

Planning Memorandum

To: Sunfish Lake Mayor Dan O'Leary and City Council Members

From: Ryan Krzos, AICP, City Planner

Date: October 27, 2020
City Council Meeting November 4, 2020

Re: 245 Salem Church Road – Major Site and Building Plan Review (MSP-05-2020)
WSB Project No. 16763-000

GENERAL INFORMATION

Applicant: Chris Van Klei, Detail Homes

Property Owner: Tim and Kate Becker

Project Location: 245 Salem Church Road, PID# 38-45900-01-010

Existing Land Use / Undeveloped; Zoned Single-Family Residential District, R-1

Surrounding Land Use Zoning

North:	Residential and Sunfish Lake; Zoned Single-Family Residential District, R-1 with Shoreland Overlay
East:	Residential; Zoned Single-Family Residential District, R-1
South:	Residential; Zoned Single-Family Residential District, R-1
West:	Residential; Zoned Single-Family Residential District, R-1

Comprehensive Plan: The City of Sunfish Lake (2020) Comprehensive Plan guides this property for Rural Residential land use.

Deadline for Agency Action:

Application Date:	09-14-2020
Additional Information Received:	10-09-2020
60 Days:	11-13-2020
Extension Letter Mailed:	N/A
120 Days:	01-21-2021

CONSIDERATIONS RELATED TO THE REQUEST

1. Overview.

Chris Van Klei, Detail Homes (the applicant), has applied on behalf of the property owner for a major site and building plan review to facilitate the development of a single-family residence on the property located at 245 Salem Church Road.

New structures require approval of a major site and building plan review. Site and building plan review requests require a public hearing, and review and recommendation by the Planning Commission, followed by review and consideration by the City Council. The Planning Commission reviewed the request and held a public hearing at their meeting on October 21, 2020. On a 4-0 vote the Planning Commission passed a motion

to recommend approval subject to the findings of fact and conditions of approval noted in the Planning Staff memorandum.

2. General Zoning Review

The residential structure is proposed in the central portion of the subject site. The grade changes slightly from Salem Church Road to the north toward the rear of the property. Grading of the site is proposed to accommodate the residence, which includes a lower level walkout design oriented towards the lake. Vehicular access to the site is provided via a driveway from Salem Church Road to a proposed attached garage. Stormwater management facilities are proposed to the north of the building and adjoining swimming pool. The City engineer has reviewed the stormwater management, erosion control, and site grading plan and found that said plans conform to ordinance requirements.

Below is a summary table of the dimensional requirements for lots and structures in the R-1 District. The project and site comply with all other applicable requirements.

	R-1 Minimum Requirement	Proposed
Net Buildable Lot Area	2.5 acres	2.6 ac (existing)
Lot Width at Building Setback	200 feet	246 feet (existing)
Minimum Building Setback: Front (South)	100 feet	118.25 feet
Minimum Building Setback: Side	50 feet	East: 93.66 ft. West: 50.5 ft.
Minimum Building Setback: Rear (North)	50 feet	234.33 feet
Maximum Building Height	30 feet or 2.5 Stories	29 ft. - 3.5 in. 2 Stories
Maximum Building Area	10% of lot area	3.79%

The proposed structure is designed in a modern farmhouse residential style with a pitched gambrel roof. Exterior materials consist of light-colored engineered wood lap siding and cedar shake siding with light trim and cedar shake roof shingles. These materials are consistent with the surrounding residential context and are allowed by the Zoning Ordinance.

The applicant has provided an existing tree inventory as well as a landscaping plan. Development plans include the removal of 13 trees in the area of the proposed building, driveway and septic area. Almost all of these trees are aggressive (box elder) or not in good condition (silver maple, white pines). Existing trees along Salem Church Road are to remain. The landscaping depicts 50 new trees within the site to include Maple, White Pine, and Quaking Aspen. Grouping of said new trees are arranged to provide screening of the site from adjoining residences to the east and west. Several plantings of shrubs and perennials are proposed around the perimeter of the structure and pool area. The area north of the structure and pool will be seeded with native prairie mixes. The City Forester has reviewed the proposed plans and tree inventory.

Proposed exterior lighting plans include building lights, garden lights, and landscape up lighting. Exterior lighting is allowed where necessary for safety purposes or where fully screened from view of abutting properties. All exterior lighting must not exceed one (1) foot candle (meter reading) as measured at the property line.

Primary and secondary septic locations are identified on the development plans in the area to the south of the proposed residence. Staff anticipates that the site can accommodate on-site sewage treatment system. Issuance of septic permits prior to obtaining building permits is a recommended condition of approval.

3. Ordinance Authority

SECTION 1208.03.B. MAJOR SITE PLAN APPROVAL PROCEDURES provides the process for review of a major site and building plan which requires public notice and notification, a public hearing, and review and recommendation by the Planning Commission, followed by review and consideration by the City Council.

4. Site Plan Review Criteria

The Planning Commission, as its basis of recommendation, and the City Council, as its basis for decision on major projects, shall evaluate the effects of the proposed site and building plans. This review shall include, but is not limited to the following, with staff's comments provided in *italics*:

A. Whether the proposed improvements are compatible and in harmony with the existing structures in the surrounding community.

The project proposes the construction of a detached single-family structure. The architectural design and placement of the structure is compatible with surrounding residences. The improvements comply with the applicable setback, yard, building height and lot coverage requirements.

B. Whether the proposed improvements preserve the character and nature of the surrounding community, including the natural landscape and woodland characteristics of the community.

The structure is proposed in the central portion of the site. This location is predominantly a mowed lawn area, and formerly contained a barn structure. A tree inventory of this site was submitted. Trees proposed for removal during development of the site are mostly aggressive in nature (box elder) or in deteriorating health (silver maple, white pine). The landscaping plan proposes 50 new trees for the site, shrub and perennial plantings, and prairie seeding.

C. Whether the proposed improvements are not constructed of unsightly, improper or unsuitable materials.

The proposed building will be finished with white engineered wood lap siding and cedar shake siding with light trim and will have a cedar shake roof. These materials are allowable by section 1219.03 of the Zoning Ordinance.

D. Whether the proposed improvements will not materially adversely affect any natural resources in the community, except when there is no feasible and prudent alternative to the proposed location of the improvements. For purposes of this clause, "natural resources" shall include, but not be limited to, all mineral, animal, botanical, air, water, land, timber, soil, quietude, recreational, historical, scenic and aesthetic resources.

The project is not expected to adversely impact any of the above noted natural resources.

E. Whether the proposed site and improvements shall have an appearance that will not have an adverse effect upon adjacent residential properties.

The proposed residence is a traditional residential style with regard to architecture. The building complies with the applicable building height, exterior material, and setback

requirements. Accordingly, the appearance is not likely to have an adverse effect on adjacent properties.

F. Whether the proposed site improvement complies with drainage requirements, as provided in Section 1216.04 of this Ordinance.

Drainage plans were reviewed by the City Engineer. The proposed improvements would comply with requirements regarding engineering, stormwater management and site grading.

G. Whether the proposed site and improvements are consistent with the purposes of this Ordinance and the Property Owner Reference & Development Guide Manual, as established by City Council resolution.

The proposed improvements comply with the general provisions of the R-1 District, and other applicable design and performance standards.

RECOMMENDATION

Based on the foregoing considerations and applicable ordinances, staff and the Planning Commission recommends conditional approval of the site and building plan subject to the following findings of fact and conditions of approval:

Findings of Fact:

1. The address of the subject property is as follows:

245 SALEM CHURCH ROAD, SUNFISH LAKE, MN 55118
2. The planning report dated October 14, 2020 prepared by WSB and City Engineer's report dated October 9, 2020 prepared by WSB are incorporated herein by reference.
3. Requests for major site and building plan review requires Planning Commission review and City Council approval.
4. The Sunfish Lake Planning Commission reviewed the applicant's request for major site and building plan approval at the October 21, 2020 Planning Commission meeting.
5. Upon review of the planning report and application information, the Planning Commission found that the proposed site and building plan request meets Ordinance requirements. The following findings support the Planning Commission's recommendation for approval:
 - a. The proposed improvements are compatible and in harmony with the existing structures in the surrounding community.
 - b. The proposed improvements preserve the character and nature of the surrounding community, including the natural landscape and woodland characteristics of the community.
 - c. The proposed improvements are not constructed of unsightly, improper or unsuitable materials.
 - d. The proposed improvements will not materially adversely affect any natural resources in the community, except when there is no feasible and prudent alternative to the proposed location of the improvements.

- e. The proposed site and improvements have an appearance that will not have an adverse effect upon adjacent residential properties.
- f. The proposed site improvement complies with drainage requirements, as provided in Section 1216.04 of this Ordinance.
- g. The proposed site and improvements are consistent with the purposes of the Zoning Ordinance and the Property Owner Reference & Development Guide Manual, as established by City Council resolution.
- h. The proposed improvements meet R-1 District requirements and standards.
- i. The proposed development is consistent with the Comprehensive Plan

Conditions of Approval:

- 1. Construction shall occur in conformance with the plans presented at the October 21, 2020 Planning Commission meeting which are kept on permanent file with the City.
- 2. Compliance with the City Engineer's report dated October 09, 2020.
- 3. Exterior lighting shall not exceed one (1) foot candle (meter reading) as measured at the property line.
- 4. The applicant must obtain a septic permit prior to issuance of building permits.
- 5. The applicant must obtain all other permits as may be required.
- 6. The applicant shall comply with all applicable federal, state, and local laws, rules and ordinances.
- 7. The applicant must adhere to and remain in compliance with the requirements of this Resolution, applicable performance standards, and such other requirements as may apply.
- 8. All conditions of the site plan review must be complied with, shall run with the land, and shall not in any way be affected by the subsequent sale, lease or other change from current ownership of the Property.
- 9. This Resolution is subject to the condition that all representations, written and oral, made by the Applicant and its agents and representatives to the City contained in and concerning the Applicant's application for the site plan review must have been true, complete and accurate at the time they were made, and that they remain true and accurate for the duration of the development.
- 10. By undertaking the activities approved by the request, the applicant agrees to all conditions.

Subject Site



Memorandum

To: Ryan Krzos, AICP – City Planner

From: Jeff Sandberg, PE – City Engineer
Kendra Fallon, EIT – Graduate Engineer

Date: October 9, 2020

Re: Major Site and Building Plan Review
245 Salem Church Road
City of Sunfish Lake, MN
WSB Project No. 016763-000

Project Background

The Applicant is proposing to construct a new house along with the necessary grading and stormwater improvements on a currently undeveloped parcel of land. The following review is only for the engineering, stormwater management, and site grading issues. The building compliance will be handled by the City planners and building inspectors.

The following requirements and comments need to be addressed as the project moves forward:

Stormwater Management

1. All previous stormwater management comments have been addressed.
2. Additional information on the proposed vegetation for the filtration basin and turf reestablishment should be provided. Applicant noted this would be provided by the landscape architect, so this comment is left to serve as a reminder that an updated landscape plan has not been received.
3. An as-built of the critical pond elevations and dimensions will be required upon project completion. This requirement was acknowledged by the applicant.

Site Grading, Erosion Control and Restoration

1. The existing wetland must be protected and have heavy duty (wire backed) silt fence installed prior to any construction activities. All temporary erosion controls must be in place and inspected by the city prior to construction start. **Comment Addressed.**
2. Retaining walls need to show top and bottom of walls at all locations where wall heights change. All walls over 3' require submittal of design by engineer. All walls must be reviewed and approved by the city building official.

Site Access

1. The applicant has been advised that they are responsible for any damage caused to the public streets as a result of the proposed construction. The applicant acknowledged this requirement.

Other

1. Any proposed garage floor drains must direct flows to an approved separation/filtration device. Applicant states no floor drains are proposed.

Conclusion and Recommendations

Based upon our review of the engineering, stormwater management and site grading for 245 Salem Church Rd, we have determined that the proposed site and grading plans dated October 9, 2020 meet city requirements. Therefore, we support this application moving forward through the Planning Commission and City Council.

**CITY OF SUNFISH LAKE
DAKOTA COUNTY, MINNESOTA**

RESOLUTION NO. 20-XX

**RESOLUTION APPROVING A MAJOR SITE AND BUILDING PLAN REVIEW FOR
THE PROPERTY LOCATED AT 245 SALEM CHURCH ROAD, SUNFISH LAKE,
DAKOTA COUNTY, MINNESOTA.**

WHEREAS, Chris Van Klei, Detail Homes, on behalf of owners Timothy and Katherine Becker, submitted an application for a major site and building plan review to allow the construction of a new single family residence on the property located at 245 Salem Church Road, legally described as:

Lot 1, Block 1, Makens Addition, Dakota County, Minnesota

With PID 38.45900.01.010; and

WHEREAS, a request for major site and building plan review requires Planning Commission review and City Council approval.

WHEREAS, City staff reviewed the application and outlined their review comments in a planning report dated October 14, 2020 prepared by WSB and a City Engineer's report dated October 9, 2020 prepared by WSB; and

WHEREAS, the Sunfish Lake Planning Commission held a public hearing at their October 21, 2020 meeting and reviewed the major site and building plan review application, along with the referenced staff reports; and

WHEREAS, upon hearing the staff presentations, applicant testimony, and public testimony, the Planning Commission closed the public hearing and recommend to the City Council approval of the major site and building plan review on a vote of 4-0; and

WHEREAS, the following findings support the Planning Commission recommendation for approval:

1. The address of the subject property is as follows:

245 SALEM CHURCH ROAD
SUNFISH LAKE, MN 55118

2. The planning report dated October 14, 2020 prepared by WSB and City Engineer's report dated October 9, 2020 prepared by WSB are incorporated herein by reference.
3. Requests for major site and building plan review requires Planning Commission review and City Council approval.

4. The Sunfish Lake Planning Commission reviewed the applicant's request for major site and building plan approval at the October 21, 2020 Planning Commission meeting.
5. Upon review of the planning report and application information, the Planning Commission found that the proposed site and building plan request meets Ordinance requirements. The following findings support the Planning Commission's recommendation for approval:
 - a. The proposed improvements are compatible and in harmony with the existing structures in the surrounding community.
 - b. The proposed improvements preserve the character and nature of the surrounding community, including the natural landscape and woodland characteristics of the community.
 - c. The proposed improvements are not constructed of unsightly, improper or unsuitable materials.
 - d. The proposed improvements will not materially adversely affect any natural resources in the community, except when there is no feasible and prudent alternative to the proposed location of the improvements.
 - e. The proposed site and improvements have an appearance that will not have an adverse effect upon adjacent residential properties.
 - f. The proposed site improvement complies with drainage requirements, as provided in Section 1216.04 of this Ordinance.
 - g. The proposed site and improvements are consistent with the purposes of the Zoning Ordinance and the Property Owner Reference & Development Guide Manual, as established by City Council resolution.
 - h. The proposed improvements meet R-1 District requirements and standards.
 - i. The proposed development is consistent with the Comprehensive Plan

WHEREAS, the Sunfish Lake City Council considered the application for the major site and building plan review at their meeting on November 4, 2020 and agrees with the findings of the Planning Commission.

NOW THEREFORE BE IT RESOLVED THAT the City Council of the City of Sunfish Lake hereby approves the major site and building plan review for 245 Salem Church Road with the following conditions:

1. Construction shall occur in conformance with the plans presented at the October 21, 2020 Planning Commission meeting which are kept on permanent file with the City.
2. Compliance with the City Engineer's report dated October 09, 2020.
3. Exterior lighting shall not exceed one (1) foot candle (meter reading) as measured at the property line.
4. The applicant must obtain a septic permit prior to issuance of building permits.
5. The applicant must obtain all other permits as may be required.

6. The applicant shall comply with all applicable federal, state, and local laws, rules and ordinances.
7. The applicant must adhere to and remain in compliance with the requirements of this Resolution, applicable performance standards, and such other requirements as may apply.
8. All conditions of the site plan review must be complied with, shall run with the land, and shall not in any way be affected by the subsequent sale, lease or other change from current ownership of the Property.
9. This Resolution is subject to the condition that all representations, written and oral, made by the Applicant and its agents and representatives to the City contained in and concerning the Applicant's application for the site plan review must have been true, complete and accurate at the time they were made, and that they remain true and accurate for the duration of the development.
10. By undertaking the activities approved by the request, the applicant agrees to all conditions.

This resolution is adopted by the City Council of the City of Sunfish Lake this 4th day of November 2020.

Dan O'Leary, Mayor

Attest:

Catherine Iago, City Clerk

I state and affirm that I agree with and accept the terms and conditions of the foregoing major site and building plan review. I acknowledge that violation of any of these terms and conditions will be cause to revoke my approval. Additionally, violation of any of these terms and conditions subjects me to the sanctions of Sunfish Lake Ordinance 1210 to include, but not be limited to, misdemeanor charges.

Dated: _____

Name:



BECKER RESIDENCE

245 SALEM CHURCH ROAD
SUNFISH LAKE, MINNESOTA

Application for Major Site Plan Review





September 8, 2020

City of Sunfish Lake Planning Commission
c/o Ryan Krozos, AICP
WSB
701 Xenia Ave. S.
Suite 300
Minneapolis, MN 55416

RE: 245 Salem Church Road

Dear City of Sunfish Lake Planning Commission:

Thank you for the opportunity to submit an application for a major site plan review on behalf of Tim and Kate Becker for their future home located at 245 Salem Church Road. Their family is very excited to become a part of Sunfish Lake and greatly value your community's commitment to maintaining a rural atmosphere and preserving the natural surroundings. It is with those goals in mind that the Beckers and their architects, Strand Design, have thoughtfully designed a timeless classic home that is intended to blend in seamlessly with the natural surroundings.

The enclosed application and supporting materials evidence the design teams' commitment to preserving the site's existing beauty, as well as enhancing the area with the addition of numerous trees and plantings that exceed the amount currently on the site. Likewise, the proposed design was created with the Beckers' dual goals of creating a family home that fits in aesthetically with the neighboring homes to the east and west, as well as preserving the privacy of the neighbors by adding additional plantings to provide extra screening.

Thank you for your time and consideration of this major site plan review. If you have any questions or would like additional information, please do not hesitate to contact myself or any member of the design team.

Very truly yours,

Chris Van Klei

Chris Van Klei
Principal, Detail Homes



**245 SALEM CHURCH (BECKER)
PROJECT TEAM**

Owners: Tim and Katherine Becker
245 Salem Church Road
Sunfish Lake, MN 55118
651-357-7899
beckerkate10@gmail.com

Architect: Strand Design
David Strand, LEED AP
1320 NE 2nd Street
Minneapolis, MN 55413
715-497-3268
david@stranddesign.com

Surveyor: Cornerstone Land Surveying
Connie Villari, L.S.
6750 Stillwater Blvd. N., Ste. 1
Stillwater, MN 55082
651-275-8969
connie@cssurvey.net

Landscape Architect: Outdoor Escapes
Drew Torrence
2345 Daniels Street
Long Lake, MN 55356
952-926-6899
dtorrence@outdoorexscapes.com

Interior Designers: The Sitting Room
Kate Regan
206 Water Street
Excelsior, MN 55331
952-473-4440
kate@thesittingroomstudio.com

Civil Engineering: Pierce Pini & Associates, Inc.
Kevin Gardner
9298 Central Avenue NE, St.312
Blaine, MN 55434
763-537-1311
kevin@piercepini.com

Builder: Detail Homes
Chris Van Klei
719 Syndicate Street South
St. Paul, MN 55116
651-336-8089
chris@detailhomes.com

[illegible]

LEGAL DESCRIPTION:

(DESCRIPTION PER DCA TITLE AS AGENT FOR OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY TITLE COMMITMENT NO. 19-080144 R- REV. 1)

Lot One (1), Block One (1), MAKENS ADDITION, according to the recorded plat thereof, Dakota County, Minnesota. Torrens property. Being registered as evidenced by Certificate of Title No. 175580.

TITLE NOTES:

(SCHEDULE BII ITEMS PER DCA TITLE AS AGENT FOR OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY TITLE COMMITMENT NO. 19-080144 R- REV. 1)

- 3/4. DRAINAGE AND UTILITY EASEMENTS AS SHOWN ON THE PLAT OF MAKENS ADDITION (SHOWN GRAPHICALLY).
5. STORM WATER POND, PIPING AND APPURTENANCES MAINTENANCE AGREEMENT PER DOC. NO. 431312.
6. PROPERTY DIVISION AGREEMENT PER DOC. NO. 250703. 7. DEVELOPERS AGREEMENT PER DOC. NO. 431311.
- *THERE MAY BE EXISTING EASEMENTS OF WHICH WE ARE UNAWARE.

EXISTING IMPROVEMENT AREAS:

THIS LOT IS VACANT.

CONCRETE PAD 26 SF
GRAVEL DRIVE 258 SF
TOTAL IMPROVEMENTS 284 SF
% IMPROVEMENT 0.24%

PROPOSED BUILDING ELEVATIONS

FIRST FLOOR = 1014.00
TOP FOUND. = 1013.21
LOWEST FLOOR = 1001.9
GARAGE FLOOR = 1012.8

*BUILDING ELEVATIONS PER DAVID STRAND DESIGN
09/10/2020 AND ENGINEERING PLANS BY PIERCE PINE
DATED 09/11/2020.

PROPOSED IMPROVEMENT AREAS:

HOUSE = 3,704 SQ. FT.
DRIVE = 4,676 SQ. FT.
ENTRY = 224 SQ. FT.
FRONT STEPPERS = 56 SQ. FT.
GARAGE STOOP = 29 SQ. FT.
PORCH = 731 SQ. FT.
REAR STEPPERS = 32 SQ. FT.
REAR STEPS = 98 SQ. FT.
POOL = 985 SQ. FT.
POOL DECK = 1,451 SQ. FT.
FIRE/STEP AREA = 210 SQ. FT.
WALLS = 289 SQ. FT.
TOTAL = 12,485 SQ.FT.
% IMPROVED = 10.7%

PROPOSED IMPROVEMENT AREAS:

BUILDING DIMENTIONS/ELEVATIONS PER ARCHITECTURE
PLANS BY DAVID STRAND DESIGN ON 09/09/2020.

SITE GRADING PER ENGINEERING PLANS BY PIERCE PINE
DATED 09/11/2020.

**CONTRACTOR TO VERIFY ALL ELEVATIONS AND
DIMENSIONS PRIOR TO CONSTRUCTION. PLEASE CONTACT
CORNERSTONE LAND SURVEYING WITH ANY DISCREPANCIES.

