NPS Form 10-900-b
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United States Department of the Interior
National Park Service

Cover

National Register of Historic Places Multiple Property Documentation Form

This form is used for documenting multiple property groups relating to one of several historic contexts. See instructions in ~~How to Complete the~~ *Multiple Property Documentation For* (National Register Bulletin 16B). Complete each item by entering the requested information. For additional space, use continuation sheets (Form 10-900-a). Use a typewriter, word processor, or computer to complete all items.

X New Submission _____ Amended Submission

A. Name of Multiple Property Listing

Lustrons in New Jersey

B. Associated Historic Contexts

(Name each associated historic context, identifying theme, geographical area, and chronological period for each.)

Lustron Corporation 1946-1950
Lustron Dealerships
Lustron Development in New Jersey
Lustron Planning Guides
Prefabricated Housing

C. Form Prepared By

name/title Patricia Garbe Morillo, Chairman

organization Closter Historic Preservation Commission date 1/1/2000

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city or town Closter state New Jersey zip code 07624-

D. Certification

As the designated authority under the National Historic Preservation Act Of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation. (☐ See continuation sheet for additional comments.)

Carl B Fold — 5/30/00

Signature and title of certifying official — Date

Assistant Commissioner, Natural & Historic Resources/DSHPO

State or Federal agency and bureau — American Indian Tribe

I hereby certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

for Patrick Andrus — 7/25/00

Signature of the Keeper — Date of Action

Table of Contents for Written Narrative

Provide the following information on continuation sheets. Cite the letter and the title before each section of the narrative. Assign page numbers according to the instructions for continuation sheets in *How to Complete the Multiple Property Documentation Form* (National Register Bulletin 16B). Fill in page numbers for each section in the space below.

Primary location of additional data:

- [ ] State Historic Preservation Office
- [ ] Other State agency
- [ ] Federal agency
- [X] Local government
- [ ] University
- [ ] Other

Name of repository:
Closter Historic Preservation Commission, Closter, New Jersey

Prefabricated Metal Housing

For all its technological advancements and streamlined design the Lustron Corporation was not the first to build either an all-metal house or a prefabricated house. Carl Strandlund was a visionary capable of adapting his ideas to fit current needs; namely the shortage of housing for military personnel returning from service during World War II. His ideas were brought to fruition through technological advancements such as the assembly line and ever evolving machinery developed during the Industrial Revolution. The first prefabricated building elements used in housing date to the early 19th century. Pattern books conceived for homeowners and not builders, began appearing in the 1830s, and became highly popularized with the Gothic revival cottages designed by Andrew Jackson Downing. Pattern books established a market for the Sears catalog for prefabricated and premanufactured housing. The first three decades of the twentieth century established Sears & Roebuck Company as the leading American company for manufacturing prefabricated housing.

The first quarter of the nineteenth century witnessed construction of the first cast-iron house in England. This was an anomaly, however; though other examples were built, it was not until the post World War I era that an interest in prefabrication was ignited by demand for inexpensive and available housing. The social situation at the time was similar to that of the post World War II period as veterans returning from the war encountered a shortage of affordable housing. Advancing technology provoked innovation in housing design, materials and manufacture that without doubt influenced Strandlund in his decision to design an all-metal prefabricated house manufactured using idled wartime industrial assembly capacity.

In 1928 L.W. Ray, the construction superintendent for White Castle's restaurant, pioneered a significant innovation in building design: the movable, all metal, porcelain-enameled steel-paneled building. Controlled through local manufacture and insulated from the variables of local construction costs, this innovative and cost-effective solution to erecting restaurants throughout the northeast became the standard building form for the company. One of the most interesting aspects of Ray's White Castle design was that the company organized its own subsidiary called the Porcelain Steel Buildings Company which manufactured their porcelain-enameled buildings; until 1934 this work was contracted out to other companies. The Porcelain Steel Buildings Company was located in Columbus, Ohio--the same town in which Lustrons were manufactured.

Another company innovating porcelain-enameled steel construction was the Ferro Company located in Cleveland, Ohio. In 1932 the company erected two metal houses in the Cleveland vicinity. One utilized steel frame and sheathing with porcelain-enameled steel shingle siding as well as roofing. The second house utilized load bearing walls rather than a steel structural system and was also clad in porcelain enameled shingles. The Ferro Company evolved this idea into a cooperative effort with the Armco Steel Company to create a porcelain-enameled steel paneled house, without a frame, which they introduced at the 1933 Chicago World's Fair. The 1933 Century of Progress Exposition in Chicago was one of the first fairs to popularize the experimental demonstration house to the public. Much of the focus was centered on the use of steel for housing stock;

however, problems with insulation, water damage and condensation corrosion impeded innovation in metal housing. Other technological advances, such as the balloon frame and the standard four-foot construction module supported the efforts towards prefabricated housing in the 1930s.

Corporations such as U.S. Steel, Republic Steel, the Homosote Company, General Electric, and Westinghouse began looking to the success of American car companies Ford and General Motors, adapting mass production techniques to tap into the new housing market. "Houses like Fords" was a common advertising slogan for some of these experimental projects. Other upstart companies, organized solely to develop housing for the modern market, included Howard Fisher's General Houses in Chicago, Robert McLaughlin's American Houses in New York, and National Houses in Lafayette, Indiana. Like the Lustron, Robert McLaughlin and Howard Fisher, who were also designing prefabricated houses in the 1930s, favored panel wall construction that utilized steel studs. Each company built several hundred houses, all of which utilized steel framing as well as other steel components. The experimental use of steel and other metals in housing came to an abrupt halt at the outset of World War II as supplies of metal tightened due to the demands of World War II. Attention then centered on wood as the primary material in the manufacture of prefabricated houses.

The war buildup and the resulting need to supply housing for the American military overseas initiated government-subsidization to private industry in order to prefabricate housing for military housing needs. The Lanham Act of 1940 enabled seventy companies to produce 200,000 housing units for the government during World War II, mostly financed with public funds. Some of these used steel structural systems, but all employed standardized parts and modular design. After the war, the demand in the United States for housing greatly increased; the federal government estimated that fifteen million houses would be needed to accommodate demand during the decade after the conclusion of the war. There was an effort to build as much as possible as fast as possible; as a result, Congress voted to fund research into prefabricated housing and to help subsidize production in 1946. Boosting support for prefabricated housing, the Veterans Emergency Housing Act of 1946 made available war plants to firms specializing in prefabrication and rewarded them with access to natural resources, such as steel-making materials, rationed for production during the war. In a development important to establishing production of postwar prefabricated houses, the Reconstruction Finance Corporation provided government loans to the prefabricating companies, making a national priority the need to house returning veterans--often in prefabricated homes.

Though this financial support ushered an influx of hundreds of companies into prefabricated housing production, only three were selected to receive the money available through the Reconstruction Finance Corporation. One, the General Panel Corporation, operated from 1942-1951 and produced a prefabricated standardized house constructed of panel units that could be adjusted for use in a variety of positions like walls or ceilings without structurally changing the building. The General Panel houses, designed by Walter Gropius and Konrad Wachsman, experienced many of the same problems as the Lustron, and the company was dissolved in 1951 after producing only a few hundred houses.

The Lustron Corporation, manufacturer of an all-steel house, was the most heavily capitalized and industrialized of the 280 firms involved in the production of prefabricated houses in 1947. An industrialist, Carl Strandlund, formed the Lustron Corporation. Born in Sweden in 1888, Strandlund came to the United States as a child and studied engineering through a correspondence school. By the 1920s, he had embarked on a successful career in industry; business journals credit him with several innovations in agricultural machinery during his years as president of the Oliver Farm Equipment Company. By the 1930s, Strandlund was an executive with the Chicago Vitreous Enamel Product Co., which produced enameled steel panels for use in products ranging from refrigerator doors to storefronts. As vice-president of the firm, Strandlund traveled to Washington, D. C., in the summer of 1946 to request material for the production of five hundred enameled steel gas stations.

The Civilian Production Administration found little appeal in steel gas stations. Steel houses, Strandlund was told, would be viewed more favorably. Chicago Vitreous agreed, and hoped the venture might recoup some of the business lost with the postwar curtailment of non-residential building. Three months later, Strandlund returned to Washington with plans and drawings for a house built of enameled panels to be produced by an affiliated Porcelain Products Company. The name was soon changed to Lustron Corporation, a name derived from Lusterlite, a type of material that Chicago Vitreous manufactured and the Porcelain Products Company applied to iron.

The plans for steel houses were well received. Housing Expeditor Wilson Wyatt called the concept a "sensationally good" idea and backed Strandlund's request for government financing, Wyatt also promised the huge wartime Dodge plant in Chicago and a guarantee to cover the cost of the first 15,000 homes produced by the firm. Strandlund's plans were to manufacture 30,000 houses a year, but their goal was never reached. After four years, from 1946 to 1950, the corporation folded with a final production run of less than 2,500 houses. The Lustron Corporation was praised by the architectural press and was hailed as a critical test of the viability of the factory-made house. Lustron began its extensive promotional campaign in early 1948, fueling enthusiasm with glossy advertisements in general interest magazines such as *Life*. Over the next year, display houses sprang up in 100 major eastern and midwestern cities. Crowds lined up to inspect models in New York, Chicago, Columbus, St. Louis, Miami, Detroit, Milwaukee, Newark, and Washington, D. C. A display house in New Jersey's Palisades Amusement Park was the prize in a raffle to benefit a charity.

Planning Guides

The Lustron Planning Guide was published by the Lustron Company to illustrate the most attractive site layouts for the homes. The planning guides also discussed specific site locations, planning and zoning regulations, and interior design--especially useful for showcasing display models by certified dealers. Often Lustrons were not welcome additions to neighborhoods with established building codes; some Lustron owners were faced with a struggle to locate their houses within established neighborhoods.

All aspects relating to the house were addressed in these guides. Residential neighborhoods were recommended where a sufficiently sized lot could provide a permanent location. Planning included proper preparation and grading of the slab. The planning guides offered established site plans for lots of various sizes and shapes. Landscaping was considered an important part of the Lustron aesthetic and was recommended for proper drainage. The company emphasized the importance of the entire setting to best display the modern house; therefore Lustron sites were illustrated in the guides complete with trees, grass, and gardens. Always looking to the future, information was provided in these guides for builders and developers on how to utilize unimproved lots and acreage for entire Lustron subdivisions.

Dealer Networks

To distribute the homes, Lustron created a network of dealers across the country, each with an exclusive sales territory. Lustron executives initially were uncertain about the number of dealers required to serve a particular area. Eventually there were 220 dealers in 34 states. At first they granted a number of exclusive franchises over large territories east of the Rockies, including the entire New York metropolitan area and the states of Connecticut, New Jersey, and Florida. Lustron began its extensive promotional campaign in early 1948. Over the next year, display houses sprang up in major eastern and midwestern cities. Crowds lined up to inspect models in New York, Chicago, Columbus, St.Louis, Miami, Detroit, Milwaukee, Newark and Washington, D.C. A display house in New Jersey's Palisades Amusement Park was the prize in a raffle to benefit charity (see Exhibit A and B).

Unfortunately, Lustron dealers faced major problems from the beginning: despite two years of promises and promotions, Lustron houses were simply not being built in sufficient numbers to meet demand. Even as houses became available, dealers faced unexpected costs. Lustron required dealers to pay for each house before it left the factory doors, to pay for transportation to the site, and to cover the cost of on-site assembly. To make such a transaction feasible, the Lustron dealer either found customers with complete up-front financing or carried portion of the costs himself. (Lustron did arrange to have a Columbus firm, Galbreath Mortgage Company, offer dealers some interim financing).

Early Funding

By 1947, Strandlund's initial $52 million loan request had been trimmed to a more modest $15 1/2 million; the Dodge plant had been given to Preston Tucker (manufacturer of the Tucker automobile), and Wyatt had resigned under the pressure of a new Republican Congress. But, despite the setbacks to Strandlund's plans, Lustron received a giant Curtiss-Wright aircraft plant in Columbus, Ohio, and the most massive financial commitment ever made by the federal government to a housing firm. The company even won concessions from the American Federation of Labor--a craft union traditionally opposed to prefabricated housing.

Strandlund's first house, a two bedroom prototype called the *Esquire* was produced at a plant in Cicero, Illinois, under the auspices of Chicago Vitreous and erected at Hinsdale, Illinois, in 1946. Architects Roy Blass and Morris Beckman designed the prototype. It was the last house Strandlund would build for nearly two years. The Columbus factory was slow to equip, slow to start up, and short of materials necessary for manufacture. The delays were expensive and caused Lustron to miss the time of greatest need during the housing crisis. Not until the summer of 1948 did the first enameled steel emerge from the ovens of the plant; the first house was not completed until November.

A second loan of $10 million was granted by the RFC in 1948 followed by a third loan for $7 million in 1959. By fall 1948, as the first houses finally rolled from the factory, the company had 20,000 unfilled orders and closed its books for the year. By 1949, infused with over $37 million in government loans, Lustron houses were being produced on a regular, if still insufficient, basis, climaxing with 268 units in July of that year. Although far short of the stated goals for the year (17,000), the press proclaimed Lustron a success. It was the first real demonstration of the theory that "houses can be turned out like automobiles," according to Architectural Forum. The success was short-lived; Lustron never ceased losing money, as much as $1 million per month. By 1950, the corporation had declared bankruptcy; Congress had begun an investigation into the federally-funded corporation, and the RFC had foreclosed on its loans. Shortly before the corporation was sold at auction in June 1950, it had shipped fewer than 2,500 houses.

The failure was especially disheartening to the proponents of prefabrication. Lustron had the elements for success; unprecedented financial, physical, and technological resources enabled the corporation to achieve a scale necessary for profitable mass production. Lustron was the most industrialized of the housing manufacturers of the period, and the Columbus plant was among the largest in the world, capable of producing one hundred houses per day. On 107 acres of land, the plant enclosed one million square feet of floor space--23

acres of presses, welding machines, and furnaces. Steel was delivered by rail and either cut into framing sections or welded on the assembly line or cold stamped into panels that were then enameled and fired.

Lustron Construction

The Lustron house was a one-story, gabled-roof ranch with an exterior and interior skin of enameled steel panels bolted to a structural-steel frame and a concrete slab foundation. All construction from the wall framing to roof trusses were made of steel with porcelain-enameled steel panels hung from them--all surfaces except the concrete slab and asphalt tile floors were porcelain-enameled steel. Porcelain enameling provided a glass-like, maintenance-free finish to the two-by-two foot square exterior panels, the two-by-eight foot interior wall panels, and the four by four foot ceiling panels. The exterior was comprised of twenty straight wall framing sections (which included openings for doors and windows) and ten corner assemblies. Ten steel roof trusses, placed at four-foot intervals, replaced traditional rafters and joists. The assembly line stamped out the steel panels out of material emerging from continuous-feed porcelain-enameling furnaces. After the panels were enameled and shaped, a plastic gasket was added to seal the joints, and the insulation was automatically cemented to the inside. Wall-framing sections were composed of interior and exterior studs placed on two-foot centers and supported by diagonal braces. The bottom plate was fastened to the concrete foundation by an anchor bolt.

Given the permanent nature of the building material, ornamental features had to be chosen with care. Carl Strandlund consulted with Howard Ketcham, a noted color consultant, to develop the Lustron color schemes. Specified to be darker for the roofs with neutral and pastel interiors, the exterior color palate was contemporary with the times. Initial exterior colors included white, blue-green, green, and pink with the later palate limited to four basic shades: surf blue, dove gray, desert tan, and maize yellow.

Lustron interiors were considered ultra-modern at their time of construction. This perception was probably enhanced as many of the houses were originally viewed within the context of theme parks, fairs or promotional displays--locations often quite different from the common residential neighborhood for which they were destined. All models included a galley kitchen with a dishwasher (innovative at the time) and built-in book shelves, bedroom vanity units, and pass through from the kitchen to the dining area. Sliding doors were utilized throughout for the bedrooms, bathrooms, closets and kitchen cabinets. Most were ornamented with a modern design element on the form of a streamlined vertical motif. The main entrance door, a typical swinging door, was fitted with a frosted glass insert with a striped design motif. Radiant heating was provided via a ceiling plenum system fired by an oil or gas furnace unit on the deluxe models. From these basic features, buyers were able to choose from three different models that came in a two or three bedroom floor plan. Approximately 90% of all Lustrons sold were the two-bedroom plan.

Building a house from separately manufactured parts represented an integrated but "closed system" design. Each building element, down to the window frames, gutters and bathtub, was fashioned expressly for Lustron and made on the factory floor. No other products would fit, nor could individual owners tailor the house to meet their own needs. Any design change required re-tooling the factory; the limitations of the closed system were compounded by the nature of steel, which required the precision fabrication capabilities of expensive machinery, none of which were easily modified.

According to Lustron plans, a fully equipped truck would roll through the factory doors every seven minutes. As custom-designed trailers traveled through the factory, each was loaded with 12 1/2 tons of parts that would comprise a single house, packed in a manner that enabled on-site workers to unload them in the proper sequential order. Each trailer was then transported to a building location where it served as an on-site warehouse until the house was assembled. The complete package was composed of 3,000 parts including clips for mounting wall decorations, a front door key, and an owner's operating manual. Even the plant location was ideal, close to both steel suppliers and the so-called "prefab belt" of the upper Midwest, where the need for, and acceptance of, prefabricated housing created a strong market. The failure of what seemed a successful venture forced the industry to re-examine the prefabricated metal house.

Designing such house was not a typical architectural project. In fact, Lustron had never been architect-designed in any real sense according to Carl Koch, who served as design consultant to the firm in 1949 and 1950. From its inception it was conceived of as an industrial design, its design itself an element of the industrialized process of manufacture. Although Blass and Beckman worked on the original plans, a staff of stylists, many drawn from the ranks of automotive designers, was primarily responsible for the finished look of the house. Such was the emphasis on production efficiency that one change made from the prototype was the elimination of a jog in the rear wall which allowed for more floor space.

Non-traditional Housing in a Traditional Market

The corporation hoped one day to assemble the house at regional warehouse-assembly plants located across the country. However, these future plans remained on the drawing board. The immediate challenge was to build houses to meet existing demand, and to get those houses to building sites. Koch and others encouraged the corporation to explore the potential of designing for planned developments, but without success. Without the lure of a cheap price, the amenities of a suburban subdivision, or the pressure of a housing crises, the house of steel panels lost out to the traditional American home of wood or brick. Lustron made several business decisions that more seriously undermined the firm's potential success. The company underestimated the costs of capitalizing to achieve mass production, allowing the peak of the housing demand to be unmet by available

Lustron products. Despite its early efforts at establishing a dealer network, much in the manner of automobile distribution, the Lustron Corporation failed to establish a substantial distribution system to handle high-volume sales. Because Lustron sold houses on an individual basis through franchised dealers, the company never achieved the sales volume that characterized the large-scale housing developments of the period like those of Levitt and Sons, Inc. Moreover, because production levels remained low, the cost of each house steadily escalated. Soon, the proposed $6,000 house was selling for $11,000, a price greater than that of many traditionally constructed small houses.

These miscalculations were critical: by the time Lustron was producing homes on a regular basis, the housing crisis had largely passed and the Lustron house was competing in a rebounded market dominated by independent builders erecting suburban homes using traditional methods. Competing in a marketplace dominated by traditional housing, Lustron had little chance for real success. Local building codes varied from city to city and, because they were based on specifications rather than performance standards, often prohibited features of Lustrons innovative design. Chicago's code, for example, banned steel houses altogether; Detroit's outlawed copper wiring. For large-scale housing developers, the problems of financing building codes, and suppliers were solved through nearly complete control of the entire real estate process. But for Lustron, these battles were fought anew with each sale. To the corporation's credit, it waged an aggressive campaign (partially successful) to amend local building codes. Moreover, the construction industry viewed metal prefabrication as a threat to on-site craftsmen and established suppliers of building materials. As a result, Lustron found little support within the very industry on which it depended for local assembly.

Significantly, conservative financial institutions such as the Federal Housing Administration were wary of granting or guaranteeing mortgages for nontraditional houses, especially before the house had arrived at the lot. The FHA, in exerting a powerful shaping influence on housing policy through their mortgage guarantees, insured that the traditionally-constructed house would be the dominant form of residential construction throughout the United States. Eventually, the design was approved by the Federal Housing Authority (FHA), but it was not enough. Lustron's piecemeal approach to sales and distribution could not guarantee the enormous sales needed to sustain mass production.

Some critics viewed the failure of Lustron as conclusive proof that factory-made housing could not succeed. But the collapse of Lustron should not overshadow the firm's achievements. The popular acceptance of the design challenged the notion that American buyers would never live in factory-made houses or that prefabricated designs could succeed only as temporary solutions in crisis situations. Nor had any venture so thoroughly applied the methods of the assembly line in the construction of single-family housing.

That the Lustron Corporation produced an innovative design that embraced efficiency and maintenance-free longevity was ultimately not enough to guarantee its success in the postwar housing market. In retrospect, the success of the Lustron experiment in mass-manufactured prefabricated housing depended as much on the institutional particulars of the housing market, such as the availability of federal financing of mortgages and restrictive local building codes, as it did on generating consumer acceptance of a revolutionary solution for affordable homebuilding. In January 1952, the RFC dropped its suit against Carl Strandlund in return for a general release and a transfer of all his Lustron stock. The following year, Strandlund found employment as president of a steel parts manufacturer. He retired to Florida a few years later and after seventeen years moved to Minneapolis, his wife's birthplace. Strandlund died on December 24, 1974. The Columbus manufacturing plant is still extant and was until recently used by an airline company. It is currently a warehouse/distribution facility for a local department store.

Lustron Houses in New Jersey

The March 1950 Lustron Corporation *Dealer's Report* indicates that a total of 16 Lustron houses were shipped to New Jersey. There were two Lustron franchise dealers in the State—Better Living Homes Company, in Maplewood received 14 Lustron units and Ramagosa in Wildwood, had two units delivered. Apparently they were all the Westchester Deluxe models which debuted in 1949 and 1950. These numbers are in stark contrast to a 1948 projection of Lustron sales and shipments published in the Newark News . This article states that shipments from the Ohio factory had production allotments for 1,035 Lustrons to the New Jersey market and that the projection for the Garden State share in 1949 was set at 3,065. The national corporate Lustron goal in that year was 45,000.

The distribution to New Jersey dealers from the Ohio plant was off to a slow start in 1949, but picked up in March when Frank L. Sundstrom of East Orange, a former congressman and friend of Strandlund's, was made vice president of the Lustron Corporation's sales, distribution and dealer services. Sundstom was responsible for finalizing the plans for New Jersey's distribution network

Lustron construction was also thwarted in many New Jersey towns by restrictive zoning ordinances and building codes. By late summer of 1949, Randolph Township and the nearby town of Fairmount had passed local legislation to allow the construction of permanent pre-fabricated metal homes. Other towns were slow to follow and the well-organized traditional building trades put up much of the resistance.

In 1949 Arthur Padula, a Newark builder, established the first Lustron franchise in the state of New Jersey. The North Jersey operations centered around the Miele Plant at 90 Millburn Avenue, Maplewood, where Better Living Homes Company was set up as the district distributor. The Better Living Homes Company became the state-wide distributor by mid 1949 and established Lustron subsidiaries in the southern part of the state. One of these sub-distributors was the building firm of Nero and Catt, and they were responsible for establishing a Monmouth, Ocean, Atlantic and Camden network.

In June 1949, Nero and Catt had erected the first of the demonstration Lustron homes on Mississippi and Atlantic Avenues in Beach Haven, and were in the process of erecting several others on lots that were for sale. One of these was built at 1246 Ocean Road in Seabright. In the north, Better Living erected a yellow Lustron Westchester model at Palisades Amusement Park in Fort Lee. This house was raffled off in 1950 and the proceeds went to charity. The winner was the Closter Chief of Police. He took the $10,000. cash prize and the Lustron house remained as an office on the Palisades Amusement Park grounds until it closed in 1971.

In 1949 Bamberger's Store in Newark announced it would erect a Lustron home complete with furnishings and landscaping as the focal point of the store's fall furniture show which was scheduled to opened on July 25th. According to John C. Williams, store president, "it would be the first time a factory built house will be exhibited and available for purchase in a department store." Macy's Department Store also had a Lustron model and several other models were constructed by New York City builders on empty lots in Manhattan.

By 1950 there was a second Lustron franchise in Wildwood, New Jersey. Richard Ramagosa who had already established a franchise in Pennsylvania moved to Wild wood by that year. By that time it was very near the end of Lustron distribution and his franchise was only responsible for the sale and construction two houses. Both residences are still extant in Wildwood and Wildwood Crest.

