A G E N D A
Riverside Unified School District
Operations Division

Operations/Board Subcommittee Meeting
Conference Room 3 A/B
3380 14th Street, Riverside, California
April 11, 2012 – 3:30 – 5:30 p.m.

As required by Government Code 54957.5, agenda materials can be reviewed by the public at the District's administrative offices, Reception Area, First Floor, 3380 Fourteenth Street, Riverside, California.

Discussion Items

1. **Review Energy Master Plan Project (Chevron)**
   Staff will review the progress that Chevron Energy Solutions has made concerning the development of the energy master plan. Specifically, the draft plan for Highgrove Elementary School will be reviewed and discussed.

Action Items

2. **Approval of Minutes**
   The subcommittee will be asked to approve the minutes of the February 28, 2012, and March 15, 2012, meetings.

3. **North High School Athletic Facilities Master Plan Project**
   Staff has worked diligently with both HMC and Tilden-Coil to revise the cost estimate prior to the project being bid in May. This cost estimate and possible scope reduction items were discussed with the North Blue Ribbon Task Force. As a result, a staff recommendation will be presented to establish an overall approach and strategy to address what is expected to be an over budget situation which will be substantiated once formal bids are received and confirmed. The recommended strategy is that previously used with the Arlington, Poly, and Ramona Athletic Facilities Master Plan projects. The recommendation will include a combination of scope reduction items and a suggestion to augment the budget to support the implementation of the project.

   Recommendation: It is recommended that the Subcommittee discuss the staff recommendation and to approve an approach and strategy to solve what will likely be an over budget condition.

4. **Re-Purposing of Measure B Funds**
   Staff will present a recommendation for re-prioritizing the projects for implementation with the balance of Measure B funds.

   Recommendation: It is recommended that the Subcommittee review the recommendation and then determine the priority order of projects to be presented at a future Board of Education meeting.

5. Extension of Measure B

Staff will present information concerning the possibility of the extension of Measure B. Mr. John Fairbank, Principal of Fairbank, Malin, Maullin, Metz & Associates, a public opinion research and strategy firm, will share his experience with regards to recent school district bond elections.

Recommendation: It is recommended that the Subcommittee discuss the possibility of the extension of Measure B.

6. Lincoln Boxing Club

The Subcommittee will discuss the liability issues concerning the Lincoln Boxing Club.

Recommendation: It is recommended that the Subcommittee discuss the issue and determine a recommended course of action.

7. Proposed Football Field/Track Graphics for Arlington, Poly, and North High School Athletic Facilities Master Plan Projects

At the Subcommittee's direction, each high school was to develop a recommendation for lettering and graphics on the football fields and track for the high school athletic facilities master plan projects. The school recommendations will be presented to the Subcommittee for consideration of approval.

Recommendation: It is recommended that the Subcommittee review the recommendations from each school and determine the graphics to be installed.

Public Relations

8. Unscheduled Communications

The Committee will consider requests from the public to comment. Comments should be limited to five minutes or less.

Adjournment

Item No. 1

ENERGY MASTER PLAN

122 – HIGHGROVE ELEMENTARY SCHOOL

122 – HIGHGROVE ELEMENTARY SHCOOL

690 Center Street
Riverside, CA 92507

NOVEMBER 2, 2011

PREPARED BY:

A DIVISION OF CHEVRON U.S.A., INC.
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Site Overview

Originally constructed in the 1956 – 1957 era, Highgrove Elementary School consists of 8 permanent buildings and 30 portable/modular buildings, comprising a total of approximately 52,800 square feet (SF).

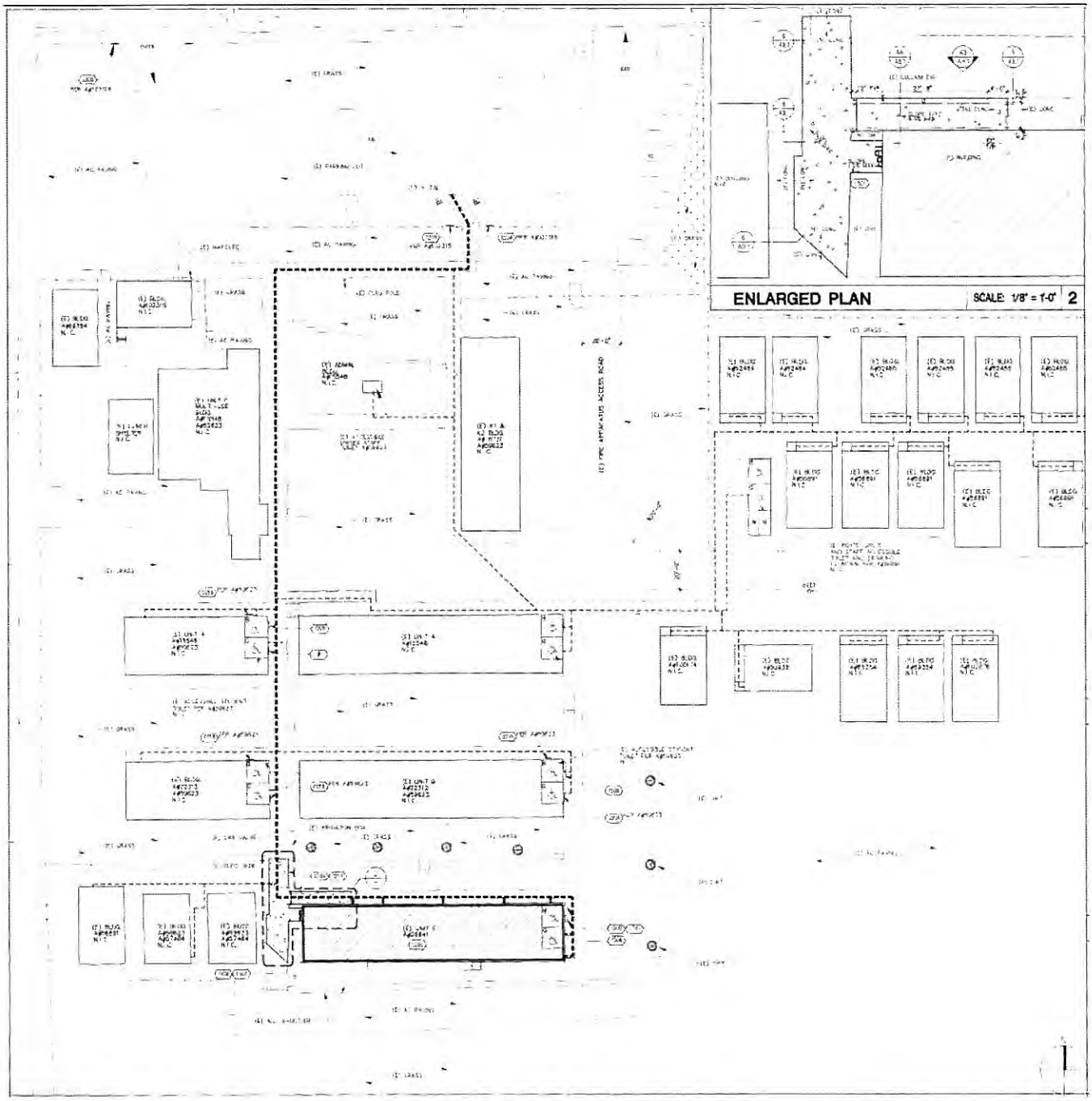


Figure 1 Highgrove Elementary site plan.

Table 1
Highgrove Elementary Building Summary

BUILDING ID	SCHOOL REFERENCE	SPACE USAGE	ESTIMATED AREA (SF)
A	Permanent Building	Classrooms 1-4, 5&6	6,382
B	Permanent Building	Classrooms 7-10, 11&12	6,375
C	Permanent Building	Multi-purpose, Kitchen, and Staff Lounge	4,015
K-1, K-2	Permanent Building	Kindergarten Classrooms K-1, K-2	3,000
Admin	Permanent Building	Administration	2,183
Portables 17-46	Portables/Modular	Classrooms 17-30, 32, 34, 35, 37, 38,39-46, Custodial Office, Parent Center, 36 (Hearts)	30,845

Energy Consumption Overview

The school consumes approximately **337,083 kWh** of electricity and **3,468 therms** of natural gas, for an annual energy cost of **$80,966 per year** based on utility data provided by the District.

Major energy consumers of the school are:

- Mechanical HVAC Systems – Packaged Gas-Electrical Units
- Mechanical HVAC Systems – Heat-Pump Units for Portables
- Cafeteria and Cooking equipment
- Classroom and Administration Plug Loads – Computers, Screens, Projectors, etc.
- Fluorescent T8 32 watt lamps in classrooms, offices and all other site facilities, along with higher wattage HPS/HID lamps in the exterior and parking area's

The following figure represents an estimated electrical energy consumption breakdown.

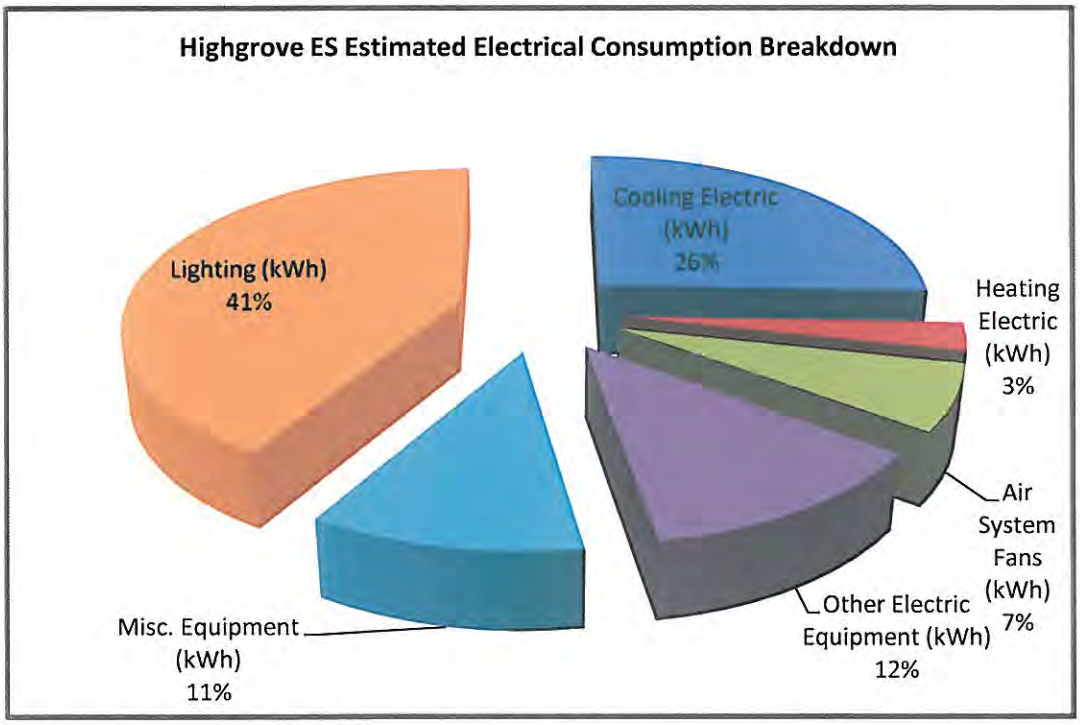


Figure 2 Estimated energy consumption breakdown for 08/2010 – 07/2011.

Existing Electrical Consumption

The following graph represents the school's annual electrical usage (kWh) and demand (kW) profiles. Based on historical data provided by the District, the annual electrical consumption is **337,083 kWh**; the peak demand is **294 kW** in October.

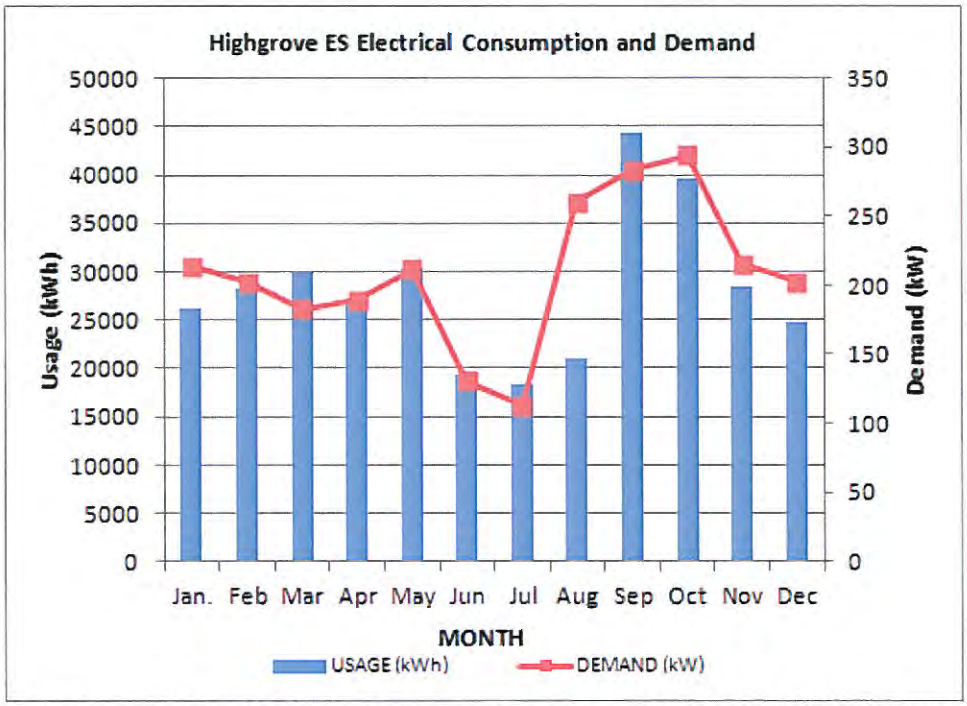


Figure 3 Annual electrical consumption and demand for 08/2010 – 07/2011.

Existing Natural Gas Consumption

The following graph represents the school's annual natural gas usage (therm) profile. Based on historical data provided by the District, the annual natural gas consumption is **3,468 therms**.

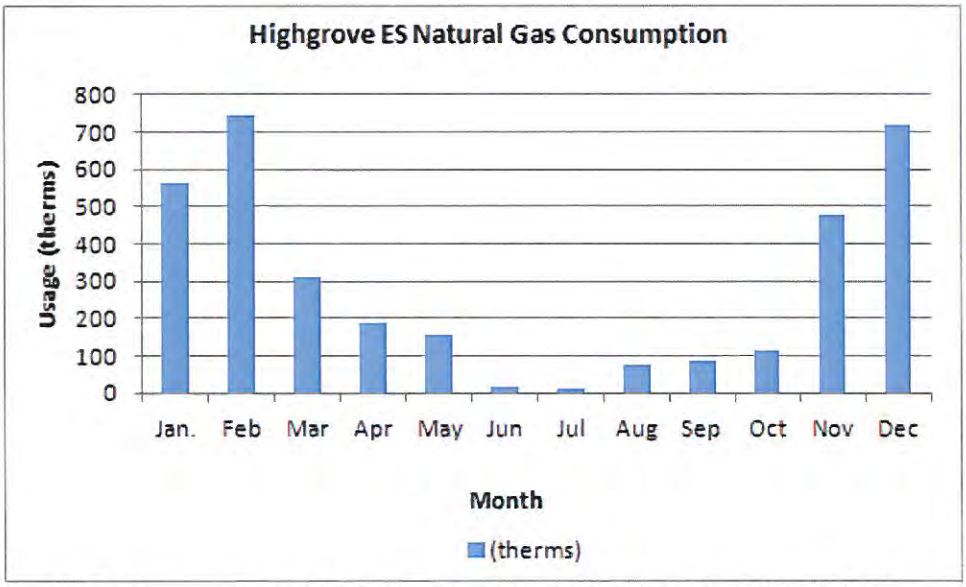


Figure 4 Annual natural gas consumption for 08/2010 – 07/2011.

Mechanical Systems

Heating, Ventilation, and Air-Conditioning Systems

Highgrove Elementary School is served by the following quantity of independent package gas-electric, split system, and heat-pump units to provide the buildings' HVAC:

- (20) gas-electric packaged rooftop constant volume systems with capacities that range from 2.5 – 5 tons for the permanent classroom buildings.
- (30) heat-pump packaged wall-mount constant volume systems with 3, 3.5, and 4 ton capacities that serve the portable/modular buildings.
- (2) 4 ton split systems with gas furnace air handling units that serve the main administration office area and workroom.
- (1) new 10 ton DX split system with a Reznor gas furnace that serves the Multi-Purpose Room.

The following observations were made and recommended actions include:

- Replace the Portable Buildings' heat-pump units with higher efficiency models supplied with ventilation heat recovery or gas-electric package units mounted on a concrete pad.
- Replace the Permanent Building's gas-electric rooftop package units with higher efficiency models supplied with airside economizer.
- Replace kitchen exhaust fan and hood, install a new exhaust fan, hood with Ansul system, and make-up air unit.
- Replace restroom exhaust fans and ceiling exhaust grills.
- Replace electrical panel, conduit, and feeders to the rooftop package units.
- Replace "Builder Quality" plastic ductwork in permanent classrooms with insulated, galvanized sheet metal ductwork.

The majority of the gas-electric package units are approximately 25 years in age and are in poor operating condition. The existing units have no economizers and are only equipped with minimal outdoor air intakes. The gas-electric system serving the Multi-Purpose Room was installed in late 2011. With preventative maintenance this unit is estimated to last the ASHRAE average lifespan of 15 years.[1]

The Administration Offices and work room are served by two 4-ton Carrier split systems with gas furnace air handling units. The units, which were installed in 2000 are in reasonable condition for their age and can be expected to last another 4-5 years based on ASHRAE's average lifespan of 15 years.

The 30 heat-pump Bard, Classic, and Wall-King units are ducted to supply air diffusers and return through a sidewall return air grille within each Portable/Modular building. The majority of the units are about 25 years old and are in poor operating condition. Observations indicate that outdoor air intake dampers are typically in the closed position. Due to unreadable unit data labels, complete nameplate data could not be obtained. The heat-pump units are past ASHRAE's lifespan of 15 years. Most of these units have received minimal levels of maintenance due to staffing, and have issues in the hot summer days maintaining space temperatures. Older units, even when meticulously maintained, lose heating and cooling capacity due to wear on the compressor. Unless a refrigerant compressor has been replaced or rebuilt, 15 years of cycling diminishes seals and gaskets which produce refrigerant leakage and therefore, reduce operational capacities. The ASHRAE Report 1197-RP

[1] Table 4, Chapter 36, 2007 ASHRAE Handbook – HVAC Application

completed several tests which include the degradation of a refrigerant compressor's capacity due to refrigerant charge reduction. At a 20% loss of refrigerant charge a capacity degradation of up to 5% can be observed.

