

Board of Education Capital Plan FY17-FY21

PROJECT TITLE: New Roof Tolland Intermediate School

DATE SUBMITTED: 10/5/2015

DEPARTMENT PROJECT INFORMATION

Department: **Facilities**

Department Contact: **Peter Sztaba**

Fiscal Year(s) Requested: **FY2017** **FY2018** **FY2019** **FY2020** **FY2021**

Department Priority: **Critical** **High** **Medium** **Low**

Type of Project: **Vehicle** **Equipment** **Technology** **Facility** **Other**

PROJECT DESCRIPTION

Current roof at Tolland Intermediate School will be out of warranty. Roof currently has leaks above the gymnasium areas, and is showing deterioration on the metal flashing, and eroded felts in many sections. Roof is at or near the end of its useful life. Roofing report conducted by SR products that took into consideration the following:

1. Current warranties
2. Current roof condition based upon physical inspection
3. Severity of deferred maintenance
4. Size and roof plan
5. Replacement with Modified roofing system(better than EPDM as it is more durable when removing snow from roof). Includes all applicable flashing installations, old roof removal, drains and insulation

Estimate-\$1,897,000(includes prevailing wage)

PROJECT NEED

Impact on Department if Recommended or Not Recommended: Water infiltration, safety issues, degradation of physical asset, massive depreciation of building, health risks, increased liability

Cost to Maintain: Preventative maintenance

Describe all Benefits and/or Savings: decrease in roof repairs, decrease in interior repairs(drywall, ceiling tiles, painting, etc), mitigation of liability, improved energy with insulation, reduction in manpower needed to clean up water infiltration, reduced downtime for classes, etc.

PROJECT BUDGET AND FUNDING SOURCES

Project Cost Summary, Recommended Financing Sources, & Operating Budget Impact

Project Cost Elements	FY 2017	FY 2018	FY 2019	FY2020	FY2021	TOTAL
Feasibility Study						
Design - Engineering						
Site Acquisition						
Site Improvements	\$1,897,000					
Construction:						
Inspection Services						
Equipment & Furnishings						
Vehicle Purchase						
Other						
Contingency						
TOTALS-\$1,897,000						

Financing Sources

Lease-Purchase
Water Enterprise Funds
Sewer Enterprise Funds
Solid Waste Enterprise Funds
Storm Water Enterprise Funds
State / Federal Grants
Sale of Surplus Property
CPA
Other (specify)
City Appropriation
TOTALS-\$1,897,000

TOLLAND INTERMEDIATE SCHOOL
96 Old Post Road
TOLLAND, CT



Photo #1: Overview of the West side of the School, Section E



Photo #2: Drain is not clamped down on the West side of Section E



Photo #3: Bolts are not lined up, somehow the drain shifted or was never clamped down to begin with.



Photo #4: Debris along the drain, again on Section E and throughout



Photo #5: Eroded felts throughout all sections



Photo #6: Faded aluminum coating along the East side perimeter on Section B

TOLLAND INTERMEDIATE SCHOOL
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TOLLAND, CT

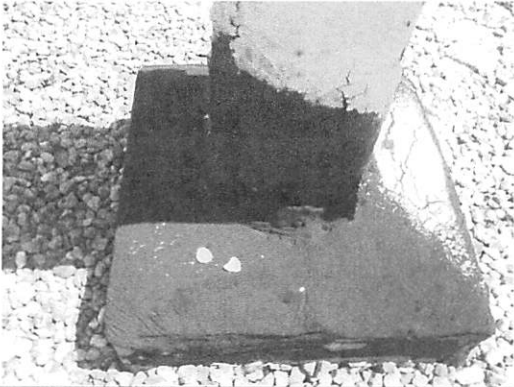


Photo #7:	Pitch box with openings on Section B
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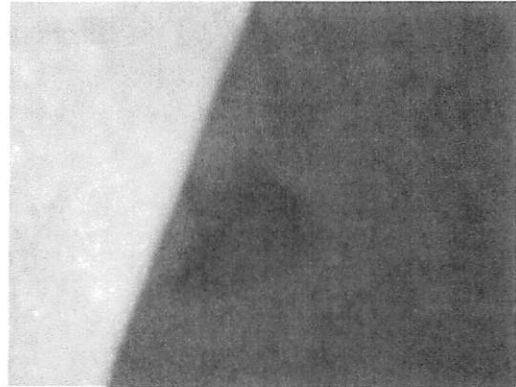


