

HISTORIC DOWNTOWN KETCHIKAN A RESTORATION HANDBOOK



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Product and Material Sources

Bibliography

Credits:

Tongass Historic Society - Photographs

Centennial Museum - Photographs

Bill Lattin - Recollections and Project Review

Karen Pitcher - Project Review

Sonja Alvarez - Project Review

Sue Liljeblad - Project Review

CHAPTER I

Historic Perspective

Ketchikan is recognized as having the largest number of remaining historic structures in Alaska. Many of these structures are outstanding examples of the style or period of their construction, while others are simply plain utilitarian structures significant in the context of a street scene or building group. Some are examples of styles popular in the lower states 20 years before their construction in Ketchikan. Most are modified architectural forms unique in their adaptation to Southeast Alaska. Adaptations in response to climate and building materials and the setting of Southeast created by its isolation, scenery and orientation to the ocean make the remaining historic structures of Ketchikan unique within the United States.

Founded in 1886 and settled in the early 1890's, Ketchikan has been centered and dependent on the mining and fishing industries for most of its short history. Original settlement, based on prospecting and outfitting and the beginning of the salmon industry, grew around Ketchikan Creek, where Mill and Stedman Streets are now located. Buildings were oriented to the water with industrial structures at or over the water on pilings and residences on the uplands. They were simple wooden structures built in response to functional needs, materials available, and the pioneer spirit of early settlers. Few if any of these buildings remain. Buildings numbered 203 and 307 Stedman appear in early photos of the area but were probably not constructed during this period. By 1900 Ketchikan had grown substantially with development in the downtown or "Old Town" and the "New Town." Buildings continued to be of wood frame construction. Once again, few if any of these structures remain. Only the Fo'c'sle Bar, 312 Front Street, built in 1900, and the Pioneers Hall, built in 1899, are recognized as remaining from this period. The first period of growth was over. Buildings from this period are significant for the reason that they represent the beginnings of a stable growing community.

During 1900-1910 Ketchikan continued to grow as canneries, mining and cold storage brought jobs and income to the community. Architectural styles visible in many of today's remaining historic structures were introduced at this time. False front and box commercial styles were predominant. Buildings become detailed or ornamented and Ketchikan began to take on the character it would retain for the next 30-40 years. Buildings were still only wood frame but construction was more substantial. The community's infrastructure was developing, with churches and schools being constructed. Electricity was provided and residential areas began to grow on the hillsides. Ketchikan was about to enter a period of sustained growth.

The time 1910-1920 saw dramatic growth as a result of development of the new fishing industry and further stabilization of the community. Newtown was fully developed including residences, industrial buildings oriented to fishing, and retail businesses. Downtown experienced a significant period of growth with construction of the Tongass and Heckman buildings, both concrete structures. Other distinct buildings were constructed in the Downtown during this time but due to fire and other circumstances they no longer exist.

The 1920's on through the 1930's continued Ketchikan's growth. Boom times escalated and brought on new construction. Neighborhoods expanded and downtown streets were paved. Ketchikan had matured. Many of the historic structures most easily recognized today were constructed during this time. The Ingersoll Hotel, the Gilmore Hotel, the Pioneer Hotel and Paul M. Hansen store are of this period. Architectural style continued from previous forms using the false front motif. However, the modern era had reached Ketchikan with the design and construction of the Chicago style City Hall. Marquees appeared in the early 1930's and reached a form that was highly detailed. They complimented and enhanced building design while adding to the unique character for which Ketchikan became known. It was a spectacular period marred only by the loss of the Revilla Hotel due to fire.

Later times have seen less growth and the loss of more historic structures to fire. Surviving structures have been remodeled or altered for new uses or ease of maintenance. With reflection on Ketchikan's history and current building styles, the 25-year period 1910-1935 truly stands out as Ketchikan's dynamic and prosperous years. The community was stable. Boom times were at hand and growth was rapid. The architectural fabric was rich: boardwalk streets; detailed marquees; distinct and appropriately scaled signs; ornamentation with light fixtures, sidewalk clocks and totem poles; and building facades with detail and ornamentation all contributed to a visually exciting community.

CHAPTER II

Historic Preservation

Within the past 15 years Americans have begun to recognize the value of the nation's architectural heritage. The Federal government has instituted tax incentives for rehabilitation of historic properties. The Main Street Program has been successful in revitalizing and preserving downtowns across the country. Historic or architecturally unique homes are in vogue and are increasing in value. The intent of this report is to document commercial structures of Ketchikan that have or contribute to the historic and architectural significance of this community. It is to provide information, suggestions, and methods to guide property owners in building rehabilitation, restoration, or reconstruction.

Historic preservation has often been a controversial subject. This is due in most part to misunderstanding of its goals and a reluctance to recognize its business or development values as well as its intrinsic values. Historic preservation is not an attempt to preserve everything that is old. It is a vehicle to retain and publicize our nation's architectural tradition. It is not an attempt to halt growth or retard business. It is a program to restore, rehabilitate, preserve and reconstruct buildings for contemporary businesses as well as museum uses. It is a desire to retain the architecture that defines a community and creates its quality of life. It is encouragement to property owners and businessmen through tax incentives, community pride and increased tourism.

The Secretary of the Interior has established comprehensive standards and guidelines for historic preservation of properties associated with the United States Government. These standards and guidelines result in a range of treatments for historic structures. There are seven treatments defined, four of which could be applied to historic commercial structures in Ketchikan. They are:

(1) Preservation - Preservation is retention of the existing form, integrity and materials of a structure. Substantial reconstruction or restoration of lost features are not generally conducted.

(2) Rehabilitation - Rehabilitation is the return of a structure through repair or alterations to an efficient contemporary use while retaining historic or architectural features. Contemporary designs for alterations or additions are not discouraged when they do not destroy architectural elements and are compatible in design with existing building and street scene character.

(3) Restoration - Restoration is the recovery of the form and detail of a structure of a particular period of time. Inappropriate modifications are removed and earlier details are replaced. An effort is made to utilize the structure for its original purpose or a compatible use is found.

(4) Reconstruction - Reconstruction is the reproduction of the exact form and detail of a missing building or architectural elements through the use of new construction. Reproductions need to duplicate the design, color, texture and other qualities of the original. Existing historic elements are retained.

Limitations of the Project

This document was compiled through research of historic photographs located in the Ketchikan Museum and through field inventory. Inclusion of buildings in the study was based primarily on date of construction or existing and past architectural character. The time 1890 through the 1930's was considered for purposes of the study to be a historic period in which city form was created, the majority of existing buildings were constructed and architectural design was distinct. Three buildings included in the study were not constructed during this period. They are, however, architecturally distinct and were included based on their existing character. Many buildings were not found in the photo record and are listed below. They were closely inspected in a subsequent field review to ascertain indications of previous architectural form and detail. In most cases sufficient information was found to reconstruct the structure's historic appearance. For a few, detail was lacking and only a guess of the building's past appearance could be made. Several structures have undergone two or more extensive alterations. Recommendations were made dependent upon the extent of alteration and the building's past character. When substantial structural changes had been made early in the building's history, recommendations were based on the historic appearance after structural changes. Recommendations attempt to specify the most effective and least expensive option to return the structure to a historic appearance. The past character of several other buildings consisted of finely detailed elements in a design of outstanding appearance. With the exception of building form, all traces of detail have been lost. They were landmarks contributing to the street scene and Ketchikan's character. Recommendations entail restoration to recreate past character. Due to time limitations and the intent of this project as an architectural study, residents of Ketchikan were not interviewed.

Buildings Not Found in Photo Records

100 Main Street - Hardcastle-Davies Insurance
Thomas Street - All buildings
501 Dock Street - Ketchikan Daily News
421 Dock Street - Knickerbocker Hotel
319 Mill Street - Union Rooms Hotel
652 Park - Ketchikan Apartments
425 Water Street - Paul M. Hansen Company
416-428 Water Street
834 Water Street - Jackie's Cafe
1007 Water Street - Murray Pacific Corp.
1010 Water Street - Salvation Army
1101 Water Street - Talbot's, Inc.

CHAPTER III

Architectural Elements

The development of Ketchikan's commercial areas during the years 1900-1930 resulted in distinct commercial architectural styles. Readily identifiable styles--false front, commercial, and art moderne--have elements and materials that distinguish them from other architectural forms. There is, however, a large number of structures that are not representative of or classifiable as a definite style. Even within styles, variations occur that make classification difficult. For this project individual elements rather than architectural styles will be identified and discussed to aid in building restoration.

Storefront

Commercial storefronts of remaining historic buildings fall into two groups: 1900-1910's and 1920-30's.

1900-1910's

Storefronts of this period are characterized by flush glass display areas and doorways. Glassed areas often extended from the base or lower window panel to the sign board that usually divides the first and second floors. Display windows were generally topped with a row of transom windows. Lower window panels are simple in detail. Doors matched the form and configuration of display windows and panels. Building corners were emphasized with wide trim (corner boards) that framed the display space. They often duplicated the detailed posts or columns of earlier design. Canvas awnings were a normal feature of this period in Ketchikan. They sheltered entries and display windows as well as pedestrians. Figures 1-4 illustrate these features.

1920-1930's

Storefronts of this era are characterized by a display space similar to 1900-1910's period. Display space glass extended from the lower window panel to transom windows. Glass panes were larger as technology had advanced. Configuration of the entry changed to a recessed doorway. Doors continued to echo display area configuration. Trim including corner boards, doorway, and sign board were plain rather than detailed as 1900-1910's trim often was. Figures 5-7 illustrate these features.

Marquees

In response to climate, marquees were added to most commercial buildings during the 1930's. Configuration, detail, and materials varied. Today few original marquees remain. They are

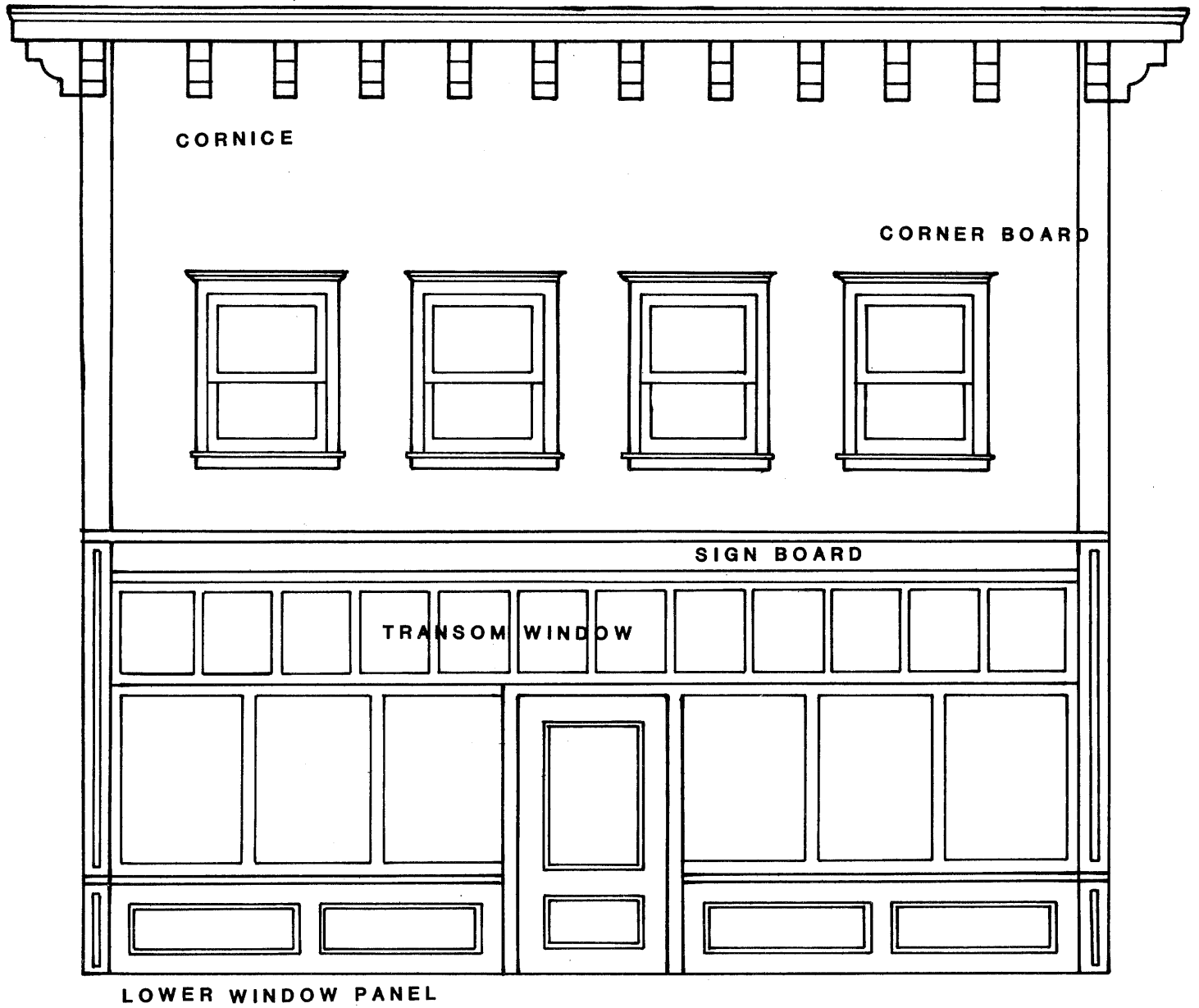


FIGURE 1

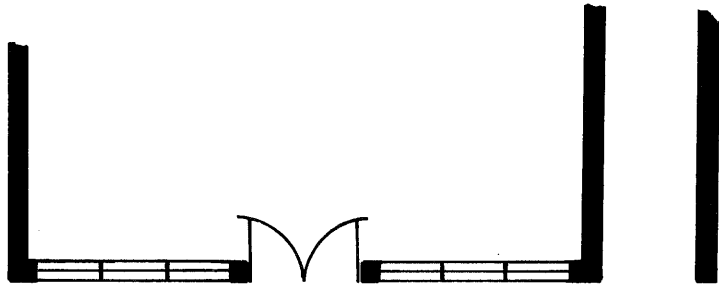


FIGURE 2

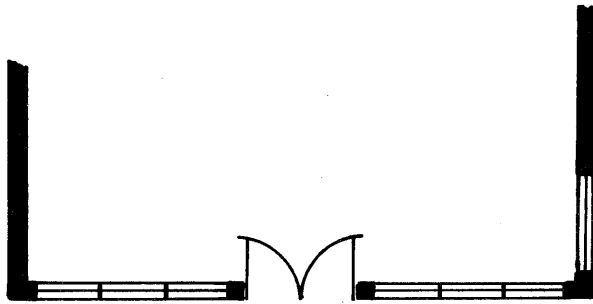


FIGURE 3

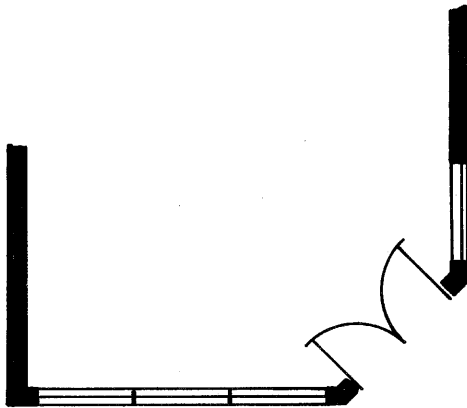


FIGURE 4

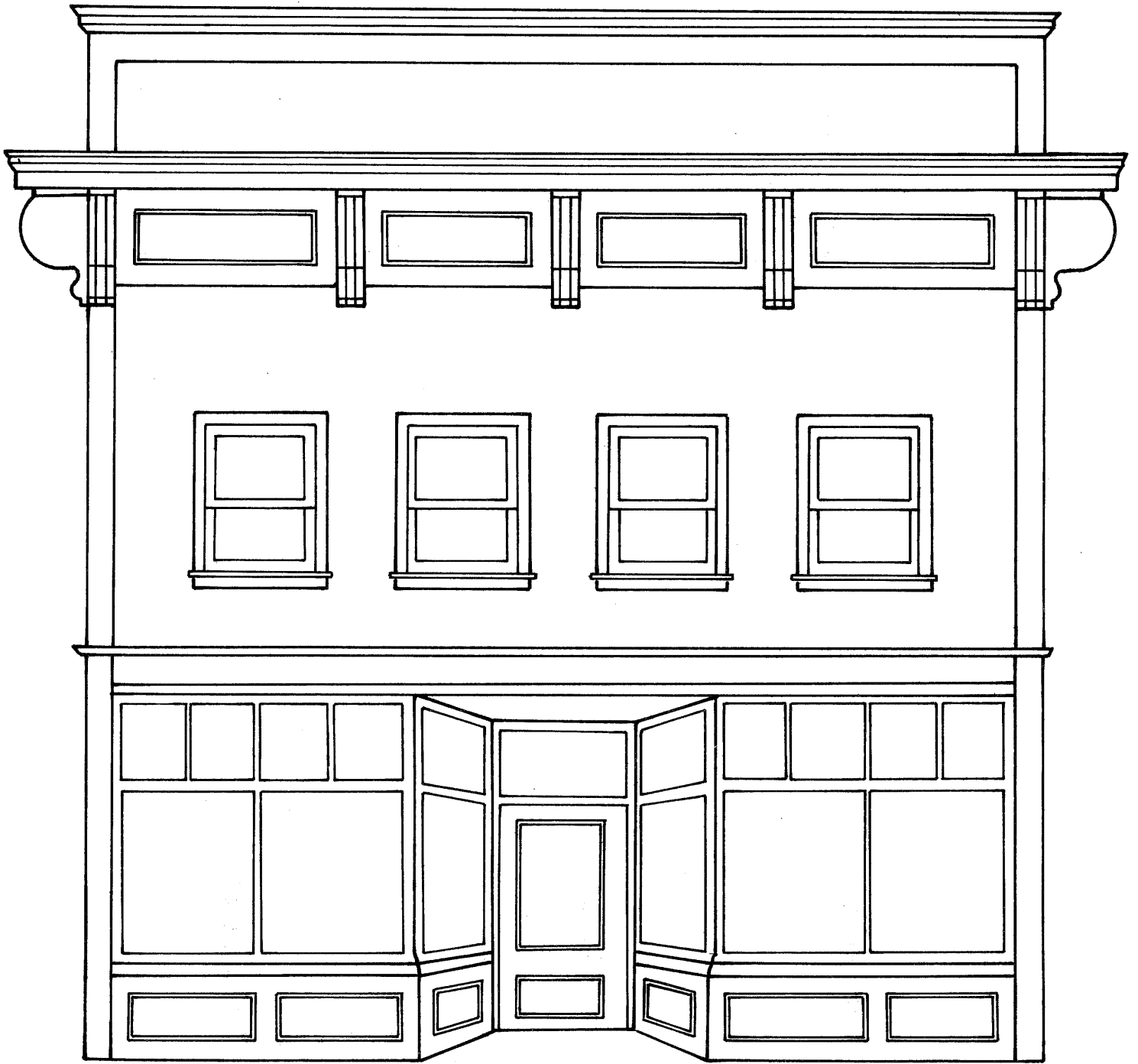


FIGURE 5

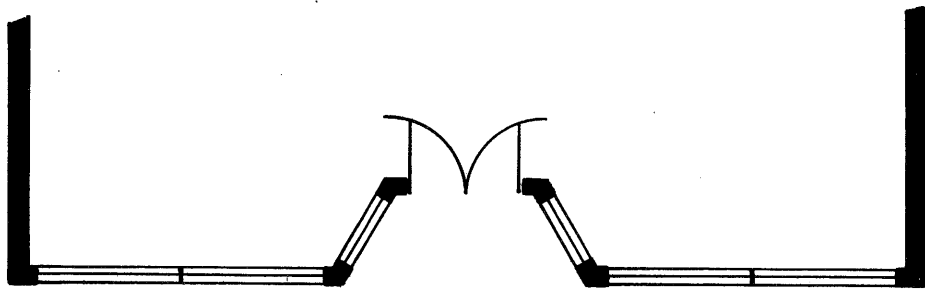


FIGURE 6

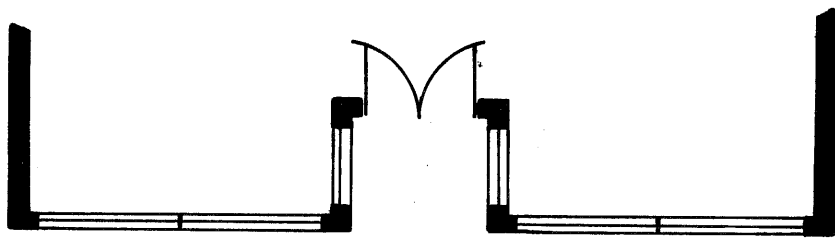
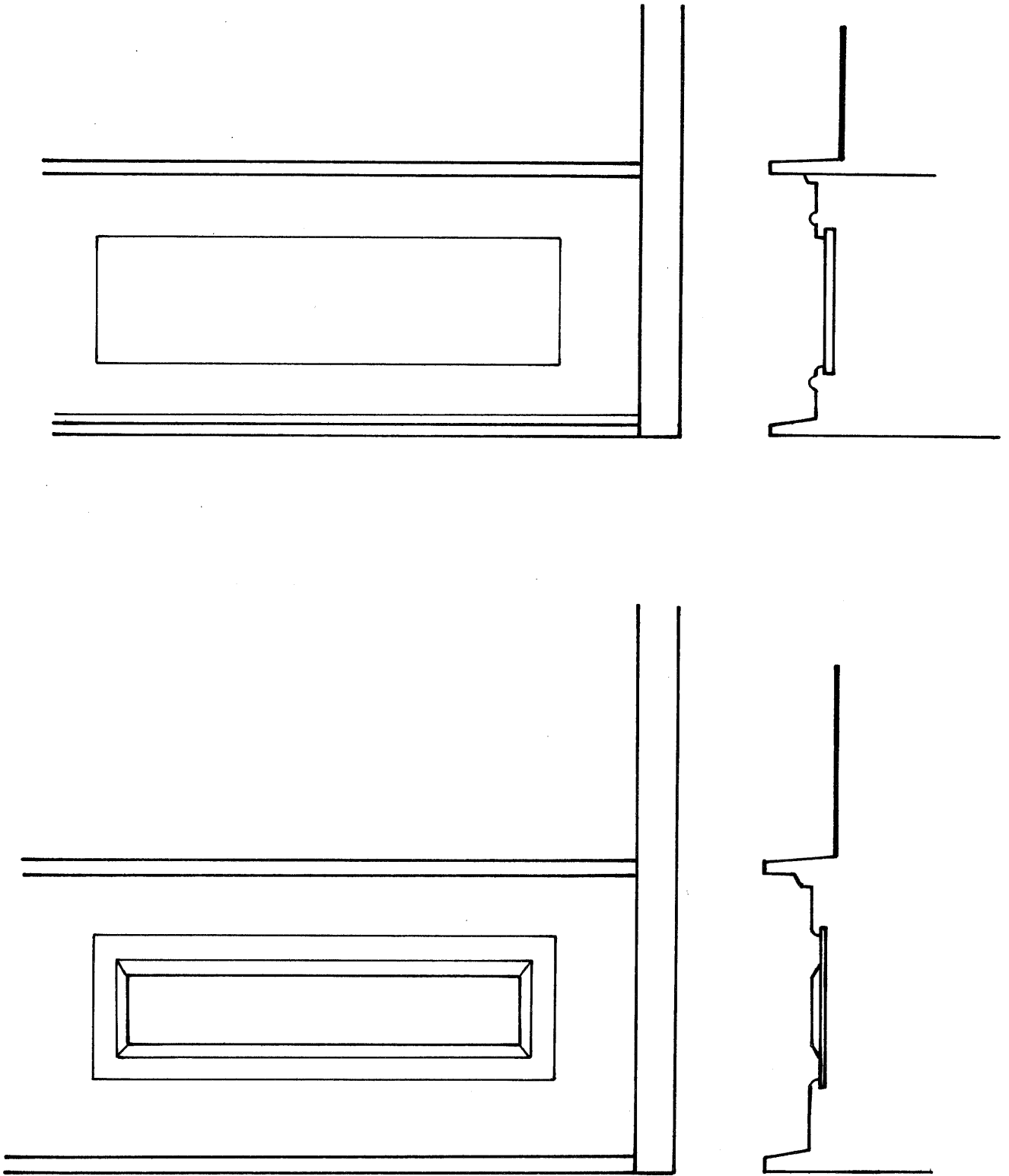


