Minneapolis
City of Lakes

CPED STAFF REPORT

Prepared for the Heritage Planning Commission
Agenda Item #1
June 9, 2015
BZH-28630

HERITAGE PRESERVATION APPLICATION SUMMARY

Property Location:	89-91 South Tenth Street and 1004-1016 Marquette Avenue
Project Name:	The Handicraft Guild Building/Handicraft Building City Apartments
Prepared By:	Hilary Dvorak, Principal Planner, (612) 673-2639
Applicant:	Village Green, Shawn Zimny
Project Contact:	Preservation Design Works, Laura Faucher
Ward:	7
Neighborhood:	Downtown West
Request:	To allow rehabilitation of the Handicraft Guild Building (89-91 South Tenth Street) in order to convert it to a mixed-use building with residential and commercial space. A new building will be constructed on the property located at 1004-1016 Marquette Avenue. A three-story glass link will connect the two buildings.

Required Applications:

Certificate of Appropriateness	To allow rehabilitation of the Handicraft Guild Building.
Historic Variance	To allow two buildings on one zoning lot.

HISTORIC PROPERTY INFORMATION

Current Name	Handicraft Guild Building
Historic Name	Handicraft Guild Building
Historic Address	89-91 South Tenth Street
Original Construction Date	1907
Original Architect	William Channing Whitney
Original Builder	H. N. Leighton Co.
Original Engineer	Unknown
Historic Use	Commercial - retail shops and offices
Current Use	Commercial - restaurant, retail shops and offices
Proposed Use	Residential dwelling units and commercial space

Date Application Deemed Complete	April 27, 2015	**Date Extension Letter Sent**	Not applicable
End of 60-Day Decision Period	June 26, 2015	**End of 120-Day Decision Period**	Not applicable

CLASSIFICATION

Local Historic District	Not Applicable
Period of Significance	1907-1918
Criteria of Significance	Cultural History, Architecture
Date of Local Designation	1998
Date of National Register Listing	Not applicable
Applicable Design Guidelines	*Secretary of the Interior's Standards for the Treatment of Historic Properties*

SUMMARY

BACKGROUND. The Handicraft Guild Building remains as unique and tangible evidence of the ideals of the founders and students of the Arts and Crafts movement in Minneapolis. In the early 1900's, in reaction to the increased industrialization of goods, the Arts and Crafts movement promoted the integrity of materials and the special quality of handmade goods. The building housed the Handicraft Guild, one of the nation's leading arts organizations. Its central location provided a forum for a community of artists to gather to discuss ideas and share their work. The Guild focused on three broad areas of concern: the need for art education, the exhibition and sale of work, and, of course, protesting industrialization. The building, designed by architect William Channing Whitney, retains its Georgian Revival exterior and reflects the ideals of the Arts and Crafts movement with beamed ceilings, dark rafters, and wainscoting details on the interior. The interior of the building is not designated.

DESIGNATION HISTORY. The City's proceedings to designate the Handicraft Guild Building (89-91 South Tenth Street) and the building adjacent to it at 1004 Marquette Avenue occurred in 1998. The City's record contained a CPED staff report based on a 1995 designation study conducted by Landscape Research and quoted excerpts from the national register nomination. The City ultimately designated both buildings. A lawsuit followed. In upholding the designation of the Handicraft Guild Building under the designation criteria "example of the religious and cultural development of Minneapolis" (housed leading arts organization during period when the Arts and Crafts movement flourished), the court concluded there was substantial evidence in the record supporting the designation. The designation was not based on the exterior physical structure of the building, but the cultural association.

In contrast, the Court overturned the designation of the adjacent building at 1004 Marquette concluding that the record was "devoid of evidence that the 1004 Marquette Avenue building is culturally or historically significant." The court also noted that the City's "consistent treatment of both buildings as a single building for preservation-designation purposes" was not persuasive and did not support the designation. Also, City assertions that the building provided additional space for the Arts and Crafts Guild was not supported by the record. Following this decision, the City hired a consultant to conduct further investigation into the significance of 1004 Marquette. This research did not yield any new evidence supporting designation of the building, nor did it establish any significant relationship between the two buildings with respect to design, architecture, or use.

Because 1004 Marquette Avenue is not historic, HPC review of the demolition is not required. In that same manner, HPC review of new construction is not required, *unless* the new construction would be considered an addition to the Handicraft Guild building. The new construction proposal does not constitute an addition.

APPLICANT'S PROPOSAL. The applicant is proposing to redevelop the properties located at 89-91 South Tenth Street and 1004-1016 Marquette Avenue. These properties are located on the southwest corner of Marquette Avenue and South Tenth Street in Downtown Minneapolis. There are currently three buildings on the site; the Handicraft Guild building, located at 89-91 South Tenth Street, will remain while the buildings located at 1004 Marquette Avenue and 1016 Marquette Avenue will be demolished as part of this development. In their place, the applicant is proposing to construct an 18-story residential building. The new building will be connected to the Handicraft Guild Building via a three-story glass link.

The main entrance to the residential building will be accessed from the Handicraft Guild Building. Also within this building there will be residential amenities such as leasing functions, concierge services and fitness spaces. The renovated building will also house restaurant space on the ground floor and office space on the second and third floors. The ground floor of the new building will have dwelling units along Marquette Avenue and a small retail space along South Tenth Street. On the roof of the new building there will be additional residential amenity space. As mentioned above, the two buildings will be connected via a three-story glass link. Because there will be two buildings on one zoning lot a historic variance is required. In addition, all of the alternations to the Handicraft Guild Building require a certificate of appropriateness.

The Handicraft Guild Building will be rehabilitated as part of the development. Masonry will be cleaned and repointed, while damaged masonry units will be replaced. The applicant will remove existing mortar joints which appear to be different from original (previously performed tuck pointing and masonry patching which does not match color, texture, and/or composition or bond pattern) and repoint. All existing non-historic paint (signage, graffiti, or other) on existing brick will be removed, using the gentlest means possible. Original surface integrity and finish of existing brick shall be maintained during and after paint removal. Brick will not be sand-blasted.

The existing roof will be replaced. The existing roof membrane will be removed at the gable, including all flashings. It will be replaced with metal standing seam panels, flashings and fascia, with gutters/downspouts to match. All other flat roofs will be replaced, including flashings, copings and scuppers/downspouts.

A window survey has been completed in order to evaluate the condition of the existing windows and doors to determine a treatment plan. See enclosed memo and elevations for the proposed treatment of each opening. Non-historic infill material will be removed from the original openings. New storm windows will be added to the interior of all windows. All skylights are to be restored to their original condition. See enclosed window survey elevations for the intended treatment of each condition.

A narrow, glass link will provide a connection between the Handicraft Guild building and the first three levels of the new residential building. To accommodate this link, a new opening will be saw cut into the east wall of the existing building at each floor level. A new steel lintel will be installed within existing mortar joints. The link will be set back approximately 36 feet back from the South Tenth Street property line, creating minimal impact to the historic building and minimal visibility from the street. New windows will be installed on the east façade of the existing building, just south of the proposed glass link, to provide a visual and physical connection from the interior space and the exterior courtyard. The revamped courtyard will provide intimate outdoor seating and green space for the restaurant.

PROJECT UPDATE. This item was continued from the May 19, 2015, Heritage Preservation Commission meeting. The Heritage Preservation Commission wanted more information about the project. Specifically, the applicant was asked to provide more information about the following:

- The glass link that will connect the Handicraft Guild building to the proposed new building;
- What the implications would be if the property were to be subdivided;
- Additional rationale for the historic variance; and
- More details about the interior modifications being made to the building.

The applicant has submitted a memo that addresses these questions and renderings of the glass link.

RELATED APPROVALS. Not applicable.

PUBLIC COMMENTS. Comment letters are attached for reference. Any additional correspondence received prior to the public meeting will be forwarded on to the Heritage Preservation Commission for consideration.

ANALYSIS

CERTIFICATE OF APPROPRIATENESS

1. *The alteration is compatible with and continues to support the criteria of significance and period of significance for which the landmark or historic district was designated.*

   The Handicraft Guild Building, designed by William Channing Whitney, is significant for its cultural history and its architecture. The period of significance for which the landmark was designated is 1907-1918. The building remains as unique and tangible evidence of the ideals of the founders and students of the Arts and Crafts movement in Minneapolis. The building retains its eclectic mixture of Georgian Revival exterior and Arts and Craft interior with beamed ceilings, dark rafters, and wainscoting details. While the interior of the building is not designated, the applicant is proposing to rehabilitate the interior spaces.

   The proposed exterior alterations will be compatible with and continue to support the criteria of significance and period of significance for which the landmark was designated. The applicant is not proposing to make any major alterations to the exterior of the building. The masonry will be cleaned and/or repaired and the majority of the historic windows will be restored while very few of them will be replaced. The new three-story glass link that will connect the landmark building to the new building will be set back approximately 36 feet from the front property line limiting its visibility from the street. The new glass link will be located on a secondary elevation of the building. And the new building will be constructed approximately eight feet from the landmark building which will allow its east wall to be exposed.

2. *The alteration is compatible with and supports the interior and/or exterior designation in which the property was designated.*

   The proposed alterations are compatible with and will continue to support the exterior designation for which the landmark was designated. The Handicraft Guild Building is significant for its cultural history and its architecture. The applicant is not proposing to make any major alterations to the exterior of the building and the modifications that will be made are all reversible.

3. *The alteration is compatible with and will ensure continued integrity of the landmark or historic district for which the district was designated.*

   The City of Minneapolis' Heritage Preservation Regulations and the National Register of Historic Places identify integrity as the authenticity of historic properties and recognize seven aspects that define a property's integrity: location, design, setting, materials, workmanship, feeling and

association. The proposed development is compatible with and will ensure continued integrity based on the evidence below:

Location: The location of the building will not be altered.

Design: The building retains its eclectic mixture of Georgian Revival exterior and Arts and Craft interior with beamed ceilings, dark rafters, and wainscoting details. The applicant is not proposing to make any major alterations to the exterior of the building. While the interior of the building is not designated, the applicant is proposing to rehabilitate the interior spaces.

Setting: Setting is the physical environment of a property. The proposed alterations to the building will not negatively impact the integrity of setting. The proposed new construction that will be located to the east of the building will impact the physical setting of the building; however, the new building will be constructed approximately eight feet from the landmark building which will allow its east wall to be exposed.

Materials: The building is constructed out of brick with limestone accents. The applicant is not proposing to make any major alterations to the exterior of the building. The new three-story glass link that will connect the landmark building to the new building will be set back approximately 36 feet from the front property line limiting its visibility from the street. The new glass link will be located on a secondary elevation of the building.

Workmanship: Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history. The applicant is not proposing to make any major alterations to the exterior of the building. The masonry will be cleaned and/or repaired and the majority of the historic windows will be restored while very few of them will be replaced. The proposed alterations will not negatively impact the integrity of workmanship.

Feeling: Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. The exterior of the building expresses the feeling of a Georgian Revival building. The integrity of the landmark will not be negatively impacted by the proposed alterations.

Association: Association is the direct link between an important historic event or person and a historic property. The proposed alterations will not impair the landmark's integrity of association. The building retains an Arts and Craft interior with beamed ceilings, dark rafters, and wainscoting details. While the interior of the building is not designated, the applicant is proposing to rehabilitate the interior spaces.

4. *The alteration will not materially impair the significance and integrity of the landmark, historic district or nominated property under interim protection as evidenced by the consistency of alterations with the applicable design guidelines adopted by the commission.*

There are no applicable design guidelines that have been adopted for this landmark. See finding number 5, regarding the consistency of the alterations with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*.

The Heritage Preservation Commission adopted the *Design Guidelines for On-Premise Signs and Awnings* in 2003. The applicant is not seeking approval of any new signs at this time. However, there are two historic signs on the building that the applicant is proposing to rehabilitate. The applicable sign guidelines for this project are below.

In General:

b. Historic signs: Maintenance or restoration of existing historic signs is encouraged and should not be counted in number of allowable signs.

There are two historic signs located on the building that will remain. One of the signs reads HANDICRAFT GUILD and is located over the door addressed as 89 South Tenth Street and the other sign reads 91 HANDICRAFT BUILDING and is located over the door addressed as 91 South Tenth Street. Each of the signs are inscribed in limestone. The limestone pediment over the door addressed as 91 South Tenth Street is cracked. This sign will be removed, repaired and reinstalled. Both of the signs will be cleaned and the text will be restored.

5. *The alteration will not materially impair the significance and integrity of the landmark, historic district or nominated property under interim protection as evidenced by the consistency of alterations with the recommendations contained in The Secretary of the Interior's Standards for the Treatment of Historic Properties.*

   The proposed development will be consistent with the following Secretary of the Interior's Standards for Rehabilitation:

   1. 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.
   2. 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.
   5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
   6. 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.
   7. 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.
   9. 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.
   10. 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.

   The proposed alterations will not materially impair the significance and integrity of the landmark as evidenced by the consistency of alterations with the recommendations contained in *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. The applicant is not proposing to make any major alterations to the exterior of the building. The masonry will be cleaned and/or repaired and the majority of the historic windows will be restored while very few of them will be replaced. The new three-story glass link that will connect the landmark building to the new building will be set back approximately 36 feet from the front property line limiting its visibility from the street. The new glass link will be located on a secondary elevation of the building. The modifications that will be made are all reversible.

6. *The certificate of appropriateness conforms to all applicable regulations of this preservation ordinance and is consistent with the applicable policies of the comprehensive plan and applicable preservation policies in small area plans adopted by the city council.*

   The proposed alterations will conform to all applicable regulations of this preservation ordinance and will be consistent with the following policies of the comprehensive plan:

   Heritage Preservation Policy 8.1: Preserve, maintain, and designate districts, landmarks, and historic resources which serve as reminders of the city's architecture, history, and culture.

   8.1.1 Protect historic resources from modifications that are not sensitive to their historic significance.

   Heritage Preservation Policy 8.9: Integrate preservation planning in the larger planning process.

   8.9.3 Encourage property owners and developers to consider historic resources early in the development review process by promoting the preliminary review and early consultation with preservation staff.

   Heritage Preservation Policy 8.10: Promote the benefits of preservation as an economic development tool and a method to achieve greater environmental sustainability and city vitality.

   8.10.1 Encourage rehabilitation of buildings and landscapes to stimulate economic activity in depressed areas.

   8.10.4 Encourage the occupation and reuse of historic structures in areas targeted by the city for revitalization by contributing resources to make older buildings more energy efficient and therefore less expensive to operate.

   8.10.5 Prioritize the reuse of the city's historic buildings as a strategy for sustainable development.

   8.10.6 Market the city's high quality, architecturally interesting, readily available and affordable housing and commercial properties.

7. *Destruction of any property. Before approving a certificate of appropriateness that involves the destruction, in whole or in part, of any landmark, property in an historic district or nominated property under interim protection, the commission shall make findings that the destruction is necessary to correct an unsafe or dangerous condition on the property, or that there are no reasonable alternatives to the destruction. In determining whether reasonable alternatives exist, the commission shall consider, but not be limited to, the significance of the property, the integrity of the property and the economic value or usefulness of the existing structure, including its current use, costs of renovation and feasible alternative uses. The commission may delay a final decision for a reasonable period of time to allow parties interested in preserving the property a reasonable opportunity to act to protect it.*

   The project does not involve the destruction of the property.

Before approving a Certificate of Appropriateness, and based upon the evidence presented in each application submitted, the Commission shall make findings that alterations are proposed in a manner that demonstrates that the Applicant has made adequate consideration of the following documents and regulations:

8. *The description and statement of significance in the original nomination upon which designation of the landmark or historic district was based.*

   The Handicraft Guild Building, designed by William Channing Whitney, is significant for its cultural history and its architecture. The period of significance for which the landmark was designated is 1907-1918. The building remains as unique and tangible evidence of the ideals of the founders and students of the Arts and Crafts movement in Minneapolis. The building is associated with the work of William Channing Whitney. The building retains its eclectic mixture of Georgian Revival exterior and Arts and Craft interior with beamed ceilings, dark rafters, and wainscoting details. While the interior of the building is not designated, the applicant is proposing to rehabilitate the interior spaces. The applicant is not proposing to make any major alterations to the exterior of the building and the modifications that will be made are all reversible.

9. *Where applicable, adequate consideration of Title 20 of the Minneapolis Code of Ordinances, Zoning Code, Chapter 530, Site Plan Review.*

   The proposed alterations to the building would not typically require site plan review under Title 20 of the Minneapolis Code of Ordinances, Zoning Code, Chapter 530. However, the proposed new construction that will be located to the east of the building will trigger site plan review for the entire development site.

10. *The typology of treatments delineated in the Secretary of the Interior's Standards for the Treatment of Historic Properties and the associated guidelines for preserving, rehabilitating, reconstructing, and restoring historic buildings.*

    The applicant submitted findings indicating that the alteration makes adequate consideration for the treatments delineated in *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. The application complies with the rehabilitation guidelines of *The Secretary of the Interior's Standards for the Treatment of Historic Properties* as discussed in finding number 5 above.

HISTORIC VARIANCE

The Department of Community Planning and Economic Development has analyzed the application to allow two buildings on one zoning lot based on the following findings:

1. *The variance is compatible with the preservation of the property and with other properties in the area.*

   The proposed historic variance request is compatible with and promotes the preservation of the Handicraft Guild Building. There are currently two buildings located on the same zoning lot. The existing Handicraft Guild Building and the building located at 1004 Marquette Avenue are connected to each other via an underground tunnel. Allowing two buildings on the same zoning lot, connected to each other via a three-story glass link, will be similar to what is taking place on the property now.

2. *The variance is necessary to alleviate practical difficulties due to special conditions or circumstances unique to the property and not created by the applicant.*

   As noted above, the existing Handicraft Guild Building and the building located at 1004 Marquette Avenue are connected to each other via an underground tunnel. The proposed historic variance will simply perpetuate this existing condition above grade. Preservation of the Handicraft Guild building in an appropriate setting leaves a very small area for construction of a new building, even with the addition of the 1016 Marquette Avenue property to the development site. This creates practical difficulties for feasible redevelopment of the site without the variance.

RECOMMENDATIONS

The Department of Community Planning and Economic Development recommends that the Heritage Preservation Commission adopt staff findings for the application(s) by Village Green for the properties located at 89-91 South Tenth Street and 1004-1016 Marquette Avenue:

A. Certificate of Appropriateness.

Recommended motion: **Approve** the certificate of appropriateness to allow rehabilitation of the Handicraft Guild Building, subject to the following conditions:

1. By ordinance, approvals are valid for a period of two years from the date of the decision unless required permits are obtained and the action approved is substantially begun and proceeds in a continuous basis toward completion. Upon written request and for good cause, the planning director may grant up to a one year extension if the request is made in writing no later than June 9, 2017.
2. By ordinance, all approvals granted in this certificate of appropriateness shall remain in effect as long as all of the conditions and guarantees of such approvals are observed. Failure to comply with such conditions and guarantees shall constitute a violation of this Certificate of Appropriateness and may result in termination of the approval.

B. Historic Variance to allow two buildings on one zoning lot.

Recommended motion: **Approve** the historic variance to allow two buildings on one zoning lot.

ATTACHMENTS

1. Memo addressing questions from the 5-19-15 HPC meeting and renderings of the glass link
2. City of Minneapolis designation description
3. Written description, photos and findings
4. Window survey
5. Restoration specification details
6. Zoning map
7. Site survey
8. Landscape plan
9. Floor plans
10. Handicraft Guild Building elevations
11. Colored window survey
12. Building elevations
13. Photos
14. Correspondence

BKV GROUP

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Enriching Lives and Strengthening Communities

Memorandum

TO:	Minneapolis Heritage Preservation Commission (HPC) Hilary Dvorak, Minneapolis CPED
FROM:	BKV Group
CLIENT NAME:	Village Green Companies
PROJECT:	Handicraft Building City Apts **COMM. NO.:** 1872.02
DATE:	May 27, 2015
RE:	HPC Hearing Comments

The Handicraft Building City Apartments was heard at the public hearing on May 19, 2015. The item was continued to the June 9th hearing to allow more time for review. Responses to the comments we heard at the hearing are in **bold** below.

1. Glass Link. Provide more information on the design of the glass link.
   Design: A narrow, glass link will provide a connection between the Handicraft Guild building and the first three levels of the new apartment building. To accommodate this link, a new opening will be saw cut into the east wall of the existing building at each floor level. The width of the new openings will be approximately 6 feet at each floor. The edge of the opening will align with a maximum number of head joints in order to minimize brick modifications. Half-bricks will be toothed in to develop the edge of the opening. The east wall currently abuts the adjacent building and was not historically a primary facade. A new steel lintel will be installed to align with existing mortar joints to minimize the amount of bricks that are removed and cut. The link will be approximately 15 feet in depth located about 34 feet back from the 10th Street facades, creating minimal impact to the historic building and minimal site line visibility from the street. Exterior materials of the link include a storefront window system with clear glass and aluminum mullions (grey, powder-coated finish). Metal panel infill to match storefront mullions will be used as spandrel at floor levels and parapet.

   Furthermore, the link will have its own foundation system, separate from the historic building to minimize impacts to this wall. Finally, glass doors at the ground floor of the link will provide a physical connection from 10th Street to the exterior courtyard. The revamped courtyard will provide intimate outdoor seating and green space for the restaurant. See enclosed 3D views of the proposed link.

   Accessibility: The link provides an accessible route to all levels of the historic Guild building and is a crucial element of the redevelopment. By linking the Guild building to the new apartment building, residents and visitors can utilize the elevators in the new apartment building to access the upper level floors in the Guild Building. It will allow the use of an interior accessible route for circulation throughout both buildings. By providing the link, people with physical disabilities can freely move between their dwelling units and the amenities spaces contained in the Guild Building using state of the art elevators to access all levels, all while under cover and protected from the weather. If the link were not provided, the Minnesota State Accessibility Code would require the installation of new mechanical vertical transportation to accommodate vertical travel in the Guild Building, thus further impacting the integrity of the Guild building.

   When evaluating the options for providing accessibility to all levels of the historic building, the link was developed to minimize the impact on the Handicraft Guild Building.

The link provides access to each floor with minimal change to the interior of the Guild building and is a reversible connection to the building. In contrast, an elevator would either require an addition or substantial interior modification, including the introduction of new foundation elements, floor framing modifications, and changes to structural framing.

2. Impact of Subdivision. Could the project move forward without the historic variance by adding a lot line and approving a subdivision application?
   If a platted property line is proposed between the two buildings, the Minnesota State Building Code will not allow openings, (windows or doors) at the property line and will reduce the amount of exterior openings allowed on walls in close proximity to the property line. For example, if a property line is implemented between the two buildings, the link would not be allowed by the State Building Code, requiring occupants to exit the new apartment building and traverse the public sidewalk only to re-enter the Guild Building at its front door. If the link is not approved, the Minnesota State Accessibility Code will require the installation of a mechanical vertical circulation device that could negatively impact the historic nature of the Guild Building.

3. Rationale for the Historic Variance.
   The historic variance provides the programming, financial, and planning means for rehabilitation of the Handicraft Guild building. The arrangement of the programmed spaces was developed to maximize public access to and experience of the historic building. The entry, lobby, and public spaces are located within the historic building. Proposed uses were also developed to be compatible with the larger volumes of space within the Guild building, like the assembly/meeting hall. Utilizing the historic building as the residential lobby will further promote its preservation by ensuring a long-term use for the building. It will also allow more people to experience the building and become familiar with and value the history of the Handicraft Guild.

   The funding of the rehabilitation of the historic Guild building is contingent on the new construction. The new development will provide much-needed financing for the rehabilitation and the ongoing financial resources for maintenance of the Guild building. Previous attempts to rehabilitate the building have been unable to demonstrate the means for long-term financial stewardship of the building.

   From a planning perspective, the Zoning Code allows multiple buildings on the same zoning lot without a variance if neither building contains residential uses. If the new building were an office building, no variance would be required. However, non-residential development options for this constrained site are not financially feasible. Thus, the historic variance to allow two buildings on the same zoning lot where one or both contain residential uses promotes the preservation of the Guild building.

   The variance would not be required if the design of the redevelopment involved more extensive connections between the old and new buildings (so that the new construction would be considered an addition) than the proposed narrow, glass link, but more extensive connections would have a greater impact on the historic building and would potentially diminish its integrity. The variance also would not be required if the site was subdivided so that the two buildings were located on different lots; however, as explained above, building code fire separation requirements along shared lot lines would

significantly limit the percentage of windows on the elevation of the new building facing the shared lot line. Even if such a design were marketable, it would result in a much less attractive and more imposing facade facing the historic building and would diminish views for the Guild building from the new construction.

The desired rehabilitation of the Handicraft Guild building leaves only a very small area for construction of a new building, which is required to facilitate the rehabilitation of the Guild building, even with the addition of the 1016 Marquette lot to the development parcel. This creates practical difficulties for feasible redevelopment of the site and consequent rehabilitation of the Guild building without the variance. If the property were subdivided into separate lots, building code requirements would require either extensive setbacks that would drastically reduce the already slim footprint of the new building or few to no windows on the facade facing the historic building. Neither condition is desirable from a project viability or urban design perspective.

Options are being explored to document the history of the Handicraft Guild building. The project is committed to ongoing discussions with CPED staff to develop interpretive elements such as historic photographs, biographies of the founding members of the Guild, or other elements of the building history.

4. Interior Rehabilitation. Provide more information.
Design: The renovated Handicraft Guild building will house restaurant and office space as well as apartment amenities such as concierge services, leasing functions and fitness spaces.

The main entrance and lobby for the entire facility will be located on the first floor along 10th Street. The restaurant will occupy the western half of the first floor Guild building including the entire southern half below the former meeting hall area. Plans are to reopen the historic entrance (with pediment detailing) as the main entry point once again, for the building, while keeping the second entrance through the archway intact as an accessible access point for the restaurant. A specific restaurant tenant has not been identified.

The second floor of the existing building will house the management and leasing offices, business center, fitness center, common lounge area and general office space for lease. The third floor is proposed to have additional office space for lease. Specific office tenants have not been identified.

Within the second floor fitness and leasing space, the lay in ceiling will be removed to expose the existing wood scissors trusses of the former meeting hall space to capture the historic volume that has been covered up for many years. The original stair opening will be maintained in its historic location with a new stair constructed to meet current codes. The historic skylight near the front of the building (currently covered from view) will be re-opened with a new skylight to bring natural daylight into the office spaces and lobby below. An existing fireplace at the third floor will remain intact within the office spaces.

END OF MEMO

10th & Marquette Development

View from Courtyard

5/27/2015

PrattOrdway PROPERTIES VILLAGEGREEN CITY BKV GROUP

10th & Marquette Development

View from 10th street

5/27/2015

PrattOrdway PROPERTIES · VILLAGEGREEN · CITY · BKV GROUP

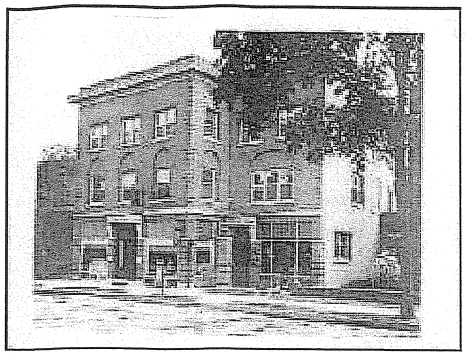
10th & Marquette Development

Section through link

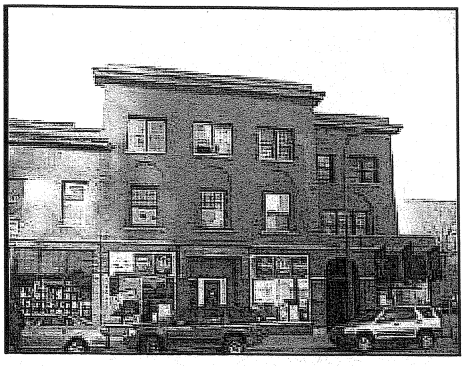
City of Minneapolis

Handicraft Guild Building

Individual Landmark



1912



2006

Address: 89-91 10 th Street South

Neighborhood: Downtown West

Construction Date: 1907

Contractor: Unknown

Architect: William Channing Whitney

Architectural Style: Georgian Revival /Arts & Crafts

Historic Use: Commercial – Retail Shops, Offices

Current Use: Commercial – Restaurant, Retail Shops, Offices

Date of Local Designation: 1998

Date of National Register Designation: N/A

Area(s) of Significance: Cultural History, Architecture

Period of Significance: 1907-1918

Historic Profile: The Handicraft Guild Building remains as unique and tangible evidence of the ideals of the founders and students of the Arts and Crafts movement in Minneapolis. In the early 1900s, in reaction to the increased industrialization of goods, the Arts and Crafts movement promoted the integrity of materials and the special quality of handmade goods. The building housed the Handicraft Guild, one of the nation's leading arts organizations. Its central location provided a forum for a community of artists to gather to discuss ideas and share their work. The Guild focused on three broad areas of concern: the need for art education, the exhibition and sale of work, and, of course, protesting industrialization. The building, designed by architect William Channing Whitney, reflects the ideals of the Arts and Crafts movement with beamed ceilings, dark rafters, and wainscoting details.

Photo Credits:

1912, courtesy of Minneapolis Public Libraries

2006, Minneapolis CPED

Works Cited:

"City of Minneapolis Heritage Preservation Commission Registration Form," March 1995.

Updated: February 2007

Last updated Nov 21, 2011

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Handicraft Guild Building
History and Local Designation

The Handicraft Guild Building at 89-91 10th Street South was constructed in 1907 by J.R. Kingman to house The Handicraft Guild of Minneapolis (the Guild), a local organization that had its roots in the international Arts and Crafts movement. This movement began in England in the mid-1800s as a reaction to the industrialization of manufacturing and belief that machine-made goods were inferior to those made by hand. This movement took hold in Minnesota in the 1890s and was primarily led by women. Several similar organizations preceded the Handicraft Guild of Minneapolis, which was incorporated in 1904. The Guild was founded by 11 women, and addressed, according to the designation study by Landscape Research, "the need for art education and formal craft training and for studio and workshop space, and to provide for the exhibition and sale of work." The Guild remained active until 1918. At that time, Arts and Crafts education was incorporated into the curriculum of the University of Minnesota.

The Handicraft Guild Building was designed by architect William Channing Whitney, who designed several other prominent local buildings. Its exterior style is Classical Revival, but the interior was more influenced by the Arts and Crafts movement. Since its construction, there have been relatively few exterior modifications. The most notable is that the courtyard in front of the two recessed western bays has been infilled with a one-story addition.

The Minneapolis City Planning Department's designation report from 1998 states as a primary consideration:

> "The Handicraft Guild Building meets two of the (four) primary considerations for historic designation. The building is significant under (criterion) Gp-1 as an 'example of the religious and cultural development of Minneapolis.' 'The Handicraft Guild Building is significant because it housed on of the nation's leading arts organization during the period in which interest in the Arts and Crafts movement flourished, and it exemplifies a unique aspect of the city's cultural and artistic heritage.' The building is significant under (criterion) Gp-3 by 'displaying the distinguishing characteristics of an architectural type inherently valuable for study of a style or method of construction.' 'The building retains its eclectic mixture of Georgian Revival exterior and Arts and Crafts interior characteristics and remains a well-conserved landmark of its period.' The architect, William Channing Whitney, was a prominent architect in Minneapolis. Other examples of this work include the Minneapolis Club, Minnesota building at the Chicago World's Columbian Exhibition (1893), and a number of grand residences throughout the city."

