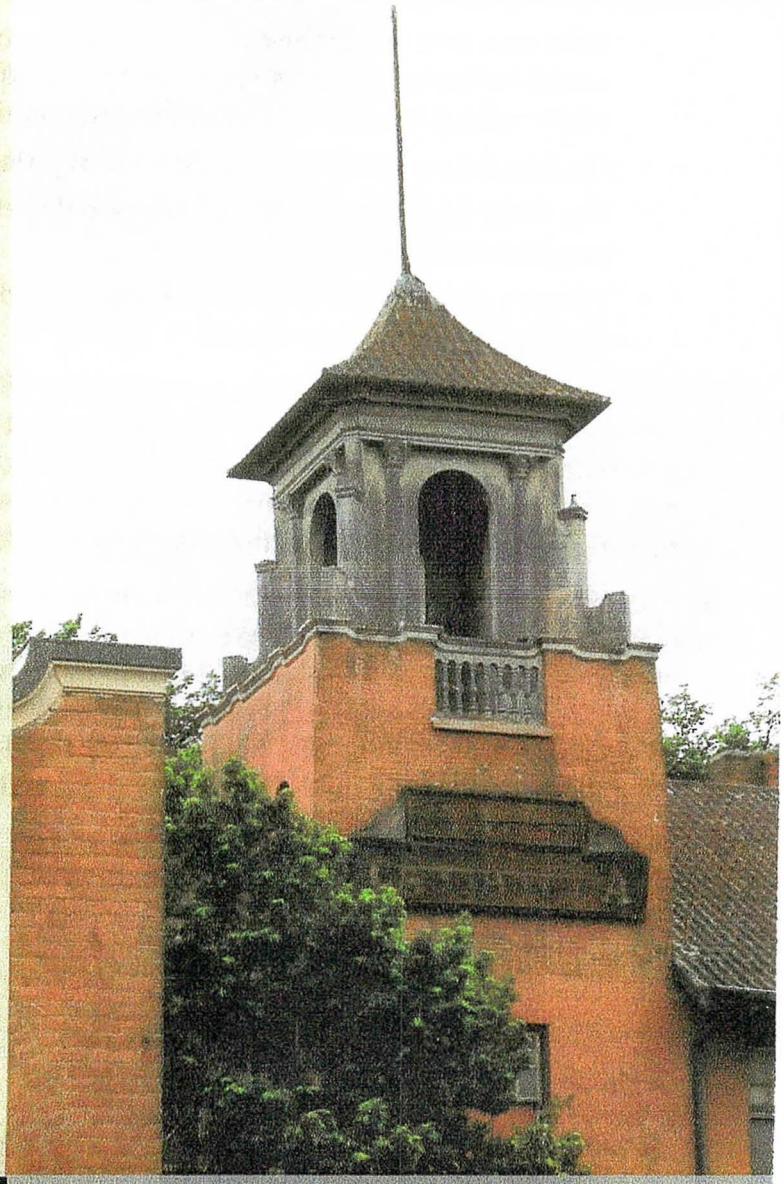
New Mexico Department of Cultural Affairs
Historic Preservation Division

2014 CLG Grant #35-13-51938.013
Castañeda Hotel, Feasibility Assessment



Preservation Plan

Linda Gegick
Preservation Specialist

September 30, 2014

Castañeda Hotel

524 Railroad Avenue, Las Vegas, NM

INTRODUCTION

The purpose of this preservation plan is to offer guidance for the preservation and continued use of the Castañeda Hotel. Recommendations comply with the Secretary of the Interior's Standards for Rehabilitation. For general purposes, changes to the building are weighed against the concepts listed here:

- New uses and occupancies would be accommodated with minimal modification to historic spaces, internal spatial relationships, and external relationships to adjacent buildings and spaces;
- Historic fabric would be retained and repaired as much as possible;
- Significant features of the building would remain in, or close to, their original conditions;
- Historic character of the building as exhibited through style, form, and finishes would be maintained.

The report identifies significant features and spaces of the hotel. Site visits were conducted from June through August 2014. The report also includes considerations of spatial remodeling and information concerning repair, modification, or replacement of elements. It should be used in conjunction with the associated structural report (Hands Engineering, Inc.) and the architectural documents (Jonathan Whitten + Associates).

This preservation plan does not address every issue that may arise in a particular reuse scheme, nor does it cover every piece of historic fabric and offer compatible solution for repair or reuse. In a potential rehabilitation, all proposed modifications and treatments must be evaluated against life safety codes, applicable construction regulations, and occupancy requirements. The plan may be used as an orientation to maintain the historic character of the Castañeda Hotel through sensitive management of the building's historic fabric.



Castañeda Hotel 1

BACKGROUND

The Castañeda Hotel, 524 Railroad Avenue, is one of the pivotal structures within the Railroad Avenue Historic District in Las Vegas, New Mexico. The building is important for its architecture and for its associations with the Fred Harvey Company and the Atchison, Topeka and Santa Fe Railway (AT&SF).

The AT&SF contracted with Frederic Louis Roehrig, of Pasadena, CA, an architect better known for large scale residential projects, to design the facility. Construction began in 1898 and was completed in 1899. While most other buildings in the district utilize Railroad Commercial and Classical Revival designs, the use of the California Mission style for the Castañeda is significant. This was the first time the AT&SF would employ the architectural style that would become the hallmark of the Fred Harvey Company and the AT&SF in the American Southwest in the early 20th century. The Castañeda Hotel dominates the area by its size (210 feet long, 120 feet deep, two stories high), and its location at and orientation to the rail line.

During the years spanning the turn of the 20th century, both the AT&SF and the Fred Harvey Company committed substantial personnel and finances to their presence in Las Vegas, New Mexico. From 1898 to 1905, the railroad would replace its depot and build new offices, as well as the Castañeda. Although the AT&SF owned and financed the hotel building, restaurant and hostelry services were provided by the Fred Harvey Company. Since 1893, the Fred Harvey Company operated the premier Montezuma Hotel, five miles west of town in the Gallinas Canyon. Nevertheless, the Company outfitted this second hotel with outstanding furnishings and provided its signature service to the traveling public.



Hotel blotter
City of Las Vegas Museum Collection 63.29.3

During the past 110 years, the building has not been severely altered, nor has deterioration been extensive. The Castañeda Hotel retains a high degree of integrity in original form and materials.

There is evidence of some remodeling soon after its opening in 1899 and again in the early decades of the 20th century. During the 1970s-1980s, some areas of the hotel received minor remodeling to adapt to new uses: original furnishings were removed; the lunch counter and kitchen were remodeled to accommodate a bar and ballroom; the lobby received new floor finishes; some sleeping rooms on the second level were arranged for apartments; and some ground level offices changed to retail spaces.

CURRENT CONDITION

The Castañeda Hotel is a two story gable-roofed U-shaped building open to the rail tracks. Construction is red brick veneer on wood frame. The central section is distinguished with a brick tower and open cupola of wood frame, metal cladding, and a hipped roof. Brick surfaces are articulated with occasional stretcher courses positioned proud of the wall surfaces, multiple arches, and beaded mortar joints.

An arcade is continuous along the ground level, except at the northwest corner. The arcade is formed by a series of brick arches and piers. At the southwest corner, the building name is painted directly on the brick surface, above the arches. There is evidence that indicates neon lighting was installed in this location during the 1950s. There is extensive etched graffiti in the brick surface, concentrated at the southwest entry corner.



South facade at Railroad Avenue

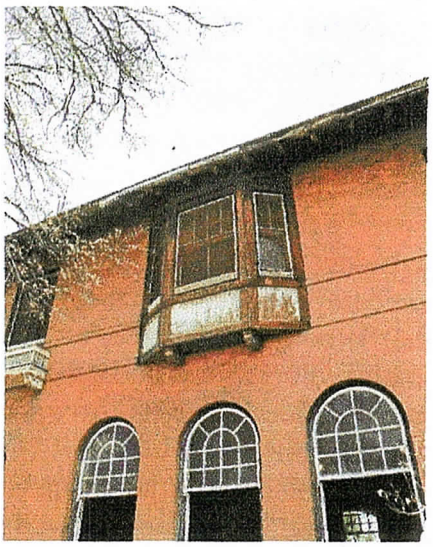
The central courtyard contains random specimen planting along the arcade. The ground surface has a grass-like cover. There is a circular shallow concrete pool near the east end of the space. Early documentation, around 1907, shows similar modest vegetation; however the pool feature does not appear.

The foundation is rusticated ashlar sandstone. It is visible for several courses along the street façade, and becomes more exposed as the ground slopes downward from Railroad Avenue to the rail tracks. Two pairs of stairs at the east side of the wings connect the arcade to grade. A partial basement under the north wing originally housed food storage and maintenance rooms. The basement area at the southeast corner of the building contained power and heating equipment. Basement walls are exposed sandstone and brick. Basement ceilings are exposed floor framing: in the southeast basement that framing includes the use of railroad track rails as floor framing elements. The basements are accessed through stairwells in the arcade, an interior service stair, and north and south side hatchways. There are areas of severe deterioration of the mortar joints and areas of incompatible mortar repair.

The second floor gable roof is covered with formed metal barrel tiles. An integrated gutter and fascia system sits at the end of the eaves, and is in poor condition. Gables of the wings terminate at curvilinear parapets. The sloping arcade roof is covered with 3-tab shingles. This roof terminates behind the outer arcade wall, which extends upward

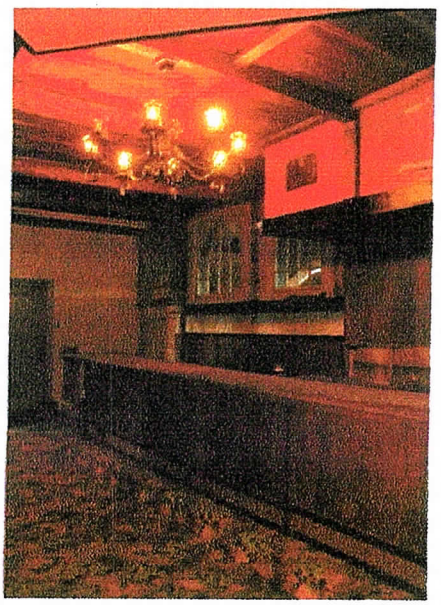
to form an articulated broken parapet. The parapet is capped with formed metal coping. An interior gutter and downspout system collects water from the gable roof, across the arcade roof, through downspouts along the arcade columns. The failure of the arcade gutter has resulted in extensive water damage affecting the arcade framing, ceiling finish, and brick piers.

Exterior window and door assemblies sit behind the brick face. Each façade is broken with one or more bay assemblies at the second level. There are faux balconies with turned balustrades below window openings at the north and west facades. Both second level wings end with a bay window: the south bay contains a center door that opens to a narrow balcony. Window openings on the ground floor are generally single-hung wooden sash – rectangular lower sash and semi-circular upper sash. Commonly, the sash is divided light 14/1, although there is variation among units. Some windows are mulled, united above with a single fanlight. Second floor windows are single hung wooden sash, generally 8/2 or 4/1. As on the ground level, some second level windows are mulled. Exterior doors are five-panel wood or half-light wood panel topped with semi-circular fanlights. The units located under the arcade are in generally good condition. The condition of other units varies from fair to good, depending on the degree of weathering. All units suffer from a lack of regular maintenance. Interior doors are 5-panel wood, single or pairs, with transoms. At the interior, door and window openings are cased with side and crown molding.



Above: Partial west facade showing typical window assemblies

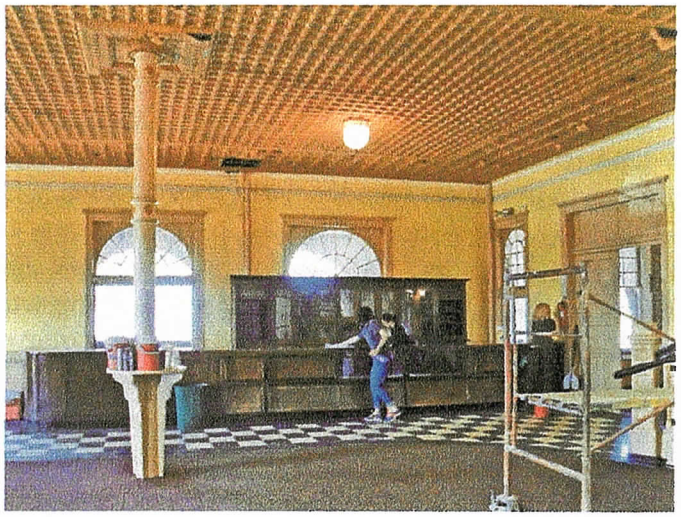
Below: Lunch counter kitchen remodeled to bar in the 1970s



The ground floor housed various services. The lunch counter, signature space of the Harvey Company, occupied the east half of the south wing. It was remodeled slightly in the 1970s to accommodate a dance floor. An adjacent space is listed on original plans as a billiard room: anecdotal conversations with Las Vegas residents suggest the room continued in that fashion through the 1980s. In both rooms, floor finish is concrete tile and cove base. Ceilings and walls are plaster. A continuous picture rail of dentil molding sits above high-paneled wainscoting. Panels are finished with flocked wallpaper. The associated kitchen lies on the north side of these rooms. During the 1970s, the kitchen was remodeled to accommodate a bar. Most of the kitchen equipment was removed and a new bar counter was installed. The ceiling is rough sawn timbers and decking. The floor is carpeted.

A service area of an office, corridor, and toilet rooms separates the billiard space from the lobby. Ceilings and walls are plaster: the corridor walls are wainscoted. Toilet partitions are wood frame and panel: no fixtures remain in place.

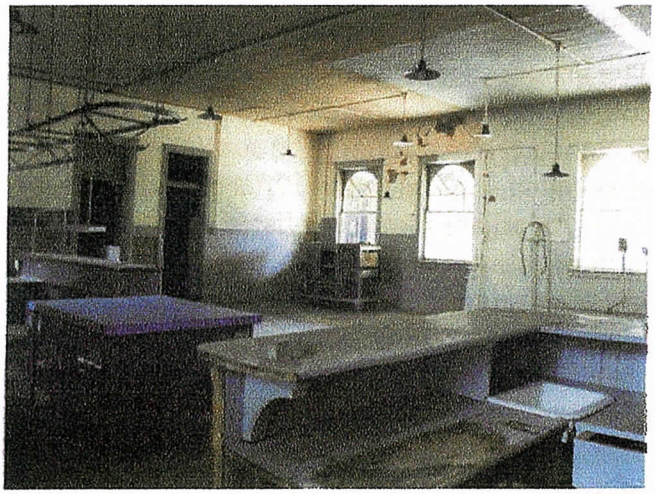
The lobby occupies the southwest corner of the ground level. The lobby is accessible from the arcade at Railroad Avenue. The ceiling is stamped metal; walls are plaster with ceiling and picture molding. Continuous wood paneled wainscoting unites the window sills. Recent tile and carpeting on composite board has been laid over hardwood floor. Slender structural metal columns are decorated with molded floral designs. An open 90 degree staircase with turned balusters and paneled newel posts leads to the second floor. The stairwell is daylighted by a gabled skylight at the second floor roof.



Lobby, looking west; door to dining room at right

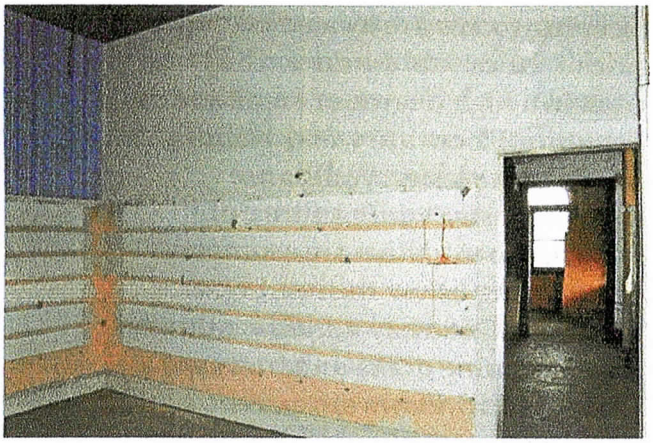
A pair of doors leads to the dining room. Windows open to the east courtyard and west to Railroad Avenue. The ceiling is stamped metal, and walls are plaster to a picture rail. Recent wallpaper covers a plaster surface from the picture rail to the chair rail. Wood trimmed wainscoting continues in the same style and height as the lobby. Floor is dark terrazzo with brass stripping that extends to an integral high cove base. Light fixtures are suspended from the ceiling.

The northwest corner of the building contains food service rooms. Kitchen, pantries, a walk-in cooler, and baking room with an integral brick oven are finished with plaster ceilings, exposed brick walls with delineated wainscot, and concrete floors. The front oven wall is glazed tile. Window openings are typical of the ground level. Some equipment is extant, including cook stove, hood, and warming stations. Utilities are exposed. The rooms are accessed from the kitchen through a corridor with concrete floor and base, plaster ceilings and walls with a delineated wainscot.



Main kitchen, looking east

The ground level north wing contains a central corridor that is flanked by a series of rooms. Both corridor and rooms are high-ceilinged, ceiling and wall surfaces are plaster, and floors are wood. There is no ornamentation (picture rail, wainscot, etc.) in the corridor. There is some remodeling in this area: rooms have been painted and papered; cased pass-through windows have been added to some walls. The corridor connecting the food service area and the north wing passes through a service stairwell which accesses basement storage and the second floor. The staircase is open with turned balusters and paneled newel posts.



Room in the first floor north wing, showing typical extent of 1970s remodeling

The second floor is organized around a continuous double-loaded corridor. The corridor passes through a lobby at the top of the main southwest stairwell. There are several light fixtures suspended from the ceiling. The floor is wood with a high wood baseboard and shoe trim. The ceiling and walls are plaster. Like the ground floor corridor, there is no ornamentation (picture rail, wainscot, etc.). Door assemblies are cased, topped with crown molding and typically five-panel wood units with transoms. The north/south corridor ends in a doorway at the north side. Until recently, there was an exterior wooden scissor stairway of low quality construction that exited the northwest corner second floor to grade. Detailing in the brick wall suggests that the existing door replaced a window, but the date of the revision is unknown.

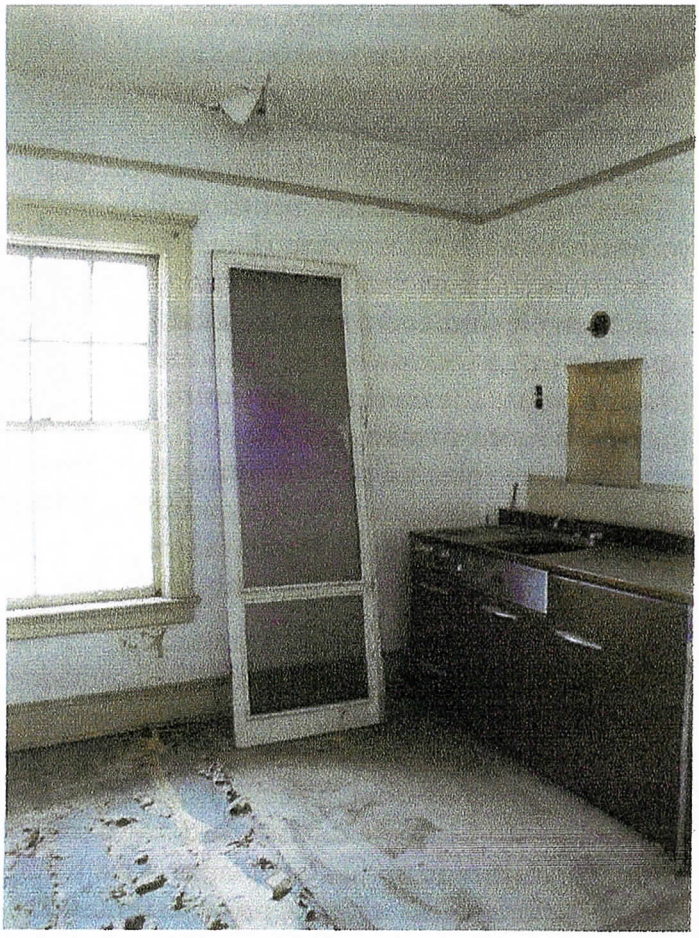


Second floor corridor, looking north through center section

Communal toilet and bath rooms are located at the west ends of the north and south wings. Finishes are similar to the rest of the floor and there are a few wood panel partitions still in place. No plumbing fixtures remain. The tower room (immediately under the central cupola) contains wooden shelving and sideboards. Like the other second level spaces, the floor is wood and walls are plaster. This space has experienced a good deal of deterioration, especially at the ceiling and floor, due to water penetration through the tower. A door in the exterior east wall opens to a flat platform on the arcade roof.

Sleeping rooms are located on either side of the central corridor. They contain a high degree of architectural detailing. Floors are wood; ceilings are smooth plaster. Walls are smooth plaster with picture rail and baseboard: there are remnants of stenciling below the rail. Some rooms include a bay window, others have adjoining doors and transoms. Doors and windows are cased. Each sleeping room included an assembly of a wall hung washbasin, mirror and shelf, and wall sconce; plumbing fixtures have been removed. Many original ceiling fixtures are in place.

Individual rooms vary in size and shape. The north wing contains four 2-room apartments and each includes a private bathroom. Primary documentation indicates this arrangement was in the original design. There is minor remodeling on this floor. Some rooms have been carpeted and papered (including the stairwell); closet space and kitchen units have been added to others. The southwest corner rooms were remodeled in the 1980s into a complete apartment.



Typical second floor sleeping room showing the remnants of recent floor finish over original wood floor and the addition of a kitchen unit

SPATIAL CONSIDERATIONS

Building Envelope

The exterior envelope of the Castañeda Hotel retains a high degree of integrity of its original construction. Architecturally, the Castañeda Hotel is significant in its use of the California Mission style. Some of the elements that define this style are the long, low ells, gable roof, arches, barrel tiles, curvilinear and articulated parapets, arcade, and courtyard.

Besides the components particular to the California Mission style, there are other features that define the specific characteristic of this building. Those include the door and window units, the extensive use of fired brick, and the use of shaped metal to simulate stone.

The Castañeda Hotel's historic significance lies with its association with the AT&SF RR and the Fred Harvey Company. This is expressed on the exterior through the building's orientation to the rail tracks, specifically, the focal courtyard opening eastward, the multiple access points from the rail platform to the arcade, and the arcade extending continuously around the courtyard and the south facade toward the depot. The original design of the courtyard was an open space with central planting. This enhanced the visual and physical continuity of the arcade and the connection to the railyard. Re-establishing this concept is desirable.

An historic rehabilitation project should maintain the overall lines of the building's architecture plus the specific elements and features in their original configuration to the highest degree possible.



The northeast corner of the Castañeda Hotel contains many examples of the significant architectural features of the building: curvilinear parapets, gable roof, barrel tiles, and arched arcade

Interior

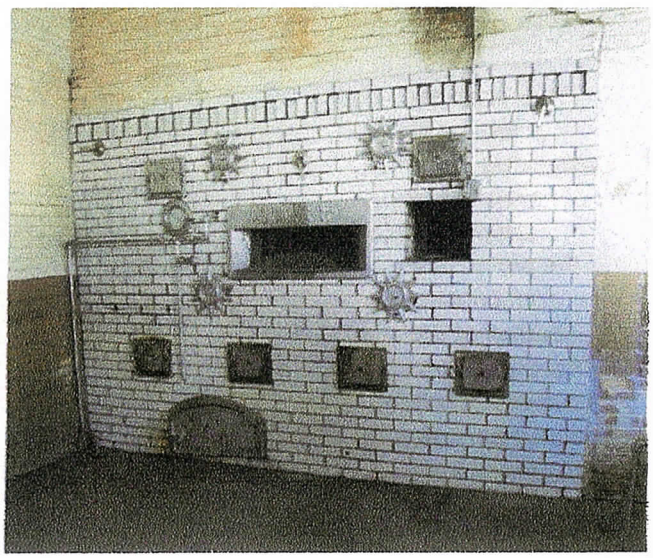
The interior public spaces were the expression of the hotel and its service. On the first floor those spaces were the lunch counter, the lobby, and the dining room. In addition to the historic references, these spaces remain the most architecturally significant in their design, finishes, and detailing. Maintaining these rooms in their original form is highly desirable. Modifications should not alter volumes, relationships to surrounding spaces (i.e. access via doors or windows), or detailing.



Significant spaces in the Castañeda Hotel include the lunch counter, above, and the dining room, below



The kitchens for the lunch counter and the dining room are important to the history of the Castañeda. However, the lunch counter kitchen has been modified to eliminate nearly all of its original purpose. The dining room kitchen and other food service areas maintain a high degree of original character. If they would be re-used as a working kitchen, modifications to systems, finishes, and layout may be extensive in order to comply with building codes. Other uses may be acceptable. In any case, the utilitarian nature of the space should be retained. Of special note is the highly detailed glazed oven front in the bakery room. It is a unique feature and indicative of the historic role of the building. Incorporating this element *in situ* in a reuse plan is desirable.



Front face of glazed tile of the oven in the baking room, located in the northwest corner of the building

The main stairwell, its second floor lobby, and the circulation corridor define the building's historic role on the second floor. They are not as highly detailed as the significant spaces of the first floor, yet, maintaining these spaces in their original form and function is desirable.

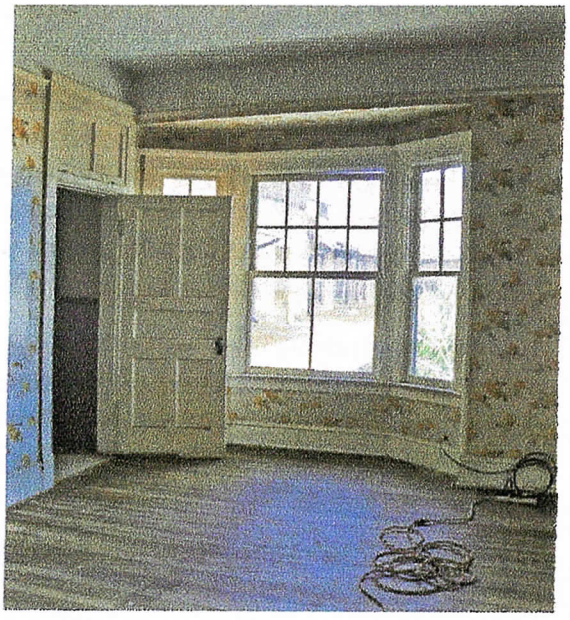
The stairwell must comply with applicable building codes in a re-use scheme. Solutions to address life safety issues in this instance should explore ways to maintain the unobstructed connection among the floors and the second floor circulation spaces: changes to balustrades, or stairwell edge conditions, should retain the balustrade in place, or as much as the historic material and form as possible. Door and transom units are another principal feature of these areas. It is desirable to retain these assemblies in place.



