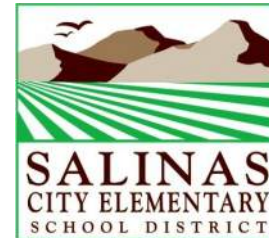


# FACILITIES NEEDS ASSESSMENT

SHERWOOD



PREPARED BY BELLI ARCHITECTURAL GROUP

2022

## 1. CAMPUS INFORMATION: Sherwood

Address: 110 S, Wood Street, Salinas, CA 93905  
 Year Built: 1936  
 Current Principal: Everardo Marquez  
 Current Enrollment: 933 students

## 2. ON-SITE OBSERVATIONS

### 2.1 SITE

The school site presents the following site issues:

- Cracks in concrete and asphalt surfaces.
- Ingrown vegetation in asphalt surfaces.
- Non-accessible and deteriorated ramps.
- Trip hazards present.
- Non-accessible playground at SPED yard.
- Non-accessible drinking fountains.

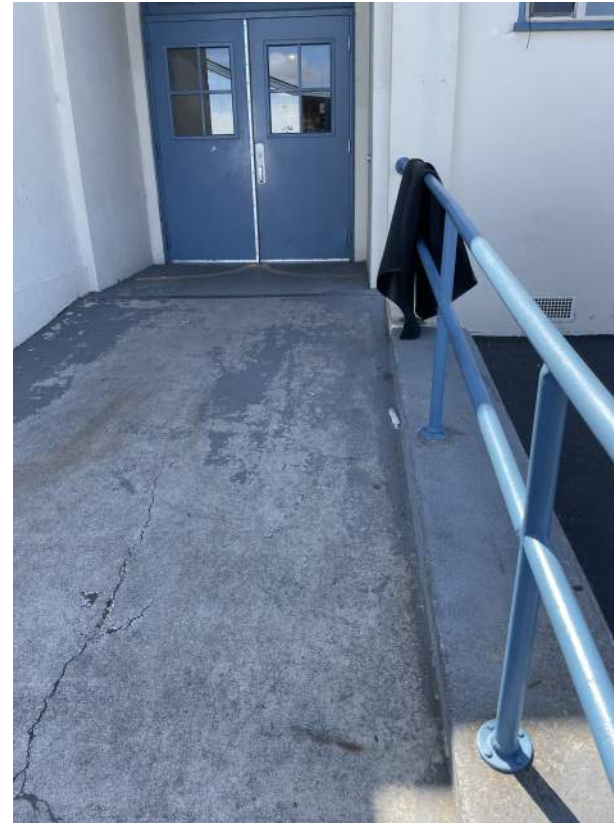


Image 2.1.3 Non-accessible ramps. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.1.5 Trip hazards present with uneven walking surfaces. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.1.2 Steep slopes on asphalt paving. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.1.4 Non-accessible stairs. Taken on 04/26/2022 by Belli Architectural Group.



Image 2.1.6 Non-accessible playground at SPED yard. Taken on 05/02/2022 by Belli Architectural Group.





Image 2.1.7 Non-accessible drinking fountain. Taken on 05/02/2022 by Belli Architectural Group.

## 2.2 EXTERIOR SHELL

The campus is composed of permanent and relocatable classrooms built in different phases. Areas of concern are as follows:

### Building A:

- Non-accessible ramps.
- Old roof in need of replacement.
- Original doors and windows in need of replacement.
- Broken window screens.
- Cracks in window and door corners.

### Building B:

- Old, damaged roof at outdoor covered walkway.
- No gutters.
- Significant dry rot present.
- Non-accessible door thresholds.
- Rot and rust at doors and windows.

- Aged exterior paint.

### Building C:

- Aged exterior paint.
- Old, original windows.
- Roof in need of replacement.

### Building D:

- Non-accessible entrance ramp to MPR.
- Aged exterior paint.
- Rot at doors and windows.
- Additional exterior lighting needed.

### Buildings E & F:

- Roof in need of replacement.
- Old, original doors and windows.
- Non-accessible door clearances and landings.

