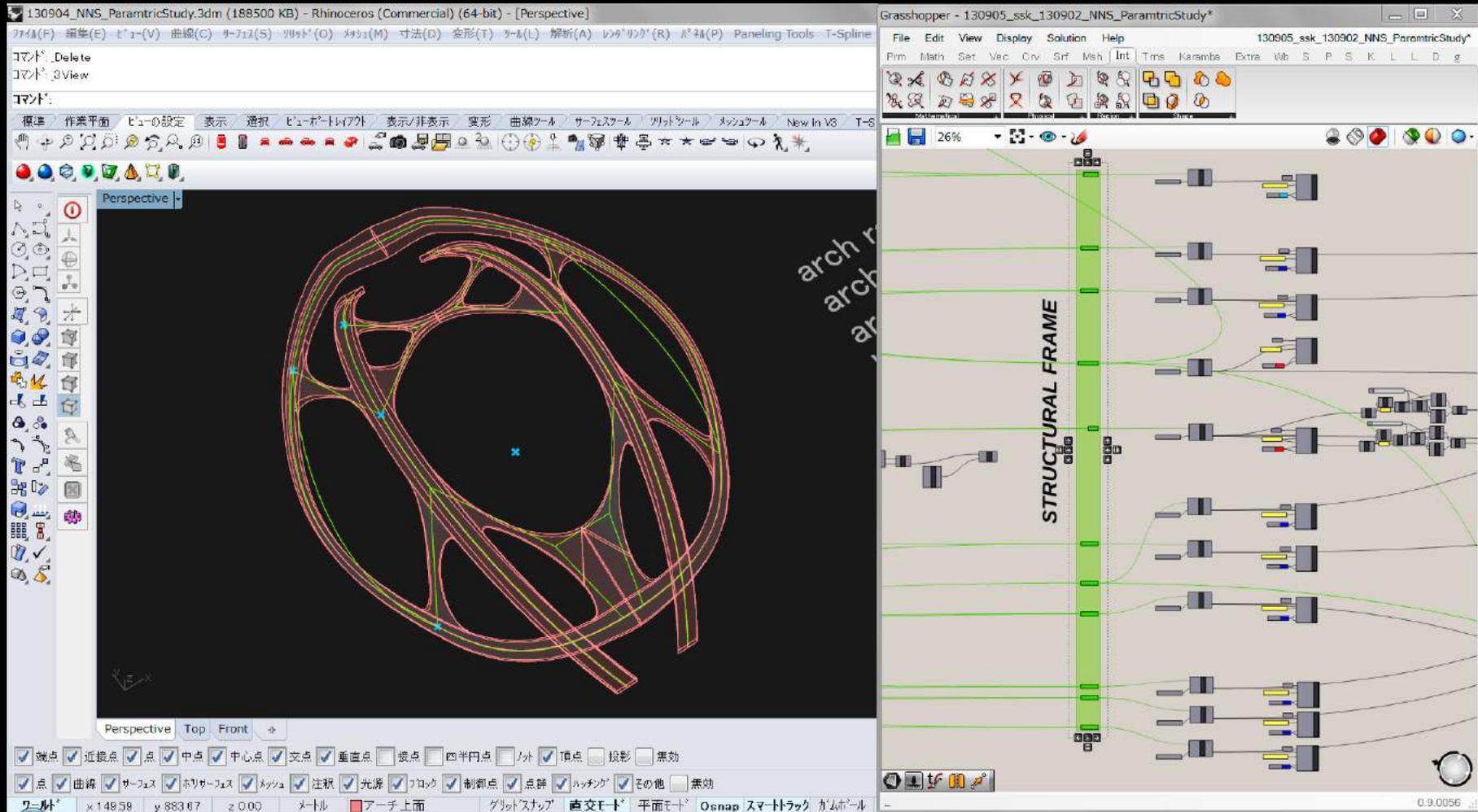
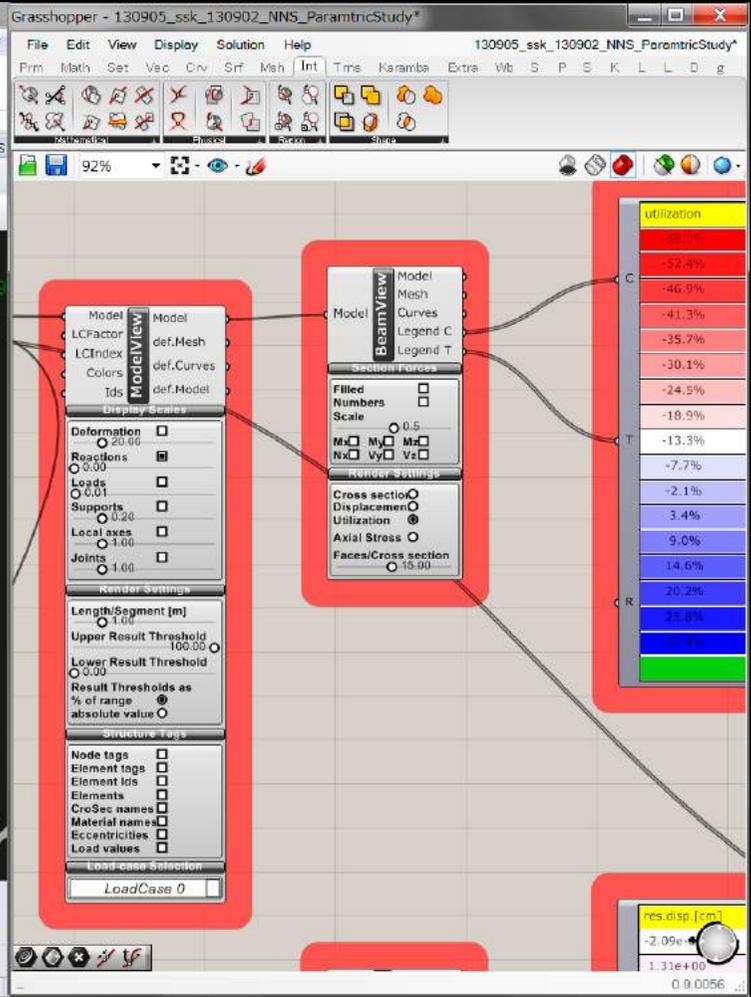
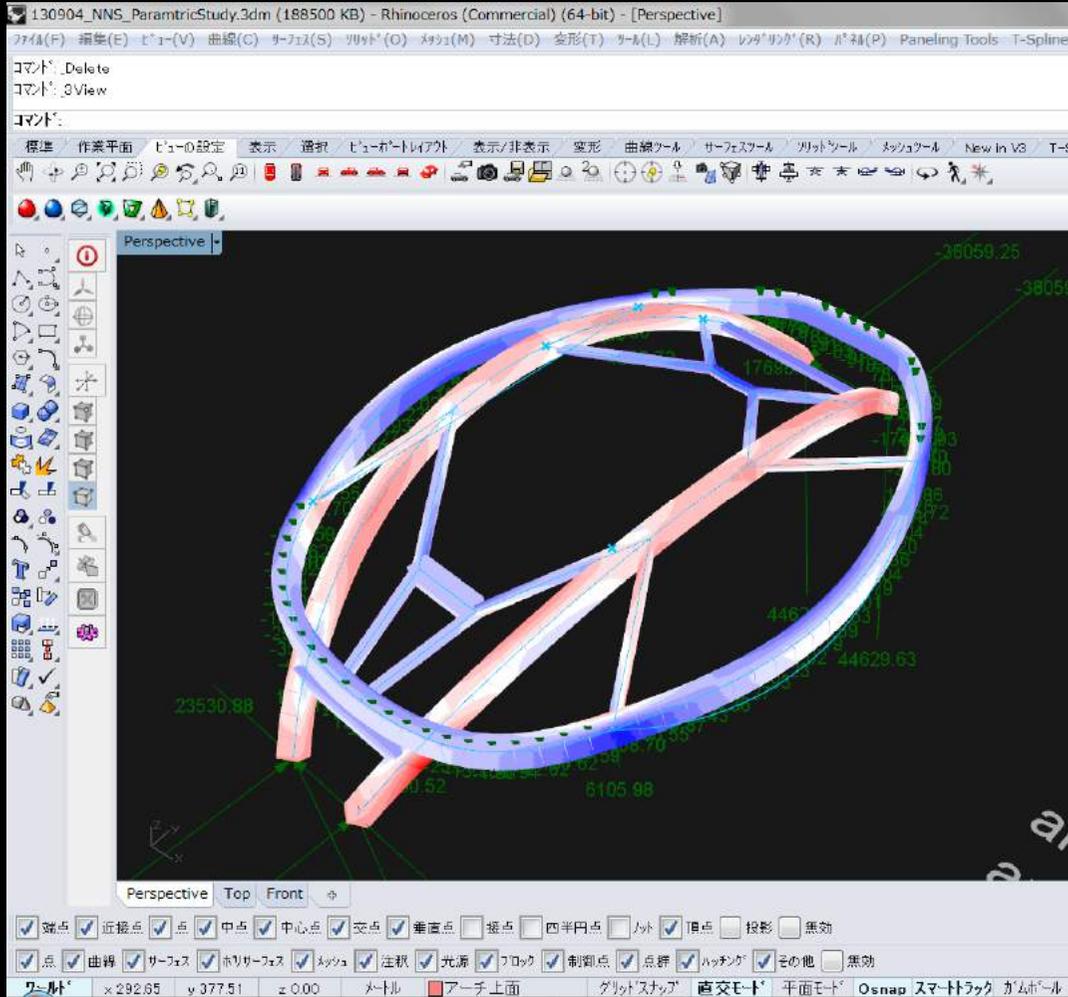
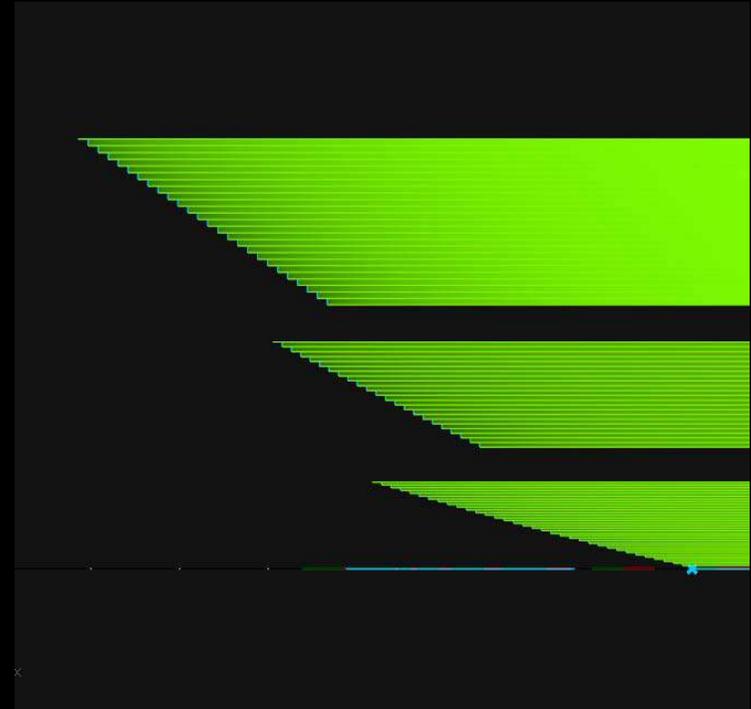
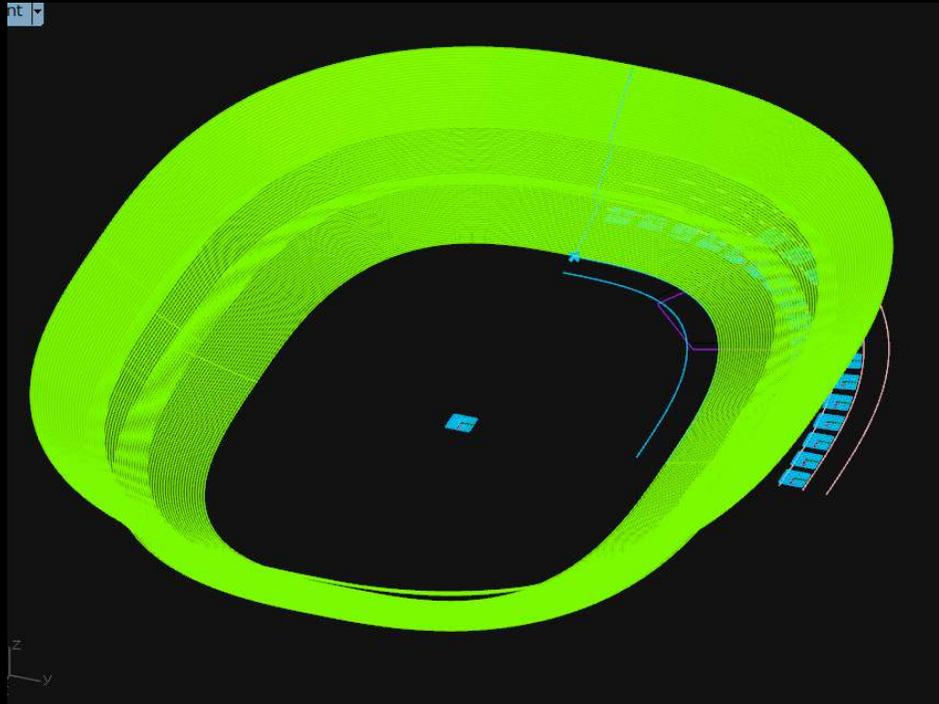


Parametric Model

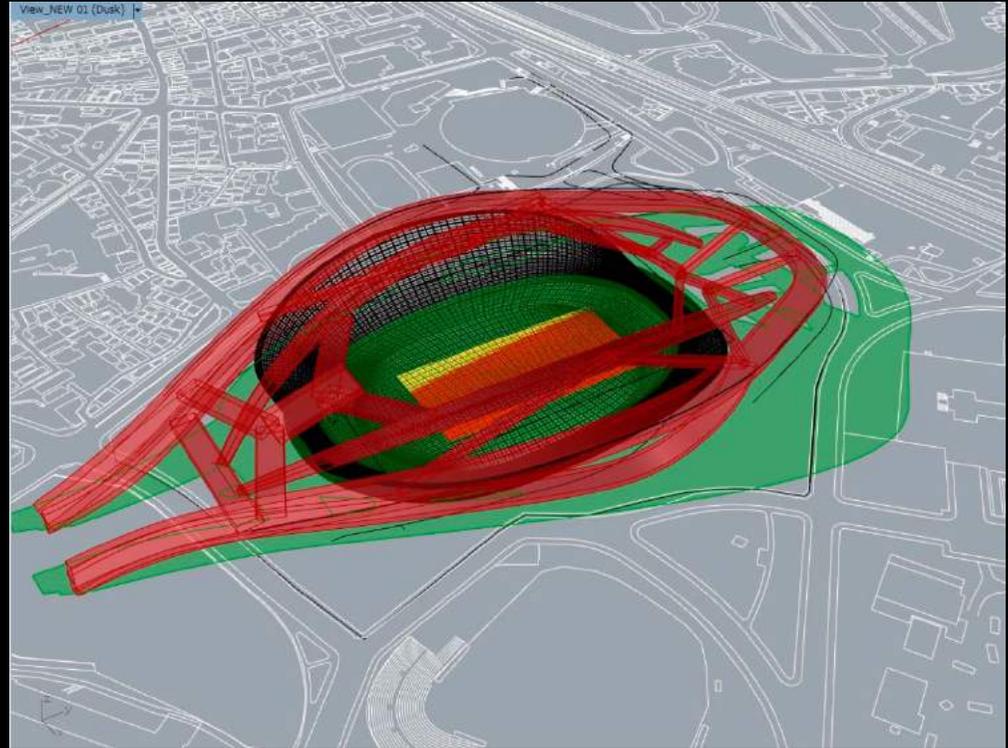
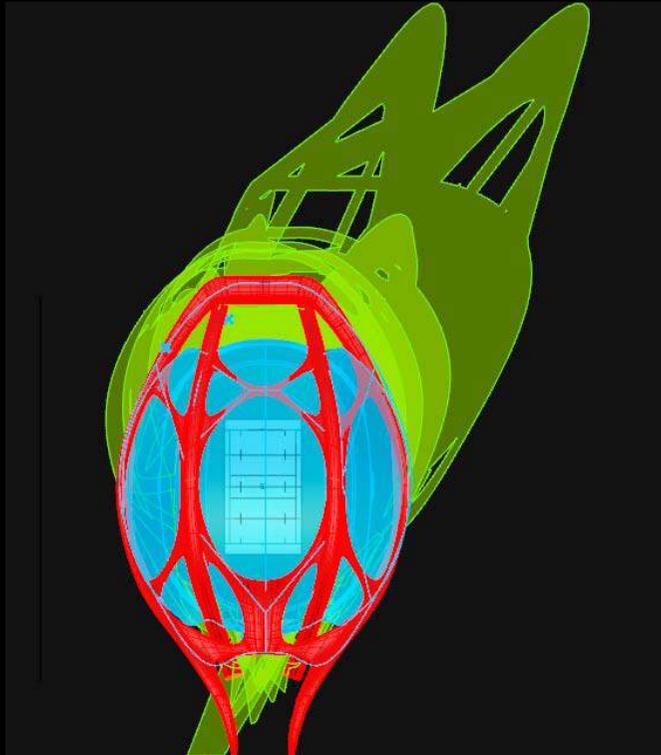


