CITY OF SAINT PAUL
HERITAGE PRESERVATION COMMISSION STAFF REPORT

FILE NAME: 2375 Como Avenue – Muskego Church

APPLICANT: Jessica Berglin and Charlene Roise – Hess, Roise and Company

OWNER: Zvago Cooperative at St. Anthony Park

ARCHITECT: Link Wilson, Kaas Wilson Architects

DATE OF APPLICATION: April 6, 2017

DATE OF PUBLIC HEARING: April 27, 2017

NRHP: Muskego Church (1975)

HPC SITE/DISTRICT: Muskego Church (1978) – Criterion C

CATEGORY: Contributing **WARD:** 4 **DISTRICT COUNCIL:** 12

INVENTORY NUMBERS: Muskego Church - RA-SPC-0737

Bockman Hall - RA-SPC-0738 (NRHP)

Gullixson Hall - RA-SPC-0739

House - RA-SPC-0736, House - RA-SPC-0740, House - RA-SPC-0741

CLASSIFICATION: Demolition Permits, Building Permit

BUILDING PERMIT #: N/A

STAFF INVESTIGATION AND REPORT: Christine Boulware

DATE OF REPORT: April 26, 2017

A. SITE DESCRIPTION: Muskego Church, a pioneer-era log building, is located on the Upper Campus of Luther Seminary in the Saint Anthony Park neighborhood of Saint Paul. Constructed in 1843, the church is reportedly the "first structure built by Norse immigrants in America dedicated exclusively to the ministries of Word and Sacrament." It was originally located at the Muskego settlement near Milwaukee, Wisconsin. In 1904, the United Norwegian Lutheran Church purchased, disassembled, and relocated the log church to its seminary in Saint Anthony Park. After reassembly on the eastern hillside of the campus, the church was encased with wood siding, which remained in place until approximately 1970. Muskego Church was listed in the National Register of Historic Places in 1975 and was designated a local landmark by the Saint Paul Heritage Preservation Commission (HPC) in 1978. Because the National Register nomination did not provide a boundary for the property, as was common at the time of designation, the footprint of the building is the de facto boundary for National Register considerations. The local designation boundary for the property, however, is identified as Lot 1, Block 1, Mann's Addition to Saint Anthony Park North, the lot that encompasses much of the Upper Campus.

An annotated map showing Mann's Addition to Saint Anthony Park North as it was platted in 1892 is on page two*. The seminary purchased the majority of the lots in Mann's

Addition from Calvin and Elizabeth Pennell and members of the Willius family in 1900. The final lot of the addition came under the seminary's ownership in 1912. According to staff at the Ramsey County Department of Property Records and Revenue, the lots were never formally consolidated as they were assembled. Staff noted, however, that in the 1930s it appeared as if the recorders started simplifying the tax records to Lot 1 Block 1, likely because that was the first parcel number in the seminary's holdings. A map on page three* shows Mann's Addition in relation to the seminary's current site plan and the proposed project site. *(information in the site description was provided in consultant's report)

B. PROPOSED CHANGES: The applicant is proposing to demolish three houses (18, 19 &21), alter the landscape, and construct a multi-unit senior co-op at the property. The legal description in the ordinance designating site is incorrect; there is not information in the nomination that addresses the setting of the church. The only locally designated heritage preservation site at the property is the Muskego Church; only impacts of the proposed work on the Muskego Church are being considered.

C. BACKGROUND: The upper-campus of Luther Seminary has been determined eligible for listing on the National Register of Historic Places. Muskego Church and Bockman Hall are already listed on the National Register. Because the proposed project has a HUD-backed mortgage, the proposal is a federal undertaking. The Saint Paul HPC is a consulting party to the Section 106 process for the project.

D. GUIDELINE CITATIONS:

The Secretary of the Interior's Standards for Rehabilitation:

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

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.*

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.*

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

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

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.*

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.*

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

9. *New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize a 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.*

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.*

Muskego Church
(Ord. No. 16470, C.F. 271887 § 1 & 2, 10-24-1978)

Section 1

Pursuant to the authority contained in the Ordinance No. 16006 adopted May 18, 1976, as amended by the Ordinance No. 16429 adopted April 4, 1978, upon the request of the Heritage Preservation Commission of the City of Saint Paul and after having duly considered the matter at a public hearing held in accordance with the said ordinances, the Council of the City of Saint Paul does hereby designate the following described property to be a Heritage Preservation Site:

The Muskego Church, 2375 Como Avenue, Saint Paul, Minnesota, on property legally described as Lot 1, Block 1, Mann's Addition to St. Anthony Park North.

Section 2

The preservation program for this heritage site is stated as follows:

Muskego Church

Preservation Program

The present appearance of the Muskego Church's exterior should be maintained in a manner consistent with the original appearance.

E. FINDINGS:

1. On October 24, 1978, the Muskego Church at 2375 Como Avenue was designated a heritage preservation site under Ordinance No. Ord. No. 16470, C.F. 271887. The Heritage Preservation Commission shall protect the architectural character of heritage preservation sites through review and approval or denial of applications for city permits for exterior work within designated heritage preservation sites §73.04.(4).
2. The building was constructed in 1843 outside of Milwaukee, Wisconsin, was purchased by Luther Seminary in 1904, and was moved and reassembled at its current location in the same year.

3. The Period of Significance for the Muskego Church is not defined in the local nomination.
4. Muskego Church was listed on the National Register of Historic Places in 1975 under Criterion C.
5. The local designation and National Register nomination do not provide information about the current setting other than noting the location on a hill and surrounding trees. Without the evaluation of the aspects of: location, design, setting, materials, workmanship, feeling, and association, it is difficult to access direct and indirect impacts to Muskego Church.
6. The proposed demolitions and new construction will alter the setting, visibility, and access/approach to the church. There is not enough information in the nominations to evaluate how the demolitions and new construction will impact the view sheds and access to Muskego Church.
7. In 2015, Luther Seminary Foundation received a $8500 Legacy Grant for Norway Lutheran Church (Muskego) for “pre-development Design Services: To contract with qualified professionals to prepare planning documents that will help preserve the Norway Lutheran Church (Muskego), listed in the National Register of Historic Places.” HPC staff have not received or reviewed this document.
8. The proposed site alterations will remove part of the hill to the south of the church and a plan to protect and stabilize the Muskego Church during the proposed work at the site has not been produced/provided.
9. The proposal to demolish buildings, construct a new building and hardscaping, and alter the site/landscape at Luther Seminary will have indirect impacts on the Muskego Church that have not been fully explored given the lack of detail about the significance of the setting in the local and National Register nominations. The site work could directly impact the Muskego Church if the building is not stabilized and monitored during construction. Staff does not have enough information to effectively determine how the project will or will not adversely affect the Program for the Preservation and architectural control of the Muskego Church Heritage Preservation District (Leg. Code §73.06 (e)).

E. STAFF RECOMMENDATION:

Based on the findings, staff recommends that the applicant or site owner have a stabilization plan created and implemented at Muskego church for the duration of work at the project site prior to work commencing. Staff further recommends that a copy of the planning documents prepared for the site (related to the 2015 Legacy Grant) be provided for the Saint Paul HPC address file.

F. ATTACHMENTS:

1. HPC design review application
2. Supporting information submitted by applicant – plans & photos

Saint Paul Heritage Preservation Commission
Department of Planning and Economic Development
25 Fourth Street West, Suite 1400
Saint Paul, MN 55102
Phone: (651) 266-9078
ApplyHPC@stpaul.gov

Project Address:
2375 Como Avenue

Heritage Preservation Commission Design Review Application

PROCESS

This application must be completed in addition to required city permit applications for individually designated Heritage Preservation Sites and properties located within Heritage Preservation Districts.

Design review applications are reviewed and approved by either heritage preservation staff or the Heritage Preservation Commission (HPC) at a public hearing. HPC staff are authorized to approve work that complies with adopted design review guidelines and preservation programs, available at our website www.stpaul.gov/hpc, while the HPC reviews projects that are significant alterations, demolitions, additions, new construction or proposals that do not comply with HPC guidelines. The decision of whether a proposal may be reviewed and approved by HPC staff or must be reviewed by the HPC at a public hearing is made once a complete application is submitted.

The HPC public hearing schedule is viewable here:
https://www.stpaul.gov/departments/planning-economic-development/heritage-preservation/heritage-preservation-commission

A complete application consists of:
1) An application form
2) Required attachments that adequately describe the proposed work (see attached checklist)

An incomplete application will be put on hold and staff will contact you for additional information. If an application is incomplete for 30 days after it was received, it will be returned to the applicant.

Complete applications will be reviewed in the order they are received. **Applications are not entered in queue to be reviewed until staff has determined them to be complete.** Once reviewed, a Certificate of Approval will be issued along with any conditions for the proposed work. You will be notified by staff when the Certificate of Approval has been issued and a copy will be sent to the Department of Safety and Inspections (DSI) to complete the HPC process of obtaining the necessary permit(s).

1. CATEGORY

Please check the category that best describes the proposed work

☐ Repair/Rehabilitation	☐ Sign/Awning	■ New Construction/Addition/ Alteration
☐ Moving	■ Fence/Retaining Wall	
■ Demolition	☐ Other _____	☐ Pre-Application Review Only

2. PROJECT ADDRESS

Street and number: 2375 Como Avenue Zip Code: 55108

3. APPLICANT INFORMATION

Name of contact person: Jessica Berglin and Charlene Roise

Company: Hess, Roise and Company

Street and number: 100 North First Street

City: Minneapolis State: MN Zip Code: 55401

Phone number: 612-338-1987 e-mail: berglin@hessroise.com

4. PROPERTY OWNER(S) INFORMATION (If different from applicant)

Name: Zvago Cooperative at St. Anthony Park

Street and number: 3530 Lexington Avenue North

City: Shoreview State: MN Zip Code: 55126

Phone number: 651-766-4440 e-mail: denameyer@ecumen.org

5. PROJECT ARCHITECT (If applicable)

Contact person: Link Wilson

Company: Kaas Wilson Architects

Street and number: 1301 American Boulevard West

City: Bloomington State: MN Zip Code: 55425

Phone number: 612-223-7952 e-mail: linkw@kaaswilson.com

6. PROJECT DESCRIPTION

Completely describe ALL exterior changes being proposed for the property. Include description of affected existing exterior features and changes to architectural details such as windows, doors, siding, railings, steps, trim, roof, foundation or porches. Attach specifications for doors, windows, lighting and other features, if applicable, including color and material samples.

No work is proposed for Muskego Church. Three nearby historic houses and one non-historic garage fall within the local designation boundary and are proposed to be demolished to construct a new senior cooperative residential development.

See attachment for additional project information.

Total Project Value:	$15,000,000	***Attach additional sheets if necessary***

7. ATTACHMENTS & DESIGN REVIEW CHECKLIST

Please refer to the following checklist section(s) that relate to your proposed scope of work and check next to the items that are attached to your application. Attach all checked items listed to this application or attach in an email to ApplyHPC@stpaul.gov

Staff may contact you for additional information or materials.

If your project or work type is not included in this checklist, please contact the staff by calling 651-266-9078 or sending an e-mail to applyhpc@stpaul.gov for assistance on how to complete an application.

Applicant Submitted	*Staff Received*	*Date Received*	
			Restoration /Repair/Rehabilitation
☐	☐		Three (3) copies of scaled and dimensioned plans which note all materials, finishes, and dimensions on plan (2 copies will be forwarded to the Dept. of Safety and Inspections).
☐	☐		Photographs of all features and areas affected by proposed work.
☐	☐		If an existing architectural feature is being replaced, please provide detailed drawings of the existing feature.
☐	☐		Historic photographs (if any) that inform the restoration/rehabilitation/repair work.
			Sign/Awning:
☐	☐		Photographs of location of proposed signage on structure/property.
☐	☐		Photographs of structure and all exterior sides affected by proposed work.
☐	☐		Three (3) copies of plans that note materials, dimensions, colors, and method of attachment.
☐	☐		Section drawing showing point of installation, method of installation, awning profile and projection.
☐	☐		Illumination plan.
☐	☐		Photographs or elevation of the building showing location of proposed sign in relation to the building and, if applicable, other signage on the building.
			New Construction/Addition/Exterior Alteration:
☑	☐		Three (3) copies of construction level plans which note all materials, finishes, and dimensions on plan (2 copies will be forwarded to the Dept. of Safety and Inspections). Show how the addition(s) relates to the existing structure.
☑	☐		Photographs of all features and areas affected by proposed work.
☑	☐		Site plan showing lot dimensions, location of any existing buildings, and proposed addition(s), elevation plans, section and detail drawings as necessary. All plans must be scaled and dimensioned.
☑	☐		Digital copies of the plans and photos submitted on CD or USB.

Applicant Submitted	*Staff Received*	*Date Received*	
			Fencing/Retaining Wall:
☑	☐		A site plan showing the location of the fence/wall in relation to property lines and any structures with measurements.
☑	☐		An elevation drawing or photo of the proposed fence/wall.
			Roofing:
☐	☐		Sample or description of existing material(s).
☐	☐		Sample or specifications of proposed material(s).
☐	☐		Sample colors.
☐	☐		Photographs of all exterior sides affected by the proposed work.
☐	☐		Photographs of the building and roof showing existing conditions of roof, coping, flashing, affected masonry, parapet, siding, existing skylights, and/or dormers. Also include any other critical intersections where the roof meets the historic fabric, and sightline drawings when a change in slope or other potentially visible change is proposed.
			Heating, Ventilating, and Air Conditioning Equipment
☐	☐		Site plan showing location of condenser in relation to the building(s) and property lines.
☐	☐		Photographs of the proposed location of any condensers or venting.
☐	☐		Photographs demonstrating that the proposed unit is not visible from the street.
☐	☐		A screening plan if a condenser is in the side yard.
☐	☐		Drawing or photograph demonstrating where and how conduit will be attached to the building.
			Window/Sash Replacement:
☐	☐		Statement describing in detail why windows need replacement as well as a description of weatherization efforts and copy of window repair estimates.
☐	☐		Existing window design and dimensions.
☐	☐		Proposed window design, dimensions, and manufacturer's specifications including shop drawings.
☐	☐		Existing type of exterior storm windows.
☐	☐		Proposed style of exterior storm windows.
☐	☐		Existing exterior window trim material.
☐	☐		Proposed exterior window trim material and style.
☐	☐		Photographs of all exterior sides where window replacement is being proposed.
☐	☐		Photographs of existing features/conditions which support window replacement proposal.

Applicant Submitted	*Staff Received*	*Date Received*	**Other Items Requested by HPC Staff:**
☐	☐		
☐	☐		
☐	☐		
☐	☐		
☐	☐		

Will any federal money be used in this project? **YES** ■ **NO** ☐

Are you applying for the Investment Tax Credits? **YES** ☐ **NO** ■

I, the undersigned, understand that the Design Review Application is limited to the aforementioned work to the affected property. I further understand that any additional exterior work to be done under my ownership must be submitted by application to the St. Paul Heritage Preservation Commission. Any unauthorized work will be required to be removed.

Signature of applicant: _____ **Date:** 4/6/17

Typed name of applicant: Jessica Berglin

Signature of owner: _____ **Date:** 4/5/17

Typed name of owner: Dena R. Meyer, Vice President Zvago Cooperative at St. Anthony Park

Send completed application with the necessary attachments to ApplyHPC@stpaul.gov or to:

Saint Paul Heritage Preservation Commission
Department of Planning and Economic Development
25 Fourth Street West, Suite 1400
Saint Paul, MN 55102

You may also click the button below to attach the completed application to an email that will go directly to ApplyHPC@stpaul.gov . **Please attach supporting documents to the email** as well.

Submit Application

FOR HPC OFFICE USE ONLY

Address: 2375 Como Avenue

Date received: _____

Date complete: _____

FILE NO. _____

City Permit # ____ - _____

District:_____/Individual Site:_____

Pivotal/Contributing/Non-contributing/New Construction/Parcel

☐ Requires staff review

Supporting data: **YES** **NO**
Complete application: **YES** **NO**

The following condition(s) must be met in order for application to conform to preservation program:

It has been determined that the work to be performed pursuant to the application does not adversely affect the program for preservation and architectural control of the heritage preservation district or site (Ch.73.06).

_____
HPC staff approval

Date _____

☐ Requires Commission review

Submitted:

- ❑ 3 Sets of Plans
- ❑ 15 Sets of Plans reduced to 8 ½" by 11" or 11" by 17"
- ❑ Photographs
- ❑ CD of Plans (pdf) & Photos (jpg)
- ❑ City Permit Application
- ❑ Complete HPC Design Review application

Hearing Date set for: _____

HPC Staff Notes

Historical Consultants

The Foster House
100 North First Street
Minneapolis MN 55401

612 338-1987 phone
612 338-2668 fax
www.hessroise.com

April 6, 2017

Hess Roise

Christine Boulware
Saint Paul Heritage Preservation Commission
Department of Planning and Economic Development
25 Fourth Street West, Suite 1400
Saint Paul, MN 55102

Re: Zvago Cooperative St. Anthony Park HPC Design Review Submittal

Dear Christine:

Enclosed is a copy of the Zvago Cooperative St. Anthony Park HPC Design Review Application. The application form, an attachment with additional project information, three sets of construction drawings, and a disc with digital copies of the drawings and site photographs are included in this submittal. These materials have also been submitted electronically.

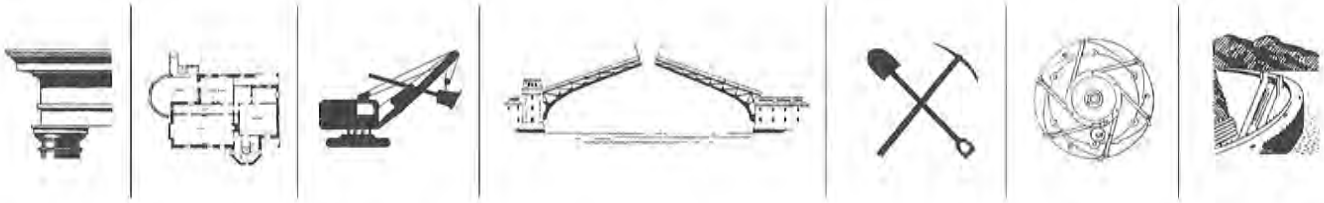
I submit this application on behalf of Zvago Cooperative St. Anthony Park. We hope to be considered at the Commission's April 27 meeting. Please let me know if you have any questions regarding the enclosed materials.

Best regards,

Jessica Berglin

Jessica Berglin

Cc: Dena Meyer and Tim Nichols, Zvago Cooperative at St. Anthony Park
3530 Lexington Avenue North, Shoreview, MN 55126



HERITAGE PRESERVATION COMMISSION
Richard Dana, Chair

CITY OF SAINT PAUL
Christopher B. Coleman, Mayor

25 Fourth Street West
Saint Paul, MN 55102

Telephone: 651-266-9078
Facsimile: 651-266-6549

November 19, 2016

Mr. David Nuccio
Field Environmental Officer in MN & WI
U.S. Department of Housing & Urban Development
920 Second Avenue South, Suite 1300
Minneapolis, MN 55402

Re: Consultation and Comment for Zvago Cooperative at Saint Anthony Park
2265 Luther Place, St. Paul, Ramsey County
MnHPO Number: 2016-2902

Dear Mr. Nuccio:
Thank you for your email dated December 2, 2016 which contained the revised Minnesota State Historic Preservation Office (MNHPO) submittal, Section 106 Memo, for the Zvago Cooperative proposal at Saint Anthony Park and attached, *An Assessment of Significance: Luther Seminary Upper Campus* (Report) by Hess, Roise and Company. These materials were submitted for the Saint Paul Heritage Preservation Commission's (HPC) review and comment.

The HPC staff and one commissioner were present at the October 26, 2016 public meeting at Luther Seminary where the architects, developer, historic consultant, and you provided some background on the project and the process thus far. HPC staff stated that the HPC had requested to be a consulting party in September and were only at the meeting because another party had notified them of the event, not because they had been invited. HPC staff indicated specific concerns about impacts to the locally designated Muskego Church as well as how communication and the consultation process had been carried out thus far.

At their December 15, 2016 meeting, the HPC discussed the Report and had the following comments and recommendations for revisions:

1. Topography - The report does not mention the early involvement of H. W. S. Cleveland with the planning of St. Anthony Park, understandably since, as David Lanegran notes, "his design for St. Anthony Park was never implemented nor mentioned in his autobiographical writings", and "the 1885 plats are considerably different from Cleveland's [ca. 1875?] design".[1] But as Lanegran goes on to say, "Only the alignment of present-day Como Avenue and the lot occupied by the campus of Luther Northwestern Seminary appear in both plans. The original seminary campus was Lot

[1] David A. Lanegran, *St. Anthony Park: Portrait of a Community*, St. Paul, 1987, 1991, pp. 5, 10.

47 in Cleveland's plan",[2] and that plan clearly indicates the steep slope that separates the higher northwest and lower southeast segments of the site. "The selection of St. Anthony Park" for the seminary site, says Lanegran, "was influenced by … the availability of a large and attractive site on a wooded knoll …. The building was set at the top of a hill in a traditional landscape design used for liberal arts colleges and theological seminaries in the Midwest."[3]

Although the landscape is cited as a contributing feature to the district and the "Memorandum" refers to the "dramatically sloping topography throughout the area",[4] this topography registers not at all in the site plans here offered. This deficiency was pointed out in the 26 October meeting, and blamed by the architect on the 3D modeling program in use (an inappropriate choice, one would think, for representing a design on such a site). The graphics would communicate more effectively if they could acknowledge the single feature of the site that Cleveland considered most important to portray, and we have to ask whether this information might inform the decision on the historic district boundary.

The HPC strongly agrees with the Recommendations' concluding statement:

"In addition to eleven buildings [we count twelve], the landscape contributes to the district's historic character. Trees, walkways, and other features that were present during the period of significance should be considered contributing elements to the historic district."[5]

And the HPC suggests that the topography be taken into account in determining the boundaries of the historic district and that impacts to view sheds be given more attention and importance.

2. Period of Significance – The HPC does not agree with the proposed period of significance, 1917-1952 and would suggest 1902-1952. Of twelve buildings in the district, nine, including two of the three most prominent buildings, were built before 1917, and a period of significance that excludes the construction period of three-quarters of the district is problematic. The United Church Seminary, opened in 1902, which acquired the site and built most of the buildings, merged with two other (smaller) Norwegian Lutheran seminaries in 1917 to form Luther Theological Seminary. If this institution's site and buildings are significant to the history of education in America, then surely their history prior to the 1917 merger cannot be irrelevant to that significance, and the Assessment of Significance seems to acknowledge this. That Luther Theological Seminary after 1952 "set its focus on new priorities, primarily the institution's expansion to a new thirty-seven-acre site to the north"[6] does seem to justify that end date for the period of significance of the Upper Campus.

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[2] Ibid., pp. 10-13.
[3] Ibid., p. 55.
[4] "Zvago Saint Anthony Park— Revised Section 106 Consultation Memo", p. 5.
[5] Jessica Berglin and Charlene Roise, *Luther Seminary Upper Campus Assessment of Significance*, Minneapolis, 2016., p. 30.
[6] Ibid., p. 27.

3. Area of Potential Effect (APE) - The APE seems credible. The primary criteria appear to be visual, but the text does address such issues as traffic, access to historic resources, and construction vibration. Restricting the Area of direct impact to the construction site itself is conventional, but the proximity to Muskego Church makes it difficult to be confident that adverse effects to the church can be avoided. We will need to see evidence at a larger scale that "The grove of trees surrounding Muskego Church will be protected and preserved", and that "The church will remain accessible from the north and west, and a new path will be created to provide access to the church from Luther Place."[7]

4. The Muskego Church is a locally designated Saint Paul Heritage Preservation Site and plans to protect the building from adverse direct and indirect impacts must be addressed. Currently, there is not a specified boundary for the designation of the site within the campus other than the campus address; this will need to be addressed in order to fully determine and address impacts to the site.

5. The Report states that "the Upper Campus appears to meet Criterion A in the area of Education."[8] Bockman Hall (contributing) and Muskego Church (contributing) being individually listed in the NRHP under Criterion C, for architecture, should be acknowledged in the Report.

6. The HPC noted that Appendix D: House Moving Feasibility Report from Prima Land, and conclusions that the properties couldn't be moved or rehabilitated were not relevant to the Report and self-serving to another purpose.

7. The HPC agreed that the conclusion provided on page 30 of the Report does not accurately represent the information provided throughout the Report. The assessment of significance identified substantial information supporting the integrity and significance of the buildings, landscape, walkways, and potential district, but the conclusion fell short in not recommending listing on the National Register of Historic Places.

Provided these changes and clarifications are made in the Report, the HPC will then concur with the Report's findings and recommendations. Please feel free to contact Christine Boulware at 651-266-6715 with any questions or comments. I'll look forward to receipt of the amended survey Report and your consideration of the HPC's recommendations.

Sincerely,

Christine Boulware, HPC Staff
Heritage Preservation Commission

Cc: Sarah Beimers, MNHPO (via email)
File

[7] "Zvago Saint Anthony Park— Revised Section 106 Consultation Memo", p. 5.
[8] Jessica Berglin and Charlene Roise, *Luther Seminary Upper Campus Assessment of Significance*, Minneapolis, 2016, p. 30.

Zvago Cooperative HPC Design Review Attachment

Local Landmark: Muskego Church, 2375 Como Avenue, Saint Paul, MN 55108

Introduction

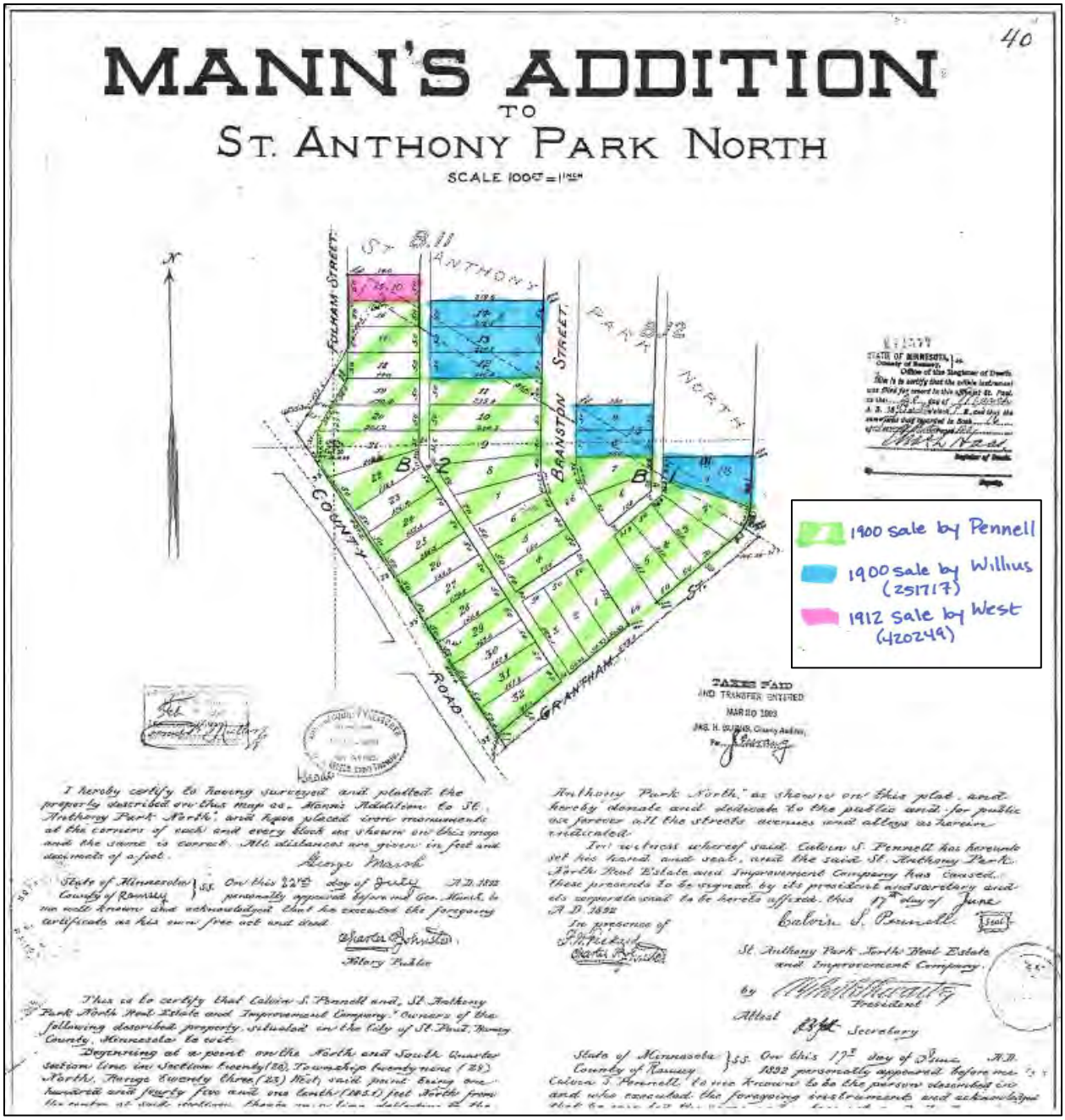
Muskego Church, a pioneer-era log building, is located on the Upper Campus of Luther Seminary in the Saint Anthony Park neighborhood of Saint Paul. Constructed in 1843, the church is reportedly the "first structure built by Norse immigrants in America dedicated exclusively to the ministries of Word and Sacrament." It was originally located at the Muskego settlement near Milwaukee, Wisconsin. In 1904, the United Norwegian Lutheran Church purchased, disassembled, and relocated the log church to its seminary in Saint Anthony Park. After reassembly on the eastern hillside of the campus, the church was encased with wood siding, which remained in place until approximately 1970.[1]

Muskego Church was listed in the National Register of Historic Places in 1975 and was designated a local landmark by the Saint Paul Heritage Preservation Commission (HPC) in 1978. Because the National Register nomination did not provide a boundary for the property, as was common at the time of designation, the footprint of the building is the de facto boundary for National Register considerations. The local designation boundary for the property, however, is identified as Lot 1, Block 1, Mann's Addition to Saint Anthony Park North, the lot that encompasses much of the Upper Campus.

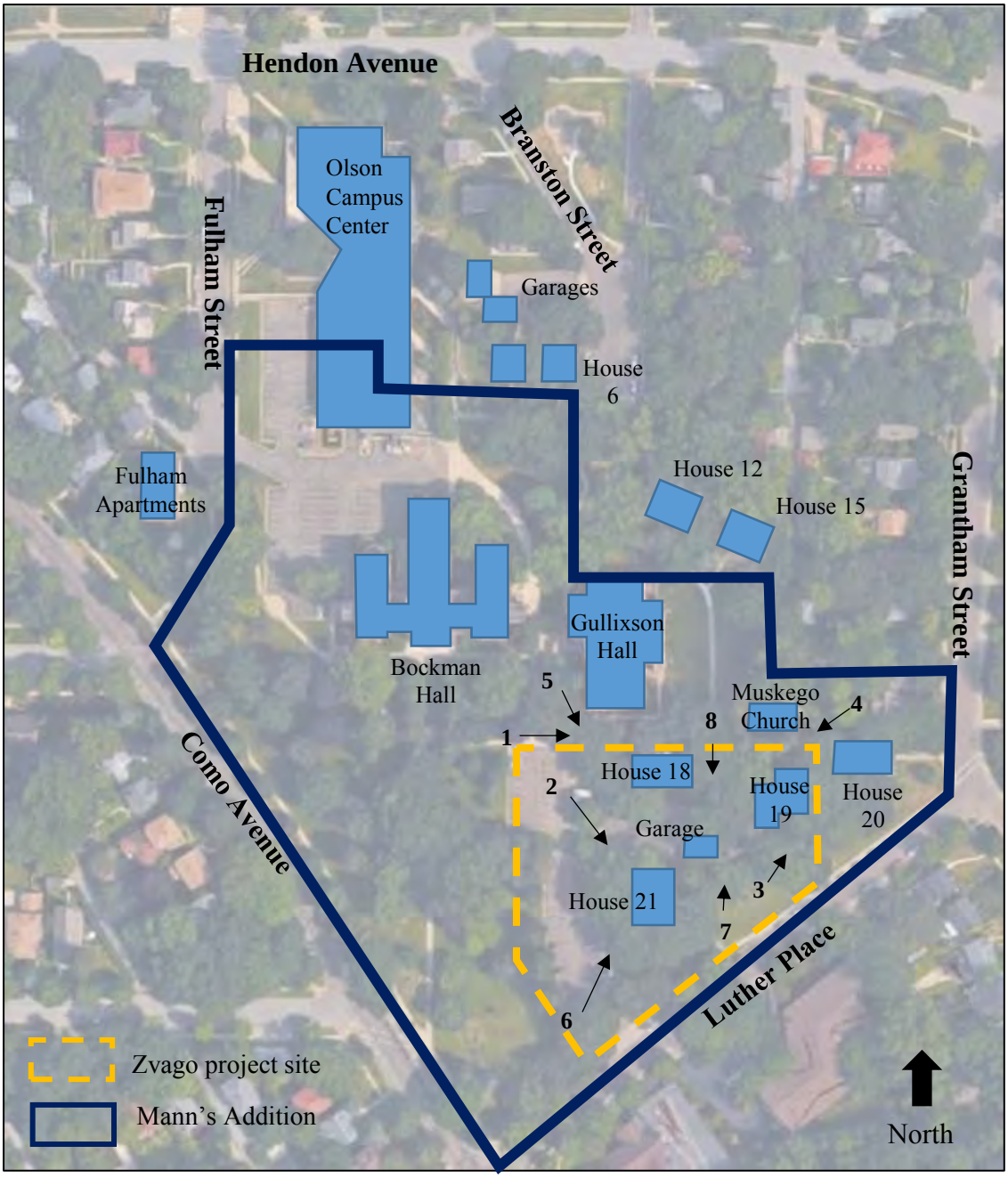
An annotated map showing Mann's Addition to Saint Anthony Park North as it was platted in 1892 is on page two. The seminary purchased the majority of the lots in Mann's Addition from Calvin and Elizabeth Pennell and members of the Willius family in 1900. The final lot of the addition came under the seminary's ownership in 1912. According to staff at the Ramsey County Department of Property Records and Revenue, the lots were never formally consolidated as they were assembled. Staff noted, however, that in the 1930s it appeared as if the recorders started simplifying the tax records to Lot 1 Block 1, likely because that was the first parcel number in the seminary's holdings. A map on page three shows Mann's Addition in relation to the seminary's current site plan and the proposed project site. [2]

[1] "Welcome to Old Muskego Church on the Luther Theological Seminary Campus," undated pamphlet, Muskego Church files, Luther Seminary Archives, Gullixson Hall, Luther Seminary, Saint Paul, Minnesota (hereafter Seminary Archives); John Hackett, "Muskego Church," National Register of Historic Places nomination, November 1974, 8:1; "Log Chapel, St. Paul, Minn.," Historic American Buildings Survey MN-29-24, 1934; Muskego Church files, Seminary Archives; unsigned letter to Oliver Swenumson, January 8, 1973, Muskego Church files, Seminary Archives.

