

# MORAGA SCHOOL DISTRICT

## **FACILITIES MASTER PLAN 2015 - 2024**

**September 2015**



**TOTAL SCHOOL SOLUTIONS  
4751 MANGELS BOULEVARD  
FAIRFIELD, CA 94534**

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## **EXECUTIVE SUMMARY**

This Facilities Master Plan was developed for the Moraga School District to assist the District in determining the magnitude of the need for school facilities funding for the period of 2015 through 2024 and to help identify potential sources for funding the construction of identified needs. It should be stressed that the work indicated in the Needs Assessment and elsewhere in this document should not be considered detailed scopes of work sufficient to define construction projects. Specific conditions and needs change with time. The general scope and budget for each project should be reviewed and refined at the commencement of that project to reflect the precise needs and conditions at that time.

### **Capacity Study**

The District's capacity is analyzed for local housing need and for eligibility in the State facilities funding programs. Different standards for student: teacher ratios (loading) are used for each purpose. District standards for loading of classrooms were used to determine the need for future student housing. These standards are 24 students per TK-3 teaching station and 28 students per 4-8 teaching stations.

The January 2015 enrollment projections indicate a growth of 250 students over the next ten years. The District currently has considerable excess capacity at all of the three elementary schools and at the intermediate school. It should be understood that not all classrooms can be filled to capacity 100 percent of the time. Some spaces may be used for pull-out programs and utilized only one or two periods per day. Others could be designated as Parent Resource spaces and not used for instructional purposes. For purposes of this report, these teaching stations are considered "unoccupied" or "not loaded", and excluded from the count of teaching stations. It is also commonly observed that some teaching stations are not loaded at District standards due to the number of students enrolled in particular grades. The District currently has an average of 6 excluded teaching stations at each elementary school site. The intermediate school has 5 classrooms excluded from teaching station count. There is no projected need for additional teaching stations during the current school year and through school years 2019-20 and 2021-25. Likewise, classrooms that are currently not used as teaching stations do not need to revert into classroom use during projected time periods.

### **21<sup>st</sup> Century Classrooms**

The characteristics of the classroom that will deliver the curriculum for the 21<sup>st</sup> century have been extensively discussed and documented. However, the important factors are those characteristics that are needed by the teachers and staff of the Moraga School District. TSS staff met with District staff, teachers and site administrators to discuss and document the characteristics that are important to the District.

## Needs Assessments

The facilities needs assessment report was developed for the Moraga School District to identify future facilities needs of all school properties within the District. The Needs Assessment provides the District with an estimate of the funding required to develop a construction program to address the identified needs. However, the Needs Assessment is not intended to be a list of specific construction projects. This Master Plan identifies estimated needs for a 10 year period. Conditions and needs change over time and specific needs and estimates should be re-evaluated at the time the project commences.

During the late 1990's, the District implemented modernization projects District-wide. The general scope of those modernization projects ranged from wall, floor and ceiling upgrades to classrooms, finishes and fixtures replacements to restrooms, and minor renovations to offices, and other core facilities such as kitchens, cafeterias, multi-purpose rooms and gymnasiums. Modernization projects also included upgrades and replacements to the heating systems, lighting systems, fire alarm systems, and intrusion alarm systems. Upgrades to electrical service, technology infrastructure and classroom data systems District-wide also occurred during and after the modernization period. Concurrent with the modernization projects, the District implemented new construction projects that added a Multi-Use building to all three elementary schools.

Three district school buildings identified on the DSA AB300 list were found to need seismic upgrade and strengthening during detailed seismic evaluations conducted by District consultants in 2009. Consultants followed-up the evaluation efforts with a study to develop strengthening schemes and cost estimates in 2011. Actual strengthening work has not commenced to date. The identified strengthening schemes, the corresponding estimates plus inflation adjustments, are included in the list of needs for Camino Pablo and Donald Rheem elementary schools.

In the process of developing a comprehensive list of facilities needs at each campus, TSS staff visited all the school sites in the District. In addition, TSS staff met with maintenance staff, reviewed plans/drawings and maintenance history/or known needs of each site. Meetings and phone interviews with the school principals were likewise conducted in order to discuss projected facilities needs relating to planned educational programs. Visits to individual sites were conducted with M & O and/or with site maintenance staff to visually determine the extent of the needs.

The section on Needs Assessments provides a brief inventory and history of the facilities, and a descriptive summary of the needs identified in the various categories of school facilities in each school site. The major systems upgrades and replacements identified in this report include:

- Demolition of old inefficient hot-water boiler equipment and components and the installation of new heating and air-conditioning units at Camino Pablo, Donald Rheem and Joaquin Moraga schools;
- Re-roofing of identified buildings at Camino Pablo, Donald Rheem, Los Perales and Joaquin Moraga schools;

- Seismic strengthening of the connections between walls and roofs of the large classroom building at Camino Pablo Elementary School.
- Seismic strengthening of the connections between walls, roofs and foundations of Wings II and III classroom buildings at Donald Rheem Elementary School.
- Conversion/retrofitting of lighting systems from T8 to LED energy efficient lighting systems to all schools for energy efficiency and conservation;
- Installation of web based Energy Management and Lighting Control systems to all school sites for energy efficiency and conservation;
- Construction of parking sheds with solar (PV) panel roofing to all school sites for clean energy generation.
- Replacement and upgrading of old phone, public address, clock and bell systems to all schools.
- Upgrades to old window systems at all school sites to double pane glass windows for energy efficiency to support energy conservation efforts of the District;;

The Summary of Needs at the end of the section shows the estimated costs by category and the overall costs for each school site. Table IX. Summary of Facility Needs at the end of the section, presents the total estimated project cost of needs at \$32,917,462. Project costs include soft costs, project contingency, escalation and an estimate of the need for interim housing.

### **Summary of Needs**

The costs from the needs assessments are summarized. The total estimated cost of the identified projected needs is **\$32,917,462**, which is comprised of modernizations, technology needs, seismic mitigation, and energy efficiency upgrades. The cost of any additional projects desired by the District that are currently not included will need to be estimated and added to the total projected needs.

## **Financing Plan**

All potential sources of funding are discussed in this section. Although funds in the State School Facilities Program (SFP) are currently exhausted, a review of the District's eligibility in this program indicates that there is a potential funding of \$454,203 available under the Modernization program. It should be noted that a review of the SFP is currently underway at the state level and these figures could change significantly if modifications in the program are made. Future funding in the program is dependent upon the passage of a new State-wide bond measure; therefore there is no guarantee that additional funding will become available.

In 2011, District consultants developed and designed strengthening measures for Camino Pablo and Donald Rheem buildings that do not meet current life safety standards as identified under the AB 300 list. In addition, cost estimates for the implementation of these mitigation measures have been prepared. It is recommended that the District proceed to obtain DSA approval for construction plans and submit applications for funding under the SFP Seismic Retrofit Program.

In 2012, the voters of California passed Proposition 39, the California Clean Energy Jobs Act which provides K-12 districts with funding for qualifying energy conservation and renewable energy projects. The needs assessment section of this report listed several projects that could be eligible for funding under the program. It is recommended that the District hire a consulting firm specializing the preparation and submittal of Energy Expenditure Plans for school districts under the Prop 39 California Clean Energy Jobs Act.

Based on projections of new housing starts from the District's recently completed demographic study, the District could receive approximately \$3,468,542 in developer fee revenue over the next ten years. The District should review the developer fee rates on a yearly basis and increase the required fee to the maximum level allowed by law.

The total estimated funding potentially available for facilities needs is \$11,383,369 leaving a shortfall of \$21,534,348.

If a facilities bond is considered to fund the unfunded needs identified in this document, the District should consider the size of the bond to be approximately \$28 million (or more) due to uncertainty surrounding the availability of State funding.

# CAPACITY STUDY

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## CAPACITY STUDY

Total School Solutions staff reviewed plans and documentation provided by the District and visited all the school sites to gather data for the determination of the total capacity of the District for housing students. The 2014-15 CBEDS data, as reported on the California Department of Education's DataQuest web site, together with the District's 5-Year and 10-Year Enrollment Projections, dated January 2015, was then utilized to determine the District's future student housing needs.

For purposes of compiling the data for this study, rooms whose primary purpose were indicated as something other than teaching activities but were clearly designed as teaching stations were not included in the capacity count. Spaces that were indicated as Resource Specialist Program (RSP), Special Day Class (SDC) or other special education functions were also not included in the capacity count but were noted on tables. Some teaching stations may be used for pull-out programs such as science, art or music and utilized only for a number of periods each day, while others may be designated as Parent Resource spaces and not used for instructional purposes. These teaching stations are not loaded for purposes of this report. It is also common that some teaching stations are not loaded at District standards due to the number of students enrolled per grade.

The State sets standards for the physical size of classrooms and the number of students per classroom for the purpose of determining eligibility to receive grant funds under the State Facility Program (SFP). The California Department of Education considers 960 square feet of floor area to be the standard classroom size for all grade levels. Classrooms with floor areas less than 900 square feet but greater than 700 square feet must be justified in the educational program. Spaces that are less than 700 square feet are not loaded as classrooms. The California Education Code Section § 17071.25 (a)(2)(A) states that, for purposes of determining capacity in the School Facilities Program (SFP), teaching stations shall be loaded at 25 pupils per teaching station in grades kindergarten through 6 and 27 pupils per teaching station in grades 7 through 12. The State capacity of the Moraga School District's facilities was determined based on the SFP loading standards. Capacities of classrooms with less than 900 square feet but greater than 700 square feet of floor area were prorated based on their actual size and the standard loading factor. Spaces with less than 700 square feet of floor area were not loaded as classrooms. The District capacity was determined based on District standard student: teacher ratios (loading factors) which remained the same, regardless of the size of the teaching station.

Spaces indicated as being designed for RSP or SDC but currently used for other functions were counted as RSP or SDC. Spaces indicated as being used for Computer Labs at the elementary school level are not included in the total count. These spaces were noted as pull-out stations and were not loaded for the District standard count or for the State standard count.



The capacity of District schools is also used in the determination of eligibility to receive grants and funding under the School Facilities Program (SFP) and other State and federally funded programs. The process of determining eligibility begins with establishing the existing capacity of all teaching stations in the District. As noted above, classrooms less than 700 square feet are not included in the capacity count. Capacities of classrooms between 700 and 900 square feet in floor area are pro-rated from the standard. TSS staff review of the District’s facilities plans and drawings identified 10 teaching stations at Joaquin Moraga Intermediate School that are greater than 700 square feet but less than 900 square feet which are included using a prorated loading factor. Since the loading standard for the State programs varies from the District’s loading standard, student capacities using both loading standards are indicated in the charts. However, for planning purposes, the District loading standard is used in the final determination of facility needs.

Enrollment projection data generated in a separate study for the District covers the period from 2015 through 2025. Hence, student housing need determinations covered in this study will be limited to the 2015 – 2025 timeframe.

**Existing School Capacities**

Determination of school capacity is based on the District’s standard student: teacher ratio or loading standard. The established student: teacher ratio or loading standard for the Moraga School District is as follows:

Kindergarten – Grade 3 . . . . .	24 students per classroom
Grades 4 – 5 . . . . .	28 students per classroom
Grades 6 – 8 . . . . .	28 students per classroom

Based on the District’s established loading standards and the existing permanent and portable teaching stations, the student capacities of each of the District’s three elementary schools and one intermediate school are shown on the table below. For comparative purposes, the student capacities based on the State loading standards of 25 students per classroom for grades K – 6 and 27 for grades 7 – 12, are also shown. As stated earlier, the District loading standard, which remains the same, regardless of the size of the teaching station, is used in the final determination of school capacities and student housing needs.

## EXISTING SCHOOL CAPACITIES

School	Grades Served	Teaching Stations (≥ 900 Sq. Ft.)				Teaching Stations - (<900 Sq. Ft.)				Total Capacity	
		Perm	Porta	Capacity		Size (Sq. Ft)	C o u n t	Capacity <sup>1</sup>		State Standard	District Standard
				State Standard	District Standard			State Standard	District Standard		
Camino Pablo	K-3	14	0	350	336						
	4-5	6	0	150	168						
	Total	20	0	500	504					500	504
Donald Rheem	K-3	12	1	325	312						
	4-5	6	0	150	168						
	Total	18	1	475	480					475	480
Los Perales	K-3	12	0	300	288						
	4-5	6	0	150	168						
	Total	18	0	450	456					450	456
Joaquin Moraga	6-8	20	0	540	560	750	7	148	196	754	840
						775	1	22	28		
						784	2	44	56		
	Total	20	0	540	560		10	214	280		
<b>TOTAL</b>	<b>K-5</b>	<b>76</b>	<b>1</b>	<b>1,965</b>	<b>2,000</b>	<b>0</b>	<b>0</b>	<b>214</b>	<b>280</b>	<b>2179</b>	<b>2,280</b>

<sup>1</sup>Student capacity for classrooms less than 900 square feet but greater than 700 square feet is prorated based on the actual size and the standard loading factor. Spaces less than 700 square feet were not loaded as classrooms. The District capacity was based on District standard student: teacher ratios (loading factors) and remained the same, regardless of the size of the teaching station.

### Excluded Teaching Stations

In most school facilities, many spaces are clearly designed and built as teaching stations based on their layout, size and configuration. However, due to the programmatic and educational needs of the school, some of these stations are utilized and assigned functions that are other than teaching stations. Spaces that were indicated as Resource Specialist Program (RSP), Special Day Class (SDC) or other special education functions were not included in the capacity count but were noted on tables. Likewise, spaces designed for RSP or SDC but are currently used for other functions were counted as RSP or SDC. Classrooms that are used for pull-out programs such as art, science or music and utilized only one or number of periods per day were excluded from the count. Spaces indicated as being used for Computer Labs at the elementary school levels were also not included in the total count. These spaces were indicated as being pull-out stations and not loaded for the District standard count or for the State standard count. Computer Labs at the intermediate school level, however, are loaded as teaching stations. The table below lists the function and floor areas of all excluded stations in each school;

**EXCLUDED STATIONS**

School	Excluded Stations <sup>1</sup>			Permanent (Sq. Ft.)	Portable (Sq. Ft.)	Total (Sq. Ft.)
	Function	Count	Size/Unit (Sq. Ft.)			
Camino Pablo	Computer Lab	1	960		960	960
	Music	1	960		960	960
	Science Lab	1	960		960	960
	ELL/Reading	1	960	960		960
	Learning Center	1	960	960		960
	Art/PE	1	960	960		960
	Bobcat Club	1	1,440		1,440	1,440
	<b>Total</b>	<b>7</b>		<b>2,880</b>	<b>4,320</b>	<b>7,200</b>
Donald Rheem	Learning Center	1	1,036	1,036		1,036
	Computer Lab	1	960	960		960
	Music	1	960		960	960
	Art	1	960		960	960
	Roadrunner Club	1	1,440		1,440	1,440
	<b>Total</b>	<b>5</b>		<b>1,996</b>	<b>3,360</b>	<b>5,356</b>
Los Perales	Computer Lab	1	960	960		960
	Spec. Ed./ Psychologist	1	960	960		960
	Music Room	1	1,581	1,581		1,581
	Panther Club	1	1,381	1,381		1,381
	Former Library	1	960	960		960
	Former Bookroom	1	960	960		960
	<b>Total</b>	<b>6</b>		<b>6,802</b>		<b>6,802</b>
Joaquin Moraga	Home Ec. (Rm #33)	1	1,110	1,110		1,110
	Home Ec. (Rm #36)	1	1,140	1,140		1,140
	Art Room	1	1,440	1,440		1,440
	Lunch Serving Room	1	1,440	1,440		1,440
	Audio/Video	1	756	756		756
	<b>Total</b>	<b>5</b>		<b>5,886</b>		<b>5,886</b>
	<b>TOTAL</b>	<b>23</b>		<b>17,564</b>	<b>7,680</b>	<b>25,244</b>

**Student Enrollment**

The District’s January 2015 enrollment projections indicate that the Moraga School District should experience steady, strong enrollment growth over the next five to ten years. Factors that are expected to impact student enrollment include the rise in kindergarten enrollment, in part due to the introduction of the transitional kindergarten program; and the increase in planned residential construction. The ratio between area births and kindergarten enrollment has changed, resulting in an increased expectation of more kindergarten students in years to come. Additionally, developers in Moraga have submitted plans to undertake significant construction of residential units in the area, which may result in enrollment increases between 229 and 473 students over a ten year period these factors suggest that enrollment may rise by as much as 13.8 percent during the next ten years. The resulting 5<sup>th</sup> year and 10<sup>th</sup> year enrollment projections are shown in the table below.

## ENROLLMENT PROJECTIONS

SCHOOL	Grade Served	Current Enrollment CBEDS FY 2014-15	5 <sup>th</sup> Year Enrollment Projection FY 2019-20	10 <sup>th</sup> Year Enrollment Projection FY 2024-25
<b>Elementary Schools</b>				
Camino Pablo	K-5	396	377	
Donald Rheem	K-5	410	450	
Los Perales	K-5	362	439	
Sub-Total		1,168	1,266	1,340
<b>Intermediate School</b>				
Joaquin Moraga	6-8	684	731	
Sub-Total		684	731	767
<b>TOTAL</b>	<b>K-8</b>	<b>1,852</b>	<b>1,997</b>	<b>2,107</b>

### PROJECTED HOUSING NEED

The District's need for student housing in the upcoming years is determined by direct comparison between the Districts existing school capacity and the projected student enrollment 5 years and 10 years into the future. The table below shows the projected level of excess capacity or the need for additional student housing based on direct comparison between capacity of the District's available teaching stations and the projected 5<sup>th</sup> year and 10<sup>th</sup> year student enrollments presented in the Moraga School District Demographic Study on January 2015 (See Appendix A).

