

ROOF ELEMENTS
ILLUSTRATION

TOPIC: ROOF ELEMENTS

ELEMENT: FLASHING

1. REPAIR

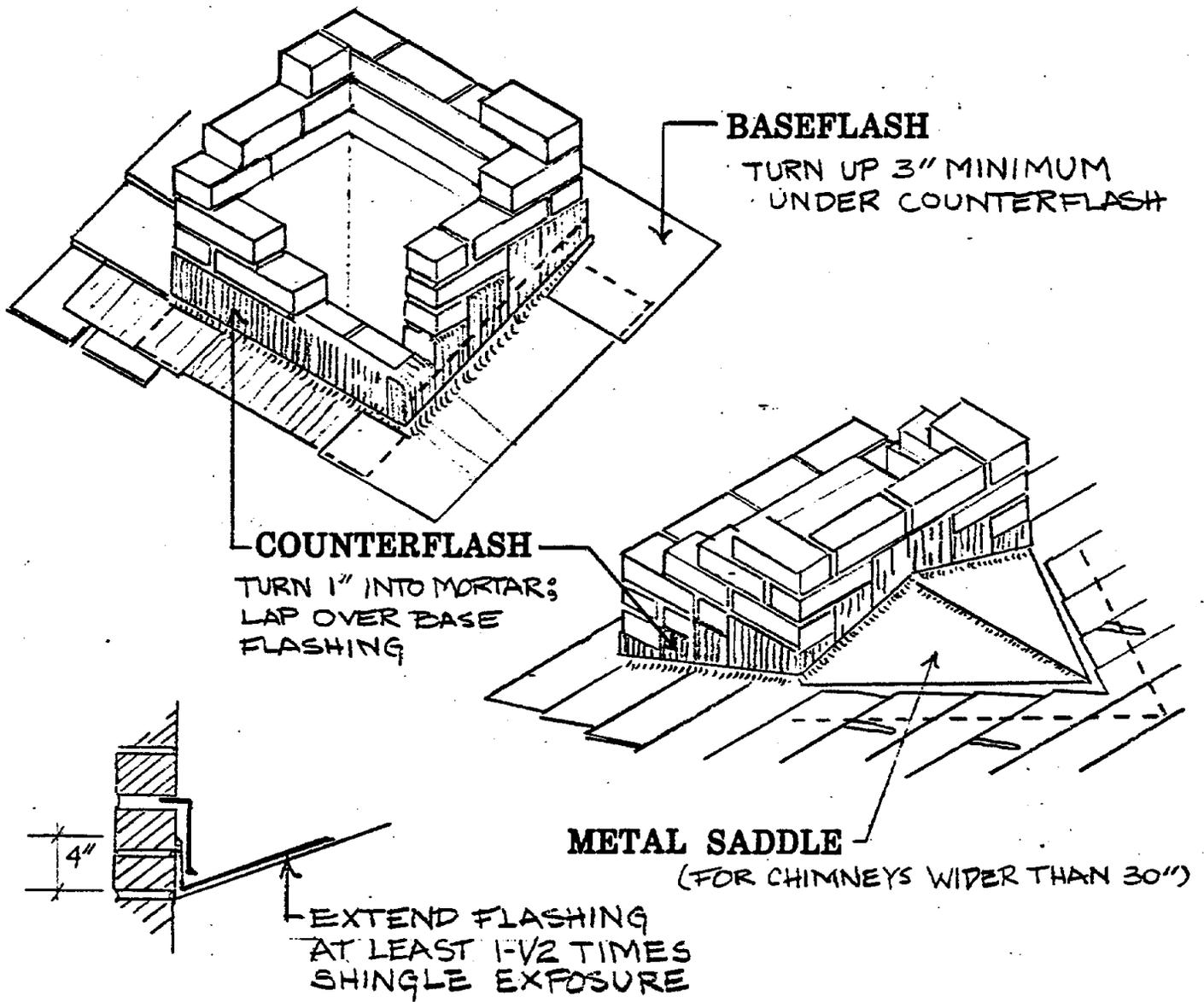
- a. Remove existing deteriorated flashing.
- b. Insert new flashing to divert water away from building materials.
- c. Counter flash, secure and caulk

2. MAINTENANCE

- a. Remove built-up debris in contact with flashing.
- b. Check flashing for signs of fatigue, cracking or slippage.