### Relocatable buildings:

- Aged exterior paint.
- Rust and rot at doors and windows.
- Broken window screens.
- Rusted and deteriorated roof.
- Significant dry rot present.



Image 2.2.1 Building A, exterior. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.2 Building A, windows. Taken on 05/02/2022 by Belli Architectural Group.





Image 2.2.4 Building A, exterior cracks. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.6 Building B, exterior. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.8 Non-compliant door threshold at building B. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.5 Building B, old, damaged roof at outdoor covered walkway. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.7 Building B, walkway. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.9 Building C, exterior. Taken on 05/02/2022 by Belli Architectural Group.





Image 2.2.10 Building C, windows. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.12 Building D, access from parking. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.14 Building F, windows. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.11 Building D, non-accessible entry. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.13 Building D, windows. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.14 Non-accessible entry at Building F. Taken on 05/02/2022 by Belli Architectural Group.





Image 2.2.15 Relocatable classroom exterior. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.2.16 Relocatable classroom door. Taken on 05/02/2022 by Belli Architectural Group.

## 2.3 INTERIORS

Each building presents the following interior issues:

Building A:

- Old boiler not in use. Should be removed.
- Restrooms due for modernization.
- Non-accessible student restrooms.
- Aging casework.
- Broken lamps.
- Non-accessible sinks in classrooms.
- 3 full-size classrooms are being used as storage.
- Vandalized restrooms.
- Deteriorated plaster at walls.

Building B:

- Restrooms due for modernization.

Building C:

- Damaged ceiling panels.
- Aging wall paper.
- Aging sheet vinyl flooring.
- Rust and rot at windows and doors.
- Missing thresholds.
- Non-accessible sinks in classrooms.
- Restrooms due for modernization.
- Old sheet vinyl flooring.

Building D – MPR:

Sherwood kitchen serves as a District-wide cooking facility. The existing conditions are:

- Flooring surfaces are adequate and in good conditions.
- Cooking equipment and surfaces are adequate, made of stainless steel.
- The rooms contain mechanical ventilation plus Ansul exhaust hood.
- There is not an “allergy free” meal preparation area.

- Additional storage and food preparation areas needed.

Buildings E & F:

- Restrooms are not size-appropriate for Kindergarten use.
- Old flooring and wall tile.
- Non-accessible drinking fountains.
- Old sheet vinyl flooring.
- Additional electrical outlets needed.

Relocatable buildings:

- Broken and collapsing ceiling panels.
- Aging sheet vinyl flooring.
- Damaged and worn wall surfaces.
- Non-accessible sinks.
- Plumbing fixtures not working in selected areas.
- Outdated furnishing and equipment.

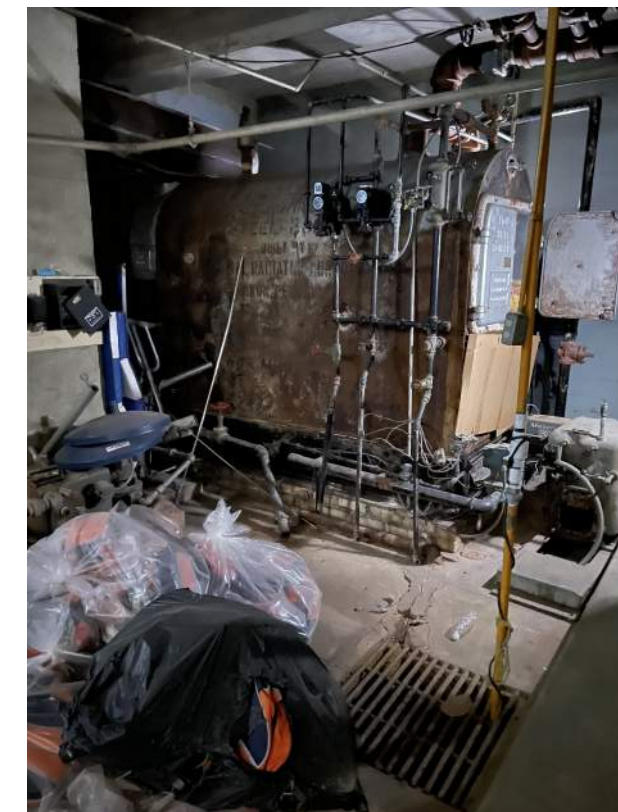


Image 2.3.1 Old boiler present at Building A. Taken on 05/02/2022 by Belli Architectural Group.





