Prop. 39 Solar Projects & Project Delivery Strategies

CAPITAL IMPROVEMENTS- BOARD OF EDUCATION UPDATE

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SAN RAFAEL CITY SCHOOLS

MAY 13, 2019

Agenda

Prop. 39 Solar PV Parking Shade Structure Recommendation

- Operations & Maintenance (O&M) Agreement
- Performance Guarantee (PeGu) Agreement

Summarize Construction Project Delivery Methods

- Project Delivery Method Basics

Future considerations: Utilize Design-Build process

- Terra Linda HS New Gym, Main Entrance, & Parking Lot - Pick up/ Drop off

Prop. 39 Solar PV Parking Shade Structure Recommendation

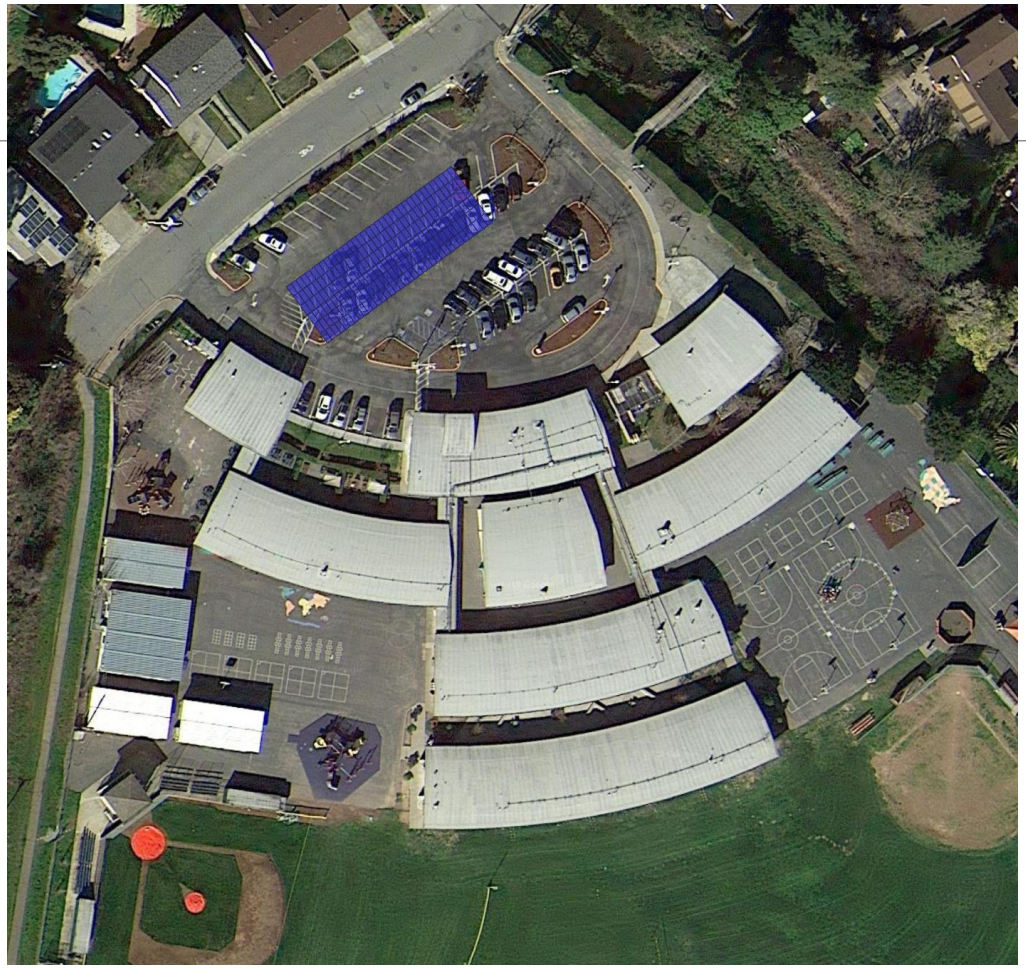
Competitive Procurement Process – Utilizing Gov. Code 4217 (Public Hearing later in BOE Agenda)

