*Enlarged view from Carleton E. Watkins 1882 image showing a set of documented vertical plank constructed dwellings, originally located above the Duwamish mud flats. Now known as the "Pioneer Houses" they were relocated to the Ballard Avenue Landmark District and preserved by Historic Seattle in 1976. (MOHAI)*

# Of Small Means: *Vertical Plank Dwellings Around Puget Sound & King County*

**A preliminary study of this unrecognized settlement era construction method**

***Paper Prepared by Katheryn H. Krafft with the support of 4Culture Preservation Special Projects Funding***

***May 23, 2015***

For the last several decades, architectural historians and historic preservationists have been actively identifying and studying historic buildings around Puget Sound by conducting historic resource surveys, preparing nomination documents and undertaking preservation projects. In doing so, our regional history and the material culture embodied by historic properties is now more fully recognized, understood and appreciated. Thankfully, these efforts have gradually moved beyond the scrutiny of only the most elaborate architectural examples to include common buildings and vernacular architecture; however, they have been limited by several crucial factors. Firstly, field survey methods primarily focus on extant properties that exhibit an intact exterior appearance; thus, historic properties that have undergone significant exterior alterations or exhibit poor physical integrity are often disregarded or overlooked. Secondly, during the typical field survey process field examination of interior spaces and historic building fabric or structural systems is rarely undertaken. Thirdly, properties that have not survived – due to their inherent fragility and eventual loss – cannot be scrutinized or documented. Thus, they are forgotten and given limited, if any, recognition.[1]

Our understanding of initial Euro-American settlement era architecture and construction activities around Puget Sound typically assumes the following scenario -- the arrival of settlers, like the Denny Party in 1851, and the earliest construction of log cabins followed rather rapidly by the establishment of steam-powered saw mills that precipitated the construction of "frame" dwellings. The general assumption is that with readily available milled lumber the early builders constructed *only* balloon or western platform frame dwellings. However, this scenario overlooks what an alternative construction method that utilized milled lumber, one which is now identified by various terms including "vertical plank", "box" or "boxed" construction.[2] The construction of dwellings that utilize a vertical plank structural system and date from Puget Sound's earliest settlement period -- and well into the early 20th C. -- has been substantiated by the identification of dozens of extant examples in the region.[3] However, the fact that few examples have survived in Seattle proper has contributed to a lack of inquiry into the subject and, to a greater degree, scholarly neglect of this subject.[4] The author recently undertook efforts to identify and examine additional examples of vertical plank constructed dwellings in Seattle and King County.[5] These efforts were undertaken in order to expand our understanding of Puget Sound architectural history and to encourage more comprehensive investigations into these modest vernacular buildings – built by men of small means -- an intriguing and unrecognized aspect of our regional history. *[Fig. 1]*

### *Description & Identification Challenges*

Vertical plank construction is a distinctly different construction method and structural system than the construction types - full log, hewn log or balloon-frame with milled lumber - generally identified with settlement era construction in the region. While vertical plank construction utilizes milled lumber it is distinguished from other mill construction in that the typical 1-1/2' to 2" thick plank members are laid vertically with members nailed or spiked to the face of a sill and cap (or plate) member in order to create a basic box frame.[6] These members may be simply finished on the exterior face with battens at the plank joints or clad with rustic horizontal or clapboard siding; thus, the

exterior conveys much the same appearance as balloon or western platform frame buildings. This was a relatively inexpensive, quick and easy method of construction; one that was certainly used for temporary buildings that could be easily dismantled and relocated as well as for the construction of more permanent, albeit small, dwellings. *[Fig. 2]*

Given that even relatively unaltered vertical plank dwellings tend to exhibit a similar exterior appearance to frame buildings they are particularly difficult to identify. However, the construction method and its inherent structural limitations generally define a standard building form that is an indicator of the structural system. The original building footprint is typically rectangular without any complex appendages or cutaway porches. Typical side-gable and front-gable roof forms are rarely taller than one to 1½ stories in height. The basic building form may include a one-story shed roof rear or a side-gable wing as well as front and/or rear porches. Due to the thinness of the original plank wall system, extant examples tend to have had multiple layers of exterior and interior finishes added to the original vertical plank walls out of necessity. Field identification is further complicated by the common installation of modern windows.[7] In order to properly identify this construction method close field examination must be undertaken; thus, the cooperation of property owners and access to interior spaces and the foundation system are essential.

***Background Research & References***

While vertical plank construction met the demand for quick, easy and inexpensive construction around Puget Sound, its origins are tied to the earliest European colonization of North America. Vernacular architecture scholars, Fred Kniffen and Henry Glassie suggest that the genesis of constructing buildings that exhibit closely set vertical wooden members is tied to a remote European concept; one that was transmitted certainly through English precedents and New France and, in turn, was displayed in the earliest buildings to be constructed in New England, Virginia, Louisiana and Spanish Florida.[8] By the mid-19th C., variations on the earliest plank construction methods would be built in locales along the Eastern seaboard and through the Mid-West to the American West, everywhere from Maryland, New York, and Pennsylvania to Nevada, California and the Oregon Territory.

Although 19th C. vertical plank or box construction in the United States has not been comprehensively examined, a few scholars have undertaken in-depth regional studies of particular note. The most complete analysis of the subject is a paper prepared by Michael Ann Williams “Pride and Prejudice: The Appalachian Boxed House in Southwestern North Carolina” that was published in *Winterthur Portfolio* (Winter 1990). Williams findings were based on sound vernacular studies methodologies and relied to some degree on historic resources survey work conducted in North Carolina in the 1970s and 1980s. She points out the various challenges of studying this subject -- the lack of accurate field identification, the inherent physical impermanence of these properties and social bias toward such modest dwellings – while making a convincing argument that during the nineteenth and early twentieth centuries vertical plank construction was a

common form of vernacular building in the Appalachian south and was much more widespread across the United States than has been previously recognized.[9]

The earliest scholarly efforts to understand vernacular architecture and recognize vertical plank construction in the Pacific Northwest were undertaken by the late Philip Dole.[10] Dole was an expert in early Oregon architecture and settlement patterns, and documented numerous Willamette Valley farms and homesteads using in-depth field examination methods. He identified three structural systems that were typically employed to construct settlement era buildings - hewn frame, balloon construction and the *box house*. He described the box construction method as:

> *Box construction, as it is called in Oregon, may be the most remarkable of the three types. As early as the others, it continued to be built until after 1900. It is a plank system with many antecedents on the East Coast of the United States. The wall system consists of only planks about two inched thick which are set vertically, one beside the next. Each plank is nailed to the sill below and at top to the plate. There are no posts or studs: its total finished thickness is only about three inches. Economy recommended its use because the wall requires one-third less material than any other system, and half as many nails.*[11]

Following in Dole's footsteps, Shannon Michal-Sardell Bell prepared a graduate thesis (University of Oregon 2006) that examined the subject to a greater extent. This study focused primarily on challenges associated with preservation and rehabilitation efforts and structural integrity issues due to the inherent fragility of the method. However, the author provided limited discussion related to the cultural diffusion of plank construction technology to the American West or the distribution of extant examples in the region.[12] A 2007 historic structures report prepared by Artifacts Architectural Consulting (Tacoma, WA) regarding the Miller-Brewer House in Rochester, WA includes a thorough description of the attributes of vertical plank construction (identified as Box Frame Construction) and acknowledged the scarcity of documented examples in the region.[13]

These prior studies provide context for the distinct ties between the presence of vertical plank construction and place-specific economic, environmental and social conditions. Given the widespread range of examples of vertical plank construction throughout the United States and the American West, there appears to be at least one broadly unifying factor -- the commercial production of power-sawn planks and boards and the availability of inexpensive milled lumber. Lumbering was one of the oldest and most formative industries in the history of Puget Sound and Western Washington. In 1828, the Hudson's Bay Company (HBC) at Fort Vancouver established the first water-powered sawmill in the Pacific Northwest as HBC anticipated a profitable export market of lumber to the Sandwich Islands (Hawaii) and Spanish mission sites. Early sawmills on Puget Sound were initially powered by water wheels; thus, they were located adjacent to rivers or larger streams. The Simmons sawmill at Tumwater, which opened in 1847, was the earliest mill operation on the South Puget Sound. However, by 1853, the lure of abundant forests combined with accessible natural harbors and the high demand for lumber caused by the California gold rush led to a boom in the establishment of lumber mills around Puget Sound. By 1853, steam-powered sawmills were operating on Elliott Bay (Yesler's

Mill, Seattle), at Alki (West Seattle), Commencement Bay (Tacoma), Bellingham Bay, Olympia and Port Gamble. By 1860, over two dozen mills, mostly owned by San Francisco-based investors were operating around Puget Sound.[14]

***Illustrated Trade Literature & Cultural Diffusion***

Given widespread 18th and early-19th C. antecedents, it is a logical assumption that knowledge of vertical plank construction methods would have been transmitted to the American West and Puget Sound as part of an immigrant builder's skill set. While it is likely that trained carpenters would have been familiar with this construction method, it was certainly diffused via another influential means – the numerous mid-19th C. architectural pattern books, magazines and builders' manuals that were marketed directly to migrating settlers and foreign immigrants.