FIGURE 7



LOWER WINDOW PANEL

FIGURE 8

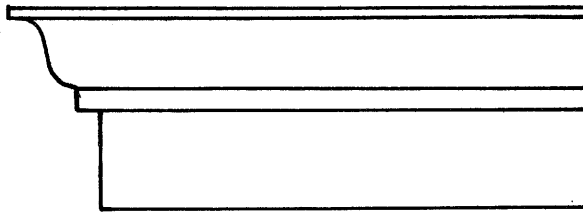


FIGURE 9

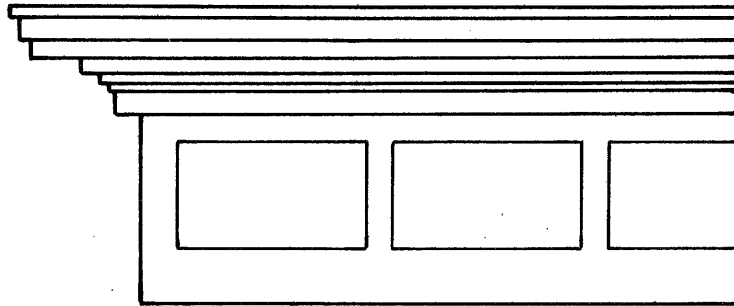


FIGURE 10

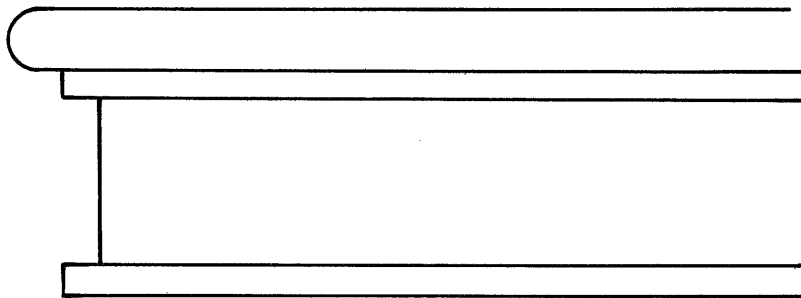


FIGURE 11

simple wooden structures similar to the marquee on the Bayside building. Original marquees were often ornate, emphasizing or repeating elements of the building. Initially several marquees covered only building entrances. They were later extended to cover the entire length of the building that fronted the street. Additional elements--pediments, capitals and lights--were used to provide detail and emphasize building entrances. Lights were also incorporated within capitals or were located on the marquee above the sidewalk at a capitals location. Divided lites were a main feature on many marquees and added a distinct character. The marquees face paralleling the street was composed of many small lites while side faces were composed of larger lites. Tongass Trading Company had perhaps the most detailed/ornate marquee. Stained glass was used as the background for its logo and name.

Original materials were glass, wood and steel, which had short life spans due to vandalism and the climate of Southeast. Today anodized aluminum and lexan are potentially materials that can be used for restoration. As a result reproduction of an elaborately detailed marquee may be expensive. It is recommended as an option in the case of limited funds that a simpler and less costly design as in Figure 9 be selected.

Upper Story Windows

Upper story windows create a rhythm or pattern that is an integral element of a downtown street scene. They often reflect the pattern of first floor elements and are a key feature in a building's total appearance. Window shape, size and location are important in restoring a structure's facade. With the exception of the Masonic building all structures with historic character were constructed with double hung windows. Most had divided lites of 2 over 2, 4 over 4, or 6 over 6. In addition to divided lites window character is determined by trim. Three variation of trim type existed as shown in Figures 12, 13, and 14. Restoration of windows involves repair or replacement of trim and sashes and/or installation of storm windows. Replacement of trim and sashes that duplicate historic character are available from several manufacturers. (See Appendix). Use of storm windows is an alternative to sash replacement. Storm windows are less costly and can be fabricated by a variety of manufacturers.

Siding

Siding of historic buildings has varied little until recent years when T1-11, vinyl, and enamel were introduced. Historic siding types--bevel tongue and groove and lap (Figures 16, 17 and 18) have retained their original form with changes only in dimensions. When original siding has been replaced or modified inspection of building side or rear walls may indicate original siding

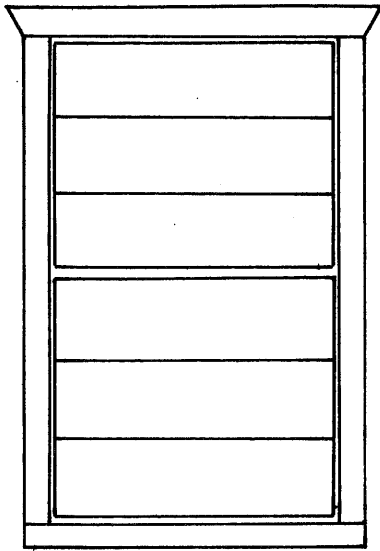


FIGURE 12

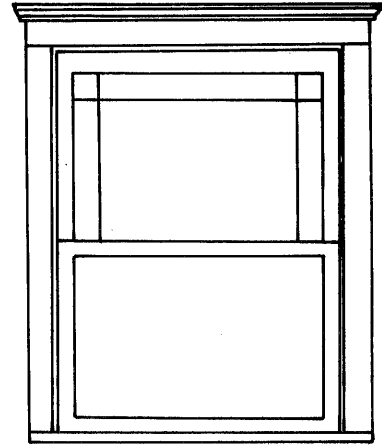


FIGURE 13

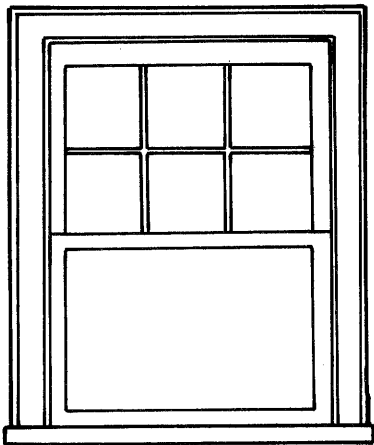


FIGURE 14

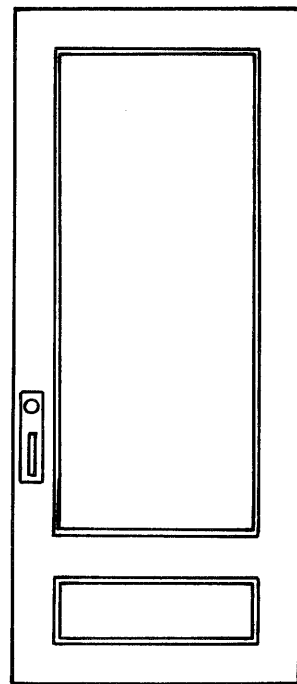


FIGURE 15



FIGURE 16

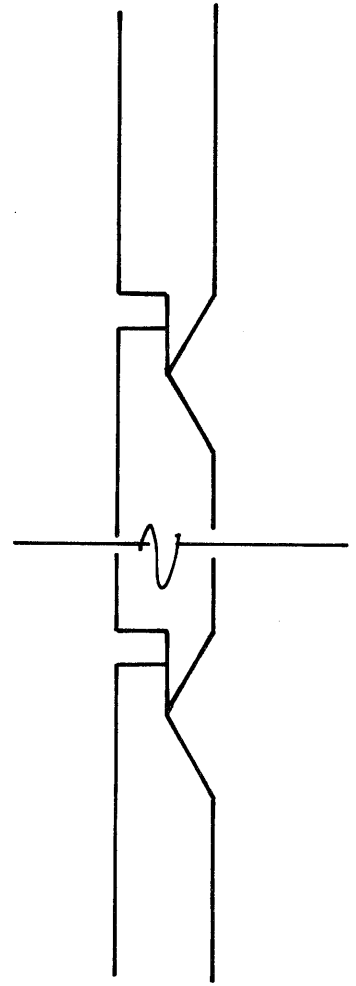


FIGURE 17



FIGURE 18

type. Replacement or cover of original siding with vinyl or enamel siding may result in severe deterioration of the building structure. An in-depth discussion of results of siding replacement is included in the Appendix.

Cornice

In addition to marquees, building cornices are the elements that visually create a building's character. Bracketed cornices and parapets, independent of building style or period, were constructed with both plain and ornate designs. Most often a structure with ornate elements on lower floors had a cornice to match. Restoration may utilize wood or aluminum to duplicate original appearances. Figure 19 illustrates three cornice styles.

Color

Painting a building can be one of the most dramatic improvements made in its rehabilitation. A well chosen color scheme such as the Tongass Trading Company can highlight architectural detail and make a building come alive. It can unify elements on the facade and relate the building to others on the street. In most instances three colors are optimum. A base color is used on upper story siding. A second color may be use on major trim such as marquees, cornices, corner boards, sign boards, lower window panels, window trim, and window frames. A third color would be used to accent details and minor trim such as brackets, doors, window sashes, storefront frames and small details on cornices, lower window panels, and marquees. Key considerations in selecting colors are adjacent buildings, other buildings that comprise the street scene and the building's character.

New Construction

New construction on lots adjacent to or between historic structures needs to be sensitive to the character and design of the historic buildings of the street. Building form and facade design are the most important factors to be considered. A new building needs to duplicate the height and width of surrounding buildings to maintain the rhythm of the facades along the street. The entire building space, if an in fill site, needs to be filled. If the site is characterized by long frontage the mass of the facade can be divided into bays to be in proportion with existing structures. Door and window pattern, size and proportion as well as facade form are instrumental in creating the character of the street. Size, proportion, and the ratio of opening to wall need to be drawn from and reflect the character of adjacent buildings. Architectural details such as cornices, window style and marquee also need to reflect elements of existing structures. The type and dimension of materials used in new construction must also be similar to those of the surrounding historic structures.

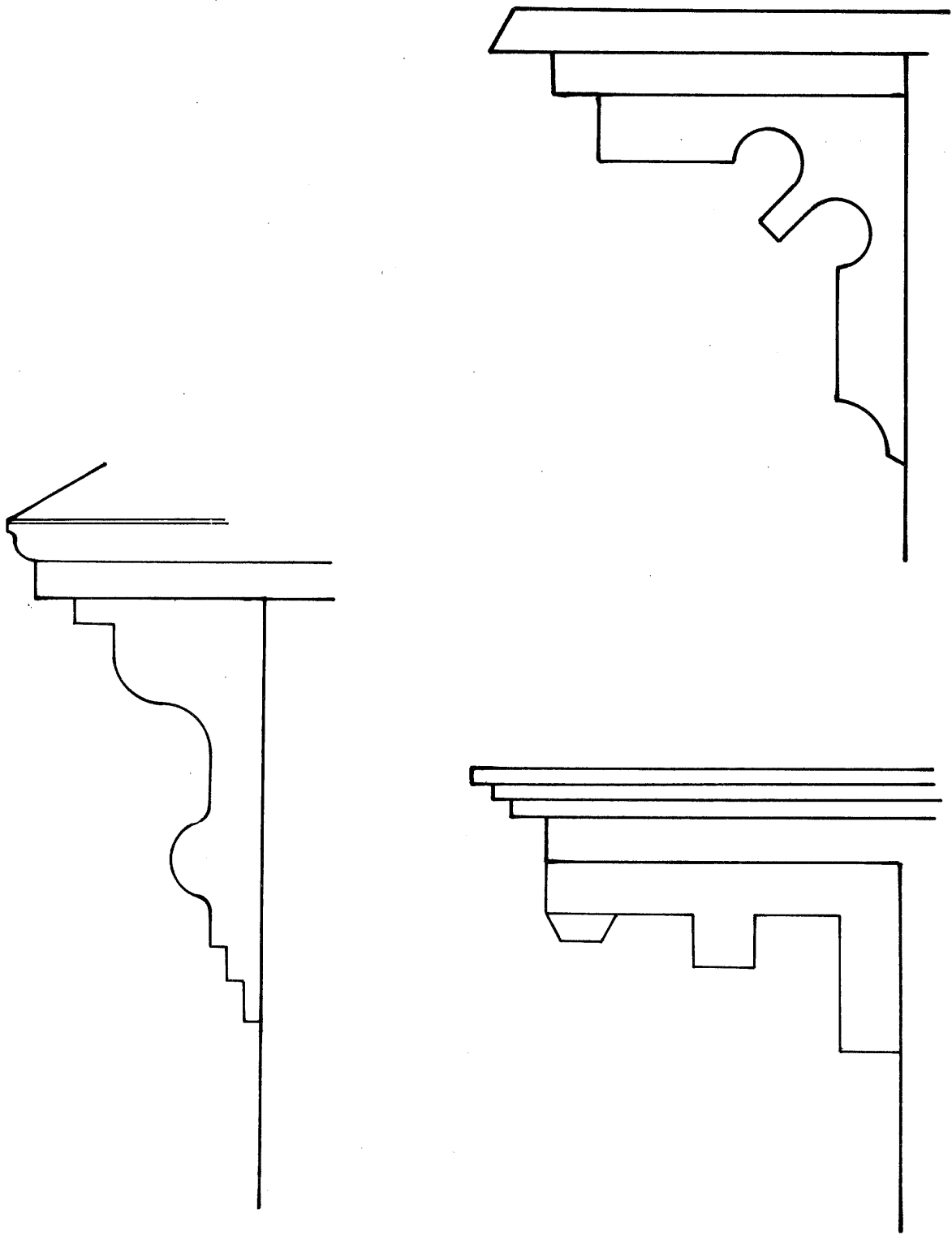


FIGURE 19

CHAPTER IV

Structures

The study area of this project was selected based on the history of Ketchikan's growth and the locations of the majority of existing historic structures. As previously suggested, Ketchikan grew in loosely definable periods that have been arranged to dates. The community also developed by distinct areas. Following are documentation and analysis of each structure judged to be of the "historic" period, 1890-1930's. Buildings are grouped in the historic areas of growth: Stedman Street, Thomas Street, the Downtown and New Town or Water Street.

Thomas Street

Constructed between 1914 and 1917, Thomas Street's initial structures were shacks and makeshift dwellings with the exception of 158. 158 Thomas Street was constructed in 1910 and was accessed by Stedman Street. The southern most buildings, 126-120 Thomas Street, were probably constructed between 1915-1920 and reflect the industrial marine orientation that still continues today. They are reminiscent of the first phase of building in Ketchikan. Remaining buildings except 130 Thomas are later additions that lack historic character or context. Thomas Street's character is industrial/utilitarian marine and is created by the boardwalk street and buildings at numbers 130, 126, 124, and 120. These buildings are similar in form and mass. Their identical roof shape and second floor window location create the harmony and rhythm that gives the street much of its character (see Figure 20). Other architectural elements, including original bevel siding on wood frame construction, corrugated metal roofing, and exposed rafter ends are identical on all buildings.

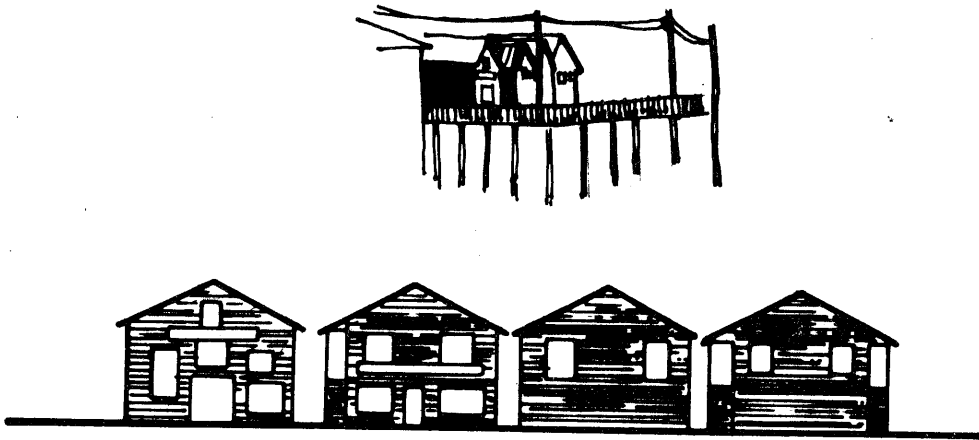


FIGURE 20

130 Thomas - Union Machine Shop

Built prior to 1920 and moved to this site in 1935, the building retains its original appearance. Significant elements are its wide window (see Figure 12), door, and corner trim; multi-pane windows; bevel tongue and groove siding; roof form and pitch; and exposed rafter ends. Its form and mass fit the existing historic street appearance. It has been excellently maintained and is in sound condition.

Recommendations:

1. Retain present facade appearance.
2. Removed corrugated metal siding on south wall and restore or replace original bevel siding.
3. Continue excellent maintenance.

126 Thomas - Potlatch Bar

This is a wood frame structure constructed circa 1918 with a corrugated metal roof. A large portion of its original features remain. Siding, with the exception of the first floor facade, is original bevel tongue and groove. Trim on building corners and second floor windows is original wide board. Window trim is shallow, wide style shown in Figure 12. Actual windows, however, have been altered from probable multi panes as in 130 or a double hung sash as in 124 and 120 to single sash. The first floor facade has been completely altered by changing window and door type, placement, and trim as well as siding type. There is a side entry to the second floor via a stairway that is covered by an extended roof. The soffit of this extension is constructed with narrow bevel tongue and groove boards. The Potlatch Bar sign is in an appropriate location and has appropriate shape and size.

Recommendations:

1. Continue maintenance. Remove first floor siding and replace or restore original bevel siding.
2. Trim window and door with shallow wide board trim of period shown in Figure 12.
3. Replace all windows with multi pane windows as on the Union Machine Shop. Replace door with one characteristic of the period, e.g. echoing first floor window pane pattern.

124 Thomas

The first floor of this building has been significantly changed from its original appearance. The windows and door have been added and the original vertical bevel tongue and groove siding has been replaced or covered with horizontal cedar siding. Original wide corner trim remains on the second floor as well as bevel tongue and groove siding, two double hung windows, wide, shallow window trim and exposed rafter ends. There is no original trim visible on the first floor.

Recommendations:

1. Retain original features; paint and clean building; and remove first floor siding and replace or restore with bevel tongue and groove.
2. Restore corner trim on first floor and add trim duplicating window trim on second floor to first floor windows and door.
3. Replace first floor windows with ones duplicating second floor windows.

120 Thomas

120 Thomas is similar in shape to 124 Thomas except that it has side entries to the second floor on both sides of the building via stairs covered by a roof overhang. The only apparent alteration to its historic appearance is the addition of corrugated metal siding to the facade. Windows, doors, and trim on each is original wide butt trim as shown in Figure 12. Rafter ends are exposed. Soffits are constructed with narrow bevel tongue and groove boards. The only recommendations are to improve maintenance of the building by painting and cleanup and to remove metal siding and restore or replace it with bevel tongue and groove.

Stedman Street

Through its brief history Stedman Street has experienced four major generations of architecture. The first generation, traditional Tlingit architecture, existed through the earliest years of settlement. The area was known as Indian Town for many years. As Ketchikan became more firmly established a boardwalk street in the present location of Stedman Street was constructed and was lined with a variety of commercial and residential buildings. These were of wood frame construction with pitched roofs and dormers. With the possible exceptions of June's Cafe and George's Diner, these second generation buildings no longer exist. June's Cafe and two buildings which have since been demolished were forerunners of the next generation.

The third generation is represented by the majority of buildings on Stedman Street, those from the Bayside south to Inman Street. From photo research, it appears that the area had developed into a main commercial area by 1915 and had possibly outpaced the newly developed downtown. This period began in the 1910's and extended into the 1930's. Buildings are characterized by traditional 1920's commercial design including: false fronts; a variety of bracketed cornice designs; traditional storefronts with recessed doorways and extensive glass display areas; wide trim often with decorative carving; and in the 1930's, marquees both simple and ornate.

The fourth generation began in the 1950's and continued to present. Additional construction has occurred as historic buildings have been lost to fire or the decision to replace with modern structures. Another aspect of this most recent period has been the modification of the third generation buildings which has resulted in significant change to exterior appearance and historic context. Many storefronts, windows, doors and siding types have been replaced. Only upper stories and cornices have survived.

