

**ROOF INSPECTION CONDUCTED ON:**

**CPS – DECATUR ELEMENTARY SCHOOL  
7030 N. SACRAMENTO AVENUE  
CHICAGO, ILLINOIS 60645**



**ROOF INSPECTION CONDUCTED ON:**

CPS – DECATUR ELEMENTARY SCHOOL  
7030 N. SACRAMENTO AVENUE  
CHICAGO, ILLINOIS 60645

**ROOF INSPECTION CONDUCTED FOR:**

MRS. JENNIE MILLER  
CHICAGO PUBLIC SCHOOLS  
42 WEST MADISON STREET  
CHICAGO, ILLINOIS 60602

**ROOF INSPECTION CONDUCTED BY:**

RRK ASSOCIATES, LTD.  
COMMERCIAL/INDUSTRIAL ROOF  
CONSULTANTS  
900 TRI-STATE PARKWAY, SUITE 800  
GURNEE, ILLINOIS 60031

GUY H. SNOWDEN JR.

**INSPECTION REPORT DATE:**

SEPTEMBER 26, 2018

## **RRK ASSOCIATES, LTD.**

**900 Tri-State Parkway, Suite 800, Gurnee, Illinois 60031  
Tel. (847) 856-8420 Fax (847) 856-8421  
[www.rrkassociates.net](http://www.rrkassociates.net)**

**Commercial/Industrial Roof Consultants**

September 26, 2018

Mrs. Jennie Miller  
Chicago Public Schools  
42 West Madison Street  
Chicago, Illinois 60602

Subject: Roof Inspection and Analysis  
Decatur Elementary School  
7030 N. Sacramento Avenue  
Chicago, Illinois 60645

Dear Mrs. Miller:

Per your request and authorization, a roof inspection and moisture survey was conducted on the four independent roof areas of the Decatur Elementary School located at 7030 N. Sacramento Avenue, Chicago, Illinois 60645. The roof inspection and moisture survey was conducted on September 11, 2018. The purpose of the roof inspection and moisture survey was to determine the roof composition on each roof area, determine the roofs general condition, determine the roofs remaining useful service life, and to determine the repair and replacement cost for each roof area based upon our findings.

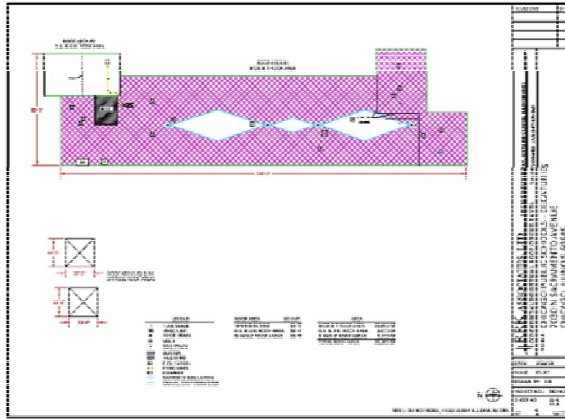
This school has (4) four independent roof areas comprising of both low sloped and steep sloped roofing assemblies on differing elevations. The approximate roof area for these four roof areas is 25,200 sf. Roof area #1 consists of a low sloped granule surfaced modified bitumen roof system, roof area #2 consists of a sloped gravel surfaced built-up roof system, and roof areas #3 and #4 consists of steep sloped three tabbed asphalt shingle systems.

The penetrations on roof areas #1 and #2 is typical consisting of raised roof curbs, soil stacks, gas and electrical penetrations, exhaust vents, and flue stacks. Perimeter detailing on roof areas #1 and #2 consisted of a metal gravel stop edge and at wall termination a surfaced mounted counter flashing detail. The penetrations on roof areas #3 and #4 consisted of passive roof vents and an electrical service penetration. The perimeter of roof area #3 and #4 consisted of a typical drip edge detail.

Drainage on roof area #1 was from the perimeter to the center of the roof to four internal roof drains and a gutter and downspout detail at the north courtyard area. Slope is estimated at  $\frac{1}{4}$ " per foot on roof area #1. The drainage of roof area #2 is good from the ridge of the roof to the north and south perimeters to gutter and downspout details. The slope of roof area #2 is estimated at 2.25" per foot. The drainage of roof area #3 and #4 is from the peak of the roof to the drip edge. No gutter or downspouts exists at the perimeter of roof areas #3 and #4. The slope of roof areas #3 and #4 is estimated at 4:12 pitch. The roof deck for roof areas #1 and #2 consisted of concrete decking and for roof areas #3 and #4 the decking is plywood.