### PROJECTED HOUSING NEED

School	Grades Served	District Standard Capacity	Current Enrollment		5 <sup>th</sup> Year Enrollment Projection		10 <sup>th</sup> Year Enrollment Projection	
			FY 2014-15 CBEDs	Capacity Excess (+)/ Need (-)	FY 2019-20	Capacity Excess (+)/ Need (-)	FY 2024-25	Capacity Excess (+)/ Need (-)
<b>Elementary Schools</b>								
Camino Pablo	K-3	336	255	81	250	86		
	4-5	168	141	27	127	41		
	Total	504	396	108	377	127		
Donald Rheem	K-3	312	260	52	284	28		
	4-5	168	150	18	166	2		
	Total	480	410	70	450	30		
Los Perales	K-3	288	240	48	280	8		
	4-5	168	122	46	159	9		
	Total	456	362	94	439	17		
Sub-Total	K-5	1,440	1,168	272	1,266	174	1,340	100
<b>Intermediate/Middle School</b>								
Joaquin Moraga	6-8	840	684	156	731	109		
Sub-Total	6-8	840	684	156	731	109	767	73
<b>TOTAL</b>	<b>K-8</b>	<b>2,280</b>	<b>1,852</b>	<b>428</b>	<b>1,997</b>	<b>283</b>	<b>2,107</b>	<b>173</b>

## **Conclusion**

As shown in the table above, the District will not need additional teaching stations in the elementary and intermediate school levels from the current year through school year 2015-16. Although the District's enrollment is projected to grow from 1,852 students in school year 2015-16 to 1,997 students in 2019-20, and then to 2,107 students in school year 2024-25, the District has sufficient inventory of available teaching stations to house all students in grade level K-8 for the next ten years.

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## CLASSROOM UTILIZATION STUDY

TSS staff reviewed all spaces in each of the District's four schools for potential use as teaching stations. The classroom utilization tables below list all potential teaching stations at each school based on information derived from District provided site maps, available plans and drawings. The tables also show floor areas and indicate which spaces were loaded as classrooms.

### Camino Pablo Elementary School

Room Name/ Number	Function	Loaded (Yes/No)	Permanent/ Portable	Floor Area (Sq. Feet)	NOTES
1	Grade 1	Yes	Permanent	960	
2	Grade 1	Yes	Permanent	960	
3	Grade 1	Yes	Permanent	960	
4	Grade 2	Yes	Permanent	960	
5	Grade 2	Yes	Permanent	960	
6	ELL/ Reading	No	Permanent	960	Pull-out program
7	Small Group	No	Permanent	960	Small Group Instruction
8	Art/PE	No	Permanent	960	Pull-out program
9	Learning Center	No	Permanent	961	Special Education/ Learning disabilities program
10	Kindergarten	Yes	Permanent	1,129	
11	T- Kindergarten	Yes	Permanent	1,129	
Kindergarten A	Kindergarten	Yes	Permanent	1,409	
Kindergarten B	Kindergarten	Yes	Permanent	1,409	
14	Grade 5	Yes	Permanent	961	
15	Grade 5	Yes	Permanent	961	
16	Grade 5	Yes	Permanent	961	
17	Grade 4	Yes	Permanent	961	
18	Grade 4	Yes	Permanent	961	
19	Grade 4	Yes	Permanent	961	
20	Science Lab	No	Portable	960	Pull-out program
21	Music	No	Portable	960	Pull-out program
22	Computer Lab	No	Portable	960	Pull-out program
23	Grade 3	Yes	Permanent	960	
24	Grade 2	Yes	Permanent	960	
25	Grade 3	Yes	Permanent	960	
26	Grade 3	Yes	Permanent	960	
Bobcat Club		No	Portable	1,440	Before/after school program.
<b>Total Number of Loaded Stations</b>		<b>19</b>			

During school year 2014-15, Camino Pablo Elementary School housed 396 students in 19 classrooms. Thirteen classrooms were loaded with 255 grade K-3 students for an average of 20 students per classroom. Six classrooms were loaded with 141 grade 4-5 students for an average of 24 students per classroom. Therefore, based on District loading standards of 24 students per classroom for grade K-3 students and 28 students per classroom for grades 4-5 students, the school had 84 remaining available seats for 57 grade K-3 students and 27 grade 4-5 students. Additionally, Room #1 was not utilized as a teaching station during the school year. This classroom will accommodate at least 24 additional students. Camino Pablo has an overall excess capacity for 108 students.

Standard sized classroom spaces were utilized to deliver the ELL/Reading, Art, computer lab, music, and science programs on a “pull-out” basis. These spaces are not loaded as full time classrooms for capacity calculation purposes. Some of these programs require spaces that are less than that of a standard sized classroom. Therefore, if proportionate spaces were reallocated for these programs, some of these classroom sized spaces could be utilized as teaching station and would further add to the schools ability to house additional students.

The Learning Center classroom is loaded with special education students only. This space is not loaded as a full time classroom for capacity calculation purposes. Therefore, if there were a substantial increase in special education enrollment in the future, this could require the allocation of an additional classroom for special education use. Likewise, a substantial decrease in special education enrollment in the future may allow the return of the current classroom to regular use as a teaching station.

### Donald Rheem Elementary School

Room Name/ Number	Function	Loaded (Yes/No)	Permanent/ Portable	Floor Area (Sq. Feet)	NOTES
1	Grade 3	Yes	Permanent	952	
2	Grade 4	Yes	Permanent	952	
3	Grade 4	Yes	Permanent	952	
4	Grade 4	Yes	Permanent	952	
5	Kindergarten	Yes	Permanent	952	
6	Learning Center	No	Permanent	1,036	Special Education/ Learning disabilities program
7	Kindergarten	Yes	Permanent	1,248	
8	Kindergarten	Yes	Permanent	1,312	
9	Grade 3	Yes	Permanent	960	
10	Grade 3	Yes	Permanent	960	
11	Grade 2	Yes	Permanent	960	
12	Grade 2	Yes	Permanent	960	
13	Grade 2	Yes	Permanent	960	
14	Grade 1	Yes	Permanent	960	
15	Grade 1	Yes	Permanent	960	
16	Grade 1	Yes	Permanent	960	

Room Name/ Number	Function	Loaded (Yes/No)	Permanent/ Portable	Floor Area (Sq. Feet)	NOTES
17	Grade 5	Yes	Permanent	961	
18	Grade 5	Yes	Permanent	961	
19	Office/ Workrooms	No	Permanent		Partitioned into 3 small office and workroom spaces.
20A	Reading	No	Permanent	496	Small instruction space
20B	Psychologist	No	Permanent	256	Office Space
21	Grade 5	Yes	Permanent	961	
22	Computer Lab	No	Permanent	961	Pull-out program
23	Music/PE	No	Portable	960	Pull-out program
24	Art/Science	No	Portable	960	Pull-out program
25		No	Portable	960	Unoccupied
Roadrunner		No	Portable	1,440	Before/after school program
<b>Total Number of Loaded Stations</b>		<b>18</b>			

Donald Rheem Elementary School housed 410 students in 18 classrooms during school year 2014-15. Twelve classrooms were loaded with 260 grade K-3 students for an average of 22 students per classroom. Another six classrooms were loaded with grade 150 grade 4-5 students for an average of 25 students per classroom. Therefore, based on District loading standards of 24 students per classroom for grade K-3 students and 28 students per classroom for grades 4-5 students, the school had 46 remaining available seats for 28 grade K-3 students and 18 grade 4-5 students. Additionally, Room #25 was not utilized as a teaching station during the school year and this classroom will accommodate at least 24 additional students. Donald Rheem has an overall excess capacity for 70 students.

Standard sized classroom spaces were utilized to deliver the art, computer lab, music, and science programs on a “pull-out” basis. These spaces are not loaded as full time classrooms for capacity calculation purposes. Some of these programs require spaces that are less than that of a standard sized classroom. Therefore, if proportionate spaces were reallocated for these programs, some of these classroom sized spaces could be utilized as teaching station uses and would further add to the schools ability to house additional students.

The Learning Center classroom is loaded with special education students only. This space is not loaded as a full time classroom for capacity calculation purposes. Therefore, if there were a substantial increase in special education enrollment in the future, this could require the allocation of an additional classroom for special education use. On the other hand, a substantial decrease in special education enrollment may allow the return of the current classroom to regular use as a teaching station.



## Los Perales Elementary School

Room Name/ Number	Function	Loaded (Yes/No)	Permanent/ Portable	Floor Area/ Sq. Feet	NOTES
Room No. 1	Kindergarten	Yes	Permanent	1,333	
Room No. 2	Kindergarten	Yes	Permanent	1,333	
Room No. 3		No	Permanent	961	Unoccupied. Used to be the Library's Book Room
Room No. 4		No	Permanent	961	Unoccupied. Used to be the school Library.
Room No. 5	Grade 1	Yes	Permanent	961	
Room No. 6	T-Kindergarten	Yes	Permanent	961	
Room No. 7	Grade 1	Yes	Permanent	961	
Room No. 8	Grade 1	Yes	Permanent	961	
Room No. 9	Grade 2	Yes	Permanent	961	
Room No. 10	Grade 2	Yes	Permanent	961	
Room No. 11	Grade 2	Yes	Permanent	961	
Room No. 12		No	Permanent	961	Unoccupied
Room No. 13	Computer Room	No	Permanent	961	Pull-out program.
Room No. 14	Grade 3	Yes	Permanent	961	
Room No. 15	Grade 3	Yes	Permanent	961	
Room No. 16	Grade 3	Yes	Permanent	961	
Room No. 17	Grade 5	Yes	Permanent	961	
Room No. 18	Grade 4	Yes	Permanent	961	
Room No. 19	Grade 4	Yes	Permanent	961	
Room No. 20	Grade 5	Yes	Permanent	961	
Room No. 21	Spec. Ed/Psych	No	Permanent	961	Partitioned into 2 office spaces
Room No. 22	Grade 5	Yes	Permanent	961	
Room No. 23	Music Room	No	Permanent	1,581	Pull-out program
Room No. 24	Panther Club	No	Permanent	1,381	Before/after school program.
<b>Total Number of Loaded Stations</b>		<b>17</b>			

Los Perales Elementary School housed 362 students in 17 classrooms during the school year 2014-15. Twelve classrooms were loaded with 240 grade K-3 students for an average of 20 students per classroom. Another five classrooms were loaded with 122 grade 4-5 students for an average of 25 students per classroom. Therefore, based on District loading standards of 24 students per classroom for grade K-3 students and 28 students per classroom for grades 4-5 students, the school had 66 remaining available seats for 48 grade K-3 students and 18 grade 4-5 students. Additionally, Room #12, was not utilized as a teaching stations during the school year. Furthermore, Room #3 and 4, the former Library and Book Room which are currently unoccupied, could be refurbished and furnished for use as classrooms. These 3 potential teaching stations will accommodate up to 84 additional students. Overall, Los Perales has a potential excess capacity for 150 students.

Standard sized classroom spaces were utilized to deliver the computer lab and music programs on a “pull-out” basis. These spaces are not loaded as full time classrooms for capacity calculation purposes. Some of these programs require spaces that are less than that of a standard sized classroom. Therefore, if proportionate spaces were reallocated for these programs, some of these classroom sized spaces could be utilized as teaching stations and would further add to the schools ability to house additional students.

The Special Education/Psychologist classroom space is loaded with special education students only. This space is not loaded as a full time classroom for capacity calculation purposes. Therefore, if there were a substantial increase in special education enrollments in the future, this could require the allocation of an additional classroom for special education use. On the other hand, a substantial decrease in special education enrollments may allow the return of the current classroom to regular use as a teaching station.

### Joaquin Moraga Intermediate School

Room Name/ Number	Function	Loaded (Yes/No)	Permanent/ Portable	Floor Area/ Sq. Feet	NOTES
1	Classroom	No	Permanent	784	Pull-out program
2	Classroom	Yes	Permanent	750	
3	Classroom	Yes	Permanent	756	
4	Classroom	Yes	Permanent	775	
5	Classroom	Yes	Permanent	784	
6	Classroom	Yes	Permanent	750	
7	Classroom	Yes	Permanent	750	
8	Classroom	Yes	Permanent	750	
9	Technology Office	No	Permanent	377	Office Space
10	Classroom	Yes	Permanent	750	
11	Computer Room	Yes	Permanent	750	
12	Computer Room	Yes	Permanent	750	
13	Classroom	Yes	Permanent	900	
14	Classroom	Yes	Permanent	900	
15	Classroom	Yes	Permanent	900	
16	Classroom	Yes	Permanent	900	
17	Classroom	Yes	Permanent	900	
18	Classroom	Yes	Permanent	900	
19	Classroom	Yes	Permanent	900	
20	Classroom	Yes	Permanent	900	
21	Classroom	Yes	Permanent	900	
22	Classroom	Yes	Permanent	900t	
23	Classroom	Yes	Permanent	900	
24	Classroom	Yes	Permanent	900	
25	Classroom	Yes	Permanent	900	

Room Name/ Number	Function	Loaded (Yes/No)	Permanent/ Portable	Floor Area/ Sq. Feet	NOTES
26	Classroom	Yes	Permanent	900	
27	Classroom	Yes	Permanent	900	
28	Science Lab	Yes	Permanent	1,230	
29	Science Lab	Yes	Permanent	900	
30	Science Lab	Yes	Permanent	900	
31	Science Lab	Yes	Permanent	900	
32	Science Lab	Yes	Permanent	1,230	
33	Food Room	No	Permanent	1,110	Pull-out program
34	Art Room	No	Permanent	1,440	Pull-out program
35	Lunch Distribution	No	Permanent	1,440	Non-instructional use
36	Classroom	Yes	Permanent	1,140	
<b>Total Number of Loaded Stations</b>		<b>31</b>			

During school year 2014-15, Joaquin Moraga Intermediate School housed 694 students in 31 classrooms at an average of 23 students per classroom. Therefore, based on District loading standards of 28 students per classroom regardless of the size of the classroom, the school had 174 remaining available seats for grade 6–8 students.

**Conclusion:**

The preceding classroom utilization and capacity analysis indicate that there is sufficient excess capacity at the Moraga School Districts four school sites to accommodate the projected increases in student enrollments for the next ten years. The study also shows that, if the enrollment projections are realized, the use of classroom sized spaces for functions other than as full-time teaching stations will not present a problem for the school sites during the time period covered by the study.

# **CLASSROOMS OF THE 21<sup>ST</sup> CENTURY**

DRAFT

## CLASSROOMS OF THE 21<sup>ST</sup> CENTURY

The characteristics of and qualities of classrooms necessary to deliver the curriculum of the 21<sup>st</sup> Century have been widely discussed and documented. The new curriculum endeavors to promote critical thinking in students and to develop problem solving abilities. The curriculum attempts not only to teach students but to teach them how to learn on their own to become lifelong learners. Research has shown significant improvement in comprehensive understanding when lessons are taught through real projects in real life context. Project based learning is applicable to all grade levels and teaches students to work collaboratively to find solutions as they would in the job market.

These elements make for very good discussion in the theoretical realm; however, what really matters is how the teachers and administrators of the Moraga School District interpret these concepts in the classroom. TSS staff met with the Superintendent and members of the teaching staff from different schools to discuss what the 21<sup>st</sup> Century Classroom means to this District.

Characteristics of 21<sup>st</sup> century classrooms should include:

### **Movable furniture:**

- Classroom furniture should be easily move to allow for a variety of configurations
- Multi-person tables are preferable to single person desks to accommodate group activities
- Table should have power connections for electronic devices
- At least some of the tables should be adjustable to allow the work surface to be higher to allow work while standing

### **Technology:**

- Reliable Wi-Fi should be installed at all campuses to allow connection the District network at all locations on the campuses
- The majority of the classes use Chromebooks
- The typical charging cart for the Chromebooks is bulky and takes up too much space in the classroom. If carts are used, electrical outlets for the charging carts should be provided in locations that are out of the way
- Charging stations could be mounted on the wall, out of the circulation in the classroom
- There should be universal charging stations for use with a variety of different devices and manufacturers

- Each student should be issued a Chromebook
- Printers should be located in the classroom and in other spaces, i.e. the library, where students can use them outside class hours
- Promethean Boards (smart board) should be located in all classrooms. Adequate training and technical support should be provided to insure that teachers can get the maximum benefit from using this technology
- There should be connections that allow the teachers to connect to the Promethean Boards from multiple locations in the classrooms. This will allow for versatile teachers' desk location
- A variety of electronic devices are being used in the classrooms, all requiring electrical power. Electrical outlets should be plentiful and in locations that provide maximum versatility on the use of devices
- iPads should be provided for each teacher
- Lighting controls, HVAC controls and telephones should be located in the same location in each classroom. This location should be easily accessible to the teacher
- Lighting and HVAC controls should be tied to a Districtwide Energy Management System with overall controls at the District offices. There should be limited override to allow the teachers some degree of flexibility
- The clock/bell system should be upgraded to have synchronized time in all spaces and synchronized bells
- The public address system at each school should be reliable and provide good communication with all spaces;

**Classroom configuration:**

- It is desirable to have spaces that can accommodate large groups (as large as two classes), small groups (4 to 6 students around a work table), and independent study as well as a standard class size. Spaces for large groups could include two classrooms with an operable wall in between. A limited number of classrooms in this configuration could be on each campus
- Spaces for small groups could be included in the library of each campus. These spaces should have windows open to the library for supervision by the library staff
- It is desirable to have a computer lab large enough to accommodate a full class directly adjacent to the library with glass walls into the library for supervision by the library staff

- Classroom walls should have a significant amount of space devoted to marker boards. These marker boards could be full height, floor to ceiling and should have a metal backing so that magnets could be used to secure information to the boards
- Students and teachers spend a considerable amount of time in the science labs standing. It is desirable to have floor covering that is cushioned for comfortable standing
- A classroom sound system should be included in the design of all classrooms, in both elementary and middle schools. This system should include a walk around/ wireless microphone for the teacher. There should also be a microphone that the students could use for presentations
- Directly outside each classroom there should be hooks for student backpacks in sufficient numbers for the number of students in each class
- The building envelope should be upgraded to provide a safe, comfortable environment. Windows that leak and allow water and air infiltration should be repaired or replaced

#### **Library:**

- As mentioned above, it is desirable to have a number of small conference rooms of sufficient size for 4 to 6 students around a work table attached to the library. These spaces should have glass walls into the library for supervision by the library staff
- It is desirable to have computer work stations in the library for student use outside of classroom time or for independent study during class. These spaces should be within the vision from the circulation desk to allow for supervision by the library staff. It is also desirable to have printers accessible from these computers for student use.
- Libraries should be designed to allow for quiet study by individuals and to accommodate small group learning in a quiet setting.

