

STATE DEPARTMENT OF EDUCATION  
ROOFING POLICY FOR SCHOOL FACILITIES

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A. GENERAL

In an attempt to alleviate some of the problems on low-sloping roofs and to standardize plans and specifications, the State Department of Education sets forth the following policy for roofing both new and existing buildings.

B. ROOF REQUIREMENTS

1. TYPE OF SYSTEM

The following four types of roofing systems will be accepted. Any other type of roof system must have written approval of the State Department of Education:

- a. A four-ply fiber glass hot applied built-up roofing system.
- b. A single-ply ethylene propylene diene monomer (EPDM) which can be loose laid, adhered or mechanically attached.
- c. A modified bitumen system which can be heat welded, hot bitumen, or adhered; and with a surfacing which shall completely cover the membrane.
- d. A standing seam metal roof system shall be from a single manufacturer with a minimum of 24 gauge galvalume sheets attached to slip clips for expansion and all seams double locked or pittsburged rolled.

Roofs shall be specified, as well as guaranteed, as a system and shall include vapor retarders, insulation, bitumen, felts, membranes, flashings, metals, decks, and/or any other items where required by the proposed roof design. All manufacturer's materials used in the roofing system shall be specified to meet the latest available ASTM Standards for individual components of the roofing system. Certification from the roofing manufacturer shall be furnished at the pre-roofing conference as well as when the material is delivered to job site.

2. GUARANTEE

- a. The four-ply built-up roof system shall have a 20-year unlimited manufacturer's guarantee for water tightness covering material and workmanship on the entire system.
- b. The single-ply EPDM system shall have a 15-year manufacturer's guarantee for water tightness covering material and workmanship on the entire system, limited to the installation cost of the roof system.
- c. The modified bitumen roof system shall have a 20-year manufacturer's guarantee for water tightness covering material and workmanship on the entire system, limited to the installation cost of the roof system.
- d. The standing seam metal roof shall have a 20-year, 6-month unlimited manufacturer's guarantee for water tightness covering material and workmanship on the entire system.
- e. In addition to the above guarantee, the general contractor and/or the roofing contractor shall provide a written guarantee agreeing to keep the roof free of leaks for a period of two (2) years starting at the time of acceptance of the project by owner.

### 3. ROOF SLOPES

- a. All roof construction on new buildings shall have a built-in minimum slope to drains or eaves of 1/4 inch per foot.
- b. All replacement roofs shall have a minimum slope of 1/4 inch per foot where feasible; but in no case shall the slope be less than 1/8 inch per foot. Justification must be requested and approved by the State Department of Education for roofs less than 1/4 inch per foot.

### 4. SUBSTRATE

The type roof system selected shall be compatible with the substrate and shall be approved by the roofing material manufacturer. All decking material used for roofing shall be UL fire rated.

5. INSULATION

- a. Roof insulation shall be of the type approved by the roofing manufacturer for the roof assembly in which it is to be used. The required minimum "R" value shall be specified.
- b. On replacement roof projects that do not have a sloping deck, tapered insulation shall be used where feasible.

6. ROOF TOP EQUIPMENT

- a. Roof top equipment on new construction is not desirable, and the building should be designed to eliminate the use of this equipment. However, where equipment must be installed on a roof, it shall be approved by the State Department of Education and shall be installed in accordance with NRCA (National Roofing Contractors Association) design details which shall be such that roofing can be easily accomplished without the removal of the equipment.
- b. Where equipment on the roof must be periodically serviced, easy access and traffic pads shall be provided.

7. FLASHINGS

- a. Flashings should be included in the roof warranty and shall be applied by an applicator approved by the manufacturer of the roofing material.
- b. In re-roofing projects, existing metal flashings which are not to be replaced may be exempted from the warranty.
- c. Perimeter metal flashing shall be of a material other than galvanized steel.

