

**FACILITIES CONDITION ASSESSMENT AND
CAPITAL ASSET MANAGEMENT REPORT**


1. **Division and Department:** Finance and Administration, Facilities Management
2. **Introduction:** The Facilities Management Department has oversight for all Oakland University facilities. This oversight includes a Capital Asset Management process with three components; plant renewal, deferred plant renewal, and plant adaptation. Each of these components is evaluated and monitored based on priority levels. Renewal and adaptation projects are strategically addressed as funding is available. Annual funding for renewal projects is approximately \$3.1 million. Large projects are often funded via special appropriations, for example, recently, the two highest cost plant renewal projects, upgrade of the high temperature hot water system and replacement of the O'Dowd Hall curtain wall, approximately \$10 million, were funded via a bond issuance. The current inventory of renewal and adaptation projects totals \$175 million.

In addition, each facility is evaluated annually based on an industry standard Facility Condition Need Index (FCNI). Overall, the campus has an average FCNI of .24 which is in the middle of the "fair condition" range.
3. **Previous Board Action:** The Board of Trustees (Board) annually approves the funding sources for Capital Asset Management projects.
4. **Budget Implications:** Budget implications will be determined and addressed in the FY2012 budget recommendations to the Board.
5. **Educational Implications:** Maintaining quality facilities enhances students' educational experiences.
6. **Personnel Implications:** None.
7. **University Reviews/Approvals:** The Report was developed by the Facilities Management Department and reviewed by the Vice President for Finance and Administration, and President.
8. **Board Action to be Requested:** None.
9. **Attachments:**
 - A. Facilities Condition Assessment and Capital Asset Management Report

**Submitted by Vice President for Finance and Administration
and Treasurer John W. Beaghan**


(Please Initial)

Reviewed by Secretary Victor A. Zambardi:


(Please Initial)

Reviewed by President Gary D. Russi:


(Please Initial)



Facilities Condition Assessment And Capital Asset Management



Oakland University - Capital Asset Management



Introduction

- Facilities Condition Assessment
 - Data Collection
 - Facilities Replacement Cost
 - Facility Condition Needs Index (FCNI)
- Capital Asset Management (CAM)
 - Planning Strategies
 - Needs versus Risks
 - Balancing Financial Resources

Facilities Condition Assessment

- '04, ISES Corporation conducted a condition assessment for Housing
- '05, SmithGroup conducted a condition assessment of Meadow Brook Hall
- '06, Integrated Design Solution completed a condition assessment for remaining facilities and support structures
- '07, Western Telecommunication Consulting developed an IT Network Plan and Condition Assessment

Facilities Condition Assessment

CAMPUS SYSTEM

{examples}

- Accessibility (AC). {Handicap Accessibility / Compatibility}
- Electrical (EL). {Power, Lighting, Emergency Generators}
- Energy Management (EN). {Energy Savings, Temp. Control /Monitoring}
- Exterior Structure (ES). {Brick/Masonry, Windows, Roof}
- Fire/Life Safety (FS). {Fire Alarm /Suppression Systems, Arc Flash Analysis}
- Health (HE). {Hazardous Material, Air Quality, Noise, etc}
- HVAC (HV). {Heating, Ventilation and Air Conditioning}
- High Temperature / Hot Water (HT). . . {Heat Exchangers, Piping, Boilers, Pumps}
- IT Network Plan (IT). {Voice, Data, & Wireless Network}
- Interior / Finish System (IS). {Flooring, Ceiling, Walls, Cabinets, Paint}
- Plumbing (PL). {Domestic Water, Sanitary and Storm Systems}
- Roads, Walks, Parking Lots (RW). {Concrete & Asphalt Surfaces}
- Site (SI). {Landscape, Grounds, Storm Water / Erosion Control}
- Security Systems (SS). {Surveillance Cameras}
- Vertical Transportation (VT). {Passenger and Freight Elevators}



Facilities Condition Assessment

- Assessment includes a detailed summary for each CAM project.
- Details include:
 - Unique project number Approx. 1,550 projects
 - Project title
 - Project description
 - Priority coding
 - Estimated cost Approx. \$175 million
 - Labor
 - Material
 - Fees - Architect / Engineering

