Filling the Voids: A Framework for Addressing Patterns of Urban Vacancy

"Almost any design proposal, regardless of scale, is inescapably subject to the vagaries of circumstance, including catastrophic change, ecological/climatic change, regulatory change, technological change, change in market demand, change in land use, even changes in knowledge, where the conditions don't change but our understanding of them does… Perhaps, rather than assuming stability and explaining change, one needs to assume change and explain stability." — Roger Sherman[1]

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The following paper responds to an ACSA conference session motion that states: "There are only contingent architectural objects."[2] The authors generally agree with this motion, and they outline a recent design competition project as an example that supports their position in favor of integrated teams that design for multiplicity and contingencies.

Disciplinary boundaries have become increasingly blurred in 21st century design practice. Territories and spheres of influence for architects and landscape architects are broadening to examine and respond to wicked ecological, social, and economic problems that plague cities. Along with reshaping disciplinary jurisdictions, designers are seeking relevance and agency through collaborative teams made up of diverse constituents—often from professional fields typically not associated with design. These transdisciplinary arrangements seek to leverage individual disciplinary expertise to more fully address contingencies, situations in flux, and "the vagaries of circumstance,"[3] particularly in large-scale urban projects. As this model of collaborative practice evolves and becomes more commonplace, design professionals consider several questions regarding their disciplinary autonomy and traditional realms of expertise: Do these emerging models of collaboration require new definitions or frameworks for professional practice? Is it possible—or even necessary—to preserve autonomy and objectivity in design disciplines within these models? Will these arrangements erode, expand, or bring greater focus to professional autonomy and disciplinary expertise? And, most importantly, as problem statements grow more complex and involve overlapping infrastructural, cultural, economic, and environmental systems, how can these teams effectively anticipate and design for multiple contingencies while developing analytical processes to address shifting circumstances and evolving contextual conditions?

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CASE STUDY: "SHEDDING [B]LIGHT," AN ENTRY TO THE *FUTURE GROUND* COMPETITION

The case study project, "Shedding [B]light", supports our position in favor of an architecture of multiplicity that addresses contingencies. The project was an entry for the *2014 Future Ground* design competition sponsored by the Van Alen Institute. The project brief stated:

> "Future Ground *is a design competition inviting multidisciplinary teams to generate flexible design and policy strategies to reuse vacant land in New Orleans, transforming abandoned landscapes into resources for the current and future city.*
>
> *Designs and plans for cities can create visions that will take decades to be fully realized. While no one can predict the future, we can outline multiplefutures: rigorous scenarios for a changing population, market, and climate for the next 1 year, 10 years, and 50 years. These alternatives can help elected officials, businesses, philanthropic organizations, and residents understand what is possible, and make realistic, informed decisions about investments...*
>
> *Future Ground will develop strategies to bring small, piecemeal projects to scale at the neighborhood and citywide level; craft policy to support promising design strategies; make these strategies flexible and participatory enough to be sustained into the next generation; and share resources with a growing network of innovators who are reusing vacant land in cities around the country."*[4]

Figure 1: Community Hubs.

From the start, the competition prompt was not primarily architectural—in other words the problem was not initially defined by the constraints of program or form, instead by the complex conditions perpetuating blight and contributing to the lack of affordable housing. Therefore the design team's[5] project models were underpinned with operative interventions which identify discrete opportunities that catalyze incremental change.