The following is a summary of our findings based upon the building section and then by individual roof area in that specific section.

## Roof Areas 1 – Granule Surfaced Modified Bitumen



Granule Surfaced Modified Bitumen (Roof Area 1): 22,000 sf.

Roof Elevation: Roof Area 1: 13 ft.

Roof System: Granule Surfaced Modified Bitumen

Insulation: 1/2" Perlite over 3" Polyisocyanurate

Deck: Concrete

Flashings: Granular Surfaced Modified Bitumen

Estimated Age: 19+ Years Old

Service Life: 0 Years

The following are conditions noted on these roof areas that require attention or monitoring:

1. The field of the roof is showing signs of major deterioration of the surfaced. Granule loss and exposed reinforcement is common throughout the field of the roof. Splits are also common. Patches are also common throughout the field of the roof. Repairs will be required to address leaks as they occur until replaced.
2. At the portal details, splits are occurring at the penetration boots. Seal the boots with caulk where splits exist or occur until they can be replaced.
3. At the perimeter gravel stop edge of the roof, deteriorated flashings exist where the membrane is split and areas of reinforcement are exposed. Seal with roofing cement to prevent water entry until the roof is replaced.
4. Monitor existing roofing cement patches at curbs and penetrations and seal as needed until the roof is replaced.
5. Caulk maintenance is required at the counter flashing details at wall terminations.
6. At the flue stack details, caulk the top of the rain collar where the existing collar is exposed. Also, at the north end of the roof, the newer flue stack was flashed in with roofing cement only. This is not a proper flashing and will need to be monitored.
7. The flashings at most of the exhaust vent curbs are delaminated and failing. Seal the flashings with roofing cement as a temporary seal until the roofing is replaced.

8. It was noted at the soil stack details that the PVC sleeves that were used as extensions had gaps between the metal stack and PVC sleeve that will allow water entry. When the roof is replaced, the gap between the soil stack and PVC extension will need to be sealed and addressed.
9. Some soil stacks on the roof will need to be raised to meet the minimum 8" height requirement above the roof surface.
10. It was noted that the clamping ring bolts at all of the roof drains are either loose or missing. A plumber will need to install clamping ring bolts where missing and tighten all bolts where not secured.
11. There are two large exhaust vent hoods on this roof are all damaged and deteriorated. It is recommended to replace these two exhaust vents when the roofing is replaced. The vents have been poorly repaired with caulk and sheet metal in the past.
12. Several of the newer exhaust vents on this roof have curb adaptors that are rusting. The adaptors need to be wire brushed and painted to prevent further rusting.
13. Monitor the roofing at the mall elevation change in the roofing at the south end of the roof. Consideration to install a roof expansion joint at the elevation change is recommended when the roof is replaced.
14. Isolated open base flashing side laps noted at the perimeter. Seal with roofing cement as a temporary seal until the roof is replaced.

Based upon our inspection and moisture survey of roof area 1, the condition of this roof area is poor. This roof is past its useful service life and should be replaced in 2018. The field membrane and flashings are failing and repairs are common throughout the field of the roof and at flashing details. The moisture survey for this roof area indicates that approximately 11% or 2,400 sf. of the existing insulation has been compromised. A moisture reading of 38 or higher for the roof insulation is believed to contain moisture in excess of allowable limits. As noted in the attached photographs, the field membrane and flashings are showing signs of extensive failure and deterioration.

Until this roof is replaced, minimal repairs should be conducted to address roof leaks as they occur. Conducting extensive repairs to this roof will not extend the performance or service life of this roof. When the roof is replaced a full tear off to the concrete deck is recommended. As noted above, repairs to the drains, soil stacks, and some exhaust vents will also be required.

Cost of Preventative Maintenance 2018:	\$2,500	(High)
Cost of PM 2019-2022:	\$3,000	(Annually)
Replacement Budget 2018:	\$440,000	(High)

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #1**  
Overview of the roof facing south along the northeast corner of the roof.



**PHOTOGRAPH #2**  
View of the ridges and splits noted in the field of the roof.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #3**

View of the hairline splits occurring at the portal curb penetration boots. The boots will need to be replaced with the roofing. Until replaced, seal with caulk.



**PHOTOGRAPH #4**

View of the exposed and deteriorated membrane reinforcement at the perimeter gravel stop flashing. It appears the top layer of modified bitumen is failing

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #5**

View roofing cement repairs to an exhaust vent. Also, note that the electrical penetration has been improperly installed and was flashed in with roofing cement.