#### **School campus:**

- Each school should be equipped with an electronic marquee at the front of the campus for identification and announcements

# **FACILITIES NEEDS ASSESSMENTS**

DRAFT



# FACILITIES NEEDS ASSESSMENTS

## METHODOLOGY

To determine the needs at each campus, TSS staff visited all the school sites in the District. TSS met with maintenance staff at most sites and reviewed the site needs, as well as touring sites with the maintenance staff to visually determine the extent of the needs. The needs were then documented based on the categories listed below:

- I. Grounds and Site Work**
  - a. Parking and Driveways
  - b. Parking Lot and Exterior Lighting
  - c. Pathways and Walkways
  - d. ADA Access Ramps
  
- II. Outdoor Facilities**
  - a. Hardcourts and Paved Areas
  - b. Playfields and Grass Areas
  - c. Playground Equipment
  - d. Outdoor Shade Structures
  - e. Perimeter Fencing
  
- III. Utilities**
  - a. Electrical Service
  - b. Water
  - c. Gas
  - d. Storm/Sewage
  
- IV. Central Equipment Systems**
  - a. Fire Alarm System
  - b. Phone/PA System
  - c. Clocks/Bell System
  - d. Technology /Data
  - e. Intrusion/Security
  - f. Energy Management System
  
- V. Building Envelope**
  - a. Roofing
  - b. Siding and Painting
  - c. Windows
  - d. Exterior Doors
  
- VI. Interior Finishes**
  - a. Interior Doors
  - b. Floors

- c. Walls
- d. Ceilings

**VII. Furnishings and Fixtures**

- a. Casework
- b. Lighting Fixtures
- c. Technology/Data
- d. HVAC/Heating Systems
- e. Plumbing Fixtures

**VIII. MPR and Other Facilities**

- a. MPR/Gymnasium
- b. Kitchen
- c. Restrooms
- d. Portable Classrooms

These designations and headings are used throughout the Needs Assessment.

The costs are based on the 2014 RS Means Building Cost Data, a publication widely accepted in the industry, and on sound professional judgment. It is important to note that the information presented here is **not** intended to be a detailed scope of work for future projects nor is it intended to be a detailed cost estimate for future work. The numbers are developed to create a budget for work to be completed at each site. This plan covers the period 2015 through 2025. As such, many of the needs for those later years have not yet been determined or even anticipated. As projects are identified and project teams established, a more detailed scope will need to be developed.

It is also important to understand that, due to the nature of modernization projects, it is strongly recommended that a substantial contingency be included in the budget. Many issues are not identified until construction is underway. Dry rot or pest infestation can only be discovered as walls are opened. Structural deficiencies may not be apparent until structural members are uncovered. Underground utilities may be damaged in the construction process due to the lack of documentation. These events drive costs up; and these costs need to be anticipated in the planning estimates. We strongly recommend using a 25 percent contingency factor in the planning stages of modernization projects. This amount may be reduced to 10-15 percent during actual construction. For the purposes of this report, a 25 percent contingency is included in the Project Costs presented at the end of this section.

The Project Costs shown also include 28 percent for soft costs, an allowance for interim housing and an additional 15 percent for cost escalation to the total estimated costs. Soft costs are added to the estimated costs to provide for fees to architects, DSA, CDE, materials testing, inspections and others during design and construction, furniture and equipment, and other incidental costs to the project. Cost escalation is added to escalate the cost of projects to the mid-point of a ten year construction program at 3 percent per year or 15 percent in five years. Escalation costs are typically adjusted when construction schedules are fully developed.

# **SCHOOL SITE ASSESSMENTS**

DRAFT

# CAMINO PABLO ELEMENTARY SCHOOL

**Address:**

1111 Camino Pablo  
Moraga, CA 94556  
P (925) 376-4435; F (925) 376-6749

**Enrollment Data:**

Capacity: 504  
CBEDS Enrollment (2014-15): 396  
Grades: K-5



## FACILITIES INVENTORY

<b>Site:</b>	<b>Building Area:</b>	
Site Acreage: _____ acres	Permanent: 40,380 sq. ft.	
Permanent Buildings: 5	Relocatable: 4,320 sq. ft.	
Year First Occupied: 1961	Total: 44,700 sq. ft.	
<b>Classrooms:</b>	<b>Administration:</b>	
Permanent Classrooms: 24	Offices 2,100 sq. ft.	
Relocatable Classrooms: 4	Staff Lounge 500 sq. ft.	
<b>Subsidiary Facilities:</b>	Multi-Purpose 7,740 sq. ft.	
Library 3,750 sq. ft.	Kitchen 800 sq. ft.	
Gymnasium 0 sq. ft.	Music 0 sq. ft.	
Auditorium 0 sq. ft.		

Restrooms	Water Closets	Sinks	Urinals
Boys	6	9	11
Girls	11	8	0
Kiddies	2	0	0
Men	1	1	0
Women	2	1	0
Nurse	1	0	0
Staff/Unisex	5	3	0

## FACILITIES NEEDS

### BACKGROUND

Camino Pablo Elementary School was completed in 1961 and consists of five permanent buildings and four relocatable classroom buildings. The school originally housed grades 5 through 8, followed a few years later, when two additional buildings were added to the campus and grades K-4 were added, turning it into a K-8 school. Grades 7 and 8 were moved to the Joaquin Moraga Intermediate School when that newly constructed school opened in 1967, and Camino Pablo School was converted to a K-6 elementary school. After a fire destroyed the primary building in 1977, Camino Pablo was converted into a K-5 school, when grade 6 was moved to the intermediate school. In 1977 a new wing was constructed to house K-1 students and the Multi-use building, complete with a serving kitchen, restrooms, a stage and a general function hall was added to the school in the late -1990's.

Currently, Camino Pablo Elementary School building facilities include the Administration building, a Multi-use building, a Library building, four relocatable classroom buildings and four permanent buildings that house 24 teaching stations. Outdoor facilities include a bus circle, staff and visitors parking areas, 3 sets of kindergarten and grade school play apparatus, asphalt paved hardcourts and play areas, and two grass playfields with metal backstops. Modernization of the older campus facilities, which included classroom and restroom upgrades, HVAC equipment upgrades and others, was undertaken by the District during the period between 1995 and 2000.

### I. GROUNDS AND SITE WORK

#### a) Parking and Driveways

- Patch cracks, seal coat and re-stripe the bus circle and staff parking areas of the school. Cut-out and repave deteriorated sections of asphalt pavement along the fence – that have been damaged by tree roots.
- Cut-out and repave deteriorated/structurally damaged asphalt-concrete transitions of the entrance/exit driveways to the school.

Estimated Cost \$23,000

#### b) Parking Lot and Exterior Lighting

- Upgrade exterior lighting system fixtures and lamps around buildings and covered walkways/breezeways to LED lighting system.
- Install two LED lighting poles along the front parking area sidewalk.

- Integrate/connect all exterior lighting and parking area lighting controls into the new district Energy Management System (EMS)

**Estimated Cost** **\$59,000**

c) **Pathways and Walkways**

- Patch cracks and seal coat asphalt walkways between the Library building and the Computer Lab portables (Room #21-22). Cut-out and repave structurally damaged sections of pavement.
- Remove severely deteriorated asphalt pavement of the patio/courtyard in front of the school and replace with concrete.

**Estimated Cost** **\$10,000**

c) **ADA Ramps**

- None.

**Estimated Cost** **\$0**

## II. OUTDOOR FACILITIES

a) **Hard Courts and Paved Areas**

- Overlay/resurface and re-stripe the asphalt hard courts/play areas north of the Library building. Cut-out and repave structurally damaged sections of pavement.
- Patch cracks, seal coat and re-stripe the asphalt hard courts/play areas north and east of the Administration Building (Room #1-8).
- Replace all 6 units of dilapidated basketball backboards behind the Library building and Room #21-22 portables and next to the Bobcat Club relocatable building.

**Estimated Cost** **\$79,000**

b) **Playfields and Grass Areas**

- Install new smart controllers complete with wireless weather station to the playfield and grass area irrigation systems to promote efficient water use and accurate programming.

**Estimated Cost** **\$4,000**

c) **Playground Equipment**

- None.

**Estimated Cost** **\$0**

d) **Outdoor Shade Structure**

- None.

**Estimated Cost** **\$0**

e) **Perimeter Fences and Gates**

- Replace rusted, bent/dilapidated sections of chain link fencing along the southern edge of the front parking area behind the concrete access ramp from the street.

**Estimated Cost** **\$13,000**

III. CENTRAL EQUIPMENT SYSTEMS

a) **Electrical Service**

- Upgrade/ increase electrical service capacity to Building #1 (Admin Offices, Room #1-8) to accommodate increasing staff, teacher and student use of technology devices and equipment.
- Demolish the existing dilapidated utility enclosure/shed and construct a new masonry type enclosure for the electrical switchgear/transformer and gas service equipment.

**Estimated Cost** **\$50,000**

b) **Water**

- None.

**Estimated Cost** **\$0**

c) **Gas**

- None.

**Estimated Cost** **\$0**

d) **Storm and Sewage System**

- Conduct a video inspection of the sewage lines from Building #1 (Admin., Room #1-8) and Building #2 (Kinder #A-B; Room #9-11) to the service connection with the City main sewer. Remove and replace sections of failed and/or damaged piping.
- Conduct a video inspection of the storm drainage lines between Building #1 (Admin., Room #1-8) and Building #3 (Library; Room #14-19). Remove and replace sections of failed and/or damaged piping.

**Estimated Cost** **\$54,000**

IV. CENTRAL EQUIPMENT SYSTEMS

a) **Fire Alarm System**

Camino Pablo Elementary School has a fully automatic fire alarm system comprised of smoke/heat detectors, bells, strobes and horns, pull down switches and annunciator panels. The system is externally monitored and supervised by an outside provider. System devices are supplemented by a number of wireless smoke detectors connected to the security alarm system.

- None.

**Estimated Cost** **\$0**

b) **Phones/ PA Systems.**

Phone and public address systems district-wide were installed during the early 1990's and have become inefficient and unreliable.

- Replace the school's existing phone equipment and system with a VoIP (Voice over Internet Protocol) phone system. The school has the technology/data infrastructure to support the system.

**Estimated Cost** **\$18,000**

c) **Clock and Bell Systems.**

Master clock and bell systems district-wide are antiquated, marginally operational and unreliable. In addition, replacement parts and devices have become obsolete and unavailable in some cases.



- Replace the school's existing master clock and bell system with a new fully integrated master clock system, PA paging, intercom and bell system. New system to include a public address and break bell speakers, two-way intercom stations, LED displays and synchronized analog clocks.

**Estimated Cost** **\$28,000**

d) **Technology/ Data Infrastructure**

The District's main server is connected to the Contra Costa County Office of Education (CCCOE) which serves as the District's Internet Service Provider (ISP) via the California High Speed Network (CHSN) using a Comcast fiber data transmission connection (50Mbps). Camino Pablo Elementary School is connected to the District main server at J. Moraga Intermediate School via a Comcast fiber network (1000Mbps). Connectivity within the Camino Pablo Elementary School facility is via a combination of fiber and CAT 5e cables. The District's Technology Plan 2014-2017 included planned upgrades to infrastructure, file servers, e-mail server, LAN, WAN, hardware and software.

- Planned upgrades and replacements to technology infrastructure and network equipment.

**Estimated Cost** **\$75,000**

e) **Intrusion/ Security**

Camino Pablo Elementary School has an existing security/intrusion alarm system comprised of door/window contacts, motion detectors, sirens, keypads, etc. The system is externally monitored and supervised by an outside provider.

The school has no video surveillance system cameras in place.

- Upgrade the security/intrusion alarm system site wide with new higher capacity controllers, components and devices.

**Estimated Cost** **\$8,000**

f) **Energy Management/Lighting Control System**

The District has a centralized Energy Management System (EMS) that remotely controls the programming and operation of the HVAC equipment and exterior lighting systems centrally from the M&O Office. However, the existing EMS is antiquated and has limited capabilities. The scheduling and programming feature is limited to turning "on" or "off" all HVAC equipment of whole buildings instead of individual HVAC units. Additionally, the system does not have a fault report system that allows the technicians to remotely diagnose system problems and perform corrective measures without visiting the school.

- Install a new web-based Energy Management System (EMS) for complete remote monitoring, controlling and programming operations of all the school's individual HVAC equipment. Integrate the site parking lot lighting system and exterior lighting system controls into the new Energy Management System (EMS).

**Estimated Cost** **\$158,000**

## V. BUILDING ENVELOPE

### a) **Roofing**

- Reroof Building #2 (Kinder Room #A & B, Room # 9-11). Replace metal flashings, gutters and downspouts.
- Repair/replace dry-rot damaged sections of fascia and eaves around breezeways/walkways between Building #1 (Administration Office, Library and Multi-Use Building).
- Install a new roofing system over the existing sheet metal roofs of relocatable classrooms (Room #20, 21 and 22)

**Estimated Cost** **\$63,000**

### b) **Sidings and Paintwork**

- Repaint building exteriors including canopies, covered walkways/breezeways, columns and railings. Patch/repair cracks in the stucco sidings of Building #4 (Room # 23-26) prior to repainting.

**Estimated Cost** **\$50,000**

### c) **Windows**

- Retrofit/re-glaze all exterior windows in Building #1 (Admin Office; Room # 1 - 8), Building #2 (Kinder Room #A & B; Room # 9-11), and Building #3 (Library; Room #14-19) with energy efficient double pane window glazing. Coordinate all window retrofit work with cabinet countertop replacements and seismic rehabilitation work.

*Note: The proposed scope of seismic mitigation work on the weak wall-to-roof connections in Building #1 (Admin Office; Room #1-8) will disturb the windows, and the wall finishes inside the classrooms, offices and hallways.*

**Estimated Cost** **\$48,000**

d) Exterior doors

- None.

Estimated Cost \$0

VI. INTERIOR FINISHES

a) Interior doors

- None.

Estimated Cost \$0

b) Floors

- Replace carpet and VCT floor finishes in classrooms and offices with resilient rubber backed carpet system (i.e. Collins Aikman carpets). Coordinate carpet and VCT floor replacements with cabinet/countertop replacement and seismic rehabilitation work.

Estimated Cost \$265,000

c) Walls

- Install new tackboard panels up to 8' high on classroom walls and hallways in Building #1 (Administration Offices, Room #1-8). Replace existing old and dilapidated tackboard wall panels.

*Note: The proposed scope of seismic mitigation work on the weak wall-to-roof connections in Building #1 (Admin Office; Room #1-8) will disturb the wall finishes inside the classrooms, offices and hallways.*

Estimated Cost \$110,000

d) Ceilings

- Replace warped, loose and stained acoustic ceilings in classrooms and hallways in Building #1 (Administration Office, Room # 1-8), Building #2 (Room #A & B, Room #9-11) and Building #4 (Room #23-26). Repaint drywall ceilings.

*Note: The proposed scope of seismic mitigation work on the weak wall-to-roof connections in Building #1 (Admin Office; Room #1-8) will disturb the ceiling finishes inside the classrooms, offices and hallways.*

- - Repaint open beam ceilings in Building #3 (Library, Room #14-19).

Estimated Cost \$193,000

## VII. FURNISHINGS AND FIXTURES

### a) Casework

- Refinish natural wood cabinets, shelves and drawers of the classrooms in Building #1 (Room #1-8). Remove old dilapidated countertops and replace with new custom fabricated, laminate finish countertops. Coordinate cabinet and countertop upgrades with the removal/demolition of radiators/convection units.
- Refinish natural wood cabinets, shelves and drawers to classrooms in Building #2 (Room # 9-11, A & B), and Building #3 (Room #14-19). Remove old dilapidated countertops and replace with new custom fabricated, laminate finish countertops.

Estimated Cost \$38,000

### b) Lighting Fixtures

- Retrofit existing T8 lighting fixtures in the Administration Offices, classroom buildings, and the Library building with LED tube lighting system. Install occupancy sensors in classrooms. *(Note: This project is anticipated to be eligible for funding under the California Clean Energy Jobs Act (Prop. 39) Program).*

Estimated Cost \$125,000

### c) Technology/Data Access

Camino Pablo Elementary School has a fully operational wireless network which provides access to servers and printing resources and supports mobile wireless devices. A fully networked Computer Lab provides scheduled grade 3-5 instructions and 60 wireless student Chromebooks housed on Carts on Wheels (COWS) and 180 iPADS are available for student and teachers use. Classrooms have at least 1 networked PC workstation (Level I). Some classrooms have Level II technology (LCD projectors, interactive white boards, audio system, document cameras, etc.). The District's Technology Plan 2014-2017 included planned upgrades and replacements to computers and classrooms devices.

- Planned upgrades and replacements to classrooms data and technology access.

Estimated Cost \$140,000

d) **HVAC/Heating Systems**

The school's remaining hot water boiler unit is located in Building #1(Admin Office, Room #1-8). This unit provides heating to the classrooms and offices in the building.

- Decommission and demolish the hot water boiler located in Building #1(Admin Office, Room #1-8). Demolish all ancillary equipment, pumps, tanks, piping and controls, etc. Renovate and repurpose the boiler room into a Storage Room for school use.
- Demolish heat radiators/convection units in the offices and classrooms. Cut down the supply and return pipes to below floor level and cap-off. Coordinate demolition of heat radiators/convection units with cabinet and countertop upgrades.
- Remove A/C units in Building #1 (Administration Office; Room #1-8) and replace new HVAC units.

**Estimated Cost** **\$145,000**

e) **Plumbing Fixtures**

- Replace sinks, faucets and bubblers in Building #1 (Room #1-8), Building #2 (Room #9-11, A&B), and Building #3 (Room #14-19) classrooms. Coordinate sink and faucet replacements with countertop upgrades.

**Estimated Cost** **\$30,000**

VIII. MPR AND OTHER FACILITIES

a) **Gymnasium**

- None.

**Estimated Cost** **\$0**

b) **Multi-Purpose Building**

- Remove/replace old parquet/plywood/laminate wood flooring and replace with hardwood athletic/sports flooring.
- Refinish wainscot, and wooden window screens. Repaint drywall walls and ceilings.
- Upgrade/retrofit T8 lighting fixtures with higher energy efficient LED lighting fixtures.

