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Beyond Coal: Facing our Landscape Legacy & Seeing our Renewable Future

Danni Hu

Washington University in St. Louis

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SHARE OF ELECTRICITY GENERATED BY COAL-POWERED PLANTS

0% 25% 50% 75% 100%

- WV
- WY
- KY
- MO
- IN
- ND
- UT
- NE
- OH
- NM
- CO
- WI
- MT
- KS
- IA
- AR
- MN
- TN
- MD
- MI
- IL
- NC
- GA
- ZA
- TX
- PA
- OK
- AL
- SC
- SD
- VA
- FL
- HI
- LA
- AK
- MS
- MA
- NV
- DE
- WA
- OR
- NH
- NJ
- NY
- ME
- CT
- ID
- CA
- RI
- VT

There are **400** coal-powered electric plants in the United States. They generated **35 percent** of the nation's electricity last year.

Coal was the chief source of electrical generation in 19 states and the second most common source in another nine. Coal is most popular in the East, south of New York. Coal still accounted for at least 50 percent of generation in 13 states.

Nearly all the coal fueling Missouri's coal-fired power plants is brought into the state by rail from Wyoming.

Legend

- Coal-powered electric plants Capacity
 - 6,495MW
 - 1,000MW
 - 500MW
 - 250MW
 - 100MW
- Existing electric power grid
 - 1,000 kv
 - 700-799 kv
 - 500-699 kv
 - 345-499 kv
- Historical coal fields (1870)
- Existing coal fields (1870)
- Largest coal resource
- Mississippi river watershed
- River streams

THE SWITCH: FROM COAL TO RENEWABLES

100% 75% 50% 25% 0%



There are **1,444 hydroelectric plants** in the United States. They generated **7 percent** of the nation's electricity last year.

It's a feast-or-famine source. Washington, Oregon, Vermont and Idaho lead the nation in power from hydroelectric plants, getting between 56 percent and 65 percent of their electricity from them. But Montana and South Dakota were the only other states where they were responsible for more than 5 percent of electricity. Government-run plants generate most of the power.



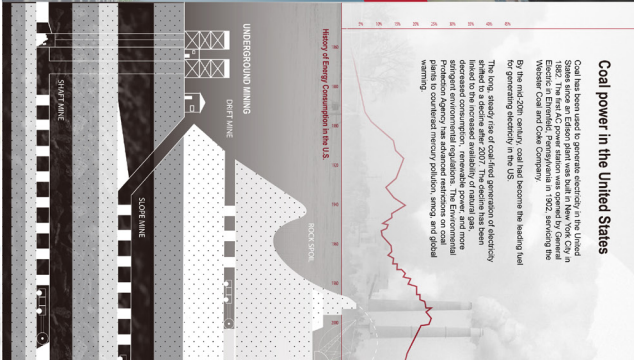
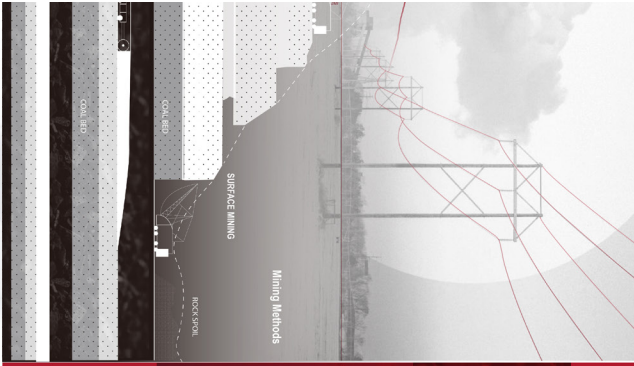
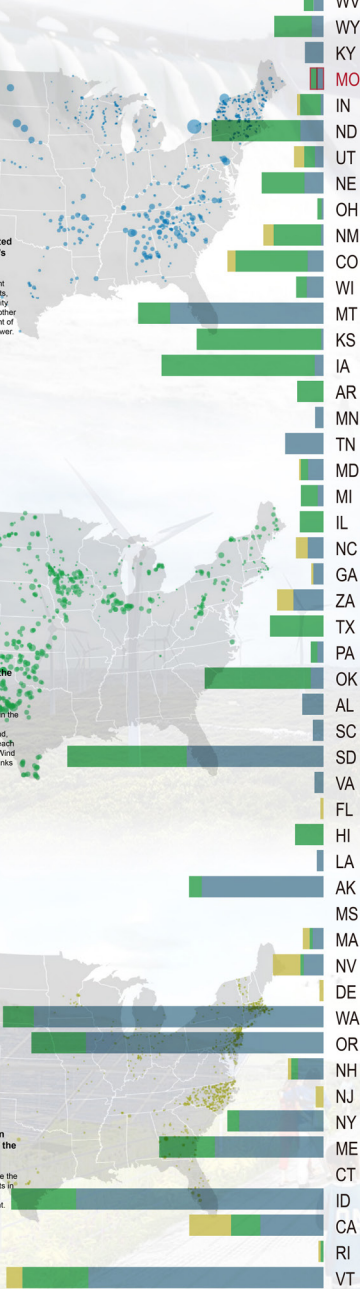
There are **999 wind-powered electric plants** in the United States. They generated **6 percent** of the nation's electricity last year.

