



**ZONING BOARD OF APPEALS
Regular Meeting Agenda
Wednesday July 2, 2025
6:30 P.M.**

If you need any assistance due to a disability, please contact the Planning Department at least 48 hours in advance of the meeting at planning@ypsitownship.org or 734-544-4000 ext. 1.

1. Call Meeting to Order
2. Roll Call – Determination of a quorum
3. Approval of Agenda
4. Approval of June 4, 2025, Regular Meeting Minutes
5. Public Hearing

Applicant: Bank of America
Location: 2250 W Michigan Avenue, Ypsilanti, MI 48197
Parcel ID: K-11-18-100-024
Request: Article 13 – Sec. 1303.3(A&B): Site Design Standards
Uses: Request for variance to permit lighting levels along the western property line to exceed the maximum allowable illumination of 0.5 footcandles

6. Open discussion for issues not on the agenda
 - a. Planning Department report
 - b. Correspondence received.
 - c. Zoning Board of Appeals members
 - d. Members of the audience and public
7. Any other business that may come before the Zoning Board of Appeals
8. Adjournment

(THERE IS NO WORK SESSION)

**CHARTER TOWNSHIP OF YPSILANTI
ZONING BOARD OF APPEALS
Wednesday, June 4, 2025
6:30 pm**

COMMISSIONERS PRESENT

Elizabeth El-Assadi
Stan Eldridge
Edward Burnett

David Marshell (Arrived at 6:34 pm)

STAFF AND CONSULTANTS

Sally Elmiger - Carlisle Wortman

• **CALL TO ORDER/ESTABLISH QUORUM**

MOTION: Ms. El-Assadi called the meeting to order at 6:32 p.m. Ms. El-Assadi completed the roll call and confirmed a quorum was established.

• **APPROVAL OF AGENDA**

MOTION: Mr. Eldridge **MOVED** to approve the agenda as presented. The **MOTION** was **SECONDED** by Mr. Burnett and **PASSED** by unanimous consent.

• **APPROVAL OF APRIL 2, 2025, REGULAR MEETING MINUTES**

MOTION: Mr. Eldridge **MOVED** to approve April 2, 2025, Regular Meeting Minutes as presented. The **MOTION** was **SECONDED** by Mr. Burnett and **PASSED** by unanimous consent.

- **PUBLIC HEARING**

Applicant: Michael Zehnder

Location: 5655 Munger Road, Ypsilanti, MI 48197

Parcel ID: K-11-19-300-040

Request: Article 8 – Sec. 802: Accessory Buildings and Accessory Uses: Request for variance to the frontage requirements for pole barns.

Sally Elmiger informed the Zoning Board that the planning staff had prepared a review of the proposal and had considered the application to have met all the criteria in the ordinance for the variance. The proposal requires one variance for the installation of a pole barn. The placing of the pole on this property in the district would require a lot frontage, which is the distance of the lot along the road (150 feet). Since the lot is flag-shaped, there is practical difficulty that arises from the proposal. The property is 2.7 acres and is considered a rural area.

The planning staff has considered the following:

- This variance would give the applicant the same substantial property rights possessed by other properties.
- The proposed pole barn will not be harmful to the nature or essential character of the area.
- The proposed pole barn stated on the application is over 120 feet from the nearest house and is not visible from the road.
- This variance request is not created by the applicant. The flag-shaped lot was created many years ago, and the applicant had recently purchased the parcel.
- This is the minimum variance necessary to allow the applicant to have the same right to a pole barn similar to the neighboring residents.
- The proposal has met all the criteria and requirements of the ordinance.

The applicant Michael Zehnder (also representing his wife Allison) informed the ZBA that the proposal was to install a pole barn to store a tractor and a zero-turn mower that would be used to maintain the property.

PUBLIC HEARING OPENED AT 6:37 PM

(Hearing no comments)

PUBLIC HEARING CLOSED AT 6:38 PM

MOTION: Mr. Elridge **MOVED** to approve the variance request at 5655 Munger Road, Ypsilanti, MI 48197; Parcel ID K-11-19-300-040 to the frontage requirement of Sec. 802.12 of the Township Zoning Ordinance for the construction of a pole barn on a lot with 30 feet of frontage, as shown on the plot plan included in the Zoning Board of Appeals application dated May 5, 2025.

Granting of the requested variance meets the criteria for a non-use variance in Section 1704, subsection two, paragraph D of the zoning ordinance, specifically, the approval is based on the following findings:

1. There are exceptional or extraordinary circumstances applying to this property that do not generally apply to other properties in the district. The flag-shaped lot with only 30 feet of frontage presents a unique challenge that limits the development potential under the current ordinance.
2. The variance is necessary for the preservation of a substantial property right allowing the applicant to construct a pole barn similar to other larger rural residential parcels in the district that meet the frontage requirements.
3. The variance will not be a substantial detriment to adjacent properties and will not materially impair the purposes of the ordinance or the public interest. The pole barn will comply with all other ordinance requirements, including setbacks, height and location in the rear yard, ensuring it does not alter the essential character of the area.
4. The need for the variance is not self-created, as the narrow frontage and flag-shaped layout of the lot were preexisting conditions that limited compliance with the frontage requirement.
5. The variance is the minimum necessary to allow the applicant to construct the pole barn on the property while complying with all other zoning requirements.

This motion is further made with the following conditions:

- The applicant shall obtain the required building permits and applicable trade permits for the construction of the pole barn.

The **MOTION** was **SECONDED** by Mr. Marshall.

Roll Call Vote: Ms. Elizabeth El-Assadi (Yes); Mr. Stan Eldridge (Yes); Mr. David Marshall (Yes); Mr. Burnett (Yes).

MOTION PASSED.

- **OPEN DISCUSSION FOR ISSUES NOT ON AGENDA**

- **PLANNING DEPARTMENT REPORT**

None to Report.

- **CORRESPONDENCE RECEIVED**

None to Report.

- **ZONING BOARD OF APPEALS MEMBERS**

None to Report.

- **MEMBERS OF THE AUDIENCE/PUBLIC**

None to Report.

- **OTHER BUSINESS THAT MAY COME BEFORE THE ZONING BOARD**

None to Report.

- **ADJOURNMENT**

MOTION: Mr. Eldridge **MOVED** to adjourn at 6:42 p.m. The **MOTION** was **SECONDED** by Mr. Marshall and **PASSED** by unanimous consent.

Respectfully submitted by Minutes Services



Zoning Board of Appeals Staff Report

July 2, 2025

Applicant: Bank of America

Location: 2250 W. Michigan Avenue, Ypsilanti, MI 48197, Parcel K-11-18-100-024

Zoning: RC, Regional Corridor, Site Type C

Action Requested: Request for variance to the lighting requirements outlined in Article 13 – Section 1303.3 (A & B)

Variance Request:

The applicant made their original request for two lighting variances to the Zoning Board of Appeals (ZBA) at their February 05, 2025, meeting. The board members asked the applicant to see if they could reduce the proposed lighting levels along the west property line, and under the ATM canopy. The applicant has revised the plans and is returning to the ZBA to reconsider the request.

The revised request for a variance from the lighting regulations under Article 13 – Sec. 1303.3 (A & B) of the Township Zoning Ordinance, has been reduced to only one variance. This variance is to permit lighting levels along the western property line to exceed the maximum allowable illumination of 0.5 footcandles, as illustrated in Sheet LU-4. Also illustrated on this sheet, the lighting levels under the ATM canopy are now within ordinance maximums, and don't require a variance.

Location and Summary of Request:

The subject site is a 5.217-acre parcel located at the intersection of S. Hewitt Road and W. Michigan Avenue. The property is zoned R-C (Regional Corridor) with a Site Type C designation and is home to Bank of America, which provides essential banking services to the local community.

The proposed project includes replacing thirty-one (31) existing light fixtures, adding four (4) new fixtures, and installing two (2) additional light poles with fixtures. In total, thirty-eight (38) light fixtures will be replaced, and seven (7) new fixtures will be added to improve the property's lighting.

Cross References:

Article 13 – Site Design Standards

Article 17 – Zoning Board of Appeals

Township Supervisor
 Brenda L. Stumbo
 Township Clerk
 Debbie Swanson
 Township Treasurer
 Stan Eldridge



**YPSILANTI
 TOWNSHIP**
 — PLANNING & ZONING DEPARTMENT —

Trustees
 John Newman II
 Gloria Peterson
 Karen Lovejoy Roe
 LaResha Thornton

2250 W. Michigan Avenue, Ypsilanti, MI 48197 – Aerial Photograph 2023



Source: Map Washtenaw

Sec. 1303.3. (A & B)

Maximum Illumination Levels

Lighting Regulation	Permitted Level	Submitted Plans	Variance Required
Maximum illumination at ground level along the western property line (adjacent to residential property)	0.5 footcandles	0.0 to 4.2 footcandles (See Sheet LU-4)	Up to 4.2 footcandles above the permitted level



Analysis:

The Zoning Board of Appeals may grant a dimensional or non-use variance only upon a finding that compliance with the strict letter of the restrictions governing area, setbacks, frontage, height, bulk, density, or other dimensional provisions would create a practical difficulty and unreasonably present the use of the property. A finding of practical difficulty shall require demonstration that all the following conditions are met:

- 1. That there are exceptional or extraordinary circumstances or conditions applying to the property in question that do not apply generally to other properties or classes of uses in the same zoning district.**

The subject property, located at 2250 W. Michigan Avenue, is adjacent to a residential property to the west. The ordinance's lighting standards are intended to minimize potential impacts on nearby residences. However, the ordinance also intends to allow lighting levels that will provide a safe environment for night-time use of a site.

Given that the ATMs are located on the west side of the bank, adjacent to a residential property, this condition makes it challenging to adequately light the ATMs for night-time safety. Also, the nature of the use creates a heightened need for night-time safety. In our opinion, the layout of this existing bank (with the ATM directly next to a residential site) creates an exceptional condition that generally does not apply to other properties in this zoning district.

- 2. That a variance is necessary for the preservation and enjoyment of a substantial property right possessed by other properties in the same zoning district and in the vicinity.**

The lighting regulations outlined in the Township Zoning Ordinance are intended to balance functional and safe site lighting with the protection of neighboring properties, particularly residential uses. The applicant has substantially revised the plans to ensure that the lighting on the site is adequate for ATM use, while minimizing light spill across the property line. Without an adequately lit night-time environment, the bank's use of this site is greatly diminished. Therefore, the lighting balance that has been achieved with this plan revision preserves the applicant's commercial use of the bank property without undue impact to the residential neighbor.

- 3. That the authorizing of such a variance will not be a substantial detriment to adjacent property, will not be harmful to or alter the essential character of the area, and will not materially impair the purposes of this Ordinance or the public interest.**

The previous set of plans proposed lighting levels along the western property line, ranging from 0.0 to 13.5 footcandles. However, the revised plans (Sheet LU-4) propose lighting levels along this property line between 0.0 to 4.2 footcandles. Also, light levels fade to



almost zero approximately 35 feet from the property line. The residential structure is approximately 210 feet from the property line. For these reasons, we don't consider the variance to be a substantial detriment to the adjacent property, nor will it alter the character of the area.

4. The property and resulting need for the variance has not been self-created by any action of the applicant or the applicant's predecessors.

As mentioned above, the need to adequate lighting is heightened given that the land use is a bank, and that their customers use the ATMs at night. The proposed lighting levels have been substantially reduced to reach a balance between this property's need to create a safe environment for its customers, and minimizing the light spill onto the residential property next door. We don't consider the need for the variance to be self-created.

5. The proposed variance will be the minimum necessary and no variance shall be granted where a different solution not requiring a variance would be possible.

With the revised plans, one variance has been eliminated, and the extent of the second variance (lighting along the property line) has been substantially reduced. We consider the request to represent the minimum necessary for adequate ATM lighting without impacting the residential neighbor's property.



Suggested motions: The following suggested motions and findings of fact are provided to assist the Zoning Board of Appeals in making a complete and appropriate motion for this application. The ZBA may utilize, add, or reject any portion of the suggested motion, as it deems appropriate.

Postpone:

I move to postpone the variance request at 2250 W. Michigan Avenue, Ypsilanti, MI 48197, Parcel K-11-18-100-024 to the lighting requirements of Article 13, Section 1303.3 (A & B) of the Township Zoning Ordinance, as shown on the plans submitted with the Zoning Board of Appeals Packet identified as V3 250307. This postponement is to provide the applicant an opportunity to address the comments made at this evening's meeting and return with a revised proposal that reflects those comments.

