

## From *hof* to homes: interwar housing exchange between Vienna and Atlanta

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# From *hof* to homes: interwar housing exchange between Vienna and Atlanta

Techwood Homes (1937) in Atlanta, Georgia, was both the first federally funded public housing in the US and a synthesis of early twentieth-century European mass housing accomplishments. This article uses Techwood as a lens through which to view transnational design exchange in the Interwar/New Deal period — here, between Red Vienna and Jim Crow Atlanta. In 1933, Atlanta real-estate mogul turned housing crusader Charles F. Palmer secured funding through Roosevelt's New Deal for Techwood Homes. In 1934, Palmer took a grand tour of European social housing sites to gather precedents for Atlanta. Vienna was a highlight of his trip. Palmer met policymakers to learn about financing, toured the Karl Marx-Hof and other municipal socialist housing projects, took his own photographs and moving picture films, and gathered promotional materials. Concrete urban design connections between the Hof and the Homes include: low site coverage (around 15%), rational yet non-rigid site planning, efficient housing units, abundant collective facilities, and high-quality garden and playground design. A comparative analysis of the two sites allows for critical assessment of why, how, and in what ways European housing principles crossed the Atlantic, and how urban design ideas are globalised then adjust to local scale.

## Introduction

In July 1934, Atlanta commercial real estate developer Charles F. Palmer and his wife, Laura, travelled by train from Rome to Vienna as part of a two-month slum fighting grand tour of Europe. The couple's timing was inauspicious; they rolled into a city under martial law.<sup>1</sup> Palmer had decided to disregard colleagues' warnings to skip beleaguered Vienna, as he was eager to tour the *Gemeindebauten*, the communal housing blocks built by the municipal Social Democratic government starting in 1923 that held 64,000 new rental units for 200,000 Viennese citizens.<sup>2</sup> The city offered a massively scaled example of working-class urban housing that he simply could not miss, spectres of war aside. Palmer toured the Karl Marx-Hof and other new housing projects, took his own photographs and moving picture films of them, and gathered promotional booklets (Fig. 1). He also met architects and important policy-makers of the Viennese housing initiative to pose questions about financing, site planning, and programming.

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Figure 1.  
Booklets collected by Charles F. Palmer on his 1934 housing tour in Vienna, courtesy of Stuart A. Rose Manuscript, Archives, and Rare Book Library, Emory University, Charles F. Palmer Papers, box 37, folder 3

In the months prior to his transatlantic journey, Palmer had spearheaded a successful application to the United States Public Works Administration (PWA) Housing Division for a slum clearance and rental housing project in Atlanta, Georgia. Palmer's proposed Techwood Homes for upwardly mobile working-class white families was bureaucratically paired by the federal government with Atlanta's University Homes for African American families in the same economic bracket.<sup>3</sup> These racially segregated projects, each with its own client group and architectural team, became the first fully federally funded public housing in the United States. In the case of Techwood Homes, European housing experience returned to the American South through Palmer, who passed information he gleaned through travel to Atlanta-based architects Burge & Stevens, designers of the project.<sup>4</sup> Atlanta's Techwood Homes is a lens through which to view both the process of and result from transnational housing and urban design exchange in the Interwar/New Deal period. We ask through this episode broadly how design knowledge travels and specifically what the first US public housing in Jim Crow Atlanta learned from the housing experiments in Red Vienna.

Although state sponsored housing had no traction in the United States until the economic devastation of the Great Depression, most European countries had some form of governmentally subsidised housing before, and directly funded housing programmes after, the First World War. The American search for worker housing typologies at the beginning of the twentieth century drew many American progressives across the Atlantic to view these European experiments. An international cast of characters — architects, planners, developers, and politicians — overlapped on tours of successful housing estates and at conferences like the International Housing Conference and the

International Federation for Housing and Town Planning (IFHTP), and they stayed connected through letters, photographs, drawing sets, and publications. The housing scene was, in effect, an architectural 'contact zone', defined by Tom Avermaete and Cathelijne Nuijsink as an intense site of encounter 'between different architectural cultures in which ideas, approaches, and tools are negotiated, selectively borrowed, partially adapted or rejected'.<sup>5</sup> The annual IFHTP congress was a particularly fruitful venue to discuss varieties of housing provision since it was held in cities that approached the problem differently. Amsterdam (1924) and Vienna (1926) were congress hosts representative of the European model that assumed public commitment to low-rent housing. New York (1925) represented the prevailing American view that housing was an issue to be solved by the free market.<sup>6</sup>

Among the individual Americans who strode into that contact zone before the economic crash were self-made housing experts Edith Elmer Wood and Louis Pink. Wood, who later became a consultant to the PWA Housing Division, spent 10 months in the UK, Belgium, and Holland in 1922 visiting governmentally sponsored projects that formed the basis for her book *Housing Progress in Western Europe* (1923).<sup>7</sup> Taking the European view, she pushed US policy makers to intervene directly in the housing market to both increase the supply of low-cost housing and reduce the number of sub-standard units. Pink, a member of the New York State Housing Board, added Germany and Austria to his 1927 itinerary. Pink's book *A New Day in Housing* (1928) praised the Viennese *Gemeindebauten* for their 'cheerfulness and architectural beauty', but, in those pre-depression years, he concluded that direct government action in housing would come to the United States 'only if private enterprise fails in its task'.<sup>8</sup> We must also not forget the young journalist Catherine Bauer who travelled throughout Europe after the stock market crash in 1930 and whose book *Modern Housing* (1934) emphatically argued for the US government to engage in direct construction of 'low-rental, high-standard, modern dwelling in communities planned carefully to provide a maximum of amenity, pleasantness, efficiency, and long-time economy'.<sup>9</sup> Like Wood, Bauer championed the European model of intensive governmental action in housing, as did their colleagues in the Regional Planning Association of America (RPAA), Clarence Stein, Henry Wright, and Lewis Mumford.<sup>10</sup>

The public housing system in the US was the result of a process that unfolded quickly and transformed significantly between 1933 and 1937 after President Franklin Delano Roosevelt signed the National Industrial Recovery Act into law. A spectrum of funding mechanisms emerged that ranged from full state funding for low- and middle-rent housing at the far left (Wood's and Bauer's position, also referred to by its critics as the 'socialist response'), no state intervention at the far right (the residential real estate lobby's position, in support of *laissez faire* capitalism), and in the middle — a hybrid condition co-funded by the public and private sectors — which is where Charles Palmer makes his appearance.<sup>11</sup> Suddenly, during the New Deal, there was governmental will and funding to design and construct public housing in the United States.

Palmer became involved in slum clearance through a short-lived limited-dividend loan programme structured to attract a private civic booster like him who might also fiscally benefit from slum removal. His involvement in America's first public housing projects reminds us of a middle way, a system that relies on private and public cooperation to provide housing of arguably better architectural quality, and for a wider socioeconomic constituency.

Palmer's mission in Europe was to pinpoint exemplary housing models that his Atlanta architects could implement. He was not in the contact zone to conduct research for a book on policy recommendations; his was a practical reconnaissance to gather precedents that could be built post-haste. Unlike at the starkly modernist Carl Mackley Houses in Philadelphia (1935), a limited-dividend PWA housing project designed in full by recent German émigré architects Oskar Stonorov and Alfred Kasner, or the Williamsburg Houses in Brooklyn (1938) designed by Swiss émigré architect William Lescaze, European influences on the architecture of Techwood Homes came not through the designers, but through the client.<sup>12</sup> Palmer was a go-between who assumed the unofficial role of American housing ambassador as he utilised his business contacts to gain access to high level European housing officials and architects during his sweep of the continent. His European itinerary — Naples — Rome — Vienna — Warsaw — Moscow — Berlin — London — hit some, but not all, of the sites a housing historian would expect (Ernst May's starkly modernist Neue Frankfurt was notably absent). Europe provided a wide range of alternatives for building and managing low-rent housing, and Palmer, an expert in private for-profit development, an 'enlightened capitalist' as he liked to call himself, was eager to experience a range of government funded projects. His travels and contacts paint a transnational picture of urban intervention in the 1930s, a time when it seemed that commercial real estate interests and 'the social good' might intertwine.<sup>13</sup>

The design of University Homes, the Black public housing project built concurrently with Techwood, was also influenced by European housing ideas.<sup>14</sup> Dr. John Hope, the President of the Atlanta University Center (AUC), a consortium of historically Black colleges and universities, was the de facto client for the project. In mid-1934, Hope hosted in Atlanta a group of international housing experts that included Raymond Unwin from the UK and Ernest Kahn from Germany. The group toured the cleared site and gave a symposium on European housing trends for AUC faculty and students. Sociology Professor W. E. B. DuBois, among other faculty, advocated strongly for the new housing project to include community facilities such as childcare, playgrounds, and shared laundries like those the visitors had presented and that he had encountered in Europe. In other words, the European connections at University Homes were robust but diffuse, with multiple inputs that may have affected the architectural outcome. At Techwood Homes, on the other hand, Palmer was a singular 'broker' of European housing trends, and his archive and memoir *Adventures of a Slum Fighter* (1955) point to specific amenities at particular sites that he expected his architects to incorporate.<sup>15</sup> Techwood, therefore, and its direct affinities with the Viennese *Höfe*, is the focus of this comparison.

Before investigating the design elements that link these Atlanta and Vienna projects, we discuss Palmer's interest in varying financing structures for public housing and distinguish the political economies of the US and Austrian context. We then turn to comparative analysis of the Viennese *Hof* ['superblock' or 'large courtyard block'] and Atlanta's Techwood Homes based on archival documentation and analytical redrawing of both projects, which allows for critical assessment of how European urban design principles crossed the Atlantic and were then adjusted for the American South.<sup>16</sup> The architectural expression of the two projects differs significantly (Figs. 2 and 3). Karl Marx-Hof is a monumental complex that was intended to represent the ascendant power of a proletarian populace while Techwood Homes was a modest low-rise brick complex that modelled middle-class values in architectural form for its upwardly mobile tenants. But, while aesthetic features diverge, urban design connections between the Karl Marx-Hof and Techwood abound, which include low site coverage (around 15%), rational yet non-rigid site planning; efficient housing units, abundant collective facilities, and high-quality garden and playground design. The specific spatial and programmatic relationships between the Höfe and the Homes demonstrate how the first federally funded public housing in the US was also a synthesis of early twentieth-century European mass housing accomplishments.