133 Stedman - Bayside

Until recently the Bayside was a well preserved example of 1920's commercial architecture. During spring, 1985, its facade was covered with vinyl siding that imitates the appearance of the original lap siding. All that remains of the buildings original elements are the marquee, transom windows, upper store windows, and bracketed cornice. Window and corner trim have been removed or covered. Several storefront windows have been covered. The Ketchikan Historic Properties Survey documents and describes the building's original appearance.

Recommendations:

1. Remove vinyl siding. Restore original siding, restore storefront windows covered by siding, and paint entire building. Replace window and corner trim.
2. Rehabilitate or restore marquee to one of the styles shown in Chapter 3.
3. Install doors characteristic of the period, e.g. reflecting store front character with large glass panel as shown in Figure 15.

203 Stedman - June's Cafe

This structure has probably been modified several times since its construction in the early 1900's. Remaining details are the cornice, corner trim and possible second story siding. Modern doors and windows have been installed throughout. Brackets and window trim have been removed. The building's form and style cause it to stand out in early photographs of the Stedman area.

Recommendations:

1. Install brackets on cornice. See Figure 19 in Chapter III for examples. Install window trim, sills, drip caps, etc. with historic appearance. See sketches in Chapter III for examples.
2. Replace siding on first floor to match second floor.
3. Install windows and doors with historic appearance. See sketches in Chapter III.

207 Stedman - New York Hotel/Cafe

The New York Hotel/Cafe retains many of its original features. Its bracketed cornice, large trim board, window trim, windows, corner trim, bevel siding and trim board at the first floor/second floor level are as originally constructed. The storefront has been modified. Its original 1920's style was modified to the present condition of small storefront windows and simple marquees covering only entry ways.

Recommendations

1. Routine maintenance and repair including painting and repair of deteriorating features. Clean and replace transom windows. Install new transom windows where necessary. Remove electrical connections on facade and locate at rear or side.
2. Restore 1920's storefront with large glass display areas. Rehabilitate existing doors. Replace marquee with historic design. See Figures 9, 10, and 11 in Chapter III.
3. Restore original recessed storefront to 1920's appearance with glass display areas. See Figures 5, 6, and 7.

223 Stedman - Ohashi's Store

A false front building, this structure retains little of its original or subsequent historic appearance. Only cornice and side trim remain. Alterations include all windows, the door, siding and a recently added marquee. Historic elements were windows characteristic of the 1920's, lap siding, an elaborate marquis with multiple lites (see Figure 21) and a storefront with large glass display area. Prior to the marquee, transom windows and an awning characterized the storefront.

Recommendations:

1. Install second floor windows and trim characteristic of 1920's. Remove existing siding and rehabilitate original lap siding. Add wide trim characteristic of the period to first floor windows and door.
2. Replace existing marquee with a reproduction of the original or install transom windows and awning.
3. Restore, storefront to historic appearance with large glass display area and trim. See Figures in Chapter III.

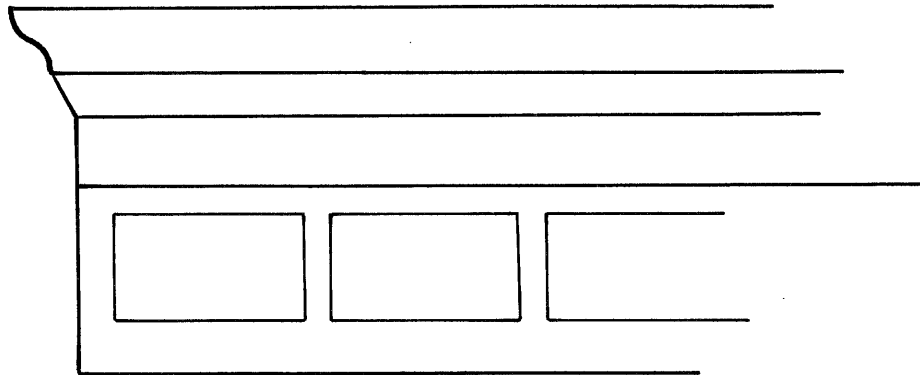


FIGURE 21

227 Stedman

The facade of this false front structure has been completely altered and has no elements remaining from its historic appearance. Originally siding was bevel tongue and groove or lap with characteristic wide trim boards dividing the ground level and second level and emphasizing corners. The false front is a later addition. Second floor windows were larger with divided panes and wide board trim. The original marquee was less ornate than others on the street (see Figure 9) but characteristic of the time. The store front was typical of the 1900's style rather than the 1920's. It is doubtful that the door was recessed. Storefront windows approached floor to ceiling height and were divided as was typical of the time. Windows extended across the store front along Stedman and wrapped around the south side providing additional display area as in Figure 4.

Recommendations:

1. Replace second floor windows with ones of original size and appearance. Remove existing siding on entire facade and restore or install siding and trim to historic appearance including window, door and corner trim.
2. Replace marquee with duplicate of original.
3. Restore storefront to original appearance with larger glass display area.

301 Stedman - Ayson Hotel

The Ayson Hotel retains many of its original architectural elements. The storefront has been substantially modified in recent years. Imitation brick siding has been installed that covers or replaces original lower window panels, posts, and lower store windows. Present doors are not original. Fortunately the original storefront configuration (door and window location) has not been modified. Original features that remain are the marquee, transom windows, wide corner trim, and upper story windows (double hung) and their location. Architectural features that have been changed or removed are upper story window trim, storefront detailing and other features as stated above and the cornice. In addition, facade siding appears original and is at least characteristic of historic style. The side wall covering, corrugated metal, was present in early photographs.

Recommendations:

1. Restore cornice to original appearance (see Figure 22). Restore transom windows. Rehabilitate/repair marquee. Establish regular maintenance schedule and paint and repair exterior. Remove electrical connections.
2. Replace upper story window trim with original style (see Figure 14). Remove imitation brick siding and restore original storefront appearance (see Figure 23).
3. Restore original architectural detailing on storefront including doors (see Figure 15). Remove existing signs except second floor hotel sign and replace with signs characteristic of 1900's to 1920's.

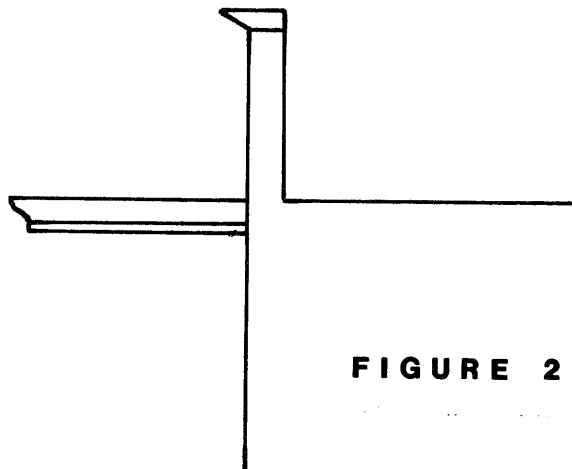


FIGURE 22

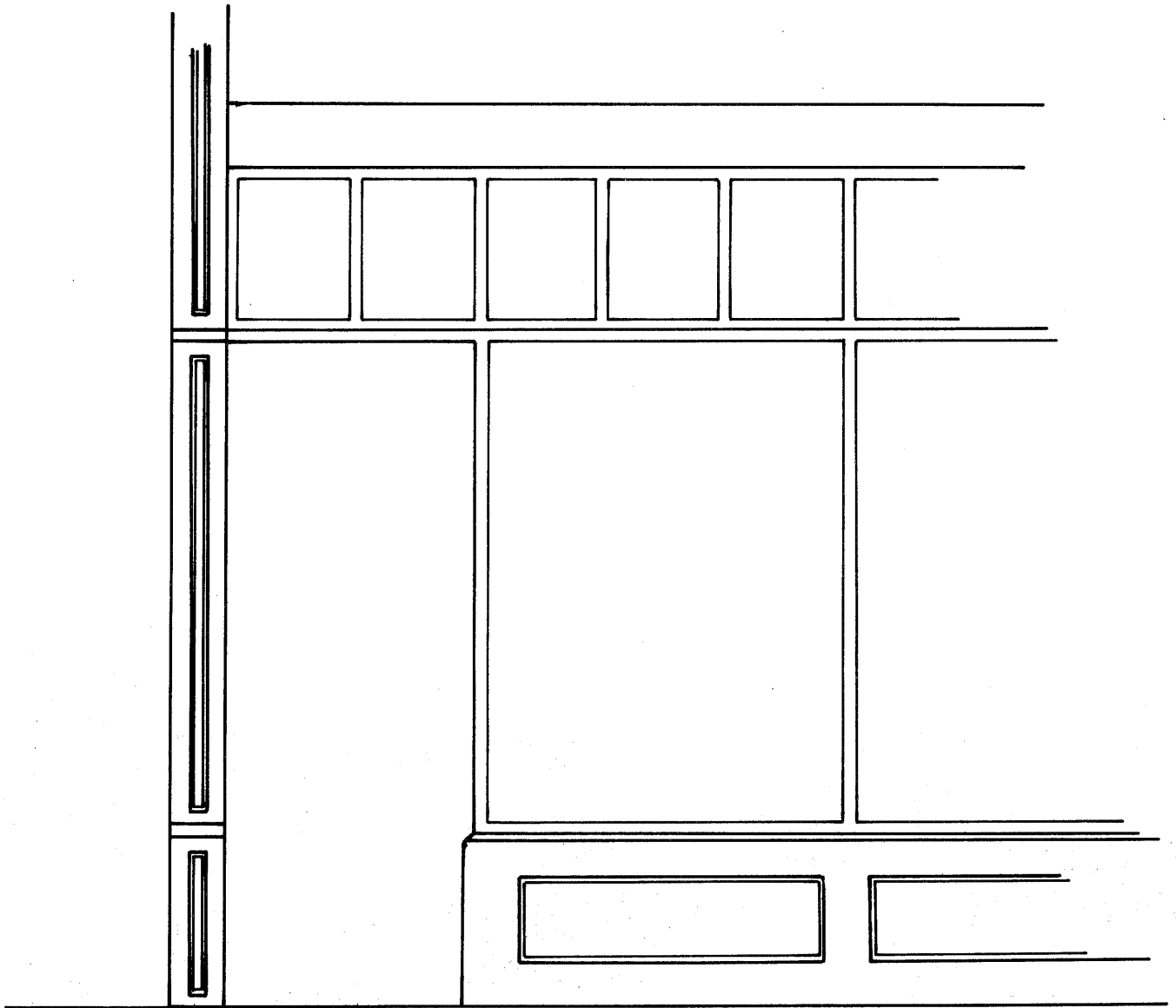


FIGURE 23

Downtown

As Stedman Street developed, Downtown was simultaneously beginning to grow as a second commercial area. It has gone through four states of growth paralleling the growth and maturation of the community. As Ketchikan changed from a pioneer settlement to stable businesses and families, structures became more distinct. Between 1900 to 1910 small nondescript buildings were replaced by more permanent structures. Prior to 1900 only two general stores operated in downtown. By 1910 many businesses had developed as well as churches, buildings with decorated facades, boardwalks and roads. Stately homes were constructed in downtown along Main and Mission Streets and continued up the hillsides. 1910-1920 saw commercial growth in downtown intensify. Concrete buildings, Tongass Trading Company and the Heckman Building, were constructed. Front Street grew and was lined with offices, stores and large hotels. The 1920's continued this growth. Additional concrete buildings were constructed: the Gilmore Hotel, City Hall and the Ingersoll Hotel. Residences in downtown made way for new commercial structures. Streets were paved with Front Street between the Revilla and Stedman Hotels in 1920 and Main Street in 1926.



633 Mission Street

Modified several times, this building retains few elements of its original 1920's appearance. Original elements consisted of a recessed main entry; lower window panels; large glass display area; transom windows; wide corner and sign boards; windows and trim typical of the period, double sash with divided lites and shallow profile trim with small drip caps; lap siding; and a simple cornice. Of interest was an additional doorway leading to the second floor that modified the facade's appearance (see Figure 24). During the 1930's a marquee with divided lites typical of the period was installed over the sign board (see Figure 10). Today few elements of the historic appearance remain. Only the corner boards, cornice and recessed store entry remain. Siding and transom windows have been covered or removed. Windows, window trim, doors, display windows and the marquee have been replaced. The building has been well maintained.

Recommendations:

1. Restore original siding, window trim and lower window panels.
2. Restore original second floor windows and main door.
3. Restore marquee and storefront windows.



FIGURE 24

625 Mission

At one time Sears, Roebuck and Company was located in this false front building. Modified several times it was a typical example of the 1920's (see Figures 5 and 6). Original features included a simple cornice (see Figure 25); lap siding; five double sash windows with a molded drip cap (see Figure 14), and the center window taller than adjacent windows; transom windows; recessed entries; and simply detailed lower window panels. As in other buildings, a marquee was added in the 1930's. The original marquis was identical to many of this period with divided lites (see Figure 10). Light fixtures were located on building corners. Today, only the false front and portions of corner boards remain. The building is currently well maintained.

Recommendations:

1. Restore cornice to one of its two previous configurations. Restore lap siding, corner boards and lower window panels to original appearance as shown in figures in Chapter III.
2. Restore upper story windows to original appearance. Restore transom windows.
3. Restore marquee and storefront windows to original appearance. Add light fixtures of similar to historic character to building corners.

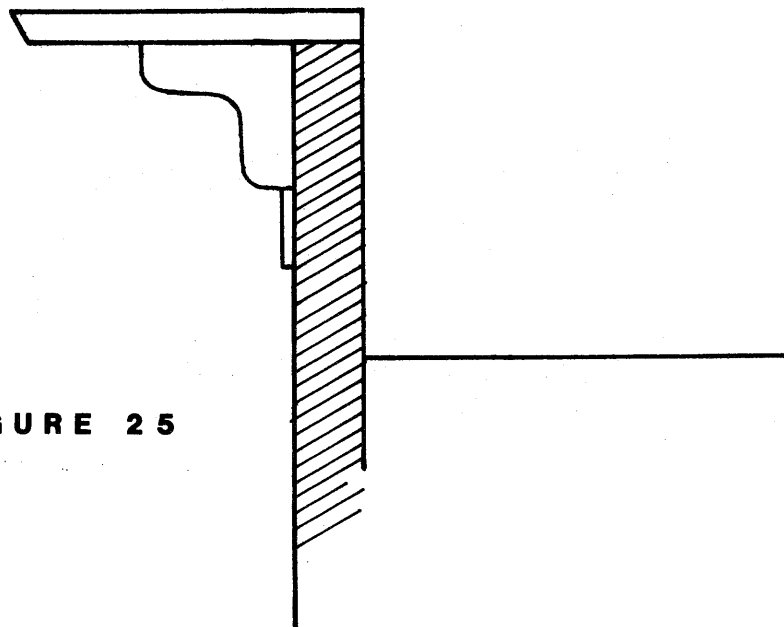


FIGURE 25

617 Mission - New Deal Building

Similar to 337 Stedman Street, this building has a distinct gabled false front. This is the only architectural element remaining from original construction. Second floor windows were located as at present but were double sash with wide shallow trim characteristic of the period (see Figure 13). Photographs of the structure do not show first floor detail. It appears to be a single storefront with a central recessed door and glass display space typical of the period. A marquee of simple design and typical of the time was present (see Figure 9).

Recommendations:

1. Restore siding. Removal of existing siding may reveal original; if not, restore with siding typical of the time (see Figures 16, 17 and 18). Restore second floor window trim (see Figure 13). Restore corner boards and cornice.
2. Restore windows to double sash one over one. Restore marquis (see Figure 9).
3. Restore storefront to a configuration typical of the period as described in Chapter III.

600 Mission Street - Don's Business Supply

Originally constructed circa 1919 in the false front style, this structure has undergone substantial modifications including a complete remodeling in 1938 as shown in the Historic Properties Survey. Many modifications have occurred in recent years, mainly alteration of the storefront and upper story windows. Other elements remain from the 1938 construction and fit the historic context of downtown commercial buildings. Significant elements remaining are leaded multi lite windows on the Bawden Street side; cornice and brackets; siding; and marquee support connections on the building facade.

Recommendations:

1. Restore upper story windows with ones similar to those on the Bawden Street facade.
2. Restore front to 1920-1930's configuration and detail (see Figures 5-8).
3. Restore or replace marquee to historic appearance (see Figures 9-11).

St. John's Episcopal Church - Mission Street

The Episcopal Church is extensively documented in the Historic Properties Survey. With the exception of vinyl siding installed in 1983, the church retains most of its original features. During the 1930's the structure was elevated and a lower story was constructed. This eliminated the main entry once on Mission Street. Recommendations are to remove the vinyl siding, repaint original siding, and establish a yearly maintenance program.

Arthur Yates Memorial Hospital - Mission Street

This building is also well documented in the Historic Properties Survey. Except for modifications to their porch it retains its original appearance. Double glass doors, siding, and three windows have replaced the porches open appearance. Recommendations are to replace glass doors with ones characteristic of the period of its construction and to establish a yearly maintenance schedule.



FIGURE 26

500 Mission - Ben Franklin Store

In the past, a 5 & 10 cent store and also the location of Bucey Motors, this building has been completely altered from its historic appearance. The 1920's storefront configuration and building form are all that remain. Cornice and brackets were moderately detailed with large brackets at building corners and smaller less detailed brackets spaced in between (see Figure 26). The marquee was a simple molded design similar to others of the time (see Figure 9). Its distinguishing feature was the "5 and 10 Cent Store" sign that was located on top of the marquee and ran around its perimeter. The storefront was also typical of the 1920's with recessed lower window panels, large glass display space, transom windows, recessed entry and doors matching display area form.

Recommendations:

1. Restore cornice and brackets to historic appearance.
2. Restore marquee and sign to historic appearance.
3. Restore storefront to its historic 1920's appearance.

422 Mission Street - Bon Marche

Originally a very detailed structure, 422 Mission has been completely altered from its historic appearance. Originally the building had an elaborate bracketed cornice with six to eight large brackets separated by smaller brackets spaced between. Both emphasized the architectural lines and spacing of building elements. Upper story windows were typical double sash multi lite windows of the period. The recessed storefront was topped with large transom windows. In addition to the bracketed cornice the most notable feature of the building was its detailed architectural trim. Decorated "posts" were located at the building corners and on the buildings center to give the illusion of two separate structures. See Figure 26 for original appearance.

Recommendations:

1. Restore bracketed cornice to original appearance as shown in the photograph. Restore siding to original lap style.
2. Restore architectural trim as shown in the photograph. Restore marquee and transom windows to original appearance as shown in Figures 10 and 29.
3. Restore storefront to historic recessed appearance as shown in Figures 5, 7 and 26.

318-320 Mission - Harbor Inn/Alaska Bar

Well documented in the Historic Properties Survey, this building is one of the oldest in downtown. Although the facade has been completely altered from its historic appearance, the building's unique storefront organization as two separate businesses is probably original. The storefront has been modernized but doorways remain in their original locations. Glass block is used in both the Harbor Inn and Alaska Bar entries. Research of historic photographs discovered a bracketed cornice (see Figures 24 and 27) and a marquee with divided lites (see Figure 10). The lower story was probably a flush front with large glass display area and recessed lower window panels (see Figures 5, 6, and 8).

Recommendations:

1. Restore upper story. Replace two modern windows with ones of historic appearance shown in Chapter III. Add brackets and cornice as shown in Figure 27.
2. Replace existing marquee with one of a style as shown in Figure 10.
3. Restore lower story to one of two appearances. Restoration to the historic appearance will require retention of existing entry configuration; installation of large display area windows and lower window panels as was characteristic of the period; and replacement of existing doors with ones of historic appearance (see Figure 15). A more contemporary but still semihistoric appearance would retain the existing glass block and windows. Remaining facade area could be faced with glazed tile or concrete painted to match the building color scheme.

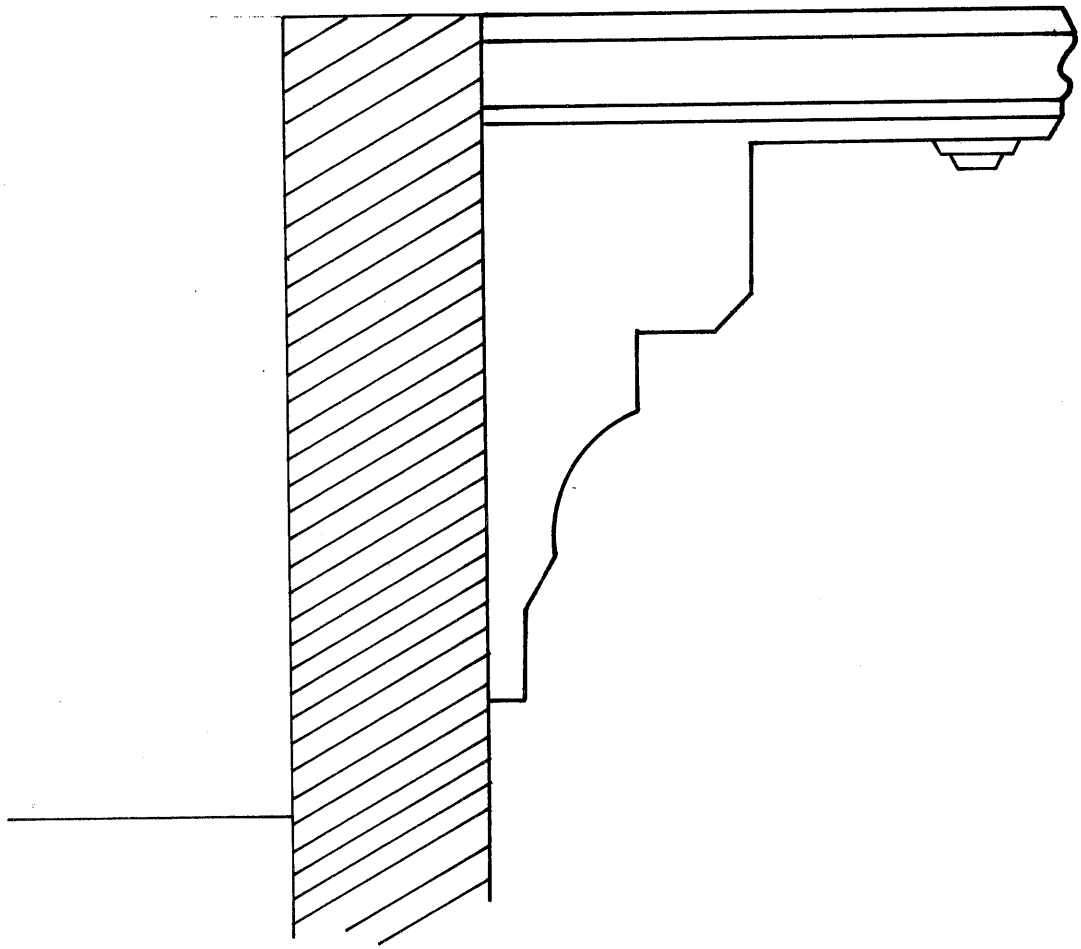


FIGURE 27

303 Mission Street - Ingersoll Hotel

The Ingersoll Hotel retains many of its original features. Unfortunately the architectural elements that created its original character have been removed, covered or are not emphasized by its present color scheme. The original cornice was simple but more distinct than the present one (see Figure 28). Transom windows, discernable at present, were functional and distinctly visible. Storefronts were typical of the 1920's period. They consisted of recessed entries, recessed lower window panels and large glass display areas as are the existing storefronts of Angela's and Smith Electric. Features that contributed most to the buildings character are, however, no longer existing. The Ingersoll Hotel sign and the buildings handsome marquee added character to the street scene as well as the building. The hotel sign, large with a distinct shape, was located high on the buildings corner of Mission and Front streets (see Figure 29). The marquee, the most distinct architectural feature of the structure was ornate with "capitals" located at support connections (see Figure 29); light features similar to the one at the Smith Electric entry, located under the marquee at each "capital"; and a unique pedimented sign/capital element located over the hotel's main entrance (see Figure 29).