The earliest period of Euro-American settlement in Seattle and King County coincided very closely with the advent of architectural plan and pattern books in the national popular press. As settlers sought to build permanent dwellings around the Puget Sound region, like local builders and carpenters, they would have been able to acquire standardized plans (or building patterns) and specifications from a variety of trade literature sources.

One of the earliest illustrated references to "upright" plank construction appeared in the *The Genesse Farmer* published in January 1849. Under "Rural Architecture" this issue included floor plans and a rendering for a "Cheap Cottage" said to be suitable for tenants, laborers and freeholders. The author argued that a comfortable and picturesque dwelling could indeed be constructed with limited expenditure and stated:

> *In planning our dwelling we men of small means find it prudent to consult more the length of our purses, than our desires for the ornamental or even the most perfect convenience.* [15] *[Fig. 3]*

Illustrated was a one and one-half story, side gable cottage measuring approximately 16' x 19' with a one-story 12' x 12' gabled-roofed "wood-house" wing at the side gable end. It also featured a one-story front gable projection measuring 4' x 10' (to house an entry mud room) at the façade. In addition to a small entry hall, the first floor housed a front parlor space open to the cooking stove and pantry, stairs to the upper floor, a cellar level and a door leading directly to the wood-house. The second floor level housed two bedrooms with under-eave closets. The author reported that it could be built at a cost of $150 to $250 according to the finishes and cost of local materials, and further clarified that it was "built of rough, upright planks, battened, (it is also battened on the inside, and the laths nailed to the battens)." Despite the somewhat limited space and modest expenditure, he noted that various design elements including a pitched roof, projecting water-table, a plain though prominent cornice, rough cased windows and varied lime-washed exterior finishes served to create a "pleasing" and somewhat "gothic" appearance.

Of particular note are various publications authored by Charles P. Dwyer, an Irish immigrant who settled in Canada in 1844. By 1847 he had migrated to Buffalo, NY

where he appears to have been employed as an architect, reporter and insurance agent.[16] In 1856 he published his first builder's manual entitled *The Economic Cottage Builder: Or, Cottages for Men of Small Means.* This illustrated 127-page volume included 15 designs for dwellings "adapted to every locality, with instructions for choosing the most economical materials afforded by the neighborhood."[17] He identified the various "Modes of Building" that utilized timber or wood including rough log, hewn log, frame, plank, and board-and-plank on end. However, his terminology does not entirely conform to our modern understanding.[18] *[Fig. 4]* He describes the "Plank, or Balloon" mode as:

> *….for cheapness and strength, this mode of wooden building surpasses all others. It is so simple in construction, and yet so compact in form and pretty in appearance, that it can not fail of winning patrons. The elements are, a moderately heavy cap and sill, and sides of planks nailed to both. The joints throughout these plank walls are covered with slips, three inches wide each.*[19]

He further instructed the builder to lay one inch thick horizontal boards over the exterior slips and paint the exterior with lead white and sand to create the appearance of sandstone.[20] He also clarified that the term "balloon" was given to this kind of wooden structure as an indication of its apparent lightness and fragility. He contended that if properly built "...the plank- house is all one complete box, not dependant in any joints" and it would possess more actual strength than earlier modes of wood construction. Dwyer noted that plank construction allowed for some variation in floor plans; however, any deviation from the rectangular form will result in added expense and he recommended against it. He included a rudimentary plan and elevation for a 24' x 18' side-gable cottage that he stated could be "...laid up, by a carpenter and two assistants, in very few days" and with milled lumber readily available could possibly be built for as little as $150.[21] The text indicated that a kitchen wing could be attached.

During the subsequent twenty years after the publication of this manual, Charles P. Dwyer reportedly made several trips to the American West to observe settlement era construction and gain first hand knowledge.[22] In 1872, Dwyer published an updated version of his initial 1856 treatise. This new manual entitled *The Immigrant Builder* was specifically directed at the ever-increasing number of western migrating settlers and immigrant farmers and workmen. It was widely sold under that title (and as *The Homestead Builder: Practical Hints for Handy-Men*) in Europe and North America. Reportedly, it went through at least ten editions before the end of the 19th C.[23]

*The Immigrant Builder* provided significantly more advice and descriptive text than *The Economic Cottage Builder.* Again, Dwyer described various methods of wood construction including a thorough discussion of log house construction using either full logs, hewn logs, upright vertical logs or vertical log slabs. A chapter was devoted to an in-depth description of how to construct a "Balloon-House" and, again, the term "balloon" was used to describe vertical plank construction.[24] The author emphasized the ease with which this mode could be constructed and the fact that a comfortable home could be rapidly built while saving time, labor and money. Described as a "cheap" mode of construction, Dwyer recommended various interior and exterior treatments that are reflected in extant examples around Puget Sound and King County.

***Puget Sound Military Posts & Settlement Communities***

American settlement of the northern portions of Oregon Territory (known as Columbia) grew rapidly after 1846 when the 49th parallel was established as the boundary between conflicting British and American territorial claims and the period of joint occupancy ended. An immediate consequence of this agreement was the increase in conflicts between settlers and the native populations. By mid-1849, rudimentary U.S. military posts began to be established around Puget Sound in order to provide protection and to reinforce the American presence. Over the following dozen years and leading up to the Civil War, numerous frontier blockhouses, rudimentary forts and what were considered more permanent military posts with interconnecting military roads were constructed.

Remnants of these early military posts are among the oldest extant and intact examples of vertical plank construction to be found around Puget Sound. Of particular note is the Capt. George Pickett Residence, associated with the short-lived Fort Bellingham, which was constructed in 1856: its principal original wing exhibits a wall structure composed of a single layer of vertical planks following typical "box" or vertical plank construction methods.[25] At Fort Steilacoom a permanent post, composed of some 25 buildings, was constructed in 1858-59 under the supervision of Lt. August Kautz, Acting Assistant Quartermaster.[26] Four extant original Officer's Quarters dwellings remain on the site; they exhibit a variety of unusual settlement era construction methods including conventional balloon framing (infilled with brick) using nominal 2" x 4" wall studs placed at 24" on center, mortise and tenon joinery and vertical plank construction at rear wings – or back buildings – that may have primarily housed cooking or utility spaces. *[Fig. 5]*

American Camp, which is now part of the San Juan Island National Historical Park, includes the remnants of another early post that was also constructed under the command of Capt. George Pickett and initially known as Camp Pickett. Constructed in 1857-60, the post was composed of eighteen buildings including the extant dwellings known as HS 11 - Officer's Quarters, HS 10 - Officer's Quarters and the Laundresses House. *[Fig. 6]* All three of these buildings are particularly intact and illustrative examples of vertical plank construction. Researchers believe that Captain Pickett undertook the construction of the post using building materials (and possibly entire buildings) salvaged from Fort Bellingham. The original four-room, central hall-parlor wing of HS 11 - Officer's Quarters was apparently constructed and occupied at the current location in 1857. The exterior of the one-story, side-gable, vertical plank structure is clad with horizontal weatherboard (a.k.a. clapboard). All interior spaces appear to have been finished with battens on the interior sides of both the vertical plank exterior walls and the vertical plank interior partitions. Interior wood surfaces were originally finished with whitewash and/or paint and some were subsequently clad with multiple layers of wallpaper, the initial layer being laid directly over interior battens.[27]