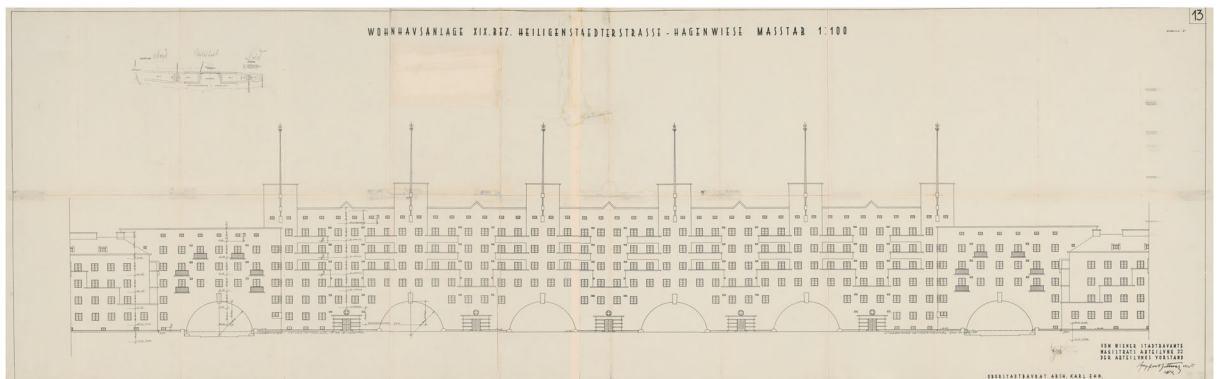
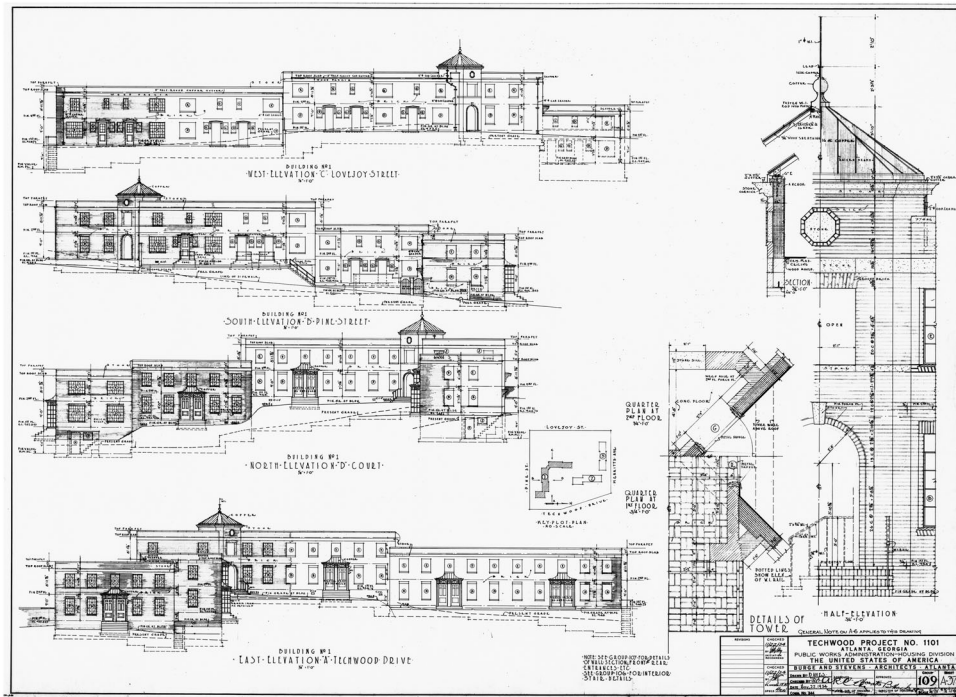
### **Enlightened capitalism and public housing finance**

The public housing system in the United States emerged during Roosevelt's New Deal in the mid-1930s. Provision of 'low-rent housing', namely 'decent, safe, and sanitary dwellings within the financial reach of, and available solely for, families of low income' was a matter of intense debate in those years as the contours of a US public housing programme took shape.<sup>17</sup> Wood's, Pink's, and Bauer's books were joined by new governmental research that combed European housing experiments for financing, design, and managerial guidance. What is surprising about Charles Palmer's European housing reconnaissance mission is that it was not prompted by political liberalism nor was Palmer a member of the socially progressive intelligentsia (he admitted that he did not vote for Roosevelt). He was a self-described 'enlightened capitalist', a for-profit developer, and former President of the National Association of Building Owners and Managers who became interested in public housing as a business proposition. To justify the European fact-finding trip to his wife, Palmer noted that 'slum clearance was actually helping to increase and stabilize real-estate values in London. So, it's plain that when businessmen support slum clearance they not only benefit humanity, they are doing themselves a might good turn as well!'<sup>18</sup> Although he later claimed a shift away from purely mercenary motives, Palmer embarked on his involvement with public housing to shield his own real estate assets; he was 'enlightened' only insofar as housing the working class constituted an ancillary benefit to his downtown Atlanta real estate portfolio.

Figure 2.  
Comparison of Atlanta and Vienna  
housing in terms of architectural  
expression: (top) Techwood Homes  
buildings along Techwood Drive,  
1936, courtesy of Stuart A. Rose  
Manuscript, Archives, and Rare  
Book Library, Emory University,  
Charles F. Palmer Papers, box 167,  
folder 8; (bottom) Karl Marx-Hof  
building on the public square,  
1930, courtesy of WStLA/Foto  
Gerlach



Palmer invoked 'enlightened capitalism' to combat accusations that government intervention into real estate matters was a fascistic, communistic, or socialistic proposition. Given that his European housing itinerary included Mussolini's Italy, Stalin's USSR, and Red Vienna, some rhetorical defence was perhaps in order. G. M. Stout, president of the Atlanta Real Estate Board,



argued in 1935: 'I am engaged in the real estate business and I am opposed to the Government's entering into any business, whether it be *my* business or *your* business [...] Now we are told that "Public Housing is more fundamentally a function of the Government than is the education of children." God save us from such a socialistic doctrine as that.'<sup>19</sup> In direct rebuttal to Stout, and often afterward, Palmer trotted out his economic arguments for public housing, namely 'that it costs more to keep slums than to clear them; that slum clearance is not new and untried, but old and proven; and finally, that slum clearance is not socialism but enlightened capitalism'.<sup>20</sup> Palmer cited



Figure 3.  
Comparison of Atlanta and Vienna housing in terms of aesthetic features: (top) elevation of Techwood Homes group 109 buildings, 1934, by Burge & Stevens and the Housing Division of the Public Works Administration, courtesy of Historic American Buildings Survey (HABS GA-2257), Library of Congress, <<https://www.loc.gov/item/ga0662/>>; (bottom) elevation of Karl Marx-Hof, 1927, by Karl Ehn, courtesy of WSTLA

Dr. Musil, a housing expert he had met in Vienna, on this point. Musil purportedly explained to Palmer that it was, in fact, ‘fear of Bolshevism that stimulated the housing program’. Vienna’s housing programme, like the PWA’s, was a make-work project to address unemployment and attendant discord. According to Musil: ‘[S]ocial and political unrest invited the Russians. The only way to keep Bolshevism out was to make jobs.’<sup>21</sup> To make his politics crystal clear, Palmer noted to Harry Hopkins, Director of the Works Progress Administration (WPA), that ‘we should take from the experience of Europe only that which will work in a democracy’.<sup>22</sup>

Due to the political unrest that greeted the Palmers on their arrival in Vienna, US Vice Consul John W. Scott suggested that Palmer review the extensive files of the embassy’s housing legation to fill the three days until Dolfuss’ funeral ‘while matters were settling down’.<sup>23</sup> One of Palmer’s primary goals of the 1934 trip was to understand how governmentally subsidised housing throughout Europe was financed. Extensive hand-written notes affirm that he pored over the official reports to acquaint himself with the unusual municipal financing structure for Viennese interwar housing that had, before the trip, seemed ‘like a sleight-of-hand performance’.<sup>24</sup> He came to understand that, starting in early 1923, the Viennese municipality instituted a progressive rent tax, the *Wohnbausteuer*, that levied higher fees on those who spent more on their living quarters.<sup>25</sup> With this extra funding in place, the Vienna City Council resolved to construct 25,000 worker housing units over a five-year period. When these units were completed a year ahead of schedule, 5,000 more were built in the final year of phase one. A second phase of the municipal housing programme, from 1927 to 1932, authorised construction of 30,000 additional units. Palmer calculated that, from 1923 to 1930, the municipality of Vienna spent the equivalent of \$93M on housing and that, by the time of his visit, they had built and managed a real estate portfolio of 64,258 dwellings valued at \$113M.<sup>26</sup>

In contrast to the Viennese case, the US government did not invest public funds in worker housing at any level — municipal, state, or national — until after the 1929 financial crash. American rental housing was provided solely by private property owners. Low-rent housing supply rarely met demand, particularly in demographically exploding US cities. To make supply matters worse, during real estate booms, private developers invested capital in stable high-rent high-return properties and exited the worker housing market altogether.<sup>27</sup> Banking on low supply, landlords in US working class neighbourhoods simply rode the waves of local housing markets, charging whatever rent they determined prospective tenants could bear and forgoing maintenance on high-demand low-rent properties. In a racially segregated city like Atlanta, the low-rent housing shortage was particularly acute for Black tenants whose housing options were geographically circumscribed by implicit colour lines.<sup>28</sup>

In the wake of the financial depression of late 1929, US President Herbert Hoover’s administration fielded various governmental funding proposals like subsidies and tax exemptions for for-profit developers to prop up the faltering private housing market. The National Industrial Recovery Act, signed by

Roosevelt in June 1933, established the Federal Emergency Administration of Public Works, and provided federal funding for a nationwide make-work programme which included 'construction, reconstruction, alteration, or repair under public regulation or control of low-cost housing and slum-clearance projects'.<sup>29</sup> The act passed quickly, bringing with it approval and federal funding to build rental housing, a radical proposition that would have been unthinkable just a few years before.<sup>30</sup>

Seeing an opportunity to clear out a 'slum' adjacent to his real estate portfolio at the government's expense, Charles Palmer gathered a board of trustees in late 1933 that included the mayor of Atlanta, the publisher of the *Atlanta Constitution* newspaper, and presidents of the Georgia Institute of Technology and the Atlanta Chamber of Congress to apply as a limited-dividend corporation to the new PWA Housing Division for a slum clearance and low-rent housing project in downtown Atlanta.<sup>31</sup> The short-lived limited-dividend programme required a local entity to commit 15% equity down and a promise to serve as developers. In February 1934, the US Department of the Interior announced that all slum-clearance and low-rent housing projects would fall under the supervision of the PWA Housing Division and would receive full federal funding.

The two Atlanta projects — Techwood Homes for white families spearheaded by Palmer and University Homes for Black families initiated by AUC President, Dr. John Hope — were already in the funding pipeline when this shift occurred, and so became the first fully federally funded public housing in the US. Like the publicly funded Viennese housing, the Atlanta projects were developed, owned, and operated by the government at the start. In both contexts, the monthly rent was set by the management to attract upwardly mobile low-income families, not the very poor.

The ambitious Viennese housing programme that Palmer explored in person was inextricably linked to the Social Democratic mayor of the city, Karl Seitz, who served from late 1923 until his removal from office and arrest by Dollfuss' national Austrofascist administration in February 1934. The Red Viennese housing projects that the Palmers toured in July 1934 were, therefore, the remnants of a political economy already overthrown. The urban blocks, buildings, courtyards, communal amenities, and housing units — the material artefacts and lives spaces of Red Vienna — persisted, however, and served for Palmer as templates for what Techwood Homes might become.