[2] Ramsey County Property Records, Document Nos. 250754 (dated August 4, 1900), 251715 (dated August 13, 1900), and 420249 (dated September 18, 1912).



The 1892 plat of Mann's Addition to Saint Anthony Park North, showing the seminary lots as they were assembled in 1900 and 1912. (Ramsey County Department of Property Records and Revenue)



Current site plan of the Upper Campus, with a key to the site photographs on pages four through seven.

Site Photographs

Photo 1: House 18, which was constructed in 1904 and served as the president's house during parts of the seminary's history. Muskego Church is on the hilltop behind House 18 (background). Photograph taken February 2016. View to east.

Photo 2: House 21, which was constructed in 1906, and a non-historic two-car garage (left, background). House 21 was also referred to as the president's house. Photograph taken February 2016. View to southeast.

Photo 3: House 19, constructed around 1920, was built as a professor's residence just south of Muskego Church (background). Photograph taken February 2016. View to northeast.

Photo 4: A panoramic photograph showing the project site and Muskego Church as viewed from the sidewalk behind Muskego Church. House 19 is on the left while House 18 is in the background in the middle. Photograph taken June 2016. View to southwest.

Photo 5: The project site as viewed from outside Gullixson Hall (left, foreground), which is directly north of House 18. Photograph taken February 2016. View to southeast.

Photo 6: The project site as viewed from Luther Place.
Photograph taken February 2016. View to northeast.

Photo 7: The project site as viewed from a sidewalk that runs west of House 19 and east of Houses 18 and 21. Muskego Church is in the background on the left. Photograph taken February 2016. View to north.

Photo 8: The project site as viewed from the same sidewalk as the previous image, but looking the opposite direction. Photograph taken February 2016. View to south.

Project Summary and Evolution

No work is proposed for Muskego Church as part of the Zvago Cooperative project. Three houses (Houses 18, 19, and 21) and one garage fall within the local designation boundary and are proposed to be demolished to construct a new three-story senior co-op development. In addition, a number of landscape features will also be replaced and a new boulder retaining wall will be constructed on the eastern hillside of the campus. An existing parking lot will be removed and replaced with a new parking lot in roughly the same configuration, although the new lot will be slightly west of its existing location. The developer has applied for financing through the U.S. Department of Housing and Urban Development (HUD), triggering compliance with Section 106 of the National Historic Preservation Act. That process is currently underway.

A summary of the project's evolution is outlined below. Diagrams on pages ten and eleven depict the modifications made to the building's footprint as the project progressed from its initial concept to the current design.

In July 2015, a preliminary development proposal for the Zvago Cooperative was presented to Saint Anthony Park community members and to campus staff, leadership, and students from Luther Seminary. The plan, created by Kaas Wilson Architects, featured a 61-unit building located at the corner of Como Avenue and Luther Place. The neighborhood vetoed the proposed building's footprint and location, which severed the viewshed across the seminary's lawn to the steps of Bockman Hall, a prominent local landmark that is listed in the National Register. Over the next several months, Kaas Wilson Architects conducted seventeen community meetings to gather additional input and refine the project's design. As a result, the currently proposed development is a three-story, 49-unit building that is tucked further back into the hillside along Luther Place. While the alterations received widespread community support, some feedback raised concerns regarding the demolition of three houses on the seminary's campus, the impact the project would have on Bockman Hall and Muskego Church, which is also listed in the National Register, and the effect the development would have on the landscape, especially the collection of mature trees near the project site.

In February 2016, Ecumen retained historical consultants Hess, Roise and Company (Hess Roise) to assess the National Register eligibility of buildings within the project site. Although Bockman Hall and Muskego Church had already been listed in the National Register, the significance of Luther Seminary's Upper Campus, particularly the landscape and the arrangement of buildings therein, had not been evaluated. The resulting investigation determined that although the three houses, garage, and surrounding landscape features seemed unlikely to qualify individually for the National Register, they should be evaluated for their potential to contribute to a historic district. Hess Roise recommended that the campus appeared eligible for the National Register as a historic district under Criterion A in the area of Education. This determination reflected the seminary's early development and expansion to eventually become the largest theological training institution for the Evangelical Lutheran Church in America.

Section 106 consultation meetings were held on October 26, 2016, and January 5, 2017, between the development team, HUD, the Minnesota Historic Preservation Office (MnHPO), community members, and consulting parties, which included the Saint Paul HPC, Minnesota Chapter of the

Society of Architectural Historians, Preservation Alliance of Minnesota, Luther Seminary, and the Saint Anthony Park Community Council. After receiving additional documentation from these consulting parties, HUD determined that the campus was also eligible for listing under Criterion C "as a significant and distinguishable entity that embodies traditional higher education campus planning—a main architecturally distinctive educational building, set on a rise above a great lawn, flanked by classroom and residential structures." HUD also determined the period of significance for the Upper Campus to be from 1900, "when the Seminary purchased the site and started to build Bockman Hall, to 1955, when the Seminary set its focus on new priorities, primarily the institution's expansion to the north."[3]

HUD submitted these findings to MnHPO on February 13, 2017. In addition to outlining the areas of significance under Criteria A and C, and establishing the period of significance, HUD determined that the proposed Zvago Cooperative will have an Adverse Effect on the eligible historic district "through demolition of three historic properties (Houses 18, 19, and 21), new construction of a multi-story apartment building within the District, and modifications to the contributing landscape elements of the District." HUD specifically noted in its letter that "if the project proceeds, the Muskego Church should be protected from any potential physical adverse impacts from the adjacent new construction."[4]

MnHPO concurred with HUD's findings in a letter dated March 17, 2017. A third consultation meeting was held on March 30, 2017, to discuss the Resolution of Adverse Effects. As of writing this application, HUD remains in the process of determining how to proceed with the Resolution of Adverse Effects after gathering input from MnHPO and the consulting parties at the March 30 meeting.

[3] U.S. Department of Housing and Urban Development, "Zvago Cooperative at Saint Anthony Park, 2265 Luther Place, Saint Paul, MN 55108, 213 FHA Insured Mortgage Application," submitted to the Minnesota Historic Preservation Office February 13, 2017.
[4] Ibid.

Evolution Diagrams

The initial proposal from July 2015, which the neighborhood vetoed because it obstructed primary vistas of Bockman Hall. The proposed parking lot would have impacted much of the lawn area as well.

A comparison of the footprint of the initial design and the current layout, which was pulled back from the intersection of Como Avenue and Luther Place to maintain the integrity of the lawn and vistas to and from Bockman Hall.

Project Description

The proposed Zvago Cooperative is a three-story senior residential building with underground parking, which will be accessible from Luther Place, where an existing driveway and surface parking lot are currently located. The project will have forty-nine units with a mix of one-, two-, and three-bedrooms. The total building area will be 112,952 square feet.

The building's exterior appearance has taken cues from the surrounding institutional, residential, and religious properties. The building form follows precedents established by the adjacent Gullixson Hall, which has a three-story massing composed of multiple rectilinear sections, a flat roof, window stacks, and an entry tower. The new building will have a flat roof to maintain a low profile and to defer to its historic surroundings. The height of the new building will be shorter than Gullixson Hall and Muskego Church, as well as House 18, which will be demolished to accommodate the new construction.

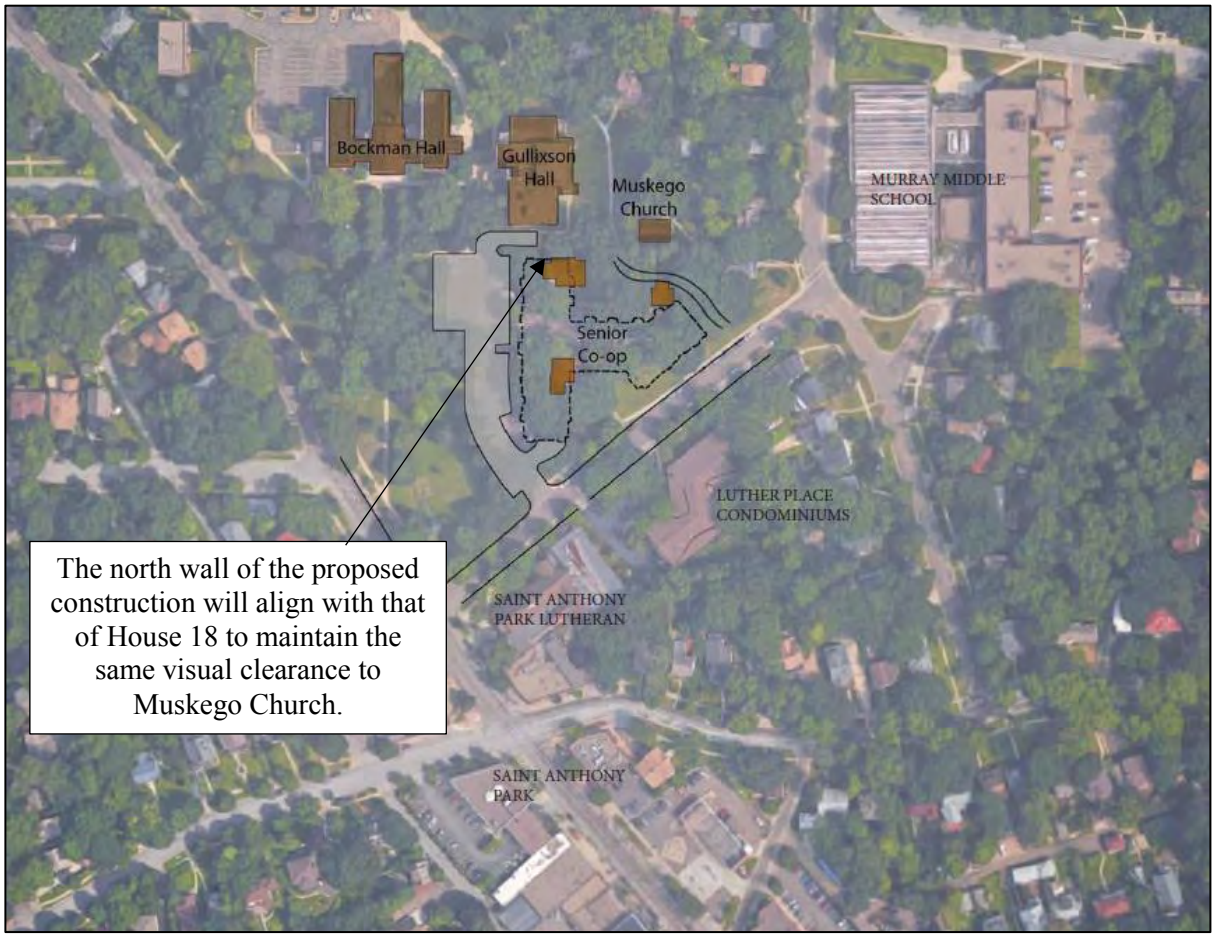
Masonry and clapboard are predominant materials in the surrounding area, and these will be incorporated into the material palette of the new construction. Metal cladding will also be used to introduce a long-lasting contemporary material to the project. Flat panels will be used on enclosed balconies and between windows. Pressed panels will be used on the upper level to replicate the appearance of clapboard siding.

The new building's main entrance will be oriented to the west to face Luther Seminary's expansive lawn, following historic site patterns on the campus. Three walk-up entries will face Luther Place to maintain a pedestrian-oriented environment along that street. The building's massing will be divided into three wings to minimize its footprint and maximize the availability of natural light and greenspace on the site. New trees and landscaping will further enhance the walkability of the neighborhood. A new retaining wall will be constructed along the hillside behind the building. It will be composed of boulders in various shapes, sizes, and colors to create a natural appearance. It will have two tiers and will be planted with trees and shrubs to enhance the outdoor greenspace at the site.

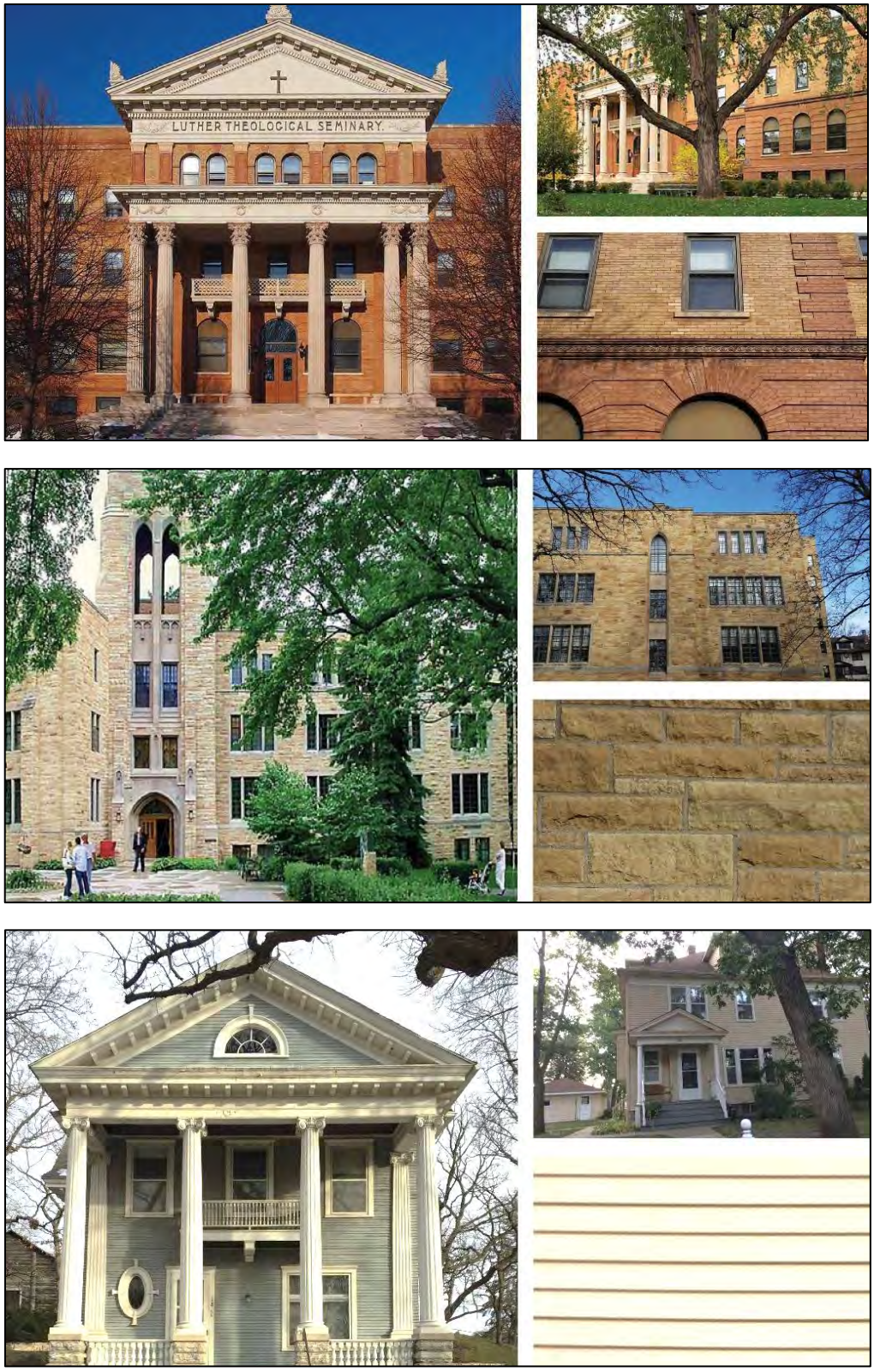
The current surface parking lot will be replaced with a new lot that is slightly further west of its existing site. A number of trees will be removed to accommodate the new lot, but new trees will be planted along the edge of the parking lot to replace them. Many of the trees slated for removal were planted in the early 1950s, when the southern half of the lawn was regraded.

Project visualizations are included in the following section to illustrate these considerations. Full project drawings are included in the application submittal.

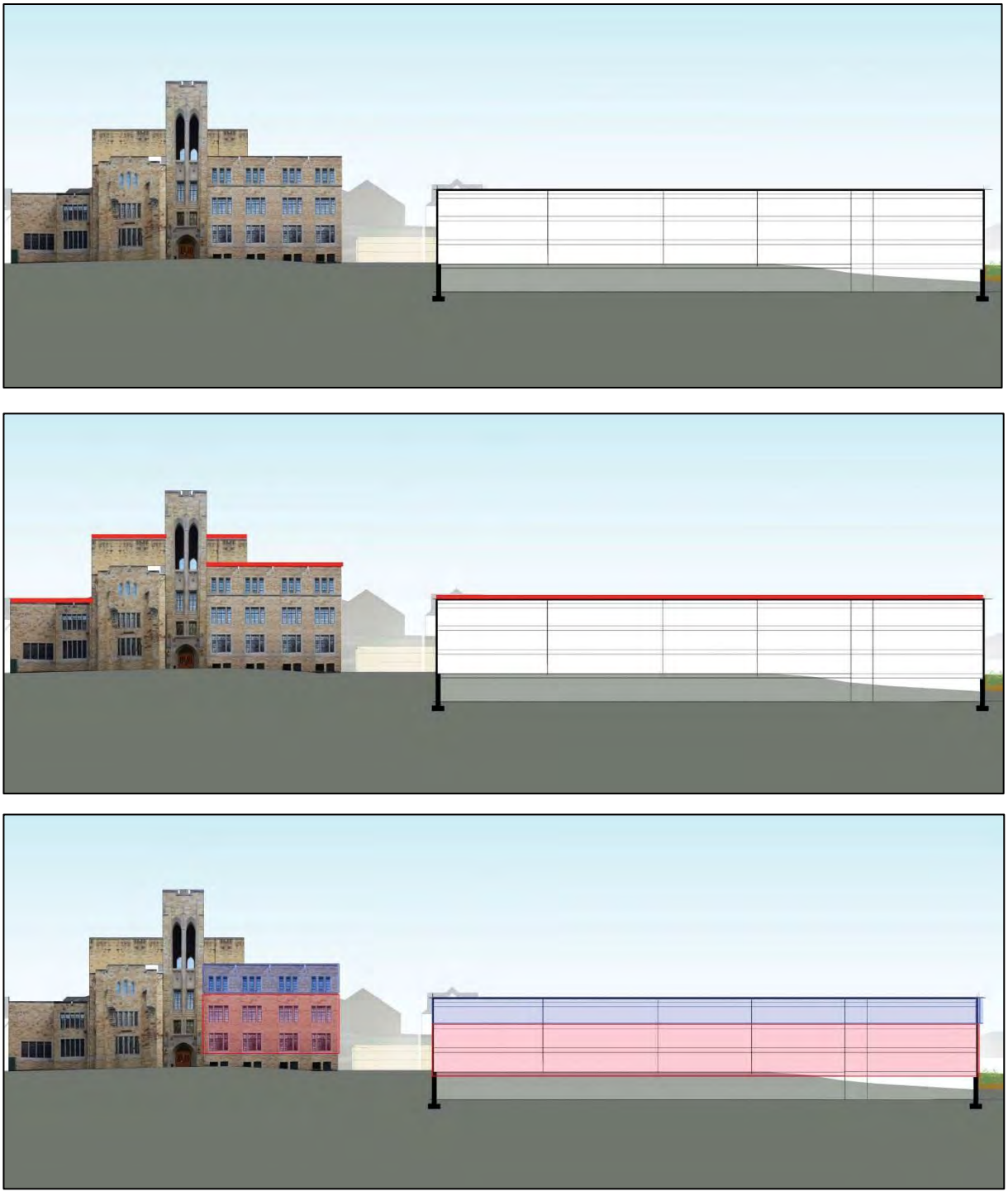
Project Visualizations



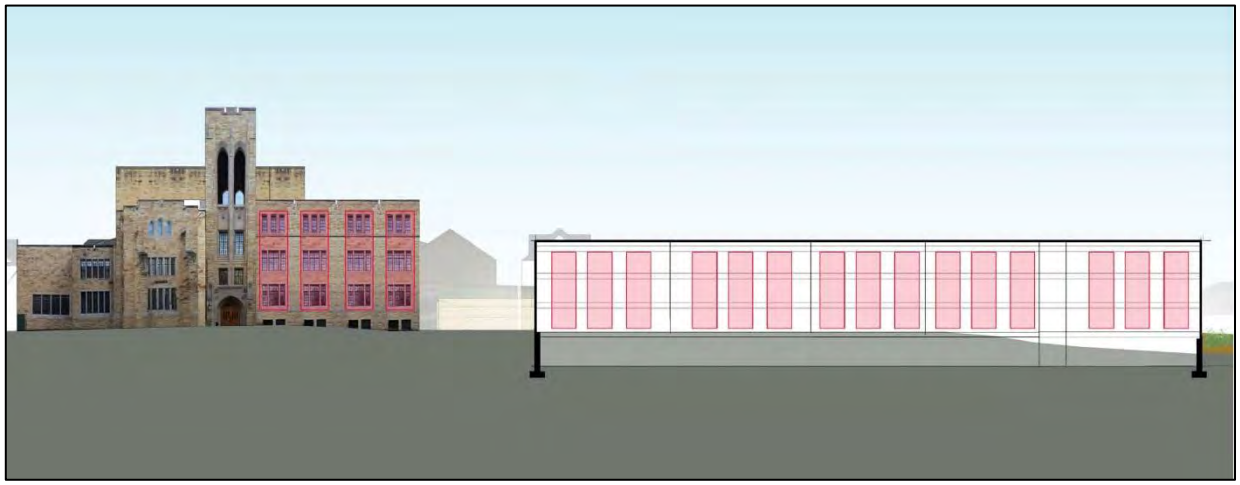
An aerial photograph showing the existing and proposed buildings on the site.

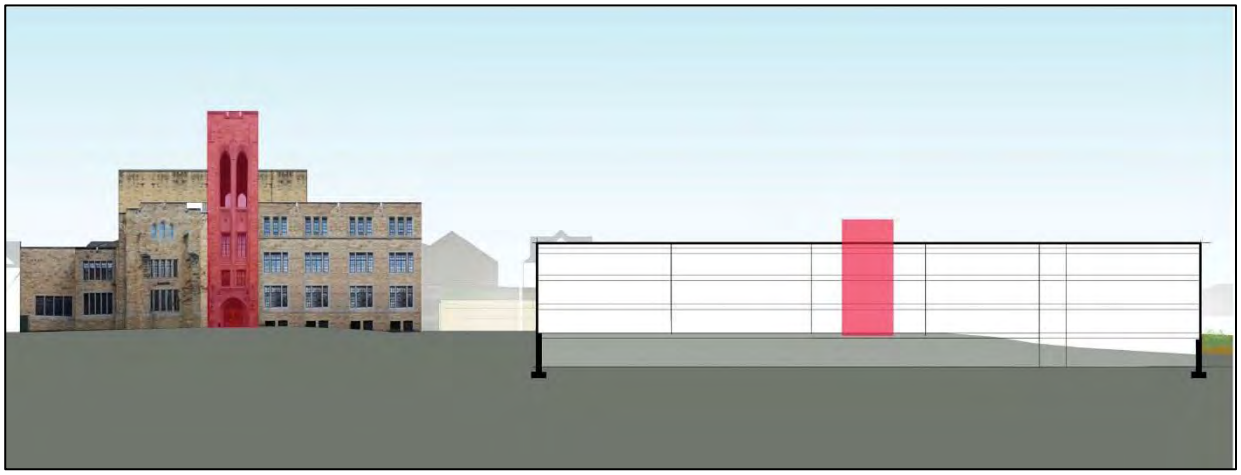


Material studies for Bockman Hall (top), Gullixson Hall (center), and two seminary residences (bottom).



Contextual cues taken from Gullixson Hall.
The new construction will be rectangular in form and will not exceed the height of the surrounding buildings (top). It will have a flat roof to maintain a low profile (center), and will have a three-story composition (bottom).



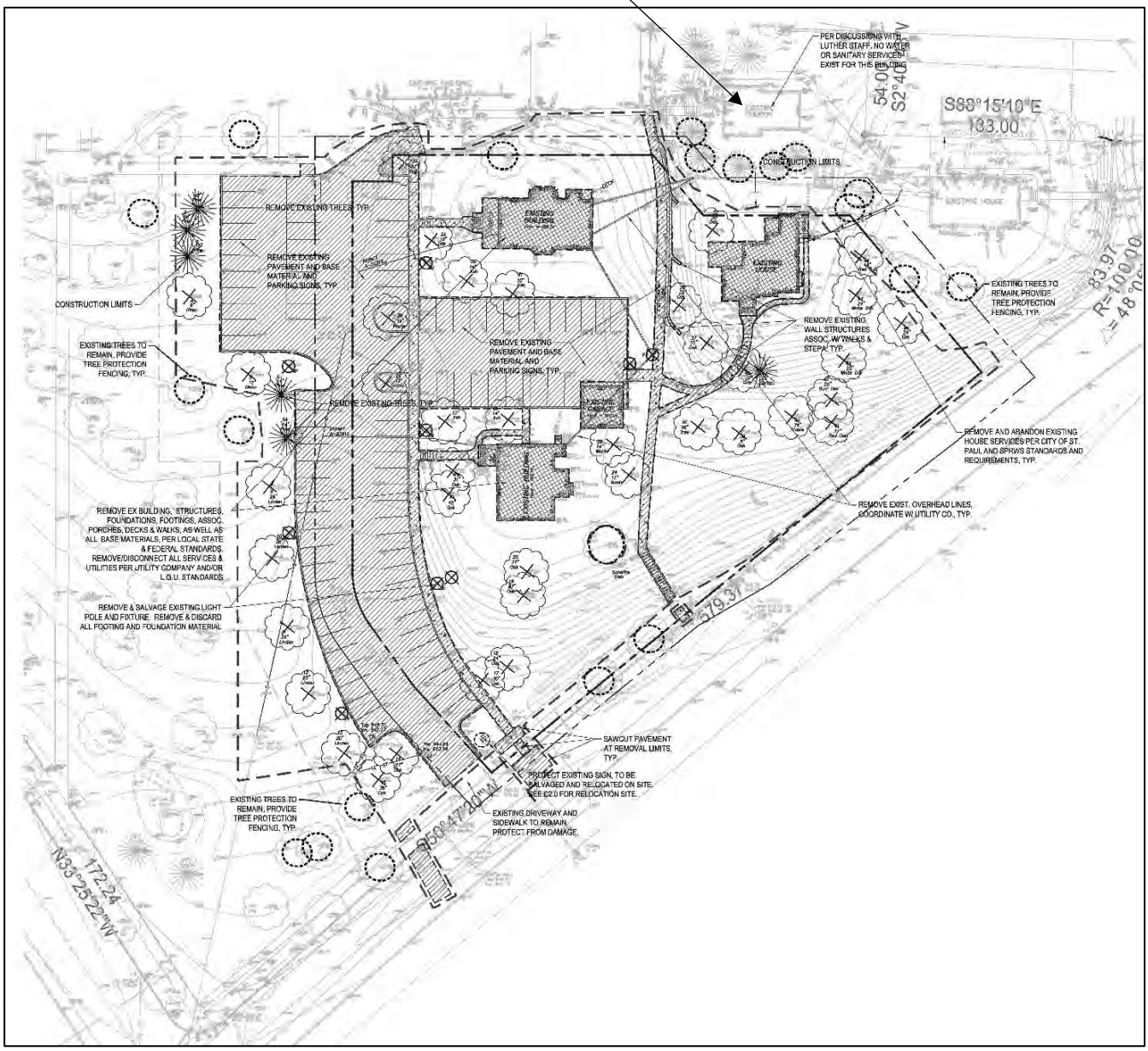


Contextual cues taken from Gullixson Hall.
The new construction will have vertical stacks of windows (top)
and a prominent entry on its front facade (bottom).

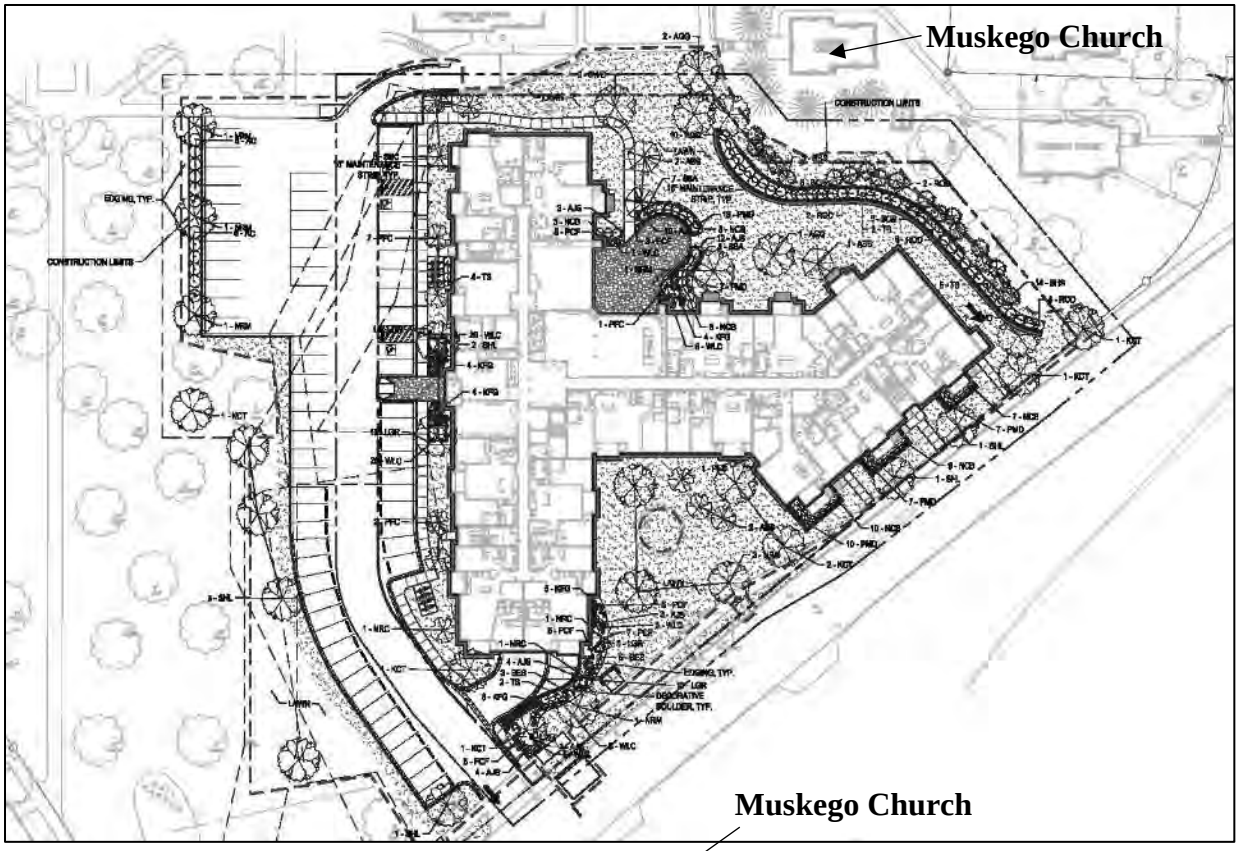
Perspective renderings showing the new construction within its surrounding context.
See full construction drawings submitted with this application.