Approve:

I move to approve the variance request at 2250 W. Michigan Avenue, Ypsilanti, MI 48197, Parcel K-11-18-100-024 to the lighting requirements of Article 13, Section 1303.3 (A & B) of the Township Zoning Ordinance, as shown on the plans submitted with the Zoning Board of Appeals Packet identified as V3 250307. Granting the requested variance meets the criteria for a non-use variance in Section 1704(D) of the Zoning Ordinance. Specifically, the approval is based on the following findings of fact:

1. The location of the ATMs next to the residential property to the west represent unique circumstances that don't apply to other properties in this zoning district, creating a practical difficulty.
2. Without an adequately lit night-time environment, the bank's use of this site is greatly diminished. Therefore, the variance is needed for safe, continued operation of the ATMs.
3. The maximum lighting levels at the property line are 4.2 footcandles, but they fade to almost zero approximately 35 feet into the residentially-used property. The residential building is approximately 210 feet from the property line. It is unlikely that the proposed light levels will negatively impact the residential use of the neighboring property.
4. The need for adequate lighting is heightened given that the land use is a bank, and that their customers use the ATMs at night. The proposed lighting levels have been substantially reduced to reach a balance between this property's need to create a safe environment for its customers, and minimizing light spill onto the residential property next door. The need for the variance is not self-created.
5. The request has reduced the number of variances from two to one, and the amount of the variance has also been substantially reduced, minimizing the needed variance to achieve adequate site lighting.



Denial:

I move to deny the variance request at 2250 W. Michigan Avenue, Ypsilanti, MI 48197, Parcel K-11-18-100-024 to the lighting requirements of Article 13, Section 1303.3 (A & B) of the Township Zoning Ordinance, as shown on the plans submitted with the Zoning Board of Appeals Packet identified as V3 250307, based on the following findings of fact:

1. The applicant has not demonstrated the presence of exceptional or extraordinary circumstances applying to the property that would prevent compliance with the lighting standards. The property conditions are typical of other commercial properties adjacent to residential areas within the zoning district.
2. The request is not necessary for the preservation of a substantial property right, as other similarly situated properties in the zoning district comply with the ordinance requirements without requiring a variance.
3. The proposed lighting levels, which exceed 0.5 footcandles along the western property line, would likely result in adverse impacts to the adjacent residential property, contrary to the purpose of the lighting regulations in protecting neighboring properties.
4. The need for the variance appears to be self-created, as the applicant has not provided a valid justification as to why the lighting plan cannot be modified to comply with the ordinance.
5. The variance requested does not appear to be the minimum necessary to achieve adequate site lighting.

Respectfully Submitted,

Sally Elmiger

Sally Elmiger, Charter Township of Ypsilanti Planning Consultant
Carlisle/Wortman Associates, Inc.

**ZONING BOARD OF
 APPEALS APPLICATION**

I. APPLICATION TYPE

- Variance
- Exceptions and Special Approvals (Includes: Temporary Uses and Structures)
- Administrative Review Appeal

II. PROJECT LOCATION

Address: _____ Parcel ID #: K-11- Zoning _____
 Lot Number: _____ Subdivision: _____

III. APPLICANT INFORMATION

Applicant: _____ Phone: _____
 Address: _____ City: _____ State: _____ Zip: _____
 Fax: _____ Email: _____
Property Owner: _____ Phone: _____
 Address: _____ City: _____ State: _____ Zip: _____
 Fax: _____ Email: _____

IV. COST AND FEES

Total: \$ _____	Breakdown of fee:	Residential:	\$ 125.00
		Non-residential:	\$ 500.00

V. APPLICANT SIGNATURE

The undersigned _____ represents _____:
Applicant Property Owner

- That _____ is/are the owner(s) of lot(s) _____ located in the _____
Property Owner Lot Subdivision
 Subdivision, Ypsilanti Township, Michigan, otherwise known as _____ and the property is
Address
 zoned _____
Zoning District
- That the petitioner hereby request _____ under Section _____ Article _____ of the Ypsilanti Township
Variance/Temporary Use Section Article
 Zoning Ordinance. /Regular Meeting
- The petitioner further state that _____ have/has read and understands the provisions of said zoning ordinance as it
Applicant Initial
 applies to this petition.
- That the following is submitted in support of the petition (attach all pertinent data to support the request).

Brian Kreke _____
 Applicant Signature Print Name Date



Charter Township of Ypsilanti

Office of Community Standards

7200 S. Huron Drive, Ypsilanti, MI 48197

Phone: (734) 544-4000 ext. #1

Website: <https://ypsitownship.org>

OFFICE USE ONLY

All Zoning Board of Appeals Applications

<input type="checkbox"/> The application is filled out in its entirety.	<input type="checkbox"/> Plot plan or lot survey to scale showing the following:
<input type="checkbox"/> If the applicant is not the property owner, written and signed permission from the property owner is required.	<input type="checkbox"/> All property lines and dimensions
<input type="checkbox"/> Fees	<input type="checkbox"/> All existing and proposed structures and dimensions
<input type="checkbox"/> Letter of interest of the applicant in the property	<input type="checkbox"/> Lot area calculations necessary to show compliance with regulations
	<input type="checkbox"/> Easements and dimensions, if applicable
	<input type="checkbox"/> Location of drives, sidewalks, and other paved areas on the property and on the adjacent streets.
	<input type="checkbox"/> Location and dimensions of the nearest structures on adjacent properties.



Bank of America

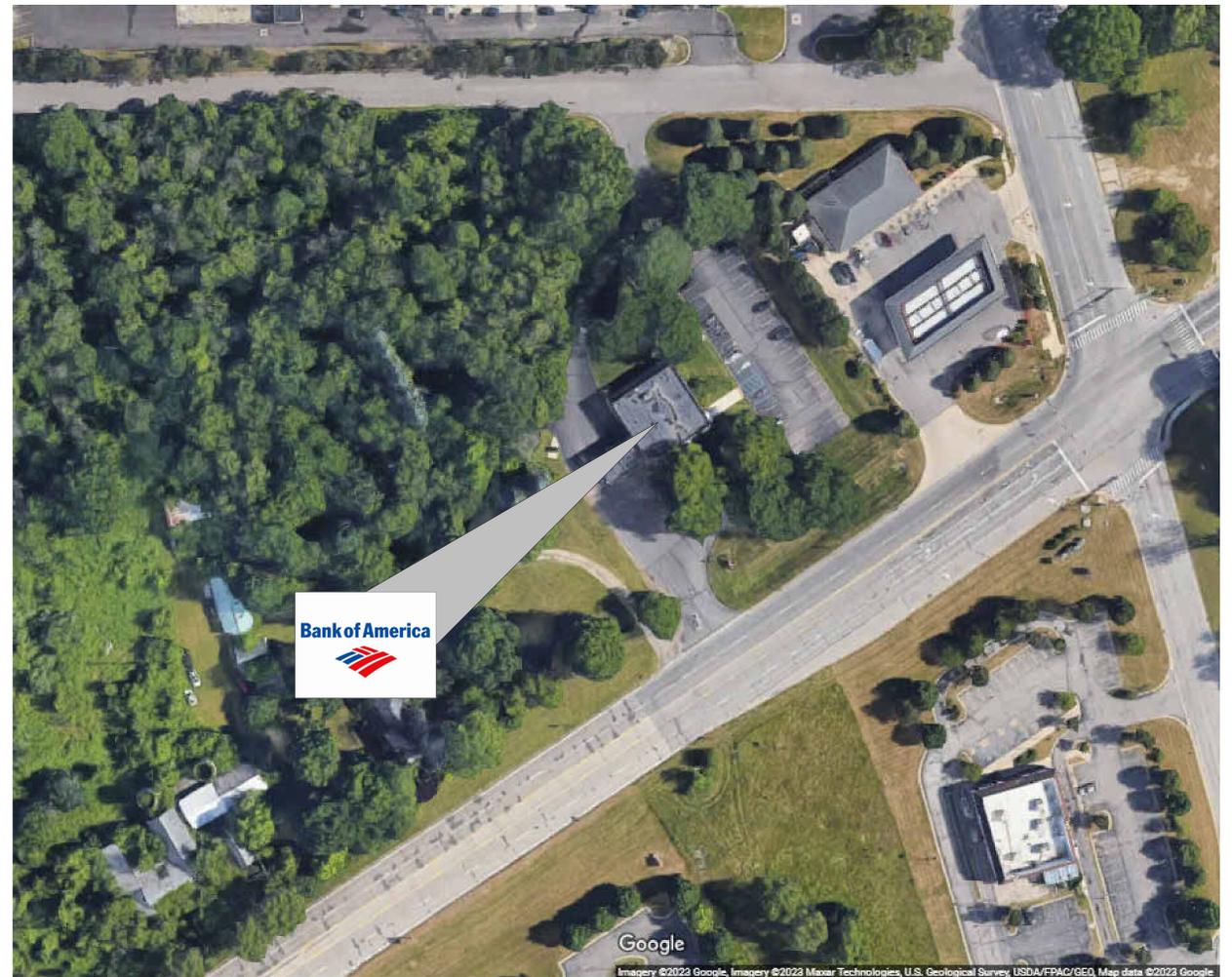


EXTERIOR LIGHTING PROGRAM

MI8-166
2250 W Michigan Ave,
Ypsilanti, MI 48197

DRAWING INDEX:

- COVER SHEET
- LU-1 GENERAL NOTES
- LU-2 LUMINAIRE SCHEDULE
- LU-3 OVERALL SITE PLAN
- LU-4 FULL SITE PHOTOMETRICS PLAN AT GRADE
- LU-5 FIXTURE REMOVAL PLAN
- LU-6 DIMENSIONING PLAN
- LU-7 LANDSCAPING PLAN
- LU-8 ATM COMPLIANCE AREA PHOTOMETRICS PLAN - FOR BANK USE ONLY
- LU-9 ELEVATIONS



VICINITY MAP

v3 250307



Office: (972) 771-6038
 1629 Smirl Drive, Suite 200, Heath, Texas 75032
www.gmr1.com

SCOPE OF WORK

COUNT	NOTES
27	REPLACE EXISTING FIXTURE
6	REMOVE AND PATCH
3	ADD NEW POLE AND FIXTURE
7	ADD NEW FIXTURE



CONTRACTOR RESPONSIBILITY NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITTING, INCLUDING COORDINATION WITH THE LOCAL JURISDICTION AND ANY ASSOCIATED PERMIT FEES OR PROCESSING. CONTRACTOR SHALL NOTIFY GMR UPON RECEIPT OF PERMIT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITTING DOCUMENTS THAT ARE NOT INCLUDED IN THE LIGHTING DESIGN PACKAGE. THESE INCLUDE, BUT ARE NOT LIMITED TO, STAMPED ELECTRICAL DRAWINGS, STAMPED POLE BASE DRAWINGS, AND PROFESSIONAL SURVEYS.
- SHOULD STAMPED PHOTOMETRIC DRAWINGS BE REQUIRED, CONTRACTOR SHALL ENGAGE LOCAL ENGINEER OR LIGHTING DESIGNER AS REQUIRED TO PROVIDE STAMP ON GMR PHOTOMETRIC DESIGN DOCUMENTS.
- CONTRACTOR SHALL PROVIDE THE BANKING CENTER NOTIFICATION AT LEAST ONE WEEK IN ADVANCE OF VISITING SITES OR STARTING WORK.
- CONTRACTOR SHALL VERIFY VOLTAGE REQUIREMENTS FOR FIXTURES PRIOR TO PLACEMENT OF FIXTURE ORDERS.
- CONTRACTOR TO VERIFY LIGHTING CONTROLS PRIOR TO BEGINNING CONSTRUCTION. SEE LIGHTING CONTROL NOTES.
- CONTRACTOR SHALL RECEIVE FORMAL APPROVAL FROM GMR ON ANY FIXTURE MODIFICATIONS OR VARIATIONS FROM THE LUMINAIRE SCHEDULE.
- CONTRACTOR SHALL VERIFY EXISTING AND PROPOSED FIXTURE MOUNTING CONDITIONS IN FIELD. ANY SPECIAL MOUNTING HARDWARE NEEDED FOR PROPOSED FIXTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL SUPPLY ALL NEW LIGHT POLES. NEW LIGHT POLES SHALL MATCH EXISTING CONDITIONS ON SITE FOR POLE TYPE AND PAINT COLOR.
- CONTRACTOR SHALL ORDER ALL FIXTURES FROM BORDER STATES IN ACCORDANCE WITH BANK OF AMERICA NATIONAL ACCOUNT. CONTACT NATIONAL ACCOUNT QUOTES DEPARTMENT AT BOA@BORDERSTATES.COM OR 704-372-3040.
- CONTRACTOR SHALL PERFORM ALL NECESSARY PATCHING OR REPAINTING FOR ADDED, REMOVED, OR REPLACED FIXTURES.
- CONTRACTOR SHALL REPAIR ANY DISTURBED AREAS BACK TO EXISTING CONDITION INCLUDING PAVED AREAS, LANDSCAPED AREAS, ETC.
- CONTRACTOR SHALL VERIFY AND DOCUMENT COMPLETED WORK DURING NIGHT HOURS. ALL FIXTURES MUST BE FUNCTIONAL DURING NIGHT HOURS PRIOR TO SCHEDULING A FINAL SURVEY WITH GMR.
- CONTRACTOR SHALL PROVIDE BEFORE AND AFTER NIGHT TIME PHOTOS OF THE SITE.
- CONTRACTOR SHALL UTILIZE THE "BOA ELP INCENTIVE SITE SURVEY FORM" TO DOCUMENT THE EXACT DETAILS OF EACH FIXTURE BEING REMOVED FOR REBATE AND ENERGY SAVINGS CALCULATION PURPOSES.
- CONTRACTOR SHALL RECEIVE A PUNCHLIST FROM GMR UPON FINAL SURVEY FOR ANY REMAINING ITEMS TO BE COMPLETED.

