



751 E. Blithedale Avenue, #2036  
Mill Valley, CA 94942-2036  
(415) 580-5200  
www.pfalimited.com

**Project Finance  
Advisory, Ltd.**

# Memo

**To:** Keith Lew & Toni Holland  
General Services Department  
County of Sonoma

**From:** Victoria Taylor,  
David Gloss

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**Re:** Financial Analysis Summary  
Report on Financial Models and  
Procurement Options

**Date:** November 30, 2020

New Sonoma County  
Government Center

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## Contents:

- I. Executive Summary
- II. Introduction
- III. Financial Analysis and Procurement Options Process
- IV. Findings
- V. Summary and Conclusions
- VI. Appendices

## I. Executive Summary:

As part of the final step in its analysis, the County's Technical Advisor ("PFAL") completed a financial analysis of the County Government Center for the purpose of (1) identifying the total cost implications of a new Government Center based on the range of site and program alternatives considered and (2) identifying the optimal delivery method for the project. This financial analysis included an assessment of potential costs over the entire lifecycle of the new Government Center.

This analysis resulted in an annual cost indication that was used by the County to establish a feasible project affordability range for Board of Supervisors consideration.



To determine the optimal delivery method, PFAL's analysis included a risk assessment workshop as one of the key inputs for the quantitative analysis in the Value for Money (VfM) assessment for determining the preferred delivery and financing approach. Certain risks were assessed quantitatively. This included setting up a project-specific risk assessment and risk allocation between the public and private sector. The VfM analysis included an assessment of design, construction, financing, operations, maintenance and lifecycle costs over the useful life of the asset in order to determine and optimize the preferred project delivery procurement method. PFAL's VfM analysis was determined to be consistent with best practice by the West Coast Infrastructure Exchange, a non-profit agency specializing in performance-based infrastructure advisory services.

KNN Public Finance, LLC, with the assistance of the Auditor Treasurer Tax Collector (ACTTC) conducted a peer review of the Financial Analysis on April 10, 2020. The peer review covered the methodology of the financial analysis, the assumptions that informed the analysis, and the soundness of PFAL's recommendation given the County's specific financial condition.

The results of PFAL's analysis are that an availability payment-based Design-Build-Finance- Operate-Maintain contractual structure will yield the best value for money to the County for the new Government Center.

**PFAL Recommendations:**

- Designate a site location to be considered for a new County Government Center.
- Designate a Design-Build-Finance-Operate-Maintain delivery and performance structure as the preferred option to be further considered for the potential new project option.
- Direct staff to initiate a solicitation to identify potential development partner(s).
- Direct staff to initiate preliminary environmental assessment in accordance with the California Environmental Quality Act (CEQA) for the designated project preference.

**II. Introduction**

The Financial Analysis component of the Technical Advisory process was the final step of the overall technical assessment process within the phase 1 scope of work. It followed from the confirmation of goals and objectives, program validation, and site analysis. Outcomes of the program validation process and site analysis have continued to inform the financial analysis because they impact the affordability of various scenarios.

In addition to site-related cost impacts, FTE numbers, and departmental spatial adjacency considerations, the financial analysis also considered other cost saving scenarios. Cost saving scenarios included various space standards and remote



working scenarios. These scenarios have continued to be evaluated in various permutations and combinations and will continue to be refined and revisited with input from the County staff and Board of Supervisors. The end-result of all steps in aggregate includes a recommendation to the Board of Supervisors regarding next steps. The analysis summarized in this memorandum was primarily completed in Spring and Summer of 2020, but with additional financial scenarios and follow-up analysis performed in the fall of 2020. Updated financial analysis includes revisiting cost implications of the Downtown Santa Rosa sites and the Airport area sites.

### **III. Financial analysis and Procurement Options Process**

The PFAL Team's overall Technical Advisory Scope included the following elements:

- Develop overarching goals and objectives for future development
- Validate program needs
- Develop site objectives and evaluation criteria
- Conduct feasibility and value for money analysis
- Perform outreach to employees
- Recommend options regarding location, delivery model and financing strategy

The purpose of the Financial Analysis is to (1) develop a realistic cost estimate for the County Government Center and (2) perform value for money analysis to identify the optimal delivery method for the project. It also further evaluates preliminary outcomes of the program validation process and site analysis as they relate to impact on affordability. Throughout the financial analysis process, there remains continued input from project stakeholders, and regular updates with County participants beyond the project team. This has included incorporation of departmental head discussions and employee surveys following the COVID-19 pandemic, and the potential impact on design space standards and remote working scenarios and their impact on affordability.

The key financial priorities for the County are:

- Achieve best value-for-money over the long-term
- Optimize risk transfer
- Avoid potential cost over-run and time delays
- Retain asset ownership
- Avoid a general obligation debt issuance
- Identify a range of affordability within annual general fund appropriations

The goals and objectives of the Government Center were established by the Board of Supervisors on December 10, 2019.



On the topic of affordability and cost, the following elements have been considered, per direction received in the December 2019 Board meeting. Affordability and cost considerations and service criteria are detailed below.

**Affordability/Cost Considerations:**

- Acquisition Costs
- Site Development Costs
- Site Zoning Restrictions / Height
- Expansion: Flexibility to expand
- Availability and Cost of Parking: for visitors and employees
- Location Complexity
- Site Utilization and Density

Service Criteria, which are deemed to be critical to project success include consideration of the following:

- Acquisition Costs: cost to purchase property
- Site Development Costs: costs associated with developing a site such as the need to upgrade utilities, and unique factors contributing to development, demolition, environmental remediation, and swing space expenses.
- Site Zoning Restrictions / Height: Existing zoning restrictions may impact the cost and length of time for development by requiring general plan amendments and entitlement processes. This factor will gauge whether current zoning provisions are conducive or present challenges to development.
- Expansion: Flexibility to expand, such as the sites capacity for initial development and the ability to accommodate future expansion
- Parking: Availability of parking for visitors and staff. Availability of structured, existing facilities or site area for new parking facilities that are safe and within reasonable proximity to the new Government Center.
- Site Condition: Unique factors relating to a site such as space constraints, proximity to other buildings or hazards requiring unusual mitigation measures, ease of access for contractors, material laydown and staging during development.
- Site Utilization and Density: factors that increase costs, such as inefficient site size that drives building envelope costs. The ability to construct low, mid- or high-rise construction to gain efficiency in site utilization would be impacted by a sites' appropriateness and ability to accommodate various densities

Thus, the approach to the financial analysis entailed three major elements:

1. Funding Analysis
2. Risk Analysis
3. Value for Money Analysis

Additionally, to support these elements, the following tools have been employed:



- Feasibility Level Cost Estimate (Cost Report)
- Cost Validation (Soft Market Survey)
- Procurement Options Analysis
- Affordability Scenarios

## **1. Funding Analysis**

The funding analysis began with an identification of potential public and private funding sources. Simultaneously, a cost estimating exercise was performed to determine which funding sources are best aligned to meet cost requirements.

### Funding Sources

The project team surveyed the full variety of potential funding sources for the project. This included analysis of County potential funding sources and other revenue generating offsets to establish a project affordability range. Key considerations therein included:

1. Covid-19 impacts, market fluctuations and recovery time
2. Reliability of funding sources for credit/investor market
3. Policy considerations for departments to change to “internal/lease charges”
4. Reimbursement of “internal/lease charges” for Federal/State programs
5. No change to existing County revenue
6. Explore certain areas further:
  - EIFD for County Campus area
  - Grants for district energy/sustainability
  - Pending State/Federal infrastructure stimulus program

The analysis also included consideration of the timing of available funds or revenues to support project repayment, such as a potential project completion milestone payment to reduce long-term financing.

### Cost Report

The PFAL Team member firm Turner & Townsend performed a Feasibility Level Cost Estimate. The feasibility level cost estimate is included as Appendix A, titled “Cost Report, Feasibility Level Cost Estimate” as of August 19, 2020. The purpose of the Cost Report is to provide the County with an opinion of likely cost at a feasibility level, reflective local market rates and conditions Santa Rosa, California. The approach to the cost model includes hard construction costs for the new Sonoma County Government Center project in Santa Rosa, CA. The report was delivered with an order of magnitude of +/-30%, given the level of design and program specificity at this phase in the feasibility analysis. Additionally, the Turner & Townsend report includes a Design Contingency for each scenario, which has been set at 20% to account for further refinement in programming.

At the direction of the County team, the costs advanced for financial modeling include the 20% design contingency but do not make further adjustments within the +/- 30% order of magnitude for a feasibility level estimate. Adjustments in the total



program cost estimate are to be expected as design and programming is refined in later phases.

Generally, the costs are built up on a per square foot by line item basis. Four options were considered, two scenarios (high and low) and two gross floor area (GFA) scenarios each (lower GFA and upper GFA). The Cost Model has been prepared solely for the use of PFAL and the County of Sonoma and shall not be relied upon by any third party. The Cost Model is subject to review and/or amendments following receipt of Concept Design information and discussion(s) with the Client and Design Consultants upon receipt of such information. It should be noted that the Cost Model has been prepared without any design information and has informed by similar projects with data normalization for Santa Rosa, CA. The cost report includes 5% for general site related costs and an estimate for incoming site utilities work in the amount of \$15 million. The site selection was not confirmed during the preparation of the feasibility cost report and thus it does not include additional site alteration costs nor demolition costs. However, it should be noted that demolition costs were separately included later in the Financial Analysis. As part of the VfM analysis, the demolition cost assumption was included, estimated at \$20 million plus 20% contingency for a total of \$24 million. Further assumptions and methodology information are detailed in the cost report, Appendix A.

The results of the Cost Report were evaluated and considered by PFAL and the County project team. This information was also further informed by and considered in the context of the VFA Asset Overview Reports (September 2019).

## **2. Risk Analysis**

Three key elements of the Risk Analysis included the Risk Workshop and Risk Matrix, as well as a cost validation exercise.

### ***Risk Workshop and Risk Matrix***

In order to quantify financial risks, a risk analysis process was performed. The goal of this exercise is to produce a risk matrix that permits the County to obtain a quantifiable view of overall project risks used for subsequent steps in the Value for Money process. The Risk Matrix was developed using industry standard best practices for major capital projects on traditional delivery and alternative delivery projects. This includes guidance detailed by the Federal Highway Administration, "Guidebook for Risk Assessment in Public Private Partnerships," a market standard financial risk guidance document for major vertical construction and horizontal construction projects. The approach captures whole lifecycle risks of projects including construction and delivery risks as well as long-term operations and maintenance risks. The County's risk workshop was conducted in March 2020. Participants included:

County of Sonoma: Jonathan Kadlec; Chris Seppeler; Jeremy Fonseca; Janell Crane; Jonathan Kajeckas; Robert Butler; Jamie Bloom; Katherine DiPasqua;



John Hartwig; Charlie Swaim; Katherine DiPasqua; Toni Holland; Alma Roger; Peter O'Brien; (all in person at the County office)

Consultants: Richard Kerrigan (PFAL); Gerry Tierney (Perkins & Will); Greg Tseng (PFAL) (all by phone).

In addition to standard project delivery risks for a major capital project, the major elements that emerged from the risk workshop were incorporated into the risk matrix. The risk matrix was developed through an iterative process in March and April of 2020. A summary of the risk workshop has been attached as Appendix B.

The risk matrix is an important part of the financial analysis which serves as an input to the Value for Money study. The risk matrix and the Value for Money analysis, was peer reviewed by West Coast Infrastructure Exchange. Additional commentary on the risk matrix, financial analysis, and the peer review process is detailed below.

### Cost Validation

The results of the cost estimate were validated against a limited market survey designed to reduce the risk of a low-cost estimate. The market survey was conducted by phone using a hypothetical governmental administrative real estate project to obtain broad cost views from the developer/constructor market participants. PFAL described the anticipated uses of the building, including estimated size of the building, rough design goals, and potential general site environs (urban/regional center/suburban, office/mixed-use). Those parties responded verbally to indicate cost ranges, and these were found to be consistent with the Turner & Townsend Cost Estimate. Those responses were documented and validated the feasibility cost estimate. Additionally, PFAL Team member firm, Perkins & Will, also provided generic cost per square foot estimate on a potential building to further support the Feasibility Cost Estimate. Minor adjustments in approach were made by Turner & Townsend to the feasibility cost estimate including adjustment for geographic regional construction market trends for a building of similar size and scope. This survey data will be further vetted in the next project phase with a more formal Market Sounding process, as detailed in the Next Steps section later in this report.

The results of the updated feasibility level cost estimate were input into the financial model.

### **3. Value for Money Analysis**

As indicated above, the results of the costing exercise serves as input into the financial modeling process.

The approach to the VfM process includes the following:

- a) Funding & affordability assessment
- b) Procurement options review (qualitative)





- c) Design, construction, financing, operations, maintenance and lifecycle cost estimates
- d) Risk workshop (identification)
- e) Risk adjusted costs analysis (quantitative financial model)
- f) Funding & financial analysis (quantitative financial model)
- g) Qualitative assessment (policy considerations)
- h) Conclusions and recommendations

The Vfm process uses the risk matrix developed as a major input to the model, evaluating the likelihood of a risks occurring, in addition to a cost impact of a risk occurring. The resulting cost-of-risk is detailed for each risk in the matrix, as well as an overall cost-of-risk, referred to as a risk adjustment. A probabilistic approach guided this process of identifying individual and combined risks. The summary of risk analysis results compares the capital risks and operating period risks, according to those retained by the county and those transferred to the private sector developer. When comparing project delivery by either traditional means or by public private partnership, the retained risks along with the capital cost, and operating and maintenance costs are considered in totality. Additional information on procurement options and summary results of the value for money analysis are available in Appendix E.

#### Peer review and Comparison with KNN's 2017 report

The County's financial advisor, KNN, was tasked with undertaking a peer review of the analysis performed by PFAL. KNN was provided with financial model outputs and data used in the analysis. The peer review addressed the following key points:

- Confirmation of cost estimates and financial structure as of KNN Study (2017)
- Identification of scope and design changes
- Adjustments for inflation

As a result of the peer review, the Technical Consultant PFAL incorporated revisions including

- While using the updated cost estimates, KNN's model yielded \$33.3M per annum: this matched with PFAL's financial model
- Under the DBFOM option, the annual service payment included an equity component of \$7 million, thereby raising the annual service payment levels to ~\$40 million. The debt service and equity component are not subject to inflation, and stay flat during the project term
- The maintenance component is also included under the DBFM approach – which starts at \$11.4 million in the first year, with the average payment around \$15.5 million
- The findings led to recommendation to proceed with recommended scenarios that falls within the established project affordability envelope.





#### **IV. Findings**

Regarding project affordability, the following assumptions summarize the outcomes of the financial modeling of various affordability scenarios. The County annual affordability limit of approximately of \$30m in 2020\$ (or \$44 m with indexation) would fund a program based on 170 sq. ft. per person with 50% of the workforce working remotely. The VfM analysis has surmised that DBFM/DBFOM is the superior delivery method that meets BOS objectives. A DBFM/DBFOM delivery is the most efficient approach from a financial perspective and provides the best Value for Money and savings to the County. Minimal retained maintenance and lifecycle cost risk with no significant deferred maintenance liability at the end of the 32.5-year contract term. A milestone payment at the end of construction will reduce the annual Availability Payment. Note that any availability payment is subject to deductions for failure to meet performance requirements.

The value proposition take-aways for a Design, Build, Finance, Operate, and Maintain project include:

- Risk Transfer to Developer
- Guaranteed performance at the end of the term
- Avoids deferred maintenance issues at the end of the term
- Successful track record: Infrastructure Ontario Canada reported that 44 of 45 projects delivered on budget (98%)
- Pay for Performance
- Other value additions to improve savings for the County:
  - Potential TIFIA Loan if certain transit elements are included
  - Efficient financing terms without the County issuing debt
  - Extension of concession term
  - Milestone Payments

For avoidance of doubt, a Design-Build-Finance-Operate-Maintain delivery model does not:

- Sell public assets to the private sector
- Transfer responsibility from the County to perform government services

The project thus, can proceed with outcomes of the program validation, site analysis, and financial analysis as described below in summary and conclusions.

Appendix C contains the Summary Financial Analysis Presentation prepared from the detailed financial model and includes the financial model information.



## **V. Summary & Conclusions**

This report recommends that the Board accept the recommendations of the Technical Advisor contained herein regarding financial analysis. These conclusions provide the following suggested Board recommendations and next steps.

Community and stakeholder engagement will continue to be an important element in advancing the project throughout next phases, and further recommendations on that process is detailed in the separate memorandum.

### **PFAL Recommendations to the County:**

Based on findings of the PFAL Technical Advisory team, and with guidance from the Steering committee, PFAL recommends the following:

- Designate a Design-Build-Finance-Operate-Maintain delivery and performance structure as the preferred option.
- Initiate a solicitation to identify potential development partner(s).
- Initiate preliminary environmental assessment in accordance with the California Environmental Quality Act (CEQA) for the designated project preference.

### **Next Steps**

After approval of the recommended items herein, staff will proceed to Phase II of this effort and work with PFAL to undertake next steps for identifying potential development partners subject to Board approval. Phase II will include:

- Initiate a “Market Sounding” where input from industry professionals is sought in a pre-procurement environment to increase competition and gain greater insight on how a procurement can be structured to most benefit the County.
- Developing a Request for Qualifications to determine a short list of qualified development entities that could meet and deliver the designated project options
- Develop a plan for community and stakeholder engagement for the Board of Supervisors consideration.
- Request for Proposals: The results of the RFQ phase with a short list of qualified entities, will be brought to your Board for approval and other necessary steps for selecting the program, the project development plan, or other relevant project option details.
- Outside counsel to be retained to support development of this process and materials and to support County Counsel’s legal analysis of potential project issues. Any proposal for retaining such counsel will be brought to your Board for approval and any other necessary steps.
- Environmental analysis in the form of an Initial Study in accordance with CEQA will be initiated after today’s item and conducted in parallel with development of the Request for Qualifications and Request for Proposals as more meaningful information sufficient for environmental assessment



becomes available. Additional environmental analysis will be completed in subsequent Phase III in conjunction with the anticipated item that would be brought to your Board for final project consideration and approval and award of related contracts for actual development of the final, selected program and project.