The 12 restroom exhaust fans are in poor condition and should be replaced with new fans, including new exhaust grills in the restrooms.

The kitchen exhaust fan is in poor condition and should be replaced. There is no make-up air system for the exhaust hood, creating a situation where the hood draws in conditioned air from the dining area of the Multi-Purpose Room and exhausts this air. The exhaust system and ductwork should be brought up to current code.

The electrical panel serving the permanent building HVAC is past its useful life, in poor condition, and should be replaced. The electrical conduit distribution system on the rooftops is old, has many broken conduits, represents a safety hazard, and should be replaced.

Supply air distribution ductwork in the permanent classrooms is "builder quality" plastic ductwork that cracks and comes apart at duct connections with age. This can result in significant duct leakage in the attic space above the classroom ceiling, This represents an energy waste, with less supply air delivered to the classroom space below. The ductwork should be replaced with new galvanized, insulated ductwork.

Refer to Appendix E for a full equipment survey and Appendix F for site photographs.

CO_2 Measurements

Carbon Dioxide (CO_2) levels were measured on a limited sampling basis during space occupancy, unless noted, with the handheld TIM 10 CO_2/relative humidity monitor[2]. Measured in parts per million (ppm), AHSRAE recommends that CO_2 levels remain below 1000 ppm, however, a good target level is 750-800 ppm. Of the spaces tested **71%** were found to be **higher than the recommended maximum**, indicating the need for more outside air ventilation and air changes. When carbon dioxide levels exceed 1000 parts per million (about two times what is normally found in the atmosphere), headaches, drowsiness, and the inability to concentrate ensue.

- **Maximum: 3045 ppm**
- Minimum: 465 ppm
- **Average: 1545 ppm**

Refer to **Table 2** for space measurements.

[2] http://www.co2meter.com.

Table 2
Highgrove Elementary CO_2 Measurements

BUILDING	SPACE NAME	SPACE USAGE	CO_2 (PPM)	COMMENTS
E	Classroom 15	Classroom	480	4 occupants, permanent building
E	Classroom 16	TV/Computer monitor storage	465	Unoccupied, HVAC on
A	Classroom 4	Classroom	**1280**	Permanent building
A	Classroom 3	Classroom	**1094**	Permanent building
26	Classroom 26	Classroom	**2625**	Portable building, door open
27	Classroom 27	Classroom	**3045**	Portable building, feels "stuffy" inside
25	Classroom 25	Classroom	**1826**	Portable building

Lighting

Appendix B contains the survey results of the room-by-room inspection of existing interior and exterior lighting. Many areas were noted to contain existing occupancy sensing lighting controls. During final design, existing sensors should be evaluated to determine whether they can be re-used or replaced.

Interior Lighting

The following site facilities are currently included in one or more of the recommended lighting energy conservation measures described below:

- Classrooms
- Office spaces,
- Library,
- Restrooms,
- Cafeteria and kitchen area,
- Storage and mechanical closets

The most common lamp type used in the buildings throughout the school sites and facilities are the medium bi-pin 4' fluorescent lamp. For the majority of the site, T8 lamps at 32 watts can be found in classrooms, library, offices, and the Multi-Purpose Room.

This bi-pin lamp is utilized in fluorescent fixtures containing first generation T8 lamps and electronic ballasts.

The lamps Chevron ES is specifying have rated lives of approximately 25,000 hours for T8 lamps, which are approximately twice as long as their T12 counterpart. The electronic ballast should be expected to operate without failure for 25 years.

The recommended scope of this lighting retrofit project should be performed by licensed contractors and trained lighting technicians. Broken lamp holders in the luminaries should be replaced at the same time the lamp and ballast replacement is occurring. At the end of each shift, the old lighting components should be removed off-site and recycled/disposed of per Federal and State laws. This includes PCB containing ballasts. All work areas should be cleaned up at the end of each shift and returned to their original condition.

The results of the specific Highgrove ES lighting survey and the recommended retrofits can be found in *Appendix B*. The recommended retrofits are focused toward the District's goals of reducing energy consumption, and include where possible and practical:

- High Efficiency Lighting Retrofits
- High Efficiency Exterior Lighting
- Light Emitting Diodes (LED)
- Compact Fluorescent Retrofits, where necessary

Lamp and Ballast Replacement

This ECM considers replacing the older technology T8 lamps and ballasts with newer technology T8 lamps and electronic ballasts.

The new generation T8 system, which consists of 28 watt T8 lamps and high efficiency electronic ballasts, is the most technologically advanced fluorescent lighting system available and also has a proven track record. The T8 fluorescent lighting system is approximately 40 percent more energy efficiency than conventional T12 cool white fluorescent lamps and standard magnetic core and coil ballasts. The new generation T8 lamps fit in the existing standard T8 bi-pin sockets without modification to the fixture. The high efficiency electronic ballasts, specifically developed for the new generations T8 lamps, replace the old core and coil ballasts. The new electronic ballasts operate at high frequencies, which reduces the power requirements to produce the same amount of light as the existing lamps. The high efficiency electronic ballasts also reduce the tendency of fluorescent lamps to flicker or ballasts to hum. Standard wattage T8 lamps also use rare earth phosphor minerals, which provide high quality color rendition in the range of 82-85 CRI (Color Rendering Index). The CRI is a scale of the color appearance of an object based on a particular light source, in comparison to the color appearance under a referenced light source. Most of the older fluorescent lamps found in the schools had a CRI of 70.

Specular Reflectors

Most buildings at the District utilize recessed luminaires that contain three or four fluorescent T8 lamps, either linear or u-tube.

The lighting industry has seen continued advances in the field of light reflection, which has resulted in the introduction of specular reflectors. With the specular reflector system, existing lamps can be replaced with two T8, 28-watt lamps and one ballast without reducing the light level at the work surface. A reflective surface is installed in the fixture to make up for the loss of illumination, due to lamp removal. This reflects more of the remaining light back into the room.

- Each specular reflector is custom designed using sophisticated optical engineering and computer aided design. The reflector is bent at optimum angles for each fixture type. The enhanced aluminum material optimizes reflectivity and overall performance. The reflector produces uniform lighting that is comfortable and aesthetically pleasing without changing the appearance of existing fixtures. Trapped light is redirected in such a way that the fixture actually appears to still have all bulbs active. Use of this reflector causes almost all of the light energy within a fixture to be transmitted as usable light.

Resulting light levels are less diverse because of the reflector's geometric design. This induces even distribution of light and reduces glare. This ECM considers retrofitting luminaires with specular reflectors, T8 lamps, and electronic ballasts. Experience shows that fixture wattages may be reduced by half with little or no noticeable loss of light intensity at the working level.

Exterior Lighting – LED Replacement

Highgrove ES utilizes high output exterior lighting fixtures to illuminate building exterior walkways, and a small portion of parking areas. These exterior fixtures primarily use standard HID lamps. These exterior fixtures are typically controlled automatically via the building automation system and the programmed schedules allow for high usage. This ECM recommends that the HID fixtures be retrofitted with new, more energy efficient LED replacement lamps.

The recommended LED retrofits have an average rated life of 50,000 to 90,000 hours. These lamps will greatly reduce energy consumption as well as maintenance labor and lamp replacement costs.

HVAC Building Controls

The MS-DOS based Carrier ACS District Building Automation System monitors and schedules all rooftop package units and exterior lighting. Portable buildings have either a Carrier programmable thermostat (many suspected of having lost their programming), or a White Rogers thermostat. Either of these situations can allow HVAC in the portable buildings to operate 24/7. Temperature set-points are programmed at 76°F and 68°F for cooling and heating, respectively. During the site survey however, significant variances to the District's cooling temperature set point were noted, with temperatures as low as 65.8 F^{O} measured in classroom 3. Determined by the school's bell schedule, units are scheduled to operate between 07:15 a.m. and 2:05 p.m. After-hours air conditioning in the permanent buildings is possible by means of an override switch for teachers working late. Unoccupied permanent classrooms 3 and 13, as well as a number of portable buildings, were noted to have the HVAC operating well after the bell schedule shut off time. According to anecdotal information obtained from District staff, the existing building automation system has no alarm feedback capability to advise staff of conditions such as space temperatures outside of standards, or operation after the scheduled shutdown time.

The following observations were made and recommended actions include:

- Verify HVAC operational schedule of 7:15 a.m. –2:05 p.m.
- Adjust scheduling for specific classrooms that have part-time occupancy.
    - The Parent Center is utilized MWF from 11:00 a.m. – 2:00 p.m.
    - Classrooms 16 and 36 are vacant and used for storage, however, HVAC is operating.
- Consistent with the District standard of Siemens BAS controls, the long-term master plan should include integration or replacement of the existing BAS with Siemens controls. The new control system should incorporate control of economizer dampers to take advantage of outdoor air cooling and assure improved indoor air quality. Although not currently required for classrooms, the District may want to consider the installation of CO_2 sensors and demand controlled ventilation for these areas.

Domestic Hot Water System

Domestic hot water is provided to the main Administration Office building by a Bradford White 30-gallon tank, 32-MBH input natural gas water heater. The piping was noted to be barely lukewarm, indicating low water temperature and that gas consumption for hot water is most likely minimal. The water heater appears to be in good operating condition.

Building Envelope

In the building drawings provided to Chevron ES, architectural section details were found to be missing. We were able to visually verify R-19 batt insulation on the underside of the roofs of the permanent buildings. Where data was not available for wall construction or portable buildings, best engineering judgment was used to approximate the most likely scenario.

Table 3
Building Envelope Summary

BUILDING	EXTERIOR WALL	ROOF	FENESTRATION
Permanent	Concrete Block, plaster exterior finish, light paint, minimal insulation	Built Up, Asphalt Roll, silver spray coating, R-19 insulation	Single pane, metal frames, some tinted
Portables	Wood Frame, Light Plywood Ext, Gypsum Board Interior, R-11 Insulation	Built Up or Metal Seam, R-19 Insulation	Single pane, metal frames, tinted

Energy Conservation Measures

ECM-1.1 HVAC Retro-commissioning

The scope of work of ECM-3.1 and ECM-5.1 includes the installation of new DDC controls and HVAC equipment as well as the installation of new ductwork in classrooms. Testing, commissioning, and air balancing is included in the scope of work, therefore, retro-commissioning as an ECM is not applicable for Highgrove ES.

ECM-2.1 Lighting

Appendix B contains the results of the room-by-room lighting survey of existing lamp & fixture types and the scope of work for the proposed retrofits. Appendix B also contains manufacturers' literature for the principal lighting products to be used. The following outlines the lighting retrofits and replacements as also described in the existing conditions lighting section above:

- **Proposed Description**
  - High Efficiency Lighting Retrofits
  - High Efficiency Exterior Lighting
  - Light Emitting Diodes (LED) for exterior lighting
  - Compact Fluorescent Retrofits
- **Energy Savings and Benefits**
  - 73,908 kWh estimated lighting savings
  - $11,282 estimated annual electric savings
  - $4,500 estimated electric utility rebate
  - Maintenance and operations savings
  - Improved light quality and consistency
  - Reduced mercury – Environmental friendly
  - Heat reduction – less load on cooling systems
- **Implications**
  - Potential savings of as much as 50% of existing energy cost for all site lighting
  - Reduced maintenance and operations cost

ECM-3.1 HVAC Controls

- **Proposed Description**

  The existing Carrier building automation system is antiquated, has limited functionality, lacks alarm response capability if space temperatures vary from District standards, HVAC equipment operates outside of scheduled hours, or if outdoor air economizer dampers are operating properly or not. Because of these limitations, comfort complaints are common and energy consumption is not optimized. Portable buildings which have either a programmable thermostat that has most likely lost its programming, or a regular wall thermostat, have the capability to allow HVAC to operate at night or over weekends when the classrooms are unoccupied.

  In keeping with the District's desire to standardize all sites with Siemens controls, Chevron ES recommends that the existing building automation system be replaced with a Siemens system that can be monitored and controlled from the central M&O Building control center. The basic scope of work will involve the following:
  - Demolition and removal of the existing Carrier control system.
  - Where appropriate, conduit and wire may be re-used.

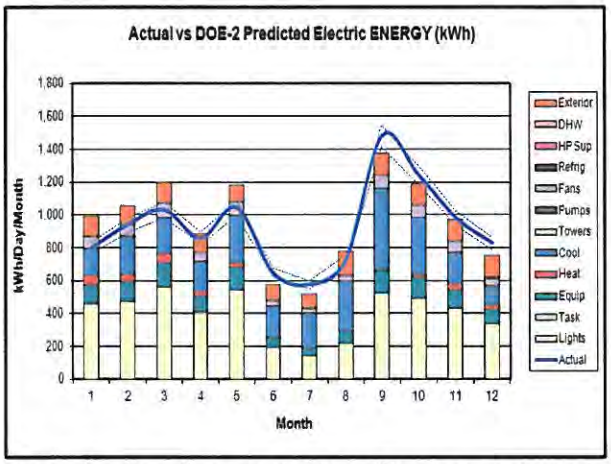
- Install new Siemens controls on new rooftop package units and heat pumps (discussed in ECM-5), door switches in permanent buildings per District standards, along with picking up contactors for exterior lighting.
- New HVAC controls will include direct control of economizer dampers, space temperature sensors with after-hours override but no display, CO_2 sensors on package units to monitor indoor air quality, demand controlled ventilation, and alarm capability at the central control center.
- For Bard style portable building heat pumps, the more limited Siemens TEC controller is included (Option 5a). This controller will provide control points for fan start/stop, fan status, electric heat enable, compressor enable, reversing valve control, supply air temperature, room temperature, and local override button. Although CO2 sensors to monitor indoor air quality are not included at this time, Chevron ES does recommend the sensors if RUSD considers this an important issue.
- We also note that for ECM-5, we obtained alternate pricing for replacing the Bard style units with pad mounted gas-electric package units (Option 5b) or gas-electric Bard units (Option 5c). Should the District decide to proceed with the package unit Option 5b, the full controls package described above for package units will be provided.
- For monitoring of filter status and economizer operation, it was desired to include a differential pressure sensor across the air filters and mixed air temperature sensor. In discussions with Siemens about the typical close proximity of the filters to the evaporator coil and possibility that a ΔP sensor might not fit, the use of an air velocity sensor was suggested as an alternative and included in the scope of work. Additionally, since there is not typically sufficient size for a mixing plenum, the use of an averaging sensor was suggested as an alternative to a mixed air temperature sensor and is included in the scope of work. In discussions with the RUSD maintenance staff, the use of a current transformer was suggested to serve the functions of indicating fan status, filter status, and if there was a broken fan belt. If the District should decide to delete the air velocity sensor and averaging temperature sensor from the scope of work, this can be accommodated.

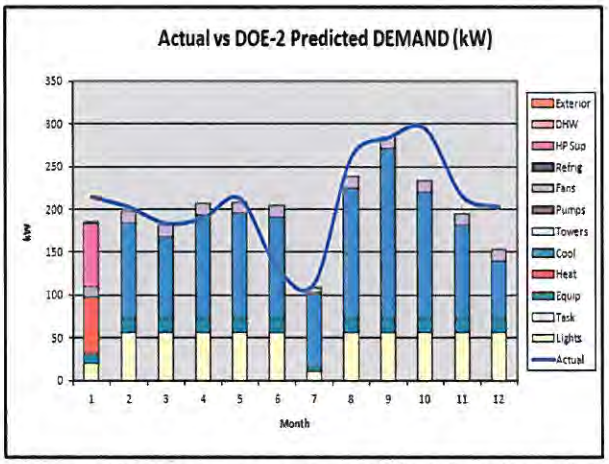
Appendix F contains control schematics which show the basic control points to be provided for gas-electric package and Bard style units.

- **Energy Savings and Benefits**

To calculate energy savings, the eQUEST hourly building energy simulation program was utilized. eQUEST uses the DOE-2.2 calculation engine, which was developed with funding by the Department of Energy, and is a widely accepted building energy simulation program. To build the simulation, the user inputs data such as building construction, equipment, and operational data obtained from building drawings, surveying equipment nameplate data, control operation, equipment condition, field measurements such as temperature and CO_2 ppm, and anecdotal information obtained from interviews with District and school staff. The program then simulates the energy performance of the building on an hour-by-hour basis for an entire year using long-term weather data typical for the area.

In order to raise the confidence level in the calculations, the simulation model is calibrated against actual historical energy consumption and demand. It is generally accepted industry practice that if a simulation can be calibrated to within ±7%-10% of actual historical consumption on an annual basis, then the simulation is considered to be a reasonable representation of the building's energy use and demand. In the case of Highgrove ES, electrical energy consumption (kWh) and demand (kW) were calibrated to within +3% and -4% respectively. These results can be seen in the calibration graphs below.





Once the baseline model is calibrated to historical consumption, we create a modified baseline that accounts for insufficient ventilation air due to closed or malfunctioning dampers and also mimics the results of the lighting retrofit. With the modified baseline set, we can then define other ECMs and calculate savings interactively. In this manner, each successive ECM simulation considers the improvements made in the prior ECM so that savings are not overstated.

- **Implications**

  We calculate energy cost savings of $8,430 annually as the result of this ECM. We note that since the existing building automation system is already providing a good portion of the available savings from time of day equipment scheduling, the incremental savings are limited versus the situation where no control system existed. Installation of the new DDC HVAC controls will provide several benefits to the District that include energy cost savings, improved temperature control, improved indoor air quality, feedback to the central control center of equipment or control malfunctions, and standardization of systems, user interfaces, and spare parts inventory.

ECM-4.1 Component Enhancements

None recommended.

ECM-5.1 Capital Equipment Replacements

- **Proposed Description**

  The existing rooftop package units and portable building heat pumps are well past the end of their useful lives and are in poor condition, creating comfort and indoor air quality problems. Restroom exhaust fans are in poor condition as well as the kitchen hood exhaust fan. The old exhaust hood design of removing conditioned air from the main area of the Multi-Purpose Room is inefficient and not allowed in new construction under current code. Additionally, we believe that the hood and ductwork system need to be upgraded to meet code. We will investigate further to confirm the code upgrade requirement. Distribution air ductwork in the permanent classrooms is inexpensive "Builder Quality" plastic duct. This installation is subject to cracking over time along with duct joint separation potential which can result in significant leakage of conditioned supply air to the attic space above the classroom ceilings.

