NORTHWEST ASSOCIATED CONSULTANTS, INC.
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Telephone: 763.957.1100 Website: www.nacplanning.com

PLANNING REPORT - Major Site and Building Plan Review and Conditional Use Permit

8/7/18 CC Mtg. Agenda Item 6a

TO: Sunfish Lake Planning Commission
Sunfish Lake City Council

FROM: Ryan Grittman

DATE: July 12, 2018

RE: Sunfish Lake – 245 Salem Church Road– Major Site and Building Plan Review and Conditional Use Permit

FILE: 211.01 – 18.05

Application Accepted:	May 14, 2018
Planning Commission Date:	June 21, 2018
Tentative City Council Review:	July 3, 2018
60-day Review:	August 7, 2018

BACKGROUND

Roger and Shari Wilsey are requesting approval of a Major Site and Building Plan Review to allow the construction of a new home at 245 Salem Church Road in the City of Sunfish Lake. The applicants have purchased the subject property; demolished an existing outbuilding; and intend to build a new home on the site. A major site and building plan review is required for building alterations exceeding 1,000 square feet in area.

The property is zoned R-1, Single Family Residential District.

A Major Site and Building Plan Review requires review by the Planning Commission and final approval by the City Council.

APPROVALS REQUIRED	
Major Site and Building Plan Review	To permit the construction of a new home at 245 Salem Church Road.

Attached for reference:

Exhibit A: Cover Sheet / Title Sheet
Exhibit B: Existing Conditions (Survey) and Tree Inventory
Exhibit C: Grading and Erosion Control Plan
Exhibit D: Landscape Plan
Exhibit E: Exterior Model Images

Exhibit F: Height Calculation
Exhibit G: Lighting Plan
Exhibit H: City Engineer Memorandum (dated June 14, 2018, and July 12, 2018)

ISSUES ANALYSIS

Major Site and Building Plan Review

Zoning. The subject property is zoned R-1, Single Family Residential. The following table illustrates the application of district requirements to the property.

R-1 District Standards	Required	Proposed	Compliant
Net Lot Area (excluding wet areas and steep slopes)	2.5 acres	2.6 acres (existing condition)	Yes
Front Setback (south)	100 feet	100 feet	Yes
Side Setback (west)	50 feet	57 feet	Yes
Side Setback (east)	50 feet	55 feet	Yes
Rear Yard Setback (north)	50 feet	> 200 feet	Yes
Maximum Building Coverage	10%	9.6% (Total parcel)	Yes
Building Height Limitation (height above average existing grade)	30 feet	28 feet	Yes

Lot Area. The gross area of the platted parcel is 2.69 acres, however once wet areas are factored in, the property is approximately 2.6 acres. The lot is a legal conforming lot.

Building Height. According to the Ordinance, no building structure shall exceed two and a half stories or 30 feet in height above average existing grade. The height of the proposed one-story structure is conforming at 28 feet above average existing grade.

Accessory Structures. The applicants are proposing a swimming pool as the one allowed accessory structure on the site. The swimming pool meets the required setbacks for an accessory structure in the R-1 district.

Architectural Design / Building Materials. As shown on the submitted drawings, the proposed home includes wood and stone siding. Stone and wood siding exterior materials are specifically permitted by ordinance. A more thorough Building Code review will be conducted with the building permit application.

Placement and Design of Roads, Driveways, and Parking Areas. The proposed driveway will arch from Salem Church Road, up to the house, and back to Salem Church

Road. The driveway will also continue to the garage area and back around to the rear of the home. Fire access is discussed later in this report.

Lighting. Exterior lighting of homes or property is allowed as necessary for safety purposes provided the impact on surrounding properties is minimized and it is in compliance with Section 1216.06 of the Zoning Ordinance. The applicants have submitted a lighting plan that includes fixtures around the home and the grounds. By code, the lights may not be greater than one candle-foot at the property line once installed.

Grading, Drainage, and Erosion Control. There are no steep grades across the subject property. The home is being located near the center of the parcel. The lot slopes north to a pond area at the rear part of the property. The project will require minimal modification of existing site grades.

The applicants have a stormwater management plan, which directs stormwater to the pond in the rear of the property. The pond is existing from the original plat from this area.

The applicants submitted grading, drainage, erosion control and stormwater management plans for review by the City Engineer. The City Engineer provided comments in the report dated July 12, 2018 (see attached Exhibit H).

As a condition of major site plan approval, the applicants must adhere to the City Engineer's recommendations for construction as addressed in his report dated July 12, 2018, this includes:

- An Operation and Maintenance Plan to be submitted with final construction documents.
- Retaining walls over 4 feet in height must be signed by a registered professional engineer in the State of Minnesota.
- All work must stay within the property lines.
- Obtain an NPDES permit.
- Adhere to axel load limits.

Landscaping / Tree Preservation. The applicants have submitted a tree removal and preservation plan on a certificate of survey that illustrates the location, type and size of existing trees on the site. The City Forester has reviewed the landscaping plan and recommends approval of the plans.

Screening. The property is mostly mowed prairie. The applicants are proposing screening along the east and west property lines to screen from homes on either side. The home will be visible from the street.

Fences. The site plan shows two new driveway monuments to be installed along with the home. By code, these monuments are defined as a fence and subject to the zoning requirements thereof. The proposed monument address signs meet the City's requirements for fences.

Well Pump. The proposed well site is to the north of the proposed garage. The well will be located on the opposite side of the property from the septic system.

Septic System. A new septic system will be built on the west side of the property. The system includes primary and alternative septic treatment areas. The City Septic Inspector had no further comments regarding the septic system.

As a condition of major site plan approval, the applicants must comply with any recommendations of the City's Septic Specialist pertaining to the installation of the new septic system on the property. Further, the applicants must demonstrate to the city that a septic permit has been attained for the system that staff has reviewed and recommended approval of.

Fire Safety. The building will not be protected by a fire sprinkler system. The driveway will be pavement approximately 20 feet wide. This meets the City's requirements for fire truck access.

Site and Building Plan Evaluation Criteria. As described in Section 1208.04 of the City Zoning Ordinance, the Planning Commission, as its basis of recommendation, and the City Council, as its basis for decision, shall evaluate the effects of the proposed site and building plans. This review shall include, but is not limited to, the following:

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

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

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

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.

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

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

The proposed home appears to meet the site and building plan review criteria. The home has been designed and sited to minimize impacts on the surrounding properties. Its two-story design is anticipated to have some visual impact from Salem Church Road. The home will be screened by existing tree cover and additional tree cover.

This is a sensitive building site due to its proximity to the pond on the rear of the property. Sediment, stormwater, and other construction debris can easily be transported down slopes and in nearby properties and pond areas. Therefore, it is essential that construction be sensitive to erosion prevention, and stormwater treatment.

Airport Noise. The subject parcel does not fall under the Aircraft Noise Attenuation District Overlay and is therefore not subject to these regulations.

Neighbor Notifications. All neighbors within 1,000 feet of the subject property were notified of the project. The City heard from a neighbor who requested a site and building plan but did not offer any further comment. No other comments or questions were received by staff.

SUMMARY AND RECOMMENDATION

The applicants are requesting approval of Major Site and Building Plans to allow the construction of a new home at 245 Salem Church Road.

Major Site Plan. Based on the preceding review, City staff recommends approval of the major site and building plans based on findings that the project submittal meets performance standards within the Sunfish Lake Zoning Ordinance. Staff recommends the following conditions with approval:

1. The applicants adhere to the City Engineer's recommendations for construction as addressed in his report dated July 12, 2018 (Exhibit H) this includes:

    - An Operation and Maintenance Plan to be submitted with final construction documents.
    - Retaining walls over 4 feet in height must be signed by a registered professional engineer in the State of Minnesota.
    - All work must stay within the property lines.
    - Obtain an NPDES permit.
    - Adhere to axel load limits.

2. The applicants must obtain a permit from the City's Septic Specialist for the installation of the proposed septic system. The applicants shall verify permit issuance prior to City Council consideration of the application.

3. The applicants obtain a building permit from the City Building Official prior to commencing any construction of the proposed project.

4. Upon installation, all exterior lighting must adhere to the Sunfish Lake Zoning Ordinance requirements related to lighting.

5. The applicants shall contact planning staff to arrange pre-construction and post-construction site visits, whereby staff can confirm that site and building plans and associated approval conditions have been implemented accordingly. The inspections are separate from other inspections that may be necessary by the City Building Inspector, City Septic System Inspector, City Engineer, or other individuals. The cost of site inspections is $75.00 each and payment of this amount shall be the responsibility of the property owner.

c: Cathy Iago, City Clerk
Mike Andrejka, City Building Official
Don Sterna and Eric Eckman, City Engineers
Jim Nayes, City Forester
Tim Kuntz, City Attorney
Ron Wasmund, City Septic Inspector
Dave Dreelan, Fire Chief
Roger and Shari Wilsey, Property Owners
Loucks Engineers, Applicants' Engineering Firm
Close Architects, Applicants' Architects

WILSEY RESIDENCE

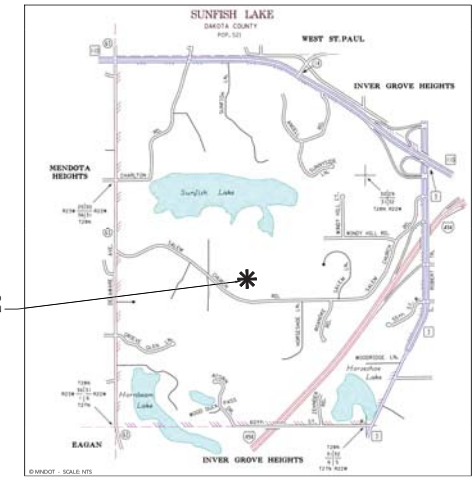
245 SALEM CHURCH ROAD, SUNFISH LAKE, MN

PRELIMINARY PLANS
FOR WILSEY RESIDENCE SITE, GRADING, UTILITIES,
STORMWATER BASINS, DRIVEWAY AND LANDSCAPE.

SHEET INDEX

C0-1	COVER SHEET
S1	EXISTING SURVEY
C2-1	SITE PLAN
C3-1	GRADING, DRAINAGE & UTILITY PLAN
C3-2	STORMWATER POLLUTION PREVENTION PLAN 1 of 2
C3-3	STORMWATER POLLUTION PREVENTION PLAN 2 of 2
C8-1	CIVIL DETAILS
L0-1	TREE INVENTORY PLAN

VICINITY MAP

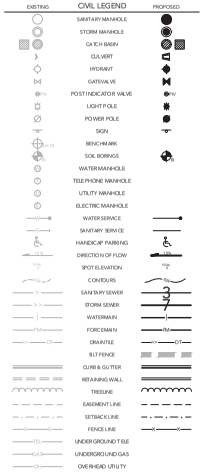


PROPOSED SITE LOCATION

GENERAL NOTES

1. BACKGROUND INFORMATION IS BASED ON A FIELD SURVEY BY OTHERS AND RECORD UTILITY DRAWINGS FROM THE CITY. LOUCKS DOES NOT GUARANTEE THE ACCURACY OF INFORMATION PROVIDED BY OTHERS.
2. WE HAVE SHOWN BURIED STRUCTURES AND UTILITIES ON AND/OR SERVING THE SITE TO THE BEST OF OUR ABILITY, SUBJECT TO THE FOLLOWING RESTRICTIONS:
   - 2.1. UTILITY OPERATORS DO NOT CONSISTENTLY RESPOND TO LOCATE REQUESTS THROUGH THE GOPHER STATE ONE CALL SERVICE FOR BOUNDARY PURPOSES SUCH AS THIS.
   - 2.2. THOSE UTILITY OPERATORS THAT DO RESPOND, OFTEN WILL NOT LOCATE SERVICES FROM THEIR MAIN LINE TO THE CUSTOMER'S STRUCTURE OR FACILITY - THEY CONSIDER THOSE SEGMENTS PRIVATE INSTALLATIONS THAT ARE OUTSIDE THEIR JURISDICTION. IF A PRIVATE SERVICE TO AN ADJOINER'S SITE CROSSES THIS SITE OR A SERVICE TO THIS SITE CROSSES AN ADJOINER, IT MAY NOT BE LOCATED SINCE MOST OPERATORS WILL NOT MARK SUCH "PRIVATE" SERVICES.
   - 2.3. SNOW AND ICE CONDITIONS DURING WINTER MONTHS MAY OBSCURE OTHERWISE VISIBLE EVIDENCE OF A BURIED STRUCTURE OR UTILITY.
   - 2.4. MAPS PROVIDED BY OPERATORS, EITHER ALONG WITH A FIELD LOCATION OR IN LIEU OF SUCH A LOCATION, ARE VERY OFTEN INACCURATE OR INCONCLUSIVE.
   - 2.5. THE SURFACE FEATURES AND ELEVATIONS SHOWN ON THIS DRAWING WERE LOCATED BY LOUCKS.
   - 2.6. ALL OF THE UNDERGROUND UTILITY INFORMATION AND LOCATION SHOWN ON THIS PLAN WERE PREPARED FROM RECORD DRAWINGS OBTAINED FROM THE CLIENT AND THE CITY RECORDS.
3. EXTREME CAUTION MUST BE EXERCISED BEFORE AN EXCAVATION TAKES PLACE ON OR NEAR THIS SITE. BEFORE DIGGING, YOU ARE REQUIRED BY LAW TO NOTIFY GOPHER STATE ONE CALL AT LEAST 48 HOURS IN ADVANCE AT 651/454-0002.
4. THERE MAY BE OTHER UTILITIES ON THE SITE THAT ARE NOT SHOWN ON THIS PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE THE UTILITIES. NOTIFY THE ENGINEER IF THERE ARE OTHER SERVICES FOUND.

CIVIL LEGEND



WARNING

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CALL BEFORE YOU DIG!
Gopher State One Call
TWIN CITY AREA: 651-454-0002
TOLL FREE: 1-800-252-1166

OWNER/DEVELOPER

ROGER & SHARI WILSEY
245 SALEM CHURCH ROAD
SUNFISH LAKE, MN 55118

SHARI WILSEY
TEL: TBD

APPROVED

DON STERNA, P.E.
SUNFISH LAKE CITY ENGINEER

DATE:

WILSEY RESIDENCE
SUNFISH LAKE, MN

SHARI WILSEY
245 SALEM CHURCH RD
SUNFISH LAKE, MN

LOUCKS
PLANNING
CIVIL ENGINEERING
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LANDSCAPE ARCHITECTURE
ENVIRONMENTAL
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CADD QUALIFICATION

SUBMITTAL/REVISIONS

04/06/18	OWNER REVIEW
04/10/18	Added Area L Amendments
05/11/18	City Submittal

PROFESSIONAL SIGNATURE

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.