Though the Lustron phenomenon was short lived, Arthur Padula, was the driving sales force in the state of New Jersey. He managed to get a signed order from top Army officers to help solve the housing shortage at Fort Dix by building 300 Lustrons for rental to Army personnel. In March 1950 Padula testified in Washington that the RFC had refused to grant him a loan to purchase 300-1000 Lustrons which he intended to also erect for the Air Force at McGuire Air Force Base in Wrightstown, N.J., and the 327 homes for the Marines at Quantico, Va. After the Army at Fort Dix dropped their order Padula went to Washington, D.C. to request an investigation into the Lustron loans he sought. Additionally, he urged the Rules Committee which was investigating the ills which had beset the Lustron Corporation to transfer the mass production housing activities from RFC to the HHFA.

Originally three Lustrons made their way to Bergen County but the house at 22 Division Street in Closter was demolished in 1998. Both of the extant Bergen County Lustrons, the Wittmer House at 19 DuBois Avenue, Alpine and the Harold Hess House at 421 Durie Avenue in Closter, were yellow Westchester Deluxe models purchased from Arthur Padula of the Better Living Homes franchise in Maplewood. Hess purchased one of the last two constructed by the franchise before the Lustron Corporation went bankrupt. His was the only one in Bergen County to have the attached breezeway and one car garage. Hess spent six months petitioning the planning and zoning boards in Fort Lee to get permission to build his prefabricated metal home here. Building codes in this more densely suburbanized area of Bergen County at the time prohibited steel houses. Hess, accompanied by Jim Mortimer, an engineer for the Lustron Corporation, failed to get the permit and eventually built his home further north in Closter where building and zoning codes were more relaxed.

Areas of Significance

Provided they meet the defined characteristics as defined in the building type and model section below, Lustrons are significant under National Register criteria A and C for their architectural and engineering contributions. The house is closely associated with federally subsidized efforts to alleviate the post World War II housing shortage and thus significantly contributes to the history of housing in the United States. Lustrons represent significant contributions to Postwar development of the residential landscape funded primarily through government programs. As such, they are part of a long history of federally subsidized housing efforts, although characterized by innovations that seem remarkable daring in the context of federal housing programs—particularly given the strength of the forestry and conventional homebuilding industry. Further, the Lustron is significant for its contributions to prefabricated metal housing technology of the era as the manufacturing techniques utilized assembly line production directly influenced by the automobile industry. Porcelain-enameled steel panels were an innovative advancement for prefabricated housing construction, particularly as utilized in the single-floor modern ranch style house plan that provides the Lustron with their unusual appearance. As practical, affordable housing for the average family, Lustrons represent perhaps the most ambitious campaign in private residential construction to infuse modernity throughout everyday life in a postwar environment that itself sought consolation for the war effort in the imagery of the future. Their failure to capture a viable market is attributable perhaps to a nation that was truly ill-prepared to embrace modernism within the dearly-held institution of the house (in the context of the automobile it was apparently acceptable).

Lustron houses meet Criterion Exception G since there is sufficient research and information available on Lustron houses and the Lustron Corporation as well as on prefabricated housing, to objectively evaluate these properties on a national, state, and local level. They have been recognized as a significant aspect of the post-WWII housing in America.

Given the nature and rarity of the Lustron as a property type, all Lustrons constructed in the state are worthy of study, even though not all might not be eligible for the National Register. Lustron houses are unique within the context of postwar housing primarily because of the small numbers produced and constructed. Because of limited model availability and relatively few customizable features, the defining characteristics of the houses are straightforward.

F: Associated Property Types

The first Lustrons manufactured were two-bedroom models, although by 1950 the corporation had introduced a three-bedroom design. In 1949, the company hired Carl Koch and Associates to design a luxury model with more flexible interior plan, a fireplace, and an attached garage. Other plans called for establishing a market for used Lustron parts and creating a system of built in furniture.

Westchester--The *Westchester* and *Westchester Deluxe* were the most commonly sold models. The two-bedroom *Westchester* measured 31 by 35 feet and was distinguished by a 6 by 12 foot cut-out which formed a corner entry porch. Two windows on the primary facade characterize this model. The three-bedroom measured 31 by 39 feet with no cut-out for the porch; this model was entered through the gable side. Three windows on the primary facade distinguish the three-bedroom model. Optional on the *Westchester*, the *Westchester Deluxe* model included a built-in vanity in the bedroom, as well as a bookcase, pass-through between the kitchen and dining room, and a bay window (See Exhibit C). The standard model was number 021 or 031 (depending on the number of bedrooms) and the deluxe model numbered 02 or 03.

Newport--The *Newport* was designed subsequently to the *Westchester* as a lower priced model--the least expensive Lustron available. Very few *Newports* were sold. The two-bedroom model, numbered 032, measured 23 by 31 feet and is characterized by the two windows on the primary facade; it lacked the corner cutout characteristic of the *Westchester* model. The three-bedroom plan is numbered 033 and measured 31 by 31 feet square; likewise, it is characterized by the two windows on the primary facade with no cutout for the porch.

Meadowbrook--The *Meadowbrook* was conceived of as a "middle-line" model and was the last one designed; it is a larger variation on the *Newport*. The two bedrooms *Meadowbrook*, numbered 022, measured 31 by 25 feet with a similar window and door arrangement as the Newport. The three bedrooms measured 31 by 33 feet and is numbered 023

Optional for the entire Lustron model line was either a one-and-a-half or two-and-a-half car garage (with or without a connecting breezeway); it was available in 1949 and 1950 only. The model G-1 garage measured 15 by 23 feet; the G-2 model measured 23 feet square. The breeezeway would connect the house to the garage, but was also sold separately. Significantly, unlike the Lustron house design, the garages were traditionally framed using balloon construction to which the porcelain enameled panels were attached.

Registration Requirements

To meet the property type registration requirements, the house must retain their characteristic form of a one-story ranch style with porcelain tile-like gable roof shingles. The porcelain-enameled steel interior and exterior, with the defining 2 foot square exterior panels and roof tiles, must be intact. The interior must retain a significant portion of the enameled steel ceiling and wall panels. The house must be manufactured by the Lustron Corporation and maintain a high degree of integrity by retaining most of its metal construction, an intact floor plan, aluminum casement windows, enameled steel, tile-like roof shingles and a concrete slab foundation.

Additions made to Lustron houses on the rear façade do not represent loss of integrity as long as the square footage of the addition does not exceed that of the Lustron house or its massing does not overwhelm or obscure the original form.

Alterations to a Lustron house such as vinyl siding, artificial siding, major front façade changes (i.e. removing bay window), or doubling the size of a Lustron house with an addition, would result in its loss of historic integrity and therefore be considered not eligible for listing in the National Register of Historic Places. All the Lustrons now fall within the fifty-year cut-off date for eligibility for the National Register.

G: GEOGRAPHICAL DISTRIBUTION

Lustrons are found widely scattered throughout the state of New Jersey, including: Bergen, Sussex, Hunterdon, Essex, Monmouth, Union, Gloucester, and Cape May Counties.

Lustrons Houses in New Jersey (Partial Listing)

	Model	Color
Alpine		
19 DuBois Ave.	02	Yellow
Clinton		
25 Union Rd.	02	Tan
Cliffside Park		
(Palisades Amusement Park)	02	Yellow
Closter		
22 Division St. (demolished)	02	Yellow
421 Durie Ave.	02	Yellow
Lake Hoptacong (?) (2)		Blue
Maplewood (?)		
Newark (Bamberger's Store) (Model)		
Red Bank (?)		
Roselle (?) (2)		Yellow
Seabright		
1256 Ocean Ave. (Model)	02	
Wildwood		
1907 Atlantic Avenue	02	
419 14th St.	02	Blue
Woodbury		
246 Queen St.	02	

H: IDENTIFICATION AND EVALUATION METHODS

Probably as many as 16 Lustrons were constructed within the state. A partial listing is provided above. It is intended that this thematic nomination will serve as a starting point to begin more complete survey and research on the other New Jersey Lustrons. These buildings played an important role in the housing industry after World War II. Thus they are recognized as a significant historical resource.

This multiple property nomination is based largely upon sources listed in Major Bibliographical References, from newspaper clippings, interviews and site visits with Lustron owners and former franchise dealers. The major portion of the text used for the National Associated Historic Contexts of the Lustrons is derived from the South Dakota National Register Nomination form by Michelle Saxman-Rogers. The Lustron Development in New Jersey section is a preliminary document based upon Lustron Corporation sales records, newspaper clippings from the Newark News, telephone calls and interviews with Lustron owners and former franchise dealers.

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"The Lustron Planning Guide." Promotional material published by the Lustron Corporation (undated).
"Answers to your Questions About the Lustron Home." Promotional material published by the Lustron Corporation (undated).
"Camera Tour of Through the Lustron Home." Promotional material of the Lustron Corporation (undated)
"Lustron Architectural Plans: Model 02, Westchester Deluxe Model." Promotional material of the Lustron Corporation (undated).
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Bibliographical References (Continued) Section I Page 16

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"Lustron Home Going to Bamberger Show." July 15, 1949.

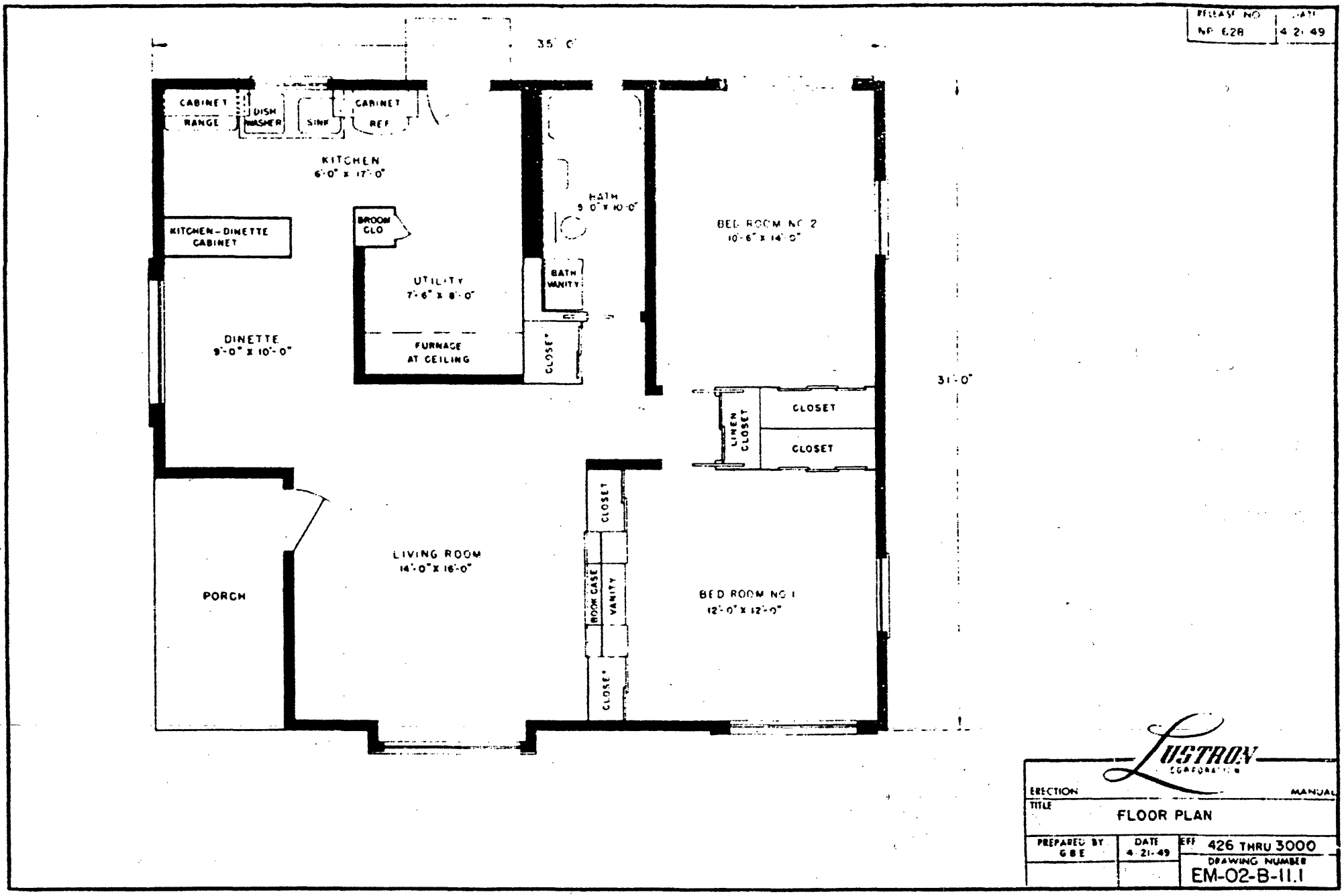
"Lustron Homes OK in Randolph Township." Aug. 20, 1949.

"Metal Homes for Ivy Hill: Fairmount Gets Permission for First Lustron Houses in City." September, 29, 1949.

"Padula Lost on Lustron: Newark Builder Tells U.S. Senators RFC Blocked Loan." March, 1950.

Interviews and Telephone Conversations

Harold Hess: Lustron Owner, 421 Durie Avenue, Closter, N.J.
Majorie Hiorth: Lustron Owner, 19 DuBois Avenue, Alpine, N.J. December 11, 1999.
Richard Ramagosa: son of former Lustron Dealer, Wildwood, N.J. December 8, 1999.
John Winkler: former Palisades Amusement Park employee, Fort Lee. December 8, 1999.



Though small by today's standards, the Lustron homes were promoted as well-planned and efficient. This two-bedroom Lustron home provided approximately 1,000 square feet of living area. (Photo courtesy Robert A. Mitchell, AIA, State Historical Society of North Dakota)

CHG. LETTER	BILLING NO.	REVISIONS	CHECKED BY	DRAWN BY	APP.	DATE
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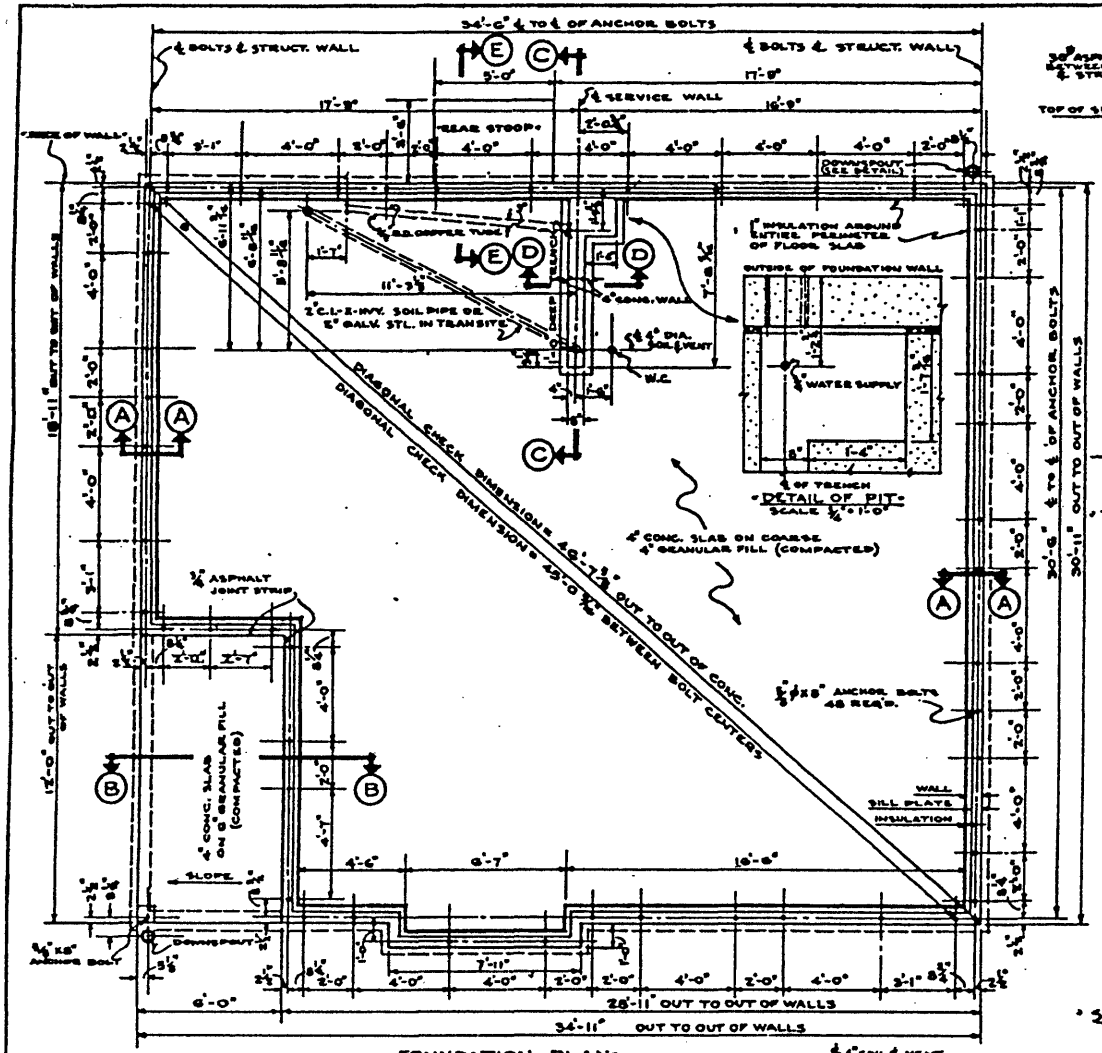
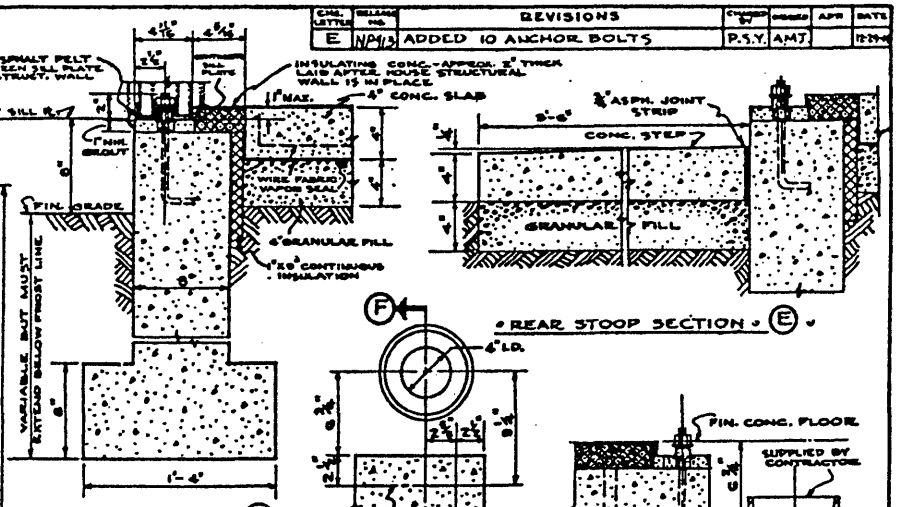


FOUNDATION PLAN
SCALE ¼" = 1'-0"



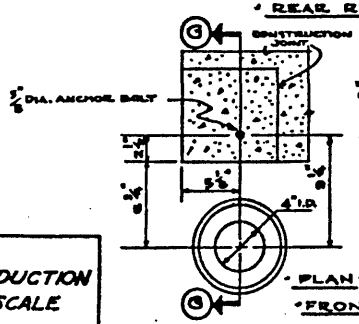
TYPICAL SECTION A

REAR STOOP SECTION E

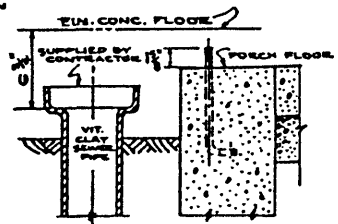
PLAN F

SECTION F

REAR RIGHT CORNER



PLAN G



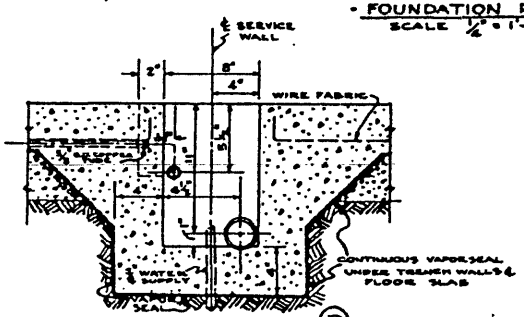
SECTION G

FRONT LEFT CORNER

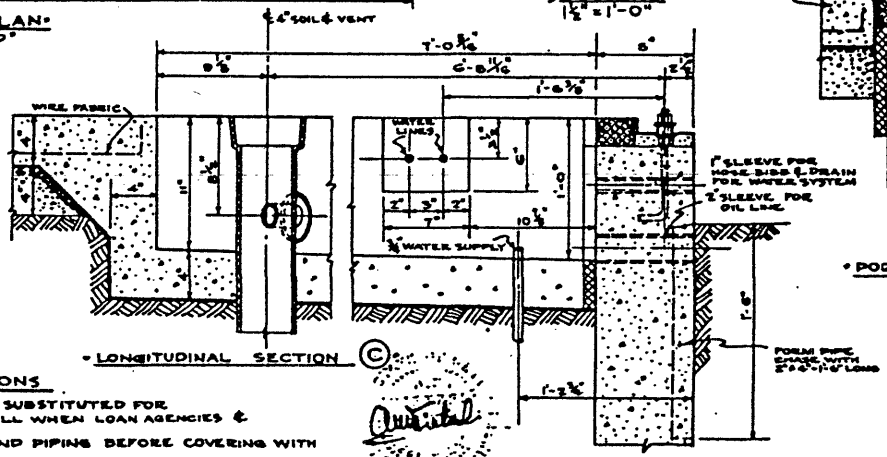
DOWNSPOUT SEWER DETAILS

PHOTO REDUCTION
DO NOT SCALE

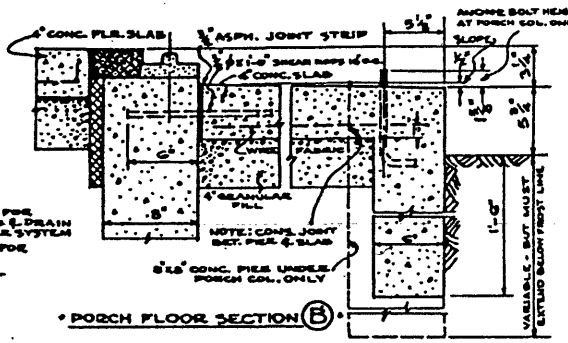
SCALE FOR ALL SECTIONS
1½" = 1'-0"



CROSS SECTION D



LONGITUDINAL SECTION C



PORCH FLOOR SECTION B

SERVICE WALL SECTIONS

NOTES: 1. CONC. OR CINDER BLOCK MAY BE SUBSTITUTED FOR INDICATED CONC. FOUNDATION WALL WHEN LOAN AGENCIES & LOCAL BUILDING CODES PERMIT.
2. PRESSURE TEST ALL UNDERGROUND PIPING BEFORE COVERING WITH EARTH OR CONCRETE.

