

dongje's Works

I'm arch....

py... ghs...

Currently,

Contacts

Teams

oftn

uwaterloo

arcadis

multstudio

GiantDrone

Project #1

Project #2...

**Hi, I am Dongje Cho,
computational designer, architectural engineer**

[Info](#) [LinkedIn](#) [Email](#)

**dropdown?
singular?**

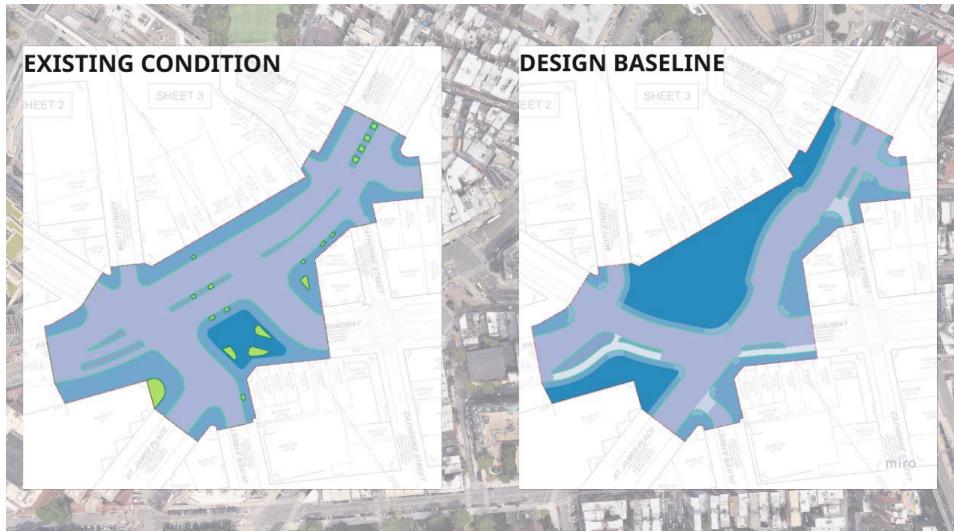
**Hi, I am Dongje Cho,
architectural engineer / computational designer**

[Info](#) [LinkedIn](#) [Email](#)



Office for the next environment

Climate Analysis



Office for the next environment

Carbon Analysis



East Side Greenway Climate Analysis.

ROLE

Climate Study (?)

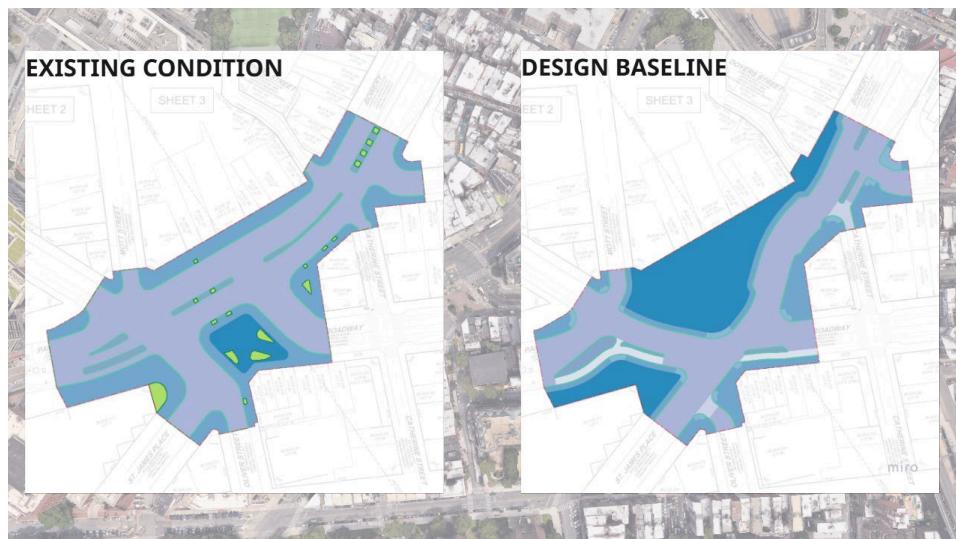
TOOLS

Grasshopper / Rhino

I did....