Today, the Heritage Preservation Regulations of the City of Minneapolis designation criteria identified in section 599.210 are slightly different from the 1998 criteria. The closest related present-day criteria are:

1. "The property is associated with significant events or with periods that exemplify broad patterns of cultural, political, economic or social history."
2. "The property is associated with the lives of significant persons or groups."
4. The property embodies the distinctive characteristics of an architectural or engineering type or style, or method of construction."

Despite the recognition that the interior Arts and Crafts character was relatively intact, the 1998 designation of the building was for the exterior only, possibly because the interior spaces were not all viewed prior to completion of the designation study.

Handicraft Guild Building Renovation
Project Description

Village Green Companies proposes to rehabilitate the historic Handicraft Guild building, located at 89-91 South 10th Street, as part of a new mixed-use residential apartment development at the southwest corner of the intersection of 10th Street and Marquette Avenue in downtown Minneapolis. The Handicraft Guild building is locally designated by the Minneapolis Heritage Preservation Commission (HPC) as outlined above. A Certificate of Appropriateness is requested to allow for the proposed renovation. Included in this application are findings for the Certificate of Appropriateness. In order to allow the new apartment building to sit on the same zoning lot as the Handicraft Guild building, a historic variance is being sought. Included in this application are findings for this variance request.

Two buildings will be demolished as part of the development. They are located at 1004 Marquette Avenue South and 1016 Marquette Avenue South. The 1004 Marquette building, which shares a party wall with the Handicraft Guild building, was included in the City's 1998 designation of the Handicraft Guild building, however, the Court of Appeals overturned the designation of the 1004 Marquette building because there was no evidence that it is culturally or historically significant on its own or through association with the Handicraft Guild. Neither of the buildings that will be demolished are historic resources, so no HPC review is required for the demolition.

The renovated Handicraft Guild building will house restaurant and office space as well as apartment amenities such as concierge services, leasing functions and fitness spaces. The renovation will include rehabilitation of the exterior. The applicant is proposing to locate the primary entrance for the project on 10th Street in the historic building. There is an existing limestone entry pediment at this front entry that is cracked. This will be removed, repaired and re-installed. Also, the applicant will clean and restore the original text "91 Handicraft Building" to original condition.

Masonry will be cleaned and repointed, while damaged masonry units will be replaced. The applicant will remove existing mortar joints which appear to be different from original (previously performed tuck pointing and masonry patching which does not match color, texture, and/or composition or bond pattern) and repoint. All existing non-historic paint (signage, graffiti, or other) on existing brick will be removed, using the gentlest means possible. Original surface integrity and finish of existing brick shall be maintained during and after paint removal. Brick will not be sand-blasted. See enclosed noted elevations for more detail.

The existing roof will be replaced. The existing roof membrane will be removed at the gable, including all flashings. It will be replaced with metal standing seam panels, flashings and fascia, with gutters/downspouts to match. All other flat roofs are to be replaced, including flashings, copings and scuppers/downspouts.

A window survey has been completed in order to evaluate the condition of the existing windows and doors to determine a treatment plan. See enclosed memo and elevations for the proposed treatment of each opening. Non-historical infill material will be removed from original openings. New storm windows will be added to the interior of all windows. All skylights are to be restored to their original condition. See enclosed window survey elevations for the intended treatment of each condition.

A narrow, glass link will provide a connection between the Handicraft Guild building and the first three levels of the new apartment building. To accommodate this link, a new opening will be saw cut into the east wall of the existing building at each floor level. A new steel lintel will be installed within existing mortar joints. The link will be approximately 15 feet in depth located about 34 feet back from the 10th Street facades, creating minimal impact to the historic building and minimal visibility from the street. New windows will be installed on the east façade of the existing building, just south side of the proposed glass link, to provide a visual and physical connection from the interior space and the exterior courtyard. The revamped courtyard will provide intimate outdoor seating and green space for the restaurant.

Apartment Development at 10th & Marquette
Project Description

The Handicraft Building City Apartments project provides a mixed-use complex consisting of upscale apartments, amenity spaces, a restaurant, new commercial co-office space and retail space. The new high-rise apartment building will house 288 units plus 5 street-level maisonettes ranging from small studio units up to 2 bedroom/2 bath units. The project incorporates dwelling units, appropriately sized, which will allow college graduates and young professionals making $35,000 to $40,000 a year, a place to reside in the downtown core. The 18th floor will provide an outdoor roof terrace and sky club, with active and passive spaces, for the private use of the building's residential tenants.

The streetscape along Marquette Avenue will incorporate urban 2-story walk-up townhomes, reminiscent of downtown Vancouver's residential maisonettes, to create a new, vibrant, pedestrian-friendly environment while screening some limited parking spaces and utility/storage areas. In a nod to capture the street's current pedestrian qualities, the base of the building will be clad in a brick veneer framework with large gridded windows and defined individual entrances to the maisonettes, in keeping with the scale of the former commercial streetscape along Marquette. The ground level façade along 10th is designed to be reminiscent of the current existing building and maintain the character of the 10th Street pedestrian experience.

The project represents a seamless integration between structure, function, materials and aesthetics to create an architecture grounded in the craft of making and current technologies. The structure consists of a steel post/girder, and precast concrete slab framework with an efficient and repetitive grid. The exterior evolves from this regular grid system to incorporate large floor to ceiling window units that alternate with a solid energy-efficient insulated wall panel.

The building incorporates classic, timeless design methods and colors to create a strong base, middle and top to the building with the top two floors consisting of penthouse units with extensive glass. The middle of the building has influences of Mondrian proportions and organizational order, to harmonize the façade yet be unique and elegant. The color palette is simple yet timeless – using white and charcoal grey along with accents of the orange earthen-tone bricks and wood tones. The window systems will have floor to ceiling glass in order to include a significant amount of glass to be equal to or exceed the three most current downtown residential projects (Latitude 45, 4 Marq and The Nic).

Handicraft Guild Building, 1909. Minnesota Historical Society

Handicraft Guild Building, 1914. Northwest Architectural Archives

Handicraft Guild Building, 1930. Minnesota Historical Society

Building at 1004 Marquette with Handicraft Guild Building at far right, 1954. Minnesota Historical Society

Certificate of Appropriateness Findings per Section 599.350:

(a) General

(1) The alteration is compatible with and continues to support the criteria of significance and period of significance for which the landmark or historic district was designated.

- The proposed scope of work is compatible with and continues to support the criteria of significance and the period of significance for the Handicraft Guild building. Work on the exterior is limited to restoration, repair, and limited replacement when necessary of masonry as well as replacing existing non-historic doors, storefronts and windows with new, more historically appropriate doors, windows and storefronts. A glass link addition is also proposed as part of the rehabilitation project. It has been designed so that it will have minimal impact on the existing building and will have limited visibility from various sightlines around the property. All exterior work will conform to the Secretary of the Interior's Standards for Rehabilitation and will not compromise the architectural integrity of the building.

(2) The alteration is compatible with and supports the interior and/or exterior designation in which the property was designated.

- The Handicraft Guild building is designated only for its exterior. The exterior retains its overall architectural integrity despite the presence of some modified windows, storefronts and entrances. Proposed work seeks to remedy deferred maintenance and re-establish historic features. Exterior work is limited to the repair and replacement of masonry that is in poor condition, the re-pointing of brick where necessary, the replacement of missing or modified historic windows and the replacement of existing non-historic storefronts and entrances.

(3) The alteration is compatible with and will ensure continued integrity of the landmark or historic district for which the district was designated.

- Rehabilitation of the Handicraft Guild building is compatible with and will ensure the continued integrity of the historic building by repairing existing historic features that are in poor condition.

(4) The alteration will not materially impair the significance and integrity of the landmark, historic district or nominated property under interim protection as evidenced by the consistency of alterations with the applicable design guidelines adopted by the commission.

- The proposed scope of work will not materially impair the significance and integrity of the building. Design guidelines specific to this building have not been established; however, proposed work will conform to the Secretary of the Interior's Standards for Rehabilitation.

(5) The alteration will not materially impair the significance and integrity of the landmark, historic district or nominated property under interim protection as evidenced by the consistency of alterations with the recommendations contained in The Secretary of the Interior's Standards for the Treatment of Historic Properties.

As noted above, in absence of design guidelines specific to the Handicraft Guild Building, all work will conform to the Secretary of the Interior's Standards for Rehabilitation which are listed below with a description of the project work scope that relates to it:

1. *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.*

The historic use of the building by the Handicraft Guild of Minneapolis ended in 1918 when the organization dissolved. Since then it has been used for a variety purposes, some of which continue the workshop, retail, and assembly space uses by other tenants. Additional uses have included restaurant and commercial. The proposed project will combine a variety of commercial uses including assembly, restaurant, and office space. Some of the interior spatial relationships will be changed, but the historic designation is only for the exterior of the building.

2. *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.*

   No distinctive exterior features will be removed or altered, unless they are damaged beyond repair. Existing historic features will be rehabilitated and missing features will be replaced to match the original features. No changes that define the character of the exterior spatial relationships

3. *Each property will 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 elements from other historic properties, will not be undertaken.*

   No changes to the exterior features of the building are planned that would give a false impression of history. Existing historic features will be rehabilitated and missing features will be replaced to match the original features.

4. *Changes to a property that have acquired historic significance in their own right will be retained and preserved.*

   The designation does not identify any changes to the original construction that have acquired significance in their own right. The only significant exterior change to the building is the one story addition at the front courtyard area, which will be retained.

5. *Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

   No changes to the exterior features of the building are planned that would remove any of the character-defining features, materials, finishes, or construction techniques. These features will be rehabilitated.

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

   The only historic features and materials that will be replaced are those that are beyond repair. The vast majority of materials will be retained and rehabilitated. Replacement materials will match the historic features as evidenced by adjacent materials and features and historic documentation.

7. *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

   Chemical and physical treatments that are planned for rehabilitation work include masonry restoration – repointing and some cleaning. The gentlest means possible will be used for both. Mortar removal will use small hand tools such as pneumatic chisels that are easily controlled so as not to damage masonry. Cleaning will use very low water pressure and mild detergent chemical cleaners.

8. *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

   It is not anticipated that there are any archeological resources at the site.

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

   The new construction will attach to a relatively small area of the exterior wall of the Handicraft. This wall is currently fully covered at the first and second floors by the adjacent building. Approximately 50 square feet of the existing brick masonry will be removed at each floor to connect to the glass link, which will cover a total of 725 square feet of exterior wall. This relatively small area of plain brick wall could be easily repaired if the connection were removed in the future.

10. *New additions and adjacent or related new construction will 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.*

    The relatively small area of plain brick wall that will be covered by the link could be easily repaired if the connection were removed in the future and would not impair the form or integrity of the building.

(6) The certificate of appropriateness conforms to all applicable regulations of this preservation ordinance and is consistent with the applicable policies of the comprehensive plan and applicable preservation policies in small area plans adopted by the city council.

The proposed rehabilitation of the Handicraft Guild Building for a commercial use conforms to all applicable regulations of the Heritage Preservation Ordinance, which outlines the regulatory and administration systems for preservation in Minneapolis. As required by the ordinance (Article VI. Certificate of Appropriateness), a Certificate of Appropriateness application for the rehabilitation project is being submitted to the Minneapolis HPC staff for review. Following HPC staff review, a hearing will be scheduled at which the Heritage Preservation Commission will review the required findings for the project.

The rehabilitation of the Handicraft Guild Building supports the following policies of the *Minneapolis Plan for Sustainable Growth*:

1.1.5 Ensure that land use regulations continue to promote development that is compatible with nearby properties, neighborhood character, and natural features; minimizes pedestrian and vehicular conflict; promotes street life and activity; reinforces public spaces; and visually enhances development.

1.15.3 Encourage the development of high- to very high-density housing within Growth Centers.

1.16.2 Incorporate principles of traditional urban design in new and phased development, including buildings that reinforce the street wall, have windows that provide “eyes on the street”, and principal entrances that face the public sidewalks.

3.2.1 Encourage and support housing development along commercial and community corridors, and in and near growth centers, activity centers, retail centers, transit station areas, and neighborhood commercial nodes.

3.6.5 Promote accessible housing designs to support persons with disabilities and the elderly.

3.8.3 Reduce the number of vacant and boarded buildings.

7.6.3 Invest in the greening of streets, particularly those that connect into and supplement the parks and open spaces network.

Policy 8.1: Preserve, maintain, and designate districts, landmarks, and historic resources which serve as reminders of the city's architecture, history, and culture.

8.7.1 Protect historic resources from demolition and explore alternatives to demolition.

8.7.6 Encourage the recycling and reuse of building materials from demolitions and remodels in order to conserve natural resources and remove material from the waste stream.

8.10.5 Prioritize the reuse of the city's historic buildings as a strategy for sustainable development.

The project supports initiative #1 of the *Downtown 2025 Plan*. **Double Downtown's residential population**: Expand the residential population to 70,000 as a catalyst for driving Downtown's next wave of business vitality, social improvement and cultural renewal.

Alterations are proposed in a manner that demonstrates that the applicant has made adequate consideration of the following documents and regulations:

(8) The description and statement of significance in the original nomination upon which designation of the landmark or historic district was based.

The proposed scope of work is compatible with and continues to support the original nomination upon which designation of the landmark of historic district was based. The Handicraft Guild Building is an individually listed local landmark for the City of Minneapolis. The building was constructed in 1907 and designed by architect William Channing Whitney. The Period of Significance for the property is 1907-1918. The City summarizes the significance of the property as follows:

"The Handicraft Guild Building remains as unique and tangible evidence of the ideals of the founders and students of the Arts and Crafts movement in Minneapolis. In the early 1900s, in reaction to the increased industrialization of goods, the Arts and Crafts movement promoted the integrity of materials and the special quality of handmade goods. The building housed the Handicraft Guild, one of the nation's leading arts organizations. Its central location provided a forum for a community of artists to gather to discuss ideas and share their work. The Guild focused on three broad areas of concern: the need for art education, the exhibition and sale of work, and, of course, protesting industrialization. The building, designed by architect William Channing Whitney, reflects the ideals of the Arts and Crafts movement with beamed ceilings, dark rafters, and wainscoting details." (*Handicraft Guild Building*, City of Minneapolis, http://www.ci.minneapolis.mn.us/hpc/landmarks/hpc_landmarks_10th_st_s_89-91_handicraft_guild_building)

Work on the exterior is limited to restoration, repair, and limited replacement when necessary of masonry as well as replacing existing non-historic doors, storefronts and windows with new, more historically appropriate doors, windows and storefronts. This work is in keeping with the Arts and Crafts style of the building.

(9) Where applicable, Title 20 of the Minneapolis Code of Ordinances, Zoning Code, Chapter 530, Site Plan Review.

The project will seek formal approval of the proposed site plan by the City Planning Commission (CPC) through a land use application. Because of the existing conditions, sections related to building placement and building design do not apply to this project. The building does not have parking access; therefore the regulations regarding vehicular access do not apply either. The project will significantly improve the pedestrian experiences, as the streetscape will be upgraded with walk-up units, trees, planters, and special paving patterns near entrances. Residents and visitors alike will support the existing transit system – both the light rail that is just blocks away and the buses that run in front of the building. Finally, the project complies with section 530.270 Historic Preservation. The project repurposes and rehabilitates a Minneapolis historic resource.

(10) The typology of treatments delineated in the Secretary of the Interior's Standards for the Treatment of Historic Properties and the associated guidelines for preserving, rehabilitating, reconstructing, and restoring historic buildings.

All aspects of the rehabilitation project will adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties. Exterior work such as repair, window and storefront replacement, and the proposed rooftop replacement will comply with these standards to ensure that the building retains its historic character-defining features.

HISTORIC VARIANCE REQUIRED FINDINGS

The redevelopment plan results in two principal structures on the same zoning lot; the new apartment building and the historic Handicraft Guild building, which will house commercial uses and amenity functions for the apartment building. The Zoning Code generally does not allow a principal residential structure to be located on the same zoning lot as another principal structure. An exception to this rule for Planned Unit Developments (PUDs) is not applicable because the 0.62 acre development site is smaller than the minimum acre required for a PUD. A historic variance is requested to allow both buildings to be on the same zoning lot. The project complies with the required findings for a historic variance.

A. The variance is compatible with the preservation of the property and with other properties in the area.

The proposed two-building design for the redevelopment is compatible with and promotes the preservation of the Handicraft Guild building. Construction and operation of the new apartment building provides the primary financing for the renovation and ongoing preservation of the Handicraft Guild building. Utilizing the historic building for resident amenities will further promote its preservation by allowing more people to experience the building and become familiar with its history. The variance would not be required if there were no residential use of either building. However, as noted, the residential use is the financial driver that makes preservation of the historic building feasible. In addition, mixed use with residential development is encouraged by the City's land use policies. The variance would not be required if the design of the redevelopment involved more extensive connections between the old and new buildings (so that they would be considered a single building) than the proposed narrow, glass link, but more extensive connections would be a less sensitive setting for the historic building and would potentially diminish its integrity. The variance also would not be required if the site was subdivided so that the two buildings were located on different lots; however, building code fire separation requirements along shared lot lines would not allow for windows on the elevation of the new building facing the shared lot line, resulting in a much less attractive and more imposing facade facing the historic building.

The variance is also compatible with other properties in the area. The delineation of the 'zoning lot' is a regulatory mechanism that, in this case, has no perceivable impacts on surrounding properties.

B. The variance is necessary to alleviate practical difficulties due to special conditions or circumstances unique to the property and not created by the applicant.

Historically, the Handicraft Guild and 1004 Marquette buildings have been treated as a single zoning lot. The proposed historic variance will simply perpetuate this existing condition. Preservation of the Handicraft Guild building in an appropriate setting leaves a very small area for construction of a new building, even with the addition of the 1016 Marquette lot to the development parcel. This creates practical difficulties for feasible redevelopment of the site without the variance. If the property were subdivided into separate lots, building code requirements would require either extensive setbacks that would drastically reduce the already slim footprint of the new building or few to no windows on the facade facing the historic building. Neither condition is desirable from either a marketability or urban design perspective. These circumstances were not created by the applicant.

PRESERVATION
DESIGN WORKS, LLC

MEMORANDUM

Date: April 3, 2015
To: Gretchen Camp, Mike Krych, BKV
Regarding: Handicraft Guild Building:
Window Recommendation Summary
Written By: Laura Faucher, faucher@pvnworks.com, (612) 387-0344
Reviewed By: Laurel Fritz, fritz@pvnworks.com, (612) 843-4140
Attachments: Window Survey Elevations

This memo summarizes Preservation Design Works' window and door treatment recommendations for the Handicraft Guild Building for the purpose of submitting a Certificate of Appropriateness (CofA) application to the City of Minneapolis Heritage Preservation Commission (HPC). The majority of the recommendations are to rehabilitate the existing historic windows and doors, which are from the period of significance of 1907-1918. However, some replacement recommendations are included for windows that are missing and/or too deteriorated to repair. Additionally, options are included for windows and doors that are not historic and/or have been previously modified.

Window Recommendations*

Group:	Description	Treatment Recommendation:	Includes opening #s:
A	Upper storefront is historic wood framed transom with true divided lites and textured glass. Lower portion of storefront is non-historic metal frame with single glazing and one vertical mullion at center.	Retain transoms and glazing. Scrape and prep frames, repaint. Lower portion may be retained or replaced with new. If replaced, new storefront should be fixed clear glazing with no vertical mullion. May be thermal paned glass. Frame should be painted metal, not anodized. Frame width should match the transom as closely as possible. Lower brick bulkhead may also be replaced, but if replaced it should consist of three windows with divided lights as shown in historic photo. A brick bulkhead that matches the original more closely may also be permitted. Install interior storm window if thermal panes are not used.	1.01 & 1.03
B	Upper storefront is historic wood framed transom with	Retain transom and glazing. Scrape and prep frame, repaint. Remove plywood, air	1.04

***Refer to exterior elevations for intended scope of work.**

	true divided lites and textured glass. Lower portion of storefront has non-historic plywood set in the frame and a through-wall air conditioner.	conditioner, and steel support bar. Install new fixed glazing (may be thermal pane) with no mullions. Remove drywall at interior and restore window trim. Install interior storm window if thermal panes are not used.	
C	Upper storefront is historic wood framed transom with true divided lites and textured glass. Lower portion of storefront has a door and a storefront window.	Retain transom and glazing (except for smaller transom above door). Scrape and prep frame, repaint. Door and storefront configuration may be retained or replaced. If replaced, eliminate door and install new storefront as described in Group A.	1.05 & D.03
D	Non-historic metal storefront and transom. No divided lights, has thermal pane glazing.	Storefront and transom may be retained or replaced. If replaced, new storefront should be fixed clear glazing with no vertical mullions or divided lites. May be thermal paned glass. Frame should be painted metal, not anodized. Frame width should match the adjacent storefronts as closely as possible.	1.06
E	Metal framed skylight with 26 lite panes and wired glass. Probably historic.	Remove all exterior sealant and glazing bar caps. Replace broken glass and reseal all glazing. Reinstall glazing caps and replace any missing ones. Replace all wall to skylight transition flashing.	S.1
F	Historic double-hung wood window or window grouping. Most have true divided lites at lower and/or upper sash. Some have non-historic exterior aluminum storm windows and/or non-historic exterior iron grilles.	Remove exterior storm window and/or iron grill. Repair wood sash, frame and trim as needed. Replace in kind if missing or damaged beyond repair. Replace broken or missing glass in kind. Replace loose or missing glazing putty. Scrape, sand, and repaint frame, trim, and sash. Install interior storm window.	1.26-1.30, 2.01-2.05, 2.18, 2.19, 2.33, 2.35, 2.36, 3.01-3.05, 3.07
G	Historic wood window frame w/ plywood infill. Originally would have matched adjacent historic wood windows.	Install new wood window and trim to match adjacent historic windows. Profiles and dimensions of sash, frame, trim, and muntins to match. Clear glass may be thermal or single panes. Prep and paint window and trim. Install interior storm window if thermal panes are not used.	1.31-1.35, 3.45 sim
H	Historic double-hung wood windows with arched tops, in groups of three. Originally had 6/6 true divided lites with arched muntins at	Repair wood sash, frame and trim as needed. Replace in kind if missing or damaged beyond repair. Where muntins have been removed, they may be left as-is, but where mismatched muntin patterns	2.20-2.22, 2.24, 2.26, 2.28, 2.30-2.32

	upper sash. Now have varying conditions at lower and upper sash. Some missing all muntins, some have mismatched muntins	exist, replace with muntins to match original. Replace broken or missing glass. Replace loose or missing glazing putty. Scrape, sand, and repaint frame, trim, and sash. Install interior storm window.	
J	Historic double-hung metal window or window grouping. All have true divided lites at lower and upper sash – 2/2 or 3/3. Wired glass. Some have non-historic exterior aluminum storm windows	Remove storm windows. Repair metal frame and sash as needed and replace broken glass. Sand off any rust, scrape, and repaint. Install interior storm window.	1.17, 2.08, 2.12, 2.14, 2.16, 2.23, 2.37, 2.40-2.43, 3.08, 3.10, 3.12, 3.23-3.25, 3.40-3.43
K	Historic double-hung metal window with modifications or infill	Remove modifications to determine how intact original windows are. If possible, repair per Group J above. If damaged or missing, replace with new metal windows to match the historic window configurations as closely as possible. Frame finish should be painted metal and glazing should be wired glass.	1.37, 1.38 *(green outline on elevations)*
L	Historic double-hung metal window grouping. Has true divided lites at lower and upper sash – 2/2.	This window will be removed for the link to the new building.	1.44
M	Historic double-hung metal window with fixed transom, in groups of three. No lite divisions. Wired glass.	Repair metal frame and sash as needed and replace broken glass. Sand off any rust, scrape, and repaint. Install interior storm window.	1.40, 1.42
N	Historic fixed metal frame window with true divided lights (5 across by 4 high) and casement inserts at three locations. Wired glass.	Repair metal frame and sash as needed and replace broken glass. Sand off any rust, scrape, and repaint. Install interior storm window.	2.10
P	Non-historic fixed metal window with no divisions and thermal paned glass. Some have interior wrought iron grill. Window opening may not be historic.	This window may be retained, replaced, or infilled with masonry depending on owner preference. Opening could also be enlarged. If replaced with new, window may be fixed and would not need to have divided lights.	1.08, 1.18, 1.21
Q	Non-historic metal slider window with screen. Has interior wrought iron grill. Window opening may not be	This window may be retained, replaced, or infilled with masonry depending on owner preference. Opening could also be enlarged. If replaced with new, window	1.22

	historic.	may be fixed with no light devisions.	
R	Window opening with brick infill.	This window may be retained as is with infilled masonry or reopened and have a new window installed. If replaced with new, window should be double hung to match existing.	1.25
S	Historic wood door with transom and sidelights.	Retain door, transom, and sidelights. Repair per Groups A & F above.	D.01
T	Historic wood door with arched transom. Possibly historic.	These doors should be retained as they appear to match those in a 1930 photo, but if replacement is necessary, they should match the existing – including strap iron hinges – and have divided lights at the windows – 2/2.	D.02
U	Wood doors in window openings. Possibly historic.	May be replaced with a window or a door. Window replacement should be a new wood window to match adjacent historic windows may be installed. Door should match existing.	D.04 & D.07
V	Historic metal door with wood screen door	This door is severely deteriorated and should be replaced.	D.10
W	Non-historic wood or hollow metal door and frame, one w/ historic wood framed transom and plywood face on door.	May be retained or replaced. If use as a door is no longer needed, openings that were originally windows may be restored to that opening configuration and a new wood window to match adjacent historic windows may be installed. Openings that have historic transoms should retain transom. Repair per Group A above. Plywood at door may be removed. Hollow metal doors to remain should be prepped and painted.	D.05, D.06 D.08, D.09, D.11

SECTION 080152

WOOD WINDOW RESTORATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 DESCRIPTION OF WORK

A. This Section includes the following window types:
   1. The restoration of existing wood window systems including repairing the existing windows.

B. Existing wood window interior and exterior paint may contain lead. Comply with all applicable regulations, laws and ordinances, as well as requirements of Division 9 Sections for the preparation and painting of existing lead containing painted surfaces.

C. Existing wood window caulking and glazing putty may contain asbestos. Comply with all applicable regulations, laws and ordinances, regarding removal and disposal of asbestos containing materials.

D. Related work specified elsewhere:
   1. Glazing, see Division-8 Section "Glass and Glazing."

   2. Finishing of existing wood windows to remain is specified in Division-9 Section "Painting".

1.3 SUBMITTALS

A. Product Data for each type of wood window specified, including standard construction details, dimensions of individual components, profiles, finishes, hardware, and accessories.

B. Shop Drawings for each type of window specified, 1/4-inch scale wall elevations, typical unit elevations at 3/4-inch scale, and full-size details of typical composite members.

1.4 QUALITY ASSURANCE

A. Wood Window Standard: Comply with provisions of NWWDA I.S. 2 for standards of performance and fabrication workmanship for wood windows.

B. Safety Glass Standard: Where safety glass is indicated or required by authorities having jurisdiction, provide the type of products indicated which comply with ANSI Z97.1 and testing requirements of 16 CFR Part 1201 for category II materials.

C. Glazing Standards: Comply with recommendations of the Flat Glass Marketing Association

D. (FGMA) "Glazing Manual" and "Sealant Manual" except where more stringent requirements are indicated. Refer to those publications for definitions of glass and glazing terms not otherwise defined in this Section or referenced standards.

E. Single Source Responsibility: Provide interior wood storm windows produced by a single fabricator who is capable of indicating prior successful production of units similar to those required.

F. Design Criteria: Drawings indicate window sizes, profiles, and dimensional requirements. The Design intent is to match the existing Historic Window units.

1.5 PROJECT CONDITIONS

A. Field Measurements: Accurately field measure existing window members and profiles. Check actual window openings in construction work by accurate field measurement before fabrication of custom window units. Show recorded measurements on final shop drawings.
   1. Coordinate fabrication with construction progress to avoid delay. Where necessary, proceed with fabrication without measurements, and coordinate tolerances to ensure proper fit of window units.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Wood: Clear Ponderosa Pine, vertical Grain Douglas Fir, Red Oak, or other suitable fine-grain lumber as required to match existing wood members, that has been kiln-dried to a moisture content of 6 to 12 percent at time of fabrication and is free of visible finger-joints, blue stain, knots, pitch-pockets and surface checks larger than 1/8-inch deep by 2-inches wide.
   1. Lumber shall be water-repellant preservative treated after machining in accordance with NWWDA I.S. 4.

B. Fasteners: Comply with NINWDA I.S. 2 for fabrication and with manufacturer's recommendations and standard industry practices for type and size of installation fasteners.

2.2 WOOD CONSOLIDANT AND FILLER

A. Provide 2 - component, liquid wood consolidant and epoxy putty filler material as manufactured by; ABATRON, Inc., 33 Center Drive, Gilbert, Illinois 60136; 1-800-445-1754, 1-708-426-2200, or approved equal.
   1. Wood Consolidant: LiquidWood, 2 - component liquid consolidant for use in restoring structural strength and integrity to deteriorated wood.

   2. Wood Filler: WoodEpox, 2 - component epoxy adhesive putty for use in structural and decorative applications for the filling, repairing or extending of deteriorated wood.

2.3 CLEANING MATERIALS

A. Retain first Water: Potable.

B. Hot Water: Water heated to a temperature of 140 to 160 deg F (60 to 71 deg C).

C. Detergent Solution: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium polyphosphate, 1/2 cup (125 mL) of laundry detergent that contains no ammonia, 5 quarts (5 L) of 5 percent sodium hypochlorite bleach, and 15 quarts (15 L) of warm water for each 5 gal. (20 L) of solution required.

D. Mildewcide: Commercial proprietary mildewcide or a job-mixed solution prepared by mixing 1/3 cup (80 mL) of household detergent that contains no ammonia, 1 quart (1 L) of 5 percent sodium hypochlorite bleach, and 3 quarts (3 L) of warm water.

E. Abrasives for Ferrous Metal Cleaning: Aluminum oxide paper, emery paper, fine steel wool, steel scrapers, and steel-wire brushes of various sizes.

F. Rust Remover: Manufacturer's standard phosphoric acid-based gel formulation, also called "naval jelly," for removing corrosion from iron and steel.

2.4 PAINT REMOVERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. ABR Products, Inc.
   2. Back to Nature Products Company.
   3. Cathedral Stone Products, Inc.
   4. Dumond Chemicals, Inc.
   5. Hydroclean; Hydrochemical Techniques, Inc.
   6. PROSOCO, Inc.

B. Alkaline-Paste Paint Remover: Manufacturer's standard alkaline-paste formulation for removing paint and coatings from masonry, stone, wood, plaster, and metal; and containing no methylene chloride.