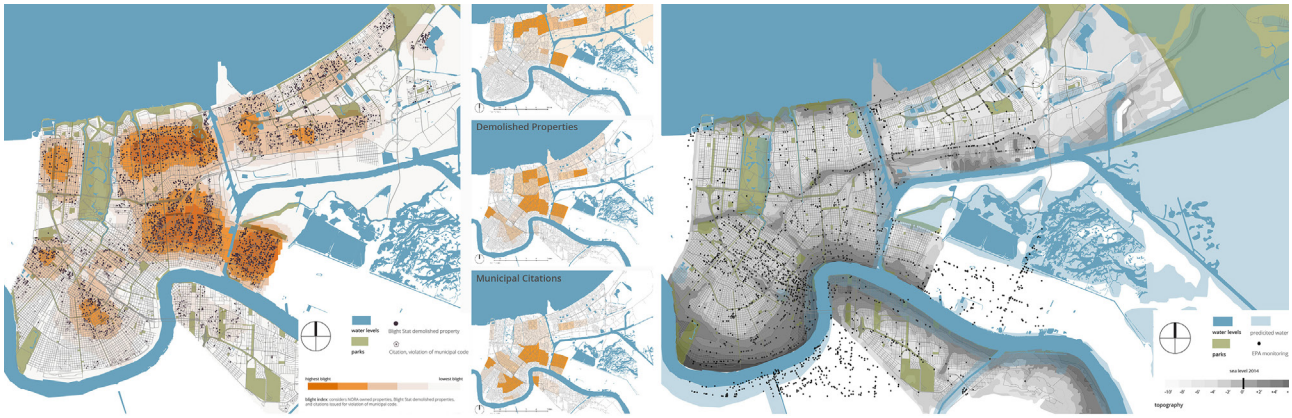
For complex problems which afflict many of our cities, adaptable architectural and urban design solutions need to take varied and distributed approaches which allow flexibility and customization specific to the local, site-based contingencies and constraints. While built environments often share many of the same challenges, each region, neighborhood, and site has different contributing dynamic forces that cause and perpetuate pervasive challenges; therefore, one solution will not fit all. Rather, distributed architectural and urban design approaches that aggregate to create larger social and infrastructural networks offer operative solutions capable of incrementally adapting to contextual feedback. This shift from traditional top-down master planning strategies to bottom-up infrastructural approaches offers long-term resiliency and seeds multiple futures.

As a case study exploring this distributed infrastructural approach to architecture, "Shedding [B]light" outlines a process of site-based research to uncover the diverse set of contributing factors, both shared and unique, which compound the complex issue of blight in New Orleans. It argues for strategic and malleable multiplicity rather than bespoke singularity. While this speculative project is generated for and from the specific conditions in New Orleans—namely urban vacant lots, blight, affordability, and impending ecological threats—the process outlined offers transferable methods applicable to a number of problems facing our urban environments. The "Shedding [B]light" proposal integrates landscape, architecture, urban planning, and ecology in an approach that deploys catalytic infrastructure to transform the city. While recognizing the instrumentality of singular structures within distributed networks, this paper emphasizes the greater agency of contingent developmental strategies across a landscape of varied conditions that materialize in overlapping timeframes. The case study embodies Stan Allen's concept of "practice engaged in time" where "the production of directed fields" allow for "program, event, and activity to play themselves out,"[6] and answers James Corner's charge to "move away from ameliorative and scenographic designs toward more productive, engendering strategies" that "shift from appearances and meanings to more prosaic concerns for how things work, what they do, how they interact, and what agency of effects they might exercise over time."[7]

DEFINING CONTINGENCIES: SITE-BASED RESEARCH AND OPERATIVE MAPPING

Ecological and demographic, broadly urban and intensely local, blight and opportunity: vacancy in New Orleans has many dimensions, and they all occur at different physical and chronological scales. Already a national bellwether in re-imagining urban infrastructure, from bicycle transportation and renewable energy production to historic preservation and education reform, New Orleans can harness the multi-dimensional potential hidden in its vacant lands to address the social, cultural and environmental needs of both its present and its many futures. "Shedding [B]light" proposes an incremental approach to address vacancy's various dimensions in New Orleans by first identifying where the challenges and opportunities for re-purposing vacant land are most efficiently aligned, and second by deploying a system of scalable community hubs in those targeted locations throughout the city.

