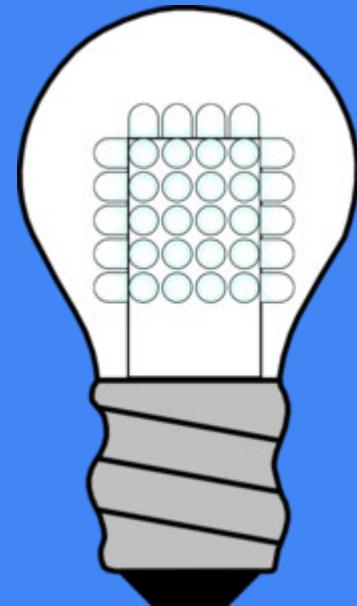


# Lack of LED Street Lights

Project Streetlights



# Problem

- Without street lights, the community isn't lively.
- It's more dangerous for kids that come home late after extracurricular activities.
- More crime can happen.

# Location

- **Areas in D8 have many civilians who walk around the streets of Bamford.**
- **The lack of light makes the streets dangerous and civilians have no choice but to walk in the dark.**
- **It's also dangerous for kids to walk home when it gets late and dark.**



# Importance of Streetlights On Bamford

- Schools in Close Proximity
- Safer for Student to Walk Home
- Daylight Saving

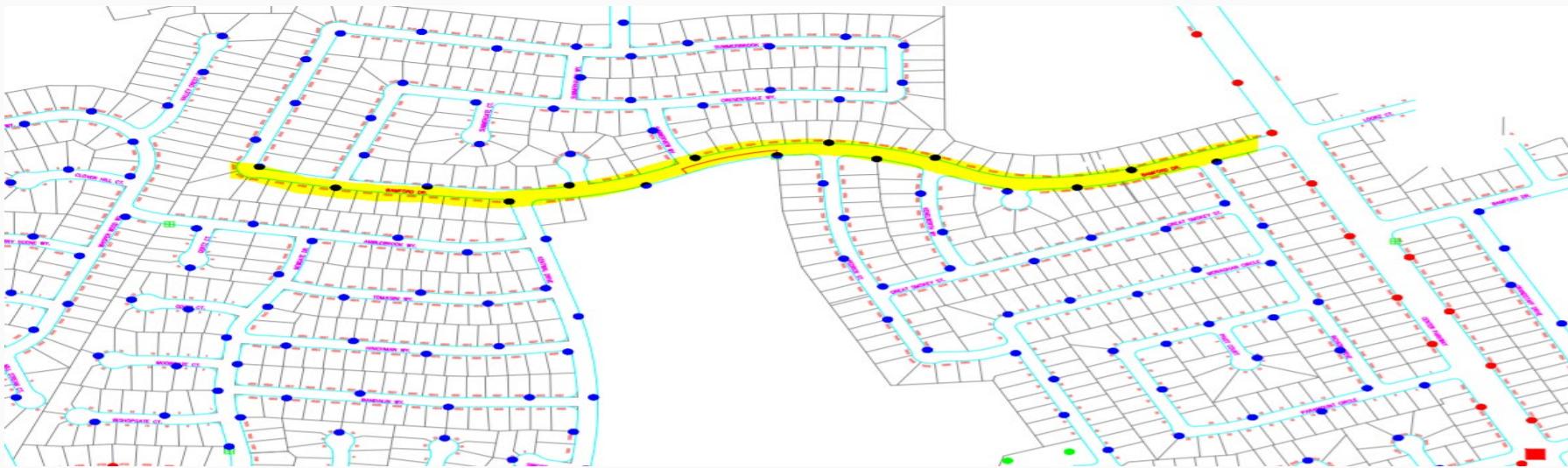


# Quality of Life

- More neighborhood activities at night
- Make the Neighborhood more inviting
- Examples of the effects of streetlights can be seen in Fremont Park