CONTROLS & ADDITIONAL NOTES:

LIGHTING CONTROL NOTES:

THE CONTRACTOR SHALL VERIFY THE CONTROLS FOR ALL EXTERIOR LIGHTING AND ATM/AHD INTERIOR LOBBIES ON THE SITE (EXCLUDING SIGNAGE) AND ADJUST ACCORDING TO THE FOLLOWING:

- IC3 CONTROL:

CONTRACTOR SHALL VERIFY THAT EXTERIOR LIGHTING CIRCUITS ARE CONTROLLED BY THE CORRECT IC3 CIRCUIT. WHERE EXTERIOR LIGHTING IS INCLUDED ON CONTROL CIRCUITS FOR INTERIOR SYSTEMS, INTERIOR LIGHTING, OR EXTERIOR SIGNAGE, CONTRACTOR SHALL ADJUST EXTERIOR LIGHTING TO THE CORRECT CONTROL CIRCUIT AS REQUIRED.

- PHOTOCELL CONTROL:

CONTRACTOR SHALL REPLACE EXISTING PHOTOCELLS WITH NEW AND INSTALL IN A LOCATION BEST SUITED TO PROVIDE APPROPRIATE LIGHT EXPOSURE SUCH THAT EXTERIOR LIGHTS ARE ON DURING DARKNESS.

- TIME CLOCK CONTROL:

CONTRACTOR SHALL VERIFY LOCATION OF TIME CLOCK. IF TIME CLOCK IS IN ELECTRICAL ROOM ALONG WITH IC3 CONTROLS, CONTRACTOR SHALL ADJUST CIRCUIT TO BE CONTROLLED BY IC3 EXTERIOR LIGHTING CONTROLS. IF TIME CLOCK IS IN A REMOTE LOCATION NOT IN CLOSE PROXIMITY TO THE IC3 CONTROLS, CONTRACTOR SHALL VERIFY TIME CLOCK IS SET PROPERLY AND LEAVE CIRCUIT ON TIME CLOCK CONTROL.

- MANUAL CONTROL:

CONTRACTOR SHALL VERIFY THAT NO EXTERIOR LIGHTING IS CONTROLLED MANUALLY. IF ANY EXTERIOR LIGHTING IS ON A MANUALLY CONTROLLED CIRCUIT, CONTRACTOR SHALL ADJUST TO BE CONTROLLED BY PHOTOCELL OR IC3, WHICHEVER IS MOST ECONOMICALLY ACCOMPLISHED.

ADDITIONAL CONTRACTOR NOTES:

CONSTRUCTION COMPLETION VERIFICATION

UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PROVIDE VERIFICATION IN WRITING TO THE BANK OF AMERICA PJM THAT ALL WORK IS COMPLETE ACCORDING TO THE CONSTRUCTION DOCUMENTS, AND THAT ALL EXTERIOR LIGHTING IS FUNCTIONING DURING NIGHTTIME HOURS. COMPLETION PHOTOS, TAKEN AT NIGHT, SHALL BE PROVIDED IN THE FOLLOWING FORMAT:

PROVIDE A SINGLE DOCUMENT CONTAINING THE FOLLOWING:

- SITE PHOTOS FROM ALL SIDES OF BUILDING
- MINIMUM OF 3 PHOTOS OF EACH COMPLIANCE AREA (ATM(S), AFTER-HOUR DEPOSITORIES, ASSOCIATE ENTRY) FROM DIFFERENT ANGLES
- MINIMUM OF 2 PHOTOS OF ALL NON-COMPLIANCE AREAS FROM DIFFERENT ANGLES

FIXTURE CLARIFICATION NOTES:

- OUT OF SCOPE - EXISTING FIXTURES TO REMAIN ON SITE WITHOUT MODIFICATION. NO ACTION REQUIRED UNLESS NOTED OTHERWISE.
- REMOVE AND PATCH - EXISTING FIXTURES TO BE FULLY REMOVED AND ANY PAINTING, PATCHING OR ELECTRICAL WORK NEEDED IS TO BE ASSESSED AND PERFORMED BY CONTRACTOR.
- REPLACE EXISTING FIXTURE - EXISTING FIXTURE TO BE FULLY REMOVED AND REPLACED IN THE SAME LOCATION WITH A NEW FIXTURE. CONTRACTOR TO VERIFY IF POLE AND/OR POLE BASE IS SUFFICIENT FOR THE NEW FIXTURES. ANY PAINTING, PATCHING OR ELECTRICAL WORK NEEDED IS TO BE ASSESSED AND PERFORMED BY CONTRACTOR.
- ADD NEW FIXTURE - NEW FIXTURES TO BE ADDED. ANY PAINTING, PATCHING OR ELECTRICAL WORK NEEDED TO BE ASSESSED AND PERFORMED BY CONTRACTOR.
- ADD NEW POLE & FIXTURE - A NEW POLE AND FIXTURE TO BE ADDED. CONTRACTOR TO SPECIFY POLE TO MATCH EXISTING STYLE AND COLOR AND, IF NOT PROVIDED, POLE BASE DATA FOR NEW POLE LOCATIONS. CONTRACTOR TO VERIFY IF POLE AND POLE BASE IS SUFFICIENT FOR THE HEIGHT, LOCATION AND FIXTURE SPECIFIED.
- GMR DOES NOT SPECIFY MOUNTING HARDWARE FOR ANY SPECIFIED FIXTURES. CONTRACTOR IS TO WORK WITH DISTRIBUTOR AND/OR MANUFACTURER ON A CASE BY CASE BASIS TO IDENTIFY AND ORDER REQUIRED MOUNTING HARDWARE.
- CONTRACTOR TO VERIFY WHETHER EXISTING WIRING LOCATIONS OR THE ADDITION OF WIRING FOR NEW FIXTURE LOCATIONS IS SUFFICIENT FOR THE DESIGNATED FIXTURE LOCATION.
- CONTRACTOR TO SPECIFY POLE COLOR AND TYPE PRIOR TO ORDERING.
- ALL FIXTURES ARE ASSUMED BRONZE IN COLOR UNLESS NOTED OTHERWISE IN THE LUMINAIRE SCHEDULE. CONTRACTOR TO CONFIRM PRIOR TO ORDERING.

GENERAL NOTES:

- EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE BASED ON A LIMITED AMOUNT OF INFORMATION AVAILABLE TO THE ENGINEER. ALL SUCH CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING THE BID AND ADJUSTED IF NECESSARY. NO ADDITIONAL COMPENSATION SHALL BE GRANTED AFTER AWARDED A BID FOR ANY EQUIPMENT, MATERIAL OR LABOR REQUIRED TO REWORK OR OTHERWISE MODIFY EXISTING CONDITIONS. THIS LIGHTING DESIGN IS BASED ON A COMBINATION OF STATE STANDARDS, THE BANK'S CURRENT SECURITY POLICY FOR EXTERIOR ATM AND AFTER-HOUR DEPOSITORIES AND BANK GUIDELINES FOR NON-SECURITY COMPLIANCE ZONES.
- TRIM ALL TREES/LANDSCAPING TO MINIMIZE IMPEDING LIGHT FROM ANY LIGHT FIXTURES THAT IMPACT THE 60' RADIUS AROUND ALL ATMS AND A RADIUS OF 50' AROUND ALL AFTER-HOUR DEPOSITORIES. CONSIDERATION MUST BE GIVEN TO TREES/LANDSCAPING IN A STATE OF FULL FOLIAGE/BLOOM AND FUTURE GROWTH. ALL LANDSCAPING WORK WILL BE PERFORMED BY OTHERS WITH A SEPARATE PERMIT (IF REQUIRED).
- ALL MOUNTING HEIGHTS ARE INTENDED TO THE BOTTOM OF THE FIXTURE. CONTRACTOR TO FIELD VERIFY FIXTURE PLACEMENT DIMENSIONS PRIOR TO CONSTRUCTION.
- DIMENSIONING PROVIDED IS FOR PROPOSED FIXTURE LOCATIONS ONLY, UNLESS OTHERWISE NOTED ON THE DRAWING.
- THE CONTRACTOR SHALL ATTEMPT TO ELIMINATE THE USE OF EXPOSED CONDUIT WHERE POSSIBLE. IF EXPOSED CONDUIT IS NECESSARY, THE CONTRACTOR SHALL VERIFY USE WITH PROJECT MANAGER.
- ALL EXISTING LIGHTS WILL BE REPLACED WITH LED LIGHTS AND ALL PROPOSED LIGHTS WILL ALSO BE LED, UNLESS OTHERWISE NOTED.
- ALL FIXTURES ARE TO BE MOUNTED ABOVE FINISH GRADE. UNLESS OTHERWISE NOTED, MATCH EXISTING POLE BASES.

v3 250307

REVISION NO.	DESCRIPTION	REVISED BY
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Ypsilanti Township
MI8-166
2250 W Michigan Ave,
Ypsilanti, MI 48197

GENERAL NOTES

DESIGNED BY:	GJS	DRAWN BY:	GJS
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REVIEWED BY:	AWD	APPROVED BY:	KRM
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SHEET NO.	LU-1
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THIS LIGHTING PLAN ILLUSTRATES ILLUMINATE LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICAN (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.

SITE ABBREVIATIONS:

- PL = PROPERTY LINE
- AFG = ABOVE FINISHED GRADE
- FC = FOOTCANDLE
- CBO = CONTROLLED BY OTHERS
- AHD = AFTER HOUR DEPOSITORY