Above: Main stairway, open to the first floor lobby and second floor with skylight above

The sleeping rooms and service rooms of the second floor vary in size and shape: the interior arrangement of those rooms is unremarkable. The spaces do contain fine detailing and workmanship. It is desirable to retain and repair existing finishes (plaster ceiling and walls, wood floors, etc.) and casework. Rearrangement of the spaces on either side of the central corridor should respect the original exterior and interior openings. Corridor doors that are not utilized as access should be retained in place. Combining spaces to create larger rooms and bath spaces should utilize existing walls as much as possible. Structural modification required to combine rooms should be concealed within walls, floors and attic spaces.

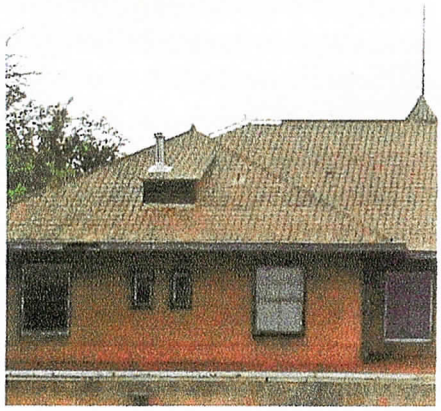
Below: Typical architectural detailing and finishes in second floor sleeping room



ROOFS

The original metal interlocking barrel tiles of the gable roof appear to be in good condition from visual inspection and by the overall absence of water penetration within the building. Tiles should be retained and repaired where needed to ensure adequate seams and overlap. Fortunately, there is a quantity of surplus tiles on site. These may replace damaged tiles that cannot be repaired. Detailing includes miscellaneous pieces, such as peak caps, hip caps, and a variety of flashing. They, too, appear to be in good condition. There is variation over the surface in color and finish.

Any new coating must be compatible with the existing material (such as rust inhibitor and finish color coats). Prepare test patches to determine appropriate application procedures. Finishes should not be so thick as to obscure the detailing of the tile profile or create "dams" where water may collect. Surrounding areas should be masked before application of any new coating. The barrel tile is easily deformed: work on the roof must be performed with care.



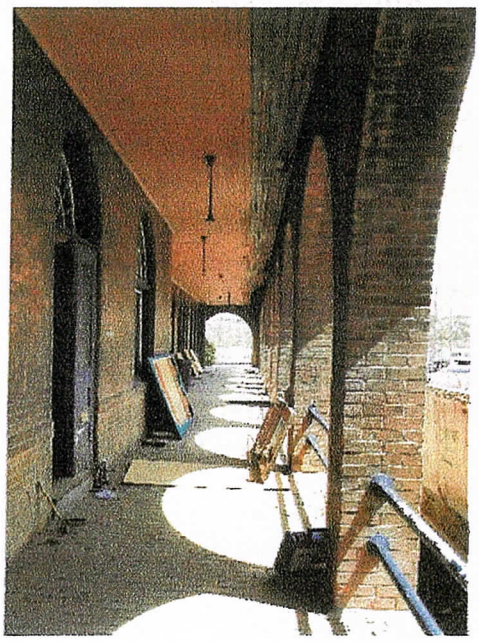
Above: Barrel tile roofing, shed dormers, and typical roof penetration

Below: Damage to arcade ceiling from gutter above

Shed dormers are located regularly along the gable surfaces. The dormer is wood frame, covered with metal sheeting. The front face is a louvered vent. Barrel tiles extend onto the roof. The shed dormers are in fair condition. These elements should be repaired in place, reusing existing material or new material of similar qualities. Wood louvers may be replaced with metal units of the same overall size. Louver configuration may vary in order to comply with air exchange requirements. Any screening should be fastened to the interior of the vent.

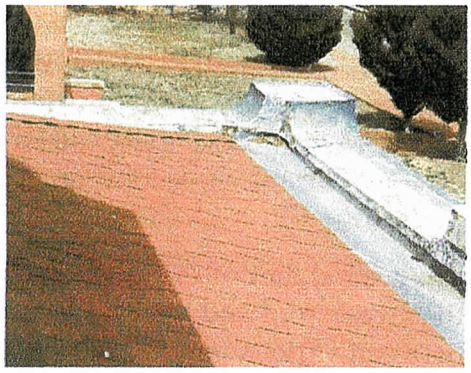
Existing roof penetrations may be removed as needed. Penetration areas should be repaired with materials to match the surrounding surfaces. The number of new roof penetrations should be minimized and blend with the surrounding tile. All flashing should be compatible with surrounding materials.

There has been significant water damage as a result of the failure of the arcade gutter system. Portions of nearly all of the arcade roof structural members have been compromised in this area. Decking damage is evident from below.



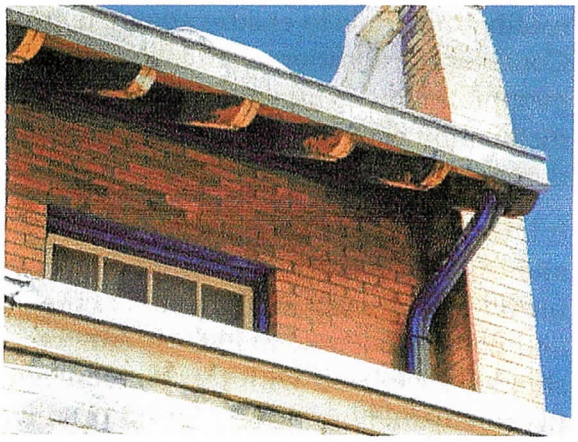
There are options to repair the arcade roof structure: 1) structural elements may be retained in place and

"sistered" to sound material. Existing roofing may be removed as needed and replaced with new compatible material; 2) due to the extent of the material deterioration, the entire arcade roof system may be removed and reconstructed if the new construction replicates the original roof exactly in slope, interfaces with bearing attachments, locations along top and bottom walls, etc. In this case, existing ceiling material in good condition should be removed, stored and reapplied to the new construction.



View of the arcade roof from the second floor

The arcade roof is visible from the ground: it is more dominant from the second floor. Although the 3-tab shingles appear to be in good condition, it may be reasonable to remove this mid-20th century roofing material in order to affect the repairs to the guttering system, decking, and structure. If removal of the material is required or desirable, the new material should be compatible with the overall architectural style of the building. The choice of a new material should take into account the structural loading of the arcade roof system, the slope of the roof, and the interface with the internal guttering system.



Above: Gutter assembly at gable roof eave

Below: Metal-lined gutter at outer edge of arcade roof

Gutters

The water collection system begins at the second floor gable. A metal-lined channel is created with a nailer board located at the eaves, above the rafter tail ends (see original construction documents detail, Sheet No. 7A). Outlets through the decking and corrugated downspouts are located at regular points along the horizontal channels. Downspouts are fastened to the second floor brick walls with interlocking collars. Some fasteners are unattached at downspouts or walls. Downspouts terminate at the arcade roof.



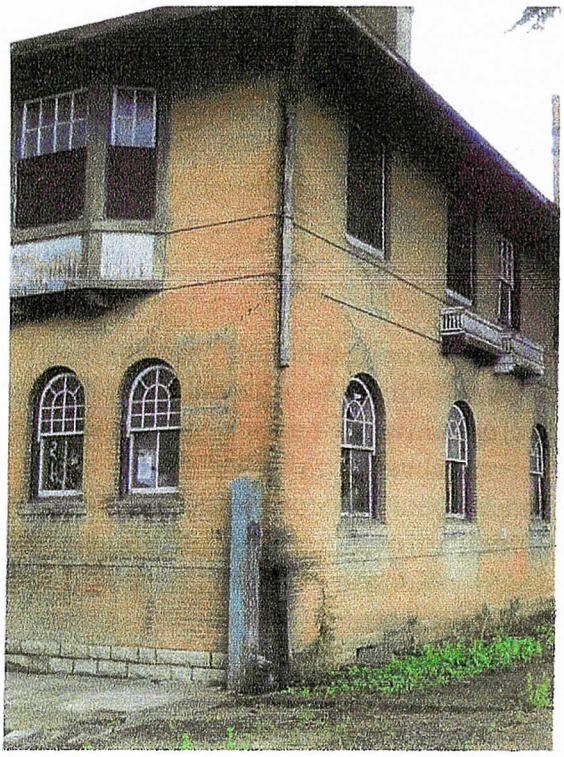
The metal channel, nailer, decking, and flashing are generally deteriorated: some sections of the assembly are absent. Joints and seams are damaged or unattached. These conditions have allowed water to damage the rafter ends, nailer board, and other materials in close proximity to the assembly.

An adequate amount of detail remains so that the system may be reestablished to its original configuration. Removal of damaged or deteriorated sections and replacement using material to match the original element in size, profile, texture, and surface is acceptable. If the original guttering system is not workable, a new system should be designed for the same location. It should not obscure the rafter tails or other detailing in the area.

The second part of the gutter system runs along the intersection of the low edge of the arcade roof and the arcade parapet. It is metal lined: joints between sections and between various parts of the system have separated. There are regularly spaced outlets and downspouts. The downspouts are fastened to the brick walls with interlocking collars: some fasteners are unattached at downspouts or walls. Lower downspouts terminate close to the building, sometimes at splash blocks. Like the gable guttering, there is evidence of water leakage along this part of the system (see discussion about arcade structural system).

At both levels, all seams and joints should be well sealed. Flashing should extend under roofing materials to ensure adequate protection. Consider the addition of an impervious membrane under the gutter channels, if the installation could be accomplished without damage to surrounding historic materials.

It is desirable to reuse the existing downspouts and collars. Repair to the components would include sealing seams and joints of the outlet and downspout assemblies. Missing sections should be replaced with section to match the corrugated profile or a round profile. Missing collars should be replaced with ones that replicate the original, or metal strap. Use compatible mortar to set receptors in the adjacent walls. Remove existing paint by hand scraping or water washing and apply an appropriate finish coat. Downspout terminations at both levels should be extended to a point away from the exterior wall to eliminate back splashing. Alternately, water could be contained or collected to a location away from the building base.



Northwest corner of the Castañeda Hotel showing gutter and downspout damage

Skylight

The gable skylight is an important element of the interior design. The metal frame and wire glass skylight is located along the gable peak, over the main staircase. It should retain its original form and location.



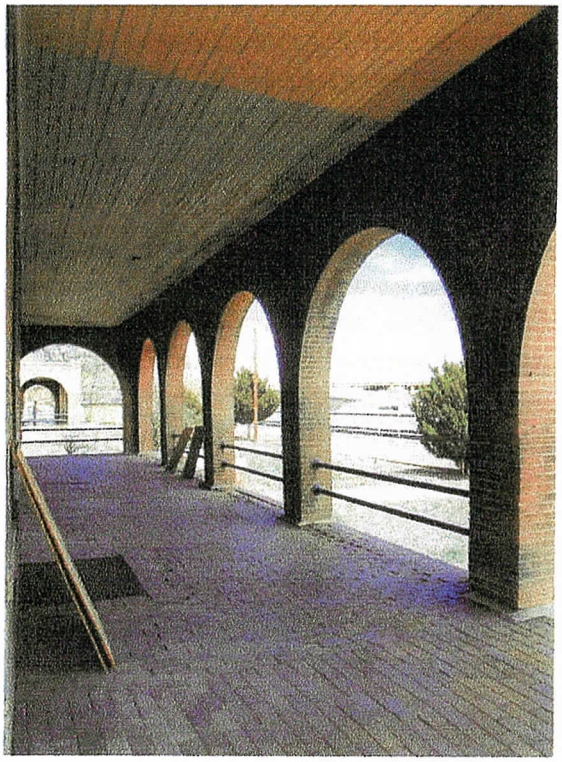
Skylight viewed from the second floor stair lobby showing damage to glazing and well walls

Glazing is cracked and patched. There is interior water damage at the walls below the sloped sides. The glazing and frame may be removed for repair and reinstalled. Curb material should be inspected and repaired or replaced as needed. Flashing along the exterior curb should be compatible with and integrated into the roofing material. The frame may be required to be adjusted to accommodate new glazing or to comply with life safety codes. In that case, the new configuration of the frame should follow the original as closely as possible. New clear glazing that complies with life safety code is acceptable.

ARCADE

The arcade is a significant architectural feature of the building. It should be retained and repaired to its original configuration.

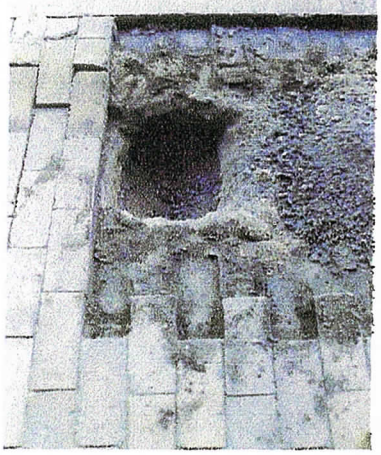
The ceiling of the arcade is continuous along its entire length. It is wood tongue and groove slats, painted, and fastened to joists of the roof system. The intersection with the brick walls is trimmed with a profiled crown molding. The material along the outer side has been severely damaged due to the failure of the guttering above. Techniques to rehabilitate the arcade structure are discussed earlier, see **ROOFS, Gutters**. Existing ceiling material in good condition should be retained or reinstalled. New material to replace the deteriorated slats and crown molding should match the original material in texture, size, shape, and profile. All material should be checked for secure fastening to the structure above. Preparation for new finishes should be as gentle as possible. Avoid sanding that removes excessive historic material or distorts surfaces. Avoid high pressure water that would penetrate and swell wood elements. Do not sandblast. Methods should be tested and evaluated on small, inconspicuous areas before proceeding to wide spread use. All surfaces should receive compatible primer and finish coating.



Above: Arcades at the east end of the two wings

Below: Excavaton at the arcade floor showing cinder fill



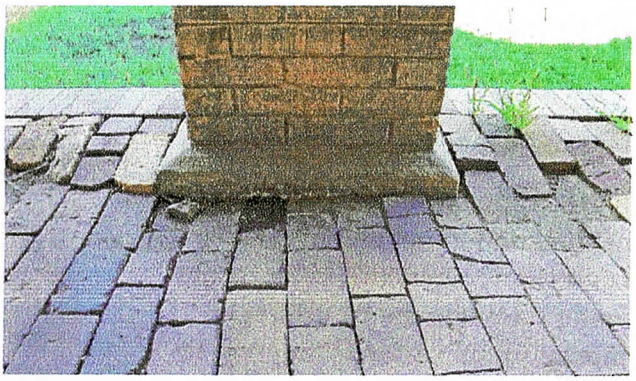


The walking surface is unmortared brick set in a running bond from building wall to arcade outer edge. The outer edge is a mortared soldier course continuous along the arcade perimeter, breaking only at the pier sandstone bases. Most of the paver faces are in good condition. The surface plane has become uneven, especially along the outer perimeter, due to melting of the fill material (rail cinder).

The walking plane should be leveled to the original elevation. Proposals suggest two options: 1) remove existing fill and install new fill, then relay pavers on a sand bed, or; 2) remove existing fill, install new fill, pour concrete slab, then relay pavers on a sand bed. Both options are acceptable. A slip joint should be installed between the sandstone foundation and a

new concrete slab. When existing material is removed, use methods that preserve the fired face of the bricks. Eroded bricks may be removed and replaced with bricks of similar properties.

The interface of the brick pavers at the sandstone pier bases is an area of concern. The dressed faces of the bases are eroded: this condition could be a result of water damage or foot traffic. A paving condition to prevent water hitting or standing at the sandstone base is a detail to consider. See more information under **EXTERIOR WALLS, Foundation**.



Arcade brick paving at sandstone pier base showing settling of brick and erosion of base

Universal access standards will require accommodation at the sidewalk level to the arcade and at one or several arcade doorways. The proposed sidewalk solution, ENTRY RAMP DETAIL, 6.23.2014, is consistent with the Secretary of the Interior's Standards for Rehabilitation: the new construction preserves the main entry into the arcade, uses vocabulary similar to the architectural style of the building, and does not affect the original historic fabric. Similar ramping along the arcade floor may be an acceptable solution to reach ground floor level from arcade floor level, provided a ramp meets applicable criteria and circulation is maintained along the arcade.

Five concrete stairways connect the arcade to the surrounding grade. These are important features of the hotel's association with the rail line. The condition of stair components vary from fair to poor: rise/run ratio is steep. Repair of the existing stairs may not be feasible. The stairs may be reconstructed using materials similar to the original: brick cheek walls should remain in place. Sandstone caps of the cheek walls are in poor condition. See more information under **EXTERIOR WALLS, Foundation**.

Life safety regulations will require handrails along new ramps and stairs and additional barriers along the edge of the arcade, between the piers. A new guardrail along the perimeter of the arcade, ideally, would retain the existing original pipe railing in place: additional barrier assembly would complement the railing. New assemblies would attach to the building with minimal consequence to the historic material. New exterior handrails, guardrails, and balusters at stairs, ramps, etc. may utilize some or all of the arcade guardrail design.

EXTERIOR WALLS

Foundation

Foundation walls are rusticated ashlar sandstone. It is in good condition, in general. In areas of water damage, the condition of mortar joints varies from good to poor. At some areas of earlier joint repair it appears that the mortar is incompatible with the surrounding stone: the repair is exacerbating deterioration of the sandstone in areas adjacent to the mortar.



An area of sandstone foundation requiring tuckpointing and eroded sandstone cap at stair cheek wall

Arcade piers sit on shallow rusticated sandstone blocks. They are in fair condition. See **ARCADE** for a discussion of floor detailing around the pier bases.

Cheek walls at east stairways are capped with rusticated sandstone slabs. The caps are in poor condition. Four caps have been covered with a cementitious coating. Sandstone surrounding the coating edge has disintegrated, changing the shape of the cap.

A mortar analysis is essential to determine the components and composition. Original mortar should be analyzed to determine a compatible recipe for repointing. Use mortar to match the existing material when tuckpointing and replacing brick.

Friable mortar or areas of incompatible mortar should be removed gently, using a hammer and chisel. Do not use hand angle grinders or similar power tools. Special care is required when removing incompatible hard mortars, so that additional sandstone does not break off with the mortar. Joints should be repointed with compatible mix and tooled to match the surrounding profile.

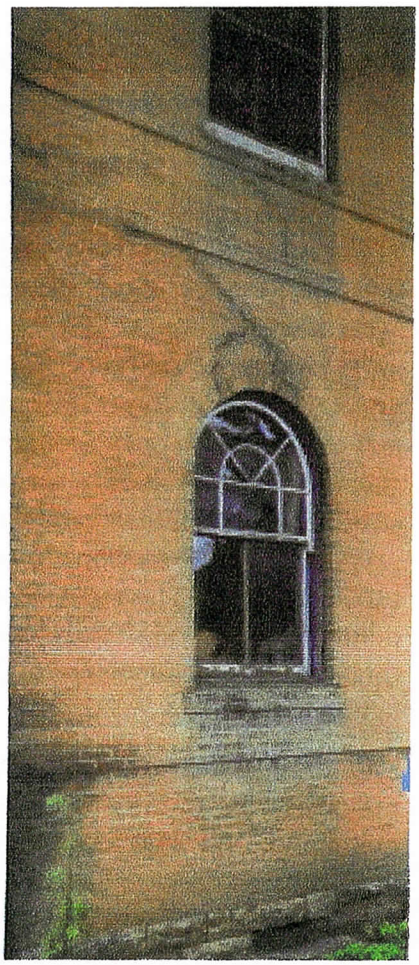
Areas of severe damage or erosion of sandstone may be repaired and "reconstructed" using a product with proven past performance, like Jahn Restoration Mortars. The application of water repellant coatings is unacceptable.

Vegetation, especially specimens with tendrils, should be removed from the base of the foundation. Sandstone is susceptible to erosion from water and abrasion. Fragments of disks or tendrils and other biological growth may be removed with low pressure water and natural bristle brushes. Test cleaning methods and materials on a small area before using the technique extensively.

Finished grade should be sloped positively away from the building for a minimum of five feet. Water from guttering systems should be deposited at a distance from the foundation that eliminates back splashing. See **ROOFS, Gutters** for more information.

Brick

The brick veneer is in good condition, in general. Deterioration is confined to areas where water has been able to penetrate between the wythes or frequently sheet the surface. In addition, some shifting has resulted in joint cracking. There is graffiti etched into the brick at the first floor level, especially concentrated at the southwest corner, near the Railroad Avenue entry.



Failures in brick joints that will require tuckpointing

If brick surfaces are cleaned use low pressure water (100 psi), soap, and natural bristle brushes. Test cleaning methods and materials on a small area before using the technique extensively. It may not be feasible to clean areas of staining further than washing.

A mortar analysis is essential to determine the components and composition. Original mortar should be analyzed to determine a compatible recipe for repointing. Use mortar to match the existing material when tuckpointing and replacing brick. Friable mortar or areas of incompatible mortar should be removed gently, using a hammer and chisel. Do not use hand angle grinders or similar power tools.

Areas of damaged brick veneer should be repaired to duplicate its original condition. Replacement bricks should match the original in color, texture, and porosity. Deteriorated brick should be removed using hand tools and replaced with surplus material found on site. In some areas, especially at the northwest corner, sections of the wall may need to be rebuilt. Remove materials carefully. Shore any structural members that bear in the area as well as sections of the walls that may be affected by removal of material. Stockpile bricks that may be reused. After the section to be rebuilt is clear, re-lay the materials to match the surrounding coursing, pattern, spacing, and mortar profile. Take care to reestablish sills, arches, etc. It may be helpful to make measured drawings and photo-document the area prior to the start of work to be certain the section is replaced accurately.

Bricks with etched graffiti may be repaired using a product with proven performance, like Jahn Restoration Mortars. Coatings, such as anti-graffiti surfactants, should be chosen for proven performance, and compatibility with qualities of the existing

substrate, (ie, permeability, sheen, color). The application of water repellant coatings is unacceptable.



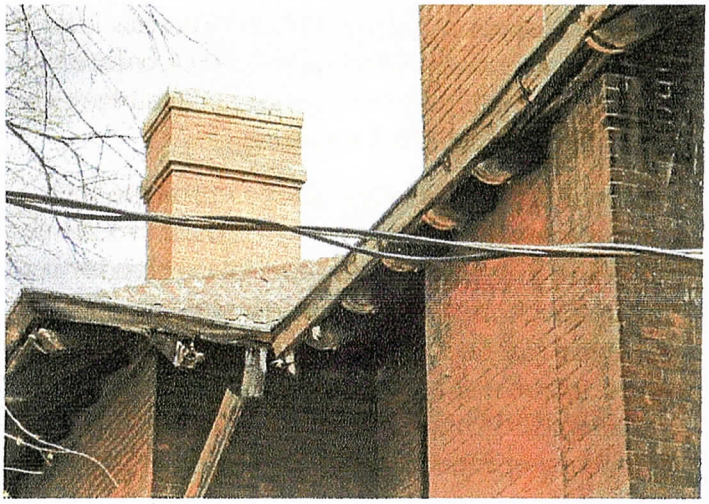
Etched graffiti in arcade brick

Exterior Woodwork

Exterior woodwork includes, but is not limited to, gable rafter tails (pairs at each spacing), soffit, fascia, eave trim, bay window bulkheads and mullions, faux balcony balustrades, and brackets. The condition of the woodwork varies with the amount of exposure: elements protected under the arcade and facing north and east are in good to fair condition; elements facing west and south are more severely deteriorated. In all cases, sufficient material is available to repair or replace sections to replicate those removed. The most severely deteriorated woodwork elements are those elements associated with the gable guttering.

Small areas of deteriorated wood may be repaired or reconstructed using a wood consolidant and filler with proven past performance, such as Abatron. Larger sections may be removed and replaced with material cut to a profile to match the surrounding material.

Severely deteriorated rafter tails may be replaced. New sections should be cut to exactly match the original profile and attached to its twin, if the original twin remains intact. If both rafter tails require replacement, new tails may be added to solid rafter section using a modified fiberglass rod techinque. Other solutions may be acceptable.



Above: Typical condition of rafter tails and fascia



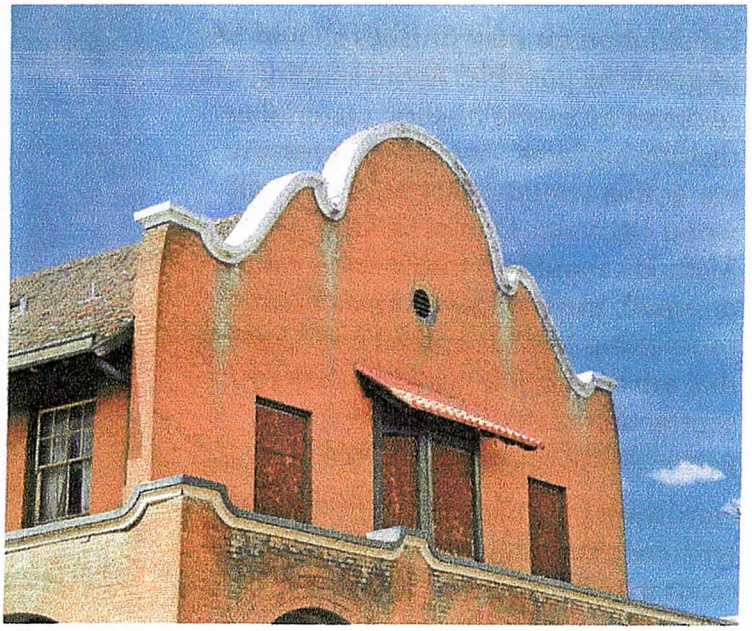
Below: Faux balconies under second floor windows

Preparation for new finishes should be as gentle as possible. Avoid sanding that removes excessive historic material or distorts surfaces. Avoid high pressure water that would penetrate and swell wood elements. Do not sandblast. Methods should be tested and evaluated on small, inconspicuous areas before proceeding to wide spread use. All surfaces should receive compatible primer and finish coating.