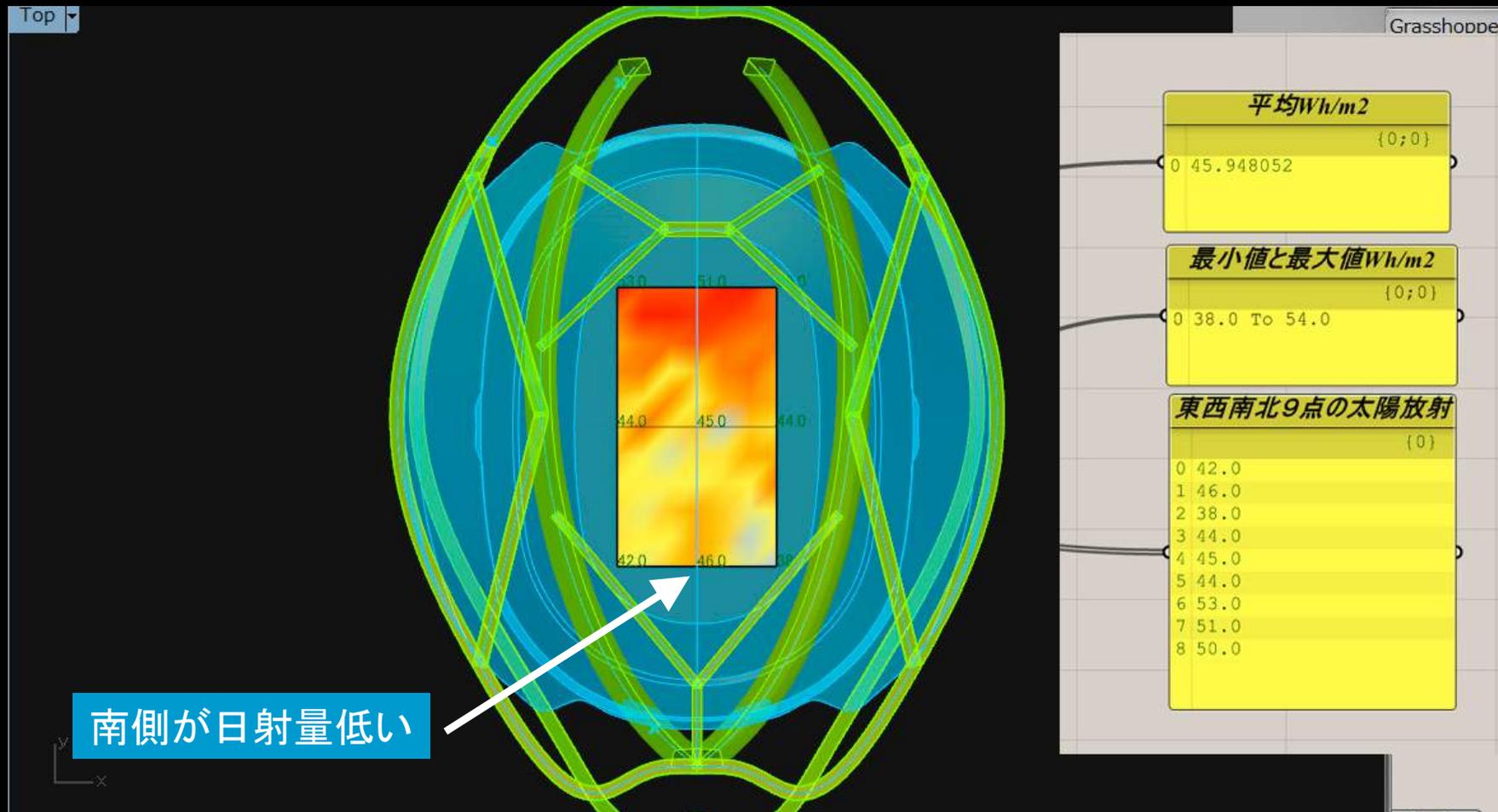


Generating the Bowl



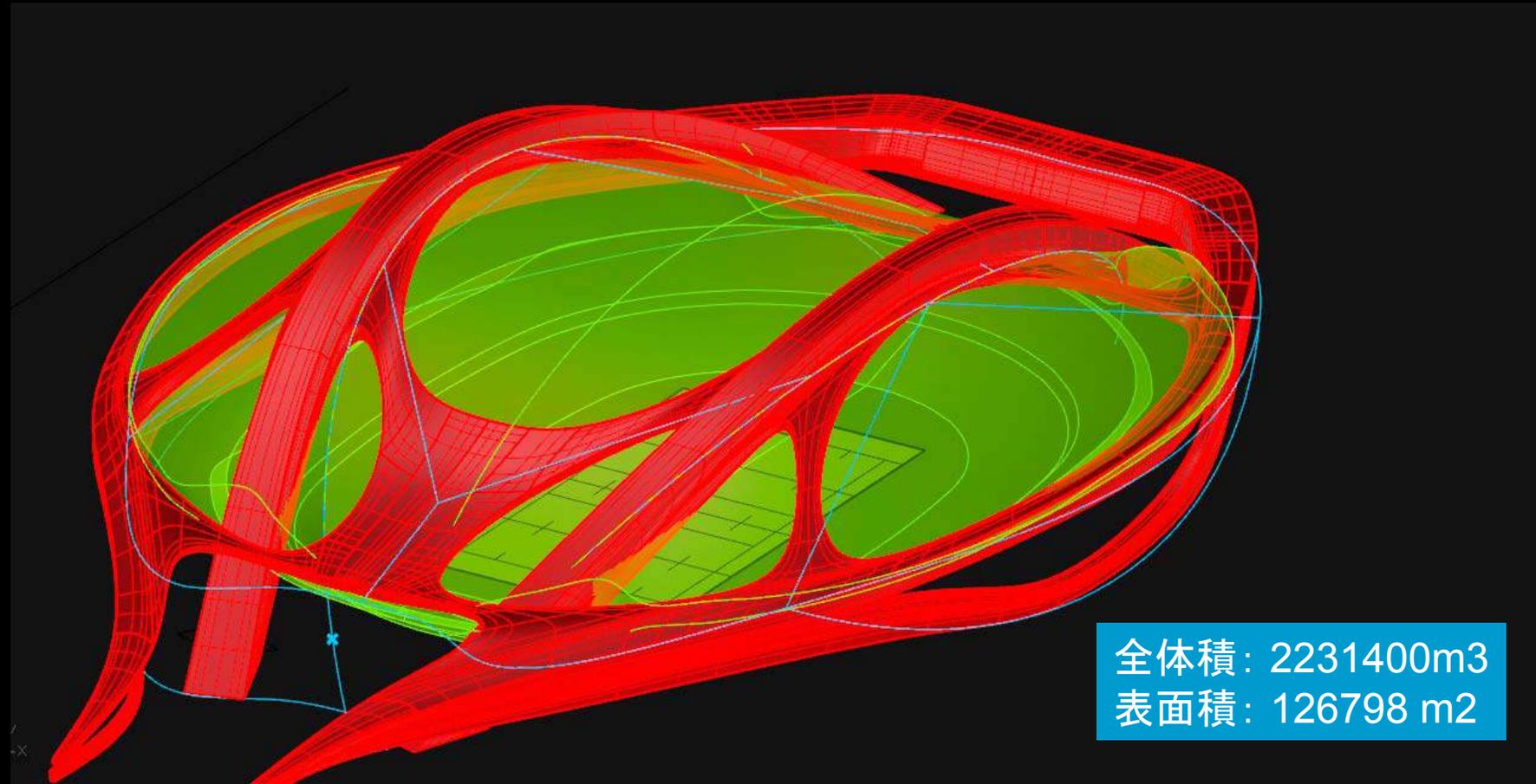
- ・ハイパー楕円から、視野を考慮した座席と通路を生成する



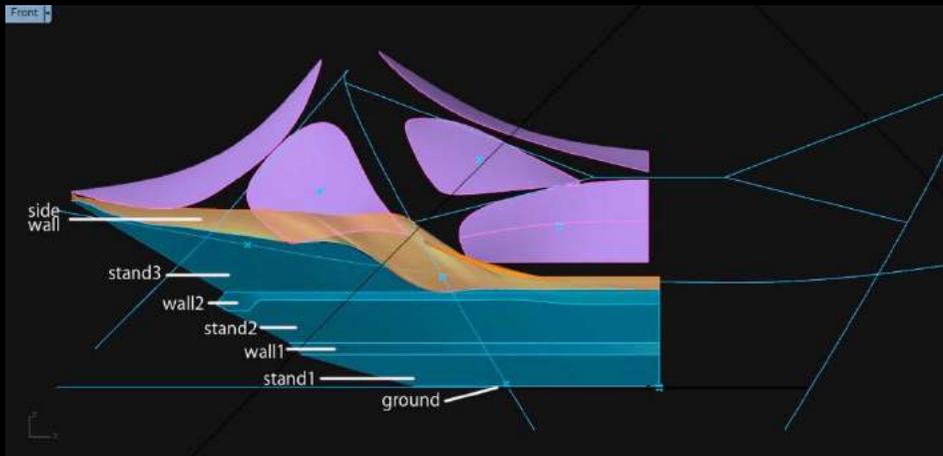


- ・東京都内の気象データをもとに、12月の月間日射量を算出
- ・平均45.9 KWh/m2

Reverberation Time Simulation



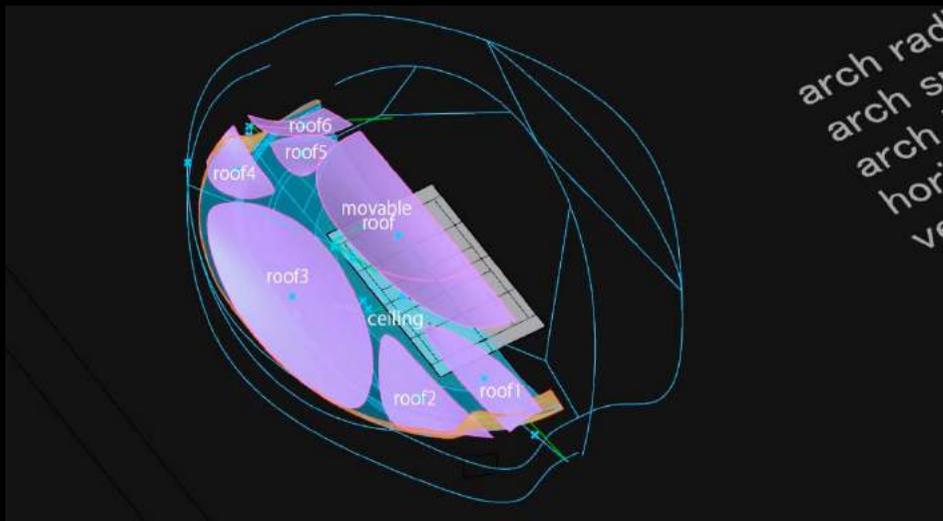
- ・モデルの室内容積と表面積を部材別に求め、残響時間を算出



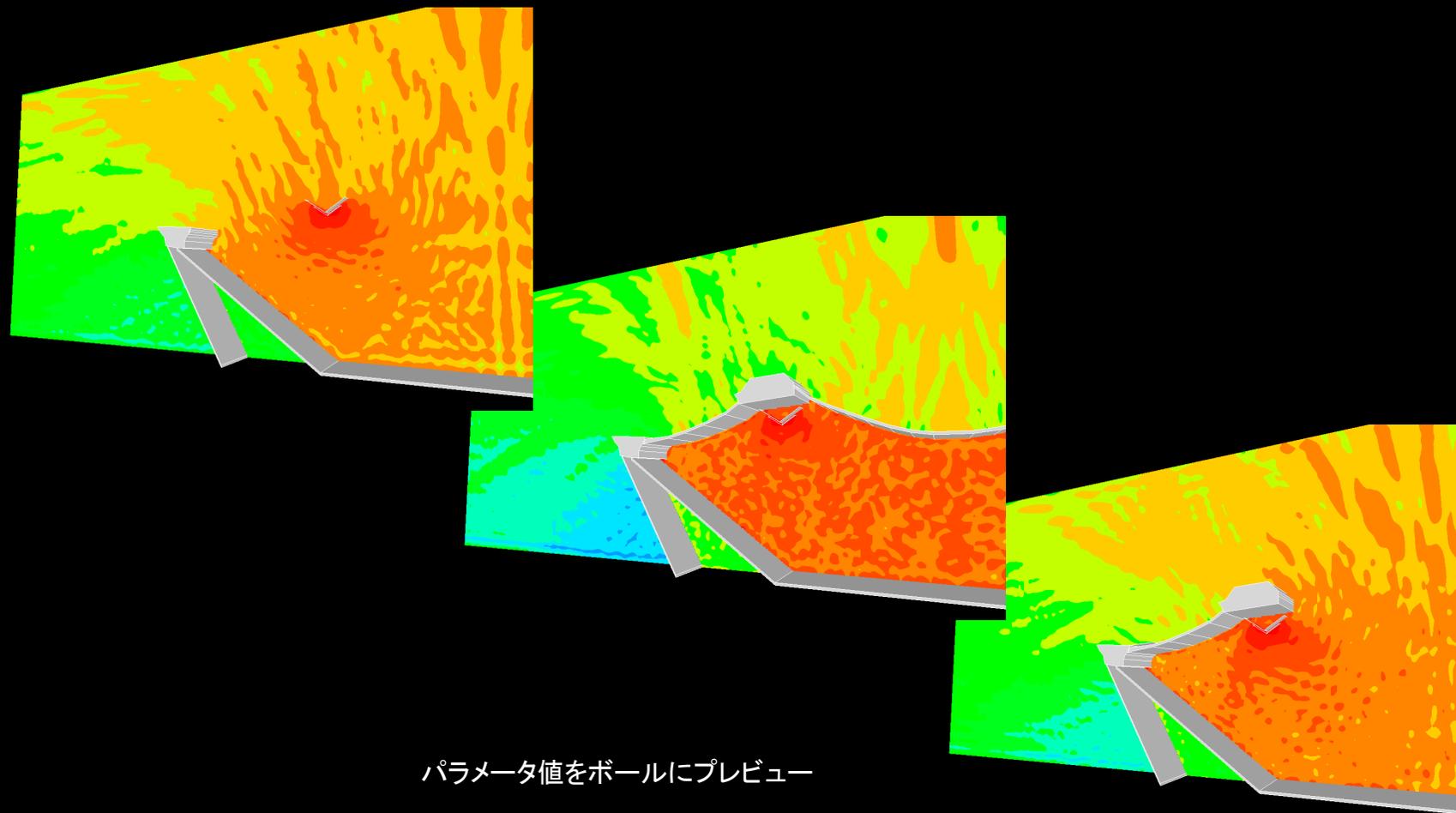
残響時間の基準(仮)