this will be video

Daylight analysis to spot intense area



Chinatown Connection Carbon Analysis

ROLE

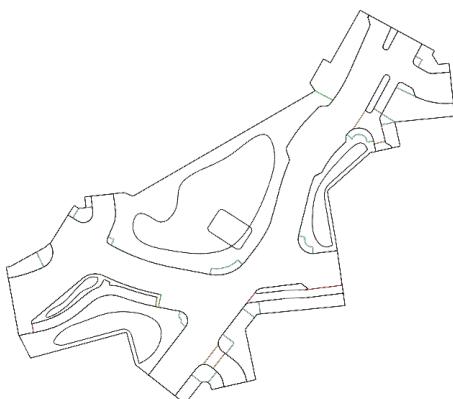
Carbon Study(?)

TOOLS

Grasshopper / Excel / Python

I did....

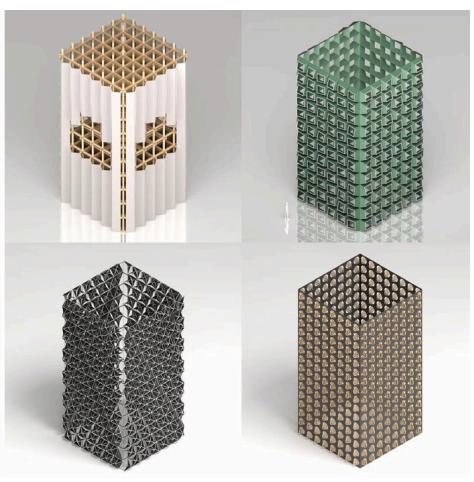
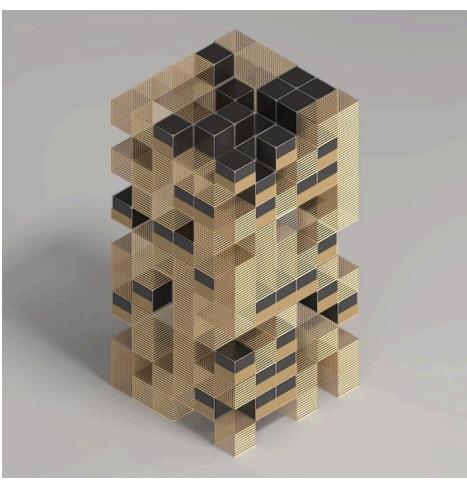
Carbon Calcs	█	█	█	█
↳ BASELINE	█	█	█	█
↳ 50%SOFT	█	█	█	█
Softscape_Visual	█	█	█	█
Cobble_Visual	█	█	█	█
Cobble	█	█	█	█
Softscape	█	█	█	█
Project_Boundary	█	█	█	█
Steel-Curb	█	█	█	█
Sidewalk-Corner	█	█	█	█
Bikepath	█	█	█	█
Crosswalk-Elevated	█	█	█	█
Plaza	█	█	█	█
Sidewalk	█	█	█	█
Street	█	█	█	█
Street-Islands	█	█	█	█



