



**CARLSON FAMILY STAGE  
TECHNICAL & PRODUCTION SPECS**

Last Updated June 17<sup>th</sup>, 2016

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# CONTACTS

## NORTHROP

<b>Director</b>	<b>Christine Tschida</b> <b>Director of Northrop</b> 612-626-8711 tschidac@umn.edu
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<b>Delivery/Loading Dock Address</b>	73 Pleasant Street SE Minneapolis, MN 55455

## TICKET OFFICE

<b>Ticketing</b>	<b>Holly Radis-McCluskey</b> <b>Director of U of M Tickets &amp; Events</b> 612-625-0509 radis001@umn.edu
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## SURDYKS CAFÉ

<b>Catering/ Merchandise</b>	<b>Abby Dunne</b> <b>Surdyk's Catering Manager</b> 612-624-5685 (office) 612-710-3804 (cell) adunne@surdyks.com
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## UNIVERSITY CONTACTS

<b>First Aid</b>	<b>EMS</b> 612-626-1312 umems@umn.edu dem.umn.edu/umems
<b>Motorist Assistance Program (MAP)</b>	612-626-7275
<b>Security Monitor Program Escort Service</b>	612-624-9255
<b>University Parking and Transportation Services</b>	<b>Dillon Fried</b> <b>Events Manager</b> 612-626-7275 frie0218@umn.edu
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<b>UM Connect</b>	<b>Lyn Weiler</b> <b>Network Manager</b> 612-625-4315 Weile001@umn.edu

# SEATING

Carlson Family Stage at Northrop can seat a maximum total of 2,692 people.

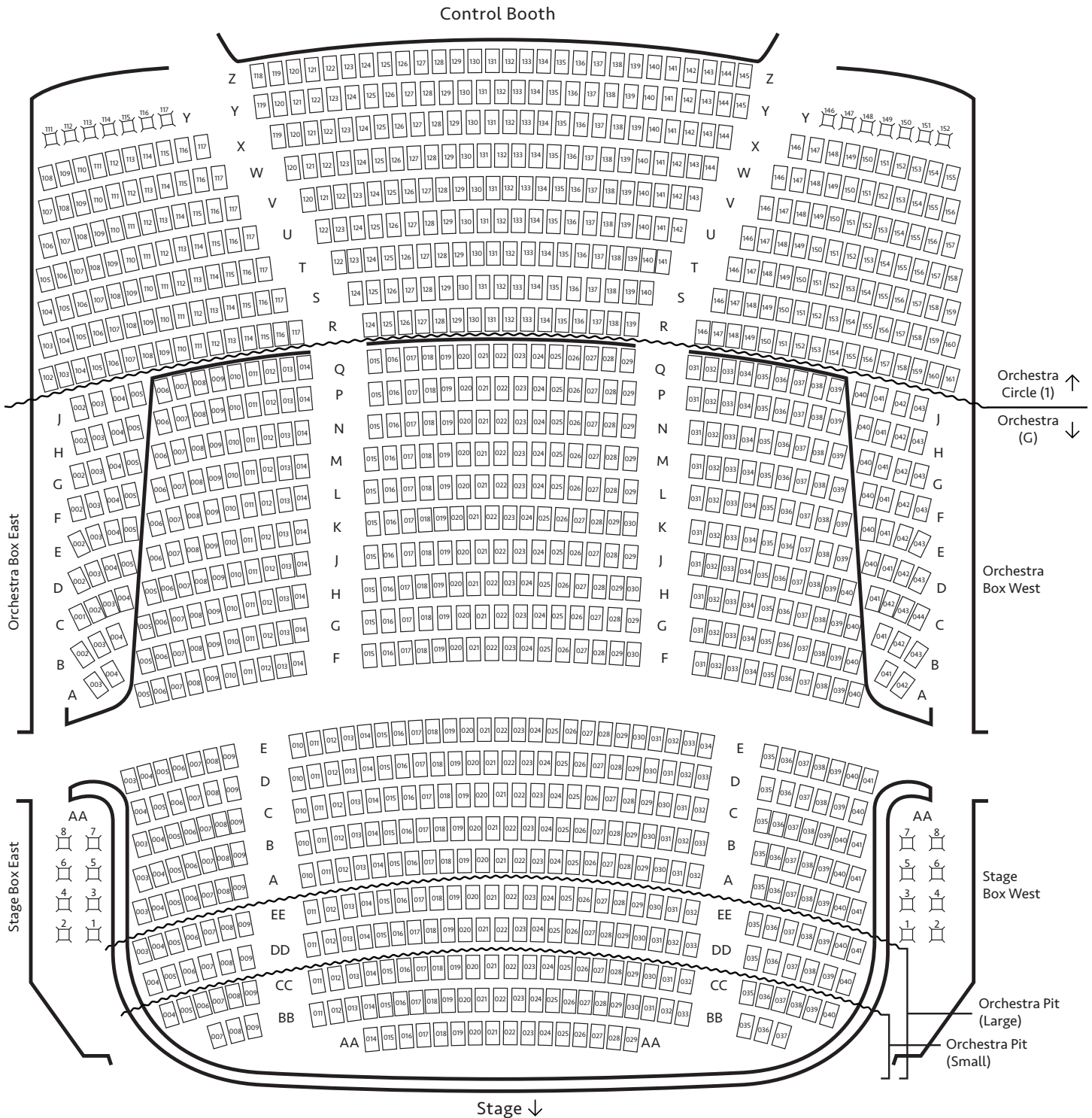
<b>Orchestra (G)</b>	744 fixed (11 wheelchair) +16 loose	760 seats
<b>Orchestra Circle (1)</b>	400 fixed (0 wheelchair) + 14 loose	414 seats
<b>Presidents Circle (2)</b>	357 fixed (0 possible wheelchair) + 46 loose	403 seats
<b>Scholars Circle (3)</b>	433 fixed (2 possible wheelchair) + 46 loose	479 seats
<b>Gallery Circle (4)</b>	622 fixed (2 possible wheelchair) + 28 loose	650 seats

The following features would require seats to be removed from the Orchestra Level:

<b>Orchestra Pit</b> (Large/Full)	Accommodates up to 90 musicians	-150 seats
<b>Orchestra Pit</b> (Small/Lift wagon only)	Accommodates up to 50 musicians	-79 seats
<b>Mixing/Sound Position</b>		-40 seats

# ORCHESTRA (G) & ORCHESTRA CIRCLE (1)

(Larger sizes available upon request)

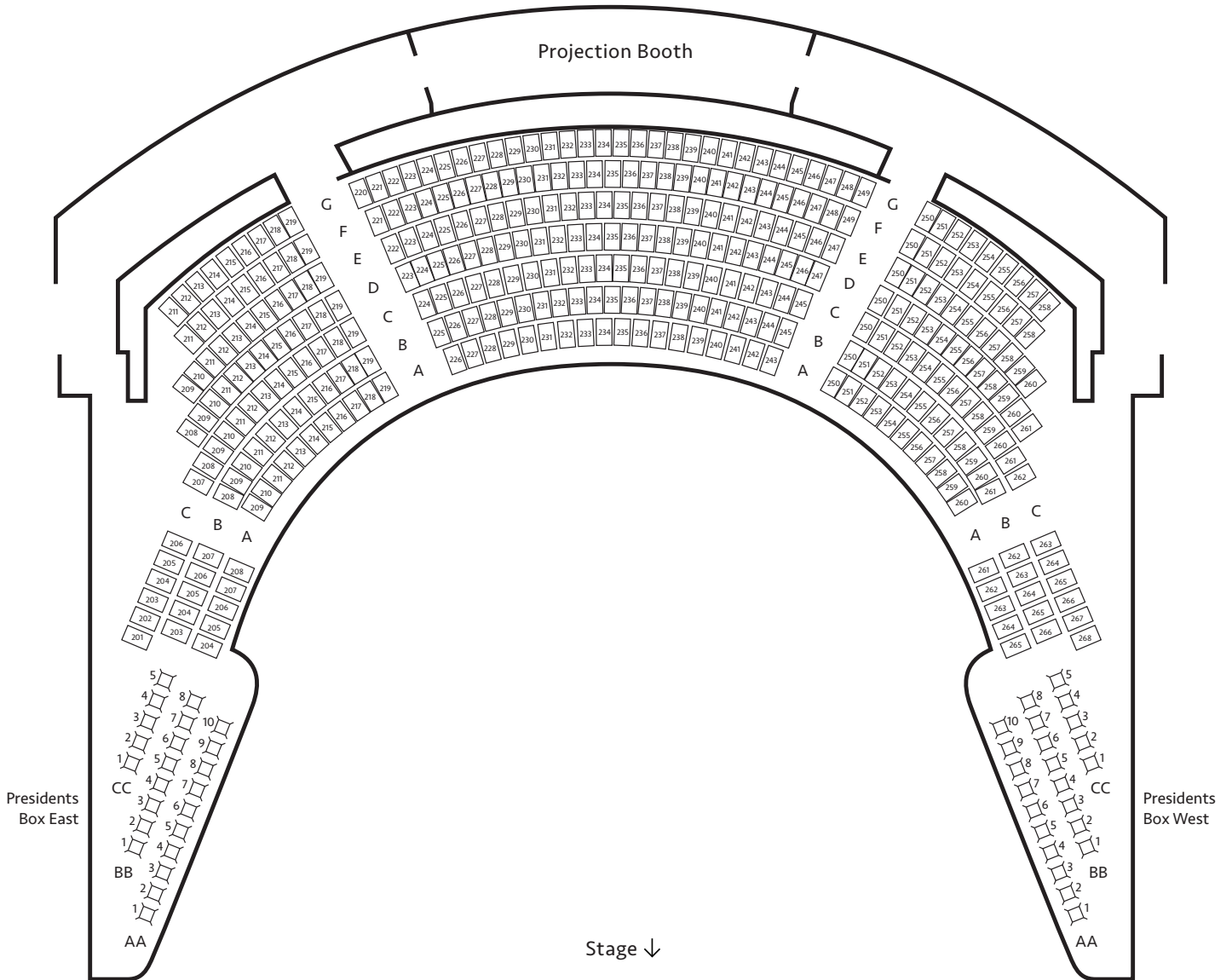


☐ = Loose chair



Seats 004 and 040 of row CC have limited leg room.  
 Rows A and DD may have limited leg room depending on the configuration of the pit for a performance.

