

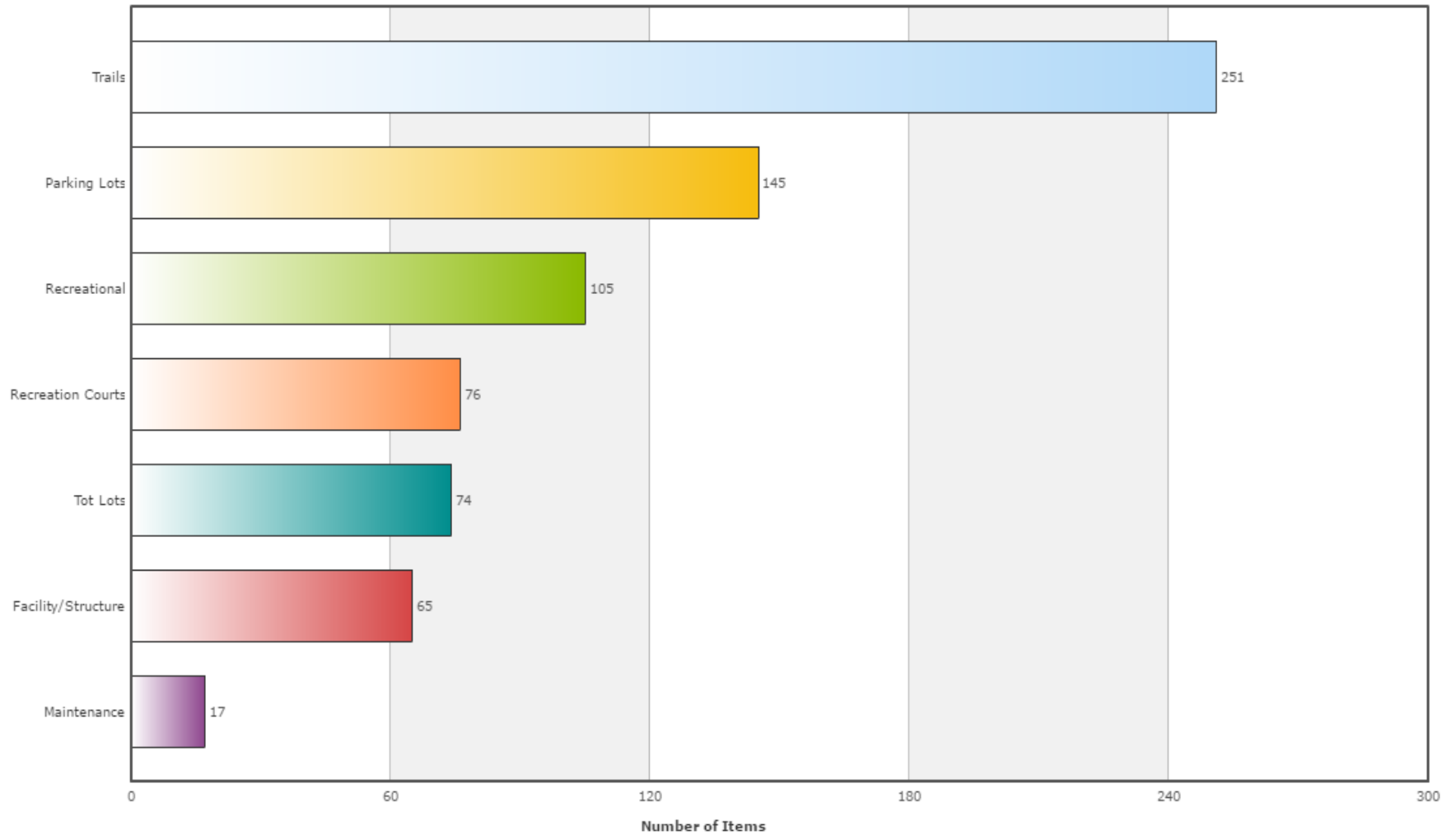
Your Trusted Sustainability Partner.



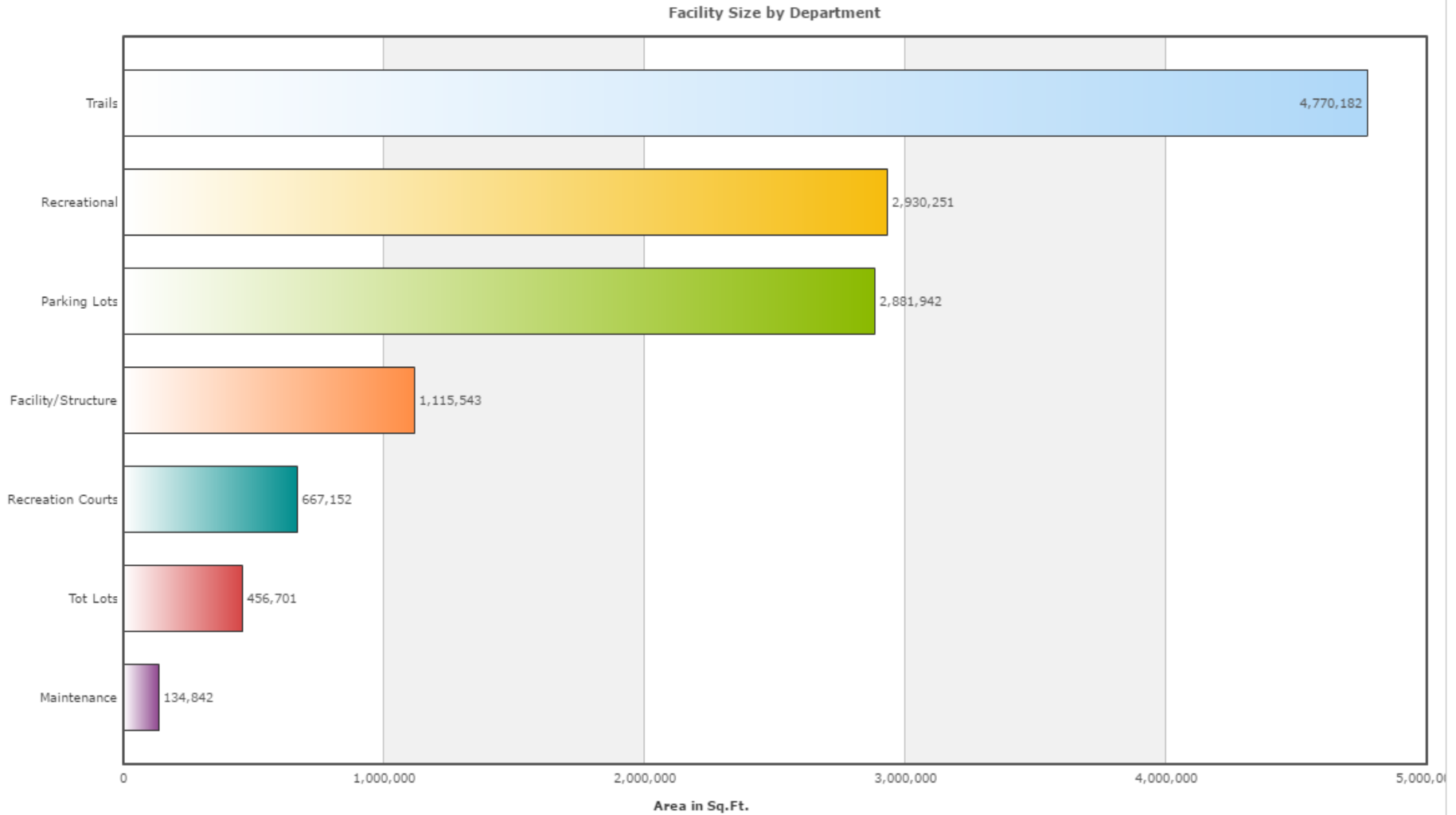
Tim Dettlaff, Sr. Vice President & General Manager Asset Sustainability