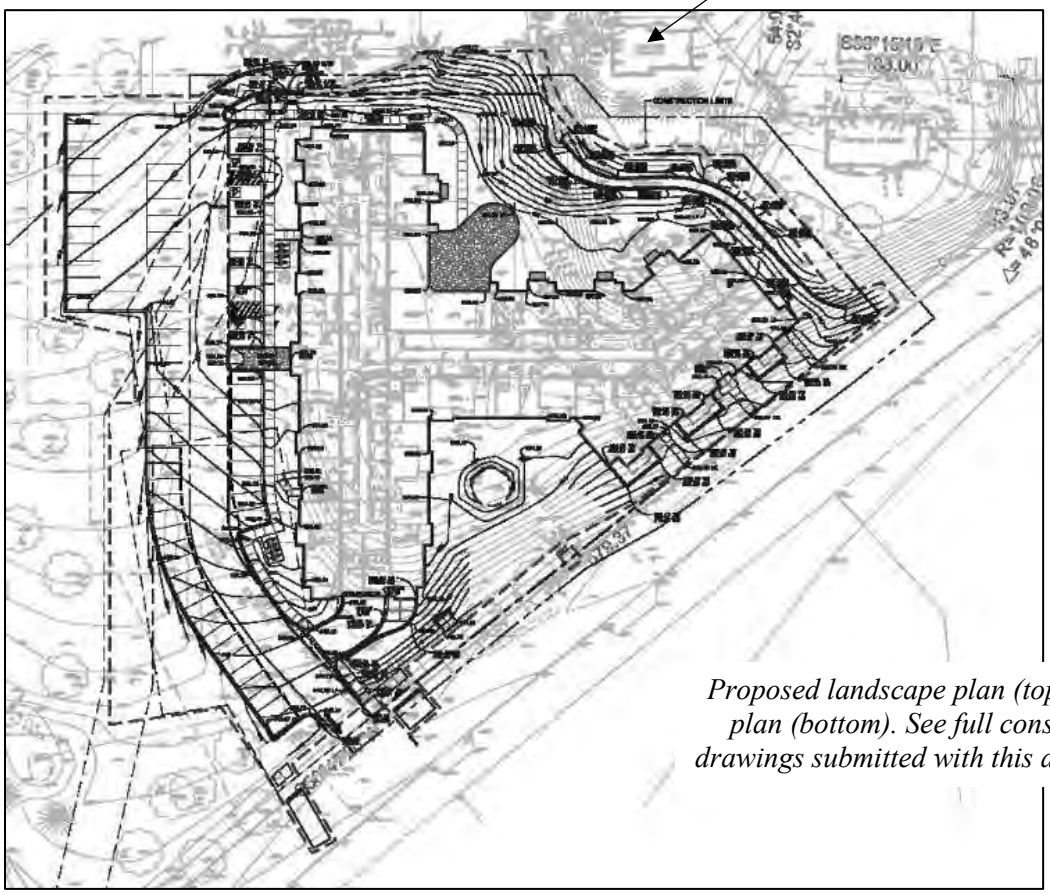
A perspective rendering showing the new construction and the boulder retaining wall behind the building (top). The plan for the boulder wall and an example of a similar wall is pictured below. See full construction drawings submitted with this application.

Muskego Church



Proposed tree removal plan. The pine trees encircling Muskego Church will be preserved and protected during construction. See full construction drawings submitted with this application.





Proposed landscape plan (top) and site plan (bottom). See full construction drawings submitted with this application.

Muskego Church Considerations

Muskego Church was listed in the National Register in 1975 under Criterion C for its significance "as the first reported Norwegian Lutheran Church in the United States and as a beautiful example of pioneer log craftsmanship." These considerations form the basis of its local designation in 1978 by the Saint Paul HPC, which provided the following narrative of the property's history and architectural significance:

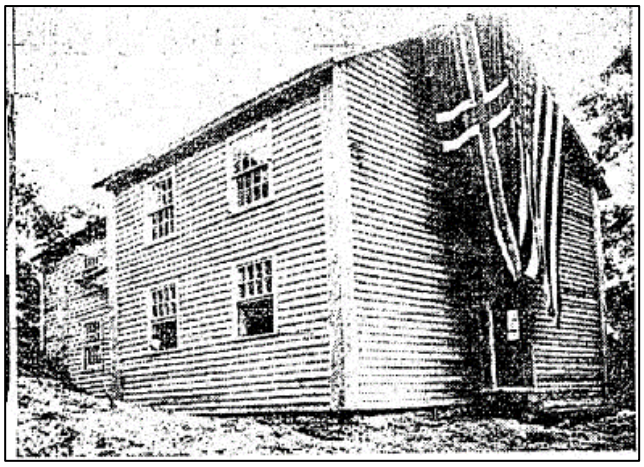
> When the building was relocated [to the seminary campus in 1904], the exterior walls were furred with two-by-fours and covered with lap siding for protection. In 1970 it was discovered that the protective cover was causing the logs underneath to rot. Subsequently, the cover materials were removed and the attractiveness of the red oak, adzed and handplaned, exposed. The walls were made of massive logs, coped and scribed, and shaped by an axe at the interlocking ends. The hewn logs were fitted so tightly that only the interlocking ends were chinked with clay.
>
> None of the wood has ever been painted. The main room has fourteen straight-back wooden pews. Above and to the rear, is a gallery supported by six hand-carved pillars of solid black walnut. Plank seats resting on wooden trestles in the gallery are accessible by stairs from the ground floor. Within the chancel area are choir stalls, a sanctuary, altar, and pulpet [*sic*]; the majority are made of black walnut. Other furnishings include a cast-iron stove, a pump organ, a baptismal font, and several portraits of persons important to the founding and growth of the church.
>
> Muskego Church rests on a hill just behind Luther Seminary Library [Gullixson Hall]. A distant view of the chapel is somewhat hindered by an adjacent house, several trees, and a row of neighboring homes. However, any visitor to the house of worship will note that the building is well maintained and preserved.[5]

As mentioned previously, no work is proposed for Muskego Church. The immediate setting of the church will be preserved, and the log building will be protected from potential direct physical impacts caused by the Zvago Cooperative development. The new construction will not affect any of the characteristics identified above that qualify the property for local designation. The church will remain in its hilltop setting behind the seminary's library and encircled by pine trees. Furthermore, the adjacent construction will be closely monitored to ensure that the church's architectural character and structural stability remain intact. These two factors are discussed in greater detail on subsequent pages.

[5] Gary Johnson, Muskego Church Saint Paul HPC Site Nomination Form, prepared by HPC staff, April 28, 1978, on file with the Saint Paul HPC.

Setting

Muskego Church is set on a hilltop within a grove of pine trees, which will be preserved and protected during construction. When the building was relocated to Saint Anthony Park in 1904, seminary leaders sought to replicate the church's original setting on "Indian Hill" near the Muskego settlement in southeastern Wisconsin. The images at the right show the church in its new setting on the seminary campus.[6]



(Minneapolis Tribune, *June 25, 1905*)

The top image was featured in the *Minneapolis Tribune* in June 1905 following the dedication of the newly reconstructed church. Clapboard siding was applied to the exterior to "preserve the logs in the old church as long as possible for coming generations." The siding was removed in the early 1970s. The center photograph, taken sometime around 1915, more clearly shows the clapboard-sided building surrounded by mature trees. The lower image, however, depicts a more barren hilltop. The photograph was featured in a 1917 yearbook for the seminary. Trees may have been cleared to construct House 12, which was added to the seminary campus sometime in the early 1910s; House 12 was relocated around 1948 to construct Gullixson Hall on the site.[7]

(*Minnesota Historical Society, circa 1915*)

(Den Forenede Kirkes Seminar 1890–1917, *Luther Seminary Archives*)

The existing pine trees were planted around the church in the early 1930s, as evidenced by documentation that was completed for the Historic American Buildings Survey (HABS) in 1934. These photographs are pictured on the next page in the left column. The trees have matured over the past eighty-odd years and many now exceed the height of the

[6] "Historic Structure Report, Norway Lutheran Church (Muskego) for Luther Seminary, Saint Paul, Minnesota," March 2015, report prepared by Claybaugh Preservation Architecture, Stark Preservation Planning, and Barn Repair Specialists, on file at the Minnesota Historic Preservation Office (hereafter Muskego HSR).

[7] "History of Quaint Old Muskego Church," *Minneapolis Tribune*, June 25, 1905; Photograph of Muskego Norwegian Lutheran Church, circa 1915, Minnesota Historical Society; *Den Forenede Kirkes Seminar 1890–1917*, Luther Seminary Archives, Gullixson Hall, Luther Seminary, Saint Paul, Minnesota.

church. Photographs in the right column illustrate the current conditions, which will remain in place following the new construction. The stone retaining wall and shrubs at the base of the hillside in front of Muskego Church were installed sometime in the early 2000s.[8]

Muskego Church with clapboard siding, as viewed from the southwest (upper) and northwest (lower). (“Log Chapel, St. Paul, Minn.,” Historic American Buildings Survey MN-29-24, 1934)

The church’s current appearance, as viewed from the west (upper) and east (lower). Photographs taken February 2016.

[8] Damon Farber Associates, “Old Muskego Church,” May 9, 2000, Facilities Management Files.

Vibrational Impacts

Construction activity will be closely monitored to ensure that the architectural and structural integrity of Muskego Church are not diminished by vibrational impacts. In October 2016, the developer retained Professional Service Industries (PSI) to address these concerns. A summary of PSI's findings is outlined below, and the full report is included in Appendix A.

The proposed building will bear on shallow foundations, so pile-driving equipment will not be necessary for the new construction. This factor greatly reduces the risk of potential vibrational impacts to the church. The greatest vibration-inducing equipment that will be used during construction is a bulldozer, which will only be in operation during mass-grading activities. A large bulldozer generates a peak particle velocity (PPV) value of 0.089 inches per second at twenty-five feet, the standard distance of measurement from the source of vibration (see table below). Common allowable values for normal residential and commercial facilities are around 0.25 inches per second PPV at the standard twenty-five-foot interval. For historic structures, these values are typically reduced to 0.12 or 0.15 inches per second PPV measured at twenty-five feet. The PPV value of a large bulldozer falls well below this permissible range. Moreover, the bulldozer will not be used within fifty feet of the church—twice the distance of the standard interval—further diminishing the vibrational impact that the equipment will have on Muskego Church. When complete, the new construction will be eighty-seven feet from Muskego Church at its closest, and the boulder retaining wall will be forty-one feet at its closest (see diagram on next page).

Table 12-2 Vibration Source Levels for Construction Equipment (From measured data.[8][9][10][11])

Equipment		PPV at 25 ft (in/sec)	Approximate L_v† at 25 ft
Pile Driver (impact)	upper range	1.518	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

† RMS velocity in decibels (VdB) re 1 μinch/second

Vibration data provided by PSI from the National Transportation Library Rail Design Manual

Distances between Muskego Church, the boulder retaining wall, and the new construction at their closest points

Structural Integrity

Claybaugh Preservation Architecture, Stark Preservation Planning, and Barn Repair Specialists completed a historic structure report for Muskego Church in 2015 to determine preservation priorities for the property. The project team inspected the church's site conditions, utilities and building systems, stone foundation, exterior log walls, windows, doors, interior finishes, and roof, ceiling, and floor structures to assess its overall condition. Of these components, they ranked replacing the roof shingles, reinforcing the roof structure, restoring the exterior logs, and chinking all of the log joints as the most critical priorities for the building. The following observations and recommendations are summarized from their report.

Roofing

The existing wood-shingle roofing was found to be in poor condition, with several visible patches that were made in recent years. Furthermore, the wood sheathing boards beneath the shingles are not uniform. The project team also noted that there was not any metal flashing where the chancel roof meets the roof of the nave. Gutters and downspouts, installed in 1995, were in good condition and can be reused in the future. They did observe, however, that the mounting brackets were installed on top of the shingles rather than underneath them.

Replacing the roofing is one of the top priorities for the restoration project. The project team recommended removing the existing gutters, downspouts, and wood shingles down to the sheathing boards. Deteriorated sheathing boards should be replaced and metal flashing installed before new wood shingles are installed. They noted that the gutter brackets should be attached to the sheathing before the shingles are installed.

Roof Structure

The project team observed a noticeable sag in the roof structure that is visible from the east. The beadboard ceiling is sagging as a result of the sagging roof structure. The roof rafters are 4″ x 6″ with 1″ x 4″ and 1″ x 6″ boards nailed to each side, which were likely installed to straighten the rafters and correct the sag. Despite the sag, the rafters were observed to be in good condition. Rafters in the nave are spaced at 41″ centers, while the chancel rafters are spaced between 41″ and 47″ centers. The project team noted that there is not a ridge beam but that the rafters rest on a wood 7.5″ x 10″ wood sill at the eave. They observed an area where the sill beam is rotted at the northeast corner of the nave. The gable boards are 0.875″ x 11.5″ clapboards laid with 10″ exposure on 2x4 wood studs. They reported that there is no sheathing or interior covering on the studs.

Reinforcing the roof structure is a top priority along with replacing the roofing materials. The existing rafter spacing is not sufficient to support the wood sheathing, so the project team recommended adding a 2″ x 6″ wood rafter between each 4″ x 6″ to reinforce the structure. Rotted sill beams and rafter ends should be repaired. They also recommended remedying the sagging ceiling by attaching hanger boards to the new roof rafters.

Exterior Log Walls

A number of log ends are missing or are severely deteriorated due to rot caused by water infiltration due to failed chinking and cracks in the logs. A number of chinking and log repairs

were noted from restoration projects that were undertaken in the 1990s. As part of the previous projects, the chinking was replaced with a mortar mix composed of Portland cement, hydrated lime, latex grout, and sand; the log repairs were made with a mixture of sawdust and epoxy.

The project team recommended preserving as much of the original log material as possible, although in some instances the exterior rot is too extensive to keep the entire log. They have suggested that an epoxy fill be used in instances where internal rot can be removed so that the interior and exterior log facing can be retained. In cases where the exterior facing of the log is too rotted to be preserved, the interior log facing will be maintained and the exterior face will be removed and replaced with log faces that match the original material as close as possible. Full replacement of the chinking is recommended to seal all of the log joints to prevent moisture penetration. The project team noted that Charles Nelson from the Minnesota Historical Society provided the previous chinking mixture for work that was completed in the 1990s, but that they have not been able to track down that formula. They recommended sending samples in for laboratory analysis as part of the restoration project.

Stone Foundation

The project team observed the foundation to be in good condition without any signs of settlement. Areas of deterioration and previous repairs were noted in the mortar joints. Samples of the mortar were sent to Arbogast Mortar Analysis for laboratory testing. The mortar was found to have a lime-to-sand ratio of about 1-to-1.5, constituting a Type L mortar that would not weather well in the foundation. The mortar joints were recommended to be 100 percent repointed using a Type O mortar with a ratio of 1 part Portland cement, 2 parts hydrated lime, and 9 parts sand. Additionally, the project team recommended adding a mortar wash at the top of the stone to the bottom course of logs to keep moisture out of the mortar and the logs. Foundation work was determined to be a secondary priority after making roof repairs and restoring the log walls.

Windows

The windows were observed to be uniform in size, each with 8-over-8, double-hung, wood sash with 8″ x 10″ single-pane, putty-glazed lights. No weather stripping or counter weights are present, and the only hardware is a sash lock. The lower sash of each window has been screwed shut. The project team reported that the wood frames and sash are in good condition overall, except for weathering and missing paint. The condition of the glazing putty varies from poor to good, and the perimeter frame caulking is generally missing or in poor condition for each window. The window heads do not have weather caps.

Restoring the windows is the next highest priority. The project team recommended removing all of the window sash for repair in a shop setting. They noted that "the sash are in good enough condition where replacement sash or portions of sash is not required." All of the existing finishes should be stripped and the glazing putty replaced. The interior sash should be refinished with a natural finish to match the existing conditions. The exterior sash should be painted to match the color of the weathered logs and exterior trim. They suggested that weather stripping is not necessary because the building is unheated, but that a new sealant should be added around the perimeter of each window frame. Lastly, wood drip caps should be installed at each window head to shed water away from the frame.[9]

[9] Muskego HSR.

Doors
The project team noted that the existing wood doors, which were installed in 1994, are in good condition and do not require any additional work. Wood drip caps, which were also installed in 1994, should be retained to ensure the doors remain in good condition.

Floor Structure
The project team noted that the floor structure—composed of wood joists at 21″ on center with a 6″ x 6″ beam down the center of the building—is in good condition and does not require any restoration work.

Utilities and Building Systems
There is no gas, sewer, or water service to the church, but the building has overhead electrical service with a box and meter on the south wall. Interior lighting and electrical outlets have been installed in discrete locations inside the church. The building is currently only used during warm months, and there are no plans to heat or cool the building. The project team noted that the overhead electrical service could be replaced with underground service, but that this is not a high priority.

Site Conditions
Overhanging branches from the pine trees around the building have crowded the church and should be trimmed to not touch the building. The project team reported two pines near the southwest corner of the building that "appear to be mostly without green needles and probably need to be removed." Trimming the branches and removing any dead or dying trees "will allow more sun and air circulation around the building that will allow the roof to dry out quicker and extend the life of the roof."[10]

Based on these recommendations, Muskego Church's structural integrity will not be compromised as a result of the Zvago Cooperative development.

[10] Muskego HSR.

House Moving Feasibility

The developers have sought alternatives to demolishing the three historic houses near Muskego Church, including exploring the feasibility of moving them to other sites on the seminary's campus and within the neighborhood. They advertised the houses for sale to any party interested in relocating them, but no offers were received. In June 2016, Charlene Roise contacted Jim Dowds, president of Prima Land, which has moved and renovated ten houses over one hundred years old throughout the Twin Cities in conjunction with Stubbs Movers. Jim and Larry Stubbs—owner of the moving company, which was the firm behind the relocation of the Shubert Theater in Minneapolis—visited Luther Seminary on June 30, 2016, to inspect the three houses on the project site to determine if they would be viable candidates for relocation. The following section is excerpted from Jim's feasibility report, which is included in Appendix B.

Although the foundations were found to be structurally sound, several other variables affect the feasibility of moving the houses:

- Size
- Condition
- Routes for moving
- Presence of trees and overhead wires
- Available lots within the proximity
- Costs of potential lots
- Availability of city utilities
- Timing
- Renovation costs
- Final sale price

Summary of the houses at Luther Seminary

- 2218 Luther Place (House 18) is 35 feet wide and the columns would have to be removed.
- 2235 Luther Place (House 21) is 31 feet wide without porches.
- 2245 Luther Place (House 19) is 36 feet wide.

The only potential moving routes are Como Avenue and Eustis Street, as the majority of streets in the neighborhood are too narrow to facilitate the move. Street trees are another major obstacle to contend with. Como Avenue is wide enough without having to trim the boulevard trees, but Eustis is only 32 feet wide. Two of the houses are too wide to fit within the curbs on Eustis. To provide the necessary clearances, the street trees would require severe trimming or removal, which would likely be rejected by members of the community and the city forestry department.

Costs

Moving, Wires, and Forestry	$75,000/house
Removing columns from 2218 Luther Place	$12,000
Renovation costs:	
2218 Luther Place	$490,000
2235 Luther Place	$375,000
2245 Luther Place	$453,000
Final costs:	
2218 Luther Place	$577,000
2235 Luther Place	$450,000
2245 Luther Place	$528,000

These figures do not include the cost of land. Jim contacted several local groups to determine the availability of potential lots in the neighborhood:

- Luther Seminary: contacted Michael Morrow, Vice President for Finance and Administration. No properties are available elsewhere on the seminary's campus.
- State of Minnesota: contacted Jennie Matti with right-of-way surplus sales for potential lots along Highway 280. If there were lots available, Jim would be behind 300 people in the request queue. Furthermore, his inquiry would not be processed for approximately one year to determine if there were lots available along Highway 280.
- Health Partners: contacted David Anderson at Fruenshuh Commercial Real Estate and Todd Young at Health Partners, the owners of a 4.8-acre parcel that was purchased from Luther Seminary. No lots are available at that site.

Retaining the houses in their existing locations is not a viable option. The houses are not suitable for Luther Seminary's continued use, and the needs of the aging houses are outpacing routine repairs. In recent years the buildings have functioned as offices and student housing—low-density uses that do not provide sufficient income to cover their utility and maintenance costs. These expenses divert limited funds from the seminary's mission of educating Christian leaders.

The size of the houses limits the potential routes for relocation and restricts the feasible search area. There are no lots available within close proximity of Luther Seminary. Even if there were lots available, the relocation and renovation costs put the houses out of range for potential buyers. Renovating the houses is not economically feasible given today's costs of construction and the income that could be anticipated from the sale after the houses are relocated.

Conclusion

Moving the historic houses is not economically feasible, nor is retaining them for continued use by the seminary. Although the Zvago Cooperative project proposes to demolish three historic houses within the local landmark boundary for Muskego Church, the new construction will not directly impact the church or the characteristics that qualify it for designation. Muskego Church is not original to Saint Anthony Park, but it has been on this relocated site for over one hundred years. The church will remain in its hilltop location nestled in a grove of pine trees, thus maintaining its integrity of location on the seminary campus. The pine trees in the church's immediate setting will be preserved and protected during construction. The north wall of the new building will be in line with that of House 18, which will maintain the same visual corridor that currently exists. The height of the new building will not exceed the height of those surrounding it, and a flat roof will ensure it maintains a low profile. The proposed retaining wall will have a negligible visual impact to Muskego Church. Furthermore, the bottom of the hillside has already been modified with the construction of a stone retaining wall in the early 2000s. For the new wall, boulders in various shapes, size, and colors will create a natural appearance along the slope to complement the existing landscape. New trees and shrubs will be planted to offset those that are proposed to be removed as a result of the new construction. These considerations will minimize the potential impacts to the church's integrity of setting. Muskego Church's integrity of design, materials, and workmanship will remain intact through rigorous vibration monitoring and the use of smaller equipment, which will lessen vibration loads. These factors will continue to underscore the church's integrity of feeling and association as an example of pioneer log craftsmanship.

Appendix A
Vibration loads report from Professional Service Industries, October 2016

Information To Build On
Engineering • Consulting • Testing

October 17, 2016

Mr. Enrico Williams
Kaas Wilson Architects
1301 American Boulevard East
Bloomington, Minnesota 55425

Re: Construction Vibration Concerns
Luther Senior Living
Saint Paul, Minnesota
PSI Report No. 0675747-L1

Dear Mr. Williams:

Professional Service Industries, Inc. (PSI) is pleased to provide our supplemental recommendations regarding vibration control and monitoring for the Luther Senior Living project located at 2201 Luther Place in Saint Paul, Minnesota. PSI understands that as part of the planned construction, protection of the existing Muskego Church on the Luther Seminary campus has been voiced as a concern. This is a listed historical structure of and is constructed of oak timbers.

When existing structures exist within or adjacent to proposed construction sites, the potential for non-impact damage is typically assessed by conducting an existing condition survey (ECS) prior to construction, utilizing crack monitors or other survey markers during construction, and recording observed vibrations at points of concern in the existing structure. The ECS is performed to document any visible existing structural damage, such as minor cracks in masonry or concrete members, deflections in timber or steel members, and checking planeness and plumbness in the structure. If existing cracks are observed, a representative number of locations may receive crack monitoring, which utilizes a gauge affixed to each side of an existing crack, which can be monitored during construction to document the magnitude and direction of movement along the crack surface. Vibration monitoring uses a series of microphones or geophones to record the magnitude of vibrations sustained at the monitor location. Pre-construction vibration monitoring is sometimes utilized to document non-construction sources of vibrations, including bus traffic, truck traffic, and industrial activity.

An important variable in protecting existing structures from vibration loads is the concept of *attenuation*. Attenuation is how soils either dampen (reduce) or magnify (increase) vibration amplitude as a wave moves laterally or vertically through a soil media. In general, the more continuous the medium is, the less damping occurs during vibration transmittal. For a less continuous medium, such as the granular soils

on site, dampening occurs as energy is lost each time the wave must move across the boundary between discrete particles or through the air voids in a porous media.

A common visual example would be striking one end of a beam with a hammer to induce vibrations, then measuring the vibrations at the opposite end. In a continuous material such as steel, the vibrations would start at the hammer end, and travel to the monitoring end, perhaps multiple times, before the vibrations are dampened to below sensory levels. If the same hammer struck a concrete beam, some vibrations may be felt, but would dampen more quickly due to the granular and porous nature of the concrete. A similar dampening would occur in a timber beam.

Another important factor in assessing the potential for damage is distance from the vibration source. Vibrations dissipate (lose energy) as they are transmitted through a medium via heat and sound. As the structure in question gets farther from the vibration source, the dissipation reduces the effective energy applied to the structure from vibrations, and reduces the potential for damage.

The final factor in assessing damage is the vibration intensity caused by a given vibration source. Typically, the largest vibration loads are induced by pile-driving equipment, with lesser loads from other excavation equipment such as bulldozers and excavators. A table is show below with common values for vibration loads (in peak particle velocity (PPV), measured in inches per second).

Table 12-2 Vibration Source Levels for Construction Equipment (From measured data.[8][9][10][11])

Equipment		PPV at 25 ft (in/sec)	Approximate L_v† at 25 ft
Pile Driver (impact)	upper range	1.518	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

† RMS velocity in decibels (VdB) re 1 μinch/second

*Data provided by the National Transportation Library Rail Design Manual

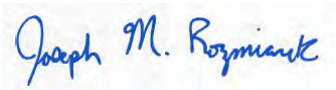
The proposed senior living facility is planned to bear on shallow foundations, so pile driving equipment is not anticipated for the project. The greatest vibration-inducing equipment in the table above would be the large bulldozer, which will be utilized during

mass-grading operations. It should be noted that the table above measures vibrations at a standard distance of 25 feet from the vibration source. Based on the provided site plans, the nearest equipment to the Muskego Church would be at least 50 feet, accounting for the planned construction limits and the distance to the new facility and associated site work inside the construction limits.

Allowable vibration loads are determined on a case-by-case basis, depending on the condition of the structure of the distance from the vibration source. Common allowable vibration values for normal residential and commercial facilities are on the order of 0.25 inches per second PPV. For historical or damaged structures, the allowable vibration loads can be reduced to 0.15 or 0.12 inches per second PPV, depending on the results of the existing condition survey. **Based on the anticipated vibration loads from the anticipated construction equipment, and based on the distance from the church to the planned construction limits, the vibration load on the existing church is anticipated to be below the thresholds noted above.** This can be verified by field testing prior to and at the time of construction. PSI is available to provide the ECS and vibration monitoring services for the project if desired.

It should be noted that this letter is based on general knowledge of soil mechanics and the conditions observed in the soils borings from the geotechnical report. This letter is not intended to address all site-specific hazards, or soil stratigraphy that is different from the conditions noted on site. If there are any questions regarding this letter, PSI should be contacted at the Eagan, Minnesota office, (651) 646-8148.

Respectfully submitted,
PROFESSIONAL SERVICE INDUSTRIES, INC.



Joseph M. Rozmiarek, P.E
Project Manager
Geotechnical/Construction Services

Appendix B
House moving feasibility report by Prima Land, October 2016

Luther Seminary House Moving Feasibility Report
Prepared by Jim Dowds, Prima Land
October 21, 2016

Prima Land is a land development and construction company serving the Twin Cities. With over twenty-five years of experience, the company has a strong track record of assisting non-profits with their housing and development needs. Jim Dowds, president of Prima Land, has partnered with several neighborhood groups to provide families with high-quality affordable housing either through new construction or the rehabilitation of historic houses. The company has built or renovated over 200 houses throughout the metropolitan area. In conjunction with Larry Stubbs of Stubbs Movers—the firm behind the relocation of the Shubert Theater in Minneapolis—Prima Land has moved and renovated ten houses over 100 years old.

Jim and Larry visited Luther Seminary on June 30, 2016, to inspect the three houses on the project site to determine if they would be viable candidates for relocation. Although the foundations were found to be structurally sound, several other variables affect the feasibility of moving them:

- Size of the house
- Condition of the house
- Routes for moving
- Presence of trees and overhead wires
- Available lots within the proximity
- Costs of potential lots
- Availability of city utilities
- Timing
- Renovation costs
- Final sale price

Summary of the houses at Luther Seminary

- 2235 Luther Place (House 21) is 31 feet wide without porches.
- 2245 Luther Place (House 19) is 36 feet wide.
- 2218 Luther Place (House 18) is 35 feet wide and the columns would have to be removed.

The only potential moving routes are Como Avenue and Eustis Street, as the majority of streets in the neighborhood are too narrow to facilitate the move. Street trees are another major obstacle to contend with. Como Avenue is wide enough without having to trim the boulevard trees, but Eustis is only 32 feet wide. Two of the houses are too wide to fit within the curbs on Eustis. To provide the necessary clearances, the street trees would require severe trimming or removal, which would likely be rejected by members of the community and the city forestry department.

Costs:

Moving, Wires, and Forestry	$75,000/house
Removing columns from 2218 Luther Place	$12,000
Renovation costs: 2235 Luther Place 2245 Luther Place 2218 Luther Place	 $375,000 $453,000 $490,000
Final costs: 2235 Luther Place 2245 Luther Place 2218 Luther Place	 $450,000 $528,000 $577,000

These figures do not include the cost of land. Jim contacted several local groups to determine the availability of potential lots in the neighborhood:

- Luther Seminary: contacted Michael Morrow, Vice President for Finance and Administration. No properties are available elsewhere on the seminary's campus.
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Retaining the houses in their existing locations is not a viable option. The houses are not suitable for Luther Seminary's continued use, and the needs of

the aging houses are outpacing routine repairs. In recent years the buildings have functioned as offices and student housing—low-density uses that do not provide sufficient income to cover their utility and maintenance costs. These expenses divert limited funds from the seminary's mission of educating Christian leaders.

Conclusion

The size of the houses limits the potential routes for relocation and restricts the feasible search area. There are no lots available within close proximity of Luther Seminary. Even if there were lots available, the relocation and renovation costs put the houses out of range for potential buyers. Renovating the houses is not economically feasible given today's costs of construction and the income that could be anticipated from the sale after the houses are relocated.