Michael J. St. Martin - PE

License No. 24440
Date

QUALITY CONTROL

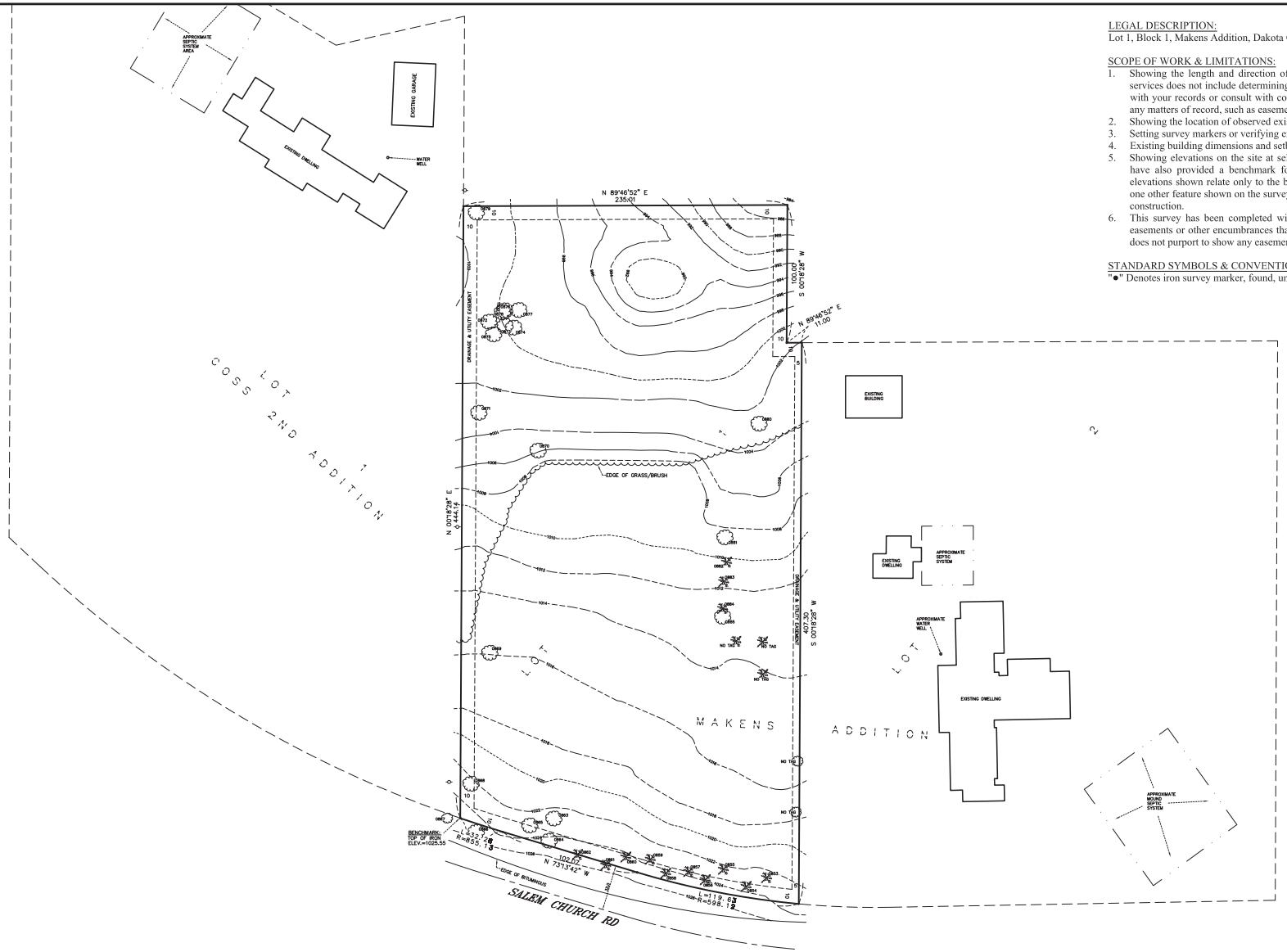
Loucks Project No.	98901.0A
Project Lead	MJS
Drawn By	ZHW/WBS
Checked By	MJS
Review Date	5/11/18

SHEET INDEX

C0-1	COVER SHEET
S1	EXISTING SURVEY
C2-1	SITE PLAN
C3-1	GRADING & UTILITY PLAN
C3-2	SWPPP 1 OF 2
C3-3	SWPPP 2 OF 2
C8-1	CIVIL DETAILS
L0-1	TREE INVENTORY

COVER SHEET
C0-1

EXHIBIT A



LEGAL DESCRIPTION:
Lot 1, Block 1, Makens Addition, Dakota County, Minnesota.

SCOPE OF WORK & LIMITATIONS:

1. Showing the length and direction of boundary lines of the legal description listed above. The scope of our services does not include determining what you own, which is a legal matter. Please check the legal description with your records or consult with competent legal counsel, if necessary, to make sure that it is correct and that any matters of record, such as easements, that you wish to be included on the survey have been shown.
2. Showing the location of observed existing improvements we deem necessary for the survey.
3. Setting survey markers or verifying existing survey markers to establish the corners of the property.
4. Existing building dimensions and setbacks measured to outside of siding or stucco.
5. Showing elevations on the site at selected locations to give some indication of the topography of the site. We have also provided a benchmark for your use in determining elevations for construction on this site. The elevations shown relate only to the benchmark provided on this survey. Use that benchmark and check at least one other feature shown on the survey when determining other elevations for use on this site or before beginning construction.
6. This survey has been completed without the benefit of a current title commitment. There may be existing easements or other encumbrances that would be revealed by a current title commitment. Therefore, this survey does not purport to show any easements or encumbrances other than the ones shown hereon.

STANDARD SYMBOLS & CONVENTIONS:
"●" Denotes iron survey marker, found, unless otherwise noted.

DATE	REVISION DESCRIPTION
2-28-18	SHOW ADJACENT BUILDINGS, TREES, WATER WELLS, SEPTIC SYSTEMS.

DRAWING ORIENTATION & SCALE

CLIENT/JOB ADDRESS

SHARI WILSEY

245 SALEM CHURCH RD.
SUNFISH LAKE, MN

Advance
Surveying & Engineering, Co.
17917 Highway No. 7
Minnetonka, Minnesota 55345
Phone (952) 474-7964
Web: www.advsur.com

I HEREBY CERTIFY THAT THIS PLAN, SURVEY OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

Wayne W. Preuss
#43503
LICENSE NO.
SEPTEMBER 14, 2017
DATE

SURVEYED DATE: SEPTEMBER 12, 2017

DRAFTED DATE: SEPTEMBER 14, 2017

SHEET TITLE
EXISTING SURVEY

SHEET SIZE: 22 X 34

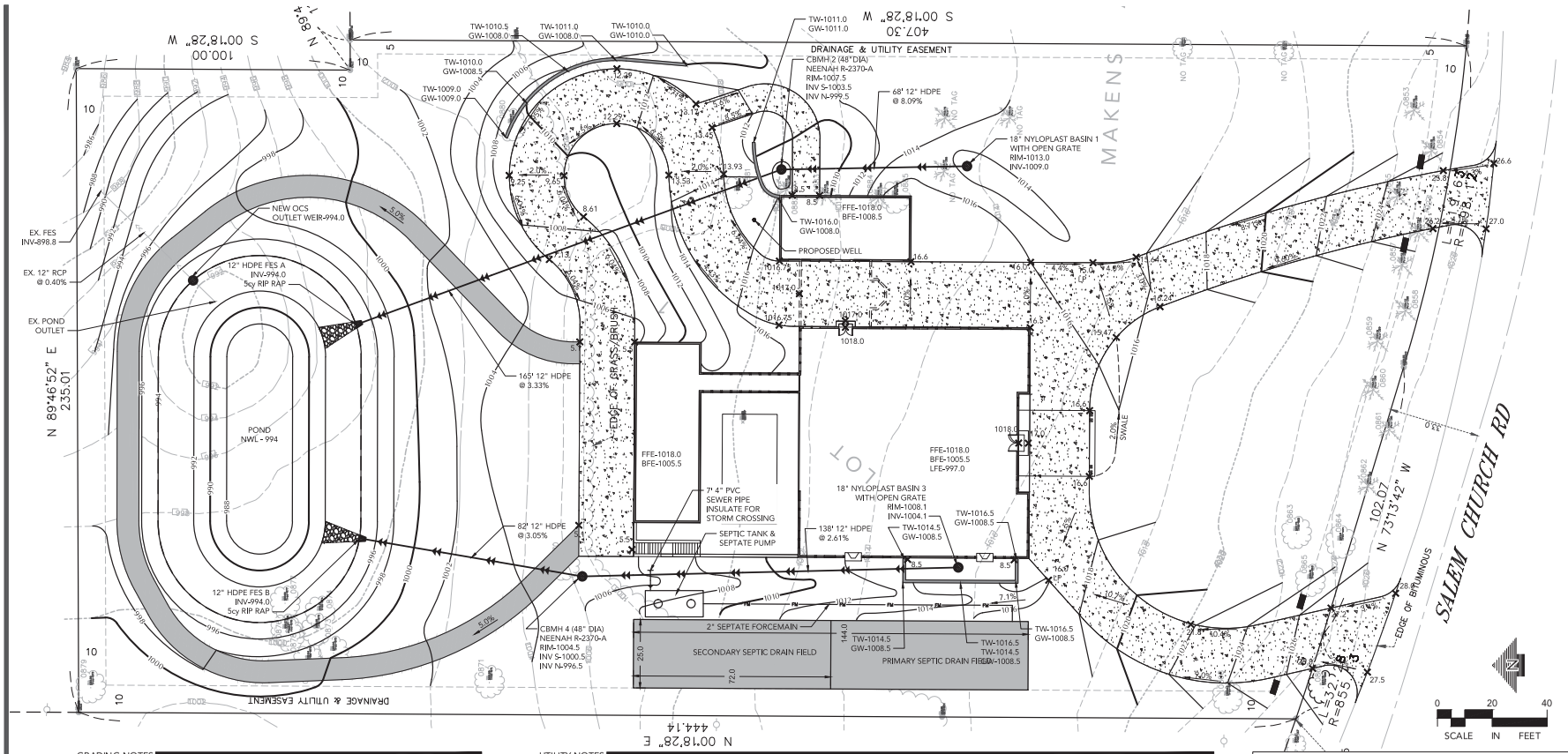
DRAWING NUMBER
170949 WP

SHEET NO.
S1
SHEET 1 OF 1

EXHIBIT B

Tree Tag Number	Tree Species
0851	Silver Maple
0852	Silver Maple
0853	Red Pine
0854	White Pine
0855	Red Pine
0856	Black Spruce
0857	Red Pine
0858	White Pine
0859	Norway Spruce
0860	Jack Pine
0861	White Pine
0862	Red Pine
0863	Bur Oak
0864	Bur Oak
0865	Bur Oak
0866	Bur Oak
0867	Bur Oak
0868	White Oak
0869	Silver Maple
0870	Box Elder
0871	Box Elder
0872	Box Elder
0873	Box Elder
0874	Box Elder
0875	Box Elder
0876	Box Elder
0877	Box Elder
0878	Box Elder
0879	Box Elder
0880	Box Elder
0881	Paper Birch
0882	Red Pine
0883	White Pine
0884	Red Pine
0885	Box Elder
0886	Scots Pine
0887	Black Spruce
0888	Black Spruce

EXHIBIT B



GRADING NOTES

1. BACKGROUND INFORMATION IS BASED ON A FIELD SURVEY BY LOUCKS AND RECORD UTILITY DRAWINGS FROM THE CITY. LOUCKS DOES NOT GUARANTEE THE ACCURACY OF INFORMATION PROVIDED BY OTHERS.
2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF BUILDINGS, VESTIBULES, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, ENTRY LOCATIONS AND LOCATIONS OF DOWNSPOUTS.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASE OF THIS PROJECT. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGES TO ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASE OF THIS PROJECT.
4. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
5. BEFORE BEGINNING CONSTRUCTION THE CONTRACTOR SHALL INSTALL A TEMPORARY ROCK ENTRANCE PAD AT ALL POINTS OF VEHICLE EXIT FROM THE PROJECT SITE. SAID ROCK ENTRANCE PAD SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT.
6. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE ESTABLISHED AROUND THE ENTIRE SITE PERIMETER AND IN ACCORDANCE WITH NPDES PERMIT REQUIREMENTS, BEST MANAGEMENT PRACTICES, AND CITY REQUIREMENTS.
7. ALL SPOT ELEVATIONS SHOWN REPRESENT FINISHED SURFACE OR GUTTER LINE ELEVATIONS UNLESS OTHERWISE NOTED.
8. CONTRACTOR TO VERIFY EXISTING INFORMATION PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY PLAN DISCREPANCIES.
9. EXISTING UTILITY LOCATIONS AS-PER CITY AS-BUILT PLANS AND FIELD SHOTS.
10. SEE SHEET C3-2 FOR EROSION CONTROL INFORMATION.
11. GENERAL CONTRACTOR MUST VERIFY ALL TIE IN GRADES.
12. REFER TO GEOTECHNICAL REPORT FOR MORE INFORMATION.
13. ADA ACCESSIBLE ROUTE SHALL HAVE A 5.0% MAXIMUM SLOPE IN THE DIRECTION OF TRAVEL AND A 2.0% MAXIMUM CROSS-SLOPE.
14. ACCESSIBLE STALLS, ACCESS AISLES AND 60° TURNING CIRCLES SHALL HAVE A 2.0% MAXIMUM SLOPE IN ANY DIRECTION.

ABBREVIATION LEGEND
FFE=FINISHED FLOOR ELEVATION
TW=TOP OF RETAINING WALL
GW=GROUND AT FACE OF RETAINING WALL
HP=HIGH POINT
LP=LOW POINT
TC=TOP OF CURB
GL=GUTTER LINE

UTILITY NOTES

1. BACKGROUND INFORMATION IS BASED ON A FIELD SURVEY BY OTHERS AND RECORD UTILITY DRAWINGS FROM THE CITY. LOUCKS DOES NOT GUARANTEE THE ACCURACY OF INFORMATION PROVIDED BY OTHERS.
2. ALL SANITARY SEWER, STORM SEWER AND WATER SERVICE UTILITIES SHALL BE FURNISHED AND INSTALLED PER THE REQUIREMENTS OF THE SPECIFICATIONS, THE CITY AND THE STANDARD UTILITIES SPECIFICATION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), 2013 EDITION. HDPE PIPE CONNECTIONS INTO ALL CONCRETE STRUCTURES SHALL BE MADE WITH WATER TIGHT MATERIALS, UTILIZING AN A-LOK OR WATERSTOP GASKET OR BOOT, CAST-IN-PLACE RUBBER BOOT, OR APPROVED EQUAL. WHERE THE ALIGNMENT PRECLUDES THE USE OF THE ABOVE APPROVED WATERTIGHT METHODS, CONSEAL 231 WATERSTOP SEALANT, OR APPROVED EQUAL WILL ONLY BE ALLOWED AS APPROVED BY THE ENGINEER. ALL SANITARY SEWER SERVICES SHALL BE SDR 26.
3. SEE SHEETS C8-1 AND THE CONTRACT SPECIFICATIONS FOR SPECIFIC UTILITY DETAILS AND UTILITY SERVICE DETAILS.
4. ALL UTILITY PIPE BEDDING SHALL BE COMPACTED SAND OR FINE GRANULAR MATERIAL PER THE REQUIREMENTS OF THE CITY. ALL COMPACTION SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CEAM SPECIFICATION.
5. THE CONTRACTOR SHALL NOTIFY GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION OR UNDERGROUND WORK.
6. ADJUST ALL EXISTING STRUCTURES, BOTH PUBLIC AND PRIVATE TO THE PROPOSED GRADES WHERE DISTURBED AND COMPLY WITH ALL REQUIREMENTS OF THE UTILITY OWNERS.
7. PROPOSED PIPE MATERIALS:

7.1.	STORM SEWER	N12 HDPE-WT	12" DIAMETER.
7.2.	WATER SERVICE	2" COPPER	TYPE K, 7.5' BURY DEPTH
7.3.	SANITARY SERVICE	6" PVC SDR 26	SERVICE

8. STORM SEWER PIPE SHALL MEET OF EXCEED AASHTO M294 MINIMUM PIPE STIFFNESS PER ASTM D2412 60PSI FOR 8"-18".
9. PROPOSED GAS, TELEPHONE & ELECTRIC SERVICES ARE APPROXIMATE LOCATIONS ONLY. COORDINATE EACH SERVICE WITH THE UTILITY OWNER AND GENERAL CONTRACTOR. IF ANY PROPOSED SERVICE LOCATION VARY SIGNIFICANTLY OR CONFLICT, THE ENGINEER MUST BE NOTIFIED PRIOR TO THE INSTALLATION OF THE SERVICE.
10. THE REMOVAL OF EXISTING SERVICES WITHIN THE CONSTRUCTION LIMITS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND UTILITY OWNER. ADDITIONAL SERVICES MAY EXIST.
11. ALL WATER SERVICES MUST BE INSTALLED AT A 7.5-FT BURY DEPTH.
    11.1. INSULATE ALL CROSSINGS INVOLVING WATER AND SEWER.
12. PVC SANITARY SEWERS MUST MEET ONE OF THE FOLLOWING ASTM STANDARDS: D3034, F789, D2665, OR F891. ASTM D2241 PIPE MAY BE USED FOR SEWERS 6-INCH AND LARGER. THE INSTALLATION MUST COMPLY WITH ASTM D2321, WHICH REQUIRES INSTALLATION BY OPEN TRENCH ON A CONTINUOUS GRANULAR BED (SEE CURRENT MINNESOTA RULES, PART 4714).
13. HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINS MUST COMPLY WITH CURRENT MINNESOTA RULES, PART 4714:
    13.1. PIPES 4-INCH TO 10-INCH IN SIZE MUST COMPLY WITH AASHTO M252.
    13.2. PIPES 12-INCH TO 60-INCH IN SIZE MUST COMPLY WITH ASTM F2306.
    13.3. ALL FITTINGS MUST COMPLY WITH ASTM D3212.
    13.4. WATER-TIGHT JOINTS MUST BE USED AT ALL CONNECTIONS INCLUDING STRUCTURES.
14. ALL JOINTS AND CONNECTIONS IN THE STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT (SEE CURRENT MINNESOTA RULES, PART 4714). APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, AND OTHER STRUCTURES.
15. WATER SERVICE LINES MUST BE INSTALLED AT LEAST 10-FEET HORIZONTALLY FROM ANY MANHOLE, CATCHBASIN, OR OTHER SOURCE OF CONTAMINATION, MEASURED FROM OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (SEE CURRENT MINNESOTA RULES, PART 4714).
16. THE BOTTOM OF WATER SERVICE PIPES LOCATED WITHIN 10-FEET OF THE SEWER CROSSING MUST BE AT LEAST 12-INCHES ABOVE THE TOP OF THE SEWER. WHEN THIS IS NOT FEASIBLE, THE SEWER PIPE MUST BE CONSTRUCTED OF MATERIALS LISTED IN CURRENT MINNESOTA RULES, PART 4714. THE WATER SERVICE SHOULD NOT CONTAIN ANY JOINTS OR CONNECTIONS WITHIN 10-FEET OF A CROSSING.
17. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10-FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH CURRENT MINNESOTA RULES, PART 4714.
18. PROPOSED SEPTIC FIELDS TO BE BOUNDED WITH FLAGGING. NO CONSTRUCTION ACTIVITY IS ALLOWED OVER THE PROPOSED SEPTIC FIELD AREAS. SEPTIC SYSTEMS MUST CONFORM TO MPCA RULES.
19. PROPOSED WELL MUST BE PLACED NO CLOSER THAN 100-FT FROM THE PROPOSED SEPTIC FIELDS. WELL MUST CONFORM TO MN DEPT OF HEALTH RULES.