City of Saint Paul

Portfolio Profile: Number of Assets By Department

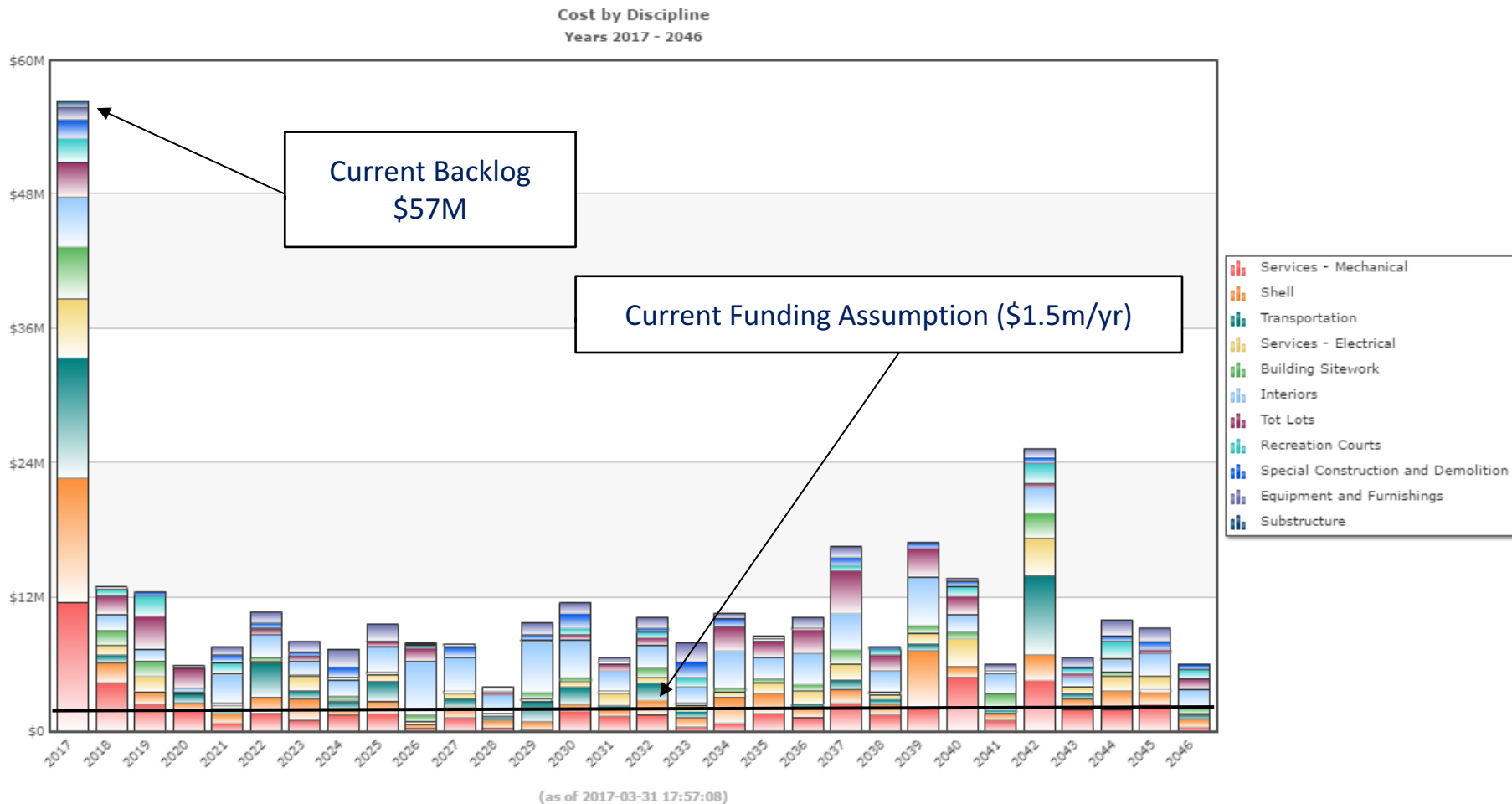


Portfolio Profile: Asset SF by Department

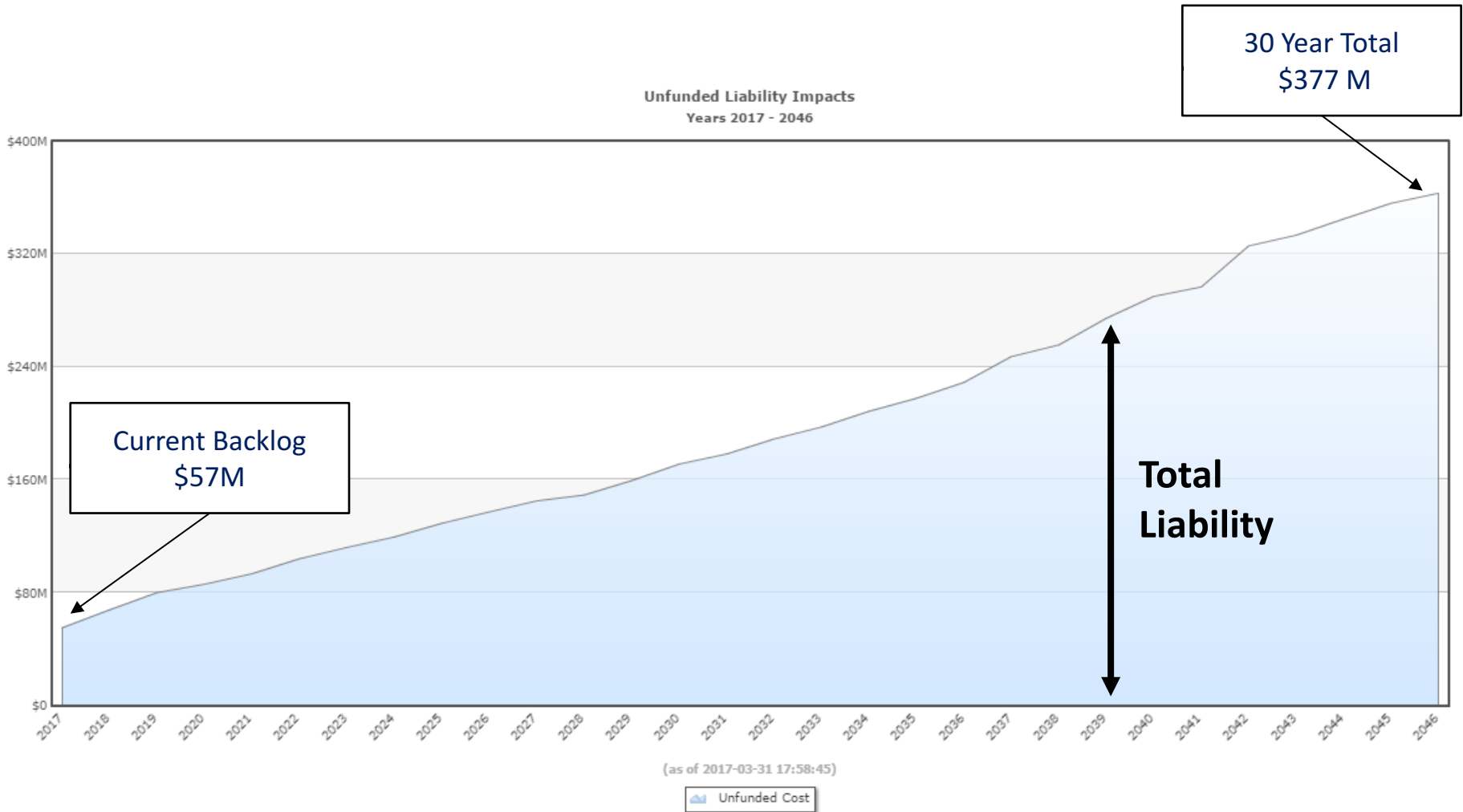


Portfolio Level: All Assets

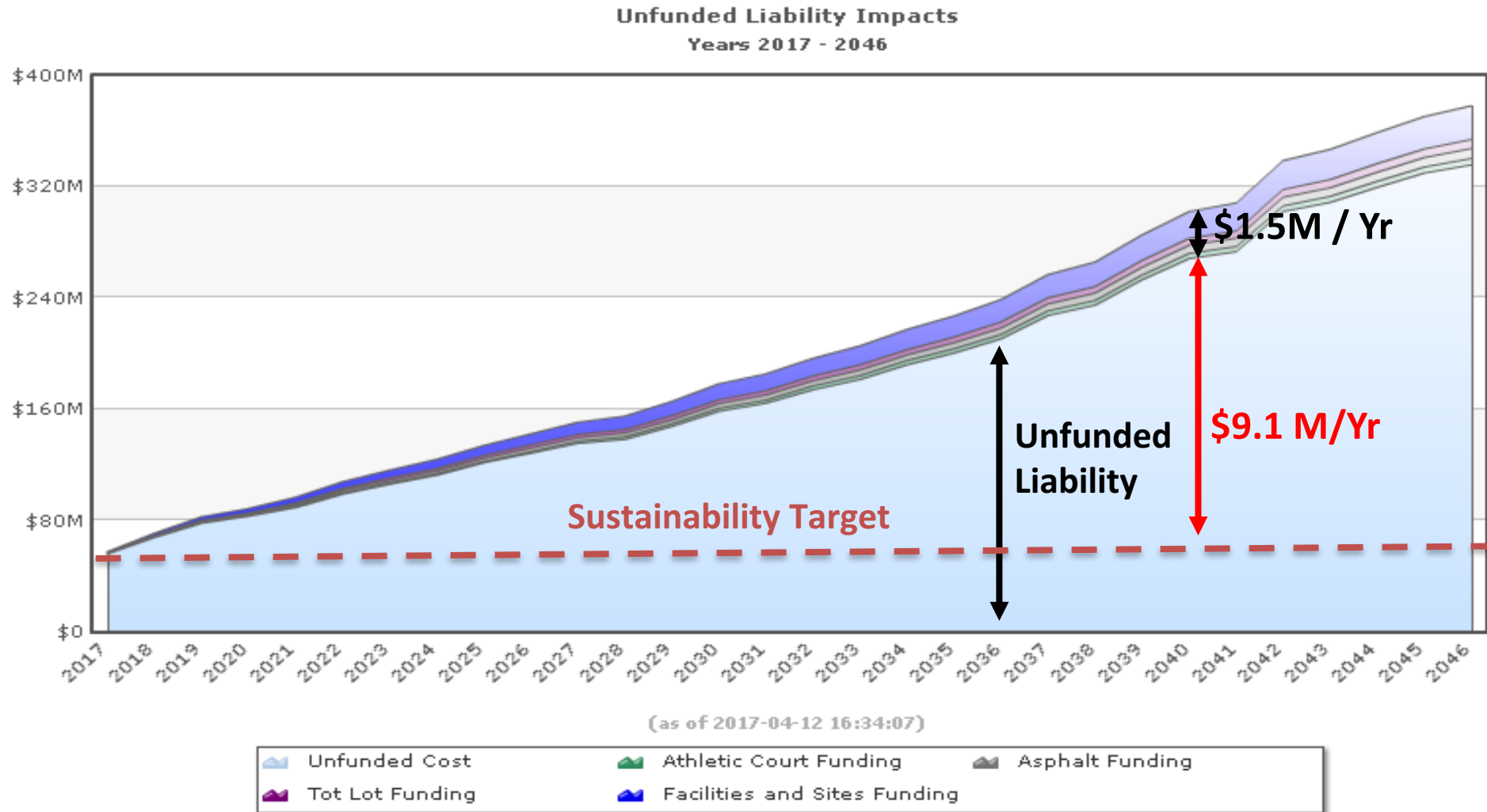