- Replace heating/air-conditioning equipment. Unit was installed in the late 1990s and nearing end of economic service life.

**Estimated Cost** **\$158,000**

c) **Kitchen**

- Remove old linoleum floor and replace with new pour in place granulated epoxy floor coating system.
- Repaint drywall walls and ceilings.
- Upgrade/retrofit T8 lighting fixtures with LED lighting fixtures.

**Estimated Cost** **\$7,000**

d) **Restrooms**

- Upgrade floor, wall and ceiling finishes, stall partitions, plumbing fixtures, and windows of the Boys and Girls restrooms in Building #1 (Room #1-8), Building #2 (Room #9-11), Building #3 (Room #14-19) and Building #5 (Multi-Use Building). Retrofit lighting fixtures with LED lighting and install new electric hand dryers.
- Upgrade floor, wall and ceiling finishes, stall partitions, plumbing and lighting fixtures, of the Kindergarten and Adult restrooms in Building #2 (Room #A & B)..
- Upgrade floor, wall and ceiling finishes, stall partitions, plumbing and lighting fixtures, of the Men's, Women's, Staff and Nurse's restrooms in Building #1 (Administration offices) and Unisex Restrooms in Building #2 (Room #9-11), Building #3 (Library) and Building #4 (Room #23-26).

**Estimated Cost** **\$372,000**

b) **Relocatable Classrooms**

The school has 4 relocatable classroom (RCR) buildings on campus.

- Room #20, 21 and 22 are DSA approved, 24' x 40' metal frame buildings installed on wood foundations complete with metal ramps and railings. These buildings have wood siding, built-up roof (BUR) with cap and polyurethane (PU) coating, metal frame windows, metal doors and wall mounted heat pumps. Needs include minor ramp repairs, wood siding repair, exterior painting, carpet and VCT flooring replacement, tack board wall and ceiling tile replacement and upgrades to LED lighting system.

- The Bobcat Club portable building is a DSA type, 36' x 40' building, installed on wood foundations and furnished with metal ramps and railings. This building has wood sidings, built-up roof (BUR) with cap and polyurethane (PU) coating, metal frame windows, metal doors and wall mounted heat pumps. Needs include minor ramp repairs, wood siding repair, exterior painting, tack board wall and ceiling tile replacement and lighting upgrades. The Bobcat Club building has a Unisex restroom with linoleum floor. Needs include upgrades to the restroom fixtures, installation of new floor, wall and lighting fixtures.

**Estimated Cost \$152,000**

**IX. OTHER NEEDS**

According to the District's 2002 Seismic Inspection Report, Building #1 - the large classroom building (Administration Office; Room #1-8) is vulnerable to seismic damage and poses life safety risk to students and staff. Recommended mitigation includes the installation of steel connectors to rehabilitate the weak connections between walls and roofs.

- Rehabilitate weak wall to roof connections in Building #1 (Administration Office, Room #1-8).

*Note: An initial cost estimate of \$2,300,206 was presented in 2011 by the District consultants, in a report titled, "Seismic Strengthening Study and Cost Estimate for Large Classroom Building at Camino Pablo School and Wings II and III at Donald Rheem School".*

**Estimated Cost \$2,623,000**

- Construct parking sheds with solar panel roofs in the parking lot to generate alternative clean energy as part of the District's energy conservation program. For the purpose of this study, it is assumed that the District will choose the option of a Power Purchase Agreement (PPA) requiring no upfront capital cost. *(Note: This project is anticipated to be eligible for funding under the California Clean Energy Jobs Act (Prop. 39) Program should the district decide to purchase and own the system).*

**Estimated Cost \$0**

**TOTAL ESTIMATED COST \$5,098,000**

# DONALD RHEEM ELEMENTARY SCHOOL

**Address:**  
 90 Laird Drive,  
 Moraga, CA 94556  
 P (925) 376-4441; F (925) 376-3248

**Enrollment Data:**  
 Capacity: 480  
 CBEDS Enrollment (2014-15): 410  
 Grades: K-5



## FACILITIES INVENTORY

**Site:**  
 Site Acreage: \_\_\_\_\_ acres  
 Permanent Buildings: 5  
 Year First Occupied: 1959

**Classrooms:**  
 Permanent Classrooms: 20  
 Relocatable Classrooms: 4

**Subsidiary Facilities:**  
 Library 3,750 sq. ft.  
 Gymnasium 0 sq. ft.  
 Auditorium 0 sq. ft.

**Building Area:**  
 Permanent: 38,972 sq. ft.  
 Relocatable: 4,320 sq. ft.  
 Total: 43,292 sq. ft.

**Administration:**  
 Offices 2,275 sq. ft.  
 Staff Lounge 500 sq. ft.

Multi-Purpose 7,740 sq. ft.  
 Kitchen 800 sq. ft.  
 Music 0 sq. ft.

Restrooms	Water Closets	Sinks	Urinals
Boys	7	9	13
Girls	11	9	0
Kiddies	2	0	0
Men	7	1	1
Women	2	2	0
Nurse	1	0	0
Staff/Unisex	4	1	0



## FACILITIES NEEDS

### BACKGROUND

Donald Rheem Elementary School was completed in 1959 and originally consisted of one permanent building. Over the years, four other additional buildings, including the Library building and two classroom buildings were added to the campus. The latest addition to the campus was the Multi-use building, which was constructed in the mid-1990s.

Currently, Donald Rheem Elementary School building facilities include the Administration and Kindergarten building, a Multi-use building, a Library building, four relocatable classroom buildings and four permanent buildings that house 20 teaching stations. Outdoor facilities include a bus circle, staff and visitor parking areas, 3 sets of kindergarten and grade school play apparatus, asphalt paved hardcourts and play areas, and grass playfields with backstops. Modernization of the older campus facilities, which included classroom and restroom upgrades, HVAC equipment upgrades and others, was undertaken by the District during the period between 1995 and 2000.

### I. GROUNDS AND SITE WORK

#### a) Parking and Driveways

- Patch cracks, seal coat and re-stripe the bus circle, entrance/exit driveways and staff parking areas of the school. Cut-out and repave deteriorated sections of asphalt pavement.

Estimated Cost \$47,000

#### b) Parking Lot and Exterior Lighting

- Upgrade exterior lighting system fixtures and lamps around buildings and covered walkways/breezeways to LED lighting system.
- Install one additional LED lighting pole on the west side of the staff parking area.
- Integrate/connect all exterior lighting and parking area lighting controls into the new district Energy Management System (EMS)

Estimated Cost \$51,000

c) **Pathways and Walkways**

- Overlay/resurface the asphalt paved walkways west of Wings III and IV and Portable Room #23.

**Estimated Cost** **\$14,000**

d) **ADA Ramps**

- None.

**Estimated Cost** **\$0**

II. OUTDOOR FACILITIES

a) **Hard Courts and Paved Areas**

- Patch cracks, seal coat and re-stripe the asphalt hard courts/play areas west of Wings I and II, and east of Wings III, IV and portable classroom (Room #23-25). Cut-out and repave structurally damaged sections of pavement.

**Estimated Cost** **\$71,000**

b) **Playfields and Grass Areas**

- Regrade/re-level sections of grass playfield to eliminate tripping hazards (i.e., indentations and uneven areas due to gopher infestation, soil erosion, etc.). Fertilize soil and re-seed barren spots and affected areas.
- Upgrade existing irrigation systems (heads, valves and piping system, etc.) of the grass playfield.
- Replace two sets of rusted/dilapidated backstops
- Install new smart controllers complete with wireless weather station to the playfield and grass area irrigation systems to promote efficient water use and accurate programming.

**Estimated Cost** **\$228,000**

c) **Playground Equipment**

- None.

**Estimated Cost** **\$0**

d) **Outdoor Shade Structure**

- None.

**Estimated Cost** **\$0**

e) **Perimeter Fences and Gates**

- Replace rusted, bent/dilapidated sections of chain link fencing around the south and east perimeter of the grass playfields.

**Estimated Cost** **\$38,000**

III. CENTRAL EQUIPMENT SYSTEMS

a) **Electrical Service**

- None

**Estimated Cost** **\$0**

b) **Water**

- None.

**Estimated Cost** **\$0**

c) **Gas**

- None.

**Estimated Cost** **\$0**

d) **Storm and Sewage System**

- Conduct video inspection of sewage lines from Wings I, II, and III to the service connection with the City main sewer. Remove and replace sections of failed and/or damaged piping.
- Repair/replace dilapidated concrete swale drainage system along the eastern edge of the grass playfields. Replace concrete drain inlets damaged by tree roots.

**Estimated Cost** **\$29,000**

#### IV. CENTRAL EQUIPMENT SYSTEMS

a) **Fire Alarm System**

Donald Rheem Elementary School has a fully automatic fire alarm system comprised of smoke/heat detectors, bells, strobes and horns, pull down switches and annunciator panels. The system is not externally monitored and supervised by an outside provider. System devices are supplemented by a number of wireless smoke detectors connected to the security alarm system.

- Provide a dedicated phone line and install wiring and equipment necessary for external remote supervision and monitoring of the school's fire detection and alarm system.

**Estimated Cost** **\$5,000**

b) **Phones/ PA Systems.**

Phone and public address systems district-wide were installed during the early 1990's and have become inefficient and unreliable.

- Replace the school's existing phone equipment and system with a VoIP (Voice over Internet Protocol) phone system. The school has the technology/data infrastructure to support a VoIP system.

**Estimated Cost** **\$18,000**

c) **Clock and Bell Systems.**

Master clock and bell systems district-wide are antiquated, marginally operational and unreliable. In addition, replacement parts and devices have become obsolete and unavailable in some cases.

- Replace the school's existing master clock and bell system with a new fully integrated master clock system, PA paging, intercom and bell system. The new system to include a public address and break bell speakers, two-way intercom stations, LED displays and synchronized analog clocks.

**Estimated Cost** **\$28,000**

d) **Technology/ Data Infrastructure**

The District's main server is connected to the Contra Costa County Office of Education (CCCOE) which serves as the District's Internet Service Provider (ISP) via the California High Speed Network (CHSN) using a Comcast fiber data transmission connection (50Mbps). Donald Rheem Elementary School is connected to the District's main server at J. Moraga Intermediate School via a Comcast fiber network (1000Mbps). Connectivity within the Donald Rheem Elementary School facility is via a combination of fiber and CAT 5e cables. The

District's Technology Plan 2014-2017 included planned upgrades to infrastructure, file servers, e-mail server, LAN, WAN, hardware and software.

- Planned upgrades and replacements to technology infrastructure and network equipment.

**Estimated Cost** **\$75,000**

e) **Intrusion/ Security**

Donald Rheem Elementary School has an existing security/intrusion alarm system comprised of door/window contacts, motion detectors, sirens, keypads, etc. The system at is externally monitored and supervised by an outside provider.

The school has no video surveillance system cameras in place.

- Upgrade the security/intrusion alarm system site wide with new higher capacity controllers, components and devices.

**Estimated Cost** **\$8,000**

f) **Energy Management/Lighting Control System**

The District has a centralized Energy Management System (EMS) that remotely controls the programming and operation of the HVAC equipment and exterior lighting systems centrally from the M&O Office. However, the existing EMS is antiquated and has limited capabilities. The scheduling and programming feature is limited to turning "on" or "off" all HVAC equipment of whole buildings instead of individual HVAC units. Additionally, the system does not have a fault report system that allows the technicians to remotely diagnose system problems and perform corrective measures without visiting the school.

- Install a new web-based Energy Management System (EMS) for complete remote monitoring, controlling and programming operations of all the school's individual HVAC equipment. Integrate the parking lot lighting system and exterior lighting system controls into the new Energy Management System (EMS).

**Estimated Cost** **\$153,000**

## V. BUILDING ENVELOPE

a) **Roofing**

- Reroof covered walkways/breezeways interconnecting Wings I, II, III and IV. Repair/replace dry-rot damaged sections of fascia and roof deck.

- Reroof Wing II (Admin Office, Room 7 & 8) and Staff Lounge and Work Room. Replace metal flashings, gutters and downspouts. Remove and replace dry-rot damaged sections of roof decks, fascia and eaves.
- Reroof Wing IV (Library, Room # 17 - 22). Replace metal flashings, gutters and downspouts.
- Install a new roofing system over the existing sheet metal roofs of relocatable classrooms (Room #23, 24 and 25)

**Estimated Cost \$161,000**

b) **Sidings and Paintwork**

- Repaint all building exteriors including covered walkways/breezeways, columns and railings. Remove/replace dry-rot damaged wooden decks and eaves.

**Estimated Cost \$63,000**

c) **Windows**

- Retrofit/re-glaze all exterior windows in Wings I, II, III and IV to energy efficient double pane window glazing. Coordinate window retrofit work with cabinet countertop replacements and seismic rehabilitation work.

*Note: The proposed scope of seismic mitigation work on the weak wall-to-roof connections in Wing II (Administration Office; Room #7-8) and Wing III (Room #9-16), will disturb the windows, and the wall finishes inside the classrooms, offices and hallways.*

**Estimated Cost \$59,000**

d) **Exterior doors**

- None.

**Estimated Cost \$0**

VI. INTERIOR FINISHES

a) **Interior doors**

- None.

**Estimated Cost \$0**

b) **Floors**

- Replace carpet and VCT floor finishes in classrooms and offices with resilient rubber backed carpet system (i.e. Collins Aikman carpets). Coordinate carpet and VCT floor replacements with cabinet/countertop replacement and seismic rehabilitation work.

**Estimated Cost** **\$292,000**

c) **Walls**

- Install new tackboard panels up to 8' high on classroom walls and hallways in Wings II (Room #7-8) and IV (Room #17-22). Replace existing old and dilapidated tackboard wall panels.

*Note: The proposed scope of seismic mitigation work on the weak wall-to-roof connections in Wing II (Admin Office; Room #7-8) will disturb the wall finishes inside the classrooms, offices and hallways.*

**Estimated Cost** **\$110,000**

d) **Ceilings**

- Replace warped, loose and stained acoustic ceiling tiles and repaint drywall ceilings in Wing I classrooms (Room #1-6) and hallways.
- Replace warped, loose and stained acoustic ceiling boards in Wings II (Room #7-8) and III (Room #9-16).

*Note: The proposed scope of seismic mitigation on the weak wall-to-roof and wall-to-floor connections in Wing II (Admin Office; Room #7-8) and Wing III (Room #9-16) will disturb the roof, windows, and the wall, ceiling and floor finishes inside the classrooms, offices and hallways*

- Repaint ceilings in Wing IV (Library, Room #18-22).

**Estimated Cost** **\$157,000**

VII. FURNISHINGS AND FIXTURES

a) **Casework**

- Refinish natural wood cabinets, shelves and drawers of the classrooms in Wing I (Room #1-6), Wing II (Room #7-8), and Wing IV (Room #17-22). Remove old Formica countertops and replace with new custom fabricated, laminate finish countertops.

- Remove old casework (cabinets and countertops) in Wing III (Room #9-16) and replace with new custom fabricated, laminate finish cabinets and countertops.

**Estimated Cost** **\$155,000**

b) **Lighting Fixtures**

- Retrofit existing T8 lighting fixtures in the Administration Offices, classroom buildings, and the Library building with LED tube lighting system. Install occupancy sensors in classrooms. *(Note: This project is anticipated to be eligible for funding under the California Clean Energy Jobs Act (Prop. 39) Program).*

**Estimated Cost** **\$120,000**

c) **Technology/Data Access**

Donald Rheem Elementary School has a fully operational wireless network which provides access to servers and printing resources and supports mobile wireless devices. A fully networked Computer Lab provides scheduled grade 3-5 instructions and 60 wireless student Chromebooks housed in Carts on Wheels (COWS) and 180 iPads are available for student and teachers use. Classrooms have at least one networked PC workstation (Level I). Some classrooms have Level II technology (LCD projectors, interactive white boards, audio system, document cameras, etc.). The District's Technology Plan 2014-2017 included planned upgrades and replacements to computers and classrooms devices.

- Planned upgrades and replacements to classrooms data and technology access.

**Estimated Cost** **\$140,000**

d) **HVAC/Heating Systems**

A hot water boiler unit located in Wing III was decommissioned in the 1990's and replaced with individual HVAC units. The boiler equipment, piping system, and heat radiators/convection units were abandoned in place.

- Demolish and dispose of the hot water boiler equipment in Wing III. Demolish all ancillary equipment including pumps, tanks, piping, and controls, etc. Renovate/modify the boiler room into a storage room for school use.



- Demolish abandoned heat radiators/convection units in Wing III (Room #9-16). Cut down the supply and return pipes to below floor level and cap-off. Coordinate demolition of heat radiators/convection units with cabinet and countertop upgrades.

**Estimated Cost** **\$37,000**

e) **Plumbing Fixtures**

- Replace sinks, faucets and bubblers in Wing I (Room #1-6, Wing II (Room #7-8), Wing III (Room #9-16) and Wing IV (Room #17-22) classrooms. Coordinate sink and faucet replacements with countertop upgrades.

**Estimated Cost** **\$34,000**

VIII. MPR AND OTHER FACILITIES

a) **Gymnasium**

- None.

**Estimated Cost** **\$0**

b) **Multi-Purpose Building**

- Remove/replace old parquet/plywood/laminate wood flooring and replace with hardwood athletic/sports flooring.
- Refinish wainscot, and wooden window screens. Repaint drywall walls and ceilings.
- Upgrade/retrofit T8 lighting fixtures with higher energy efficient LED lighting fixtures.
- Replace heating/air-conditioning equipment. Unit was installed in the mid 1990's and is nearing the end of its economic service life.

**Estimated Cost** **\$158,000**

c) **Kitchen**

- Remove old linoleum floor and replace with new pour in place granulated epoxy floor coating system.
- Repaint drywall walls and ceilings.

- Upgrade/retrofit T8 lighting fixtures with LED lighting fixtures.

