

# Appendices

LESSONS LEARNED

## BLOCKED EXITS



QUATTROCCHI KWOK  
ARCHITECTS

Napa Earthquake

August 2014

Lessons Learned



Free standing  
cabinets placed  
next to classroom  
doors can block  
exits





Open shelves are open...







Kitchens offer a  
special treat...  
broken glass

In a severe  
enough  
earthquake,  
cabinet doors will  
open



## **Civil/Site Assessment & Recommendations**

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### **Mountain View Los Altos High School District**

**Brelje & Race Consulting Engineers**

475 Aviation Blvd, Suite 120, Santa Rosa, CA 95403

Tel 707.576.1322 Fax 707.576.1322

Principal in Charge: Paul V. Bartholow

### **Campus Assessments**

The Civil/Site assessment task included a review and evaluation of existing site conditions at Mountain View High School, Los Altos High School and MVLA Adult Education site, related primarily to accessibility issues/ADA compliance, pavement condition, fire suppression, drainage, sewer, and water systems on each campus. Observations of existing longitudinal and cross slope conditions at various locations were documented by the use of a “smart level” tool, which produces reasonably accurate results, but is not intended to take the place of actual surveyed elevations from which true slope can be determined. Because there is theoretically no tolerance allowed above ADA maximum slope conditions, any existing improvement that registered a smart level reading in excess of the maximum standard was noted as non-compliant. District personnel assisted in touring both High School sites and were consulted regarding any known wet utility problems. Any issues raised have been noted for each campus below.

#### **Accessibility/ADA Compliance**

The primary area of concern for each campus is accessibility, as there are widespread instances of walkways throughout the sites that are arguably on what appear to be logical paths of travel to accessible destinations that have either excessive cross slope (>2%) or excessive longitudinal slope (>5% without railings, or >8.3% with railings). A second area of ADA compliance concern is accessible parking stalls. Problem areas include excessive cross/longitudinal slope (limited to 2% max. in any direction), insufficient length or width, missing or non-compliant signage or striping, and non-compliant ramps >8.3% slope, landings with slope > 2%, missing truncated domes) connecting the stalls to a path of travel to the campus

On several campuses there are significant areas that do not comply with mandatory federal and state accessibility requirements. These deficiencies are, for the most part, of a nature that they will be difficult, disruptive to the campus, and expensive to correct. Unfortunately, there is virtually no flexibility regarding compliance with these requirements. Generally, DSA requires upgrades to accessibility features in the general vicinity of new construction or modernization, with emphasis on POT to the



location in question. However, there are increasing instances of private citizens or groups bring lawsuits against building owners/sites where existing improvements do not meet accessibility requirements. In recent years, the San Francisco USD and Tamalpais USD, among others, were the subject of citizen suits over accessibility, resulting in those districts undertaking extensive and costly accessibility improvements at their various campuses.

Each campus has been individually reviewed as noted below. Specific locations, keyed to individual site plan exhibits, have been identified and grouped by type indicating specific problem areas along with recommendation for resolution. Photographs are also attached which illustrate representative examples of major problem areas.

### **Los Altos High School Campus**

#### **ADA Accessibility**

1. Keynote A. Truncated domes should extend along full length of flush walkout curb at 4 separate locations throughout campus.
  - Recommendation: Saw cut and remove existing concrete and place concrete embedded truncated domes along all walkout locations at driveways.
2. Keynote B. Cross slopes greater than 2%.
  - Recommendation: Saw cut existing concrete and replace to create path of travel with cross slopes at 2% or less.
3. Keynote C. No ADA student drop off provided.
  - Recommendation: Provide ADA loading area with ramps, domes, and signage to comply with current ADA requirements.
4. Keynote E. Landing at door with slopes greater than 2%.
  - Recommendation: Remove and replace concrete at door landing to provide 2% max slope in any direction.
5. Keynote F: ADA “tow away” signage missing at entry to parking areas.
  - Recommendation: Install code compliant signage at entry to parking areas.
6. Keynote G: ADA parking at staff parking with non-compliant ramp, landing at top of ramp, and missing signage.
  - Recommendations: Remove and replace existing concrete ramp and landing at top of ramp and provide code compliant ramp, landing, and truncated domes. Add missing “fine” signage on existing poles. Existing ADA layout does not meet current standards for angled ADA parking; provide new striping and layout for angled parking.

7. Keynote H: Cross slope along path of travel to public right of way greater than 2%.
  - Recommendation: Saw cut and remove existing sidewalk and replace with new 4' minimum width sidewalk with cross slopes of 2% or less. Provide code compliant ramp at north end of walkway for ADA path of travel to campus.
8. Keynote I. Connection to path of travel with excessive cross slopes, no truncated domes at walkout.
  - Recommendation: Saw cut and remove existing concrete paving and construct code compliant flush walkout with truncated domes and pavement markings at crossing.
9. Keynote J. All door landings along south side of building with slopes greater than 2%.
  - Recommendation: Saw cut and remove concrete adjacent to building 13' in width along length of building and replace to address slopes at door landings and path of travel along building.
10. Keynote K. All door landings along south side of building with slopes greater than 2%.
  - Recommendation: Saw cut and remove concrete adjacent to building 10' in width along length of building and replace to address slopes at door landings and path of travel along building.
11. Keynote L. Path of travel with cross slope in excess of 2%.
  - Recommendation: Saw cut and remove existing concrete and replace with code compliant walkway.
12. Keynote M. Door landings at rooms 303, 304, 305, and 306 with slopes greater than 2%.
  - Recommendation: Saw cut and remove concrete adjacent to building 10' in width along non-compliant doorways and replace to address slopes at door landings and path of travel along building.
13. Keynote N. Path of travel along lockers at east side of 300 building with slopes greater than 2%.
  - Recommendation: Saw cut and remove concrete adjacent to east side of building along width of building and replace to address excessive cross slopes path of travel along building.
14. Keynote O. Landing at bottom of ramp at P15 with cross slopes greater than 2%.
  - Recommendation: Saw cut and remove ac paving and repave landing with cross slopes less than 2%.
15. Keynote P. Ramps with longitudinal slopes greater than 8.33% at P13, entry to tennis courts, weight room, and ramp to fields.

FACILITIES ASSESSMENT  
Mountain View Los Altos High School District

- Recommendation: Replace/adjust ramps and saw cut and remove paving and repave landing with cross slopes less than 2% as necessary.
16. Keynote Q: Path of travel with cross slopes in excess of 2%.
- Recommendation: Remove existing walkway and construct new code compliant path of travel.
17. Keynote R: Landing of ramp with cross slopes greater than 2%, no truncated domes at walkout to driveway.
- Recommendation: Saw cut and remove existing landing and construct code compliant landing with truncated domes.
18. Keynote S: Door landings at rooms 712 and 713 with slopes in excess of 2%.
- Recommendation: Remove and replace concrete at door landing to provide 2% max slope in any direction.
19. Keynote T: Door landings at rooms 702, 703, 707, 708, and 709 with slopes in excess of 2%.
- Recommendation: Remove and replace concrete at door landing to provide 2% max slope in any direction.
20. Keynote V: Access to entry at College and Career building with non-compliant door threshold (greater than 1/2" vertical) and landing with slopes greater than 2%.
- Recommendation: Saw cut and removed existing concrete landing and reconstruct to provide code compliant threshold and landing.
21. Keynote W: Door landings at rooms 310, 311, 312, 313, and 314 with slopes greater than 2%.
- Recommendation: Saw cut and remove concrete adjacent to building 10' wide along non-compliant doorways and replace to address slopes at door landings and path of travel along building.

**Fire/Life Safety**

No Known issues.

**Wet Utilities (Sewer, Water, Storm Drain)**

22. Keynote D. Inadequate inlet capacity on trench drains causes ponding during heavy rain events at numerous locations throughout campus.
- Recommendation: Modify existing trench drain system to provide larger inlet capacity. Provide larger outlet pipes to trench drains. Maintain and clean on regular basis.
23. Keynote U: Existing storm drain lids with holes drilled apparently for drainage.

**FACILITIES ASSESSMENT**  
**Mountain View Los Altos High School District**

- Replace existing solid lids with grated inlets as necessary.
24. Keynote X: Site Staff reported repeated sewer blockages due to 90 degree bend in sewer line located on the westerly end of building 100.
- Recommendation: Repair existing sewer line to eliminate or bypass 90 degree bend and add cleanout for future ease of maintenance.
25. Roof leaders throughout site are easily plugged without access to provide for maintenance and cleaning.
- Recommendation: Provide clean out locations on storm drain lines adjacent to existing downspout location for maintenance purposes.
26. Utility boxes along 400 building marked as “water” appear to be mismarked and may be cleanouts.
- Recommendations: Replace mislabeled covers as required.
27. Staff reported that generally storm drain structures throughout the site are undersized and have ponding in large rain events.
- Recommendation: Remove and replace undersized drainage structures as necessary.

**General Pavement Condition**

On campus paved areas not specifically mentioned below were found to be in acceptable condition, with no immediate needs. Implementation of a pavement management program is encouraged to prolong pavement life.

28. Keynote Y. Pavement at easterly entry to student parking in poor condition with significant cracking and “alligatored” area.
- Recommendation: Saw cut and remove entire paving section in area of damaged paving. Scarify and recompact subgrade and place new paving section per recommendations of Geotechnical Engineer..
29. Keynote Z. Pavement in student parking area in fair to poor condition with significant cracking.
- Recommendation: Seal cracks, slurry seal asphalt surface and restripe parking as necessary.

**Necessary Improvements – Site Work**

None noted.

## **Mountain View High School Campus**

### **ADA Accessibility**

1. Keynote A. Non-compliant ADA parking due to ramps with excessive slopes on ramp wings, lack of truncated domes, excessive slope in parking area, missing signage, non-compliant angled parking.
  - Recommendation: Saw cut and remove existing concrete ramps and landings and construct new compliant ramps with embedded truncated domes. Repave and restripe ADA stalls to comply with current standards and dimensions.
2. Keynote B. Truncated domes should extend along full length of flush walkout curb.
  - Recommendation: Saw cut and remove existing concrete and place concrete embedded truncated domes along walkout location at driveway.
3. Keynote C: Raised vertical edge greater than  $\frac{1}{2}$ " along path of travel.
  - Recommendation: Grind asphalt edge to eliminate vertical edge.
4. Keynote D: Accessible ramp to theater with cross slopes greater than 2%
  - Recommendation: Remove and replace ramp, approximately 16' x 5.5'.
5. Keynote E: Non-compliant threshold, vertical rise greater than  $\frac{1}{2}$ "
  - Recommendation: Remove and replace concrete at door landing to provide compliant threshold and 2% max slope in any direction.
6. Keynote F: Excessive cross slope on path of travel south rooms 212 & 214, vertical offsets of concrete greater than  $\frac{1}{2}$ " in height.
  - Recommendation: Remove and replace approximately 24" x 10' area of concrete with code compliant accessible walkway.
7. Keynote G: Excessive cross slope on path of travel north of rooms 213-215.
  - Recommendation: Remove and replace approximately 40" x 15' area of concrete with code compliant accessible walkway.
8. Keynote H: Vertical offsets of concrete greater than  $\frac{1}{2}$ " in height.
  - Recommendation: Remove and replace approximately 24" x 10' area of concrete with code compliant accessible walkway.
9. Keynote I: Doorways at rooms 101 & 102 with non-compliant door threshold (greater than  $\frac{1}{2}$ " vertical) and landing with slopes greater than 2%.
  - Recommendation: Saw cut and removed existing concrete landing and reconstruct to provide code compliant threshold and landing.
10. Keynote J: Excessive cross slope on path of travel north of rooms 102, 104, 106, 108.



FACILITIES ASSESSMENT  
Mountain View Los Altos High School District

- Recommendation: Remove and replace approximately 110'x10' area of concrete with code compliant accessible walkway.
11. Keynote K: Door landings at room 107 with slopes in excess of 2%.
    - Recommendation: Remove and replace concrete at door landing to provide 2% max slope in any direction. Approximately 200 s.f.
  12. Keynote L: Door landings at restrooms with slopes in excess of 2%.
    - Recommendation: Remove and replace concrete at door landing to provide 2% max slope in any direction. Approximately 12'x20' exposed aggregate concrete.
  13. Keynote M: Areas of non-compliant path of travel north of buildings 100 and 300 with cross slope in excess of 2%.
    - Recommendation: Remove and replace non-compliant areas of concrete with code compliant accessible walkway.
  14. Keynote N: Sides of accessible ramp with excessive slope.
    - Recommendations: Remove and replace existing ramp with code-compliant ramp.
  15. Keynote O: No ADA student drop off provided.
    - Recommendation: Provide ADA loading area with ramps, domes, and signage to comply with current ADA requirements.
  16. Keynote P: Angled parking does not meet current ADA standards.
    - Restripe ADA parking to provide loading areas that comply with current standards.
  17. Keynote Q: Door landings at rooms 123 & 125 with slopes in excess of 2%.
    - Recommendation: Remove and replace concrete at door landing to provide 2% max slope in any direction. Approximately 200 s.f.
  18. Keynote R: Path of travel along lockers at north side of building with slopes greater than 2%.
    - Recommendation: Saw cut and remove concrete adjacent to east side of building along width of building and replace to address excessive cross slopes path of travel along building. Approximately 100'x10'
  19. Keynote S: Door landings at room 120 with slopes in excess of 2%.
    - Recommendation: Remove and replace concrete at door landing to provide 2% max slope in any direction. Approximately 100 s.f.
  20. Keynote T: Non-compliant threshold at rooms 311, 313, 315, 317, vertical rise greater than 1/2"
    - Recommendation: Remove and replace concrete at door landing to provide compliant threshold and 2% max slope in any direction.
  21. Keynote U: Door landings at Activities Office with slopes in excess of 2%.

FACILITIES ASSESSMENT  
Mountain View Los Altos High School District

- Recommendation: Remove and replace concrete at door landing to provide 2% max slope in any direction. Approximately 600 s.f.
22. Keynote V: Non-compliant threshold at rooms A & B, vertical rise greater than 1/2"
- Recommendation: Remove and replace concrete at door landing to provide compliant threshold and 2% max slope in any direction.
23. Keynote X: Doorways at locker rooms with non-compliant door threshold (greater than 1/2" vertical) and landing with slopes greater than 2%.
- Recommendation: Saw cut and removed existing concrete landing and reconstruct to provide code compliant threshold and landing. Approximately 10'x30'
24. Keynote Y: Doorways at south end of the locker rooms with non-compliant landing with slopes greater than 2%.
- Recommendation: Saw cut and removed existing concrete landing and reconstruct to provide code compliant threshold and landing. Approximately 10'x60'
25. Keynote Z: Non-compliant ramp to public right of way.
- Removed and replace non-compliant ramp with a sloped walkway or code-compliant ramp.
26. Keynote AA: Non-compliant ramps from walkway adjacent to tennis courts, 4 locations.
- Recommendations: Remove and replace existing ramps with code-compliant ramp.
27. Keynote BB: Grate at doorway with long direction of grate in direction of path of travel.
- Recommendations: Replace grate with ADA compliant grate with long direction of grate perpendicular to path of travel.
28. Keynote CC: Truncated domes should extend along full length of flush walkout curb.
- Recommendation: Saw cut and remove existing concrete and place concrete embedded truncated domes along walkout location at driveway.
29. Keynote DD: Non-compliant threshold at room 522, vertical rise greater than 1/2"
- Recommendation: Remove and replace concrete at door landing to provide compliant threshold and 2% max slope in any direction at door landing.
30. Keynote EE. Truncated domes should extend along full length of flush walkout curb between sidewalk and driveway.
- Recommendation: Saw cut and remove existing concrete and place concrete embedded truncated domes along walkout location adjacent to driveway and parking.
31. Keynote FF: Excessive cross slope on path of travel south Building 500.

FACILITIES ASSESSMENT  
Mountain View Los Altos High School District

- Recommendation: Remove and replace concrete walkway with code compliant accessible walkway.
32. Keynote GG: Raised vertical edge greater than ½" adjacent to room 501.
- Recommendation: Grind concrete edge to eliminate vertical edge.
33. Keynote HH: Door landings at AD office and lockers with slopes in excess of 2%.
- Recommendation: Remove and replace concrete at door landing to provide 2% max slope in any direction. Approximately 200 s.f.
34. Keynote II: Non-compliant threshold at south door to gym, vertical rise greater than ½"
- Recommendation: Remove and replace concrete at door landing to provide compliant threshold and 2% max slope in any direction.
35. Keynote JJ: Stairs at building exit, non-compliant hand rails, doorway with non-compliant threshold at two locations.
- Recommendation: Difficult to make this area compliant. Verify exit not required exiting location.
36. Keynote KK: Stairs at building exit, no handrails at stair, doorway with non-compliant threshold at two locations.
- Recommendation: Difficult to make this area compliant. Verify exit not required exiting location.
37. Keynote LL: Ramp landing at special education modular with slopes in excess of 2%.
- Recommendation: Remove and replace landing to provide 2% max slope in any direction.
38. Keynote MM: Excessive cross slope on path of travel from ADA parking to public right of way.
- Recommendation: Remove and replace concrete walkway with code compliant accessible walkway.
39. Keynote NN: Non-compliant or missing ADA signage.
- Recommendation: Place code compliant ADA signage as necessary.
40. Keynote PP: Excessive cross slope on path of between press box and bleachers.
- Recommendation: Remove and replace concrete walkway with code compliant accessible walkway.
41. Keynote QQ: Greater than 4" drop within 2' each side of accessible path of travel.
- Recommendation: Regrade adjacent to path to provide 4" maximum vertical elevation change within 2' horizontal of path of travel or provide curb along path of travel.

**Fire/Life Safety**

42. Keynote OO: Fire Hydrant spacing greater than 300' on center through this portion of campus.
- Recommendation: Consult with local fire official to determine locations of additional fire protection facilities.

**(Sewer, Water, Storm Drain)**

43. Keynote W: Inadequate drainage and ponding.
- Recommendations: Remove and replace existing concrete, extend storm drain and provide drainage inlet at low point to provide positive drainage.
44. Root intrusion was reported by Facilities staff between the 400 and 500 building wing.
- Recommendations: Complete video inspection of the sewer line and replace or line sections where roots have entered sewer line.

**General Pavement Condition**

On campus paved areas not specifically mentioned below were found to be in acceptable condition, with no immediate needs. Implementation of a pavement management program is encouraged to prolong pavement life.

45. Pavement in Main parking area and student parking in fair to poor condition with significant cracking.
- Recommendation: Seal cracks, slurry seal asphalt surface and restripe parking as necessary.

**Necessary Improvements – Site Work**

None noted.

## **MVLA Adult School Campus**

### **ADA Accessibility**

1. Keynote A. Non-compliant ramp – greater than 5% slope without handrails, portions of ramp exceed 8.3%.
  - Recommendation: Remove existing ramp and construct new code compliant ramp.
2. Keynote B: Non-compliant ADA access to this exit door.
  - Recommendation: Difficult to make this area compliant. Verify not required exiting location.
3. Keynote C: Non-compliant ramp to public right of way.
  - Removed and replace non-compliant ramp with a sloped walkway or code-compliant ramp with handrails.
4. Keynote D: Excessive cross slope on path of travel adjacent to parking.
  - Recommendation: Remove and replace concrete walkway with code compliant accessible walkway.
5. Keynote E. Accessible parking stall is non-compliant due to excessive slopes, non-compliant ramp and missing ADA signage.
  - Recommendation: Remove and reconstruct to provide code compliant slopes on parking and loading area. Provide ADA signage and striping of parking, loading and accessible path to the ramp. Consider relocation of ADA parking and combining with other site ADA parking.

### **Fire/Life Safety**

No known issues

### **Wet Utilities (Sewer, Water, Storm Drain)**

No known issues

### **General Pavement Condition**

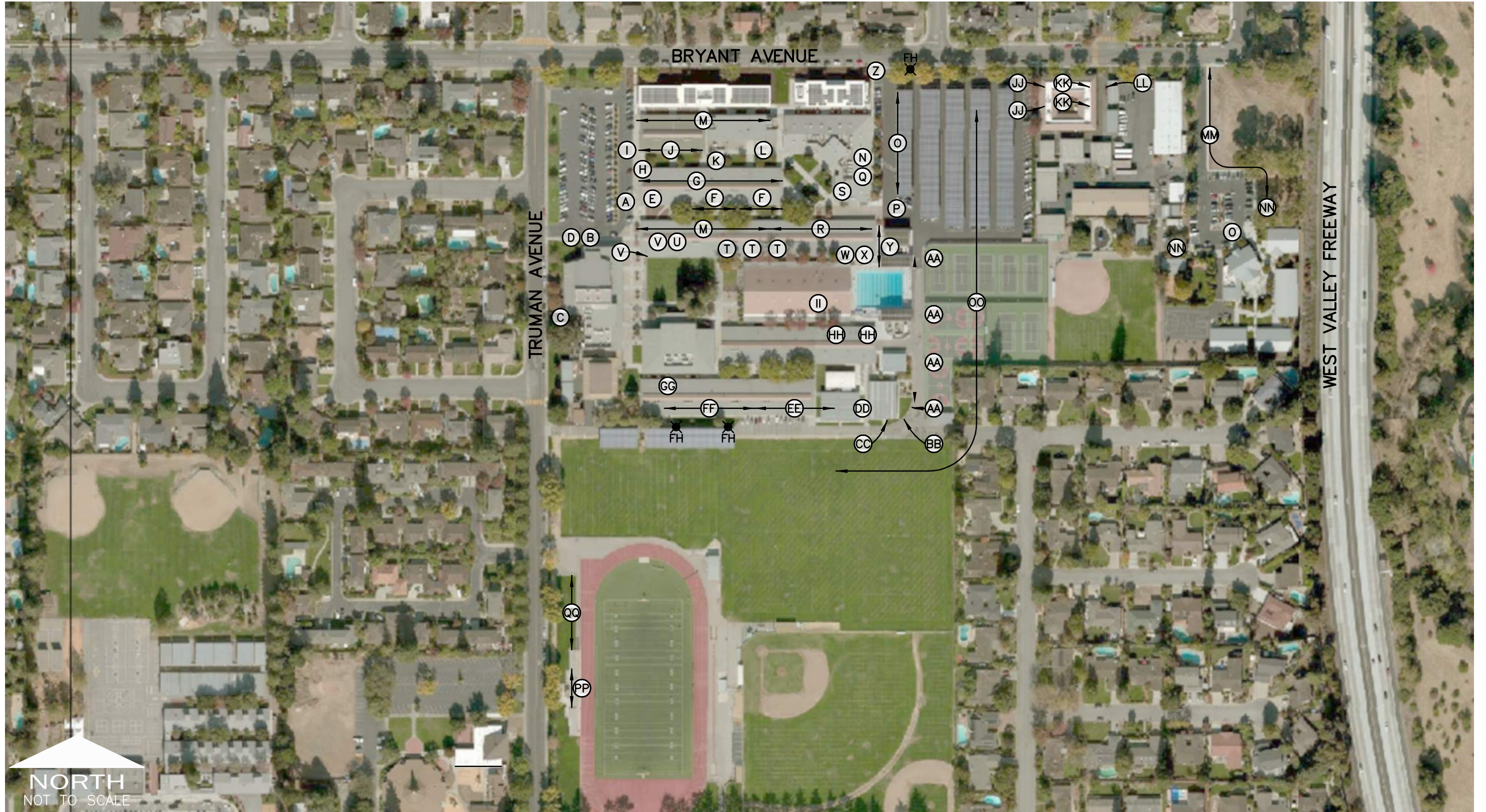
On campus paved areas were found to be in acceptable condition, with no immediate needs. Implementation of a pavement management program is encouraged to prolong pavement life.

