



SHADY SHORES TOWN COUNCIL
SPECIAL CALLED WORKSESSION
FEBRUARY 14, 2022; 6:00 PM
101 S.SHADY SHORES ROAD
SHADY SHORES, TX 76208

AGENDA

TO VIEW THE MEETING LIVE
<https://shadyshorestx.civicclerk.com/>

CALL TO ORDER

ROLL CALL

COUNCIL WORKSESSION

1. Worksession Discussion Items

A) Police Contract- Consider and discuss approval of renewal of the Contract for Patrol Services with the City of Corinth.

B) Street Light- Receive a presentation from Town Engineer Richard Arvizu relative to the placement and cost of streetlight for the Town of Shady Shores.

FUTURE AGENDA ITEMS AND STAFF DIRECTION

ADJOURN

The Town Council reserves the right to adjourn into closed session at any time during the course of this meeting to discuss any of the matters listed on this agenda, as authorized by Texas Government Code Section 551.071 (Consultation with Attorney), 551.072 (Deliberation about Real Property), 551.073 (Deliberation about Gifts and Donations), 551.074 (Personnel Matters), 551.076 (Deliberations about Security Devices), and 551.087 (Economic Development).

I, Cindy Aughinbaugh, Mayor of the Town of Shady Shores do hereby certify that the above notice of the Regular Town Council Meeting was posted on the bulletin board at the Community Center, 101 S. Shady Shores Road, Shady Shores, Texas on _____ Day of _____ 2022, at _____ .M.

Cindy Aughinbaugh, Mayor



AGENDA MEMORANDUM

DATE: February 14, 2022
TO: Town Council
FROM: Wendy withers, Town Administrator
SUBJECT: Worksession Discussion Items

BACKGROUND/INFORMATION:

FINANCIAL IMPLICATIONS:

RECOMMENDATION/ACTION DESIRED:

ATTACHMENTS/SUPPORTING DOCUMENTATION:

None

REVIEWED BY:



AGENDA MEMORANDUM

DATE: February 14, 2022
TO: Town Council
FROM: Wendy withers, Town Administrator
SUBJECT: Police Contract- Consider and discuss approval of renewal of the Contract for Patrol Services with the City of Corinth.

BACKGROUND/INFORMATION:

The Town of Shady Shores has a current interlocal agreement for Police Patrol Services with the City of Corinth. The Shady Shores Town Council provided notice of intent to renew the current contract to the City of Corinth in October 2021 (**Resolution 2021-10-821**). The current contract for police patrol services expires on September 30, 2022. A worksession was conducted on February 14, 2022 to review and discuss the proposed contract. The proposed contract includes a proposal for the City of Corinth to provide Animal Control Services. The initial year one increase is equal to 8%, which is largely due to the addition of Animal Control Services. The yearly increase is fixed at 3.5% per year.

The current animal control contract with All American Dogs is \$16,954.

FINANCIAL IMPLICATIONS:

Fiscal Year	Cost (4 Quarterly Payments)
2022-2023	\$290,350
2023-2024	\$300,512
2024-2025	\$311,030
2025-2026	\$321,916
2026-2027	\$333,183

RECOMMENDATION/ACTION DESIRED:

ATTACHMENTS/SUPPORTING DOCUMENTATION:

1. DRAFT RENEWAL CONTRACT 1.7.2022

REVIEWED BY:

INTERLOCAL COOPERATION AGREEMENT FOR LAW ENFORCEMENT SERVICES

THIS AGREEMENT (hereinafter the "Agreement"), is made and entered into by the City of Corinth, Texas, a municipal corporation, (hereinafter referred to as "Corinth"), and the Town of Shady Shores, Texas, a municipal corporation, (hereinafter referred to as "Shady Shores"), and collectively, "the Parties."

RECITALS

WHEREAS, Shady Shores is desirous of providing its residents and businesses with full-time law enforcement protection and services and has requested Corinth to provide law enforcement services; and

WHEREAS, Corinth is desirous of furnishing full-time law enforcement protection and services to Shady Shores; and

WHEREAS, the parties desire to enter into this Agreement to provide law enforcement protection and services for both communities in accordance with the terms and conditions set forth herein; and

WHEREAS, all payments to be made hereunder shall be made from current revenues available to the paying party; and

WHEREAS, the parties have concluded that this Agreement fairly compensates the performing party for the services being provided hereunder and is in the best interest of each party; and

WHEREAS, this Agreement shall be in conformance with Chapter 791 of the Texas Government Code, more commonly known as the "Interlocal Cooperation Act;"

NOW, THEREFORE, IN CONSIDERATION OF THE MUTUAL PROMISES AND CONSIDERATION PROVIDED FOR HEREIN, THE RECEIPT AND SUFFICIENCY OF WHICH ARE HEREBY CONFIRMED, THE PARTIES AGREE AS FOLLOWS:

Section 1. Preamble. All matters stated above in the preamble are found to be true and correct and are incorporated herein by reference as if copied in their entirety.

Section 2. Term. This Agreement shall be for a term of five (5) years commencing on October 1, 2022 ("Effective Date") and ending at midnight on September 30, 2027. Notwithstanding anything herein to the contrary, however, this Agreement may be terminated pursuant to the provisions of Section 10.

Section 3. Scope of Services. Corinth agrees to provide Shady Shores the following equipment, services, personnel, and facilities (described below, hereinafter collectively referred to as "Police Services"):

(a) Provide one officer per shift and an adequate number of police patrol units to provide routine neighborhood patrol, patrol of business establishments, speed limit enforcement and traffic control on all roadways within Shady Shores, (the "Shady Shores District"), routine investigation services, and otherwise enforce the laws of the State of Texas and Shady Shores, in such a manner as to provide adequate police services considering factors such as, but not limited to, housing densities, commercial development, roadway conditions, and traffic flow. It is understood that (i) the officer assigned to the Shady Shores District may, from time to time, be required to respond to calls or otherwise provide services outside of the Shady Shores District and (ii) that, from time to time, an officer assigned to another district in Corinth may provide services in Shady Shores. The parties agree that the coverage described hereinabove constitutes adequate police services. The Shady Shores District is as designated within Corinth's District 3 as shown on the Corinth Police Department map.

(b) Answer and respond to calls for police assistance on a 24-hour basis.

(c) Arrange for and/or coordinate jail capacity and services for housing Shady Shores arrestees, including providing booking services.

(d) Provide all human resource services necessary for the recruitment, screening, employment, and training of all personnel required to provide services to Shady Shores, including providing all employee policies and procedures and the administration thereof.

(e) Provide all general and personal liability coverage necessary for the adequate protection of Corinth personnel providing police services to Shady Shores at the same level of protection afforded officers and employees while performing the same or similar duties in Corinth, provided however, that neither party shall be responsible for the other party's employee retirement and/or pension benefits. Corinth will also provide general and personal liability coverage for its Volunteers in Policing program for volunteers, (the "VIPs" program).

(f) Conduct all crime reporting and maintain Corinth's standard law enforcement activity reports/statistics pertinent to Shady Shores for the purpose of providing Shady Shores performance measures relating to services provided by Corinth in accordance with this Agreement.

(g) Give prompt consideration to all requests from Shady Shores routed through the Shady Shores Liaison or dispatch regarding the delivery of law enforcement services under this Agreement. Corinth will make every reasonable effort to comply with such requests so long as they are consistent with the law and the Policy Manual of the Corinth Police Department.

(h) Submit written reports of police activity within Shady Shores within thirty days for the services provided during the prior month.

(i) Provide citizens and/or residents of Shady Shores with the same access to Corinth's Police Chief, officers, and employees as is provided to Corinth's citizens and residents.

(j) Continue to provide the VIPs program in Shady Shores through the term of this Agreement, with volunteers selected from Shady Shores, as well as Corinth.

(k) Provide a bailiff for the monthly municipal court session at the Shady Shores Municipal Court. The bailiff will normally be an on-duty officer who may be dispatched to a call occurring during court proceedings, and will be absent on those occasions.

(l) Provide Animal Control Services for the Town of Shady Shores. The specifics of those services are as follows:

- (i) Corinth will provide trained animal control officers (ACOs), vehicle, equipment and materials to engage in preventive patrol in Shady Shores whenever they are on-duty in Corinth.
- (ii) Corinth ACOs will impound strays or return them to the owner, when possible, and will where appropriate issue summonses into Shady Shores Municipal Court for animal-related violations occurring in the town.
- (iii) ACOs will respond after normal work hours for uncontained vicious or injured animals in Shady Shores.
- (iv) ACOs will investigate, document, and where appropriate take enforcement action in animal bite incidents.
- (v) ACOs will provide field euthanasia when required.
- (vi) ACOs will loan humane traps for nuisance animals such as skunks, raccoons, opossums, and feral cats to the degree that such traps are available.
- (vii) ACOs will not be responsible for the trapping or eradication of such wildlife as coyotes, deer, pumas, and bobcats.
- (viii) ACOs will pick up or arrange pickup of animal carcasses reported on public roadways within Shady Shores. Very small animals such as squirrels, birds, and snakes will not be picked up.
- (ix) In addition to the cost contained in this general agreement, Shady Shores will be invoiced \$25 for each dog and \$15 for each cat brought to the Lake Dallas Animal Shelter by Corinth ACOs. Invoices will be provided to Shady Shores on a quarterly basis.
- (x) The Lake Dallas Animal shelter will be permitted to charge its customary fees to Shady Shores residents for animal impoundment, surrender, adoption, and release charges.
- (xi) Shady Shores will be invoiced quarterly by Corinth in the amount of \$50 for each animal placed on a ten-day rabies observation quarantine at the shelter.
- (xii) Shady Shores will be invoiced quarterly by Corinth in the amount of \$250 for each animal head that must be removed and shipped to the Texas Department of Health for rabies testing.
- (xiii) Corinth annually will provide a report to Shady Shores detailing animal services activity in the town by Corinth ACOs for the calendar year just ended.

Section 4. Liaison.

(a) The Chief of Police of Corinth or his or her designee shall act on behalf of Corinth and serve as "Police Liaison Officer" for Corinth. The Corinth Police Liaison Officer will make or receive requests and confer upon matters concerning the delivery of law enforcement services to Shady Shores. The Corinth Liaison Officer will devote sufficient time and attention to the execution of said duties and will provide immediate and direct supervision of the Corinth Police Department employees, agents, contractors, subcontractors, and/or laborers, if any, in the furtherance of the purposes, terms and conditions of this Agreement for the mutual benefit of Shady Shores and Corinth. The Corinth Liaison Officer will cause the Corinth Police Department to respond to any non-emergency inquiries from the Shady Shores Liaison within 24 hours from the receipt of inquiry or, if the request is made on a weekend or holiday, on the next business day.