Projected Capital Needs Portfolio



Projected Total Liability Portfolio



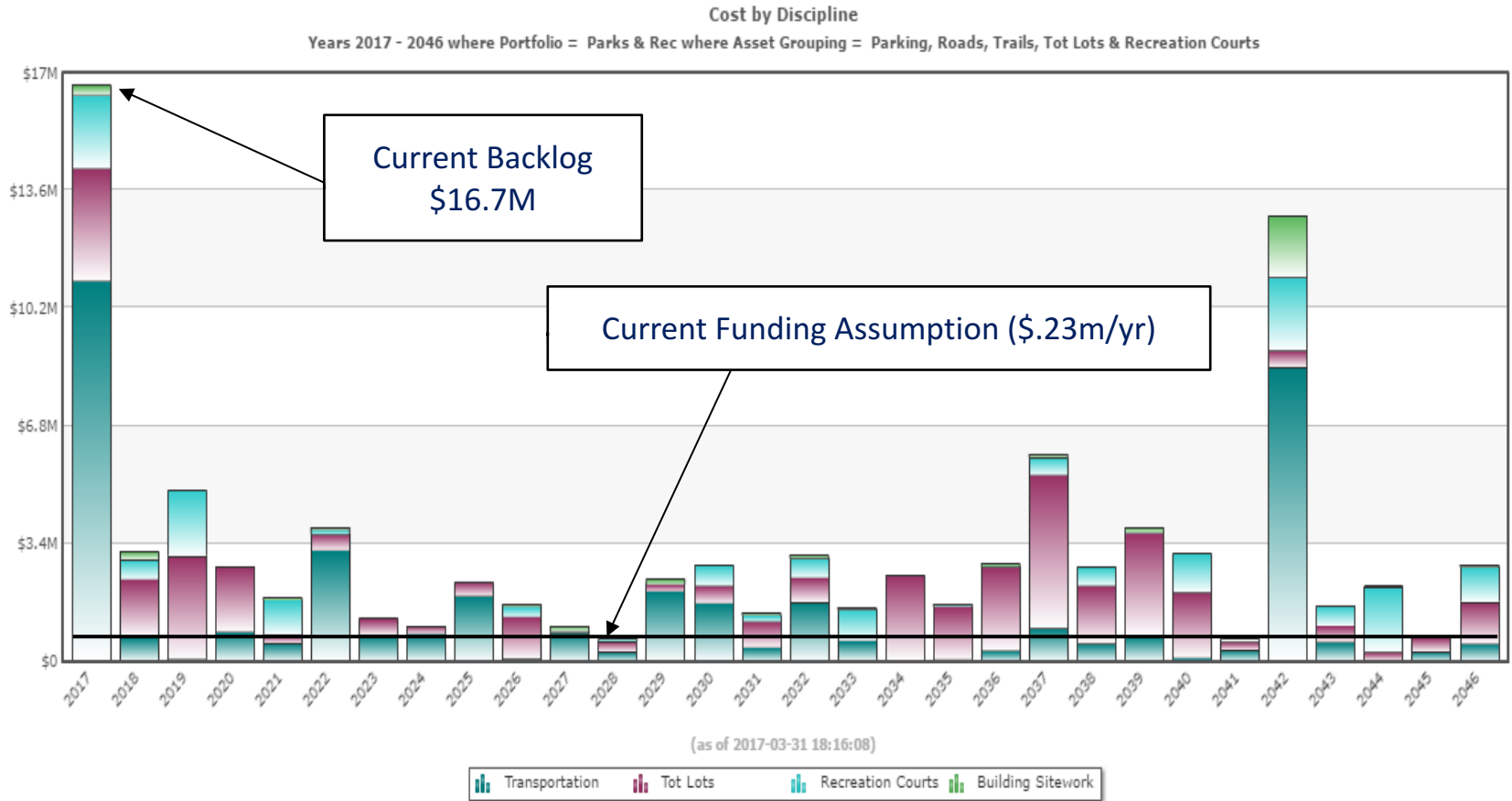
Projected Unfunded Liability Portfolio



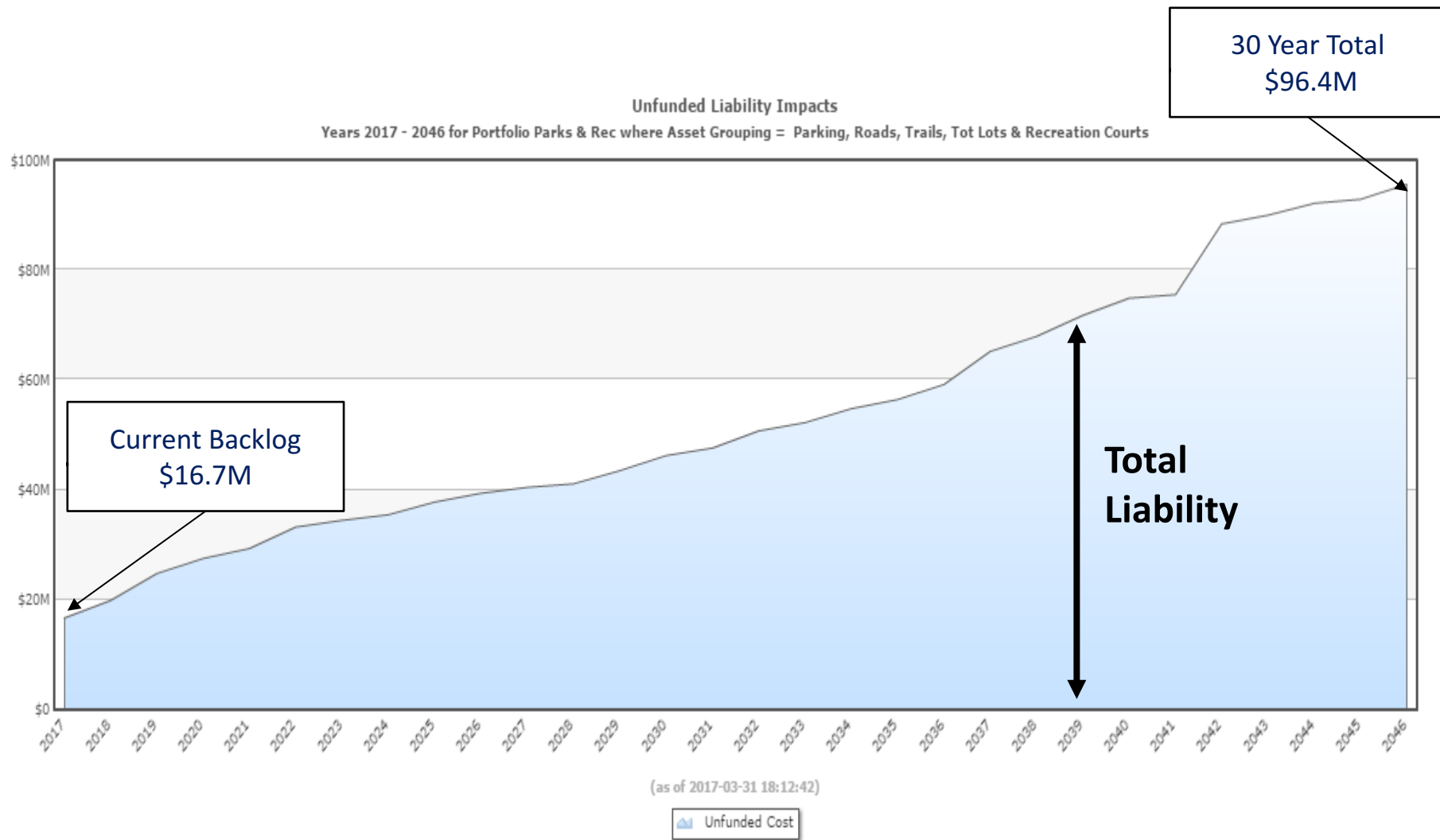
Portfolio Funding Required = \$10.6 Million/Year