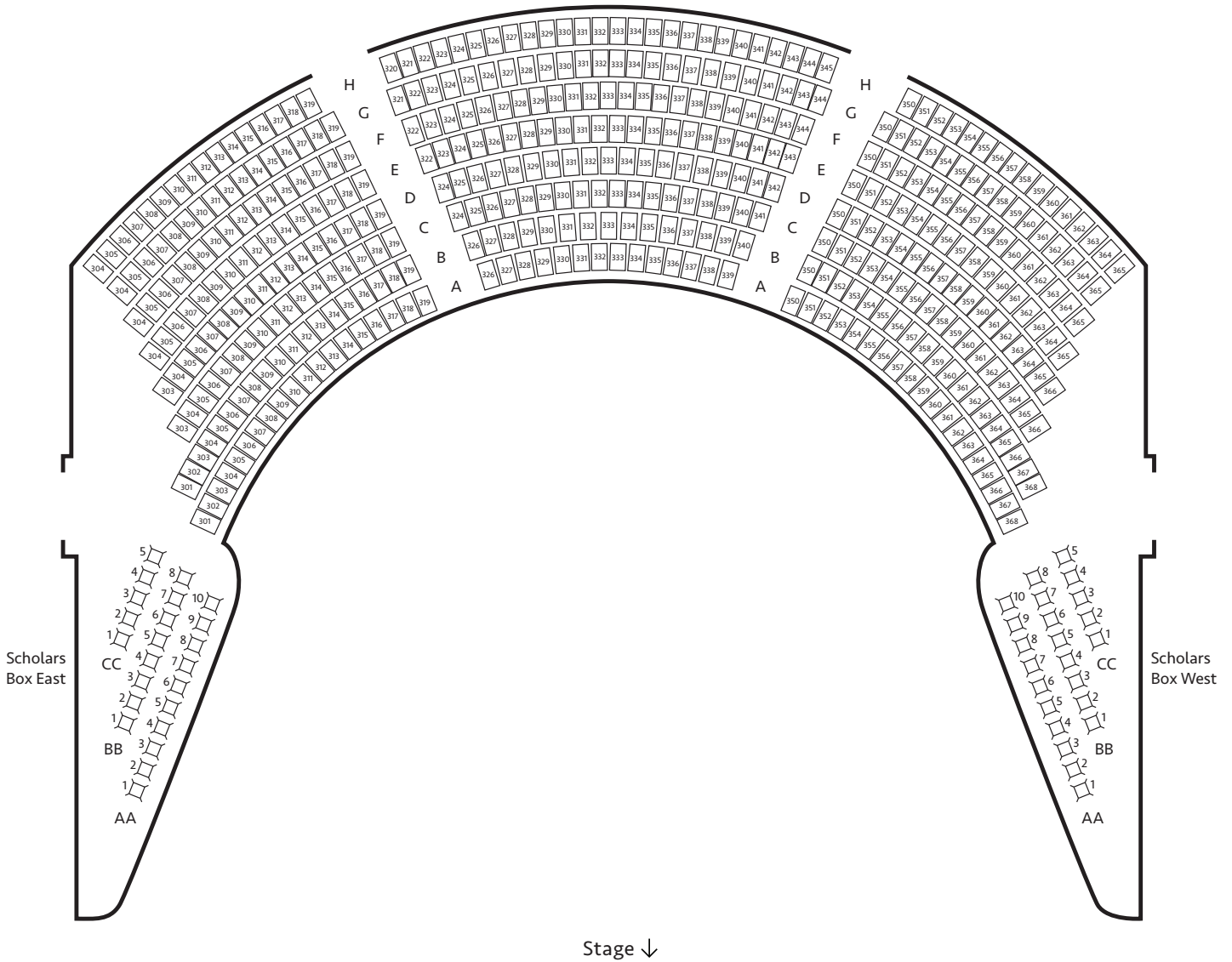
# PRESIDENTS CIRCLE (2)



☐ = Loose chair



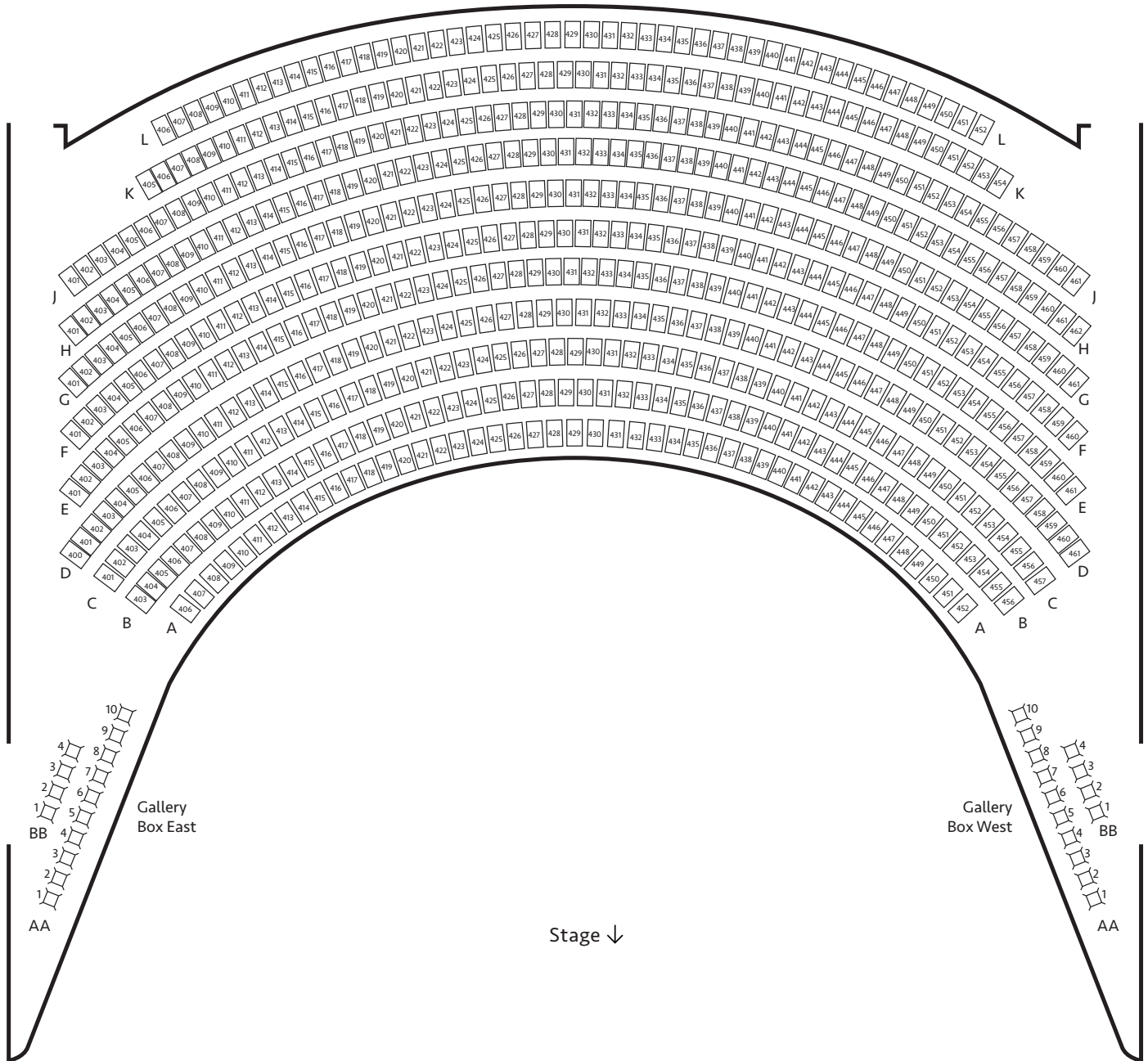
# SCHOLARS CIRCLE (3)