4. RELATED ARTICLES

- a. 5.4 Flashing
- b. 5.1 Roofing
- c. 5.6 Gutters and Downspouts



FLASHING

NOTES

ROOF ELEMENTS

ILLUSTRATION

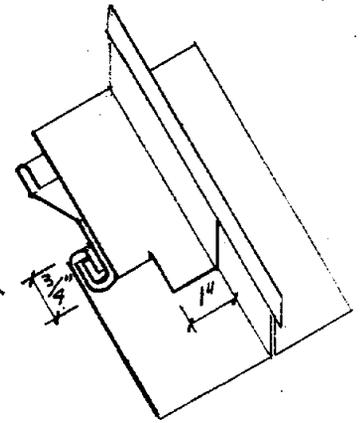
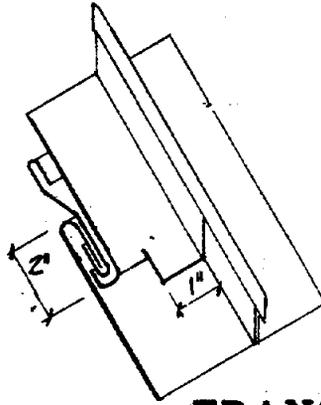
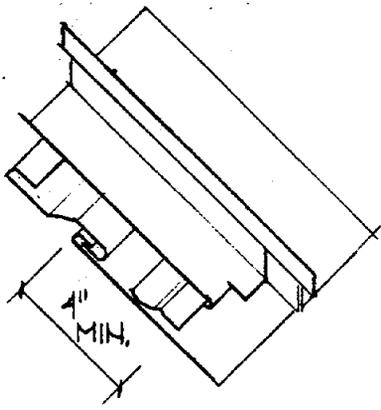
5.9

METAL ROOFING JOINTS

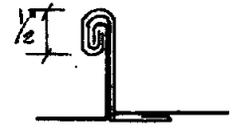
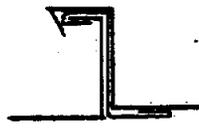
TOPIC: ROOF ELEMENTS

ELEMENT: METAL ROOFING JOINTS

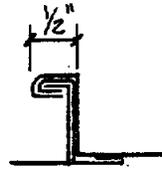
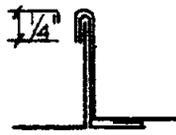
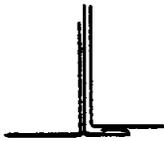
These illustrations show procedures for forming various metal roofing joints. For more information refer to the SMACNA Architectural Sheet Metal Manual.



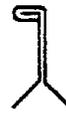
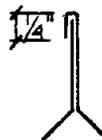
TRANSVERSE JOINT TYPES



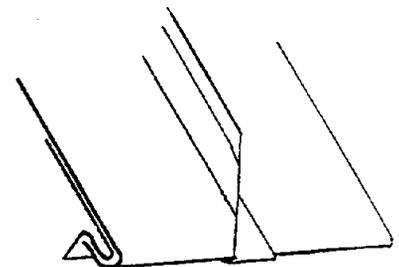
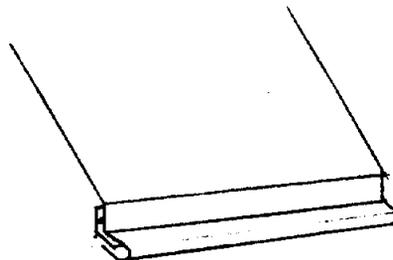
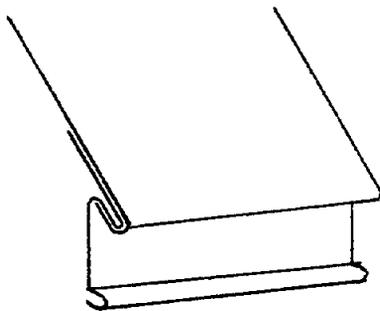
STANDING SEAM



STANDING SEAM



RIDGE



DRIP EDGE TYPES

METAL ROOFING JOINTS

NOTES

ROOF ELEMENTS
ILLUSTRATION

5.10
ATTIC VENTILATION TYPES

TOPIC: ROOF ELEMENTS

ELEMENT: ATTIC VENTILATION TYPES

1. REPAIR

- a. Repair and repaint existing attic vents having evident moisture damage.
- b. Install head flashing if ongoing water problem exists.
- c. Repair or replace broken louvers.