(b) Shady Shores shall designate a liaison to act on behalf of Shady Shores, and to serve as "Shady Shores Liaison" for Shady Shores. The Shady Shores Liaison will devote sufficient time and attention on behalf of Shady Shores for the mutual benefit of Shady Shores and Corinth. Shady Shores will notify Corinth as to the designation of the Shady Shores Liaison for Shady Shores if the Shady Shores Liaison is a person other than the Mayor of Shady Shores. For routine inquiries, the Liaison shall phone the Corinth Police Department non-emergency line or email Corinth at the e-mail address furnished by the Corinth Chief of Police.

Section 5. Supervision. The Chief of Police for the Corinth Police Department will be solely responsible for the planning, organizing, assigning, directing and supervising the Corinth personnel under this Agreement. The rendition of service, the standard of performance, the discipline of officers, and other matters incident to the performance of such services and the control of personnel so employed will be solely determined, directed and performed by the Corinth Police Department; provided however, that the Corinth Police Department may consult with the Shady Shores Liaison or Mayor concerning such matters.

Section 6. Compensation.

(a) Shady Shores agrees to make Annual Payments to Corinth in payment for all Police Services provided by Corinth not otherwise specifically designated in this Agreement. The Annual Payment for October 1, 2022 through September 30, 2023 is \$290,350. Shady Shores shall make this payment in four equal installments with the first payment due on or before October 1, 2022, and the remaining payments for this year due on January 1, 2023, April 1, 2023 and July 1, 2023,

respectively. The remaining payment amounts for years two through five of this Agreement are as follows and shall be incorporated by reference herein: October 1, 2023 through September 30, 2024: \$300,512. October 1, 2024 through September 30, 2025: \$311,030. October 1, 2025 through September 30, 2026: \$321,916. October 1, 2026 through September 30, 2027: \$333,183. Payment amounts for years two through five shall also be made in four equal installments with the first payment due on or before October 1, January 1, April 1, and July 1 of each fiscal year.

(b) In addition to the Annual Payments, Shady Shores shall pay the following costs upon receipt of an invoice from Corinth:

(i) Any actual, out of pocket non-personnel costs, or personnel overtime, incurred by the Corinth Police Department in connection with any criminal matters associated with substantial, non-routine, major case investigations undertaken, for or within Shady Shores.

(ii) Pay any and all jail fees assessed for providing jail services associated with persons arrested pursuant to a warrant issued by Shady Shores Municipal Court, or persons arrested for class C misdemeanors for on-view offenses occurring in Shady Shores.

(iii) In the event Shady Shores specifically requests police overtime for any of the services described in Section 3(a) through (i), Shady Shores shall pay any overtime charges for Corinth Police Personnel at the actual overtime rate, including benefits, for the officer(s) performing the requested service.

(iv) In the event Shady Shores specifically requests special All-Terrain Vehicle (ATV) patrols along the shoreline of Lewisville Lake on United States Army Corps of Engineers land and/or within the ETJ of Shady Shores, Shady Shores may notify the Corinth Police Department in a timely manner and contract with off-duty Corinth police officers to perform such services at the secondary employment rate that is established by the Chief of Police according to policy. Shady Shores understands that Corinth does not guarantee availability of off-duty officers. On some occasions and as needed, Shady Shores will utilize its ATV for public safety use as the Mayor deems necessary. During such use, if any, Shady Shores will provide the insurance, maintenance, repair and fuel as needed, and will cover or remove any signage on the ATV relating to Corinth.

Section 7. Vehicle and Equipment.

Included as a part of the fixed annual payments described in 6 (a) above, Corinth agrees to provide the use, fuel and all maintenance expenses of operating a Corinth police vehicle in proper working condition, to be equipped with all equipment necessary for patrol operation. This equipment includes, but is not limited to:

1. Radio
2. Emergency Lights and Siren
3. Markings
4. Cage
5. Camera System

6. MDC (compatible with Denton County-Corinth version)
- (b) Shady Shores agrees to provide one Polaris Police ATV for public safety purposes.
 1. Ownership of the ATV and all of its related equipment purchased by Shady Shores shall remain the property of Shady Shores.
 2. Shady Shores agrees to insure the ATV, its driver and passengers against personal injury and damages related to the use and operation of the vehicle. Corinth may also provide liability insurance sufficient to insure both Corinth and Shady Shores, from liability arising as alleged by third parties as a result of the operation and use of the vehicle by Corinth. Corinth will provide workers compensation insurance covering all injuries to its employees operating or riding in the vehicle. Shady Shores is not required to insure the vehicle for more than the limits of the Texas Tort Claims Act. Corinth agrees not to use the ATV in areas not within Shady Shores without prior approval of the Liaison or Mayor of Shady Shores. Corinth agrees to provide all fuel and maintenance for the ATV, and repair of all damage caused during use by Corinth employees.

Section 8. Ordinance Conflict. In the event a conflict between the applicable Ordinances of Corinth and Shady Shores creates difficulty in enforcement, Corinth may notify Shady Shores of such conflict and Corinth and/or Shady Shores may consider amending their ordinances to be consistent. A conflict on legal grounds of the enforceability of an ordinance will be brought to the attention of the city attorneys for the Parties with the intention of resolving the legal questions. The attorneys will be asked for opinions or recommendations to their respective clients on any modifications to the ordinance, procedure or policy to resolve the issue.

Section 9. Revenues Retained. All revenues, fines, and forfeitures that may be generated by the performance of law enforcement duties within the municipal boundaries of Shady Shores shall be retained by Shady Shores.

Section 10. Termination.

- (a) In the event Corinth is not in default of the provisions in this Agreement, and Shady Shores should fail to make any quarterly payment due under the terms of this Agreement, and Corinth has issued notice of the failure to pay to Shady Shores, then Shady Shores will be in default under this Agreement if payment is not made within 15 days of receipt of notice.

Interest shall accrue on any debt to either city for whom payment is in default under this contract in accordance with the percent of interest authorized by the Texas Prompt Payment Act (Chapter 2251, TEXAS GOVERNMENT CODE, as amended).

- (b) Shady Shores recourse for failure of Corinth to furnish law enforcement services under this Agreement will be the right to make a proportionate reduction in the fee to be paid or to

terminate this Agreement by giving not less than 30 days notice, or any other appropriate legal action.

(c) If this Agreement is terminated, the police vehicle leased or and equipment purchased by Shady Shores pursuant to Section 7 will be refunded or relinquished to Shady Shores. The leased vehicle payments included within the quarterly payments paid in the quarter of termination shall be refunded to Shady Shores, and Corinth will be responsible for the vehicle and its payments. The equipment purchased or leased by Shady Shores may be purchased by Corinth, or otherwise will be removed from the vehicle and provided to Shady Shores. Any equipment purchased by Corinth for use in said vehicle shall be retained by Corinth.

(d) Either party to this Agreement can expect and may require the other party and its officials and employees to carry out, respect and enforce the terms and obligations of this Agreement. Should any party to this Agreement be in default under this Agreement, the other party shall provide 30 days notice to remedy the default, after which notice such party shall promptly cure the default.

(e) Should any notice of default be given for any default and not be cured to the satisfaction of the non-defaulting party within 30 days, the parties agree to submit to non-binding mediation. Each party will name at least two and no more than three potential mediators (complete with resume) who are located within 30 miles of Denton County, Texas. If the parties cannot mutually agree on a mediator, each party may strike all but one of the other party's proposed mediators, leaving a total of two names. The parties shall then select a name by coin toss. It is the intent of the parties that mediation be scheduled to occur within 30 days of the selection of the mediator. The cost of the mediator shall be divided evenly by the parties whether or not the mediation results in resolution of the matters in controversy.

(f) If mediation does not result in resolution of the matters in controversy, the aggrieved party may proceed to enforce its rights in a court of competent jurisdiction.

(g) The foregoing remedies shall be cumulative; the election of one remedy shall not preclude pursuit of another.

(h) All negotiations pursuant to this section are confidential and shall be treated as compromise and settlement negotiations for purposes of applicable rules of evidence.

Section 11. Notices. All written notices shall be sent to the following parties by certified mail-return receipt requested:

Corinth
Mayor
City of Corinth
3300 Corinth Parkway
Corinth, Texas 76208

Shady Shores
Mayor
Town of Shady Shores
101 South Shady Shores Rd
Shady Shores, Texas 76208

Section 12. Jurisdiction. Shady Shores grants full and complete authorization and jurisdiction to Corinth for all Police Services provided by Corinth contained in this Agreement. Said jurisdiction shall apply to the town limits of Shady Shores, and to the extent lawful, to the extraterritorial jurisdiction of Shady Shores.

Section 13. Venue. Venue for any legal dispute arising pursuant to this Agreement shall be in Denton County, Texas.

Section 14. Corinth Police Department. At all times during the term of this Agreement, all police officers and employees shall be solely under the supervision and control of the Chief of Police of Corinth or the Chief's duly authorized representatives.

Section 15. Party Status. Both parties agree that (i) Corinth is an independent contractor, (ii) that Corinth shall have exclusive control of the performance of services hereunder, and (iii) that employees of Corinth in no way are to be considered employees of Shady Shores.

Section 16. Indemnification.

(a) To the extent permitted by law, Shady Shores agrees to hold harmless, save and indemnify Corinth from and against any and all claims for damages, personal injury and/or death that may be asserted against Corinth arising from Shady Shores' negligence or its performance hereunder.

(b) To the extent permitted by law, Corinth agrees to hold harmless, save and indemnify Shady Shores from and against any and all claims for damages, personal injury and/or death that may be asserted against Shady Shores arising from Corinth's negligence or its performance hereunder, save and except intentional acts or acts of gross negligence by Shady Shores.

(c) The foregoing notwithstanding, the parties hereto reserve the right to assert all available legal defenses and all protections and limitations of liability provided by the Texas Tort Claims Act and the Texas Constitution relative to these parties.

(d) The provisions of this indemnification are solely for the benefit of the parties hereto and are not intended to create or grant any rights, contractual or otherwise, to any person or entity.

