



THE CITY OF SAN DIEGO

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**OFFICE OF THE INDEPENDENT BUDGET ANALYST REPORT**

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# **IBA Review of General Fund Facilities Condition Assessment and Proposed Service Level Standards**

## **OVERVIEW**

On December 7, 2016, the Infrastructure Committee accepted the FY 2016 Facilities Condition Assessment (FCA) Report for Leased General Fund (GF) Facilities and approved the proposed service levels for City-occupied and leased GF Facilities. Our report discusses the role of FCAs conducted for the City's GF facilities (both City-occupied and leased) as an initial step in identifying the City's true facilities needs and summarizes the FCA results for leased GF facilities. A closer review of the condition assessment results for Balboa Park facilities is also provided, as it was of particular interest to the Chair of the Infrastructure Committee and the public. Finally, our report discusses the next steps, including how these results will be used to inform the development of the City's asset management process<sup>1</sup>, and highlights issues for Council consideration as this process continues to take form.

### **Background**

In December 2013, the City Council authorized three consultant agreements to perform FCAs. The contracts are each authorized for up to \$5.0 million and for five years. Beginning in FY 2014 condition assessments have been undertaken and completed for GF buildings, developed parks, and Public Utilities Department (PUD) buildings. Table 1 summarizes the status of these assessments. Other condition assessments have been conducted recently and are being done on an

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<sup>1</sup> Assets include streets; storm water and drainage systems; water and sewer systems; public buildings such as libraries and parks; and public safety facilities such as police, fire, and lifeguard stations.

ongoing basis outside of these consultant agreements (such as condition assessments for streets, sidewalks, and water and wastewater).

**Table 1: Scope and Status of Condition Assessments**

<b>Asset Class</b>	<b>Scope</b>	<b>Status</b>
GF Buildings <sup>1</sup>	693 GF facilities: <ul style="list-style-type: none"> <li>- 560 City-occupied</li> <li>- 133 leased</li> </ul>	Complete <ul style="list-style-type: none"> <li>- City-occupied GF facilities results presented to City Council April 2016</li> <li>- Leased GF facilities results to be presented to City Council March 14, 2017</li> </ul>
Developed Parks <sup>2</sup>	76 parks plus Balboa Park	Complete <ul style="list-style-type: none"> <li>- Results estimated to come before Infrastructure Committee spring 2017</li> <li>- Assessments for all parks anticipated to be complete in FY 2020</li> </ul>
PUD Buildings	306 PUD Facilities: <ul style="list-style-type: none"> <li>- 276 City-occupied</li> <li>- 30 leased</li> </ul>	Complete <ul style="list-style-type: none"> <li>- Assessments are complete. Final report anticipated early this calendar year</li> </ul>

<sup>1</sup> GF buildings include Park and Recreation facilities.

<sup>2</sup> This is the first phase of assessments and more parks will be assessed in future years as funding is available. Assessments of developed parks are limited to park amenities such as playgrounds, pavements, surfacing, and fences.

## FISCAL/POLICY DISCUSSION

### Overview of Facilities Condition Assessments (FCAs)

FCAs provide a point-in-time snapshot of the condition of the City’s facilities and subsystems. Conducting FCAs for the City’s GF facilities is the beginning of a process to better understand the scope of our infrastructure needs. This understanding will inform the process of identifying the most effective maintenance and capital improvement investment strategies to achieve maximum benefit from the City’s assets. Maintaining quality data with which investment decisions can be made is a critical component of asset management. Condition assessments are also identified as a necessary step within Council Policy 800-16 (Asset Management Guidelines and Plan Steps).

Asset management is a process used to sustainably manage assets at a desired level of service, both now and in the future, for the lowest life cycle cost. According to Council Policy 800-16, an effective program integrates the disciplines of economics, engineering, maintenance, operations, and information technology working together to build and maintain sustainable assets. Better planning and management of the City’s assets allows the City to rely less on reactive, emergency repairs and more on preventative maintenance, resulting in more efficient allocation of staff and fiscal resources.