Recommendations:

1. Restore cornice to configuration similar to original. Clean and restore transom windows. Restore Ingersoll Hotel sign.
2. Restore marquee.
3. Restore storefronts and hotel entry with lower window panels, glass display space, and doors reflecting storefront form (see Figures 8 and 15).

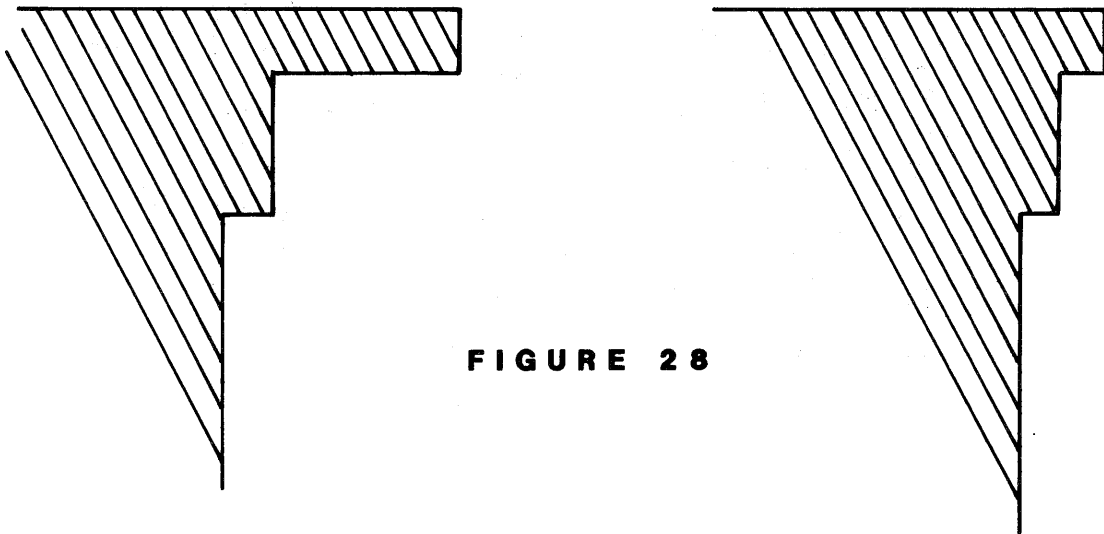


FIGURE 28

Dock Street

501 Dock Street - Ketchikan Daily News

As described in the Historic Properties Survey, this building was originally a false front structure. It has undergone a complete remodeling that has significantly changed its character. The cornice, brackets, and corner board are the only original architectural elements of the facade that remain. Although this method of rehabilitation is not recommended, the building will conform with the historic character of other downtown structures as they are restored.

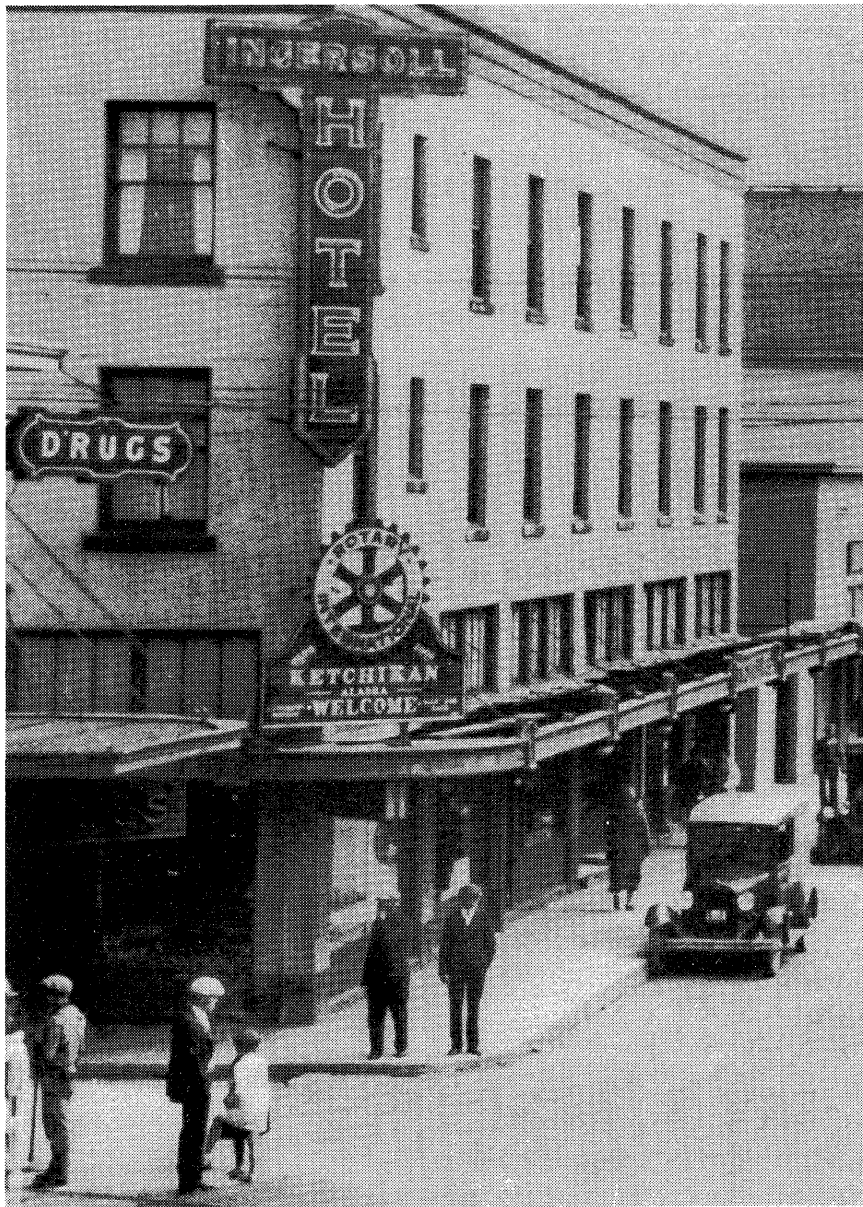


FIGURE 29

435 Dock Street

Possibly one of the oldest remaining buildings in downtown, this structure has elements of the 1900-1910's period. The flush storefront, cornice, brackets, corner boards, one lower window panel and doors are original. Of most importance is a display window with divided lites that faces Edmond Street. This window is indicative of the 1900-1910's period (see Figure 4). First floor alterations include lower window panels, storefront windows and possibly the elimination of transom windows. The upper store has been completely altered. Original windows and trim have been removed. Original siding has either been removed or covered.

Recommendations:

1. Restore upper story. Remove existing siding and restore with lap siding. Replace two existing windows with four smaller ones characteristic of the period (see Figure 14) evenly spaced across the facade.
2. Restore lower window panels to resemble existing original.
3. Restore storefront display space windows with divided lites similar to the existing corner windows.

421 Dock Street - Knickerbocker Hotel

The Knickerbocker Hotel, although altered, still retains elements that identify it as a recessed storefront style of the 1920-1930's. Upper story windows, in poor condition, are original with one over one double sashes and narrow trim and drip cap. The facade has been resided but a sidewall visible from Dock Street retains what is probably its original bevel siding. The lower storefront has been altered. It is presently a modified recessed entry with one storefront window and an entry door to the upper story located on the building corner. The store entry is a modern "peachtree" door topped by a transom. Present renovation has uncovered the building's structure which indicates the original appearance was a traditional recessed entry with an upper store entry way and two large display windows (see Figures 2 and 7). Original wide corner and sign boards are deteriorated.

Recommendations:

1. Retain and rehabilitate upper story windows and trim. If windows are beyond rehabilitation and replacement is necessary, use a contemporary design identical to the original. Remove present facade siding. If original siding remains, restore it. If replacement is necessary use historic styles or combination of styles traditional to Ketchikan. Restore corner and sign boards.
2. Restore storefront to traditional configuration as shown in Figure 7). Reconstruction to a historic entry will require its modification. If transom windows or framing members indicating their previous existence are found during residing, restore transom windows. Install new storefront window on right side of the store entry as was historic. Replace existing doors with ones duplicating a historic appearance as on 201 Mission Street, the Trading Post. Restore lower window panels as shown in Figure 8.

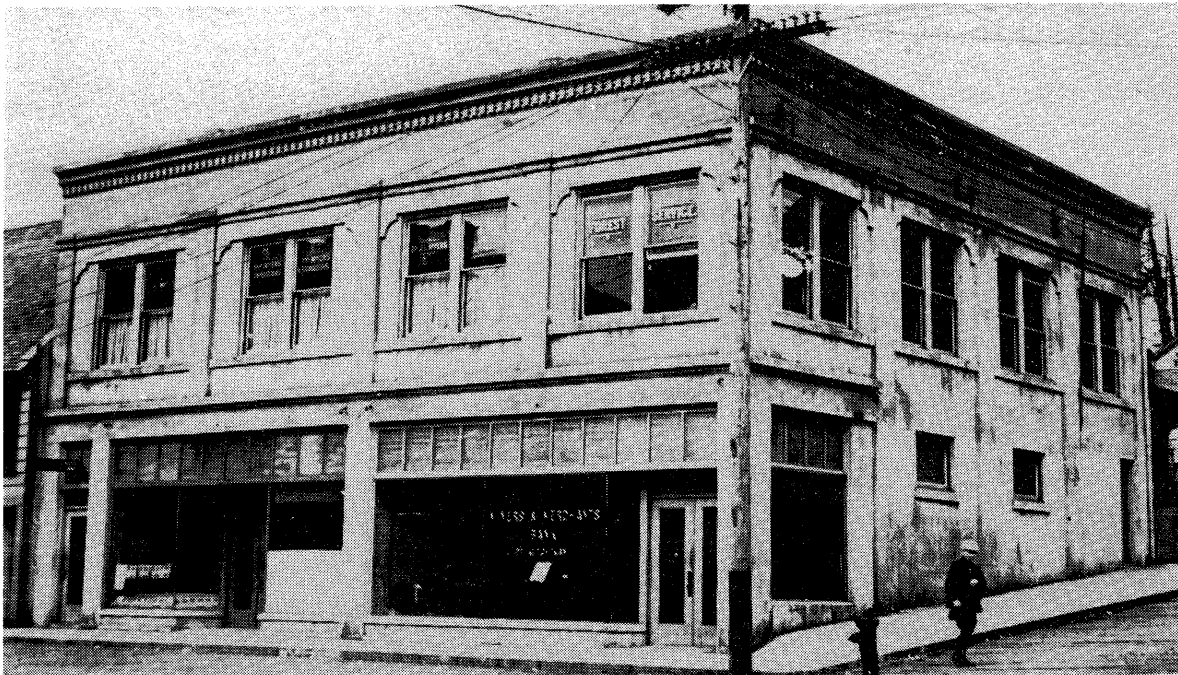
331 Dock Street - First Bank Building

The building housing the First Bank of Ketchikan is "concrete commercial" style. It has been significantly altered from its historic appearance through addition of a marquee and reconstruction of the first floor facade. The upper floor and cornice remain as constructed with the exception of window sashes. Original first floor configuration was typical of the 1920-1930's period. Entries were recessed and glassed storefront space was extensive. Transom windows topped the storefront and ran the length of the facade. Corner boards, sign board, and lower window panels as on wood frame structures were duplicated in concrete. The division between the first and second floors was emphasized with a broad plain band duplicating a sign board and with concrete molding (see Figure 30). The present marquee has covered or eliminated transom windows.

First floor alterations have changed entries and storefront windows eliminating architectural character and the rhythm of the street scene. Modern materials have been poorly selected and utilized in the "reconstruction."

Recommendations:

1. Paint building detail, cornice, etc., to emphasize them as on the Tongass Trading Building.
2. Restore first floor to original storefront style.
3. Restore marquee to 1930's style (see Figure 10 or 11). Restore transom windows. Replace upper story window sashes to one over one double sash.



Main Street

317 Main Street and 326 Dock Street - Heckman Building

The Heckman Building is located along Mission and Dock Streets. It is composed of three buildings each constructed in different years. Addresses 317 Main Street and 326 Dock Street, constructed in 1912 and 1920, are now viewed as one building. They are concrete construction in a modified commercial style. A majority of architectural details remain. They consist of a lifted parapet system with the buildings sign; a detailed cornice/bracket system including dentils; transom windows; and simple pilasters that tie with brackets. Transom windows have been covered or painted and were originally divided lites. The present marquee is a replacement. The original marquee was ornamented with detailed capitals, light fixtures, and a pediment with sign over the main entrance (see Figure 31). Storefront configuration was typical of the 1920's period with recessed entries and large glass display areas. Today, storefronts with the exception of the corner of Main and Dock Streets are relatively unchanged. Originally the Main and Dock Street corner did not contain an entry but was a square corner. Second story windows are not original although their location and dimensions retain original character. Building number 3 will be discussed separately.

Recommendations:

1. Restore transom windows and repaint architectural trim to contrast and emphasize detail.
2. Restore marquee to original design.
3. Replace upper story sashes and entry doors with ones characteristic of historic period.

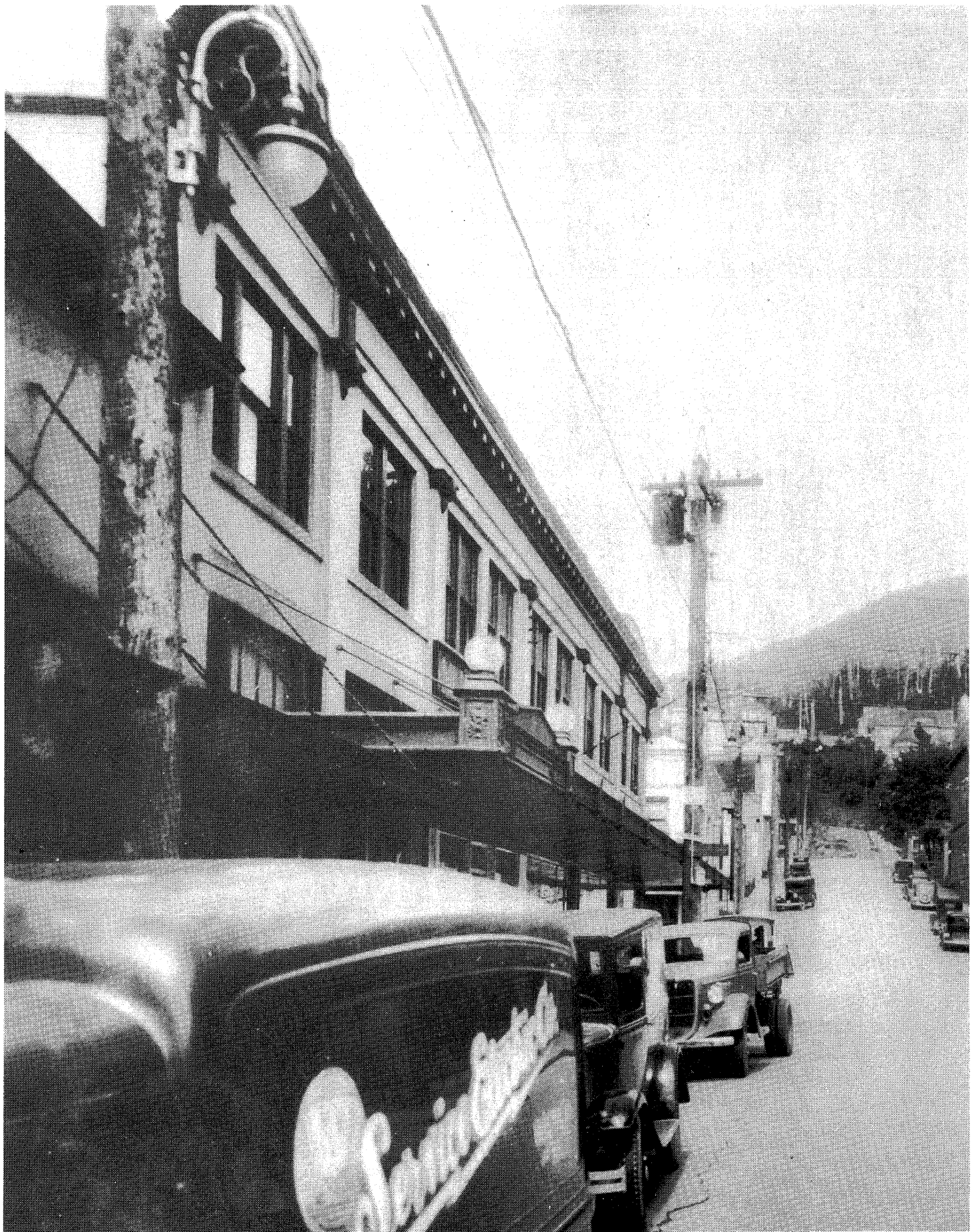
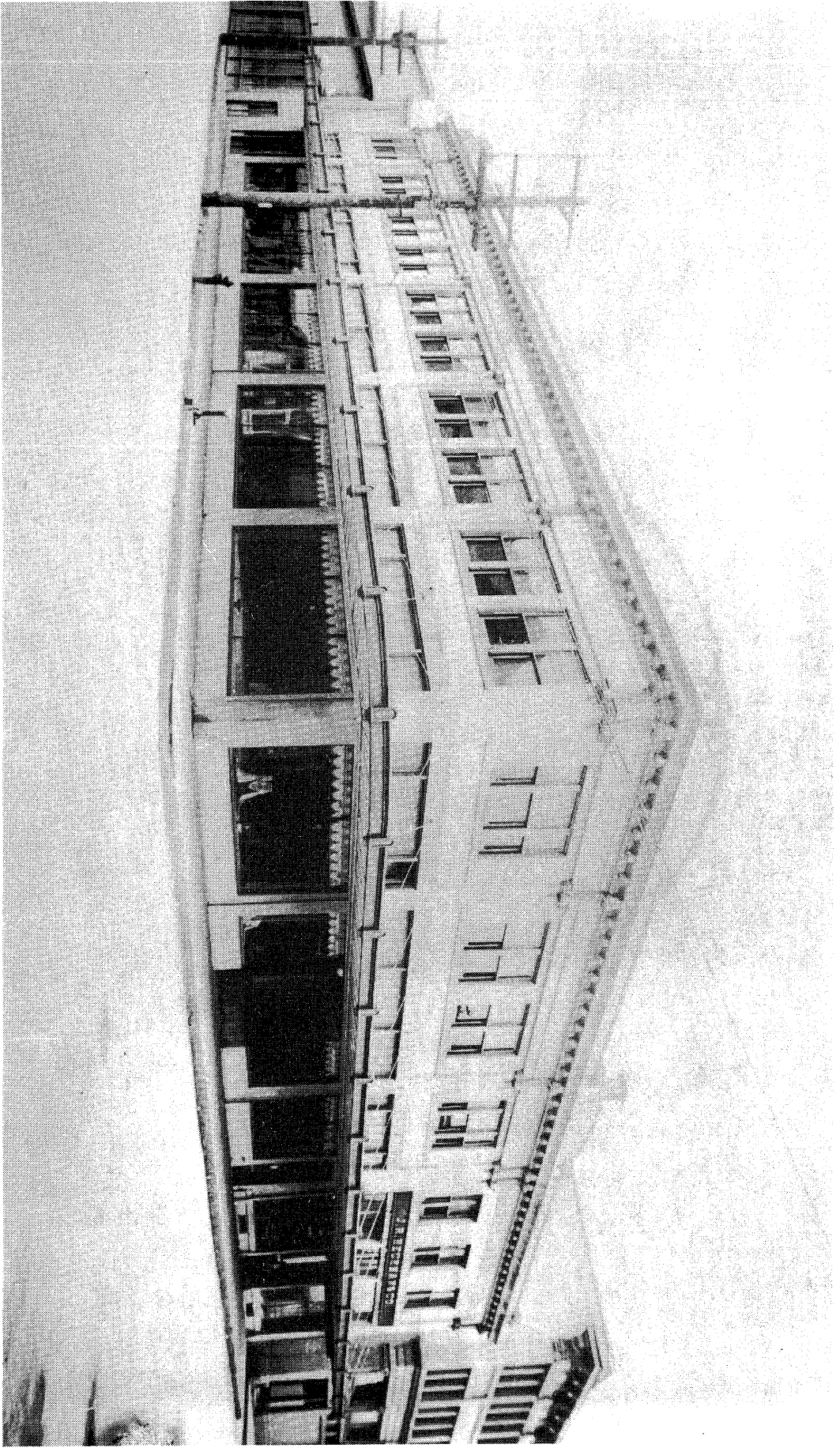


FIGURE 31



201 and 209 Main Street - Heckman Building

Located on Main and Mission Streets and constructed in 1913, this building has been significantly altered over time. Architectural elements have been removed or covered. Original details were a simple bracketed cornice (see Figure 32), divide lite, transom windows, siding, marquee added during and typical of the 1930's (see Figure 9), and storefronts typical of the 1920's. The original bracketed cornice and marquee have been removed. Inspection of the buildings interior reveals that transom windows have been covered by existing siding. Storefronts have undergone little change and many retain original doors.