DRAFT Qualitative Evaluation of Prop 39 Solar Project Proposals

Qualifications			Solar Technologies	Sprig Electric	Sun Light and Power
Q1	Minimum Qualifications	Pass/Fail	• Pass	• Pass	• Pass
Q2	Firm Info - PV	Summary	• Founded in 1998, offices in San Ramon and Santa Cruz, CA. • No litigation issues.	• Founded in 1970, electrical contractor. • Headquarters in San Jose, offices in San Francisco and Livermore. • 2 ongoing litigations with Apple Inc.	• Founded in 1976, employee-owned company. • Main office in Berkeley, CA. • No litigation issues.
Q3	Firm Financial Info	Summary	Audited Financial Statement, 2017 • Liabilities: $6.7M • Assets: $6.7M • Net Income: $2.3M	Audited Financial Statement, 2017 • Liabilities: $93.6M • Assets: $93.6M • Net Income: -$2.7M	Audited Statement for 2018 • Liabilities: $7.5M • Assets: $7.5M • Cash flow: $266,000
Q4	Project Experience	Summary	• Prime Contractor limited DSA experience. • Project team (structural & electrical engineers) has significant DSA experience.	• Good multi-site DSA experience (8 projects listed). • Good DSA experience.	• Limited multi-site DSA experience (4 projects listed). • Deep resume as one of oldest CA solar installer.
Q5	Project Team	Summary	• Experienced project team with in-housoutside construction managers. • Canopy subcontractor is Elevated Solar Performance.	• Experienced project team with in-house design engineers and construction managers. • Canopy subcontractor is MBL Energy.	• Experienced project team with in-house design engineers and construction managers. • Canopy subcontractor is MBL Energy.

