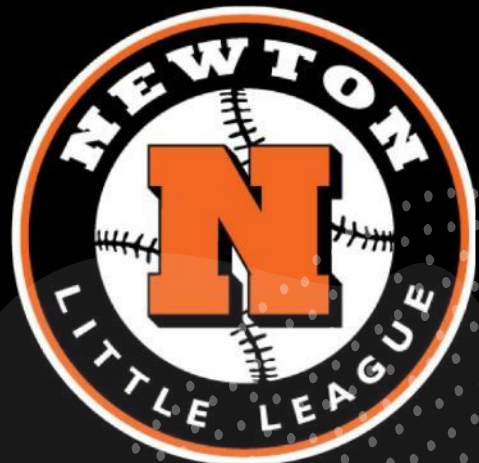


Proposed Murphy Field Lights Addition

Newton Little League - 12/20/21



**NEWTON
LITTLE LEAGUE**

Welcoming Boys and Girls • Ages 4 –12



Murphy Field Lights Opportunity

Newton Little League (NLL) would like to partner with Newton Parks, Recreation and Culture (PRC) to make substantial improvements to Murphy Field helping meet PRC goals to expand Newton field utilization into evenings, increase player safety, and meet Newton family requests for field quality consistent with neighboring and surrounding towns.

NLL has a base of well over than six hundred players and families that are eager to see improvements to fields. NLL proposes adding lighting to Murphy Baseball Field complemented by selective renovations that will substantially improve utilization by players and families and help bring our field quality in line with neighboring towns

Murphy Baseball Field at the Halloran Sports Complex



Albermarle North

Multi-Use Football, Soccer, Lacrosse, Baseball and Softball
This area is lighted for night use.

Albermarle Central

Area consists of 1 Field House, 1 Basketball Court, Two Tennis Courts, The Gath Pool & Bath House, a Children's Wading Pool and Two Softball Fields

Albermarle South

Area consists of Newton Little League's Murphy Field, Roche Baseball Field, a snack bar/ shed, two batting cages, a storage container, a T-Ball Field (out of use) and a Multi-Sport use open area.

Adjacent to Murphy's Outfield Fence is a picnic area, a gazebo, soft-scape playgrounds and swings. Further south is the Newton Ed Center (formerly Horace Mann Elementary School)

Murphy



Murphy Field, Roche Field, R& T-Ball Field

Proposed Project

NLL proposes adding infield and outfield lighting to Murphy Baseball Field at the Halloran Athletic Complex in accordance with the design proposal submitted to PRC by Musco Lighting

- Lighting will include two infield and two outfield LED lights
- The latest green technology LED lighting will be incorporated in the project.
- The LED lighting incorporates Total Light Control (TLC), which virtually eliminates vertical and horizontal light spillage, as well as glare from the light fixtures.
- New TLC lighting technology achieves pinpoint precision illumination to the playing surface, while dramatically cutting-off light-spill.
- LED with TLC provides for instant-on / instant-off operation, as well dimmable capabilities
- Musco Estimate: \$190K-\$210K (LED Light Source: \$130,000-\$140,000, Installation \$60,000-\$70,000)

In conjunction NLL will invest in field improvements to enhance family and player experiences and safety and bring our fields in line with the experience at neighboring towns.

- Upgraded bleachers, fencing, netting
- New scoreboard
- Renovated concessions, batting cages, bullpen, dugouts
- Estimated NLL Investment: \$35K

Project Benefits

Murphy Field Lighting and proposed field enhancements directly support the strategic goals articulated by the City and Parks and Recreation of substantially expanding use of fields through lighting and improving safety of fields

- Addition of lighting will add ~ 275 hours of available playing time for league supporting several hundred players and their families on a highly visible and attractive Newton field complex
- Planned league upgrades including painting, renovated bleachers, new fencing, netting, scoreboard, concessions, improved bull pen/batting cages will improve player and family experience, increase safety and accessibility
- Murphy work has the widespread support of the league and could be accomplished quickly providing a quick visible win in highly trafficked area of Newton families
- Newton Little League is well positioned to raise funds for the project once a timeline has been committed. Even without launching a formal campaign it has \$55K in commitments and several interested parties if a near term date can be confirmed. Early success by the league in raising funds would set a good precedent for the rest of Halloran work

MUSCO PROJECT SUMMARY

Murphy Field

Newton, MA

Lighting System

Pole / Fixture Summary

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1-A2	60'	60'	1	TLC-LED-1200	1.17 kW	A
		60'	2	TLC-LED-900	1.78 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
B1-B2	70'	70'	5	TLC-LED-1200	5.85 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
4			20		19.90 kW	