Metal coping and sheathing

Metal coping along parapet caps, horizontal and curvilinear parapets, and cupola walls should be repaired to the original configuration in size, profile, texture and surfacing. Seams should be well joined, and the metal should be secured to substrates with appropriate fasteners and compatible compounds.

Photo documentation from the 1912 shows the metal coping in a light color, likely to emulate a sandstone element. Preparation for new finish coat(s) should be as gentle as possible to achieve desired results. A low pressure water, soap, and natural bristle brushes may remove scaled and flaking coatings. Any hand scraping should be performed with care: do not incise blade points into the surface. Some chemical cleaning, especially at complex shapes may be appropriate. Test all cleaning methods and materials on a small area before using the technique extensively.



Metal coping detail along arcade parapet and curvilinear parapet.

EXTERIOR WINDOWS AND DOORS

Windows, doors, and other openings are character-defining features. The exterior openings in the Castañeda enhance its Mission Revival architectural style. Overall, the door and window units and associated elements appear to be in good condition. A unit-by-unit survey would clarify the extent and nature of repairs to bring each assembly to a workable and sound condition.

Removal or replacement of windows and doors is undesirable. Repair of existing units is the preferred method of rehabilitation. Elements (such as individual pieces of frame, sash, track, trim, etc.) which are beyond reasonable repair, should be replaced with new material that matches the original shape and profile exactly. The use of new material to fill gaps from hardware removal or small areas of deterioration is acceptable. Small areas may be strengthened and filled with a consolidant product with a proven record of performance (such as Abatron) and it is compatible with the surrounding historic material. Missing elements, such as casing, may be recreated using patterns from other intact units.

Preparation for new finishes should be as gentle as possible. Avoid sanding that removes excessive historic material or distorts surfaces. Avoid high pressure water that would penetrate and swell wood elements. Do not sandblast. Methods should be tested and evaluated on small, inconspicuous areas before proceeding to wide spread use. Coatings that are compatible with expansion/ contraction of material and vapor permeability should be chosen.

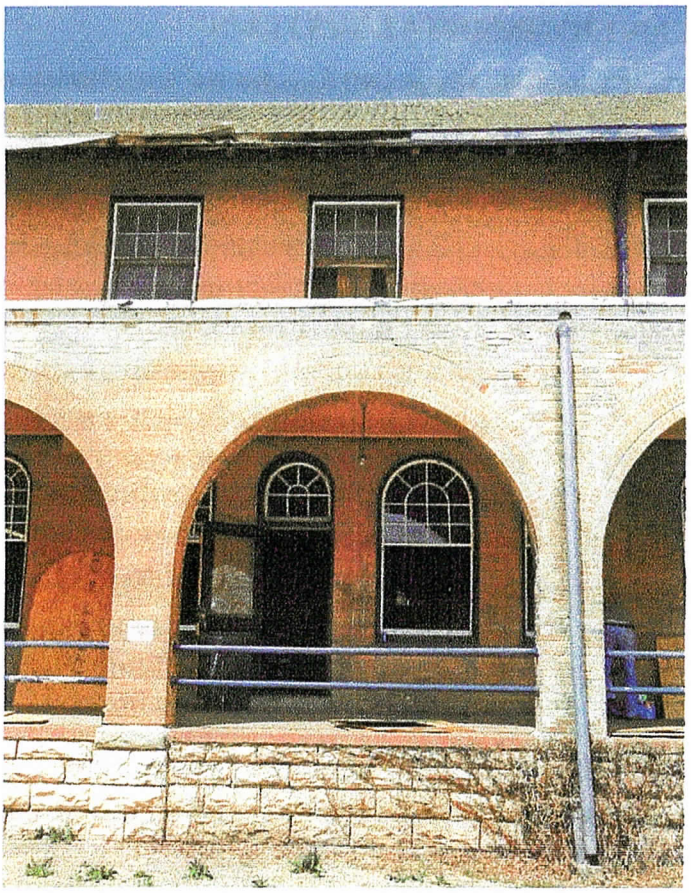
Hardware may be reused, if compatible with code requirements. Window sash cords may be replaced, when necessary, for smooth operation.

From primary documentation, originally, exterior window and doors surfaces and assembly elements were painted dark (blue or black). White muntins appear in photos from about 1950.



Typical first floor window

Alterations to exterior window and door openings should be minimized. Changes from window to door units should retain the original brick opening and extend the opening downward. Door assemblies should fit within the original opening. Do not extend the exterior brick surface into the opening. If opaque surface is required at openings, add panels within the opening area. In extreme cases, assemblies may be removed and openings may be filled with materials that complement interior and exterior materials. The new surface should sit behind both interior and exterior adjacent wall surfaces. This technique would be appropriate only at secondary facades and would be reviewed within the context of the entire rehabilitation project.



Door and window units under the south arcade

Modifications for energy efficiency

Modifications for energy efficiency should be weighed against the financial cost, affect to historic material, and actual savings. Effective changes to windows and doors may be determined through a whole building energy audit. Suggestions to address thermal properties follow, in order of compatibility to the Secretary of the Interior's *Standards for Rehabilitation:*

- Use of thermal shades or blinds, draperies to achieve energy reductions and comfort levels
- Installing clear, low-emissivity (low-e) film on existing panes
- Installing weather stripping into original frames, sash, and panels, provided the new material does not alter the original configuration or proportion of the unit
- Installing interior or exterior storm panels, provided they do not intrude into or alter the look of the original patterns, and maintain the existing proportions of the sash, muntins, mullions, etc.
- Replacement glazing provided the new material does not alter the original configuration, profile, or proportion of the unit.

ENVIRONMENTAL SYSTEMS

The Castañeda Hotel will require the installation of new power, lighting, plumbing, heating, and cooling systems. New construction (such as equipment screening) should complement the character of the historic structure, yet be distinguishable from the original building envelope.

The size, amount, and location of ducting and conduit are dependent on the new reuse plan for the building. The following are some factors to consider during the design and installation of these building components:

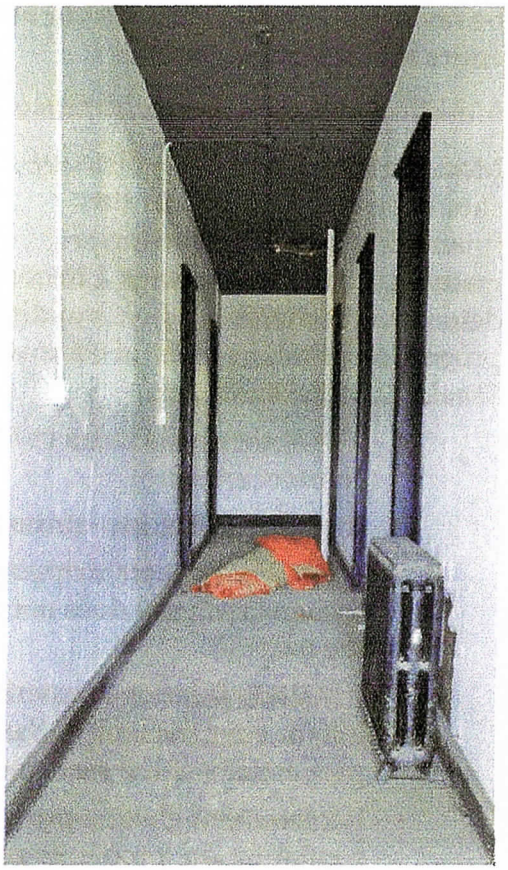
- Run lines together to minimize locations of new components and equipment.
- The building's original character is a finished one. Do not leave system components exposed to suggest a "warehouse" appearance. Conceal components in soffits or within other constructions. Study areas where new system construction would meet original components.
- Run lines through ceiling, floor, and wall spaces when possible.
- New fixtures, such as lights or heating elements, should complement the original character of the building. They do not have to replicate units of the original periods of construction.

Energy

An energy audit may offer a feasible course of action to improve energy efficiency. Options to improve the thermal qualities of the building envelope could include the addition of blown insulation between floors, into wall cavities, and in the attic; and the installation of weather stripping at doors and windows. Furred spaces and insulation at walls or ceilings that change the relationship of surface to adjacent architectural detailing, like molding and trims, is not acceptable.

Heating and cooling

No rooftop units, equipment or conduit should be employed. These elements would be highly visible. Attic and basement spaces should be used as much as possible to house environmental systems. Specific requirements would depend on structural capability and building code considerations. Besides providing heating or cooling, environmental systems should regulate and stabilize relative humidity within the building. Multiple units and appropriate zoning could assist with energy efficiency.



Elements of the existing power and heating systems

Conduits and ducting should not be present in the primary public spaces. Those include the arcade, lunch room, lobby, dining room, second floor primary circulation corridor, and the main stairwell. If it is not possible to route conveyance outside these spaces, conduits and ducting should be located and concealed in a manner to match the architectural style of the space. Placement and housing should not diminish the spatial volumes or hide or damage existing architectural detailing.

Service spaces such as the kitchen and food service areas are historically utilitarian in nature. These spaces may contain exposed system equipment, and their placement would be evaluated during a project review.

Power and lighting

Elements of new power systems should be concealed within walls or ceiling spaces as much as possible. Emergency lighting, exit signs, etc. should be installed without damaging historic fabric, and in locations that do not compete with significant architectural detailing.

Many original or early light fixtures remain in the building. Consider reusing them after rewiring the units to meet applicable codes.

New fixtures could be concealed, as with recessed housings, or within new soffit constructions, where appropriate. New surface mounted fixtures should complement the architectural style of the building. The use of LED lamps could provide significant energy savings.



Original ceiling fixture in second floor sleeping room

Plumbing

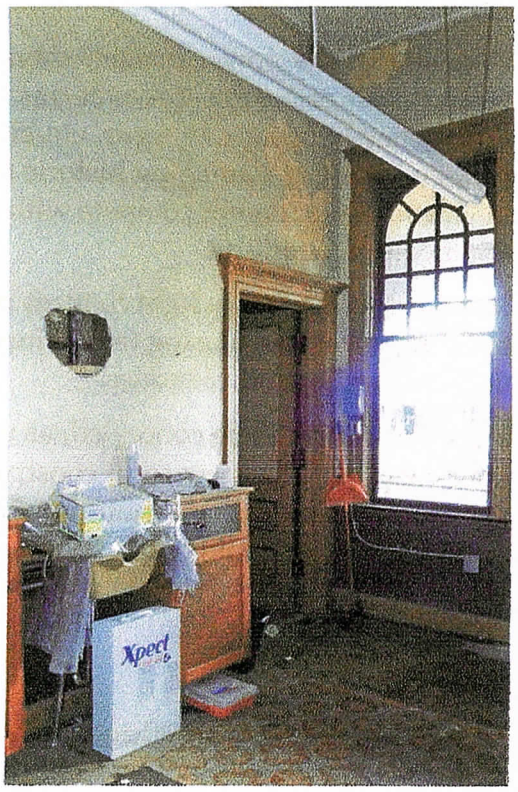
The addition of private bathrooms in sleeping rooms is a modern necessity. The creation of these spaces should take into account structural loading, and should respect original existing openings in the interior and exterior walls.

INTERIOR FINISHES

Finishes and detailing are character defining elements of all buildings, including the Castañeda Hotel. They convey information about the owners, craftspeople, and builders. In a larger context, they reflect social developments and styles. A survey of the condition of all of the finishes would clarify the extent and nature of repairs to bring each surface to an acceptable and sound condition.

Walls

Wall finishes in the hotel range from applied panels to plaster to exposed brick. Detailing includes picture molding, chair rail, and wainscoting. Overall, wall assemblies should be maintained in place. Areas of deterioration should be repaired using materials that are compatible with the original material.



Typical plaster wall surface, service room, first floor

Surfaces of repaired or new materials must preserve the relationship at architectural detailing adjacent to or contained within the wall surface. For example, plaster abutting door casings, window trim, and floor baseboard molding should retain the same amount of offset between the two surfaces as the original condition.

Lunch counter and bar walls are covered with tall wood paneling and molding. This assembly is probably original, although the paper within the panels may not be. Panel configuration and other molding should remain in place and be repaired.

The reuse or addition of Lincrusta panels would be desirable, but not required. Currently, Lincrusta is evident in the service corridor east of the lobby and may have been part of the wainscot assemblies in the lobby, lunch counter, and the billiard room. The patterns and finish of new material should complement the original construction of the building

Food service area, including the main kitchen is exposed and painted brick with minor wood molding. If these areas are to remain in food service, coverings and coatings must comply with food handling regulations, as well as being compatible with the environmental requirements of the structure (i.e., vapor permeability, appropriateness to the historical character of the space).

Corridor walls, service rooms, and sleeping rooms on both floors currently exhibit a variety of finishes; painted plaster, wall paper over plaster, and a small amount of metal paneling. The continued employment of these types of finishes would be consistent with the building's age and historic character.



Lunch room showing wood panel wainscot and tile flooring

Floors

The first level flooring is a variety of materials: concrete tile, recent carpeting, composition tile, concrete slab, terrazzo, and tongue-and-groove wood strips.

The terrazzo in the dining room and the tile in the lunch counter should remain and be repaired using appropriate materials and techniques. The existing lobby flooring appears to have been laid over wood stripping. Since the tile and carpeting in this area is not original and it is not distinctive on its own, new material is an option. If the original wood floor is present and repairable, retention of this feature is desirable. Other choices should be evaluated and selected to complement the historic character of the lobby space.

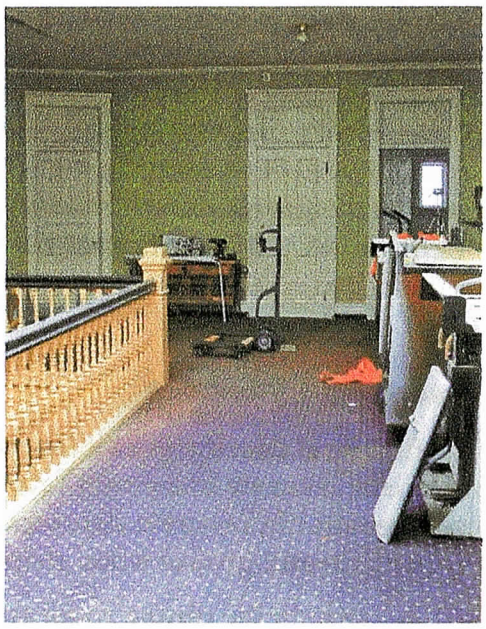
Food service areas with concrete flooring may be repainted. Alternately, new material that complies with occupancy requirements should be selected to complement the utilitarian nature of these spaces.

In areas of the first level where wood flooring is in good condition, it should be retained and refinished. Flooring in secondary spaces should be evaluated for reuse: new material should be selected to complement the historic character of the hotel's original construction

The entire second floor is finished with tongue-and-groove wood strip flooring, with the exception of the stair lobby. Overall, the wood flooring is in good condition, and it should be retained and refinished. Areas of deteriorated material should be replaced with material to match species, dimension, and profile. Services spaces, such as utility closets, housekeeping, etc. may receive more functional finish material like composition tile. New private toilet and bath rooms may receive finish material appropriate for the area and selected to complement the historic character of the original construction.

Like the first floor lobby, the second floor stair lobby has been carpeted. Since this finish is not original and it is not distinctive on its own, new material is an option. If the original wood floor is present and repairable, retention of this feature is desirable. It is especially important to consider life safety requirements for the stair finish. New finish

choices should be evaluated and selected to complement the historic character of the lobby and corridor spaces.



Second floor stair lobby flooring

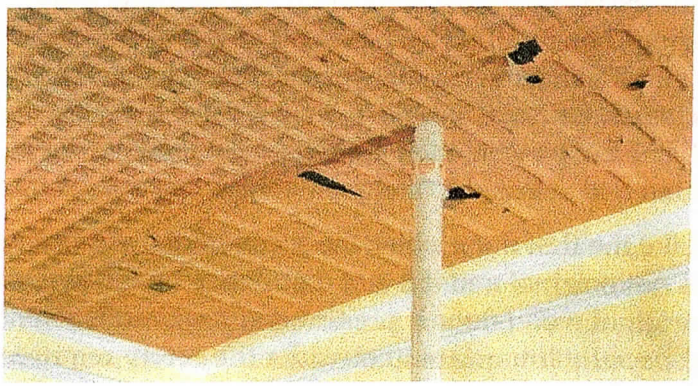
On both floors, when the original flooring is reused, preparation for new finishes should be as gentle as possible. Avoid techniques that remove excessive material or distort surfaces. Avoid high pressure water that would penetrate and swell wood. Do not sandblast any material. Methods should be tested and evaluated on small, inconspicuous areas before proceeding to wide spread use. Take care to avoid damaging adjacent material like floor base. Installation of new floor coverings should maintain the original, or close to original, floor level. New finish material should maintain the existing relationships with adjacent detailing, such as baseboards and casings. See Interior Woodwork for more information. A transparent coating like varnish would be most appropriate for the original wood flooring.

Ceilings

All ceilings, with the exception of the lobby and dining room ceilings are smooth plaster. Plaster ceilings should be retained and repaired with similar and compatible materials when necessary. Where deterioration is severe or rehabilitation construction requires new finishes, approximate the finished qualities of the original plaster. Options are listed below, beginning with the most preferred:

- Two coat plaster over rock lath
- Veneer plaster
- Drywall

The pressed metal panels of the lobby are in good condition. Retention of the material is highly desirable. There is extensive water damage to some of the panels in the dining room. Replacement with metal panels that match the existing historic patterns is desirable, but may not be feasible. Acceptable solutions include the following options: 1) replacement with a panel of alternative material that may be pressed to replicate the



Pressed metal ceiling in the lobby

existing component; 2) redesign of the ceiling panel layout to reuse all original panels that are in good condition and the addition of new material (such as smooth plaster or new unembellished metal panels). Other options may be acceptable.

Methods to remove existing flaking paint and prepare for new finishes should be as gentle as possible. Avoid techniques that distort surfaces. Do not sandblast. Methods should be tested and evaluated on small, inconspicuous areas before proceeding to wide spread use. Take care to avoid damaging adjacent material like crown molding. New finish coatings should not obscure the detailing and relief of the pressed patterns.

Installation of metal ceilings in rooms that do not have them currently is discouraged.

Interior Woodwork

Elements (such as individual pieces of molding, nosing, sash, trim, etc.) which are beyond reasonable repair, may be replaced with new material that matches the original shape and profile exactly. The use of new material to fill gaps, such as from hardware removal or small areas of deterioration is acceptable. Small areas may be strengthened and filled with a consolidant provided the product has a proven record of performance (such as Abatron) and it is compatible with the surrounding historic element. Missing elements, such as casing, may be recreated using patterns from other intact units.

Preparation for new finishes should be as gentle as possible. Avoid sanding that removes excessive historic material or distorts surfaces. Avoid high pressure water that would penetrate and swell wood elements. Do not sandblast. Methods should be tested and evaluated on small, inconspicuous areas before proceeding to wide spread use.

Staircases

The staircases, especially the central one, are character defining features of the Castañeda Hotel. Reuse and modification of these elements will be closely tied to building and life safety code requirements. Ideally, the front stair would remain open through the first and second floor lobbies.

Replacement of worn treads should match the original design exactly. The balustrade should be repaired and



Open balustrade and newel posts at the main stairwell, second floor lobby

reused. The balustrade surrounding the second floor opening may require additional height. An option to achieve this is to construct a low cheek wall at the bottom and reinstall the balustrade as a component on top of the wall. Other solutions may be acceptable. The service stair in the north wing should be retained in its present form if possible. Modifications to this element are less critical since it is in a non-public area. Minimally, both stairs may require side handrails. New handrails should be scaled to match the space and of a profile that reflects the refined nature of the associated woodwork.

Interior Doors and Other Openings

Preservation and rehabilitation of all existing trimmed and cased openings is desirable. Interior window and door assemblies are highly detailed, even within service spaces. Removal of windows and doors is undesirable. Repair of existing units is the preferred method of rehabilitation.

New plan configurations, especially on the second level, may render some interior openings unnecessary. Retaining the assembly in place, but inoperable, is the preferred solution, especially when the unit connects to one of the public spaces (corridor or stair circulation).

Door and transom assemblies into egress spaces present potential life safety issues. Building code requirements of a re-use project will dictate how, or if, these units are able to remain in their current form. Retention would be highly desirable. The decision must be determined after consultation with code officials and design professionals.

Miscellaneous Moldings

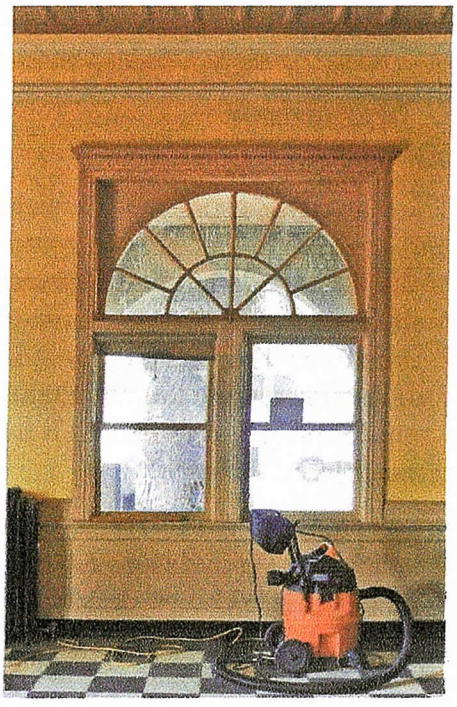
Elements such as door and window casings, (plinth blocks, pilaster and corner block molding), baseboards, base shoe, ceiling molding, corner guards, etc. should be retained in place and repaired, if necessary.



Above: Typical door assembly in second floor sleeping room

Below: Interior lobby window with casing and wainscot, crown molding, and picture rail trim

Below left: Detail of baseboard and door casing





RESOURCES

Secretary of the Interior's *Standards for Rehabilitation*

A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.

Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

National Park Service Preservation Briefs www.nps.gov/tps/how-to-preserve/briefs.htm:

#1 Cleaning and Water-Repellent Treatments for Historic Masonry Buildings www.nps.gov/tps/how-to-preserve/briefs/1-cleaning-water-repellent.htm

#2 Repointing Mortar Joints in Historic Masonry Buildings www.nps.gov/tps/how-to-preserve briefs/2-repoint-mortar-joints.htm

#3 Improving Energy Efficiency in Historic Buildings www.nps.gov/tps/how-to-preserve /briefs/3-improve-energy-efficiency.htm

#4 Roofing for Historic Buildings www.nps.gov/tps/how-to-preserve/briefs/4-roofing.htm

#6 Dangers of Abrasive Cleaning to Historic Buildings www.nps.gov/tps/how-to-preserve/briefs/6-dangers-abrasive-cleaning.htm

#9 The Repair of Historic Wooden Windows www.nps.gov/tps/How-to-preserve/briefs/9-wooden-windows.htm

#16 The Use of Substitute Materials on Historic Building Exteriors www.nps.gov/tps/How-to-preserve/briefs/16-substitute-materials.htm

#18 Rehabilitating Interiors in Historic Buildings—Identifying Character-Defining Elements www.nps. gov/tps/how-to-preserve /briefs/18-rehabilitating-interiors.htm

#21 Repairing Historic Flat Plaster—Walls and Ceilings www.nps.gov/tps/how-to-preserve /briefs/21-flat-plaster.htm

#24 Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches www.nps. gov/tps/how-to-preserve /briefs/24-heat-vent-cool.htm

#25 The Preservation of Historic Signs www.nps.gov/tps/how-to-preserve/briefs/25-signs.htm

#32 Making Historic Properties Accessible www.nps.gov/tps/how-to-preserve/briefs/32-accessibility.htm

Brick signs http://www.fcgov.com/historicpreservation/ghostsigns.php

Stone and mortar repair

Cathedral Stone Products, http://www.cathedralstone.com/

http://www.mortaranalysis.biz/

www.limeworks.us/SendSample.html

Lincrusta wall finish http://www.lincrusta.com

Fiberglass rod repair of structural wood

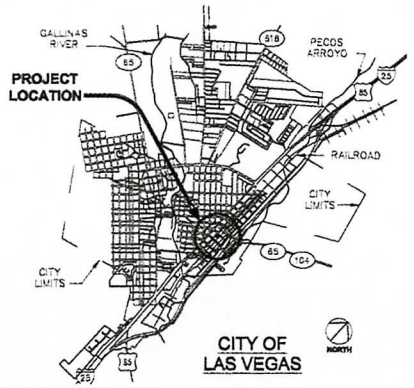
http://www.nps.gov/dscw/upload/DSC-TechBulletin-04-05.pdf

http://ncptt.nps.gov/blog/improved-method-for-repairing-wooden-structural-beams-in-ccc-nhl-district-2011-10/

CASTANEDA HOTEL

Building Renovations
Las Vegas, New Mexico

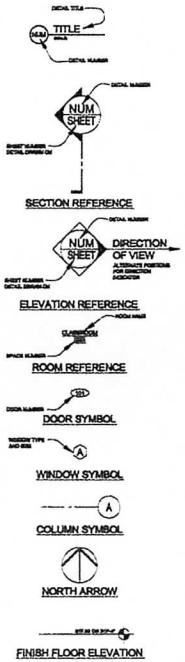
VICINITY MAP
Las Vegas, New Mexico



Castaneda Hotel
524 Railroad Avenue
Las Vegas, New Mexico

LEGEND

DETAIL NOTATION



MATERIALS

Plan / Section

- EIFS
- BRICK
- CONCRETE
- CONCRETE MASONRY UNITS
- EARTH
- CAST STONE
- INSULATION, BATT
- INSULATION, RIGID
- METAL, LARGE SCALE
- METAL, SMALL SCALE
- PLYWOOD
- POROUS FILL
- WOOD, FINISHED
- WOOD, ROUGH (CONTINUOUS)
- WOOD, ROUGH (INTERRUPTED)

Elevation

- BRICK
- CERAMIC TILE
- CONCRETE/PLASTER
- RUNNING BOND MASONRY

DRAWING INDEX

ARCHITECTURAL

G 100	GENERAL PROJECT INFORMATION
A 101	FIRST FLOOR PLAN - EXISTING
A 102	SECOND FLOOR PLAN - EXISTING
A 103	FIRST FLOOR PLAN
A 104	SECOND FLOOR PLAN

NOTE: IF CLARIFICATION OF DRAWINGS OR DETAILS IS REQUIRED CONTACT ARCHITECT IMMEDIATELY.