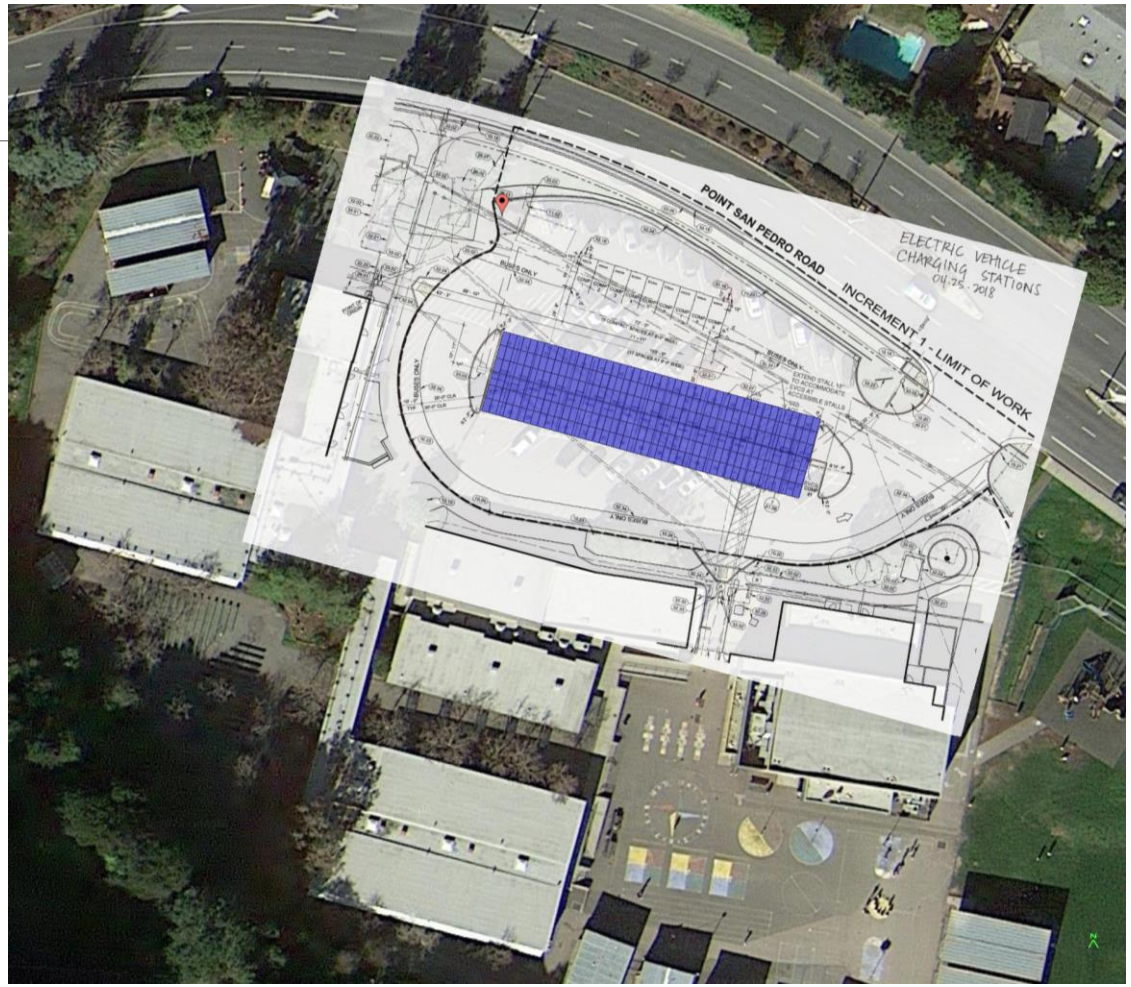
Solar Technologies Preliminary Design

Glenwood Elementary School



Solar Technologies Preliminary Design

San Pedro Elementary School



Prop 39 Solar Project Metrics

Financing Type	**Proposition 39 Grant Funding**
Solar Contractor	Solar Technologies (STE Inc.)
Number of District Sites	2 Sites, San Pedro ES & Glenwood ES
System Size and Structure	194.3 kWp, Solar Carport Shade Structures
Expected Production, Year 1	304,300 kWh (94% Consumption Offset)
25-year Environmental Impact	~1,000 tons eCO_2 Offset ~8,600 trees planted per year

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SAGE RENEWABLES

Prop 39 Solar Project Financial Metrics

System Capital Cost	~$788,120
Cost to the District	$0
Annual Operating Costs (O&M)	~$11,000
Performance Guarantee	95% of expected production
Year-1 Expected Savings	$43,600 gross savings $32,500 net savings (after operating costs)
25 Year Expected Savings	$1,309,700 gross savings $937,800 net savings

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Solar Project Cost Impacts

The cost of the *Design-Build Agreement* for these 'turnkey' solar photovoltaic (PV) systems with parking shade structures will be paid for entirely by Proposition 39 grant funding. The sub-total Design-Build costs are $788,120. On top of this subtotal, SRCS has included a 2.8% contingency, for a total impact of **$810,000**. PV Parking Shade structures will be located at both San Pedro and Glenwood Elementary Schools.

Solar Project Cost Impacts

In addition to the *Design-Build Agreement*, this project has the following **two ongoing agreements** associated these solar parking shade structures:

1) **Operations & Maintenance (O&M) Agreement** – This is a service contract for preventative and proactive maintenance to ensure the solar systems are in good working condition. ***The cost of the O&M Agreement is $4,858 in Year-1, which escalates by 3% annually for the entire term of the contract***. SRCS will need to continue to budget these fees on an annual basis and can terminate at any time. ***Note, these fees will be offset by the estimated total project-savings.***

2) **Performance Guarantee (PeGu) Agreement** - The PeGu is a guarantee that the solar systems will produce at least 95% of weather-adjusted expected performance over a 5-year true-up period for the entire term of the O&M Agreement. If the systems underperform, Solar Technologies will reimburse the District for the unrealized solar generation credits. ***The cost for the PeGu is included in the O&M Agreement costs***.

Solar Project Cost Impacts

SRCS has budgeted one year of ongoing asset management/operational costs associated with these solar projects. These annual operating costs include the following: O&M Agreement, insurance, inverter replacement funds, 3rd party verification with performance management, and a decommissioning reserve.

The total budget for ongoing asset management/operational costs over the lifetime of the systems is approximately ***$11,100 in Year-1, escalating by 3% annually.*** Note, these costs will be funded through the savings generated by the project. For example, in Year-1, the project is estimated to ***save SRCS $43,600 in utility electric costs, which results in a net savings of $32,500 after these operating costs***.

The total 25-year operating costs are estimated to be **$371,900**. However, off-setting these costs are the estimated **total project savings of $1,309,700, for a net-savings of $937,800**.