  The scope of work of this ECM (Option 5a) includes the following:

  - Demo of (20) existing rooftop package units, classroom ductwork and grills, electrical conduits and gas lines
  - Demo of (12) existing restroom ceiling exhaust fans and grills

- Demo of (30) existing wall mount heat pump units at portable buildings
- Demo (1) existing kitchen exhaust fan and hood
- Install (20) York Affinity 5 ton high efficiency (12 EER) gas-electric rooftop package units with pitched curbs and economizers. During final engineering, we will evaluate the structural integrity of the roof to determine if heavier, higher efficiency (15 EER) package units can be utilized. Also included are new gas lines, conduits & wiring, and a 3 phase electrical panel. These will be discussed under ECM-8.1.
- Associated roof patching and repairs at locations of new package units
- Install (30) Bard "Quiet Climate" 4 ton high efficiency (11.3 EER) wall mount heat pumps equipped with energy recovery ventilators. As an alternative for District consideration, we have obtained pricing for pad mounted gas-electric package units that will allow easier maintenance access (Option 5b) and also gas-electric Bard units (Option 5c).
- Install (12) restroom exhaust fans and ceiling exhaust grills
- Install galvanized ductwork and new ceiling supply and return air grills in (20) permanent building classrooms
- Install (1) rooftop grease fan, kitchen exhaust hood with Ansul system, Reznor rooftop make-up air unit with curb, 16 gauge welded grease duct with fire rates and duct wrap
- Install (4) ceiling make up air grills in kitchen
- Start up and testing
- Air balancing of all new systems

Manufacturers' literature for the new package and Bard units can be found in Appendix C.

- **Energy Savings and Benefits**
  Energy cost savings for this ECM are calculated to be $3,997 annually. Additionally, a Southern California Edison rebate of $9,000 should be available for this ECM.
- **Implications**
  In addition to energy savings, installation of the new HVAC equipment will improve thermal comfort levels and indoor air quality. The ECM also provides important infrastructure upgrades that address replacement of old, poor condition restroom exhaust fans, ductwork, gas lines, electrical feeds and service panel, as well as code required upgrades associated with the kitchen exhaust system that we believe will be triggered if the exhaust fan is replaced.

ECM-6.1 Photovoltaic/Onsite-generation

- **Proposed Description**
  Chevron ES recommends that a PV shade structure be installed in the back staff parking lot at Highgrove Elementary School. Based on detailed studies of the energy usage profiles and utility rate options, we were able to identify an optimal PV system program.

Figure 5 Shaded Carport Installation
The recommended PV shade structure will look similar to the Milpitas Unified School District shaded PV carport installation shown below

PV Systems Sizing Considerations:

We believe that every responsible solar photovoltaic design begins with energy conservation. That is why the preliminary system sizing includes provisions to reduce the consumption of Highgrove ES first. To arrive at system size, we utilized a sophisticated modeling process which analyzed system cost, utility cost, (including the R-Rate), and actual energy consumption to determine the optimal PV system size for Highgrove ES. This process is more clearly defined in the "Utility Economic Model for the TOU-GS3 Rate Structure" section.

Proposed Equipment and Location Affected:

The installation of PV shade structures in the back staff parking lot allows for shading of cars in the Inland Empire heat while producing energy for the school (see Appendix D). *The analysis and sizing of the PV shade structures for this project are based on installing Hyundai modules and Power-One inverters (Cut Sheets in Appendix D). The selected Hyundai modules are optimal based on their efficiency and quality. The selected Power-One inverters are optimal based on the size of the proposed project and that by using the inverter, the need for an electrical equipment pad is eliminated.*

The inverters should be located on the solar PV shade structures. The inverters should be attached to the steel columns a minimum of 96" from the asphalt. Since parking spaces at are limited, the electrical panel board should also be mounted on the structure, and not readily accessible. This will eliminate the need for an electrical pad. Final engineering will determine the exact location, quantity, and size of inverters and panel board per site.

The electricity from the solar arrays will be tied into the main electrical switchgear at the front of the school. In order to get to the front of the school, a trench will be dug around the west side of the campus as shown in Appendix F. Due to the poor condition of the electrical gear, it is recommended to replace the distribution section of the switchgear in order to tie in the solar power.

Table 4

Summary of Array Information

Array No.	Length		Columns	Width		Strings (12 modules per string)	Total Modules	kW DC STC
	(modules)	(feet)		(modules)	(feet)			
Highgrove Elementary School								
A	29	≈92	4	6	≈32.5	14	168	42.84
B	29	≈92	4	6	≈32.5	14	168	42.84

M&V Approach:

Solar PV systems enrolled in the California Solar Initiative (CSI) program must abide by minimum metering and monitoring requirements outlined in Appendix C of the CSI Handbook (CSI, Dec 2011). To help ensure the long-term success of District's energy program, we recommend a monitoring system to provide the District with the ability to monitor PV system output at each school in near real-time. This approach conforms to the International Performance Measurement & Verification Protocol (IPMVP) Option B, long-term monitoring.

Operation and Maintenance (O&M) Services:

With few moving parts and no fuel costs, solar PV systems require little O&M compared to other sources of generation. Regular maintenance consists of the five basic elements: Module cleaning, Inverter maintenance, String wiring maintenance, Mounting structure maintenance and Monitoring. Monitoring is also necessary to identify sub-optimal performance which might suggest a need for cleaning or further trouble-shooting.

Most maintenance activities involve routine inspections and cleanings, although comprehensive annual system inspections are encouraged to identify possible problems before they affect the operation of the systems.

Energy Savings and Benefits

Energy Savings Summary:

Energy cost savings for the first year are projected to be 128,292kWh and the total projected utility costs saving (assuming TOU-GS3-Option R Rate) are projected to be $35,280.

Estimating PV Production Output:

The industry recognized software program called PVSYST was used to estimate the output of the recommended solar PV system. This program allows the user to upload more site specific weather conditions data. This

difference allows more accurate estimates of the output of the proposed solar PV system than modeling software like PV Watts Version 2 and CSI's Expected Performance Based Buydown (EPBB) Calculator. Information about the location of the system, the size of the system, the type of system components, soiling losses, temperature coefficients, shading analysis, etc. are input into the program in order to estimate energy production more precisely. The closest and most relevant weather station to this project is March Air Force Base TMY3 weather data. Therefore, March Air Force Base TMY3 was the weather data that was used for the Riverside analysis. An example of the output from PVSYST is shown In Appendix D.

Estimating California Solar Initiative Incentives:

Because Highgrove Elementary School is located in Southern California Edison utility territory, it is eligible to participate in a solar rebate program through the California Solar Initiative (CSI) under the Performance Based Incentive (PBI) Program.

Currently, the CSI incentive in SCE territory is at Step 8 and availability of funds completely depends on how quickly they are exhausted. Reserving the CSI incentive in a timely manner can be the determining factor in whether or not a PV system makes financial sense for a customer. In our experience, it is prudent to act quickly and submit the CSI applications as soon as possible to reap the most beneficial incentive dollars. If the District elects to move forward with the decision to install Solar PV, The CSI application has already been completed and is ready to be submitted in order to reserve the incentive funds. It is our strong recommendation to submit the application right away to ensure that the incentive funds are reserved at the current Step 8.

Table 5
Summary of Estimated CSI Performance Based Incentives – 5 years

Location	CSI PBI Incentive
	Self Financed (Incentives Paid to District)
Highgrove Elementary School	$89,000

Utility Economic Model for the TOU-GS3 Rate Structure:

The utility economic model utilizes 15-minute interval usage data and utility rate schedule information obtained from SCE to simulate a Business-As-Usual (BAU) scenario for each site that contains a TOU meter (i.e.,Highgrove Elementary School). To obtain the BAU scenario, the utility economic model goes through a series of steps. First, the 15 minute interval data obtained from SCE is converted to hourly average kW and hourly peak kW. Then, the model evaluates the converted hourly data and assigns the appropriate demand and energy charges based on whether the data is associated with on-peak, mid-peak, and off-peak rates and whether the data is associated with the summer season or winter season. The modeled BAU results are then compared to the actual 12-month utility bill summary statement provided by SCE to verify that the monthly bills and energy usages are close in comparison, usually within 3%. Theoretically, the utility economic model and the 12-month utility bill summary statements should match. However, the model assumes that the monthly billing cycle begins

on the 1st of every month, where in reality this is usually not the case. Thus, there is usually a small, but acceptable, difference between the utility economic model and actual results for the total kWh consumed and peak kW demand.

Once the BAU is estimated and verified to be within the acceptable limits of the actual utility bills, the utility economic model imports the hourly electric generation by the proposed solar PV system from PVSYST. Then by using these two pieces of information, the BAU hourly site's demand kW and hourly kW generated by the proposed solar PV system, the utility economic model can calculate the net hourly kW which will be still be required from the utility following the installation of the solar PV system (post-PV). This is calculated by subtracting the amount of kW generated from the proposed solar PV system from the BAU amount of kW needed for the site on an hourly basis.

Business as Usual (Electricity Consumed by School)	—	**Electricity Generated By New Solar PV System**	=	**Amount of Electricity to be Purchased from Utility**

Using this post-PV net hourly kW data, the utility economic model repeats the analysis it did using the BAU hourly kW and simulates the expected post-PV charges that will be billed out by the utility. This is done with the baseline utility rate schedule as well as with an alternative rate schedule. In this case, the hourly model switches each site from a TOU-GS3 Option B tariff rate structure to a TOU-GS3 Option R tariff rate structure. An example of the hourly calculations is presented in Appendix D where one can see times where the facility demand is negative (meter is spinning backward and the facility is exporting power to SCE) and the energy charges are negative (accumulating a billing credit). The TOU-GS3-Option R rate schedule maximizes the PV cost savings as the time of use rates are highest during the peak and semi-peak hours, which coincides with the times of greatest PV production. Additionally, under TOU-GS3-Option R rate schedule, peak and semi-peak demand charges are not charged. Only the facilities related demand charge, at a rate about half of the facilities related charge under the present TOU-GS3-Option B rate schedule.

With the BAU and the post-PV results side-by-side, the annual electric cost savings is determined for the best possible rate schedule. Finally the model calculates the solar rate by dividing the annual post-PV electric cost savings by the annual solar production imported from PVSYST.

Utility Economic Model Findings:

Our utility economic model yielded the following BAU and solar rates for Highgrove Elementary School. See **Table 6**.

Table 6
PV Program Economics Optimization

		Highgrove Elementary School
Site Total Modules		336
Site Capacity (DCkWp)		85.68
BAU	kWh	327,578
	Post 12/31/10 Annual Billing Cost	$75,418
SCE Charges Post PV	kWh	199,286
	Base Schedule	$57,714 TOU-GS3 Option B
	Alternate Schedule	$40,169 TOU- GS3 Option R
Solar Potential Savings	Solar kWh Production	128,292
	Base Schedule	$17,703 TOU- GS3 Option B
	Alternate Schedule	$35,248 TOU- GS3 Option R
Solar Rate Base Schedule		0.138 TOU- GS3 Option B
Solar Rate Alternate Schedule		0.275 TOU- GS3 Option R

ASSUMPTIONS:

1. BASE TOU-GS3 RATE STRUCTURE SCHEDULES ARE ASSUMED TO BE THE TOU-GS3-B OPTION.
2. ANY AUTOMATIC POWERSHIFT PROGRAM STILL APPLIES BEFORE AND AFTER PV INSTALLATION

By implementing the proposed solar PV program, the District has the ability to capture $35,248 in first year energy savings with the new renewable "R" rates.

Implications

Local Economic Leadership

- Provide General Fund relief through a fiscally responsible approach
- Reduction of power purchased from SCE
- Budget predictability

Local Pride and Environmental Stewardship

- Lead by example
- Responsible approach to reduce demand and address District's energy efficiency needs first
- Provide clean, renewable energy and help protect our environment

Educational Enhancement

- Supports the District's goals of providing world class educational environment to our future leaders
- Provides opportunity to enhance the District's commitment to STEM education
- Opportunity to educate future generations on the benefits of energy efficiency and renewable energy
- Helps educate and prepare the next generation for careers in renewable and energy efficiency technology
- Program to enhance the math and science curriculum

GREEN HOUSE GAS EQUIVALENCIES

Source:
Clean Energy Greenhouse Gas Equivalency Calculator; www.epa.gov/cleanenergy-resources

The Proposed Program for Riverside USD is Equivalent to an Annual Reduction of 128,292 kWh. This equates to the following:


Taking 17 passenger vehicles off the road


Eliminating the CO2 emissions from the electricity use of 11 homes


Planting 2,268 tree seedlings and those seedlings growing for 10 years


Recycling 31 tons of waste instead of sending it to the landfill

ECM-7.1 Envelope Improvements

- **Proposed Description**
  During the site survey we noted the existence of R-19 insulation on the underside of the building roofs as well as silver or light colored roofs, and dropped ceilings in classrooms. These observations led us to conclude that installing additional roof insulation, cool roofs, or classroom ceilings would not provide significant additional benefit or were not necessary. We do not currently have sufficient data to evaluate if the walls will benefit from adding insulation. As we perform the simulation models for the sites in the Riverside Public Utilities service territory, we will be calculating savings for various envelope improvements. Should we determine that the addition of wall insulation offers compelling economic or other benefits, we will re-visit this item for Highgrove ES.

  Windows were noted to have original steel frames in poor-fair condition with single pane glass, some of which was noted to be tinted. The outside edges of the window panes are heavily caulked or "puttied up", most likely to prevent water or air infiltration and drafts. Replacement of the original windows with new metal frame, double pane, low-e glass windows that meet current Title 24 standards is recommended.

  .

- **Energy Savings and Benefits**
  We calculate annual energy savings at $1,115.
- **Implications**
  Generally, window and other envelope measures in California do not have great economic viability; however, there are also intangible benefits to be gained. The addition of double pane windows will help reduce any outdoor sound transmission into the classrooms. Additionally, just cleaning up the appearance of the old, original windows will contribute to making the classrooms a more pleasant learning environment. Finally, the water infiltration or air drafts that are the reason for the "puttied up" windows will be eliminated.

ECM-8.1 Infrastructure Upgrades

- **Proposed Description**
  Included as part of the ECM-5 pricing, we have included a number of recommended infrastructure improvements. These include the following items:
  - Demo the "spaghetti work" of existing electrical conduits and broken conduits on the rooftops
  - Demo existing gas lines located on the rooftops
  - Run new conduits and gas lines through the attic spaces and stub up to the locations of the new rooftop package units
  - Demo the existing electrical panel serving the package units that is in poor condition
  - Install a new 3 phase electrical panel to serve the HVAC units
- **Energy Savings and Benefits**
  No energy savings are calculated as the result of this ECM
- **Implications**
  Old and broken conduits and electrical panel in poor condition will be replaced with a new distribution system for the HVAC units. Removal of the conduits and gas lines from the rooftops eliminates a safety hazard, which is especially important in light of the pitched roof and absence of parapet walls to prevent falling.

The table below provides a simple economic breakdown of each energy conservation measure mentioned above.

Table 5 Energy Conservation Measure Economic Breakdown

ECM	Name	Consumption Savings			Cost Savings		
		Electrical Usage (kWh)	Electrical Demand (kW)	Natural Gas (therms)	Electrical ($/yr)	Natural Gas ($/yr)	Total ($/yr)
1.1	Retro-Commissioning	x	x	x	x	x	x
2.1	Lighting – Retrofit	73,908	35.90	x	$11,282	x	$11,282
2.2	Lighting – Heating Penalty and Cooling Savings	9,772	50	-103	$1,540	-$77	$1,462
3.1	Controls – Reschedule HVAC Start/Stop Operation, Reschedule HVAC for Vacant Spaces, Demand Control Ventilation	44,535	251.1	1,523.0	$7,189	$1,241	$8,430
4.1	Component Enhancement – Piping Insulation	x	x	x	x	x	x
4.2	Component Enhancement – Motor Replacement	x	x	x	x	x	x
5.1	Equipment Replacement – High Efficiency Rooftop Units and Portable Classroom Units	18,109	207.7	194.0	$3,832	$165	$3,997
6.1	Self-Generation – Photovoltaic Array	128,292	Variable	N/A	$35,248	N/A	$35,248

ECM	Name	Consumption Savings			Cost Savings		
		Electrical Usage (kWh)	Electrical Demand (kW)	Natural Gas (therms)	Electrical ($/yr)	Natural Gas ($/yr)	Total ($/yr)
6.2	Self-Generation – Solar Hot Water	x	x	x	x	x	x
7.1	Envelope Improvements – Cool Roof	x	x	x	x	x	x
7.2	Envelope Improvements – Interior Furring	x	x	x	x	x	x
7.3	Envelope Improvements – Window Replacement	3,826	64.7	144.0	$996	$119	$1,115
8.1	Infrastructure Upgrade – Electrical	x	x	x	x	x	x

Item No. 2

UNOFFICIAL
This is an uncorrected copy of Board Operations Subcommittee Minutes. The Minutes do not become official until they are approved by the Board Subcommittee at the next meeting.

Riverside Unified School District
Operations Division

Board Operations Subcommittee Meeting
3380 14th Street, Riverside, Conference Room 1 A/B
February 28, 2012 – 3:30 p.m.

MINUTES

CALL TO ORDER: 3:31 p.m.

PRESENT: Mr. Tom Hunt, Dr. Charles L. Beaty, and Dr. Kirk Lewis

Also present were Mr. Mike Fine, Mrs. Janet Dixon, Mr. Kevin Hauser, Ken Mueller, Ms. Barbara Heyman, The Planning Center, and Ms. Lizette Delgado (Recorder)

Discussion Items

1. **Re-Purposing of Hyatt Elementary School**

   Dr. Lewis stated that staff presented a proposal concerning the potential re-purposing of Hyatt Elementary School to the Board of Education at the Study Session on Tuesday, February 21st, and that the Board of Education supported further study of the concept. Dr. Lewis said that the basic proposal is to close Hyatt Elementary School and reuse the school for the STEM academy to allow for expansion of the program and it is expected that 240 – 280 students will attend the academy in 2012-13.