2. MAINTENANCE

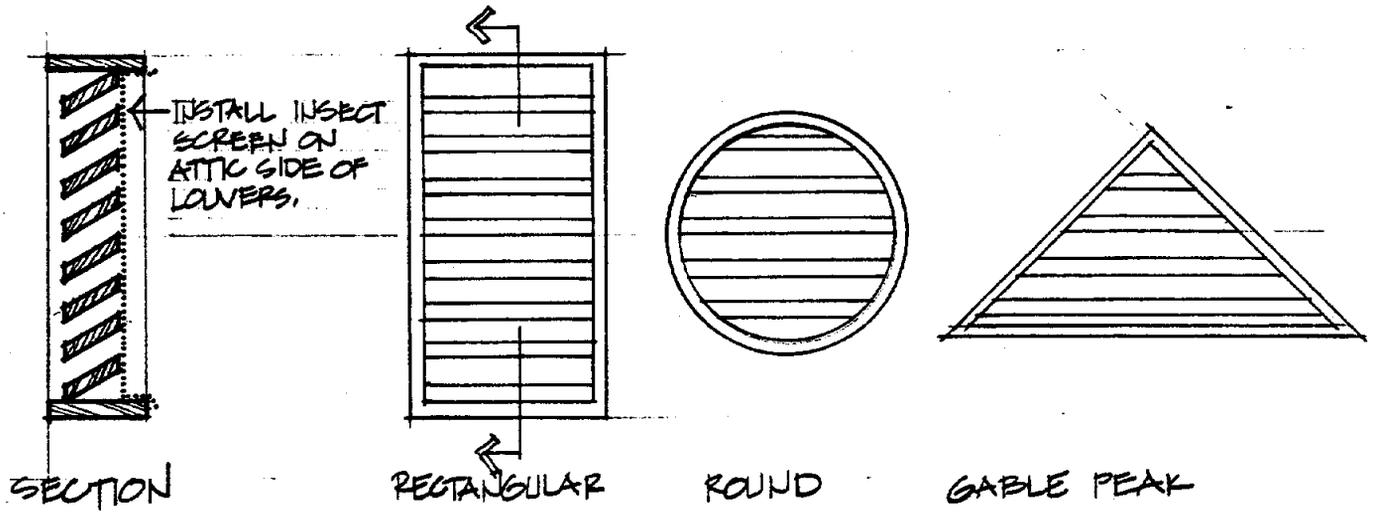
- a. Scrape all loose, peeling paint. Sand.
- b. Treat bare wood with paintable water repellent preservative.
- c. Repaint. Use one prime and two finish coats on bare wood.

3. UPGRADING

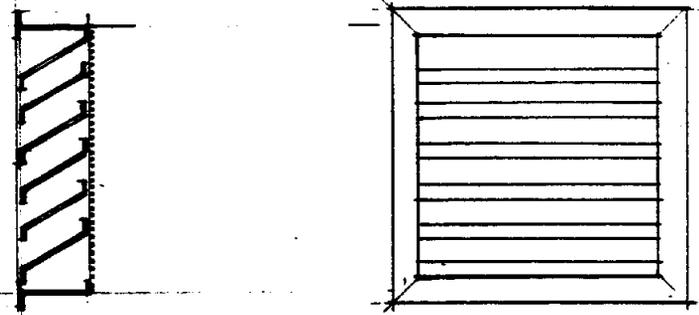
- a. Cover inside face of louvers with bronze insect screen if one does not already exist.
- b. Provide attic vents at all gable ends of all buildings where alternate attic cross ventilation does not exist.

4. RELATED ARTICLES

- a. 5.1 Roofing



WOOD LOUVER VENTS



SHEET METAL LOUVER VENTS

ATTIC VENTILATION TYPES

NOTES

ROOF ELEMENTS
ILLUSTRATION

5.11

GUTTERS AND DOWNSPOUTS

TOPIC: ROOF ELEMENTS

ELEMENT: GUTTERS AND DOWNSPOUTS

1. REPAIR

- a. Leaks and leaking joints or cracks in metal gutters should be soldered immediately by a skilled roofer or metalsmith. Alternately, a self adhesive rubber sheet ("Miracle Seal", See "Sources") can be used. Do not patch with roofing compounds. Cracks in vinyl gutters may be temporarily sealed with "Miracle Seal".
- b. Slope: Adjust all gutters to slope toward downspout.
- c. Prune: Judiciously and selectively prune plant material which is dropping leaves or needles into gutters, keeping plants' basic natural shape.

2. MAINTENANCE

- a. Keep gutters free of debris. Debris will clog gutters and downspouts, and acidic elements in debris can corrode metals. Clean twice a year.
- b. Gutters made of tin, galvanized, or terne metal should be kept painted. Do not use roofing compounds, they are acidic and can corrode metals.
- c. Joints in metal gutters may have to be resoldered once a year.