**VI. Appendices:**

Appendix A: Cost Report, Feasibility Study Estimate Report

Appendix B: Risk Workshop Summary

Appendix C: Financial Analysis Summary

Appendix D: West Coast Infrastructure Exchange Support Letter



## **Appendix A: Cost Report, Feasibility Study Estimate Report**



02 December 2020

# Cost Report

Feasibility Study Estimate

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**Sonoma County  
Project Finance Advisory Limited**

making the **difference**

Belinda Edwards  
Associate Director

Darren Cash  
Director

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**Turner & Townsend**  
2 St. Clair Avenue West  
Floor 12  
Toronto  
Ontario  
M4V 1L5  
Canada  
t: +1 (416) 925 1424  
f: +1 (416) 925 2329

---



e: [Belinda.Edwards@turntown.com](mailto:Belinda.Edwards@turntown.com)  
e: [Darren.Cash@turntown.com](mailto:Darren.Cash@turntown.com)  
w: [turnerandtownsend.com](http://turnerandtownsend.com)

**Section 1 - Contents Page**

<b>Section</b>	<b>Heading</b>
1	Contents Page
2	Executive Summary
3	Financial overview
4	Basis of Costs
5	Elemental Basis
6	Cost Model - Scenario 1: Lower GFA
7	Cost Model - Scenario 1: Upper GFA
8	Cost Model - Scenario 2: Lower GFA
9	Cost Model - Scenario 2: Upper GFA
10	Operational and Life Cycle Costs

**Appendices**

A	Information used register
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**Quality Check**

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0	For Comment	Darren Cash	Belinda Edwards	24-02-20
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**Section 2 - Executive Summary**

GROSS FLOOR AREA FT2 (Building)	752,763	838,454	593,952	728,931
COST/SQFT (Building Costs)	\$564	\$563	\$566	\$564
GROSS FLOOR AREA FT2 (Parking)	1,166,764	1,299,676	920,701	1,129,951
COST/SQFT (Parking Costs)	\$134	\$134	\$134	\$134

Ref	Element	Scenario 1 - Lower GFA	Scenario 1 Upper GFA	Scenario 2 Lower GFA	Scenario 2 Upper GFA
A	Building Cost	\$424,700,000	\$472,457,000	\$336,193,000	411,419,000
B	Parking Cost	\$156,226,000	\$174,023,000	\$123,279,000	151,297,000
<b>SUB-TOTAL: BUILDING COSTS</b>		<b>\$580,926,000</b>	<b>\$646,480,000</b>	<b>\$459,472,000</b>	<b>\$562,719,011</b>

The following costs are allowances as discussed with PFAL for the purposes of providing an overall Proforma for the development:

D	Site Related Costs - 5%	\$29,046,000	\$32,324,000	\$22,974,000	\$28,136,000
E	Fixtures, Fittings & Equipment - \$42/sf	\$31,470,000	\$35,053,000	\$24,831,000	\$30,474,000
F	IT Communications & Equipment - 5%	\$21,235,000	\$23,623,000	\$16,810,000	\$20,571,000
G	LEED Premium - 3%	\$12,741,000	\$14,174,000	\$10,086,000	\$12,343,000
H	AV Equipment - \$23/sf	\$17,484,000	\$19,474,000	\$13,795,000	\$16,930,000
I	Incoming Site Utilities	\$15,000,000	\$15,000,000	\$15,000,000	\$15,000,000
J	Moving & Relocation Costs / Swing Space	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000
<b>TOTAL: BUILDING + SOFT COSTS</b>		<b>\$717,902,000</b>	<b>\$796,128,000</b>	<b>\$572,968,000</b>	<b>\$696,173,011</b>
K	Escalation - 10%	\$71,790,000	\$79,613,000	\$57,297,000	\$69,617,000
L	Project Contingency - 20%	\$157,938,000	\$175,148,000	\$126,053,000	\$153,158,000
<b>TOTAL: PROJECT COSTS (exc TAX)</b>		<b>\$947,630,000</b>	<b>\$1,050,889,000</b>	<b>\$756,318,000</b>	<b>\$918,948,011</b>
TAX	Tax Assessment - 8.25%	\$78,179,000	\$86,698,000	\$62,396,000	\$75,813,000
<b>TOTAL: PROJECT COSTS (inc TAX)</b>		<b>\$1,025,809,000</b>	<b>\$1,137,587,000</b>	<b>\$818,714,000</b>	<b>\$994,761,011</b>



**Section 3 - Financial overview****3 Cost Report****3.1 Project introduction**

The purpose of this Cost Model is to provide Project Finance Advisory Limited with an Opinion of Probable Cost only at Feasibility Study and reflects current local market rates and conditions in Santa Rosa, CA.

The Cost Model provides indicative hard construction costs costs for the Sonoma County project in Santa Rosa, CA, for Project Finance Advisory Limited at Feasibility Study correct to a magnitude of +/-30%.

The costs have been based upon the information listed in Appendix A and various Gross Floor Area scenarios as provided by the Client.

The Cost Model has been prepared solely for the use of Project Finance Advisory Limited and the County of Sonoma and shall not be relied upon by any third party.

This Cost Model is subject to review and/or amendments following receipt of Concept Design information and discussion(s) with the Client and Design Consultants upon receipt of such information. It should be noted that the Cost Model has been prepared without any design information and has been based on a similar project in Toronto, ON with data normalization for Santa Rosa, CA.

**3.2 Financial overview**

Please refer to the Executive Summary for confirmation of the Scenario costs.

The Construction Manager's General Conditions have been assumed at 14% and Construction Manager's Fee at 6%

**3.3 Key cost drivers**

- Floor to ceiling height 14-15ft
- Curtain wall system
- Gross up factor

**3.4 Contingency summary**

Design Contingency for each scenario has been set at 20%.

General Project Contingency of 20% has been included in the Cost Model.

**3.5 Risks**

The key risks that may affect the Cost Model for each scenario are summarised below:

- Inadequate or unclear project brief
- Programme uncertainty
- Inadequate site investigation
- Availability of labour to travel and undertake the work
- Pricing volatility of the local market

**Section 3 - Financial overview****3.6 Escalation Summary**

Works are priced at a Base Date of Q2 2020. Escalation has been included in the Cost Model of 10% to take the project up to Q4 2022.

**3.7 General Conditions**

We have included an allowance of 14% for General Conditions within the Cost Model which represents the current market levels for a project of this nature.

Our allowance for General Conditions includes: -

- Site Set Up
- Contractor Staff
- Construction Hoarding (Fencing)
- Mobilization and Demobilization
- Bonding and Insurance
- Temporary Power
- Temporary Heating
- Scaffolding
- Regular and Final Cleaning
- Traffic Control and Management
- Small Tools and Equipment
- Site Signage
- Temporary Office

**3.8 Procurement strategy**

This Cost Model assumes that the project will be procured on a Stipulated Lump sum basis, and that bids will be received from a minimum of five pre-qualified general contractors. We also assume that the project will be completed in a reasonable time frame and have not included any premiums related to "fast-tracking" the project, if required. The unit rates in our estimate are based on construction activities occurring during normal working hours and proceeding within a non-accelerated schedule.

This Cost Model includes current price feedback received from our office in San Francisco for some of the major trade divisions. We have been informed by our California team that due to the assumed project location and the increasing amount of work within the San Francisco area, it is likely that there will be issues in attracting trades to work on the Project and this may impact the pricing of the project. As such, Turner and Townsend strongly recommends that a "tender / bidding contingency " be carried by the Client for the project as it is our opinion that the local market will remain very busy and volatile in the short and medium term (2Q and 3Q 2020).

**Section 3 - Financial overview****3.9 Measurement and Pricing**

This Cost Model has been developed utilizing a tendered project of a similar nature in Toronto, ON. It has been developed utilizing generally accepted principles on method of measurement as per the Canadian Institute of Quantity Surveyors (CIQS) Elemental Cost Analysis.

The rates used for this Cost Model include labour and material, equipment, and subcontractor's overheads and profit. Elemental rates developed for this project have been based on a tendered project of a similar nature in Toronto, ON which have then been normalized to suit the location in Santa Rosa, CA. We have also received input from our team in San Francisco as it relates to certain major construction items to arrive at appropriate elemental rates for this project. Our Cost Model does not take into account extraordinary market conditions, where bidders may be limited and may include in their tenders disproportionate contingencies and profit margins.

**3.10 General Statement of Liability**

Turner & Townsend strongly recommends the Client and/or design team review the Cost Model including allowances, assumptions, exclusions and contingencies to ensure the appropriate project intent has been accurately captured within the report.

Turner & Townsend does not guarantee that tenders or actual construction costs will not vary from this Cost Model. Adverse market conditions, proprietary and/or sole source specifications, single sourcing of materials and equipment or reduced competition among contractors may cause bids to vary from reasonable estimates based on assumed current market conditions. In addition, it should be noted that due to the lack of information available to generate this Cost Model, all numbers shall be considered correct to a magnitude of +/- 30%.

**3.11 Outstanding actions / information**

- Design Information
- Site selection
- Project schedule - we have assumed a 30 month schedule for construction

**3.12 Additional detail**

Per the request on July 23, 2020 we have extracted the following costs from our Cost Model:

1. Emergency Operations Centre (11,000sf): \$560/sf or \$6.2M \*
2. Morgue and Public Health Lab (26,450sf): \$710/sf or \$18.8M
3. Council Chambers (21,000sf): \$630/sf or \$13.2M

These costs are for the Total Building Cost only and excludes Items D-L as noted on the Executive Summary. We confirm that the above costs are represented in the overall Cost Model.

\*EOC later amended to 12,000 sf at \$850/sf by PFAL in subsequent financial modeling.

## Section 4 - Basis of Costs

## 4 Basis of Costs

### 4.1 Information used and outstanding

The Cost Model has been prepared solely in accordance with the documentation outlined within this document and as specified in Appendix A.

### 4.2 Assumptions

The following assumptions have been made in the preparation of the Cost Model:

1. An allowance of 10% has been included in the Total Project Cost from Q2 2020 to Q4 2022
2. The Cost Model assumes that the works will be procured by a single stage Competitive Tender process. The tender will be based on Class A information or equivalent.
3. Regular working hours
4. Site selection has not been decided so no site costs have been included at this time. However, it is assumed that the site will be located within the city limits of Santa Rosa.
5. No major phasing requirements
6. No 'Accelerated' schedule premiums allowed
7. Refer to the section 'Elemental Basis' for further specific Works assumptions
8. Use of union labour has been assumed in the Cost Model
9. Site Related costs have been included at 5% of the Building + Parking Costs
10. Fixtures, Fittings & Equipment costs have been included at \$40/sf of the Office Building Area only
11. IT & Communications Equipment costs have been included at 5% of the Building Cost Only
12. LEED Premium uplift costs have been included at 3% of the Building Cost Only
13. AV Equipment costs have been included at \$20/sf of the Office Building Area only
14. Incoming Site Utilities have been assumed at \$15,000,000 for each scenario
15. Moving & Relocation / Swing Space costs have been assumed at \$10,000,000 for each option
16. General Project Contingency has been included at 20% of the Escalated Project Cost

### 4.3 Exclusions

The following items are specifically excluded from the Cost Model:

1. Premiums for Single Sourced Materials
2. Schedule Acceleration Premium
3. Kitchen Equipment
4. Out of Hours Working (other than where stated)
5. Hazardous Material
6. Loss of Revenue
7. Marketing
8. Premiums included by either the General Contractor or sub trades due to any prohibitive contractual clauses such as Liquidated Damages or penalties for non completion of the work
9. Permits & Development Charges
10. Land Acquisition Costs
11. Impact on pricing of ongoing market volatility beyond 5% per annum

**Section 5 - Elemental Basis**

**5 Elemental Basis**

The following Assumptions have been made in the preparation of the Cost Estimate

<b>A Shell</b>	
A1 Substructure	- Standard Foundations - Slab on grade construction
A2 Structure	- Standard reinforced concrete frame construction
A3 Exterior Enclosure	- 70/30 curtain wall/solid wall construction - SBS mod-bit roofing membrane w/ e.o. for green roof
<b>B Interiors</b>	
B1 Partitions & Doors	- Standard reinforced concrete shear wall construction - Mixture of CMU, drywall and glazed partitions - Mixture of solid core wood, hollow metal and glazed doors
B2 Finishes	- Standard office floor finishes (carpet, VCT, porcelain tile, etc.) - Standard office ceiling finishes (ACT, wood, drywall, etc.) - Standard office wall finishes (AWP, paint, porcelain, etc.) - Premium for council chamber areas
B3 Fittings & Equipment	- Standard office fittings (washroom accessories, handrails, etc.) - Millwork to be mid-grade quality non-FSC rated - Premium for council chamber areas
<b>C Services</b>	
C1 Mechanical	- Standard office installations - Chilled water cooling - BAS control system
C2 Electrical	- Standard office installations - Standby generator - R/I for AV and security installations - CAT6A cabling
<b>D Site Work</b>	
D1 Site Work	- Excluded from the Cost Model
D2 Ancillary Work	- Excluded from the Cost Model

Section 6 - Cost Model - Scenario 1: Lower GFA

Cost Model Scenario 1 - Lower GFA								
Ref	Element	Ratio To GFA	Elemental Quantity	Elemental Unit Rate	Total	Cost / m <sup>2</sup>	Cost / ft <sup>2</sup>	Cost Ratio
<b>A</b>	<b>Shell</b>				<b>\$122,473,176</b>	<b>\$1,751</b>	<b>\$163</b>	<b>29%</b>
<b>A1</b>	<b>Substructure</b>				<b>\$11,639,815</b>	<b>\$166</b>	<b>\$15</b>	<b>3%</b>
A11	Foundation	100%	69,934 m <sup>2</sup>	\$139	\$9,699,846	\$139	\$13	2%
A12	Basement excavation	100%	69,934 m <sup>3</sup>	\$28	\$1,939,969	\$28	\$3	0%
<b>A2</b>	<b>Structure</b>				<b>\$48,499,229</b>	<b>\$694</b>	<b>\$64</b>	<b>11%</b>
A21	Lowest Floor Construction	100%	69,934 m <sup>2</sup>	\$6	\$387,994	\$6	\$1	0%
A22	Upper Floor Construction	100%	69,934 m <sup>2</sup>	\$411	\$28,711,544	\$411	\$38	7%
A23	Roof Construction	100%	69,934 m <sup>2</sup>	\$277	\$19,399,692	\$277	\$26	5%
<b>A3</b>	<b>Exterior Enclosure</b>				<b>\$62,334,132</b>	<b>\$891</b>	<b>\$83</b>	<b>15%</b>
A31	Walls Below Grade	100%	69,934 m <sup>2</sup>	\$0	\$0	\$0	\$0	0%
A32	Walls Above Grade	100%	69,934 m <sup>2</sup>	\$130	\$9,056,733	\$130	\$12	2%
A33	Windows & Entrances	100%	69,934 m <sup>2</sup>	\$529	\$36,981,659	\$529	\$49	9%
A34	Roof Covering	100%	69,934 m <sup>2</sup>	\$155	\$10,863,827	\$155	\$14	3%
A35	Projections	100%	69,934 m <sup>2</sup>	\$78	\$5,431,914	\$78	\$7	1%
<b>B</b>	<b>Interiors</b>				<b>\$71,292,902</b>	<b>\$1,019</b>	<b>\$95</b>	<b>17%</b>
<b>B1</b>	<b>Partitions &amp; Doors</b>				<b>\$38,424,991</b>	<b>\$549</b>	<b>\$51</b>	<b>9%</b>
B11	Partitions	100%	69,934 m <sup>2</sup>	\$431	\$30,247,121	\$433	\$40	7%
B12	Doors	100%	69,934 nr	\$117	\$8,177,870	\$117	\$11	2%
<b>B2</b>	<b>Finishes</b>				<b>\$19,075,315</b>	<b>\$273</b>	<b>\$25</b>	<b>4%</b>
B21	Floor Finishes	100%	69,934 m <sup>2</sup>	\$93	\$6,868,296	\$98	\$9	2%
B22	Ceiling Finishes	100%	69,934 m <sup>2</sup>	\$99	\$7,275,690	\$104	\$10	2%
B23	Wall Finishes	100%	69,934 m <sup>2</sup>	\$64	\$4,931,329	\$71	\$7	1%
<b>B3</b>	<b>Fittings &amp; Equipment</b>				<b>\$13,792,596</b>	<b>\$197</b>	<b>\$18</b>	<b>3%</b>
B31	Fittings & Fixtures	100%	69,934 m <sup>2</sup>	\$128	\$9,437,658	\$135	\$13	2%
B32	Equipment	100%	69,934 m <sup>2</sup>	\$17	\$1,638,981	\$23	\$2	0%
B33	Conveying Systems	100%	69,934 stp	\$39	\$2,715,957	\$39	\$4	1%
<b>C</b>	<b>Services</b>				<b>\$99,114,446</b>	<b>\$1,417</b>	<b>\$132</b>	<b>23%</b>
<b>C1</b>	<b>Mechanical</b>				<b>\$61,601,635</b>	<b>\$881</b>	<b>\$82</b>	<b>15%</b>
C11	Plumbing & Drainage	100%	69,934 m <sup>2</sup>	\$105	\$7,403,083	\$106	\$10	2%
C12	Fire Protection	100%	69,934 m <sup>2</sup>	\$64	\$4,561,329	\$65	\$6	1%
C13	HVAC	100%	69,934 m <sup>2</sup>	\$617	\$43,783,714	\$626	\$58	10%
C14	Controls	100%	69,934 m <sup>2</sup>	\$82	\$5,853,509	\$84	\$8	1%
<b>C2</b>	<b>Electrical</b>				<b>\$37,512,811</b>	<b>\$536</b>	<b>\$50</b>	<b>9%</b>
C21	Service & Distribution	100%	69,934 m <sup>2</sup>	\$181	\$12,629,199	\$181	\$17	3%
C22	Lighting, Devices & Heating	100%	69,934 m <sup>2</sup>	\$198	\$14,051,380	\$201	\$19	3%
C23	Systems & Ancillaries	100%	69,934 m <sup>2</sup>	\$151	\$10,832,232	\$155	\$14	3%
<b>D</b>	<b>Site &amp; Ancillary Work</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>
<b>D2</b>	<b>Ancillary Work</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>
D21	Demolition	0%	0 m <sup>2</sup>		\$0	\$0	\$0	0%
D22	Alterations	0%	0 m <sup>2</sup>		\$0	\$0	\$0	0%
<b>SUB-TOTAL: NET BUILDING WORKS</b>					<b>\$292,880,524</b>	<b>\$4,188</b>	<b>\$389</b>	<b>69%</b>
<b>Z</b>	<b>General Requirements &amp; Allowances</b>							
<b>Z1</b>	<b>General Requirements &amp; Fee</b>				<b>\$61,036,301</b>	<b>\$873</b>	<b>\$81</b>	<b>14%</b>
Z11	General Requirements		14.0 %		\$41,003,273	\$586	\$54	10%
Z12	Fee		6.0 %		\$20,033,028	\$286	\$27	5%
<b>TOTAL: BUILDING WORKS ESTIMATE</b>					<b>\$353,917,000</b>	<b>\$5,061</b>	<b>\$470</b>	<b>83%</b>
<b>Z2</b>	<b>Allowances</b>				<b>\$70,783,400</b>	<b>\$1,012</b>	<b>\$94</b>	<b>17%</b>
Z21	Design & Pricing Allowance		20.0 %		\$70,783,400	\$1,012	\$94	17%
Z22	Escalation Allowance		0.0 %		\$0	\$0	\$0	0%
Z23	Construction Allowance		0.0 %		\$0	\$0	\$0	0%
<b>TOTAL BUILDING COST</b>					<b>\$424,700,000</b>	<b>\$6,073</b>	<b>\$564</b>	<b>73%</b>
<b>Above Grade Car Park</b>			3,011 spaces		<b>\$156,226,000</b>	<b>\$1,441</b>	<b>\$134</b>	<b>27%</b>
<b>TOTAL COST SCENARIO 1 - LOWER GFA</b>					<b>\$580,926,000</b>	<b>\$3,258</b>	<b>\$303</b>	<b>100%</b>
<b>GFA</b>		<b>BUILDING</b>	<b>CAR PARK</b>	<b>TOTAL</b>				
Gross Floor Area (ft <sup>2</sup> ):		752,763 ft <sup>2</sup>	1,166,764 ft <sup>2</sup>	1,919,526 ft <sup>2</sup>				

