



Elgin-Butler Brick Company
Since 1873

Recommended Long Form Specification for Structural Glazed Facing Tile (SGFT)

As manufactured by
ELGIN-BUTLER BRICK COMPANY
PO Box 546
Elgin, TX 78621
Tel: (512)281-3356
Fax: (512)281-2487
www.elginbutler.com

SECTION 04210
STRUCTURAL GLAZED FACING TILE

1.0 GENERAL

1.1 SUMMARY

- A. System Description: Work described in this section covers requirements for Structural Glazed Facing Tile Units Masonry and its installation and maintenance.
- B. Products installed but not furnished in this section:
 - 1. Section 04100: Mortar
 - 2. Section 04150: Masonry Accessories

1.2 REFERENCES

- A. Applicable standards of the following as referenced:
 - 1. American Society for Testing and Materials (ASTM)
 - 2. Brick Institute of America (BIA)
 - 3. Underwriters' laboratories, Inc. (UL)
 - 4. Ceramic Glazed Masonry Institute (CGMI)

1.3 DEFINITIONS

- A. Terms
 - 1. Structural Glazed Facing Tile: SGFT, extruded and manufactured clay masonry unit with a ceramic glazed face that is a structural unit which can be load bearing masonry.
 - 2. Glazed Face: Exposed ceramic glazed face on SGFT.
 - 3. Bed Joint: Horizontal mortar joint between two SGFT.
 - 4. Head Joint: Vertical mortar joint between two SGFT.

1.4 SUBMITTALS:

- A. Strap samples: Submit three samples to indicate the approximate range of color and texture to be expected in the completed wall for each color or texture.
- B. Field Panel: Construct not less than 4' wide and 4' high sample panel of material and accessories representative of completed wall.

- C. Certificates:
1. Material Safety Data Sheet (MSDS)
 2. Certification Letter: Submit a certified letter from manufacturer prior to delivery of SGFT to jobsite for compliance of specification requirements.

1.5 QUALITY ASSURANCE:

- A. Sample Field Panel: Construct a wall panel 4' wide and 4' high for SGFT work. Locate as directed by Architect.
- B. Panel to indicate quality representation of:
1. SGFT color and texture range
 2. Bonding pattern.
 3. Mortar color.
 4. Joint tooling.
 5. Reinforcement/Ties.
 6. Workmanship.
- C. Sample Field Panel should be erected at least 14 days prior to shipment of the SGFT to the jobsite. If necessary, additional panels will be erected until architectural approval is received.
- D. Approved Sample Panel shall act as the standard of comparison and quality to be expected throughout the work.
- E. Approved Sample Panel should be maintained through job completion and not destroyed until instructed by the Architect.
- F. Erect separate Sample Panels for each color and texture, mortar color or combinations specified or as indicated on drawings.

1.6 DELIVERY, STORAGE AND HANDLING:

- A. Deliver SGFT to Project Site as packaged by manufacturer. Offload SGFT packages using equipment that will not damage SGFT. No SGFT is allowed to be in direct contact with the ground. Do not double stack cubes of SGFT.
- B. Cover SGFT with non-staining waterproof membrane covering. Keep units dry. Allow air circulation around stacked units. Installation of wet or stained SGFT is prohibited.

1.7 PROJECT CONDITIONS:

A. Environmental requirements:

1. Do not lay SGFT and mortar when ambient temperatures are below 40 degrees F., unless properly protected in a heated enclosure and accepted means are provided to heat units and mortar, with specific written approval from Architect. (Reference: BIA Technical Notes for Guide Specifications for Brick Masonry.)
2. Maintain air temperature above 40 degrees F. on both sides of masonry for at least 72 hours after erection of walls.
3. Protect masonry construction from direct exposure to wind and sun then erected in ambient air temperatures of 95 degrees F. in shade with relative humidity less than 50%.
4. Take all precautions necessary to protect units from damage.
 - a. Handle and store in protective cartons or trays until actual installation in the wall.
 - b. Damaged units will not be accepted in the wall.

2.0 PRODUCTS:

2.1 STRUCTURAL GLAZED FACING TILE:

A. Pattern or Type:

1. As detailed and required (running bond or stack bond).

B. Characteristics:

1. Meet ASTM C-126 for grade (S) Select (or grade [SS] Sized Select) quality.
2. Must meet UL requirements for zero flame spread and zero smoke developed.
3. Nominal Face stretcher dimensions standard run 6T Series (Horizontal or Vertical Cell) 5-1/3" height X 12" length, or 4W Series (Horizontal or Vertical Cell) 8" height X 8" length, or 8W Series (Horizontal or Vertical Cell) 8" height X 16" length, as specified. All dimensions are +/- allowable tolerance.
4. Bed Depth: 2", 4", 6" or 8" thickness (limited production of 8W in 8" bed depth). As required.
5. Shapes: Furnished as shown on the plans in accordance with current standard production of the manufacturer. All external corners, sills and jambs shall be bullnosed unless otherwise noted. Lintels and internal corners shall be square unless otherwise noted. The base course is straight or coved

Unit Masonry

(recessed or non-recessed, as required) as shown on the drawings.