□ = Loose chair



# GALLERY CIRCLE (4)



☐ = Loose chair



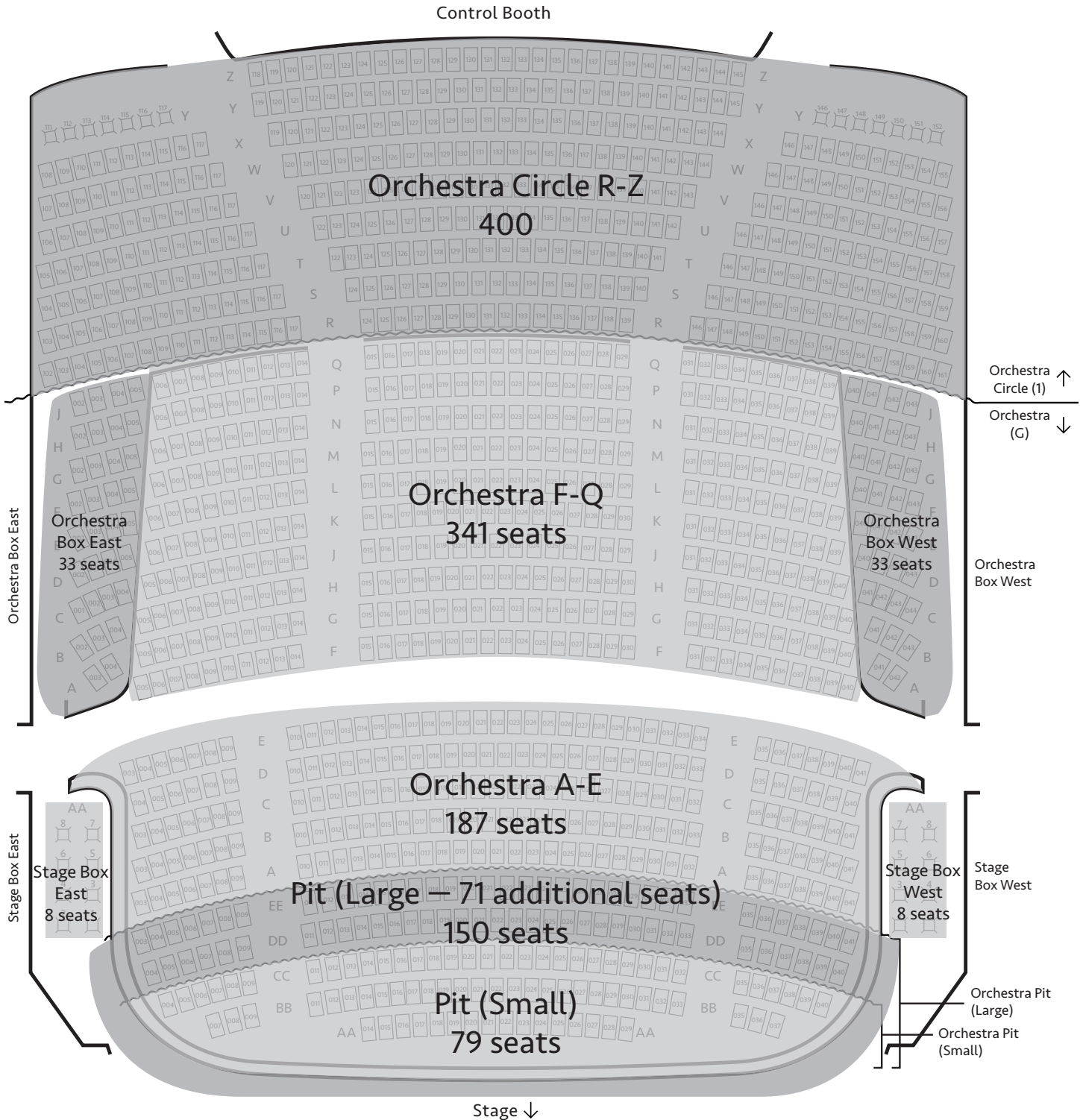
Row L of Gallery Circle is best for patrons 5 foot 6 inches or taller for the best possible viewing experience. Seat bottoms in Row L are thicker to maintain sightlines.



# ORCHESTRA (G) & ORCHESTRA CIRCLE (1)

(Larger sizes available upon request)