**PHOTOGRAPH #6**

Typical open caulk noted at one of the counter flashings at one of the wall terminations.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #7**

View of a flue stack where the flange has been improperly flashed in with roofing cement only. The rain collar also needs to be sealed with caulk.



**PHOTOGRAPH #8**

View of one of the large exhaust vents where the curb height is low and where the existing flashings are falling. Note the roofing cement repairs to the corners which is a temporary repair.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #9**

View of the exposed membrane reinforcement along one of the field side laps. Failure of the membrane is occurring.



**PHOTOGRAPH #10**

View of the inside of one of the soil stack details where a PVC sleeve was installed over the cast iron stack. A gap exists at the transition between the cast iron and PVC where water entry is possible.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #11**

View of a low soil stack that needs to be raised. Also, note the roofing cement patches at the exhaust vent curb.



**PHOTOGRAPH #12**

View of a roof drain where the clamping ring bolts are note secured. There is no compression occurring at the drain to prevent water from backflowing.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #13**

Typical repairs to the field membrane side and end laps. This is common throughout the field of the roof.



**PHOTOGRAPH #14**

Additional noted repairs to the field membrane. The membrane is splitting and failing.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #15**

View of noted repairs to the field membrane, curb flashings, and the caulk repairs to the vent curb hood.



**PHOTOGRAPH #16**

View of another roof drain where the clamping ring bolts are noted secured.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #17**

View of rusting of the exhaust vent curb adaptor. It is recommended to wire brush and coat with a rust inhibiting paint.



**PHOTOGRAPH #18**

View of an exhaust vent where the hood has been previously repaired with roofing cement which is not appropriate. Note the past repairs to the curb corner with roofing cement also.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #19**

Another roof drain where the clamping ring bolts are noted secured or tightened down.



**PHOTOGRAPH #20**

View of the large patch noted at the roof elevation change at the far south end of the roof. Note that the edges of the patch have been sealed with roofing cement which is a temporary repair.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #21**

View of a noted open flashing side lap at the perimeter of the roof.



**PHOTOGRAPH #22**

View of a deteriorated and cracked surface of the field membrane. This condition was common throughout the field of the roof.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #23**

Another view of the deteriorated and cracked surface of the field membrane. Note that the reinforcement is exposed.



**PHOTOGRAPH #24**

Another view of the past repairs conducted in the field of the roof. Note this recent repair was conducted to address a split in the membrane.

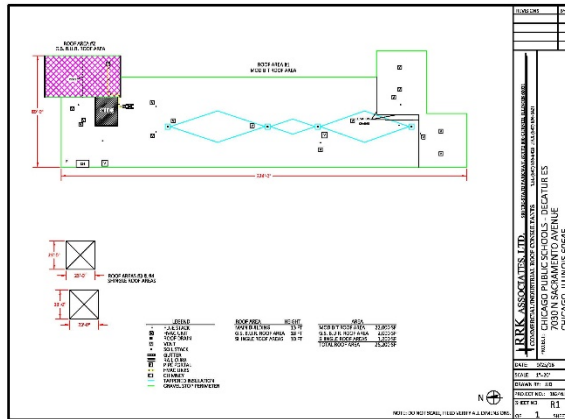
**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 1 – Main Roof (Modified Bitumen))**



**PHOTOGRAPH #25**

View of another exhaust vent where roofing cement repairs were noted. Also, the flashings at the curb were not installed or detailed properly.

## Roof Area 2 – Gravel Surfaced Built-Up Roof



Gravel Surfaced Asphalt Built-Up Roof (Roof Area 2): 2,000 sf.

Roof Elevations: Roof Area 2: 18 ft.

Roof System: Gravel Surfaced Asphalt Built-Up Roof  
 Insulation: ½" Perlite over 3" Polyisocyanurate  
 Deck: Concrete  
 Flashings: Granule Surfaced Modified Bitumen

Estimated Age: 19+ Years Old  
 Service Life: 4-5 Years

The following are conditions noted on these roof areas that require attention or monitoring:

1. Cover all areas of exposed membrane with gravel set into a solid bead of cold adhesive. This was common at the ridge of the roof and perimeter edges.
2. Seal the penetration boots at the portal cap detail where splits or cracks are occurring with NP-1 caulk.
3. At the gutter and gravel stop edge of the roof where the gravel stop and gutter flange has been flashed in with modified bitumen like on roof area #1, repair the deteriorated areas of flashing with a minimum three course of roofing cement and fabric. It is recommended to cover all exposed modified bitumen flashings at the gutter and gravel stop edges with gravel set into a solid bed of cold adhesive to protect from UV exposure.
4. Clear the gutters of all gravel and debris.
5. Minor rusting of the gutters was noted. Replacement of the gutters will be required when this roof area is replaced in 4-5 years.