### **Transnational housing design: Viennese Höfe to Techwood Homes**

When assembling materials for the initial PWA Housing Division limited-dividend funding application, Palmer selected Atlanta-based architecture firm Burge & Stevens to produce sketch perspectives and draft plans. The firm had worked for Palmer as designers for his office building portfolio in downtown Atlanta and were known for their neo-Georgian mode of architectural expression. When the project switched to full federal funding, the architects applied directly to the PWA to lead the design for Techwood Homes and, in

March 1934, signed the federal contract as architects of record for Techwood's final design.<sup>32</sup>

New Deal public housing projects like Techwood were subject to PWA Housing Division design standards. As the local architect, Burge & Stevens had to abide by strict dimensional limits for rooms, windows, and closets; strong recommendations for kitchen and bathroom layouts and equipment; and prescriptions for material selection in common areas within the apartment buildings, among other requirements. Other factors such as 'the proper use and layout of basement (if one is to be built), the most efficient type of construction to be used', etc., were considered local concerns and were therefore free from federal standards.<sup>33</sup> Site planning and landscape schemes for New Deal housing projects were also the purview of the local designers. The overall urban design strategy for Techwood Homes was developed primarily by Burge & Stevens in consultation with local landscape architect Edith Henderson. Charles Palmer effectively served as the project's client, and he claimed responsibility to gather intelligence for his design team about best housing practices when he embarked on his European housing expedition.

On 30 July 1934, Palmer's Viennese contacts organised a day-long housing tour for the American; they planned to visit two urban housing complexes in the morning and a suburban example in the afternoon.<sup>34</sup> 'Our first stop was the Karl Marx Hof', Palmer later recalled, 'a mile-long building arcaded over intersecting streets. The structure was like a continuous chain with links forming spacious interior playgrounds and gardens. The six thousand residents of this immense building comprised a nearly complete community under one roof.'<sup>35</sup> George Washington-Hof, the second stop, was larger than the Karl Marx-Hof at 10,000 residents, but Palmer found it to be 'of less severe architectural design'.<sup>36</sup> Whether he was attracted by the addition of modest architectural ornamentation at George Washington-Hof, or the larger common open spaces, is left unqualified. After lunch, the group drove to the Viennese outskirts to tour the Leopoldau settlement, composed of modest detached houses neatly aligned at the edge of agricultural fields; most were surrounded by well-tended subsistence gardens.<sup>37</sup> Palmer met a handful of Viennese architects that day, including Karl Ehn, the architect of Karl Marx-Hof, and Leopoldau's architect Richard Bauer, whom Palmer later helped to immigrate to the US through Atlanta.<sup>38</sup> Although Palmer closely inspected just three Viennese housing projects, his itinerary provided an overview that ranged from the largest Höfe built in greater Vienna to the smallest settlement in terms of population and density.

Correlations between the Viennese Höfe and Atlanta's Techwood Homes emerge upon close architectural analysis and comparison. First, we compare the Viennese and Atlanta projects at the urban design scale, investigating the arrangement of the housing units on each site, the balance of constructed to open space on the urban superblocks (the Building Coverage Ratio), and the quality and programming of the exterior spaces. Second, we articulate the typological features that units in the Höfe and Homes share, namely an interest in consolidating programmes like living, kitchen, and dining, but with a spatial

generosity not evident in other contemporaneous examples. Finally, we consider the social programming and landscape design.

#### *Urban design: the Hof meets the American suburb*

Urban design guidelines for the Viennese housing programme were published in 1926 and 1930. Both iterations required that interwar municipal projects drastically de-densify site coverage through a metric known as the Building Coverage Ratio. The guidelines stipulated that a maximum of 50% of a project plot could be constructed upon, leaving 50% or more of the site unbuilt and reserved for shared open space.<sup>39</sup> These planning rules were instituted to prohibit the density and intense crowding typical of pre-First World War private speculative residential projects known as the *Mietkaserne*, which often were built with a Building Coverage Ratio as high as 85% (Fig. 4).<sup>40</sup> In Vienna, the urban *Gemeindebauten* were typically designed to meet the street, creating a building edge along the sidewalk. To satisfy the new rules on site coverage ratio, the large common courtyard, or *Hof*, became the main spatial feature of reformed block design in interwar Vienna, lending its name to the housing type.<sup>41</sup>

The large urban courtyard originating from the dominant types in Viennese urban history had, in fact, been developed as a theoretical model some decades before its installation during the Social Democratic era.<sup>42</sup> In the late nineteenth century, Viennese architects Camillo Sitte and Otto Wagner both published city planning tracts that advocated widespread use of such urban courtyards. In the article 'Greenery Within the City' (1900), Sitte advocated

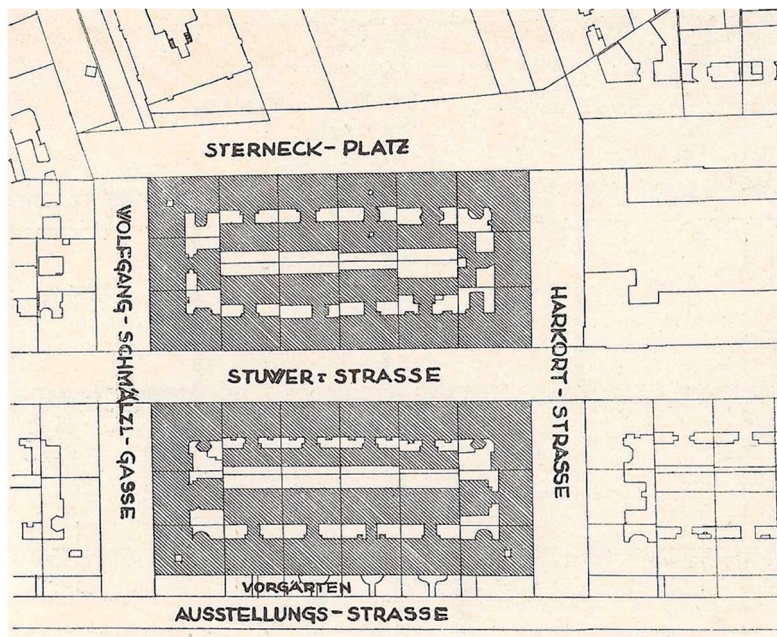


Figure 4.  
A typical pattern of a private speculative residential urban block in Vienna pre-First World War, in *Die Wohnungspolitik der Gemeinde Wien*, 1929, p. 7, courtesy of Stuart A. Rose Manuscript, Archives, and Rare Book Library, Emory University, Charles F. Palmer Papers, box 37, folder 3

for enclosed green spaces sheltered on the interior of large building blocks to accommodate numerous functions.<sup>43</sup> In a lecture entitled 'The Metropolis' (1910), Wagner argued that changing conditions of urban life made the rental apartment block the only appropriate housing typology for modern city dwellers (as opposed the detached suburban house). High living expenses were mitigated by the small and efficient spaces of the rental apartment, family size fluctuations were accommodated by various apartment types, and occupational and economic mobility were addressed by the ease of short leases and upgrades.<sup>44</sup> Together, Sitte's courtyard and Wagner's apartment type suggested the urban design form of the large open block that was implemented in the Höfe of Red Vienna.<sup>45</sup>

As befitted an American individualist, Palmer preferred the suburban settlement [*Siedlung*] of Leopoldau that his tour visited later in the day, with its small detached 'homesteads' sitting in rural fields surrounded by gardens, to the urban Höfe. In his memoir *Adventures of a Slum Fighter*, Palmer dwelled on the Viennese suburbs, describing the subsistence cottages in greater detail than the urban courtyard projects.<sup>46</sup> Leopoldau was organised by the Public Utility Settlement and Building Material Corporation [GESIBA, short for *Gemeinwirtschaftlichen Siedlungs- und Baustoffanstalt*], a public corporation founded in 1921 and owned jointly by the city and national governments and co-operative agencies. The GESIBA supplied construction materials for the cottages and designed two types of settlement: the *Wohnsiedlungen* or residential settlements with kitchen-garden and accessories covering 1,000 square metres, and the *Klein-Wirtschaftssiedlungen* with an area of 5,000 square metres, comparable to subsistence homesteads in the United States.<sup>47</sup> From 1921 to 1932, however, few subsistence homesteads were constructed, since the Viennese socialist government was more interested in building large courtyard blocks for working-class residents in the city proper. As Eve Blau explains, the Social Democrats asserted that 'the city was not only the proper "home" of the proletariat but also the social environment within which working-class consciousness itself would develop, could be fostered and heightened'.<sup>48</sup> Beyond political motives, the municipal government also advocated easy access to transportation infrastructure and cultural amenities, benefits they could ensure for Höfe residents but not for those living in remote *Siedlungen*.

Regardless of Palmer's attraction to the quaintly suburban *Siedlungen*, the slum clearance and future housing site for Techwood — known as Tech Flats before clearance (Fig. 5) — sat squarely adjacent to Atlanta's urban core. The housing project's urban design, then, was more likely to approximate the apartment blocks of the Viennese Höfe. Before Palmer's European tour, the preliminary aerial rendering for Techwood Homes developed by Atlanta architects Burge & Stevens for the funding application submission showed normatively sized city blocks holding collections of two- to four-story peaked-roof apartment houses (Fig. 6), their architecture akin to English garden city precedents like Letchworth (though denser and taller). Only in later schemes from 1935, after Palmer's return from Europe, did certain characteristics of the modernist



Figure 5.  
Tech Flats neighbourhood before  
construction of Techwood Homes,  
courtesy of Stuart A. Rose  
Manuscript, Archives, and Rare  
Book Library, Emory University,  
Charles F. Palmer Papers, box 168,  
folder 3

superblock plan emerge in Burge & Stevens's design (Fig. 7).<sup>49</sup> Techwood's architecture became homogenised across the blocks into a collection of slim flat-roofed brick buildings that snaked around the site leaving ample open space for tenant use. Contrasted to the granular single-house plot structure of the surrounding fabric, the Techwood project read as a singular urban unit that stretched across multiple blocks (Fig. 8). As built, the housing project covered eleven urban blocks along Techwood Drive, yet the buildings occupied only about 15% of the site, providing neatly landscaped courtyards as a controlled shared open space alternative to the disorganised private yard landscape of the neighbourhood before slum clearance. In Vienna, only large housing blocks, such as Karl Marx-Hof (18%) and George Washington-Hof (24%), reached a similarly low Building Coverage Ratio (Fig. 9).