Wind is the fastest-growing power source, finding a home in the Great Plains, where wind blows reliably across wide open spaces. Iowa got more than one-third of its power from wind, followed by Kansas, Oklahoma and South Dakota, which each got more than a quarter of their electricity from windmills. Wind is not the leading source of electric power anywhere but ranks second in seven states.



There are **1,721 solar-powered electric plants** in the United States. They generated **5 percent** of the nation's electricity last year.

Solar power is predominantly used in the Southwest, where the sun shines the most. The growth of solar has created plants in all but eight states. California gets almost 10 percent of its electricity from solar, and Nevada gets more than 6 percent. Vermont and Arizona follow with 4 percent each.



Time's Up For Coal!

from nearby oil and gas! → NO_x + VOCs + sunlight = SMOG

11 MILLION TONS CO₂
Every year! That's equivalent to **2.2 million more cars** on the road!

METHANE
A greenhouse gas **86x more potent** than carbon dioxide leaks from the mine and waste

TAILINGS PILES
(earth removed to mine)

COAL ASH WASTE
(power plant waste) **33.5 million tons** accumulated since 1962

TOXIC POLLUTANTS
from the mine and waste piles leaches into groundwater

UP TO 3% of coal can be lost in transit

POWER PLANT

11 MILLION TONS CO₂
Every year! That's equivalent to **2.2 million more cars** on the road!

TOXIC POLLUTANTS
Arsenic, Boron, NO_x, Lead, Thallium, Mercury, Selenium, SO₂

POWER PLANT

Each year, FCPP uses **9 BILLION GALLONS** of water

ONLY 17% of water is return to the river

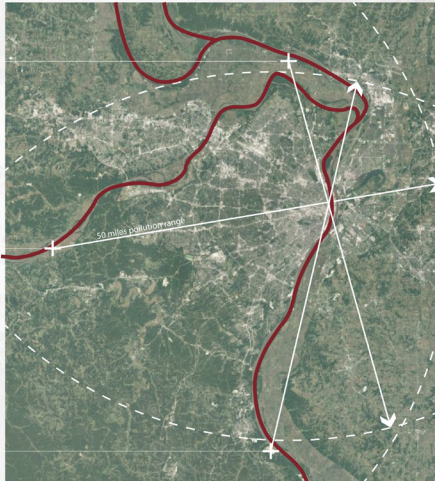
2 billion gallons of water is lost each year from **EVAPORATION**

16,052 gallons of water is withdrawn approximately generated by electricity and consumes approximately 682 gallons of water.

WEIRS Used to divert water and often block fish movement.