Rhino → curve or length combined in each layer



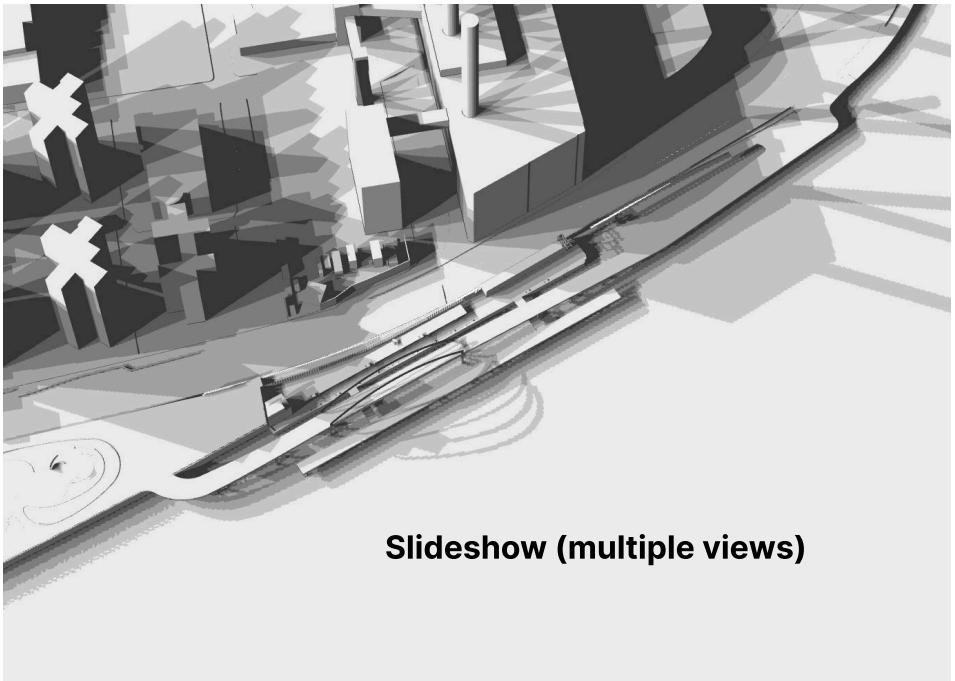
Office for the next environment
Carbon Analysis / BIM Landscape



Computational Design Lab
Pattern Design

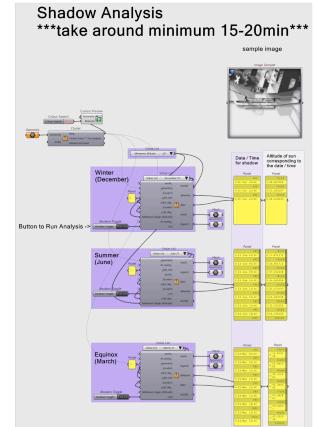
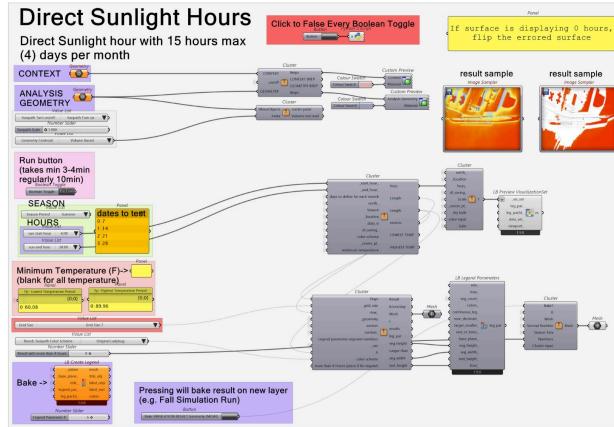


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BIM Managing



Slideshow (multiple views)

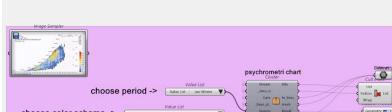
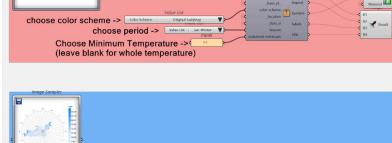
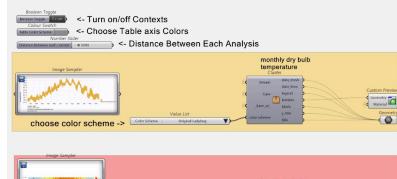
Sun shadow analysis to spot most shading spots



