

***Keller Auditorium - Urban  
Renaissance/ZGF 2,800 Seat  
Program Base at Lloyd Center***

*Portland, OR*

***Program Estimate***

***May 22, 2024***





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**Program Estimate**

**May 22, 2024**

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### **Introduction**

Metro commissioned Venue to provide an order-of-magnitude program cost estimate for Portland 5 Centers for the Arts – Keller Auditorium Future Project. This estimate specifically relates to the Urban Renaissance/ZGF Architects option. Venue submits this cost estimate as a cost model to assist in aligning program, scope, quality and budget.

### **Basis**

Urban Renaissance/ZGF Architects "Lloyd District Conceptual Site Study Submission for Estimate Exercise March 29, 2024" forms the basis of this estimate.

### **Financial Summary**

The estimated Total Construction Cost for the Urban Renaissance/ZGF Architects facility is \$318.5 million and the Total Project Cost is \$429.9 million, in 1st Quarter 2027 bid dollars (start of construction).

### **Building Summary**

Gross floor area of 215,550 square feet for the baseline project.

Gross floor area clarification: catwalks and exterior program areas are not included in the gross floor area.

### **Estimate Methodology**

"LMN preliminary room list dated September 19, 2018" was analyzed and adjusted for the required grossing factor (the inclusion of area for public circulation, structure/walls etc., back-of-house circulation, mechanical/electrical spaces, unusable spaces, etc.), yielding a gross floor area for the new facility. A cost model was next developed based on the function of areas contained in the gross floor area program, and other building, performance equipment, acoustical and site conditions taken into consideration. It should be noted that this is a program driven budget principally based on functional areas, with reference to ZGF drawings for building layout, massing and site considerations.

For pricing and market conditions, Venue confidentially contacted general contractors for input and this current and project specific cost data was utilized in this estimate, along with Venue's vast database of historical cost information.

**Estimate Inclusions**

*Building Costs:*

- Substructure
- Shell
- Interiors
- Mechanical & electrical services
- Performance equipment & seating
- General requirements
- Sitework & Utilities
- Design/pricing allowance
- General conditions, overhead and fee
- Escalation to 1st Quarter 2027
- GMP buyout contingency
- Construction change order contingency

*Soft Costs:*

- Owner purchase loose fixtures, fittings and equipment and furniture (FF&E)
- Soil borings, geotech, site and utility surveys
- Testing/inspections expenses
- Third party M&E commissioning
- Permits and associated fees
- Professional fees and reimbursables
- Construction administration expenses
- Models, mockups, renderings
- Fundraising
- Public relations
- Legal fees and expenses
- Groundbreaking, topping off and pre-opening expenses
- Art allowance
- Owner overall project contingency

**Estimate Exclusions**

- Demolition of existing structures and foundations
- Supplemental and optional program such as the parking garage
- Relocation of any main existing utilities to outlying site
- Contaminated soil treatment and disposal
- Design build and/or fast-track construction schedule premium
- Sole sourced equipment or systems
- Service and maintenance contracts
- Spare parts
- Financing
- Owner staff costs, moving costs, existing Keller building economic impact costs
- Land purchase, site enablement
- Endowment/Subsidies

### ***Definitions and Assumptions***

The following helps define the terminology and assumptions in this report:

- Building includes:
  - Greenfield site on grade assumed
  - Substructure: shallow foundations; dewatering.
  - Structure: comprises steel/concrete frame.
  - Exterior enclosure comprises 25% segmented curtain wall, 5% punched windows, balance of metal panels.
- Interiors - see interior finishes schedule
  
- Mechanical includes plumbing and drainage, fire protection, heating, ventilating, air conditioning and controls - specifically -

#### *Plumbing and Drainage:*

Plumbing and drainage includes electronically activated plumbing fixtures; domestic hot, cold and recirculation potable water piping to fixtures and fittings and HVAC systems throughout; Heat pump based water heating system and storage tank are utilized; domestic water booster pump; gravity and pumped flow sanitary waste (and vent) collection system from fixtures, fittings, floor drains and equipment throughout connected to site sanitary services; full flow storm drainage waste collection piping connected to site services with emergency overflow daylighting system; All heating and kitchen equipment is electric and no gas is utilized in the building. A separate pricing for rainwater harvesting system is included to collect all rainwater for re-use in the building.

#### *Fire Protection:*

Fire protection includes for a fully protected facility, complete with a combination standpipe/sprinkler coverage throughout complete with siamese connection; wet sprinkler systems throughout as per NFPA 13; fire hose valves at intermediate stair landings, exit passageways, roof, and the supplemental interior locations as per the design intent; a fire water booster pump assume @ 1000gpm (200HP) capacity; gaseous fire protection systems are not included.

*Controls and Automation:*

A Building Automation System (BAS) is provided consisting of direct digital controls. The BAS controls and monitors all HVAC systems and equipment, and various plumbing, fire protection and electrical systems where required. System allows operators to start and stop equipment and automatically control zone temperatures, air and water flow rates. System and system graphics allow full monitoring, trending and reporting of set points, equipment control and alarm functions. Damper and valve actuators are electric / electronic type with direct digital control (DDC). Ventilation rates are controlled by main duct run mounted carbon dioxide sensors (demand ventilation) throughout the facility. Humidification is controlled by humidistats throughout the facility. Metering is provided on electrical and water services above.

*Heating, Ventilating, Air Conditioning (H.V.A.C.):*

The mechanical H.V.A.C. system estimate includes for the following:

- Air sourced heat pump chillers provide chilled/heating water to serve the building HVAC loads. Chilled water loop is provided with primary circulation pumps complete with VFD's. Air and expansion control and chemical pot feeder are provided. Chilled water piping is extended to air handling units and space cooling units throughout utilizing fully redundant secondary circulation pumps complete with VFD's.
- Electric hot water boilers are utilized to provide back-up heating to ASHP's to provide hot water to serve the building heating and reheat loads. Primary circulation pumps complete with VFD's are provided. Heat exchangers / glycol loop is provided. Air and expansion control and chemical pot feeder are provided. Hot water heating piping is extended to air handling units, unit/force flow heaters, perimeter radiation, and VAV reheat coils throughout utilizing fully redundant secondary circulation pumps complete with VFD's.
- Local steam electric resistive steam generators (humidifier) equal to Dri-steam- Vaporstream located adjacent to AHUs.
- Air conditioning systems is selected to suit the function, geometry and thermal characteristics of the space served. All air conditioning systems are zoned in order to maximize thermal comfort and minimize energy wastage. Building is generally conditioned by ducted central AHUs with back of house and smaller spaces such as green rooms and admin areas to operate independently from larger auditorium and foyer spaces. Main auditorium is served by two (stage & seating areas AHUs) constant volume AHUs, modulating temperature output of air. Temperature and humidity is controlled via sensors located within the space. The balcony seats are supplied via underfloor displacement either through diffusers in the steps, floor or integrated as part of the pedestals. The stage area is also supplied via low velocity diffusers located underneath the balcony. Piano store room is furnished with a dedicated FCU which controls both temperature and humidity with dedicated sensors to control the space temperature. Make-up air is provided to adjacent foyer. Generally air is supplied to the spaces via a network of sheetmetal ducts to and from the respective air handling units supply air diffusers within the space. Duct is lined with internal 1" - 2" thick duct liner depending on location and area served. Ceiling voids (where available) are utilized to convey return air to main riser shaft locations.

- Custom quality indoor mounted air handling units generally comprising 4" thick double wall insulated casing, solid stainless steel base (drain pan), chilled water cooling coil section, hot water reheat coil, mixing box section, MERV8/13 filter sections, humidification, specialty filtration (UV / etc.), supply and return/exhaust fan arrays through variable frequency drives and complete with vibration isolation, access sections with marine lights, factory installed building automation BACnet, and discharge plenum equal to Haakon / Ventrol.
- Custom quality indoor mounted dedicated outside air handling units generally comprising 4" thick double wall insulated casing, solid stainless steel base (drain pan), energy recovery wheel, chilled water cooling coil section, hot water reheat coil, mixing box section, MERV8/13 filter sections, supply and return/exhaust fan arrays through variable frequency drives and complete with vibration isolation, access sections with marine lights, factory installed building automation BACnet, and discharge plenum equal to Haakon / Ventrol.
- Dedicated exhaust system installed to provide extraction from the toilets and change room areas located in the building. Relief air for this system is drawn off the main building areas via high level transfer ducts which are to be acoustically insulated. Toilets and change rooms are stacked within the building to allow for extraction system with minimum disruption. Supplementary exhaust systems is also provided for store rooms and laundry.
- Provision for auxiliary 24/7 cooling systems for data rooms / instrument rooms / control rooms and the like.
- Provision for duct lagging, vinyl wrap, acoustical plenums (sound traps) and the like for low noise criteria
- Post smoke purge exhaust system with UL-864 listed control system separate from building BMS and interconnected to building fire alarm system complete with make-up fans and minimal ductwork.
- An allowance is included for generator support including ventilation, exhaust, Diesel Fuel Oil Fill Station, Fuel Oil Transfer Pump, Fuel Oil Storage Tank, fuel oil piping Sc.40 steel diesel fuel oil, monitoring, commissioning and initial fuel oil fill.

**General:**

- All systems/services located and routed for acoustic sensitivity and noise transfer elimination.
- Premium for LEED design initiatives compliance and administration is included.
- Seismic/Hurricane restraints to Local standards.

- Electrical includes services and distribution, lighting, devices and controls, systems and ancillaries and performance equipment accommodation - specifically -

*Distribution & Services:*

The facility is powered through (2) 4000A 277/480V main switchboard supplied by 2500kVA transformers. 277/480V distribution panels distribute the power throughout the facility. Lighting is fed from 120/208V lighting panels. Emergency life safety lighting is fed through (1) 500kW 277/480V diesel generator. 120/208V panels provide power to receptacles and theatrical loads. Transformers are isolation type to accommodate the production equipment requirements and are located away from all production areas. Mechanical equipment is fed through 480V mechanical panels and the electrical division is providing line and load side wiring. A building and technical grounding systems are provided throughout the facility. Infrastructure for roof top photovoltaic system has been included.

*Lighting, Devices and Heating:*

Lighting is generally provided using recessed and wall mounted decorative LED fixtures. Life safety lighting is powered through the emergency distribution system and is controlled using emergency control relays. Lighting control is generally provided using a central LV addressable control system. Local switching, occupancy and daylight sensors are incorporated into the design. These controls are interfaced with the production dimming systems. Devices are installed to meet general maintenance and specialty requirements for production facilities. 20A receptacles are provided in the production areas to accommodate the production equipment requirements. Dimmer racks are provided as part of the equipment provided in the production equipment package and will be fed through dedicated transformers. Level 3 EV chargers are included in the estimate.

*Systems and Ancillaries:*

An addressable two stage fire alarm EVAC system is provided throughout the facility. A distributed antenna system for first responders is provided throughout the facility. A security access control and CCTV system is provided to facilitate the control and monitor the perimeter access doors. Communications empty raceway infrastructure and structured cabling system are provided. Horizontal structured is provided from wall mounted communication outlets, wireless access points and runs back to communications rooms. An empty raceway and wiring system for the production equipment and AV performance lighting is provided to accommodate the production equipment. Production equipment is provided by the performance equipment/AV budget elsewhere in this estimate and is not included in the Electrical Contractors costs.