LEGEND

EXISTING		PROPOSED
872	TOPOGRAPHIC CONTOUR	870
872.5	SPOT ELEVATION	X 800.0
	DRAINAGE SLOPE	X.XX%
	STORM SEWER	
	CATCH BASIN	
	EMERGENCY OVERFLOW	

WARNING

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CALL BEFORE YOU DIG!
Gopher State One Call
TWIN CITY AREA: 651-454-0002
TOLL FREE: 1-800-252-1166

WILSEY RESIDENCE

SUNFISH LAKE, MN

SHARI WILSEY
245 SALEM CHURCH RD
SUNFISH LAKE, MN

LOUCKS
PLANNING
CIVIL ENGINEERING
LAND SURVEYING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL
7200 Hemlock Lane, Suite 300
Maple Grove, MN 55369
763.424.5505
www.loucksinc.com

CADD QUALIFICATION

SUBMITTAL/REVISIONS

04/06/18	OWNER REVIEW
04/10/18	Added Area L Amphitheatre
05/11/18	City Submittal

PROFESSIONAL SIGNATURE

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.

Michael J. St. Martin - PE

License No. 24440
Date

QUALITY CONTROL

Loucks Project No.	98901.0A
Project Lead	MJS
Drawn By	ZHW/WBS
Checked By	MJS
Review Date	5/11/18

SHEET INDEX

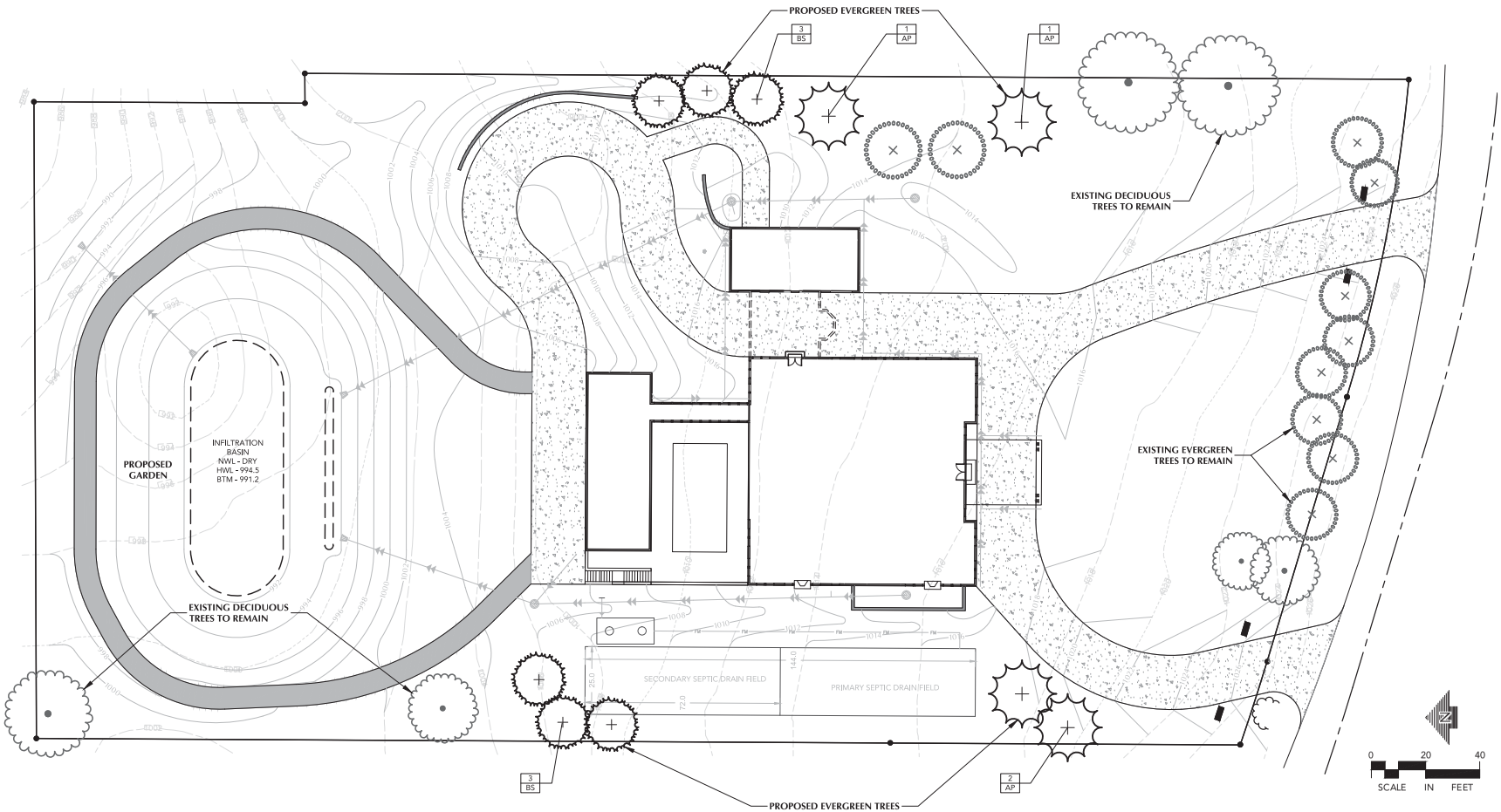
C0-1	COVER SHEET
S1	EXISTING SURVEY
C2-1	SITE PLAN
C3-1	GRADING & UTILITY PLAN
C3-2	SWPPP 1 OF 2
C3-3	SWPPP 2 OF 2
C8-1	CIVIL DETAILS
L0-1	TREE INVENTORY

GRADING, DRAINAGE & UTILITY PLAN

C3-1

EXHIBIT C

Plotted: 05 /10 / 2018 2:59 PM W:\1998\98901A\CADD DATA\CIVIL\dwg Sheet Files\C98901A 3-1



PLANT SCHEDULE						
EVERGREEN TREES	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE	
AP	4	AUSTRIAN PINE FULL FORM	Pinus nigra	B & B	6' HGT	
BS	6	BLACK HILLS SPRUCE FULL FORM	Picea glauca 'Densata'	B & B	6' HGT	

EXISTING DECIDUOUS TREE TO REMAIN

EXISTING EVERGREEN TREE TO REMAIN

WILSEY RESIDENCE

SUNFISH LAKE, MN

SHARI WILSEY

245 SALEM CHURCH RD
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Maple Grove, MN 55369
763.424.5505
www.loucksinc.com

CADD QUALIFICATION

SUBMITTAL/REVISIONS

04/06/18	OWNER REVIEW
04/10/18	Added Area L Amendments
05/11/18	City Submittal
06/13/18	Hydrocad Comments

PROFESSIONAL SIGNATURE

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.

Michael J. St. Martin - PE

License No. 24440
Date

QUALITY CONTROL

Loucks Project No.	98901.0A
Project Lead	MJS
Drawn By	ZHW/WBS
Checked By	MJS
Review Date	6/13/18

SHEET INDEX

C0-1	COVER SHEET
S1	EXISTING SURVEY
C2-1	SITE PLAN
C3-1	GRADING & UTILITY PLAN
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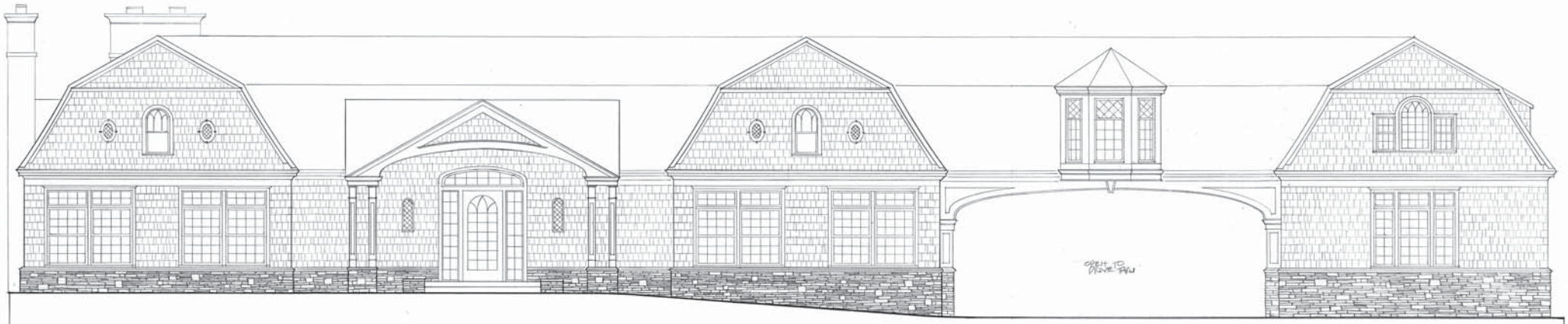
C3-3	SWPPP 2 OF 2
C8-1	CIVIL DETAILS
C8-2	CIVIL DETAILS
L0-1	TREE INVENTORY

LANDSCAPE PLAN

L1-1

EXHIBIT D

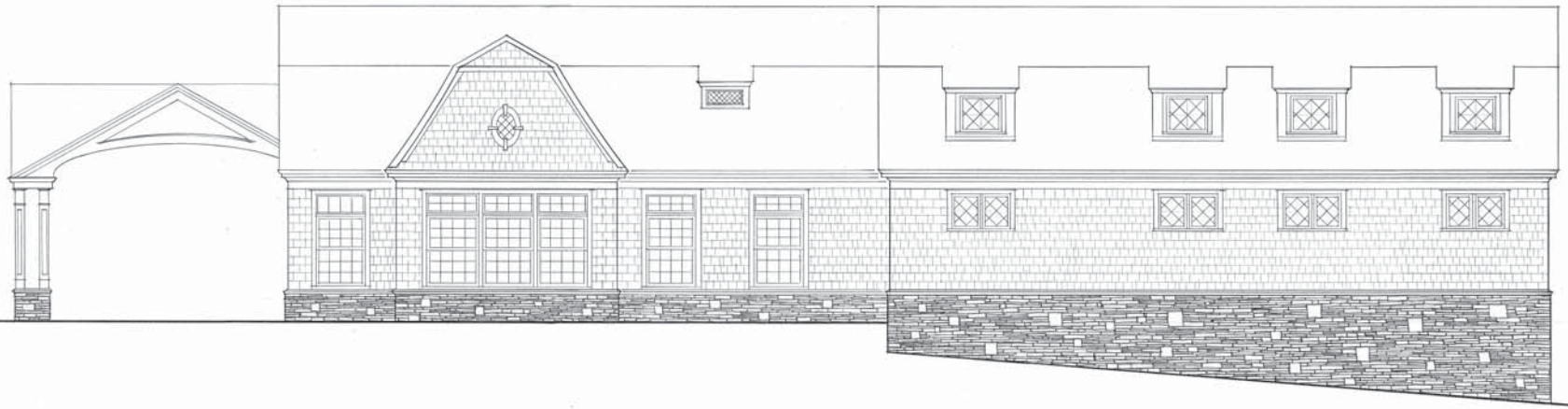


ELEVATION (SOUTH)
1/4"=1'-0"

ENTRANCE TO THE PROPERTY
(OFF OF SALEM CHURCH ROAD)
1/4"=1'-0"

4/20/18

EXHIBIT E



ELEVATION (EAST)
1/4"=1'-0"

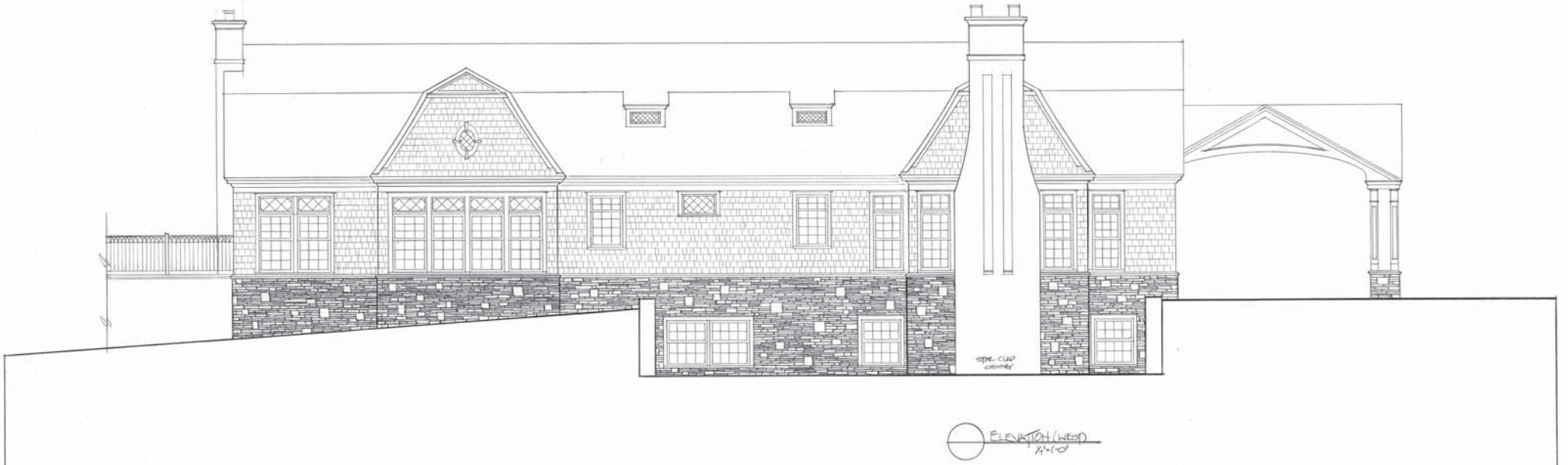
4/20/15

EXHIBIT E

ELEVATION (NORTH)
1/4"=1'-0"

4/30/18

EXHIBIT E



ELEVATION (WEST)
1/4"=1'-0"

4/30/18

EXHIBIT E

Ryan Grittman

From: Andrew Peterson <andrew@dsnfltr.com>
Sent: Monday, July 02, 2018 1:11 PM
To: Ryan Grittman
Cc: Gar Hargens
Subject: 245 Salem Church Rd, Sunfish Lake (Wilsey) Building Ht. Calc.

The building ht. average is **28'-0"**. This was derived from the following:

As the proposed building relates to the existing site contours, the southwest corner of the proposed building sits at elev. **1016.5'**. The is the highest point of grade relating to the building, therefore the shortest building height. The building height is 24' -0" from that elevation (23'-6" from elev. 1017.0' as shown on West Elevation drawing). The northwest corner of the building, as it relates to the existing site contours, is at the lowest elevation (tallest height) at elev. **1008.5'.** That is an **8' difference, or drop**, in site grade elevation. Therefore, if the shortest height of the building is **24'-0"** from existing grade, and the tallest location of the building is **32'-0"** from existing grade, then the average building height would **28'-0" (56'/2)**. This is under the 30'-0" maximum building height requirement.

Ryan, please let me know if this is acceptible to you.