Techwood Homes as constructed exhibits a combination of urban and suburban characteristics (Fig. 10). Contrary to the city's typical single-family residential typology, Burge & Stevens designed two- and three-story walk-up apartment blocks for Techwood (multi-unit apartment building typologies were required by the PWA Housing programme). The architects separated the buildings for regular pass throughs and provided dedicated playgrounds adjacent to the apartments.<sup>50</sup> Despite its extremely low site coverage and homogeneous architecture, the Techwood Homes design also adapted certain suburban site planning features to its urban Atlanta location. This aspect is reinforced by a low density of 47 units/ha for a total amount of 604 built units while Karl Marx-Hof housed 1,382 units in 4- to 6-story buildings with a density of 88 units/ha. Thanks to this low density, the U-, L-, and S-

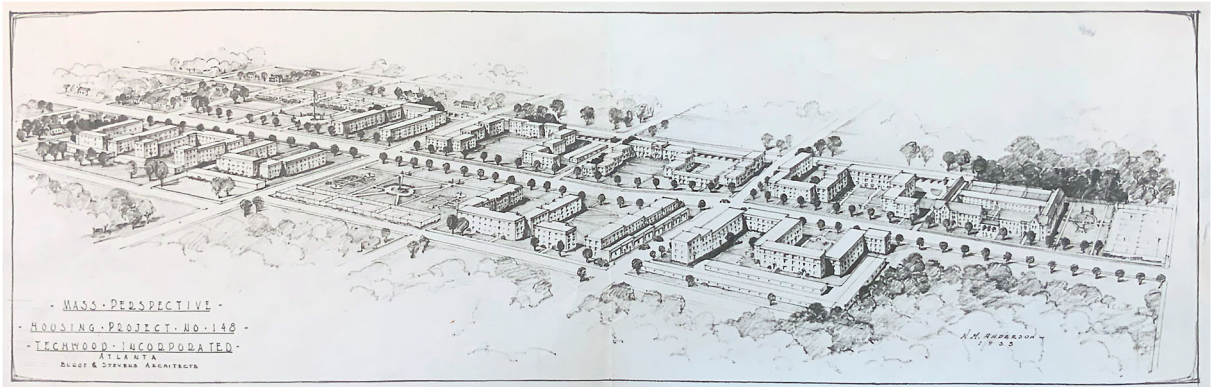
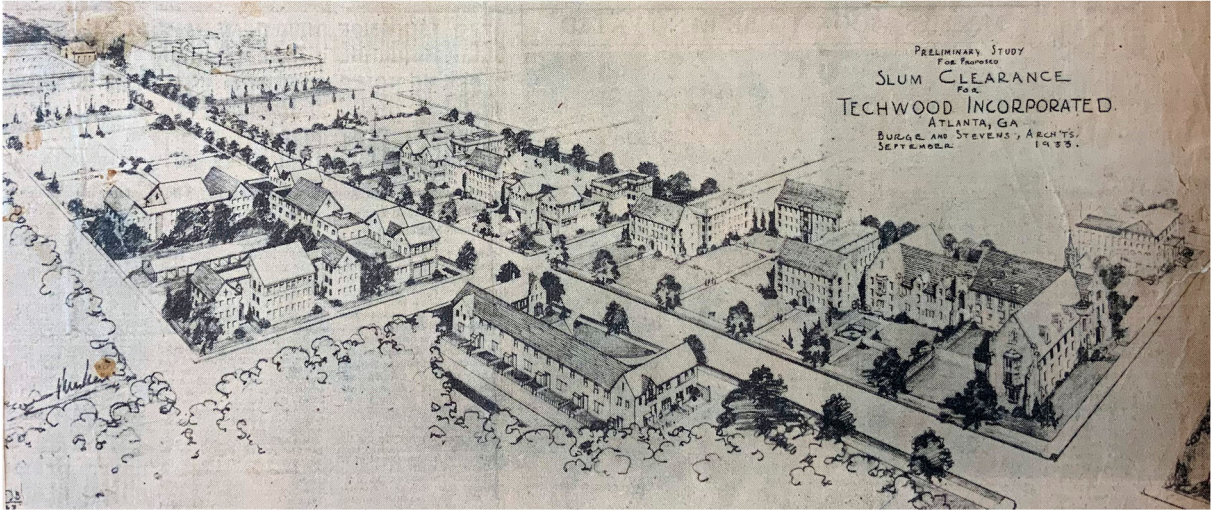


Figure 6.  
Early rendering of Techwood Homes, 1933, by Burge & Stevens as published in *The Sunday American* (Atlanta, 15 October 1933), courtesy of Stuart A. Rose Manuscript, Archives, and Rare Book Library, Emory University, Charles F. Palmer Papers, OBV3

Figure 7.  
Later rendering of Techwood Homes, 1935, by Burge & Stevens, courtesy of Stuart A. Rose Manuscript, Archives, and Rare Book Library, Emory University, Charles F. Palmer Papers, box 167, folder 9

shaped apartment buildings created courtyards that were, to varying degrees, open to surrounding streets, but a combination of landscaping cues and significant building setbacks from the street edges communicated that the green spaces were at most semi-public and intended solely for the use of the projects' residents (Fig. 11). Like the visually appealing private green lawn of American suburbia, the Techwood courtyards increased the aesthetic quality of the neighbourhood while clearly delineating accessibility.

Techwood Homes adapted the reformed European urban block to create a new site planning strategy that minimised density and maximised light, air, and open space amenities for its residents. Like the Red Viennese Höfe projects, Techwood's urban design clearly addressed the existing street network and created courtyards dedicated to each block in symmetrical compositions. In contrast to the autonomous urban model of the Viennese superblock,



however, Techwood adopted the concept of the Hof and enlarged and opened it over the whole site.

*Unit typology: standards for 'relative' minimums*

The choice between the apartment and the single-family house type was intensely debated by European architectural theorists and practitioners during the Interwar period.<sup>51</sup> Of the three projects Palmer visited in 1934, the two Höfe (Karl Marx-Hof and George Washington-Hof) were multi-unit apartment complexes. Leopoldau, the suburban Siedlung, provided detached duplex houses. The majority of housing units constructed by the Viennese municipality, and all units in the Höfe, were small apartments by American standards. And because of the heterogeneous block shapes Viennese housing architects had to deal with, site plans and unit types generated were unique to each project. While fully standardised unit types were rare in the Red Viennese Gemeindebauten, units shared the same amenities and exhibited certain design commonalities.

Extensive hand-written notes affirm that Palmer became acquainted with the standard features and configurations of Viennese apartments through the embassy's official housing reports.<sup>52</sup> Vienna's workforce housing units were accessed directly from stairwells, an organisational strategy that eliminated extraneous corridors, and there was a maximum of four units per staircase.

Figure 8.  
Aerial view of Techwood Homes,  
courtesy of Stuart A. Rose  
Manuscript, Archives, and Rare  
Book Library, Emory University,  
Charles F. Palmer Papers, box 167,  
folder 8



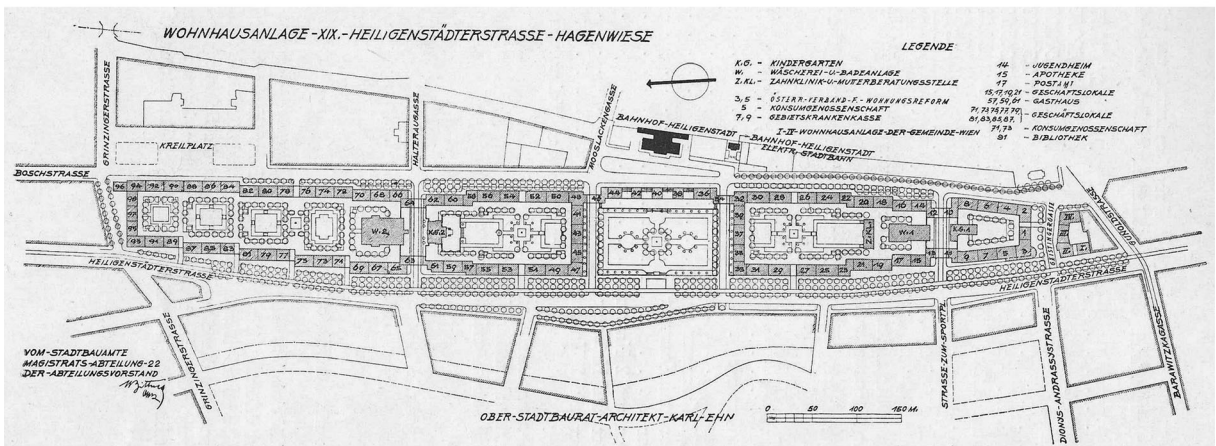
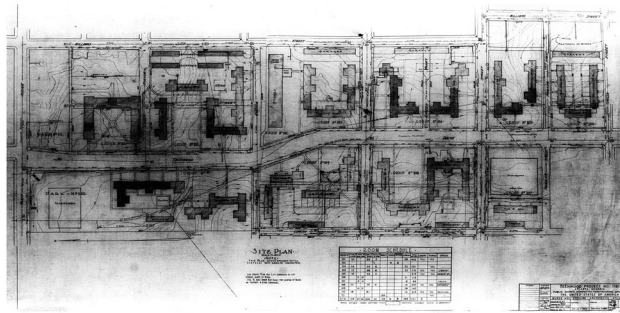


Figure 9. Comparison of Atlanta and Vienna housing site plans at the same scale: (top) site plan of Techwood Homes, 1934, by Burge & Stevens and the Housing Division of the Public Works Administration, courtesy of Atlanta History Center, microfilm drawer 2.7; (bottom) site plan of Karl Marx-Hof, in *Der Karl Marx-Hof: die Wohnhausanlage der Gemeinde Wien auf der Hagenwiese in Heiligenstadt* (Vienna: Thalia, 1930), p. 8, courtesy of Stuart A. Rose Manuscript, Archives, and Rare Book Library, Emory University, Charles F. Palmer Papers, box 37, folder 3

Each unit was provided its own toilet with running water, accessed from a small entryway, and all rooms enjoyed natural lighting. Although many units had shared kitchen-living rooms due to spatial economisation, kitchens were fitted with an exterior window for direct light and ventilation, and they were provided with water supply and a gas oven.<sup>53</sup> Three-quarters of all residential units built in Vienna between 1919 and 1927 shared this configuration: small entrance hall; toilet; one large multipurpose room for cooking, eating, and living; and one large sleeping room with a total area of 409 square feet (38 sq.m.). An expanded type grew to 517 square feet (48 sq.m.). After 1927, over half of the units built in Vienna settled at an average of 443 square feet (43 sq.m.) and conformed to the entry, toilet, kitchen-living room, and bedroom type (Fig. 12).<sup>54</sup>

The modestly sized units in Techwood Homes, too, offered architectural modernity through exposure to fresh air and natural light, and easy-to-clean, durable, and fire protective materials.<sup>55</sup> These characteristics indicate that the unit designs at Techwood Homes were informed not only by specific European examples provided by Palmer but also by general architectural debates around the modernist concept of 'Existenzminimum', defined in 1929 during the *Congrès Internationaux d'Architecture Moderne* (CIAM II) in Frankfurt-



am-Main.<sup>56</sup> In Europe, architects responded to the demand for ‘socially responsible housing’ for low-income earners and families, and the ‘technical realization of the small apartment’.<sup>57</sup> In the late 1920s and early 1930s, changes in social structures led to the establishment of new health regulations and of minimum area standards common across European cities, with minor variations to address local requirements, habits, limitations, and desires.<sup>58</sup>

Burge & Stevens and PWA Housing Division architects elected to design both apartments and attached townhouse unit types for the Techwood Homes site. They concluded that the savings in heating, water, and electricity costs gained by grouping dwellings was more important than spatial autonomy or a minor loss of privacy that more expensive detached duplex or single-family homes would provide. The apartment buildings designed for Techwood Homes were, per the PWA definition:

a compact and efficient room group served by one stair and consisting of as many rooms or dwelling units as may be intelligently worked around this stair. The unit plan is generally one floor in height but may be repeated one above the other, as in the case of the apartment house. Row houses and flats are treated similarly in that [standard] unit plans form the basic element of design.<sup>59</sup>

Techwood Homes was composed of four-unit cluster designs, three of which held apartment types (Types A, C, D) and one a row-house type (Type B) (Figs. 13 and 14). The four types were mixed and matched experimentally throughout the project’s apartment buildings to combine efficient unit repetition with high typological variety in each block. The Type A cluster held two 4-room apartments on every floor, each with an area of roughly 55 sq.m. Each individual unit was divided into two sectors — day and night — and connected by a small hall that concentrated the bathroom/utility/storage

Figure 10.  
Ground floor plan of Techwood  
Homes, 1934, by Burge & Stevens  
and the Housing Division of the  
Public Works Administration,  
redrawn by Alessandro Porotto  
based on the original plan, 2020

Figure 11.  
Courtyard of Techwood Homes  
group 101 buildings, 1936,  
courtesy of Stuart A. Rose  
Manuscript, Archives, and Rare  
Book Library, Emory University,  
Charles F. Palmer Papers, box 167,  
folder 8



spaces in the core of the plan.<sup>60</sup> The Type B cluster consisted of a pair of two-story 5- and 6-room row houses (respectively, 82 and 89 sq.m.). In the Type C (regular dwellings of 44 sq.m. and additional dwelling of 47 sq.m.) and D clusters (regular dwellings of 71 sq.m., and additional dwelling of 45 sq.m.), a common stairwell served three 3-room apartments per floor, an arrangement that gave rise to a volume that extended beyond the building's rectangular body and produced a crenellated exterior massing. This solution produced one triple exposure and two double exposure units, improving on the single exposure standard in Vienna. Per standard US practice at the time, these unit area calculations include kitchen area, but not bathroom.