NOTE: THIS DWG. SUPERSEDES AP2 DWGS. A-1; A-2; A-3; A-100-1

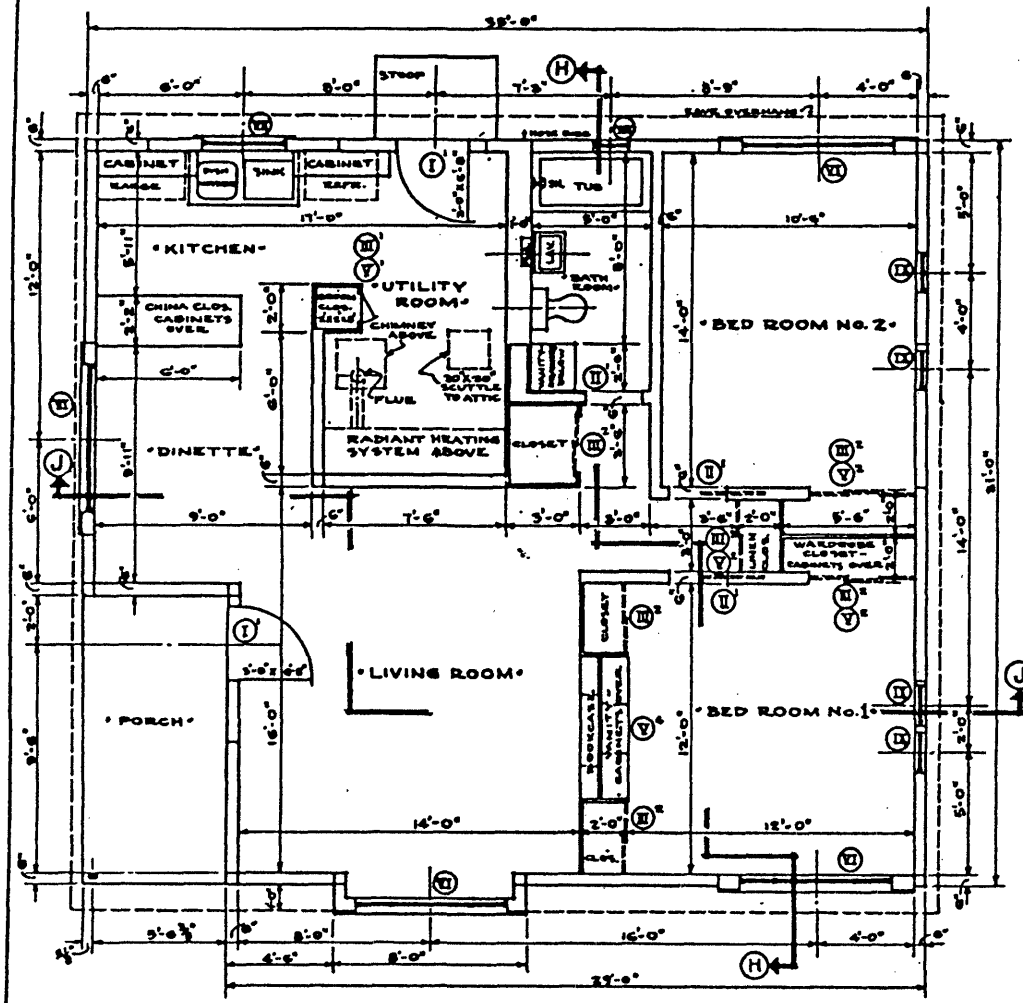
LUSTRON CORPORATION
4600 E. FIFTH AVE., COLUMBUS 16, OHIO

DR: P.S.V.	8-5-48	
CH'D: A.M.T.	8-6-48	
APP: A.M.T.	8-6-48	
SCALE AS NOTED		
REVISED	12-29-48	

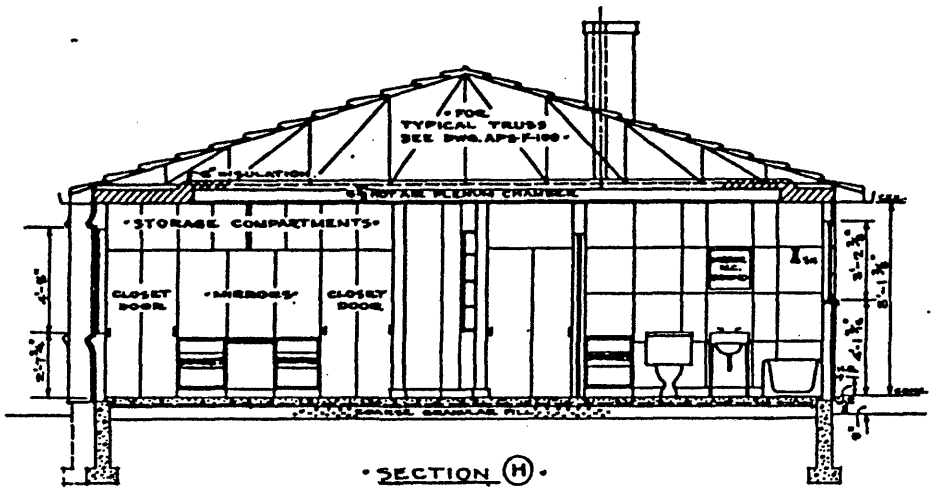
FOUNDATION - PLAN & DETAILS

DRAWING NUMBER	REV.
AP2-A-100-2	E

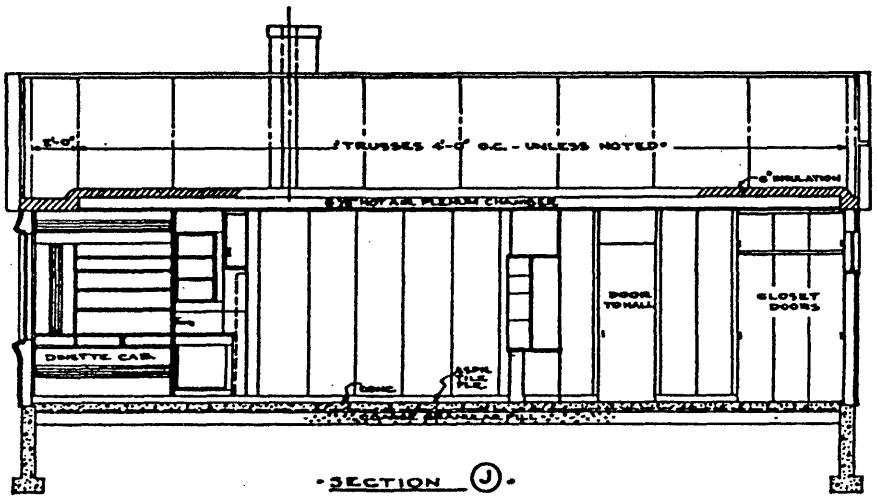
CODE LETTER	SYMBOL NO.	REVISIONS	BY	COMMENCED	APPR	DATE
R	3/11/49	CHANGED DOOR AND WINDOW SCHEDULE	T.Y.	ANT		1-7-49



FLOOR PLAN



SECTION (H)



SECTION (J)

NOTE: ALL INTERIOR WALLS ARE NON-BEARING.

DOOR AND WINDOW SCHEDULE

DESIGNATION ON PLAN	QUANTITY	SIZE	DESCRIPTION
(I)	2	3'-0" x 6'-8"	FRONT & REAR DOORS
(II)	3	2'-8" x 6'-8"	INTERIOR COMMUN. DOORS
(III)	13	1'-6" x 6'-0"	CLOSET DOORS
(V)	11	1'-6" x 1'-10"	CLOSET DOORS
(VI)	4	6'-5" x 4'-5"	LARGE WINDOWS
(VII)	1	3'-5" x 2'-11"	KITCHEN WINDOWS
(VIII)	1	1'-6 5/8" x 3'-1 5/8"	BATHROOM WINDOW
(IX)	4	1'-6 7/8" x 1'-6 7/8"	PORTHOLE WINDOWS

FOR DETAILS SEE AP2-B-100 & H-102

* SMALL NO. OUTSIDE CIRCLE DENOTES QUANTITY AT ANY PARTICULAR LOCATION.

PHOTO REDUCTION DO NOT SCALE

NOTE: SUPERSEDES Dwg. AP2-B-1 & PART OF AP2-A-100

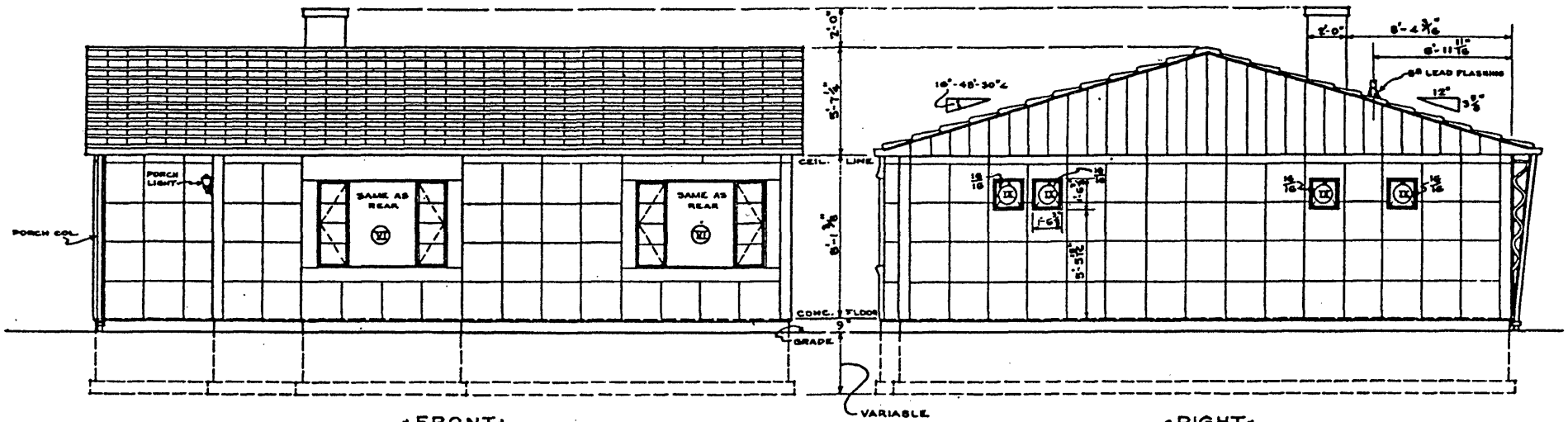
LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO.

DR: R.S.Y.	4-14-48	
CH'D: M.J.E.	7-29-48	
APP.: J.K.D.	8-12-48	
SCALE: 1/4" = 1'-0"		
REVISED	1-7-49	

FLOOR PLAN & SECTIONS | AP2-B-100 (DRAWING NUMBER) | B (REV.)

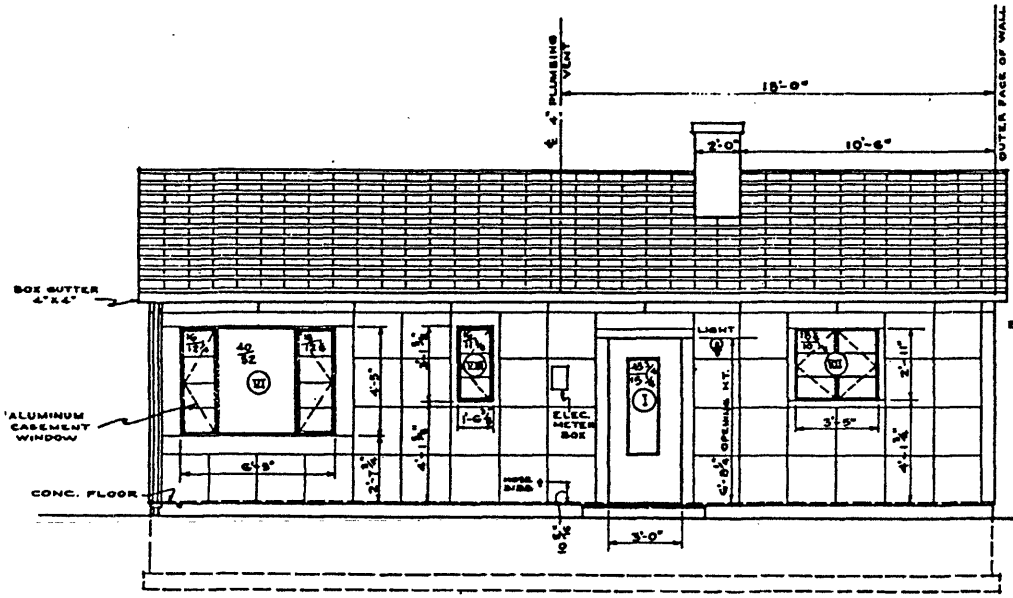
31 THRU 3 000

CHG. LETTER	RELEASE NO.	REVISIONS	CHANGED BY	CHECKED	APPR.	DATE
A		ADDED HOSE BIBB TO REAR ELEV.	P.S.Y.			12-5-46



"FRONT"

"RIGHT"



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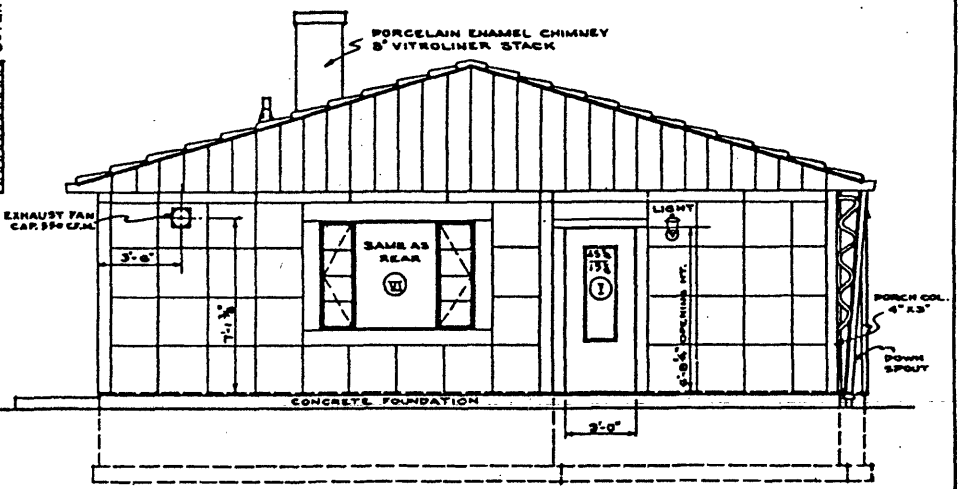


"LEFT"

PHOTO REDUCTION
DO NOT SCALE

NOTE: SUPERSEDES AP2 DWGS. C-1, C-2, C-3 & C-4.

NOTES: 1- ROMAN NUMERALS REFER TO PLAN LOCATIONS (AP2-B-100) AND DOORS & WINDOW DETAILS (AP2-H-102).

2- EXTERIOR & INTERIOR WALL PANELS, CEILING PANELS, ROOF PANELS, GUTTER, DOWNSPOUT, PORCH COLUMN, GABLE ENDS AND CHIMNEY ARE PORCELAIN ENAMEL ON STEEL.

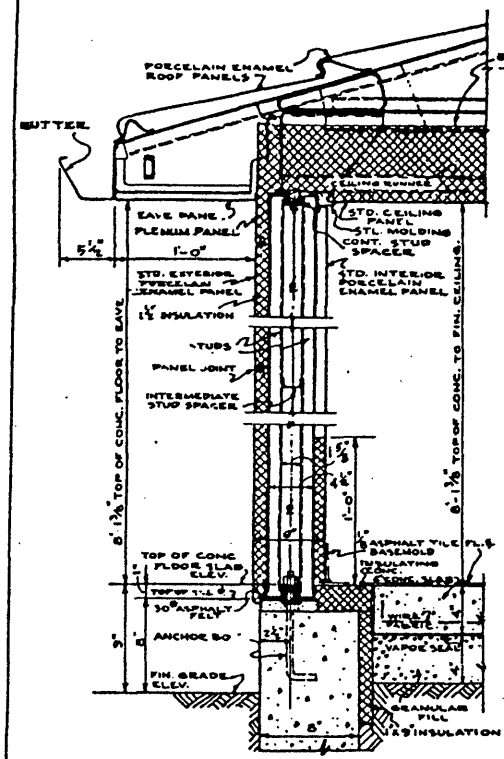
3- EXTRUDED POLYVINYL CHLORIDE SEALS IN ALL JOINTS BETWEEN PORCELAIN ENAMEL PANELS- EXTERIOR & INTERIOR

LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO

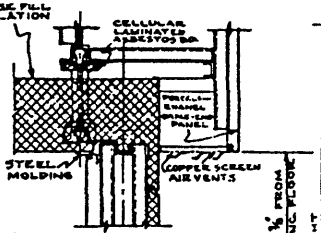
DR: A.M.T.	9-26-46
CHD: J.K.D.	9-26-46
APP: [illegible]	9-24-46
SCALE: ½" = 1'-0"	
REVISED	12-5-46

ELEVATIONS EXTERIOR.

AP2-C-100 | A



• TYPICAL EXTERIOR WALL SECT. •
SCALE 1½" = 1'-0"



• TYPICAL GABLE END SECTION •
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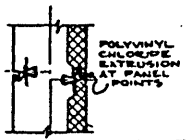

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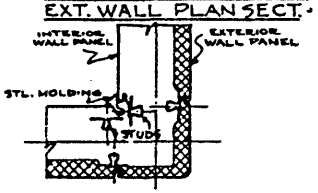

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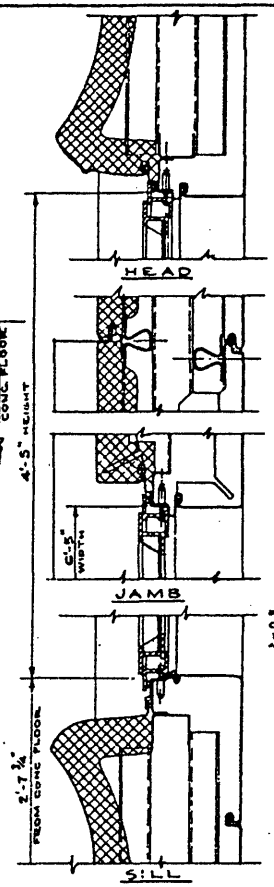
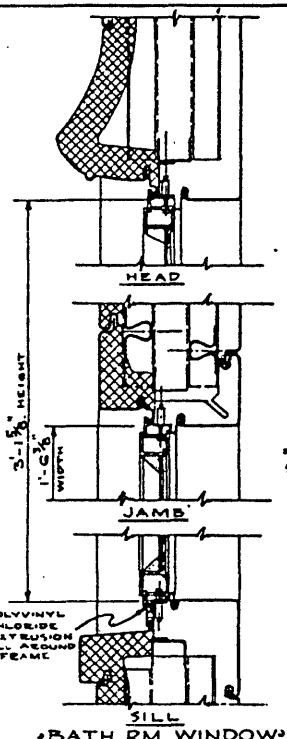
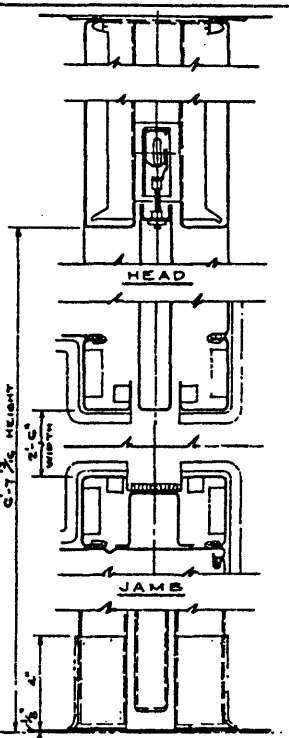


• TYPICAL WINDOW SECT. •
SCALE 3" = 1'-0"



• BATH RM. WINDOW •
SCALE 3" = 1'-0"



• INTERIOR DOOR •
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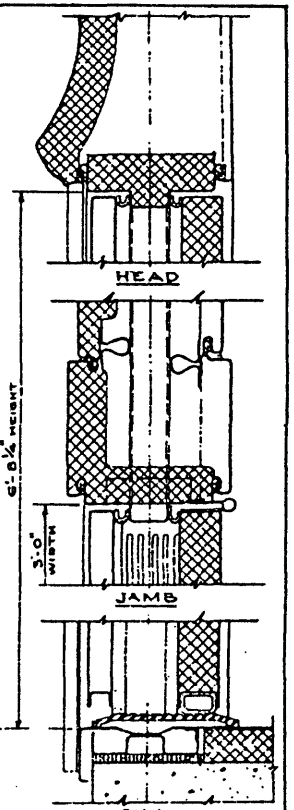
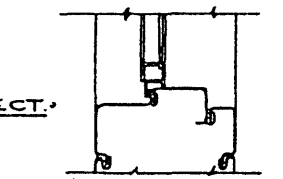
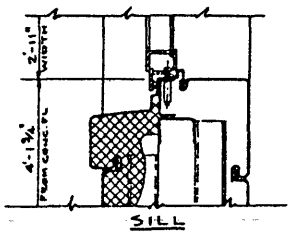


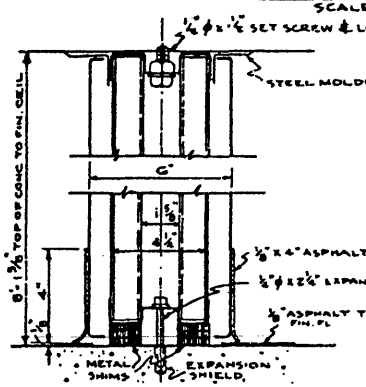
• EXTERIOR DOOR •
SCALE 3" = 1' 0"



• PORTHOLE WINDOW •
HEAD, JAMB & SILL SIMILAR
SCALE 3" = 1'-0"



• KITCHEN WINDOW SECT. •
HEAD & JAMB SIMILAR TO TYPICAL
SCALE 3" = 1'-0"



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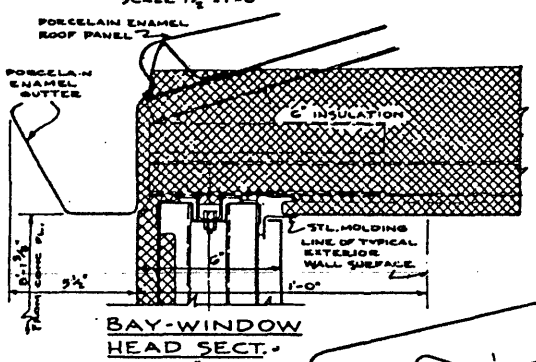
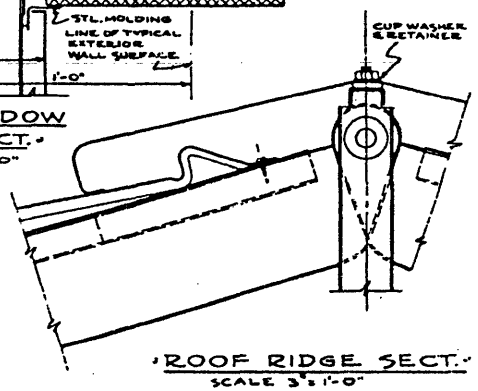


BAY-WINDOW HEAD SECT. •
SCALE 3" = 1'-0"



• ROOF RIDGE SECT. •
SCALE 3" = 1'-0"

NOTE: FOR DETAIL OF JOINT SEALS SEE DWG. AP2-H-103.

PHOTO REDUCTION DO NOT SCALE

NOTE: SUPERSEDES AP2 DWGS. D-1; D-2; D-3; E-1; E-8; E-11.

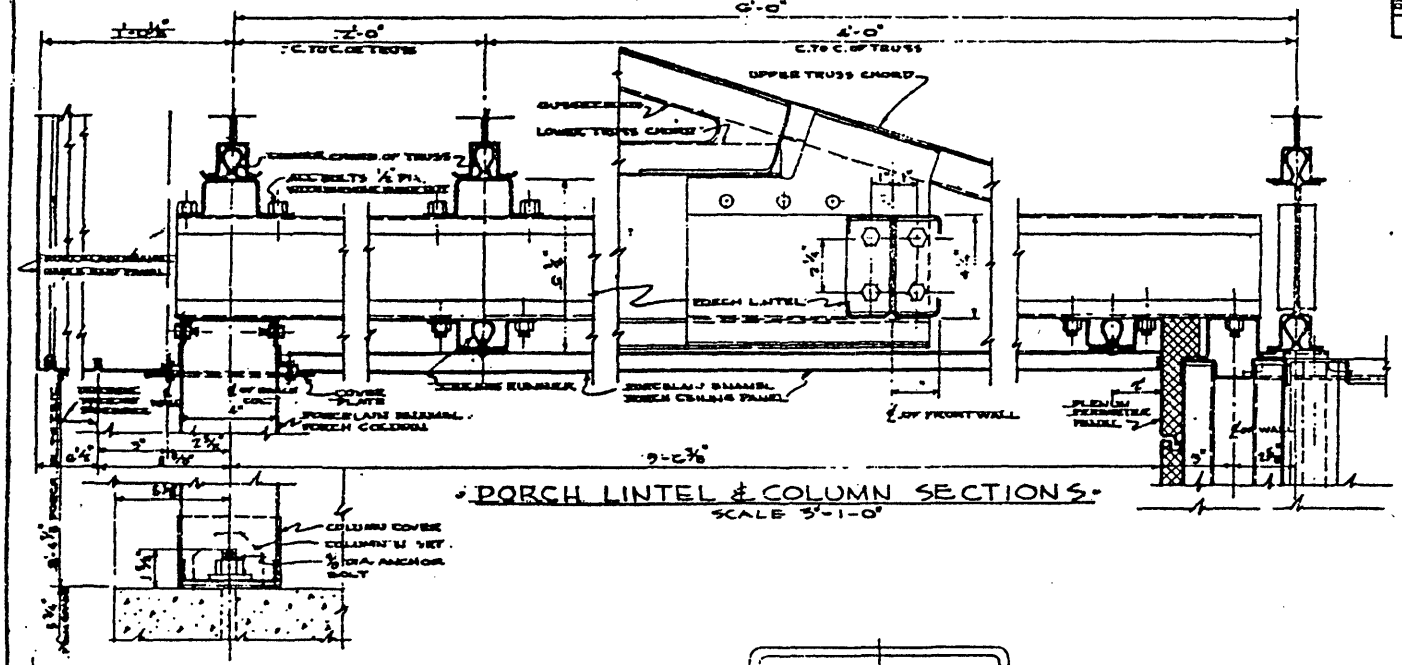
CHG. LETTER	RELEASE NO.	REVISIONS	CHECKED BY	ORDER NO.	DATE
A	NF 900	MISCELLANEOUS CHANGES.	KS1	A MT	12.1.48

LUSTRON CORPORATION
4700 E. FIFTH AVE., COLUMBUS 16, OHIO.