TREE INVENTORY:

TAG NO.	SIZE	SPECIES	TAG NO.	SIZE	SPECIES
851	30	SILVER MAPLE	870	7	BOX ELDER
852	28	SILVER MAPLE	871	8	BOX ELDER
853	14	RED PINE	872	9	BOX ELDER
854	30	WHITE PINE	873	9	BOX ELDER
855	14	RED PINE	874	10	BOX ELDER
856	16	BLACK SPRUCE	875	25	BOX ELDER
857	14	RED PINE	876	7	BOX ELDER
858	28	WHITE PINE	877	18	BOX ELDER
859	18	NORWAY SPRUCE	878	19	BOX ELDER
860	16	JACK PINE	879	9	BOX ELDER
861	26	WHITE PINE	880	28	BOX ELDER
862	20	RED PINE	881	16	PAPER BIRCH
863	16	BUR OAK	882	16	RED PINE
864	15	BUR OAK	883	19	WHITE PINE
865	9	BUR OAK	884	12	RED PINE
866	20	BUR OAK	885	24	BOX ELDER
867	23	BUR OAK	886	16	SCOTS PINE
868	24	WHITE OAK	887	19	BLACK SPRUCE
869	44	SILVER MAPLE	888	12	BLACK SPRUCE

245 SALEM CHURCH ROAD

SUNFISH LAKE, MINNESOTA

CONTACT:

BEN RICHTER
DETAIL HOMES
719 Syndicate Street S.
St. Paul, MN 55116
Tel: 651-271-7327
Email:ben@detailhomes.com

COUNTY/CITY:

DAKOTA
COUNTY

CITY OF
SUNFISH LAKE

REVISIONS:

DATE	REVISION
11/14/2019	INITIAL ISSUE
09/11/2020	PROPOSED IMPROVE
09/14/2020	ADD REMOVAL INFO

CERTIFICATION:

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

Daniel L. Thurnes
Daniel L. Thurnes Registration Number: 25718
Date: 11/14/2019

PROJECT LOCATION:

245
SALEM CHURCH ROAD
PID#38-45900-01-010

Suite #200
1970 Northwestern Ave.
Stillwater, MN 55082
Phone 651.275.8969
dan@cssurvey.net

CORNERSTONE
LAND SURVEYING, INC.

FILE NAME SURVSTR70
PROJECT NO. STR19070

PROPOSED IMPROVEMENT
SURVEY

ADRESS: 100 WINDY HILL RD
OWNER: BANCROFT
PID: 38-03100-06-013

SURVEY NOTES:

- BEARINGS ARE BASED ON COORDINATES SUPPLIED BY THE DAKOTA COUNTY SURVEYORS OFFICE. BEARINGS ARE DIFFERENT THAN SHOWN ON THE RECORDED PLAT AND DEEDS. ALL INTERIOR ANGLES MATCH THE RECORDED PLAT/DEED ANGLES.
- THERE MAY SOME UNDERGROUND UTILITIES, GAS, ELECTRIC, ETC. NOT SHOWN OR LOCATED.
- CONTOURS BASED ON FIELD SURVEY CONDUCTED 11/08/2019.

BENCHMARKS

ELEVATIONS BASED ON INFORMATION AS SHOWN ON THE MNDOT GEODETIC WEBSITE. SURVEY DISK 1918 K WITH AN ELEVATION OF 931.83 WAS USED TO ESTABLISH VERTICAL CONTROL FOR THIS SURVEY (NAVD 88)

PROJECT BENCHMARKS IDENTIFIED AND SHOWN GRAPHICALLY.

UNDERGROUND UTILITIES NOTES:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THIS SURVEY HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. GOPHER STATE ONE CALL LOCATE TICKET NUMBER(S) 193112417. SOME MAPS WERE RECEIVED, WHILE OTHER UTILITIES DID NOT RESPOND TO THE LOCATE REQUEST. ADDITIONAL UTILITIES OF WHICH WE ARE UNAWARE MAY EXIST.

ZONING/SETBACKS

ZONING: R-1 - SINGLE FAMILY RESIDENTIAL
SETBACKS:
FRONT: 100 FT.
SIDEYARD: 50 FT.
REAR: 50 FT.

FLOOD INFORMATION:

THIS PROPERTY LIES WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON NON-PRINTED FEMA FLOOD INSURANCE RATE MAP NUMBER 27037C0105E HAVING AN EFFECTIVE DATE OF 12/02/2011.

AREA:

PARCEL AREA = 117,035 SQ. FT. / 2.69 ACRES

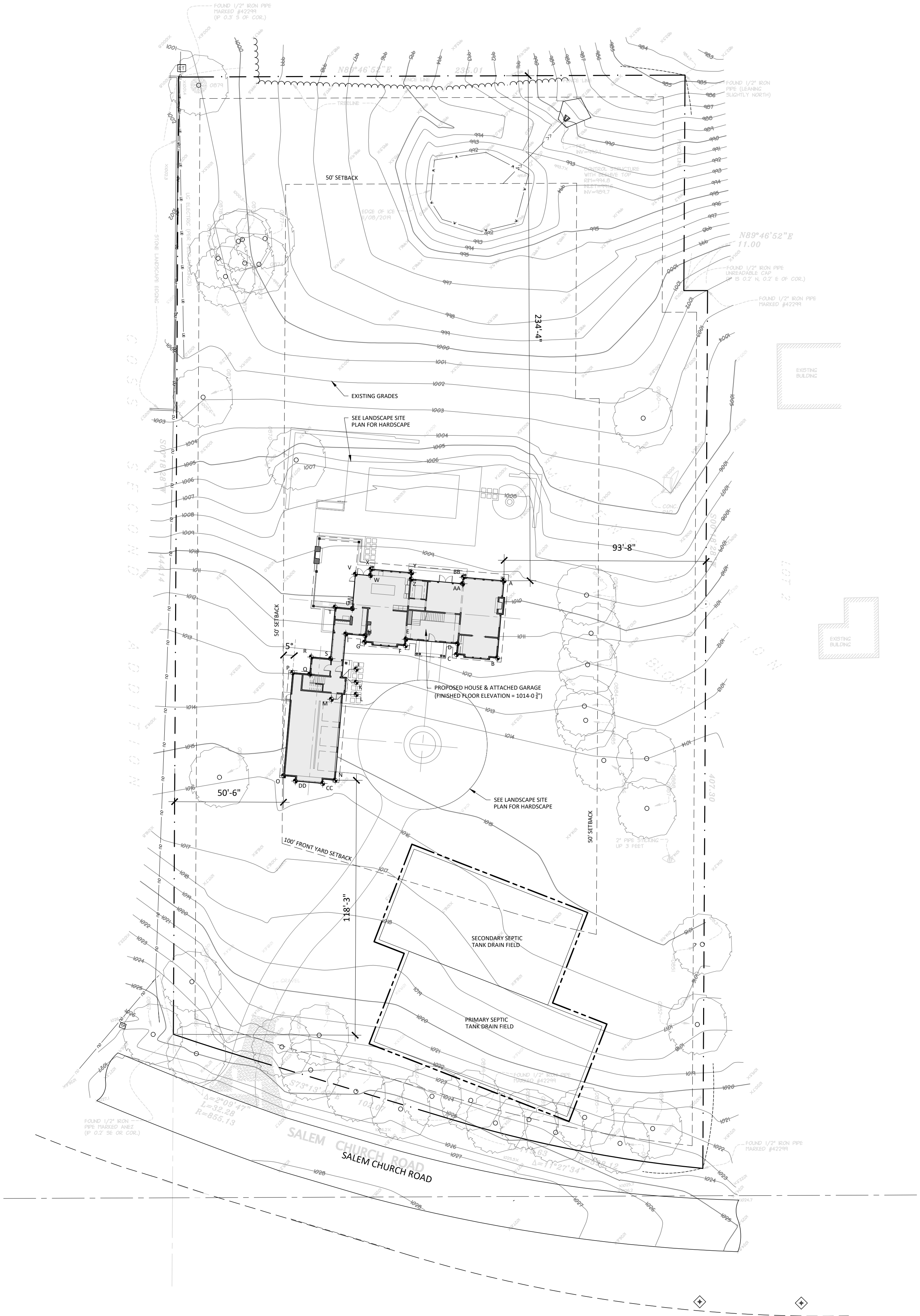
LEGEND:

● FOUND MONUMENT	✚ FIRE DEPT. CONNECTION	— UG UNDERGROUND ELECTRIC
○ SET 1/2" IRON PIPE MARKED RLS NO. 25718	✚ HYDRANT	— UTV UNDERGROUND CABLE TV
□ CABLE TV PEDESTAL	✚ WATER STOP	— UF UNDERGROUND FIBER OPTIC
□ AIR CONDITIONER	✚ WATER MANHOLE	— UT UNDERGROUND TELEPHONE
□ ELECTRIC MANHOLE	✚ WATER METER	— UG OVERHEAD UTILITY
□ ELECTRIC METER	✚ POST INDICATOR VALVE	— UG UNDERGROUND GAS
□ ELECTRIC PEDESTAL	✚ WATER VALVE	— > SANITARY SEWER
□ ELECTRIC TRANSFORMER	✚ BOLLARD	— > STORM SEWER
□ LIGHT POLE	✚ FLAG POLE	— I WATERMAIN
□ CUT WIRE	✚ MAIL BOX	— F FENCE
□ POWER POLE	✚ TRAFFIC SIGN	— C CURB (TYPICAL)
□ GAS MANHOLE	✚ UNKNOWN MANHOLE	— 1230 CONTOURS
□ GAS METER	✚ SOIL BORING	— 100 PROPOSED CONTOUR
□ TELEPHONE MANHOLE	✚ SPOT ELEVATION	— + 842.68 PROPOSED SPOT ELEVATION
□ TELEPHONE PEDESTAL	✚ TRAFFIC SIGNAL	— < PROPOSED DRAINAGE
□ SANITARY CLEANOUT	✚ CONFEROUS TREE	— < DENOTES SILT FENCE
□ SANITARY MANHOLE	✚ DECIDUOUS TREE	— X DENOTES TREE PROTECTION FENCE
□ CATCH BASIN	✚ TREE TO BE REMOVED	
□ STORM DRAIN		
□ FIRE DEPT. SECTION		
□ STORM MANHOLE		

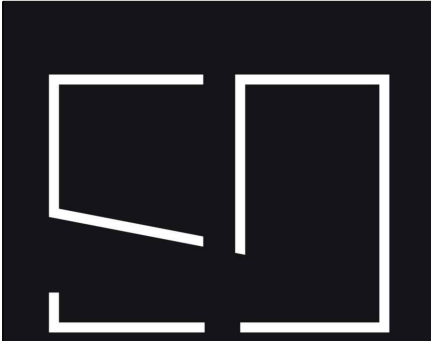


SQUARE FOOTAGE CALC	
LOWER LEVEL	2,294 SF
MAIN LEVEL	2,682 SF
UPPER LEVEL	1,865 SF
TOTAL SQ. FT. OF MAIN HOUSE (MEASURED TO EXT OF WALL 6" ALLOWANCE AT TRUSS LOCATIONS)	6,841 SF
GARAGE MAIN LEVEL	1,021 SF
GARAGE UPPER LEVEL	980 SF
SCREEN PORCH	592 SF
BUILDING FOUNDATION FOOTPRINT (INCLUDES ENCLOSED AREA AND SCREEN PORCH)	4,263 SF

MAX HEIGHT CALCULATION		
	POINT	EXISTING GRADE ELEVATION
	A	1009'-4"
	B	1011'-7"
	C	1011'-6"
	D	1011'-2"
	E	1011'-6"
	F	1011'-9"
	G	1011'-8"
	H	1011'-5"
	I	1011'-5"
	J	1013'-0"
	K	1013'-0"
	L	1013'-8"
	M	1013'-8"
	N	1015'-8"
	O	1015'-10"
	P	1013'-0"
	Q	1013'-0"
	R	1012'-4"
	S	1012'-4"
	T	1010'-6"
	U	1010'-6"
	V	1009'-7"
	W	1009'-7"
	X	1009'-6"
	Y	1009'-6"
	Z	1009'-7"
	AA	1009'-7"
	BB	1009'-5"
	CC	1015'-8"
	DD	1015'-9"
AVERAGE ELEVATION		1011'-10"
HEIGHT LIMITATION (30'+AVERAGE)		1041'-10"
PROPOSED HEIGHT AT GABLE, (FFE OF 1014'-0 3/4")		1041'-1 1/2"



1 ARCHITECTURAL SITE PLAN
SCALE: 1" = 30'-0"



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715.497.3268

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245 SALEM CHURCH ROAD
SUNFISH LAKE, MN

ARCHITECTURAL SITE PLAN

A1.0



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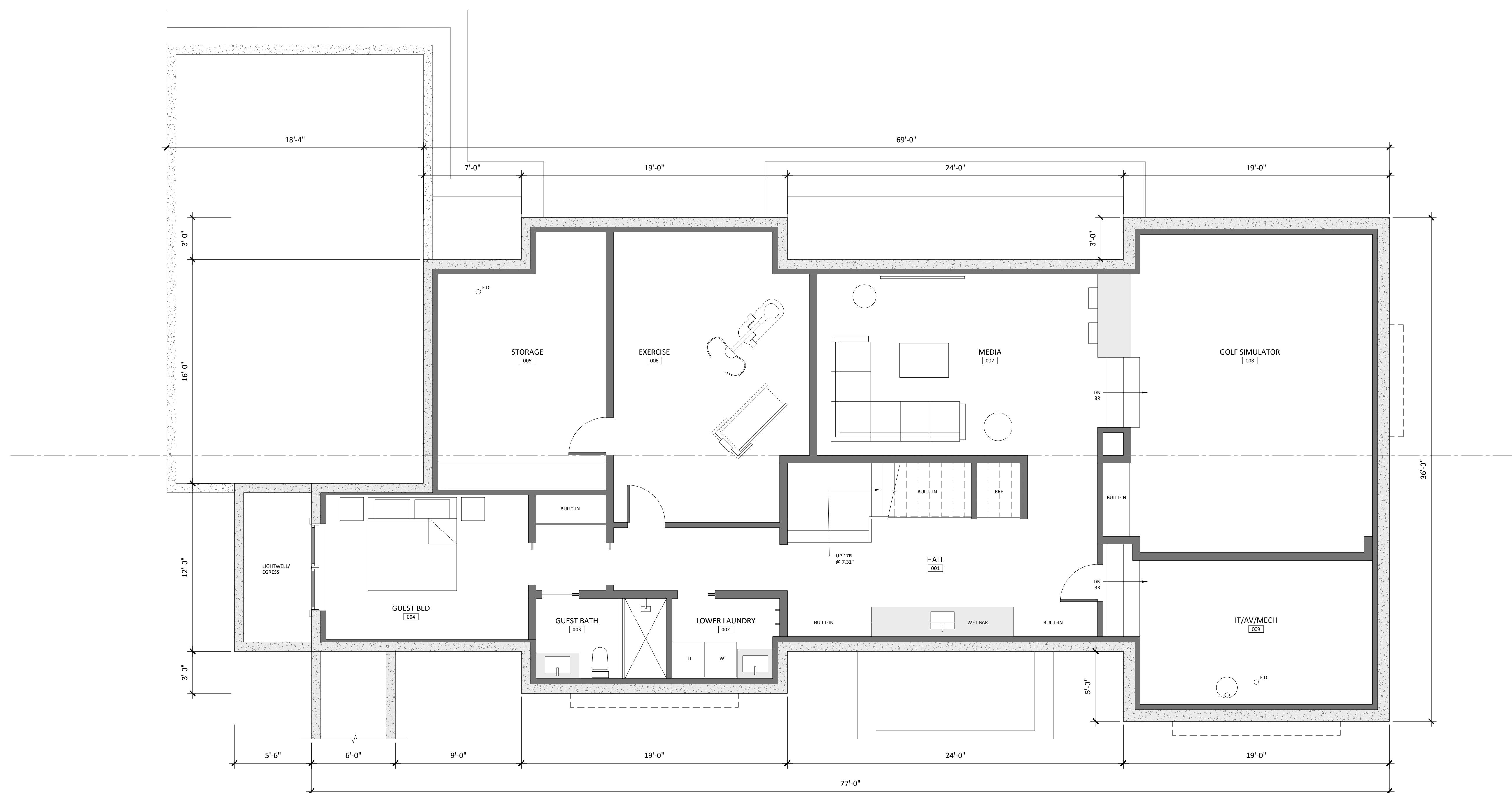
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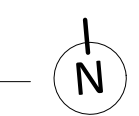
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SUNFISH LAKE, MN

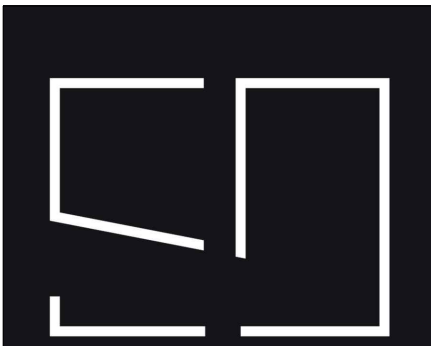
LOWER LEVEL FLOOR PLAN

A1.1



1 LOWER LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"





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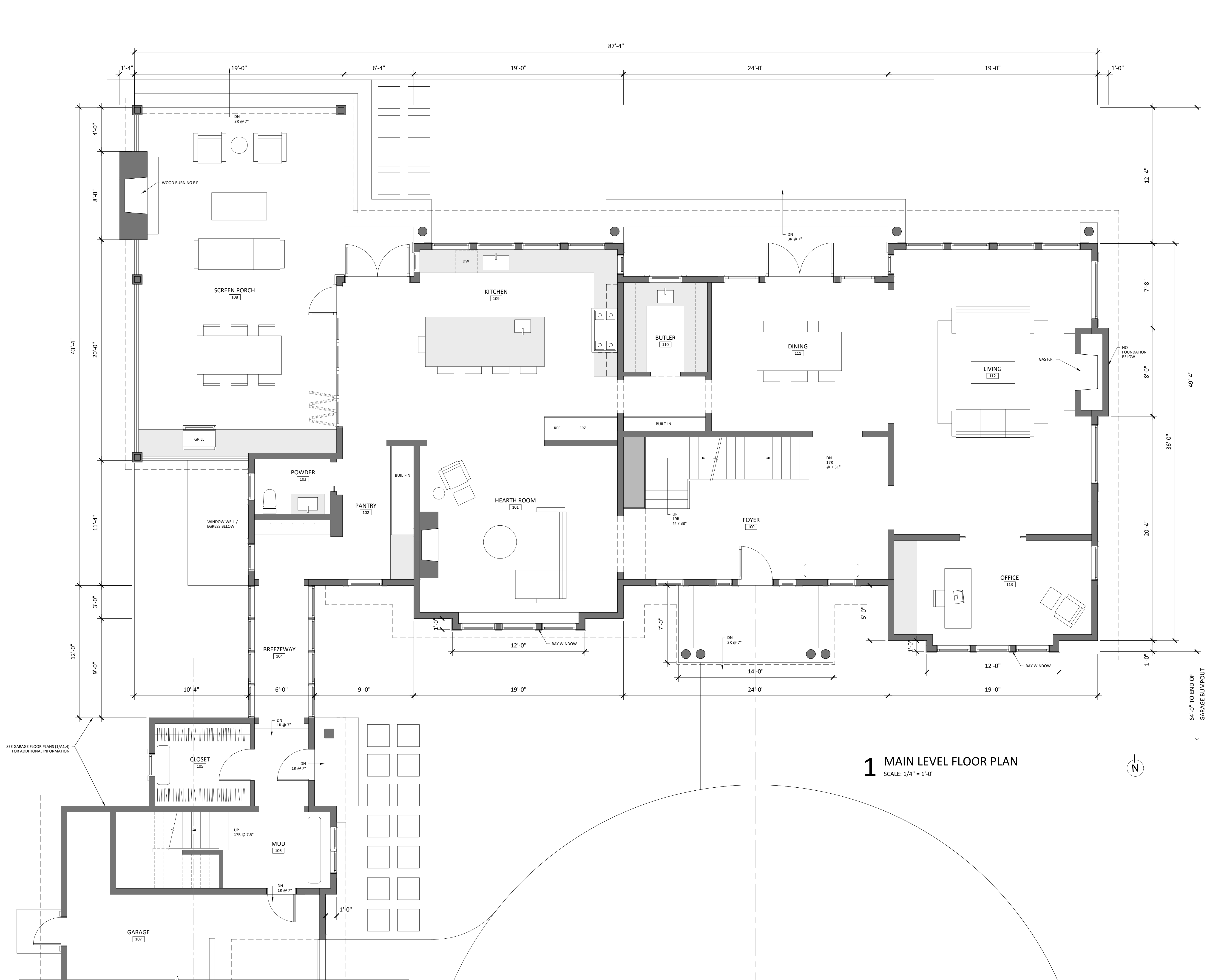
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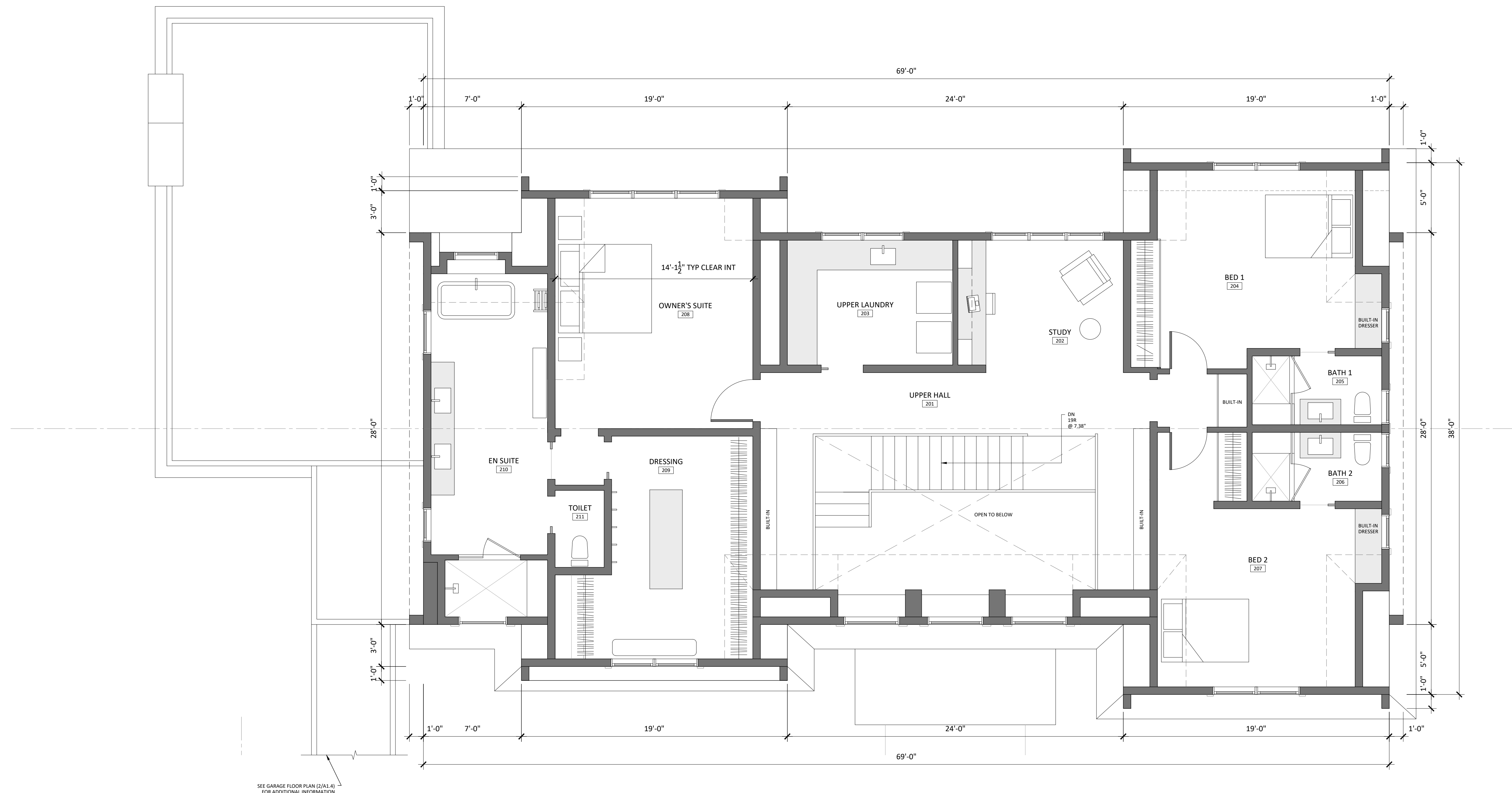
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BECKER RESIDENCE
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MAIN LEVEL FLOOR PLAN