To provide the most generous and well-designed low-rent units, the PWA Housing Division established standards to ensure sufficient light and exterior open space for tenants in public housing.<sup>61</sup> In addition, architects had to abide by the PWA's schedule of minimum room sizes and were tasked to minimise hallway and circulation spaces. Typological unit variation was generally achieved by adding bedrooms rather than increasing room dimensions. The bedrooms' standardised dimensions, however, allowed spatial flexibility in the furnishing, as each could accommodate either two single beds or one double bed. The number of bedrooms determined the size of a unit's living room.

The kitchen was standardised in all the Techwood Homes unit types as a so-called 'laboratory kitchen', akin to the well-known *Frankfurter Küche* [Frankfurt kitchen] designed by architect Margarete Schütte-Lihotzky for the minimised apartments in New Frankfurt.<sup>62</sup> The laboratory kitchen was designed for efficiency, an 'arrangement studied to avoid lost motion, unnecessary stretching

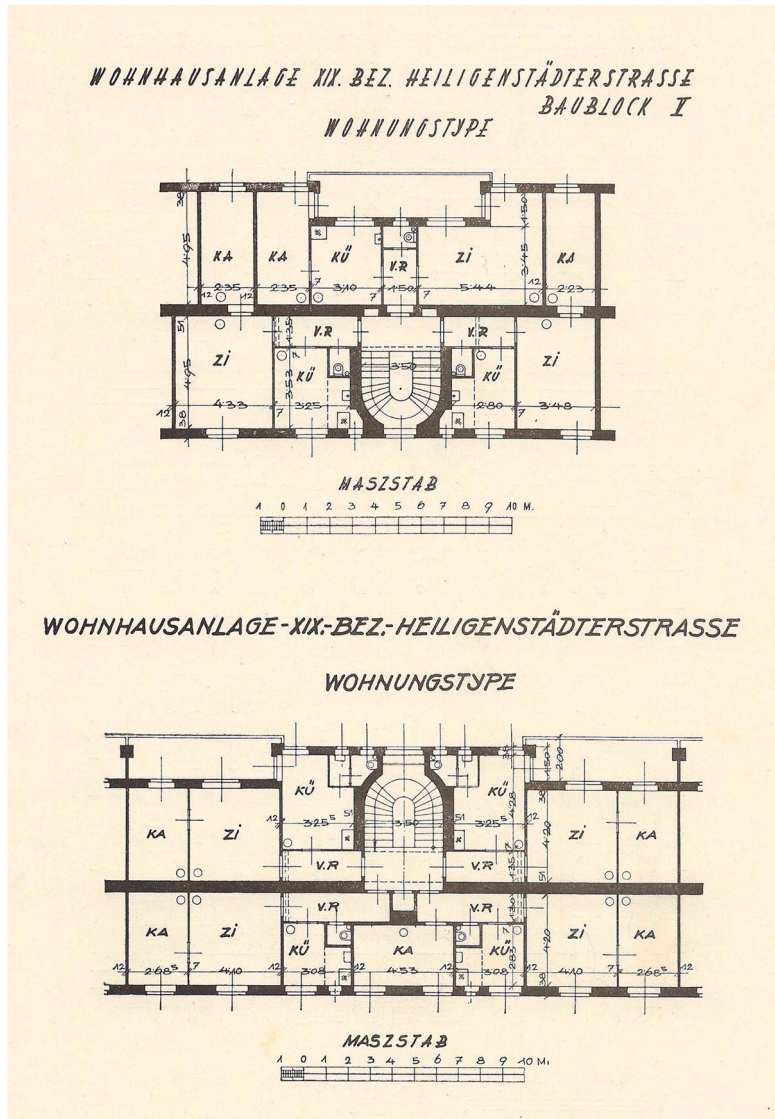


Figure 12.  
Apartment typologies in the Karl Marx-Hof, 1927, by Karl Ehn, from *Der Karl Marx-Hof: die Wohnhausanlage der Gemeinde Wien auf der Hagenwiese in Heiligenstadt* (Vienna: Thalia, 1930), p. 9, courtesy of Stuart A. Rose Manuscript, Archives, and Rare Book Library, Emory University, Charles F. Palmer Papers, box 37, folder 3

or stooping, and to allow for easy opening and tight closing of doors, windows, and drawers' (Fig. 15).<sup>63</sup> At Techwood, the kitchens were equipped with a ceramic double sink and integrated drainboard to provide space for light laundry duty. Appliances included a narrow three-burner electric stove and oven, and a refrigerator. Techwood's units did not have a dedicated dining room (apart from the Type B row-house). As Palmer had seen in the Viennese Höfe, the PWA Housing Division directed designers to include eat-in kitchens to economise on space and, by extension, rent. Each apartment boasted a bath-

