NATIONAL ARCHITECTURAL ACCREDITING BOARD, INC.
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May 20, 2022

Igor Marjanović
Dean of Architecture
Rice University
6100 Main St.
MS-50
Houston, TX 77005-1827

Sent via Email

Dear Dean Marjanović:

After reviewing the five-year Interim Progress Report (IPR) for the Bachelor of Architecture and Master of Architecture programs submitted by Rice University, the National Architectural Accrediting Board (NAAB) has accepted the IPR as having demonstrated satisfactory progress toward addressing deficiencies identified in the most recent two-year Interim Progress Report.

Your next accreditation visit is scheduled for spring 2025 and will be conducted under the Conditions and Procedures in effect at the time of the visit. The Architecture Program Report (APR) is due September 7, 2024.

Please note that Program Annual Reports are still due annually.

If you have any questions regarding this matter, please contact accreditation@naab.org.

Sincerely,

Rebecca O'Neal
President

3. TEMPLATE

Interim Progress Report Year 5

Rice University
School of Architecture
Bachelor of Architecture (High School diploma + 192 credit hours)
Master of Architecture
Track I (Bachelor degree + 133 credit hours)
Track II (Bachelor degree in Arch + 95 credit hours)
Year of the previous visit: 2016

Please update contact information as necessary since the last APR was submitted.

Chief administrator for the academic unit in which the program is located:

Name: Igor Marjanović
Title: Dean of Architecture
Email Address: im@rice.edu
Physical Address: 6100 Main St. MS-50 Houston, TX 77005

Any questions pertaining to this submission will be directed to the chief administrator for the academic unit in which the program is located.

Chief academic officer for the Institution:

Name: Reginald DesRoches
Title: Provost
Email Address: provost@rice.edu
Physical Address: 6100 Main St. MS-2 Houston, TX 77005

Text from the previous VTR and IPR Year 2 Review is in the gray text boxes. Type your response in the designated text boxes.

I. Progress in Addressing Not-Met Conditions and Student Performance Criteria

a. Progress in Addressing Not-Met Conditions

Rice University, 2021 Response: N/A

b. Progress in Addressing Not-Met Student Performance Criteria

B.2 Site Design (M. Arch. only)

2016 Team Assessment: Evidence of student achievement at the prescribed level in the B. Arch program was found in student work prepared for ARCH 301: Intermediate Problems in Architecture I and ARCH 602: Architectural Problems. In the graduate curriculum, the team did not find sufficient evidence of student achievement in understanding topography and watershed as represented by topographic manipulation or site-planning responses to climate considerations.

Rice University, 2018 Response: In response to this deficiency, as well as the serious concerns of flooding in Houston, particularly after the devastation of Hurrican Harvey, watershed issues and other relevant topographic concerns have been foregrounded in addressing the site planning phases of the required graduate core studios, ARCH 504, which is a housing/urban studio sited in Houston. This studio is required of all M.Arch students regardless of program option. In addition, the graduate option studios, Arch 602, have been mandated to address this issue more consistently.

Rice University, 2021 Response:

We continue to emphasize watershed issues and topographical considerations throughout our M.Arch. program, aiming to have consistent studio offerings on these important issues. Graduate option studios (ARCH 602) continue to address the interrelated issues of housing, flooding and urbanism—and climate crisis—both in Houston and more broadly. ARCH 504: Core Design Studio IV continues to address water ecology as well, including the Spring 2021 offerings located in Baytown (Institute for New Ecologies/The Brownwood Marsh Restoration Project) and in downtown Houston.

II. Changes or Planned Changes in the Program

Please report such changes as the following: faculty retirement/succession planning; administration changes (dean, department chair, provost); changes in enrollment (increases, decreases, new external pressures); new opportunities for collaboration; changes in financial resources (increases, decreases, external pressures); significant changes in educational approach or philosophy; changes in physical resources (e.g., deferred maintenance, new building planned, cancellation of plans for new building).

Rice University, 2021 Response:

Administration changes within school and university:
- Appointed new directors of graduate and undergraduate studies in the School of Architecture in July 2018.
- Appointed new university provost, Reginald DesRoches, in July 2020, who was just announced as the new university president, effective July 2022.
- Appointed a new dean for the School of Architecture, Igor Marjanovic, effective July 2021.

Changes in enrollment:
- Saw an increase in enrollment in the Bachelor of Architecture program, about a 30% increase. This is, in part, due to the university's efforts to grow the undergraduate student body, though we do not expect it to continue to grow in the School of Architecture.

- Masters of Architecture numbers slightly fluctuate every year, but remain steady over time.

Facilities:
- The School of Architecture building was upgraded with a new HVAC system in the summer of 2020.
- Plans for a new building are underway for the school.
- Replacing studio furniture over the next three years to allow for more flexible workspaces and reflect the changing environments of an architectural education.
- Installed hi-def monitors and cameras in each studio and classroom space.

New building addition:
- Designed by Karamuk/Kuo, Cannady Hall will add 15,000 square feet of fabrication and making space, a gallery for events and exhibitions, and flexible work space for students and faculty. The design phase is concluding and we expect to break ground in summer 2022.

Given the scope of administrative changes and University next capital campaign, Be Bold, we anticipate a robust self-evaluation process in the near future, refining the philiosophy and direction of our programs, all while building on our many strengths and tapping on additional human, cultural, and intellectual resources of our city and our university. Relatedly, Rice Architecture is also searching for two tenured or tenure-track faculty members, replacing recent retirements and departure of one permanent faculty member. Finally, the undergraduate B.Arch. program has had a significant increase in yield rate in Fall 2021, enrolling almost 50% more students than usual.

III. Summary of Preparations for Adapting to 2020 NAAB Conditions

Please provide a brief description of actions taken or plans for adapting your curriculum/ classes to engage the 2020 Conditions.

Rice University, 2021 Response:

We understand that the revised 2020 NAAB Conditions for Accreditation aligned many of the 2014 Student Performance Criteria (SPC) into broader Program Criteria (PC). We believe that these larger, critical themes respond more directly to the changing context of practice, while at the same time giving individual schools more agency in cultivating distinct approaches. The 2020 conditions require that Rice Architecture continues to evolve clear systems for periodic evaluation and self-assessment of all aspects of our program. We hereby respond to the Program and Student Criteria with our current and intended actions for addressing the 2020 Conditions for Accreditation. Furthermore, we have several initiatives underway that relate to the “Shared Values of the Discipline and Profession,” addressing the interconnected issues of disciplinary ethics, environmental stewardship and diversity/equity/inclusion—all of which are particularly pertinent to Houston, a place of unprecedented human diversity and ecological complexity. Working through faculty, student and staff groups, we will continue to assess and measure the impact of these initiatives, using them also to frame our long-term program goals (see PC.8 below).

*******Program Criteria (PC)
PC.1 Career Paths—We will continue to assess our professional practice courses, as well as public programs such as lectures and workshops to make sure that we are exposing students to a diverse range of professional career paths. Our career development staff will continue to cultivate alumni events that allow professional exchange between students and a broad range of practices, and, together with the faculty, advise students on internship opportunities. Our undergraduate Preceptorship program will be assessed annually to ensure the inclusion of diverse professional practices; while we continue to cultivate summer internship opportunities for graduate students as well. We will develop clear methods of assessment to identify ongoing and new opportunities for professional career paths within the graduate and undergraduate programs.
PC.2 Design—We will continue to assess our core design studios within the graduate and undergraduate programs to identify and situate a clear method of analysis and synthesis that allow students to incrementally develop design skills—from more foundational approaches to more complex

building and site considerations. As it has been the tradition in our school, we will continue to offer studios that cut across multiple scales—from architectural to urban, from local to global—while developing assessment mechanisms for students' ability to consider multiple factors, scales and settings in their design decisions.
PC.3 Ecological Literacy and Responsibility—We will continue to annually assess our core technology coursework to ensure that contemporary issues of ecology and climate change are addressed in the context of our professional agency. Collaboration with faculty from the sciences, engineering, and social sciences will be continually cultivated. We will develop specific moments in the required core studio sequence to address these issues through urban design, building performance, and community engagement in Houston. Our community engagement programs will be reassessed to identify specific environmental issues.
PC.4 History and Theory—We will conduct an annual assessment and discussion of the core History/Theory coursework to ensure that students are exposed to diverse social, cultural, and economic global histories and theories of architecture and urbanism. We will ensure that precedents and histories presented within studio and elective coursework continues to complement and expand upon this diversity.
PC.5 Research and Innovation—We will continue to annually evaluate our core and advanced option studios to ensure that students develop the technical skills and analytical knowledge necessary to approach the dynamic context of architecture and urbanism today. Our comprehensive studio (ARCH601) will continue to engage students with practitioners and engineers who work within advanced/emerging building technologies. We will aim to further strengthen opportunities for advanced students to participate in faculty research (foundational and applied).
PC.6 Leadership and Collaboration—Collaboration and leadership thread through every aspect of our program. We will continue to assess and expand upon professional mentorship opportunities for students, including through our career office and organizations such as Rice Architecture Mentorship. We will assess and ensure that collaborative, team-based learning takes place at multiple points within the core design studios – and that opportunities for engagement with community groups and external interests are integrated within the studio curriculum. In addition, we will develop and continue to offer extra- curricular discussions and workshops that provide insights into the complex, dynamic contexts of architectural practice today.
PC.7 Learning and Teaching Culture—We will continue to build on our collective culture as a small school with much overlap and collaboration among our different degree programs, integrating design, history and technology. We continue to work closely with numerous entities and resources on campus to reinforce a healthy and effective learning environment. We will continue to provide mentorship to junior, incoming faculty, to ensure teaching excellence. In addition to student evaluations each semester, we will promote a culture of communication and respect between students, faculty, and staff. The administrative faculty will continue to meet regularly with students to solicit feedback regarding their learning environment. PC.8 Social Equity and Inclusion—We will continue to develop and assess our methods for recruiting a more diverse students and faculty – with the continued support of the university. We will strengthen our existing initiatives in the areas of diversity, equity and inclusion—setting clear goals for substantive academic and extra-curricular elements that collectively build our students' understanding of diverse cultural and social contexts. We will continue to encourage and support faculty and student initiatives, further develop and assess programs that are actively engaged with communities in the City of Houston. We will also continually build upon our K-12 outreach engagement, involving both faculty and students to establish more equitable opportunities leading toward college education, and to help shape a future generation of architects.

*******Student Performance Criteria (SPC)
SC.1 Health, Safety, and Welfare in the Built Environment—We will continue to evaluate how our courses address health, safety, and welfare in a broad range of curricular contexts and scales: from environmental resiliency or transportation on an urban scale, to material research, building code provisions on the level of a building, to broader questions of affordable housing or care work, among others. The school's public programming will continue to integrate positions that address these issues and engage students and faculty in a sustained conversation on health, safety, and welfare. SC.2 Professional Practice—Graduate and Undergraduate directors will consult with faculty to ensure that the 2020 Conditions will be met in ARCH 423/623 Professionalism and Management in Architectural

Practice. We will also evaluate the extracurricular professional programs, such as Mentorship to reinforce their connections and complementary offerings with the required courses. Within the undergraduate professional degree program, we will create curricular opportunities to allow for feedback and knowledge transfer from the professional world back into the school, including through our signature Preceptorship program. We will also evaluate the potential for comparable opportunities within the graduate program, assessing the potential for meaningful externship programs.
SC.3 Regulatory Context—We will review all required program courses, including advanced design studios, professional practice, and technology, to ensure a comprehensive and current understanding of both broad and specific regulatory frameworks. We will expand opportunities for students to get exposure to actual projects under construction in Houston. We will seek the potential for stronger collaborations with other entities on the Rice campus, including, but not limited to the School of Engineering, the Disability Resource Center, or Facilities, Engineering and Planning.
SC.4 Technical Knowledge—We will investigate how to build stronger collaborations and curricular integration between design studios and required technology courses. We will also assess our current advanced studios that foreground assemblies of building construction and technology (ARCH 601) and how aspects covered in that course could be introduced at earlier stages in the curriculum. In addition, we will assess our current pedagogical platforms for building performance evaluation.
SC.5 Design Synthesis—Our program foregrounds architecture as a synthetic discipline that brings together various modes of design thinking. We will continue to assess our design pedagogy to ensure that students are incrementally advancing from fundamental design requirements to more complex sites and building assemblies. Our current advanced core studios will continue to be regularly evaluated at multiple points within the course of studies, ensuring the growth of skills and abilities to consider multiple factors in their design decisions.
SC.6 Building Integration—Building integration continues to be tackled in three curricular areas: design studios, technology courses and workshops. We support strong building integration in select core design studios, including expert consultants from within the school and private practices. We will assess technology courses and further strengthen connections between building performance, material research, and design. We will periodically review required workshops and seminars that address life safety, regulatory mandates, and environmental control systems to ensure most current standards and expectations. Undergraduate students in the professional degree program will continue to be exposed to questions of building integration design procedures as part of their one-year immersion in architectural practice as part of the Preceptorship program. We will continue to develop Rice Architecture Construct, the school's design-build program, which forms an additional outlet for students to experience building integration from the drawing board to the construction site.