Circuit Summary

Circuit	Description	Load	Fixture Qty
A		19.9 kW	20

Fixture Type Summary

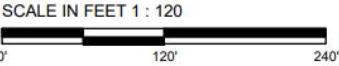
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-900	LED 5700K - 75 CRI	890W	89,600	>120,000	>120,000	>120,000	4
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	4
TLC-LED-1200	LED 5700K - 75 CRI	1170W	136,000	>120,000	>120,000	>120,000	12

Light Level Summary

Calculation Grid Summary

Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Murphy Field Spill (Cd)	Max Candela Metric	884	2.74	2135	780.39	322.67	A	20
Murphy Field Spill	Horizontal Illuminance	0.02	0	0.05	0.00		A	20
Murphy Field Spill	Max Vertical Illuminance Metric	0.05	0	0.14	0.00		A	20
Murphy Field (Infield)	Horizontal Illuminance	50.9	38	64	1.68	1.34	A	20
Murphy Field (Outfield)	Horizontal Illuminance	34	21	43	2.02	1.62	A	20
Zero Grid	Horizontal Illuminance	11.4	0	63	31626.72		A	20

MUSCO EQUIPMENT LAYOUT



ENGINEERED DESIGN By: · File #215333A-R1 · 15-Dec-21

Murphy Field Newton, MA

EQUIPMENT LAYOUT

INCLUDES:

- Murphy Field
- Zero Grid

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	
2	A1-A2	60'	-	60'	TLC-LED-1200	1	
				15.5'	TLC-BT-575	1	
				60'	TLC-LED-900	2	
2	B1-B2	70'	-	15.5'	TLC-BT-575	1	
				70'	TLC-LED-1200	5	
4	TOTALS					20	

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
Single Phase Voltage	5.3	5.0	4.6	4.0	3.2	2.9	2.3
TLC-LED-900	3.4	3.2	2.9	2.5	2.0	1.8	1.5
TLC-BT-575	7.0	6.6	6.1	5.2	4.2	4.0	3.0
TLC-LED-1200							



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Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

MUSCO ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	60'	-	60'	TLC-LED-1200	1	1	0
				15.5'	TLC-BT-575	1	1	0
				60'	TLC-LED-900	2	2	0
2	B1-B2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	5	5	0
4	TOTALS					20	20	0



Murphy Field
Newton, MA

GRID SUMMARY

Name:	Zero Grid
Size:	500' x 500'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average:	11.42
Maximum:	63
Minimum:	0
Avg / Min:	5691.05
Max / Min:	31626.72
UG (adjacent pts):	11.97
CU:	0.90
No. of Points:	1684
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	20
Total Load:	19.9 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

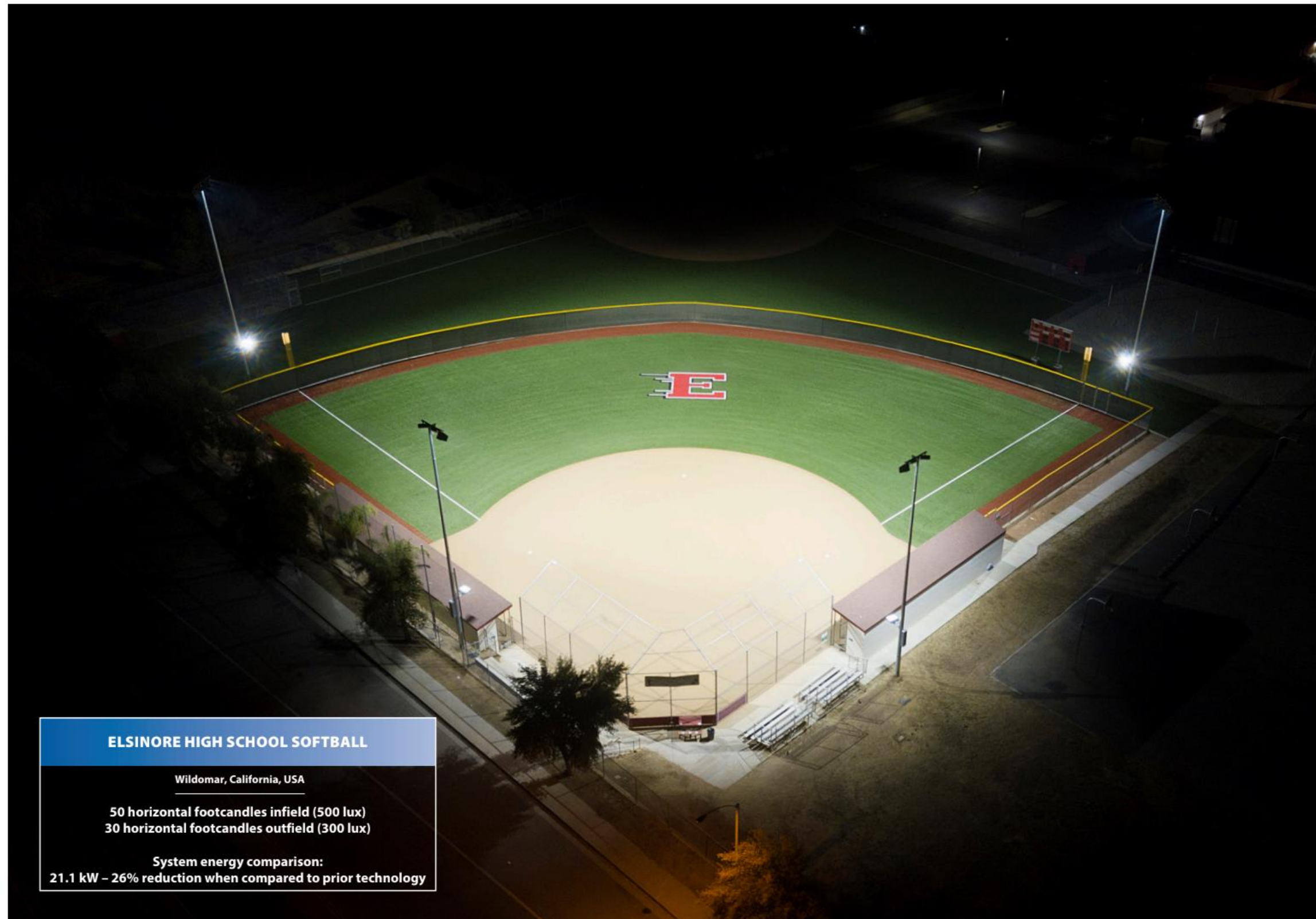
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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Musco Lighting Example