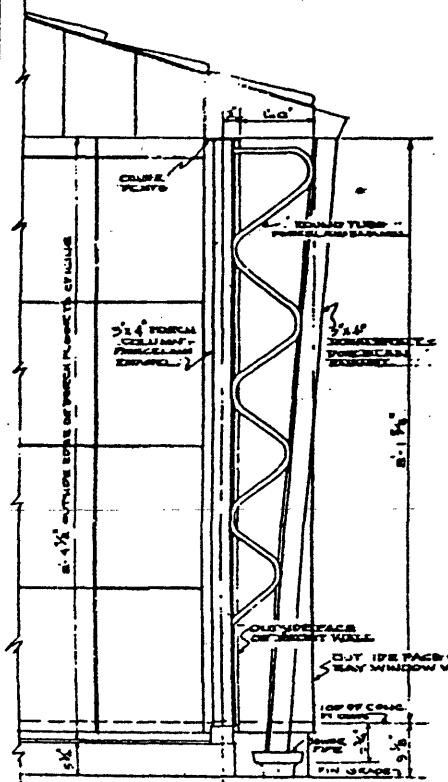
DR. D.H.B.	6-29-48
CHD. P.L.Y.	8-10-48
APP. A.M.T.	8-26-48
SCALE AS NOTED	
REVISED	12-9-48

WALL SECTIONS WINDOWS, DOORS, ROOF RIDGE, ETC

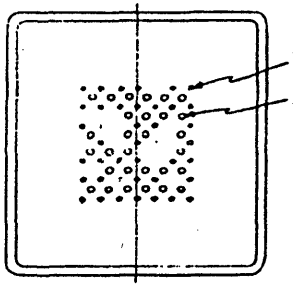
AP2-D-100 — DRAWING NUMBER — REV. A



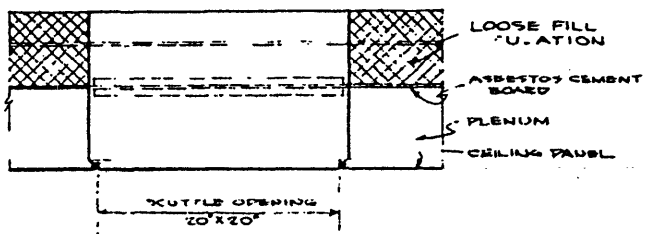
PORCH LINTEL & COLUMN SECTIONS
SCALE 3"-1'-0"



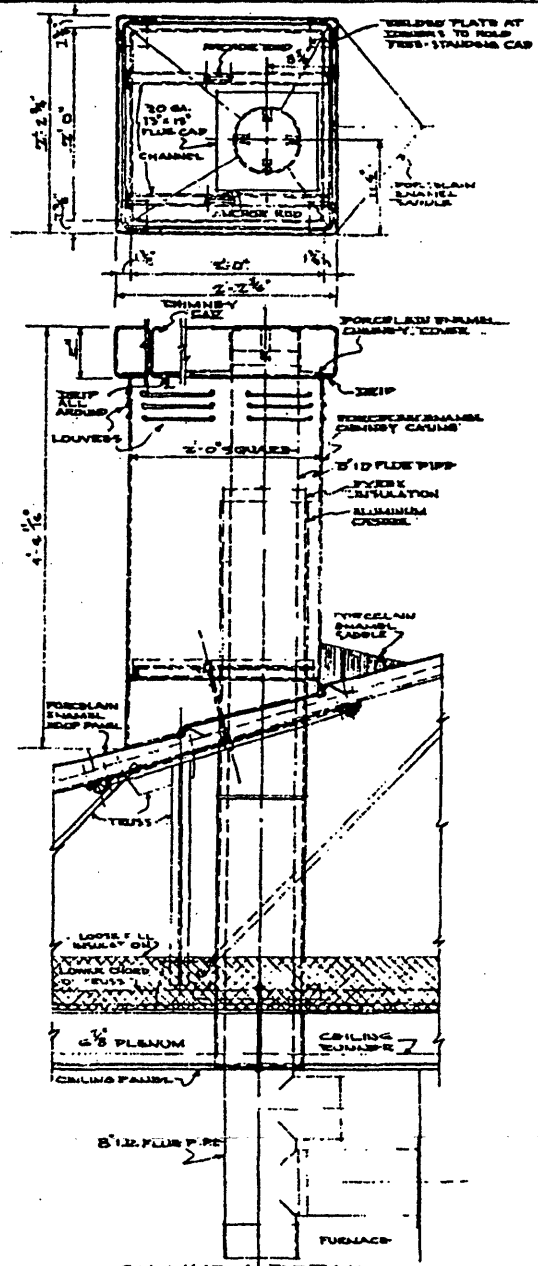
PORCH COLUMN & DOWNSPOUT
DOWNSPOUT AT REAR OF HOUSE SIMILAR
SCALE 3/4"=1'-0"



VIEW SHOWING PERFORATIONS IN CEILING PANEL



SECTION THRU SCUTTLE
SCALE 1½"=1'-0"



CHIMNEY DETAIL
SCALE 1"=1'-0"

NOTE: SUPERSEDES APT. DWG. E-_,_ 2

PHOTO REDUCTION
DO NOT SCALE

LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 19, OHIO

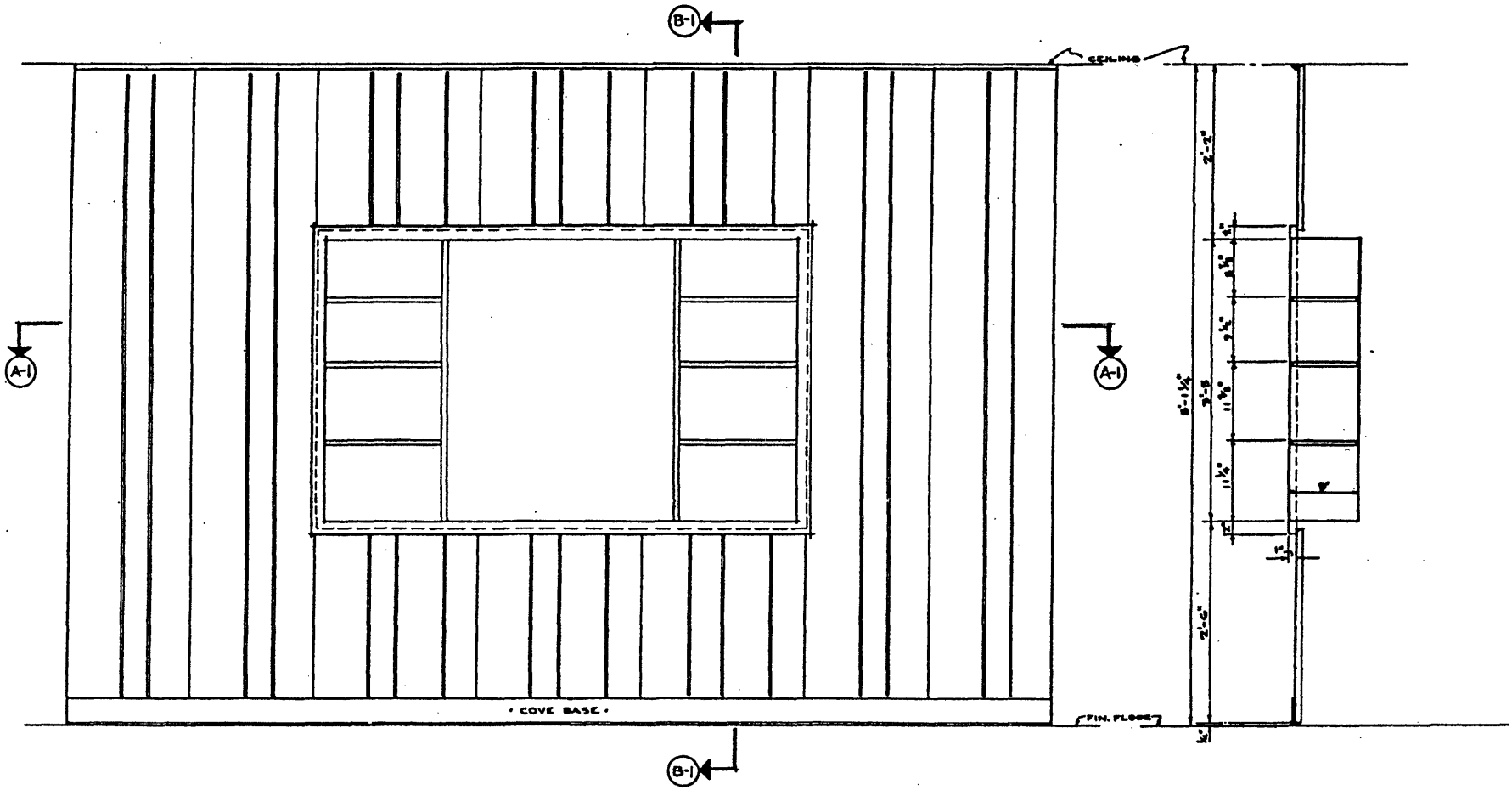
DR: P.S.Y.	10-1-48
CH'D:	
APP	
SCALE AS NOTED	

PORCH & CHIMNEY DETAILS

DRAWING NUMBER: APZ-H-100-1

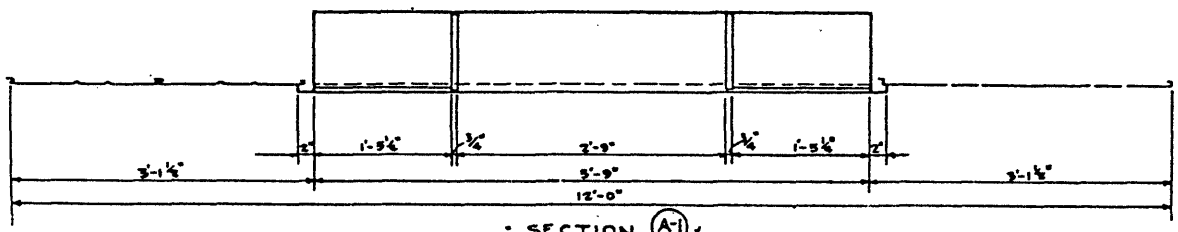
REV.

CHG. LETTER	ORIGINAL NO.	REVISIONS	DRAWN BY	CHECKED	APPR.	DATE
A	11722		D.L.Y.		A.S.T.	1749



• ELEVATION •

• SECTION B-1 •



• SECTION A-1 •

PHOTO REDUCTION
DO NOT SCALE

NOTE: SUPERSEDES APZ DWG. H-1.

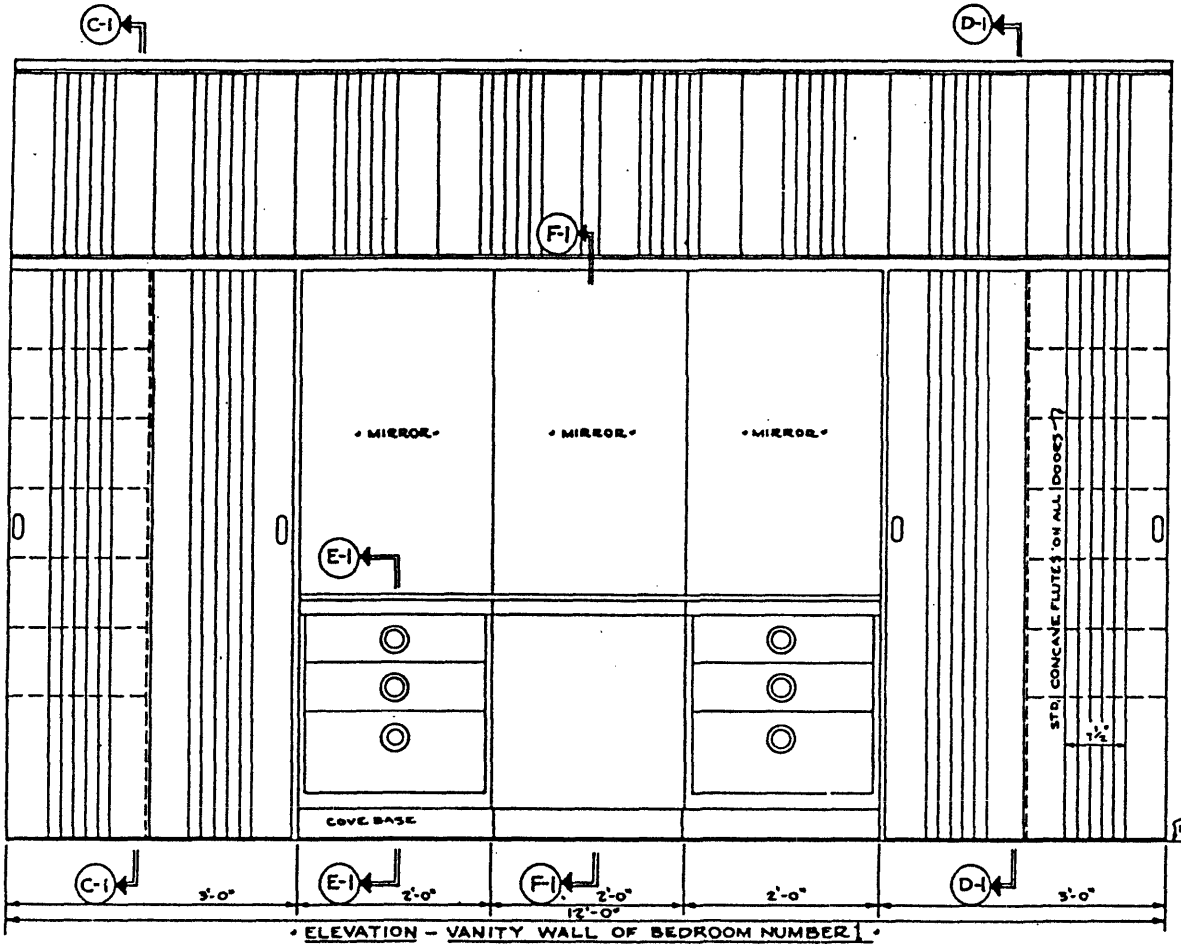
LUSTRON CORPORATION
6200 E. FIFTH AVE., COLUMBUS 16, OHIO.

DR: D.H.B.	7-5-48
CHD: M.J.R.	8-18-48
APP: J.K.G.	8-20-48
SCALE: 1"=1'-0"	
REVISED	11-7

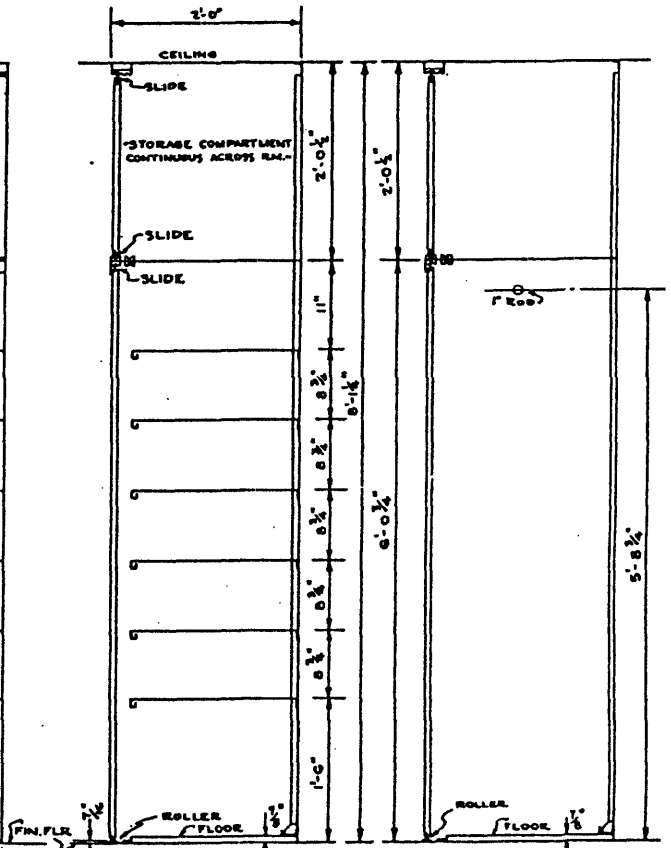
BOOKCASE-
LIVING ROOM

APZ-H-200
DRAWING NUMBER

CHG. LETTER	BULLETIN NO.	REVISIONS	MARKED BY	APPROVED	APP.	DATE
A	11 48					1-7-49

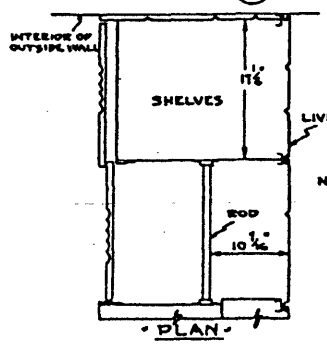


ELEVATION – VANITY WALL OF BEDROOM NUMBER 1



SECTION C-1

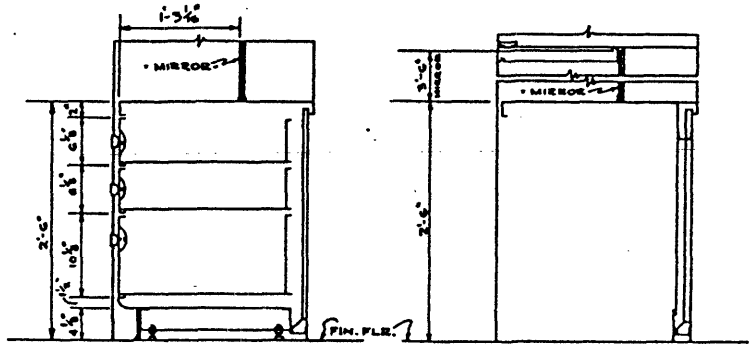
SECTION D-1



NOTE:
PLAN OF CLOSET ON OPPOSITE WALL REVERSED

PLAN

PHOTO REDUCTION
DO NOT SCALE



SECTION E-1

SECTION F-1

NOTE: SUPERSEDES APE DWG. H-4

LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO

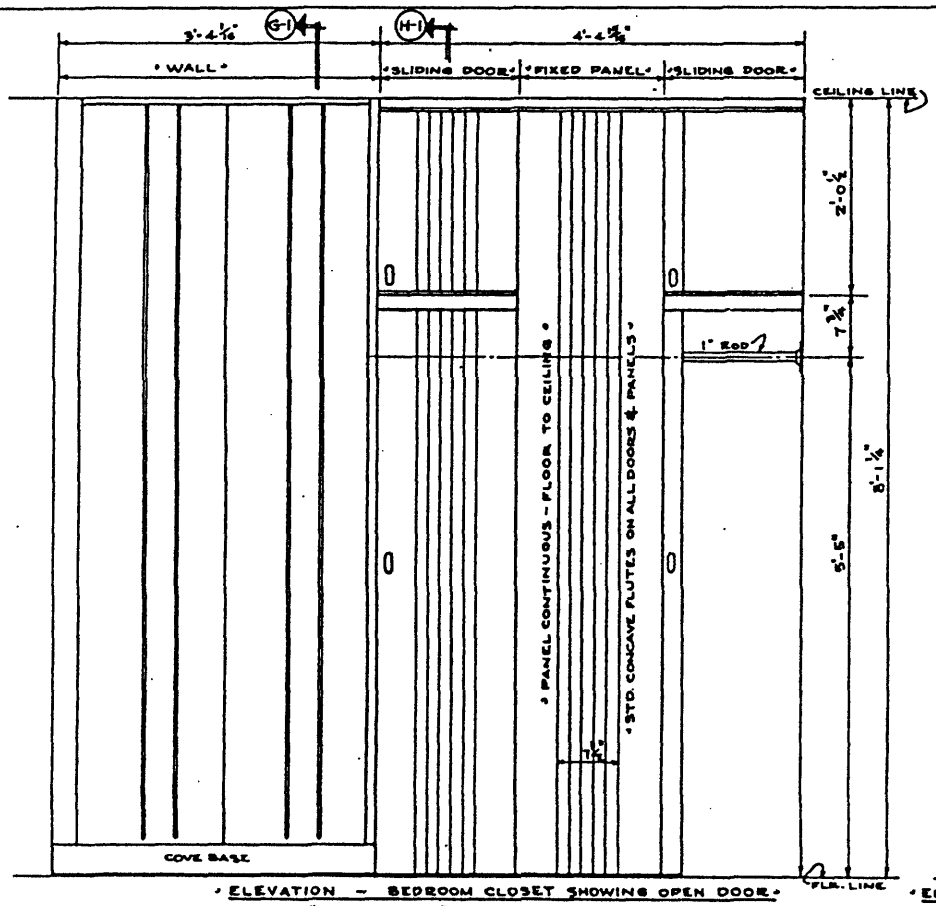
DR: P.S.V.	1-7-48	
CHK: M.J.R.	8/18/48	
APP: J.K.D.	8-20-48	
SCALE: 1" = 1'-0"		
REVISED	1-7-49	

VANITY & CLOSETS BEDROOM NO. 1.

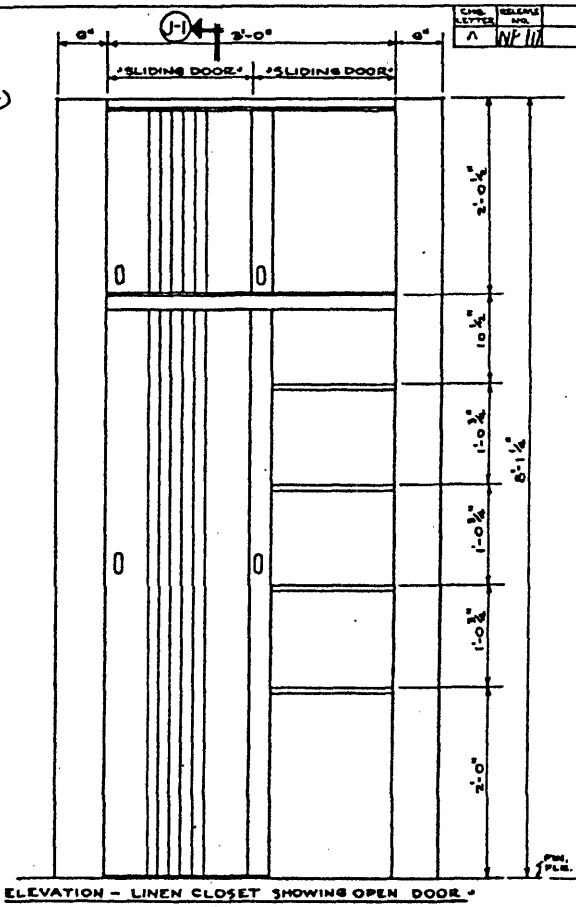
AP2-H-201 (DRAWING NUMBER)

A (REV.)