空席時: 7.4 s

満席時: 5.9 s



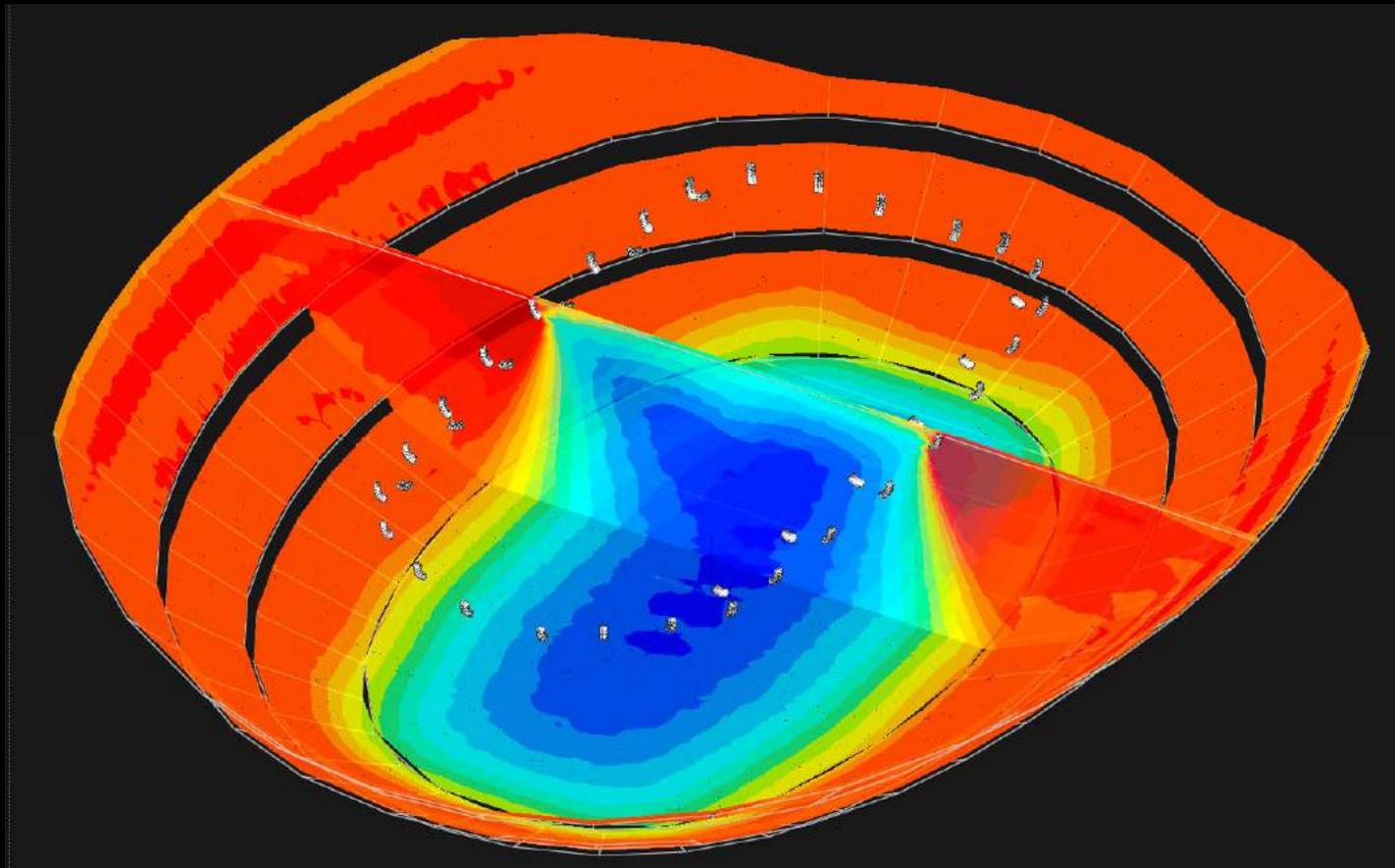
・残響時間を算出することで、室容積減と材料検討の必要性を認識する



パラメータ値をボールにプレビュー

・室形状・屋根素材により大きく変わる外部への音伝搬の検証を行う

制作：司馬

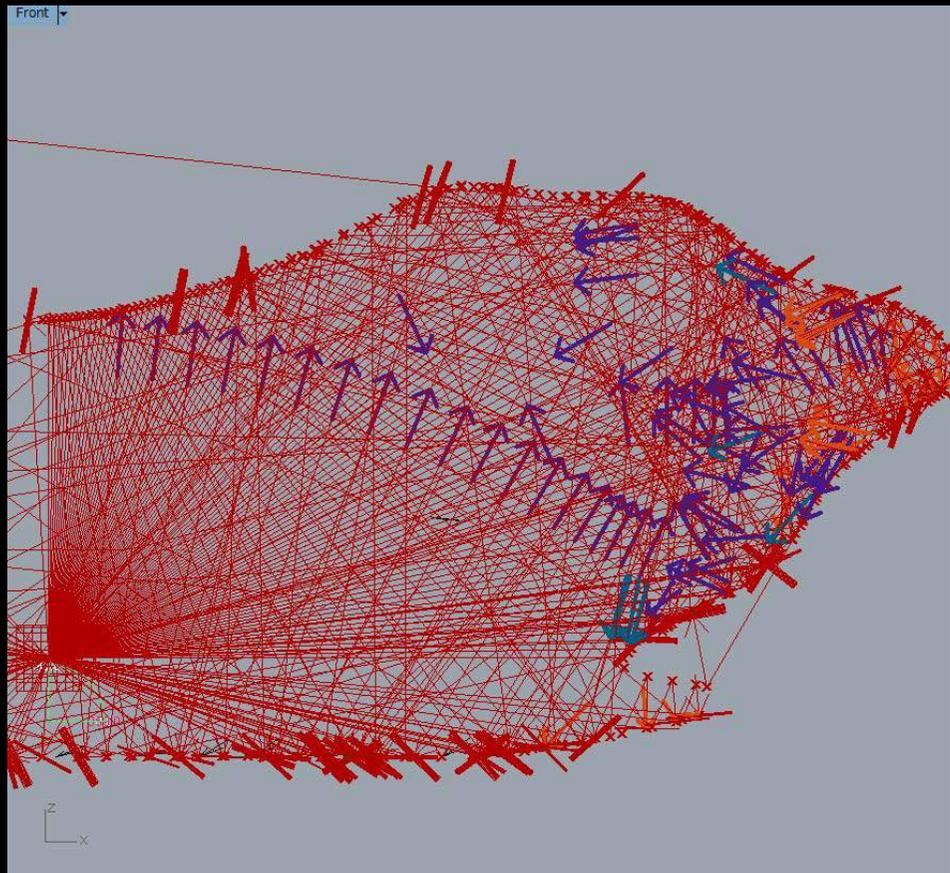


パラメータ値をボールにプレビュー

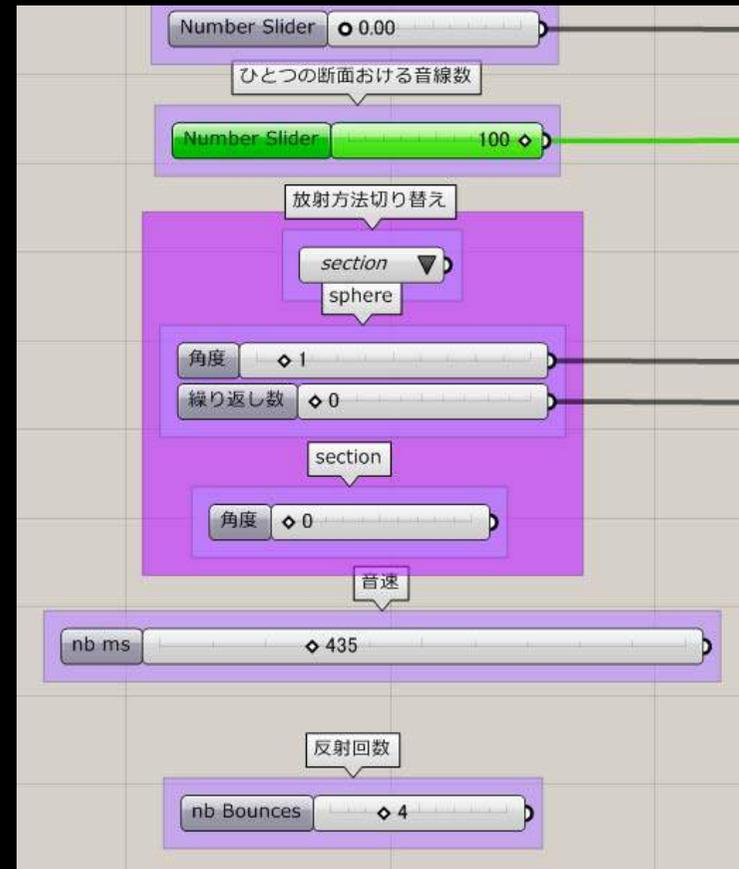
解析パラメータ入力

・ラインアレイ等のスピーカシステムの選定, クラスタレイアウト,
スピーカカバーエリアの検証を通して、明瞭な音を届ける

制作: 司馬

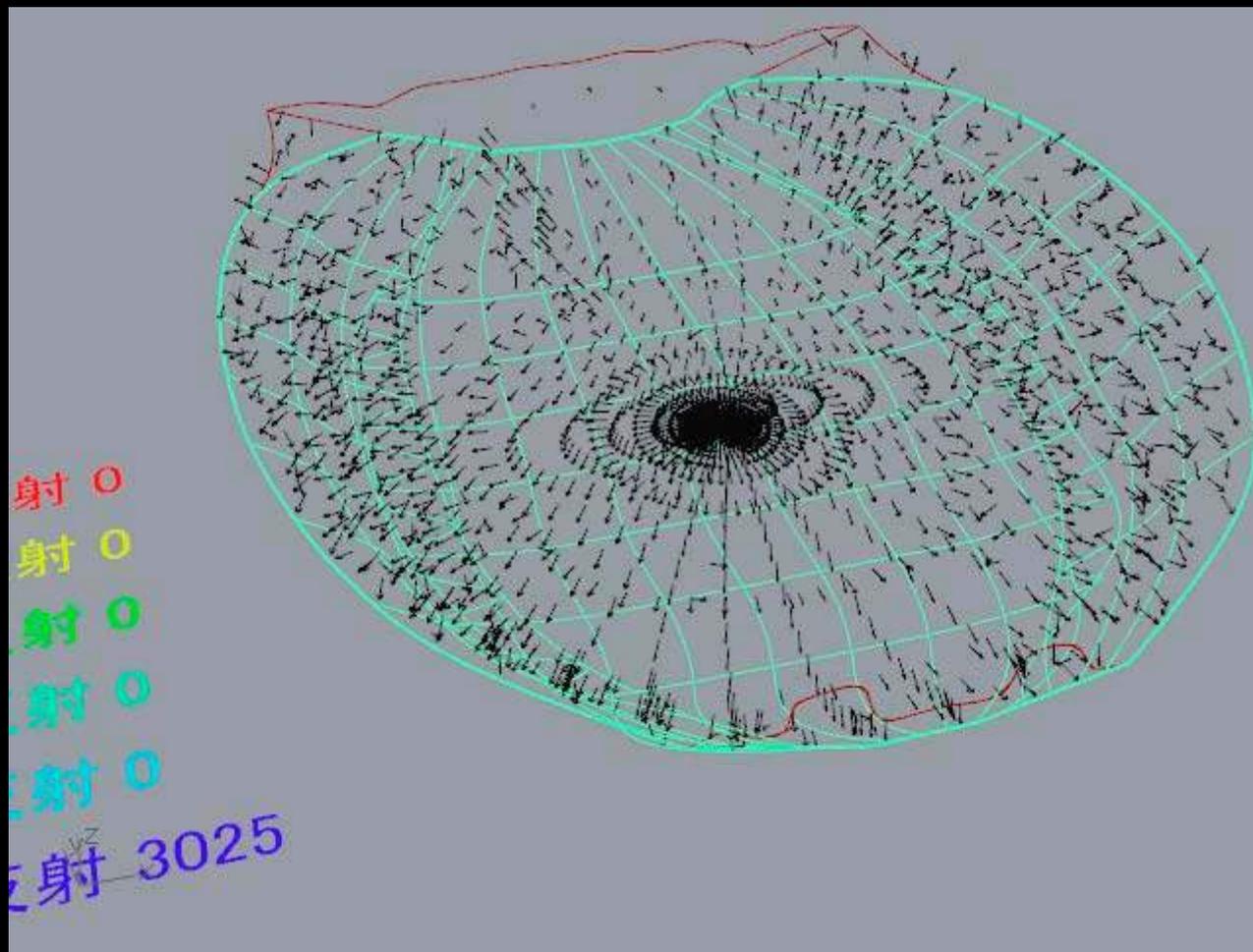


パラメータ値をボールにプレビュー

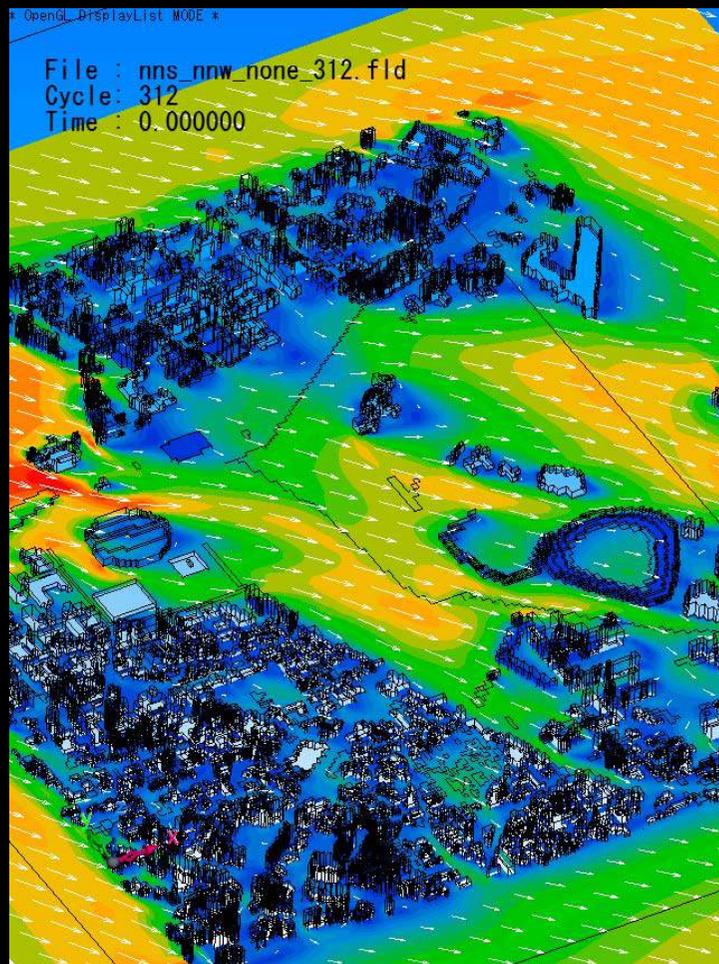