### **Necessary Improvements – Site Work**

None

### **End of Document**





**MOUNTAINVIEW HIGH SCHOOL  
SITE ASSESSMENTS**

KEYNOTE MAP  
SEPTEMBER, 2016





①

**MOUNTAIN VIEW HIGH SCHOOL**  
INADEQUATE DRAINAGE AND PONDING



②

**MOUNTAIN VIEW HIGH SCHOOL**  
MISSING ADA SIGNAGE



③

**MOUNTAIN VIEW HIGH SCHOOL**  
MISSING TRUNCATED DOMES AT WALKOUT



④

**MOUNTAIN VIEW HIGH SCHOOL**  
NO TRUNCATED DOMES AT WALKOUT





⑤

**MOUNTAIN VIEW HIGH SCHOOL**  
NON ADA GRATE AT DOORWAY



⑥

**MOUNTAIN VIEW HIGH SCHOOL**  
NON-COMPLIANT ACCESS TO PUBLIC RIGHT OF WAY



⑦

**MOUNTAIN VIEW HIGH SCHOOL**  
NON-COMPLIANT ADA RAMP



⑧

**MOUNTAIN VIEW HIGH SCHOOL**  
NON-COMPLIANT EXIT



⑨

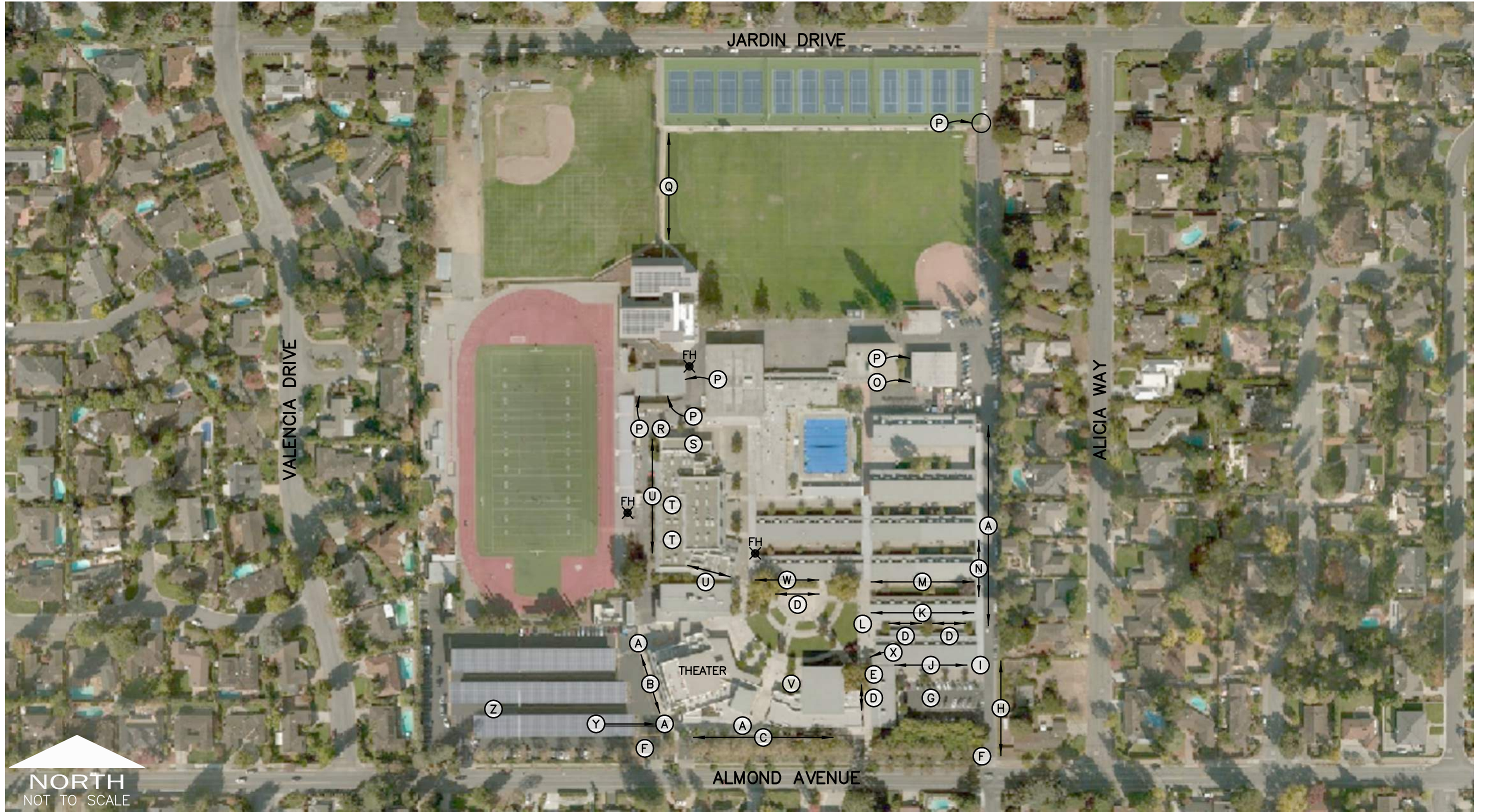
**MOUNTAIN VIEW HIGH SCHOOL**  
NON-COMPLIANT THRESHOLD AND LANDING



⑩

**MOUNTAIN VIEW HIGH SCHOOL**  
TRUNCATED DOMES REQUIRED AT WALKOUTS





## LOS ALTOS HIGH SCHOOL SITE ASSESSMENTS

KEYNOTE MAP  
SEPTEMBER, 2016





①

**LOS ALTOS HIGH SCHOOL**  
CROSS SLOPE GREATER THAN 2%



②

**LOS ALTOS HIGH SCHOOL**  
LANDINGS WITH SLOPES GREATER THAN 2%





③

LOS ALTOS HIGH SCHOOL  
NON COMPLIANT LANDING



④

LOS ALTOS HIGH SCHOOL  
NON COMPLIANT WALKOUT AT PATH OF TRAVEL



09-07-16 kelly \\4346\dwg\4346 00\4346.00 EXHIBIT-keynote map-MOUNTAIN VIEW ADULT.dwg TAB: Layout1



## MOUNTAINVIEW ADULT EDUCATION CENTER SITE ASSESSMENTS

KEYNOTE MAP  
SEPTEMBER, 2016





①

**MOUNTAIN VIEW ADULT EDUCATION CENTER**  
NON-COMPLIANT RAMP TO PUBLIC RIGHT OF WAY



②

**MOUNTAIN VIEW ADULT EDUCATION CENTER**  
WALKWAY WITH EXCESSIVE CROSS SLOPE





**O'MAHONY & MYER**  
ELECTRICAL ENGINEERING & LIGHTING DESIGN

San Rafael, California  
Pacific Harbour, Fiji

August 25, 2016

Brian O'Mahony  
Jan P. Myer  
Paul Carey  
Pieter Colenbrander  
David Orgish

**Quattrocchi Kwok Architects**  
636 Fifth Street  
Santa Rosa, CA 95404

Attn: Debra McGuire

Re: Mountain View High School  
Electrical / Lighting / Signal Systems Conditions Assessment - 2016

Dear Debra,

O'Mahony & Myer visited the Mountain View High School site on July 25<sup>th</sup>, 2016 to review the existing conditions of the electrical, lighting, and signal systems. The purpose of our review was to evaluate the condition of the various systems and to comment on their ability to support future use.

Below is a summary of the existing conditions:

**Power Service:**

The campus is fed with a primary voltage service meter at 12kV. The 12kV system feeds through a District owned transformer to a 4,000 Amp, 277/480V, main switchboard that serves sub-feed loads to the rest of the campus buildings.

The service equipment appears to be in good condition, but the labeling of the various sub-feed breakers (in two equipment sections), is not complete or easy to identify. Labels include blue tape and p-touch style labels, or missing identifications. There is also not much physical space left in the distribution sections for future breakers.

**Photovoltaic Power / Battery Storage System:**

The campus includes a large photovoltaic system that is interconnected with the utility system in parallel with a large scale battery storage system for peak load shaving. The PV system was installed in 2010. The battery system was installed in 2015.

Both systems appear to be operating normally and are in good condition.

### Power Distribution System:

Power distribution feeders throughout the campus could not be reviewed as part of this visual inspection, but are reported to be operating properly with no issues.

All building panels observed appear to have been replaced since original. The condition of the various sub-feed panels at each building appears to be good, with no deteriorating conditions.

Most Classrooms include numerous runs of surface mounted raceways around the Classroom perimeter, for power and data wiring. These systems are in good condition.

### Interior Lighting Systems:

Interior lighting consists primarily of fluorescent sources with T8 lamps. The lighting is generally in good shape.

Prop 39 funding is underway at Los Altos High School to replace lighting systems with new LED sources, which will help improve the energy efficiency of the lighting systems over the existing fluorescent systems. Mt. View High School will be the next priority, after LAHS.

### Exterior Lighting Systems:

Exterior lighting systems include a mix of older HID and some newer retrofitted LED sources. The existing HID fixtures are in fair condition. Prop 39 funding may be used to replace the HID units as well.

No specific dark spots, lacking adequate safety and wayfinding lighting, were reported.

### Lighting Controls:

Interior lighting controls include some occupancy sensors in Classrooms and smaller spaces of the more recently renovated buildings, in addition to multi-level switching. The older buildings do not have occupancy sensors, or where they do exist, they are old and in poor condition.

Exterior lighting controls include a mix of some photocells and timeclock controls with switched contactors located at various electric rooms. The controls are in fair condition.

There is no central campus control system.

### Emergency Lighting / Exit Signs:

Emergency lighting does not appear to be up to current code for 1 foot candle average in the paths of egress. Many areas have normally off, stand-alone, wall pack, battery fixtures, but some have non-working batteries. Other areas have integral battery ballasts in fluorescent fixtures. Overall coverage of fixtures appears to be lacking.

Exit signs appear to be newer low wattage LED style and located as required by code. They are in good condition.

#### Telecommunications Systems:

Fiber infrastructure at the campus is reportedly adequate, but is older style 62.5 multi-mode and single mode fiber. Newer fiber systems could be installed to provide better network bandwidth.

Individual station cables are mostly a mix of Category 5 and 5e cabling and jacks, in fair condition. Some Category 6 reportedly exists for recent wi-fi upgrades and in the newest Classrooms.

There are wireless access routers throughout each building, but not one-for-one in each Classroom. These systems are in good condition, but the bandwidth for overall usage is unknown and may benefit from one router in each Classroom in the future.

Newer Category 6 or 6A cabling could be installed to provide better network bandwidth on the computer station level.

The campus Main Distribution Frame (MDF) is in good condition.

There is no specific IT standard to follow, but the IT Department indicated that Leviton is one of their preferred products.

#### Clock / Speaker Systems:

The campus clock /speaker system is operational and appears in fair condition. The terminal cabinets at original remote buildings are original, with original wiring and terminal strips with poor labeling.

A modern network based clock / speaker system could be provided to consolidate the system onto the campus data network.

#### AV Systems:

Most classrooms have wall mounted short throw projectors with AV input cabling and small speakers for additional audio coverage. Some rooms have ceiling mounted projectors with AV cabling installations and small speakers. Rooms with AV systems

typically include a Pixie style (infrared based) control plate that allows adjustment of source selection, volume, and other functions.

These systems are in good condition.

Cable TV System:

Co-axial cable TV distribution still exists at the School, but is reportedly no longer in full use. With the advent of video over the Campus network, the co-axial systems will become obsolete and can be eventually be disconnected and removed.

Fire Alarm System:

The campus fire alarm system was fully upgraded to a new Honeywell system in 2011, to include full smoke detector coverage, horn/strobes, and related devices and wiring.

The system is in good condition.

Security System:

The previous District Standard for security was Sonitrol. Sonitrol system panels and monitoring devices still exist throughout the School, but have been reportedly disconnected and are no longer in use.

Miscellaneous notes:

During the site review of the Theater, it was noted that the code required dressing room counter receptacle switches, where installed inside the dressing rooms, in violation of NEC 520.73. This code section requires the pilot light switches to be installed outside the dressing room door, in the Hallway, in order to alert staff that receptacles at the counters / mirrors, may still be energized during or after a performance.

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If you have any questions or comments on any of the above items, please do not hesitate to call.

Sincerely,



Pieter Colenbrander, P.E.  
**O'MAHONY & MYER**





**O'MAHONY & MYER**  
ELECTRICAL ENGINEERING & LIGHTING DESIGN

San Rafael, California  
Pacific Harbour, Fiji

August 25, 2016

Brian O'Mahony  
Jan P. Myer  
Paul Carey  
Pieter Colenbrander  
David Orgish

**Quattrocchi Kwok Architects**  
636 Fifth Street  
Santa Rosa, CA 95404

Attn: Debra McGuire

Re: Los Altos High School  
Electrical / Lighting / Signal Systems Conditions Assessment - 2016

Dear Debra,

O'Mahony & Myer visited the Los Altos High School site on August 10th, 2016 to review the existing conditions of the electrical, lighting, and signal systems. The purpose of our review was to evaluate the condition of the various systems and to comment on their ability to support future use.

Below is a summary of the existing conditions:

Power Service:

The campus is fed with a primary voltage service meter at 12kV. The 12kV system feeds (3) District owned transformers that feed (3) switchboards:

- a. 2,000 amp, 277/480V switchboard 'MSL' at front of campus.  
(Transformer LA1)
- b. 2,000 amp, 120/208V switchboard 'MSB' at front of campus.  
(Transformer LA3)
- c. 4,000 amp, 120/208V, switchboard at the rear of the campus.  
(Transformer LA2)

The service equipment appears to be in good condition, but the labeling of the various sub-feed breakers is not complete or easy to identify. Labels include blue tape and p-touch style labels, or missing identifications.

### Photovoltaic Power / Battery Storage System:

The campus includes a large photovoltaic system that is interconnected to switchboard MSL on transformer LA1, in parallel with a large scale battery storage system for peak load shaving. The PV system was installed in 2010. The battery system was installed in 2015.

Both systems appear to be operating normally and are in good condition.

See misc. items at the end of this report for an issue noted with a 2<sup>nd</sup> smaller (recent) PV system interconnection, located at switchboard MSL.

### Power Distribution System:

Power distribution feeders throughout the campus could not be reviewed as part of this visual inspection, but are reported to be operating properly with no issues.

All building panels observed appear to have been replaced since original. The condition of the various sub-feed panels at each building appears to be good, with no deteriorating conditions.

Most Classrooms include numerous runs of surface mounted raceways around the Classroom perimeter, for power and data wiring. These systems are in good condition.

### Interior Lighting Systems:

Interior lighting consists primarily of fluorescent sources with T8 lamps. The lighting is generally in good shape.

Prop 39 funding is underway to replace lighting systems with new LED sources, which will help improve the energy efficiency of the lighting systems over the existing fluorescent systems.

### Exterior Lighting Systems:

Exterior lighting systems include a mix of older HID and some newer retrofitted LED sources. The existing HID fixtures are in fair condition. Prop 39 funding will replace the HID units as well.

No specific dark spots, lacking adequate safety and wayfinding lighting, were reported.

### Lighting Controls:

Interior lighting controls include some occupancy sensors in Classrooms and smaller spaces of the more recently renovated buildings, in addition to multi-level switching.

The older buildings do not have occupancy sensors, or where they do exist, they are old and in poor condition.

Exterior lighting controls include a mix of some photocells and timeclock controls with switched contactors located at various electric rooms. The controls are in fair condition.

There is no central campus control system.

There are reported problems with the low voltage relay controls at the new 900 Wing Building that need to be investigated and repaired.

#### Emergency Lighting / Exit Signs:

With the exception of the newest 900 wing, emergency lighting does not appear to be up to current code for 1 foot candle average in the paths of egress. Many areas have normally off, stand-alone, wall pack, battery fixtures, but some have non-working batteries. Other areas have integral battery ballasts in fluorescent fixtures. Overall coverage of fixtures appears to be lacking.

Exit signs appear to be newer low wattage LED style and located as required by code. They are in good condition.

The new newest 900 Wing has a central battery inverter for back-up of selected fixtures. This unit is in good condition.

#### Telecommunications Systems:

Fiber infrastructure at the campus is reportedly adequate, but is older style 62.5 multi-mode and single mode fiber. Newer fiber systems could be installed to provide better network bandwidth.

Individual station cables are mostly a mix of Category 5 and 5e cabling and jacks, in fair condition. Some Category 6 reportedly exists for recent wi-fi upgrades and in the newest Classrooms.

There are wireless access routers throughout each building, but not one-for-one in each Classroom. These systems are in good condition, but the bandwidth for overall usage is unknown and may benefit from one router in each Classroom in the future.

Newer Category 6 or 6A cabling could be installed to provide better network bandwidth on the computer station level.

The campus Main Distribution Frame (MDF) is in good condition.

There is no specific IT standard to follow, but the IT Department indicated that Leviton is one of their preferred products.

#### Clock / Speaker Systems:

The campus Valcom Multi-Path clock /speaker system is operational and appears to be in fair condition. The terminal cabinets at original remote buildings are original, with original wiring and terminal strips with poor labeling.

The clocks and speakers themselves appear to be in good condition.

More modern network based wiring could be provided for the clock / speaker system to consolidate the system onto the campus data network.

#### AV Systems:

Some classrooms have wall mounted short throw projectors with AV input cabling and small speakers for additional audio coverage. Some rooms have ceiling mounted projectors with AV cabling installations and small speakers. Rooms with AV systems typically include a Pixie style (infrared based) control plate that allows adjustment of source selection, volume, and other functions.

These systems are in good condition.

New Extron Classroom AV systems have been purchased by the District to replace the existing AV systems in many Classrooms. The systems were in storage at the District IT Office during our visit, but reported to be for installation at LAHS.

#### Cable TV System:

Co-axial cable TV distribution still exists at the School, but is reportedly no longer in full use. With the advent of video over the Campus network, the co-axial systems will become obsolete and can be eventually be disconnected and removed.

#### Fire Alarm System:

The campus fire alarm system was fully upgraded to a new Honeywell system in 2011, to include full smoke detector coverage, horn/strobes, and related devices and wiring.

The system is in good condition.

#### Security System:

The previous District Standard for security was Sonitrol. Sonitrol system panels and monitoring devices still exist throughout the School, but have been reportedly disconnected and are no longer in use.

Miscellaneous notes:

Theater dressing room receptacle switches:

During the site review of the Theater, it was noted that the code required dressing room counter receptacle switches, where installed inside the dressing rooms, in violation of NEC 520.73. This code section requires the pilot light switches to be installed outside the dressing room door, in the Hallway, in order to alert staff that receptacles at the counters / mirrors, may still be energized during or after a performance.

Photovoltaic system interconnection:

During the site review of Main Switchboard MSL at the front of the Campus, it was noted that one of the photovoltaic system circuit breakers in the distribution section was improperly installed at the center of the distribution section. Per NEC 705.12(D), this breaker must be located at the opposite end of the bus from where it receives its supply. This breaker and red engraved label should be relocated to the far end of the bus from where it receives its supply.

There is also a large opening (missing panel cover) directly under the PV breaker. This opening leaves easy access to live 480V bus bars and should be covered immediately.

---

If you have any questions or comments on any of the above items, please do not hesitate to call.

Sincerely,



Pieter Colenbrander, P.E.  
**O'MAHONY & MYER**



**O'MAHONY & MYER**  
ELECTRICAL ENGINEERING & LIGHTING DESIGN

San Rafael, California  
Pacific Harbour, Fiji

August 25, 2016

Brian O'Mahony  
Jan P. Myer  
Paul Carey  
Pieter Colenbrander  
David Orgish

**Quattrocchi Kwok Architects**  
636 Fifth Street  
Santa Rosa, CA 95404

Attn: Debra McGuire

Re: Freestyle Academy High School  
Electrical / Lighting / Signal Systems Conditions Assessment - 2016

Dear Debra,

O'Mahony & Myer visited the Freestyle Academy High School site on July 25th, 2016 to review the existing conditions of the electrical, lighting, and signal systems. The purpose of our review was to evaluate the condition of the various systems and to comment on their ability to support future use.

Below is a summary of the existing conditions:

Power Service and Distribution:

The campus is of modular building construction and is fed with electrical feeders from the adjacent District Office / Maintenance Facility location.

The connections are in fair condition.

Interior Lighting Systems:

Interior lighting consists primarily of fluorescent sources with T8 lamps. The lighting is generally in good condition.

Exterior Lighting Systems:

Exterior lighting systems are building mounted only and consist of typical metal halide or compact fluorescent wall pack fixtures. Many of the existing exterior wall fixtures have yellowed lenses, from sunlight degradation.

These exterior lighting fixtures are in fair condition.

No specific dark spots, lacking adequate safety and wayfinding lighting, were reported.

#### Lighting Controls:

Interior lighting controls include standard switches only. No occupancy sensors or other controls

There is no central campus control system.

#### Emergency Lighting / Exit Signs:

Since each Classroom has an exit directly to the outside, most spaces do not require or have emergency lighting.

The large Film Classroom space may be over 50 people of occupancy and would require emergency lighting and powered exit signs, which do not currently exist. The exit doors have what appear to be photo luminescent signs (non-powered).

#### Telecommunications Systems:

Fiber infrastructure at the campus is reportedly adequate, but is older style 62.5 multi-mode and single mode fiber. Newer fiber systems could be installed to provide better network bandwidth.

Individual station cables are Category 5e cabling and jacks, in fair condition.

There is no specific IT standard to follow, but the IT Department indicated that Leviton is one of their preferred products.

#### Clock / Speaker Systems:

The campus has its own clock/speaker system, made up of a Valcom speaker head-end, an AllSyn Clock head-end, and a Bogen bell tone generator. The systems are operational and appears to be in good condition.

The clocks and speakers themselves appear to be in good condition.

#### AV Systems:

Some classrooms have ceiling mounted projectors with AV cabling installations and small speakers.

These systems are in good condition.

Cable TV System:

There does not appear to be any traditional co-axial cable TV distribution system.

Fire Alarm System:

The campus has its own Silent Knight 5700 fire alarm system panel. The system includes full smoke detector coverage and horn/strobe devices in the Classrooms, as well as manual pullstations.

The system is in good condition.

---

If you have any questions or comments on any of the above items, please do not hesitate to call.

Sincerely,



Pieter Colenbrander, P.E.  
**O'MAHONY & MYER**





O'MAHONY & MYER  
ELECTRICAL ENGINEERING & LIGHTING DESIGN

San Rafael, California  
Pacific Harbour, Fiji

Brian O'Mahony  
Jan P. Myer  
Paul Carey  
Pieter Colenbrander  
David Orgish

August 25, 2016

**Quattrocchi Kwok Architects**  
636 Fifth Street  
Santa Rosa, CA 95404

Attn: Debra McGuire

Re: Alta Vista Continuation High School  
Electrical / Lighting / Signal Systems Conditions Assessment - 2016

Dear Debra,

O'Mahony & Myer visited the Alta Vista Continuation High School site on July 25th, 2016 to review the existing conditions of the electrical, lighting, and signal systems. The purpose of our review was to evaluate the condition of the various systems and to comment on their ability to support future use.

Below is a summary of the existing conditions:

Power Service:

The campus is fed with 1,200 amp, 120/208V exterior electric service located on the West side of the site.

The service equipment appears to be in good condition and is properly labeled.

Power Distribution System:

The campus is new enough (circa 2004), that all power distribution feeders and panels are in good condition, with no deteriorating conditions.

Interior Lighting Systems:

Interior lighting consists primarily of fluorescent sources with T8 lamps. The lighting is generally in good shape.

### Exterior Lighting Systems:

Exterior lighting systems include a mix of pole mounted HID and wall mounted compact fluorescent sources. Many of the existing exterior wall fixtures have yellowed lenses, from sunlight degradation.

These exterior lighting fixtures are in poor condition.

No specific dark spots, lacking adequate safety and wayfinding lighting, were reported.

### Lighting Controls:

Interior lighting controls include occupancy sensors in Classrooms and smaller spaces. Exterior lighting controls are via a single timeclock control with contactors at the main electric room. The controls are in good condition.

There is no central campus control system.

### Emergency Lighting / Exit Signs:

Since each Classroom has an exit directly to the outside, most of the School does not require or have emergency lighting.

Exit signs appear to be newer low wattage LED style, but the MPR room has non-electric signs. All exit signs are in good condition.

### Telecommunications Systems:

Fiber infrastructure at the campus is reportedly adequate, but is older style 62.5 multi-mode and single mode fiber. Newer fiber systems could be installed to provide better network bandwidth.

Individual station cables are Category 5e+ cabling and jacks, in fair condition.

There is no specific IT standard to follow, but the IT Department indicated that Leviton is one of their preferred products.

### Clock / Speaker Systems:

The campus Rauland Borg Telecenter clock /speaker system is operational and appears to be in fair condition.