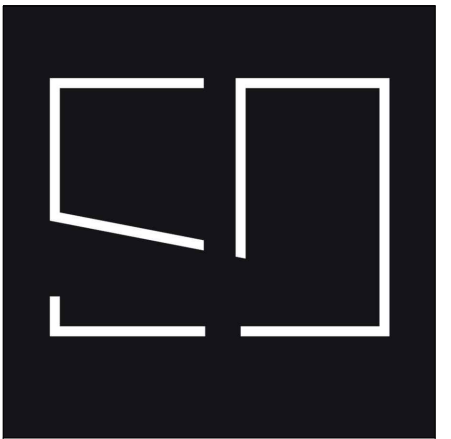
A1.2





1 UPPER LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"

SEE GARAGE FLOOR PLAN (2/A1.4)
FOR ADDITIONAL INFORMATION



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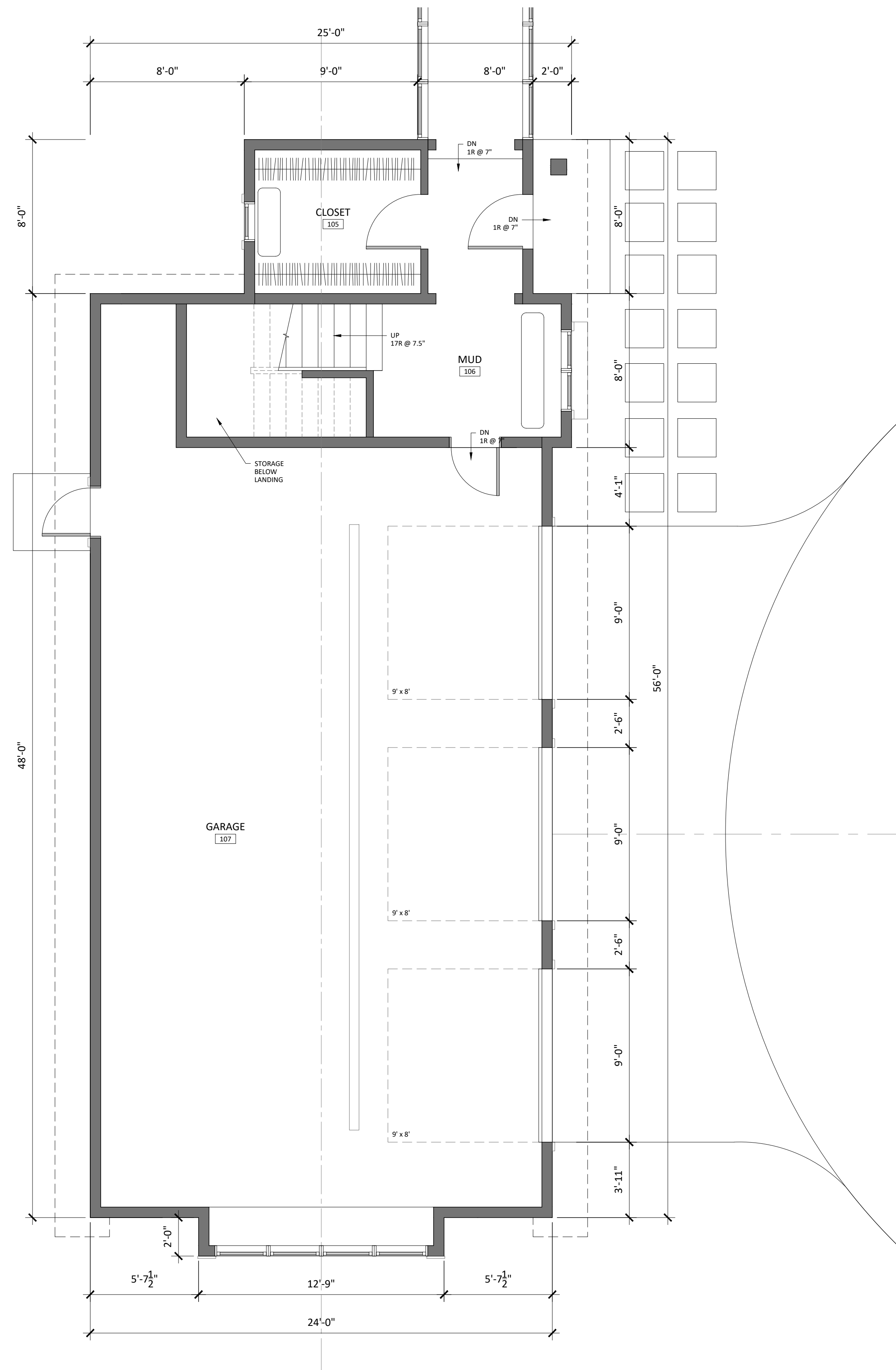
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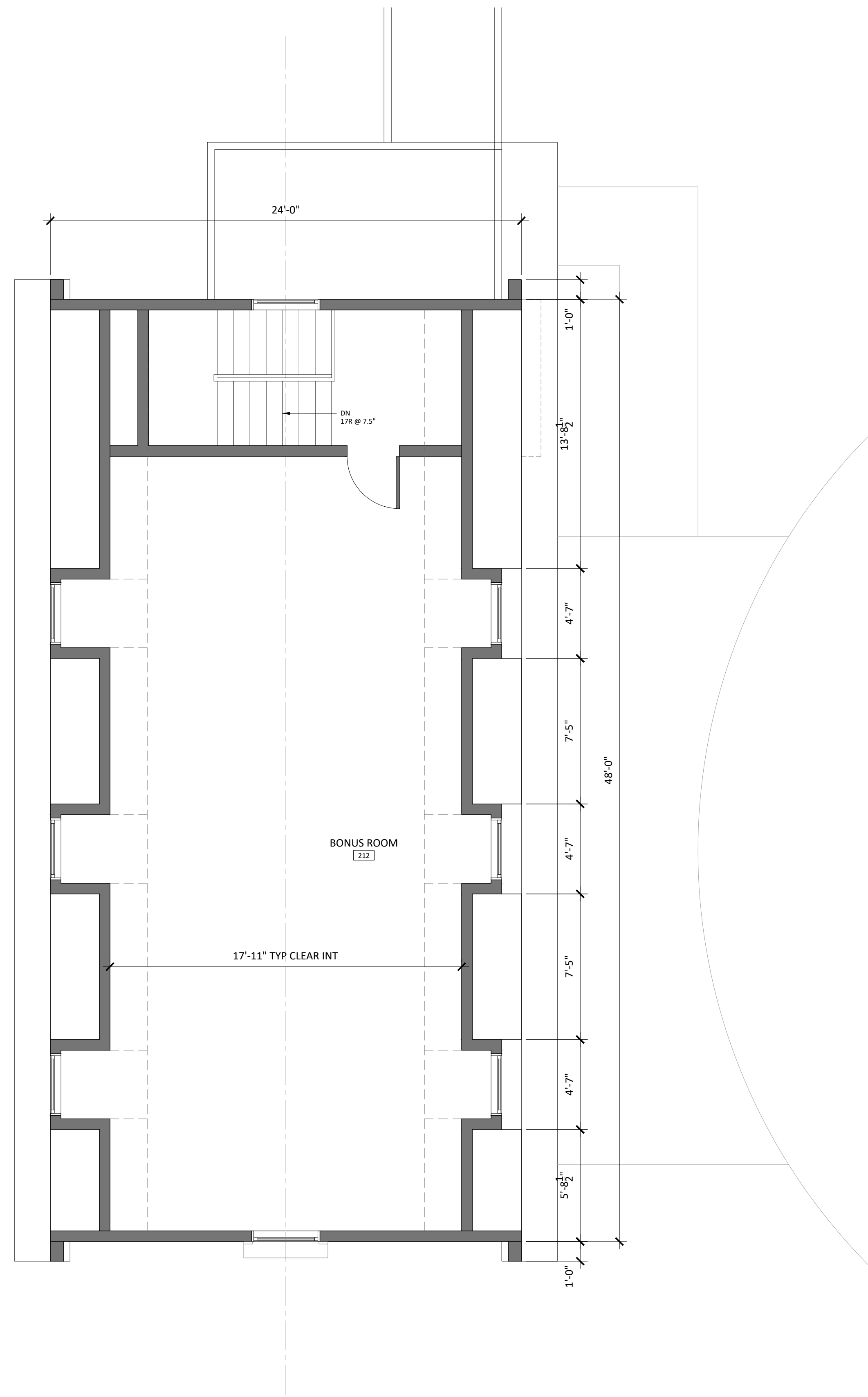
BECKER RESIDENCE
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SUNFISH LAKE, MN

UPPER LEVEL FLOOR PLAN

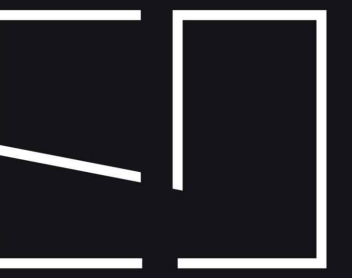
A1.3



1 GARAGE MAIN LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"



2 GARAGE UPPER LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"



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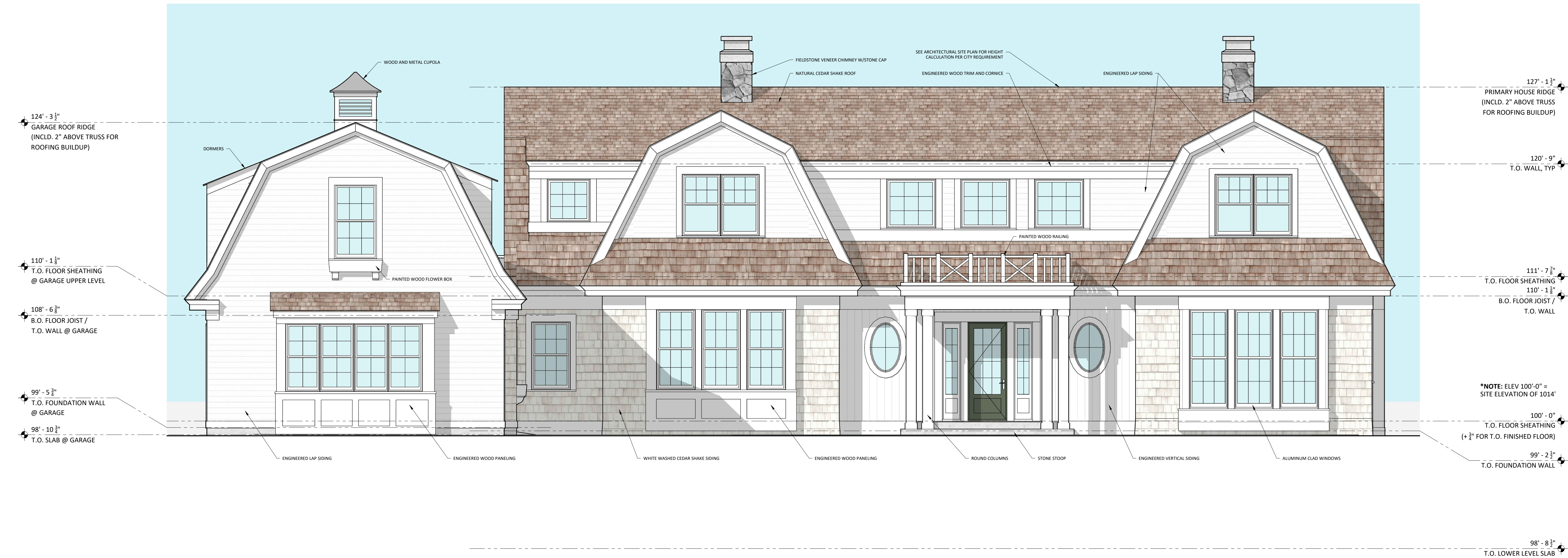
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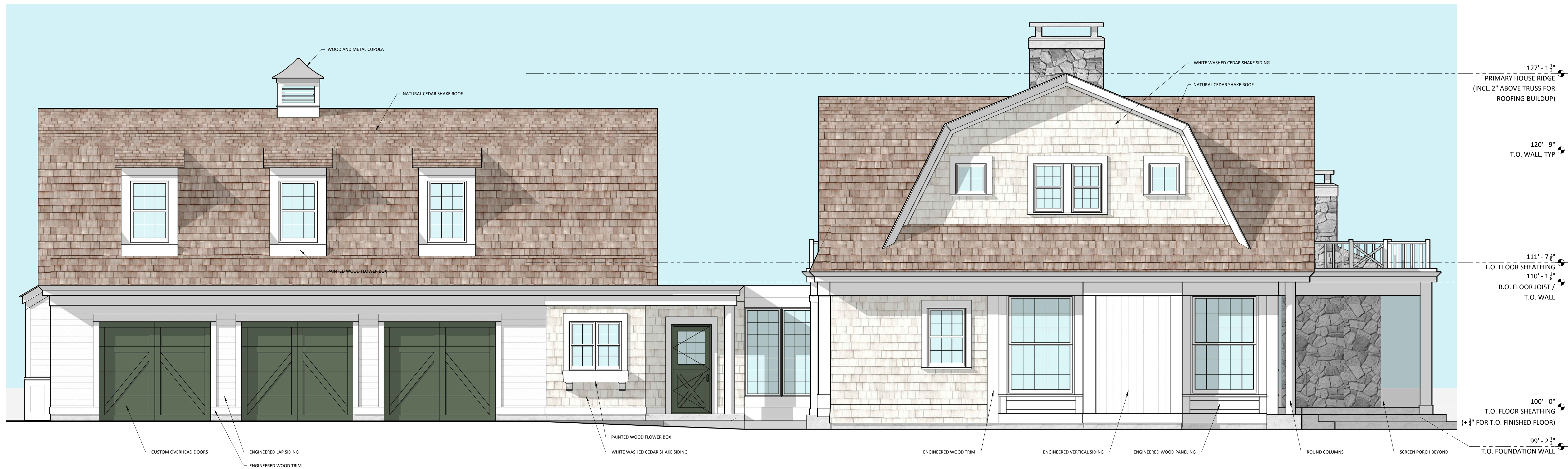
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SUNFISH LAKE, MN

GARAGE MAIN LEVEL & UPPER
LEVEL FLOOR PLANS

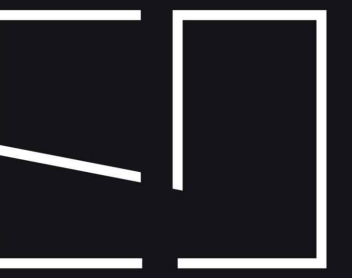
A1.4



1 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



2 EAST ELEVATION
SCALE: 1/4" = 1'-0"



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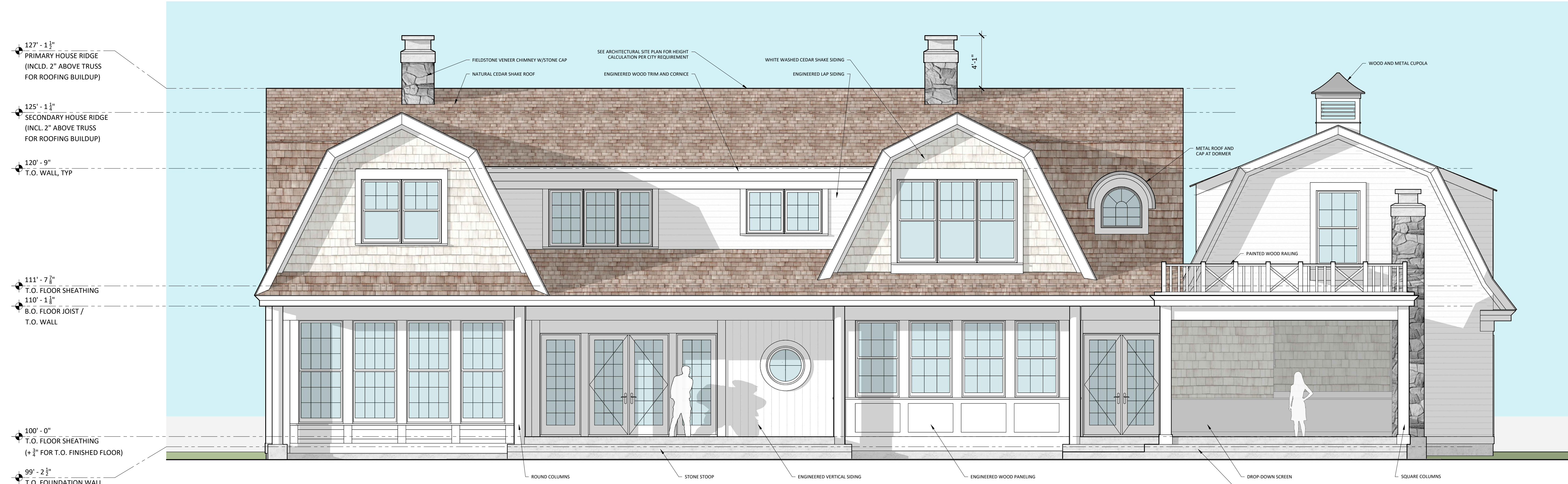
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SUNFISH LAKE, MN

EXTERIOR ELEVATIONS

A2.0



1 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



2 WEST ELEVATION
SCALE: 1/4" = 1'-0"



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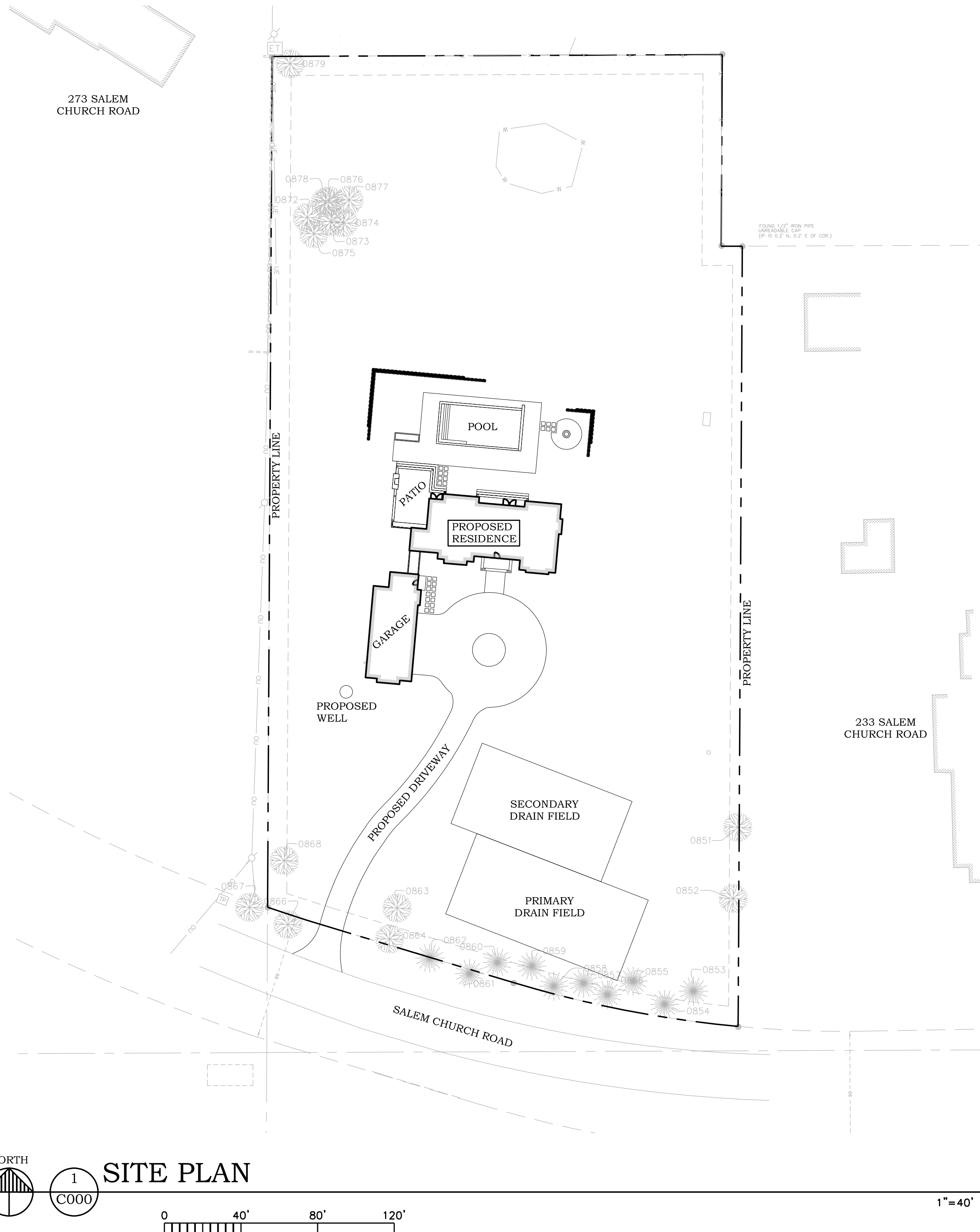
EXTERIOR ELEVATIONS

A2.1

BECKER RESIDENCE

245 SALEM CHURCH ROAD
SUNFISH LAKE, MINNESOTA

GRADING, STORMWATER MANAGEMENT AND EROSION CONTROL PLANS



CONTACT INFORMATION

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LANDSCAPE ARCHITECT
OUTDOOR EXCAPES
2345 DANIELS STREET
LONG LAKE, MN 55356
CONTACT: Drew Torrence
TEL: 952-926-6899

DRAWING INDEX

- C000 - COVER SHEET
- C100 - SITE REMOVALS PLAN
- C200 - STORMWATER POLLUTION PREVENTION NOTES
- C300 - STORMWATER POLLUTION PREVENTION DETAILS
- C400 - GRADING, DRAINAGE AND EROSION CONTROL PLAN



LOCATION MAP

PROPERTY INFORMATION

ADDRESS: 245 SALEM CHURCH ROAD, SUNFISH LAKE, MN
PARCEL ID: 384590001010
LOT AREA: 117,030 SQ. FT. (2.69 ACRES)
WATERSHED: LOWER MISSISSIPPI RIVER

