

# **DOWNTOWN LIGHTING STUDY – PHASE ONE FY25**





# PROJECT BACKGROUND AND GOALS


## Background

Over the last few years, we heard from stakeholders regarding the need for improved lighting in certain areas of the district. This year we contracted Kimley Horn to do a Pedestrian Level Evaluation of Lighting.

Phase One included high traffic areas:

- Narcissus Avenue – Banyan to Evernia.
- 100 blocks of Datura, Evernia, and Fern Streets.
- Olive Avenue and Dixie Highway - Banyan to Lakeview.
- Rosemary Avenue – Banyan to Evernia.
- Public Spaces: The Great Lawn, Meyer Amphitheatre, and Post Park.

## Project Goals

- Confirm appropriate lighting criteria
  - Review existing lighting levels for criteria compliance
  - Identify potential improvements and costs
- 



Manual of Uniform Minimum  
Standards for Design,  
Construction and Maintenance  
for Streets and Highways  
*Rule # 14-15.002, F.A.C.*

Florida

# LIGHTING CRITERIA

**Table 6 – 2 Illuminance and Luminance Design Values**

Roadway and Walkway Classification	Off-Roadway Light Sources	Illuminance Method					Luminance Method			Additional Values (both Methods)
		Average Maintained Illuminance (Horizontal)				Illuminance Uniformity Ratio	Average Maintained Luminance			Veiling Luminance Ratio
		R1	R2	R3	R4		Lavg	Uniformity		
	General Land Use	(foot- candles) (min)	(foot- candles) (min)	(foot- candles) (min)	(foot- candles) (min)	avg/min (max) (6)	cd/m2 (min)	Lavg/Lmin (max)	Lmax/Lmin (max)	Lv(max)/Lavg (max) <sup>(3)</sup>
Sidewalks	Commercial	0.9	1.3	1.3	1.2	3:1	Use illuminance requirements			
	Intermediate	0.6	0.8	0.8	0.8	4:1				
	Residential	0.3	0.4	0.4	0.4	6:1				

# LIGHTING LEVELS



Decorative Poles



Pedestrian Poles



Roadway Poles



# IDENTIFY IMPROVEMENTS

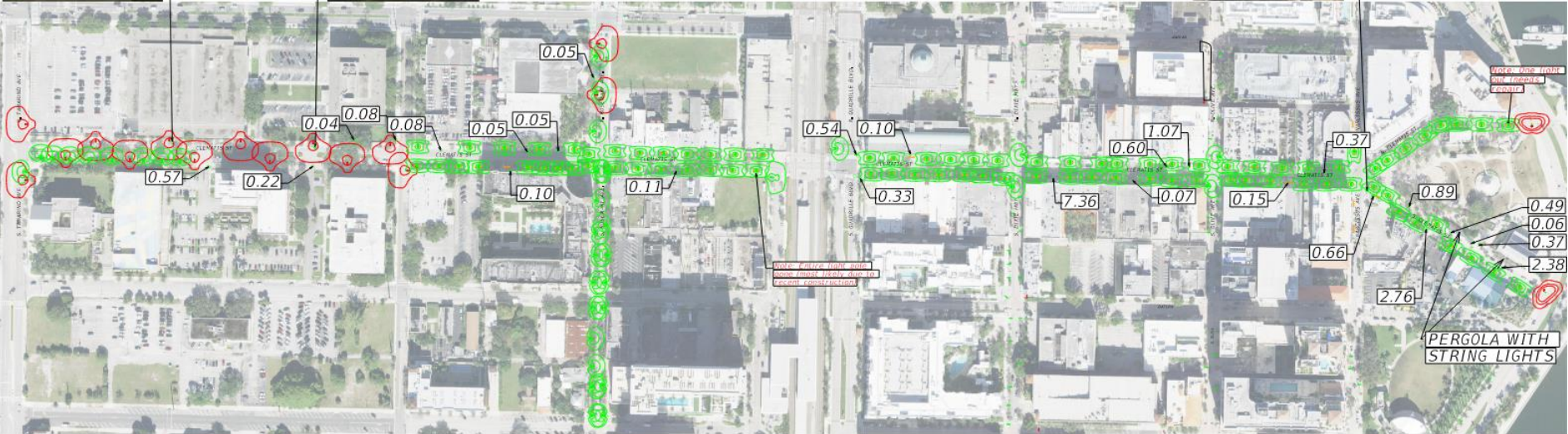
## Existing Lighting Layout

Calculation Summary		
Label	Avg	Avg/Min
Clematis Sidewalk 6	2.28	5.70
Clematis Sidewalk 7	2.48	12.40
Clematis Sidewalk 8	2.20	11.00