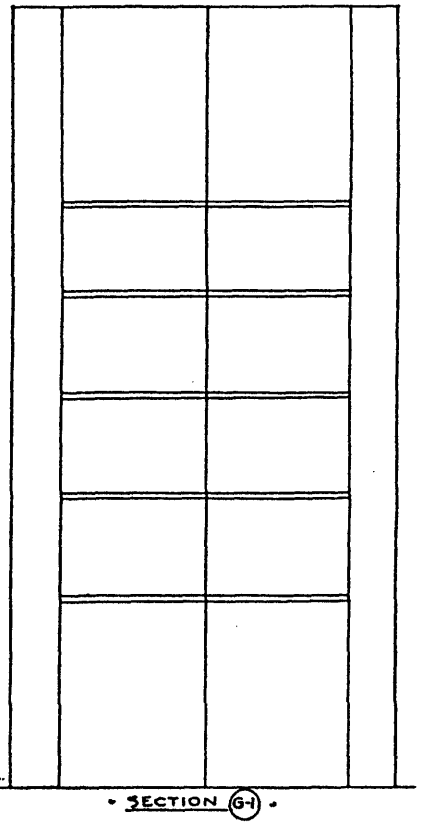
CHG. LETTER	RELEASE NO.	REVISIONS	CHANGED BY	CHECKED	APP.	DATE
A	NP 111					1-7-47



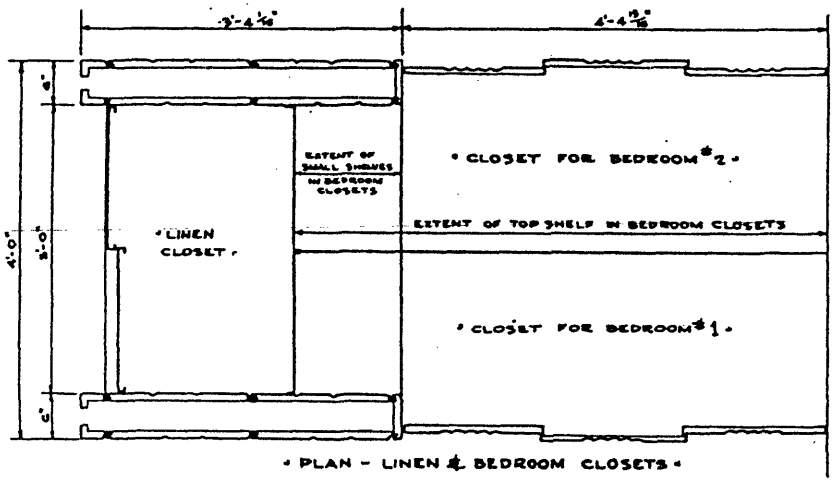
"ELEVATION - BEDROOM CLOSET SHOWING OPEN DOOR"



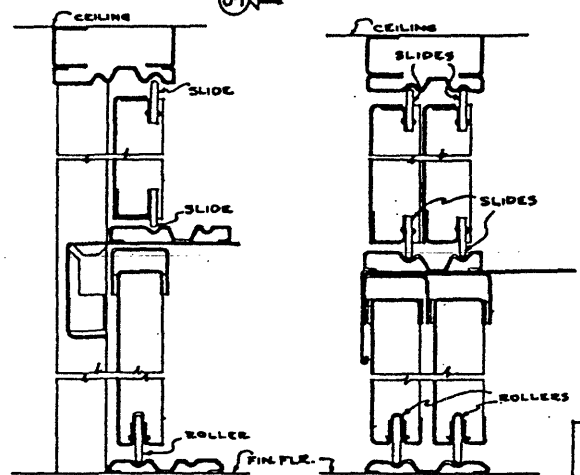
"ELEVATION - LINEN CLOSET SHOWING OPEN DOOR"



"SECTION G-1"



"PLAN - LINEN & BEDROOM CLOSETS"



"SECTION H-1"
"SCALE - HALF SIZE"

"SECTION J-1"
"SCALE - HALF SIZE"

PHOTO REDUCTION
DO NOT SCALE

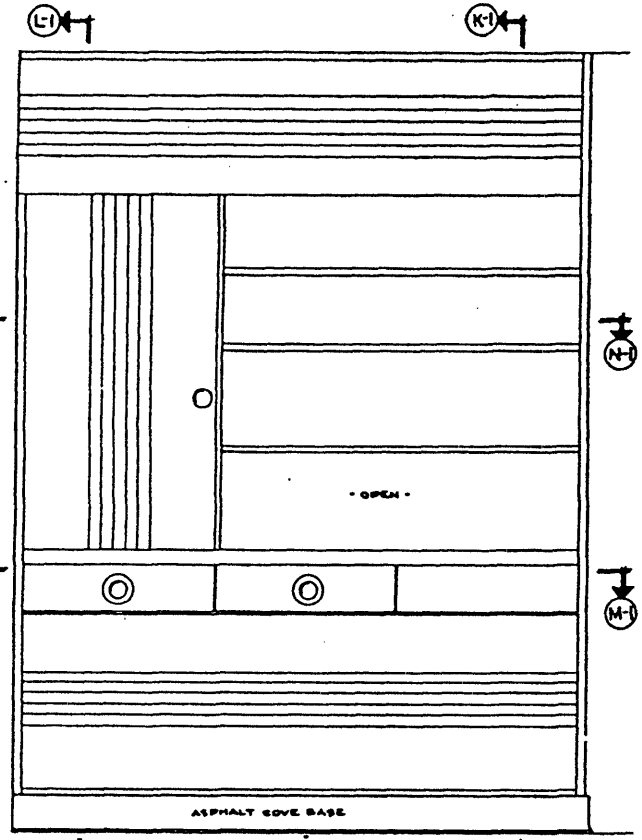
NOTE: SUPERSEDES AP2 Dwg. H-8

LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO.

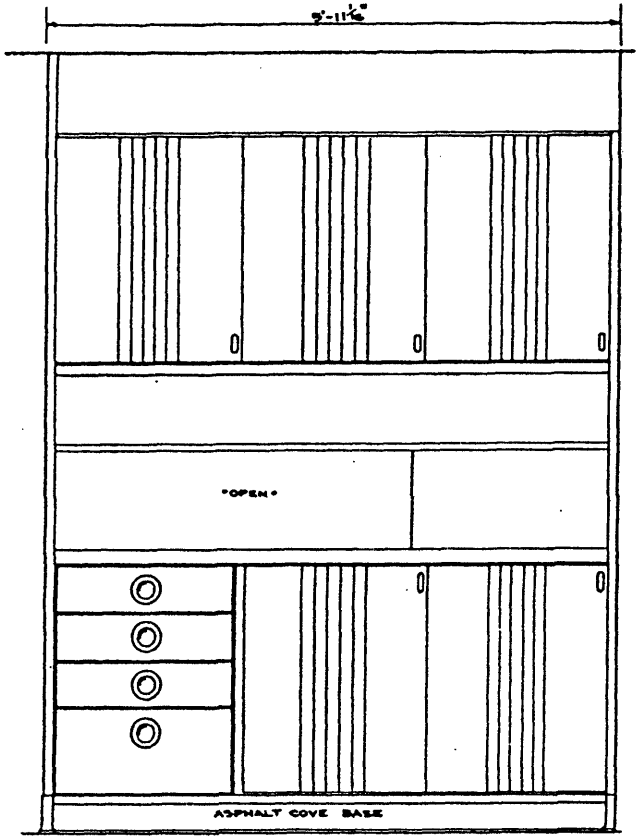
DR: P.S.Y.	7-12-46
CH'D: M.J.R.	8-16-46
APP: J.K.D.	8-20-46
SCALE: 1" = 1'-0" EXCEPT AS NOTED	
REVISED	1-7-47

TRIPLE CLOSET UNIT
LINEN & BEDROOMS 1 & 2.

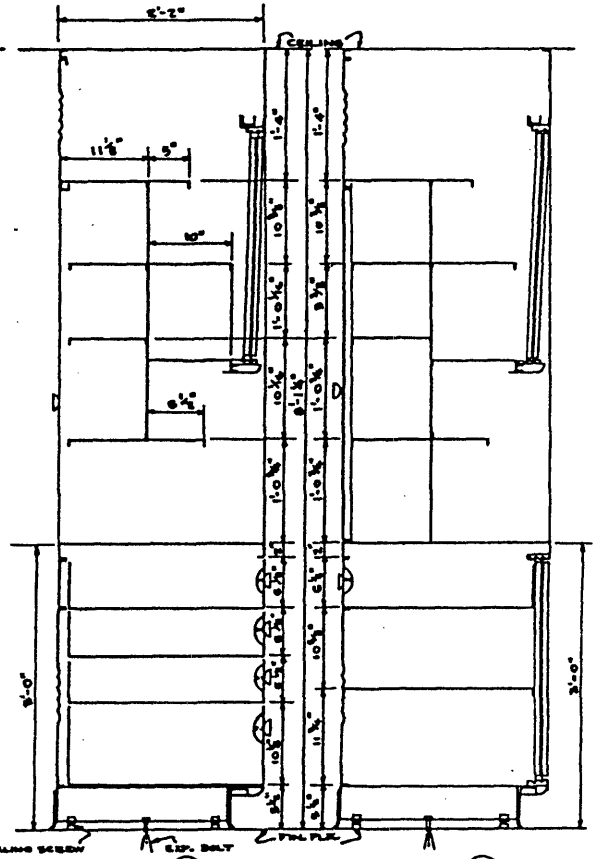
AP2-H-202 — DRAWING NUMBER — REV. A



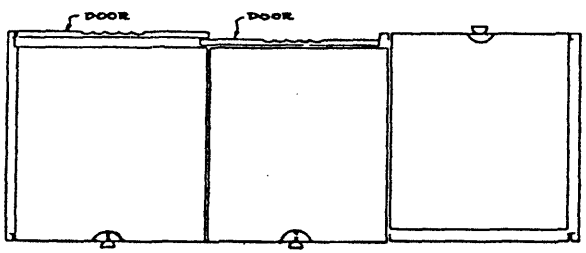
"DINETTE ELEVATION"



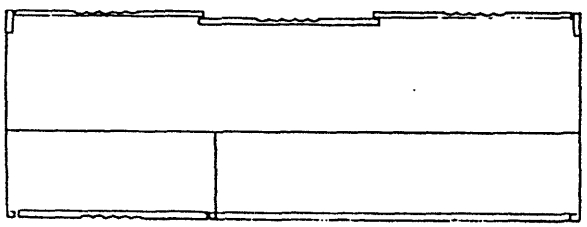
"KITCHEN ELEVATION"



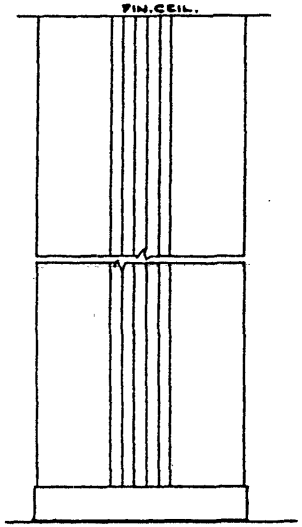
"SECTION K-1" "SECTION L-1"



"PLAN M-1"



"PLAN N-1"



"END ELEVATION"

NOTE:
CABINET DOOR MECHANISM IN KITCHEN SIMILAR TO TOP DOORS IN BEDROOM CLOSETS. SEE SECTION J-1 ON DWG. NO. APZ-H-202.

PHOTO REDUCTION
DO NOT SCALE

NOTE: SUPERSEDES APZ DWG. H-2.

CHG. LETTER	RELEASE NO.	REVISIONS	CHECKED BY	DRAWING	APP.	DATE
A	W-127	[illegible]	[illegible]		AHT	1/49

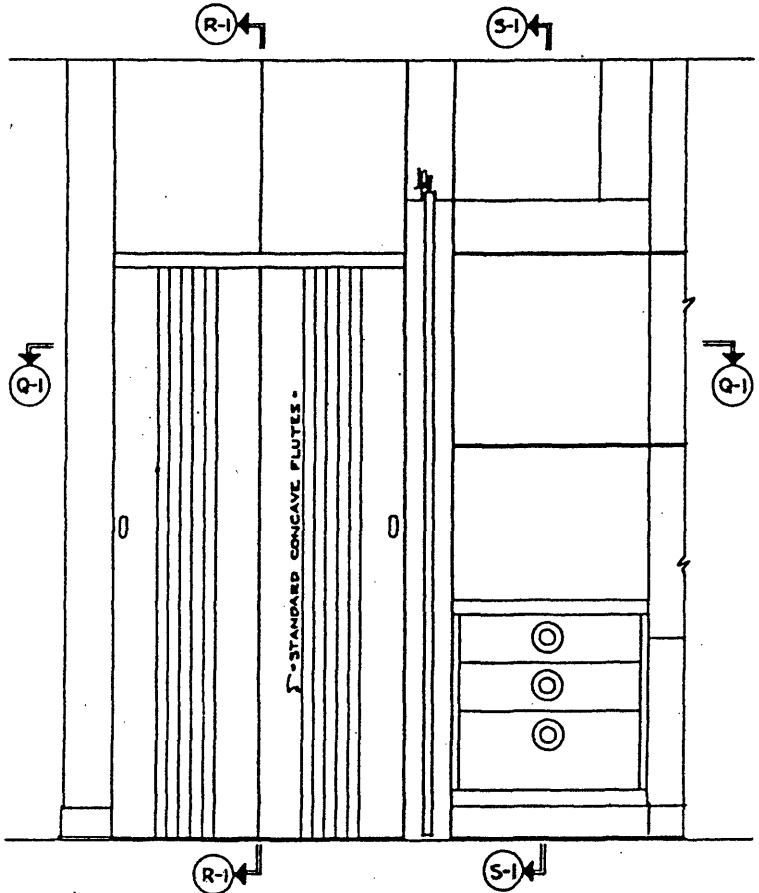
LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO.

DR: P.S.Y.	7-15-48
CHD: M.L.R.	8-18-48
APP: J.K.D.	8-20-48
SCALE: 1"=1'-0" EXCEPT AS NOTED	
REVISED	1-7-49

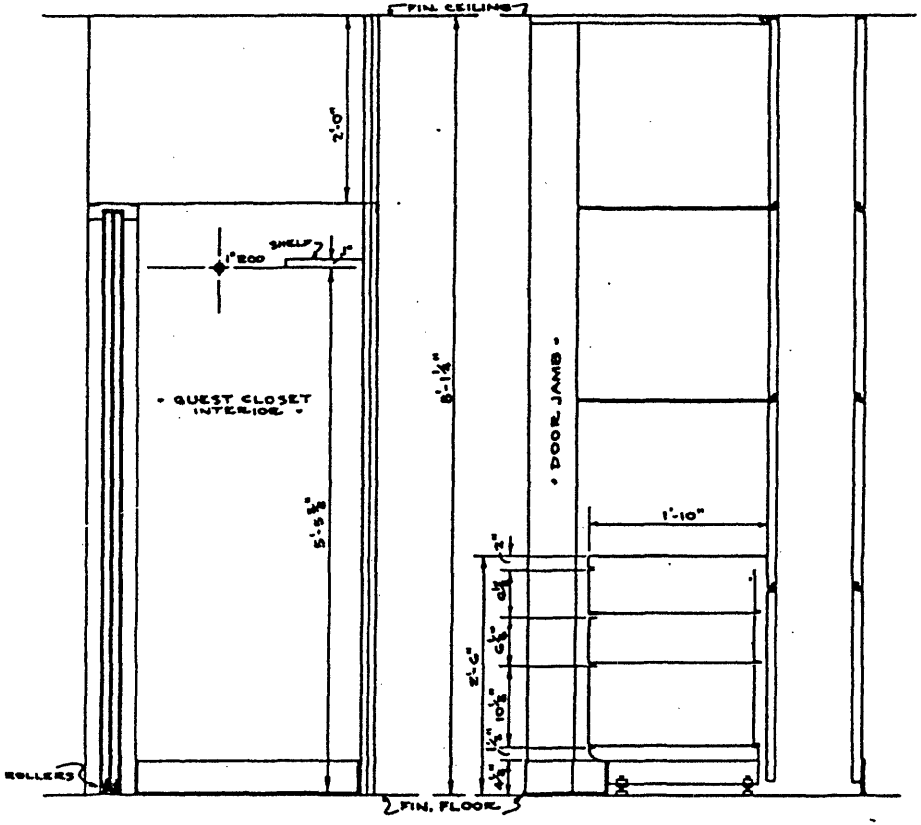
KITCHEN & DINETTE CABINET.

APZ-H-203 A

ENG. LETTER	RELEASE NO.	REVISIONS	CHECKED BY	PROJECT	APP.	DATE
A	W1-03	CHANGED [illegible] IN VANITY	P.S.Y.		AMT	1-7-49

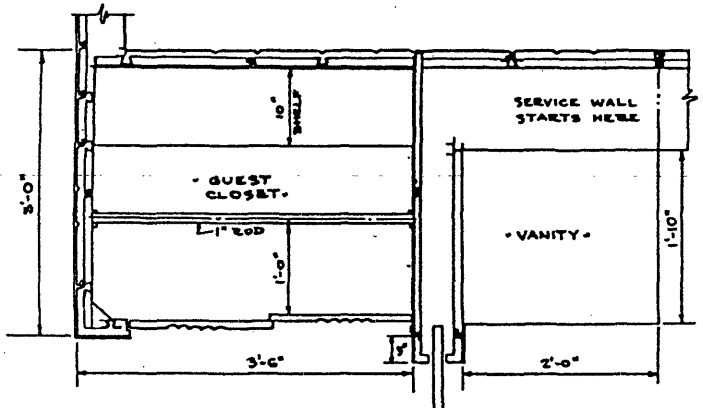


ELEVATION - GUEST CLOSET & END OF BATHROOM



SECTION R-1

SECTION S-1



PLAN SECTION Q-1

PHOTO REDUCTION
DO NOT SCALE

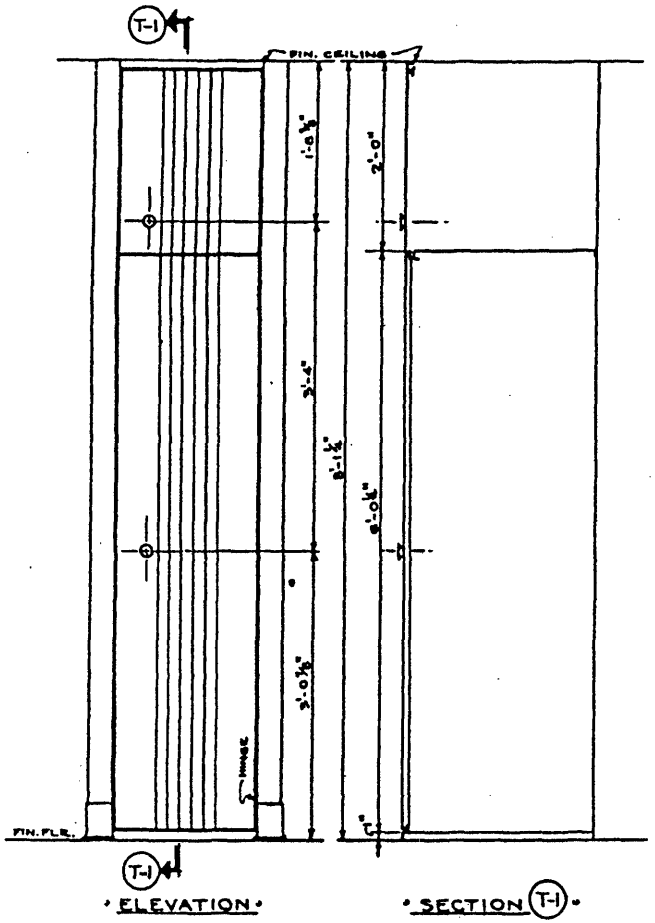
LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO

DR.: P.S.Y.	8-12-48
CH'D: M.J.E.	8-18-48
APP.: J.K.D.	8-20-48
SCALE: 1" = 1'-0"	
REVISED	1-7-49

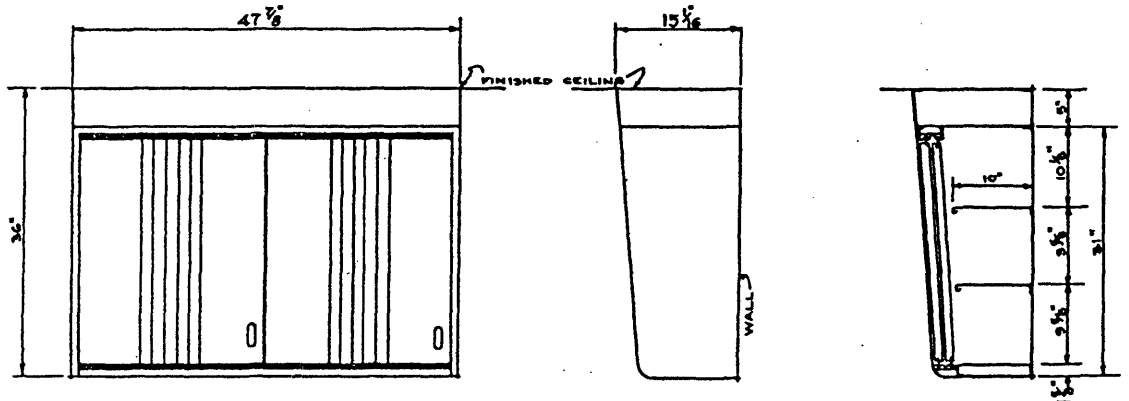
GUEST CLOSET & BATHROOM VANITY.

AP2-H-204 (DRAWING NUMBER) A (REV.)

CHG. LETTER	RELEASE NO.	REVISIONS	CHANGED BY	CHECKED	APP.	DATE
A	V/Y-1	CHANGED DOOR ENDS & 1-E.P. DIM'S.	P.S.Y.		J.H.T.	7-49

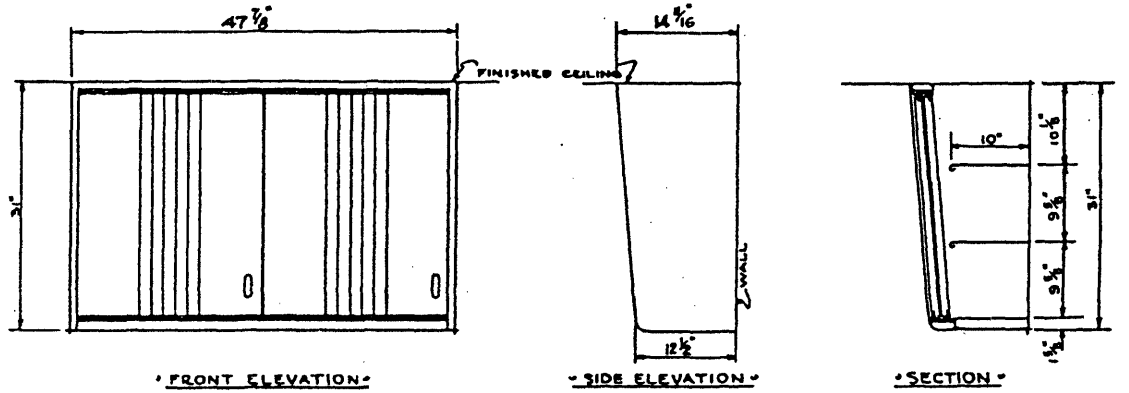


"ELEVATION" "SECTION T-1"



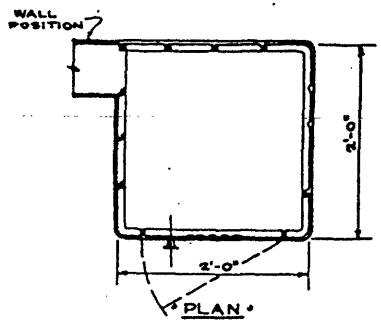
"FRONT ELEVATION" "SIDE ELEVATION" "SECTION"

"KITCHEN CABINET OVER STOVE SPACE"



"FRONT ELEVATION" "SIDE ELEVATION" "SECTION"

"KITCHEN CABINET OVER REFRIGERATOR SPACE"



"PLAN"

"BROOM CLOSET"

PHOTO REDUCTION
DO NOT SCALE

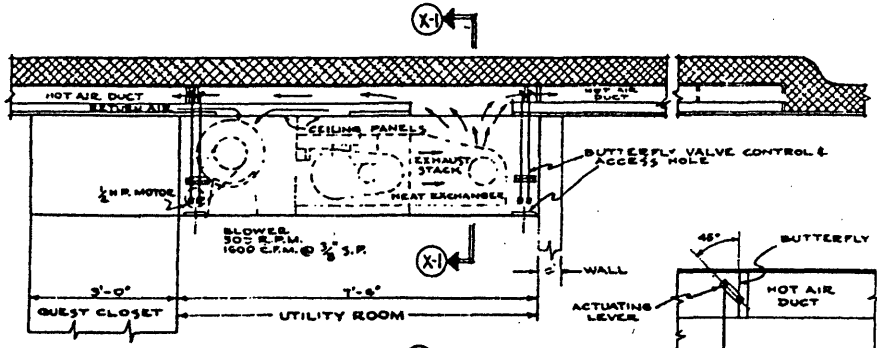
LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO.

DR: P.S.Y.	7-26-48
CHD: M.J.R.	8-18-48
APP: J.K.D	8-20-48
SCALE: 1"=1'-0"	
REVISED	

KITCHEN CABINETS & BROOM CLOSET.