Capital Asset Management

(Project Classification)

- CAM is a systematic approach to renewing capital assets through planned:
 - Plant Renewal
 - Deferred Plant Renewal
 - Plant Adaptation

Plant Renewal

- “...future cyclical renewal and replacement requirements that extend the (present) life and retain the usable condition of campus facilities and (building) systems...” (NACUBO)
 - Examples: roof replacement, electrical switchgear, HVAC system replacement

Deferred Plant Renewal

- “...measures that are not carried out because of under funding ... or perceived low priority...” (NACUBO)
 - Postponed work
 - Example: Deferring parking lot repairs because total costs exceed current budget
 - Low priority
 - Example: Dredge wetland improvements downstream of lower playfields (est. \$2 million)

Plant Adaptation

- “...improvements are driven by institutional program changes ...” (NACUBO)
 - The evolving use of the institution (e.g., changes in academic disciplines, shifting expectations, supporting institutional mission, etc.), or
 - Changing standards (e.g., campus master plans, architectural standards, etc.)



Facilities Condition Assessment

PRIORITY 1

(150 projects @ \$17 million)

Current & Critical (immediate or current year)

- Immediate action required:
 - Return a facility to normal operation
 - Stop accelerated deterioration
 - Correct a cited safety hazard
- Example:
 - Life Safety (Hannah - Replacing emergency lights and exit signs)
 - HVAC (PSS – New air conditioning system for renovated dispatch area)
 - HTHW Loop (Main Campus – Replacement of deteriorated buried piping in the new trench tunnels)

Facilities Condition Assessment

PRIORITY 2

(345 projects @ \$22 million)

Potentially Critical (one year)

- If not corrected expeditiously, will become critical within a year:
 - Intermittent interruptions
 - Rapid deterioration
 - Potential safety hazard
- Example:
 - Elevator (HHS – Upgrade passenger elevators & controls)
 - Health (DHE – Upgrade laboratory fume hoods)
 - HVAC (NFH – Replace heat exchanger in mechanical room)

Facilities Condition Assessment

PRIORITY 3

(543 projects @ \$76 million)

Necessary / Not Yet Critical (two – five years)

- Conditions requiring prompt attention:
 - preclude predictable deterioration
 - potential down time
 - higher costs if deferred further
- Example:
 - HTHW (Heating Plant - repair / re-tube hot water boiler)
 - HTHW (Main Campus – Replace south loop HTHW piping)
 - Exterior (SFH – Exterior brick repair)
 - Electrical (Emergency generator project)

Facilities Condition Assessment

PRIORITY 4

(342 projects @ \$42 million)

Recommended (six – nine years)

- Sensible improvement to existing conditions:
 - Not required for the most basic function of a facility
 - Improve overall usability, reduce long-term maintenance
- Example:
 - HTHW (VAR – Replace heat exchanger)
 - Exterior (SFH – Replace roofing)

Facilities Condition Assessment

PRIORITY 5

(176 projects @ \$18 million)

Recommended (ten years or beyond)

- Projects may represent an economic payback.
- Example:
 - HVAC (GHC – Convert air handling equipment to VAV)
 - HVAC (PH – Overhaul chiller and related components)
 - HVAC (BGM - Convert propane equipment to natural gas)
 - VT (SRAC – Upgrade passenger elevator and controls)

