

Coeur de Ville: An Urban, Ecological Catalyst

From its first employment by humankind, infrastructure provided a means to negotiate and eventually control the natural environment. Bridges provided safe crossing, roads provided clear navigation, and viaducts provided potable water when there was none. Infrastructure ordered the wild and subsequently empowered those that used it. Nowhere than the Roman Republic and Empire is this infrastructural

empowerment more evident. To establish itself as the “eternal city,” the Romans engaged in a massive infrastructure-building agenda. Their roads traversed more than 400,000 kilometers, their aqueducts could be found as far north as Germany, and their bridges spanned rivers in more than twenty contemporary countries. This permeating infrastructure not only supported the territorial colonization of the republic’s and empire’s expanding metropolis, but it also identified to the Roman citizens and slaves, the city’s military power and technological prowess. The infrastructure was visible, cultural, and clearly fundamental to the population’s condition and the condition of the city. Infrastructure represented who they were and made them who they were.

Roman infrastructure dealt primarily with a non-natural tectonic focusing on regulating nature for man’s needs: stable ground, fresh water, and unlimited access to all lands. In the contemporary context, infrastructure is still needed by mankind but the tectonic is changing. No longer does moving fresh water from one location to another suffice, now the fresh water must be constructed and then moved. The natural life-support systems that were a given previously—such as fresh air, clean water, drainage basins—suburban sprawl and urban densities have been all but destroyed. Infrastructure no longer simply requires ordering nature for mankind’s convenience but instead must now replicate, remediate, and redevelop the natural living systems required for a healthy biosphere. The Coeur de Ville project presented here investigates an ecological urban catalyst that re-envision the traditional role of urban infrastructure, the *control* of nature, for the more contemporary demand, the *support* of nature. It is an infrastructure that supports the larger urban biosphere.¹

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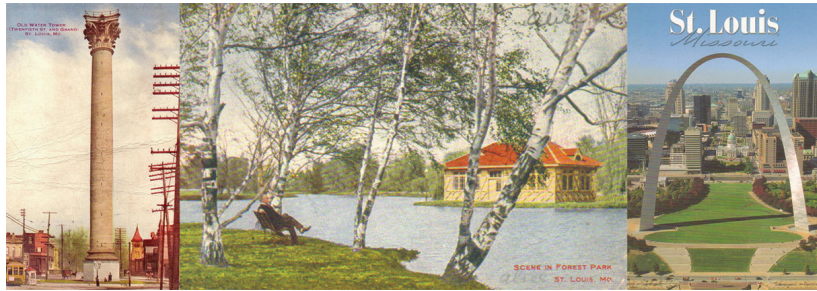


For this project, the design team composed of two architects and one landscape architect selected the Pruitt Igoe Housing Projects, an abandoned urban site ideologically and historically identified with failed urban density and the reactionary horizontal suburbanization. The site seemed particularly well suited for our investigation because both St. Louis and Pruitt Igoe have been used as metaphors to describe the rise and fall of the American city. As the 'Gateway to the West,' St. Louis is symbolic of the vibrant urban growth of the nineteenth century. Its position as an economic and cultural transfer point helped it to develop as a major American and World city known for a vigorous and diverse urban fabric. Of particular interest to our project are the urban catalysts that remain from this growth period. Forest Park and the Victorian Tower Grove Park (1876 and 1868 respectively) acted as urban ecological catalysts that created a wide range of positive effects on their districts and the city as a whole. Established and continuously maintained by legislative acts authorized by the Missouri General Assembly, both parks not only provide green grass, trees, and fresh air for recreation but they also are integrally linked to the water infrastructure of the city: Tower Grove's drainage management of Grand Avenue watershed and Forest Park's underground control of the River des Peres. Simultaneously, at the time of their creation and present today, both parks fulfill Henry Shaw's (Tower Grove's creator) vision that

A park is not created for the benefit of any particular class, but for the enjoyment of *all* classes—for the use of the city population in the aggregate.... The rich, the poor, the educated and the illiterate have an equal title to the fair domain of shade and sward, of pleasant walks and landscapes all that is required of any of them being a due regard to the character of the place and the rights of each visitor... and the taxpayer has no pre-emptive right in any of its features over the man who never owned anything to pay taxes upon. Its broad and level drives are made for the costly chariot flashing with silver and polish, and also for the humble wagon with its painted sign indicating its daily use. There are also quiet, shady walks, specially intended for those who can command no vehicle but the street car.²

Presently these two urban parks are visited by thirteen million a year, surrounded by substantial residential real estate, and are publically and privately supported. In a city whose urban population growth is stagnant at best, these parks illustrate the catalyzing effect of ecological urbanisms.