Section 17. Waiver of Breach. No waiver by either party of any default or breach of a term or condition of this Agreement by the other party may be treated as a waiver of any subsequent default or breach of the same or any other term or condition of this Agreement.

Section 18. Modification. This Agreement may only be modified, changed or altered at any time upon mutual agreement of the parties, provided that any such modification, change and/or alteration be reduced to writing and approved by the governing bodies of Corinth and Shady Shores.

Section 19. No Waiver of Immunity. Nothing in this Agreement shall give any claim or cause of action to any person or party not a party to this Agreement, nor create any claim or cause of action against Corinth or Shady Shores which would not exist in the absence of this Agreement.

Nothing in this Agreement shall add to or change the liability limits or immunities otherwise available to each party to this Agreement, and nothing in this Agreement shall be deemed or construed to waive any defense, privilege, or immunity of any of the parties to this Agreement nor of any of their elected officials, officers, or employees, as to any claim or cause of action brought by any person or entity.

Section 20. Miscellaneous. This Agreement is not intended to and shall not be construed so as to create a joint enterprise between the parties hereto. This Agreement shall not be construed more strictly against the drafter as both parties have the benefit of counsel. This Agreement contains the entire agreement between the parties and all prior negotiations, statements, or representations are superseded and displaced hereby. A waiver, alteration, or modification of this Agreement shall not be binding unless it is in writing and signed by both parties. The headings of the various paragraphs of the Agreement have been inserted for convenient reference only and shall not be construed to enlarge, diminish, or otherwise change the express provisions hereof.

IN WITNESS WHEREOF, we have hereunto set our hands this Agreement, to be effective the 1st day of October, 2022, in duplicate originals.

CITY OF CORINTH, TEXAS

Bill Heidemann, Mayor

ATTEST:

Lana Wylie, City Secretary

TOWN OF SHADY SHORES, TEXAS

Cindy Aughinbaugh, Mayor

ATTEST:

Wendy Withers, Town Manager

SHADY SHORES CONTRACT PROPOSAL**As of July 1, 2021**

<u>ALLOCATION PERCENTAGE</u>	Corinth	Shady Shores	Total	Shady Shores
Calls for Service	39,262	3,473	42,735	8%
CID Division Case Load	711	217	928	23%
Population	22,437	2,893	25,330	11%
				14%

<u>Personnel Costs</u>	Annual	% Allocated	Shady Shores
CID Sergeant	145,847	14%	20,872
CID Officer	123,990	14%	17,744
CID Officer	125,160	14%	17,911
Patrol Officer (Step 2)	99,989	100%	99,989
Patrol Officer (Step 2)	99,989	100%	99,989
Animal Control Officer	54,532	14%	7,804
Animal Control Officer	67,228	14%	9,621
<i>Total Personnel Costs</i>			\$ 273,929

<u>Fuel & Vehicle Replacement</u>			
Annual Enterprise Lease	10,935	100%	10,935
Annual Fuel (2,143 miles x \$2)	4,286	100%	4,286
Annual Vehicle Maintenance	1,200	100%	1,200
<i>Total Fuel/Vehicle Replacement</i>			\$ 16,421

Total Charge for Service - Year 1	\$ 290,350
--	-------------------

Current Allocation	\$ 268,957
Change Current vs Proposed	\$ 21,393
Percentage Increase	8.0%

Proposed Five Year Agreement	Year 1 \$ 290,350
Annual Increase - 3.5%	Year 2 \$ 300,512
	Year 3 \$ 311,030
	Year 4 \$ 321,916
	Year 5 \$ 333,183

Note:

- * Allocated expenditures do not include uniforms, training, equipment, ammunition, supplies, Denton County Dispatch/Communications contract, and command staff overhead.
- * Allocated expenditures include Animal Control which was not included in prior years.



Date: February 9, 2022

To: Cindy Aughinbaugh, Mayor – Town of Shady Shores

From: Derek Sweeney, PE, PTOE

Re: Design Report – Shady Shores Street Lighting Project – Shady Shores, TX

INTRODUCTION

The Town of Shady Shores engaged Binkley & Barfield to coordinate with Oncor to install street lighting at the following locations:

- Fritz Lane at W. Shady Shores Road
- Garza Road at W. Shady Shores Road (School intersection)
- W. Shady Shores Road/Lakeshore Road/Cielo Lane/S. Shady Shores Road
- Smokey Lane at Garza Road

As part of this project, we coordinated with Oncor to better understand their design and construction process as well as what the Town would need to provide to achieve the desired lighting outcomes. The Town has also expressed their desire to reduce light glare by following Dark Sky standards. As such, we researched Dark Sky criteria and specifications to better understand how this can be achieved.

This design report summarizes our work efforts related to this coordination and research

ONCOR DESIGN PROCESS

Our office met with Kym Teeters, Sr. Utility Designer with Oncor, on January 25, 2022, to go over Oncor's street light design and installation process. Oncor has two standard ways of supporting street lighting. The first is by providing electric service to light fixtures installed and maintained by the Town. The second is by installing, operating, and maintaining light fixtures for a fixed monthly cost per fixture that is billed to the Town. The second option is what the Town has expressed interest in.

Oncor has several LED light fixture options available that are suitable to roadway and neighborhood lighting. For the purposes of this project, the fixtures looked at were cobra head and rectangular. Ms. Teeters mentioned that they install the rectangular type more often than cobra head. Oncor's standard illumination design includes underground conduit/wiring and rectangular metal poles installed on concrete foundations. Standard mounting height is 30 feet. While Oncor will install the full lighting system, it caps their cost at a specific allowable cost per fixture. Anything above that will be the responsibility of the Town to fund. This is in addition to the monthly usage fees. The Town does have the option to use wood poles and overhead wiring to save installation cost, if needed.

Based on Oncor's provided documentation, it is expected that the monthly usage fees will range between \$25-30 per fixture.

The design process is fairly simple – Binkley & Barfield will provide an illumination concept plan showing proposed pole locations and photometrics based on Oncor provided fixtures. Once the pole locations have been approved by the Town, Binkley & Barfield will provide this to Oncor to begin the electrical design. The design usually takes a few weeks and once complete Oncor will provide information on the additional costs for which the Town would be responsible, which are the costs above the Oncor allowed

installation costs per fixture. Once the Town agrees to the project and executes the necessary documents, construction will likely occur within 4-6 weeks.

DARK SKY COMMUNITY STANDARDS

The international Dark-Sky Association sets various guidelines for outdoor lighting with the ultimate goal of protecting the night from light pollution. In order to minimize light pollution, the organization believes that lighting should:

- Only be on when needed.
- Only light the area that needs it.
- Be no brighter than necessary.
- Minimize blue light emissions.
- Be fully shielded (pointing downward).

The Fixture Seal of Approval Program developed by the International Dark-Sky Association certifies a range of specific light fixtures as dark sky friendly. According to Oncor on their website, the Evolve Cobra Head and Evolve LED Area Light Rectangular fixtures supplied by Oncor are certified as dark sky compliant fixtures.

OPTIMAL LED COLOR TEMPERATURE

According to the Internal Dark-Sky Association, an LED color temperature of 3000 K or less is recommended for outdoor lighting applications. This color leans more towards the warmer end of the lighting spectrum (yellow) and helps minimize potentially harmful blue light. Use of blue light could result in increased light pollution, increased glare, decreased road safety, and negative impacts to wildlife behavior and reproduction.

MINIMUM ILLUMINATION DESIGN FACTORS

The Town of Shady Shores does not currently have established lighting standards; therefore, research was conducted to determine reasonable lighting standards. Minimum illumination design factors were determined using guidance from the AASHTO *Roadway Lighting Design Guide* and the City of Dallas lighting standards discussed in the City's *Street Design Manual*. Based on the research, an average of 1.5 foot-candles and a maximum uniformity ratio (average/min) of 3.0 was sought at all intersections. It is believed that these design values will provide adequate brightness and distribution to each of the intersections.

The lighting layout designs established analysis areas that focused on the critical areas of the intersections, including stop bars, crosswalks, conflict points and decision points while minimizing spillover lighting on adjacent properties. The uniformity ratio, which is the ratio of the average illumination level to the minimum illumination level, describes how consistent the resultant lighting appears throughout the analysis area.

FIXTURE TYPE RECOMMENDATIONS

After coordinating with Oncor, it was determined that the GE Evolve Cobra Head (ERLC, ERL1, ERLH, ERL2) and GE Evolve LED Area Light Rectangular fixture (EACL) are supplied by the agency for intersection lighting applications. The manufacturer, GE, offers a variety of options for both fixtures such as shielding, distribution type, color temperature, voltage, and typical lumens, among others. Based on the photometric analysis, the following fixture types are recommended:

- GE Evolve LED Area Light Rectangular - EACL010C3AW730
 - Specifications
 - Typical lumens: 7,400

- Color temperature: 3000K
 - IES Distribution Type: Type III
 - Fixture housing color: Dark Bronze (Oncor Standard)
- Proposed Locations
 - Shady Shores Road at Cielo Lane
- GE Evolve LED Area Light Rectangular - EACL010E4AF730
 - Specifications
 - Typical lumens: 12,200
 - Color temperature: 3000K
 - IES Distribution Type: Type IV
 - Fixture housing color: Dark Bronze (Oncor Standard)
 - Proposed Locations
 - W Shady Shores Road at Fritz Lane
 - Garza Road at Smokey Lane
 - Garza Road at W Shady Shores Road

The placement of these fixtures (as shown on **Exhibits 1-4**) will ensure adequate lighting is provided at each of the intersections based on the design requirements discussed above. Additionally, these fixtures will meet Dark Sky community standards.

Continued coordination with Oncor is still necessary to confirm availability of the desired light fixtures and poles. As mentioned previously, Oncor offers rectangular metal poles or wood poles but did not provide specific cut sheets for review.

ATTACHMENTS

- Light Fixture Specification Cut Sheet
- Exhibit 1 – Garza Road at Smokey Lane
- Exhibit 2 – Garza Road at W Shady Shores Road
- Exhibit 3 – W Shady Shores Road at Fritz Lane
- Exhibit 4 – Shady Shores Road at Cielo Lane

Evolve® LED Area Light

Compact Low Wattage (EACL)



Project Name _____

Date _____ Type _____

Notes _____

Current's EAL Series of Area Light Luminaires offer a wide range of optical patterns, color temperatures, lumen packages, and mounting configurations to optimize area light applications, as well as provide versatility in lighting design within the same form factor.