The clocks and speakers themselves appear to be in good condition.

### AV Systems:

Some classrooms have wall mounted short throw projectors with AV input cabling and small speakers for additional audio coverage. Some rooms have ceiling mounted projectors with AV cabling installations and small speakers.

These systems are in good condition.

Cable TV System:

Co-axial cable TV distribution still exists at the School, but is reportedly no longer in full use. With the advent of video over the Campus network, the co-axial systems will become obsolete and can be eventually be disconnected and removed.

Fire Alarm System:

The campus has an FCI fire alarm system, as originally installed in 2004. The system includes full smoke detector coverage and horns in the Classrooms, but does not have strobe light alarm devices in the Classrooms.

The system is in good condition.

---

If you have any questions or comments on any of the above items, please do not hesitate to call.

Sincerely,



Pieter Colenbrander, P.E.  
**O'MAHONY & MYER**



**O'MAHONY & MYER**  
ELECTRICAL ENGINEERING & LIGHTING DESIGN

San Rafael, California  
Pacific Harbour, Fiji

August 25, 2016

Brian O'Mahony  
Jan P. Myer  
Paul Carey  
Pieter Colenbrander  
David Orgish

**Quattrocchi Kwok Architects**

636 Fifth Street  
Santa Rosa, CA 95404

Attn: Debra McGuire

Re: Adult Education Center  
Electrical / Lighting / Signal Systems Conditions Assessment - 2016

Dear Debra,

O'Mahony & Myer visited the MVLA Adult Education Center on August 10th, 2016 to review the existing conditions of the electrical, lighting, and signal systems. The purpose of our review was to evaluate the condition of the various systems and to comment on their ability to support future use.

Below is a summary of the existing conditions:

Power Service:

The building is fed with 1,600 amp, 120/208V interior electric service board.

The service equipment appears to be in good condition and is properly labeled, but has no space for future added load breakers.

Power Distribution System:

Based on the age of the building and visual inspection of the panels, the power distribution system is in good condition.

Interior Lighting Systems:

Interior lighting consists primarily of fluorescent sources with T8 lamps. The lighting is generally in good shape.

### Exterior Lighting Systems:

Exterior lighting systems include a mix of pole mounted HID (at parking) and wall mounted HID at entrances.

These exterior lighting fixtures are in fair condition.

The parking lot tree canopies have grown into most of the light pole, blocking much of the useful light in the parking lot, from the pole mounted fixtures.

### Lighting Controls:

Interior lighting controls include occupancy sensors in Classrooms on the 2<sup>nd</sup> floor only. First floor rooms do not have occupancy sensors.

Exterior lighting controls are via a single timeclock control with contactors at the main electric room. The controls are in good condition.

### Emergency Lighting / Exit Signs:

Emergency lighting does not appear to be up to current code for 1 foot candle average in the paths of egress. Most EM sources are integral battery ballasts in fluorescent fixtures. Overall coverage of fixtures appears to be lacking.

Exit signs appear to be compact fluorescent style. Exit signs are in fair condition.

### Telecommunications Systems:

There is a main telecom rack at the 1<sup>st</sup> Floor Staff area, in a closet with other signal systems.

Individual station cables are Category 5, with some newer Category 6 cabling.

The telecom systems are in good condition.

### Clock / Speaker System:

The building clock /speaker system is operational and appears in fair condition.

Clocks are reportedly run through a computer console at the main office area. Speakers are run from an amplifier rack at the 1<sup>st</sup> floor signal closet.

The clocks and speaker systems are in fair condition.

A modern network based clock / speaker system could be provided to consolidate the system onto the campus data network.

AV Systems:

Classrooms have older style ceiling mounted projectors, without any special AV speakers or control systems.

These systems are in fair condition.

Cable TV System:

Co-axial cable TV distribution still exists at the building, but may no longer be in use. Many of the cables are disconnected at the signal closet on the first floor, but there are conventional TV's in various Classrooms.

Fire Alarm System:

The building has a Simplex 4002 fire alarm system, as originally installed in the early 90's. The system includes manual pullstations and older style alarm notification horn/strobes in public areas. There are no fire alarm devices in the Classrooms.

The system is in fair condition.

---

If you have any questions or comments on any of the above items, please do not hesitate to call.

Sincerely,



Pieter Colenbrander, P.E.  
**O'MAHONY & MYER**



**O'MAHONY & MYER**  
ELECTRICAL ENGINEERING & LIGHTING DESIGN

San Rafael, California  
Pacific Harbour, Fiji

August 25, 2016

Brian O'Mahony  
Jan P. Myer  
Paul Carey  
Pieter Colenbrander  
David Orgish

**Quattrocchi Kwok Architects**  
636 Fifth Street  
Santa Rosa, CA 95404

Attn: Debra McGuire

Re: MVLA School District Office  
Electrical / Lighting / Signal Systems Conditions Assessment - 2016

Dear Debra,

O'Mahony & Myer visited the MVLA School District Office site on July 25th, 2016 to review the existing conditions of the electrical, lighting, and signal systems. The purpose of our review was to evaluate the condition of the various systems and to comment on their ability to support future use.

Below is a summary of the existing conditions:

**Power Service:**

The District Office facility is fed with several different 120/240V, single phase metered electric services. One is rated 400 Amps, one is rated 200 Amps, and (1) is rated 100 Amps, each serving different areas of the facility.

All service equipment appears to be in good condition.

**Power Distribution System:**

Power distribution at the DO facility appears adequate and there are no reported deficiencies.

The main campus telecom data center room is located at the Warehouse building and is fed from one of the existing metered services. It was recently upgraded, but does not include a code required "emergency power off" feature required for Information Technology Rooms, per NEC 645.10(A).

All power distribution feeders and panels at the DO facility appear to be in good condition.

Interior Lighting Systems:

Interior lighting consists primarily of fluorescent sources with T8 lamps. The lighting is generally in good condition.

Exterior Lighting Systems:

Exterior lighting systems include a mix of various wall mounted HID and compact fluorescent sources.

These exterior lighting fixtures are in fair condition.

Lighting Controls:

There are no specific interior automatic lighting controls. Exterior lighting controls appear to be on timeclock and/or photocell control.

Emergency Lighting / Exit Signs:

There appears to be limited emergency lighting and exit signs in the facility (DO and Warehouse spaces).

Telecommunications Systems:

The District Main Telecom Distribution Frame (MDF) was recently upgraded and includes underground fiber infrastructure between the Basement of the DO and the Warehouse MDF location.

Most individual station cables are Category 5e cabling and jacks, in fair condition.

Fire Alarm System:

There is no fire alarm equipment in the District Office or Warehouse occupancies and none is required.

If you have any questions or comments on any of the above items, please do not hesitate to call.

Sincerely,



Pieter Colenbrander, P.E.  
**O'MAHONY & MYER**



The Garland Company, Inc.

Roof Asset Management Program



# Mountain View High School

---

8-15-2016

Prepared By  
Jay Mulligan

Prepared For  
Jay Mulligan



# Table of Contents

*Mountain View HS / Facility Summary* ..... 3

*Mountain View HS / Roof Survey / Construction Details* ..... 4

*Mountain View HS / Roof Survey / Roof Section Photo* ..... 5

*Mountain View HS / Roof Survey / Roof Section Drawing* ..... 6

*Mountain View HS / Roof Survey / Inspection: Aug 6, 2016* ..... 7

*Mountain View HS / Roof Survey / Photo Report: Jul 28, 2016* ..... 9

*Mountain View HS / Roof Survey / Solution: Aug 23, 2016* ..... 179



# Facility Summary

**Client:** Mountain View/Los Altos High School District

**Facility:** Mountain View HS



## Facility Data

|                  |                    |
|------------------|--------------------|
| Address 1        | - 3535 Truman Ave, |
| Address 2        | -                  |
| City             | - Mountain View    |
| State            | - CA               |
| ZIP              | - 94040            |
| Type of Facility | School             |

## Asset Information

| Name        | Date Installed | Square Footage | Roof Access   |
|-------------|----------------|----------------|---------------|
| Roof Survey |                | -              | Ladder Needed |



# Construction Details

**Client:** Mountain View/Los Altos High School District

**Facility:** Mountain View HS

**Roof Section:** Roof Survey

## Information

|                        |               |                       |                     |
|------------------------|---------------|-----------------------|---------------------|
| <b>Year Installed</b>  | -             | <b>Square Footage</b> | -                   |
| <b>Slope Dimension</b> | -             | <b>Eave Height</b>    | -                   |
| <b>Roof Access</b>     | Ladder Needed | <b>System Type</b>    | Built Up Roof (BUR) |

## Details

|                         |                                     |
|-------------------------|-------------------------------------|
| <b>Perimeter Detail</b> | Gravel Stop, Expansion Joint        |
| <b>Drain System</b>     | Internal Roof Drains, Gutter System |
| <b>Parapet Wall</b>     | Wood                                |
| <b>Coping Cap</b>       | Metal                               |

## Inventory

|                       |                 |
|-----------------------|-----------------|
| <b>Inventory Type</b> | <b>Quantity</b> |
| Drain                 |                 |
| HVAC                  |                 |









# Inspection Report

**Client:** Mountain View/Los Altos High School District

**Facility:** Mountain View HS

**Report Date:** 08/06/2016

**Roof Section:** Roof Survey

## Inspection Information

|                 |                   |           |    |
|-----------------|-------------------|-----------|----|
| Inspection Date | 08/06/2016        | Core Data | No |
| Inspection Type | Visual Inspection | Leakage   | No |
| Deck Conditions | -                 |           |    |

## Flashing Conditions

|             |   |                 |   |
|-------------|---|-----------------|---|
| Perimeter   | - | Wall            | - |
| Projections | - | Counterflashing | - |

## Miscellaneous Details

|                          |   |               |    |
|--------------------------|---|---------------|----|
| Reglets                  | - | Debris        | No |
| Control Expansion Joints | - | Ponding Water | -  |
| Parapet Wall             | - | Coping Joints | -  |

## Perimeter

|           |      |
|-----------|------|
| Rating    | Poor |
| Condition |      |

## Field

|           |   |
|-----------|---|
| Rating    | Poor  |
| Condition | Faux shakes are failing.<br>Classroom buildings do not have insulation in the ceiling system in most of the building. |

## Penetrations

|           |      |
|-----------|------|
| Rating    | Fair |
| Condition |      |

| Drainage  |  |
|-----------|--|
| Rating    | Good   |
| Condition | Face mounted gutter installation is recommended. |

| Other     |   |
|-----------|---|
| Rating    | Fair  |
| Condition | Walls have siding on them which will have to be replaced if the roofs are replaced because of the increased thickness of the roof assembly with insulation. |

| Overall   |      |
|-----------|------|
| Rating    | Poor |
| Condition |      |





# Photo Report

**Client:** Mountain View/Los Altos High School District

**Facility:** Mountain View HS

**Report Date:** 07/28/2016

**Roof Section:** Roof Survey



**Photo 1**

Mountain View HS Roof Survey



**Photo 2**





**Photo 3**

100 Wing  
Roof has a fair number of blisters.  
Low slope roof does not comply  
with current Title 24.



**Photo 4**



**Photo 5**

Worn flashing materials are present.  
Corrections are recommended.



**Photo 6**

Flashing surfacing is being pulled apart by students or birds.



**Photo 7**

Cap sheet blisters are present. Corrections are recommended.



**Photo 8**

Large field blisters





**Photo 9**



**Photo 10**

Granular erosion noted at the cap sheet (Multiple locations). Roof restoration/replacement is recommended.



**Photo 11**

Cracked solder joints noted at the sheet metal curb caps. Corrections are recommended.



**Photo 12**

Recommend sealing the storm collar/vent pipe connections at the shingle roof area.



**Photo 13**

General roof area photos



**Photo 14**

If additional insulation is added to the roof assembly the siding will need to be replaced to accomodate the new flashing height.





**Photo 15**



**Photo 16**

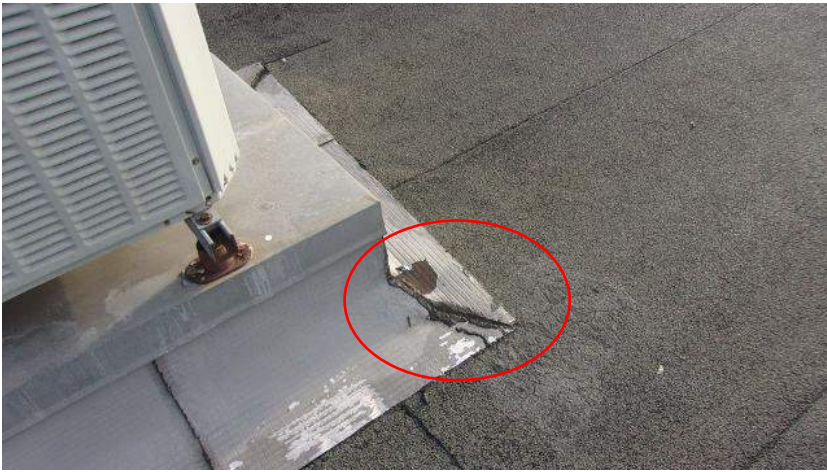


**Photo 17**





**Photo 18**



**Photo 19**



**Photo 20**



**Photo 21**



**Photo 22**



**Photo 23**





**Photo 24**



**Photo 25**



**Photo 26**



**Photo 27**



**Photo 28**



**Photo 29**





**Photo 30**

Science building



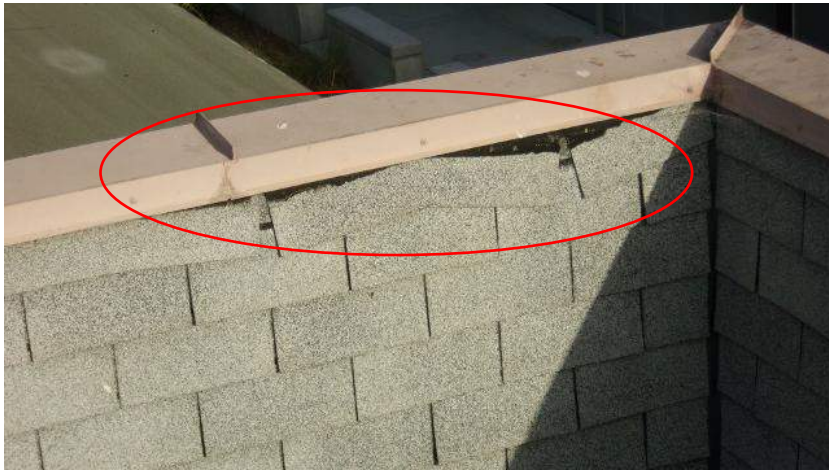
**Photo 31**

Granular erosion/alligatoring noted at the mineral cap sheet areas. Roof coating/restoration is recommended.



**Photo 32**

Damaged/missing parapet wall shingles are present. Corrections are recommended.



**Photo 33**



**Photo 34**

Torn/worn flashing's are present.  
Corrections are recommended.



**Photo 35**





**Photo 36**

Sealant at lead jacks shows signs of wear/weathering. Re-sealing is recommended. (Check all)



**Photo 37**

Debris should be cleared from roof drains.



**Photo 38**

Unflashed conduit jacks are present. Corrections are recommended.



**Photo 39**

Damaged ridge shingle noted. Corrections are recommended.



**Photo 40**

Shingle cupping/roof deck deflection noted at the composition shingle roof area.



**Photo 41**

Exposed fasteners at the shingle roof ridges should be sealed to help prevent future moisture intrusion.





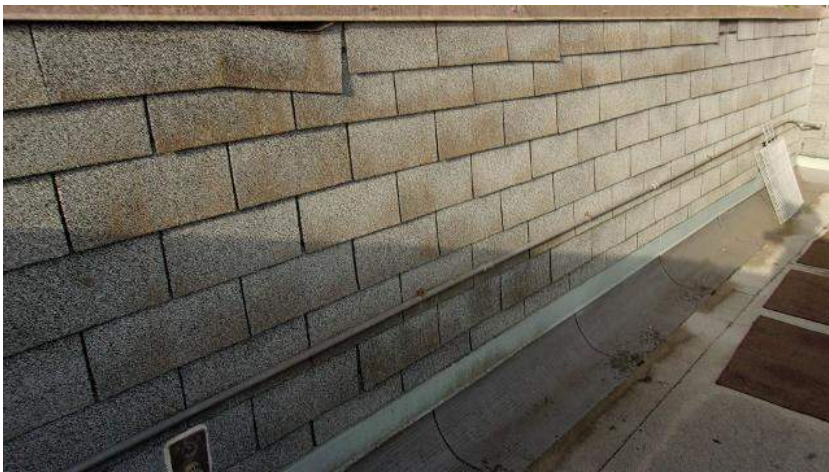
**Photo 42**

General roof area photos



**Photo 43**

Roof hatch needs safety post.



**Photo 44**



**Photo 45**



**Photo 46**



**Photo 47**

Shingles are starting to fail.





**Photo 48**



**Photo 49**



**Photo 50**



**Photo 51**



**Photo 52**



**Photo 53**





**Photo 54**



**Photo 55**



**Photo 56**



**Photo 57**



**Photo 58**



**Photo 59**





**Photo 60**



**Photo 61**



**Photo 62**



**Photo 63**



**Photo 64**



**Photo 65**





**Photo 66**



**Photo 67**



**Photo 68**



**Photo 69**



**Photo 70**



**Photo 71**





**Photo 72**



**Photo 73**



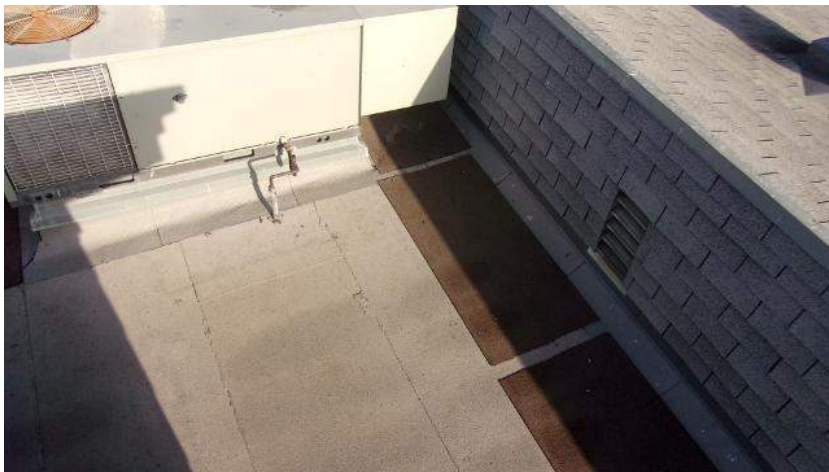
**Photo 74**



**Photo 75**



**Photo 76**



**Photo 77**





**Photo 78**



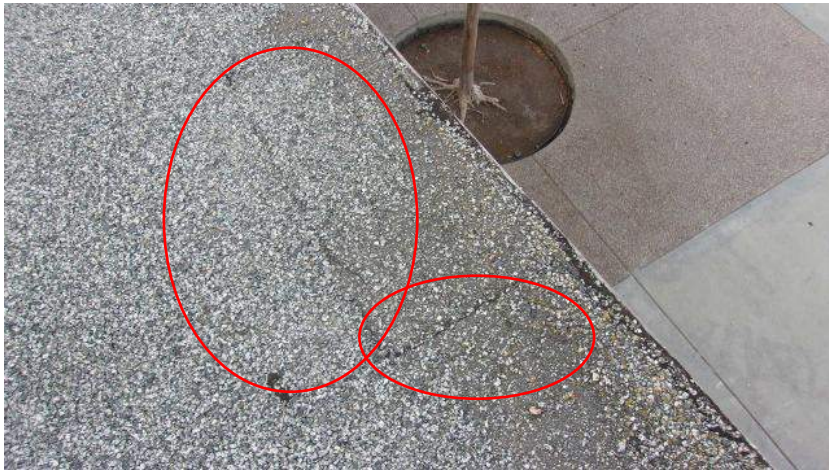
**Photo 79**

200 Wing

Faux shake manufacturers have gone out of business in California because of the high failure rate. What you see in the photos is typical of what you see. Shakes tend to fracture for no apparent reason.



**Photo 80**



**Photo 81**

Wear/weathering noted at the gravel roof edges.



**Photo 82**

Worn curb flashing's noted. Corrections are recommended.



**Photo 83**

Multiple damaged shingles are present. Corrections are recommended.





**Photo 84**



**Photo 85**

Outside curb corners should be three coursed with mastic and mesh.



**Photo 86**

Open utility penetrations are present at the upper siding. Closure installation is recommended.





**Photo 87**

Unsealed roof jacks are present. Corrections are recommended.



**Photo 88**



**Photo 89**

Missing vent cap/unsealed storm collar(s) noted. Corrections are recommended.





**Photo 90**

Open joint noted at the flood and gravel roof area. Corrections are recommended.



**Photo 91**

Open joints noted at the skylight curb area(s). Corrections are recommended.



**Photo 92**

Tree debris should be removed from the roof area. Recommend trimming tree branches away from the roof/structure.





**Photo 93**

General Building 200 roof photos



**Photo 94**



**Photo 95**





**Photo 96**



**Photo 97**



**Photo 98**



**Photo 99**



**Photo 100**



**Photo 101**





**Photo 102**



**Photo 103**



**Photo 104**





**Photo 105**



**Photo 106**



**Photo 107**



**Photo 108**



**Photo 109**



**Photo 110**





**Photo 111**



**Photo 112**



**Photo 113**





**Photo 114**



**Photo 115**



**Photo 116**





**Photo 117**



**Photo 118**



**Photo 119**



**Photo 120**



**Photo 121**

300 Wing



**Photo 122**

Overall building the building 300 roof was found to be in fair condition.





**Photo 123**



**Photo 124**

Siding is failing.



**Photo 125**



**Photo 126**

Outside curb corners should be three coursed with mastic and mesh.



**Photo 127**

Equipment curb flashing's should be repaired.



**Photo 128**

Worn cracked expansion joints are present. Corrections are recommended.





**Photo 129**

Storm collar/vent pipe connections should be re-sealed.



**Photo 130**

Tree debris should be removed from the roof area.



**Photo 131**

Flashing repairs are needed at equipment curbs.





**Photo 132**

Damaged shingles noted. Corrections are recommended.



**Photo 133**

Moss growth noted at the gravel roof area.



**Photo 134**

Sealant at lead jacks shows signs of wear/weathering. Re-sealing is recommended.



**Photo 135**

General building 300 roof photos



**Photo 136**



**Photo 137**





**Photo 138**



**Photo 139**



**Photo 140**





**Photo 141**



**Photo 142**



**Photo 143**



**Photo 144**

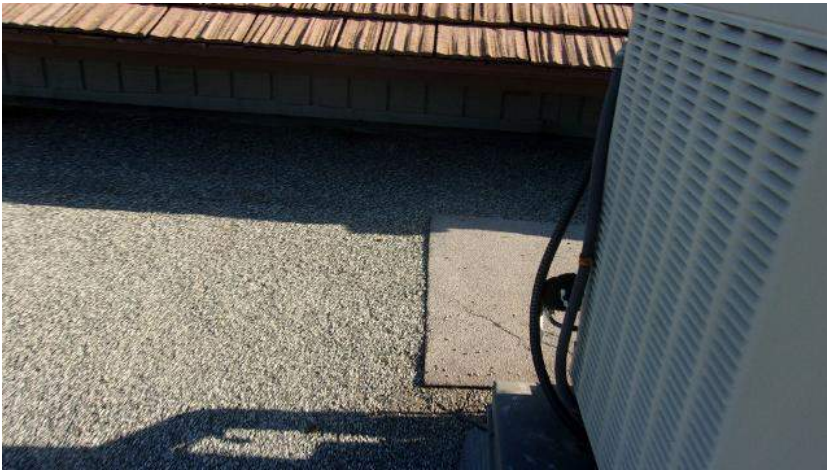


**Photo 145**

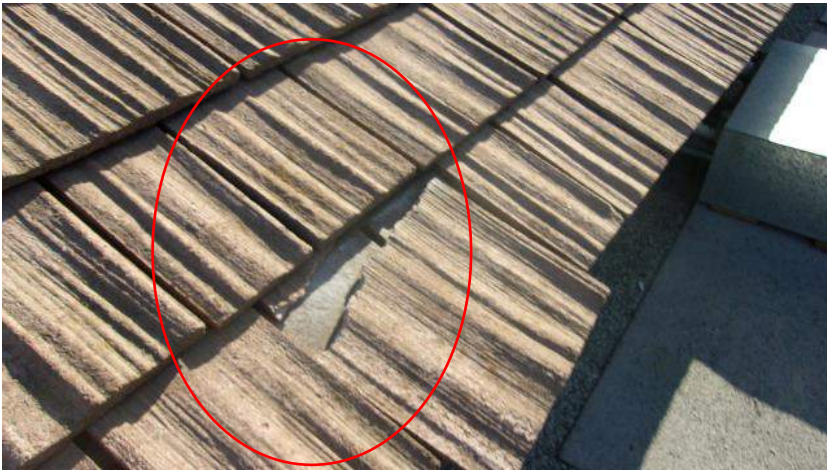


**Photo 146**





**Photo 147**



**Photo 148**



**Photo 149**





**Photo 150**



**Photo 151**



**Photo 152**



**Photo 153**



**Photo 154**

400 Wing



**Photo 155**

Overall building 400 was found to be in good condition.