   Dr. Lewis presented an update on the tentative timeline and stated that information on potential school attendance area adjustment scenarios would be presented for review and comment by the Subcommittee. He made comments on the Hyatt staff meeting held on Wednesday, February 22nd, and said that staff recognized the instructional challenges at the school and expressed that the STEM Academy is a good option for students. Dr. Lewis said that the item will be presented at the March 5th Board meeting for approval and that if approved, staff will initiate the process to adjust attendance areas to various elementary schools to accommodate students in the Hyatt attendance area. He informed the subcommittee that he and Mrs. Dixon will be meeting with the principals at Emerson, Longfellow, Highland, Pachappa, and Taft Elementary Schools to present the options for the proposed attendance area adjustments.

   Ms. Dixon presented three different scenarios for the proposed attendance area adjustments: Option A, Option B, and Option C, and stated that Option C appears to be the most feasible option because the schools are within walking distance for students.

   Dr. Lewis added that a Hyatt Parent Meeting has been scheduled for tomorrow, Wednesday, February 29th, to inform parents on the Board of Education's decision to explore the re-purpose of Hyatt Elementary School.

Subcommittee members requested an update on the RCTC construction of the block wall close to the railroad tracks in the Hyatt vicinity. Mr. Hunt made comments regarding the naming of the STEM Academy and the wearing of uniforms by students attending the academy.

2. **Potential Re-allocation of Designated but Unused Measure B Funds for Energy Conservation Projects**

   Dr. Lewis stated that given the structural deficit in the District budget, it is prudent to investigate and consider the implementation of projects that will generate savings to the district's utility budget. For that reason, this item was presented for discussion by the Subcommittee.

   Mr. Mueller provided information for upgrading current energy management systems at about a dozen sites, which will yield an estimated annual savings to the general fund of $159,150. The net cost to install the new controls would be just over $1.2 million with a payback of approximately 8 years. After a brief discussion, the subcommittee asked staff to bring back a proposal to re-prioritize the list of projects to be financed by remaining Measure funds.

Action Items

3. **Parking Lot Lighting at Schools**

   A list of schools without parking lot lights was presented at the Operations/Board Subcommittee meeting on 2/2/2012. A prioritized version of the list was also provided, but the sorting of the schools by priority was later found to be erroneous. A correctly sorted prioritized list of schools without parking lot lights was presented for the subcommittee's approval. Staff also recommended that the Subcommittee determine an initial group of schools that could be recommended to the Board of Education for installation of parking lot lights.

   Mr. Hunt moved and Dr. Beaty seconded that the list of schools with parking lot lighting needs be approved as presented and to move forward for the Board of Education's approval of the funding for the initial installation of parking lot lights for schools in Group A (Adams, Emerson, Fremont, Liberty, Longfellow and Madison Elementary Schools, and Central Middle School), in the amount of $256,000, using Measure B funds. The item will be presented for Board of Education approval at a future meeting.

4. **Resolution No. 2011/12-40 – Resolution of the Board of Education of the Riverside Unified School District Making Certain Required Written Findings Pursuant to the California Environmental Quality Act; Adopting the Final Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the John W. North High School Athletic Facilities Master Plan Completion Project (Project); Approving the Project; and Delegating Authority to Execute a Notice of Determination**

   Dr. Lewis stated that the approval of Resolution No. 2011/12-40 was presented for Board of Education approval at the February 6, 2012, meeting and that the item was pulled from the agenda at the request of Board Member Beaty so that the CEQA document could be discussed by the Subcommittee. Ms. Barbara Heyman with The Planning Center attended

the meeting and answered questions subcommittee members had concerning the Mitigated Negative Declaration (MND) with Mitigation Monitoring and Reporting Program, and Mitigated Negative Declaration and Initial Study.

Dr. Beaty moved and Mr. Hunt seconded to present the Mitigated Negative Declaration and the adoption of Resolution No. 2011/12-40, to the Board of Education for consideration of approval at the March 5, 2012.

5. **Resolution No. 2011/12-41 – Resolution of the Board of Education of the Riverside Unified School District Rendering City and County Zoning Ordinances Inapplicable to the John W. North High School Athletic Facilities Master Plan Completion Project Pursuant to Government Code Section 53094**

   Dr. Lewis stated that the approval of Resolution No. 2011/12-41 was presented for Board of Education approval at the February 6, 2012, meeting and that the item was pulled from the agenda at the request of Board Member Beaty so that the item could be reviewed and discussed by the Subcommittee. Ms. Barbara Heyman with The Planning Center attended the meeting and answered questions subcommittee members had concerning the resolution, which renders city and county ordinances inapplicable to the John W. North High School Athletic Facilities Master Plan Completion project.

   Dr. Beaty moved and Mr. Hunt seconded to approve that Resolution No. 2011/12-41 be presented to the Board of Education for consideration of approval at the March 5, 2012 Board of Education meeting.

6. **Resolution No. 2011/12-48 – Resolution of the Board of Education of the Riverside Unified School District Approving a School Facilities Needs Analysis, Adopting Alternative School Facility Fees in Compliance with Government Code Section 65995.5, 65995.6, and 65995.7, Adopting Responses to Public Comments Received, and Making Related Findings and Determinations**

   Dr. Lewis stated that Resolution No.2011/12-48 adopts the findings of the 2012 School Facilities Needs Analysis (SFNA), which is a routine item that it is done annually, and that if the resolution is approved by the Board of Education the new Level II fees would go into effect immediately. He added that the adoption of the 2012 SFNA remains in effect for one year, or until the adoption of a subsequent SFNA, whichever occurs first. Dr. Lewis said that the new Level II residential fee of $3.83 per square foot replaces the Level II fee of $3.26 per square foot which was adopted on March 21, 2011, and is set to expire on March 21, 2012. He mentioned that if the Level II fee were allowed to expire without adoption of a new Level II fee, the fee would revert to the District-adopted statutory amount, currently $3.20 per square foot. The resolution will be presented to the Board of Education for adoption at the March 19, 2012, meeting.

   Subcommittee members requested information concerning how much money was generated by collecting the developer fees last year in comparison with prior years, and the average home size and its impact. Mr. Fine added that developer fees funds are used to pay debt service; therefore, providing relief to the general fund.

   Mr. Hunt moved and Dr. Beaty seconded to present the approval of the 2012 School

Facilities Needs Analysis and the adoption of Resolution No. 2011/12-48, to Board of Education at the March 19, 2012, meeting.

7. Dugout Fencing

Dr. Lewis stated that because of concerns that have arisen regarding the design of the fencing in front of high school dugouts in respect to the safety of the players, staff was presenting the subcommittee with fencing options to review and to determine which design should be considered as the standard for installation on District baseball and softball fields. The subcommittee was also asked to decide whether all of the dugout fencing at schools should be retrofitted with the chosen standard.

Dr. Lewis presented background information on the item and stated that during the staff investigation it was discovered that 4 ft. is the most common height used for dugout fencing. Pictures of existing dugouts with a variety of fencing designs at District schools were presented to the subcommittee.

Subcommittee members discussed the information presented and agreed that a 6 ft. padded fence is the appropriate height to provide protection to players in the dugout. They also agreed to modify all current dugout fencing to the recommended standard. Subcommittee members requested information concerning the cost of green vinyl coated fencing compared with traditional chain link galvanized fence fabric. Staff will present the requested information along with the item for consideration and approval at a future subcommittee meeting.

Public Relations

8. Unscheduled Communications

There were no requests to speak to the subcommittee.

Members Comments:

There were no comments from the subcommittee members.

Adjournment

The meeting was adjourned at 3:54 p.m.

Riverside Unified School District
Operations Division

Board Operations Subcommittee Meeting
3380 14th Street, Riverside, Conference Room 1 A/B
March 15, 2012 – 2:30 p.m.

MINUTES

CALL TO ORDER: 2:30 p.m.

PRESENT: Mr. Tom Hunt, Dr. Charles L. Beaty, and Dr. Kirk Lewis

Also present were Mr. Mike Fine, Mrs. Janet Dixon, Mr. Kevin Hauser, and Ms. Lizette Delgado (Recorder)

Action Items

1. **Approval of Minutes**
   Dr. Beaty moved and Mr. Hunt seconded to approve the minutes of the February 2, 2012, meeting, as presented.

2. **Approval of Attendance Area Adjustments for Emerson, Highland, Longfellow, and Pachappa Elementary Schools**
   Dr. Lewis stated that on March 5, 2012, the Board of Education approved the re-purposing of Hyatt Elementary School with the STEM Academy and for that reason, the current Hyatt Elementary School attendance area needs to be assigned to other schools effective for the 2012-2013 school year.

   Mrs. Dixon stated that the staff recommendation is to assign the Hyatt attendance area to Emerson, Highland, and Longfellow Elementary Schools, as follows:

   - 132 students currently residing east of the 215 Freeway will attend Highland Elementary School.
   - 33 students currently residing in the area between Linden and University and west of the 215 Freeway and east of Chicago Avenue will attend Longfellow Elementary School.
   - 81 students currently residing west of Chicago and East of Ottawa between 12th street and Martin Luther King Boulevard will attend Emerson Elementary School.

   Mrs. Dixon added that in order to develop capacity at Highland, it is recommended that a portion of the Highland attendance area be assigned to Pachappa Elementary School as follows:

   - 149 students currently residing in the area south of University and north of Martin Luther King, and west of Ottawa and east of Kansas will attend Pachappa Elementary School.

Mrs. Dixon stated that transportation to Pachappa Elementary School will be provided for students residing in the above attendance area.

Dr. Lewis provided information concerning the schools' current ethnic make-up and the schools ethnic make-up with the proposed attendance area changes; intra-district and program improvement transfers; and application to the STEM Academy. He also mentioned that on Monday, March 12, 2012, a meeting was held with Hyatt parents to present the attendance area adjustment proposals and to receive their comments and input. Ms. Dixon shared that, in general, parents were mostly concerned with transportation issues. Dr. Lewis mentioned that a meeting with Highland parents has been scheduled to be held at 5:00 p.m. on March 15, 2012.

Dr. Beaty moved and Mr. Hunt seconded to approve the staff recommendation of adjusting the attendance areas of the aforementioned elementary schools be presented to the Board of Education for approval at the March 19, 2012, meeting.

3. Dugout Fencing

Dr. Lewis said that concerns have arisen concerning the design of the fencing in front of high school dugouts in respect to the safety of the players, and that this item was presented at the Operations/Board Subcommittee meeting held on February 28, 2012. He added that the Subcommittee generally agreed that a 6' fence should be the standard for protecting players in the dugouts. Dr. Lewis added that the subcommittee had asked that pricing for green vinyl coated chain link fencing be procured for price comparison purposes.

Staff presented information concerning the cost to upgrade all District baseball and softball fields' dugout fencing to the new standard. After briefly reviewing and discussing the information presented, the Subcommittee agreed to upgrade all District baseball and softball fields' dugout fencing. Top rail padding and wind screen material was added to the already approved dugout fencing standard of 6 feet. Schools will be given the option to choose from a galvanized fence or a green vinyl coated fence. The retrofitting of all District baseball and softball fields' dugout fencing to the new standard will cost approximately $29,000. Mr. Fine identified funding for this project.

Dr. Beaty moved and Mr. Hunt seconded to approve the upgrading of all District baseball and softball field's dugout fencing to the new standard and to present this item to the Board of Education for approval at a future Board meeting.

Public Relations

4. Unscheduled Communications

There were no requests to speak to the subcommittee.

Members Comments:

There were no comments from the subcommittee members.

Adjournment

The meeting was adjourned at 3:05 p.m.

Item No. 3

Arlington HS Athletic Facilities Master Plan Project

Riverside Unified School District

January 5, 2012

Project Cost Breakdown

Approved Project Budget	**$11,582,656**	
Sum of the Prime Bids	9,437,879	Bid Date November 29, 2011
CM Fees and General Conditions	1,225,420	
Construction Contingency	200,000	2% of Construction Budget
Soft Costs (A/E Fees, Testing & Inspection, CEQA, etc.)	1,496,784	
Total	12,360,083	
Project is Over Budget by	**777,427**	

Additive Alternates (Not Included in Bid Values - i.e. Not Included in this Project)

1	Ornamental Iron Fencing in lieu of Chain Link	152,942
2	Asphalt paving and curbs at Parking lot along Jackson	41,737
3	4'-0" high chain link fence around detention basins	12,427
4	Adjustment in tree size (36" box to 48" box)	46,000
5	Add additional pole mounted light fixtures at main site walkway	39,500
6	Provide colored concrete	147,533
	Total	440,139

	Possible Value Engineering (Scope Reduction) Options		**Impact to Schedule**
1	Remove New Tennis Courts from Scope - Existing to remain	450,000	Minimal
2	Change V Baseball and Softball Fields from Sod to Seed	40,000	Minimal
3	Delete 1 Concession Building near ball fields	300,000	Minimal
4	Change Bleachers to 5 Tier (off the shelf)	150,000	Minimal
5	Delete Track & Football Lighting and Emergency Generator	280,000	Minimal
6	Misc. Plumbing Contractor VE items	42,000	Minimal
7	Misc. Concrete Contractor VE items	65,000	Minimal
8	Minor Adjustment in tree quantity and size	30,000	Minimal
			Net Over Budget
	Total Value Engineering	1,357,000	(579,573)

Notes:

1 At the Operations/Board Subcommittee Meeting on December 16, 2011, the committee was under the impression that an additional $36,000 would be required to provide for a 1 Year Landscape Maintenance Contract, assuming that the Base Bid only included a 90 day maintenance period. Upon further review, the Base Bid includes a 1 Year Landscape Maintenance Contract, so no additional funds are required.

Staff Recommendations

1	Remove New Tennis Courts from Scope - Existing to remain	450,000
3	Delete 1 Concession Building near ball fields	300,000
6	Misc. Plumbing Contractor VE items	42,000
7	Misc. Concrete Contractor VE items	65,000
8	Minor Adjustment in tree quantity and size	30,000
	Total	887,000
	Net Over Budget based on Staff Recommendations	**(109,573)**

Operations/Board Subcommittee Recommendation

Leave in project	
Ok for reduction	300,000
Ok for reduction	42,000
Ok for reduction	65,000
Ok for reduction	30,000
Restore 3% Construction Contingency	-70,000
Total	367,000
Net Over Budget	**410,472**

Poly HS Athletic Facilities Master Plan Project

Riverside Unified School District

January 5, 2012

Project Cost Breakdown

Approved Project Budget	**$12,990,089**	
Sum of the Prime Bids	10,721,415	Bid Date December 15, 2011
CM Fees and General Conditions	1,370,209	
Construction Contingency	200,000	1.8% of Construction Budget
Soft Costs (A/E Fees, Testing & Inspection, CEQA, etc.)	1,679,009	
Total	13,970,633	
Project is Over Budget by	**980,544**	

Additive Alternates *(Not Included in Bid Values - i.e. Not Included in this Project)*

A	Landscape Maintenance Contract 1 year	50,000
	Total	50,000

	Possible Value Engineering (Scope Reduction) Options		**Impact to Schedule**
1	Change Bleachers to 5 Tier "off the shelf" (rec. by des. comm.)	170,000	Minimal
2A	Build 40 Meter Pool in lieu of 52 Meter	325,000	Rebid, extension of schedule
2B	Build 30 Meter Pool in lieu of 52 Meter	600,000	Rebid, extension of schedule
3	Delete Bulkhead (recommended by design committee)	200,000	Minimal
4	Delete Bleacher Canopy & Solar Thermal System on Canopy	200,000	Minimal
5	Delete Track & Football field lighting and Emergency Generator	280,000	Minimal
6	Misc. Concrete Contractor VE items	70,000	Minimal
			Net Over Budget
	Total Including 2A	1,245,000	(264,456)
	Total Including 2B	1,520,000	(539,456)

Notes:

1 Category 26 (Track and Field) has received a bid protest. The next low bidder is approximately $250,000 higher. It is recommended that Category 26 be rejected and rebid. It is anticipated that the construction cost will increase by approximately $100,000. This addition is included in the Sum of Prime Bids noted above.