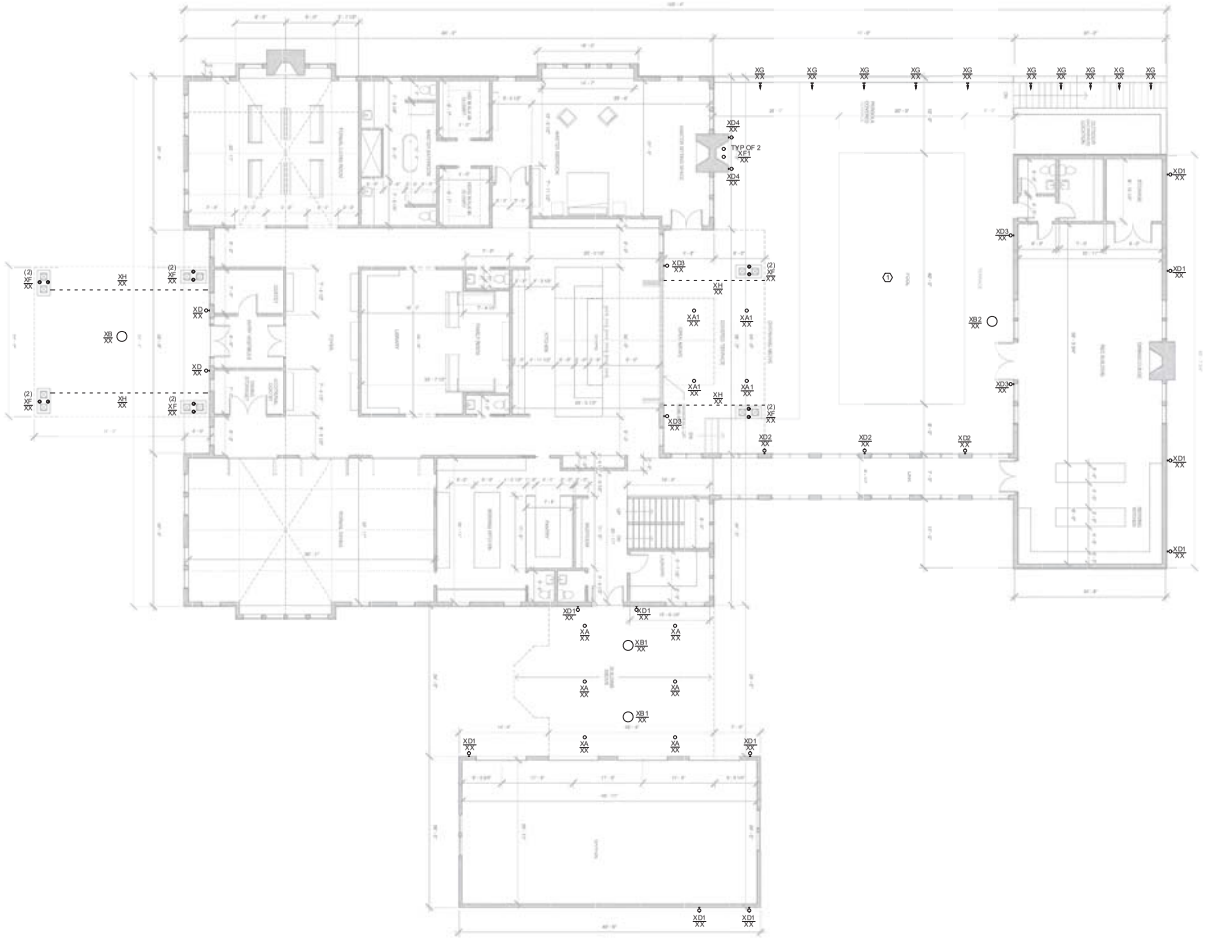
Thank you!

ANDREW PETERSON
BARCH | AIA ASSOCIATE

DESIGN **FILTER**
DESIGNER / OWNER

3101 E FRANKLIN AVE
MINNEAPOLIS, MN 55406
952 270 9233

EXHIBIT F



1 A1.2 MAIN LEVEL ARCHITECTURAL LIGHTING LAYOUT
SCALE: 1/8" = 1'-0"

THIS DRAWING INDICATES LIGHTING EQUIPMENT LAYOUT AND DESIGN OF LIGHTING SYSTEMS. REVIEW BY A QUALIFIED ENGINEER IS NECESSARY TO ASSURE SAFETY AND CODE COMPLIANCE.

FOR REFERENCE ONLY

REFER TO E-SERIES DRAWINGS FOR ELECTRICAL FEEDS, DISCONNECT SWITCHES, CONDUIT, AND WIRE FOR ALL LIGHTING EQUIPMENT.
DIVISION 26 CONTRACTOR SHALL PROVIDE AND INSTALL ALL LIGHTING EQUIPMENT AND CONTROL WIRING INDICATED FOR A COMPLETE AND OPERABLE SYSTEM.

PRELIMINARY
NOT FOR CONSTRUCTION

GENERAL NOTES:

A. INSTALLATION SHALL CONFORM TO ALL APPLICABLE NEC, UL, STATE AND LOCAL CODES.
B. ALL EMERGENCY EGRESS LIGHTING IS THE RESPONSIBILITY OF THE ELECTRICAL ENGINEER OR ELECTRICAL CONTRACTOR.
C. ALL DIMMING CIRCUITS ARE TWO-WIRE. NO COMMON NEUTRALS SHALL BE USED.
D. FIELD PAINT ALL CONDUIT, JUNCTION BOXES AND HARDWARE TO MATCH ADJACENT SURFACES.
E. ELECTRICAL CONTRACTOR SHALL VERIFY ALL CEILING TYPES, RECESS CONDITIONS, AND MOUNTING HARDWARE REQUIRED PRIOR TO PURCHASE OF ANY LIGHTING FIXTURES.
F. ELECTRICAL CONTRACTOR SHALL VERIFY MOUNTING HEIGHTS OF ALL DECORATIVE FIXTURES WITH SCHULER SHOOK PRIOR TO INSTALLATION.
G. ALL STEP LIGHTS SHALL BE MOUNTED AT +1'-6" A.F.F. TO CENTER OF FIXTURE UNLESS OTHERWISE NOTED.

KEYED NOTES:

1. POOL LIGHTING BY POOL VENDOR.

Schuler Shook
219 MAIN STREET SE, SUITE 200
MINNEAPOLIS, MN 55414
T 612 339 5958 F 612 337 5097
schulershook.com

THIS DRAWING INDICATES GENERAL LIGHTING LAYOUT AND DESIGN OF LIGHTING SYSTEMS. REVIEW BY A QUALIFIED ENGINEER IS NECESSARY TO ASSURE SAFETY AND CODE COMPLIANCE.

WILSEY RESIDENCE

SUNFISH LAKE
MINNESOTA

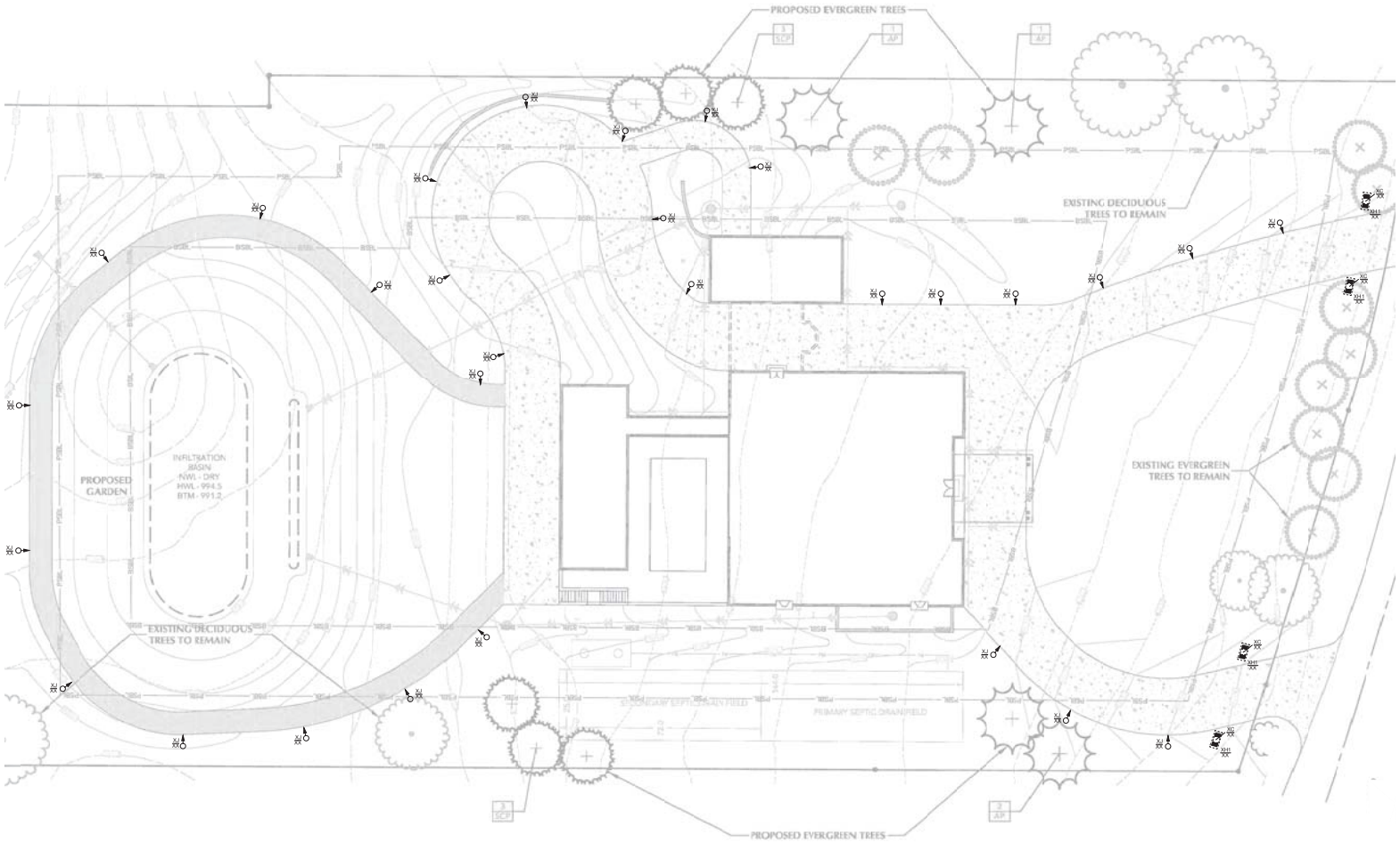
ARCHITECT:

SCALE: AS NOTED
LAYOUT BY:
DATE: 06-29-2018
REVISION HISTORY:

MAIN LEVEL LIGHTING PLAN

A1.2

EXHIBIT G



PLANT SCHEDULE					
EVERGREEN TREES	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE
AP	4	AUSTRIAN PINE FULL FORM	Pinus nigra	B & B	6' HGT
SCP	5	SCOTCH PINE FULL FORM	Pinus sylvestris	B & B	6' HGT

EXISTING DECIDUOUS TREE TO REMAIN

EXISTING EVERGREEN TREE TO REMAIN

0 20 40

SCALE IN

1 L1-1 LANDSCAPE LIGHTING LAYOUT
SCALE: 1/16" = 1'-0"

THIS DRAWING INDICATES LIGHTING EQUIPMENT LAYOUT AND DESIGN OF LIGHTING SYSTEMS. REVIEW BY A QUALIFIED ENGINEER IS NECESSARY TO ASSURE SAFETY AND CODE COMPLIANCE.

FOR REFERENCE ONLY

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PRELIMINARY

NOT FOR CONSTRUCTION

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WILSEY RESIDENCE

SUNFISH LAKE
MINNESOTA

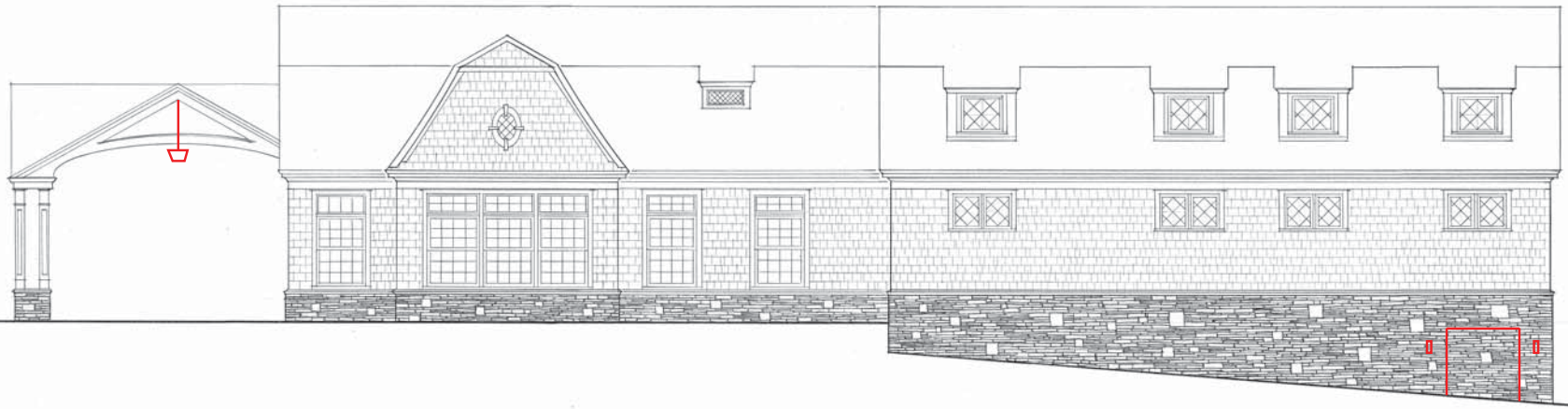
ARCHITECT:

SCALE: AS NOTED
LAYOUT BY:
DATE: 06-29-2018
REVISION HISTORY:

LANDSCAPE LIGHTING PLAN

L1-1

EXHIBIT G



ELEVATION (EAST)
1/4"=1'-0"

SS 2018-06-29

7/30/18

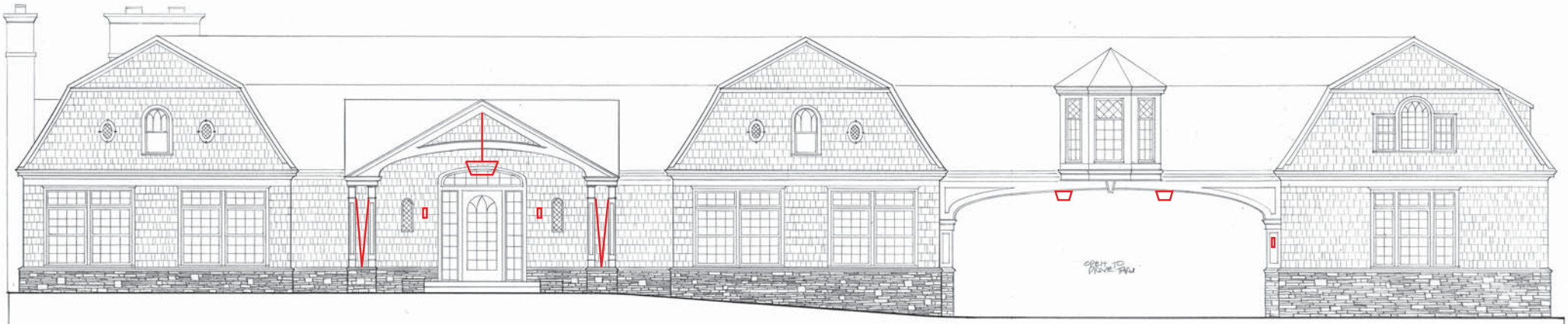
EXHIBIT G

ELEVATION (NORTH)
1/4"-1'-0"

SS 2018-06-29

7/30/18

EXHIBIT G



ELEVATION (SOUTH)

ENTRANCE TO THE PROPERTY
(OFF OF SALEM CHURCH ROAD)

SS 2018-06-29

4/20/18

EXHIBIT G

WILSEY RESIDENCE, SUNFISH LAKE,MN - PRELIMINARY LIGHT FIXTURE SCHEDULE

TYPE	REV.	FIXTURE TYPE	VOLTAGE	INPUT WATTAGE	DIMMING	SOURCE	CATALOG NUMBER	REMARKS
XA						INTEGRAL LED - 915 LUMENS	ELEMENT LIGHTING EN3R-LO-9-27-A40-A-I, EN3R-F-F-O-W.	DOWN
XA1						INTEGRAL LED - 915 LUMENS	ELEMENT LIGHTING EN3R-LO-9-27-A40-A-I, EN3R-F-F-O-W.	DOWN
XB						60W EQ 10W LED - 815 LUMENS	BEVELO SIX SIDED LONDON STREET PENDANT - 36x20.3x17.5-FROSTED HURRICANE CHIMNEY	PENDANT
XB1						60W EQ 10W LED - 815 LUMENS	BEVELO SIX SIDED LONDON STREET PENDANT - 36x20.3x17.5-FROSTED HURRICANE CHIMNEY	PENDANT
XB2						60W EQ 10W LED - 815 LUMENS	BEVELO SIX SIDED LONDON STREET PENDANT - 29x15.8x12.8-FROSTED HURRICANE CHIMNEY	PENDANT
XC						GAS FLAME - 5 LUMENS	BEVELO SIX SIDED LONDON STREET POST MOUNT - 29x15.8x12.8	GAS POST TOP
XD						GAS FLAME - 5 LUMENS	BEVELO SIX SIDED LONDON STREET SCONCE - COMANDER'S PALACE MOUNTING ARM - 29x15.8x12.8	SCONCE
XD1						60W EQ 10W LED - 815 LUMENS	BEVELO SIX SIDED LONDON STREET SCONCE - COMANDER'S PALACE MOUNTING ARM - 29x15.8x12.8-FROSTED HURRICANE CHIMNEY	SCONCE
XD2						60W EQ 10W LED - 815 LUMENS	BEVELO SIX SIDED LONDON STREET SCONCE - COMANDER'S PALACE MOUNTING ARM - 29x15.8x12.8-FROSTED HURRICANE CHIMNEY	SCONCE
XD3						60W EQ 10W LED - 815 LUMENS	BEVELO SIX SIDED LONDON STREET SCONCE - COMANDER'S PALACE MOUNTING ARM - 29x15.8x12.8-FROSTED HURRICANE CHIMNEY	SCONCE
XF						INTEGRAL LED - 247 LUMENS	MP LIGHTING L05-7-W27S-S-F-HM-0-A-P-0-BZ. PROVIDE REMOTE DRIVERS AS REQUIRED.	IN-GRADE UPLIGHT AT COLUMNS
XF1						INTEGRAL LED - 247 LUMENS	MP LIGHTING L05-7-W27S-S-F-HM-0-A-P-0-BZ. PROVIDE REMOTE DRIVERS AS REQUIRED.	IN-GRADE UPLIGHT AT FIREPLACE