Section 7 - Cost Model - Scenario 1: Upper GFA

Cost Model Scenario 1 - Upper GFA								
Ref	Element	Ratio To GFA	Elemental Quantity	Elemental Unit Rate	Total	Cost / m <sup>2</sup>	Cost / ft <sup>2</sup>	Cost Ratio
<b>A</b>	<b>Shell</b>				<b>\$136,415,021</b>	<b>\$1,751</b>	<b>\$163</b>	<b>29%</b>
<b>A1</b>	<b>Substructure</b>				<b>\$12,964,844</b>	<b>\$166</b>	<b>\$15</b>	<b>3%</b>
A11	Foundation	100%	77,895 m <sup>2</sup>	\$139	\$10,804,037	\$139	\$13	2%
A12	Basement excavation	100%	77,895 m <sup>3</sup>	\$28	\$2,160,807	\$28	\$3	0%
<b>A2</b>	<b>Structure</b>				<b>\$54,020,183</b>	<b>\$694</b>	<b>\$64</b>	<b>11%</b>
A21	Lowest Floor Construction	100%	77,895 m <sup>2</sup>	\$6	\$432,161	\$6	\$1	0%
A22	Upper Floor Construction	100%	77,895 m <sup>2</sup>	\$411	\$31,979,948	\$411	\$38	7%
A23	Roof Construction	100%	77,895 m <sup>2</sup>	\$277	\$21,608,073	\$277	\$26	5%
<b>A3</b>	<b>Exterior Enclosure</b>				<b>\$69,429,995</b>	<b>\$891</b>	<b>\$83</b>	<b>15%</b>
A31	Walls Below Grade	100%	77,895 m <sup>2</sup>	\$0	\$0	\$0	\$0	0%
A32	Walls Above Grade	100%	77,895 m <sup>2</sup>	\$130	\$10,087,714	\$130	\$12	2%
A33	Windows & Entrances	100%	77,895 m <sup>2</sup>	\$529	\$41,191,499	\$529	\$49	9%
A34	Roof Covering	100%	77,895 m <sup>2</sup>	\$155	\$12,100,521	\$155	\$14	3%
A35	Projections	100%	77,895 m <sup>2</sup>	\$78	\$6,050,260	\$78	\$7	1%
<b>B</b>	<b>Interiors</b>				<b>\$79,154,740</b>	<b>\$1,016</b>	<b>\$94</b>	<b>17%</b>
<b>B1</b>	<b>Partitions &amp; Doors</b>				<b>\$42,784,336</b>	<b>\$549</b>	<b>\$51</b>	<b>9%</b>
B11	Partitions	100%	77,895 m <sup>2</sup>	\$431	\$33,678,945	\$432	\$40	7%
B12	Doors	100%	77,895 nr	\$117	\$9,105,391	\$117	\$11	2%
<b>B2</b>	<b>Finishes</b>				<b>\$21,115,859</b>	<b>\$271</b>	<b>\$25</b>	<b>4%</b>
B21	Floor Finishes	100%	77,895 m <sup>2</sup>	\$93	\$7,610,313	\$98	\$9	2%
B22	Ceiling Finishes	100%	77,895 m <sup>2</sup>	\$99	\$8,064,082	\$104	\$10	2%
B23	Wall Finishes	100%	77,895 m <sup>2</sup>	\$64	\$5,441,465	\$70	\$6	1%
<b>B3</b>	<b>Fittings &amp; Equipment</b>				<b>\$15,254,544</b>	<b>\$196</b>	<b>\$18</b>	<b>3%</b>
B31	Fittings & Fixtures	100%	77,895 m <sup>2</sup>	\$128	\$10,457,930	\$134	\$12	2%
B32	Equipment	100%	77,895 m <sup>2</sup>	\$17	\$1,771,484	\$23	\$2	0%
B33	Conveying Systems	100%	77,895 stp	\$39	\$3,025,130	\$39	\$4	1%
<b>C</b>	<b>Services</b>				<b>\$110,244,688</b>	<b>\$1,415</b>	<b>\$131</b>	<b>23%</b>
<b>C1</b>	<b>Mechanical</b>				<b>\$68,511,660</b>	<b>\$880</b>	<b>\$82</b>	<b>15%</b>
C11	Plumbing & Drainage	100%	77,895 m <sup>2</sup>	\$105	\$8,237,852	\$106	\$10	2%
C12	Fire Protection	100%	77,895 m <sup>2</sup>	\$64	\$5,071,465	\$65	\$6	1%
C13	HVAC	100%	77,895 m <sup>2</sup>	\$617	\$48,699,570	\$625	\$58	10%
C14	Controls	100%	77,895 m <sup>2</sup>	\$82	\$6,502,773	\$83	\$8	1%
<b>C2</b>	<b>Electrical</b>				<b>\$41,733,028</b>	<b>\$536</b>	<b>\$50</b>	<b>9%</b>
C21	Service & Distribution	100%	77,895 m <sup>2</sup>	\$181	\$14,066,856	\$181	\$17	3%
C22	Lighting, Devices & Heating	100%	77,895 m <sup>2</sup>	\$198	\$15,628,164	\$201	\$19	3%
C23	Systems & Ancillaries	100%	77,895 m <sup>2</sup>	\$151	\$12,038,008	\$155	\$14	3%
<b>D</b>	<b>Site &amp; Ancillary Work</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>
<b>D2</b>	<b>Ancillary Work</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>
D21	Demolition	0%	0 m <sup>2</sup>		\$0	\$0	\$0	0%
D22	Alterations	0%	0 m <sup>2</sup>		\$0	\$0	\$0	0%
<b>SUB-TOTAL: NET BUILDING WORKS</b>					<b>\$325,814,449</b>	<b>\$4,183</b>	<b>\$389</b>	<b>69%</b>
<b>Z</b>	<b>General Requirements &amp; Allowances</b>							
<b>Z1</b>	<b>General Requirements &amp; Fee</b>				<b>\$67,899,731</b>	<b>\$872</b>	<b>\$81</b>	<b>14%</b>
Z11	General Requirements		14.0 %		\$45,614,023	\$586	\$54	10%
Z12	Fee		6.0 %		\$22,285,708	\$286	\$27	5%
<b>TOTAL: BUILDING WORKS ESTIMATE</b>					<b>\$393,714,000</b>	<b>\$5,054</b>	<b>\$470</b>	<b>83%</b>
<b>Z2</b>	<b>Allowances</b>				<b>\$78,742,800</b>	<b>\$1,011</b>	<b>\$94</b>	<b>17%</b>
Z21	Design & Pricing Allowance		20.0 %		\$78,742,800	\$1,011	\$94	17%
Z22	Escalation Allowance		0.0 %		\$0	\$0	\$0	0%
Z23	Construction Allowance		0.0 %		\$0	\$0	\$0	0%
<b>TOTAL BUILDING COST</b>					<b>\$472,457,000</b>	<b>\$6,065</b>	<b>\$563</b>	<b>73%</b>
<b>Above Grade Car Park</b>			3,354 spaces		<b>\$174,023,000</b>	<b>\$1,441</b>	<b>\$134</b>	<b>27%</b>
<b>TOTAL COST SCENARIO 1 - LOWER GFA</b>					<b>\$646,480,000</b>	<b>\$3,255</b>	<b>\$302</b>	<b>100%</b>
<b>GFA</b>		<b>BUILDING</b>	<b>CAR PARK</b>	<b>TOTAL</b>				
Gross Floor Area (ft <sup>2</sup> ):		838,454 ft <sup>2</sup>	1,299,676 ft <sup>2</sup>	2,138,130 ft <sup>2</sup>				



Section 8 - Cost Model - Scenario 2: Lower GFA

Cost Model Scenario 2 - Lower GFA								
Ref	Element	Ratio To GFA	Elemental Quantity	Elemental Unit Rate	Total	Cost / m <sup>2</sup>	Cost / ft <sup>2</sup>	Cost Ratio
<b>A</b>	<b>Shell</b>				<b>\$96,634,968</b>	<b>\$1,751</b>	<b>\$163</b>	<b>29%</b>
<b>A1</b>	<b>Substructure</b>				<b>\$9,184,159</b>	<b>\$166</b>	<b>\$15</b>	<b>3%</b>
A11	Foundation	100%	55,180 m <sup>2</sup>	\$139	\$7,653,466	\$139	\$13	2%
A12	Basement excavation	100%	55,180 m <sup>3</sup>	\$28	\$1,530,693	\$28	\$3	0%
<b>A2</b>	<b>Structure</b>				<b>\$38,267,330</b>	<b>\$694</b>	<b>\$64</b>	<b>11%</b>
A21	Lowest Floor Construction	100%	55,180 m <sup>2</sup>	\$6	\$306,139	\$6	\$1	0%
A22	Upper Floor Construction	100%	55,180 m <sup>2</sup>	\$411	\$22,654,259	\$411	\$38	7%
A23	Roof Construction	100%	55,180 m <sup>2</sup>	\$277	\$15,306,932	\$277	\$26	5%
<b>A3</b>	<b>Exterior Enclosure</b>				<b>\$49,183,479</b>	<b>\$891</b>	<b>\$83</b>	<b>15%</b>
A31	Walls Below Grade	100%	55,180 m <sup>2</sup>	\$0	\$0	\$0	\$0	0%
A32	Walls Above Grade	100%	55,180 m <sup>2</sup>	\$130	\$7,146,031	\$130	\$12	2%
A33	Windows & Entrances	100%	55,180 m <sup>2</sup>	\$529	\$29,179,625	\$529	\$49	9%
A34	Roof Covering	100%	55,180 m <sup>2</sup>	\$155	\$8,571,882	\$155	\$14	3%
A35	Projections	100%	55,180 m <sup>2</sup>	\$78	\$4,285,941	\$78	\$7	1%
<b>B</b>	<b>Interiors</b>				<b>\$56,722,678</b>	<b>\$1,028</b>	<b>\$95</b>	<b>17%</b>
<b>B1</b>	<b>Partitions &amp; Doors</b>				<b>\$30,345,884</b>	<b>\$550</b>	<b>\$51</b>	<b>9%</b>
B11	Partitions	100%	55,180 m <sup>2</sup>	\$431	\$23,886,972	\$433	\$40	7%
B12	Doors	100%	55,180 nr	\$117	\$6,458,911	\$117	\$11	2%
<b>B2</b>	<b>Finishes</b>				<b>\$15,293,605</b>	<b>\$277</b>	<b>\$26</b>	<b>5%</b>
B21	Floor Finishes	100%	55,180 m <sup>2</sup>	\$93	\$5,493,129	\$100	\$9	2%
B22	Ceiling Finishes	100%	55,180 m <sup>2</sup>	\$99	\$5,814,575	\$105	\$10	2%
B23	Wall Finishes	100%	55,180 m <sup>2</sup>	\$64	\$3,985,901	\$72	\$7	1%
<b>B3</b>	<b>Fittings &amp; Equipment</b>				<b>\$11,083,189</b>	<b>\$201</b>	<b>\$19</b>	<b>3%</b>
B31	Fittings & Fixtures	100%	55,180 m <sup>2</sup>	\$128	\$7,546,803	\$137	\$13	2%
B32	Equipment	100%	55,180 m <sup>2</sup>	\$17	\$1,393,416	\$25	\$2	0%
B33	Conveying Systems	100%	55,180 stp	\$39	\$2,142,970	\$39	\$4	1%
<b>C</b>	<b>Services</b>				<b>\$78,486,937</b>	<b>\$1,422</b>	<b>\$132</b>	<b>23%</b>
<b>C1</b>	<b>Mechanical</b>				<b>\$48,795,390</b>	<b>\$884</b>	<b>\$82</b>	<b>15%</b>
C11	Plumbing & Drainage	100%	55,180 m <sup>2</sup>	\$105	\$5,856,020	\$106	\$10	2%
C12	Fire Protection	100%	55,180 m <sup>2</sup>	\$64	\$3,615,901	\$66	\$6	1%
C13	HVAC	100%	55,180 m <sup>2</sup>	\$617	\$34,673,231	\$628	\$58	10%
C14	Controls	100%	55,180 m <sup>2</sup>	\$82	\$4,650,238	\$84	\$8	1%
<b>C2</b>	<b>Electrical</b>				<b>\$29,691,547</b>	<b>\$538</b>	<b>\$50</b>	<b>9%</b>
C21	Service & Distribution	100%	55,180 m <sup>2</sup>	\$181	\$9,964,813	\$181	\$17	3%
C22	Lighting, Devices & Heating	100%	55,180 m <sup>2</sup>	\$198	\$11,129,149	\$202	\$19	3%
C23	Systems & Ancillaries	100%	55,180 m <sup>2</sup>	\$151	\$8,597,585	\$156	\$14	3%
<b>D</b>	<b>Site &amp; Ancillary Work</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>
<b>D2</b>	<b>Ancillary Work</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>
D21	Demolition	0%	0 m <sup>2</sup>		\$0	\$0	\$0	0%
D22	Alterations	0%	0 m <sup>2</sup>		\$0	\$0	\$0	0%
<b>SUB-TOTAL: NET BUILDING WORKS</b>					<b>\$231,844,583</b>	<b>\$4,202</b>	<b>\$390</b>	<b>69%</b>
<b>Z</b>	<b>General Requirements &amp; Allowances</b>							
<b>Z1</b>	<b>General Requirements &amp; Fee</b>				<b>\$48,316,411</b>	<b>\$876</b>	<b>\$81</b>	<b>14%</b>
Z11	General Requirements		14.0 %		\$32,458,242	\$588	\$55	10%
Z12	Fee		6.0 %		\$15,858,170	\$287	\$27	5%
<b>TOTAL: BUILDING WORKS ESTIMATE</b>					<b>\$280,161,000</b>	<b>\$5,077</b>	<b>\$472</b>	<b>83%</b>
<b>Z2</b>	<b>Allowances</b>				<b>\$56,032,200</b>	<b>\$1,015</b>	<b>\$94</b>	<b>17%</b>
Z21	Design & Pricing Allowance		20.0 %		\$56,032,200	\$1,015	\$94	17%
Z22	Escalation Allowance		0.0 %		\$0	\$0	\$0	0%
Z23	Construction Allowance		0.0 %		\$0	\$0	\$0	0%
<b>TOTAL BUILDING COST</b>					<b>\$336,193,000</b>	<b>\$6,093</b>	<b>\$566</b>	<b>73%</b>
<b>Above Grade Car Park</b>			2,376 spaces		<b>\$123,279,000</b>	<b>\$1,441</b>	<b>\$134</b>	<b>27%</b>
<b>TOTAL COST SCENARIO 1 - LOWER GFA</b>					<b>\$459,472,000</b>	<b>\$3,265</b>	<b>\$303</b>	<b>100%</b>
<b>GFA</b>		<b>BUILDING</b>	<b>CAR PARK</b>	<b>TOTAL</b>				
Gross Floor Area (ft <sup>2</sup> ):		593,952 ft <sup>2</sup>	920,701 ft <sup>2</sup>	1,514,653 ft <sup>2</sup>				