	Staff Recommendations	
1	Change Bleachers to 5 Tier "off the shelf" (rec. by des. comm.)	170,000
3	Delete Bulkhead (recommended by design committee)	200,000
4	Delete Bleacher Canopy & Solar Thermal System on Canopy	200,000
5	Delete Track & Football field lighting and Emergency Generator	280,000
6	Misc. Concrete Contractor VE items	70,000
	Reduce contingency by 60,600	60,600
	Total	980,600
	Net Over Budget based on Staff Recommendations	**(56)**

Operations/Board Subcommittee Recommendation	
Ok for reduction	170,000
Ok for reduction	200,000
Leave in project	
Leave in project	
Ok for reduction	70,000
Restore 3% Construction Contingency	-108,000
Total	332,000
Net Over Budget	**648,544**

Ramona HS Athletic Facilities Master Plan Completion Project

Riverside Unified School District

January 5, 2012

Project Cost Breakdown

Approved Project Budget	**$3,942,946**	
Sum of the Prime Bids	3,714,723	Bid Date November 3, 2011
CM Fees and General Conditions	488,777	
Construction Contingency	186,116	4.4% of Construction Budget
Soft Costs (A/E Fees, Testing & Inspection, CEQA, etc.)	760,000	
Total	5,149,616	
Project is Over Budget by	**1,206,670**	

Additive Alternates (Not Included in Bid Values - i.e. Not Included in this Project)

A	Shade Structure at Sports Plaza	114,500
B	Ornamental Iron Fencing in lieu of Chain Link	162,500
C	Concrete/Brick Seat Benches	67,000
D	Patch/Repair Asphalt at Basketball Courts	87,000
E	Add Sod Turf in lieu of Hydro seed	8,500
	Total	439,500

	Possible Value Engineering (Scope Reduction) Options		**Impact to Schedule**
1A	Construct only 4 New Tennis Courts	200,000	Possible Schedule Reduction
1B	Remove all new tennis courts from scope - existing to remain	480,000	Possible Schedule Reduction
2	Delete Pool Practice Lighting (Musco)	150,000	Minimal
3	Delete Indoor Pool Storage	70,000	Major (Requires DSA Approval)
4	Delete Shade Structure at Pool	125,000	Minimal
5	Delete Solar Thermal System	25,000	Minimal
6	Reduce Storm Drain System	50,000	Minimal
7	Delete Pool Ticket/Concession Building	190,000	Moderate (Requires DSA Approval)
			Net Over Budget
	Total Including 1A	810,000	396,670
	Total Including 1B	1,090,000	116,670

Staff Recommendations

1B	Remove all new tennis courts from scope - existing to remain	480,000
2	Delete Pool Practice Lighting (Musco)	150,000
3	Delete Indoor Pool Storage	70,000
4	Delete Shade Structure at Pool	125,000
5	Delete Solar Thermal System	25,000
6	Reduce Storm Drain System	50,000
7	Delete Pool Ticket/Concession Building	190,000
	Reduce contingency by 117,000	117,000
	Total	1,207,000
Net Over Budget based on Staff Recommendations		**(330)**

Operations/Board Subcommittee Recommendation

Leave in project	
Leave in project	
Leave in project	
Leave in project	
Leave in project	
Ok for reduction	50,000
Leave in project	
Reduce Construction Contingency to 3%	76,174
Total	126,174
Net Over Budget	**1,080,496**

Riverside Unified School District
Operations Division

High School Athletic Facilities Master Plan Projects
Bid Results Summary
January 10, 2012

Project	Bid Results	Value Engineering/Scope Reduction Items		Operations/Board Subcommittee Recommendation: Revised Bid Results		Budget	Over Budget	
^Arlington	12,360,083	887,000	367,000	11,473,083	11,993,083	11,582,656	-109,573	410,427
Poly	13,970,633	980,600	332,000	12,990,033	13,638,633	12,990,089	-56	648,544
Ramona	5,149,616	1,207,000	126,174	3,942,616	5,023,442	3,942,946	-330	1,080,496
*North								
Total	31,480,332	3,074,600	825,174	28,405,732	30,655,158	28,515,691	-109,959	2,139,467

Available Measure B Resources

Available Contingency	2,604,842
Less Over Budget	2,139,467
Balance of Contingency	465,375
Approved Measure B Projects not Implemented	4,679,461

Important Factors:

Bid life ends: Ramona -Feb. 1, Arlington - March 28, Poly - April 14

^ 109,573 balance recommended to be added to Arlington construction contingency

*North H.S. Athletic Facilities Master Plan Completion Project will bid in March/June

3% Construction Contingency is considered minimal

No additive alternates are included in the projects

North HS Athletic Facilities Master Plan Completion Project

Riverside Unified School District

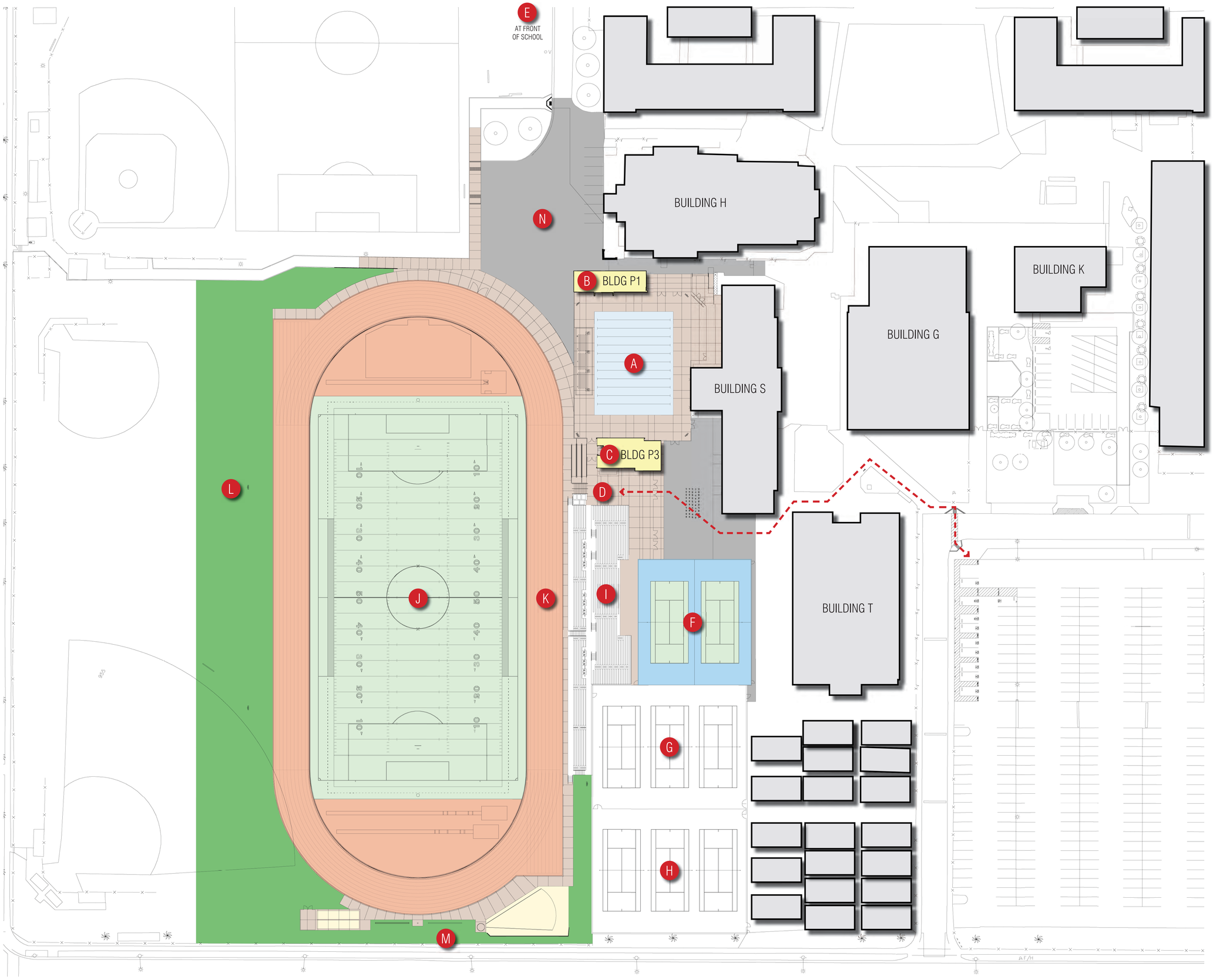
March 27, 2012

Project Cost Breakdown

Original Board Approved Budget		$10,430,648	
Board Approved Blue Ribbon Task Force		$2,400,000	
Total Project Budget		**$12,830,648**	
Sum of the Prime Bids		10,329,521	Bid Date May XX, 2012
CM Fees and General Conditions		1,300,018	
Construction Contingency		309,886	3.0%
Soft Costs (A/E Fees, Testing & Inspection, CEQA, etc.)		1,614,942	
Escallation		413,181	
Owner Provided & Installed FF&E		15,000	
Completed Projects		438,287	
	Total	14,420,835	
	Project is Over Budget by	**1,590,187**	

Possible Value Engineering (Scope Reduction) Options			**Impact to Schedule**
1.1	Remove P2 Building	759,000	minimal
1.2	Remove Visitor Bleachers at west side 1300	401,983	none
1.3	Remove slab under bleacher on west side	27,600	none
1.4	Remove fencing need for West side bleacher	41,400	none
1.5	Deduct Handicap parking, new paving, grading	61,216	minimal - DSA review implications
1.6	AC Paving at Entry instead of Concrete at P2 Building area	17,250	minimal - DSA review implications
1.7	Remove Enhanced Audio Sound System (West Side Bleachers)	69,000	none
1	Deduct Replace lights for baseball field	230,000	none
2	Reduce Track from 9 lanes to 8 lanes	69,000	possibly major - DSA review implications
3	Remove Additional Scoreboard for Track (football scoreboard to remain)	23,000	none
4	Delete Pool practice lighting (musco) -add alternative exterior lighting	100,000	minimal - DSA review implications
5	Some additional FF&E (~$100K)	100,000	none
6	Remove flat work to visitor bleachers	22,264	none
7	Remove basketball courts at existing staff parking, 2 1/2 courts	67,376	none
8	Remove ornamental fencing and replace with chain link	46,000	minimal
9	Musco Lights added to Stadium Lighting for behind bleachers	34,500	none
10	Deduct Press Box and Elevator	201,250	possibly major - DSA review implications
			Net Over Budget
	Total	2,270,839	**(680,652)**

Staff Recommendations			
1.1	Remove P2 Building	759,000	minimal
1.2	Remove Visitor Bleachers at west side 1300	401,983	none
1.3	Remove slab under bleacher on west side	27,600	none
1.4	Remove fencing need for West side bleacher	41,400	none
1.5	Deduct Handicap parking, new paving, grading	61,216	minimal - DSA review implications
1.6	AC Paving at Entry instead of Concrete at P2 Building area	17,250	minimal - DSA review implications
1.7	Remove Enhanced Audio Sound System (West Side Bleachers)	69,000	none
1	Deduct Replace lights for baseball field	230,000	none
	Total Value Engineering	1,607,449	
Value Engineering Reductions		1,607,449	
Total Over Budget		1,590,187	
	Net Over Budget based on staff recommendations	**(17,262)**	



LEGEND

A. NEW 30M X 25Y POOL AND COVERED BLEACHERS WITH SOLAR PANELS. 200 TOTAL SEATS.
B. NEW POOL EQUIPMENT & STORAGE BUILDING
C. NEW TICKET, RESTROOM & CONCESSION BUILDING
D. NEW STAIR & RAMP TO FIELD
E. NEW MARQUEE SIGN AT FRONT OF SCHOOL
F. TWO NEW TENNIS COURTS PER NFHS STANDARDS
G. RESURFACE AND RESTRIPE THREE EXISTING NORTH TENNIS COURTS
H. REPLACE THREE SOUTH TENNIS COURTS
I. NEW BLEACHERS WITH +/- 2,100 SEATS
J. NEW SYNTHETIC TURF FIELD
K. NEW 8 LANE SYNTHETIC TRACK
L. PRACTICE MUSCO LIGHTS (TYPICAL OF 4) AT FOOTBALL FIELD / TRACK ONLY
M. NEW SCOREBOARD FOR FOOTBALL / TRACK
N. NEW AC PAVING AND STRIPING

EXISTING BUILDINGS

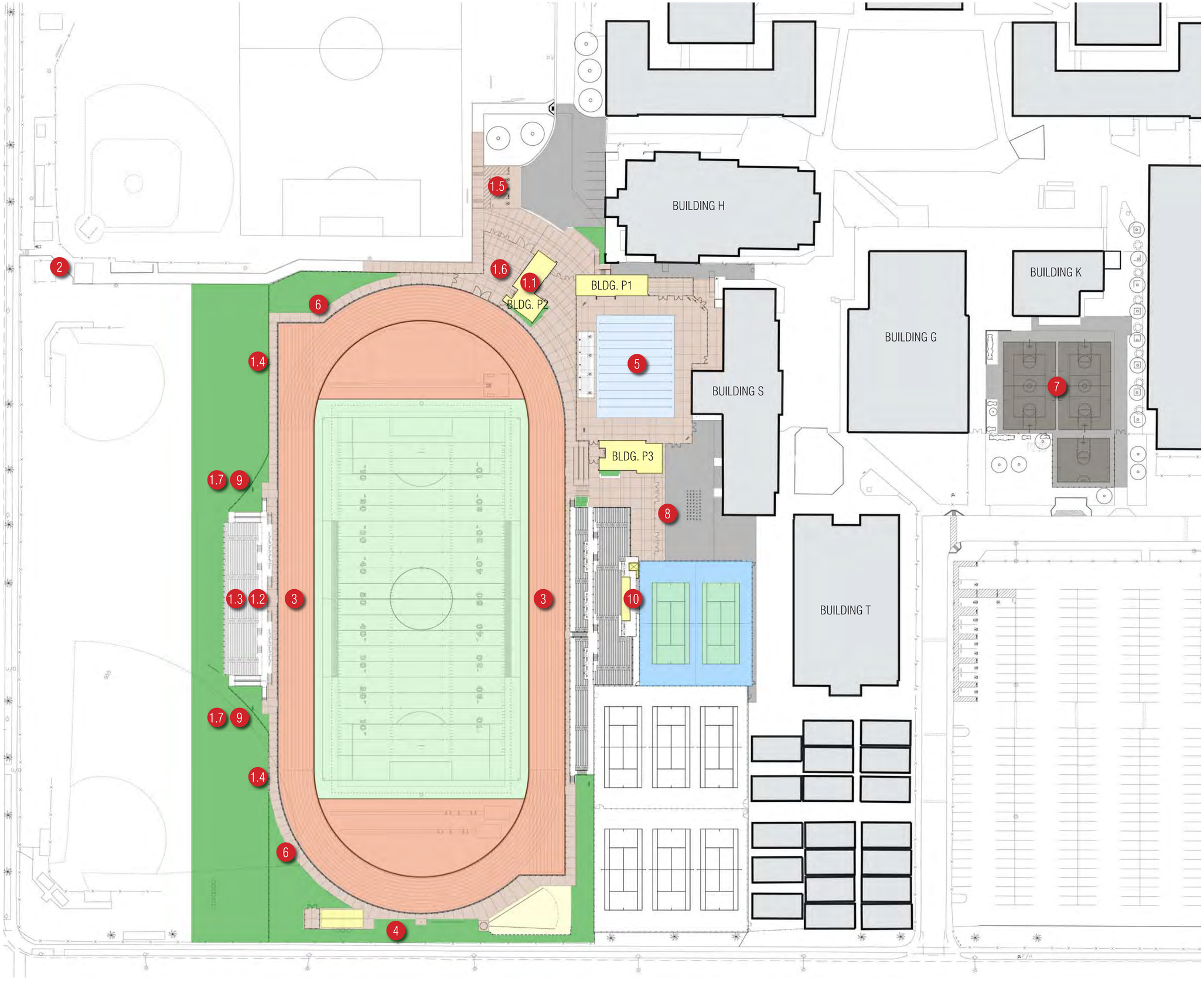
NEW BUILDINGS

PATH OF TRAVEL

HMC Architects

SCOPE OF WORK (WITHOUT ALTERNATES)

RIVERSIDE UNIFIED SCHOOL DISTRICT
NORTH HIGH SCHOOL
03.07.12
NORTH



LEGEND

1.1. BUILDING P2, CANOPY, ORNAMENTAL FENCING AND GATES
1.2. VISITOR BLEACHERS AT WEST SIDE OF TRACK (+/- 1300 SEATS)
1.3. 2-1/2" CONCRETE SLAB UNDER VISITOR BLEACHERS AT WEST SIDE OF TRACK
1.4. FENCING AT WEST SIDE OF TRACK - REQUIRED FOR BLEACHERS
1.5. ADDITIONAL ACCESSIBLE PARKING NEAR BUILDING P2
1.6. USE CONCRETE PAVING AT VISITOR BUILDING P2 ENTRY IN LIEU OF AC PAVING
1.7. ENHANCED AUDIO SOUND SYSTEM (FOR VISITOR BLEACHERS)
2. REPLACED LIGHTS POLES AT VARSITY BASEBALL FIELD
3. ENLARGE SYNTHETIC TRACK FROM 8 LANES TO 9
4. ADDITIONAL TRACK SCOREBOARD
5. PRACTICE LIGHTS AND POLES FOR SWIMMING POOL
6. ADDITIONAL CONCRETE WALK TO ACCESS VISITOR BLEACHERS
7. BASKETBALL COURTS AT STAFF PARKING LOT
8. REVISE CHAIN LINK FENCING AND GATES TO ORNAMENTAL AT HOME ENTRY
9. ADDITIONAL LIGHTS FOR AREA= BEHIND VISITOR BLEACHERS
10. PRESSBOX AND ELEVATOR TOWER

Item No. 4

Riverside Unified School District
Operations Division
April 11, 2012
Prioritization of Remaining Measure B Projects

Remaining Projects	Location	Estimate 4/11/2012	Rev Cum Total	
Athletic Facilities Master Plan Completion (supplement)	North	$1,000,000	$ 1,000,000	
Parking Lot Lights, Priority A	Various	$256,000	$ 1,256,000	
Priority Energy Management System Upgrades	Various	$1,207,500	$ 2,463,500	
Restroom Renovations Phase II	Multiple Sites	$1,000,000	$ 3,463,500	
Career Tech Ramona Theater (Match to State Amount)	Ramona	$541,000	$ 4,004,500	
Ramona Theater Modernization	Ramona	$2,000,000	$ 6,004,500	
Energy Projects to assist General Fund	Various	$2,000,000	$ 8,004,500	Assumes $2 million in energy proj
Parking Lot Reconfiguration	Victoria	$334,750	$ 8,339,250	$159,150 savings per year
Remaining Measure B Contingency		$465,375	$ 8,804,625	
Athletic Field Renovation	Chemawa	$1,000,000	$ 9,804,625	
Athletic Field Renovation	Sierra	$1,000,000	$ 10,804,625	
Athletic Field and Slope Renovation	Earhart	$250,000	$ 11,054,625	
Land Cost Available	Elementary School #34	$2,023,815	$ 13,078,440	
Land Cost Dedicated to Cash Flow (1,2)	Elementary School #34	$1,976,185	$ 15,054,625	

Unrestricted Measure B Funds		7,077,790.00	
Project Savings (New and Mod)		2,219,918.97	
Total Measure B Available		9,297,708.97	
State Project Savings			
Project Savings for New Construction Only	$	2,031,982	Recommend saving for FAMMS and Liberty Wings?
Project Savings for Modernization Only	$	730,170	Move forward Mod/Energy project (Highgrove?)
Total State Project Savings	$	2,762,152	

(1) Bond Sales have resumed, but there is a significant backlog in bond fund need. Uncertain as to when funds will be available, but approximate 1 year del
Ramona Career Tech (Theater), Highgrove Mod/MPR
(2) Maxine Frost Actuals to be reimbursed by future CFD

3/16/2012

Ramona Theater Refurbishment Estimate

				Fully Burdened	Cum Total
*	1	ADA Upgrades	$132,991	$210,658	$210,658
	2	Emergency Light and fire alarm	$55,000	$87,120	$297,778
	3	Seismic Upgrade	$505,732	$801,079	$1,098,857
*	4	Sound System Upgrade	$272,000	$430,848	$1,529,705
	5	Replace Seating	$421,800	$668,131	$2,197,836
*	6	Power upgrade	$506,000	$801,504	$2,999,340
*	7	Dimmer and Lighting	$283,300	$448,747	$3,448,088
	8	HVAC (Boiler and Air Handler)	$560,000	$887,040	$4,335,128
	9	Cosmetic Items	$103,000	$163,152	$4,498,280

Subtotal	$2,839,823	
Escalation 10%	$283,982	
Contingency 20%	$624,761	
Soft Costs 20%	$749,713	
Total	$4,498,280	
* In grant application CTE Grant	$579,687	
Local funding required	$3,918,593	