- Performance equipment and seating comprises:
  - production rigging, orchestra pit lifts, seating wagons, production lighting features and control, fixed and loose theatre seating, production audio visual systems, building wide audio visual systems including portable, variable acoustics, production lighting control, stage draperies. Budget by The Shalleck Collaborative, updated by Venue for escalation.



- General requirements includes for contractor supplied crane and hoisting, scaffolding, subguard and miscellaneous non trade items.
- Sitework & Utilities allowance includes for earthworks, paving/curbing, fencing and gates, stairs, ramps and railings, utilities allowance for mechanical and electrical work within property limits.
- Design/pricing allowance is for ongoing design detailing that will occur until drawings are complete and for quantity measurement and pricing adjustments.
- General conditions, overhead and fee includes all requirements for the general contractor (or construction manager), at a competitive rate.
- Escalation to bid date allows for normal price increases that will likely occur between now and the projected 1st Quarter 2027 bid date. However, any final adjustment to pricing can only be made with any certainty once market conditions at bid time are known.
- GMP buyout contingency is included to allow for variances in the trade bids received by the construction manager.
- Construction change order contingency is for ground conditions variances, coordination conflicts on the drawings and other minor errors and omissions that may occur during the construction phase of the project (owner changes not included).
- Soft Cost allowance is included as defined in estimate inclusions above.
- Assume all requirements to achieve or exceed Portland's Green Building Policy are included within narratives and drawings.

*Note: Venue has no control over the cost of labor, materials or equipment, the general contractor/construction manager's bid prices, competitive/negotiated bidding, or market conditions. Whilst Venue cannot warrant that bids or negotiated prices will not vary from any estimate prepared, we do however use our best endeavors to ensure that our estimate closely reflects the anticipated bid cost.*

**Keller Auditorium - Urban Renaissance/ZGF 2,800 Seat Program Base at Lloyd Center**

**Program Estimate**

**Estimate Summary**

**May 22, 2024**

<b>ITEM</b>		<b>AMOUNT</b>
A	Sub-Structure	\$11,110,000
B	Shell	\$66,930,000
C	Interiors	\$44,510,000
D	Mechanical & Electrical Services	\$63,995,000
E	Performance Equipment & Seating	\$13,770,000
F	Demolition & Temporary Construction	\$0
G	General Requirements	\$12,485,000
H	Siteworks & Utilities	\$6,825,000
I	Design/Pricing Allowance	10% \$21,965,000
J	General Conditions, Overhead & Fee	12% \$28,750,000
K	Escalation	11% \$29,850,000
L	GMP Buyout Contingency	3% \$9,005,000
M	Owner Purchase Specialist Equipment	\$0
N	Construction Change Order Contingenc	3% \$9,275,000
<b>TOTAL CONSTRUCTION COST IN 1ST QTR 2027 BID DOLLARS</b>		<b>\$318,470,000</b> \$1,477/gsf
O	Soft Costs	35% \$111,465,000
<b>TOTAL PROJECT COST IN 1ST QTR 2027 BID DOLLARS</b>		<b>\$429,935,000</b> \$1,995/gsf

**Overall Gross Floor Area 215,550 gsf**



**Keller Auditorium - Urban Renaissance/ZGF 2,800 Seat Program Base at Lloyd Center  
Program Estimate  
Mechanical Estimate Summary**

Gross Floor Area 215,550 sf

May 22, 2024

Description Element\Sub-Element	Specialty Sub Break down	Sub Element Total	Element Total	\$ per sf Sub Element	\$ per sf Element	%	Remarks
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**D1 Mechanical**

<b>D1.1 Plumbing &amp; Drainage</b>			<b>\$6,261,800</b>		<b>\$15.43</b>	<b>10.0%</b>	
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D1.11 - Plumbing Fixtures		\$920,000		\$4.27
D1.12 - Domestic Water		\$1,812,500		\$8.41
D1.13 - Sanitary Waste & Vent		\$862,200		\$4.00
D1.14 - Storm		\$1,514,300		\$7.03
D1.15 - Natural Gas		\$0		\$0.00
D1.16 - Specialty Systems:		\$0		\$0.00
D1.16.1 - Rain Water Harvesting		\$0		\$0.00
D1.16.2 - Seismic Restraints		\$53,900		\$0.25
D1.16.3 - LEED Certification & Sustainable Design Administration		\$53,900		\$0.25
D1.16.4 - Combination Photo Voltaic / Solar Hot Thermal System		\$0		\$0.00
D1.16.8 - Selective / General Demolition		\$0		\$0.00
D1.17 - Miscellaneous Works and General Accounts		\$1,045,000		\$4.85

<b>D1.2 Fire Protection</b>			<b>\$1,841,400</b>		<b>\$4.54</b>	<b>3.0%</b>	
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D1.21 - Standpipe		\$269,400		\$1.25
D1.22 - Sprinklers		\$1,505,600		\$6.98
D1.23 - Specialty Systems		\$53,900		\$0.25
D1.24 - Fire Extinguisher		\$12,500		\$0.06
D1.25 - Miscellaneous Works and General Accounts		\$0		\$0.00

<b>D1.3 Heating, Ventilation &amp; Air Conditioning</b>			<b>\$31,048,700</b>		<b>\$144.04</b>	<b>93.7%</b>	
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D1.31 - Liquid Heat Transfer (Heating)		\$2,511,000		\$11.65
D1.32 - Liquid Heat Transfer (Cooling)		\$5,757,800		\$26.71
D1.33 - Steam and Condensate		\$431,100		\$2.00
D1.34 - Air Distribution		\$14,384,700		\$66.73
D1.35 - Exhaust Systems		\$511,100		\$2.37
D1.36 - Specialty Systems		\$0		\$0.00
D1.37 - Support Systems and Works		\$2,278,000		\$10.57
D1.37.1 - Noise and Vibration Isolation	\$181,300			
D1.37.2 - Mechanical Wiring and Starters	\$0			
D1.37.3 - Balancing and Commissioning	\$538,900			
D1.37.6 - LEED / Sustainability	\$107,800			
D1.37.7 - Seismic / Tornado / Hurricane Restraint	\$107,800			
D1.37.8 - Acoustic Treatments	\$431,100			
D1.37.9 - 24/7 Cooling Systems	0			
D1.37.10 - Generator Support	\$200,000			
D1.37.11 - Smoke Exhaust System	\$431,100			
D1.37.12 - 24/7 Cooling Systems	\$280,000			
D1.38 - Miscellaneous Works and General Accounts		\$5,175,000		\$24.01

<b>D1.4 Controls</b>			<b>\$2,099,400</b>		<b>\$9.74</b>	<b>6.3%</b>	
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D1.41 - Controls and Automation		\$2,099,400		\$9.74
D1.42 - Miscellaneous Works and General Accounts		\$0		\$0.00

<b>Total (D1) Mechanical</b>			<b>\$41,251,300</b>		<b>\$153.78 \$ per sf</b>		
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**H1.2 - Mechanical Utilities**

<b>H1.2 Mechanical Utilities</b>			<b>\$900,000</b>		<b>\$4.18 \$ per sf</b>		
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H1.21 - Water		\$125,000		\$0.58
H1.22 - Sanitary		\$125,000		\$0.58
H1.23 - Storm		\$350,000		\$1.62
H1.24 - Natural Gas		\$0		\$0.00
H1.25 - Specialty Systems		\$300,000		\$1.39
H1.26 - Miscellaneous Works and General Accounts		\$0		\$0.00

<b>Total (H1.2) Mechanical Utilities</b>			<b>\$900,000</b>		<b>\$4.18 \$ per sf</b>		
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**Keller Auditorium - Urban Renaissance/ZGF 2,800 Seat Program Base at Lloyd Center  
Program Estimate  
Electrical Estimate Summary**

Gross Floor Area 215,550 sf

May 22, 2024

Description Element\Sub-Element	Sub Element Total	Element Total	\$ per sf Sub Element	\$ per sf Element	%	Remarks
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**D2 Electrical**

<b>D2.1 Services &amp; Distribution</b>		<b>\$5,708,000</b>		<b>\$26.48</b>	<b>25.1%</b>	
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D2.11 - L.V. Switchboard	\$1,146,000			\$5.32	
D2.12 - Emergency Power	\$925,600			\$4.29	
D2.13 - Distribution	\$1,112,100			\$5.16	
D2.14 - Feeders	\$957,000			\$4.44	
D2.15 - Motor Controls & Wiring	\$441,600			\$2.05	
D2.16 - Miscellaneous	\$174,700			\$0.81	
D2.17 - General Requirements	\$951,000			\$4.41	

<b>D2.2 Lighting, Devices &amp; Controls</b>		<b>\$11,129,300</b>		<b>\$51.63</b>	<b>48.9%</b>	
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D2.21 - Lighting	\$8,133,100			\$37.73	
D2.22 - Branch Devices & Wiring	\$1,141,200			\$5.29	
D2.23 - Heating	\$0			\$0.00	
D2.24 - General Requirements	\$1,855,000			\$8.61	

<b>D2.3 Systems &amp; Ancillaries</b>		<b>\$5,911,100</b>		<b>\$27.42</b>	<b>26.0%</b>	
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D2.31 - Fire Alarm System	\$893,300			\$4.14	
D2.32 - Security System	\$895,100			\$4.15	
D2.33 - Communications	\$896,000			\$4.16	
D2.34 - P.A. System	\$2,241,700			\$10.40	
D2.35 - Miscellaneous	\$0			\$0.00	
D2.36 - General Requirements	\$985,000			\$4.57	