Zvago Saint Anthony Park

2265 Luther Place, Saint Paul, MN 55108

ABBREVIATIONS

AC	AIR CONDITIONER
ACOUST	ACOUSTIC/ACOUSTICAL
ACT	ACOUSTIC TILE
ADH	ADHESIVE
AFF	ABOVE FINISH FLOOR
AGGR	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
AP	ACCESS PANEL
ARCH	ARCHITECTURAL
ASPH	ASPHALT
AVE	AVENUE
BD/BDS	BOARD/BOARDS
BFE	BOTTOM OF FOOTING
BITUM	BITUMINOUS
BKT	BRACKET
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLVD	BOULEVARD
BM	BEAM/BENCH MARK
BOT	BOTTOM
BR	BEDROOM
BRG	BEARING
BRK	BRICK
BSMT	BASEMENT
BTWN	BETWEEN
CAB	CABINET
CB	CATCH BASIN
CEM	CEMENT
CFB	CEMENT FIBER BOARD
CG	CORNER GUARD
CIP	CAST IRON PIPE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLKG	CAULKING
CLO	CLOSET
CMU	CONC MASONRY UNIT
CNTR	COUNTER
CO	COMPANY
COL	COLUMN
COMB	COMBINATION
COMP	COMPOSITION
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORP	CORPORATION
CORR	CORRIDOR
CPT	CARPET
CR	CURTAIN ROD
CSK	COUNTERSINK
CT	CERAMIC TILE
CTOP	COUNTER TOP
CU FT	CUBIC FOOT
CU IN	CUBIC INCH
CU YD	CUBIC YARD
D	DRYER
DBL	DOUBLE
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIV	DIVISION
DN	DOWN
DPRF	DAMPPROOF
DR	DINING ROOM/DOOR
DS	DOWNSPOUT
DT	DRAPERY TRACK
DW	DISHWASHER
DWG	DRAWING
DWR	DRAWER
E	EAST
EA	EACH
EIFS	EXT. INSUL FIN SYSTEM
EL	ELEVATION
ELEC	ELECTRIC/ELECTRICAL
ELEV	ELEVATOR
ENGR	ENGINEER
ENT	ENTRANCE
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXC	EXCAVATE
EXH	EXHAUST
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
F TO F	FACE TO FACE
FAB	FABRICATE
FD	FLOOR DRAIN
FDN	FOUNDATION
FEC	FIRE EXTINGUISHER CABINET
FEP	FINISHED END PANEL
FE	FIRE EXTINGUISHER
FF	FINISH FACE
FH	FIRE HOSE
FIG	FIGURE
FIN	FINISH/ FINISHED
FIX	FIXTURE
FL	FLOOR
FLASH	FLASHING
FLUOR	FLUORESCENT
FM	FACE OF MASONRY
FOW	FACE OF WALL
FRPF	FIREPROOF
FR	FRAME
FRT	FREIGHT
FS	FACE STUD
FSH	FACE OF SHEATHING
FT	FOOT/FEET
FTG	FOOTING
FURN	FURNISH
FURR	FURRING
F.V.	FIELD VERIFIED
G	GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GAR	GARAGE
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL
GI	GALVANIZED IRON
GL	GLASS/GLAZING
GOVT	GOVERNMENT
GPBD	GYPSUM WALLBOARD
GPM	GALLON PER MINUTE
GR	GRADE
GRTG	GRATING
GS	GREASE SHIELD
GYP	GYPSUM
HB	HOSE BIB
HC	HOLLOW CORE
HD	HEAD
HDRL	HANDRAIL
HDWD	HARDWOOD
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HWY	HIGHWAY
ID	IDENTIFICATION/INSIDE DIA
IN	INCH
INCL	INCLUDE
INC	INCORPORATE
INFO	INFORMATION
INSUL	INSULATE/INSULATION
INT	INTERIOR
INV	INVERT
JAN	JANITOR
JCT	JUNCTION
JT	JOINT
JST	JOIST
KD	KNOCK DOWN
KIT/K	KITCHEN
L	LINEN
LAB	LABORATORY
LAD	LADDER
LAM	LAMINATE
LAT	LATITUDE
LAV	LAVATORY
LB/LBS	POUND/POUNDS
LBR	LUMBER
LD	LOAD
LDG	LOADING
LG	LENGTH
LH	LEFT HAND
LIB	LIBRARY
LIN	LINOLEUM
LNDY	LAUNDRY
LOA	LENGTH OVERALL
LONG	LONGITUDE
LR	LIVING ROOM
LT	LIGHT
MACH	MACHINE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MC	MEDICINE CABINET
MECH	MECHANICAL
MEMB	MEMBRANE
MEMO	MEMORANDUM
MEZZ	MEZZANINE
MFG	MANUFACTURED
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MLDG	MOULDING
MO	MASONRY OPENING
MOD	MODULAR
MTL	METAL
MTD	MOUNTED
MULL	MULLION
N	NORTH
NIC	NOT IN CONTRACT
NO#	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OD	OVERFLOW DRAIN
OFF	OFFICE
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
OSB	ORIENTED STRAND BOARD
OZ	OUNCE
P&G	PITCH & GRAVEL
PASS	PASSENGER
PCF	POUNDS PER CUBIC FOOT
PED	PEDESTRIAN TRAFFIC COATING
PER	PERIMETER
PERF	PERFORATE
PERP	PERPENDICULAR
PIL	PILASTER
P LAM	PLASTIC LAMINATE
PL	PLATE
PLAS	PLASTER
PLMB	PLUMBING
PLYWD	PLYWOOD
PNEU	PNEUMATIC
POL	POLISHED
PORC	PORCELAIN
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT/POINT
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PROP	PROPERTY
PUR	PURLINS
QR	QUARTER/QUARTER-ROUND
QT	QUARRY TILE
QTY	QUANTITY
R	RISER
R&S	ROD & SHELF
RAD	RADIATION/RADIUS
RB	RESILIENT BASE
RC	RESILIENT CHANNEL
RCT	RUBBER COMPOSITION TILE
RD	ROAD/ROUND/ROOF DRAIN
RECP	RECEPTACLE
REC	RECESSED
REF	REFERENCE
REFRIG	REFRIGERATOR
REG	REGULAR/REGISTER
REINF	REINFORCE/REINFORCING
REQD	REQUIRED
RESIL	RESILIENT
RET	RETURN
RH	ROBE HOOK/RIGHT HAND
RFG	ROOFING
RM	ROOM
RO	ROUGH OPENING
RS	REDUCER STRIP
RWD	REDWOOD
RWL	RAIN WATER LEADER
S	SOUTH
SAN	SANITARY
SB	SPLASH BLOCK
SC	SOLID CORE
SCHED	SCHEDULE
SD	SOAP DISH
S DISP	SOAP DISPENSER
SEC	SECOND
SECT	SECTION
SH	SHELF/SHINGLES
SHR	SHOWER
SHT	SHEET
SHTG	SHEATHING
SID	SIDING
SIM	SIMILAR
SLID	SLIDING
SM	SMOOTH (FINISH)
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SPEC	SPECIFICATION
SQ	SQUARE
SS	SERVICE SINK
SSA	SINGLE STRENGTH A
S STL	STAINLESS STEEL
ST	STREET
STD	STANDARD
STL	STEEL
STOR	STORAGE
STR	STRINGER
STXT	SPRAY TEXTURE
SUB FL	SUBFLOOR
SUSP	SUSPENDED
SV	SHEET VINYL
S4S	SURFACED FOUR SIDES
T	TREAD
T&G	TONGUE & GROOVE
TB	TOWEL BAR
TC	TOP OF CURB
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERED
TERR	TERRAZZO
TEX	TEXTURE
TFE	TOP OF FOOTING ELEV
THRESH	THRESHOLD
THRU	THROUGH
TK BD	TACKBOARD
T.O	TOP OF
TPH	TOILET PAPER HOLDER
TRANS	TRANSOM
TV	TELEVISION
TW	TOP OF WALL
TYP	TYPICAL
UL	UNDERWRITER'S LAB, INC
UNO	UNLESS NOTED OTHERWISE
VAN	VANITY
VB	VAPOR BARRIER/VINYL BASE
VEN	VENEER
VENT	VENTILATOR
VERT	VERTICAL
VEST	VESTIBULE
VFY	VERIFY
VIN	VINYL
VNL	VINYL
VWC	VINYL WALL COVERING
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMP TILE
W	WEST/WASHER
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WI	WROUGHT IRON
WP	WATERPROOF
WR	WATER RESISTAN
WS	WEATHERSTRIP
WSCT	WAINSCOTING
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

HATCH KEY

- EARTH
- GRANULAR FILL
- GYPSUM BOARD
- SAND
- CONCRETE
- CONCRETE MASONRY UNIT
- BRICK/ MANUFACTURED STONE
- RIGID INSULATION OR FOAM/POURED IN PLACE INSUL
- STEEL
- ROUGH WOOD
- WOOD BLOCKING OR SHIM
- PLYWOOD
- BATT INSULATION (INSUL-10)
- WOOD
- STUD WALL
- QUARRY OR CERAMIC TILE

(These patterns are scaled for 1-1/2"= 1'-0"details)

SYMBOLS KEY

- ELEVATION
- DETAIL
- SECTION
- INTERIOR ELEVATION
- ADDENDUM, CHANGE ORDER, PROPOSAL REQUEST, ARCHITECTS SUPPLEMENTAL INSTRUCTIONS
- KEYNOTES
- INTERIOR/EXTERIOR WALL TYPE, FLOOR-CEILING TYPE
- Room name 101 — ROOM NAME / NUMBER
- 101 / Name / x 45x — UNIT NUMBER / NAME DETAIL NUMBER
- 1i — DOOR NUMBER
- ELEVATION / WORK POINT
- NORTH ARROW
- HDCP SYMBOL
- BREAK LINE
- DETAIL CALLOUT
- REVISION CLOUD
- W2430 — CASEWORK TAG
- 1i — PARKING TAG
- 1t — WINDOW TAG
- CPT-1 — FLOOR & WALL FINISH TAG
- PL-1 — MILLWORK FINISH TAG

General Notes to Bidders:

Per AIA A201 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are **complementary**, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

Per Supplementary instructions Specification Section 00 81 00

A. 1.2.4 - Precedence: In the event of inconsistencies among the documents, Architect will interpret them in accordance with the requirements specified herein and the overall intent of achieving a **finished,** code complying product throughout the buildings.

B. 1.2.5 - Where standard specifications, such as Fed. Spec, ANSI, ASTM, or other standards are referred to herein, if no date or edition is indicated, the latest or most recent edition at date of issue including all supplements, shall apply to this project.

Deferred Submittals

10 30 00 Fireplaces

14 24 00 Elevator

15 50 00 Fire Suppression

16 72 00 Fire Alarm System

LOCATION MAP

Gross Area by Level	
Level	**Gross Area**
Level -1	28,882 ft²
Level 1	28,067 ft²
Level 2	27,999 ft²
Level 3	28,004 ft²
Grand total	112,952 ft²

HUD ID#:

I, the undersigned Design Architect, to the best of my knowledge, belief and professional judgment, hereby certify that the proposed construction in accordance with the working drawings and specifications prepared for the subject Project (a) is permissible under the applicable zoning, building, housing and other codes, ordinances and/or regulations, as modified by any waivers obtained from appropriate officials, and (b) complies with the HUD Minimum Property Standards, applicable accessibility laws for persons with disabilities, and other applicable HUD Standards, guidelines and criteria.

Architect:

Owner:

Contractor:

Bonding Company:

Lender:

The building and site design covered under these documents are in compliance with the design requirements of the Fair Housing Act Design Manual.

1503 - Residential Unit Mix

Zvago Name	Name	Count	Unit Area Gross	Unit Area Net	Room Counts Bed Rooms	Bath Rooms	Den	Deck	ADA Type
Hawthrone	Unit B1	3	999 ft²	924 ft²	1	1	0	1	
Birch	Unit B2	4	1,036 ft²	950 ft²	1	1.5	1	1	
Laurel	Unit C1	3	1,197 ft²	1,101 ft²	2	2	0	1	
Willow	Unit C2	5	1,227 ft²	1,142 ft²	2	2	0	1	
Willow	Unit C2 (Type A)	2	1,227 ft²		2	2	0	1	
Walnut	Unit C3	3	1,237 ft²	1,154 ft²	2	2	0	1	
Spruce	Unit C4	3	1,267 ft²	1,171 ft²	2	2	0	1	
Pine	Unit C5	3	1,292 ft²	1,195 ft²	2	2	0	1	
Elm	Unit C6	1	1,346 ft²	1,243 ft²	2	2	0	0	
Oak	Unit D1	3	1,443 ft²	1,347 ft²	2	2	0	1	
Sumac	Unit E1	9	1,413 ft²	1,324 ft²	3	2	0	2	
Maple	Unit E2	6	1,554 ft²	1,440 ft²	2	2	1	1	
Sycamore	Unit E3	3	1,732 ft²	1,639 ft²	2	2	1	1	
Hickory	Unit E4	1	1,756 ft²	1,652 ft²	2	2.5	1	1	
Grand total: 49		49							

1503 - Non-Rental Living Unit Mix

Name	Count	Unit Area Gross	Unit Area Net	Room Counts Bed Rooms	Bath Rooms	Den	Deck	ADA Type
Unit Guest Suite	1	555 ft²	508 ft²	0	1	0	0	
Grand total: 1	1							

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A001	Code Diagrams	11/10/16	
A002	Code Information	11/10/16	
A005	Code Details	11/10/16	
A006	Code Details	11/10/16	
A010	Construction Assemblies	11/10/16	
C0.0	TITLE SHEET	10/11/16	
C0.1	SITE SURVEY	10/11/16	
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C2.0	SITE PLAN	10/11/16	
C3.0	GRADING PLAN	10/11/16	
C4.0	UTILITY PLAN	10/11/16	
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C5.1	CIVIL DETAILS	10/11/16	
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C5.3	CIVIL DETAILS	10/11/16	
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L1.1	LANDSCAPE PLAN NOTES & DETAILS	10/11/16	
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A462	Unit Plans - Sumac	11/10/16	
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E830	MOTOR SCHEDULE	11/10/16	

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Bloomington, MN 55425
tel: (612) 879-6000
www.kaaswilson.com

Civil / Landscape:
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4931 W 35th St. Suite 200
St. Louis Park, MN 55416
P: (763) 213-3944

Structural:
BKBM Engineers
5930 Brooklyn Blvd
Minneapolis, MN 55429
P: (763) 843-0436

Mechanical:
Ken Kendle
1900 Oakcrest Ave. #1
Roseville, MN 55113
P: (651) 633-3955

Electrical:
Wunderlich-Malec Engr.
5501 Feltl Road
Minnetonka, MN 55343
P: (952) 933-3222

Interiors:
BDH & Young Space Design
7001 France Ave.S, Suite 200
Edina, MN 55435
P: (952) 893-9020

General Contrator:
Frana Companies Inc.
633 2nd Ave S
Hopkins, MN 55343
P: (952) 935-8600

Project: Zvago Saint Anthony Park
2265 Luther Place, Saint Paul, MN 55108

Owner: OneTwoOne Development (651) 766-4488

Project Number 1503

Date 11/10/16

NOT FOR CONSTRUCTION

Date 11/10/16

Revision PRICING SET

Rev. No.

Cover

As indicated

A000

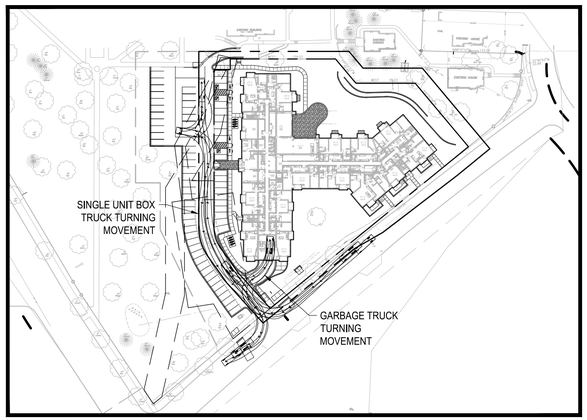
C:\Revit Local\1503 - Ecumen Luther Seminary Senior Co-op_v9_ewilliams.rvt

Copyright Kaas Wilson Architects | 11/10/2016 1:47:29 PM

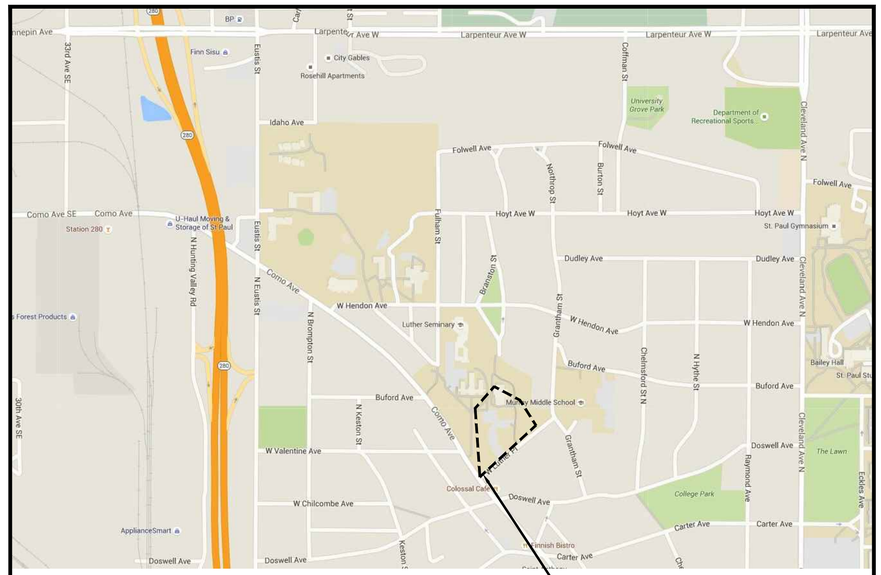
ZVAGO SAINT ANTHONY PARK

ST. PAUL, MINNESOTA

ISSUED FOR: CITY SUBMITTAL



SITE ACCESS MAP



SITE LOCATION MAP

DEVELOPER / PROPERTY OWNER:

ONETWOONE DEVELOPMENT
3530 LEXINGTON AVENUE NORTH
SHOREVIEW, MN 55126
651-766-4488

ENGINEER / LANDSCAPE ARCHITECT:

CIVIL SITE GROUP
4931 W 35TH STREET
SUITE 200
ST LOUIS PARK, MN 55416
612-615-0060

SURVEYOR:

REHDER AND ASSOCIATES, INC.
3440 FEDERAL DRIVE
SUITE 110
EAGAN, MN
651-452-5051

GEOTECHNICAL ENGINEER:

TBD

MASTER LEGEND:

- 932 — EX. 1' CONTOUR ELEVATION INTERVAL
- x 932.0 — EXISTING SPOT GRADE ELEVATION
- 939 — PROPOSED 1' CONTOUR ELEVATION INTERVAL
- 932.0 — SPOT GRADE ELEVATION (GUTTER/FLOW LINE UNLESS OTHERWISE NOTED)
- 932.0BC / 932.0TC — SPOT GRADE ELEVATION BACK OF CURB (TOP OF CURB)
- 932.0TW — SPOT GRADE ELEVATION TOP OF WALL
- 932.0BW — SPOT GRADE ELEVATION BOTTOM OF WALL
- DRAINAGE ARROW
- EOF — EMERGENCY OVERFLOW
- SILT FENCE / GRADING LIMIT
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- SOIL BORING LOCATION
- T.O. — CURB AND GUTTER (T.O = TIP OUT)

- PROPOSED MANHOLE STORM
- PROPOSED CATCH BASIN OR CATCH BASIN MANHOLE STORM
- PROPOSED GATE VALVE
- PROPOSED FIRE HYDRANT
- S — PROPOSED MANHOLE SANITARY
- PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED WATER MAIN
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING WATER MAIN
- G — EXISTING GAS MAIN
- E — EXISTING UNDERGROUND ELECTRIC
- C — EXISTING UNDERGROUND CABLE

- EXISTING MANHOLE
- EXISTING CATCH BASIN
- EXISTING HYDRANT
- EXISTING STOPBOX
- EXISTING GATE VALVE
- EXISTING ELECTRIC BOX
- EXISTING LIGHT
- EXISTING GAS METER
- EXISTING GAS VALVE

GOPHER STATE ONE CALL
WWW.GOPHERSTATEONECALL.ORG
(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL

SHEET INDEX

SHEET NUMBER	SHEET TITLE
C0.0	TITLE SHEET
C0.1	SITE SURVEY
C1.0	REMOVALS PLAN
C2.0	SITE PLAN
C3.0	GRADING PLAN
C4.0	UTILITY PLAN
C5.0	DETAILS
C5.1	DETAILS
C5.2	DETAILS
C5.3	DETAILS
L1.0	LANDSCAPE PLAN
L1.1	LANDSCAPE NOTES
SW1.0	STORM WATER POLLUTION PREVENTION PLAN - EXISTING CONDITIONS
SW1.1	STORM WATER POLLUTION PREVENTION PLAN - PROPOSED CONDITIONS
SW1.2	STORM WATER POLLUTION PREVENTION PLAN - DETAILS
SW1.3	STORM WATER POLLUTION PREVENTION PLAN - NARRATIVE
SW1.4	STORM WATER POLLUTION PREVENTION PLAN - NOTES
SW1.5	STORM WATER POLLUTION PREVENTION PLAN - NOTES

CivilSite GROUP
4931 W. 35TH ST, SUITE 200
ST. LOUIS PARK, MN 55416
CivilSiteGroup.com
Matt Pavek 763-213-3944
Pat Sarver 952-250-2003

kaas wilson architects

PROJECT
ZVAGO SAINT ANTHONY PARK
2265 LUTHER PLACE, SAINT PAUL, MN 55108

ONETWOONE DEVELOPMENT
3530 LEXINGTON AVE N., SHOREVIEW, MN 55126

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 ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Matthew R. Pavek
DATE 10/11/16 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
12/15/15	CITY SUBMITTAL
6/20/16	SHPO SUBMITTAL
7/25/16	WATERSHED RESUBMITTAL
8/17/16	WATERSHED RESUBMITTAL
8/31/16	WATERSHED RESUBMITTAL
9/15/16	WATERSHED RESUBMITTAL
10/11/16	CITY/WATERSHED RESUBMITTAL

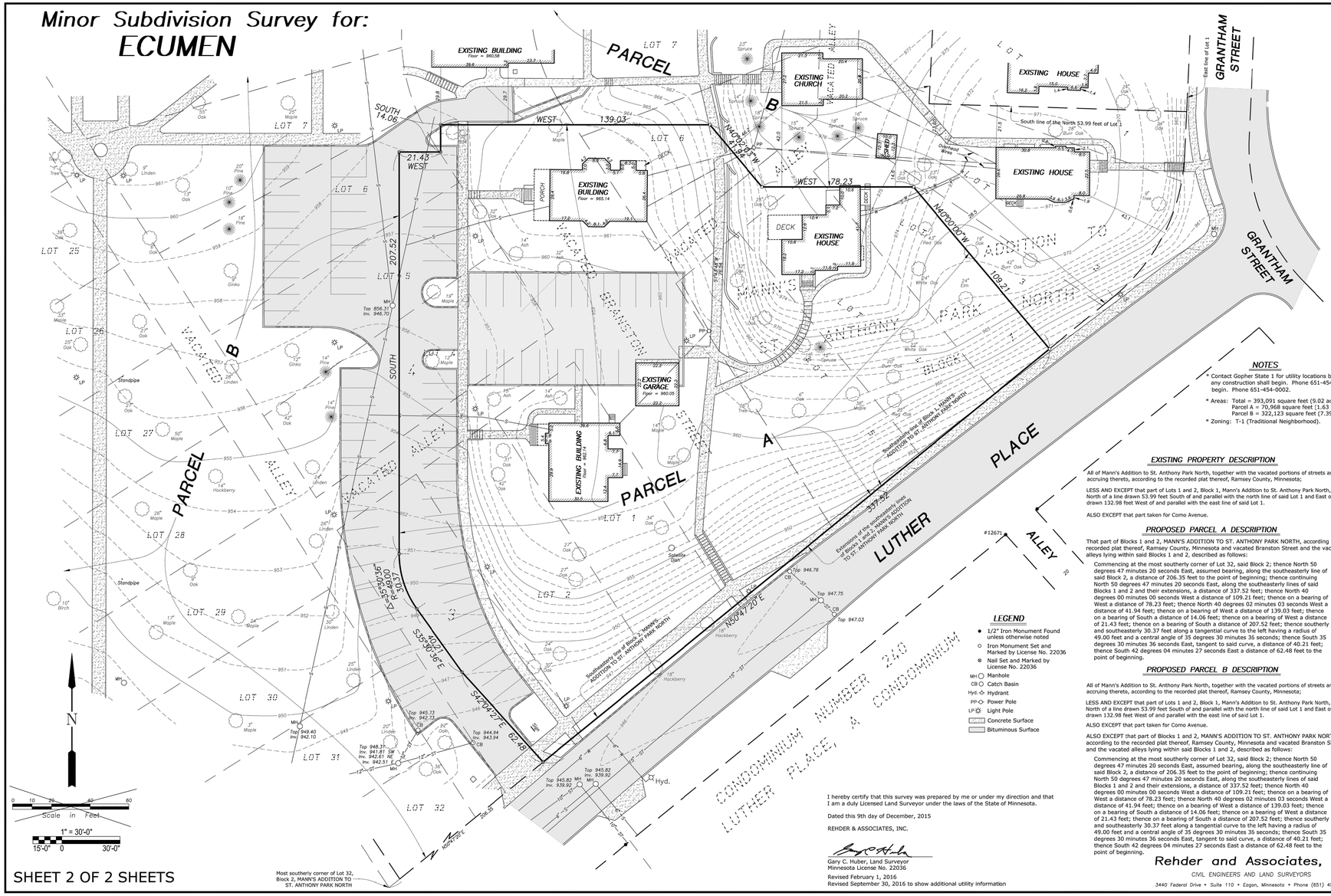
REVISION SUMMARY

DATE	DESCRIPTION

TITLE SHEET

C0.0

Minor Subdivision Survey for:
ECUMEN



LEGEND

- ● 1/2" Iron Monument Found unless otherwise noted
- ○ Iron Monument Set and Marked by License No. 22036
- ⊗ Nail Set and Marked by License No. 22036
- MH ○ Manhole
- CB ○ Catch Basin
- Hyd. ◇ Hydrant
- PP ◇ Power Pole
- LP ☼ Light Pole
- Concrete Surface
- Bituminous Surface

NOTES

* Contact Gopher State 1 for utility locations before any construction shall begin. Phone 651-454-0002. begin. Phone 651-454-0002.
* Areas: Total = 393,091 square feet (9.02 acres). Parcel A = 70,968 square feet (1.63 acre). Parcel B = 322,123 square feet (7.39 acre).
* Zoning: T-1 (Traditional Neighborhood).

EXISTING PROPERTY DESCRIPTION

All of Mann's Addition to St. Anthony Park North, together with the vacated portions of streets and alleys accruing thereto, according to the recorded plat thereof, Ramsey County, Minnesota;

LESS AND EXCEPT that part of Lots 1 and 2, Block 1, Mann's Addition to St. Anthony Park North, that lies North of a line drawn 53.99 feet South of and parallel with the north line of said Lot 1 and East of a line drawn 132.98 feet West of and parallel with the east line of said Lot 1.

ALSO EXCEPT that part taken for Como Avenue.

PROPOSED PARCEL A DESCRIPTION

That part of Blocks 1 and 2, MANN'S ADDITION TO ST. ANTHONY PARK NORTH, according to the recorded plat thereof, Ramsey County, Minnesota and vacated Branston Street and the vacated alleys lying within said Blocks 1 and 2, described as follows:

Commencing at the most southerly corner of Lot 32, said Block 2; thence North 50 degrees 47 minutes 20 seconds East, assumed bearing, along the southeasterly line of said Block 2, a distance of 206.35 feet to the point of beginning; thence continuing North 50 degrees 47 minutes 20 seconds East, along the southeasterly lines of said Blocks 1 and 2 and their extensions, a distance of 337.52 feet; thence North 40 degrees 00 minutes 00 seconds West a distance of 109.21 feet; thence on a bearing of West a distance of 78.23 feet; thence North 40 degrees 02 minutes 03 seconds West a distance of 41.94 feet; thence on a bearing of West a distance of 139.03 feet; thence on a bearing of South a distance of 14.06 feet; thence on a bearing of West a distance of 21.43 feet; thence on a bearing of South a distance of 207.52 feet; thence southerly and southeasterly 30.37 feet along a tangential curve to the left having a radius of 49.00 feet and a central angle of 35 degrees 30 minutes 35 seconds; thence South 35 degrees 30 minutes 36 seconds East, tangent to said curve, a distance of 40.21 feet; thence South 42 degrees 04 minutes 27 seconds East a distance of 62.48 feet to the point of beginning.

PROPOSED PARCEL B DESCRIPTION

All of Mann's Addition to St. Anthony Park North, together with the vacated portions of streets and alleys accruing thereto, according to the recorded plat thereof, Ramsey County, Minnesota;

LESS AND EXCEPT that part of Lots 1 and 2, Block 1, Mann's Addition to St. Anthony Park North, that lies North of a line drawn 53.99 feet South of and parallel with the north line of said Lot 1 and East of a line drawn 132.98 feet West of and parallel with the east line of said Lot 1.

ALSO EXCEPT that part taken for Como Avenue.

ALSO EXCEPT that part of Blocks 1 and 2, MANN'S ADDITION TO ST. ANTHONY PARK NORTH, according to the recorded plat thereof, Ramsey County, Minnesota and vacated Branston Street and the vacated alleys lying within said Blocks 1 and 2, described as follows:

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I hereby certify that this survey was prepared by me or under my direction and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Dated this 9th day of December, 2015

REHDER & ASSOCIATES, INC.

Gary C. Huber, Land Surveyor
Minnesota License No. 22036

Revised February 1, 2016
Revised September 30, 2016 to show additional utility information

Rehder and Associates, Inc.
CIVIL ENGINEERS AND LAND SURVEYORS
3440 Federal Drive • Suite 110 • Eagan, Minnesota • Phone (651) 452-5051

JOB: 154-2872.010

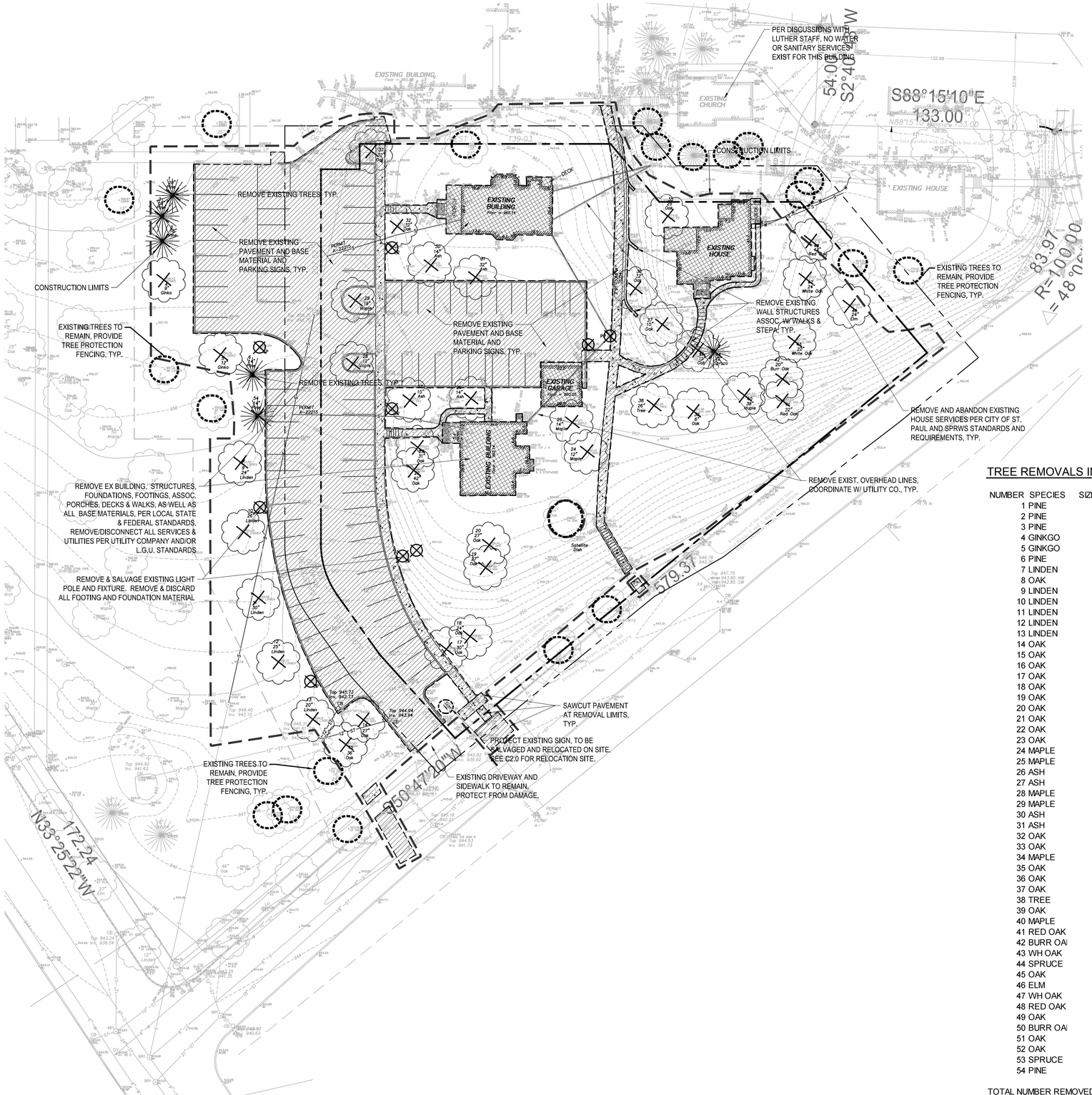
SHEET 2 OF 2 SHEETS

REVISION SUMMARY

DATE	DESCRIPTION

SITE SURVEY

C0.1



REMOVAL NOTES:

1. SEE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PLAN FOR CONSTRUCTION STORM WATER MANAGEMENT PLAN.
2. REMOVAL OF MATERIALS NOTED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH MNDOT, STATE AND LOCAL REGULATIONS.
3. REMOVAL OF PRIVATE UTILITIES SHALL BE COORDINATED WITH UTILITY OWNER PRIOR TO CONSTRUCTION ACTIVITIES.
4. EXISTING PAVEMENTS SHALL BE SAWCUT IN LOCATIONS AS SHOWN ON THE DRAWINGS OR THE NEAREST JOINT FOR PROPOSED PAVEMENT CONNECTIONS.
5. REMOVED MATERIALS SHALL BE DISPOSED OF TO A LEGAL OFF-SITE LOCATION AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
6. ABANDON, REMOVAL, CONNECTION, AND PROTECTION NOTES SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE WITH PROPOSED PLANS.
7. EXISTING ON-SITE FEATURES NOT NOTED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT THE DURATION OF THE CONTRACT.
8. PROPERTY LINES SHALL BE CONSIDERED GENERAL CONSTRUCTION LIMITS UNLESS OTHERWISE NOTED ON THE DRAWINGS. WORK WITHIN THE GENERAL CONSTRUCTION LIMITS SHALL INCLUDE STAGING, DEMOLITION AND CLEAN-UP OPERATIONS AS WELL AS CONSTRUCTION SHOWN ON THE DRAWINGS.
9. MINOR WORK OUTSIDE OF THE GENERAL CONSTRUCTION LIMITS SHALL BE ALLOWED AS SHOWN ON THE PLAN AND PER CITY REQUIREMENTS.
10. DAMAGE BEYOND THE PROPERTY LIMITS CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED IN A MANNER APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT OR IN ACCORDANCE WITH THE CITY.
11. PROPOSED WORK (BUILDING AND CIVIL) SHALL NOT DISTURB EXISTING UTILITIES UNLESS OTHERWISE SHOWN ON THE DRAWINGS AND APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
12. SITE SECURITY MAY BE NECESSARY AND PROVIDED IN A MANNER TO PROHIBIT VANDALISM, AND THEFT, DURING AND AFTER NORMAL WORK HOURS, THROUGHOUT THE DURATION OF THE CONTRACT. SECURITY MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY.
13. VEHICULAR ACCESS TO THE SITE SHALL BE MAINTAINED FOR DELIVERY AND INSPECTION ACCESS DURING NORMAL OPERATING HOURS. AT NO POINT THROUGHOUT THE DURATION OF THE CONTRACT SHALL CIRCULATION OF ADJACENT STREETS BE BLOCKED WITHOUT APPROVAL BY THE CITY PRIOR TO CONSTRUCTION ACTIVITIES.
14. ALL TRAFFIC CONTROLS SHALL BE PROVIDED AND ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
15. SHORING FOR BUILDING EXCAVATION MAY BE USED AT THE DISCRETION OF THE CONTRACTOR AND AS APPROVED BY THE OWNERS REPRESENTATIVE AND THE CITY PRIOR TO CONSTRUCTION ACTIVITIES.
16. STAGING, DEMOLITION, AND CLEAN-UP AREAS SHALL BE WITHIN THE PROPERTY LIMITS AS SHOWN ON THE DRAWINGS AND MAINTAINED IN A MANNER AS REQUIRED BY THE CITY.