Image 2.3.2 Building A, restrooms. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.4 Building A, casework. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.6 Building C, ceiling panels. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.3 Building A, single occupancy restrooms. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.5 Building B, restrooms. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.7 Building C, wall finishes. Taken on 05/02/2022 by Belli Architectural Group.





Image 2.3.8 Building C, doors.  
Taken on 05/02/2022 by Belli  
Architectural Group.



Image 2.3.10 Building C, sinks.  
Taken on 05/02/2022 by Belli  
Architectural Group.

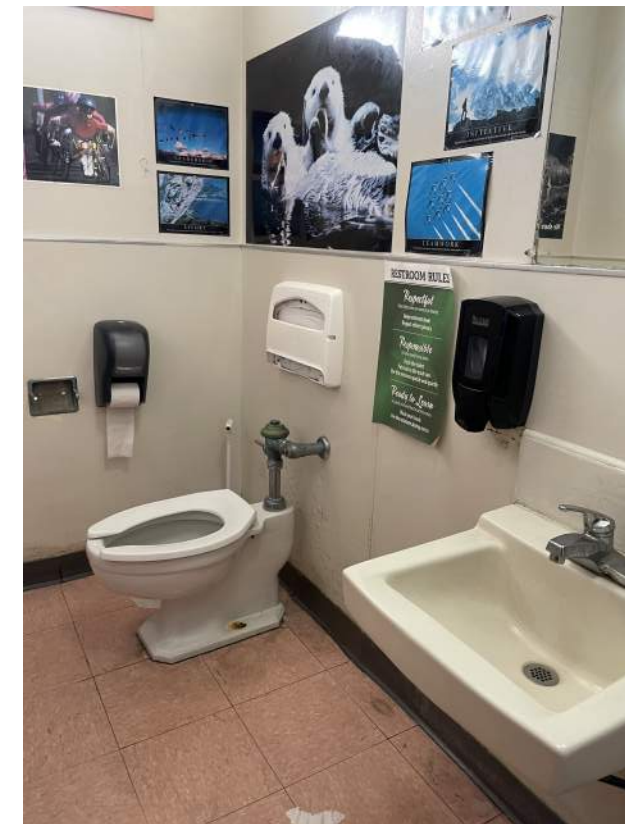


Image 2.3.11 Building C,  
restrooms. Taken on 05/02/2022  
by Belli Architectural Group.



Image 2.3.9 Building C,  
thresholds. Taken on 05/02/2022  
by Belli Architectural Group.



Image 2.3.12 Building E,  
restrooms. Taken on 05/02/2022  
by Belli Architectural Group.





Image 2.3.13 Building F, sinks. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.15 Building E, classroom. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.17 Relocatable classroom interior. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.14 Building E, machinery. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.16 Building E, water fountain. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.18 Relocatable classroom interior. Taken on 05/02/2022 by Belli Architectural Group.





Image 2.3.19 Kitchen addition. Taken on 06/29/2022 by Belli Architectural Group.



Image 2.3.19 Kitchen. Taken on 06/29/2022 by Belli Architectural Group.