Based upon our inspection and moisture survey of roof area 2 this roof is on fair condition and performing as expected for a built-up roof that is 19+ years old. Pending the recommendations and issues listed above are conducted, this roof should provide an additional 4-5 years of service life. The one item that will need to be monitored is the modified bitumen flashings used to flash in the gutter and gravel stop details on this roof.

The modified bitumen flashing membrane is the same as the modified bitumen membrane on roof area #1 that is currently failing. If the perimeter flashings are covered with gravel set into a solid bed of cold adhesive, the existing flashings should last 4-5 years.

Moisture readings on this roof did not indicate the presence of wet insulation on this roof area.

Cost of Preventative Maintenance 2018:	\$3,000	( <b>Medium</b> )
Cost of PM 2019-2022:	\$6,750	(Annually)
Replacement Budget 2024:	\$40,000	( <b>Medium</b> )

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 2 – Gravel Built-Up)**



**PHOTOGRAPH #1**  
View of the north section of the roof area facing northwest.



**PHOTOGRAPH #2**  
View of the south portion of the roof area facing southwest.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 2 – Gravel Built-Up)**



**PHOTOGRAPH #3**

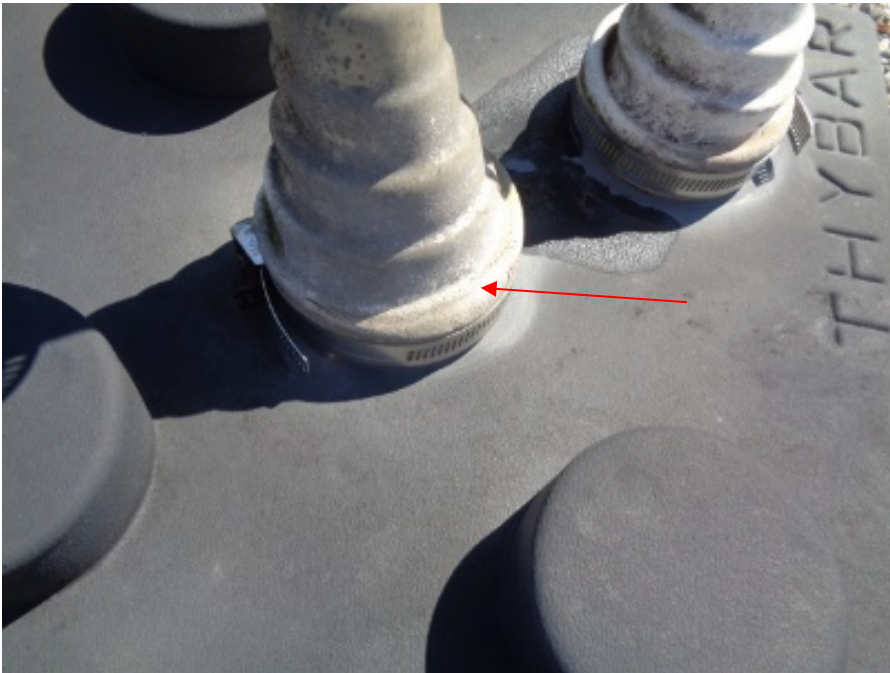
View of the noted exposed and deteriorated membrane noted at the ridge of the roof. This area of roofing needs to be covered with gravel set into a solid bed of cold adhesive.



**PHOTOGRAPH #4**

Another view of the exposed reinforcement of the roofing membrane at the ridge of the roof. Cover the areas of exposed membrane with gravel set into a solid bed of cold adhesive to protect from UV exposure and deterioration.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 2 – Gravel Built-Up)**



**PHOTOGRAPH #5**

View of hair line splits occurring at the portal curb penetration boots. Replacement of the boots is required. Until replaced, seal with caulk.