6. Color(s) to be selected by Architect from Elgin-Butler Brick Company standard color offering.
7. Approved manufacturer:
 - a. Elgin-Butler Brick Company, Austin, Texas, 512/453-7366.
 - b. Or approved equal.

2.2 ACCESSORIES:

- A. Mortar: As specified in mortar section.
- B. Joint Reinforcing: Masonry joint reinforcing as specified in Masonry Accessories section.
- C. Wall Ties: Installed as per BIA recommendations, such as with a 4" or less width cavity, use corrosion resistant metal ties, minimum of one 3/16" diameter steel wall tie in every 4-1/2 sq. ft.; for vertical-cell hollow masonry units the tie shall be rectangular or U-shaped, or for horizontal-cell, hollow masonry units or solid masonry units shall be Z-shaped (Reference BIA Tech Note 21C).
- D. Lateral support as required.

3.0 EXECUTION:

3.1 PREPARATION:

- A. Protection of work:
 1. Protect the surfaces of the installed SGFT. Cover freshly laid weather exposed masonry at the end of each day or the start of each shut down period, with non-staining waterproof material in such a manner which will ensure that the covering will overhang the masonry not less than 2' on each side of the masonry. Anchor on each side of wall. Finished walls to be covered with 15# felt paper and erect wooden barriers to protect walls at areas that are subject to large amounts of construction traffic or material movement. Protect glazed face from exposure to welding buns, stains, etc.

3.2 INSTALLATION

- A. Workmanship:
 1. Lay only dry masonry units.
 2. Lay masonry plumb, level and true to line.
 3. Lay units in bonding pattern as specified.

Unit Masonry

4. Cut units with masonry saw using a wet diamond blade. Do not use units less than 4" in length.
- B. Build in work of other trades indicated to be built-in with SGFT as work progresses.
- C. Mortar Joints:
1. Lay joints of each first course in full width bed of mortar.
 2. Horizontally cored units:
 - a. Bed Joint: Full
 - b. Head Joint: Face shell thickness.
 3. Vertically cored units:
 - a. Head and Bed Joints: face shell thickness.
 4. Remove and replace mortar with fresh mortar where adjustment must be made after mortar has started to set.
 5. Keep bed and head joints uniform in width, except for minor variations required to maintain bond and locate returns.
 6. Both bed and head mortar joints standard thickness for 4T Series use 5/16", +/- 1/16" or to course out with the existing material.
 7. Sanitary Epoxy Mortar, where required:
 - a. Rake mortar joints 1/4" to 3/8" deep. Mix and install non-sagging sanitary epoxy mortar in strict accordance with manufacturer's directions.
- D. Joint Treatment:
1. Tool or strike mortar joints on exposed face when they are "thumb print" hard.
 2. Tool all SGFT joints concave using a non-metallic tool 1-1/4" in diameter or larger unless otherwise noted.
- E. Removal of Existing Structural Glazed Facing Tile:
1. Cut out existing material where indicated on the drawings. Do not leave pieces or tile in the wall smaller than 4" in length. Use care in cutting out units at the mortar joints as to not chip the existing tile. Chips larger than a 3/8" square will require replacement of the units. Smaller chips may be repaired. Contact the manufacturer for instructions.

3.3 APPLICATION:

- A. Acceptable Tolerances:
1. Walls must be straight in plane.

Unit Masonry

2. Maximum variation from plumb: 1/4" in 10' 0"; not exceeding 3/8" in 20' 0".
3. Maximum variation from level: 1/4 in 20' 0"; not exceeding 1/2" in 40' 0" or more.
4. Maximum variation in linear building line from location indicated: 1/4" in 20' 0".

3.4 CLEANING:

- A. It is intended that with careful adherence to this specification that extensive cleaning will not be necessary. During construction, wipe glazed surface clean after tooling of joints or within 30 minutes after laying, with course rag. Keep wall clean as work progresses to avoid more difficult cleanup. Use no metal scrapers, abrasive powders or unauthorized cleaning agents. Use wooden paddles or scrapers to clean away mortar residue or lumps. Wash with clean water. A mild detergent may be used. Rinse with clean water. Wipe with clean cloths, sponges or similar item.
- B. In event of unexpected contaminations of SGFT walls, perform any cleaning with other than a non-metallic scraper, stiff bristled brush or wooden paddle only after approval by Architect and necessary tests to insure against any wall damage.

END OF SECTION 04210

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