IV. Appendix *(include revised curricula, syllabi, and one-page CVs or bios of new administrators and faculty members; syllabi should reference which NAAB SPC a course addresses. Provide three examples of low-pass student work for SPCs in the following cases--if there are any SPCs that have not been met for two consecutive visits, or If there are three not-met SPCs in the same realm in the last visit--as required in the Instructions.)*

Rice University, 2021 Update: Syllabi and bios

Spring 2021
Rice School of Architecture
ARCH 504-1

CITY HALLS

Monday Wednesday Friday
1:30-6:20pm

Instructor:
Sarah Nichols
sn49@rice.edu

Zoom: https://riceuniversity.zoom.us/j/95875849432?pwd=OFh6ejF5OTArL2JUT0NlZ0NrT0wydz09
Passcode: 055113

Slack: https://join.slack.com/t/arch504/shared_invite/zt-kqebqcba-Iyll41wfCeXV8NLeApzkQQ

The final core studio in the graduate sequence considers architecture in relation to the city. This studio will take this relationship literally, looking at the spaces and functions of the City of Houston as a latent network for structuring the future of the city.

Working in pairs, students will research and design for a particular municipal function as an architectural project with territorial and civic intentions. Special attention will be paid to the structural and material characteristics of the design in relation to the anticipation of change as the institution and the city develop through time.

What makes a city? Frederick Wiseman's latest film *City Hall* (2020) turns the lens on Boston and in doing so reveals the myriad ways from the bombastic to the banal that a municipality not only operates or governs but also produces and reproduces itself, cares for or fails its citizens, reckons with its past and negotiates its future. Wiseman, an auteur who has made a career of piercing looks at American institutions, is perhaps the ultimate misanthrope. And yet this portrait of a municipality is incredibly hopeful, showing how—even after decades of gutting the core competencies of government—a city provides essential and often unseen or undervalued forms of care, from education, housing, and law to sanitation, building inspection, animal shelters, plant nurseries, or records collection. Aside from City Hall or the municipal courthouse or the handful of other representational buildings of municpal governance, most of these tasks simply happen *somewhere*, in generic space with a dropped ceiling, overhead lighting, and proximity to parking. The premise of this studio is that while many of these duties are already performed, making them visible—to use a dirty term, reifying them—and giving them form could engender a larger rethinking of the "City" in relation to the "city."

CITY HALLS

The Distributed Institution

The site of the studio will be the City of Houston which, of course, already has a City Hall. It is centrally located in downtown on Bagby St. between Walker and McKinney facing Hermann Square. The building was completed in 1939, designed by architect Joseph Finger and financed by a Works Progress Administration grant. The square and the edifice that frames it are an important site for civic life and public protest. Clustered nearby are the headquarters for a number of the city's other functions: the City Hall Annex building which houses the City Council and Bureau of Vital Statistics and the Houston Public Library Central Library. These are in turn surrounded by the Hobby Center for the Performing Arts, One Shell Plaza, Deloitte, PricewaterhouseCoopers, the Federal Courthourse, and the United States Postal Service. To the north, crossing I-45, is the main judicial and carceral center of the city: the Houston Municipal Court, Houston Police, Houston Police Property Room, Houston Police Vehicle Compound, and Houston Central Jail are clustered together, surrounded by Trinity Downtown Church, A Better Bail Bond, St. Joseph Catholic Church, 2B Free Bonding Company, Upbring School of Discovery and Leadership, and extensive surface parking.

These two sites—one civically minded, the other larger but far more discrete—are only a fraction of the city's spaces of governance, bureaucracy, and maintenance. In total, the city of Houston is distributed across over 500 buildings. Over 23,000 people work for the city. The diversity of labor, of types of care, is not represented by City Hall. The premise of the studio therefore becomes to think of a distributed institutionality, one that uses the welfare project of the City to engender a new type of civic space for Houston at large, not just downtown but throughout the considerable footprint of 669 square miles.

Public Services

In a city whose development is overwhelmingly determined by the private sector, the performance and making public of core munipal functions is posited as a way of intervening on the city as a whole and imagining for it an alternate future. What happens, for example, when the sanitation work of the city is a City Hall? When the welfare work of the city is a City Hall? When the transport work of the city is a City Hall?

Such propositions do not need to reproduce the monumentality of representative government buildings. Rather, the aim will be to find strategic ways of locating these services within the city, weaving them into their surroundings, and slying exposing them, opening them up to scrutiny and engagement and thinking of latent or complementary capacities that can expand from their currently narrow notion of service provision to speak more broadly to the cultivation of a civic realm.

As a number of contemporary initiatives show, foremost among them the Green New Deal, we are at a turning point in the imagination of what government—or, more broadly considered, collective projects—can do. This studio operates in sympathy with such ideas but approaches the question from the municipal level rather than the visualization of a federal project in a particular place. If we are reimagining our relations with one another and the services and spaces that govern them, such a rethinking can ultimately operate with many scales and consistuencies, from cooperative housing, to a Community Land Trust, to a Sanctuary City declaration, to state energy regulations, to federal public works projects and beyond: ecologies and people rarely respect or remain within prefigured boundaries and the challenges that we must address are complex and multiscalar, yet each scale brings with it specific questions.

In envisioning a new civic sphere, the city brings with it a distinct set of possibilities. It exceeds the neighborhood scale and forces the negotiation of different consistuencies. It deals in hard infrastructure but then is cut across by highways drawn and built by the state. Cities have more affinity to other cities than to the larger scales of government within which they are nested– they form a global network of people, goods, and information that are in direct exchange. Cities struggle with the limits of the urban: the municipality versus the ever-growing urban agglomeration and the negotiation between the city and its hinterland of provision. With an eye on these considerations, our focus will be on the reconsideration of city government this semester even as we keep in mind how other scales are also transforming.

STUDIO SETUP

Part 1: Research & Urban Strategy

The first part of the semester will be dedicated to understanding the functions and geography of the services of the City of Houston as they exist today. Working collectively, the studio will produce an atlas on the forms of governance, maintenance, transportation, welfare, punishment, and provision that make up municipal operations. Following from this, each group will be asked to critically assess these operations for their spatial, political, and territorial possibilities and posit a strategy that deploys a specific aspect or aspects of local governance as an agent of urban transformation. Specific areas of focus include: sanitation, water, mobility, maintenance, and knowledge.

Part 2: The Distributed Institution

Working from revision of the strategy proposed in part 1, each group will design municipal facilities as a network of spaces across the city with the capacity to reframe their surroundings, giving a territorial intention even to punctural interventions. The projects will work together and complement one another, focusing on different capacities and different neighborhoods or scales while remaining tied together through a collective attitude that should make public sometimes mundane acts of maintenance and welfare as essential and potentially radical forms of care. While sites and program will be determined individually, each project will develop three buildings with a total public area of approximately 75,000 square feet.

Part 3: Durability, Mutability, and Maintenance

After the midterm review, the three weeks before the penultimate review will be used to think about the project through time. How do the spaces and structures of your project anticipate, foster, and adapt as the municipality and its services, needs, and populace change over time? Projecting into the future, this portion of the studio should allow the project to become both more abstract and more precise, detaching from the city as we know it today to accommodate uncertain futures. In doing so, this phase should focus on the material, structure, and ecology of the project in relation to unstable program.

Part 4: Representation and Distillation

Following the penultimate review, the final two weeks of the studio should be reserved for refining representational techniques to ensure that text, drawing, image, and, if applicable, film all support the thesis of the project. Graphic clarity should be improved and made consistent across all deliverables. Rather than producing more, this final phase should focus on editing down and finding ways to present the project as clearly, concisely, and compellingly as possible, editing out unnecessary or distracting information and focusing on the essential qualities of the project. This editing process applies not just to the project as it is represented but also to the preparation of the final presentation.

Framework Sessions

Every Wednesday, the course will step back from the design projects and examine references that theoretically contextualize the work. First and foremost, these sessions will provide an intellectual backbone for the projects, build a culture of discussion, and provide a set of common references that foster such discussions. These Wednesday pauses also serve a secondary function of allowing you to build self-sufficiency as you develop your designs with an uninterrupted period of work between feedback sessions from Monday until Friday.

These sessions will be programmed with readings, film screenings, lecture viewings, and discussion. As the projects develop, the exact assignments may change so that they can better reflect the work as it develops. In this spirit, suggestions for readings, films, or discussion topics are welcomed and will be accommodated whenever possible and appropriate.

INSTITUTE FOR NEW ECOLOGIES

STUDIO SCHEDULE

PHASE 01 SITE MAPPING [Weeks 01-02]
Working individually or in pairs, students will produce two maps (one large-scale map of the shipping channel and one detailed map of the Brownwood site) that describe and annotate the region's environment, including (1) habitat/wildlife (2) topography/hydrology (3) industry/toxicity (4) infrastructure/energy (5) archaeology/territory. Base drawings, graphics, and scale will be determined and produced collectively by the studio.

PHASE 02 INSTITUTE PROPOSAL [Weeks 03-04]
After researching the architectures, landscapes, and programs of existing institutions, students will define an Instititute for New Ecologies, imagining new organizational structures, typological hybrids, and environmental agendas for maintenance and care. Working individually or in pairs, students will develop an "Institute Proposal," a design brief that will outline the specific program, scope, and ethos of their Institute. Precedents may include Lina Bo Bardi's SESC Pompéia, Studio Muoto's Public Condensor, Bruther's New Generation Research Center, Lacaton & Vassal's FRAC Dunkerque, OMA's Zollverein Masterplan, Junya Ishigami's Kanagawa Institute of Technology KAIT, among others.

PHASE 03 DESIGN DEVELOPMENT [Weeks 05-09]
Site: Westwood Park, Baytown, TX (north of Baytown Nature Center, Brownwood)
Program: Instititute for New Ecologies
Area: 75,000 ft^2 (3 buildings in total)
Working individually or in pairs, students will develop a campus for an Instititute for New Ecologies. The campus will be a composition of 3 primary buildings: (1) Institute, (2) Laboratory, and (3) Residence Hall. The Institute should include civic-facing programs such as public galleries, social spaces, classrooms, and library. The Laboratory should include programs such as laboratories, workshops, offices, grow houses, and test landscapes. The Residence Hall should include dormitories, cafeteria, and gathering areas.

PHASE 04 REPRESENTATION [Weeks 10-13]
A key component of the studio is leveraging architectural visualization to communicate the speculative and hybrid quality of a project. In addition to traditional modes of architectural representation (plans, sections, axons), students must develop drawing types and image-making techniques that convey the aesthetics, tone, politics, materiality, and sensorial components of their projects. A list of final deliverables (drawings, images, data models, maps, animations, etc) will be developed with each team during the final phase of the semester.