**PHOTOGRAPH #6**

Noted exposed reinforcement of the modified bitumen membrane at the gutter edge of the roof. Repair with like modified bitumen membrane.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 2 – Gravel Built-Up)**



**PHOTOGRAPH #7**

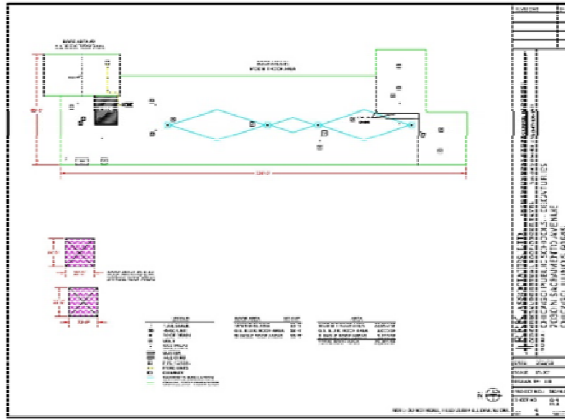
View of the gutter detail of the sloped roof area. Clear the gutter of all gravel and debris.



**PHOTOGRAPH #8**

View of surface rusting noted inside of the gutter and downspout. Recommend addressing the rust with a rust inhibiting paint.

### **Roof Area 3 & 4 – Three Tab Asphalt Shingle**



Asphalt Three Tab Shingle (Roof Area 3 & 4): 1,200 sf.

Roof Elevations:      Roof Area 3 & 4:      10 ft.

Roof System: Three Tab Asphalt Shingle

Insulation: N/A

Deck: Plywood

Flashings: None

Estimated Age: 18+ Years Old

Service Life: 0-1 Years

The following are conditions noted on these roof areas that require attention or monitoring:

1. Replace any missing or damaged shingles in the field of each roof and at the hips with new like shingles.
2. Seal the rubber boot at the electrical penetration at the east garage roof area with caulk until it is replaced.
3. At the east most garage roof, cover the exposed area of decking at the drip edge of the roof with new underlayment and shingles until the roof can be replaced. Approximately 2 lf. of deck is exposed.
4. The passive roof vents on both roof areas is damaged and crushed. Replacement of the vents is recommended when the shingles are replaced.
5. The past repairs to the areas of missing shingles is poor. The installing roofer did not tie in shingles properly and exposed nail heads are common. If the shingles are not schedule for replacement in 2019, the exposed nails will need to be sealed with caulk at a minimum.

Based upon our inspection of roof areas 3 &4, these shingles are in poor condition and require replacement in 0-1 years. Minimal repairs to address missing shingles and exposed areas of decking is all that should be conducted until these roofs are replaced. Past repairs to these two roof areas has been poorly conducted. When these roofs are

replaced, it is recommended to install an architectural laminated shingle to provide a service life that will exceed 20 years.

Cost of Preventative Maintenance 2018:	\$1,000	( <b>Medium</b> )
Cost of PM 2019-2022:	\$0	(Annually)
Replacement Budget 2019:	\$7,200	( <b>Medium</b> )

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 3 & 4 – Garage - Asphalt Shingle)**



**PHOTOGRAPH #1**  
View of the west most garage.



**PHOTOGRAPH #2**  
View of past repairs to the west side of the west garage. Note the shingles do not match and exposed nails are common.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 3 & 4 – Garage - Asphalt Shingle)**



**PHOTOGRAPH #3**  
More exposed nails at the hip of the roof.



**PHOTOGRAPH #4**  
More exposed nails at the repair areas.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 3 & 4 – Garage - Asphalt Shingle)**



**PHOTOGRAPH #5**  
More exposed nails at the repair area.



**PHOTOGRAPH #6**  
View of the one of the passive roof vents that show hail impacts and denting.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 3 & 4 – Garage - Asphalt Shingle)**



**PHOTOGRAPH #7**  
View of the east garage roof area.



**PHOTOGRAPH #8**  
View of the dented and damaged passive vents on the east garage roof area.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 3 & 4 – Garage - Asphalt Shingle)**



**PHOTOGRAPH #9**

View of the surface condition of the shingles of the east roof area. The shingles are showing signs of cracking.



**PHOTOGRAPH #10**

View of a hip shingle that is damaged.

**PHOTOGRAPHIC EXHIBITS / CPS – DECATUR ES**  
**7030 N. SACRAMENTO AVENUE**  
**CHICAGO, ILLINOIS 60645**  
**(Roof 3 & 4 – Garage - Asphalt Shingle)**



**PHOTOGRAPH #11**

View of the split rubber boot at the electrical penetration at the west side of the east roof area.



**PHOTOGRAPH #12**

View of missing shingles and exposed decking at the west side of the east garage. New base sheet and shingles need to be installed. Note the past shingle repair was poorly conducted and exposed nails exist.