Total Capacity: 1,160 seats

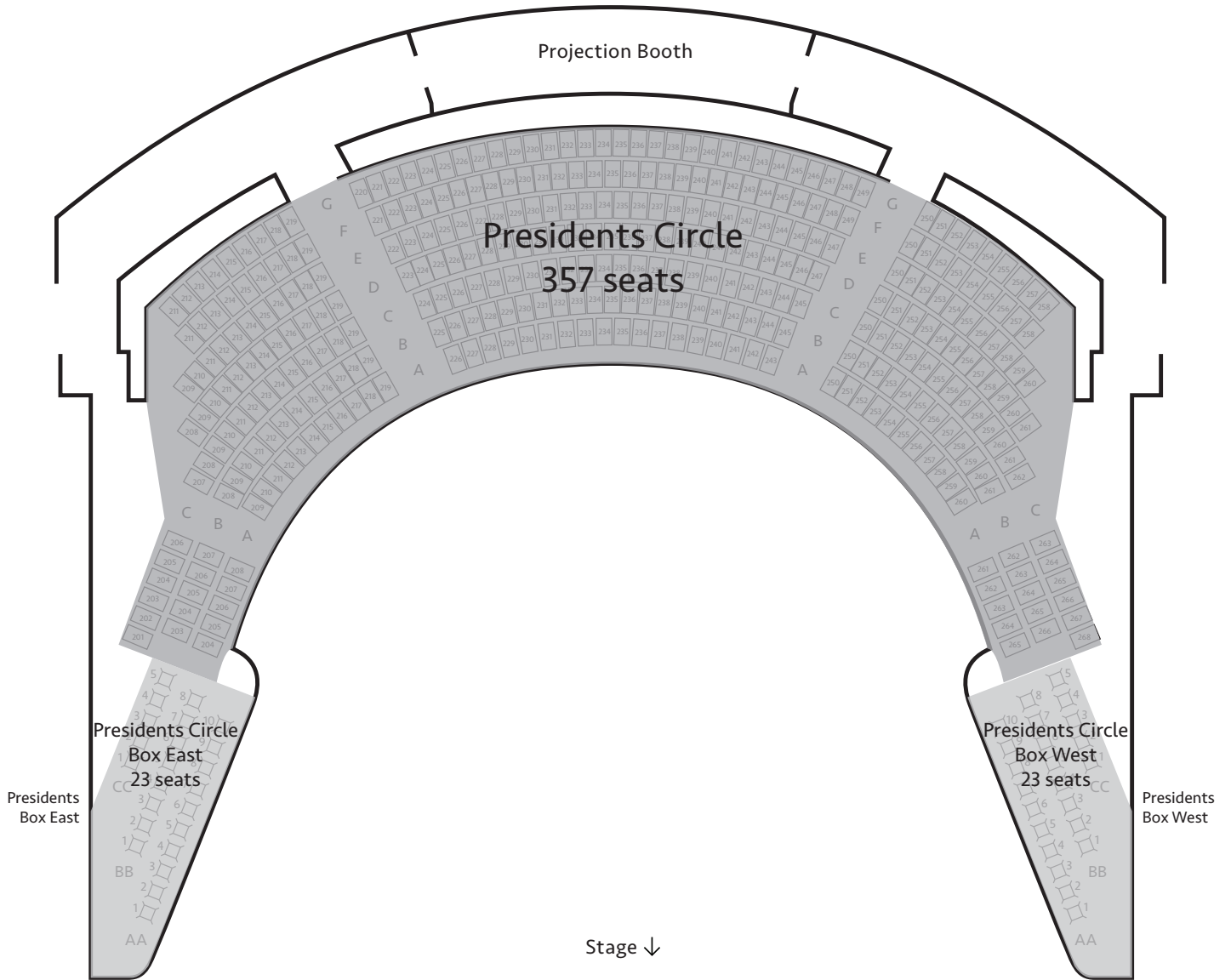


□ = Loose chair



# PRESIDENTS CIRCLE (2)

Total Capacity: 403 seats

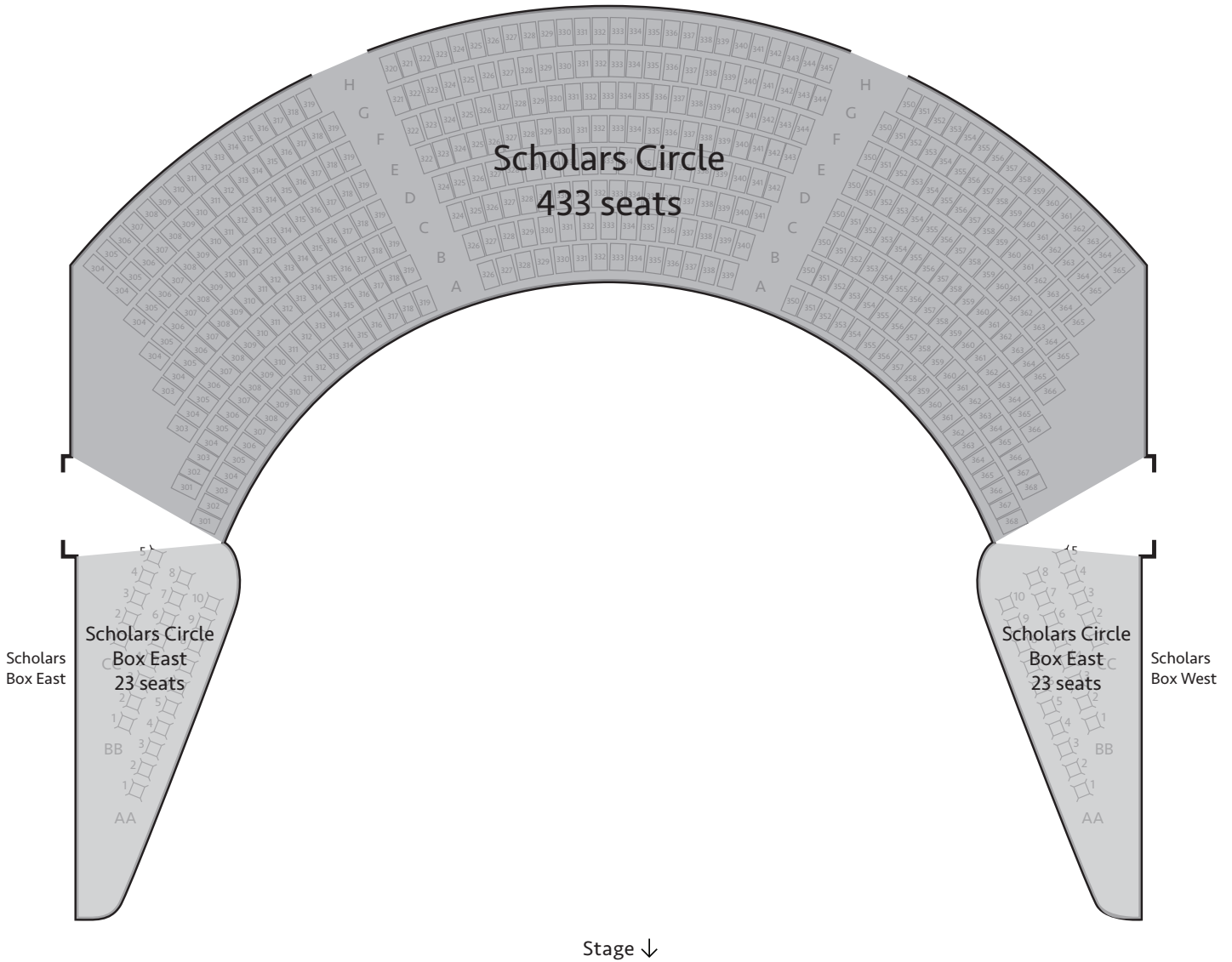


□ = Loose chair



# SCHOLARS CIRCLE (3)

Total Capacity: 479 seats

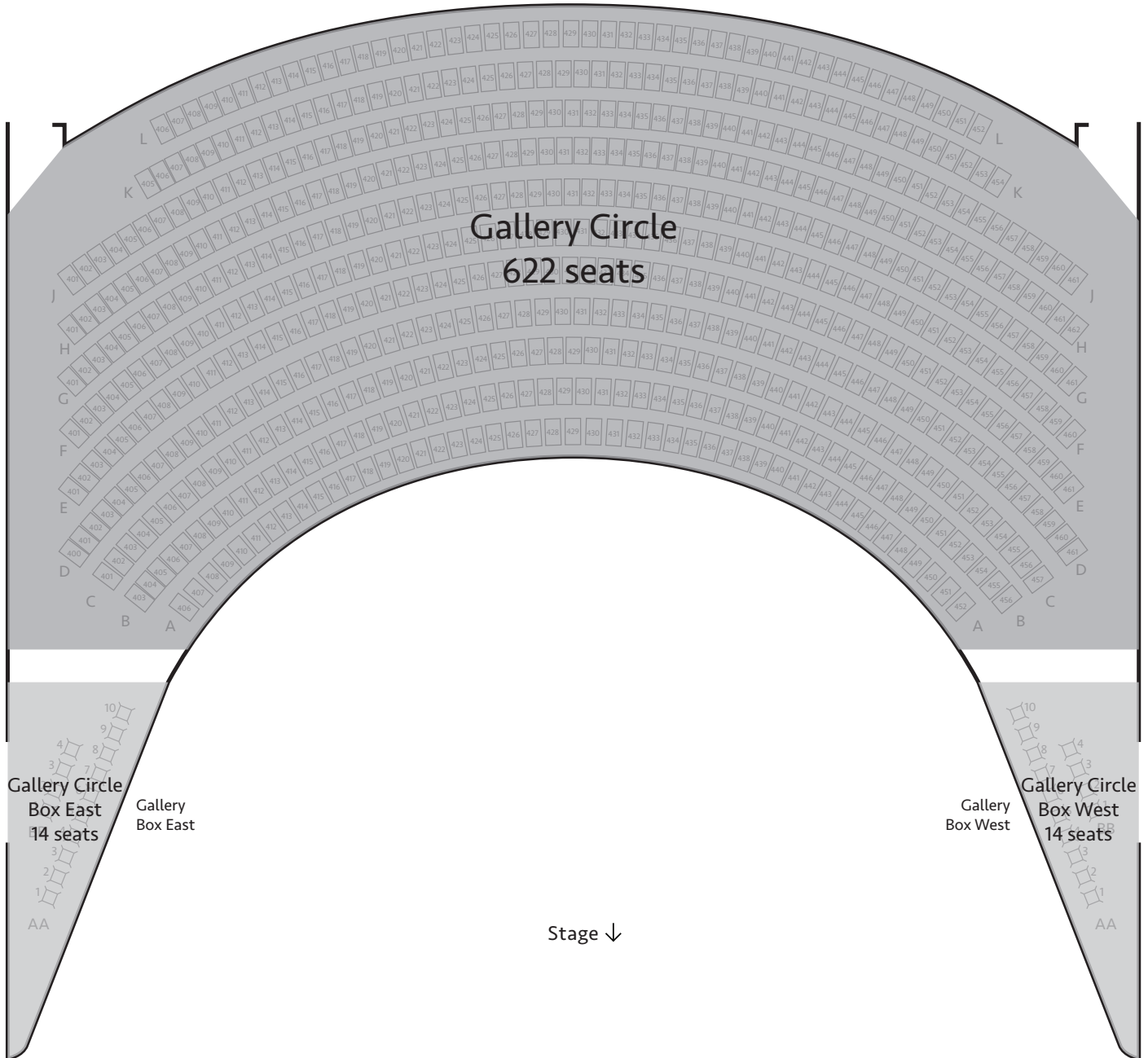


□ = Loose chair



# GALLERY CIRCLE (4)

Total Capacity: 650 seats



□ = Loose chair



# STAGE SPECIFICATIONS

## STAGE & PROSCENIUM

<b>Stage Depth</b> (Plaster line to back wall)	39'6"	12.0 m
<b>Additional Upstage Deadhang Space</b>	17'3"	5.3 m
<b>Stage Width</b> (Loading door to locking rail)	97'	29.6 m
<b>Proscenium Width</b>	60'	18.3 m
<b>Proscenium Height</b> (Maximum)	43'5"	13.2 m
<b>Proscenium Height</b> (Minimum)	33'5"	10.2 m

## ORCHESTRA PIT

(Small)

<b>Length</b>	68'	20.7 m
<b>Width on Center</b>	16'2"	4.9 m
<b>Width at Ends</b>	10'11"	3.3 m
<b>Pit Floor to Stage</b>	7'9"	2.4 m
<b>Square Footage</b>	971'	296.0 m

## ORCHESTRA PIT

(Large)

<b>Length</b>	72'3"	22.0 m
<b>Width on Center</b>	22'8"	6.9 m
<b>Width at Ends</b>	17'8"	5.4 m
<b>Pit Floor to Stage</b>	7'9"	2.4 m
<b>Square Footage</b>	1,430'	435.9 m

## LOADING DOCK

<b>Truck Access</b>	2 bays with levelers & seals at stage level (Nominal 40' travel distance to stage door, 90' to center of stage)
<b>Stage Loading Door</b>	10' (3.0 m) Width 20' (6.1 m) Height

# BACKSTAGE SPECIFICATIONS

## DANCE FLOOR

(for Stage and Rehearsal Room)

Harlequin Liberty Latchloc Sprung Floor System

Harlequin Reversible Marley Floor

## PODIUMS

### Large

41" h, 56" w, 24.5" d (104 cm h, 142 cm w, 62 cm d)

### Small

45" h, 26.5" w, 21" d (114 cm h, 67 cm w, 53 cm d)

### Mace

27" h, 42" w, 18" d (69 cm h, 107 cm w, 46 cm d)

## PIANOS

Essex Upright 1

Steinway Grand  
Model D 1

## LAUNDRY

Washers 2

Dryers 2

Garment Racks 12

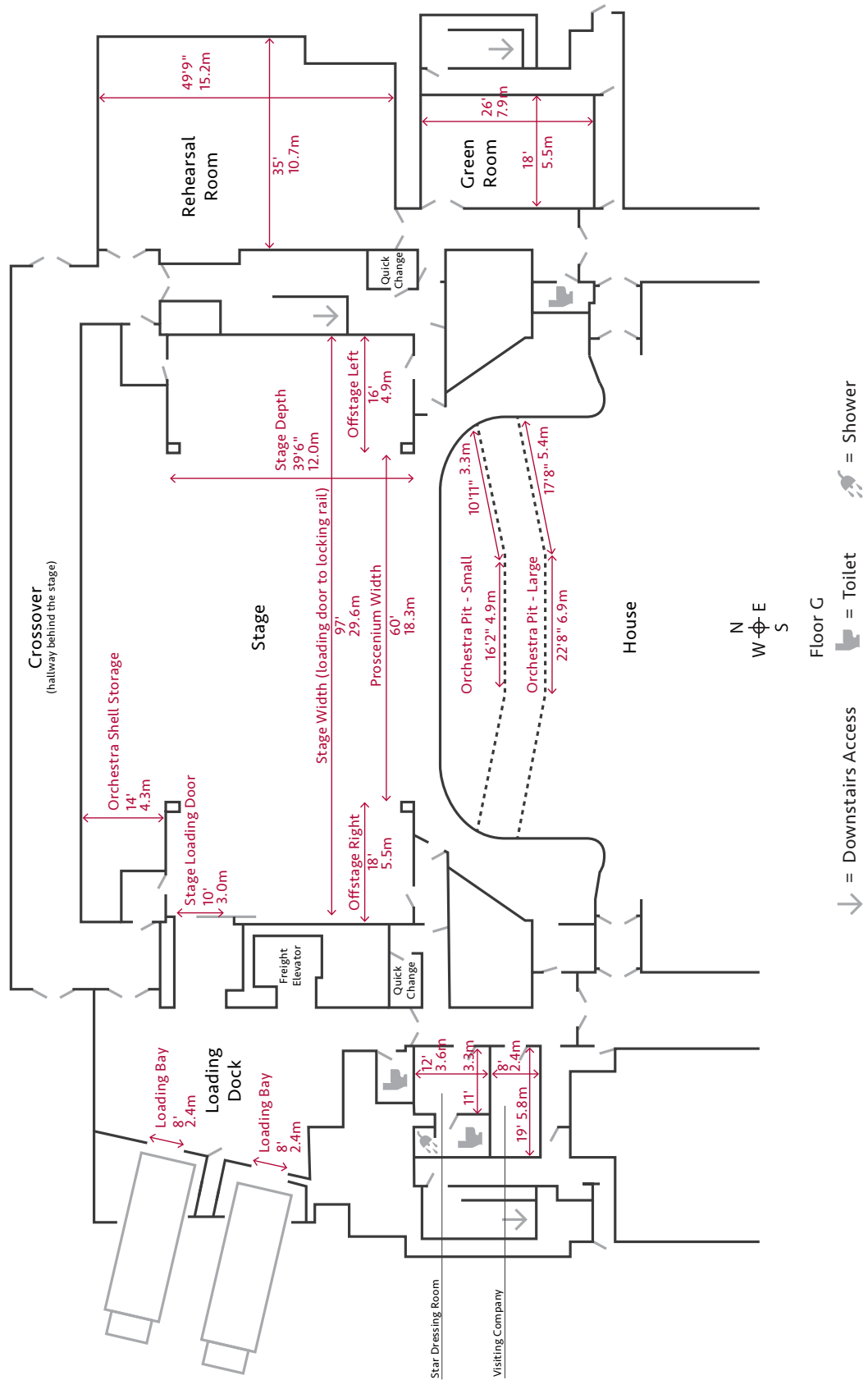
Steamers 2

Irons 4

Ironing Boards 4

# NORTHROP BACKSTAGE

## GROUND LEVEL



# BACKSTAGE ARTIST FACILITIES

## GROUND LEVEL

	Dimensions		Makeup Stations	Showers
<b>Rehearsal Room</b>	49'9" x 35'	15.2 m x 10.7 m		
<b>Green Room</b>	26' x 18'	7.9 m x 5.5 m		
<b>Quick Change Room</b> (Stage Right)	8' x 5'	2.4 m x 1.5 m		
<b>Quick Change Room</b> (Stage Left)	7' x 5'	2.1 m x 1.5 m		
<b>Star Dressing Room</b>	12' x 11'	3.7 m x 3.4 m	1	1