An operative mapping process synchronizes current and future urban policy, land use patterns, and natural system dynamics. This integrative mapping strategy identifies where the challenges and opportunities of re-purposing vacant land are most efficiently aligned and can be used to suggest different typologies of responses to vacancy city-wide. Today when nearly half of the city is below sea level, and the social, economic, and ecological systems are trying to repair themselves through rebuilding the physical fabric, there is the



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opportunity to re-image the dynamic systems of context as a catalyst for new terms of architectural engagement—an engagement of multiplicity which contributes to large-scale systemic transformation.

Through iterative mapping processes which overlay political, physical, and ecological site-based attributes, our process targets neighborhoods with the greatest challenges and opportunities for re-thinking the future of vacant lots. Specifically, the figures that describe New Orleans' citywide blight epidemic include an estimated 20-30,000 vacant properties and more than 33% of the renter market paying more than 50% of their pre-tax income on rent.[8] A critical understanding of the many dimensions of vacancy and blight in New Orleans enables us to pinpoint where the crisis is most immediate in order to design interventions that meet the needs of those most threatened communities. Our mapping protocol combines multiple indicators of blight and vacancy, including demolitions, citations, and concentration of NORA-owned (New Orleans Redevelopment Authority) properties, aggregating datasets to optimally locate and dissect which demographic issues to engage.

In mapping the ecological threats that compound the demographic elements of vacancy and blight, our protocol blends datasets that describe current conditions—topography, urban heat island effect, and soil contamination (as monitored by the U.S. EPA)—with datasets that project future sea level citywide. While the indecision and paralysis that surround climate change and sea level rise projections are damaging everywhere, this is particularly true in a city where the average elevation is already below current sea level. By considering these ecological hazards across multiple time horizons, we approach the design challenge through a dynamic set of contingent factors which requires adaptive and flexible solutions to vacancy and blight that work now and are resilient into the future.

Through this process, the design team identified three representative community clusters that currently languish from vacancy and lack of redevelopment:

- post-WWII neighborhoods in north New Orleans (Fillmore, St. Anthony, Milneburg, Dillard, and Gentilly);
- historic Creole neighborhoods in central New Orleans (St. Roch, Desire, Florida, and St. Claude); and
- low-lying neighborhoods in northeast New Orleans (West Lake, Plum Orchard, and Read Boulevard).

The communities within each group share attributes of housing stock age and construction type, urban fabric patterns of lot size and proportion, topography and relationship to rising water, and sociocultural demographics. Working across the three distinct neighborhood groups, the team uncovered a wide range of challenges surrounding vacancy. Once revealed,

Figure 2: Operative maps: blight and ecology-based contingent factors.

the broad spectrum of neighborhood factors reemphasized the need for a highly responsive and contextually adaptive proposal. To respond to and be respectful of the unique conditions of each representative neighborhood, the design team developed three strategic approaches:

- *reimagine*: consolidate development at high-ground to optimize infrastructure function;
- *repopulate*: apply innovative land-use policies to promote affordability and restore historic neighborhoods; and
- *repurpose*: transform low-ground via strategic infrastructure decommissioning to provide essential ecosystem service functions.

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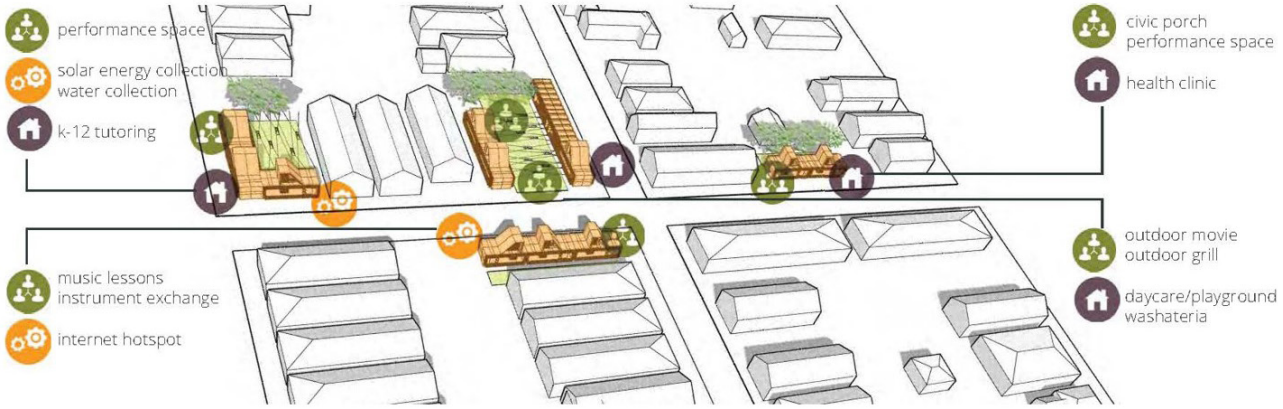
Figure 3: Incremental change diagram and representative neighborhoods.