SEE FIXTURE CLARIFICATION NOTE #9

LUMINAIRE SCHEDULE

CONTRACTOR TO VERIFY MOUNTING ACCESSORIES BEFORE ORDERING

SYMBOL	TOTAL FIXTURE COUNT	TYPE	NEW POLE COUNT	MANUFACTURER	MODEL	MODEL NUMBER	NOTES	MOUNTING HEIGHT	MOUNTING ACCESSORY	BUG RATING	MOUNTING	KILOWATT PER HOUR	TOTAL WATTAGE
■	8	BA1	-	CREE	CPY	CPY250-C-2L-40K7-F-UL-DM-BZ	REPLACE EXISTING FIXTURE	MATCH EXISTING CANOPY HEIGHT	-	B1-U0-G0	SURFACE CANOPY MOUNT	0.014	112 W
■	3	OB1	-	CREE	OSQ	OSQM-C-11L-40K7-5N-UL-NM-BK	REPLACE EXISTING FIXTURE	MATCH EXISTING	OSQ-ML-C-DA-BK	B3-U0-G1	POLE MOUNT	0.068	204 W
■	2	OC1	1	CREE	OSQ	OSQM-C-16L-40K7-5N-UL-NM-BK	ADD NEW POLE AND FIXTURE	18' AFG	OSQ-ML-C-DA-BK	B3-U0-G2	POLE MOUNT	0.097	194 W
■	1	OC2	-	CREE	OSQ	OSQM-C-16L-40K7-5N-UL-NM-BK	ADD NEW FIXTURE	18' AFG	OSQ-ML-C-DA-BK, WM-DM-BK	B3-U0-G2	WALL MOUNT	0.097	97 W
■	1	OK1	-	CREE	OSQ	OSQL-C-22L-40K7-4M-UL-NM-BK	ADD NEW FIXTURE	18' AFG	OSQ-ML-C-DA-BK, WM-DM-BK	B3-U0-G3	WALL MOUNT	0.131	131 W
■	1	OT1	-	CREE	OSQ	OSQM-C-16L-40K7-3M-UL-NM-BK	REPLACE EXISTING FIXTURE	MATCH EXISTING	OSQ-ML-C-DA-BK	B3-U0-G3	POLE MOUNT	0.097	97 W
■	1	OW1	1	CREE	OSQ	OSQM-C-16L-40K7-3B-UL-NM-BK	ADD NEW POLE AND FIXTURE	18' AFG	OSQ-ML-C-DA-BK	B2-U0-G2	POLE MOUNT	0.097	97 W
■	1	SB1	-	CREE	SECURITY EDGE	SEC-EDG-2S-WM-02-E-UL-BZ-525-40K	REPLACE EXISTING FIXTURE	MATCH EXISTING	-	B1-U0-G1	WALL MOUNT	0.037	37 W
■	1	SG1	-	CREE	SECURITY EDGE	SEC-EDG-3M-WM-04-E-UL-BZ-350-40K	REPLACE EXISTING FIXTURE	MATCH EXISTING	-	B1-U0-G1	WALL MOUNT	0.046	46 W
■	6	SJ1	-	CREE	SECURITY EDGE	SEC-EDG-4M-WM-02-E-UL-BZ-700-40K	REPLACE EXISTING FIXTURE	MATCH EXISTING	-	B1-U0-G1	WALL MOUNT	0.05	300 W
■	2	SK1	-	CREE	SECURITY EDGE	SEC-EDG-4M-WM-04-E-UL-BZ-525-40K	REPLACE EXISTING FIXTURE	MATCH EXISTING	-	B2-U0-G2	WALL MOUNT	0.07	140 W
■	2	SK2	-	CREE	SECURITY EDGE	SEC-EDG-4M-WM-04-E-UL-BZ-525-40K	ADD NEW FIXTURE	11' - 6" AFG	-	B2-U0-G2	WALL MOUNT	0.07	140 W
■	5	UU1	-	CREE	ZR22	ZR-22-D-26L-840-CV-UNV-10V5	REPLACE EXISTING FIXTURE	MATCH EXISTING CANOPY HEIGHT	-	B2-U0-G1	RECESSED CANOPY MOUNT	0.018	90 W
■	3	UU2	-	CREE	ZR22	ZR-22-D-26L-840-CV-UNV-10V5	ADD NEW FIXTURE	MATCH EXISTING CANOPY HEIGHT	-	B2-U0-G1	RECESSED CANOPY MOUNT	0.018	54 W
■	2	WA1	-	-	-	-	REMOVE AND PATCH	-	-	-	WALL MOUNT	0	0 W
■	4	WH1	-	-	-	-	REMOVE AND PATCH	-	-	-	CANOPY MOUNT	0	0 W
GRAND TOTAL WATTAGE												1739 W	

v3 250307

△		
△		
△		
REVISION NO.	DESCRIPTION	REVISED BY



Ypsilanti Township
MI8-166
2250 W Michigan Ave,
Ypsilanti, MI 48197

LUMINAIRE SCHEDULE

DESIGNED BY:	GJS	DRAWN BY:	GJS
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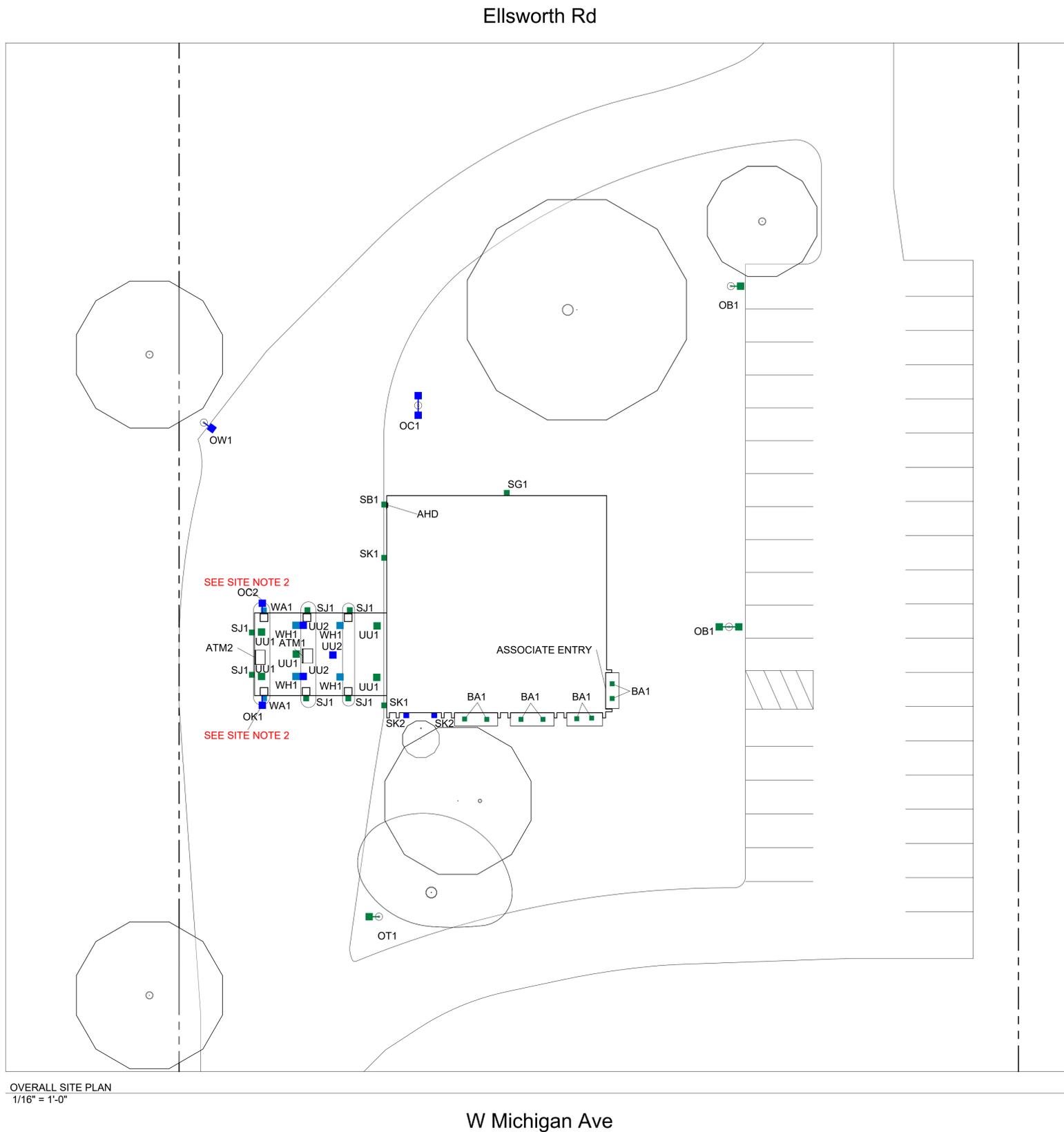
REVIEWED BY:	AWD	APPROVED BY:	KRM
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SHEET NO.

LU-2

THIS LIGHTING PLAN ILLUSTRATES ILLUMINATE LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICAN (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.

TOTAL FIXTURE COUNT	TYPE	NOTES	MOUNTING HEIGHT
8	BA1	REPLACE EXISTING FIXTURE	MATCH EXISTING CANOPY HEIGHT
3	OB1	REPLACE EXISTING FIXTURE	MATCH EXISTING
2	OC1	ADD NEW POLE AND FIXTURE	18' AFG
1	OC2	ADD NEW FIXTURE	18' AFG
1	OK1	ADD NEW FIXTURE	18' AFG
1	OT1	REPLACE EXISTING FIXTURE	MATCH EXISTING
1	OW1	ADD NEW POLE AND FIXTURE	18' AFG
1	SB1	REPLACE EXISTING FIXTURE	MATCH EXISTING
1	SG1	REPLACE EXISTING FIXTURE	MATCH EXISTING
6	SJ1	REPLACE EXISTING FIXTURE	MATCH EXISTING
2	SK1	REPLACE EXISTING FIXTURE	MATCH EXISTING
2	SK2	ADD NEW FIXTURE	11' - 6" AFG
5	UU1	REPLACE EXISTING FIXTURE	MATCH EXISTING CANOPY HEIGHT
3	UU2	ADD NEW FIXTURE	MATCH EXISTING CANOPY HEIGHT
2	WA1	REMOVE AND PATCH	-
4	WH1	REMOVE AND PATCH	-



OVERALL SITE PLAN
1/16" = 1'-0"



- BLUE = NEW FIXTURE
- GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED
- ORANGE = EXISTING FIXTURE LOCATION TO REMAIN
- TURQUOISE = FIXTURE TO BE REMOVED
- PINK = REPLACE WITH NEW POLE AT NEW HEIGHT
- = PROPERTY LINE BASED ON COUNTY APPRAISAL INFORMATION
- = INDICATES NEW SECURITY FENCE
- = BURIED ELECTRICAL CIRCUIT



v3 250307

REVISION NO.	DESCRIPTION	REVISED BY



Ypsilanti Township
MI8-166
2250 W Michigan Ave,
Ypsilanti, MI 48197

OVERALL SITE PLAN

DESIGNED BY:	GJS	DRAWN BY:	GJS
REVIEWED BY:	AWD	APPROVED BY:	KRM
SHEET NO.	LU-3		

THIS LIGHTING PLAN ILLUSTRATES ILLUMINATE LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICAN (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.



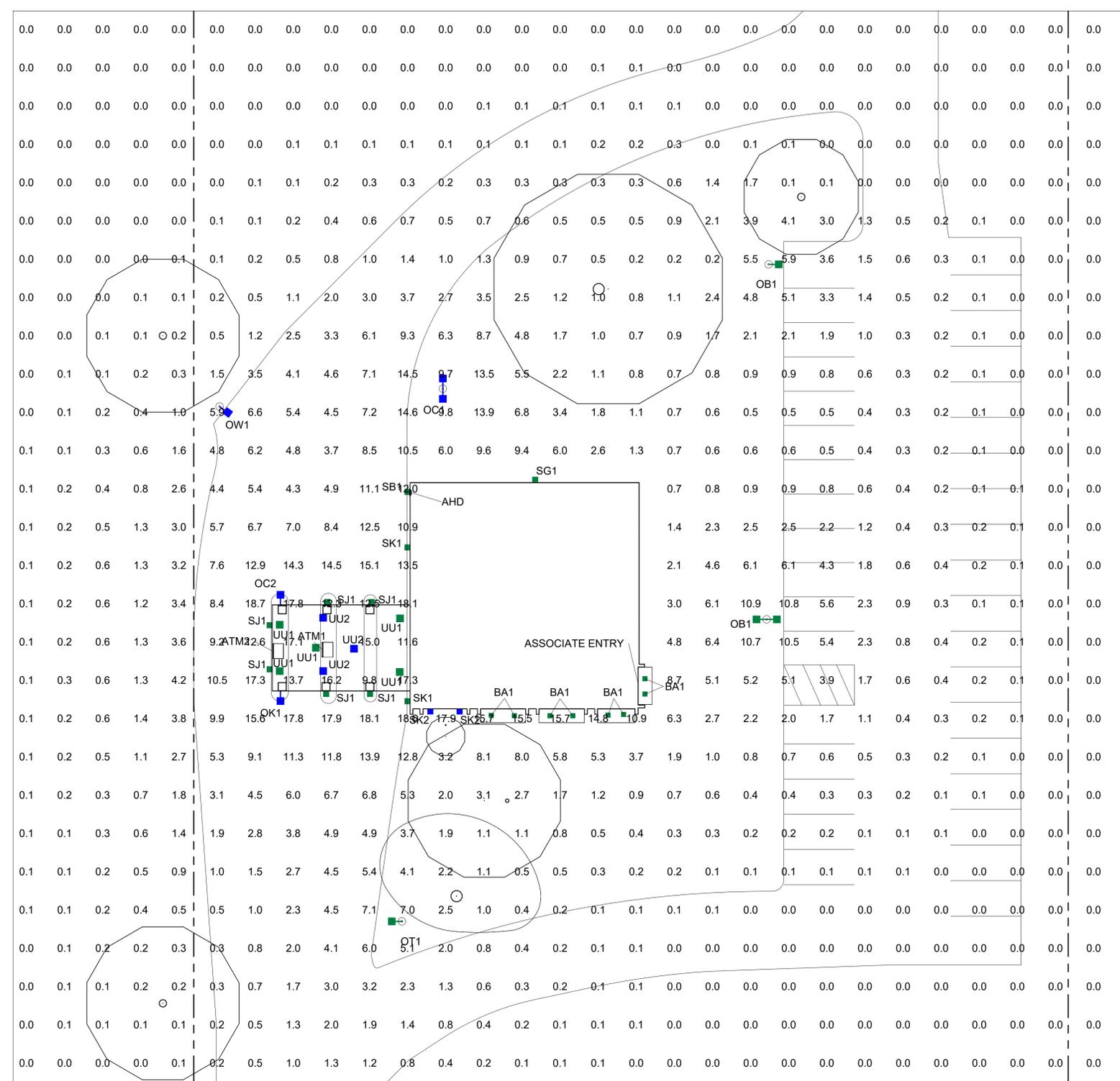
- BLUE = NEW FIXTURE
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Ellsworth Rd

S Hewitt Rd

W Michigan Ave



FULL SITE PHOTOMETRICS PLAN
1/16" = 1'-0"

- NOTES:
1. THE SCOPE OF WORK FOR THIS PROJECT IS LIMITED TO EXTERIOR LIGHTING RENOVATIONS AS SHOWN ON THE PLANS.
 2. ALL PROPOSED LIGHTS WILL BE FULL CUTOFF LED LIGHT FIXTURES.
 3. ALL EXISTING LIGHTS WILL BE REPLACED WITH FULL CUT OFF LED LIGHT FIXTURES.
 4. REFERENCE THE LUMINAIRE SCHEDULE (SHEET LU-2) FOR ADDITIONAL LIGHT FIXTURE INFORMATION.