Capital Asset Management

Cost per Priority Classification

Fiscal Year	2011	2012	2013 - 2016	2017 - 2020	2021 +	
<u>System Description</u>	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Sub Total
Accessibility	47,029	35,841	690,660	885,382	1,363,848	3,022,760
Electrical	112,714	452,570	1,489,969	2,389,757	2,863,222	7,308,231
Energy	168,267	588,377	1,770,819	525,332	136,495	3,189,288
Exterior Systems	5,495,739	2,857,660	8,272,811	4,128,923	916,614	21,671,748
Fire / Life Safety	300,813	782,619	3,208,616	2,345,278	701,845	7,339,170
Health	21,040	555,901	264,786	207,600	16,135	1,065,461
High Temp Hot Water	4,899,850	6,117,163	7,795,512	3,513,350	40,622	22,366,497
HVAC	286,008	3,391,969	13,775,597	8,209,631	419,796	26,083,001
Interior Systems	909,569	2,857,041	10,227,625	9,958,051	4,020,969	27,973,254
Information Technology	400,000	2,275,000	20,800,718	54,858	0	23,530,576
Plumbing	18,544	455,103	1,634,303	1,540,288	266,327	3,914,564
Roads / Walks / Parking Lots	2,038,757	377,049	2,568,333	1,762,158	473,921	7,220,219
Site	464,792	475,758	2,180,548	5,602,433	6,845,477	15,569,008
Security Systems	1,319,320	0	0	0	0	1,319,320
Elevators	155,001	393,806	1,624,898	616,784	442,047	3,232,536
TOTALS	\$16,637,441	\$21,615,856	\$76,305,196	\$41,739,824	\$18,507,317	\$174,805,634

Capital Asset Management

Facilities Management Department and Auxiliaries maintain 48 major buildings and 1,443 acres of campus



Facilities Replacement Cost (FRC)

- The total replacement cost for the building or structure and its contents or fixed assets.
- Currently estimated at \$724 million

Facility Condition Needs Index

- A relative measure for comparing one building (or group of buildings) to another.
- Calculated by dividing the total project costs by the total facility replacement cost.
- The lower the number, the better the facility condition.

Facility Condition Needs Index

FCNI Range	Condition Description (APPA)
0.01 – 0.05	Excellent condition, typically new construction
0.06 – 0.15	Good condition, renovations occur on schedule
0.16 – 0.30	<u>Fair condition, in need of normal renovation</u>
0.31 – 0.40	Below average condition, major renovation required
0.41 – 0.59	Poor condition, gut / renovation indicated
0.60 and above	Complete facility replacement indicated