The results of the FCAs for GF buildings were used to develop a Facility Condition Index (FCI) score to reflect the facilities’ condition and level of reliability. A FCI score is a ratio of estimated maintenance and capital backlogs for a facility, or group of facilities, to the overall value of replacing that facility or facility group (referred to as the plant replacement value). Maintenance backlogs are created when repairs to facility subsystems are delayed. Similarly, capital backlogs

are created when replacement of a facility subsystem is deferred and the subsystem remains in service beyond its useful life<sup>2</sup>.

In addition to estimating maintenance and capital backlogs, the FCAs also project future capital renewal needs (the out-year costs attributed to replacing a facility or system in the year it is anticipated to reach the end of its useful life).

### Scope of the FCAs

It is important to understand the scope of the FCAs for GF buildings to properly interpret the results. These assessments evaluated existing facility conditions to determine the maintenance and capital needs to restore each facility to its original state. The assessments *do not* evaluate the costs to bring each facility up to current code requirements, such as those pertaining to seismic conditions and the Americans with Disabilities Act (ADA), or identify expansions or operational improvements to facilities. The Public Works Department (PW Department) indicates that estimating costs to bring facilities up to current code standards would require a significantly more intensive assessment.

It should be noted that mandatory code upgrades may be triggered when some of the infrastructure needs derived from the FCAs are addressed. Therefore, actual costs to address needs identified in the FCAs for GF buildings could be significantly higher than estimated in the FCA consultant reports. This underscores the role of FCAs as being an initial step in identifying the City's true infrastructure needs and related costs.

The FCAs for GF buildings did include accessibility assessments, but they were limited to building and site access. Solar energy feasibility assessments were also conducted to determine whether some buildings present a potential opportunity for solar system installations. Because these assessments are limited, a deeper investigation is needed to develop reasonable cost estimates to fully address these accessibility needs and potential solar opportunities.

### FCA Methodology

The FCAs for GF buildings evaluated existing buildings and their associated subsystems. Examples of the facility subsystems that were assessed for both City-occupied and leased GF facilities include: electrical systems, floor/roof structure, floor finishes, plumbing, and wall finishes. Each subsystem was inventoried and assessed for needed repairs and remaining useful life.

According to both FCA consultant reports for City-occupied and leased GF facilities, assessment teams relied upon historical information; discussions with facility occupants and maintenance staff; as well as visual inspections to determine facility maintenance and replacement backlogs. Cost estimates applied to these needs were derived from construction cost estimating data provided by the R.S. Means cost estimating guides.<sup>3</sup>

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<sup>2</sup> The period over which an asset is expected to be operational.

<sup>3</sup> R.S. Means is an independent third party provider of building industry construction cost data.

To determine the plant replacement value, or how much it would cost to replace a facility system (using its existing size, location, and functional capability) comparisons were made between construction cost standards and historical costs the City paid for similar projects and building types. The FCA consultant reports indicate that plant replacement values derived from the construction cost standards were around three to four times lower than the cost historically paid by the City, depending on the type of system and building, even after applying a city-specific cost escalator. Therefore, a multiplier of between three and four has been applied to the plant replacement values to reflect higher construction costs than the national average used by the cost standard.

The PW Department indicates that the plant replacement value cost estimates are based on actual bids the City has received in the past for similar projects, and that higher costs are driven by local materials and labor costs that the R.S. Means guides do not reflect. Additionally, the R.S. Means guides are generally used when estimating the construction costs for new projects, whereas replacement projects often include additional efforts. Council may wish to request additional clarification as to what factors are specifically behind the discrepancy between the City’s costs and those indicated in the R.S. Means guides.

*Facility Condition Index*

As mentioned above, a FCI score is a ratio of the cost of maintenance plus capital backlogs divided by the plant replacement value. The higher the FCI score, the worse the condition of the building. The scores are categorized in following way:

- Scores ranging from 0 to 20 percent are considered to be in “Good” condition
- 21 to 29 percent are considered to be in “Fair” condition
- 30 percent or greater are considered to be in “Poor” condition

Table 2 reflects the inputs that result in a FCI score for the facilities assessed. Leased GF facilities appear to have a large maintenance and capital backlog relative to the number of facilities assessed but the FCI score indicates that the facilities are in worse condition (FCI 35) as compared to City-occupied facilities (FCI 25).