NOTE: IF DISCREPENCIES OCCUR BETWEEN DRAWING SHEETS CONTACT ARCHITECT FOR CLARAFICATION.

CODE & BUILDING DATA

1. Building Code:
   2009 International Building Code
   2009 International Existing Building Code
   2009 NM Commercial & Residential Building Code
   2009 NM Plumbing and Mechanical Code
   2009 Uniform Mechanical Code
   2009 Uniform Plumbing Code
   2011 NM Electrical Code
   2011 National Electrical Code

2. Occupancy:
   First Floor:
   Group A2, Assembly - Restaurant & Bar
   Group B, Business - Hotel Lobby & Offices
   Group R1, Hotel
   Group S, Storage - Bar Storage

   Second Floor:
   Group R1, Hotel

3. Type of Construction: Type V

4. Areas:

First Floor:	
Lobby	812 s/fn
Dining Room	1,696 s/fn
Kitchen	1,348 s/fg
Kitchen Office	883 s/fg
Kitchen Storage	840 s/fg
Bar	1,112 s/fn
Bar Storage	187 s/fg
Residential - Hotel	2,554s/fg
Second Floor:	
Residential - Hotel	12,170 s/fg

5. Number of Stories: 2
6. Height of Building: 40'-0"

7. Occupant Load:

First Floor:	
Lobby - A2	41 ppl @ 15 s/fg per occ.
Dining Room - A2	127 ppl @ 15 s/fn per occ.
Kitchen	7 ppl @ 200 s/fg per occ.
Kitchen Office	5 ppl @ 200 s/fg per occ.
Kitchen Storage	4 ppl @ 200 s/fg per occ.
Bar - A2	74 ppl @ 15 s/fn per occ.
Bar Storage	1 ppl @ 300 s/fg per occ.
Residential - R1	13 ppl @ 200 s/fg per occ.
First Floor Total:	272 ppl
Second Floor:	
Residential - R1	81 ppl @ 200 s/fg per occ.
Second Floor Total:	81 ppl

8. Exiting Calculations:
   First Floor:
   Required: occ. x .2" = 65.2" — Provided = 438"
   Second Floor:
   Required stairway width: occ. x .3" = 18.3" — Provided: 127"

9. Plumbing Fixtures:

Water Closets:	
Required at Dining, Bar, Lobby & Office: 8	Provided: 10
Required at Kitchen: 0	Provided: 1 unisex
Lavatories:	
Required at Dining, Bar, Lobby & Office: 8	Provided: 8
Required at Kitchen: 0	Provided: 1 unisex
Drinking Fountains:	
Required: 1	Provided: 1

Jonathan Whitten + Associates
1017 Seventh Street Las Vegas, New Mexico
t. 505.795.8376 jwhitten98@msn.com

CASTANEDA HOTEL
Building Renovations
524 Railroad Avenue
Las Vegas, New Mexico

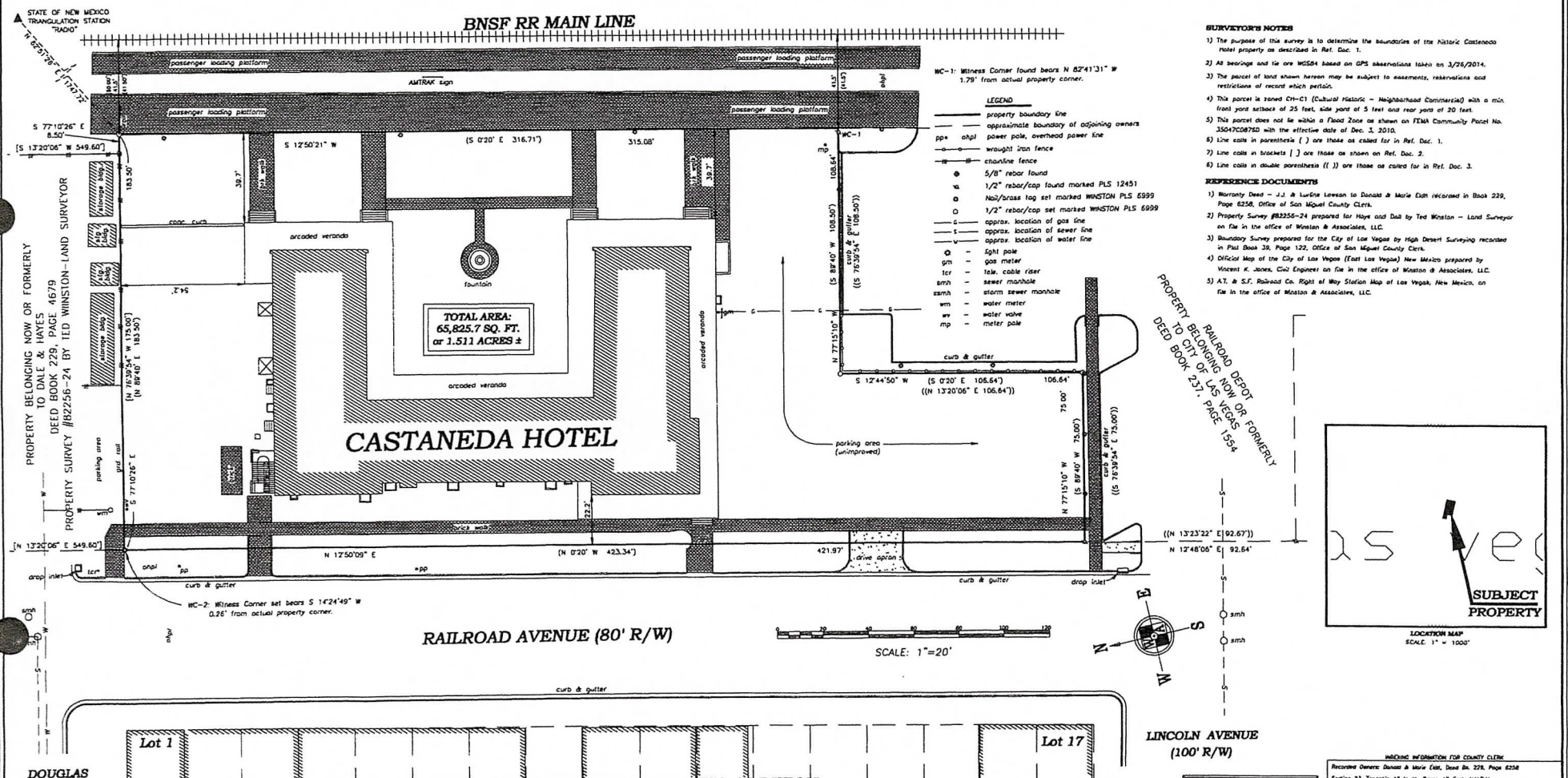
GENERAL PROJECT INFORMATION

REVISIONS

FILE: 1414 G1.0.dwg
CHECKED: JW
DRAWN:
PROJECT NO: 1414
DATE: 8.28.14

SHEET NO. G100 OF SHEETS

BOUNDARY SURVEY OF THE CASTANEDA HOTEL BEING PROPERTY BELONGING NOW OR FORMERLY TO DONALD & MARIE ELDH, WITHIN THE CITY OF LAS VEGAS, SAN MIGUEL COUNTY, NEW MEXICO, AND LYING WITHIN THE LAS VEGAS LAND GRANT, PROJECTED SECTION 23, TOWNSHIP 16 NORTH, RANGE 16 EAST, N.M.P.M.



LOCATION MAP
SCALE: 1" = 1000'

LEGEND

- property boundary line
- approximate boundary of adjoining owners
- pp• ohpl — power pole, overhead power line
- wrought iron fence
- chainlink fence
- ● 5/8" rebar found
- ⊗ 1/2" rebar/cap found marked PLS 12451
- ⊙ Nail/brass tag set marked WINSTON PLS 6999
- ○ 1/2" rebar/cap set marked WINSTON PLS 6999
- approx. location of gas line
- approx. location of sewer line
- approx. location of water line
- ☼ – light pole
- gm – gas meter
- tcr – tele. cable riser
- smh – sewer manhole
- ssmh – storm sewer manhole
- wm – water meter
- wv – water valve
- mp – meter pole

SURVEYOR'S NOTES

1) The purpose of this survey is to determine the boundaries of the historic Castaneda Hotel property as described in Ref. Doc. 1.
2) All bearings and tie are WGS84 based on GPS observations taken on 3/26/2014.
3) The parcel of land shown hereon may be subject to easements, reservations and restrictions of record which pertain.
4) This parcel is zoned CH-C1 (Cultural Historic – Neighborhood Commercial) with a min. front yard setback of 25 feet, side yard of 5 feet and rear yard of 20 feet.
5) This parcel does not lie within a Flood Zone as shown on FEMA Community Panel No. 35047C0875D with the effective date of Dec. 3, 2010.
6) Line calls in parenthesis ( ) are those as called for in Ref. Doc. 1.
7) Line calls in brackets [ ] are those as shown on Ref. Doc. 2.
8) Line calls in double parenthesis (( )) are those as called for in Ref. Doc. 3.

REFERENCE DOCUMENTS

1) Warranty Deed – J.J. & Lurline Lawson to Donald & Marie Eldh recorded in Book 229, Page 6258, Office of San Miguel County Clerk.
2) Property Survey #B2256-24 prepared for Hays and Dale by Ted Winston – Land Surveyor on file in the office of Winston & Associates, LLC.
3) Boundary Survey prepared for the City of Las Vegas by High Desert Surveying recorded in Plat Book 39, Page 122, Office of San Miguel County Clerk.
4) Official Map of the City of Las Vegas (East Las Vegas) New Mexico prepared by Vincent K. Jones, Civil Engineer on file in the office of Winston & Associates, LLC.
5) A.T. & S.F. Railroad Co. Right of Way Station Map of Las Vegas, New Mexico, on file in the office of Winston & Associates, LLC.

SURVEYOR'S CERTIFICATION

I, Edward G. Winston, Jr. a New Mexico Registered Professional Surveyor certify that I conducted and am responsible for this survey made on March 25-30, 2014 that this survey is true and correct to the best of my knowledge and belief, and that this survey and Plat meet the Minimum Standards for Land Surveying in New Mexico.

I further certify that this is a Boundary Survey of an existing tract and a lot line adjustment as defined in the New Mexico Subdivision Act.

Edward G. Winston, JR. N.M.P.L.S. 6999

STATE OF NEW MEXICO }ss
COUNTY OF SAN MIGUEL }

On this _____ day of _____ 2014, the foregoing instrument was acknowledged before me.

My Commission Expires: _____ NOTARY PUBLIC

FILED IN MY OFFICE
AT _____ O'CLOCK _____ M.
DATE: _____
COUNTY CLERK AND RECORDER SAN MIGUEL COUNTY
BY: _____
DEPUTY: _____
BOOK _____ PAGE _____

WORKING INFORMATION FOR COUNTY CLERK
Recorded Owners: Donald & Marie Eldt, Deed Bk. 229, Page 6258
Section 23, Township 16 North, Range 16 East, N.M.P.M. (projected into the Las Vegas Land Grant)
Las Vegas Town Company's Addition
Lincoln Parcel Code Number: 1-085-083-358-050

BOUNDARY SURVEY

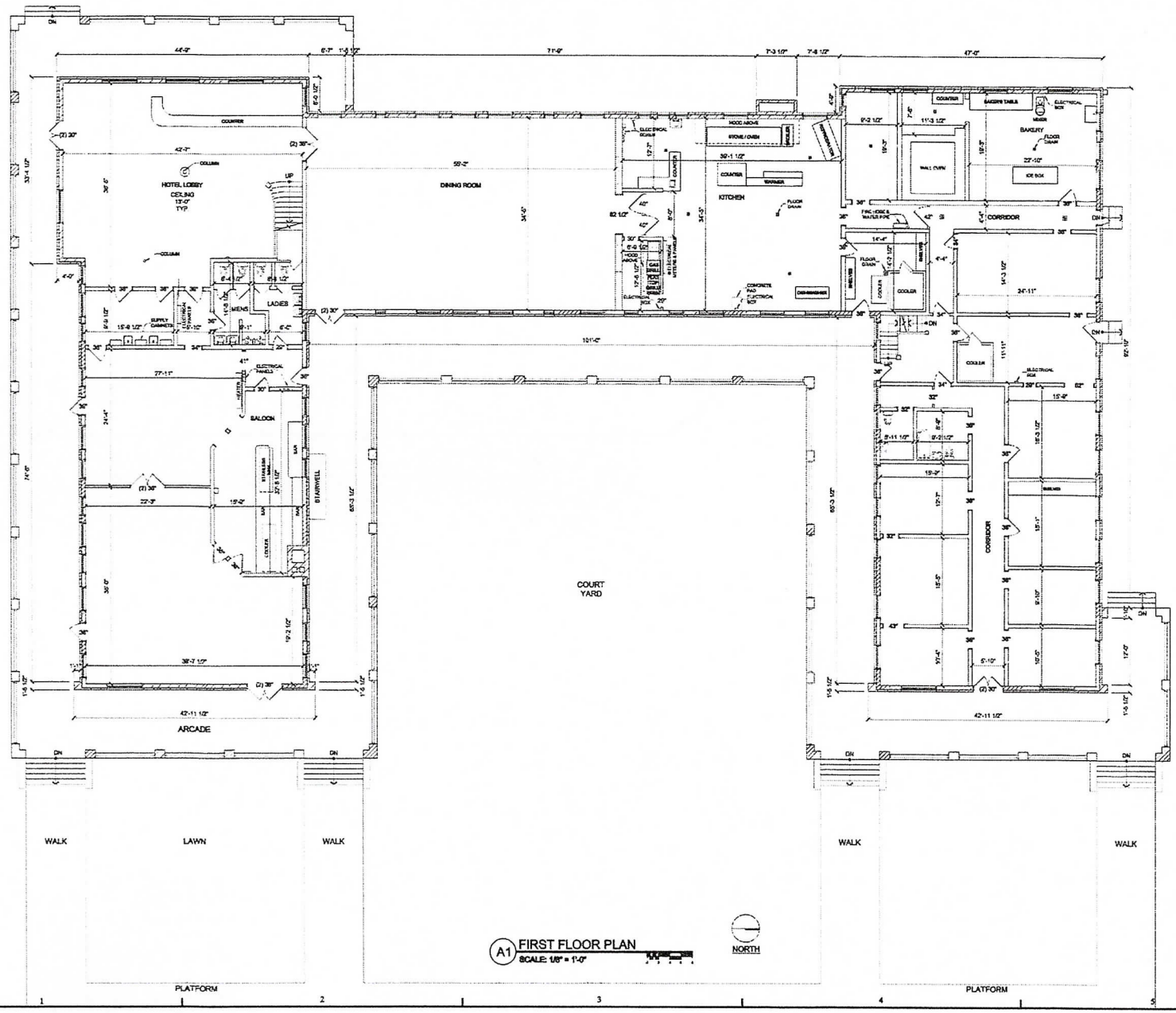
DATE: March 2014		REVISED
DRAWN BY: JPC		REVISED BY

PREPARED FOR:
AFFELDT/ELDH

WINSTON & ASSOCIATES, LLC.
LAND SURVEYING

prepared by: WINSTON & ASSOCIATES, LLC.
LAND SURVEYING
834 TAOS ST.
LAS VEGAS, NEW MEXICO 87701
PHONE (505) 426-7717

PLAT # 014-039



A1 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

THESE DOCUMENTS ARE INTENDED TO PROVIDE A REPRESENTATION OF EXISTING ROOM LOCATIONS, SHAPES AND SIZES. DUE TO THE NATURE OF EXISTING CONSTRUCTION ALL SIZES AND DIMENSIONS SHOULD BE CONFIRMED IN FIELD BEFORE ANY CONSTRUCTION

AS BUILT LAYOUT

Denise Heller - 3BD Drafting
HC 89 Box 55 - Rociada, New Mexico
t. 505.454.0217 redheller@aol.com

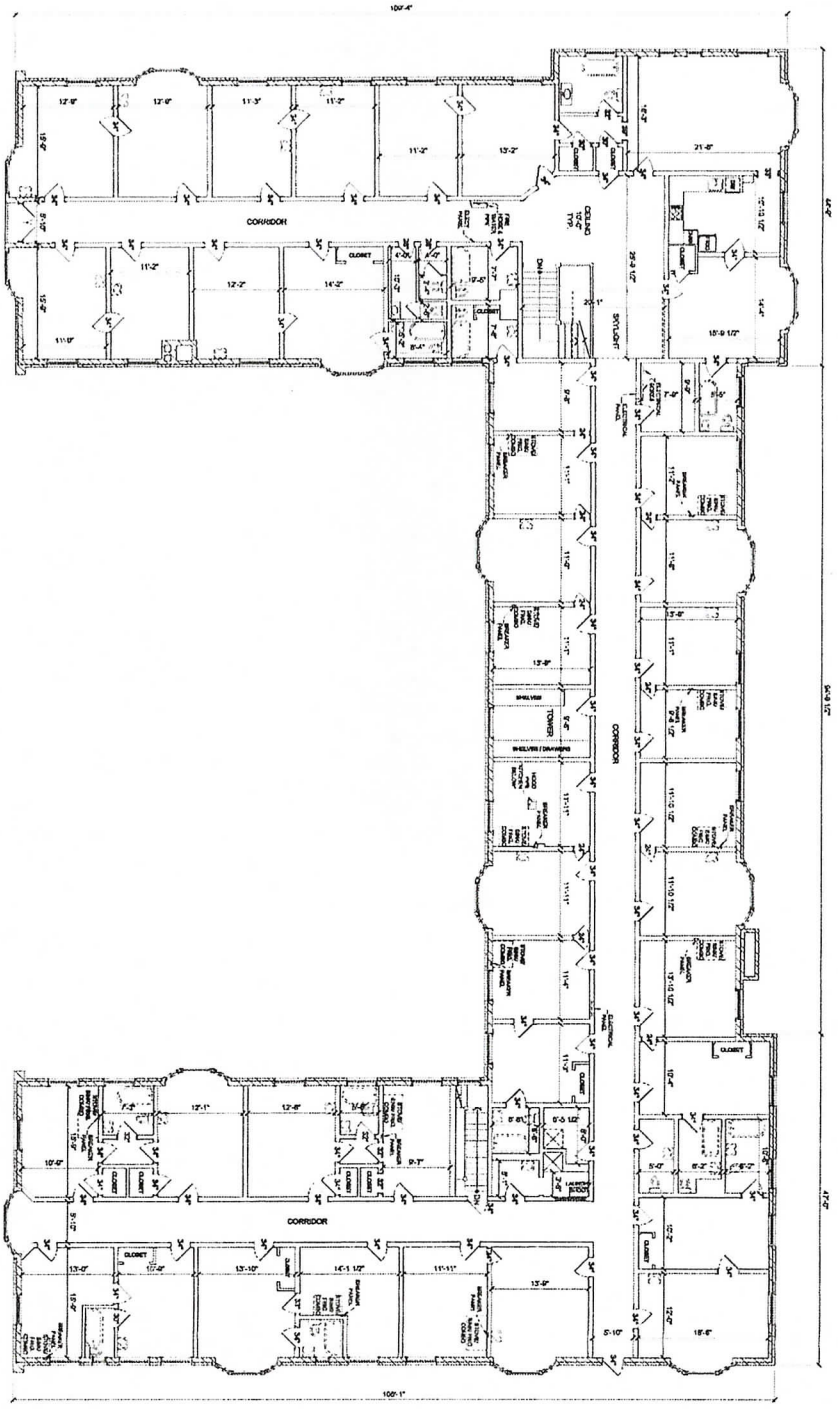
CASTANEDA HOTEL
524 Railroad Ave.
for
MainStreet de Las Vegas
Las Vegas, New Mexico

EXISTING FIRST FLOOR PLAN

REVISIONS

PROJECT NO: 1414
CHECKED:
DRAWN:
DATE: 8.8.14

SHEET NO. A101 OF SHEETS

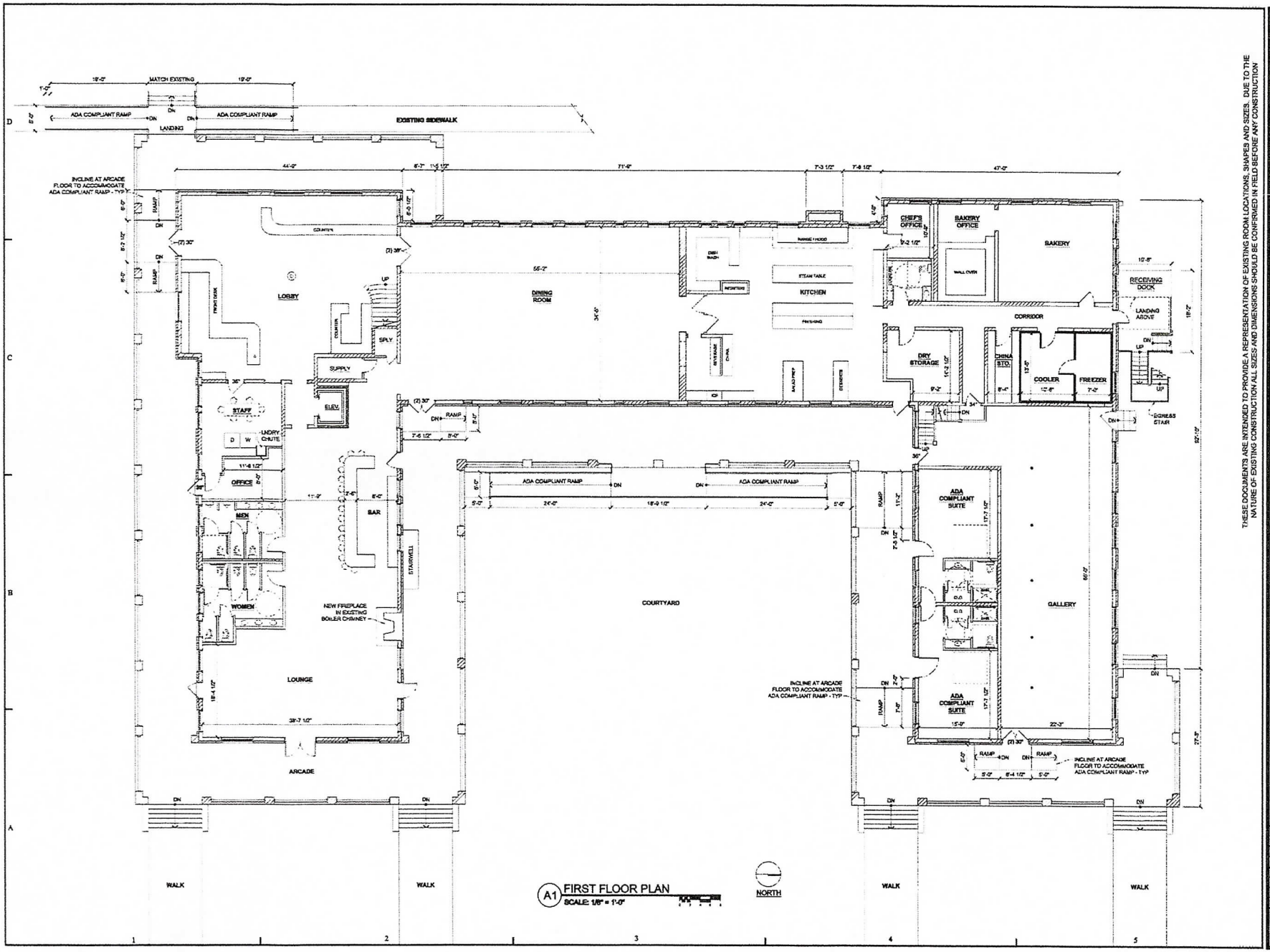


A1 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

NORTH

THESE DOCUMENTS ARE INTENDED TO PROVIDE A REPRESENTATION OF EXISTING ROOM LOCATIONS, SHAPES AND SIZES. DUE TO THE NATURE OF EXISTING CONSTRUCTION ALL SIZES AND DIMENSIONS SHOULD BE CONFIRMED IN FIELD BEFORE ANY CONSTRUCTION

SHEET NO. A102 OF SHEETS DATE: 8.8.14 DRAWN: CHECKED: PROJECT NO. 1414 REVISIONS	CASTANEDA HOTEL 524 Railroad Ave. for MainStreet de Las Vegas Las Vegas, New Mexico **EXISTING SECOND FLOOR PLAN**	**AS BUILT LAYOUT**	Denise Heller - 360 Drafting HC 69 Box 55 - Rociada, New Mexico t. 505.454.0217 redheller@aol.com



A1 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

THESE DOCUMENTS ARE INTENDED TO PROVIDE A REPRESENTATION OF EXISTING ROOM LOCATIONS, SHAPES AND SIZES. DUE TO THE NATURE OF EXISTING CONSTRUCTION ALL SIZES AND DIMENSIONS SHOULD BE CONFIRMED IN FIELD BEFORE ANY CONSTRUCTION

Jonathan Whitten + Associates
1017 Seventh Street Las Vegas, New Mexico
t. 505.795.8376 jwhitten98@msn.com