C. PRELIMINARY REQUIREMENTS

1. A report shall be prepared by the professional which will include the following items:
  - a. New Construction
    1. Code fire-protection requirement and the required fire resistance in hours

2. UL roof assembly numbers
3. Type of flashing and roofing system recommended with justification for its use
4. Roof area

b. Existing Construction

1. Determination of roof construction--core where necessary
2. Visual roof analysis inspection (See form attached.)
3. Code requirements--UL roof assembly number, if applicable
4. Provide Class A type roof or match existing roof
5. Recommendations by the professional as to repair or re-roof

D. BIDDING REQUIREMENTS

1. BID DOCUMENTS

- a. For new construction and complete tear-off of existing roofs, the professional shall specify the roof as a system and shall include all items which are to be covered under the roof warranty.
- b. When required, the professional shall state in the section, Instructions to Bidders, that upon award of contract, the General Contractor and/or Roofing Contractor shall provide the owner with the installed price of the roofing system.

2. QUALITY ASSURANCE

If requested, the roof contractor shall provide to the Local Education Agency a letter from the manufacturer of the required roofing materials that it is an authorized installer and will provide the required specified warranty for completion.

3. CONFERENCES

a. Pre-Bid Conference

It is recommended that at least seven (7) days before the bidding of a re-roofing project, a pre-bid conference be held at the project site. Attendance at the pre-bid conference is not a prerequisite for bidding.

b. Pre-Roofing Conference

On new and re-roofing projects prior to ordering roofing materials, a pre-roofing conference shall be initiated by the professional.

At such time the roofing contractor shall provide a list of materials to be used, manufacturers installation instructions as well as manufacturer's certification confirming that the materials to be used on the project meet the specified ASTM Standards.

On re-roofing projects, the following personnel shall be represented:

Professional	Roofing Contractor
State Department of Education	Roofing Manufacturer
Local Education Agency	

On new projects the following shall be represented:

Professional	General Contractor
State Department of Education	Roofing Contractor
Local Education Agency	Deck Contractor
Roofing Manufacturer	Mechanical Contractor

4. INSPECTION

a. Inspections shall be made by the manufacturer's technical representative as necessary to obtain the roof guarantee.

b. The professional or his representative shall inspect the roof as the work progresses, but in particular, he shall inspect at the following times and give a letter of confirmation:

1. Inspect the substrate before any roofing is done.

2. Inspect at the start of roofing installation to assure that the approved materials are being properly installed.
3. Inspect as necessary as the work progresses or when a problem arises.
4. Final inspection at the end of the work to give acceptance of the project.

5. HISTORICAL RECORD

The professional shall assist the roofer in preparing the Roofing Data Sheet provided by the owner for the historical files. (See form attached.)

E. ANNUAL INSPECTION

School districts are encouraged to contract with a professional or a roof inspector to inspect their roof on an annual basis and submit a written report of any needed repairs and budgeted costs to the school district superintendent.

STATE DEPARTMENT OF EDUCATION  
VISUAL ROOF ANALYSIS INSPECTION FORM

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Project No. \_\_\_\_\_ District \_\_\_\_\_ Date: \_\_\_\_\_  
Building No. or Name \_\_\_\_\_  
School \_\_\_\_\_ Use \_\_\_\_\_  
Contact \_\_\_\_\_ Title: \_\_\_\_\_ Phone \_\_\_\_\_  
Professional \_\_\_\_\_ Phone \_\_\_\_\_

BASIC DATA:

Roof Level No. \_\_\_\_\_ of \_\_\_\_\_  
Age of Original Installation \_\_\_\_\_  
Coring Required \_\_\_\_\_ Data is Based on Coring \_\_\_\_\_

Interior: Design Temperature \_\_\_\_\_ Design RH% \_\_\_\_\_  
Water/Moisture Staining \_\_\_\_\_

Shingle Roof: Area No. \_\_\_\_\_ Area Sq. Ft. \_\_\_\_\_ Slope \_\_\_\_\_  
Type \_\_\_\_\_ Condition \_\_\_\_\_

