

STAIRWELL H
LL TO FLOOR 12
FLOOR 12

12

EXIT DOWN TO
FLOOR 1
NO ROOF ACCESS

draft

PROPOSAL

july 2019

LEV. 5TH
1500
1500
1500

H₂ 2.5 1/4" 17.5
H₂ 2.5 1/2" 18.5
H₂ 2.5 3/4" 18.5

Escalier Forte

ESCALIER FORTE
Andrew Lackey & Mark Wentzel

Stairwell H @ PCM: escalier forte

project description:

Stairwell H is a 12 floor service stairwell that ascends from below Ponce City Market's food court to the top floor of the building. Project collaborators, artist Mark Wentzel, and sound designer, Andrew Lackey, will transform the stairwell into a multi-story stringed instrument, a work they've entitled escalier forte meaning "loud staircase." The project explores the inherent acoustic properties of the stairwell by locating and exciting the hidden sonic qualities of the space using string vibration and both sympathetic and forced resonance. The escalier forte project asks questions of both the public and the PCM building itself. What is a building or space meant to sound like? How does architecture want to respond to sound waves? How do we as humans listen and respond to the urban environment we build around ourselves? Can we "tune" our surroundings and modify our experience to better understand and relate to the world? Visitors to Stairwell H can pluck the strings of the escalier forte, "playing" its fundamental sounds, allowing them to physically activate the tonal properties of the structure and consider such questions.

1500

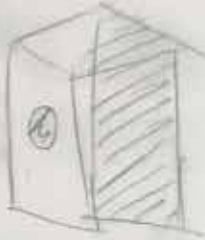
Escalier Forte proposal

Andrew Lackey &

Mark Wentzel

1/4" triply
6' x 6' x 6'

UPPER RESONATOR



27"



SOUND HOLE

4" STRAND SPACING
of sound

DUTTON LAMSON
WINCH MODEL
B2500
2500/16
BRAKE WINCH



5

BRAKE WINCH TENSIONERS

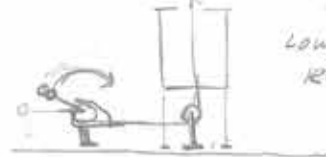
$$T = \frac{UW \cdot (2 \cdot L \cdot F)^2}{386.4}$$

APPROX. 1500"
SCALE
LENGTH
(floor to ceiling)

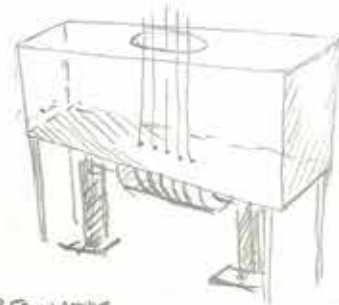
PRO STRANDS

1/8" STRAND	.0025 lb/in	400 lb MAX
1/4" STRAND	.01 lb/in	1400 lb MAX
3/16" STRAND	.0057 lb/in	840 lb MAX

2.5 Hz



LOWER RESONATOR



LOWER RESONATOR

2' x 2' x 4'

1/4" triply (IN SUBFLOOR)

T = Tension, in pounds

UW = unit weight of the string,
in pounds per linear inch

L = vibrating length of the string,
in inches

F = frequency of the note to which you will tune string, in Hz

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partial materials list

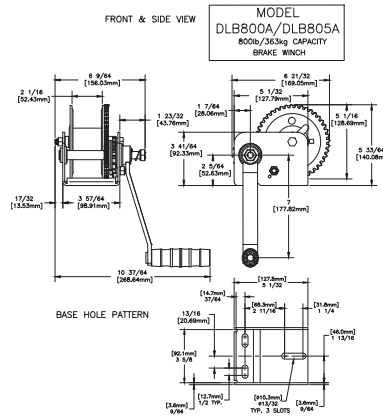


HEAVY DUTY STAINLESS THIMBLES
1/4 inch - 3/4 inch Diameter

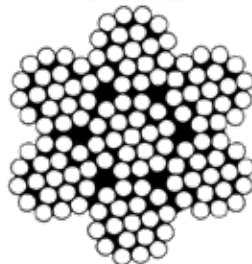


STAINLESS SHOULDER EYE BOLTS
1/4 inch - 5/8 inch Diameter

SHEET STEEL MOUNTING HARDWARE
SPOOL BODY



3/16" X 250', 7x19, Galvanized Cable Ree-
Item #: 21015025



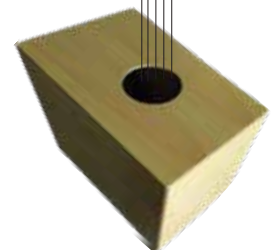
Length: 250 ft
Cable Diameter: 3/16 inches
WLL (5:1): 840 lbs
Breaking Load: 4200 lbs
Weight (per foot): 0.065 lbs