EROSION CONTROL NOTES:

SEE SWPPP ON SHEETS SW1.0-SW1.5

CITY OF ST. PAUL REMOVAL NOTES:

1. THE REMOVAL, PRUNING, AND/OR PLANTING OF TREES ON THE PUBLIC BOULEVARD REQUIRES A PERMIT FROM THE CITY FORESTER (651-632-5129).

TREE REMOVAL NOTES:

SEE LANDSCAPE PLAN FOR TREES TO BE PLANTED ON-SITE

TREE REMOVALS INVENTORY:

NUMBER	SPECIES	SIZE	REMOVE
1	PINE	20	X
2	PINE	10	X
3	PINE	18	X
4	GINKGO	9	X
5	GINKGO	12	X
6	PINE	14	X
7	LINDEN	28	
8	OAK	42	
9	LINDEN	24	X
10	LINDEN	26	X
11	LINDEN	30	X
12	LINDEN	25	X
13	LINDEN	20	X
14	OAK	27	X
15	OAK	36	X
16	OAK	24	
17	OAK	30	X
18	OAK	24	X
19	OAK	27	X
20	OAK	27	X
21	OAK	34	
22	OAK	42	X
23	OAK	31	X
24	MAPLE	12	X
25	MAPLE	14	X
26	ASH	14	X
27	ASH	15	X
28	MAPLE	12	X
29	MAPLE	19	X
30	ASH	14	X
31	ASH	32	X
32	OAK	32	X
33	OAK	32	X
34	MAPLE	27	X
35	OAK	25	X
36	OAK	32	X
37	OAK	15	X
38	TREE	26	X
39	OAK	6	X
40	MAPLE	38	X
41	RED OAK	22	X
42	BURR OA	20	X
43	WH OAK	22	X
44	SPRUCE	12	X
45	OAK	15	X
46	ELM	24	X
47	WH OAK	24	X
48	RED OAK	43	X
49	OAK	19	
50	BURR OA	42	
51	OAK	23	
52	OAK	23	
53	SPRUCE	14	
54	PINE	14	X

TOTAL NUMBER REMOVED 45
TOTAL CALIPER REMOVED 1013

REMOVALS LEGEND:

- 932 — EX. 1' CONTOUR ELEVATION INTERVAL
- REMOVAL OF PAVEMENT AND ALL BASE MATERIAL, INCLUDING BIT., CONC., AND GRAVEL PVMTS.
- REMOVAL OF STRUCTURE INCLUDING ALL FOOTINGS AND FOUNDATIONS.
- TREE PROTECTION
- TREE REMOVAL - INCLUDING ROOTS AND STUMPS

GOPHER STATE ONE CALL
WWW.GOPHERSTATEONECALL.ORG
(800) 252-1166 TOLL FREE
(651) 454-0002 LOCAL

1" = 30'-0"
15'-0" 0 30'-0"

CivilSite GROUP
4931 W. 35TH ST. SUITE 200
ST. LOUIS PARK, MN 55416
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Matt Pavek 763-213-3944
Pat Sarver 952-250-2003

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2265 LUTHER PLACE, SAINT PAUL, MN 55108

ONETWOONE DEVELOPMENT
3530 LEXINGTON AVE N., SHOREVIEW, MN 55126

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Matthew R. Pavek
DATE 10/11/16 LICENSE NO. 44263

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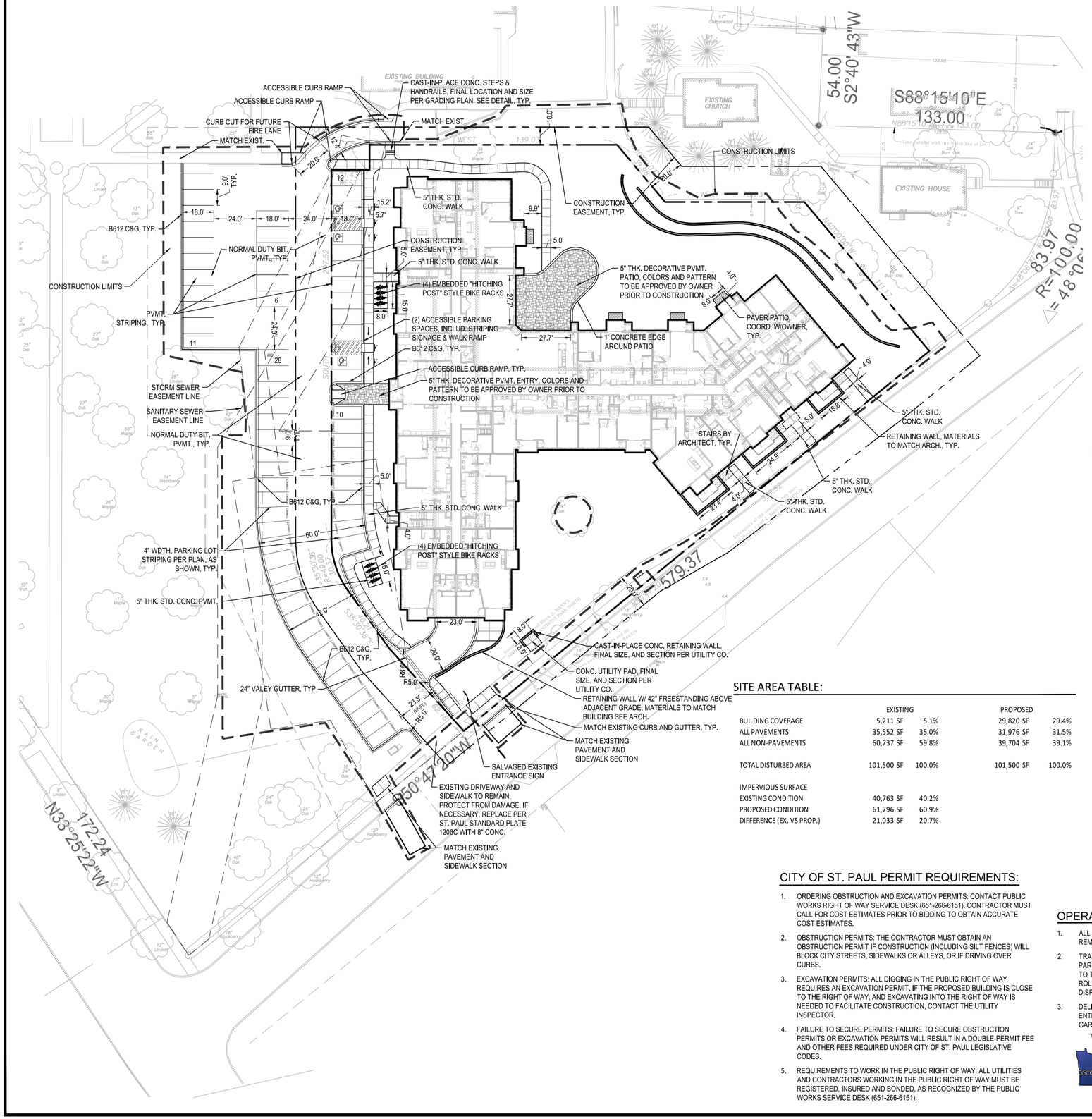
REVISION SUMMARY

DATE	DESCRIPTION

REMOVALS PLAN

C1.0



SITE AREA TABLE:

	EXISTING		PROPOSED	
BUILDING COVERAGE	5,211 SF	5.1%	29,820 SF	29.4%
ALL PAVEMENTS	35,552 SF	35.0%	31,976 SF	31.5%
ALL NON-PAVEMENTS	60,737 SF	59.8%	39,704 SF	39.1%
TOTAL DISTURBED AREA	101,500 SF	100.0%	101,500 SF	100.0%
IMPERVIOUS SURFACE				
EXISTING CONDITION	40,763 SF	40.2%		
PROPOSED CONDITION	61,796 SF	60.9%		
DIFFERENCE (EX. VS PROP.)	21,033 SF	20.7%		

CITY OF ST. PAUL PERMIT REQUIREMENTS:

1. ORDERING OBSTRUCTION AND EXCAVATION PERMITS: CONTACT PUBLIC WORKS RIGHT OF WAY SERVICE DESK (651-266-6151). CONTRACTOR MUST CALL FOR COST ESTIMATES PRIOR TO BIDDING TO OBTAIN ACCURATE COST ESTIMATES.
2. OBSTRUCTION PERMITS: THE CONTRACTOR MUST OBTAIN AN OBSTRUCTION PERMIT IF CONSTRUCTION (INCLUDING SILT FENCES) WILL BLOCK CITY STREETS, SIDEWALKS OR ALLEYS, OR IF DRIVING OVER CURBS.
3. EXCAVATION PERMITS: ALL DIGGING IN THE PUBLIC RIGHT OF WAY REQUIRES AN EXCAVATION PERMIT. IF THE PROPOSED BUILDING IS CLOSE TO THE RIGHT OF WAY, AND EXCAVATING INTO THE RIGHT OF WAY IS NEEDED TO FACILITATE CONSTRUCTION, CONTACT THE UTILITY INSPECTOR.
4. FAILURE TO SECURE PERMITS: FAILURE TO SECURE OBSTRUCTION PERMITS OR EXCAVATION PERMITS WILL RESULT IN A DOUBLE-PERMIT FEE AND OTHER FEES REQUIRED UNDER CITY OF ST. PAUL LEGISLATIVE CODES.
5. REQUIREMENTS TO WORK IN THE PUBLIC RIGHT OF WAY: ALL UTILITIES AND CONTRACTORS WORKING IN THE PUBLIC RIGHT OF WAY MUST BE REGISTERED, INSURED AND BONDED, AS RECOGNIZED BY THE PUBLIC WORKS SERVICE DESK (651-266-6151).

SITE LAYOUT NOTES:

1. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS AND LAYOUT OF ALL SITE ELEMENTS PRIOR TO BEGINNING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, LOCATIONS AND ELEVATIONS OF EXISTING AND PROPOSED PROPERTY LINES, TOPOGRAPHIC FEATURES, EASEMENTS, SETBACKS, UTILITIES, BUILDINGS AND PAVEMENTS. CONTRACTOR IS RESPONSIBLE FOR FINAL LOCATIONS OF ALL ELEMENTS FOR THE SITE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS. THE CONTRACTOR SHALL ALSO NOTIFY THE ENGINEER IF ANY EXISTING UTILITY LOCATIONS OR DEPTHS WILL NEED TO BE ADJUSTED FOR CONSTRUCTION TO SATISFY MINIMUM SEPARATION AND DEPTH REQUIREMENTS. REVISIONS AND RELOCATIONS THAT ARE REQUIRED DUE TO SITE VERIFICATION PRIOR TO CONSTRUCTION SHALL BE AT OWNER'S EXPENSE. ANY REVISIONS REQUIRED AFTER COMMENCEMENT OF CONSTRUCTION, DUE TO LOCATIONAL ADJUSTMENTS SHALL BE CORRECTED AT NO ADDITIONAL COST TO OWNER. ADJUSTMENTS TO THE LAYOUT SHALL BE APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF MATERIALS. STAKE LAYOUT FOR APPROVAL.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, INCLUDING A RIGHT-OF-WAY AND STREET OPENING PERMIT.
3. THE CONTRACTOR SHALL VERIFY RECOMMENDATIONS NOTED IN THE GEO TECHNICAL REPORT PRIOR TO INSTALLATION OF SITE IMPROVEMENT MATERIALS.
4. CONTRACTOR SHALL FIELD VERIFY COORDINATES AND LOCATION DIMENSIONS OF THE BUILDING AND STAKE FOR REVIEW AND APPROVAL BY THE OWNERS REPRESENTATIVE PRIOR TO INSTALLATION OF FOOTING MATERIALS.
5. LOCATIONS OF STRUCTURES, ROADWAY PAVEMENTS, CURBS AND GUTTERS, BOLLARDS, AND WALKS ARE APPROXIMATE AND SHALL BE STAKED IN THE FIELD, PRIOR TO INSTALLATION, FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT.
6. CURB DIMENSIONS SHOWN ARE TO FACE OF CURB. BUILDING DIMENSIONS ARE TO FACE OF CONCRETE FOUNDATION. LOCATION OF BUILDING IS TO BUILDING FOUNDATION AND SHALL BE AS SHOWN ON THE DRAWINGS.
7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR SAMPLES AS SPECIFIED FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO FABRICATION FOR ALL PREFABRICATED SITE IMPROVEMENT MATERIALS SUCH AS, BUT NOT LIMITED TO THE FOLLOWING, FURNISHINGS, PAVEMENTS, WALLS, RAILINGS, BENCHES, FLAGPOLES, LANDING PADS FOR CURB RAMPS, AND LIGHT AND POLES. THE OWNER RESERVES THE RIGHT TO REJECT INSTALLED MATERIALS NOT PREVIOUSLY APPROVED.
8. PEDESTRIAN CURB RAMPS SHALL BE CONSTRUCTED WITH TRUNCATED DOME LANDING AREAS IN ACCORDANCE WITH A.D.A. REQUIREMENTS-SEE DETAIL.
9. CROSSWALK STRIPING SHALL BE 24" WIDE WHITE PAINTED LINE, SPACED 48" ON CENTER PERPENDICULAR TO THE FLOW OF TRAFFIC. WIDTH OF CROSSWALK SHALL BE 5' WIDE. ALL OTHER PAVEMENT MARKINGS SHALL BE WHITE IN COLOR UNLESS OTHERWISE NOTED OR REQUIRED BY ADA OR LOCAL GOVERNING BODIES.
10. CURB AND GUTTER TYPE SHALL BE B612 UNLESS OTHERWISE NOTED ON THE DRAWINGS-TAPER BETWEEN CURB TYPES-SEE DETAIL.
11. ALL CURB RADII ARE MINIMUM 3' UNLESS OTHERWISE NOTED.
12. CONTRACTOR SHALL REFER TO FINAL PLAT FOR LOT BOUNDARIES, NUMBERS, AREAS AND DIMENSIONS PRIOR TO SITE IMPROVEMENTS.
13. FIELD VERIFY ALL EXISTING SITE CONDITIONS, DIMENSIONS.
14. PARKING IS TO BE SET PARALLEL OR PERPENDICULAR TO EXISTING BUILDING UNLESS NOTED OTHERWISE.
15. ALL PARKING LOT PAINT STRIPPING TO BE WHITE, 4" WIDE TYP.
16. BITUMINOUS PAVING TO BE "LIGHT DUTY" UNLESS OTHERWISE NOTED. SEE DETAIL SHEETS FOR PAVEMENT SECTIONS.
17. ALL TREES THAT ARE TO REMAIN ARE TO BE PROTECTED FROM DAMAGE WITH A CONSTRUCTION FENCE AT THE DRIP LINE. SEE LANDSCAPE DOCUMENTS.

CITY OF ST. PAUL SITE SPECIFIC NOTES:

1. ALL WORK ON CURBS, DRIVEWAYS, AND SIDEWALKS WITHIN THE PUBLIC RIGHT OF WAY MUST BE DONE TO CITY STANDARDS AND SPECIFICATIONS BY A LICENSED AND BONDED CONTRACTOR UNDER 7. A PERMIT FROM PUBLIC WORKS SIDEWALK SECTION (651-266-6120). SIDEWALK GRADES MUST BE CARRIED ACROSS DRIVEWAYS.
2. CONSTRUCTION OF THE DEVELOPMENT THAT NECESSITATES TEMPORARY USE OF THE RIGHT-OF-WAY (ROW) FOR CONSTRUCTION PURPOSES SHALL BE LIMITED TO EQUIPMENT, PERSONNEL, DEVICES AND APPURTENANCES THAT ARE REMOVABLE FOLLOWING CONSTRUCTION. ENCROACHMENT PERMITS WILL NOT BE GRANTED FOR DEVICES SUCH AS TIE BACKS, ROCK BOLTS, H-PILES, LAGGING, TIMBERS, SHEET PILING, ETC. THAT THE OWNER IS SEEKING TO ABANDON IN THE ROW. FOOTINGS ARE ALLOWED IN THE ROW NO MORE THAN TWELVE INCHES AT DEPTHS BELOW 8 FEET.
3. RESTORATION OF ASPHALT AND CONCRETE PAVEMENTS ARE PERFORMED BY THE PUBLIC WORKS STREET MAINTENANCE DIVISION. THE CONTRACTOR IS RESPONSIBLE FOR PAYMENT TO THE CITY FOR THE COST OF THESE RESTORATIONS. THE CONTRACTOR SHALL CONTACT PUBLIC WORKS STREET MAINTENANCE TO SET UP A 10. WORK ORDER PRIOR TO BEGINNING ANY REMOVALS IN THE STREET AT 651-292-6600. PROCEDURES AND UNIT COSTS ARE FOUND IN STREET MAINTENANCE'S "GENERAL REQUIREMENTS - ALL RESTORATIONS" AND ARE AVAILABLE AT THE PERMIT OFFICE.
4. THE CONTRACTOR SHALL CONTACT JOHN MCNAMARA, GENERAL FOREMAN, LIGHTING-SIGNAL MAINTENANCE, 651-266-9780, IF REMOVAL OR RELOCATION OF EXISTING FACILITIES IS REQUIRED OR IN THE EVENT OF DAMAGE TO THE LIGHTING OR SIGNAL UTILITIES. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY (AND RELATED COSTS) FOR ANY DAMAGE OR RELOCATIONS. ACCESS TO SIGNAL CONTROLLER AND LIGHTING CABINETS MUST BE MAINTAINED AT ALL 11. TIMES. IF FENCING IS REQUIRED FOR A JOB SITE, A KEY OR OTHER MEANS OF ACCESS MUST BE PROVIDED TO THE CITY OF ST. PAUL TRAFFIC OPERATIONS DEPARTMENT.
5. CARE MUST BE TAKEN DURING CONSTRUCTION AND EXCAVATION TO PROTECT ANY SURVEY MONUMENTS AND/OR PROPERTY IRONS. CALL SAM GIBSON (651-266-6075) OF PUBLIC WORKS SURVEYING IF 12. YOU HAVE ANY QUESTIONS.
6. SIGNS REGULATING PARKING AND/OR TRAFFIC ON PRIVATE PROPERTY SHALL BE INSTALLED BY THE PROPERTY OWNER OR CONTRACTOR OUTSIDE OF THE PUBLIC RIGHT-OF-WAY. SIGNS APPROVED BY PUBLIC WORKS TRAFFIC ENGINEERING REGULATING PARKING AND/OR TRAFFIC IN THE PUBLIC RIGHT-OF-WAY FOR THIS DEVELOPMENT SHALL BE INSTALLED BY CITY FORCES AT THE EXPENSE OF THE DEVELOPMENT. CONTACT MIKE MILLER OF PUBLIC WORKS 651-266-9778 SIX WEEKS IN ADVANCE OF NEEDED SIGN(S).

CONSTRUCTION MATERIALS, STOCKPILES, EQUIPMENT AND VEHICLES SHALL NOT BE STORED OR OPERATED ON TURF BOULEVARDS.

8. INSPECTION CONTACT: THE DEVELOPER SHALL CONTACT THE RIGHT OF WAY INSPECTOR DICK ROHLAND, 651-485-1688 (ONE WEEK PRIOR TO BEGINNING WORK) TO DISCUSS TRAFFIC CONTROL, PEDESTRIAN SAFETY AND COORDINATION OF ALL WORK IN THE PUBLIC RIGHT OF WAY.
9. SAFE WORK SITE REQUIREMENTS: THE CONTRACTOR SHALL PROVIDE A CONTINUOUS, ACCESSIBLE AND SAFE PEDESTRIAN WALKWAY THAT MEETS ADA AND MN MUTCD STANDARDS IF WORKING IN A SIDEWALK AREA, AND TRAFFIC CONTROL PER MN MUTCD REQUIREMENTS FOR WORK IN THE PUBLIC RIGHT OF WAY. CONTRACTOR MUST DEVELOP A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) AS NEEDED BY THE CITY OF ST. PAUL.

NO PRIVATE FACILITIES IN THE RIGHT OF WAY: THE DEVELOPER IS STRICTLY PROHIBITED FROM INSTALLING PRIVATE ELECTRICAL WIRING, CONDUIT, RECEPTACLES AND/OR LIGHTING IN THE CITY'S RIGHT OF WAY. THIS INCLUDES STUBBING CONDUIT OR CABLE INTO THE PUBLIC RIGHT OF WAY TO ACCOMMODATE UTILITY FEEDS TO THE SITE. COORDINATE WITH EACH UTILITY PRIOR TO CONSTRUCTION TO DETERMINE FEED POINTS INTO THE PROPERTY. UTILITIES ARE RESPONSIBLE FOR SECURING EXCAVATION PERMITS TO RUN THEIR SERVICE INTO A SITE, AND (WHERE REQUIRED) SUBMITTING PLANS FOR REVIEW BY THE PUBLIC WORKS UTILITY REVIEW COMMITTEE.

CONTRACTOR SHALL COORDINATE WITH CITY OF ST. PAUL STREET DIVISION REGARDING FULL WIDTH MILL AND OVERLAY OF STREETS SURFACES LESS THAN 5 YEARS OLD. PAVEMENT RESTORATION SHALL BE COMPLETED BY THE ST. PAUL PUBLIC WORKS STREET DIVISION, CONTACT STREET MAINTENANCE AT 651-266-9700 FOR ESTIMATES.

ROADWAY STRIPING IMPACTED BY THE WORK ZONE SHALL BE REPLACED IN-KIND AT NO COST TO THE CITY. IF THERE ARE QUESTIONS AS TO THE TYPE OF MATERIAL TO BE USED, CONTACT MIKE MILLER, 651-266-9778 IN THE CITY'S TRAFFIC OPERATIONS SECTION. STRIPING RESTORATION SHALL BE COMPLETED IMMEDIATELY FOLLOWING FINAL PAVEMENT RESTORATION. IF THERE IS A DESIRE FOR THE CITY OF ST. PAUL PUBLIC WORKS DEPARTMENT TO COMPLETE THE PAVEMENT MARKING RESTORATION, CONTACT MIKE MILLER FOR AN ESTIMATE. 1 WEEK ADVANCE NOTICE IS REQUIRED.

OPERATIONAL NOTES:

1. ALL SNOW WILL EITHER BE PLOWED TO LANDSCAPE AREAS OR REMOVED FROM SITE AT EACH PLOWING.
2. TRASH STORAGE WILL BE PROVIDED IN THE UNDERGROUND PARKING AREA. SOLID WASTE DISPOSAL TRUCKS WILL PULL IN TO THE PARKING AREA AND THE SOLID WASTE BINS WILL BE ROLLED OUT INTO THE DRIVE LANE FOR LOADING AND DISPOSAL.
3. DELIVERIES WILL EITHER BE MADE THROUGH THE MAIN ENTRANCE TO THE BUILDING OR THROUGH THE PARKING GARAGE

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1" = 30'-0"
15'-0" 0 30'-0"

SITE PLAN LEGEND:

- CONCRETE PAVEMENT AS SPECIFIED (PAD OR WALK)
- PROPERTY LINE
- CURB AND GUTTER-SEE NOTES (T.O.) TIP OUT GUTTER WHERE APPLICABLE-SEE PLAN
- TRAFFIC DIRECTIONAL ARROWS
- SIGN AND POST ASSEMBLY. SHOP DRAWINGS REQUIRED. HC = ACCESSIBLE SIGN NP = NO PARKING FIRE LANE ST = STOP CP = COMPACT CAR PARKING ONLY

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REVISION SUMMARY

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SITE PLAN

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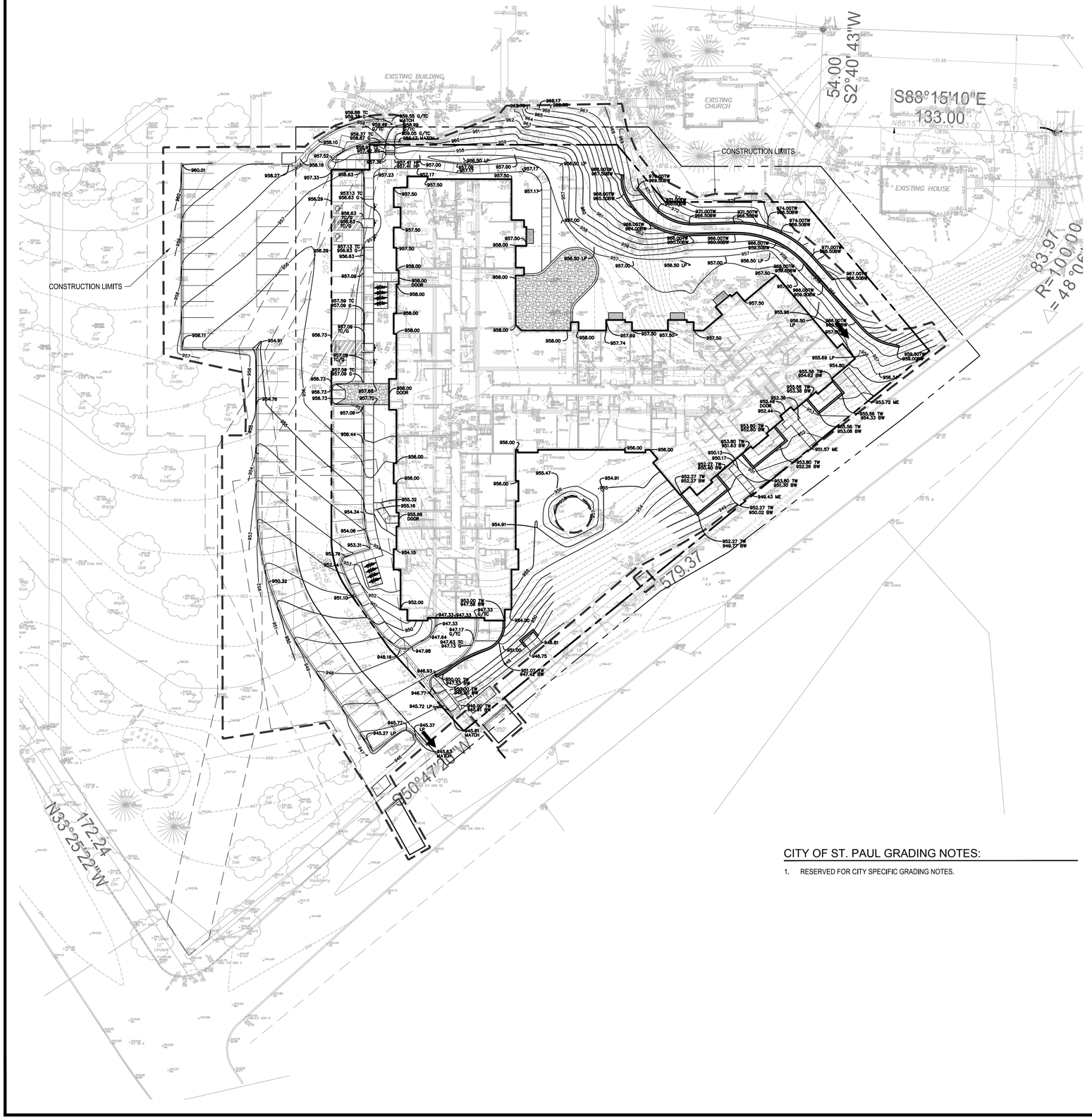

EROSION CONTROL NOTES:

SEE SWPPP ON SHEETS SW1.0-SW1.5

GROUNDWATER INFORMATION:

TO BE PROVIDED ONCE SOIL BORINGS ARE COMPLETED ON SITE.

GENERAL GRADING NOTES:

1. SEE SITE PLAN FOR HORIZONTAL LAYOUT & GENERAL GRADING NOTES.
2. THE CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION (INCLUDING BUT NOT LIMITED TO SITE PREPARATION, SOIL CORRECTION, EXCAVATION, EMBANKMENT, ETC.) IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.
3. GRADING AND EXCAVATION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS & PERMIT REQUIREMENTS OF THE CITY.
4. PROPOSED SPOT GRADES ARE FLOW-LINE FINISHED GRADE ELEVATIONS, UNLESS OTHERWISE NOTED.
5. GRADES OF WALKS SHALL BE INSTALLED WITH 5% MAX. LONGITUDINAL SLOPE AND 1% MIN. AND 2% MAX. CROSS SLOPE, UNLESS OTHERWISE NOTED.
6. PROPOSED SLOPES SHALL NOT EXCEED 3:1 UNLESS INDICATED OTHERWISE ON THE DRAWINGS. MAXIMUM SLOPES IN MAINTAINED AREAS IS 4:1
7. PROPOSED RETAINING WALLS, FREESTANDING WALLS, OR COMBINATION OF WALL TYPES GREATER THAN 4' IN HEIGHT SHALL BE DESIGNED AND ENGINEERED BY A REGISTERED RETAINING WALL ENGINEER. DESIGN DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF GRADE STAKES THROUGHOUT THE DURATION OF CONSTRUCTION TO ESTABLISH PROPER GRADES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR A FINAL FIELD CHECK OF FINISHED GRADES ACCEPTABLE TO THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO TOPSOIL AND SODDING ACTIVITIES.
9. IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, THE CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.
10. EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. THE CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF BUILDING PADS, ROADWAYS AND PARKING AREAS. THE CONTRACTOR SHALL SUBCUT CUT AREAS, WHERE TURF IS TO BE ESTABLISHED, TO A DEPTH OF 6 INCHES. RESPREAD TOPSOIL IN AREAS WHERE TURF IS TO BE ESTABLISHED TO A MINIMUM DEPTH OF 6 INCHES.
11. FINISHED GRADING SHALL BE COMPLETED. THE CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISH GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED BY TRAFFIC OR ERODED BY WATER OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE NEW WORK.
12. PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL WILL BE REQUIRED ON THE STREET AND/OR PARKING AREA SUBGRADE. THE CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. THE SOILS ENGINEER SHALL DETERMINE WHICH SECTIONS OF THE STREET OR PARKING AREA ARE UNSTABLE. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER.
13. TOLERANCES
    - 13.1. THE BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.30 FOOT ABOVE, OR 0.30 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.
    - 13.2. THE STREET OR PARKING AREA SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION OF ANY POINT WHERE MEASUREMENT IS MADE.
    - 13.3. AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.30 FOOT ABOVE OR BELOW THE REQUIRED ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
    - 13.4. TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.
14. MAINTENANCE
    - 14.1. THE CONTRACTOR SHALL PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION, AND KEEP AREA FREE OF TRASH AND DEBRIS.
    - 14.2. CONTRACTOR SHALL REPAIR AND REESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS TO SPECIFIED TOLERANCES. DURING THE CONSTRUCTION, IF REQUIRED, AND DURING THE WARRANTY PERIOD, ERODED AREAS WHERE TURF IS TO BE ESTABLISHED SHALL BE RESEEDED AND MULCHED.
    - 14.3. WHERE COMPLETED COMPACTED AREAS ARE DISTURBED BY SUBSEQUENT CONSTRUCTION OPERATIONS OR ADVERSE WEATHER, CONTRACTOR SHALL SCARIFY, SURFACE, RESHAPE, AND COMPACT TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION.