Membrane Roof: Area No. \_\_\_\_\_ Area Sq. Ft. \_\_\_\_\_ Slope \_\_\_\_\_  
Type: Coal Tar \_\_\_\_\_ Asphalt \_\_\_\_\_  
Single Ply/Attachment \_\_\_\_\_  
Metal \_\_\_\_\_ Other \_\_\_\_\_  
No. of Felt Plies \_\_\_\_\_ Type of Felts \_\_\_\_\_  
Surfacing: Gravel \_\_\_\_\_ Pavers \_\_\_\_\_  
Smooth Unsurfaced \_\_\_\_\_ Smooth Coated \_\_\_\_\_

Defects: (See Plan for No. Locations)

1. Bare Areas (denuded of surfacing) \_\_\_\_\_ Approx. Area \_\_\_\_\_
2. Exposed Felts: \_\_\_\_\_ Approx. Area \_\_\_\_\_
3. Eroded Felts: \_\_\_\_\_ Approx. Area \_\_\_\_\_
4. Alligatoring: \_\_\_\_\_ Approx. Area \_\_\_\_\_
5. Interply Delamination: \_\_\_\_\_ Approx. Area \_\_\_\_\_
6. Blisters: \_\_\_\_\_ No. or Area \_\_\_\_\_
7. Fractures: \_\_\_\_\_ Type \_\_\_\_\_ Area \_\_\_\_\_
8. Drains \_\_\_\_\_ No. \_\_\_\_\_ Dim. \_\_\_\_\_  
Condition \_\_\_\_\_
9. Ponding Water \_\_\_\_\_ Depth \_\_\_\_\_ Area \_\_\_\_\_
10. Expansion Joints \_\_\_\_\_ Type \_\_\_\_\_  
Length \_\_\_\_\_ Height \_\_\_\_\_ No. \_\_\_\_\_  
Distance between \_\_\_\_\_
11. Chemical Exposure \_\_\_\_\_ Type \_\_\_\_\_  
Amount \_\_\_\_\_
12. Roof Traffic Pads \_\_\_\_\_ Type \_\_\_\_\_  
Extent \_\_\_\_\_
13. Present Leaks \_\_\_\_\_ No. \_\_\_\_\_  
Locations \_\_\_\_\_
14. Fishmouths \_\_\_\_\_ No. \_\_\_\_\_  
Size \_\_\_\_\_
15. Ridging \_\_\_\_\_ Type \_\_\_\_\_  
Size \_\_\_\_\_

16. Slippage \_\_\_\_\_  
17. Mechanical Damage \_\_\_\_\_  
Type \_\_\_\_\_ Extent \_\_\_\_\_

**VISUAL ROOF ANALYSIS INSPECTION FORM (Continued)**

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18. Debris \_\_\_\_\_  
19. Other \_\_\_\_\_

Vapor Retarder (Barrier): Type \_\_\_\_\_ Condition \_\_\_\_\_  
Attachment \_\_\_\_\_

Insulation: Type \_\_\_\_\_ Condition \_\_\_\_\_  
Thickness \_\_\_\_\_ Attachment \_\_\_\_\_

Deck: Type \_\_\_\_\_ Thickness \_\_\_\_\_  
Condition \_\_\_\_\_

Roof Support Structure: Type \_\_\_\_\_  
Spacing \_\_\_\_\_ Condition \_\_\_\_\_

Base Flashings: Type \_\_\_\_\_ Condition \_\_\_\_\_  
Height \_\_\_\_\_ Coatings \_\_\_\_\_  
Shear Action Evidenced \_\_\_\_\_

Cant Type: Type \_\_\_\_\_ Condition \_\_\_\_\_

Perimeter Treatment: Type \_\_\_\_\_ Condition \_\_\_\_\_

Nailers: Y \_\_\_\_\_ N \_\_\_\_\_ Condition \_\_\_\_\_

**Metal Components**

Counterflashings: Type Metal \_\_\_\_\_  
Type: Thru Wall \_\_\_\_\_ Reglet \_\_\_\_\_  
Surface Applied \_\_\_\_\_ Condition \_\_\_\_\_