NEIGHBORHOOD FRAMEWORKS AND CONTINGENT FACTORS
REIMAGINE: FILLMORE, ST. ANTHONY, MILNEBURG, DILLARD, AND GENTILLY

Our mapping protocol revealed that much of the vacancy and blight in these north New Orleans neighborhoods occurs in property already owned by NORA. And while this part of the city suffered massive flooding from Hurricane Katrina, our aggregated projections for sea level rise, subsidence, and land loss indicate that parts of these neighborhoods will be even more threatened by storm surge in the future. We anticipate that rehabilitation of existing structures in these neighborhoods will be problematic given the prevalence of slab-on-grade construction in these largely post-war communities.

While the built and ecological conditions of these lakeside areas present massive challenges to addressing present and future vacancy and blight, they also embed powerful opportunities. Topographically, the mix of high and very low elevations offers opportunities to channel development to higher ground within existing city frameworks, while reimagining other local sites as catchment basins for stormwater. This strategy was identified in the Greater New Orleans Water Plan, which has already pinpointed opportunities in these neighborhoods for large-scale stormwater management.[9] To successfully reimagine these neighborhoods, we recommend key policy changes to the development code and property acquisition strategies for city agencies. For example, the current building and zoning codes permit development anywhere within the district without regulating building in low lying areas or encouraging construction on higher ground. Through changes in the development code, the city could steer future urban patterns to integrate stormwater management within residential neighborhoods making both systems more resilient. In order to model this



Community Hubs
distributed infrastructure for delivering utility services, essential services, and cultural services

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strategy, NORA and other city agencies could target additional property acquisition through sales or compensated takings in order to effectively consolidate property in this area.

REPOPULATE: ST. ROCH, DESIRE, FLORIDA, AND ST. CLAUDE

Though neighborhoods like the Marigny, Bywater, and Lower St. Roch have seen unprecedented redevelopment in the post-Katrina era, the neighborhoods just north of these rapidly gentrifying areas remain pocked by high percentages of blight. Crime and public safety concerns hamstring redevelopment opportunities, even as trends in immediately adjacent communities drive up prices and the cost of living. Futhermore, the delivery of both essential and nonessential services in this part of the city is unequal, unjust, and woefully insufficient to meet community needs.

Nonetheless, this part of the city is rich in many of the assets that are spurring redevelopment closer to the river. In addition to the rich narrative of its Creole heritage, much of the housing stock is historic and high quality, either already above or easily elevated to base flood elevations. Just as the state's generous historic tax credit has been instrumental in stoking redevelopment in neighboring communities, it could be instrumental in promoting redevelopment in this historic area. In order to catalyze the equitably repopulation of these neighborhoods we suggest revisiting temporary use zoning, inclusionary zoning, and cultural overlay policies in this district. As these neighborhoods are redeveloping we suggest amending the zoning ordinance to allow a wider range of "temporary uses" such as our proposed mobile hubs to deliver essential services like health care to the current residents. Additionally, even though redevelopment is currently slow in these neighborhoods, the city should be prepared to implement inclusionary zoning, whereby 10-15% of new residential units are affordable in order to encourage diverse housing options in the future. Lastly, due to the rich cultural heritage of this district, we suggest applying existing cultural overlay districts to this neighborhood to stimulate mixed use redevelopment.