**Photo 156**

Damaged roof shingles are present.  
Corrections are recommended.



**Photo 157**

Storm collar/vent pipe connections should  
be sealed.



**Photo 158**

Tree debris should be cleared from the roof  
area.





**Photo 159**

Draw band and sealant is needed at lead jack/conduit penetration.



**Photo 160**

Moss growth noted to portions of the gravel roof area.



**Photo 161**

Vent pipe/roof jacks should be re-sealed.





**Photo 162**

Sealant at mechanical equipment fasteners shows signs of wear/weathering. Re-sealing is recommended.



**Photo 163**

Wear/weathering/exposed roofing plies noted at the roof edges. Repair/replace is recommended.



**Photo 164**

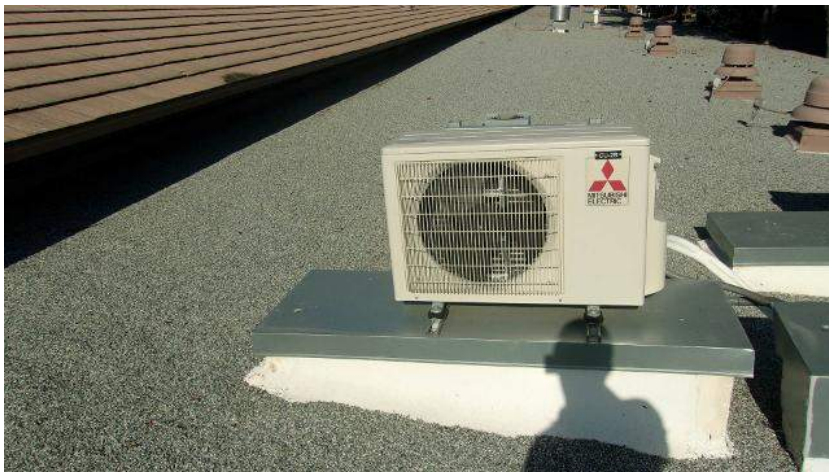


**Photo 165**

General building 400 roof photos



**Photo 166**



**Photo 167**





**Photo 168**



**Photo 169**



**Photo 170**



**Photo 171**



**Photo 172**



**Photo 173**

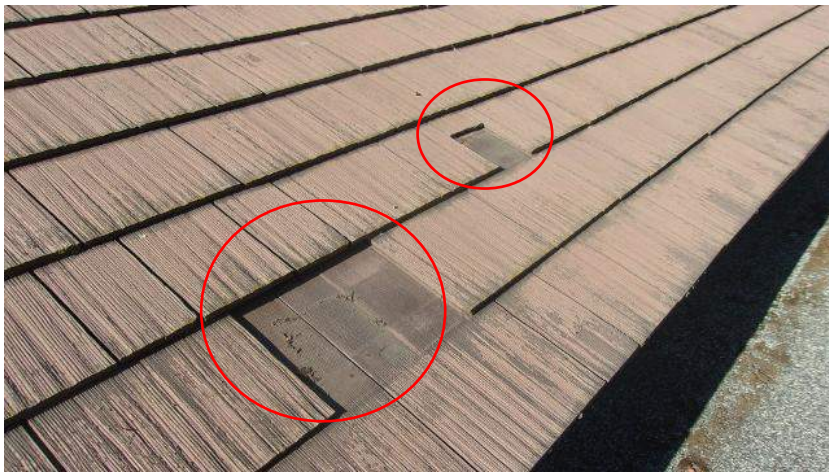




**Photo 174**



**Photo 175**



**Photo 176**





**Photo 177**



**Photo 178**



**Photo 179**





**Photo 180**



**Photo 181**



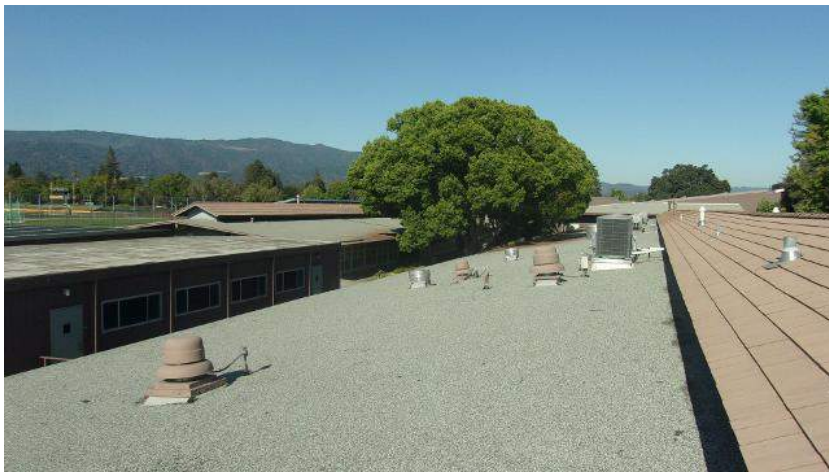
**Photo 182**



**Photo 183**



**Photo 184**



**Photo 185**





**Photo 186**



**Photo 187**



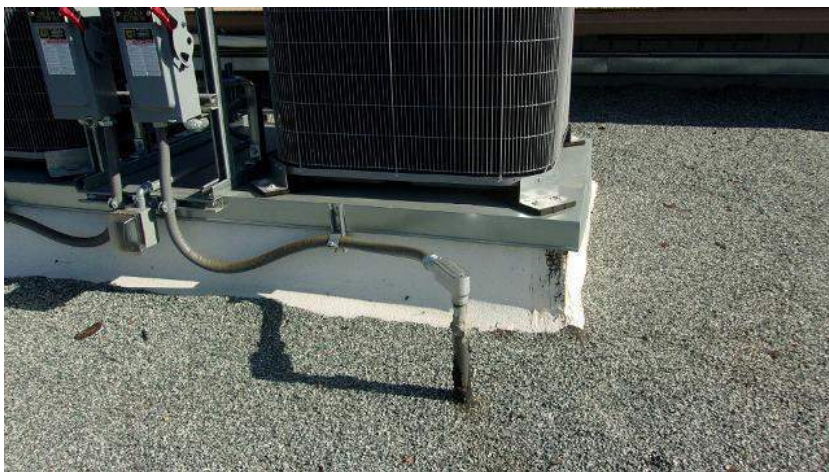
**Photo 188**



**Photo 189**



**Photo 190**



**Photo 191**





**Photo 192**



**Photo 193**



**Photo 194**





**Photo 195**



**Photo 196**



**Photo 197**



**Photo 198**



**Photo 199**



**Photo 200**





**Photo 201**



**Photo 202**



**Photo 203**





**Photo 204**



**Photo 205**



**Photo 206**





**Photo 207**



**Photo 208**



**Photo 209**



**Photo 210**



**Photo 211**



**Photo 212**





**Photo 213**

500 Wing



**Photo 214**

Overall the building 500 roof was found to be in fair condition.



**Photo 215**

Damaged expansion joints are present. Corrections are recommended.





**Photo 216**

Tree debris should be removed from the roof area.



**Photo 217**

Multiple damaged roof shingles are present.



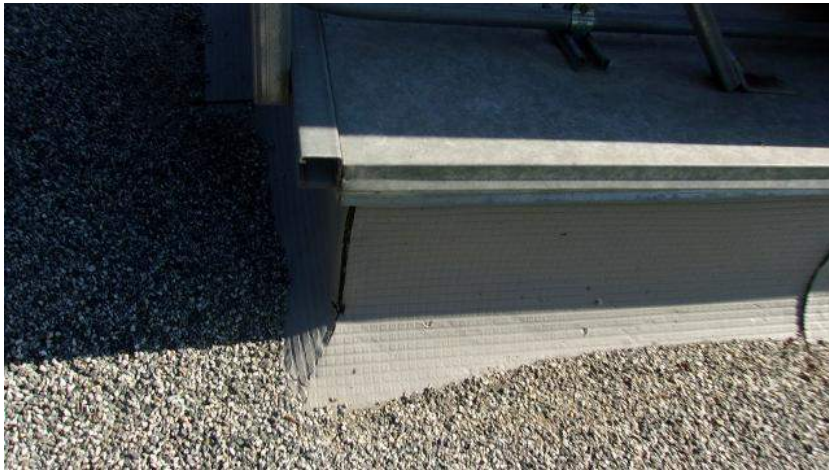
**Photo 218**

Draw band and sealant are needed at lead jack/conduit connection.



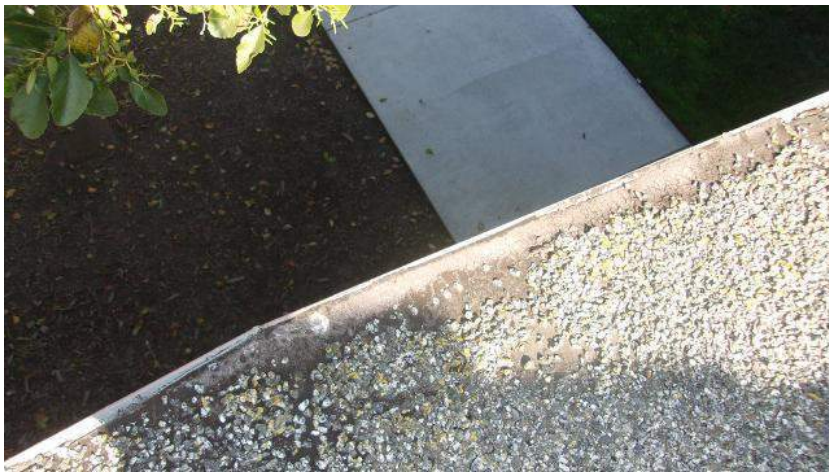
**Photo 219**

Sealant at equipment fasteners shows signs of wear/weathering. Re-sealing is recommended.



**Photo 220**

Curb corners should be three courses with mastic and mesh.



**Photo 221**

Wear/weathering/exposed plies noted at the roof edges. Repair/replacement is recommended.





**Photo 222**

Building 500 general roof photos



**Photo 223**



**Photo 224**



**Photo 225**



**Photo 226**



**Photo 227**





**Photo 228**



**Photo 229**



**Photo 230**





**Photo 231**



**Photo 232**



**Photo 233**



**Photo 234**



**Photo 235**



**Photo 236**





**Photo 237**



**Photo 238**



**Photo 239**



**Photo 240**



**Photo 241**



**Photo 242**





**Photo 243**



**Photo 244**



**Photo 245**



**Photo 246**



**Photo 247**



**Photo 248**





**Photo 249**



**Photo 250**



**Photo 251**



**Photo 252**



**Photo 253**



**Photo 254**





**Photo 255**



**Photo 256**



**Photo 257**



**Photo 258**



**Photo 259**



**Photo 260**





**Photo 261**

600 Wing  
Garland R-mer Span metal roof



**Photo 262**

Building 600 was found to be in good condition.



**Photo 263**

Regular roof system maintenance is recommended.



**Photo 264**



**Photo 265**



**Photo 266**





**Photo 267**



**Photo 268**



**Photo 269**



**Photo 270**



**Photo 271**



**Photo 272**





**Photo 273**



**Photo 274**



**Photo 275**



**Photo 276**



**Photo 277**



**Photo 278**





**Photo 279**



**Photo 280**



**Photo 281**



**Photo 282**



**Photo 283**

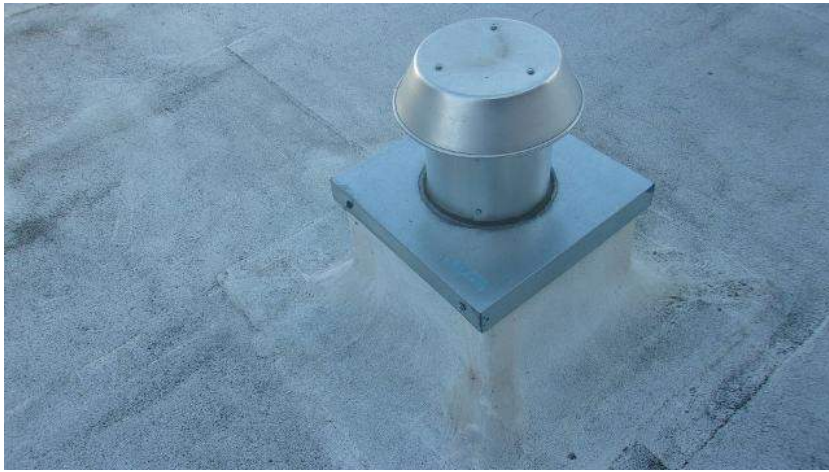


**Photo 284**





**Photo 285**



**Photo 286**



**Photo 287**



**Photo 288**



**Photo 289**



**Photo 290**





**Photo 291**



**Photo 292**



**Photo 293**



**Photo 294**



**Photo 295**



**Photo 296**





**Photo 297**



**Photo 298**



**Photo 299**



**Photo 300**



**Photo 301**



**Photo 302**





**Photo 303**



**Photo 304**



**Photo 305**



**Photo 306**



**Photo 307**



**Photo 308**





**Photo 309**



**Photo 310**



**Photo 311**



**Photo 312**



**Photo 313**



**Photo 314**





**Photo 315**



**Photo 316**



**Photo 317**



**Photo 318**



**Photo 319**



**Photo 320**





**Photo 321**



**Photo 322**



**Photo 323**

Gym

The gym roof assembly is uninsulated and there is no plywood over the plank deck. When roof is replaced insulation should be added and the deck should get 1/2" plywood nailed down over the entire surface.



**Photo 324**

Several damaged/missing roof shingles are present. Corrections are recommended.



**Photo 325**



**Photo 326**





**Photo 327**



**Photo 328**

Granular erosion noted at the mineral cap sheet (Gym/Covered Walkway). Roof restoration/replacement is recommended.



**Photo 329**



**Photo 330**



**Photo 331**



**Photo 332**

Weight Room/Pool Equipment Roof

Roofs were replaced with Garland roofing materials in 2013.





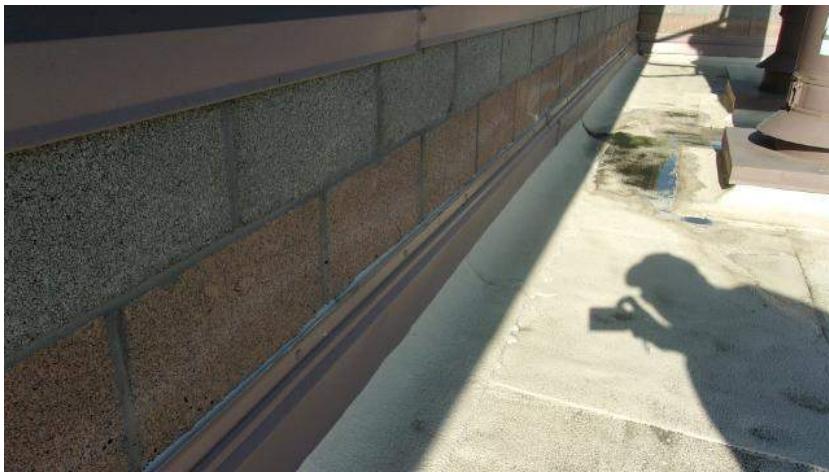
**Photo 333**

Overall, roof system was found to be in good condition.



**Photo 334**

Counter flashing/wall connections should be re-sealed. Current sealant shows signs of wear/weathering.

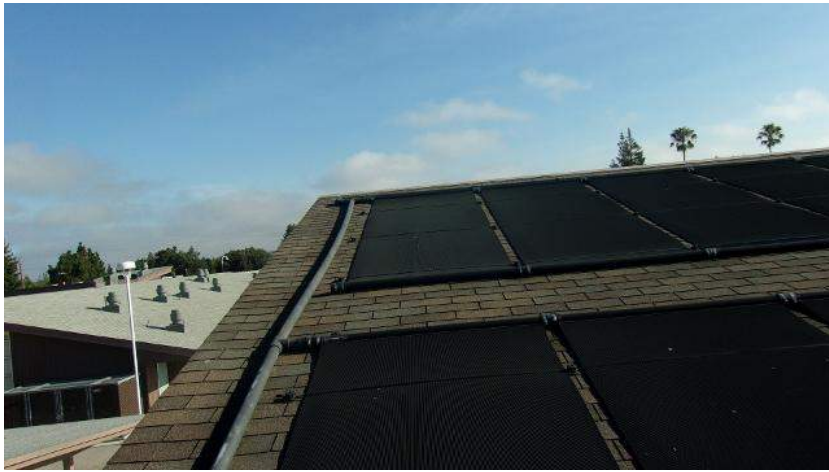


**Photo 335**



**Photo 336**

Signs of past leakage noted at face mounted gutters. Gutter joint re-sealing is recommended.



**Photo 337**

Roof shingles (where visible) appear to be in good condition.



**Photo 338**

General roof photos





**Photo 339**



**Photo 340**



**Photo 341**



**Photo 342**



**Photo 343**



**Photo 344**





**Photo 345**



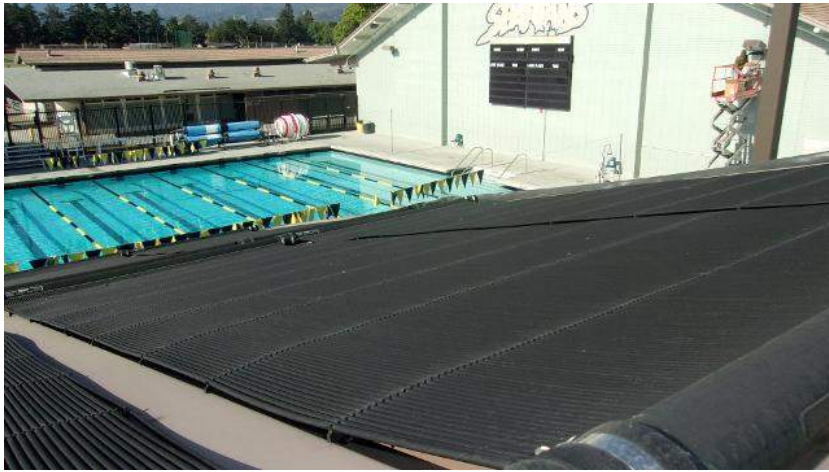
**Photo 346**



**Photo 347**



**Photo 348**



**Photo 349**



**Photo 350**

Packard Hall





**Photo 351**

Rof is failing and needs to be replaced



**Photo 352**

Multiple bare spots are present at the gravel roof area. Exposed plies show signs of heavy wear. Roof replacement is recommended.



**Photo 353**





**Photo 354**



**Photo 355**



**Photo 356**





**Photo 357**

Loose counter flashing is present.  
Corrections are recommended.



**Photo 358**

Exposed fasteners behind counter flashing  
should be sealed with mastic.



**Photo 359**

Concrete tile roof appears to be  
in fair condition.



**Photo 360**



**Photo 361**

Debris should be removed from face mounted gutters.



**Photo 362**

Storm collar/vent pipe connections should be re-sealed.





**Photo 363**

General roof photos



**Photo 364**



**Photo 365**



**Photo 366**



**Photo 367**

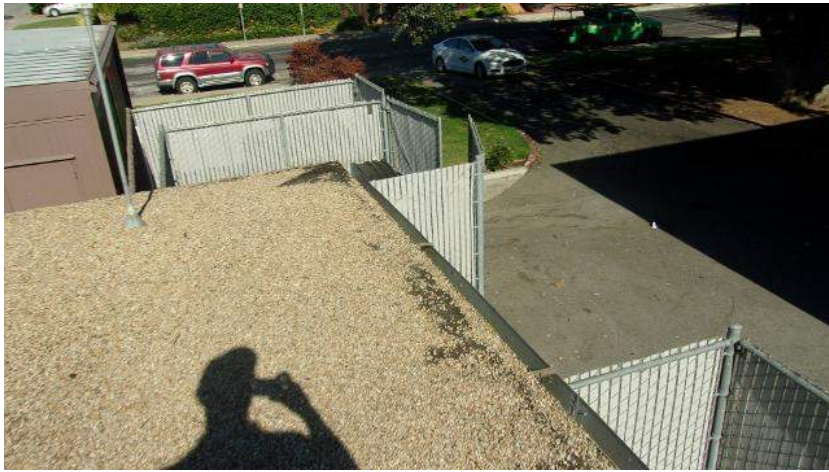


**Photo 368**





**Photo 369**



**Photo 370**



**Photo 371**



**Photo 372**

Downspouts need to be extended to gutters when roof is replaced.



**Photo 373**



**Photo 374**





**Photo 375**



**Photo 376**



**Photo 377**





**Photo 378**



**Photo 379**



**Photo 380**





**Photo 381**



**Photo 382**



**Photo 383**



**Photo 384**



**Photo 385**

Theater/Cafeteria/Food Service



**Photo 386**

Overall, the roof system was found to be in good condition.





**Photo 387**



**Photo 388**

Recommend clearing debris from roof drains.



**Photo 389**

Recommend clearing tree debris from flat roof areas.



**Photo 390**

Granular erosion noted to the mineral cap sheet. Roof coating/restoration is recommended.



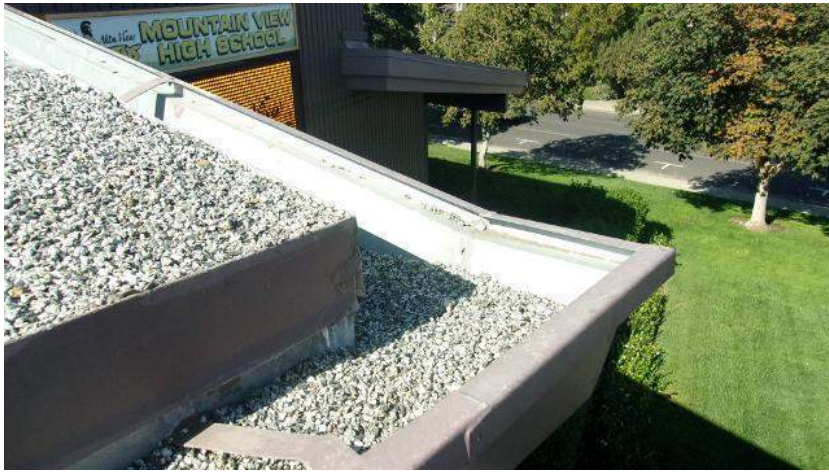
**Photo 391**



**Photo 392**

Outside curb corners should be three coursed with mastic and mesh.





**Photo 393**

Gravel build-up noted in the upper face mounted gutters. Gravel removal is recommended.



**Photo 394**

Upper cap sheet roof  
Typical wear noted. Roof coating is recommended.



**Photo 395**



**Photo 396**

Weathering/wear noted to the upper wall flashing's. Flashing repair/replacement is recommended.