**Table 2: Input Factors to Achieve FCI Score**  
(\$ in millions)

<b>Asset Function</b>	<b>Number of Facilities</b>	<b>Total Capital Backlog</b>	<b>Total Maintenance Backlog</b>	<b>Total Backlog<sup>1</sup></b>	<b>Plant Replacement Value</b>	<b>FCI<sup>2</sup></b>
City-Occupied	560	\$764.6	\$13.6	\$778.2	\$3,120.9	25 Fair
Leased	133	\$667.5	\$5.1	\$672.6	\$1,944.2	35 Poor
<b>Total GF Facilities</b>	<b>693</b>	<b>\$1,432.1</b>	<b>\$18.7</b>	<b>\$1,450.8</b>	<b>\$5,065.1</b>	<b>29 Fair</b>

<sup>1</sup>According to the PW Department, it is not industry best management practice or typical for agencies to improve facilities to a backlog of \$0. The PW Department also notes that this amount should not be interpreted as a funding request.

<sup>2</sup>Overall FCI score is an average of individual facilities which may vary from poor, to fair, to good.

## *Projected Future Capital Renewal*

Future capital renewal is the replacement of facilities and systems that are anticipated to reach the end of their useful life in the next 20 years. The cost estimates associated with projected capital renewal are not captured in the capital backlog as these are needs anticipated for the future. The purpose of forecasting capital renewal is for the City to plan and budget appropriately for facility systems as they expire.

The FCA consultant reports estimate projected capital renewal for the period between 2016 and 2035 for 560 City-occupied facilities to be \$1.37 billion and for 133 leased GF facilities to be \$887.4 million. These are in addition to the maintenance and capital backlogs. Caution should be used when interpreting these projections as they are based on potential events. It is uncertain when the need to replace a facility, subsystem, or equipment will materialize. However, if investments are not made in facilities and associated systems approaching the end of their useful lives, the probability of these projected capital renewal costs materializing becomes greater. It is likely that as more FCAs are conducted and the City's asset management process becomes more robust, projections of capital renewal will become more refined.

### **Summary of FCA Results for Leased GF Facilities**

The 133 leased GF facilities assessed are managed by two departments: Park and Recreation (73 facilities) and Real Estate Assets Department (READ) (60 facilities). With \$672.6 million in estimated maintenance and capital backlog and an estimated plant replacement value of \$1.94 billion, leased GF facilities received an overall FCI score of 35 (Poor). The estimated backlog is based on limited factors and actual funding needs will depend on additional aspects that go beyond simply restoring existing facilities. These aspects are discussed in more detail later in this report with regard to developing asset management plans.

It should be noted that the overall FCI is an average of individual facilities which may vary from poor to good. Taken together, the facilities' FCI scores average to a score of 35 (Poor). Of the facilities assessed, 23 percent were considered to be in good condition (31 facilities) and 67 percent were considered to be in poor condition (89 facilities), with 49 facilities receiving an FCI score of 50 or greater.

The following provides key takeaways of where and what the needs are:

- READ facilities are in poorer condition than Park and Recreation facilities. READ facilities received an average FCI score of 51 (Poor) as compared to Park and Recreation facilities with a FCI score of 19 (Good).
- Almost three-quarters of the total backlog is attributed to READ facilities.
- Balboa Park leased facilities (61 facilities) resulted in an average FCI score of 17 (Good). Both Balboa Park City-occupied and leased facilities, are discussed in more detail on page 7 of this report.
- Almost 40 percent of the total backlog, or \$256.3 million, is attributed to the four City Concourse facilities.

- Over half of the backlog costs are categorized as Reliability Level 1 Operations Impacts<sup>4</sup> which represent systems (such as electrical and HVAC) that can lead to partial or full facility shut-downs if the systems continue to exceed the end of their useful life or are not properly maintained.
- 94 percent of the facilities that received an accessibility assessment (94 facilities) were determined to have accessibility-related deficiencies.

### **Proposed Service Level Standards for City-Occupied and Leased GF Facilities**

Because capital improvement needs exceed available funding sources, efficient resource allocation is critical. Therefore, setting a standard that represents a minimum and sustainable level of facility condition, or service level, which the City can strive to achieve and maintain for its facilities guide limited resource allocation. It is also identified as a necessary step within the City’s Policy 800-16 for asset management.