解析パラメータ入力

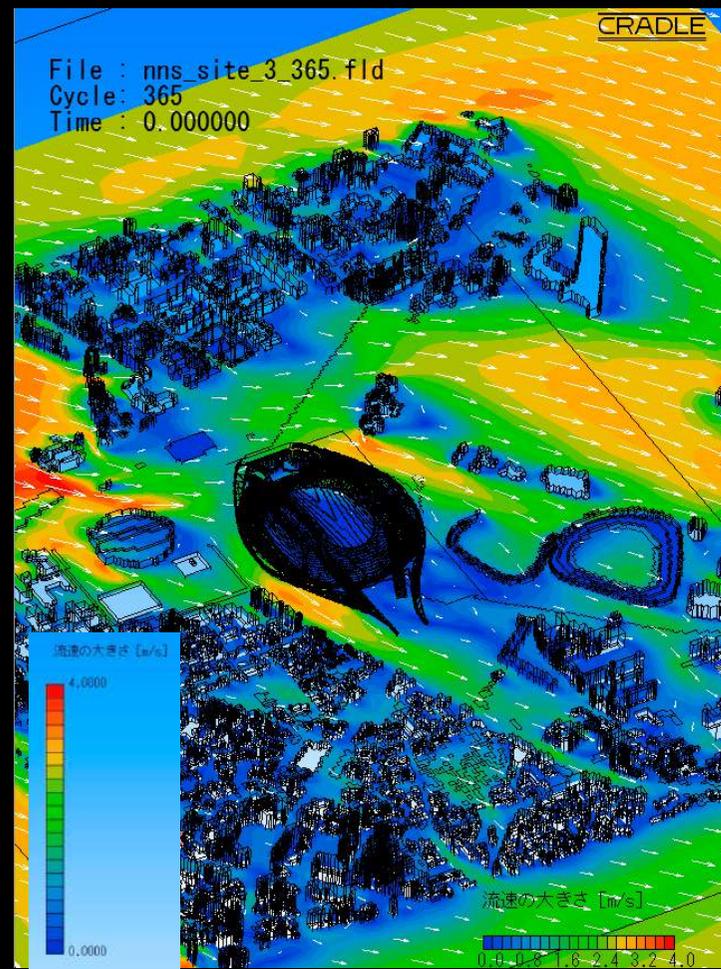
- ・反射音を視覚化することで、跳ね返りの様子を観察する



- ・反射音を視覚化することで、跳ね返りの様子を観察する



建物なし

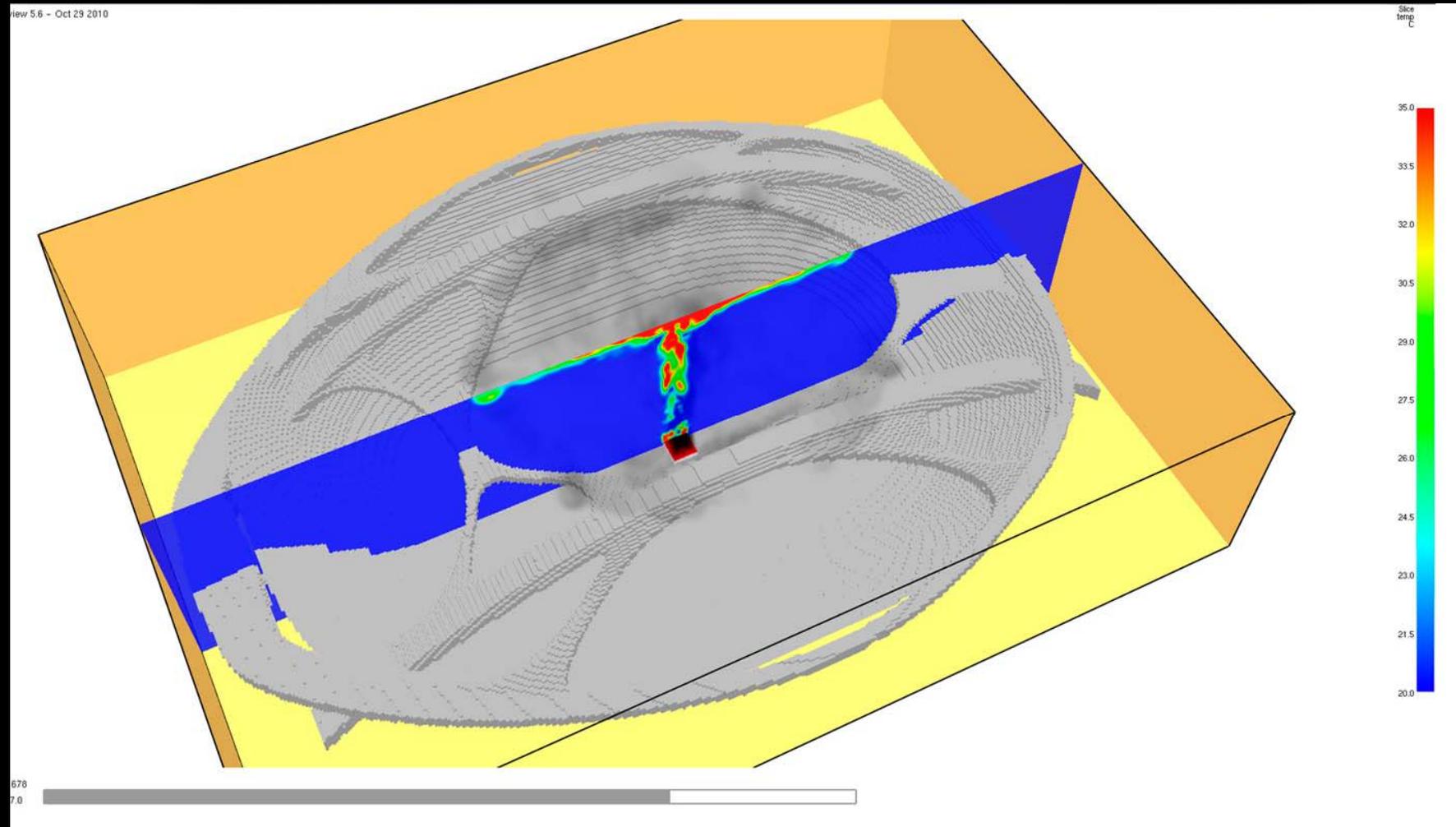


建物あり

風向き: 北北西
 風の強さ: 2.2m/s
 地上高さ: 1.5m

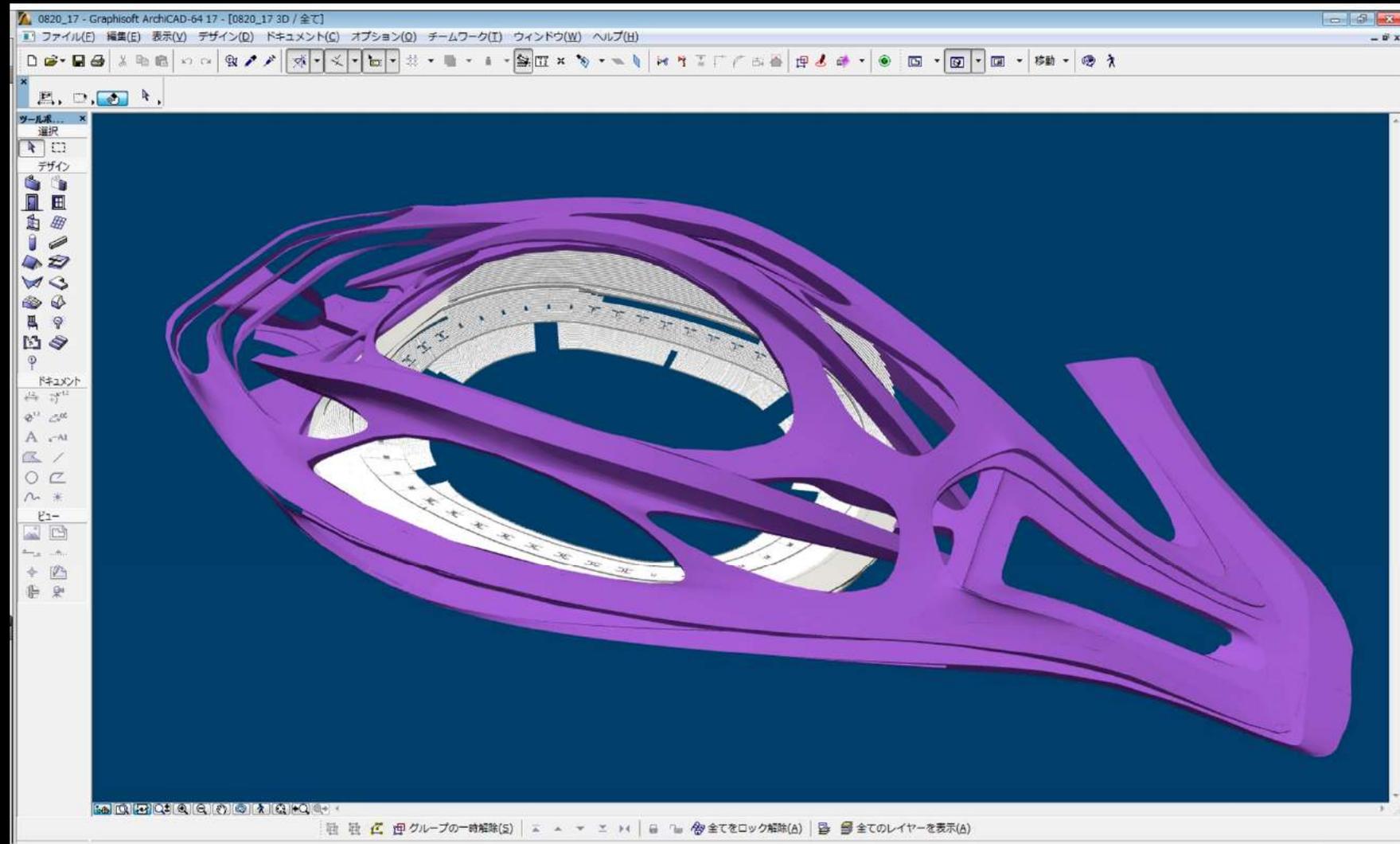
・建物ができることによる風の影響を検討する

Smoke Simulation

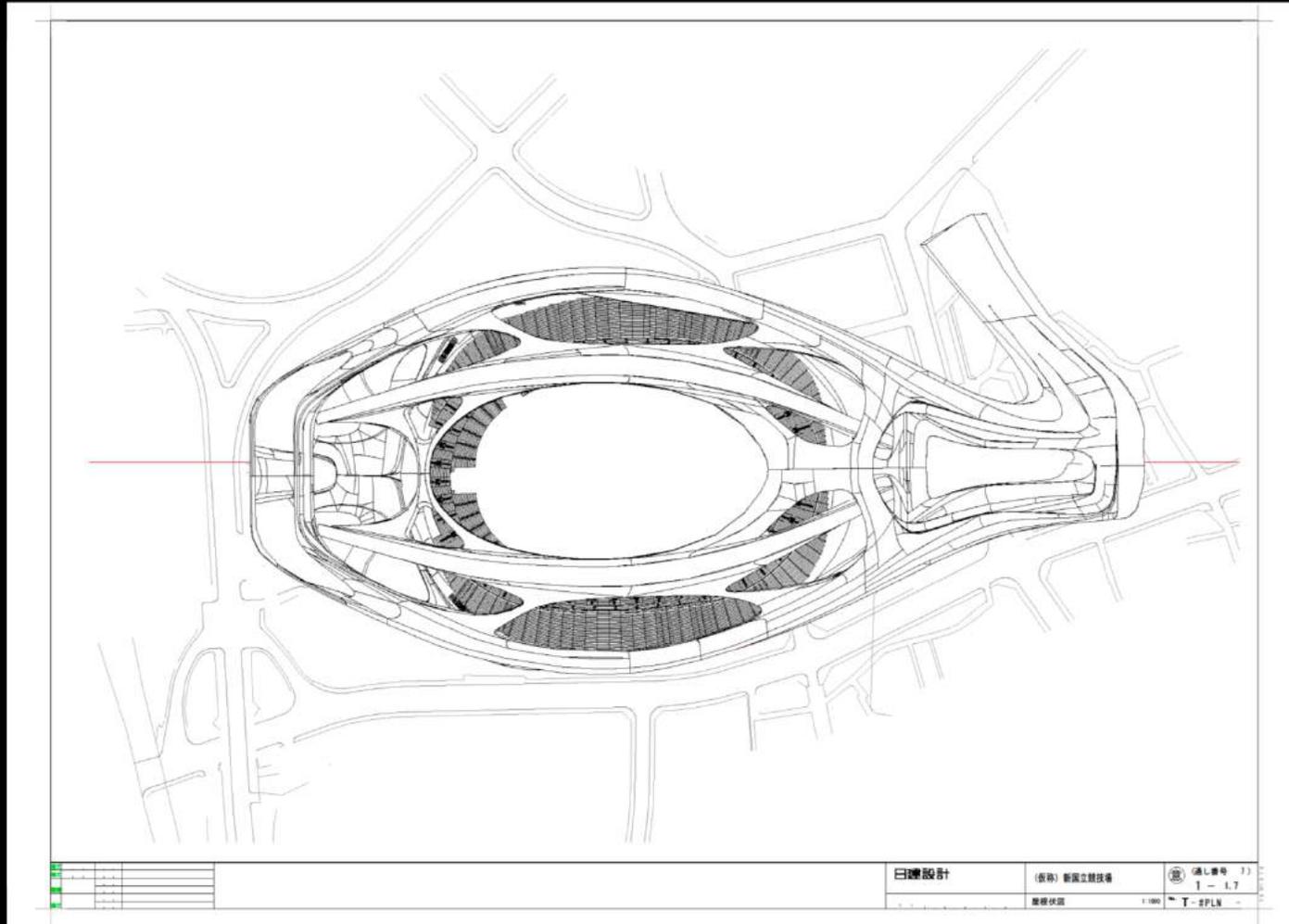


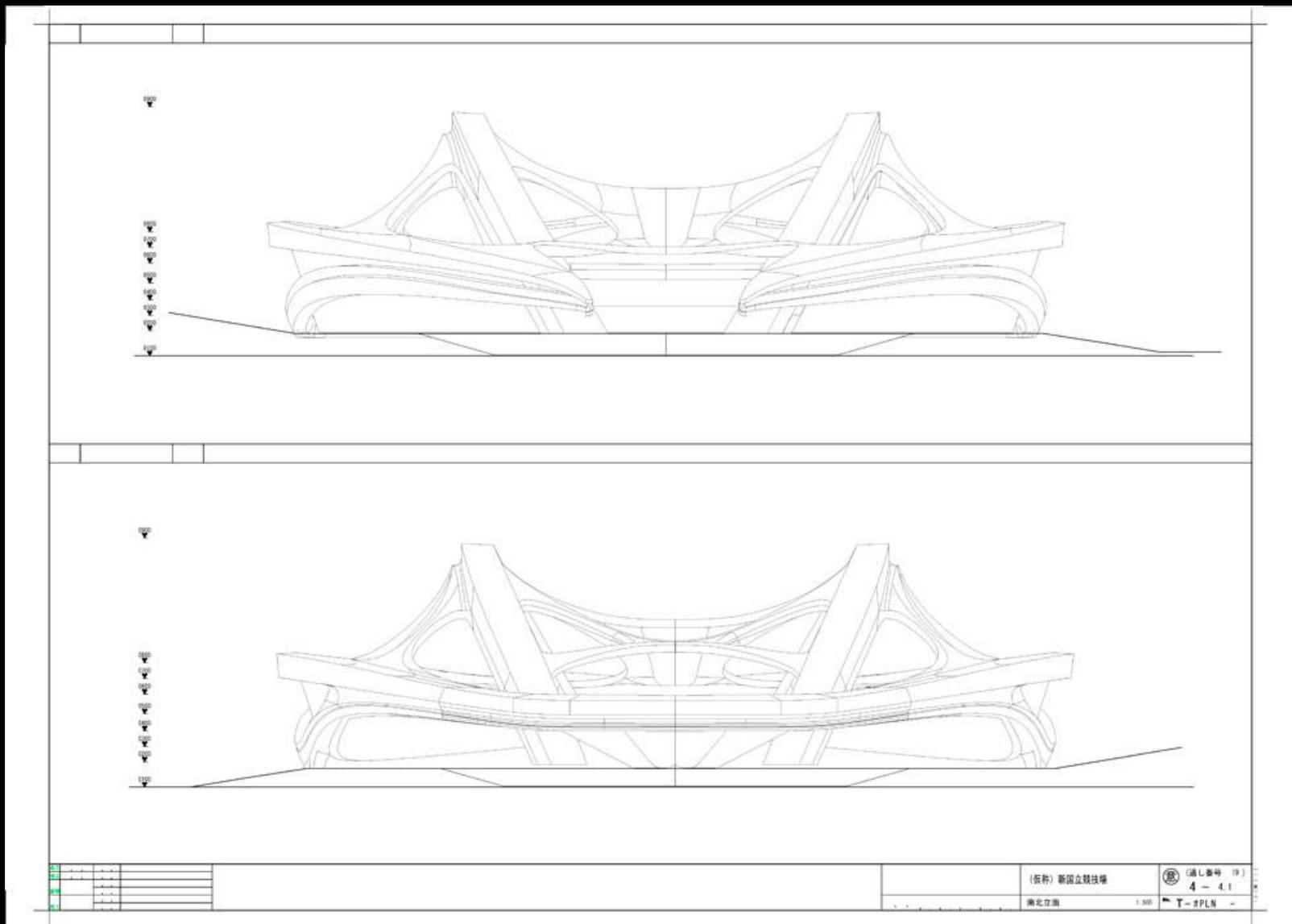
- ・火災発生時の煙の動きと温度分布を求め、避難安全性を検証

取り込んだ3Dモデルから図面の線分を取り出す