CONSTRUCTION NOTES

- ALL EXISTING INFORMATION AND PROPOSED GRADING TAKEN FROM DRAWINGS BY CORNERSTONE LAND SURVEYING, DATED NOVEMBER 14, 2019.
- CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING LOCATIONS OF EXISTING UTILITIES, AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
- CONTRACTOR TO PREVENT DIRT AND/OR DEBRIS FROM BEING TRANSPORTED OFF-SITE IN AN UNCONTROLLED MANNER. SEDIMENT DISCOVERED SHALL BE REMOVED BY CONTRACTOR WITHIN 7 DAYS OF DISCOVERY.
- ALL WORK TO BE PERFORMED IN ACCORDANCE WITH CITY OF SUNFISH LAKE AND STATE OF MINNESOTA REGULATIONS AND STANDARDS.
- EXISTING UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES WHICH MAY INCLUDE BUT IS NOT LIMITED TO: ELECTRIC, TELEPHONE, GAS, CABLE TV, COMPUTER CABLE, FIBER OPTIC CABLE, SANITARY SEWER, STORM SEWER AND WATER MAIN. CONTRACTOR TO CONTACT THE GOPHER STATE ONE CALL BEFORE EXCAVATING.
- CONTRACTOR TO PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS, LANDSCAPING, STRUCTURES AND UTILITIES THAT ARE TO REMAIN. CONTRACTOR TO STORE AND PROTECT EXISTING SITE FEATURES WHICH NEED TO BE REMOVED AND REPLACED. CONTRACTOR TO PREVENT DAMAGE OR THEFT OF THESE ITEMS AND TO REPAIR AND REPLACE AT OWN EXPENSE.
- ALL EXCAVATIONS MUST COMPLY WITH THE REQUIREMENTS OF OSHA 29 CFR, PART 1926, SUBPART P "EXCAVATIONS AND TRENCHES". THIS DOCUMENT STATES THAT EXCAVATION SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL COORDINATE WITH ARCHITECT'S DRAWINGS TO VERIFY LOCATION, SIZE AND QUANTITY OF ALL ROOF DRAINS AND UTILITY CONNECTIONS.
- PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH MMUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS", CURRENT EDITION.
- DRAWINGS DO NOT INDICATE AREAS OF TEMPORARY SUPPORT SYSTEMS. THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS AND WILL HAVE TOTAL CONTROL OVER THE TYPES AND DESIGN OF ALL SHORING, SHEETING, BRACING, ANCHORAGES, EXCAVATION SUPPORT WALLS, DIRECTIONAL BORING, AUGER JACKING, SOIL STABILIZATION AND OTHER METHODS OF PROTECTING EXISTING IMPROVEMENTS. SEE SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS.
- CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO STARTING CONSTRUCTION.
- ALL MATERIALS FOR PROPOSED CONSTRUCTION OR REPAIR OF EXISTING FACILITIES SHALL BE NEW PRODUCTS DIRECT FROM THE FACTORY AND FREE FROM DEFECTS.
- WHEN WORKING AROUND EXISTING UTILITIES, LIGHT POLES, TRAFFIC SIGNALS, TELEPHONE OR POWER POLES, THE CONTRACTOR SHALL PROVIDE SUFFICIENT SUPPORT OR BRACING TO PREVENT EXCESSIVE STRESS ON THE PIPING. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.
- CARE MUST BE TAKEN DURING CONSTRUCTION AND EXCAVATION TO PROTECT ANY SURVEY MONUMENTS AND/OR PROPERTY IRONS. MONUMENTS DAMAGED OR DISPLACED DUE TO CONTRACTOR NEGLIGENCE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOT BLOCK DRAINAGE FROM OR DIRECT EXCESS DRAINAGE ONTO ADJACENT PROPERTY.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY.
- CONTRACTOR MUST ADHERE TO AXLE LOAD LIMITS WHEN DELIVERING MATERIALS AND EQUIPMENT TO THE SITE. ANY DAMAGE TO THE ROADWAY AND THE CITY RIGHT-OF-WAY SHALL BE REPAIRED TO THE CITY'S SATISFACTION AT THE COST OF THE CONTRACTOR.
- CONTRACTOR SHALL TAKE PHOTOGRAPHS AND DOCUMENT THE CONDITION OF THE EXISTING ROADWAY PRIOR TO CONSTRUCTION.

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Consulting Civil Engineers

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BLAINE, MN 55434
TEL 763-537-1311

BECKER RESIDENCE
245 SALEM CHURCH ROAD
SUNFISH LAKE, MINNESOTA

I hereby certify that this plan or drawing 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.

Company: PIERCE PINI & ASSOCIATES

Signed:

Name: Kevin Gardner

Date: 10/09/2020

Reg. No: 45815

Issued for

Date

Permit Set

10/09/2020

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20-010

Drawn

JH

Checked

KG

Date

10/09/2020

Permit Set

Drawing Title

COVER SHEET

C000

BECKER RESIDENCE
245 SALEM CHURCH ROAD
SUNFISH LAKE, MINNESOTA

I hereby certify that this plan or drawing 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.

Company: PIERCE PINI & ASSOCIATES

Signed:

Name: Kevin Gardner

Date: 10/09/2020 Reg. No: 45815

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Drawn JH

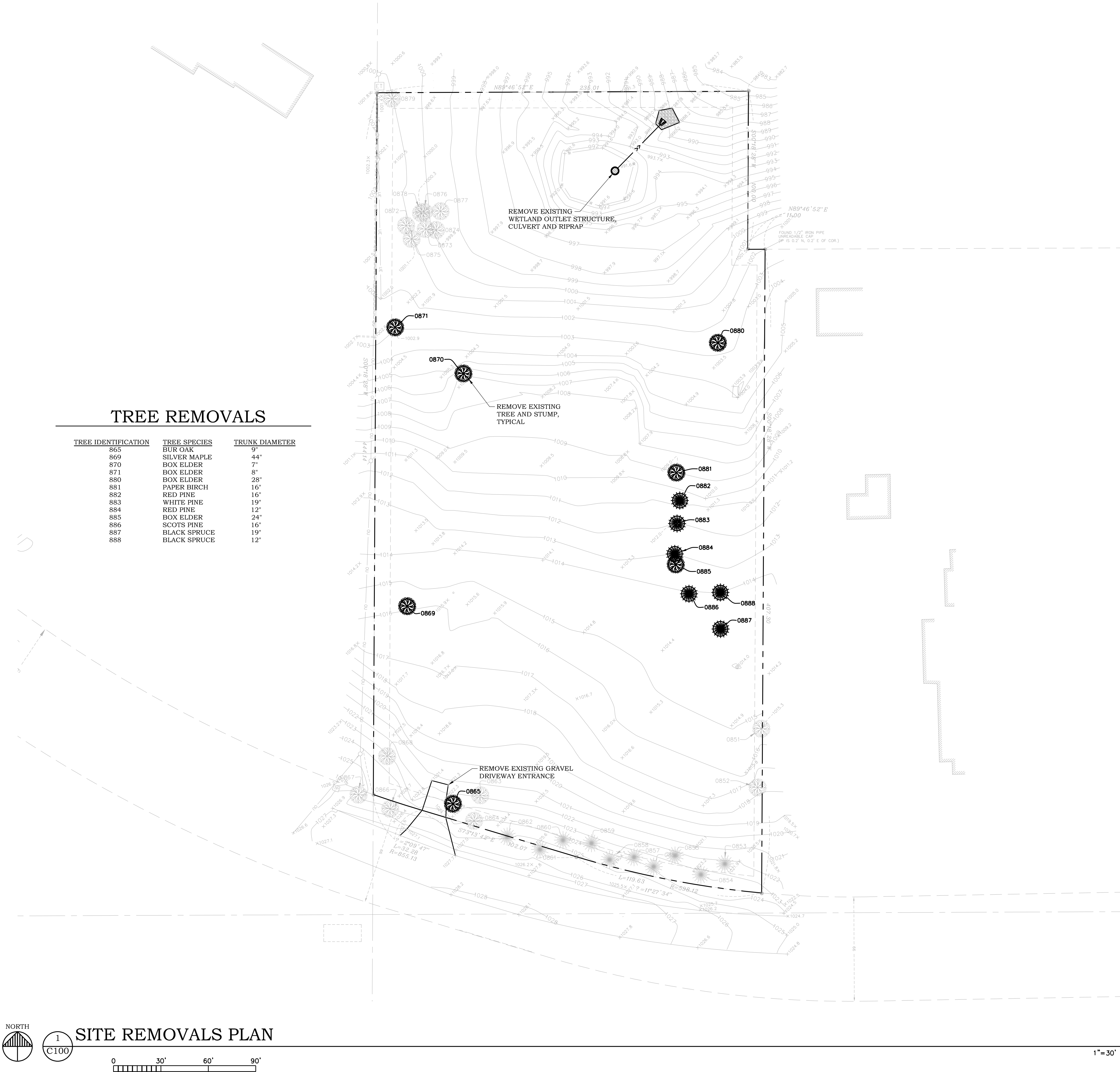
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Date 10/09/2020

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Drawing Title

SITE REMOVALS PLAN



PROJECT DESCRIPTION:
A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS NOT REQUIRED AS PART OF THE GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)/STATE DISPOSAL SYSTEM (SDS) CONSTRUCTION STORMWATER PERMIT FOR THE PROJECT SINCE THE DISTURBED AREA IS LESS THAN ONE ACRE, HOWEVER IT IS INTENDED THAT ALL SITE WORK SHALL FOLLOW THE PERMIT GUIDELINES.

THE GOAL OF POLLUTION PREVENTION EFFORTS DURING PROJECT CONSTRUCTION IS TO CONTROL SOIL AND POLLUTANTS ON THE SITE AND PREVENT THEM FROM LEAVING THE PROJECT SITE AND FLOWING TO SURFACE WATERS. THE PURPOSE OF THIS SWPPP IS TO PROVIDE GUIDELINES FOR ACHIEVING THAT GOAL. THE SWPPP MUST BE KEPT ONSITE AND UPDATED AS NECESSARY DURING THE COURSE OF CONSTRUCTION TO KEEP IT CURRENT WITH ANY MODIFICATIONS TO THE POLLUTION CONTROL MEASURES BEING UTILIZED.

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A NEW HOUSE WITH ATTACHED GARAGE AND DRIVEWAY ON THE SOUTH SIDE OF SUNFISH LAKE.

THE PROPOSED STORMWATER MANAGEMENT DESIGN WILL MEET THE REQUIREMENTS OF THE CITY OF SUNFISH LAKE AND THE LOWER MISSISSIPPI RIVER WATERSHED MANAGEMENT ORGANIZATION. THIS PROJECT IS REQUIRED TO MEET THE MPCA PERMANENT STORMWATER MANAGEMENT REQUIREMENTS BECAUSE THE DISTURBED AREA IS GREATER THAN ONE ACRE.

REGULATORY CONTEXT:
DISCHARGE TO SPECIAL OR IMPAIRED WATERS WITHIN ONE MILE OF SITE:
- THIS PROJECT DISCHARGES TO SUNFISH LAKE - THIS LAKE IS IDENTIFIED AS AN IMPAIRED WATER ON THE MPCA'S 303(d) IMPAIRED WATERS LIST FOR EUTROPHICATION BIOLOGICAL INDICATORS. THESE IMPAIRMENTS ARE CONSIDERED CONSTRUCTION RELATED AND REQUIRE BEST MANAGEMENT PRACTICES FOUND IN APPENDIX 'A' OF THE MPCA STORMWATER PERMIT.

PLACEMENT OF FILL IN WATERS OF THE STATE:

-N/A

DRINKING WATER SUPPLY MANAGEMENT AREA:

-N/A

THE PROJECT STORMWATER DISCHARGE IS NOT ANTICIPATED TO IMPACT ANY OF THE FOLLOWING:

-OUTSTANDING RESOURCE VALUE WATERS, TROUT WATERS, WETLANDS, CALCAREOUS FENS, PROPERTIES LISTED BY THE NATIONAL REGISTER OF HISTORIC PLACES OR ARCHAEOLOGICAL SITES

THE PROJECT STORMWATER DISCHARGE IS NOT SUBJECT TO ADDITIONAL REGULATION DUE TO ANY OF THE FOLLOWING:

-OTHER FORMAL ENVIRONMENTAL REVIEWS, ENDANGERED OR THREATENED SPECIES

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IMPLEMENTATION RESPONSIBILITIES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE IMPLEMENTATION OF THE SWPPP, INCLUDING THE ACTIVITIES OF ALL OF THE CONTRACTOR'S SUBCONTRACTORS.
- CONTRACTOR SHALL PROVIDE A PERSON(S) KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPs TO OVERSEE ALL INSTALLATION AND MAINTENANCE OF BMPs AND IMPLEMENTATION OF THE SWPPP.
- FOLLOWING FINAL STABILIZATION, THE OWNER IS EXPECTED TO FURNISH LONG TERM OPERATION AND MAINTENANCE (O & M) OF THE PERMANENT STORM WATER MANAGEMENT SYSTEM.

STORMWATER DISCHARGE DESIGN REQUIREMENTS:

THE FOLLOWING SIZING CRITERIA APPLY TO THE DESIGN OF STORMWATER TREATMENT FACILITIES. N/A INDICATES NOT APPLICABLE OR NOT CONSTRUCTED AS PART OF THIS PROJECT.

- TEMPORARY SEDIMENTATION BASINS: N/A
- PERMANENT WET SEDIMENTATION BASINS: N/A
- PERMANENT INFILTRATION/FILTRATION : SEE GRADING PLAN AND STORMWATER MANAGEMENT PLAN
- PERMANENT REGIONAL PONDS: N/A
- ALTERNATIVE METHODS: N/A

SEQUENCE OF CONSTRUCTION:

THE FOLLOWING SEQUENCE DESCRIBES, IN GENERAL, THE WORK ON THE SITE:

- CONTRACTOR SHALL VERIFY THAT ALL PERMITS HAVE BEEN OBTAINED AND/OR OBTAIN THE NECESSARY PERMITS.
- CONTRACTOR SHALL PERFORM SITE INSPECTIONS, RECORD KEEPING AND RECORD RETENTION IN ACCORDANCE WITH ALL PERMITS.
- CONTRACTOR SHALL INSTALL ALL PERIMETER AND DOWN-GRADIENT EROSION CONTROL AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), CONSTRUCTION ENTRANCES AND INLET PROTECTION DEVICES PRIOR TO SITE GRADING, EXCAVATION, STOCKPILING OR DISTURBING EXISTING VEGETATIVE COVER.
- CONTRACTOR SHALL PERFORM SITE GRADING, EXCAVATION, STOCKPILING WORK IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
- CONTRACTOR SHALL INSTALL, INSPECT, MONITOR AND MAINTAIN TEMPORARY AND PERMANENT EROSION CONTROL BMPs AS SHOWN ON PLANS & IN CONFORMANCE WITH NPDES PERMIT, CONTINUOUSLY DURING THE WORK. CONTRACTOR SHALL STABILIZE ALL EXPOSED SOILS NO LATER THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- CONTRACTOR SHALL REPLACE OR REPAIR EROSION CONTROL AND SEDIMENT CONTROL BMPs THAT ARE NOT FUNCTIONING PROPERLY.
- CONTRACTOR SHALL PERFORM SITE RESTORATION ACTIVITIES FOR PERMANENT VEGETATIVE ESTABLISHMENT.
- CONTRACTOR SHALL REMOVE SEDIMENT CONTROL DEVICES PRIOR TO FINAL COMPLETION.

1. CONSTRUCTION ACTIVITY FIELD REQUIREMENTS:

- ALL FIELD REQUIREMENTS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NPDES PERMIT AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
- THE CONTRACTOR MUST IMPLEMENT THE SWPPP AND PROVIDE BMPs IDENTIFIED IN THE SWPPP IN AN APPROPRIATE AND FUNCTIONAL MANNER.
 - THE CONTRACTOR SHALL RESPOND TO CHANGING SITE CONDITIONS AND IMPLEMENT/SUPPLEMENT EROSION PREVENTION AND SEDIMENT CONTROL MEASURES UTILIZED TO PROVIDE ADEQUATE PROTECTION OF DISTURBED SOILS AND ADEQUATE PREVENTION OF SEDIMENT TRANSPORT OFF-SITE. AT A MINIMUM, THE FOLLOWING STORM WATER POLLUTION PREVENTION CONSTRUCTION ACTIVITY FIELD REQUIREMENTS SHALL BE FURNISHED BY THE CONTRACTOR.

2. EROSION PREVENTION PRACTICES

- CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING EROSION PREVENTION PRACTICES:
- THE CONTRACTOR SHALL ATTEMPT TO PHASE ALL WORK TO MINIMIZE EROSION AND MAINTAIN VEGETATIVE COVER TO THE EXTENT POSSIBLE. THE LOCATION OF AREAS NOT TO BE DISTURBED MUST BE DELINEATED ON THE SITE BEFORE CONSTRUCTION BEGINS.
 - STABILIZATION ON ALL EXPOSED SOILS MUST BE INITIATED IMMEDIATELY WHENEVER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS, INCLUDING STOCKPILES WITH SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS. STABILIZATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS.
 - THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH THAT DRAINS WATER FROM A CONSTRUCTION SITE OR DIVERTS WATER AROUND A SITE MUST BE STABILIZED BY CONTRACTOR WITHIN 200 FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE TO ANY SURFACE WATER WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER. TEMPORARY OR PERMANENT DITCH SWALES BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DO NOT NEED TO BE STABILIZED UNTIL THEY ARE NO LONGER USED AS A SEDIMENT CONTAINMENT SYSTEM, AFTER WHICH THEY MUST BE STABILIZED WITHIN 24 HOURS.
 - TEMPORARY OR PERMANENT ENERGY DISSIPATION AT PIPE OUTLETS MUST BE PROVIDED WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER.
 - THE CONTRACTOR MUST DIRECT DISCHARGES FROM BMPs TO VEGETATED AREAS OF THE SITE IN ORDER TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE INFILTRATION UNLESS INFEASIBLE. THE CONTRACTOR MUST UTILIZE VELOCITY DISSIPATION DEVICES IF NECESSARY TO PREVENT EROSION WHEN DIRECTING STORMWATER TO VEGETATED AREAS.

3. SEDIMENT CONTROL PRACTICES

- CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING SEDIMENT CONTROL PRACTICES:
- CONTRACTOR MUST INSTALL ALL DOWN GRADIENT PERIMETER CONTROLS BEFORE ANY UP GRADIENT DISTURBANCE BEGINS. CONTRACTOR SHALL MAINTAIN PERIMETER CONTROLS UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.
 - CONTRACTOR SHALL PROVIDE GRADING AND BMP INSTALLATION TO LIMIT ALL SLOPES OF 3H:1V OR STEEPER TO AN UNBROKEN LENGTH OF 75 FEET OR LESS.
 - IF DOWN GRADIENT SEDIMENT CONTROLS ARE OVERLOADED, THE CONTRACTOR MUST INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPs TO ELIMINATE

OVERLOADING. THE SWPPP MUST BE AMENDED TO IDENTIFY THESES ADDITIONAL PRACTICES.

- TIMING AND INSTALLATION OF SEDIMENT CONTROL DEVICES CAN BE ADJUSTED BY CONTRACTOR TO ACCOMMODATE SHORT-TERM ACTIVITIES SUCH AS CLEARING AND GRUBBING OR VEHICLE PASSAGE. ANY SHORT-TERM ACTIVITY MUST BE COMPLETED AS QUICKLY AS POSSIBLE AND THE SEDIMENT CONTROL PRACTICES MUST BE INSTALLED IMMEDIATELY AFTER THE ACTIVITY IS COMPLETED AND IN ALL CASES PRIOR TO THE NEXT PRECIPITATION EVENT.
- ALL PUBLIC AND PRIVATE STORM SEWER INLETS AND OUTLETS SHALL BE PROTECTED BY CONTRACTOR WITH APPROPRIATE BMPs DURING THE WORK. THESE PRACTICES SHALL REMAIN IN PLACE UNTIL THE POTENTIAL SOURCES FOR DISCHARGING SEDIMENT TO INLETS HAVE BEEN STABILIZED BY CONTRACTOR.
- TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS. SOIL STOCKPILES SHALL NOT BE PLACED IN SURFACE WATERS OR STORMWATER CONVEYANCES. ACCEPTABLE PROTECTION INCLUDES COVER OF MULCH, EROSION CONTROL MATS, OR PLASTIC SHEETING.
- ROCK CONSTRUCTION ENTRANCES OR EQUIVALENT SYSTEM MUST BE INSTALLED BY CONTRACTOR TO MINIMIZE TRACKING FROM SITE. CONTRACTOR SHALL PROVIDE STREET SWEEPING AS NECESSARY IF BMPs ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE STREET.
- CONTRACTOR SHALL PROVIDE TEMPORARY SEDIMENTATION BASINS AS NEEDED.
- CONTRACTOR MUST MINIMIZE SOIL COMPACTION AND PRESERVE TOPSOIL, UNLESS INFEASIBLE. MINIMIZING SOIL COMPACTION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA OF THE SITE DICTATES THAT IT BE COMPACTED.
- THE CONTRACTOR MUST PRESERVE A 50 FOOT NATURAL BUFFER OR PROVIDE REDUNDANT SEDIMENT CONTROLS WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECT DISTURBANCE LIMITS AND STORMWATER FLOWS TO THE SURFACE WATER.
- IF POLYMERS, FLOCCULANTS, OR OTHER SEDIMENTATION TREATMENT CHEMICALS ARE USED ON SITE, THE CONTRACTOR MUST COMPLY WITH THE FOLLOWING REQUIREMENTS.
 - THE CONTRACTOR MUST USE CONVENTIONAL EROSION AND SEDIMENT CONTROLS PRIOR TO CHEMICAL ADDITION TO ENSURE EFFECTIVE TREATMENT. CHEMICALS MAY ONLY BE APPLIED WHERE TREATED STORMWATER IS DIRECTED TO A SEDIMENT CONTROL SYSTEM WHICH ALLOWS FOR THE SETTLEMENT OF THE FLOC PRIOR TO DISCHARGE.
 - CHEMICALS MUST BE SELECTED THAT ARE APPROPRIATELY SUITED TO THE TYPES OF SOILS LIKELY TO BE EXPOSED DURING CONSTRUCTION. CHEMICALS MUST BE USED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES, AND WITH DOSING SPECIFICATION AND SEDIMENT REMOVAL DESIGN SPECIFICATION PROVIDED BY THE MANUFACTURER.

4. DEWATERING AND BASIN DRAINING

- CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING DEWATERING REQUIREMENTS:
- CONTRACTOR'S DEWATERING ACTIVITIES THAT HAVE SEDIMENT-LADEN DISCHARGE WATER MUST BE DISCHARGED INTO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN WHENEVER POSSIBLE, OTHERWISE IT MUST BE DISCHARGED THROUGH SOME FORM OF BEST MANAGEMENT PRACTICE (BMP) BY CONTRACTOR TO LIMIT SEDIMENT FROM LEAVING THE SITE. PRIOR TO DISCHARGE, THE CONTRACTOR SHALL PERFORM A VISUAL TEST TO ENSURE ADEQUATE TREATMENT IS OBTAINED IN THE BASIN OR BMP AND APPLY ADDITIONAL TREATMENT AS REQUIRED TO ENSURE ADEQUATE TREATMENT.
 - THE CONTRACTOR SHALL DISCHARGE WATER FROM DEWATERING IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS. THE DISCHARGE WATER SHALL BE DISPERSED OVER AN ACCEPTED ENERGY DISSIPATION MEASURE AND NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM LANDOWNERS OR WETLANDS.
 - IF CONTRACTOR IS USING FILTERS WITH BACKWASH WATER, THE CONTRACTOR SHALL HAUL THE BACKWASH WATER AWAY FOR DISPOSAL, RETURN THE BACKWASH WATER TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE THE BACKWASH WATER INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION.