SRCS Operating Costs Proforma

	Solar Project Operating Costs					
Year	Insurance	PV O&M	PV PeGu	Inverter Replacement	Asset Management	De-commissioning Reserve
0						
1	$ 788	$ 4,858	$ -	$ 1,595	$ 2,915	$ 938
2	$ 812	$ 5,004	$ -	$ 1,595	$ 3,003	$ 938
3	$ 836	$ 5,154	$ -	$ 1,595	$ 3,093	$ 938
4	$ 861	$ 5,308	$ -	$ 1,595	$ 3,185	$ 938
5	$ 887	$ 5,468	$ -	$ 1,595	$ 3,281	$ 938
6	$ 914	$ 5,632	$ -	$ 1,595	$ 3,379	$ 938
7	$ 941	$ 5,801	$ -	$ 1,595	$ 3,481	$ 938
8	$ 969	$ 5,975	$ -	$ 1,595	$ 3,585	$ 938
9	$ 998	$ 6,154	$ -	$ 1,595	$ 3,693	$ 938
10	$ 1,028	$ 6,339	$ -	$ 1,595	$ 3,804	$ 938
11	$ 1,059	$ 6,529	$ -	$ 1,595	$ 3,918	$ 938
12	$ 1,091	$ 6,725	$ -	$ 1,595	$ 4,035	$ 938
13	$ 1,124	$ 6,926	$ -	$ 1,414	$ 4,156	$ 938
14	$ 1,157	$ 7,134	$ -	$ 1,414	$ 4,281	$ 938
15	$ 1,192	$ 7,348	$ -	$ 1,414	$ 4,409	$ 938
16	$ 1,228	$ 7,569	$ -	$ 1,414	$ 4,542	$ 938
17	$ 1,265	$ 7,796	$ -	$ 1,414	$ 4,678	$ 938
18	$ 1,303	$ 8,030	$ -	$ 1,414	$ 4,818	$ 938
19	$ 1,342	$ 8,270	$ -	$ 1,414	$ 4,963	$ 938
20	$ 1,382	$ 8,519	$ -	$ 1,414	$ 5,112	$ 938
21	$ 1,423	$ 8,774	$ -	$ 1,414	$ 5,265	$ 938
22	$ 1,466	$ 9,037	$ -	$ 1,414	$ 5,423	$ 938
23	$ 1,510	$ 9,308	$ -	$ 1,414	$ 5,586	$ 938
24	$ 1,555	$ 9,588	$ -	$ 1,414	$ 5,753	$ 938
25	$ 1,602	$ 9,875	$ -	$ -	$ 5,926	$ 938
	$ 28,734	$ 177,119	$ -	$ 36,105	$ 106,282	$ 23,444

Questions Solar?

Now onto a Design Build …

Design Build Summary

Objectives:

- Summarize Construction Project Delivery Methods
- Future considerations: Utilize Design-Build process

Project Delivery Methods

Construction project contractual relationships—how project is "delivered"—money, risk, reward…

- Design-Bid-Build (Traditional, hard-bid methodology)
- Lease-Leaseback
- Design-Build

Choice of Delivery Method is critical

- Impacts pre-design, design phases
- Consider options at earliest possible time
- Will set team expectations, a tone for the project