WILSEY RESIDENCE, SUNFISH LAKE,MN - PRELIMINARY LIGHT FIXTURE SCHEDULE

XG						INTEGRAL LED - 74 LUMENS	WAC LIGHTING LED300BZ	STEP LIGHT
XH						INTEGRAL LED - 400 LUMENS/FT	JUNO LIGHTING TAPELIGHT IO414-20X45D-5FT-27K-90CRI-DLDPS-96-ECOS2. PROVIDE CHANNEL, LENS, CONNECTORS AND FITTINGS FOR A COMPLETE INSTALLATION.	UNDER CANOPY UPLIGHT LINEAR
XH1						INTEGRAL LED - 400 LUMENS/FT	JUNO LIGHTING TAPELIGHT IO414-15D-5FT-27K-90CRI-DLDPS-96-FPCZT-IP67. PROVIDE CHANNEL, LENS, CONNECTORS AND FITTINGS FOR A COMPLETE INSTALLATION.	GAS POST LINEAR
XJ						INTEGRAL LED - 375 LUMENS/FT	THE LIGHT YARD MODEL CITY 350 LED BOLLARD	

GENERAL NOTES:

A - CONTRACTOR SHALL VERIFY ALL MOUNTING AND RECESS CONDITIONS PRIOR TO ORDERING FIXTURES

B - CONTRACTOR SHALL PROVIDE ALL HARDWARE, BRACKETS, WIRING, TRANSFORMERS, REMOTE BOXES AND EQUIPMENT TO INSTALL A COMPLETE AND FUNCTIONAL SYSTEM

C - NO SUBSTITUTIONS SHALL BE ACCEPTED WITHOUT PRIOR REVIEW AND WRITTEN APPROVAL BY SCHULER SHOOK

D - LIGHT FIXTURE MANUFACTURERS AND ELECTRICAL CONTRACTORS TO VERIFY COMPATIBILITY OF ALL DIMMING TRANSFORMERS, DRIVERS AND BALLASTS WITH THE LIGHTING CONTROL SYSTEM.

E - PRICES SHOWN ARE DISTRIBUTOR NET PRICING AND DO NOT INCLUDE TAXES, FREIGHT, MARK-UP (DISTRIBUTOR OR CONTRACTOR) OR INSTALLATION COST. PRICES ARE PER FIXTURE OR LINEAR FOOT.

F- PRIOR TO ORDERING LUMINAIRES, CONTRACTORS SHALL VERIFY THE COMPATIBILITY OF ALL LED DRIVERS WITH THE CONTROLS BEING ORDERED. WHERE DIMMING IS REQUIRED, CONTROL DEVISES SHALL BE COMPATIBLE TO ACCESS THE FULL DIMMING CAPABILITY OF THE SPECIFIED LED FIXTURE AND DRIVER COMBINATION, WITH NO VISIBLE FLICKER OR STEPPING (CLARIFY STEPPING). FAILURE TO COORDINATE DIMMERS AND DRIVERS THAT RESULT IN POOR DIMMING PERFORMANCE, AS DETERMINED BY THE LIGHTING DESIGNER AND/OR OWNER OR ELECTRICAL ENGINEER, SHALL BE RECTIFIED BY THE CONTRACTOR AT NO COST TO THE OWNER.

G- CONTRACTOR WILL FAMILIARIZE THEMSELVES WITH ADDRESSING OF LED FIXTURES AT BEGINNING OF PROJECT, PRIOR TO INSTALLATION. CONTRACTOR SHALL PROVIDE A SYSTEMS INTEGRATOR FOR ALL DIMMING SYSTEM.

3" LED
ENTRA ADJUSTABLE DOWNLIGHT & WALL WASH

TYPE XA, XA1

ELEMENT by Tech Lighting®

LED 5 YEAR WARRANTY

The ELEMENT Entra 3" adjustable LED downlight offers a cost-effective alternative to meet residential and commercial specifications on budget-sensitive projects. Custom engineered for high performance and reliability, ELEMENT Entra is easy to configure with a complete feature set that offers flexibility without an overwhelming list of options. Entra LED modules are available in 4 color temperatures and include 20°, 40° and 65° interchangeable optics with hot-aiming (30° tilt; 359° rotation). Flanged or flangeless (includes mud plate), round or square, flat or beveled die-cast trims in Silver and a paintable White finish. Remodel installation also available with same performance and trim options.

- Hot-aiming (30° tilt; 359° rotation)
- Flanged or Flangeless Ceiling Appearance
- 20°, 40° and 65° interchangeable optics (all included)
- Accepts 2 optical controls
- 3-step color binning

SPECIFICATIONS

	2700K	3000K	3500K	4000K
DELIVERED LUMENS	915	980	1004	1060
WATTS	12			
EFFICACY	76.3	81.7	83.7	88.3
CRI	90			
CBCP (AT 3000K)	20° - 4213; 40° - 1822; 65° - 691			
CCT OPTIONS	2700K, 3000K, 3500K, 4000K			
VOLTAGE	Universal 120V - 277V			
DIMMING*	TRIAC, ELV or 0-10V (all standard)			
POWER SUPPLY	Constant current driver with +.9 power factor and >87% efficiency			
OPTICS	20°, 40°, 65° (all included)			
ADJUSTABILITY	0-30° tilt, 359° rotation			
CEILING APPEARANCE	Flanged or Flangeless (Both accommodate 1/2" to 1 ceiling thickness)			
CEILING APERTURE	4" ceiling cut-out			
HOUSING	IC Airtight, Chicago Plenum. IC suitable up to R60 spray foam insulation.			
CONSTRUCTION	Housing: Steel Trims: Die cast aluminum			
FINISH	Housing: Black powder coat Trims: Silver, White (paintable)			
GENERAL LISTING	ETL listed. Damp listed. Shower version wet listed. Energy Star.			
CALIFORNIA TITLE 24	Registered CEC Appliance Database. Can be used to comply with CEC 2016 Title 24 Part 6.			
LED LIFETIME	L70; 50,000 hours			
WARRANTY**	5 years			

*See ELEMENT-lighting.com for dimmer compatibility.
**Visit ELEMENT-lighting.com for specific warranty limitations and details.
Accepts two optical controls and an optional trim-mounted lens.

shown in flangeless bevel square

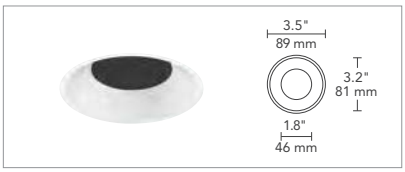
EXHIBIT G

3" LED
ENTRA ADJUSTABLE DOWNLIGHT & WALL WASH

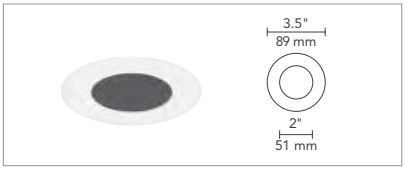
TYPE XA, XA1

TRIMS

ROUND



FLANGELESS BEVEL



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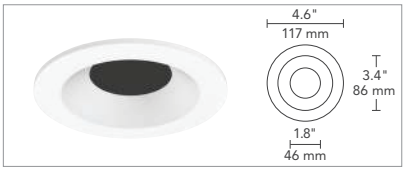

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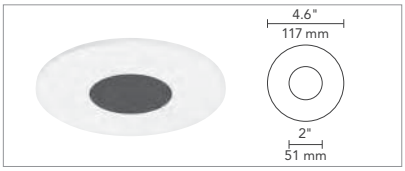
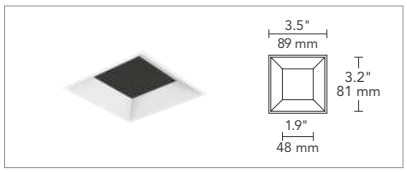
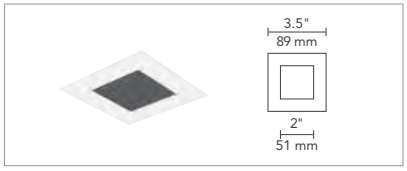


FLANGED FLAT

SQUARE



FLANGELESS BEVEL



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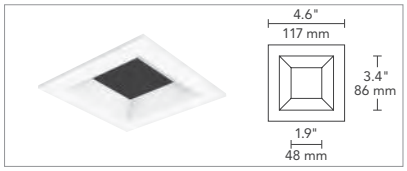
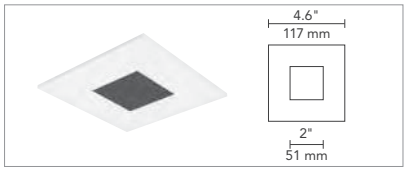
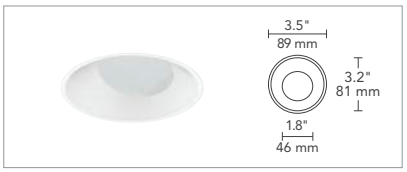


FLANGED BEVEL



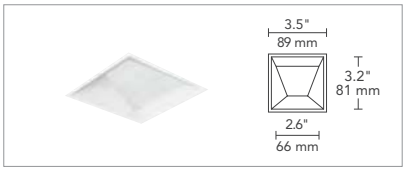
FLANGED FLAT

WALL WASH



FLANGELESS WALL WASH

FLANGED WALL WASH



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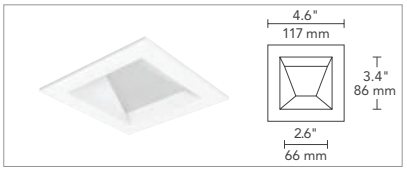


FLANGED WALL WASH

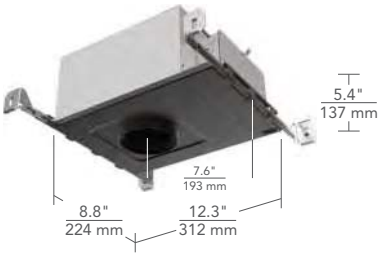
FINISH

SILVER

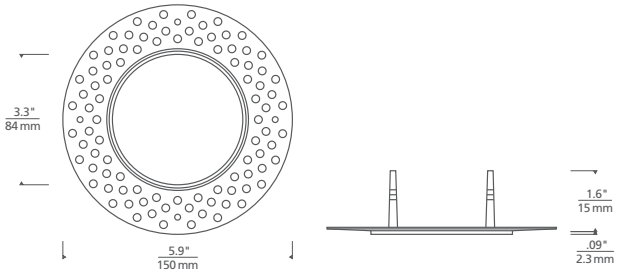
WHITE
(PAINTABLE)

3" HOUSING

ROUND



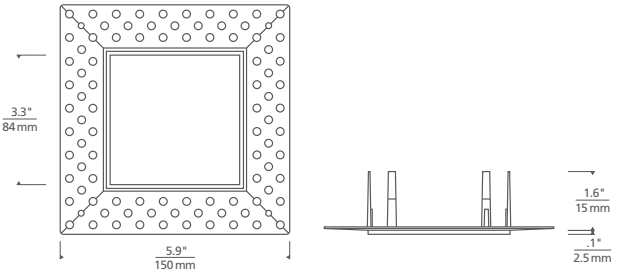
IC AIRTIGHT



*SHIPS WITH MUD/PLASTER PLATE FOR FLANGELESS INSTALLATION

SQUARE

IC AIRTIGHT



*SHIPS WITH MUD/PLASTER PLATE FOR FLANGELESS INSTALLATION

EXHIBIT G

3" LED
ENTRA ADJUSTABLE DOWNLIGHT & WALL WASH

TYPE XA, XA1

GRIDS

HOUSING

PRODUCT SERIES	LAMP	CRI	TEMPERATURE	BEAM	FUNCTION	HOUSING RATING
EN3R ENTRA 3" ROUND **EN3S** ENTRA 3" SQUARE	**-LO** LED	**9** 90 CRI	**27** 2700K **30** 3000K **35** 3500K **40** 4000K	**A** 20° - 40° - 65°†	**A** ADJUSTABLE	**I** IC AIRTIGHT **C** CHICAGO PLENUM
	-LO	9		A	A	

INCLUDES AN LED DRIVER WITH UNIVERSAL INPUT 120V/277V, DIMMABLE BY TRIAC, ELV OR 0-10V CONTROLS.
†LED MODULE SHIPS WITH 40° OPTIC INSTALLED. INCLUDES 20° AND 65° OPTICS AS WELL.
HOUSING SHIPS WITH PLASTER-PLATE FOR USE ON FLANGELESS INSTALLATION, DO NOT USE PLATE FOR FLANGED INSTALLS.
TRIMS ARE REQUIRED AND MUST BE ORDERED SEPARATELY.

TRIM

PRODUCT SERIES	CEILING APPEARANCE	STYLE	APERTURE	FINISH
EN3R ENTRA 3" ROUND **EN3S** ENTRA 3" SQUARE	**L** FLANGELESS **F** FLANGED UP TO 0.75" CEILING THICKNESS **F1** FLANGED 0.75" - 1" CEILING THICKNESS	**B** BEVEL **F** FLAT **W** WALL WASH	**-O** NO LENS **-H** SHOWER (LENSED)* **-W** WALL WASH (LENSED)**	**S** SILVER **W** WHITE
			-	

*SHOWER (LENSED) APERTURE (-H) REQUIRES BEVEL TRIM (B).
**WALL WASH STYLE TRIM (W) REQUIRES WALL WASH LENSED APERTURE (-W).