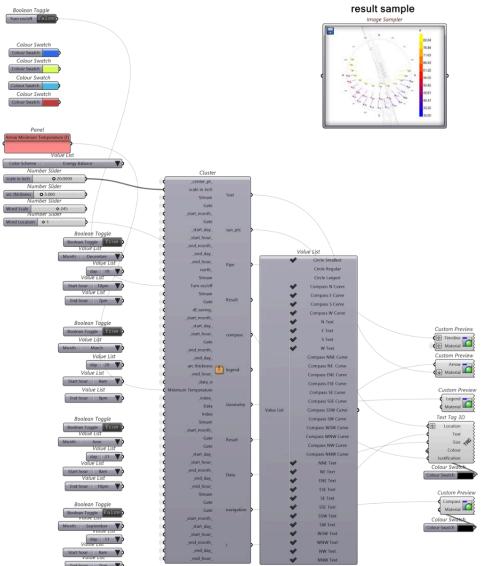
Site Context

Make sure print them in RASTER SETTING

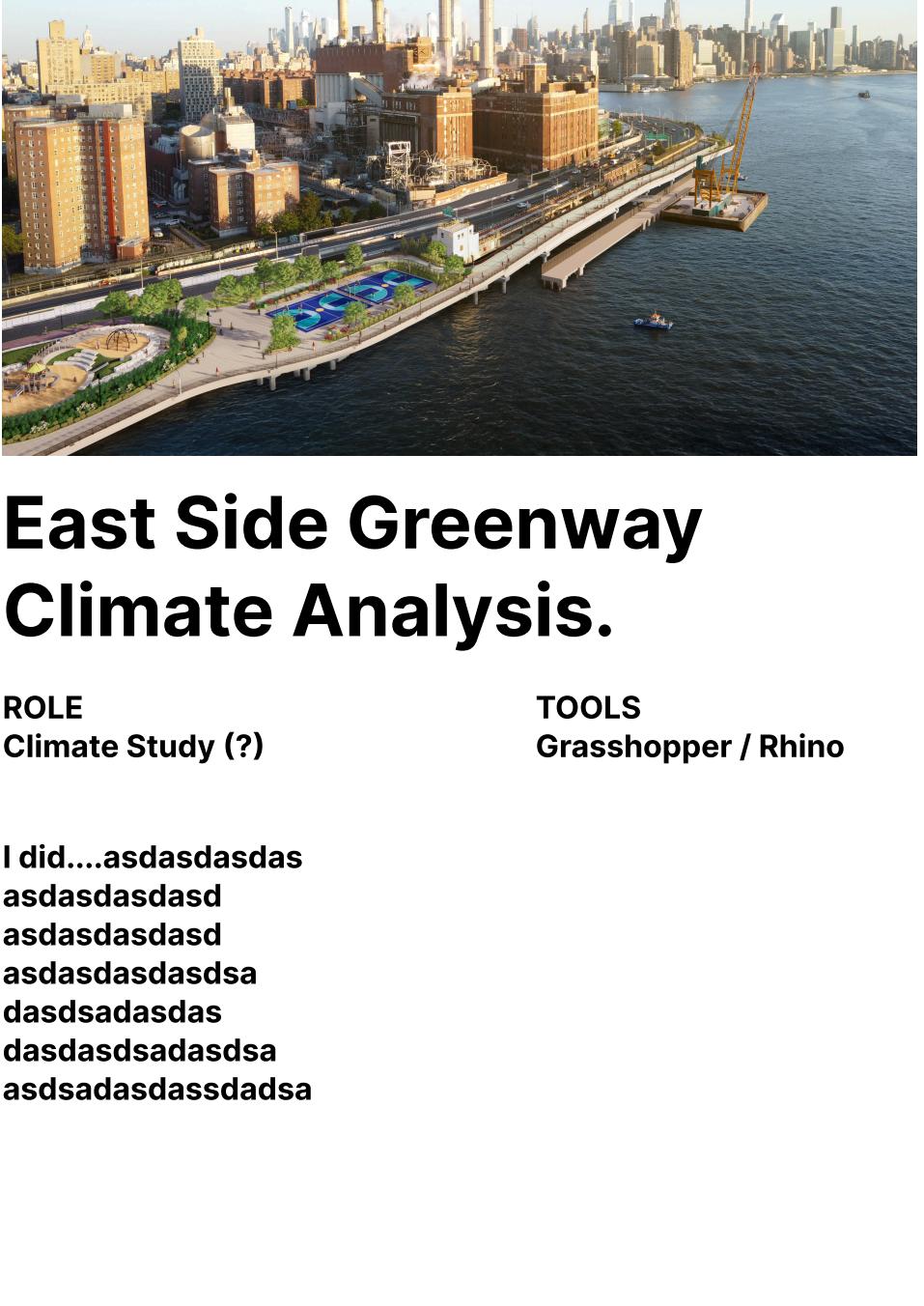
screen shot after zooming in these tables (viewcapturetofile)