By the mid-1850s milled lumber *and* influential pattern books, magazines and builders' manuals were certainly available to Army quartermasters, itinerant carpenters and

homesteaders as construction decisions were made. Numerous extant settlement era dwellings located throughout the Puget Sound region serve to further demonstrate that vertical plank construction methods were employed by the earliest settlers for the construction of what were - in fact - permanent homes.[28] *[Fig 7]* These extant dwellings exhibit the prototypical building forms and exterior features emblematic of vertical plank construction, including: main building footprints that are rectangular without complex appendages or cutaway porches; typical side-gable and front-gable building forms that are rarely taller than 1½ stories in height; one-story shed-roof rear or side-gable wings as well as projecting front and/or rear porches. Several of the known examples were embellished with popular picturesque Gothic Revival details or finished with exterior treatments drawn from Greek or Classical Revival stylistic influences, while others are modest vernacular forms. A *partial* list of known extant examples includes to following properties.[29]

- Daniel R. Bigelow House, Olympia (1854)
- Capt. Thomas Coupe House, Coupeville (c.1854)
- Capt. George Pickett Residence, Bellingham (1856)
- Officer's Quarters (HS-10 & HS-11), American Camp – San Juan Island (1857)
- Laundresses House, American Camp – San Juan Island (1857)
- Officer's Quarters (2 dwellings), Fort Steilacoom (1858)
- Nathaniel Crosby III House, Tumwater (1858)
- Ferry House, Ebey's Landing, Whidbey Island (1860)
- Miller-Brewer House, Rochester (c.1860)
- Ruddell House, Lacey (1866)
- Horace Tucker House (aka Charles W. Pink House), Port Townsend (c.1867)
- Thomas Griffith House, Coupeville (1869)
- Alden H. Steele House, Olympia (1870)
- John Silsby House, Olympia (c.1883)
- Thomas McNair House, Burton, Vashon Island (1884)

***Mining Communities & Company Towns - Cultural Diffusion***

There appears to be a clear correlation between vertical plank construction and the construction of dwellings in late-19th and early 20th C. mining communities and company towns elsewhere in the nation, particularly in the American West. Aside from the ease of construction and economic advantages, the use of this construction method had a very practical purpose in coal mining towns that were often company-owned. As coal mine veins were played out, a mining community could be relocated and company-owned or miner-owned houses could be relatively easily dismantled and reconstructed elsewhere – which was the case with the establishment of Black Diamond, WA. Furthermore, milled lumber of the appropriate plank width and lengths would have been readily available given its dual use in the construction of industrial sheds as well as cribbing as part of the mining operations.

As previously noted, Michael Ann Williams documented vertical plank construction in Appalachia dating from the latter half of the 19th C. and into the 20th C. and

acknowledged evidence of its widespread use in eastern coal-mining towns from Pennsylvania to Alabama.[30] A common historic house type in the coal mining regions of Appalachia was the "Jenny Lind" - a one-story, box-constructed house built with a simple post and pier foundation.[31] These family dwellings were often a side-gable form that utilized a vertical plank wall construction method and board-and-batten cladding, the simplest and cheapest method of weatherizing the building. The correlation between the modest plank dwellings commonly built in Appalachian coal company towns and those constructed in mining communities and company towns in the American West, including those in King County, is worthy of greater scrutiny.[32]

The box or vertical plank method, which allowed for the rapid and easy construction of a small dwelling, was certainly a technique employed during the California Gold Rush era after 1849. Initially, as hundreds of thousands of fortune seekers migrated into the California gold country, the typical miner's dwelling was a haphazard structure often built of logs and clay, a crude semi-subterranean dugout, or most likely canvas placed over a wooden frame, pine boughs, thatch or piles of stone.[33] However, an examination of historic and current photographic images of "Miner's Cabins" located in California and Nevada appears to document the presence of dwellings that exhibit the proto-typical building form, scale and design elements, including the ubiquitous application of board and batten treatments associated with vertical plank construction.[34] A well-preserved and notable example of known vertical plank construction is the James W. Marshall Cabin constructed in 1863 in Coloma, El Dorado County, California. Now part of Marshall Gold Discovery State Park, it exhibits a one-story front gable roof form, prototypical board and batten cladding and multi-pane six o/six wooden window sash. Studies of the California Gold Rush tend to focus on the social history and specific material culture questions. Definitive studies of the "shanties" and simple wooden dwellings associated with the thousands of people who flooded California during this era have not been undertaken. Investigations into potential correlations between gold rush era dwelling construction and the diffusion of vertical plank construction methods to Puget Sound -- via migrating miners -- would also be a worthy undertaking. *[Fig. 8]*

***Coal Company Towns and Dwellings in Newcastle, Issaquah & Black Diamond (King County, Washington)***

The earliest substantial coal mining activity in King County began in 1863 coal when California and eastern investors were attracted to the region and established mining operations near Newcastle in East King County. Coal was initially bagged and hauled by wagon to the southern end of Lake Washington where it was barged and portaged via Lake Union to a coal bunker on Elliott Bay near the foot of Pike Street. In 1870, the Seattle and Walla Walla Railroad laid tracks to Newcastle, after which coal could be efficiently hauled to port by rail. The company towns of Newcastle and Coal Creek grew up around the mines, and in the 1880s they comprised the second largest community in King County. As the county's earliest sizable industry, these coal mining operation were a major factor in the growth of Seattle from a small village to a major port city in the 1880s. Very few remnants of the company town of Newcastle and the historic mining activity have survived since mining operations ceased in the early 1960s; however,

Pacific Coast Coal Company House No. 75 (Baima House) has survived and is an exceptional example of vertical plank construction. Constructed c.1880, it exhibits the prototypical building form and exterior features indicative of both vertical plank construction and modest coal company housing types. It is distinguished by simple board and batten cladding, a small rectangular main building footprint, a side-gable building form that is one story in height with a small shed-roof rear wing and a full width front porch. A c.1916 historic image of the nearby mining community of Issaquah shows numerous small dwellings that exhibit similar typical features of plank construction. *[Fig. 9a]*

The former company town of Black Diamond has survived to a greater degree and retains additional examples of company town housing. It was established in the mid-1880s due to the relocation of the entire Black Diamond Coal Company enterprise from Nortonville, California - in the East Bay Contra Costa County. The Black Diamond Coal Company had been incorporated in 1861 and by 1880 it was owned by powerful California-based financiers who controlled various diversified companies associated with mining, rail transportation and shipping. The ever-increasing market for bituminous coal, in conjunction with increased East Bay production costs, prompted the company to acquire additional land in order to mine high-grade coal. Between 1882 and 1884, the company relocated all of its equipment and some of its personnel to Black Diamond before eventually resettled a large group of former Nortonville employees to the new townsite. Commercial coal production and shipment via a new railroad line began in late 1884. An estimated 200 to 300 individuals are believed to have migrated to Black Diamond once the railroad line was complete and the company town was reestablished. These were primarily foreign-born Welsh coal miners and mine managers along with some Italian laborers.