3. UPGRADING

- a. Provide gutters on buildings not presently having gutters.
- b. Replace out of character gutters installed during previous modernizations.
- c. Replace shallow plastic gutters.

4. RELATED ILLUSTRATIONS

- a. 5.8 Flashing
- b. 5.12 Built-in Gutters

5. RELATED ARTICLES

- a. 5.1 Roofing
- b. 5.4 Flashing
- c. 5.6 Gutters and Downspouts
- d. 2.1 Planting and Pruning

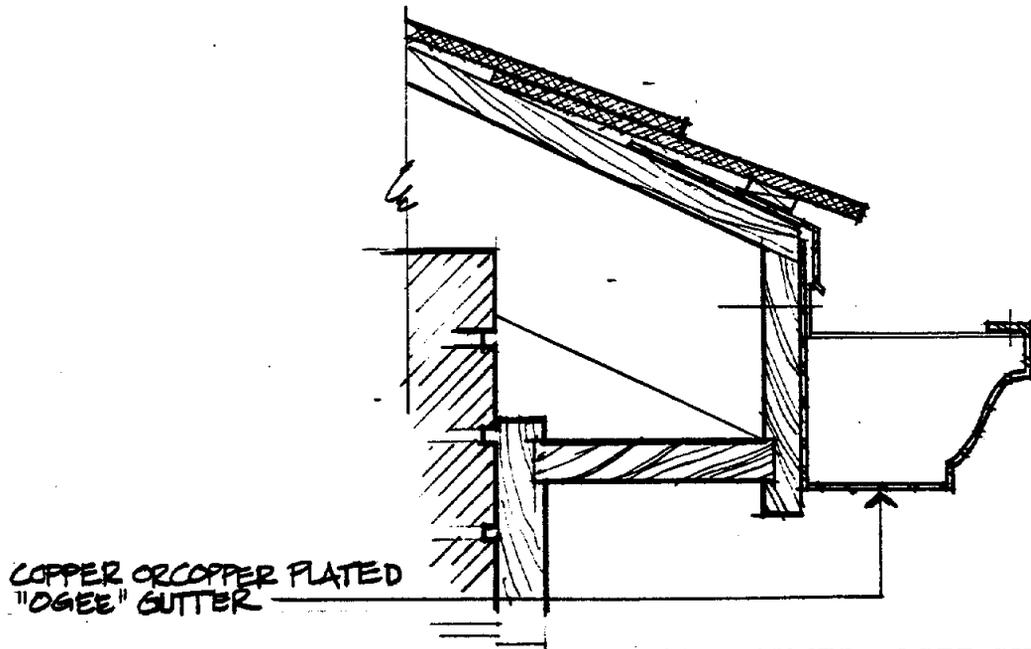
RAPTER ENDS

COPPER OR COPPER PLATED
HALF ROUND GUTTERS

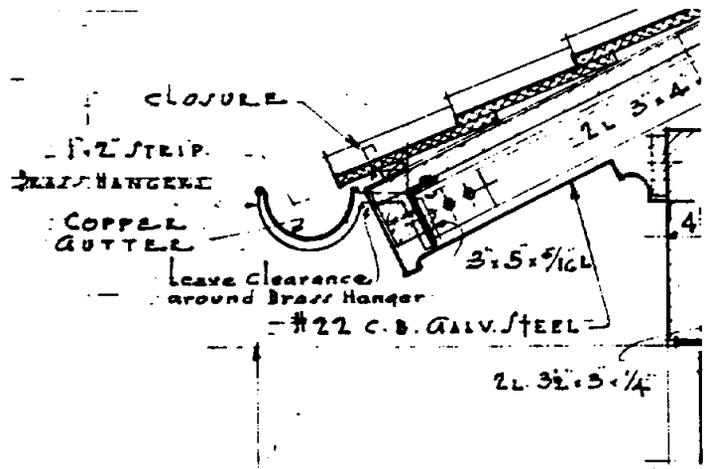
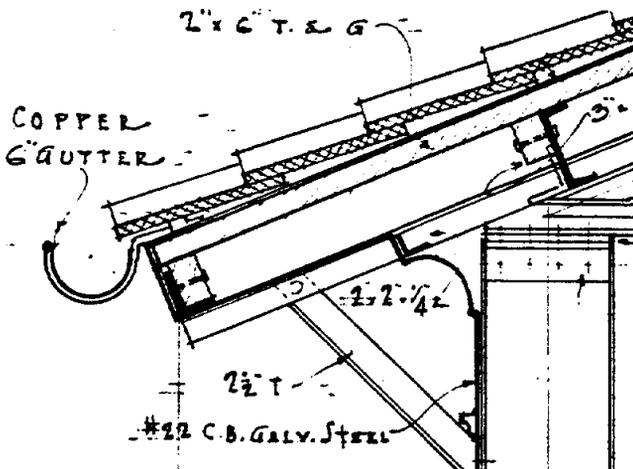
BRONZE HANGAR BRACKETS
ATTACHED UNDER ROOF TILES