<b>Total Building (D2) Electrical</b>		<b>\$22,748,400</b>		<b>\$105.54 \$ per sf</b>	
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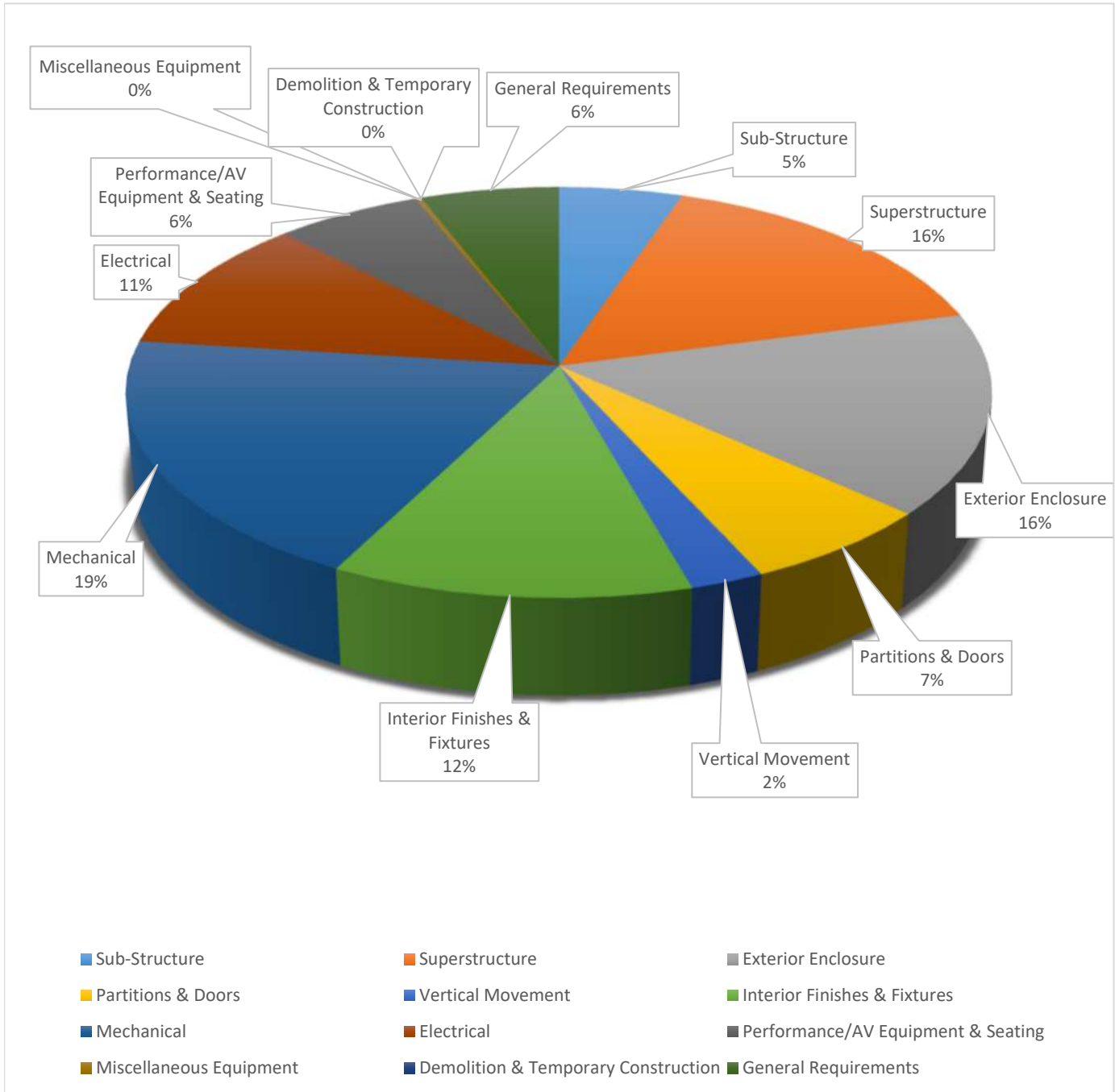
**H1.3 Electrical Utilities**

<b>H1.3 Electrical Utilities</b>		<b>\$927,000</b>		<b>\$4.30</b>	
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H1.31 - Site - Power	\$682,000			\$3.16	
H1.32 - Site - Communications	\$99,000			\$0.46	
H1.33 - Site - Lighting	\$146,000			\$0.68	
H1.34 - Site - General Requirements	\$0			\$0.00	

<b>Total (H1.3) Electrical Utilities</b>		<b>\$927,000</b>		<b>\$4.30 \$ per sf</b>	
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Elemental Summary Pie Chart



**Keller Auditorium - Urban Renaissance/ZGF 2,800 Seat Program Base at Lloyd Center**

**Program Estimate**

**Elemental Summary**

**May 22, 2024**

<b>ELEMENT</b>	<b>Total</b>	<b>\$ per gsf</b>	<b>ELEMENT</b>
<b>A SUB-STRUCTURE</b>	<b>\$11,109,800</b>	<b>\$51.54</b>	<b>5%</b>
A1.1 Excavation	\$3,635,400	\$16.87	
A1.2 Foundations	\$5,250,000	\$24.36	
A1.3 Slab-on-Grade	\$1,424,000	\$6.61	
A1.4 Basement Walls	\$800,400	\$3.71	
<b>B SHELL</b>	<b>\$66,930,100</b>	<b>\$310.51</b>	<b>31%</b>
<b>B1 Superstructure</b>	<b>\$33,217,200</b>	<b>\$154.10</b>	<b>16%</b>
B1.1 Structural Concrete	\$27,472,500	\$127.45	
B1.2 Structural Steel	\$5,639,700	\$26.16	
B1.3 Other Structure	\$0	\$0.00	
B1.4 Miscellaneous Structure	\$105,000	\$0.49	
<b>B2 Exterior Enclosure</b>	<b>\$33,712,900</b>	<b>\$156.40</b>	<b>16%</b>
B2.1 Roofing	\$4,590,600	\$21.30	
B2.2 Exterior Walls	\$14,826,300	\$68.78	
B2.3 Exterior Windows & Curtainwall	\$13,145,000	\$60.98	
B2.4 Exterior Doors	\$315,000	\$1.46	
B2.5 Miscellaneous Exterior	\$836,000	\$3.88	
<b>C INTERIORS</b>	<b>\$44,508,400</b>	<b>\$206.49</b>	<b>21%</b>
<b>C1 Partitions &amp; Doors</b>	<b>\$13,848,100</b>	<b>\$64.25</b>	<b>7%</b>
C1.1 Partitions	\$12,199,100	\$56.60	
C1.2 Interior Doors	\$1,649,000	\$7.65	
<b>C2 Vertical Movement</b>	<b>\$5,200,000</b>	<b>\$24.12</b>	<b>2%</b>
C2.1 Stairs	\$2,880,000	\$13.36	
C2.2 Elevators & Lifts	\$2,320,000	\$10.76	
<b>C3 Interior Finishes &amp; Fixtures</b>	<b>\$25,460,300</b>	<b>\$118.12</b>	<b>12%</b>
C3.1 Public & Performance Spaces	\$20,234,400	\$93.87	
C3.2 Non-Public Spaces	\$5,225,900	\$24.24	
<b>D MECHANICAL &amp; ELECTRICAL SERVICES</b>	<b>\$63,997,347</b>	<b>\$296.90</b>	<b>30%</b>
<b>D1 Mechanical</b>	<b>\$41,251,798</b>	<b>\$191.38</b>	<b>19%</b>
D1.1 Plumbing & Drainage	\$6,262,055	\$29.05	
D1.2 Fire Protection	\$1,841,408	\$8.54	
D1.3 Heating, Vent, Air Cond	\$31,048,935	\$144.05	
D1.4 Controls	\$2,099,400	\$9.74	
<b>D2 Electrical</b>	<b>\$22,745,550</b>	<b>\$105.52</b>	<b>11%</b>
D2.1 Services & Distribution	\$5,707,211	\$26.48	
D2.2 Lighting, Devices & Controls	\$11,128,283	\$51.63	
D2.3 Systems & Ancillaries	\$5,910,056	\$27.42	
<b>E EQUIPMENT</b>	<b>\$13,768,000</b>	<b>\$63.87</b>	<b>6%</b>
<b>E1 Performance/AV Equipment &amp; Seating</b>	<b>\$13,208,000</b>	<b>\$61.28</b>	<b>6%</b>
E1.1 Performance Equipment & Seating	\$13,208,000	\$61.28	
E1.2 AV Equipment	\$0	\$0.00	
<b>E2 Miscellaneous Equipment</b>	<b>\$560,000</b>	<b>\$2.60</b>	<b>0%</b>
E2.1 Miscellaneous Equipment	\$560,000	\$2.60	
<b>F DEMOLITION &amp; TEMPORARY CONSTRUCTION</b>	<b>\$0</b>	<b>\$0.00</b>	<b>0%</b>
F1.1 Demolition	\$0	\$0.00	
F1.2 Temporary Construction	\$0	\$0.00	
<b>G GENERAL REQUIREMENTS</b>	<b>\$12,485,000</b>	<b>\$57.92</b>	<b>6%</b>
G1.1 Equipment & Rentals	\$4,650,000	\$21.57	
G1.2 Project Overhead Items	\$7,835,000	\$36.35	
<b>TOTAL BUILDING ELEMENTAL COSTS</b>	<b>\$212,798,647</b>	<b>\$987.24</b>	<b>100%</b>
<b>GROSS FLOOR AREA</b>	<b>215,550</b>	<b>gsf</b>	
<b>H SITEWORKS &amp; UTILITIES</b>			
H1.1 Siteworks	\$5,000,000		
H1.2 Mechanical Utilities	\$900,000		
H1.3 Electrical Utilities	\$927,000		
<b>TOTAL SITWORKS &amp; UTILITIES</b>	<b>\$6,827,000</b>		



Keller Auditorium - ZGF 2,800 Seat Program Base

Program Estimate

Detailed Estimate

May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	

**A SUB-STRUCTURE**

9. <b>A1.1 Excavation</b>					
11. Excavate & stockpile					
12. cut & haul - rock, etc	32,045	cy	85.00	2,723,800	assuming greenfield site
14. Imported Backfill	12,694	cy	60.00	761,600	assuming greenfield site
16. Shoring & lagging					assume not required
18. Dewatering	1	ls	150,000.00	150,000	allowance
<b>21. Total for Section A1.1 Excavation</b>				<b>\$3,635,400</b>	

24. <b>A1.2 Foundations</b>					
26. Shallow foundations:					adj description
27. Basement	1	ls	2,800,000.00	2,800,000	
28. Grade Level	1	ls	2,200,000.00	2,200,000	
30. Elevator pits:					
31. Public	4	ea	40,000.00	160,000	
32. BOH	1	ea	40,000.00	40,000	
33. Freight	1	ea	50,000.00	50,000	
35. Acoustic Premiums					
36. AIJ in foundations				0	
<b>39. Total for Section A1.2 Foundations</b>				<b>\$5,250,000</b>	

42. <b>A1.3 Slab-On-Grade</b>					
44. 5" slab on grade:					
45. basement	43,200	sf	17.50	756,000	including waterproofing
47. 6" slab-on-grade:					
48. sloped/stepped					
49. flat	34,000	sf	17.50	595,000	
51. Acoustic Premiums					
52. Acoustic isolation joints	1	ls	73,000.00	73,000	
<b>55. Total for Section A1.3 Slab-On-Grade</b>				<b>\$1,424,000</b>	



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	Quantity	Unt	Rate	Amount	
<b>58. A1.4 Basement Walls</b>					
60. Concrete wall, 12" thick, waterproofing, drainage sheet, reinforcing	13,340	sf	60.00	800,400	
62. Acoustic Premiums					
63. AIJ in foundations				0	
<b>66. Total for Section A1.4 Basement Walls</b>				<b>\$800,400</b>	

**B SHELL**

**B1 Superstructure**

<b>72. B1.1 Structural Concrete</b>					
74. Framed floor/roof structure	215,550	sf	119.56	25,771,700	
76. Plenum	15,295	sf	78.24	1,196,700	
78. Core Drilling/Blocking	1	ls	140,000.00	140,000	allowance
80. Acoustic Premiums					
81. floating slabs:					
82. Large rehearsal room (1 #)	5,005	sf	35.50	177,700	
83. Small rehearsal room (1 #)	1,150	sf	35.50	40,800	
84. Mechanical & electrical spaces	4,100	sf	35.50	145,600	20% of M&E spaces
<b>87. Total for Section B1.1 Structural Concrete</b>				<b>\$27,472,500</b>	

<b>90. B1.2 Structural Steel</b>					
92. Stage Grid					
93. stage - Multi-Function (95' high roof)	7,360	sf	109.00	802,200	
95. Forestage Grids					
96. mf theatre - 2800 seats	1,400	sf	79.00	110,600	
98. Pipe Grids					
99. Large rehearsal room (1 #)					with perf equip
100. Small rehearsal room (1 #)					with perf equip
102. Premium for secondary steel to curtainwall				0	assumed not req'd
104. Catwalks (Lf)					
105. stagehouse galleries	150	lf	850.00	127,500	
106. lighting catwalks	635	lf	800.00	508,000	