Another historical example, the Eads Bridge (1874), although not specifically ecological infrastructure, provides lessons in that it remains an essential and integrated urban catalyst. Today it crosses the Mississippi River carrying pedestrians, vehicles, and light rail mass transit. It remains as essential to the working fabric today as it was when built because its use has been adapted to remain relevant. Other nineteenth-century urban infrastructures that interest us are no longer as integrated into the city. Adjacent to our project site in north St. Louis for example, there remain many highly formal and decorated water towers, like the Grand Water Tower and Bissel Water towers, that acted in a more 'Roman' manner where the infrastructure



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was public and cultural. Their ruins still act as iconic visual symbols for the neighborhood, but they did not adapt technologically or ecologically; they are no longer integrated urban catalysts.


In the twentieth century, St. Louis became, and in some ways still is, a symbol of the destructive force leveled against urbanism by suburbanization, the automobile, and the decline of urban infrastructure. The Gateway Arch complex (1967) and the Pruitt Igoe Housing projects are two examples of a modernist attempt at urban renewal. Saarinen and his team designed an urban project that attempted to integrate monumental visual symbols, multi-modal transit, and ecological infrastructure. Dan Kiley's landscape provides an urban park that caters to the Gateway Arch, but fails to connect the city to the complex and the riverfront. The integrated train tunnels, flood control, and public amphitheater continue to be the most successful aspect of the complex. While the effectiveness of this complex is questioned, the Arch remains to many a positive symbol for the city and the country.

Pruitt Igoe is more clearly a failed example. Pruitt Igoe, in particular, is a metaphor for the failures of modernism to solve issues of urban decay. The Pruitt Igoe Housing Projects in St. Louis, Missouri were constructed on fifty-seven acres of prime urban real estate during the 1950s. The motivation and inspiration for the housing development was driven by the 1949 Federal Housing Act. The act funded urban redevelopment projects in cities experiencing massive substandard inner-city housing conditions and the resultant migration to the suburbs. The goal of the act was that redevelopment in troubled urban cores would catalyze healthy growth via middle-income housing and commercial development. Unfortunately the Pruitt Igoe Housing projects did not succeed. Mired in vandalism, physical degradation, low occupancy, violence, fiscal instability, and poor management, in 1972 the city began to demolish the housing towers. By 1977, the last housing units were demolished and Charles Jencks pronounced that

Modern Architecture died in St. Louis, Missouri on July 15, 1972 at 3.32 pm (or thereabouts) when the infamous Pruitt Igoe scheme, or rather several of its slab blocks, were given the final coup de grâce by dynamite.³

Today thirty-three acres of the original site exist as an urban brownfield. They have never been developed, and now nature has reclaimed the urban infrastructure, the roads, the drainage, the street lights, etc. Around the chain-linked site, there exists a sparse physical occupation and struggling population that even the 1989 development of the Gateway Schools

Figure 1: Grand Water Tower, Tower Grove Park, Gateway Arch, and Pruitt Igoe



complex has not been able to densify. It is here in the brownfield remains of Pruitt Igoe, the design investigation of an infrastructural component within an urban ecology seems particularly well suited. In addition to, and despite the metaphors, St. Louis remains an urban environment with particular successes and failures, wants and needs. Its position as an important American City has been in question for quite some time. Therefore, we see the rich history and current realities of St. Louis and the Pruitt Igoe site as particularly well suited for a twenty-first century investigation into urban renewal, urban ecologies, landscape, and architecture.

In 1951 Mayor Joseph Darst stated the intentions of the Pruitt Igoe project was to “rebuild, open up and clean up the hearts of our cities.” He succinctly described the utopian modernist ideal that inner city housing could solve the issues of urban decay. Unfortunately this proved far from true, as the city, which reached its highest population in 1950, steadily has shrunk, plagued with suburban flight and the decline of the urban, infrastructural and economic core. It cannot be denied that the Pruitt Igoe Housing towers failed to fulfill Mayor Darst’s stated intentions and forty years later, north St. Louis still lacks the vitality that defines a successful urban condition.