CONSTRUCTION

Housing:	Die-cast aluminum housing with integral heat sink for maximum heat transfer
Paint:	Corrosion resistant polyester powder paint, minimum 2.0 mil thickness Standard = Black, Dark Bronze Gray, White (RAL & custom colors available) Optional coastal finish available.
Weight:	18 lbs (8.16 kg) Max depending on configuration

OPTICAL SYSTEM

Lumens:	2,900 - 20,400
Distribution:	Asymmetric Forward Type IV Asymmetric Wide Type III Asymmetric Narrow/Auto Type II
Efficacy:	123 - 143 LPW
CCT:	3000K, 4000K, 5000K
CRI:	≥70

ELECTRICAL

Input Voltage:	120-277V & 347-480V
Input Frequency:	50/60Hz
Power Factor:	> 90% at rated watts
Total Harmonic Distortion:	< 20% at rated watts

SURGE PROTECTION*

Typical (120 Strikes)	Enhanced (40 Strikes)	Extreme (40 Strikes)
6kV/3kA*	10kV/5kA*	20kV/10kA*

*Per ANSI C136.2-2015

LUMEN MAINTENANCE

Projected Lxx per IES TM-21-11 at 25°C

Lumen Codes	LXX(10K) @ Hours		
	25,000 HR	50,000 HR	60,000 HR
A2, A3, A4, B2, B3, B4, C2, C3, C4D2, D3, D4, E2, E3, E4, F2, F3, F4	L94	L90	L88
H2, H3, H4	L97	L96	L96

Note: Projected Lxx based on LM80 (≥ 10,000 hour testing). Accepted industry tolerances apply to initial luminous flux and lumen maintenance measurements.

LUMINAIRE AMBIENT TEMPERATURE FACTOR

Ambient Temp (°C)	Initial Flux Factor	Ambient Temp (°C)	Initial Flux Factor
10	1.02	30	0.99
20	1.01	40	0.98
25	1.00	50	0.97

RATINGS

Operating Temperature:	-40°C to 50°C
Vibration:	3G vibration per ANSI C136.31-2018
LM-79:	Testing in accordance with IESNA Standards

CONTROLS

Dimming:	Standard - 0-10V Optional - DALI (Option U)
Sensors:	Photo Electric Sensors (PE) available LightGrid and Daintree Compatible

WARRANTY

5 Year (Standard)

Evolve® LED Area Light

Compact Low Wattage (EACL)

Catalog Logic

Project Name _____

Date _____ Type _____

Notes _____

EACL 01

7

PROD. ID	GEN	VOLTAGE	OPTIC CODE	DISTRIBUTION	CRI (min)	CCT	DIMMING ²	CONTROLS	MOUNTING ARM	COLOR	OPTIONS
E = Evolve	01	0 = 120-277 ¹	Ax=3000	AF = Asymmetric Forward	7 = 70	30 = 3000K ¹¹	N = Dimming thru PE receptacle ¹²	1 = None	C1 = Integral Slip-fitter for 1.25"- 2" Pipe (1.66in. OD - 2.378 in. OD) ⁴	GRAY = Gray	F = Fusing
AC = Compact Area Light		H = 347-480 ¹	Bx=5000	AW = Asymmetric Wide		40 = 4000K	D = External Dimming 18/2-3ft cable ¹²	A = ANSI 7-pin PE receptacle (no control)	D1 = Universal Mounting Arm, fitted for round or square pole mounting ⁵	BLCK = Black	H = Motion Sensor (Sensor Switch) ⁸
L = Low Voltage			Cx=7500	AN = Asymmetric Narrow/Auto		50 = 5000K	X = No PE receptacle, no external dimming leads ¹³	D = ANSI 7-pin PE receptacle with shorting cap provided	K1 = Knuckle Slipfitter for 1.9 in - 2.3in. OD Tenon ^{5,6}	DKBZ = Dark Bronze	H1 = Motion Sensor w/LightGrid
		1 = 120	Dx=10000					E = ANSI C136.41 7-pin with Non-Dimming PE Control ³	S1 = Knuckle Slipfitter for 2.3in. - 3.0in OD Tenon ^{5,6}	WHTE = White	H2 = Motion Sensor (Daintree) ⁸
		2 = 208	Dx=10000						V1 = Knuckle Wall Mount ^{5,6}		H4 = Motion Sensor (Wattstopper)
		3 = 240	Ex=12500								J = cUL/Canada
		4 = 277	Fx=15000								L = Tool-Less Entry
		5 = 480	Hx=20000								R = Enhanced Surge Protection (10kV/ 5kA)
		D = 347									U = DALI dimming ⁷
											V0 = 3-Position Terminal Block
											V1 = Variable output via Field Adjustable Module
											Y = Coastal Finish ¹⁰
											XXX = Special Options

¹ Not Available with Fusing, Must Choose a Discrete Voltage with "F" Option Code

² Note Standard Dimming is 0-10V

³ PE Control only available for 120-277V, 347V or 480V Discrete Voltage.

⁴ Supplied with 3ft leads

⁵ Supplied with 16/3 ft Cable

⁶ Restricted Aiming Angle of 0-45°

⁷ Compatible with LightGrid Wireless Control Nodes, Not Compatible with Motion Sensor Control

⁸ Not available in 347V, 480V or 347-480V

¹⁰ Recommended for installations within 750 feet from coast. Lead time varies, check with factory.

¹¹ Select 3000K CCT for IDA approved fixtures.

¹² Can only be ordered with Controls A, D or E

¹³ Can only be used with controls option 1

Evolve® LED Area Light

Compact Low Wattage (EACL)

Spec Tables

Project Name _____

Date _____ Type _____

Notes _____

OPTICAL CODE	DIST CODE	CLASSIFICATION	TYPICAL LUMENS		TYPICAL SYSTEM WATTAGE		BUG RATING	
			3000K	4000K & 5000K	120-277V	347-480V	3000K	4000K & 5000K
A4	AF	TYPE IV	2900	2900	21	23	B1-UO-G1	B1-UO-G1
B4			4900	4900	36	38	B1-UO-G1	B1-UO-G1
C4			7300	7300	55		B1-UO-G2	B1-UO-G2
D4			9800	9800	73		B2-UO-G2	B2-UO-G2
E4			12200	12200	95		B2-UO-G2	B2-UO-G2
F4			14700	14700	122		B2-UO-G2	B2-UO-G2
H4			19000	19000	153		B3-UO-G3	B3-UO-G3
A3			2900	3000	21	23	B1-UO-G1	B1-UO-G1
B3			4900	5100	36	38	B1-UO-G1	B1-UO-G1
C3			7400	7600	55		B1-UO-G2	B1-UO-G2
D3	AW	TYPE III	9900	10200	73		B2-UO-G2	B2-UO-G2
E3			12400	12700	95		B2-UO-G2	B2-UO-G2
F3			14900	15300	122		B2-UO-G2	B2-UO-G2
H3			19300	20400	153		B3-UO-G2	B3-UO-G2
A2	AN	TYPE II	2900	3000	21	23	B1-UO-G1	B1-UO-G1
B2			4900	5000	36	38	B1-UO-G1	B1-UO-G1
C2			7300	7500	55		B2-UO-G1	B2-UO-G2
D2			9800	10100	73		B2-UO-G2	B2-UO-G2
E2			12300	12600	95		B2-UO-G2	B2-UO-G2
F2			14700	15100	122		B3-UO-G2	B3-UO-G3
H2			19100	20200	153		B3-UO-G3	B3-UO-G3

For additional information on EACL IES files, please click one of the following links:

[Non-Shielded](#)

[Shielded](#)

Evolve® LED Area Light

Compact Low Wattage (EACL)

Photometric Plots

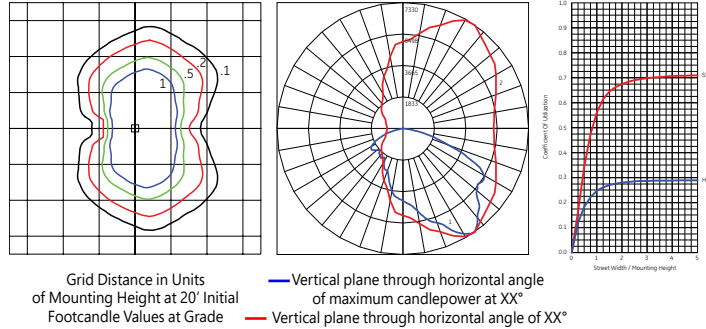
Project Name _____

Date _____ Type _____

Notes _____

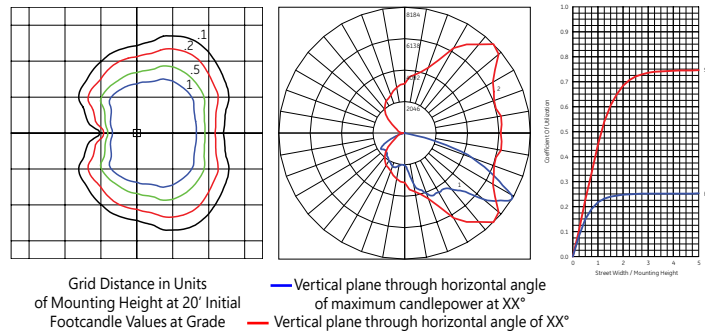
EACL - Type II - Very Short

15,100 lumens
EACL01_F2AN750__IES



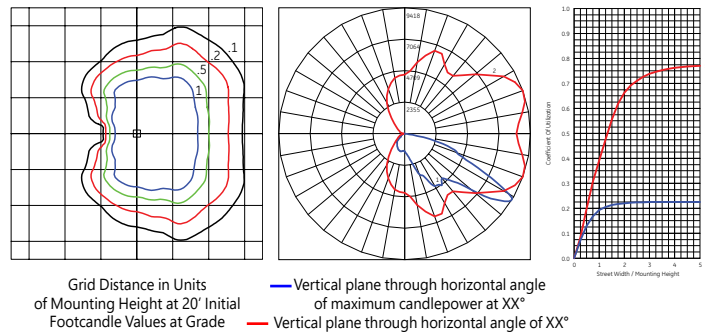
EACL - Type III - Short

15,300 lumens
EACL01_F3AW750__IES



EACL - Type III - Very Short

15,000 lumens
EACL01_F4AF750__IES



Evolve® LED Area Light

Compact Low Wattage (EACL)