5. INSPECTIONS AND MAINTENANCE

- CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THE FOLLOWING INSPECTIONS AND MAINTENANCE:
- WHEN INSPECTIONS FIND EROSION PREVENTION AND SEDIMENT CONTROL BMPs THAT ARE NONFUNCTIONING, ALL NON-FUNCTIONAL BMPs MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPs WITHIN 24 HOURS AFTER DISCOVERY. THE CONTRACTOR SHALL ALSO PLACE ANY ADDITIONAL EROSION CONTROL MEASURES DEEMED NECESSARY WITHIN 24 HOURS OF NOTICE FROM CITY INSPECTORS.
 - THE CONTRACTOR MUST ROUTINELY INSPECT THE SITE ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS.
 - ALL INSPECTIONS AND MAINTENANCE CONDUCTED DURING CONSTRUCTION MUST BE RECORDED IN WRITING BY CONTRACTOR AND RETAINED WITH THE SWPPP BY CONTRACTOR. MAINTENANCE MUST BE COMPLETED BY CONTRACTOR. CONTRACTOR'S RECORDS MUST INCLUDE:
 - DATE AND TIME OF INSPECTION.
 - NAME OF PERSON CONDUCTING INSPECTION.
 - FINDING OF INSPECTION INCLUDING RECOMMENDATIONS FOR CORRECTIVE ACTION.
 - DETAILS OF CORRECTIVE ACTION TAKEN (DATE, TIME, PARTY COMPLETING MAINTENANCE ACTIVITIES).
 - DATE AND AMOUNT OF RAINFALL GREATER THAN 0.5 INCHES IN 24 HOURS.
 - IF ANY DISCHARGE IS OBSERVED TO BE OCCURRING DURING THE INSPECTION, A RECORD OF ALL POINTS OF THE PROPERTY FROM WHICH THERE IS A DISCHARGE MUST BE MADE, AND THE DISCHARGE SHALL BE DESCRIBED (COLOR, ODOR, FLOATING, SETTLED, OR SUSPENDED SOLIDS, FOAM, OIL SHEEN, AND OTHER INDICATORS) AND PHOTOGRAPHED.
 - DOCUMENTATION OF CHANGES MADE TO SWPPP.
 - IN AREAS OF PROJECT WHERE FINAL STABILIZATION IS COMPLETE INSPECTIONS CAN BE REDUCED TO ONCE A MONTH. THESE AREAS SHALL BE INSPECTED BY CONTRACTOR FOR MINIMUM PERIOD OF 12 NON-WINTER MONTHS AND WITHIN 24 HOURS OF FIRST SPRING RUNOFF OR PRIOR TO RESUMING CONSTRUCTION FOLLOWING ANY WINTER STOPPAGE, WHICHEVER COMES FIRST.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF BMPs UNTIL THE PROJECT HAS UNDERGONE FINAL STABILIZATION.
 - ALL EROSION CONTROL MEASURES MUST BE INSTALLED AND MAINTAINED BY CONTRACTOR ACCORDING TO THE DETAILS INCLUDED IN THE CONSTRUCTION DOCUMENTS AND IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S RECOMMENDATIONS.
 - ALL PERIMETER CONTROL DEVICES MUST BE REPAIRED, REPLACED OR SUPPLEMENTED BY THE CONTRACTOR WHEN THEY BECOME NON-FUNCTIONAL OR THE SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE DEVICE. CONTRACTOR SHALL REPAIR OR REPLACE DEVICE THAT IS NONFUNCTIONAL BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR THEREAFTER AS SOON AS FIELD CONDITIONS ALLOW.
 - TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND SEDIMENT REMOVED BY CONTRACTOR ONCE THE SEDIMENT COLLECTED REACHES ONE HALF THE STORAGE VOLUME WITH 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW.
 - ALL SEDIMENT DEPOSITS WITHIN SURFACE WATERS OR STORMWATER CONVEYANCES MUST BE REMOVED AND RESTABILIZED BY CONTRACTOR WITHIN 7 DAYS OF DISCOVERY OR SOONER IF IT PRESENTS A FLOOD RISK, INCLUDING DELTAS AND STORM SEWER SEDIMENT DEPOSITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED, IF NECESSARY, FOR SUCH SEDIMENT REMOVAL.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING EXISTING PAVED SURFACES CLEAN OF SEDIMENT. CONSTRUCTION ENTRANCES SHALL BE CHECKED DAILY BY CONTRACTOR. IF THE ENTRANCE BECOMES INUNDATED WITH SEDIMENT, THE ENTRANCE WILL BE CLEANED OR REPLACED AS APPROPRIATE BY CONTRACTOR. STREETS LEADING TO AND FROM THE CONSTRUCTION ENTRANCE SHALL BE CHECKED DAILY BY CONTRACTOR FOR SEDIMENT TRACKING ONTO PAVED SURFACES. THESE AREAS WILL BE SWEEP CLEAN OF ANY TRACKED MATERIALS BY CONTRACTOR AS SOON AS POSSIBLE AND WITHIN 24 HOURS OF DISCOVERY AND AS DIRECTED BY THE CITY. CONTRACTOR SHALL EXTEND SWEEPING TO THE EXTREMITY OF ANY SEDIMENT TRACKING THAT OCCURS OFF-SITE.
 - CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ANY OFF-SITE SEDIMENT ACCUMULATIONS IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS.
 - ALL INFILTRATION/FILTRATION AREAS MUST BE INSPECTED BY CONTRACTOR TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION IS ACCUMULATING OVER THE INFILTRATION/FILTRATION AREA. SEDIMENT ACCUMULATED OVER INFILTRATION /FILTRATION MUST BE REMOVED BY CONTRACTOR.
 - CONTRACTOR SHALL PROTECT INFILTRATION/FILTRATION AREAS FROM SEDIMENTATION AND OVER-COMPACTION. DURING EXCAVATION, SEDIMENT AND EROSION CONTROL DEVICES MUST BE UTILIZED BY CONTRACTOR TO PREVENT SEDIMENTATION AND THE AREA MUST BE STAKED OFF AND MARKED SO THAT HEAVY CONSTRUCTION EQUIPMENT WILL NOT COMPACT THE SOIL.
 - INSPECTIONS CAN BE SUSPENDED DUE TO FROZEN GROUND CONDITIONS UNTIL FIRST RUNOFF OCCURS OR CONSTRUCTION ACTIVITIES RESUME.

6. POLLUTION PREVENTION MEASURES

- CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THE FOLLOWING POLLUTION PREVENTION MANAGEMENT MEASURES ON THE SITE:
- THE CONTRACTOR SHALL MINIMIZE THE EXPOSURE OF ALL PRODUCTS, MATERIALS, AND WASTES FROM STORMWATER WHICH MAY BE A SOURCE OF CONTAMINATION TO STORMWATER OR ARE NOT DESIGNED TO BE EXPOSED TO STORMWATER.
 - BUILDING PRODUCTS THAT MAY LEACH POLLUTANTS MUST BE UNDER COVER (PLASTIC SHEETING,

- TEMPORARY ROOFS, ETC.) TO PREVENT THE DISCHARGE OF POLLUTANTS OR PROTECTED BY A SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
- PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS MUST BE UNDER COVER (PLASTIC SHEETING, TEMPORARY ROOFS, ETC.) TO PREVENT THE DISCHARGE OF POLLUTANTS OR PROTECTED BY A SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
 - HAZARDOUS MATERIALS, TOXIC WASTE, (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) MUST BE STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS MATERIALS MUST COMPLY WITH ALL STATE REQUIREMENTS.
 - SOLID WASTE MUST BE STORED, COLLECTED, AND DISPOSED IN COMPLIANCE WITH ALL STATE REQUIREMENTS.
 - PORTABLE TOILETS MUST BE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OVER. SANITARY WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH ALL STATE REQUIREMENTS.
 - THE CONTRACTOR SHALL TAKE REASONABLE STEPS TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ALL AREAS WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED. THE CONTRACTOR MUST CONDUCT FUELING IN A CONTAINED AREA UNLESS INFEASIBLE. THE CONTRACTOR MUST ENSURE ADEQUATE SUPPLIES ARE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD IS AVAILABLE FOR RECOVERED SPILLED MATERIALS. ALL SPILLS MUST BE CLEANED UP AND REPORTED IN ACCORDANCE WITH STATE REQUIREMENTS. DRY CLEAN UP MEASURES SHALL BE USED WHERE POSSIBLE.
 - THE CONTRACTOR MUST LIMIT VEHICLE AND EQUIPMENT WASHING TO A DEFINED AREA WHEN COMPLETED ON THE PROJECT SITE. RUNOFF FROM THE WASHING AREA MUST BE CONTAINED IN A SEDIMENT BASIN OR OTHER SIMILARLY EFFECTIVE CONTROLS AND WASTE FROM THE WASHING ACTIVITY MUST BE PROPERLY DISPOSED OF. THE CONTRACTOR MUST PROPERLY USE AND STORE SOAPS, DETERGENTS, OR SOLVENTS. NO ENGINE DEGREASING IS ALLOWED ONSITE.
 - THE CONTRACTOR MUST PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS (CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS, AND OTHER CONSTRUCTION MATERIALS) RELATED TO THE PROJECT CONSTRUCTION ACTIVITY. NO WASHOUT WASTES MAY CONTACT THE GROUND, AND THE CONTAINMENT MUST BE DESIGNED SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR ARE LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH ALL MPCA RULES. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY THAT REQUIRES SITE PERSONNEL TO UTILIZE PROPER FACILITIES FOR DISPOSAL OF CONCRETE AND OTHER WASHOUT WASTES.

7. FINAL STABILIZATION

- THE CONTRACTOR SHALL ENSURE FINAL STABILIZATION OF THE SITE. FINAL STABILIZATION REQUIRES THE FOLLOWING:
- ALL SOIL DISTURBING ACTIVITIES ARE COMPLETE AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OVER THE ENTIRE PREVIOUS SURFACE HAS BEEN ACHIEVED, INCLUDING STABILIZATION OF ALL DITCHES AND SWALES.
 - CONTRACTOR SHALL ENSURE THAT ALL PERMANENT STORMWATER TREATMENT SYSTEMS ARE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF CONSTRUCTION DOCUMENTS.
 - CONTRACTOR SHALL REMOVE ALL TEMPORARY SYNTHETIC AND STRUCTURAL BMPs.

RECORD AVAILABILITY AND RETENTION:

-THE CONTRACTOR SHALL MAKE THE SWPPP, INCLUDING ALL CERTIFICATES, REPORTS, RECORDS, OR OTHER INFORMATION, AVAILABLE TO FEDERAL, STATE, OR LOCAL OFFICIALS WITHIN 72 HOURS UPON REQUEST FOR THE DURATION OF THE PROJECT AND FOR THREE YEARS FOLLOWING FINAL STABILIZATION.

INSPECTION AND ENTRY:

-THE CONTRACTOR MUST ALLOW ACCESS FOR REPRESENTATIVES OF THE CITY OR ANY MEMBER THEREOF WHEN AUTHORIZED BY IT, TO ENTER UPON THE PROJECT SITE FOR THE PURPOSE OF OBTAINING INFORMATION, EXAMINATION OF RECORDS, OR CONDUCTING SURVEYS OR INVESTIGATIONS.

8. CHANGES TO SWPPP

- THE CONTRACTOR MUST AMEND THE SWPPP AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL OR MODIFIED BMPs, DESIGNED TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER.
- THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE, WEATHER OR SEASONAL CONDITIONS THAT HAVE SIGNIFICANT EFFECT ON DISCHARGE. INSPECTION IS REQUIRED WITHIN 24 HOURS OF A RAINFALL EVENT GREATER THAN ONE-HALF INCH.
 - INSPECTION OR INVESTIGATION BY SITE OPERATORS, LOCAL, STATE OR FEDERAL OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE.
 - THE SWPPP IS NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS.

9. SWPPP CERTIFICATION:

- THIS STORMWATER POLLUTION PREVENTION PLAN WAS PREPARED BY INDIVIDUAL(S) TRAINED IN ACCORDANCE WITH TRAINING REQUIREMENTS FOR PREPARATION OF SWPPPS. INDIVIDUAL(S) PREPARING THIS SWPPP:

PREPARED BY:
KEVIN GARDNER, P.E.
PIERCE PINI AND ASSOCIATES
KEVIN@PIERCEPINI.COM
763-537-1311

TRAINING /CERTIFICATION:

DATE OF TRAINING /CERTIFICATION: 2020
CERTIFICATION PROGRAM: UNIVERSITY OF MINNESOTA - DESIGN OF CONSTRUCTION SWPPP
ARDEN HILLS, MN
INSTRUCTOR(S): DWAYNE STENLUND
CERTIFICATION EXPIRATION: 2023

I hereby certify that this plan or drawing 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.

Company: PIERCE PINI & ASSOCIATES

Signed:

Name: Kevin Gardner

Date: 10/09/2020 Reg. No: 45815

Issued for Date

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Drawing Title

STORMWATER
POLLUTION
PREVENTION NOTES

C200

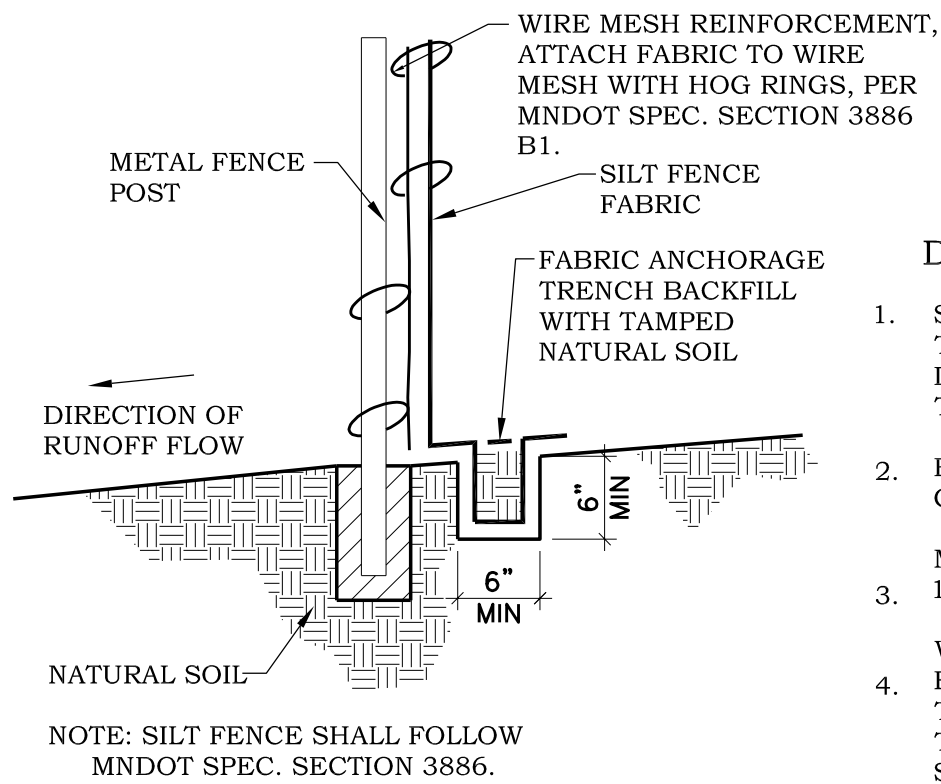


FIGURE 1 TYPICAL INSTALLATION FOR SILT FENCE

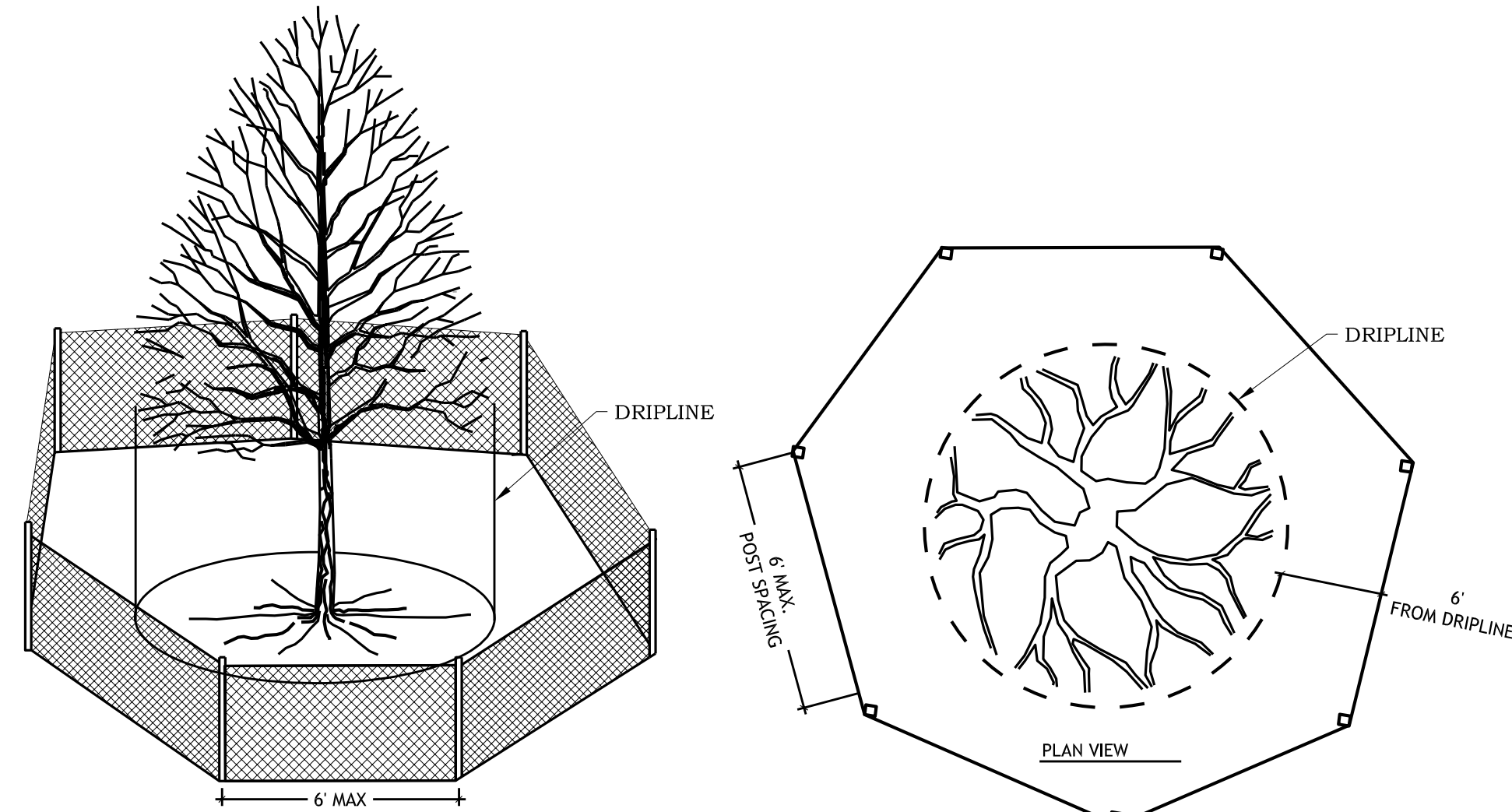
TABLE 1 MAXIMUM SLOPE LENGTH AND SLOPE FOR WHICH SILT FENCE IS APPLICABLE

		BY CALCULATION	BY CALCULATION	BY ACCEPTED DESIGN PRACTICES
SLOPE H:V	PERCENT	SILT FENCE STORAGE EQUALS 2 FT FOR A 100-YEAR EVENT	SILT FENCE STORAGE EQUALS 2 FT FOR A 2-YEAR EVENT OR 3 FT FOR A 100-YEAR EVENT	MAXIMUM SLOPE LENGTH
100:1	1%	400 FT	900 FT	100 FT
50:1	2%	200 FT	450 FT	75 FT
25:1	4%	100 FT	225 FT	75 FT
20:1	5%	80 FT	180 FT	75-50 FT
17:1	6%	67 FT	150 FT	50 FT
12.5:1	8%	50 FT	112 FT	50 FT
10:1	10%	40 FT	90 FT	50-25 FT
5:1	20%	20 FT	45 FT	25-15 FT
4:1	25%	16 FT	36 FT	15 FT
3:1	33%	12 FT	27 FT	15 FT
2:1	50%	8 FT	18 FT	15 FT

1 HEAVY DUTY SILT FENCE

NO SCALE

- NOTES:
- 1) ALL TREE PROTECTION FENCING AND EROSION CONTROL FENCING SHALL BE INSTALLED ACCORDING TO THE PLANS PRIOR TO ANY DEMOLITION. AFTER DEMOLITION OR AS NECESSARY, TREE PROTECTION FENCING MAY BE RELOCATED WITH APPROVAL FROM THE LANDSCAPE ARCHITECT. ALL TREE PROTECTION FENCING AND EROSION CONTROL DEVICES SHALL BE MAINTAINED FOR THE DURATION OF THE CONSTRUCTION PERIOD.
 - 2) CONTRACTOR SHALL NOT STORE ANY MATERIALS OR PARK ANY VEHICLES IN TREE PROTECTION ZONES. THE FENCE SHALL PREVENT TRAFFIC MOVEMENT AND THE PLACEMENT OF TEMPORARY FACILITIES, EQUIPMENT, STOCKPILES AND SUPPLIES FROM HARMING VEGETATION WITHIN THE LIMITS OF PROTECTION.
 - 3) THE CONTRACTOR SHALL CLEANLY CUT ALL ROOTS EXPOSED BY GRADING AS DIRECTED BY THE LANDSCAPE ARCHITECT.
 - 4) THE CONTRACTOR SHALL USE DESIGNATED CONSTRUCTION ENTRANCES AND STAGING AREAS.