WIRE CLIP ATTACHMENT SHOWN
OTHER TYPES EXIST.

HALF ROUND GUTTERS ON HUNG BRACKETS



FACIA MOUNTED OGEE GUTTER



HALF ROUND GUTTER ON OUTRIGGER BRACKETS

GUTTERS AND DOWNSPOUTS

NOTES

**ROOF ELEMENTS
ILLUSTRATION**

5.12

BUILT-IN GUTTERS

TOPIC: ROOF ELEMENTS

ELEMENT: BUILT-IN GUTTERS

1. REPAIR

- a. **Cracks in Metal Liners:** Solder immediately by a skilled roofer or metalsmith. Alternately, a self adhesive rubber sheet ("Miracle Seal", See "Sources") can be used. Leaking joints should be soldered also. Do not patch with roofing compound.
- b. **Wood Cornice Members:** Can be repaired using standard wood repair techniques.

2. MAINTENANCE

- a. Keep gutters free of debris. Debris will clog gutters and downspouts, and acidic elements in debris can corrode metal liners. Clean out twice a year.
- b. Gutter liners made of tin, galvanized or terne metal should be kept painted. Do not use roofing compound they are acidic and can corrode metal liners.
- c. Joints in metal liners may have to be resoldered once a year.

3. UPGRADING

- a. Clean gutters free of any existing roofing compound. Prime bare metal with a good quality metal primer and paint.
- b. Install soffit ventilators in cornices.