The coal plant pollution conditions in St. Louis



Soldiers Memorial Military Museum

Now this is a park for...

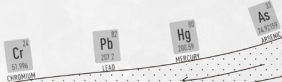
- Parking
- Homeless
- Walking the dog
- Events

Kaufman Park

Poelker Park

SLU

City Hall

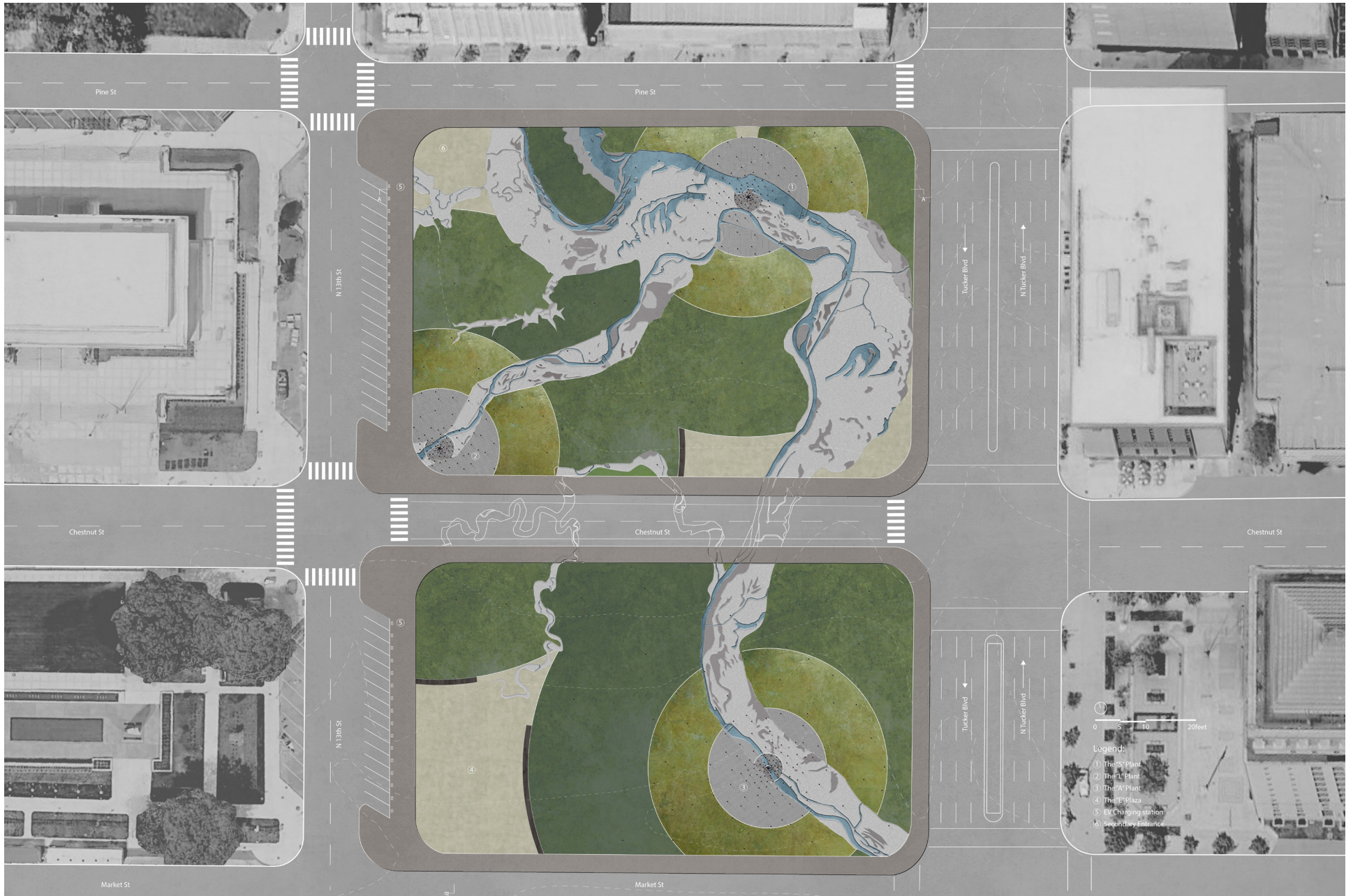


Environmental Risks
Contamination of local rivers, lakes, streams

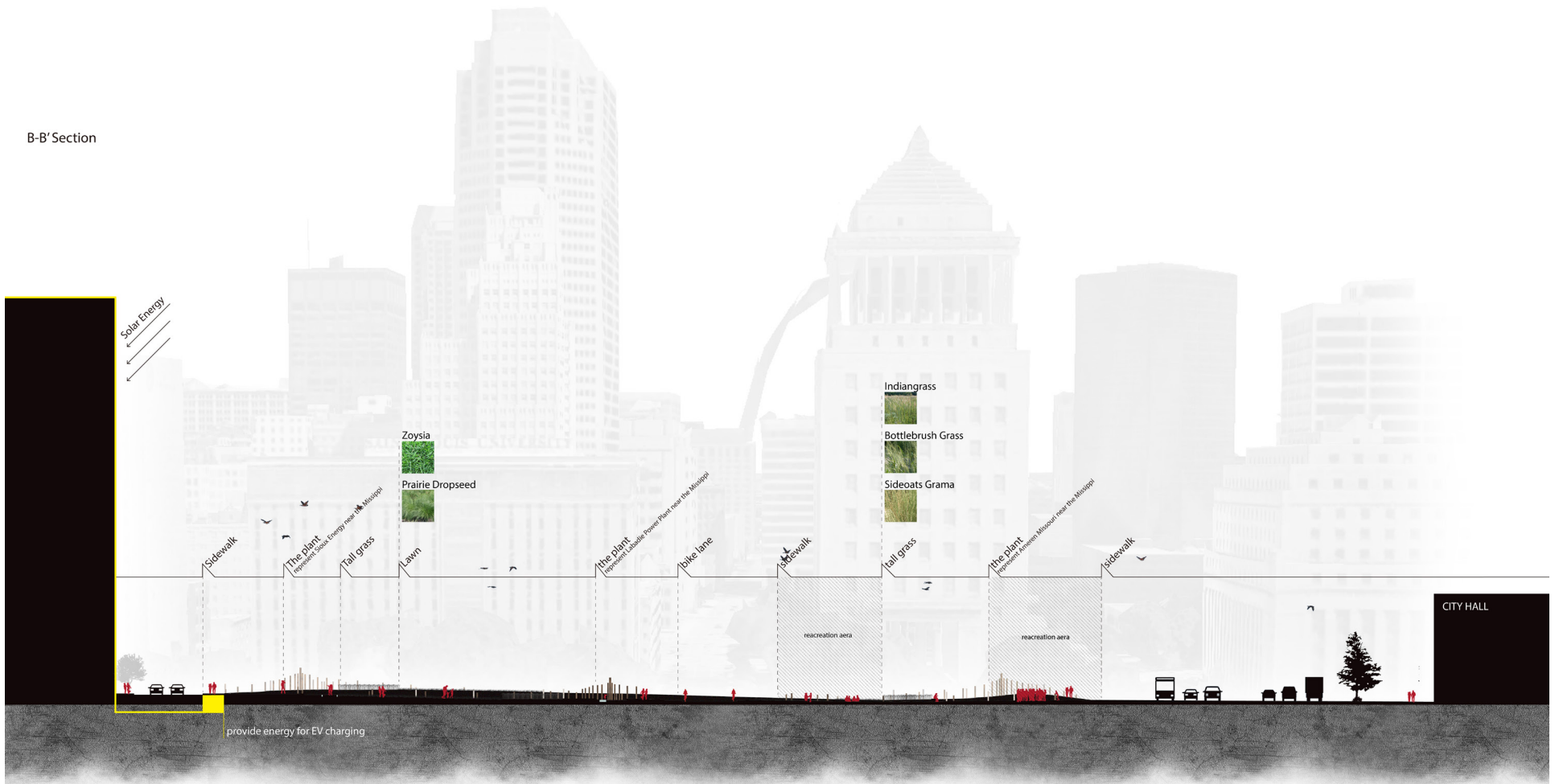
Public Health Threat
Exposure to toxic chemicals that could lead to serious injury or even death