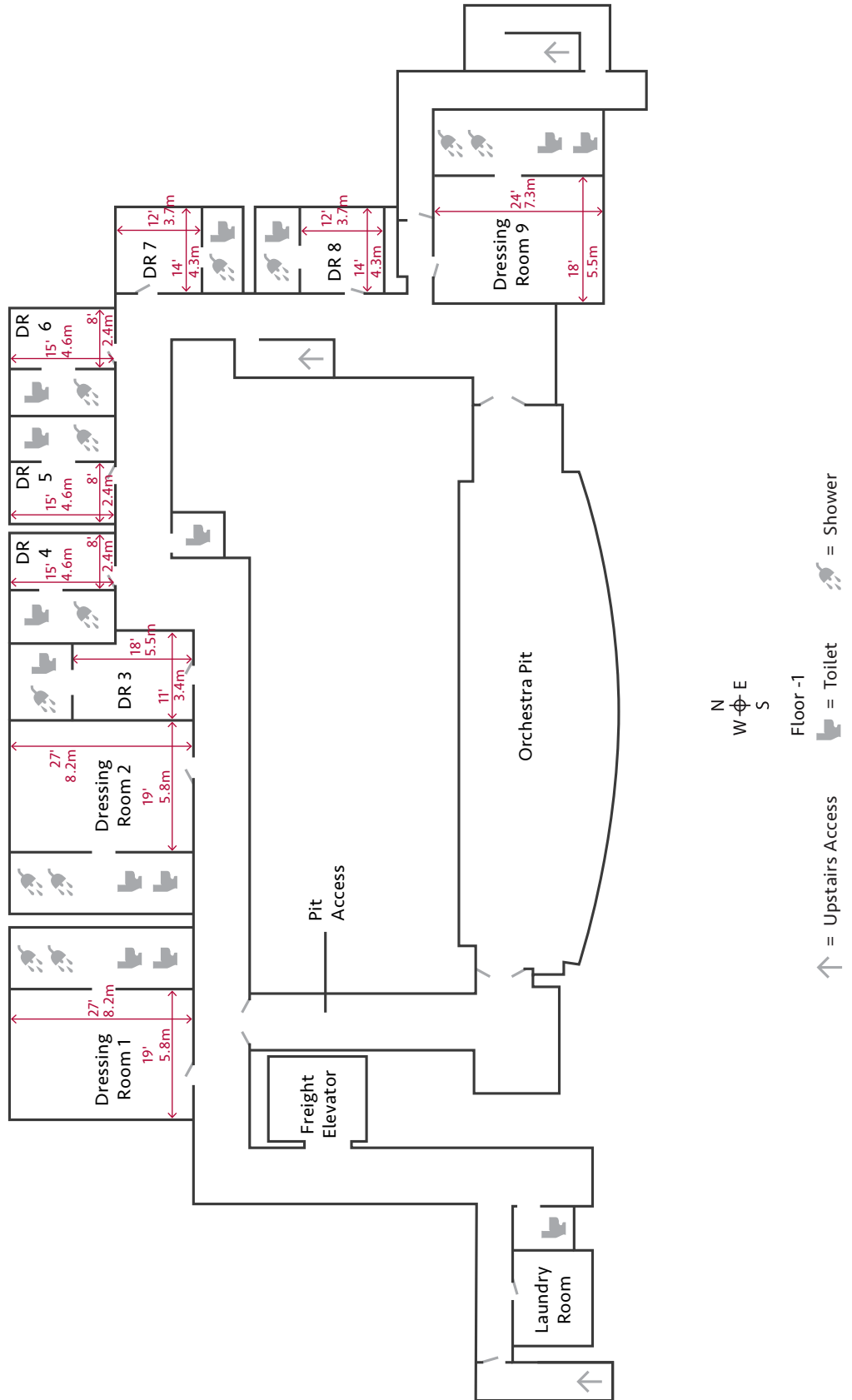
## LOWER LEVEL

### Dressing Rooms

<b>1</b>	27' x 19'	8.2 m x 5.8 m	18	2
<b>2</b>	27' x 19'	8.2 m x 5.8 m	19	2
<b>3</b>	18' x 11'	5.5 m x 3.4 m	1	1
<b>4</b>	15' x 8'	4.6 m x 2.4 m	4	1
<b>5</b>	15' x 8'	4.6 m x 2.4 m	4	1
<b>6</b>	15' x 8'	4.6 m x 2.4 m	4	1
<b>7</b>	14' x 12'	4.3 m x 3.7 m	2	1
<b>8</b>	14' x 12'	4.3 m x 3.7 m	2	1
<b>9</b>	24' x 18'	7.3 m x 5.5 m	18	2