Oakland University Conditions

October 2010

Project Cost

=

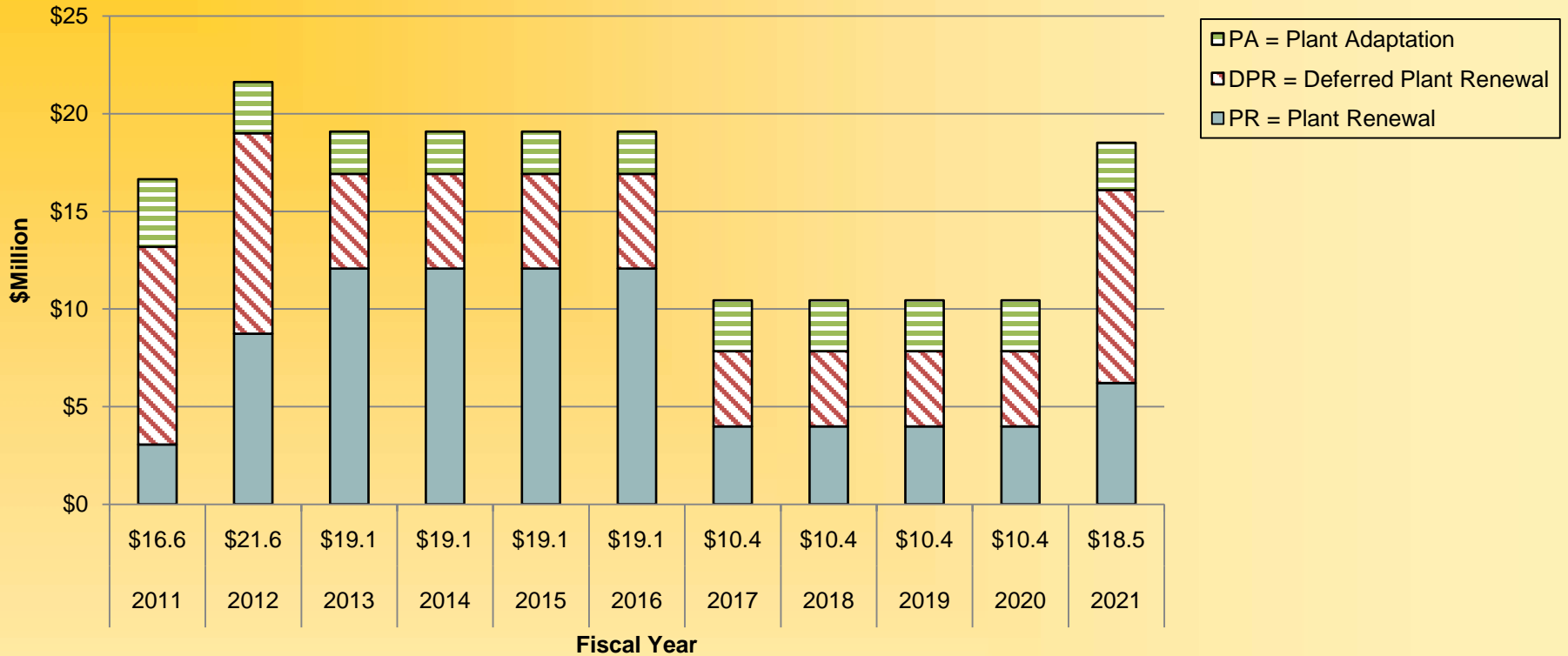
Facility Condition Needs Index

Facility Replacement Cost

Project Cost	Facility Replacement Cost	Total FCNI	Benchmark Rating
\$174,805,634	\$723,660,088	0.24	Fair Condition

Integration of Capital Asset Management And Budgets

Capital Asset Management Projects



Priority 1 2011	Priority 2 2012	Priority 3 2013– 2016	Priority 4 2017– 2020	Priority 5 2021 & Beyond