Linear Assets

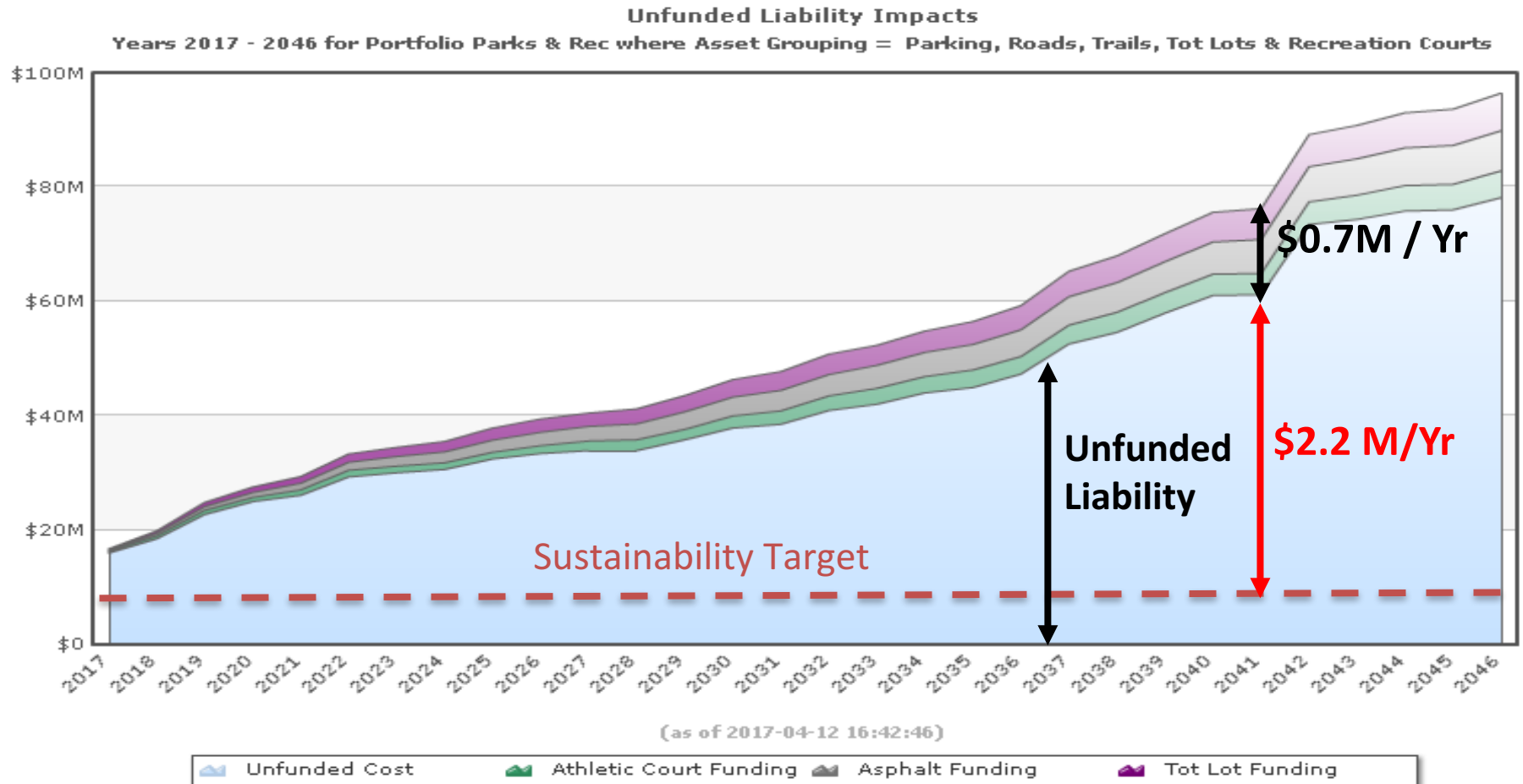
Projected Capital Needs Linear Assets



Projected Total Liability Linear Assets



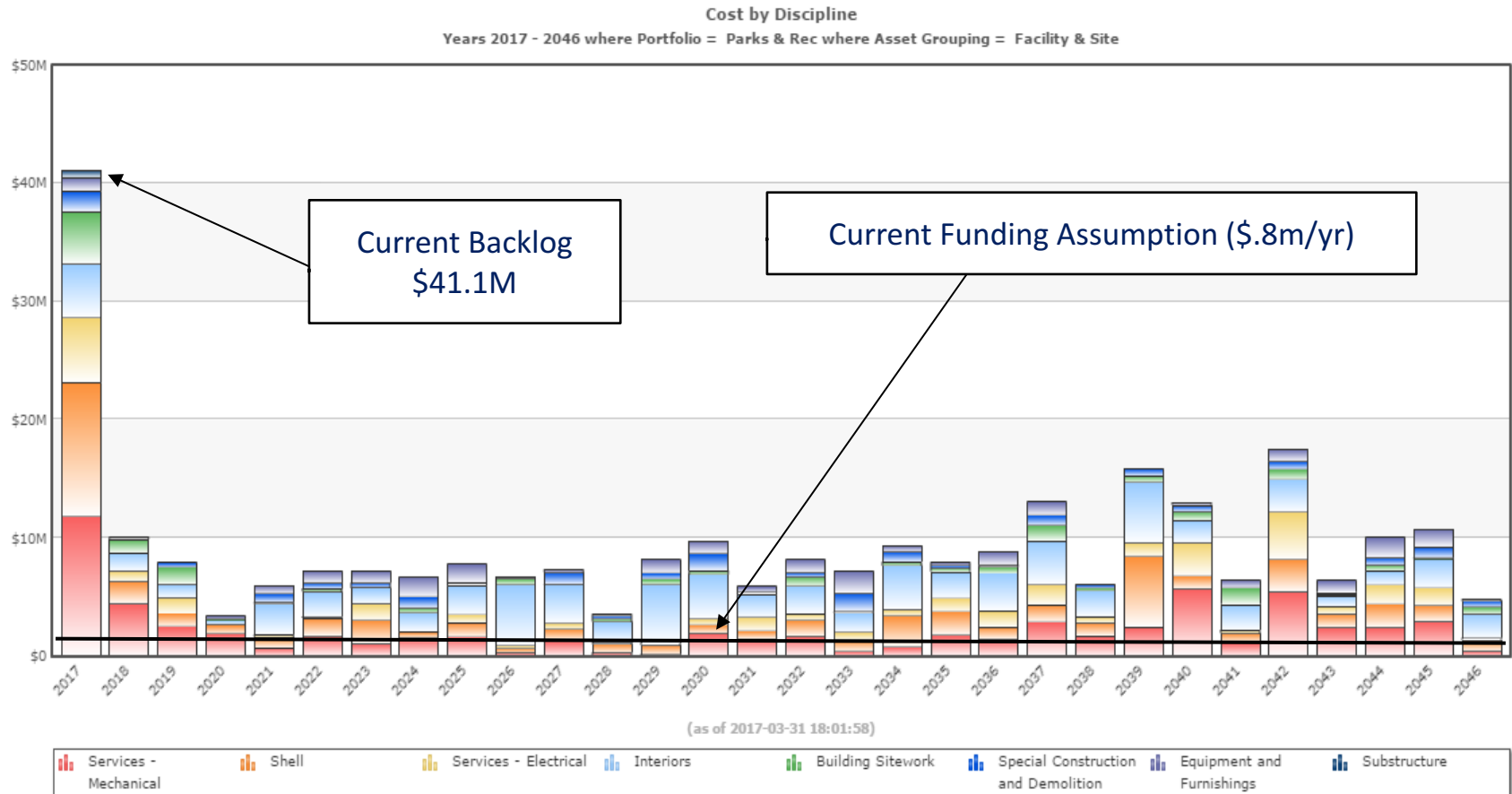
Projected Unfunded Liability Linear Assets