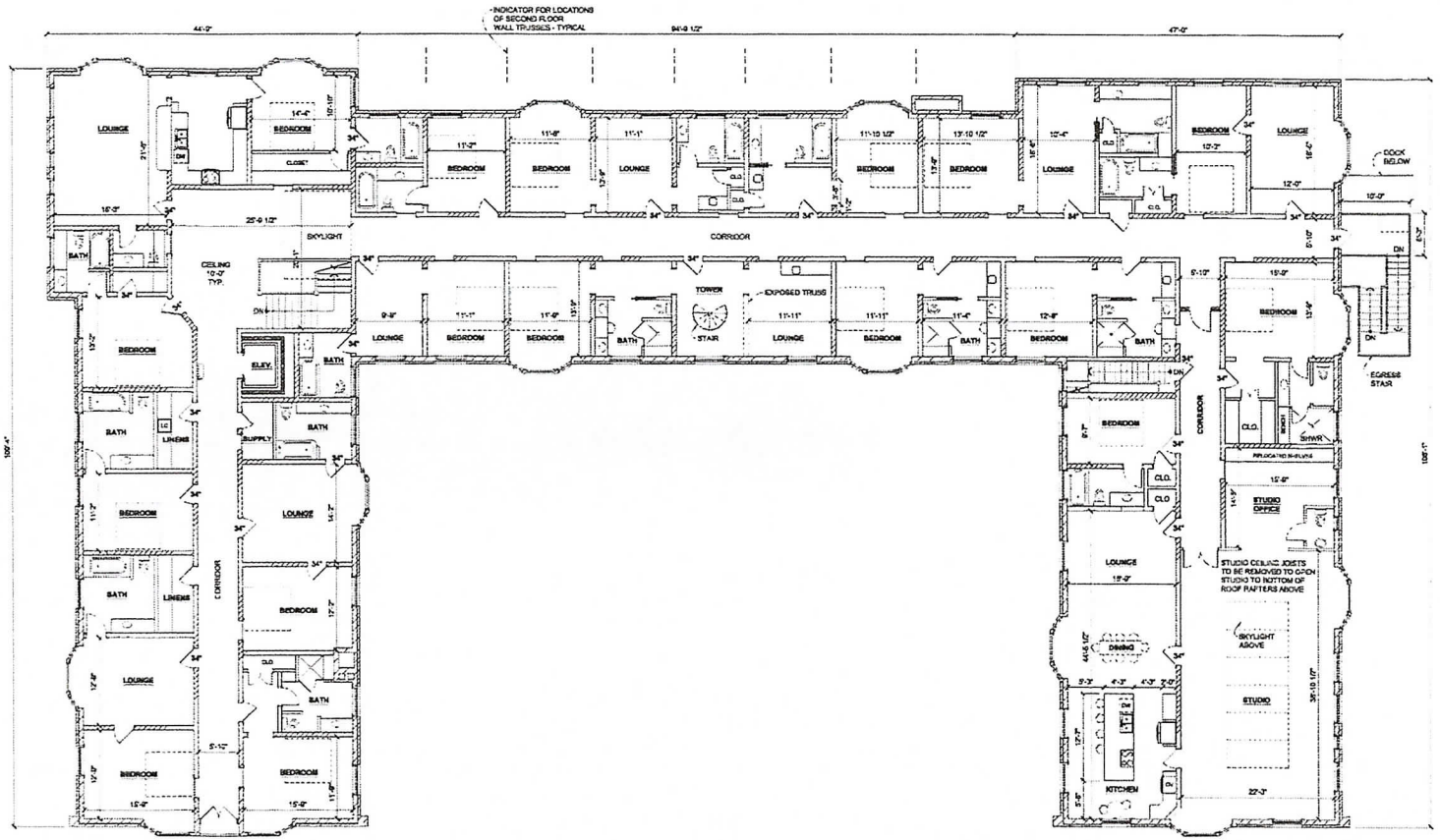
CASTANEDA HOTEL
524 Railroad Ave.
for
MainStreet de Las Vegas
Las Vegas, New Mexico

SCHEMATIC FIRST FLOOR PLAN

REVISIONS

PROJECT NO: 1414
CHECKED:
DRAWN:
DATE: 9.29.14

SHEET NO. A103
OF SHEETS



A1 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

NORTH

THESE DOCUMENTS ARE INTENDED TO PROVIDE A REPRESENTATION OF EXISTING ROOM LOCATIONS, SHAPES AND SIZES. DUE TO THE NATURE OF EXISTING CONSTRUCTION ALL SIZES AND DIMENSIONS SHOULD BE CONFIRMED IN FIELD BEFORE ANY CONSTRUCTION

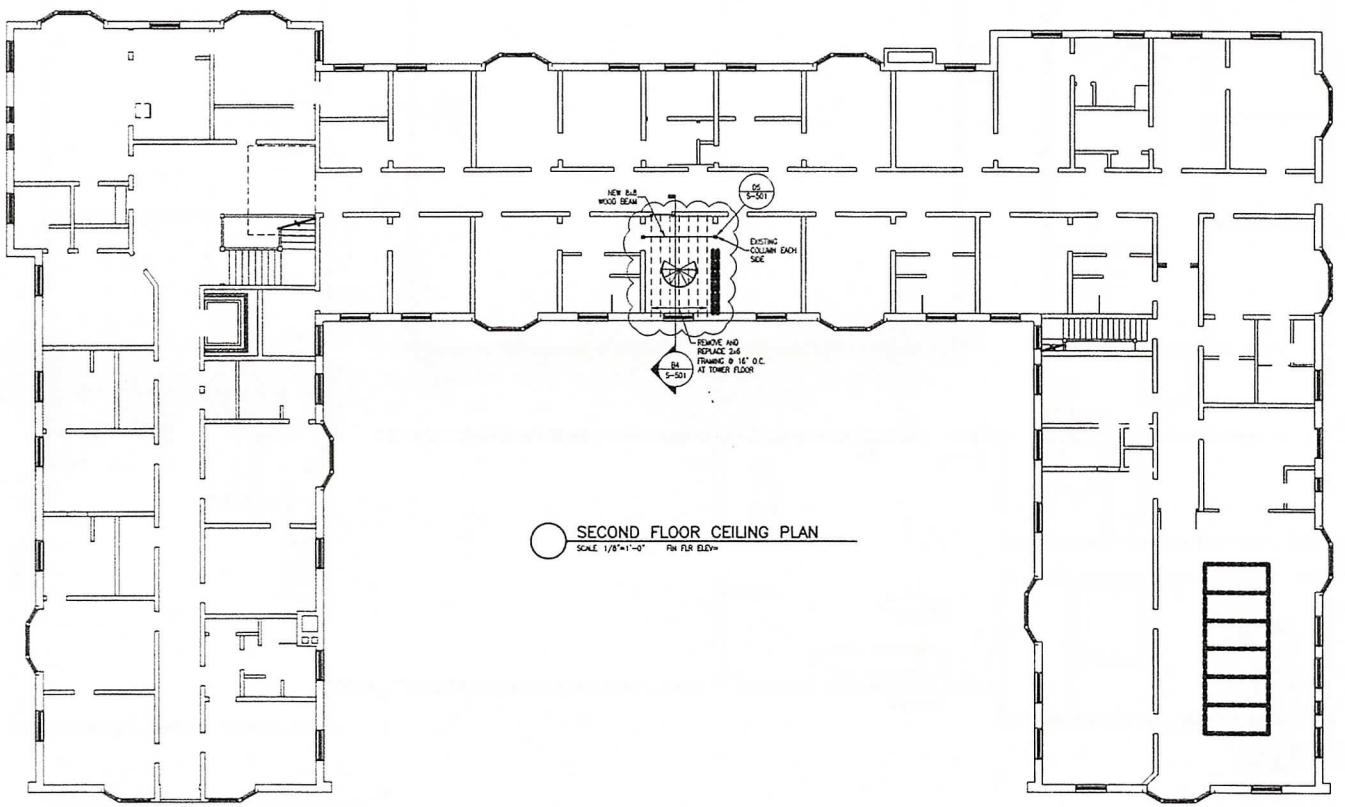
Jonathan Whitten + Associates
1017 Seventh Street Las Vegas, New Mexico
t. 505.795.8376 jwhitten98@msn.com

CASTANEDA HOTEL
524 Railroad Ave.
for
MainStreet de Las Vegas
Las Vegas, New Mexico

SCHEMATIC SECOND FLOOR PLAN

REVISIONS

PROJECT NO: 1414
CHSIONED:
DRAWN:
DATE: 9.29.14
SHEET NO. A104
OF SHEETS



SECOND FLOOR CEILING PLAN

SCALE 1/8"=1'-0" FIN FLR ELEV=

GENERAL SHEET NOTES

NOTE- CONTRACTOR SHALL VERIFY ALL VERTICAL AND HORIZONTAL DIMENSIONS OF EXISTING BUILDING ELEMENTS PRIOR TO FABRICATION OF CONSTRUCTION SUPPORT ELEMENTS

CONTRACTOR SHALL PROVIDE SHORING ALL ITEMS UNTIL FINAL CONSTRUCTION SUPPORT ELEMENTS ARE IN PLACE.

WOOD: NEW FIR #1 OR BETTER

KEY NOTES

NOTE: KEY NOTES MAY NOT BE USED ON THIS SHEET

1 -
2 -
3 -
4 -
5
6
7
8
9
10

SYMBOLS

Hands Engineering, Inc.
Engineers
1316 Rancho Dr. Suite A
Las Vegas, NV 89106
Phone (702) 431-7272
Fax (702) 431-7373
jhands@handsengineering.com

SHEET TITLE: CEILING PLAN

PROJECT: CASTANEDA HOTEL
LAS VEGAS, NEW MEXICO

THE ARCHITECTURAL WORK PRODUCT IS AND SHALL REMAIN THE PROPERTY OF HANDS ENGINEERING, INC. AND IS NOT TO BE REPRODUCED, PUBLISHED OR USED IN ANY WAY WITHOUT THE EXPRESS WRITTEN CONSENT OF HANDS ENGINEERING, INC.

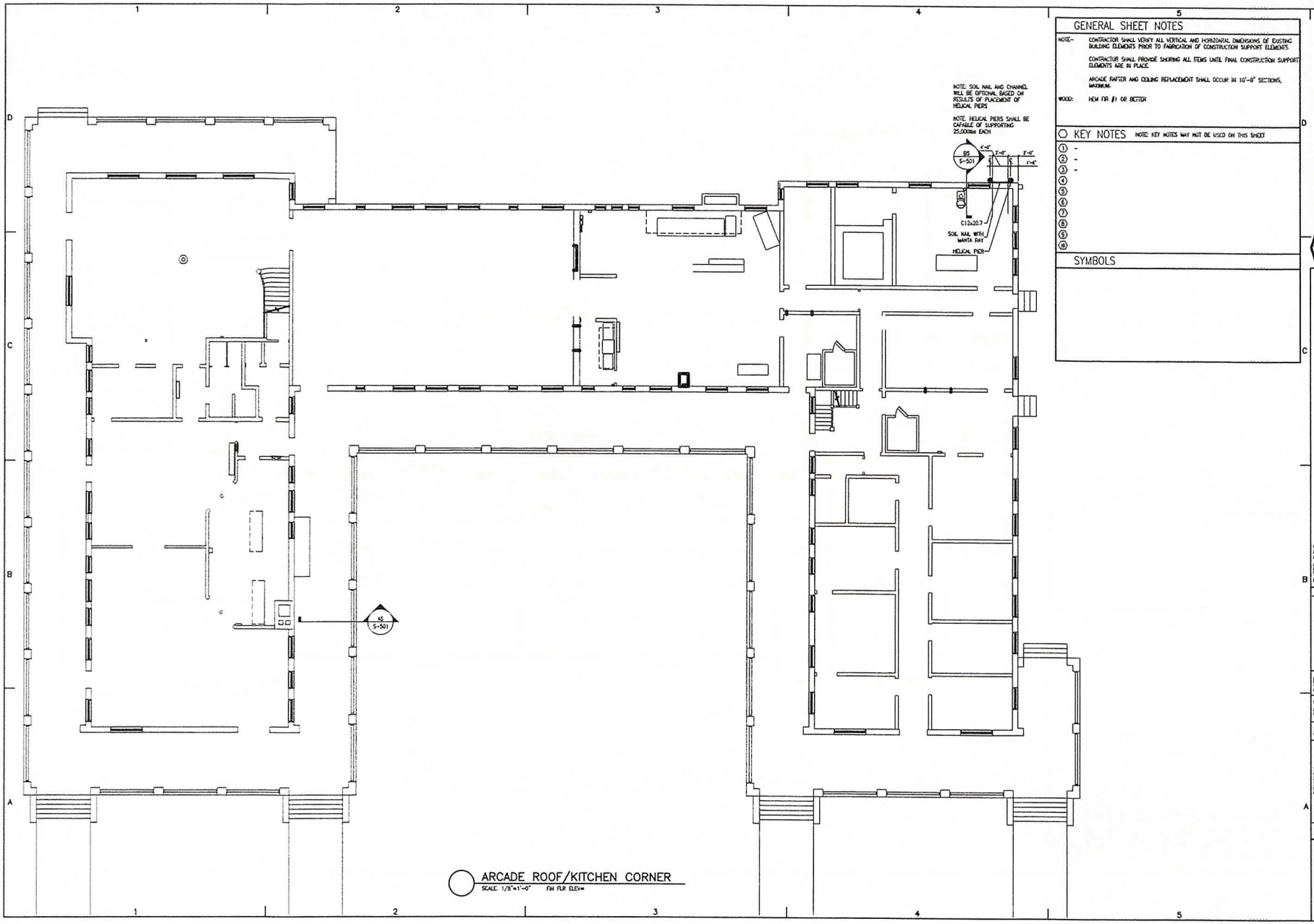
No.	REVISION	BY	APPVD	DATE

PROJECT 2014-4268
DESIGN RHK
CHECKED RHK
DRAWN DM
DATE 30 SEP 14
SCALE AS NOTED

SHEET No.

S-101

OF ?



ARCADE ROOF/KITCHEN CORNER
SCALE 1/8"=1'-0" FIN FLR ELEV=

GENERAL SHEET NOTES

NOTE- CONTRACTOR SHALL VERIFY ALL VERTICAL AND HORIZONTAL DIMENSIONS OF EXISTING BUILDING ELEMENTS PRIOR TO FABRICATION OF CONSTRUCTION SUPPORT ELEMENTS.

CONTRACTOR SHALL PROVIDE SHORING ALL ITEMS UNTIL FINAL CONSTRUCTION SUPPORT ELEMENTS ARE IN PLACE.

ARCADE RAFTER AND CEILING REPLACEMENT SHALL OCCUR IN 10'-0" SECTIONS, MAXIMUM.

WOOD: HEM FIR #1 OR BETTER

KEY NOTES

NOTE: KEY NOTES MAY NOT BE USED ON THIS SHEET

1 -
2 -
3 -
4
5
6
7
8
9
10

SYMBOLS

Hands Engineering, Inc.
Engineering & Project Management
1220 Rio Rancho Blvd. NE, Suite A
Rio Rancho, New Mexico 87124
Phone (505) 892-1555
Fax (505) 892-1557
Email info@handsengineering.com

SHEET TITLE: ROOF PLAN

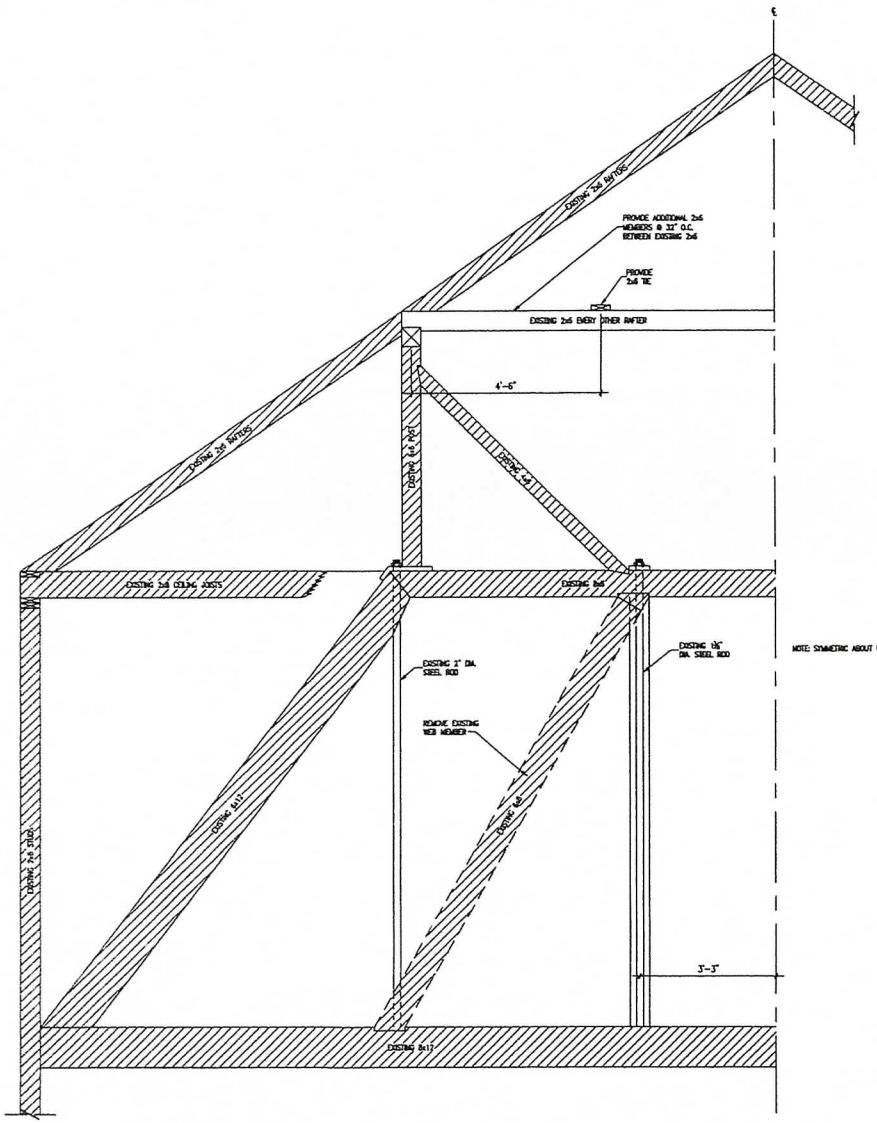
PROJECT: CASTANEDA HOTEL
LAS VEGAS, NEW MEXICO

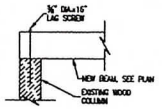
THIS DRAWING IS THE PROPERTY OF HANDS ENGINEERING, INC. AND IS NOT TO BE REPRODUCED, USED IN WHOLE OR IN PART, OR ALTERED WITHOUT THE WRITTEN PERMISSION OF HANDS ENGINEERING, INC.

No	REVISION	BY	APPVD	DATE

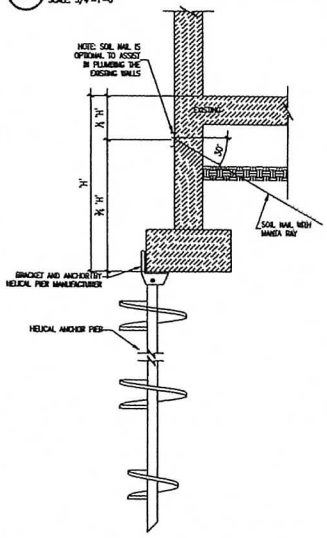
PROJECT 2014-4360 DESIGN RHH CHECKED RHH
DATE 30 SEP 14 DRAWN DAH
SCALE AS NOTED

SHEET No.
S-102
OF ?

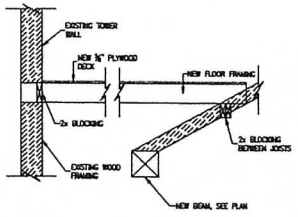




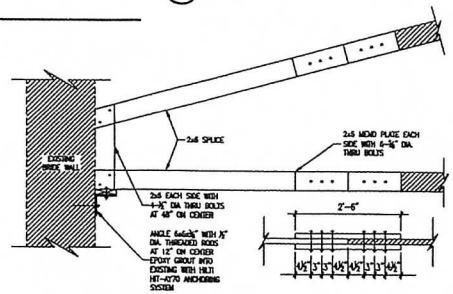
D5 SECTION
SCALE: 3/4"=1'-0"



B5 SECTION
SCALE: 3/4"=1'-0"



B4 SECTION
SCALE: 3/4"=1'-0"



A5 SECTION
SCALE: 3/4"=1'-0"

Hands Engineering, Inc.
Engineering & Project Management
1111 Second Street, Suite A
Las Vegas, New Mexico 87701
Phone: (505) 425-3772
Fax: (505) 425-3773
Email: info@handseng.com

SHEET TITLE: SECTIONS
PROJECT: CASTANEDA HOTEL
LAS VEGAS, NEW MEXICO

No.	REVISION	BY	APP'VD	DATE

PROJECT: 2014-4286
DESIGN: RHW
CHECKED: RHW
DRAWN: DJH
DATE: 30 SEP 14
SCALE: AS NOTED

SHEET No.
S-501
OF ?

Hands Engineering, Inc.

September 30, 2014

Ms. Cindy Collins, Executive Director
MainStreet de Las Vegas
500 Railroad Avenue
Las Vegas, NM 87701

RE: CASTANEDA HOTEL
FEASIBILITY ASSESSMENT
524 RAILROAD AVENUE
LAS VEGAS, NEW MEXICO
Hands Engineering Project No. 2014-4268

Dear Ms. Collins:

Per your request, we visited the referenced site on June 11, 2014, with a follow-up visit on July 21, 2014. The purpose of the site visit was to evaluate current building conditions and to provide details for proposed remediation, as required. Please note that the evaluation was limited to visual observation only. Plans were available at the time of the second visit.

The observations are as follows:

General

1. The building, as a whole, was in generally good condition, given the age of the building.

2. Due to lack of regular maintenance, some issues have developed. Most notably, water damage due to roof leaks.

3. The existing building is two stories with partial basements under the north and south wings.

4. The existing structure of the building was wood framed floor and roof bearing on wood framed walls and wood and steel beams. In two locations at the first floor, concrete slab on steel bar joists and a composite steel beam and concrete floor were used in lieu of the wood framing. The exterior wall was a brick veneer. The existing foundation appeared to be a formed cemented rubble foundation. The existing roof was a tin sheathing, shaped in a Spanish clay tile configuration.

High Roof

1. The existing roof was a wood framed gable roof. Truss elements, occurring approximately 11'-6" on center were present.

2. The high roof structure appeared to be in good condition with no apparent signs of distress or deterioration.

3. The overhang at the exterior of the building exhibited signs of water damage in numerous locations. As this was an exposed condition, the required repair will need to be coordinated as a part of the design.

4. The tower had some damage due to exposure on four sides of the structure. The walls will require bracing and damaged member will most likely need to be replaced. Refer to the drawings for the required remediation.

Second Floor / Arcade Roof

1. The floor structure appeared to be in generally good condition. Some unevenness of the floor was noted.

2. The floor framing was supported by wall trusses. One truss was exposed and modifications had been made to the existing truss. The modifications did not appear to adversely affect the floor framing. No further recommendations at this time.

3. At a few locations, some water damage was noted, from observations at the first floor ceiling. The framing did not appear to be deteriorated.

4. The arcade roof framing was a half gable roof. The original design incorporated on interior gutter system at the low end of the roof. It appeared that over a period of time, the gutters became non functional, resulting in extensive water damage at the low end of the roof. The damaged appeared to affect approximately 90 percent of the framing. This condition will require remediation. Refer to the drawings for the required structural remediation.

Basement / First Floor Framing

1. The floor framing appeared to be in good condition.

2. The basement appeared to be in good condition. There appeared to be no cracking in the walls.

3. The floor framing appeared to be a mix of wood framing, steel bar joists, and composite steel beam and concrete.

Exterior

1. Generally, the exterior appeared to be in good condition.

2. At the northwest corner of the building, there appeared to be some settlement at the corner. This resulted in cracking in the brick mortar joints and cracking through the brick and through a window arch. The corner will require underpinning of the foundation with helical piers and the window arch will need to be rebuilt. Refer to the plans for remediation.

3. The concrete stairs at the east side of the arcade will need to be removed and replaced.

The conclusions and opinions stated are based on our understanding of the facts and evidence stated in the discussion above. Should additional facts or evidence become available pertaining to this project I reserve the right to review that information and revise my opinions when appropriate.

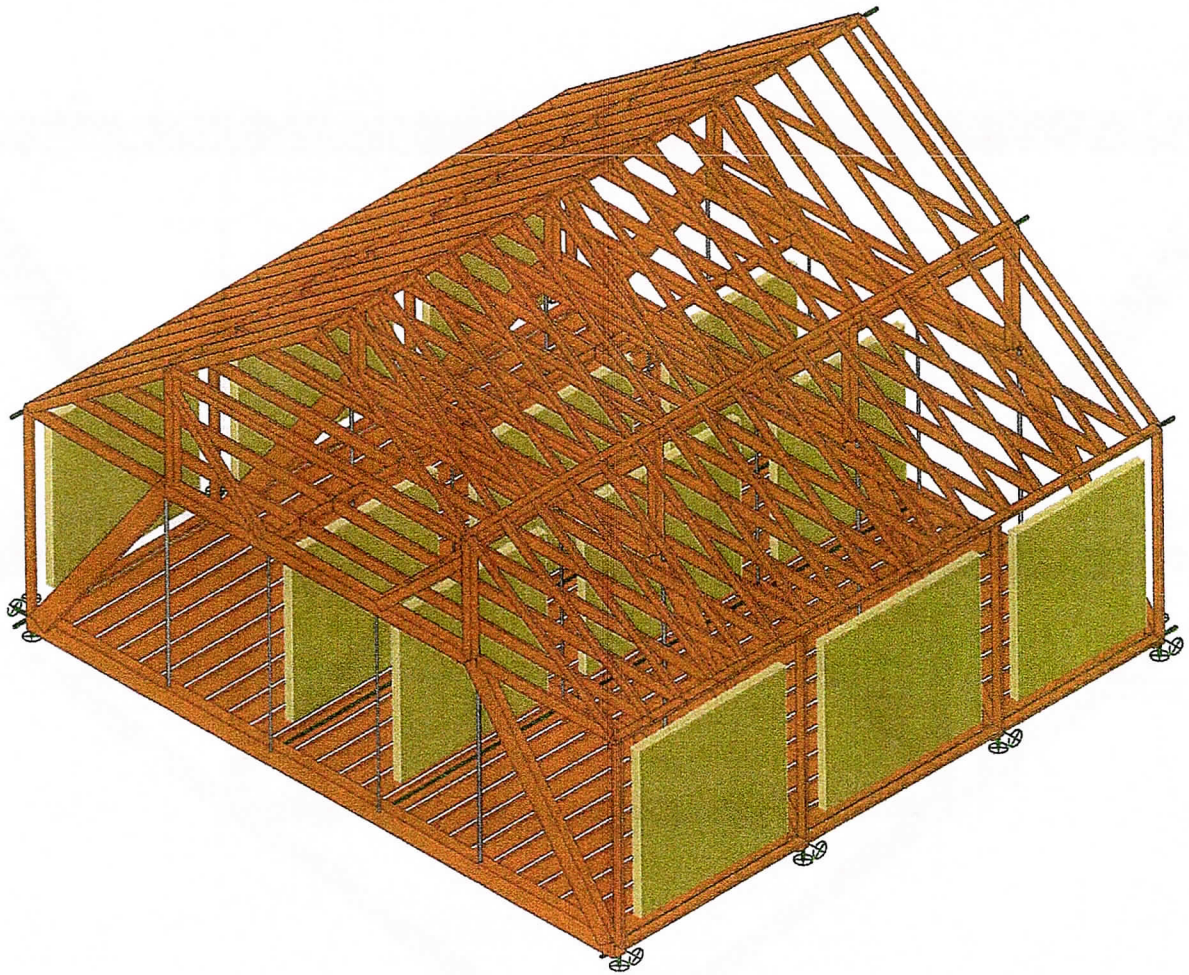
Please do not hesitate to contact our office should you have any questions or if we can be of further assistance.