BRIGHT LIGHT  
ACROSS STREET

ENTIRE  
SIDEWALK  
COVERED  
BY TREES

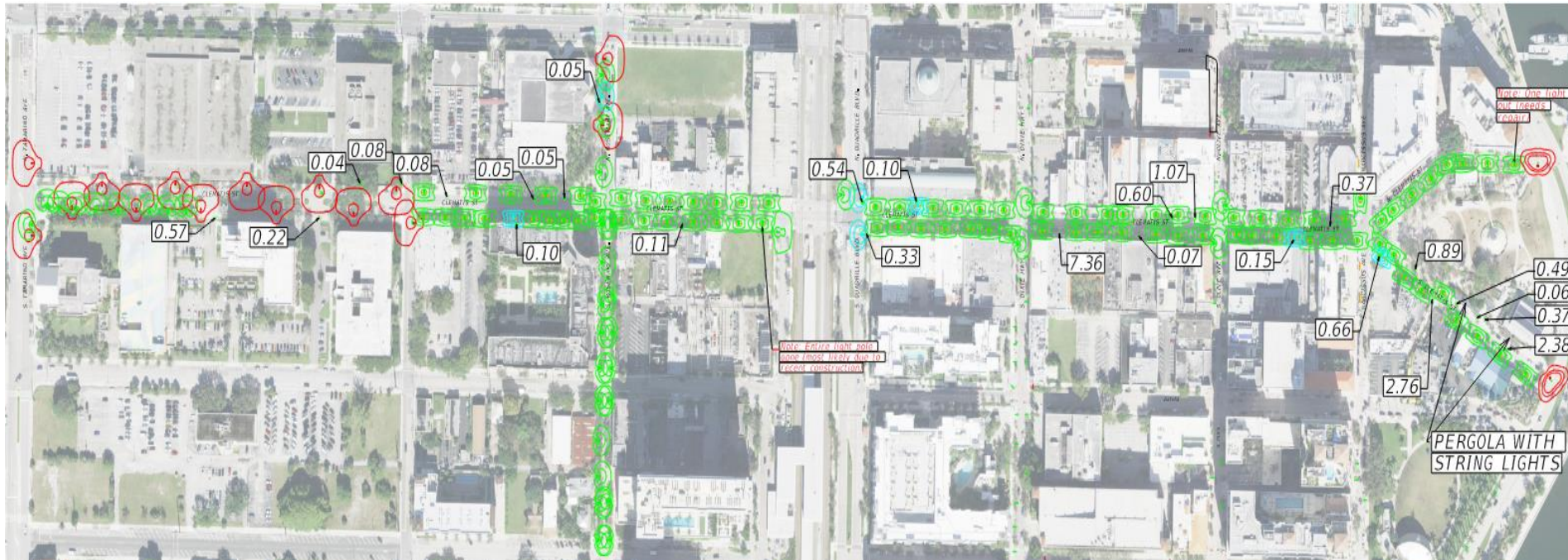
LARGE TREE  
BLOCKING LIGHT



# IDENTIFY IMPROVEMENTS

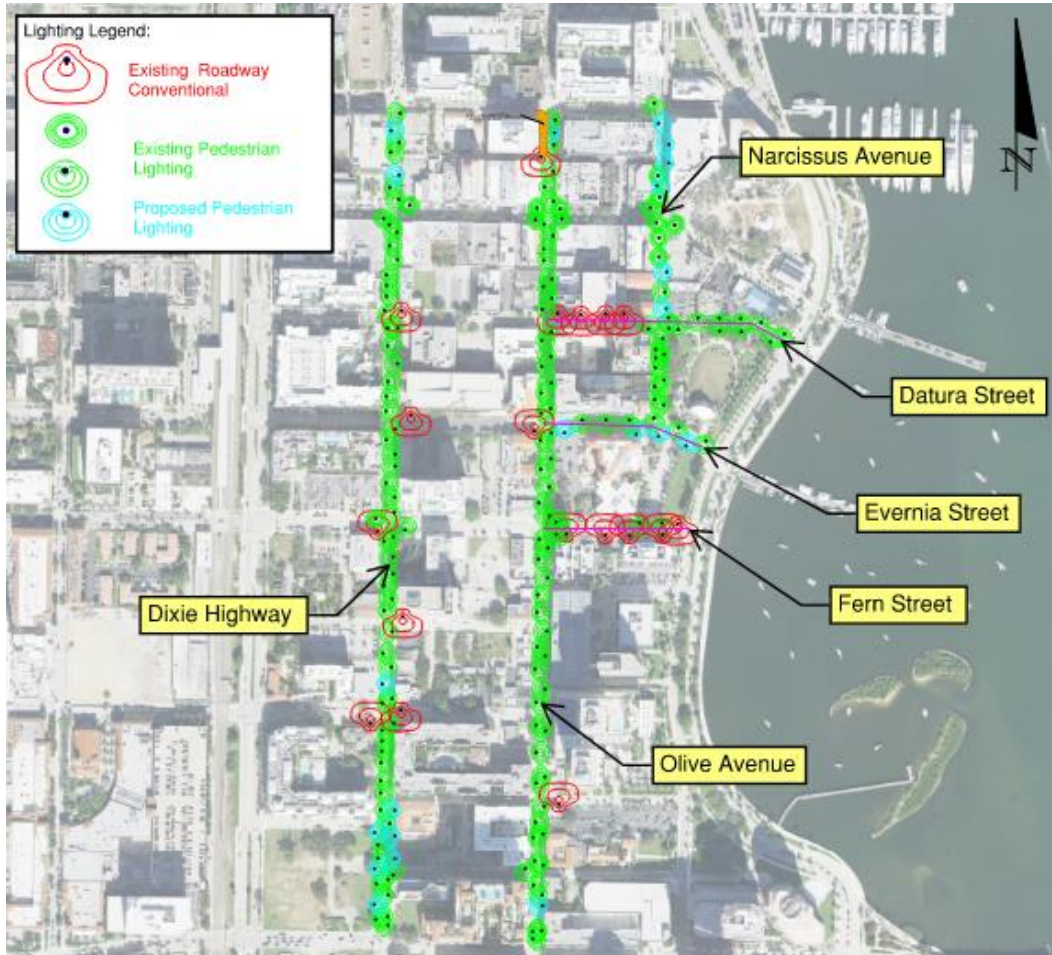
## Design Lighting Layout

Calculation Summary		
Label	Avg	Avg/Min
Clematis Sidewalk 6	2.28	5.70
Clematis Sidewalk 7	2.53	4.22
Clematis Sidewalk 8	2.64	3.30





# IDENTIFY IMPROVEMENTS



## Existing Lighting Layout

Calculation Summary		
Label	Avg	Avg/Min
Datura Sidewalk 1	1.60	2.00
Datura Sidewalk 2	1.34	4.47
Datura Sidewalk 3	0.96	4.80
Datura Sidewalk 4	1.16	5.80
Dixie Hwy Sidewalk 1	2.17	2.71
Dixie Hwy Sidewalk 10	1.51	3.02
Dixie Hwy Sidewalk 11	1.30	2.17
Dixie Hwy Sidewalk 12	1.23	4.10
Dixie Hwy Sidewalk 13	1.70	5.67
Dixie Hwy Sidewalk 14	1.22	12.20
Dixie Hwy Sidewalk 15	1.78	17.80
Dixie Hwy Sidewalk 2	1.25	6.25
Dixie Hwy Sidewalk 3	0.87	4.35