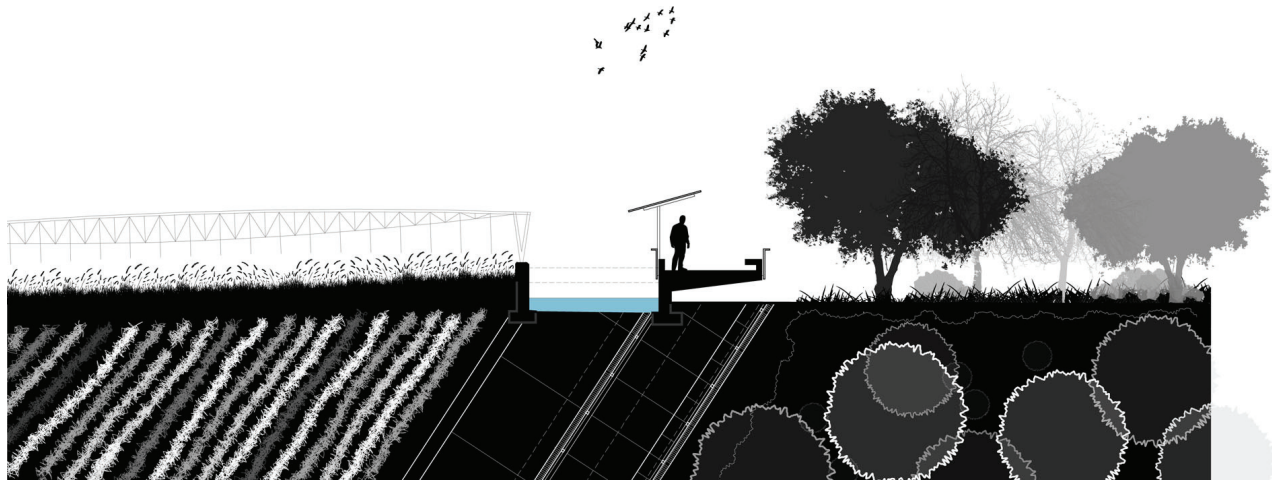
Coeur de Ville (heart of the city) questions the modernist impulse to create discreet objects as urban catalysts. This renewal project also proposes an alternate approach for urban densification from the more typically proposed urban housing and mixed-use programs. Without the necessary infrastructure and ecological systems required for a healthy urban biosphere, we question rebuilding high-density housing in a site surrounded by blocks of open land and a vast stock of readily recyclable nineteenth- and twentieth-century urban fabric. As James Corner identified in *Terra Fluxus*, contemporary urbanity requires “a spatio-material practice able to bridge scale and scope with critical insight and imaginative depth.” This practice he outlines with four provisional themes: processes over time, the staging of surfaces, the operational or working method, and the imaginary.⁴ For this project we employ this practice and propose an ecological urban catalyst: a reimagined infrastructure.

Coeur de Ville takes the position that the most effective agent of urban renewal is not a metaphorical machine limited by “optimized rationalization and capital accumulation,”⁵ but an active system that accepts the urban condition, processes it for positive effect, and then disperses it back into the urban system. We aspire to develop a “space-time ecology that treats all forces and agents working in the urban field” while considering “them as continuous networks of inter relationships.”⁶ The intention is to tie directly into and nurture the urban and ecological systems that exist. With minimal imposition, the project can then focus on improving the basic infrastructural and ecological inputs from the site. The surrounding site will then be supported by this integral infrastructure allowing for an evolutionary development of urban regeneration.

The project’s organization is a result of the existing major site systems found across the brownfield. The natural watershed flows east to the river