SRCS Project Delivery to Date

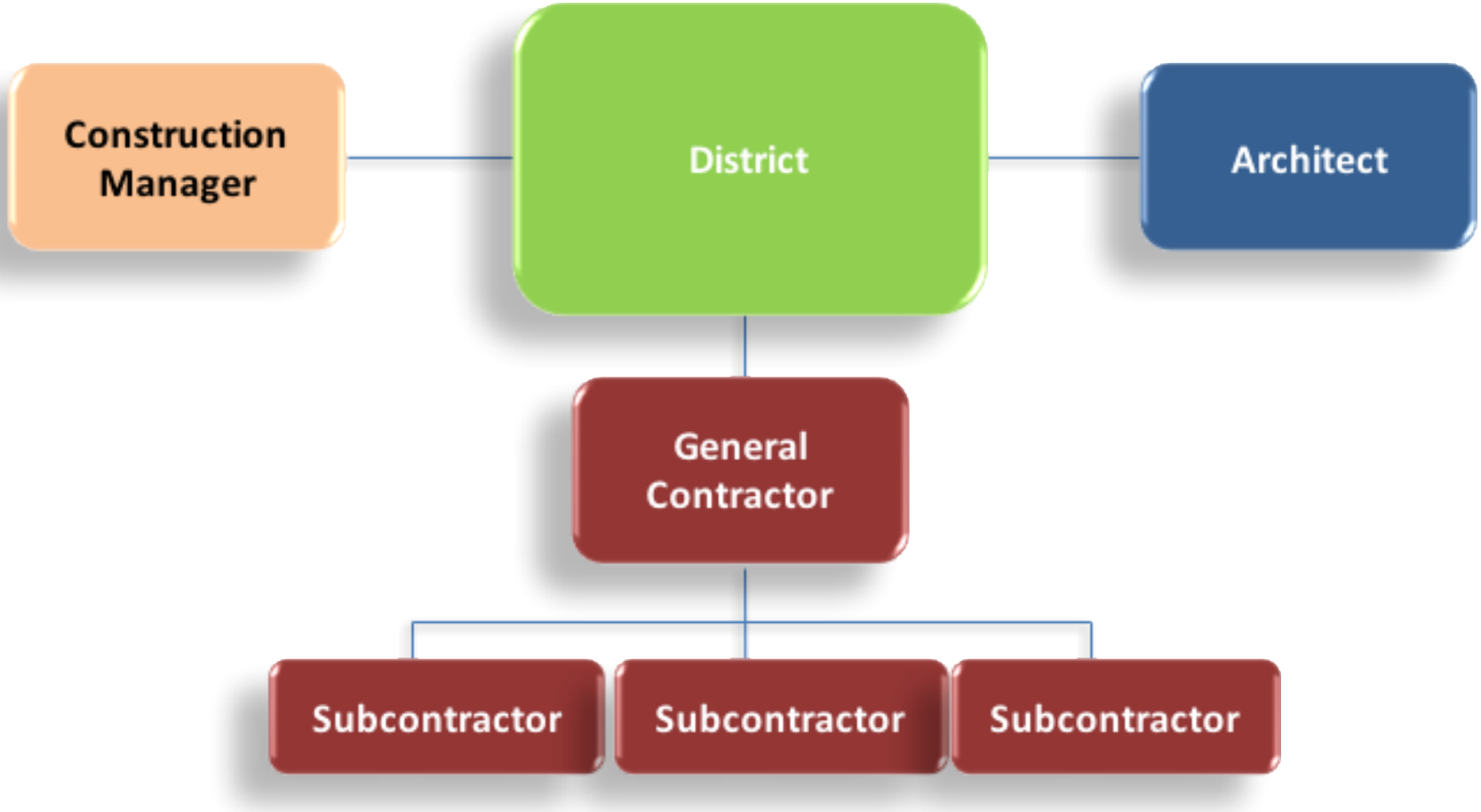
Design-Bid-Build

- Bahia Vista Shade Structure
- SRHS & TLHS HVAC
- Laurel Dell Temp Housing (Annex)
- DMS Wing 10 Roofing
- SRHS Temporary Housing
- SRHS Demolition
- TLHS Demolition
- TLHS Electrical Utilities
- TLHS ICT Renovations