Scuppers: Type Metal \_\_\_\_\_  
Condition \_\_\_\_\_

Gutters: Type Metal \_\_\_\_\_ Type \_\_\_\_\_  
Condition \_\_\_\_\_

Pitch Pockets: Y \_\_\_\_\_ N \_\_\_\_\_ Condition \_\_\_\_\_

Gravel Guard/Facia: Type Metal \_\_\_\_\_  
Type \_\_\_\_\_ Condition \_\_\_\_\_

Expansion Joint Covers: Type Metal \_\_\_\_\_  
Type \_\_\_\_\_ Condition \_\_\_\_\_

Coping: Type Metal \_\_\_\_\_ Size \_\_\_\_\_  
Condition \_\_\_\_\_

Parapet: Type \_\_\_\_\_ Condition \_\_\_\_\_  
Height \_\_\_\_\_

Coping: Type \_\_\_\_\_ Condition \_\_\_\_\_

Roof Penetrations: Type \_\_\_\_\_ No. \_\_\_\_\_  
Condition \_\_\_\_\_

Roof Hatch: Y \_\_\_\_\_ N \_\_\_\_\_ Condition \_\_\_\_\_

VISUAL ROOF ANALYSIS INSPECTION FORM (Continued)

Roof Ladder: Y \_\_\_\_\_ N \_\_\_\_\_ Condition \_\_\_\_\_

Roof Mounted Equipment: Type \_\_\_\_\_

Clearance Height \_\_\_\_\_ Type Support \_\_\_\_\_

Condition \_\_\_\_\_

Summary:

No. of Squares in Total Project \_\_\_\_\_

No. of Squares Having Problems \_\_\_\_\_

No. of Squares Requiring Maintenance \_\_\_\_\_

No. of Squares Requiring Re-roofing \_\_\_\_\_

No. of Squares Requiring No Work \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ROOF PLAN OVERVIEW: Identify roof types, slopes, gutters, downspouts, roof-drains, equipment, roof access, walkways and defects by numbers. Give approximate areas, North arrow and scale. Sketch typical section thru roof and deck at perimeter.

SUMMARY RECOMMENDATIONS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Prepared By \_\_\_\_\_

Title \_\_\_\_\_ Date \_\_\_\_\_

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Project No. \_\_\_\_\_ District \_\_\_\_\_

School \_\_\_\_\_ Building Name \_\_\_\_\_

Professional \_\_\_\_\_

General Contractor \_\_\_\_\_

Roofing Contractor \_\_\_\_\_

Surety Company \_\_\_\_\_ Policy No. \_\_\_\_\_

WORK

New Roof \_\_\_\_\_ Re-roof \_\_\_\_\_ Patching \_\_\_\_\_ Other \_\_\_\_\_

Roof Type \_\_\_\_\_ Trade Name \_\_\_\_\_

Built-up Roof Bitumen: (Asphalt) (Coaltar) (Other \_\_\_\_\_)  
Plys: \_\_\_\_\_ Felt Type: \_\_\_\_\_ Surfacing: \_\_\_\_\_

Roof Deck Type: (Wood) (Metal) (Concrete) (Cementious) (Other \_\_\_\_\_)

Insulation Type: \_\_\_\_\_ Thickness: \_\_\_\_\_

Flashing Materials: \_\_\_\_\_

GUARANTEE

Roofing Manufacturer \_\_\_\_\_

Manufacturer's Guarantee Years: \_\_\_\_\_ Roofer Guarantee Years: \_\_\_\_\_

Guarantee Title: \_\_\_\_\_ # \_\_\_\_\_

Beginning Date: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Renewal Option: (Yes) (No) Renewal Period: \_\_\_\_\_

Area: \_\_\_\_\_ Squares. Limits, if any: \$ \_\_\_\_\_ Per Square

Whole Building: (Yes) (No) Flashing on Guarantee: (Yes/No)

If only part of building is under guarantee, describe part:

\_\_\_\_\_

REMARKS:

BASIC BID	\$	_____
ALTERNATE BID	\$	_____
CHANGE ORDERS	\$	_____
TOTAL CONTRACT	\$	_____

Name \_\_\_\_\_ Date \_\_\_\_\_

STATE DEPARTMENT OF EDUCATION  
ROOF BOND FILE LOG

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SCHOOL: \_\_\_\_\_