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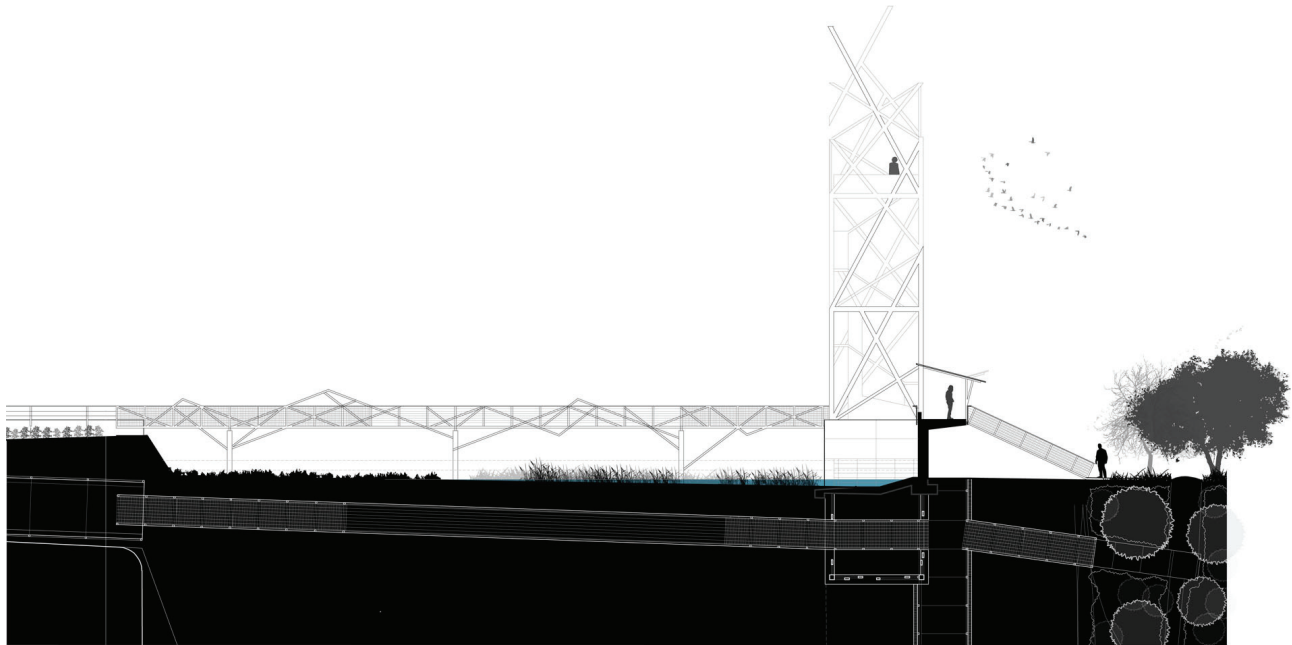
and organizes the intake of storm drain and surface water at the western edge of the site. As the water is processed and flows to the east, it is dispersed and supports productive landscapes relevant to the purity of the water (non-edible to edible to potable). The historical cores of the Pruitt Igoe housing towers offer locations for new productive infrastructure that stores, produces, manages, and controls the proposed urban ecologies. The cores recall a past order that now organizes the new connective circulation systems. The new towers located at each historical core also revive the power of vantage; offering both the remembered views from a Pruitt Igoe penthouse to the city, and the city's view to an occupied and ordered Pruitt Igoe site. The urban edges organize the project's interface to the urban condition. Multi-use buildings and a large sediment pond with fountain define the western urban edge. To the east, a new public market, water tower, and distribution center fills the gap to complete the urban edge already occupied by the Junior Naval Academy, St. Stanislaus Kostka Church, and the post office. To the south, the project accepts and grafts to the existing Gateway School and warehouses.

Coeur de Ville celebrates the original intentions of Pruitt Igoe's fifty-seven acres to revitalize and reenergize the urban condition. Today, the site presents an opportunity to engage the operations of sustainable urbanity, and enhance the qualities of livable cities; fresh air, clean water, green spaces, and food production. Critical to the project is an understanding that cities are complex collective systems where every element that composes the system is informed by and informs the overall network. Therefore when an urban element fails, its failure extends far beyond itself; so true of its successes. Building on the existing presence of the Gateway Schools Complex

Figure 2: Re-vised Eastern urban edge with water towers + urban market

Figure 3: Public interface with edibles+ potable water+ successional forest

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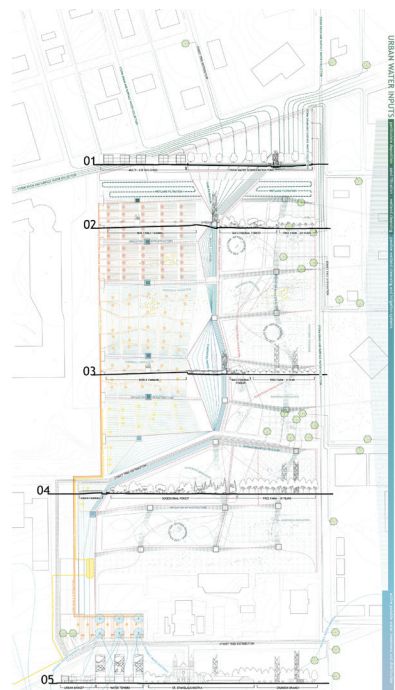


Figure 4: Public interface with edible farm + water control + successional forest

Figure 5: Hyper-productive ecological urban catalyst

that supports the city through the education of its youth, the project proposes an aggregate ecological distribution system that accepts elements in, processes the elements, and eventually disperses them to the community. The Pruitt Igoe site becomes an ecological substation nurturing the neighborhood, the district, and the St. Louis urban biosphere.

