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ADV STUDIO IV - TUTORIAL:

San Andreas: Architecture for the Fault

Image: Lebbeus Woods, from *San Francisco Project: Inhabiting the Quake, Quake City*, 1995

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Schedule: Monday/Wednesday, 2-6pm Tutorial; Friday, 2-6pm Research & Work

The San Andreas Fault is an 800-mile tectonic feature cutting diagonally across the state of California, from the coastal spit of Cape Mendocino, roughly 200 miles north of San Francisco, to the desert shores of the Salton Sea near the U.S./Mexico border. Described by geologists as a "transform fault," the San Andreas marks a stark and exposed division between the North American

and Pacific Plates. It is a landscape on the move—"one of the least stable parts of the Earth," in the words of paleontologist Richard Fortey.

Seismologists estimate that, in only one million years' time, the two opposing sides of the fault will have slid past one another to the extent of physically sealing closed the entrance to San Francisco Bay, while, at the other end of the state, Los Angeles will be dragged more than 15 miles north of its present position. Then another million years will pass—and another, and another—violently and irreversibly distorting Californian geography, with the San Andreas as a permanent, sliding scar.

In some places, the fault is a picturesque landscape of rolling hills and ridges; in others, it takes the form of a broad valley, marked by quiet streams, ponds, and reservoirs; in yet others, it is not visible at all, hidden beneath the rocks and vegetation. In a sense, the San Andreas is not singular and it has no clear identity of its own. It cuts through heavily urbanized areas—splitting the San Francisco peninsula in two—as well as through the suburbs. It cleaves through mountains and farms, ranches and rail yards, taking on the character of what it passes through while influencing the ways in which that land is used. As the National Park Service reminds us, "Although the very mention of the San Andreas Fault instills concerns about great earthquakes, perhaps less thought is given to the glorious and scenic landscapes the fault has been responsible for creating."

Image: A "fault trench" cut along the San Andreas for studying underground seismic strain; photo by Ricardo DeAratanha for the *Los Angeles Times*.

This is not a class about seismic engineering, then, nor is it a rigorous look at how architects might stabilize buildings in an earthquake zone. Rather, it is a class about making the seismic energies of the San Andreas Fault *legible through architecture*. That is, making otherwise imperceptible planetary forces—the tectonic actions of the Earth itself—physically and spatially sensible. Our goal is to make the seismic energy of the fault experientially present in the lives of the public, framing and

interpreting its extraordinary geology by means of a new National Park: a San Andreas Fault National Park.

For generations, the fault has inspired equal parts scientific fascination and pop-cultural fear, seen—rightly or not—as the inevitable source of the "Big One," an impending super-earthquake that will devastate California, flattening San Francisco and felling bridges, houses, and roads throughout greater Los Angeles.

From the 1985 James Bond film, *A View to a Kill*, in which the San Andreas Fault is weaponized by an eccentric billionaire, to the so-called Parkfield Experiment, "a comprehensive, long-term earthquake research project on the San Andreas fault" run by the U.S. Geological Survey to "capture" an earthquake, the fault pops up in—and has influence on—extremely diverse contexts: literary, poetic, scientific, photographic, and, as we will explore in this studio, architectural.

Indeed, the fault—and the earthquake it promises to unleash—is even psychologically present for the state's residents in ways that are only vaguely understood. As critic David L. Ulin suggests in his book on earthquake prediction, the constant threat of potentially fatal seismic activity has become "part of the subterranean mythos of people's lives" in California, inspiring a near-religious or mystical obsession with "finding order in disorder, of taking the random pandemonium of an earthquake and reconfiguring it to make unexpected sense."

For this class, each student must make a different kind of unexpected (spatial) sense of the San Andreas Fault by proposing a San Andreas Fault National Park: a speculative complex of land forms, visitors' centers, exhibition spaces, hiking paths, local transportation infrastructure, and more, critically rethinking what a National Park—both a preserved landscape, no matter how mobile or dynamic it might be, and its related architecture, from campsites to trail signage—is able to achieve.

Important questions here relate back to seismic safety and the limits of the National Park experience. While, as we will see, there is a jigsaw puzzle of literally hundreds of minor faults straining beneath the cities, towns, suburbs, ranches, vineyards, farms, and parks of coastal California—and much of the state's water infrastructure, in fact, crosses the San Andreas Fault—there are entirely real concerns about inviting visitors into a site of inevitable and possibly massive seismic disturbance.

For instance, what does it mean to frame a dangerously unstable landscape as a place of aesthetic reflection, natural refuge, or outdoor recreation, and what are the risks in doing so? Alternatively, might we discover a whole new type of National Park in our designs, one that is neither reflective nor a refuge—perhaps something more like a San Andreas Fault National Laboratory, a managed landscape of sustained scientific research, not personal recreation? Further, how can a park such as this most clearly and effectively live up to the promise of being *National*, thus demonstrating that seismic activity has played an influential role in the shared national history of the United States?

Meanwhile, each student's San Andreas Fault National Park proposal must include a Seismic Interpretive Center: an educational facility within which seismic activity will be studied, demonstrated, explained, or even architecturally performed and replicated. The resulting Seismic Interpretive Center will take as one of its central challenges how to communicate the science, risk, history, and future of seismic activity to both the visiting public and to resident scientists or park rangers.

Finally, the San Andreas Fault National Park must, of course, be located on the fault itself, at a site (or sites) carefully chosen by each student; however, the Seismic Interpretive Center could remain physically distant from the fault, although still within park boundaries, thus reflecting its role as a mediator between visitors and the landscape they are on the verge of entering.

All of the above will be explained in much greater detail in class, including a complete syllabus.