**Estimated Cost** **\$7,000**

d) **Restrooms**

- Upgrade floor, wall and ceiling finishes, stall partitions, plumbing fixtures, and windows of the Boys and Girls restrooms in Wing I (Room #1-6), Wing III (Room #9-16), Wing IV (Room #18-22) and Multi-Use Building. Retrofit lighting fixtures with LED lighting and install new electric hand dryers.
- Upgrade floor, wall and ceiling finishes, plumbing and lighting fixtures, of the Kindergarten and Adult Restrooms in Wing II (Room #7 & 8).
- Upgrade floor, wall and ceiling finishes, plumbing and lighting fixtures, of the Men's, Women's, Staff and Nurse's restrooms in Wing II (Administration offices) and Unisex Restrooms in Wing I (Room #1-6), and Wing III (Room #9-16).

**Estimated Cost** **\$351,000**

b) **Relocatable Classrooms**

The school has 4 relocatable classroom (RCR) buildings on campus.

- Rooms #23 (Special Education), #24 (Science) and #25 (Special Education), are DSA approved, 24' x 40' metal frame buildings, installed on wood foundations and furnished with concrete ramps and metal railings. These buildings have wood siding, standing seam sheet metal roofing, metal frame windows, metal doors and wall mounted heat pumps. Needs include minor ramp repairs, wood siding repair, exterior painting, carpet and VCT flooring replacement, tack board wall and ceiling tile replacement and upgrades to LED lighting system. Install new built-up roof (BUR) and cap sheet roof system over existing old sheet metal roofing.
- The Roadrunner Club portable building is a DSA type, 36 ft. x 40 ft. building, installed on wood foundations and furnished with metal ramps and railings. This building has wood sidings, built-up roof (BUR) with cap and polyurethane (PU) coating, metal frame windows, metal doors and wall mounted heat pumps. Needs include minor ramp repairs, wood siding repair, exterior painting, tack board wall and ceiling tile replacement and lighting upgrades. The Roadrunner Club building has a Unisex restroom with linoleum floor. Upgrade needs include new restroom fixtures, installation of new floor, wall and lighting fixtures.

**Estimated Cost** **\$202,000**

IX. OTHER NEEDS

According to the District's 2002 Seismic Inspection Report, Wing II (Administration; Room #7-8), and Wing III (Room #9-16) are vulnerable to seismic damage and poses life safety risk to students and staff. Recommended mitigation includes the installation of steel connectors to rehabilitate the weak connections between walls and roofs and between walls and floors.

- Rehabilitate weak wall to roof connections, and wall to floor connections in Wing II (Administration; Room #7-8), and Wing III (Room #9-16).

*Note: An initial cost estimate of \$1,878,982 was presented in 2011 by the District consultants, R. P. Gallagher Associates, Inc., in a report titled, "Seismic Strengthening Study and cost Estimate for Large Classroom Building at Camino Pablo School and Wings II and III at Donald Rheem School".*

**Estimated Cost** **\$2,143,000**

- Construct parking sheds with solar panel roofs in the parking lot to generate alternative clean energy as part of the District's energy conservation program. For the purpose of this study, it is assumed that the District will choose the option of a Power Purchase Agreement (PPA) requiring no upfront capital cost. *(Note: This project is anticipated to be eligible for funding under the California Clean Energy Jobs Act (Prop. 39) Program should the district decide to purchase and own the system).*

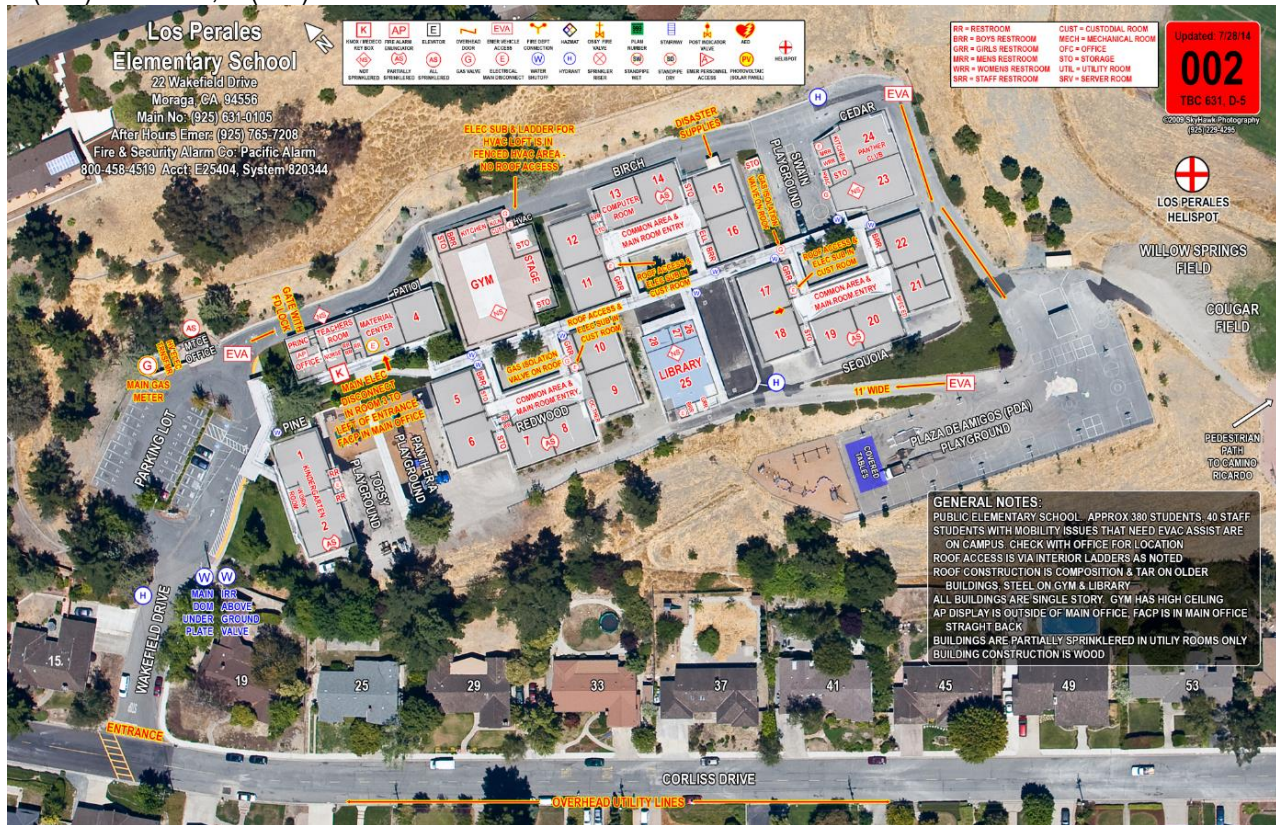
**Estimated Cost** **\$0**

**TOTAL ESTIMATED COST** **\$4,954,000**

# LOS PERALES ELEMENTARY SCHOOL

**Address:**  
 22 Wakefield Drive,  
 Moraga, CA 94556  
 P (925) 631-0105; F (925) 376-7452

**Enrollment Data:**  
 Capacity: 456  
 CBEDS Enrollment (2014-15): 362  
 Grades: K-5



## FACILITIES INVENTORY

<b>Site:</b>	<b>Building Area:</b>	
Site Acreage: _____ acres	Permanent: 36,540 sq. ft.	
Permanent Buildings: 8	Relocatable: 0 sq. ft.	
Year First Occupied: 1966	Total: 36,540 sq. ft.	
<b>Classrooms:</b>	<b>Administration:</b>	
Permanent Classrooms: 24	Offices: 1,800 sq. ft.	
Relocatable Classrooms: 0	Staff Lounge: 450 sq. ft.	
<b>Subsidiary Facilities:</b>	Multi-Purpose: 7,740 sq. ft.	
Library: 2,560 sq. ft.	Kitchen: 800 sq. ft.	
Gymnasium: 0 sq. ft.	Music: 0 sq. ft.	
Auditorium: 0 sq. ft.		

Restrooms	Water Closets	Sinks	Urinals
Boys	7	11	8
Girls	13	11	0
Kiddies	4	0	0
Men	1	1	5
Women	3	3	0
Nurse	1	0	0
Staff/Unisex	1	1	0

## FACILITIES NEEDS

### BACKGROUND

Los Perales Elementary School originally opened in 1966, and served kindergarten through 5th grade students. Due to declining enrollment, Los Perales was closed in 1983. From 1983 to 1996 the campus was leased to the Moraga Playhouse and two private preschool programs. The Moraga School District re-opened the Los Perales Elementary School in 1997 when the district experienced consistent district-wide student growth and the need for additional student housing generated by the mandated implementation of class size reduction programs for grade K-3. Utilizing funds from a local bond measure, in 1997, the District completed significant alterations and upgrades to existing buildings and classrooms, including the addition of the Multi-use Building, prior to the re-opening of the school.

Currently, Los Perales Elementary School building facilities include the Administration building, a Multi-use building, a Library building, and six permanent buildings that house 24 teaching stations for K-5 students. Outdoor facilities include a staff and visitor parking areas, 3 sets of kindergarten and grade school play apparatus, asphalt paved hardcourts and play areas, two grass playfields, and one with a metal backstop for baseball/softball. Modernization of the older campus facilities, which included classroom and restroom upgrades, HVAC equipment upgrades and others, was undertaken by the District during the period between 1999 and 2000.

### I. GROUNDS AND SITE WORK

#### a) Parking and Driveways

- Overlay/resurface the deteriorated sections of the driveway connecting the fire lane from behind Room # 23 to the Plaza De Amigo playground below. Remove and replace structurally damaged sections of pavement. Restripe pavement markings.

Estimated Cost \$9,000

#### b) Parking Lot and Exterior Lighting

- Upgrade exterior lighting system fixtures and lamps around buildings and covered walkways/breezeways to LED lighting system.
- Upgrade/retrofit existing parking area pole lighting to LED system.
- Integrate/connect all exterior lighting and parking area lighting controls into the new district Energy Management System (EMS).

Estimated Cost \$33,000

c) **Pathways and Walkways**

- Overlay/resurface the deteriorated sections, cut-out and repave structurally damaged sections of pavement of the walkway from the Plaza De Amigo playground to the softball/baseball playfield below.
- Overlay/resurface the deteriorated sections, cut-out and repave structurally damaged sections of pavement of the asphalt paved trail/walkway around the softball/baseball playfield
- Overlay/resurface the deteriorated sections, cut-out and repave structurally damaged sections of pavement of the asphalt paved trail/walkway from softball/baseball playfield to the soccer/grass playfields and mini amphitheater area below.
- Patch cracks, and seal coat asphalt paved walkways from behind Redwood, Library and Sequoia buildings to Plaza De Amigos playground.

**Estimated Cost** **\$25,000**

c) **ADA Ramps**

- None.

**Estimated Cost** **\$0**

II. OUTDOOR FACILITIES

a) **Hard Courts and Paved Areas**

- Patch cracks, seal coat and re-stripe the asphalt paved play areas of Topsy, Panthera, Swain and Plaza De Amigos playgrounds. Stabilize the edges of asphalt pavement along the fences. Cut-out and repave structurally damaged sections of pavement.

**Estimated Cost** **\$165,000**

b) **Playfields and Grass Areas**

- Regrade/re-level sections of the baseball/grass playfield to eliminate tripping hazards (i.e., indentations and uneven areas due to gopher infestation, soil erosion, etc.). Fertilize soil and re-seed barren spots and affected areas.
- Upgrade existing irrigation systems (heads, valves and piping system, etc.) of the upper baseball/softball grass playfield.

- Install new smart controllers complete with wireless weather station to the playfield and grass area irrigation systems to promote efficient water use and accurate programming.

**Estimated Cost** **\$46,000**

c) **Playground Equipment**

- Remove and replace deteriorated wooden bark box/curb of Topsy and Panthera play apparatus.
- Remove and replace wooden Panthera play equipment and replace with new plastic and coated-steel modular play equipment.

**Estimated Cost** **\$60,000**

d) **Outdoor Shade Structure**

- None.

**Estimated Cost** **\$0**

e) **Perimeter Fences and Gates**

- Replace the damaged/ rusted sections of chain link fencing west and south of the softball/baseball grass play fields.
- Replace the damaged/missing sections of chain link fencing west of the Plaza De Amigos playground.

**Estimated Cost** **\$19,000**

III. CENTRAL EQUIPMENT SYSTEMS

a) **Electrical Service**

- None

**Estimated Cost** **\$0**

b) **Water**

- None.

**Estimated Cost** **\$0**

c) Gas

- None.

Estimated Cost \$0

d) Storm and Sewage System

- Conduct a video inspection of sewage lines that run alongside the central breezeway from Pine Building (Room #1-2) to Cedar Building (Room #23-24). Remove and replace sections of failed and damaged piping.
- Replace damaged sections of the lower concrete swale drainage system along the hill above concrete retaining walls northeast of the school.

Estimated Cost \$66,000

#### IV. CENTRAL EQUIPMENT SYSTEMS

a) Fire Alarm System

Los Perales Elementary School has a fully automatic fire alarm system comprised of smoke/heat detectors, bells, strobes and horns, pull down switches and annunciator panels. The system is externally monitored and supervised by an outside provider. System devices are supplemented by a number of wireless smoke detectors connected to the security alarm system.

Estimated Cost \$0

b) Phones/ PA Systems.

Phone and public address systems district-wide were installed during the early 1990's and have become inefficient and unreliable.

- Replace the school's existing phone equipment and system with a VoIP (Voice over Internet Protocol) phone system. The school has the technology/data infrastructure to support a VoIP system.

Estimated Cost \$19,000

c) Clock and Bell Systems.

Master clock and bell systems district-wide are antiquated, marginally operational and unreliable. In addition, replacement parts and devices have become obsolete and unavailable in some cases.



- Replace the school's existing master clock and bell system with a new fully integrated master clock system, PA paging, intercom and bell system. The new system to include a public address and break bell speakers, two-way intercom stations, LED Displays and synchronized analog clocks.

**Estimated Cost** **\$27,000**

d) **Technology/ Data Infrastructure**

The District's main server is connected to the Contra Costa County Office of Education (CCCOE) which serves as the District's Internet Service Provider (ISP) via the California High Speed Network (CHSN) using a Comcast fiber data transmission connection (50Mbps). Los Perales Elementary School is connected to the District main server at J. Moraga Intermediate School via a Comcast fiber network (1000Mbps). Connectivity within the Los Perales Elementary School facility is via a combination of fiber and CAT 5e cables. The District's Technology Plan 2014-2017 included planned upgrades to infrastructure, file servers, e-mail server, LAN, WAN, hardware and software.

- Planned upgrades and replacements to technology infrastructure and network equipment.

**Estimated Cost** **\$75,000**

e) **Intrusion/ Security Alarm System**

Los Perales Elementary School has an existing security/intrusion alarm system comprised of door/window contacts, motion detectors, sirens, keypads, etc. The system is externally monitored and supervised by an outside provider.

The school has no video surveillance system cameras in place.

- Upgrade the security/intrusion alarm system site wide with new higher capacity controllers, components and devices.

**Estimated Cost** **\$8,000**

f) **Energy Management/Lighting Control System**

The District has a centralized Energy Management System (EMS) that remotely controls the programming and operation of the HVAC equipment and exterior lighting systems centrally from the M&O Office. However, the existing EMS is antiquated and has limited capabilities. The scheduling and programming feature is limited to turning "on" or "off" all HVAC equipment of whole buildings instead of individual HVAC units. Additionally, the system does not have a fault report system that allows the technicians to remotely diagnose system problems and perform corrective measures without visiting the school.

- Install a new web-based Energy Management System (EMS) for complete remote monitoring, controlling and programming the operations of all the school's individual HVAC equipment. Integrate the parking lot lighting system and exterior lighting system controls into the new Energy Management System (EMS).

**Estimated Cost** **\$153,000**

## V. BUILDING ENVELOPE

### a) **Roofing**

- Reroof the front and central breezeway/covered walkways. Relocate drains, gutters and downspouts to the lower areas of the roof to eliminate water ponding. (Note: The breezeway structure has moved and settled significantly over time. As a result, the existing gutters, drains inlets and downspouts are no longer on the lowest portions of the roof.)
- Reroof flat sections of roofs in all buildings. Replace metal flashings, gutters and downspouts.
- Remove and replace dry-rot damaged sections of roof decks, fascia and eaves around the buildings and covered breezeways/walkways.

**Estimated Cost** **\$82,000**

### b) **Sidings and Paintwork**

- Repaint exterior building walls, fascia and eaves of canopies, covered walkways, breezeways, pipe/steel columns and hand rails. Repaint floor stripes, signs, etc.

**Estimated Cost** **\$77,000**

### c) **Windows**

- Retrofit/re-glaze all exterior windows of Pine, Cypress, Redwood, Birch, Sequoia and Cedar buildings to energy efficient double pane window glazing. Coordinate window retrofit work with cabinet countertop replacements and seismic rehabilitation work.

**Estimated Cost** **\$136,000**

### d) **Exterior doors**

- None.

**Estimated Cost** **\$0**

## VI. INTERIOR FINISHES

### a) Interior doors

- None.

Estimated Cost \$0

### b) Floors

- Replace carpet and VCT floor finishes in classrooms and offices with resilient rubber backed carpet system (i.e. Collins Aikman carpets). Coordinate carpet and VCT floor replacements with cabinet/countertop replacement work.

Estimated Cost \$269,000

### c) Walls

- Install new tackboard panels up to 8' high on classroom walls and common areas in Redwood building (Room #5-10), Birch building (Room #11-16) and Sequoia building (Room #17-22). Replace existing old and dilapidated tackboard wall panels.
- Install new tackboard panels up to 8' high on classroom walls in Pine building (Room # 1-2) and Cedar building (Room # 23-24). Replace existing old and dilapidated tackboard wall panels.

Estimated Cost \$115,000

### d) Ceilings

- Refinish natural wood ceilings and repaint wood beams in Pine (Room #1-2), Cypress (Admin., Room # 3-4), Redwood (Room #5-10, Common Area), Birch (Room #11-16, Common Area), Sequoia (Room #17-22, Common Area) and Cedar (Room #23-24) buildings.

Estimated Cost \$33,000

## VII. FURNISHINGS AND FIXTURES

### a) Casework

- Refinish natural wood cabinets, shelves and drawers in classrooms in Pine (Room #1-2), Redwood (Room #5-10), Birch (Room #11-16), Sequoia (Room #17-22) and Cedar (Room #23-24) buildings. Remove old Formica countertops and replace with new custom laminate finish countertops.

