



# Fix the Bricks

PLANNING DIVISION  
COMMUNITY & NEIGHBORHOODS

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To: Salt Lake City Historic Landmark Commission  
From: Cheri Coffey, AICP, Assistant Planning Director  
801-353-6188 or cheri.coffey@slcgov.com  
Date: October 6, 2016 Meeting  
Re: Fix the Bricks- Seismic Upgrades to buildings in Local Historic Districts or Landmark Sites

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In Salt Lake City, there are approximately 47,000 single family homes. About 32,000 (68%) are Unreinforced Masonry Dwellings and require some kind of seismic improvement as a life saving measure in the event of an earthquake. Salt Lake City, in cooperation with the Federal Emergency Management Agency (FEMA) is working on a program to provide financial incentives for owners of Unreinforced Masonry Dwellings to seismically upgrade their buildings and help minimize damage during an earthquake. The program would reimburse property owners a percentage of the cost they spend to retrofit their Unreinforced Masonry Dwelling for seismic upgrades.

The program, would start in 2017, and in its initial year, would target approximately 25 properties for the program to ensure that the process works as intended. It is hoped that the program will become an ongoing program each year with capacity for more applications. Cory Lyman, the City's Emergency Management Program Director is leading the efforts to establish this program. He will be at the Commission meeting on October 6<sup>th</sup> to give the Commissioners an overview of the program.

All owners of Unreinforced Masonry Dwellings in the City will be eligible for this program, including owners of property in the local historic districts and of Landmark Sites. The major exterior changes that may be visible on historic structures, relates to the bracing of chimneys. Most other seismic upgrades are done to the interior of the structure. Although chimney bracing is considered a minor alteration, because of their visibility, Planning Staff is asking that the Commission review the proposed process for this type of work and pass a formal motion that would grant the Planning Staff the authority to administratively approve these types of seismic modifications if they meet certain standards.

### Standards for Bracing Chimneys

The State Historic Preservation Office published a document "Bracing for the Big One," in 1993 that gives guidance of how to make appropriate seismic upgrade changes to historic homes. The 2016 document, "The Utah Guide for the Seismic Improvement of Unreinforced Masonry Dwellings," published by Utah Seismic Safety Commission reinforces and references the recommendations from "Bracing for the Big One." In the 2016 document, various models of Unreinforced Masonry Dwellings are identified and appropriate modifications to each type of model is included.

As noted above, the most significant exterior change will probably be the request to brace chimneys. Staff is of the opinion that bracing chimneys in the manner that is outlined in “Bracing for the Big One” and the “Utah Guide for the Seismic Improvement of Unreinforced Masonry Dwellings” are appropriate in local historic districts, even if the bracing is visible because the method is something that generally does not remove historic materials and is reversible.