Based upon our inspection and moisture survey of the roofs located at Decatur Elementary School, the overall condition of roofs 1, 3 & 4 are considered to be in poor condition and at the end of their useful service life. Roof area 2 is considered in fair condition with a service life of 4-5 years estimated with regular inspection and maintenance.

In regards to roof area #1, due to the roofs condition and the fact the insulation has been compromised, replacement is recommended in 2018. For roof areas 3 and 4 replacement is recommended in 2019 as the garages are not over a critical space and could be repaired as need at minimal cost to address leaks as they occur.

Until the roofs are replaced, minimal preventative maintenance repairs should be conducted on roof areas 1, 3 and 4 to keep the roofs watertight. More extensive repairs are suggested for roof area 2 as this roof still has an estimated service life of 4-5 years remaining.

The estimated replacement and preventive maintenance budget for this school over the next 5 years is \$457,950.

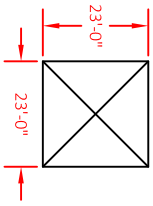
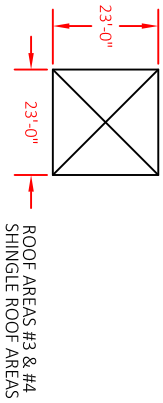
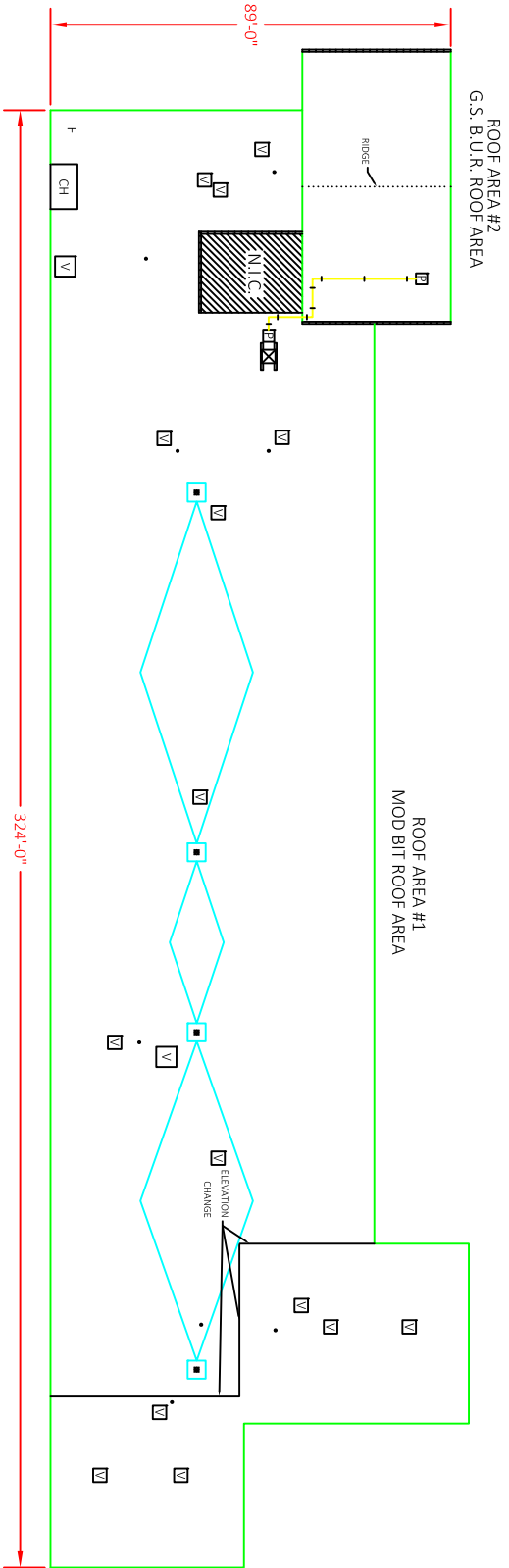
Should you have any questions regarding the findings in this report, please contact our office directly.

Report Submitted By:



Guy H. Snowden Jr.  
Principal  
RRK Associates, Ltd.  
Commercial/Industrial Roof Consultants

Attachment: Roof Plan  
Roof Capital Expense Summary Spread Sheet  
Photographic Exhibits  
Moisture Scan Data



LEGEND	
F	FLUE STACK
⊠	HVAC UNIT
⊠	ROOF DRAIN
•	VENT
•	SOIL STACK
—	GUTTER
—	RAIL CURB
—	PIPE PORTAL
—	HVAC LINES
—	CHIMNEY
—	TAPERED INSULATION
—	GRAVEL STOP PERIMETER

ROOF AREA	HEIGHT	AREA
MAIN BUILDING	13 FT	MOD BIT ROOF AREA 22,000 SF
G.S. B.U.R. ROOF AREA	18 FT	G.S. B.U.R. ROOF AREA 2,000 SF
SHINGLE ROOF AREAS	10 FT	SHINGLE ROOF AREAS 1,200 SF
		TOTAL ROOF AREA 25,200 SF

NOTE: DO NOT SCALE, FIELD VERIFY ALL DIMENSIONS.