Respectfully submitted,



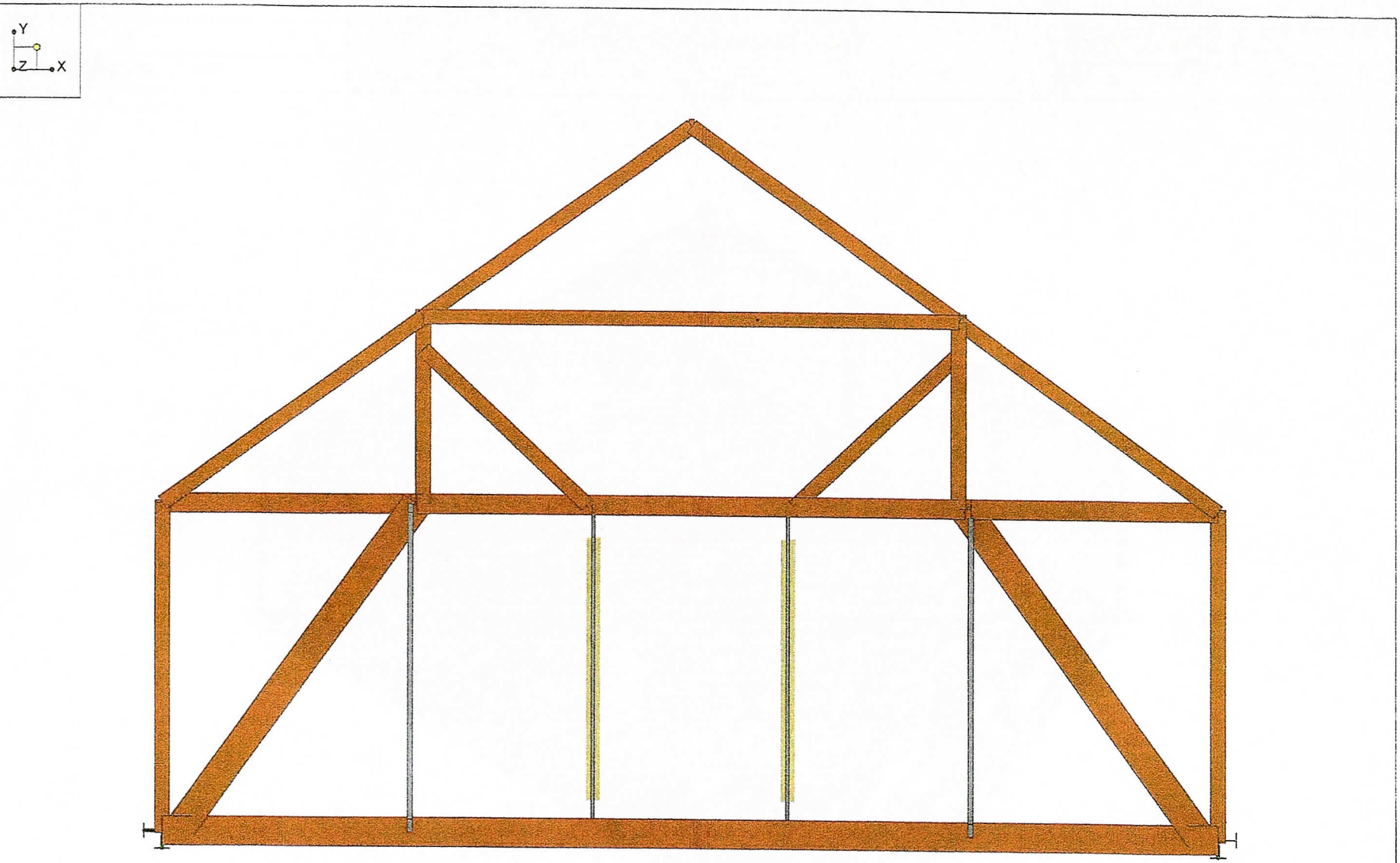
Robert H. Wichmann, PE
Project Engineer

RHW/lmh



Results for LC 2, dl+ll

Hands Engineering, Inc.	Castaneda Hotel Roof/Floor Frame	SK - 2
RHW		Oct 14, 2014 at 2:24 PM
		truss1 mod.r3d



Results for LC 2, dl+ll

Hands Engineering, Inc.		SK - 1
RHW		Oct 14, 2014 at 2:20 PM
		truss1 mod.r3d

Global

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	37
Include Shear Deformation?	Yes
Include Warping?	No
Trans Load Btwn Intersecting Wood Wall?	No
Increase Nailing Capacity for Wind?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Gravity Acceleration (in/sec^2)	32.2
Wall Mesh Size (in)	12
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Solver	Sparse Accelerated

Hot Rolled Steel Code	AISC 13th(360-05): ASD
Adjust Stiffness?	Yes(Iterative)
Cold Formed Steel Code	AISI NAS-01: ASD
Wood Code	AF&PA NDS-05/08: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-05
Masonry Code	ACI 530-05/08: Strength
Aluminum Code	AA ADM1-05: ASD

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	PCA Load Contour
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	Yes
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

Global, Continued

Seismic Code	ASCE 7-05
Seismic Base Elevation (in)	0
Add Base Weight?	No
Ct X	.02
Ct Z	.02
T X (sec)	.013
T Z (sec)	.013
R X	5.5
R Z	5.5
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	.338
SDS	.586
S1	.167
TL (sec)	6
Occupancy Cat	I or II
Seismic Detailing Code	ASCE 7-05
Om X	1
Om Z	1
Rho X	1
Rho Z	1

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N1	0	0	396	0	
2	N2	6.5	0	396	0	
3	N3	12	0	396	0	
4	N4	28	0	396	0	
5	N5	44	0	396	0	
6	N6	60	0	396	0	
7	N7	76	0	396	0	
8	N8	92	0	396	0	
9	N9	96.5	0	396	0	
10	N10	99.5	0	396	0	
11	N11	108	0	396	0	
12	N12	124	0	396	0	
13	N13	140	0	396	0	
14	N14	156	0	396	0	
15	N15	172	0	396	0	
16	N16	173	0	396	0	
17	N17	188	0	396	0	
18	N18	204	0	396	0	
19	N19	212	0	396	0	
20	N20	220	0	396	0	
21	N21	236	0	396	0	
22	N22	251	0	396	0	
23	N23	252	0	396	0	
24	N24	268	0	396	0	
25	N25	284	0	396	0	
26	N26	300	0	396	0	
27	N27	316	0	396	0	
28	N28	324.5	0	396	0	
29	N29	327.5	0	396	0	
30	N30	332	0	396	0	
31	N31	348	0	396	0	
32	N32	364	0	396	0	
33	N33	380	0	396	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
34	N34	396	0	396	0	
35	N35	412	0	396	0	
36	N36	417.5	0	396	0	
37	N37	424	0	396	0	
38	N38	0	0	261	0	
39	N39	6.5	0	261	0	
40	N40	12	0	261	0	
41	N41	28	0	261	0	
42	N42	44	0	261	0	
43	N43	60	0	261	0	
44	N44	76	0	261	0	
45	N45	92	0	261	0	
46	N46	96.5	0	261	0	
47	N47	99.5	0	261	0	
48	N48	108	0	261	0	
49	N49	124	0	261	0	
50	N50	140	0	261	0	
51	N51	156	0	261	0	
52	N52	172	0	261	0	
53	N53	173	0	261	0	
54	N54	188	0	261	0	
55	N55	204	0	261	0	
56	N56	212	0	261	0	
57	N57	220	0	261	0	
58	N58	236	0	261	0	
59	N59	251	0	261	0	
60	N60	252	0	261	0	
61	N61	268	0	261	0	
62	N62	284	0	261	0	
63	N63	300	0	261	0	
64	N64	316	0	261	0	
65	N65	324.5	0	261	0	
66	N66	327.5	0	261	0	
67	N67	332	0	261	0	
68	N68	348	0	261	0	
69	N69	364	0	261	0	
70	N70	380	0	261	0	
71	N71	396	0	261	0	
72	N72	412	0	261	0	
73	N73	417.5	0	261	0	
74	N74	424	0	261	0	
75	N75	0	0	118	0	
76	N76	6.5	0	118	0	
77	N77	12	0	118	0	
78	N78	28	0	118	0	
79	N79	44	0	118	0	
80	N80	60	0	118	0	
81	N81	76	0	118	0	
82	N82	92	0	118	0	
83	N83	96.5	0	118	0	
84	N84	99.5	0	118	0	
85	N85	108	0	118	0	
86	N86	124	0	118	0	
87	N87	140	0	118	0	
88	N88	156	0	118	0	
89	N89	172	0	118	0	
90	N90	173	0	118	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
91	N91	188	0	118	0	
92	N92	204	0	118	0	
93	N93	212	0	118	0	
94	N94	220	0	118	0	
95	N95	236	0	118	0	
96	N96	251	0	118	0	
97	N97	252	0	118	0	
98	N98	268	0	118	0	
99	N99	284	0	118	0	
100	N100	300	0	118	0	
101	N101	316	0	118	0	
102	N102	324.5	0	118	0	
103	N103	327.5	0	118	0	
104	N104	332	0	118	0	
105	N105	348	0	118	0	
106	N106	364	0	118	0	
107	N107	380	0	118	0	
108	N108	396	0	118	0	
109	N109	412	0	118	0	
110	N110	417.5	0	118	0	
111	N111	424	0	118	0	
112	N112	0	0	0	0	
113	N113	6.5	0	0	0	
114	N114	12	0	0	0	
115	N115	28	0	0	0	
116	N116	44	0	0	0	
117	N117	60	0	0	0	
118	N118	76	0	0	0	
119	N119	92	0	0	0	
120	N120	96.5	0	0	0	
121	N121	99.5	0	0	0	
122	N122	108	0	0	0	
123	N123	124	0	0	0	
124	N124	140	0	0	0	
125	N125	156	0	0	0	
126	N126	172	0	0	0	
127	N127	173	0	0	0	
128	N128	188	0	0	0	
129	N129	204	0	0	0	
130	N130	212	0	0	0	
131	N131	220	0	0	0	
132	N132	236	0	0	0	
133	N133	251	0	0	0	
134	N134	252	0	0	0	
135	N135	268	0	0	0	
136	N136	284	0	0	0	
137	N137	300	0	0	0	
138	N138	316	0	0	0	
139	N139	324.5	0	0	0	
140	N140	327.5	0	0	0	
141	N141	332	0	0	0	
142	N142	348	0	0	0	
143	N143	364	0	0	0	
144	N144	380	0	0	0	
145	N145	396	0	0	0	
146	N146	412	0	0	0	
147	N147	417.5	0	0	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
148	N148	424	0	0	0	
149	N149	99.5	5.215686	396	0	
150	N150	324.5	5.215686	396	0	
151	N151	99.5	5.215686	261	0	
152	N152	324.5	5.215686	261	0	
153	N153	99.5	5.215686	118	0	
154	N154	324.5	5.215686	118	0	
155	N155	99.5	5.215686	0	0	
156	N156	324.5	5.215686	0	0	
157	N157	99.5	129.518325	396	0	
158	N158	324.5	129.518325	396	0	
159	N159	99.5	129.518325	261	0	
160	N160	324.5	129.518325	261	0	
161	N161	99.5	129.518325	118	0	
162	N162	324.5	129.518325	118	0	
163	N163	99.5	129.518325	0	0	
164	N164	324.5	129.518325	0	0	
165	N165	0	133	396	0	
166	N166	99.5	133	396	0	
167	N167	102	133	396	0	
168	N168	104.5	133	396	0	
169	N169	170.5	133	396	0	
170	N170	173	133	396	0	
171	N171	212	133	396	0	
172	N172	251	133	396	0	
173	N173	253.5	133	396	0	
174	N174	319.5	133	396	0	
175	N175	322	133	396	0	
176	N176	324.5	133	396	0	
177	N177	424	133	396	0	
178	N178	0	133	372	0	
179	N179	173	133	372	0	
180	N180	251	133	372	0	
181	N181	424	133	372	0	
182	N182	0	133	348	0	
183	N183	173	133	348	0	
184	N184	251	133	348	0	
185	N185	424	133	348	0	
186	N186	0	133	324	0	
187	N187	173	133	324	0	
188	N188	251	133	324	0	
189	N189	424	133	324	0	
190	N190	0	133	300	0	
191	N191	173	133	300	0	
192	N192	251	133	300	0	
193	N193	424	133	300	0	
194	N194	0	133	276	0	
195	N195	173	133	276	0	
196	N196	251	133	276	0	
197	N197	424	133	276	0	
198	N198	0	133	261	0	
199	N199	99.5	133	261	0	
200	N200	102	133	261	0	
201	N201	104.5	133	261	0	
202	N202	170.5	133	261	0	
203	N203	173	133	261	0	
204	N204	212	133	261	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
205	N205	251	133	261	0	
206	N206	253.5	133	261	0	
207	N207	319.5	133	261	0	
208	N208	322	133	261	0	
209	N209	324.5	133	261	0	
210	N210	424	133	261	0	
211	N211	0	133	252	0	
212	N212	173	133	252	0	
213	N213	251	133	252	0	
214	N214	424	133	252	0	
215	N215	0	133	228	0	
216	N216	173	133	228	0	
217	N217	251	133	228	0	
218	N218	424	133	228	0	
219	N219	0	133	204	0	
220	N220	173	133	204	0	
221	N221	251	133	204	0	
222	N222	424	133	204	0	
223	N223	0	133	180	0	
224	N224	173	133	180	0	
225	N225	251	133	180	0	
226	N226	424	133	180	0	
227	N227	0	133	156	0	
228	N228	173	133	156	0	
229	N229	251	133	156	0	
230	N230	424	133	156	0	
231	N231	0	133	132	0	
232	N232	173	133	132	0	
233	N233	251	133	132	0	
234	N234	424	133	132	0	
235	N235	0	133	118	0	
236	N236	99.5	133	118	0	
237	N237	102	133	118	0	
238	N238	104.5	133	118	0	
239	N239	170.5	133	118	0	
240	N240	173	133	118	0	
241	N241	212	133	118	0	
242	N242	251	133	118	0	
243	N243	253.5	133	118	0	
244	N244	319.5	133	118	0	
245	N245	322	133	118	0	
246	N246	324.5	133	118	0	
247	N247	424	133	118	0	
248	N248	0	133	108	0	
249	N249	173	133	108	0	
250	N250	251	133	108	0	
251	N251	424	133	108	0	
252	N252	0	133	84	0	
253	N253	173	133	84	0	
254	N254	251	133	84	0	
255	N255	424	133	84	0	
256	N256	0	133	60	0	
257	N257	173	133	60	0	
258	N258	251	133	60	0	
259	N259	424	133	60	0	
260	N260	0	133	36	0	
261	N261	173	133	36	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
262	N262	251	133	36	0	
263	N263	424	133	36	0	
264	N264	0	133	12	0	
265	N265	173	133	12	0	
266	N266	251	133	12	0	
267	N267	424	133	12	0	
268	N268	0	133	0	0	
269	N269	99.5	133	0	0	
270	N270	102	133	0	0	
271	N271	104.5	133	0	0	
272	N272	170.5	133	0	0	
273	N273	173	133	0	0	
274	N274	212	133	0	0	
275	N275	251	133	0	0	
276	N276	253.5	133	0	0	
277	N277	319.5	133	0	0	
278	N278	322	133	0	0	
279	N279	324.5	133	0	0	
280	N280	424	133	0	0	
281	N281	104.5	196	396	0	
282	N282	319.5	196	396	0	
283	N283	104.5	196	261	0	
284	N284	319.5	196	261	0	
285	N285	104.5	196	118	0	
286	N286	319.5	196	118	0	
287	N287	104.5	196	0	0	
288	N288	319.5	196	0	0	
289	N289	104.5	209	396	0	
290	N290	319.5	209	396	0	
291	N291	104.5	209	372	0	
292	N292	319.5	209	372	0	
293	N293	104.5	209	348	0	
294	N294	319.5	209	348	0	
295	N295	104.5	209	324	0	
296	N296	319.5	209	324	0	
297	N297	104.5	209	300	0	
298	N298	319.5	209	300	0	
299	N299	104.5	209	276	0	
300	N300	319.5	209	276	0	
301	N301	104.5	209	261	0	
302	N302	319.5	209	261	0	
303	N303	104.5	209	252	0	
304	N304	319.5	209	252	0	
305	N305	104.5	209	228	0	
306	N306	319.5	209	228	0	
307	N307	104.5	209	204	0	
308	N308	319.5	209	204	0	
309	N309	104.5	209	180	0	
310	N310	319.5	209	180	0	
311	N311	104.5	209	156	0	
312	N312	319.5	209	156	0	
313	N313	104.5	209	132	0	
314	N314	319.5	209	132	0	
315	N315	104.5	209	118	0	
316	N316	319.5	209	118	0	
317	N317	104.5	209	108	0	
318	N318	319.5	209	108	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
319	N319	104.5	209	84	0	
320	N320	319.5	209	84	0	
321	N321	104.5	209	60	0	
322	N322	319.5	209	60	0	
323	N323	104.5	209	36	0	
324	N324	319.5	209	36	0	
325	N325	104.5	209	12	0	
326	N326	319.5	209	12	0	
327	N327	104.5	209	0	0	
328	N328	319.5	209	0	0	
329	N329	212	287.1818	396	0	
330	N330	212	287.1818	372	0	
331	N331	212	287.1818	348	0	
332	N332	212	287.1818	324	0	
333	N333	212	287.1818	300	0	
334	N334	212	287.1818	276	0	
335	N335	212	287.1818	261	0	
336	N336	212	287.1818	252	0	
337	N337	212	287.1818	228	0	
338	N338	212	287.1818	204	0	
339	N339	212	287.1818	180	0	
340	N340	212	287.1818	156	0	
341	N341	212	287.1818	132	0	
342	N342	212	287.1818	118	0	
343	N343	212	287.1818	108	0	
344	N344	212	287.1818	84	0	
345	N345	212	287.1818	60	0	
346	N346	212	287.1818	36	0	
347	N347	212	287.1818	12	0	
348	N348	212	287.1818	0	0	