REPURPOSE: WEST LAKE, PLUM ORCHARD, AND READ BOULEVARD

Many of the considerations driving the previous site-scale strategies apply in this part of New Orleans East. But in addition to the low levels of essential and nonessential services, an escalating vulnerability to flooding, and the alarming percentages of NORA-owned slab-on-grade-construction, we determined that this area has one of the highest concentrations of brownfields in the city. Not only does soil contamination threaten the environmental health of residents today, but it also complicates future redevelopment.

Figure 4: Community hubs as infill and a distributed infrastructure.

"Shedding [B]light" harnesses current momentum to promote green infrastructure citywide. Not only does the Greater New Orleans Water Plan identify this part of the city as a prime candidate for large-scale storm water management, but the Sewerage and Water Board's push to implement these initiatives can help replace existing neighborhood infrastructure with ecological alternatives. Our strategy in this segment of New Orleans East will rely on policy readjustments, specifically pertaining to the transfer of development rights and principal use ordinances. We anticipate significant opportunities for the city to work with property owners to sell development rights, while avoiding responsibility for track maintenance. Additionally we suggest that the city incentivize, either through financial assistance or expedited review, development that takes advantage of new zoning ordinances that permit stormwater management and renewable energy production as principal uses.

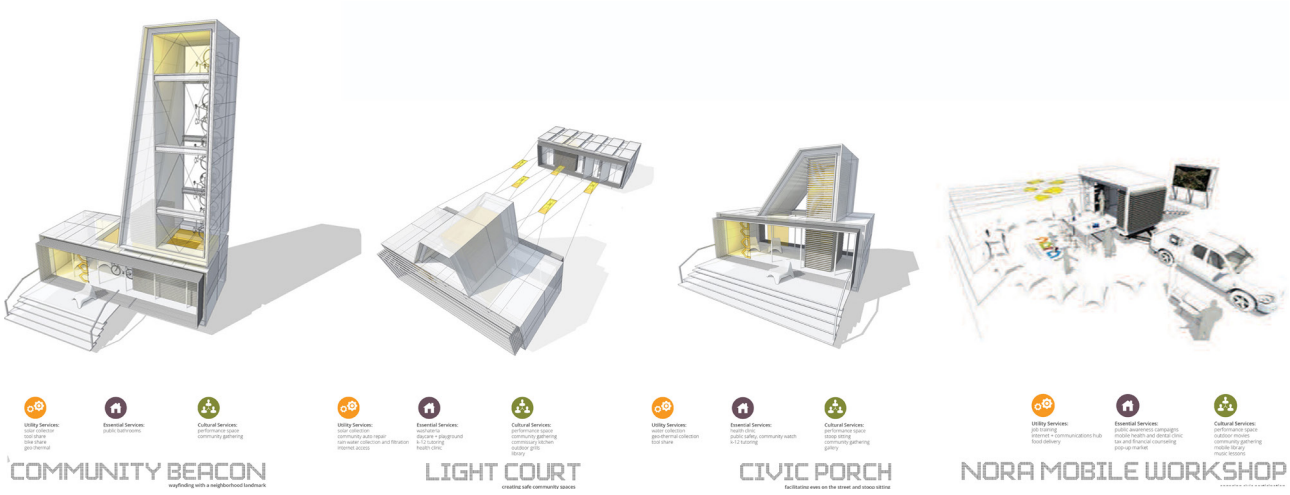

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Figure 5: Community hub components and variations.

SCALABLE COMMUNITY HUBS

To tackle the diverse needs and leverage the unique opportunities of each of these communities, we propose a system of scalable community hubs that can be rapidly deployed, first in the target neighborhoods and then in other vacancy contexts throughout the city. Central to this adaptability is an emphasis on unifying elements of porches and light. Familiar and inexpensive, modular porches will replace vacancy with a cohesive sidewalk edge or communal gathering spot, swapping out the forbidding tangle of trash and weeds for a vernacular public realm derived from the urban and architectural patterns in place. A canopy of overhead lights connecting the porches will help transform the once-vacant lot from dark eyesore to a safe, iconic place to gather, recreate, and participate.