Photo #8:	Portable EPDM roof with numerous openings, Section A
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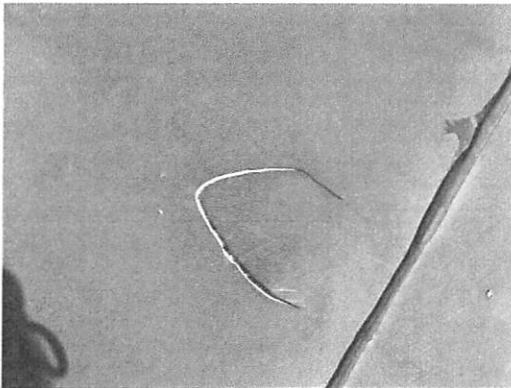


Photo #9:	Another example of the numerous openings in the portables, again this is on Section A
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**Tolland Intermediate School
96 Old Post Road
Tolland, CT**

Roof Inspection Date

8/11/2015

Roof Identification / Square footage

All roof areas consists of Built-up roofing with modified flashings, with the exception of the EPDM Portables

Total sq. footage of 1991 Built-up area (Sections B, C and D)	27,177 sq. ft.
Total sq. footage of 1996 Built-up area (Sections E and F)	43,057 sq. ft.
Total sq. footage of fully adhered EPDM portable Section A	8,880 sq. ft

Estimated Installation Date

Built-up Sections B, C and D	- 1991
Built-up Sections E and F	- 1996
EPDM Portable Roof Section A	- Estimated 1991

Leak History

Leaks reported along the skylights on Section D

Drainage/Slope

The existing pitch ranges from 1/8" to 1/4" on the low slope areas

Roof Defects/Deficiencies

- Drain on Section E was not clamped down properly
- Leaks reported along skylights on Section D
- Eroded felts throughout
- Pitch boxes fill be topped off
- Deteriorated flashings throughout
- Some of the flashings need to be coated an aluminum coating (Mainly Section B)
- Portable roof (Section A) has at least 20 tears and openings

Overall Roof Condition/Rating Built-up Section and EPDM section

We use a rating system based on the following:

- Roofs rated “Green”. These roofs are in good to excellent condition and have 7+ years of additional service life if properly maintained. The roofs need little or no work at this time.
- Roofs rated “Amber”. These roofs are in fair condition and have approximately 4 to 6 years of service life remaining if routine preventive maintenance and repairs are performed.
- Roofs rated “Red”. These roofs are in poor condition and are at the end of their service life. A maximum of 1 to 3 years of service life may be remaining. Significant repairs are necessary to keep the roofs watertight.

Roof Area	Rating
All roof areas A through F	Red

Recommendations and Budgets

Maintenance and Repairs Recommendation

- 1) Repair perimeter flashings as required
- 2) Repair unclamped drain
- 3) Repair all eroded felts as required
- 4) Repair drain and skylight
- 5) Repair opening in flashings and EPDM Portables

Budget \$5000 (PO issued for the work)

Replacement of all the low slope roofs include the following:

- 1) Complete tear off of the existing roof down to the structural decking.
- 2) Installation of new tapered insulation
- 3) Installation of a new roof system with a 20 year warranty
- 4) New metal flashings as required
- 5) Install new Insert drains

Budget for 1991 Sections \$680,000
Budget for 1996 Sections \$1,077,000
Budget for Portable roof \$140,000