Section 9 - Cost Model - Scenario 2: Upper GFA

Cost Model Scenario 1 - Lower GFA								
Ref	Element	Ratio To GFA	Elemental Quantity	Elemental Unit Rate	Total	Cost / m <sup>2</sup>	Cost / ft <sup>2</sup>	Cost Ratio
<b>A</b>	<b>Shell</b>				<b>\$118,595,869</b>	<b>\$1,751</b>	<b>\$163</b>	<b>29%</b>
<b>A1</b>	<b>Substructure</b>				<b>\$11,271,317</b>	<b>\$166</b>	<b>\$15</b>	<b>3%</b>
A11	Foundation	100%	67,720 m <sup>2</sup>	\$139	\$9,392,764	\$139	\$13	2%
A12	Basement excavation	100%	67,720 m <sup>3</sup>	\$28	\$1,878,553	\$28	\$3	0%
<b>A2</b>	<b>Structure</b>				<b>\$46,963,820</b>	<b>\$694</b>	<b>\$64</b>	<b>11%</b>
A21	Lowest Floor Construction	100%	67,720 m <sup>2</sup>	\$6	\$375,711	\$6	\$1	0%
A22	Upper Floor Construction	100%	67,720 m <sup>2</sup>	\$411	\$27,802,581	\$411	\$38	7%
A23	Roof Construction	100%	67,720 m <sup>2</sup>	\$277	\$18,785,528	\$277	\$26	5%
<b>A3</b>	<b>Exterior Enclosure</b>				<b>\$60,360,732</b>	<b>\$891</b>	<b>\$83</b>	<b>15%</b>
A31	Walls Below Grade	100%	67,720 m <sup>2</sup>	\$0	\$0	\$0	\$0	0%
A32	Walls Above Grade	100%	67,720 m <sup>2</sup>	\$130	\$8,770,011	\$130	\$12	2%
A33	Windows & Entrances	100%	67,720 m <sup>2</sup>	\$529	\$35,810,878	\$529	\$49	9%
A34	Roof Covering	100%	67,720 m <sup>2</sup>	\$155	\$10,519,896	\$155	\$14	3%
A35	Projections	100%	67,720 m <sup>2</sup>	\$78	\$5,259,948	\$78	\$7	1%
<b>B</b>	<b>Interiors</b>				<b>\$69,106,480</b>	<b>\$1,020</b>	<b>\$95</b>	<b>17%</b>
<b>B1</b>	<b>Partitions &amp; Doors</b>				<b>\$37,212,632</b>	<b>\$550</b>	<b>\$51</b>	<b>9%</b>
B11	Partitions	100%	67,720 m <sup>2</sup>	\$431	\$29,292,711	\$433	\$40	7%
B12	Doors	100%	67,720 nr	\$117	\$7,919,922	\$117	\$11	2%
<b>B2</b>	<b>Finishes</b>				<b>\$18,507,828</b>	<b>\$273</b>	<b>\$25</b>	<b>4%</b>
B21	Floor Finishes	100%	67,720 m <sup>2</sup>	\$93	\$6,661,937	\$98	\$9	2%
B22	Ceiling Finishes	100%	67,720 m <sup>2</sup>	\$99	\$7,056,433	\$104	\$10	2%
B23	Wall Finishes	100%	67,720 m <sup>2</sup>	\$64	\$4,789,457	\$71	\$7	1%
<b>B3</b>	<b>Fittings &amp; Equipment</b>				<b>\$13,386,020</b>	<b>\$198</b>	<b>\$18</b>	<b>3%</b>
B31	Fittings & Fixtures	100%	67,720 m <sup>2</sup>	\$128	\$9,153,914	\$135	\$13	2%
B32	Equipment	100%	67,720 m <sup>2</sup>	\$17	\$1,602,132	\$24	\$2	0%
B33	Conveying Systems	100%	67,720 stp	\$39	\$2,629,974	\$39	\$4	1%
<b>C</b>	<b>Services</b>				<b>\$96,019,061</b>	<b>\$1,418</b>	<b>\$132</b>	<b>23%</b>
<b>C1</b>	<b>Mechanical</b>				<b>\$59,679,917</b>	<b>\$881</b>	<b>\$82</b>	<b>15%</b>
C11	Plumbing & Drainage	100%	67,720 m <sup>2</sup>	\$105	\$7,170,930	\$106	\$10	2%
C12	Fire Protection	100%	67,720 m <sup>2</sup>	\$64	\$4,419,457	\$65	\$6	1%
C13	HVAC	100%	67,720 m <sup>2</sup>	\$617	\$42,416,585	\$626	\$58	10%
C14	Controls	100%	67,720 m <sup>2</sup>	\$82	\$5,672,945	\$84	\$8	1%
<b>C2</b>	<b>Electrical</b>				<b>\$36,339,144</b>	<b>\$537</b>	<b>\$50</b>	<b>9%</b>
C21	Service & Distribution	100%	67,720 m <sup>2</sup>	\$181	\$12,229,379	\$181	\$17	3%
C22	Lighting, Devices & Heating	100%	67,720 m <sup>2</sup>	\$198	\$13,612,867	\$201	\$19	3%
C23	Systems & Ancillaries	100%	67,720 m <sup>2</sup>	\$151	\$10,496,898	\$155	\$14	3%
<b>D</b>	<b>Site &amp; Ancillary Work</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>
<b>D2</b>	<b>Ancillary Work</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>
D21	Demolition	0%	0 m <sup>2</sup>		\$0	\$0	\$0	0%
D22	Alterations	0%	0 m <sup>2</sup>		\$0	\$0	\$0	0%
<b>SUB-TOTAL: NET BUILDING WORKS</b>					<b>\$283,721,410</b>	<b>\$4,190</b>	<b>\$389</b>	<b>69%</b>
<b>Z</b>	<b>General Requirements &amp; Allowances</b>							
<b>Z1</b>	<b>General Requirements &amp; Fee</b>				<b>\$59,127,542</b>	<b>\$873</b>	<b>\$81</b>	<b>14%</b>
Z11	General Requirements		14.0 %		\$39,720,997	\$587	\$54	10%
Z12	Fee		6.0 %		\$19,406,544	\$287	\$27	5%
<b>TOTAL: BUILDING WORKS ESTIMATE</b>					<b>\$342,849,000</b>	<b>\$5,063</b>	<b>\$470</b>	<b>83%</b>
<b>Z2</b>	<b>Allowances</b>				<b>\$68,569,800</b>	<b>\$1,013</b>	<b>\$94</b>	<b>17%</b>
Z21	Design & Pricing Allowance		20.0 %		\$68,569,800	\$1,013	\$94	17%
Z22	Escalation Allowance		0.0 %		\$0	\$0	\$0	0%
Z23	Construction Allowance		0.0 %		\$0	\$0	\$0	0%
<b>TOTAL BUILDING COST</b>					<b>\$411,419,000</b>	<b>\$6,075</b>	<b>\$564</b>	<b>73%</b>
<b>Above Grade Car Park</b>			2,916 spaces		<b>\$151,297,000</b>	<b>\$1,441</b>	<b>\$134</b>	<b>27%</b>
<b>TOTAL COST SCENARIO 1 - LOWER GFA</b>					<b>\$562,716,000</b>	<b>\$3,258</b>	<b>\$303</b>	<b>100%</b>
<b>GFA</b>		<b>BUILDING</b>	<b>CAR PARK</b>	<b>TOTAL</b>				
Gross Floor Area (ft <sup>2</sup> ):		728,931 ft <sup>2</sup>	1,129,951 ft <sup>2</sup>	1,858,882 ft <sup>2</sup>				

**Section 10 - Operational and Life Cycle Costs**

**10 Operational Costs**

**10.1 Information used**

High level benchmarks have been used based on Whitestone Data as well as benchmarks from other similar P3 projects within Turner & Townsends data base.

**10.2 Assumptions**

The following assumptions have been made:

1. Works are priced at Q1 with no escalation applied.
2. High level indicative costs as no scope of works has been provided
3. Hard FM Costs include maintenance, small element of grounds maintenance (eg maintenance to patio's etc), associated management costs and a help desk
4. Soft FM costs include cleaning and waste management
5. All costs exclude extensive landscaping costs, security costs (other than maintenance of security hardware) and any technological refresh
6. Life cycle assumes a 25-30 year concession period

**10.3 Operational Costs**

For the 225ft2/person building: Hard FM - \$7.0/ft2, Soft FM - \$2.0/ft  
For the 170ft2/person building: Hard FM - \$7.50/ft2, Soft FM - \$2.50/ft2  
For the 100ft2/person building: Hard FM - \$8.0/ft2, Soft FM - \$3.0/ft2

**10.4 Life Cycle Costs**

An allowance of \$2.5-3.0/ft2/yr

**Appendix A - Information used register**

Document Type	Author	Document Ref.	Title / Description	Date	Revision
	PFAL	Assumptions List	Functional Program	02-02-20	
	T&T	Cost Estimate	Commercial Office Cost Estimate Example	01-08-19	
	T&T	Market Research	Email from SF Office re: market conditions and select rates	21-02-20	
	RSMeans	Location Factor	Use of RSMeans Online to compare overall location factor		
		Zoom Call	Conversation between PFAL, P+W and T&T re: Cost Model	08-07-20	
		Email	Email from PFAL re: additional detail	23-07-20	



## **Appendix B: Risk Workshop Summary**



Project Finance  
Advisory Ltd.

# Risks and Opportunities Workshop for New County Government Center Project

Project Finance Advisory, Ltd.

Excerpts from March 11, 2020,  
Revised December 4, 2020

# Today's presenters



**Richard Kerrigan**  
PFAL



**Greg Tseng**  
PFAL



**Gerry Tierney**  
Perkins & Will

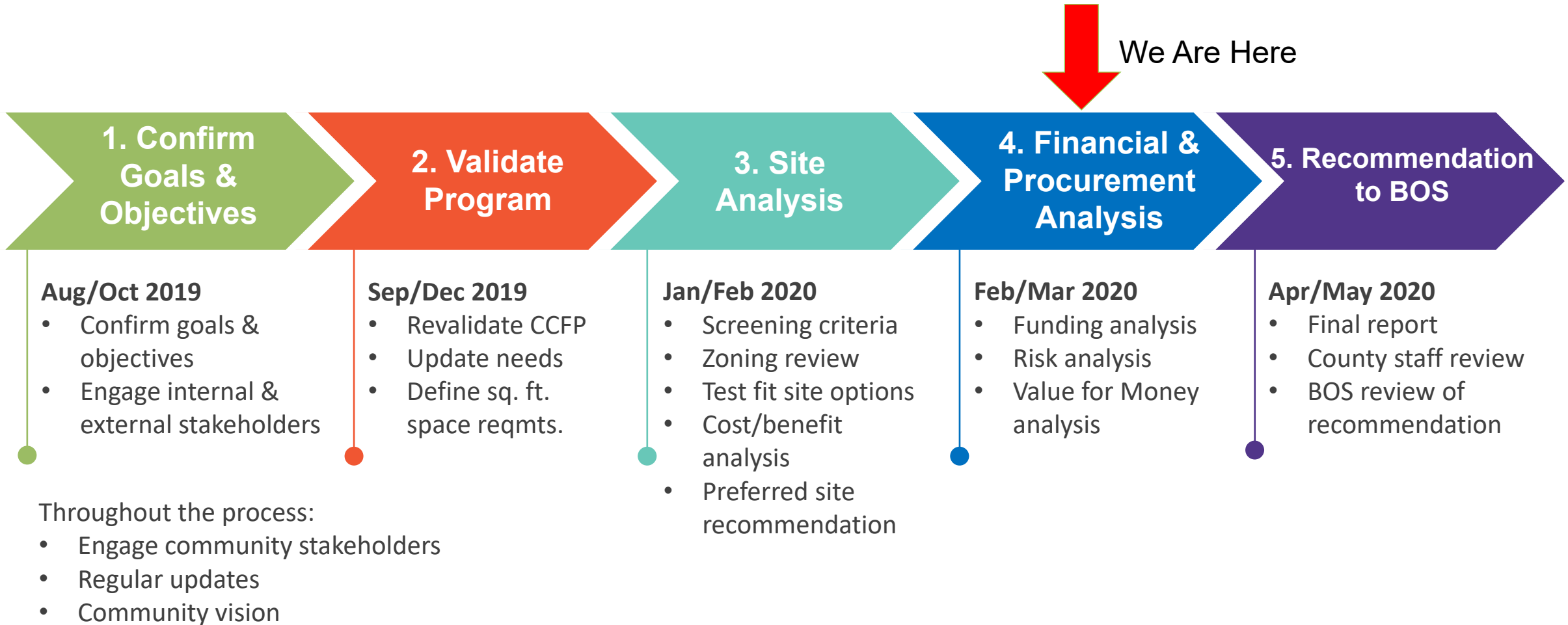




# Agenda

- 1. Introduction: 5 mins**
- 2. Concept introduction: 10 mins (with Q&A)**
  - a) Risk Workshop Purpose and Outcomes
  - b) Risk Transfer Concept
  - c) Risk Workshop Process
- 3. Workshop: 1 hour 10 mins**
- 4. Next steps: 5 mins**