The PW Department is proposing the following service levels:

- Goal FCI 15 (Good) for public and semi-public GF facilities
- Goal FCI 20 (Good) for office/work yard/operations and commercial/residential GF facilities

Both proposed service levels standards (FCI of 15 or FCI of 20) set a goal that all GF facilities be in good condition. However, public facilities are proposed to be maintained at a higher level, as indicated by the lower FCI score of 15. The PW Department indicates that this is largely due to public facilities typically receiving higher foot traffic making facility presentation more important, and also due to increased liability to the City if facilities are in poor condition.

Setting service level standards is an important policy decision that will determine the amount of funding needed to reach the standards, and in turn drives planning and budgetary decisions. The lower the FCI goal is set, the more expensive the goal will be to achieve. Due to the magnitude of the City’s facilities inventory, making slight changes to the FCI goal can significantly affect the funding needed to improve the condition of the City’s facilities to reach the established service level standards.

### Funding Needs to Reach Proposed Service Level Standards

To reach the proposed service level standards, reinvestments in existing facilities would be needed to improve their condition and corresponding FCI score. The methodology used to calculate reinvestment amounts is for every point difference between a facility’s actual FCI score and the target FCI score, a reinvestment amount equivalent to one percent of the facility’s plant replacement value is generated. If a facility is within the service level target, it would generate no necessary reinvestment.

The estimated reinvestment to meet the FCI standards is \$402.7 million for the 560 City-occupied facilities and \$426.0 million for the 133 leased GF facilities, for a total of \$828.7 million. Based

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<sup>4</sup> Building systems can fall into two other reliability levels: Level 2 represents systems that will shorten the life of the asset and cause deterioration to other systems if deficiencies are not addressed, such as windows; and Level 3 are systems that affect appearance, such as ceilings.

on the reinvestment methodology, this level of reinvestment is anticipated to bring the total inventory of GF facilities from a FCI score of 29 (Fair) to 12 (Good). It is important to note that the City Administration Building, City Operations Building, and other City Concourse facilities comprise 39 percent of the estimated necessary reinvestment costs for both City-occupied and leased facilities. The report specifically points out that reinvestment costs are reduced from \$828.7 million to \$508 million (39 percent) when these facilities are not considered. The current condition of these existing facilities is such that significant future investment may not be prudent.

Necessary reinvestment estimates only reflect the cost to repair or replace existing structures. They *do not* include costs for future capital renewal, code compliance, upgrades, or facility expansions, as previously noted. The necessary reinvestments for City-occupied facilities of \$402.7 million was incorporated into the CIP Outlook, though it was adjusted downward to account for other assumptions made in the report.

The \$234.2 million in needs for City facilities that was identified in the CIP Outlook over the five-year period are based on FCA results for City-occupied facilities, draft asset management plan (AMP) cost scenarios, and estimates of work that the PW Department staff believe it can complete during the CIP Outlook period. The feasibility of implementing many projects at once was also a limiting factor. Therefore, the total necessary reinvestment estimated for both City-occupied and leased GF facilities of \$828.7 million was not reflected in the FY 2018 – 2022 CIP Outlook. In our review of the CIP Outlook, our office recommended that future CIP Outlooks include the *total* expected capital needs for facilities based on adopted service levels over the five-year period.

### **A Closer Look at FCA Results for Balboa Park GF Facilities**

Balboa Park GF facilities (both City-occupied and leased) generated an overall FCI score of 19 which indicates that the facilities are in good condition. Table 3 further breaks down the FCI score of these facilities by asset function.

**Table 3: FCI Score for Balboa Park GF Facilities by Asset Function**

<b>Asset Function</b>	<b>Number of Buildings Assessed</b>	<b>Actual FCI<sup>1</sup></b>
Public Leased	61	17 Good
Public City-Occupied	39	26 Fair
City-Occupied Office, Work Yard, and Operations	18	32 Poor
<b>Total Balboa Park Facilities</b>	<b>118</b>	<b>19 Good</b>

<sup>1</sup>Actual FCI scores represent an averaging of the FCI score of each facility within the asset function. FCI scores for each individual facility varies.