** cosmetic Items include: paint, carpet, storefront window assembly, curtain, projector and screen

Riverside Unified School District
Operations Division

Item No. 5

September 14, 2010

Potential Future Bond Project List and Estimate

Project	Location	Estimate	Notes
High Priority Seismic Retrofits Identified in Survey	Various	$31,187,009	
ADA Improvements Identified in Survey	Multiple Sites	$22,942,976	
Implementation of Energy Master Plan	Various	TBD	RFQ asks firms to rank first $100M in projects
High School Master Plan (including CTE facilities)	Various	TBD	
Practice Gym	Arlington	$4,000,000	1 basketball court
Practice Gym	King	$4,000,000	1 basketball court
Practice Gym	Poly	$4,000,000	1 basketball court
Full Sized Gym	North	$7,000,000	2 court gym assumed
Elementary School #34	**Elementary School #34**	$10,000,000	Assumes relocation of Lincoln
Campus Access Control/Security – Admin. Bldg	**Adams**	**$75,000**	
Campus Access Control/Security – Admin. Bldg	**Alcott**	**$50,000**	
Campus Access Control/Security – Admin. Bldg	**Castle View**	**$50,000**	
Campus Access Control/Security – Admin. Bldg	**Emerson**	**$100,000**	
Campus Access Control/Security – Admin. Bldg	**Grant**	**$500,000**	
Campus Access Control/Security – Admin. Bldg	**Highland**	**$50,000**	
Campus Access Control/Security – Admin. Bldg	**Hyatt**	**$75,000**	
Campus Access Control/Security – Admin. Bldg	**Jackson**	**$100,000**	
Campus Access Control/Security – Admin. Bldg	**Jefferson**	**$500,000**	
Campus Access Control/Security – Admin. Bldg	**Longfellow**	**$500,000**	
Campus Access Control/Security – Admin. Bldg	**Madison**	**$300,000**	
Campus Access Control/Security – Admin. Bldg	**Monroe**	**$300,000**	
Campus Access Control/Security – Admin. Bldg	**Victoria**	**$100,000**	
Library	**Monroe**	**$1,250,000**	
Library	Adams	$1,250,000	
Library	Alcott	$1,250,000	
Library	Highgrove	$1,250,000	
Library	Jackson	$1,250,000	
Library	Jefferson	$1,250,000	
Library	Madison	$1,250,000	
Library	Magnolia	$1,250,000	
Library	Washington	$1,250,000	
Complete Landscape/Hardscape Renovation	**North**	**$3,000,000**	
Complete Landscape/Hardscape Renovation	**Arlington**	**$3,000,000**	
Complete Landscape/Hardscape Renovation	**Poly**	**$1,000,000**	
Complete Landscape/Hardscape Renovation	**Central**	**$500,000**	
Complete Landscape/Hardscape Renovation	**Chemawa**	**$900,000**	
Complete Landscape/Hardscape Renovation	**Sierra**	**$900,000**	
Complete Landscape/Hardscape Renovation	**Bryant**	**$150,000**	
Complete Landscape/Hardscape Renovation	**Castle View**	**$150,000**	
Complete Landscape/Hardscape Renovation	**Fremont**	**$750,000**	
Complete Landscape/Hardscape Renovation	**Longfellow**	**$750,000**	
Complete Landscape/Hardscape Renovation	**Magnolia**	**$150,000**	
Portable Replacement/Relocation	**Multiple Sites**	**$1,000,000**	
MPR	**Sunshine**	**$4,000,000**	
Assorted site improvement projects	Various	TBD	
Total		**$113,329,985**	

Riverside County Bond Elections

Date Order

Date	District	Amount	Type	% to pass	%	P/F
June 2012	Jurupa USD	$125,000,000	Prop 39	55	N/A	
June 2012	Val Verde USD	$178,000,000	Prop 39	55	N/A	
Nov 2010	Mt. San Jacinto CCD	$47,000,000	Prop 39	55	52.57	F
Nov 2008	Beaumont USD	$125,000,000	Prop 39	55	61.45	P
Nov 2008	Colton Joint USD	$225,000,000	Prop 39	55	74.06	P
June 2008	Val Verde USD	$43,440,000	Prop 39	55	69.08	P
Feb 2008	Menifee Union SD	$31,460,000	Prop 39	55	56.00	P
Feb 2008	Palm Springs USD	$516,000,000	Prop 39	55	61.00	P
Nov 2007	Alvord USD	$196,000,000	Prop 39	55	62.02	P
Nov 2006	Banning USD	$63,000,000	Prop 39	55	59.12	P
Nov 2006	Corona-Norco USD	$250,000,000	Prop 39	55	61.73	P
Nov 2006	Hemet USD	$149,000,000	Prop 39	55	58.12	P
Nov 2006	Perris Elementary	$25,000,000	Prop 39	55	70.47	P
Nov 2006	San Jacinto Unified	$150,000,000	Prop 39	55	66.92	P
June 2006	Banning USD	$63,000,000	Prop 39	55	52.98	F
June 2006	Hemet USD	$149,000,000	Prop 39	55	52.44	F
June 2006	Mt. San Jacinto CCD	$720,000,000	Prop 39	55	45.09	F
June 2006	Murrieta Valley USD	$120,000,000	Prop 39	55	57.38	P
June 2006	Nuview USD	$39,600,000	Prop 39	55	56.39	P
March 2004	Desert CCD	$346,500,000	Prop 39	55	68.59	P
Nov 2004	Palm Springs USD	$122,000,000	Prop 39	55	72.34	P
Nov 2004	Perris Union HSD	$46,000,000	Prop 39	55	57.62	P
March 2004	Moreno Valley USD	$50,000,000	Prop 39	55	67.31	P
March 2004	Perris Union HSD	$38,000,000	Prop 39	55	53.91	F
March 2004	Riverside CCD	$350,000,000	Prop 39	55	60.35	P
Nov 2002	Banning USD	$12,000,000	Prop 39	55	67.80	P
Nov 2002	Menifee Union SD	$14,500,000	Prop 39	55	59.15	P
Nov 2002	Murrieta Valley USD	$40,400,000	Prop 39	55	70.40	P
March 2002	Hemet USD	$60,000,000	Prop 39	55	62.78	P
Nov 2001	Desert Sands USD	$450,000,000	Prop 39	55	80.70	P
Nov 2001	Jurupa USD	$58,000,000	Prop 39	55	64.65	P
Nov 2001	Riverside USD	$175,000,000	Prop 39	55	68.31	P
Nov 2000	Palm Springs USD	$75,000,000	Prop 39	55	73.10	P
Nov 1999	Perris Union HSD	$16,000,000	Prop 39	55	70.00	P

Other Riverside Elections

Nov, 20	Riverside Library	$19/parcel	Parcel	66.67	85.03	P
Nov. 20	Fire Department	$20,000,000	GO	66.67	70.87	P
March,	Riverside Library	$19/parcel	Parcel	66.67	69.03	P

RUSD
RIVERSIDE
UNIFIED SCHOOL DISTRICT

DRAFT

Riverside Unified School District

Understanding Voter Attitudes toward Public Education and Support for School Bond Measures

921-2761

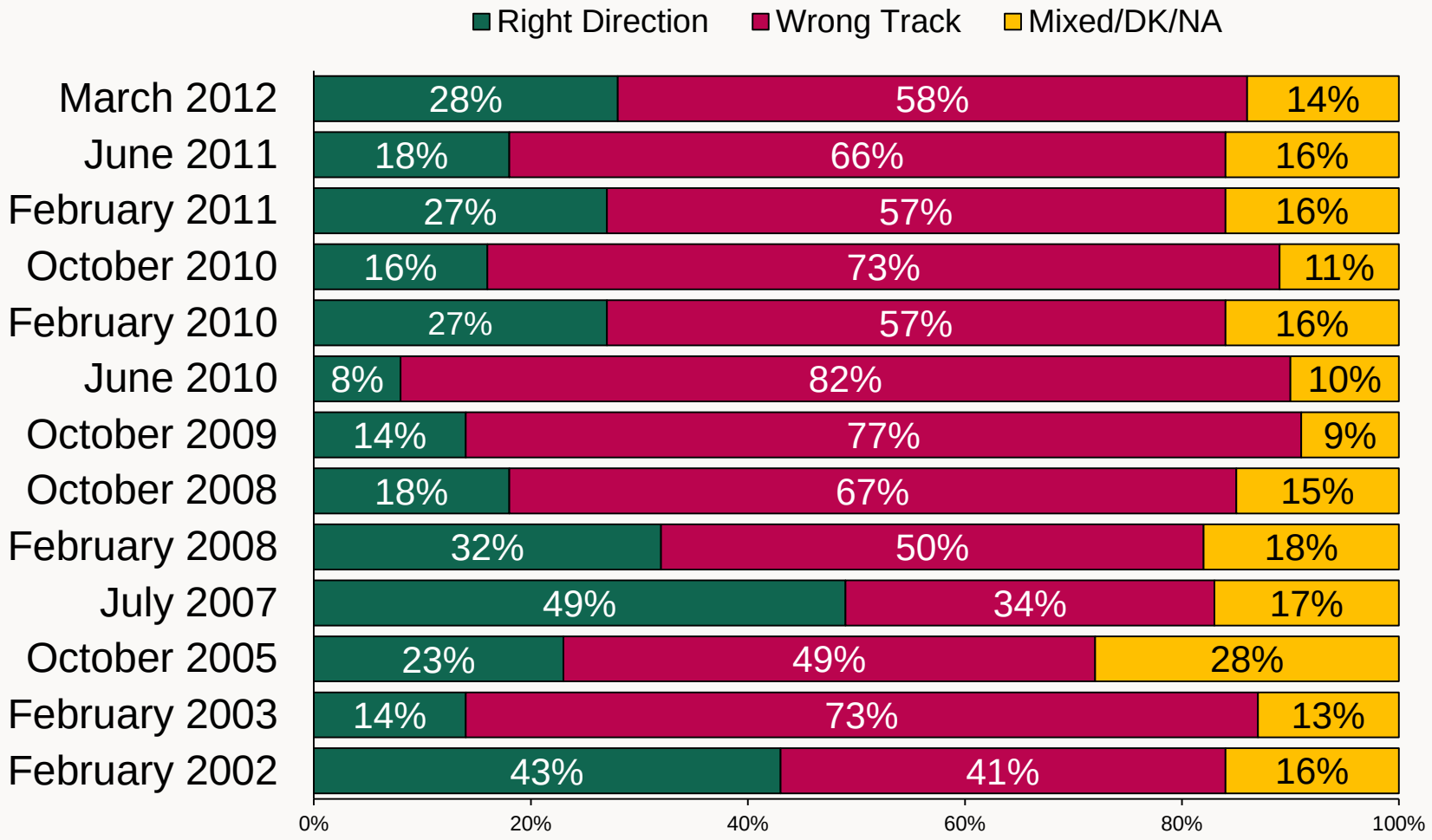
Fairbank, Maslin, Maullin, Metz & Associates - FM3

Public Opinion Research & Strategy

SANTA MONICA • OAKLAND • MADISON • MEXICO CITY

Fairbank, Maslin, Maullin, Metz & Associates
FM3

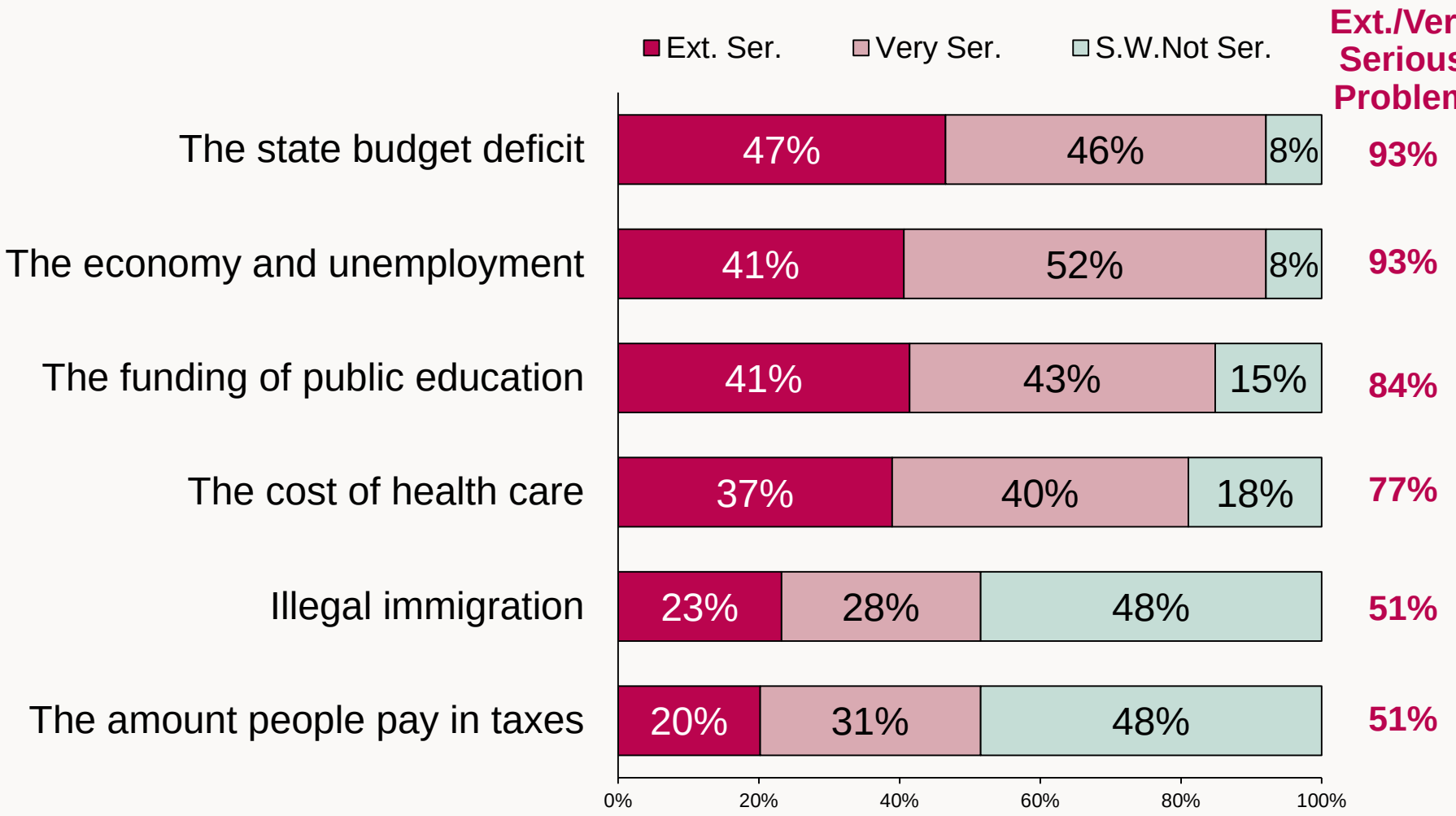
State of California Right Direction / Wrong Track



2. Would you say that things in the state of California are generally headed in the right direction or do you feel that things are pretty seriously off on the wrong track?

Fairbank, Maslin, Maullin, Metz & Associates
FM3

Economic issues and education funding are the clear top priorities for California voters.

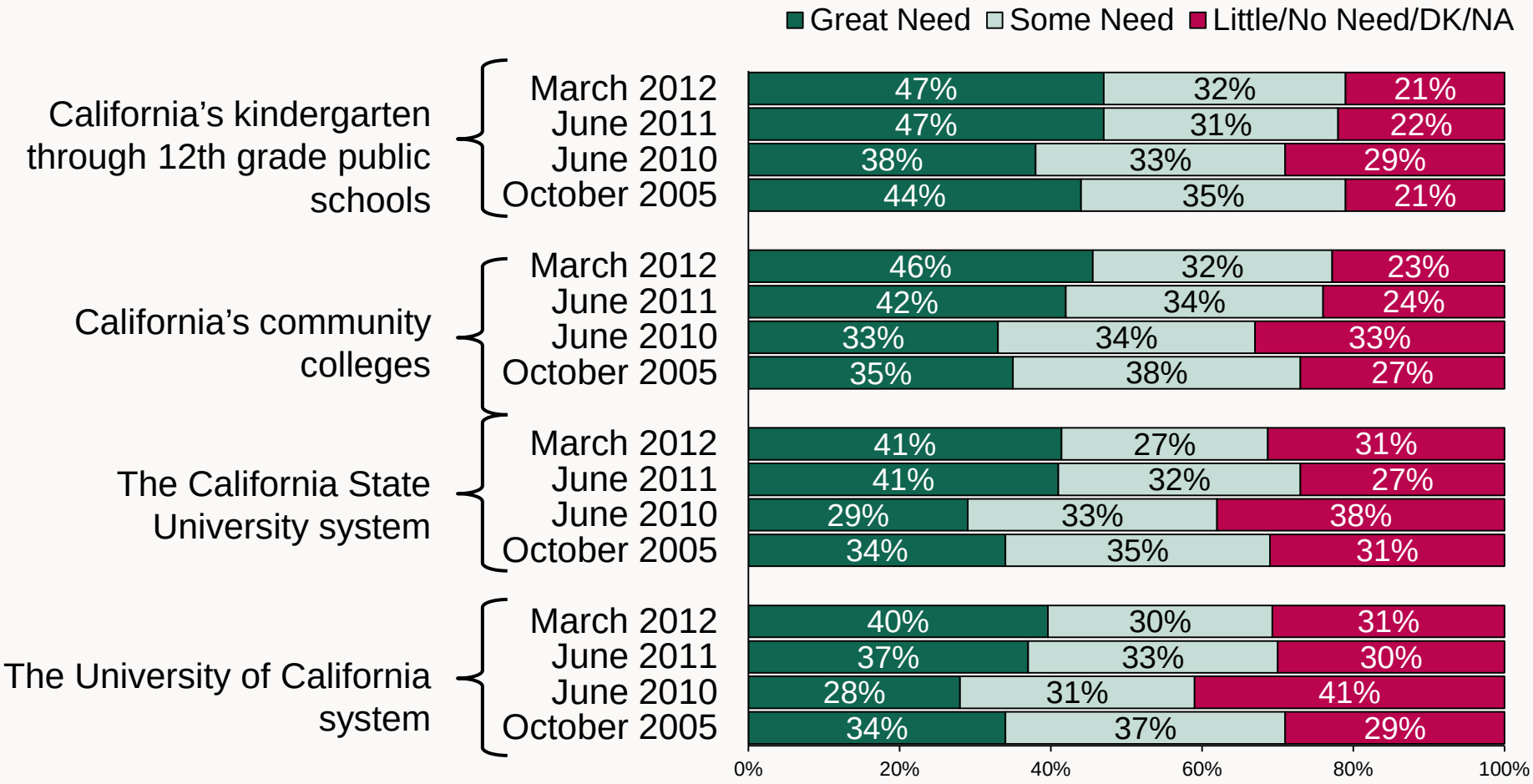


4. Please tell me whether you think each of the following issues is an extremely serious problem, a very serious problem, a somewhat serious problem, or not a serious problem in California.