CITY OF ST. PAUL GRADING NOTES:

1. RESERVED FOR CITY SPECIFIC GRADING NOTES.

GRADING PLAN LEGEND:

891	EX. 1' CONTOUR ELEVATION INTERVAL
819	1.0' CONTOUR ELEVATION INTERVAL
891.0	SPOT GRADE ELEVATION (FLOW LINE UNLESS OTHERWISE NOTED)
891.0 G	SPOT GRADE ELEVATION GUTTER
891.0 BC	SPOT GRADE ELEVATION BACK OF CURB (TOP OF CURB)
891.0 BS/TS	SPOT GRADE ELEVATION BOTTOM OF STAIRS/TOP OF STAIRS
T.O.	TIP OUT (T.O.) CURB AND GUTTER WHERE APPLICABLE - TAPER GUTTERS TO DRAIN AS SHOWN
	EXISTING AND PROPOSED DRAINAGE ARROWS

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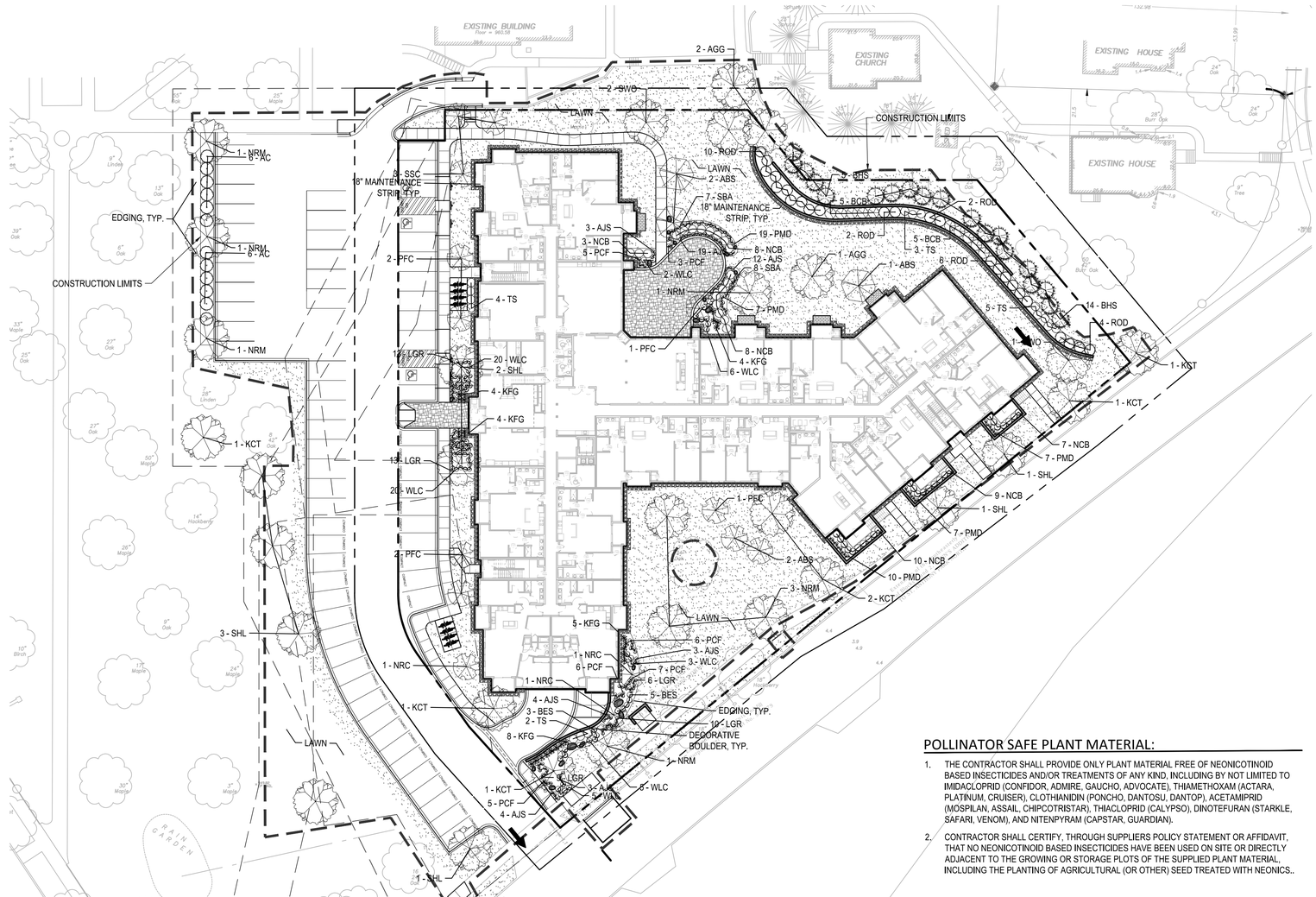


PLANT SCHEDULE - ENTIRE SITE

SYM	QUANT.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	COMMENTS	POLLINATOR FRIENDLY	NATIVE
		DECIDUOUS TREES						
NRM	8	NORTHWOOD RED MAPLE	Acer rubrum 'Northwood'	2.5" CAL.	B&B	STRAIGHT LEADER, FULL FORM	X	X
SHL	8	SKYLINE HONEYLOCUST	Gleditsia triacanthos 'Skycole'	2.5" CAL.	B&B	STRAIGHT LEADER, FULL FORM		X
KCT	7	KENTUCKY COFFEE TREE	Gymnocladus dioicus	2.5" CAL.	B&B	STRAIGHT LEADER, FULL FORM		
AGG	3	AUTUMN GOLD GINKGO	Ginkgo biloba 'Autumn Gold'	2.5" CAL.	B&B	STRAIGHT LEADER, FULL FORM		
SWO	3	SWAMP WHITE OAK	Quercus bicolor	2.5" CAL.	B&B	STRAIGHT LEADER, FULL FORM		X
		ORNAMENTAL TREES						
PFC	6	PRAIRIEFIRE FLOWERING CRAB	Malus 'Prairiefire'	1.5" CAL.	B&B	STRAIGHT LEADER, FULL FORM	X	
ABS	6	AUTUMN BRILLIANCE SERVICEBERRY	Amelanchier x grandiflora 'Autumn Brilliance (tree form)'	1.5" CAL.	B&B	STRAIGHT LEADER, FULL FORM		X
SSC	3	SPRING SNOW FLOWERING CRAB	Malus 'Spring Snow'	1.5" CAL.	B&B	STRAIGHT LEADER, FULL FORM	X	
NRC	3	NORTHERN REDBUD CLUMP	Cercis canadensis 'Northern Strain'	1.5" CAL.	B&B	STRAIGHT LEADER, FULL FORM	X	
		EVERGREEN TREES						
BHS	19	BLACK HILLS SPRUCE	Picea glauca 'Densata'	6' HT.	B&B	STRAIGHT LEADER, FULL FORM		X
		SHRUBS - CONIFEROUS & EVERGREEN						
TS	14	TOR SPIREA	Spirea betulifolia 'Tor'	24" HT.	CONT.		x	
AC	12	ALPINE CURRANT	Ribes alpinum	24" HT.	CONT.			
BCB	10	BLACK CHOKEBERRY	Aronia melanocarpa 'var. elata'	24" HT.	CONT.			x
ROD	24	REDOSIER DOGWOOD	Cornus serica	24" HT.	CONT.			X
NCB	45	NORTHERN CHARM BOXWOOD	Buxus 'Wilson'	24" HT.	CONT.			
		PERENNIALS & GRASSES						
KFG	25	KARL FOERSTER GRASS	Calamagrostis x acutiflora "Karl Foerster"	#1	CONT.			X
PMD	50	PARDON ME DAYLILLY	Hemerocallis 'Pardon Me'	#1	CONT.			
WLC	61	WALKER'S LOW CATMINT	Nepeta 'Walker's Low'	#1	CONT.		X	
LGR	51	LITTLE GOLDSTAR RUDBECKIA	Rudbeckia fulgida 'Little Goldstar'	#1	CONT.		x	X
BES	8	BLACK EYED SUSAN	Rudbeckia hirta	#1	CONT.		X	X
PCF	43	PURPLE CONEFLOWER	Echinacea purpurea	#1	CONT.		X	X
AJS	51	AUTUMN JOY SEDUM	Sedum 'Autumn Joy'	#1	CONT.		X	
SBA	15	SKY BLUE ASTER	Aster oolentangiensis	#1	CONT.		X	X

LANDSCAPE NOTES:

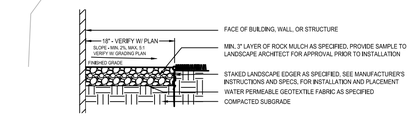
1. ALL SHRUB BEDS SHALL BE MULCHED WITH 4" DEPTH OF DOUBLE SHREDDED HARDWOOD MULCH OVER WEED BARRIER. OWNER'S REP SHALL APPROVE MULCH SAMPLE PRIOR TO INSTALLATION. EDGING SHALL BE METAL EDGING OR APPROVED EQUAL.
2. PLANT MATERIALS SHALL CONFORM WITH THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND SHALL BE OF HARDY STOCK, FREE FROM DISEASE, DAMAGE AND DISFIGURATION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PLUMBNESS OF PLANT MATERIAL FOR DURING OF ACCEPTANCE PERIOD.
3. UPON DISCOVERY OF A DISCREPANCY BETWEEN THE QUANTITY OF PLANTS SHOWN ON THE SCHEDULE AND THE QUANTITY SHOWN ON THE PLAN, THE PLAN SHALL GOVERN.
4. CONDITION OF VEGETATION SHALL BE MONITORED BY THE LANDSCAPE ARCHITECT THROUGHOUT THE DURATION OF THE CONTRACT. LANDSCAPE MATERIALS PART OF THE CONTRACT SHALL BE WARRANTED FOR ONE (1) FULL GROWING SEASONS FROM SUBSTANTIAL COMPLETION DATE.
5. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL RECEIVE 4" LAYER LOAM AND SOD AS SPECIFIED UNLESS OTHERWISE NOTED ON THE DRAWINGS.
6. COORDINATE LOCATION OF VEGETATION WITH UNDERGROUND AND OVERHEAD UTILITIES, LIGHTING FIXTURES, DOORS AND WINDOWS. CONTRACTOR SHALL STAKE IN THE FIELD FINAL LOCATION OF TREES AND SHRUBS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
7. ALL PLANT MATERIALS SHALL BE WATERED AND MAINTAINED UNTIL ACCEPTANCE.
8. REPAIR AT NO COST TO OWNER ALL DAMAGE RESULTING FROM LANDSCAPE CONTRACTOR'S ACTIVITIES.
9. SWEEP AND MAINTAIN ALL PAVED SURFACES FREE OF DEBRIS GENERATED FROM LANDSCAPE CONTRACTOR'S ACTIVITIES.

IRRIGATION NOTES:

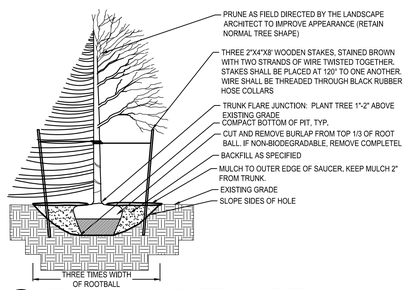
1. ENTIRE SITE SHALL BE FULLY IRRIGATED. THE CONTRACTOR SHALL SUBMIT IRRIGATION SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. SEE MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS FOR IRRIGATION WATER, METER, AND POWER CONNECTIONS.
3. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND/ABOVE GROUND FACILITIES PRIOR TO ANY EXCAVATION/INSTALLATION. ANY DAMAGE TO UNDERGROUND/ABOVE GROUND FACILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND COSTS ASSOCIATED WITH CORRECTING DAMAGES SHALL BE BORNE ENTIRELY BY THE CONTRACTOR.
4. SERVICE EQUIPMENT AND INSTALLATION SHALL BE PER LOCAL UTILITY COMPANY STANDARDS AND SHALL BE PER NATIONAL AND LOCAL CODES. EXACT LOCATION OF SERVICE EQUIPMENT SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT OR EQUIVALENT AT THE JOB SITE.
5. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR THE PROPOSED ELECTRICAL SERVICE AND METERING FACILITIES.
6. IRRIGATION WATER LINE CONNECTION SIZE IS 1-½" AT BUILDING. VERIFY WITH MECHANICAL PLANS.COVAGE.
7. ALL MAIN LINES SHALL BE 18" BELOW FINISHED GRADE.
8. ALL LATERAL LINES SHALL BE 12" BELLOW FINISHED GRADE.
9. ALL EXPOSED PVC RISERS, IF ANY, SHALL BE GRAY IN COLOR.
10. CONTRACTOR SHALL LAY ALL SLEEVES AND CONDUIT AT 2'-0" BELOW THE FINISHED GRADE OF THE TOP OF PAVEMENT. EXTEND SLEEVES TO 2'-0" BEYOND PAVEMENT.
11. CONTRACTOR SHALL MARK THE LOCATION OF ALL SLEEVES AND CONDUIT WITH THE SLEEVING MATERIAL "ELLED" TO 2'-0" ABOVE FINISHED GRADE AND CAPPED.
12. FABRICATE ALL PIPE TO MANUFACTURE'S SPECIFICATIONS WITH CLEAN AND SQUARE CUT JOINTS. USE QUALITY GRADE PRIMER AND SOLVENT CEMENT FORMULATED FOR INTENDED TYPE OF CONNECTION.
13. BACKFILL ALL TRENCHES WITH SOIL FREE OF SHARP OBJECTS AND DEBRIS.
14. ALL VALVE BOXES AND COVERS SHALL BE BLACK IN COLOR.
15. GROUP VALVE BOXES TOGETHER FOR EASE WHEN SERVICE IS REQUIRED. LOCATE IN PLANT BED AREAS WHENEVER POSSIBLE.
16. IRRIGATION CONTROLLER LOCATION SHALL BE VERIFIED ON-SITE WITH OWNER'S REPRESENTIVE.
17. CONTROL WIRES: 14 GAUGE DIRECT BURIAL, SOLID COPPER IRRIGATION WIRE. RUN UNDER MAIN LINE. USE MOISTURE-PROOF SPLICES AND SPLICE ONLY AT VALVES OR PULL BOXES. RUN SEPARATE HOT AND COMMON WIRE TO EACH VALVE AND ONE (1) SPARE WIRE AND GROUND TO FURTHEST VALVE FROM CONTROLLER. LABEL OR COLOR CODE ALL WIRES.
18. AVOID OVERSPRAY ON BUILDINGS, PAVEMENT, WALLS AND ROADWAYS BY INDIVIDUALLY ADJUSTING RADIUS OR ARC ON SPRINKLER HEADS AND FLOW CONTROL ON AUTOMATIC VALVE.
19. ADJUST PRESSURE REGULATING VALVES FOR OPTIMUM PRESSURE ON SITE.
20. USE SCREENS ON ALL HEADS.
21. PRESENTIVE. A SET OF AS-BUILT DRAWINGS SHALL BE MAINTAINED ON-SITE AT ALL TIMES IN AN UPDATED CONDITION.
22. ALL PIPE 3" AND OVER SHALL HAVE THRUST BLOCKING AT EACH TURN.
23. ALL AUTOMATIC REMOTE CONTROL VALVES WILL HAVE 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL UNDERNEATH VALVE AND VALVE BOX. GRAVEL SHALL EXTENT 3" BEYOND PERIMETER OF VALVE BOX.
24. THERE SHALL BE 3" MINIMUM SPACE BETWEEN BOTTOM OF VALVE BOX COVER AND TOP OF VALVE STRUCTURE.

POLLINATOR SAFE PLANT MATERIAL:

1. THE CONTRACTOR SHALL PROVIDE ONLY PLANT MATERIAL FREE OF NEONICOTINOID BASED INSECTICIDES AND/OR TREATMENTS OF ANY KIND, INCLUDING BY NOT LIMITED TO IMIDACLOPRID (CONFIDOR, ADMIRE, GAUCHO, ADVOCATE), THIAMETHOXAM (ACTARA, PLATINUM, CRUISER), CLOTHIANIDIN (PONCHO, DANTOSU, DANTOP), ACETAMIPRID (MOSPILAN, ASSAIL, CHIPCOTRISTAR), THIACLOPRID (CALYPSO), DINOTEFURAN (STARKLE, SAFARI, VENOM), AND NITENPYRAM (CAPSTAR, GUARDIAN).
2. CONTRACTOR SHALL CERTIFY, THROUGH SUPPLIERS POLICY STATEMENT OR AFFIDAVIT, THAT NO NEONICOTINOID BASED INSECTICIDES HAVE BEEN USED ON SITE OR DIRECTLY ADJACENT TO THE GROWING OR STORAGE PLOTS OF THE SUPPLIED PLANT MATERIAL, INCLUDING THE PLANTING OF AGRICULTURAL (OR OTHER) SEED TREATED WITH NEONICS..



1 AGGREGATE MAINTANENCE STRIP
NTS

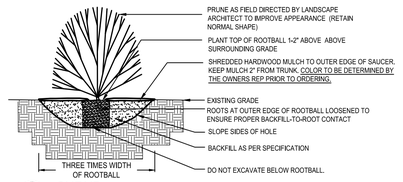


2 DECIDUOUS & CONIFEROUS TREE PLANTING
N T S

TREE REMOVAL MITIGATION NOTES:

PER TREE REMOVAL INVENTORY, NUMBER OF TREES TO BE REMOVED AS PART OF THE PROJECT: 45

PER LANDSCAPE SCHEDULE, NUMBER OF TREES PROPOSED TO BE PLANTED IN PROJECT SITE AREA: 45



3 SHRUB
NTS

LEGEND

- SHREDDED HARDWOOD MULCH OVER FILTER FABRIC, SAMPLES REQUIRED
- SOD
- 1" DIA. DECORATIVE ROCK MULCH OVER FILTER FABRIC, SAMPLES REQUIRED
- PROPOSED CANOPY & EVERGREEN TREE SYMBOLS - SEE SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- PROPOSED DECIDUOUS AND EVERGREEN SHRUB SYMBOLS - SEE SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- PROPOSED PERENNIAL PLANT SYMBOLS - SEE SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- DECORATIVE BOULDERS, 18"-30" DIA.

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N
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15'-0" 0 30'-0"

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2265 LUTHER PLACE, SAINT PAUL, MN 55108

ONETWOONE DEVELOPMENT
3530 LEXINGTON AVE N., SHOREVIEW, MN 55126

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Patrick J. Sarver
DATE 10/11/16 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

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REVISION SUMMARY

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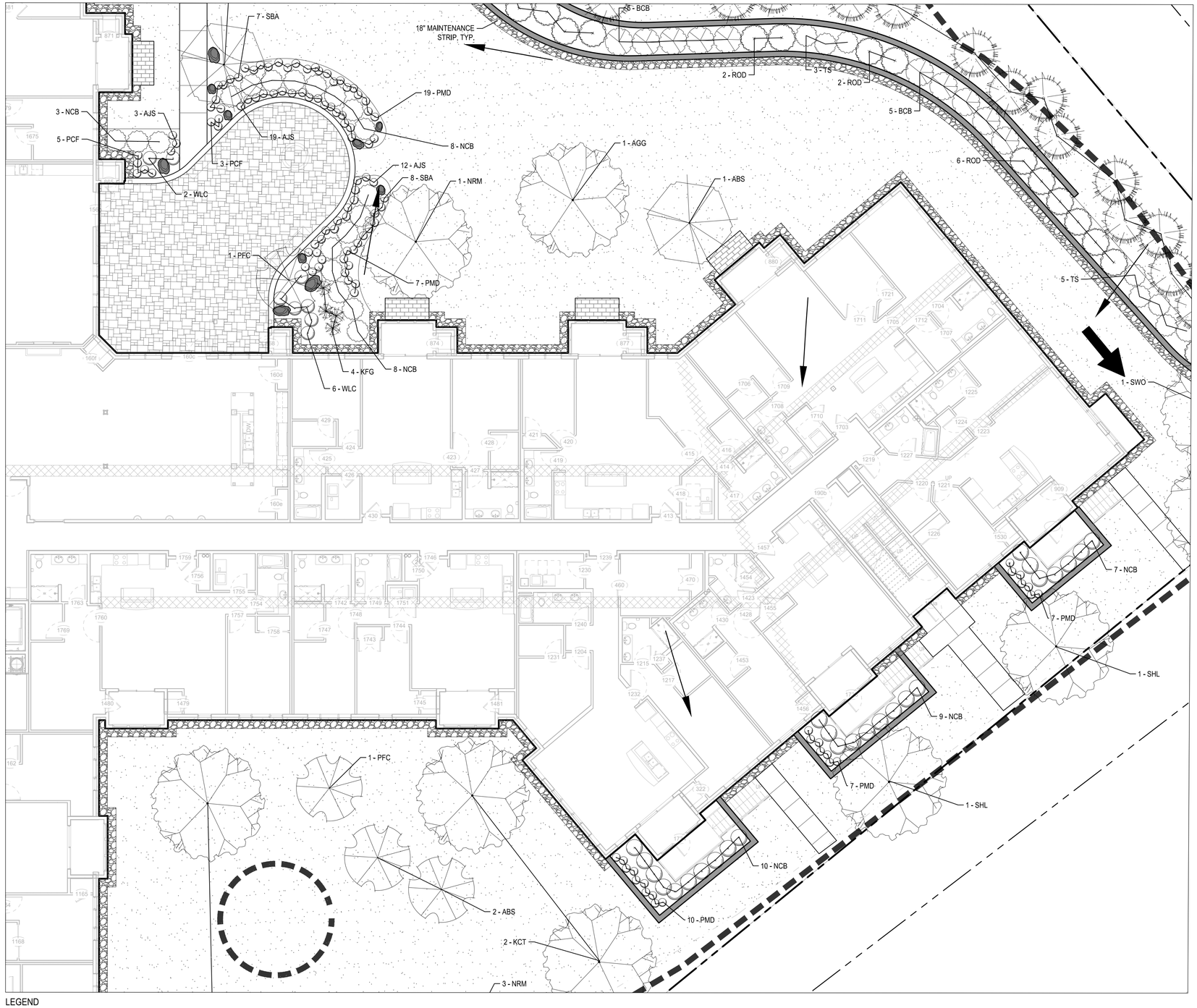
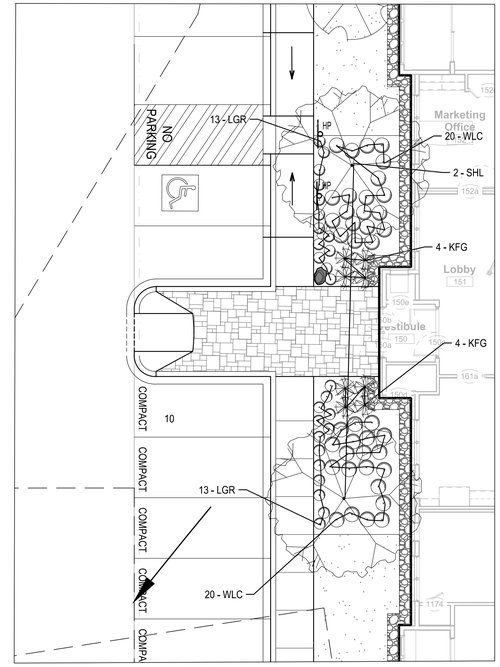
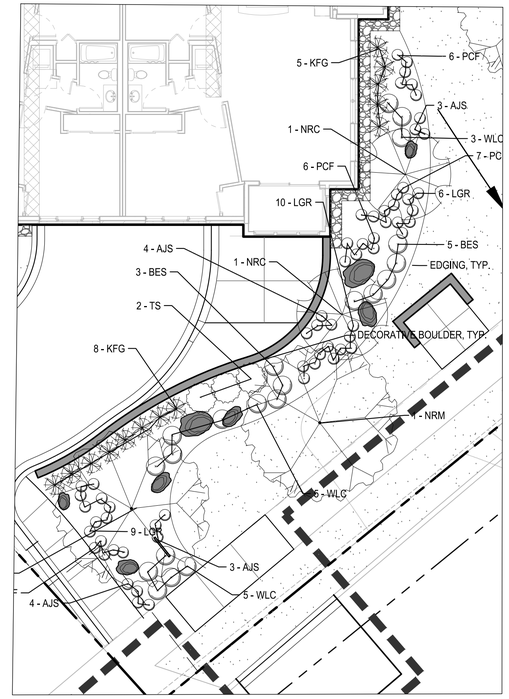
LANDSCAPE PLAN

L1.0







LEGEND

- SOD
- 1" DIA. DECORATIVE ROCK MULCH OVER FILTER FABRIC, SAMPLES REQUIRED
- PROPOSED CANOPY & EVERGREEN TREE SYMBOLS - SEE SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
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- DECORATIVE BOULDERS, 18"-30" DIA.

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REVISION SUMMARY

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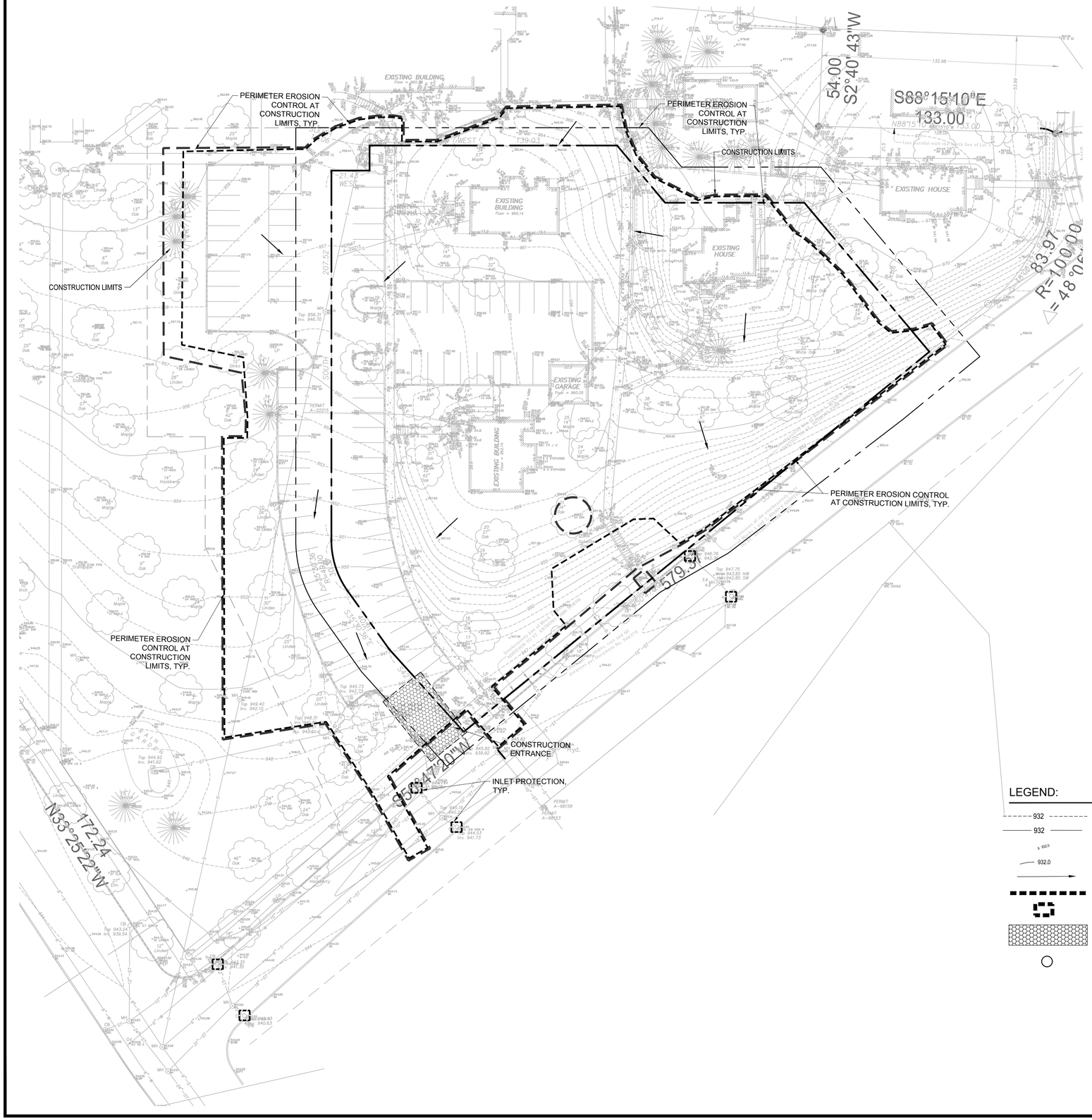
LANDSCAPE PLAN NOTES & DETAILS

L1.1



SWPPP NOTES:

1. THIS PROJECT IS GREATER THAN ONE ACRE AND WILL REQUIRE AN MPCA NPDES PERMIT. AN EROSION CONTROL PERMIT IS ALSO REQUIRED FROM THE CITY OF ST. PAUL.

2. SEE SHEETS SW1.0 - SW1.5 FOR ALL EROSION CONTROL NOTES, DESCRIPTIONS, AND PRACTICES.

3. SEE GRADING PLAN FOR ADDITIONAL GRADING AND EROSION CONTROL NOTES.

4. CONTRACTOR IS RESPONSIBLE FOR SWPPP IMPLEMENTATION, INSPECTIONS, AND COMPLIANCE WITH NPDES PERMIT.

CITY OF ST. PAUL EROSION CONTROL NOTES:

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3. EXCAVATION OF INFILTRATION AREAS SHALL BE COMPLETED USING A BACKHOE WITH A TOOTHED BUCKET.

4. DURING CONSTRUCTION, STORMWATER SHALL BE ROUTED AROUND INFILTRATION AREAS UNTIL ALL CONSTRUCTION ACTIVITY HAS CEASED AND TRIBUTARY SURFACES ARE CLEANED OF SEDIMENT.