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	Quantity	Unt	Rate	Amount	
108. M&E dunnage	1	ls	155,000.00	155,000	allowance
110. Miscellaneous metals	1	ls	1,293,300.00	1,293,300	allowance
112. Fireproofing	1	ls	788,100.00	788,100	allowance
114. Intumescent paint to structural steel				0	assumed not req'd
116. AESS steel/detail premium				0	assumed not req'd
118. Acoustic Premiums					
119. Acoustic isolation joints	1	ls	1,855,000.00	1,855,000	allowance
<b>122. Total for Section B1.2 Structural Steel</b>				<b>\$5,639,700</b>	

124. B1.3 Other Structure					
					0
<b>129. Total for Section B1.3 Other Structure</b>					<b>\$0</b>

132. B1.4 Miscellaneous Structure					
134. Firesafing	1	ls	105,000.00	105,000	
<b>138. Total for Section B1.4 Miscellaneous Structure</b>					<b>\$105,000</b>

B2 Exterior Enclosure

143. B2.1 Roofing					
145. Skylights	3,100	sf	375.00	1,162,500	
147. Membrane roofing	79,550	sf	37.50	2,983,100	
149. Smoke hatches	1	ls	280,000.00	280,000	
151. Rough carpentry	1	ls	165,000.00	165,000	allowance
<b>154. Total for Section B2.1 Roofing</b>					<b>\$4,590,600</b>



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Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
<b>158. B2.2 Exterior Walls</b>					
160. Exterior cladding on back-up (measured elsewhere), (allowance):					
161. Metal panel (allowance)	80,000	sf	125.00	10,000,000	
163. Back-up to exterior cladding	80,000	sf	52.00	4,160,000	
165. Rear of parapets	4,600	sf	40.50	186,300	
166. Copings	2,300	lf	100.00	230,000	
167. Louvres	1	ls	100,000.00	100,000	allowance
168. Caulking & sealing	1	ls	150,000.00	150,000	allowance
170. Acoustic Premiums				0	
<b>173. Total for Section B2.2 Exterior Walls</b>				<b>\$14,826,300</b>	

<b>177. B2.3 Exterior Windows &amp; Curtainwall</b>					
179. Curtainwall	28,500	sf	300.00	8,550,000	25% of skin
181. Punched windows	5,500	sf	125.00	687,500	5% of solid skin
183. Shading to glazing (measured elsewhere):					
184. curtainwall	28,500	sf	125.00	3,562,500	allowance
185. balance of windows	1	ls	345,000.00	345,000	allowance, 50% of glazing
187. Design assist				0	assumed not req'd
<b>190. Total for Section B2.3 Exterior Windows &amp; Curtainwall</b>				<b>\$13,145,000</b>	

<b>193. B2.4 Exterior Doors</b>					
195. Doors					
196. glazed	14	lvs	12,500.00	175,000	
197. metal	10	lvs	2,500.00	25,000	
198. overhead	4	ea	17,500.00	70,000	
199. automatic door openers	6	ea	7,500.00	45,000	
<b>202. Total for Section B2.4 Exterior Doors</b>				<b>\$315,000</b>	

<b>205. B2.5 Miscellaneous Exterior</b>					
207. Canopies and projections	1	ls	436,000.00	436,000	allowance



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May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
209. Premium for green roof/pavers					excluded per ZGF
211. Terrace paving/railings	1	ls	150,000.00	150,000	allowance
213. Screen walls				0	assumed not req'd
215. Exterior signage	1	ls	250,000.00	250,000	allowance
218. <b>Total for Section B2.5 Miscellaneous Exterior</b>				<b>\$836,000</b>	

C INTERIORS

C1 Partitions & Doors

224. C1.1 Partitions					
226. Stc Glazing	900	sf	250.00	225,000	
228. Glazed	1,700	sf	100.00	170,000	
230. Grout filled cmu walls	75,000	sf	43.25	3,243,800	
232. Gypsum walls	86,500	sf	20.00	1,730,000	
234. Balance	182,000	sf	35.34	6,431,300	
236. Firesafing	1	ls	129,750.00	129,800	allowance
238. Acoustic Premiums					
239. Box-in-box construction:					
240. Large rehearsal room (1 #)	5,005	sf	27.50	137,600	
241. Small rehearsal room (1 #)	1,150	sf	27.50	31,600	
243. Acoustic isolation joints	1	ls	100,000.00	100,000	allowance
246. <b>Total for Section C1.1 Partitions</b>				<b>\$12,199,100</b>	

248. C1.2 Interior Doors					
250. Oversized stc, 10' x 12' high	1	ea	36,000.00	36,000	
252. Oversized stc, 8' x 10' high	2	ea	25,000.00	50,000	
254. Glazed - office doors	10	lvs	6,000.00	60,000	
256. Glazed - vestibule doors	14	lvs	12,500.00	175,000	
258. Stc doors	10	lvs	9,000.00	90,000	



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May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
260. Gasket and sealed doors	135	lvs	3,000.00	405,000	
262. Balance of doors	340	lvs	2,200.00	748,000	
264. Fire shutters	1	ls	40,000.00	40,000	allowance
266. Automatic door openers	6	ea	7,500.00	45,000	
269. <b>Total for Section C1.2 Interior Doors</b>				<b>\$1,649,000</b>	

C2 Vertical Movement

273. C2.1 Stairs					
275. Feature					
276. straight, 12'w	4	flts	310,000.00	1,240,000	
278. Public					
279. straight	6	flts	85,000.00	510,000	
281. Auditorium	1	ls	300,000.00	300,000	
283. Spiral stair to top of fly tower	1	ls	90,000.00	90,000	
285. Upgraded boh stair	1	flts	35,000.00	35,000	
287. Service/Exiting	21	flts	30,000.00	630,000	
289. Misc steps and ladders	1	ls	75,000.00	75,000	allowance
292. <b>Total for Section C2.1 Stairs</b>				<b>\$2,880,000</b>	

294. C2.2 Elevators & Lifts					
296. Public					
297. Public (6 Stp, 57'-6" Rise) Frt & Rear opgs	4	ea	325,000.00	1,300,000	
299. Back of House					
300. Boh (4 Stp, 60' Rise) Frt opgs	1	ea	200,000.00	200,000	
302. Service/Freight					
303. Freight 10' X 16' (3 Stp, Front opng, Approx. 45'-0" rise)	1	ea	750,000.00	750,000	allowance
305. H/C Lifts (Ea)	2	ea	35,000.00	70,000	
308. <b>Total for Section C2.2 Elevators &amp; Lifts</b>				<b>\$2,320,000</b>	



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Program Estimate

Detailed Estimate

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Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	

**C3 Interior Finishes & Fixtures**

312. C3.1 Public & Performance Spaces						
314.	Large hall stage/auditorium/orchestra pit	43,045	sf	181.50	7,812,700	
315.	Lobbies/public circulation/concessions/s&ll's	54,935	sf	168.50	9,256,500	
316.	Public restrooms	8,155	sf	148.50	1,211,000	
317.	Café	2,565	sf	171.00	438,600	
318.	Donor room	2,420	sf	224.00	542,100	
319.	Gift shop	440	sf	187.00	82,300	
320.	Box office/coats	955	sf	61.50	58,700	
322.	Motorshades for skylights	3,100	sf	75.00	232,500	
323.	Donor Recognition	1	ls	250,000.00	250,000	allowance
325.	Performance equipment accommodation:					
326.	Multi-Function Theatre - 2800 seats	1	ls	350,000.00	350,000	
329.	<b>Total for Section C3.1 Public &amp; Performance Spaces</b>				<b>\$20,234,400</b>	

331. C3.2 Non-Public Spaces						
333.	Green room	660	sf	54.50	36,000	
334.	Large rehearsal room	5,005	sf	95.50	478,000	
335.	Small rehearsal room	1,150	sf	147.50	169,600	
336.	Boh circulation/boh s&ll	28,595	sf	22.50	643,400	
337.	Boh toilets/dressing/changing/lockers	9,580	sf	74.50	713,700	
338.	Catering/servery/kitchen	2,750	sf	94.50	259,900	
339.	Coaching/warm up	675	sf	49.00	33,100	
340.	Control/dimmer rooms	1,825	sf	111.50	203,500	
341.	Crew lounge/kitchenette/m&f toilets	660	sf	36.50	24,100	
342.	Inaccessible	5,610			0	
343.	Mech and electrical	20,380	sf	21.50	438,200	
344.	Office/lounges	5,840	sf	23.00	134,300	
345.	Plenum	15,295	sf	7.50	114,700	
346.	Staging/loading/receiving	6,200	sf	6.50	40,300	
347.	Storage	8,925	sf	23.00	205,300	
348.	Trap room	1,760	sf	5.00	8,800	
349.	Workshops/support space	3,420	sf	28.00	95,800	
351.	Loading dock equipment	4	ea	15,000.00	60,000	
352.	Restroom accessories	1	ls	300,000.00	300,000	allowance
353.	Interior signage	1	ls	325,000.00	325,000	allowance
354.	Rough carpentry	1	ls	110,000.00	110,000	allowance
356.	Blackout shades:					
357.	interior acoustic glazing	900	sf	40.00	36,000	



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**Detailed Estimate**

**May 22, 2024**

<b>Description</b>	<b>Program Estimate</b>				<b>Remarks</b>
	<b>Quantity</b>	<b>Unt</b>	<b>Rate</b>	<b>Amount</b>	
359. Performance equipment accommodation:					
360. Large rehearsal room (1 #)	1	ls	250,000.00	250,000	
361. Small rehearsal room (1 #)	1	ls	150,000.00	150,000	
363. Acoustic premiums:					
364. Acoustical isolation joints	1	ls	150,000.00	150,000	allowance
365. Box in box construction, isolated ceilings:					
366. Large rehearsal room (1 #)	5,005	sf	40.00	200,200	
367. Small rehearsal room (1 #)	1,150	sf	40.00	46,000	
<b>370. Total for Section C3.2 Non-Public Spaces</b>				<b>\$5,225,900</b>	

**D MECHANICAL & ELECTRICAL SERVICES**

**D1 Mechanical**

<b>377. D1.1 Plumbing &amp; Drainage</b>					
<b>379. <u>D1.11 - Plumbing Fixtures</u></b>				<b>920,000</b>	
381. Water conserving, commercial quality plumbing fixtures c/w trim, faucets, supplies, stops, waste and traps, hangers, brackets, supports and fasteners are provided including:	368	ea	2,500.00	920,000	
382. Water closets or urinals with electronic no touch flush valves					
383. Lavatories with electronic faucets					
384. Janitor mop basins in custodial closets					
385. Dual level drinking fountains refrigerated					
386. Showers					
387. Studio sinks					
388. Emergency eyewash showers					
389. Rough-ins for above fixtures					
<b>391. <u>D1.12 - Domestic Water</u></b>				<b>1,812,500</b>	
393. Domestic water services are extended from the incoming water service central water meter and backflow preventer assembly, to fixtures and fittings throughout, as well as mechanical cooling systems make-up and general interior and exterior hose bibb coverage. All domestic water piping is thermally insulated. Booster pumpset is also included.	215,550	sf	5.63	1,212,500	
395. Domestic hot water is produced by air source heat pump water heater (equal to Nyle) with two large 750gallons storage tank with immersion backup (equal to PVI)	1	ea	600,000.00	600,000	