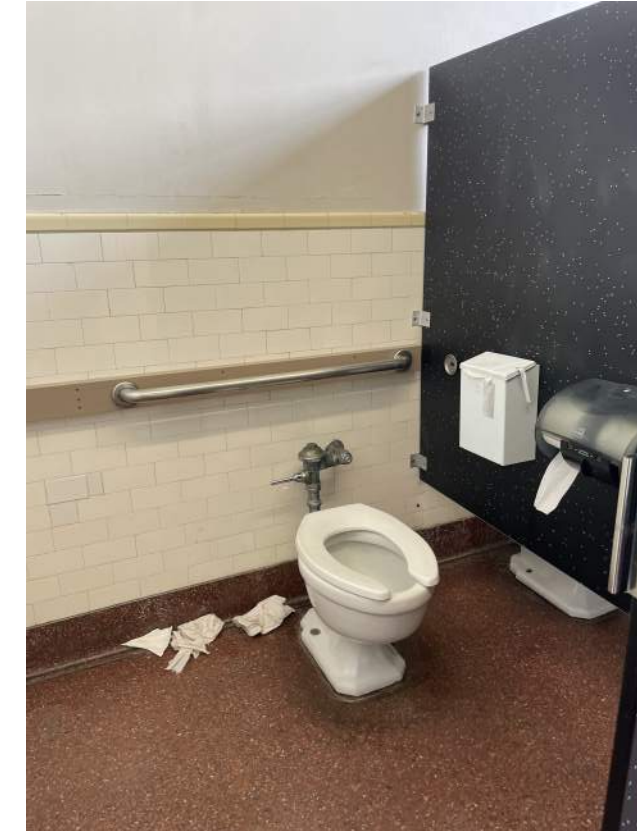


Image 2.4.1 Non-ADA compliant restrooms. Taken on 05/02/2022 by Belli Architectural Group.



Image 2.3.20 Kitchen. Taken on 06/29/2022 by Belli Architectural Group.

## 2.4 ACCESSIBILITY

The campus presents the following accessibility issues:

- Non-compliant thresholds.
- Lack of accessible ramps.
- Non-accessible restroom facilities for students.
- Non-accessible drinking fountains.
- Non-accessible sinks.
- Non-accessible Nurse's restroom.



Image 2.4.2 Drinking fountain missing cane detection rails. Taken on 05/02/2022 by Belli Architectural Group.





Image 2.4.3 Non-ADA compliant classroom sink. Taken on 05/02/2022 by Belli Architectural Group.

## 2.5 SERVICES

For MEP findings, please refer to subsequent reports provided by Aurum Consulting and Axiom Engineers.

## 2.6 STAKEHOLDER REMARKS

- HVAC upgrades needed.
- Safety and monitoring system upgrades needed.
- TK/ Kindergarten facility upgrades needed.
- Permanent buildings need modernization.
- No indoor PE space available.
- Permanent buildings need window replacement.
- Permanent buildings need roof replacement.
- Permanent buildings need new paint.

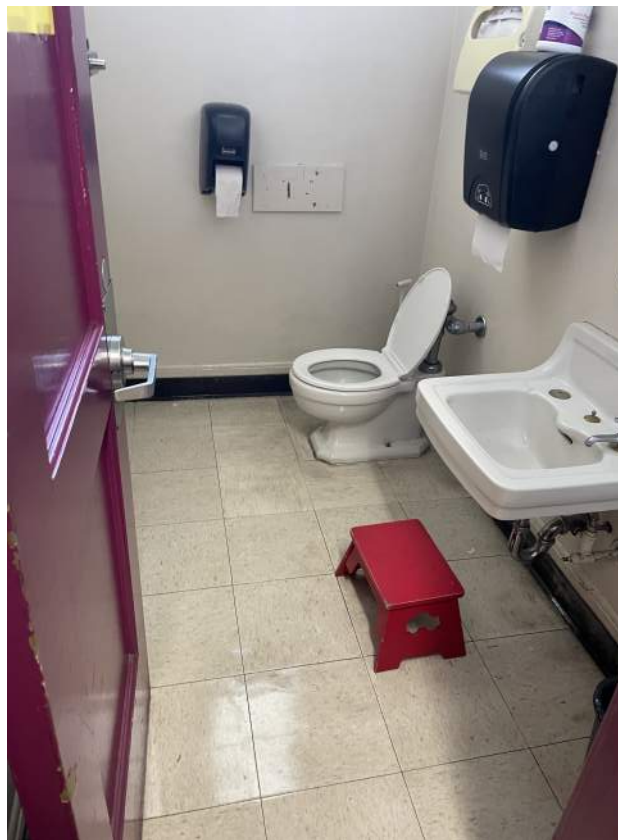


Image 2.4.4 Nurse's office restroom. Taken on 05/02/2022 by Belli Architectural Group.