Recommendations:

1. Restore bracketed cornice and original siding. Restore transom windows.
2. Restore marquee to original appearance.
3. Restore storefronts by making minor repairs and replacing modern doors with ones characteristic of originals.

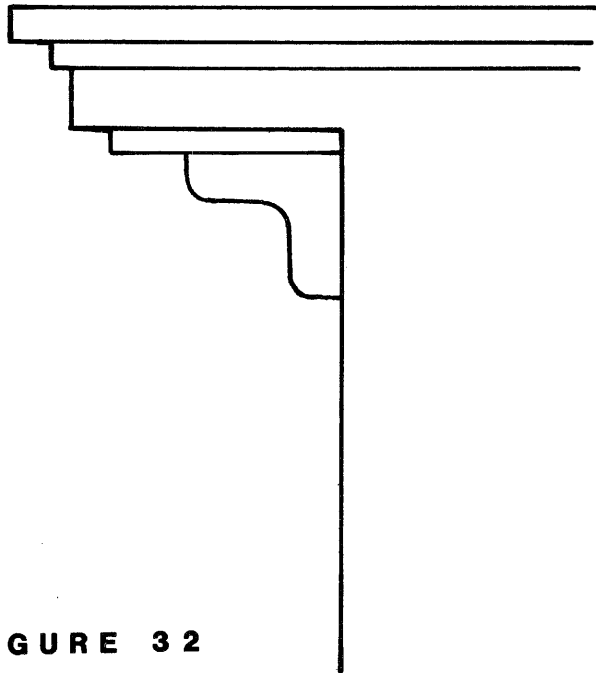


FIGURE 32

306 Main Street - NBA Building

Originally a well designed and detailed brick building, 306 Main Street has undergone significant alterations. Architectural elements that created its distinct character have been removed or covered. Original elements consisted of upper story divided lite windows, transom windows, 1920's style storefronts, a corner entry, and uniquely detailed main entries. Upper story window sashes have been replaced while locations and dimensions remain as originally constructed. Transom windows have been covered or removed to install the present marquee. The most significant changes have occurred to the first level with complete alteration of storefronts and entries. The building's original design featured a main bank entry on Main Street that acted as a focal point on Dock Street; a corner entry similar to the present entry to the Voyageur Bookstore; an entry on Dock Street similar to the Main Street entry; and large glass storefronts. Both the Main and dock Street entries were highly detailed with patterns created in brick and semicircular divided transom windows. In addition to these details the Main Street entry was emphasized with a small but unique marquee and light fixtures (see Figure 33). In later years awnings were used in conjunction with the marquee to shelter pedestrians and protect the building facade.

Recommendations:

With most structures it is possible to recommend several steps to building restoration. However, due to the character of this structure's original design, it is recommended that the first level be fully restored as one project. It is also recommended that installation of awnings or a modification of the original marquee design be considered to extend the length of building frontage. Subsequent restoration would involve restoration of upper story windows.



FIGURE 33

338-342 Main Street - Redmen Hall

This is a false front commercial style unaltered from its original appearance. The stucco facade consists of a stepped parapet, bracketed cornice, corner boards, and wide shallow window trim. Recommendations are to preserve its original appearance and continue its excellent maintenance.

100 Main Street - Hardcastle-Davies Building

100 Main Street has been extensively modified and retains few of its original features. It has been structurally modified with an addition that doubled its size. Siding, windows, doors, and their placement are all contemporary. The only original elements remaining are brackets and sections of wide window trim on the ground floor. In addition to the architectural modifications, the building did not originally occupy this site, but was relocated from upper Main Street.

Recommendations:

1. Replace narrow contemporary window and door trim with wide trim matching existing historic trim. Replace existing doors with ones of historic appearance (see Figure 15). Paint building to highlight historic architectural features.
2. Reside building with siding of historic style as discussed in Chapter III. Replace upper story windows with historic appearing double hung windows.
3. Reconstruct ground floor to 1900-1910 appearance as discussed in Chapter III.

319 Main Street - Firestation
335 Main Street - Fireside Building

Although neither the Fireside Building nor the Firestation qualify as historic structures, they are architecturally distinct and will be briefly discussed below.

Both buildings are concrete and have similar architectural styling and mass. They are adjacent to each other within the 300 block of Main Street and consequently their facades are the main elements of each buildings' visible. The color schemes of both buildings emphasize detail, and in the case of the Firestation, identifies its use. Both buildings are simply detailed and well proportioned. The predominant features of the Fireside Building are glass block windows; rounded and flared main entry; arches of the lower story corner entry; large columns currently painted black that separate windows and create architectural definition of the facade; and scalloped detail beneath windows. Significant features of the Firestation are the large red vehicle doors; two rosettes located on the second story level; second story window dimensions and spacing; scalloped detailing between windows; and lettering of the building's label.

Recommendations:

1. Retain present appearance of each building. Retain architectural elements of each building. Retain existing color schemes. Continue excellent maintenance of each building.

Mill and Front Streets

319 Mill - Union Rooms Hotel

Built in 1905-1906, this building has been moderately altered from its earliest appearance. The recessed storefront retains its original configuration but display windows and framing have changed. Lower window panels have been covered or replaced. The marquee installed in the 1920's remains intact. Upper story window sashes are original but most of the original butt joint trim has been replaced. Corner boards have been removed and original lap siding has been covered with shingle siding.

Recommendations:

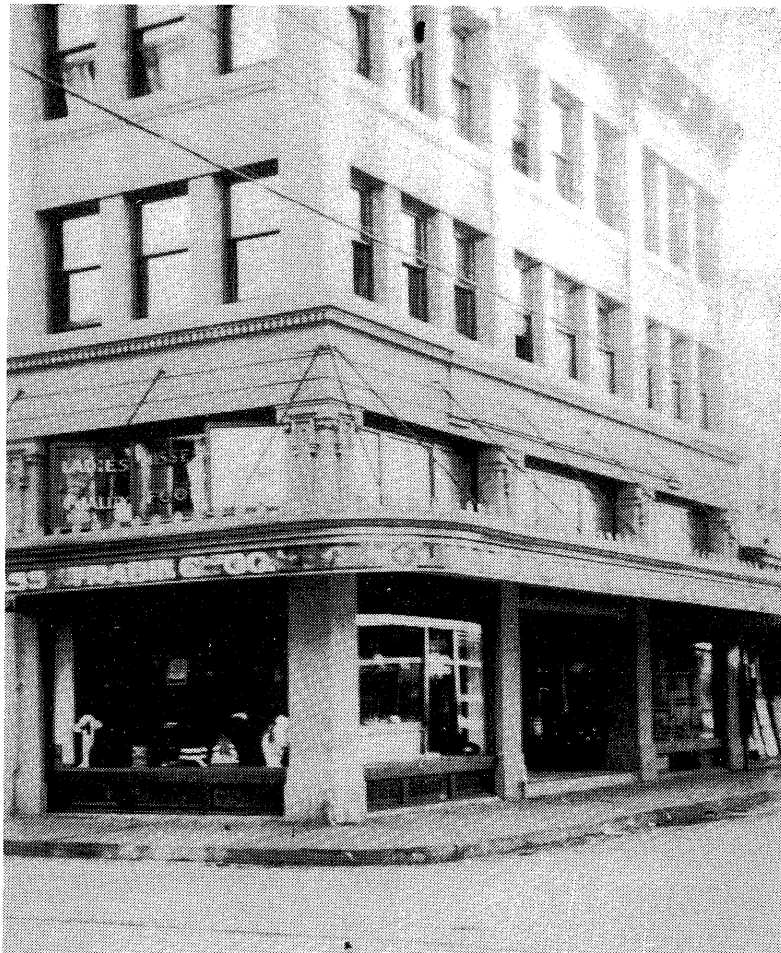
1. Restore storefront. Return lower window panels to historic appearance (see Figure 8). Renovate or reconstruct marquee.
2. Restore corner boards and upper story window trim (see Figure 14).
3. Restore siding to original lap siding.

118-124 Front - Pioneer Hotel

Documented in the Historic Properties Survey, the Pioneer Hotel retains most of its original features and appearance. Replacement of upper story multi lite windows and wide trim occurred in 1985. The recessed 1920's storefront retains many of its original architectural elements and is an example for reconstruction of other storefronts of the period.

Recommendations:

1. Retain remaining elements of the building including storefront characteristics, original upper story windows and all architectural details such as cornice and parapet. Relocate electrical connections and other mechanical equipment visible on the facade to sides or rear of building.
2. Restore upper story windows that have recently been replaced.
3. Restore altered storefronts to original appearance using the Pioneer Liquor Store as an example.



203 Dock Street - Tongass Trading Company

The Tongass building constructed in 1913 is concrete commercial style. The major characteristics of the building are well documented in the Historic Properties Survey. During the summer, 1985, the building was restored to much of its historic appearance. Although the cornice was not restored detailed brackets were added. The only element requiring restoration is the marquis. Installed in the 1930's it was extremely detailed and complimented the buildings other architectural elements. Outstanding features of the marquee were its elaborate "capitals" and stained glass lites that carried the company's name and logo. The initial marquee covered only the main entries and wrapped around the Dock/Front Street corner. It was later extended to cover the buildings entire frontage on Dock and Front Streets.

Recommendations:

Restore marquee to its 1930's complete appearance, e.g., coverage of buildings entire frontage. Restore as shown in Figure 2 34 and 35.



FIGURE 34

300 Front Street - Stedman Hotel

The Stedman Hotel was constructed in 1905 during the second period of Ketchikan's growth. It is prominent in early photographs of downtown and along with the Revilla Hotel was one of the first landmarks of Ketchikan. It remained a landmark and identifying feature until the 1960's when major alteration of its facade began. Today the building's appearance has been completely changed and bears no resemblance to the original structure. It is extremely important that the building be restored to its historic appearance. Across Dock Street from the Tongass Trading Company building it occupies a strategic location in the downtown street scene.

Recommendations are to restore the building to its historic appearance. Due to the complete alteration of the facade, this will require extensive research and possible redesign by an architect. A project of this complexity is beyond the scope of this document and is recommended as a separate undertaking.

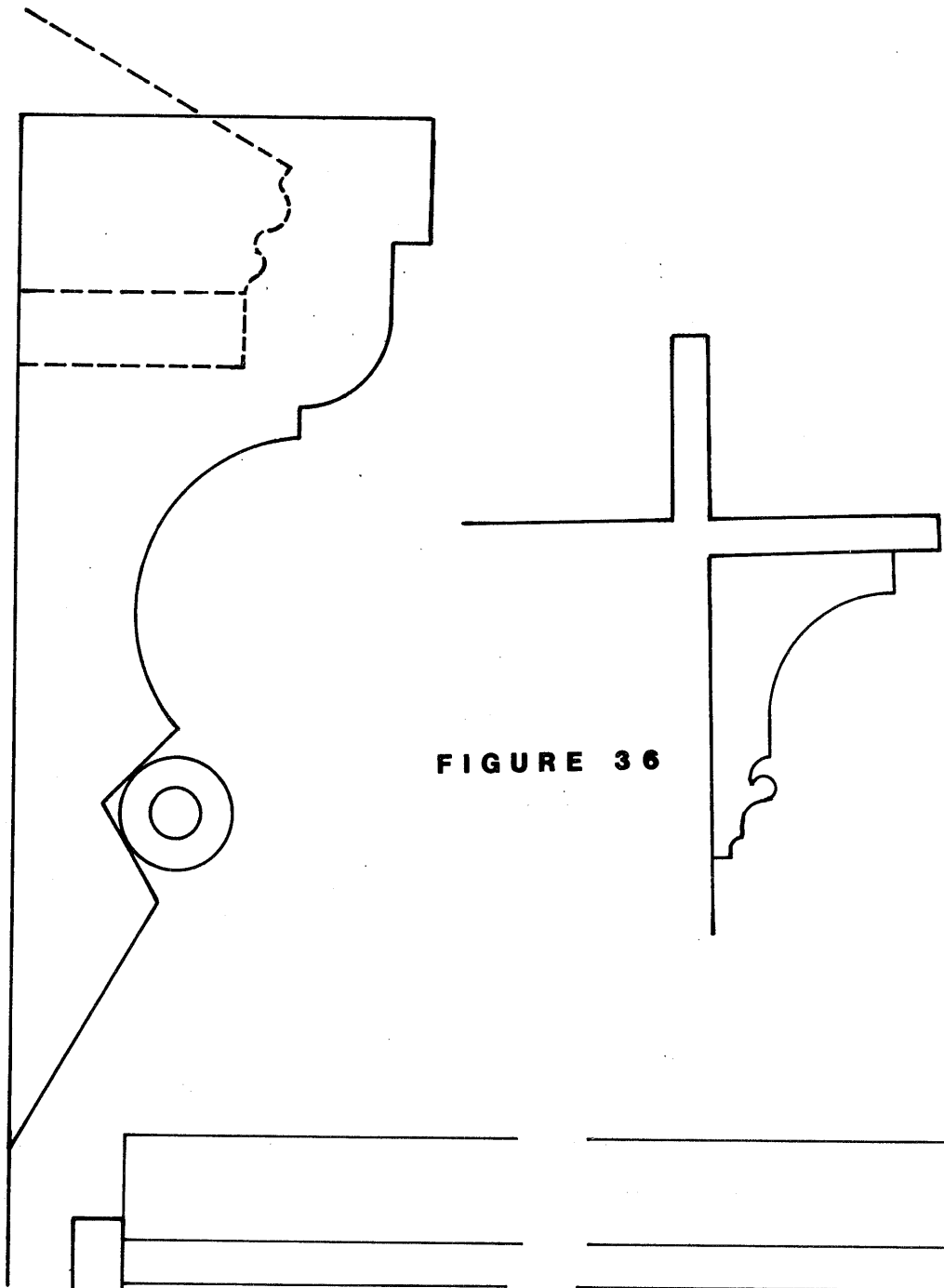


FIGURE 36

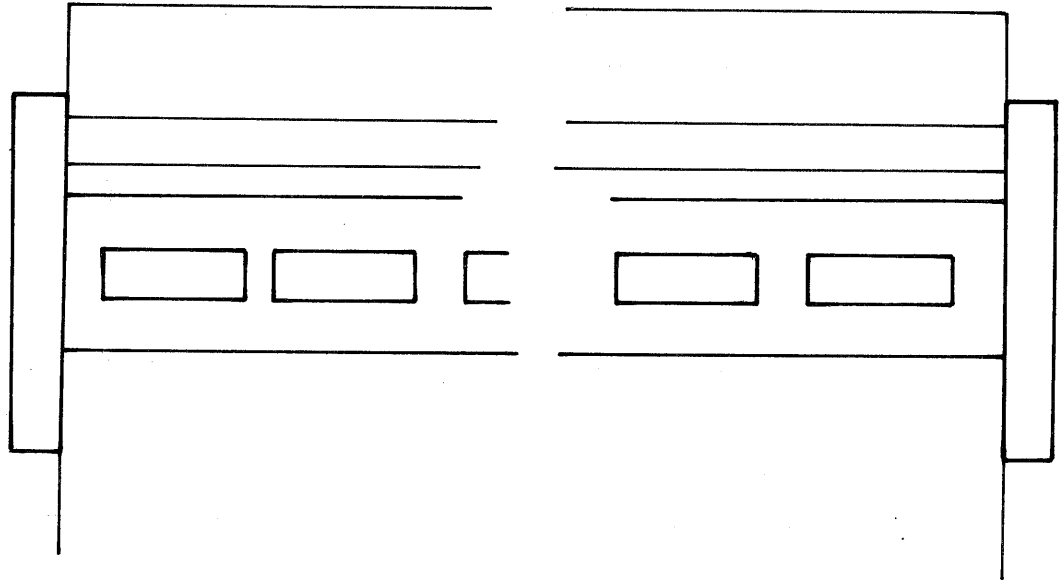


FIGURE 37

312 Front Street - Fo'c'sle Bar

Probably the oldest remaining structure in downtown, 312 Front Street has been significantly altered from its historic appearances. Research of historic photographs has found that the upper floor had two historic appearances, one significantly more detailed than the other. The initial design was the least detailed and consisted of a simple bracketed cornice with a parapet (see Figure 36), two double sash one over one windows with molded drip cap on the upper story, lap siding, transom windows, and a flush storefront. The later appearance consisted of a detailed bracketed cornice with recessed panel (see Figure 37), two upper story windows with unique detailing (see Figure 38), a marquee with a scalloped canvas awning, a recessed storefront, and transom windows.

Recommendations:

1. Restore upper story. Remove existing siding and replace with lap siding. Choose one of the two historic appearances and reconstruct to this appearance.
2. Restore marquee to one of the simple designs shown in Chapter III. Restore transom windows.
3. Restore lower story to 1920's design. This will require removal of existing siding, restoration of display windows and lower window panels, and replacement of entry door to a period design (see Figure 5).

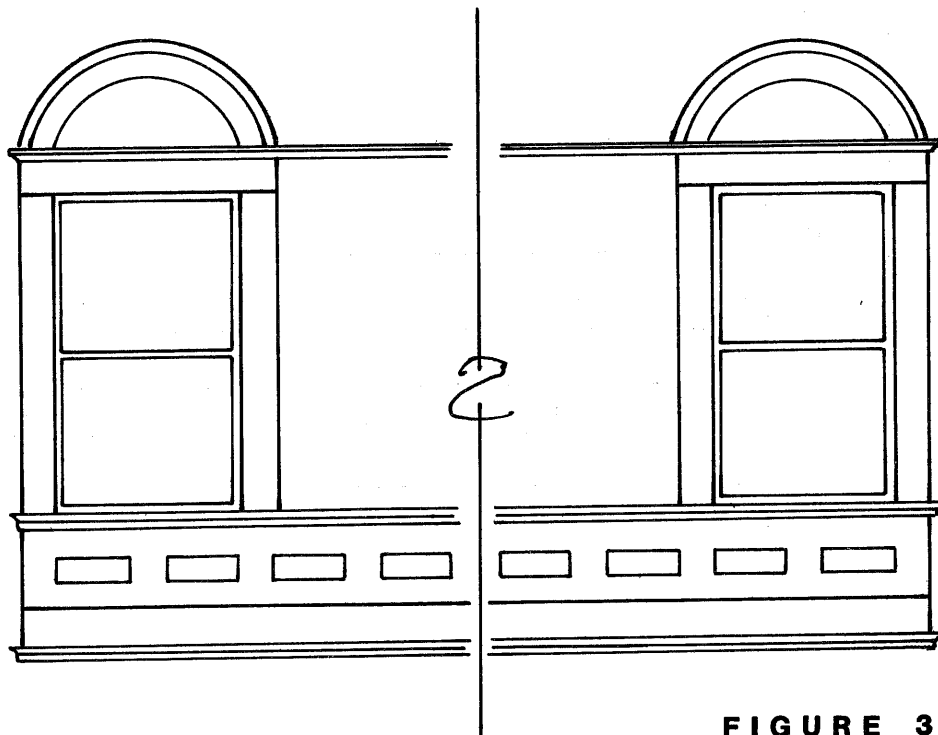


FIGURE 38

326 Front Street - Gilmore Hotel

Built in 1926, the Gilmore has retained much of its original appearance. Upper story architectural details including cornice, brackets, stepped parapet, hotel sign, windows, and transom windows remain unchanged. The building design is reminiscent of a period of West Coast building, particularly in San Francisco, that drew from Spanish and Moorish influences. Its glazed tile second story cornice and lower story detailing including tile facing are elements common to this style. The 1920's style recessed storefronts have been altered. Their original appearance was distinguished by tile facing of lower window panels, round marble appearing columns in the entry of the model cafe, and large storefront windows.

Recommendations:

1. Retain and maintain original architectural elements.
2. Restore lower story storefronts. Remove existing facade facing including the entire Nugget Lounge facade. Replace facade with glazed tile as in original construction. Restore marble columns. Restore glass of storefronts to original size as in the Gilmore Garden section of today's building.

334 Front Street - City Hall

City hall, built in 1925, is an example of the Chicago commercial style of architecture. The Historic Properties Survey has an adequate description of its architectural elements and history. The first floor facade has been altered several times since its construction. The present appearance using glass block is for the most part a legitimate historic architectural expression. The false stone facing of the lower window panels and posts is however inappropriate. Replacement of the stone facing with glazed tile similar to the original appearance of the Gilmore Hotel is recommended.

Front Street - Masonic Temple

Constructed between 1947-1950 the Masonic Temple is documented in the Historic Properties Survey. It is an example of the Art Moderne Style of architecture. Recommendation is to maintain the excellent maintenance that the building receives.

652 Park - Ketchikan Apartments

Documented in the Historic Properties Survey, this building retains its original appearance. Recommendations are to retain all its features and establish a yearly maintenance schedule to insure its preservation.

347 Bawden Street - Alaska Building

Formerly Ketchikan's hospital, the Alaska Building is now an apartment. It is a good example of 1920-1930's wood frame construction, retaining its original appearance with the exception of brackets. During spring, 1985, the small, simply detailed brackets were removed. They were spaced 3-4' along the entire cornice simulating exposed rafters and were an integral part of the building's character. Other important elements are the 1 over 1 double hung windows, lap siding, melded window trim, window configuration, entry, and cornice that wraps around the entire building.

Recommendations:

1. Continue excellent maintenance and retain the building in its present form.
2. Replace or restore brackets.

Newtown - Water Street

By 1900 Ketchikan had a population of 459 divided between "Old Town" and "New Town". "New Town" consisted of a few residences, a bar, and one general store. It was connected along the shoreline to Downtown by a boardwalk known as the New Town walk. During the next ten years New Town continued to grow in conjunction with the larger Ketchikan Community. Water Street was constructed during this time, 1907-1908, and replaced a large part of the New Town walk. It extended from the intersection of Grant and Front Streets around the bluff then in a straight line to Charcoal Point, presently the location of the First Lutheran Church. Built on pilings after passing the bluff it abandoned the coastline between the bluff and the Sparhawk/Young Store, presently Jackie's Cafe. Subsequently buildings grew up along Water Street creating the continuous block that exists today. By 1920 New Town was completely developed with commercial maritime structures along the water and residences on the hillside. During the 1920's commercial growth continued as it did in the rest of Ketchikan. The City Dock and many warehouses and fish packing structures were constructed during this time.