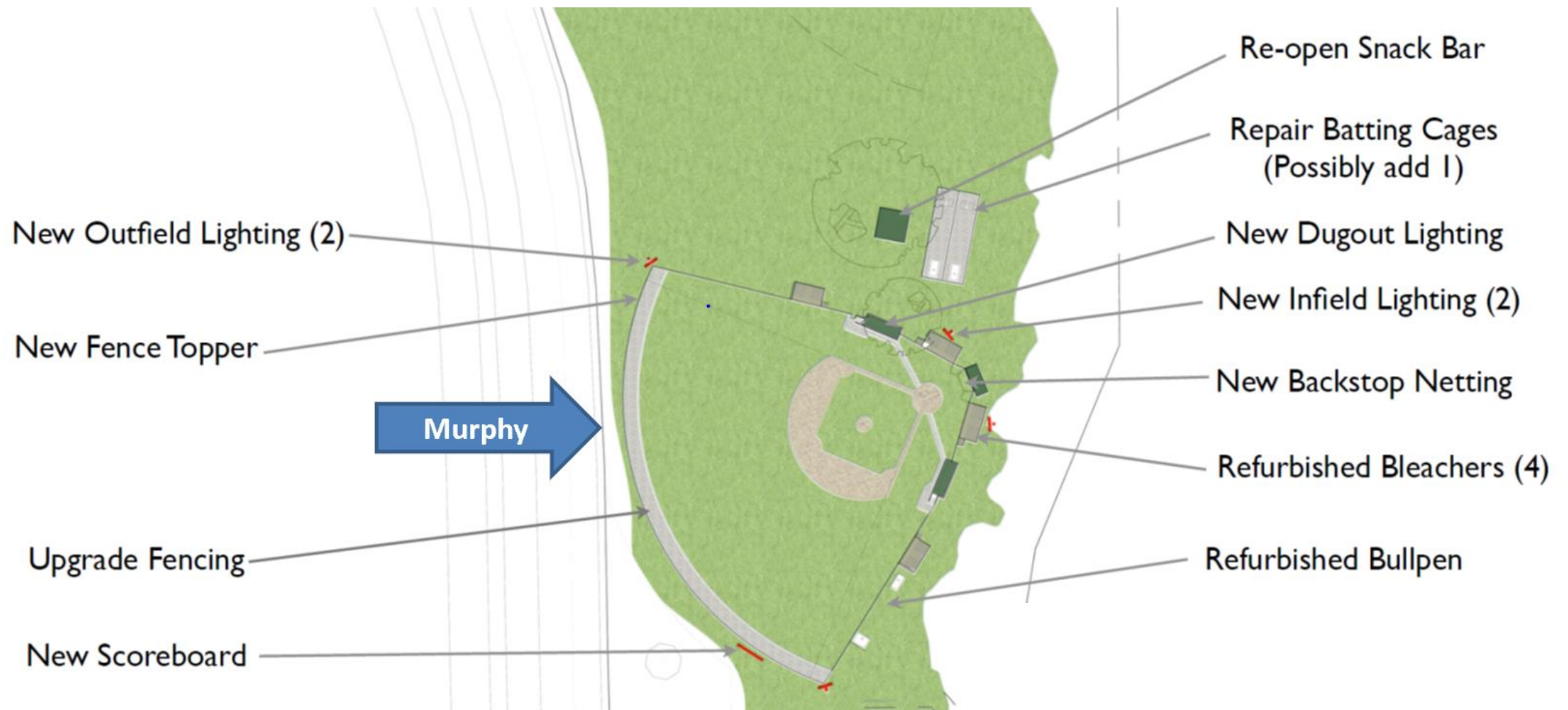
ELSINORE HIGH SCHOOL SOFTBALL

Wildomar, California, USA

50 horizontal footcandles infield (500 lux)
30 horizontal footcandles outfield (300 lux)