# PFAL Approach & Timeline

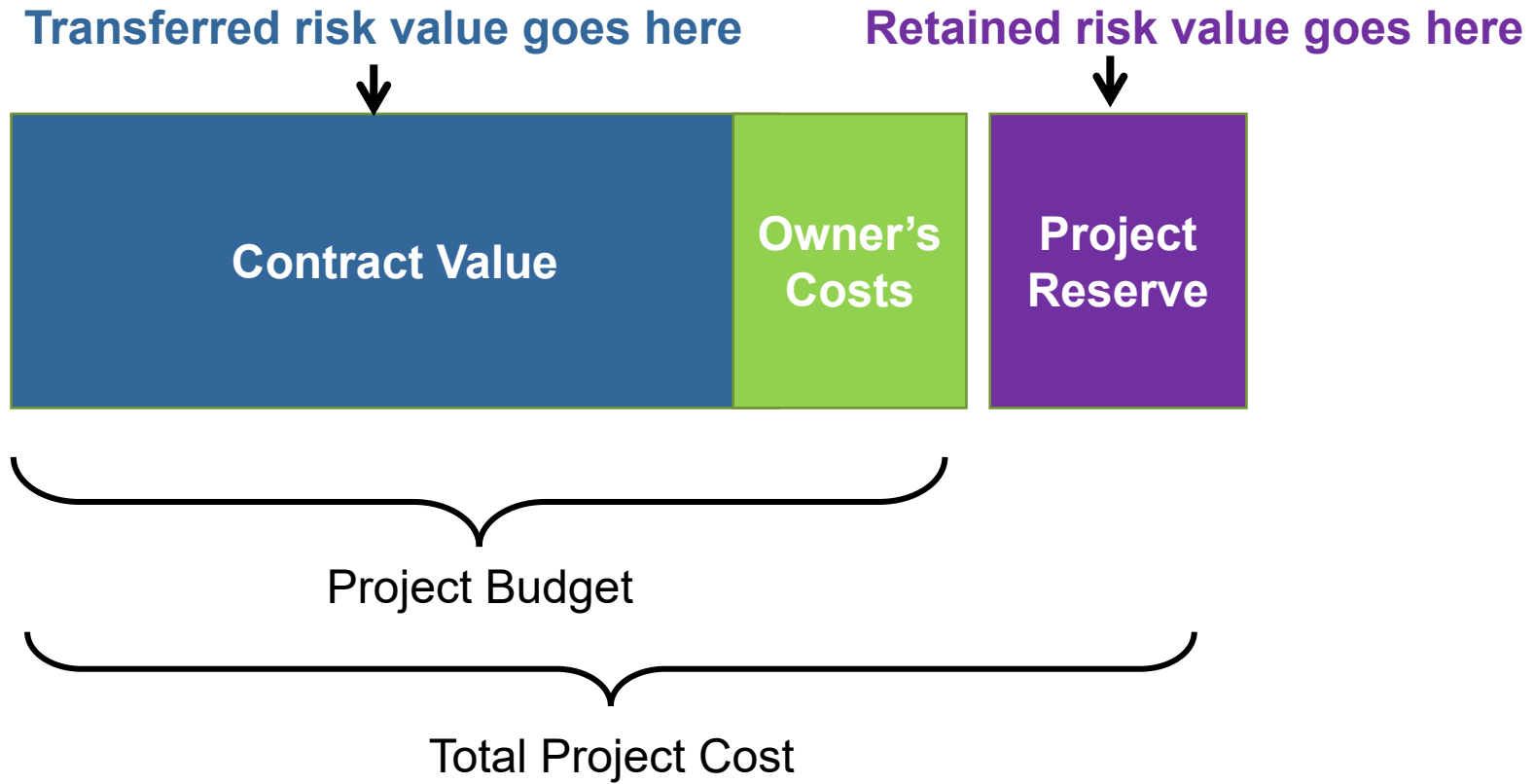


# Purpose

Understand risks/opportunities and uncertainty to make better decisions

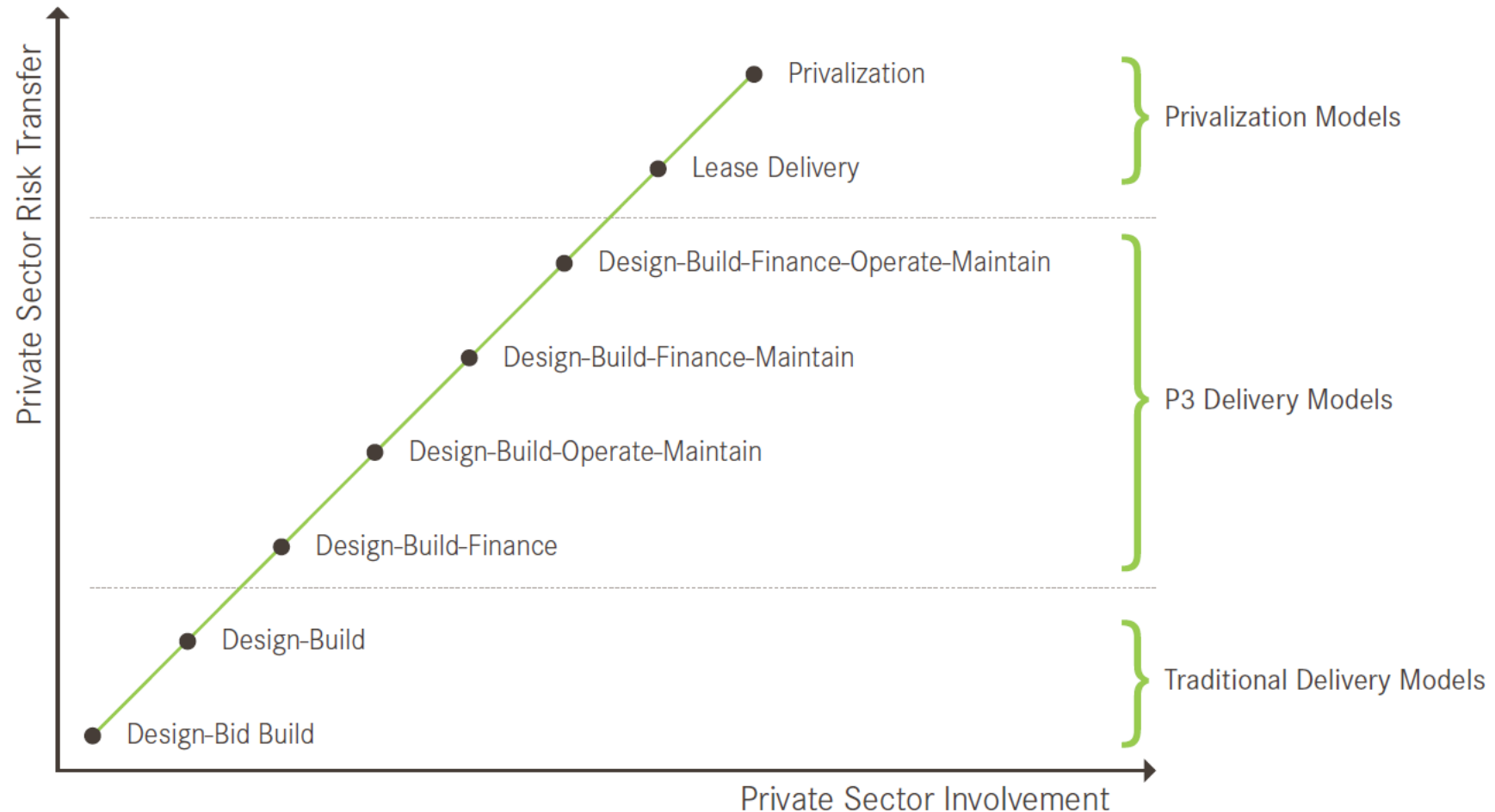
Achieve project goals and objectives

# Risk Allocation



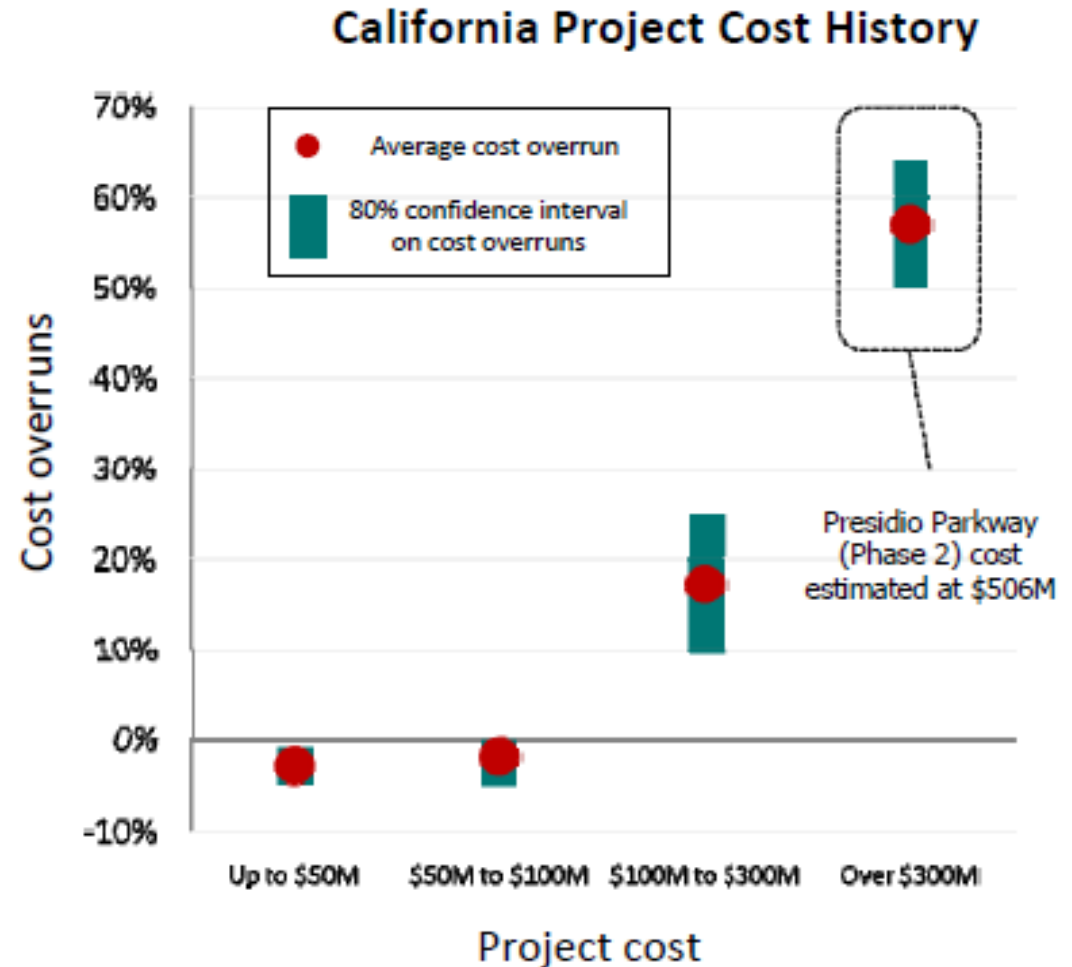
# Project Delivery Models

The term P3 can refer to a number of delivery models. Therefore, it is important to evaluate delivery models that are most likely to produce an optimal structure when compared to project objectives.



# Importance of Cost & Schedule Risk Transfer

- Caltrans study: historically, worst overruns on projects over \$300 million
- Indicative of projects nationally – larger, more complex projects typically make more sense for P3 delivery
- Analysis does not include deferred maintenance cost assessment over the asset life



# Sample Risk Allocation Matrix

Risk Allocation Matrix for Delivery Models	DBB	DB	DBF	DBFOM
Ownership	●	●	●	●
Environmental	●	●	●	●
Project approval	●	●	●	●
Design	●	○	○	○
Permitting	●	◐	◐	○
Financing	●	●	○	○
Funding	●	●	●	●
Owner directed change in scope	●	●	●	●
Change orders (excluding owner directed change in scope)	●	●	○	○
Change in site conditions	●	●	●	◐
Construction	○	○	○	○
Labor shortage & material shortage	●	○	○	○

	DBB	DB	DBF	DBFOM
Construction cost overruns	○	○	○	○
Construction delays	◐	○	○	○
Insurance	●	●	◐	◐
Commissioning	●	●	●	○
Contractor default	●	●	○	○
Post warranty issue	●	●	●	○
Maintenance	●	●	●	○
Energy Consumption (quantity)	●	●	●	○
Energy price	●	●	●	●
Lifecycle	●	●	●	○
Operator default	●	●	●	○
Unforeseen events / force majeure	◐	◐	◐	◐

Retained: ●      Shared: ◐      Transferred: ○



# Risk Transfer Concept

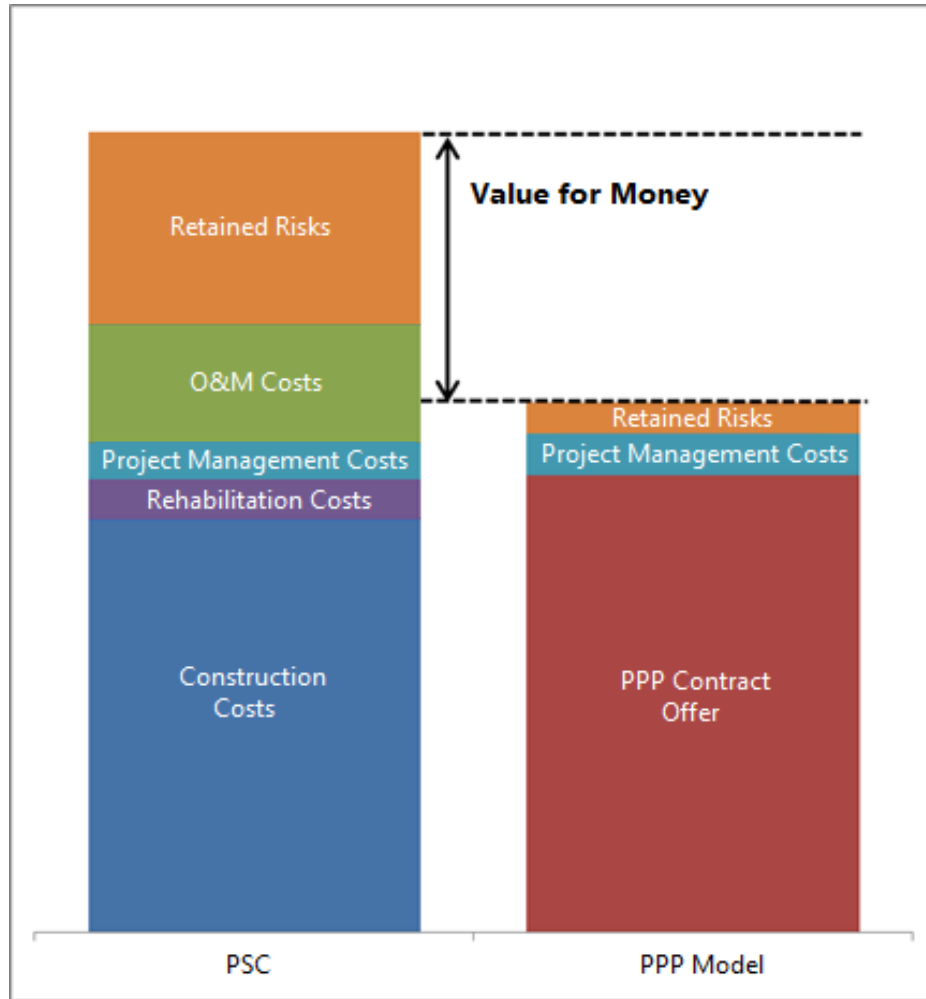
**Objective: optimum risk transfer to the party best able to manage risks within affordability limits**

Risk / Delivery Options	Project Definition	Environmental	Design	Construction	O&M	Finance
DBB	Public					
DB	Public		Private		Public	Public
DBF	Public		Private		Public	Private
DBFOM	Public		Private			

Delivery models: DBB = Design Bid Build, DB = Design Build, DBF = Design Build Finance, DBFOM = Design Build Finance Operate Maintain

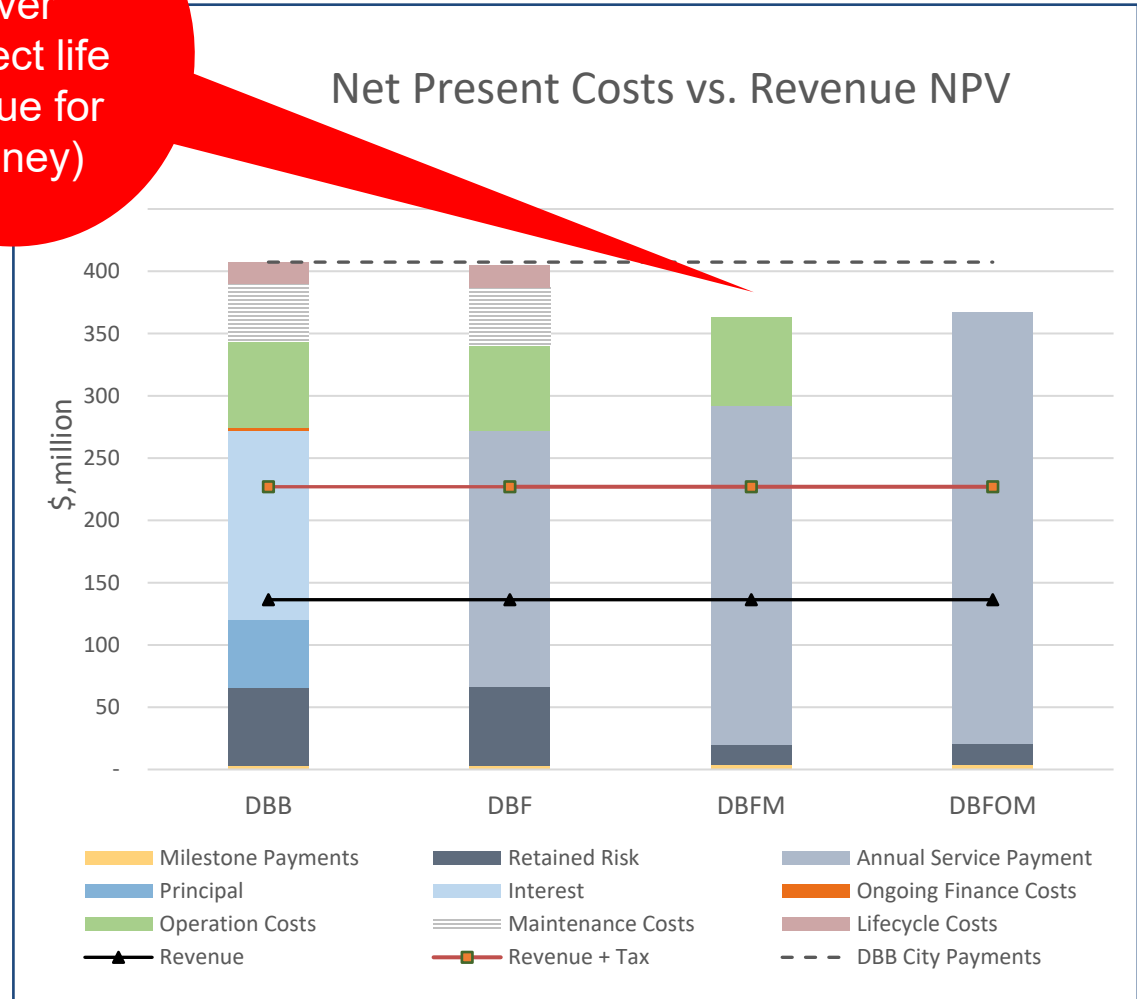
Private finance means private debt/equity e.g. developer/infrastructure funds, bank debt, private placement;  
Public finance means municipal debt;

# Value for Money Concept

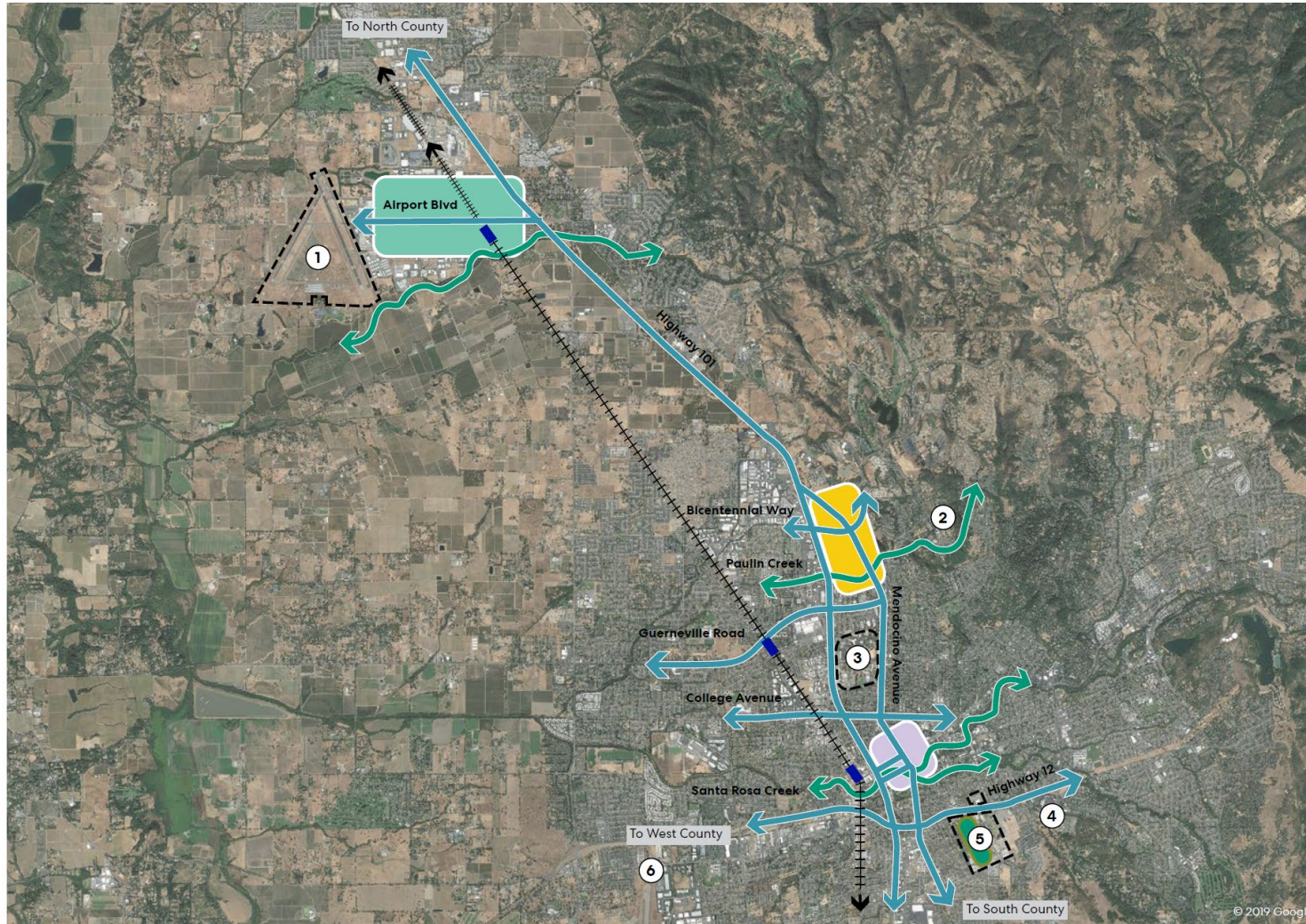


Savings over project life (Value for Money)

Net Present Costs vs. Revenue NPV



# Project Overview



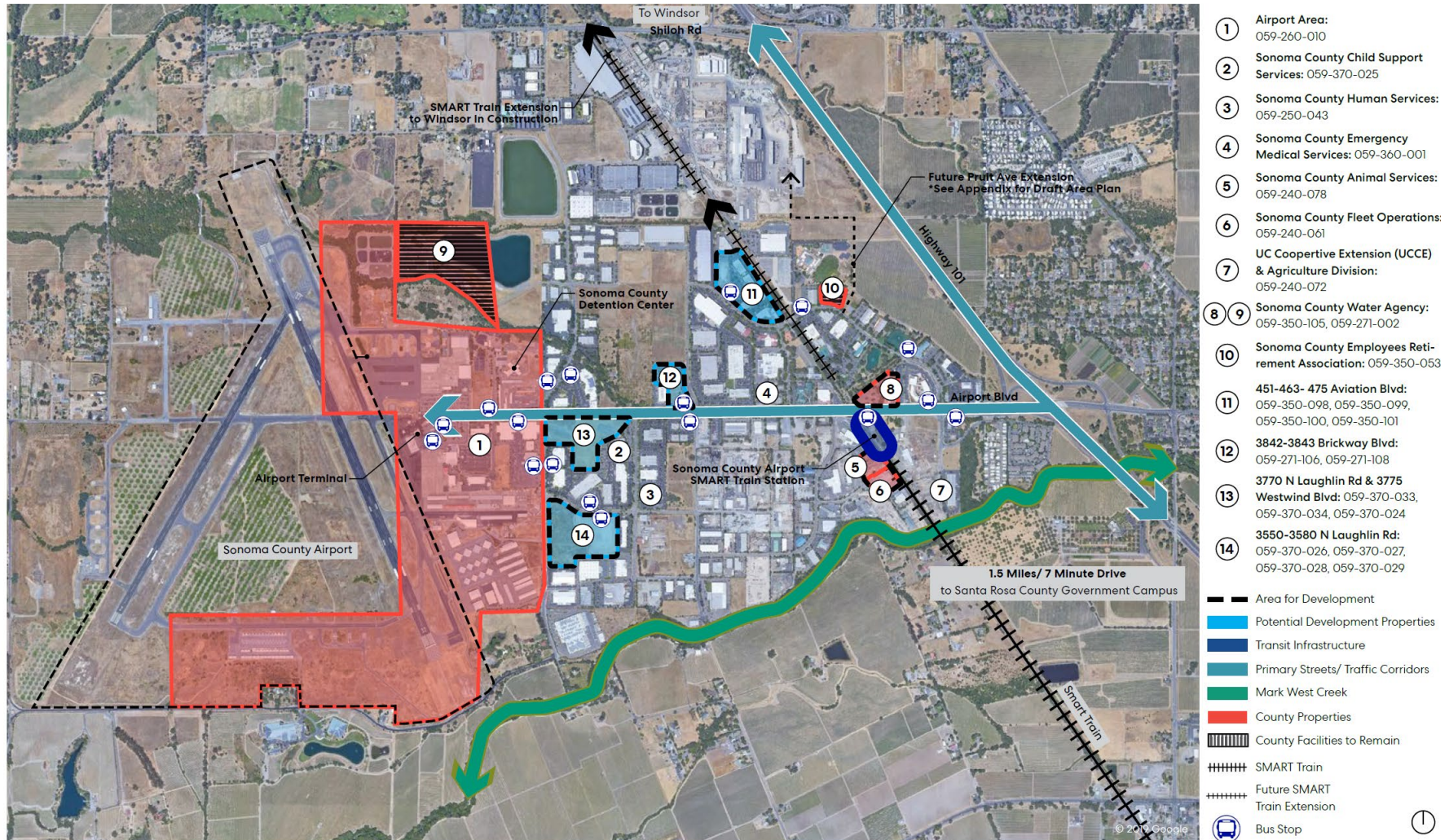
- ① Sonoma County Airport
- ② Sonoma County Public Health Laboratory
- ③ Santa Rosa Junior College & Santa Rosa High School
- ④ Sonoma County Health Services Department
- ⑤ Sonoma County Fairgrounds
- ⑥ Sonoma County Behavioral Health Campus