Dixie Hwy Sidewalk 4	1.30	2.60
Dixie Hwy Sidewalk 5	1.35	3.38
Dixie Hwy Sidewalk 6	1.29	12.90
Dixie Hwy Sidewalk 7	1.10	5.50
Dixie Hwy Sidewalk 8	1.27	4.23
Dixie Hwy Sidewalk 9	1.56	3.12
Evernia Sidewalk 1	0.91	9.10
Evernia Sidewalk 2	0.37	3.70
Fern Sidewalk 1	2.41	2.41
Fern Sidewalk 2	1.58	3.95
Narcissus Ave Sidewalk 1	2.05	5.13
Narcissus Ave Sidewalk 2	1.94	3.23
Narcissus Ave Sidewalk 3	0.68	6.80
Narcissus Ave Sidewalk 4	3.74	37.40
Narcissus Ave Sidewalk 5	0.16	N.A.
Narcissus Ave Sidewalk 6	1.94	N.A.
S Olive Sidewalk 1	1.15	11.50
S Olive Sidewalk 10	1.94	2.16
S Olive Sidewalk 11	1.58	5.27
S Olive Sidewalk 12	2.19	2.74
S Olive Sidewalk 2	1.56	15.60
S Olive Sidewalk 3	1.56	3.90
S Olive Sidewalk 4	1.34	6.70
S Olive Sidewalk 5	1.35	4.50
S Olive Sidewalk 6	1.16	5.80
S Olive Sidewalk 7	1.64	4.10
S Olive Sidewalk 8	1.75	2.50
S Olive Sidewalk 9	1.68	4.20