2.5 GLAZING

A. Glass and Glazing Materials: provide GL-1 (GL-1T / GL-15 where required by Code).

B. Glazing Compound: DAP 33 or approved equal.

2.6 WEATHER STRIP

A. Spring Bronze Weatherstrip: .008" hemmed spring bronze (brass), 1-1/8" wide, complete with nails, Pemko No. P51B17 or equal.

B. Foam Tape Weatherstrip: Compressible, self-adhesive, foam tape weatherstrip, of polyurethane, PVC, or Neoprene, of width and thickness required for the application.

2.7 FINISHES

A. Wood Finish: Provide new storm window units for field finishing, or for shop finishing to match new field finishes as specified in Division 9 Sections.

PART 3 - EXECUTION

3.1 INSPECTION

A. Conduct a window-by-window survey to determine existing conditions and identify the specific work needs of each window.

3.2 RESTORATION PROCEDURES, GENERAL

A. General: Have restoration of wood windows performed by a qualified specialist. Ensure that specialist's field supervisors are present when historic treatment of wood windows begins and during its progress. In treating historic items, disturb them as minimally as possible and as follows:
   1. Apply each product according to manufacturer's written instructions unless otherwise indicated.
   2. Stabilize and repair wood windows to reestablish structural integrity and weather resistance while maintaining the existing form of each item.
   3. Stop the progress of deterioration by removing coatings and applying borate preservative treatment before repair.
   4. Repair items in place where possible and retain as much original material as possible.
   5. Replace or reproduce historic items where indicated or scheduled.
   6. Make historic treatment of materials reversible whenever possible.
   7. Install temporary protective measures to protect wood window work that is indicated to be completed later.

B. Mechanical Abrasion: Where mechanical abrasion is needed for the work, use only the gentlest mechanical methods, such as scraping and natural-fiber bristle brushing, that will not abrade wood substrate, reducing clarity of detail. Do not use abrasive methods such as sanding, wire brushing, or power tools except as indicated as part of the historic treatment program and as approved by Architect.

C. Repair and Refinish Existing Hardware: Dismantle window hardware; repair and refinish it to match finish samples.

D. Repair Wood Windows: Match existing materials and features, retaining as much original material as possible to perform repairs.
   1. Unless otherwise indicated, repair wood windows by consolidating, patching, splicing, or otherwise reinforcing wood with new wood matching existing wood or with salvaged, sound, original wood.
   2. Where indicated, repair wood windows by limited replacement matching existing material.

E. Replace Wood Window Units: Where indicated, duplicate and replace units with salvaged, sound, original wood or with new wood matching existing wood. Use surviving prototypes to create patterns for duplicate replacements.
   1. Do not use substitute materials unless otherwise indicated.
   2. Compatible substitute materials may be used.

F. Protection of Openings: Where sash or windows are indicated for removal, cover resultant openings with temporary enclosures so that openings are weathertight during repair period.

G. Identify removed windows, sash, and members with numbering system corresponding to window locations to ensure reinstallation in same location. Key windows, sash, and members to Drawings showing location of each removed unit. Permanently stamp units in a location that will be concealed after reinstallation.

3.3 EXISTING WINDOW RESTORATION

A. Remove all glazing putty and broken glass.

B. Remove existing window hardware as required for restoration work including Paint and Varnish Removal and Refinishing.
   1. Tag, number, and catalog each item to assure reinstallation in proper location.

C. Remove all existing paint and varnish

D. Replace broken glass window lites using glass and glazing accessories to match existing. Comply with requirements Section 088000 Glazing, as well as requirements of Painting 099000 for the preparation, treatment and priming of existing wood surfaces to receive glazing.

E. Repair window frames and sash as indicated or required.
   1. Repair, replace, or rebuild all rotted or deteriorated wood features. These can include but are not limited to stiles, rails, muntins, joints, frame and trim. New work shall match existing profiles or shapes in every respect and shall be flush with exiting surfaces.

   2. Repair deteriorated wood through the use of epoxies, Dutchmen and or replacement with new wood to match the existing appearance.

   3. Sand smooth transitions between repaired or replaced wood and remaining original wood.

F. Re-point as required and re-putty all existing glazing indicated to remain.

3.4 PAINT REMOVAL

A. General: Remove paint where indicated. Where cleaning methods have been attempted and further removal of the paint is required because of incompatible or unsatisfactory surfaces for repainting, remove paint to extent required by conditions.
   1. Brushes: Use brushes that are resistant to chemicals being used.

   2. Spray Equipment: Use spray equipment that provides controlled application at volume and pressure indicated, measured at spray tip. Adjust pressure and volume to ensure that spray methods do not damage surfaces.

   3. Paint Removal with Hand Tools: Remove paint manually using hand-held scrapers, wire brushes, sandpaper, and steel wool. Do not use other methods except as approved by Architect.

   4. Paint Removal with Alkaline-Paste Paint Remover:

      a. Remove loose and peeling paint using water, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.

      b. Apply paint remover to dry, painted surface with brushes or as recommended by manufacturer.

      c. Allow paint remover to remain on surface for period recommended by manufacturer or as determined by preconstruction testing.

d. Use mechanical methods recommended by manufacturer to remove chemicals and paint residue.

e. Repeat process if necessary to remove all paint.

3.5 APPLICATION OF WOOD CONSOLIDANT AND FILLER

A. Prepare deteriorated wood surfaces and apply the specified wood consolidant and filler in strict compliance with all manufacturer's written instructions and recommendations. Remove and replace wood members not suitable for restoration with wood consolidant and filler materials, with materials, profiles, etc., to match existing/original construction.

3.6 INSTALLATION

A. Reinstall window sashes level, plumb, true to line, without warp or rack.

3.7 ADJUSTING

A. Adjust window and components to provide smooth operation, a tight fit at contact points, and to provide an airtight closure.

3.8 CLEANING

A. Clean interior and exterior surfaces promptly after installation of storm windows. Take care to avoid damage to protective coatings and finishes. Remove excess glazing and sealants, dirt, and other substances.

3.9 PROTECTION

A. Institute and maintain protection and other precautions required through remainder of construction period to ensure that, except for normal weathering, storm window units will be without damage or deterioration at the time of substantial completion.

END OF SECTION 085900

SECTION 080151

STEEL WINDOW RESTORATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes removal, restoration, and reinstallation of existing steel window systems.
   1. Window types include fixed, pivoting, and others as may be indicated on the drawings.

B. Existing steel window interior and exterior paint may contain lead. Comply with all applicable regulations, laws and ordinances, as well as requirements of Division 9 Sections for the preparation and painting of existing lead containing painted surfaces.

C. Existing window caulking and glazing putty may contain asbestos. Comply with all applicable regulations, laws and ordinances, regarding removal and disposal of asbestos containing materials.

D. Related work specified elsewhere:
   1. Division-8 Section "Aluminum Windows" for interior storm windows.
   2. Division-8 Section "Glass and Glazing" for product requirements.
   3. Division-9 Section "Painting".

1.3 PERFORMANCE REQUIREMENTS

A. Crack Tolerances: Test each type and size of required window unit, with ventilators closed and locked, for compliance with the following tolerances:
   1. Operable Windows: It shall not be possible to freely insert a steel feeler gage 2 inches (51 mm) wide by 0.031 inch thick between the inside metal-to-metal contacts between frames and ventilators without forcing, or to freely insert a steel feeler gage 2 inches (51 mm) wide by 0.020 inch (0.5 mm) thick between more than 40 percent of such contacts between frames and ventilators without forcing.

1.4 SUBMITTALS

A. Allow adequate time for review and approval of submittals. Submittals related to historic restoration tax credits and similar issues require approval by government agencies. See Division 1 Section “Submittal Procedures” for additional information.

B. Product Data: For each type of product indicated. Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions.

C. Shop Drawings: Include plans, elevations, sections, details, hardware, attachments to other work, operational clearances, installation details, and the following:

1. Mullion details including reinforcement and stiffeners.
2. Joinery details.
3. Expansion provisions.
4. Flashing and drainage details.
5. Weather-stripping details.
6. Glazing details.
7. Accessories.

D. Qualification Data: For qualified Installer, and manufacturer.

E. Warranties: Sample of special warranty.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A manufacturer capable of restoring and fabricating steel windows that meet or exceed performance requirements indicated and of documenting this performance by inclusion in lists, and by labels, test reports, and calculations.

B. Installer Qualifications: An installer acceptable to window manufacturer for installation/reinstallation of units required for this Project.

1. Installer's responsibilities include providing professional engineering services needed to assume engineering responsibility including preparation of data for steel windows, including Shop Drawings and Designated Design Submittal based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

C. Source Limitations: Obtain steel windows from single source from single manufacturer.

D. SWI Publication: Comply with applicable requirements in SWI's "The Architect's Guide to Steel Windows and Doors" except where more stringent requirements are indicated.

E. Safety Glass Standard: Where safety glass is indicated or required by authorities having jurisdiction, provide the type of products indicated which comply with ANSI Z97.1 and testing requirements of 16 CFR Part 1201 for category II materials.

F. Glazing Standards: Comply with recommendations of the Flat Glass Marketing Association

G. (FGMA) "Glazing Manual" and "Sealant Manual" except where more stringent requirements are indicated. Refer to those publications for definitions of glass and glazing terms not otherwise defined in this Section or referenced standards.

H. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.

1. Build mockup for type(s) of glazed window(s) indicated in location(s) shown on Drawings.

2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

I. Preinstallation Conference: Conduct conference at Project site

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Review and discuss removal, restoration, and reinstallation of steel windows.
3. Review, discuss, and coordinate the interrelationship of steel windows with other exterior wall components. Include provisions for structural anchorage, glazing, flashing, weeping, air barriers, sealants, and protection of finishes.
4. Review and discuss the sequence of work required to construct a watertight and weathertight exterior building envelope.
5. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

1.6 PROJECT CONDITIONS

A. Field Measurements: Accurately field measure existing window members and profiles. Check actual window openings in construction work by accurate field measurement before fabrication of custom window units. Show recorded measurements on final shop drawings.

1. Coordinate fabrication with construction progress to avoid delay. Where necessary, proceed with fabrication without measurements, and coordinate tolerances to ensure proper fit of window units.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of steel windows that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Failure to meet performance requirements.
b. Structural failures including excessive deflection.
c. Water leakage or air infiltration.
d. Faulty operation of operable sash and hardware.
e. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

2. Warranty Period: Three years from date of Substantial Completion.
3. Warranty Period for Metal Finishes: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 STEEL WINDOW RESTORATION FIRMS

A. Acceptable Manufacturers: Subject to compliance with requirements, provide products by one of the following

a. National Window Associates, Rogers, MN, www.nationalwindowassoc.com, contact: Duke Henneberg, (763) 428-3123
b. Midwest Window and Door, MN, contact: Rick Swanson, (612) 720-3416
c. Other firms subject to Architect's prior approval

2.2 MATERIALS

A. Steel, provide new to match existing profiles. Utilize the following materials as appropriate:
1. Hot-Rolled Steel
2. Cold-Formed Steel Window Members: Provide frame and ventilator members mechanically formed from metallic-coated, low-carbon, cold-rolled steel sheet complying with ASTM A 653/A 653M.

B. Fasteners: Provide fasteners of bronze, brass, stainless steel, or other metal that are warranted by manufacturer to be noncorrosive and compatible with trim, hardware, anchors, and other components of steel windows.

1. Exposed Fasteners: If exposed fasteners are used, provide Phillips flat-head machined screws that match finish of member or hardware being fastened, as appropriate.

C. Anchors, Clips, and Window Accessories: Provide units of stainless steel, hot-dip zinc-coated steel, bronze, brass, or iron complying with ASTM A 123/A 123M. Provide units with sufficient strength to withstand design pressure indicated.

D. Compression-Type Weather Stripping: Provide compressible weather stripping designed for permanently resilient sealing under bumper or wiper action and for complete concealment when steel window is closed.
1. Weather-Stripping Material: Manufacturer's standard.

2. Weather Seals: Provide weather stripping with integral barrier fin or fins of semirigid, polypropylene sheet or polypropylene-coated material.

E. Trim Members, Screen Frames, Retainers for Weather Stripping, Flashing, and Similar Items: Formed steel to match existing

F. Glazing Stops: Formed steel to match existing

G. Glazing Compound: DAP 33 or approved equal.

H. Sealant: For sealants required within fabricated windows, provide manufacturer's standard, permanently elastic, nonshrinking, and nonmigrating type recommended by sealant manufacturer for joint size and movement.

2.3 GLAZING

A. Glass and Glazing Materials: provide GL-1 (GL-1T / GL-15 where required by Code), unless noted otherwise.

2.4 HARDWARE

A. General: Provide hardware to match existing, with operating components of stainless steel, carbon steel complying with AAMA 907, brass, bronze, or other corrosion-resistant material designed to operate smoothly, to close tightly, and to lock steel window ventilators securely. Provide hardware of sufficient strength to accommodate size and weight of ventilator for which it is intended.

B. Friction Shoes: Adjustable friction shoes of bronze, brass, nylon, or other nonabrasive, nonstaining, noncorrosive, durable material.

C. Pivoting Windows: Provide the following operating hardware:

1. Pivot Assembly: Manganese-bronze pivot assembly.

2. Limit device.

2.5 ACCESSORIES

A. General: Provide manufacturer's standard accessories that comply with indicated standards.

2.6 FABRICATION

A. General: Renovate steel windows. Include a complete system for assembly of components, glazing, and anchorage of window units.

B. Remove windows from structure. Remove glass and glazing compound. Salvage all components, including hardware, suitable for reuse. Chemically strip components. Remove rust and corrosion. Determine extent of frames requiring replacement and repair. Provide new components as required. Miter or cope corners, and weld and dress joints smooth. Prime and finish.

C. Mullions: Formed of steel matching window units; with anchors for support to structure and for installation of window units and having sufficient strength to withstand design pressure indicated. Provide mullions of profile indicated and with cover plates. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections.

D. Subframes and Operable Ventilators: Formed of steel of profile indicated. Miter or cope corners, and weld and dress joints smooth.

E. Provide weep holes and internal water passages to conduct infiltrating water to the exterior.

F. Glazing Stops: If present on existing windows, provide new glazing stops; coordinate with Section 088000 "Glazing" and with glazing system indicated. Provide glazing stops to match panel frames. Finish glazing stops to match window units if fabricated of steel; otherwise, provide manufacturer's standard finish.

G. Glazing Clips: Where face glazing (without glazing stops) is indicated, furnish glazing clips for concealment in glazing compound.

2.7 STEEL FINISHES

A. Surface Preparation: Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning" or SSPC-SP 8, "Pickling" After cleaning, apply a conversion coating suited to the organic coating to be applied over it.

B. Galvanized Finish: Hot-dip galvanize per ASTM A 123.

C. Steel and Galvanized-Steel Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pretreating.

D. High-Performance Organic Finish: Two-coat fluoropolymer finish containing not less than **50** percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

PART 3 - EXECUTION

3.1 INSPECTION

A. Conduct a window-by-window survey to determine existing conditions and identify the specific work needs of each window.

3.2 RESTORATION PROCEDURES, GENERAL

A. General: Have restoration of windows performed by a qualified specialist. Ensure that specialist's field supervisors are present when historic treatment of windows begins and during its progress. In treating historic items, disturb them as minimally as possible and as follows:
   1. Apply each product according to manufacturer's written instructions unless otherwise indicated.
   2. Stabilize and repair windows to reestablish structural integrity and weather resistance while maintaining the existing form of each item.
   3. Repair items in place where possible and retain as much original material as possible.
   4. Replace or reproduce historic items where indicated or scheduled.
   5. Install temporary protective measures to protect window work that is indicated to be completed later.

B. Removal: Remove window assemblies carefully. Avoid damage to window assemblies and adjacent construction. Coordinate removal with other trades to minimize corrective or remedial work.
   1. Label each unit and document original location for coordination with reinstallation work.
   2. Protect removed units to minimize damage subsequent to removal.

C. Mechanical Abrasion: Where mechanical abrasion is needed for the work, use only the gentlest mechanical methods, such as scraping and natural-fiber bristle brushing, that will not abrade wood substrate, reducing clarity of detail. Do not use abrasive methods such as sanding, wire brushing, or power tools except as indicated as part of the historic treatment program and as approved by Architect.

D. Repair and Refinish Existing Hardware: Dismantle window hardware; repair and refinish it to match finish samples.

E. Repair Windows: Match existing materials and features, retaining as much original material as possible to perform repairs.

F. Protection of Openings: Where sash or windows are indicated for removal, cover resultant openings with temporary enclosures so that openings are weathertight during repair period.

G. Identify removed windows, sash, and members with numbering system corresponding to window locations to ensure reinstallation in same location. Key windows, sash, and members to Drawings showing location of each removed unit. Permanently stamp units in a location that will be concealed after reinstallation.

3.3 WINDOW RESTORATION

A. Remove all glass and glazing putty.

B. Remove existing window hardware as required for restoration work.
   1. Tag, number, and catalog each item to assure reinstallation in proper location.

C. Remove all existing paint, varnish, sealants, glazing compounds, and foreign matter.

D. Repair window frames, members, and sashes as indicated or required.
   1. Repair, replace, or rebuild deteriorated features. These can include but are not limited to stiles, rails, muntins, joints, frame and trim. New work shall match existing profiles or shapes in every respect and shall be flush with exiting surfaces.
   2. Grind smooth transitions between repaired or replaced metal and remaining original metal.
   3. Re-glaze to match original appearance.

3.4 INSTALLATION

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work. Verify rough opening dimensions, levelness of sill plate, and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weathertight window installation.

   1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
   2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches of opening.
   3. Metal Surfaces: Dry, clean, and free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. Comply with manufacturer's written instructions for installing windows, hardware, operators, accessories, and other components.

D. Install windows level, plumb, square, true to line, without distortion or impediment to thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.

E. Set sill members in bed of sealant or with gaskets, as indicated, to provide weathertight construction.

F. Install windows and components to drain condensation, water-penetrating joints, and moisture migrating within windows to the exterior.

G. Separate corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials according to ASTM E 2112, Section 5.12 "Dissimilar Materials."

3.5 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

B. Tests and Inspections:

1. Testing Methodology: Testing of windows for air-penetration resistance and water resistance will be performed according to AAMA 502, Test Method [**A**] [**B**], by applying same test pressures required for performance.
2. Testing Extent: Three windows as selected by Architect and a qualified independent testing and inspecting agency. Windows shall be tested immediately after installation.

C. Window will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports according to AAMA 502. Testing agency will interpret test results and state in each report whether tested work complies with or deviates from requirements.

3.6 ADJUSTING, CLEANING, AND PROTECTION

A. Adjust operating sashes and ventilators, screens, hardware, operators, and accessories for a tight fit at contact points and weather stripping for smooth operation and weathertight closure. Lubricate hardware and moving parts.

B. Clean factory-finished steel surfaces immediately after installing windows. Comply with manufacturer's written recommendations for final cleaning and maintenance. Avoid damaging protective coatings and finishes.

C. Clean glass immediately after installing windows. Comply with manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.

D. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

E. Protect window surfaces from contact with contaminating substances resulting from construction operations. Remove contaminants immediately according to manufacturer's written recommendations.

F. Refinish or replace windows with damaged finish.

END OF SECTION

SECTION 085200
ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes
   1. *Single hung, fixed, and awning aluminum frame windows*
   2. *Historic Double hung, fixed, and awning (pivot) aluminum frame replacement windows*

1.2 RELATED DOCUMENTS

A. Related work specified elsewhere:
   1. *Division 7 Section "Sheet Metal Flashings & Trim".*
   2. *Division 8 Section "Aluminum Entrances and Storefronts".*

1.3 DEFINITIONS

A. Performance class designations according to AAMA/WDMA 101/I.S.2/NAFS:
   1. *AW: Architectural.*
   2. *HC: Heavy Commercial.*
   3. *C: Commercial.*
   4. *LC: Light Commercial.*
   5. *R: Residential.*

B. Performance grade number according to AAMA/WDMA 101/I.S.2/NAFS:
   1. *Design pressure number in pounds force per square foot used to determine the structural test pressure and water test pressure.*

C. Structural Test Pressure: For uniform load structural test, is equivalent to 150 percent of the design pressure.

D. Minimum Test Size: Smallest size permitted for performance class (gateway test size). Products must be tested at minimum test size or at a size larger than minimum test size to comply with requirements for performance class.

1.4 PERFORMANCE REQUIREMENTS

A. General: Provide aluminum windows capable of complying with performance requirements indicated, based on testing manufacturer's windows that are representative of those specified, and that are of minimum test size indicated below:
   1. *Size required by AAMA/WDMA 101/I.S.2/NAFS for gateway performance.*
   2. *Size indicated on Drawings.*

B. Structural Performance: Provide aluminum windows capable of withstanding the effects of the following loads, based on testing units representative of those indicated for Project that pass AAMA/WDMA 101/I.S.2/NAFS, Uniform Load Structural Test:
   1. *Design Wind Loads: Determine design wind loads applicable to Project from basic wind speed indicated in miles per hour (meters per second) at 33 feet (10 m) above grade, according to ASCE 7, Section 6.5, "Method 2-Analytical Procedure," based on mean roof heights above grade indicated on Drawings.*

a. Basic Wind Speed: 90 mph (40 m/s).
b. Importance Factor: I.
c. Exposure Category: B.

2. *Deflection: Design glass framing system to limit lateral deflections of glass edges to less than 1/175 of glass-edge length or 3/4 inch (19 mm), whichever is less, at design pressure based on testing performed according to AAMA/WDMA 101/I.S.2/NAFS, Uniform Load Deflection Test or structural computations.*

C. Windborne-Debris Resistance: Provide glazed windows capable of resisting impact from windborne debris, based on the pass/fail criteria as determined from testing glazed windows identical to those specified, according to ASTM E 1886 and testing information in ASTM E 1996 and requirements of authorities having jurisdiction.

D. Thermal Movements: Provide aluminum windows, including anchorage, that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. *Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C) material surfaces.*

1.5 SUBMITTALS

A. Product Data for each type of window required, including the following:

1. *Construction details and fabrication methods.*
2. *Profiles and dimensions of individual components.*
3. *Data on hardware, accessories, and finishes.*
4. *Recommendations for maintaining and cleaning exterior surfaces.*

B. Shop Drawings showing fabrication and installation of each type of window required including information not fully detailed in manufacturer's standard Product Data and the following:

1. *Layout and installation details, including anchors.*
2. *Elevations at 1/4 inch = 1 foot scale and typical window unit elevations at 3/4 inch = 1 foot scale.*
3. *Location of weep holes.*
4. *Panning details.*
5. *Window cleaning provisions.*
6. *Glazing details.*

C. Samples for initial color selection on 12-inch- long sections of window members. Where finishes involve normal color variations, include Sample sets showing the full range of variations expected.

D. Test reports from a qualified independent testing agency indicating that each type, grade, and size of window unit complies with performance requirements indicated. Test results based on use of down-sized test units will not be accepted.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project.

1. *Installer's responsibilities include providing professional engineering services needed to assume engineering responsibility.*

2. *Engineering Responsibility: Preparation of data for aluminum windows, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.*

B. Manufacturer Qualifications: A manufacturer capable of fabricating aluminum windows that meet or exceed performance requirements indicated and of documenting this performance by inclusion in lists and by labels, test reports, and calculations.

C. Source Limitations: Obtain aluminum windows through one source from a single manufacturer.

D. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum windows and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements." Do not modify size and dimensional requirements.
1. *Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.*

E. Fenestration Standard: Comply with AAMA/WDMA 101/I.S.2/NAFS, "North American Fenestration Standard Voluntary Performance Specification for Windows, Skylights and Glass Doors," for definitions and minimum standards of performance, materials, components, accessories, and fabrication. Comply with HUD-UM 111 Fenestration Products. Comply with more stringent requirements if indicated.
1. *Provide AAMA-certified aluminum windows with an attached label.*

F. Glazing Publications: Comply with published recommendations of glass manufacturers and with GANA's "Glazing Manual" unless more stringent requirements are indicated.

G. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. *Build mockup for historic window location as selected by Architect. Window to include single hung window with fixed units around. Minimum of 3 openings to be selected.*

H. Provide Independent Third Party Notice of Product Certification showing products to be in full compliance with AAMA/NWWDA 101/I.S.2-97 and the following:
1. *Test sequence is optional except air infiltration test shall precede water resistance test and uniform load structural test shall be performed at the end of sequence. The manufacturer shall field test at least one of each window type & size – in place, and verify that the window performs in accordance with HUD's Minimum Property Standards, and the manufacturer's own performance specifications. A representative of the window manufacturer shall be present to supervise the installation of the first two windows, making periodic inspections thereafter, and issue a written report concerning whether installation followed the manufacturer's recommendations. Copies of the report and window testing shall be submitted to HUD and Architect.*
2. *Test Units. Perform all tests as listed below in accordance with AAMA/NWWDA 101/I.S.2-97.*
3. *Test Procedures.*
    a. Air Infiltration Test – by Independent AAMA Certified Laboratory (Manufacturer's Facility May Be Utilized). With window glazed, sash closed and locked, mounted vertically, test in accordance with ASTM E283-91 at a static pressure of 1.567 psf (25 mph). Air infiltration shall not exceed 1/2 c.f.m. per foot of crack length.
    b. Water Resistance Test - by Independent AAMA Certified Laboratory (Manufacturer's Facility May Be Utilized). With window glazed, sash closed and locked, mounted vertically, test in accordance with ASTM E331-86 at the static pressure of 2.86 psf with water applied at the rate of 5.0 U.S. gal. per sq. ft. per hour for a time period of 15 minutes.
    c. Uniform Load Test – Design Wind Load Test by Independent AAMA Certified Laboratory (Manufacturer's Facility May Be Utilized).

1) Test with window glazed, sash closed and locked, mounted vertically in accordance with ASTM E330-90.
2) There shall be no glass breakage, permanent damage to fasteners or hardware parts, or damage to make window inoperable when tested at a design load of positive and negative 50 psf for sizes up to 38 x 60" or 36 x 62".
3) There shall be no glass breakage, permanent damage to fasteners or hardware parts, or damage to make window inoperable when tested at a design load of positive and negative 45 psf for sizes up to 44 x 62".
4) There shall be no glass breakage, permanent damage to fasteners or hardware parts, or damage to make window inoperable when tested at a design load of positive and negative 30 psf for sizes up to 48 x 84".

d. Uniform Load Structural Overload Test – by Independent AAMA Certified Laboratory (Manufacturer's Facility May Be Utilized).
1) With window glazed, sash closed and locked, mounted vertically test in accordance with ASTM E330-90.

4. When tested at positive and negative structural loads at 150% of Design Pressure, there shall be no glass breakage, permanent damage to fasteners or hardware parts, damage to make window inoperable, or permanent deformation of any main frame or ventilator section in excess of 0.4% of its unsupported span.

1.7 PROJECT CONDITIONS

A. Field Measurements: Check window openings by field measurements before fabrication and show recorded measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
1. Where field measurements cannot be made without delaying the Work, guarantee opening dimensions and proceed with fabricating aluminum windows without field measurements. Coordinate wall construction to ensure that actual opening dimensions correspond to guaranteed dimensions.

1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:

a. Failure to meet performance requirements.
b. Structural failures including excessive deflection, water leakage, air infiltration, or condensation.
c. Faulty operation of movable sash and hardware.
d. Deterioration of metals, other materials, and metal finishes beyond normal weathering.
e. Failure of insulating glass.

2. Warranty Period:

a. Window: Five years from date of Substantial Completion.
b. Glazing: 10 years from date of Substantial Completion.
c. Metal Finish: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Windows
   1. *Basis of Design: St. Cloud Window, St. Cloud, MN,*
      a. 2500 series awning and fixed windows,
      b. 5000 series single hung.
      c. Match historic profiles.
   2. *Other acceptable manufacturers, subject to meeting contract requirements and the intent of the above products:*
      a. Traco Window Company, Cranberry Township, PA.
      b. Graham Windows, York, PA

2.2 MATERIALS

A. Aluminum Extrusions: Provide alloy and temper recommended by manufacturer for strength, corrosion resistance, and application of required finish, but not less than 22,000-psi ultimate tensile strength and not less than 0.062 inch thick at any location for mainframe and sash members.

B. Fasteners: Provide aluminum, nonmagnetic stainless steel, epoxy adhesive, or other materials warranted by manufacturer to be noncorrosive and compatible with aluminum window members, trim, hardware, anchors, and other components of window units.
   1. *Reinforcement: Where fasteners screw anchor into aluminum less than 0.125 inch thick, reinforce interior with aluminum or nonmagnetic stainless steel to receive screw threads or provide standard, noncorrosive, pressed-in, splined grommet nuts.*
   2. *Exposed Fasteners: Except where unavoidable for application of hardware, do not use exposed fasteners. For application of hardware, use fasteners that match finish of member or hardware being fastened, as appropriate.*

C. Anchors, Clips, and Window Accessories: Fabricate anchors, clips, and window accessories of aluminum, nonmagnetic stainless steel, or hot-dip zinc-coated steel or iron complying with requirements of ASTM B 633; provide sufficient strength to withstand design pressure indicated.

D. Compression-Type Weather Stripping: Provide compressible weather stripping designed for permanently resilient sealing under bumper or wiper action and for complete concealment when aluminum window is closed.
   1. *Weather-Stripping Material: Elastomeric cellular preformed gaskets complying with ASTM C 509.*
   2. *Weather-Stripping Material: Dense elastomeric gaskets complying with ASTM C 864.*
   3. *Weather-Stripping Material: Manufacturer's standard system and materials complying with AAMA/WDMA 101/I.S.2/NAFS.*

E. Sealant: For sealants required within fabricated window units, provide type recommended by manufacturer for joint size and movement. Sealant shall remain permanently elastic, nonshrinking, and non-migrating. Comply with Division 7 Section "Joint Sealants" of these Specifications for selection and installation of sealants.

2.3 WINDOWS

A. Window Types:
   1. *Single Hung, Awning, and Fixed, with surface applied muttins. Match existing profiles.*

B. AAMA/WDMA Performance Requirements: Provide aluminum windows of performance indicated that comply with AAMA/WDMA 101/I.S.2/NAFS
   1. *Performance Class and Grade*
      a. Double-hung, Single Hung and Awnings: HC/AW75
      b. Fixed window: HC-60

C. Condensation-Resistance Factor (CRF): Provide aluminum windows tested for thermal performance according to AAMA 1503, showing a **CRF of not less than 55** for each type of unit.

D. Thermal Transmittance: Provide aluminum windows with a whole-window, U-factor maximum indicated at 15-mph (24-km/h) exterior wind velocity and winter condition temperatures when tested according to AAMA 1503.
   1. *U-Factor: 0.60 Btu/sq. ft. x h x deg F (3.4 W/sq. m x K) or less.*

E. Solar Heat-Gain Coefficient (SHGC): Provide aluminum windows with a whole-window SHGC maximum of 0.40, determined according to NFRC 200 procedures.