INSTITUTE FOR NEW ECOLOGIES

RESEARCH TOPICS [Weeks 01-04]

The studio will include a series of research discussions centered around texts and films that engage with architecture and the environmental imaginary. Topics will explore the aesthetics and politics of nature, the potential for hybrid thinking within ecology, and how the built environment participates within the systems of material extraction, care and maintenance, and labor production.

TOPIC 01 **NATURES [territories, landscapes, wilderness, aesthetics]**

Texts: William Cronon, “The Trouble with Wilderness, or, Getting Back to the Wrong Nature,” *Uncommon Ground: Toward Reinventing Nature*, 1995.
Maria S. Giudici, “Cultiver Notre Jardin,” *Into the Great Wide Open*, 2018.

Screening: *Little Joe*. Directed by Jessica Hausner, 2019.

TOPIC 02 **FLOWS [capitalism, commodities, values, materials]**

Texts: Jane Hutton, “Inexhaustible Terrain: Guano from the Chincho Islands, Peru, to Central Park, 1862,” *Reciprocal Landscapes: Stories of Material Movements*, 2019.
Jason Moore, “The End of Cheap Nature. Or How I Learned to Stop Worrying about ‘The’ Environment and Love the Crisis of Capitalism,” 2014.

Screening: *Manufactured Landscapes*. Directed by Jennifer Baichwal, 2006.

TOPIC 03 **SYSTEMS [technologies, industries, labor]**

Texts: Mark Jarzombek, “The Quadrivium Industrial Complex,” *e-flux Journal*, 2019.
Reinhold Martin, “Risks: Excerpts from the Environmental Division of Labor,” *Climates: Architecture and the Planetary Imaginary*, 2016.

Screening: *Topophilia*. Directed by Peter Bo Rappmund, 2015.

TOPIC 04 **HYBRIDS [alliances, agencies, new natures]**

Texts: Hélène Frichot, “Introduction,” *Dirty Theory: Troubling Architecture*, 2020.
William Bryant Logan, “The Lessons of a Hideous Forest,” *The New York Times*, July 20, 2019.
Félix Guattari, *The Three Ecologies*, 1989. *(Optional)*

Screening: “Cities.” *Planet Earth II.* Narrated by David Attenborough, 2016.

ARCH 602.21_AIRQUAKE_PROF POPE
present future_energy co-ops in west texas

1.0 the great divide

1.1 the new, New Deal

The Green New Deal (GND) put forward in the United States by Rep. Alexandria Ocasio-Cortez and Sen. Ed Markey (H.R. 109) represents the most ambitious infrastructural development program since the 1930s, one that maps out a holistic approach to addressing diverse problems of climate mitigation, economic recession, public health and social inequality. At present, the Green New Deal is focused on the retrofitting of existing public housing to make it more energy efficient (https://www.dataforprogress.org/green-new-deal-public-housing-national). But there is evidence that GND advocates intend to build a new public housing agenda around this legislation. This studio will focus on this prospect and revive the arguments for large-scale public intervention in the housing market that have been off the table for more than four decades. A return to these arguments is timely. Surrounded by deteriorating environment conditions and the increasingly obvious failures of market-based solutions, long-standing economic principles are quickly losing their legitimacy. Looking forward to an imminent revival of Keynesian policies in the wake of an administration change on January 20, the studio will reconsider urban interventions from the perspective of energy

MESA WIND FARM, WEST TEXAS

production and consumption, revisioning design solutions to the urban and environmental problems we face today.

The studio will explore the social, political and architectural legacies of the original New Deal in the 1930s with a special focus on one of its most impactful programs, the Tennessee Valley Authority (TVA). During the late 1930s and early 1940s, an advanced a comprehensive design agenda—ranging from flood control to farming, to cheap energy production, to new housing and recreation—dramatically altered life in the Tennessee River Valley. The TVA architects built a huge number of structures, including many hydroelectric dams, that became the core of new urban settlements and rural electrification schemes. The TVA pursued an integrated fusion of energy and urbanism at a regional scale that we believe offers important lessons for the GND. The studio will review the many failures and successes of the post war adaptation of New Deal programs with a special focus on updating the idea of a clean energy co-op. The ability to productively reengage with past agendas requires that we track the historic consequences of these agendas and, lessons learned, adapt them to an entirely new set of circumstances.

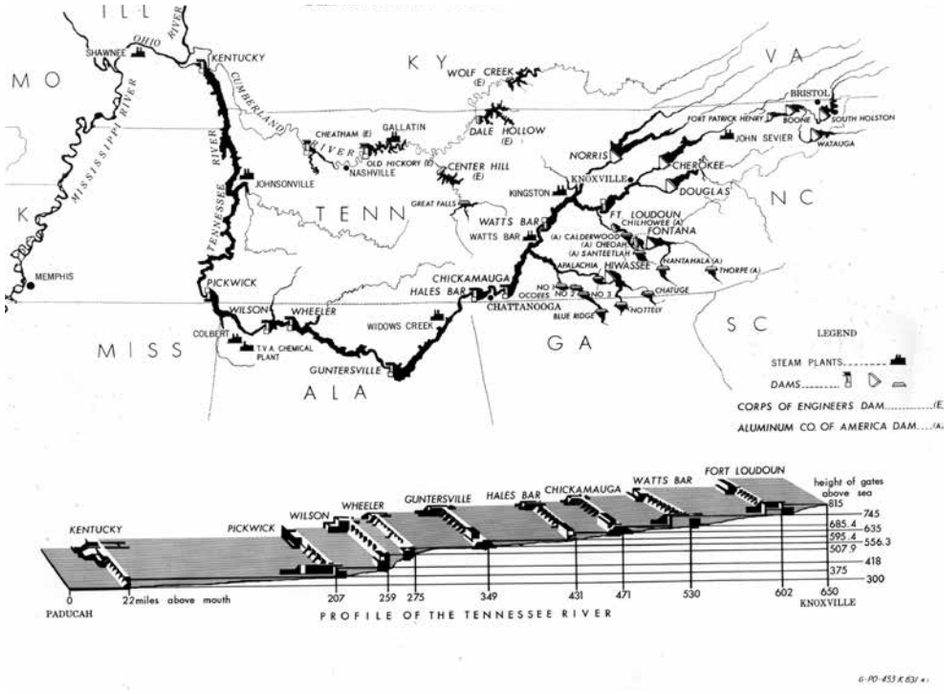
In the thirties the rural counties in Tennessee were among the poorest in the country. Today, rural poverty has not gone away, it has spread as industrialized farming has gained pace and wrecked what was left of regional economies around the country (and the world). In the United States, the gutting of regional economies has increased rural poverty, produced a sharp rural/urban political divide and alienated urban areas from the natural systems upon which they depend. Unless we find a way to overcome this divide, and reintegrate the city and its hinterland, solutions to both our social and environmental problems will remain out of reach. In formulating the New Deal, Roosevelt recognized the need for holistic solutions just as many of our politicians do today.

The studio is speculative, encouraging creative and critical thinking about what a major GND stimulus would mean for rural environments in the United States. The aim is to create a design demonstration of rural reform built around new sources of clean energy. For this studio, the clean energy resource will be the wind and the location of that resource will be some of the poorest counties in the state, the trans-pecos counties of West Texas. The trans-pecos counties record some of the greatest wind activity in the world. Along with other areas of the state, this activity explains why wind has now overtaken coal as the second largest source of electricity in the state. If Texas were a country, it would rank fifth in the world with its installed wind capacity. In 2020, wind accounted for

20% of the total electricity generated in the state.

Building on the integrated model of the TVA, the wind resources in West Texas can be secured, in part, for the economic and cultural redevelopment of the counties in which these resources exist. The studio will undertake the design of a new town founded as an energy coop in one of the many struggling counties of the wind rich, trans-pecos counties. This new town, with an eventual population of 36,000, will be based on wind energy capacity sufficient to power the co-op and produce a surplus to be sold in the eastern metropolitan markets. Providing a new economic base for the county as well as amenities now limited to larger cities, rural communities can reestablish themselves while actively shrinking the environmental footprint, locally and statewide. Given the emergence of the Green New Deal, operative question for the studio becomes: what does a revitalized welfare state project look like in the 21st century and how can design best serve it?

TENNESSEE VALLEY REGION



There is something in the mere cant of a dam, when seen from below, that makes one think of the Pyramids of Egypt. Both Pyramid and dam represent an architecture of power. But the difference is notable, too, and should make one prouder of being an American. The first grew out of slavery and celebrated death. Ours was produced by free labor to create energy and life for the people of the United States. —Lewis Mumford

NORRIS DAM, TVA

1.1 tennessee valley authority: big is beautiful

THE ORIGINAL NEW DEAL WAS ALSO A GREEN NEW DEAL. The New Deal's most ambitious and most representative project, the Tennessee Valley Authority, addressed the critical imbalance between urban and natural systems. Since that project was put into place, this imbalance has grown to the point of breaking down entirely. This imbalance is not only manifest in the environmental problems that loom in such an obvious manner. A social analogue to critical imbalance between urban and natural systems can be seen in the absolute split between so-called blue counties that are urban and red counties that are rural. This "Density Divide" between the city and its hinterland is not only tearing the political environment apart, it is, in a larger sense, what has produced a dangerous rift between our urban and natural systems. Our awareness of this rift sheds a new and compelling light on the TVA. In this project, urban and rural reform were integrated into a holistic/cultural response to the problems of the day.

TENNESSEE VALLEY AUTHORITY. During the 1920s and the 1930s Great Depression years, Americans began to support the idea of public ownership of utilities, particularly hydroelectric power facilities. The concept of government-owned generation facilities selling to publicly owned distribution utilities was controversial and remains so today. Many believed privately owned power companies were charging too much for power, did not employ fair operating practices, and were subject to abuse by their owners (utility holding companies), at the expense of consumers. During his presidential campaign, Franklin D. Roosevelt said that private utilities had "selfish purposes" and said, "Never shall the federal government

OCOEE DAM 2, TVA

part with its sovereignty or with its control of its power resources while I'm president of the United States." The private sector practice of forming utility holding companies had resulted in their controlling 94 percent of generation by 1921, and they were essentially unregulated. In an effort to change this, Congress and Roosevelt enacted the Public Utility Holding Company Act of 1935.

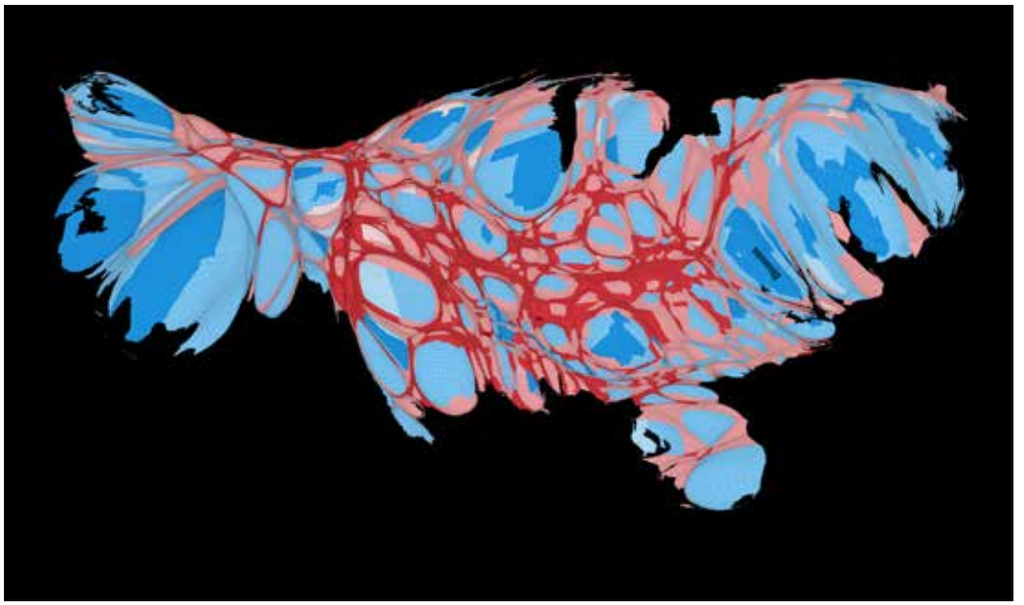
After Roosevelt was elected, the federal government bought many private utility companies in the Tennessee Valley as part of the Tennessee Valley Authority project. Others shut down, unable to compete with the TVA. The government passed regulations to prevent competition with TVA. In 1920 Senator George Norris (R-Nebraska) blocked a proposal from industrialist Henry Ford to build a private dam and utility to modernize the valley. Norris deeply distrusted privately owned utility companies, which controlled 94% of power generation in 1921. He gained passage of the Muscle Shoals Bill, to build a federal dam in the valley, but it was vetoed as socialistic by President Herbert Hoover in 1931. The idea behind the Muscle Shoals project in 1933 became a core part of President Franklin D. Roosevelt's New Deal Tennessee Valley Authority (TVA).