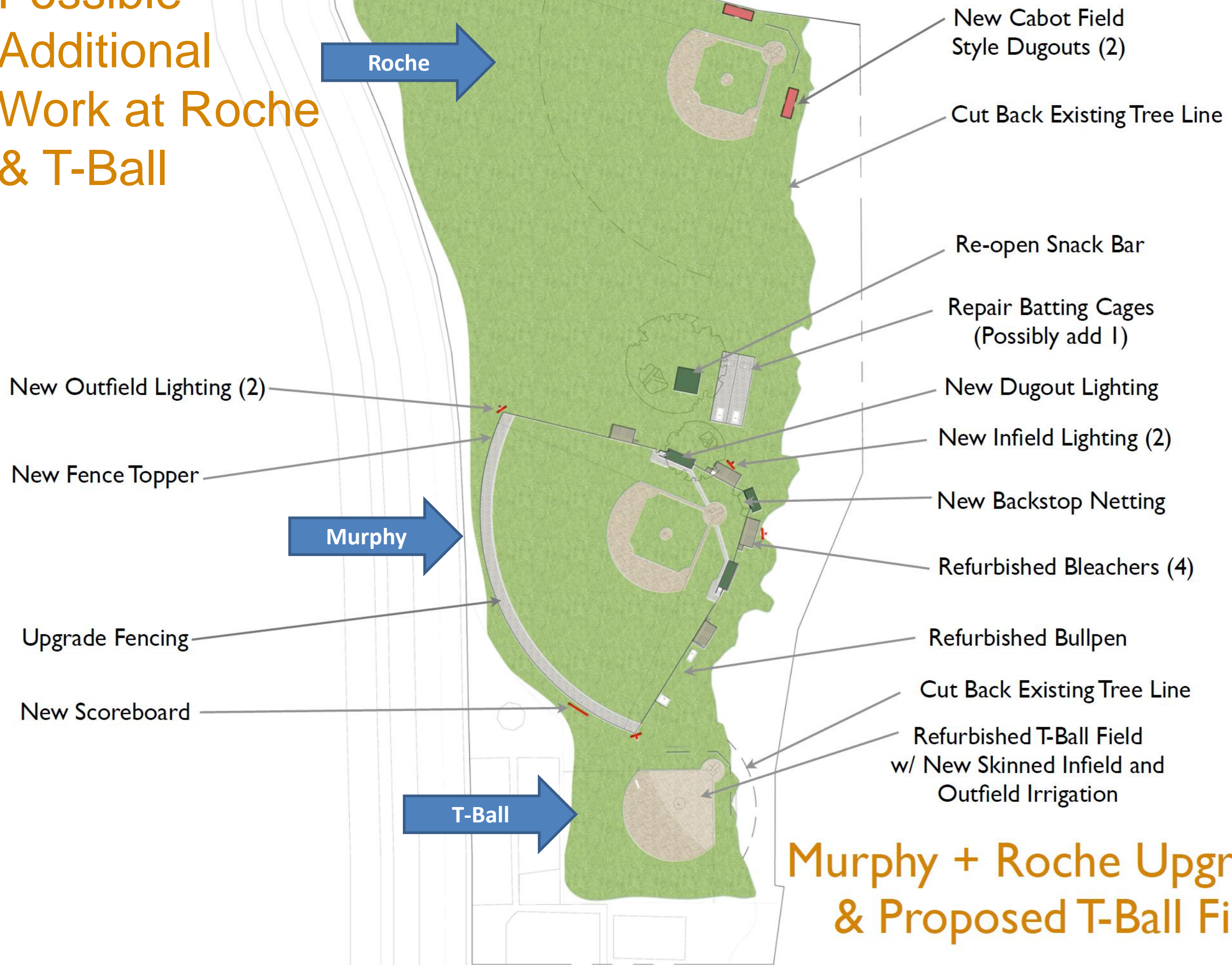
System energy comparison:
21.1 kW – 26% reduction when compared to prior technology

Murphy Lighting + Additional Enhancements



APPENDIX

Possible Additional Work at Roche & T-Ball



**Murphy + Roche Upgrades
& Proposed T-Ball Field**



Existing Conditions