- Airport Sites
- Government Campus Sites
- Downtown Sites
- Highway 101
- Transit Infrastructure
- Primary Streets/ Traffic Corridors
- Riparian Corridor
- SMART Train
- Future SMART Train Extension

**Potential Site Identification: Site Context**  
 Sonoma County Government Center Technical Advisor Site Selection  
 February 28, 2020 - DRAFT PACKAGE #1



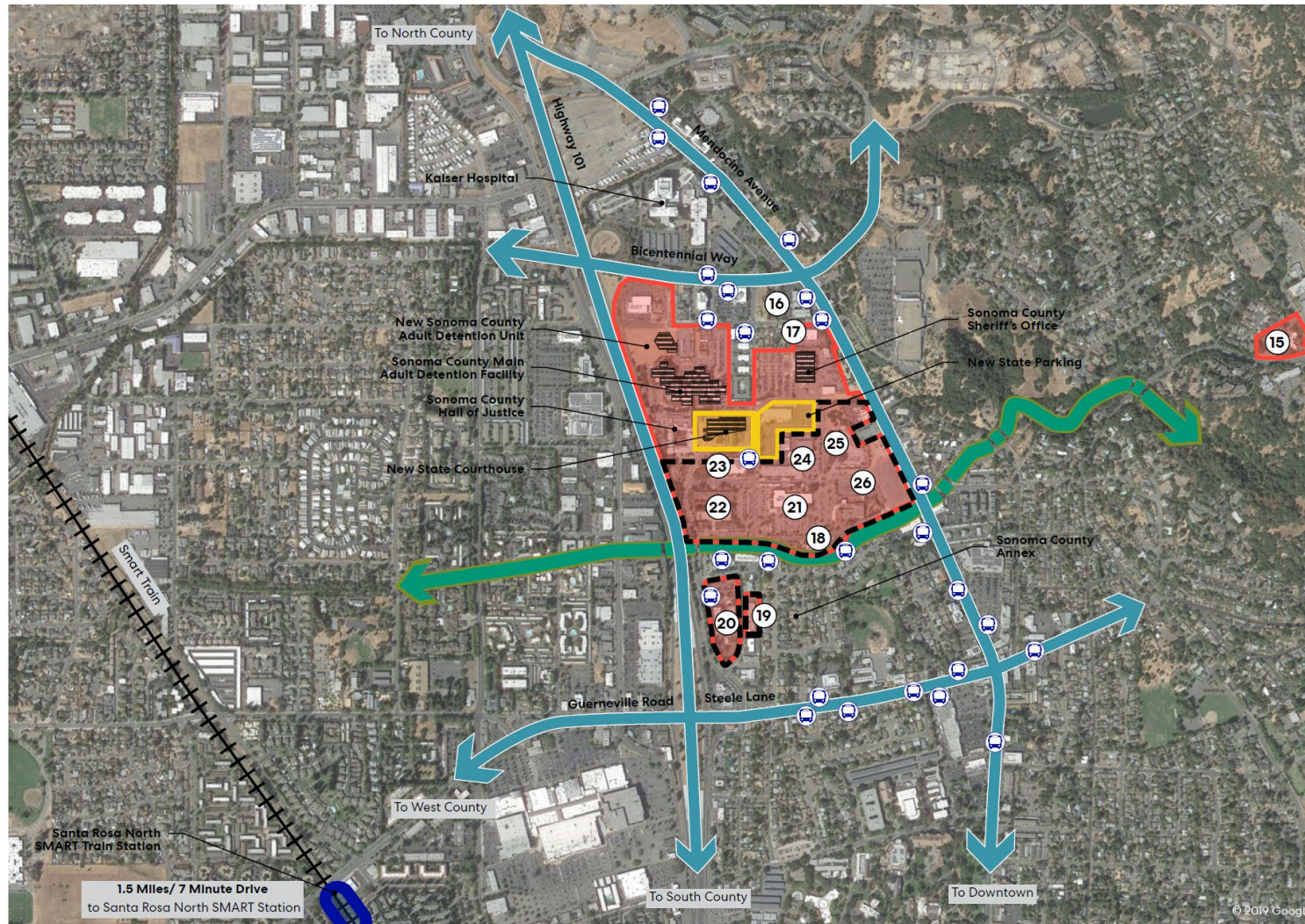
# Project Overview: Airport sites



**Potential Site Identification: Airport Sites**  
 Sonoma County Government Center Technical Advisor Site Selection  
 February 28, 2020 - DRAFT PACKAGE #1



# Project Overview: Existing County Government Center sites

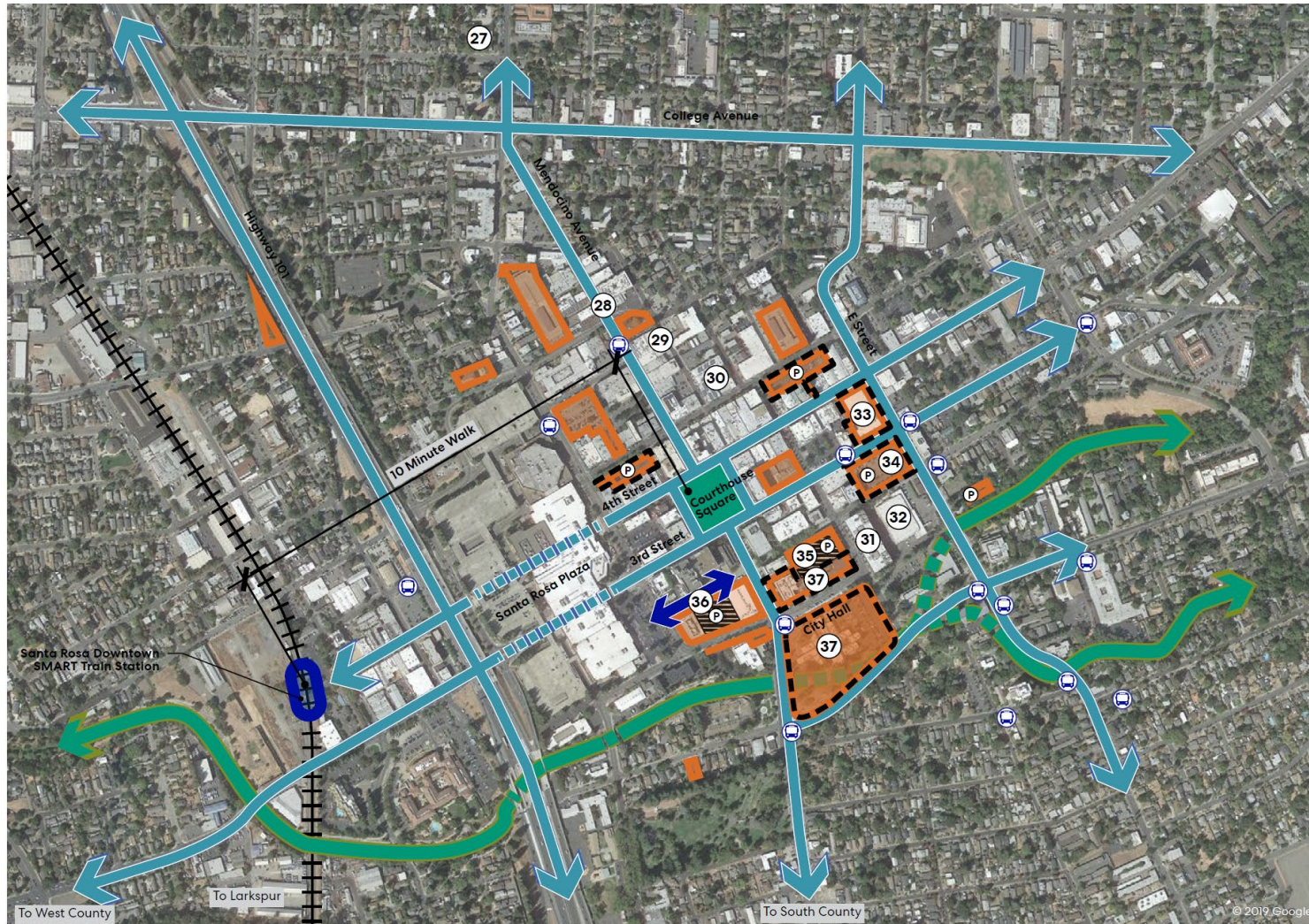


- 15 Health Services & Laboratory: 180-090-001
- 16 Justice Crime Lab: 180-020-018
- 17 Family Justice Center: 180-030-001
- 18 Credit Union Building: 180-030-007
- 19 La Plaza "A" & "B": 180-260-055 & 180-260-054
- 20 Information Systems & Health Services: 059-360-001
- 21 Permit & Resource Management: 180-030-012
- 22 Administration Building: 180-030-012
- 23 Fiscal Building: 180-030-012
- 24 Central Mechanical Plant, Law Library & ISD: 180-030-012
- 25 Children Day Care: 180-030-012
- 26 Human Services: 180-030-012

**Potential Site Identification: Government Campus Sites**  
 Sonoma County Government Center Technical Advisor Site Selection  
 February 28, 2020 - DRAFT PACKAGE #1



# Project Overview: Downtown Santa Rosa sites



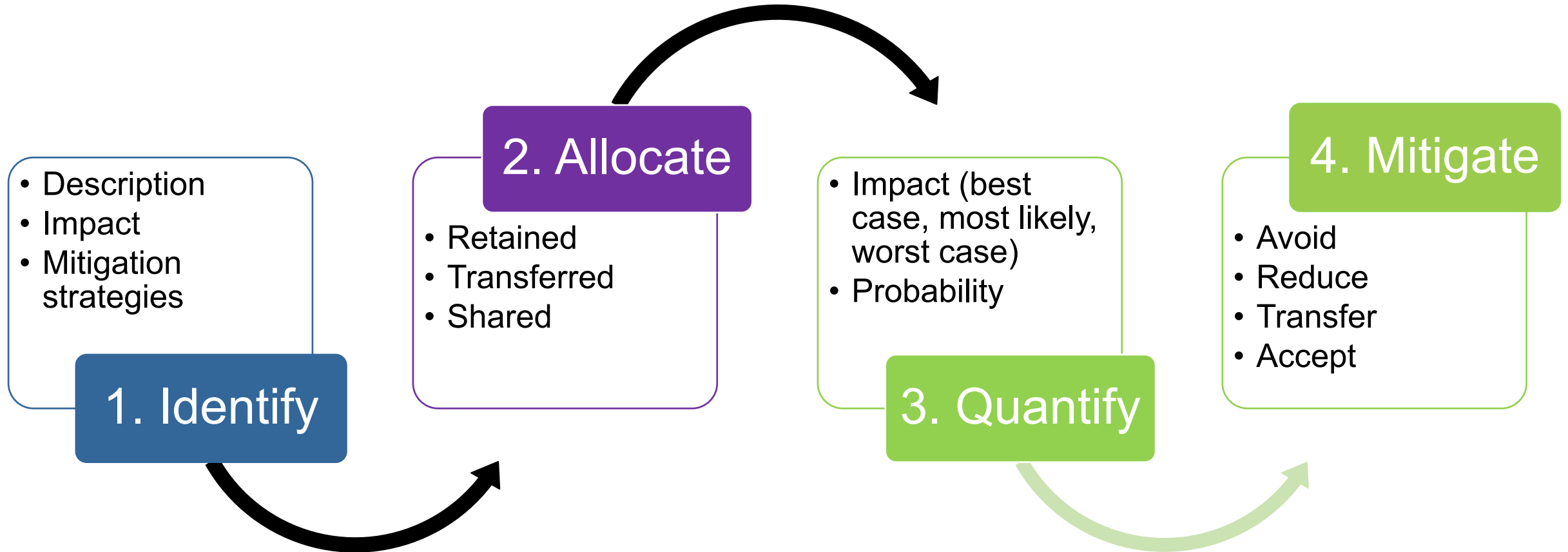
- 27 Sonoma County Agriculture, Preservation & Open Space: 180-760-047
- 28 Economic Assistant & Retail: 009-024-048, 009-024-047, 010-035-026
- 29 Commission-Aids & Retail: 009-026-008, 009-026-010
- 30 Environmental: 009-025-018
- 31 Grand Jury: 009-076-037
- 32 US Post Office: 009-076-036
- 33 Central Library: 009-014-017, 009-014-016, 009-014-011
- 34 Whitehouse Public Parking Lot: 009-072-044
- 35 Parking Garage 9: 009-073-016
- 36 Parking Garage 12: 010-066-016
- Existing City Hall Locations: 009-191-021, 009-073-023, 009-073-021 & 009-073-022, 009-073-018

Not Pictured:  
 Municipal Services Center South: 010-680-014  
 Public Safety Building: 009-171-026

- Area for Development
- Transit Infrastructure
- Transit Infrastructure
- Primary Streets/ Traffic Corridors
- Santa Rosa & Matanzas Creeks
- County Facilities to Remain
- SMART Train
- Parking Facility
- Bus Stop

**Potential Site Identification: Downtown Sites**  
 Sonoma County Government Center Technical Advisor Site Selection  
 February 28, 2020 - DRAFT PACAKGE #1

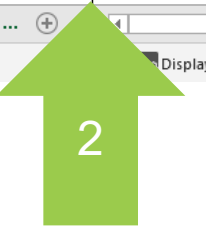
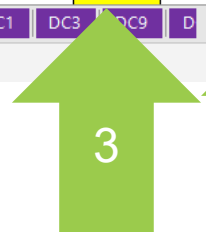
# Risk Process





# Example Risk Mitigations

IDENTIFICATION				ASSESSMENT							MITIGATION	
Category	ID#	Risk Name	Quantify (Y/N)	Description	Cause	Effect	L	C	Inherent Risk (Risk Rating)	Initial Allocation under DBB	Initial Allocation under DBFM	Mitigation Description
<b>APPROVAL RISKS</b>												
Approval	AR1	Public Works Capital Planning Approv	Y	Pw' capital budget planning does not approve the project request for funding or scope resulting in re-work and delay.	Multiple potential causes (misalignment of scope with expectations, delay in submission, budgetary concerns or lack of a robust Business Case, or change in fiscal circumstances)	Project would experience significant delay until approved	Possible	Minor	MED	Retained	Retained	Engage with members of Project Review Committee informally to determine re deviations from expectations early to ensure support; have a champion for the
Approval	AR2	Board of Supervisors approval	Y	Board approval required for any contracting authority (outside contracts for pre-design consultants and project agreement). If Board does not approve the project agreements or contracts	Cause may be mis-alignment with Public Works vision, objectives or other strategic timing concern -MBE/WBE	Project would experience significant delay until approved	Possible	Minor	MED	Retained	Retained	Engage with senior management informally to determine key issues needed fo informally to ensure support; have a champion for the project who can manag
Approval	AR3	Municipal Facilities Committee Approval	Y	MFC approval required for new building before going to CAO	Oversees space, leases and various construction projects	Delay to project approval	Possible	Major	HIGH	Retained	Retained	
Approval	AR4	Unsolicited Proposal	N	Unsolicited proposal creates risk of protest later in process	Inability to negotiate with Goodwill, underground parking or insufficient surface parking	Additional cost	Rare	Minor	LOW	Retained	Retained	Establishing procedures for unsolicited bids and following standard contractir
Approval	AR5											
Approval	AR6											
<b>PERMITTING</b>												
Permitting / Regulatory	PER1	Re-zoning and/or Development Permit (DP)	Y	Particular concern is parking; project may be held to a higher standard as city project and require minimum parking requirements. For DB or DBFM final design is unknown until contract award requiring a modified community engagement, Development Permit process based on using an indicative design and approved design guidelines - Need to clarify re-zoning requirements from "hybrid industrial" to "commercial"	Permit requirements not met or longer than scheduled City review and application process. Challenges with City staffing availability. City re-assesses its requirements and project visions -current zoning may not be suitable of building	Potential delays to construction and/or additional costs. -re-zoning will add schedule delay (may take 12 - 18 months concurrently with EIR)	Possible	Major	HIGH	Retained	Shared	Work with the City to understand their requirements and proactively address is application timing to ensure City resources are available. Clearly lay out the process and protocols for proponent interaction with the Cit Allow proponents to meet with City during procurement. Stay on schedule. Owner to do necessary advance work. (e.g. if variance rezoning is required.) -Mayor and city council pushing for revitalization. Example (re-purposing of ja -BOE to lead re-zoning
Permitting / Regulatory	PER2	Building Permit (BP)	Y	Building Permit process takes longer than planned Certificate of Occupancy is delayed. Also includes the risk that the City changes its requirements or that the consultants are unable to sign their	Permit requirements not met or longer than scheduled City review and application process.	Potential delays to construction and / or additional costs. Delay in Occupancy Permit and potential delays in preparing asset for	Possible	Minor	MED	Retained	Transferred	Work with the City to understand their requirements and proactively address is timing to ensure City resources are available. Clearly lay out the process and protocols for proponent interaction with the Cit





# Identify top 5 risks

Overarching categories:

1. Project approvals (governance process)
2. Legal/authority (alternative procurements)
3. Permitting (including environmental)
4. Project management
5. Procurement
6. Design and construction
7. Equipment
8. Land and property
9. Supervening events
10. Commercial and financial
11. Operations, maintenance and lifecycle

# PFAL

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A risk is an event that could impact the project

- Typically **cost** or **schedule**

Description of risk should include

- **Cause** of the risk (located near fuel storage)
- **Risk event** (project encounters soil contamination)
- **Impact of risk if it occurs** (results in increased cost to remove soil)

# Risk Allocation

**GOAL**

Allocate each risk to the party best able to manage that risk at the lowest cost

EXAMPLE RISKS	DBB	DBFOM
Approval Delay	R	R
Design Errors and Omissions	R	T
Construction Delay	R	T
Latent Defects	R	T
Geotechnical	R	T or S

R = Retained

T = Transferred

S = Shared

# Risk Quantification

## Materiality

If the risk were to materialize, would it have a significant impact (financial, schedule, public perception, program delivery)?