FIGURE 39

416-428 Water Street

This building, constructed circa 1914 is an excellent example of a 1920's storefront. Its recessed store entries, transom windows, and display windows are characteristic of the 1920's period. Upper story divided lite windows, drip cap, broad window trim, bevel siding and all other building trim including wide corner boards are also original. The building has not been altered except possibly during the 1920's.

Recommendations:

Retain the present appearance and upgrade maintenance to ensure the building's integrity.

425 Water Street - Paul M. Hansen Store

The well-maintained Paul M. Hansen Store is a good example of 1920's commercial architecture. The storefront with only minor alterations from its original appearance consists of a recessed entry; broad glass storefront with corner windows; transom windows; double sash one over one upper story windows; cornice with dentils; and wide corner and barge boards. Only the lower window panels have possibly been changed.

Recommendations:

1. Retain original features and excellent maintenance.
2. Restore lower window panels (see Figure 8).

702 Water Street - Flatiron Building

As described in the Historic Properties Survey, the Flatiron Building was constructed circa 1912 and modified prior to 1940. These changes included widening the building, addition of a window at the Water Street/Hopkins Alley corner and alteration of entries from flush configuration to 1920's recessed storefront. In addition to these earlier alterations recent modifications have also been made. Upper story windows and storefront details have been altered. Windows and trim have been replaced with modern styles not in historic character or scale. The storefront retains a 1920's configuration with recessed entries and display space but lower window panels; doors of the addition, and display space glazing and divides are changed.

Recommendations:

1. Restore upper story windows and trim to historic character and scale. This will probably require four windows evenly spaced on the original building and three windows evenly spaced on the addition. Figures 12, 13 and 14 are example of window style and scale. Restore marquee, presently in need of repair, to an historic appearance (see Figures 9, 10, and 11).
2. Restore doors to historic appearance with replacements similar to the existing door on the original building. Restore lower window panels as shown in Figure 8.
3. Restore storefront glazing and divides to 1920's appearance.

712-726 Water Street

Altered to appear as a single building, 712-726 Water Street was originally three separate structures. Alteration of roof lines, cornices and upper story siding has produced its present appearance. Upper story windows, their character and size, and storefront elements indicate past building forms. Original roof lines appeared as shown in Figures 39 and 40. Each building was constructed at a separate time and during a different period. 712 Water Street was one of the first generation of buildings in New Town. It was simply detailed but not entirely typical of its time. Its cornice, brackets (see Figure 41), flush storefront and wide corner trim were similar to common elements of buildings of this period. Window location and trim were, however, unique. The other buildings constructed at later dates copied the cornice and brackets of 712 Water Street. Their storefronts, however, were typical of the 1920's with recessed entries, large glass display spaces, and doors reflecting first floor forms. A marquee was added during the 1930's and ran the length of the three buildings.

Recommendations:

1. Restore building identities by reconstruction of roof lines and cornices. Restore original bevel siding by removal of existing siding and replacement with new bevel siding if necessary.

2. Restore upper story windows to historic appearance.

712 Water Street - Historic appearance consisted of three double sash one over one windows with broad trim (see Figure 13).

716 Water Street - Appearance was two double sash one over one windows with broad trim (see Figure 13).

722 Water Street - Appearance was double sash one over one with molded trim (see Figure 14).

3. Restore storefront display areas to historic appearance using wooden sills and dividers. Restore doors to historic appearance with replacements similar to 726 Water Street. Restore lower window panels (see Figure 8).

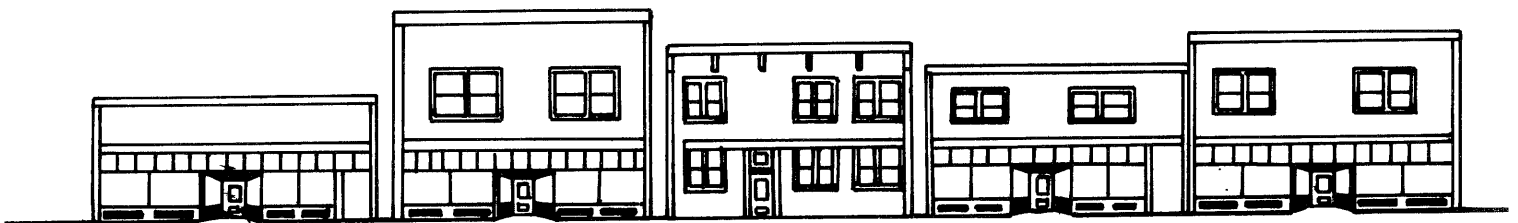


FIGURE 40

1830 Water Street - Jackie's Cafe

As stated in the Historic Properties Survey this structure is one of the oldest in New Town. It is a false front style but has been radically altered. Only the cornice remains from the facade's historic appearance. Side and rear windows are, however, original divided lite double sash with wide trim (see Figure 13).

Recommendations:

1. Restore upper story windows. Use side and rear windows as examples for replacements.
2. Restore siding to historic bevel type and corner boards to wide historic appearance.
3. Restore storefront to 1910-1920's appearance as shown in Figure 1.



FIGURE 4 1

906 and 910 Water Street - Johnson Glass and NCR, Inc.

Possibly constructed during the early growth of New Town, 906/910 Water Street was at one time separate structures. Both had architectural elements, flush storefronts, characteristic of early commercial buildings in Ketchikan. The facade of 906 Water Street consisted of a main entry flanked by two store windows; an open entry way on the north leading to the upper story; two double sash one over one upper story windows; and in the 1960's photograph used for research a plain cornice without brackets. The facade of 910 Water Street consisted of an open entry way to the upper floor at the building's center flanked by store entries; glass display windows adjacent to both store entries; four double sash one over one upper story windows; and a simple bracketed cornice. Both buildings had wide corner and sign boards, lap siding, and transom windows over doors and entry ways.

Recommendations:

1. Remove existing siding and restore the integrity of the two structures. Replace existing upper story siding with lap siding. Restore cornices of both buildings. Restore wide corner and sign boards.
2. Restore store fronts. Replace existing modern glass doors with ones characteristic of the period similar to 726 Water Street. Restore transom windows over doorways. Entry ways may have doors characteristic of the period. Restore display windows to size characteristic of the period (see Figure 1) and restore lower window panels (see Figure 8).
3. Restore upper story windows and trim as shown in Figure 14.

1007 Water Street - Murray Pacific

1007 Water Street is an excellent example of the early false front style. Its storefront and interior are in original condition. The storefront is composed of recessed lower window panels; large divided display windows; transom windows; double entry doors that reflect the buildings storefront details; and wide corner and sign boards. A significant aspect of the building is the absence of a marquee. The integrity of its design and construction is retained as a result. Only minor alterations have been made to the building. False front siding has been covered or replaced with plywood. An addition to the buildings north side has been made but does not effect the historic appearance.

Recommendations:

1. Restore original false front siding with bevel tongue and groove siding.

1010 Water Street - Salvation Army

Well documented in the historic Properties Survey, this building is an excellent example of the 1920's false front style. Only minor alterations to the original appearance have occurred. Original storefront glass has been replaced with large single panes with metal divides. Lower window panels have been covered with or replaced by plywood panels.

Recommendations:

1. Restore lower window panels. If original panels have been replaced reconstruct using panels below the buildings cornice as an example.
2. Restore storefront by replacing metal divides with wood.

1101 Tongass - Talbot's Hardware

Although the Talbot Buildings suffered extensive damage during a fire in 1956, they still retain much of their original character as documented in the Historic Properties Survey. Reconstruction of and additions to the two structures since 1956 have generally conformed to the buildings historic appearance. Recent alterations have utilized T1-11 siding and modern windows. Due to the buildings extensive reconstruction it would be impractical to recommend restoration to original appearances. Rather it is recommended that materials not in historic character be replaced.

Recommendations:

1. Retain all original elements.
2. Replace all T1-11 siding with bevel tongue and groove.
3. Replace contemporary windows with ones duplicating historic appearance. Divided lite windows of buildings rear are examples.

APPENDIX

GLOSSARY

- Bracket - A decorative element projecting from a building's facade designed to support or appear to support a cornice or roof overhang.
- Capital - A decorative element which can be a top of a column or post or attached to a feature such as a marquee to add architectural detail.
- Corner Board - A vertical trim board used on the external corners of a wood frame building to give a finished appearance and to protect the end grain of siding from moisture.
- Cornice - A horizontal trim projection that crowns or completes a building wall.
- Dentil - Small, projecting ornamental blocks used under a cornice and between brackets.
- Divided lites - Small panes of glass that form a larger window or glass area.
- Drip Cap - Horizontal trim above a window or door to prevent water from dripping upon the door or window.
- Facade - The front or face of a building.
- Lower Window Panel - A rectangular wood panel with its center raised or recessed that is located below a ground floor display window.
- Marquee - A structure projecting over an entrance to a building.
- Parapet - A low wall along the edge of a roof or above a cornice.
- Pediment - A triangular element used as decoration above a window, door, or cornice.
- Sash - The moveable framework of a window: 1 over 1, 2 over 2, 6 over 6, etc., a double hung sash in which each sash has 1, 2 or 6 panes of glass.
- Sign Board - A horizontal trim board across a building's facade that visually separates the ground floor from upper floors.
- Soffit - The underside of a building's external rafters.
- Transom Windows - Small windows above a larger window or door.

PRODUCT AND MATERIAL SOURCES

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Architectural detail and cornice work

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503-231-7070

PUBLICATIONS

Preservation Briefs 1: "The Cleaning and Waterproof Coating of Masonry Buildings" by Robert C. Mack, AIA. Provides guidance on the techniques of cleaning and waterproofing and explains the consequences of their inappropriate use. 4 pages. 5 illustrations. November, 1975. GPO stock number: 024-005-00877-2. \$1 per copy.

Preservation Briefs 3: "Conserving Energy in Historic Buildings" by Baird M. Smith, AIA. Provides information on materials and techniques to consider or avoid when undertaking weatherization and energy conservation measures in historic buildings. 8 pages. 8 illustrations. April, 1978. GPO stock number: 024-005-00879-9. \$1 per copy.

Preservation Briefs 4: "Roofing for Historic Buildings" by Sarah M. Sweetser. Provides a brief history of the most commonly used roofing materials in America. Presents a sound preservation approach to roof repair, roof replacement, and the use of alternative roofing materials. 8 pages. 15 illustrations. February, 1978. GPO stock number: 024-005-00880-2. \$1 per copy.

Preservation Briefs 8: "Aluminum and Vinyl Siding on Historic Buildings: The Appropriateness of Substitute Materials for Resurfacing Historic Wood Frame Buildings" by John H. Myers, revised by Gary L. Hume. Discusses the appearance of various types of historic wood siding and makes recommendations for repair and replacement. Outlines the limited instances under which substitute siding may be a reasonable alternative. 7 pages. 5 illustrations. GPO stock number: 024-005-00869-1. \$1 per copy.

Preservation Briefs 9: "The Repair of Historic Wooden Windows," by John H. Myers. Provides useful information on evaluating and repairing historic wooden windows found in typical rehabilitation projects. Emphasizes practical methods for homeowners or developers. 8 pages. 10 illustrations. January, 1981. GPO stock number: 024-005-00884-5. \$1 per copy.

Preservation Briefs 10: "Exterior Paint Problems on Historic Woodwork" by Kay D. Weeks and David W. Look, AIA. Identifies and describes common types of paint surface conditions and failures. Provides guidance on preparing historic woodwork for repainting, including limited and total paint removal. 12 pages. 14 illustrations. November, 1982. GPO stock number: 024-005-00885-3. \$1 per copy.

Preservation Briefs 11: "Rehabilitating Historic Storefronts" by H. Ward Jandl. Explores the role of the storefront in historic buildings and provides guidance on rehabilitation techniques for historic storefronts as well as compatible new storefront designs. November, 1982. GPO stock number: 024-005-00886-1. \$1 per copy.

Preservation Briefs are available from the National Park Service, U.S. Department of the Interior, Washington, D.C. 20240.

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7. Water Street Study, Chillicothe, Ohio: Suggestions for Rehabilitation; Visuapuu and Gaede, Inc.; National Trust for Historic Preservation, Washington, D.C., 1973.
8. "Property Owners Guide to Paint Restoration and Preservation" by Frank D. Crawley, Preservation League of New York. Copies are available for \$1 from the Preservation League of New York, 13 Northern Blvd., Albany, New York 12210

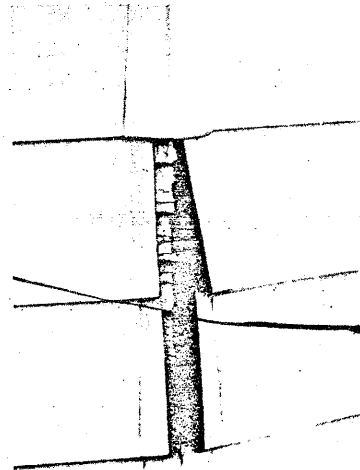
The Hazards of Synthetic Siding

Brian D. Conway
Architectural Coordinator
Division of Historic Sites
Illinois Department of Conservation

There is an alarming increase in the use of synthetic siding in older residential neighborhoods. All too often fine old homes are entirely encased in aluminum, steel, or vinyl siding that invariably pretends to be something that it is not. There are plastic "bricks," asbestos "shingles," and aluminum "clapboards"—imitations that never seem convincing apart from a salesman's pitch. Those sidings are not maintenance free, and because synthetic siding will almost certainly destroy the architectural integrity of an old building and may even contribute to the structure's physical deterioration, the Illinois Department of Conservation discourages the use of aluminum, steel, or vinyl siding on frame structures.

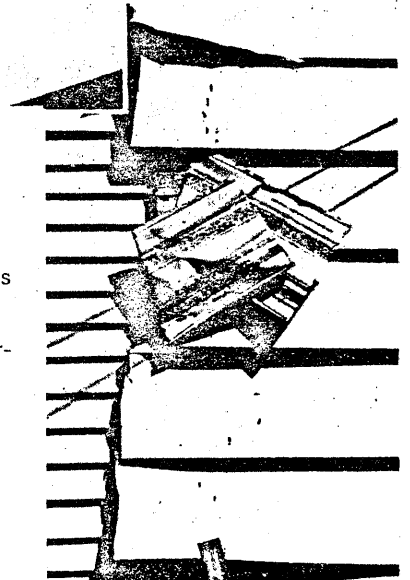
Synthetic siding will change a building's character by hiding important design details and ornaments. In fact, the installation of such siding often requires that those details be entirely removed. Monotone siding will, for example, cover the varied textures and colors of clapboards, shingles, and decorations that are essential features of a Queen Anne style house, destroying the house's visual character. Similarly, an Italianate house loses a characteristic feature when its brackets are replaced with aluminum siding and soffits. Even a house of no particular style can be ruined by synthetic siding. For example, wide steel siding destroys the original design and proportions of a typical early-twentieth-century frame house with narrow clapboards. The design and function of window casings, drip caps, drip molds, and door trim are often obstructed. The three-dimensional appearance is destroyed, resulting in a flat, monotonous appearance.

Synthetic sidings will not render a building maintenance-free. Although synthetic siding hides physical deterioration, it does not prevent, and may even accelerate, such deterioration. Even if the original building fabric is not damaged during installation (a very real possibility), there are other problems. Rot and insect attack may proceed undetected. Many sidings act as vapor barriers, trapping excess moisture vapor that condenses and eventually damages the wood, and if details are handled incorrectly or if the siding is damaged, water runoff may also penetrate behind the sid-



Damaged aluminum siding allows water to enter behind the siding causing the frame structure to rot.

Aluminum siding strips covering three clapboards, totally changing the building's character. This aluminum siding is easily bent and damaged.





These houses were identical until the one on the right was covered with aluminum siding. Though the houses do not possess high architectural significance, they did have character and visual interest. The house on the right lost its character and visual interest when the variety of textures and details were covered with aluminum siding.

ing and be trapped. Such problems are undetectable because synthetic siding makes a visual structural inspection impossible. And finally, artificial sidings offer no structural support, so that if continued deterioration leads to failure, the siding will buckle and separate from the building.

The synthetic siding itself will lose its initial appearance. Aluminum siding is prone to dents, particularly the less expensive, thinner gauge aluminum, and its color coating may peel or fade if not properly anodized. Steel siding will not dent, but its colored vinyl coating does, on occasion, peel. Solid vinyl siding is vulnerable to punctures or tears, and it reacts with sunlight, becoming brittle and faded if not properly treated with an ultraviolet inhibitor. Should it ever become necessary to replace a section of siding, it may be impossible to match color and style since the industry fre-

quently changes its product lines. Successful painting of synthetic siding may also be impossible.

Synthetic sidings can create problems if there is a fire. Aluminum or steel siding makes it difficult to reach the fire's source, and vinyl siding releases toxic gases when exposed to fire. Vinyl siding is sometimes advertised as "self extinguishing," which simply means that it will not burn alone. It will, however, burn in the presence of fire.

According to the Federal Trade Commission, synthetic sidings have little or no insulative value. The FTC recently accused aluminum siding manufacturers of making false claims regarding the value of their product as a home insulator. It was the FTC's contention that even when insulated aluminum siding is correctly installed, there is little or no energy savings. As a result of FTC charges, the insulative

value claim has disappeared from most advertising.

And finally, synthetic sidings are no less expensive than other sidings. One siding company advertised that in a twenty-year period one property owner saved over five thousand dollars in painting costs. That sounds appealing, but neither the initial investment of the siding installation nor the cost of repairing deterioration, which was caused by the siding, was taken into account. Most synthetic siding comes with a twenty-year guarantee, some expensive types even carry up to forty years, but those guarantees are prorated. And although the loss of aesthetic value is not quantifiable, it must also be included in economic considerations because the property will retain greater value when original materials are properly maintained.

Two Illinois Examples

In 1979 the Illinois Department of Conservation participated in two projects involving the removal of inappropriate synthetic siding. Both projects were partially funded by federal historic preservation grants-in-aid administered by the department, and in both cases, the siding, which had been in place between twenty and twenty-five years, was faded, dented, and peeling. Moreover, it had destroyed the architectural integrity of the houses. Wide siding covered narrow clapboards and decorative details, and trim had been removed when the siding was installed. Beneath the siding, the wood structures had deteriorated. And in both cases, it was clear that a regular painting schedule would have been far preferable to synthetic siding.

One project was in Peoria's West Bluff Historic District. Installed in 1955, the aluminum siding on this 1889 frame house had been painted white to cover its original coating, which had faded and peeled. Eight-inch-wide aluminum siding had been applied over four-inch clapboards, altering the scale and proportions of the building, and decorative details had been covered or removed during installation.

Faced with periodically painting the aluminum siding and maintaining a building out of character with the rest of the neighborhood, the owner removed the siding himself, disclosing the badly deteriorated clapboards beneath. The aluminum shell was not airtight, yet there was not enough air circulation to allow moisture to evaporate. Dirt had accumulated behind the siding, and the condensed moisture that had been trapped between clapboards and siding ran down the side of the house, leaving patterns in the accumulated dirt. Most bottom boards near raised moldings or trim boards, where moisture had collected at the base of each planar surface, were rotten and required replacing. In other areas water was actually entering and being trapped behind the siding, a phenomenon attributable to

any of several causes—improper installation, failure to correct a water problem prior to installation, or damage to the siding. There were areas where water had been entering undetected, causing the original siding, sheathing, and structural studs to rot. Interior plaster was also beginning to fail due to excess moisture.

Various insects had been making their homes behind the aluminum siding. Beetles and wasps found it particularly attractive. One area was literally covered with dead wasps, another was actively infested with termites, which were busily destroying the frame structure while protected by the aluminum siding. But for the siding, the termite attack easily could have been detected.

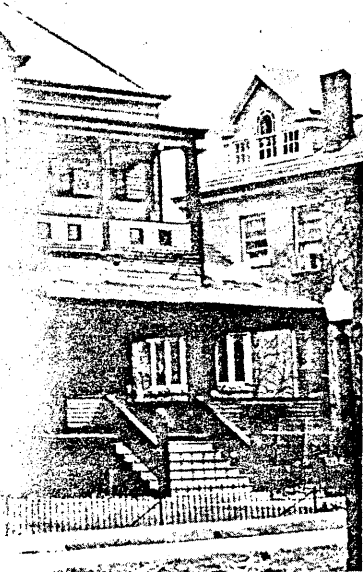
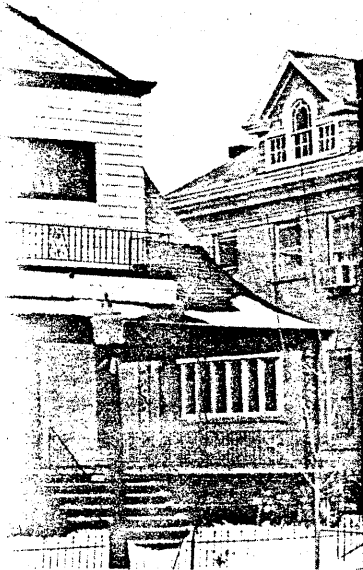
It was also clear that the frame structure had been damaged during installation of the siding. Nails used to secure furring strips that held the aluminum siding had cracked the original wood siding. Decorative details had been removed, and the wood window sills had been cut and sections removed to accommodate the siding.

To restore the building, the owner is replacing damaged or deteriorated wood siding and trim, reconstructing missing trim and details, filling nail holes and cracks, and scraping all loose paint. He is then sanding, priming, and painting the siding with colors that match the original. This project also involves restoration of the house's porches, which had been altered when the aluminum siding was installed. The porches' original wood columns and railings were replaced with wrought iron, altering the original design and appearance of the house. Those wrought iron fixtures appear too light and delicate to carry the roof's weight, and they may not be structurally sound. The sagging roof provided evidence that the supporting system was failing. The inappropriate wrought iron columns and railings will be replaced with columns and railings matching the original.



Above top: Covered with aluminum siding, this 1889 District lacked detail and had a flat monotone appearance.