Estimated Cost \$41,000

### b) Lighting Fixtures

- Retrofit existing T8 lighting fixtures in the Administration Offices, classroom buildings, and the Library building with LED tube lighting system. Install occupancy sensors in classrooms. (Note: This project is anticipated to be eligible for funding under the California Clean Energy Jobs Act (Prop. 39) Program).

Estimated Cost \$154,000

### c) Technology/Data Access

Los Perales Elementary School has a fully operational wireless network which provides access to servers and printing resources and supports mobile wireless devices. A fully networked Computer Lab provides scheduled grade 3-5 instructions and 60 wireless student Chromebooks housed in Carts on Wheels (COWS) and 180 iPADS are available for student and teachers use. Classrooms have at least 1 networked PC workstation (Level I). Some classrooms have Level II technology (LCD projectors, interactive white boards, audio system, document cameras, etc.). The District's Technology Plan 2014-2017 included planned upgrades and replacements to computers and classroom devices.

- Planned upgrades and replacements to classroom data and technology access.

Estimated Cost \$140,000

### d) HVAC/Heating Systems

- Replace existing heating/air-conditioning equipment in the Administration Office, classroom buildings, and Multi-Use building. This equipment was installed in the late 1990's and are nearing the end of their economic service life.

- Demolish abandoned heat radiators/convection units in in Pine Building (Room #1-2). Cut down the supply and return pipes to below floor level and cap-off. Coordinate demolition of heat radiators/convection units with cabinet and countertop upgrades.

**Estimated Cost** **\$364,000**

e) **Plumbing Fixtures**

- Replace sinks, faucets and bubblers in Pine (Room #1-2), Redwood (Room #5-10), Birch (Room # 11-16), Sequoia (Room # 17-22), and Cedar (Room # 23-24) buildings. Coordinate sink and faucet replacements with countertop upgrades.

**Estimated Cost** **\$33,000**

VIII. MPR AND OTHER FACILITIES

a) **Gymnasium**

- None.

**Estimated Cost** **\$0**

b) **Multi-Purpose Building**

- Remove/replace old VCT flooring and replace with hardwood athletic/sports flooring.
- Refinish wainscot, and wooden window screens. Repaint drywall walls and ceilings.
- Upgrade/retrofit T8 lighting fixtures with higher energy efficient LED lighting fixtures.
- Replace heating/air-conditioning equipment. Unit was installed in the mid 1990's and is nearing end of its economic service life.

**Estimated Cost** **\$156,000**

c) **Kitchen**

- Remove old linoleum floor and replace with new pour in place granulated epoxy floor coating system.
- Repaint drywall walls and ceilings.

- Upgrade/retrofit T8 lighting fixtures with LED lighting fixtures.

**Estimated Cost \$7,000**

d) **Restrooms**

- Upgrade floor, wall and ceiling finishes, stall partitions, plumbing fixtures, and windows of the Boys and Girls restrooms in Redwood (Room #5-10), Birch (Room #11-16), Sequoia (Room #17-22), Library and Oak (Multi-Use) buildings. Retrofit lighting fixtures with LED lighting and install new electric hand dryers.
- Upgrade floor, wall and ceiling finishes, plumbing and lighting fixtures, of the Kindergarten and Adult Restrooms in Pine Building (Room #1 & 2).
- Upgrade floor, wall and ceiling finishes, plumbing and lighting fixtures, of the Men's, Women's, Staff and Nurse's restrooms in Cypress Building (Administration offices) and Cedar Building (Room #23-24).

**Estimated Cost \$411,000**

b) **Relocatable Classrooms**

- None.

**Estimated Cost \$0**

IX. OTHER NEEDS

- Redesign/re-purpose Room # 3 and #4, which formerly served as the Library and book storage, to meet new space needs of the school site. Partition a dedicated space/room in Room # 3 for the schools main electrical distribution panel which is located in the southwest corner.

**Estimated Cost \$96,000**

- Construct parking sheds with solar panel roofs in the parking lot to generate alternative clean energy as part of the District's energy conservation program. For the purpose of this study, it is assumed that the District will choose the option of a Power Purchase Agreement (PPA) requiring no upfront capital cost. *(Note: This project is anticipated to be eligible for funding under the California Clean Energy Jobs Act (Prop. 39) Program should the district decide to purchase and own the system).*

**Estimated Cost \$0**

**TOTAL ESTIMATED COST \$2,819,000**

# JOAQUIN MORAGA INTERMEDIATE SCHOOL

**Address:**

1010 Camino Pablo  
Moraga, CA 94556  
P (925) 376-7206; F (925) 376-6836

**Enrollment Data:**

Capacity: 840  
CBEDS Enrollment (2014-15): 684  
Grades: 6-8



## FACILITIES INVENTORY

**Site:**

Site Acreage: \_\_\_\_\_ acres  
Permanent Buildings: 10 buildings  
Year First Occupied: 1967

**Classrooms:**

Permanent Classrooms: 34  
Relocatable Classrooms: 0

**Subsidiary Facilities:**

Library 2,750 sq. ft.  
Gymnasium 10,640 sq. ft.  
Auditorium

**Building Area:**

Permanent: 86,672 sq. ft.  
Relocatable: 0 sq. ft.  
Total: 86,672 sq. ft.

**Administration:**

Offices 2,750 sq. ft.  
Staff Lounge 350 sq. ft.

Multi-Purpose 0 sq. ft.  
Kitchen 0 sq. ft.  
Music 4,096 sq. ft.

Restrooms	Water Closets	Sinks	Urinals
Boys	11	15	17
Girls	17	14	0
Kiddies	0	0	0
Men	4	4	3
Women	5	4	0
Nurse	1	0	0
Staff/Unisex	2	2	0

## FACILITIES NEEDS

### BACKGROUND

Joaquin Moraga Intermediate School first opened in 1967 and originally served students in grades 7 and 8. In 1977, grade 6 students were moved to the school after a fire destroyed the primary building of Camino Pablo Elementary School. Joaquin Moraga Intermediate School has since continued to be a 6- 8 school.

Currently, the campus building facilities include the Administration and Library building, a Music building, a Gymnasium and Boys and Girls Locker Room building, an Auditorium and classroom building, and six permanent classroom buildings that house 30 teaching stations. Outdoor facilities include a bus circle, staff and visitors parking areas, asphalt paved basketball hardcourts and play areas, six baseball/softball grass playfields with metal backstops, and a covered student pavilion. Modernization of the old campus facilities, which included upgrades to classroom finishes, upgrades to lighting systems, upgrades to heating systems, installation of technology equipment and upgrades to restroom facilities was undertaken by the District in the mid through late 1990s.

### I. GROUNDS AND SITE WORK

#### a) Parking and Driveways

- Overlay/resurface deteriorated fire lane behind Buildings E, F, G and H and the fire lane west side of school, from behind Building E to the student drop-off driveway.
- Patch cracks, seal coat and restripe entrance/exit driveways, parking lot, bus circle and student drop-off driveway in front of the school. Cut-out and repave structurally damaged sections of pavement. Repaint curbs.

Estimated Cost \$60,000

#### b) Parking Lot and Exterior Lighting

- Upgrade exterior lighting system fixtures and lamps around buildings site-wide to LED lighting system.
- Install additional LED lighting pole in the front parking area and the student drop-off area/drive through.
- Upgrade/retrofit existing parking area pole lighting to LED system.
- Integrate/connect all exterior lighting and parking area lighting controls into the new district Energy Management System (EMS).

Estimated Cost \$67,000



c) **Pathways and Walkways**

- Overlay/resurface the deteriorated sections of the asphalt paved walking/running trail around the west and southwest perimeter of the playfields. Cut-out and repave structurally damaged sections of the pavement.
- Patch cracks, and seal coat asphalt the fire lane and the asphalt running track along the east perimeter of the playfields.

**Estimated Cost** \$28,000

c) **ADA Ramps**

- None.

**Estimated Cost** \$0

II. OUTDOOR FACILITIES

a) **Hard Courts and Paved Areas**

- None.

**Estimated Cost** \$0

b) **Playfields and Grass Areas**

- Regrade/re-level sections of the baseball/softball grass playfield to eliminate tripping hazards (i.e., indentations and uneven areas due to gopher infestation, soil erosion, etc.). Fertilize soil and re-seed barren spots and affected areas.
- Install new smart controllers complete with wireless weather station to the playfield and grass area irrigation systems to promote efficient water use and accurate programming.

**Estimated Cost** \$23,000

c) **Playground Equipment**

- None.

**Estimated Cost** \$0

d) **Outdoor Shade Structure**

- None.

**Estimated Cost** \$0

e) **Perimeter Fences and Gates**

- None

**Estimated Cost** **\$0**

III. CENTRAL EQUIPMENT SYSTEMS

a) **Electrical Service**

- Upgrade the electrical service and increase the capacity of Building A (Administration Offices and Library) in order to accommodate increasing staff, teacher and student use of technology devices and equipment for educational programs.
- Demolish existing dilapidated utility enclosure and shed. Construct a new masonry enclosure for the electrical switchgear/transformer and gas service equipment.

**Estimated Cost** **\$42,000**

b) **Water**

- None.

**Estimated Cost** **\$0**

c) **Gas**

- None.

**Estimated Cost** **\$0**

d) **Storm and Sewage System**

- Conduct video inspection of sewage lines from Buildings F (Room #23-27), G (Room #28-32) and H (Room #33-36) to the service connection with the City main sewer. Remove and replace sections of failed and damaged piping.

**Estimated Cost** **\$41,000**

#### IV. CENTRAL EQUIPMENT SYSTEMS

a) **Fire Alarm System**

Joaquin Moraga Intermediate School has a fully automatic fire alarm system comprised of smoke/heat detectors, bells, strobes and horns, pull down switches and annunciator panels. The system is not externally monitored and supervised by an outside provider. System devices are supplemented by a number of wireless smoke detectors connected to the security alarm system.

- Provide a dedicated phone line and install wirings and equipment for external remote supervision and monitoring of the school's fire detection and alarm system.

**Estimated Cost** **\$5,000**

b) **Phones/ PA Systems.**

Phone and public address systems district-wide were installed during the early 1990's and have become inefficient and unreliable.

- Replace the school's existing phone equipment and system with a VoIP (Voice over Internet Protocol) phone system. The school has the technology/data infrastructure to support a VoIP system.

**Estimated Cost** **\$27,000**

c) **Clock and Bell Systems.**

Master clock and bell systems district-wide are antiquated, marginally operational and unreliable. In addition, replacement parts and devices have become obsolete and unavailable in some cases.

- Replace the school's existing master clock and bell system with a new fully integrated master clock system, PA paging, intercom and bell system. The new system to include a public address and break bell speakers, two-way intercom stations, LED displays and synchronized analog clocks.

**Estimated Cost** **\$37,000**

d) **Technology/ Data Infrastructure**

The District's main server is connected to the Contra Costa County Office of Education (CCCOE) which serves as the District's Internet Service Provider (ISP) via the California High Speed Network (CHSN) using a Comcast fiber data transmission connection (50Mbps). J. Moraga Intermediate School houses the main server and is connected to each school site via a Comcast fiber network (1000Mbps). Connectivity within J. Moraga Intermediate School utilizes a combination of fiber and CAT 5e cables. The District's Technology Plan 2014-

2017 included planned upgrades to infrastructure, file servers, e-mail server, LAN, WAN, hardware and software.

- Planned upgrades and replacements to technology infrastructure and network equipment.

**Estimated Cost** **\$100,000**

e) **Intrusion/ Security Alarm System**

Joaquin Moraga Intermediate School has an existing security/intrusion alarm system comprised of door/window contacts, motion detectors, sirens, keypads, etc. The system is externally monitored and supervised by an outside provider.

The school has no video surveillance system cameras in place.

- Upgrade the security/intrusion alarm system site wide with new higher capacity controllers, components and devices.

**Estimated Cost** **\$10,000**

f) **Energy Management/Lighting Control System**

The District has a centralized Energy Management System (EMS) that remotely controls the programming and operation of the HVAC equipment and exterior lighting systems centrally from the M&O Office. However, the existing EMS is antiquated and has limited capabilities. The scheduling and programming feature is limited to turning "on" or "off" all HVAC equipment of whole buildings instead of individual HVAC units. Additionally, the system does not have a fault report system that allows the technicians to remotely diagnose system problems and perform corrective measures without visiting the school.

- Install a new web-based Energy Management System (EMS) for complete remote monitoring, controlling and programming the operations of all the school's individual HVAC equipment. Integrate the parking lot lighting system and exterior lighting system controls into the new Energy Management System (EMS).

**Estimated Cost** **\$258,000**

## V. BUILDING ENVELOPE

a) **Roofing**

- Reroof the Music Building, the Gymnasium and the Locker Room building. Replace metal flashings, gutters and downspouts

- Replace the dry-rot damaged sections of fascia and eaves around buildings site wide.

**Estimated Cost** **\$116,000**

b) **Sidings and Paintwork**

- Repaint exterior building walls, fascia and eaves of canopies. Repaint floor stripes, signs, etc.

**Estimated Cost** **\$52,000**

c) **Windows**

- Retrofit/re-glaze all exterior windows in Buildings A, B, C, D, E, F, G, and H to energy efficient double pane window glazing. Repaint rusty metal frames.

**Estimated Cost** **\$188,000**

d) **Exterior doors**

- None.

**Estimated Cost** **\$0**

VI. INTERIOR FINISHES

a) **Interior doors**

- None.

**Estimated Cost** **\$0**

b) **Floors**

- Replace carpet and VCT floor finishes in classrooms and offices with resilient rubber backed carpet system (i.e. Collins Aikman carpets).

**Estimated Cost** **\$539,000**

c) **Walls**

- Replace existing old and dilapidated tackboard wall panels in classrooms and common areas of Building B (Auditorium, Room # 1-5), C (Room #6-12), D (Room #13-17), E (Room #18-22), F (Room #23-27), G (Room #28-32) and H (Room # 33-37).

- Refinish/repaint natural wood wall panels in Building A (Administration Offices and Library).

**Estimated Cost \$202,000**

d) **Ceilings**

- Replace acoustic ceiling boards (warped, loose, stained, etc.) in A (Administration Office, Library), B (Auditorium, Room # 1-5), C (Room #6-12), D (Room # 13-17), E (Room #19-22), F (Room # 23-27), G (Room #28-32) and H (Room #33-36) buildings. Repaint drywall ceilings.

**Estimated Cost \$70,000**

VII. FURNISHINGS AND FIXTURES

a) **Casework**

- Refinish natural wood cabinets, shelves and drawers in classrooms in Buildings D (Room #13-17), E (Room #18-22), and F (Room #23-27). Remove old Formica countertops and replace with new custom laminate finish countertops.
- Refinish wood cabinets, shelves and drawers in Buildings G (Room #28-32) and H (Room #33-36).
- Remove old dilapidated student lockers in the hallways and common areas of Buildings B (Auditorium, Room #1-5), C (Room #6-12), D (Room #13-17), and F (Room #23-27) and replace with new.
- Replace old Library tables with new flip-top tables.

**Estimated Cost \$91,000**

b) **Lighting Fixtures**

- Retrofit existing T8 lighting fixtures in Buildings A (Administration Offices, classroom buildings, and the Library), B (Auditorium, Room # 1-5), C (Room #6-12), D (Room #13-17), E (Room #18-22), F (Room #23-27), G (Room #28-32), H (Room #33-36) and Music Building, with LED tube lighting system. Install occupancy sensors in classrooms. *(Note: This project is anticipated to be eligible for funding under the California Clean Energy Jobs Act (Prop. 39) Program).*

**Estimated Cost \$232,000**

c) **Technology/Data Access**

Joaquin Moraga Intermediate School has a fully operational wireless network which provides access to servers and printing resources and supports mobile wireless devices. The school has two fully networked Computer Labs. One lab provides scheduled grade 6-8 instructions while the other is used as an open lab. In addition, the school has 60 wireless student Chromebooks housed on Carts on Wheels (COWS) and 180 iPADS available for student and teachers use. Classrooms have at least one networked PC workstation (Level I). Some classrooms have Level II technology (LCD projectors, interactive white boards, audio system, document cameras, etc.). The District's Technology Plan 2014-2017 included planned upgrades and replacements to computers and classrooms devices.

- Planned upgrades and replacements to classroom data and technology access.

**Estimated Cost** **\$207,000**

d) **HVAC/Heating Systems**

- Demolish and dispose of the abandoned hot water boiler equipment located between the Boys and Girls Locker Rooms. Demolish and dispose of all ancillary equipment including pumps, tanks, piping, controls, etc. Renovate/re-purpose the boiler room into a storage room for school use.

**Estimated Cost** **\$32,000**

e) **Plumbing Fixtures**

- Replace sinks, faucets and bubblers in the classrooms in Building A (Nurse Room), Building D (Room #16), Building E (Room # 18-22), Building G (Room #28-32) and Building H (Room #33-36). Coordinate sink and faucet replacements with countertop upgrades.

**Estimated Cost** **\$24,000**

VIII. MPR AND OTHER FACILITIES

a) **Gymnasium**

***Main Hall;***

- Refinish natural wood (panel wainscot) walls (up to the bottom of high windows on 3 sides).
- Replace acoustic ceiling tiles in the upper and lower roof ceilings.
- Replace the telescoping bleachers on both sides on the Gym floor

- Replace lighting fixtures with new high efficiency LED lighting fixtures.

***Boys and Girls Locker Rooms;***

- Recoat epoxy floor finish.
- Replace existing old 12" x 12" acoustic ceiling tiles
- Replace lighting fixtures with new high efficiency LED lighting fixtures

***Boys and Girls PE Coaches Offices;***

- Replace VCT floor finishes
- Repaint walls/replace damaged sections of walls
- Replace existing old acoustic ceiling tiles
- Replace lighting fixtures with new high efficiency LED lighting fixtures.

***Exercise Room;***

- Install exercise rubber mat system
- Repaint walls/replace damaged sections of walls
- Replace existing old acoustic ceiling tiles
- Replace lighting fixtures with new high efficiency LED lighting fixtures.

**Estimated Cost \$405,000**

b) **Auditorium**

- Replace carpet floor finishes in hall and platform.
- Refinish natural wood walls.
- Repaint open beam ceilings.
- Replace the old auditorium seating.
- Replace the old stage curtains.