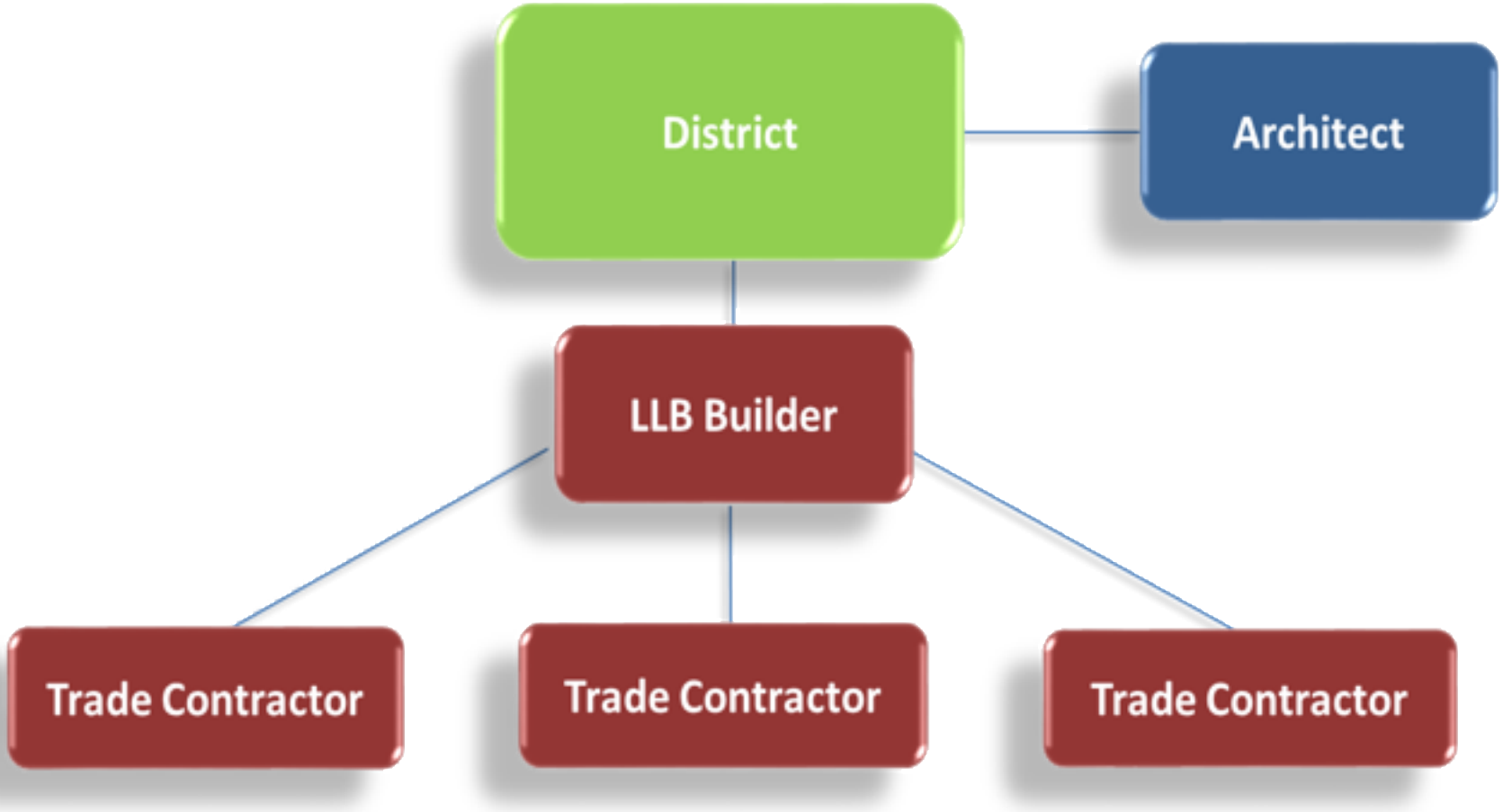
Lease-Leaseback

- SRHS Stadium
- Davidson new STEM Building
- Laurel Dell New + Renovations
- San Pedro New + Renovations
- Venetia Valley New Classrooms + Multi-Purpose, Temporary Housing
- *In progress*: SRHS New Admin, Library, Kitchen, Commons, Madrone
- *In progress*: TLHS New Commons, Kitchen, Library, Music Drama