Even by Depression standards, in 1933 the Tennessee Valley was in dire economic straits. Thirty percent of the population was affected by malaria. The average income in the rural area was $639 per year, with some families surviving on as little as $100 per year. Much of the land had been exhausted by poor farming practices, and the soil was eroded and depleted. Crop yields had fallen, reducing farm incomes. The best timber had been cut, and 10% of forests were lost to fires each year.

President Franklin Roosevelt signed the Tennessee Valley Authority Act on May 18, 1933, creating the TVA. TVA was designed to modernize the region, using experts and electricity to combat human and economic problems. TVA developed fertilizers, and taught farmers ways to improve crop yields. In addition, it helped replant forests, control forest fires, and improve habitat for fish and wildlife. The most dramatic change in Valley life came from TVA-generated electricity from the dams it constructed on area rivers. With electricity, farms could be provided with lights and modern home appliances, making the lives of residents easier and farms more productive. The available electricity attracted new industries to the region, providing desperately needed jobs.

The development of the dams provided numerous construction jobs. At the same time, however, they required the displacement of more than 15,000 families. This created anti-TVA sentiment in some rural communities. In related projects, three towns had to be relocated, as were cemeteries. The TVA relocated and reinterred remains at new locations, together with replacing tombstones. Many local landowners were suspicious of government agencies, but TVA successfully introduced new agricultural methods into traditional farming communities by blending in and finding local champions. Tennessee farmers would often reject advice from TVA officials, so the officials had to find leaders in the communities and convince them that crop rotation and the judicious application of fertilizers could restore soil fertility. Once they had convinced the leaders, the rest followed. WIKIPEDIA

The TVA has survived as a "public corporation" to this day; it remains the largest public provider of electricity in the United States. Its success has yet to be duplicated.



CARTOGRAM OF 2020 ELECTION, CITIES IN BLUE, "COUNTRYSIDE" IN RED

1.2 the density divide

The world is riven by division. In the United States, as in many other countries, political cultures have polarized around a deep partisan divide. This divide marks differences of gender, race and class and it polarizes attitudes regarding every significant problem that we face. While this divide varies from place to place and changes over time, a single constant has remained the same for the last few decades. The divide is directly related to a split between a rural and an urban electorate.

This spatial distribution is largely due to economic changes following World War Two. As the rural economy shifted from the family farm to industrial agriculture, regional economies collapsed. At the turn of the twentieth century, more than half of the U.S. labor force was agrarian, at the turn of the twenty-first century, it was less than two percent. As the wealth of the land shifted from individual families to large corporate entities, what was left behind were broken and impoverished regions that lacked a viable economic base. As Norman Rockwell and Main Street USA were by-passed and flown-over, agribusiness built massive feedlots, reorganized entire counties into single-crop monocultures, and made regional centers all but obsolete.

This decline of the agricultural region and the provincial town has increasingly driven the politics of the nation. The low-densities of our electoral system enabled Republicans to win with majority support in areas that produce just 1/3 of GDP and contain less than 1/2 the population.

Summary: "The Density Divide: Urbanization, Polarization, and Populist Backlash," Will Wilkinson, Niskanen Center, June 2019 (https://www.niskanencenter.org/the-density-divide-urbanization-polarization-and-populist-backlash/)

- Urbanization sorts populations on attributes—ethnicity, personality, and education that make individuals more or less responsive to the incentives to move toward cities.
- Self-selected migration has segregated the national population and concentrated economic production into megacities, driving a polarizing wedge between dense diverse populations and sparse white populations—the "density divide."

cartogram

Conventional mapping techniques show data from a geographical perspective. For election outcomes this means that they show vote shares plotted onto the distribution of land area. This usually leads to sparsely populated rural areas being over-represented. In contrast, dense urban areas with an often significantly different demographic are obstructed from these maps, therefore providing misleading representations of an election outcome.

A different way of showing elections is the use of so-called cartograms where areas are transformed by certain (often social) indicators. The most commonly used cartograms usually show a ***proportional representation of population distributions.***

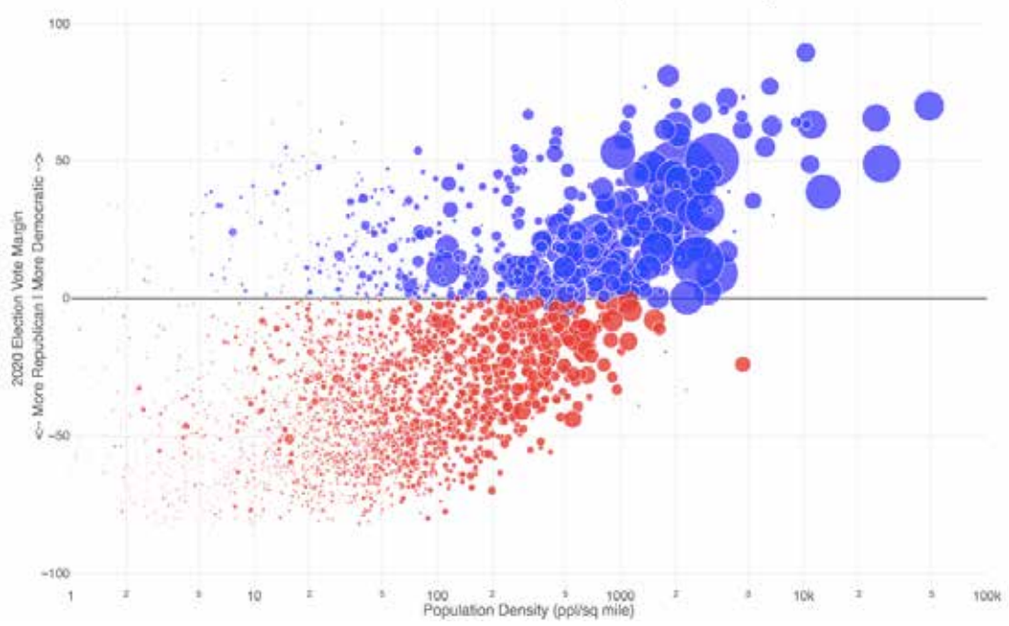
The comparison of the electoral outcome in a normal map and an equal-population projection shows, how Biden's vote dominates the spatial distribution of the votes in the most densely populated areas that stand out in the cartogram. Almost all large urban centres, including quite a few in the mid-west, show a majority of votes for Biden. Trump's vote share was highest in the rural areas.

A conventional map projection shows a significant dominance of the votes for the Republican Party and Donald Trump across large parts of the country. Yet changing the base-map to a population-weighted cartogram where each state is proportional to the number of people who live there, this impression becomes relativized. The dominance of the Democratic Party with their candidate Joe Biden in some of the most populous states becomes apparent, while the Republican vote in the mid-western and central parts looks much less prevailing due to the respective small populations there.

- The filtering/sorting dynamic of urbanization has produced a lower-density, mainly white population that is increasingly uniform in socially conservative personality, aversion to diversity, relative disclination to migrate and seek higher education, and Republican Party loyalty.
- Related urban-rural economic divergence has put many lower-density areas in dire straits, activating a zero-sum, ethnocentric mindset receptive to scapegoating populist rhetoric about the threat of "un-American" immigrants, minorities, and liberal elites who dwell in relatively prosperous multicultural cities.
- The low-density bias of our electoral system enabled Republicans to win with majority support in areas that produce just 1/3 of GDP and contain less than 1/2 the population.

In order to mend the schism between the urban and the rural, both environmentally and socially, the impoverishment of our provincial cities and towns needs to be addressed.

2020 ELECTION RESULTS V. DENSITY

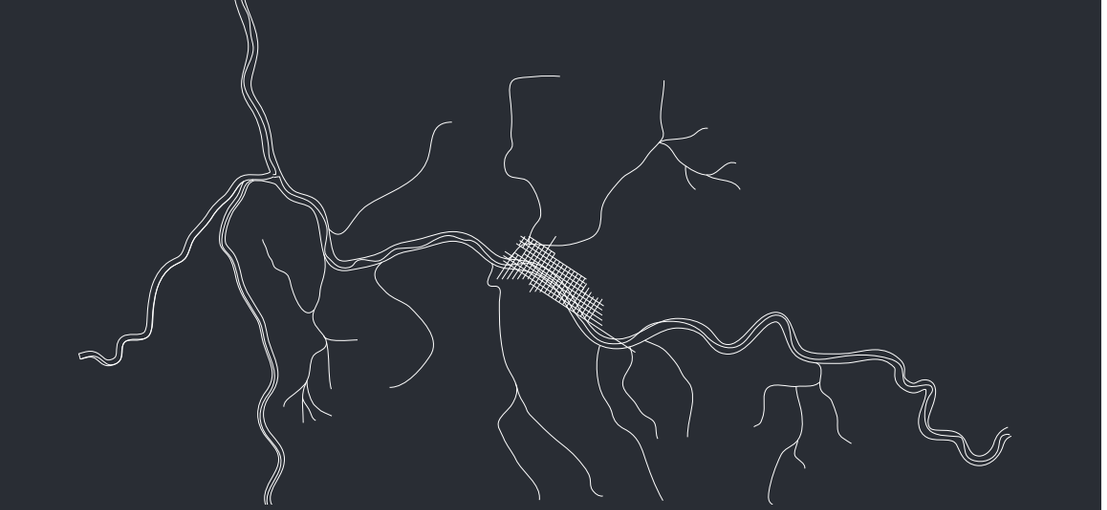


2.0 blue archipelago (2005)

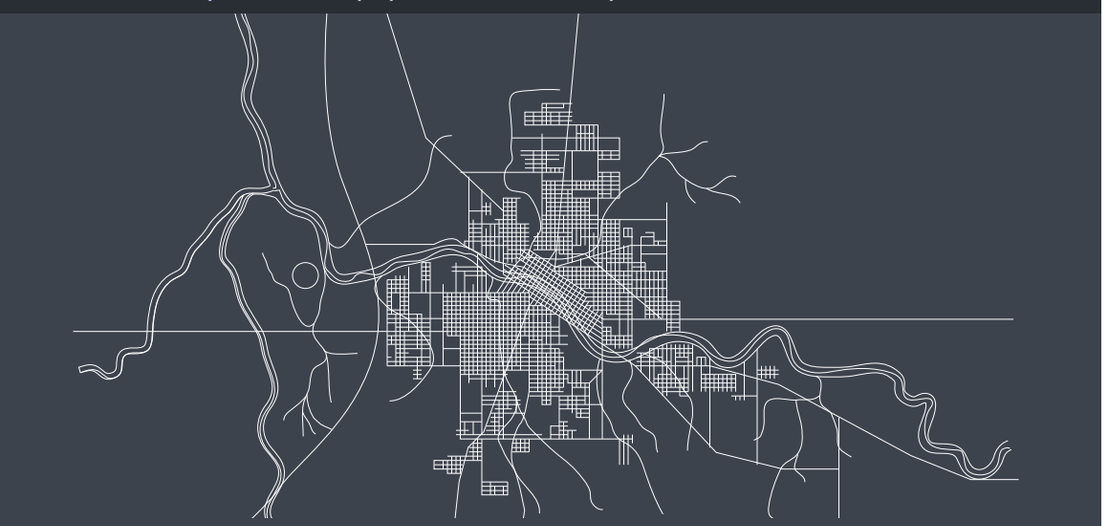
This essay ties the urban and rural divide into the regional planning movement of the early twentieth century. It was first published in Log 5, Spring/Summer 2005, p.8.