\$16,637,441	\$21,615,856	\$76,305,196	\$41,739,824	\$18,507,317



CAM Budgets

- Recommended annual investment is 1.5 to 3.0 percent (APPA)
- Oakland University Assets @ \$724 million
 - 1.5% = \$11 million (\$7m General Fund + \$4m Auxiliary)
 - 3.0% = \$22 million (\$14m General Fund + \$8m Auxiliary)

Based on Current Project Ratio:
65% General Fund and 35% Auxiliary

– Spend nothing



– Continue at current level



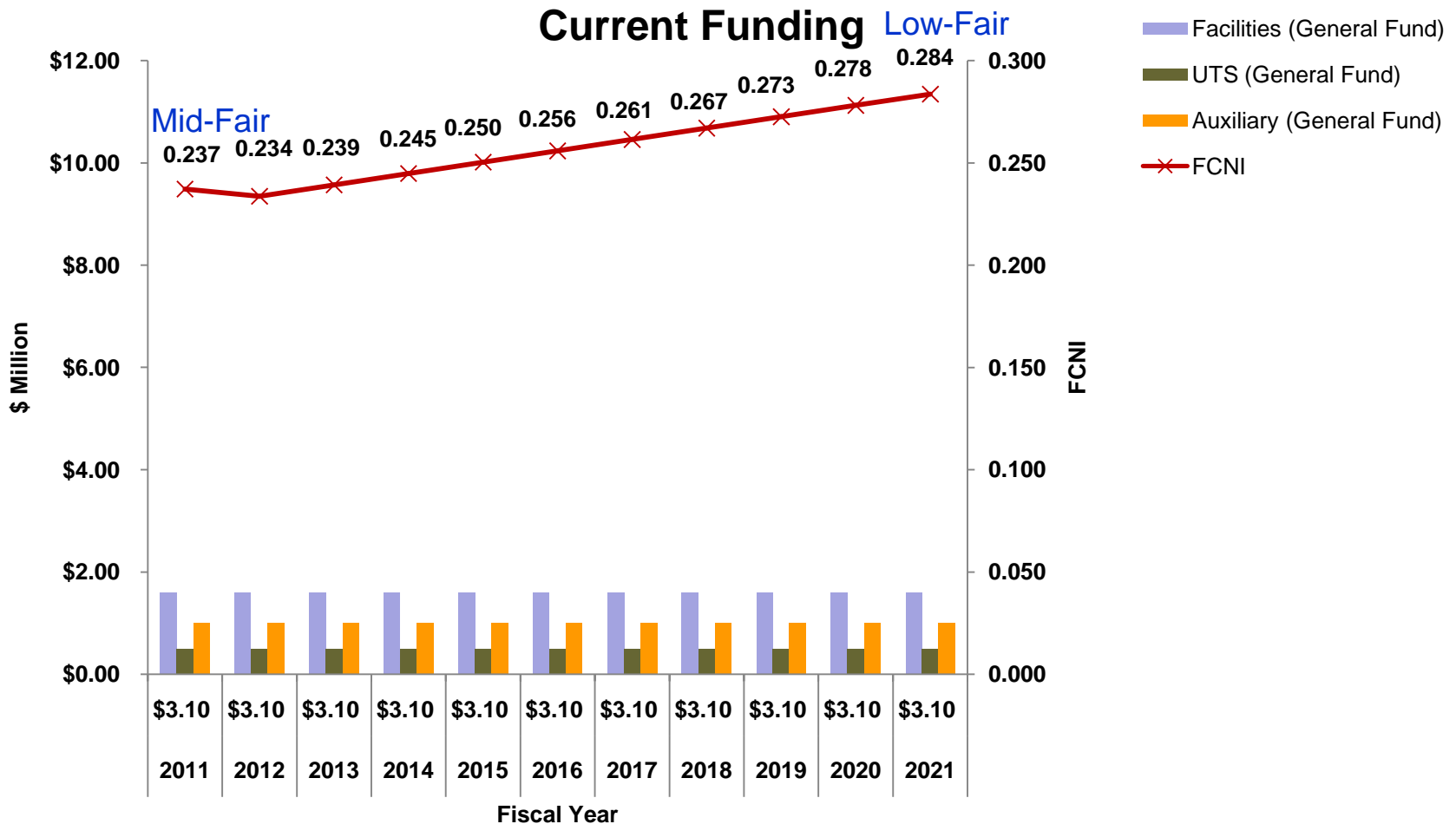
– Set goals for Excellent Facilities Condition Needs Index