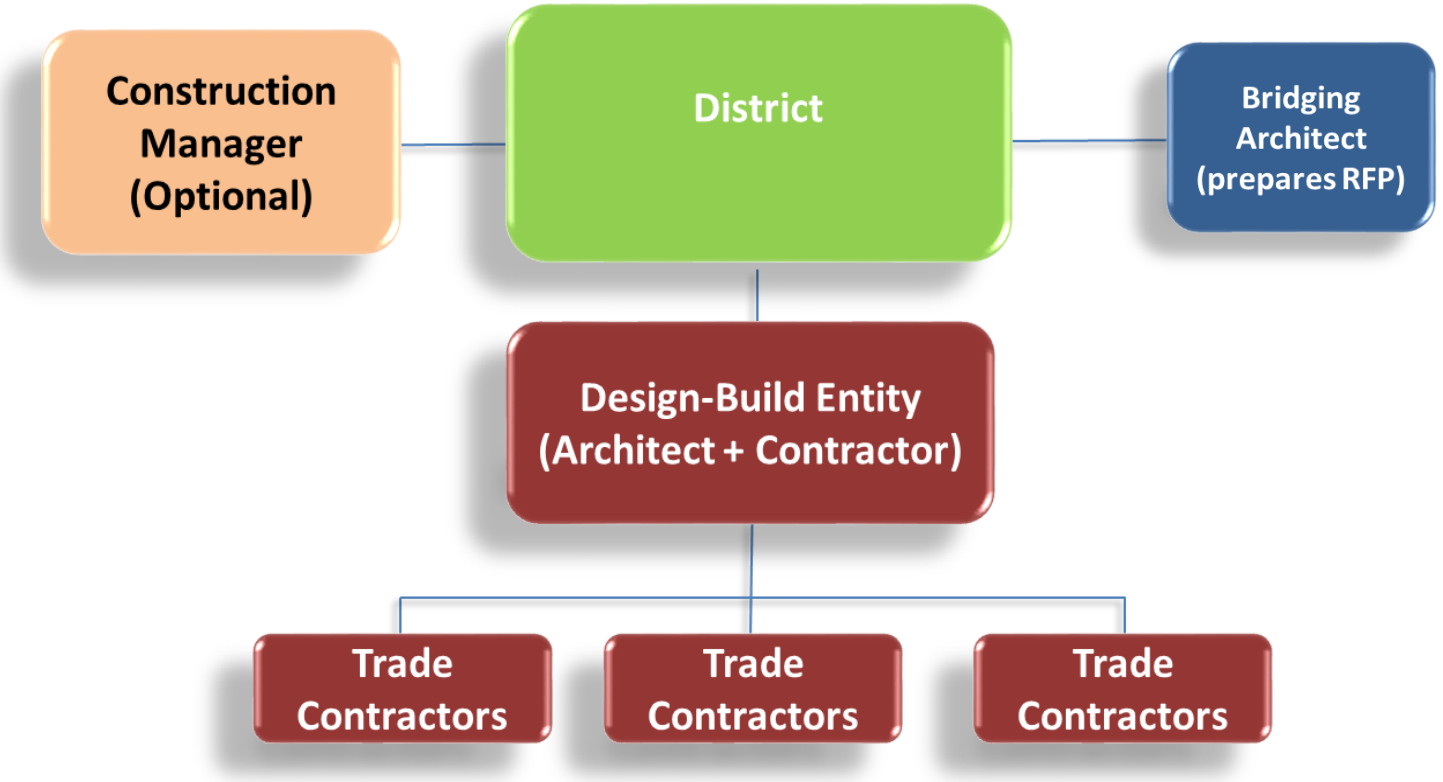
Design-Bid-Build



Lease-Leaseback



Design-Build



Design-Build

Increasingly popular alternative to Lease-Leaseback

- Design-Build entity—Contractor and Architect team
  - Single point of responsibility through design, construction
- Promotes creativity early in process
- Most collaborative delivery method
- Early ability to *lock-in* guaranteed maximum price (GMP)
- Legal requirements for selection somewhat complex
  - But Legislature has continued to streamline
- Multi-step process
  - Bridging documents prepared to define the work
  - Pre-Qualification of teams, Requests for Proposals

Future project considerations

We've used Design-Bid-Build & Lease-Leaseback successfully

- Decisions on which method based on project—type, scale, schedule, design status
- In position with one upcoming major project to consider Design-Build
  - Terra Linda HS New Main Gym Building; Main Entrance; and Parking Lot Renovations – Pick up/ Drop off

Why Design-Build?

For our next major Terra Linda High School project

- We have the Architectural Bridging components in place:
  - We have a site Master Plan, Education Specifications, Conceptual Building Program, & Traffic/ Parking analysis
  - Used to define the project during Design Build selection process
- We have a budget, need early pricing ***certainty***
  - Team creativity can generate project approach to meet budget
- Shift our design risk to the Design Build team
  - Architect as a part of the Contractor's team