Single Days Context Analysis



Organized scripts for everyone's use

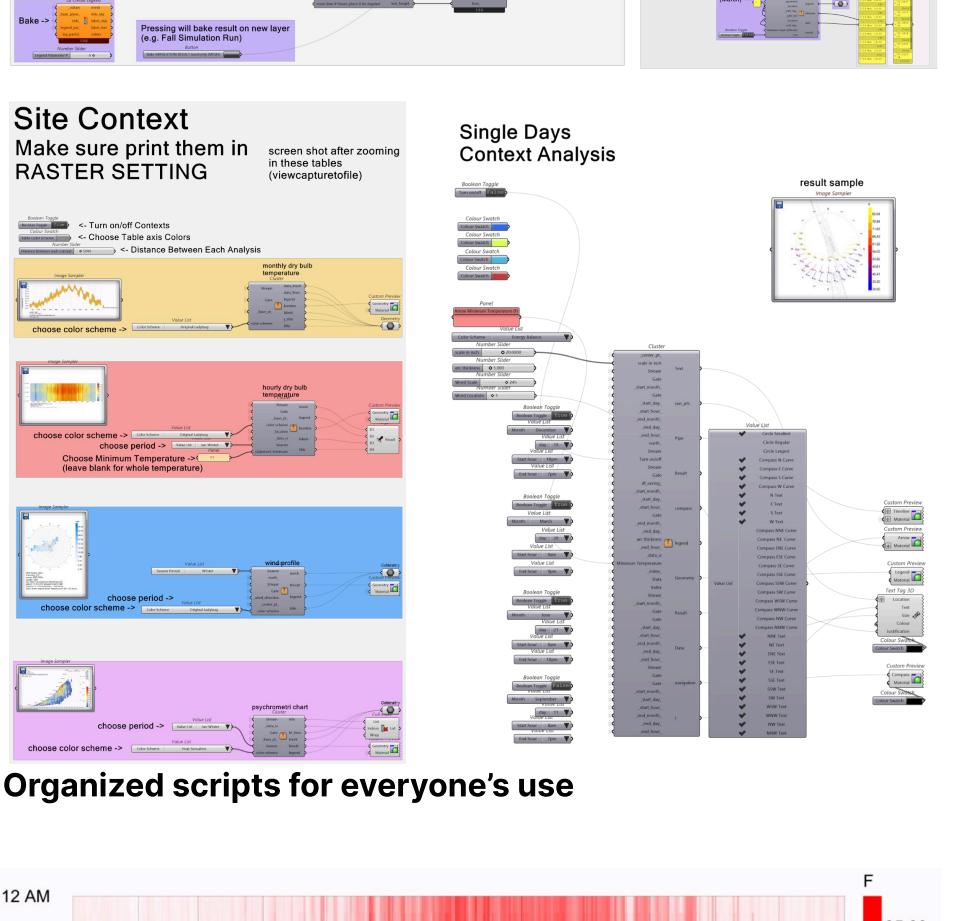


East Side Greenway Climate Analysis.