2.1. blue islands

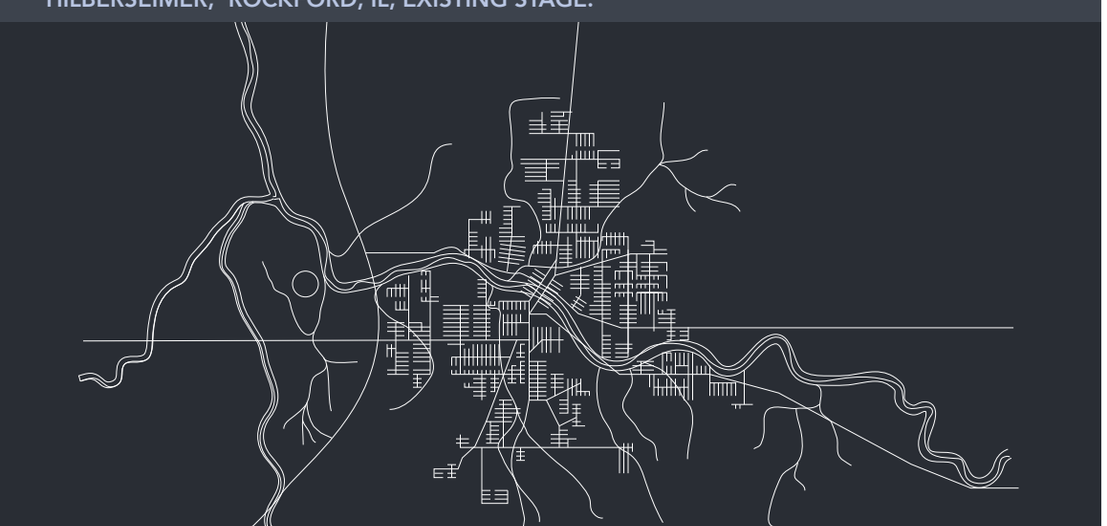
Among the many maps that have been produced by a stunned liberal electorate in the aftermath of the recent presidential elections, the so-called cartogram has always enjoyed a wide circulation. The cartogram distorts the size of an area based on its population so that the greater the population density of a region, the larger its representation. The county-by-county cartogram of the election results revealed a direct correlation between shrunken and swollen counties and votes cast for Republican and Democratic candidates. Democratic votes clustered in blue islands of higher density urban and suburban development surrounded by a sparsely populated sea of red, exurban space. The map continues to startle because it confirms the apparently deep ideological divide that has increasingly rendered so many contemporary democracies dysfunctional. From a political standpoint the maps provide irrefutable evidence that the division is not simply ideological but has taken on material form. Given the Balkanization of the built environment over the past decades, however, it should have been expect-



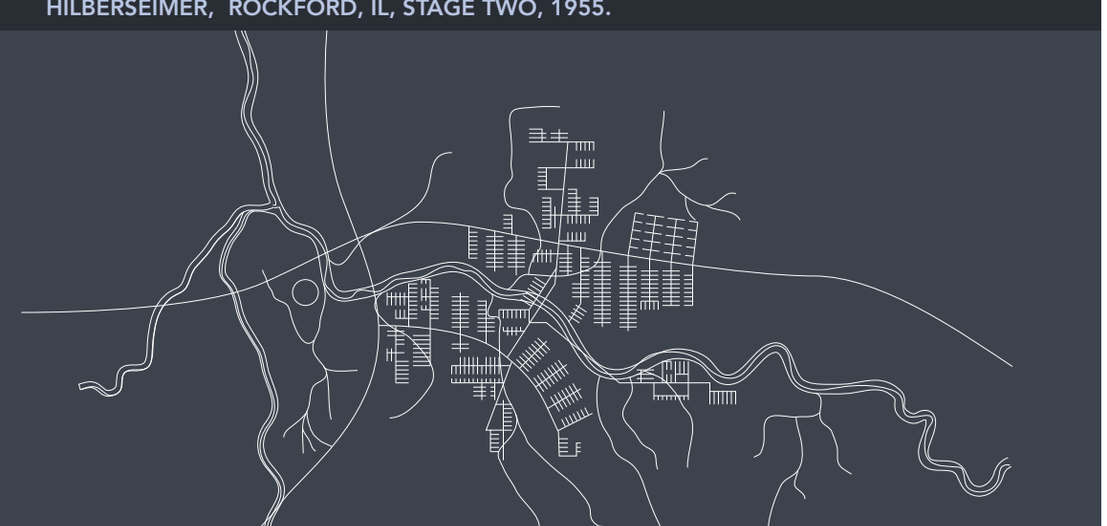
HILBERSEIMER, ROCKFORD, IL, FOUNDING STAGE, THE FORD OF THE ROCK RIVER.



HILBERSEIMER, ROCKFORD, IL, EXISTING STAGE.



HILBERSEIMER, ROCKFORD, IL, STAGE TWO, 1955.



HILBERSEIMER, ROCKFORD, IL, STAGE THREE, 1955.

regional integration...

Ludwig HIlberseimer's plan for the redevelopment of Rockford Illinois begins, naturally enough, at a historic ford of the Rock River. That integral balance with a natural feature was subsequently lost in Rockford's transition into a mechanically reproduced gridiron city and its indifference to the environmental context in which it existed. From that situation in the early fifties, Hilberseimer proposed transforming that arbitrary gridiron development into an urban "organism" that finds its equilibrium within the riverine ecosystem of the Rock River valley.

The first stage shows the existing condition of the city as a build up of gridiron infrastructure surrounding the presumably ancient ford of the Rock River. Using two intermediate stages, the city is shown to be gradually transformed, street-by-street, from a centralized mesh of continuous blocks and streets into a linear aggregation of discontinuous spine fragments that responds, like an organism, to the riparian environment in which it sits.

The initial transformation identifies what will become the primary north/south traffic artery and begins to distinguish it from the mesh of existing streets. This road will follow the river, crossing and recrossing it as some sort of man-made equivalent to the river flow that vicariously reflects its natural authority. As the grid demolition continues a second, primary east/west road is established in the south as the downtown grid is substantially cleared out around the river in this stage. The primary curvilinear armature has been connected up to the south and the four primary axes that previously connected the city to the hinterland have been removed.

As grid demolition proceeds, all urban infrastructure is pulled back from the river save the bridge at the original ford. A second north/south axis is established to organize the remaining infrastructure east of the river. Entirely new spine nuclei are initiated at this stage including the provision for three new nodes for heavy industry downwind from population areas. Looking at the final stage of the Rockford proposal, one is struck by the integrative capacity of a discontinuous polynuclear urbanism. This deep level of integration makes much of what is passed off as ecological urbanism seem amateurish.

ed. That it was unexpected is perhaps as disturbing as the existence of the blue archipelago itself.

2.2. the regional ideal

Open, gridiron cities are coterminous to the natural horizon with the potential of every street extending into the rural hinterland. Closed, *cul-de-sac* cities, on the other hand, are cut off both physically and spatially from their surrounding regions. The blue islands are startling because they provide definitive evidence that, beginning in the 1950s, we closed out the peripheries our cities with *cul-de-sac* development. This evidence flies in the face of some of the most basic assumptions about our present modes of urbanization. The physical continuity is no longer seamless. Over the past half century, new development has jumped beyond the perimeter of the existing city and has formed into discrete suburban clusters. In the interstices of these clusters, open space has emerged. When it has not been ignored, this open space has been associated with the qualities of natural environments. In one interpretation, the seamless fabric of the city has been dispersed. In another interpretation, the urban fabric has been infiltrated by open space. This last interpretation has led to the assumption that the traditional city has been opened up to the natural environment.

This opening up of the urban fabric was, of course, long anticipated. The green, spatially abundant, open city underwrote the practices of Frank Lloyd Wright, Le Corbusier, Ludwig Hiberseimer, and Ivan Leonidov, as well as those of Patrick Geddes, Lewis Mumford, Patrick Abercrombie, and N.A. Miliutin. The cities they imagined and drew dissolved into the landscape integrating the urban and natural world into a new continuity. (Enshrined in the infamous "Valley Section," Regionalism proposed a geographic continuity from the highest mountain wilderness to the center of a coastal city, with all degrees of urban and rural organization locked in inbetween to its appropriate elevation. More a dream than a proven reality, the section cut itself became an index of an irresistible continuity.) The modern city was to achieve, not just spatial integration, but an integration between urban and natural systems that would reestablish an ecological balance that had been long thrown off by the excesses of industrialization. This new and balanced relationship between the urban and the natural was promoted under the name of Regionalism.

Regionalism came into being in the mid-1920s with the activities of Lewis Mumford and Benton MacKaye and the founding of the Regional Planning Association of America. While none of these designers or theorists managed to realize a veritable Regional City–indeed, their work is often thought to have paved the way for suburbia—the regional idea has never fallen out of currency. Admired by ecological reformers and subject to recurring revivals (most recently under the label Landscape Urbanism) the open, regional city remains part of the operating logic of our present worldview. In other words, the regional ideal is background noise; it goes unquestioned until such evidence appears that brings its assumptions to our attention. To wit, the blue and red maps that have measured, among many other things, the degree to which the American city has become ideologically and materially alienated from its adjacent territory.

2.3. the logic of closed systems

The crucial component of this regional model is, of course, the open urban network of blocks and streets that forms its core. The foreclosure of this open network brought the regional model into crisis. Closed urban systems have been rewriting the logic of the open city for the past seven decades. As described in the preceding chapters, gridiron urbanism was the dominant mode of urban production throughout the United States from 1800 to 1950. Today it remains synonymous with our definition of "city." Its open form and infinite extensibility once spanned our culture, connecting the banality of urban infrastructure to the myth of the open urban frontier. As infrastructure, its influence was pervasive, even subliminal. Like all urban infrastructures, gridiron urbanism defined urban life at an existential level.

In spite of the continuing value of gridiron infrastructure, its production came to an abrupt and unceremonious end in the immediate aftermath of the Second World War. Across a relatively short space of time, the grid was overthrown as the dominant mode of urban production and since then, no significant plattings of continuous blocks and streets have been realized. What came to replace the open form of the gridiron was, of course, the closed form of spine-based cul-de-sac urbanism. Much as gridiron urbanism came to define the world that it structured, closed cul-de-sac urbanism defines today's city. Unlike gridiron urbanism, however, we are generally less aware of the cul-de-sac presence. Its intervention was subtle, its forms were often fractured, its impact was indiscernible, yet it is everywhere actively defining the opportunities we take, the routines we keep, the people we know and the connections that are made and not made. We are, nonetheless, even less aware of its existential effects. Primary among these would be the discontinuities of urban form. Cul-de-sacs are closed systems. They create an archipelago of densely populated islands (that typically recreate the natural within its boundaries) closed off from the greater region in which they exist.

2.4. the networked interior

Our awareness of closed systems has often been focused on their effects from within: their effects on both the foreclosure of the inner city and on the balkanization of the urban periphery. The effects of closure from without are arguably more consequential. Severing the city from its regional context deeply affects our relation, not only to provincial populations, but to the whole of the natural world. In an open city, each street ends at the horizon. In a closed city, each street ends in some form of a terminal. Closed city destinations are met, not by the open road, but by the labyrinthine logic of the parking garage, the subdivision, the commercial mall, or the airport. In other words, in a closed city, destinations are defined by an interior condition, an interior condition that did not exist in the world created by continuous gridiron expansion. The continuity of the gridiron gave rise to an open urban frontier that, by definition, extended infinitely. Before 1950, the urban gridiron of every American city flowed seamlessly into the continental grid, creating a continuum for which there was no interior and exterior. This continuum created a univalent, universal space. Closed cul-de-sac urbanism, on the other hand, creates a bivalent space fashioned out of the division between an exclusive, highly controlled interior and a displaced exterior. Closed systems have reconstituted the open city as an interior and, in so doing, have relegated the greater urban region as external and removed. The result is the blue island morphology so apparent in the cartogram.: small scale cul-de-sacs accumulate like grapes into ever larger clusters that, in turn, generate the cartogram's striking red and blue divide.