### 3. MECHANICAL SITE VISIT REPORT

**AXIOM ENGINEERS<sup>SM</sup>**  
 CONSULTING MECHANICAL ENGINEERS  
 22 Lower Ragsdale Dr., Suite A Monterey, CA 93940  
 Phone 831.649.8000 Fax 831.649.8038



School Name: **Sherwood ES**

Address: 110 South Wood Street

Finding from a site visit conducted on May 2, 2022. It appears the last significant HVAC/Plumbing modernization was prior to the 1990's. The main school building is similar to El Gabilan, Kammann, Lincoln and Roosevelt and was constructed in 1936. Note that the main classroom building does NOT have any insulation and windows are single pane glass. It is desired to install a Pelican Wireless Control System to allow the district maintenance staff to control all HVAC equipment.

#### 3.1 HVAC

Administration Area:

The heating system for this area is served by a Carrier Weathermaker Six up-flow gas-fired furnace located in a closet across the hall. The Teacher's Lounge and adjacent Work Room is served by another Carrier Weathermaker Six unit in the same closet. These furnaces are pre 1990's era and should be replaced. The motorized outside air damper linkage for these units has been disconnected and needs repairing.



Multi-Purpose/Cafeteria Building:

The heating system for the Multi-Purpose room is with two (2) suspended gas-fired unit heaters. These appear to be original and should be replaced. The kitchen food service equipment appears to be original and in need of replacement.



Classrooms 1, 2, 5, 7, 8, 9, Computer Lab 10, 11, Library 12, 13 thru 15:

These rooms are served by individual Carrier Weathermaster 6 up-flow gas-fired furnaces located in a closet inside the room. Supply ductwork is exposed. The Computer Lab had two (2) separate furnaces serving this room. All of these furnaces are 1990's era and should be replaced. The photo below is of the Computer Lab.



Classroom 16 thru 21:

This is a separate stand-alone building. These six (6) classroom rooms are served by six (6) individual Day and Night Plus 80 up-flow gas-fired furnaces located in a closet inside the room. All of these furnaces are 1990's era and should be replaced. The photo below is of the Classroom 18.





Classroom 23 thru 25 and 30:

These five (5) classrooms are in a stand-alone building and are served by five (5) rooftop gas heat/electric cooling units. The unit serving classroom 24 was recently replaced. The other four (4) units also need replacing.



Classroom 26, 27, 28 and 29:

These four (4) classrooms are in a stand-alone building and are heated with three (3) new gas-fired wall mounted tankless boilers and four (4) individual hot water window console type fan-coil units. The boiler needs pipe insulation on all exposed heating water piping.



The hot water fan-coil console in the classroom.



Classrooms 31 thru 33, 35 thru 47, Lounge 48, Workroom 49, Library 50, Classroom 51 thru 55, Computer Lab 56, Classroom 57 thru 64, Migrant Services, and the Multi-Purpose Building:

These are portable classroom consisting of the exterior wall mounted “Bard” type heat pump units. All portables utilize this type of equipment. These units throughout the campus appear to be operating. Older (20 years) units should be replaced. The photo below is of Classroom 31.



Kindergarten Classroom K1, K2, K3 and K4:

This is a stand-alone building. Classroom K1 and K2 are served by one gas-fired up-flow furnace and Classroom K-3 and K-4 are served by another gas-fired up-flow furnace. Ductwork is exposed spiral. The furnaces appear to be newer and are operating.

### 3.2 PLUMBING

The main building waste and vent piping consist of hub and spigot/lead joint cast iron piping. This piping is 70+ years old and should be replaced. This school is in need of a restroom modernization.

#### Primary Multi-Purpose/Cafeteria Building:

A gas-fire water heater serving the food service equipment was installed in 2016, Seismic bracing is per DSA requirements.