The Luigi and Aurora Pagani House (c.1896) is an already well-recognized example of vertical plank construction that exhibits the side-gable roof form and other prototypical design features.[35] At Black Diamond Company employees were typically responsible for the design and construction of their individual dwellings and the subtle variations in size, form and finish materials of other extant historic dwellings appear to verify this assertion.[36] It is also known that the Black Diamond Company employed a number of carpenters, some of whom may have been available for hire, to construct company-owned buildings associated with the mining operation and other community needs.[37] The utilitarian structures that housed mining operations were typically clad with board and batten materials similar to those exhibited by the Pagani House and other dwellings documented by WPA photographers, thus, the typical plank materials were readily available. *[Fig. 9b]*

The homogeneous character of the dwellings suggests that the company may have provided home builders with a palette of standardized construction materials including two-over-two window sash, turned posts, square spindles, rustic siding, cedar shingles in addition to the vertical boards and battens. While subtle variations in size and form of individual houses suggests varied spatial needs and personal preferences, exterior finishes are indicative of varied economic means. For the least expensive houses, the vertical

planks were simply finished on the exterior with a batten to fill the gap between the vertical planks and the interior the face of the planks would remain visible and be painted, as is the case at the Pagani House. A more expensive dwelling would include rustic siding laid over the vertical boards (which still functioned as skirting), while the interior face of the planks may remain visible or finished with wall paper. The most expensive construction method would be to clad not only the exterior, but also the interior faces with horizontal boards and then add wallpaper or oilcloth decorative finishes. The latter method not only made the house more weather tight and sanitary, but also increased the structural strength of the perimeter wall system and the interior partitions. While in depth interior investigations of extant early miner's dwellings in Black Diamond have yet to be conducted, an examination of historic property tax records and historic photographs certainly suggests that plank wall construction may have been widely used to construct much of the company town. [38]

***Gabriel Soderman and Dwellings in Preston & Fall City (King County, Washington)***

An interesting cluster of dwellings that were constructed using the vertical plank method are located in the former mill town of Preston (est. 1892) in the foothills of the Cascade Range. By 1903, 75 families lived in Preston, mostly involved with the Preston Mill Company operations. The mill company built many of the town buildings including modest workers' dwellings and until the Great Depression many of the dwellings (located near the mill) were still owned by the company. Several extant dwellings are known to have been constructed by Gabriel Soderman (1879-1957). Soderman was a Finnish-born immigrant who migrated via Sweden and arrived in the United States in 1899, at the age of 20. Mr. Soderman appears to have resided in Minnesota prior to settling with his family in Preston c.1904. According to a knowledgeable informant -- his grandson Earl Soderman -- Gabriel Soderman grew up on a farm with an agrarian background and only became a house carpenter after his immigration to America.[39] [Fig. 10]

Gabriel Soderman identified himself as a "House Carpenter" in the 1910 U.S. Census. According to Earl Soderman, he constructed numerous vertical plank dwellings during this period, many for the mill company and its employees. In c.1904, he is known to have built his own family home on the Preston- Fall City Road; although modernized it exhibits evidence of vertical plank construction and remains in Soderman family ownership. Reportedly, he built at least three other nearby residences located on the opposite side of the Preston-Fall City Road; all of which are also reported to exhibit vertical plank construction utilizing 2" thick planks.[40] Based on the informant information, field observations and historic photographs there appear to be several other extant historic dwellings in the community that possess very similar building form and design attributes. While conjecture, it appears highly likely that Soderman built additional vertical plank houses that may be extant in Preston and the vicinity.[41]

A well-preserved and recognized vertical plank constructed dwelling is located in the nearby community of Fall City.[42] It exhibits design attributes and construction materials that are extremely similar to the houses located along the Preston-Fall City Road, which are known to have been constructed by Gabriel Soderman. The Charles and Minnie

Moore House was constructed c.1905 and is an exceptional example of vertical plank construction, which utilized 2" x 11" vertical plank members. Measuring 28' x 31' it exhibits the same basic footprint, roof form, dormer and porch designs and window details as the Soderman houses located in Preston. Building materials for the Moore House are believed to have been advanced to the Moore family by the Preston Mill Co., which further suggests that Gabriel Soderman played a role in its construction. His work as a "house carpenter" provides clear evidence related to the persistence of this construction mode into the 20th C. Further inquiry and research related to Gabriel Soderman and the scope of his construction of vertical plank dwellings would be a worthwhile effort. *[Fig. 11-12]*

***Preliminary Field Examination Findings in Seattle, Washington***

The settlement-era townsite of Seattle was established in 1851 at the mouth of the Duwamish River and immediately adjacent the shore of Elliot Bay. The town developed gradually. By the late 1880s it included a substantial commercial district and industrial and shipping facilities that were clustered near Yesler's Mill, Puget Sound's first steam-powered mill that had been established at the foot of Mill Street in 1853. Virtually all of these facilities were destroyed by the great fire in 1889. The substantial settlement era residential district, which extended northward and uphill above the bay, survived the fire.[43] However, this entire geographic area was subsequently overtaken by modern commercial development as the business district expanded rapidly northward after 1902 and suburban residential expansion occurred. Thus, recent efforts to identify extant examples of vertical plank dwellings were focused on the few remaining enclaves of early residential development along Yesler Way and in the older Seattle neighborhoods of Georgetown, Ballard and near Alki Point, where windshield surveys utilizing insurance maps were undertaken.[44]

Research methodology also relied an examination of City of Seattle historic resources survey and inventory data as well as current and historic King County tax records in an effort to identify older dwellings that exhibited the prototypical exterior form and other attributes indicative of plank construction. Direct outreach to knowledgeable historians and preservation professionals was also undertaken. As potential examples were identified, the current property owners or representatives were contacted and interior field examinations were scheduled. Miraculously, three notable extant examples of vertical plank construction were confirmed through field examination and subsequent preliminary research efforts.[45]

***Relocated "Pioneer Houses" in the Ballard Neighborhood, Seattle, WA***

A set of two very similar dwellings that are commonly known today as the "Pioneer Houses" (now located at 5341 Ballard Avenue NW in the Ballard Avenue Landmark District) appear to be the oldest intact residential properties remaining in Seattle. They exhibit highly intact historic building fabric and exceptionally well-preserved vertical plank construction structural systems. [46] According to historic photographs they were constructed sometime prior to 1880 and given tax records - as well as extant historic

building fabric – they could date to the late 1850s. They were originally constructed as a set on a site within the geographic area where the earliest significant Euro-American settlement occurred adjacent to the mouth of the Duwamish River. Most interestingly, the original site was within the donation land claim and subsequent plat owned by one of Seattle's most important and influential pioneers - David S. and Catharine Maynard. The original building lots are known to have remained in the ownership of David S. Maynard and his wife Catharine until 1871.[47] The houses are well documented at their original tidelands location in historic images dating to the early 1880s, as well as on subsequent Sanborn insurance and Baist's real estate maps.[48]

The structural/exterior walls and interior partitions are constructed with 1 to 1-1/2 inch thick vertical planks of varied widths, which are clad on the exterior face with dropped siding. The interior faces are clad with horizontal boards (which were stripped of wallpaper in 1976); however, the vertical plank structural members are clearly visible throughout the current interior spaces and within the attics. The houses both exhibit a typical small rectangular 23' x 25' footprint, one & ½ story side-gable roof form with a rear shed wing and include intact interior stairwells. The houses each originally included a central hall passage plan -- a typical settlement era plan type -- however some partitions were removed in order to adapt the houses as part of the relocation effort. Furthermore, Building 2 (moved from Lane Street to the rear of the current site) exhibits visible portions of the original brick masonry chimney, which was preserved and stabilized as part of the relocation work. The brick masonry units suggest a potential early settlement construction date, as they are quite similar to the under-fired, very orange and soft brick that was fabricated on-site at Fort Steilacoom during its construction in 1857-58.[49] *[Fig. 13-16]*

***The Maynard- Hansen House near Alki Point, Seattle, WA***

As previously noted, efforts to identify intact examples of vertical plank construction within Seattle have proven to be *very* challenging given various factors. However, one addition - albeit heavily altered - example of vertical plank construction has been identified in West Seattle, near Alki Point. Due to the high degree of both exterior and interior alterations, extensive concealed item investigation was required in order to identify the plank wall system. Like the Soderman houses in Preston, virtually all of the historic exterior and interior building fabric has been removed and/or entirely encapsulated by modern cladding and finish materials.

