	Title: YALE OFFICE OF FACILITIES PROCEDURE MANUAL Chapter: 01 - Yale Design Standard Division: 04 00 00 Masonry	Section: 04 00 00 Requirements for Unit Masonry
		Date: November 2023
		Author: Office of Facilities

PART 1 - INTRODUCTION

1.1 PURPOSE

This section contains general design criteria for unit masonry, including brick veneer, concrete masonry, and masonry repair and remodeling of existing construction


PART 2 - GENERAL DESIGN REQUIREMENTS

2.1 MATERIALS

- A. Provide severe weathering grade, type FBS brick that conforms to ASTM C216 standards, or that necessary to match existing brick units. Use type FBX brick where a high degree of mechanical perfection is required.
- B. Provide C90 Type 1, Grade N concrete masonry units of normal weight that conform to ASTM C145 standards. The unit face size must be 7-5/8" by 15-5/8" and of thickness required by the design. Masonry units at fire rated partitions must conform to ASTM C129 standards.
 - 1. Use split-faced block by Plasticrete Architectural Products or an approved equivalent.
 - 2. Use ground-faced block by Plasticrete Architectural Products, Trenwyth Industries Inc., or an approved equivalent.
 - 3. Glazed block must conform to ASTM C744 standards. Use Spectra-Glaze II by Burns and Russell Co., Astra-Glaze by Trenwyth Industries Inc., or an approved equivalent.
- C. Provide mortar that conforms to ASTM C270 standards. Use Portland Type N cement-lime mortar above grade and Type M below grade. Use other types as required by the application. The use of masonry cement mortar is not permitted.
- D. Provide reinforcing as follows:
 - 1. Provide hot-dipped galvanized ties and reinforcing that conforms to ASTM A 153 standards.
 - 2. Provide welded, truss-type horizontal reinforcing with 9-gauge wire and deformed side rods.
 - 3. Provide two-piece, horizontal reinforcing brick-to-concrete masonry ties with 3/16" diameter, tab-type, adjustable drip ties.
 - 4. Provide masonry-to-concrete ties with 24-gauge steel dovetail slots, fillers, and 1" wide, 16-gauge corrugated steel anchors.
 - 5. Provide 3/16" diameter masonry-to-steel ties. Provide two-piece steel wire ties for lateral restraint, and for horizontal and vertical movement.
 - 6. Provide DW-10 brick-to-metal stud ties by Hohmann & Barnard or an approved equivalent, consisting of 3/16" diameter vee ties with drip and 12-gauge wall slots.
 - 7. Provide Grade 60 deformed reinforcing bars that conform to ASTM A 615 standards.

2.2 INSTALLATION GUIDELINES

- A. Install masonry within tolerances of $\pm 1/8"$ in 20' from dimensions and locations in the contract

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documents for plumb, level, and alignment.

- B. Lay exposed face brick in bonds required by the design or to match existing masonry. Concrete masonry units may be laid in running or stacked bond as required by the design.
- C. Maintain joints of a uniform 3/8" width as required by the design. Tool concave joints or as required by the design. Provide full bed, head and collar joints, except at weep holes. Provide a clean cavity in cavity wall construction.
- D. Provide weep holes by placing fully open head joints at 2' on center above all ledges, flashings, and lintels. Fill then cavity 8" high with weep baffle material.
- E. Provide expansion joints no greater than 30' on center.
- F. Reinforce all concrete masonry partitions.
- G. Clean all traces of excess mortar/grout efflorescence and other construction stains from new exposed masonry surfaces.

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