#### Upper Sherwood Multi-Purpose/Cafeteria:

A tank type electric water heater located in a closet inside the Computer Lab 56 serves the food service equipment. The food service equipment appears to be new.

### 3.3 FIRE SPRINKLERS

The main pre-1940’s era administrative/classroom building has fire sprinklers in the hallway and at every door opening into the hallway. The sprinkler system was installed in the mid-1970’s. The Sprinkler heads are more than 45 years old and should be replaced.

This concludes this assessment.

**AXIOM ENGINEERS<sup>SM</sup>** CONSULTING MECHANICAL ENGINEERS  
22 Lower Ragsdale Dr., Suite A • Monterey, CA 93940 • Phone 831.649.8000 • Fax 831.649.8038



## 4. ELECTRICT SITE VISIT REPORT



ELECTRICAL ENGINEERING · LIGHTING DESIGN · SYSTEMS DESIGN

### ELECTRICAL DUE DILIGENCE REPORT

For  
**Sherwood Elementary School**  
Salinas, CA

For  
**Belli Architectural Group**  
235 Monterey Street, Suite B  
Salinas, California 93901

May 6, 2022

Prepared by: Najib Anwary, P.E.

Aurum Consulting Engineers Monterey Bay  
404 W. Franklin Street, Suite 100  
Monterey, California 93940  
Telephone : (831) 646-3330  
Fax: (831) 646-3336  
ACEMB Project #: 21-393.00

### 4.1 INTRODUCTION

The following is based on a walk-through visual inspection of the school. No electrical equipment was opened for inspection, no load studies done and no testing was performed. The intent was to evaluate the electrical systems and identify any obvious problems that may be present.

### 4.2 FIELD FINDINGS

#### Electrical System:

There are (3) existing main “metered” electrical service switchboards (MSB1, MSB2 and MSB3). MSB1 is a 1200 amp, 120/208 volt, 3 phase, NEMA 3R, Square D, service located at the front parking lot of the Upper Sherwood area. MSB1 has a connection for the existing Solar PV system. The Solar PV is connected ahead of the main breaker at MSB1. MSB1 serves in large part, the entire Upper Sherwood area including modular/portable buildings (approximately 29 total modular buildings). MSB1 expected life 20 yrs. MSB2 is a 600 amp, 120/240V, 3-phase, NEMA 1 service located in the Multi-Purpose building at the Lower Sherwood area. MSB2 feeds the MPR building and several portable classrooms located near the playground area. The manufacturer is Trumbull Electric and it is discontinued. If electrical renovation/upgrade takes place in the MPR building, it is recommended to replace the switchboard with a new switchboard. MSB2 expected life; 5 to 10 yrs. MSB3 is a 600amp, 120/240V, 1-phase, NEMA 3R, Square D service located on the north exterior wall of classroom #32. MSB3 feeds several modular classrooms clustered at the northwest of campus. MSB3 has an overhead service fed from PG&E pole mounted 50KVA transformer. Switchboard NEMA 3R enclosure is old and rusty. MSB3 expected life; 4 to 6 yrs. The electrical services are used primarily for lighting and heating equipment, with minimal plug loads. Some of the electrical distribution system panels that are located around the site and are original to the main campus buildings when the school was built, are old and manufactured by a company that no longer exists. The reliability of the system’s breakers to function correctly when necessary cannot be relied upon. It is recommended to replace the oldest panels within the classroom wings of the main campus building. Where the District plans to add HVAC to the site, the switchboards that are serving those locations may require an upgrade based on what type of system is recommended for HVAC upgrades. See attached photos MSB1, MSB2 and MSB3.