The property is currently located at 3045 64th Avenue SW; it was relocated to this site in 1915. As originally constructed prior to 1864, it was located nearby on Alki Avenue with the gable end oriented toward Elliott Bay. Ironically, this property also has direct associations with David S. and Catharine Maynard, two of Seattle's most important and influential pioneers and despite the extensive alterations possesses some historic significance. According to various sources, in 1857 David S. and Catharine Maynard traded a significant portion of their original townsite plat with fellow pioneer Charles C. Terry for 319 acres of farmland at Alki Point. They had built a farmhouse on the property (c.1854, prior to the purchase) and took up farming; however, without much success. In

1858, reportedly while they were away conducting Indian agent affairs elsewhere on Puget Sound the original farmhouse burned to the ground. Supposedly, the Maynards then returned to the Seattle townsite where they established a hospital. Despite this contention, they appear to have had a new home constructed at Alki and continued to reside there for a brief period. Reportedly, the subject dwelling was in place at its original Alki Avenue site in 1864 when the property was purchased by Hans Hansen (famous Seattle restaurateur Ivar Haglund's grandfather) and his business partner and brother-in-law, Knute Olsen.[50] A series of historic photographs dating from the early Hansen ownership era through 1953, serve to confirm the history and evolution of the building as it originally appeared and as it was relocated, altered and remodeled. [Figs. 14-15]

Due to the level of exterior alteration, the original front-gable house is virtually unrecognizable as an extant mid-19th C. dwelling. One of the two shed side wings was removed when the house was relocated to the current site in 1915. The original clapboard cladding appears to have been encapsulated by both a layer of machined shingles and modern vinyl siding. Most window openings have been enlarged and all original multi-pane sash members have been removed and replaced by modern vinyl windows. The original floor plan appears to have been a side-parlor arrangement; the only remnant being the main entry door opening as all of the first floor partitions have been replaced or encapsulated with most walls having been furred out for modern plumbing and electrical systems. *[Fig. 17]*

In order to identify the vertical plank structural system, the author examined the foundation structural members and the bottom edges of encapsulated perimeter walls from within a -- rather constricted -- crawl space under the main original wing. Field examination revealed that the floor system is supported by large 10" deep x 12" wide hewn cedar beams and perimeter girders, several of which retained barked edges. The bottom edges of varied width planks (approx. 1-1/2" thick) were observed at the exterior face of the (current) west wall of the original main wing. The vertical plank construction method was also revealed at one interior location on the upper floor where an interior partition had been furred out within a modern bathroom space and a medicine cabinet cavity created within the wall. Behind the cabinet, which could be removed, it was possible to observe the face of vertical planks with a thin layer of wallpaper laid directly over the planks. *[Fig. 18]*

***Correlation with Nineteenth Century Native American Housing Types***

A particularly intriguing observation is the apparent correlation between vertical plank construction and the housing types constructed by and/or for the native peoples of Puget Sound after Euro-American settlement. Traditional plank constructed structures – using wide split and adzed cedar planks placed both horizontally and vertically – were an elemental feature of coastal settlement communities throughout the various Northwest Coast native cultures. Salish-speaking people around the Olympic Peninsula and Puget Sound are known to have continued to build a wide variety of large communal houses after European contact including several examples that were clad with vertical planks and in some cases exhibit board and batten treatments. As the traditional shed roof building

form was partly supplanted by the gable form, the use of vertical plank members appears to have been more broadly adopted. By 1900, very few of these large traditional Salish houses had survived as native people began to occupy what were referred to as “Boston houses” constructed with milled lumber and built more in the style of 19th C. American settlers. In urbanized areas, like Seattle, Victoria and Vancouver, native people also mostly lived on the peripheries in shantytowns composed of small shacks built from cast-off lumber.

An examination of historic photographic images taken in the late 19th and early 20th C. indicates the copious use of vertical planks and the application of board and batten treatments for the construction of dwellings associated with local native peoples, including a well-documented shack built for Chief Sealth’s daughter Princess Angeline before 1890. Like Euro-American settlers during this era, native peoples would have also turned to methods of construction that were cheap, quick and easy to build. However, the correlations between vertical plank construction and Native American housing types during this era may be more clearly tied to deep cultural tradition and their knowledge of wood plank construction methods. Inquiry into these correlations and the interplay between settlement era construction and native cultures is certainly worthy of further scrutiny. *[Fig. 20 & 21]*

These preliminary endeavors to identify extant examples of vertical plank constructed dwellings in Seattle and King County were undertaken in an effort to acknowledge what has been a neglected aspect of Puget Sound architectural history; one which is certainly deserving of further inquiry and recognition. The presence of numerous extant vertical plank dwellings constructed around Puget Sound -- which is reinforced by intriguing historic images and influential literary sources -- certainly suggests that this construction method was a distinct form of vernacular building in this region and - like elsewhere in the nation - it was more common than has been previously acknowledged. While vertical plank construction was basically a cheap and expeditious construction method essentially marketed to “men of small means” – these dwellings represent an important aspect of our regional history and are a fragile part of our cultural landscapes. Most certainly, additional extant examples are present in King County and around Puget Sound -- if only comprehensive efforts were made to identify and document them. A variety of worthwhile cultural diffusion questions related to the influence of trade literature, the roles of migrating gold miners and influential coal-company housing types as well as correlations with Native American building traditions ought to be further examined. While these dwellings have been inherently lost or encapsulated – due to their fragility and modest character - they should not be forgotten. They ought to be more fully identified, understood and appreciated.

[1] See Michael Ann Williams. "Pride and Prejudice: The Appalachian Boxed House in Southwestern North Carolina" *Winterthur Portfolio*, Vol.25, No.4 (Winter 1990) for a discussion of this basic trend.
[2] This method is also referred to as "single wall" "box frame" and "studless" construction; however, for the purposes of this paper the more descriptive term "vertical plank" shall primarily be used.
[3] Since the late 1970s, scholars and researchers have been identifying extant examples of vertical plank construction in King County, around Puget Sound and elsewhere in the region. See King County Landmark Nomination documents for PCCC House #75 (Baima House) – Newcastle, WA, Luigi & Aurora Pagani House – Black Diamond, WA, Charles & Minnie Moore House, Fall City, WA. Others examples are noted elsewhere in this report.
[4] Until recently extant examples of vertical plank construction within Seattle, the largest municipality and among the oldest cities in the region, have been virtually unrecognized. This fact is entirely reasonable given the high style architectural bias of early survey work, the inherent challenges of field identification and the historic physical development of the original Seattle townsite, which grew rapidly after 1902 and had been absorbed into a modern urban center by 1930.
[5] This report is the result of a limited research and study effort. It was prepared in an attempt to provide contextual information regarding vertical plank construction, identify numerous known examples and encourage additional research.
[6] This is typical of extant local examples known to the author. Stephen B. Jordon and Shannon Bell acknowledge examples that are known to have 3" thick planks and extend a full two stories. Jordon noted that the earliest examples used wooden pegs and had sills and plates that were rabbetted, ploughed or mortised to secure the vertical planks.
[7] The author has identified several examples [noted elsewhere in this report] that have been "encapsulated" due to thermal necessity, electrical and plumbing needs and the modernization of the interior spaces.
[8] Kniffin, Fred & Glassie, Henry. "Building in Wood in the Eastern United States: A Time-Place Perspective" *Geographic Review*, Vol.56, No.1 (Jan. 1966), pp. 40-66.
[9] Williams also documented the varied methods of securing planks and corner posts and the range of exterior cladding treatments.
[10] Phil Dole (1921-2006) became a University of Oregon Professor of Architecture in 1954 and went on to teach innovative courses in design, settlement landscape and preservation technology and was instrumental in the establishment of the first Historic Preservation graduate program on the West Coast.
[11] Vaughn, Thomas and Virginia Guest, ed. "Farmhouses and Barns of the Willamette Valley" *Space, Style and Structure: Building in Northwest America – Vol.1*, pg. 98.
[12] Shannon Michal Sardell Bell, "The Preservation of Vertical Plank and Box Constructed Buildings in the Pacific Northwest" University of Oregon (Thesis M.S. Historic Preservation, 2006).
[13] This discussion is drawn from information included in *Bigelow House Shed Condition Assessment* (July 2012) and *Miller-Brewer House Historic Structures Report* (August 2007) prepared by Artifacts Consulting Inc. Tacoma, WA.
[14] Ibid.
[15] Ed. David Lee and D.D.T. Moore, *The Genesee Farmer* (Vol. X- 1849) Rochester, NY January 1849, page 20. *The Genesee Farmer* was a highly popular periodical devoted to the subjects of agriculture and horticulture as well as the domestic sciences and rural economy. It was founded in 1831 by Luther Tucker of Rochester, New York: Tucker was subsequently responsible for the publication of several other influential agricultural publications. *The Genesee Farmer* was one of the earliest publications of its kind in America. It was available as a weekly paper or as a monthly journal and covered topics ranging from farm buildings and implements to domestic animals and planting materials. By 1839 there were over 19,000 subscribers and it remained in regular circulation until c.1865.
[16] Roger W. Moss. Biography from the American Architects and Buildings database. (2006) www.americanbuildings.org
[17] Charles P. Dwyer, *The Economic Cottage Builder: Or, Cottages for Men of Small Means* Buffalo, NY, Wanzer, McKim & Co. (part of title page text).
[18] "Frame" is understood to be the traditional heavy timber structural system. Rather confusingly, "Plank" construction is referred to as "Balloon" a term that came to describe a subsequent and broadly used light stud framing method.