**Estimated Cost \$101,000**



c) **Kitchen**

- None

**Estimated Cost** \$0

d) **Restrooms**

- Upgrade floor, wall and ceiling finishes, stall partitions plumbing fixtures and windows of the Boys and Girls restrooms in Buildings A (Library), C (Room #6-12), D (Room #13-17), E (Room #18-22), F (Room #23-27), G (Room #28-32), H (Room #33-36), the Gymnasium building and the Boys and Girls Locker Rooms. Retrofit lighting fixtures with LED lighting and install new electric hand dryers.
- Upgrade floor, wall and ceiling finishes, plumbing and lighting fixtures, of the Nurse's restroom in Building A (Administration offices), and the Men's and Women's Restrooms in Buildings A (Admin Offices, Library), D (Room #13-17) and F (Room #23-27).
- Upgrade floor, wall and ceiling finishes, plumbing and lighting fixtures, of the Staff Restroom in Building C (Room #6-12), Shower Rooms in the Gymnasium, Boy's and Girl's Coaches Restrooms in the Boy's and Girl's Locker Rooms.

**Estimated Cost** \$568,000

b) **Relocatable Classrooms**

- None.

**Estimated Cost** \$0

IX. OTHER NEEDS

X.

- Construct a new Practice Gymnasium and PE Facility to relieve overcrowding at the Main Gymnasium and provide a facility for physical education instructions especially during the rainy days

**Estimated Cost** \$2,100,000

- Construct parking sheds with solar panel roofs in the parking lot to generate alternative clean energy as part of the District's energy conservation program. For the purpose of this study, it is assumed that the District will choose the option of a Power Purchase Agreement (PPA) requiring no upfront capital cost. (Note: This project is anticipated to be eligible for funding under the

*California Clean Energy Jobs Act (Prop. 39) Program should the district decide to purchase and own the system).*

**Estimated Cost** **\$0**

**TOTAL ESTIMATED COST** **\$5,625,000**

DRAFT

**SUMMARY OF NEEDS**

DRAFT

## I. Grounds and Site Work

SCHOOL SITE	Parking, Driveways and Fire Lanes	Parking Lot and Exterior Lighting	Pathways and Walkways	ADA Access	TOTAL
<b>Camino Pablo Elementary School</b>	\$23,000	\$59,000	\$10,000	\$0	<b>\$92,000</b>
<b>Donald Rheem Elementary School</b>	\$47,000	\$51,000	\$14,000	\$0	<b>\$112,000</b>
<b>Los Perales Elementary School</b>	\$9,000	\$33,000	\$25,000	\$0	<b>\$67,000</b>
<b>Joaquin Moraga Intermediate School</b>	\$60,000	\$67,000	\$28,000	\$0	<b>\$155,000</b>
<b>TOTALS</b>	<b>\$139,000</b>	<b>\$210,000</b>	<b>\$77,000</b>	<b>\$0</b>	<b>\$426,000</b>

## II. Outdoor Facilities

SCHOOL SITE	Hardcourts and Paved Areas	Playfields and Grass Areas	Playground Equipment	Outdoor Shade Structure	Perimeter Fences and Gates	TOTAL
<b>Camino Pablo Elementary School</b>	\$79,000	\$4,000	\$0	\$0	\$13,000	<b>\$96,000</b>
<b>Donald Rheem Elementary School</b>	\$71,000	\$228,000	\$0	\$0	\$38,000	<b>\$337,000</b>
<b>Los Perales Elementary School</b>	\$165,000	\$46,000	\$60,000	\$0	\$19,000	<b>\$290,000</b>
<b>Joaquin Moraga Intermediate School</b>	\$0	\$23,000	\$0	\$0	\$0	<b>\$23,000</b>
<b>TOTALS</b>	<b>\$315,000</b>	<b>\$301,000</b>	<b>\$60,000</b>	<b>\$0</b>	<b>\$70,000</b>	<b>\$746,000</b>

### III. Utilities

SCHOOL SITE	Electrical Service	Water (Domestic, Irrigation And Fire)	Gas	Storm/ Sewage System	TOTAL
Camino Pablo Elementary School	\$50,000	\$0	\$0	\$54,000	<b>\$104,000</b>
Donald Rheem Elementary School	\$0	\$0	\$0	\$29,000	<b>\$29,000</b>
Los Perales Elementary School	\$0	\$0	\$0	\$66,000	<b>\$66,000</b>
Joaquin Moraga Intermediate School	\$42,000	\$0	\$0	\$41,000	<b>\$83,000</b>
<b>TOTALS</b>	<b>\$92,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$190,000</b>	<b>\$282,000</b>

#### IV. Central Equipment Systems

SCHOOL SITE	Fire Alarm System	Phones/ PA System	Clocks/ Bell System	Technology/ Data	Intrusion/ Security Alarm System	Energy Management/ Lighting Control System	TOTAL
<b>Camino Pablo Elementary School</b>	\$0	\$18,000	\$28,000	\$75,000	\$8,000	\$158,000	<b>\$287,000</b>
<b>Donald Rheem Elementary School</b>	\$5,000	\$18,000	\$28,000	\$75,000	\$8,000	\$153,000	<b>\$287,000</b>
<b>Los Perales Elementary School</b>	\$0	\$19,000	\$27,000	\$75,000	\$8,000	\$153,000	<b>\$282,000</b>
<b>Joaquin Moraga Intermediate School</b>	\$5,000	\$27,000	\$37,000	\$100,000	\$10,000	\$258,000	<b>\$437,000</b>
<b>TOTALS</b>	<b>\$10,000</b>	<b>\$82,000</b>	<b>\$120,000</b>	<b>\$325,000</b>	<b>\$34,000</b>	<b>\$722,000</b>	<b>\$1,293,000</b>

## V. Building Envelope

SCHOOL SITE	Roofing	Sidings and Paintwork	Windows	Exterior Doors	TOTAL
<b>Camino Pablo Elementary School</b>	\$63,000	\$50,000	\$48,000	\$0	<b>\$161,000</b>
<b>Donald Rheem Elementary School</b>	\$161,000	\$63,000	\$59,000	\$0	<b>\$283,000</b>
<b>Los Perales Elementary School</b>	\$82,000	\$77,000	\$136,000	\$0	<b>\$295,000</b>
<b>Joaquin Moraga Intermediate School</b>	\$116,000	\$52,000	\$188,000	\$0	<b>\$356,000</b>
<b>TOTALS</b>	<b>\$422,000</b>	<b>\$242,000</b>	<b>\$431,000</b>	<b>\$0</b>	<b>\$1,095,000</b>



## VI. Interior Finishes

SCHOOL SITE	Interior Doors	Floors	Walls	Ceilings	TOTAL
Camino Pablo Elementary School	\$0	\$265,000	\$110,000	\$193,000	<b>\$568,000</b>
Donald Rheem Elementary School	\$0	\$292,000	\$110,000	\$157,000	<b>\$559,000</b>
Los Perales Elementary School	\$0	\$269,000	\$115,000	\$33,000	<b>\$417,000</b>
Joaquin Moraga Intermediate School	\$0	\$539,000	\$202,000	\$70,000	<b>\$811,000</b>
<b>TOTALS</b>	<b>\$0</b>	<b>\$1,365,000</b>	<b>\$537,000</b>	<b>\$453,000</b>	<b>\$2,355,000</b>

## VII. Furnishings and Fixtures.

SCHOOL SITE	Casework	Lighting Fixtures	Technology/ Data Access	HVAC/ Heating Systems	Plumbing Fixtures	TOTAL
<b>Camino Pablo Elementary School</b>	\$38,000	\$125,000	\$140,000	\$145,000	\$30,000	<b>\$478,000</b>
<b>Donald Rheem Elementary School</b>	\$155,000	\$120,000	\$140,000	\$37,000	\$34,000	<b>\$486,000</b>
<b>Los Perales Elementary School</b>	\$41,000	\$154,000	\$140,000	\$364,000	\$33,000	<b>\$732,000</b>
<b>Joaquin Moraga Intermediate School</b>	\$91,000	\$232,000	\$207,000	\$32,000	\$24,000	<b>\$586,000</b>
<b>TOTALS</b>	<b>\$325,000</b>	<b>\$631,000</b>	<b>\$627,000</b>	<b>\$578,000</b>	<b>\$121,000</b>	<b>\$2,282,000</b>

### VIII. Gymnasium, MPR and Other Facilities

SCHOOL SITE	Gymnasium	Multi-Use Building	Cafeteria/ Kitchen	Restrooms	Relocatable Classrooms	Other Facilities Needs	TOTAL
<b>Camino Pablo Elementary School</b>	\$0	\$158,000	\$7,000	\$372,000	\$152,000.00	\$2,623,000	<b>\$3,312,000</b>
<b>Donald Rheem Elementary School</b>	\$0	\$158,000	\$7,000	\$351,000	\$202,000	\$2,143,000	<b>\$2,861,000</b>
<b>Los Perales Elementary School</b>	\$0	\$156,000	\$7,000	\$411,000	\$0	\$96,000	<b>\$670,000</b>
<b>Joaquin Moraga Intermediate School</b>	\$405,000	\$101,000	\$0	\$568,000	\$0	\$2,100,000	<b>\$3,174,000</b>
<b>TOTALS</b>	<b>\$405,000</b>	<b>\$573,000</b>	<b>\$21,000</b>	<b>\$1,702,000</b>	<b>\$354,000</b>	<b>\$6,962,000</b>	<b>\$10,017,000</b>

## IX. Summary of Facilities Needs

SCHOOL SITE	I. Grounds and Site Work	II. Outdoor Facilities	III. Utilities	IV. Centralized Systems	V. Building Envelope	VI. Interior Finishes	VII. Furnishings and Fixtures	VIII. Gym, MPR and Others	Total Construction Cost
<b>Camino Pablo Elementary School</b>	\$92,000	\$96,000	\$104,000	\$287,000	\$161,000	\$568,000	\$478,000	\$3,312,000	<b>\$5,098,000</b>
<b>Donald Rheem Elementary School</b>	\$112,000	\$337,000	\$29,000	\$287,000	\$283,000	\$559,000	\$486,000	\$2,861,000	<b>\$4,954,000</b>
<b>Los Perales Elementary School</b>	\$67,000	\$290,000	\$66,000	\$282,000	\$295,000	\$417,000	\$732,000	\$670,000	<b>\$2,819,000</b>
<b>Joaquin Moraga Intermediate School</b>	\$155,000	\$23,000	\$83,000	\$437,000	\$356,000	\$811,000	\$586,000	\$3,174,000	<b>\$5,625,000</b>
<b>TOTALS</b>	<b>\$426,000</b>	<b>\$746,000</b>	<b>\$282,000</b>	<b>\$1,293,000</b>	<b>\$1,095,000</b>	<b>\$2,355,000</b>	<b>\$2,282,000</b>	<b>\$10,017,000</b>	<b>\$18,496,000</b>

## X. Project Costs

SCHOOL SITE	Construction Cost	Contingency (25%)	Soft Costs (28%)	Interim Housing	Escalation	Total Project Cost
Camino Pablo Elementary School	\$5,098,000	\$1,274,500	\$1,427,440	\$75,000	\$1,181,241	\$9,056,181
Donald Rheem Elementary School	\$4,954,000	\$1,238,500	\$1,387,120	\$75,000	\$1,148,193	\$8,802,813
Los Perales Elementary School	\$2,819,000	\$704,750	\$789,320	\$75,000	\$658,211	\$5,046,281
Joaquin Moraga Intermediate School	\$5,625,000	\$1,406,250	\$1,575,000	\$100,000	\$1,305,938	\$10,012,188
<b>TOTALS</b>	<b>\$18,496,000</b>	<b>\$4,624,000</b>	<b>\$5,178,880</b>	<b>\$325,000</b>	<b>\$4,293,582</b>	<b>\$32,917,462</b>

# **FINANCING PLAN**

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## FINANCING PLAN

School districts generally avail of a number of sources for funding of the construction of their facility's needs. Federal and State programs can provide some funding assistance; however, local programs must be considered the primary funding source.

From time to time, the federal government has initiated programs related to school facilities funding that districts can benefit from. Most recently, the Qualified School Construction Bond (QSCB) program provided districts with a method of reducing the interest costs for bonds that they were selling. The federal government also has had bond interest credit programs for solar photovoltaic installations. Currently, these programs are not available. However, the District should investigate the availability of these programs from time to time to determine if any funding becomes available.

### **State Funding**

The School Facilities Program (SFP) was established in 1998 by the State Legislature with the passage of Senate Bill 50 (SB 50). The SFP replaced the Lease Purchase Program (LPP) that had been in effect since 1976. The LPP had been modified numerous times over that time frame and had become quite complex. There was a call for a much simpler program which would allow school districts greater flexibility in building the school facilities responsive to their educational programs.

The SFP has been funded by statewide bond measures. The last of these bonds were Proposition 1D, a \$10.4 Billion measure passed in November of 2006. The funds from this measure and previous measures have been essentially exhausted. Currently, the State is accepting but not processing new applications for funding. A new bond measure has qualified for the November, 2016 ballot through the initiative process. However, the measure totals \$9 billion and includes \$3 billion for K-12 new construction, \$3 billion for K-12 modernization, \$500 million for charter schools, \$500 million for Career Tech Facilities and \$2 billion for community colleges. For the purposes of this Facilities Master Plan, the funding from this program has been calculated based on current program parameters. However, the District should reevaluate the eligibility and the extent of State funding once a new program is established.

The State has a number of facilities related programs that can provide funding assistance. The most significant of these programs is the School Facility Program (SFP). The SFP programs that have the most potential for providing future funding for the District are the New Construction Program, the Modernization Program, the Seismic Mitigation Program and the Joint Use Program. The State Allocation Board, the entity responsible for approving regulations and funding associated with the SFP, has established a subcommittee to review the existing programs and make recommendations for changes. Most of these changes will need to take the form of new legislation or be included in the initiative measure.

### **SFP New Construction Program**

The need for student housing and the growth in enrollment projected 5 years into the future determines the eligibility of the school district to receive funding under the New Construction Program. Eligibility is determined based on district-wide or high school attendance areas. The State calculates enrollment projections and facility capacities based on formulas in State law. The amount of SFP funding available to districts is then determined by: (1) subtracting projected

enrollment from capacity to determine the number of unhoused students in a district; and (2) multiplying unhoused students by per pupil grant amounts. The formulas used in the SFP to determine enrollment projections and facility capacities are not appropriate to determine true local need for school facilities to house students. The State programs use State loading standards as opposed to the local standards. However, they are what have been established in law for facilities funding need. The New Construction Program requires that a district contribute an amount from local sources equal to the State's share.

According to the data published by the Office of Public School Construction web site, the Moraga School District does not currently have any remaining new construction eligibility at any grade level.

According to the results shown in the Capacity Study section of this report, the District will not need additional teaching stations in the elementary and intermediate school levels from the current year through school year 2019-20. The report also concluded that although the District's enrollment is projected to grow from 1,852 students in school year 2015-16 to 1,997 students in 2019-20, and then to 2,107 students in school year 2024-25, the District will continue to have sufficient inventory of available teaching stations to house the projected number of students in grade level K-8. These projections were based on the anticipated new development at the time the study was completed. If additional new developments are proposed, these numbers should be reevaluated.

Therefore, based on data published by the Office of Public School Construction web site, the Capacity Study and the Demographic Study presented in this report, the Moraga School District will not have new construction grant eligibility under the New Construction Program of the School Facilities Program (SFP) during the period of this master plan (2015-16 thru 2024-25).

### **SFP Modernization Program**

Eligibility in the SFP Modernization Program is determined on a site by site basis. The age of the facilities and the enrollment at the site are the primary criteria for funding. To be eligible, permanent school facilities must have been built or modernized at least 25 years prior to the application and portable facilities at least 20 years. Determination of eligibility is based on information submitted by the district for a specific school site. This information includes the identification of all permanent and portable classrooms and their ages. A district may update their eligibility at a site at any time, however, once established, the eligibility remains until used in a project or until updated. The eligible State funding represents 60 percent of the total eligible cost of the project and the District must provide at least 40 percent of the cost.

According to the data published by the Office of Public School Construction web site, the Moraga School District has had an active modernization program in the mid-1990s that successfully availed of SFP funding eligibility at three school sites as shown in the following tables:



## SFP MODERNIZATION ELIGIBILITY

School Site	Approved Baseline Eligibility	Eligibility Applied/ Used	Eligibility Applied/ Used	District Contribution (\$)	Remaining Eligibility (08/10/2015)
Camino Pablo	350 (K-6)	350 (K-6)	\$785,771	\$206,612	0 (K-6)
Los Perales	412 (K-6)	412 (K-6)	\$972,185	\$243,043	0 (K-6)
Joaquin Moraga	226 (K-6)	226 (K-6)			0 (K-6)
	522 (7-8)	413 (7-8)	\$1,552,988	\$388,247	109 (7-8)
<b>TOTAL</b>	<b>1,510</b>	<b>1,401</b>	<b>\$3,310,944</b>	<b>\$837,902</b>	<b>109</b>

As shown in the above table, the District has remaining eligibility of 109 student grants at the 7-8 grade level and none at the other grade levels. Based on a review of data published by the Office of Public School Construction web site, it is estimated that the Moraga School District has approximately \$454,203 of grant eligibility under the Modernization Program of the School Facilities Program (SFP) for Joaquin Moraga Intermediate School. These numbers should be verified prior to the start of any design work for the sites.

### Estimated Modernization Funding

Grade Level	Remaining Eligibility (August 10, 2015)	Estimated SFP Modernization Grant	Estimated District Contribution
K-6	0	\$0	\$0
7-8	109	\$454,203 <sup>1</sup>	\$302,802 <sup>2</sup>
<b>TOTAL</b>	<b>109</b>	<b>\$454,203</b>	<b>\$302,802</b>

<sup>1</sup> Based on January 1, 2015 SFP Modernization Grant Amounts for Middle School (7-8) Grade Level = \$4,167.

<sup>2</sup> District contribution at 40 percent, the current 60:40 project match.