Fairbank, Maslin, Maullin, Metz & Associates
FM3

Consistent with last year, voters believe California's K-12 public schools and community colleges have a significant need for additional funding.

(Ranked by % 2010 Great Need)

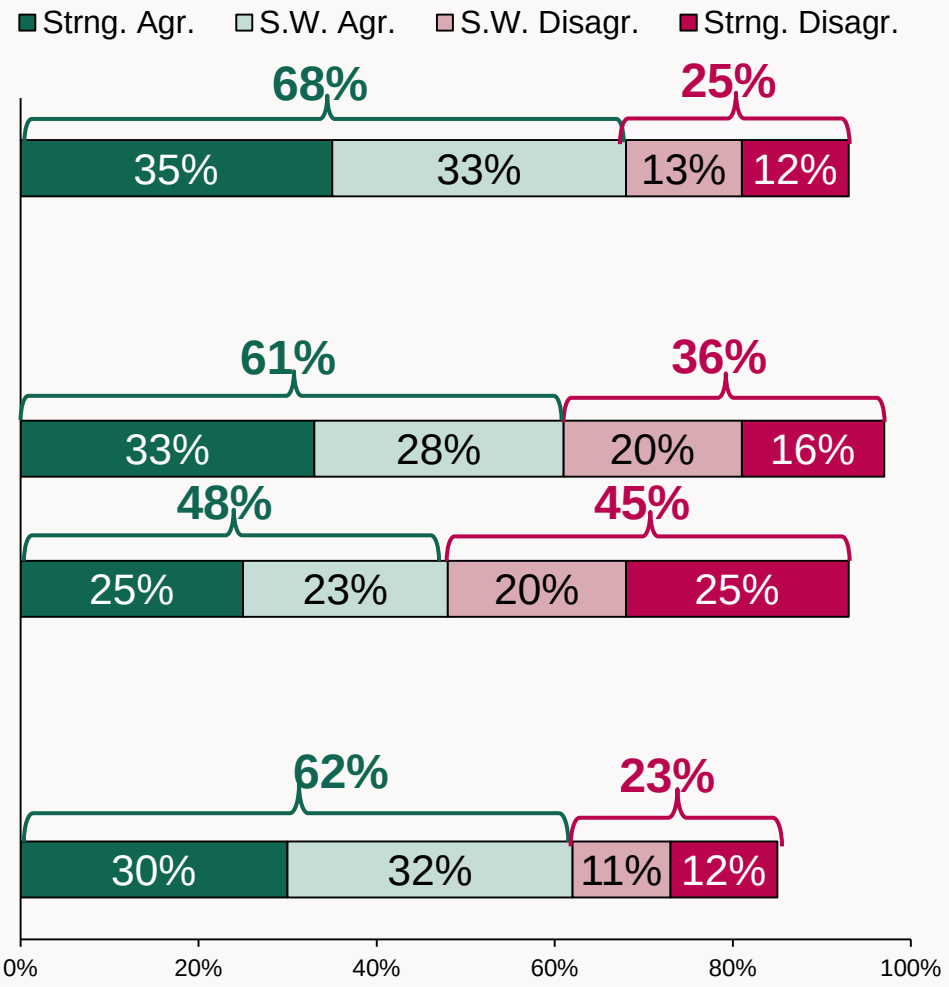


3. Generally speaking, would you say that _____ have a great need for additional funding, some need, a little need or no real need for additional funding?

Fairbank, Maslin, Maullin, Metz & Associates
FM3

Most California voters believe schools need improvements and these upgrades must be funded despite the state's fiscal problems.

(Ranked by % Strongly Agree)

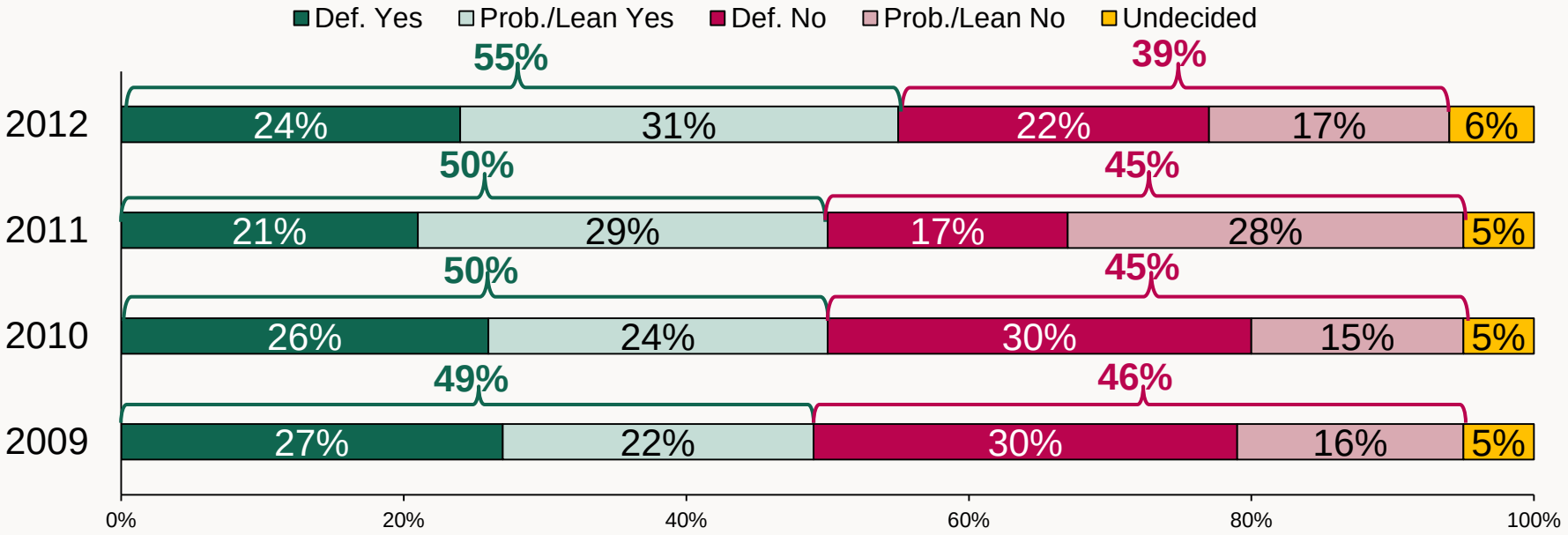


9a/c/e. I am going to read you a list of statements. I'd like you to tell me whether you generally agree or disagree. ^Not Part of Split Sample/O Worded differently in 2011: Building new K through twelve schools is a top priority that must be funded despite the state's fiscal problems

Fairbank, Maslin, Maullin, Metz & Associates
FM3

Vote on $5 Billion Statewide School Bond Measure

KINDERGARTEN-COMMUNITY COLLEGE PUBLIC EDUCATION FACILITIES BOND ACT OF 2012. This $5 billion bond issue will provide needed funding to repair and upgrade older schools to meet state health and safety standards; upgrade technology, science labs, and libraries; improve vocational education facilities; and accommodate the growing student enrollment in K-thru-12 public schools and community colleges. Bond funds must be spent according to strict accountability measures. This bond measure would result in about $8 billion in state costs to pay off both the principal, $5 billion, and interest, $3 billion, costs on the bonds, requiring payments of $400 million per year.



4a. There may be several statewide measures to raise new revenues for education and local public schools on the ballot during the November 2012 election. Please tell me if you would yes in favor or no to oppose that particular ballot measure.

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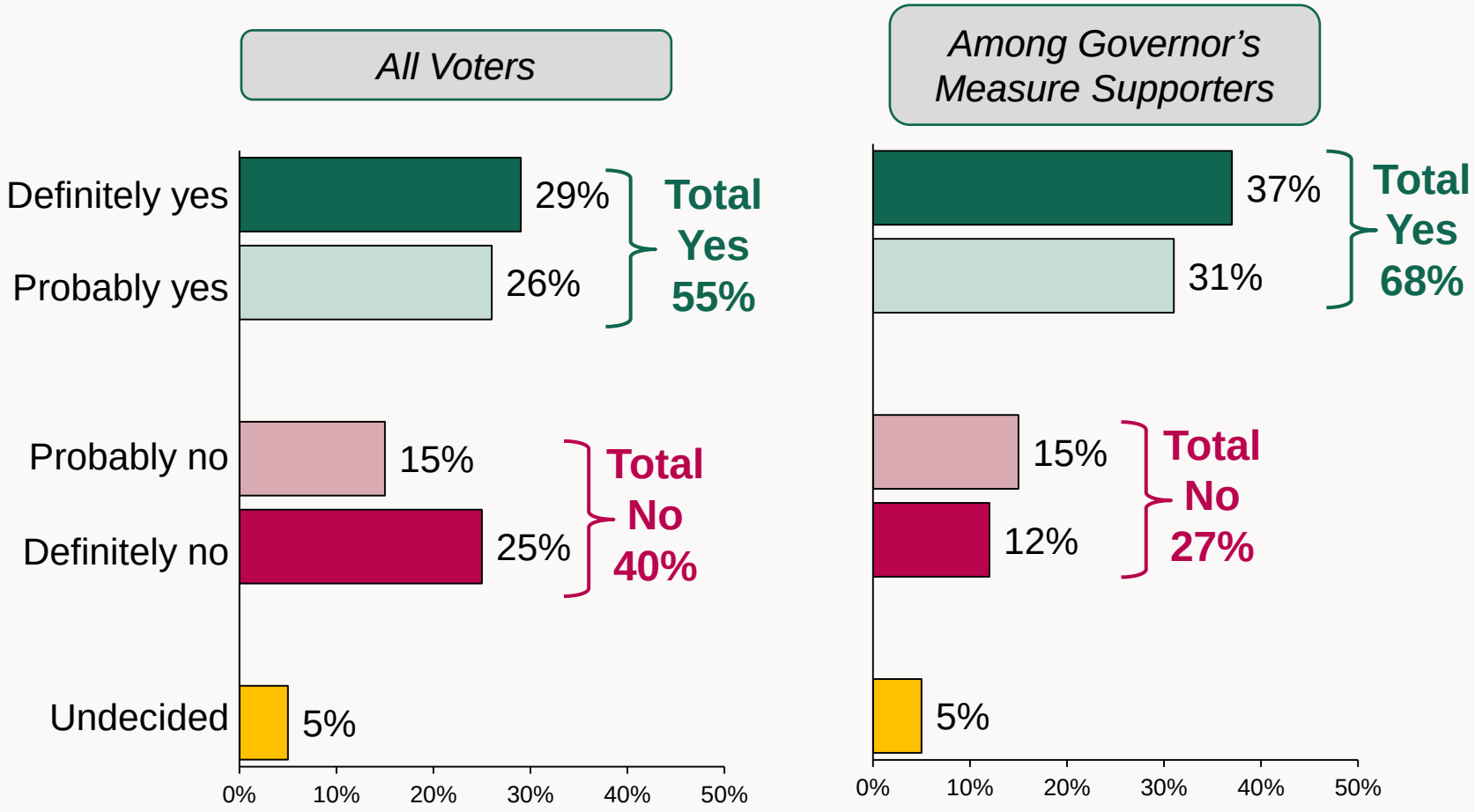
A 55 percent majority supports putting the school bond on the ballot even if the other three tax measures are on the November 2012 ballot.



7/7 by 4b Total Yes Voters. Having heard this, let me ask you, do you think the statewide school bond measure that we have been discussing should also be on the November 2012 ballot?

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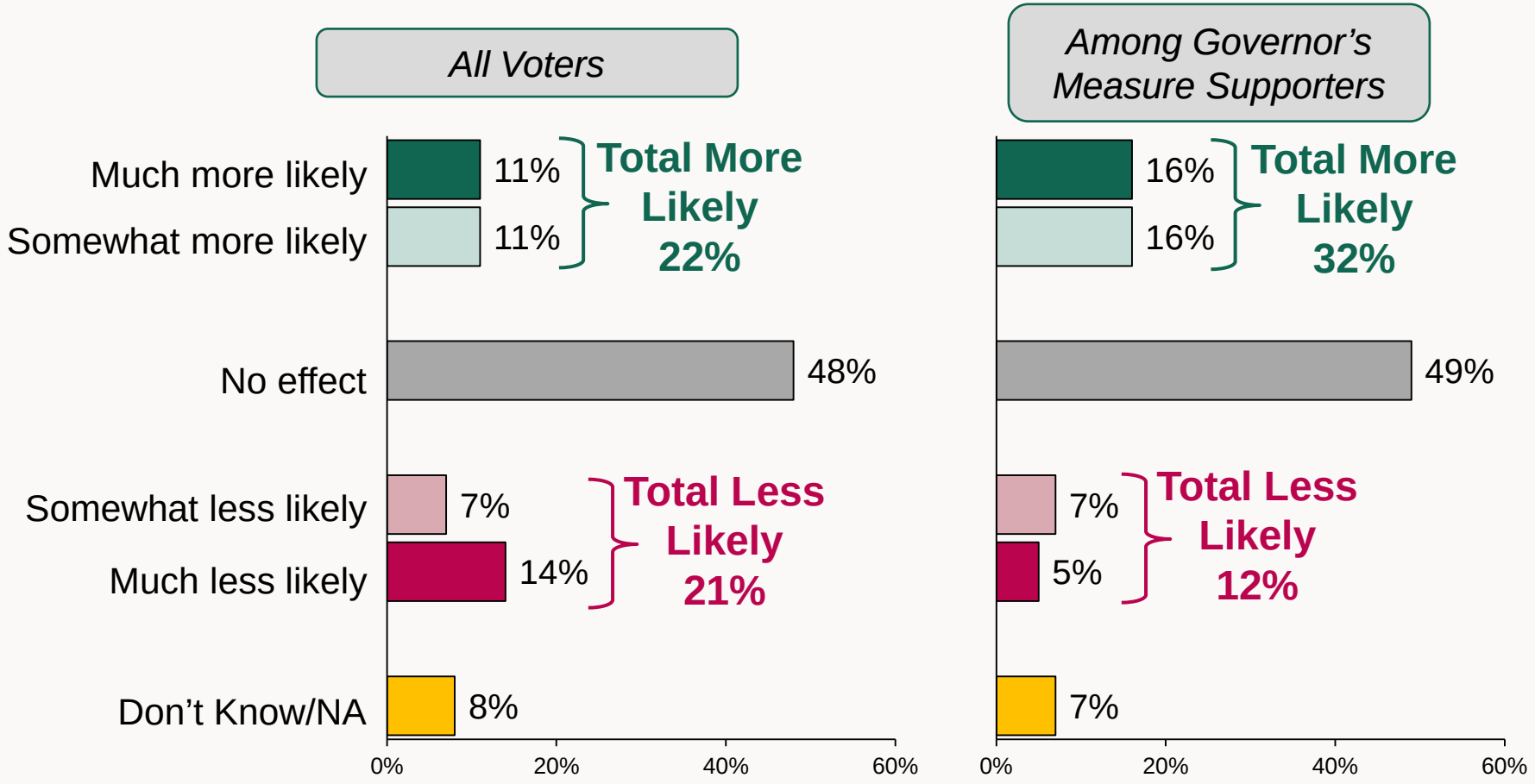
Half say the school bond measure appearing on the ballot would have no effect on their support for the Governor's measure, and an additional two-in-ten say it would make them more likely to support Brown's initiative.



8/8 by 4b Total Yes Voters. If this statewide school bond measure does appear on the November 2012 ballot, would that make you more likely or less likely to vote in favor of Governor Brown's ballot measure? If it has no effect on your thinking either way, you can tell me that too.

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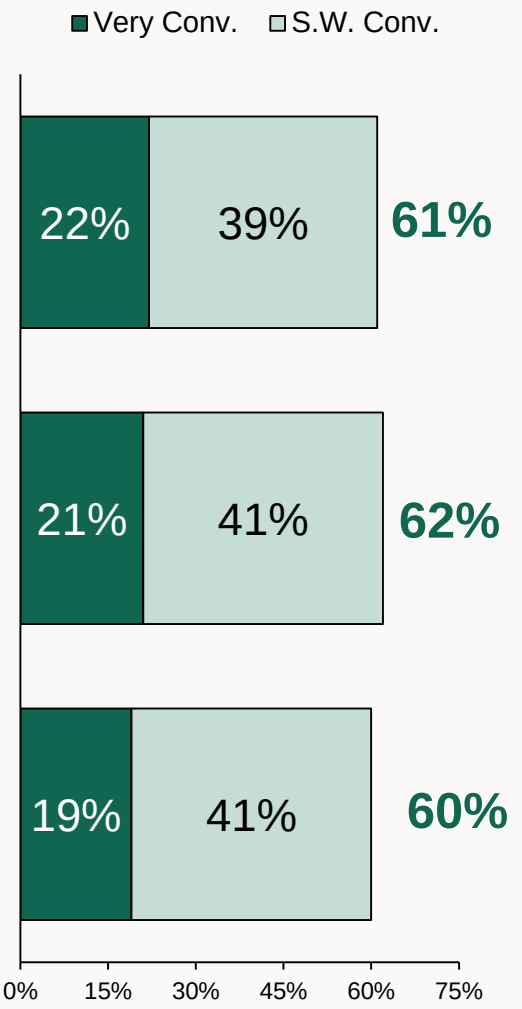
Messages in Support of Placing a School Bond Measure on the November Ballot

(Ranked by % Very Convincing)

(CUTS) ***State funding for public education has been cut by $18 billion***, and more cuts are likely this year due to the state budget deficit. As a result, the state is not funding emergency repairs to neighborhood schools, and very soon matching grants from previously approved school bond measures will run out. Passing a statewide school bond measure would provide our neighborhood public schools and community colleges with ***a secure source of funding that Sacramento can not touch***.