[19] Charles P. Dwyer, *The Economic Cottage Builder: Or, Cottages for Men of Small Means* Buffalo, NY. page 33. The term "slips" appears to be an early term for battens.
[20] Dwyer also recommended that plank cottages be lathed and plastered inside and clapboarded outside, according to taste and circumstances.
[21] Charles P. Dwyer, *The Economic Cottage Builder: Or, Cottages for Men of Small Means* Buffalo, NY. page 72.
[22] For a period in the early 1870s Dwyer appears to have resided in Philadelphia where he worked for Samuel Sloan who had authored *Sloan's Homestead Architecture* (1861) and published other architectural and builders journals during this era. Typical of many of the popular pattern books of the day, Sloan's *Homestead Architecture: Forty Designs for Villas, Cottages, and Farm House* does not include any discussion of vertical plank construction although it does include modest plans for a workingman's cottage.
[23] Moss reported that the tenth edition (published in New York c. 1884) is the last known version to have been identified and that copies of all of the earlier editions have not been located.
[24] Dwyer states that the term is indicative of the "lightness and total want of any heavy element of solidity" of this construction *mode* despite the fact that it possesses strength. What is commonly known today as balloon framing is identified by Dwyer as "frame-house" construction. See Charles P. Dwyer, *The Homestead Builder: Practical Hints for Handy-Men* New York: Hurst, 1872, page 75.
[25] See *Pickett House Historic Structures Report* prepared by Artifacts Consulting Inc., Tacoma, WA, April 2009 and *Interior Finishes Report Officer's Quarters (HS-11) at American Camp* prepared by Leavengood Architects and Krafft & Krafft Architecture/CRM, Seattle, WA, November 2011.
[26] Kautz recorded his day-to-day activities in an intriguing diary that includes descriptions of his efforts to hire carpenters, obtain quality construction materials and fabricate bricks on-site.
[27] An exhaustive search for additional plank wall constructed examples of early military post buildings has not been undertaken. Reportedly, the General Grant Headquarters at Fort Vancouver (Vancouver Barracks) and the Hospital building at English Camp, San Juan Island also exhibit vertical plank construction methods.
[28] In order to identify extant Puget Sound region examples the author used DAHP historic resource inventory data and conducted outreach to historic preservation colleagues. However, no field examination was conducted outside King County. The author possesses field knowledge having worked directly on projects involving subject properties at Fort Steilacoom, American Camp, Black Diamond (Aurora Pagani House) and Fall City (Charles & Minnie Moore House).
[29] This list is drawn from the Washington State Department of Archaeology & Historic Preservation Wissard database and information provided by various individuals knowledgeable about Puget Sound architecture. Additional examples have been reported in various other Washington locales including Steilacoom, Oysterville, Lopez Island and rural Whatcom County.
[30] Williams cited Margaret M. Mulrooney, *A Legacy of Coal: The Company Towns of Southwestern Pennsylvania* (HABS/HAER 1989) and noted Mulrooney's suggestion that plank houses were probably more common than physical evidence reflects because surviving examples are often missed or misidentified by surveyors.
[31] The term "Jenny Lind" is often applied generically in West Virginia to any building of simple construction and is referred to as a type of modest building construction, not a building style. See Rhoda Janney Coleman "Coal Miners and Their Communities in Southern Appalachia, 1925-1941" *West Virginia Historical Quarterly*, April 2001.
[32] See Michael Ann Williams. "Pride and Prejudice: The Appalachian Boxed House in Southwestern North Carolina" *Winterthur Portfolio*, Vol.25, No.4 (Winter 1990).
[33] *Historical Context and Archaeological Research Design for Mining Properties in California*. Division of Environmental Analysis, California Department of Transportation, Sacramento, CA. 2008 (pg.41)
[34] While this may be conjecture on the part of the author, one must question the basic assumption that all of these modest buildings were indeed balloon and/or western frame.
[35] See Luigi and Aurora Pagani House (PCCC House #225), Black Diamond, WA National Register of Historic Places, April 2002.
[36] Miners typically owned their own homes while the company owned all of the land.
[37] It is believed that various industrial and community buildings – and possibly dwellings - were dismantled and hauled to Black Diamond to be reconstructed. This contention has yet to be fully documented.

[38] Recent efforts to conduct additional in-depth field investigations in Black Diamond were unsuccessful given owners unwillingness to provide access. A significant number of extant historic miner's houses have been extensively modernized and encapsulated with modern cladding materials.
[39] Informant interview with Earl Soderman of Preston, WA, October 23, 2013.
[40] The Soderman House has been encapsulated in modern cladding materials and interior finishes such that virtually no historic building fabric or features could be identified with the exception of the bottom edges of a few exposed wall planks. Earl Soderman reported that during remodeling efforts the original interior faces of the vertical planks exhibited felt paper and/or muslin backing with wallpaper coverings. All of the extant Preston-Fall City Road properties known to be directly associated with Soderman have also been modernized; while they retain the basic side gable form they exhibit extensive exterior alterations. The author could not gain access to those properties.
[41] Additional potential examples were preliminarily identified but could not be confirmed due to the unwillingness of property owners to allow in-depth field examination.
[42] See Charles and Minnie Moore House (Parmelee-Pike House), Fall City, WA King County Landmark Registration Form, November 2002.
[43] A thorough examination of historic images of the settlement-era townsite and scrutiny of 1884 Sanborn insurance maps indicates the presence of numerous dwellings that exhibit the prototypical building forms and features indicative of vertical plank construction, including: building footprints that are rectangular without complex appendages or cutaway porches; typical side gable and front gable forms that are rarely taller than one to 1½ stories in height; one-story shed-roof rear or side-gable wings as well as projecting front and/or rear porches. Furthermore, a significant number of small early dwellings were clad with board and batten materials. While it may be conjecture on the part of the author, one must question the basic assumption that all of these modest buildings were indeed balloon and/or western frame and *not* vertical plank construction.
[44] This effort focused on finding potential examples that were not necessarily intact but rather on historic properties that might have undergone significant exterior alterations and had been previously overlooked.
[45] Additional potential examples were preliminarily identified but could not be confirmed due to the unwillingness of property owners to allow in-depth field examination.
[46] In 1976, the two properties were threatened and in danger of demolition; they were donated to Historic Seattle Preservation & Development Authority and moved to the current site, within a protected historic district, and rehabilitated. They were adapted to serve a commercial purpose and remain remarkably well-preserved. The exteriors (but not the interior spaces, features or finishes) are protected as part of the local historic district and Historic Seattle holds a façade easement.
[47] Both houses were originally located on Lot 51, Block 8, Maynards Plat at the NW corner of Seventh Avenue S. and Lane Street in the neighborhood that is now known as International District. In 1871, the property was acquired by or possibly given to St. John's Lodge F & AM, Seattle's first Masonic order established in 1860. Additional research and investigation utilizing St. John's Lodge records must be undertaken to determine whether the buildings existed prior to the change in ownership.
[48] Their original site was at the SW corner of Ninth Avenue (now 7th Avenue) and Lane Street. One of the houses was moved a short distance to Lane Street in c.1905.
[49] The extra bricks that were fired at Fort Steilacoom in 1857-58 are believed to have been transported and used elsewhere around Puget Sound (possibly at the Ferry House, Ebey's Landing - built 1860) during this same era. However, additional field examination and analysis must be undertaken to confirm this contention and a direct association with the subject dwellings..
[50] A lengthy illustrated article "Early Day Mansions No 35 – Hans Hansen" regarding the history of the house was published in *The Seattle Times* April 20, 1945.