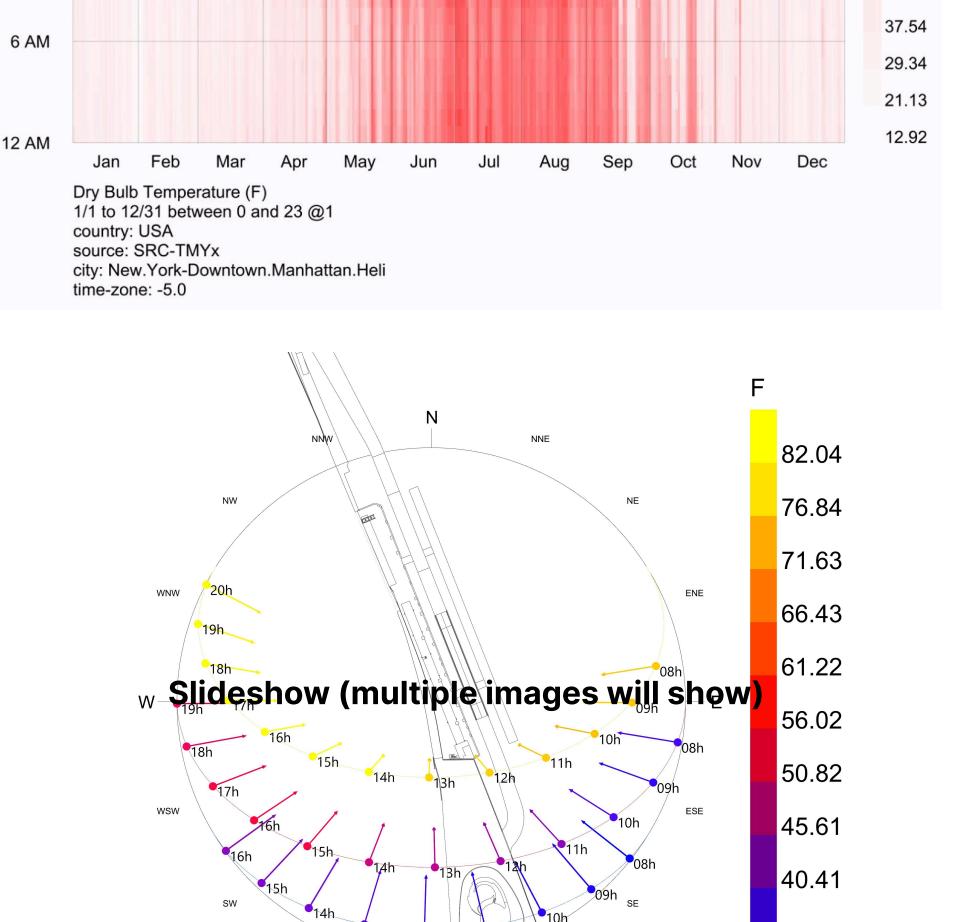
ROLE
Climate Study (?)

TOOLS
Grasshopper / Rhino

I did....asdasdasdas
asdasdasd
asdasdasd
asdasdasdasda
dasdsadas
dasdasdsadas
asdsadasdassdadsa