## Design Lighting Layout

Calculation Summary		
Label	Avg	Avg/Min
Datura Sidewalk 1	1.61	2.01
Datura Sidewalk 2	1.38	3.45
Datura Sidewalk 3	1.13	3.77
Datura Sidewalk 4	1.31	3.28
Dixie Hwy Sidewalk 1	2.17	2.17
Dixie Hwy Sidewalk 10	1.64	2.73
Dixie Hwy Sidewalk 11	1.52	2.17
Dixie Hwy Sidewalk 12	1.40	2.00
Dixie Hwy Sidewalk 13	1.79	3.58
Dixie Hwy Sidewalk 14	1.44	2.40
Dixie Hwy Sidewalk 15	1.92	3.84
Dixie Hwy Sidewalk 2	2.39	3.98
Dixie Hwy Sidewalk 3	2.44	3.49
Dixie Hwy Sidewalk 4	1.63	2.33
Dixie Hwy Sidewalk 5	1.81	3.62
Dixie Hwy Sidewalk 6	1.73	3.46
Dixie Hwy Sidewalk 7	1.68	2.40
Dixie Hwy Sidewalk 8	1.50	3.75
Dixie Hwy Sidewalk 9	1.63	2.72
Evernia Sidewalk 1	1.15	3.83
Evernia Sidewalk 2	1.20	4.00
Fern Sidewalk 1	2.42	2.42
Fern Sidewalk 2	1.59	3.98
Narcissus Ave Sidewalk 1	2.00	4.00
Narcissus Ave Sidewalk 2	2.01	2.23
Narcissus Ave Sidewalk 3	1.49	3.73
Narcissus Ave Sidewalk 4	4.32	6.17
Narcissus Ave Sidewalk 5	1.51	2.52
Narcissus Ave Sidewalk 6	2.78	9.27
S Olive Sidewalk 1	1.52	5.07
S Olive Sidewalk 10	2.06	2.06
S Olive Sidewalk 11	1.62	3.24
S Olive Sidewalk 12	2.22	2.78
S Olive Sidewalk 13	1.43	2.38
S Olive Sidewalk 14	1.87	3.12
S Olive Sidewalk 2	1.80	4.50
S Olive Sidewalk 3	1.64	3.28
S Olive Sidewalk 4	1.58	3.16
S Olive Sidewalk 5	1.40	3.50
S Olive Sidewalk 6	1.36	3.40
S Olive Sidewalk 7	1.56	3.12
S Olive Sidewalk 8	1.75	2.50
S Olive Sidewalk 9	1.75	2.50

# IDENTIFY COSTS



West Palm Beach DDA Street Lighting Improvements OPINION OF PROBABLE COST														
		7/1/2025												
PAY ITEM NO.	ITEM OF WORK	Olive Ave. QTY	Dixie Hwy. QTY	Narcissus Ave. QTY	Datura St. QTY	Evernia St. QTY	Fern St. QTY	Rosemary Ave. QTY	Clematis St. QTY	Great Lawn QTY	UNIT	UNIT COST	SUB TOTAL	
1	LIGHT POLE COMPLETE, CLEMATIS DECORATIVE POLE								4	6	EA	\$ 15,000.00	\$150,000	
2	LIGHT POLE COMPLETE, LUMEC S55 ON DECORATIVE POLE (CITY STANDARD)	2	9	6		4		1	2		EA	\$ 8,000.00	\$192,000	
3	2" SCH 40 PVC CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	100	565	430		475		48	331		LF	\$ 43.58	\$84,937	
4	LIGHTING CONDUCTORS, F&I, INSULATED NO. 6 AWG	300	1695	1290		1425		144	993		LF	\$ 2.52	\$14,734	
5	PULL & SPLICE BOX, F&I, 18" x 11 1/4" COVER SIZE	2	9	6		4		1	6		EA	\$ 911.60	\$25,525	
6	TEARDROP LUMINAIRE, ON EXISTING ROADWAY POLE									3	EA	\$ 4,000.00	\$12,000	
7	SIDEWALK REPLACEMENT, 4" THICK	17.8	80.1	53.4		35.6		8.9	53.4	53.4	SY	\$ 206.16	\$62,384	
TOTAL STREET COST		\$ 22,937.20	\$ 109,098.50	\$ 75,459.80	\$ -	\$ 59,937.90	\$ -	\$ 11,366.32	\$ 98,396.94	\$ 102,000.00				
DESIGN ENGINEERING COST												LS	20%	\$ 108,316
CONTINGENCY ALLOWANCE												LS	20%	\$ 108,316
												Subtotal Materials and Installation		\$541,581
												Grand Total		\$ 758,213

## Notes:

- The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.
- Due to current conditions in the construction industry, this Opinion of Probable Construction Cost is based on our most current data. We have added a 20% contingency onto the OPC and it may still be below the actual material cost.

**Kimley-Horn and Associates, Inc.**  
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# SUMMARY OF FINDINGS

- Most of the sidewalks met the average lighting level criteria
- Some deviations from the uniformity criteria were observed
  - Temporary outages
  - Areas requiring additional coverage
  - Landscape obstructions
- The proposed improvements will bring most sidewalks within criteria

# DDA EVALUATION, RECOMMENDATIONS AND ACTIONS




After receiving the findings from Kimley, we took a few areas from the study to look at specific impacts.