Photometric Plots

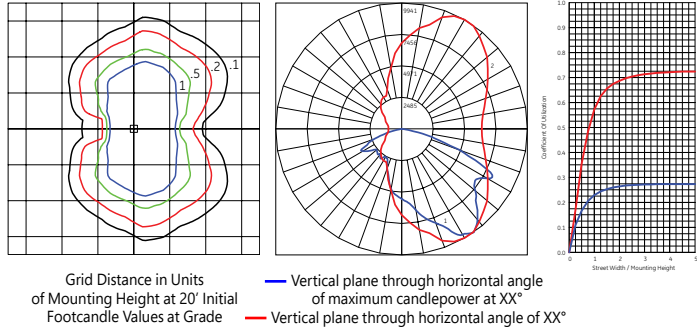
Project Name _____

Date _____ Type _____

Notes _____

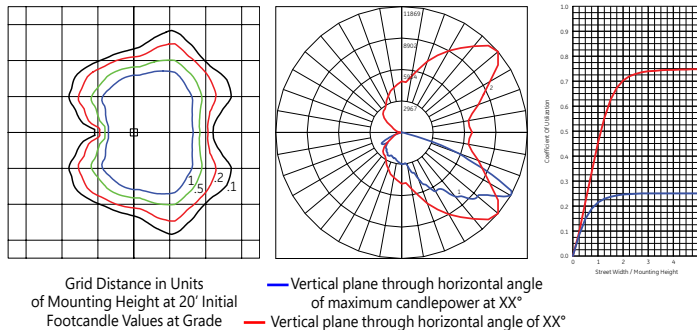
EACL - Type II- Very Short

20,200 lumens
EACL01_H2AN750__IES



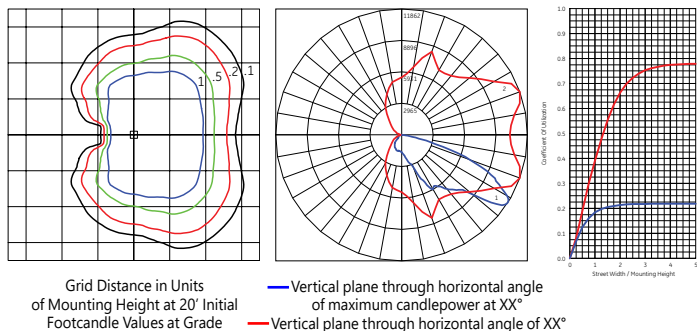
EACL - Type III - Short

20,400 lumens
EACL01_H3AW750__IES



EACL - Type IV - Very Short

20,000 lumens
EACL01_H4AF750__IES



Evolve® LED Area Light

Compact Low Wattage (EACL)

Motion Sensing

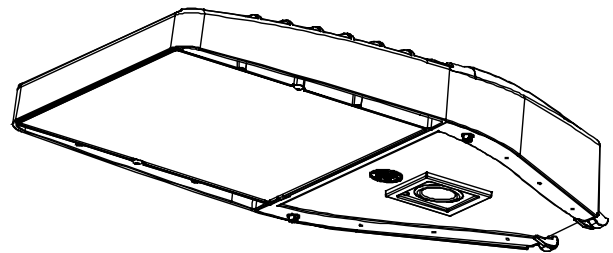
Project Name _____

Date _____ Type _____

Notes _____

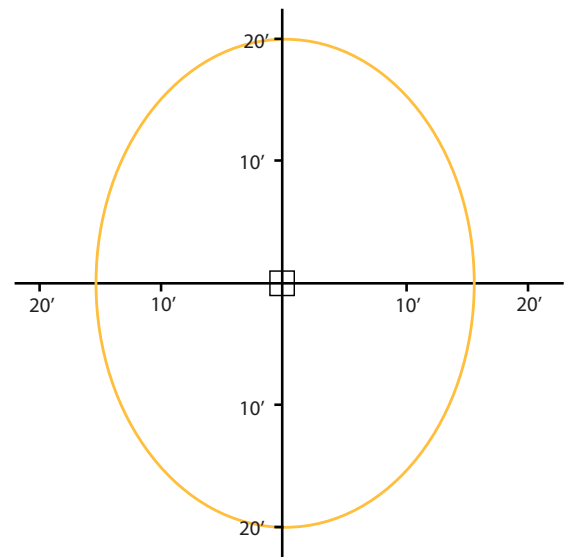
H-MOTION SENSING OPTION

- Recommended Mounting Height: 15-30' (4.6-9.1m)
- For mounting heights exceeding 30 ft., pole mounted sensors are recommended
- Coverage Radius: 15-20' (4.6-6.1 m).
- Provides 270 degree of coverage (approx 90 is blocked by the pole)
- Default Settings:
 - Output: Occupied - 100%/Unoccupied - 50%
 - Integral PE Sensor.
 - 5 minute post-occupancy time delay, 5 minute dimming ramp-down.
- Fixture power increase of 1W expected with sensor use.



H1/4 - MOTION SENSING OPTION (WATTSTOPPER)

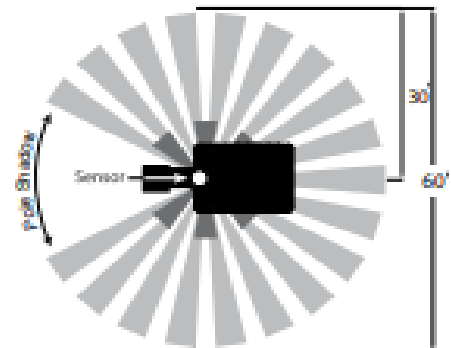
- Recommended Mounting Height: 15-30' (4.6-9.1m)
- For mounting heights exceeding 30 ft., pole mounted sensors are recommended
- Coverage Radius: 15-20' (4.6-6.1 m).
- Provides 270 degree of coverage (approx 90 is blocked by the pole)
- Default Settings:
 - Output: Occupied - 100%/Unoccupied - 50%
 - PE Sensor: Enabled
 - Ramp/Fade: 5 Minutes/5 Minutes
- Adds < 1W to fixture power rating
- Field programmable using FSIR-100 hand held programmer



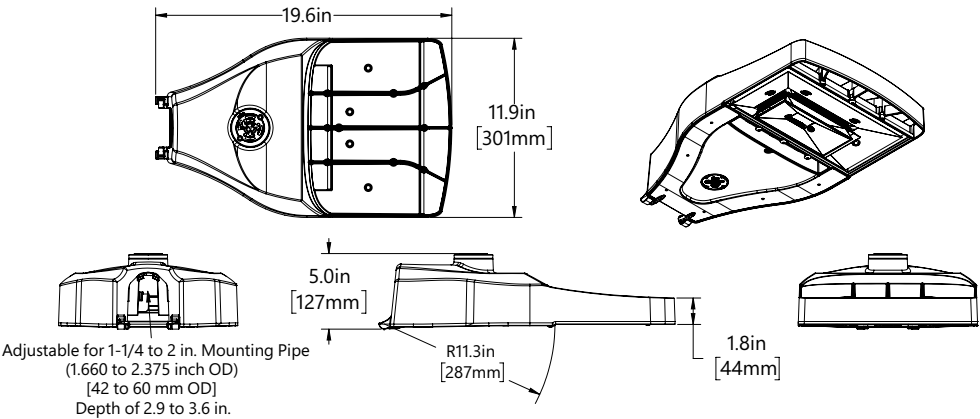
H2 - MOTION SENSING OPTION (DAINTREE)

- Recommended Mounting Height: 15-30' (4.6-9.1m)
- For mounting heights exceeding 30 ft., pole mounted sensors are recommended
- Provides a coverage area radius for walking motion of 15-20 ft. (4.57-6.10m)
- Provides 270 degree of coverage (approx 90 is blocked by the pole)
- Default Settings:
 - Output: Occupied - 100%/Unoccupied - 50%
 - PE Sensor: None
 - Ramp/Fade: 5 Minutes/5 Minutes
- Adds < 1W to fixture power rating
- Requires Daintree Enterprise and wide area control (WAC)

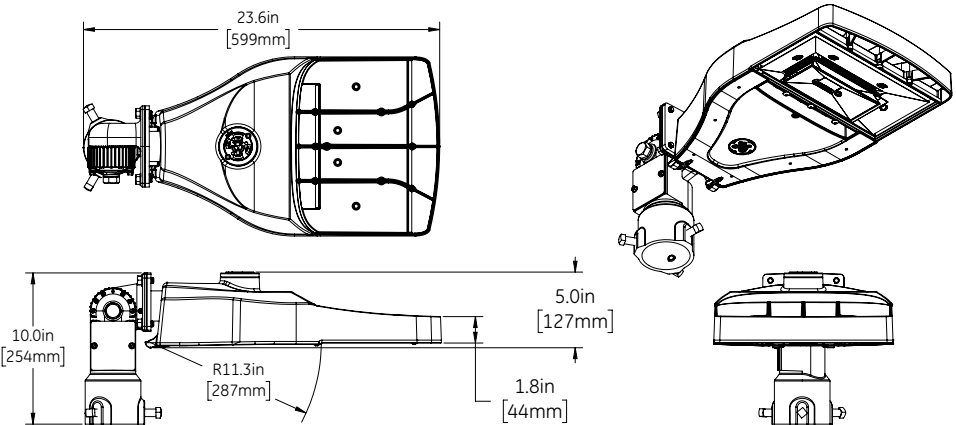
Sensing Pattern Area Fixture
Up to 30 ft. Mounting Height



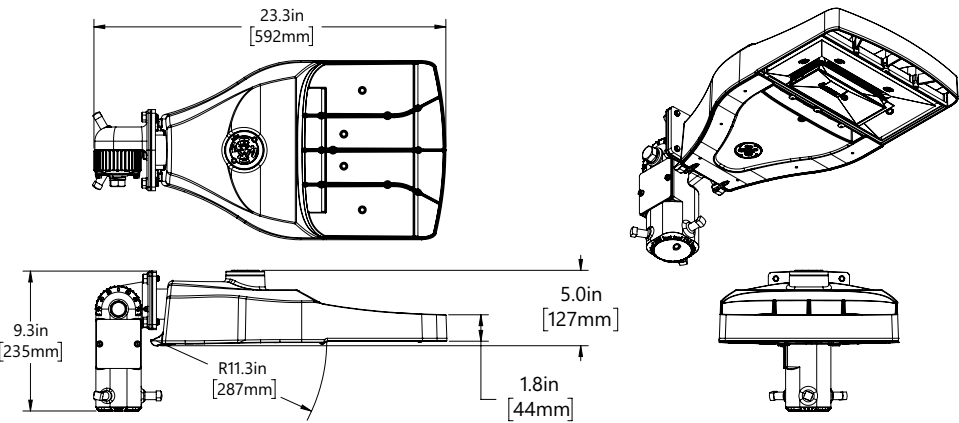
Integral Slipfitter: C1



Knuckle Slipfitter: S1



Knuckle Slipfitter: K1



Evolve® LED Area Light

Compact Low Wattage (EACL)