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N166	N167			RIGID	None	None	RIGID	Default
2	M2	N175	N176			RIGID	None	None	RIGID	Default
3	M3	N200	N199			RIGID	None	None	RIGID	Default
4	M4	N208	N209			RIGID	None	None	RIGID	Default
5	M5	N237	N236			RIGID	None	None	RIGID	Default
6	M6	N245	N246			RIGID	None	None	RIGID	Default
7	M7	N270	N269			RIGID	None	None	RIGID	Default
8	M8	N278	N279			RIGID	None	None	RIGID	Default
9	M9	N165	N166			attic flr	Beam	Rectangular	Rawlins DF	Typical
10	M10	N176	N177			attic flr	Beam	Rectangular	Rawlins DF	Typical
11	M11	N178	N179			attic flr	Beam	Rectangular	Rawlins DF	Typical
12	M12	N179	N180			attic flr	Beam	Rectangular	Rawlins DF	Typical
13	M13	N180	N181			attic flr	Beam	Rectangular	Rawlins DF	Typical
14	M14	N182	N183			attic flr	Beam	Rectangular	Rawlins DF	Typical
15	M15	N183	N184			attic flr	Beam	Rectangular	Rawlins DF	Typical
16	M16	N184	N185			attic flr	Beam	Rectangular	Rawlins DF	Typical
17	M17	N186	N187			attic flr	Beam	Rectangular	Rawlins DF	Typical
18	M18	N187	N188			attic flr	Beam	Rectangular	Rawlins DF	Typical
19	M19	N188	N189			attic flr	Beam	Rectangular	Rawlins DF	Typical
20	M20	N190	N191			attic flr	Beam	Rectangular	Rawlins DF	Typical
21	M21	N191	N192			attic flr	Beam	Rectangular	Rawlins DF	Typical
22	M22	N192	N193			attic flr	Beam	Rectangular	Rawlins DF	Typical
23	M23	N194	N195			attic flr	Beam	Rectangular	Rawlins DF	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
24	M24	N195	N196			attic flr	Beam	Rectangular	Rawlins DF	Typical
25	M25	N196	N197			attic flr	Beam	Rectangular	Rawlins DF	Typical
26	M26	N211	N212			attic flr	Beam	Rectangular	Rawlins DF	Typical
27	M27	N212	N213			attic flr	Beam	Rectangular	Rawlins DF	Typical
28	M28	N213	N214			attic flr	Beam	Rectangular	Rawlins DF	Typical
29	M29	N215	N216			attic flr	Beam	Rectangular	Rawlins DF	Typical
30	M30	N216	N217			attic flr	Beam	Rectangular	Rawlins DF	Typical
31	M31	N217	N218			attic flr	Beam	Rectangular	Rawlins DF	Typical
32	M32	N219	N220			attic flr	Beam	Rectangular	Rawlins DF	Typical
33	M33	N220	N221			attic flr	Beam	Rectangular	Rawlins DF	Typical
34	M34	N221	N222			attic flr	Beam	Rectangular	Rawlins DF	Typical
35	M35	N223	N224			attic flr	Beam	Rectangular	Rawlins DF	Typical
36	M36	N224	N225			attic flr	Beam	Rectangular	Rawlins DF	Typical
37	M37	N225	N226			attic flr	Beam	Rectangular	Rawlins DF	Typical
38	M38	N227	N228			attic flr	Beam	Rectangular	Rawlins DF	Typical
39	M39	N228	N229			attic flr	Beam	Rectangular	Rawlins DF	Typical
40	M40	N229	N230			attic flr	Beam	Rectangular	Rawlins DF	Typical
41	M41	N231	N232			attic flr	Beam	Rectangular	Rawlins DF	Typical
42	M42	N232	N233			attic flr	Beam	Rectangular	Rawlins DF	Typical
43	M43	N233	N234			attic flr	Beam	Rectangular	Rawlins DF	Typical
44	M44	N248	N249			attic flr	Beam	Rectangular	Rawlins DF	Typical
45	M45	N249	N250			attic flr	Beam	Rectangular	Rawlins DF	Typical
46	M46	N250	N251			attic flr	Beam	Rectangular	Rawlins DF	Typical
47	M47	N252	N253			attic flr	Beam	Rectangular	Rawlins DF	Typical
48	M48	N253	N254			attic flr	Beam	Rectangular	Rawlins DF	Typical
49	M49	N254	N255			attic flr	Beam	Rectangular	Rawlins DF	Typical
50	M50	N256	N257			attic flr	Beam	Rectangular	Rawlins DF	Typical
51	M51	N257	N258			attic flr	Beam	Rectangular	Rawlins DF	Typical
52	M52	N258	N259			attic flr	Beam	Rectangular	Rawlins DF	Typical
53	M53	N260	N261			attic flr	Beam	Rectangular	Rawlins DF	Typical
54	M54	N261	N262			attic flr	Beam	Rectangular	Rawlins DF	Typical
55	M55	N262	N263			attic flr	Beam	Rectangular	Rawlins DF	Typical
56	M56	N264	N265			attic flr	Beam	Rectangular	Rawlins DF	Typical
57	M57	N265	N266			attic flr	Beam	Rectangular	Rawlins DF	Typical
58	M58	N266	N267			attic flr	Beam	Rectangular	Rawlins DF	Typical
59	M59	N1	N37			bc	Beam	Rectangular	Rawlins DF	Typical
60	M60	N38	N74			bc	Beam	Rectangular	Rawlins DF	Typical
61	M61	N75	N111			bc	Beam	Rectangular	Rawlins DF	Typical
62	M62	N112	N148			bc	Beam	Rectangular	Rawlins DF	Typical
63	M63	N168	N289			col	Column	Rectangular	Rawlins DF	Typical
64	M64	N174	N290			col	Column	Rectangular	Rawlins DF	Typical
65	M65	N201	N301			col	Column	Rectangular	Rawlins DF	Typical
66	M66	N207	N302			col	Column	Rectangular	Rawlins DF	Typical
67	M67	N238	N315			col	Column	Rectangular	Rawlins DF	Typical
68	M68	N244	N316			col	Column	Rectangular	Rawlins DF	Typical
69	M69	N271	N327			col	Column	Rectangular	Rawlins DF	Typical
70	M70	N277	N328			col	Column	Rectangular	Rawlins DF	Typical
71	M71	N169	N281			col brc	Column	Rectangular	Rawlins DF	Typical
72	M72	N173	N282			col brc	Column	Rectangular	Rawlins DF	Typical
73	M73	N202	N283			col brc	Column	Rectangular	Rawlins DF	Typical
74	M74	N206	N284			col brc	Column	Rectangular	Rawlins DF	Typical
75	M75	N239	N285			col brc	Column	Rectangular	Rawlins DF	Typical
76	M76	N243	N286			col brc	Column	Rectangular	Rawlins DF	Typical
77	M77	N272	N287			col brc	Column	Rectangular	Rawlins DF	Typical
78	M78	N276	N288			col brc	Column	Rectangular	Rawlins DF	Typical
79	M79	N40	N3			floor jst	Beam	Rectangular	Rawlins DF	Typical
80	M80	N41	N4			floor jst	Beam	Rectangular	Rawlins DF	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
81	M81	N42	N5			floor jst	Beam	Rectangular	Rawlins DF	Typical
82	M82	N43	N6			floor jst	Beam	Rectangular	Rawlins DF	Typical
83	M83	N44	N7			floor jst	Beam	Rectangular	Rawlins DF	Typical
84	M84	N45	N8			floor jst	Beam	Rectangular	Rawlins DF	Typical
85	M85	N48	N11			floor jst	Beam	Rectangular	Rawlins DF	Typical
86	M86	N49	N12			floor jst	Beam	Rectangular	Rawlins DF	Typical
87	M87	N50	N13			floor jst	Beam	Rectangular	Rawlins DF	Typical
88	M88	N51	N14			floor jst	Beam	Rectangular	Rawlins DF	Typical
89	M89	N52	N15			floor jst	Beam	Rectangular	Rawlins DF	Typical
90	M90	N54	N17			floor jst	Beam	Rectangular	Rawlins DF	Typical
91	M91	N55	N18			floor jst	Beam	Rectangular	Rawlins DF	Typical
92	M92	N57	N20			floor jst	Beam	Rectangular	Rawlins DF	Typical
93	M93	N58	N21			floor jst	Beam	Rectangular	Rawlins DF	Typical
94	M94	N60	N23			floor jst	Beam	Rectangular	Rawlins DF	Typical
95	M95	N61	N24			floor jst	Beam	Rectangular	Rawlins DF	Typical
96	M96	N62	N25			floor jst	Beam	Rectangular	Rawlins DF	Typical
97	M97	N63	N26			floor jst	Beam	Rectangular	Rawlins DF	Typical
98	M98	N64	N27			floor jst	Beam	Rectangular	Rawlins DF	Typical
99	M99	N67	N30			floor jst	Beam	Rectangular	Rawlins DF	Typical
100	M100	N68	N31			floor jst	Beam	Rectangular	Rawlins DF	Typical
101	M101	N69	N32			floor jst	Beam	Rectangular	Rawlins DF	Typical
102	M102	N70	N33			floor jst	Beam	Rectangular	Rawlins DF	Typical
103	M103	N71	N34			floor jst	Beam	Rectangular	Rawlins DF	Typical
104	M104	N72	N35			floor jst	Beam	Rectangular	Rawlins DF	Typical
105	M105	N77	N40			floor jst	Beam	Rectangular	Rawlins DF	Typical
106	M106	N78	N41			floor jst	Beam	Rectangular	Rawlins DF	Typical
107	M107	N79	N42			floor jst	Beam	Rectangular	Rawlins DF	Typical
108	M108	N80	N43			floor jst	Beam	Rectangular	Rawlins DF	Typical
109	M109	N81	N44			floor jst	Beam	Rectangular	Rawlins DF	Typical
110	M110	N82	N45			floor jst	Beam	Rectangular	Rawlins DF	Typical
111	M111	N85	N48			floor jst	Beam	Rectangular	Rawlins DF	Typical
112	M112	N86	N49			floor jst	Beam	Rectangular	Rawlins DF	Typical
113	M113	N87	N50			floor jst	Beam	Rectangular	Rawlins DF	Typical
114	M114	N88	N51			floor jst	Beam	Rectangular	Rawlins DF	Typical
115	M115	N89	N52			floor jst	Beam	Rectangular	Rawlins DF	Typical
116	M116	N91	N54			floor jst	Beam	Rectangular	Rawlins DF	Typical
117	M117	N92	N55			floor jst	Beam	Rectangular	Rawlins DF	Typical
118	M118	N94	N57			floor jst	Beam	Rectangular	Rawlins DF	Typical
119	M119	N95	N58			floor jst	Beam	Rectangular	Rawlins DF	Typical
120	M120	N97	N60			floor jst	Beam	Rectangular	Rawlins DF	Typical
121	M121	N98	N61			floor jst	Beam	Rectangular	Rawlins DF	Typical
122	M122	N99	N62			floor jst	Beam	Rectangular	Rawlins DF	Typical
123	M123	N100	N63			floor jst	Beam	Rectangular	Rawlins DF	Typical
124	M124	N101	N64			floor jst	Beam	Rectangular	Rawlins DF	Typical
125	M125	N104	N67			floor jst	Beam	Rectangular	Rawlins DF	Typical
126	M126	N105	N68			floor jst	Beam	Rectangular	Rawlins DF	Typical
127	M127	N106	N69			floor jst	Beam	Rectangular	Rawlins DF	Typical
128	M128	N107	N70			floor jst	Beam	Rectangular	Rawlins DF	Typical
129	M129	N108	N71			floor jst	Beam	Rectangular	Rawlins DF	Typical
130	M130	N109	N72			floor jst	Beam	Rectangular	Rawlins DF	Typical
131	M131	N114	N77			floor jst	Beam	Rectangular	Rawlins DF	Typical
132	M132	N115	N78			floor jst	Beam	Rectangular	Rawlins DF	Typical
133	M133	N116	N79			floor jst	Beam	Rectangular	Rawlins DF	Typical
134	M134	N117	N80			floor jst	Beam	Rectangular	Rawlins DF	Typical
135	M135	N118	N81			floor jst	Beam	Rectangular	Rawlins DF	Typical
136	M136	N119	N82			floor jst	Beam	Rectangular	Rawlins DF	Typical
137	M137	N122	N85			floor jst	Beam	Rectangular	Rawlins DF	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
138	M138	N123	N86			floor jst	Beam	Rectangular	Rawlins DF	Typical
139	M139	N124	N87			floor jst	Beam	Rectangular	Rawlins DF	Typical
140	M140	N125	N88			floor jst	Beam	Rectangular	Rawlins DF	Typical
141	M141	N126	N89			floor jst	Beam	Rectangular	Rawlins DF	Typical
142	M142	N128	N91			floor jst	Beam	Rectangular	Rawlins DF	Typical
143	M143	N129	N92			floor jst	Beam	Rectangular	Rawlins DF	Typical
144	M144	N131	N94			floor jst	Beam	Rectangular	Rawlins DF	Typical
145	M145	N132	N95			floor jst	Beam	Rectangular	Rawlins DF	Typical
146	M146	N134	N97			floor jst	Beam	Rectangular	Rawlins DF	Typical
147	M147	N135	N98			floor jst	Beam	Rectangular	Rawlins DF	Typical
148	M148	N136	N99			floor jst	Beam	Rectangular	Rawlins DF	Typical
149	M149	N137	N100			floor jst	Beam	Rectangular	Rawlins DF	Typical
150	M150	N138	N101			floor jst	Beam	Rectangular	Rawlins DF	Typical
151	M151	N141	N104			floor jst	Beam	Rectangular	Rawlins DF	Typical
152	M152	N142	N105			floor jst	Beam	Rectangular	Rawlins DF	Typical
153	M153	N143	N106			floor jst	Beam	Rectangular	Rawlins DF	Typical
154	M154	N144	N107			floor jst	Beam	Rectangular	Rawlins DF	Typical
155	M155	N145	N108			floor jst	Beam	Rectangular	Rawlins DF	Typical
156	M156	N146	N109			floor jst	Beam	Rectangular	Rawlins DF	Typical
157	M157	N167	N175			mc	Beam	Rectangular	Rawlins DF	Typical
158	M158	N200	N208			mc	Beam	Rectangular	Rawlins DF	Typical
159	M159	N237	N245			mc	Beam	Rectangular	Rawlins DF	Typical
160	M160	N270	N278			mc	Beam	Rectangular	Rawlins DF	Typical
161	M161	N165	N289			rafter	Beam	Rectangular	Rawlins DF	Typical
162	M162	N177	N290			rafter	Beam	Rectangular	Rawlins DF	Typical
163	M163	N178	N291			rafter	Beam	Rectangular	Rawlins DF	Typical
164	M164	N182	N293			rafter	Beam	Rectangular	Rawlins DF	Typical
165	M165	N186	N295			rafter	Beam	Rectangular	Rawlins DF	Typical
166	M166	N190	N297			rafter	Beam	Rectangular	Rawlins DF	Typical
167	M167	N194	N299			rafter	Beam	Rectangular	Rawlins DF	Typical
168	M168	N211	N303			rafter	Beam	Rectangular	Rawlins DF	Typical
169	M169	N215	N305			rafter	Beam	Rectangular	Rawlins DF	Typical
170	M170	N219	N307			rafter	Beam	Rectangular	Rawlins DF	Typical
171	M171	N223	N309			rafter	Beam	Rectangular	Rawlins DF	Typical
172	M172	N227	N311			rafter	Beam	Rectangular	Rawlins DF	Typical
173	M173	N231	N313			rafter	Beam	Rectangular	Rawlins DF	Typical
174	M174	N248	N317			rafter	Beam	Rectangular	Rawlins DF	Typical
175	M175	N252	N319			rafter	Beam	Rectangular	Rawlins DF	Typical
176	M176	N256	N321			rafter	Beam	Rectangular	Rawlins DF	Typical
177	M177	N260	N323			rafter	Beam	Rectangular	Rawlins DF	Typical
178	M178	N264	N325			rafter	Beam	Rectangular	Rawlins DF	Typical
179	M179	N268	N327			rafter	Beam	Rectangular	Rawlins DF	Typical
180	M180	N280	N328			rafter	Beam	Rectangular	Rawlins DF	Typical
181	M181	N289	N329			rafter	Beam	Rectangular	Rawlins DF	Typical
182	M182	N290	N329			rafter	Beam	Rectangular	Rawlins DF	Typical
183	M183	N327	N348			rafter	Beam	Rectangular	Rawlins DF	Typical
184	M184	N328	N348			rafter	Beam	Rectangular	Rawlins DF	Typical
185	M185	N330	N292			rafter	Beam	Rectangular	Rawlins DF	Typical
186	M186	N331	N294			rafter	Beam	Rectangular	Rawlins DF	Typical
187	M187	N332	N296			rafter	Beam	Rectangular	Rawlins DF	Typical
188	M188	N333	N298			rafter	Beam	Rectangular	Rawlins DF	Typical
189	M189	N334	N300			rafter	Beam	Rectangular	Rawlins DF	Typical
190	M190	N336	N304			rafter	Beam	Rectangular	Rawlins DF	Typical
191	M191	N337	N306			rafter	Beam	Rectangular	Rawlins DF	Typical
192	M192	N338	N308			rafter	Beam	Rectangular	Rawlins DF	Typical
193	M193	N339	N310			rafter	Beam	Rectangular	Rawlins DF	Typical
194	M194	N340	N312			rafter	Beam	Rectangular	Rawlins DF	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
195	M195	N341	N314			rafter	Beam	Rectangular	Rawlins DF	Typical
196	M196	N343	N318			rafter	Beam	Rectangular	Rawlins DF	Typical
197	M197	N344	N320			rafter	Beam	Rectangular	Rawlins DF	Typical
198	M198	N345	N322			rafter	Beam	Rectangular	Rawlins DF	Typical
199	M199	N346	N324			rafter	Beam	Rectangular	Rawlins DF	Typical
200	M200	N347	N326			rafter	Beam	Rectangular	Rawlins DF	Typical
201	M201	N289	N301			rafter bm	Beam	Rectangular	Rawlins DF	Typical
202	M202	N290	N302			rafter bm	Beam	Rectangular	Rawlins DF	Typical
203	M203	N301	N315			rafter bm	Beam	Rectangular	Rawlins DF	Typical
204	M204	N302	N316			rafter bm	Beam	Rectangular	Rawlins DF	Typical
205	M205	N315	N327			rafter bm	Beam	Rectangular	Rawlins DF	Typical
206	M206	N316	N328			rafter bm	Beam	Rectangular	Rawlins DF	Typical
207	M207	N289	N290			rafter brc	Column	Rectangular	Rawlins DF	Typical
208	M208	N293	N294			rafter brc	Column	Rectangular	Rawlins DF	Typical
209	M209	N297	N298			rafter brc	Column	Rectangular	Rawlins DF	Typical
210	M210	N303	N304			rafter brc	Column	Rectangular	Rawlins DF	Typical
211	M211	N307	N308			rafter brc	Column	Rectangular	Rawlins DF	Typical
212	M212	N311	N312			rafter brc	Column	Rectangular	Rawlins DF	Typical
213	M213	N317	N318			rafter brc	Column	Rectangular	Rawlins DF	Typical
214	M214	N321	N322			rafter brc	Column	Rectangular	Rawlins DF	Typical
215	M215	N325	N326			rafter brc	Column	Rectangular	Rawlins DF	Typical
216	M216	N16	N170			rod1375	Column	None	A36	Typical
217	M217	N22	N172			rod1375	Column	None	A36	Typical
218	M218	N53	N203			rod1375	Column	None	A36	Typical
219	M219	N59	N205			rod1375	Column	None	A36	Typical
220	M220	N90	N240			rod1375	Column	None	A36	Typical
221	M221	N96	N242			rod1375	Column	None	A36	Typical
222	M222	N127	N273			rod1375	Column	None	A36	Typical
223	M223	N133	N275			rod1375	Column	None	A36	Typical
224	M224	N10	N149			rod2000	Column	None	A36	Typical
225	M225	N28	N150			rod2000	Column	None	A36	Typical
226	M226	N47	N151			rod2000	Column	None	A36	Typical
227	M227	N65	N152			rod2000	Column	None	A36	Typical
228	M228	N84	N153			rod2000	Column	None	A36	Typical
229	M229	N102	N154			rod2000	Column	None	A36	Typical
230	M230	N121	N155			rod2000	Column	None	A36	Typical
231	M231	N139	N156			rod2000	Column	None	A36	Typical
232	M232	N149	N157			rod2000	Column	None	A36	Typical
233	M233	N150	N158			rod2000	Column	None	A36	Typical
234	M234	N151	N159			rod2000	Column	None	A36	Typical
235	M235	N152	N160			rod2000	Column	None	A36	Typical
236	M236	N153	N161			rod2000	Column	None	A36	Typical
237	M237	N154	N162			rod2000	Column	None	A36	Typical
238	M238	N155	N163			rod2000	Column	None	A36	Typical
239	M239	N156	N164			rod2000	Column	None	A36	Typical
240	M240	N157	N166			rod2000	Column	None	A36	Typical
241	M241	N158	N176			rod2000	Column	None	A36	Typical
242	M242	N159	N199			rod2000	Column	None	A36	Typical
243	M243	N160	N209			rod2000	Column	None	A36	Typical
244	M244	N161	N236			rod2000	Column	None	A36	Typical
245	M245	N162	N246			rod2000	Column	None	A36	Typical
246	M246	N163	N269			rod2000	Column	None	A36	Typical
247	M247	N164	N279			rod2000	Column	None	A36	Typical
248	M248	N1	N165			stud	Column	Rectangular	Rawlins DF	Typical
249	M249	N37	N177			stud	Column	Rectangular	Rawlins DF	Typical
250	M250	N37	N74		90	stud	Column	Rectangular	Rawlins DF	Typical
251	M251	N38	N1		90	stud	Column	Rectangular	Rawlins DF	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
252	M252	N38	N198			stud	Column	Rectangular	Rawlins DF	Typical
253	M253	N74	N210			stud	Column	Rectangular	Rawlins DF	Typical
254	M254	N74	N111		90	stud	Column	Rectangular	Rawlins DF	Typical
255	M255	N75	N38		90	stud	Column	Rectangular	Rawlins DF	Typical
256	M256	N75	N235			stud	Column	Rectangular	Rawlins DF	Typical
257	M257	N111	N247			stud	Column	Rectangular	Rawlins DF	Typical
258	M258	N111	N148		90	stud	Column	Rectangular	Rawlins DF	Typical
259	M259	N112	N75		90	stud	Column	Rectangular	Rawlins DF	Typical
260	M260	N112	N268			stud	Column	Rectangular	Rawlins DF	Typical
261	M261	N148	N280			stud	Column	Rectangular	Rawlins DF	Typical
262	M262	N165	N178		90	stud	Column	Rectangular	Rawlins DF	Typical
263	M263	N170	N179		90	stud	Column	Rectangular	Rawlins DF	Typical
264	M264	N172	N180		90	stud	Column	Rectangular	Rawlins DF	Typical
265	M265	N177	N181		90	stud	Column	Rectangular	Rawlins DF	Typical
266	M266	N178	N182		90	stud	Column	Rectangular	Rawlins DF	Typical
267	M267	N179	N183		90	stud	Column	Rectangular	Rawlins DF	Typical
268	M268	N180	N184		90	stud	Column	Rectangular	Rawlins DF	Typical
269	M269	N181	N185		90	stud	Column	Rectangular	Rawlins DF	Typical
270	M270	N182	N186		90	stud	Column	Rectangular	Rawlins DF	Typical
271	M271	N183	N187		90	stud	Column	Rectangular	Rawlins DF	Typical
272	M272	N184	N188		90	stud	Column	Rectangular	Rawlins DF	Typical
273	M273	N185	N189		90	stud	Column	Rectangular	Rawlins DF	Typical
274	M274	N186	N190		90	stud	Column	Rectangular	Rawlins DF	Typical
275	M275	N187	N191		90	stud	Column	Rectangular	Rawlins DF	Typical
276	M276	N188	N192		90	stud	Column	Rectangular	Rawlins DF	Typical
277	M277	N189	N193		90	stud	Column	Rectangular	Rawlins DF	Typical
278	M278	N190	N194		90	stud	Column	Rectangular	Rawlins DF	Typical
279	M279	N191	N195		90	stud	Column	Rectangular	Rawlins DF	Typical
280	M280	N192	N196		90	stud	Column	Rectangular	Rawlins DF	Typical
281	M281	N193	N197		90	stud	Column	Rectangular	Rawlins DF	Typical
282	M282	N194	N211		90	stud	Column	Rectangular	Rawlins DF	Typical
283	M283	N195	N212		90	stud	Column	Rectangular	Rawlins DF	Typical
284	M284	N196	N213		90	stud	Column	Rectangular	Rawlins DF	Typical
285	M285	N197	N214		90	stud	Column	Rectangular	Rawlins DF	Typical
286	M286	N211	N215		90	stud	Column	Rectangular	Rawlins DF	Typical
287	M287	N212	N216		90	stud	Column	Rectangular	Rawlins DF	Typical
288	M288	N213	N217		90	stud	Column	Rectangular	Rawlins DF	Typical
289	M289	N214	N218		90	stud	Column	Rectangular	Rawlins DF	Typical
290	M290	N215	N219		90	stud	Column	Rectangular	Rawlins DF	Typical
291	M291	N216	N220		90	stud	Column	Rectangular	Rawlins DF	Typical
292	M292	N217	N221		90	stud	Column	Rectangular	Rawlins DF	Typical
293	M293	N218	N222		90	stud	Column	Rectangular	Rawlins DF	Typical
294	M294	N219	N223		90	stud	Column	Rectangular	Rawlins DF	Typical
295	M295	N220	N224		90	stud	Column	Rectangular	Rawlins DF	Typical
296	M296	N221	N225		90	stud	Column	Rectangular	Rawlins DF	Typical
297	M297	N222	N226		90	stud	Column	Rectangular	Rawlins DF	Typical
298	M298	N223	N227		90	stud	Column	Rectangular	Rawlins DF	Typical
299	M299	N224	N228		90	stud	Column	Rectangular	Rawlins DF	Typical
300	M300	N225	N229		90	stud	Column	Rectangular	Rawlins DF	Typical
301	M301	N226	N230		90	stud	Column	Rectangular	Rawlins DF	Typical
302	M302	N227	N231		90	stud	Column	Rectangular	Rawlins DF	Typical
303	M303	N228	N232		90	stud	Column	Rectangular	Rawlins DF	Typical
304	M304	N229	N233		90	stud	Column	Rectangular	Rawlins DF	Typical
305	M305	N230	N234		90	stud	Column	Rectangular	Rawlins DF	Typical
306	M306	N231	N248		90	stud	Column	Rectangular	Rawlins DF	Typical
307	M307	N232	N249		90	stud	Column	Rectangular	Rawlins DF	Typical
308	M308	N233	N250		90	stud	Column	Rectangular	Rawlins DF	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
309	M309	N234	N251		90	stud	Column	Rectangular	Rawlins DF	Typical
310	M310	N248	N252		90	stud	Column	Rectangular	Rawlins DF	Typical
311	M311	N249	N253		90	stud	Column	Rectangular	Rawlins DF	Typical
312	M312	N250	N254		90	stud	Column	Rectangular	Rawlins DF	Typical
313	M313	N251	N255		90	stud	Column	Rectangular	Rawlins DF	Typical
314	M314	N252	N256		90	stud	Column	Rectangular	Rawlins DF	Typical
315	M315	N253	N257		90	stud	Column	Rectangular	Rawlins DF	Typical
316	M316	N254	N258		90	stud	Column	Rectangular	Rawlins DF	Typical
317	M317	N255	N259		90	stud	Column	Rectangular	Rawlins DF	Typical
318	M318	N256	N260		90	stud	Column	Rectangular	Rawlins DF	Typical
319	M319	N257	N261		90	stud	Column	Rectangular	Rawlins DF	Typical
320	M320	N258	N262		90	stud	Column	Rectangular	Rawlins DF	Typical
321	M321	N259	N263		90	stud	Column	Rectangular	Rawlins DF	Typical
322	M322	N260	N264		90	stud	Column	Rectangular	Rawlins DF	Typical
323	M323	N261	N265		90	stud	Column	Rectangular	Rawlins DF	Typical
324	M324	N262	N266		90	stud	Column	Rectangular	Rawlins DF	Typical
325	M325	N263	N267		90	stud	Column	Rectangular	Rawlins DF	Typical
326	M326	N264	N268		90	stud	Column	Rectangular	Rawlins DF	Typical
327	M327	N265	N273		90	stud	Column	Rectangular	Rawlins DF	Typical
328	M328	N266	N275		90	stud	Column	Rectangular	Rawlins DF	Typical
329	M329	N267	N280		90	stud	Column	Rectangular	Rawlins DF	Typical
330	M330	N329	N330			stud	Column	Rectangular	Rawlins DF	Typical
331	M331	N330	N331			stud	Column	Rectangular	Rawlins DF	Typical
332	M332	N331	N332			stud	Column	Rectangular	Rawlins DF	Typical
333	M333	N332	N333			stud	Column	Rectangular	Rawlins DF	Typical
334	M334	N333	N334			stud	Column	Rectangular	Rawlins DF	Typical
335	M335	N334	N336			stud	Column	Rectangular	Rawlins DF	Typical
336	M336	N336	N337			stud	Column	Rectangular	Rawlins DF	Typical
337	M337	N337	N338			stud	Column	Rectangular	Rawlins DF	Typical
338	M338	N338	N339			stud	Column	Rectangular	Rawlins DF	Typical
339	M339	N339	N340			stud	Column	Rectangular	Rawlins DF	Typical
340	M340	N340	N341			stud	Column	Rectangular	Rawlins DF	Typical
341	M341	N341	N343			stud	Column	Rectangular	Rawlins DF	Typical
342	M342	N343	N344			stud	Column	Rectangular	Rawlins DF	Typical
343	M343	N344	N345			stud	Column	Rectangular	Rawlins DF	Typical
344	M344	N345	N346			stud	Column	Rectangular	Rawlins DF	Typical
345	M345	N346	N347			stud	Column	Rectangular	Rawlins DF	Typical
346	M346	N347	N348			stud	Column	Rectangular	Rawlins DF	Typical
347	M347	N2	N167			web1	Column	Rectangular	Rawlins DF	Typical
348	M348	N36	N175			web1	Column	Rectangular	Rawlins DF	Typical
349	M349	N39	N200			web1	Column	Rectangular	Rawlins DF	Typical
350	M350	N73	N208			web1	Column	Rectangular	Rawlins DF	Typical
351	M351	N76	N237			web1	Column	Rectangular	Rawlins DF	Typical
352	M352	N110	N245			web1	Column	Rectangular	Rawlins DF	Typical
353	M353	N113	N270			web1	Column	Rectangular	Rawlins DF	Typical
354	M354	N147	N278			web1	Column	Rectangular	Rawlins DF	Typical
355	M355	N9	N170			web2	Column	Rectangular	Rawlins DF	Typical
356	M356	N29	N172			web2	Column	Rectangular	Rawlins DF	Typical
357	M357	N46	N203			web2	Column	Rectangular	Rawlins DF	Typical
358	M358	N66	N205			web2	Column	Rectangular	Rawlins DF	Typical
359	M359	N83	N240			web2	Column	Rectangular	Rawlins DF	Typical
360	M360	N103	N242			web2	Column	Rectangular	Rawlins DF	Typical
361	M361	N120	N273			web2	Column	Rectangular	Rawlins DF	Typical
362	M362	N140	N275			web2	Column	Rectangular	Rawlins DF	Typical
363	M363	N326	N267			rafter	Beam	Rectangular	Rawlins DF	Typical
364	M364	N325	N347			rafter	Beam	Rectangular	Rawlins DF	Typical
365	M365	N324	N263			rafter	Beam	Rectangular	Rawlins DF	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
366	M366	N323	N346			rafter	Beam	Rectangular	Rawlins DF	Typical
367	M367	N322	N259			rafter	Beam	Rectangular	Rawlins DF	Typical
368	M368	N321	N345			rafter	Beam	Rectangular	Rawlins DF	Typical
369	M369	N320	N255			rafter	Beam	Rectangular	Rawlins DF	Typical
370	M370	N319	N344			rafter	Beam	Rectangular	Rawlins DF	Typical
371	M371	N318	N251			rafter	Beam	Rectangular	Rawlins DF	Typical
372	M372	N317	N343			rafter	Beam	Rectangular	Rawlins DF	Typical
373	M373	N314	N234			rafter	Beam	Rectangular	Rawlins DF	Typical
374	M374	N313	N341			rafter	Beam	Rectangular	Rawlins DF	Typical
375	M375	N312	N230			rafter	Beam	Rectangular	Rawlins DF	Typical
376	M376	N311	N340			rafter	Beam	Rectangular	Rawlins DF	Typical
377	M377	N310	N226			rafter	Beam	Rectangular	Rawlins DF	Typical
378	M378	N309	N339			rafter	Beam	Rectangular	Rawlins DF	Typical
379	M379	N308	N222			rafter	Beam	Rectangular	Rawlins DF	Typical
380	M380	N307	N338			rafter	Beam	Rectangular	Rawlins DF	Typical
381	M381	N306	N218			rafter	Beam	Rectangular	Rawlins DF	Typical
382	M382	N305	N337			rafter	Beam	Rectangular	Rawlins DF	Typical
383	M383	N304	N214			rafter	Beam	Rectangular	Rawlins DF	Typical
384	M384	N303	N336			rafter	Beam	Rectangular	Rawlins DF	Typical
385	M385	N300	N197			rafter	Beam	Rectangular	Rawlins DF	Typical
386	M386	N299	N334			rafter	Beam	Rectangular	Rawlins DF	Typical
387	M387	N298	N193			rafter	Beam	Rectangular	Rawlins DF	Typical
388	M388	N297	N333			rafter	Beam	Rectangular	Rawlins DF	Typical
389	M389	N296	N189			rafter	Beam	Rectangular	Rawlins DF	Typical
390	M390	N295	N332			rafter	Beam	Rectangular	Rawlins DF	Typical
391	M391	N294	N185			rafter	Beam	Rectangular	Rawlins DF	Typical
392	M392	N293	N331			rafter	Beam	Rectangular	Rawlins DF	Typical
393	M393	N292	N181			rafter	Beam	Rectangular	Rawlins DF	Typical
394	M394	N291	N330			rafter	Beam	Rectangular	Rawlins DF	Typical