Coeur de Ville proposes a transformative hyper-productive ecology using both wild and cultivated landscapes. The system is supported by a series of subtle topographies that serve to move, percolate, and contain the urban watershed in a multi-stage cleansing process. The topographies are informed by the urban inputs and create the variety of cultivated and wild ecologies. The interior canal splits into smaller enclosed micro-ecologies that maintain soil moistures, shelter, and heterogeneous planting regimes. The subtle shifts allow park dwellers to move within the productive systems, providing spaces for circulation and gathering through a didactic relationship with the constructed ecologies.

Composed of street-tree groves, non-edible and edible productive landscapes, storm water filtration, successional forests, waterworks, and urban park, the Pruitt Igoe site aims once again to participate in the vitality of the city. Everything that is produced or occurs on site in some way is dispersed. The clean water supplies the city utilities, the market distributes the edibles and non-edibles, the tree groves and forests provide oxygen and recreation. Simultaneously the site collects elements of the city in order to produce and disperse. The project takes in storm water run-off, reconnects the street grid, attracts birds and bees, and collects goods for distribution. The water irrigates the wild and cultivated landscapes and fills the water towers, the streets bring people to the site, the bees pollinate the gardens and groves, and the goods stock the market.

The intention of Coeur de Ville is to connect integrally the Pruitt Igoe site to the city, therefore connecting the city back to the site. Transformative hyper-productive ecologies are introduced in order to exponentially increase the site's capacity as an active agent for positive urban renewal. It is unfortunate that in the contemporary era humankind we must now assume the creativity and responsibility for maintaining the biosphere, urban or otherwise. Nature seemed to be omnipresent for the Romans and seemed merely to require negotiation and manipulation, but we now must tectonically re-envision and replicate. Nature is an infrastructure that supports the larger urban biosphere and is undoubtedly more critical to our survival than an Appian Way or even Eads Bridge. Coeur de Ville attempts to assume this responsibility while maintaining the requisites of contemporary life. It is a transformative ecology but it would be a fallacy to presume the present or even past systems can be preserved or re-created.⁷

The practical benefits of parks in a sanitary point of view were especially mentioned. These benefits arise from the inducements parks offer to outdoor exercise, the improvement of the atmosphere, and the salubrious effects of trees in the vicinity of residences. By vegetation nature imparts to the air the free oxygen that is essential to animal life. Animals consume oxygen and give back to the air carbonic acid, which is dangerous to human life: and yet this carbonic acid is the principal element in the food and support of vegetables, is consumed or decomposed by them, and oxygen returned for the use of animals. It is an ascertained fact that air rendered pernicious by respiration, if confined in a bottle containing a living plant and exposed to the action of the sun, will be restored to purity. This mysterious chemical relation of the animal and vegetable kingdoms, each yielding to the atmosphere what is essential to the continued existence of the other, suggests the dependence of humankind upon vegetation not only for the principal part of human food, but for the purification and renewal of the atmosphere humans breathe. ♦

ENDNOTES

1. biosphere, n. 1: the part of the world in which life can exist. 2: living organisms together with their environment. Merriam-Webster Online Dictionary copyright © 2012 by Merriam-Webster. n.d. Web. 18 August 2012.
2. David H. MacAdam, *Tower Grove Park of the City of St. Louis* (St. Louis: R. P. Studley & Co., 1883) 12.
3. Charles Jencks, *The New Paradigm in Architecture: The Language of Post-Modernism* (New Haven and London: Yale University Press, 2002), 9.
4. James Corner, "Terra Fluxus." *The Landscape Urbanism Reader*. Ed. Charles Waldheim. (New York, NY: Princeton Architectural Press, 2006), 28.
5. *Ibid.*, 32.
6. *Ibid.*, 30.
7. MacAdam, 98-99.