**Photo 397**



**Photo 398**

Sealant at lead jacks shows signs of wear/weathering. Re-sealing is recommended. (Check all)





**Photo 399**

General roof photos



**Photo 400**



**Photo 401**



**Photo 402**



**Photo 403**



**Photo 404**





**Photo 405**



**Photo 406**



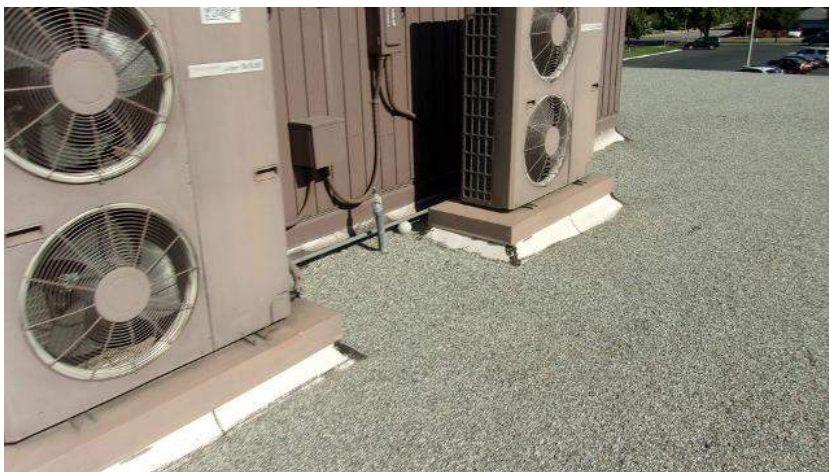
**Photo 407**



**Photo 408**



**Photo 409**



**Photo 410**





**Photo 411**



**Photo 412**



**Photo 413**



**Photo 414**



**Photo 415**



**Photo 416**





**Photo 417**



**Photo 418**



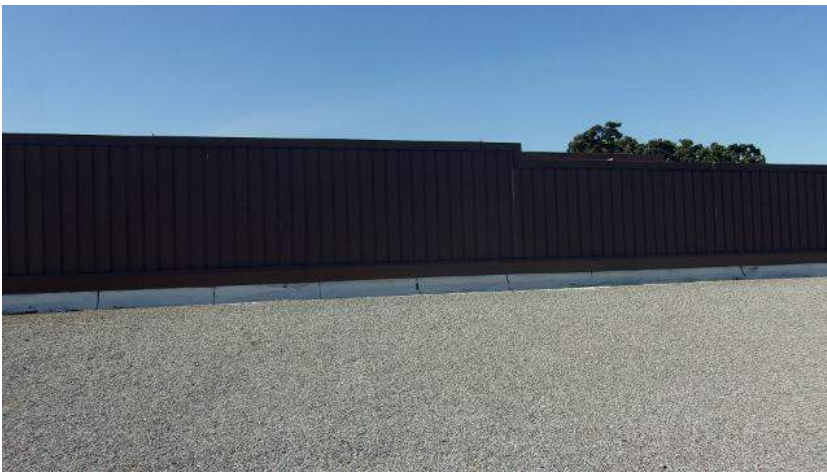
**Photo 419**



**Photo 420**



**Photo 421**



**Photo 422**





**Photo 423**



**Photo 424**



**Photo 425**



**Photo 426**



**Photo 427**



**Photo 428**





**Photo 429**



**Photo 430**



**Photo 431**



**Photo 432**



**Photo 433**



**Photo 434**





**Photo 435**



**Photo 436**



**Photo 437**



**Photo 438**



**Photo 439**



**Photo 440**





**Photo 441**



**Photo 442**



**Photo 443**

Library



**Photo 444**

Overall, the library roof system was found to be in good condition.



**Photo 445**



**Photo 446**





**Photo 447**

Recommend installing splash blocks at the upper downspouts.



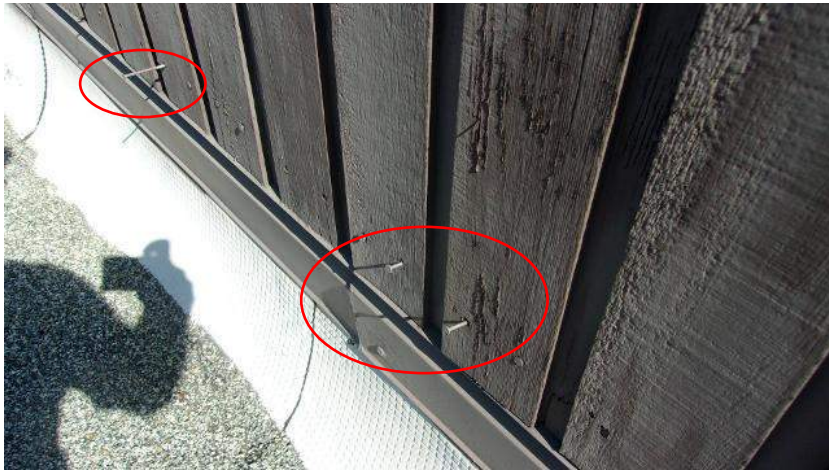
**Photo 448**

Granular erosion noted at the mineral cap sheet roof. Roof coating/restoration is recommended.



**Photo 449**

Recommend clearing debris from the roof area.



**Photo 450**

Loose upper wall siding fasteners are backing out. Corrections are recommended.



**Photo 451**

General roof area photos



**Photo 452**





**Photo 453**



**Photo 454**



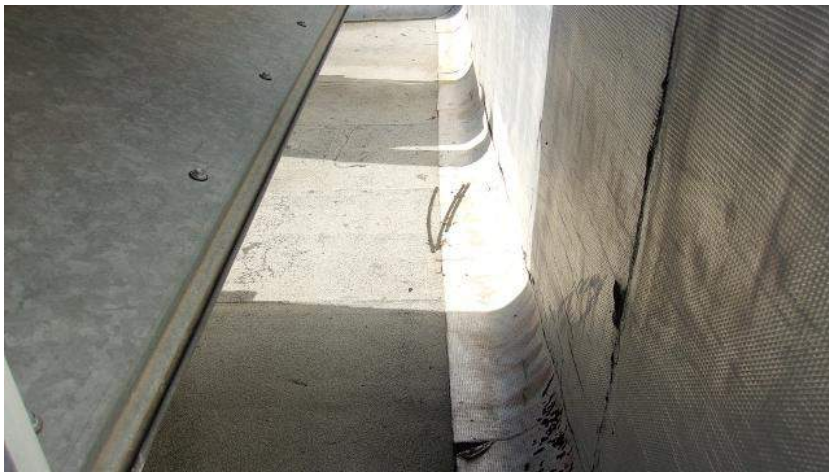
**Photo 455**



**Photo 456**



**Photo 457**



**Photo 458**





**Photo 459**



**Photo 460**



**Photo 461**



**Photo 462**



**Photo 463**



**Photo 464**





**Photo 465**



**Photo 466**



**Photo 467**



**Photo 468**



**Photo 469**



**Photo 470**





**Photo 471**



**Photo 472**



**Photo 473**



**Photo 474**



**Photo 475**



**Photo 476**





**Photo 477**



**Photo 478**



**Photo 479**



**Photo 480**



**Photo 481**



**Photo 482**





**Photo 483**



**Photo 484**



**Photo 485**



**Photo 486**



**Photo 487**



**Photo 488**





**Photo 489**



**Photo 490**



**Photo 491**



**Photo 492**



**Photo 493**



**Photo 494**





**Photo 495**



**Photo 496**



**Photo 497**

Portables

These need to be replaced but I assumed the portable building was being replaced in it's entirety.



**Photo 498**



**Photo 499**



**Photo 500**





**Photo 501**



**Photo 502**



**Photo 503**



**Photo 504**



**Photo 505**



**Photo 506**





**Photo 507**



**Photo 508**



# Solution Options

**Client:** Mountain View/Los Altos High School District

**Facility:** Mountain View HS

**Roof Section:** Roof Survey

## Replace Options

|                         |         |                             |      |
|-------------------------|---------|-----------------------------|------|
| <b>Solution Option:</b> | Replace | <b>Action Year:</b>         | 2017 |
| <b>Square Footage:</b>  | -       | <b>Expected Life Years:</b> | 30   |
| <b>Budget:</b>          | -       |                             |      |

1. Remove all roofing to the structural deck.
2. Install R-12 thermal insulation and cover board over top of the structural deck. Attach per CBC, Chapter 15.
3. Install modified bitumen roof with Title 24 approved coating system where BUR is existing.
4. Install 1/2" plywood over plank decking, install standing seam metal roof panels where faux shake and asphalt shingles are existing.
5. Install new sheet metal components and attached per ANSI SPRI ES-1.
6. Gutters and downspout volume shall be calculated per CBC Chapter 11.

| Building:            | Budget    | Priority |
|----------------------|-----------|----------|
| 100 Wing:            | \$450,000 | 7        |
| 200 Wing:            | \$600,000 | 6        |
| 300 Wing:            | \$800,000 | 3        |
| 400 Wing:            | \$650,000 | 5        |
| 500 Wing:            | \$720,000 | 4        |
| 600 Wing:            | 2013 new  |          |
| Large Gym:           | \$770,000 | 1        |
| Weight room:         | 2013 new  |          |
| Science Wing:        | \$550,000 | 8        |
| Packard Hall:        | \$250,000 | 2        |
| Theater & Cafeteria: | \$500,000 | 9        |
| Library:             | \$360,000 | 10       |

Priority

1-8 should be replaced in the next 5 years.

9-10 should be replaced in the next 10 years.



The Garland Company, Inc.

Roof Asset Management Program



Los Altos High School

8-15-2016

Prepared By  
Jay Mulligan

Prepared For  
Jay Mulligan

## Table of Contents

|  |            |
|--|------------|
| <b><i>Los Altos HS / Facility Summary</i></b> .....                        | <b>3</b>   |
| <b><i>Los Altos HS / Facility Drawing</i></b> .....                        | <b>4</b>   |
| <b><i>Los Altos HS / Roof Survey / Construction Details</i></b> .....      | <b>5</b>   |
| <b><i>Los Altos HS / Roof Survey / Roof Section Photo</i></b> .....        | <b>6</b>   |
| <b><i>Los Altos HS / Roof Survey / Roof Section Drawing</i></b> .....      | <b>7</b>   |
| <b><i>Los Altos HS / Roof Survey / Inspection: Aug 1, 2016</i></b> .....   | <b>8</b>   |
| <b><i>Los Altos HS / Roof Survey / Photo Report: Aug 1, 2016</i></b> ..... | <b>10</b>  |
| <b><i>Los Altos HS / Roof Survey / Solution: Aug 15, 2016</i></b> .....    | <b>134</b> |





# Facility Summary

**Client:** Mountain View/Los Altos High School District

**Facility:** Los Altos HS

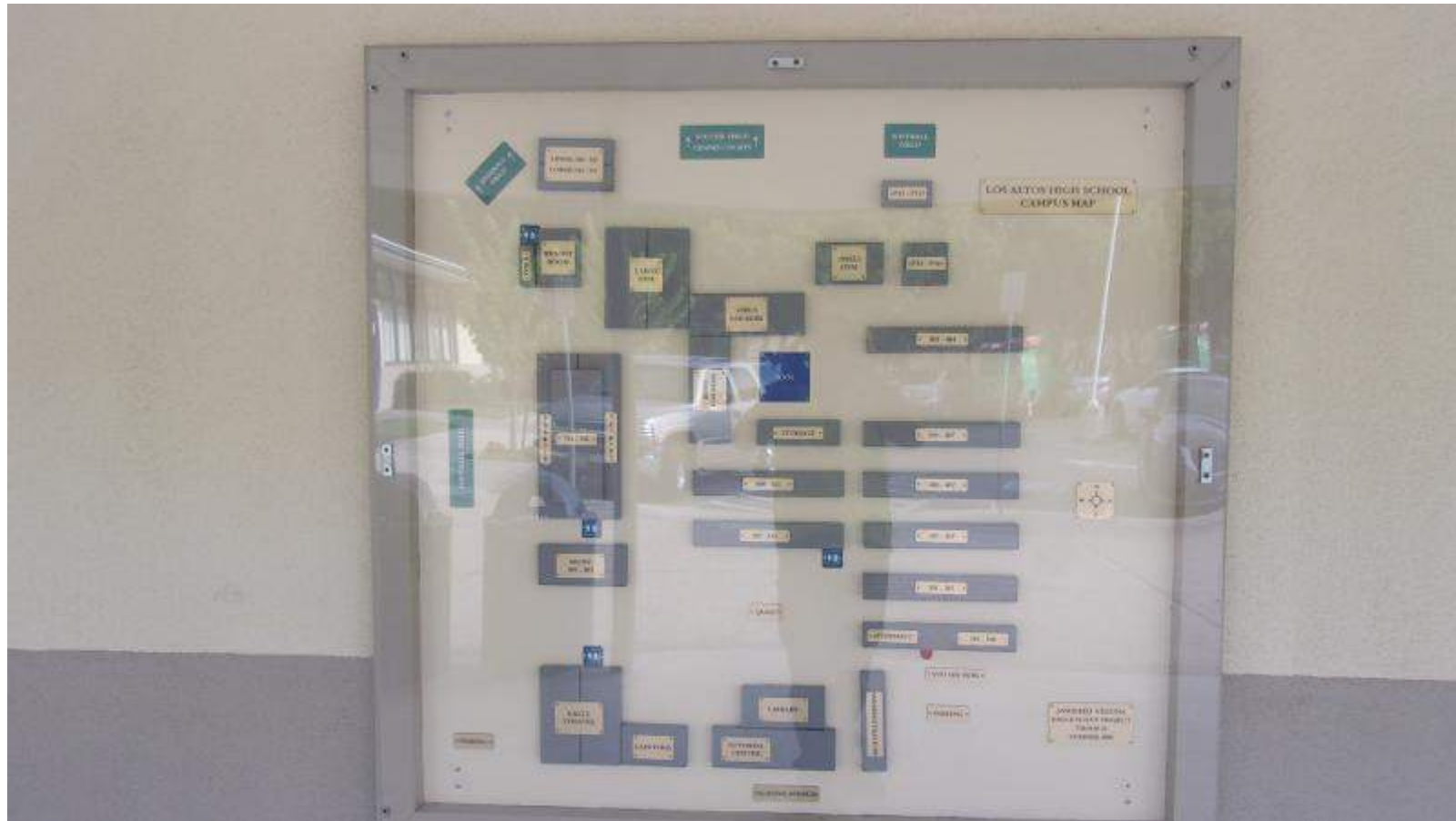


## Facility Data

|                  |                   |
|------------------|-------------------|
| Address 1        | - 201 Almond Ave, |
| Address 2        | -                 |
| City             | - Los Altos       |
| State            | - CA              |
| ZIP              | - 94022           |
| Type of Facility | School            |

## Asset Information

| Name        | Date Installed | Square Footage | Roof Access   |
|-------------|----------------|----------------|---------------|
| Roof Survey | Varies         | -              | Ladder Needed |







# Construction Details

**Client:** Mountain View/Los Altos High School District

**Facility:** Los Altos HS

**Roof Section:** Roof Survey

## Information

|                 |               |                |                     |
|-----------------|---------------|----------------|---------------------|
| Year Installed  | -             | Square Footage | -                   |
| Slope Dimension | -             | Eave Height    | -                   |
| Roof Access     | Ladder Needed | System Type    | Built Up Roof (BUR) |

## Details

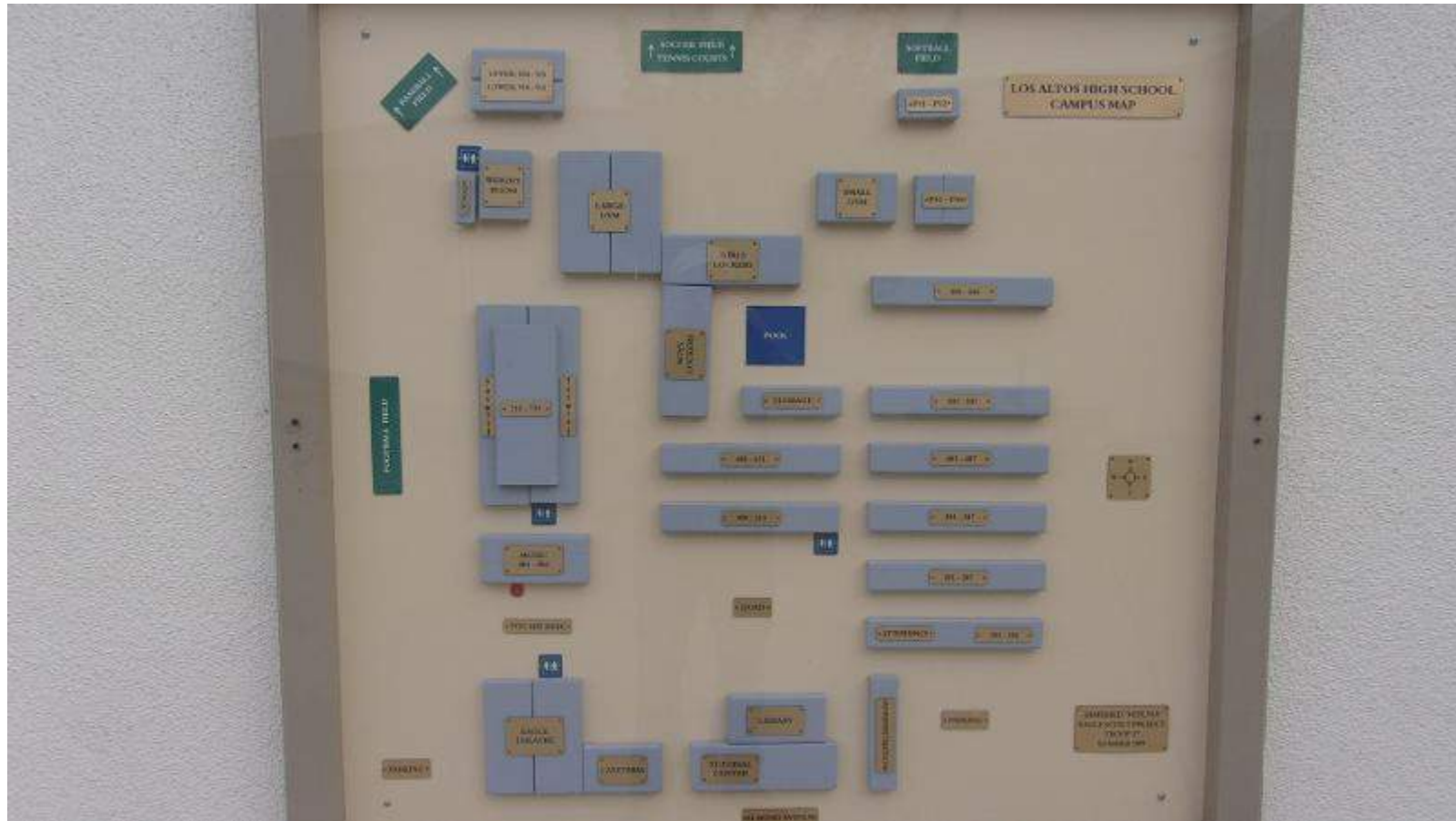
|                   |                   |
|-------------------|-------------------|
| Flashing Material | Modified Membrane |
| Parapet Wall      | Stucco            |

## Inventory

| Inventory Type | Quantity |
|----------------|----------|
| HVAC           |          |
| Drain          |          |









# Inspection Report

**Client:** Mountain View/Los Altos High School District

**Facility:** Los Altos HS

**Report Date:** 08/01/2016

**Roof Section:** Roof Survey

## Inspection Information

|                 |                   |           |    |
|-----------------|-------------------|-----------|----|
| Inspection Date | 08/01/2016        | Core Data | No |
| Inspection Type | Visual Inspection | Leakage   | No |
| Deck Conditions | -                 |           |    |

## Flashing Conditions

|             |   |                 |   |
|-------------|---|-----------------|---|
| Perimeter   | - | Wall            | - |
| Projections | - | Counterflashing | - |

## Miscellaneous Details

|                          |   |               |    |
|--------------------------|---|---------------|----|
| Reglets                  | - | Debris        | No |
| Control Expansion Joints | - | Ponding Water | -  |
| Parapet Wall             | - | Coping Joints | -  |

## Perimeter

|           |      |
|-----------|------|
| Rating    | Fair |
| Condition |      |

## Field

|           |      |
|-----------|------|
| Rating    | Fair |
| Condition |      |

## Penetrations

|           |      |
|-----------|------|
| Rating    | Fair |
| Condition |      |



| Drainage  |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

| Other     |      |
|-----------|------|
| Rating    | Fair |
| Condition |      |

| Overall   |      |
|-----------|------|
| Rating    | Fair |
| Condition |      |



# Photo Report

**Client:** Mountain View/Los Altos High School District

**Facility:** Los Altos HS

**Report Date:** 08/01/2016

**Roof Section:** Roof Survey



**Photo 1**

Administration Office



**Photo 2**

Overall the administration office roof is in fair condition.





**Photo 3**



**Photo 4**

Wear/bare spots noted at the roof edges. Maintenance repairs are recommended.



**Photo 5**





**Photo 6**

Support pads should be installed under the conduit support blocks.



**Photo 7**

A proper flashing is not installed under the conduit penetration. Corrections are needed.



**Photo 8**

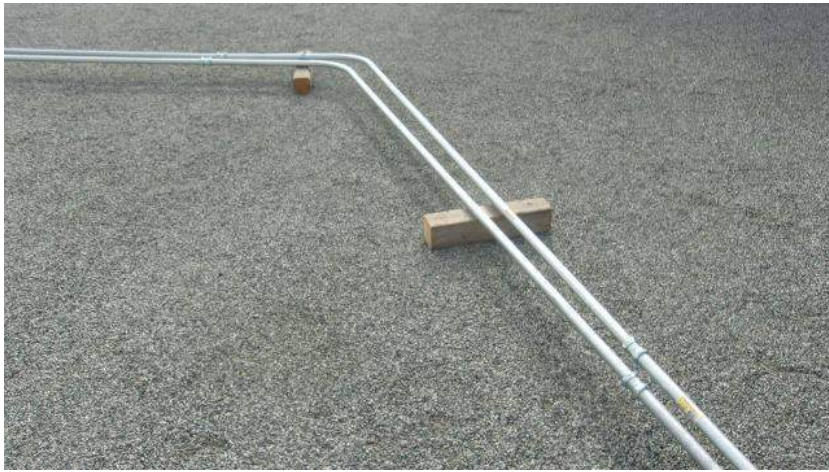
General administration office roof photos





**Photo 9**

Curb mounted Solar Tubes have been installed. Solar Tubes will be reusable when roof is replaced.



**Photo 10**

Pads missing undr support blocks.



**Photo 11**

Walkway pads installed on most roof sections.



**Photo 12**

HVAC curbs installed at proper height but not leveled.



**Photo 13**

Attendance Office/Building 100



**Photo 14**

The front covered walkway at the attendance office is in fair condition.





**Photo 15**

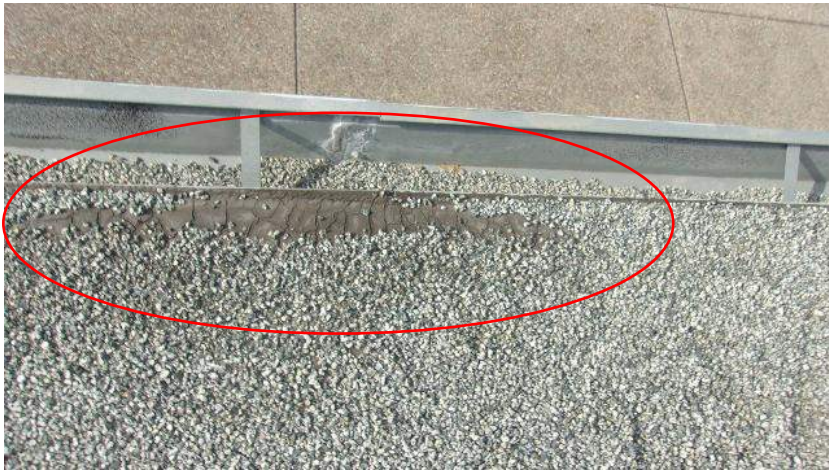


**Photo 16**

Verify supports for window mounted AC are DSA approved or need to be replaced. These are new.



**Photo 17**



**Photo 18**

Bare spots noted at the walkway edge. General maintenance repairs are recommended.



**Photo 19**



**Photo 20**

Granular erosion noted at the east side covered walkway. Roof coating or restoration is recommended. Roof should be coated.