5. THE BOTTOM EXCAVATION SURFACE OF INFILTRATION AREAS SHALL BE LEVEL WITHOUT DIPS OR SWALES.

LEGEND:

- 932 — EX. 1' CONTOUR ELEVATION INTERVAL
- 932 — 1' CONTOUR ELEVATION INTERVAL
- x 932.5 — EXISTING SPOT GRADE ELEVATION
- 932.0 — PROPOSED SPOT GRADE ELEVATION
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- SILT FENCE / BIOROLL - GRADING LIMIT
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED MANHOLE OR CATCH BASIN
- PROPOSED GATE VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY SEWER
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- EXISTING STORM SEWER
- EXISTING WATER MAIN
- EXISTING GAS MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND CABLE
- EXISTING MANHOLE
- EXISTING CATCH BASIN
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Matthew R. Pavek
DATE 10/11/16 LICENSE NO. 44263

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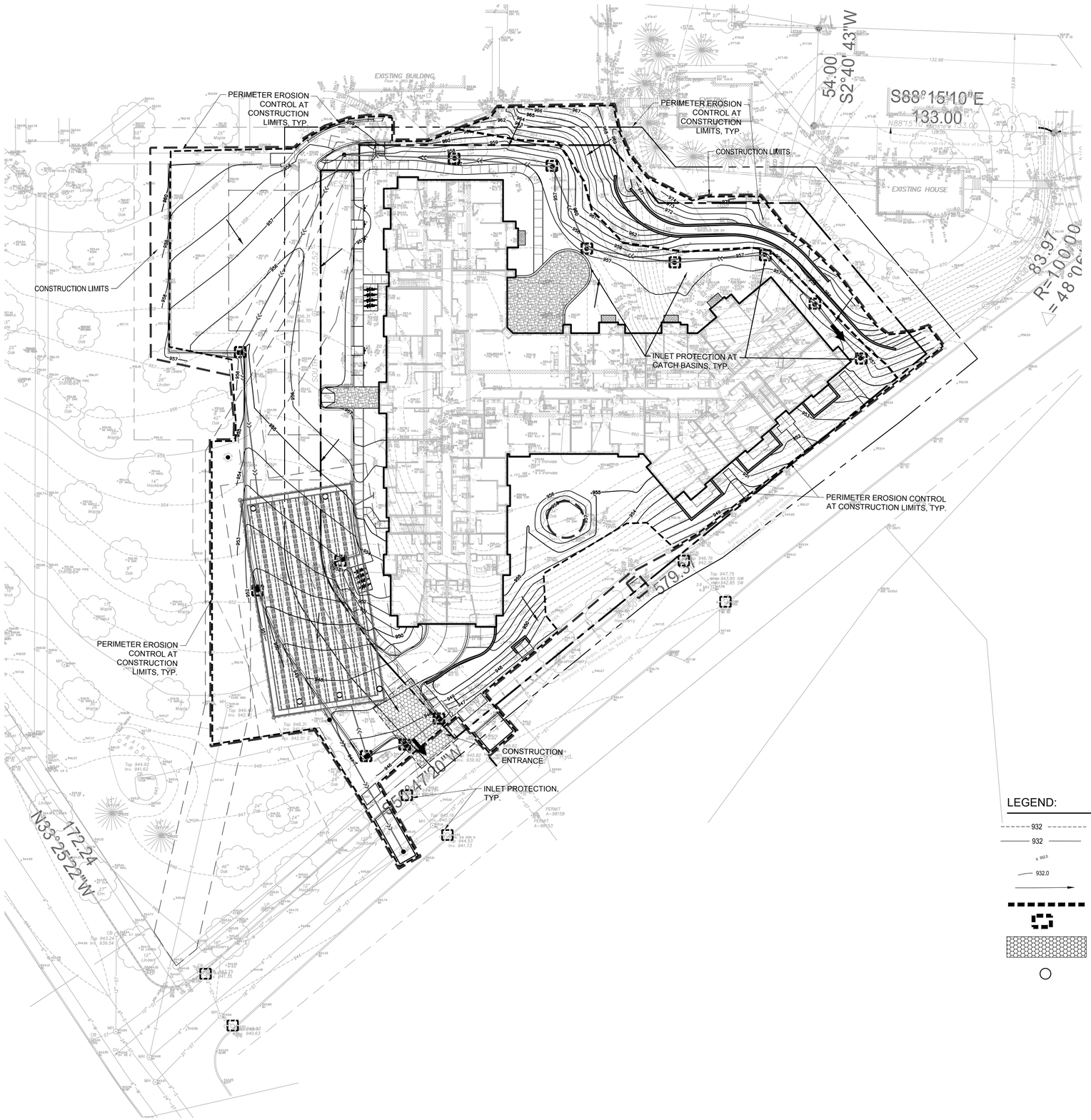
SWPPP - EXISTING CONDITIONS

SW1.0



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REVISION SUMMARY

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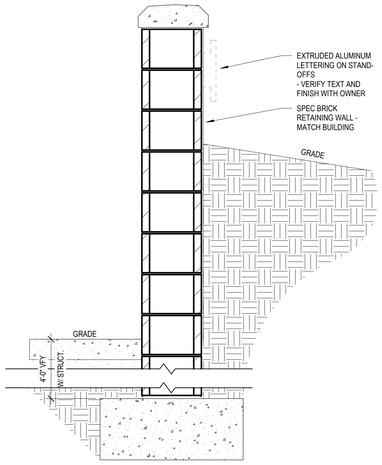
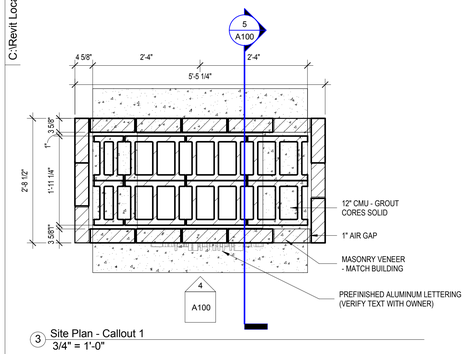
SWPPP - PROPOSED CONDITIONS

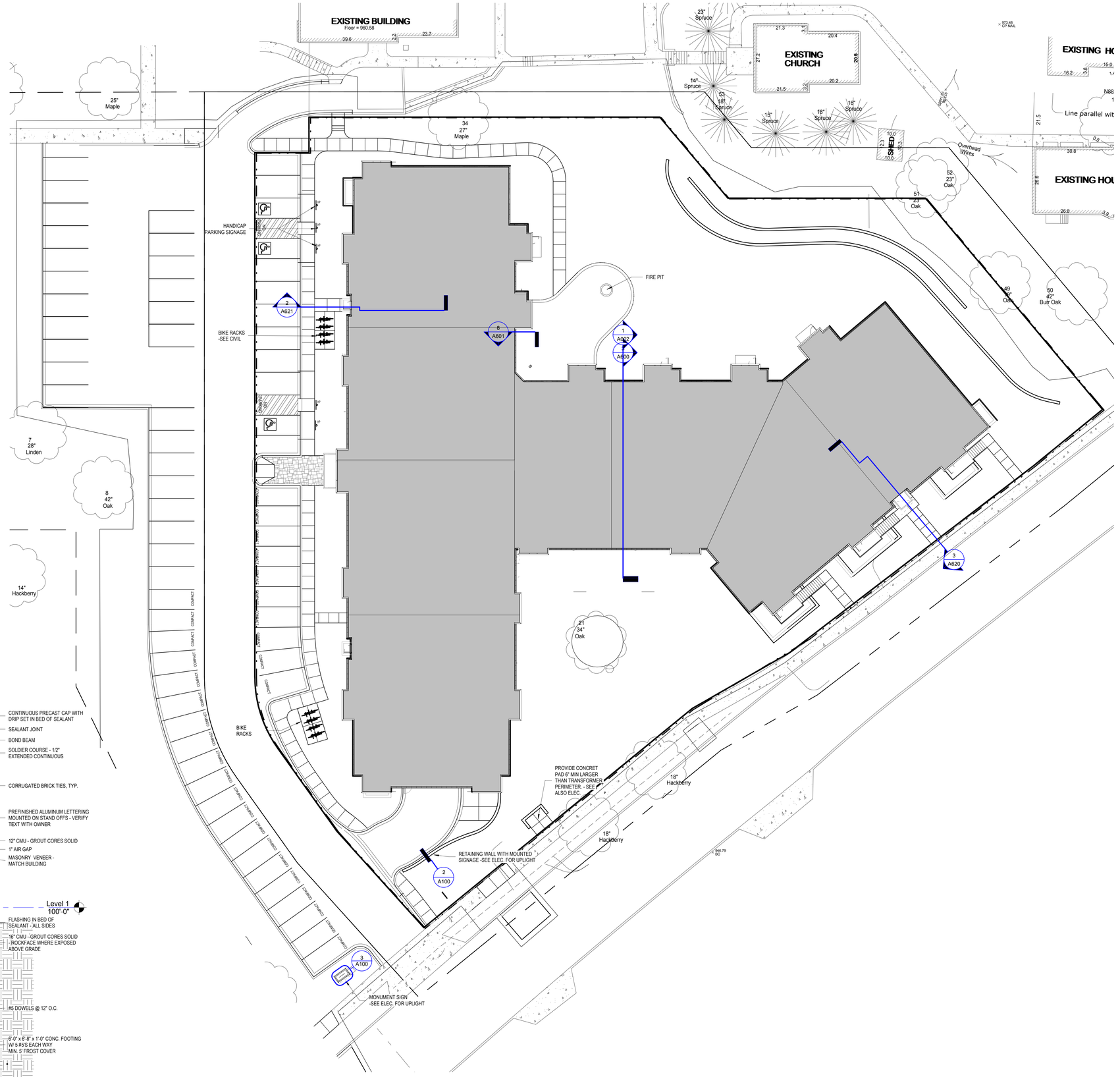
SW1.1



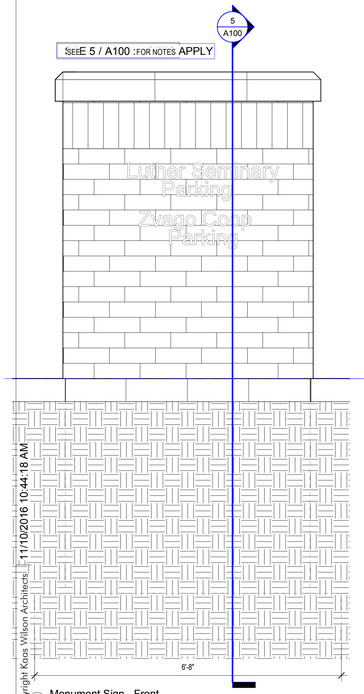
2 Monument SIGN DETAIL
1" = 1'-0"



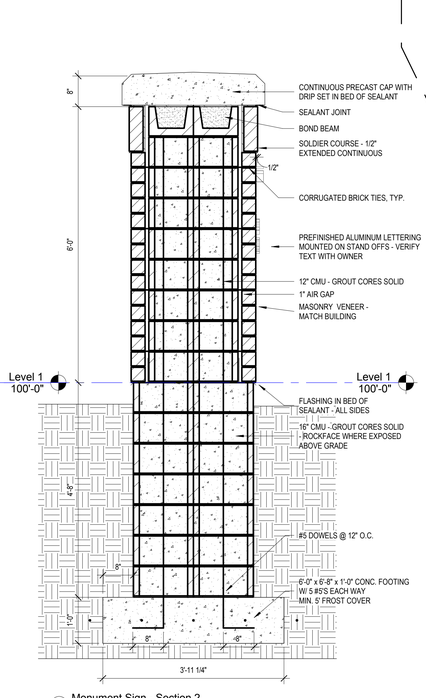
3 Site Plan - Callout 1
3/4" = 1'-0"



1 Site Plan
1/16" = 1'-0"



4 Monument Sign - Front
3/4" = 1'-0"



5 Monument Sign - Section 2
3/4" = 1'-0"

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Owner:
OneTwoOne Development
(651) 766-4488

Project Number 1503

Date 11/10/16

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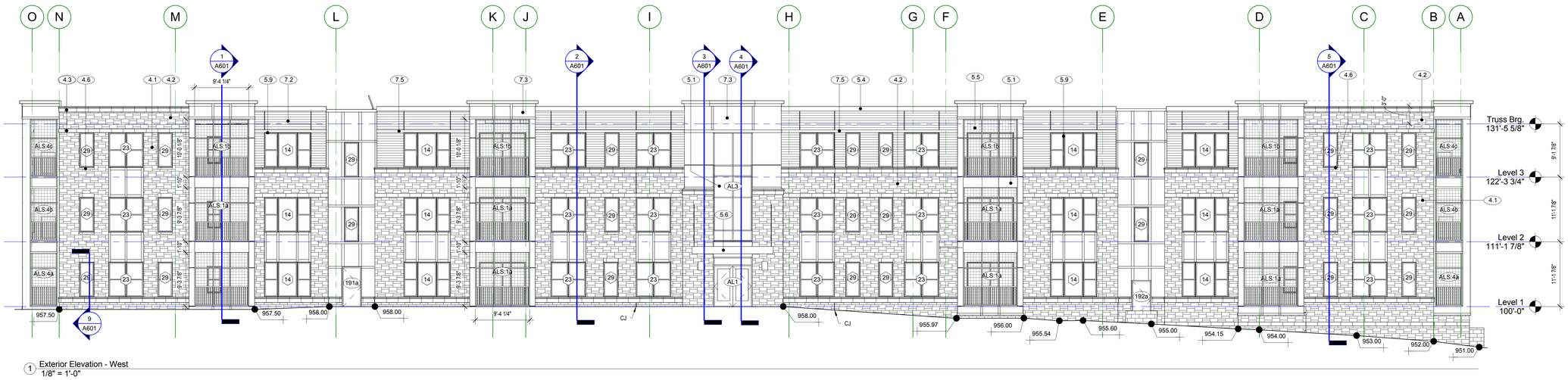
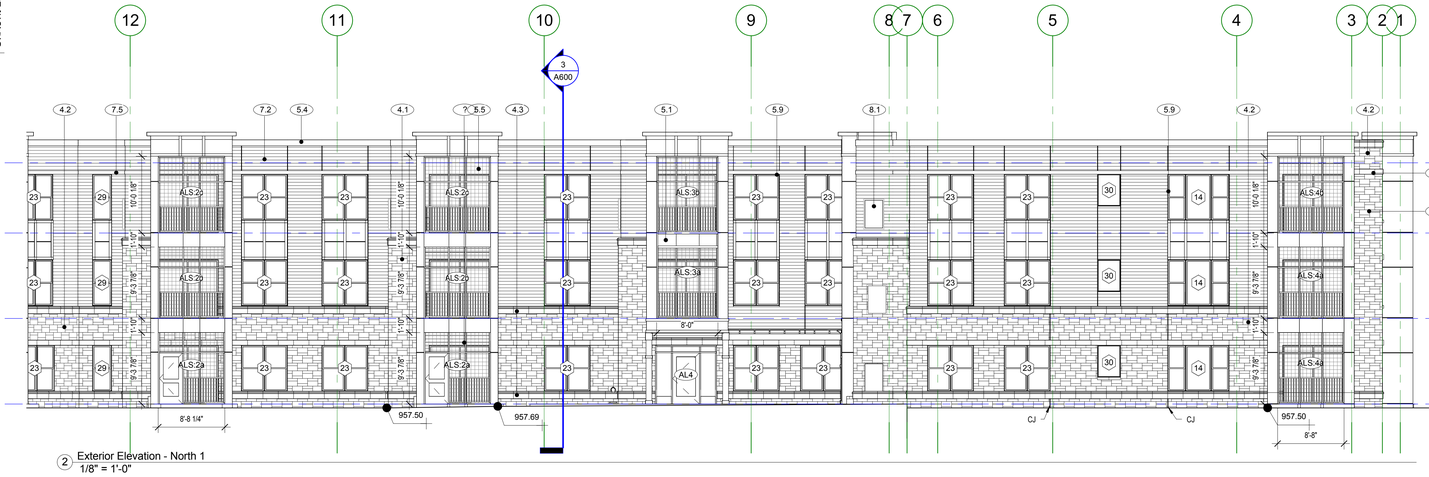
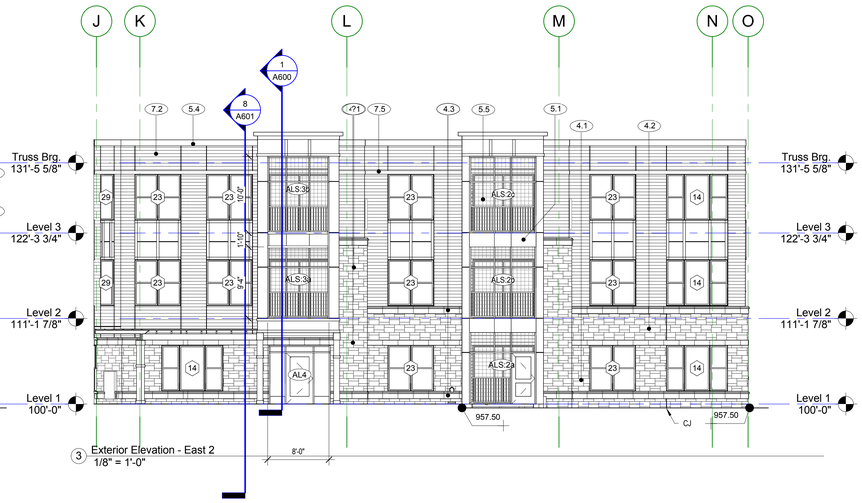


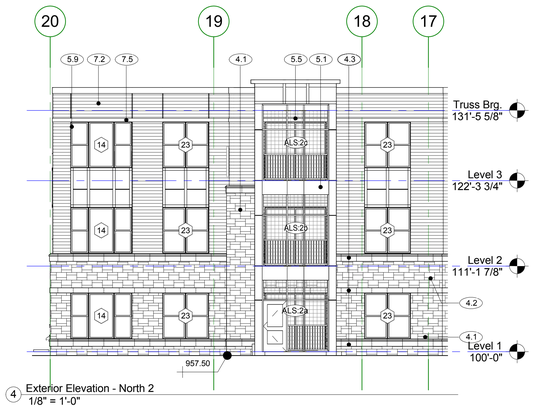
1 Exterior Elevation - West
1/8" = 1'-0"



2 Exterior Elevation - North 1
1/8" = 1'-0"



3 Exterior Elevation - East 2
1/8" = 1'-0"



4 Exterior Elevation - North 2
1/8" = 1'-0"

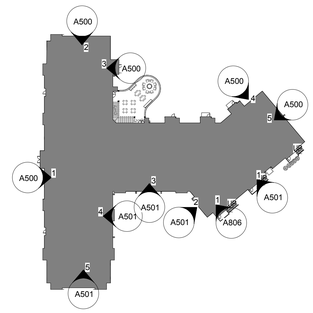
5 Exterior Elevation - East
1/8" = 1'-0"

EXTERIOR ELEVATION NOTES

1. SEE DRAWING SHEETS A831-A832 FOR WINDOW HEAD, JAMB AND SILL DETAILS.
2. SEE A800-A807 FOR EXTERIOR WALL DETAILS.
3. ALL DIMENSIONS AT EXTERIOR WALLS ARE TAKEN TO EXTERIOR FACE OF MASONRY AT CMU WALLS OR CENTER OF STUD AT FRAMED WALLS UNLESS NOTED OTHERWISE.
4. SEE SHEETS A007 FOR INTERIOR AND EXTERIOR WALL TYPES.
5. EXPANSION JOINTS REQUIRED AT MASONRY WALLS EVERY 30'-0" (REGARDLESS IF SHOWN ON ELEVATION OR NOT SHOWN ON ELEVATION), SEE SHEET A801.
6. PROVIDE BRICK EXPANSION JOINTS AT ALL MASONRY INSIDE CORNERS, SEE SHEET A801.
7. ALL WINDOWS IN BRICK TO HAVE CHAMFERED SILLS.
8. FOR VERTICAL JOINTS OF DIS-SIMILAR MATERIALS CONTACT ARCHITECT.
9. COMPLY WITH FLASHING DETAILS ON SHEETS A831-A832, A840-A841 FOR ROOF.
10. GEODETIC ELEVATION 958.00 FROM CIVIL PLANS = 100'-0" IN ARCHITECTURAL PLANS

Exterior Material Tag Key

- 4.1 SPEC BRICK 1 - ASHLAR PATTERN A (DESIGNER SERIES)
- 4.2 SPEC BRICK 2 - ASHLAR PATTERN B (DESIGNER SERIES)
- 4.3 SPEC BRICK SILL - PROFILE VARIES (SEE DETAILS) - SMOOTH - COLOR: TBD
- 4.6 STONE SILL - COLOR: TBD
- 5.1 PREFINISHED METAL PANEL 1 - COLOR: TBD
- 5.4 PREFINISHED METAL COPING - COLOR: TBD
- 5.5 PREFINISHED ALUMINUM SCREEN PORCH SYSTEM
- 5.6 PAINTED METAL CANOPY - COLOR: TBD
- 5.9 UNIT WINDOWS - COLOR: TBD
- 7.2 CFB LAP SIDING - COLOR: TBD
- 7.3 CFB SMOOTH TEXTURE PANEL - COLOR: TBD
- 7.5 CFB TRIM - COLOR: TBD
- 8.1 MAGIC PAK GRILL- PREFINISHED COLOR: TO MATCH ADJACENT MATERIAL (PAINT IF PREFINISHED COLORS DO NOT MATCH)
- 8.4 EXHAUST - PREFINISHED COLOR: TO MATCH ADJACENT FINISH COLOR (PAINT IF PREFINISHED COLORS DO NOT MATCH)



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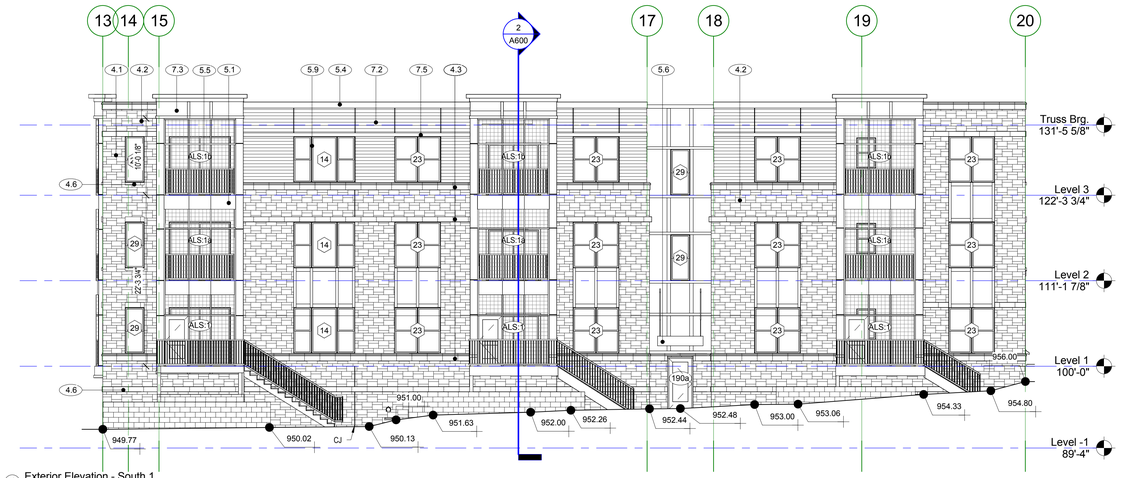
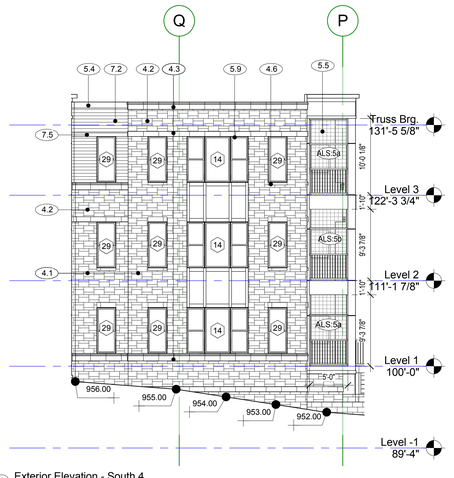
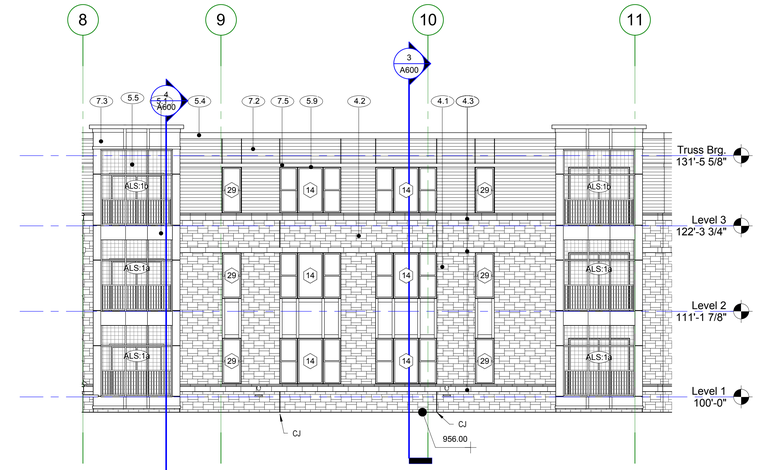


1 Exterior Elevation - South 1
1/8" = 1'-0"

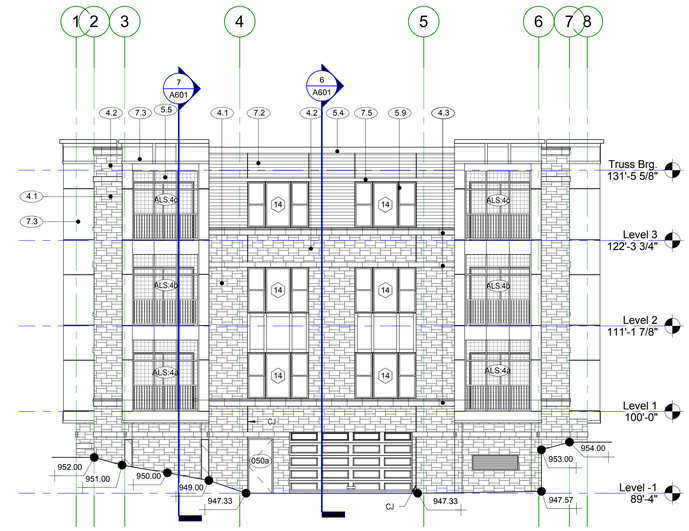


2 Exterior Elevation - South 4
1/8" = 1'-0"



3 Exterior Elevation - South 3
1/8" = 1'-0"

4 Exterior Elevation - East 3
1/8" = 1'-0"



5 Exterior Elevation - South 2
1/8" = 1'-0"

EXTERIOR ELEVATION NOTES

1. SEE DRAWING SHEETS A831-A832 FOR WINDOW HEAD, JAMB AND SILL DETAILS.

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3. ALL DIMENSIONS AT EXTERIOR WALLS ARE TAKEN TO EXTERIOR FACE OF MASONRY AT CMU WALLS OR CENTER OF STUD AT FRAMED WALLS UNLESS NOTED OTHERWISE.

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7. ALL WINDOWS IN BRICK TO HAVE CHAMFERED SILLS.

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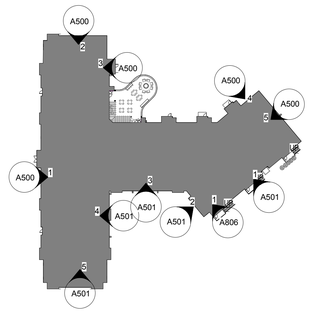

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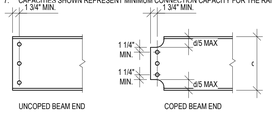
SINGLE PLATE CONNECTION TABLE

BEAM SIZE	# OF BOLT ROWS	Ø Rn COPED	Ø Rn UNCOPED	REMARKS
W8x10-W8x24, W10x12-W10x22, W12x14-W12x26	2	20	30	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=5K W/OUT STIFFENER)
W8x28-W8x40, W10x26-W10x49, W12x30-W12x53	2	27	30	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=14K W/OUT STIFFENER)
W8x48-LARGER, W10x49-LARGER, W12x58-LARGER	2	32	30	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=19K W/OUT STIFFENER)
W14x22	3	32	47	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=22K W/OUT STIFFENER)
W14x26-W14x48, W14x53-LARGER	3	43	47	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=25K W/OUT STIFFENER)
W16x26-W16x45, W18x35-W18x50	4	58	63	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=26K W/OUT STIFFENER)
W16x50-LARGER, W18x55-LARGER,	4	61	63	
ALL W21 AND W24	5	79	79	USE ONLY WHERE NOTED FOR W24'S
ALL W27 AND W30	6	95	95	USE ONLY WHERE NOTED
ALL W33 AND W36	7	111	111	USE ONLY WHERE NOTED

UNLESS NOTED OTHERWISE:
*ASSUMES AISC STANDARD CONNECTION CONFIGURATION.
1. ALL BOLTS 3/4"Ø A325-N. PLATE WELDS 2-1/4" FULL LENGTH FILLET WELDS.
2. ALL PLATES 5/16" THICK ASTM A36. ALL BEAMS ASTM A992.
3. FOR COPED BEAMS Leh=1 3/4" MINIMUM. Lev=1 1/4" MINIMUM (PARAMETERS PER AISC 13TH EDITION). MAXIMUM COPE LENGTH = 5". MAXIMUM COPE DEPTHS = 20% OF BEAM DEPTH.
4. HORIZONTAL SHORT SLOTTED HOLES PERMITTED IN BEAM WEB.
5. COORDINATE PLATE LENGTH WITH DRAWINGS AND COORDINATE BOLT LOCATIONS FOR ERECTION PURPOSES.
6. BEAMS REQUIRING ADDITIONAL BOLTS WILL BE NOTED ON THE DRAWINGS THUS: "SP-X" (X=NUMBER OF ROWS OF BOLTS).
7. CAPACITIES SHOWN REPRESENT MINIMUM CONNECTION CAPACITY FOR THE RANGE OF SIZES GIVEN.

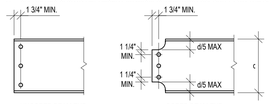


UNCOPED BEAM END COPED BEAM END

BOLTED - DOUBLE ANGLE CONNECTION TABLE

BEAM SIZE	# OF BOLT ROWS	Ø Rn COPED	Ø Rn UNCOPED	REMARKS
W8x10-W8x24, W10x12-W10x22, W12x14-W12x26	2	20	33	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=5K W/OUT STIFFENER)
W8x28-W8x40, W10x26-W10x49, W12x30-W12x53	2	27	44	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=14K W/OUT STIFFENER)
W8x48-LARGER, W10x49-LARGER,	2	38	63	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=19K W/OUT STIFFENER)
W14x22	3	32	60	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=22K W/OUT STIFFENER)
W14x26-W14x48, W16x26-W16x45, W18x35-W18x50	3	43	65	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=25K W/OUT STIFFENER)
W12x58-LARGER, W14x53-LARGER, W16x50-LARGER, W18x55-LARGER,	3	61	95	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=26K W/OUT STIFFENER)
ALL W21 AND W24	4	82	126	WEB STIFFENER REQUIRED FOR DOUBLE COPED BEAMS IF COPE LENGTH >0'-3" (MAX CAPACITY=76K W/OUT STIFFENER)
ALL W27 AND W30	5	136	156	
ALL W33 AND W36	6	187	187	
BEAMS AS NOTED	7	147	215	UNCOPED CAPACITY ASSUMES tw=0.35
BEAMS AS NOTED	8	169	245	UNCOPED CAPACITY ASSUMES tw=0.35
BEAMS AS NOTED	9	191	277	UNCOPED CAPACITY ASSUMES tw=0.35
BEAMS AS NOTED	10	212	307	UNCOPED CAPACITY ASSUMES tw=0.35

UNLESS NOTED OTHERWISE:
*ASSUMES AISC STANDARD CONNECTION CONFIGURATION.
1. ALL BOLTS 3/4"Ø A325-N.
2. ALL ANGLES MINIMUM 5/16" THICK ASTM A36. ALL BEAMS ASTM A992.
3. FOR COPED BEAM Leh=1 3/4" MINIMUM. Lev=1 1/4" MINIMUM (PARAMETERS PER AISC 13TH EDITION). MAXIMUM COPE LENGTH = 5". MAXIMUM COPE DEPTH 20% OF BEAM DEPTH.
4. HORIZONTAL SHORT SLOTTED HOLES PERMITTED IN BEAM WEB AND OUTSTANDING ANGLE LEGS.
5. COORDINATE ANGLE LENGTHS WITH DRAWINGS AND COORDINATE BOLT LOCATIONS FOR ERECTION PURPOSES.
6. BEAMS REQUIRING ADDITIONAL BOLTS WILL BE NOTED ON THE DRAWINGS THUS: "DA-X" (X=NUMBER OF ROWS OF BOLTS).
7. CAPACITIES SHOWN REPRESENT MINIMUM CONNECTION CAPACITY FOR THE RANGE OF SIZES GIVEN.