**RRK ASSOCIATES, LTD.**

900 TRI-STATE PARKWAY, SUITE 800 GURNEE, ILLINOIS 60031

COMMERCIAL/INDUSTRIAL ROOF CONSULTANTS

TEL (847) 856-8420 FAX (847) 856-8421

PROJECT: CHICAGO PUBLIC SCHOOLS - DECATUR ES  
7030 N SACRAMENTO AVENUE  
CHICAGO, ILLINOIS 60645

REVISIONS

BY

DATE: 9/25/18

SCALE: 1"=20'

DRAWN BY: JJD

PROJECT NO.: 18246.06

SHEET NO. R1

OF 1 SHEETS

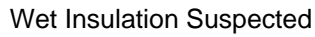
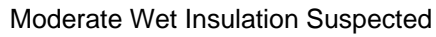
Decature Elementary School - Capital Expense  
7030 N. Sacramento Avenue, Chicago, Illinois 60645

ROOF REPLACEMENT BUDGET											
Roof Section ID	Activity Type	Allocation	Urgency	(Budget Amount) Replacement	Roof Area (sf.)	Estimated Age	Roof System	Insulation	Deck	Service Life	Replacement Year
Roof Area 1	Replacement	Capital	High	\$440,000	22,000	19+ Years Old	Granule Surfaced Modified Bitumen	1/2" Perliter over 3" Polyisocyanurate	Concrete	0 Years	2018
Roof Area 2	Replacement	Capital	Medium	\$40,000	2,000	19+ Years Old	Gravel Surfaced Built-Up Roof	1/2" Perliter over 3" Polyisocyanurate	Concrete	4-5 Years	2024
Roof Area 3 &4	Replacement	Capital	Medium	\$7,200	1,200	18+ Years Old	Three Tab Asphalt Shingles	N/A	Unknown	1 Year	2019
				487,200	25,200						

PREVENTATIVE MAINTENACE BUDGET											
Roof Section ID	Activity Type	Allocation	PM Budget 2018	(Budget Amount) Maintenance (2018)	Roof Area (sf.)	Estimated Age	Roof System	Insulation	Deck	Service Life	
Roof Area 1	Repair	Expense	High	\$2,500	22,000	19+ Years Old	Granule Surfaced Modified Bitumen	1/2" Perliter over 3" Polyisocyanurate	Concrete	0 Years	
Roof Area 2	Repair	Expense	Medium	\$3,000	2,000	19+ Years Old	Gravel Surfaced Built-Up Roof	1/2" Perliter over 3" Polyisocyanurate	Concrete	4-5 Years	
Roof Area 3 &4	Repair	Expense	Medium	\$1,000	1,200	18+ Years Old	Three Tab Asphalt Shingles	N/A	Unknown	1 Year	
				\$6,500							

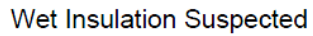
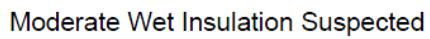
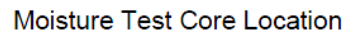
5 YEAR CAPITAL							
Roof Section ID	2018	2019	2020	2021	2022	Total	Replacement Year
Roof Area 1	\$440,000	\$750	\$750	\$750	\$750	\$443,000	2019
Roof Area 2	\$3,000	\$750	\$750	\$750	\$1,500	\$6,750	2024
Roof Area 3 & 4	\$1,000	\$7,200	\$0	\$0	\$0	\$8,200	2019
		\$444,000	\$8,700	\$1,500	\$1,500	\$2,250	\$457,950

Notes:	Roof replacement cost of between \$18.00-\$20.00 sf. for tear off and replacement of Roof Areas 1 & 2.
	Shingle Replacement cost of \$5.00-\$6.00 sf. for tear off and replacement of shingles of Roof Areas #3 & #4.