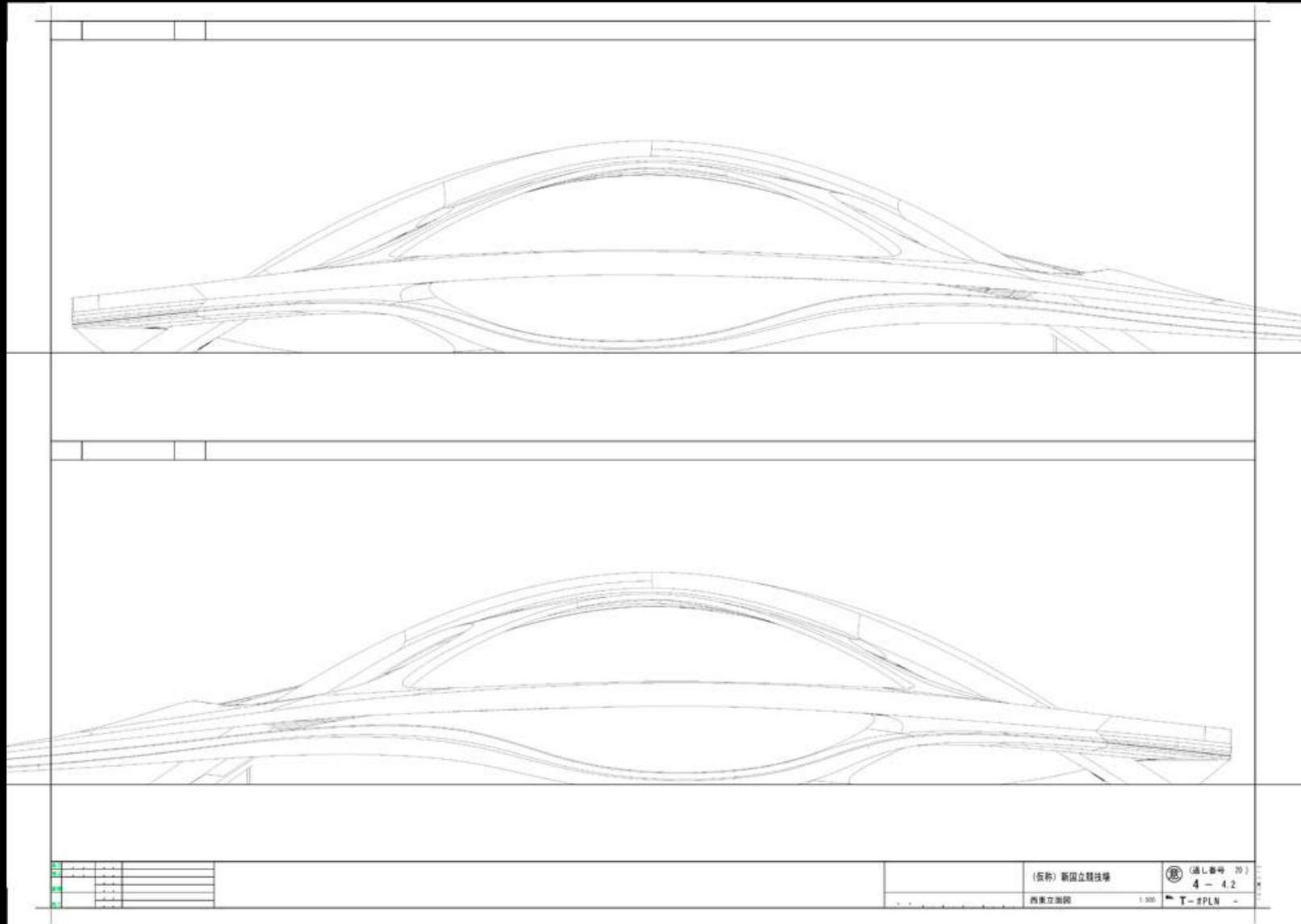


取り込んだ3Dモデルから図面の線分を取り出す

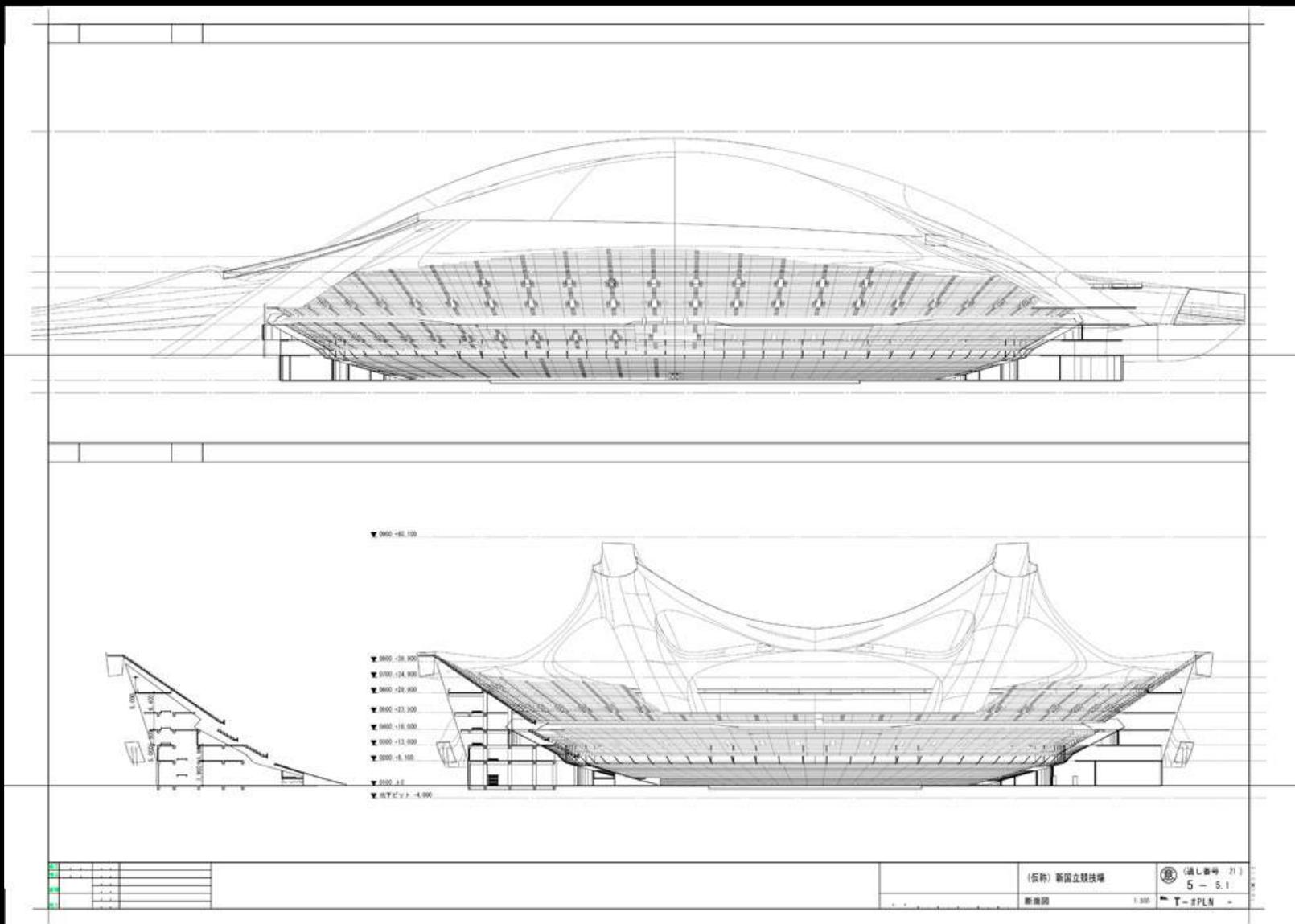




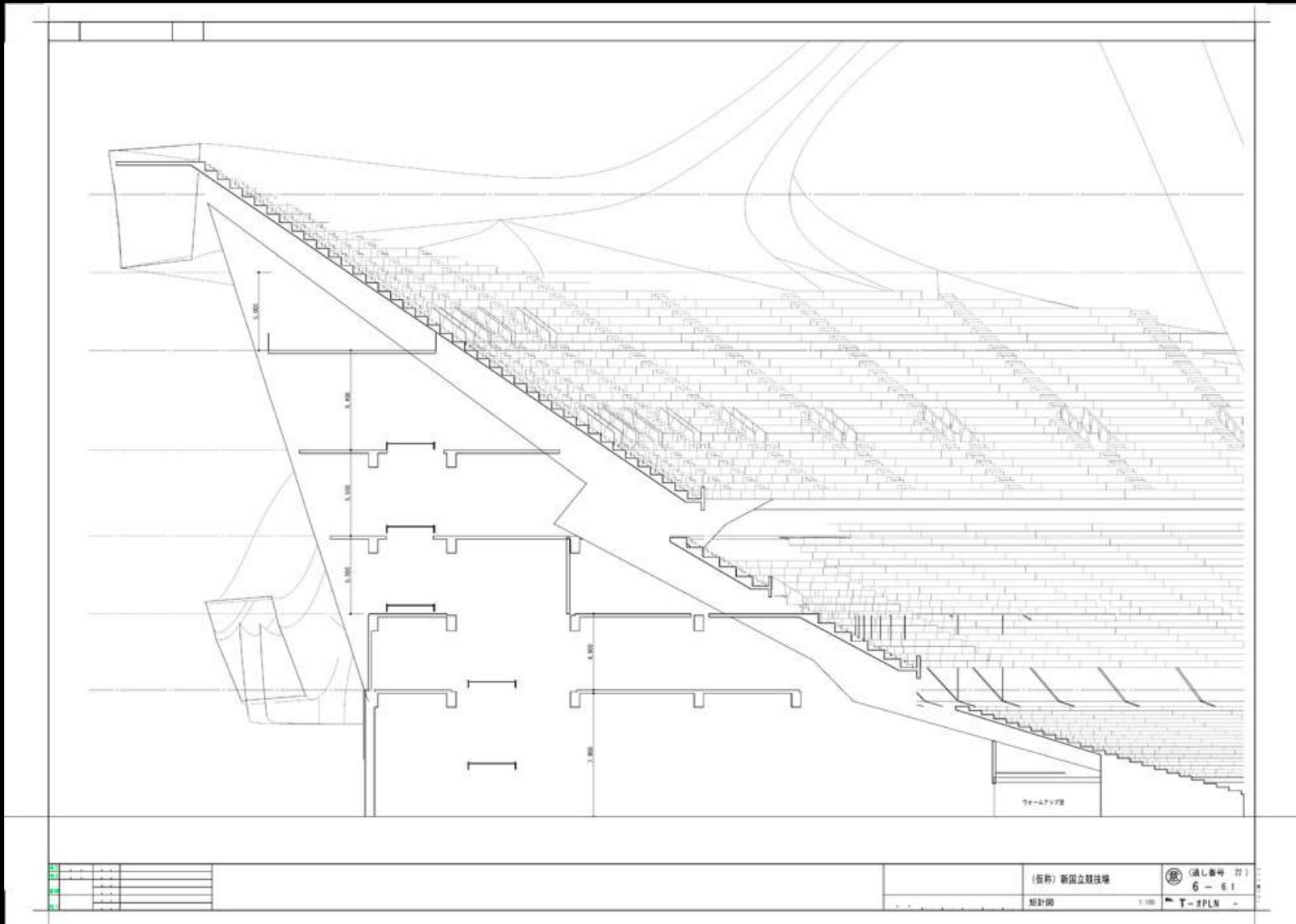
南北立面图



東西立面図



断面図



矩計図

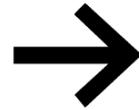
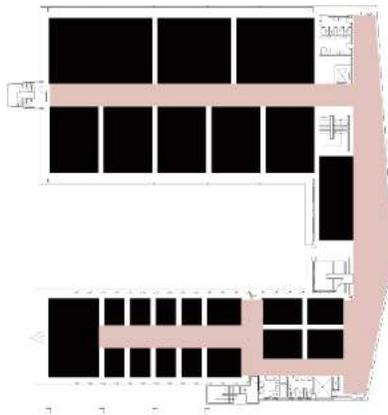
TOHO GAKUEN SCHOOL OF MUSIC



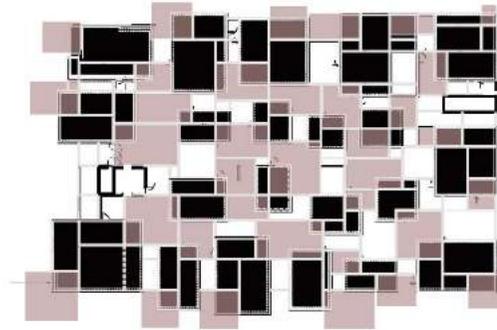


Concept Diagram

OLD

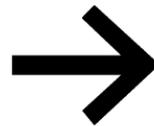
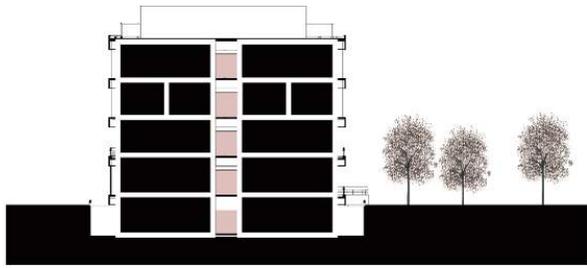