**Photo 21**

Tie in between older gravel roof and new cap sheet roof has leaked. Gravel roof to be replaced.



**Photo 22**

Gravel stop edge of cap sheet roof has been resealed.



**Photo 23**



**Photo 24**

Attendance office/Building 100

Most of the HVAC units look to be fairly new.



**Photo 25**

Support pads should be installed under the conduit support blocks.



**Photo 26**

Granular erosion noted at the roof area walk pads. Check all and replace as needed.





**Photo 27**

Debris should be cleared from the face mounted gutters.

Gutter screens to be installed when roof is replaced.



**Photo 28**

Splashblocks/extensions should be installed at the downspouts.



**Photo 29**

Upper roof area was found to be in fair condition.



**Photo 30**



**Photo 31**

General attendance office/building 100 roof photos.

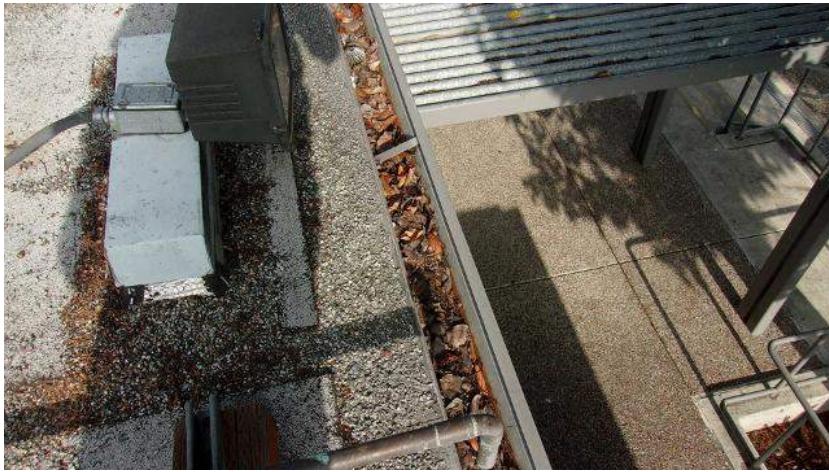


**Photo 32**





**Photo 33**



**Photo 34**



**Photo 35**





**Photo 36**



**Photo 37**



**Photo 38**





**Photo 39**



**Photo 40**



**Photo 41**



**Photo 42**



**Photo 43**



**Photo 44**





**Photo 45**



**Photo 46**



**Photo 47**

Building 200





**Photo 48**

Overall, building 200's roof system is in fair condition.



**Photo 49**

The flashing on this roof is older.



**Photo 50**

Sealant at the lead roof jacks show signs of wear/weathering. Re-sealing is recommended. (Check all)





**Photo 51**

Small voids noted at the roof edges. General maintenance repairs are recommended. Metal edge is sawing it's way out of roof which indicated roof is 15 plus years old.



**Photo 52**

Recommend three coursing curb corners with mastic and mesh. Check all



**Photo 53**

Surface rust noted at galvanized curb caps. Corrections are recommended.



**Photo 54**

Recommend clearing debris from face mounted gutters.



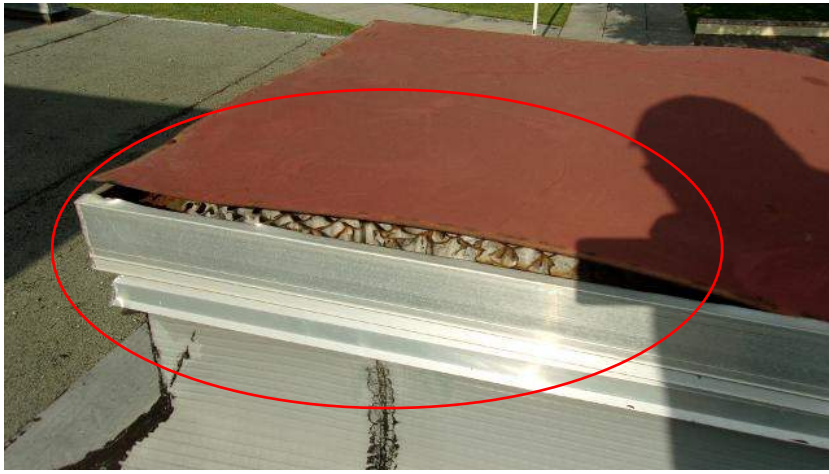
**Photo 55**

Granular erosion noted at the mineral cap sheet roof. Roof coating/restoration is recommended.



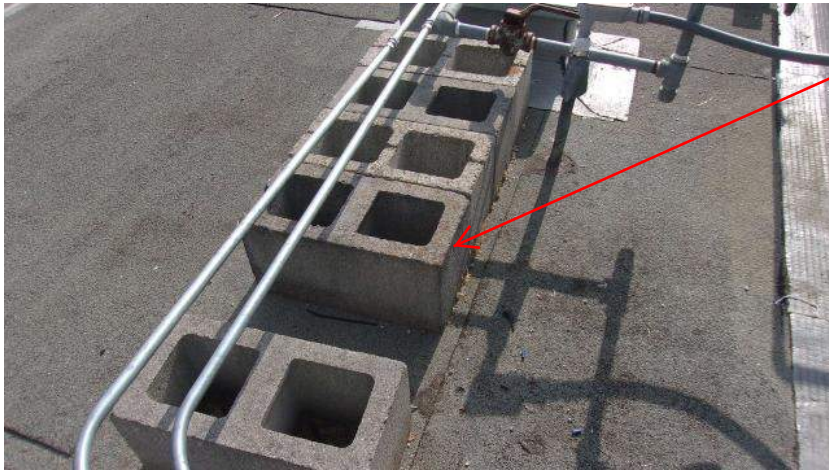
**Photo 56**





**Photo 57**

Damaged roof access hatch is present.  
Hatch replacement is recommended.



**Photo 58**

Support pads should be installed under roof  
area cinder blocks.



**Photo 59**

General building 200 roof photos.



**Photo 60**



**Photo 61**



**Photo 62**

Roof is more than 10 years old but less than 15 in this roof section.





**Photo 63**

Support curbs are high enough and are well flashed.



**Photo 64**



**Photo 65**

Rof should be coated if it is not scheduled to be replaced.



**Photo 66**



**Photo 67**



**Photo 68**

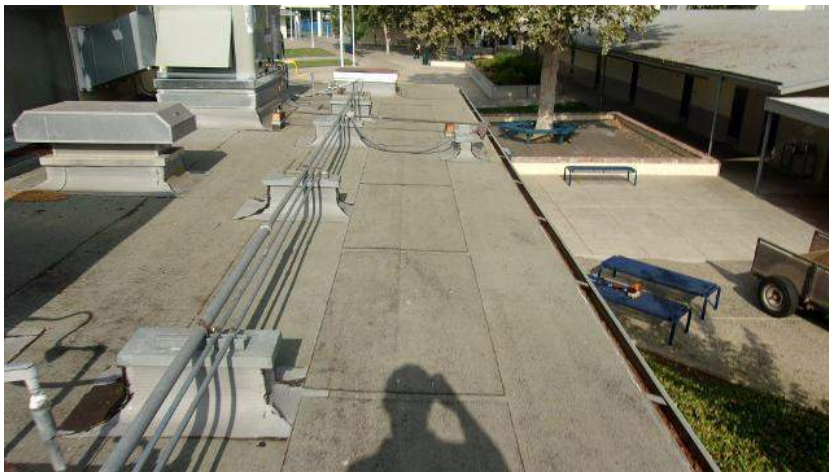




**Photo 69**



**Photo 70**



**Photo 71**



**Photo 72**



**Photo 73**



**Photo 74**

Building 300





**Photo 75**

Overall building 300's roof was found to be in fair condition.



**Photo 76**

Recommend clearing roof debris from the roof areas and gutter screens installed.



**Photo 77**

Central corridor is the newest roof section and does not need to be replaced.



**Photo 78**



**Photo 79**

Support pads need to be installed at the west covered walkway area conduits.



**Photo 80**





**Photo 81**



**Photo 82**

Recommend trimming trees away from the roof.

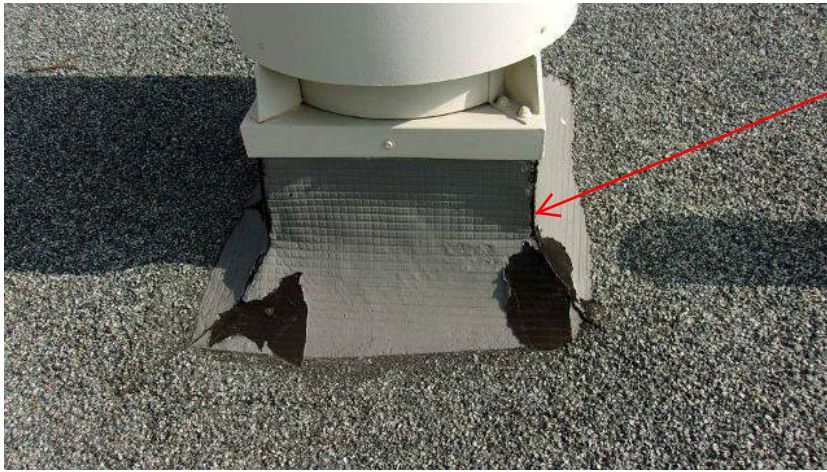


**Photo 83**

Bare spots noted at the roof edges. General maintenance repairs are recommended.



**Photo 84**



**Photo 85**

Recommend three coursing curb corners with mastic and mesh (Check all).



**Photo 86**

General building 300 roof photos





**Photo 87**



**Photo 88**



**Photo 89**



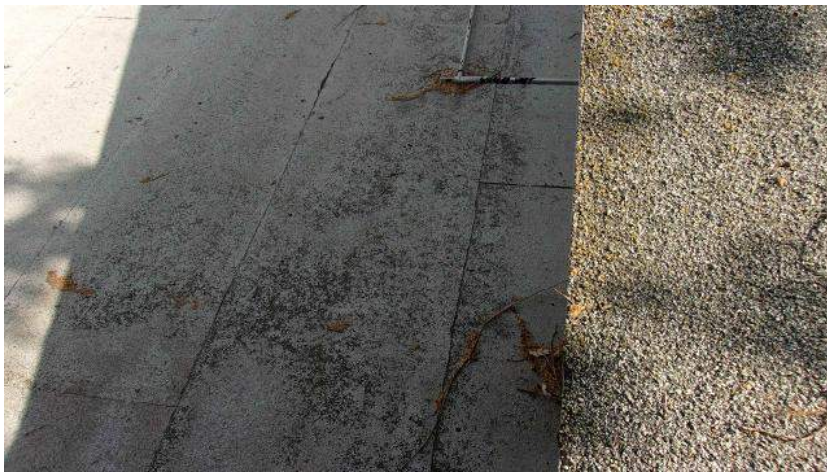


**Photo 90**



**Photo 91**

Granular erosion at covered walkway (west side). Roof replacement is recommended.



**Photo 92**





**Photo 93**



**Photo 94**



**Photo 95**

Entire edge of roof has been patched.



**Photo 96**

Entire perimeter has been patched.



**Photo 97**



**Photo 98**

Roof curbs are high enough and the HVAC units appear to be in good condition.





**Photo 99**

Roof is in poor condition and needs to be repaced.



**Photo 100**



**Photo 101**



**Photo 102**



**Photo 103**



**Photo 104**

Central cooridor.





**Photo 105**



**Photo 106**



**Photo 107**



**Photo 108**



**Photo 109**



**Photo 110**





**Photo 111**



**Photo 112**



**Photo 113**



**Photo 114**



**Photo 115**

Building 400



**Photo 116**

Overall, building 400's roof system was found to be in fair condition.





**Photo 117**



**Photo 118**



**Photo 119**

Recommend re-sealing lead jack/vent pipe penetrations (Check all).





**Photo 120**

An un-flashed conduit penetration is present. proper flashing installation is needed.



**Photo 121**

Worn walk pads are present. Walk pad replacement is recommended.



**Photo 122**

General building 400 roof photos





**Photo 123**



**Photo 124**



**Photo 125**



**Photo 126**



**Photo 127**



**Photo 128**





**Photo 129**



**Photo 130**



**Photo 131**



**Photo 132**



**Photo 133**



**Photo 134**





**Photo 135**



**Photo 136**



**Photo 137**



**Photo 138**



**Photo 139**



**Photo 140**





**Photo 141**



**Photo 142**



**Photo 143**



**Photo 144**



**Photo 145**



**Photo 146**





**Photo 147**



**Photo 148**



**Photo 149**

Building 500



**Photo 150**

Overall, building 500's roof was found to be in fair condition.



**Photo 151**

Recommend clearing tree debris from the roof covered walkway area.



**Photo 152**

Recommend re-sealing roof jack/vent pipe connections. Current sealant shows signs of wear/weathering.





**Photo 153**

Uneven gravel is present. Corrections are recommended.



**Photo 154**

Trees are overhanging the roof system. Corrections are recommended.



**Photo 155**

Granular erosion at covered walkway.





**Photo 156**

Improperly installed sheet metal flashing is present (lower roof area). Corrections are needed.



**Photo 157**

Un-flashed electrical conduit at the lower roof area. Corrections are recommended.



**Photo 158**

General building 500 roof photos





**Photo 159**



**Photo 160**



**Photo 161**



Photo 162



Photo 163



Photo 164





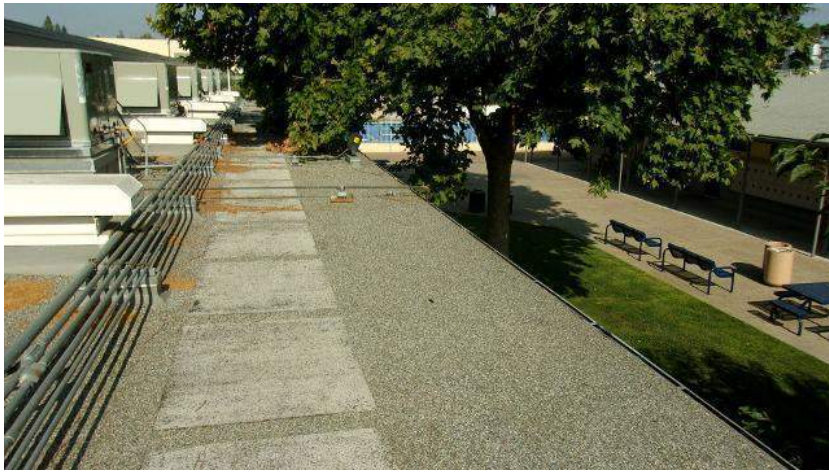
**Photo 165**



**Photo 166**



**Photo 167**



**Photo 168**



**Photo 169**



**Photo 170**





**Photo 171**



**Photo 172**

Building 600 roof was found to be in fair condition



**Photo 173**



**Photo 174**

Building 600 roof was found to be in fair condition.



**Photo 175**



**Photo 176**





**Photo 177**



**Photo 178**



**Photo 179**

Roof jacks should be re-sealed.



**Photo 180**

Curb flashing corners should be three coursed with mastic and mesh.



**Photo 181**



**Photo 182**





**Photo 183**

Storm collars should be re-sealed.



**Photo 184**

Bare spots at the roof edges should be repaired.



**Photo 185**





**Photo 186**

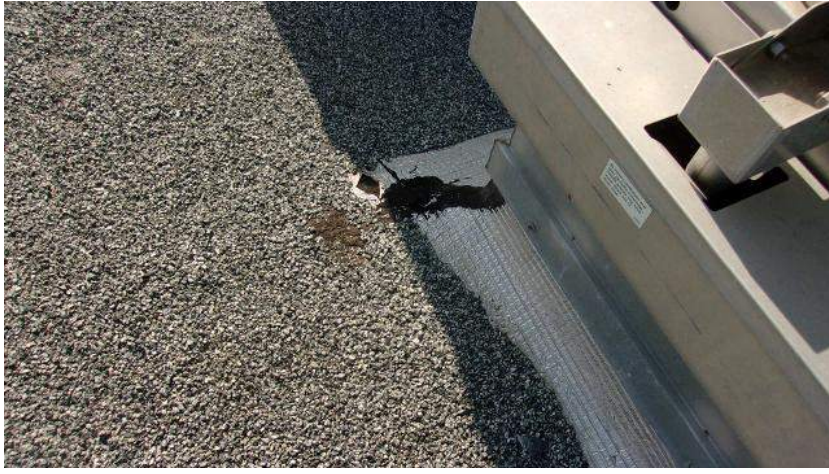


**Photo 187**



**Photo 188**





**Photo 189**



**Photo 190**



**Photo 191**



**Photo 192**

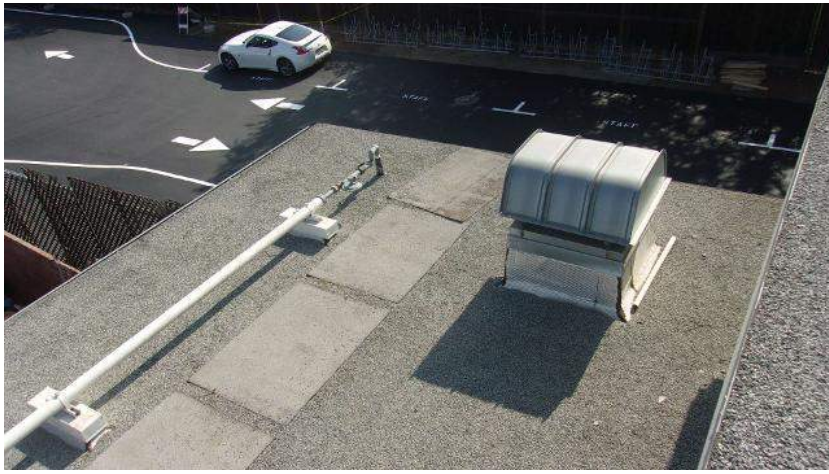


**Photo 193**



**Photo 194**





**Photo 195**



**Photo 196**



**Photo 197**

Building 700



**Photo 198**

Building 700 was locked at the time of inspection. Roof system was not fully accessible. Areas (where visible) appear to be in good condition.



**Photo 199**



**Photo 200**





**Photo 201**



**Photo 202**



**Photo 203**



**Photo 204**



**Photo 205**



**Photo 206**





**Photo 207**



**Photo 208**



**Photo 209**



**Photo 210**



**Photo 211**



**Photo 212**





**Photo 213**



**Photo 214**

Building 800, Music Building roof was found to be in fair condition.



**Photo 215**

Peeling/weathered paint noted at the upper window areas. Paint/sealant work is recommended.



**Photo 216**



**Photo 217**

Covered walkway area at building 800 was found to be in fair condition.

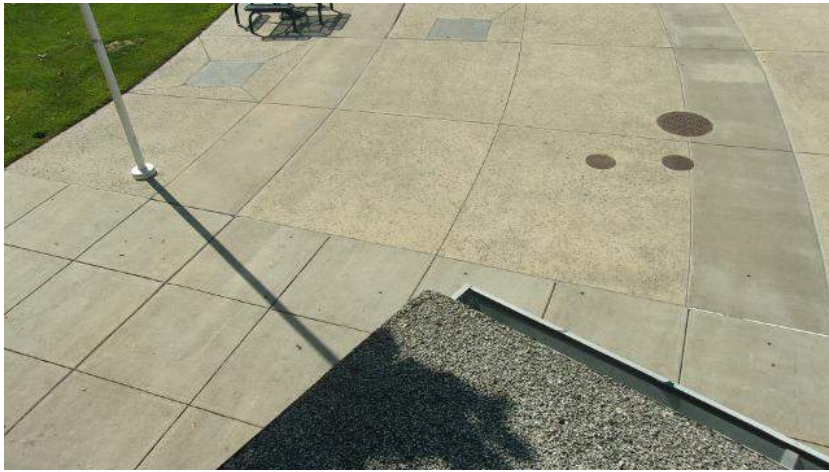


**Photo 218**





**Photo 219**



**Photo 220**



**Photo 221**



**Photo 222**

Lead jacks should be re-sealed. Current sealant shows signs of wear/weathering.



**Photo 223**



**Photo 224**





**Photo 225**



**Photo 226**



**Photo 227**



**Photo 228**

Building 800 upper roof



**Photo 229**

Mastic at equipment flashing shows signs of wear/weathering. Re-sealing is recommended.



**Photo 230**

Worn walk pads are present. Walk pad replacement is recommended.





**Photo 231**

Bare spots noted at the roof edges. Roof edge repairs are needed.



**Photo 232**

General roof photos



**Photo 233**



**Photo 234**

Previous leaks at units



**Photo 235**



**Photo 236**

Roof is in poor condition





**Photo 237**



**Photo 238**



**Photo 239**





**Photo 240**



**Photo 241**



**Photo 242**

Roof hatch is in poor condition





**Photo 243**

Building 900 Building is new. Completed in 2013.



**Photo 244**



**Photo 245**



**Photo 246**

Eagle Theater



**Photo 247**

Roof areas (where visible) appear to be in fair condition.



**Photo 248**





**Photo 249**



**Photo 250**



**Photo 251**



**Photo 252**



**Photo 253**



**Photo 254**

Granular erosion noted to the mineral cap sheet roof areas. Roof coating/restoration is recommended.





**Photo 255**

Recommend clearing debris from the roof drains.



**Photo 256**



**Photo 257**

Small cracks noted at the upper stucco walls. Sealant/paint work is recommended.



**Photo 258**

Signs of past mastic/roof repairs noted.



**Photo 259**

Surface rust noted at the lower roof hatch.



**Photo 260**

Lead jacks should be re-sealed.





**Photo 261**

Coping/wall connections should be re-sealed.



**Photo 262**

Debris should be cleared from the roof area.



**Photo 263**

General theater roof photos (Lower)



**Photo 264**



**Photo 265**



**Photo 266**





**Photo 267**



**Photo 268**



**Photo 269**



**Photo 270**



**Photo 271**



**Photo 272**





**Photo 273**



**Photo 274**



**Photo 275**



**Photo 276**



**Photo 277**

Gym/Locker Rooms

Roofs are in poor condition and need to be replaced.



**Photo 278**





**Photo 279**

Roof/flashing repairs are in progress.



**Photo 280**

Many old patches.



**Photo 281**



**Photo 282**



**Photo 283**



**Photo 284**





**Photo 285**



**Photo 286**



**Photo 287**



**Photo 288**



**Photo 289**



**Photo 290**





**Photo 291**

The Garland Co. materials are on-site.



**Photo 292**



**Photo 293**



**Photo 294**



**Photo 295**

New lead jacks need ot be flashed into the roof.



**Photo 296**





**Photo 297**



**Photo 298**



**Photo 299**



**Photo 300**



**Photo 301**



**Photo 302**





**Photo 303**



**Photo 304**



**Photo 305**



**Photo 306**



**Photo 307**

Solar hot water system in very poor condition. Will need to be replaced when roof is replaced as it will not be salvageable.



**Photo 308**





**Photo 309**



**Photo 310**



**Photo 311**



**Photo 312**



**Photo 313**



**Photo 314**

Severe granule erosion.





**Photo 315**



**Photo 316**



**Photo 317**



**Photo 318**



**Photo 319**

Extensive large patches.



**Photo 320**





**Photo 321**

Edge metal shows heavy rust.



**Photo 322**

Cap sheet is failing.



**Photo 323**

Old patch.





**Photo 324**

Large buckle



**Photo 325**

Extensive patching



**Photo 326**





**Photo 327**



**Photo 328**



**Photo 329**



**Photo 330**



**Photo 331**



**Photo 332**





**Photo 333**



**Photo 334**



**Photo 335**



**Photo 336**



**Photo 337**



**Photo 338**





**Photo 339**

Heavy granular erosion is present at the upper gym roof areas.