Wood Material Properties

	Label	Species	Grade	Cm	Emod	Nu	Therm (...	Dens[k/ft^3]
1	DF/SPine	Com Species Group I DF,SP	No.1		1	.3	.3	.035
2	HF/Spruce Fir	Com Species Group II HF,SPF	No.1		1	.3	.3	.035
3	DF	Douglas Fir-Larch	No.1		1	.3	.3	.035
4	SP	Southern Pine	No.1		1	.3	.3	.035
5	HF	Hem-Fir	No.1		1	.3	.3	.035
6	SPF	Spruce-Pine-fir	No.1		1	.3	.3	.035
7	24F-1.8E DF Balanced	24F-1.8E_DF_BAL	na		1	.3	.3	.035
8	24F-1.8E DF Unbalanced	24F-1.8E_DF_UNBAL	na		1	.3	.3	.035
9	24F-1.8E SP Balanced	24F-1.8E_SP_BAL	na		1	.3	.3	.035
10	24F-1.8E SP Unbalanced	24F-1.8E_SP_UNBAL	na		1	.3	.3	.035
11	LVL-PRL Commercial 2250F	LVL_PRL_1.5E_2250F	na		1	.3	.3	.035
12	LVL-PRL Commercial 2900F	LVL_PRL_2.0E_2900F	na		1	.3	.3	.035
13	Microlam	Micro-Lam	na		1	.3	.3	.035
14	Rawlins DF	Doug Fir #1(55 UBC)	na		1	.3	.3	.035

Wood Design Parameters

	Label	Shape	Length[...	le2[in]	le1[in]	le-bend to...	le-bend bo...	Kyy	Kzz	CV	Cr	y sway	z sway
1	M9	attic flr	99.5	6			6						
2	M10	attic flr	99.5	6			6						
3	M11	attic flr	173	6			6						
4	M12	attic flr	78	6			6						
5	M13	attic flr	173	6			6						
6	M14	attic flr	173	6			6						

Wood Design Parameters (Continued)

	Label	Shape	Length[...	le2[in]	le1[in]	le-bend to...	le-bend bo...	Kyy	Kzz	CV	Cr	y sway	z sway
7	M15	attic flr	78	6			6						
8	M16	attic flr	173	6			6						
9	M17	attic flr	173	6			6						
10	M18	attic flr	78	6			6						
11	M19	attic flr	173	6			6						
12	M20	attic flr	173	6			6						
13	M21	attic flr	78	6			6						
14	M22	attic flr	173	6			6						
15	M23	attic flr	173	6			6						
16	M24	attic flr	78	6			6						
17	M25	attic flr	173	6			6						
18	M26	attic flr	173	6			6						
19	M27	attic flr	78	6			6						
20	M28	attic flr	173	6			6						
21	M29	attic flr	173	6			6						
22	M30	attic flr	78	6			6						
23	M31	attic flr	173	6			6						
24	M32	attic flr	173	6			6						
25	M33	attic flr	78	6			6						
26	M34	attic flr	173	6			6						
27	M35	attic flr	173	6			6						
28	M36	attic flr	78	6			6						
29	M37	attic flr	173	6			6						
30	M38	attic flr	173	6			6						
31	M39	attic flr	78	6			6						
32	M40	attic flr	173	6			6						
33	M41	attic flr	173	6			6						
34	M42	attic flr	78	6			6						
35	M43	attic flr	173	6			6						
36	M44	attic flr	173	6			6						
37	M45	attic flr	78	6			6						
38	M46	attic flr	173	6			6						
39	M47	attic flr	173	6			6						
40	M48	attic flr	78	6			6						
41	M49	attic flr	173	6			6						
42	M50	attic flr	173	6			6						
43	M51	attic flr	78	6			6						
44	M52	attic flr	173	6			6						
45	M53	attic flr	173	6			6						
46	M54	attic flr	78	6			6						
47	M55	attic flr	173	6			6						
48	M56	attic flr	173	6			6						
49	M57	attic flr	78	6			6						
50	M58	attic flr	173	6			6						
51	M59	bc	424	6		6							
52	M60	bc	424	6		6							
53	M61	bc	424	6		6							
54	M62	bc	424	6		6							
55	M63	col	76										
56	M64	col	76										
57	M65	col	76										
58	M66	col	76										
59	M67	col	76										
60	M68	col	76										
61	M69	col	76										
62	M70	col	76										
63	M71	col brc	91.241										

Wood Design Parameters (Continued)

	Label	Shape	Length[...	le2[in]	le1[in]	le-bend to...	le-bend bo...	Kyy	Kzz	CV	Cr	y sway	z sway
64	M72	col brc	91.241										
65	M73	col brc	91.241										
66	M74	col brc	91.241										
67	M75	col brc	91.241										
68	M76	col brc	91.241										
69	M77	col brc	91.241										
70	M78	col brc	91.241										
71	M79	floor jst	135	6		6	6						
72	M80	floor jst	135	6		6	6						
73	M81	floor jst	135	6		6	6						
74	M82	floor jst	135	6		6	6						
75	M83	floor jst	135	6		6	6						
76	M84	floor jst	135	6		6	6						
77	M85	floor jst	135	6		6	6						
78	M86	floor jst	135	6		6	6						
79	M87	floor jst	135	6		6	6						
80	M88	floor jst	135	6		6	6						
81	M89	floor jst	135	6		6	6						
82	M90	floor jst	135	6		6	6						
83	M91	floor jst	135	6		6	6						
84	M92	floor jst	135	6		6	6						
85	M93	floor jst	135	6		6	6						
86	M94	floor jst	135	6		6	6						
87	M95	floor jst	135	6		6	6						
88	M96	floor jst	135	6		6	6						
89	M97	floor jst	135	6		6	6						
90	M98	floor jst	135	6		6	6						
91	M99	floor jst	135	6		6	6						
92	M100	floor jst	135	6		6	6						
93	M101	floor jst	135	6		6	6						
94	M102	floor jst	135	6		6	6						
95	M103	floor jst	135	6		6	6						
96	M104	floor jst	135	6		6	6						
97	M105	floor jst	143	6		6	6						
98	M106	floor jst	143	6		6	6						
99	M107	floor jst	143	6		6	6						
100	M108	floor jst	143	6		6	6						
101	M109	floor jst	143	6		6	6						
102	M110	floor jst	143	6		6	6						
103	M111	floor jst	143	6		6	6						
104	M112	floor jst	143	6		6	6						
105	M113	floor jst	143	6		6	6						
106	M114	floor jst	143	6		6	6						
107	M115	floor jst	143	6		6	6						
108	M116	floor jst	143	6		6	6						
109	M117	floor jst	143	6		6	6						
110	M118	floor jst	143	6		6	6						
111	M119	floor jst	143	6		6	6						
112	M120	floor jst	143	6		6	6						
113	M121	floor jst	143	6		6	6						
114	M122	floor jst	143	6		6	6						
115	M123	floor jst	143	6		6	6						
116	M124	floor jst	143	6		6	6						
117	M125	floor jst	143	6		6	6						
118	M126	floor jst	143	6		6	6						
119	M127	floor jst	143	6		6	6						
120	M128	floor jst	143	6		6	6						

Wood Design Parameters (Continued)

	Label	Shape	Length[...	le2[in]	le1[in]	le-bend to...	le-bend bo...	Kyy	Kzz	CV	Cr	y sway	z sway
121	M129	floor jst	143	6		6	6						
122	M130	floor jst	143	6		6	6						
123	M131	floor jst	118	6		6	6						
124	M132	floor jst	118	6		6	6						
125	M133	floor jst	118	6		6	6						
126	M134	floor jst	118	6		6	6						
127	M135	floor jst	118	6		6	6						
128	M136	floor jst	118	6		6	6						
129	M137	floor jst	118	6		6	6						
130	M138	floor jst	118	6		6	6						
131	M139	floor jst	118	6		6	6						
132	M140	floor jst	118	6		6	6						
133	M141	floor jst	118	6		6	6						
134	M142	floor jst	118	6		6	6						
135	M143	floor jst	118	6		6	6						
136	M144	floor jst	118	6		6	6						
137	M145	floor jst	118	6		6	6						
138	M146	floor jst	118	6		6	6						
139	M147	floor jst	118	6		6	6						
140	M148	floor jst	118	6		6	6						
141	M149	floor jst	118	6		6	6						
142	M150	floor jst	118	6		6	6						
143	M151	floor jst	118	6		6	6						
144	M152	floor jst	118	6		6	6						
145	M153	floor jst	118	6		6	6						
146	M154	floor jst	118	6		6	6						
147	M155	floor jst	118	6		6	6						
148	M156	floor jst	118	6		6	6						
149	M157	mc	220	6		6							
150	M158	mc	220	6		6							
151	M159	mc	220	6		6							
152	M160	mc	220	6		6							
153	M161	rafter	129.214	6	Segment	6	Segment						
154	M162	rafter	129.214	6	Segment	6	Segment						
155	M163	rafter	129.214	6	Segment	6	Segment						
156	M164	rafter	129.214	6	Segment	6	Segment						
157	M165	rafter	129.214	6	Segment	6	Segment						
158	M166	rafter	129.214	6	Segment	6	Segment						
159	M167	rafter	129.214	6	Segment	6	Segment						
160	M168	rafter	129.214	6	Segment	6	Segment						
161	M169	rafter	129.214	6	Segment	6	Segment						
162	M170	rafter	129.214	6	Segment	6	Segment						
163	M171	rafter	129.214	6	Segment	6	Segment						
164	M172	rafter	129.214	6	Segment	6	Segment						
165	M173	rafter	129.214	6	Segment	6	Segment						
166	M174	rafter	129.214	6	Segment	6	Segment						
167	M175	rafter	129.214	6	Segment	6	Segment						
168	M176	rafter	129.214	6	Segment	6	Segment						
169	M177	rafter	129.214	6	Segment	6	Segment						
170	M178	rafter	129.214	6	Segment	6	Segment						
171	M179	rafter	129.214	6	Segment	6	Segment						
172	M180	rafter	129.214	6	Segment	6	Segment						
173	M181	rafter	132.923	6	Segment	6	Segment						
174	M182	rafter	132.923	6	Segment	6	Segment						
175	M183	rafter	132.923	6	Segment	6	Segment						
176	M184	rafter	132.923	6	Segment	6	Segment						
177	M185	rafter	132.923	6	Segment	6	Segment						

Wood Design Parameters (Continued)

	Label	Shape	Length[...	le2[in]	le1[in]	le-bend to...	le-bend bo...	Kyy	Kzz	CV	Cr	y sway	z sway
178	M186	rafter	132.923	6	Segment	6	Segment						
179	M187	rafter	132.923	6	Segment	6	Segment						
180	M188	rafter	132.923	6	Segment	6	Segment						
181	M189	rafter	132.923	6	Segment	6	Segment						
182	M190	rafter	132.923	6	Segment	6	Segment						
183	M191	rafter	132.923	6	Segment	6	Segment						
184	M192	rafter	132.923	6	Segment	6	Segment						
185	M193	rafter	132.923	6	Segment	6	Segment						
186	M194	rafter	132.923	6	Segment	6	Segment						
187	M195	rafter	132.923	6	Segment	6	Segment						
188	M196	rafter	132.923	6	Segment	6	Segment						
189	M197	rafter	132.923	6	Segment	6	Segment						
190	M198	rafter	132.923	6	Segment	6	Segment						
191	M199	rafter	132.923	6	Segment	6	Segment						
192	M200	rafter	132.923	6	Segment	6	Segment						
193	M201	rafter bm	135	6	Segment	6	Segment						
194	M202	rafter bm	135	6	Segment	6	Segment						
195	M203	rafter bm	143	6	Segment	6	Segment						
196	M204	rafter bm	143	6	Segment	6	Segment						
197	M205	rafter bm	118	6	Segment	6	Segment						
198	M206	rafter bm	118	6	Segment	6	Segment						
199	M207	rafter brc	215	72	Segment	72	Segment						
200	M208	rafter brc	215	72	Segment	72	Segment						
201	M209	rafter brc	215	72	Segment	72	Segment						
202	M210	rafter brc	215	72	Segment	72	Segment						
203	M211	rafter brc	215	72	Segment	72	Segment						
204	M212	rafter brc	215	72	Segment	72	Segment						
205	M213	rafter brc	215	72	Segment	72	Segment						
206	M214	rafter brc	215	72	Segment	72	Segment						
207	M215	rafter brc	215	72	Segment	72	Segment						
208	M248	stud	133	6		6							
209	M249	stud	133	6		6							
210	M250	stud	135	6		6							
211	M251	stud	135	6		6	6						
212	M252	stud	133	6		6							
213	M253	stud	133	6		6							
214	M254	stud	143	6		6							
215	M255	stud	143	6		6	6						
216	M256	stud	133	6		6							
217	M257	stud	133	6		6							
218	M258	stud	118	6		6							
219	M259	stud	118	6		6	6						
220	M260	stud	133	6		6							
221	M261	stud	133	6		6							
222	M262	stud	24	6		6							
223	M263	stud	24	6		6							
224	M264	stud	24	6		6							
225	M265	stud	24	6		6							
226	M266	stud	24	6		6							
227	M267	stud	24	6		6							
228	M268	stud	24	6		6							
229	M269	stud	24	6		6							
230	M270	stud	24	6		6							
231	M271	stud	24	6		6							
232	M272	stud	24	6		6							
233	M273	stud	24	6		6							
234	M274	stud	24	6		6							

Wood Design Parameters (Continued)

	Label	Shape	Length[...	le2[in]	le1[in]	le-bend to...	le-bend bo...	Kyy	Kzz	CV	Cr	y sway	z sway
235	M275	stud	24	6		6							
236	M276	stud	24	6		6							
237	M277	stud	24	6		6							
238	M278	stud	24	6		6							
239	M279	stud	24	6		6							
240	M280	stud	24	6		6							
241	M281	stud	24	6		6							
242	M282	stud	24	6		6							
243	M283	stud	24	6		6							
244	M284	stud	24	6		6							
245	M285	stud	24	6		6							
246	M286	stud	24	6		6							
247	M287	stud	24	6		6							
248	M288	stud	24	6		6							
249	M289	stud	24	6		6							
250	M290	stud	24	6		6							
251	M291	stud	24	6		6							
252	M292	stud	24	6		6							
253	M293	stud	24	6		6							
254	M294	stud	24	6		6							
255	M295	stud	24	6		6							
256	M296	stud	24	6		6							
257	M297	stud	24	6		6							
258	M298	stud	24	6		6							
259	M299	stud	24	6		6							
260	M300	stud	24	6		6							
261	M301	stud	24	6		6							
262	M302	stud	24	6		6							
263	M303	stud	24	6		6							
264	M304	stud	24	6		6							
265	M305	stud	24	6		6							
266	M306	stud	24	6		6							
267	M307	stud	24	6		6							
268	M308	stud	24	6		6							
269	M309	stud	24	6		6							
270	M310	stud	24	6		6							
271	M311	stud	24	6		6							
272	M312	stud	24	6		6							
273	M313	stud	24	6		6							
274	M314	stud	24	6		6							
275	M315	stud	24	6		6							
276	M316	stud	24	6		6							
277	M317	stud	24	6		6							
278	M318	stud	24	6		6							
279	M319	stud	24	6		6							
280	M320	stud	24	6		6							
281	M321	stud	24	6		6							
282	M322	stud	24	6		6							
283	M323	stud	24	6		6							
284	M324	stud	24	6		6							
285	M325	stud	24	6		6							
286	M326	stud	12	6		6							
287	M327	stud	12	6		6							
288	M328	stud	12	6		6							
289	M329	stud	12	6		6							
290	M330	stud	24	6		6							
291	M331	stud	24	6		6							

Wood Design Parameters (Continued)

	Label	Shape	Length[...	le2[in]	le1[in]	le-bend to...	le-bend bo...	Kyy	Kzz	CV	Cr	y sway	z sway
292	M332	stud	24	6		6							
293	M333	stud	24	6		6							
294	M334	stud	24	6		6							
295	M335	stud	24	6		6							
296	M336	stud	24	6		6							
297	M337	stud	24	6		6							
298	M338	stud	24	6		6							
299	M339	stud	24	6		6							
300	M340	stud	24	6		6							
301	M341	stud	24	6		6							
302	M342	stud	24	6		6							
303	M343	stud	24	6		6							
304	M344	stud	24	6		6							
305	M345	stud	24	6		6							
306	M346	stud	12	6		6							
307	M347	web1	163.735										
308	M348	web1	163.735										
309	M349	web1	163.735										
310	M350	web1	163.735										
311	M351	web1	163.735										
312	M352	web1	163.735										
313	M353	web1	163.735										
314	M354	web1	163.735										
315	M355	web2	153.432										
316	M356	web2	153.432										
317	M357	web2	153.432										
318	M358	web2	153.432										
319	M359	web2	153.432										
320	M360	web2	153.432										
321	M361	web2	153.432										
322	M362	web2	153.432										
323	M363	rafter	129.214	6	Segment	6	Segment						
324	M364	rafter	132.923	6	Segment	6	Segment						
325	M365	rafter	129.214	6	Segment	6	Segment						
326	M366	rafter	132.923	6	Segment	6	Segment						
327	M367	rafter	129.214	6	Segment	6	Segment						
328	M368	rafter	132.923	6	Segment	6	Segment						
329	M369	rafter	129.214	6	Segment	6	Segment						
330	M370	rafter	132.923	6	Segment	6	Segment						
331	M371	rafter	129.214	6	Segment	6	Segment						
332	M372	rafter	132.923	6	Segment	6	Segment						
333	M373	rafter	129.214	6	Segment	6	Segment						
334	M374	rafter	132.923	6	Segment	6	Segment						
335	M375	rafter	129.214	6	Segment	6	Segment						
336	M376	rafter	132.923	6	Segment	6	Segment						
337	M377	rafter	129.214	6	Segment	6	Segment						
338	M378	rafter	132.923	6	Segment	6	Segment						
339	M379	rafter	129.214	6	Segment	6	Segment						
340	M380	rafter	132.923	6	Segment	6	Segment						
341	M381	rafter	129.214	6	Segment	6	Segment						
342	M382	rafter	132.923	6	Segment	6	Segment						
343	M383	rafter	129.214	6	Segment	6	Segment						
344	M384	rafter	132.923	6	Segment	6	Segment						
345	M385	rafter	129.214	6	Segment	6	Segment						
346	M386	rafter	132.923	6	Segment	6	Segment						
347	M387	rafter	129.214	6	Segment	6	Segment						
348	M388	rafter	132.923	6	Segment	6	Segment						

Wood Design Parameters (Continued)

	Label	Shape	Length[...	le2[in]	le1[in]	le-bend to...	le-bend bo...	Kyy	Kzz	CV	Cr	y sway	z sway
349	M389	rafter	129.214	6	Segment	6	Segment						
350	M390	rafter	132.923	6	Segment	6	Segment						
351	M391	rafter	129.214	6	Segment	6	Segment						
352	M392	rafter	132.923	6	Segment	6	Segment						
353	M393	rafter	129.214	6	Segment	6	Segment						
354	M394	rafter	132.923	6	Segment	6	Segment						

Member Area Loads (BLC 1 : rdl)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N280	N247	N316	N328	Y	A-B	-.01
2	N247	N210	N302	N316	Y	A-B	-.01
3	N210	N177	N290	N302	Y	A-B	-.01
4	N328	N316	N342	N348	Y	A-B	-.01
5	N316	N302	N335	N342	Y	A-B	-.01
6	N302	N290	N329	N335	Y	A-B	-.01
7	N348	N342	N315	N327	Y	A-B	-.01
8	N342	N335	N301	N315	Y	A-B	-.01
9	N335	N329	N289	N301	Y	A-B	-.01
10	N327	N315	N235	N268	Y	A-B	-.01
11	N315	N301	N198	N235	Y	A-B	-.01
12	N301	N289	N165	N198	Y	A-B	-.01

Member Area Loads (BLC 2 : sl)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N280	N247	N316	N328	V	A-B	-.03
2	N247	N210	N302	N316	V	A-B	-.03
3	N210	N177	N290	N302	V	A-B	-.03
4	N328	N316	N342	N348	V	A-B	-.03
5	N316	N302	N335	N342	V	A-B	-.03
6	N302	N290	N329	N335	V	A-B	-.03
7	N348	N342	N315	N327	V	A-B	-.03
8	N342	N335	N301	N315	V	A-B	-.03
9	N335	N329	N289	N301	V	A-B	-.03
10	N327	N315	N235	N268	V	A-B	-.03
11	N315	N301	N198	N235	V	A-B	-.03
12	N301	N289	N165	N198	V	A-B	-.03

Member Area Loads (BLC 3 : fdl)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N165	N198	N203	N170	Y	A-B	-.02
2	N198	N235	N240	N203	Y	A-B	-.02
3	N235	N268	N273	N240	Y	A-B	-.02
4	N170	N203	N205	N172	Y	A-B	-.02
5	N203	N240	N242	N205	Y	A-B	-.02
6	N240	N273	N275	N242	Y	A-B	-.02
7	N172	N205	N210	N177	Y	A-B	-.02
8	N205	N242	N247	N210	Y	A-B	-.02
9	N242	N275	N280	N247	Y	A-B	-.02
10	N111	N96	N133	N148	Y	A-B	-.02
11	N96	N90	N127	N133	Y	A-B	-.02
12	N90	N75	N112	N127	Y	A-B	-.02
13	N74	N59	N96	N111	Y	A-B	-.02
14	N59	N53	N90	N96	Y	A-B	-.02
15	N53	N38	N75	N90	Y	A-B	-.02
16	N37	N22	N59	N74	Y	A-B	-.02

Member Area Loads (BLC 3 : fdl) (Continued)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
17	N22	N16	N53	N59	Y	A-B	-.02
18	N16	N1	N38	N53	Y	A-B	-.02

Member Area Loads (BLC 4 : fll)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N111	N96	N133	N148	Y	A-B	-.04
2	N96	N90	N127	N133	Y	A-B	-.04
3	N90	N75	N112	N127	Y	A-B	-.04
4	N74	N59	N96	N111	Y	A-B	-.04
5	N59	N53	N90	N96	Y	A-B	-.04
6	N53	N38	N75	N90	Y	A-B	-.04
7	N37	N22	N59	N74	Y	A-B	-.04
8	N22	N16	N53	N59	Y	A-B	-.04
9	N16	N1	N38	N53	Y	A-B	-.04

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	rdl	None							12	
2	sl	None							12	
3	fdl	None							18	
4	fll	None							9	
5	BLC 1 Transient Area Loads	None						72		
6	BLC 3 Transient Area Loads	None						224		
7	BLC 4 Transient Area Loads	None						84		

Load Combinations

	Description	Sol..	PD..	SR..	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Factor
1	dl	Yes	Y		Y	-1	1	1			3	1								
2	dl+ll	Yes	Y		Y	-1	1	1			3	1	4	1						
3	dl+sl	Yes	Y		Y	-1	1	1	2	1	3	1								
4	dl+0.75ll+0.75sl	Yes	Y		Y	-1	1	1	2	.75	3	1	4	.75						

Member Section Forces

	LC	Member Label	Sec	Axial[k]	y Shear[k]	z Shear[k]	Torque[k-ft]	y-y Moment[k-...	z-z Moment[k-...
1	2	M9	1	-.827	.094	0	0	0	0
2			2	-.827	.047	0	0	0	-.146
3			3	-.827	0	0	0	0	-.195
4			4	-.827	-.047	0	0	0	-.146
5			5	-.827	-.093	0	0	0	0
6	2	M10	1	-.815	.093	0	.001	0	0
7			2	-.815	.047	0	.001	0	-.146
8			3	-.815	0	0	.001	0	-.195
9			4	-.815	-.047	0	.001	0	-.146
10			5	-.815	-.094	0	.001	0	0
11	2	M11	1	-.297	.298	0	.002	0	0
12			2	-.297	.149	0	.002	0	-.806
13			3	-.297	0	0	.002	0	-1.075
14			4	-.297	-.149	0	.002	0	-.806
15			5	-.297	-.298	0	.002	0	0
16	2	M12	1	-.271	.135	0	0	0	0
17			2	-.271	.067	0	0	0	-.164
18			3	-.271	0	0	0	0	-.219
19			4	-.271	-.067	0	0	0	-.164