Daylight analysis to spot intense area



Sun shadow analysis to spot most shading spots



Organized scripts for everyone's use





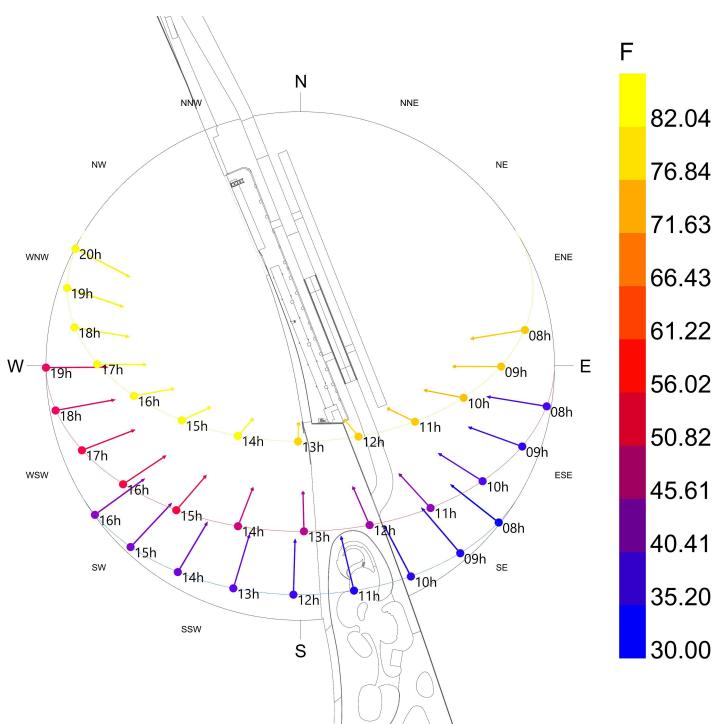
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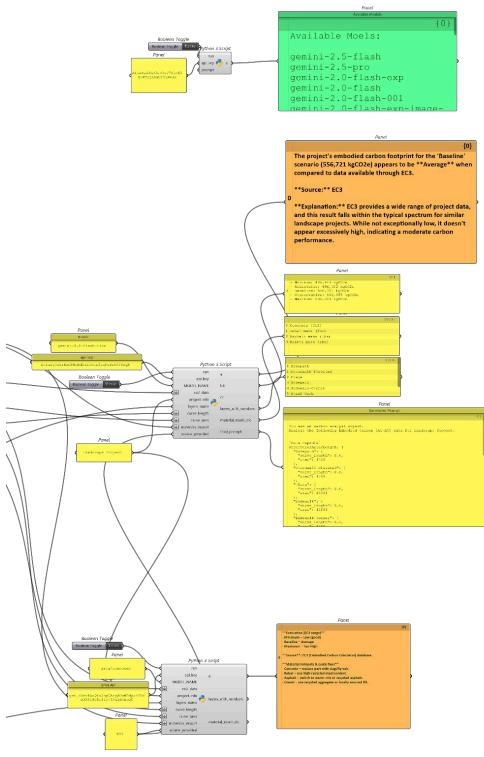
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BIM Managing





then send this excel calculation back to Grasshopper
and python code calls AI tools and ask if the
calculations are good enough to pass baseline
(source?)

Calculation Explanation:

Concrete Volume = Concrete Thickness(in) × Curve Area(ft²) + 12in

Rebar Mass = $\frac{1}{Rebar\ Spacing\ (ft)} \times \frac{1}{Rebar\ Spacing\ (ft)} \times Rebar\ Density\ (\frac{lb}{ft^3}) \times Rebar\ Wire\ Area(ft^2) \times Curve\ Area(ft^2)$

Asphalt Mass = Asphalt Density($\frac{lb}{ft^3}$) × Asphalt Thickness(in) × Curve Area(ft²) × $\frac{ft}{12in}$

Gravel Mass = Gravel Density($\frac{lb}{ft^3}$) × Gravel Thickness(in) × Curve Area(ft²) × $\frac{ft}{12in}$

Concrete Curve Mass = Curve(ft²) × [(K(0.0001 + 6.875in)) + 11(1 - $\frac{1}{ft^2} \times \frac{144in^2}{ft^2} + 7in \times 8in \times \frac{ft^2}{144in^2}$)]

Steel Curve Mass = $(12in + \frac{3}{in}) \times \frac{ft^2}{12^2in^2} \times (15 + 2 + 0.5 \times pi) \times \frac{in}{12in^2} \times Rebar\ Density\ (\frac{lb}{ft^3}) \times Curve(ft^2)$