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Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
398. <b><u>D1.13 - Sanitary Waste &amp; Vent</u></b>				<b>862,200</b>	
400. A complete system of sanitary waste and vent collection is provided to serve plumbing fixtures, floor drains and equipment throughout. Condensate drainage is provided to serve HVAC equipment piped to floor / hub drains throughout. Service connects to outlet to site sanitary sewer. Grease interceptor is also provided for the kitchen.	215,550	sf	4.00	862,200	
402. <b><u>D1.14 - Storm</u></b>				<b>1,514,300</b>	
404. A complete systems of roof/storm water drainage is provided to collect rainwater from roofs and green roofs. Service connects to outlets to site storm sewer. Adjacent overflow "daylight" drains spill to grade. Special provision for noise sensitive roof theater area drainage is also included.	215,550	sf	6.00	1,293,300	
406. Exterior Covered Loading Dock	3,500	sf	6.00	21,000	
408. Rainwater retention tank and treatment skid	1	ea	200,000	200,000	
411. <b><u>D1.15 - Natural Gas</u></b>				<b>0</b>	
413. No work required.					
415. <b><u>D1.16 - Specialty Systems:</u></b>					
<b><u>D1.16.1 - Rain Water Harvesting</u></b>				<b>0</b>	
419. Rainwater harvesting system consisting of Non-pressurized rainwater harvesting storage tank, Greywater filtration system, non-potable piping and pumps			See Separate Estimate		
423. <b><u>D1.16.2 - Seismic Restraints</u></b>				<b>53,900</b>	
425. Seismic / Hurricane restraints to city standards	215,550	sf	0.25	53,900	
428. <b><u>D1.16.3 - LEED Certification &amp; Sustainable Design</u></b>				<b>53,900</b>	
430. Allowance for LEED Certification and/or Sustainable Design Administration	215,550	sf	0.25	53,900	



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432. <b><u>D1.16.4 - Combination Photo Voltaic / Solar Hot Thermal System</u></b>				<b>0</b>	
434. Combination photo voltaic and solar hot thermal system (PV/T) on roof			More info is required		
436. <b><u>D1.16.8 - Selective / General Demolition</u></b>				<b>0</b>	
438. By others if required					
541. <b><u>D1.17 - Miscellaneous Works and General Accounts</u></b>				<b>1,045,000</b>	
543. Supervision, site office, head office overheads, submittals, clean up, small tools, rentals and the like, rigging and preparation of 3D co-ordination drawings	1	ea	1,045,000.00	1,045,000	
548. <b>Total for Section D1.1 Plumbing &amp; Drainage</b>				<b>\$6,261,800</b>	

551. <b><u>D1.2 Fire Protection</u></b>					
553. <b><u>D1.21 - Standpipe</u></b>				<b>269,400</b>	
555. Fire hose coverage provided throughout the building as per NFPA14.	215,550	sf	1.25	269,400	
558. <b><u>D1.22 - Sprinklers</u></b>				<b>1,505,600</b>	
560. The building is fully fire sprinkler protected with wet and/or dry system to local codes and NFPA regulations, for light / ordinary hazard coverage.	215,550	sf	6.52	1,405,600	
562. Automatic Horizontal split case fire pump (1000gpm, 200HP)	1	ea	80,000.00	80,000	
564. Incoming firewater service 8" dia. c/w house control and backflow preventor	1	ea	20,000.00	20,000	
567. <b><u>D1.23 - Specialty Systems</u></b>				<b>53,900</b>	
569. Seismic / Hurricane restraints to city standards	215,550	sf	0.25	53,900	





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572. <b><u>D1.24 - Fire Extinguisher</u></b>				<b>12,500</b>	
574. Individual fire extinguishers are provided to meet local codes and NFPA regulations.	50	ea	250.00	12,500	
577. <b><u>D1.25 - Miscellaneous Works and General Accounts</u></b>				<b>0</b>	
579. Supervision, site office, head office overheads, submittals, clean up, small tools, rentals and the like, rigging and preparation of 3D co-ordination drawings				Included above	
582. <b>Total for Section D1.2 Fire Protection</b>				<b>\$1,841,400</b>	

585. <b>D1.3 Heating, Ventilation, Air Conditioning</b>					
587. <b><u>D1.31 - Liquid Heat Transfer (Heating)</u></b>				<b>2,511,000</b>	
589. Electric hot water boilers are utilized to provide back-up heating to ASHP's to provide hot water to serve the building heating and reheat loads. Primary circulation pumps complete with VFD's are provided. Heat exchangers / glycol loop is provided. Air and expansion control and chemical pot feeder are provided.	7,500	mbh	125.00	937,500	
591. Hot water heating piping is extended to air handling units, unit/force flow heaters, perimeter radiation, and VAV reheat coils throughout utilizing fully redundant secondary circulation pumps complete with VFD's.	215,550	sf	7.30	1,573,500	
594. <b><u>D1.32 - Liquid Heat Transfer (Cooling)</u></b>				<b>5,757,800</b>	
596. Air source heat pumps provides heating hot water and chilled water which is distributed in a loop to all air handling units and fan coils throughout the building via primary circulation pumps complete with VFDs. Air and expansion control and chemical pot feeder are provided.	720	tn	6,500.00	4,680,000	
598. Chilled water piping is extended to air handling units and space cooling units throughout utilizing fully redundant secondary circulation pumps complete with VFD's.	215,550	sf	5.00	1,077,800	



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	Quantity	Unt	Rate	Amount	
601. <b><u>D1.33 - Steam and Condensate</u></b>				431,100	
603. Local steam electric resistive steam generators (humidifier) equal to Dri-steam- Vaporstream located adjacent to AHUs.	215,550	ea	2.00	431,100	
605. <b><u>D1.34 - Air Distribution</u></b>				14,384,700	
<b><u>Equipment</u></b>					
609. Custom quality indoor mounted air handling units generally comprising of: 4" thick Double Wall insulated casing, solid stainless steel base (drain pan), chilled water cooling coil section, hot water reheat coil, mixing box section, MERV8/13 filter sections, humidification, specialty filtration (UV / etc.), supply and return/exhaust fan arrays through variable frequency drives and complete with vibration isolation, access sections with marine lights, factory installed building automation BACnet, and discharge plenum equal to Haakon / Ventrol	259,000	cfm	20.00	5,180,000	
611. Custom quality indoor mounted dedicated outside air handling units generally comprising of: 4" thick Double wall insulated casing, solid stainless steel base (drain pan), energy recovery wheel, chilled water cooling coil section, hot water reheat coil, mixing box section, MERV8/13 filter sections, supply and return/exhaust fan arrays through variable frequency drives and complete with vibration isolation, access sections with marine lights, factory installed building automation BACnet, and discharge plenum equal to Haakon / Ventrol	51,800	cfm	30.00	1,554,000	



**Keller Auditorium - ZGF 2,800 Seat Program Base**  
**Program Estimate**

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May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
613. Air conditioning systems is selected to suit the function, geometry and thermal characteristics of the space served. All air conditioning systems are zoned in order to maximize thermal comfort and minimize energy wastage. Building is generally conditioned by ducted central AHUs with back of house and smaller spaces such as green rooms and admin areas to operate independently from larger Auditorium and Foyer spaces. Main Auditorium is served by two (stage & seating areas AHUs) constant volume AHUs, modulating temperature output of air. Temperature and humidity is controlled via sensors located within the space. The balcony seats are supplied via underfloor displacement either through diffusers in the steps, floor or integrated as part of the pedestals. The stage area is also supplied via low velocity diffusers located underneath the balcony. Piano store room is furnished with a dedicated FCU which controls both temperature and humidity with dedicated sensors to control the space temperature. Make-up air is provided to adjacent Foyer. Generally air is supplied to the spaces via a network of sheetmetal ducts to and from the respective air handling units supply air diffusers within the space. Duct is lined with internal 1" - 2" thick duct liner depending on location and area served. Ceiling voids (where available) are utilized to convey return air to main riser shaft locations.					
615. Galvanized steel sheetmetal distribution ductwork as per SMACNA	311,000	lbs	15.00	4,665,000	
617. Thermal insulation / acoustic lining for above ductwork	202,000	sf	6.00	1,212,000	
619. Air outlets and accessories	215,550	sf	5.00	1,077,800	
621. VAV terminals with reheat coils (allowance)	260	ea	1,500.00	390,000	
623. Allowance for Plenums	15,295	sf	20.00	305,900	
625. <b><u>D1.35 - Exhaust Systems</u></b>				<b>511,100</b>	
627. Dedicated exhaust system installed to provide extraction from the toilets and change room areas located in the building. Relief air for this system is drawn off the main building areas via high level transfer ducts which are to be acoustically insulated. Toilets and change rooms are stacked within the building to allow for extraction system with minimum disruption. Supplementary exhaust systems is also provided for store rooms and laundry.	215,550	sf	2.00	431,100	
A separate kitchen exhaust duct and fire-rated shaft is provided in line with code requirements.	1	ea	80,000.00	80,000	



**Keller Auditorium - ZGF 2,800 Seat Program Base**  
**Program Estimate**

**Detailed Estimate**

**May 22, 2024**

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
630. <b><u>D1.36 - Specialty Systems</u></b>				<b>0</b>	
632. No work required			Info only		
634. <b><u>D1.37 - Support Systems and Works</u></b>					
636. <b><u>D1.37.1 - Noise and Vibration Isolation</u></b>				<b>181,300</b>	
638. Vibration isolators and ductwork silencers are provided to ensure quiet operation and to ensure noise levels from operation do not exceed above the required levels	518,000	cfm	0.35	181,300	
640. <b><u>D1.37.2 - Mechanical Wiring and Starters</u></b>				<b>0</b>	
642. All starters, motor controls, line and load side wiring by Electrical Contractor			Info only		
644. <b><u>D1.37.3 - Balancing and Commissioning</u></b>				<b>538,900</b>	
646. The HVAC systems are balanced to design flow rates and equipment placed into prime operating condition via enhanced commissioning practices.	215,550	sf	2.50	538,900	
653. <b><u>D1.37.6 - LEED / Sustainability</u></b>				<b>107,800</b>	
655. Allowance for LEED Certification and/or Sustainable Design Administration	215,550	sf	0.50	107,800	
657. <b><u>D1.37.7 - Seismic / Tornado / Hurricane Restraint</u></b>				<b>107,800</b>	
659. Seismic / Hurricane restraints to city standards	215,550	sf	0.50	107,800	
661. <b><u>D1.37.8 - Acoustic Treatments</u></b>				<b>431,100</b>	
663. Provision for duct lagging, vinyl wrap, sound traps and the like	215,550	sf	2.00	431,100	
665. <b><u>D1.37.10 - Generator Support</u></b>				<b>200,000</b>	
667. Provisional sum allowance included for generator support including ventilation, exhaust, Diesel Fuel Oil Fill Station, Fuel Oil Transfer Pump, Fuel Oil Storage Tank, fuel oil piping Sch.40 steel diesel fuel oil, monitoring, commissioning and initial fuel oil fill.	1	ea	200,000.00	200,000	