Table 4 provides the reinvestment amounts estimated to achieve the proposed service level standards by asset function, which totals \$79.2 million for all of Balboa Park’s GF facilities.

**Table 4: Balboa Park Facilities Service Level Standards and Necessary Reinvestment**  
(\$ in millions)

<b>Asset Function</b>	<b>Goal FCI</b>	<b>Necessary Reinvestment</b>
Public Leased	15 Good	\$60.7
Public City-Occupied	15 Good	\$13.2
City-Occupied Office, Work Yard, and Operations	20 Good	\$5.3
<b>Total Balboa Park Facilities</b>	<b>19 Good<sup>1</sup></b>	<b>\$79.2</b>

<sup>1</sup> Averaged actual FCI score for all Balboa Park facilities.

A 2008 report called *The Soul of San Diego* summarizes the findings of three studies commissioned by three foundations (the Legler Benbough Foundation, the San Diego Foundation, and the Parker Foundation) with the goal of providing a foundation for a discussion of the future of Balboa Park. One aspect of the report provides a sample of needed projects related to maintenance, capital, and improvement needs of the park. Not intended to be a comprehensive list, the report identified a minimum of \$238 million (2007 dollars) in project costs. The sample of projects included in the report totaled over \$700 million (though one parking project was estimated as high as \$500 million).

When this item was heard in December 2016, the Infrastructure Committee was interested in reconciling the FCA results for Balboa Park GF facilities, which received an overall FCI score of 19 (Good) requiring \$79.2 million of necessary reinvestment, with the \$238 million in minimum project needs identified in the 2008 *The Soul of San Diego* report. We note that since the goals and scope of each assessment and the date each assessment was conducted differ so significantly, the results are not comparable. Table 5 summarizes the key differences of each report.

Though the facilities included in *The Soul of San Diego* report were also assessed in the FCAs for GF buildings, it is unclear how much overlap there is on the specific projects, as the FCAs had a different purpose. Many projects included in *The Soul of San Diego* report were outside the scope of the FCAs for various reasons: many were new or expansions of assets, code upgrades, or not maintenance or capital in nature. In other cases, some of the projects had been already completed before the FCA was conducted. Some facilities addressed in the FCAs that had needs identified in *The Soul of San Diego* report have FCI scores that indicate that those facilities are in good condition and therefore generate no necessary reinvestment.

Several projects listed in *The Soul of San Diego* report do not relate to facilities but would fall under the purview of the Parks and Recreation Department. As mentioned above, condition assessments were recently conducted for various parks, including Balboa Park. It is possible that some of the non-facility needs may be related to needs that will be identified in the developed parks condition assessment which focuses on park amenities. The developed parks condition assessment data will be used to inform the update of the Parks Master Plan that is estimated for completion in FY 2020.



**Table 5: Key Differences Between The Soul of the San Diego Report and the FCAs for GF Buildings**

Domain	The Soul of San Diego (2008)	FCAs for GF Buildings (Assessed between FY 2014 and FY 2016)
Goal of report	Lay the foundation for a discussion of the future of the Park	Assess the physical condition of the City’s existing GF facilities
Scope	Includes code upgrades, improvements, expansion, or renovation for facilities and park amenity needs	Limited to repairs and replacements for existing facilities needed to bring them to their original condition. Does not include code upgrades, improvements, expansion, or renovation
Sources of needs	Various sources: San Diego Unfunded Park Improvements List; various community and related plans; Parking Management Action Plan for Balboa Park; Members of SD Historical Society; Land use, Circulation and Parking Study; Balboa Park Master Plan; City Council requests or actions; Ordinances and Municipal Code	Data collected from condition assessments and cost models used by assessment teams

As demonstrated in Table 5, many of the needs in the Soul of the City report came from various planning documents. These documents include desired infrastructure changes that the respective community believes to be necessary as the community develops. The City’s FCAs have a much narrower focus and resulting needs are based on assessment data and cost models. This brings to light an issue that Council may wish to keep in mind as the City’s asset management process is being developed: at what point are data-driven needs and community needs reconciled? The development of a facilities AMP may in large part bridge this gap.