4. RELATED ILLUSTRATIONS

- a. 4.11 Wood Trim Repair
- b. 5.8 Flashing
- c. 5.11 Gutters and Downspouts

5. RELATED ARTICLES

- a. 5.1 Roofing
- b. 5.4 Flashing
- c. 5.6 Gutters and Downspouts
- d. 4.1 Wood

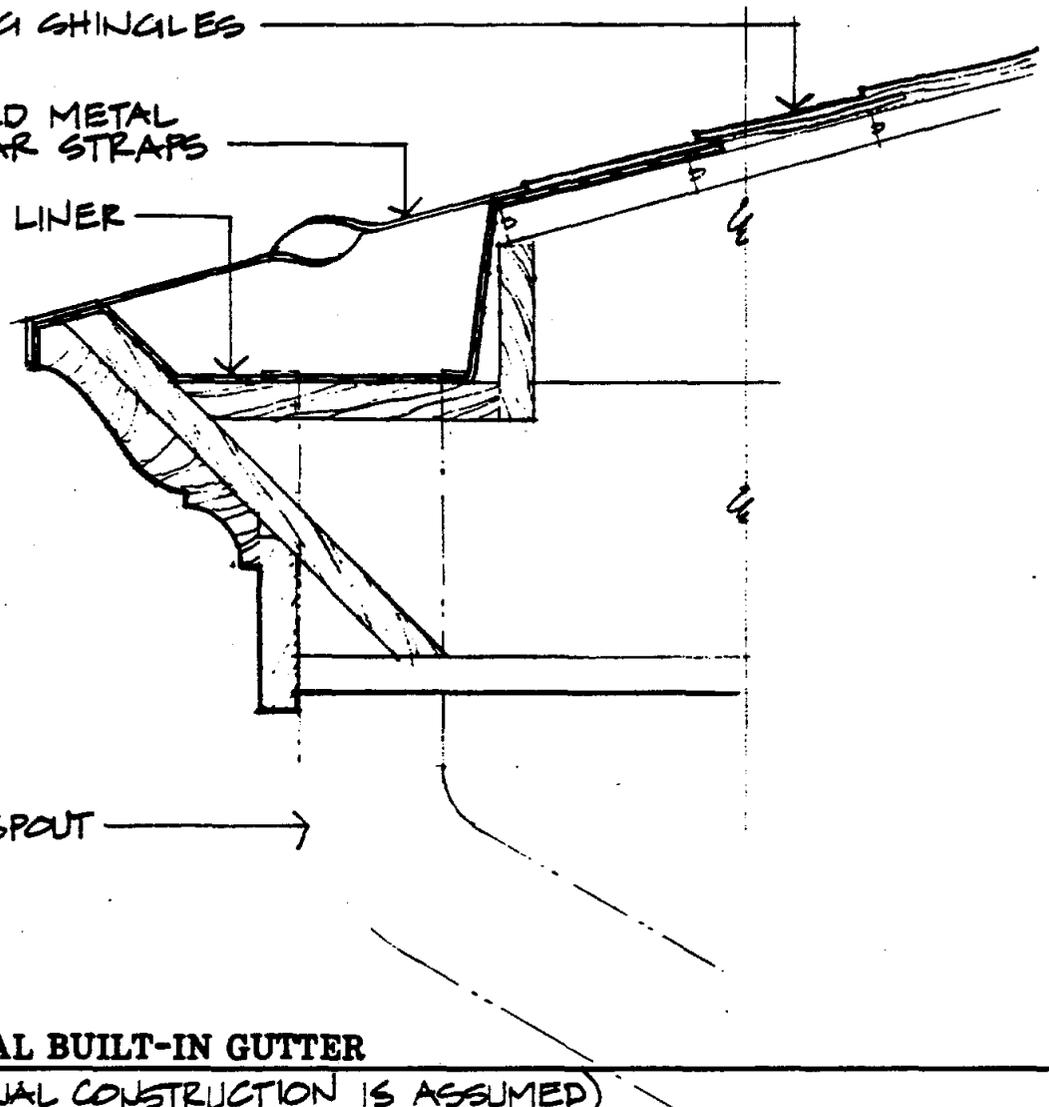
ROOFING SHINGLES

TWISTED METAL HANGAR STRAPS

METAL LINER

DOWNSPOUT

TYPICAL BUILT-IN GUTTER
(INTERNAL CONSTRUCTION IS ASSUMED)



NOTES

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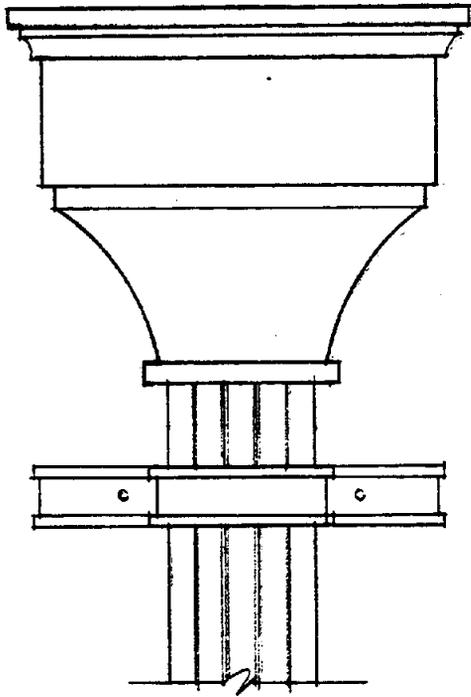
5.13

RAINWATER LEADER HEADS

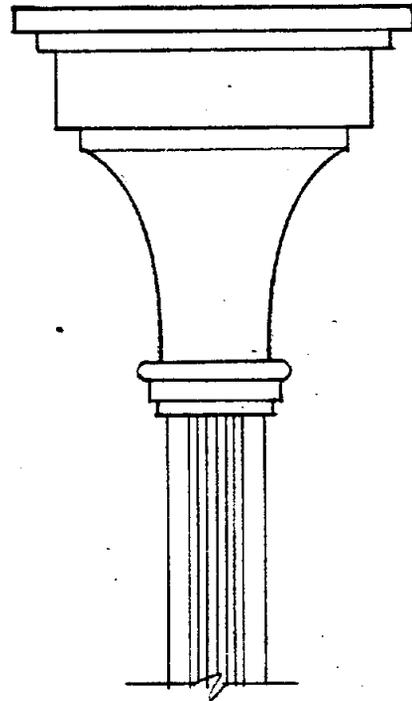
TOPIC: ROOF ELEMENTS

ELEMENT: RAINWATER LEADER

This sketch is included to illustrate existing character defining elements which should be protected and maintained.



GYMNASIUM



FIVE UNIT ROWHOUSE

RAINWATER LEADER HEADS

NOTES