## Estimable

Can it be reasonably and accurately estimated?

## Risk Ranking

How high is the risk ranking (Low? Medium? High? Extreme?)

# Risk Quantification

## Likelihood

Descriptor	Approximate Probability	Frequency Example
Almost Certain	.90- 1.00	Once a year or more
Likely	.55 - .89	Once every 3 years
Possible	.25 - .54	Once every 10 years
Unlikely	.05 - .24	Once every 30 years
Rare	.00 - .04	Once every 100 years

## Consequence

Descriptor	Effect
Catastrophic	Project or program irrevocably finished
Major	Program or project re-design, re-approval
Significant	Delay in accomplishing program or project objectives
Minor	Normal administrative difficulties
Insignificant	Negligible effects

## Hypothetical example risk: hazardous

### **Best Case**

- No leaks in tank
- Test holes are clean
- No new tanks found

**Expected Cost:  
\$0**

### **Most Likely**

- Some leakage, but well contained
- Minor remediation required

**Expected Cost:  
\$250,000 +  
Schedule Impact**

### **Worst Case**

- Serious leakage
- Extensive soil contamination found
- Major remediation required

**Expected Cost:  
\$2 million +  
Schedule Impact**

# Mitigation

## Avoid

Reduces the likelihood of the risk to zero

Project will avoid the risk by....

## Reduce

Reduces either the likelihood or impact

Project will reduce the likelihood/impact by...

## Transfer

Transfer the risk to another party

Project transfers this risk to [private party] because [better to manage]

## Accept

Accept that risk will happen on project

Project willing to accept risk because...



**County of Sonoma new County Government Center (CGC) risk workshop, summary notes. Meeting date: 2 - 3.30 pm, March 11, 2020;  
Revised December 4, 2020.**

Below were the attendees of the workshop:

**County of Sonoma:** Jonathan Kadlec; Chris Seppeler; Jeremy Fonseca; Janell Crane; Jonathan Kajeckas; Robert Butler; Jamie Bloom; Katherine DiPasqua; John Hartwig; Charlie Swaim; Toni Holland; Alma Roger; Peter O'Brien; (all in person at the County office)

**Consultants:** Richard Kerrigan (PFAL); Gerry Tierney (Perkins & Will); Greg Tseng (PFAL) (all by phone).

Yellow highlights below identify follow-up calls/discussions needed.

Risk workshop commentary	Project risks identified	Follow-up comments/actions
<p>1. At the airport, lot 13 has a hotel planned for development, so this is not available to us for planning purposes unless that project stops.</p>	<ul style="list-style-type: none"> <li>Land not available for study purposes</li> </ul>	<ul style="list-style-type: none"> <li>Not at this time</li> </ul>
<p>2. Permit Sonoma has control over approval for the CGC on County campus, not the City of Santa Rosa. County confirmation required. Need to also confirm what limits are available if a private use office space, housing or day-care is included in the public land portion.</p>	<ul style="list-style-type: none"> <li>Project approval delays given review interface with the City of Santa Rosa process</li> <li>Unknown scope/design changes as a result of the review with the City of Santa Rosa</li> </ul>	<ul style="list-style-type: none"> <li>For County owned land, the County permit these ourselves (i.e. building permits). County may do a joint City/County design review of any new building(s) on site.</li> <li>As with other county buildings built on County-owned land in the city (Sheriff's office, Fleet Building, Valley of the Moon Children's Home) County consulted with the city as a courtesy. Given potential scale of a new building(s) here, the County would work closely with the City on design related issues.</li> <li>Note the County center sites have no zoning designations, as they are within the city limits. The current main campus is currently showing on the City of Santa Rosa's Zoning Map as PI (Public &amp; Institutional). The "annex" sites are shown as being zoned PD (Planned Development), not public. If the two "annex" sites where PFAL shows potential</li> </ul>

County of Sonoma new County Government Center (CGC) risk workshop, summary notes. Meeting date: 2 - 3.30 pm, March 11, 2020;  
 Revised December 4, 2020.

		<p>housing are owned by the County then, the County would permit them; if not, the permitting would be as a Planned Development (which is good) through the City.</p> <ul style="list-style-type: none"> <li>Follow up with Chris Seppeler. County to confirm if a private use office facility (e.g. leased space for law firms related to justice/courts) was built on the public &amp; institutional zoned land, is this an eligible project?</li> </ul>
<p>3. Sites are believed to have varying seismic issues / requirements and additional study will be required for sites with slopes and other topographical features or adjacency to watersheds to further explore soils and liquefaction risks</p>	<ul style="list-style-type: none"> <li>Operational downtime due to seismic event or soil liquefaction event</li> </ul>	<ul style="list-style-type: none"> <li>Existing emergency operations center planning needs to be considered in the project phasing and demolition strategy at the current campus.</li> <li>Consider “essential/critical” functional space needs during seismic event and level of resiliency for space and power.</li> </ul>
<p>4. Swing space is limited, risk to find suitable temporary leased space during construction.</p>	<ul style="list-style-type: none"> <li>Market capacity and suitability of temporary office space</li> <li>Budget and cost of relocation for leased space unknown given timing of market availability</li> </ul>	<ul style="list-style-type: none"> <li>Extend existing leases where possible</li> <li>Assess viable options in the market for temporary leased space (P&amp;W to assess possible sizing requirements)</li> <li>If County Campus site is used look at phasing construction of the four proposed buildings so that the first building constructed could act temporary surge or swing space building for displaced departments.</li> </ul>
<p>5. Sale of County campus land will not affect County’s credit rating, which is based upon liquidity not capitalization.</p>	<ul style="list-style-type: none"> <li>Market price/interested impacted by timing of land sale</li> <li>Longer term County commitments to a P3 lease structure may impact County credit rating</li> </ul>	<ul style="list-style-type: none"> <li>Current market valuations provided by PFAL.</li> <li>Discuss credit rating strategy with ACTTC.</li> </ul>

**County of Sonoma new County Government Center (CGC) risk workshop, summary notes. Meeting date: 2 - 3.30 pm, March 11, 2020;  
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<p>6. There is need for a single floor, multi-department “One-stop-shop” to serve the public that includes adjacent parking. In general, this requirement needs a larger parcel.</p>	<ul style="list-style-type: none"> <li>• Service delivery to be improved by new project investment</li> </ul>	<ul style="list-style-type: none"> <li>• Planning and program integration and adjacencies at next phase of the project development.</li> <li>• In general, this is more difficult to achieve in the downtown sites</li> </ul>
<p>7. Downtown Santa Rosa may have power issues.</p>	<ul style="list-style-type: none"> <li>• Power capacity constraints that would require capital investment and planning approval</li> </ul>	<ul style="list-style-type: none"> <li>• Require feedback/input from the City of Santa Rosa.</li> </ul>
<p>8. Airport area may have water supply and sewer capacity issues. Airport water supply comes from the City of Windsor.</p>	<ul style="list-style-type: none"> <li>• Water and sewer capacity constraints that would require capital investment and planning approval</li> </ul>	<ul style="list-style-type: none"> <li>• Follow up with Cecily Condon (supervising planner; 707-565-1958).</li> <li>• With the City of Windsor providing fire / first provider response building height is limited at the Airport sites.</li> </ul>
<p>9. Underground water will be an issue Downtown and may be an issue at County campus. Airport sites less impacted by underground water.</p>	<ul style="list-style-type: none"> <li>• Geotechnical unknown/limited information</li> <li>• Environmental approval</li> </ul>	<ul style="list-style-type: none"> <li>• Require feedback/input from the City of Santa Rosa.</li> <li>• Follow up with Cecily Condon (supervising planner; 707-565-1958).</li> <li>• Site investigations needed.</li> </ul>
<p>10. Concern about traffic issues at both at Downtown sites and the airport area.</p>	<ul style="list-style-type: none"> <li>• Environmental approval</li> <li>• Capital investment and approval with Caltrans/City of Santa Rosa to mitigate certain traffic constraints</li> </ul>	<ul style="list-style-type: none"> <li>• Require feedback/input from the City of Santa Rosa.</li> <li>• Follow up with Cecily Condon (supervising planner; 707-565-1958).</li> </ul>
<p>11. Downtown Santa Rosa and airport area presents an accessibility of service risk to the public vs. the County campus location.</p>	<ul style="list-style-type: none"> <li>• Accessibility of service</li> </ul>	<ul style="list-style-type: none"> <li>• Considering transit/vehicle access and parking requirements.</li> <li>• PFAL surveys to be conducted?</li> </ul>
<p>12. A single, high tower may be an evacuation risk vs. multiple, lower rise buildings.</p>	<ul style="list-style-type: none"> <li>• Evacuation risk</li> </ul>	<ul style="list-style-type: none"> <li>• Design features address the code requirements for building heights</li> <li>• If CBC building codes are followed this should be a low-probability risk.</li> </ul>
<p>13. A single building limits flexibility in cost and quality of construction vs multiple buildings. In multiple buildings you can have one building built at a lower cost, standard construction level for</p>	<ul style="list-style-type: none"> <li>• Future flexibility</li> <li>• Special space requires unique considerations</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple buildings with flexibility to phase project offers greatest flexibility.</li> <li>• Consider unique requirements in planning and programming phase.</li> </ul>

**County of Sonoma new County Government Center (CGC) risk workshop, summary notes. Meeting date: 2 - 3.30 pm, March 11, 2020;  
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office use and a higher cost, more robustly built building for specific uses (such as morgue, Public Health lab, EOC). Need to consider the complexity and diverse needs of 26 (?) departments.		
14. With a single large building you have the risk of intermingling members of the public who shouldn't be required to mix together, such as Family Youth and Children and Probation.	<ul style="list-style-type: none"> <li>• Safety and security</li> </ul>	<ul style="list-style-type: none"> <li>• Consider unique requirements in planning and programming phase.</li> </ul>
15. Build the CGC above code (more resilient) so that insurance costs are lower in the future (need to quantify/assess cost impacts).	<ul style="list-style-type: none"> <li>• Vulnerability</li> </ul>	<ul style="list-style-type: none"> <li>• Consider "essential/critical" functional space needs during major event and level of resiliency for space and power</li> <li>• Identify only those departments that need to be built to a 1.5 seismic structural importance factor and locate in 1 or 2 buildings only.</li> </ul>
16. Consider "critical/essential functions" (including IT/data center) and how to incorporate into design/planning, including a need for redundant power feed for the data center.	<ul style="list-style-type: none"> <li>• Vulnerability</li> </ul>	<ul style="list-style-type: none"> <li>• As above, no. 15.</li> </ul>
17. EOC could be a separate isolated structure (possibly at the airport). Smaller downtown sites not suitable.	<ul style="list-style-type: none"> <li>• Vulnerability</li> </ul>	<ul style="list-style-type: none"> <li>• As above, no. 15.</li> </ul>
18. Need to consider owner insured cost savings under a more resilient design and lifecycle approach (e.g. P3). Avoid future deferred maintenance liability.	<ul style="list-style-type: none"> <li>• Deferred maintenance</li> <li>• Insurance saving/exposure</li> </ul>	<ul style="list-style-type: none"> <li>• Assessing alternative project delivery approaches.</li> <li>• Discuss insurance savings/exposure with Jamie Bloom (risk team).</li> </ul>
19. FAA heights limits of airport to be determined.	<ul style="list-style-type: none"> <li>• Changing height limits due to FAA regulations</li> </ul>	<ul style="list-style-type: none"> <li>• From initial review of documentation by P&amp;W the FAA height limits would not impact the proposed Airport sites.</li> </ul>
20. Demolition of the County campus buildings will require asbestos remediation and other ground contaminates.	<ul style="list-style-type: none"> <li>• Remediation of existing County owned sites</li> </ul>	<ul style="list-style-type: none"> <li>• Any information available of the extent and cost of such known remediation?</li> <li>• This is to be expected of buildings of this age and construction.</li> </ul>

**County of Sonoma new County Government Center (CGC) risk workshop, summary notes. Meeting date: 2 - 3.30 pm, March 11, 2020;  
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<p>21. Complex underground utilities on County Campus sites.</p>	<ul style="list-style-type: none"> <li>• Timely delivery and approval of utilities</li> <li>• Increased cost due to accuracy of location of all known utilities</li> </ul>	<ul style="list-style-type: none"> <li>• Engage with utility providers to discuss process early in the next phase of site development/procurement preparation.</li> <li>• Site investigations needed. This also presents the opportunity to rationalize and update the existing underground utilities and distribution systems.</li> </ul>
<p>22. ACTTC (finance team) has a debt committee that will have to approve the CGC <u>after</u> (?) the Board approves it. Need to clarify process.</p>	<ul style="list-style-type: none"> <li>• Credit rating impact</li> <li>• Approval requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss with ACTTC.</li> </ul>
<p>23. County has a good track record with design-build projects.</p>	<ul style="list-style-type: none"> <li>• Project management</li> <li>• Schedule/cost increase</li> </ul>	<ul style="list-style-type: none"> <li>• Review County’s track record and lessons learned.</li> </ul>
<p>24. Need to consider legal authority (and legal challenges) for DBFM P3 structure or other longer-term agreements.</p>	<ul style="list-style-type: none"> <li>• Legal challenge</li> <li>• Delay to approvals</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss with County Counsel and need for County specific legislation/authority (reference other P3 projects).</li> </ul>
<p>25. Likely need 30% design plan completed to initiate/complete CEQA.</p>	<ul style="list-style-type: none"> <li>• CEQA approval delay</li> </ul>	<ul style="list-style-type: none"> <li>• This should be reviewed by the County and the selected CEQA consultant at a very early stage.</li> </ul>
<p>26. Possible lawsuit on GHG emissions, reduce VMT. Chanate property development.</p>	<ul style="list-style-type: none"> <li>• CEQA approval delay</li> </ul>	<ul style="list-style-type: none"> <li>• As 25 above.</li> </ul>
<p>27. Parking structure may become redundant with changing Mobility as a Service model.</p>	<ul style="list-style-type: none"> <li>• Redundant capital investment</li> </ul>	<ul style="list-style-type: none"> <li>• P&amp;W will propose that any structured parking take this into account with sufficient reuse flexibility.</li> </ul>
<p>28. Project approval related to housing scope of the project will likely need a separate process (i.e. RED). Stakeholder engagement for both the administrative and housing components is critical given past experiences.</p>	<ul style="list-style-type: none"> <li>• Approval delays</li> </ul>	<ul style="list-style-type: none"> <li>• County to confirm role of RED in this process?</li> <li>• Agree stakeholder engagement process for next stage.</li> </ul>
<p>29. Creating the CGC “Net Zero” will off-set Vehicle Miles Traveled (VMT) restrictions, but it will require land or rooftops to tap alternative power.</p>	<ul style="list-style-type: none"> <li>• CEQA approval</li> </ul>	<ul style="list-style-type: none"> <li>• As 25 above.</li> </ul>
<p>30. The State Natural Resource Agency Headquarters building, slightly larger than the proposed CGC and planned to house 3,450 employees, is being</p>	<ul style="list-style-type: none"> <li>• Net zero goal</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss with project owner to determine lessons learned and trade-offs.</li> </ul>

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<p>built in Sacramento. It claims it will be Net Zero energy. <a href="https://sacrbr.aecomonline.net/">https://sacrbr.aecomonline.net/</a></p>		
<p>31. Need to consider labor agreements for construction and facility operations.</p>	<ul style="list-style-type: none"> <li>• Approval delay or dispute</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to engage with labor union reps/groups.</li> </ul>
<p>32. Construction labor market very difficult to compete to gets subs/trades.</p>	<ul style="list-style-type: none"> <li>• Increased construction costs and schedule delays</li> </ul>	<ul style="list-style-type: none"> <li>• Engage with market outreach effort and include contingency in risk assessment for uncertainty.</li> </ul>

DRAFT



## **Appendix C: Financial Analysis Summary**



# Financial Analysis



# FINANCIAL CONSIDERATIONS

Risk tolerance

Value for Money Affordability limits

Funding options

Delivery Models

## Key priorities for the County:

- Achieve best value-for-money over the long-term
- Optimal risk transfer
- Avoid cost over-run and time delays
- Retain asset ownership
- Not going for voter approval
- Annual fund appropriation as against upfront payment

# Delivery Model Options

Comparing Traditional Delivery vs. Public-Private Partnership

Traditional

Design, Bid, Build (DBB)

Design-Build (DB)

P3

Design Build Finance (Operate) Maintain (DBFM or DBFOM)