# The Solution

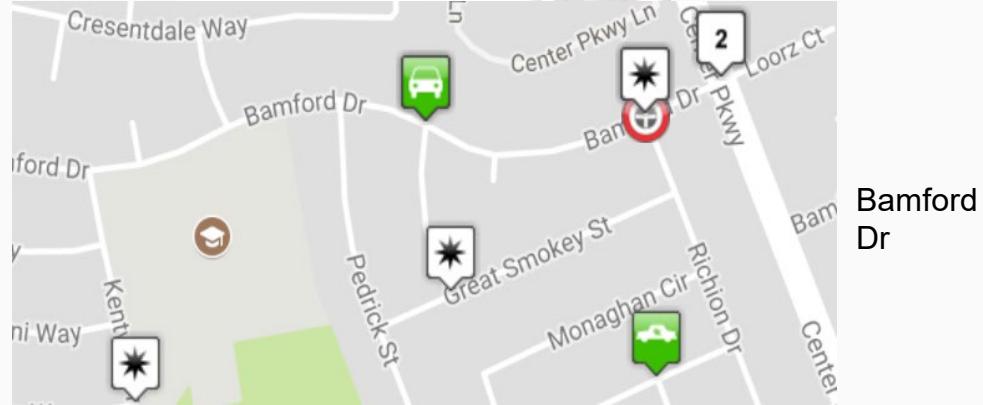
- Replace the bulbs of the existing streetlights
- HPS Bulbs to LED Bulbs



# Safety for Bamford to Deer Creek Dr.

- Deer Creek Dr is a street that has a good amount of street lights and has far less crime.
- Bamford Dr. is a street with dim lighting and less amount of street light and more crime.
- Based on studies the streetlight has less crime because of more and or brighter street lights.(Professor Ken Pease)

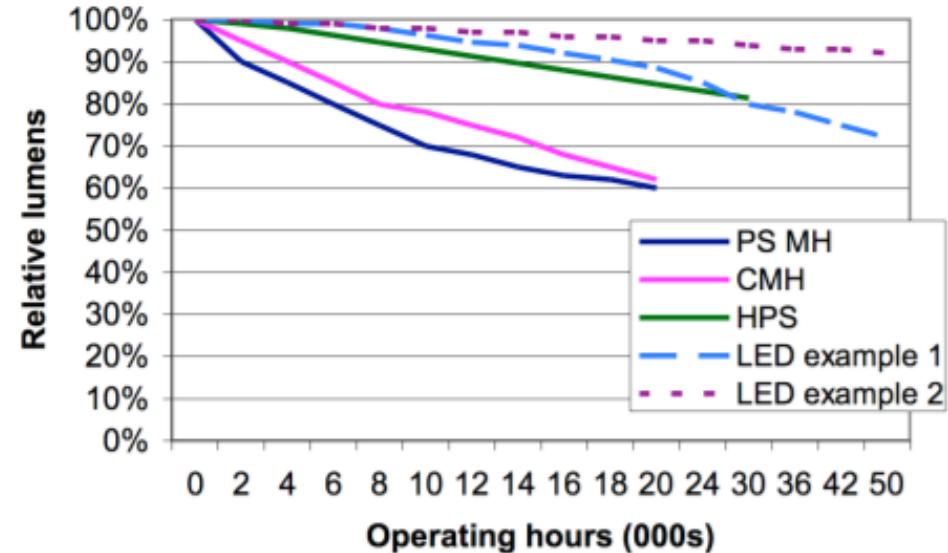
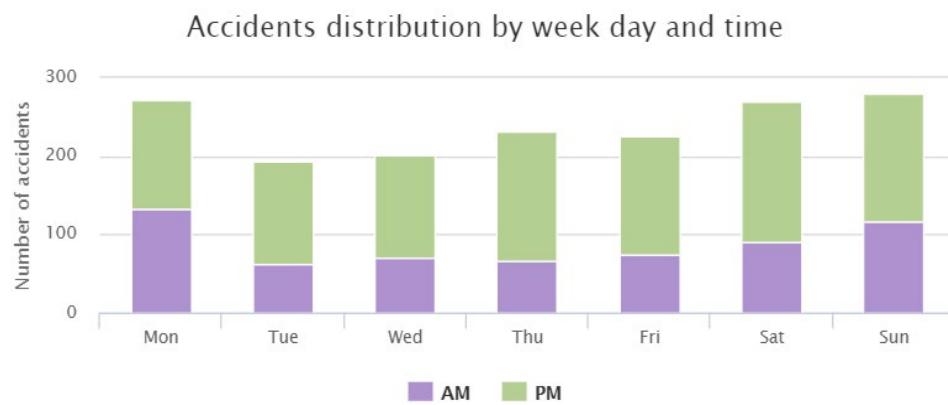
Deer Creek Drive



Bamford Dr

# Safety cont.

- Less Accidents
  - More accidents happen at night than the day.
  - You can identify/report the person committing crime.
- LED's are brighter than HPS lights