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Ypsilanti Township
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FULL SITE PHOTOMETRICS PLAN

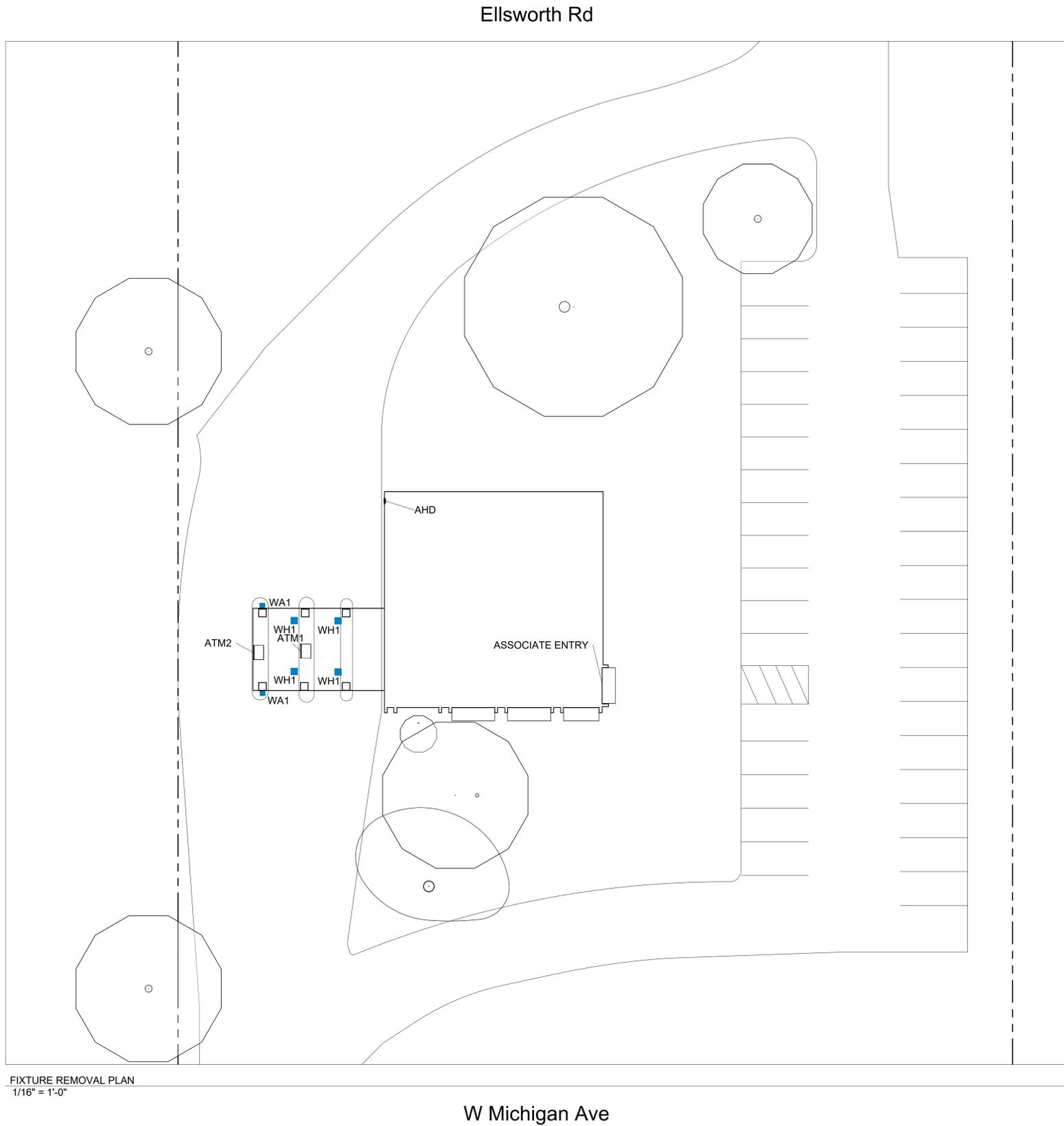
DESIGNED BY:	GJS	DRAWN BY:	GJS
REVIEWED BY:	AWD	APPROVED BY:	KRM

SHEET NO. LU-4

CALCULATION SUMMARY FULL SITE					
Calculation Points Name	Average	Maximum	Minimum	Ave/Min	Max/Min
CANOPY @ GRADE	14.5 fc	19.3 fc	8.6 fc	1.7	2.2
FULL SITE @ GRADE	1.9 fc	18.7 fc	0.0 fc	0.0	0.0

THIS LIGHTING PLAN ILLUSTRATES ILLUMINATE LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICAN (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.

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1	OC2	ADD NEW FIXTURE	18' AFG
1	OK1	ADD NEW FIXTURE	18' AFG
1	OT1	REPLACE EXISTING FIXTURE	MATCH EXISTING
1	OW1	ADD NEW POLE AND FIXTURE	18' AFG
1	SB1	REPLACE EXISTING FIXTURE	MATCH EXISTING
1	SG1	REPLACE EXISTING FIXTURE	MATCH EXISTING
6	SJ1	REPLACE EXISTING FIXTURE	MATCH EXISTING
2	SK1	REPLACE EXISTING FIXTURE	MATCH EXISTING
2	SK2	ADD NEW FIXTURE	11' - 6" AFG
5	UU1	REPLACE EXISTING FIXTURE	MATCH EXISTING CANOPY HEIGHT
3	UU2	ADD NEW FIXTURE	MATCH EXISTING CANOPY HEIGHT
2	WA1	REMOVE AND PATCH	-
4	WH1	REMOVE AND PATCH	-



FIXTURE REMOVAL PLAN
1/16" = 1'-0"



- BLUE = NEW FIXTURE
- GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED
- ORANGE = EXISTING FIXTURE TO REMAIN
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2250 W Michigan Ave,
Ypsilanti, MI 48197

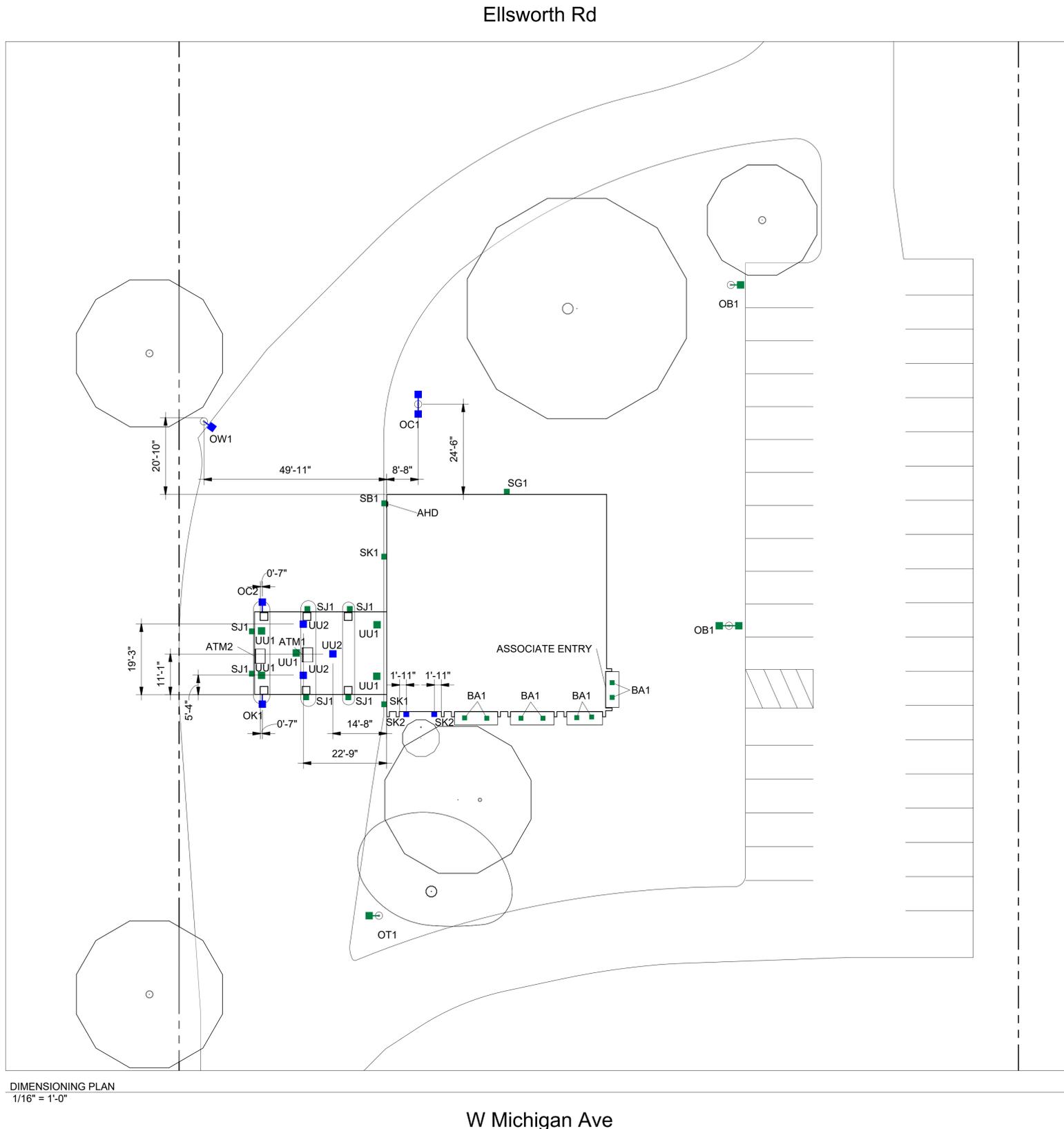
FIXTURE REMOVAL PLAN

DESIGNED BY:	GJS	DRAWN BY:	GJS
REVIEWED BY:	AWD	APPROVED BY:	KRM

SHEET NO. LU-5

THIS LIGHTING PLAN ILLUSTRATES ILLUMINATE LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICAN (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.

