



Thomas Wolfe Auditorium

**Order-of-Magnitude Estimates
Thomas Wolfe Auditorium
Asheville, NC**

10 July 2015



Thomas Wolfe Auditorium

Index

**Order-of-Magnitude Estimates
Thomas Wolfe Auditorium
Asheville, NC**

10 July 2015

INDEX	PAGE
Introduction	1 - 4
Estimate Summary Moderate Renovation	5
Detailed Estimate Moderate Renovation	6 - 9
Estimate Summary Major Renovation	10 - 11
Detailed Estimate Major Renovation	12 - 17

© Venue, for circulation on this project only

Introduction

Venue was commissioned by Threshold Acoustics LLC to prepare an order-of-magnitude estimate for the acoustical renovation scope of work envisaged for the Thomas Wolfe Auditorium.

Basis

Threshold Acoustics LLC reports and sketches formed the basis of this estimate. Input was sought and received on structural engineering issues and incorporated in the cost estimate. Additionally, original design documents prepared by Lindsey-Madison-Grudger Architects, dated August 10, 1938 were relied upon for “as-is” building architecture, configuration and structural details.

Financial Summary

The estimate summaries of construction costs for the two scope of work packages, Moderate Renovation and Major Renovation, are included on pages 5 and 10, respective, of this report. Detailed estimates for the two work packages begin on page 6 for the Moderate Renovation and page 12 for the Major Renovation.

Estimate Methodology

This order-of-magnitude cost estimate was developed based on approximate quantities measured for the various work packages including building renovation and new work for architectural/engineering/acoustical and theater planning scopes of work. Reference was made to Threshold Acoustics LLC reports/sketches for possible parameters of renovation and new work envisaged. It should be noted that this is a very broad brush and approximate estimate of construction cost based on the commensurate level of information available. The estimate has been priced on the basis that each work package will be carried out by a General Contractor/Construction Manager in one continuous construction duration for that particular work package and that the required building area is available to the contractor unimpeded. No attempt has been made to assess phasing/schedule/overtime premiums should any particular work package be constructed in a piecemeal fashion involving more than one mobilization and de-mobilization by the General Contractor/Construction Manager. This issue needs to be assessed once the scope/schedule of the work packages has been determined and approved by the Owner. No provision has been made for seismic upgrades of the structure.

Documentation

The following Threshold Acoustics LLC documentation was utilized in this estimate:

- Scope of work analysis (“Memo: Note to accompany pricing sketches”) dated 4 June 2015
- Sketches dated 4 June 2015
- Various e-mails dated June 2015

The following Walter P. Moore and Associates Inc. documentation was utilized in this estimate:

- Structural evaluation and recommendations report dated 6 July 2015
- Historic design documents prepared by Lindsey-Madison-Grudger Architects dated 10 August 1938
- Various e-mails dated June 2015

Estimate Inclusions

Construction Costs:

- Building renovation work
- Staging, accessibility & protection
- Design/pricing contingency
- General conditions, overhead and profit
- Construction change order contingency
- Escalation to July 2018

Estimate Exclusions

Project and soft costs more specifically described as:

- Costs associated with seismic upgrades, if required
- Phasing, schedule and overtime premiums for work package piecemeal operation
- Owner purchase loose FF&E
- Permits and associated fees
- Testing/inspections expenses
- Soil borings, geotech, site and utility surveys
- Contaminated soil/hazardous materials treatment including asbestos abatement/disposal
- Commissioning
- Professional fees and reimbursables
- Construction administration expenses
- Models, mockups, renderings
- Finance expenses
- Fundraising
- Legal fees and expenses
- Public relations
- Staff expenses
- Moving expenses
- Client overall project contingency
- Endowment/subsidies

Definitions and Assumptions

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

- Building renovation work: structure; building interiors includes partitions/doors, stairs/steps/finishes;
- Mechanical systems as follows: the plumbing and drainage estimate includes for high quality low water consumption plumbing fixtures to replace existing in renovated washrooms, and add for additional in new washrooms including showers and electronically activated lavatories, urinals and water closets of commercial robust quality; connections to existing domestic hot, cold and recirculation potable water piping to fixtures and fittings throughout; gravity flow sanitary waste (and vent) collection system from fixtures, fittings, floor drains and equipment throughout connected existing in vicinity (drainage unable to flow by gravity will be pumped, pumps included in Major Renovation estimate); drains to serve Loading Dock areas are included in the Moderate Renovation with additional drains to serve the Performer Access and Crossover Corridor in the Major Renovation. Demolition of existing plumbing and drainage piping / fixtures is included; fire protection includes: sprinkler head coverage will be modified to suit new ceilings / layouts; it is assumed existing service will be extended to suit additions; existing fire department valves / fire hose cabinets will remain in situ; fire extinguishers will remain in situ.