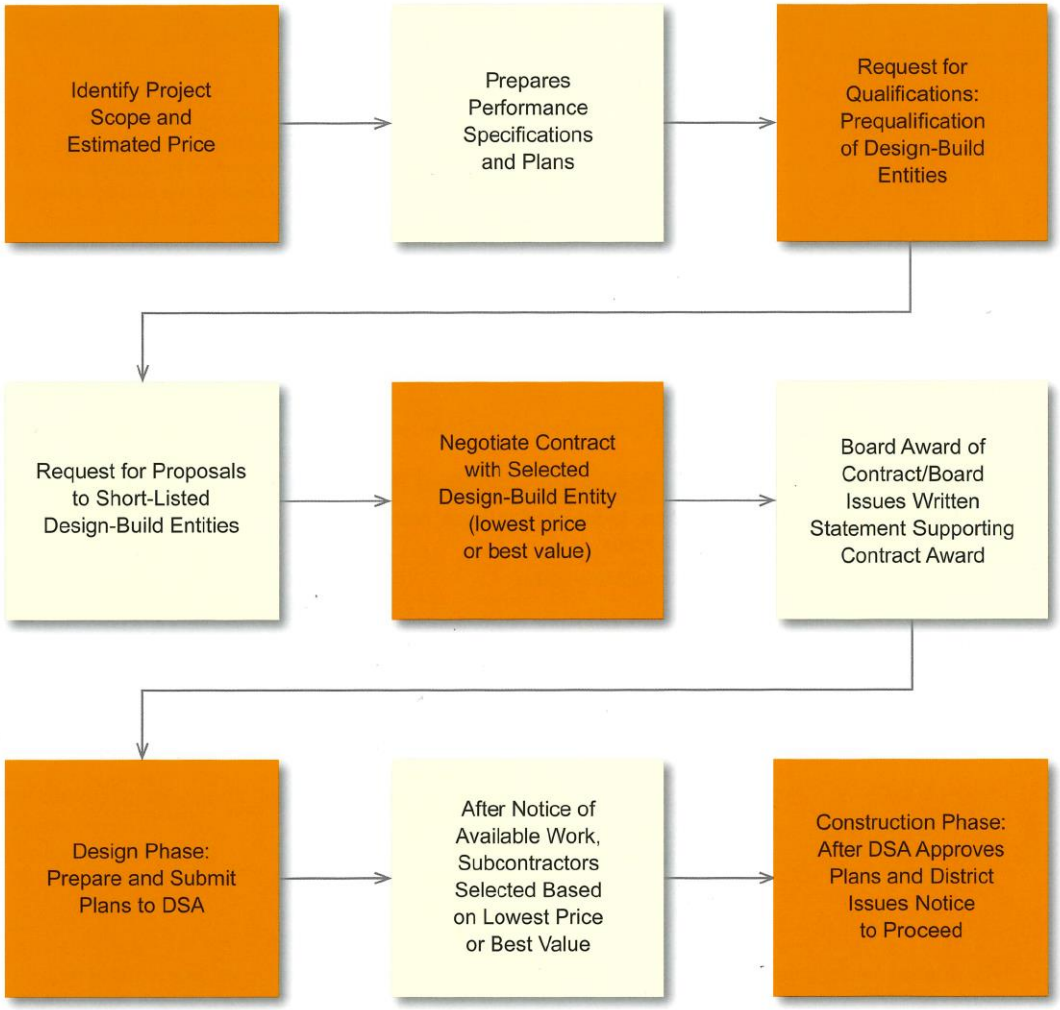
Design-Build District Team Process/ Next Steps

Develop Bridging Architects role in Design-Build project

- Assist in finalizing the Bridging Documents & Specifications used in Design-Build selection process
- Assist in leading the *Design Competition* selection process
- District's advocate to ensure that project program and building quality are maintained

How Design-Build Works: Overview for School Districts

Education Code, § 17250.10 *et seq.*



Design-Build Next Steps

Capital Facilities Team recommends using Design-Build on the next major Terra Linda High school project – **Competition Gym/ Main Entrance/ Parking Improvements**

- **TONIGHT**- Board approval of updated Conflict of Interest policy related to design teams participation in selection process
- Prepare Bridging Documents setting out project scope
  - Board approval of contract with Bridging Architects
- Pre-Qualify Design-Build teams
- Prepare and circulate Request for Proposals
  - Design/ Build Competition! Best Value selection process
  - **Recommendation**: Stipend for teams to generate concepts & proposals
- Board approval of contract with Design-Build team

Questions