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1	OC2	ADD NEW FIXTURE	18' AFG
1	OK1	ADD NEW FIXTURE	18' AFG
1	OT1	REPLACE EXISTING FIXTURE	MATCH EXISTING
1	OW1	ADD NEW POLE AND FIXTURE	18' AFG
1	SB1	REPLACE EXISTING FIXTURE	MATCH EXISTING
1	SG1	REPLACE EXISTING FIXTURE	MATCH EXISTING
6	SJ1	REPLACE EXISTING FIXTURE	MATCH EXISTING
2	SK1	REPLACE EXISTING FIXTURE	MATCH EXISTING
2	SK2	ADD NEW FIXTURE	11' - 6" AFG
5	UU1	REPLACE EXISTING FIXTURE	MATCH EXISTING CANOPY HEIGHT
3	UU2	ADD NEW FIXTURE	MATCH EXISTING CANOPY HEIGHT
2	WA1	REMOVE AND PATCH	-
4	WH1	REMOVE AND PATCH	-



DIMENSIONING PLAN
1/16" = 1'-0"



- BLUE = NEW FIXTURE
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REVISION NO.	DESCRIPTION	REVISED BY



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MI8-166
2250 W Michigan Ave,
Ypsilanti, MI 48197

DIMENSIONING PLAN

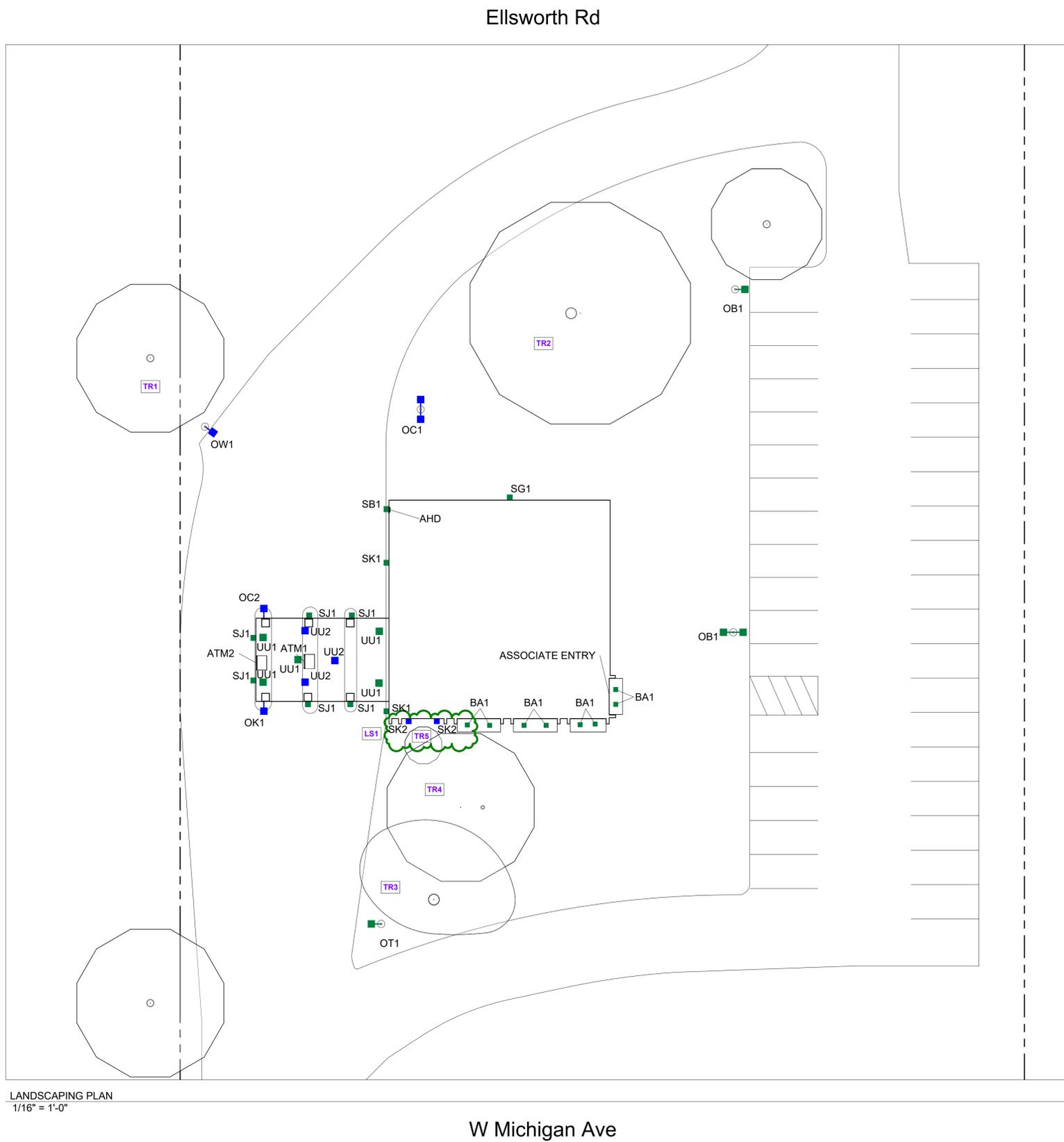
DESIGNED BY:	GJS	DRAWN BY:	GJS
REVIEWED BY:	AWD	APPROVED BY:	KRM

SHEET NO. LU-6

THIS LIGHTING PLAN ILLUSTRATES ILLUMINATE LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICAN (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.



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- = PROPERTY LINE BASED ON COUNTY APPRAISAL INFORMATION
- = INDICATES NEW SECURITY FENCE
- = BURIED ELECTRICAL CIRCUIT



LANDSCAPING PLAN
1/16" = 1'-0"

v3 250307

REVISION NO.	DESCRIPTION	REVISED BY



Ypsilanti Township
MI8-166
2250 W Michigan Ave,
Ypsilanti, MI 48197

LANDSCAPING PLAN

DESIGNED BY:	GJS	DRAWN BY:	GJS
REVIEWED BY:	AWD	APPROVED BY:	KRM
SHEET NO.:	LU-7		

LANDSCAPING SCHEDULE

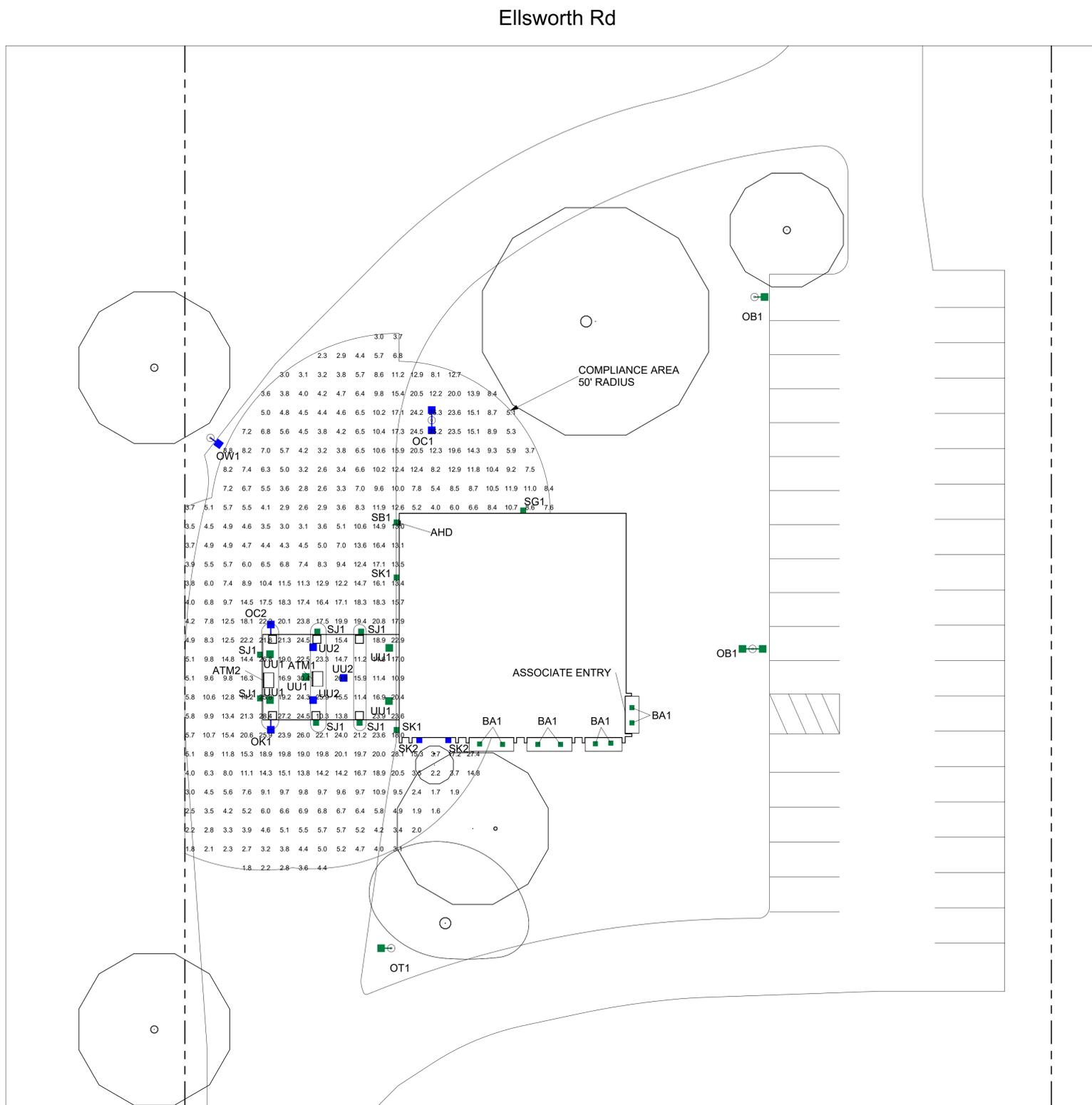
SYMBOL	QTY	NOTE
LS1	1	TRIM LANDSCAPING DOWN TO 36"
TR1	1	TRIM TREE UP TO 12' AND THIN OUT TREE CANOPY AND AWAY FROM LIGHT FIXTURE TO ENSURE THAT IT DOES NOT INTERFERE WITH INTENDED ILLUMINATION
TR2	1	TRIM TREE UP TO 25' AND THIN OUT TREE CANOPY
TR3	1	TRIM TREE UP TO 20' AND THIN OUT TREE CANOPY AND AWAY FROM LIGHT FIXTURE TO ENSURE THAT IT DOES NOT INTERFERE WITH INTENDED ILLUMINATION
TR4	1	TRIM TREE UP TO 20' AND THIN OUT TREE CANOPY
TR5	1	TRIM TREE UP TO 6' AND THIN OUT TREE CANOPY AND AWAY FROM LIGHT FIXTURE TO ENSURE THAT IT DOES NOT INTERFERE WITH INTENDED ILLUMINATION

GC TO VERIFY WITH LOCAL AUTHORITY HAVING JURISDICTION ON TREE TRIMMING AND/OR REMOVAL PRIOR TO COMMENCING WORK

THIS LIGHTING PLAN ILLUSTRATES ILLUMINATE LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICAN (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.



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- PINK = REPLACE WITH NEW POLE AT NEW HEIGHT
- = PROPERTY LINE BASED ON COUNTY APPRAISAL INFORMATION
- = INDICATES NEW SECURITY FENCE
- = BURIED ELECTRICAL CIRCUIT



ATM COMPLIANCE AREA PHOTOMETRICS PLAN
1/16" = 1'-0"

W Michigan Ave

S Hewitt Rd

v3 250307

REVISION NO.	DESCRIPTION	REVISED BY



Ypsilanti Township
MI8-166
2250 W Michigan Ave,
Ypsilanti, MI 48197

ATM COMPLIANCE
AREA PHOTOMETRICS PLAN

DESIGNED BY:	GJS	DRAWN BY:	GJS
REVIEWED BY:	AWD	APPROVED BY:	KRM

SHEET NO. LU-8

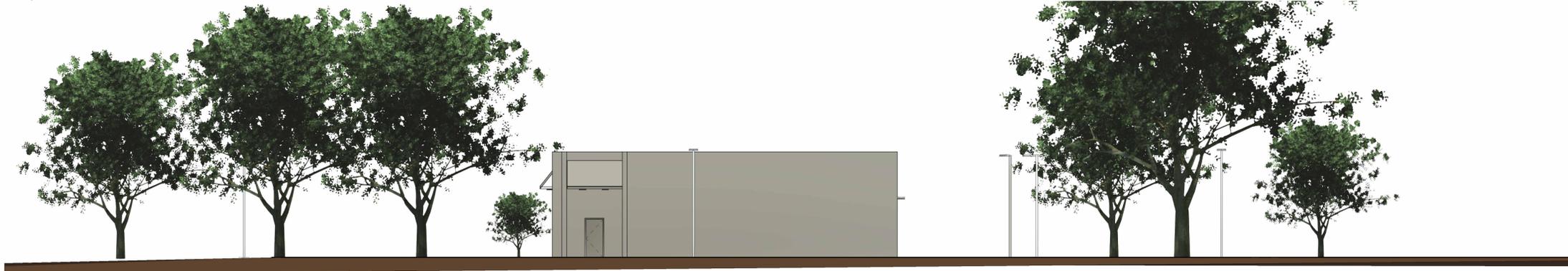
- NOTES:
1. READINGS ARE MEASURED AT 36" (3') ABOVE GRADE.
 2. THE SCOPE OF WORK FOR THIS PROJECT IS LIMITED TO EXTERIOR LIGHTING RENOVATIONS AS SHOWN ON THE PLANS.
 3. REFERENCE THE LUMINAIRE SCHEDULE FOR ADDITIONAL LIGHT FIXTURE INFORMATION.
 4. GC TO VERIFY WITH LOCAL AUTHORITY HAVING JURISDICTION ON TREE TRIMMING AND/OR REMOVAL PRIOR TO COMMENCING WORK.