Linear Funding Required = \$2.9 Million/Year

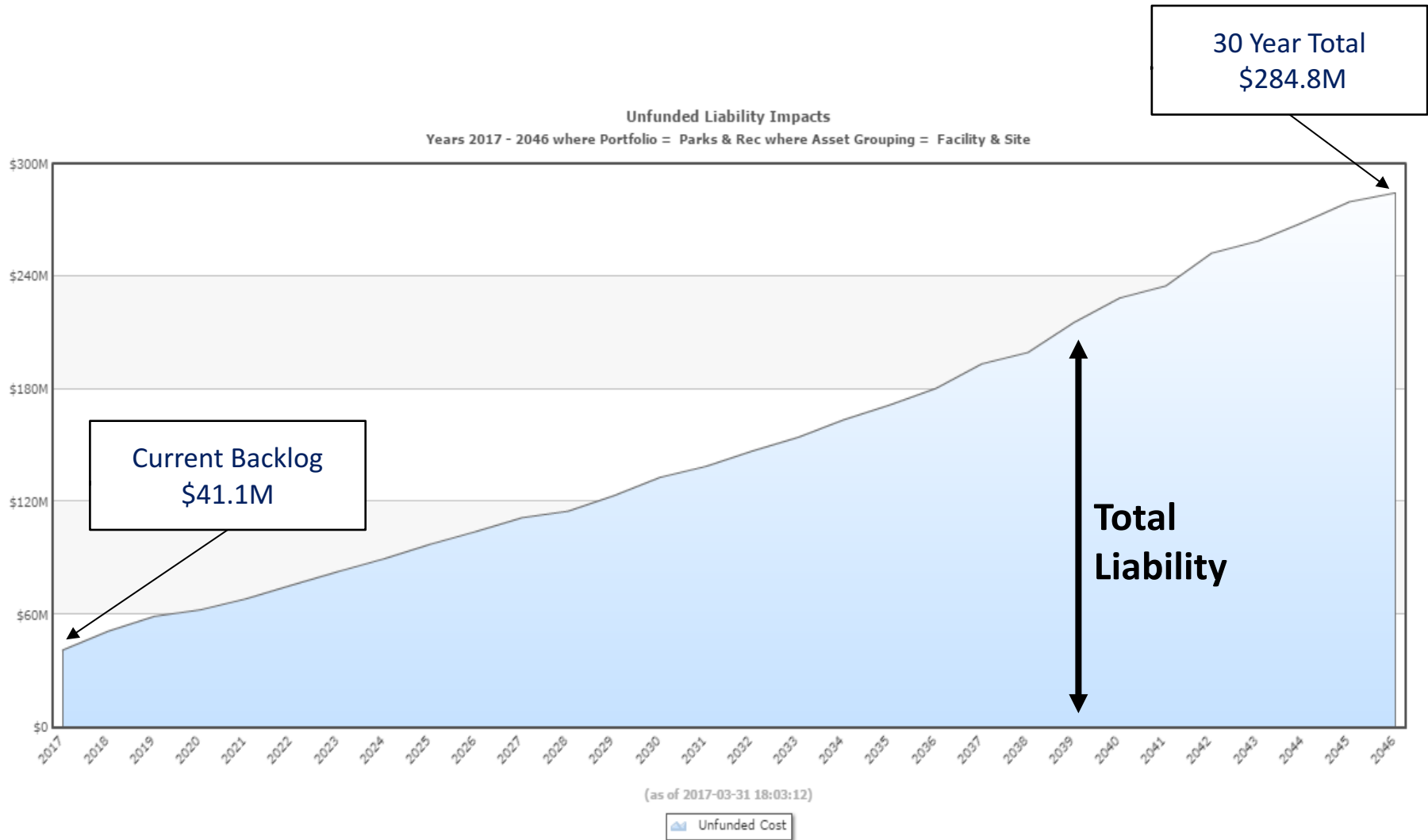
Facilities & Sites

Projected Capital Needs Facilities & Sites*

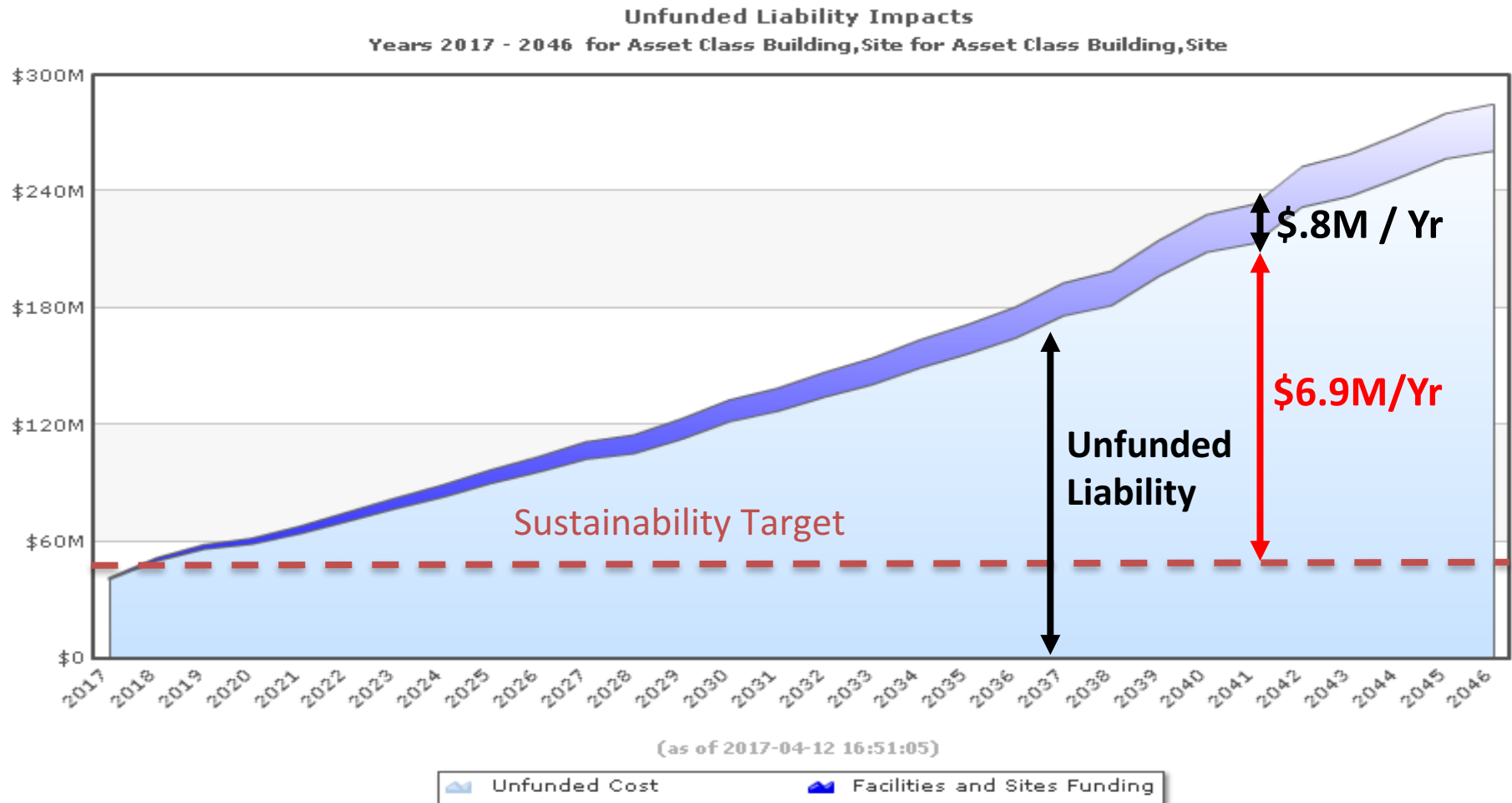


*Sites include the grounds surrounding the building and exclude parking lots, trails & tot lots

Projected Total Liability Facilities & Sites



Projected Unfunded Liability Facilities & Sites



Facility & Site Funding Required = \$7.7 Million/Year

Facility Condition Index (FCI)

- Industry Standard Index Used to Track Condition Performance of Facilities / Portfolios

$$\text{FCI} = \frac{\text{Renewal and Repair Costs}}{\text{Replacement Cost}}$$

GOOD Range: FCI (0% - 5%)

Sustainability Target

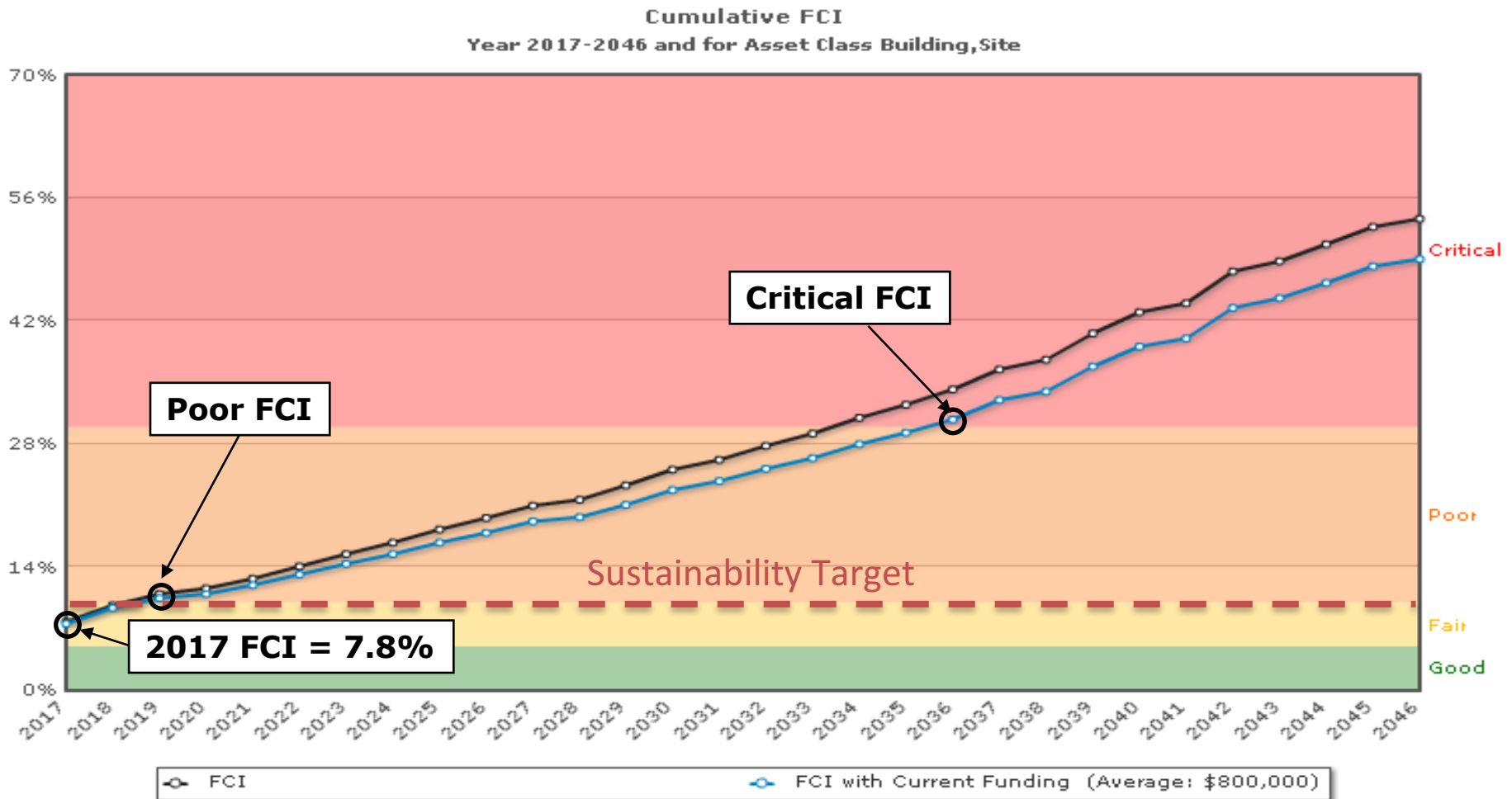
FAIR Range: FCI (5% - 10%)

Sustainability Target

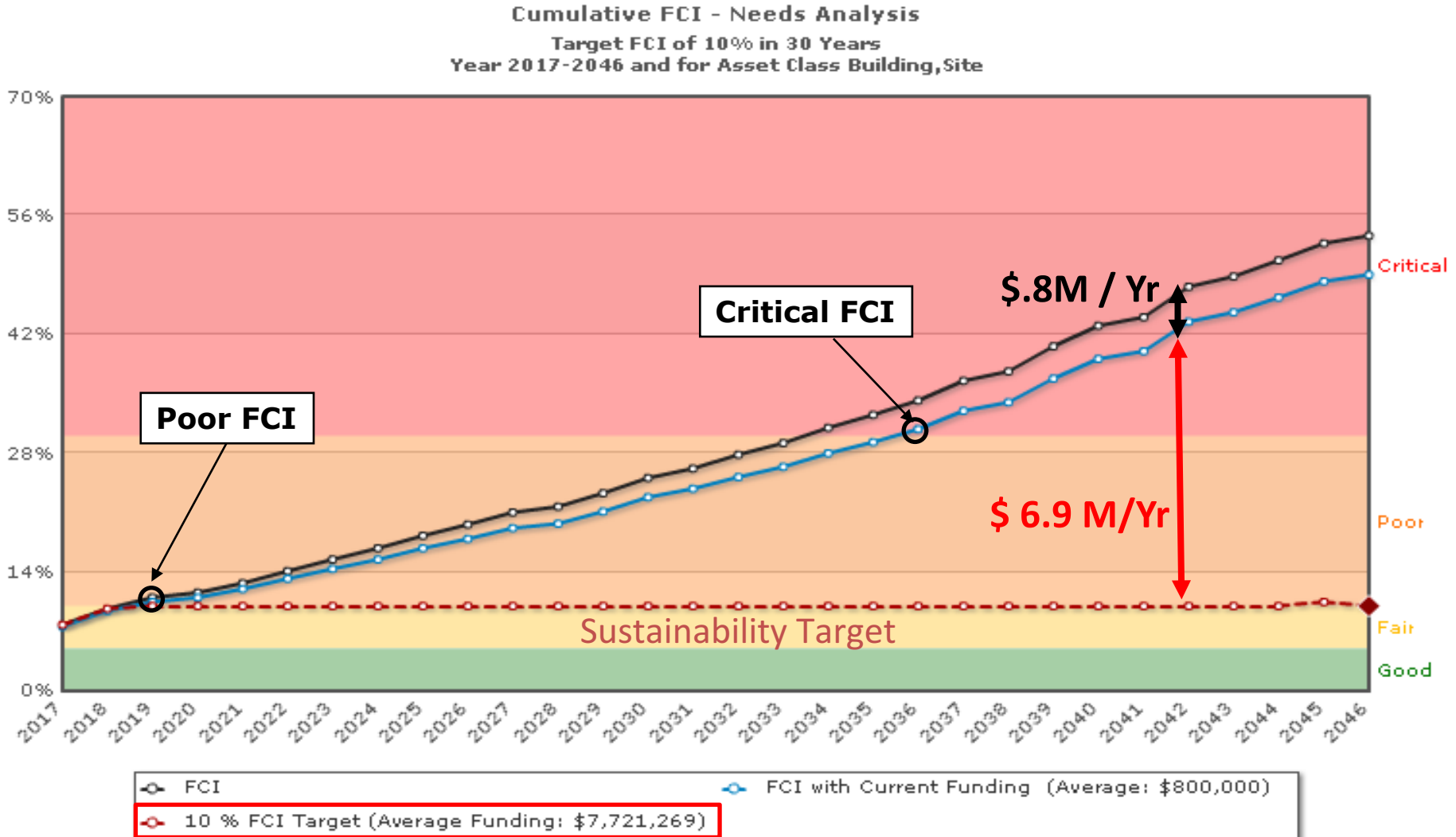
POOR Range: FCI (10%-30%)