(OLD SCHOOLS) By 2014, K-through-12 public schools and community colleges will need $5 billion in upgrades, ***but state cuts to education have forced 70% of school districts to stop repairing neighborhood schools***. If a statewide bond measure is not approved, too many students will have to learn in classrooms that do no meet current health and safety standards, and students will not have access to up-to-date classroom technology, science labs, and job training programs.

(JOBS) Economic studies show passing a statewide school bond will create and protect tens of thousands of good-paying, local jobs. By providing local schools and community colleges with matching grant funds to invest in repairs and upgrades ***a statewide school bond measure is expected to create as many as 65,000 jobs over the next several years***.



13. I am going to read you some statements made by people who support placing a statewide school bond measure on the ballot in an upcoming election. Please tell me whether you find it very convincing, somewhat convincing, or not convincing to put a statewide school bond measure on the ballot.

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Why 2012 is shaping up to be the "year of education" in the State of California.

While the economy/jobs will continue to be the top concern and drive the Presidential debate, California voters' attention will also be heavily focused on education solutions:

- The recently announced "CFT/Gov. Brown" ballot measure campaign will engage in a well-funded statewide paid media campaign to galvanize support for a temporary tax increase to avert deeper cuts to public education that would have severe repercussions -- economically and socially -- for years to come.

- Local school ballot measure campaigns for bonds and education parcel taxes will target voters at the grassroots level – particularly younger voters, women, Independents, and Latinos – to increase turnout among segments of the electorate most likely to support local ballot measures for public schools.

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And, like previous years, voters are likely to approve numerous local tax and bond measures passed for schools and other services – especially in a Presidential election year.

Election	Total Local Measures Passed	City, County & Special District Measures	School Bond Measures	Success Rate of School Bond Measures
November 2010	109	63	46*	**73%**
November 2008	***233***	***129***	***85***	***92%***
November 2006	132	75	55	**82%**

*Source: Data on Local Ballot Measures compiled from the website: Californiacityfinance.com. *Does not include School Parcel Tax Measures from November 2010.*

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April 11, 2012

LOCAL GENERAL OBLIGATION BOND MEASURE OPTIONS

RIVERSIDE UNIFIED SCHOOL DISTRICT

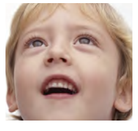
PRESENTATION OUTLINE

- Riverside Unified School District's Measure B
- Statewide GO Bond Election History
- Local GO Bond Background and Overview
- Future Planning Considerations

RIVERSIDE UNIFIED

School District's Measure B

- Planning began in 1999-2000
- Election Day, November 6, 2001
- Concurrent with Board of Education elections
- Incumbent re-elected with 39.75%
- $175 million/$43 annual tax rate projected
- 16,466 YES votes/68.31%
- September 11th factor



RUSD
POSITIVE INDICATORS

- Success of Measure B
- District's tradition of planning/stewardship
- Stability
- Eligibility for matching dollars (requires local match)
- Opportunity to focus on projects to improve efficiency/reduce operating costs
- Construction costs relatively low/stable
- Local economic stimulus
- Local control and benefit

STATEWIDE

Election

November 2008 – Presidential Election

· Landmark Election Day for local bond success

· 77 of 88 K-12 measures approved – 90% passage

· $17 billion in local bonds authorized by voters

· $220 million average bond size

November 2012 – Presidential Election

· Proportionally higher turnout of parents, democrats, & other "bond-friendly" voters

Most Recent

STATEWIDE

Election History Data

June 2010 - Gubernatorial Primary

· First regularly scheduled election date following economic crisis

·15 of 19 K-12 measures approved - 79% passage

· $1.3 billion in local bonds authorized by voters

November 2010 - Gubernatorial General

47 of 63 GO bonds passed, 75%, No K-12 bonds attempted in Riverside County

November 2011 - Statewide General

6 of 8 GO bonds passed, 75%, No K-12 bonds attempted in Riverside County

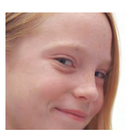
· Measure I, City of Riverside Library Parcel Tax renewal passed with 85+% approval

LOCAL GO BONDS

Parcel Tax Comparison

- Ad Valorem Tax based on assessed value of property (secured and unsecured within district boundaries)
- Secure, backed by “taxing power” of district assessed value
- Restricted to capital expenditures, plus F&E (Prop 39 only)
- Legal debt limit/tax rate cap (Prop 39)
- Authorization does not expire
- 55% voter threshold required for passage (Prop 39)
- More $ raised/higher rate of passage
- Regularly scheduled election dates (Prop 39)
- SFID’s may be utilized to exclude areas/voters

- Per parcel assessment (all parcels within district boundaries, assessment may vary by type/sq. ft.)
- Secure, known/set quantity of parcels
- Permissible expenditures include salaries, programs, materials
- No debt incurred or tax rate limits
- Typically includes “sunset” date (5-7 years typical)
- 66.7% voter threshold required for passage
- Less $ raised/lower rate of passage
- Regularly scheduled and special election dates
- Senior and other taxpayer exemptions available



LOCAL GO BONDS

Background & Overview

- Prop 39/55% yes vote
  - Regularly scheduled Election Day
  - Allows for FF&E
  - Requires 2/3 approval of resolution by BOE
- Project list (Master Plan) which considers projects that:
  - District needs
  - Potential for state or other matching funds
  - Will reduce operating costs
  - Relieve burden on general fund
  - Voters willing to be taxed for
- Ballot Language (informed by polling)
- Bond size (Assessed value history/projected growth, interest rate, issuance schedule) & projected tax rate (max $60/100,000 AV, possible tax rate extension)

FUTURE GO BOND
PLANNING CONSIDERATIONS

Potential Prop 39 Election Dates (Deadline to Call for Election*)

- November 6, 2012 (August 10, 2012)
- November 5, 2013 (August 9, 2013)
- June 3, 2014 (March 7, 2014)
- November 4, 2014 (August 8, 2014)

LOCAL GO BOND

Potential Planning Steps

APRIL 2012 → DEVELOP YOUR PLAN

APRIL-MAY 2012 → UNDERSTAND YOUR COMMUNITY

→ LISTEN TO YOUR COMMUNITY

JUNE 2012 → REFINE YOUR PLAN

JULY 2012 → MAKE CRITICAL DECISIONS

AUGUST 2012 →

↑

STEP ONE: DEVELOP YOUR PLAN

- Based on Identified Needs/Goals
- Site Specific
- Articulated in Plain English
- Reasonable, Validated Costs
- Identifies Potential Funding Sources

ACTION:
District Master Plan/Needs Assessment Underway

STEP TWO: KNOW YOUR COMMUNITY

- Understand Who Votes
- Translate Your Facilities Needs/ Master Plan Into Public Information/Outreach Plan

ACTION:
BOE Community Engagement Initiated

STEP THREE: INFORM/ENGAGE YOUR COMMUNITY

- Rigorous Communication Plan
- Create Opportunities for Community Input
- Identify District/Stakeholder Leadership

ACTIONS:
BOE Consider Formation of Superintendent's Advisory Group

- BOE Approval of Community Survey
- Identify Advisory Team (Underwriting, Bond Counsel)
- BOE Update

STEP FOUR: REVIEW/REFINE YOUR PLAN

ACTIONS:
Meetings of Superintendent's Advisory Group

- Conduct Community Survey
- BOE Update

STEP FIVE: MAKE CRITICAL DECISIONS

- GO Bond Election
- Bond Amount/Tax Rate
- Resources Required:
  - –Volunteers
  - –Contributions
  - –Citizen Campaign Leadership

ACTIONS:
Superintendent's Advisory Group Recommendation

- Presentation to BOE
- BOE Directs Staff to Adopt Resolution or Seek Alternatives

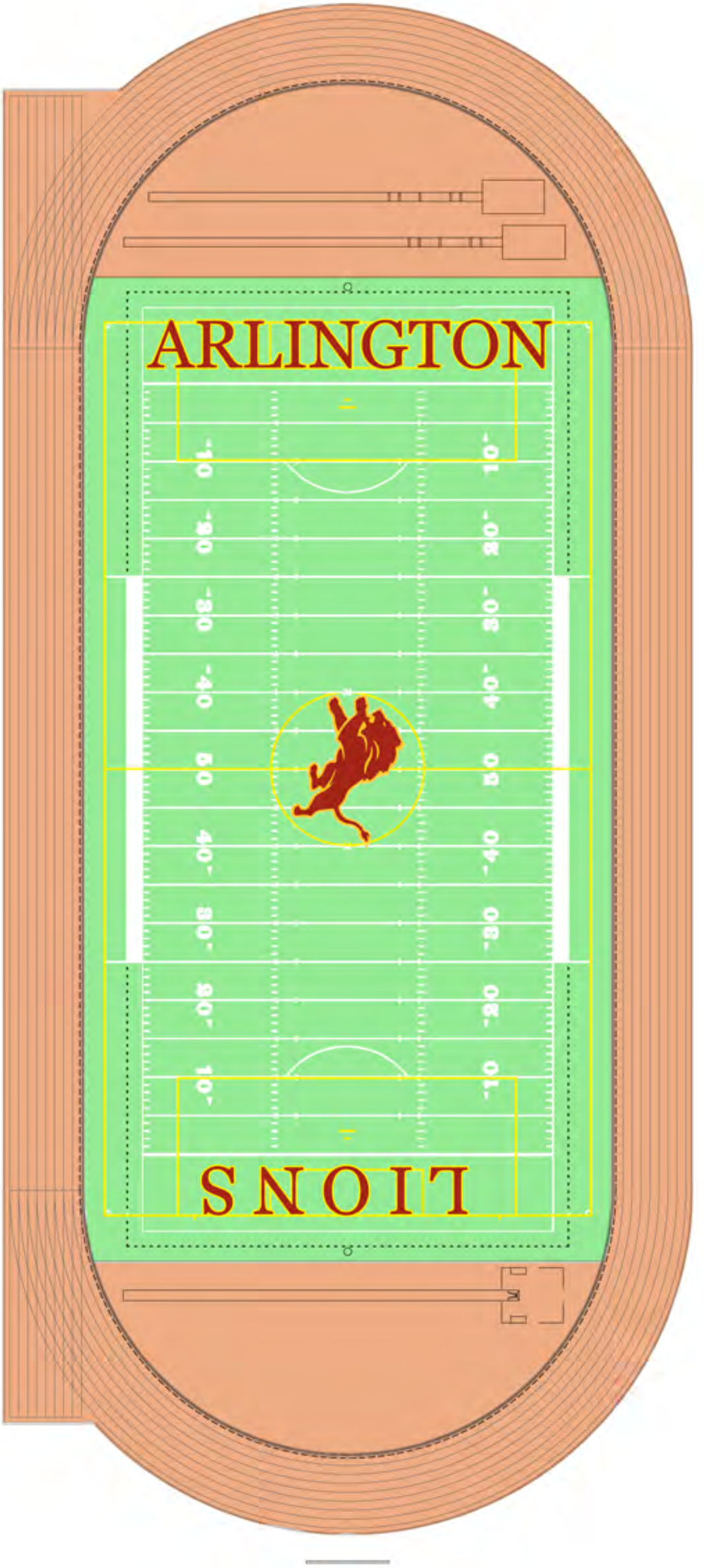
POSSIBLE CALL FOR ELECTION

Governing Board Calls for Election

ACTIONS:
Potential Board Vote

- File Resolution
- Possible Transition to Citizen Campaign Committee
- Election Day

COMMENTS & QUESTIONS



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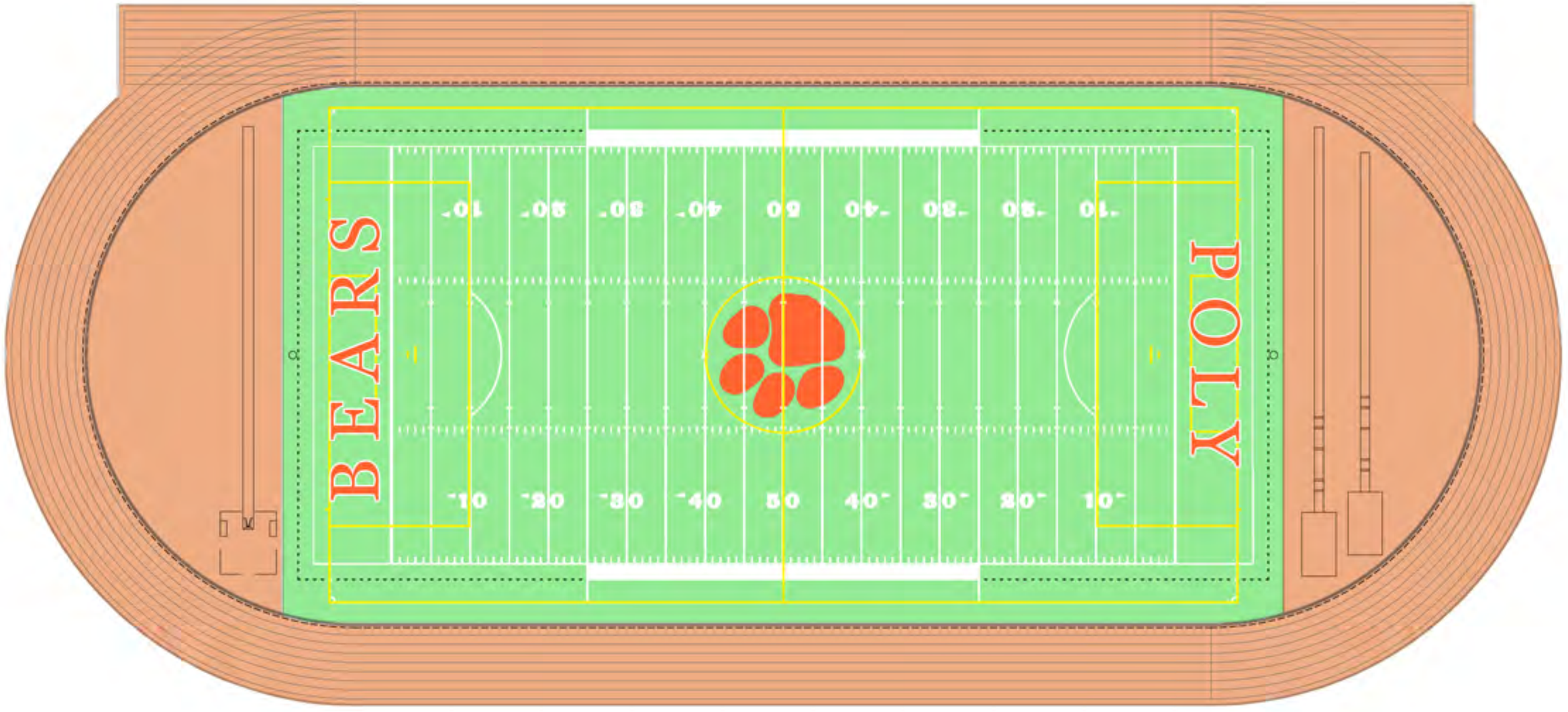
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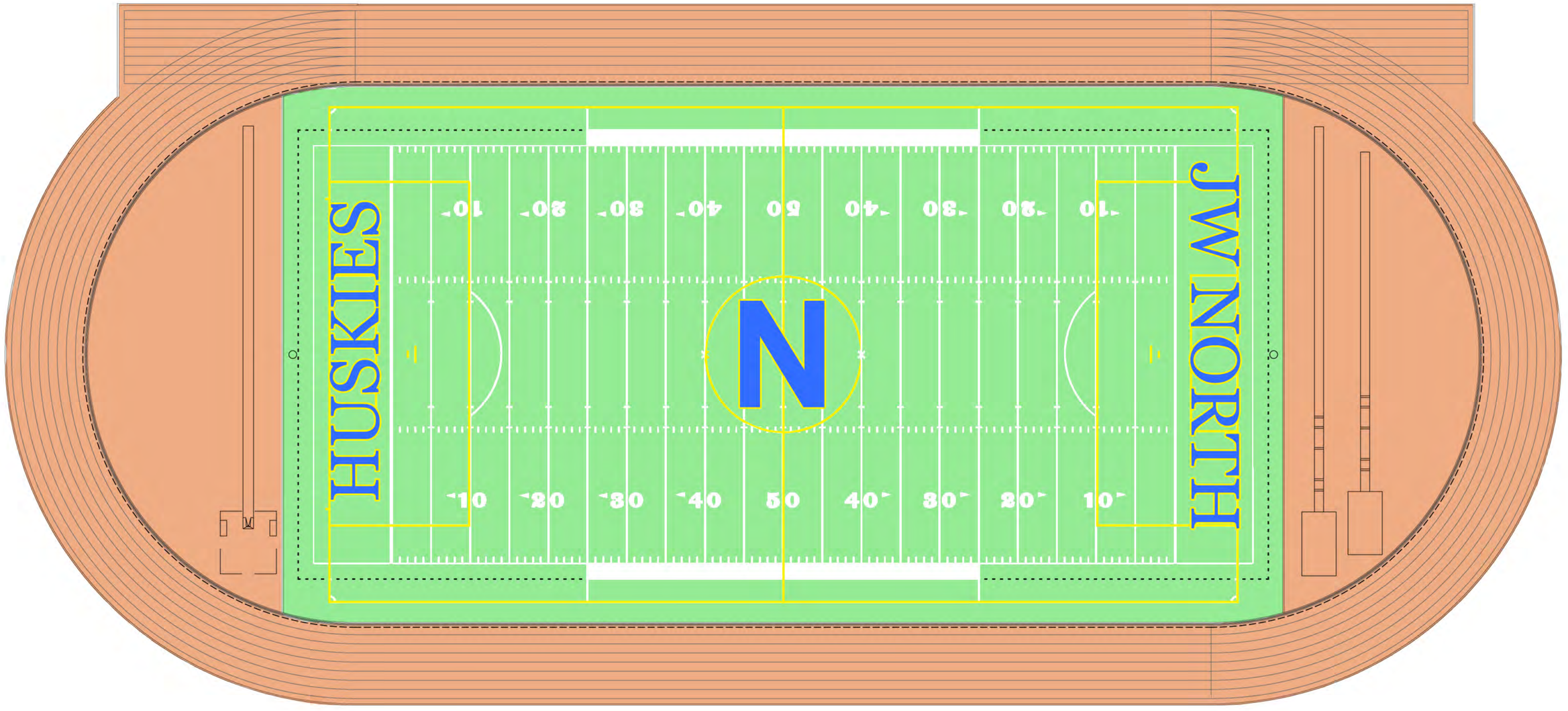
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