**Next Steps**

FCA Results to Inform Development of Facilities Asset Management Plan

While the City’s FCAs are necessary and valuable, they only represent the first step toward identifying actual funding needs for facility reinvestment. Development of an AMP to address identified maintenance and capital needs and consider other factors is the next step. Development of an AMP is also consistent with the Council Policy 800-16 for asset management. The facilities AMP will be a long-range funding plan (potentially covering a span of 15 years) that includes

funding in the amounts necessary to achieve the service level standard within a desired period of time, with the consideration that as time progresses facilities continue to deteriorate. Beginning with GF facilities, results from the FCAs will feed into the development of the facilities AMP.

It is important to note that the FCAs *do not* represent an implementation plan or a funding request but rather their results indicate the condition and reliability of a facility or group of facilities. As noted above, FCAs are limited in their scope. Therefore, other factors beyond simply restoring existing facilities must be considered to develop an effective action plan.

The facilities AMP will incorporate estimated costs for code upgrades, including ADA requirements. These estimates will remain preliminary until costs are developed on a project basis. Also, there could be opportunities to make energy efficient upgrades to facility systems that may make more financial sense than strictly restoring the deficiencies identified in the FCAs.

The AMP is also intended to address department operational needs aligned to the City's General Plan which is further defined through community plans and financing plans. The General Plan provides a long-range vision and policy framework for how the City should grow and develop, provide public services, and maintain the qualities that define the City of San Diego. At a high level, the General Plan sets the Citywide policies pertaining to future growth. FCAs do not contemplate growth or expansion. Community plans identify public facilities that are needed to serve the community and are required to implement the General Plan. Accompanying community plans, are public facilities financing plans which prioritize needed infrastructure and outline the financing strategy that will be used to implement community plans, contingent upon CIP budget approval. Community-level priorities are to be identified in community plans and financing plans in consultation with community planning groups. The facilities AMP is intended to be reflective of these strategic planning documents.

According to the PW Department, it is in the early stages of meeting with asset management departments<sup>5</sup> to discuss the results of the FCAs and future facility needs. This is an important step because the FCAs did not assess operational needs or whether existing facilities or their subsystems support a department's mission. If they do not, it may not make sense to repair or replace the facilities and subsystems to their original condition. Instead, improvement or expansion of an existing facility could be necessary to provide a certain service level to the public, often times established as part of the General Plan and community plans. One such example is a need for a new fire station to meet response-time standards. This is an example of a need based on service level standards that support the Fire-Rescue Department's mission and is derived from the City's General Plan. In addition, fire service standards defined in the General Plan policies are further defined in the 2011 Citygate report. An update to this report was recently released which provides detail on the Fire-Rescue Department's facility needs to achieve established service level standards.

To the extent an asset managing department has operational facility needs and clear service level standards that support its mission, costs and actions to achieve these standards can be included in the facilities AMP. However, there may be underutilized facilities which the City would benefit

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<sup>5</sup> Asset-managing departments that operate, manage, or maintain capital assets. They include: Airports, Environmental Services, Fire-Rescue, Library, Park and Recreation, Police, Public Utilities, General Services, Real Estate Assets, and Transportation and Storm Water (Streets and Storm Water Divisions)

more from selling or demolishing. The AMP will contemplate this and other factors described in the next section to identify optimal investment strategies.

The PW Department is planning to come to the Infrastructure Committee with a proposed framework for the development of the facilities AMP this summer. After the Infrastructure Committee, it will come to the full Council. Therefore, Council will be involved in shaping the final framework.

### AMP Framework

The facilities AMP is where data-driven needs to restore existing buildings will intersect with department operational needs that are driven by the City's strategic goals. The AMP framework currently being developed by the PW Department will likely demonstrate how the plan will bridge this gap and prioritize projects to create an effective maintenance and capital plan.