F. Sound Transmission Class (STC): Provide glazed windows rated for not less than 26 STC when tested for laboratory sound transmission loss according to ASTM E 90 and determined by ASTM E 413.

G. Air Infiltration: Maximum rate not more than indicated when tested according to AAMA/WDMA 101/I.S.2/NAFS, Air Infiltration Test.
   1. *Maximum Rate: 0.1 cfm/sq. ft. (2 cu. m/h x sq. m) of area at an inward test pressure of 6.24 lbf/sq. ft. (300 Pa).*

H. Water Resistance: No water leakage as defined in AAMA/WDMA referenced test methods at a water test pressure equaling that indicated, when tested according to AAMA/WDMA 101/I.S.2/NAFS, Water Resistance Test.
   1. *Test Pressure: 15 percent of positive design pressure, but not less than 2.86 lbf/sq. ft. (140 Pa) or more than 15 lbf/sq. ft. (720 Pa).*

I. Life-Cycle Testing: Test according to AAMA 910 and comply with AAMA/WDMA 101/I.S.2/NAFS.

J. Operating Force and Auxiliary (Durability) Tests: Comply with AAMA/WDMA 101/I.S.2/NAFS for operating window types indicated.

2.4 FABRICATION

A. General: Fabricate aluminum window units to comply with indicated standards. Include a complete system for assembly of components and anchorage of window units.
   1. *Provide units that are re-glazable without dismantling sash or ventilator framing.*
   2. *Framing sizes: 4 inch deep*

B. Thermally Improved Construction: Fabricate window units with an integral, concealed, low-conductance, thermal barrier, located between exterior materials and window members exposed on interior, in a manner that eliminates direct metal-to-metal contact.
   1. *Provide thermal-break construction that has been in use for not less than 3 years, has been tested to demonstrate resistance to thermal conductance and condensation, and has been tested to show adequate strength and security of glass retention.*
   2. *Provide hardware with low conductivity or nonmetallic material for hardware bridging thermal breaks at frame or vent sash.*
   3. *Weep Holes: Provide weep holes and internal passages to conduct infiltrating water to exterior.*
   4. *Mullions: Provide mullions and cover plates as shown, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections, as indicated.*
   5. *Glazing Stops: Provide screw-applied or snap-on glazing stops, coordinated with glass selection and glazing system indicated. Finish to match window units.*

2.5 GLAZING

A. Glass and Glazing Materials: Refer to Division 8 Section "Glazing" for glass units and glazing requirements applicable to glazed aluminum window units.

2.6 HARDWARE

A. Provide the following operating hardware:
   1. *Sash Balances: Two per sash.*
   2. *Handles: Applied sash lift bar on bottom rail of forward-placed operating sash; two per sash.*
   3. *Sash Lock: Spring-loaded, snap-type lock on bottom rail of lower sash; two per sash.*
   4. *Limit Device: Sash stop limit device; for top sash located at jamb; two per sash.*
   5. *Removable Lift-Out Sash: Design windows and provide with hardware to permit removal of sash from inside for cleaning.*
   6. *Tilt Lock: Design windows and provide with tilt latch and pivot bar hardware to permit tilting of sash inward for cleaning both sides of sash from interior.*

2.7 INSECT SCREENS

A. General: Design windows and hardware to accommodate screens in a tight-fitting, removable arrangement, with a minimum of exposed fasteners and latches. Fabricate insect screens to fully integrate with window frame. Locate screens on outside of window and provide for each operable exterior sash or ventilator.
   1. *Aluminum Tubular Frame Screens: Comply with SMA 1004, "Specifications for Aluminum Tubular Frame Screens for Windows," Architectural C-24 class.*
   2. *Comply with SMA 1004, "Specifications for Aluminum Tubular Frame Screens for Windows," for minimum standards of appearance, fabrication, attachment of screen fabric, hardware, and accessories unless more stringent requirements are indicated.*

B. Glass-Fiber Mesh Fabric: 18-by-14 (1.1-by-1.4-mm) or 18-by-16 (1.0-by-1.1-mm) mesh of PVC-coated, glass-fiber threads; woven and fused to form a fabric mesh resistant to corrosion, shrinkage, stretch, impact damage, and weather deterioration; in the following color. Comply with ASTM D 3656.

2.8 ALUMINUM FINISHES

A. Kynar resin
   1. *Colors: match Architect's samples*

PART 3 - EXECUTION

3.1 INSPECTION

A. Inspect openings before installation. Verify that rough or masonry opening is correct and sill plate is level.
   1. *Masonry surfaces shall be visibly dry and free of excess mortar, sand, and other construction debris.*
   2. *Metal surfaces shall be dry; clean; free of grease, oil, dirt, rust and corrosion, and welding slag; without sharp edges or offsets at joints.*

3.2 INSTALLATION

A. Comply with manufacturer's specifications and recommendations for installing window units, hardware, operators, and other components of the Work.

B. Set window units plumb, level, and true to line, without warp or rack of frames or sash. Provide proper support and anchor securely in place.
   1. *Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials by complying with requirements specified under "Dissimilar Materials" Paragraph in appendix to AAMA 101.*

C. Set sill members and other members in a bed of sealant or with joint fillers or gaskets, as shown on Shop Drawings, to provide weathertight construction. Refer to Division 7 Section "Joint Sealants" for compounds, fillers, and gaskets to be installed concurrently with window units. Coordinate installation with wall flashings and other components of the Work.

D. Perimeter shims shall be located under glass setting blocks, vertical mullions, and as additionally necessary. All joints between framing and the building structure shall be sealed at both the interior and the exterior in order to secure a weather tight installation. Weep holes shall be installed per manufacturer's shop drawings.

3.3 CLEANING

A. Clean aluminum surfaces promptly after installing windows. Exercise care to avoid damage to protective coatings and finishes. Remove excess glazing and sealant compounds, dirt, and other substances. Lubricate hardware and other moving parts.

B. Clean all glazed surfaces, (inside and out), after installation. Remove all shipping stickers, tags, -etc. after installation is completed.

C. After installation, the General Contractor shall protect the exposed aluminum surfaces from damage by the work of other trades. The General Contractor shall be responsible for the final cleaning.

3.4 PROTECTION

A. Provide final protection and maintain conditions, in a manner acceptable to aluminum window manufacturer, to ensure window units are without damage or deterioration at the time of Substantial Completion.

END OF SECTION

SECTION 049010
MASONRY RESTORATION AND CLEANING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes restoration and cleaning of brick , stone, and glass masonry as follows:
1. Repairing original face brick units.
2. Repairing original clay tile masonry.
3. Repairing original stonework.
4. Removal and replacing damaged units, including sills, where indicated.
5. Removal of non-historic infill brick and cmu at historic window openings.
6. Repointing mortar joints in brick and stone including removal of sealant used to repair mortar joints.
7. Patch holes greater than ½" diameter in mortar and face brick.
8. Patching of holes where louvers and vents are removed.
9. Cleaning exposed exterior clay masonry and stone surfaces.
10. Repair of existing steel lintels where indicated.
11. Paint removal at areas indicated.

B. Related Sections include the following:
1. Division 1 Section "Unit Prices".
2. Division 2 Section "Selective Demolition" for brick, stone, and clay tile masonry salvaged for reuse.
3. Division 4 Section "Unit Masonry Assemblies" for requirements related to new clay masonry, concrete unit masonry, and stone construction.
4. Division 7 Section "Sheet Metal Flashing and Trim" for metal flashing installed in or on restored masonry.
5. Division 7 Section "Joint Sealants" for sealing joints in restored clay masonry.

1.3 DEFINITIONS

A. Very Low-Pressure Spray: Under 100 psi.

B. Low-Pressure Spray: 100 to 400 psi (690 to 2750 kPa); 4 to 6 gpm (0.25 to 0.4 L/s). Distances to be field determined on test panel for appropriateness and approved by governing historic agency and architect.

C. Medium-Pressure Spray: 400 to 800 psi (2750 to 5500 kPa); 4 to 6 gpm (0.25 to 0.4 L/s). Distances to be field determined on test panel for appropriateness and approved by governing historic agency and architect.

D. High-Pressure Spray: 800 to 1200 psi (5500 to 8250 kPa); 4 to 6 gpm (0.25 to 0.4 L/s). Distances to be field determined on test panel for appropriateness and approved by governing historic agency and architect.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated. Include recommendations for application and use. Include test data substantiating that products comply with requirements.

B. Samples for Verification: Before erecting mockup, submit samples of the following:

1. Each type of exposed masonry unit to be used for replacing existing units.

    I. For each brick type, provide straps or panels containing at least four bricks.

2. Each type of stone to be used for replacing existing units.

    I. For each stone type, provide 3 samples.

3. Each type of clay tile masonry to be used for replacing existing units.

    I. For each clay tile masonry type, provide 3 samples.

4. Each type of sand used for pointing mortar.

    I. For blended sands, provide samples of each component and blend.
    2. Identify sources, both supplier and quarry, of each type of sand.

5. Each type of pointing mortar in the form of sample mortar strips, 6 inches (150 mm) long by 1/2 inch (13 mm) wide, set in aluminum or plastic channels.

    I. Include with each sample a list of ingredients with proportions of each. Identify sources, both supplier and quarry, of each type of sand and brand names of cementitious materials and pigments if any.

6. Each type of masonry patching compound in the form of briquettes, at least 3 inches (75 mm) long by 1-1/2 inches (38 mm) wide. Document each sample with manufacturer and stock number or other information necessary to order additional material.

C. Samples for Initial Selection: For the following:

1. Pointing Mortar: Submit sets of mortar for pointing in the form of sample mortar strips, 6 inches (150 mm) long by 1/4 inch (6 mm) wide, set in aluminum or plastic channels.

    I. Have each set contain a close color range of at least three Samples of different mixes of colored sands and cements that produce a mortar matching the cleaned masonry when cured and dry.
    2. Submit with precise measurements on ingredients, proportions, gradations, and sources of colored sands from which each Sample was made.

2. Patching Compound: Submit sets of patching compound Samples in the form of plugs (patches in drilled holes) in sample units of masonry representative of the range of masonry colors on the building.

    I. Have each set contain a close color range of at least three Samples of different mixes of patching compound that matches the variations in existing masonry when cured and dry.

D. Stone (STN) Samples for Verification: Submit a set of representative samples showing ranges in the selected stone color, grade, and finish. Include 3 or more Samples in each set showing the full range of variations expected in these characteristics. Lable samples so that approval can be based on sample/submitall number. Architect will retain on set of samples.

E. Stone Shop Drawings: Detail fabrication and installation of stone masonry veneer units and connections. Indicate member locations, plans, elevations, dimensions, shapes, cross sections, openings, and types of reinforcement, including special reinforcement.

F. Sample Panels for masonry to match existing: Before installing brick, stone, and clay tile masonry, build sample panels, using materials indicated for the completed Work, to verify selections made under sample Submittals and to demonstrate aesthetic effects. Build sample panels for each type of exposed unit masonry assembly in sizes approximately 72 inches long by 72 inches high with 24 inch return wall to show corner construction by full thickness of wall system.

1. Locate panels in the locations indicated or, if not indicated, as directed by Architect.
2. Protect approved sample panels from the elements with weather-resistant membrane.
3. Maintain sample panels during construction in an undisturbed condition as a standard for judging the completed Work.
4. Sample panels to be built to reflect actual “as built” project construction. The sample shall include:

    I. Wall Facing:
        1) Masonry with mortar, to match existing exterior construction in appearance.
        2) Include all patterns and laying methods specified for the project, such as soldier coursing, sills, headers, if indicated.
    2. Back up wall: where required for stability of mockup, or to match existing construction, build back up wall construction on concrete base same width as foundation wall
        1) Masonry: use 8 inch CMU with horizontal reinforcing.

5. Approval of sample panels is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling & spacing of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.

    I. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels, unless such deviations are specifically approved by Architect in writing.

6. Demolish and remove sample panels when directed. Intent is for samples to remain throughtout the masonry restoration process. If locations will conflict with other work during the course of the project, review alternatives with the Architect prior to construction of mockups.

G. Qualification Data: For restoration specialists including field supervisors and chemical manufacturer.

H. Restoration Program: For each phase of restoration process, provide detailed description of materials, methods, equipment, and sequence of operations to be used for each phase of restoration work including protection of surrounding materials on building and Project site.

1. Include methods for keeping pointing mortar damp during curing period.
2. If materials and methods other than those indicated are proposed for any phase of restoration work, provide a written description, including evidence of successful use on comparable projects, and a testing program to demonstrate their effectiveness for this Project.

I. Cleaning Program: Describe cleaning process in detail, including materials, methods, and equipment to be used and protection of surrounding materials on building and Project site, and control of runoff during operations.

1. If materials and methods other than those indicated are proposed for cleaning work,

provide a written description, including evidence of successful use on comparable projects, and a testing program to demonstrate their effectiveness for this Project.

1.5 QUALITY ASSURANCE

A. Restoration Specialist Qualifications: Engage an experienced, preapproved masonry restoration and cleaning firm to perform work of this Section. Firm shall have completed work for not less than 5 similar projects in material, design, and extent to that indicated for this Project with a record of successful in-service performance.

1. At Contractor's option, work may be divided between two specialist firms: one for cleaning work and one for repair work.
2. Field Supervision: Restoration specialist firms shall maintain experienced full-time supervisors on Project site during times that clay masonry restoration and cleaning are in progress. Supervisors shall not be changed during Project except for causes beyond the control of restoration specialist firm.
3. Restoration Worker Qualifications: Persons who are experienced and specialize in restoration work with at least 5 years experience in the types of work they will be performing. When masonry units are being patched, assign at least one worker among those performing patching work who is trained and certified by manufacturer of patching compound to apply its products.

B. Restoration Specialist Firms: Subject to compliance with specific requirements regarding stonework, clay tile masonry, and/or brick masonry, provide masonry restoration and cleaning by one of the following:
1. Building Restoration Corporation, St. Paul, MN
2. McPherson Towne, St. Louis Park, MN
3. American Masonry Restoration, Fridley, MN
4. Structural, Baltimore, MD
5. Encompass, Minneapolis, MN
6. Other restoration specialists will be considered, subject to approval of a prebid qualifications submittal documenting equivalent experience with comparable projects when compared to the above listed firms.

C. Source Limitations: Obtain each type of material for masonry restoration (face brick, cement, sand, etc.) from one source with resources to provide materials of consistent quality in appearance and physical properties.

D. Source Limitations for Stone: Obtain each variety of stone from a single quarry with resources to provide materials of consistent quality in appearance and physical properties without delaying the work.

1. Obtain each variety of stone from the same strata, and location, from a single quarry, whether specified in this Section or in another Section of the Specifications.

E. Preconstruction Testing Service: Engage a qualified independent testing agency to test the following. Provide test specimens and assemblies as indicated.

1. Existing Brick and Clay Tile Masonry: Test each type of existing masonry unit indicated for replacement, according to testing methods in ASTM C 67 for compressive strength, 24-hour cold-water absorption, 5-hour boil absorption, saturation coefficient, and initial rate of absorption (suction). Carefully remove five existing units from locations designated by Architect. Take testing samples from these units.
2. Replacement Brick and Clay Tile Masonry: For each proposed type of replacement brick, according to sampling and testing methods in ASTM C 67 for compressive strength, 24-hour cold-water absorption, 5-hour boil absorption, saturation coefficient, and initial rate of absorption (suction).
3. Existing Mortar: Sample existing mortar to determine physical properties, strength,

composition, and absorption rate.

4. Repointing Mortar and Repair Mortar: After mortar mix design is determined, prepare one batch for testing. Form mortar cylinders as required by ASTM requirements for testing.

F. Mockups: Prepare mockups of restoration and cleaning as follows to demonstrate aesthetic effects and qualities of materials and execution. Prepare mockups on existing walls under same weather conditions to be expected during remainder of the Work.

1. Repair an area approximately 48 inches high by 48 inches wide as indicated for each type of masonry material indicated to be rebuilt or replaced.
2. Patch three small areas at least 1 inch in diameter for each type of masonry material indicated to be patched.
3. Rake out joints in two separate areas approximately 36 inches high by 72 inches wide for each type of repointing required and repoint one of the two areas.
4. Paint Removal and Cleaning of Masonry: A series of up to six (6) 48 inch by 48 inch test panels on existing exterior construction will be used to determine the acceptable exterior cleaning/paint removal methods. A series of up to six (6) 48 inch by 48 inch test panels on existing interior construction will be used to determine the acceptable interior cleaning/paint removal methods. Architect will select locations for test panels. Depending on the desired appearance, test panels will be cleaned or have paint removal/cleaning.

    1. Test cleaners and methods on samples of adjacent materials for possible adverse reactions unless cleaners and methods are known to have deleterious effect.
    2. Allow a waiting period of not less than seven days after completion of sample cleaning to permit a study of sample panels for negative reactions.

5. Obtain approval of each mockup from Architect, Owner, and State Historic Preservation Office prior to proceeding with the work.

G. Prepare good quality overall, and close-up, “before and after” color photographs of for submittal by the Owner to the National Park Service (NPS) in order to meet NPS Certification procedures. Before and after photos shall be taken of the same subject area and from approximately the same vantage point. Photographs shall be cataloged in a manner which clearly indicates the locations of each photograph, through text or the use of annotated drawings or ‘key plans’. Submit 3 hard copies. Also submit 3 copies in pdf format, plus photo files in jpg format, on CD or DVD. Photos shall document the following:
1. All areas of cleaning of masonry restoration.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver masonry units to Project site strapped together in suitable packs or pallets or in heavy-duty cartons.

B. Deliver other materials to Project site in manufacturer's original and unopened containers, labeled with manufacturer's name and type of products.

C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

D. Store hydrated lime in manufacturer's original and unopened containers. Discard lime if containers have been damaged or have been opened for more than two days.

E. Store lime putty covered with water in sealed containers.

F. Store sand where grading and other required characteristics can be maintained and contamination avoided.

1.7 PROJECT CONDITIONS

A. Repoint mortar joints and repair masonry only when air temperature is between and 40 and 90 deg F (4 and 32 deg C) and is predicted to remain so for at least 7 days after completion of work.

B. Cold-Weather Requirements: Comply with the following procedures for masonry repair and mortar-joint pointing:

1. When air temperature is below 40 deg F (4 deg C), heat mortar ingredients, masonry repair materials, and existing masonry walls to produce temperatures between 40 and 120 deg F (4 and 49 deg C).
2. When mean daily air temperature is below 40 deg F (4 deg C), provide enclosure and heat to maintain temperatures above 32 deg F (0 deg C) within the enclosure for 7 days after repair and pointing.

C. Hot-Weather Requirements: Protect masonry repair and mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and repair materials. Provide artificial shade and wind breaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 90 deg F (32 deg C) and above.

D. Patch masonry only when air and surface temperatures are between and 55 and 100 deg F (13 and 38 deg C) and are predicted to remain above 55 deg F (13 deg C) for at least 7 days after completion of work. On days when air temperature is predicted to go above 90 deg F (32 deg C), schedule patching work to coincide with time that surface being patched will be in shade or during cooler morning hours.

E. Clean masonry surfaces only when air temperature is 40 deg F (4 deg C) and above and is predicted to remain so for at least 7 days after completion of cleaning.

F. Provide protection for existing parking, buildings and landscape during cleaning operations. Comply with environmetal requirements for runoff.

G. Protection of work: During erection, cover tops of walls, projections, and sills with waterproof sheeting at the end of each day's work. Cover partially completed masonry when construction is not in progress.

H. Stain Prevention: Immediately remove grout, mortar, and soil to prevent them from staining the face of stone masonry veneer.

1. Protect base of walls from rain-splashed mud and mortar splatter by coverings spread on the ground and over the wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and doorframes, as well as similar products with painted and integral finishes, from mortar droppings.
4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt on completed stone masonry veneer.

1.8 SEQUENCING AND SCHEDULING

A. Order replacement materials at earliest possible date, to avoid delaying completion of the Work.

B. Order sand for repointing mortar immediately after approval of Samples mockups. Take delivery of and store at Project site a sufficient quantity of sand to complete Project.

C. Perform masonry restoration work in the following sequence:

1. Remove plant growth, if present.

2. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
3. Remove paint.
4. Clean masonry surfaces.
5. Rake out mortar from joints surrounding masonry to be replaced and from joints adjacent to masonry repairs along joints.
6. Repair masonry, including replacing existing masonry with new masonry materials.
7. Rake out mortar from joints to be repointed.
8. Point mortar joints.
9. After repairs and repointing have been completed and cured, perform a final cleaning to remove residues from this work.

D. As scaffolding is removed, patch anchor holes used to attach scaffolding. Patch holes in masonry units to comply with Part 3 "Masonry Unit Patching" Article. Patch holes in mortar joints to comply with Part 3 "Repointing Masonry" Article.

E. Clean and romove paint from interior masonry and concrete. Interior work may be concurrent with exterior work if approved in advance by the Architect.

PART 2 - GENERAL

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:

1. Products: Subject to compliance with requirements, provide one of the products specified.

2.2 MASONRY MATERIALS

A. Face Brick and Accessories: Provide face brick and accessories, including specially molded, ground, cut, or sawed shapes where required to complete masonry restoration work.

1. Provide units with colors, surface texture, size, and shape to match existing brickwork and with physical properties not less than those determined from preconstruction testing of selected existing units.

    1. For existing brickwork that exhibits a range of colors, provide brick that matches that range rather than brick that matches an individual color within that range.
    2. For sample that exhibits a range of colors, provide brick that matches that range rather than brick that matches an individual color within that range.
    3. Refer to Section “Unit Masonry Assemblies” for brick selections for each building.

2. Provide specially molded shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
3. Provide specially ground units, shaped to match patterns, for arches and where indicated.

B. Face Brick and Clay Tile Masonry:

1. Brick shall be utilized in lieu of salvaged brick if insufficient existing brick can be salvaged for reuse.
    1. Sizes: match existing
    2. Bond pattern: match existing
    3. ASTM C 216, Grade SW, Type FBX

4. Products are subject to approval by Architect and Historic Preservation Authorities.
5. A Mill South and Cleaning House brick:
    1) FB-1A: match existing brick FB-1, subject to approval.
    2) FB-2A: match existing brick FB-2, subject to approval.
    3) FB-7: New 'red' brick to match existing at elevator penthouse
    4) FB-8: New 'white' brick to match existing at elevator penthouse

6. Warehouse 2:
    1) FB-10A: New to brick to match existing FB-10, subject to approval.
    2) FB-13A: New to brick to match existing FB-13, subject to approval.

7. Red Tile Building Clay Tile Masonry:
    1) CTM-1A: New clay tile masonry to match existing CTM-1, subject to approval.
    2) CTM-2A: New clay tile masonry to match existing CTM-2, subject to approval.
    3) Match exsisting profiles, color, and appearance
    4) Manufacturers:
        a) Gladding McBean, Lincoln, CA
        b) Superior Clay Products, Uhrichsville, OH
        c) Other manufacturers subject to compliance with contract requirements.

2.3 STONE

A. Stone (STN-#) Varieties and Sources: Subject to compliance with requirements, provide stone types as follows.
1. STN-1: Existing Platteville Limestone.
2. STN-1A: New Platteville Limestone to match existing STN-1. Field verify existing stone type, color, texture/grain, and finishes, and submit samples to match for Architect's approval.
3. STN-2: Existing Granite (A-Mill trim and water table).
4. STN-2A: New Granite to match existing STN-2. Field verify existing stone type, color, texture/grain, and finishes, and submit samples to match for Architect's approval.
5. STN-3: Existing Marble
6. STN-3: New Marble to match existing STN-3. Field verify existing stone type, color, texture/grain, and finishes, and submit samples to match for Architect's approval.
7. STN-4: Existing Lannon Stone (color 1).
8. STN-4: New Lannon Stone to match existing STN-4. Field verify existing stone type, color, texture/grain, and finishes, and submit samples to match for Architect's approval.
9. STN-5: Existing Lannon Stone (color 2).
10. STN-5: New Lannon Stone to match existing STN-5. Field verify existing stone type, color, texture/grain, and finishes, and submit samples to match for Architect's approval.

B. Fabricate to shapes and sizes required. Match existing finishes.
1. Provide copings, and window sills, and trim where indicated or required.
2. Provide replacement stone for existing stone bands where panels are to be replaced or extended in lieu of patching.

2.4 MORTAR MATERIALS – BRICK AND CLAY TILE MASONRY

A. Note: Masonry Cements will not be allowed.

B. Portland Cement: Portland Cement: ASTM C 150, Type I or II, except Type III may be used for coldweather construction. Provide natural color or white cement as required to produce mortar color indicated.

C. Hydrated Lime: ASTM C 207, Type S.

D. Factory-Prepared Lime Putty: Screened, fully-slaked lime putty, prepared from pulverized lime complying with ASTM C 5.

E. Mortar Sand: ASTM C 144, unless otherwise indicated.
1. Color: Provide natural sand or ground marble, granite, or other sound stone; of color necessary to produce required mortar color.
2. Match grading and appearance of aggregate in original mortar.
3. For pointing mortar, provide sand with rounded edges.
4. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands, if necessary, to achieve suitable match.

F. Mortar Pigments: Natural and synthetic iron oxides, compounded for mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortars.

G. Water: Potable.

H. Existing mortar to be tested, and new mortar compostion shall match existing as close as possible, and meet approval of governing historic agency and architect.
1. Premixed mortar to provide consistency, and meeting the project requirements, is acceptable.

2.5 MORTAR MATERIALS - STONE

A. Portland Cement-Lime Mix: Packaged blend of Portland cement complying with ASTM C 150, Type I or Type III, and hydrated lime complying with ASTM C 207.

B. Aggregate: ASTM C 144 and as indicated below:

1. For joints narrower than 1/4 inch, use aggregate graded with 100 percent passing No. 16 sieve.

C. Water: Potable.

D. Color Admixture: For mineral-oxide pigments and portland cement-lime mortar, not more than 10 percent. Pigments containing carbon black shall not exceed 2 percent of Portland cement by weight.
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
    1. True Tone Mortar Colors; Davis Colors.
    2. Centurion Pigments; Lafarge Corporation.
    3. SGS Mortar Colors; Solomon Grind-Chem Services, Inc.
    4. Tamms Industries,
    5. Euclid's Super Concentrated Mortar Color,
    6. DCS Color and Supply,
    7. Prism Pigments.

2. Color: To match existing mortar, subject to Architect's approval.

2.6 ADJUSTABLE STONE MASONRY-VENEER ANCHORS

A. General: Provide engineered 2-piece assemblies allowing vertical or horizontal differential movement between veneer and substrate parallel to plane of wall but resisting tension and compression forces perpendicular to it, for attachment over sheathing to metal studs, and with the following performance characteristics:

1. Structural Performance Characteristics: Capable of withstanding a minimum 100-lbf load in either tension or compression without developing play or deforming more than 0.05 inch. Conform to applicable code requirements, including those which exceed these specifications.

2. Coursing Alignment: Capable of supporting stone veneer with vertical coursing that varies from back-up masonry construction as shown on drawings.

B. Materials: Provide masonry-veneer anchors of the following materials and thicknesses, unless otherwise indicated:

1. Stainless-Steel Wire: ASTM A 580, Type 304 or 316.
   I. Wire Diameter: 0.25 inch.

2. Stainless-Steel Sheet: ASTM A 666, Type 304 or 316.
   I. Thickness: 0.1094 inch.

C. Screw-Attached, Masonry-Veneer Anchors: Units consisting of a wire-tie section and a metal-anchor section complying with the following requirements:

1. Wire-Tie Shape: Triangular.
2. Wire-Tie Length: As required to extend to within 1-1/2 inches of face of stone masonry veneer.
3. Anchor Section: Rib-stiffened, sheet metal plate with screw holes top and bottom, 0.0747 inch thick by 2-3/4 inches wide by 3 inches high; fabricated into a T-shape with 2 projecting tabs, 3/4 inch wide by 1 inch long; with slotted holes for connecting vertical legs of triangular wire tie specially formed to fit anchor section.

D. Steel Tapping Screws for Concrete Masonry: Self-tapping screws with specially designed threads for tapping and wedging into masonry, with hex washer head and neoprene washer, 3/16-inch diameter by 1-1/2-inch length, and with the following corrosion-protective coating:

1. Organic polymer coating with salt-spray resistance to red rust of more than 500 hours per ASTM B 117.

E. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:

1. Screw-Attached, Masonry-Veneer Anchors:

   I. D/A 213; Dur-O-Wal, Inc. (Stainless Steel)

2. Organic-Polymer-Coated, Masonry Screws:

   1. Tapcon; ITW-Ramset/Redhead.
   2. Tapcon; Rawlplug Co., Inc. (The).

2.7 STONE FABRICATION

A. General: Fabricate stone in sizes and shapes required to comply with requirements indicated, including details on Drawings.

B. Cut stone to produce pieces of thickness, size, and shape indicated and to comply with fabrication and construction tolerances recommended by applicable stone association or, if none, by stone source, for faces, edges, beds, and backs. Clean sawn backs of stone to remove rust stains and iron particles.

C. Thickness of Stone Masonry Veneer: Provide thickness indicated, but not less than the following:

1. Thickness: 4 inches plus or minus 1/4 inch.

D. Dress joints (bed and vertical) straight and at right angle to face, unless otherwise indicated.

E. Shape stone for type of masonry (pattern) indicated:
1. Veneer Pattern: Lay as detailed on the Drawings, with level bed joints

F. Finish exposed faces and edges of stone to comply with requirements indicated for finish and to match approved samples and mockups.

G. Carefully inspect stone units at quarry or fabrication plant for compliance with requirements for appearance, material, and fabrication. Replace defective units before shipment.

H. Line up head joints at Vertical control joint locations.

2.8 TERRA COTTA COPINGS

A. Terra Cotta copings:
1. Match exsisting profiles, color, and appearance
2. Manufacturers:
   1. Gladding McBean, Lincoln, CA
   2. Superior Clay Products, Uhrichsville, OH
   3. Other manufacturers subject to compliance with contract requirements.

2.9 MANUFACTURED REPAIR MATERIALS

A. Masonry Patching Compound: Factory-mixed cementitious product that is custom manufactured for patching masonry.
1. Custom color matching is required.

2. Products: Subject to compliance with requirements, provide one of the following:

   1. Cathedral Stone Products, Inc.;
      1) Brick and Clay Tile Masonry Repair: Jahn M100 Terra Cotta and Brick Repair Mortar.
      2) Stone Repair: Jahn M70 Limestone and Sandstone Mortar
   2. Conproco Corporation; Mimic and Matrix.
   3. Edison Coatings, Inc.; Custom System 45.

3. Use formulation that is vapor- and water permeable (equal to or more than the masonry unit), exhibits low shrinkage, has lower modulus of elasticity than the masonry units being repaired, and develops high bond strength to all types of masonry.
4. Use formulation having working qualities and retardation control to permit forming and sculpturing where necessary.
5. Formulate patching compound used for patching brick in colors and textures to match each masonry unit being patched. Provide sufficient number of colors to enable matching the color, texture, and variation of each unit.

2.10 PAINT REMOVERS

A. Alkaline Paste Paint Remover: Manufacturer's standard alkaline paste formulation for removing paint coatings from masonry.