Above bottom: The same house during a restoration historic preservation grant-in-aid administered by the department. The synthetic siding is being removed, rotten or missing porches are being restored, and the building is being restored with a variety of textures, details, and colors.



House in Peoria's West Bluff Historic District.

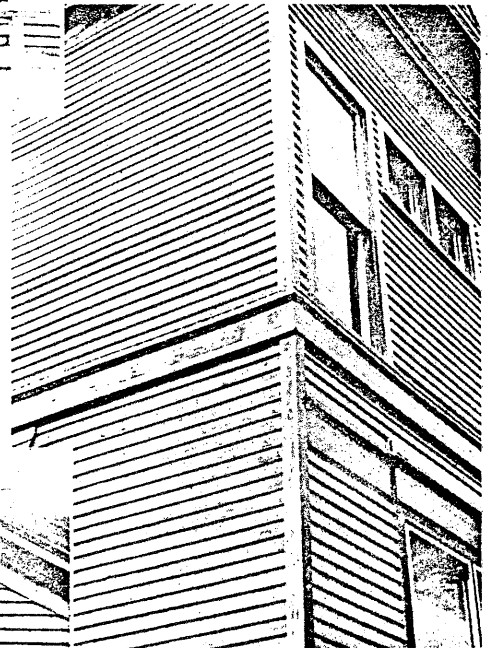
Project partially funded by federal Illinois Department of Conservation. As clapboards are being replaced, the house has come alive



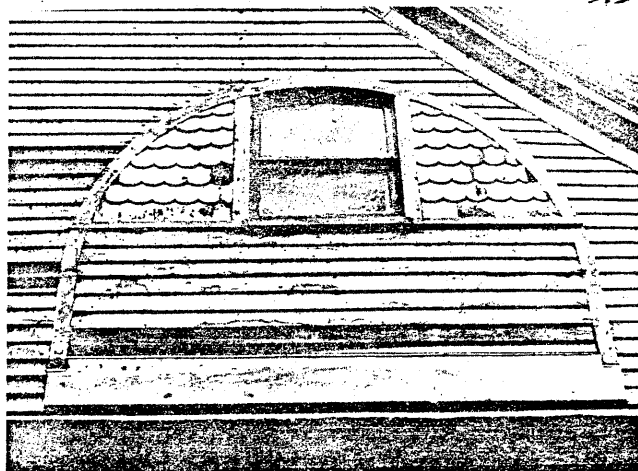
Above: As the aluminum siding was removed, it became evident that water had been seeping behind the siding and that the clapboards beneath had rotted. As a result, all clapboards above the second-floor windows had to be replaced. Water had also collected at the raised banding below the second floor windows, rotting the clapboards there. Note the shadowlines of the bull's-eye details that were removed to accommodate the siding.

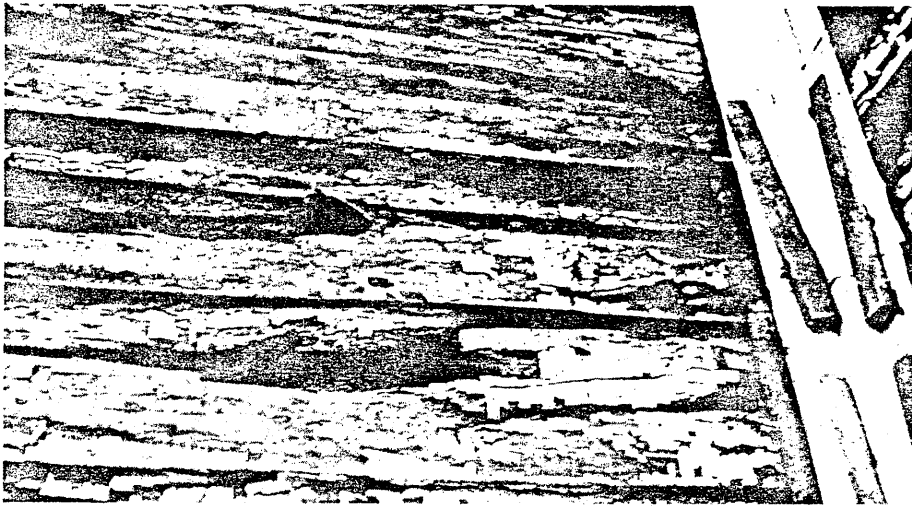


Above: Each strip of aluminum siding covered more than two original clapboards, changing the original character of the house. This photo also shows how the windowsills had been cut away to accommodate the synthetic siding.



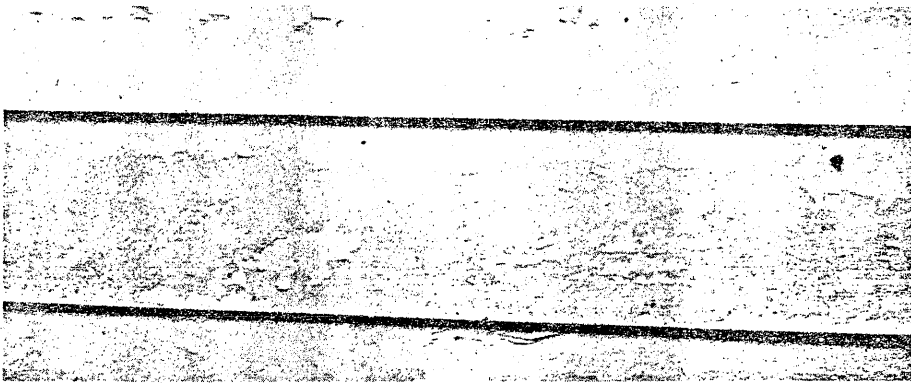
Left and Above: A variety of details and textures that had been covered by the monotone aluminum siding.





Above: The areas where water had been trapped beneath the synthetic siding showed severe deterioration. In this case, even the studs had rotted and the interior plaster was beginning to fail.

Below: The factory finish on this aluminum siding peeled and was painted to hide the problem. This problem would require regular painting to maintain a uniform surface.

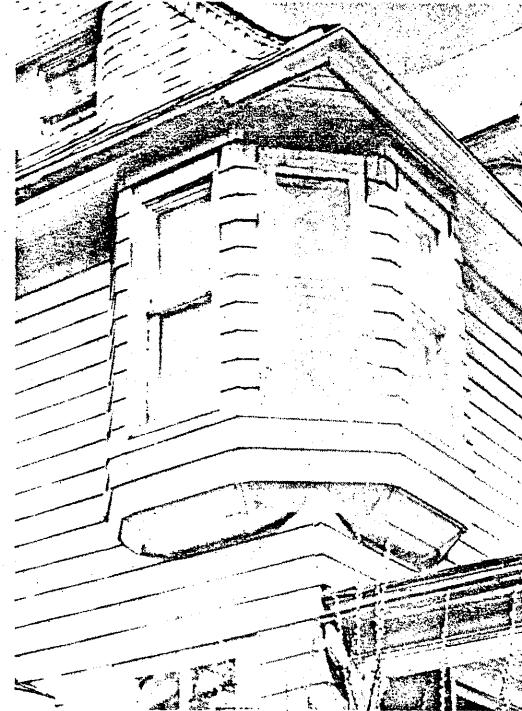


A second project illustrating the dangers of synthetic siding is in Oak Park's Frank Lloyd Wright-Prairie School of Architecture Historic District. The green aluminum siding on this simplified Queen Anne style house, which had been in place twenty years, was dull, faded, and very unattractive. Each strip of the wide siding covered three narrow clapboards, altering the scale and proportions of the original structure. The wide aluminum siding had awkwardly covered curved areas of the building, and details such as vertical corner trim and beaded siding on the second floor corner bay window had been covered. Decorative details such as window head moldings and band trim had been removed to accommodate the siding.

There was the same kind of deterioration evident as in the Peoria project,

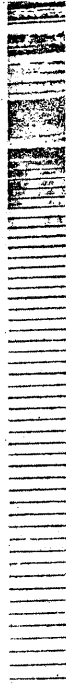
and the restoration process will be similar. Deteriorated elements will be replaced, missing details reconstructed, nail holes filled, paint scraped, and the entire building sanded, primed, and painted.

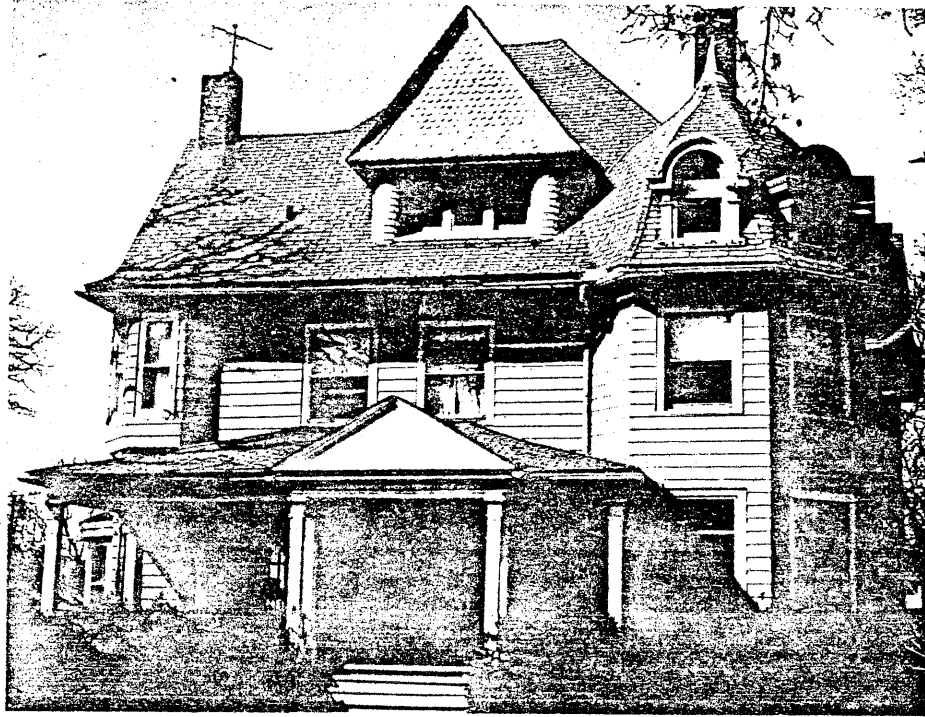
As these two case studies clearly illustrate, synthetic siding should not be applied to frame structures. Such siding is not maintenance free, nor does it provide long-term savings. In each case, a regular maintenance program would have preserved the original siding at less cost to the owner. By removing the synthetic siding, both owners have stopped the deterioration of their buildings, restored the visual integrity of their homes, and improved the quality of their neighborhoods. That's two houses saved—but what about the increasing number still being destroyed?



Above: This illustrates how awkwardly synthetic cover curved surfaces.

Right: The same corner oriel window shown above after the synthetic siding was removed. Note the beaded wood siding that had been covered by the aluminum. A trim board at the window-sill level was removed to accommodate the aluminum siding.





Left: This modified Queen Anne style house in Oak Park was covered with aluminum siding twenty years ago. The siding not only changed the proportions of the building, it also became dull and faded.

Below: During the restoration project, the aluminum siding was removed, exposing missing or damaged clapboards and trim. Note the delicate bowing of the turret, which was obscured by the aluminum siding. The wood elements will be repaired as necessary, and the house will be painted.

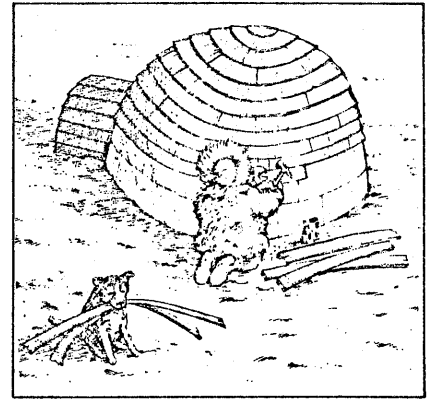


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8 PRESERVATION BRIEFS



Aluminum and Vinyl Sidings on Historic Buildings

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This brief, intended primarily for owners of historic properties, provides a discussion of issues surrounding the application of aluminum and vinyl sidings. The Secretary of Interior's Standards for Historic Preservation Projects (and their accompanying guidelines) recommend *against* resurfacing frame buildings with new material which is inappropriate, or was not available when the building was constructed.

The appearance of a historic building is a product of the cultural heritage of its region, the technology of its period, the skill and training of its builders and the materials used for its construction. The application of sidings which cover, or cause the removal of, original building features raises some of the fundamental issues of architectural conservation. This brief on the use of aluminum and vinyl sidings is an attempt to present in an objective manner the issues surrounding the use of these substitute materials on historic buildings. The information contained herein has been drawn from a variety of sources, many of which are listed in the bibliography. This brief is not an exhaustive examination of the subject; clearly there is a need for additional research on the physical consequences of siding installations. Readers are encouraged to advise us of their experiences with the siding materials discussed, particularly when those experiences involve historic architecture. As additional information is obtained and evaluated, there may be revisions to this brief.

Historic Character

The exterior character of a building is largely established by its "style" and by the degree of decorative detailing. It is also influenced by the choice of materials for the walls—by their dimensions, details, color and other surface characteristics. This is particularly true for wood sided, frame buildings which are the typical objects of aluminum or vinyl siding applications. Since wood has always been present in abundance in America, it has been a dominant building material in most parts of the country. Early craftsmen could harvest the wood and create both structural and finish members with their hand tools. The variety of tools used and regional differences in style resulted in the richness and diversity of wood textures. Later, as technology progressed, weatherboards produced by local mills continued to reflect regional traditions in material, style and dimensions. Although aluminum and vinyl siding materials seek to imitate wood sidings, they cannot capture the richness and variety of real wood because they are standardized, machine-made, mass produced materials.

Today, a number of communities are conserving the unique characteristics of their historic buildings and districts with

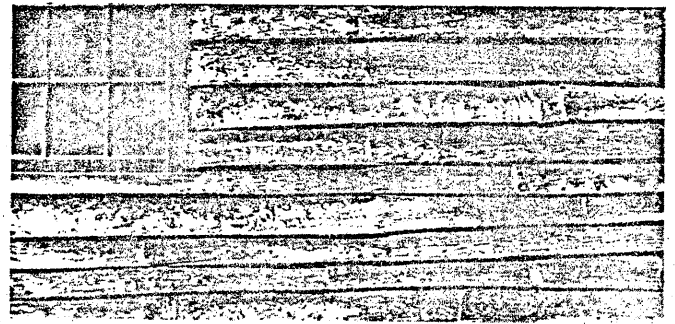


Photo: Lee H. Nelson

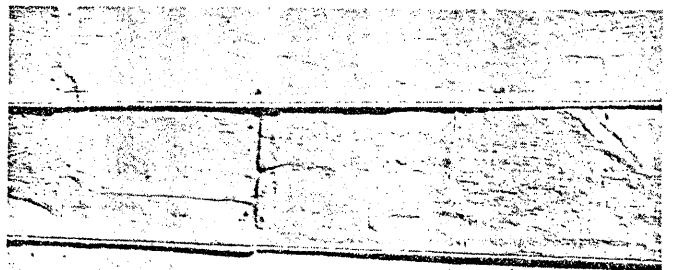


Photo: Hugh C. Miller

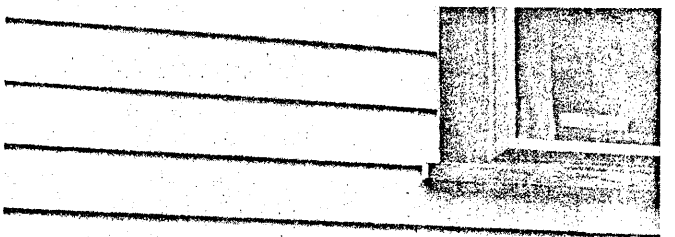


Photo: John H. Myers

Historic wood sidings exhibit rich and varied surface textures. They range from hand-split clapboards of short lengths with feather-edged ends, to pit or mill sawn boards which can be beveled, rabbeted, milled or beaded.



Photo: Laurie Robin Hammel

When a building is in need of maintenance, such as the house on the right which needs painting, some owners consider installing aluminum or vinyl siding. The result, like the house on the left, can be a complete loss of architectural character due to the covering of details (cornice), the removal of features (window trim), and a change of scale due to inappropriate siding dimensions.

architectural controls, including the regulation of aluminum, vinyl and other siding materials. One of the reasons for such regulation is that the historic appearance of a building may be visually altered by changes in scale, texture, color and detailing which are inappropriate. The changes are especially dramatic where "clapboard" spacing is increased, shadow reveals are lost, trim is removed and windows are altered or replaced. Manufacturers and some applicators are attempting to reduce the negative visual impact of both the products and the installations. Among the more successful efforts is the manufacture of narrow panels which approximate the clapboard widths of some historic wood sidings. Among the least successful efforts are the panels with embossed wood graining, which is supposed to simulate the texture of wood. This exaggerated graining would have been undesirable on real wood sidings, and is generally found only after excessive weathering of raw wood or sandblasting. A technique of in-

stallation which is gaining some acceptance, and which ameliorates some of the visual impact, is the application of siding only, retaining original corner boards, sills, jambs and other trim. A related technique involves retaining the trim, but removing all existing siding. This technique is highly destructive of original fabric and irreversible, since it is unlikely that a property owner will conserve the removed material.

As products and applications become more sensitive and the visual impact is minimized, it becomes important to articulate the real issue of authenticity of materials and craftsmanship. A structure is historic because its materials and the craftsmanship reflected in its construction are tangible and irreplaceable evidence of our cultural heritage. To the degree that they conceal the original building fabric, substitute materials such as aluminum and vinyl sidings will always subtract from the basic integrity of historically and architecturally significant buildings.

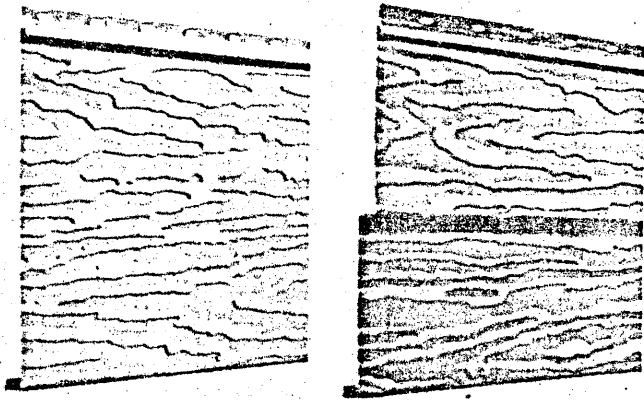


Photo: Technical Preservation Services

Aluminum and vinyl sidings are available in a variety of widths and colors, but the optional wood graining is not characteristic of real wood siding.

Products and Installation

The architectural products of aluminum and vinyl which are primarily used on older buildings are horizontal lap sidings. Horizontal aluminum and vinyl sidings are available in eight, five and four inch exposures to simulate clapboard widths, smooth and wood grained textures and a variety of colors. Trim pieces are produced to cover existing details at corners, doors, windows and eaves. With both materials the optional wood grain textures are exaggerated, and the colors are generally light to minimize fading problems which are inherent in the darker shades.

The siding materials are produced by manufacturers who conduct the major advertising and provide most of the product literature. The actual installations, however, are carried out by independent contractors or applicators, who are frequently called "home improvement" contractors, and are not affiliated with the manufacturers. Since the manufacturer has no control over the quality of the installation, both the quality of the work and the sensitivity of the application are highly variable (a fact recognized in that the manufacturer's warranties do not cover problems due to faulty installation). It

is important that proper installation techniques be used to avoid sagging, bending, leaking and other appearance-related problems.

Application of the products is accomplished by nailing the siding panels, which are usually about twelve and one-half feet long, to the existing surface. Preparation consists of eliminating uneven areas, squaring up the starter strips and nailing furring strips where necessary to create a smooth and level surface. Generally there is little concern over damage or alteration to the surface of the building, since it is assumed that any damage to the substrate will remain hidden for many years. The siding panels are not nailed firmly to the surface, but are hung on nails, sixteen inches on center, to allow for expansion. Trim pieces are used to aid in attachment and connection, and to cover existing trim, but such pieces are usually quite different from historic trim. For aluminum siding, caulking is recommended to seal all intersections where metal meets wood.

Removal of Features

Although it is sometimes argued that a siding application is reversible since it can be removed, there is frequently irreversible damage to historic buildings when decorative and other trim is removed by applicators and discarded or destroyed. The installation process dictates that the existing surface be flat and free of "obstructions" so that the new siding will be smooth and even in appearance. Where projecting details appear, it is easier to pull them off or cut them back rather than to attempt the time consuming process of custom fitting the siding. Aluminum and vinyl siding can be installed around existing trim, but the application requires more labor and, therefore, will be more expensive. In addition, there may be greater potential for water to penetrate the siding at points where aluminum or vinyl meets existing trim. Caulking of these intersections would help keep water out but would also cut infiltration which allows some moisture vapor to escape from the wall.