Current CAM Funding Levels

- Assumptions
 1. Current funding levels
 - Facilities Management \$1.6 M
 - I/T budget \$.5 M
 - Auxiliary budget \$1.0 M
 2. 4% Inflationary project cost increase
 3. New projects based on history
 - \$7 million annually

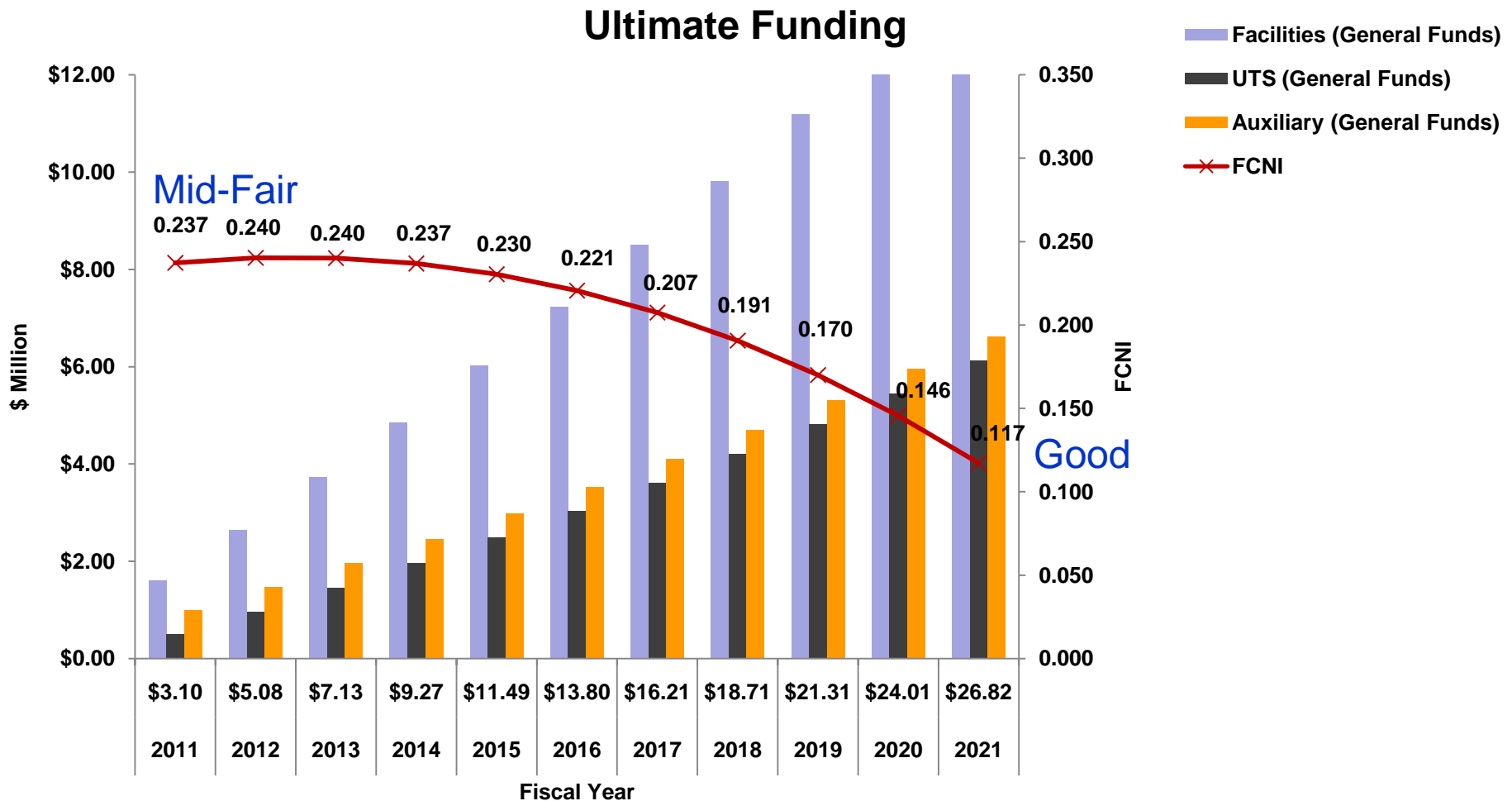
No Increase in Current CAM Funding Levels



Ultimate Funding

- **Assumptions** (FCNI = 0.12 by FY 2021)
 1. **Current funding levels**
 - Facilities Management \$1.6 M + \$1.0M/yr + 4%
 - I/T budget \$.5 M + \$450K/yr + 4%
 - Auxiliary budget \$1.0 M + \$450K/yr + 4%
 2. 4% Inflationary project cost increase
 3. New projects based on history
 - \$7 million annually
 4. FM – CHP improvements \$17M
 5. IT – Network improvements \$23M

Ultimate Funding (FCNI = 0.12 by FY 2021)