Programmatically, each hub will be equipped to deliver a range of socially, culturally, and ecologically essential services. Community partners[10] will be heavily involved in creating customizable, evolving programmatic combinations for each site which engaged local organizations and institutions to deliver basic community services which we have divided into the three categories:

- utility services (solar collection, internet hotspots, water collection, neighborhood tool share, and gardens);
- essential services (tutoring, health clinic, daycare, playgrounds, and laundromats); and
- cultural services (porch, performance/arts, grills, movies, and music lessons).

These hubs will both fill existing gaps in community function and grow civic capacity to respond to anticipated demographic and ecological changes throughout New Orleans.

"Shedding [B]light" embraces the potential for strategic projects at the site scale to realize impacts that echo throughout the region. The community hubs will immediately provide critical remedies for communities stricken with vacancy and blight, but just as critical will be the rippling impacts that they have on the city and region in the coming decades. Once constructed, we anticipate the site-specific elements of our strategy to scale up and fill out, galvanizing more profound shifts in regional patterns of development, infrastructure, and interfacing between the built and ecological environments. In addition to a web of potential partnerships with local experts in fields like public health, workforce training, and urban agriculture, we envision an ongoing dialogue with local policymakers to achieve meaningful refinements in New Orleans development policy. Measured but precise, adjustments to city ordinances will provide the regulatory support to transform the community hubs from isolated oases in the city's fabric of vacancy to a catalytic network of adaptable, community defined spaces for New Orleans' next 50 years…and beyond.

ENDNOTES

1. Sherman, Roger. "If, then." *Log 5* (2005): 51.
2. Bassett, Jim and Zellner, Paoloa, debate group moderators. *Between the Autonomous and Contingent Object*. ACSA Fall Conference (October 2015).
3. Sherman, Roger. "If, then." *Log 5* (2005): 51.
4. "Future Ground," Van Alen Institute, accessed October 28, 2015, https://vanalen.org/projects/future-ground/
5. The "Shedding [B]light" cross-discplinary research and design team:
   Traci Birch, PhD, AICP, Asst. Professor, Coastal and Environmental Planning, ECU
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   Matt Tomasulo, MLA, MCRP, LEED AP
   Mikey Goralnik, MLA, MCRP
   Jared Kaelin, MLA
   Melissa Todd, MArch candidate, NCSU
6. Allen, Stan. *Points + Lines: Diagrams and Projects for the City.* (New York: Princeton Architectural Press, 1999), 52.
7. Corner, James. "Eidetic Operations and New Landscapes" in *Recovering Landscape*. (New York: Princeton Architectural Press, 1999), 160.
8. White, Gillian. "A Housing Crisis Amid Tens of Thousands of Abandoned Homes," The Atlantic, August 20, 2015. Online article accessed October 28,2015, http://www.theatlantic.com/business/archive/2015/08/new-orleans-blight-hurricane-katrina/401843/
9. "The Greater New Orleans Urban Water Plan", Greater New Orleans, Inc., accessed October 28, 2015, http://livingwithwater.com/
10. Potential community partnerships at various levels will help leverage these opportunities across the city. We anticipate neighboring universities (University of New Orleans, Dillard University, Southern University, Tulane, Louisiana State, and Xavier Universities) being instrumental in implement programmatic components. Additionally, we seek to partner with strong local neighborhood groups and CACs, including the Gentilly Terrace Gardens Improvement Association and the East New Orleans Neighborhood Advisory Committee. Partnerships with NORA, the New Orleans Police Department, and the Department of Safety and Permits will also be necessary to initially address concerns of crime and violence. Utility providers like Entergy, the Sewerage and Water Board, and the US Army Corps of Engineers will be key to re-purposing New Orleans East's infrastructure, while groups like the US EPA and the Deep South Center for Environmental Justice will be critical to addressing the dangerous levels of soil contamination.