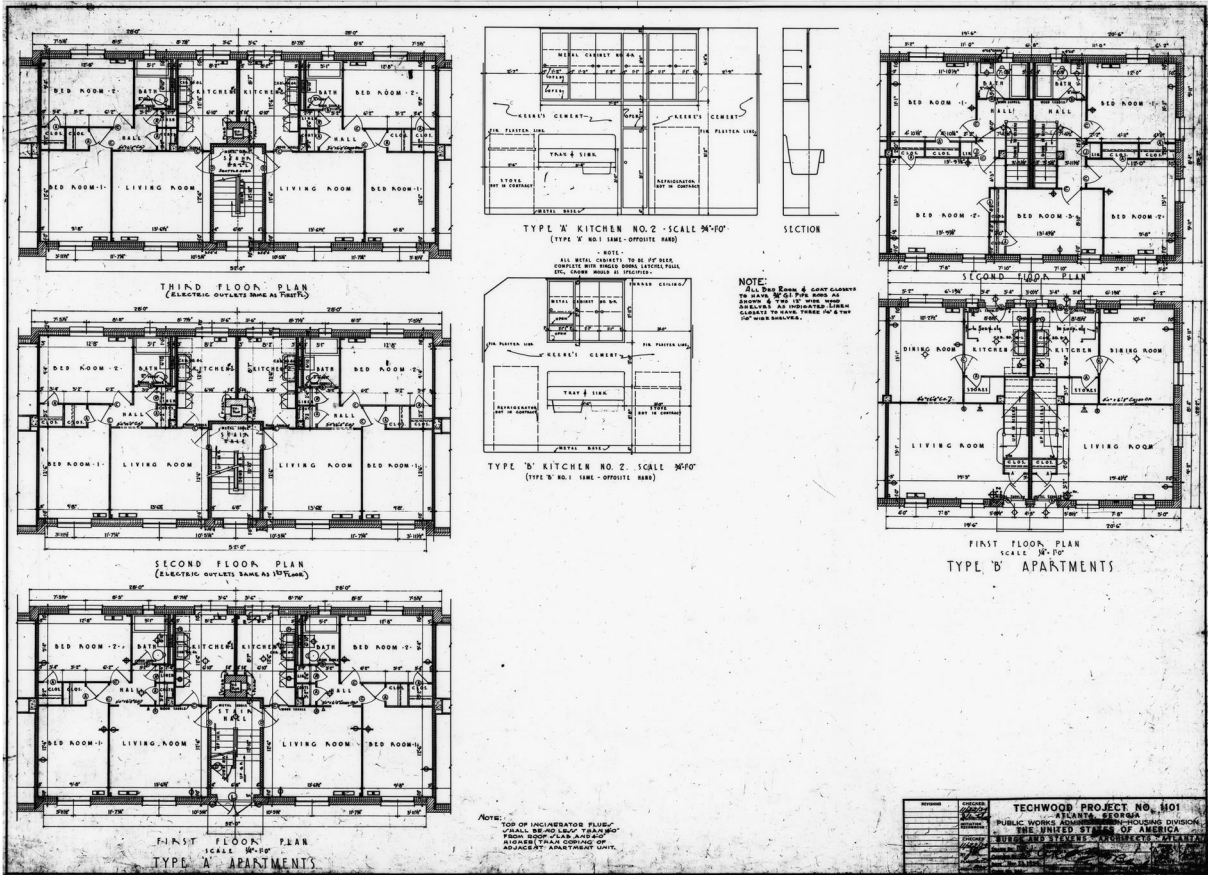


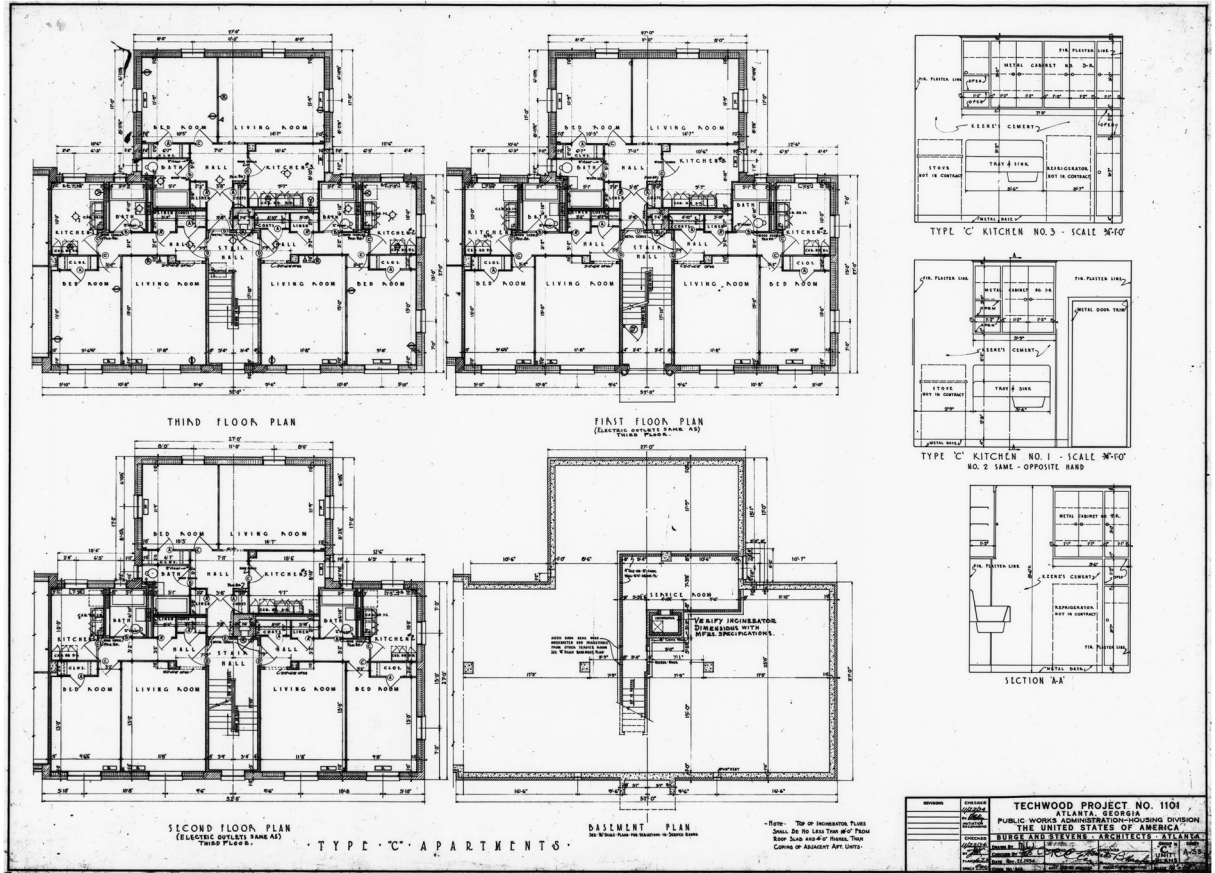
Figure 13. Plans of Techwood Homes unit types A and B, 1934, by Burge & Stevens and the Housing Division of the Public Works Administration, courtesy of Historic American Buildings Survey (HABS GA-2257), Library of Congress <<https://www.loc.gov/item/ga0662/>>

room with indoor plumbing and hot and cold running water. Bathrooms were also standardised and typically adjoined the kitchen to consolidate plumbing runs.

Neither the housing units in Vienna nor Atlanta can be characterised as radical designs, especially when compared to contemporaneous avant-garde housing experiments in Frankfurt-am-Main or the Soviet Union. Instead, unit typologies developed for both the Viennese *Höfe* and Techwood Homes sought to carefully optimise dimensions for each room to produce liveable spaces, not dogmatically tiny spaces for the sake of hyper-efficiency or ideology. In both housing programmes, the unit designs provided ‘relative’ minimums that promoted not just survival but social health, a philosophy that carried over to the neighbourhood scale.<sup>64</sup>

*Social-collective programmes and landscapes: a ‘complete community’*

Vienna’s *Höfe* included a variety of collective spaces for the tenants. This shared community programming, built into the housing complex, was a hallmark of



the Viennese programme that notable American 'housers' Catherine Bauer and Clarence Stein wished would be integrated into US public housing as well. 'To design a house that will accommodate all the needs of modern living, one must also design the community', they explained in 1933:

A motorcar is inefficient without suitable roads; a house is inefficient without a suitable communal environment.<sup>65</sup>

Connections between the Viennese and Atlantan housing projects are evident in these realms of holistic programming and common-use space. Palmer noted the importance of social programming spaces during his inspection of the Karl Marx-Hof. In his memoir, two communal programmes received the most attention: laundry and childcare. Palmer observed women in the washhouse at the Karl Marx-Hof, 'gossiping over the mechanical washers in the laundries, running their clothes through the great steam mangles, hanging their wash in the gas driers' (Fig. 16).<sup>66</sup> Indeed, Höfe covering more than 300 units

Figure 14. Plans of Techwood Homes unit type C, 1934, by Burge & Stevens and the Housing Division of the Public Works Administration, courtesy of Historic American Buildings Survey (HABS GA-2257), Library of Congress <<https://www.loc.gov/item/ga0662/>>

Figure 15.  
View of a typical kitchen in  
Techwood Homes, 1936, courtesy  
of Stuart A. Rose Manuscript,  
Archives, and Rare Book Library,  
Emory University, Charles F. Palmer  
Papers, box 167, folder 8



were built with their own steam heating plants, usually accommodated in stand-alone buildings located in the courtyard. For projects with fewer units, several washhouses were provided, and the tenants had access to shared drying lofts.<sup>67</sup> Palmer's hosts provided two professional photos of a Karl Marx-Hof kindergarten building for him to bring back to Atlanta (Figs. 17 and 18). While a shot of the stark modernist exterior prompted no commentary by the US developer, the schoolroom's interior with large windows, small wooden desks and chairs, a simple play structure, and dozens of potted plants made a deeper impression. Childcare linked to housing was a boon for working-class tenants, Palmer recognised as he scribbled on the photo's verso: 'Kindergarten in Vienna housing — where children parked while mothers work'.<sup>68</sup> In addition, Red Viennese Gemeindebauten frequently included shops, libraries, centres for maternal advice, and tuberculosis clinics among other public programmes. A typical ground floor of a Hof emerges as an interaction between private, collective, and public spaces. Its courtyards are therefore both domestic and civic, open to the city and enclosed within its edges.<sup>69</sup>

Techwood Homes provided a mix of collective spaces as was suggested by the Höfe. Four types of social-collective spaces — commercial, educational, recreational, and domestic-technical — were located either inside the apartment buildings or within walkable distance from them. At the core of the Techwood site plan were the commercial facilities that included a multi-story building with rental and administrative offices, cashier, medical and dental clinics, and single-story shops appended in a row. Educational facilities such as the kindergarten



Figure 16.  
View of the collective laundry in the  
Karl Marx-Hof, 1930, courtesy of  
WStLA/Foto Gerlach

and library, and recreational facilities like the meeting rooms and auditorium, were spread throughout the site plan. Shared domestic-technical amenities were typically located in the apartment buildings' basements and included perambulator rooms, storage, and laundry facilities. The five central laundry rooms embodied modern domesticity and hygiene. They offered the residents access to hot water and large tubs for scrubbing and rinsing garments. The clean wet clothes could be placed on lines in the drying room, where huge electric fans blew air through a hot radiator. Pull-down ironing boards were also available. These well-equipped spaces were repeatedly publicised through staged photographs of Techwood's women doing their families' wash (Fig. 19).

Sensitive landscape design was also considered a crucial ingredient to ensure a housing project's success. Due to rapid urban development in Vienna at the beginning of the twentieth century, and limited opportunities to expand existing public green spaces, the Hof model allowed nature to enter into the urban fabric through courtyard landscapes full of vegetation.<sup>70</sup> Upon successful completion of the first garden courtyards, the Höfe were integrated into Vienna's system of public green spaces.<sup>71</sup> Werner Hegemann, an internationally recognised planner in the 1920s and 1930s, and transnational 'broker' of housing expertise in his own right, appreciated the ingenious way in which the block plans of the Viennese complexes related to existing streets and open spaces so that both the old and new fabric benefitted.<sup>72</sup> Furthermore, housing policy guidelines for the Höfe courtyards stressed the importance of high quality design, the need for ornamental gardens and other planted surfaces, sufficient area so that all rooms received as much sunlight and ventilation as possible, and provision of playgrounds for children, rest areas for adults, and even ice rinks.



Figure 17.  
Charles F. Palmer's postcard with exterior view of the Karl Marx-Hof kindergarten, 1934, courtesy of Stuart A. Rose Manuscript, Archives, and Rare Book Library, Emory University, Charles F. Palmer Papers, box 163, folder 17



Figure 18.  
Charles F. Palmer's postcard with interior view of the Karl Marx-Hof kindergarten, 1934, courtesy of Stuart A. Rose Manuscript, Archives, and Rare Book Library, Emory University, Charles F. Palmer Papers, box 163, folder 17



Following the example of the Viennese Höfe, the Techwood Homes designers incorporated social-collective exterior spaces. Unlike in Vienna, where the Höfe architects designed both buildings and garden courtyards, the exterior spaces at Techwood Homes were realised by landscape architects Edith Henderson and Norman Butts (Fig. 20). The topography and building massing of each subblock guided their planting schemes, and they designed the shared exterior spaces 'so that the entire design plan would be an ever-green one, that in various times of the year there would always be something in leaf color or in flower'.<sup>73</sup> They located playgrounds within protected courtyards and included benches for children's minders. Overall, Henderson



Figure 19.  
Interior view of a laundry room in  
Techwood Homes, 1936, courtesy  
of Stuart A. Rose Manuscript,  
Archives, and Rare Book Library,  
Emory University, Charles F. Palmer  
Papers, box 167, folder 8

explained, 'the entire housing concept, [was to] be absorbed inside the city as if it were a park'.<sup>74</sup> Henderson asserted that for Atlanta:

[Techwood Homes] was a different concept of the way people could live. It was clearly an introduction of all that was to come. It was really a very exciting thing for the city to have the first and to watch it grow.<sup>75</sup>

Ultimately, the common attitude in Vienna and Atlanta towards the housing project's social role is embodied in photographs of children splashing in the swimming pools of Fuchsenfeldhof and Techwood Homes (Fig. 21). In both cases, the landscaped urban blocks encouraged tenants of all ages to realise the community.

### Traces of the Vienna-Atlanta exchange

The Vienna-Atlanta exchange, initiated by Palmer's tour, provides a glimpse into one strain of transnational housing exchange in the early twentieth century, a multidimensional 'contact zone' that brought together architects, planners, officials, and businessmen to develop strategies for mass housing production.<sup>76</sup> Palmer's entry into this scene entangled not only Hof and Homes, but the architecture of the two cities over the longer term. Viennese architect Richard Bauer, designer of the Leopoldau settlement for the GESIBA who met Palmer on that 1934 trip, immigrated to Atlanta in 1939 with Palmer's direct assistance. Bauer worked for over five years as a designer