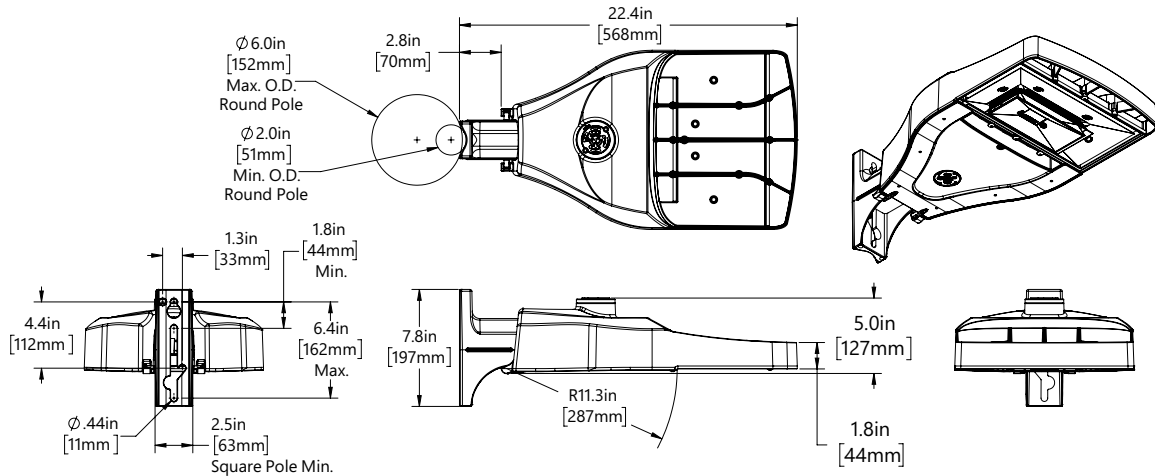
Mounting

Project Name _____

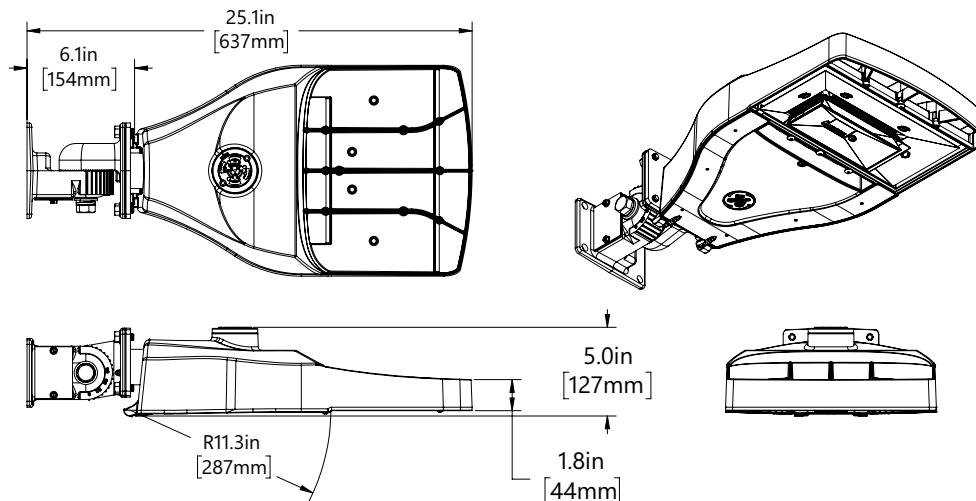
Date _____ Type _____

Notes _____

Universal Mounting Arm: D1



Knuckle Wall Mount: V1



WEIGHT

- 18 lbs (8.16 kg) Max depending on configuration

EFFECTIVE PROJECTED AREA

- Integral Slipfitter C1, EPA = 0.31 Min/0.37 Max
- Universal Arm Mount D1, EPA = 0.31 Min / 0.52 Max
- Knuckle Slipfitter S1, K1 downward aim, EPA = 0.46 Min / 0.56 Max
- Knuckle Slipfitter S1, K1 45° aim, EPA = 0.56 Min / 1.03 Max

Evolve® LED Area Light

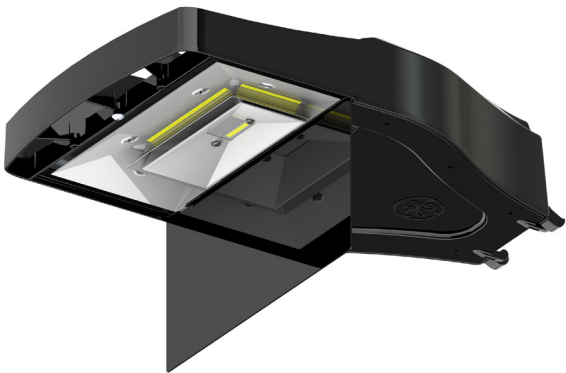
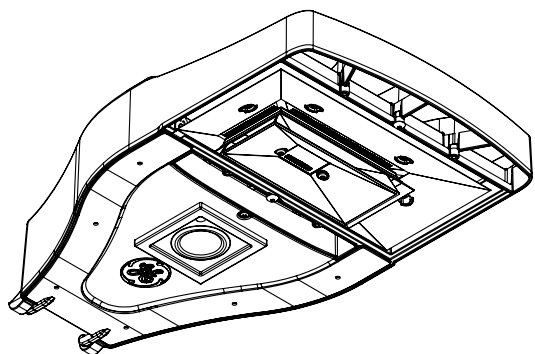
Compact Low Wattage (EACL)

Mounting & Accessories

Project Name _____

Date _____ Type _____

Notes _____



PE Accessories (to be ordered separately)

SAP Number	Part Number	Description
93123552	WANSI - 277	ANSI 136.41 Dimming PE Daintree Enable, 105-305V
93123553	WANSI - 480	ANSI 136.41 Dimming PE Daintree Enable, 312-530V
93029237	PED-MV-LED-7	ANSI C136.41 Dimming PE, 120-277V
93029238	PED-347-LED-7	ANSI C136.41 Dimming PE, 347V
93029239	PED-480-LED-7	ANSI C136.41 Dimming PE, 480V

SAP Number	Part Number	Description
28299	PECOTL	Standard 120-277V
28294	PEC5TL	Standard 480V
80436	PECCTL	Standard 347V
93147530	PECHTL	Long Life Standard PE 347-480V
73251	SCCL-PECTL	Shorting cap

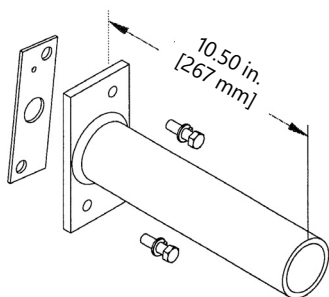
EACL Shields

Shield Orientations	Cutoff Distance	Shield Order Logic
Back	Long	ELS-EACL-RBL-BLCK
Front	1.5	ELS-EACL-RF3-BLCK
Front	2	ELS-EACL-RF4-BLCK
Side	1	ELS-EACL-RS2-BLCK

MOUNTING ARMS FOR SLIPFITTER Order separately with Mounting Option C1 (Slipfitter)

SQUARE POLE MOUNTING ARM

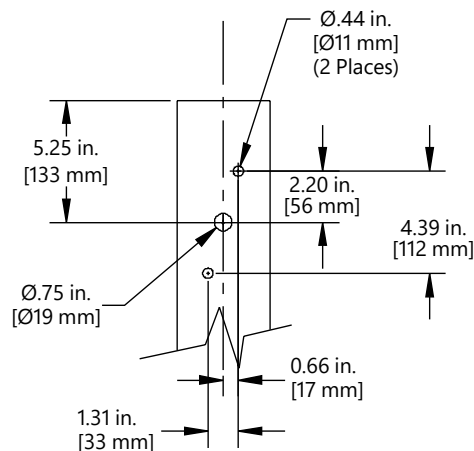
- 3.5 TO 4.5-inch (89 to 114mm) SQUARE (WILL ALLOW 4 FIXTURES PER POLE @ 90 DEGREES.)



ORDER SEPARATELY FROM FIXTURE AS CATALOG NUMBER

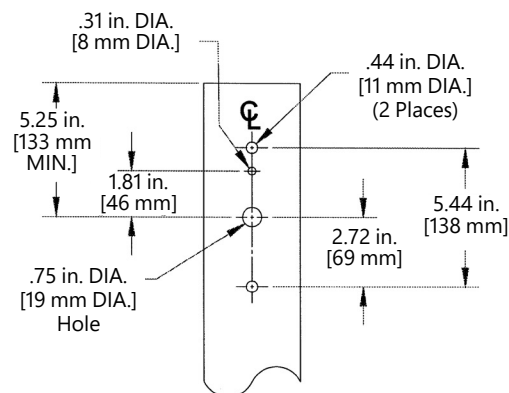
- SPA-EAMT10BLCK "Black"
- SPA-EAMT10DKBZ "Dark Bronze"
- SPA-EAMT10WHITE "White"
- SPA-EAMT10GRAY "Gray"

SQUARE POLE MOUNTING DRILLING TEMPLATE



ROUND POLE MOUNTING DRILLING TEMPLATE

- 3.5 TO 4.5-inch (89 to 114mm) OD round pole mounting arm



ORDER SEPARATELY FROM FIXTURE AS CATALOG NUMBER

- RPA-EAMT10BLCK "Black"
- RPA-EAMT10DKBZ "Dark Bronze"
- RPA-EAMT10WHITE "White"
- RPA-EAMT10GRAY "Gray"

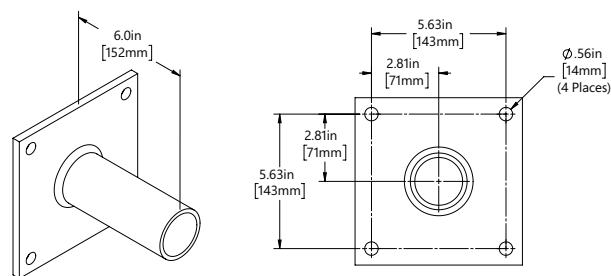
Wall Mounting Bracket Adapter Plate

ORDER SEPARATELY FROM FIXTURE AS CATALOG NUMBER
WMB-EAMT06

*NOTE: For Wall Mounting, order luminaire with mounting arm: C1 = Slipfitter 2" Pipe (2.378 in. OD) supplied with leads.