# NORTHROP BACKSTAGE LOWER LEVEL



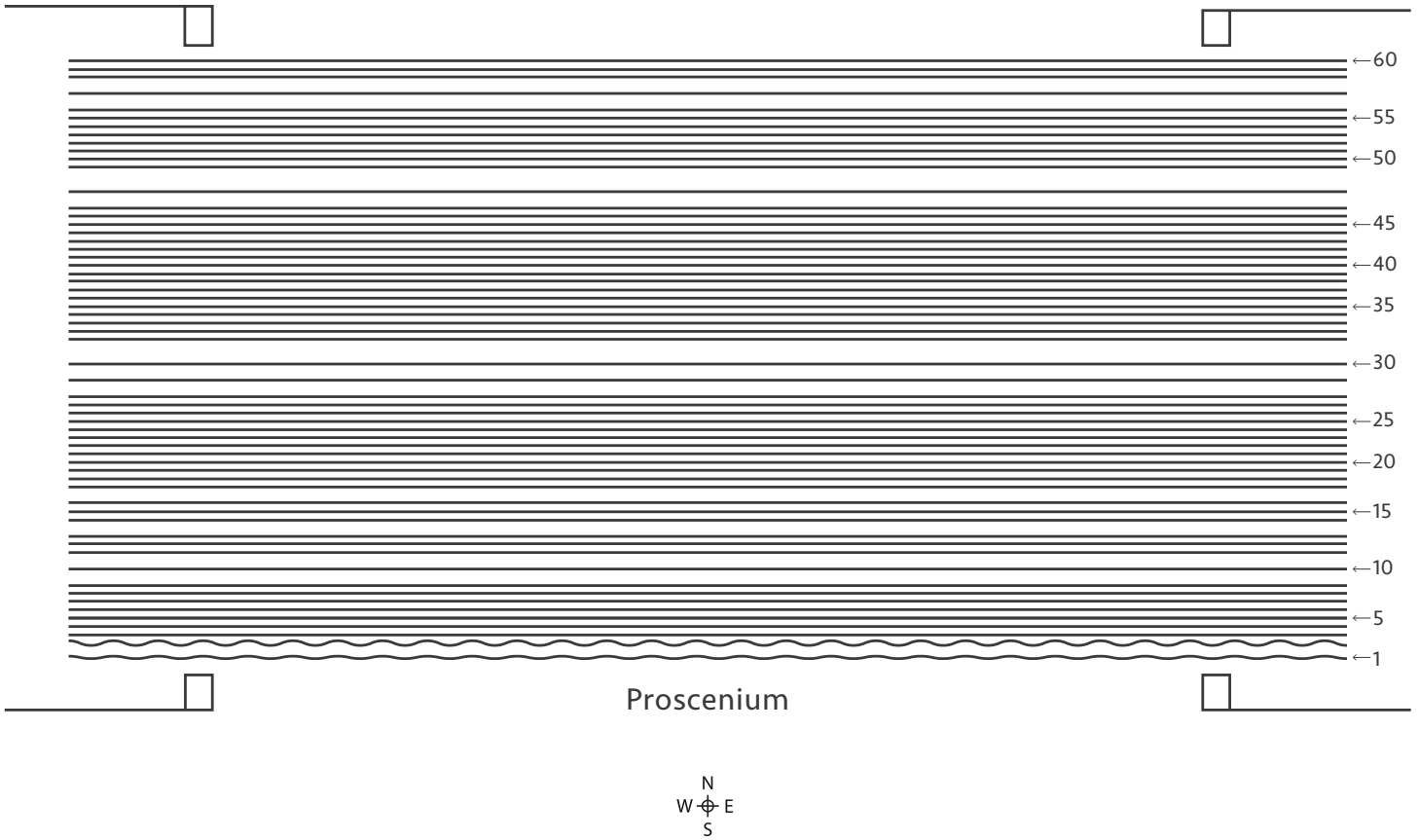
# LINESET SCHEDULE

	40'	12.19 m	<b>Back Wall</b>	26	17'4"	5.28 m	
60	38'10"	11.83 m		25	16'10"	5.13 m	
59	38'4"	11.68 m		24	16'4"	4.97 m	
58	37'10"	11.63 m		23	15'10"	4.82 m	
57	36'10"	11.22 m		22	15'4"	4.67 m	
56	35'10"	10.92 m		21	14'10"	4.52 m	
55	35'4"	10.76 m		20	14'4"	4.36 m	
54	34'10"	10.61 m		19	13'10"	4.21 m	
53	34'4"	10.46 m		18	13'4"	4.06 m	
52	33'10"	10.31 m		17	12'10"	3.91 m	
51	33'4"	10.16 m		16	11'10"	3.60 m	
50	32'10"	10.00 m		15	11'4"	3.45 m	
49	32'4"	9.85 m		14	10'10"	3.30 m	
48	30'10"	9.39 m	<b>Orch. Ceiling N/A</b>	13	9'10"	2.99 m	
47	29'10"	9.09 m		12	9'4"	2.84 m	
46	29'4"	8.94 m		11	8'10"	2.69 m	
45	28'10"	8.78 m		10	7'10"	2.38 m	<b>Orch. Ceiling N/A</b>
44	28'4"	8.63 m		9	6'10"	2.08 m	
43	27'10"	8.48 m		8	6'4"	1.93 m	
42	27'4"	8.33 m		7	5'10"	1.77 m	
41	26'10"	8.17 m		6	5'4"	1.63 m	
40	26'4"	8.02 m		5	4'10"	1.47 m	
39	25'10"	7.87 m		4	4'4"	1.32 m	
38	25'4"	7.72 m		3	3'10"	1.16 m	<b>1st G.P. Lineset (limited use)</b>
37	24'10"	7.56 m		2	3'4"	1.01 m	<b>Main Curtain</b>
36	24'4"	7.41 m		1	2'4"	0.71 m	<b>Teaser</b>
35	23'10"	7.26 m					<b>Fire Curtain</b>
34	23'4"	7.11 m		0	0'	0 m	<b>Plaster Line</b>
33	22'10"	6.95 m	<b>Mid Stage Traveler N/A</b>				
32	22'4"	6.80 m					
31	21'10"	6.65 m					
30	20'4"	6.19 m					
29	19'4"	5.89 m	<b>Orch. Ceiling N/A</b>				
28	18'4"	5.58 m					
27	17'10"	5.43 m					

<b>Proscenium Opening</b>	60' (18.3 m)
<b>High Trim</b>	68'7" (20.9 m)
<b>Arbor Cap</b>	2,380 lbs (1,079 kg)
<b>Pipe Length</b>	78' (23.7 m)

# LINESET SCHEDULE



## SOFT GOODS

	QUANTITY	WIDTH x HEIGHT	
<b>House Curtain</b> (Maroon)	1 pair	40' x 33'2"	12.2 m x 10.1 m
<b>Valance</b> (Maroon)	1	78' x 26'2"	23.8 m x 8.0 m
<b>Legs</b>	5 pairs	20' x 30'	6.1 m x 9.1 m
<b>Borders</b>	6	78' x 12'	23.8 m x 3.7 m
<b>Scrim</b> (Black & White)	2	78' x 25'	23.8 m x 7.6 m
<b>Mid-Stage Traveler</b>	1 pair	78' x 24'5"	23.8 m x 7.4 m
<b>Side Tabs</b> (Stage Right)	3	12' x 20'	3.7 m x 6.1 m
<b>Side Tabs</b> (Stage Left)	3	12' x 30'	3.7 m x 9.1 m
<b>Plastic Cyc</b>	1	78' x 25'	23.8 m x 7.6 m
<b>Fabric Cyc</b>	1	78' x 25'	23.8 m x 7.6 m
<b>Full Blackout</b>	1	78' x 30'	23.8 m x 9.1 m

# RIGGING

<b>Battens</b>	58 (Ladder battens)
<b>Batten Length</b>	78'
<b>In Trim</b>	3'10"
<b>Out Trim</b>	68'7"
<b>Batten Locations</b>	75 (17 obstructed/not installed)
<b>Clearance between Battens</b>	6"
<b>Lineset Live Capacity</b>	2,070 lbs
<b>Grid Height</b> (From Stage)	71'

Rear stage allows for dead hang rigging from 6 rigging beams 10' on center.  
Rear stage rigging height is 32'.

## PROSCENIUM ARCH

There are 25 rigging points, each 38.5 inches apart.

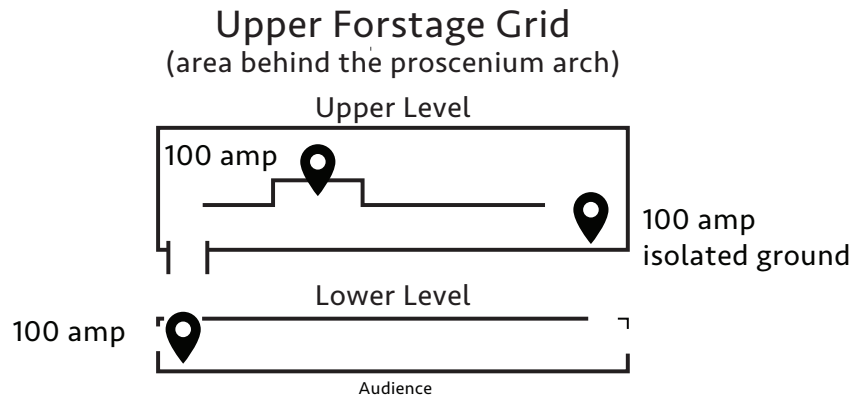
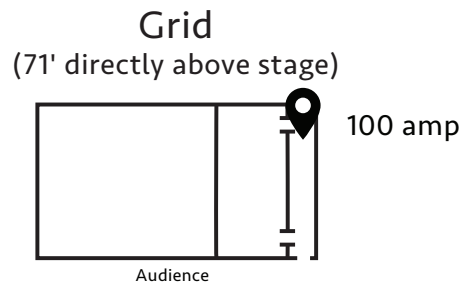
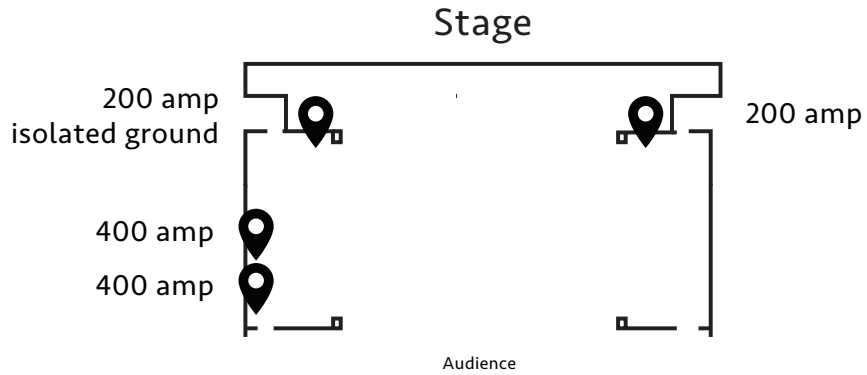


Photo by Patrick O'Leary

# DISCONNECTS

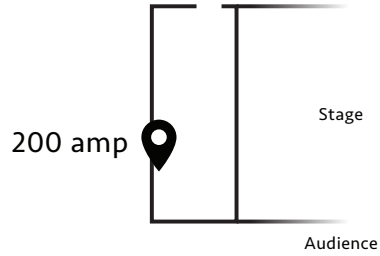
<b>Upstage Left</b> (isolated ground)	200 amp 208 volt 3 phase
<b>Upstage Right</b>	200 amp 208 volt 3 phase
<b>Downstage Right</b>	400 amp 208 volt 3 phase
<b>Downstage Right</b>	400 amp 208 volt 3 phase
<b>Stage Left Gallery</b>	200 amp 208 volt 3 phase
<b>Rehearsal Room</b>	200 amp 208 volt 3 phase
<b>Loading Dock</b> (shore power)	200 amp 208 volt 3 phase
<b>Loading Dock</b> (shore power isolated ground)	100 amp 208 volt 3 phase
<b>Upper Forestage Grid</b> (isolated ground)	100 amp 208 volt 3 phase
<b>Upper Forestage Grid</b>	100 amp 208 volt 3 phase
<b>Grid</b>	100 amp 208 volt 3 phase

# DISCONNECT LOCATIONS

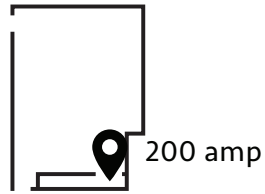


# DISCONNECT LOCATIONS

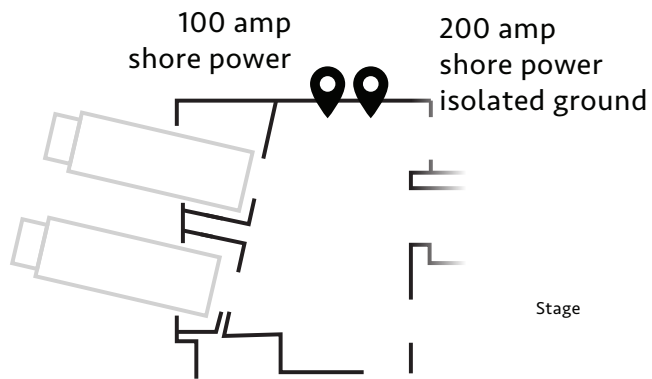
Stage Right Gallery  
(above stage right)



Rehearsal Room



Loading Dock





# LIGHTING

## CONSOLE

ETC Eos Ti – 4000 Channel  
Capable of Mid-House Tech Table

## CONTROL/DMX

ETC Net3  
12 – Two Port Gateways (DMX in or out)  
In-House Power on Universes 1 and 2

## DIMMERS

(ETC Sensor)

Type	Quantity
2.4k Performance	506
6.0k Performance	16
120v Non-Dim	48
208v Non-Dim	48