DRAWING NUMBER: AP2-H-205 REV: A

CHG. LETTER	RELEASE NO.	REVISIONS	CHANGED BY	CHECKED	APP.	DATE
A	W-999	ENLARGED HOT AIR CHAMBER OVER FURNACE	P.S.Y.			10/21/48

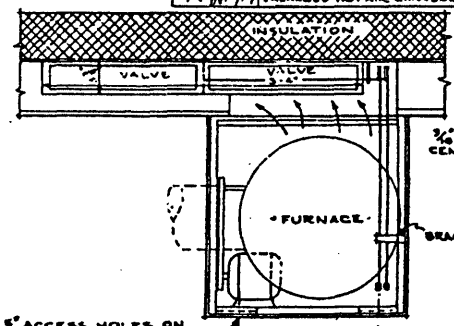


• SECTION (W-1) •

SCALE 1/4" = 1'-0"

• VALVE CONTROL LINKAGE •

SCALE 1 1/2" = 1'-0"

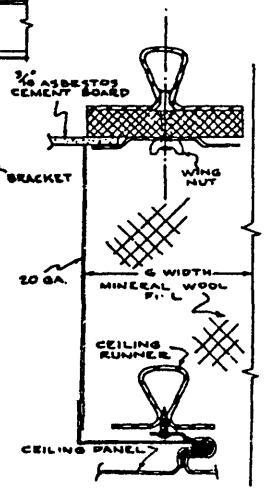


• SECTION (X-1) •

SCALE 1" = 1'-0"

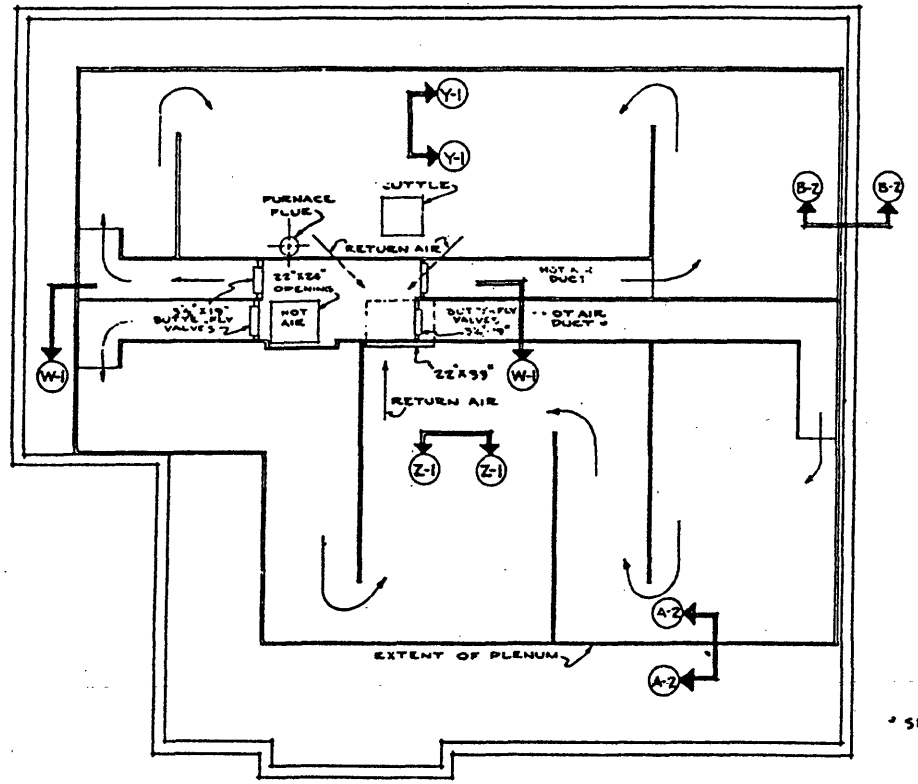
• SECTION (Y-1) •

• THRU ASBESTOS BOARD JOINT AT TOP OF PLENUM •



• SECTION (B-2) •

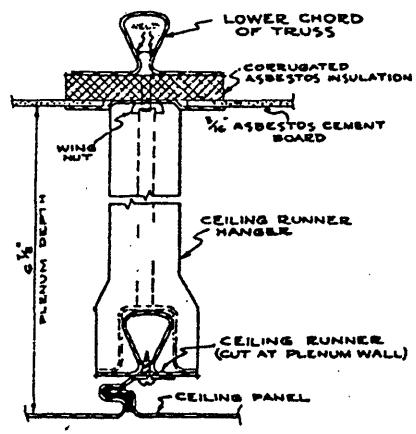
• THRU PLENUM WALL •



• PLAN •

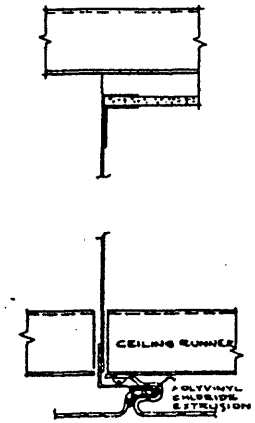
RADIANT HEATING SYSTEM

SCALE 1/4" = 1'-0"



• SECTION (Z-1) •

• SHOWING TYPICAL CONSTRUCTION OF PLENUM AT TRUSS •



• SECTION (A-2) •

• THRU PLENUM WALL •

• SCALE FOR SECTION DETAILS • — HALF SIZE —

NOTE: SUPERSEDES AP2 DWGS. J-1 ; L-100.

PHOTO REDUCTION DO NOT SCALE

LUSTRON CORPORATION

4200 E. FIFTH AVE., COLUMBUS 16, OHIO.

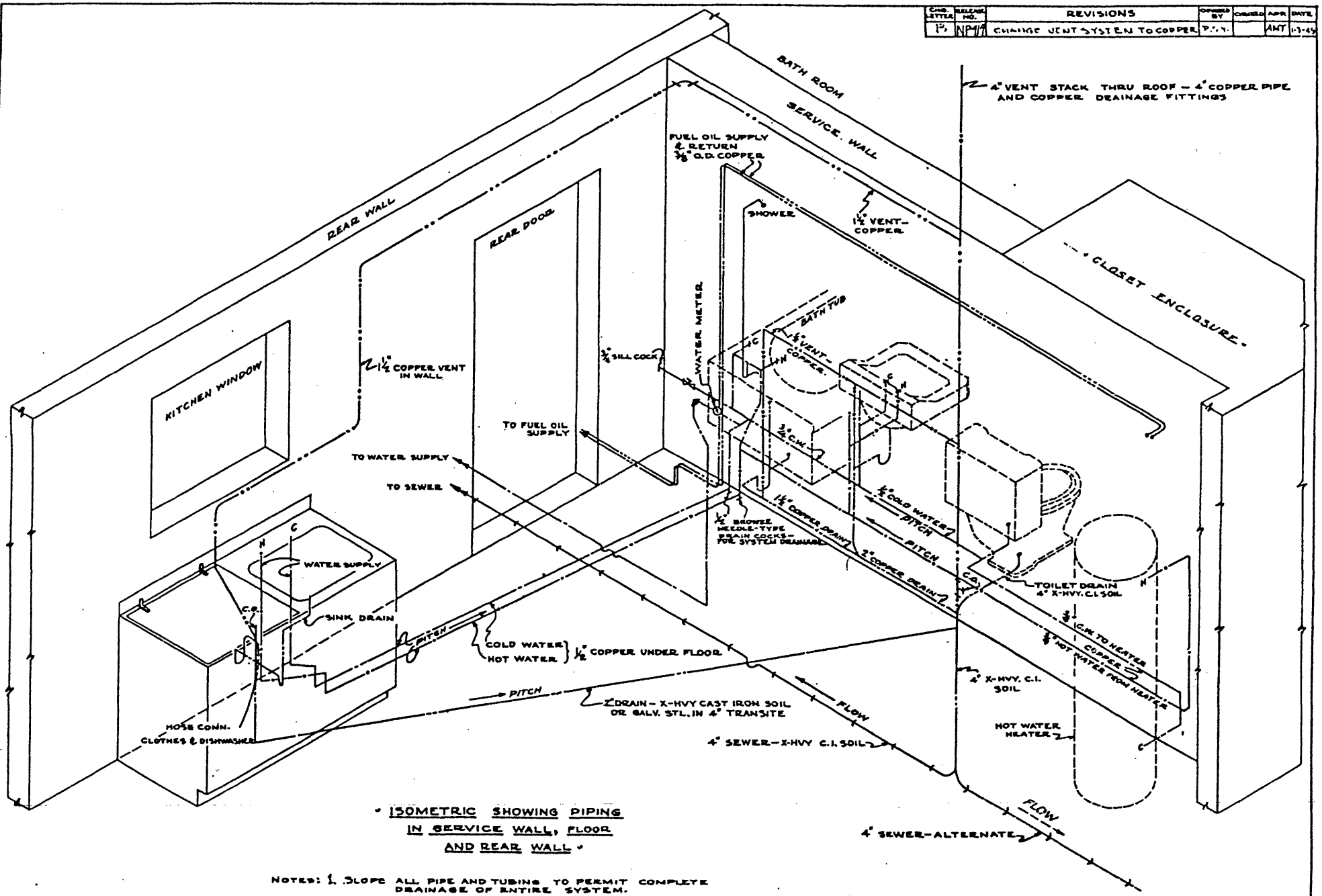
DR: P.S.Y.	10-21-48
CK'D: A.M.T.	10-21-48
APP: A.M.T.	10-21-48
SCALE AS NOTED	
REVISED	

RADIANT HEATING SYSTEM

AP2-J-100 /

DRAWING NUMBER REV.

CHG. LETTER	RELEASE NO.	REVISIONS	DRAWN BY	CHECKED	APPR	DATE
B	NPM 1	CHANGE VENT SYSTEM TO COPPER	P.Y.Y.		AMT	1-3-49



ISOMETRIC SHOWING PIPING IN SERVICE WALL, FLOOR AND REAR WALL

NOTES: 1. SLOPE ALL PIPE AND TUBING TO PERMIT COMPLETE DRAINAGE OF ENTIRE SYSTEM.

2. PRESSURE TEST ALL UNDERGROUND PIPING BEFORE COVERING WITH EARTH OR CONCRETE. ALSO PRESSURE TEST ALL OTHER PIPING BEFORE ENCLOSING SAME IN WALLS.

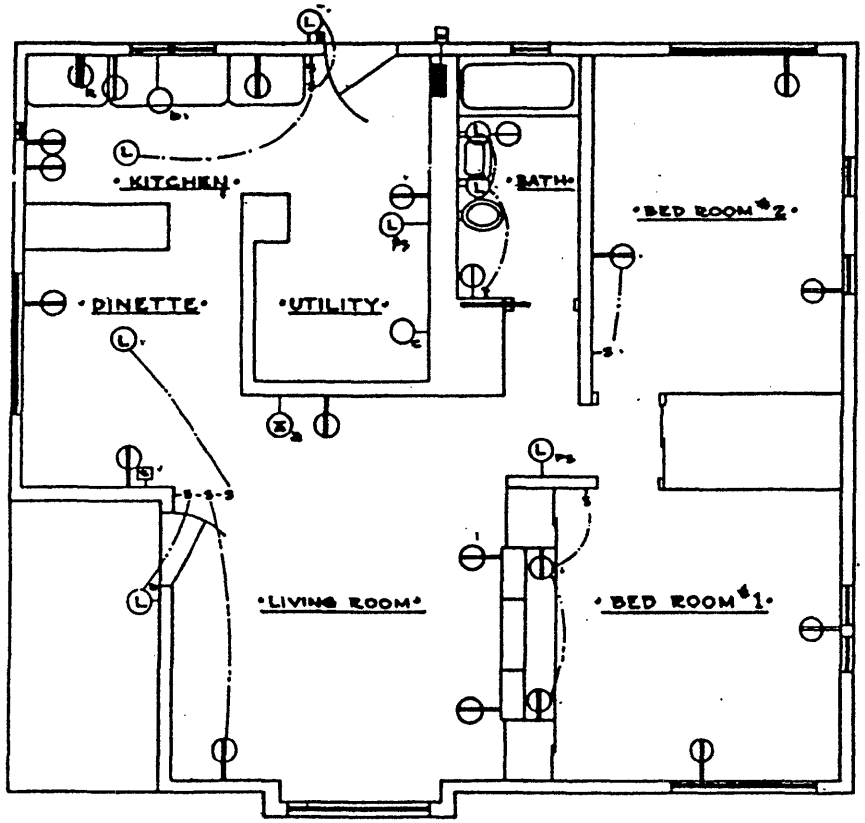
PHOTO REDUCTION DO NOT SCALE

LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO

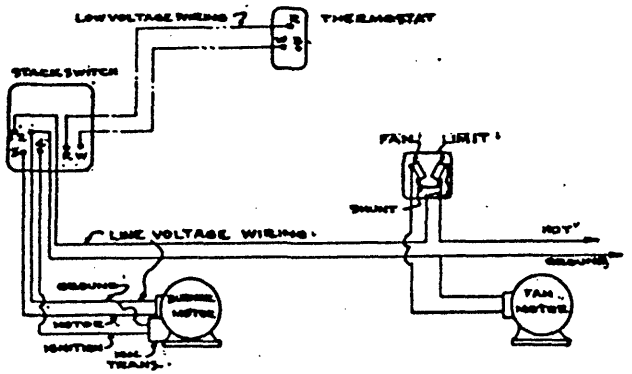
DR: A.J.B.	5-12-48	
CH'D: A.M.T.	5-21-48	
APP. C.J.B.	5-21-48	
SCALE ¾" = 1'-0"		
REVISED		

PLUMBING ISOMETRIC — AP2-K-100 — B

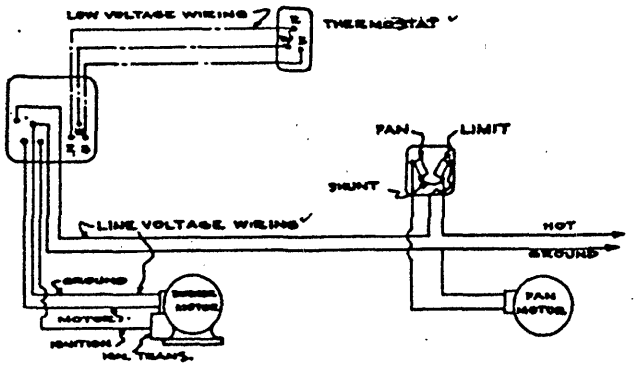
CHANGE LETTER	RELEASE NO.	REVISIONS	DRAWN BY	CHECKED	DATE	PAGE
B	APP'VD	ADDED SYMBOL FOR SINGLE RECEPTACLE	P.S.Y.	A.M.T.		



FLOOR PLAN - ELECTRICAL OUTLETS



OIL BURNER CONTROL CIRCUIT—
INTERMITTENT IGNITION
(PENN SYSTEM)



OIL BURNER CONTROL CIRCUIT—
INTERMITTENT IGNITION
(MINNEAPOLIS-HONEYWELL SYSTEM)

ALTERNATE WIRING DIAGRAMS SHOWING BONNET CONTROL OF FAN & COMBINATION FURNACE CONTROL
SET FAN SWITCH FOR ON AT 125°F AND OFF AT 110°F.
SET HEAT EXCHANGER BONNET TEMPERATURE LIMIT AT 200°F.

LIST OF ELECTRIC CIRCUITS

NO.	DESCRIPTION	AMPERES	SIZE OF CONDUCTOR	VOLTS
1 -	LIGHTING	15	NO. 14 - 2 WIRE	110
2 -	LIGHTING	15	NO. 14 - 2 WIRE	110
3 -	HEATING SYSTEM	15	NO. 14 - 2 WIRE	110
4 -	RANGE	50	NO. 6 - 3 WIRE	220
5 -	WATER HEATER	20	NO. 12 - 2 WIRE	220
6 -	APPLIANCES	20	NO. 12 - 2 & 3 WIRE	110/220
7 -	CHIME	—	NO. 18 - 2 & 3 WIRE	10

SYMBOLS

- SINGLE RECEPTACLE
- DUPLEX RECEPTACLE
- RANGE RECEPTACLE
- LAMP HOLDER
- ENTRANCE PANEL
- LAMP HOLDER WITH PULL SWITCH
- TELEPHONE OUTLET BOX
- AUTOMATIC SINK OUTLET
- DOOR CHIME
- WATER HEATER OUTLET
- SINGLE POLE SWITCH
- PUSH BUTTON CHIME
- METER

PHOTO REDUCTION
DO NOT SCALE

NOTE: SUPERSEDES AP2 DWG. L-1

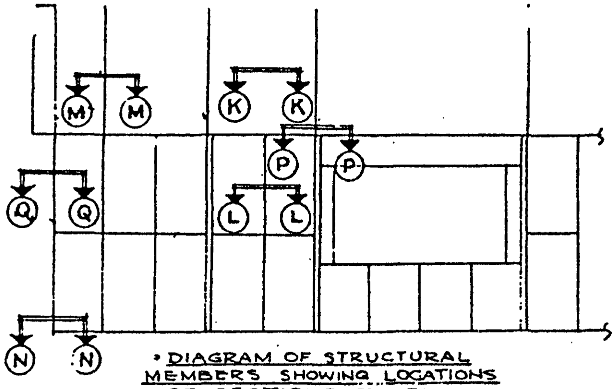
LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO.

DE: P.S.Y.	6-14-46	
CHD: A.M.T.	7-23-46	
APP: A.M.T.	7-23-46	
SCALE 3/8" = 1'-0"		
REVISED		

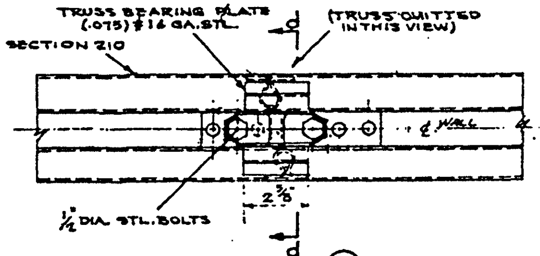
ELECTRICAL FLOOR PLAN & HEATING SYS. DIAGRAM

AP2-L-100-1 B

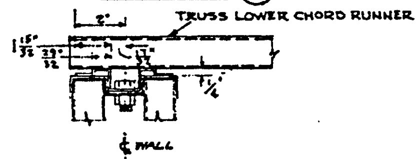
CHG. LETTER	RELEASE NO.	REVISIONS	BY			APP.
A		CHANGED TITLE OF SECTION N.	P.S.Y.		ANT	



• DIAGRAM OF STRUCTURAL MEMBERS SHOWING LOCATIONS OF SECTIONS TAKEN IN FRONT WALL •
(SEE FRONT ELEVATION - AP2-C-100)

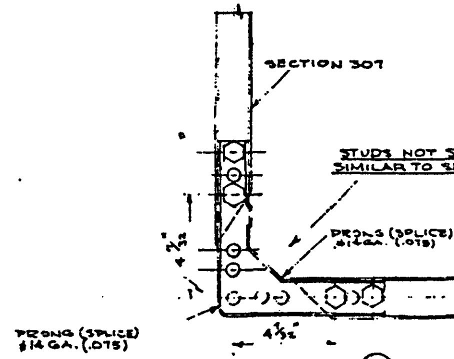


• SECTION (M)



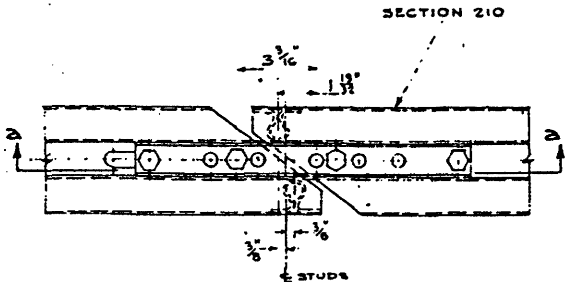
• SECTION d-d •

TYPICAL WALL TO TRUSS CONNECTION

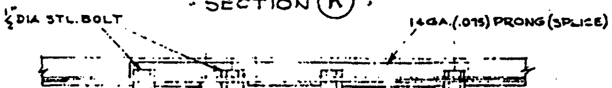


• SECTION (Q)

TYPICAL FIELD CONNECTION INTERMEDIATE SPACER CORNER

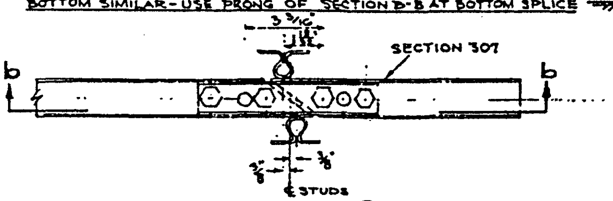


• SECTION (K) •



• SECTION a-a •

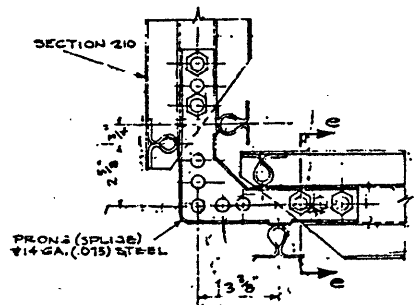
TYPICAL FIELD CONNECTION - TOP STUD SPACER SHOWN - BOTTOM SIMILAR - USE PRONG OF SECTION b-b AT BOTTOM SPLICE

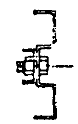


SECTION (L)

• SECTION b-b •

TYPICAL FIELD CONNECTION INTERMEDIATE STUD SPACER SHOWN

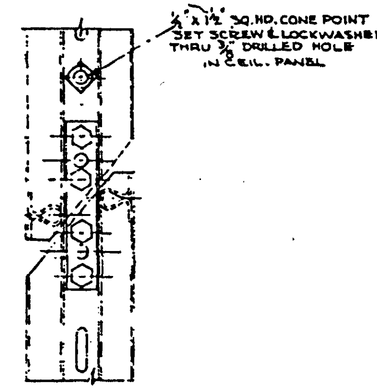




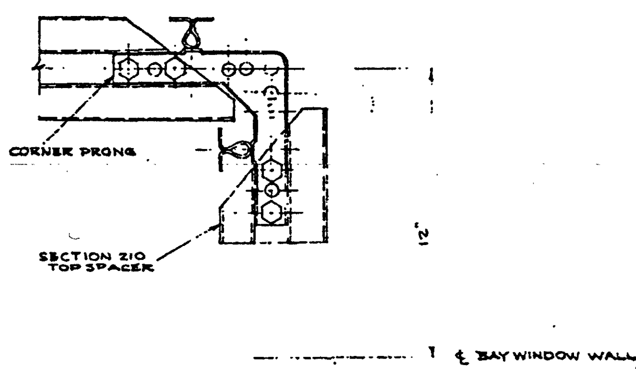
• SECTION e-e

• SECTION (N)

TYPICAL FIELD CONNECTION BOTTOM CORNER



• PLAN - TOP OF INTERNAL WALL •



SECTION (P) •

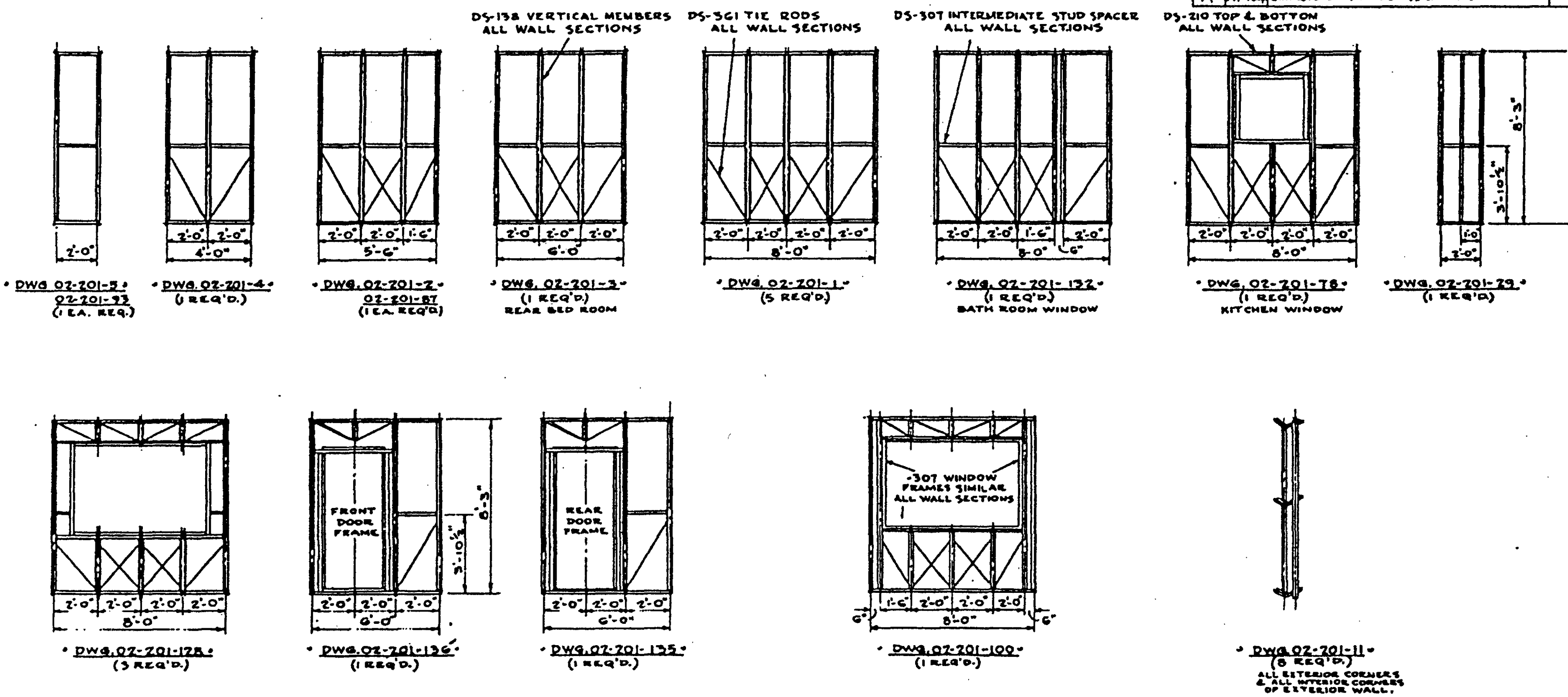
BAY WINDOW CONNECTION TOP AND BOTTOM SIMILAR

NOTE: SUPERSEDES AP2 DWGS. E-2, E-3.