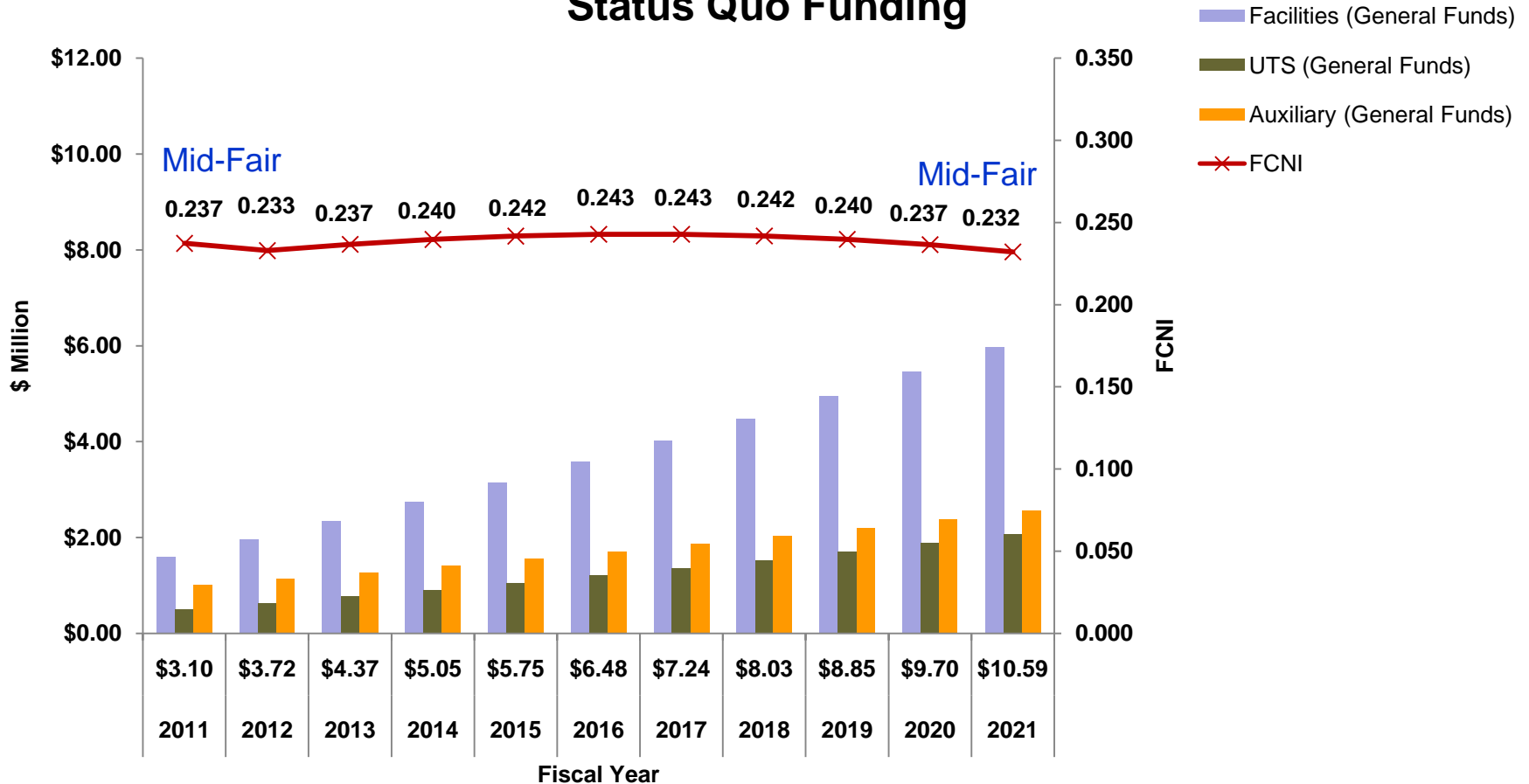


“Status Quo” Funding

- Assumptions
 1. Current funding levels
 - Facilities Management \$1.6 M + \$350K/yr + 4%
 - I/T budget \$.5 M + \$125K/yr + 4%
 - Auxiliary budget \$1.0 M + \$125K/yr + 4%
 2. 4% Inflationary project cost increase
 3. New projects based on history
 - \$7 million annually
 4. FM – CHP improvements \$10M
 5. IT – Network improvements \$21M

Status Quo Changes to CAM Funding Levels

Status Quo Funding



Summary

- \$175 Million in Capital Asset Management needs:

Plant Renewal	\$ 82 Million
Deferred Plant Renewal	\$ 65 Million
Plant Adaptation	<u>\$ 28 Million</u>
Total	\$175 Million

- Current funding:

\$1.6 million (General Fund) Facilities
\$.5 million (General Fund) UTS
\$1.0 million (Auxiliary Fund)

- OU Facility Condition Need Index - **FAIR**

Recommendation

- Increase CAM budget:
 - Facilities Management annually \$350K per year to \$4.4M in FY'21
 - I/T annually \$125K per year to \$1.6M in FY'21
 - Auxiliary Fund annually \$125K per year to \$1.6M in FY'21
- Annually increase all funding by 4% to offset inflationary project cost increases
- Fund Special Projects:
 - \$21 Million beginning in FY 2014 (UTS Project)
 - \$10 Million beginning in FY 2013 (Boilers and HTHW Piping Systems)
- Results:
 - Maintains overall Oakland University facility condition needs index at Mid-Fair through FY 2021 with modest inflation and unforeseen additional projects



Facilities Condition Assessment And Capital Asset Management



Oakland University - Capital Asset Management