Interior Lighting is primarily fluorescent with T8 or T12 lamps at interior spaces in permanent buildings. Most if not all modular classrooms have LED lights with wireless corner occupancy sensor and on/off switches. The existing fluorescent lamps were retrofitted with LED T8 lamps manufactured by eTech LED. The District Staff stated that these LED lamps are made in China and are no longer available. Even though they are LED lamps, the fixture housing is old and several light covers/diffusers are broken, see attached photo LTG1. The lighting throughout the school campus is old and although there was no mention of complete failure, some light fixtures seemed original to the spaces, so they are likely near their “end of life”, especially with regards to efficiency. There were also several light fixtures in the classrooms that don’t work. Moreover, the lighting in the MPR stage doesn’t seem to have adequate lighting levels and flexible controls. There is no uniform lighting distribution and some light fixtures don’t work, see attached photo LTG2. Only newly remodeled spaces have energy code compliant controls such as occupancy sensors (Admin building area and remodeled classrooms as well as modular classrooms). Emergency lighting was not apparent at any classrooms (except for remodeled classrooms),

restrooms, or exterior landings. However, in multi-use spaces and hallways, bug-eye type stand-alone emergency light fixtures were installed. Multilevel switching/dimming necessary for energy conservation is almost non-existent (except for remodeled spaces). Expected life; Unknown. It is recommended to retrofit campus wide lighting system with new LED technology in the near future. This would be a good opportunity for reduction in energy use from more efficient lighting fixtures, improved classroom lighting, smart lighting controls, daylight harvesting and would also reduce maintenance costs.

Exterior Lighting at the back parking lot is relative newer LED pole lighting. The front parking lot has no lighting poles other than building lights which are not sufficient to illuminate the entire front parking lot. Between buildings where breezeways/covered walkways occur, there is some surface mounted newer fluorescent light fixtures throughout the main campus buildings. Exterior lighting is controlled via time clock or photocell for auto shut-off. There seems to be a lack of building perimeter lighting with respect to light out 10-15 feet away from buildings around the site (although there are residences that may be impacted by new lighting), considerations of residences should be taken into account where new lighting is proposed. Where new lighting is to be installed, it will need to be controlled via an astronomic time clock or photocell. Motion sensor may be required per T24. Expected life of existing exterior lighting; 7-10 yrs. minimum for newer LED fixtures and unknown for older fluorescent/HID fixtures.

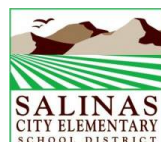
Classrooms have typically one outlet per wall with modifications in some areas to accommodate current computer loads (where surface raceways were added). Expected life; Unknown. It is recommended to retrofit classrooms, in the near future, with additional circuits and outlets to accommodate a minimum district standard quantity of devices in general classroom/space for equipment connections including multi-media equipment. This will in turn require an upgrade to existing electrical panelboards which will need to be connected to the existing main electrical switchboard or nearby distribution panels. There are some classrooms where either the sink was added or the receptacle installation was original to the site and thus the receptacle(s) are not GFCI (Ground-Fault Circuit Interrupt) type. This is a safety hazard and should be replaced.

#### Telephone System:

The existing telephone system appears to be in fair condition and functional. It is a Voice Over Internet Protocol (VoIP) system throughout the campus. Several classrooms including modular classrooms have the old analog phone system that is no longer being used. It is recommended to remove the existing analog phones to avoid confusion during emergency situations. Expected life of existing system; unknown.

#### PA Speaker System:

The existing PA System is an older Dukane model and is connected to speakers around the campus, some exterior speakers with separate amplifiers are located strategically to cover large open field areas. Expected life; 2 to 3 yrs., the system is older and requires regular maintenance, per district staff.





**Clock System:**

The existing Simplex Clock system was replaced by Primex Wireless Clock system. The Simplex Clock system is still located in the admin building. As of today, it is still running and connected but it is only a dummy system. The District should confirm that this system is no longer being used and remove the equipment completely from the building. The new PRIMEX Wireless Clock system seems to be in good condition and functional. The school staff reported no ongoing problems with the PRIMEX system. Expected life; approximately 5 yrs. Where PA Speaker system is upgraded, it is recommended to upgrade the clock system if desired to have both under one “umbrella”/manufacturer.

**Data System:**

There are IDF's (Intermediate Distribution Frame) throughout the school campus with wireless routers in most of the buildings/classroom spaces. Since most classrooms have only a couple computers at most (except for computer labs), the existing campus wide data system seems to be working fine. Expected life; unknown. It is recommended to retrofit classrooms, in the near future, with additional outlets to accommodate a district standard quantity of devices in general classroom/space for computers, printers and multi-media equipment. This will require District IT input on available bandwidth and patch panels at existing distribution frames to accommodate an increase in connections.