**Photo 340**



**Photo 341**



**Photo 342**



**Photo 343**



**Photo 344**





**Photo 345**



**Photo 346**



**Photo 347**



**Photo 348**



**Photo 349**



**Photo 350**





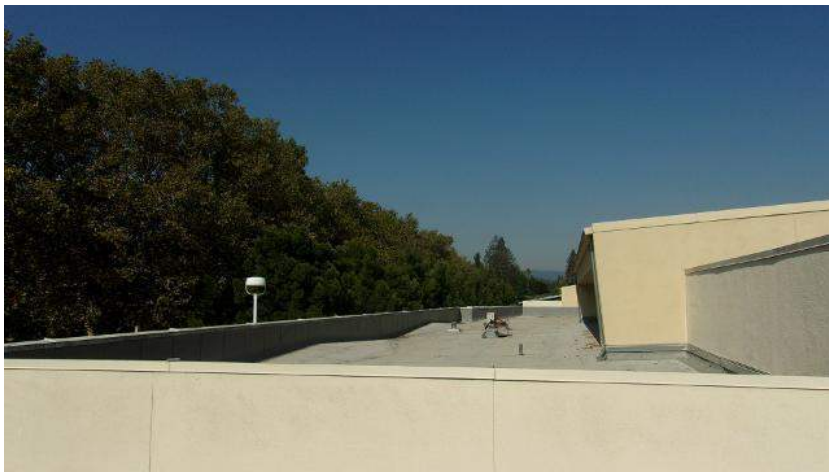
**Photo 351**

Library/Tutorial Center



**Photo 352**

Library/Tutorial center was locked at the time of inspection. Roof system was not fully accessible.



**Photo 353**

Areas (where visible) appear to be in good/fair condition.



**Photo 354**



**Photo 355**



**Photo 356**





**Photo 357**



**Photo 358**



**Photo 359**



**Photo 360**



**Photo 361** Storage Building.  
replaced 2014



**Photo 362**

The storage building roof was found to be in good condition.





**Photo 363**

Recommend sealing the roof/edge metal connections with mastic. Small voids are present.



**Photo 364**

Recommend re-sealing roof/vent connection. Current sealant shows signs of wear/weathering.



**Photo 365**



**Photo 366**



**Photo 367**



**Photo 368**





**Photo 369**



**Photo 370**



**Photo 371**




# Solution Options

**Client:** Mountain View/Los Altos High School District

**Facility:** Los Altos HS

**Roof Section:** Roof Survey

## Replace Options

|                         |   |                             |      |
|-------------------------|---|-----------------------------|------|
| <b>Solution Option:</b> | Replace  | <b>Action Year:</b>         | 2017 |
| <b>Square Footage:</b>  | -   | <b>Expected Life Years:</b> | 30   |
| <b>Budget:</b>          | -   |                             |      |

1. Remove all roofing to the structural deck.
2. Install R-12 thermal insulation and cover board over top of the structural deck. Attach per CBC, Chapter 15.
3. Install modified bitumen roof with Title 24 approved coating system.
4. Install new sheet metal components and attached per ANSI SPRI ES-1.
5. Gutters and downspout volume shall be calculated per CBC Chapter 11.

Building:      Budget      Priority

|                      |            |    |
|----------------------|------------|----|
| Administration:      | \$165,000  | 12 |
| 100 Wing:            | \$264,000  | 11 |
| 200 Wing:            | \$210,000  | 13 |
| 300 Wing:            | \$420,000  | 9  |
| 400 Wing:            | \$420,000  | 8  |
| 500 Wing:            | \$253,000  | 7  |
| 600 Wing:            | \$253,000  | 10 |
| Small Gym:           | \$165,000  | 3  |
| Locker Rooms:        | \$550,000  | 1  |
| Large Gym:           | \$300,000  | 2  |
| Weight room:         | \$ 88,000  | 5  |
| 700 Wing:            | \$620,000  | 14 |
| Music:               | \$220,000  | 4  |
| Theater & Cafeteria: | \$450,000  | 15 |
| Library:             | \$400,000  | 16 |
| 900 Wing:            | Built 2013 |    |
| Central walkway:     | 2010       |    |
| East walkways:       | 2010       |    |
| West walkway:        | \$60,000   | 6  |
| Storage:             | 2014       |    |

Priority

1-13 should be replaced in the next 5 years.

14-16 should be replaced in the next 10 years.



The Garland Company, Inc.

Roof Asset Management Program



Freestyle Academy

8-15-2016

Prepared By  
Jay Mulligan

Prepared For  
Jay Mulligan

Table of Contents

*Freestyle Academy / Facility Summary* ..... 3

*Freestyle Academy / Roof Survey / Construction Details* ..... 4

*Freestyle Academy / Roof Survey / Roof Section Photo* ..... 5

*Freestyle Academy / Roof Survey / Inspection: Aug 6, 2016* ..... 6

*Freestyle Academy / Roof Survey / Photo Report: Jul 28, 2016* ..... 8

*Freestyle Academy / Roof Survey / Solution: Aug 15, 2016* ..... 27





# Facility Summary

**Client:** Mountain View/Los Altos High School District

**Facility:** Freestyle Academy

## Facility Data

|                  |                 |
|------------------|-----------------|
| Address 1        | 1299 Bryant Ave |
| Address 2        | -               |
| City             | Mountain View   |
| State            | -               |
| ZIP              | 94040           |
| Type of Facility | School          |

## Asset Information

| Name        | Date Installed | Square Footage | Roof Access   |
|-------------|----------------|----------------|---------------|
| Roof Survey | 1995?          | -              | Ladder Needed |



# Construction Details

**Client:** Mountain View/Los Altos High School District

**Facility:** Freestyle Academy

**Roof Section:** Roof Survey

## Information

|                        |                |                       |                  |
|------------------------|----------------|-----------------------|------------------|
| <b>Year Installed</b>  | - 1995?        | <b>Square Footage</b> | -                |
| <b>Slope Dimension</b> | - 1/4" per 12" | <b>Eave Height</b>    | - 12'            |
| <b>Roof Access</b>     | Ladder Needed  | <b>System Type</b>    | Modified Bitumen |

## Assembly

| Roof # | Layer Type | Description      | Attachment  | R-Value | Thickness |
|--------|------------|------------------|-------------|---------|-----------|
| 1      | Base Sheet | 1 ply base sheet | Hot asphalt | -       | -         |

## Details

|                          |               |
|--------------------------|---------------|
| <b>Flashing Material</b> | Metal         |
| <b>Drain System</b>      | Gutter System |







# Inspection Report

**Client:** Mountain View/Los Altos High School District

**Facility:** Freestyle Academy

**Report Date:** 08/06/2016

**Roof Section:** Roof Survey

## Inspection Information

|                        |                   |                  |    |
|------------------------|-------------------|------------------|----|
| <b>Inspection Date</b> | 08/06/2016        | <b>Core Data</b> | No |
| <b>Inspection Type</b> | Visual Inspection | <b>Leakage</b>   | No |
| <b>Deck Conditions</b> | Poor              |                  |    |

## Flashing Conditions

|                    |        |                        |     |
|--------------------|--------|------------------------|-----|
| <b>Perimeter</b>   | Poor   | <b>Wall</b>            | N/A |
| <b>Projections</b> | Failed | <b>Counterflashing</b> | N/A |

## Miscellaneous Details

|                                 |     |                      |       |
|---------------------------------|-----|----------------------|-------|
| <b>Reglets</b>                  | -   | <b>Debris</b>        | Yes   |
| <b>Control Expansion Joints</b> | -   | <b>Ponding Water</b> | Minor |
| <b>Parapet Wall</b>             | N/A | <b>Coping Joints</b> | N/A   |

## Perimeter

|                  |  |
|------------------|--|
| <b>Rating</b>    | Poor   |
| <b>Condition</b> | Asphalt flashing and metal edge is failing and needs to be replaced. |

## Field

|                  |  |
|------------------|--|
| <b>Rating</b>    | Poor   |
| <b>Condition</b> | Many of the buildings are heavily patched and all roofs need to be replaced. |

## Penetrations

|                  |      |
|------------------|------|
| <b>Rating</b>    | Poor |
| <b>Condition</b> |      |



| Drainage  |   |
|-----------|---|
| Rating    | Fair  |
| Condition | Some ponding water which is easily corrected. |

| Other     |                                |
|-----------|--------------------------------|
| Rating    | Poor                           |
| Condition | All roofs need to be replaced. |

| Overall   |  |
|-----------|--|
| Rating    | Poor   |
| Condition | All roof sections are in need of replacement and upgrade to current Title 24 reflective roof requirements. |



# Photo Report

**Client:** Mountain View/Los Altos High School District

**Facility:** Freestyle Academy

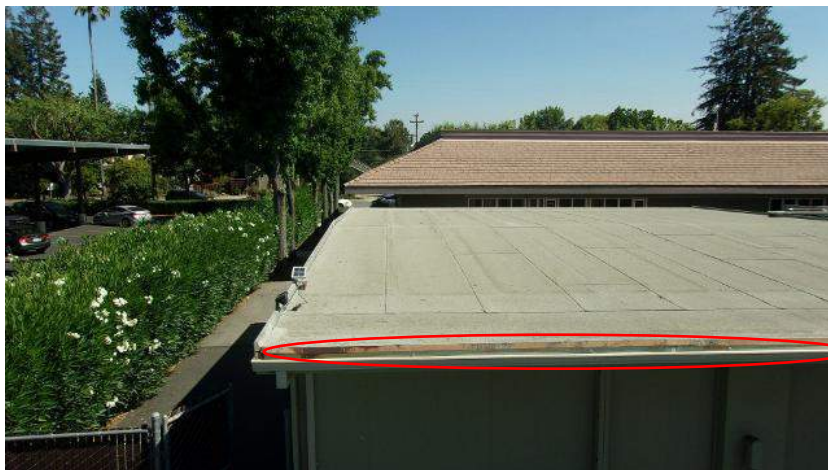
**Report Date:** 07/28/2016

**Roof Section:** Roof Survey



**Photo 1**

Freestyle Academy Roof Survey



**Photo 2**

Edge metal is rusting out.





**Photo 3**

Building 1



**Photo 4**

Overall, the roof system was found to be in fair condition.



**Photo 5**



**Photo 6**

Rust/corrosion noted at the edge metal.  
Maintenance repairs are recommended.



**Photo 7**

Building 2



**Photo 8**

Overall, the flat roof area was found to be  
in poor condition. This roof has numerous  
patches.





**Photo 9**

Past roof repairs noted at the time of inspection.



**Photo 10**



**Photo 11**

Granular erosion noted to portions of the roof area. Roof system coating/restoration are recommended.



**Photo 12**

General Building 2 roof photos



**Photo 13**



**Photo 14**





**Photo 15**

Roof has numerous patches and needs to be replaced.



**Photo 16**



**Photo 17**



**Photo 18**



**Photo 19**

Building 3



**Photo 20**

Overall the flat roof area at building 3 was found to be in poor condition. Roof is heavily patched.





**Photo 21**



**Photo 22**

Recommend clearing tree debris from roof area.



**Photo 23**

Past roof repairs noted at the time of inspection.



**Photo 24**

Granular erosion noted to portions of the cap sheet. Roof system coating/restoration is recommended.



**Photo 25**

General building 3 roof photos



**Photo 26**





**Photo 27**



**Photo 28**



**Photo 29**



**Photo 30**



**Photo 31**



**Photo 32**

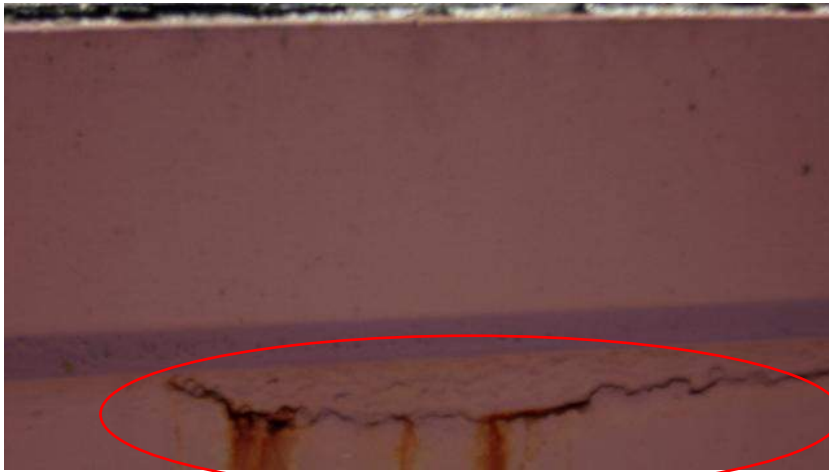
Building 4





**Photo 33**

Age related wear/granular erosion noted.  
Roof replacement is recommended.



**Photo 34**

Rust/corrosion noted at the perimeter metal  
framing.



**Photo 35**

Voids noted at the roof edge/cap sheet  
connections.



**Photo 36**

Damaged cap sheet noted (Multiple locations).

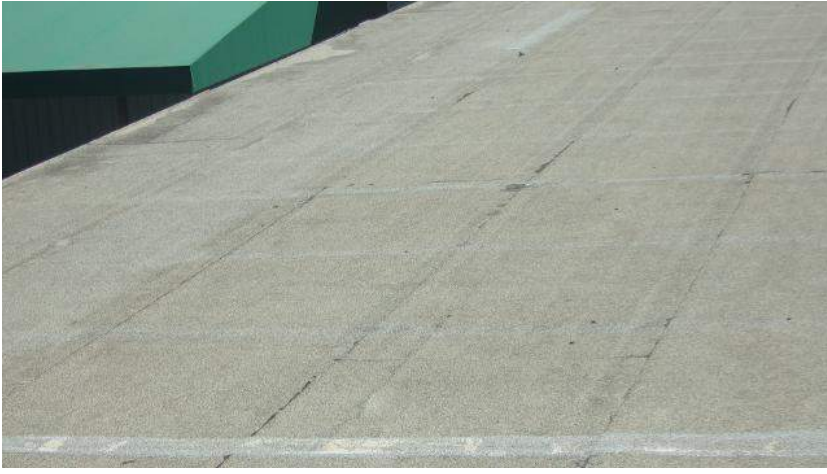


**Photo 37**



**Photo 38**





**Photo 39**

General Building 4 roof photos



**Photo 40**



**Photo 41**



**Photo 42**

Building 5/6



**Photo 43**

Overall, the flat roof system was found to be in poor condition. Regular system maintenance is recommended.



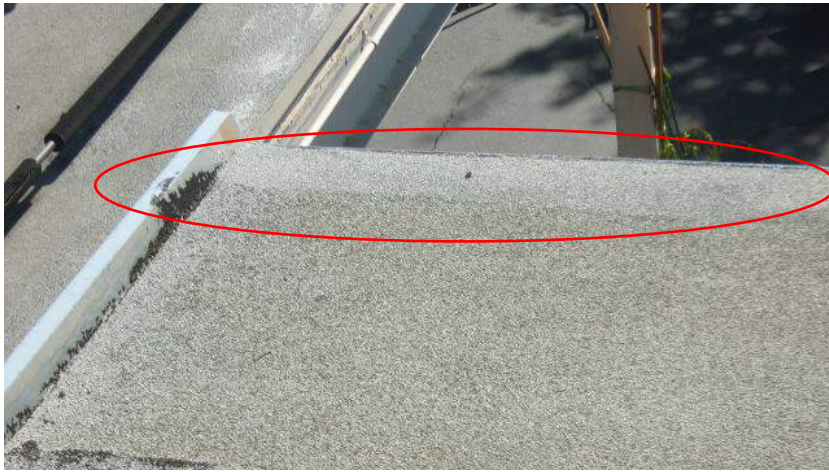
**Photo 44**

General Building 5/6 roof photos





**Photo 45**



**Photo 46**



**Photo 47**



**Photo 48**

Covered Walkways



**Photo 49**

Covered walkway roof areas were found to be in poor condition with moderate wear noted. Roof system restoration or replacement is recommended.



**Photo 50**





**Photo 51**



**Photo 52**



**Photo 53**



**Photo 54**






# Solution Options

**Client:** Mountain View/Los Altos High School District

**Facility:** Freestyle Academy

**Roof Section:** Roof Survey

## Replace Options

|                         |   |                             |      |
|-------------------------|---|-----------------------------|------|
| <b>Solution Option:</b> | Replace  | <b>Action Year:</b>         | 2017 |
| <b>Square Footage:</b>  | -   | <b>Expected Life Years:</b> | 30   |
| <b>Budget:</b>          | \$250,000.00  |                             |      |

Remove all roofing to the structural deck.  
Mechanically attach R-12 thermal insulation and cover board.  
Install modified bitumen roof with Title 24 approved finished surface.  
Replace all edge metal and gutters.

The Garland Company, Inc.

Roof Asset Management Program



Alta Vista High School

8-15-2016

Prepared By  
Jay Mulligan

Prepared For  
Jay Mulligan



Table of Contents

*Alta Vista High School / Facility Summary* ..... 3

*Alta Vista High School / Roof Survey / Construction Details* ..... 4

*Alta Vista High School / Roof Survey / Roof Section Photo* ..... 5

*Alta Vista High School / Roof Survey / Inspection: Aug 6, 2016* ..... 6

*Alta Vista High School / Roof Survey / Photo Report: Jul 29, 2016* ..... 8

*Alta Vista High School / Roof Survey / Solution: Aug 15, 2016* ..... 34



# Facility Summary

**Client:** Mountain View/Los Altos High School District

**Facility:** Alta Vista High School

## Facility Data

|                  |                  |
|------------------|------------------|
| Address 1        | 1325 Bryant Ave. |
| Address 2        | -                |
| City             | Mountain View    |
| State            | -                |
| ZIP              | 94040            |
| Type of Facility | School           |

## Asset Information

| Name        | Date Installed | Square Footage | Roof Access   |
|-------------|----------------|----------------|---------------|
| Roof Survey |                | -              | Ladder Needed |





# Construction Details

**Client:** Mountain View/Los Altos High School District

**Facility:** Alta Vista High School

**Roof Section:** Roof Survey

## Information

|                 |               |                |       |
|-----------------|---------------|----------------|-------|
| Year Installed  | -             | Square Footage | -     |
| Slope Dimension | -             | Eave Height    | -     |
| Roof Access     | Ladder Needed | System Type    | Metal |

## Assembly

| Roof # | Layer Type | Description | Attachment            | R-Value | Thickness |
|--------|------------|-------------|-----------------------|---------|-----------|
| 1      | Metal      | Aluminum    | Mechanically attached | -       | -         |

## Details

|                   |               |
|-------------------|---------------|
| Perimeter Detail  | Parapet Wall  |
| Flashing Material | Metal         |
| Drain System      | Gutter System |







# Inspection Report

**Client:** Mountain View/Los Altos High School District

**Facility:** Alta Vista High School

**Report Date:** 08/06/2016

**Roof Section:** Roof Survey

## Inspection Information

|                 |                   |           |    |
|-----------------|-------------------|-----------|----|
| Inspection Date | 08/06/2016        | Core Data | No |
| Inspection Type | Visual Inspection | Leakage   | No |
| Deck Conditions | Good              |           |    |

## Flashing Conditions

|             |      |                 |      |
|-------------|------|-----------------|------|
| Perimeter   | Good | Wall            | Fair |
| Projections | Good | Counterflashing | Good |

## Miscellaneous Details

|                          |      |               |      |
|--------------------------|------|---------------|------|
| Reglets                  | -    | Debris        | No   |
| Control Expansion Joints | -    | Ponding Water | None |
| Parapet Wall             | Good | Coping Joints | Good |

## Perimeter

|           |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

## Field

|           |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

## Penetrations

|           |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

| Drainage  |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

| Other     |   |
|-----------|---|
| Rating    | Fair  |
| Condition | Building M<br>Signs of a compromised wall cap membrane noted at the single ply parapet wall area.<br>Corrections are recommended. |

| Overall   |      |
|-----------|------|
| Rating    | Good |
| Condition |      |





# Photo Report

**Client:** Mountain View/Los Altos High School District

**Facility:** Alta Vista High School

**Report Date:** 07/29/2016

**Roof Section:** Roof Survey



**Photo 1**

Alta Vista HS Roof Survey



**Photo 2**

Building A



**Photo 3**

Metal roof panels at building A were found to be in good condition.



**Photo 4**



**Photo 5**

Debris build-up noted in the face mounted gutters. Gutter cleaning is recommended.





**Photo 6**



**Photo 7**

General building A Roof photos



**Photo 8**



**Photo 9**



**Photo 10**



**Photo 11**





**Photo 12**



**Photo 13**



**Photo 14**

Building C



**Photo 15**

Building C roof panels were found to be in good condition.



**Photo 16**



**Photo 17**

Tree debris noted in the face mounted gutter system. Gutter cleaning is recommended.





**Photo 18**

Recommend trimming trees away from the roof/structure.



**Photo 19**

Signs of leakage noted at the gutter seam joints. Gutter seam joint re-sealing is recommended. (Check all)



**Photo 20**

General Building C roof photos



**Photo 21**



**Photo 22**



**Photo 23**





**Photo 24**



**Photo 25**



**Photo 26**

Building D



**Photo 27**

Building D roof panels were found to be in good condition.



**Photo 28**

Signs of leakage noted at the gutter seams. Gutter seam re-sealing is recommended. (Check all)



**Photo 29**

Debris noted in the face mounted gutters. Gutter cleaning is recommended.





**Photo 30**

General Building D roof photos



**Photo 31**



**Photo 32**



**Photo 33**



**Photo 34**



**Photo 35**





**Photo 36**



**Photo 37**



**Photo 38**

Building E



**Photo 39**

Signs of leakage noted at the face mounted gutter joints. Gutter joint re-sealing is recommended. (Check all)



**Photo 40**



**Photo 41**

The Building E roof panels were found to be in serviceable condition.





**Photo 42**

Debris noted in the face mounted gutters. Gutter cleaning is recommended.



**Photo 43**

Recommend trimming trees away from the roof/structure.



**Photo 44**

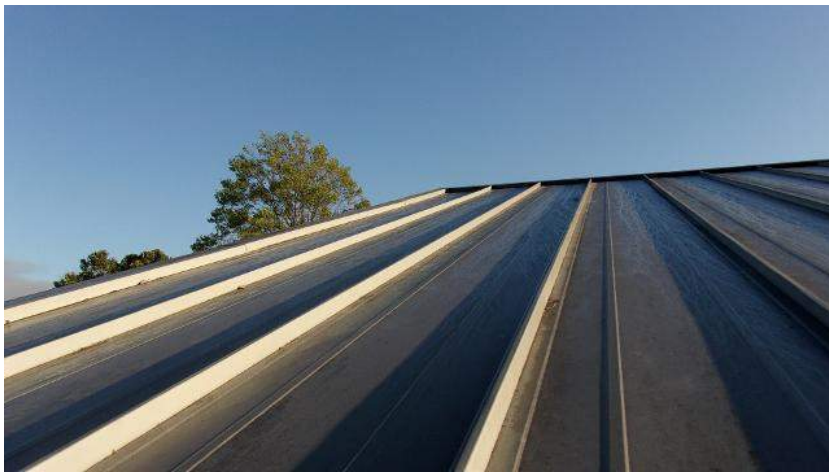
General Building E roof photos



**Photo 45**



**Photo 46**



**Photo 47**





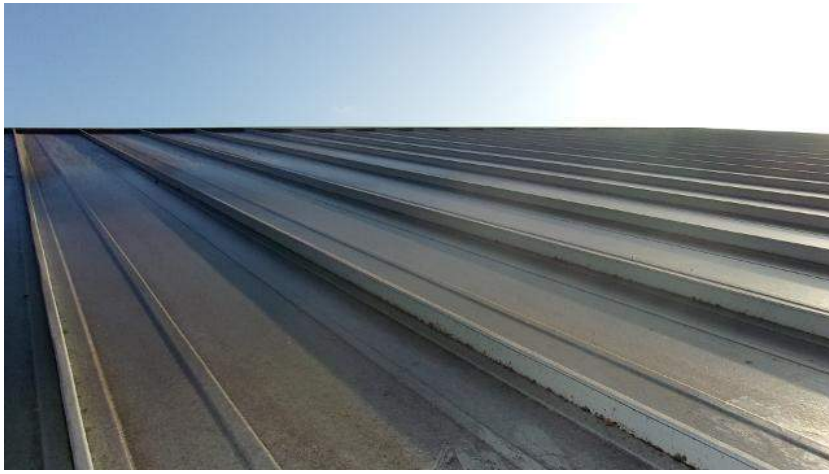
**Photo 48**



**Photo 49**



**Photo 50**



**Photo 51**



**Photo 52**



**Photo 53**

Building M





**Photo 54**

The metal roof panels at Building M were found to be in good condition.



**Photo 55**

Moss growth noted at the roof valleys. Cleaning/treatment is recommended.