TOLLAND INTERMEDIATE SCHOOL

96 OLD POST ROAD
TOLLAND, CT

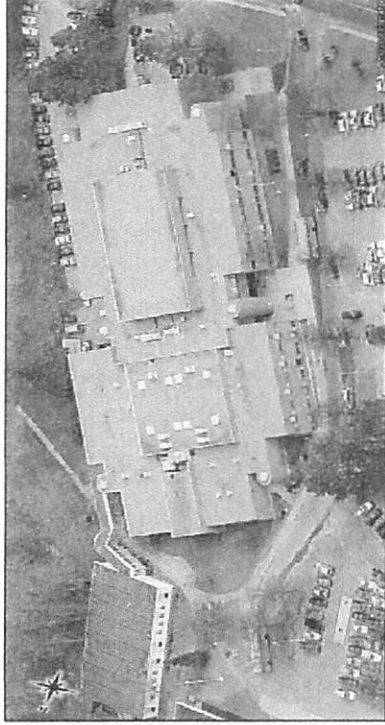







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PAGE #	DRAWING NUMBER	AREA
PAGE 1	1 - TITLE PAGE	
PAGE 2	2-ALL ROOFS	79,112 sq. ft.

LEGEND

WALL TYPE	SYMBOL TYPE
 FLAT ROOF	 CURB (HVAC)
 PITCHED ROOF	 CURB
	 STACK

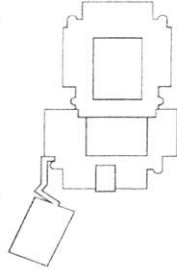
The dimensions and square footage on these drawings are calculated to be within 3-7% of the actual field dimensions. These dimensions are for estimation purposes only and should not be used for bidding purposes. Actual dimensions and penetrations can only be determined by measuring the physical structure in the field using proper measuring tools.