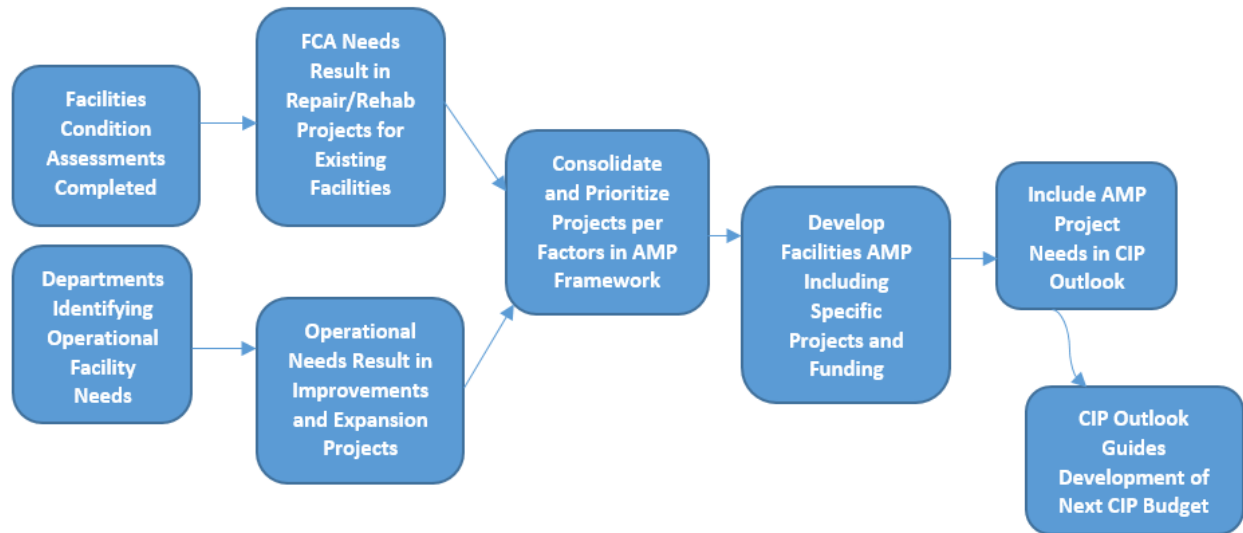
Council will have the opportunity to weigh in on the direction the PW Department plans to take in developing the facilities AMP by providing feedback on the framework which will include how project needs will be prioritized. The framework could address factors such as whether a facility is still needed and is beneficial to the City; the point at which a facility should be replaced rather than repaired; the criticality of a project need or facility or its subsystem in supporting a department's mission; how projects with differing reliability levels are prioritized in the context of fiscal constraints; and whether facilities with higher FCI scores may be given higher priority.

Once project needs become CIP projects they will be prioritized according to Council Policy 800-14. This policy should be reviewed at a later date to see if updates are necessary to reflect any changes in prioritizing needs that are included in the facilities AMP.

By considering these scenarios, the facilities AMP is intended to identify optimal maintenance and capital investment strategies. The facilities AMP is anticipated to be a more accurate representation of the City's total facilities needs and costs by considering both needs for existing facilities and needs for improvements or expansion that support a department's mission and the City's strategic goals.

The flow chart below demonstrates at a high level the process in which these needs converge into the facilities AMP and affect the CIP Budget planning process. FCAs are one way that CIP projects may be identified which will result in repair and rehabilitation projects to existing facilities. Other facility needs are identified by asset management departments when existing facilities no longer support their mission. These needs would result in improvements or expansion projects. The need for new facilities should be rooted in and aligned to strategic planning documents such as the General Plan and community plans. The AMP framework will outline the factors that will be considered to prioritize identified project needs on a Citywide basis. The resulting facilities AMP will be a long-term plan that addresses maintenance and capital needs for existing facilities and new or expanding facilities to support departmental operations. The AMP will feed into the development of the CIP Outlook which will guide the development of the CIP Budget.

**Graphic 1: FCA Results and Next Steps**



FCA Results to be Integrated with the Infrastructure Asset Management (I AM) Project

The I AM Project (Project) is a Citywide initiative to develop and implement a software solution aimed to improve the City’s management of infrastructure assets. The data collected through FCAs and other condition assessments will be incorporated into the system. Currently in its first phase, the project replaces 32 applications used to manage each of the four participating departments’<sup>6</sup> asset maintenance with one consolidated and integrated system. The Project is planned to go live in FY 2018. Next steps for the Project include finalizing system design; building and testing the system; and as increasing City staff knowledge on using the system. Implementation of Phase 2 will begin in FY 2019 to incorporate five more departments<sup>7</sup>.