Other mounting patterns are available for retrofit installations. Contact manufacturing for other available mounting patterns.

WALL MOUNTING BRACKET HOLE PATTERN

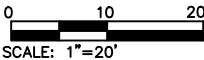
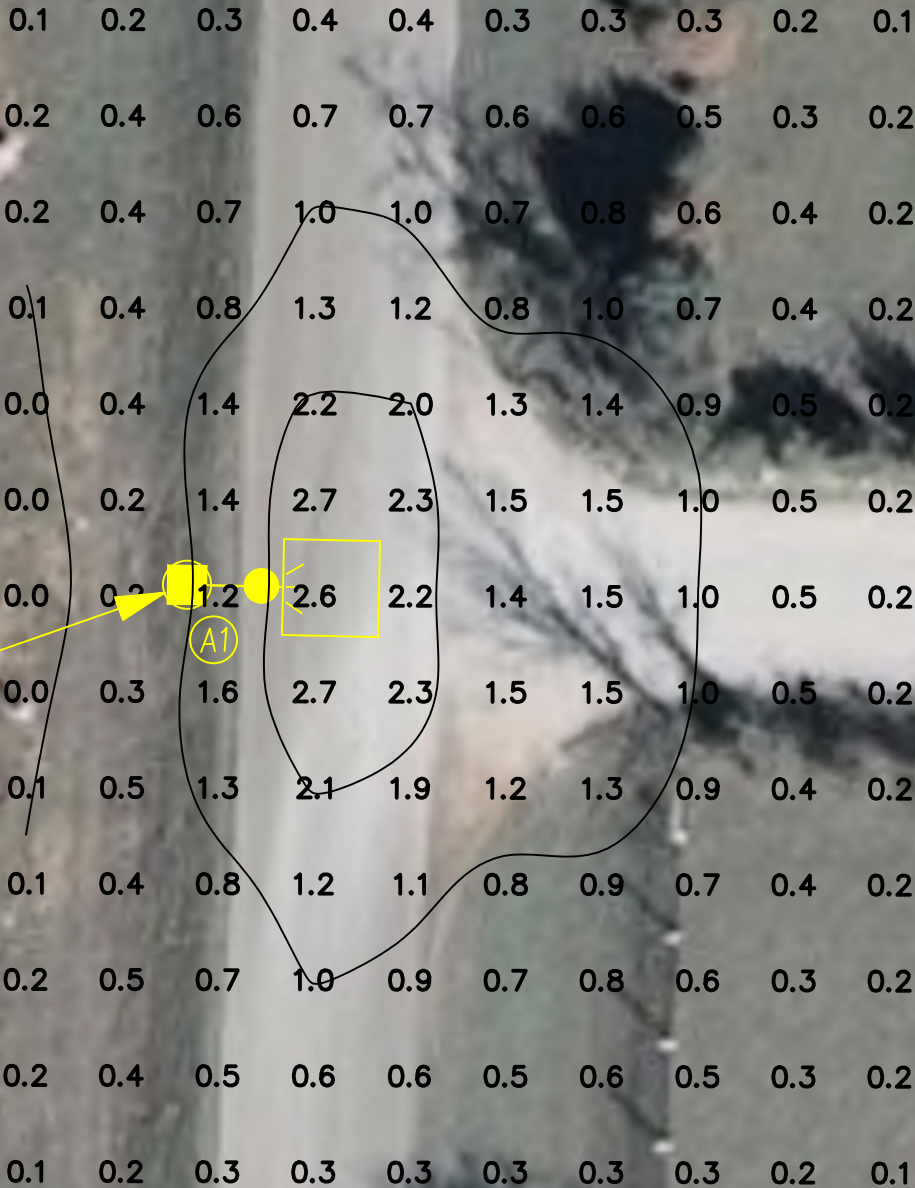


\\hobart\hobart\0160012012\01_street_lighting\project\6.00_cadd\6.03_Drawing\6.031_Sheet_Fig\illumination-1_ILLUMINATION PLAN Plotted Feb 09, 2022 at 9:15am by bari L Last Saved by bari



GARZA AT SMOKEY	
AVERAGE FOOT-CANDLES	1.62
MAXIMUM FOOT-CANDLES	2.7
MINIMUM FOOT-CANDLES	0.9
MINIMUM TO MAXIMUM FC RATIO	0.34
MAXIMUM TO MINIMUM FC RATIO	2.97
AVERAGE TO MINIMUM FC RATIO	1.78

EACL E4

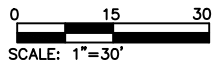
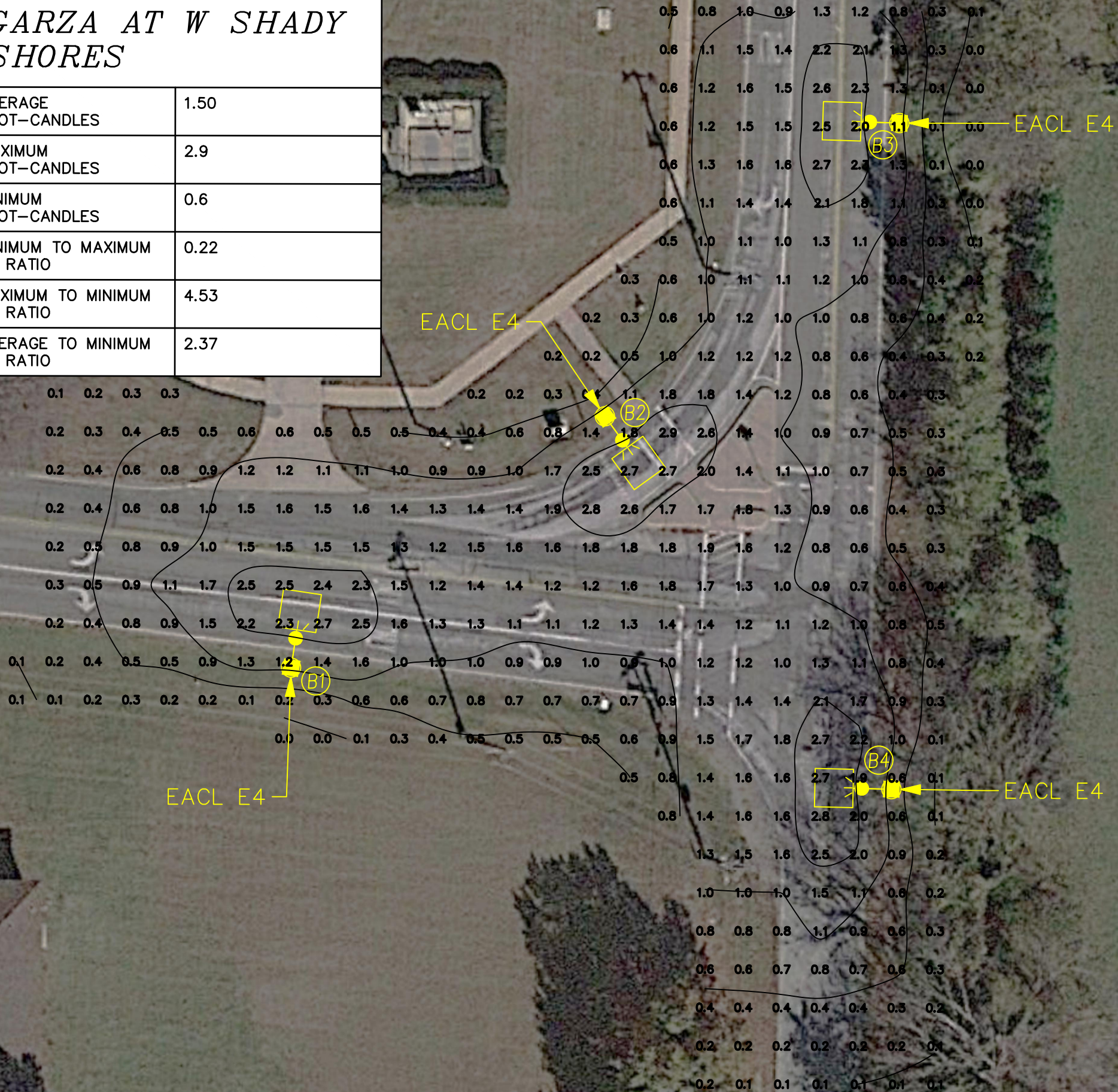


NO.	REVISIONS	DATE
ILLUMINATION PLAN GARZA RD AT SMOKEY LN STREET LIGHTING PROJECT TOWN OF SHADY SHORES, TEXAS		
Binkley & Barfield, Inc. consulting engineers Texas Registration Number F-257 1801 Gateway Blvd. Suite 101 Richardson, Texas 75080 www.binkleybarfield.com Phone (972) 644-2800 Fax (972) 644-2817		
DRAWN BY:	DATE:	SCALE:
BBI	FEB. 2022	1" = 20'