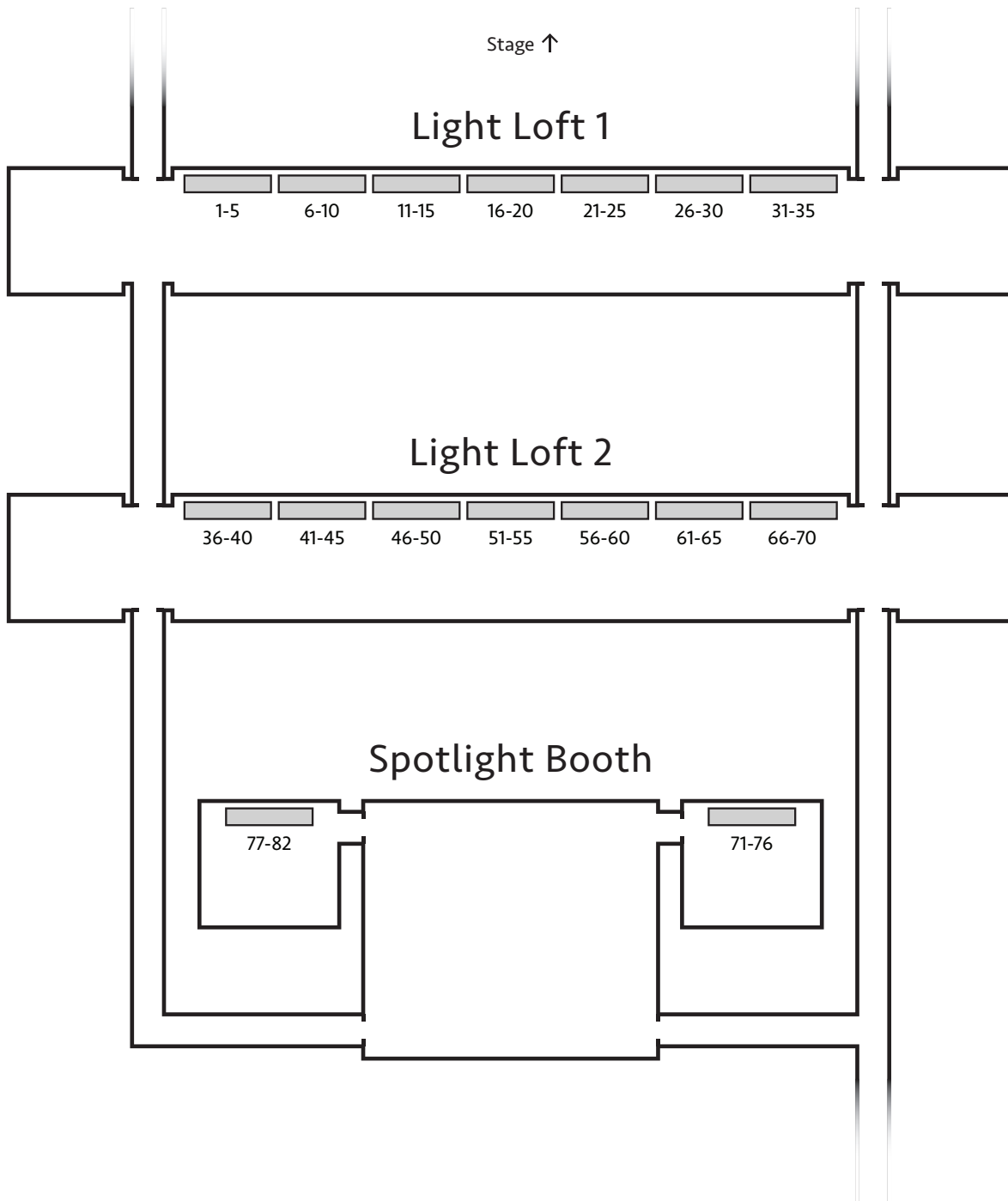
# LIGHTING INVENTORY

<b>TYPE</b>	<b>QUANTITY</b>
<b>Source Four 5° 750 Watt</b>	36
<b>Source Four 10° 750 Watt</b>	34
<b>Source Four 14° 750 Watt</b>	6
<b>Source Four 19° 750 Watt</b>	84
<b>Source Four 26° 750 Watt</b>	72
<b>Source Four 36° 750 Watt</b>	60
<b>Source Four 50° 750 Watt</b>	24
<b>Source Four PAR 575 Watt</b>	8
<b>Birdies</b>	12
<b>Cyc Lights, 3 cell</b> (Aurora, 1000 watts per cell)	12
<b>Ground Row, 3 cell</b> (Aurora, 1000 watts per cell)	12
<b>10" Selecon Fresnel 2KW</b>	42
<b>PAR 64 1k</b>	60
<b>Followspots</b> (3K Lycian)	4

Some additional Source Four barrels available upon request.

# STAGE PIN CONNECTIONS

82 circuits available



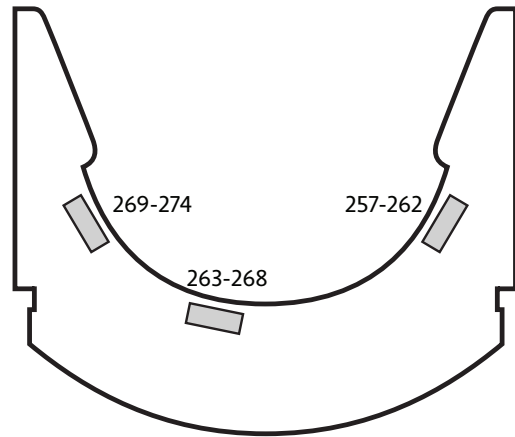
Floor 5 (Ceiling of the House)



# STAGE PIN CONNECTIONS

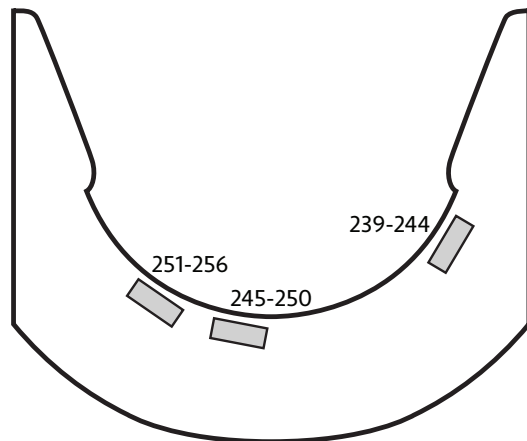
## PRESIDENTS CIRCLE (2)