LUSTRON CORPORATION 4200 E. FIFTH AVE., COLUMBUS 16, OHIO.	DR: P.S.Y.	
	CHD: M/K	
	APP: ANT	
	SCALE: 3"=1'-0"	
	REVISED	

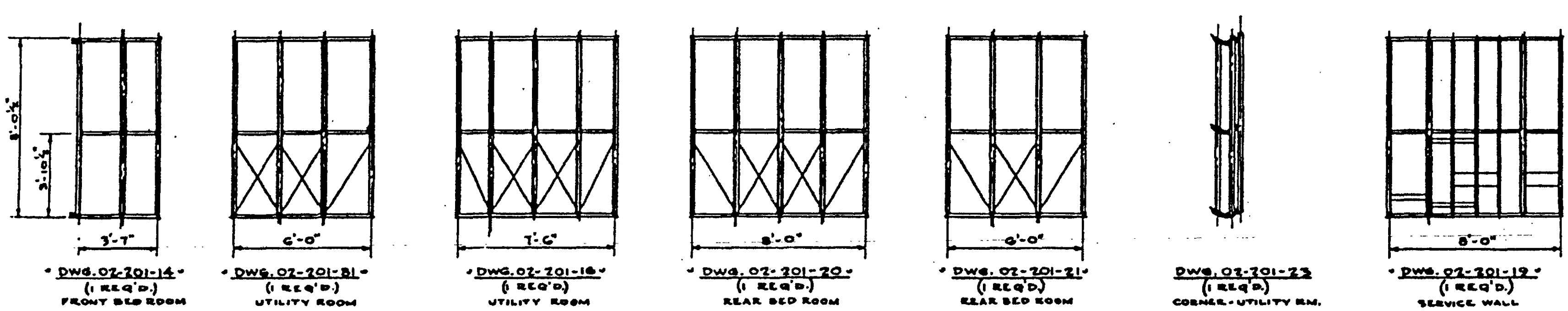
STRUCTURAL WALL FIELD CONNECTIONS	AP2-E-100	A
	DRAWING NUMBER	REV.

CHG. LETTER	RELEASE NO.	REVISIONS	CHANGED BY	CHECKED	APP.	DATE
A	WP404	CHANGED EXT. WALL SEC. NOS. EFF. [illegible]	PSV			12/11/4[illegible]



• EXTERIOR WALL SECTIONS •

28 UNITS



• INTERIOR WALL SECTIONS •

7 UNITS

NOTES:

1. SEE DWG. NO. AP2-F-501 FOR LOCATION PLAN OF ABOVE SECTIONS.
2. SEE DWG. NO. AP2-G-100 FOR SECTIONS OF MEMBERS
3. ALL DIMENSIONS ARE NOMINAL
4. DWG. NO'S. BENEATH WALL SECTIONS ARE ALSO PART NOS.
5. ALL VIEWS OF EXTERIOR WALL SECTIONS ARE LOOKING TOWARD INSIDE OF HOUSE.

NOTE: SUPERSEDES AP2 DWGS. F-5 ; F-6.

LUSTRON CORPORATION

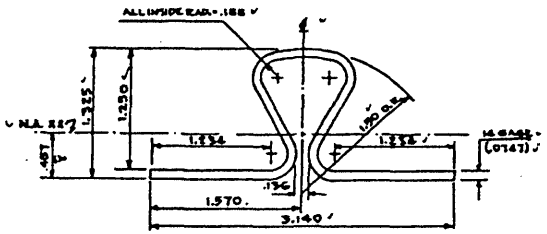
4200 E. FIFTH AVE., COLUMBUS 16, OHIO

DR.: F.S.V.	6-21-48
CH'D.: M.J.E.	7-29-48
APP.: A.M.T.	8-26-4[illegible]
SCALE: ¼" = 1'-0"	
REVISED	

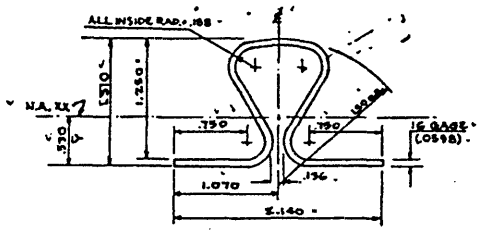
STRUCTURAL WALL SECTIONS - EXTERIOR AND INTERIOR

AP2-F-500 A

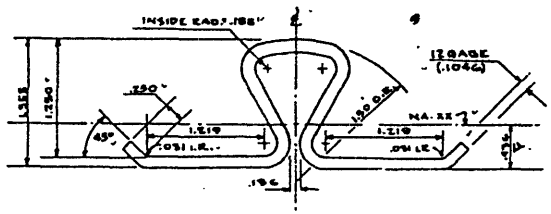
CHG. LETTER	CHANGE NO.	REVISIONS	CHANGED BY	CHECKED	APP.	DATE
A	WP401	ADDED SECTION NO 500.	P.S.Y.			2/1/49



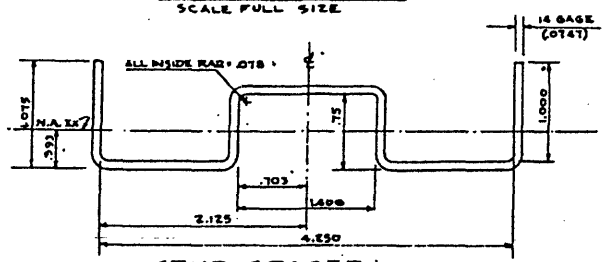
SECTION 124A
SCALE FULL SIZE.



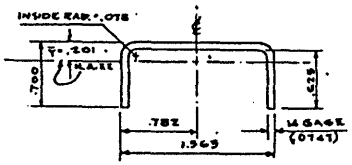
SECTION 138A
SCALE FULL SIZE



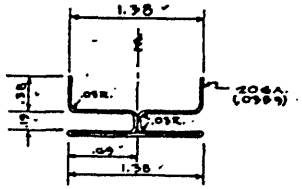
SECTION 152A
SCALE FULL SIZE



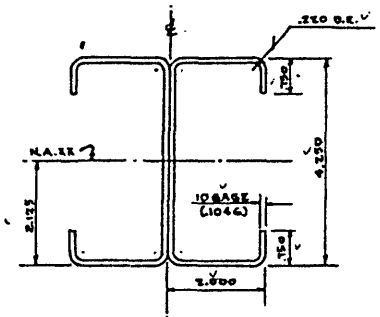
STUD SPACER
SECTION 210
SCALE FULL SIZE



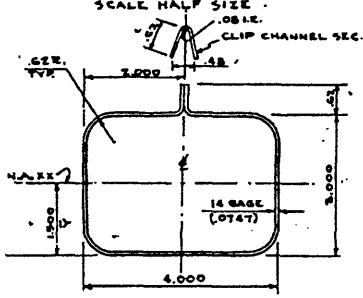
STUD SPACER
SECTION 307



SECTION 500
SCALE FULL SIZE

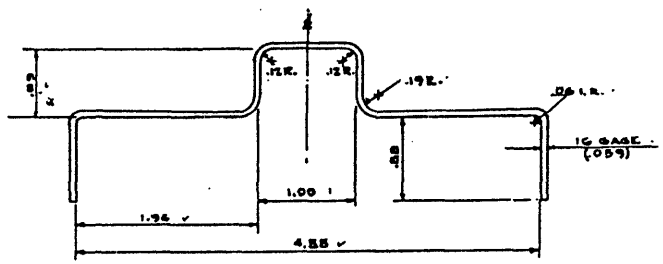


PORCH LINTEL
SECTION
SCALE HALF SIZE

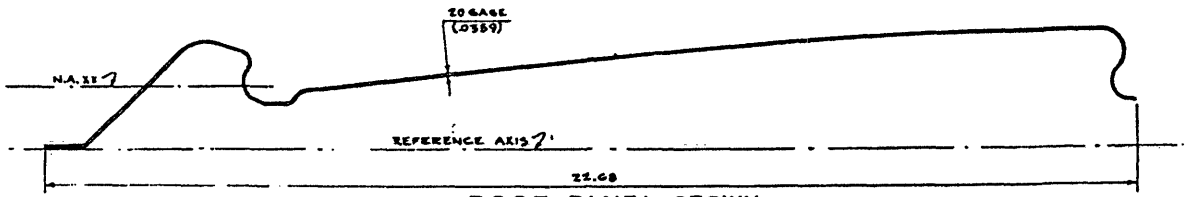


PORCH COLUMN
SECTION
SCALE HALF SIZE

SECTION NO.	AREA	Q	NEUTRAL AXIS X-X: I_{NA}	$\bar{Y}$	r	S	NEUTRAL AXIS Y-Y: I_{NA}	$\bar{X}$	Y	S
124A	.4545 in²	.866	.104 in⁴	.457 in.	.478 in.	.118 in³	.216 in⁴	0	.687 in.	.137 in³
138A	.296 in²	.990	.070 in⁴	.530 in.	.487 in.	.089 in³	.065 in⁴	0	.462 in.	.059 in³
152A	.6820 in²	1.000	.199 in⁴	.436 in.	.446 in.	.151 in³	.460 in⁴	0	.819 in.	.267 in³
210	.559 in²	.993	.065 in⁴	.393 in.	.533 in.	.0928 in³	1.224 in⁴	0	1.480 in.	.558 in³
307	.2002 in²	1.000	.0092 in⁴	.201 in.	.214 in.	.0184 in³	.0698 in⁴	0	.591 in.	.0894 in³
PORCH LINTEL	1.878 in²	1.000	5.1990 in⁴	2.125 in.		2.4700 in³				
PORCH COLUMN	1.000 in²	.792	1.2050 in⁴	1.500 in.	1.230 in.					
ROOF PANEL	.3445 in²		.1620 in⁴	1.262 in.	.684 in.	.1285 in³				
SILL PLATE										



SILL PLATE
SECTION
SCALE FULL SIZE



ROOF PANEL CROWN
SECTION
SCALE HALF SIZE

NOTE: SUPERSEDES AP2 DWGS. F-1; F-8; G-1; G-2; G-3; G-4; G-5.

LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO.

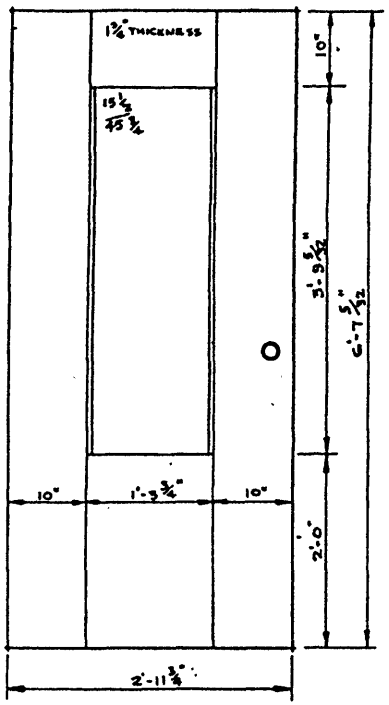
DR: D.D.	6-28-48
CH'D: N.J.R.	7-29-48
APP: A.M.T.	8-26-48
SCALE AS NOTED	
REVISED	

STRUCTURAL SECTIONS-STANDARD

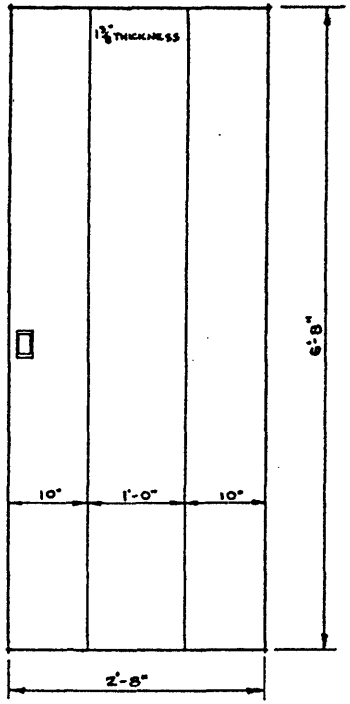
AP2-G-100 A

DRAWING NUMBER REV.

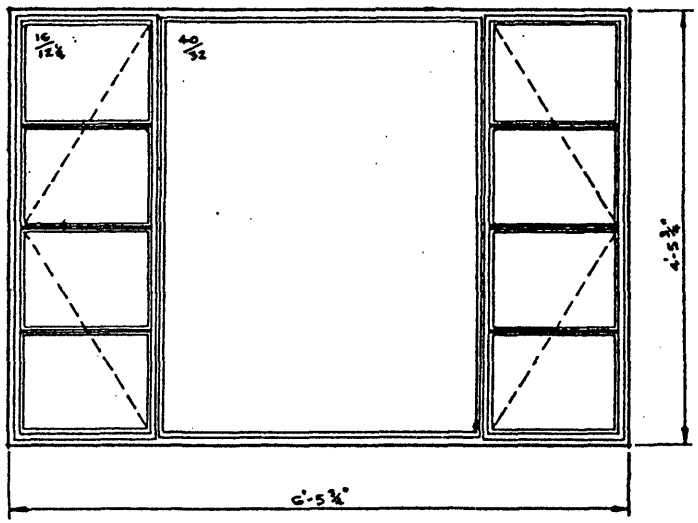
CHG. LETTER	EL. CHG. NO.	REVISIONS	BY	CHKD	APR	DATE



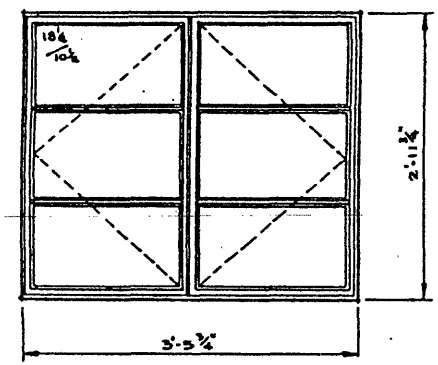
"EXTERIOR DOOR"
I.



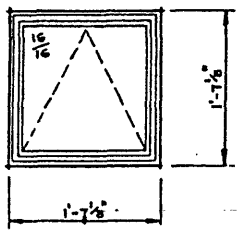
"INTERIOR DOOR"
II.



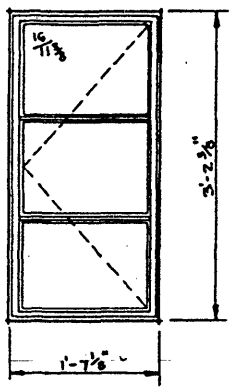
"TYPICAL LARGE WINDOW"
VI.



"KITCHEN WINDOW"
VII.



"PORTHOLE WINDOW"
IX.



"BATHROOM WINDOW"
VIII.

NOTE:
ALL VIEWS OF WINDOWS TAKEN OUTSIDE LOOKING IN.

"DOORS AND WINDOW SASH"
SCALE 1" = 1'-0"

NOTE: SUPERSEDES APZ DWG. F-9.

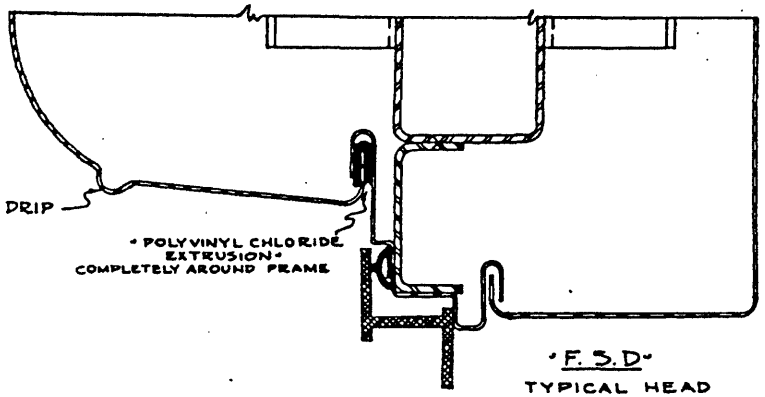
LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO.

DR: P.S.Y.	6-30-48
CH'D: M.J.R.	7-29-48
APP: A.M.T.	8-26-48
SCALE AS NOTED	
REVISED	

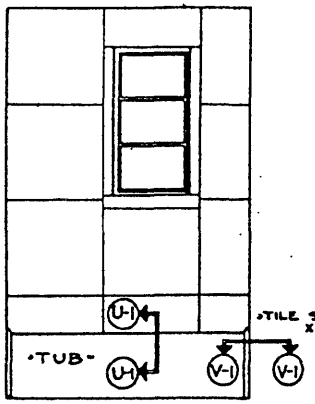
DOORS AND WINDOW SASH

APZ-H-102

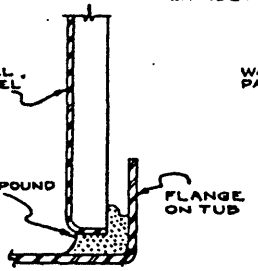
CHG. LETTER	RELEASE NO.	REVISIONS	CHECKED BY	ORIGINAL	APP.	DATE
	NP401					



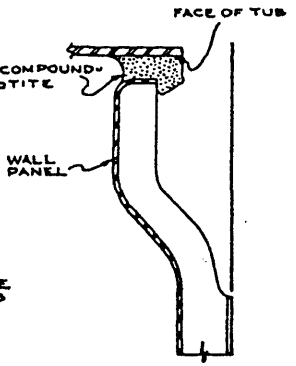
• F.S.D •
TYPICAL HEAD



• ELEVATION •
END OF BATHROOM
SCALE ½" = 1'-0"

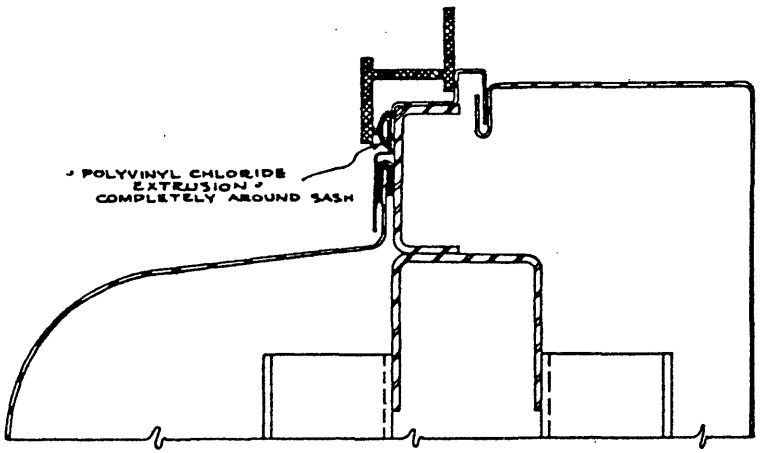


• F.S.D. •
SECTION (U-I)

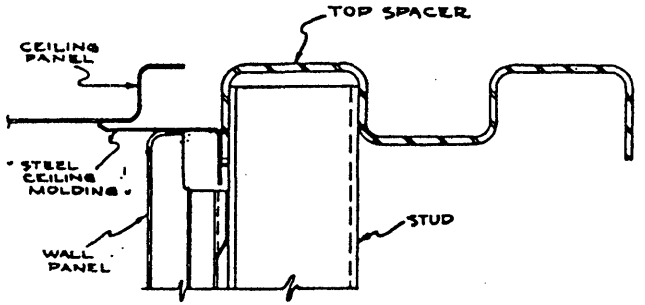


F.S.D
SECTION (V-I)

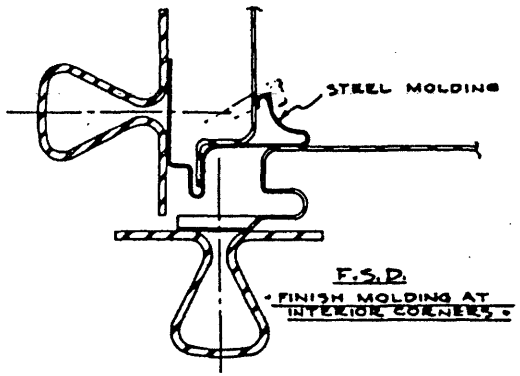
• SEALS AT BATHTUB •



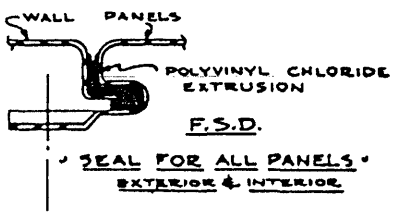
• F.S.D. •
TYPICAL SILL
WINDOW SEALS



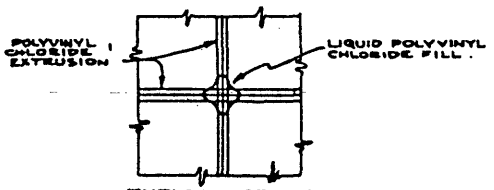
• F.S.D. •
• FINISH MOLDING AT JUNCTION OF WALL & CEILING •



F.S.D.
• FINISH MOLDING AT INTERIOR CORNERS •



F.S.D.
• SEAL FOR ALL PANELS •
EXTERIOR & INTERIOR



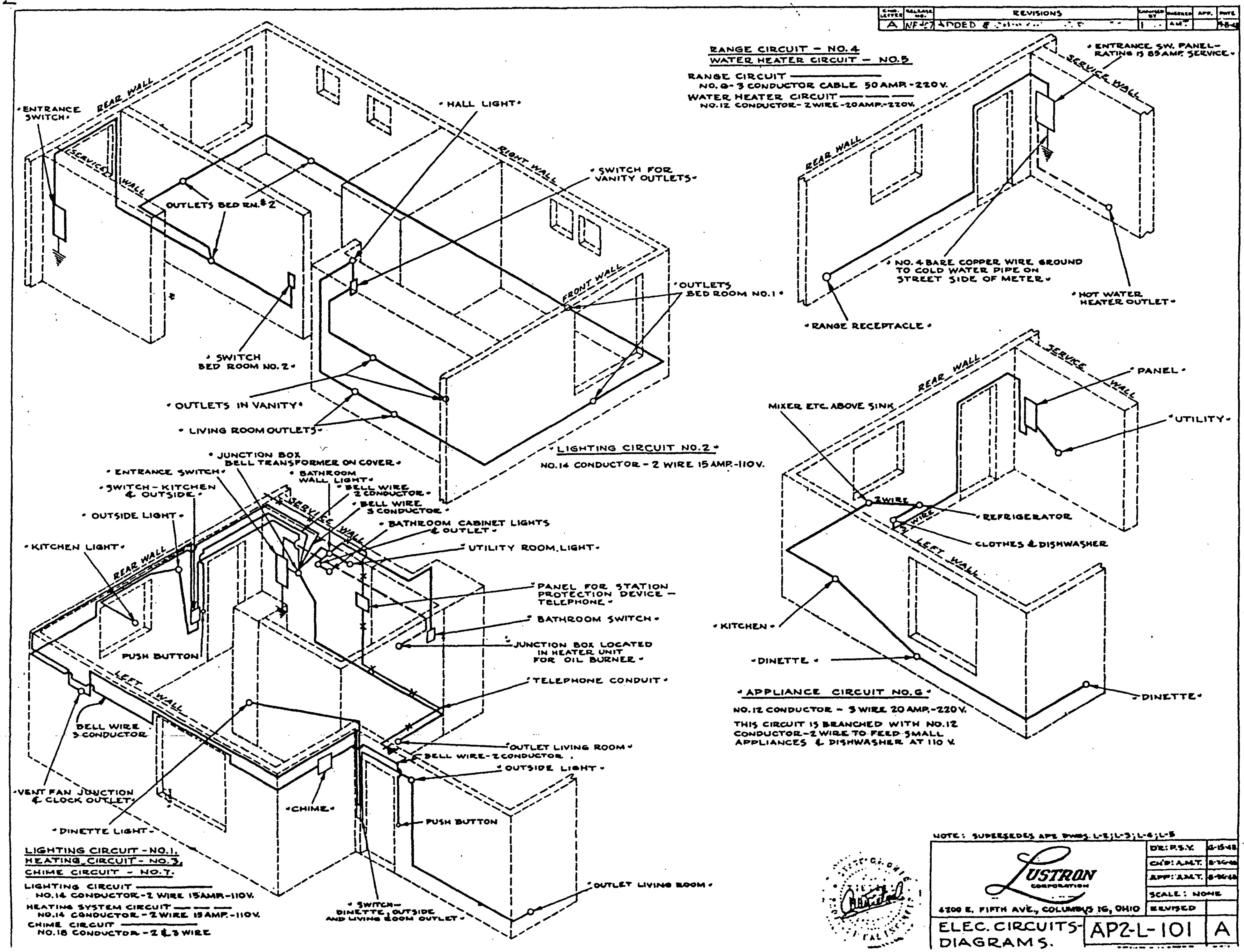
• TYPICAL SEAL •
AT CORNERS OF EXTERIOR PANELS

LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO

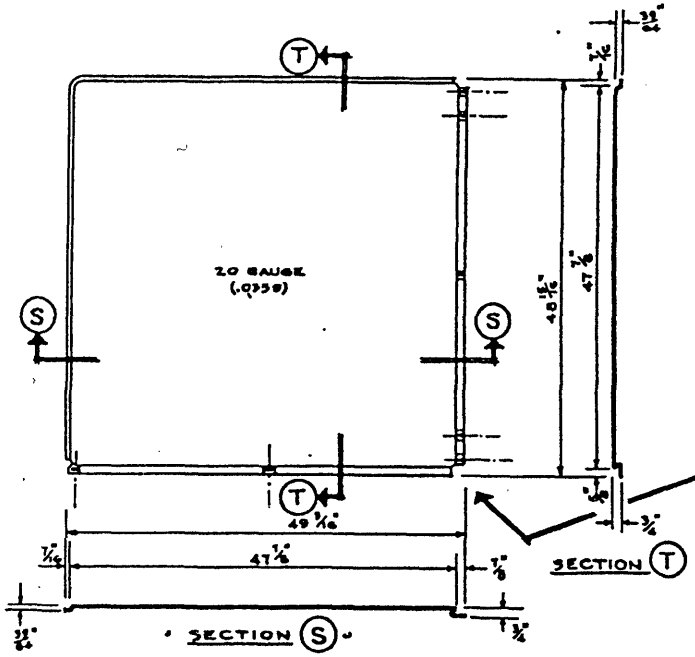
DR: P.S.Y.	9-20-60
CH'D: A.M.T.	10-19-60
APP: A.M.T.	10-19-60
SCALE:	

JOINT SEALS

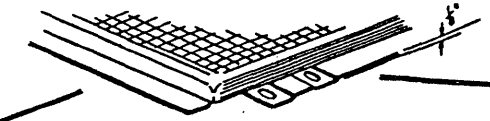
AP2-H-103
DRAWING NUMBER


REVISIONS
A
RANGE CIRCUIT - NO.4
WATER HEATER CIRCUIT - NO.5
RANGE CIRCUIT
NO.6-3 CONDUCTOR CABLE 50 AMP.-220V.
WATER HEATER CIRCUIT
NO.12 CONDUCTOR-2 WIRE-20AMP.-220V.
ENTRANCE SW. PANEL-RATING IS 85 AMP. SERVICE.
SERVICE WALL
REAR WALL
NO. 4 BARE COPPER WIRE GROUND TO COLD WATER PIPE ON STREET SIDE OF METER.
HOT WATER HEATER OUTLET
RANGE RECEPTACLE
ENTRANCE SWITCH
REAR WALL
SERVICE WALL
HALL LIGHT
RIGHT WALL
SWITCH FOR VANITY OUTLETS
OUTLETS BED RM. #2
FRONT WALL
OUTLETS BED ROOM NO.1
SWITCH BED ROOM NO.2
OUTLETS IN VANITY
LIVING ROOM OUTLETS
LIGHTING CIRCUIT NO.2
NO.14 CONDUCTOR - 2 WIRE 15 AMP.-110V.
PANEL
REAR WALL
SERVICE WALL
MIXER ETC. ABOVE SINK
UTILITY
2 WIRE
REFRIGERATOR
CLOTHES & DISHWASHER
LEFT WALL
KITCHEN
DINETTE
DINETTE
APPLIANCE CIRCUIT NO.6
NO.12 CONDUCTOR - 3 WIRE 20 AMP.-220V.
THIS CIRCUIT IS BRANCHED WITH NO.12 CONDUCTOR-2 WIRE TO FEED SMALL APPLIANCES & DISHWASHER AT 110 V.
JUNCTION BOX BELL TRANSFORMER ON COVER
ENTRANCE SWITCH
BATHROOM WALL LIGHT
SWITCH-KITCHEN & OUTSIDE
BELL WIRE 2 CONDUCTOR
BELL WIRE 3 CONDUCTOR
OUTSIDE LIGHT
BATHROOM CABINET LIGHTS & OUTLET
KITCHEN LIGHT
UTILITY ROOM LIGHT
REAR WALL
SERVICE WALL
PANEL FOR STATION PROTECTION DEVICE - TELEPHONE
BATHROOM SWITCH
JUNCTION BOX LOCATED IN HEATER UNIT FOR OIL BURNER
PUSH BUTTON
LEFT WALL
TELEPHONE CONDUIT
BELL WIRE 3 CONDUCTOR
OUTLET LIVING ROOM
BELL WIRE-2 CONDUCTOR
OUTSIDE LIGHT
VENT FAN JUNCTION & CLOCK OUTLET
CHIME
PUSH BUTTON
DINETTE LIGHT
OUTLET LIVING ROOM
SWITCH-DINETTE, OUTSIDE AND LIVING ROOM OUTLET
LIGHTING CIRCUIT - NO.1,
HEATING CIRCUIT - NO.3,
CHIME CIRCUIT - NO.7.
LIGHTING CIRCUIT
NO.14 CONDUCTOR-2 WIRE 15 AMP.-110V.
HEATING SYSTEM CIRCUIT
NO.14 CONDUCTOR - 2 WIRE 15 AMP.-110V.
CHIME CIRCUIT
NO.18 CONDUCTOR - 2 & 3 WIRE
NOTE: SUPERSEDES APE DWGS. L-2; L-3; L-4; L-5
LUSTRON CORPORATION
4200 E. FIFTH AVE., COLUMBUS 16, OHIO
DR: P.S.Y.
CH'D: A.M.T.
APP: A.M.T.
SCALE: NONE
REVISED
ELEC. CIRCUITS-DIAGRAMS.
AP2-L-101
A

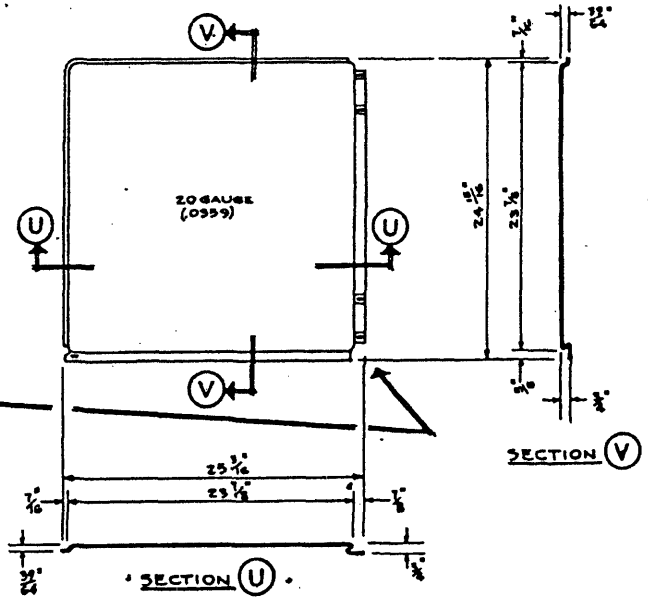
CHG. LETTER	RELEASE NO.	REVISIONS	DRAWN BY	CHECKED	APPR.	DATE



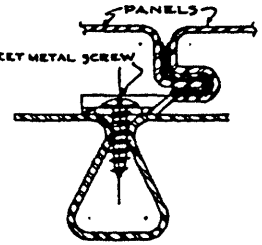
• TYPICAL CEILING PANEL •
SCALE: 1" = 1'-0"



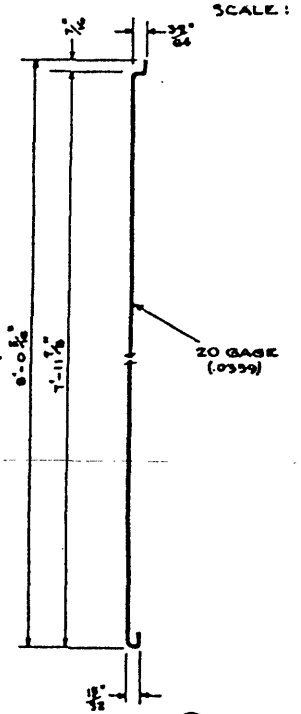
• TYPICAL VIEW SHOWING EMBOSSING AT SLOTS •

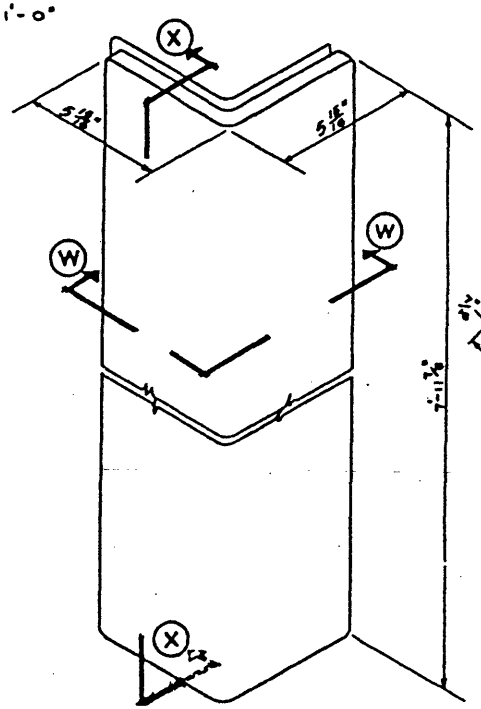


• TYPICAL STANDARD PANEL •
• EXTERIOR WALLS & INTERIOR BATHROOM WALLS •
SCALE: 1½" = 1'-0"

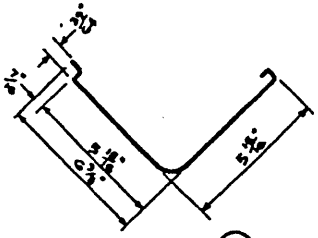


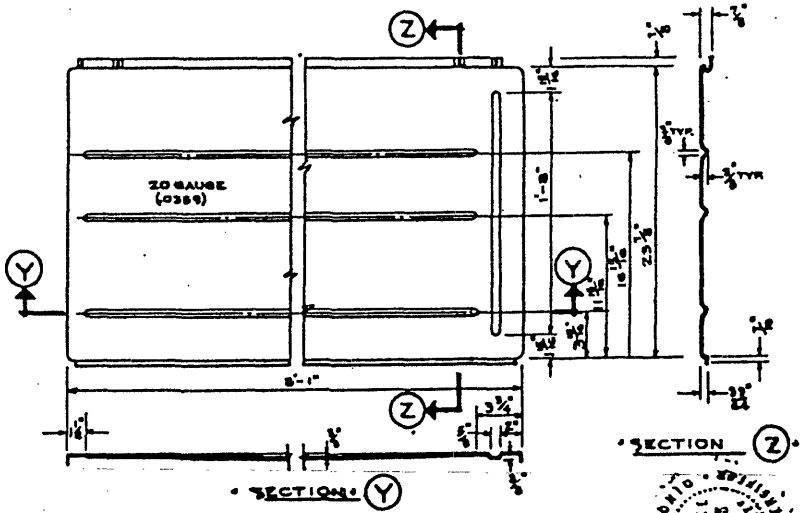
• F.S.D. •
PANEL FASTENING AT JOINT





• TYPICAL CORNER PANEL •
SCALE: 3" = 1'-0"





• STANDARD INTERIOR WALL PANEL •
SCALE: 1½" = 1'-0"

NOTE: SUPERSEDES AP2 DWGS. G-6; G-7; G-8; G-9.

NOTE:
ALL JOINTS BETWEEN PANELS FILLED WITH POLYVINYL CHLORIDE EXTRUSION.

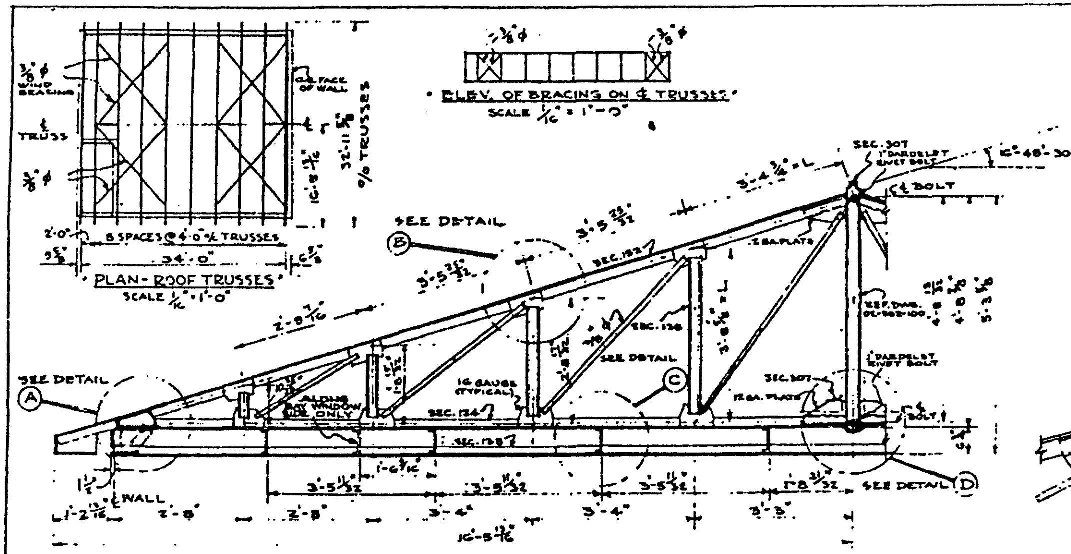
LUSTRON CORPORATION
4500 E. FIFTH AVE., COLUMBUS 16, OHIO.

DR.: R.B.Y.	7-3-48
CHD: M.J.E.	7-29-48
APP: J.K.D.	8-2-48
SCALE AS NOTED	
REVISED	

PORCELAIN PANELS-WALLS & CEILING

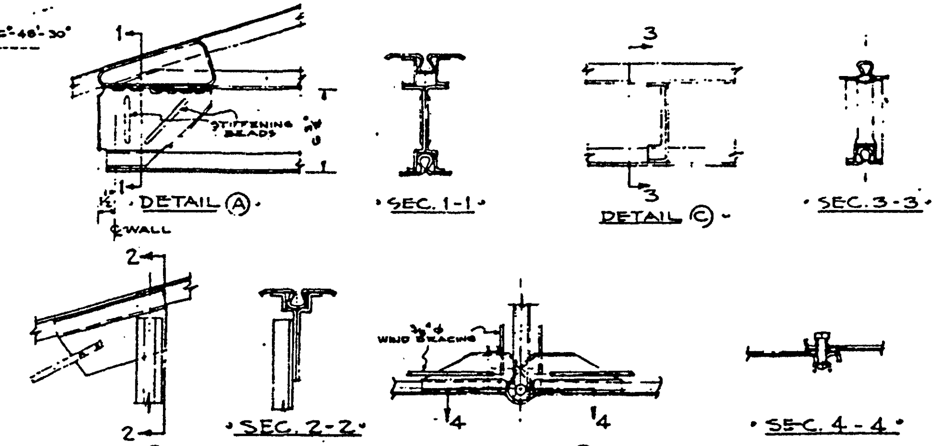
AP2-H-101
DRAWING NUMBER

CHG. LETTER	REFERENCE NO.	REVISIONS	CHANGED BY	CHECKED	APP.	DATE
A		[illegible]	P.S.Y.	A.H.T.		[illegible]



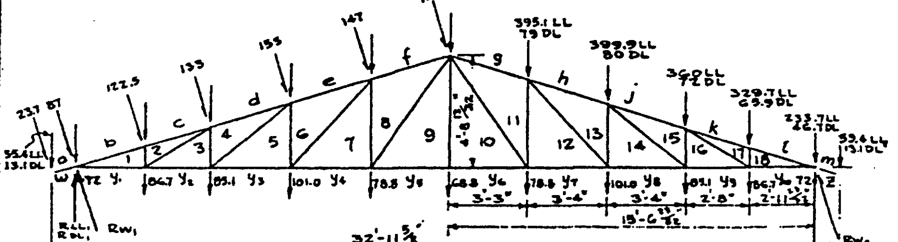
HALF ELEVATION OF TRUSS

SCALE 1/2" = 1'-0"



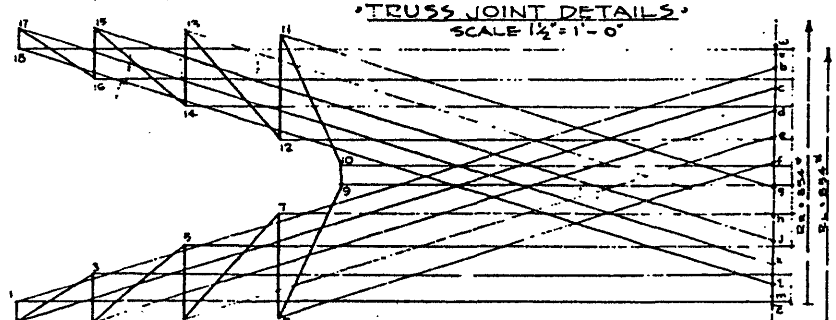
TRUSS JOINT DETAILS

SCALE 1 1/2" = 1'-0"



TRUSS LOADING DIAGRAM

SCALE 1/4" = 1'-0"



TOTAL DEAD LOAD STRESS DIAGRAM

CEILING D.L. = 7.4 LBS. PER SQ.FT. ROOF D.L. 6 P.S.F. TOTAL D.L. = 13.4 P.S.F.

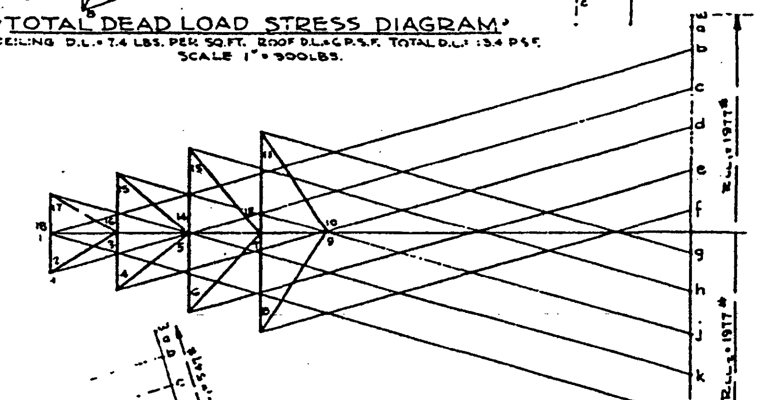
SCALE 1" = 900 LBS.

TRUSS DESIGN DATA

DESIGN LOADS PER SQ.FT.:- CEILING DEAD LOAD = 7.4 LBS. - ROOF D.L. = 6.00 LBS. - TOTAL = 13.4 LBS.
TOTAL STRESS IN POUNDS - UNIT STRESS IN POUNDS PER SQ. IN. - TENSION SHOWN +; COMPRESSION -

1	2	3	4	5	6	7	8	9	10	11	12	13
	STRESSES											
TRUSS MEMBER	TOTAL DEAD LOAD	LIVE LOAD	WIND LOAD	TOTAL D.L. PLUS L.L. COL. 2 & 3 P	TOTAL D.L. & LIVE LOAD + WIND LOAD COL. 2+3+4	DESIGN LOAD (SEE FOOT NOTE)	SECTION NO. USED	SECTION AREA SQ.IN. A	DESIGN UNIT STRESS P/A 5/9	LENGTH L INCHES	L/r.	ALLOW UNIT STRESS
1-b	-2470	-5916	-1440	-8386	-9826	-8386	152	.6820	-12300	35.59	79.8	-12500
18-l	-2470	-5916	-614	-8386	-9000	-8386	152	.6820	-12300	35.59	79.8	-12500
8-f	-1630	-3960	-854	-5590	-6444	-5590	152	.6820	-8200	40.74	91.7	-11700
11-g	-1630	-3960	-614	-5590	-6204	-5590	152	.6820	-8200	40.74	91.7	-11700
1-y	+2365	+5670	+1505	+8035	+9540	+8035	124	.4545	+17700	——	——	+18000
18-y	+2365	+5670	+532	+8035	+8567	+8035	124	.4545	+17700	——	——	+18000
1-2	-60	-330	-127	-390	-517	-390	138	.2961	-1315	10.79	23.3	-14920
2-3	+275	+618	+240	+893	+1133	+893	3/8 ϕ	.1105	+8080	——	——	+20000
3-4	-153	-540	-207	-693	-900	-693	138	.2961	-2340	20.46	44.3	-14320
4-5	+381	+876	+331	+1257	+1588	+1257	3/8 ϕ	.1105	+1135	——	——	+20000
5-6	-225	-726	-280	-951	-1231	-951	138	.2961	-3210	32.54	70.5	-13050
6-7	+440	+984	+380	+1424	+1804	+1424	3/8 ϕ	.1105	+12900	——	——	+20000
7-8	-318	-906	-359	-1224	-1583	-1224	138	.2961	-4140	44.62	96.5	-11160
8-9	+482	+1110	+441	+1592	+2033	+1592	3/8 ϕ	.1105	+1440	——	——	+20000
9-10	+69	0	0	+69	+69	+69	02-302-100	.1720	+400	——	——	+18000
10-11	+482	+1110	0	+1592	+1592	+1592	3/8 ϕ	.1105	+1440	——	——	+20000
11-12	-318	-906	0	-1224	-1224	-1224	138	.2961	-4130	44.62	96.5	-11160
12-13	+440	+984	0	+1424	+1424	+1424	3/8 ϕ	.1105	+12900	——	——	+20000
13-14	-225	-726	0	-951	-951	-951	138	.2961	-3210	32.54	70.5	-13050
14-15	+381	+876	0	+1257	+1257	+1257	3/8 ϕ	.1105	+1140	——	——	+20000
15-16	-153	-540	0	-693	-693	-693	138	.2961	-2340	20.46	44.3	-14320
16-17	+275	+618	0	+893	+893	+893	3/8 ϕ	.1105	+8080	——	——	+20000
17-18	-60	-330	0	-390	-390	-390	138	.2961	-1320	10.79	23.3	-14920

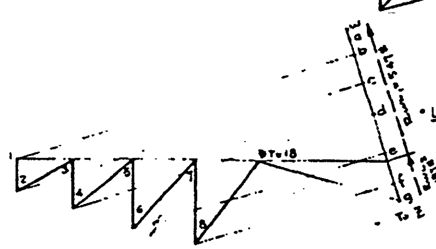
NOTES: 1) AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION PERMITS DESIGN LOAD (COL. 7) TO BE TOTAL DEAD LOAD PLUS LIVE LOAD (COL. 5) WHERE TOTAL DEAD LOAD PLUS LIVE LOAD PLUS WIND LOAD (COL. 6) DOES NOT EXCEED COL. 5 BY ONE (1/3) THIRD. SEE 1948 MANUAL P.281-PART II.



LIVE LOAD STRESS DIAGRAM

FOR 30 LBS. PER SQ. FT.

SCALE 1" = 900 LBS.



WIND LOAD STRESS DIAGRAM

FOR 20 LBS. PER SQ. FT. ON VERTICAL PROJECTION

SCALE 1" = 400 LBS.

LUSTRON CORPORATION	DR: P.S.Y. 10-23-48
4200 E. FIFTH AVE. COLUMBUS 16, OHIO	CHD: A.H.T. 10-28-48
	APP:
	SCALE: AS NOTED
	REVISED
TRUSS DETAILS & STRESS DIAGRAMS	AP2-F-100 — A