1. Products:

    1. American Building Restoration Products, Inc.; 800 Brush Grade.
    2. Diedrich Technologies Inc.; 606/606X Extra Thick Multi-Layer Paint Remover.
    3. Hydrochemical Techniques, Inc.; Hydroclean Heavy Duty Paint Remover (HT-716).
    4. ProSoCo; Sure Klean Heavy-Duty Paint Stripper.

B. Covered or Skin-Forming Alkaline Paint Remover: Manufacturer's standard covered or skin-forming alkaline formulation for removing paint coatings from masonry.

1. Products:

    1. American Building Restoration Products, Inc.; Grip 'N Strip 800 F.A.
    2. Diedrich Technologies Inc.; 404 Rip-Strip.
    3. ProSoCo; Enviro Strip #2.

C. Solvent-Type Paint Remover: Manufacturer's standard water-rinsable, solvent-type gel formulation for removing paint coatings from masonry.

1. Products:

    1. Diedrich Technologies Inc.; 505 Special Coatings Stripper.
    2. Dominion Restoration, Inc.; Dominion Multi-Layer Paint & Graffiti Remover.
    3. Hydrochemical Techniques, Inc.; Hydroclean Solvent Paint Remover (HT-300).
    4. ProSoCo; Sure Klean Fast Acting Paint Stripper.

D. Biodegradable, Non-flamable and Non-combustible Strippers:
1. Products:
    1. Back To Nature, Multi Stripper.
2. Use on building interior concrete to remove paint.

2.11 CLEANING MATERIALS

A. Water for Cleaning: Potable.

B. Hot Water: Heat water to a temperature of 140 to 160 deg F (60 to 71 deg C).

C. Job-Mixed Detergent Solution: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium polyphosphate (TSPP), 1/2 cup (125 mL) of laundry detergent, and 20 quarts (20 L) of hot water for every 5 gal. (20 L) of solution required.

D. Job-Mixed Mold, Mildew, and Algae Remover: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium polyphosphate, 5 quarts (5 L) of 5 percent sodium hypochlorite (bleach), and 15 quarts (15 L) of hot water for every 5 gal. (20 L) of solution required.

E. Mild Acidic Cleaner: Manufacturer's standard mildly acidic cleaner containing no muriatic (hydrochloric), hydrofluoric, or sulfuric acid; or ammonium bifluoride or chlorine bleaches.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    1. ABR Products, Inc.; X-190 Limestone & Concrete Cleaner.
    2. Diedrich Technologies Inc.; Envirorestore 100.
    3. Dominion Restoration Products, Inc.; DR-60 Stone and Masonry Cleaner.
    4. PROSOCO; Enviro Klean BioWash.

F. Two-Part Chemical Cleaner: Manufacturer's standard system consisting of potassium or sodium hydroxide based, alkaline prewash cleaner and acidic afterwash cleaner that does not contain hydrofluoric acid.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      1. ABR Products, Inc.; 500 Limestone Prewash Cleaner followed by 500 Limestone Afterwash.
      2. Diedrich Technologies Inc.; Diedrich 808 Limestone Pre-Wash or Diedrich 808X Black Encrustation Remover - Super Strong followed by 707N Limestone Neutralizer After-Rinse.
      3. PROSOCO; Enviro Klean BioKlean followed by Sure Klean Limestone & Masonry Afterwash or Sure Klean 766 Limestone Prewash followed by SureKlean Limestone & Masonry Afterwash.

G. Job-Mixed Mild Acidic Cleaner and Paint Remover Neutralizer: Masonry restoration firm's standard highly diluted hydrofluoric acid solution, as utilized on at least five previous successful restoration projects of similar scale. Solution shall be such that it is diluted to the point that it is barely strong enough to perform its function.

2.12 MORTAR MIXES

A. Preparing Lime Putty: Slake quicklime and prepare lime putty according to appendix to ASTM C 5 and manufacturer's written instructions.

B. Measurement and Mixing: Measure cementitious materials and sand in a dry condition by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer.

   1. Mixing Pointing Mortar: Thoroughly mix cementitious materials and sand together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 15 to 30 minutes. Add remaining water in small portions until mortar reaches desired consistency. Use mortar within one hour of final mixing; do not retemper or use partially hardened material.

C. Colored Mortar: Produce mortar of color required by using selected ingredients. Do not alter specified proportions without Architect's approval.

   1. Mortar Pigments: Where mortar pigments are indicated, do not exceed a pigment-to-cement ratio of 1:10 by weight.

D. Do not use admixtures of any kind in mortar, unless otherwise indicated.

E. Mortar Proportions: Mix mortar materials in the following proportions:

   1. Pointing Mortar for Brick: 1 part portland cement, 2 parts lime, and 6 parts sand 1 part portland cement, 6 parts lime, and 12 parts sand.

      1. Add mortar pigments to produce mortar colors required.

   2. Rebuilding (Setting) Mortar: Same as pointing mortar.
   3. Rebuilding (Setting) Mortar: Comply with ASTM C 270, Proportion Specification, Type N, unless otherwise indicated; with cementitious material content limited to portland cement and lime.
   4. At interior hollow clay tile, patch holes with mortar designed to match strength of hollow clay tile or the mortar used to set clay tile.

2.13 COLORED MORTAR MIXES AT STONE

A. General: Comply with referenced standards and with manufacturers' written instructions for mix proportions, mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures needed to produce mortar of uniform quality and with optimum performance characteristics.

1. Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated. Do not use calcium chloride.
2. Mixing: Combine and thoroughly mix cementitious materials, water, and aggregates in a mechanical batch mixer, unless otherwise indicated. Discard mortar when it has reached initial set.

B. Colored Mortar for Stone Masonry Veneer: Comply with ASTM C 270, Proportion Specification, for types of mortar indicated below:
1. Set stone with Type S mortar above grade UNO.
2. Set stone with Type M mortar below grade UNO
3. Point stone with Type N mortar.
4. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortar.
5. Color: to be selected by Architect full line of colors.
6. Architect shall approve final color selection of tinted mortar by viewing cured and dry tooled colored mortar joints in mock up sample panel.

2.14 ACCESSORY MATERIALS

A. Liquid Strippable Masking Agent: Manufacturer's standard liquid, film-forming, strippable masking material for protecting glass, metal, and polished stone surfaces from damaging effects of acidic and alkaline masonry cleaners.

B. Setting Buttons: Resilient plastic buttons, nonstaining to masonry, sized to suit joint thicknesses and bed depths of masonry units without intruding into required depths of pointing materials.

C. Masking Tape: Nonstaining, nonabsorbent material, compatible with pointing mortar, joint primers, sealants, and surfaces adjacent to joints; that will easily come off entirely, including adhesive.

D. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer complying with MPI #79, Alkyd Anticorrosive Metal Primer or SSPC-Paint 20 or SSPC-Paint 29 zinc-rich coating.

E. Miscellaneous Products: Select materials and methods of use based on the following, subject to approval of a mockup:

1. Previous effectiveness in performing the work involved.
2. Little possibility of damaging exposed surfaces.
3. Consistency of each application.
4. Uniformity of the resulting overall appearance.
5. Do not use products or tools that could do the following:

    1. Remove, alter, or in any way harm the present condition or future preservation of existing surfaces, including surrounding surfaces not in contract.
    2. Leave a residue on surfaces.

2.15 BLASTING MEDIA FOR INTERIOR PAINT REMOVAL

A. Utilize least abrasive media suitable for the application, based on approved test panels/mockups.
   1. Possible media include:
      1. Sand, for removal of rust from ferrous materials. Not acceptable for masonry, stone, and wood.
      2. Walnut shells and similar organic media
      3. Soda
      4. Dry ice
   2. Masking materials
      1. Provide manufacturer's standard non-staining, non-absorbant, removable masking materials that will not damage substrates, and will provide adequate protection against blasting media.

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm resulting from masonry restoration work.

   1. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during course of restoration and cleaning work.

B. Comply with chemical cleaner manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent chemical cleaning solutions from coming into contact with pedestrians, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

   1. Cover adjacent surfaces with materials that are proven to resist chemical cleaners used unless chemical cleaners being used will not damage adjacent surfaces. Use materials that contain only waterproof, UV-resistant adhesives. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
   2. Keep wall wet below area being cleaned to prevent streaking from runoff.
   3. Do not clean masonry during winds of sufficient force to spread cleaning solutions to unprotected surfaces.
   4. Neutralize and collect alkaline and acid wastes for disposal off Owner's property.
   5. Dispose of runoff from cleaning operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

C. Protect stone masonry veneer during erection as follows:

   1. Cover tops of walls with non-staining, waterproof sheeting at end of each day's work. Cover partially completed structures when work is not in progress. Extend cover a minimum of 24 inches down both sides and hold securely in place.
   2. Prevent staining of stone from mortar, grout, sealants, and other sources. Immediately remove such materials without damaging stone.
   3. Protect base of walls from rain-splashed mud and mortar splatter by coverings spread on the ground and over the wall surface.
   4. Protect sills, ledges, and projections from mortar droppings.

D. Prevent mortar from staining face of surrounding masonry and other surfaces.

1. Cover sills, ledges, and projections to protect from mortar droppings.
2. Keep wall area wet below rebuilding and pointing work to discourage mortar from adhering.
3. Immediately remove mortar in contact with exposed masonry and other surfaces.
4. Clean mortar splatters from scaffolding at end of each day.

3.2 UNUSED ANCHOR REMOVAL

A. Remove masonry anchors, brackets, wood nailers, and other extraneous items no longer in use unless identified as historically significant or indicated to remain.

1. Remove items carefully to avoid spalling or cracking masonry.
2. If item cannot be removed without damaging surrounding masonry, cut off item flush with surface and core drill surrounding masonry and item as close around item as practical.
3. Patch holes where items were removed unless directed to remove and replace units.

3.3 BRICK AND CLAY TILE MASONRY REMOVAL AND REPLACEMENT

A. At locations indicated, remove bricks/clay tile masonry units that are damaged, spalled, or deteriorated. Carefully demolish or remove entire units from joint to joint, without damaging surrounding masonry, in a manner that permits replacement with full-size units.

1. When removing single units, remove material from center of unit and work toward outside edges.

B. Support and protect remaining masonry that surrounds removal area. Maintain flashing, reinforcement, lintels, and adjoining construction in an undamaged condition.

C. Notify Architect of unforeseen detrimental conditions including voids, cracks, bulges, and loose masonry units in existing masonry backup, rotted wood, rusted metal, and other deteriorated items.

D. Remove in an undamaged condition as many whole bricks as possible, including brick salvaged from cutting out brick for new openings at East side elevation.

1. Remove mortar, loose particles, and soil from brick by cleaning with hand chisels, brushes, and water.
2. Store brick for reuse, as indicated.
3. Deliver cleaned brick not required for reuse to Owner, unless otherwise directed.

E. Clean bricks surrounding removal areas by removing mortar, dust, and loose particles in preparation for replacement.

F. Install replacement brick into bonding and coursing pattern of existing brick. If cutting is required, use a motor-driven saw designed to cut masonry with clean, sharp, unchipped edges.

G. Lay replacement brick with completely filled bed, head, and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Wet both replacement and surrounding bricks that have ASTM C 67 initial rates of absorption (suction) of more than 30 g/30 sq. in. per min.. Use wetting methods that ensure that units are nearly saturated but surface is dry when laid. Maintain joint width for replacement units to match existing joints.

1. Tool exposed mortar joints in repaired areas to match joints of surrounding existing brickwork.
2. Rake out mortar used for laying brick before mortar sets and point new mortar joints in

repaired area to comply with requirements for repointing existing masonry, and at same time as repointing of surrounding area.

3.4 MASONRY UNIT PATCHING

A. Patch the following masonry units:

1. Units indicated to be patched.
2. Units with holes.
3. Unit replaced where indicated
4. Hollow clay tile units as indicated.

B. Remove and replace existing patches, unless otherwise indicated or approved by Architect.

C. Patching Bricks:

1. Remove loose material from brick surface. Remove additional material so patch will not have feathered edges and will be at least 1/4 inch (6 mm) thick, but not less than recommended by patching compound manufacturer.
2. Mask or remove surrounding mortar joints if patch will extend to edge of brick.
3. Mix patching compound in individual batches to match each unit being patched. Combine one or more colors of patching compound, as needed, to produce exact match.
4. Rinse surface to be patched and leave damp, but without standing water.
5. Brush-coat surfaces with slurry coat of patching compound according to manufacturer's written instructions.
6. Place patching compound in layers as recommended by patching compound manufacturer, but not less than 1/4 inch (6 mm) or more than 2 inches (50 mm) thick. Roughen surface of each layer to provide a key for next layer.
7. Trowel, scrape, or carve surface of patch to match texture and surface plane of surrounding brick. Shape and finish surface before or after curing, as determined by testing, to best match existing brick.
8. Keep each layer damp for 72 hours or until patching compound has set.

D. Patching hollow clay tile:

1. Fill visible holes and cracks within and between hollow clay masonry units with mortar to match color, texture and strength characteristics of the existing mortar.
2. Tool joints to match existing tooled joints. Smooth mortar flush at infill of unit holes

3.5 SETTING STONE MASONRY

A. Execute stone masonry by skilled masons experienced with the kind and form of stone and installation method indicated.

1. Employ skilled stone fitters at the Project site to do necessary field cutting as stone is set. Use power saws to cut stone. Produce lines cut straight and true, with edges eased slightly to prevent snipping.
2. Arrange and trim stones for accurate fit with uniform joint widths, and to provide offset between vertical joints as indicated.
3. Arrange stones for uniformity of appearance, with color and size variations uniformly dispersed for an evenly blended appearance.

B. Set stone to comply with requirements indicated on Drawings. Install anchors, supports, fasteners, and other attachments indicated or necessary to secure stone masonry veneer in place. Set stone accurately in locations indicated with edges and faces aligned according to established relationships and indicated tolerances.

C. Maintain uniform joint widths, except for variations due to stone size variations and minor

variations required to maintain bond alignment, if any. Lay walls with joints of the following width.

1. Joint Width: 3/8 to 1/2 inch.

D. Provide expansion, control, and pressure-relieving joints of widths and at locations indicated.

1. Sealing expansion and other joints is specified in Division 7 Section "Joint Sealants."
2. Keep expansion joints free of mortar and other rigid materials.

E. Install concealed flashing at shelf angles, lintels, ledges, and similar obstructions to downward flow of water to divert water to exterior.

1. At metal frame walls, extend flashing from exterior face of veneer, through the veneer, and up the face of the sheathing at least 16 inches, behind the wall membrane. Lap all joints a minimum of 12”, and adhesively seal all lapped joints.
2. At lintels and shelf angles, extend flashing a minimum of 4 inches into masonry at each end. At heads and sills, extend flashing 4 inches at ends and turn up not less than 4 inches to form a pan.
3. Cut off flashing flush with face of wall after masonry wall construction is completed.

F. Place weep holes and vents in joints where moisture may accumulate including base of cavity walls, above shelf angles, and flashing. Locate weep holes and vents at intervals not exceeding 24 inches.

1. Form weep holes with product specified in Part 2 of this Section.
2. Place cavity drainage material immediately above flashing in cavities.
3. Trim wicking material used in weep holes to extend 1” beyond the outside face of wall after mortar has set.

3.6 REPOINTING MASONRY

A. Rake out and repoint mortar joints to the following extent:

1. All joints in areas indicated.
2. Joints where mortar is missing or where they contain holes.
3. Cracked joints where cracks can be penetrated at least 1/4 inch (6 mm) by a knife blade 0.027 inch (0.7 mm) thick.
4. Cracked joints where cracks are 1/8 inch (3 mm) or more in width and of any depth.
5. Joints where they sound hollow when tapped by metal object.
6. Joints where they are worn back 1/4 inch (6 mm) or more from surface.
7. Joints where they are deteriorated to point that mortar can be easily removed by hand.
8. Joints, other than those indicated as sealant-filled joints, where they have been filled with substances other than mortar.

B. Do not rake out and repoint joints where not required.

C. Rake out joints as follows:

1. Remove mortar from joints to depth of 2 times joint width, but not less than 1/2 inch (13 mm) or not less than that required to expose sound, unweathered mortar.
2. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
3. Do not spall edges of masonry units or widen joints. Replace or patch damaged masonry units as directed by Architect.

I. Cut out mortar by hand with chisel and mallet. Do not use power-operated grinders

without Architect's written approval based on submission by Contractor of a satisfactory quality-control program and demonstrated ability of operators to use tools without damaging masonry. Quality-control program shall include provisions for supervising performance and preventing damage due to worker fatigue.

2. Cut out center of mortar bed joints using angle grinders with diamond-impregnated metal blades, if approved by governing historic agency and architect. Remove remaining mortar by hand with chisel and mallet. Strictly adhere to written quality-control program. Quality-control program shall include provisions for demonstrating ability of operators to use tools without damaging masonry, supervising performance, and preventing damage due to worker fatigue.

D. Notify Architect of unforeseen detrimental conditions including voids in mortar joints, cracks, loose masonry units, rotted wood, rusted metal, and other deteriorated items.

E. Point joints as follows:

1. Rinse masonry-joint surfaces with water to remove dust and mortar particles. Time rinsing application so, at time of pointing, joint surfaces are damp but free of standing water. If rinse water dries, dampen masonry-joint surfaces before pointing.
2. Apply pointing mortar first to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch (9 mm) until a uniform depth is formed. Fully compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.
3. After low areas have been filled to same depth as remaining joints, point all joints by placing mortar in layers not greater than 3/8 inch (9 mm). Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing bricks have worn or rounded edges, slightly recess finished mortar surface below face of masonry to avoid widened joint faces. Take care not to spread mortar over edges onto exposed masonry surfaces or to featheredge mortar.
4. When mortar is thumbprint hard, tool joints to match original appearance of joints. Remove excess mortar from edge of joint by brushing.

F. Cure mortar by maintaining in thoroughly damp condition for at least 72 hours including weekends and holidays.

1. Acceptable curing methods include covering with wet burlap and plastic sheeting, periodic hand misting, and periodic mist spraying using system of pipes, mist heads, and timers.
2. Adjust curing methods to ensure that pointing mortar is damp throughout its depth without eroding surface mortar.

G. Where repointing work precedes cleaning of existing masonry, allow mortar to harden at least 30 days before beginning cleaning work.

3.7 CLEANING MASONRY, GENERAL

A. Proceed with cleaning in an orderly manner. In accordance with the approved restoration plan work either from top to bottom, or bottom to top, of each scaffold width and from one end of each elevation to the other. Method used shall be selected to avoid staining of cleaned work.

B. Use only those cleaning methods indicated for each masonry material and location.

1. Do not use wire brushes or brushes that are not resistant to chemical cleaner being used. Do not use plastic-bristle brushes if natural-fiber brushes will resist chemical cleaner being used.
2. Use spray equipment that provides controlled application at volume and pressure indicated, measured at spray tip. Adjust pressure and volume to ensure that cleaning methods do not damage masonry.

1. Equip units with pressure gages.

3. For chemical cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with cone-shaped spray tip.
4. For water spray application, use fan-shaped spray tip that disperses water at an angle of 25 to 50 degrees.

C. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces.

D. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to cleaning methods being used. Extraneous substances include paint, calking, asphalt, and tar.

1. Carefully remove heavy accumulations of material from surface of masonry with a sharp chisel. Do not scratch or chip masonry surface.
2. Remove paint and caulking with alkaline paint remover.

1. Comply with requirements for paint removal.
2. Repeat application up to two times if needed.

3. Remove asphalt and tar with solvent-type paint remover.

1. Apply only to asphalt and tar by brush without prewetting.
2. Allow paint remover to remain on surface for 10 to 30 minutes.
3. Rinse off with cold water using low-pressure spray.
4. Repeat application if needed.

E. Water Spray Applications: Unless otherwise indicated, hold spray nozzle at least 6 inches (150 mm) from surface of masonry and apply water in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage. Final distances to be field determined on test panel for appropriateness and approved by governing historic agency and architect.

F. Chemical Cleaner Application Methods: Apply chemical cleaners to masonry surfaces to comply with chemical cleaner manufacturer's written instructions; use brush or spray application methods, at Contractor's option. Do not spray apply at pressures exceeding 50 psi (345 kPa). Distances to be field determined on test panel for appropriateness and approved by governing historic agency and architect. Do not allow chemicals to remain on surface for periods longer than those indicated or recommended by manufacturer.

G. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.

1. Apply neutralizing agent and repeat rinse, if necessary, to produce tested pH of between 6.7 and 7.5.

H. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.

3.8 ADJUSTING AND CLEANING OF REPLACEMENT STONE AND CAST STONE

A. Remove and replace stone masonry of the following description:

1. Broken, chipped, stained, or otherwise damaged stone. Stone may be repaired if the

methods and results are approved by Architect.
2. Defective joints.
3. Stone masonry veneer and joints not matching approved samples and mockups.
4. Stone masonry veneer not complying with other requirements indicated.

B. Replace in a manner that results in stone masonry matching approved samples and mockups, complying with other requirements, and showing no evidence of replacement.

C. In-Progress Cleaning: Clean stone masonry as work progresses. Remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean stone masonry veneer as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on mockup; leave one-half of panel un-cleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent stone and non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
5. Clean stone by bucket and brush hand-cleaning method described in BIA Technical Note No. 20 Revised II, using the following masonry cleaner:

    I. Job-mixed detergent solution.

E. Protection: Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer that ensure stone masonry veneer is without damage and deterioration at the time of Substantial Completion.

3.9 PAINT REMOVAL

A. During Construction, preconstruction testing will be completed and final cleaning methods will be selected from the following options.:

B. Paint Removal with Alkaline Paste Paint Remover:
1. Apply paint remover to dry, painted masonry with brushes.
2. Allow paint remover to remain on surface for period recommended by manufacturer.
3. Rinse with water applied by medium-pressure spray to remove chemicals and paint residue.
4. Repeat process if necessary to remove all paint.
5. Apply acidic cleaner or manufacturer's recommended afterwash to masonry, while surface is still wet, using low-pressure spray equipment or soft-fiber brush. Let cleaner or afterwash remain on surface as a neutralizing agent for period recommended by chemical cleaner or afterwash manufacturer.
6. Rinse with cold water applied by medium-pressure spray to remove chemicals and soil.

C. Paint Removal with Covered or Skin-Forming Alkaline Paint Remover:
1. Apply paint remover to dry, painted masonry with trowel, spatula, or as recommended by manufacturer.
2. Apply cover, if required by manufacturer, per manufacturer's written instructions.
3. Allow paint remover to remain on surface for period recommended by manufacturer or as determined in test panels.
4. Scrape off paint and remover and collect for disposal.
5. Rinse with water applied by medium-pressure spray to remove chemicals and paint residue.

6. Apply acidic cleaner or manufacturer's recommended afterwash to masonry, while surface is still wet, using low-pressure spray equipment or soft-fiber brush. Let cleaner or afterwash remain on surface as a neutralizing agent for period recommended by chemical-cleaner or afterwash manufacturer.
7. Rinse with cold water applied by medium-pressure spray to remove chemicals and soil.

D. Paint Removal with Solvent-Type Paint Remover:
1. Apply thick coating of paint remover to painted masonry with natural-fiber cleaning brush, deep-nap roller, or large paint brush.
2. Allow paint remover to remain on surface for period recommended by manufacturer. Agitate periodically with stiff-fiber brush, in accordance with manufacturer's recommendations.
3. Rinse with water applied by medium-pressure spray to remove chemicals and paint residue.

E. Blasting Media for Removal of Paint from Interior Concrete and Masonry:
1. Comply with Naional Park Service Standards regarding recommended procedures and application.
2. Do not use blasting media on clay masonry.
3. Use only those cleaning methods indicated for each masonry material and location, and selected from those tested. Use spray equipment that provides controlled application at volume and pressure indicated, measured at spray tip. Adjust pressure and volume to ensure that cleaning methods do not damage wood surfaces.
4. Use pressure matching that used on approved test sample panel.
5. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces.
6. Power Blasting Applications: Unless otherwise indicated, hold spray nozzle at least 12 inches from surface being cleaned and apply blasting media in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.
7. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks. Clean up all debris and used media.

3.10 PAINTING STEEL UNCOVERED DURING THE WORK

A. Inspect steel exposed during masonry removal. Where Architect determines that it is structural, or for other reasons cannot be totally removed, prepare and paint it as follows:

1. Remove paint, rust, and other contaminants according to SSPC-SP 2, "Hand Tool Cleaning", as applicable to meet paint manufacturer's recommended preparation.
2. Immediately paint exposed steel with two coats of antirust coating, following coating manufacturer's written instructions and without exceeding manufacturer's recommended rate of application (dry film thickness per coat).

B. If on inspection and rust removal, the cross section of a steel member is found to be reduced from rust by more than 1/16 inch (1.6 mm), notify Architect before proceeding.

3.11 CLEANING BRICKWORK

A. Hot-Water Wash: Use hot water applied by low-pressure spray.

B. Detergent Cleaning:

1. Wet masonry with hot water applied by low-pressure spray.
2. Scrub masonry with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is

used and that masonry surface remains wet.

3. Rinse with cold water applied by low-pressure spray to remove detergent solution and soil.
4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.

3.12 FINAL CLEANING

A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water, spray applied at low pressure.

1. Do not use metal scrapers or brushes.
2. Do not use acidic or alkaline cleaners.

B. Wash adjacent woodwork and other nonmasonry surfaces. Use detergent and soft brushes or cloths.

C. Clean masonry debris from roof; remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.

D. Sweep and rake adjacent pavement and grounds to remove masonry debris. Where necessary, pressure wash surfaces to remove mortar, dust, dirt, and stains.

3.13 FIELD QUALITY CONTROL

A. Inspectors: Owner will engage qualified independent inspectors to perform inspections and prepare test reports. Allow inspectors use of lift devices and scaffolding, as needed, to perform inspections.

B. Architect's Project Representatives: Architect will assign Project representatives to help carry out Architect's responsibilities at the site, including observing progress and quality of portion of the Work completed. Allow Architect's Project representatives use of scaffolding, as needed, to observe progress and quality of portion of the Work completed.

C. Notify Architect's Project representatives in advance of times when lift devices and scaffolding will be relocated. Do not relocate lift devices and scaffolding until Architect's Project representatives have had reasonable opportunity to make observations of work areas at lift device or scaffold location.

END OF SECTION 049010

SECTION 076113
STANDING-SEAM SHEET METAL ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Standing-seam metal roofing from manufactured panels.

B. Related Sections:
   1. Section 061600 – Sheathing, for composite nail base insulated sheathing.
   2. Section 076200 – Sheet Metal Flashing and Trim.
   3. Section 079200 – Joint Sealants.

1.2 SUBMITTALS

A. Product Data: For each type of product.
   1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.

B. Shop Drawings:
   1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
   2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches (1:10).

C. Informational Submittals:
   1. Field quality-control reports.
   2. Sample Warranties: For special warranties.

D. Closeout Submittals:
   1. Maintenance Data: For metal panels to include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. Preinstallation Conference: Conduct conference at Project site.
   1. Meet with Owner, Architect, Owner's insurer if applicable, metal panel Installer, metal panel manufacturer's representative, structural-support Installer, and installers whose work interfaces with or affects metal panels, including installers of roof accessories and roof-mounted equipment.
   2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   3. Review methods and procedures related to metal panel installation, including manufacturer's written instructions.
   4. Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.
   5. Review structural loading limitations of purlins and rafters during and after roofing.

6. Review flashings, special details, drainage, penetrations, equipment curbs, and condition of other construction that affect metal panels.
7. Review governing regulations and requirements for insurance, certificates, and tests and inspections if applicable.
8. Review temporary protection requirements for metal panel systems during and after installation.
9. Review procedures for repair of metal panels damaged after installation.
10. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Retain strippable protective covering on metal panels during installation.

1.5 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.6 COORDINATION

A. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.

B. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
    a. Structural failures including rupturing, cracking, or puncturing.
    b. Deterioration of metals and other materials beyond normal weathering.
2. Warranty Period: Two years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
    a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.

c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.

C. Special Weathertightness Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that fail to remain weathertight, including leaks, within specified warranty period.

1. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. For standing seam metal roofing systems, provide materials and construction identical to those tested in assembly indicated in accordance with UL 580 or ASTM E 1592, by an independent testing agency.

B. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592:

1. Wind Loads: As indicated on Structural Drawings S001.

C. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. (0.3 L/s per sq. m) when tested according to ASTM E 1680 at the following test-pressure difference:

1. Test-Pressure Difference: 6.24 lbf/sq. ft. (300 Pa).

D. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 1646 at the following test-pressure difference:

1. Test-Pressure Difference: 6.24 lbf/sq. ft. (300 Pa).

E. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.

1. Uplift Rating: UL 580 Class 90.

F. Hail Impact Rating: Class 4, UL 2218.

G. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 STANDING-SEAM METAL ROOFING

A. Standing Seam Metal Roof Panels: Self-locking, factory-formed, architectural standing seam metal roof panels, designed for sequential installation by mechanically attaching panels to supports and snapping panels together, and with integral fastening flange that accommodates thermal movement

1. Acceptable Products: One of the following:

a. Firestone Building Products, UnaClad, UC-4.

b. Peterson Aluminum Corp., comparable product.

2. Panel Material: Zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation; structural quality; factory pre-finished by the coil-coating process per ASTM A 755/A 755M.

a. Nominal Thickness: 0.031 inch (0.79 mm).

3. Exterior Finish: Two-coat fluoropolymer, AAMA 621, fluoropolymer finish, not less than 70 percent PVDF; prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    a. Color: Selected by Architect from manufacturer's full range, for colors designated on Drawings.
4. Panel Coverage: 16 inches (406 mm).
5. Panel Height: 1.5 inches (38 mm).

2.3 MISCELLANEOUS MATERIALS

A. Roofing Fasteners: Roofing manufacturer's recommended self-drilling, corrosion resistant fastener for substrates and applications indicated, of lengths, sizes, and duty-level to withstand loads indicated.

B. Self-Adhering, High-Temperature Underlayment: Roofing manufacturer's self-adhering, cold-applied, sheet underlayment, a minimum of 30 mils (0.76 mm) thick, consisting of slip-resistant, polyethylene-film top surface laminated to a layer of butyl or SBS-modified asphalt adhesive, with release-paper backing.
1. Provide roofing manufacturer's product required to achieve specified warranty.
2. Provide primer when recommended by underlayment manufacturer.
3. Thermal Stability: Stable after testing at 240 deg F (116 deg C); ASTM D 1970.
4. Low-Temperature Flexibility: Passes after testing at minus 20 deg F (29 deg C); ASTM D 1970.

C. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.

D. Miscellaneous Metal Subframing and Furring: ASTM C 645; cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 (Z275 hot-dip galvanized) coating designation or ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

E. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

F. Sheet Metal Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.
1. Comply with requirements specified in Section 076200 – Sheet Metal Flashing and Trim.

G. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are non-staining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, non-staining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
2. Joint Sealant: ASTM C 920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.4 FABRICATION

A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using UL-certified, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.

C. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

D. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.

E. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
2. Seams: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
3. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
5. Fabricate attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
    a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal panel manufacturer for application, but not less than thickness of metal being secured.

2.5 FINISHES

A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are unacceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.

1. Examine primary and secondary roof framing to verify that rafters, purlins, angles, channels, and other structural panel support members and anchorages have been installed within alignment tolerances required by metal roof panel manufacturer.
2. Examine solid roof sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal roof panel manufacturer.
    a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.3 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Comply with temperature restrictions of underlayment manufacturer for installation.

1. Apply over the entire roof surface.
2. Apply materials to be wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (152 mm) staggered 24 inches (610 mm) between courses.
3. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.
4. Apply primer if required by manufacturer.

B. Slip Sheet: Apply slip sheet over underlayment before installing metal roof panels.

C. Flashings: Install flashings to cover underlayment to comply with requirements specified in Section 076200 "Sheet Metal Flashing and Trim."

3.4 SHEET METAL ROOFING INSTALLATION

A. Panel Installation, General: Comply with manufacturer's written instructions and ICC-ES Evaluation Report ESR-3422.

B. Install metal roofing panels in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Shim or otherwise plumb substrates receiving metal panels.
2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.

3. Install screw fasteners in predrilled holes.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Install flashing and trim as metal panel work proceeds.
6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
8. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.

C. Fasteners, Steel Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use galvanized-steel fasteners for surfaces exposed to the interior.

D. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.

E. Clipless Metal Panel Installation: Fasten metal panels to supports with screw fasteners at each lapped joint at location and spacing recommended by manufacturer.

F. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal roof panel manufacturers; or, if not indicated, types recommended by metal roof panel manufacturer.

G. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof and weather-resistant performance.
2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (610 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

3.5 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align metal panel units within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.6 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect metal roof panel installation, including accessories. Report results in writing.

B. Remove and replace applications of metal roof panels where tests and inspections indicate that they do not comply with specified requirements.

C. Additional tests and inspections, at Contractor's expense, are performed to determine compliance of replaced or additional work with specified requirements.

D. Prepare test and inspection reports.

3.7 CLEANING AND PROTECTION

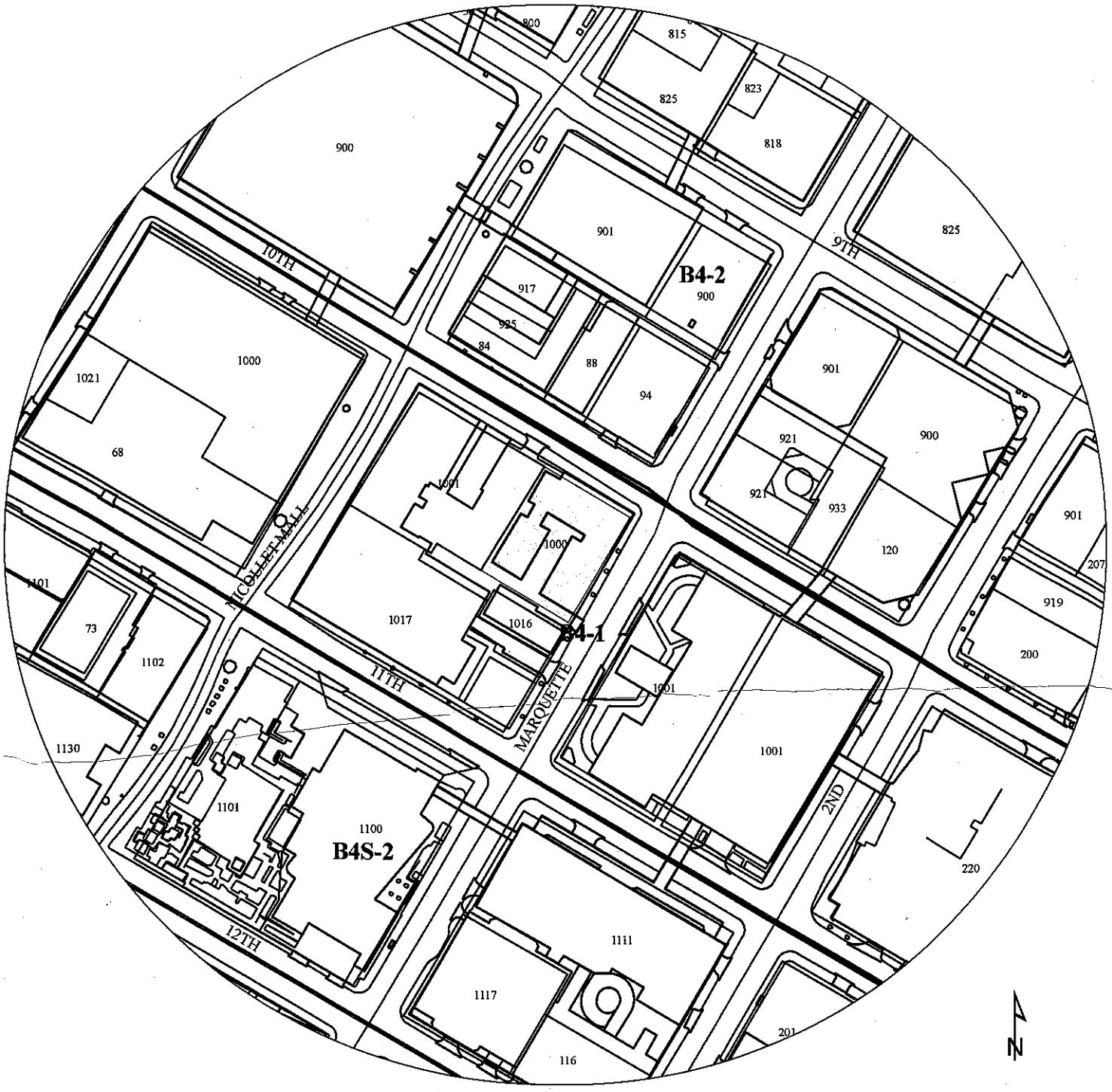
A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

B. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

Handicraft Guild Building — **7th**

NAME OF APPLICANT — WARD

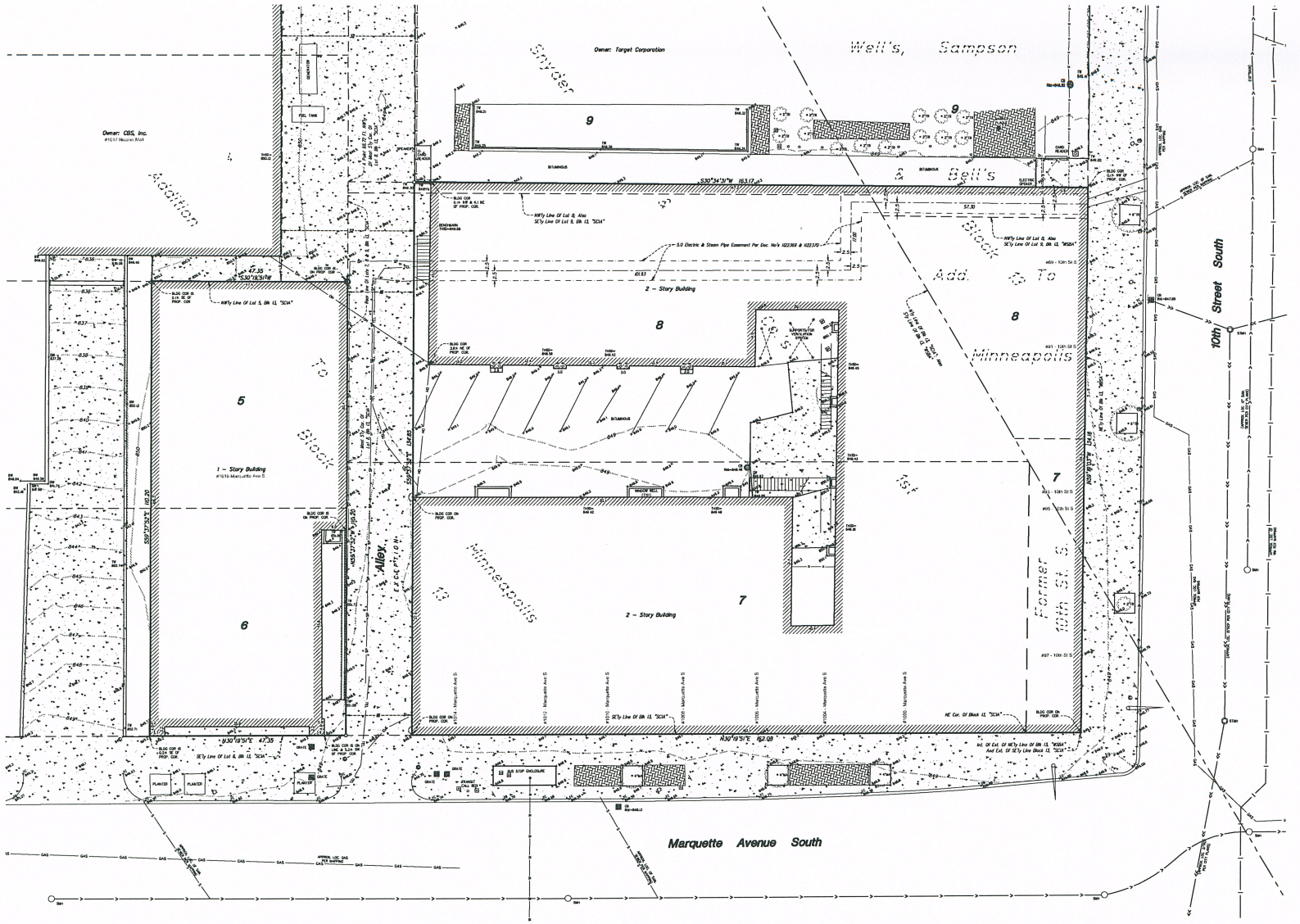


PROPERTY ADDRESS

89-91 Tenth Street South

FILE NUMBER

BZH-28630



DENOTES "PK NAIL" SET

DENOTES "LLM" JUDICIAL LANDMARK FOUND PURSUANT TO TORRENS CASE NO. 14153

"WSBA" DENOTES PLAT OF "WELLS, SAMPSON & BELL'S ADDITION TO MINNEAPOLIS"

"SC1A" DENOTES PLAT OF "SNYDER & CO.'S 1ST ADDITION TO MINNEAPOLIS"

BENCHMARK:
MOST SOUTHERLY AND WESTERLY THRESHOLD OF 2 STORY BUILDING, AS SHOWN HEREON.
ELEVATION=949.68 FEET
(CITY OF MINNEAPOLIS DATUM)

SURVEY REPORT

The property depicted on this survey and the easements of record shown hereon are the same as the property and the easements described in the Commitment for Title Insurance issued by Title Source, Inc., Order No. 5901136535, dated April 4, 2014.

1) The following remarks reference items in Schedule B-II - Exceptions of the herein referenced Title Commitment:

a) Item no.'s 1 through 6, 9 and 10 are not survey related items.

b) Item no. 7 - Document no. 1122369 is an easement for electrical control purposes and is shown hereon through the northwesterly portion of the building.

c) Item no. 8 - Document no. 1122370 is an easement for steam line purposes and is shown hereon through the northwesterly portion of the building.

d) Item no. 11 - The plat of "Snyder & Co.'s 1st Addition to Minneapolis" and the plat of Wells, Sampson & Bell's Addition to Minneapolis did not dedicate any easements over the subject property.

CERTIFICATION

To Tenth and Nicollet, LLC, a limited liability company; Stony Lake Marquette, LLC, a Minnesota limited liability company and Title Source, Inc.:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2011 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS in 2011, and includes items 1, 2, 4, 5, 6a, 7a, 8, 9, 11a, 11b, 13, 16 and 20 of Table A thereof. The field work was completed on April 22, 2014.

Date of Plat or Map: May 5, 2014

Richard L. Licht, PLS — Minnesota License No. 26724
richt@loucksassociates.com

RICHARD L. LICHT — LICENSED LAND SURVEYOR 26724 — STATE OF MINNESOTA

DESCRIPTION OF PROPERTY SURVEYED

(Per Schedule A of the herein referenced Title Commitment)

Parcel 1:
A tract of land which includes Lots 7 and 8 and a part of Lot 9, Block 13, "Snyder & Co.'s 1st Addition to Minneapolis" and Lots 7 and 8 and a part of Lot 9, Block 13, Wells, Sampson & Bell's Addition to Minneapolis, and a strip of land which was formerly a part of 10th Street South, which tract of land is particularly described as: Commencing at the intersection of an extension of the Northeasterly line of Block 13 of Wells, Sampson & Bell's Addition to Minneapolis and an extension of the Southeasterly line of Block 13 of "Snyder & Co.'s 1st Addition to Minneapolis"; thence Northwesterly along the Northeasterly line of Block 13 of Wells, Sampson & Bell's Addition to Minneapolis and an extension thereof a distance of 134.16 feet; thence Southwesterly to a point in the rear line of said Lot 9, Block 13, Snyder & Co.'s 1st Addition which is 68.72 feet Northwesterly along the rear lines of Lots 8 and 9 of said Block of said last named Addition from the most Southerly corner of said Lot 8; thence Southeasterly along the rear lines of said Lots 9, 8 and 7, Block 13, said last named Addition to its point of intersection with the Southeasterly line of Block 13 of said last named Addition; thence Northeasterly along the said Southeasterly line and the extension thereof to the point of beginning, except the public alley as now laid out over the rear 16 feet of Lots 7, 8 and 9, Block 13 of "Snyder & Co.'s 1st Addition to Minneapolis".

Parcel 2:
The Northeasterly 47.35 feet of Lots 5 and 6, Block 13, "Snyder & Co.'s 1st Addition To Minneapolis" as measured along the Northwesterly and Southeasterly lines of said Lots 5 and 6.

The Northwesterly boundary of said Lot 5 and the Northeasterly boundaries of said Lots 5 and 6 are marked by Judicial Landmarks set pursuant to Torrens Case No. 14153;

ALTA/ACSM OPTIONAL TABLE A NOTES

(The following items refer to Table A optional survey responsibilities and specifications)

4) The Gross land area of Parcel 1 is 21,874 +/- square feet or 0.50 +/- acres.
The Gross land area of Parcel 2 is 5,218 +/- square feet or 0.12 +/- acres.

6) The current zoning classification, per the city of Minneapolis Zoning Districts Map, is (B4-1) Downtown Business District

7a) Exterior dimensions of the buildings are shown at ground level.

9) There are 9 regular parking stalls on this site.

11b) We have shown buried structures and utilities on and/or serving the site by observed evidence and per Gopher State One-Call Ticket No.'s 141113352, 141113355, 141113378, 141113487. The following utilities and municipalities were notified:

AMERIPRISE FINANCIAL	(320) 963-2400	AT&T LOCAL SVCS/TRANSMISSI-TCG	(903) 753-3145
AT&T TRANSMISSION	(903) 753-3145	CENTER POINT ENERGY	(612) 342-5200
CITY OF MINNEAPOLIS	(612) 673-5600	COMCAST	(612) 522-8141
MCI	(800) 289-3427	MINNEAPOLIS ENERGY CTR	(612) 349-6067
SPRINT/LONG DISTANCE	(800) 521-0579	STERLING TECHNOLOGIES	(320) 963-2400
TW TELECOM	(800) 778-9140	WINDSTREAM COMMUNICATIONS	(763) 682-3514
XCEL ENERGY	(612) 630-4396	XO COMMUNICATIONS INC	(320) 241-4029
ZAYO BANDWIDTH	(888) 267-1903	CENTURYLINK	(800) 283-4237

i) Utility operators do not consistently respond to locate requests through the Gopher State One Call service for boundary purposes such as this. Those utility operators that do respond often will not locate services from their main line to the customer's structure or facility - they consider those segments private installations that are outside their jurisdiction. If a private service to an adjoiner's site crosses this site or a service to this site crosses an adjoiner, it may not be located since most operators will not mark such "private" services.

ii) Snow and ice conditions during winter months may obscure otherwise visible evidence of a buried structure or utility.

iii) Maps provided by operators, either along with a field location or in lieu of such a location, are very often inaccurate or inconclusive. EXTREME CAUTION MUST BE EXERCISED BEFORE AN EXCAVATION TAKES PLACE ON OR NEAR THIS SITE. BEFORE DIGGING, YOU ARE REQUIRED BY LAW TO NOTIFY GOPHER STATE ONE CALL AT LEAST 48 HOURS IN ADVANCE AT 651/454-0002.

13) The names of the adjoining owners of the platted lands, as shown hereon, are based on information obtained from the Hennepin County Website on April 30, 2014.

16) I am not aware of any recent observable evidence of earth moving work.

20 There were no offsite easements or servitudes benefiting the surveyed property, disclosed in the Record Documents provided to the surveyor, that could be plotted on this survey.

Project Name:

Handicraft City Apartments

Minneapolis, Minnesota

Owner/Developer Name:

Village Green
188 West Randolph
Suite 20
Chicago, IL 60601

Professional Services:

LOUCKS ASSOCIATES
Planning • Civil Engineering • Land Surveying
Landscape Architecture • Environmental
7700 Bonhomme Lane - Suite 300
Maple Grove, MN 55311
Telephone: (763) 424-5505
www.loucksassociates.com

CADD Qualification:

Revisions:

DRAWING ISSUED

Professional Signature:

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly licensed Land Surveyor under the laws of the State of Minnesota.

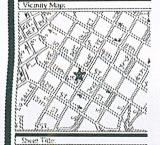
Richard L. Licht — Reg. No. 26724 — 4/22/14

On Site Contact:

N/A — SEA

RLL — Minnesota License No.

Vicinity Map:



Sheet Title:

ALTA/ACSM Land Title Survey

Project No.:

13-55

Sheet No.:

Sheet 1 of 1

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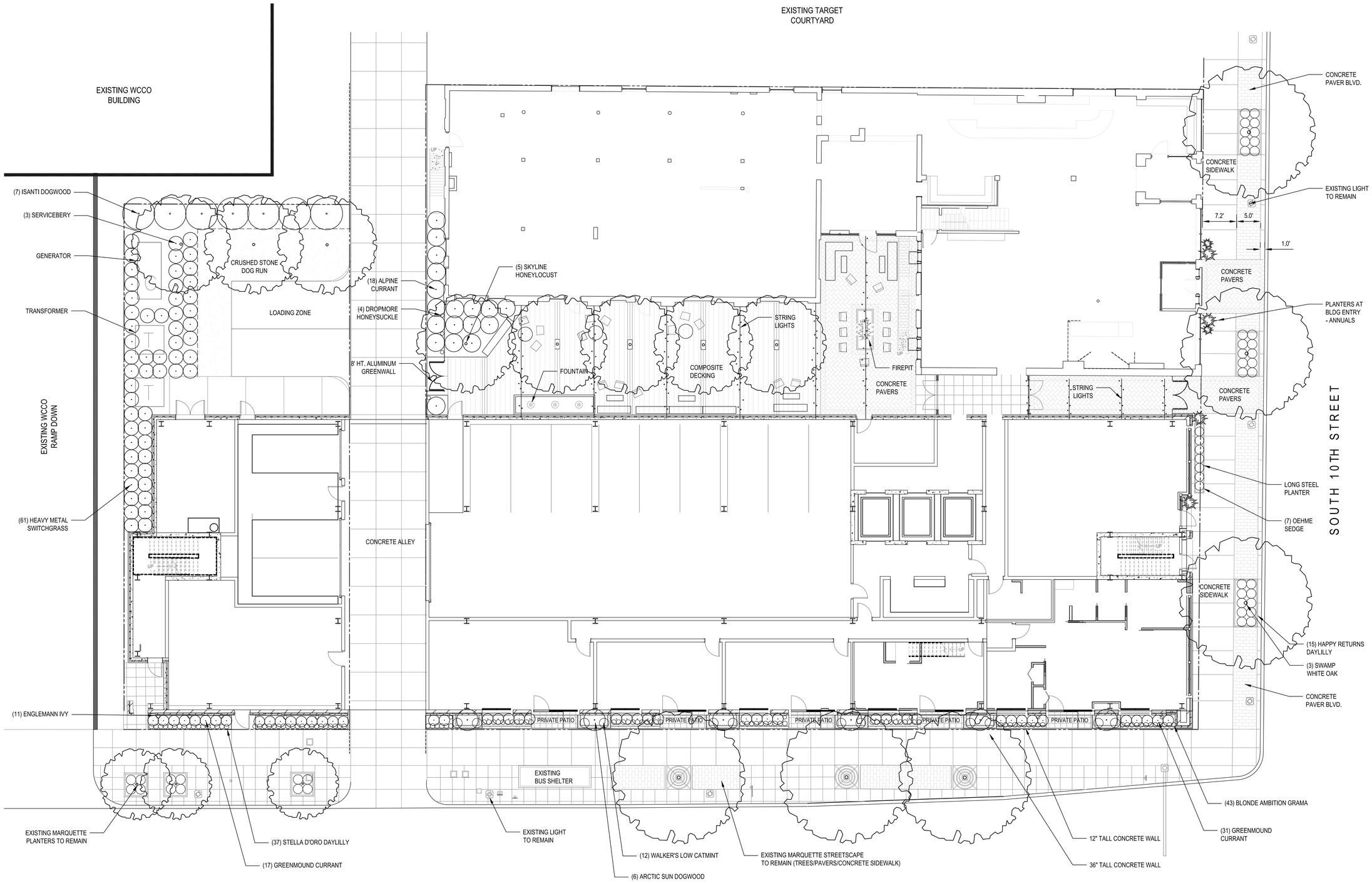

PROJECT SUMMARY:

LOT AREA: 27,092 SF
HANDICRAFT GUILD BUILDING AREA: 18,751 SF
NEW APARTMENT BUILDING AREA (INCLUDING PARKING): 239,445 SF
TOTAL BUILDING AREA (NOT INCLUDING PARKING): 253,746SF
TOTAL BUILDING FOOTPRINT: (13,075 + 7,977) = 21,052 SF
COURTYARD LANDSCAPE AREA: 455 SF
TOTAL LANDSCAPE AREA: 2,420 SF
PERVIOUS AREA: 4,020 SF

NORTH SCALE 1"=8'-0" (0, 4', 8', 16')

LANDSCAPE PLAN

TOTAL	SYM	QTY.	COMMON NAME	SCIENTIFIC NAME	SIZE	CONT.	COMMENTS
	DECIDUOUS TREES						
		3	SWAMP WHITE OAK	Quercus bicolor	3.5" CAL.	B&B	SINGLE STRAIGHT LEADER
		5	SKYLINE HONEYLOCUST	Gleditsian triacanthos var. inermis 'Skycole'	3.5" CAL.	B&B	SINGLE STRAIGHT LEADER
		6	AUTUMN BRILLIANCE SERVICEBERRY	Amelanchier x grandiflora	12' HT.	B&B	CLUMP
	DECIDUOUS SHRUBS						
		10	ALPINE CURRANT	Ribes alpinum	24" HGT.	#5 CONT.	
		6	DOGWOOD, ARCTIC SUN	Cornus sanguinea 'Cato'	24" HGT.	#5 CONT.	
		48	GREENMOUND CURRANT	Ribes alpinum 'Greenmound'	18" HGT.	#2 CONT.	
		7	ISANTI DOGWOOD	Cornus sericea 'Isanti'	24" HGT.	#5 CONT.	
	PERENNIALS AND GRASSES						
		15	HAPPY RETURNS DAYLILLY	Hemerocallis 'Happy Returns'		#1 CONT.	
		37	STELLA D'ORO DAYLILLY	Hemerocallis 'Stella D'Oro'		#1 CONT.	
		7	OEHME SEDGE	Carex muskingumensis 'Oehme'		#1 CONT.	
		43	GRASS, BLONDE AMBITION BLUE GRAMA	Bouteloua gracilis 'Blonde Ambition'		#1 CONT.	
		12	WALKER'S LOW CATMINT	Nepeta faasenii 'Walker's Low'		#1 CONT.	
		61	HEAVY METAL SWITCHGRASS	Panicum virgatum 'Heavy Metal'		#1 CONT.	
	VINES						
		4	DROPMORE SCARLET HONEYSUCKLE	Lonicera x brownii 'Dropmore Scarlet'		#3 CONT.	
		11	ENGELMANN IVY	Parthenocissus quinquefolia 'Engelmanni'		#3 CONT.	

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Boarman Kroos Vogel Group Inc.

222 North Second Street
Minneapolis MN 55401
Telephone: 612-339-3752
Facsimile: 612-339-6212
www.bkvgroup.com

CONSULTANTS

DF/ DAMON FARBER LANDSCAPE ARCHITECTS
401 2nd Avenue North, Suite 410
Minneapolis, MN 55401
p 612.332.7522

ISSUANCE

HPC UPDATE 04-22-15

PROJECT TITLE

10th & Marquette Development
10TH & MARQUETTE
MINNEAPOLIS, MN

KEY PLAN NORTH ARROW

NOT FOR CONSTRUCTION

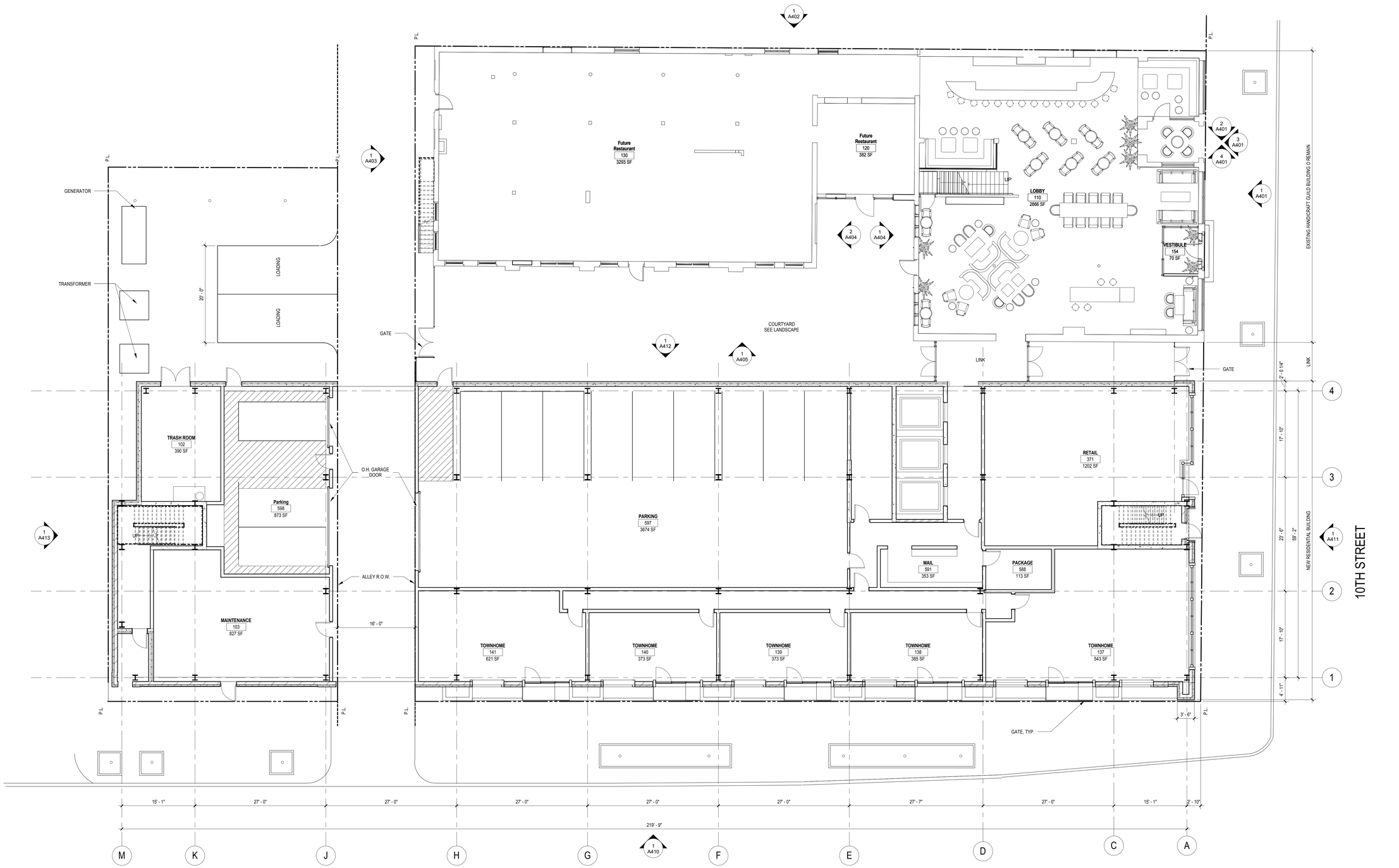
DATE	04-20-15
DRAWN BY	
CHECKED BY	JS
COMMISSION NO.	1872.01

SHEET TITLE

LANDSCAPE PLAN

SHEET NUMBER

L100



1 FIRST FLOOR PLAN
COW-A101 1/8" = 1'-0"

0 5' 15' 30'

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PROJECT TITLE

HANDICRAFT GUILD BUILDING - HPC SUBMITTAL

KEY PLAN

NOT FOR CONSTRUCTION

CERTIFICATION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Architect under the laws of the State of Minnesota