THIS LIGHTING PLAN ILLUSTRATES ILLUMINATE LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICAN (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.

CALCULATION SUMMARY COMPLIANCE					
Calculation Points Name	Average	Maximum	Minimum	Ave/Min	Max/Min
ALL UNITS 50' @ 36"	10.5 fc	30.4 fc	1.6 fc	6.5	18.9



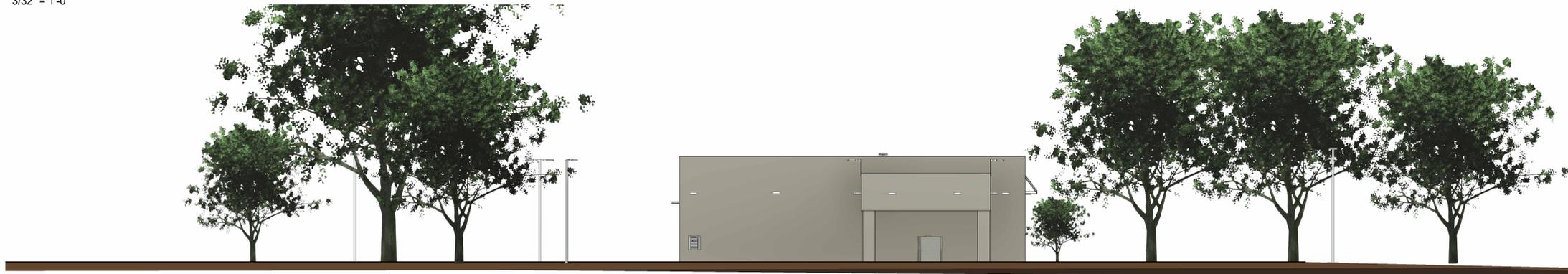
ELEVATION 1
3/32" = 1'-0"



ELEVATION 2
3/32" = 1'-0"



ELEVATION 3
3/32" = 1'-0"



ELEVATION 4
3/32" = 1'-0"

v3 250307

REVISION NO.	DESCRIPTION	REVISED BY



Ypsilanti Township
MI8-166
2250 W Michigan Ave,
Ypsilanti, MI 48197

ELEVATIONS

DESIGNED BY:	GJS	DRAWN BY:	GJS
REVIEWED BY:	AWD	APPROVED BY:	KRM

SHEET NO.
LU-9

Product Specifications

SMARTCAST® TECHNOLOGY

SmartCast® Technology is the most intuitive and easiest to install intelligent light solution on the market. SmartCast Technology delivers up to 70% energy savings at up to half the cost of other solutions. Luminaires combine best-in-class light with onboard sensors and intelligence to deliver a better light experience. Extreme energy productivity, code compliance and a better light experience without any extra design, installation or setup work.

CONSTRUCTION & MATERIALS

- Durable 22 ga. cold rolled steel housing provides strength and uniformity
- Ultra-thin luminaire height and lightweight design effectively target a broad range of plenum spaces and allow for easy installations
- Luminaire is pre-painted for enhanced matte finish
- Includes integrated hooks for mounting to t-bar, and cable slots for suspended mounting
- Luminaire sides and ends are hemmed in for safe, easy handling
- Room-side accessible/removable lens snaps and locks into end caps for tool-less entry
- Not for installation within 3" (76mm) of insulation
- **Weight:** Refer to table on pages 1 and 6

OPTICAL SYSTEM

- Unique luminaire design creates perfect balance of both horizontal and vertical illumination
- Optimized smooth acrylic lens eliminates pixelation and delivers a low-glare, diffused light distribution
- Additional diffuser options available. Refer to Inner Optic Overlay Diffuser Accessories table on page 6 for additional detail

ELECTRICAL SYSTEM

- **Power Factor:** >90% at full load
- **Input Power:** Stays constant over life
- **Input Voltage:** 120-277V or 347V, 50/60Hz. 347V w/ LDE1 is 60Hz only
- **Operating Temperature Range:** 0°C - + 35°C (32°F - + 95°F)
- **Total Harmonic Distortion:** <20% at full load

10V DIMMING AND CONTROL

- 10V5 option provides continuous dimming to 5% with 0-10V DC control protocol
- **Maximum 10V Source Current:** 0.45mA
- For use with Class 2 dimming systems only
- Use only lighting controls with neutral connection or controls intended for use with LED fixtures
- Reference <https://cree.widen.net/s/2b8dlcwsq/cr-flex-zr-cs-ln-ls-ur-stylus-series-control-options-dimming-specsheet> for recommended dimming controls and wiring diagrams

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed (UL1598)
- Suitable for damp locations
- Designed for indoor use only
- Requires minimum 90°C supply conductors
- Drivers and LEDs are UL Recognized in accordance with UL8750
- Meets NEMA C82.77 standards
- UL924 (EB Option) Maximum mounting height: 15.0' (4.6m)
- EB option meets CA Title 20 Appliance Regulations
- RoHS compliant. Consult factory for additional details
- Meets FCC Part 15, Subpart B, Class A limits for conducted and radiated emissions
- Assembled in the USA by Cree Lighting from US and imported parts
- Meets Buy American requirements within ARRA

CA RESIDENTS WARNING: Cancer and Reproductive Harm - www.p65warnings.ca.gov

SmartCast® Technology

INTEGRAL MOTION SENSOR

- Passive infrared (PIR)
- **Coverage area:** Please refer to the PIR motion sensor coverage table
- Not intended to be mounted higher than 20 ft.
- **Operation:**
 - Grouped with a wall control: Luminaire will operate in vacancy mode (manual-on/auto-off)
 - Not grouped with a wall control: Luminaire will operate in occupancy mode (auto-on/auto-off)
- Luminaires operate at full intensity until OneButton™ Setup is initiated by the Cree Configuration Tool

AMBIENT LIGHT SENSOR

- Sensor response matches response of human eye
- Not intended to be mounted higher than 20 ft. (6.1m)
- Luminaires operate at full intensity until OneButton™ Setup is initiated by the Cree Configuration Tool
- Daylight harvesting calibration performed automatically during OneButton™ Setup

INTEGRAL WIRELESS COMMUNICATION

- 2.4GHz wireless mesh technology with AES 128-bit encryption
- Self assigns to quietest channel during OneButton™ Setup
- **Range:**
 - 30 ft. (9.1m) in typical commercial applications
 - 300 ft. (91.4m) open air without obstructions
- **Network:** 250 devices max.
- **Space:** 100 devices max. per group
- FCC and IC certifications

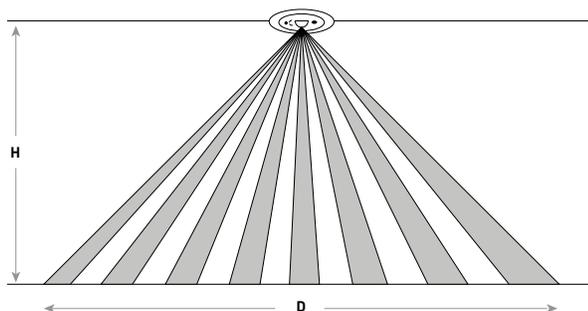
LUMINAIRE

- Energy metering with 4% accuracy
- Luminaires operate at full intensity until OneButton™ Setup is initiated by the Cree Configuration Tool
- 10 year power fail memory of settings
- **NOTE:** SmartCast luminaires must be installed on unswitched AC power. Constant power is required to maintain all luminaires on the SmartCast network. If wall control or manual dimming is required, a SmartCast wall control dimmer must be used for manual on, off, and dimming.

DEPLOYMENT

- Please refer to the SmartCast® Deployment Guide at <https://cree.widen.net/s/mvxtfd2pcz/smartcastr-wireless-deployment-guide>

PIR Motion Sensor Coverage



Mounting Height - H (Feet)	Motion Sensor Coverage Diameter - D (Feet)		
	Sensitivity - High (Default)	Sensitivity - Medium	Sensitivity - Low
10	20	10	8
12	26	14	12
14	28	15	13
20	38	Not Recommended	Not Recommended

ZR14™, ZR22™, and ZR24™ LED Troffers - Version D

Delivered Lumens & Electrical Data																										
Size	Lumen Package	Initial Delivered Lumens	10V5 Control												SC1, VDO, VRF, LDE1 Controls											
			Wattage		Current [A]					EB Wattage	EB Current [A]				Wattage		Current [A]					EB Wattage	EB Current [A]			
			120-277V	120-347V	120V	208V	240V	277V	347V	120-277V	120V	208V	240V	277V	120-277V	347V	120V	208V	240V	277V	347V	120-277V	120V	208V	240V	277V
2x2	26L	2,600	18	N/A	0.17	0.10	0.08	0.07	N/A	21	0.19	0.11	0.09	0.08	18	21	0.17	0.10	0.08	0.07	0.06	21	0.19	0.11	0.09	0.08
1x4, 2x2, 2x4	30L	3,000	21	N/A	0.19	0.11	0.09	0.08	N/A	24	0.22	0.12	0.11	0.09	21	24	0.19	0.11	0.09	0.08	0.07	24	0.22	0.12	0.11	0.09
1x4, 2x2, 2x4	40L	4,000	27	27	0.24	0.14	0.12	0.10	0.09	30	0.27	0.15	0.13	0.11	27	29	0.24	0.14	0.12	0.10	0.09	30	0.27	0.15	0.13	0.11
1x4, 2x2, 2x4	50L	5,000	35	35	0.31	0.18	0.15	0.13	0.12	38	0.34	0.19	0.17	0.14	35	38	0.31	0.18	0.15	0.13	0.12	38	0.34	0.19	0.17	0.14
1x4, 2x4	60L	6,000	42	42	0.37	0.21	0.18	0.16	0.14	45	0.39	0.23	0.20	0.17	42	44	0.37	0.21	0.18	0.16	0.14	45	0.39	0.23	0.20	0.17
2x4	70L	7,000	47	47	0.41	0.24	0.20	0.17	0.15	50	0.44	0.25	0.21	0.19	47	49	0.41	0.24	0.20	0.17	0.15	50	0.44	0.25	0.21	0.19
2x4	80L	8,000	54	54	0.47	0.27	0.23	0.20	0.18	57	0.49	0.29	0.25	0.21	54	57	0.47	0.27	0.23	0.20	0.18	57	0.49	0.29	0.25	0.21
2x4	100L	10,000	67	67	0.58	0.34	0.29	0.25	0.22	69	0.61	0.35	0.30	0.26	67	70	0.58	0.34	0.29	0.25	0.22	69	0.61	0.35	0.30	0.26

* Electrical data at 25°C (77°F). Actual wattage and lumens may differ by +/- 10% when operating between 120-277V, 120-347V or 347V +/- 10%.

ZR Series Ambient Adjusted Lumen Maintenance ¹					
Ambient	Initial LMF	25K hr Reported ² LMF	50K hr Reported ² LMF	75K hr Estimated ³ LMF	100K hr Estimated ³ LMF
0°C (32°F)	1.04	0.99	0.95	0.91	0.87
5°C (41°F)	1.04	0.99	0.95	0.91	0.87
10°C (50°F)	1.03	0.98	0.94	0.90	0.86
15°C (59°F)	1.02	0.97	0.93	0.89	0.85
20°C (68°F)	1.01	0.96	0.92	0.88	0.85
25°C (77°F)	1.00	0.95	0.91	0.87	0.84
30°C (86°F)	0.99	0.93	0.89	0.85	0.81
35°C (95°F)	0.98	0.91	0.86	0.82	0.77

¹ Lumen maintenance values at 25°C (77°F) are calculated per IES TM-21 based on IES LM-80 report data for the LED package and in-situ luminaire testing. Luminaire ambient temperature factors (LATF) have been applied to all lumen maintenance factors.

² In accordance with IES TM-21, Reported values represent interpolated values based on time durations that are up to 6x the tested duration in the IES LM-80 report for the LED.