NEW

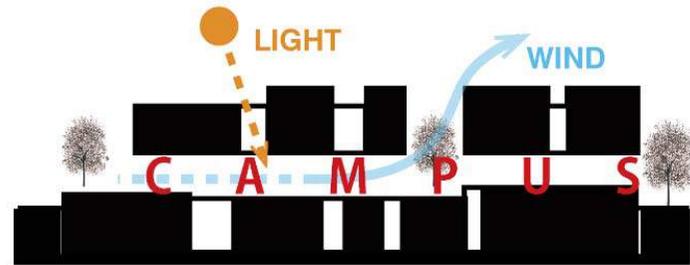


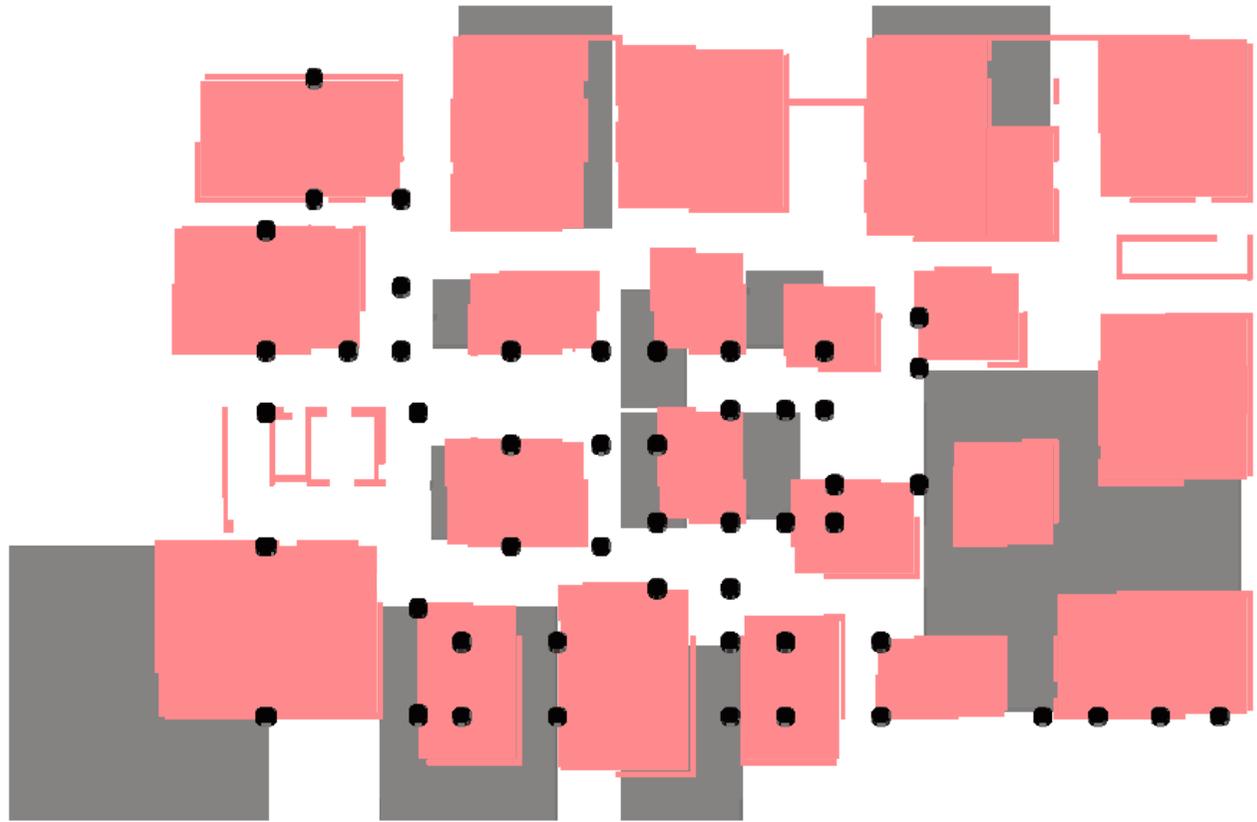
Concept Diagram

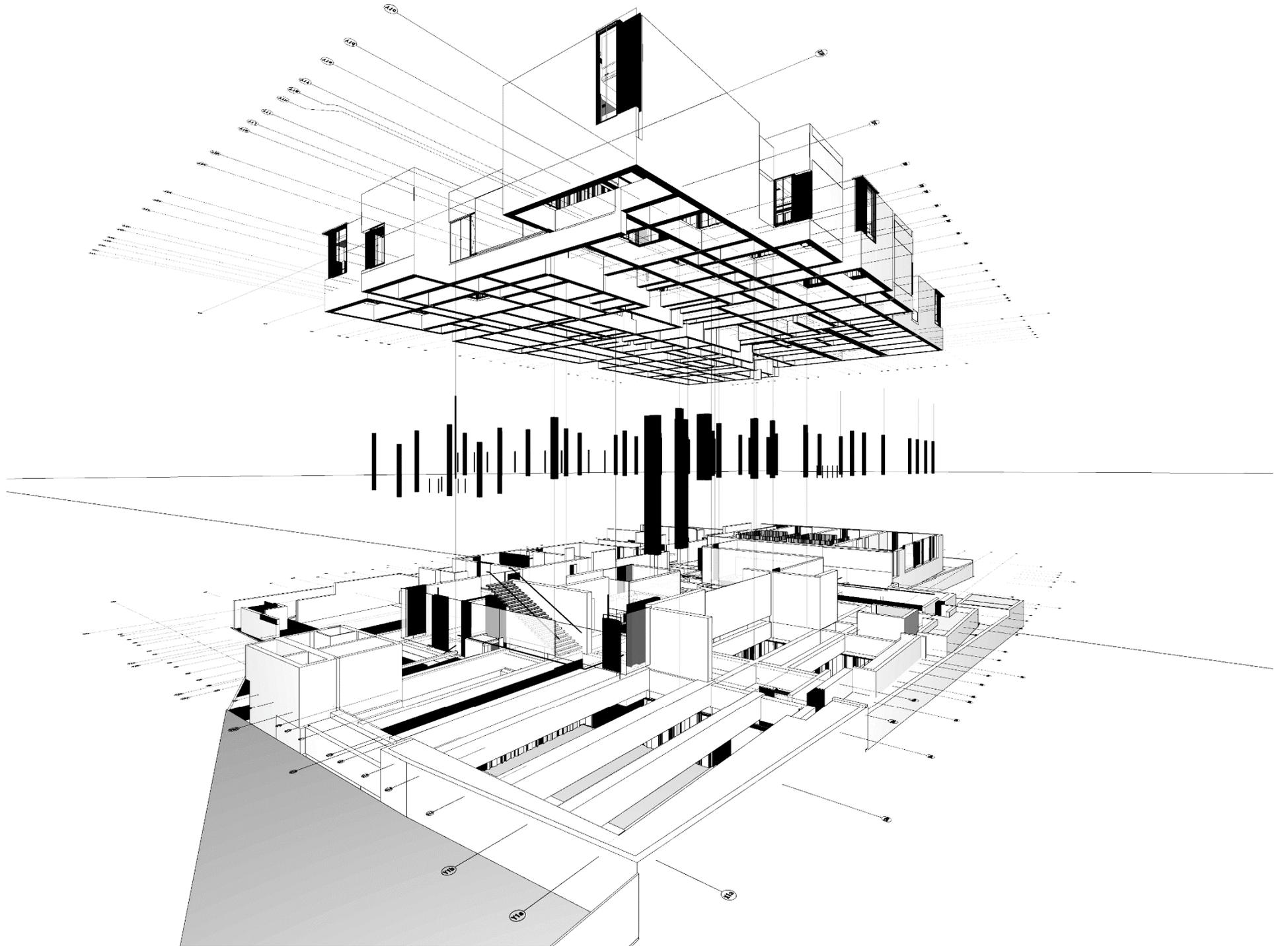
OLD

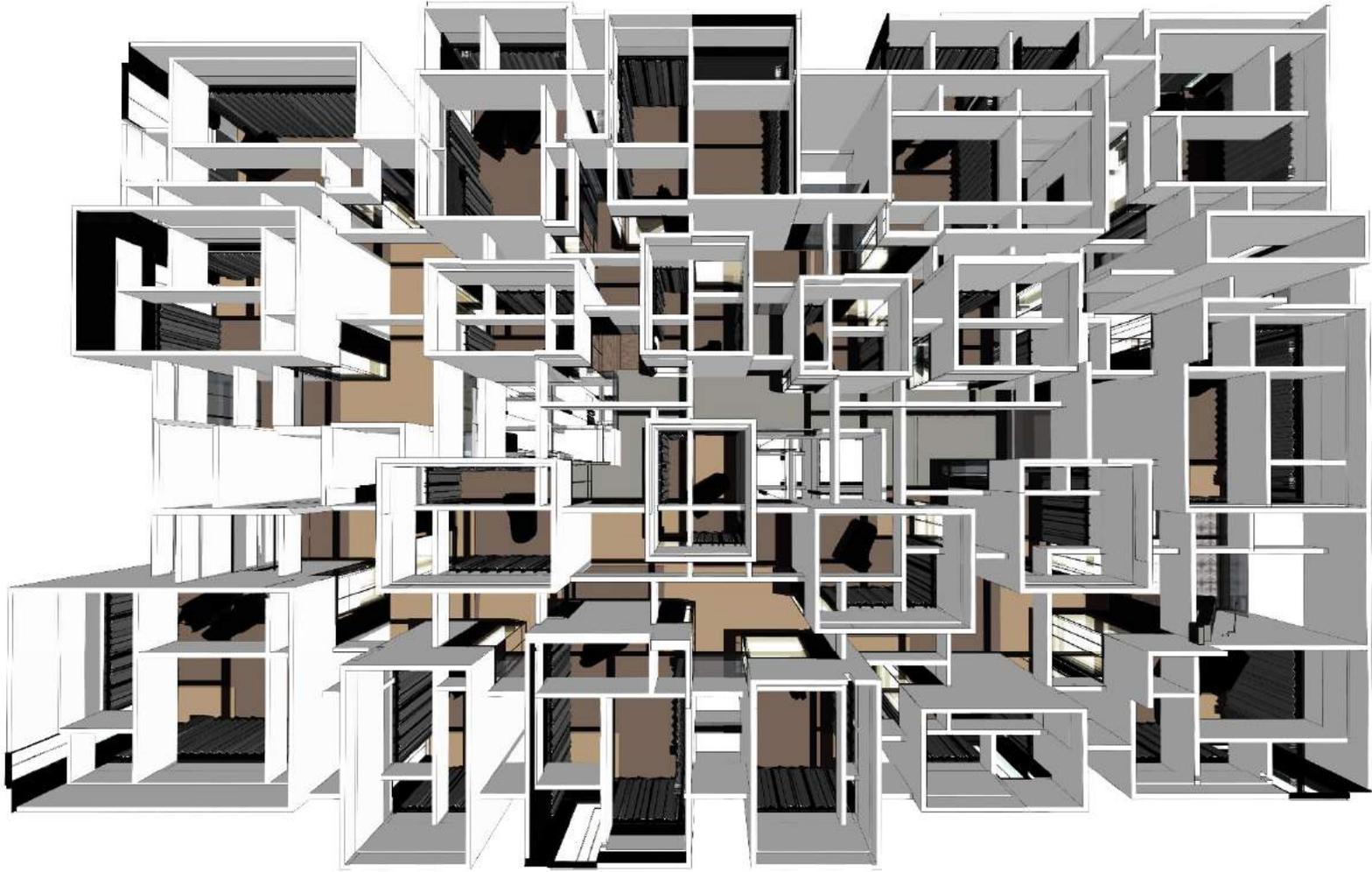


NEW

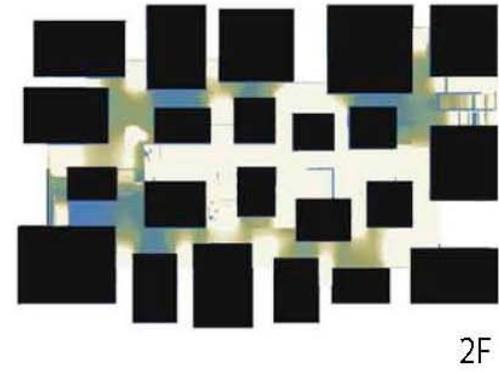
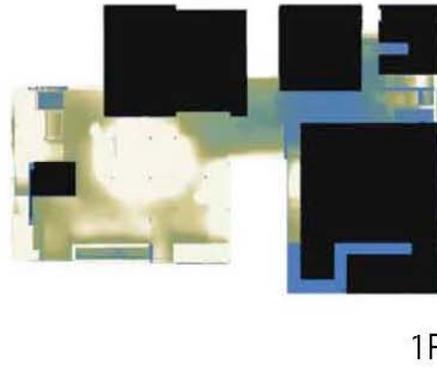
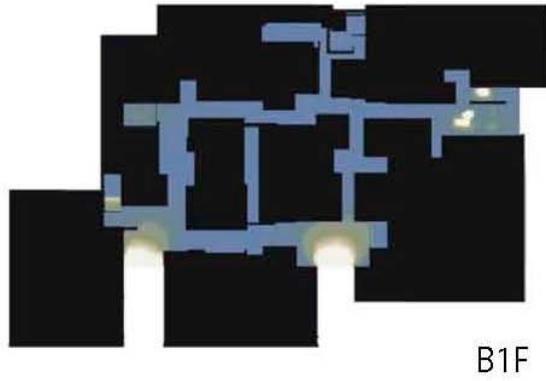




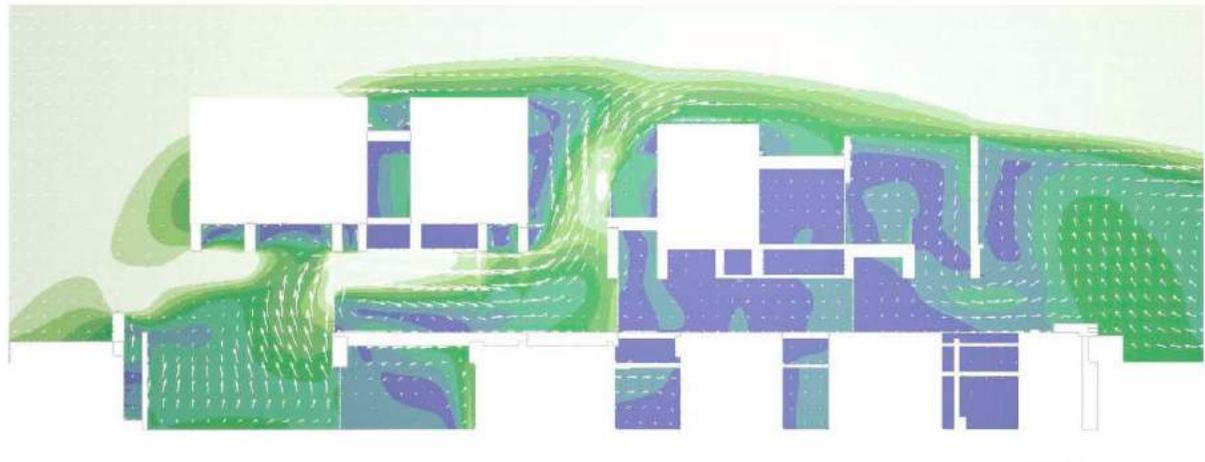
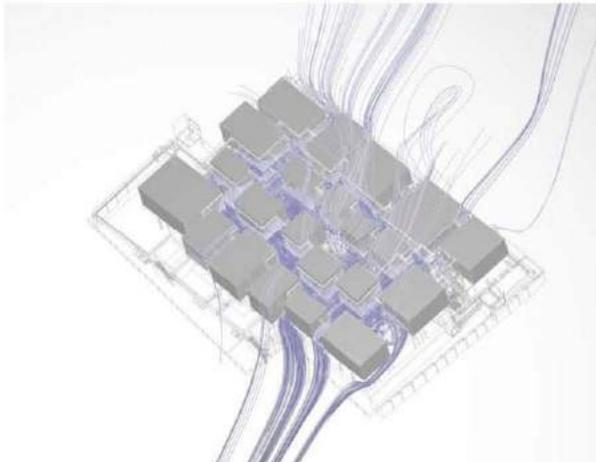