**Fire Alarm System:**

1.The existing Fire Alarm System is a Notifier NFS-320 and seems to have been installed to replace an older/failing AFP-200 (FACP1) model that is discontinued and it is located in the main office space at the Lower Sherwood area. Similarly, there is a Notifier AFP-200 (FACP2) fire alarm panel in the Migrant office located at the Upper Sherwood area. Both fire alarm panels are not interconnected with each other. There is only a supervisory module in the main office to notify occupants of any fault conditions in FACP2. The site does not have current code compliant coverage as required by California Fire Code. The school site has pull stations and horns/horns-strobes (except for the Annex building, no fire alarm devices were found in classrooms, there are only exterior horns at the front of the building) for majority of the spaces which met code standards at the time of install, however, where spaces are remodeled and required to conform to current code requirements, the existing Notifier AFP-200 panel will not accommodate any future remodel work or Emergency Voice Evacuation System addition. The raceways associated with fire alarm/low voltage systems around the central/main interconnected building of the campus are cabled through in concealed locations and where add-ons or systems are extended, surface raceways (Panduit) are routed within the room/spaces. Where fire alarm/low voltage raceways extend between buildings, it seems to be mainly an underground connection with pull cans on exterior of buildings. Expected life of existing system; 1 to 3 yrs., if no new major building renovations or additions occur.

**Security:**

1.The existing campus security system is comprised of (2) stand-alone security panel (DSC), (1) located in the main office (Lower Sherwood) and (1) located in the Migrant office (Upper Sherwood). The system seems to be in good condition and the school staff reported no ongoing problems. The system is interconnected to remote building booster panels and the campus has wired motion detectors throughout the site connected to the security panel. Expected life; 4 to 5 yrs. There is also a CCTV Security Camera system which Power over Ethernet (POE) cameras located strategically by the district throughout the site. Each camera is connected to a local IDF/MDF via data cable. Expected life; unknown, seems to be in working condition with no reported problems.

**4.3 SUMMARY**

The school electrical infrastructure is in fair condition except for a few panels that are very old and should be replaced with new to match the existing main service switchboard manufacturer type and ratings in the near future. The school interior lighting system and controls need to be upgraded in the near future where energy may be conserved with lower maintenance cost and higher lamp life LED technology with dimming capabilities. An increase in the classroom receptacle quantity and associated electrical loads will require electrical distribution upgrades from the main service switchboard to the classroom building in order to support future additional computer/technology loads as well as possible mechanical HVAC connections. The raceways associated with low voltage systems around the campus may need to be verified/inspected for re-use where additional fiber optic cables/network cabling for any low voltage system upgrades is deemed necessary in order to verify cost impact of new trench vs. existing underground conduit re-use. The Lower and Upper Sherwood have separate systems (i.e. fire alarm, security, PA, etc.). Where major building renovations or additions occur, it would be ideal to replace existing systems or install modules, if possible, to interconnect all systems as one main central system for each system such as fire alarm, security, PA, etc. Per District staff, all systems head-end equipment should be located in the main office at the Lower Sherwood area. Where a new building may be proposed at this site, an electrical survey will need to be completed and it is likely that the new building will require an Electrical (PG&E) service upgrade to accommodate any new proposed building (should an equivalent number of buildings/rooms not be slated to be removed due to new building added). In addition, Site Telecom, Fire Alarm, and Low Voltage Systems will need upgrades to accommodate new connections with newer technology and EM Voice Evacuation Fire Alarm System.



MSB1.



MSB2.





MSB3.



LTC2.

404 W. Franklin Street, Suite 100 - Monterey, CA 93940  
1798 Technology Drive, Suite 242 - San Jose, CA 95110  
T 831 646 3330 (Monterey) T 408 564 7925 (San Jose) F 831 646 3336

[www.acemb.com](http://www.acemb.com)



LTC1.