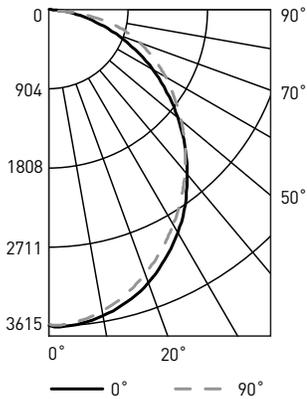
³ Estimated values are calculated and represent time durations that exceed the 6x test duration of the LED.

Delivered Emergency Lumens	
Lumen Package	Approximate Delivered Emergency Lumens
26L	1,440
30L	1,430
40L	1,480
50L	1,430
60L	1,430
70L	1,490
80L	1,480
100L	1,490

Photometry

FLX24-100L-930-ARC-10V1-UNV BASED ON RESTL REPORT TEST #: PL16330-001A

Luminaire photometry has been conducted in accordance with IES LM-79. IES LM-79 specifies the entire luminaire as the source resulting in a luminaire efficiency of 100%.



Coefficients Of Utilization - Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	108	103	99	95
2	98	90	83	77
3	90	79	71	64
4	82	70	61	54
5	76	63	54	47
6	70	56	47	41
7	65	51	42	36
8	60	47	38	32
9	56	43	35	29
10	53	40	32	27

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m ²)			
Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	4,495	4,373	4,454
55°	4,145	4,133	4,377
65°	3,739	4,003	4,497
75°	3,110	4,066	4,960
85°	2,061	4,185	5,209

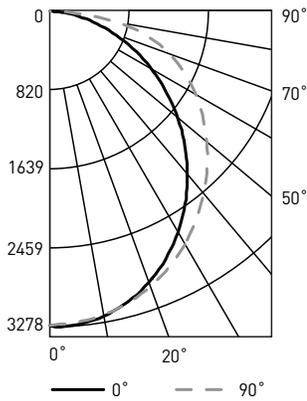
Reference <https://www.creelighting.com/products/indoor/troffers/zr-series> for detailed photometric data.

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	2,697	N/A	28.0%
0-40	4,338	N/A	45.0%
0-60	7,468	N/A	77.5%
0-90	9,641	N/A	100%
0-180	9,641	N/A	100%

Photometry

FLX24-100L-930-CRV-10V1-UNV BASED ON RESTL REPORT TEST #: PL16304-001A

Luminaire photometry has been conducted in accordance with IES LM-79. IES LM-79 specifies the entire luminaire as the source resulting in a luminaire efficiency of 100%.



Coefficients Of Utilization – Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	108	103	98	94
2	98	89	82	75
3	89	78	69	62
4	81	69	59	52
5	74	61	52	45
6	69	55	46	39
7	64	50	41	35
8	59	45	37	31
9	55	42	33	28
10	52	38	30	25

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m ²)			
Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	4,051	4,341	4,714
55°	3,738	4,292	4,892
65°	3,377	4,409	5,313
75°	2,846	4,804	6,064
85°	2,059	5,089	5,578

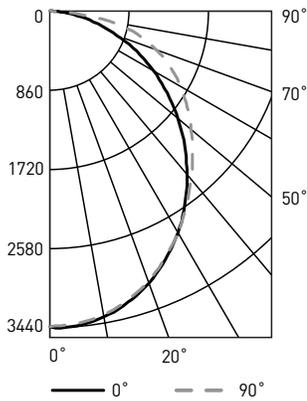
Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	2,496	N/A	25.9%
0-40	4,070	N/A	42.3%
0-60	7,216	N/A	74.9%
0-90	9,631	N/A	100%
0-180	9,631	N/A	100%

Reference <https://www.creelighting.com/products/indoor/troffers/zr-series> for detailed photometric data.

Photometry

FLX24-100L-930-SQ-10V1-UNV BASED ON RESTL REPORT TEST #: PL16329-001B

Luminaire photometry has been conducted in accordance with IES LM-79. IES LM-79 specifies the entire luminaire as the source resulting in a luminaire efficiency of 100%.



Coefficients Of Utilization – Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	108	103	99	95
2	98	89	82	76
3	89	78	70	63
4	82	69	60	53
5	75	62	53	46
6	69	56	47	40
7	64	51	42	35
8	60	46	38	32
9	56	42	34	28
10	52	39	31	26

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m ²)			
Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	4,246	4,346	4,498
55°	3,927	4,244	4,604
65°	3,565	4,284	4,955
75°	3,011	4,478	5,512
85°	2,030	4,015	4,278

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	2,596	N/A	27.0%
0-40	4,192	N/A	43.6%
0-60	7,322	N/A	76.2%
0-90	9,610	N/A	100%
0-180	9,610	N/A	100%

Reference <https://www.creelighting.com/products/indoor/troffers/zr-series> for detailed photometric data.

Application Reference

Open Space						
Spacing	Lumen Package	Initial Delivered Lumens	Wattage	LPW	w/ft ²	Average fc
8 x 8	26L	2,600	18	144	0.27	36
	30L	3,000	21	143	0.32	42
	40L	4,000	27	148	0.41	56
	50L	5,000	35	143	0.53	70
8 x 10	26L	2,600	18	144	0.23	30
	30L	3,000	21	143	0.26	35
	40L	4,000	27	148	0.34	47
	50L	5,000	35	143	0.44	58
10 x 10	26L	2,600	18	144	0.18	24
	30L	3,000	21	143	0.21	28
	40L	4,000	27	148	0.27	37
	50L	5,000	35	143	0.35	47
10 x 12	26L	2,600	18	144	0.14	19
	30L	3,000	21	143	0.17	22
	40L	4,000	27	148	0.22	30
	50L	5,000	35	143	0.28	37

10' ceiling: 80/50/20 reflectances; 2.5' workplane, open room. LLF: 1.0 Initial
 Open Space: 50' x 40' x 10
 Applies to AC, CV and SQ lenses.

Application Reference

Open Space						
Spacing	Lumen Package	Initial Delivered Lumens	Wattage	LPW	w/ft ²	Average fc
8 x 8	60L	6,000	42	143	0.63	56
	70L	7,000	47	149	0.71	65
	80L	8,000	54	148	0.81	74
	100L	10,000	67	149	1.01	93
	100L	10,000	67	149	1.01	93
8 x 10	60L	6,000	42	143	0.53	46
	70L	7,000	47	149	0.59	54
	80L	8,000	54	148	0.68	61
	100L	10,000	67	149	0.84	77
	100L	10,000	67	149	0.84	77
10 x 10	60L	6,000	42	143	0.42	37
	70L	7,000	47	149	0.47	43
	80L	8,000	54	148	0.54	49
	100L	10,000	67	149	0.67	62
	100L	10,000	67	149	0.67	62
10 x 12	60L	6,000	42	143	0.34	29
	70L	7,000	47	149	0.38	34
	80L	8,000	54	148	0.43	39
	100L	10,000	67	149	0.54	49
	100L	10,000	67	149	0.54	49

25' ceiling: 80/50/20 reflectances; 2.5' workplane, open room. LLF: 1.0 Initial
 Open Space: 50' x 40' x 10
 Applies to AC, CV and SQ lenses.

Lens Images



CV

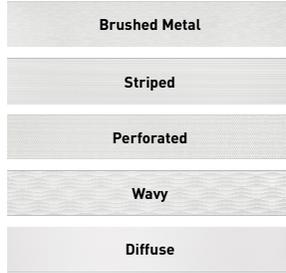
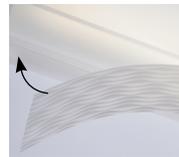


AR



SQ

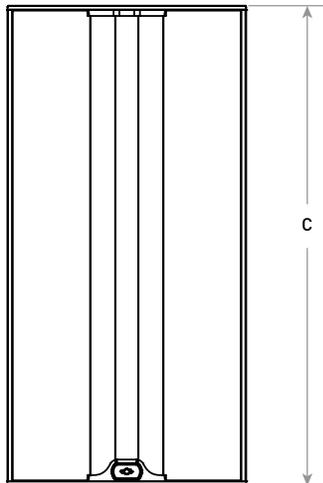
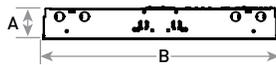
Inner Optic Overlay Diffuser Accessories



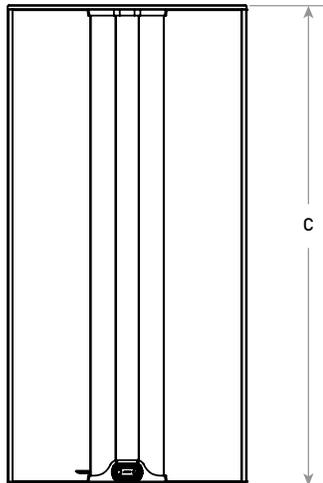
Inner Optic Overlay Diffuser Accessories (for use with AR Lens only)

Field-Installed	
For use with 10V5 and LDE1	
Wavy Inner Optic Diffuser, 10-Pack FLX-WVD-4 (1x4 & 2x4 luminaires) FLX-WVD-2 (2x2 luminaires)	
Perforated Inner Optic Diffuser, 10-Pack FLX-PFD-4 (1x4 & 2x4 luminaires) FLX-PFD-2 (2x2 luminaires)	
Diffuse Inner Optic, 10-Pack FLX-STD-4 (1x4 & 2x4 luminaires) FLX-STD-2 (2x2 luminaires)	
Brushed Metal Inner Optic Diffuser, 10-Pack FLX-BMD-4 (1x4 & 2x4 luminaires) FLX-BMD-2 (2x2 luminaires)	
Striped Inner Optic Diffuser, 10-Pack FLX-STRD-4 (1x4 & 2x4 luminaires) FLX-STRD-2 (2x2 luminaires)	
Sample Inner Optic Diffuser Kit FLX-SMPL-4 (1x4 & 2x4 luminaires) FLX-SMPL-2 (2x2 luminaires) - Includes one of each optic overlay diffuse accessory (wavy, perforated, diffuse, brushed metal and striped)	
For use with SC1, VDO, and VRF Controls	
Wavy Inner Optic Diffuser, 10-Pack FLX-SCLV-WVD-4 (1x4 & 2x4 luminaires) FLX-SCLV-WVD-2 (2x2 luminaires)	
Perforated Inner Optic Diffuser, 10-Pack FLX-SCLV-PFD-4 (1x4 & 2x4 luminaires) FLX-SCLV-PFD-2 (2x2 luminaires)	
Diffuse Inner Optic, 10-Pack FLX-SCLV-STD-4 (1x4 & 2x4 luminaires) FLX-SCLV-STD-2 (2x2 luminaires)	
Brushed Metal Inner Optic Diffuser, 10-Pack FLX-SCLV-BMD-4 (1x4 & 2x4 luminaires) FLX-SCLV-BMD-2 (2x2 luminaires)	
Striped Inner Optic Diffuser, 10-Pack FLX-SCLV-STRD-4 (1x4 & 2x4 luminaires) FLX-SCLV-STRD-2 (2x2 luminaires)	

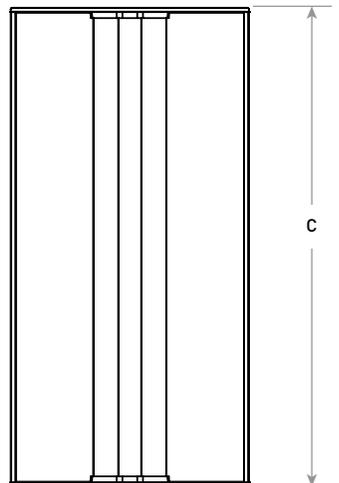
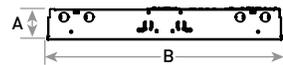
SC1 SMARTCAST® TECHNOLOGY CONTROL



VDO/VRF CONTROLS



LDE1 CONTROL



SC1, VDO, VRF, LDE1 Dimensions						
	DIM "A"	DIM "A" w/EB	DIM "B"	DIM "C"	Weight	Weight w/EB
1x4	4.0" [101mm]	4.0" [101mm]	11.7" [298mm]	47.7" [1213mm]	11.0 lbs. [5.0kg]	16.0 lbs. [7.3kg]
2x2	4.0" [101mm]	3.3" [84mm]	23.7" [603mm]	23.8" [604mm]	9.0 lbs. [4.1kg]	14.0 lbs. [6.4kg]
2x4	4.0" [101mm]	3.3" [84mm]	23.7" [603mm]	47.7" [1213mm]	15.0 lbs. [6.8kg]	20.0 lbs. [9.1kg]