PROJECT INFO

FIXTURE TYPE & QUANTITY

JOB NAME & INFO

NOTES

ELEMENT
by Tech Lighting®
GENERATION BRANDS
7400 Linder Avenue, Skokie, Illinois 60077
T 847.410.4400 F 847.410.4500

EXHIBIT G

3" LED
ENTRA ADJUSTABLE DOWNLIGHT & WALL WASH

TYPE XA, XA1

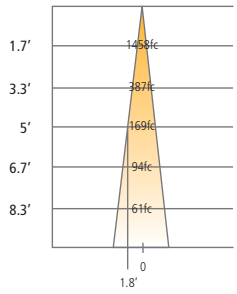
PHOTOMETRICS: 3" ENTRA LED

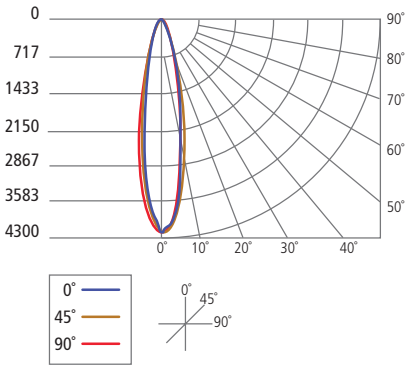
DESCRIPTION: 3" LED Module
20° Beam - 0° Tilt, 3000K

MODEL: ENTRA Adjustable 20° High Output

INPUT POWER (WATTS):	11.9
INPUT POWER FACTOR:	0.98
ABSOLUTE LUMINOUS FLUX (LUMENS):	950*
LUMEN EFFICACY (LUMENS PER WATT):	80

ANGLE	0°	45°	90°
0°	4213	4213	4213
5°	3746	3797	3620
10°	2524	2562	2359
15°	1429	1454	1292
20°	770	786	670
25°	435	439	358
30°	252	251	192
35°	132	136	99
40°	65	71	51
45°	30	38	24
50°	11	20	9
55°	5	9	4
60°	2	3	2
65°	1	1	1
70°	0	1	0
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0



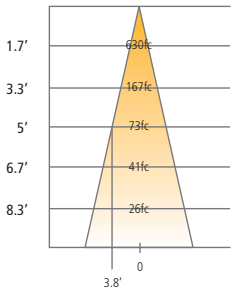


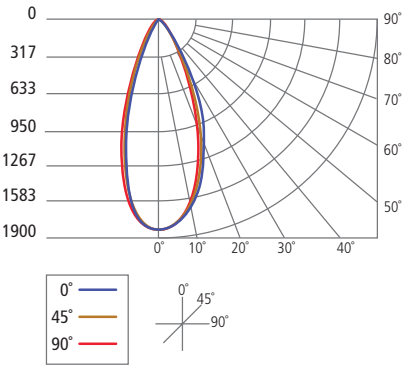
DESCRIPTION: 3" LED Module
40° Beam - 0° Tilt, 3000K

MODEL: ENTRA Adjustable 40° High Output

INPUT POWER (WATTS):	11.9
INPUT POWER FACTOR:	0.98
ABSOLUTE LUMINOUS FLUX (LUMENS):	979*
LUMEN EFFICACY (LUMENS PER WATT):	82

ANGLE	0°	45°	90°
0°	1822	1822	1822
5°	1771	1762	1770
10°	1624	1614	1588
15°	1413	1375	1289
20°	1130	1050	916
25°	795	700	562
30°	486	422	323
35°	267	242	175
40°	120	131	81
45°	49	65	33
50°	21	29	14
55°	10	10	7
60°	3	4	2
65°	0	2	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0



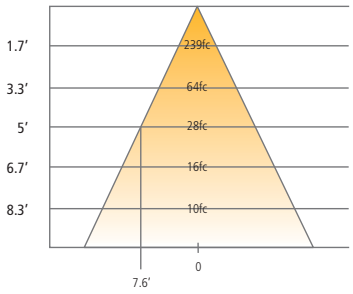


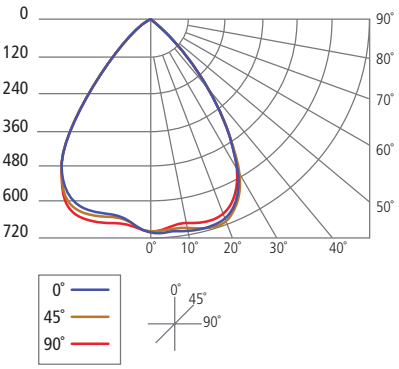
DESCRIPTION: 3" LED Module
65° Beam - 0° Tilt, 3000K

MODEL: ENTRA Adjustable 65° High Output

INPUT POWER (WATTS):	11.9
INPUT POWER FACTOR:	0.98
ABSOLUTE LUMINOUS FLUX (LUMENS):	1022*
LUMEN EFFICACY (LUMENS PER WATT):	86

ANGLE	0°	45°	90°
0°	691	691	691
5°	701	691	680
10°	703	696	677
15°	708	707	686
20°	698	706	683
25°	658	667	647
30°	568	580	563
35°	436	449	436
40°	275	296	285
45°	145	161	150
50°	68	72	67
55°	28	30	28
60°	3	13	5
65°	0	3	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0
90°	0	0	0





*For 80 CRI values, multiply by 1.25.

GENERATION BRANDS

ELEMENT by Tech Lighting®

EXHIBIT G

7400 Linder Avenue, Skokie, Illinois 60077 T 847.410.4400 F 847.410.4500

TYPE XB SERIES

BEVOLO
– established 1945 –
GAS & ELECTRIC LIGHTS

Six-Sided London Street

Hanging Chain

Six-Sided London Street on Hanging Chain in Electric only.

Standard Lantern Sizes

Height	Width	Depth
29.0"	15.8"	12.8"
36.0"	20.3"	17.5"

CREE

TYPE XB SERIES

LED 40/60/75w

A19

SUGGESTED USE:

OMNIDIRECTIONAL LIGHT SOURCE

ENERGY STAR | TITLE 20 COMPLIANT | Dimmable

EXPERIENCE EXCEPTIONAL

90+ CRI — RICH, VIBRANT & NATURAL COLORS

22.8 YEARS — LONGER LIFE 25,000 hour rated life exceeds ENERGY STAR® minimum requirements

DIMMABLE Visit creebulb.com/dimmers for compatible dimmers

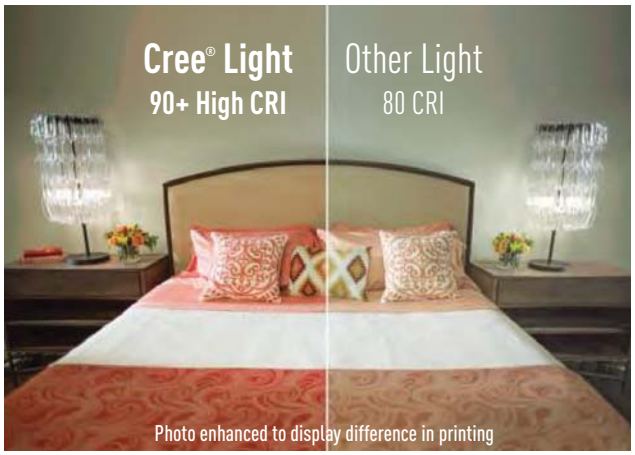
10 YEAR 100% SATISFACTION GUARANTEE

GOOD FOR ENCLOSED USE

SHATTERPROOF

BETTER LIGHT IS WORTH IT

Beautiful high CRI light delivers **exceptional color quality**— making the colors in your home appear vibrant, rich & natural.



CREE® A19 REPLACEMENT LED LIGHT BULBS

	40-Watt Soft White/Daylight Replacement	60-Watt Soft White/Daylight Replacement	75-Watt Soft White/Daylight Replacement
Color Temperature	2700K/5000K	2700K/5000K	2700K/5000K
Lumens	460	815	1100
Energy Used (Watts)	5.5W	10W	12W
Color Rendering Index	90+	90+	90+
Rated Life (Hours)	25,000	25,000	25,000

CREE www.creebulb.com

866.924.3645 www.cree.com

EXHIBIT G

03.18

TYPE XD SERIES

BEVOLO
-established 1945-
GAS & ELECTRIC LIGHTS

Six-Sided London Street

Commander's Palace

Six-Sided London Street Lantern on Commander's Palace Bracket

Standard Lantern Sizes

Height	Width	Depth
29.0"	15.8"	13.8"
36.0"	20.3"	17.5"

EXHIBIT G

CREE

TYPE XD SERIES

LED 40/60/75w

A19

SUGGESTED USE:

OMNIDIRECTIONAL LIGHT SOURCE

ENERGY STAR | CA TITLE 20 COMPLIANT | Dimmable

EXPERIENCE EXCEPTIONAL

90+ CRI — RICH, VIBRANT & NATURAL COLORS

22.8 YEARS — LONGER LIFE 25,000 hour rated life exceeds ENERGY STAR® minimum requirements

DIMMABLE Visit creebulb.com/dimmers for compatible dimmers

10 YEAR 100% SATISFACTION GUARANTEE

GOOD FOR ENCLOSED USE

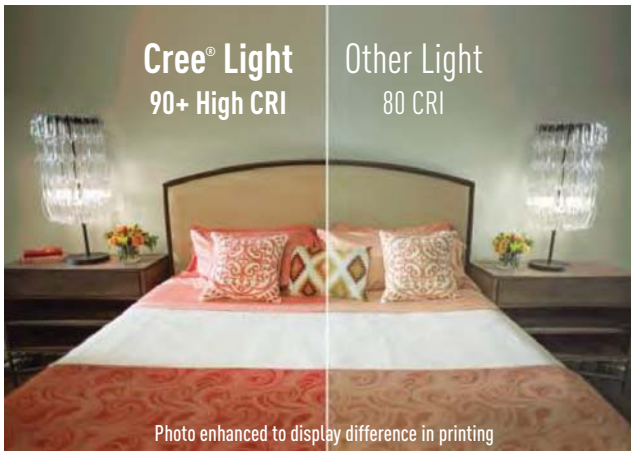
SHATTERPROOF

BETTER LIGHT IS WORTH IT

Beautiful high CRI light delivers **exceptional color quality**— making the colors in your home appear vibrant, rich & natural.

CREE® A19 REPLACEMENT LED LIGHT BULBS

	40-Watt Soft White/Daylight Replacement	60-Watt Soft White/Daylight Replacement	75-Watt Soft White/Daylight Replacement
Color Temperature	2700K/5000K	2700K/5000K	2700K/5000K
Lumens	460	815	1100
Energy Used (Watts)	5.5W	10W	12W
Color Rendering Index	90+	90+	90+
Rated Life (Hours)	25,000	25,000	25,000



CREE www.creebulb.com

866.924.3645 www.cree.com

EXHIBIT G

03.18

TYPE XF, XF1

L05

Application Exterior/interior directional in-grade light for lighting walls, columns, architectural features or landscape features. Applicable for mounting into floors, walls, ceilings or other surfaces where a non-obtrusive luminaire is required. Suitable for drive-over and walk-over applications. For wet/dry locations.

Recommended Projects - Commercial, Institutional, Retail, Clinic, Hospitality, Religious, Educational, Architecture

IP Rating 66

Mounting Comes with splice box, aluminum flange and level gauge. Can be buried in earth/gravel or cast into concrete/paving stone with or without mounting base.

Electrical 1 Watt x 3 LED / 2.5Watt x 3 LED

Powered by remote dimmable/non-dimmable driver(sold separately).

*See website for recommended drivers
*Remote emergency driver / inverter options available. Consult factory

Power Consumption 3.0 Watt

7.5 Watt

Light Output 3.0 Watt, 117~173lm

7.5 Watt, 189~275lm

**For photometric data, see page 02*

Warranty 5 years limited warranty

Estimated useful life of LED is 50,000 hours.

Material Solid anodized aluminum or stainless steel (316), suitable for walk-over and drive-over applications. RoHS compliant.

Drive Over Rating 4400kg/9700lbs

Weight 2.56lbs (1.16kg) (base extra).

Approval C SP® US CE

Type:

Project:

Modified:

Quantity:

Notes:

DISCLAIMER Malfunction and damage to product due to improper dimming system installation or misuse will not be covered under warranty. Only DC Drivers are recommended for dimming systems. Consult MP Lighting for recommended drivers.

*MP Lighting reserves the right, at its sole discretion, at any time and without notice, to make design changes to any of our products.

Order Guide

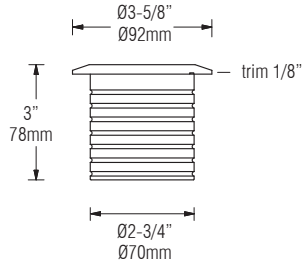
Example: L05-3-W30S-S-C-HM-0-D-2-MA

Code	Wattage	Color	Beam	Lens	Option	Angle Bracket*	Input Voltage	Flange + Box	Base Height	Finish
L05 -									-	
	3 = 3 x 1W **7** = 3 x 2.5W	**W27S** = 2700K, 80+CRI **W30S** = 3000K, 80+CRI **W35S** = 3500K, 80+CRI **W41S** = 4100K, 80+CRI **W20H** = 2000K, 90+CRI **W30H** = 3000K, 90+CRI ** Note: W20H has consistent binning that falls within 1.5 MacAdam ellipse.*	**S** = spot *(12°)* **N** = narrow flood *(30°)* **F**= flood *(60°)*	**C** = clear **F** = frost	**HM** = hex louver, matte anodized **HB** = hex louver, black anodized ** Louver not available with angle bracket*	**0** = no angle **30** = 30° angle ** Internal angle bracket factory set. Cannot be field adjusted.*	**D** = DC **A** = 12V AC	**S** = standard flange/ box, 4-1/2" *(114mm)* **P** = paving stone flange/ box, 6-1/2" *(165mm)*	**0** = no base **2** = 2" *(51mm)* **6** = 6" *(152mm)*	**MA** = matte clear anodized **BA** = black anodized **BZ** = bronze **S6** = stainless steel 316* **ABZ** = antique bronze **For upside down mounting on soffits, S6 finish is not recommended due to weight*

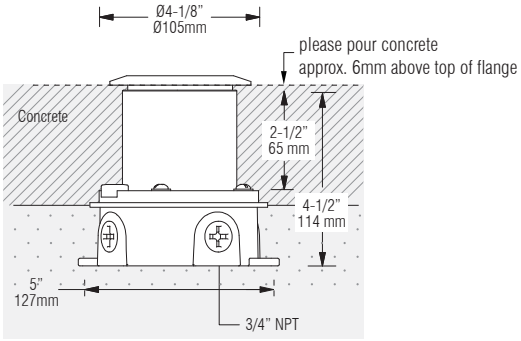
EXHIBIT G

TYPE XF, XF1

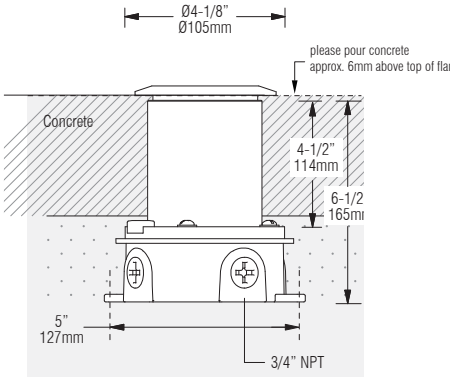
DIMENSION:



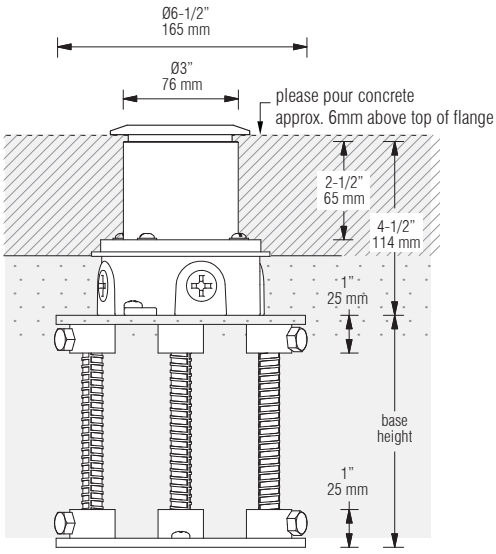
Insert



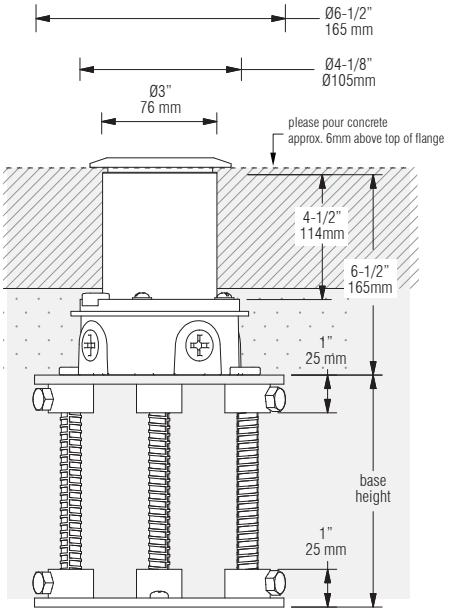
Standard Flange



Paving Stone Flange



Standard Flange with MK2 mounting base



Paving Stone Flange with MK2 mounting base

LIGHT DISTRIBUTION:

3Watt

12° (Spot Beam), Clear lens, Matte clear anodized

30° (Narrow Flood Beam), Clear lens, Matte clear anodized

60° (Wide Flood Beam), Clear lens, Matte clear anodized

EXHIBIT G

TYPE XF, XF1

7.5Watt

12° (Spot Beam), Clear lens, Matte clear anodized

30° (Narrow Flood Beam), Clear lens, Matte clear anodized

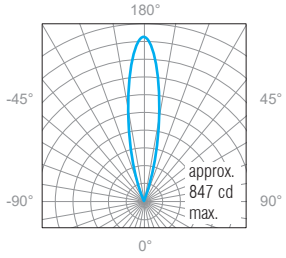
60° (Wide Flood Beam), Clear lens, Matte clear anodized

PHOTOMETRIC DATA:

3W, 3000K, Clear lens

Polar Candela Distribution

Lumen: 155lm, Spot beam (12°)

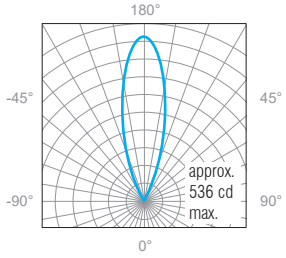


Illuminance at a Distance

	Center Beam FC	Beam Width
9.0′	10.5	3.0′ (914mm)
7.5′	15.1	2.5′ (762mm)
6.0′	23.5	2.0′ (610mm)
4.5′	41.8	1.5′ (457.2mm)
3.0′	94.1	1.0′ (305mm)
1.5′	377	0.5′ (152.4mm)