Value for Money  
Analysis

# Financial Analysis

# Risk Allocation

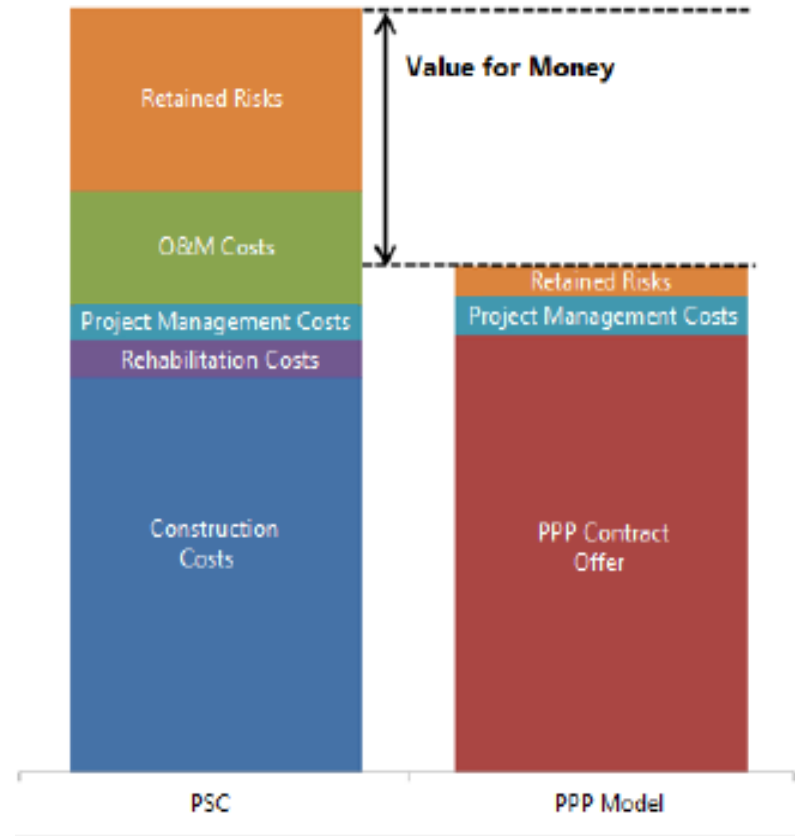
Risk Allocation Matrix for Delivery Models	DBB	DB	DBFOM
Ownership	●	●	●
Environmental	●	●	●
Project approval	●	●	●
Design	●	○	○
Permitting	●	◐	○
Financing	●	●	○
Funding	●	●	●
Owner directed change in scope	●	●	●
Change orders (excluding owner directed change in scope)	●	●	○
Change in site conditions	●	●	◐
Construction	○	○	○
Labor shortage & material shortage	●	○	○

	DBB	DB	DBFOM
Construction cost overruns	○	○	○
Construction delays	◐	○	○
Insurance	●	●	◐
Commissioning	●	●	○
Contractor default	●	●	○
Post warranty issue	●	●	○
Maintenance	●	●	○
Energy Consumption (quantity)	●	●	○
Energy price	●	●	●
Lifecycle	●	●	○
Operator default	●	●	○
Unforeseen events / force majeure	◐	◐	◐

Retained: ●    Shared: ◐    Transferred: ○

# Value for Money (VfM) Approach

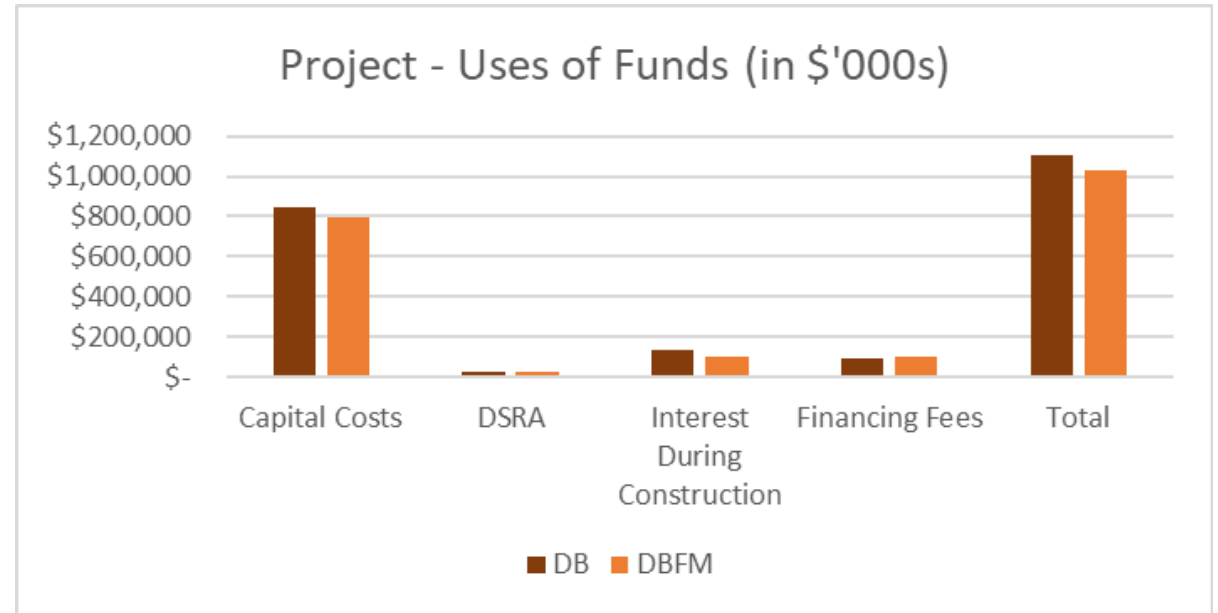
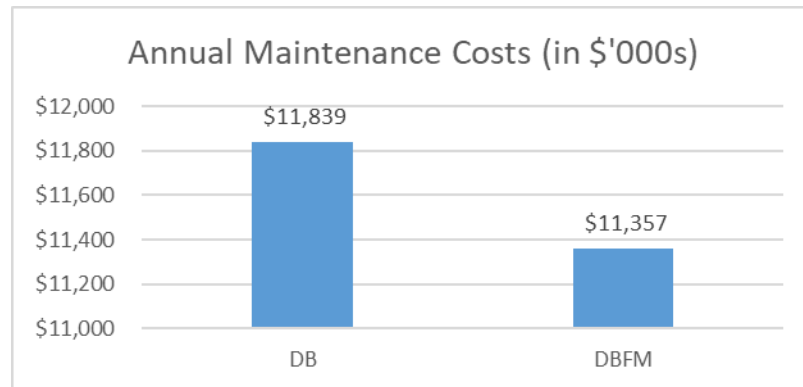
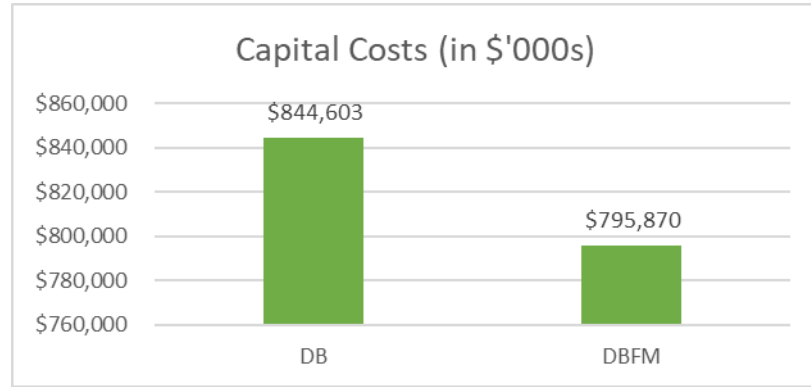
1. Establish project goals & objectives with BOS
2. Case study review (precedents in market, discussion with owners)
3. Developer/investor market surveys and interviews
4. Value for Money analysis:
  - a) Funding & affordability assessment
  - b) Procurement options review (qualitative)
  - c) Design, construction, financing, maintenance and lifecycle cost estimates
  - d) Risk workshop (identification)
  - e) Risk adjusted costs analysis (quantitative financial model)
  - f) Funding & financial analysis (quantitative financial model)
  - g) Qualitative assessment (policy considerations)
5. Conclusions and recommendations



**Planning/budgeting assumptions**  
**based on Pre-Covid-19 market**

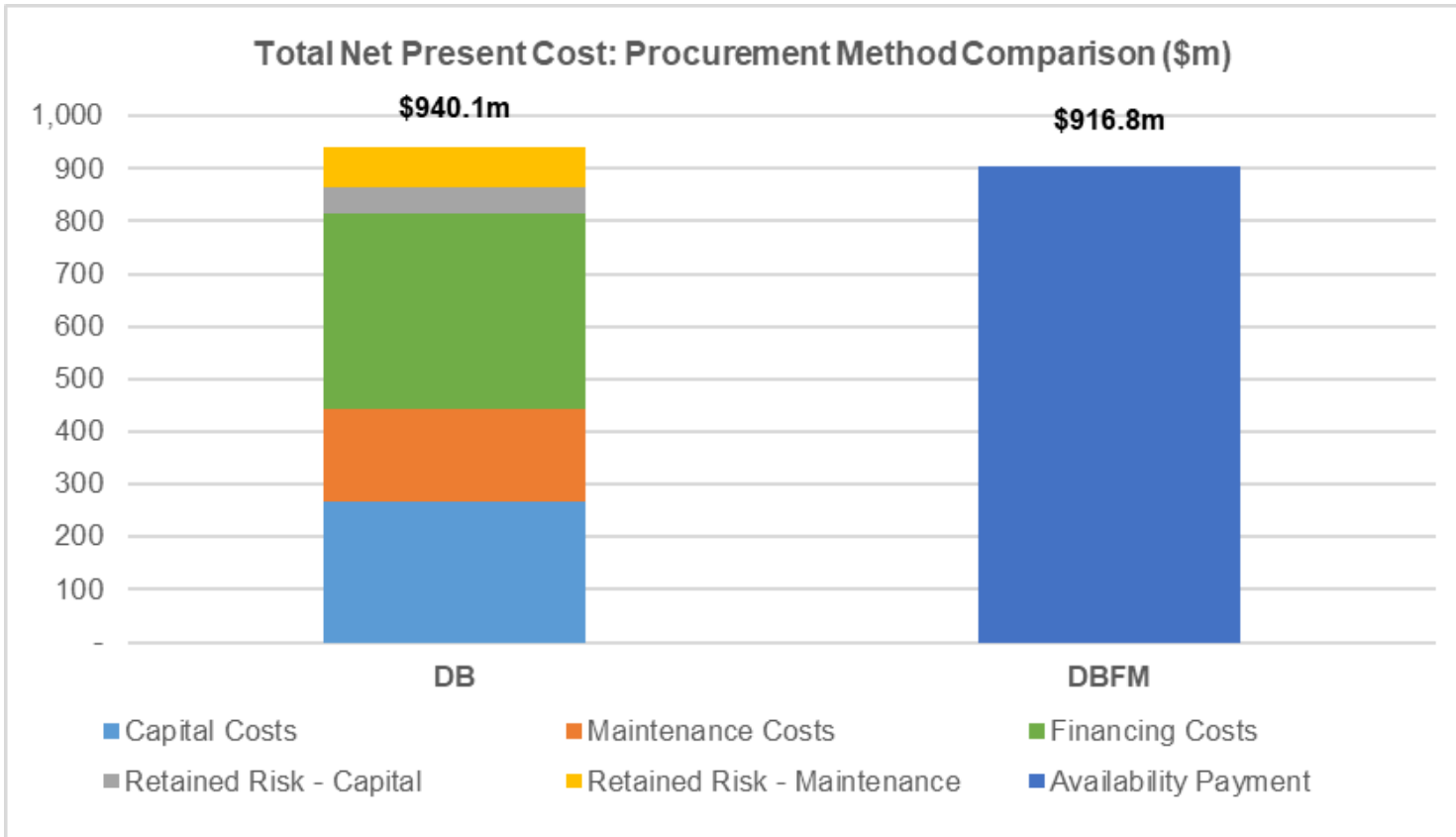
# Financial Analysis - Value for Money

# Base Case Financial Model Outputs: Design-Build vs. DBFM



- Capital costs include estimated demolition costs of \$20 million plus 20% contingency totaling \$24 million as well as construction costs, transaction costs, and financing costs

All figures in \$ '000s



- **VFM analysis resulted in 3% difference**
- **DBFM is \$25 million less than Bond Financed**
- **Further Value Proposition**

# Financial Analysis – VFM Results

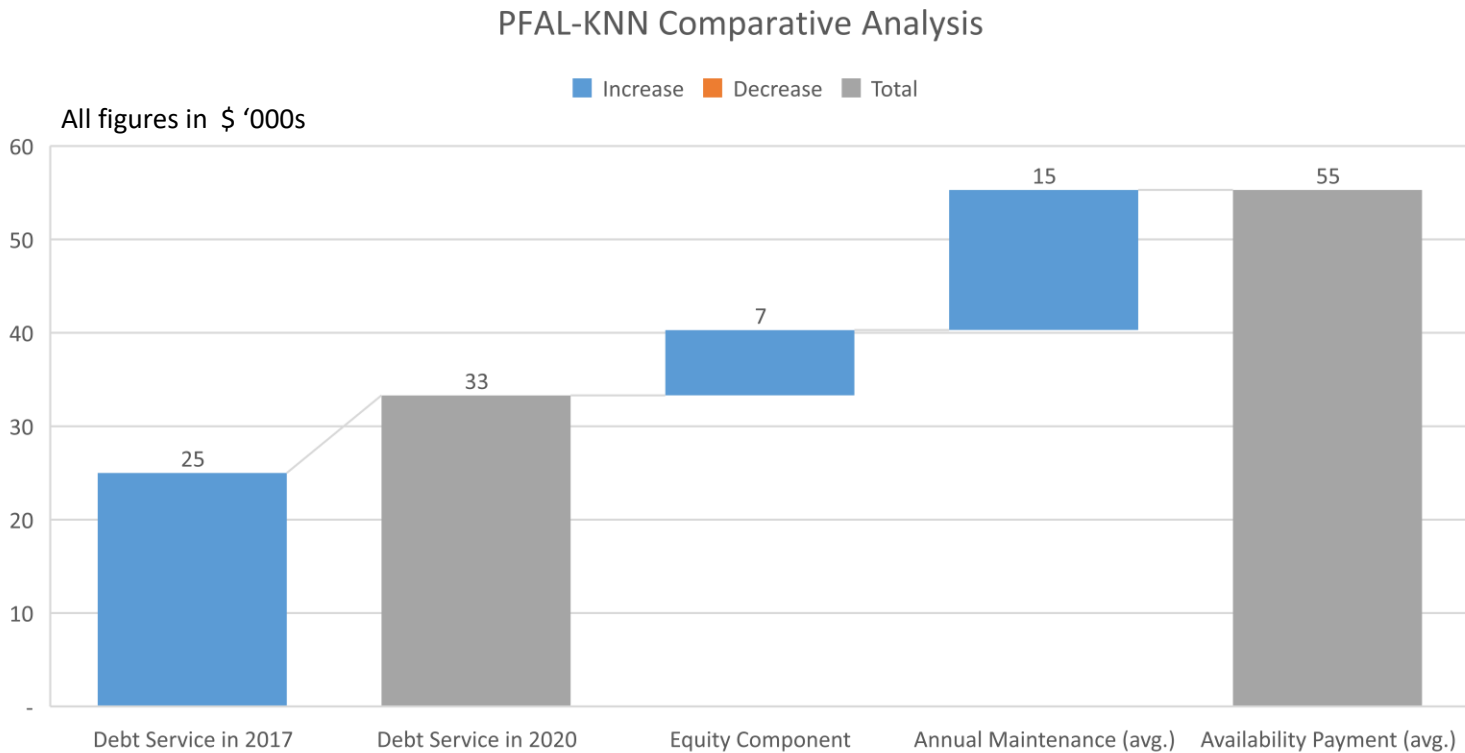


# Cost Impacts of Space Standards & Telework on Base Case

Net Square feet per FTE	Telework %	Net Present Cost (\$ million)	First Year Availability Payment w/ Offset of \$8.566 mm avoided rent (\$ millions)
225	0	916.83	72.50
	33	711.14	54.22
	50	608.37	45.08
170	0	737.70	56.36
	33	593.95	43.63
	50	521.99	37.25

- Operational and maintenance costs are subject to an annual inflation
- Avoided rental costs assumed 2% inflation, in line with other costs assumptions
- Per Turner & Townsend Cost Report, includes 20% Project Cost Contingency; with addition of demolition costs of \$12/sq ft

# Comparison with KNN's 2017 report



As of June 2020

- 2017 KNN study based on bond financed Design-Build
  - 2020 PFAL analysis includes cost updates, maintenance payments by County and private sector financing
- Under traditional procurement, annual payment included only debt service excluded ongoing maintenance
  - 2017 report was \$25M for annual debt service only
- DBFM approach would also include equity component and maintenance charge
  - Annual debt service per updated cost estimates in the PFAL model was \$33.3M
    - Proved consistent with KNN's model under updates in cost estimates
  - Equity component of \$7M, in addition to debt service, raised capital component to ~\$40M
    - Not subject to inflation, stays flat over term
  - Adding maintenance component, which is subject to inflation, averages about ~\$15.5M per annum (\$11.M in the first year) brings the total annual service payment to \$55M

## RECOMMENDATION

- Design Build Finance Maintain
- Mixture of Financing Sources
  - Equity
  - Private Placement
  - Tax-exempt Private Activity Bonds (if available)
  - TIFIA (if available)
  - WIFIA (if available)



## **Appendix D: West Coast Infrastructure Exchange Support Letter**



Keith Lew  
Deputy Director  
Facilities Development & Management  
General Services  
County of Sonoma

Toni Holland  
Capital Projects Manager  
Facilities Development & Management  
General Services  
County of Sonoma

Dear Keith & Toni,

As a nonprofit organization created by the Governors and Treasurers of California, Oregon, and Washington, the West Coast Infrastructure Exchange (WCX) serves as a trusted advisor and provides impartial early stage analysis for public agencies considering alternative delivery methods for public infrastructure. Our mission is to ensure that public agencies understand the potential benefits and disadvantages of alternative delivery methods that factor in lifecycle costs and long-term performance.

In serving on the technical advisory team for the County Government Center project, WCX was asked to review the Value for Money (VfM) analysis produced by Project Finance Advisory Ltd (PFAL). In doing so, I found PFAL's methodology to be consistent with best practices in the industry. Moreover, I believe the assumptions used in the analysis to be reasonable, and the results are consistent with my expectations.

Please do not hesitate to reach out if you have any questions or comments. WCX appreciates the opportunity to serve on the technical advisory team.

Regards,

Scott Boardman  
Executive Director  
West Coast Infrastructure Exchange  
(503) 863-5459  
[scott.boardman@westcoastx.org](mailto:scott.boardman@westcoastx.org)

**First Year Availability Payment with Parking Options Base Case v. Modified Base Case**

**Parking Options**

Office Space / Telework	No Parking Garage	400 Space Garage Traditional Ramp, Balance Surface	3,025 Spaces Traditional Ramp	3,025 Space Garage Flexible Design for Future Office
225 SF/Person @ 0% Telework	\$55.07M	\$56.99 M	\$69.53 M	\$72.5 M
170 SF/Person@ 50% Telework	\$27.92 M	\$29.83 M	\$35.83 M	\$37.25 M

**Net Present Costs with Parking Options Base Case v. Modified Base Case**

**Parking Options**

	No Parking Garage	400 Space Garage Traditional Ramp, Balance Surface	3,025 Spaces Traditional Ramp	3,025 Space Garage Flexible Design for Future Office

225 SF/Person @ 0% Telework	\$730.44 M	\$750.89 M	\$884.22 M	\$916.83 M
170 SF/Person@ 50% Telework	\$422.26 M	\$442.83 M	\$508.59 M	\$521.99 M