### Seismic Mitigation Program

In the year 2000, the State passed AB 300 which directed the Division of State Architect (DSA) to compile a list of buildings in the State which could be vulnerable to failure or collapse in a seismic event. The result of that study was a list of projects estimated to cost over \$4 billion to mitigate. In 2006, Proposition 1D was passed by the California voters which provided \$199.5 million to the Seismic Mitigation Program (SMP) to mitigate those structures identified as “most vulnerable”. The funds are targeted for facilities that are the most vulnerable within Category 2, as defined by DSA, and which pose an unacceptable risk of injury during a seismic event. That definition is based on the type of construction, the proximity to known faults and the potential for ground movement that would cause potential failure in these types of buildings. However, these criteria have been changed significantly over the past few years to make the funding more available to districts. The District should monitor the regulatory process to determine if changes could impact their eligibility in the program.

Funding for seismic mitigation provides for the minimum work necessary to gain DSA approval and includes costs of structural reports on affected buildings. Implementation of seismic mitigation plans includes upgrades as part of modernization projects, school closures, demolitions and replacements of classrooms or buildings. Replacement funding is a cost-share program (50 percent district/50 percent state) while modernizations that include seismic upgrades will incur adjustments to the school’s baseline modernization eligibility to account for classrooms demolished or replaced as a result of seismic mitigation. The only exception is when a district obtains financial hardship status; then the project may receive up to 100 percent state funding. Districts should contact the Financial Hardship Team supervisor to determine whether a project meets the requirements to qualify for Financial Hardship assistance.

Eleven Moraga School District buildings were placed on the DSA AB300 list, i.e. the list of buildings that require more study to determine their seismic safety. The list consisted of K-12 public school buildings with tilt-up concrete wall or non-wood construction that were built prior to July 1, 1978. Three of the eleven Moraga School District buildings on the AB300 list, were identified as belonging to structural Category 2, a category for “Building Types Requiring Detailed Seismic Evaluation.”

Detailed seismic evaluations were performed on the identified buildings using the criteria of ASCE 31, “Seismic Evaluation of Existing Buildings”. Results were presented in a December 2009 report which found that the buildings do not meet current life safety standards and are recommended to be strengthened. The large classroom building at Camino Pablo Elementary School and Wings II and III at Donald Rheem Elementary School were confirmed to have seismic deficiencies that may pose life safety risks.

The engineers developed preliminary construction cost estimates to strengthen each of the three buildings. In addition, ”soft costs” which include such things as DSA fees, design fees, owner costs, and funds to cover contingencies associated with the project were included in the estimates. The table below summarizes the estimated costs associated with the seismic strengthening of the large classroom building at Camino Pablo Elementary School and Wings II and III at Donald Rheem Elementary School;

School Site	Building	Estimated Construction Costs	Estimated Soft Costs	Total Estimated Project Costs
Camino Pablo	Large Classroom Building	\$1,688,000	\$612,000	\$2,300,000
Donald Rheem	Wing II	\$437,000	\$158,000	\$595,000
Donald Rheem	Wing III	\$942,000	\$342,000	\$1,284,000
<b>Total Cost</b>		<b>\$3,067,000</b>	<b>\$1,112,000</b>	<b>\$4,179,000</b>

SMP funds are currently underutilized due to the complex application process. The District should pursue the completion of the remaining work towards obtaining DSA approval and eventual submission of application for funding. Currently, there are no filing deadlines for project submittal. The District must submit a structural report for DSA concurrence. Should the DSA concur with the report, the District will be able to submit an application to the OPSC. The District should then gather the necessary documents needed and submit to OPSC for SMP funding (Form SAB 50-04).

Complete SMP project submittals are processed in the order applications are received. Facility Hardship is a health and safety mitigation program; therefore, projects approved by the SAB are placed at the top of the Unfunded List and given priority for funding once cash (or new bond authority, once current authority is exhausted) becomes available.

**Proposition 39 Energy Grants**

Proposition 39, the California Clean Energy Jobs Act was passed by the voters on November 6, 2012. The act provides funding to local educational agencies for improving energy efficiency and creating clean energy jobs by allocating up to \$550,000,000 per year from the annual State budget for energy efficiency and renewable energy projects. This program will be effective in budget years 2013-14 through 2017-18. According to the CDE website, the total available funds for fiscal year 2015-16, are \$313,421,000. Of the available funds, 89 percent will go to K-12 school districts. The source of the revenue is a revision to the Revenue and Taxation Code which the State estimates will produce additional State revenues of \$1.1 billion per year. If these revisions do not produce the projected amount the allocations will be reduced to 50 percent of the amount of increased yearly revenue. For this reason districts should be cautioned that the allocations determined for the 2014-15 budget year may not be realized in future years.

**Planning Funds**

The State Superintendent for Public Instruction (SSPI) allocates the awards to school districts or LEAs for the planning of energy efficiency and clean energy projects. The amount of planning fund allocated to each district is determined by the district’s enrollment and participation on the Free and Reduced Price Meals (FRPM) program. The amounts below have been calculated by the California Department of Education for the Moraga School District for the 2014-15 budget year:

**Proposition 39 Allocations**

Awards	Award Allocation		Planning Funds Paid	Allocation Remaining
	2013-14	2014-15		
P-2 Entitlement	\$100,000	\$100,000	\$100,000	\$100,000
FRPM Entitlement	\$362	\$305	\$362	\$3362
<b>Total Allocation</b>	<b>\$100,362</b>	<b>\$100,305</b>	<b>\$100,362</b>	<b>\$100,305</b>

At the time of this writing, the District has applied for and received \$100,362 in planning funds from the 2013-14 allocation. There is an award allocation of \$100,305 for the District in the year 2014-15 that has remained unused. Proposition 39 award allocations are updated on a yearly basis. Allocations for Fiscal Year 2014-15 can be viewed in the California Department of Education (CDE) website has posted the Schedule of Total Award Allocations for the Prop 39 program at: <http://www.cde.ca.gov/fg/fo/r14/prop39ccej13result.asp>

Energy planning funds under the Proposition 39 Program Assistance category can only be used for Proposition 39 program requirements such as providing the electric and gas usage/billing data, benchmarking, submitting an Energy Expenditure Plan, and program reporting. Planning funds can be spent any time during the five-year Proposition 39 program. The first opportunity to request planning funds ended November 1, 2013. A second opportunity ended in January 2014. A third and final opportunity ended April 30, 2014. The District may incur expenses to implement an energy project after December 19, 2013 (the date the Energy Commission adopted the Proposition 39 Guidelines), and before submitting its Energy Expenditure Plan.

### **Energy Expenditure Plan (EEP) Funds**

The District must submit an Energy Expenditure Plan (EEP) and receive approval for a qualifying energy efficiency measure/project before the California Department of Education will release funds. CDE started to release funds awarded to Energy Commission approved EEPs in February 2014 and will continue to accept applications through September 30, 2017. Final approvals and awards will be made in October 2017 with allocations made available for multiple-year energy expenditure plans in January of every year.

Energy efficiency measures, including solar photovoltaic projects and/or clean energy installation at a school or site that meets the Savings to Investment Ratio (SIR) requirement of the program will be funded under Proposition 39. These funds can only be used for existing buildings, not new construction. The CDE website listed the following as energy efficiency projects that typically have short payback periods.

- Lighting projects with approximately 2-year payback
  - Replace incandescent light with compact fluorescent or light-emitting diode (LED) light
  - Convert incandescent/compact fluorescent (CFL) exit sign to LED exit sign
  - Replace 32 watt T8 fluorescent lamp with 28 watt T8 fluorescent lamp
- Lighting projects with 4 years or less payback
  - Convert T12 fluorescent lamp to T8 fluorescent lamp with electronic ballast or LED lamp
  - Install occupancy control for intermittently occupied rooms
- HVAC projects with approximately 2-year payback
  - Replace manual thermostat with programmable thermostat.

Other eligible projects also include;

- Repairs to heating, ventilation and air conditioning systems.
- Installation of new chillers, boilers and furnaces.
- New lighting and lighting control systems
- Installation of cool roof systems
- Installation of energy-efficient window systems
- Installation of on-site clean energy generation systems (Solar PV Systems, etc.)

The District does not currently have an Energy Expenditure Plan (EEP) approved by the Energy Commission for energy efficiency projects. However, the Facilities Needs Assessment section of this report listed several projects that could be eligible for funding

under the Prop 39 Clean Energy Act program. Following are energy efficiency measures that the District could submit EEPs for funding under Prop 39;

- Parking lot and exterior lighting upgrades to LED lighting systems
- Installation of new Energy Management Systems (EMS) with lighting control features.
- Replace old roof systems to new cool roof systems
- Replace old single pane windows with energy efficient windows
- Retrofit lighting fixtures in school buildings with LED lighting system
- Replace old HVAC units with newer, more efficient units

To construct the above listed projects, it will cost the District over \$5 million. Under the Prop 39 program, these projects could be submitted as individual measures or as a bundled group of energy efficiency measures for funding purposes. To avail of Prop 39 funds, the District will be required to follow an 8 step application and approval process established by the Energy Commission for EEPs. Steps include benchmarking of past electric and gas usage for comparison with future usage, energy surveys, prioritization and sequencing of projects, determination of cost-effectiveness or Savings to Investment Ratio (SIR) and many other analytical processes. At this point, it is not possible to determine which of these projects will be approved, and how much funds will be awarded by the Energy Commission for those projects. For the purpose of this study, it is assumed that the District will be approved for and receive approximately \$3 million for these energy efficiency measures.

Due to the complexity of the process, it is recommended that the District engage the services of a consulting firm that is specialized in conducting energy planning studies and preparing Energy Expenditure Plans for school districts under the Prop 39 California Clean Energy Jobs Act.

### **Developer Fees**

Mitigation fees on development are an essential source of funding for the District's building program. Developer fees can only be used for construction/modernization work that can be directly linked to the development. The purpose of the fee is to mitigate the need for additional and/or adequate student housing generated by the development. State law allows school districts to levy fees on residential or commercial development at one of three levels. The Moraga School District currently levies fees at Level 1, the lowest level. Level 1 fees are adjusted by the State Allocation Board in January of every even year based on construction cost inflation. The values for Level 1 fees approved in January, 2014 are \$3.36 per square foot for residential development and \$0.54 per square foot for commercial/industrial development. The District receives 70 percent of the developer fees collected while 30 percent is received by the Acalanes High School District.

Developer Fees collected by the District during the last ten years are shown in the following table;

Year	Developer Fees	Interest Earned	Expenditures	Fund Balance
				\$550,759
2002-03	\$100,234	\$15,741	\$13,436	\$653,298
2003-04	\$54,704	\$7,314	\$64,933	\$650,383
2004-05	\$43,899	\$14,971	\$13,906	\$695,347
2005-06	\$68,040	\$31,300	\$101,246	\$693,441
2006-07	\$34,161	\$33,068	\$279,653	\$508,222
2007-08	\$40,186	\$7,198	\$545,653	\$9,953
2008-09	\$30,768	\$170	\$15437	\$25,454
2009-10	\$19,357	\$124	\$0	\$44,936
2010-11	\$22,640	\$226	\$0	\$67,802
2011-12	\$39,477	\$387	\$3,000	\$104,665
2012-13	\$17,602	\$427	\$0	\$122,694
2013-14	\$28,819	\$460	\$30,749	\$121,224

At \$2.24 per square foot (70 percent of \$3.20), about 8,049 square feet of residential construction was subject to developer fees in 2012-13, and about 13,071 square feet in 2013-14. The square footage translates into only 3-4 new houses per year, calculated on an average square feet of 2,500-3,000 square feet for a new single-family unit. (Note: Residential construction subject to the fee includes new housing units and 500+ square foot additions to existing housing units.) During the last five years, from 2010 thru 2014, only eight single-family units were built in the community of Moraga.

### Projected Residential Development

The Plan Bay Area data projects that Moraga will need 229 new housing units over the 2014–2022 period – an average of 29 units per year.

In response to 2008’s SB 375 which calls for a Sustainable Communities Strategy (SCS) throughout California, The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), who are responsible for preparing a Sustainable Communities Strategy (SCS) for the Bay Area, adopted Plan Bay Area in 2013. The Regional Housing Needs Allocation (RHNA) section of that plan allocated housing needs for the period 2014-22 for the Town of Moraga as follows:

Income (% of Median)	No. Of Housing Units
Very Low (0-50%)	75
Low (51-80%)	44
Moderate (81-120%)	50
Above Moderate (120%)	60
<b>Total</b>	<b>229</b>
<b>Average</b>	<b>29</b>

The 2015-2023 Housing Unit Update reported that the Town of Moraga has five approved development projects; Camino Ricardo, Los Encinos, Hetfield Estates, Country Club Extension and Palos Colorados. These projects are approved to develop and construct 263 Single-Family housing units on 564 acres of land. Three other development projects; Via Moraga, Moraga Town Center Homes and Rancho Laguna II, are awaiting approval of projects for the development and construction of an additional 44 Single-Family and 36 Multiple-Family housing units on 185 acres of land. In addition, potential projects that could deliver an estimated 988 additional housing units that are currently in various stages of planning include the Bollinger Canyon project, the Moraga Center Specific Plan and various other individual lots or potential subdivisions.

The latest planning updates indicate that the community of Moraga is projected to continue the development of residential properties and construction of 1,331 residential housing units. The potential build-out schedule prepared for the January 2015 Demographic Study indicates that the Moraga community will have 250 new housing units by 2020 and an additional 223 new housing units by 2025. This build-out schedule is used in the calculation of future developer fee revenues. Developer fee rates used for the calculations were adjusted for construction cost inflation of 2.5 percent per year every even numbered year. Fee revenues are based on the community average for new single-family housing unit size of 2,500-3,000 square feet. The estimated developer fee revenue that the District could receive over the next ten years is shown in the table below;

#### ESTIMATED DEVELOPER FEE REVENUE

Year	No. of Housing Units	Projected Developer Fee Rate	Estimated Developer Fee Revenue* <sup>1</sup>	Total Fees
2014-15	22	\$3.36/sq. ft.	\$142,296	\$223,386
2015-16	39		\$264,264	\$406,560
2016-17	55	\$3.52/sq. ft.	\$372,680	\$779,240
2017-18	69		\$491,453	\$1,270,693
2018-19	65	\$3.70/sq. ft.	\$462,963	\$1,733,655
2019-20	43		\$321,167	\$2,054,822
2020-21	45	\$3.88/sq. ft.	\$336,105	\$2,390,927
2021-22	45		\$353,430	\$2,744,357
2022-23	45	\$4.08/sq. ft.	\$353,430	\$3,097,787
2023-24	45	\$4.28/sq. ft.	\$370,755	\$3,468,542
<b>TOTAL</b>	<b>473</b>			<b>\$3,468,542</b>

\*<sup>1</sup>The District receives 70% of the revenue and shares 30% with Acalanes Union High School District

If the above cumulative projection becomes reality, the 2014-2022 ABAG allocation of 229 units for the town of Moraga will be exceeded. ABAG's forecast of new housing units for the town of Moraga allocates 131 housing units from 2015 to 2020 and 129 housing units from 2020 to 2025. In comparison, if the build-out schedule shown in the above table occurred, there would be 250 new housing units by 2020 and an additional 223 housing units by 2025.

## Maintenance Funding

Education Code Section 17584 requires districts to reserve one-half percent of their general fund budget for deferred maintenance. Each year the State intends to match that amount. However, in recent years the State match has been minimally funded. In 2010, as a part of the State budget process, the Legislature passed legislation which allowed districts to transfer the restricted deferred maintenance funding to the general fund.

The decline in State funding for deferred maintenance and the ability of districts to use local deferred maintenance funding for other purposes has far reaching consequences for the long term condition of facilities. Without adequate funding for maintenance, facilities will deteriorate and will eventually need greater funding for more extensive repairs or replacement. Local funding through voter supported bond measures is being used more extensively to address issues caused by the lack of maintenance funding.

## Existing Funds

In addition to the potential revenue sources listed above, the District has balances in the following facilities related funds:

### Summary of Existing Funds

Fund No.	Description	Amount
Fund 21	Building Funds	\$101,811
Fund 25	Capital Facilities Fund	\$127,224
Fund 35	State SFP Funds	\$0
Fund 40	Deferred Maintenance Fund	\$52,334
	<b>Total</b>	<b>\$281,369</b>

### Summary of Potential Funding

Source	Projected Amount
SFP New Construction Program <sup>1</sup>	\$0
SFP Modernization Program <sup>1</sup>	\$454,203
SFP Seismic Mitigation Program <sup>2</sup>	\$4,179,000
Proposition 39 Energy Grants	\$3,000,000
Developer Fees	\$3,468,542
Existing Funds	\$281,369
<b>Total</b>	<b>\$11,383,114</b>

<sup>1</sup> Dependent upon passage of future State bond

<sup>2</sup> Assume that the project meets the requirement and qualify for Financial Hardship assistance.



## **Conclusions**

- The District has an identified need over the next ten years for \$32,917,462 in facilities upgrades.
- The District has potential funding during that time period of \$11,383,114. However, some of this potential funding is dependent upon unknowns such as the passage of a state bond measure.
- The District has a shortfall of \$21,534,348. This shortfall could increase significantly if State funding from Seismic Mitigation Program and Prop 39 Clean Energy Jobs Act do not materialize in the near future.

## **Recommendations**

- The District should continue to adjust the developer fee rates to the maximum level allowed by law and continue to assess the maximum level of fees.
- The District should continue to set aside funding from the General Fund for maintenance issues.
- Over \$7 million of the funding indicated above is from State programs that may change or may not be funded for some time. It is recommended that the District engage the services of specialized consulting firm to conduct energy planning studies and prepare Energy Expenditure Plans for the District under the Prop 39 California Clean Energy Jobs Act. In addition, the District should pursue the remaining requirements in obtaining DSA concurrence and approval of the proposed plans and submission of the application for funding under the State Seismic Mitigation Program.
- The District should pursue a local general obligation bond to fund the remaining needs. It is important for the District to engage the services of a bond consultant to determine the assessed value of the District property and the maximum amount allowed for a local bond measure. It would also be advisable to conduct polling to determine the voter tolerance for a bond measure. If a facilities bond is considered and all other factors allow, the District should consider the size of the bond of about \$28 million (or more) due to uncertainty surrounding the availability of State funding.