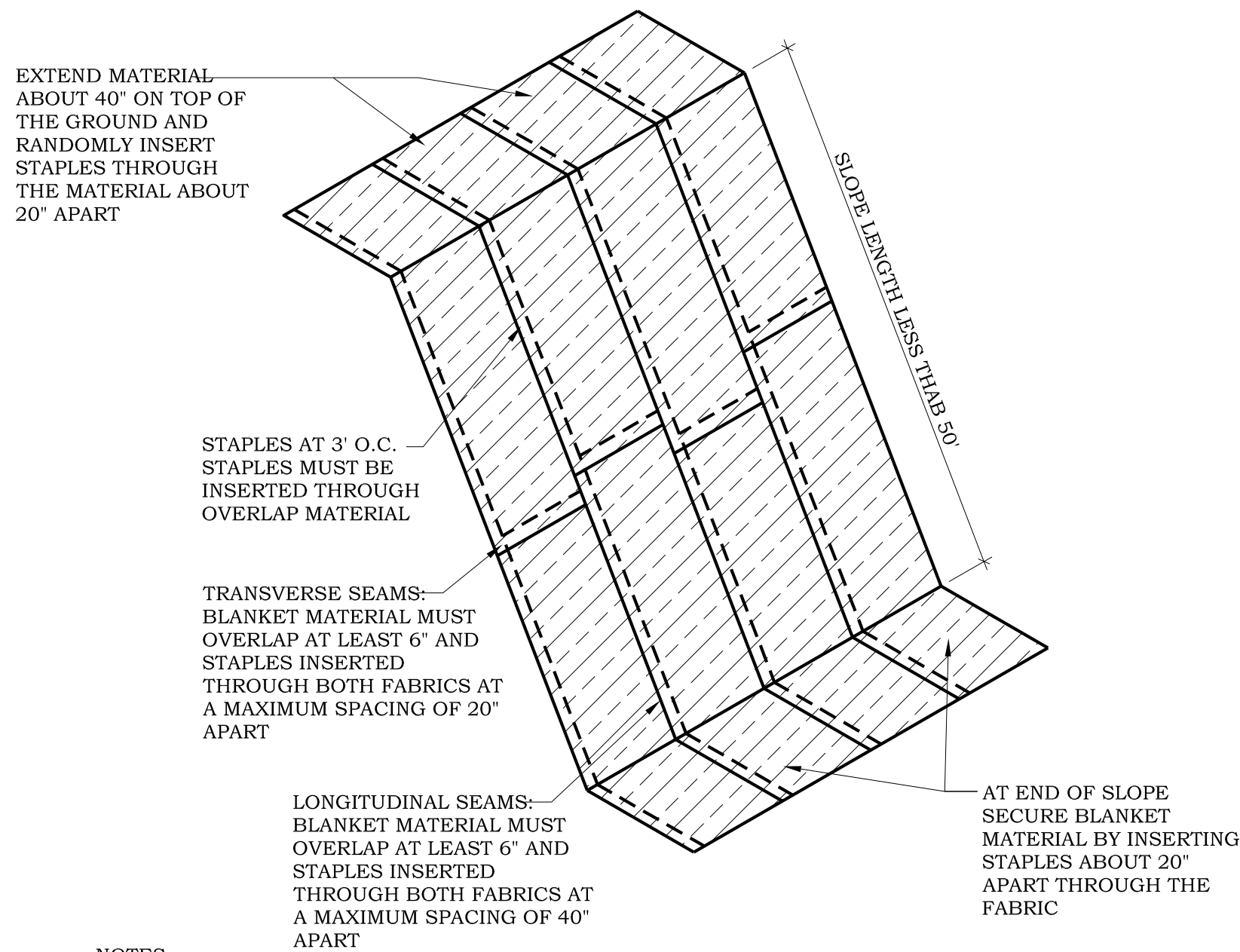


5 TREE PROTECTION FENCING

NO SCALE

DESIGN RECOMMENDATIONS

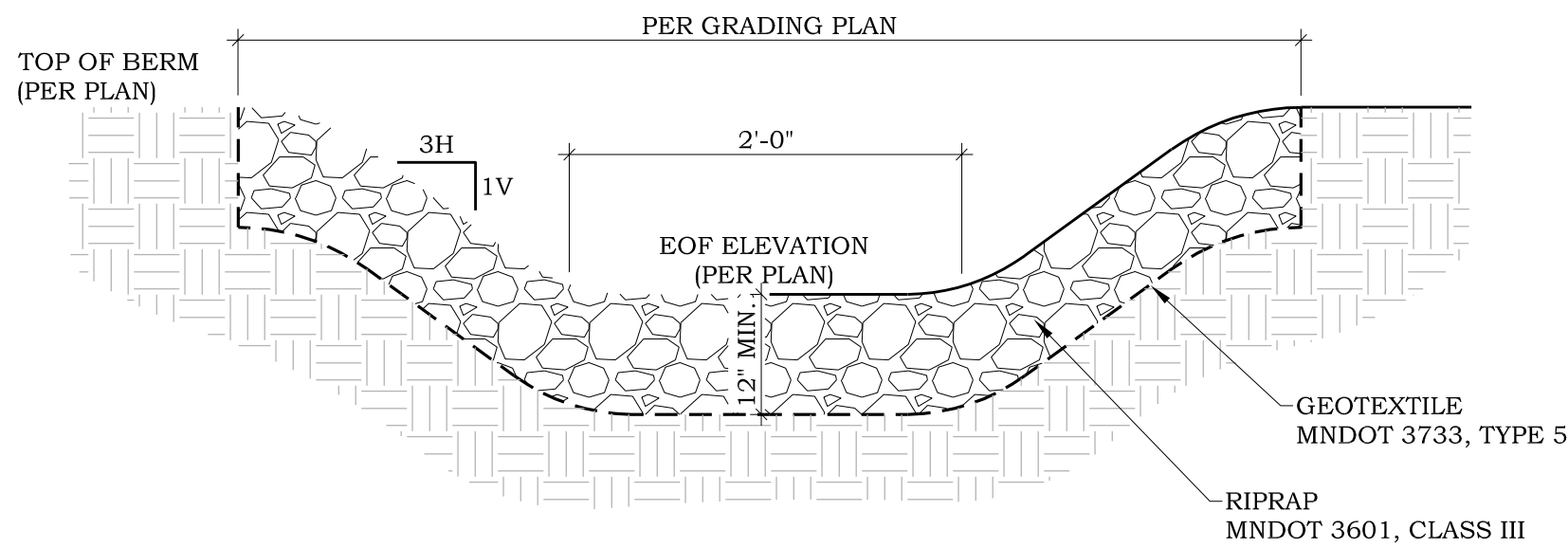
1. SILT FENCES SHOULD BE INSTALLED ON THE CONTOUR (AS OPPOSED TO UP AND DOWN A HILL) AND CONSTRUCTED SO THAT FLOW CANNOT BYPASS THE ENDS.
2. ENSURE THAT THE DRAINAGE AREA IS NO GREATER THAN 1/4 ACRE PER 100 FT OF FENCE.
3. MAKE THE FENCE STABLE FOR THE 10-YEAR PEAK STORM RUNOFF.
4. WHERE ALL RUNOFF IS TO BE STORED BEHIND THE SILT FENCE, ENSURE THAT THE MAXIMUM SLOPE LENGTH BEHIND THE FENCE DOES NOT EXCEED THE SPECIFICATIONS SHOWN IN TABLE 1.



- NOTES:
1. EROSION CONTROL BLANKET TO BE CATEGORY 4-COCONUT 2S FOR SLOPES GREATER THAN 5:1 AND SIDES AND BOTTOM OF ALL DRAINAGE SWALES AND PONDING AREAS AND CATEGORY 2-STRAW 2S FOR ALL SLOPES LESS THAN 5:1 PER MNDOT SPEC. SECTION 3885.
 2. INSTALL PER MNDOT SPEC. SECTION 2575

2 EROSION CONTROL BLANKET

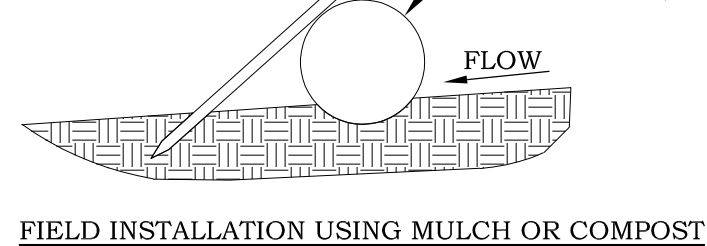
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6 RIPRAP SPILLWAY

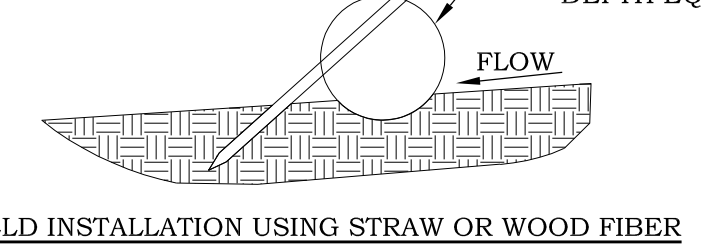
NO SCALE

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FIELD INSTALLATION USING MULCH OR COMPOST

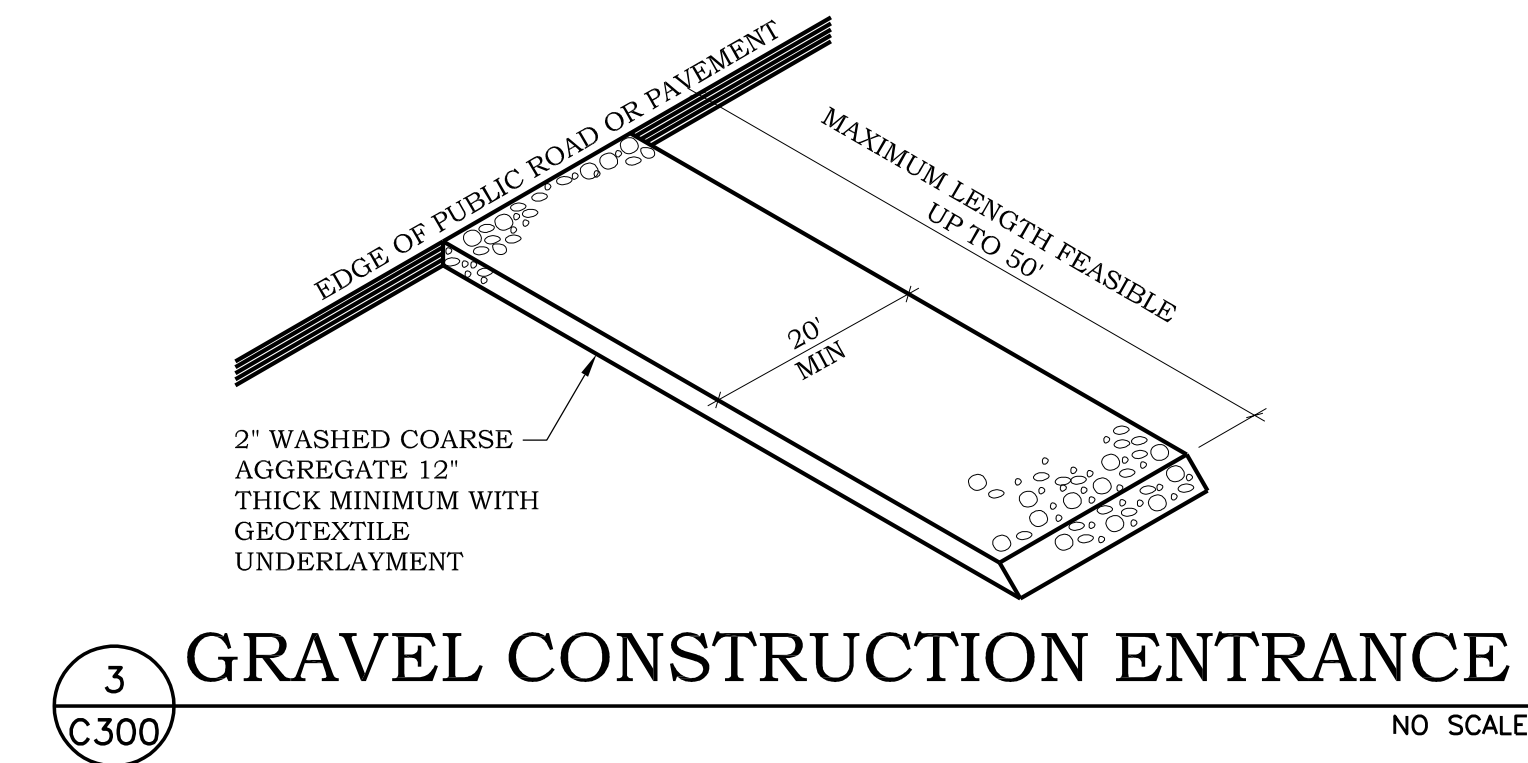
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FIELD INSTALLATION USING STRAW OR WOOD FIBER

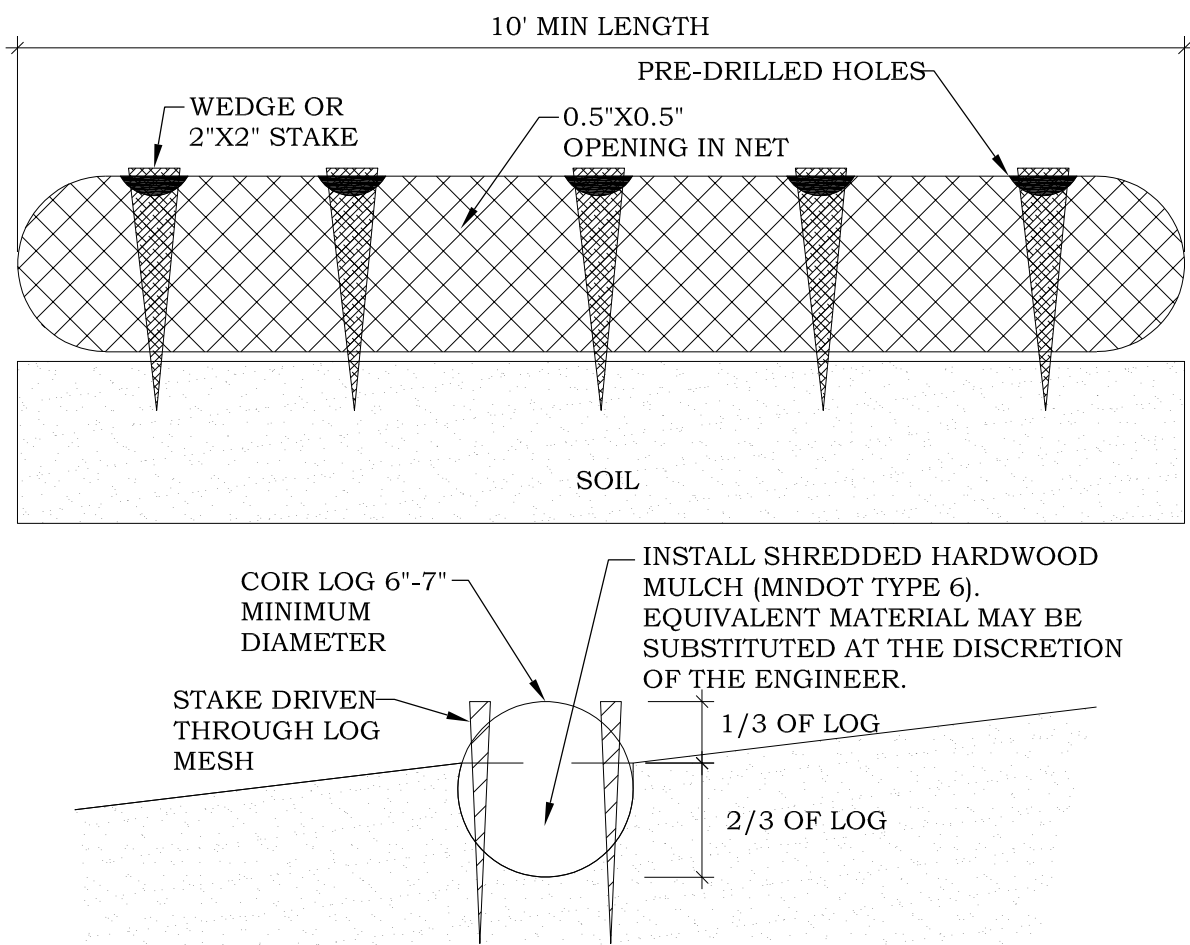
7 FILTER LOG DITCH CHECK

NO SCALE



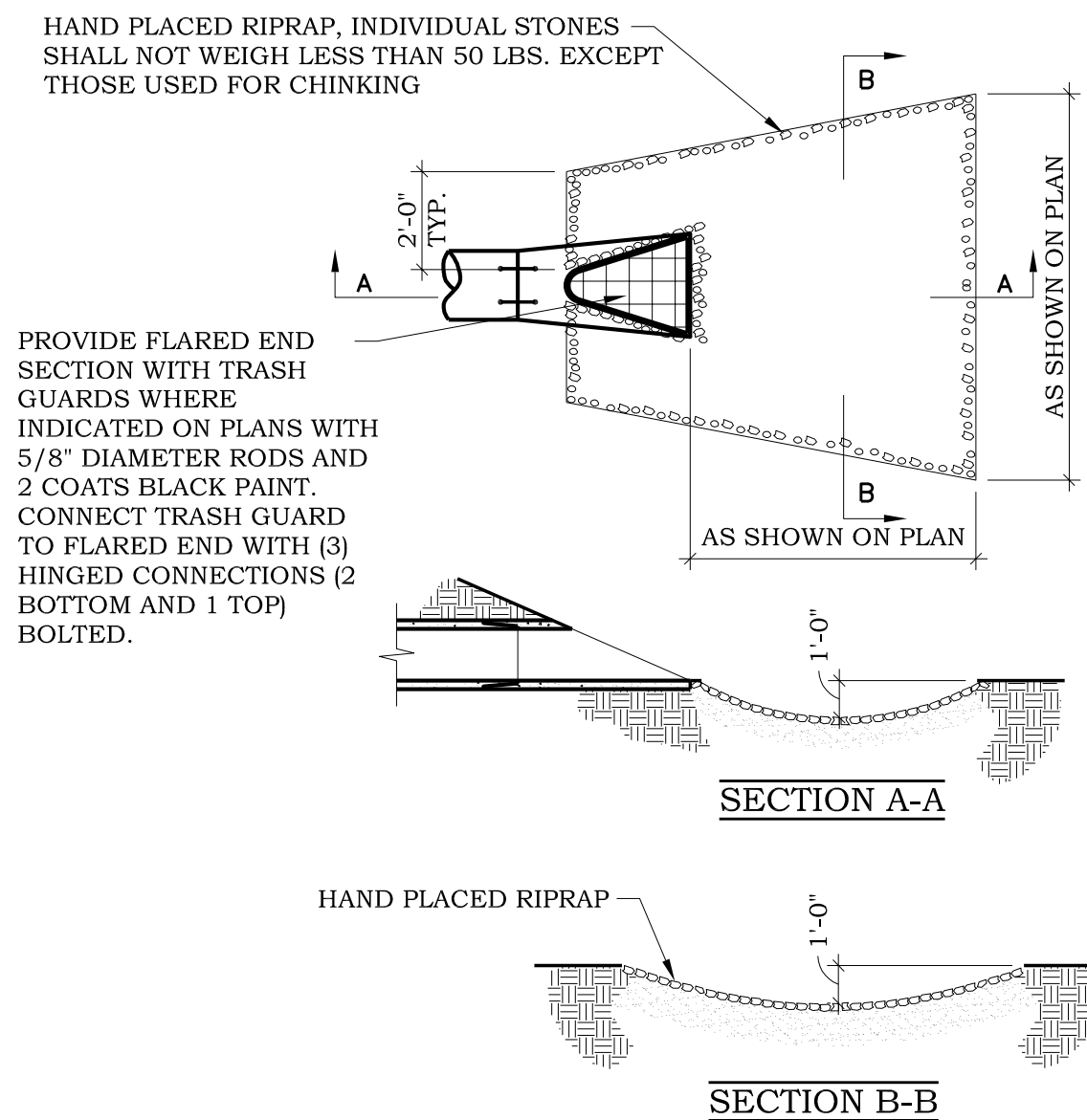
3 GRAVEL CONSTRUCTION ENTRANCE

NO SCALE



4 COIR LOG

NO SCALE



8 FLARED END SECTION WITH RIPRAP

NO SCALE

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ASSOCIATES, INC.
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BLAINE, MN 55434
TEL 763-537-1311

BECKER RESIDENCE

245 SALEM CHURCH ROAD
SUNFISH LAKE, MINNESOTA

I hereby certify that this plan or drawing 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.

Company: PIERCE PINI & ASSOCIATES

Signed:

Name: Kevin Gardner

Date: 10/09/2020

Reg. No: 45815

Issued for

Date

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10/09/2020

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STORMWATER
POLLUTION
PREVENTION DETAILS

C300

EROSION CONTROL NOTES

- BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES EXIT THE CONSTRUCTION SITE. USE 2 INCH OR GREATER DIAMETER ROCK IN A LAYER AT LEAST 12 INCHES THICK ACROSS THE ENTIRE WIDTH OF THE ENTRANCE. EXTEND THE ROCK ENTRANCE AT LEAST 50 FEET INTO THE CONSTRUCTION ZONE USING A GEOTEXTILE FABRIC BENEATH THE AGGREGATE TO PREVENT MIGRATION OF SOIL INTO THE ROCK FROM BELOW.
- REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. REMOVAL SHALL BE ON A DAILY BASIS WHEN TRACKING OCCURS AND MAY BE ORDERED BY CITY INSPECTORS AT ANY TIME IF CONDITIONS WARRANT. SWEEPING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONSTRUCTION AND DONE IN A MANNER TO PREVENT DUST BEING BLOWN TO ADJACENT PROPERTIES.
- CATCH BASIN INSERTS OR OTHER APPROVED PRODUCTS ARE REQUIRED IN UNDISTURBED AREAS THAT MAY RECEIVE RUNOFF FROM THE PROJECT AREA. HAY BALES OR FILTER FABRIC WRAPPED GRATES ARE NOT ALLOWED FOR INLET PROTECTION.
- LOCATE SOIL OR DIRT STOCKPILES NO LESS THAN 25 FEET FROM ANY PUBLIC OR PRIVATE ROADWAY OR DRAINAGE CHANNEL. TEMPORARY STOCKPILES LOCATED ON PAVED SURFACES MUST BE NO LESS THAN TWO FEET FROM THE DRAINAGE/GUTTER LINE AND SHALL BE COVERED IF LEFT MORE THAN 24 HOURS.
- MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETERIORATED, DAMAGED, OR ROTTED EROSION CONTROL DEVICES IMMEDIATELY.
- DISTURBED SOIL STABILIZATION SHALL USE SEED AND MULCH, EROSION CONTROL MATTING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS. SEED WITH ANNUAL RYE SEED AT 60 LBS PER ACRE AND WOOD MULCH FIBER AT 45 LBS PER 1,000 SF. AN EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED IS RECOMMENDED TO MINIMIZE EROSION POTENTIAL.

- READY MIXED CONCRETE AND CONCRETE BATCH PLANTS ARE PROHIBITED WITHIN THE PUBLIC RIGHT OF WAY. ALL CONCRETE RELATED PRODUCTION, CLEANING AND MIXING ACTIVITIES SHALL BE DONE IN THE DESIGNATED CONCRETE MIXING/WASHOUT LOCATIONS.
- CHANGES TO EROSION CONTROL PLAN MUST BE APPROVED BY THE EROSION CONTROL INSPECTOR PRIOR TO IMPLEMENTATION. CONTRACTOR TO PROVIDE INSTALLATION AND DETAILS FOR ALL PROPOSED ALTERNATE TYPE DEVICES.
- ALL EROSION CONTROL ELEMENTS ARE TEMPORARY. CONTRACTOR TO INSTALL EROSION CONTROL ELEMENTS PRIOR TO START OF LAND DISTURBING ACTIVITIES, MAINTAIN IN GOOD CONDITION DURING CONSTRUCTION AND REMOVE FROM THE SITE UPON COMPLETION OF FINAL PAVING AND TURF ESTABLISHMENT.