Keller Auditorium - ZGF 2,800 Seat Program Base

Program Estimate

Detailed Estimate

May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
669. <b><u>D1.37.11 - Smoke Exhaust System</u></b>				<b>431,100</b>	
671. Post smoke purge exhaust system with UL-864 listed control system separate from building BMS and interconnected to building fire alarm system c/w make-up fans and minimal ductwork.	215,550	sf	2.00	431,100	
674. <b><u>D1.37.12 - 24/7 Cooling Systems</u></b>				<b>280,000</b>	
676. Allowance for provision of 24/7 cooling systems	40	tns	7,000.00	280,000	
678. <b><u>D1.38 - Miscellaneous Works and General Accounts</u></b>				<b>5,175,000</b>	
680. Supervision, site office, head office overheads, submittals, clean up, small tools, rentals and the like, rigging and preparation of 3D co-ordination drawings	1	ea	5,175,000	5,175,000	
683. <b>Total for Section D1.3 Heating, Ventilation &amp; Air Conditioning</b>				<b>\$31,048,700</b>	
685. <b><u>D1.4 Controls</u></b>					
687. <b><u>D1.41 - Controls and Automation</u></b>				<b>2,099,400</b>	
689. A Building Automation System (BAS) is provided consisting of direct digital controls. The BAS controls and monitors all HVAC systems and equipment, and various plumbing, fire protection and electrical systems where required. System allows operators to start and stop equipment and automatically control zone temperatures, air and water flow rates. System and system graphics allow full monitoring, trending and reporting of set points, equipment control and alarm functions. Damper and valve actuators are electric / electronic type with direct digital control (DDC). Ventilation rates are controlled by main duct run mounted carbon dioxide sensors (demand ventilation) throughout the facility. Humidification is controlled by humidistats throughout the facility. Metering is provided on electrical and water services above.	215,550	sf	9.74	2,099,400	
691. <b><u>D1.42 - Miscellaneous Works and General Accounts</u></b>				<b>0</b>	
693. Supervision, site office, head office overheads, submittals, clean up, small tools, rentals and the like, rigging and preparation of 3D co-ordination drawings				Included in above rates	
696. <b>Total for Section D1.4 Controls</b>				<b>\$2,099,400</b>	



Keller Auditorium - ZGF 2,800 Seat Program Base

Program Estimate

Detailed Estimate

May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	

D2 Electrical

<b>700. D2.1 Services &amp; Distribution</b>					
<b>702. <u>D2.11 - L.V. Switchboard</u></b>				<b>1,146,000</b>	
704.	2500KVA pad mounted transformer	2	ea	239,000.00	478,000
706.	4000A 277/480V main switchboard c/w main, and feeder breakers	2	ea	334,000.00	668,000
<b>708. <u>D2.12 - Emergency Power</u></b>				<b>925,600</b>	
710.	500kW 277/480V diesel generator in a W/P enclosure located on the roof with a fuel storage, critical grade muffler, etc....	1	ea	433,000.00	433,000
712.	800A 277/480V emergency distribution panel	1	ea	48,000.00	48,000
714.	400A 277/480V ATS c/w bypass feature	2	ea	42,300.00	84,600
716.	Emergency power distribution system consisting of 277/480V distribution panels and mechanical panels, 120/208V lighting and power panels with associated K13 transformer isolated from all production areas.	215,550	sf	1.67	360,000
<b>718. <u>D2.13 - Distribution</u></b>				<b>1,112,100</b>	
720.	Normal power distribution system with 277/480V distribution and lighting panels, 480V mechanical distribution system, 120/208V distribution panels feeding production equipment, 120/208V lighting and power panels. 480V to 120/208V transformers are located away from the performance areas to eliminate noise transmission and submetering system	215,550	sf	3.13	674,700
722.	Normal power distribution system for covered Loading dock c/w	3,500	sf	0.37	1,300
724.	1000kVA 480V to 120/208V transformer	2	ea	68,700.00	137,400
726.	500kVA 480V to 120/208V transformer	1	ea	34,900.00	34,900
728.	2500A 120/208V distribution panel	2	ea	131,900.00	263,800
<b>730. <u>D2.14 - Feeders</u></b>				<b>957,000</b>	
732.	All life safety feeders have a 2 hour fire rating, critical power feeders are copper conductor with required ground and installed in EMT conduit. Flexible conduit and cabling is utilized for final connections to vibrating equipment.	215,550	sf	4.44	957,000



Keller Auditorium - ZGF 2,800 Seat Program Base

Program Estimate

Detailed Estimate

May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
734. <b><u>D2.15 - Motor Controls &amp; Wiring</u></b>				<b>441,600</b>	
736. The electrical division installs loose starters provided by the mechanical division and load and line side wiring for mechanical equipment. Final terminations to any vibrating equipment is	215,550	sf	2.04	439,700	
738. Power connection to dock levelers, overhead doors , etc. ... to support covered loading dock area	3,500	sf	0.54	1,900	
741. <b><u>D2.16 - Miscellaneous</u></b>				<b>174,700</b>	
743. A building grounding system to meet code requirements, and technical grounding system to meet the requirements of the production equipment is provided.	215,550	sf	0.35	75,400	
745. Lightning protection system	1	ea	75,700.00	75,700	
747. Infrastructure for future PV system	1	ea	23,600.00	23,600	
749. <b><u>D2.17 - General Requirements</u></b>				<b>951,000</b>	
751. Supervision, site office, head office overheads, submittals, premium of loss of productivity time, small tools, rentals and the like.	1	sum	951,000	951,000	
755. <b>Total for Section D2.1 Services &amp; Distribution</b>				<b>\$5,708,000</b>	
<b>757. <u>D2.2 Lighting, Devices &amp; Controls</u></b>					
759. <b><u>D2.21 - Lighting</u></b>				<b>8,133,100</b>	
761. <u>General</u>					
763. Lighting in the public areas consists of decorative ambient lighting is provided by the use of decorative recessed, wall mounted fixtures with energy efficient LED; lighting in the private room areas is provided by recessed direct / indirect fixtures. Lighting in storage, back of house and service areas is provided using standard suspended industrial LED fixtures.					
765. Exit lights and emergency lighting control are provided to meet code requirements. Emergency battery units are provided in mechanical and electrical rooms.					
767. Supply and installation of LED fixtures within performance space	43,045	sf	62.49	2,689,900	



Keller Auditorium - ZGF 2,800 Seat Program Base

Program Estimate

Detailed Estimate

May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
769. Supply and installation of LED fixtures within FOH public	54,165	sf	58.18	3,151,300	
771. Supply and installation of LED fixtures within rehearsal and dressing rooms c/w branch wiring	14,860	sf	39.34	584,600	
773. Supply and installation of LED fixtures within gift shop, concessions, donor spaces, etc... c/w branch wiring	8,945	sf	28.10	251,400	
775. Supply and installation of LED fixtures within offices and meeting rooms c/w branch wiring	9,920	sf	22.48	223,000	
777. Supply and installation of LED fixtures within control, dimmer, green, etc.... rooms c/w branch wiring	2,485	sf	19.67	48,900	
779. Supply and installation of LED fixtures within public washrooms	8,935	sf	16.86	150,600	
781. Supply and installation of LED fixtures within BOH circulation c/w	28,595	sf	16.15	461,800	
783. Supply and installation of LED fixtures within service rooms c/w	38,990	sf	14.05	547,800	
785. Inaccessible area - N/A	5,610	sf			
787. Supply and installation of LED fixtures within covered loading dock	3,500	sf	6.80	23,800	
789. <b><u>D2.22 - Branch Devices &amp; Wiring</u></b>				<b>1,141,200</b>	
791. General maintenance receptacles are provided throughout the facility. Receptacles for office, dressing rooms... are provided to accommodate the specific usage of each area. 20A dimming circuits are provided in the performance areas to accommodate the production requirements. 50% of plug loads will be switched as per ASHRAE 90.1 2013 requirements.	215,550	sf	3.35	722,100	
793. A central programmable lighting control and dimming system for lighting control in the public areas is provided. Service and non public areas have lighting controlled by central LV switching and occupancy sensors.	215,550	sf	1.90	409,500	
795. Supply and installation of receptacle/power connection and lighting control devices within covered loading dock	3,500	sf	2.75	9,600	
797. <b><u>D2.23 - Heating</u></b>				<b>0</b>	
799. Electric heating is achieved by units supplied by Mechanical. The electrical division installs, wires and terminates these unit (included above).					





Keller Auditorium - ZGF 2,800 Seat Program Base

Program Estimate

Detailed Estimate

May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
801. <b><u>D2.24 - General Requirements</u></b>				<b>1,855,000</b>	
803. Supervision, site office, head office overheads, submittals, premium of loss of productivity time, small tools, rentals and the like.	1	sum	1,855,000	1,855,000	
806. <b><u>Total for Section D2.2 Lighting, Devices &amp; Controls</u></b>				<b>\$11,129,300</b>	

808. <b><u>D2.3 Systems &amp; Ancillaries</u></b>					
810. <b><u>D2.31 - Fire Alarm System</u></b>					<b>893,300</b>
812. A two stage addressable fire alarm EVAC system is provided in the facility to suit local code requirements. System includes central panel, annunciator, speakers/horns/strobes, heat/smoke detectors, pull stations... throughout.	215,550	sf	3.09	666,000	
814. Fire responders distributed antenna system	215,550	sf	1.03	222,000	
816. Supply and installation of fire alarm devices within covered	3,500	sf	1.50	5,300	
818. <b><u>D2.32 - Security System</u></b>					<b>895,100</b>
820. A security access and CCTV system are provided to suit the end user needs. It is assumed that this system monitors exterior doors, provides access through security doors only and provide cameras to monitor the building perimeter only.	215,550	sf	4.12	888,100	
822. Supply and installation of security devices within covered loading	3,500	sf	2.00	7,000	
824. <b><u>D2.33 - Communications</u></b>					<b>896,000</b>
826. <b><u>General</u></b>					
828. The electrical division provides an infrastructure raceway system to accommodate a CAT 6 structured cabling system with horizontal and backbone cabling throughout the facility to meet the clients requirements. Telephony and active hardware is provided by others.	215,550	sf	4.12	888,100	
830. Supply and installation of communication outlets c/w associated structured cabling within covered loading dock	3,500	sf	2.25	7,900	
832. <b><u>Clock</u></b>					
834. A clock system is not required. Time is displayed by the information screens and/or PC devices.					