Verizon Hall – Kimmel Center

-
- Demolition of existing sprinkler piping / heads in renovation areas is included; the mechanical H.V.A.C. system estimate includes for the following: existing air handling units, ductwork distribution and diffusion will be removed in the renovated spaces - Auditorium will be complete with 2 new custom rooftop mounted constant air volume (CAV) air handling units (AHU's) with chilled water cooling, hot water heating sections, VFD's, access corridor, etc. Allowances have been included for HVAC system to serve new Loading Dock. New ductwork distribution will be installed in soffits (by G.C.) to serve balcony level. Ductwork will connect to existing ductwork on the underside of balcony. New air distribution devices will be provided throughout the auditorium - connections to existing heating / chilled water systems will be provided and it is assumed the central plant has enough capacity for all renovations - the stage will be provided with a new CAV AHU located in basement, with a high level supply, low level return air distribution system - dressing rooms will be provided with a new VAV AHU located in basement, with conventional overhead supply air with VAV terminals. An air to air heat exchanger will be provided to serve dressing room / washroom exhausts to recapture waste energy - allowances have been included in the major renovation estimate for HVAC system to serve new Performer Access, Crossover Corridor, Basement Symphony Offices and Conference rooms and lounges - new/ renovated Washrooms and mechanical / electrical rooms will be provided with exhaust fans / dampers - provision for acoustic treatments such as silencers, duct lagging and the like for acoustical control will be provided - balancing and commissioning of systems / equipment; new equipment will be reconnected to existing base building BAS by nominated controls vendor. Exterior to building: a trench drain will be installed for the loading dock addition in the Moderate Renovation scope.
 - Electrical Distribution and Services: the existing 277/480V switchboard will provide power to the new mechanical equipment at 480V, lighting and production equipment power at 120/208V. The existing stage production panels will be replaced by new panels in a relocated position on stage right. Existing emergency lighting and power panels will provide emergency power for life safety loads in the building. The existing circuitry will be tagged and new panel directories will be provided. Power load and line side wiring will be provided to the mechanical units from the mechanical distribution panels. The building grounding, technical grounding system will be upgraded for the production equipment; Lighting, Devices and Heating: lighting will generally be provided using energy efficient LED fixtures throughout. These fixtures will be fed from the normal power lighting panels. Life safety lighting will be powered from the emergency power system. Lighting control will generally be provided using a central LV control system and local occupancy and daylight sensors. These controls will be interfaced with the production dimming systems. Devices will be installed to meet general maintenance and specialty requirements for production facilities. Wiring for 20A dimmer circuits will be run from the dimmer racks to the outlets in the theatre areas with the rigging power circuitry. Dimmer racks will be provided as part of the equipment provided in the production equipment package; Systems and Ancillaries: the existing addressable Fire Alarm, security access control and CCTV system will be provided modified to accommodate the layout of the revised facility. Communications conduit and CAT 6 structured cabling will be provided to accommodate the new communication outlets. A complete conduit and wiring system for the production equipment and AV will be provided to accommodate the new production equipment. Supply and installation of production and telephone equipment will be provided by others.
 - Staging, accessibility & protection allowance includes for each work packages' particular conditions/level of difficulty that the General Contractor/Construction Manager will encounter with regard to materials delivery, equipment placing etc.



Verizon Hall – Kimmel Center

- Design/pricing contingency allows for ongoing design detailing that will occur until drawings are complete by the design team and for quantity measurement and pricing adjustments
- General conditions, overhead and profit includes all requirements for the General Contractor/Construction Manager, at a competitive rate
- Construction change order contingency includes for coordination conflicts on the drawings and other errors and omissions that may occur during the construction phase of the project

Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate Rev 1
Construction Cost Summary - Moderate Renovation **January 14, 2016**

<i>Description</i>	<i>Amount</i>
1 Ceiling Revisions	\$4,396,022
2 Mechanical Systems	\$287,910
3 Cheek Walls	\$737,710
4 Side Walls	\$30,425
5 Variable and Permanent Acoustic Treatments	\$730,573
6 Seating	\$1,576,648
7 Stage Extension	\$259,738
8 Proscenium	\$109,492
9 Orchestra Shell	\$1,126,848
10 Rigging	\$3,019,765
11 Dressing Room Renovation and Expansion	\$861,381
12 Reconfigure Balcony	\$1,376,633
13 Loading Dock Addition	\$1,349,025
12 Paint	\$38,688
13 Restrooms	\$209,406
14 Mechanical Systems	\$4,925,452
15 Electrical Systems	\$2,482,258
16 A/V Equipment and Performance Lighting	\$6,479,376
Overall Cost in July 2018 Construction Dollars	<u><u>\$29,997,350</u></u>

NOTE: Phasing, schedule and overtime premiums are not included and need to be assessed once the scope of the project has been determined by the Owner.

**Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate**

Detailed Estimate - Moderate Renovation Project

July 10, 2015

<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Amount</i>	<i>Remarks</i>
				2,340,700	
Ceiling Revisions					
Remove existing plaster including support structure	14,950	sf	3.50	52,300	
Remove brick infill along upper galleries, both sides, to expose original fenestrations; assume existing structural elements remain as-is	430	sf	12.00	5,200	per 1938 drawings
Install 4 layers drywall to underside of wood joists including isolation hangers	14,950	sf	45.00	672,800	
- structural steel modifications to complete above work	14	tn	6,000.00	84,000	
Paint					
- intumescent paint to newly exposed trusses	14,950	sf	3.00	44,900	
- paint to remaining exposed walls and new drywall					
- walls	29,240	sf	1.50	43,900	
- ceilings	14,950	sf	5.00	74,800	
Install new acoustically rated window assemblies in original openings	430	sf	200.00	86,000	per 1938 drawings
Construct soffit for ductwork comprising metal framing and 4 layers of drywall with paint finish	3,395	sf	25.00	84,900	
- structural steel modifications to complete above work	8	tn	5,500.00	44,000	
Install catwalks and follow spot platforms comprising metal grate flooring, guard rails at 21" and 42" with an additional light pipe on the front side of the cat walks					
- catwalks approximately 6' wide	280	lf	900.00	252,000	
- follow spot platforms	375	sf	130.00	48,800	
- structural steel modifications to complete catwalks/follow spot platforms	10	tn	6,000.00	60,000	
Install forestage grid for rigging loud speakers, box trusses, forestage reflector and temporary scenic elements	720	sf	55.00	39,600	
- structural steel modifications to complete installation of forestage grid	10	tn	6,000.00	60,000	
Install a forestage reflector and two mid-house reflectors suspended from catwalks comprising metal framing and 3 layers of drywall	3,550	sf	50.00	177,500	
Install spiral stair each side of house within new cheek walls, 33' rise	2	ea	5,000.00	10,000	
Scaffolding for above work		allowance		500,000	
				153,300	
Mechanical Systems					
Locate new mechanical equipment (equipment measured elsewhere) serving the auditorium to the roof of the 1970s constructed lobby					
- steel dunnage	5	tn	5,000.00	25,000	
- modify existing structural steel roof framing	5	tn	5,500.00	27,500	
- repair roof finish including flashing	1,000	sf	19.00	19,000	area assumed
- repair finishes in conference room area below	1,000	sf	11.50	11,500	area assumed
Locate new mechanical equipment (equipment measured elsewhere) serving the stage to the basement level					
- steel dunnage	5	tn	5,500.00	27,500	
- add steel to newly created floor opening for ducting	5	tn	7,500.00	37,500	
- demolish and refinish new openings	70	sf	75.00	5,300	
				392,800	
Cheek Walls					
Construct curved cheek walls comprising metal framing with 3 layers of drywall on auditorium face	5,060	sf	24.00	121,400	
- HSS 20 x 8 sections for vertical support	16	tn	5,500.00	88,000	
- curved horizontal steel support members	8	tn	6,500.00	52,000	
- modify existing floor framing	6	tn	8,500.00	51,000	
Construct steps within cheek wall enclosures connecting orchestra seating level to stage level, 5'4" tread width, straight run with handrail each side					

**Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate**

Detailed Estimate - Moderate Renovation Project

July 10, 2015

Description	Quantity	Unit	Rate	Amount	Remarks
- structure	75	lfr	120.00	9,000	
- railing	25	lf	200.00	5,000	
Install one wheelchair lift within the cheek wall enclosure on house left, 4' rise	1	ea	25,000.00	25,000	
Construct stairs to connect stage level to gallery level within cheek wall enclosures, curved, 4' wide tread, wall rail one side, handrail the other side					
- structure	220	lfr	120.00	26,400	
- railing	75	lf	200.00	15,000	
Side Walls				16,200	
Construct new walls at the orchestra seating level between the new cheek walls and the existing cross aisle location. Construct from the existing floor to the ceiling beneath the side galleries. Assume metal framing with three layers of drywall on the front side (facing toward the center of the auditorium).	1,080	sf	15.00	16,200	
Repair underside of balcony	135	lf			included with balcony reconfiguration
Variable and Permanent Acoustic Treatments				389,000	
Install permanent diffusive elements along the side walls of the orchestra level seating and the upper galleries. Assume construction of pre-fabricated plaster panels that will be installed on the existing walls and finished. Note that if the plan option for the orchestra level seating with new walls constructed along the column line, the diffusion in these locations will be on the new wall instead of the existing wall.	1,640	sf	75.00	123,000	
Install mechanically-operated rolling banners within each structural bay at the upper corners of the room on both sides.	8	ea	22,000.00	176,000	
Install a walk-along curtain, approximately 18' high, along the back wall of the house to cover the full surface of the wall. This curtain will be housed in a pocket when not deployed. Note that if the option to reconfigure the balcony and move the rear wall forward is selected (described below under the Major Renovation Projects section), then this curtain will be installed on this new wall.	90	lf	1,000.00	90,000	
Seating				839,500	
Replace theatrical seating throughout the auditorium. As different options described in this memo have affect the total seat count, provide costing on a per-seat basis so that final seat cost can be determined for various options; assume 9 sf/seat	1,800	ea	400.00	720,000	
Finish floors	14,940	sf	8.00	119,500	
Stage Extension				138,300	
Purchase a new, larger stage extension system that can be manually deployed and disassembled. Provide the ability to have two options for stage extension size: the first a moderate extension useful for typical orchestral performances and certain types of non-theatrical productions, and the second an addition to the first allowing the stage to extend far into auditorium for particular orchestral performances.					
- first extension	880	sf	70.00	61,600	
- second extension	1,095	sf	70.00	76,700	
Proscenium				58,300	
Demolish decorative plaster proscenium to increase proscenium size. Remove back to primary structure –approximately two feet on each side and at the head. Refinish edges with plaster.	110	lf	530.00	58,300	
Orchestra Shell				600,000	

**Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate**

Detailed Estimate - Moderate Renovation Project

July 10, 2015

Description	Quantity	Unit	Rate	Amount	Remarks
Purchase a new orchestra shell designed specifically for the stage and house. Assume 11 towers at 25 feet tall, plus three ceiling panels that will be suspended from the rigging system. Heith to match new proscenium opening; integral lighting included in ceiling.		allowance		600,000	
Rigging				1,607,900	
Remove the existing hemp rigging system and wood grid.	1	ls		250,000	
Construct a new steel grid and install a new double-purchase rigging system. Assume 24 fly lines, including 3 electric lines and 3 lines dedicated to the new orchestra shell ceiling as described above.					
-steel grid	4,790	sf	60.00	287,400	
- manual and motorized rigging	1	ls		1,000,000	
Install new access ladders to connect the existing fly loft to the new grid.	1	ls		70,500	
Dressing Room Renovation and Expansion				458,650	
Demolish all existing dressing rooms, restrooms, and the green room at the dressing room level (directly beneath the stage).	3,380	sf	10.00	33,800	
Construct stairs on stage left and stage right connecting the stage to the dressing room level and basement level.	4	flt	20,000.00	80,000	
Construct new dressing rooms at the dressing room level. Assume 2 small (~100 sf) star performer dressing rooms with their own single-stall restrooms with showers, four medium (~200 sf) dressing rooms sharing two single-stall restrooms with showers, and a green room.	3,380	sf	55.00	185,900	
Construct two large dressing rooms, each with their own 4-person restroom and a single shower at existing basement level space	1,870	sf	85.00	158,950	
					Excludes any substructure modifications
Reconfigure Balcony				733,000	
Construct a new balcony in front of the existing balcony, relocated approximately one structural bay forward of the existing balcony. Include a curved balcony face with diffusive plaster treatment, a curved cross-aisle, and reconfigured upper balcony area.					
- demo existing structure	4,665	sf	15.00	70,000	
- new structure including finish	3,390	sf	125.00	423,800	
- balcony face, curved, 3'6" high	150	lf	650.00	97,500	
- balance of existing balcony space	2,170	sf	20.00	43,400	
Construct a new curved rear wall.	1,785	sf	21.00	37,500	
Construct wall between the existing mezzanine seating risers and the underside of the new balcony	990	sf	21.00	20,800	
Replace the balcony face of the side galleries with new diffusive plaster treatment. This item assumes that the option to remove the first two rows of the side galleries (described below) has not been accepted.	80	lf		included elsewhere	
Install a second set of doors at the rear exits of the auditorium to create sound and light locks.					
- doors, frames and hardware	8	pr	5,000.00	40,000	
Loading Dock Addition				718,300	
Construct an addition on the southeast corner of the stage to house. Assume the structure underneath the new platform lift and loading dock will be exposed steel pylons. Include the following access-related items:					
- demolish existing loading dock area	1,380	sf	5.00	6,900	
- foundations and slab on grade	1,380	sf	30.00	41,400	
- new framed structure	1,050	sf	55.00	57,800	
- new exterior skin	4,980	sf	45.00	224,100	

**Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate**

Detailed Estimate - Moderate Renovation Project

July 10, 2015

<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Amount</i>	<i>Remarks</i>
- finished roof	1,050	sf	20.00	21,000	
- new loading dock doors, 15' x 20' high	2	pr	75,000.00	150,000	
- new loading dock lift, approximate size 26' wide X 16' deep	1	ls		100,000	
- loading dock and canopy	415	sf	150.00	62,300	
Expand the loading dock platform outside the new addition to create additional staging area for loading and unloading of trucks, includes canopy	365	sf	150.00	54,800	
Paint				20,600	
Repaint all remaining existing plaster.	13,750	sf	1.50	20,600	
Restrooms				111,500	
Renovate restrooms located off the main floor lobby and the lower lobby (a total of four restrooms).	1,115	sf	100.00	111,500	
Mechanical Systems				2,622,600	
Plumbing Fixtures	1	ls		110,600	
Domestic Water	1	ls		35,400	
Sanitary Waster & Vent	1	ls		30,400	
Stormwater	1	ls		8,100	
Selective Demolition	1	ls		8,100	
Misc. Works and General Accounts - Plumbing	1	ls		39,000	
Fire Protection	1	ls		148,200	
Heating	1	ls		49,000	
Cooling	1	ls		58,000	
Air Distribution	1	ls		1,539,600	
Exhaust Sytems	1	ls		33,000	
Support Systems & Works (noise isolation, wiring, commissioning)	1	ls		75,600	
Misc. Works and General Accounts - HVAC	1	ls		351,000	
Controls	1	ls		131,600	
Misc. Site Utilities (storm drainage for addition)	1	ls		5,000	
Electrical Systems				1,321,700	
Service and Distribution	1	ls		89,800	
Lighting, Devices and Controls	1	ls		1,015,200	
Fire, Security, P.A. and Misc. Systems	1	ls		216,700	
A/V Equipment and Performance Lighting				3,450,000	
Audio system including distributed audio, intercom and program		allowance		1,300,000	Threshold provided
Video system including distributed video		allowance		650,000	Threshold provided
control console and additional lighting inventory		allowance		1,500,000	Threshold provided
Subtotal Major Renovations				15,972,350	
Markups					
Design & Pricing Contingency		15%		2,395,000	
Staging, Accessibility & Protection		10%		1,835,000	
General Conditions, Overhead & Profit		20%		4,040,000	
Escalation To Bid Date (July 2018)		13%		3,030,000	
Construction Change Order Contingency		10%		2,725,000	
				\$29,997,350	

Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate Rev 1
Construction Cost Summary - Major Renovation **January 14, 2016**

Description	Amount
1 Ceiling Revisions	\$4,395,138
2 Mechanical Systems	\$287,938
3 Cheek Walls	\$737,782
4 Side Walls	\$30,428
5 Variable and Permanent Acoustic Treatments	\$730,645
6 Seating	\$1,576,803
7 Stage Extension	excluded in Major Renovation
8 Proscenium	\$109,503
9 Orchestra Shell	\$1,126,958
10 Rigging	\$3,020,061
11 Dressing Room Renovation and Expansion	\$861,466
12 Reconfigure Balcony	\$1,390,103
13 Loading Dock Addition	\$1,349,157
14 Paint	\$38,692
15 Restrooms	\$209,426
16 Reconfigure Balcony Expanded Option	\$1,084,885
17 Remove Portion of Side Galleries	Included elsewhere
18 Orchestra Level Side Galleries	\$61,607
19 Pit Lift System	\$1,237,964
20 Additional Rigging Improvements	\$444,022
21 Performer's Entrance Addition	\$1,112,120
22 Stage Crossover	\$493,044

Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate Rev 1
Construction Cost Summary - Major Renovation **January 14, 2016**

<i>Description</i>	<i>Amount</i>
23 Symphony Offices	\$123,965
24 Mechanical Systems	\$5,893,429
25 Electrical Systems	\$3,892,702
26 A/V Equipment and Performance Lighting	\$6,480,011
Overall Cost in July 2018 Construction Dollars	<div style="border-top: 1px solid black; border-bottom: 3px double black; padding: 2px 0;"> \$36,687,850 </div>

NOTE: Phasing, schedule and overtime premiums are not included and need to be assessed once the scope of the project has been determined by the Owner.

**Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate**

Detailed Estimate - Major Renovation Project

July 10, 2015

<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Amount</i>	<i>Remarks</i>
				2,340,000	
Ceiling Revisions					
Remove existing plaster including support structure	14,940	sf	3.50	52,300	
Remove brick infill along upper galleries, both sides, to expose original fenestrations; assume existing structural elements remain as-is	430	sf	12.00	5,200	per 1938 drawings
Install 4 layers drywall to underside of wood joists including isolation hangers	14,940	sf	45.00	672,300	
- structural steel modifications to complete above work	14	tn	6,000.00	84,000	
Paint					
- intumescent paint to newly exposed trusses	14,940	sf	3.00	44,800	
- paint to remaining exposed walls and new drywall					
- walls	29,240	sf	1.50	43,900	
- ceilings	14,940	sf	5.00	74,700	
Install new acoustically rated window assemblies in original openings	430	sf	200.00	86,000	per 1938 drawings
Construct soffit for ductwork comprising metal framing and 4 layers of drywall with paint finish	3,395	sf	25.00	84,900	
- structural steel modifications to complete above work	8	tn	5,500.00	44,000	
Install catwalks and follow spot platforms comprising metal grate flooring, guard rails at 21" and 42" with an additional light pipe on the front side of the cat walks					
- catwalks approximately 6' wide	280	lf	900.00	252,000	
- follow spot platforms	375	sf	130.00	48,800	
- structural steel modifications to complete catwalks/follow spot platforms	10	tn	6,000.00	60,000	
Install forestage grid for rigging loud speakers, box trusses, forestage reflector and temporary scenic elements	720	sf	55.00	39,600	
- structural steel modifications to complete installation of forestage grid	10	tn	6,000.00	60,000	
Install a forestage reflector and two mid-house reflectors suspended from catwalks comprising metal framing and 3 layers of drywall	3,550	sf	50.00	177,500	
Install spiral stair each side of house within new cheek walls, 33' rise	2	ea	5,000.00	10,000	
Scaffolding for above work		allowance		500,000	
				153,300	
Mechanical Systems					
Locate new mechanical equipment (equipment measured elsewhere) serving the auditorium to the roof of the 1970s constructed lobby					
- steel dunnage	5	tn	5,000.00	25,000	
- modify existing structural steel roof framing	5	tn	5,500.00	27,500	
- repair roof finish including flashing	1,000	sf	19.00	19,000	area assumed
- repair finishes in conference room area below	1,000	sf	11.50	11,500	area assumed
Locate new mechanical equipment (equipment measured elsewhere) serving the stage to the basement level					
- steel dunnage	5	tn	5,500.00	27,500	
- add steel to newly created floor opening for ducting	5	tn	7,500.00	37,500	
- demolish and refinish new openings	70	sf	75.00	5,300	
				392,800	
Cheek Walls					
Construct curved cheek walls comprising metal framing with 3 layers of drywall on auditorium face	5,060	sf	24.00	121,400	
- HSS 20 x 8 sections for vertical support	16	tn	5,500.00	88,000	
- curved horizontal steel support members	8	tn	6,500.00	52,000	
- modify existing floor framing	6	tn	8,500.00	51,000	
Construct steps within cheek wall enclosures connecting orchestra seating level to stage level, 5'4" tread width, straight run with handrail each side					

**Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate**

Detailed Estimate - Major Renovation Project

July 10, 2015

Description	Quantity	Unit	Rate	Amount	Remarks
- structure	75	lfr	120.00	9,000	
- railing	25	lf	200.00	5,000	
Install one wheelchair lift within the cheek wall enclosure on house left, 4' rise	1	ea	25,000.00	25,000	
Construct stairs to connect stage level to gallery level within cheek wall enclosures, curved, 4' wide tread, wall rail one side, handrail the other side					
- structure	220	lfr	120.00	26,400	
- railing	75	lf	200.00	15,000	
Side Walls				16,200	
Construct new walls at the orchestra seating level between the new cheek walls and the existing cross aisle location. Construct from the existing floor to the ceiling beneath the side galleries. Assume metal framing with three layers of drywall on the front side (facing toward the center of the auditorium).	1,080	sf	15.00	16,200	
Repair underside of balcony	135	lf			included with balcony reconfiguration
Variable and Permanent Acoustic Treatments				389,000	
Install permanent diffusive elements along the side walls of the orchestra level seating and the upper galleries. Assume construction of pre-fabricated plaster panels that will be installed on the existing walls and finished. Note that if the plan option for the orchestra level seating with new walls constructed along the column line, the diffusion in these locations will be on the new wall instead of the existing wall.	1,640	sf	75.00	123,000	
Install mechanically-operated rolling banners within each structural bay at the upper corners of the room on both sides.	8	ea	22,000.00	176,000	
Install a walk-along curtain, approximately 18' high, along the back wall of the house to cover the full surface of the wall. This curtain will be housed in a pocket when not deployed. Note that if the option to reconfigure the balcony and move the rear wall forward is selected (described below under the Major Renovation Projects section), then this curtain will be installed on this new wall.	90	lf	1,000.00	90,000	
Seating				839,500	
Replace theatrical seating throughout the auditorium. As different options described in this memo have affect the total seat count, provide costing on a per-seat basis so that final seat cost can be determined for various options; assume 9 sf/seat	1,800	ea	400.00	720,000	
Finish floors	14,940	sf	8.00	119,500	
Stage Extension					excluded in Major Renovation
Purchase a new, larger stage extension system that can be manually deployed and disassembled. Provide the ability to have two options for stage extension size: the first a moderate extension useful for typical orchestral performances and certain types of non-theatrical productions, and the second an addition to the first allowing the stage to extend far into auditorium for particular orchestral performances.					
- first extension	880	sf		0	to remain in scope of work in lieu of second pit lift
- second extension	1,095	sf	70.00	76,700	
Proscenium				58,300	
Demolish decorative plaster proscenium to increase proscenium size. Remove back to primary structure –approximately two feet on each side and at the head. Refinish edges with plaster.	110	lf	530.00	58,300	

**Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate**

Detailed Estimate - Major Renovation Project

July 10, 2015

<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Amount</i>	<i>Remarks</i>
Orchestra Shell				600,000	
Purchase a new orchestra shell designed specifically for the stage and house. Assume 11 towers at 25 feet tall, plus three ceiling panels that will be suspended from the rigging system. Heith to match new proscenium opening; integral lighting included in ceiling.		allowance		600,000	
Rigging				1,607,900	
Remove the existing hemp rigging system and wood grid.	1	ls		250,000	
Construct a new steel grid and install a new double-purchase rigging system. Assume 24 fly lines, including 3 electric lines and 3 lines dedicated to the new orchestra shell ceiling as described above.					
-steel grid	4,790	sf	60.00	287,400	
- manual and motorized rigging	1	ls		1,000,000	
Install new access ladders to connect the existing fly loft to the new grid.	1	ls		70,500	
Dressing Room Renovation and Expansion				458,650	
Demolish all existing dressing rooms, restrooms, and the green room at the dressing room level (directly beneath the stage).	3,380	sf	10.00	33,800	
Construct stairs on stage left and stage right connecting the stage to the dressing room level and basement level.	4	ft	20,000.00	80,000	
Construct new dressing rooms at the dressing room level. Assume 2 small (~100 sf) star performer dressing rooms with their own single-stall restrooms with showers, four medium (~200 sf) dressing rooms sharing two single-stall restrooms with showers, and a green room.	3,380	sf	55.00	185,900	
Construct two large dressing rooms, each with their own 4-person restroom and a single shower at existing basement level space	1,870	sf	85.00	158,950	
Reconfigure Balcony				740,100	Excludes any substructure
Construct a new balcony in front of the existing balcony, relocated approximately one structural bay forward of the existing balcony. Include a curved balcony face with diffusive plaster treatment, a curved cross-aisle, and reconfigured upper balcony area.					
- demo existing structure	4,665	sf	15.00	70,000	
- new structure including finish	3,390	sf	125.00	423,800	
- balcony face, curved, 3'6" high	150	lf	650.00	97,500	
- balance of existing balcony space	2,170	sf	20.00	43,400	
Construct a new curved rear wall.	1,785	sf	25.00	44,600	
Construct wall between the existing mezzanine seating risers and the underside of the new balcony	990	sf	21.00	20,800	
Replace the balcony face of the side galleries with new diffusive plaster treatment. This item assumes that the option to remove the first two rows of the side galleries (described below) has not been accepted.	80	lf		included elsewhere	
Install a second set of doors at the rear exits of the auditorium to create sound and light locks.					
- doors, frames and hardware	8	pr	5,000.00	40,000	
Loading Dock Addition				718,300	
Construct an addition on the southeast corner of the stage to house. Assume the structure underneath the new platform lift and loading dock will be exposed steel pylons. Include the following access-related items:					
- demolish existing loading dock area	1,380	sf	5.00	6,900	
- foundations and slab on grade	1,380	sf	30.00	41,400	
- new framed structure	1,050	sf	55.00	57,800	

**Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate**

Detailed Estimate - Major Renovation Project

July 10, 2015

Description	Quantity	Unit	Rate	Amount	Remarks
- new exterior skin	4,980	sf	45.00	224,100	
- finished roof	1,050	sf	20.00	21,000	
- new loading dock doors, 15' x 20' high	2	pr	75,000.00	150,000	
- new loading dock lift, approximate size 26' wide X 16' deep	1	ls		100,000	
- loading dock and canopy	415	sf	150.00	62,300	
Expand the loading dock platform outside the new addition to create additional staging area for loading and unloading of trucks, includes canopy	365	sf	150.00	54,800	
Paint				20,600	
Repaint all remaining existing plaster.	13,750	sf	1.50	20,600	
Restrooms				111,500	
Renovate restrooms located off the main floor lobby and the lower lobby (a total of four restrooms).	1,115	sf	100.00	111,500	
Reconfigure Balcony Expanded Option				577,600	Excludes any substructure
Demolish a portion of the existing balcony risers to make way for a new vomitory connecting the new cross aisle with the existing conference room located behind the existing rear wall of the auditorium. Include doors to create a sound and light lock. Construct ramps along the connecting path to adjust to the elevation difference between the cross aisle and the conference room (~two feet). Create penetrations through the existing back wall of the auditorium building (the former exterior wall of the auditorium).					
- demolition	990	sf	15.00	14,900	
- floor structure	990	sf	40.00	39,600	
- walls	3,168	sf	25.65	81,300	
- doors/frames/hardware	3	pr	5,000.00	15,000	
Construct a wall between the existing mezzanine seating risers and the underside of the new balcony.	700	sf	25.00	17,500	
Repair existing finishes in original lobby and colonnade area	4,500	sf	30.00	135,000	
Renovate the finishes in the existing conference room.	4,135	sf	36.00	148,900	
Construct two additional multi-person restrooms adjacent to the existing conference room.	1,045	sf	120.00	125,400	
Remove Portion of Side Galleries				Included elsewhere	
Demolish the first two rows of both of the side galleries.	2,170	sf			
Install a new fascia and rail along the exposed face of the shortened side galleries. Assume prefabricated diffusive plaster panels installed over a framed wall.	80	lf			
Note: the reconfiguration of the balcony as described above would need to be modified to integrate with the shortened side galleries.					
Orchestra Level Side Galleries				32,800	
Construct raised seating sections in front of the new side walls at the orchestra seating level.	655	sf	50.00	32,800	Railing included elsewhere
Pit Lift System				659,100	
Demolish a portion of the orchestra seating level floor (both the original structural floor and the topping slab added later). Provide supporting structure around the penetration as required. This will include demolition of an existing structural steel beam encased in concrete located one structural bay downstage of the proscenium.	880	sf	16.00	14,100	Reflects one pit lift section only
Structural steel to reinforce new openings	20	tn	8,500.00	170,000	
Create a penetration through the concrete wall in the basement located beneath the proscenium to allow for access into the new wagon storage area.		sf		excluded	See WPM report

Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate

Detailed Estimate - Major Renovation Project

July 10, 2015

Description	Quantity	Unit	Rate	Amount	Remarks
Construct a raised floor upstage and downstage of the new penetration, and walls enclosing these new wagon storage areas.		sf		excluded	See WPM report
Install a pit lift system consisting of: - one pit lift which can be positioned independently at the new wagon storage level, at orchestra pit level, audience seating level, and stage level.	1	ls		325,000	Modified per WPM report
- chair wagons for pit lift that can be rolled from the wagon storage area onto lift and raised to audience level to provide seating. Note: this option is in lieu of the first stage extension system described as part of the Moderate Renovation. The second stage extension remains.	1	ls		150,000	Modified per WPM report
				236,400	
Additional Rigging Improvements					
Demolish three levels of existing dressing rooms and the fly loft located stage right.	865	sf	5.00	4,300	
Construct a new fly loft located stage right midway up the height of the stage house (positioned to work with a double-purchase system) to maximize the wing space available under the loft. Install a spiral stair in the northwest corner of the stage to connect stage level to the new fly loft and the new grid.					
- modify structural steel	20	tn	5,500.00	110,000	
- fly loft	320	sf	115.00	36,800	
- spiral stair, 50' rise	2	flt	8,000.00	16,000	
Construct a new pinrail gallery located stage left midway up the height of the stage house (level with the new fly loft). Construct a spiral stair connection stage level to the new pinrail gallery.					
- modify structural steel	5	tn	5,500.00	27,500	
- pinrail gallery	320	sf	115.00	36,800	
- spiral stair, 23' rise	1	flt	5,000.00	5,000	
Note: work in this section is in addition to the rigging project described in the Moderate Renovation.					
				592,100	
Performer's Entrance Addition					
Construct an addition on the southeast corner of the stage to house. Assume the structure underneath the new platform lift and loading dock will be exposed steel pylons. Include the following access-related items:					
- at ground level, a performer's entrance and security check point (when required for shows) with access to a passenger elevator and stairs connecting to the loading dock, dressing rooms, and stage.	630	sf	350.00	220,500	
- at dressing room level, access to the passenger elevator and stairs.	345	sf	350.00	120,800	
- at stage level, access to the passenger elevator and stairs.	345	sf	350.00	120,800	
- passenger elevator to above	1	ea	100,000.00	100,000	
- stairs to above	2	flt	15,000.00	30,000	
				262,500	
Stage Crossover					
Install a new crossover corridor behind the stage. Construct with framed walls with exterior masonry cladding. Assume the corridor addition is constructed on exposed metal structure below (not enclosed).	750	sf	350.00	262,500	
				66,000	
Symphony Offices					
Renovate space in the basement level into office space for 8 staff members.	1,200	sf	55.00	66,000	
				3,137,700	
Mechanical Systems					
Plumbing Fixtures	1	ls		137,300	
Domestic Water	1	ls		45,800	

**Thomas Wolfe Auditorium, Asheville, NC
Order-of-Magnitude Renovation Estimate**

Detailed Estimate - Major Renovation Project

July 10, 2015

<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Amount</i>	<i>Remarks</i>
Sanitary Waster & Vent	1	ls		48,000	
Stormwater	1	ls		9,500	
Selective Demolition	1	ls		14,100	
Misc. Works and General Accounts - Plumbing	1	ls		51,000	
Fire Protection	1	ls		251,600	
Heating	1	ls		49,000	
Cooling	1	ls		58,000	
Air Distribution	1	ls		1,757,200	
Exhaust Systems	1	ls		36,000	
Support Systems & Works (noise isolation, wiring, commissioning)	1	ls		113,500	
Misc. Works and General Accounts - HVAC	1	ls		403,000	
Controls	1	ls		158,700	
Misc. Site Utilities (storm drainage for addition)	1	ls		5,000	
Electrical Systems				2,072,500	
Service and Distribution	1	ls		140,400	
Lighting, Devices and Controls	1	ls		1,573,400	
Fire, Security, P.A. and Misc. Systems	1	ls		358,700	
A/V Equipment and Performance Lighting				3,450,000	
Audio system including distributed audio, intercom and program		allowance		1,300,000	Threshold provided
Video system including distributed video		allowance		650,000	Threshold provided
control console and additional lighting inventory		allowance		1,500,000	Threshold provided
				19,609,550	
Subtotal Major Renovations					
Markups					
Design & Pricing Contingency		15%		2,940,000	
Staging, Accessibility & Protection		10%		2,255,000	
General Conditions, Overhead & Profit		20%		4,960,000	
Escalation To Bid Date (July 2018)		13%		3,720,000	
Construction Change Order Contingency		10%		3,350,000	
				\$36,834,550	