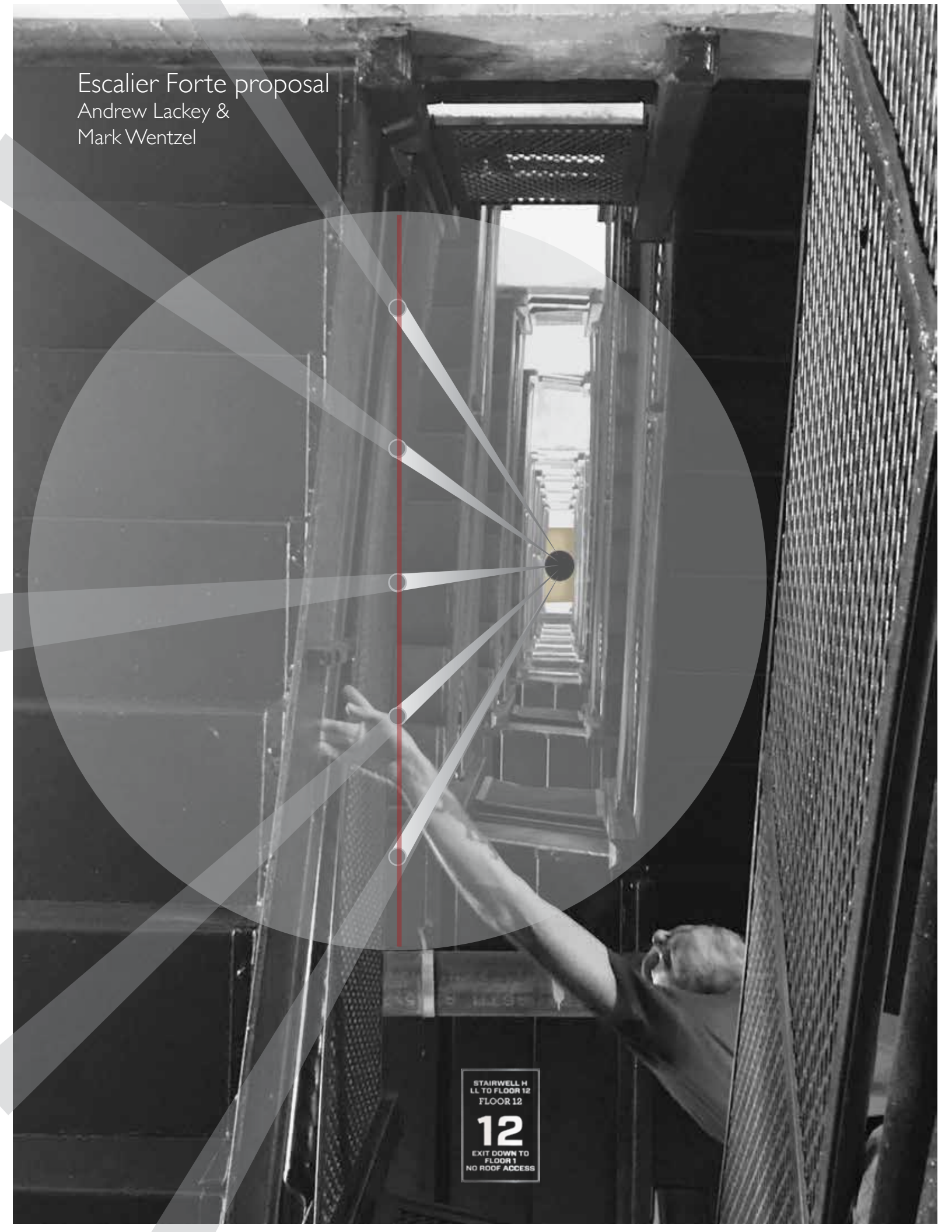
ALEKO WR3/8G7X19F250 3/8 Inch Diameter 7 x 19 Strand Galvanized Aircraft Steel Cable Wire Rope 250 Feet



1/4" Birch Cabinet Grade Hardwood Plywood
Good 2 Sides (G2S), grade A-4, and has a MDF Core.
1/4" birch plywood is rotary cut. 48.5" x 96.5" sheet size.