0° Spread: 19.2°

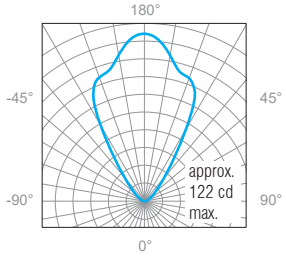
Lumen: 173lm, Narrow flood beam (30°)



	Center Beam FC	Beam Width
9.0′	6.62	4.7′ (1.43m)
7.5′	9.54	3.9′ (1.18m)
6.0′	14.9	3.2′ (970mm)
4.5′	26.5	2.4′ (731mm)
3.0′	59.6	1.6′ (487mm)
1.5′	238	0.8′ (243mm)

0° Spread: 29.5°

Lumen: 117lm, Flood beam (60°)



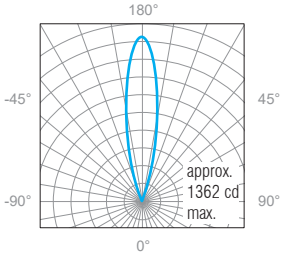
	Center Beam FC	Beam Width
9.0′	1.50	10.5′ (3.2m)
7.5′	2.16	8.7′ (2.65m)
6.0′	3.38	7.0′ (2.1m)
4.5′	6.01	5.2′ (1.6m)
3.0′	13.5	3.5′ (1.0m)
1.5′	54.0	1.7′ (518mm)

0° Spread: 60.4°

7.5W, 3000K, Clear lens

Polar Candela Distribution

Lumen: 247lm, Spot beam (12°)

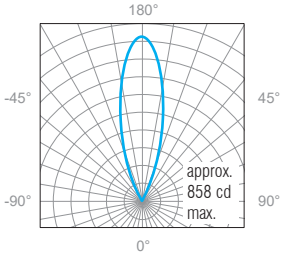


Illuminance at a Distance

	Center Beam FC	Beam Width
9.0′	16.8	3.0′ (914mm)
7.5′	24.2	2.5′ (762mm)
6.0′	37.8	2.0′ (609mm)
4.5′	67.3	1.5′ (457mm)
3.0′	151	1.0′ (304mm)
1.5′	605	0.5′ (152mm)

0° Spread: 19.2°

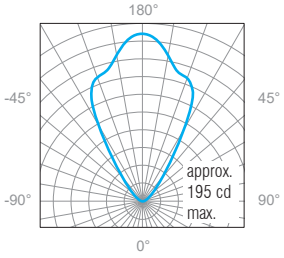
Lumen: 275lm, Narrow flood beam (30°)



	Center Beam FC	Beam Width
9.0′	10.6	4.7′ (1.43m)
7.5′	15.3	3.9′ (1.18m)
6.0′	23.8	3.1′ (945mm)
4.5′	42.4	2.4′ (731mm)
3.0′	95.4	1.6′ (487mm)
1.5′	381	0.8′ (243mm)

0° Spread: 29.5°

Lumen: 189m, Flood beam (60°)



	Center Beam FC	Beam Width
9.0′	2.41	10.5′ (3.2m)
7.5′	3.47	8.8′ (2.68m)
6.0′	5.42	7.0′ (2.13m)
4.5′	9.64	5.3′ (1.61m)
3.0′	21.7	3.5′ (1.0m)
1.5′	86.8	1.8′ (548m)

0° Spread: 60.5°

EXHIBIT G

Model: WL-LED300

TYPE XG

LEDme® Step Light

WAC LIGHTING
Responsible Lighting®

Fixture Type:

Catalog Number:

Project:

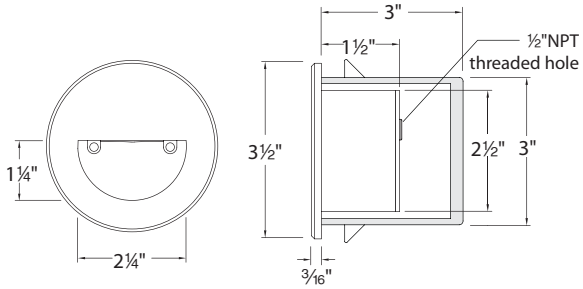
Location:

PRODUCT DESCRIPTION

Circular scoop LEDme® Step Light. Designed for safety and style on stairways, patios, decks, balcony areas, walkways and building perimeters.
Features an architectural design. Energy efficient for long-lasting indoor and outdoor lighting solutions. Creates an attractive, romantic impression at night. Colored lights can be used for way finding.

FEATURES

- Direct wiring, no driver needed
- Low profile, flush to wall aesthetics with no visible hardware
- 40,000 hour rated life
- Balanced lighting, free of shadows with minimum glare
- Up to 200 fixtures can be connected in parallel
- Replaceable LED module
- 5 year WAC Lighting product warranty



SPECIFICATIONS

Construction: Die-cast aluminum

Power: Direct wiring, no remote driver needed
Input voltage: 120VAC 50/60Hz

Light Source: 3000K CCT Samsung HV-AC High Power LED, CRI: 85
Total power consumption of 3.9W

Mounting: Supplied with junction box for recessed installation

Dimming: Dim to 10% with electronic low voltage (ELV) dimmer
Approved dimmers: Lutron Nova-T NTELV-300 & NTELV-600, Lutron Vietri VTELV-600, Lutron Diva DVELV-300P, Lutron Skylark SELV-300P, Lutron Maestro MAELV-600

Standards: IP66, UL & cUL Listed for wet locations

ORDER NUMBER

Model		*Light Color*		*Finish*		*Lumens*
WL-LED300	*120V*	**C**	*White*	**BN***	*Brushed Nickel*	*30*
				BZ	*Bronze*	*33*
				WT	*White*	*74*
		AM	*Amber*	**BN***	*Brushed Nickel*	*19*
				BZ	*Bronze*	*21*
				WT	*White*	*38*
		RD	*Red*	**BN***	*Brushed Nickel*	*2*
				BZ	*Bronze*	*2*
				WT	*White*	*4*
		BL	*Blue*	**BN***	*Brushed Nickel*	*3*
				BZ	*Bronze*	*4*
				WT	*White*	*8*

**Brushed Nickel Finish is for interior use only*

WL-LED300 – [ ] – [ ]

Example: **WL-LED300-C-WT**

FINISHES

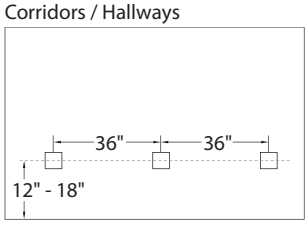
BN

BZ

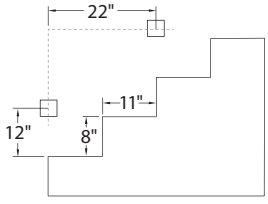
WT

SPACING RECOMMENDATIONS FOR OPTIMAL LIGHT DISTRIBUTION

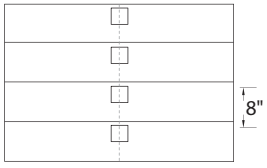
Corridors / Hallways



Stairs - Wall Mount



Stairs - Step Mount



Mount in center of stair as close to the upper tread as possible.
For best results use one light per step for steps narrower than 5'.

waclighting.com
Phone (800) 526.2588
Fax (800) 526.2585

Headquarters/Eastern Distribution Center
44 Harbor Park Drive
Port Washington, NY 11050

Central Distribution Center
1600 Distribution Ct
Lithia Springs, GA 30122

Western Distribution Center
1750 Archibald Avenue
Ontario, CA 91760

EXHIBIT G

JUNO

TYPE XH, XH1

FlexConnect™

Architectural Linear Lighting System

Integrated Micro Optics IO414 Series Indoor/Outdoor Wet Location (IP67)

Type	Cat. No.

Project: _____

Notes: _____

micrOptix™

PRODUCT DESCRIPTION

Juno FlexConnect featuring Patent Pending micrOptix technology is a diminutive flexible architectural luminaire system featuring miniature silicone optics for grazing, washing, cove, and other architectural or accent applications. Delivering up to **425 lumens per foot**, Juno FlexConnect utilizes onboard current regulation for consistent light output from the start to end of the run. Juno FlexConnect luminaires feature silicone encapsulation for durability, reliability, and ease of installation. Luminaire can be cut and reconnected in six inch increments, making FlexConnect easy to configure in the field.

PRODUCT SPECIFICATIONS

Performance Delivers up 425 lumens per foot while consuming just 4.8 watts per foot.

Construction Flexible, silicone encapsulated LED Light engine is equipped with miniature silicone optics in three distributions: 15 deg, 20deg x 45 deg, and Asymmetric • Fourteen (14) LEDs per foot • Onboard current regulation maintains consistent light output from start to end of run • Rated for indoor or outdoor use when used with appropriate accessories.

Field-Cuttable Features integrated connectors every six (6) inches, allowing luminaire to be field cut and reconnected in six (6) inch increments.
NOTE: MUST USE IOCUTTER TO CUT LUMINAIRE - see instructions.

Color Quality Features industry leading color consistency within 3 SDCM • Available in 2700K, 3000K, 3500K, and 4000K at 80 CRI min • 2700K and 3000K are also available in at 90 CRI min • Silicone is UV resistant for excellent color consistency over life.

Drivers Compatible with Juno Class 2, 24VDC remote mount drivers • For a list of compatible dimmers, refer to JUNOLINEARLED-DIM

Run Length Supplied in 5' spools • Beginning of spool features 12" of 22AWG wire which can be removed if longer starter cable is required or to connect multiple strips together • Minimum run length of 1' • **Maximum run length of 20'**.

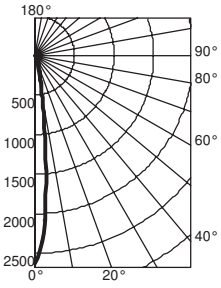
Operating Environment -30°C to 50°C, 95% humidity (non-condensing)

Life Rated for L70 50,000 hours.

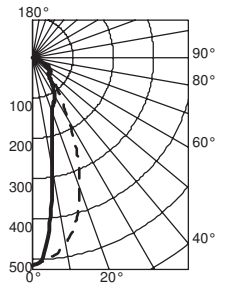
Labels ETL/cETL listed for wet locations • IP67 Rated • CE certified • ENERGY STAR® certified • Can be used to comply with Title 24, part 6.

Warranty 5-year limited warranty. Complete warranty terms located at: http://www.acuitybrands.com/CustomerResources/Terms_and_Conditions.aspx
Specifications subject to change without notice.

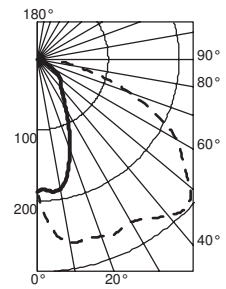
15˚

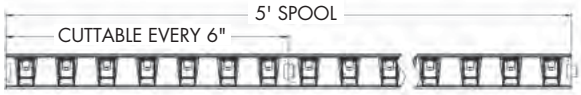


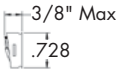
20˚ X 45˚



Asymmetric







ORDERING INFORMATION

Luminaire

Ordering Example: IO414 15D 5FT 27K 90CRI

Series	Optic	Length	Color Temperature	CRI
IO414 FlexConnect with micrOptix, 4.8 W/ft	**15D** 15˚ **20x45D** 20˚x45˚ **ASY** Asymmetric	**5FT**	**27K** 2700K **30K** 3000K **35K** 3500K **40K** 4000K	**80CRI** **90CRI**[1]

Driver/Power Supply

Ordering Example: DLDPS 96W FPCZT IP67

Driver	Max Wattage	Dimming	Options
DLDPS Flex 24VDC Remote Driver **DLDCP**[2] Flex 24VDC Plug-in Driver	**25W**[3] 25 watt **40W** 40 watt **60W** 60 watt **96W** 96 watt	**-** No Dimming **FPCZT**[4] 0-10V & Phase Dimming (5% min) **ECOS2**[5] Lutron 2-wire Forward Phase (1% min) **ECOS3**[6] Lutron 3-wire EcoSystem (1% min for 40W), (0.1% min for 96W)	**IP67**[7] IP67 Rated

Accessories on following pages.

Notes:
1 90CRI available with 27K and 30K only.
2 DLDCP available with 25W only.
3 25W non-dimming only.
4 FPCZT available in 60W & 96W only.
5 ECOS2 available in 40W only.
6 ECOS3 available for 40W & 96W.
7 IP67 available with FPCZT only.

EXHIBIT G

FlexConnect™

Architectural Linear Lighting System

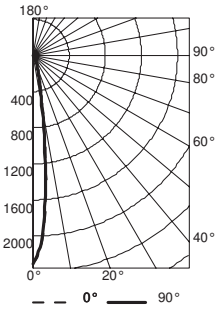
TYPE XH, XH1

Integrated Micro Optics IO414 Series Indoor/Outdoor Wet Location (IP67)

micrOptix™

PHOTOMETRICS

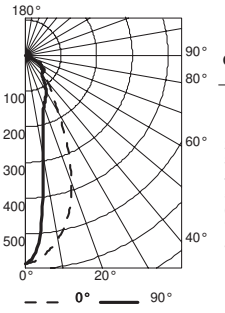
15° Optic
3500K LEDs, input watts: 4.8W,
delivered lumens: 427, LM/W = 89,
test no. PT02180502R,
tested in accordance to IESNA LM-79



CP Summary

	0°	90
0°	2307	2307
5°	1619	1564
15°	279	246
25°	96	94
35°	60	61
45°	37	40
55°	26	52
65°	44	37
75°	20	18
85°	7	6
90	3	1

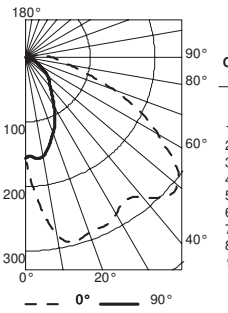
20° X 45° Optic
3500K LEDs, input watts: 4.8W,
delivered lumens: 418, LM/W = 87,
test no. PT02180501R,
tested in accordance to IESNA LM-79



CP Summary

	0°	90
0°	584	584
5°	564	493
15°	464	192
25°	279	133
35°	132	93
45°	72	67
55°	55	59
65°	47	23
75°	23	10
85°	3	3
90	1	0

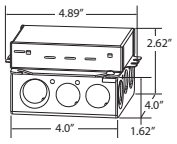
Asymmetric Optic
3500K LEDs, input watts: 4.8W,
delivered lumens: 408, LM/W = 85,
test no. PT02180503R,
tested in accordance to IESNA LM-79



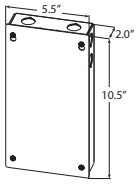
CP Summary

	0°	90
0°	157	157
5°	223	156
15°	294	141
25°	288	108
35°	270	72
45°	305	52
55°	281	34
65°	193	19
75°	99	11
85°	53	4
90	41	0

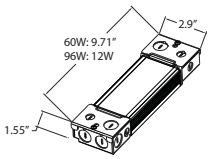
CCT	MIN CRI	WATTS PER FT	LUMENS PER FOOT		
			15D	20x45D	ASY
2700K	80	4.8	409	400	391
2700K	90	4.8	343	327	332
3000K	80	4.8	415	405	396
3000K	90	4.8	368	360	352
3500K	80	4.8	427	418	408
4000K	80	4.8	442	438	425



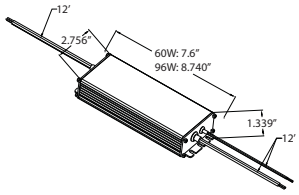
DLDPS 40W ECOS3
DLDPS 40W ECOS2



DLDPS 96W ECOS3



DLDPS 60W FPCZT
DLDPS 96W FPCZT



DLDPS 60W FPCZT IP67
DLDPS 96W FPCZT IP67

DLDCP 25W

Indoor Remote Power Supplies

Driver P/N	Dimming	Input Voltage	Min Wattage	Max Wattage	Min Dim
DLDPS 60W FPCZT	Forward Phase/Triac, Electronic Low Voltage, 0-10V	120-277V	2W	60W	5%
DLDPS 96W FPCZT			33W	96W	5%
DLDPS 40W ECOS2	Lutron Hi-Lume, 2-wire forward phase	120V	2W	40W	1%
DLDPS 40W ECOS3	Lutron Hi-Lume, 3-wire and EcoSystem	120-277V	2W	40W	1%
DLDPS 96W ECOS3			33W	96W	0.1%
DLDPS 25W	Non-Dimming	120-277V	2W	25W	N/A

IP67 Rated Power Supplies

Driver P/N	Dimming	Input Voltage	Min Wattage	Max Wattage	Min Dim
DLDPS 60W FPCZT IP67	Forward Phase/Triac, Electronic Low Voltage, 0-10V	120-277V	2W	60W	5%
DLDPS 96W FPCZT IP67			33W	96W	5%

Plug-in Power Supplies

Driver P/N	Dimming	Input Voltage	Min Wattage	Max Wattage	Min Dim
DLDCP 25W	Non-Dimming	120-277V	2W	25W	No Dim

TYPE XH, XH1

FlexConnect™
Architectural Linear Lighting System

Integrated Micro Optics IO414 Series Indoor/Outdoor Wet Location (IP67)

microptix™

Electrical Feeds		Catalog #	Description	Length
	Starter Cable	SL101P 36IN	Connects driver to start of FlexConnect luminaire. 22AWG, CL2 rated for in-wall use.	36"
		SL101P 144IN	Connects driver to start of FlexConnect luminaire. 22AWG, CL2 rated for in-wall use. Connects driver to start of FlexConnect luminaire.	144"
	Indoor Terminal Black	SL101TB	Input: Accepts 14AWG - 22AWG wire input. Output: 12AWG starter cable	
		IO101TB	Input: Accepts 14 - 22 AWG solid/stranded wire input. Output: Connects directly to FlexConnect (IO Series) strips"	
	Joiner Cable	SL102FLX 2IN	Joins two segments of FlexConnect. 22AWG wire.	2"
		SL102FLX 6IN	Joins two segments of FlexConnect. 22AWG, CL2 rated for in-wall use.	6"
		SL102FLX 12IN	Joins two segments of FlexConnect. 22AWG, CL2 rated for in-wall use.	12"
		SL102FLX 36IN	Joins two segments of FlexConnect. 22AWG, CL2 rated for in-wall use.	36"
		SL102FLX 72IN	Joins two segments of FlexConnect. 22AWG, CL2 rated for in-wall use.	72"
	3-Way Connector	SL102Y	Joins three segments of FlexConnect. 22AWG wire.	