**Published Sources of Note**

Jordan, Stephen B. “Houses Without Frames: The Uncommon Technique of Plank Construction” *Old-House Journal,* Vol. 21, No.2 (May-June 1993), pp.36-41

Kibbel, William. “Box-House Plank Construction” Old House Web http://www.oldhouseweb.com

Kniffin, Fred & Glassie, Henry. “Building in Wood in the Eastern United States: A Time-Place Perspective” *Geographic Review*, Vol.56, No.1 (Jan. 1966), pp. 40-66.

Nelson, Walter R. “Some Examples of Plank House Construction and Their Origin” *Pioneer America*, Vol. 1 No.2 (July 1969), pp.18-29.

Richie, T. “Plankwall Framing, a Modern Wall Construction with an Ancient History” *Journal of the Society of Architectural Historians*, Vol.30, No.1 (Mar. 1971), pp.66-70.

Ritchie, T. “The Use of Planks in Wall Construction” *Bulletin of the Association for Preservation Technology*, Vol.6, No. 3 (1974), pp.26-34.

Williams, Michael Ann. “Pride and Prejudice: The Appalachian Boxed House in Southwestern North Carolina” *Winterthur Portfolio*, Vol.25, No.4 (Winter 1990), pp. 217-230.

THE COOK HOUSE IN 1866; BUILT IN 1853

Fig. 1 - Yesler's Cook House (Seattle, Washington Territory) exhibited a distinct combination of construction methods including what appear to be vertical plank materials, image c.1866. [UW Libraries Special Collections Neg# 5695]

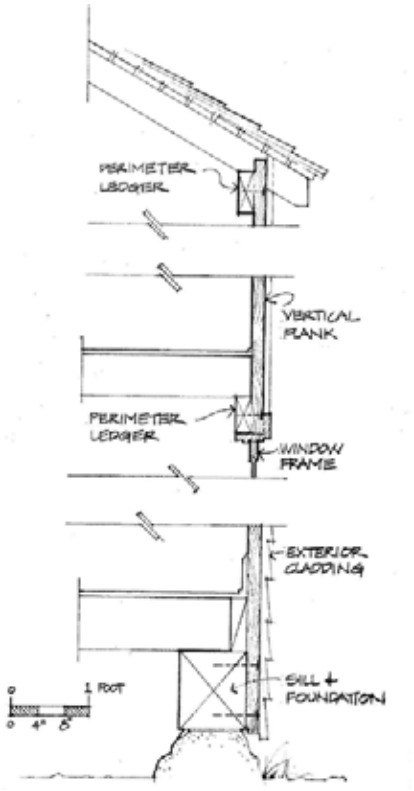
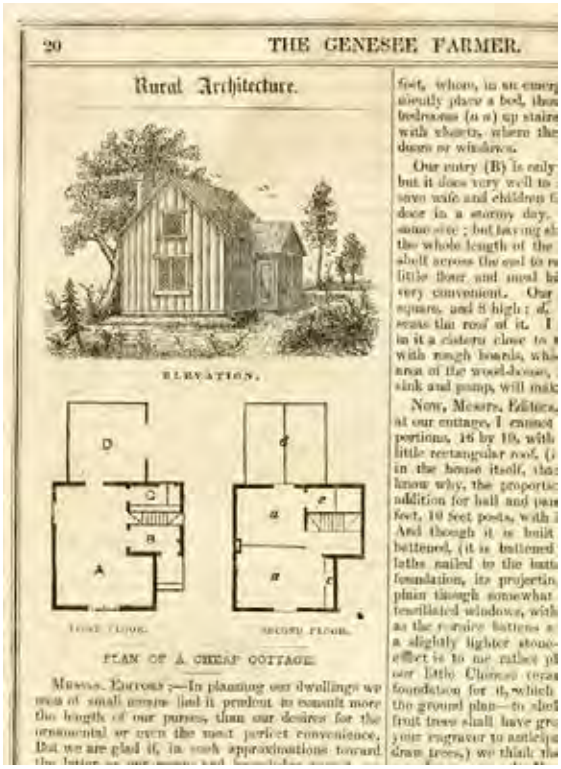



Fig. 2 – Schematic vertical plank construction - wall section [C.K. Krafft 2014]



20 THE GENESEE FARMER.

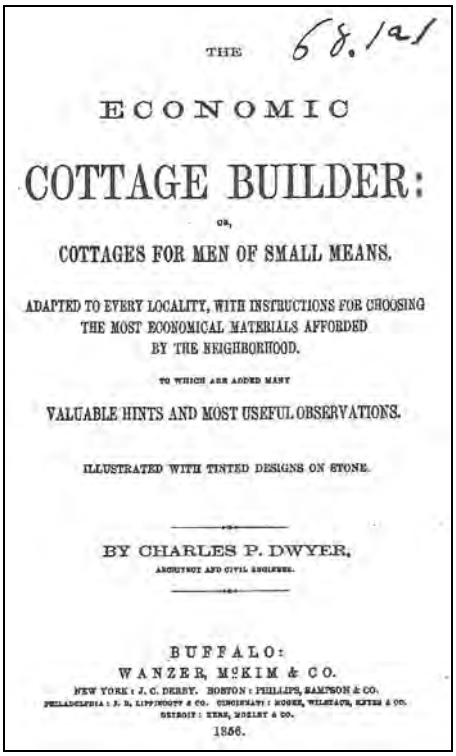
Rural Architecture.

ELEVATION.

PLAN OF A CHEAP COTTAGE.

Messrs. Editors :—In planning our dwellings we men of small means find it prudent to consult more the length of our purses, than our desires for the ornamental or even the most perfect convenience. But we are glad if, in such approximations toward

Fig. 3 - An early illustrated trade publication reference to vertical plank construction from January 1849 issue of *The Genesse Farmer.*



THE 68.121

ECONOMIC

COTTAGE BUILDER:

OR,

COTTAGES FOR MEN OF SMALL MEANS.

ADAPTED TO EVERY LOCALITY, WITH INSTRUCTIONS FOR CHOOSING THE MOST ECONOMICAL MATERIALS AFFORDED BY THE NEIGHBORHOOD.

TO WHICH ARE ADDED MANY

VALUABLE HINTS AND MOST USEFUL OBSERVATIONS.

ILLUSTRATED WITH TINTED DESIGNS ON STONE.

BY CHARLES P. DWYER,

ARCHITECT AND CIVIL ENGINEER.

BUFFALO:
WANZER, McKIM & CO.
NEW YORK: J. C. DERBY. BOSTON: PHILLIPS, SAMPSON & CO.
PHILADELPHIA: J. B. LIPPINCOTT & CO. CINCINNATI: ROBERT, WILSTACH, EATON & CO.
DETROIT: EVANS, MOSELEY & CO.
1856.

Fig- 4 – Charles P. Dwyer published various influential 19th C trade publications from 1856-c.1884 or later that were directed at western migrating settlers, farmers and workmen.