TOLLAND INTERMEDIATE SCHOOL
96 OLD POST ROAD
TOLLAND, CT

SCALE : NTS

DWG # 1 OF 2

KEY DRAWING



DRAWING # :	1-TITLE PAGE
DATE :	07-31-15
DRAWN BY :	DMR
REVISION #1	-
REVISION #2	-
REVISION #3	-

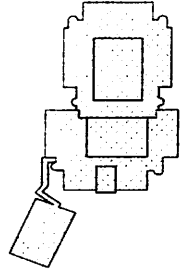


TOLLAND INTERMEDIATE
SCHOOL
96 OLD POST ROAD
TOLLAND, CT

SCALE : NTS

DWG # 2 OF 2

KEY DRAWING



DRAWING # : 2-ALL ROOFS

DATE : 07-31-15

DRAWN BY : DMR

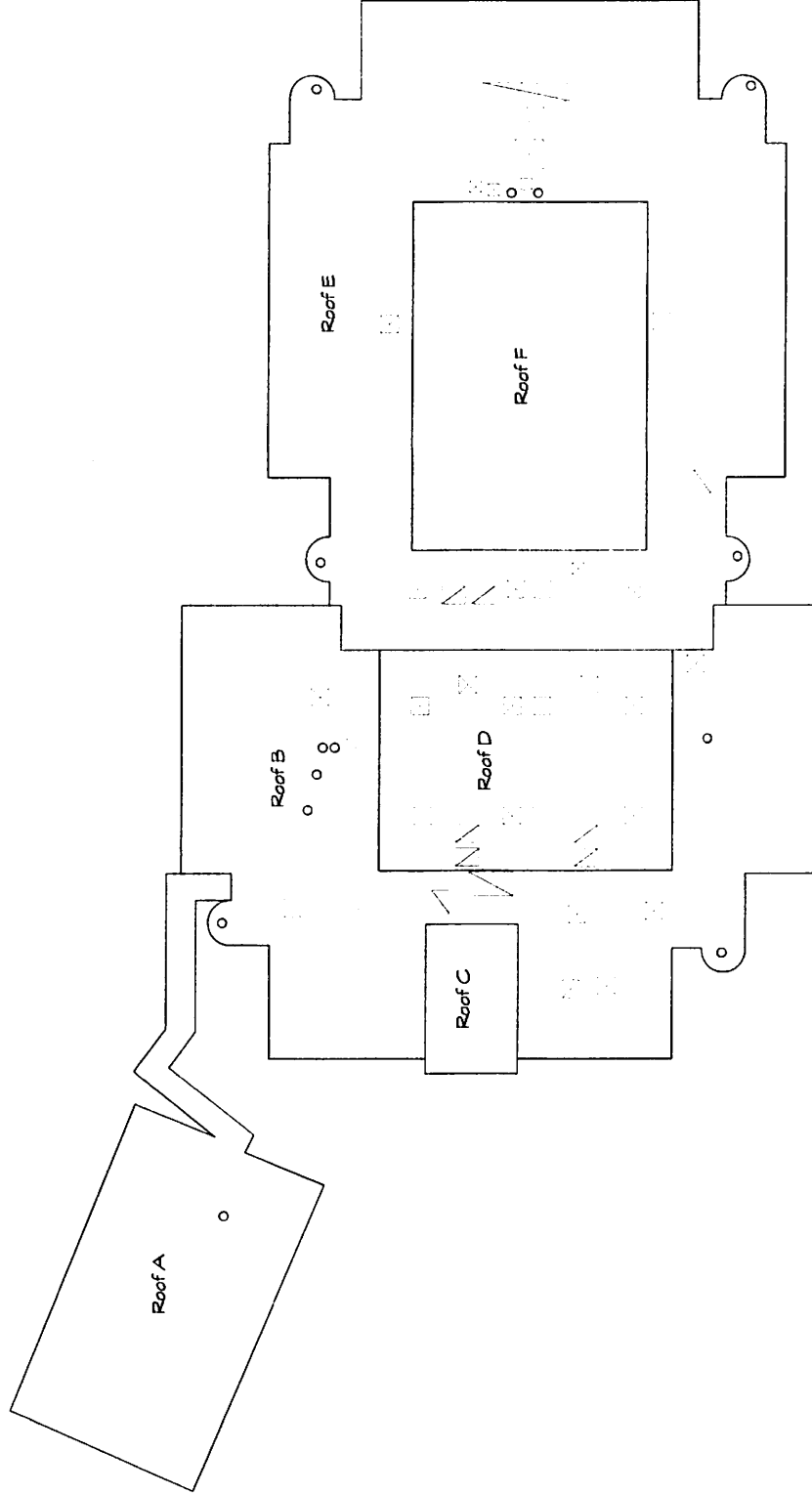
REVISION #1 -

REVISION #2 -

REVISION #3 -



SR PRODUCTS
CUSTOMER SATISFACTION SINCE 1900
1380 E. HIGHLAND ROAD
MACEDONIA, OH 44056
440.748.0720



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Takeoff Record

Name	Area	Length	Count
Group 1			
Flat Roof (Dig)	8,880.00	603'0"	15
Stack	15.00	10'0"	1
Roof B			
Flat Roof (Dig)	18,301.00	1022'0"	26
Curb	324.00	216'0"	9
Curb (HVAC)	111.00	74'0"	2
Stack	99.00	66'0"	7
Roof C			
Flat Roof (Dig)	1,550.00	162'0"	4
Roof D			
Flat Roof (Dig)	7,326.00	346'0"	4
Curb	360.00	240'0"	10
Curb (HVAC)	168.00	112'0"	4
Roof E			
Flat Roof (Dig)	33,814.00	825'0"	26
Base Wall - Roof F	9,243.00	392'0"	4
Curb	396.00	264'0"	12
Curb (HVAC)	234.00	156'0"	4
Stack	85.00	57'0"	6
Roof F			
Flat Roof (Dig)	9,243.00	392'0"	4