18 circuits available



## SCHOLARS CIRCLE (3)

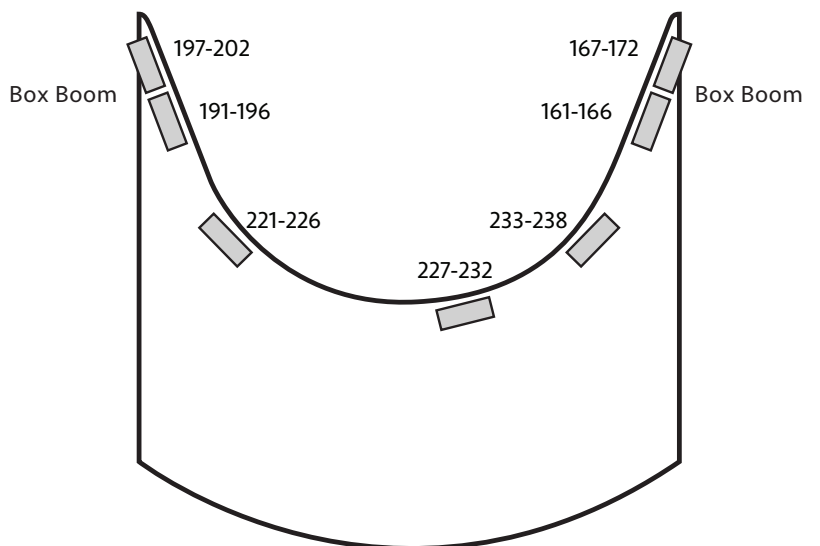
18 circuits available



## GALLERY CIRCLE (4)

18 circuits available

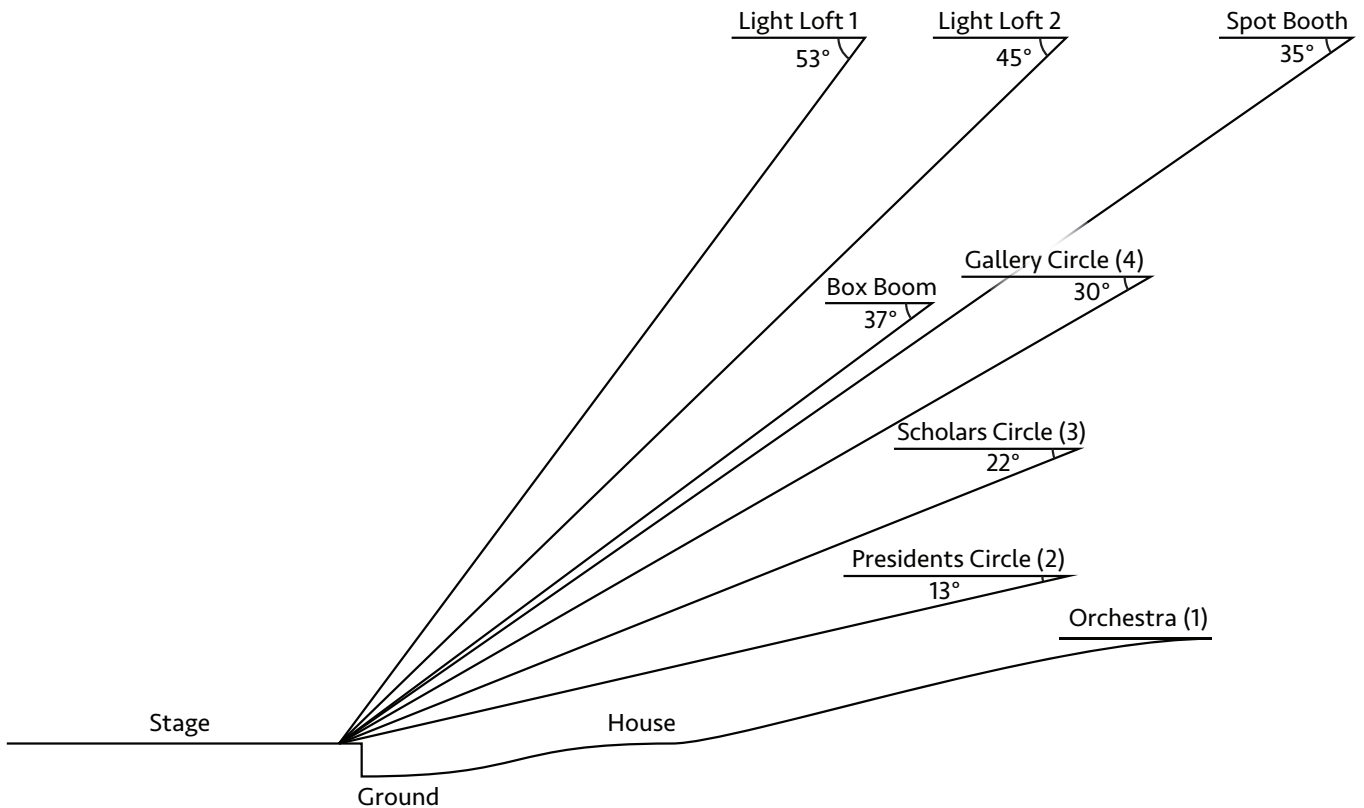
12 circuits per Box Boom



# LIGHTING ANGLES & DISTANCE TO STAGE

## DISTANCE TO STAGE

Light Loft 1	98'	29.9 m
Light Loft 2	113'	34.4 m
Spot Booth	138'	42.0 m
Box Boom	82'	25.0 m
Gallery Circle (4)	104'	31.7 m
Scholars Circle (3)	89'	27.1 m
Presidents Circle (2)	84'	25.6 m



# SOUND

## FRONT OF HOUSE SOUND CONSOLE

Digico SD9 48x24

## LOUDSPEAKER SYSTEM

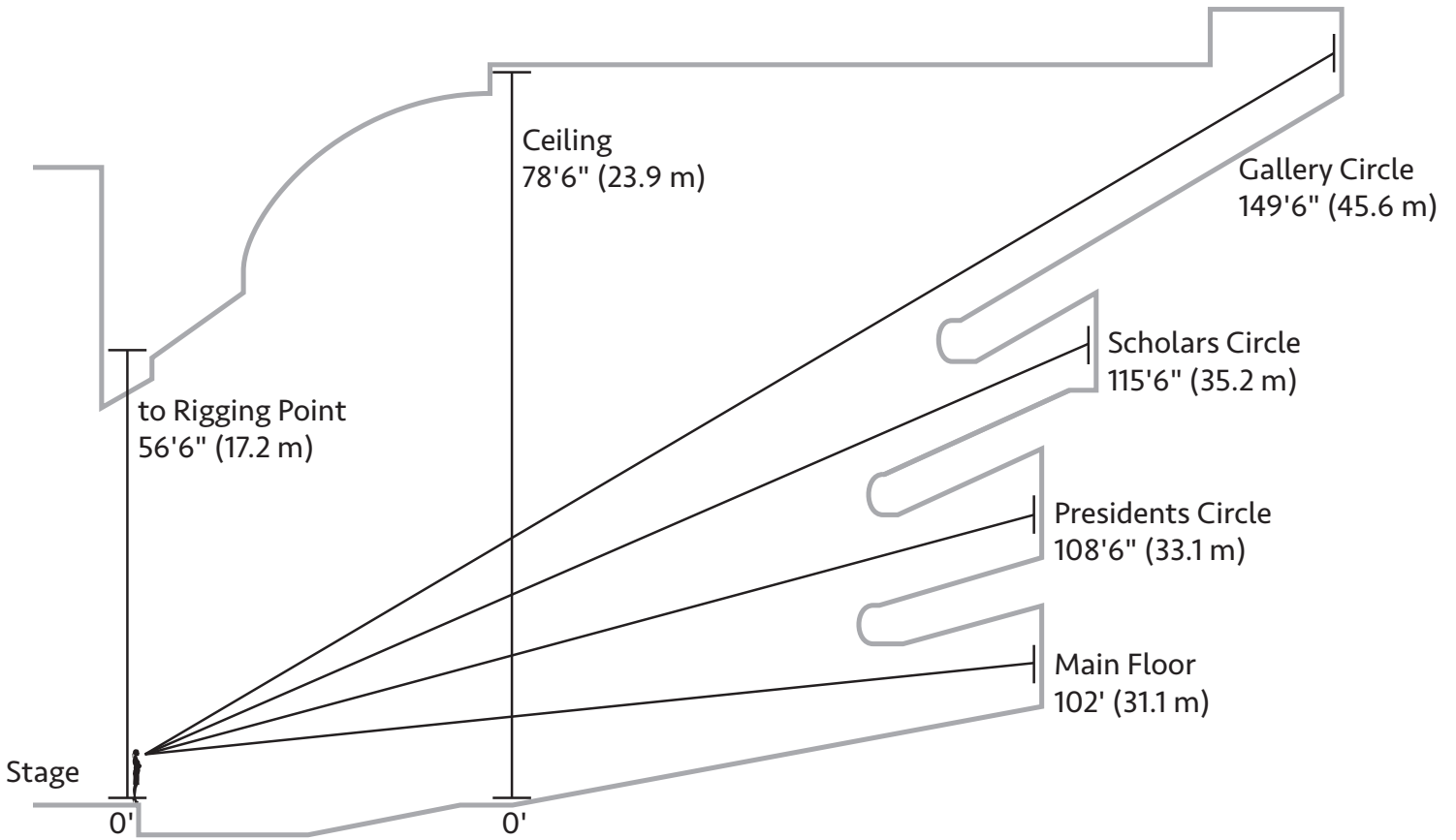
Type	Quantity
<b>JBL Vertec 4888</b>	18 (9 down per side)
<b>JBL Vertec 4880 Subs</b>	8 (4 per side, on ground)
<b>JBL Vertec 4886</b> (main center array)	10
<b>JBL Vertec 4886</b> (balconies L/R/C)	15
<b>Meyer UPQ-2P</b> (front and side fill)	6
<b>Renkus Heinz TRX 61</b> (main floor front fill)	7
<b>JBL PRX 715</b> (active monitors)	4
<b>Electro Voice SXA 250</b> (active monitors)	8
<b>Meyer UPA 1P</b> (active speakers)	8
<b>Meyer UP Junior</b> (under balcony speakers)	2

## AMPLIFIERS, PROCESSING, CONTROL

Type	Quantity
<b>Crown IT 12000HD</b>	9
<b>Crown IT 9000HD</b>	11
<b>Crown CTS 1200</b>	4
<b>BSS London BLU Processing</b>	
<b>Clear Com System</b>	

# SOUND

## THROW DISTANCES



# VIDEO

## PROJECTION

Barco HDX-W20 Flex 20,000 Lumen WUXGA DLP Projector  
Barco TLD+(4.17-6.95: 1 WVXGA)(4.5-7.5: 1 SXGA+) Zoom Lens  
The Screen Works 12' x 21.25' Truss Frame Front Project Screen

## CONTROL

Barco PDS-902 3G Presentation Switcher/Scaler

## CAMERA, RECORDER, SIGNAL ROUTING

Sony BRCH700 HD 3CCDs P/T/Z Camera (FOH Position)  
Sony RMBR300 Remote Control Unit  
Sound Devices PIX270i Production Video/Audio Recorder  
Magenta Multiview VGA Transmitter/Receiver x2  
Extron HDMI Extender x1



# HOUSE FEATURES

## STAGE & PROSCENIUM

**Stage Depth** 39'6" 12.0 m  
(plaster line to back wall)

**Upstage Extension Depth** 17'3" 5.3 m

## HOUSE MIX POSITION

**Depth** 9'6" 2.9 m

**Width** 18'10" 5.7 m

**Distance to Proscenium** 68' 20.7 m

**Cable Pass  
(Limited Access)** 2 stage left,  
1 stage right,  
2 control booth

## FOLLOW SPOT BOOTH

**Depth** 11' 3.3 m

**Width** 25' (7.6 m) window,  
35' (10.7 m) room

**Height** 8'11" 2.7 m

**Throw Distance** 140' 42.7 m

**Follow Spots** 4

## CONTROL BOOTH

**Depth** 9'7" 2.9 m

**Width** 37' 11.2 m

**Height** 9' 2.7 m

**Throw Distance** 105' 32.0 m

## PROJECTION BOOTH

**Depth** 6'10" 2.1 m

**Width** 31' 9.4 m

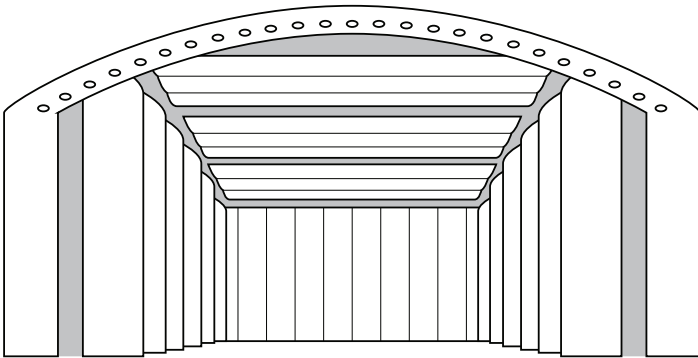
**Height** 9'3" 2.8 m

**Throw Distance** 110' 33.5 m

# ORCHESTRA SHELL

<b>Tower Count</b>	10
<b>Tower Depth</b>	5'      1.5 m
<b>Tower Width</b> (open)	12'4"    3.8 m
<b>Tower Width</b> (closed)	6'8"     2.0 m
<b>Tower Height</b>	25'9" to 43'6" (7.8 m x 13.3 m)
<b>Storage</b>	Upstage Left & Upstage Right
<b>Orchestra Ceiling Count</b>	3
<b>Orchestra Ceiling Depth</b>	10'10"    3.3 m
<b>Orchestra Ceiling Length</b>	41'6" to 58'1" (12.6 m x 17.7 m)

Large



Small