## Moisture Map for Roof

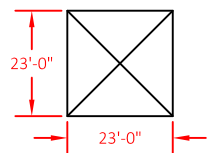
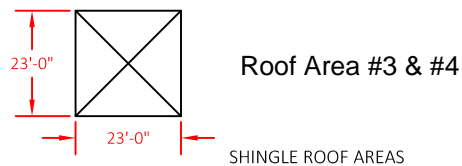
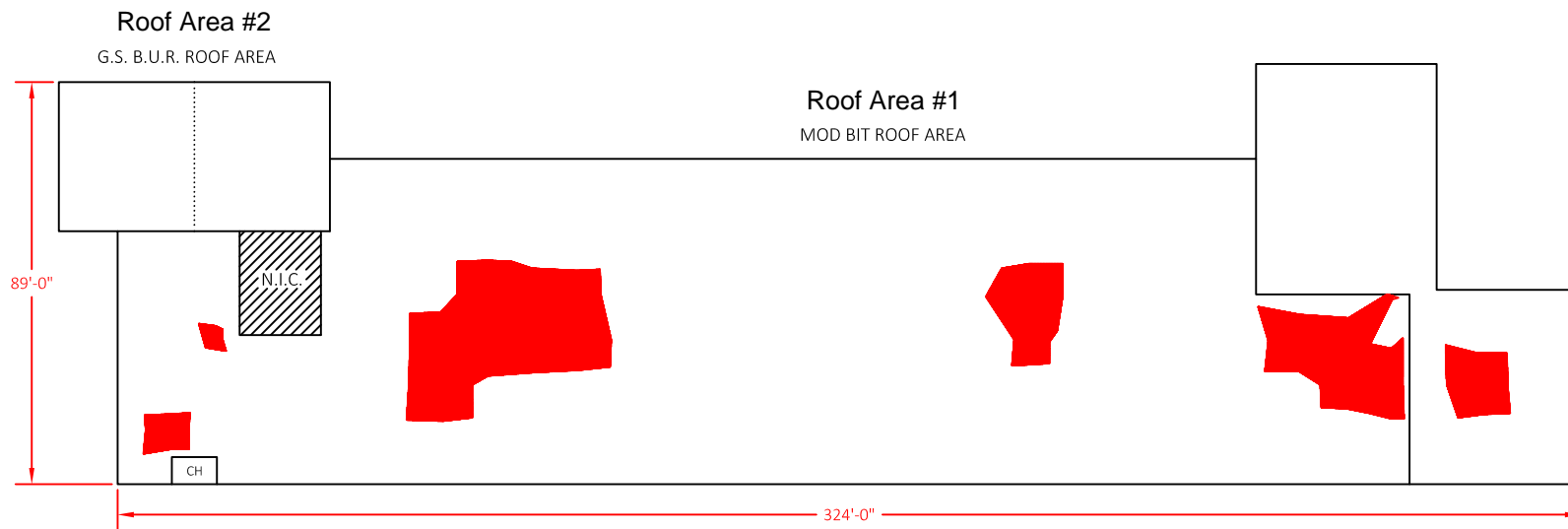
[illegible]



## Moisture Map for Roof

[illegible]

REVISIONS	BY




LEGEND	
F	FLUE STACK
	HVAC UNIT
	ROOF DRAIN
	VENT
	SOIL STACK
	ROOF HATCH
P	PIPE PENETRATION
	PIPE PORTAL
	SCUPPER
	RAIL CURB
	PITCH PAN
	ABANDONED
	HVAC LINES
	DUCT LIFT
	ANTENNA
	CHIMNEY

ROOF AREA	HEIGHT
FULL BUILDING	X FT
G.S. B.U.R. ROOF AREA	X FT
SHINGLE ROOF AREAS	X FT

AREA	
MOD BIT ROOF AREA	22,000 SF
G.S. B.U.R. ROOF AREA	2,000 SF
SHINGLE ROOF AREAS	1,200 SF
TOTAL ROOF AREA	25,200 SF

N 

NOTE: DO NOT SCALE, FIELD VERIFY ALL DIMENSIONS.

 <b>RRK ASSOCIATES, LTD.</b> 900 TRI-STATE PARKWAY, SUITE 800 GURNEE, ILLINOIS 60031 COMMERCIAL/INDUSTRIAL ROOF CONSULTANTS TEL (847) 856-8420 FAX (847) 856-8421	
PROJECT: CHICAGO PUBLIC SCHOOLS - DECATUR ES 7030 N SACRAMENTO AVENUE CHICAGO, ILLINOIS 60645	
DATE:	9/4/18
SCALE:	1"=20'
DRAWN BY:	JJD
PROJECT NO.:	18246.06
SHEET NO.	R1
OF 1 SHEETS	