Keller Auditorium - ZGF 2,800 Seat Program Base

Program Estimate

Detailed Estimate

May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
836. <b><u>D2.34 - P.A. System</u></b>				<b>2,241,700</b>	
838. The electrical division provides a complete empty raceway infrastructure to accommodate a general paging system for non production paging throughout the facility. Paging equipment is provided by others.	215,550	sf	0.51	109,900	
840. <b><u>Audio/Visual - Performance</u></b>					
842. The electrical division provides a complete empty raceway infrastructure to accommodate the intercom, program audio/visual, assisted listening, integrated controls and portable equipment. A complete cable pass through system provides routing for broadcast and recording cabling. The equipment costs are included in Architectural estimate	215,550	sf	9.89	2,131,800	
844. <b><u>D2.35 - Miscellaneous</u></b>				<b>0</b>	
846. Miscellaneous systems such as Night Delivery system, clocks, etc. are not required in the facility.					
849. <b><u>D2.36 - General Requirements</u></b>				<b>985,000</b>	
851. Electrical subcontractor's supervision, site office, head office overheads, submittals, premium of loss of productivity time, small tools, rentals and the like.	1	sum	985,000.00	985,000	
855. <b>Total for Section D2.3 Systems &amp; Ancillaries</b>				<b>\$5,911,100</b>	

E EQUIPMENT

E1 Equipment

862. <b>E1.1 Performance Equipment &amp; Seating</b>		per Shalleck Collaborative			
864. <b>Main Theatre</b>					
866. Production rigging	1	ls	2,300,000.00	2,300,000	
867. (76) general purpose battens					
868. (4) side batterns					
869. manual counterweight with compensating chains					
870. (3) traveler tracks, motorized framed proscenium fire safety curtain installed					
872. Orchestra pit lifts - (1) main and (1) extension	1	ls	900,000.00	900,000	
874. Seating wagons	1	ls	450,000.00	450,000	



Keller Auditorium - ZGF 2,800 Seat Program Base

Program Estimate

Detailed Estimate

May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
876. Production lighting control	1	ls	400,000.00	400,000	
878. Fixed & loose theatre seating - 2805 upholstered seats	1	ls	1,825,000.00	1,825,000	
880. Production av systems	1	ls	2,000,000.00	2,000,000	
882. Variable acoustics	1	ls	3,000,000.00	3,000,000	
884. <b>Rehearsal Hall</b>					
886. Production lighting control	1	ls	75,000.00	75,000	
888. Production a/v systems	1	ls	50,000.00	50,000	
890. <b>Balance</b>					
892. Building Wide A/V Systems					
894. Production av systems	1	ls	100,000.00	100,000	
896. Fixtures, Furniture & Equipment					
898. Stage draperies	1	ls	250,000.00	250,000	
900. Production lighting fixtures	1	ls	1,000,000.00	1,000,000	
902. Portable a/v equipment	1	ls	350,000.00	350,000	
904. Escalation from June 2023 to May 2024 dollars	1	ls	508,000.00	508,000	4% escalation
907. <b>Total for Section E1.1 Performance Equipment &amp; Seating</b>				<b>\$13,208,000</b>	

909. <b>E1.2 AV Equipment</b>					
911. AV equipment				elsewhere	w/ section E1.1
915. <b>Total for Section E1.2 AV Equipment</b>				<b>\$0</b>	

**E2 Miscellaneous Equipment**

919. <b>E2.1 Miscellaneous Equipment</b>					
921. Food service and bar equipment	1	ls	500,000.00	500,000	allowance
923. Loading dock equipment	3	ea	20,000.00	60,000	

**Keller Auditorium - ZGF 2,800 Seat Program Base  
Program Estimate**

Detailed Estimate

May 22, 2024

Description	Program Estimate			Remarks
	Quantity	Unt	Rate	
925. Security and communication equipment				see electrical
928. <b>Total for Section E2.1 Miscellaneous Equipment</b>				<b>\$560,000</b>

**F DEMOLITION & TEMPORARY CONSTRUCTION**

**F1 Demolition & Temporary Construction**

934. <b>F1.1 Demolition</b>				
936. Demolition of existing buildings on site				0 excluded
939. <b>Total for Section F1.1 Demolition</b>				<b>\$0</b>

942. <b>F1.2 Temporary Construction</b>				
944. Assumed all included in general requirements				elsewhere
947. <b>Total for Section F1.2 Temporary Construction</b>				<b>\$0</b>

**G GENERAL REQUIREMENTS**

952. <b>G1.1 Equipment &amp; Rentals</b>				
954. Cranes/hoisting	1	ls	3,000,000.00	3,000,000
956. Scaffolding				
957. Multi-Function Theatre - 2800 seats	1	ls	1,050,000.00	1,050,000
958. lobby	1	ls	600,000.00	600,000
961. <b>Total for Section G1.1 Equipment &amp; Rentals</b>				<b>\$4,650,000</b>

963. <b>G1.2 Project Overhead Items</b>				
965. Temporary cooling	1	ls	75,000.00	75,000 allowance
967. Subguard	1	ls	3,175,000.00	3,175,000 1-1/2% allowance
969. Non-trade items:	1	ls	4,235,000.00	4,235,000 2% allowance
970. temporary protection of finishes				incl
971. cleaning				incl
972. sediment control				incl
973. construction fence				incl
974. temporary roads				incl
975. street cleaning				incl



Keller Auditorium - ZGF 2,800 Seat Program Base

Program Estimate

Detailed Estimate

May 22, 2024

Description	Program Estimate				Remarks
	Quantity	Unt	Rate	Amount	
977. Mock-ups	1	ls	350,000.00	350,000	
980. <b>Total for Section G1.2 Project Overhead Items</b>				<b>\$7,835,000</b>	

H SITEWORKS & UTILITIES

985. <b>H1.1 Siteworks</b>					
987. Hard and soft landscaping (site area minus bldg footprint)	1	ls	5,000,000.00	5,000,000	80,400 sf, allowance
990. <b>Total for Section H1.1 Siteworks</b>				<b>\$5,000,000</b>	

993. <b>H1.2 Mechanical Utilities</b>					
995. <b>H1.21 - Water</b>				<b>125,000</b>	
997. Allowance for new incoming water service from adjacent street and lateral to building complete with weather proof water meter chamber complete with backflow preventer / water meter assembly and required valving arrangement	1	ls	125,000.00	125,000	
999. <b>H1.22 - Sanitary</b>				<b>125,000</b>	
1001. Allowance for new sanitary service from adjacent street and lateral to building complete with manhole at point of connection	Allowance			125,000	
1004. <b>H1.23 - Storm</b>				<b>350,000</b>	
1006. Allowance to connect to existing storm structures in adjacent street and lateral to building complete with manholes, catch basin, trench drains, etc. as required	Allowance			350,000	
1008. <b>H1.24 - Natural Gas</b>				<b>0</b>	
1010. No work required.					
1013. <b>H1.25 - Specialty Systems</b>				<b>300,000</b>	
1015. Provisional sum allowance for Irrigation including Lawn - Sprinkler irrigation, Trees / shrubs / perennials	Allowance			300,000	



**Keller Auditorium - ZGF 2,800 Seat Program Base**  
**Program Estimate**

Detailed Estimate

May 22, 2024

Description	Program Estimate			Remarks
	Quantity	Unt	Rate	
1018. <b>H1.26 - Miscellaneous Works and General Accounts</b>				0
1020. Included in above rates				
1024. <b>Total for Section H1.2 Mechanical Utilities</b>				<b>\$900,000</b>

1027. <b>H1.3 Electrical Utilities</b>				
Description	Quantity	Unt	Rate	Amount
1031. <u>Property Site</u>				
1033. Allowance for Utility connection and cable charge	1	sum	136,000.00	136,000
1035. Concrete pad and grounding	1	ea	11,000.00	11,000
1037. Primary and secondary duct banks complete with associated feeders	1	sum	155,000.00	155,000
1039. Level 3 EV charging stations complete with infrastructure	5	ea	76,000.00	380,000
1041. <b>H1.32 - Site - Communications</b>				<b>99,000</b>
1043. <u>Property Site</u>				
1045. A concrete encased ductbank is provided for incoming communication	1	sum	51,000.00	51,000
1047. Allowance for exterior rated CCTV cameras	1	sum	48,000.00	48,000
1049. <b>H1.33 - Site - Lighting</b>				<b>146,000</b>
1051. <u>Property Site</u>				
1053. Allowance for site lighting consisting of decorative exterior wall sconce and linear fixtures, pole mounted parking lot heads, façade lighting, etc....	1	sum	146,000.00	146,000
1055. <b>H1.34 - Site - General Requirements</b>				<b>0</b>
1057. Included in above rates				
1061. <b>Total for Section H1.3 Electrical Utilities</b>				<b>\$927,000</b>

**Keller Auditorium - Urban Renaissance/ZGF 2,800 Seat Program Base at Lloyd Center  
Program Estimate**

Summary of Interior Finishes

May 22, 2024

Program Spaces	Floor Finish 1	Floor Finish 1 %	Floor Finish 2	Floor Finish 2 %	Base 1	Base 1 %	Base 2	Base 2 %	Wall Finish 1	Wall Finish 1 %	Wall Finish 2	Wall Finish 2 %	Wall Finish 3	Wall Finish 3 %	Wall Finish 4	Wall Finish 4 %	Ceiling 1	Ceiling 1 %	Ceiling 2	Ceiling 2 %	Ceiling 3	Ceiling 3 %
Multi-Function Theatre - 2800 seats	sealed & polished conc (scofield)	100%	carpet to steps and aisles in auditorium	33%	wood base to auditorium	100%	none	0%	wood panelling	40%	1" fwp FOH	0%	painted shaped gypsum to auditorium	30%	proscenium surround to mf	100%	ceiling reflectors to mf hall	40%	painted gyp with skim coat plaster ceiling	60%	2" ductliner (ceiling)	60%
Stage - Multi-Function (95' hi roof)	¾" renewresources "stageboard" on two layers of 3/4" thick tongue and groove, structural 1 grade, 7-ply marine plywood on 2x4 sleepers	100%	none	0%	wood base	100%	none	0%	paint to stagehouse walls	100%	none	0%	none	0%	none	0%	exposed ceiling, ptd black TO STAGEHOUSE	100%	none	0%	none	0%
Orchestra Pit	¾" renewresources "stageboard" on two layers of 3/4" thick tongue and groove, structural 1 grade, 7-ply marine plywood on 2x4 sleepers	100%	none	0%	wood base	100%	none	0%	1" fwp FOH	100%	none	0%	none	0%	none	0%	2" fwp	70%	none	0%	none	0%
Box Office/Coats	carpet tile	100%	none	0%	rubber base	100%	none	0%	painted gyp lvl 4	100%	none	0%	none	0%	none	0%	acoustic tile (foh)	100%	none	0%	none	0%
Lobbies/Public Circulation	terrazzo	100%	none	0%	terrazzo base	100%	none	0%	wood panelling	30%	1" fwp FOH	0%	painted shaped gypsum to lobbies	40%	none	0%	acoustic plaster to lobbies	100%	none	0%	none	0%
Public S&LL'S	carpet	100%	none	0%	wood base	100%	none	0%	1" fwp FOH	50%	painted gyp lvl 5	0%	none	0%	none	0%	acoustic tile (foh)	100%	none	0%	none	0%
Concessions/Bar	terrazzo	100%	none	0%	terrazzo base	100%	none	0%	wood panelling	30%	1" fwp FOH	0%	painted shaped gypsum to lobbies	40%	none	0%	acoustic plaster to lobbies	100%	none	0%	none	0%
Public Restrooms	porcelain tile	100%	none	0%	tile base foh	100%	none	0%	ceramic tile (walls) (foh)	100%	none	0%	none	0%	none	0%	painted gyp with skim coat plaster ceiling	100%	none	0%	none	0%
Café	terrazzo	100%	none	0%	terrazzo base	100%	none	0%	wood panelling	30%	1" fwp FOH	0%	painted shaped gypsum to lobbies	40%	none	0%	acoustic plaster to lobbies	100%	none	0%	none	0%
Donor Room	wood flooring	80%	custom carpet	20%	wood base	100%	none	0%	wood panelling	50%	1" fwp FOH	0%	none	0%	none	0%	acoustic plaster to lobbies	100%	none	0%	none	0%
Gift Shop	terrazzo	100%	none	0%	terrazzo base	100%	none	0%	painted gyp lvl 5	100%	none	0%	none	0%	none	0%	painted gyp with skim coat plaster ceiling	100%	none	0%	none	0%
Large rehearsal room (1 #)	¾" renewresources "stageboard" on two layers of 3/4" thick tongue and groove, structural 1 grade, 7-ply marine plywood on 2x4 sleepers	100%	none	0%	wood base	100%	none	0%	1" fwp to boh	30%	painted shaped gypsum to rehearsal rooms	0%	none	0%	none	0%	acoustic tile high nrc (boh)	100%	none	0%	none	0%
Small rehearsal room (1 #)	¾" renewresources "stageboard" on two layers of 3/4" thick tongue and groove, structural 1 grade, 7-ply marine plywood on 2x4 sleepers	100%	none	0%	wood base	100%	none	0%	1" fwp to boh	30%	painted shaped gypsum to rehearsal rooms	0%	none	0%	none	0%	acoustic tile high nrc (boh)	100%	none	0%	none	0%