License Number Date

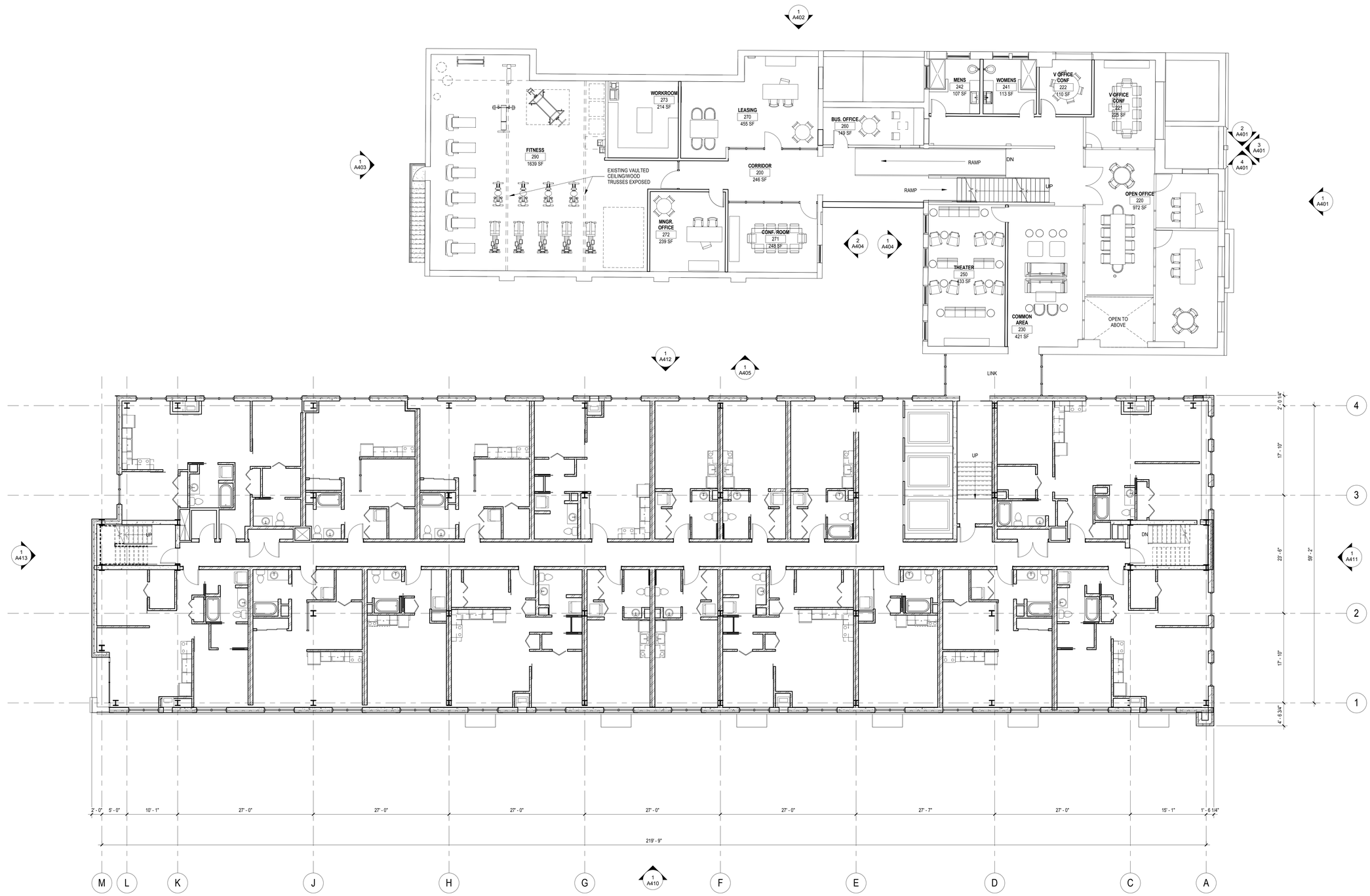
DATE	04/22/2015
DRAWN BY	MFK
CHECKED BY	MFK
COMMISSION NUMBER	1872.01

SHEET TITLE

1ST FLOOR PLAN

SHEET NUMBER

A101



1 COW-A102 2ND FLOOR PLAN 1/8" = 1'-0"

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PROJECT TITLE

HANDICRAFT GUILD BUILDING - HPC SUBMITTAL

KEY PLAN

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License Number Date

DATE	04/22/2015
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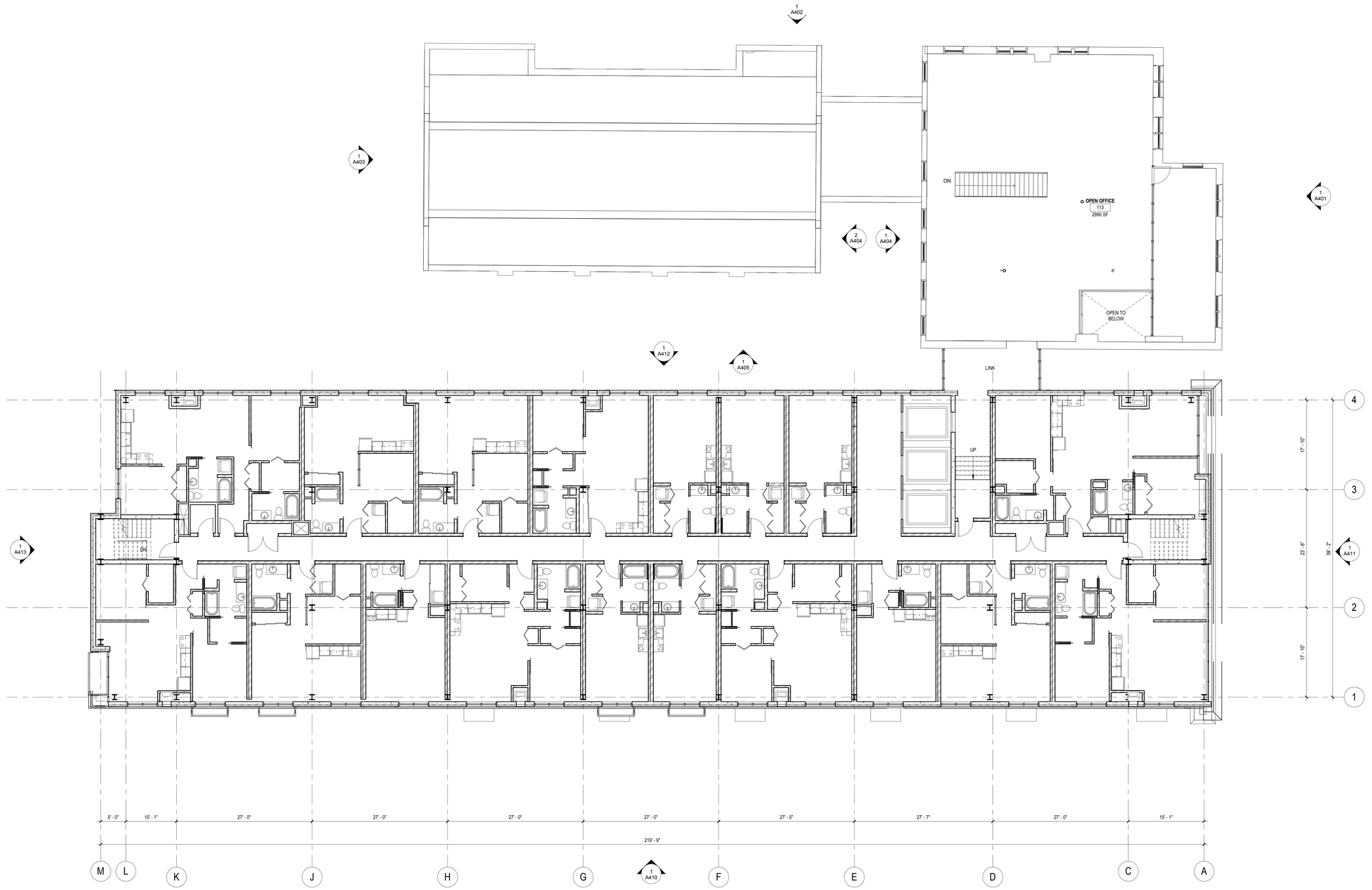
COMMISSION NUMBER	1872.01

SHEET TITLE

2ND FLOOR PLAN

SHEET NUMBER

A102



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1 COW-A103 3RD FLOOR PLAN 1/8" = 1'-0"

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PROJECT TITLE

HANDICRAFT GUILD BUILDING - HPC SUBMITTAL

KEY PLAN

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- -
License Number Date

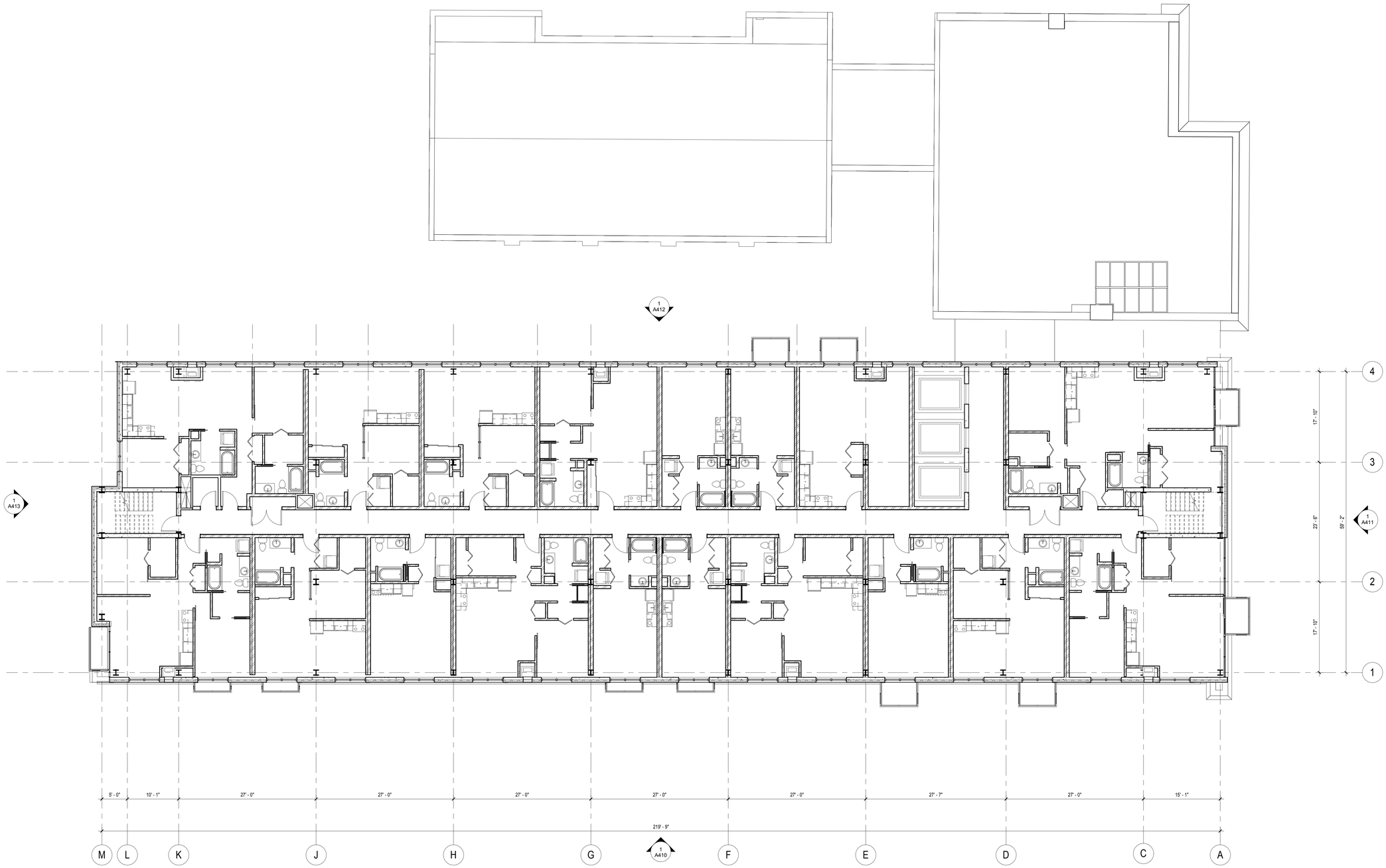
DATE	04/22/2015
DRAWN BY	MFK
CHECKED BY	MFK
COMMISSION NUMBER	1872.01

SHEET TITLE

3RD FLOOR PLAN

SHEET NUMBER

A103



1 COW-A104 4TH - 17TH FLOOR PLAN 1/8" = 1'-0"

0 5' 15' 30'

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PROJECT TITLE

HANDICRAFT GUILD BUILDING - HPC SUBMITTAL

KEY PLAN

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CERTIFICATION

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License Number Date

DATE	04/22/2015
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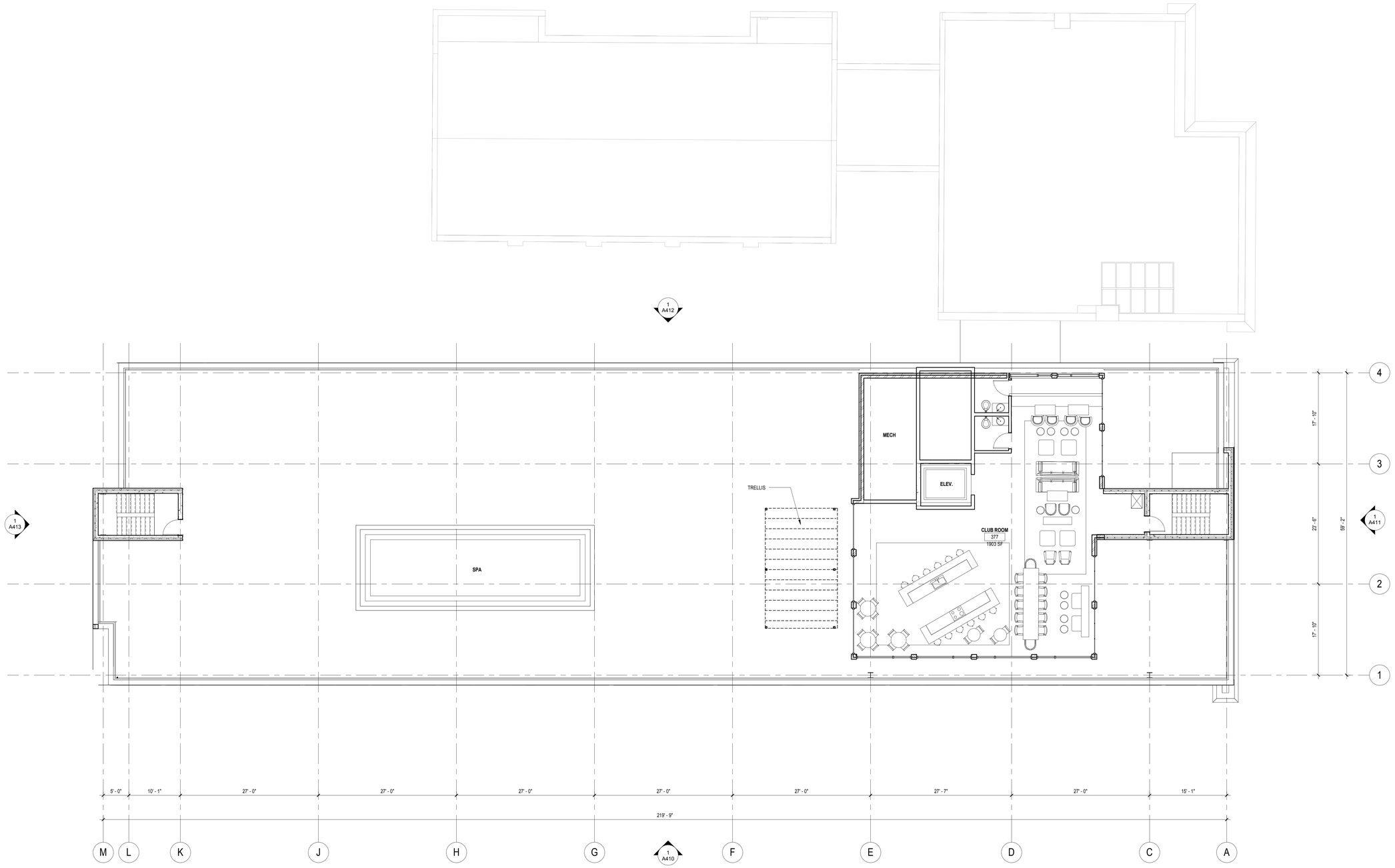
CHECKED BY	MFK
COMMISSION NUMBER	1872.01

SHEET TITLE

4TH - 17TH TYPICAL FLOOR PLANS

SHEET NUMBER

A104



1 ROOF PLAN
COW-A105 1/8" = 1'-0"

0 5' 15' 30'

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PROJECT TITLE

HANDICRAFT GUILD BUILDING - HPC SUBMITTAL

KEY PLAN

NOT FOR CONSTRUCTION

CERTIFICATION

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License Number Date

DATE	04/22/2015
DRAWN BY	MFK
CHECKED BY	MFK
COMMISSION NUMBER	1872.01

SHEET TITLE

MAIN ROOF PLAN

SHEET NUMBER

A105

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1 A401 NORTH ELEVATION
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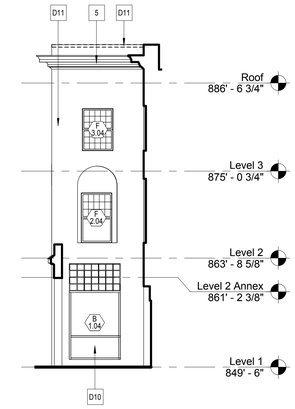
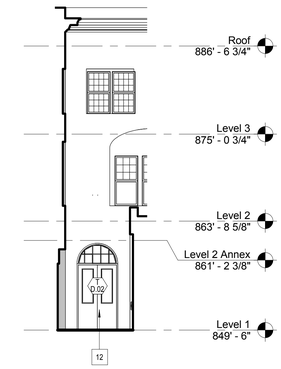


2 A401 East Entry Elevation
1/8" = 1'-0"



3 A401 North Entry Elevation
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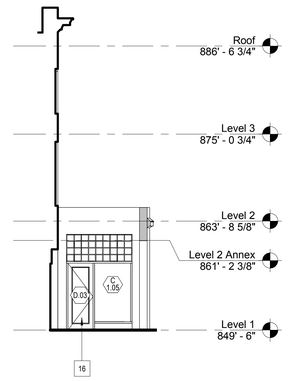


4 A401 West Entry Elevation
1/8" = 1'-0"

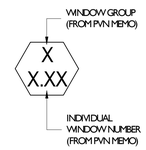
EXTERIOR ELEVATION DEMOLITION NOTES

1. SALVAGE ALL ORIGINAL EXTERIOR MASONRY UNITS LARGER THAN 1/2 UNIT FOR USE AT REPLACEMNT CONDITIONS.
2. REMOVE EXISTING MORTAR JOINTS WHICH APPEAR TO BE DIFFERENT FROM ORIGINAL (PREVIOUSLY PERFORMED TUCK POINTING AND MASONRY PATCHING WHICH DOES NOT MATCH COLOR, TEXTURE, AND/OR COMPOSITION OR BOND PATTERN). REMOVE AND REPOINT.
3. PROTECT ADJACENT HISTORICAL BRICK FROM DAMAGE AT LINTEL AND EXISTING MISMATCHED MASONRY CONDITIONS.
4. VERIFY NEW OPENING SIZES WITH NEW DOOR AND WINDOW TYPES AND WITH ACTUAL FRAME DIMENSIONS OF DOORS AND WINDOWS APPROVED IN THE SUBMITTAL PROCESS.
5. REFER TO STRUCTURAL NOTES FROM ATTACHED MEMO FOR ADDITIONAL INFORMATION.

WINDOW NOTES AND KEY

1. REFER TO WINDOW SURVEY BY PRESERVATION DESIGN WORKS (PVN) FOR INDIVIDUAL EVALUATIONS AND RECOMMENDATIONS OF ALL EXISTING WINDOWS AND DOORS.
2. ADD NEW STORM WINDOW INSERTS ON INTERIOR OF ALL WINDOWS.
3. REMOVE ALL EXTERIOR STORM WINDOWS
4. REMOVE ALL AIR CONDITIONING UNITS AND EXHAUST ENCLOSURES AT EXISTING WINDOWS

TYPICAL WINDOW KEYNOTE



EXTERIOR ELEVATION DEMOLITION KEYNOTES

- D1 REMOVE NON-HISTORICAL INFILL MATERIAL FROM ORIGINAL OPENING.
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- D3 REMOVE EXISTING MORTAR JOINTS NOT MATCHING ORIGINAL AND ALL FAILING JOINTS, REPOINT AS NECESSARY
- D4 SAW CUT NEW MASONRY OPENING IN EXISTING MASONRY WALL. INSTALL NEW STEEL LINTEL WITHIN EXISTING MORTAR JOINTS.
- D5 REMOVE EXISTING ROOF MEMBRANE INCLUDING FLASHINGS.
- D6 DISCONNECT AND REMOVE EXISTING MECHANICAL EQUIPMENT INCLUDING ALL METAL SUPPORTS.
- D7 RESTORE EXISTING SKYLIGHT. REPLACE FASCIA AND FLASHING.
- D8 REPAIR CRACK IN BRICK AND/OR MORTAR JOINTS. REPLACE BRICK AND REMOVE AND REPOINT JOINTS AS NEEDED.
- D9 PILASTER BASES DETERIORATED BY WATER FROM DOWNSPOUTS TO BE REPAIRED. VERIFY STORM DRAIN IS FUNCTIONING CORRECTLY, CORRECT IF NECESSARY.
- D10 REPAIR BRICK CORNICE AS NEEDED
- D11 REMOVE AND REPLACE SHEET METAL COPING AT PARAPET
- D12 REMOVE THE LOWER GLAZED BRICK BULKHEAD. REPLACE WITH NEW MASONRY TO COMPLEMENT EXISTING MASONRY.
- D13 LIMESTONE PEDIMENT AT FRONT ENTRY CRACKED AT 1/3 LENGTH THROUGH BOTTOM AND FRONT PIECES. REMOVE, REPAIR AND RE-INSTALL. REFER TO STRUCTURAL. CLEAN AND RESTORE ORIGINAL SIGNAGE "91 HANDICRAFT BUILDING" TO ORIGINAL
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- D20 REMOVE EXISTING AWNING, PATCH ALL HOLES
- D21 REMOVE EXISTING INFILL, REPLACE WITH MASONRY TO MATCH ORIGINAL
- D22 REMOVE EXISTING METAL STAIR

NEW WORK KEYNOTES

- 1 THREE STORY LINK FROM EXISTING HANDICRAFT BUILDING TO RESIDENTIAL TOWER (NEW CONSTRUCTION)
- 3 NOT USED
- 4 REPLACE EXTERIOR METAL STAIR TO COMPLY WITH CURRENT BUILDING CODE AND EXITING REQUIREMENTS.
- 5 RESTORE METAL CORNICE AND PAINT AS DIRECTED BY ARCHITECT
- 6 INSTALL METAL STANDING SEAM ROOF, FASHINGS AND FASCIA
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CONSULTANTS

PROJECT TITLE

HANDICRAFT GUILD BUILDING - HPC SUBMISSION

KEY PLAN

ISSUE #	DATE	DESCRIPTION

NOT FOR CONSTRUCTION

CERTIFICATION

DATE	4/22/2015
DRAWN BY	MFK
CHECKED BY	MFK
COMMISSION NUMBER	1872.2

SHEET TITLE

EXTERIOR ELEVATIONS

SHEET NUMBER

A401

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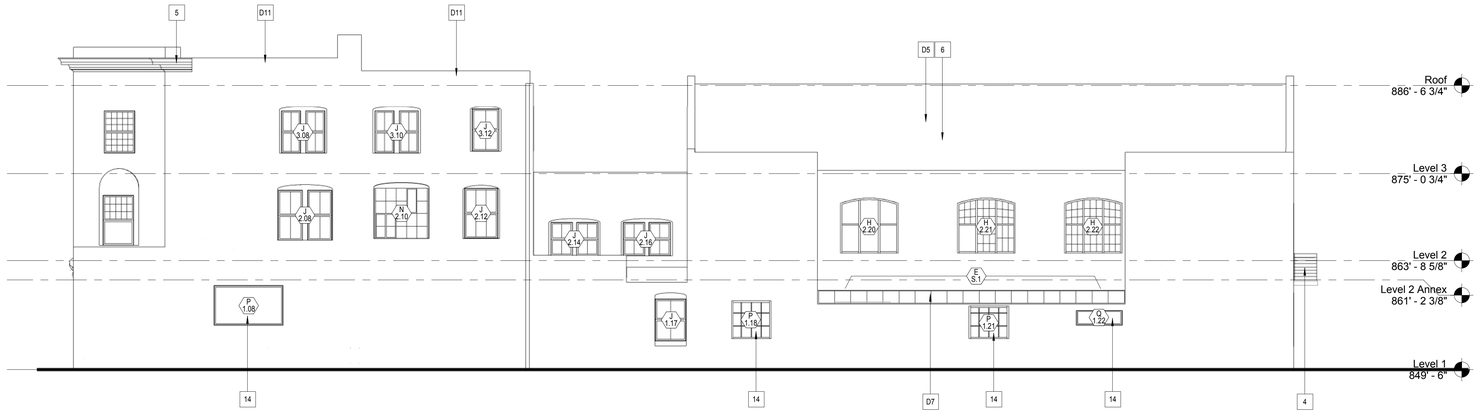
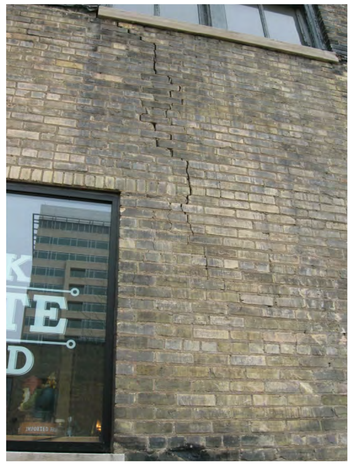
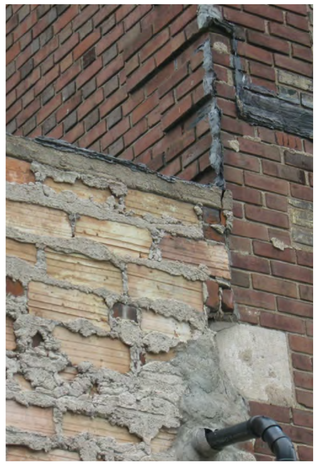


1 A402 WEST ELEVATION
1/8" = 1'-0"





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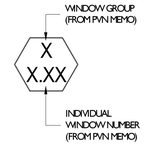

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CONSULTANTS

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KEY PLAN

NOT FOR CONSTRUCTION

CERTIFICATION

DATE	4/22/2015
DRAWN BY	MFK
CHECKED BY	MFK
COMMISSION NUMBER	1872.2

SHEET TITLE

EXTERIOR ELEVATIONS

SHEET NUMBER

A402

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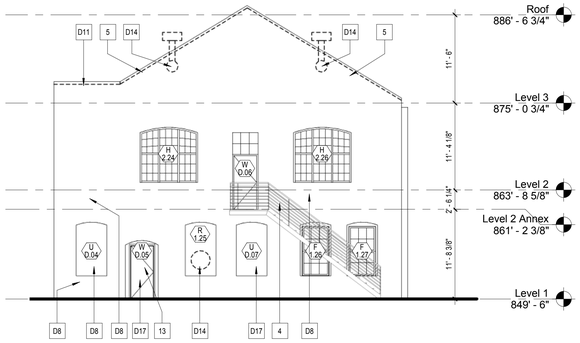
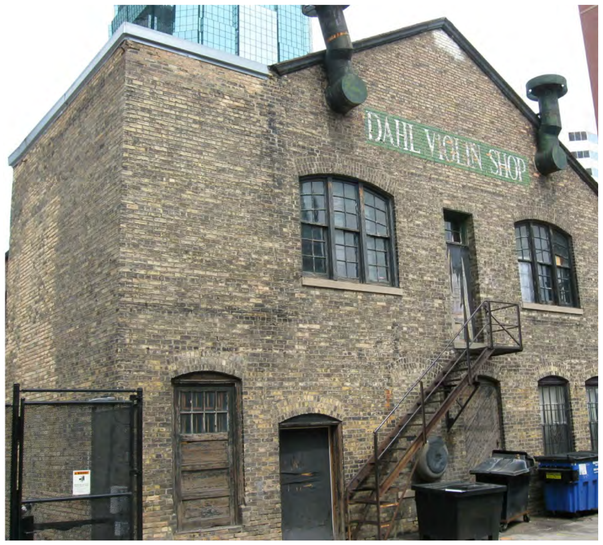
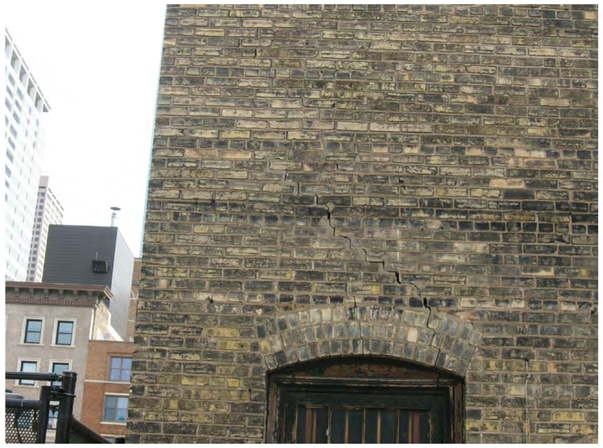


1 A403 SOUTH ELEVATION 1/8" = 1'-0"





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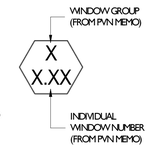

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KEY PLAN

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DATE	4/22/2015
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SHEET TITLE

EXTERIOR ELEVATIONS

SHEET NUMBER

A403

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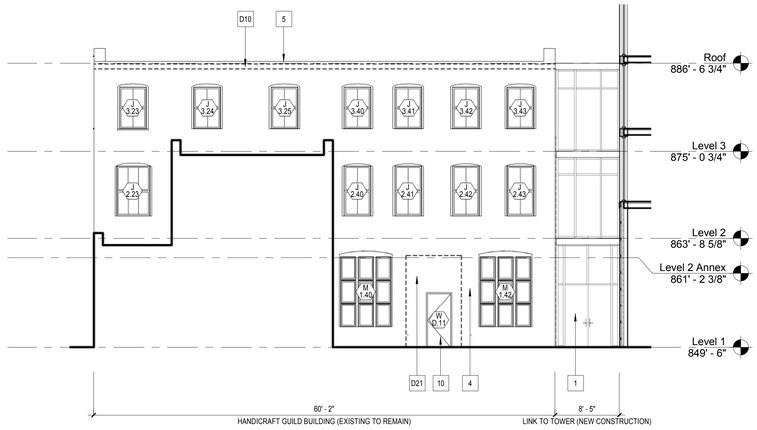
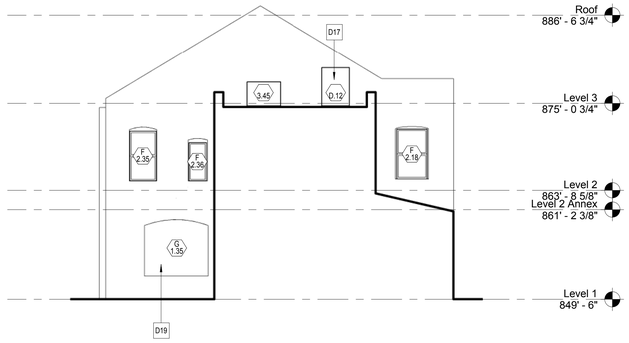
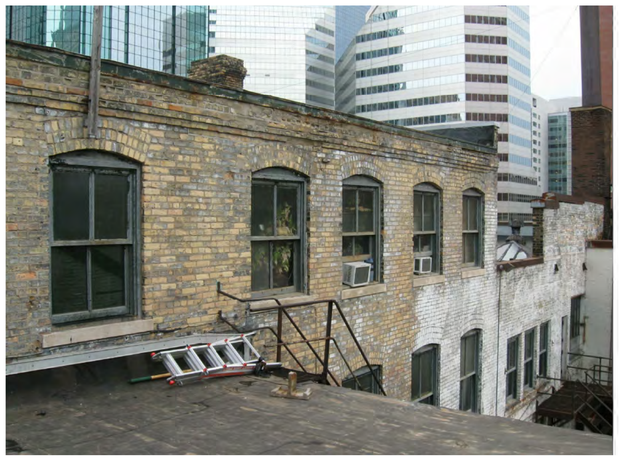


1 A404 South Elevation at Annex Courtyard
1/8" = 1'-0"



2 A404 North Elevation at Annex Courtyard
1/8" = 1'-0"



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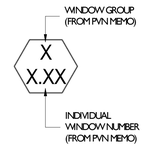

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PROJECT TITTLE
HANDICRAFT GUILD BUILDING - HPC SUBMISSION

KEY PLAN

NOT FOR CONSTRUCTION

CERTIFICATION

DATE	4/22/2015
DRAWN BY	MFK
CHECKED BY	MFK
COMMISSION NUMBER	1872.2

SHEET TITLE
EXTERIOR ELEVATIONS

SHEET NUMBER
A404

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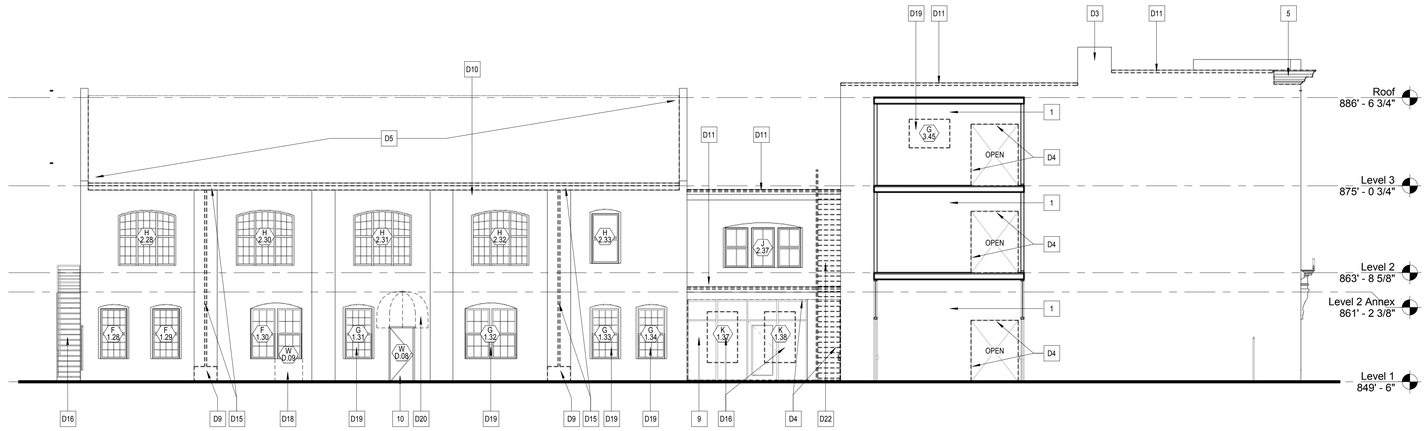
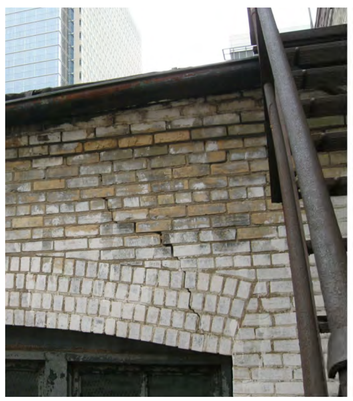
4/21/2015 2:05:02 PM



1 A405 EAST ELEVATION AT GUILD BUILDING
1/8" = 1'-0"



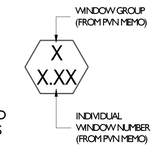
EXTERIOR ELEVATION DEMOLITION NOTES

1. SALVAGE ALL ORIGINAL EXTERIOR MASONRY UNITS LARGER THAN 1/2 UNIT FOR USE AT REPLACEMNT CONDITIONS.
2. REMOVE EXISTING MORTAR JOINTS WHICH APPEAR TO BE DIFFERENT FROM ORIGINAL (PREVIOUSLY PERFORMED TUCK POINTING AND MASONRY PATCHING WHICH DOES NOT MATCH COLOR, TEXTURE, AND/OR COMPOSITION OR BOND PATTERN). REMOVE AND REPOINT.
3. PROTECT ADJACENT HISTORICAL BRICK FROM DAMAGE AT LINTEL AND EXISTING MISMATCHED MASONRY CONDITIONS.
4. VERIFY NEW OPENING SIZES WITH NEW DOOR AND WINDOW TYPES AND WITH ACTUAL FRAME DIMENSIONS OF DOORS AND WINDOWS APPROVED IN THE SUBMITTAL PROCESS.
5. REFER TO STRUCTURAL NOTES FROM ATTACHED MEMO FOR ADDITIONAL INFORMATION.