JOB NUMBER:	SHEET:
0160012012	1

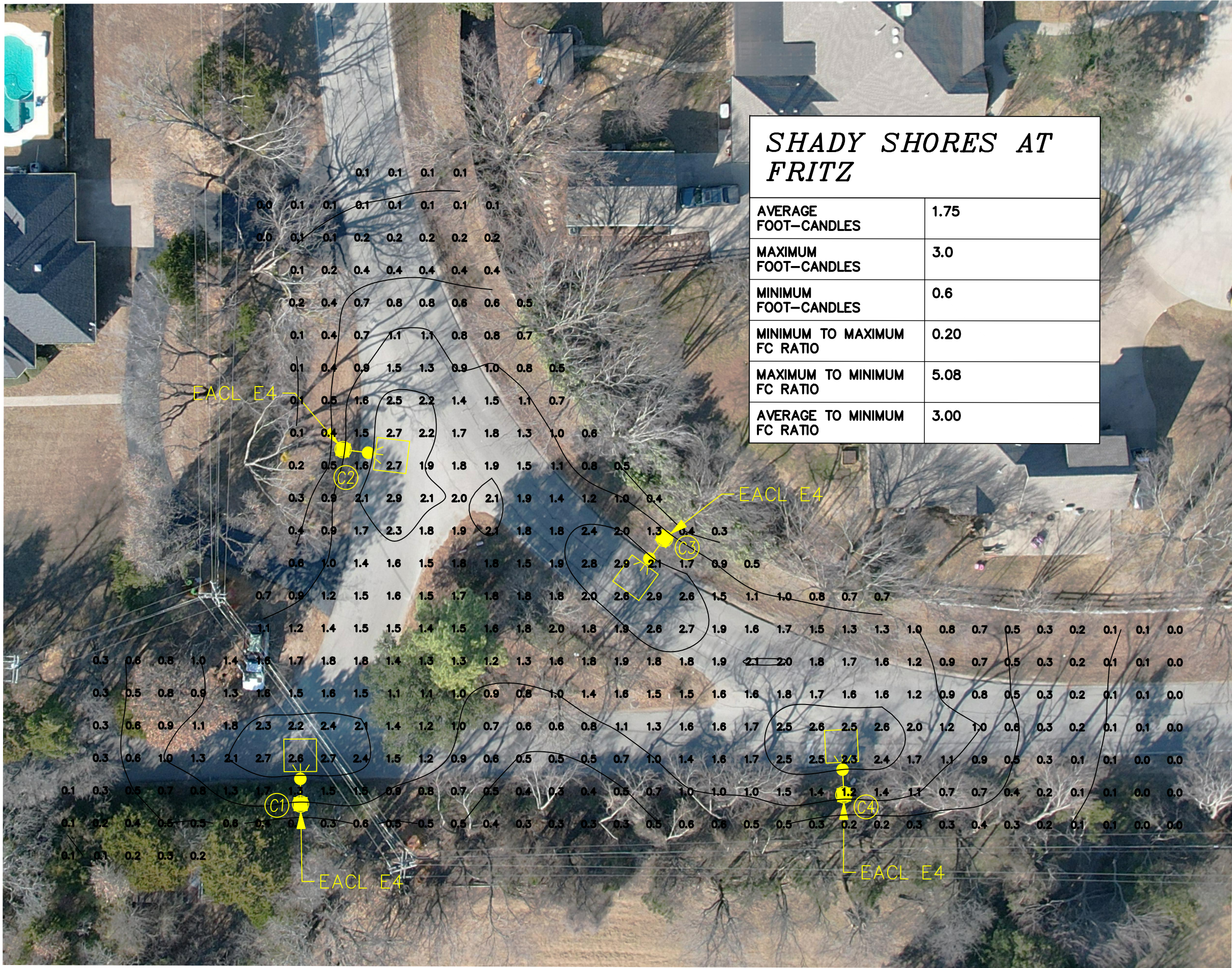
\\hobbs\hobbs\0160012012\01_street_lighting_project\6.00_cadd\6.03_Drawing\6.03_ILLUMINATION PLAN Plotted Feb 09, 2022 at 9:16am by bari L Last Saved by bari

GARZA AT W SHADY SHORES	
AVERAGE FOOT-CANDLES	1.50
MAXIMUM FOOT-CANDLES	2.9
MINIMUM FOOT-CANDLES	0.6
MINIMUM TO MAXIMUM FC RATIO	0.22
MAXIMUM TO MINIMUM FC RATIO	4.53
AVERAGE TO MINIMUM FC RATIO	2.37

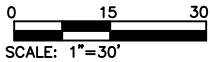


NO.	REVISIONS	DATE
ILLUMINATION PLAN GARZA RD AT W SHADY SHORES RD STREET LIGHTING PROJECT TOWN OF SHADY SHORES, TEXAS		
 Binkley & Barfield, Inc. consulting engineers Texas Registration Number F-257 1801 Gateway Blvd., Suite 101 Richardson, Texas 75080 www.binkleybarfield.com Phone (972) 644-2800 Fax (972) 644-2817		
DRAWN BY:	DATE:	SCALE:
BBI	FEB. 2022	1" = 30'
JOB NUMBER:	SHEET:	
0160012012	2	

\\houston\houston\0160012012\01_street_lighting\project\6.00_cadd\6.03_Drawing\6.03_ILLUMINATION PLAN Plotted Feb 09 2022 at 9:16am by barl Last Saved by barl



SHADY SHORES AT FRITZ	
AVERAGE FOOT-CANDLES	1.75
MAXIMUM FOOT-CANDLES	3.0
MINIMUM FOOT-CANDLES	0.6
MINIMUM TO MAXIMUM FC RATIO	0.20
MAXIMUM TO MINIMUM FC RATIO	5.08
AVERAGE TO MINIMUM FC RATIO	3.00



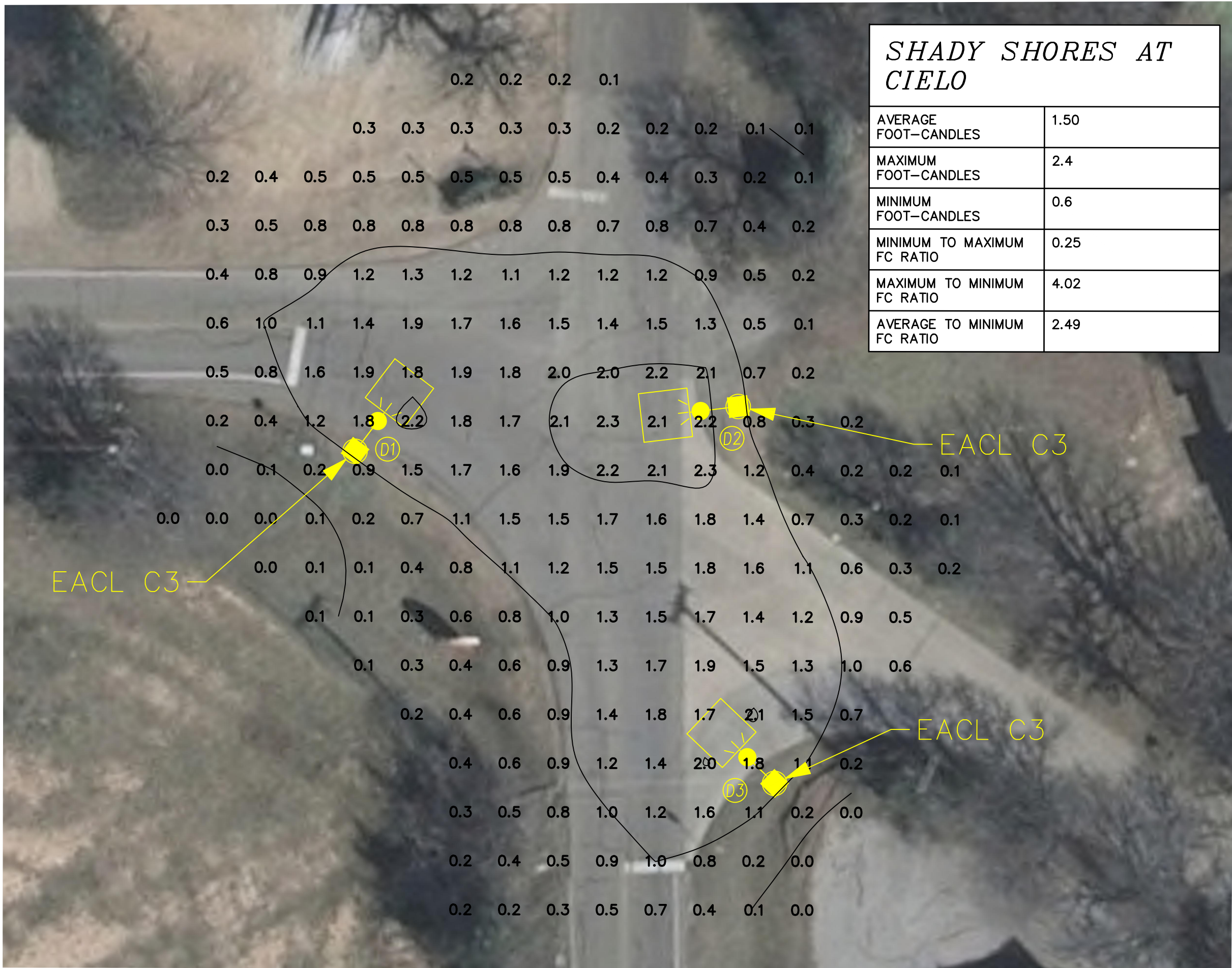
NO.	REVISIONS	DATE

ILLUMINATION PLAN
W SHADY SHORES RD AT FRITZ LN
STREET LIGHTING PROJECT
TOWN OF SHADY SHORES, TEXAS

Binkley & Barfield, Inc.
consulting engineers
Texas Registration Number F-257
1801 Gateway Blvd, Suite 101 Richardson, Texas 75080 www.binkleybarfield.com
Phone (972) 644-2800 Fax (972) 644-2817

DRAWN BY:	DATE:	SCALE:	JOB NUMBER:	SHEET:
BBI	FEB. 2022	1" = 30'	0160012012	3

\\houston\houston\0160012012\01_street_lighting\project\6.00_cadd\6.03_Drawing\6.031_Sheet_Fig\illumination-4_illumination PLAN Plotted Feb 09 2022 at 9:16am by bari I Last Saved by bari



SHADY SHORES AT CIELO	
AVERAGE FOOT-CANDLES	1.50
MAXIMUM FOOT-CANDLES	2.4
MINIMUM FOOT-CANDLES	0.6
MINIMUM TO MAXIMUM FC RATIO	0.25
MAXIMUM TO MINIMUM FC RATIO	4.02
AVERAGE TO MINIMUM FC RATIO	2.49



NO.		REVISIONS		DATE
ILLUMINATION PLAN				
W SHADY SHORES RD AT CIELO LN				
STREET LIGHTING PROJECT				
TOWN OF SHADY SHORES, TEXAS				
				
consulting engineers				
Texas Registration Number F-257				
1801 Gateway Blvd., Suite 101 Richardson, Texas 75080 www.binkleybarfield.com				
Phone (972) 644-2800 Fax (972) 644-2817				
DRAWN BY:	DATE:	SCALE:	JOB NUMBER:	SHEET:
BBI	FEB. 2022	1" = 20'	0160012012	4