**Photo 56**

General Building M metal roof photos



**Photo 57**



**Photo 58**



**Photo 59**





**Photo 60**



**Photo 61**



**Photo 62**



**Photo 63**



**Photo 64**



**Photo 65**





**Photo 66**



**Photo 67**



**Photo 68**



**Photo 69**



**Photo 70**



**Photo 71**





**Photo 72**

Building M Single Ply



**Photo 73**

Mastic/adhesive is running down the parapet wall area. A compromised wall cap may be present under the wall cap. Corrections are recommended.



**Photo 74**



**Photo 75**

Recommend clearing tree debris from the flat roof/drain areas.



**Photo 76**






# Solution Options

**Client:** Mountain View/Los Altos High School District

**Facility:** Alta Vista High School

**Roof Section:** Roof Survey

## Repair Options

|   |  |                      |      |
|---|--|----------------------|------|
| Solution Option:  | Repair  | Action Year:         | 2017 |
| Square Footage:   | -  | Expected Life Years: | 20   |
| Budget Range:   | \$4,000.00 - \$10,000.00   |                      |      |
| Clean gutters. Reseal leaking sections of gutter.<br>Cut back trees.<br>Install gutter screens. |  |                      |      |

The Garland Company, Inc.

Roof Asset Management Program



Adult Education

8-15-2016

---

Prepared By  
Jay Mulligan

Prepared For  
Jay Mulligan



Table of Contents

*MVLA Adult Education Center / Facility Summary* ..... 3

*MVLA Adult Education Center / Roof Survey / Construction Details* ..... 4

*MVLA Adult Education Center / Roof Survey / Roof Section Photo* ..... 5

*MVLA Adult Education Center / Roof Survey / Inspection: Aug 6, 2016* ..... 6

*MVLA Adult Education Center / Roof Survey / Photo Report: Jul 29, 2016* ..... 8

*MVLA Adult Education Center / Roof Survey / Solution: Aug 15, 2016* ..... 26



# Facility Summary

**Client:** Mountain View/Los Altos High School District

**Facility:** MVLA Adult Education Center



## Facility Data

|                  |                   |
|------------------|-------------------|
| Address 1        | 333 Moffett Blvd. |
| Address 2        | -                 |
| City             | Mountain View     |
| State            | -                 |
| ZIP              | 94043             |
| Type of Facility | School            |

## Asset Information

| Name        | Date Installed | Square Footage | Roof Access         |
|-------------|----------------|----------------|---------------------|
| Roof Survey |                | -              | Internal Roof Hatch |





# Construction Details

**Client:** Mountain View/Los Altos High School District

**Facility:** MVLA Adult Education Center

**Roof Section:** Roof Survey

## Information

|                 |                     |                |                  |
|-----------------|---------------------|----------------|------------------|
| Year Installed  | ~ 2000?             | Square Footage | -                |
| Slope Dimension | ~ 1/4" per 12"      | Eave Height    | -                |
| Roof Access     | Internal Roof Hatch | System Type    | Modified Bitumen |

## Assembly

| Roof # | Layer Type | Description | Attachment  | R-Value | Thickness |
|--------|------------|-------------|-------------|---------|-----------|
| 1      | Membrane   |             | Hot asphalt | -       | -         |

## Details

|                   |                      |
|-------------------|----------------------|
| Flashing Material | Modified Membrane    |
| Drain System      | Internal Roof Drains |
| Parapet Wall      | Stucco               |

## Inventory

| Inventory Type | Quantity |
|----------------|----------|
| HVAC           | 1        |







# Inspection Report

**Client:** Mountain View/Los Altos High School District

**Facility:** MVLA Adult Education Center

**Report Date:** 08/06/2016

**Roof Section:** Roof Survey

## Inspection Information

|                 |                   |           |    |
|-----------------|-------------------|-----------|----|
| Inspection Date | 08/06/2016        | Core Data | No |
| Inspection Type | Visual Inspection | Leakage   | No |
| Deck Conditions | Good              |           |    |

## Flashing Conditions

|             |      |                 |      |
|-------------|------|-----------------|------|
| Perimeter   | Good | Wall            | Good |
| Projections | Good | Counterflashing | Good |

## Miscellaneous Details

|                          |      |               |       |
|--------------------------|------|---------------|-------|
| Reglets                  | -    | Debris        | Yes   |
| Control Expansion Joints | -    | Ponding Water | Minor |
| Parapet Wall             | Good | Coping Joints | -     |

## Perimeter

|           |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

## Field

|           |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

## Penetrations

|           |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

| Drainage  |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

| Other     |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

| Overall   |      |
|-----------|------|
| Rating    | Good |
| Condition |      |





# Photo Report

**Client:** Mountain View/Los Altos High School District

**Facility:** MVLA Adult Education Center

**Report Date:** 07/29/2016

**Roof Section:** Roof Survey



**Photo 1**

MVLA Adult Education Center Roof Survey



**Photo 2**

Overall, the roof area was found to be in good condition.



**Photo 3**

Small cap sheet blisters were noted. (Approx 10) Blister repairs are recommended.



**Photo 4**



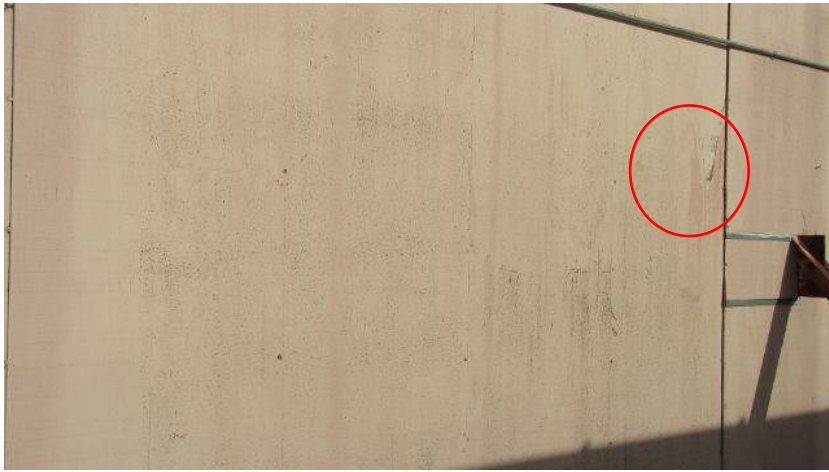
**Photo 5**

Small cracks noted at the upper stucco walls. Sealant/paint work is recommended.





**Photo 6**



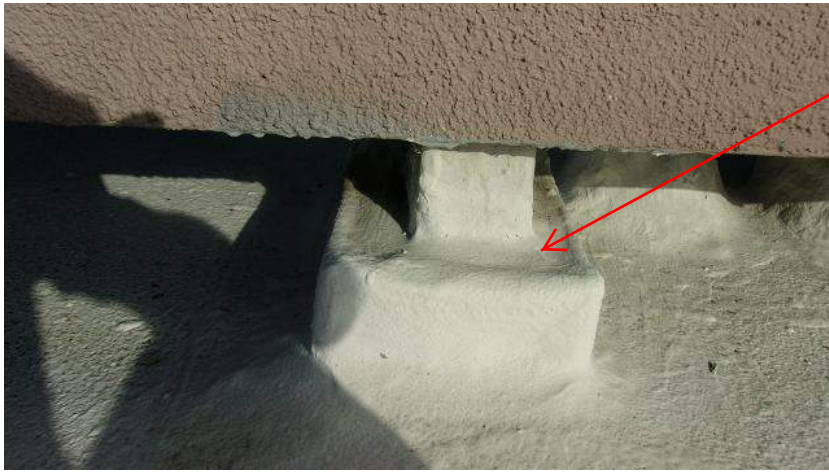
**Photo 7**

Wear/weathering noted at the upper mechanical area wall panels. General maintenance repairs/sealant work is recommended.



**Photo 8**

Plywood on the inside of the screenwall needs to be painted.



**Photo 9**

Recommend crowning roof area pitch pockets with mastic.



**Photo 10**

Recommend clearing tree debris from the roof/drain areas.



**Photo 11**

Recommend installing support pads under the satellite dish frame to help protect the roofing material.





**Photo 12**

General roof area photos



**Photo 13**



**Photo 14**

Some minor ponding on roof which should be corrected to get maximum longevity out of roof.



**Photo 15**

Gas line supports properly spaced.

Additional one needed at elbow in pipe.



**Photo 16**



**Photo 17**





**Photo 18**



**Photo 19**



**Photo 20**

Wall coping appears in good condition.



**Photo 21**



**Photo 22**



**Photo 23**





**Photo 24**

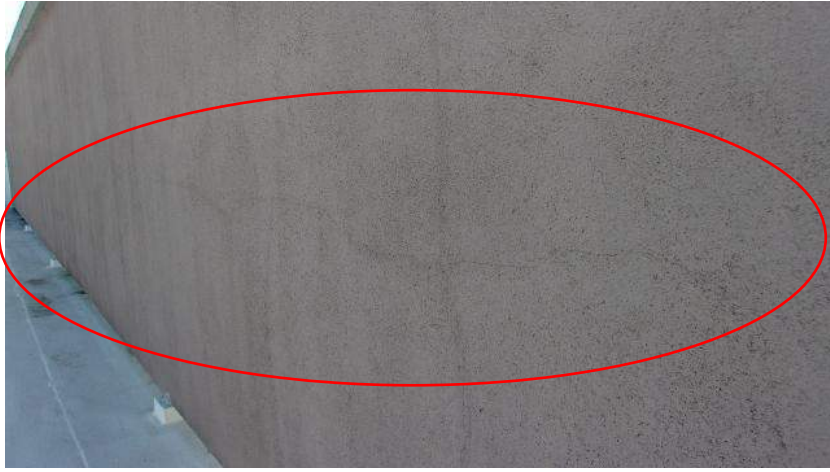


**Photo 25**

Some cracks in the stucco wall.



**Photo 26**



**Photo 27**

Some cracks in stucco screen wall.



**Photo 28**



**Photo 29**





**Photo 30**



**Photo 31**



**Photo 32**



**Photo 33**

Steel wall supports showing rust. Wire brush and coat with rust inhibitive paint.



**Photo 34**



**Photo 35**





**Photo 36**



**Photo 37**



**Photo 38**



**Photo 39**



**Photo 40**

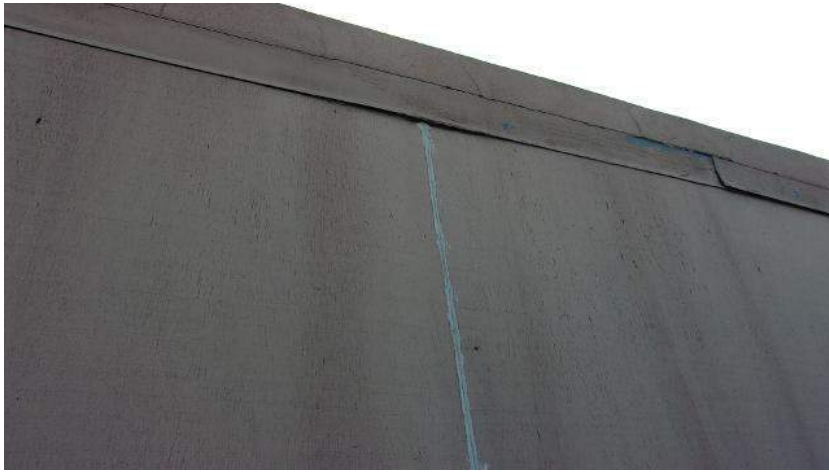


**Photo 41**





**Photo 42**



**Photo 43**



**Photo 44**



**Photo 45**

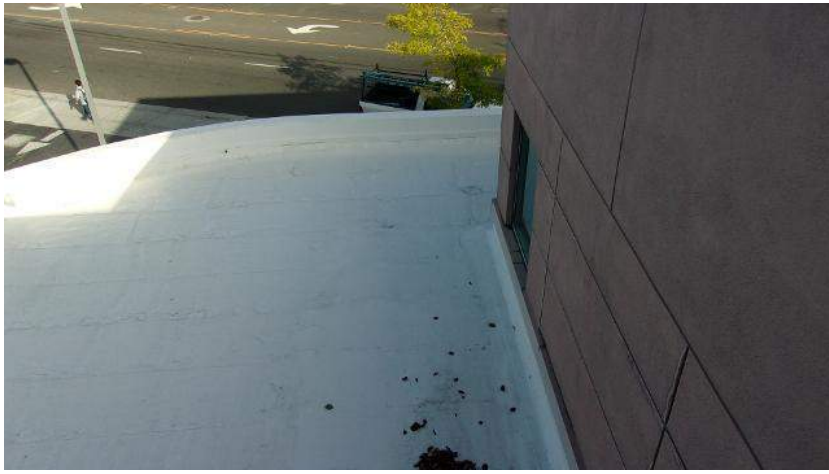


**Photo 46**



**Photo 47**





**Photo 48**



**Photo 49**



**Photo 50**



**Photo 51**






# Solution Options

**Client:** Mountain View/Los Altos High School District

**Facility:** MVLA Adult Education Center

**Roof Section:** Roof Survey

## Repair Options

|   |  |                      |      |
|---|--|----------------------|------|
| Solution Option:  | Repair  | Action Year:         | 2017 |
| Square Footage:   | -  | Expected Life Years: | 15   |
| Budget Range:   | \$5,000.00 - \$10,000.00   |                      |      |
| Clean roof, repair blisters and small ponding areas. Coat any areas of delaminated coating. |  |                      |      |

The Garland Company, Inc.

Roof Asset Management Program



District Office

8-15-2016

Prepared By  
Jay Mulligan

Prepared For  
Jay Mulligan



Table of Contents

*MVLA District Office / Facility Summary* .....3

*MVLA District Office / Roof Survey / Construction Details* .....4

*MVLA District Office / Roof Survey / Roof Section Photo* .....5

*MVLA District Office / Roof Survey / Inspection: Jul 28, 2016* .....6

*MVLA District Office / Roof Survey / Photo Report: Jul 28, 2016* .....8

*MVLA District Office / Roof Survey / Solution: Aug 15, 2016* .....24



# Facility Summary

**Client:** Mountain View/Los Altos High School District

**Facility:** MVLA District Office



## Facility Data

|                  |                  |
|------------------|------------------|
| Address 1        | 1325 Bryant Ave. |
| Address 2        | -                |
| City             | Mountain View    |
| State            | -                |
| ZIP              | 94040            |
| Type of Facility | District Office  |

## Asset Information

| Name        | Date Installed | Square Footage | Roof Access         |
|-------------|----------------|----------------|---------------------|
| Roof Survey | 2000?          | -              | Internal Roof Hatch |





# Construction Details

**Client:** Mountain View/Los Altos High School District

**Facility:** MVLA District Office

**Roof Section:** Roof Survey

## Information

|                        |                     |                       |                  |
|------------------------|---------------------|-----------------------|------------------|
| <b>Year Installed</b>  | 2000?               | <b>Square Footage</b> | -                |
| <b>Slope Dimension</b> | 1/4" per 12"        | <b>Eave Height</b>    | 20'              |
| <b>Roof Access</b>     | Internal Roof Hatch | <b>System Type</b>    | Modified Bitumen |

## Assembly

| Roof # | Layer Type | Description | Attachment            | R-Value | Thickness |
|--------|------------|-------------|-----------------------|---------|-----------|
| 1      | Shingles   | Wood Shake  | Mechanically attached | -       | -         |

## Details

|                          |                                     |
|--------------------------|-------------------------------------|
| <b>Flashing Material</b> | Modified Membrane, Metal            |
| <b>Drain System</b>      | Internal Roof Drains, Gutter System |
| <b>Parapet Wall</b>      | Wood                                |
| <b>Coping Cap</b>        | Metal                               |







# Inspection Report

**Client:** Mountain View/Los Altos High School District

**Facility:** MVLA District Office

**Report Date:** 07/28/2016

**Roof Section:** Roof Survey

## Inspection Information

|                 |                   |           |    |
|-----------------|-------------------|-----------|----|
| Inspection Date | 07/28/2016        | Core Data | No |
| Inspection Type | Visual Inspection | Leakage   | No |
| Deck Conditions | -                 |           |    |

## Flashing Conditions

|             |        |                 |        |
|-------------|--------|-----------------|--------|
| Perimeter   | - good | Wall            | - good |
| Projections | -      | Counterflashing | -      |

## Miscellaneous Details

|                          |   |               |    |
|--------------------------|---|---------------|----|
| Reglets                  | - | Debris        | No |
| Control Expansion Joints | - | Ponding Water | -  |
| Parapet Wall             | - | Coping Joints | -  |

## Perimeter

|           |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

## Field

|           |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

## Penetrations

|           |      |
|-----------|------|
| Rating    | Good |
| Condition |      |

| Drainage  |   |
|-----------|---|
| Rating    | Good                                      |
| Condition | Debris build-up noted at the roof drains. |

| Other     |   |
|-----------|---|
| Rating    | Fair  |
| Condition | Multiple damaged roof shingles are present. |

| Overall   |  |
|-----------|--|
| Rating    | Fair   |
| Condition | <p>The low slope modified bitumen is in good condition.</p> <p>The synthetic shakes are failing. This type of has a very poor track record and spontaneously fractures. Synthetic shakes should be replaced.</p> |





# Photo Report

**Client:** Mountain View/Los Altos High School District

**Facility:** MVLA District Office

**Report Date:** 07/28/2016

**Roof Section:** Roof Survey



**Photo 1**

MVLA District Office Roof Survey



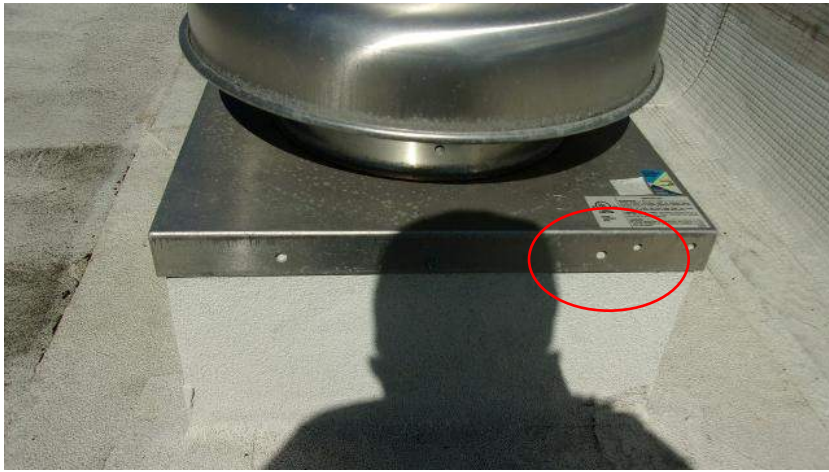
**Photo 2**

Overall, the BUR was found to be in good condition.



**Photo 3**

Tree debris noted at the roof area. Regular roof cleaning is recommended.



**Photo 4**

Unfastened curb caps are present. Stainless steel fasteners and neoprene washers should be installed. Two fasteners per side.



**Photo 5**

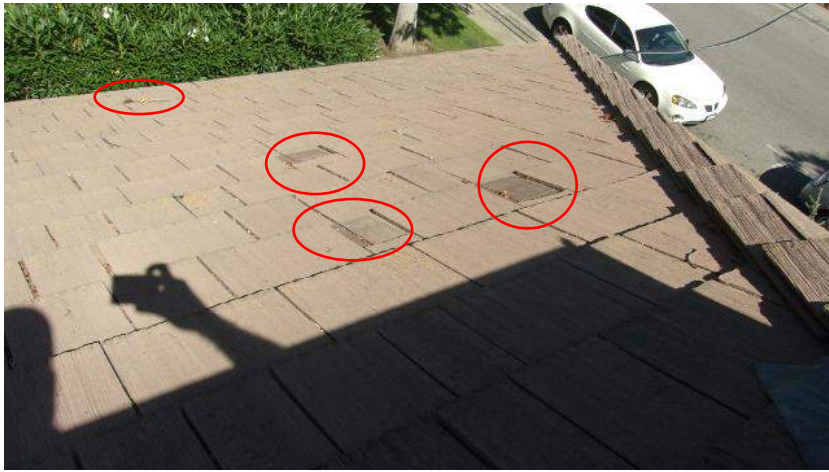
Sealant voids/weathering noted at wall mounted uni-strut brackets. Check all and seal as needed.





**Photo 6**

Damaged roof shingles are present.  
Corrections are recommended.

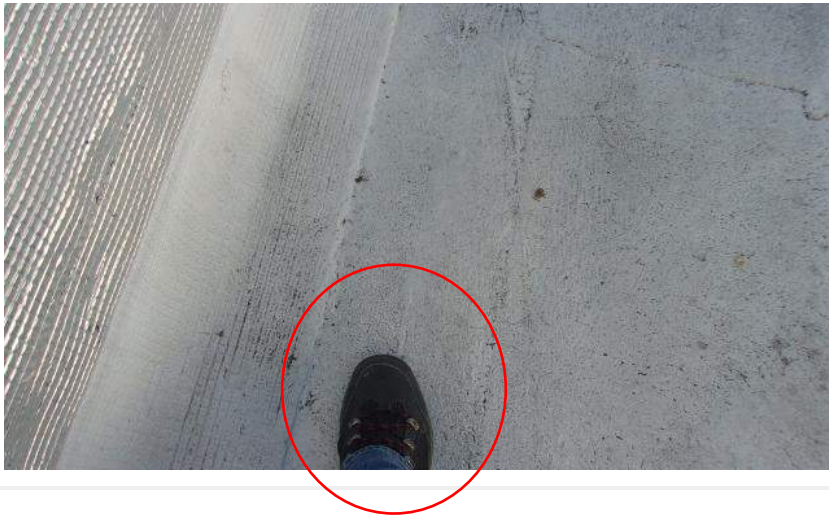


**Photo 7**



**Photo 8**

Minor damage noted at the wall/equipment  
flashing's. Check all and repair as needed.



**Photo 9**

Cap sheet blister noted at left flat roof area. Blister repair is recommended.



**Photo 10**

Disconnected condensate drain pipe noted. Corrections are recommended.



**Photo 11**

General flat roof area photos





**Photo 12**



**Photo 13**



**Photo 14**



**Photo 15**



**Photo 16**

Some ponding water on roof.



**Photo 17**





**Photo 18**



**Photo 19**



**Photo 20**

Ponding water at drains where debris builds up.



**Photo 21**



**Photo 22**



**Photo 23**





**Photo 24**



**Photo 25**



**Photo 26**



**Photo 27**



**Photo 28**



**Photo 29**





**Photo 30**

General attic area photos under synthetic shakes. Deck is skipped sheathing. Recommend going back with 1/2' plywood over entire deck.



**Photo 31**

Rafter spacing at about 24" O.C.



**Photo 32**

Deck below modified bitumen roof. Joists at about 24" O.C.



**Photo 33**



**Photo 34**

General shingle roof area photos



**Photo 35**

Shakes are starting to fail. Most of these products have been litigated out of the roofing market due to premature failure.





**Photo 36**



**Photo 37**



**Photo 38**



**Photo 39**



**Photo 40**



**Photo 41**





**Photo 42**



**Photo 43**



**Photo 44**



**Photo 45**





# Solution Options

**Client:** Mountain View/Los Altos High School District


**Facility:** MVLA District Office

**Roof Section:** Roof Survey

## Inspection Options

|   |            |                      |      |
|---|------------|----------------------|------|
| Solution Option:  | Inspection | Action Year:         | 2017 |
| Square Footage:   | -          | Expected Life Years: | 15   |
| Budget:   | \$5,000.00 |                      |      |
| Clean low slope modified bitumen roof and make repairs. |            |                      |      |

## Replace Options

|   |   |                             |      |
|---|---|-----------------------------|------|
| <b>Solution Option:</b>   | Replace  | <b>Action Year:</b>         | 2018 |
| <b>Square Footage:</b>  | -   | <b>Expected Life Years:</b> | 30   |
| <b>Budget:</b>  | \$215,000.00  |                             |      |
| <div>Remove all synthetic shake down to skipped sheathing.<br/>Mechanically attach 1/2" plywood over entire deck.<br/>Install underlayment.<br/>Install standing seam metal roof.<br/>Install new gutter and sheet metal.</div> |   |                             |      |