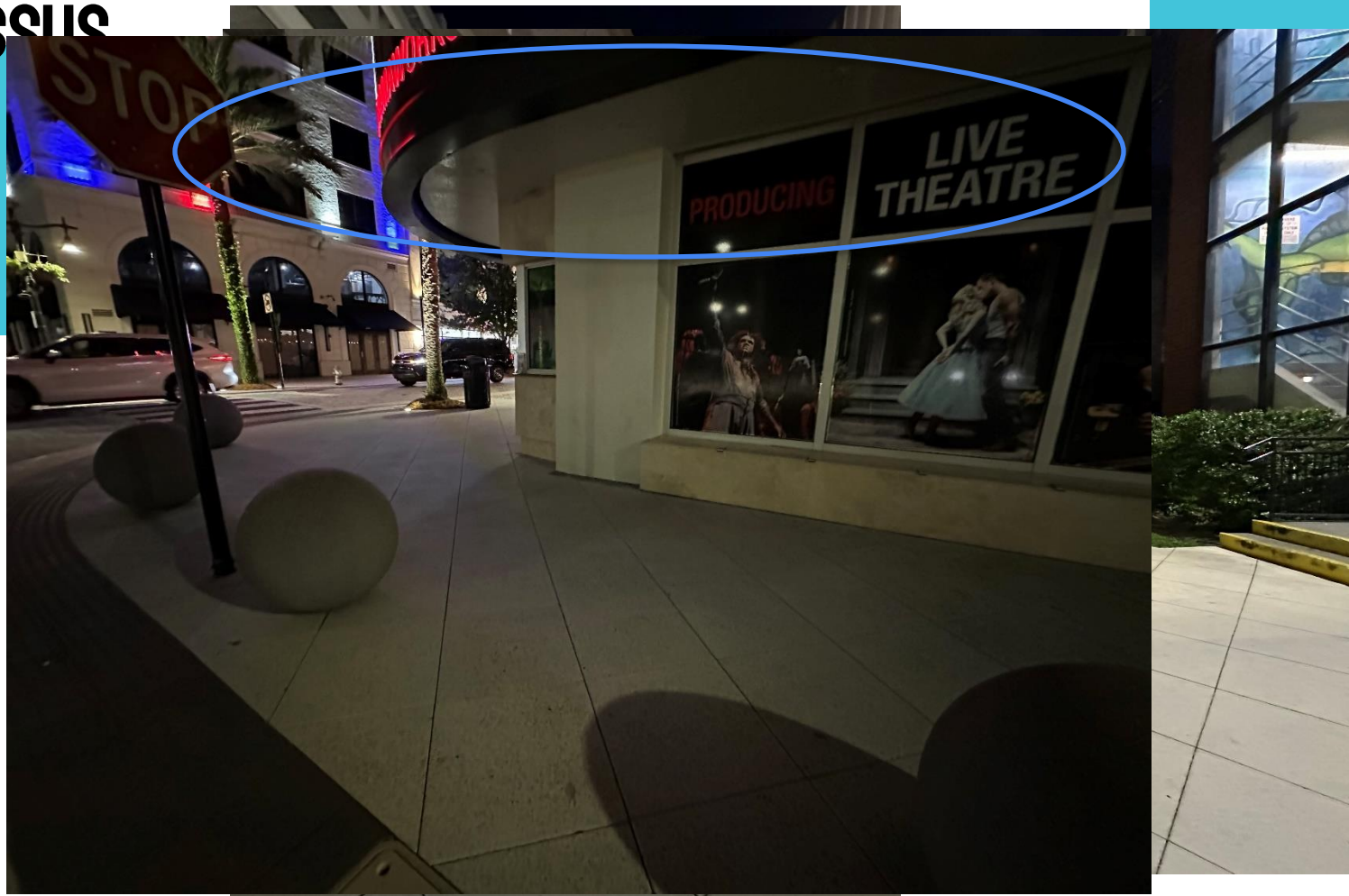
## **Tree Trimming:**

- On Olive and Dixie, we have already had trees trimmed as much as allowed for the health of the trees.
- We have scheduled tree trimming in other locations to help with lighting.
- The impact will be more subtle than new lights but will help.

Shade trees like the Oaks and Holly are not ornamental so we are not able to cut them in a manner that prevents lighting interference.