CRITICAL Range: FCI (> 30%)

Projected Facility Condition Index



Projected Funding Target

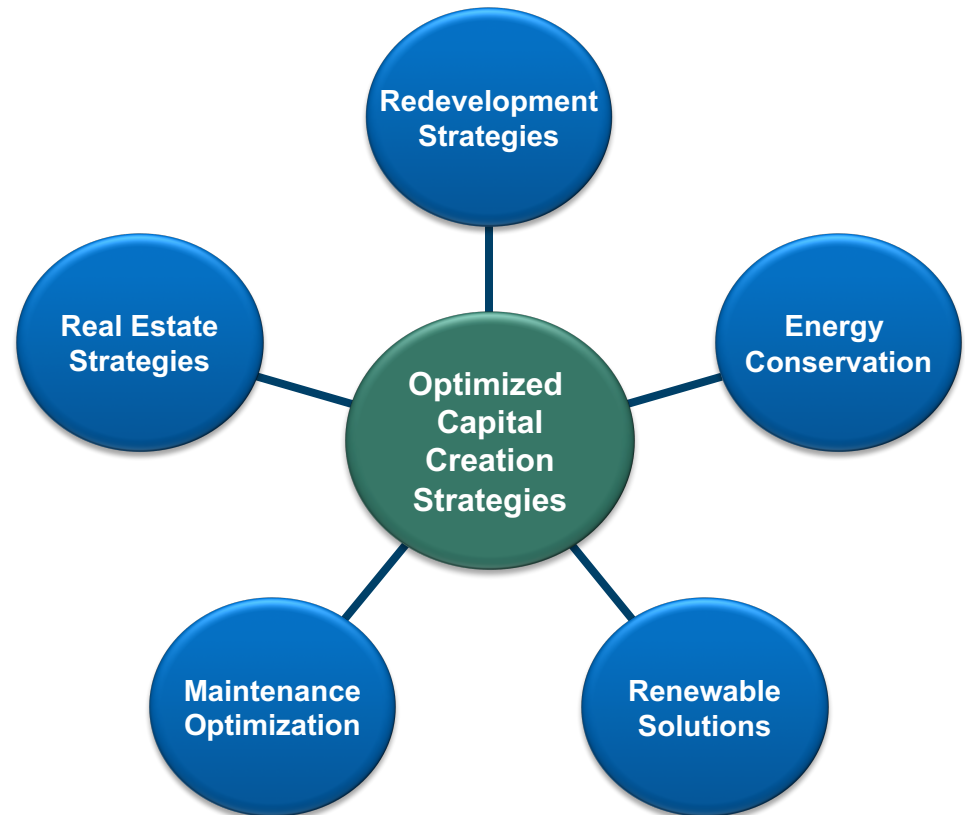


Facility & Site Funding Needed = \$7.7 Million/Year

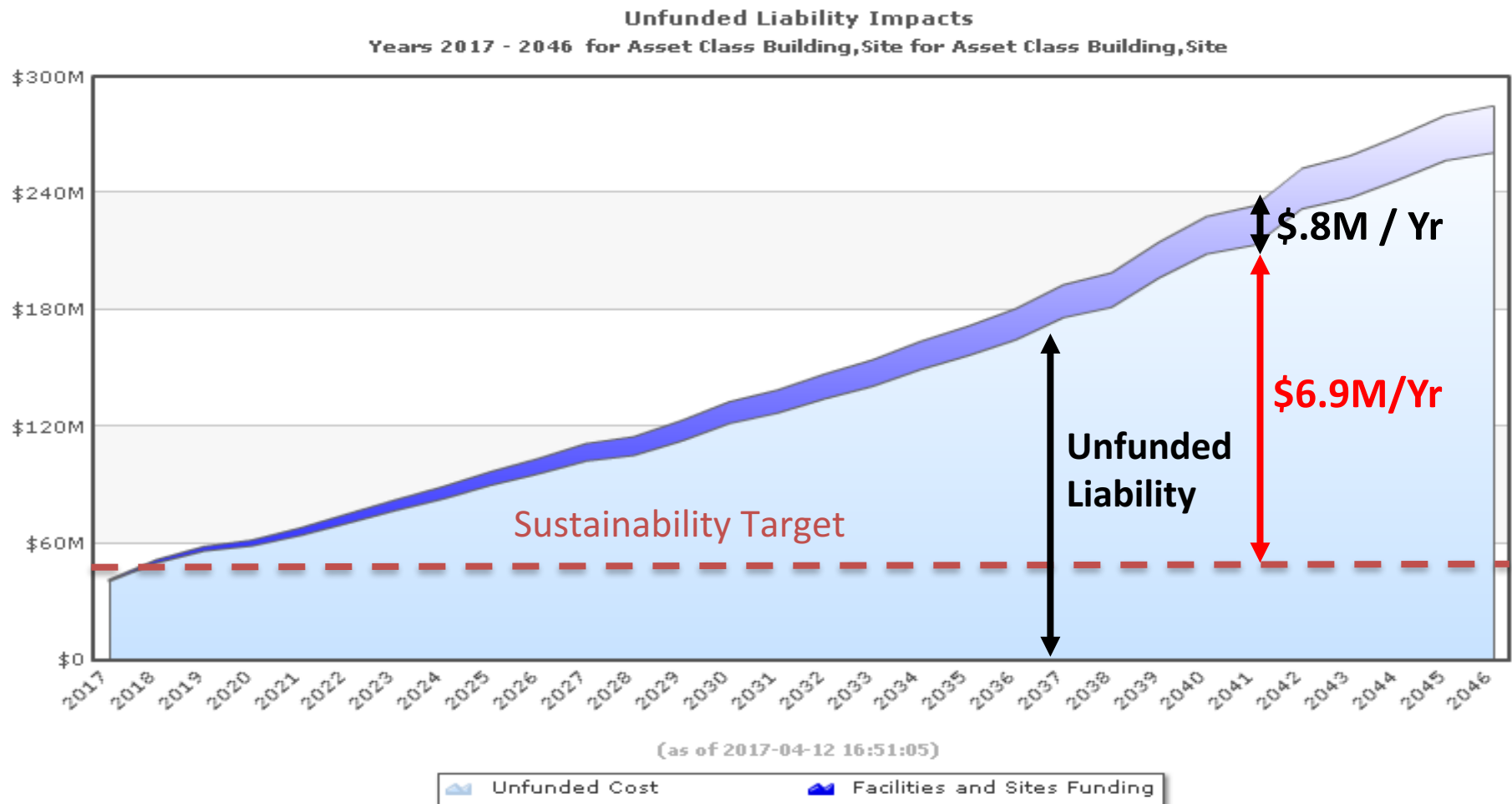
Capital Creation Strategies (CCS)

Leveraged and Bundled *Capital Creation Strategies*TM:

- ✓ Energy Conservation
- ✓ Deep Retrofits
- ✓ Renewable Solutions
- ✓ Maintenance Optimization
- ✓ Consolidation Strategies
- ✓ Redevelopment Strategies:
 - Existing Infrastructure
 - Re-purposing