How does the transition to the interior/exterior bivalent space exclude the greater region? An image makes the point. The photograph of a standard, interstate exit sign covered in reflective lettering indicates access to a road whose founding logic has long been lost. The road now originates from nowhere and goes nowhere. Phoenix's 339th Avenue occupies the astral expanses of the Sonoran desert with no trace of the city in sight. The sign bears testament to a time when the entire urban project aspired to an open horizon. At that time, city and hinterland were both part of a single continuum. No longer. Today, 339th Avenue exists well past the last residential subdivision; it has been cut off from the univalent space that gave rise to it. Outside the boundaries of closed urban development, the avenue stands adrift in the recently disorganized exterior. The interstate sign confirms that, once, hundreds of numbered streets would have met the desert's edge. Today these streets have been replaced by a single highly regulated right of way, optimized for transnational traffic. The greater Phoenix region now exists only as an apron to this right of way. It remains, however, the home of the hinterland populations, the thousand-many red counties indicated on the cartogram, and now exterior to the urban nexus. In contrast to its former existence as a gridiron frontier, the hinterland has been reduced to a sea of

arbitrary GPS coordinates—no longer a hinterland, merely a land. This absence of spatial organization stands in distinct contrast to the closed-world geometry that is highly defined. The blue islands are highly organized against the red sea recently cut off from their civic anchors. Given such a contrast, one might well ask how an ideological divide could not exist?

2.5. open contradiction

What is so striking about this binary, interior/exterior condition is less the fact of its existence, than the fact that its existence is lost on just about everyone. This lack of awareness is all the more astonishing in a social, political, and economic world in which openness seems to matter so much. Risking a few generalizations, everything about American society is believed to be open: the government, the economy, education, and politics. The cherished right of "equal access" to education, capital, information, and markets is predicated on nothing if not an open infrastructure immune to limits of any kind. The myth of the open society is crucial to the social psyche that pervades the nation's economic, political and cultural discourses, including its urban discourses where the existence of open infrastructure is still imagined to correspond to the myths of an open society.

When an ideology exists in a vacuum, when it is everywhere contradicted by reality, adherence to it becomes increasingly blind. When an ideology sponsors openness but returns nothing but interiors, when it sponsors horizons and returns nothing but terminal conditions, when it sponsors self-determination and returns nothing but corporate behavior–ideology splits off from the life-world. Under such conditions, words and deeds, or ideas and things, break apart. Things take on a life of their own. Because it is so much easier to understand than a complex urban environment, ideology ultimately dominates the scene and the contradictory realities (of the closed city) are willfully ignored. Under such circumstances, the environment becomes completely opaque.

Living in a moment when urban systems are closed off from natural systems, and natural systems are in a state of radical decline if not collapse, the consequences of being ideologically driven and environmentally blind could not be more catastrophic. A network of densely populated islands, each sealed off from its surrounding territory, creates a closed-world scenario of the most regressive kind. On the outside, entropy accelerates at an exponential rate. The closure of urban form has led to an absence of regional orientation and to the disorganization of space, profoundly alienating in its effect,p. Those who inhabit this space are as alienated as the land itself. Clinging to their bibles, guns and radar dishes for survival, they become susceptible to the most intense form of ideological manipulation that media-savvy profiteers and politicians can buy.

2.6. material constraints

Despite the fact that the cartogram is mathematically generated with statistical precision, it looks like a cut of strangely marbled meat: a continental pork chop charred to a crisp by the effects of global warming. The reddish fat is shrunken to gristle, the meat has turned a rancid blue. The modernist dreams projected by Wright, Mumford, Leonidov, and Milutin belong to the past. Their idea of an open Regional City that would restore balance between natural and the urban world is so out of sync with present-day realities that their example is bracing yet all but useless In dismissing their utopian predispositions, however, we must admit that they were correct in saying that there can be no divide between the city and its hinterland. There can be no urban interior and natural exterior for the simple reason that there is no exterior to our ecology. There is only one environment and everything, every creation and every destruction, must be entered on the balance sheet. An urban system closed off from, and all but blind to the natural systems that support it creates an exterior capable of being abused with impunity. Corrupt accounting practices that keep so many items off the books reminds us that the opposite of regionalism is a fool's paradise.

MCCARNEY TRANS-PECOS CREZ ZONE

Airquake: the explication of air, climate, and atmospheric situations calls into question the basic presumption of beings concerning their primary media of existence, and convicts it of naïveté. If, in their history to date, humans could step out at will under any given stretch of sky, in or out of doors, and take for granted the unquestioned idea of the possibility of breathing in the surrounding atmosphere, then, as we see in retrospect, they enjoy a privilege of naïveté which was withdrawn with the caesura of the 20th century. Anyone who lives after this caesura and moves within a culture zone in step with modernity is already bound, whether in rudimentary or elaborated forms, to a formal concern for climate and atmosphere design. To show one's willingness to participate in modernity one is compelled to let oneself be seized by its power of explication over what once discretely underlay everything, that which encompassed and enveloped to form an environment.

3. wind energy in texas

While Texas is known for being the leading state in domestic oil production, it is less known as the nation's leader in wind energy, by far. There are over 40 different wind farm projects in Texas, with a total combined rated capacity of 17,911 MW. In 2015, wind accounted for 10% of 0the total electricity generated in Texas. Today that percentage has doubled to 20%.

Below are the top 5 states ranked by wind power generation (2020):

- Texas (17,813 MW)
- Iowa (6,212 MW)
- California (6,108 MW)
- Oklahoma (5,184 MW)
- Illinois (3,842 MW)

In many regions of the state, the wind is one of the most widely available natural resources for power generation. This is especially true in the Texas Panhandle region, the Gulf Coast area south of Galveston, and the mountain ridges of the Trans-Pecos area of the Chihuahuan Desert, at the western edge of the state.

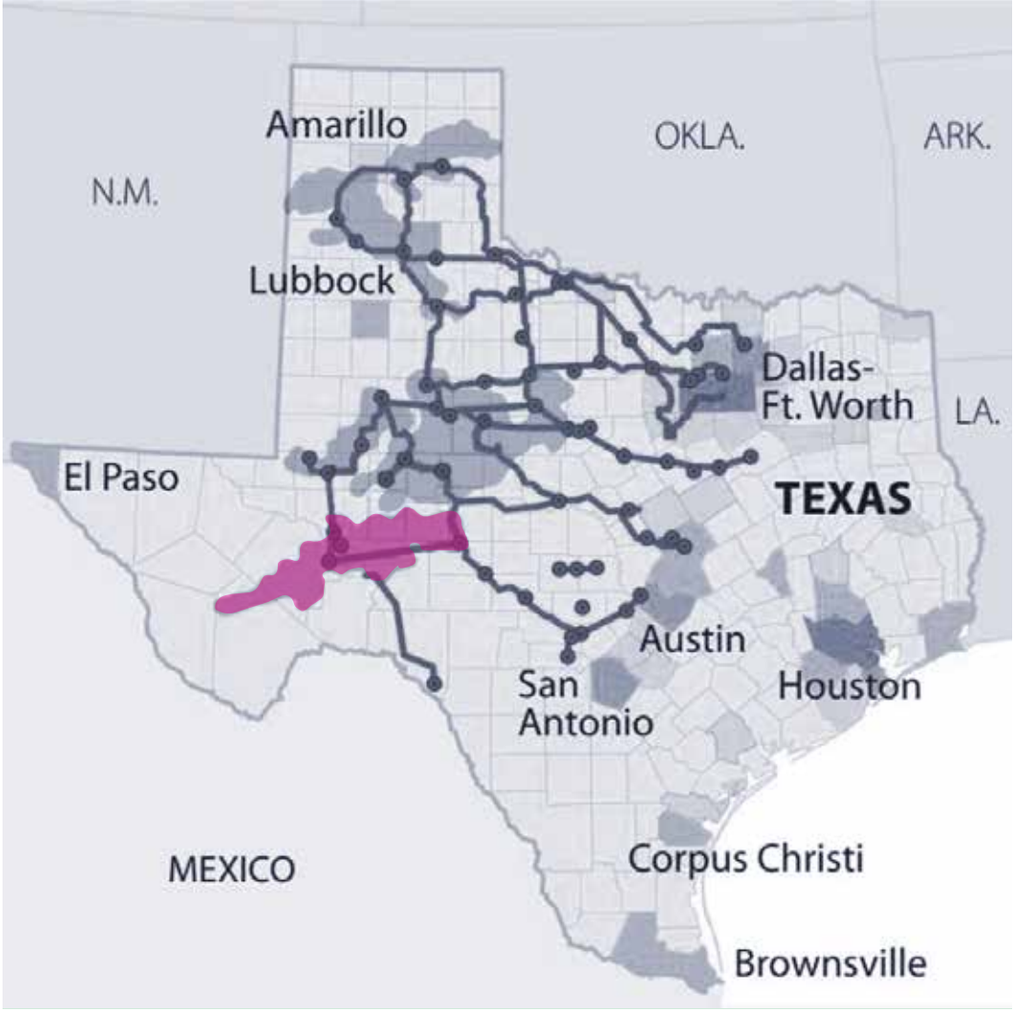
Not only does the wind provide clean energy, but it's also been a boon for the state's economy. Wind power is typically a for-profit enterprise between landowners and wind farm operators. Texas farmers can lease their land to wind developers for either a set rental per turbine or for a small percentage of gross annual revenue from the project. This offers farmers a new revenue stream without impacting traditional farming and grazing practices. The wind power industry has also created thousands of jobs. The largest wind farm in Texas is the Roscoe Wind Farm, 200 miles west of Fort Worth, which boasts 634 wind turbines and has a wind energy capacity of 781.5 Megawatts.

The growth of wind energy is largely due to transmission infrastructure that is identified as the CREZ (Competitive Renewable Energy Zones). The Texas State Legislature introduced the concept of CREZ in 2005 as a means of connecting areas with abundant wind resources to urban areas in the eastern half of the state. "The state's Public Utility Commission, or PUC, approved the CREZ concept in 2008 in response to a directive from the Legislature in 2005. The plan called for erecting a network of transmission lines — spanning more than 2,300 miles — to connect the wind power generated atop remote western mesas to

the state's large energy markets. At the time, the plan was the biggest investment in renewable energy in U.S. history. The network has earned praise for its efficient planning from renewable energy advocates around the country. Completed in 2013, the CREZ Transmission Project transmits more than 18.5 MW of electricity across Texas. Today the overall CREZ project consists of 3,500 miles of transmission lines capable of carrying 18,500 MW of electricity. While wind-generated electricity is the primary source of power, the transmission lines are capable of carrying electricity from any source.

This state-funded infrastructure has allowed for the rapid development and growth of the state's wind resources to the point that, in 2020, wind exceeded coal as an energy source for the state. While the transmission lines have made this clean energy source possible at scale, it has also resulted in the wealth generated from those resources to be transferred out of the areas in which it originated. As a consequence, the wind resources of West Texas have contributed little to the regional economies in which those resources exist. Building on the investment of new transmission infrastructure, the creation of regional wind energy coops would be a way to address this problem. If regional economies continue to be treated as extraction economies, the hinterlands will continue to decline and inequities will continue to exist, pulling the world apart.

FIVE CREZ ZONES AND TRANSMISSION LINES TO HIGH DENSITY COUNTIES



MAP OF TEXAS WIND ZONES AND INFRASTRUCTURE. Five areas of wind energy were identified as Competitive Renewable Energy Zones (CREZ). These are specific areas located in west Texas and the Texas panhandle that sustain winds capable of producing electricity. The southernmost area (pink) is called the McCamey Zone. (The western extension includes Pecos (pop. 15,815) and Brewster (pop. 9,231) Counties.) The transmission lines that moves electricity to the eastern urban counties were completed in 2013. Today the overall CREZ project consists of 3,500 miles of transmission lines capable of carrying 18,500 MW of electricity.