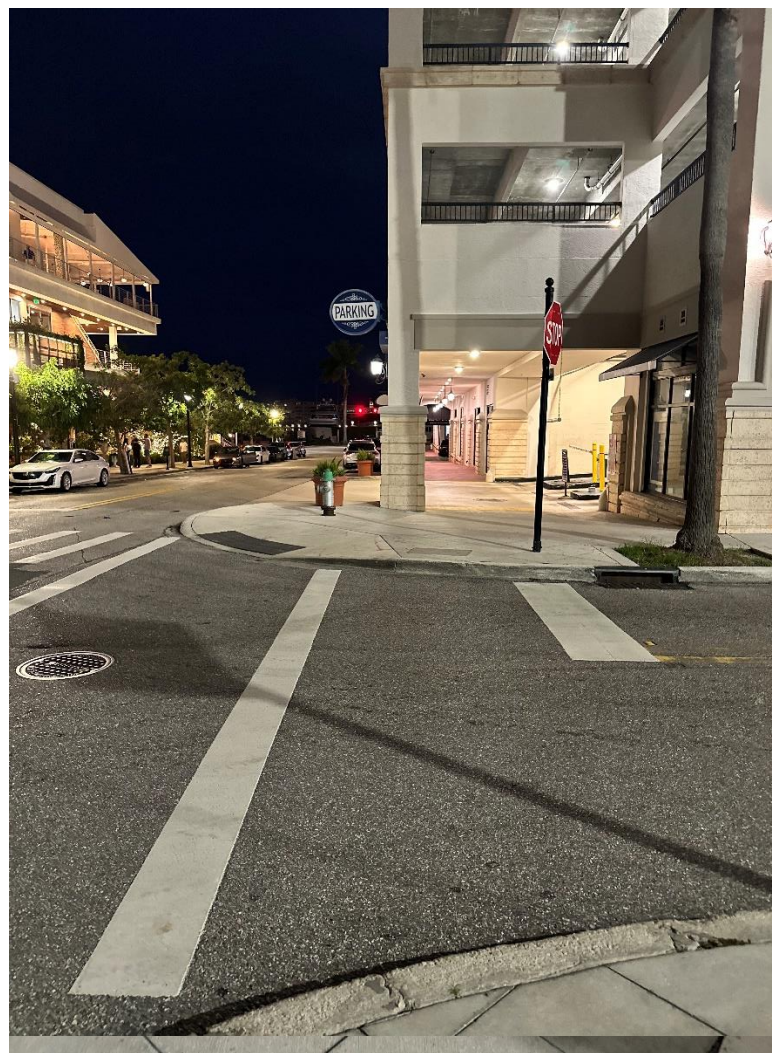


# NARCISSUS



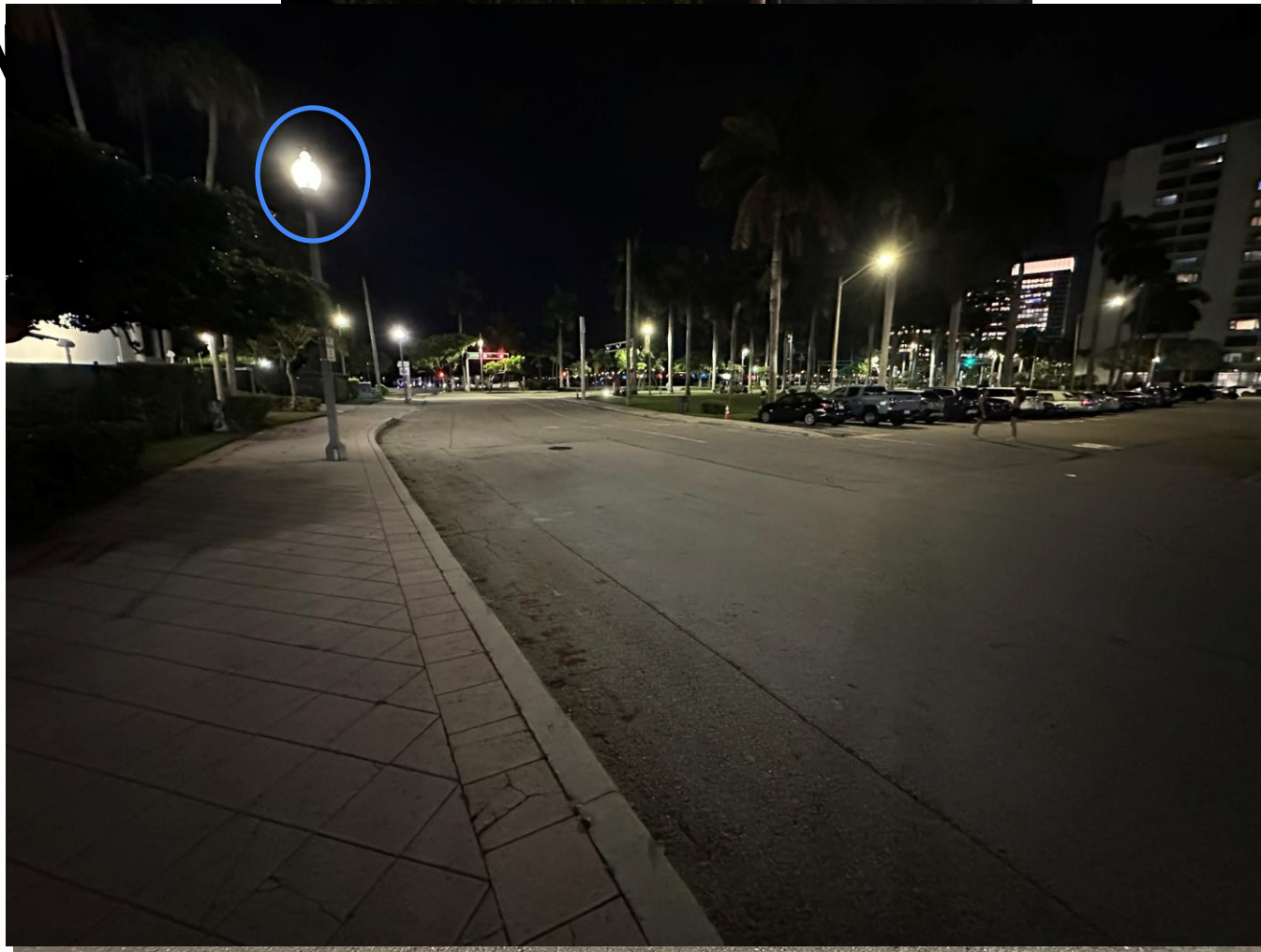


# BANYAN



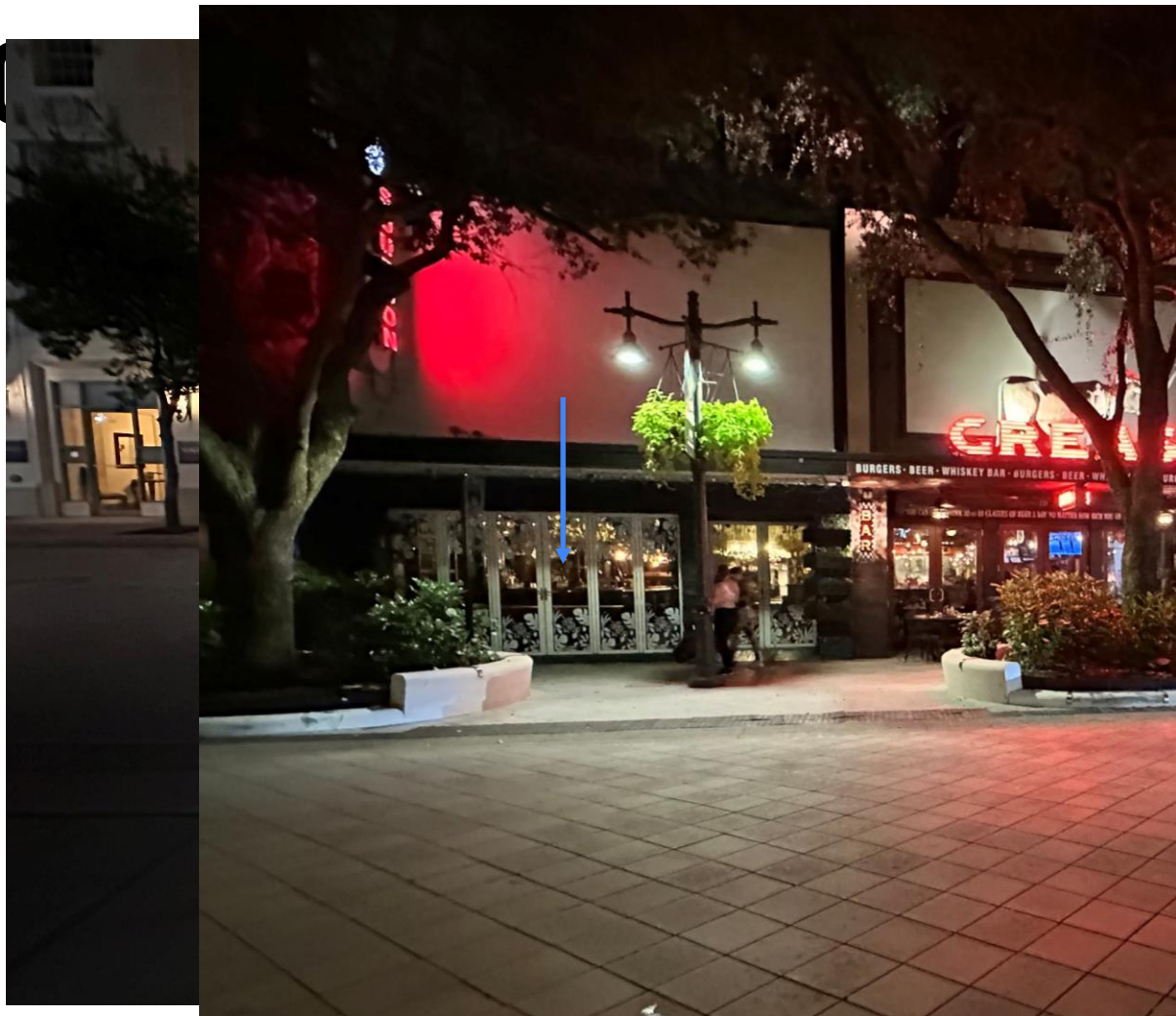


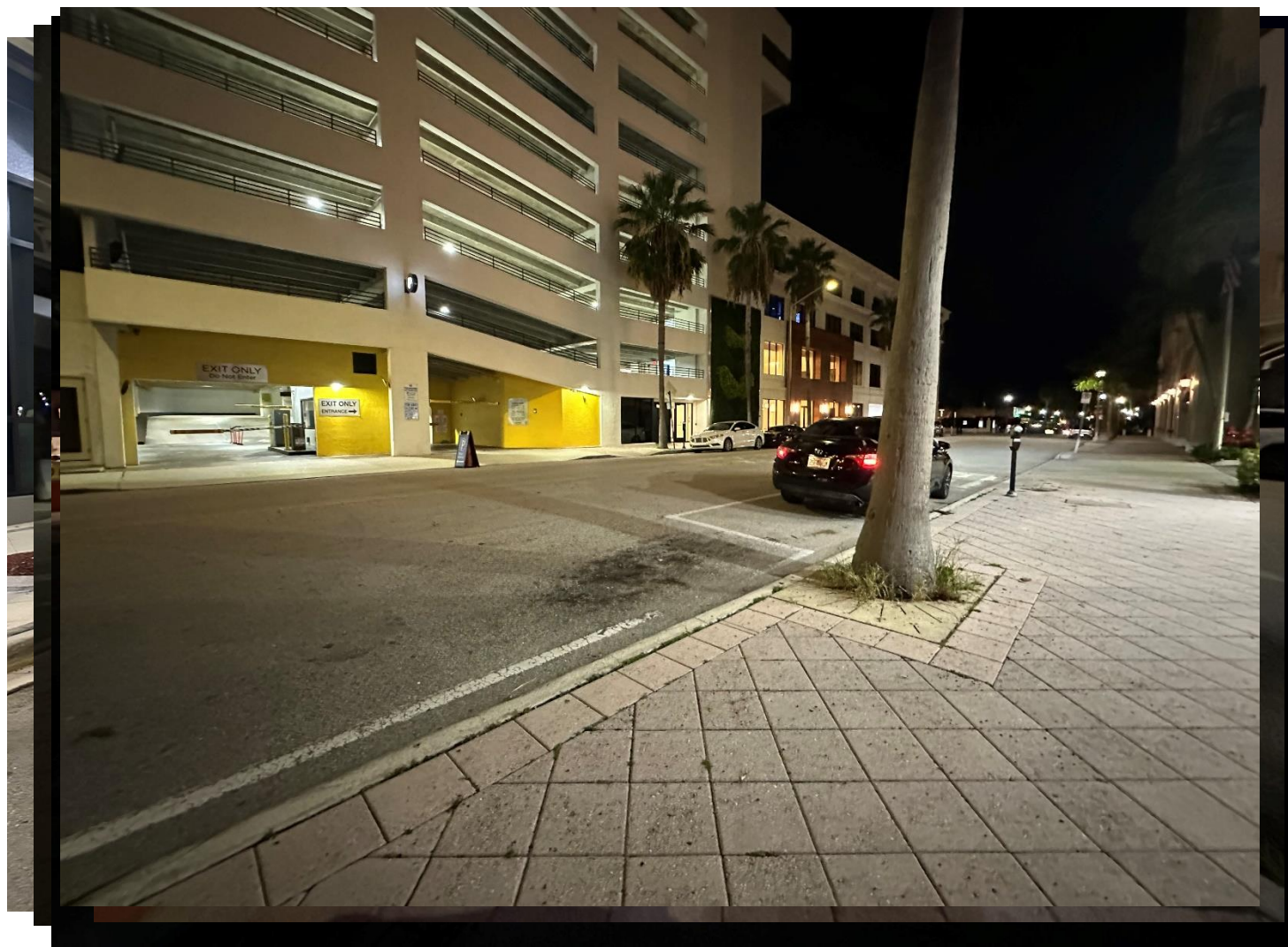
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# SUMMARY

- Work with property owners to add lighting to building exteriors. This is an impact that is effective and much more cost effective.
- Address alleyways with box or pole lighting on existing poles.
- Poles impacted by trees regarding spacing, are not an easy fix and likely long-term items.

## Next Steps

- Draft a plan in phases utilizing Kimley Horn's findings along with staff recommendations to making improvements - working with the city and property owners
- Plan draft to be established in the next 3 months
- Establish timeline for Phase 2 target areas

In many ways, we could have minor fixes for something that can drastically change the look and feel of our Downtown.



# QUESTIONS?