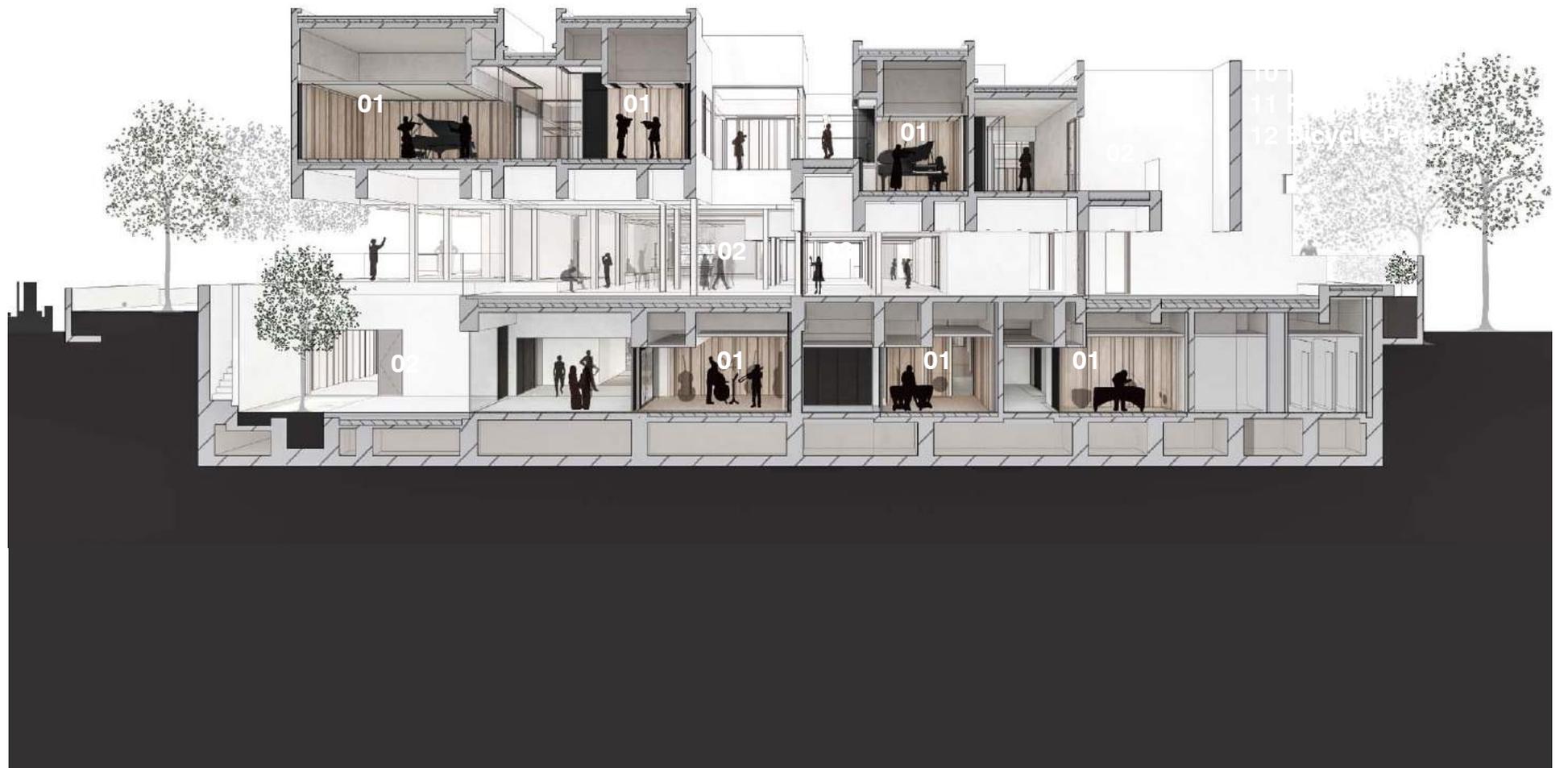


Simulation



Natural wind ventilation



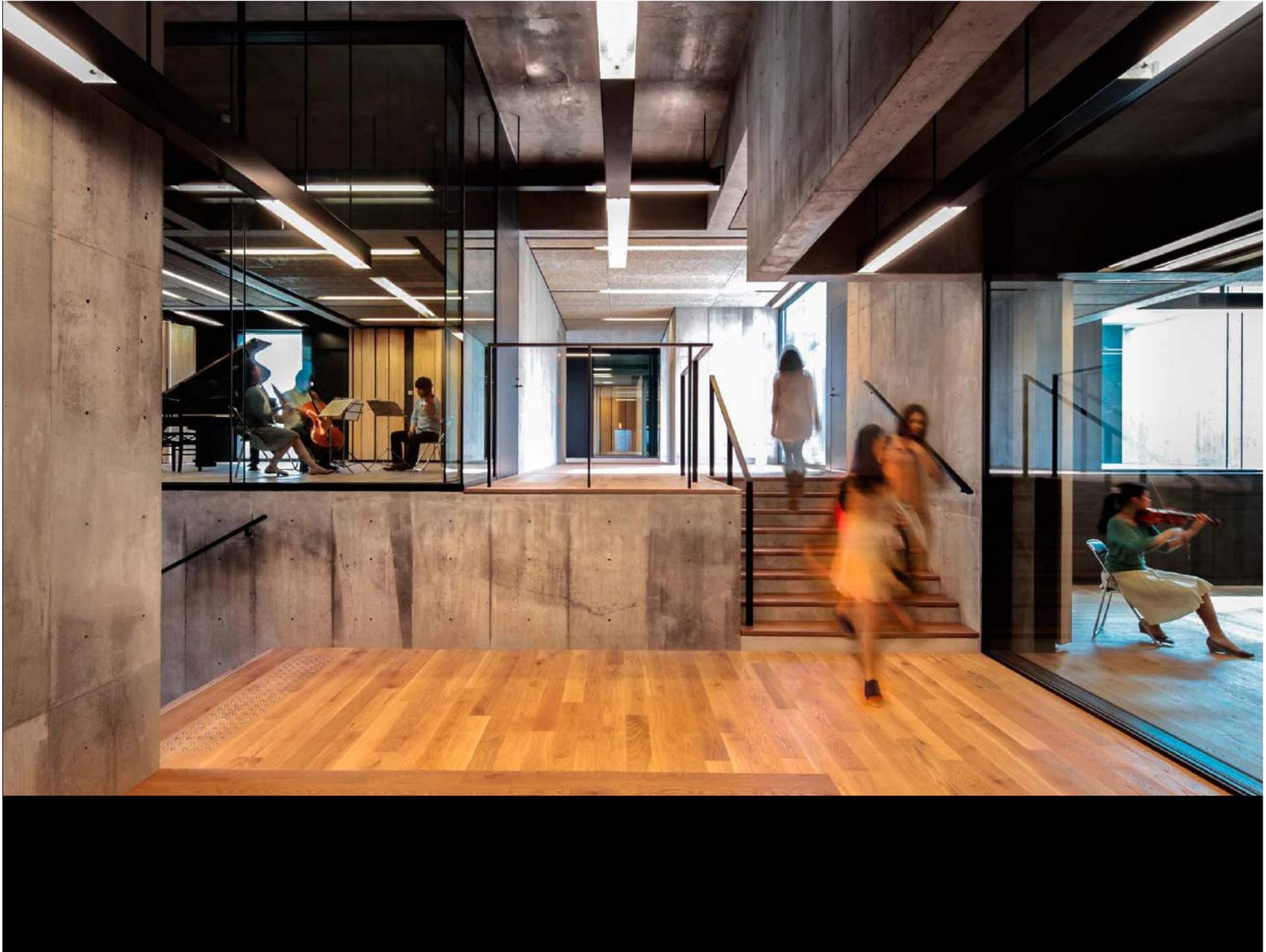


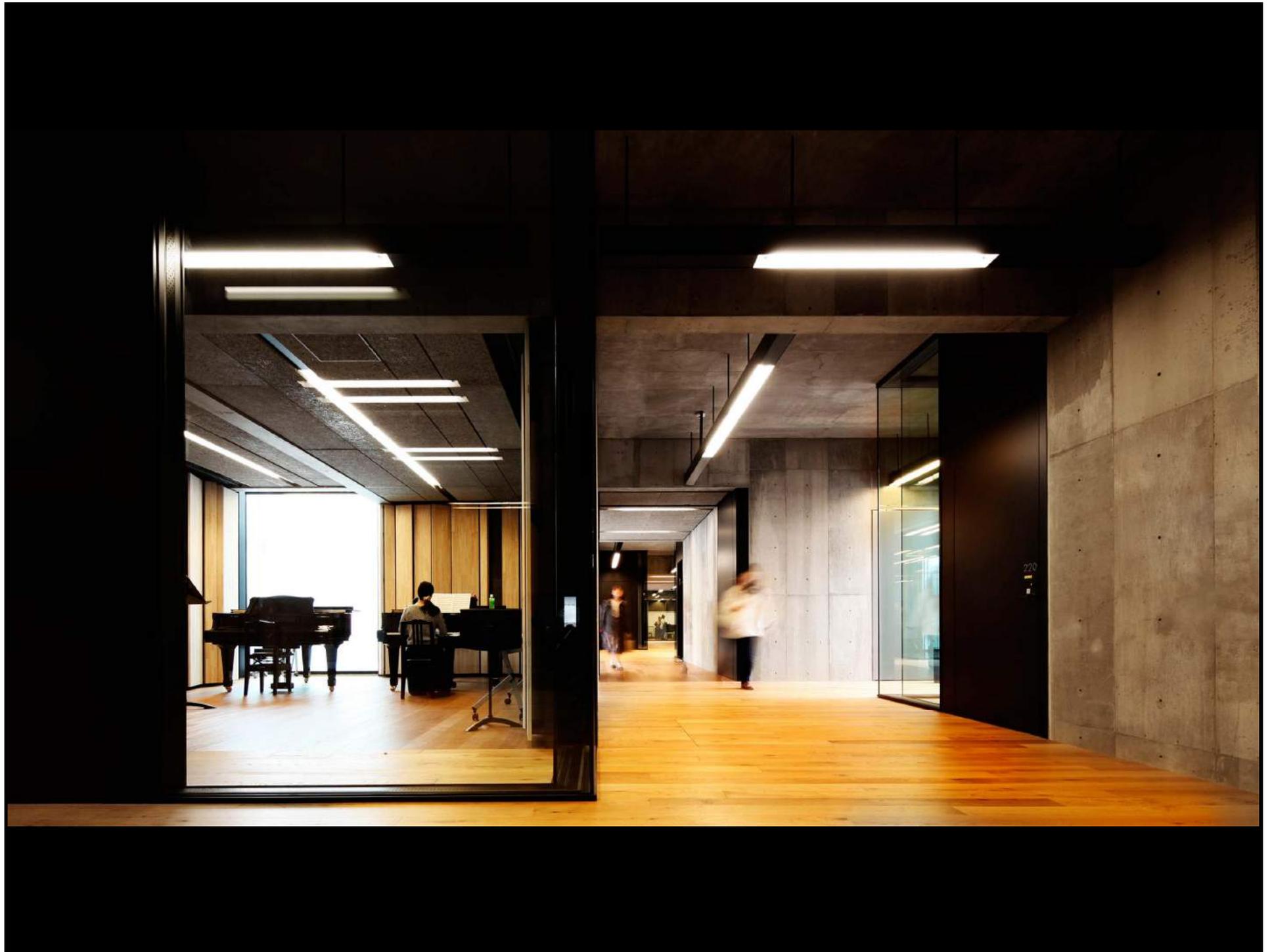
2nd floor

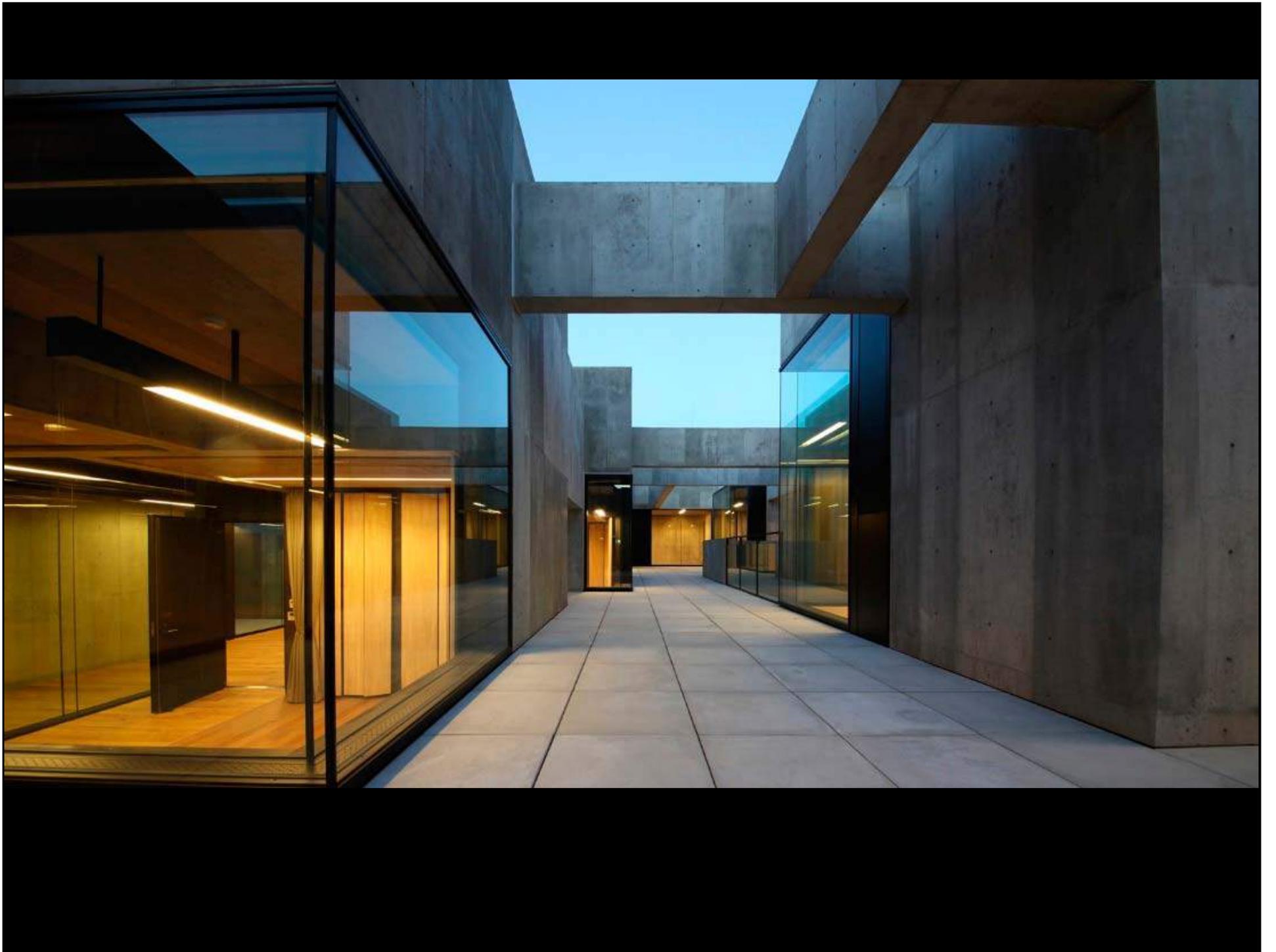




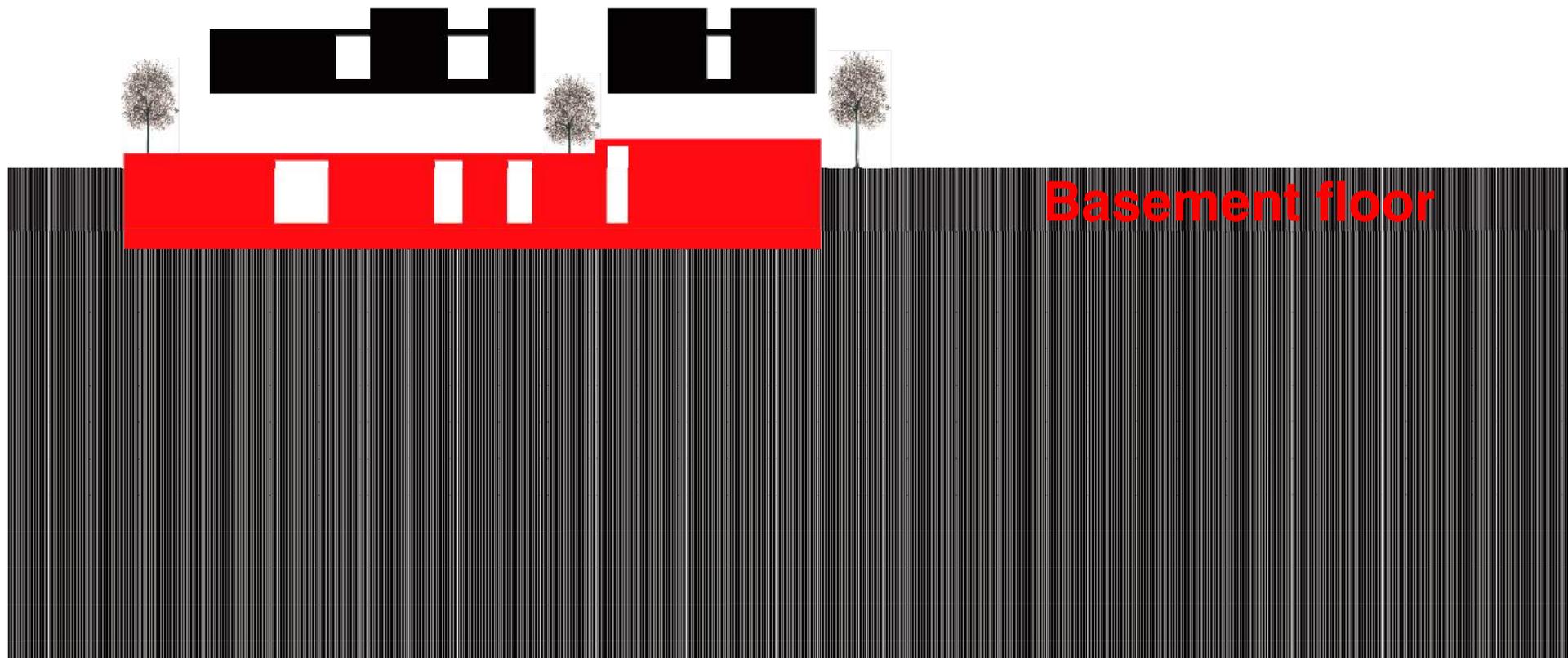








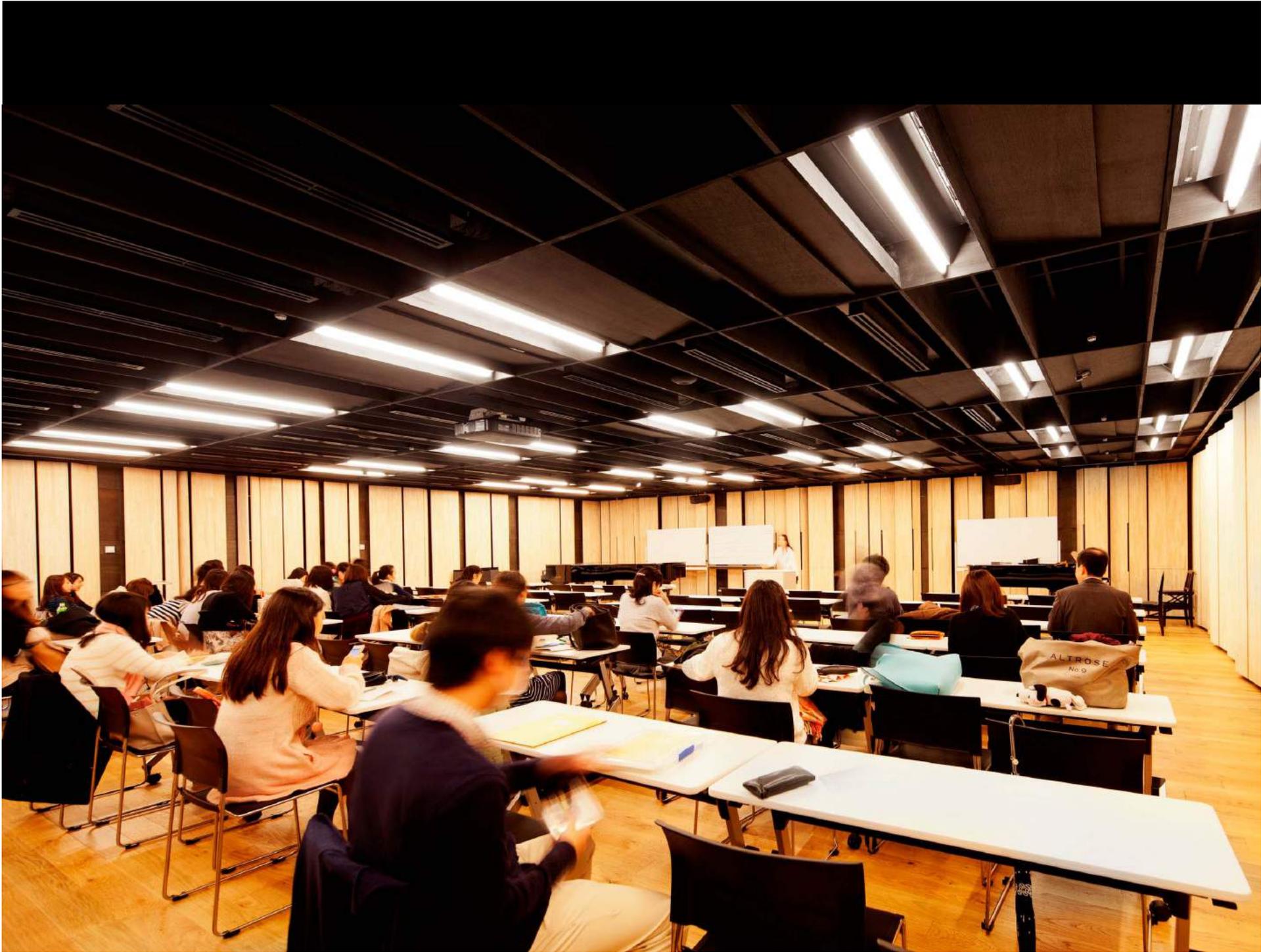




Basement floor









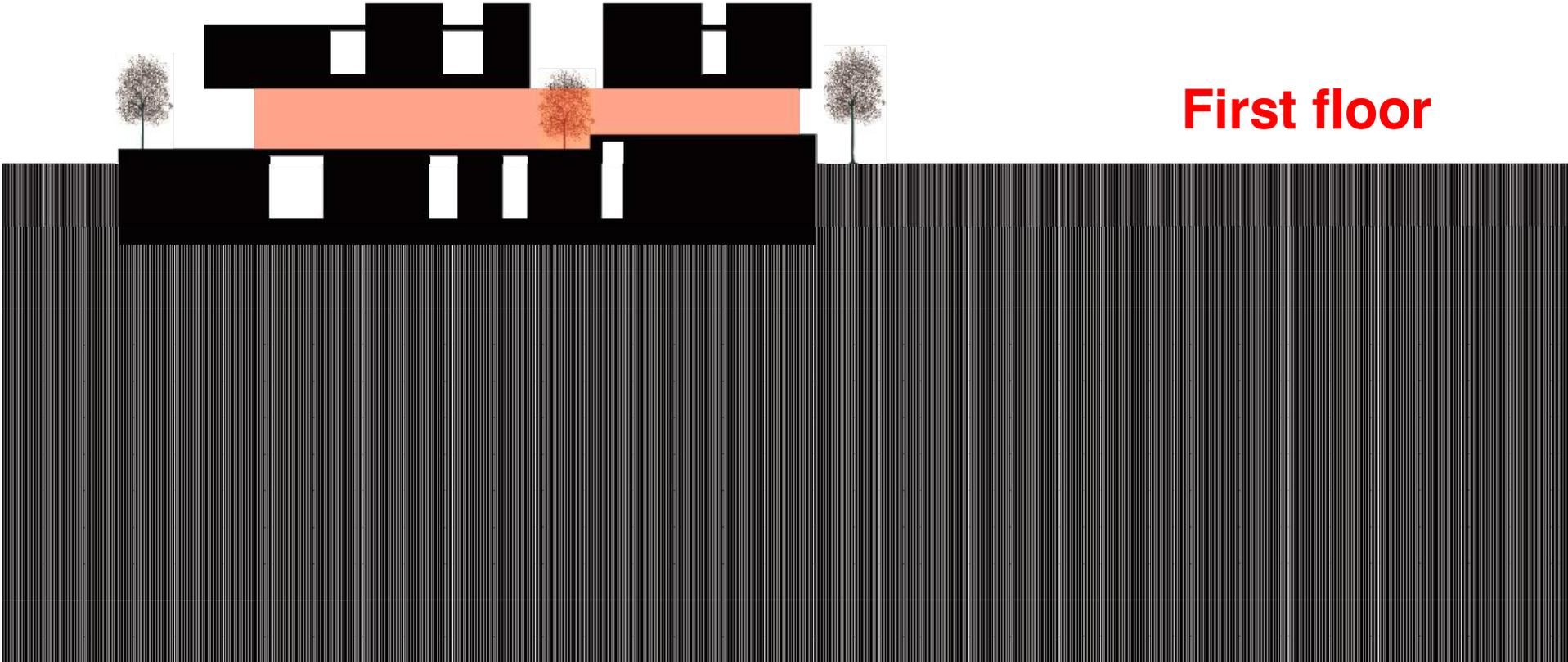




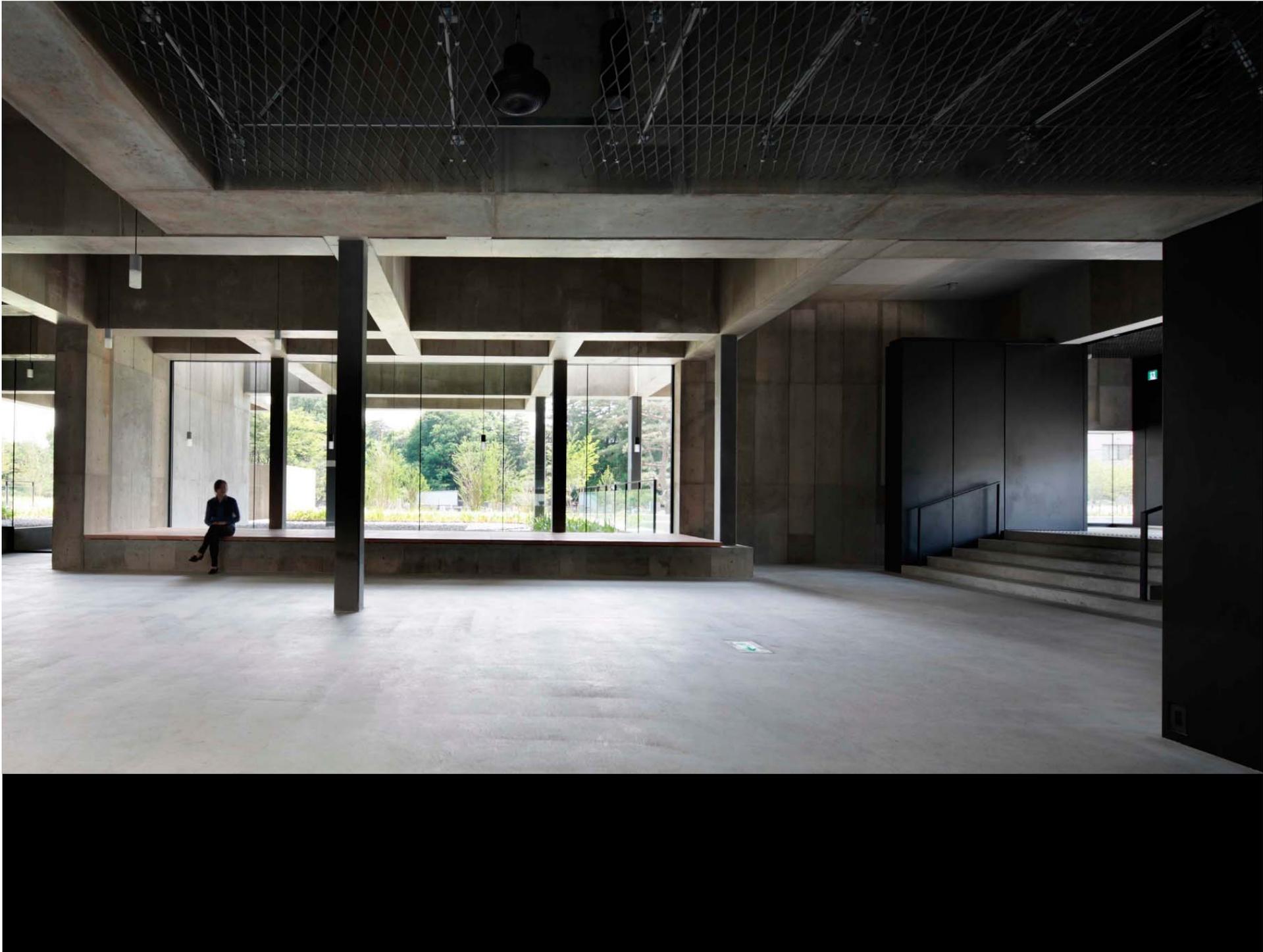