4.0 studio requirements

4.1. studio attendance

Studio attendance Monday, Wednesday and Friday 1-5 is mandatory either in person or online. Absences must be approved by the instructor. As a rule, Studios will dedicate Mondays to team reviews and Wednesdays to studio reviews and outside lectures, and Fridays to reading discussions. This organization makes for the majority of studio time taking place in a group setting. Any juried reviews will be on days preceding our days off (see schedule). Any Wednesday without a review will have a one-hour seminar on topics related to the research. Team meetings will otherwise structure the weekly schedule. Smaller team presentations will have the option to occur on Mondays or Wednesdays or both, with only one presentation out of the two days required. Any final research or design presentations to the studio are mandatory. This schedule allows for a minimum of two presentations weekly in order to keep the pace of work steady throughout the semester.

4.2. teams and groups

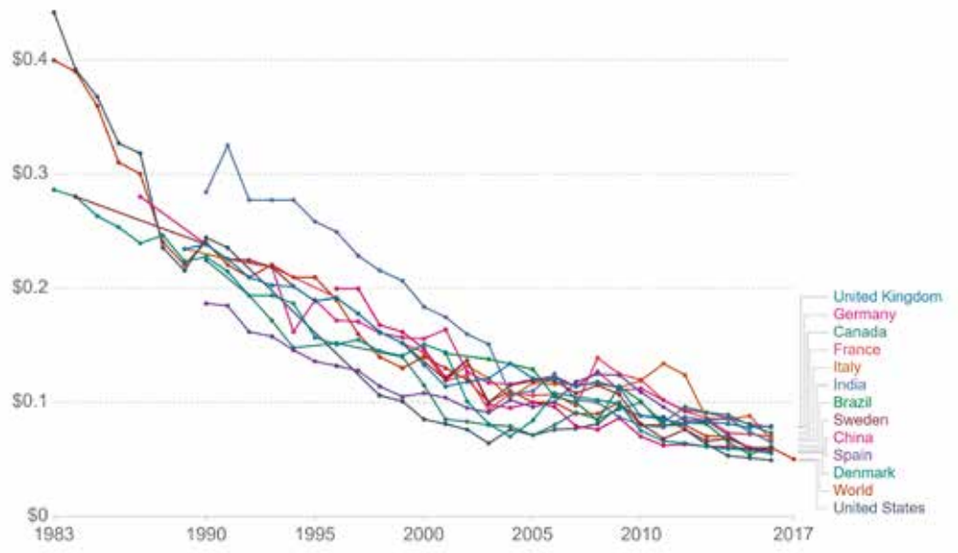
There are seven distinct studio projects as outlined above. In an attempt to create a studio product that exceeds the sum of its individual members, some of the work will be done in pairs and the remaining will be done in somewhat larger groups. Of all the groups formed in the studio, the most significant is that of the entire studio and the singular study that it produces.

4.3. formatting

As an ambition, “aggregation” is not limited to streets and buildings but also extends into their design and presentation. It would be absurd to propose an urbanism whose sum exceeds its individual parts and then design and demonstrate this urbanism as unrelated parts. In the same way that spines and bands govern a productive urban aggregation, proportion, color sets, projection angles, and layout templates allow the studio to achieve the synergies that we aspire to urbanistically. Having said that, however, it is crucial produce the best individual parts possible. Like an urban grid, we mean to standardize only so much as to provide a functional aggregation. Further than that, an undue restraint is imposed.

Governing the studio’s output, first and foremost is an adobe indesign template

ONSHORE WIND COST/KWH, 1983-2017



(.indd) that focuses on frame size and proportion allowing for a rapid repurposing of material from slide, to board, to book, to portfolio. The template contains color groups, proportional frames (1:1, 1:2, 1:3), object and text styles and a font family. This syllabus document serves to demonstrate the template. The template will accommodate, not only our own design work, but the research and analysis done in the first two assignments. A lot of the research that we find online or in the GIS lab will have to be redrawn in order to incorporate it into our project. The redrawn work brings these outside influences into our consistent graphic "world." That this world is coherent and consistent is as important to the presentation of urban design as it is to graphic novels or film (which are useful models.

The templates folder is on the GOOGLE DRIVE studio folder (ARCH 401.19 STUDIO). The templates include an indesign page template, layout template, and color swatches. All members of each group should open up the templates and check them out. We will have reviews using the slide templates and will repurpose and print out boards for Friday presentation as needed. I will review the template in studio, but the things that you need to be familiar with are:

GRAPHIC AND TEXT FRAMES should be controlled dimensionally and proportionally (1:1, 1:2, 1:3) in control strip. Inset text frames (.25") should be used for text. The graphic frames should be placed within frames for photos and drawings. Use fitting options on control strip to fit and center images and diagrams.
DOCUMENT GRID: Always align your rhino imports to the internal Illustrator grid and keep the snap enabled.
COLOR GROUPS: Grey blue color group is primary, the green color group is secondary. See folder "color groups" in the Templates Folder.
OBJECT STYLES: There are two object styles, inset text frame and inset caption bars are included but don't need to be used.
TEXT STYLES: Use the Avenir font family. It is included in the style sheets in indesign.
MASTER PAGES: Use background tones on lower later, page numbers on the top.
INDESIGN LAYER CONTROLS: Use layer controls inside indesign (Object/Object Layers) for placed .ai files. This can decrease the number of art boards required in .ai.
ART BOARDS: Make all illustrator artboards 1:1 or 1:2 or 2:1, etc. for easy fitting and centering in indesign. Always place them in indesign with the "Crop" option selected in the "Crop" option in the Place Options box.
UNITS: Set the units to inches in Document Setup.
EMBEDDED IMAGES: Try not to put rendered images into Illustrator. You can usually translate them to vectors to export. If you have to insert them, embed them.

Beyond these simple formatting structures, the studio will employ axonometric and "oblique" projections. These projections have the ability to bridge the gap between the abstract/organizational and the rendered/representational that is crucial to large scale work. There is a Rhino tutorial on oblique projections in the template file.

Apart from the Templates folder, there are five other folders at the top level of the studio folder. These are self explanatory. All studio interim and final presentations should be in pdf format and filed by 12:30PM on the day of presentations, File names should always start with a date followed by the assignment number and a brief and descriptive title: 150824_assignment 1phasing diagram.ai.

4.5. logistics

STUDIO CULTURE. Present Future does funded research and the Studio serves as the focus for its ongoing projects. Students are expected to use the studio

TRANS-PECOS MESA

The Trans-Pecos region is the only part of Texas where mountain and desert habitats are found. This unique combination contributes to the tremendous vegetation diversity in the region, which includes at least 268 grass species and 447 species of woody plants. The vegetation diversity is also influenced by the Edwards Plateau eco-region in portions of Terrell, Pecos, and Brewster counties. (the border of the Edwards Plateau and the Chihuahuan Desert) In addition, there are vegetational influences in the northeast Trans Pecos by the plains ecosystem and in the southeast Trans Pecos by the Tamaulipan Province (south Texas plains).

space as a laboratory for production, reflection and conversation during the semester. Take advantage of the resources of your colleagues, the energy of the studio, and the space provided by the school by working in studio. Respect your colleagues and keep the space as clean and orderly as it needs to be to facilitate a working atmosphere. A designated area for studio meetings and pin ups consisting of a large table and space and a wall should be kept clear and operative at all times. This means that your computer needs to be in the studio, at least when you are there. We recommend insuring it and having a lock. Students, as well as instructors, are expected to treat each other with mutual respect as outlined in the RSA Studio Culture policy, available from the School office and/or ASR representatives.

GRADING. Grading will be based on the quality of the presentation materials produced for each of the four exercises as well as presentations themselves. All members of the group must strive to contribute with equal effort and share the responsibilities for getting work done well and put in place on time. Each of the four projects will be evaluated separately with the majority of the grade depending on the success of them all.

DEADLINES. Deadlines will be defined for work expected each week and for the assignments. Pencils down deadlines may be instituted for the final review and interim deadlines and the honor code will apply equally to all such deadlines. Required deliverables will be made clear at the beginning of each project. Also remember to build in time for printing.

LATE WORK. All assignments are due in class at the specified time and date. Project deadlines can be extended only in cases of illness or incapacity, or special circumstances. Unexcused late work will be penalized by one letter grade per day it is late. Requests for such extensions should be made in writing, always before the project deadline, by emailing me at ahp@rice.edu.

HONOR CODE. All work in the studio is governed by the Rice University Honor Code. You are welcome to collaborate with each other, to share ideas with each other and even help each other out finish a drawing or model in a pinch. However, unless the assignment is clearly a group project, your work should represent your ideas and be substantially the product of your labor. In written materials and analysis all scanned, copied images or paraphrases or quoted text needs to be clearly referenced using a standard citation style. All text and footnoting should be in accordance with the Chicago Manual of Style. For further information on the Chicago Manual of Style, visit: http://www.chicagomanualofstyle.org/home.html

ADA Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with their instructor during the first two weeks of class. All such discussions will remain as confidential as possible. Students with disabilities will need to also contact Disability Support Services: https://drc.rice.edu/.

4.6 studio schedule

As described above, there are four discrete projects that span the semester. The schedule spells out approximate dates and durations for each project. The research projects will be divided into two overlapped phases. The first project, tactical research, is a five week exercise that will produce formatted information related to all aspects of the Brays watershed. The second project, strategic research, is a four week exercise that will explore the best practices for urban retreat and floodplain restoration. The third project, strategic design, is a five week exercise concerning the schematic, organizational design of a typical bayou neighborhood. The fourth project, tactical design, is a three week exercise that translates the schematic organizational design to a specific site...

BLIND DESIGN PROCESS

variation & selection, 4 weeks
1. SEARCH SPACE
2. SELECTION CRITERIA
3. SELECTION ELEMENTS

units of aggregation, 2 weeks
4. ELEMENT PAIRS
5. ELEMENT BLOCKS

phasing, 3 weeks
6. LANDSCAPE SEQUENCE
7. BUILDING SEQUENCE

RESEARCH TOPICS

new deal research
1. GREEN NEW DEAL
2. TENNESSEE VALLEY AUTHORITY

texas research
3. TRANS-PECOS COUNTIES
4. TEXAS CLEAN ENERGY

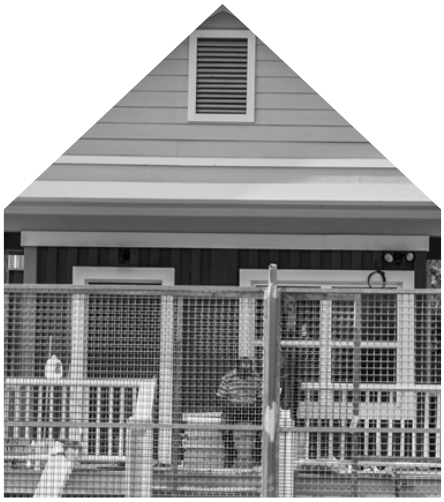
wind technology research
5. ENERGY CO-OPS
6. TURBINE TECHNOLOGY

READING

1. LE GUIN, DISPOSSESSED, WHOLE BOOK
2. WALLACE WELLS, UNIHABITABLE EARTH, CHAPTER ONE
3. LATOUR, CAUTIOUS PROMETHEUS
4. ROBINSON, MINISTRY OF THE FUTURE, CHAPTER ONE
5. SLOTERDIJK, AIRQUAKE: TERROR FROM THE AIR.