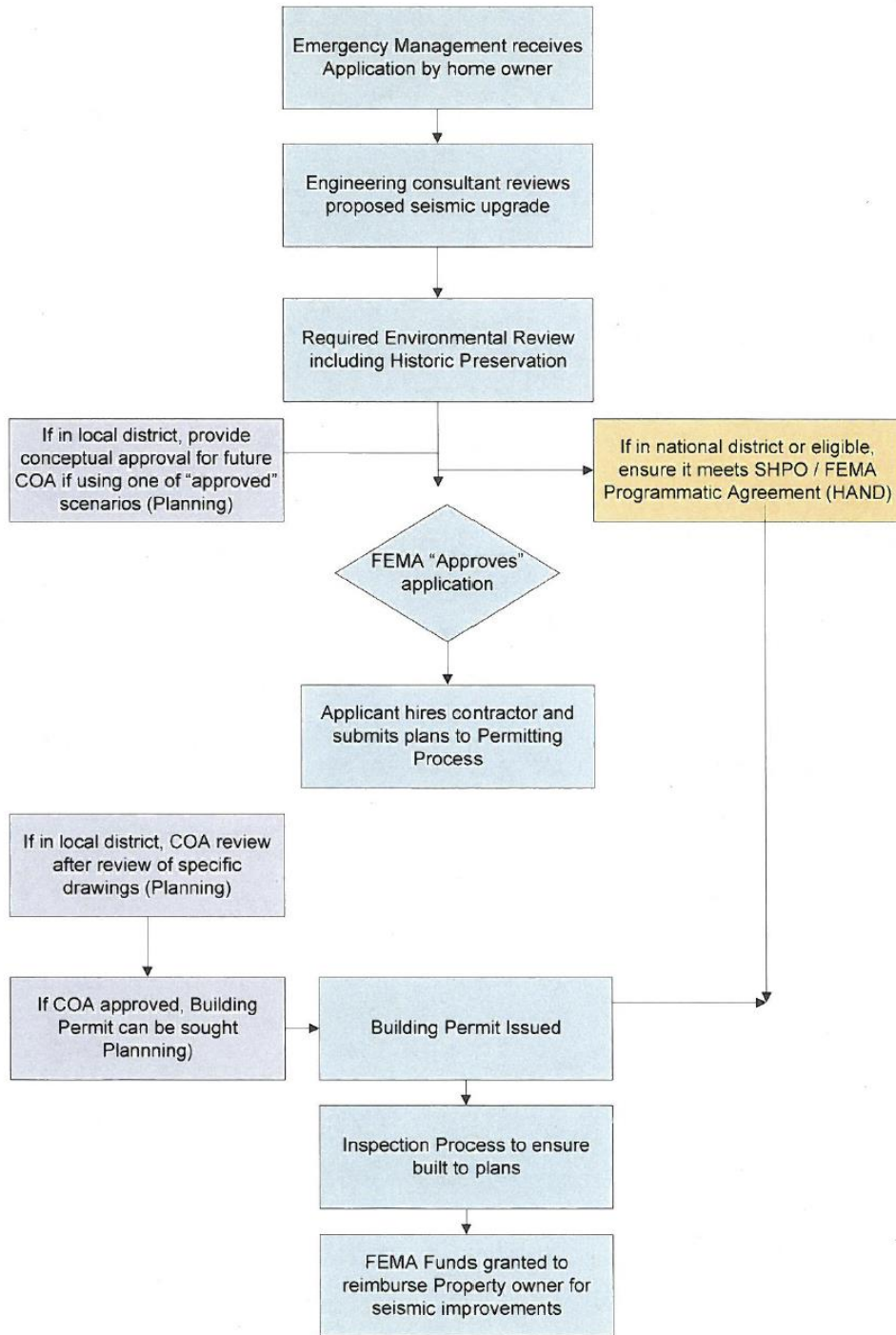
Attachment A includes the specific details for bracing chimneys as identified in “The Utah Guide for the Seismic Improvement of Unreinforced Masonry Dwellings” and “Bracing for the Big One.” Both documents are provided in full, in Attachment B.

### Process

The proposed process includes a few additional steps than just a regular building permit process. As a federal program, FEMA is responsible to ensure that the projects all meet the requirements of Section 106 of the National Historic Preservation Act of 1966. This ensures that projects receiving federal funds follow historic preservation standards (Secretary of the Interior Standards) to protect buildings that are ELIGIBLE for the National Register. Eligible buildings include any building that is 50 years old or older that still retains its integrity. Building Code standards that address seismic issues were not adopted until the 1970s. Therefore, most of the City’s residential building stock is not seismically upgraded and much of it is older than 50 years or more (built prior to 1967) and therefore, would qualify for this program and require Section 106 review.

The Proposed Process

## FIX THE BRICKS PROGRAM 2017-GENERAL PROCESS



The proposed process is as follows:

- 1) Property owners apply for the program identifying what they propose to do to seismically upgrade their building.
- 2) The City's structural engineering consultant will review the information, identify the model of the building and the proposed method of seismic upgrade and submit an application, including required information such as photographs, etc. for the property.
- 3) The City will review the project to determine whether the proposed modification meeting the historic preservation standards.
  - a. If the project is located in a local historic district or is a Landmark Site the Planning Staff will review the proposal and grant conceptual approval where appropriate.
  - b. If the project is Eligible for the National Register but is not within a local historic district or Landmark Site, the Housing and Neighborhood Development Staff will review the project to determine whether it complies with the Programmatic Agreement between FEMA and the State Historic Preservation Office as a "No Adverse Effect" modification.
- 4) The initial "sign off" for historic preservation will be communicated with FEMA. FEMA will determine whether the project meets its requirements to be eligible for the reimbursement program. If FEMA approves the project then-
- 5) The property owner or representative (contractor, architect, etc.) will apply for a building permit.
  - a. If the property is within a local historic district or Landmark Site, the Planning Staff will review the specific drawings to determine if the project meets the standards for minor alteration and issue a formal Certificate of Appropriateness.
- 6) If all other standards are met (such as building code requirements, etc.) a building permit will be issued.
- 7) The City will inspect the work to ensure it is built according to the permitted plans.
- 8) Once the work passes inspection, the applicant can file for reimbursement of the seismic upgrades.