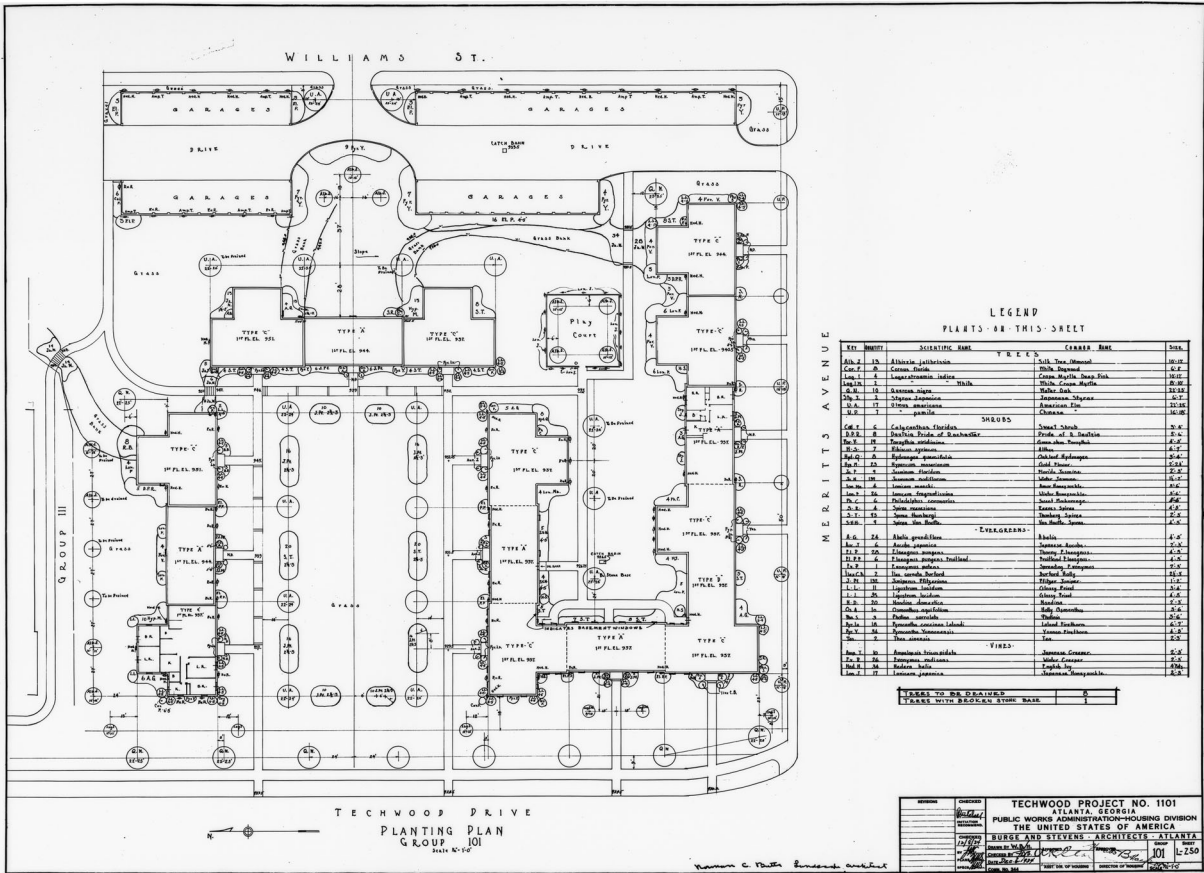


Figure 20. Planting plan of Techwood Homes group 101 buildings, 1934, by Norman C. Butts, landscape architect, courtesy of Historic American Buildings Survey (HABS GA-2257), Library of Congress

at Burge & Stevens, Techwood’s architects, and as an extended consequence he brought Viennese modernism directly to the American South, just as Stenorov and Kasner had brought the German iteration to Philadelphia.<sup>77</sup> The European exchange was personally impactful for Palmer as well, who transformed himself thereafter into a national housing expert. He became the first chairman of the Atlanta Housing Authority in 1938, served as the president of the National Association of Housing Officials in 1940, and was twice the US representative to the International Federation for Housing and Town Planning Conference (1938, 1946).

The immediate material result of Palmer’s tour was, of course, Techwood Homes. For the fifty-odd years that it stood, Techwood was the repository of cross-cultural ideas about the proper philosophy, shape, and organisation of governmentally funded housing. In the years immediately after its completion, Techwood was widely published in the US and heralded as a model that other American cities should (and did) emulate. The architectural expression of Techwood Homes — brick neo-Georgian, palatable to Atlanta’s aesthetically conservative elite — indicated that American public housing projects could



provide European-inflected site planning and social programming while also meeting local architectural tastes.

The fate of Techwood Homes and the Viennese Höfe could not be more divergent, however. By the early 2000s, both Techwood and its African American partner project across town, University Homes, had been demolished.<sup>78</sup> The projects' deterioration over time was blamed publicly on myriad factors, from uninspired architecture to tenant neglect. In fact, the salient reason for the projects' demise was decades of federal and local government disinvestment in public housing that came to a head upon Atlanta's successful bid to host the 1996 Olympics. The embarrassing 'blight' of badly maintained public housing met a resurgent downtown real estate market and the Techwood site was once again cleared to make way, this time, for Olympic athletes' lodging in the short term, and privately developed mixed-income housing in the long term.<sup>79</sup> Karl Marx-Hof and other first-generation Viennese housing projects, on the other hand, remain part of that city's 'renters' utopia', a vast stock of municipally owned units recently (wistfully) held up in the *New York Times* as a model of governmental involvement in housing.<sup>80</sup> Vienna kept up its efforts to develop, maintain, and promote social housing policy after the Interwar period. Today, housing subsidies remain one of the most crucial tools for ensuring an adequate supply of affordable housing and neighbourhood facilities such as kindergartens, playgrounds, and open spaces. This user-centred system integrates social infrastructure with urban development.<sup>81</sup>

As the US faces an ever-mounting housing crisis, growing indignation among renting voters is causing policy makers and designers to travel once again, to Europe, for proven solutions to affordable and humane governmentally funded housing. First stop: Vienna.

Figure 21.  
Comparison of Vienna and Atlanta housing in terms of recreational features: (left) pool with children playing in the courtyard of Fuchsenfeldhof, courtesy of WStLA/Foto Gerlach; (right) pool with children playing at Techwood Homes, 1937, courtesy of Stuart A. Rose Manuscript, Archives, and Rare Book Library, Emory University, Charles F. Palmer Papers, box 167, folder 8

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## Notes and references

1. The Chancellor Engelbert Dollfuss, an 'Austrofascist' who dissolved parliament in 1933 and installed autocratic rule, was assassinated by Nazi agents on 25 July 1934, just as the Palmers arrived in the city. The European edition of the *New York Herald* newspaper, with the Dollfuss news highlighted, is in Box 37, Folder 3, Charles F. Palmer Papers, Stuart A. Rose Manuscript, Archives, and Rare Book Library, Emory University (hereafter Palmer Papers).
2. The late Dollfuss was no admirer of the *Gemeindebauten*. In February 1934, his militia attacked the housing blocks to oust armed socialist sympathisers. After three days of fighting, Dollfuss's troops defeated the Red Viennese resistance. See Eve Blau, *The Architecture of Red Vienna, 1919–1934* (Cambridge, MA: MIT Press, 1999), p. 2.
3. Approval found in Robert D. Kohn to C. F. Palmer, 'Approval of Projects No. H-148 (Techwood) and H-161 (University) of the Federal Emergency Administration of Public Works', 13 October 1933, Box 38, Folder 4, Palmer Papers.
4. Daniel T. Rodgers, *Atlantic Crossings Social Politics in a Progressive Age* (Cambridge, MA: Belknap Press of Harvard University Press, 1998), p. 4.
5. Tom Avermaete and Cathelijne Nuijsink, 'Architectural Contact Zones: Another Way to Write Global Histories of the Post-War Period?', *Architectural Theory Review*, 25.3 (2021), 350–61 (p. 354) <<https://doi.org/10.1080/13264826.2021.1939745>>.
6. The International Federation for Town and Country Planning and Garden Cities (IFTCPGC), founded in 1913, transformed into the IFHTP in 1926. See Renzo Riboldazzi, 'The IFHTP Congresses between the Wars: A Source for Studies on Modern Town Planning', *The Town Planning Review*, 84.2 (2013), 159–60.
7. Edith Elmer Wood, *Housing Progress in Western Europe* (Boston, MA: Dutton, 1923). For more on Wood's travels, see Eugenie Ladner Birch, 'Edith Elmer Wood and the Genesis of Liberal Housing Thought, 1910–1942' (unpublished doctoral thesis, Columbia University, 1976), chapter VI.
8. Louis H. Pink, *The New Day in Housing* (New York, NY: John Day, 1928), pp. 63, 188.
9. Catherine Bauer, *Modern Housing* (Boston, MA: Houghton Mifflin, 1934), p. I.
10. H. Peter Oberlander and Eva Newbrun, *Houser: The Life and Work of Catherine Bauer* (Vancouver: UBC Press, 2014), pp. 68–9.
11. Gail Radford notes that 'projects sponsored by [local low-profit or completely non-commercial developers] would have been more in keeping with the American ideology of grassroots initiative than ones originated and owned by a federal agency'. See Gail Radford, *Modern Housing for America: Policy Struggles in the New Deal Era* (Chicago, IL: University of Chicago Press, 1996), p. 94.

12. See Eric J. Sandeen, 'The Design of Public Housing in the New Deal: Oskar Stonorov and the Carl Mackley Houses', *American Quarterly*, 37.5 (1985), 645–67 <<https://doi.org/10.2307/2712614>>; and Richard Pommer, 'The Architecture of Urban Housing in the United States during the Early 1930s', *Journal of the Society of Architectural Historians*, 37.4 (1978), 235–64.
13. Rodgers, *Atlantic Crossings*, p. 4.
14. For a full discussion of the University Homes federal housing project for Black families and its European connections, see Christina E. Crawford, 'Black Community Building: New Deal Programmatic Advocacy at Atlanta's University Homes', *Journal of the Society of Architectural Historians*, 81.2 (2022), 213–34 <<https://doi.org/10.1525/jsah.2022.81.2.213>>.
15. 'The making of the Atlantic era in social politics [...] required new sorts of brokers to span the connection'; see Rodgers, *Atlantic Crossings*, p. 4.
16. Alessandro Porotto, 'Vienna's Höfe: How Housing Builds the Collective', in *Architecture and Collective Life* (London: Routledge, 2021), pp. 170–81.
17. See United States Housing Authority, *Urban Housing: The Story of the P.W.A. Housing Division, 1933–1936*, Bulletin No. 2 (Washington, D.C.: US Government Printing Office, 1936), p. 67; and *United States Housing Act of 1937 / Wagner–Steagall Act*, 50 Stat. 888, 1937.
18. Charles F. Palmer, *Adventures of a Slum Fighter* (Atlanta, GA: Tupper and Love, 1955), p. 4.
19. G. M. Stout, 'Against Public Housing', in *Proceedings of the Conference on Low Cost Housing* (Atlanta, GA: Curtiss Printing, 1935), pp. 75–84 (pp. 75–7).
20. Palmer, *Adventures of a Slum Fighter*, p. 102.
21. *Ibid.*, p. 61.
22. *Ibid.*, p. 101.
23. 'Europe – 1934 – Vienna', chapter from an early draft of Palmer, *Adventures of a Slum Fighter*, 1949, in Box 95, Folder 7, Palmer Papers.
24. 'The Housing Policy of the Municipality of Vienna' (Vienna, June 1933), typed translation and handwritten notes, both in Box 37, Folder 3, Palmer Papers.
25. Levying and Collection of Wohnbausteuer (Housing Tax) in Vienna, Box 37, Folder 3, Palmer Papers.
26. Palmer's typed notes in Box 37 Folder 3, Palmer Papers. This can be compared to data about dwellings owned or directly controlled by the City of Vienna in Charles O. Hardy, *The Housing Program of the City of Vienna* (Washington, D.C.: Brookings Institution, 1934), p. 58.
27. Radford, *Modern Housing for America*, chapter 2.
28. A 1922 racial redistricting plan proposed for Atlanta was deemed unenforceable in 1924 by the Georgia Supreme Court, but this did not measurably affect where Black residents could live in practice. See Robert H. Whitten, *The Atlanta Zone Plan: Report Outlining a Tentative Zone Plan for Atlanta* (Atlanta, GA: Atlanta City Planning Commission, 1922). See also the discussion in LeeAnn Lands, *The Culture of Property: Race, Class, and Housing Landscapes in Atlanta, 1880–1950* (Athens, GA: University of Georgia Press, 2009), pp. 152–4.
29. 'National Industrial Recovery Act (1933)', *National Archives*, 2021, p. Sec. 202 (d) <<https://www.archives.gov/milestone-documents/national-industrial-recovery-act>> [accessed 28 August 2023]. 'SECTION 201. (a) To effectuate the purposes of this title, the President is hereby authorized to create a Federal Emergency Administration of Public Works.'
30. The PWA Housing Division was founded to provide rental housing for non-military families, to be specific. During the First World War, the US government had built housing to support military industries.