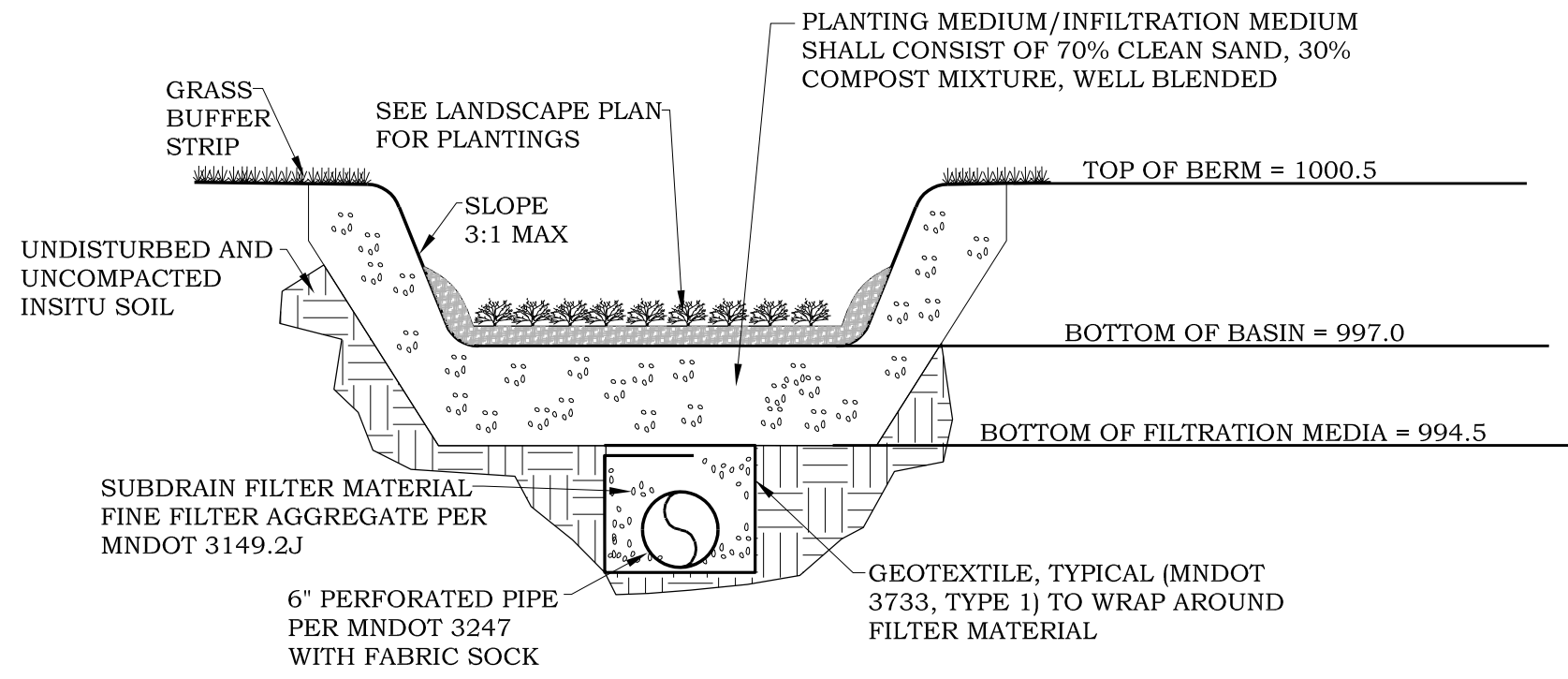
LEGEND

- EXISTING PROPERTY LINE
- PROPOSED HEAVY-DUTY SILT FENCE
- PROPOSED TREE FENCING
- PROPOSED SEDIMENT LOG DITCH CHECK
- PROPOSED CONSTRUCTION ENTRANCE/RIPRAP
- PROPOSED DRAIN TILE
- PROPOSED PVC STORM SEWER

ACREAGE SUMMARY	
TOTAL LOT AREA	2.69 ACRES
EXISTING IMPERVIOUS AREA	0.06 ACRES
PROPOSED IMPERVIOUS AREA	0.29 ACRES
TOTAL DISTURBED AREA	1.73 ACRES

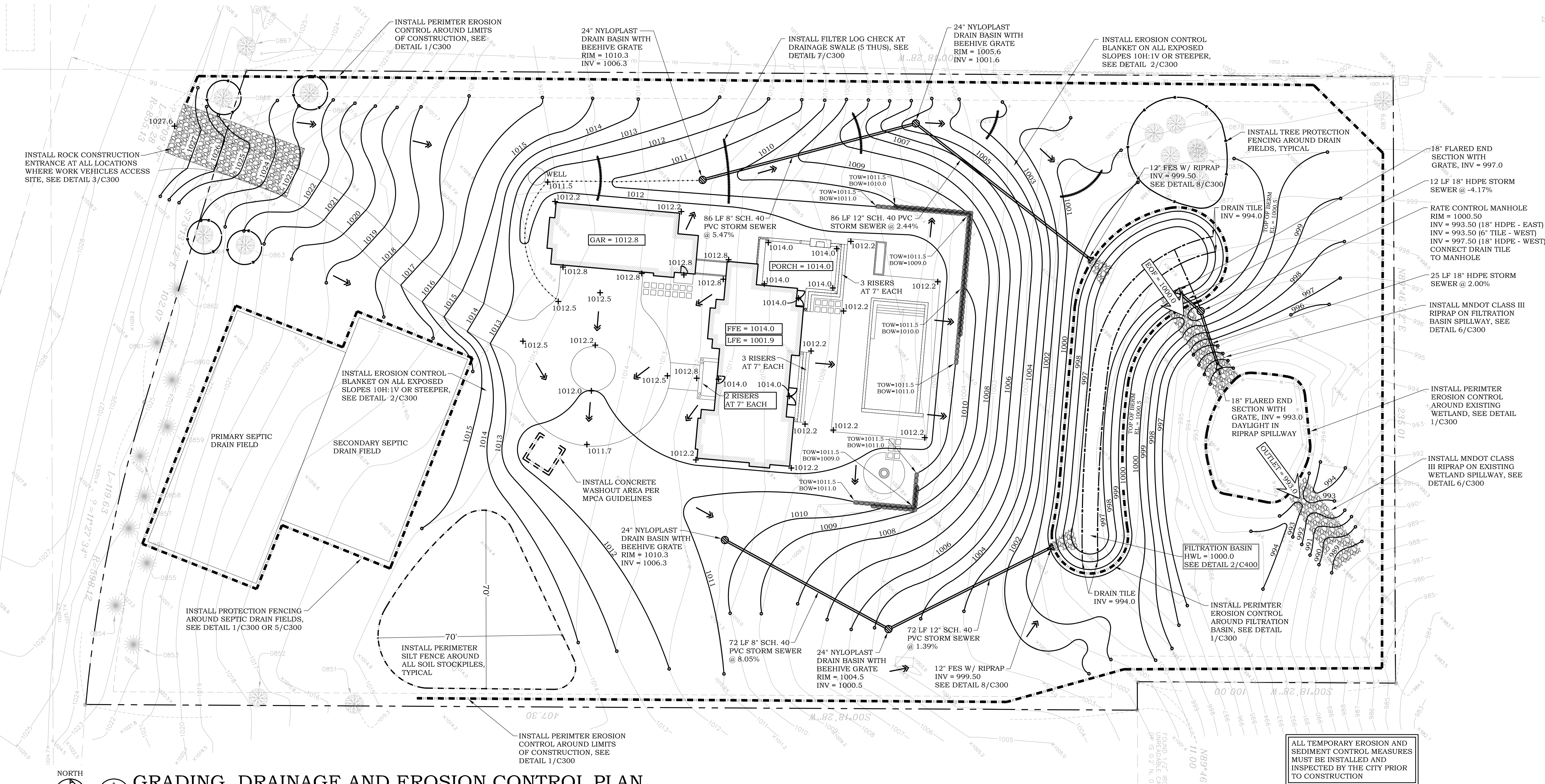
ESTIMATED BMP QUANTITIES	
HEAVY-DUTY SILT FENCE	2,250 LF
ROCK CONSTRUCTION ENTRANCE	1 EACH
CONCRETE WASHOUT AREA	1 EACH
TREE PROTECTION FENCING	400 LF
EROSION CONTROL BLANKET	4,700 SY
RIPRAP	45 CY

NOTE: QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL DETERMINE FOR THEMSELVES THE EXACT QUANTITIES FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL NOT RELY ON THESE QUANTITIES FOR THEIR BID AND CIVIL ENGINEER IS NOT RESPONSIBLE FOR COST ESTIMATES OR ACTUAL CONSTRUCTION COSTS.



FILTRATION BASIN SECTION

NO SCALE



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Permit Set

Drawing Title

GRADING, DRAINAGE
AND EROSION
CONTROL PLAN

C400



NOTES:

- EXISTING TREES MARKED WITH 'EX' AND COLORED IN RED
- PROPOSED TREES ARE MARKED WITH ASSOCIATED CODE AND COLORED IN GREEN

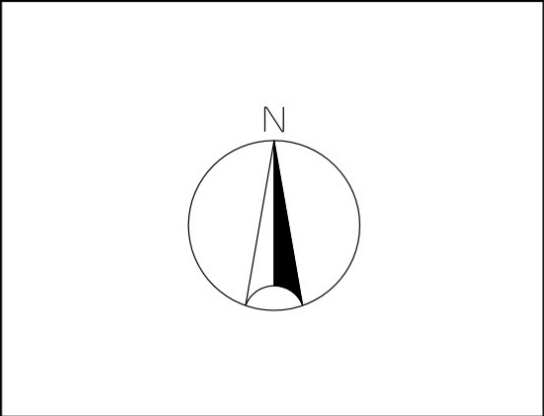
PLANTING SCHEDULE			
CODE	SPECIES	DESCRIPTION	QTY.
H-LL	HYDRANGEA 'LITTLE LIME'	SHRUB #10 CONT.	19
C-P	COTONEASTER 'PEKING'	SHRUB #10 CONT.	5
B-CG	BOXWOOD 'CHICAGOLAND GREEN'	SHRUB #7 CONT.	23
N-WL	NEPETA WALKERS LOW	PERENNIAL #1 CONT.	10
S-MN	SALVIA 'MAY NIGHT'	PERENNIAL #1 CONT.	10
QA	QUAKING ASPEN	TREE MIXED SIZES	33
WP	WHITE PINE	TREE SPADED	5
MP-AB	MAPLE 'AUTUMN BLAZE'	TREE SPADED	8
MP-FF	SUGAR MAPLE 'FALL FESTA'	TREE SPADED	4

LANDSCAPE LIGHTING SCHEDULE			
CODE	DESCRIPTION	SYMBOL	QTY.
K-AL	KICHLER 15384AZT ACCENT LIGHT 2700K LED 4W 40 DEG. - 285 LUMENS		16
AO-DL	AO PASHOO-RC DOWN LIGHT 2700K LED 23W - 270 LUMENS		14



SCALE:	
DATE:	10.1.20
DESIGNER:	DT

LANDSCAPE DESIGN



BECKER RESIDENCE
254 SALEM CHURCH ROAD
SUNFISH LAKE, MN 55113



LANDSCAPE PLANTS

TREES:



Autumn Blaze Maple



Quaking Aspen



Fall Fiesta Sugar Maple

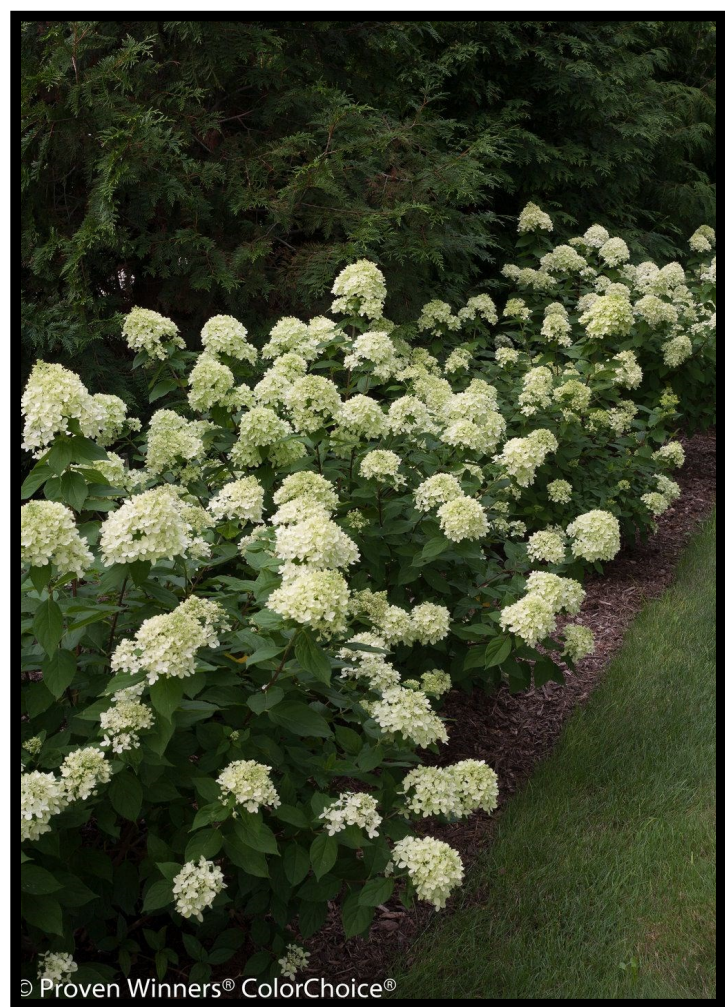


White Pine

SHRUBS:



Chicagoland Green Boxwood



Little Lime Hydrangea



Hedge Cotoneaster

PERENNIALS AND ORNAMENTAL GRASSES:

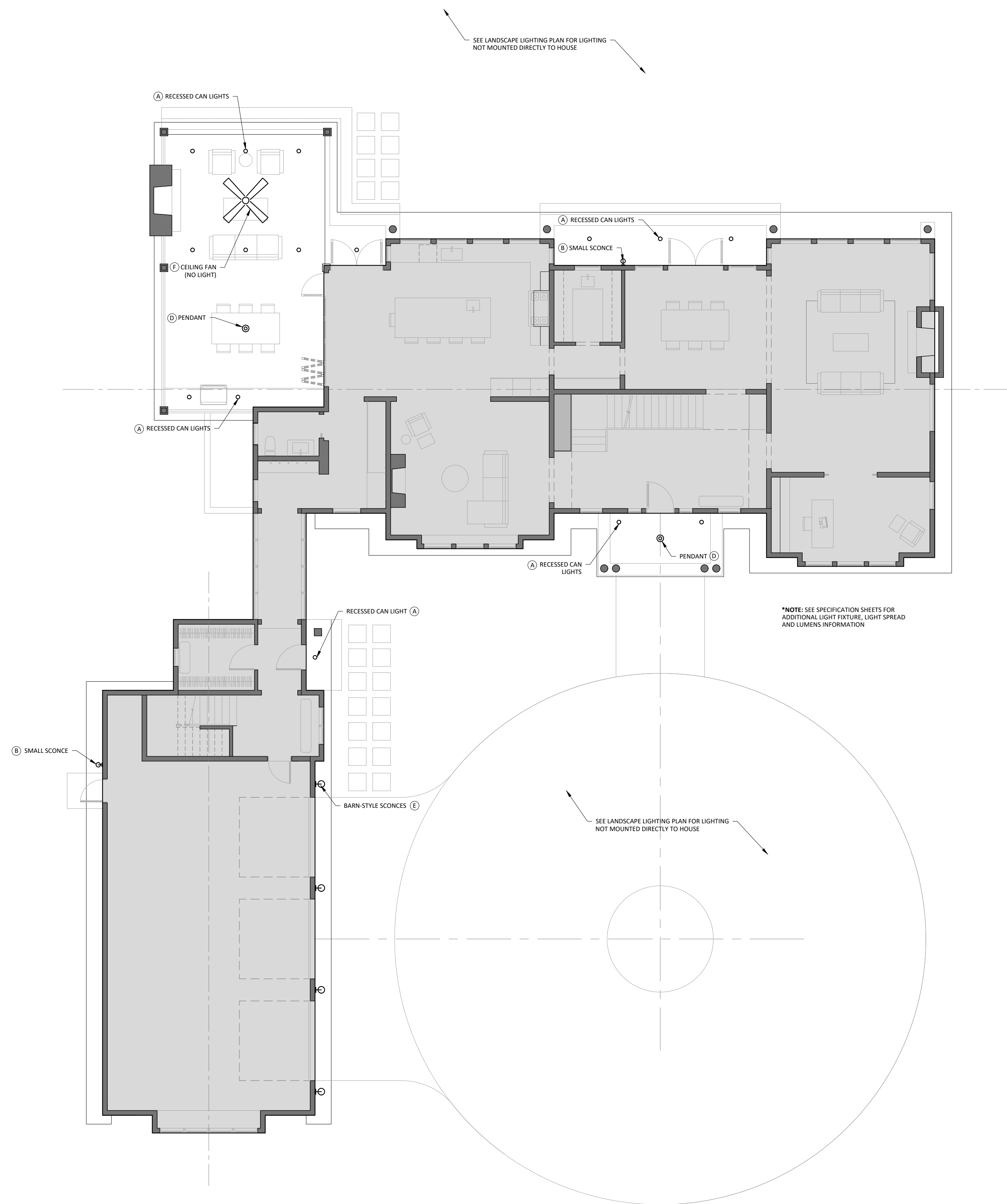


May Night Salvia

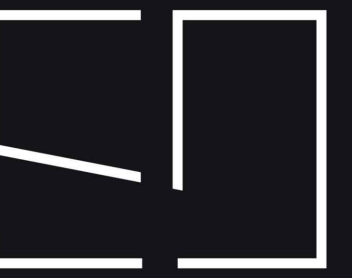


Walker's Low Nepeta





1 ARCHITECTURAL EXTERIOR LIGHTING PLAN DIAGRAM
SCALE: 1/8" = 1'-0"



STRANDDESIGN

STRANDDESIGN.COM
DAVID@STRANDDESIGN.COM
715.497.3268

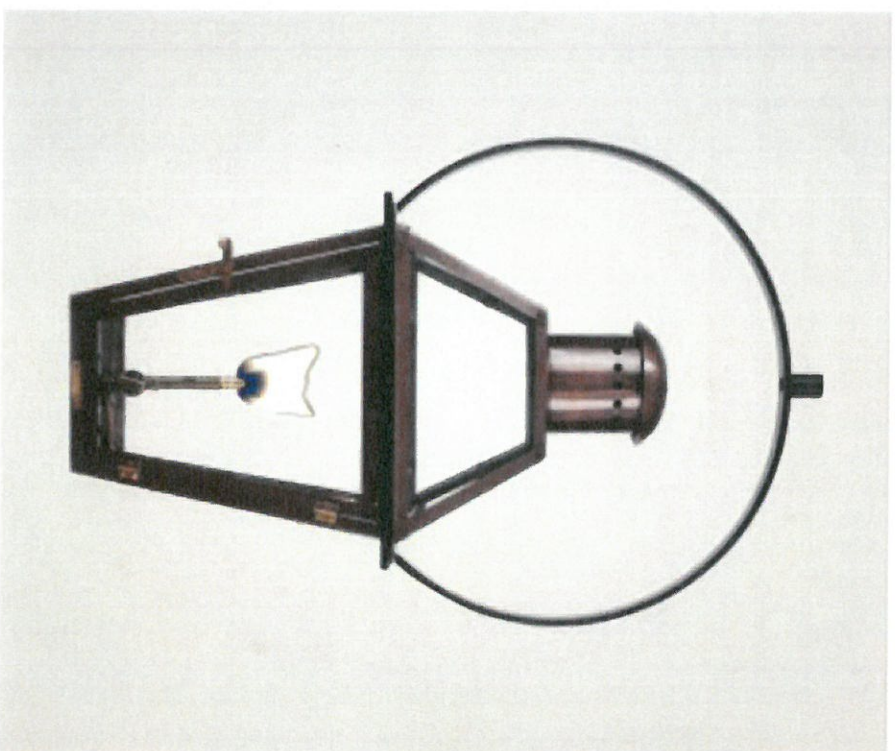
SET	ISSUE DATE
SITE PLAN REVIEW	09.03.2020

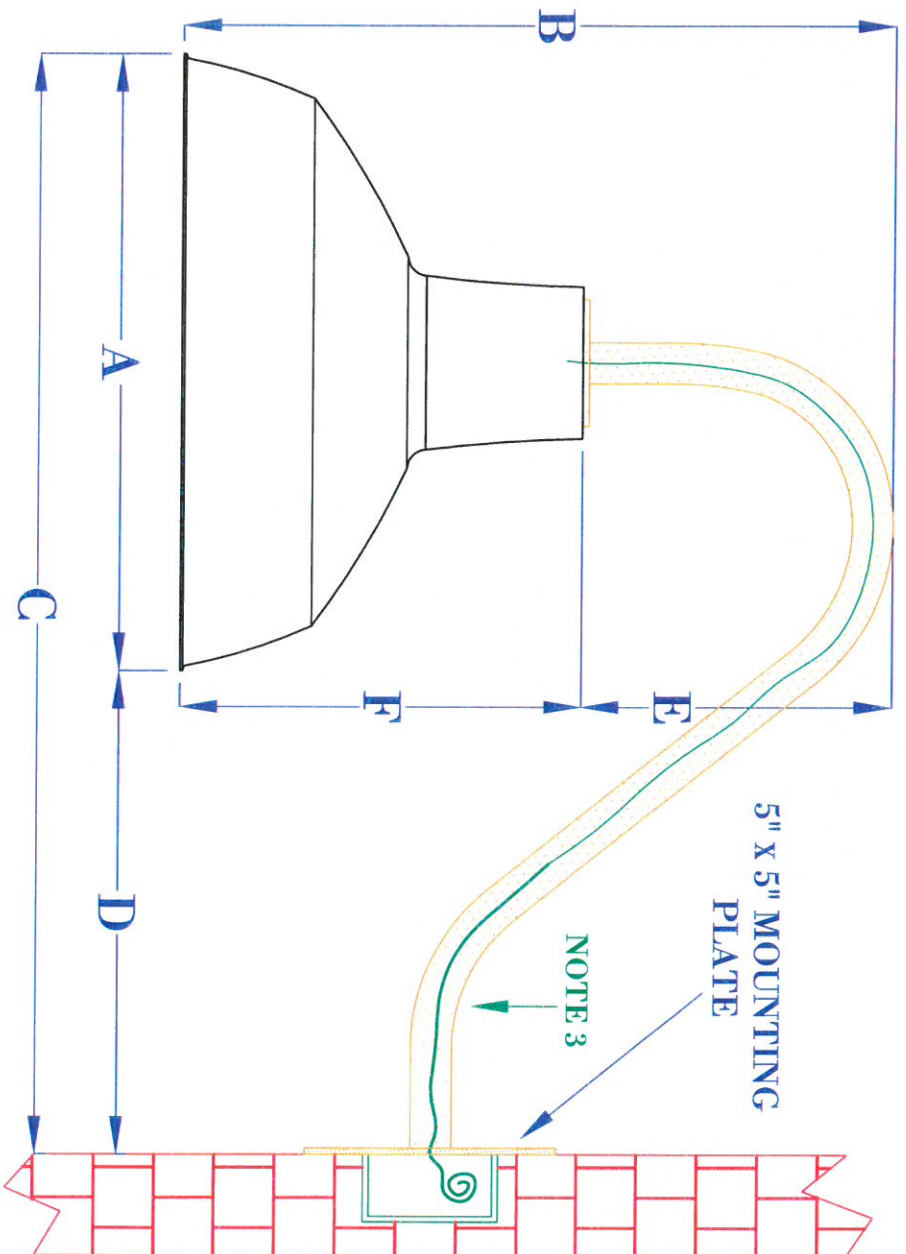
BECKER RESIDENCE
245 SALEM CHURCH ROAD
SUNFISH LAKE, MN