Economic Costs
Property damage to homes, cars, and cleanup costs to local communities

Threats To Facilities
Damage to basic facilities and services such as phone and power lines

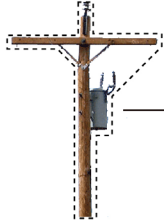


B-B' Section

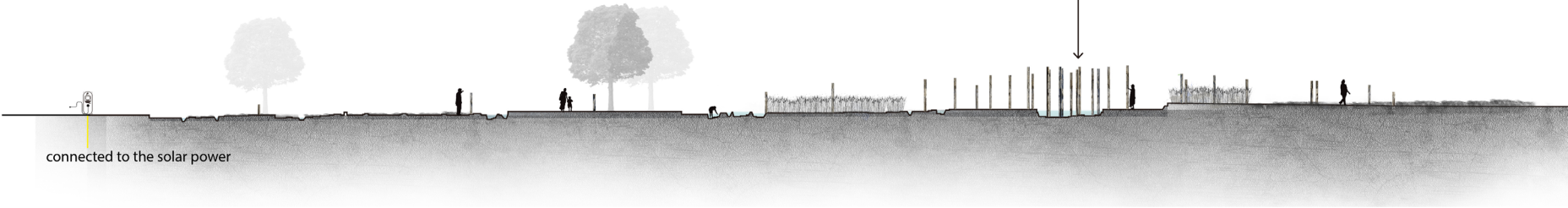


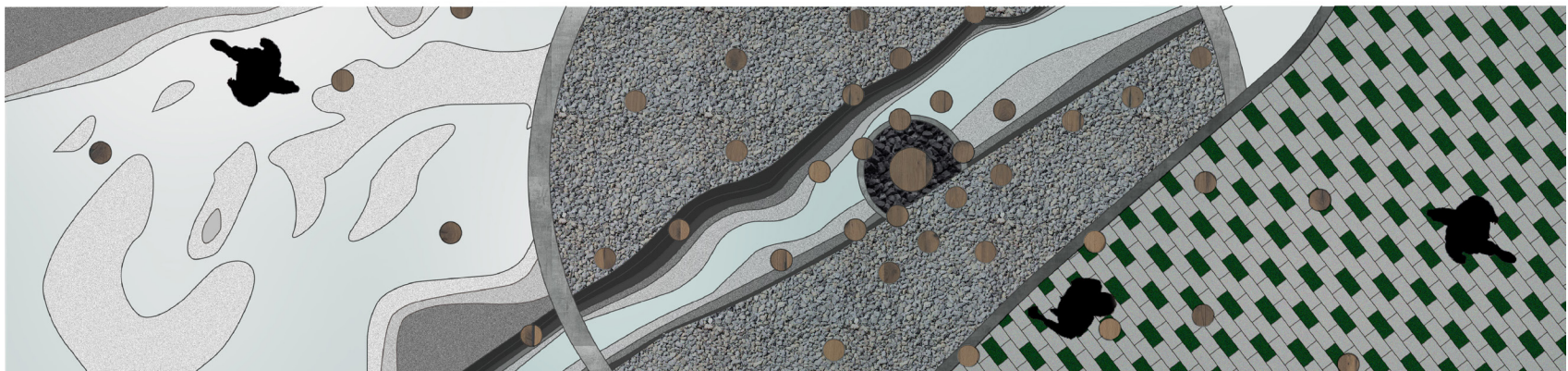
A-A' Section

The Concept Of Poles
Utility Poles



Recycled









Danni Hu