UNCOPED BEAM END COPED BEAM END

CLASS 'A' TENSION LAP SPLICE TABLE

BAR SIZE	fc(psi) 2500	3000	3500	4000	5000	6000	7000	8000
#3	1'-6"	1'-5"	1'-4"	1'-3"	1'-1"	1'-0"	1'-0"	1'-0"
#4	2'-0"	1'-10"	1'-9"	1'-7"	1'-5"	1'-4"	1'-3"	1'-2"
#5	2'-6"	2'-4"	2'-2"	2'-0"	1'-10"	1'-8"	1'-6"	1'-5"
#6	3'-0"	2'-9"	2'-7"	2'-5"	2'-2"	2'-0"	1'-10"	1'-9"
#7	4'-5"	4'-0"	3'-9"	3'-6"	3'-2"	2'-10"	2'-8"	2'-6"
#8	5'-0"	4'-7"	4'-3"	4'-0"	3'-7"	3'-3"	3'-0"	2'-10"
#9	5'-8"	5'-2"	4'-10"	4'-6"	4'-0"	3'-8"	3'-5"	3'-2"
#10	6'-4"	5'-9"	5'-4"	5'-0"	4'-6"	4'-1"	3'-9"	3'-6"
#11	7'-1"	6'-4"	5'-10"	5'-6"	4'-11"	4'-6"	4'-2"	3'-11"

CLASS 'B' TENSION LAP SPLICE TABLE

BAR SIZE	fc(psi) 2500	3000	3500	4000	5000	6000	7000	8000
#3	1'-11"	1'-10"	1'-8"	1'-7"	1'-5"	1'-4"	1'-2"	1'-2"
#4	2'-7"	2'-5"	2'-3"	2'-1"	1'-11"	1'-9"	1'-7"	1'-6"
#5	3'-3"	3'-0"	2'-9"	2'-7"	2'-4"	2'-2"	2'-0"	1'-10"
#6	3'-11"	3'-7"	3'-4"	3'-1"	2'-10"	2'-7"	2'-4"	2'-3"
#7	5'-8"	5'-3"	4'-10"	4'-6"	4'-1"	3'-9"	3'-5"	3'-3"
#8	6'-6"	6'-0"	5'-6"	5'-2"	4'-8"	4'-3"	3'-11"	3'-8"
#9	7'-4"	6'-9"	6'-3"	5'-10"	5'-3"	4'-9"	4'-5"	4'-2"
#10	8'-3"	7'-6"	6'-11"	6'-6"	5'-9"	5'-3"	4'-11"	4'-7"
#11	9'-2"	8'-2"	7'-7"	7'-1"	6'-4"	5'-10"	5'-5"	5'-0"

NOTES:
1. THESE TABLES SHOW LENGTHS FOR PLAIN, BOTTOM ASTM A615 GRADE 60 BARS IN NORMAL WEIGHT CONCRETE, MEETING THE SPACING AND COVER LIMITATIONS GIVEN BELOW. MULTIPLY THESE LENGTHS BY ALL OF THE APPLICABLE FACTORS GIVEN FOR OTHER CONDITIONS. SPECIFIC EMBEDMENT, LAP, OR PROJECTION LENGTHS SHOWN ON DRAWINGS GOVERN OVER THESE TABLES.
2. SPACING AND COVER REQUIREMENTS.
   a. CLEAR SPACING BETWEEN BARS AT SPLICE ≥2db AND CLEAR COVER ≥db OR
   b. CLEAR SPACING BETWEEN BARS AT SPLICE ≥db AND CLEAR COVER ≥db AND STIRRUPS/TIES OVER FULL LENGTH OF SPLICE. STIRRUPS/TIES TO BE SPACED SUCH THAT:
      s x n≤16 FOR #3 TIES/STIRRUPS
      s x n≤32 FOR #4 TIES/STIRRUPS
      s x n≤50 FOR #5 TIES/STIRRUPS
   db = BAR DIAMETER IN INCHES, s = SPACING OF TIES/STIRRUPS, n = NUMBER OF BARS SPLICED AT A GIVEN LOCATION.
3. MULTIPLY GIVEN SPLICE LENGTHS BY ALL THE FOLLOWING APPLICABLE FACTORS:
   a. MULTIPLY BY 1.5 IF SPACING OR COVER REQUIREMENTS ARE NOT MET.
   b. MULTIPLY BY 1.3 FOR TOP BARS. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR.
   c. MULTIPLY BY 1.2 FOR #3 OR #4 EPOXY COATED BARS SPACED 4" MIN OC WITH 1 1/2" MIN CLEAR COVER.
   d. MULTIPLY BY 1.31 FOR OTHER EPOXY COATED TOP BARS.
   e. MULTIPLY BY 1.5 FOR OTHER EPOXY COATED BARS - EXCEPT TOP BARS.
   f. MULTIPLY BY 1.3 FOR LIGHTWEIGHT CONCRETE.
   g. MULTIPLY BY fy/60 FOR BARS WITH YIELD STRESS >60 KSI.
4. USE CLASS 'B' TENSION LAP SPLICES UNLESS SPECIFICALLY NOTED OTHERWISE.
5. COMPRESSION LAP LENGTH, ONLY WHERE NOTED, TO BE 30db. INCREASE TO 44db FOR Fy = 75 KSI, AND 57db FOR Fy = 90KSI.

NON-BEARING WALL LINTEL SCHEDULE

MASONRY LINTELS			STEEL LINTELS			
CLR MAS OPENING	4'-0" OR LESS	4'-1" TO 8'-0"	CLR MAS OPENING	4'-0" OR LESS	4'-1" TO 8'-0"	8'-1" TO 12'-0"
4" WALL	1-#4 BOTTOM	NA	4" WALL	L 3 1/2x3 1/2x5/16	L5x3 1/2x5/16 LLV	NA
6" WALL	1-#4 BOTTOM	1-#5 BOTTOM	6" WALL	2-L2 1/2x3 1/2x5/16 LLV	2-L5x3x5/16 LLV	W8x15+ 5/16x5 PLATE
8" WALL	2-#4 BOTTOM	2-#5 BOTTOM	8" WALL	2-L 3 1/2x3 1/2x5/16	2-L5x3 1/2x5/16 LLV	W8x15+ 5/16x7 PLATE
10" WALL	2-#4 BOTTOM	2-#5 BOTTOM	10" WALL	2-L 3 1/2x3 1/2x5/16	2-L5x3 1/2x5/16 LLV	W8x15+ 5/16x9 PLATE
12" WALL	2-#4 BOTTOM	2-#5 BOTTOM	12" WALL	2-L5x3 1/2x5/16 LLV + 5/16x11 PLATE	2-L5x3 1/2x5/16 LLV + 5/16x11 PLATE	W8x15+ 5/16x11 PLATE
16" WALL			16" WALL	W8x10+ 5/16x15 PLATE	W8x10+ 5/16x15 PLATE	W8x15+ 5/16x15 PLATE

UNLESS NOTED OTHERWISE:
1. MASONRY LINTELS MAY BE USED FOR MASONRY WALL OPENINGS UNDER THE FOLLOWING CONDITIONS:
   A. THE HEIGHT OF THE MASONRY ABOVE THE OPENING IS AT LEAST EQUAL TO THE CLEAR WIDTH OF THE OPENING.
   B. THE LENGTH OF THE WALL AND DISTANCE TO THE NEAREST CONTROL JOINT ON EACH SIDE OF THE OPENING IS AT LEAST EQUAL TO THE CLEAR OPENING WIDTH.
2. USE STEEL LINTELS AT NON-BEARING WALL OPENINGS NOT MEETING MASONRY CONDITIONS.
3. MASONRY LINTELS MAY BE USED FOR ANY LINTEL IN SOLIDLY GROUTED WALLS UP TO 8'-0" SPAN.
4. MASONRY LINTELS ARE 8" LINTEL BLOCK FILLED WITH 3,000 PSI CONCRETE W/4 1/2" MIN FROM TOP OF LINTEL TO REINFORCING.

COLUMN FOOTING SCHEDULE

MARK	FOOTING SIZE WIDTH	LENGTH	THICKNESS	REINFORCING
CF4-0	4' - 0"	4' - 0"	1' - 0"	6-#5 EACH WAY, BOT
CF5-0	5' - 0"	5' - 0"	1' - 4"	6-#5 EACH WAY, BOT
CF6-0	6' - 0"	6' - 0"	1' - 8"	6-#6 EACH WAY, BOT
CF7-0	7' - 0"	7' - 0"	1' - 10"	6-#7 EACH WAY, BOT
CF8-0	8' - 0"	8' - 0"	2' - 0"	7-#7 EACH WAY, BOT
CF9-0	9' - 0"	9' - 0"	2' - 2"	9-#7 EACH WAY, BOT
CF9-6	9' - 6"	9' - 6"	2' - 4"	10-#7 EACH WAY, BOT

CONTINUOUS WALL FOOTING SCHEDULE

MARK	FOOTING SIZE WIDTH	THICKNESS	REINFORCING
WF2-0	2' - 0"	1' - 0"	2-#5 CONT, BOT
WF3-0	3' - 0"	1' - 0"	3-#5 CONT, BOT

LINTEL SCHEDULE

MARK	SIZE	REMARKS
L1	16" BOND BEAM	2-#5 CONT
L2	24" BOND BEAM	2-#5 CONT, BOT, W/#3 STIRRUPS @8"OC
L3	32" BOND BEAM	2-#5 CONT, BOT, W/#3 STIRRUPS @8"OC
L4	24" BOND BEAM	2-#6 CONT, BOT, W/#3 STIRRUPS @8"OC

UNLESS NOTED OTHERWISE:
1. USE LINTEL BLOCKS FOR LINTELS.
2. BEAR LINTELS 8" MINIMUM EACH SIDE OF OPENING.
3. DO NOT PLACE CONTROL JOINTS WITHIN 24" OF JAMBS.
4. PROVIDE 5/16" END PLATES FOR STEEL WIDE FLANGE LINTELS.
5. BOTTOM PLATES TO BE HELD BACK 1/2" FROM EDGE OF MASONRY OPENING.
6. PROVIDE 5/8"Ø7HT HS @24"OC, TOP OF STEEL LINTELS, MINIMUM 2 PER LINTEL. GROUT CMU CORES SOLID AT STUD LOCATIONS.
7. PROVIDE LINTEL TYPE L1 WHERE LINTEL IS NOT SHOWN. CONFIRM WITH ENGINEER PRIOR TO PLACEMENT.

PIER SCHEDULE

MARK	SIZE	CONC	MAS	REINFORCING	REMARKS
P1	16"x16"		X	4-#5 VERTS W/ #3 TIES @8"OC	
P2	24"x20"		X	6-#5 VERTS W/ #3 TIES @8"OC	
PA	16"xWALL WIDTH		X	2-#5 @8"OC	

UNLESS NOTED OTHERWISE:
1. PROVIDE HOOKED DOWELS TO MATCH VERTICAL REINFORCING.
2. SEE 8/S500 FOR TYPICAL JAMB REINFORCING LAYOUT.
3. PROVIDE PIER TYPE PA FOR BEAM BEARINGS AND OPENING JAMBS WHERE PIER IS NOT SHOWN. CONFIRM WITH ENGINEER PRIOR TO PLACEMENT.
4. REINFORCING SHOWN AT LOWEST LEVEL EXTENDED FROM TOP OF FOOTING TO TOP OF WALL.
5. PROVIDE FIRST TIE MAXIMUM OF ONE-HALF TIE SPACING ABOVE TOP OF FOOTING AT CONCRETE PIERS.
6. EXTEND TIES TO WITHIN ONE-HALF TIE SPACING OF TOP OF PIER. PROVIDE MINIMUM OF 2 TIES WITHIN 5" OF TOP OF PIER.
7. SEE 18/S500 FOR PIERS INTEGRATED WITH EXTERIOR WALL.

WALL REINFORCING SCHEDULE

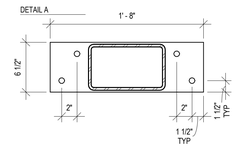
MARK	REINFORCING
W1	#5@16" OC, 3" FROM INSIDE FACE
W2	#5@24"OC, CENTERED
W3	#5@48"OC, CENTERED

UNLESS NOTED OTHERWISE:
1. PROVIDE TYPE W1 REINFORCING WHERE REINFORCING IS NOT SHOWN. CONFIRM WITH ENGINEER PRIOR TO PLACEMENT.
2. PROVIDE DOWELS TO MATCH WALL REINFORCING SIZE AND SPACING. HOOK AT BOTTOM OF FOOTING. PROJECT 2'6" INTO WALL.
3. PLACE FIRST BAR 1/2 TYPICAL SPACING FROM EDGE OF PIERS.
4. SEE 8/S500 FOR TYPICAL JAMB REINFORCING AND LAYOUT. SEE PIER SCHEDULE FOR ADDITIONAL REINFORCEMENT REQUIRED.
5. WALL REINFORCING TO EXTEND FROM FOOTING TO TOP OF WALL.

STEEL COLUMN SCHEDULE

MARK	SIZE	BASE PLATE (WHERE REQUIRED)
SC1	HSS4x4x1/4	10"x3/4"x0'-10"
SC2	HSS 10x6x5/16	6 1/2"x3/4"x1'-8", SEE DETAIL A

UNLESS NOTED OTHERWISE:
1. PROVIDE 4-1/2"Ø x0'-6" CONCRETE SCREW ANCHORS.
2. PROVIDE 1" NON-SHRINK GROUT BELOW BASE PLATE.



PRECAST COLUMN SCHEDULE

MARK	SIZE	BASE PLATE (WHERE REQUIRED)
PC1	16"x16"	

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Project Number 1503

Date 05.23.2016

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Date 11-10-16

Revision Pricing Set

Rev. No. 1

SCHEDULES

As indicated

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WOOD BEAM SCHEDULE

MARK	HEADER	LEVEL 1 POST	LEVEL 2 POST	LEVEL 3 POST	REMARKS
B1	3-2x10	4-2x6	3-2x6	2-2x6	
B2	3-1 3/4x24 LVL	5-2x6	--	--	
B3	3-1 3/4x9 1/4 LVL	4-2x6	3-2x6	2-2x6	
B4	3-2x10	2-2x6	2-2x6	2-2x6	
B5	3-1 3/4x11 7/8 LVL	4-2x6	--	--	
B6	3-1 3/4x16 LVL	5-2x6	--	--	
B7	3-1 3/4x9 1/4 LVL	2-2x6	2-2x6	--	
B8	3-1 3/4x18 LVL	4-2x6	--	--	
B9	3-1 3/4x24 LVL	6-2X6			
B10	3-1 3/4x20 LVL	--	--	3-2x8	
B11	3-1 3/4x24 LVL	5-2x8	4-2x8		
B12	3-1 3/4x24 LVL	7-2x6	6-2x6	3-2x6	
B13	2-1 3/4x24 LVL	5-2X6	5-2x6	3-2x6	END HANGERS, TYP. POSTS NOTED ARE ONLY REQUIRED WHERE BEAM IS NOT SUPPORTED BY ANOTHER BEAM, SEE PLAN
B14	3-1 3/4x20 LVL	7-2x6	6-2x6	3-2x6	
B15	2-1 3/4x20 LVL	5-2x6	5-2x6	3-2x6	END HANGERS, TYP. POSTS NOTED ARE ONLY REQUIRED WHERE BEAM IS NOT SUPPORTED BY ANOTHER BEAM, SEE PLAN
B16	3-2x12	6x6	--	--	
B17	2-2x12	--	--	--	

UNLESS NOTED OTHERWISE:
1. EXTEND BEAM TO BEAR ON FULL WIDTH OF POST.
2. SEE STRUCTURAL NOTES FOR TYPICAL MULTI-PLY BEAM FASTENING FOR DIMENSIONAL LUMBER
3 SEE 19/SS02 FOR TYPICAL MULTI-PLY FASTENING FOR LVL BEAMS.

WOOD POST SCHEDULE

MARK	LEVEL 1	LEVEL 2	LEVEL 3	REMARKS
WP1	4-2x6	3-2x6	2-2x6	
WP2	7x5 1/4 PSL			
WP3	2-2x6	2-2x6		
WP4	3-2x6			
WP5	6x6			SIMPSON ABU66 AT BASE W/ 5/8"Ø THREADED ANCHOR INTO STOOP WALL, EMBED 9" MIN AND SET W/ ADHESIVE

UNLESS NOTED OTHERWISE:
1. POSTS SHALL BE CONTINUOUS TO THE LOWEST LEVEL OF WOOD FRAMING. PROVIDE BLOCKING AS REQUIRED AT FLOORS.
2. PROVIDE SOLID BLOCKING AT BEAM BEARING TO MATCH WIDTH OF WALL TO PROVIDE FULL BEARING FOR POST ABOVE WHERE BEAM WIDTH IS LESS THAN WALL WIDTH.
3. PROVIDE A MINIMUM OF 2 STUDS AT BEAM AND GIRDER TRUSS BEARING WHERE POST IS NOT INDICATED. MATCH WALL STUD SIZE.

WOOD JOIST SCHEDULE

MARK	SIZE	REMARKS
J1	24" OPEN WEB TRUSS @24"OC MAX	
J2	2x10 @16"OC	
J3	20" I-JOIST @24"OC MAX	
J4	2x10@12"OC	

UNLESS NOTED OTHERWISE:
1. TRUSS SPACING MAY BE REDUCED IN ORDER TO MEET THE SUPPLIERS REQUIREMENTS OR THE CONTRACTORS MEANS AND METHODS OF CONSTRUCTION.

HEADER SCHEDULE

MARK	HEADER	LEVEL 1		LEVEL 2		LEVEL 3		REMARKS
		JACK STUDS	KING STUDS	JACK STUDS	KING STUDS	JACK STUDS	KING STUDS	
H1	3-1 3/4x9 1/4 LVL	2-2x6	1-2x6	2-2x6	1-2x6	2-2x6	1-2x6	
H2	3-2x10	3-2x6	1-2x6	2-2x6	1-2x6	2-2x6	1-2x6	
H3	3-2x10	2-2x6	1-2x6	2-2x6	1-2x6	2-2x6	1-2x6	
H4	3-1 3/4x11 1/4 LVL	3-2x6	2-2x6	2-2x6	1-2x6	2-2x6	1-2x6	
H5	NA	--	--	--	--	--	--	
H6	NA	--	--	--	--	--	--	
H7	3-1 3/4x9 1/4 LVL	3-2x6	1-2x6	3-2x6	1-2x6	2-2x6	1-2x6	
H8	3-2x12	3-2x6	1-2x6	--	--	--	--	
H9	3-1 3/4x11 1/4 LVL	3-2x6	1-2x6	--	--	--	--	

UNLESS NOTED OTHERWISE:
1. SEE 4/SS02 FOR TYPICAL WALL OPENING DETAIL.
2. PROVIDE SOLID VERTICAL BLOCKING AT ALL FLOORS AT ALL POST LOCATIONS.
3. BEAR HEADERS ON FULL WIDTH OF JACK STUDS.

WOOD SHEAR WALL SCHEDULE

MARK	SHEATHING			ATTACHMENT AT PANEL EDGES			SILL PLATE CONNECTION			HOLD DOWN			REMARKS
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 1	LEVEL 2	LEVEL 3	
SW1	1 LAYER OF 5/8" GYP	1 LAYER OF 5/8" GYP	1 LAYER OF 5/8" GYP	NO. 6 TYPE S OR W SCREWS @4"OC/12"OC	NO. 6 TYPE S OR W SCREWS @8"OC/12"OC	NO. 6 TYPE S OR W SCREWS @8"OC/12"OC	1/2"Ø ANCHORS @6'-0"OC	0.131"Ø x 3" NAILS @12"OC	0.131"Ø x 3" NAILS @12"OC	--	--	--	
SW2	1 LAYER OF 5/8" GYP, EACH WALL	1 LAYER OF 5/8" GYP EACH WALL	1 LAYER OF 5/8" GYP EACH WALL	NO. 6 TYPE S OR W SCREWS @8"OC/12"OC	NO. 6 TYPE S OR W SCREWS @8"OC/12"OC	NO. 6 TYPE S OR W SCREWS @8"OC/12"OC	1/2"Ø ANCHORS @6'-0"OC	0.131"Ø x 3" NAILS @12"OC	0.131"Ø x 3" NAILS @12"OC	--	--	--	
SW3	1 LAYER R-6 ZIP SHEATHING EXT FACE	1 LAYER R-6 ZIP SHEATHING EXT FACE	1 LAYER R-6 ZIP SHEATHING EXT FACE	ZIP: 0.131"Ø x3" NAILS @3"OC	ZIP: 0.131"Ø x3" NAILS @3"OC	ZIP: 0.131"Ø x3" NAILS @3"OC	1/2"Ø ANCHORS @36"OC	0.131"Ø x 3" NAILS @4"OC	0.131"Ø x 3" NAILS @4"OC	--	--	--	
SW4	1 LAYER R-6 ZIP SHEATHING EXT FACE	1 LAYER R-6 ZIP SHEATHING EXT FACE	1 LAYER R-6 ZIP SHEATHING EXT FACE	ZIP: 0.131"Ø x3" NAILS @3"OC	ZIP: 0.131"Ø x3" NAILS @3"OC	ZIP: 0.131"Ø x3" NAILS @3"OC	1/2"Ø ANCHORS @36"OC	0.131"Ø x 3" NAILS @4"OC	0.131"Ø x 3" NAILS @4"OC	DTT2Z	CS22	--	
SW5	1 LAYER R-6 ZIP SHEATHING EXT FACE	1 LAYER R-6 ZIP SHEATHING EXT FACE	1 LAYER R-6 ZIP SHEATHING EXT FACE	ZIP: 0.131"Ø x3" NAILS @3"OC	ZIP: 0.131"Ø x3" NAILS @3"OC	ZIP: 0.131"Ø x3" NAILS @3"OC	1/2"Ø ANCHORS @36"OC	0.131"Ø x 3" NAILS @4"OC	0.131"Ø x 3" NAILS @4"OC	HTT5KT	CS14	CS22	
SW6	1 LAYER OF 5/8" GYP, BLOCKED	1 LAYER OF 5/8" GYP, BLOCKED	1 LAYER OF 5/8" GYP	NO. 6 TYPE S OR W SCREWS @4"OC/12"OC	NO. 6 TYPE S OR W SCREWS @4"OC/12"OC	NO. 6 TYPE S OR W SCREWS @8"OC/12"OC	1/2"Ø ANCHORS @6'-0"OC	0.131"Ø x 3" NAILS @8"OC	0.131"Ø x 3" NAILS @12"OC	HTT5	CS16	CS22	
SW7	1 LAYER OF 5/8" GYP	1 LAYER OF 5/8" GYP	1 LAYER OF 5/8" GYP	NO. 6 TYPE S OR W SCREWS @4"OC/12"OC	NO. 6 TYPE S OR W SCREWS @4"OC/12"OC	NO. 6 TYPE S OR W SCREWS @8"OC/12"OC	1/2"Ø ANCHORS @6'-0"OC	0.131"Ø x 3" NAILS @10"OC	0.131"Ø x 3" NAILS @12"OC	--	--	--	
SW8	1 LAYER R-6 ZIP SHEATHING EXT FACE, 1 LAYER OF GYP INT FACE	1 LAYER R-6 ZIP SHEATHING EXT FACE	1 LAYER R-6 ZIP SHEATHING EXT FACE	ZIP: 0.131"Ø x3" NAILS @3"OC EXT FACE, NO. 6 TYPE S OR W SCREWS @8"OC/12"OC	ZIP: 0.131"Ø x3" NAILS @3"OC	ZIP: 0.131"Ø x3" NAILS @3"OC	1/2"Ø ANCHORS @3'-0"OC	0.131"Ø x 3" NAILS @4"OC	0.131"Ø x 3" NAILS @4"OC	HDU11-SDS2.5, 4-2x6 END POST	2-CS16	CS22	
SW9	1 LAYER OF 5/8" GYP, EACH WALL, BLOCKED	1 LAYER OF 5/8" GYP, EACH WALL	1 LAYER OF 5/8" GYP	NO. 6 TYPE S OR W SCREWS @4"OC/12"OC	NO. 6 TYPE S OR W SCREWS @4"OC/12"OC	NO. 6 TYPE S OR W SCREWS @4"OC/12"OC	1/2"Ø ANCHORS @3'-0"OC	0.131"Ø x 3" NAILS @4"OC	0.131"Ø x 3" NAILS @10"OC	HTT4	CS18	CS22	
SW10	--	--	--	--	--	--	--	--	--	--	--	--	

UNLESS NOTED OTHERWISE:
1. SHEATHING TO BE CONTINUOUS FOR LENGTH OF SHEAR WALL. LAP SHEATHING ON SINGLE STUD. AT INTERSECTING WALLS, PROVIDE FLAT 2x MEMBER 2" WIDER THAN INTERSECTING WALL AND ATTACH SHEATHING TO FLAT 2x ON EACH SIDE OF INTERSECTING WALL.
2. PLYWOOD OR OSB TO BE APA RATED SHEATHING THAT CONFORMS TO PRODUCT STANDARD PS-2.
3. SEE 19 & 20/SS01 FOR TYPICAL HOLD DOWN DETAIL TO PRECAST AT HOLD DOWN LOCATIONS INDICATED IN SCHEDULE.
4. SEE 12,13 &14/S502 FOR TYPICAL HOLD DOWN DETAIL AT WOOD FLOOR TRUSSES.
5. PROVIDE MINIMUM 2-2x STUDS AT EACH END OF SHEAR WALL PANEL. SEE SCHEDULE FOR HOLD DOWN REQUIRED AT EACH END OF SHEAR WALL.
6. PROVIDE 1/2"Ø SCREW ANCHOR WITHIN 9" OF SHEAR WALL END POST FOR SHEAR WALLS WITH NO HOLD DOWN. SEE STRUCTURAL NOTES ON S000 FOR REQUIRED SCREW ANCHOR EMBEDMENT.
7. PROVIDE RSP STRAP TIES ON EACH SIDE OF TOP AND BOTTOM SILL PLATES FOR BORED HOLE/NOTCH GREATER THAN 1 1/2" FOR 2x4 OR 2 1/2" FOR 2x6.
8. PROVIDE 1/4"Øx3" SDS SCREWS @ 12"OC OR (3) 0.131Øx3" NAILS @ 6"OC BETWEEN STUDS AT LOCATIONS WHERE WALL STUD SIZE CHANGES.
9. AT GYPSUM SHEATHING, ATTACHMENT AT INTERMEDIATE STUDS IS EQUAL TO ATTACHMENT AT PANEL EDGES.
10. AT PLYWOOD OR OSB SHEATHING, ATTACHMENT AT INTERMEDIATE STUDS IS 12"OC.
11. AT PLYWOOD OR OSB SHEATHING LOCATIONS, SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL GYPSUM SHEATHING REQUIREMENTS TO ACHIEVE REQUIRED FIRE RATING.
12. AT 6x6 POST LOCATIONS, POST REPLACES KING STUD OF HEADER IF ADJACENT TO AN OPENING.
13. SEE 16/SS01 FOR TYPICAL SILL PLATE CONNECTION DETAIL AT PLANK.

WOOD BEARING WALL SCHEDULE

FLOOR LEVEL	TYPICAL EXTERIOR NON-LOAD BEARING WALL - WW1			TYPICAL EXTERIOR LOAD BEARING WALL - WW2			TYPICAL CORRIDOR WALLS - WW3			TYPICAL NON-BEARING DEMISING WALL (DOUBLE WALL) - WW4			SELECTED BEARING DEMISING WALLS - WW5			SELECTED INTERIOR NON-BEARING WALLS - WW6			SELECTED INTERIOR NON-BEARING WALLS - WW6		
	STUD SIZE AND SPACING	STUD GRADE	PLATE GRADE	STUD SIZE AND SPACING	STUD GRADE	PLATE GRADE	STUD SIZE AND SPACING	STUD GRADE	PLATE GRADE	STUD SIZE AND SPACING	STUD GRADE	PLATE GRADE	STUD SIZE AND SPACING	STUD GRADE	PLATE GRADE	STUD SIZE AND SPACING	STUD GRADE	PLATE GRADE	STUD SIZE AND SPACING	STUD GRADE	PLATE GRADE
3	2x6@16"OC	SPF NO. 2	SPF NO. 2	2x6@16"OC	SPF NO. 2	SPF NO. 2	2x6@16"OC	SPF NO. 2	SPF NO. 2	2x4@16"OC	SPF NO. 2	SPF NO. 2	2x6@16"OC	SPF NO. 2	SPF NO. 2	2x4@16"OC	SPF NO. 2	SPF NO. 2	2x8@16"OC	SPF NO. 2	SPF NO. 2
2	2x6@16"OC	SPF NO. 2	SPF NO. 2	2x6@16"OC	SPF NO. 2	SPF NO. 2	2x6@16"OC	SPF NO. 2	SPF NO. 2	2x4@16"OC	SPF NO. 2	SPF NO. 2	2x6@16"OC	SPF NO. 2	SPF NO. 2	2x4@16"OC	SPF NO. 2	SPF NO. 2	2x8@16"OC	SPF NO. 2	SPF NO. 2
1	2x6@16"OC	SPF NO. 2	SYP NO. 2	2x6@16"OC	SPF NO. 2	SYP NO. 2	2x6@12"OC	SPF NO. 2	SYP NO. 2	2x4@16"OC	SPF NO. 2	SYP NO. 2	2x6@16"OC	SPF NO. 2	SYP NO. 2	2x4@16"OC	SPF NO. 2	SYP NO. 2	2x8@12"OC	SPF NO. 2	SYP NO. 2

UNLESS NOTED OTHERWISE:
1. SEE SHEET S000 FOR WOOD GRADES WHERE GRADE IS NOT NOTED.
2. PROVIDE PRESSURE TREATED BOTTOM PLATES AT WALLS SUPPORTED ON CONCRETE OR MASONRY.
3. SEE PLAN FOR NON-TYPICAL AREAS.

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As indicated

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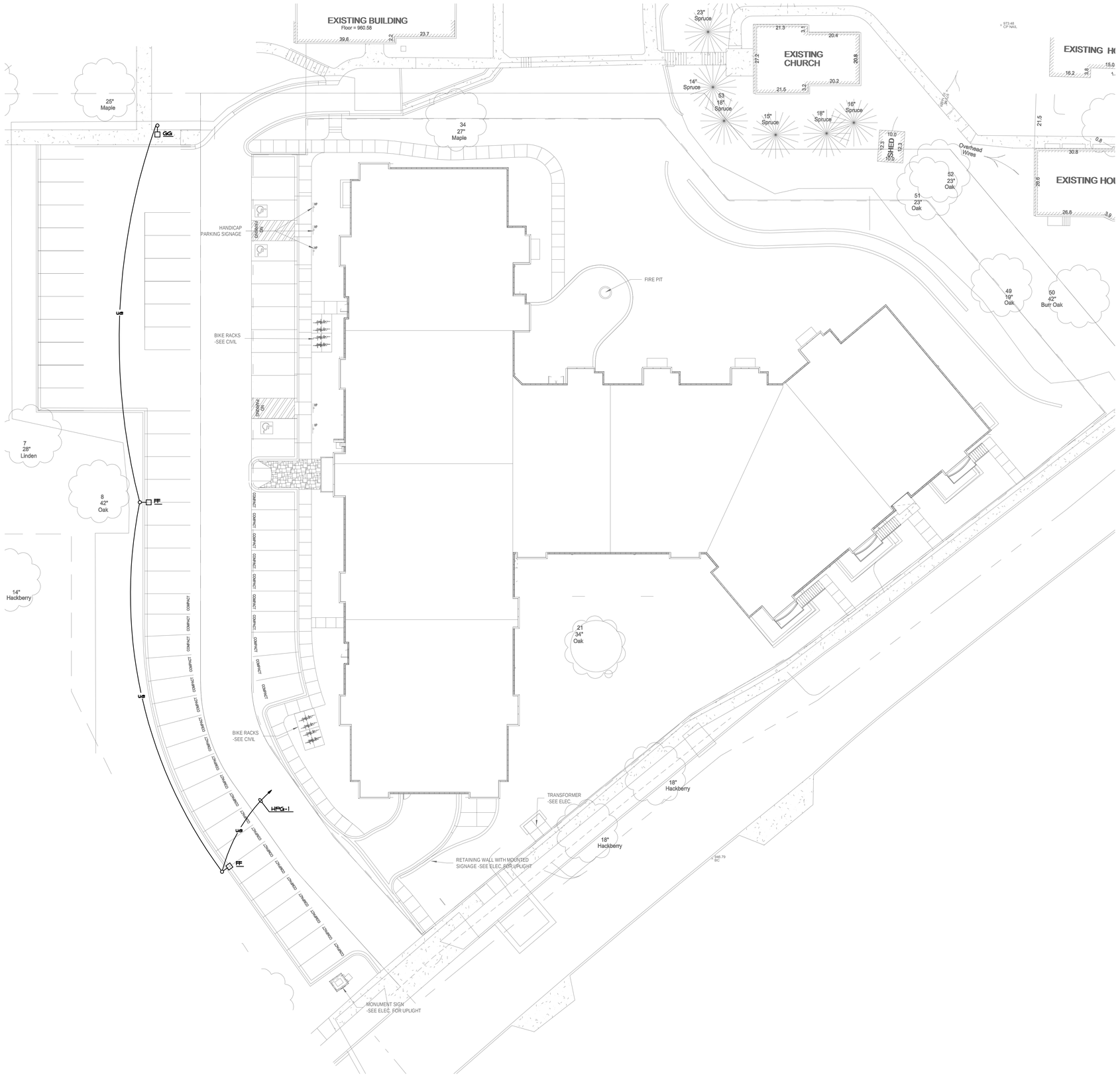

1 SITE PLAN - LIGHTING
E100 SCALE: 1/16" = 1'-0"

GENERAL NOTES:

A .

SPECIFIC NOTES:

1 -

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633 2nd Ave S
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P: (952) 935-8600

Project: Zvago Saint Anthony Park
2265 Luther Place. Saint Paul, MN 55108

Owner: One Two One Development

Project Number	1503/1116021
Date	11.10.2016

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 Engineer under the laws of the State of Minnesota.

Name: Neal K. Wunderlich

Reg. No. 14878 Date 11/10/16

NOT FOR CONSTRUCTION

Date / Revision / Rev. No.

SITE PLAN - LIGHTING

As indicated

E100

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