ARCHITECTURAL
EXTERIOR LIGHTING PLAN

A5.0

EXTERIOR LIGHTING





NOTES:

1. MOUNTING HARDWARE SUPPLIED BY OTHERS
2. FIXTURES ARE HANDCRAFTED. DIMENSIONS MAY VARY PLUS OR MINUS $\frac{1}{4}$ "
3. ELECTRIC LIGHTS SUPPLIED WITH 18/2 WIRE WITH GROUND

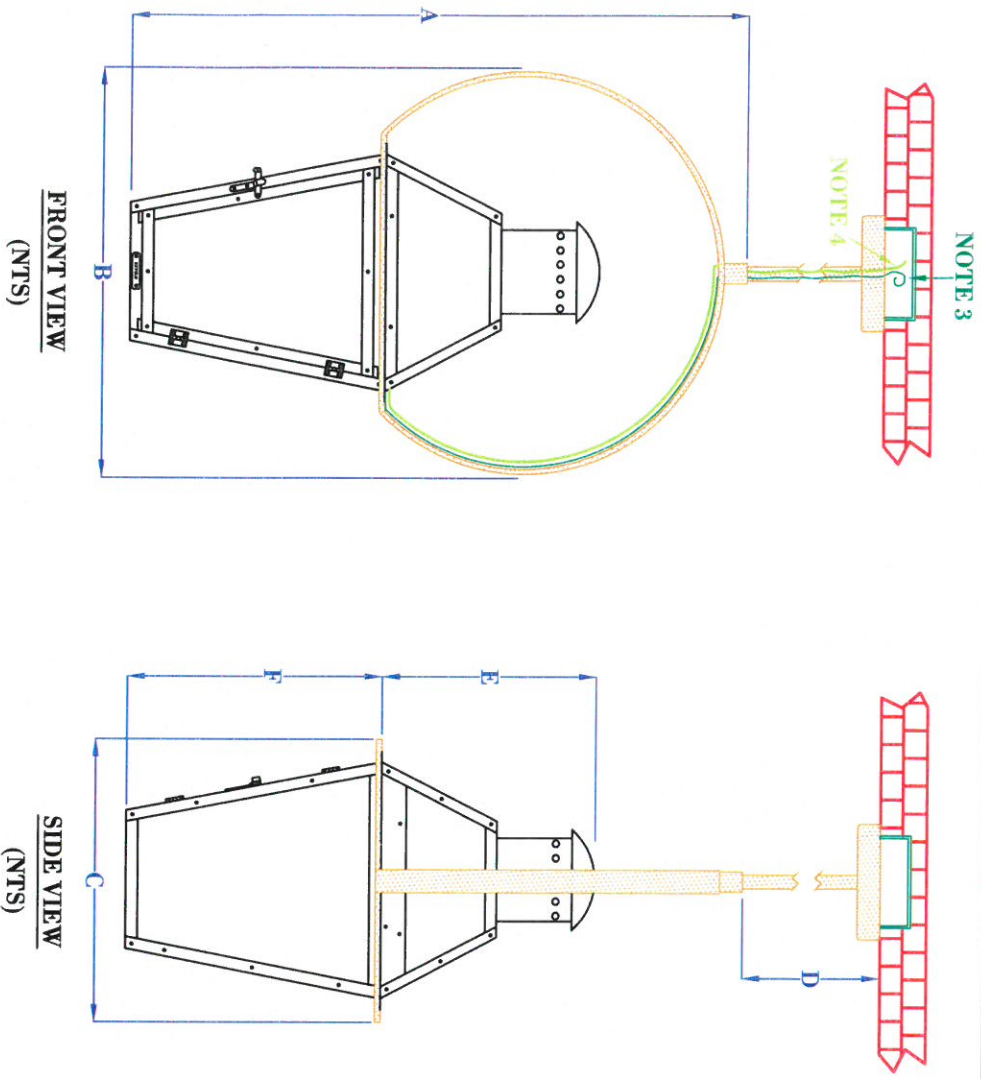
SIDE VIEW
(NTS)

BEVOILO GAS & ELECTRIC LIGHTS

LIGHT:	FARMHOUSE	DATE:	APP. BY:	MAJ
BRACKET:	GOOSENECK	6-13-13	REVISION:	1

SIZE:	14"
A:	12 $\frac{1}{2}$ "
B:	14 $\frac{1}{4}$ "
C:	21 $\frac{3}{4}$ "
D:	9 $\frac{1}{2}$ "
E:	6 $\frac{1}{4}$ "
F:	8"

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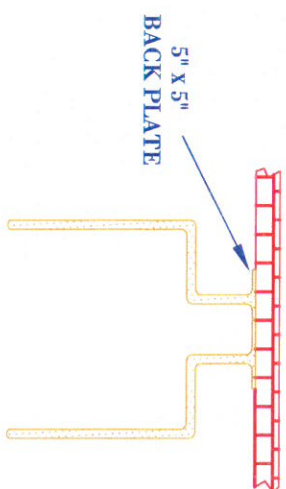
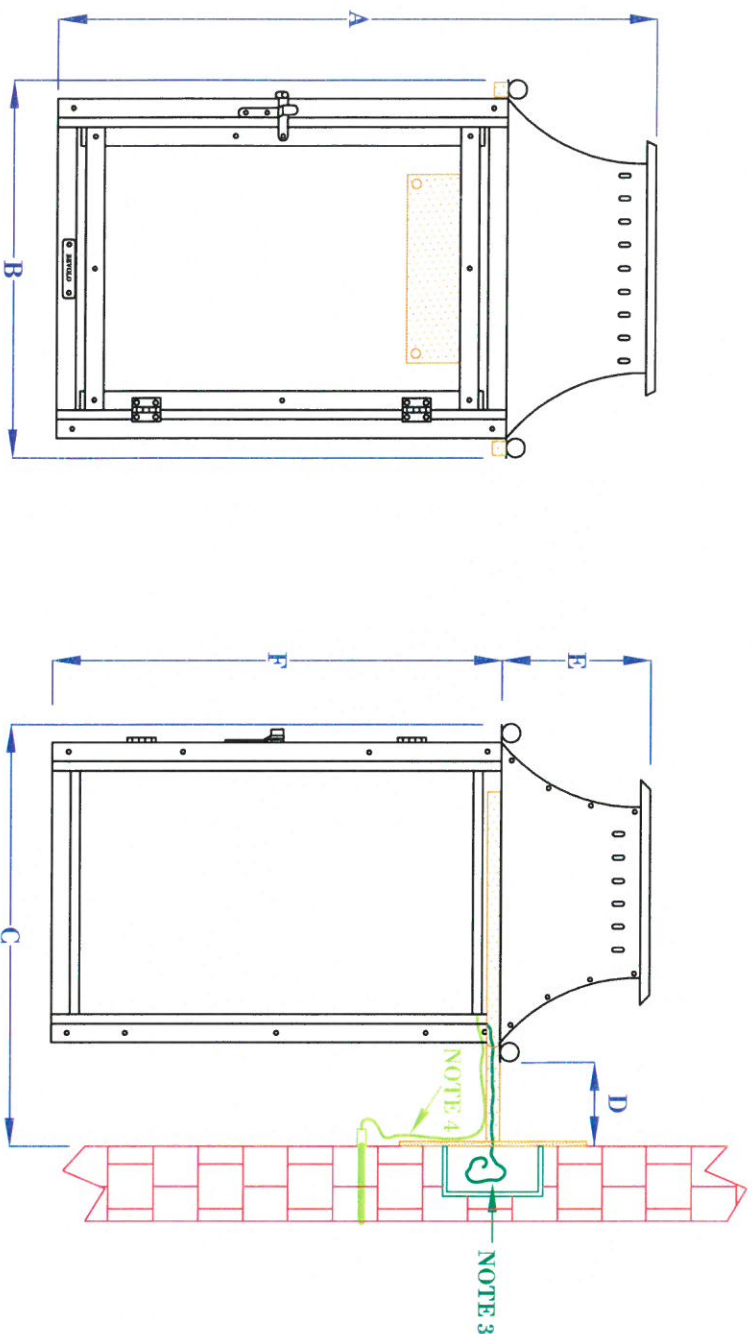
- NOTES:
1. MOUNTING HARDWARE SUPPLIED BY OTHERS
 2. FIXTURES ARE HANDCRAFTED. DIMENSIONS MAY VARY PLUS OR MINUS $\frac{1}{4}$ "
 3. ELECTRIC LIGHTS SUPPLIED WITH 18/2 WIRE WITH GROUND
 4. GAS LIGHTS SUPPLIED WITH $\frac{3}{16}$ " COPPER GAS LINE AND $\frac{3}{16}$ " x $\frac{1}{4}$ " GAS LINE ADAPTOR

BEVOLO GAS & ELECTRIC LIGHTS

LIGHT:		FRENCH QUARTER	
BRACKET:		YOKE	
DATE:	APP. BY:	JJG	
4-17-18	REVISION:	11	

SIZE:	14"	18"	21"	24"	27"	30"	36"
A:	20"	24"	26"	30"	33 $\frac{3}{4}$ "	38 $\frac{3}{4}$ "	46 $\frac{3}{4}$ "
B:	14 $\frac{1}{4}$ "	15 $\frac{7}{8}$ "	17 $\frac{1}{4}$ "	20 $\frac{1}{2}$ "	21 $\frac{7}{8}$ "	25 $\frac{3}{4}$ "	31"
C:	9 $\frac{7}{8}$ "	11 $\frac{1}{4}$ "	12 $\frac{1}{8}$ "	14 $\frac{3}{8}$ "	15 $\frac{1}{4}$ "	18 $\frac{1}{4}$ "	22 $\frac{1}{4}$ "
D:	VARIES	VARIES	VARIES	VARIES	VARIES	VARIES	VARIES
E:	6 $\frac{1}{4}$ "	7 $\frac{5}{8}$ "	9 $\frac{3}{8}$ "	12 $\frac{3}{8}$ "	11 $\frac{7}{8}$ "	14 $\frac{1}{2}$ "	17 $\frac{3}{8}$ "
F:	8"	10 $\frac{1}{8}$ "	11 $\frac{1}{8}$ "	12 $\frac{7}{8}$ "	14 $\frac{3}{8}$ "	16 $\frac{1}{8}$ "	19 $\frac{5}{8}$ "

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TOP VIEW
(NTS- BRACKET ONLY)

FRONT VIEW
(NTS)

SIDE VIEW
(NTS)

NOTES:

1. MOUNTING HARDWARE SUPPLIED BY OTHERS
2. FIXTURES ARE HANDCRAFTED. DIMENSIONS MAY VARY PLUS OR MINUS $\frac{1}{4}$ "
3. ELECTRIC LIGHTS SUPPLIED WITH 18/2 WIRE WITH GROUND
4. GAS LIGHTS SUPPLIED WITH $\frac{3}{16}$ " COPPER GAS LINE AND $\frac{3}{16}$ " x $\frac{1}{4}$ " GAS LINE ADAPTOR

BEVOLO GAS & ELECTRIC LIGHTS

LIGHT: WILLIAMSBURG 14", 16", 22"

BRACKET: BRACKET MOUNT

SIZE:	14"	16"	22"
A:	14 $\frac{1}{8}$ "	16 $\frac{1}{8}$ "	22 $\frac{1}{8}$ "
B:	10 $\frac{1}{8}$ "	10 $\frac{1}{8}$ "	10 $\frac{1}{8}$ "
C:	11 $\frac{5}{8}$ "	11 $\frac{5}{8}$ "	11 $\frac{5}{8}$ "
D:	2 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "
E:	4"	4"	4"
F:	10 $\frac{1}{8}$ "	12 $\frac{1}{8}$ "	18 $\frac{1}{8}$ "

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DRW BY: JJG

DATE: APP. BY: MAJ

10-30-2009 REVISION: 1



UPC: 019813510699



Color: White

Weight: 0.4 lbs

Project:

Type:

Prepared By:

Date:

Driver Info

Type	Constant Current
120V	0.07A
208V	N/A
240V	N/A
277V	N/A
Input Watts	7.60W

LED Info

Watts	8W
Color Temp	3000K (Warm)
Color Accuracy	80 CRI
L70 Lifespan	50,000
Lumens	849
Efficacy	111.7 lm/W

Technical Specifications**Listings****UL Classified:**

Suitable for wet locations

ENERGY STAR V2.2:

This product is ENERGY STAR® Version 2.2 Certified.

Energy Star Model Number:

DLR0037

Energy Star ID:

2350042

NEC Compliant:

Suitable for use in closets. Compliant with NEC Sec. 410.16 (A)(1) and 410.16 (C)(3).

Electrical**Dimming Driver:**TRIAC compatible dimmer with dimming as low as 5%. [See dimmer compatibility guide here.](#)**THDi:**

Produces less than 20% THD

PF:

≥0.9

Input Voltage:

120V

Operating Frequency (Hz):

60Hz

Performance**Lifespan:**

50,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

Construction**Shape:**

Round

Trim Style:

Smooth Trim

Housing:

Constructed from durable steel sheet metal

Technical Specifications (continued)

Construction

Cold Weather Starting:

The minimum starting temperature is -30°C (-22°F)

Maximum Ambient Temperature:

Suitable for use in up to 40°C (104°F)

Lens:

Frosted polycarbonate diffusion lens. Regressed lens. Constructed from durable sheet metal construction.

Green Technology:

Mercury and UV free. RoHS-compliant components.

Mounting:

Easy installation with friction clips (4") and torsion springs (5"/6")

Socket Adapter:

Edison 26 Medium Base Socket adapter included in box

Compatible:

Compatible with most common 4" recessed housings

Finish:

Matte White

Optical

Beam Angle:

95°±10°

LED Characteristics

LEDs:

Long-life, high-efficacy, surface-mount LEDs

Wattage Equivalency:

65W Incandescent

Flicker:

Silent and flicker free operations of less than 30%

Other

Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

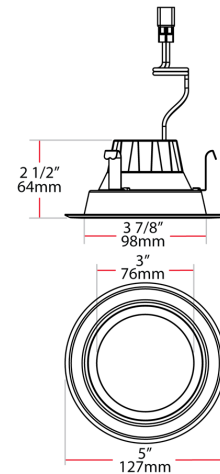
Buy American Act Compliance:

RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

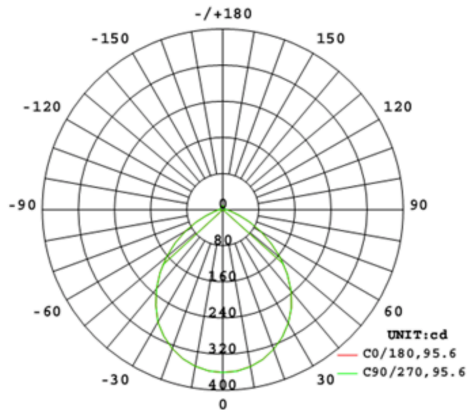
Case and Pallet Dimensions

	QTY	LENGTH (in)	WIDTH (in)	HEIGHT (in)
CASE	4	11.02	6.5	5.91
PALLET	1568	5.31	3.03	86.22

Dimension



Light Distribution



Features

- High Performance LEDS up to 106 lm/w
- Use to replace up to 100W traditional light sources
- Durable construction: dent and scratch resistant
- UL wet location rated
- Compatible with most standard recessed housings
- Dimmable down to 5% on compatible dimmers
- Available in 3 color temperatures: 3000K, 3500K, 4000K
- Smooth diffusing regressed lens
- 5-Year, No-Compromise Warranty

Ordering Matrix

Family	Size	Shape	Wattage	CRI/Color Temp	Voltage	Dimming	Finish	Trim
R	4	R	8	830	120		W	S
	4 = 4"	R = Round	7 = 600lm-700lm	940 = 90 CRI, 4000K (Neutral)	120 = 120V	Blank = TRIAC Dimming	W = White	B = Baffle
	6 = 6"	S = Square	8 = 700lm-850lm	935 = 90 CRI, 3500K (Warm Neutral)	UNV = 120-277V	T = TRIAC Dimming		S = Smooth
			10 = 850lm-1000lm	930 = 90 CRI, 3000K (Warm)				
			11 = 900lm-1050lm	927 = 90 CRI, 2700K (Residential Warm)				
			14 = 1200lm-1400lm	840 = 80 CRI, 4000K (Neutral)				
				835 = 80 CRI, 3500K (Warm Neutral)				
				830 = 80 CRI, 3000K (Warm)				
				827 = 80 CRI, 2700K (Residential Warm)				

2700K LED MR16 4W 40 Degree
18130 (Clear)

Project Name: _____
Location: _____
Type: _____
Qty: _____
Comments: _____



Certifications/Qualifications

Location Rating CSA UL Listed Wet
www.kichler.com/warranty

Dimensions

Height 2.00"
Length 2.00"
Width 2.00"

Electrical

Operating Voltage Range 9-15 VAC
Voltage 12V

Photometrics

Beam Angle Options 40.00
Color Rendering Index 80
Delivered Efficacy (Lumens/Watt) 71
Delivered Lumens 285
Kelvin Temperature 2700K

Primary Lamping

Expected Life Span 30000
Lamp Included Not Included
Lamp Type MR16
Max or Nominal Watt 4.00

Product/Ordering Information

SKU 18130.00
Finish Other

Specifications

Material ALUMINUM

Additional Finishes



Clear

Kichler
7711 East Pleasant Valley Road Cleveland, Ohio 44131-8010
Toll free: 866.558.5706 or kichler.com

Notes:
1) Information provided is subject to change without notice. All values are design or typical values when measured under laboratory conditions.
2) Incandescent Equivalent: The incandescent equivalent as presented is an approximate number and is for reference only.

KICHLER®



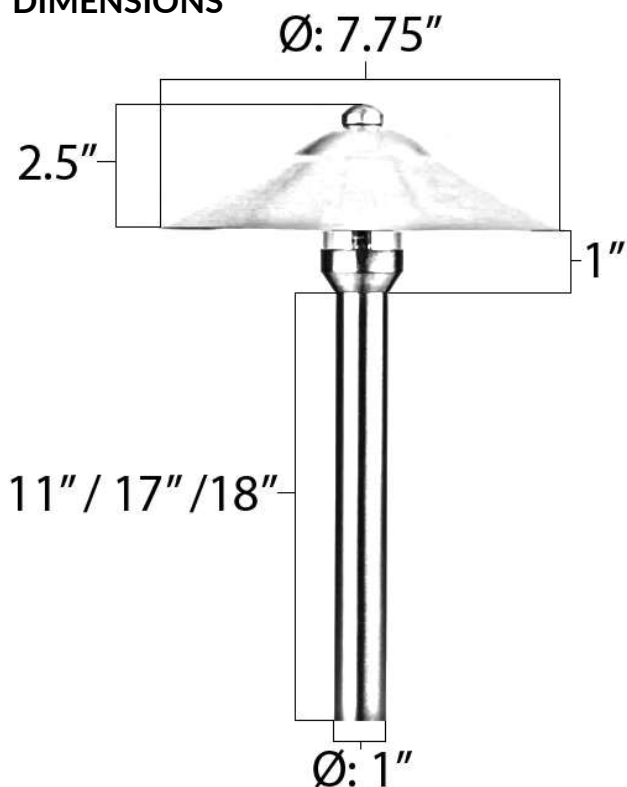
12V / 120V LED Raw Copper Dome Shade Pathway Light

DESCRIPTION

Material: Cast Brass / Raw Copper
Voltage: 12V / 120V
Socket Type: UL Certified G4 JC Bi-Pin
(E230758)
Bulb Type: JC Bi-Pin Cluster
Wiring: 36" Lead w/ Ground
Power Rating: 35w Max
Mounting: Surface
Fixture Weight: 1.65 lbs



DIMENSIONS



ORDERING INFORMATION

LED-PASH-L-100-RC	VOLTAGE	Stem Height		LED BULB	
	12V	11	11"	CW12V	12V 2.3W 270 Lumens Cool White 5000K LED
	120V	17	17"	WW12V	12V 2.3W 270 Lumens Warm White 2700K LED
		18	18"	CW120V	120V 2.3W 270 Lumens Cool White 5000K LED
				WW120V	120V 2.3W 270 Lumens Warm White 2700K LED

LED-PASH-L-100-RC - ____ - ____ - ____

Fixture Type: _____

Job Name: _____

Notes: _____



12V 1 Light Mini Accent Light Textured Architectural Bronze

15384AZT (Textured Architectural Bronze)



Project Name: _____
Location: _____
Type: _____
Qty: _____
Comments: _____

Certifications/Qualifications

Location Rating	CUL_12V
	www.kichler.com/warranty

Dimensions

Height	6.00"
Length	6.00"
Width	2.50"

Electrical

Operating Voltage Range	12 VAC
Voltage	12V

Mounting/Installation

Lead Wire Length	35
------------------	----

Primary Lamping

Lamp Included	Not Included
Lamp Type	MR16
Max or Nominal Watt	7,20

Product/Ordering Information

SKU	15384AZT
Finish	Bronze
UPC	783927042864

Optional Lamping

2700K LED MR16 4W 15 Degree	18126
3000K LED MR16 4W 15 Degree	18127
2700K LED MR16 4W 25 Degree	18128
3000K LED MR16 4W 25 Degree	18129
2700K LED MR16 4W 40 Degree	18130
3000K LED MR16 4W 40 Degree	18131
2700K LED MR16 4W 60 Degree	18132
3000K LED MR16 4W 60 Degree	18133
2700K LED MR16 5W 15 Degree	18134
3000K LED MR16 5W 15 Degree	18135
2700K LED MR16 5W 25 Degree	18136
3000K LED MR16 5W 25 Degree	18137
2700K LED MR16 5W 40 Degree	18138
3000K LED MR16 5W 40 Degree	18139
2700K LED MR16 5W 60 Degree	18140
3000K LED MR16 5W 60 Degree	18141
2700K LED MR16 7W 15 Degree	18142
3000K LED MR16 7W 15 Degree	18143
2700K LED MR16 7W 25 Degree	18144
3000K LED MR16 7W 25 Degree	18145
2700K LED MR16 7W 40 Degree	18146
3000K LED MR16 7W 40 Degree	18147
2700K LED MR16 7W 60 Degree	18148
3000K LED MR16 7W 60 Degree	18149

Specifications

Material	ALUMINUM
----------	----------

Additional Finishes

 Centennial Brass



Copper



Textured Architectural Bronze



Textured Architectural Bronze



Textured Black



Textured Black

Kichler

7711 East Pleasant Valley Road Cleveland, Ohio 44131-8010
Toll free: 866.558.5706 or kichler.com

Notes:

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