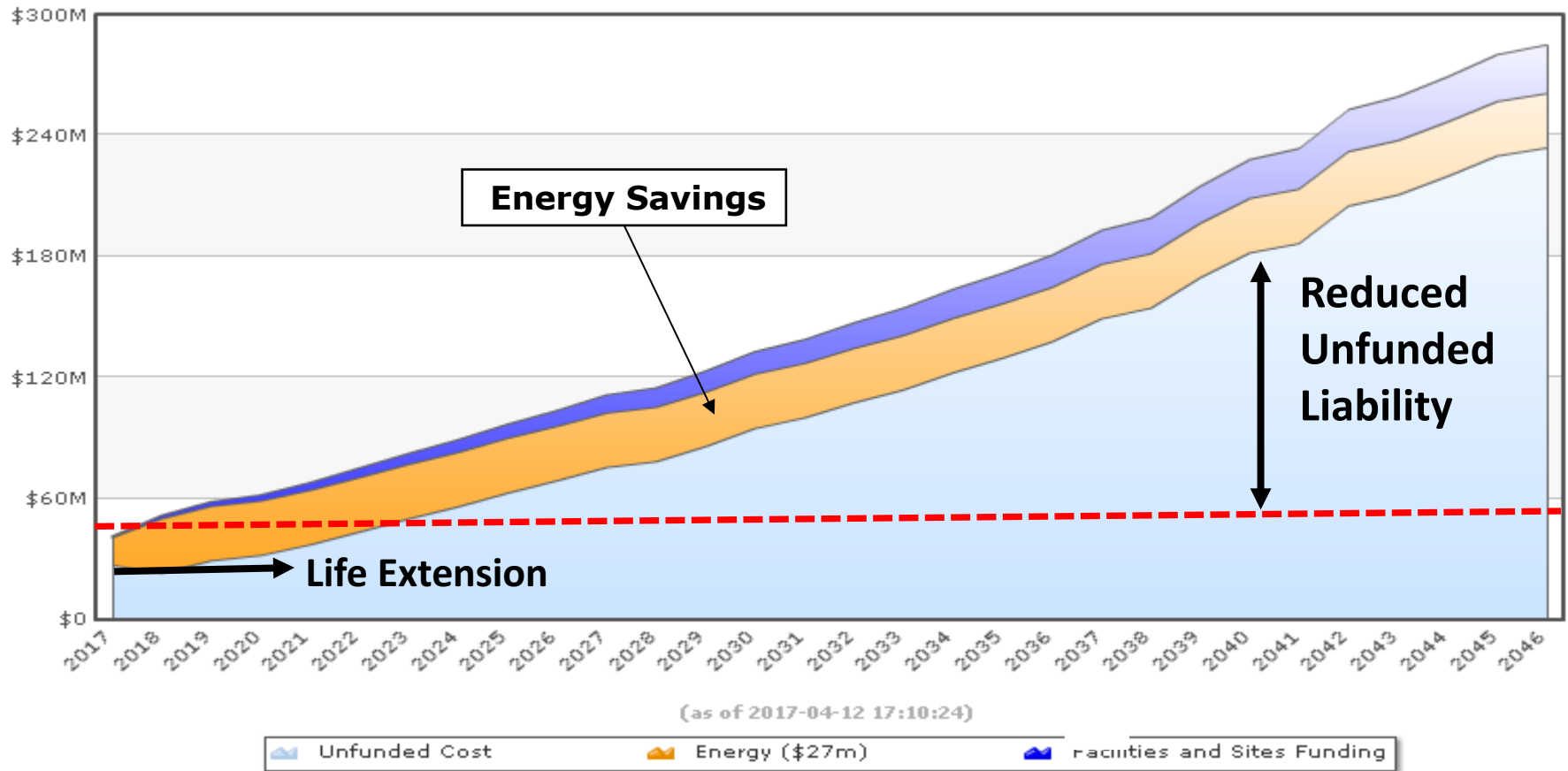
Projected Unfunded Liability Facilities & Sites



Facility & Site Funding Required = \$7.7 Million/Year

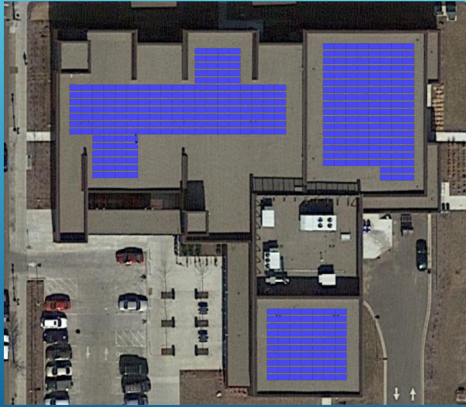
Capital Creation Strategy

Unfunded Liability Impacts
Years 2017 - 2046 for Asset Class Building, Site for Asset Class Building, Site

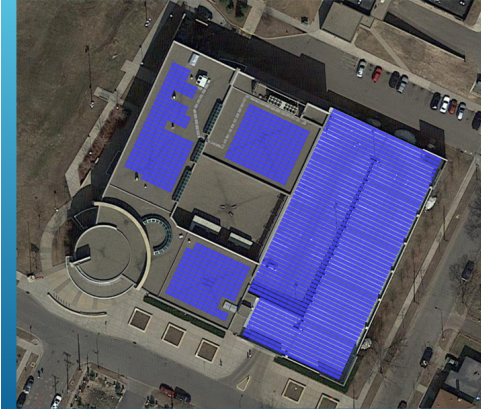


Lighting	Plumbing	HVAC	Controls	Other
\$ 13,332,786	\$ 4,863,263	\$ 7,621,969	\$ 133,811	\$ 1,927,750

Solar Opportunities (Examples)



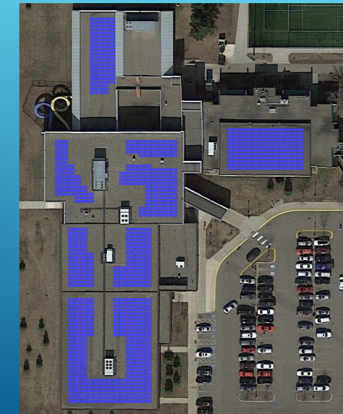
- ▶ Arlington Hills Community Center
- ▶ 128 kW (about 120,000 kWh generated per annum)
- ▶ Ballasted rooftop system; 5 degree tilt facing due south



- ▶ El Rio Vista Recreation Center and Parking Garage
- ▶ 475 kW (about 520,000 kWh per annum)
- ▶ Ballasted system on rooftop and a superstructure on the top level of the parking garage – all at 5 degree tilt and 205 degree azimuth



- ▶ Como Zoo – Wolf Parking Lot
- ▶ 208 kW (about 235,000 kWh per annum)
- ▶ Double cantilever carport with 12 degree tilt at 130 degree azimuth



- ▶ Oxford Community Center
- ▶ 280 kW (about 285,000 kWh per annum)
- ▶ Ballasted rooftop application at 5 degree tilt facing due south

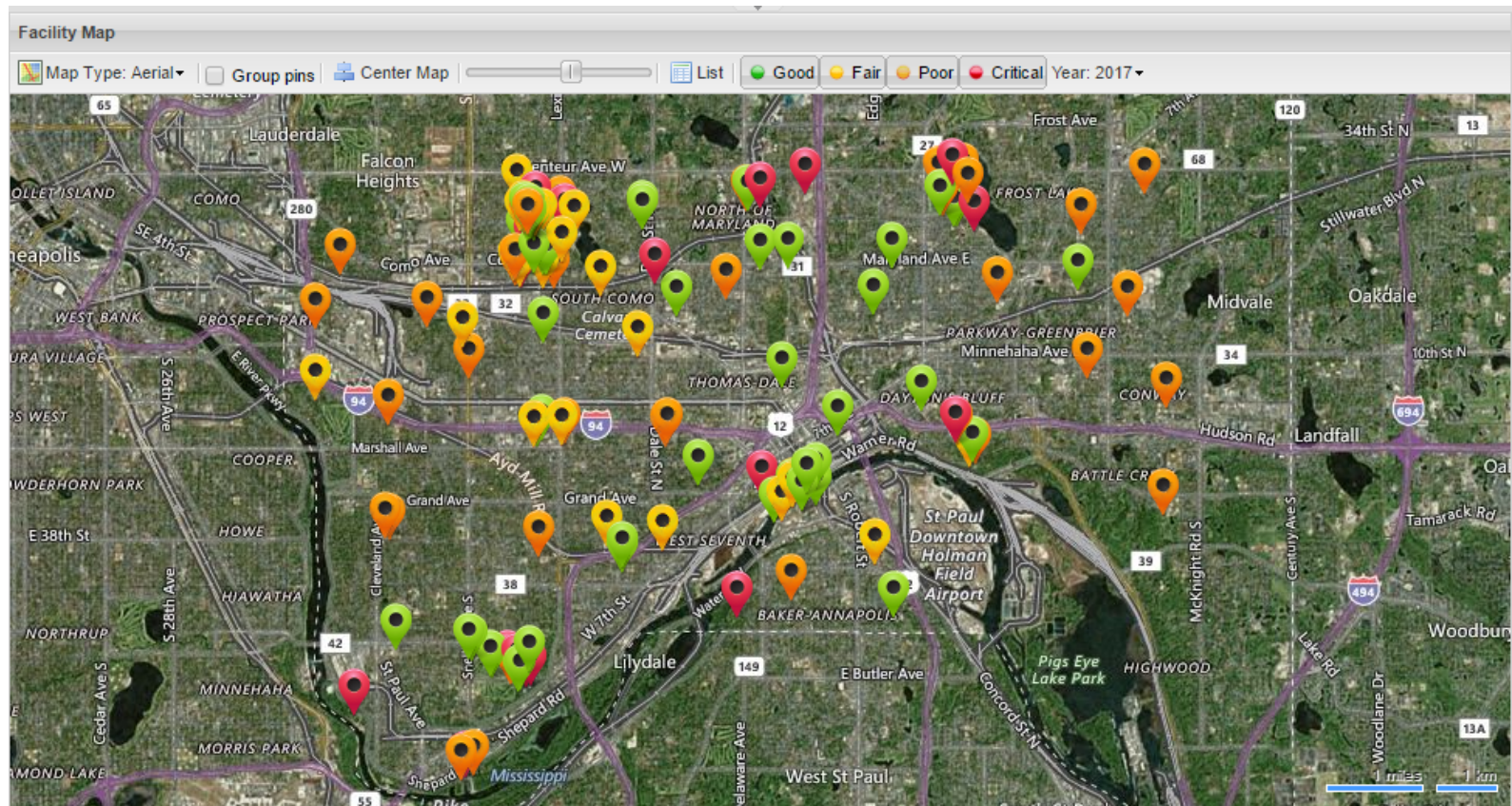
THANK YOU!

Tim Dettlaff | 111 Speen Street, Framingham, Massachusetts 01701 | 763-516-3905



Your Trusted Sustainability Partner.