31. Charles F. Palmer, Limited Dividend Project Application 'To Division of Housing, Public Works', 5 October 1933, RG 196, Project H-1101, Box 28, National Archives and Records Administration (NARA) College Park.
32. Horatio B. Hackett, 'Telegram to David D. Calhoun Confirming Architects' Contracts Signed for Techwood Homes and University Homes', 16 May 1934, NARA College Park, RG 196, Project H-1101, Box 26.
33. Horatio B. Hackett, *United States Federal Emergency Administration of Public Works Housing Division: Low-Rent Housing Unit Plans* (Washington, D.C.: PWA Housing Division, 1935), pp. 6–7.
34. Palmer was officially authorised to inspect eight Höfe: Lassalle-Hof, Metzleinstalerhof, Reumann-Hof, Am Fuchsenfeld, Fuchsenfeldhof, Spinnerin am Kreuz or George Washington-Hof, Karl Marx-Hof, and Sandeleiten, as well as two settlements: Siedlung Hermeswiese and Gartenstadt Am Tivoli. See Box 37, Folder 3, Palmer Papers.
35. *Der Karl Marx-Hof: Die Wohnhausanlage Der Gemeinde Wien Auf Der Hagenwiese in Heiligenstadt* [*The Karl Marx-Hof: The Residential Complex of the Municipality of Vienna on the Hagenwiese in Heiligenstadt*] (Vienna: Thalia, 1930), Box 37, Folder 3, Palmer Papers, quoted in Palmer, *Adventures of a Slum Fighter*, p. 64.
36. *Gedenkblatt und Programm der Feier der Namengebung des George Washington-Hofes in Wien am 26. Mai 1932*, Box 37, Folder 3, Palmer Papers, quoted in Palmer, *Adventures of a Slum Fighter*, p. 65.
37. 'Austria is Helping her Unemployed to Help Themselves' booklet, Box 37, Folder 3, Palmer Papers.
38. The architects' business cards are found in Box 37, Folder 3, Palmer Papers.
39. *Die Wohnungspolitik der Gemeinde Wien: Ein Überblick über die Tätigkeit der Stadt Wien seit dem Kriegsende zur Bekämpfung der Wohnungsnot und zur Hebung der Wohnkultur* [*The Housing Policy of the Municipality of Vienna: An Overview of the City of Vienna's Activities Since the End of the War to Combat the Housing Shortage and Improve Housing Culture*] (Vienna: Gesellschafts und Wirtschaftsmuseum in Wien, 1929), p. 44, Box 37, Folder 3, Palmer Papers.
40. Hardy, *The Housing Program*, pp. 10–1.
41. Manfredo Tafuri, *Vienna rossa: la politica residenziale nella Vienna socialista, 1919–1933* [*Red Vienna: Housing Policy in Socialist Vienna, 1919–1933*] (Milan: Electa, 1980), pp. 26–9.
42. Hans Bobek and Elisabeth Lichtenberger, *Wien. Bauliche Gestalt u. Entwicklung seit der Mitte des 19. Jahrhunderts* [*Vienna: Architectural Form and Development Since the Middle of the 19th Century*] (Graz: Hermann Böhlhaus Nachfolger, 1966), pp. 207–18.
43. This article was reprinted as an appendix in Camillo Sitte, *Der Städtebau Nach Seinen Künstlerischen Grundsätzen* [*Urban Planning According to Artistic Principles*] (Vienna: von Karl Graeser & K, 1909). The English translation is in George Roseborough Collins and Christiane Crasemann Collins, *Camillo Sitte: The Birth of Modern City Planning* (New York, NY: Rizzoli, 1986), pp. 303–21.
44. Otto Wagner showed his full urban vision for Vienna in *Die Grossstadt* (1911). The site plan and aerial perspective for the 22nd Vienna Municipal District project presented uniform residential blocks interspersed with monumental public buildings arranged along a central axis of green spaces. See also Otto Wagner, 'The Development of Great City', *The Architectural Record*, 31 (May 1912), 485–500.
45. Wolfgang Sonne, 'Dwelling in the Metropolis: Reformed Urban Blocks 1890–1940 as a Model for the Sustainable Compact City', *Progress in Planning*, 72.2 (2009), 53–149 (p. 77) <<https://doi.org/10.1016/j.progress.2009.06.001>>.
46. Palmer, *Adventures of a Slum Fighter*, pp. 63–4.

47. Report Development of Subsistence Homesteads and Living Quarters for Working Men in Austria, Box 37, Folder 3, Palmer Papers.
48. Blau, *The Architecture of Red Vienna*, p. 159.
49. Preston S. Stevens, *Building a Firm: The Story of Stevens & Wilkinson Architects Engineers Planners Inc.* (Atlanta, GA: Stevens & Wilkinson, 1979), p. 24.
50. Clifford M. Kuhn, Oral history interview of Preston Stevens, Sr., 1978, Kenan Research Center, Atlanta History Center, Living Atlanta oral history recordings <<https://album.atlantahistorycenter.com/digital/collection/LAohr/id/182>> [accessed 31 August 2020].
51. Viennese *Höfe* and modern *Siedlungen* in Frankfurt served as examples to highlight this opposition in Alessandro Porotto, *L'intelligence des formes: Le projet de logements collectifs à Vienne et Francfort [The Intelligence of Form: Projects for Multi-family Housing in Vienna and Frankfurt]* (Geneva: Métispresses, 2019).
52. 'The Housing Policy of the Municipality of Vienna' (Vienna, June 1933), typed translation and handwritten notes, Box 37, Folder 3, Palmer Papers.
53. Hardy, *The Housing Program*, pp. 64–5.
54. Comparison here is made with the 'Size and Equipment of Individual Apartments' section in Hardy, *The Housing Program*, pp. 62–6 and the analysis of dwellings in Porotto, *L'intelligence des formes*, pp. 184–92.
55. Katie Marages Schank, 'Producing the Projects: Atlanta and the Cultural Creation of Public Housing, 1933–2011' (unpublished doctoral thesis, The George Washington University, 2016), p. 118.
56. The United States began official participation in CIAM in 1930 when Richard Neutra attended the CIAM III conference in Brussels; see Eric Mumford, *The CIAM Discourse in Urbanism, 1928–1960* (Cambridge, MA: MIT Press, 2000), p. 52.
57. Martin Steinmann, *CIAM: Dokumente 1928–1939* (Basel: Birkhäuser, 1979), p. 36.
58. Catherine Bauer, *Modern Housing* (Minneapolis, MN: University of Minnesota Press, 2020), p. 222.
59. 'Standards for Low-Rent Housing (Planning Requirements Set up by the PWA Housing Division)', *The Architectural Record* (March 1935), 182–4 (p. 182).
60. Unit dimensions taken from original 1934 architectural drawings collected for the Historical American Building Survey (HABS) and accessible through the US Library of Congress <<https://www.loc.gov/search/?in=&q=Techwood+Homes&new=true&st=>> [accessed 6 October 2016].
61. 'Standards for Low-Rent Housing', pp. 182–4.
62. For more on the Frankfurt kitchen, see Susan R. Henderson, *Building Culture: Ernst May and the Frankfurt Initiative, 1926–1931* (Bern: Peter Lang, 2013), pp. 143–60.
63. Hackett, *United States Federal Emergency Administration*, p. 6.
64. *L'abitazione razionale atti dei congressi C.I.A.M. 1929–1930 [Rational Housing Proceedings of C.I.A.M. congresses 1929–1930]*, ed. by Carlo Aymonino (Padova: Marsilio, 1971), p. 82.
65. Schank, 'Producing the Projects', p. 106, original quote from [Anon.], 'A Traveling Exhibit of Housing Projects', *American City*, 48 (March 1933), p. 50.
66. Palmer, *Adventures of a Slum Fighter*, p. 65.
67. Typed translation of *The Housing Policy of the Municipality of Vienna*, Box 37, Folder 3, Palmer Papers.
68. Karl Marx-Hof photos, Box 163, Folder 17, Palmer Papers.
69. Blau, *The Architecture of Red Vienna*, chapter 8.
70. Maria Auböck, *Die Gärten der Wiener [The Gardens of Vienna]* (Vienna: Jugend u. Volk, 1975), p. 62.
71. S. Schmidt, 'Gärten Im Roten Wien/The Gardens in "Red Vienna"', *Topos*, 2 (1993), 92–9.



72. Hegemann lived and worked between Germany and the United States throughout the early twentieth century. For more on his transnational life, see Christiane Crasemann Collins, *Werner Hegemann and the Search for Universal Urbanism* (New York, NY: Norton, 2005), quote from Werner Hegemann, *City, Planning, Housing. Vol. 3: A Graphic Review of Civic Art 1922–1937* (New York, NY: Architectural Book, 1938), p. 93.
73. Cliff Kuhn, *Living Atlanta: An Oral History of the City, 1914–1948* (Athens, GA: University of Georgia Press, 1990), p. 48.
74. *Ibid.*
75. *Ibid.*, p. 45.
76. Avermaete and Nuijsink, 'Architectural Contact Zones', p. 358.
77. Stevens, *Building a Firm*, p. 26. Bauer's multi-year correspondence with Palmer can be found in Boxes 3 and 25, Palmer Papers.
78. The 604-unit Techwood Housing project was demolished in the late 1990s, and the 675-unit University Homes was entirely cleared by 2009. See Lawrence J. Vale, *Purging the Poorest: Public Housing and the Design Politics of Twice-Cleared Communities* (Chicago, IL: University of Chicago Press, 2013), chapter 3.
79. Edward G. Goetz, *New Deal Ruins: Race, Economic Justice, and Public Housing Policy* (Ithaca, NY: Cornell University Press, 2013), pp. 73, 100–10.
80. Francesca Mari and Luca Locatelli, 'Lessons From a Renters' Utopia', *The New York Times*, 23 May 2023, Magazine section <<https://www.nytimes.com/2023/05/23/magazine/vienna-social-housing.html>> [accessed 7 September 2023].
81. Léa Pelleteret, "'Housing is a Human Right, Not a Business": An interview with Dr. Kurt Puchinger, Senior Housing Expert, and former Director of Urban Planning for the City of Vienna, at Vienna's Rathaus', *Les Cahiers de la recherche architecturale urbaine et paysagère*, 'Matériels de la recherche' (2020) <<https://doi.org/10.4000/craup.5202>>.