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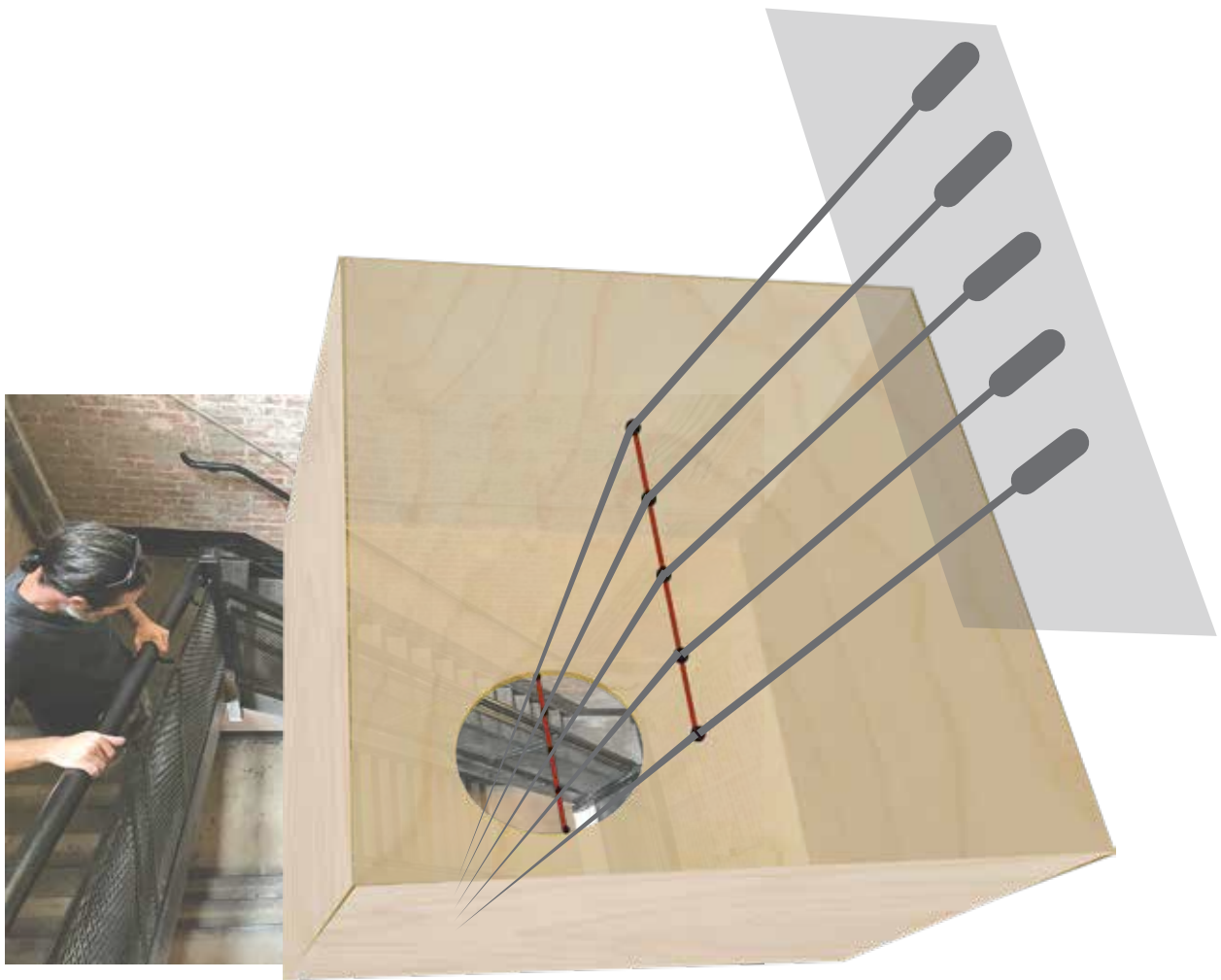


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Upper Resonator