Asset Map



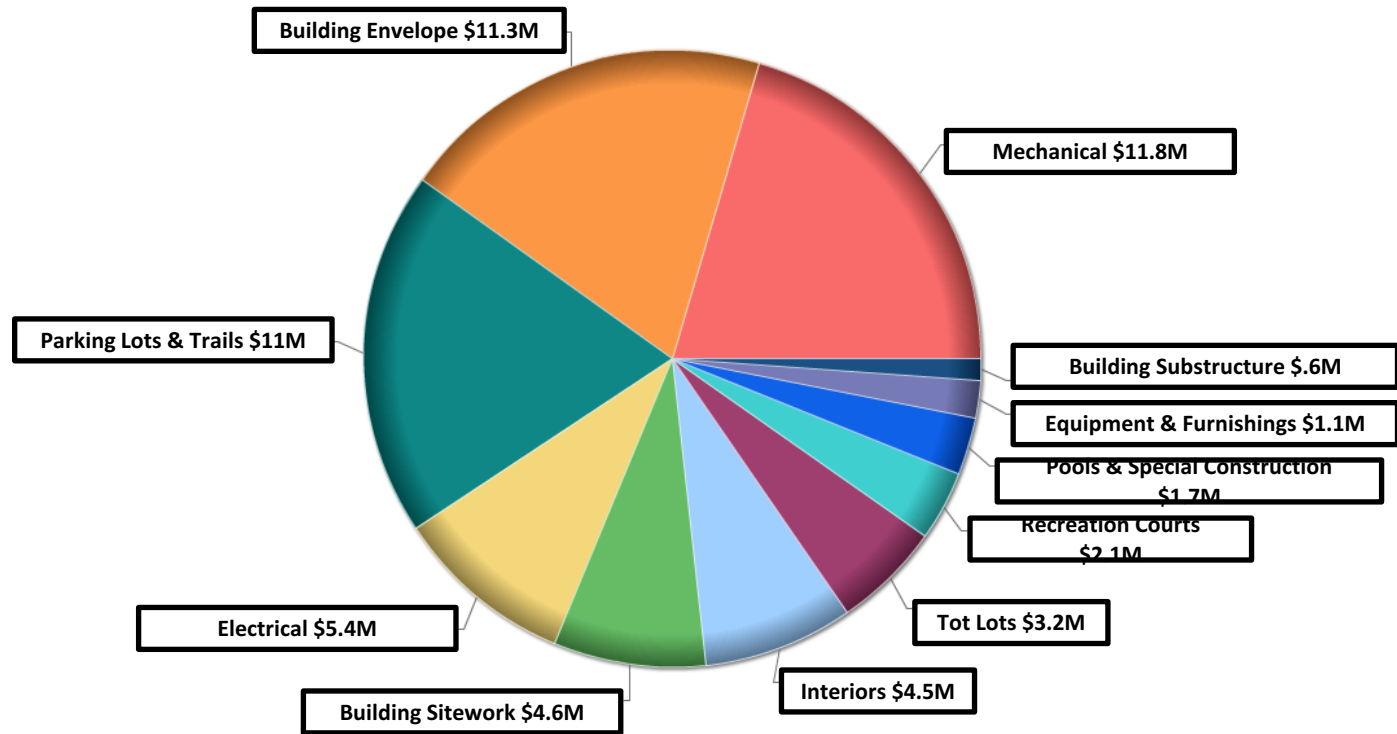
Locations with a Critical FCI (30% or Higher)

Cherokee Park	41.45%
Hidden Falls Park	46.16%
Irvine Park	90.93%
Marydale Park	100.85%
McDonough Recreation Center	37.99%
Rice & Arlington	71.95%

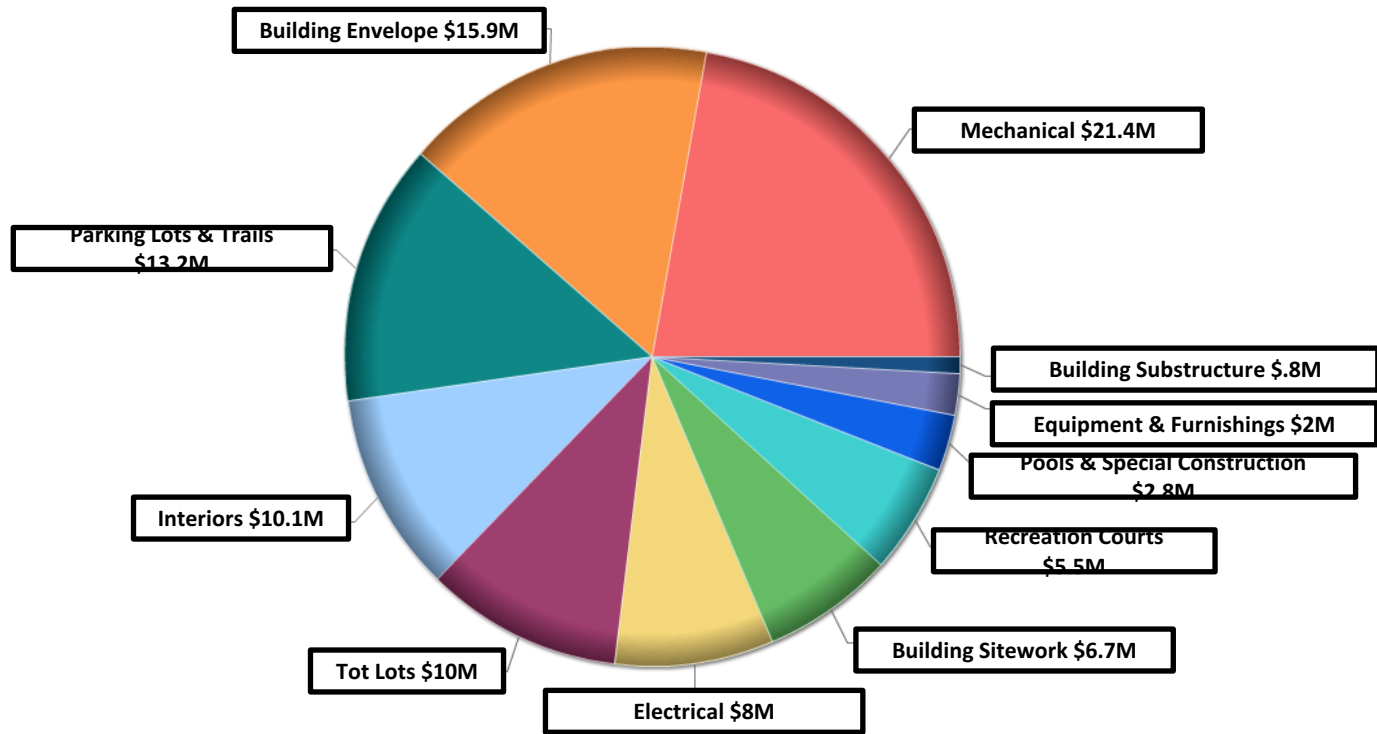
List of Critical Facilities

Cherokee Park - Restrooms	41.45%
Como Park - Beulah Lane Restrooms	60.60%
Como Park - Golf - Maintenance Building	32.79%
Como Park - Golf - Maintenance Building - Fuel Tanks (1) -500gal gas (1) 250gal diesel	100.00%
Como Park - Golf - Pumphouse	45.72%
Como Park - Shop - Brown Machine Shed	57.12%
Hidden Falls Park - Pavilion & Restrooms	46.16%
Highland Park - Booya Shed	58.15%
Highland Park - Golf Clubhouse 18 Hole	49.47%
Highland Park - Old Pool Building	53.85%
Highland Park - Picnic Pavilion	74.95%
Irvine Park - Gazebo & Fountain	90.93%
Marydale Park - Restroom	100.85%
McDonough Recreation Center - Seasonal Building	37.99%
Mounds Park - Maintenance Building - Fuel Tanks (1) 250 gal gas (1) 250gal diesel	61.23%
Phalen Park - Beach House	50.17%
Phalen Park - Golf Concession RR	57.46%
Phalen Park - Pumphouse	48.70%
Rice & Arlington - Field Building	71.95%
Watergate Marina Building 1	46.70%
Watergate Marina Building 2	32.07%

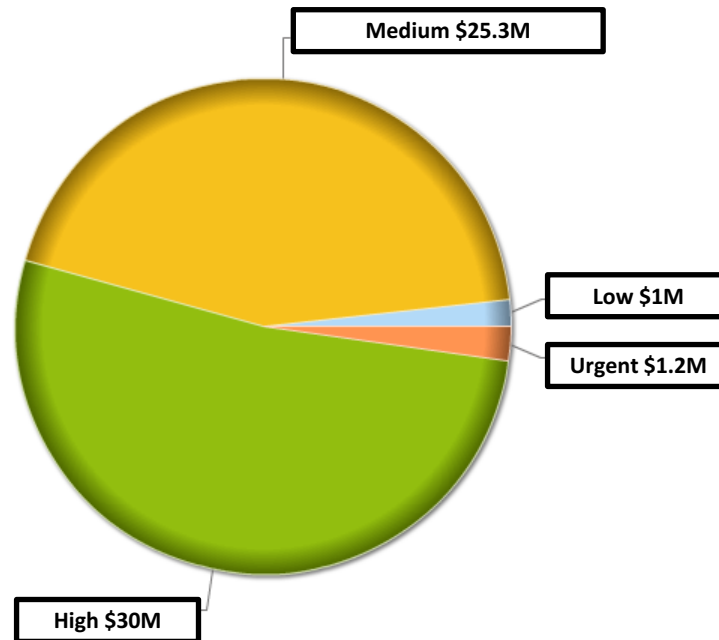
Cost by Discipline 2017



Cost by Discipline 5 Years (2017-2021)



Cost by Priority 2017



Cost by Priority 5 Years (2017-2021)