One of the Project’s key functions is the asset management planning component. The Project is being designed to assess various factors including current facility conditions, consequences of failing systems, and industry standards to prioritize needs. This supports development of AMPs as well as the CIP Outlook. The asset management planning component is not intended to replace human decision making regarding infrastructure investments. Analyses will be needed to determine if recommended projects identified in the AMP report are reasonable and are the best use of the City’s resources.

Other key features of the Project including grouping projects that may be located together so that they may be addressed at the same time, or grouping jobs across departments to achieve savings on contracts, will allow for more efficient use of City resources. In addition, the system is intended to be able to model the deterioration of an asset and continually track an asset’s condition so that maintenance and capital projects can be anticipated throughout the asset’s life cycle. These features will support the City in taking a preventative approach in addressing infrastructure needs.

FCA Results to Assist in Identification of Solar Installation Projects

<sup>6</sup> Information Technology, PUD, PW Department, Transportation and Storm Water

<sup>7</sup> Library, Police, Fire-Rescue, Environmental Services, Park and Recreation

The FCAs for GF facilities identified 125 facilities that are deemed feasible for solar system installations out of the 185 GF facilities that received a feasibility assessment. These were high level assessments evaluating whether solar installations were possible at a given facility. The results will be used by the Environmental Services Department to do a deeper analysis to consider other factors including the financial impact of these projects, as well as gather enough information necessary to engage in the procurement process if a facility is a viable candidate.

Conducting these assessments is consistent with the goals of the City's Municipal Energy Strategy and Implementation Plan, a discrete action within the Climate Action Plan, to identify where potential projects may exist to reduce energy consumption at municipal facilities. Solar is one aspect of the Citywide effort to achieve its Climate Action Plan goals. According to the 2016 Annual Report on the Climate Action Plan, installation of solar panels is planned for 20 City-owned sites in 2017.

## CONCLUSION

### Issues for City Council Consideration

The detailed FCA data represents a large undertaking and is a valuable initial step in being able to effectively manage the City's assets. The data can be filtered in various ways to support effective decision-making for addressing infrastructure needs. Having a complete inventory of the maintenance and capital backlogs can help in contracting out for services if similar work is grouped together. FCI scores derived from assessment data highlights facilities that are in the poorest conditions and the most unreliable. Grouping subsystems in reliability levels is useful in being able to address deficiencies that would have the most significant impact on the building operations if they were to fail.


Our office generally supports the proposed service level standards for the City's GF facilities. As for next steps, it will be important for Council to weigh in on the direction of the AMP framework when it is brought forward to Council for feedback. In anticipation of this, Council may wish to consider the following:

- Prioritization of needs and projects within AMPs. Specifically:
  - The inclusion of FCI scores. Should facilities with the highest FCI scores receive first priority in addressing maintenance and capital needs? Should there be a maximum FCI score established reflecting the lowest allowable facility condition level? At what condition level should further investigation be warranted to determine whether a facility (or its subsystems) should be replaced?
  - The use of reliability levels. The FCAs collected data on the reliability levels of facility subsystems but no policy is being proposed yet to use them for prioritization of infrastructure needs. Should this information be used to prioritize facilities that have Reliability Level 1 Operation Impacts to prevent potential system failures?
  - Alignment with the City's strategic goals. Should needs based on service level standards that are reflective of the General Plan, community and financing plans, and the department's mission be given greater priority?
  - Affordability. How will the City maintain a sustainable asset management program while balancing competing priorities?

- Reviewing the City's current policy for prioritizing capital improvement projects after the AMP framework and prioritization therein have been determined.
- Addressing the frequency that FCAs should be conducted on a continuing basis.
- Requesting additional clarification as to what factors are specifically behind the discrepancy between the City's costs and construction cost standards used to estimate a facility's plant replacement value.
- Planning for future capital renewal. Though the FCAs project capital renewal costs in out years, there is no proposed policy to use these projections for planning purposes. As data on the City's infrastructure becomes more refined, a plan for addressing future capital renewal should be established. This will support a preventative approach to maintaining the City's facilities.



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