AFFORDABLE HOUSING LAB

Rice School of Architecture
Arch 602 - Spring 2021
Jesús Vassallo








Affordable Housing Laboratory

Rice Architecture / Spring 2020 / Options Studio
Jesús Vassallo (jv8@rice.edu)

With a focus on collective housing and a research approach, the studio exposes the students at the end of the graduate degree to the different scales of work involved in producing a housing project in the context of the city. The students learn the basics of residential architecture design as they engage Houston and its current dynamics of redevelopment in a critical manner: actual sites, partners, and development scenarios are introduced, allowing for a conversation that involves multiple perspectives. This is a unique opportunity for the students to tackle this kind of real-life condition from the independence of an academic setting, before entering the profession.

More specifically, this semester the studio will operate as a research unit to explore combining alternative land ownership models with innovative design approaches to multifamily development. We will work directly with the Houston Land Bank and the Houston Community Land Trust (CLT) to speculate on the potential of adding cooperative and public interest models of multifamily development to their existing development programs, which are currently focused on the single-family arena.

The outcomes of the studio will be threefold. First, we will take on a review of existing policy and will develop recommendations to make the proposed advanced housing models possible in the context of Houston. The policy piece will be supported by a second piece of research focused on the economic implications of this type of development, which will culminate with the design of a financial model. Finally, the studio will produce a range of multifamily design to illustrate the potential of the ideas developed in the studio.

At the end of the semester, the outcomes of the studio will be formatted and presented to the Housing and Community Development Departmet of the City of Houston, as well as to non profit community developers and other possible partners, with the ambition to influence the development of policy and advance the results of the studio towards implementation.

STUDIO MANIFESTO IN FOUR SCALES

Scale 1 - An Argument for Infill Development

After three consecutive 500-year floods and billions of dollars lost in buildings and infrastructure to Hurricane Harvey, it has become apparent that the City of Houston needs to reconsider how it approaches the occupation of its territory. Capitalizing on an already ongoing process of densification of the city center, and assuming the recent disaster as a galvanizing event, this studio works with the hypothesis that Hurricane Harvey will be to Houston what the great fires of 1666 and 1871 were to London and Chicago: an opportunity to radically reconsider their footprint and trace. In the next decades, the gradual relinquishment of the floodplain back to nature will be accompanied by an increase of density in higher areas, resulting in a city plan realigned with the geology and hydrology of the bayou system.

It is however apparent already that this massive amount of change will have to be incremental. In the current political climate and culture, we cannot take for granted an effort as concerted or as forward-looking as the Burnham plan was for the City of Chicago. As a product of this context, the studio will focus on the scale of the building type instead of the city plan, in order to propose a catalog of solutions to be deployed within the existing city fabric so as to increase urban density. This is the way development happens in Houston anyways, with unassuming solutions deployed at a radical rate of repetition. Students will design housing solutions dimensioned to the current block size, and therefore suitable to be implemented through piecemeal development, in order to propose an increase of density between four and six times the existing condition.

Scale 2 – An Argument for a Missing Housing Type, or Several

It is difficult to overemphasize the repetitive and formulaic quality of Houston's urban development. On one end of the spectrum, we have small developers with different degrees of professionalization, who work by identifying areas in transition and quickly turning over one or two single-family lots into small townhome developments. The speculative nature of these practices, aided by the real estate boom of the past decade and the relative lack of planning in Houston, compound to produce swathes of the city covered by a housing typology that is very inefficient in its use of land (it almost quadruples the amount of construction while barely doubling the density of inhabitants), and that also neglects to create meaningful public space inside and outside of its property lines.

At the other end of the spectrum, we have large national and international development firms who deploy consistently tried-and-true solutions at the scale of the block or the megablock. Whether it is the tower in the park or the more modest Texas Donut, these typologies have congealed into investment vehicles, which in turn prevents them from evolving and keeping pace with the reality of the city. The scales of capital needed to realize projects this size, together with a real estate industry where the tools of commercial development have infiltrated and dominated residential development, result in levels of consensus that make change and innovation almost impossible to bring about.

As a result of this polarized landscape it is fair to say that there is a gap, a space for opportunity in the physical and financial scales between the two modes of development described above. This studio will explore this gap and aim for the production of new housing types that could contribute to improve the lack of diversity in the city's building stock.

Scale 3 - An Argument for a Less Scripted Architecture: Without Labels

There is much talk today about new ways of living, unconventional families, and the revolution that remote work is bringing about in the space of the domestic. However, experiments in catering to these new realities sometimes fail to understand the fundamental ways in which architecture relates to the programs that it contains. This is especially true in those cases that react by producing designs or types that are especially tailored to what is perceived as a new user (age-in-place, micro-housing, co-living, etc.). This studio proposes on the other hand that the response to new paradigms of living should be less instead of more programmatic specificity. If the room labels in a conventional housing plan no longer match the way we live, the answer is not to make up new and more bespoke labels, but rather to work without labels altogether. After all, the most versatile, adaptable, and resilient buildings in the history of architecture are the simplest and most generic in their configuration.

With this ethos in mind, the studio sets out to calibrate the quantitative in order to produce the qualitative, by exploring a greater variety of sizes of living spaces, a wider range in the number of spaces within what is conventionally considered a housing unit, as well as more diversity overall in the degrees of connectivity among such units and with the city at large. This approach does not deny social engineering as an aspect of the design of housing, but rather seeks to approach such inevitability with a more open-ended strategy, one that understands housing as a framework for the emergence of new subjectivities, as opposed to a product for their consumption. It is also the hope that such an approach can contribute, as it trickles up to the larger scales of each project, to undo some of the strict dichotomies (between private and public, between nature and architecture) found in the city in its current form, introducing the possibility of a series of gradients to enrich the urban fabric.

Scale 4 - An Argument for Construction Materials as a Locus of Design

Focusing on the housing type as a design problem poses an opportunity to advance our understanding of the role of materiality in architecture, and vice versa. To take a construction material and place it at the center of the architecture project only makes true sense if a substantial degree of repetition and the economies of scale that come with it are the focus. Housing, in its archetypal character and consistent repetition of cellular structures, offers the additional benefit that standard dimensions derived from culture (function and use) can be linked to a second set of dimensions derived from material properties (structural performance), accelerating the emergence by design of a new type. Taken to an extreme, the thesis of this studio is that planning plus detailing, as well as the acceptance of their constraints, are all it takes to produce good architecture. With all of the above in mind, the studio will focus on just a few selected scales within the wide spectrum that goes from the housing estate to the construction detail in order to maximize the degree of functional and formal discovery.

Reginald DesRoches
Incoming University President
Howard R. Hughes Provost
Professor of Civil & Environmental Engineering
Professor of Mechanical Engineering

Reginald DesRoches was appointed provost of Rice University in 2020. In this role, DesRoches serves as the chief academic officer of the university and its 7,500 students, seven schools and more than 700 faculty. He previously served as the William and Stephanie Sick Dean of Engineering at the George R. Brown School of Engineering at Rice. In this position, DesRoches provided leadership to a top-ranked engineering school with nine departments, 137 faculty and 2,500 students.

During his tenure as provost, DesRoches has led the university's academic, research, scholarly and creative activities through the challenges posed by the COVID-19 pandemic, including the sudden suspension of classroom instruction and Rice's successful conversion to remote learning. In addition, he has dramatically increased the university's research awards, launched several new centers and institutes, and forged new partnerships and programs with institutions and organizations in the Houston area, including institutions and organizations in the Texas Medical Center.

Under his leadership, several new majors and professional master's programs have been launched, including a new undergraduate business major. DesRoches has made diversity, equity and inclusion a priority and established the Office of Diversity, Equity and Inclusion, which has been instrumental in dramatically increasing the diversity of Rice's faculty and graduate student population. He also is leading the first major expansion of the undergraduate body in over a decade.

DesRoches has been at Rice since 2017, when he accepted the post as the William and Stephanie Sick Dean of Engineering at the George R. Brown School of Engineering. As the leader of Rice's engineering school, he was in charge of nine departments, 137 faculty and 2,500 students. During his time as dean, the school dramatically increased in size, stature and department rankings. It also saw a significant growth in research programs. Several key interdisciplinary initiatives were launched during DesRoches' time as dean, some of which were in the areas of neuroengineering, synthetic biology and data science. He also led the establishment of the first of its kind collaborative research center in India with IIT-Kanpur.

Before his appointment at Rice, DesRoches served as chair of the School of Civil and Environmental Engineering at Georgia Tech in Atlanta. As chair, he led a major renovation of the school's main research and teaching home, and he spearheaded major fundraising effort for the school that doubled the number of endowed chairs and professors. During his tenure as chair, the school dramatically moved up in the U.S News & World Report graduate rankings, achieving a ranking of No. 2 in the nation – the highest in the history of the school.

DesRoches' primary research interests are in the design of resilient infrastructure systems under extreme loads and the application of smart materials. His research is highly interdisciplinary and spans micro- to macro-scales. He has published approximately 300 articles and delivered more than 100 presentations in over 30 different countries. He also has mentored more than 30 doctoral students, many of whom hold faculty positions at top universities around the world.

DesRoches was born in Port-au-Prince, Haiti, and grew up in Queens, New York. He earned his Bachelor of Science in Mechanical Engineering and Master of Science in Civil Engineering degrees and a doctorate in Structural Engineering at the University of California, Berkeley.

Igor Marjanović
William Ward Watkin Dean
Professor at Rice Architecture

As an architect, scholar, educator, and curator, he is committed to architecture as a critical facet of our multicultural world, fostering diversity, equity, and inclusion as the foundation of both social transformation and academic distinction.

Marjanović's research integrates the teaching of studio and theory with historical scholarship on architectural pedagogy, practice, and identity formation, examining the role of drawings, exhibitions, and publications in the emergence of international architectural culture. His collaborative approach to scholarship has led to critically acclaimed books such as Marina City: Bertrand Goldberg's Urban Vision, which was featured on PBS NewsHour. The exhibition Drawing Ambience: Alvin Boyarsky and the Architectural Association debuted at the Kemper Art Museum in St. Louis and the RISD Museum in Providence, Rhode Island, before traveling internationally to seven venues, including the Jut Art Museum in Taipei, Taiwan. His other publications build on these dialogues between art, architecture, and culture in a globalized world, including Tomás Saraceno: Cloud Specific and On the Very Edge: Modernism and Modernity in the Arts and Architecture of Interwar Serbia (1918-1941). Marjanović's most recent book, The Evolving Project: The Journal of Architectural Education and the Expansion of Scholarship, is a co-edited volume that tells the story of postwar architectural pedagogy as an intellectual platform that engaged the larger social, cultural, and political issues of its time.

In this teaching, Marjanović fuses together design and theory, with a particular passion for drawing as a powerful tool to imagine beautiful buildings and more just societies. A series of Florence Studios that he taught for twelve years, titled "Disegno: Encounters in Public Space," used the medium of drawing to engage the global refugee crisis, migration, and decolonization, earning him the American Institute of Architects Education Honor Award.

He has practiced architecture with Osnova Projekt in Belgrade, Denise Pontes Arquitetura Interiores in Fortaleza, Brazil, and OWP/P Architects (now CannonDesign) in Chicago, where he focused on its educational portfolio for Chicago Public Schools. His practice with Katerina Rüedi Ray, ReadyMade Studio, engaged questions of immigration, diversity, and globalization through community partnership with the Sofia Quintero Latino Art and Cultural Center in Toledo, Ohio, and the installation City of Arrivals at the Art Institute of Chicago, which re-imagined the city's future as one that belongs to immigrant children.

Trained as an architect at the University of Belgrade in Serbia (then Yugoslavia), Marjanović completed his undergraduate thesis at the Moscow Architectural Institute. He received a master's degree in architecture at the University of Illinois at Chicago and Ph.D. at the Bartlett School of Architecture in London.

Before joining Rice Architecture, Marjanović was at Washington University in St. Louis for fifteen years, serving as the JoAnne Stolaroff Cotsen Professor and chair of undergraduate architecture program, where he created a distinct academic vision that integrated architectural and liberal arts education. Prior to that, he taught at the University of Illinois at Chicago and Iowa State University, where he was the founding director of the Core Design Program that brought together art, architecture, design, landscape architecture, and planning.