# HPS Lights VS. LED Lights



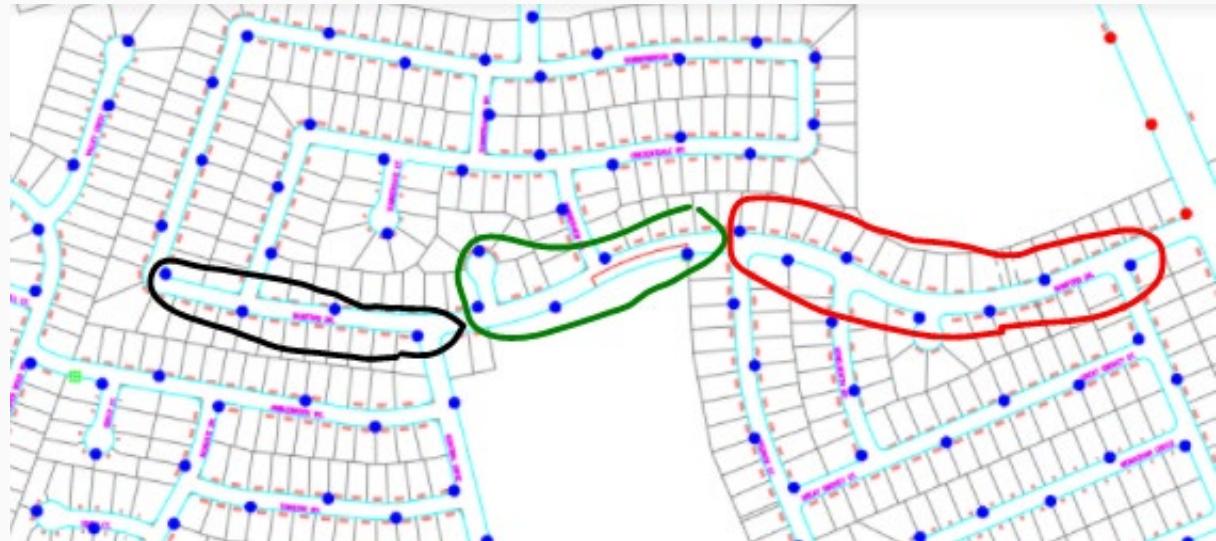
# Cost of Streetlights

- \$400 per LED streetlight
- 16 Streetlights on Bamford
- Total Cost: \$6400

2 Methods:

All 16 street lights at once

Retrofit streetlights in 3 phases



# Cost comparison (LED vs. traditional)

	LED Post Top - 27W	LU100 (HPS)
Life of Bulb:	50,000 hours	24,000 hours
Watts:	27 watts	100 watts
Kelvin Temp:	2700, 4000, 5700 K	2100 K

# Cost comparison (LED vs. traditional)

Cost per Kilowatt:

**\$0.1291 per kWh**

LED:

**\$15.3843 per year**

HPS:

**\$56.979 per year**



## Phoenix: HPS to LED Conversion Analysis

Data (Arterial street)	Units	HPS - 250 Watt	LED - 139 Watt
Lamp and Fixture (Mat. Only)	\$	\$230.00	\$475.00
Fixture Installation (Labor)	\$	\$29.00	\$29.00
Manufacturer's Lamp Life	Hours	20,000	50,000
Annual Energy Costs	\$	\$72.36	\$32.88
Lamp Replacement Cost	\$	<b>\$1.20 per month</b>	<b>\$0.60 per month*</b>
Calculations			
Years to Replace Lamp	Years	<b>4</b>	<b>12</b>
Manufacturer's Warranty	Years	<b>1</b>	<b>10</b>
10 year Lamp Replacements	#	2	0
Life Cycle Costs			
Initial Equipment & Install Costs	\$	\$259.00	\$504.00
10 Yr Energy Costs (w/o Infl)	\$	\$723.60	\$328.80
10 Yr Lamp Maintenance Costs	\$	\$144.00	\$72.00
Final Cost Totals			
10 Year Life Cycle Costs	\$	<b>\$1,126.60</b>	<b>\$904.80</b>
Annualized Costs	\$	\$112.66	\$90.48

# THANK YOU FOR LISTENING

“And Remember, with just a little light, it’ll be alright”

-Jacari Johnson

Sowrov Talukder, Tou Xiong, Jacari Johnson, Kathleen Thao, Anthony Hara, Monique Williams, Noah Ramos, Farm Saetern, Josue Hernandez, Stephen Cutchlow

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