WINDOW NOTES AND KEY

1. REFER TO WINDOW SURVEY BY PRESERVATION DESIGN WORKS (PVN) FOR INDIVIDUAL EVALUATIONS AND RECOMMENDATIONS OF ALL EXISTING WINDOWS AND DOORS.
2. ADD NEW STORM WINDOW INSERTS ON INTERIOR OF ALL WINDOWS.
3. REMOVE ALL EXTERIOR STORM WINDOWS
4. REMOVE ALL AIR CONDITIONING UNITS AND EXHAUST ENCLOSURES AT EXISTING WINDOWS

TYPICAL WINDOW KEYNOTE



EXTERIOR ELEVATION DEMOLITION KEYNOTES

- D1 REMOVE NON-HISTORICAL INFILL MATERIAL FROM ORIGINAL OPENING.
- D2 REMOVE ALL EXISTING NON-HISTORIC PAINT (SIGNAGE, GRAFFITI, OR OTHER) ON EXISTING BRICK USING THE GENTEST MEANS POSSIBLE. ATTEMP PAINT REMOVAL AT 3'X3' ZONE, LOCATION SELECTED BY ARCHITECT. ORIGINAL SURFACE INTEGRITY AND FINISH OF EXISTING BRICK SHALL BE MAINTAINED DURING AND AFTER PAINT REMOVAL. BRICK SHALL NOT BE SAND-BLASTED.
- D3 REMOVE EXISTING MORTAR JOINTS NOT MATCHING ORIGINAL AND ALL FAILING JOINTS, REPOINT AS NECESSARY
- D4 SAW CUT NEW MASONRY OPENING IN EXISTING MASONRY WALL. INSTALL NEW STEEL LINTEL WITHIN EXISTING MORTAR JOINTS.
- D5 REMOVE EXISTING ROOF MEMBRANE INCLUDING FLASHINGS.
- D6 DISCONNECT AND REMOVE EXISTING MECHANICAL EQUIPMENT INCLUDING ALL METAL SUPPORTS.
- D7 RESTORE EXISTING SKYLIGHT. REPLACE FASCIA AND FLASHING.
- D8 REPAIR CRACK IN BRICK AND/OR MORTAR JOINTS. REPLACE BRICK AND REMOVE AND REPOINT JOINTS AS NEEDED.
- D9 PILASTER BASES DETERIORATED BY WATER FROM DOWNSPOUTS TO BE REPAIRED. VERIFY STORM DRAIN IS FUNCTIONING CORRECTLY, CORRECT IF NECESSARY.
- D10 REPAIR BRICK CORNICE AS NEEDED
- D11 REMOVE AND REPLACE SHEET METAL COPING AT PARAPET
- D12 REMOVE THE LOWER GLAZED BRICK BULKHEAD. REPLACE WITH NEW MASONRY TO COMPLEMENT EXISTING MASONRY.
- D13 LIMESTONE PEDIMENT AT FRONT ENTRY CRACKED AT 1/3 LENGTH THROUGH BOTTOM AND FRONT PIECES. REMOVE, REPAIR AND RE-INSTALL. REFER TO STRUCTURAL. CLEAN AND RESTORE ORIGINAL SIGNAGE "91 HANDICRAFT BUILDING" TO ORIGINAL
- D14 REMOVE EXISTING MECHANICAL EXHAUST VENTS, INFILL WITH BRICK
- D15 REMOVE AND REPLACE METAL GUTTERS AND DOWNSPOUTS
- D16 EXISTING WINDOWS TO BE REMOVED FOR NEW OPENING
- D17 EXISTING WINDOW OR DOOR TO BE REMOVED, INFILL WITH MASONRY
- D18 REMOVE EXISTING DOOR AND/OR WINDOW TO CREATE WINDOW PAIR. INFILL MASONRY TO MATCH EXISTING AS NECESSARY.
- D19 REMOVE EXISTING INFILL MATERIAL, PREP OPENING FOR NEW WINDOW
- D20 REMOVE EXISTING AWNING, PATCH ALL HOLES
- D21 REMOVE EXISTING INFILL, REPLACE WITH MASONRY TO MATCH ORIGINAL
- D22 REMOVE EXISTING METAL STAIR

NEW WORK KEYNOTES

- 1 THREE STORY LINK FROM EXISTING HANDICRAFT BUILDING TO RESIDENTIAL TOWER (NEW CONSTRUCTION)
- 3 GLASS CANOPY WITH STEEL SUPPORT STRUCTURE CANTILEVERED FROM BUILDING
- 4 REPLACE EXTERIOR METAL STAIR TO COMPLY WITH CURRENT BUILDING CODE AND EXITING REQUIREMENTS.
- 5 RESTORE METAL CORNICE AND PAINT AS DIRECTED BY ARCHITECT
- 6 INSTALL METAL STANDING SEAM ROOF, FASHINGS AND FASCIA
- 7 INSTALL WROUGHT IRON METAL FENCE AND GATE, PAINTED
- 8 REBUILD AND REPLACE NEW STONE SILLS AS NEEDED
- 9 INSTALL ALUMINUM STOREFRONT WINDOW SYSTEM
- 10 REPLACE WITH NEW DIVIDED LIGHT WOOD DOOR
- 11 REPLACE WITH NEW STEEL DOOR AND FRAME WITH METAL PANEL TRANSOM
- 12 RETAIN DOOR OR WINDOW AND REPAIR IN PLACE
- 13 REPLACE WITH NEW STEEL DOOR AND FRAME
- 14 REFURBISH WINDOW AND/OR FRAME AS NEEDED
- 15 REPLACE WITH NEW STOREFRONT TO MATCH ADJACENT STOREFRONT
- 16 REFURBISH AND FIX SHUT

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CONSULTANTS

PROJECT TITLE

HANDICRAFT GUILD BUILDING - HPC SUBMISSION

KEY PLAN

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CERTIFICATION

DATE	4/22/2015
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COMMISSION NUMBER	1872.2

SHEET TITLE

EXTERIOR ELEVATIONS

SHEET NUMBER

A405

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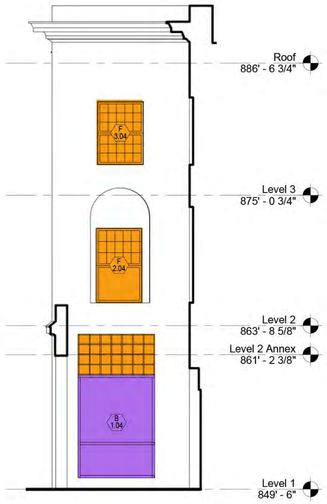
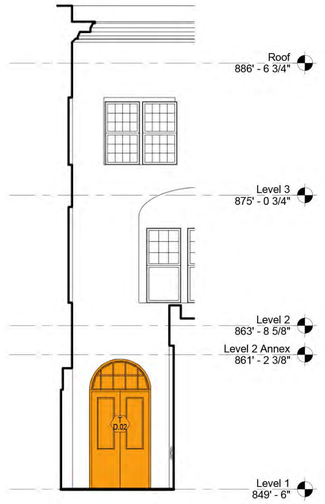
1 A406 North Elevation - Color Coded

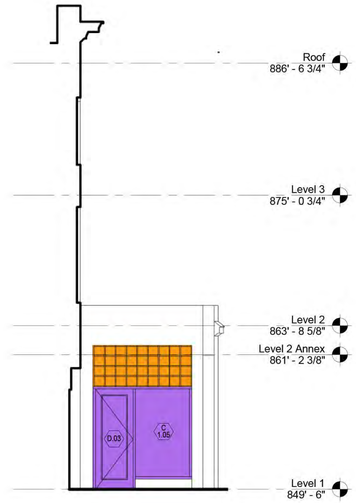
SCALE 0' 4' 8' 16'



2 A406 West Entry Elevation - Color Coded



3 A406 North Entry Elevation - Color Coded



4 A406 East Entry Elevation - Color Coded

5 A406 West Elevation - Color Coded

SCALE 0' 4' 8' 16'

WINDOW AND DOOR TREATMENT COLOR KEY

1. HISTORIC WINDOW/DOOR TO BE REFURBISHED
2. HISTORIC WINDOW/DOOR TO BE REPLACED IN KIND
3. REMOVE INFILL AT OPENING TO ASSESS WINDOW/DOOR CONDITION. REFURBISH OR REPLACE PER INDIVIDUAL ASSESSMENT
4. NON-HISTORIC WINDOW/DOOR TO REMAIN (REPAIRS AS NECESSARY)
5. NON-HISTORIC WINDOW/DOOR TO BE REPLACED
6. NEW WINDOW/DOOR IN NEW OPENING
7. HISTORIC OPENING WITH MASONRY INFILL TO REMAIN
8. REMOVE WOOD INFILL AND INFILL WITH NEW MASONRY TO MATCH EXISTING

WINDOW NOTES AND KEY

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4. REMOVE ALL AIR CONDITIONING UNITS AND EXHAUST ENCLOSURES AT EXISTING WINDOWS

TYPICAL WINDOW KEYNOTE

WINDOW GROUP (FROM PVN MEMO)

X
X.XX

INDIVIDUAL WINDOW NUMBER (FROM PVN MEMO)

BKV GROUP
Architecture
Interior Design
Landscape Architecture
Engineering

Boarman
Kroos
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Group
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CONSULTANTS

PROJECT TITLE

HANDICRAFT GUILD BUILDING - HPC SUBMISSION

KEY PLAN

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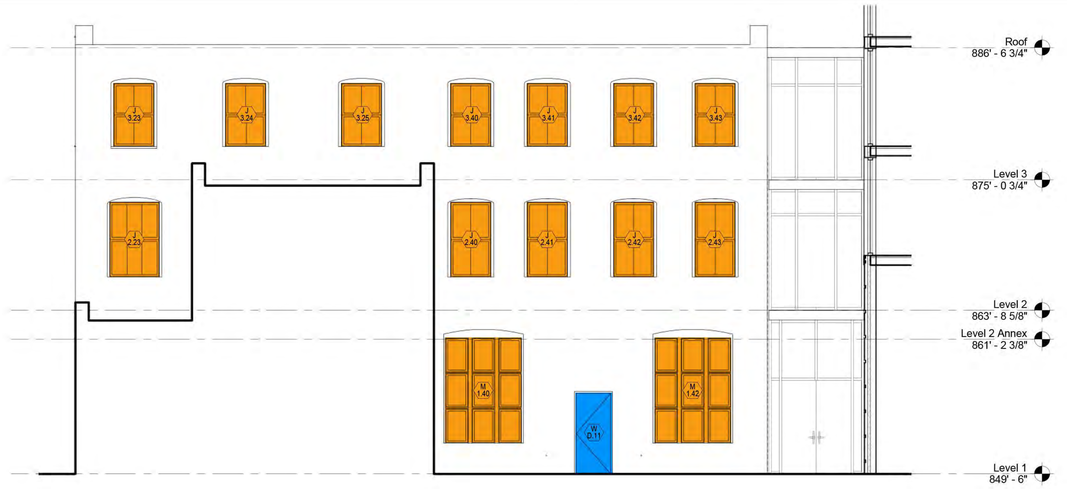
SHEET TITLE

EXTERIOR ELEVATIONS

SHEET NUMBER

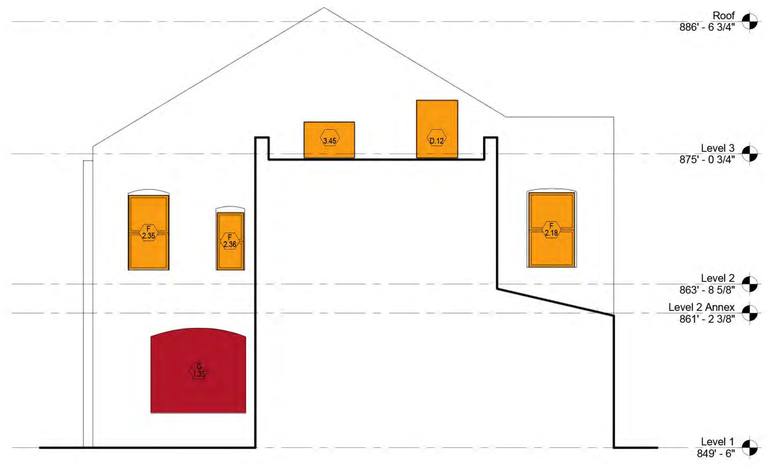
A406

1 A407 SOUTH ELEVATION SCALE 0' 4' 8' 16'



2 A407 South Elevation at Annex Courtyard - Color Coded SCALE 0' 4' 8' 16'

3 A407 EAST ELEVATION AT GUILD BUILDING SCALE 0' 4' 8' 16'



4 A407 North Elevation at Annex Courtyard - Color Coded SCALE 0' 4' 8' 16'

WINDOW AND DOOR TREATMENT COLOR KEY

1. HISTORIC WINDOW/DOOR TO BE REFURBISHED
2. HISTORIC WINDOW/DOOR TO BE REPLACED IN KIND
3. REMOVE INFILL AT OPENING TO ASSESS WINDOW/DOOR CONDITION. REFURBISH OR REPLACE PER INDIVIDUAL ASSESSMENT
4. NON-HISTORIC WINDOW/DOOR TO REMAIN (REPAIRS AS NECESSARY)
5. NON-HISTORIC WINDOW/DOOR TO BE REPLACED
6. NEW WINDOW/DOOR IN NEW OPENING
7. HISTORIC OPENING WITH MASONRY INFILL TO REMAIN
8. REMOVE WOOD INFILL AND INFILL WITH NEW MASONRY TO MATCH EXISTING

WINDOW NOTES AND KEY

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TYPICAL WINDOW KEYNOTE

WINDOW GROUP (FROM PVN MEMO)

X
X.XX

INDIVIDUAL WINDOW NUMBER (FROM PVN MEMO)

BKV GROUP
Architecture
Interior Design
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Engineering

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PROJECT TITLE

HANDICRAFT GUILD BUILDING - HPC SUBMISSION

KEY PLAN

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CERTIFICATION

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SHEET TITLE

EXTERIOR ELEVATIONS

SHEET NUMBER

A407

1 COW-A401 COW - EAST ELEVATION
1/8" = 1'-0"

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PROJECT TITLE
HANDICRAFT GUILD BUILDING - HPC SUBMITTAL

KEY PLAN

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CERTIFICATION

DATE	04/22/2015
DRAWN BY	
CHECKED BY	
COMMISSION NUMBER	1872.01

SHEET TITLE

EAST ELEVATION

SHEET NUMBER

A410

1 COW-A402 COW - NORTH ELEVATION
1/8" = 1'-0"

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DATE	04/22/2015
DRAWN BY	
CHECKED BY	
COMMISSION NUMBER	1872.01

SHEET TITLE

NORTH ELEVATION

SHEET NUMBER

A411

1 COW-A403 COW - WEST ELEVATION 1/8" = 1'-0"

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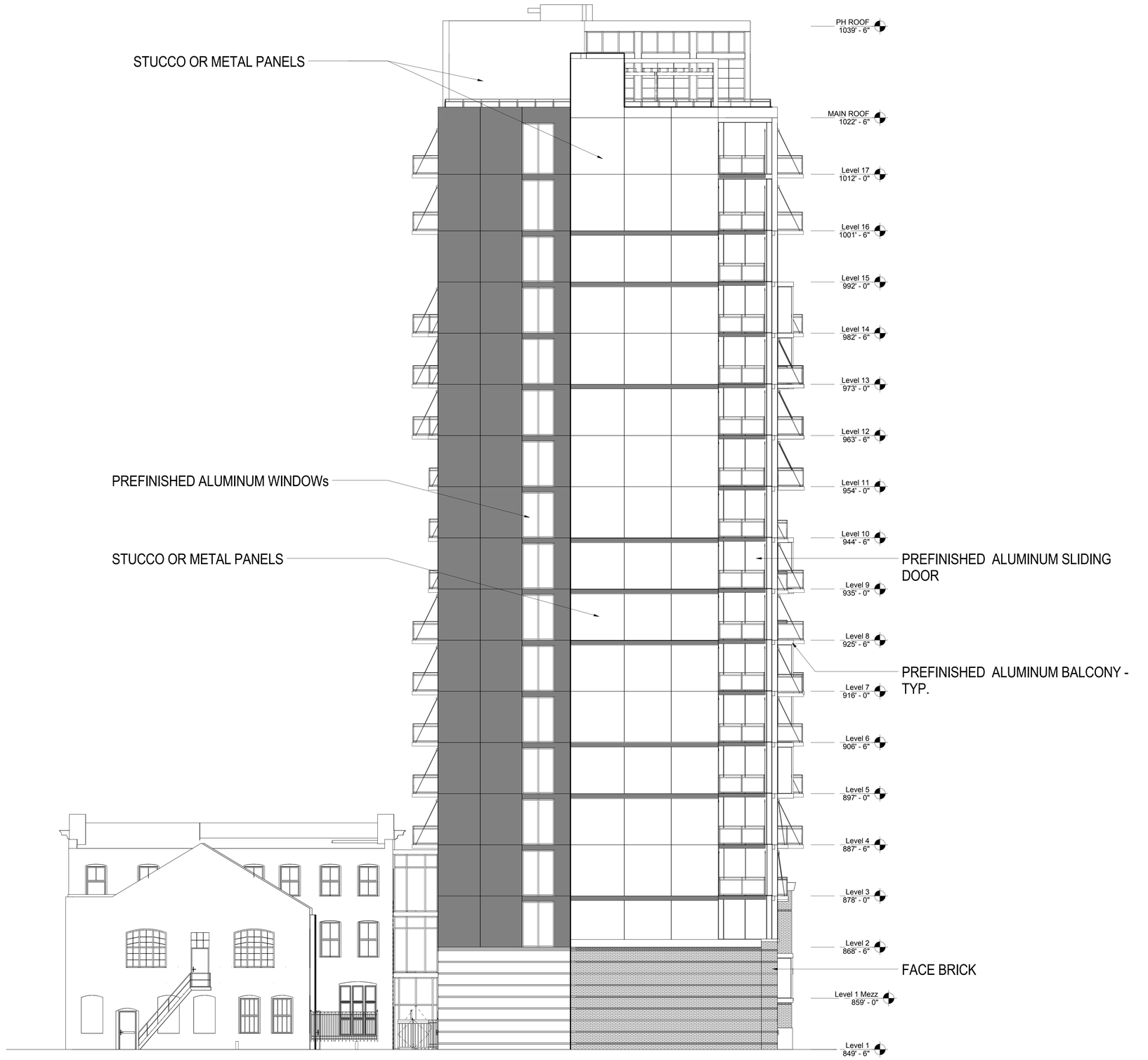
DATE	04/22/2015
DRAWN BY	Author
CHECKED BY	Checker
COMMISSION NUMBER	1872.01

SHEET TITLE

WEST ELEVATION

SHEET NUMBER

A412



1 COW-A404 COW - SOUTH ELEVATION 1/8" = 1'-0"

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CONSULTANTS

PROJECT TITLE

10TH AND MARQUETTE DEVELOPMENT

KEY PLAN

ISSUE #	DATE	DESCRIPTION

NOT FOR CONSTRUCTION

CERTIFICATION

DATE	04/20/2015
DRAWN BY	Author
CHECKED BY	Checker
COMMISSION NUMBER	1872.01

SHEET TITLE

SOUTH ELEVATION

SHEET NUMBER

A413


10th Street context, looking west
S 10th St
S Marquette Av
ONE WAY
Shins Alterations
& dry cleaning
NAILS & HAIR
MetroMobility

North Elevation (10th Street), in perspective

North Elevation (10th Street), in perspective

North Elevation (10th Street)

West Elevation (partial)

West Elevation (partial)

South Elevation


Alley view
ALL UNAUTHORIZED
VEHICLES
TOWED
Cedar Towing Inc.

Gretchen Camp

From: Gretchen Camp
Sent: Thursday, April 02, 2015 12:22 PM
To: Goodman, Lisa R.
Cc: 'Shawn Zimny (Regional CHI)'
Subject: Handicraft Guild Building - renovation
Attachments: DMNA Letter of Support -BKV for 10th and Marquette - 03-23-15_Draft.pdf

Dear Council Member Goodman,
We are taking this opportunity to formally notify you that on April 3rd Village Green will submit applications for HPC approval of the following:

- Certificate of Appropriateness for the renovation of the Handicraft Guild Building
- Historic Variance to allow 2 buildings (Handicraft Guild and new Apartment) on one zoning lot

We greatly appreciate the support letter we received from the DMNA. Please see attached.

We will keep you informed, as the project moves forward and we submit land use applications for Planning Commission review. Should you have any questions please contact our CPED planner, Hilary Dvorak, or any member of the Village Green or BKV Group teams.

Best regards,
Gretchen

Gretchen Camp, AIA, LEED AP | Partner | BKV Group | Ph: 612.373.9122
222 North 2nd Street, Minneapolis, MN 55401 | Chicago, IL | Washington, DC
Architecture, Interior Design, Landscape Architecture, Engineering | www.bkvgroup.com

Gretchen Camp

From: Gretchen Camp
Sent: Thursday, April 02, 2015 11:24 AM
To: 'Christie@hantge.com'
Subject: Handicraft Guild Building renovation

Christie,
We are taking this opportunity to formally notify the DMNA that on April 3rd Village Green will submit applications for HPC approval of the following:

- Certificate of Appropriateness for the renovation of the Handicraft Guild Building
- Historic Variance to allow 2 buildings (Handicraft Guild and new Apartment) on one zoning lot

Again, we want to thank the DMNA Board for their review and support of the project. We greatly appreciate the support letter you sent to Hilary Dvorak. We will keep you informed, as the project moves forward and we submit land use applications for Planning Commission review.

Best regards,
Gretchen

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222 North 2nd Street, Minneapolis, MN 55401 | Chicago, IL | Washington, DC
Architecture, Interior Design, Landscape Architecture, Engineering | www.bkvgroup.com

DOWNTOWN MINNEAPOLIS NEIGHBORHOOD ASSOCIATION

40 S. 7th Street
Suite 212, PMB 172
Minneapolis, MN 55402
Phone: (612) 659-1279
Online: www.thedmna.org

March 24, 2015

Ms. Hilary Dvorak, City Planner
City of Minneapolis - Heritage Preservation Commission
Public Service Center - 250 S. 4th Street, Room 300
Minneapolis, MN 55415

Re: Village Green – 10th Street and Marquette Ave.

Dear Hilary:

I am writing to you on behalf of the Downtown Minneapolis Neighborhood Association (DMNA) Board of Directors regarding Village Green's plans for redeveloping the property located at 10th Street and Marquette Avenue. Shawn Zimny from Village Green and Gretchen Camp and Michael Krych from BKV Group met with the DMNA Board on Monday, March 16, 2015 to review the concept plans for the 18-story residential project.

Zimny and Krych used a PowerPoint presentation to show images of the site plan and exterior design of the building. Krych explained that there are currently three buildings on the property. He stated that Village Green intends to incorporate one of the buildings, the 108-year-old HandiCraft Guild building at 89 S.10th St., into the redevelopment plan. Krych further noted that the exterior design of the base of the new building compliments the HandiCraft Guild Building, while the upper portion is contemporary and practical like the building was when it was first constructed.

After reviewing the site plan and exterior design, Zimny highlighted the residential composition of the project. He stated that the project will contain 293 market rate apartments. The project includes 23% micro units, plus other smaller unit types such as studio, alcove and small 1-bedroom units. In addition, the project provides 2-bedroom/1 bath and 2-bedroom/2 bath units. Zimny indicated the 18th floor will provide an outdoor roof terrace and sky club for the private use of the building's residential tenants.

Camp reviewed the land use applications associated with this project. She stated that Village Green is seeking a Certificate of Appropriateness from the Heritage Preservation Commission for the renovation of the historic HandiCraft Guild Building. In addition, Village Green will be requesting the following from the Planning Commission: variance to increase the maximum floor area ratio from 8 to 9.5; variance to reduce the width of the drive aisle from 22 feet to 0 feet; variance to reduce the south interior side yard setback from 15 feet to one foot for residential windows facing the property line; site plan review; and vacation of air rights over the public alley.

Krych and Zimny concluded the presentation by requesting a letter of support from the DMNA. Krych and Zimny then accepted questions about the project. There was some concern about the size of units and lack of parking spaces. Krych and Zimny stated that this project intends to cater to millennials working downtown that rely on car share companies and public transit. After some discussion, the DMNA Board passed a motion in support of concept plans for the project and associated land use applications.

If you have any questions regarding this letter, please feel free to contact me at christie@hantge.com, or 320-583-4573. You may also contact DMNA Board Chair, Chad DiDonato, at Chad.DiDonato@gmail.com.

Sincerely,

Christie Rock
DMNA Coordinator / Finance Coordinator

Cc. Gretchen Camp, BKV Group
Chad DiDonato, DMNA Board Chair

Dvorak, Hilary A.

From: Grant Simons <grant1simons2@gmail.com>
Sent: Thursday, February 19, 2015 6:21 PM
To: Dvorak, Hilary A.
Subject: Handicraft Guild

Hello Ms. Dvorak,

I'm e-mailing you in regard to the Handicraft Guild proposed 18 story building. First of all I'd like to state that I am opposed to this development. First off, the history of the building; The Handicraft building as you know was designed in 1907 by

William Channing Whitney. Whitney also designed the H. Alden Smith house near MCTC, now known as the Wells Family College Center. Along with that he designed the Charles J. Martin house on Mount Curve Rd near the Walker Art Museum.

Probably one of my personal favorite of his designs is the Minneapolis Club, the old Mens club covered in vines in the summer. Projects on this site have failed before, and I expect this one to fail again due to the protection of this site by the Heritage

preservation.

The problem with this proposed building doesn't only lie in the issue of historical preservation, but also in design and layout. Having what looks like white panels is a bad idea. They can get dirty much easier than concrete, which can be treated, but

concrete wouldn't look good on a building such as this one. Along the lines of layout, this building would eliminate even more street presence retail that we have on Marquette. Not only is it street retail, but it's very good street retail. A great shirt press

store that has some amazing Minneapolis themed shirts, and a women's fashion boutique that opened just around 8 months ago. Instead they've decided to replace the ground floor with private amenities, one restaurant, and town homes. This building

would work much better in the Mill District, and I really wonder why it's not being proposed there.

I'd like to make it very clear that I'm not anti-development downtown. I'm pro historical preservation downtown, mostly because right now there's tons of space in the city to build on a totally empty lot or parking lot. In fact I've praised many projects in

the past such as 4marq and Nic off Fifth to name a couple. I'm actually hoping to study architecture this coming year and work on getting a minor in urban studies. I know what works downtown, and as much as I love the amount of units this would bring to

the downtown area, it just shouldn't be built in this specific block. I've kept the argument of height out of this message on purpose. It seems as much as some residents push for some taller buildings downtown and for the commission and the city to push

for it as well, it never seems to make any difference. I'd like the city to make the right choice on this site.

Sincerely,
Grant Simons