Fig. 5 – Like other frontier military posts around Puget Sound & Washington Territory the Officer's Quarters at Fort Steilacoom built in 1858 utilized the vertical plank construction method. [1939, HABS 39-W-18]

Fig. 6 The Laundresses House built 1857-58 at American Camp on San Juan Island, WA is one of three extant buildings from this military post that are well-preserved examples of vertical plank construction. [Courtesy NPS]

Fig. 7 – The Ferry House built 1860 is one of numerous extant dwellings constructed around Puget Sound during the settlement era that exhibit vertical plank construction methods. [Courtesy Scott Swenson, Ebey's Landing NHR, Whidbey Island, WA 2013]


Fig. 8 – The James W. Marshall Cabin constructed in 1863 (now part of Marshall Gold Discovery State Park, Coloma, CA).is vertical plank construction. Investigations into potential correlations between California gold rush era dwelling construction and the diffusion of vertical plank construction methods to Puget Sound have yet to be undertaken. [HABS CAL 9-COLO]

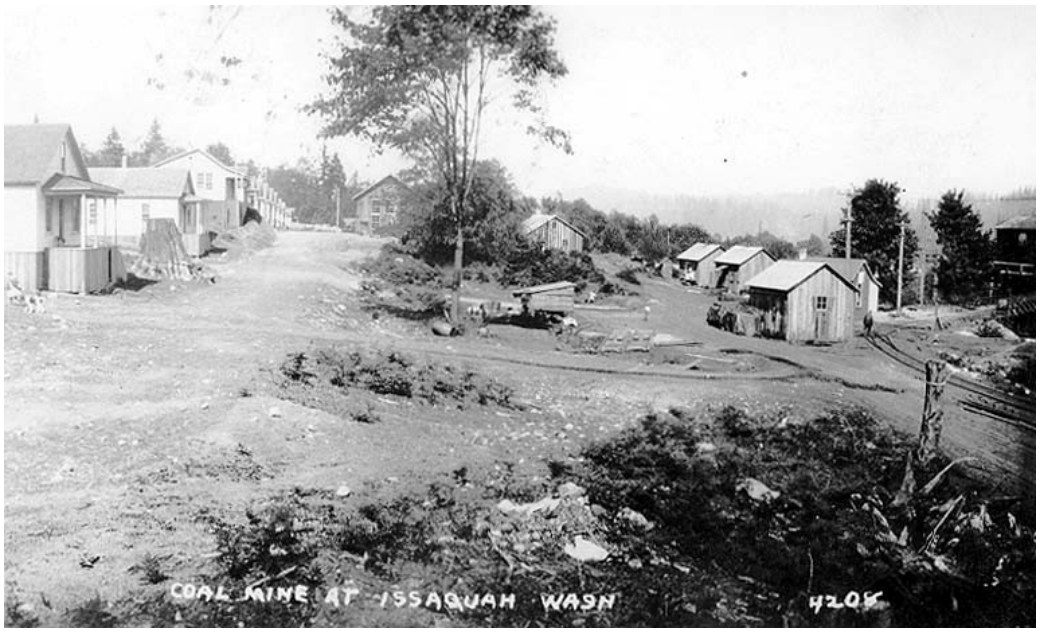



Figure 9a – This image of coal miners' housing at Issaquah, WA c.1916 includes numerous small dwellings that are typical of coal company towns and exhibit forms and features indicative of vertical plank construction. [UW Libraries Special Collections 27009]


Figure 9b – Aurora & Luigi Pagani House, Black Diamond, WA is a vertical plank constructed miner's cabin constructed c.1896. There are several other extant early miners' dwellings in Black Diamond. While interior investigations have not been made, an examination of historic property tax records and photographs suggests that the vertical plank wall construction method may have been widely used in this former coal company town. (1940, Puget Sound Regional Archives)

Fig. 10 – Gabriel Soderman was a Finnish-born immigrant who settled in Preston, WA c.1904. He became a "house carpenter" and is known to have built numerous local dwellings including this example of vertical plank construction - the Soderman family home built c.1905. [Image courtesy of Earl Soderman]

Figure 11a Soderman family home, Preston WA (OCT 2013)

Fig. 11b G. Soderman-built house, Preston WA (OCT 2013)


Fig. 12a Soderman-built house, Preston WA (PSRA 1937)

Fig.12b Moore House, Fall City, WA built c.1905


Figure 13 – View NW toward Elliott Bay, Seattle, Wash Territory showing set of parallel “Pioneer Houses” just above train trestle & mud flats, 1882. [Carleton E. Watkins photographs of Puget Sound W.T. Courtesy Jim Crain]

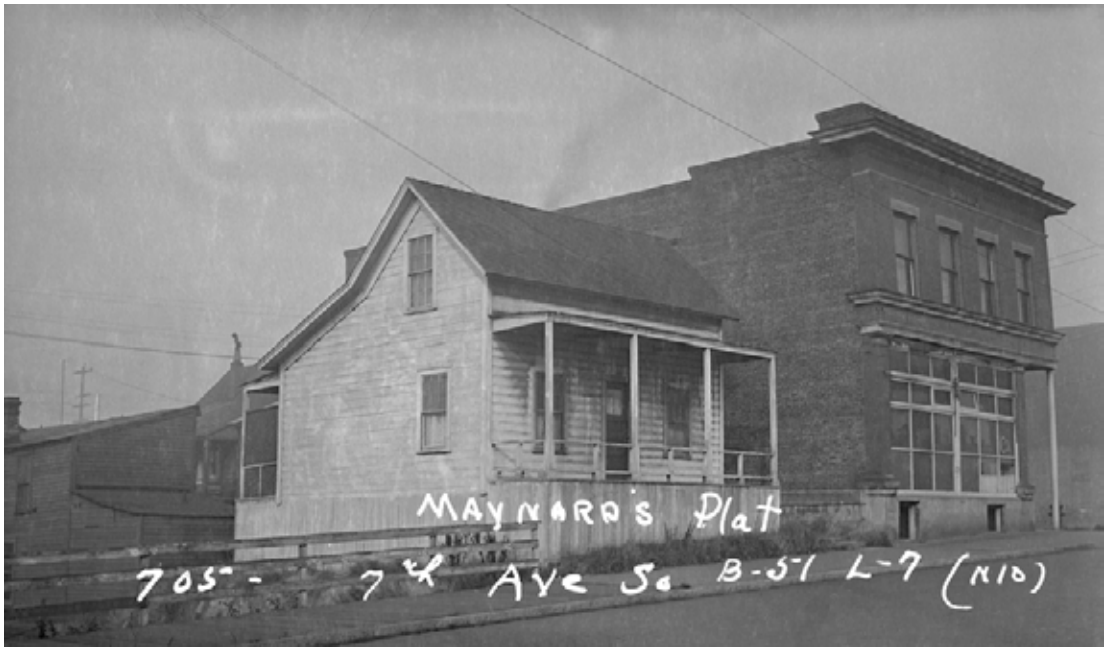



Fig. 14 – One of the two “Pioneer Houses” at its original 7th Avenue S. and Lane Street location. The adjacent house was moved around the corner to Lane Street c.1905. [Puget Sound Regional Archive (PSRA) 1937]

Fig. 15 – The “Pioneer Houses” were relocated (and renovated) to a site on Ballard Avenue NW in 1976. The former Lane Street house is situated to the rear of the former 7th Avenue S. house (July 2013).

Fig. 16 - The “Pioneer Houses” exhibit exposed vertical plank members at interior sides of perimeter/structural walls (and at interior partitions) that are visible within first floor spaces and extend into the attic level (July 2013).




Figure 17 – The Maynard-Hansen House as recorded at Alki (Seattle) in Washington Territory c.1864, shown in 1937 after relocation to 64th Ave SW & in 1953 after remodeling and current view showing level of alteration & encapsulation of historic building fabric. [UW Libraries Special Collections & Puget Sound Regional Archives]

Fig. 18 Bottom edges of vertical planks attached to girder visible from within crawl space and face of wallpaper-covered vertical plank members concealed within wall cavity at Maynard-Hansen House (July 2013).

Fig. 20 - Image of Native American dwelling that exhibits attributes of vertical plank construction c.1905. [UW Libraries Special Collections, Neg# NA4230]


Fig. 21 – Iconic c.1890 image of Princess Angeline in front of cabin where she resided at the foot of Pike Street surrounded by several other dwellings constructed with vertical plank and batten materials. [UW Libraries Special Collections PHColl. 844.22 Neg# UW 11902]