IP67 Rated Connectors		Catalog #	Description
	IP67 Rated Terminal Block	IO101TB IP67	Input: Accepts 14 - 22 AWG solid/stranded wire. Output: Connects directly to FlexConnect (IO Series) strips
	IP67 Endcap	IO101EC IP67	Seals cut end of FlexConnect
	IP67 End Feed	IO101F IP67	Input: 22 AWG starter cable or joiner cable Output: FlexConnect (IO Series) strips.
	IP67 End to end connector	IO102EE IP67	IP67 End to end connector, seals and connects two cut ends of FlexConnect (IO Series) for continuous run

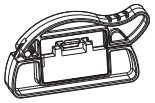
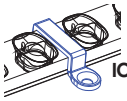
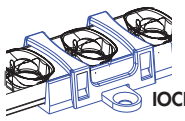
Mounting Clips & Cutter		Catalog #	Description
	Cutter	IOCUTTER	IO414 Series Cutting Tool - Required to field cut luminaire
 IOCLIP/I  IOCLIP/O	Mounting Clips	IOCLIPI	Indoor Clips (Bag of 20 clips. Recommend spacing every 3")
		IOCLIPO	Outdoor Clips - For use with when IP67 connector boxes are used (Bag of 20 clips. Recommend spacing every 3")

EXHIBIT G

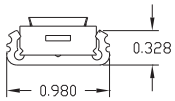
TYPE XH, XH1

FlexConnect™
Architectural Linear Lighting System

Integrated Micro Optics IO414 Series Indoor/Outdoor Wet Location (IP67)

micrOptix™

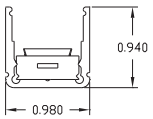
Surface Mount Channels



Ordering Example: IOLP 5FT ADJ SA

Channel	Length	Mounting Option	Lens	Finish
IOLP Low Profile Surface Mount	**5FT**	**–** Standard Surface Mount **ADJ** Adjustable Mounting Bracket (allows aiming 0-180 degrees)	**-** no lens **CL** Clear Lens	**SA** Satin Aluminum **BL** Black **WH** White

Lens is not needed to maintain IP67. Lens is only recommended when luminaire is oriented in such a way that water can pool on the optic face.

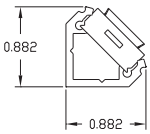


Louver **No Lens**

Ordering Example: IODC 5FT ADJ BLV BL

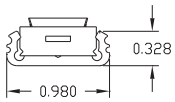
Channel	Length	Mounting Option	Lens	Finish
IODC Deep Surface Mount	**5FT**	**–** Standard Surface Mount **ADJ** Adjustable Mounting Bracket (allows aiming 0-180 degrees)	**-** no lens **CL** Clear Lens **BLV** Louver (black)	**SA** Satin Aluminum **BL** Black **WH** White

Lens is not needed to maintain IP67. Lens is only recommended when luminaire is oriented in such a way that water can pool on the optic face.



Ordering Example: IO45C 5FT BL

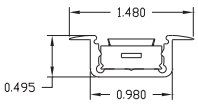
Channel	Length	Finish
IO45C 45 Degree Surface Mount	**5FT**	**SA** Satin Aluminum **BL** Black **WH** White



Ordering Example: IOFLXC 5FT SA

Channel	Length	Finish
IOFLXC Flexible Surface Mount	**5FT**	**SA** Satin Aluminum

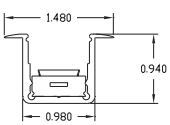
Recessed Channels



Ordering Example: IOLPR 5FT SA

Channel	Length	Lens	Finish
IOLPR Low Profile Recessed	**5FT**	**-** no lens **CL** Clear Lens	**SA** Satin Aluminum **BL** Black **WH** White

Lens is not needed to maintain IP67. Lens is only recommended when luminaire is oriented in such a way that water can pool on the optic face.



Louver **No Lens**

Ordering Example: IODCR 5FT CL SA

Channel	Length	Lens	Finish
IODCR Deep Recessed Channel	**5FT**	**-** no lens **CL** Clear Lens **BLV** Louver (black)	**SA** Satin Aluminum **BL** Black **WH** White

Lens is not needed to maintain IP67. Lens is only recommended when luminaire is oriented in such a way that water can pool on the optic face.

TYPE XJ

CITY 350 LED BOLLARD

Designed as a subtle exterior light for a path or roac
City 350 LED Bollard is an ideal light for both comm
and residential use. Not only is it perfect for a path c
road but its discreet design can also be complimenta
gardens, driveways, patios, hotel, commercial landscaf
and walkways around the home.

The City 350 LED Bollard has been designed to shine light down onto a path or road and is an ideal bollard light for both commercial and residential use. It is the perfect exterior bollard light for discreet lighting of paths, gardens, driveways, patios, walkways around the home, hotels and commercial landscape lighting.

Made from extremely durable solid exotic iroko hardwood, it is supplied with a stainless steel fixing plate for easy and hassle free installation.

It is designed to IP54 specification making it suitable for all outdoor lighting environments.

Each City 350 bollard light is handmade to order in the UK therefore please allow 3-4 weeks for delivery.

Dimensions:
H:35cm x W:14.5cm x D:11cm

Powered by 1 x 4.5 watt 4000K LED

Suitable for both 110v and 230v installations

THE LIGHT YARD

EXHIBIT G

WSB & Associates, Inc.
engineering • planning • environmental • construction

701 Xenia Avenue South
Suite 300
Minneapolis, MN 55416
Tel: 763-541-4800
Fax: 763-541-1700

Memorandum

To: ***Ryan Grittman***
Northwest Associated Consultants

From: ***Jeff Sandberg, PE – City Engineer***
Eric M. Eckman, PE – Project Manager
WSB & Associates, Inc.

Date: ***June 14, 2018***

Re: ***Site and Building Plan Review***
245 Salem Church Road
City of Sunfish Lake, MN
WSB Project No. 012102-000

Project Background

The applicant is proposing a construction of a new home, pool, retaining walls and terrace along with the necessary grading and storm water improvements on an existing vacant lot. The following review is only for the engineering, storm water management, and site grading issues. The building compliance will be handled by the City planners and Building inspectors.

General Notes

The following requirements and comments need to be addressed.

- Remove approval from the City of Sunfish Lake from the Cover Sheet
- Cover sheet should be signed by the signing engineer
- Existing conditions should be shown including all existing buildings and utilities (storm sewer, gas, fiber optic, etc)
- Removal of any existing utilities or structures need to be shown on the plans
- The proposed driveway and pathway material needs to be identified on the plans (bituminous or concrete). This can be accomplished with a legend with the appropriate hatching.
- Front, rear, and side yard setbacks should be shown on the site plan along with the closest building dimension to each setback.

Stormwater Management

The following requirements and comments need to be addressed.

- The velocity in which the water will be discharging into the proposed infiltration basin needs to be lowered to less than 5 ft/s to prevent scour and washouts at the discharge point.
- Design infiltration rates and 3 feet of separation to groundwater should be verified prior to construction. This is especially critical due to the historical documentation of HSG Type C and mottled soils. In addition, it should be noted in the civil plans and stormwater management report that soils encountered during construction that do not provide the design infiltration rates, must be amended accordingly. The applicant should use the MN Stormwater Manual for guidance.
- The plan set should show all construction details for the infiltration basin. For example, subsurface materials and seed mix for final restoration.

- The applicant indicated that pretreatment for the infiltration basin will be a forebay. Construction details should be added to the plan set. This could be incorporated in the detail for the infiltration basin.
- The last storm sewer catch basin for all runs discharging to the infiltration basin are required to have a sump area for the collection of coarse grained material.
- The Stormwater Management Report dated 05/23/18 should be updated to include the most recent proposed plans for the site.
- An Operation and Maintenance Plan for all proposed stormwater best management practices is required per City ordinance and should be submitted with the final construction documents per the response letter received on June 13, 2018.

Site Grading

The following requirements and comments need to be addressed.

- There are several trees that on the plan indicating that they are to be saved. The type of protection for these trees must be indicated on the plans (i.e. silt fence, snow fence, etc.).
- Any slopes steeper than or equal to 10 to 1 horizontal to vertical will require erosion control blankets.
- The builder/applicant must provide retaining wall plans for review for any walls that are 4-feet in height or taller. They need to be designed and signed by a registered professional engineer in the State of Minnesota.
- It is recommended that any pipe planned to be directly under a proposed retaining wall be installed in a casing pipe in order to prevent unnecessary reinstallation of the wall if anything were to happen to the pipe.
- Ensure that the top of the septic tank and septate pump have adequate coverage through the drainage swale, specifically the NE corner of the structure.
- Ensure the work proposed does not go past the easterly property line. Discussions with the property owner regarding the work along this property line will need to take place if the site grading cannot be accomplished as proposed. This includes any equipment that may be needed during construction.

Erosion Control/Restoration

The following requirements and comments need to be addressed.

- Potential temporary stockpile location(s) need to be at locations that are within 50 feet of a driving surface for the Sunfish Lake building ordinances. The stockpiles will also need to be protected to prevent sediment loss (i.e. silt fence).
- Restoration types should be identified on the plans (i.e. sod, seed mix, erosion control blanket)
- Due to disturbance of greater than one acre, an NPDES permit will be required for the site. All site inspections must be document per the requirements of the permit and available for review upon request.

Site Access

The Contractor must adhere to axel load limits when delivering material to the site. Any damage to the roadway and City right-of-way shall be repaired to the City's satisfaction by the applicant prior to the issuance of a certificate of occupancy.

Conclusion and Recommendations

Based upon our review of the proposed site and grading plan for 245 Salem Church Road, the proposed site and grading plans appear to be consistent with the City's requirements, with the exception of the above-noted items in this memorandum. The stormwater information needs to be updated as indicated above and structural plans need to be submitted for the retaining walls. Therefore, we hereby find the proposed plans not to be in accordance with City requirements and recommend denial from an

engineering standpoint for this project until these items are addressed. We are requesting a new set of plans addressing these comments and drainage calculations be resubmitted to our office prior to approval. The retaining wall information must be submitted prior to issuing the building permit on the project.

WSB & Associates, Inc.
engineering • planning • environmental • construction

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Memorandum

To: ***Ryan Grittman***
Northwest Associated Consultants

From: ***Jeff Sandberg, PE – City Engineer***
Eric M. Eckman, PE – Project Manager
WSB & Associates, Inc.

Date: ***July 12, 2018***

Re: ***Site and Building Plan Review***
245 Salem Church Road
City of Sunfish Lake, MN
WSB Project No. 012102-000

Project Background
The applicant is proposing a construction of a new home, pool, retaining walls and terrace along with the necessary grading and storm water improvements on an existing vacant lot. The following review is only for the engineering, storm water management, and site grading issues. The building compliance will be handled by the City planners and Building inspectors.

Stormwater Management
The following requirements and comments need to be addressed.

- An Operation and Maintenance Plan for all proposed stormwater best management practices is required per City ordinance and should be submitted with the final construction documents per the response letter received on June 13, 2018.

Site Grading
The following requirements and comments need to be addressed.

- The builder/applicant must provide retaining wall plans for review for any walls that are 4-feet in height or taller. They need to be designed and signed by a registered professional engineer in the State of Minnesota.
- Ensure the work proposed does not go past the easterly property line. Discussions with the property owner regarding the work along this property line will need to take place if the site grading cannot be accomplished as proposed. This includes any equipment that may be needed during construction.

Erosion Control/Restoration
The following requirements and comments need to be addressed.

- Due to disturbance of greater than one acre, an NPDES permit will be required for the site. All site inspections must be document per the requirements of the permit and available for review upon request.

Site Access

The Contractor must adhere to axle load limits when delivering material to the site. Any damage to the roadway and City right-of-way shall be repaired to the City's satisfaction by the applicant prior to the issuance of a certificate of occupancy.

Conclusion and Recommendations

Based upon our review of the proposed site and grading plan for 245 Salem Church Road, the proposed site and grading plans appear to be consistent with the City's requirements, with the exception of the above-noted items in this memorandum. Structural plans need to be submitted for the retaining walls prior to issuance of a Building Permit. We recommend approval of the plans upon satisfactory compliance with the remaining items outlined herein.

CITY OF *Sunfish Lake* MINNESOTA

Planning Commission
Findings of Fact &
Recommendation
(Approval)

Applicant's Name: Roger and Shari Wilsey

Request: The applicants request City approval of major site and building plan to construct a new home at 245 Salem Church Road.

Planning Commission Meeting Date: June 20, 2018, and July 18, 2018

Findings of Fact: Based on review of the application and evidence received, the Sunfish Lake Planning Commission now makes the following findings of fact and recommendation:

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

   245 SALEM CHURCH ROAD
   SUNFISH LAKE, MN 55118

2. The planning report dated July 12, 2018 prepared by Northwest Associated Consultants, Inc. and the engineering report dated June 14, 2018 and July 12, 2018 prepared by WSB Associates are incorporated herein by reference.

3. The home will be more than 1,000 square feet in area, which 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 June 20, 2018, and July 18, 2018 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 recommendation for approval:

   Major Site and Building Plans:

   a. The subject property and proposed development meet R-1 District setback, and home footprint standards.

b. The proposed development addresses Ordinance requirements pertaining to drive and parking area design, lighting design, grading, drainage and stormwater management, landscaping, and screening.

c. The proposed home meets Ordinance requirements pertaining to building size, height, and material use.

d. The proposed home meets other applicable Zoning Ordinance criteria.

Recommendation:

Based on the foregoing considerations and applicable ordinances, the Planning Commission recommends approval of the applicant's major site and building plans.

Approved, subject to the following conditions:

1. The applicants adhere to the City Engineer's recommendations for construction as addressed in his report dated July 12, 2018 this includes:

    - An Operation and Maintenance Plan to be submitted with final construction documents.
    - Retaining walls over 4 feet in height must be signed by a registered professional engineer in the State of Minnesota.
    - All work must stay within the property lines.
    - Obtain an NPDES permit.
    - Adhere to axel load limits.

2. The applicants must obtain a permit from the City's Septic Specialist for the installation of the proposed septic system. The applicants shall verify permit issuance prior to City Council consideration of the application.

3. The applicants obtain a building permit from the City Building Official prior to commencing any construction of the proposed project.

4. Upon installation, all exterior lighting must adhere to the Sunfish Lake Zoning Ordinance requirements related to lighting.

5. The applicants shall contact planning staff to arrange pre-construction and post-construction site visits, whereby staff can confirm that site and building plans and associated approval conditions have been implemented accordingly. The inspections are separate from other inspections that may be necessary by the City Building Inspector, City Septic System Inspector, City Engineer, or other individuals. The cost of site inspections is $75.00 each and payment of this amount shall be the responsibility of the property owner.

Adopted by the Sunfish Lake Planning Commission this 18th day of July 2018.

City of Sunfish Lake

By: _____
Tom Hendrickson
Planning Commission Chair

ATTEST

_____
Catherine Iago, City Clerk