**Keller Auditorium - Urban Renaissance/ZGF 2,800 Seat Program Base at Lloyd Center**

**Program Estimate**

**Program Net to Gross Area Calculations**

**May 22, 2024**

<b>Program Space Name</b>		<b>Net Prog</b>	<b>Multi</b>	<b>Gross Sf</b>	<b>Notes</b>
<b>Summary of Programmed Spaces - using 2,800 seat program as a basis</b>					
<b>FRONT OF HOUSE - COMMON</b>					
100	PUBLIC SPACES: LOBBY	25,300	1.12	28,405	
110	PUBLIC SPACES: LOBBY SUPPORT	8,480	1.25	10,595	
120	PUBLIC SPACES: RECEPTION AREAS	7,890	1.10	8,700	
130	PUBLIC SPACES: STAFF SUPPORT AREAS	2,350	1.16	2,720	
200	PERFORMANCE SPACE: AUDITORIUM	29,100	1.15	33,460	
210	STAGE	16,090	1.14	18,270	
300	STAGE SUPPORT SPACES	3,500	1.14	3,995	
400	PERFORMER SUPPORT	17,540	1.13	19,850	
500	WORKSHOPS	3,250	1.14	3,705	
600	SERVICES	3,350	1.11	3,705	
700	ADMINISTRATION	2,200	1.12	2,460	
<b>Total Of Programmed Spaces</b>		<b>119,050</b>	<b>1.14</b>	<b>135,865</b>	
<b>Other Required Spaces</b>					
	Front-Of-House Circulation	22,400	1.15	25,760	
	Back-Of-House Circulation			28,115	
	<i>boh circulation/corridors</i>			0	
	<i>boh S&amp;LL's</i>			0	
	<i>boh stairs</i>			0	
	<i>stage/flytower/egress</i>				
	<i>egress</i>				
	<i>boh elevators</i>			0	
	Mechanical And Electrical			20,380	
	Unusable/Inaccessible			5,430	
	Plenum			0	
<b>Total of Other Required Spaces</b>				<b>79,685</b>	
<b>Overall Total</b>		<b>119,050</b>	<b>1.81</b>	<b>215,550</b>	
<b>FRONT OF HOUSE - COMMON</b>					
<b>100</b>	<b>PUBLIC SPACES: LOBBY</b>				
101	Building Entry Vestibules	2,500	1.15	2,875	
102a	Orchestra Main Foyer	10,500	1.10	11,550	
102b	Orchestra SLLs	600	1.35	810	
102c	Parterre Foyer			0	
102d	Parterre SLLs	200	1.35	270	
103a	Box Foyer			0	
103b	Box SLLs	200	1.35	270	
104a	First Balcony Foyer	5,250	1.10	5,775	



**Keller Auditorium - Urban Renaissance/ZGF 2,800 Seat Program Base at Lloyd Center**

**Program Estimate**

**Program Net to Gross Area Calculations**

**May 22, 2024**

	<b>Program Space Name</b>	<b>Net Prog</b>	<b>Multi</b>	<b>Gross Sf</b>	<b>Notes</b>
104b	First Balcony SLLs	400	1.35	540	
105a	Second Balcony Foyer	5,250	1.10	5,775	
105b	Second Balcony SLLs	400	1.35	540	
	<b>Total PUBLIC SPACES: LOBBY</b>	<b>25,300</b>	<b>1.12</b>	<b>28,405</b>	
<b>110</b>	<b>PUBLIC SPACES: LOBBY SUPPORT</b>				
111	Box Office	400	1.10	440	
112	Gift Shop/Merch	400	1.10	440	
113	Coat Room	470	1.10	515	
114	Concessions	500	1.10	550	
115	Concessions/Food Cart Storage	450	1.10	495	
116	Restrooms - Women	3,480	1.30	4,525	
117	Restrooms - Men	2,480	1.30	3,225	
118	Restrooms - Gender Neutral	300	1.35	405	
	<b>Total PUBLIC SPACES: LOBBY SUPPORT</b>	<b>8,480</b>	<b>1.25</b>	<b>10,595</b>	
<b>120</b>	<b>PUBLIC SPACES: RECEPTION AREAS</b>				
121	Donor's Room	2,200	1.10	2,420	
121a	Bar	200	1.10	220	
121b	Storage	275	1.10	305	
121c	Catering	375	1.10	415	
122	Servery	250	1.15	290	
123	Reception/Press Room	400	1.10	440	
124	Kitchen	1,560	1.10	1,715	
125	Café	2,330	1.10	2,565	
126	Critic Rooms	300	1.10	330	
	<b>Total PUBLIC SPACES: RECEPTION AREAS</b>	<b>7,890</b>	<b>1.10</b>	<b>8,700</b>	
<b>130</b>	<b>PUBLIC SPACES: STAFF SUPPORT AREAS</b>				
131	House Manager Head Usher	150	1.10	165	
132	Usher Meeting Room/Storage	400	1.10	440	
133	FOH Storage/Program Assembly	500	1.10	550	
134	First Aid Room	150	1.15	175	
135	Ushers Changing Room	300	1.10	330	
136	Custodial	500	1.35	675	
137	Volunteers Room	350	1.10	385	
	<b>Total PUBLIC SPACES: STAFF SUPPORT AREAS</b>	<b>2,350</b>	<b>1.16</b>	<b>2,720</b>	
<b>200</b>	<b>PERFORMANCE SPACE: AUDITORIUM</b>				
201A	Orchestra/Parterre	13,300	1.15	15,295	
210b	In House Mix	200	1.15	230	

**Keller Auditorium - Urban Renaissance/ZGF 2,800 Seat Program Base at Lloyd Center**

**Program Estimate**

**Program Net to Gross Area Calculations**

**May 22, 2024**

<b>Program Space Name</b>		<b>Net Prog</b>	<b>Multi</b>	<b>Gross Sf</b>	<b>Notes</b>
202	Boxes	3,000	1.15	3,450	
203	First Balcony	6,750	1.15	7,760	
204	Second Balcony	5,850	1.15	6,725	
	<b>Total PERFORMANCE SPACE: AUDITORIUM</b>	<b>29,100</b>	<b>1.15</b>	<b>33,460</b>	
<b>210</b>	<b>STAGE</b>				
211a	Stage	6,000	1.15	6,900	
211b	Counterweight Pit	400	1.15	460	
211c	Staging	2,000	1.10	2,200	
211d	Apron	350	1.10	385	
211e	Stage Manager Console Position	150	1.10	165	
211f	Crossover Aisle	1,200	1.15	1,380	
	Lighting			0	
	Grid & Rigging			0	
	Proscenium Opening			0	60' long
212a	Orchestra Pit	1,600	1.15	1,840	
212b	Orchestra Pit Storage	300	1.10	330	
212c	Seat Wagon Storage	1,750	1.10	1,925	
213	Stage Floor Traps/Trap Room	1,600	1.10	1,760	
214	Lighting Control Booth	150	1.20	180	
215	Director's Booth	120	1.25	150	
216	Stage Manager Booth	120	1.25	150	
217	Supertitle Booth	80	1.25	100	
218	Sound Control Booth	120	1.25	150	
219	Follow Spot Booth	150	1.30	195	
	<b>Total STAGE</b>	<b>16,090</b>	<b>1.14</b>	<b>18,270</b>	
<b>300</b>	<b>STAGE SUPPORT SPACES</b>				
301	Production/Technical office	600	1.10	660	
302	Crew Room	600	1.10	660	
303	BOH Catering	300	1.10	330	
304	Changing Rooms & Lockers	400	1.10	440	
305	Props Shop	200	1.10	220	
306	Painter's closet	100	1.15	115	
307	Backstage Toilets	600	1.30	780	
308	Quick Change rooms	300	1.15	345	
309	Visiting Staff Offices	300	1.10	330	
310	Special Effects Room	100	1.15	115	
	<b>Total STAGE SUPPORT SPACES</b>	<b>3,500</b>	<b>1.14</b>	<b>3,995</b>	
<b>400</b>	<b>PERFORMER SUPPORT</b>				

**Keller Auditorium - Urban Renaissance/ZGF 2,800 Seat Program Base at Lloyd Center**

**Program Estimate**

**Program Net to Gross Area Calculations**

**May 22, 2024**

	<b>Program Space Name</b>	<b>Net Prog</b>	<b>Multi</b>	<b>Gross Sf</b>	<b>Notes</b>
401	Stage Door/ Receiving	300	1.10	330	
402	Green Room	600	1.10	660	
403	Principal/Double w W/C and Piano	440	1.20	530	
404	Principal-2 Person w W/C	1,400	1.20	1,680	
405	4-Person Dressing	1,500	1.15	1,725	
406	15-Person Dressing	1,400	1.20	1,680	
407	24-Person Chorus Dressing Rooms	1,800	1.15	2,070	
408	Therapy Room	300	1.10	330	
409	Makeup Room/ Wig Room	400	1.10	440	
410	Coaching Room	250	1.10	275	
411	Wardrobe	500	1.10	550	
412	Warm up	350	1.15	400	
413	Performer's Lounge	800	1.10	880	
414	Artist's Lounge	1,000	1.10	1,100	
415	Instrument Storage	400	1.10	440	
416	Storage	250	1.10	275	
417	Rehearsal Hall 1	4,550	1.10	5,005	
418	Rehearsal Hall 2	1,000	1.15	1,150	
419	Rehearsal Hall Storage Room	300	1.10	330	
	<b>Total PERFORMER SUPPORT</b>	<b>17,540</b>	<b>1.13</b>	<b>19,850</b>	
<b>500</b>	<b>WORKSHOPS</b>				
501	Stage Department Shop	500	1.10	550	
502	Theatrical Equipment Storage	1,000	1.15	1,150	
503	Lighting Equipment Storage	500	1.15	575	
504	Sound Shop	250	1.15	290	
505	Sound Equipment Storage	500	1.10	550	
506	Sound Support Spaces	300	1.20	360	
507	Lighting Electrical Room	200	1.15	230	
	<b>Total WORKSHOPS</b>	<b>3,250</b>	<b>1.14</b>	<b>3,705</b>	
<b>600</b>	<b>SERVICES</b>				
601	Freight Elevator	150	1.20	180	
602	Security Closet	100	1.15	115	
603	Receiving/Dock	2,000	1.10	2,200	
604	Temporary Storage	1,100	1.10	1,210	
	<b>Total SERVICES</b>	<b>3,350</b>	<b>1.11</b>	<b>3,705</b>	
<b>700</b>	<b>ADMINISTRATION</b>				
701	Building Operations Suite	500	1.10	550	
702	Building Services Loading Dock	500	1.10	550	

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<b>Program Space Name</b>		<b>Net Prog</b>	<b>Multi</b>	<b>Gross Sf</b>	<b>Notes</b>
703	Receiving	300	1.10	330	
704	Trash/Recycling	800	1.15	920	
705	Security at Stage Door	100	1.10	110	
	<b>Total ADMINISTRATION</b>	<b>2,200</b>	<b>1.12</b>	<b>2,460</b>	