The existing wall fabric is further damaged by the nailing necessary to apply siding. The panels may be nailed directly to the building fabric or furring strips may be nailed up as a base. Either technique will leave numerous holes in wood

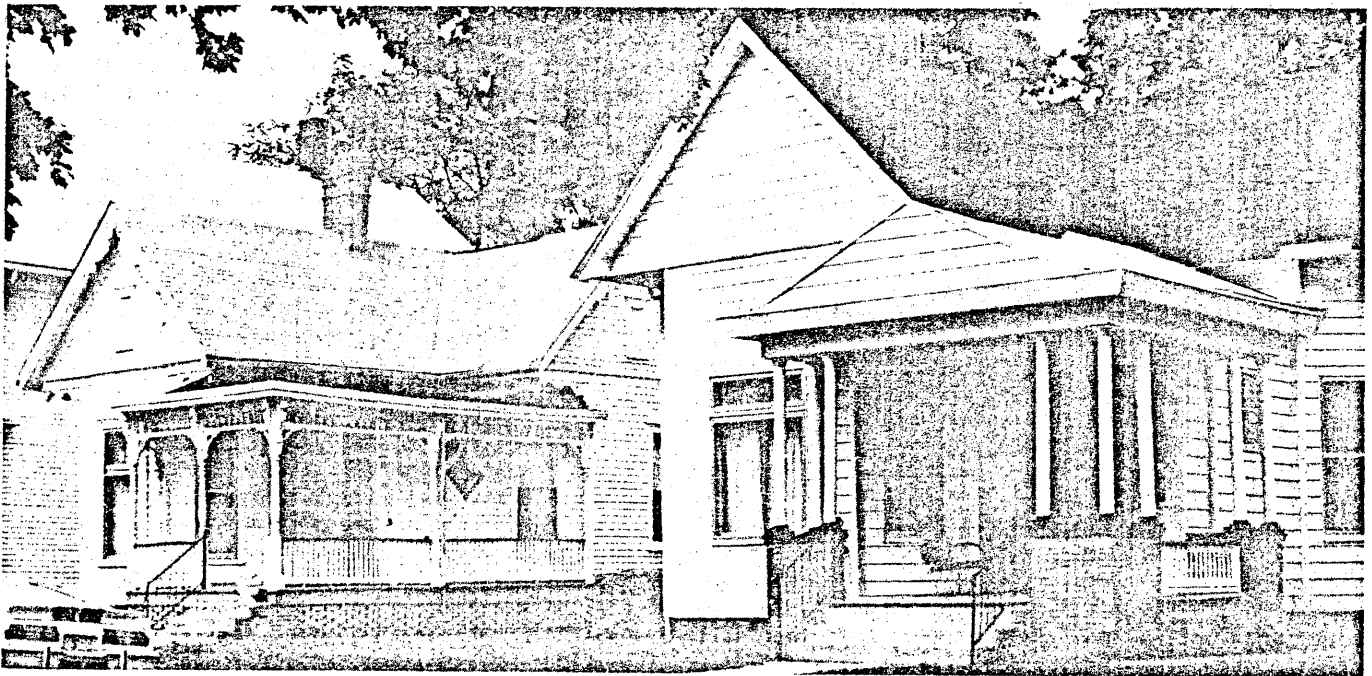


Photo: Nancy J. Long

Two originally similar houses. When aluminum was installed on the house on the right, the barge boards, scrollwork, columns and railings were removed. The distinctive shingled gable and attic vent were covered, further compromising the building's architectural integrity.

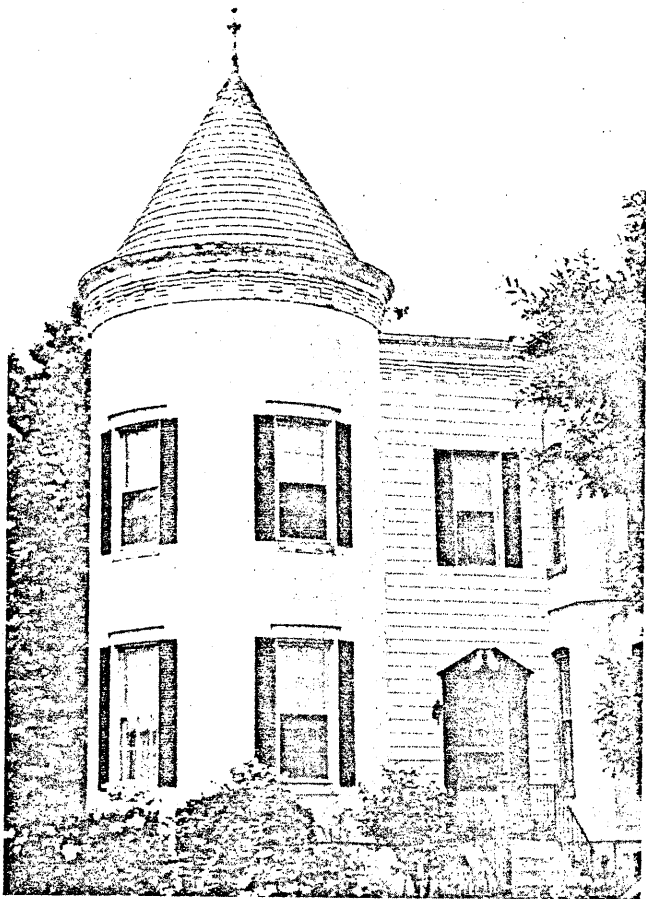


Photo: John H. Myers

This brick rowhouse was covered with vertical and horizontal aluminum siding. Such treatment is inappropriate for historic masonry buildings.

sidings and will cause irreversible cracking or spalling of masonry walls. Although this reference to the damage of masonry is included as a point of fact, the application of aluminum or vinyl siding is highly inappropriate to historic masonry buildings.

Moisture Problems

The walls of historic frame buildings are usually uninsulated so that moisture produced within the structure, (from cooking, cleaning, bathing or humidification), migrates through the wall cavity to the exterior, particularly in the winter. The amount of moisture generated may be significant. The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) reports that a typical family of four can produce up to twenty-five pounds of moisture per day through normal daily activity. If an impermeable layer of siding is applied to the exterior or cold side of a wall, moisture can be trapped within the wall cavity and create conditions favorable to deterioration due to wood rotting or staining fungi. There are three techniques which will prevent the accumulation of moisture within a wall that has an exterior (cold side) vapor barrier: (1) apply an interior (warm side) vapor barrier to keep moisture out of the wall, (2) ventilate the interior space to remove humid air and (3) ventilate the wall cavity to remove excess moisture. When humidity and climatic conditions indicate a need, the added expense of such preventative measures should be considered as part of the installation cost of impermeable siding over frame walls.

Some manufacturers have attempted to prevent moisture problems by venting their sidings. Typical venting techniques include perforated foil, weep holes, vent tubes into the wall cavity, recommendations to omit caulking or a combination of these methods. The success of these efforts is inconclusive since there are numerous variables affecting the moisture levels within any particular building. The Forest Products Laboratory of the U.S. Department of Agriculture conducted a study of the moisture content of frame walls during winter. Although they found that an interior vapor barrier was highly effective in reducing the moisture content of the test wall, they found that the exterior vents had little effect on reducing the moisture levels except where wind speeds were high enough to force ventilation. Such consistent winds are likely to occur only on a wall facing the prevailing winds and without adjacent obstructions to reduce the wind pressure. In addition, the small weep holes provided are subject to blockage by accumulations of dust and debris, insect activity and painting.

Another potential source of moisture problems results from the application of aluminum and vinyl sidings to buildings in need of repair. When leaking roofs, broken gutters and downspouts, or flashing problems are left unrepaired during a cosmetic application of an impermeable siding, quantities of water may be channeled into the wall behind the siding. In such cases the water admitted directly to the wall cavity can exceed the levels produced by moisture migration from the interior. Such excessive moisture levels within the wall can contribute to problems with interior finishes such as paint or wallpaper, causing peeling, blistering or staining of the finishes.

Prevention of Inspection

The application of aluminum or vinyl sidings prohibits periodic inspection of the underlying historic building fabric. Since these sidings are typically marketed as home improvement items, they are frequently applied to buildings in need of maintenance and repair. The result of this can be the concealing of problems which are the early warning signs of deterioration. Minor problems, concealed and uncorrected, can progress to the point where expensive, major repairs to the structure are necessary.

It cannot be overemphasized that a cosmetic treatment to hide difficulties such as peeling paint, stains or other deterioration is no substitute for proper care and maintenance. Aluminum and vinyl sidings are not directly at fault in this case since property owners should determine the nature and source of their problems, then make appropriate repairs. The difficulty arises when owners perceive the sidings as the total solution to their required maintenance and forego other remedial action.

Vulnerability

Aluminum and vinyl sidings are often marketed and purchased as maintenance saving alternatives; there are, however, certain types of damage to which these materials are susceptible. Aluminum siding scratches and dents easily, as a typical thickness is about .020 inches. The U.S. Navy suspended the use of aluminum siding on its housing facilities (non-historic) for several years after experiencing excessive damage due to the activities of children playing nearby. Now siding is permitted only above six feet so that the possibility of frequent impact is reduced. Other users have had similar experiences and it is now generally accepted that aluminum is a poor choice for applications where the chances for impact are high. The problem is recognized by manufacturers in that the backing on some sidings, which is now marketed as insulation, had its origin as a reinforcement to prevent denting.

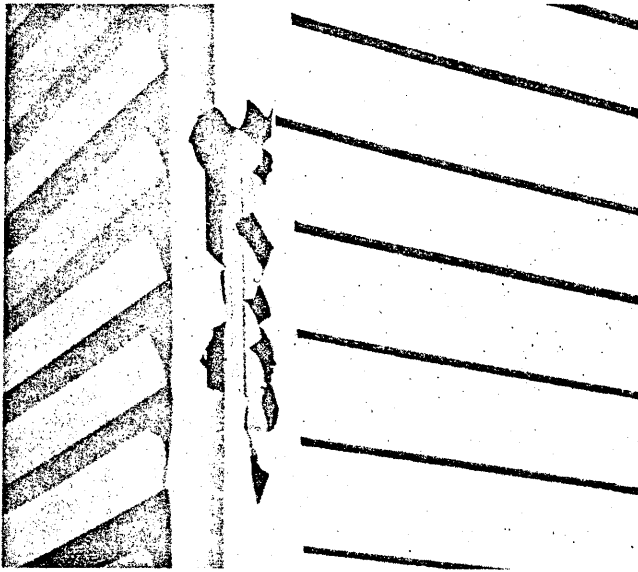


Photo: Courtesy of Technical Preservation Services

Vinyl siding tends to become brittle when cold, and is susceptible to cracking or shattering from impact. Damage like this may not be covered by warranty.

While there are some government agencies which use or permit vinyl siding, experience has shown that vinyl sidings become brittle and susceptible to shattering in very cold weather. Typical repairs are made by cutting out the damaged area and splicing in a new piece of vinyl, but new sections will probably not be an exact color match due to fading of the exposed surface and color variations in product runs.

If aluminum or vinyl sidings are damaged and later replacement is necessary, it may be difficult or impossible to obtain an exact replacement. Siding manufacturers can change products, styles, or colors in response to market factors without any advance notice to owners.

Durability and Cost

The questions of durability and relative costs of aluminum or vinyl sidings compared to the maintenance cost of original materials are complex, to say the least. It is important to carefully consider these questions because both sidings are marketed as long lasting, maintenance free alternatives. Assuming that the sidings are not damaged, and that they will weather and age normally, there will be inevitable changes in color and gloss as time passes. A normal application of aluminum or vinyl siding is likely to cost from two to three times as much as a good paint job on wood siding. A sensitive application, retaining existing trim, will cost more. Therefore, to break even, on expense, the new siding should last as long as two or three paintings before requiring maintenance. On wood, two coats of good quality paint on a properly prepared surface can last from 8 to 10 years, according to the U.S. Department of Agriculture. If a conservative life of seven years is assumed for paint on wood, then aluminum and vinyl sidings should last 15 to 21 years before requiring additional maintenance, just to break even with the maintenance cost for painting wood siding. There are reports, however, that some painted aluminum sidings may chalk and fade and appear to need painting as early as 5 to 7 years. Once painted, they will require repainting with the same frequency as wood. A New England architectural firm compared the cost of applying vinyl siding with the projected cost of maintaining and repainting the existing wood siding of a church. For purposes of the study, they assumed a 20 year life for vinyl material, a six percent inflation rate, six percent interest on savings

and a repainting cycle of six to seven years for the existing wood. They took the cost of the vinyl siding application as the total amount of money available for all options, and where an alternative was initially less expensive, they invested the difference or surplus at six percent interest. By using the surplus and the accrued interest, the figures showed that the church could be repainted every six to seven years up through the year in which the vinyl siding would be replaced. At that time the church would show a surplus in the painting fund, but a sizeable deficit with the vinyl siding due to the replacement cost. In this study the cost of aluminum siding was found to be similar to that of the vinyl.

Practically, very few property owners will set aside surplus money in the manner of the study, but the results of the study indicate that lower cost of the maintenance would allow the expense to be spread out over a longer time period. Conversely, the higher expense of a major application of aluminum or vinyl siding frequently will require financing so that the total cost to the property owner may include substantial interest in addition to the purchase price.

Fire Characteristics

Many questions have been raised about the performance of aluminum and vinyl sidings in fires. Because of the different natures of these two materials, their fire related characteristics should be discussed separately.

Concerns about aluminum siding in a fire may be divided into two areas. The first area consists of the normally tested

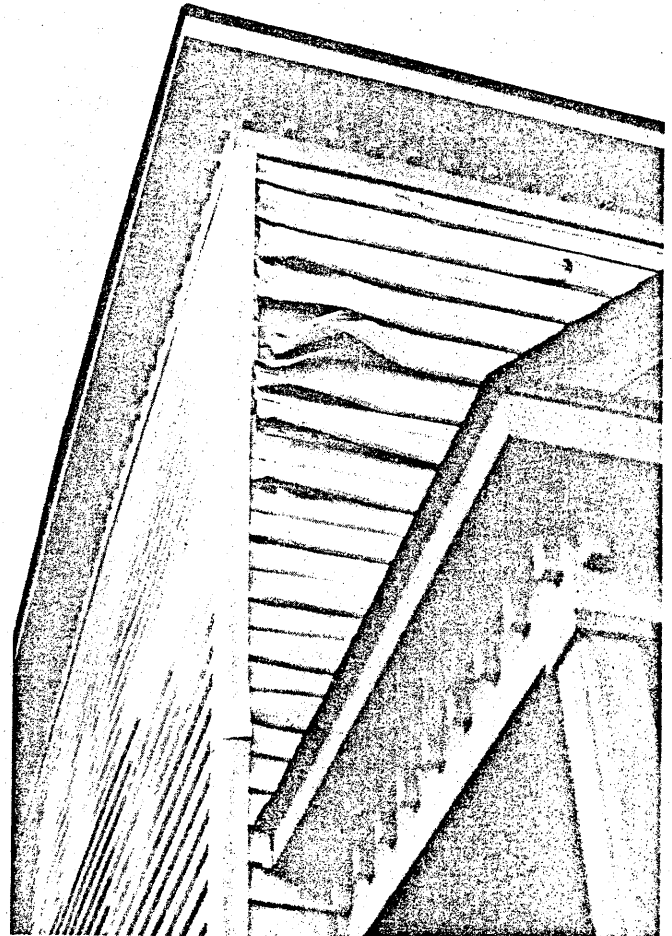


Photo: Linda J. Flint

Vinyl siding exposed to heat from a fire across the street.

characteristics such as flame spread, flame penetration and smoke accumulation. The National Bureau of Standards has tested aluminum lap siding for each of these factors and found that it performed very well compared to many other siding materials. In more practical tests, the New York City Fire Department conducted actual burn tests on frame rowhouses covered with aluminum siding. They discovered that the aluminum offers some protection from exterior fires, and that underlying original sidings sustain less damage from internal fires when covered by aluminum siding. The reason for the latter finding is that the aluminum is a barrier between the original siding and the lapping flames which emerge from window and door openings and extend upward.

Another concern about aluminum is the so-called "oven effect" which proposes that the siding contains and intensifies the heat of a fire. An oven consists of a metallic lining surrounded by insulation so that radiation is reflected back into the oven while the insulated shell prevents conductive heat losses. In reality, this phenomenon should not occur in an aluminum sided house. In a building with aluminum siding the metal is on the exterior and the "insulation," which consists of the wall components, is on the inside. The result is that the interior finishes of plaster or gypsum board, the studs and the original siding insulate the aluminum skin, preventing radiation from reaching the siding and being reflected inward.

When vinyl siding is subjected to fires on the exterior of the building, the siding will begin to sag and melt. In the case of internal fires, the vinyl material is shielded from the fire by the wall components so that occupants should have adequate time to exit the building before the siding becomes involved. The siding would probably melt off the building as the heat intensified thus reducing its involvement in the fire.

Energy

There is a growing concern for energy conservation, and aluminum and vinyl sidings are being promoted as energy saving measures. From a practical standpoint, aluminum and vinyl sidings are not good insulators because they are so thin. Any energy saving due to a siding application probably results from the creation of an air space between old and new siding, reduced infiltration due to the new impermeable skin, the installation of some insulating material behind the siding or a combination of these three factors.

The Federal Trade Commission filed suit against one manufacturer of aluminum siding and obtained a consent order from the company which agreed to refrain from making energy conservation claims. The FTC report claimed that both plain aluminum siding over aluminum foil and insulated aluminum siding have "little or no insulation value."

Preservation Briefs No. 3, "Conserving Energy In Historic Buildings," notes that the primary sources of energy loss in small frame buildings are the doors, windows and roof. It is, therefore, more cost effective to apply storm windows, storm doors and attic insulation than to treat the side walls of these structures. There are numerous publications on energy retrofitting which explain techniques of determining cost-effectiveness based on utility costs, R-factors of materials and initial cost of the treatment. Persons interested in this approach may wish to read "Retrofitting Existing Housing for Energy Conservation: An Economic Analysis" published by the National Bureau of Standards, or the U.S. Department of Housing and Urban Development booklet "In the Bank or Up the Chimney." One such study in Providence, Rhode Island, determined that for a two story house, twenty-five feet square, the payback period for twenty-three storm windows, two storm doors and six inches of attic insulation was 4.4 years while the payback for aluminum siding with an R-factor of 2.5 was 29.96 years. Most of the information which is available supports the position that plain aluminum or vinyl

sidings will not have a reasonable payback on an energy saving basis alone.

Warranties

Aluminum and vinyl sidings frequently carry long term warranties which make them attractive to property owners; however, most of these warranties are limited and pro-rated, and contain very specific coverage. One technique used to make the warranties appear more comprehensive is to guarantee the products against defects which are not inherent in the materials, and therefore cannot possibly occur; for example both aluminum and vinyl sidings are usually guaranteed not to "red rust." Such rusting is the result of the oxidation of iron which is not a component of either siding product. Most warranties will exclude any change in color or gloss, damage due to accidents, vandalism and exposure to the weather, damage to the house and all problems resulting from faulty installation. Since the manufacturers do not install the sidings, the reliability of the applicator is very important in the event of future claims. The distinction between manufacturing defects and problems due to improper installation can confuse the issue of which party is responsible and leave the property owner with the difficult and expensive burden of proving liability.

The pro-rated warranties limit the liability of the manufacturer to a decreasing percentage of labor and material costs as the warranty period progresses. As an example, one forty year warranty covers all labor and material for only three years, and the liability decreases so that after twelve years no labor costs and only thirty percent of material costs are covered. It is probably safe to say that because of the profit margin in the material and the fact that the bulk of any repair cost would be for labor, the property owner would bear most of the expense of repairs for the last twenty-seven years of this warranty.

An additional consideration is that warranties cannot guarantee that exact replacement products will be available in the future, so responsibility is usually limited to providing the closest match in color, texture and dimension available at the time of repair. This is done because manufacturers can change their product lines due to market factors. Color can also vary from one production run to another, making exact replacement difficult.

The important point to remember concerning warranties is that property owners should obtain a copy in advance of any purchase and read it carefully to determine the extent of coverage and the degree of liability under any pro-rated terms. This recommendation also applies to any warranties given by local contractors or applicators since these will be important if problems occur with siding installations.

Property Values

There is little doubt that the application of aluminum or vinyl siding will affect property values. In the case of a non-historic house of modest cost and in need of repair, the effect will likely be to increase the property value. A different set of factors govern in the case of a historic building, particularly in a historic district where authenticity in materials and styles commands a premium. The application of a substitute material such as aluminum or vinyl siding would probably have a negative effect on the resale value of such a building. The degree to which property values are affected will vary widely due to the quality of the application, differences in local attitudes and tastes, the demand for housing and many other factors. There may be an added concern that the sidings, which prohibit inspection of the underlying fabric, may be concealing problems. Real estate appraisers and realtors gen-

erally evaluate each property individually, weighing both objective and subjective factors in order to determine a property value. The best method of establishing the effect of an aluminum or vinyl siding application on the value of a particular property is to consult qualified local real estate professionals.

Local Regulation

Local historic district officials face a dilemma on the siding issue: They are caught between their responsibility for preserving the character and integrity of the buildings and the often hostile resistance of property owners who resent architectural controls. Although policies vary considerably from one jurisdiction to another, such policies usually involve a combination of recommendations, prohibitions, negotiation and compromise. Most local historic district policies on artificial sidings fall into one of the following four categories:

1. Complete Prohibition—Artificial siding materials are not allowed in the district, but the commission can review special circumstances at its discretion.
2. Conditional Acceptance—If certain preset conditions apply, the sidings may be applied if they meet established design criteria involving dimension, texture, color and installation techniques. Conditions may allow for differences in the significance of buildings or the degree of exposure of walls to public view.
3. Standard Approval—Siding applications are routinely approved if they conform to established design criteria such as those mentioned in number two.
4. Advisory—Property owners and developers are advised on appropriate techniques of restoration and rehabilitation, but there is no enforcement authority.

When architectural controls are established for the protection of certain historic buildings or historic districts, controversy is inevitable as community needs conflict with individual rights. Communities with a significant architectural heritage frequently establish strict controls and successfully use the police power to enforce them. Various court cases have upheld the local decisions to control artificial siding applications. Communities which have review boards or which are establishing policies on the use of modern sidings in historic districts can contact their State Historic Preservation Offices or the Landmarks and Preservation Law Division of the National Trust for Historic Preservation for examples or information on design criteria, methods of enforcement or precedent setting court cases.

In some communities where original sidings have been covered by substitute materials, there are programs which give property owners financial assistance in removing the substitute materials. The most publicized program of this type is in Cambridge, Massachusetts where several non-profit community organizations make grants available for siding removal. Grants of this type are available in several other cities with redevelopment programs, and aid property owners and communities in recovering the earlier character and charm of their historic houses.

Summary

The intent of this brief has been to delineate issues which should be addressed when contemplating the use of aluminum or vinyl sidings on historic buildings. Many property owners are faced with decisions weighing the historic value of their building and its maintenance cost against the alleged benefit of aluminum and vinyl siding materials, and very little comprehensive information has been published to assist them in making those decisions.

As stated earlier, the application of aluminum and vinyl sidings is frequently considered as an alternative to the maintenance of the original historical material. The implication

is that the new material is an economic and long-lasting alternative and that somehow the historic material is fragile, short-lived or problematic. In reality, historic building materials such as wood, brick and stone usually are not delicate or short-lived. Their existence, frequently in sound condition, after many decades during which they probably suffered periods of neglect, is proof that they are the original economic and long-lasting alternatives. All materials, including the new sidings discussed above, can fall into disrepair if abused or neglected; however the maintenance, repair and retention of "original materials" are always the most architecturally appropriate and usually the most economically sound measures for preserving the unique qualities of historic buildings.

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