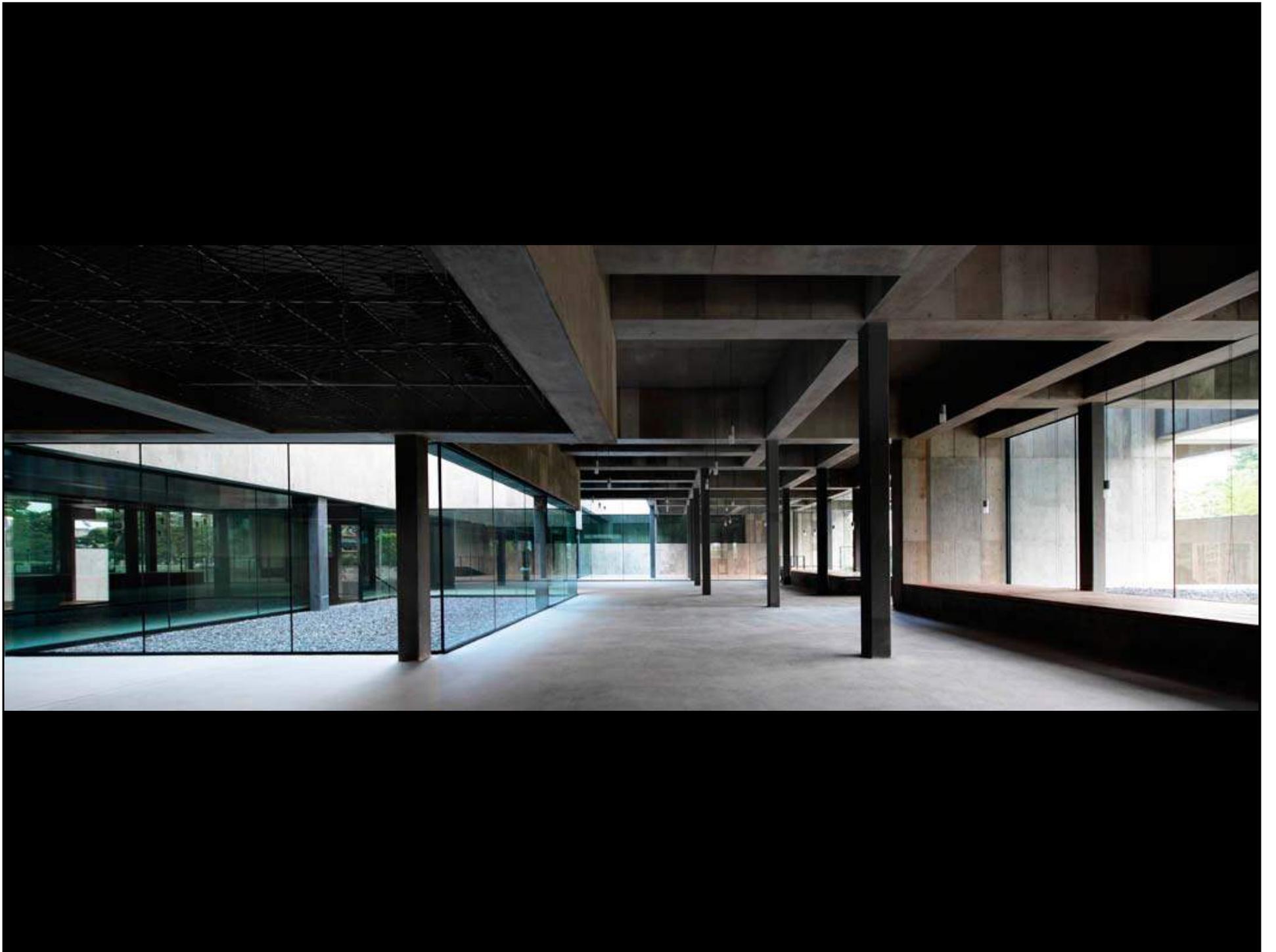


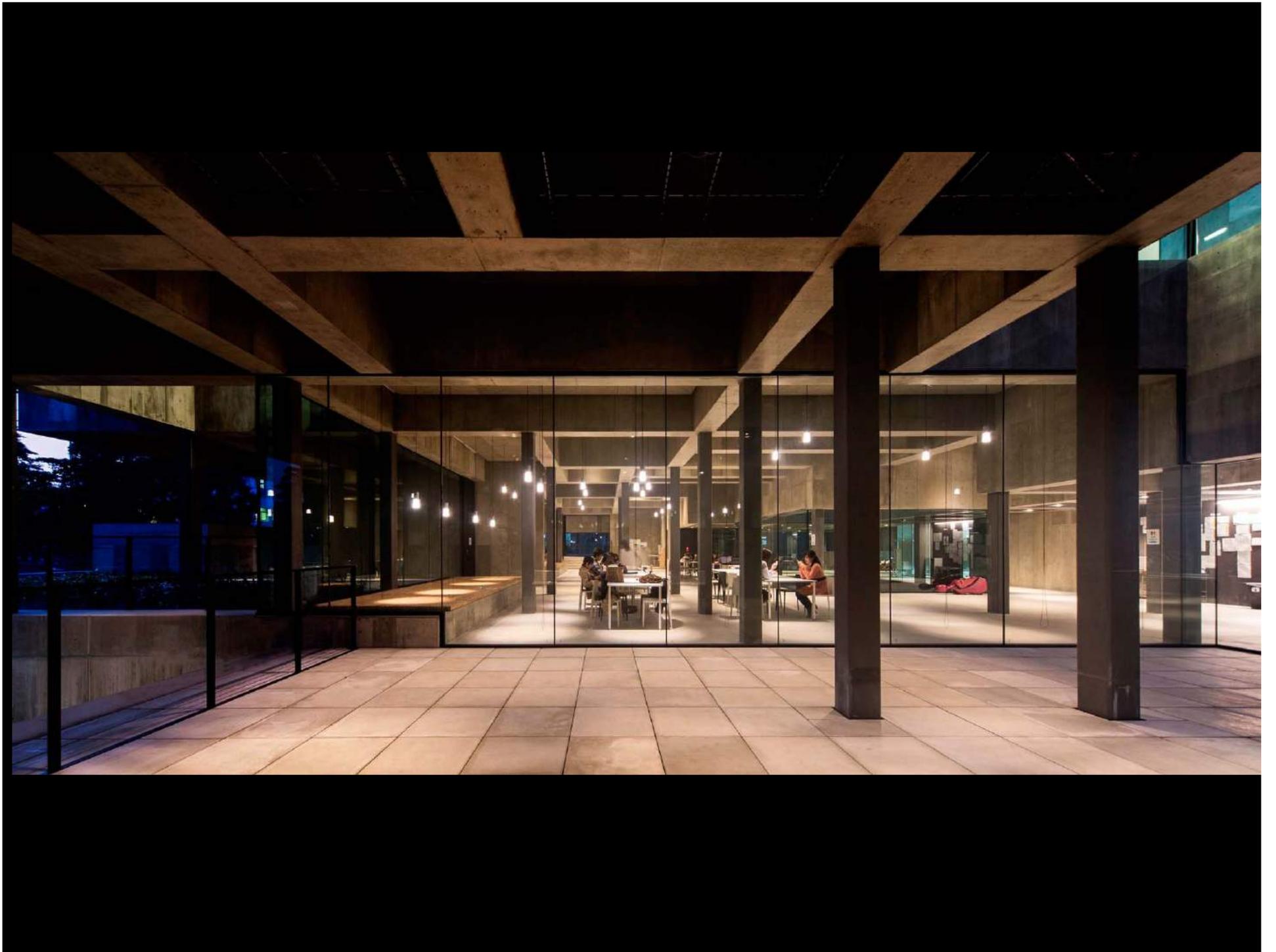
First floor

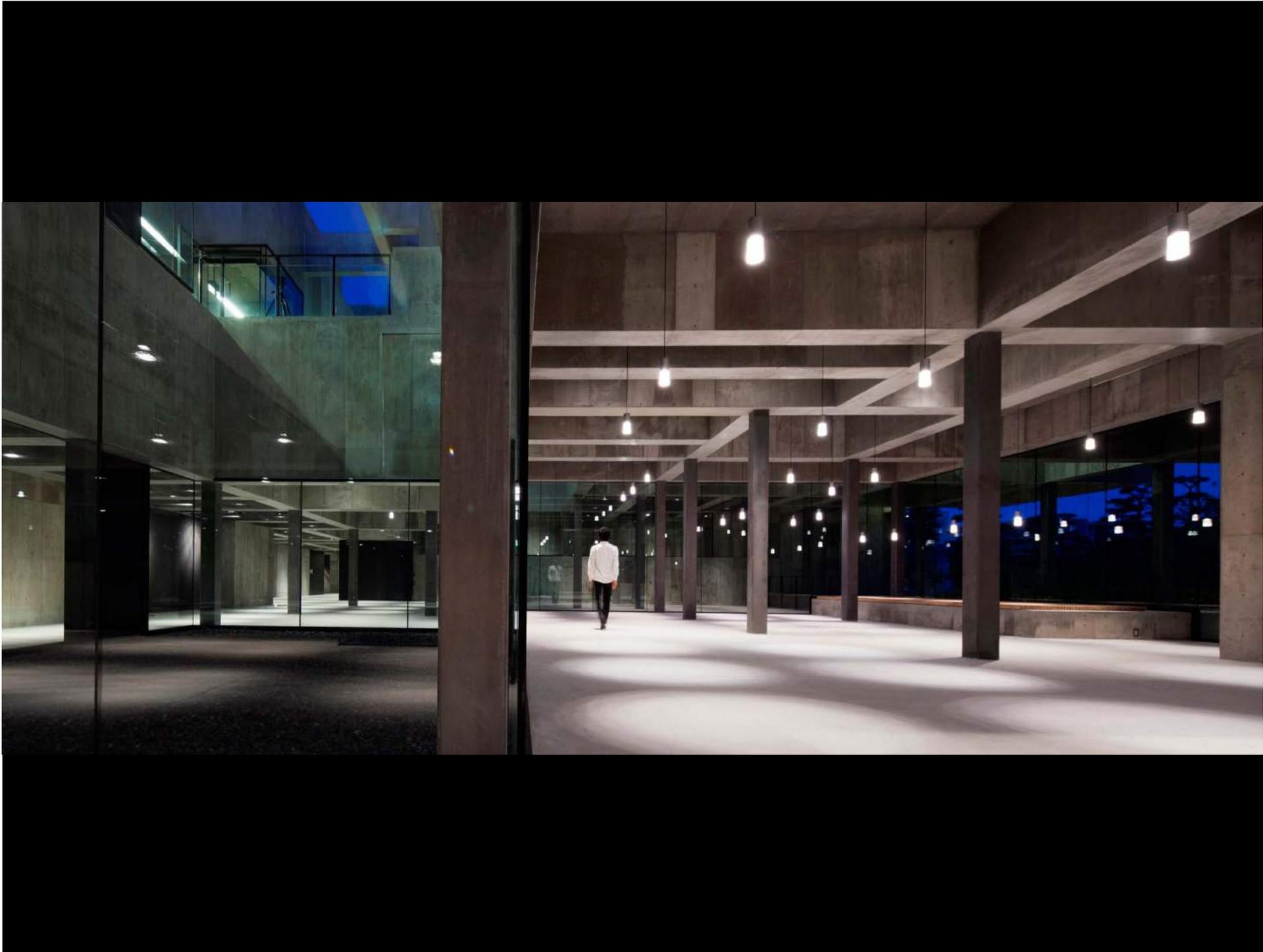
















桐朋学園大学 音楽学部 調布キャンパス
TOHO GAKUEN SCHOOL OF MUSIC







more than creative



BIM for productivity
(mass production)



BIM for high quality of design
(mass customization, simulation, multipurpose
optimization, generation)



BIM for life cycle building design



BIM for new building business