### Recommendation

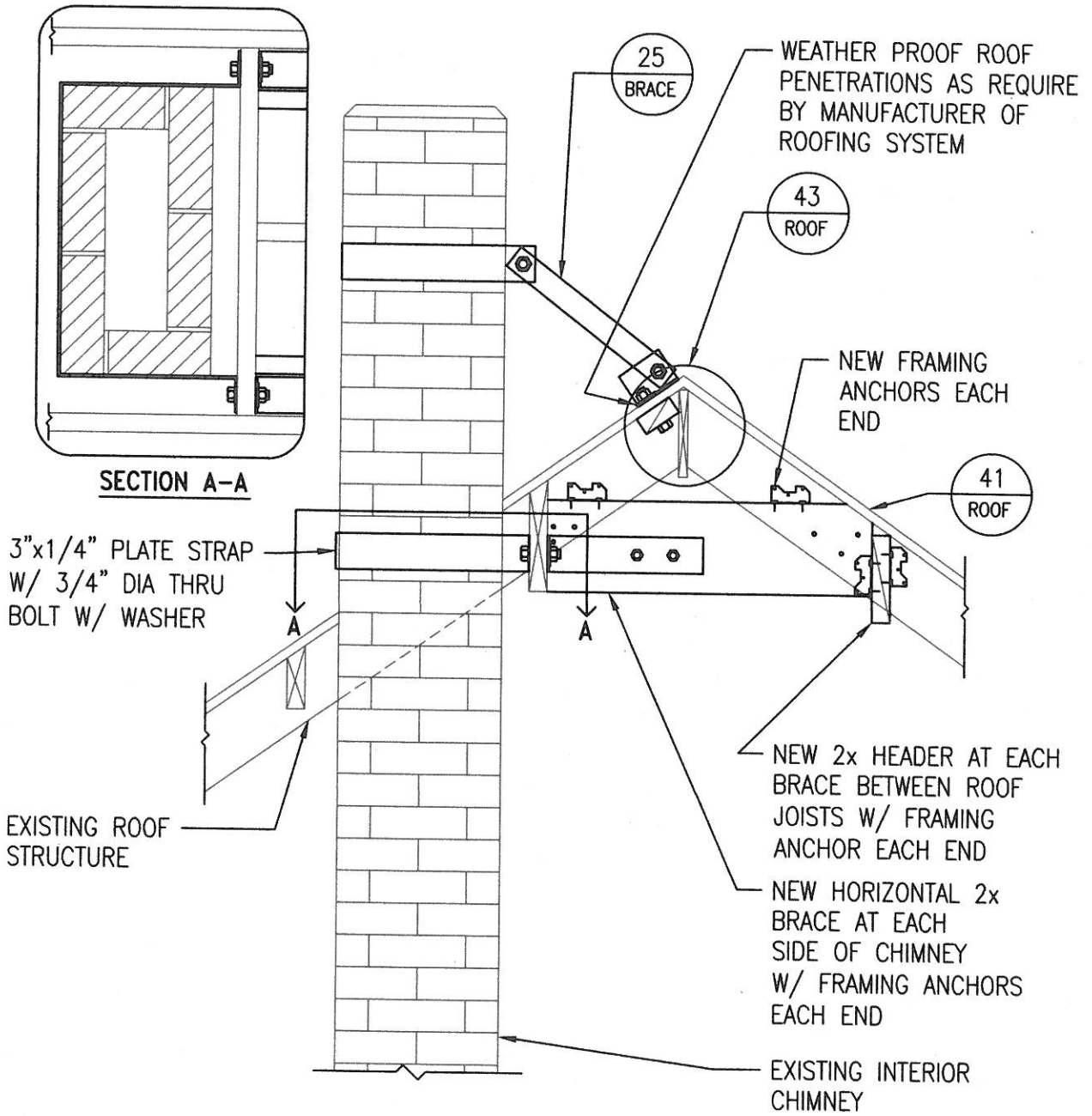
Staff recommends that the Historic Landmark Commission pass a motion that authorizes staff to administratively approve exterior seismic upgrades to properties within the H Historic Preservation Overlay Zone if the proposed changes are consistent with those recommended in "Bracing for the Big One" (1993) and / or the Utah Guide for Seismic Improvements to Unreinforced Masonry Dwellings" (2016)

### Proposed Motion

I move that the Historic Landmark Commission delegate approval authority for minor alterations of seismic upgrades to the exterior of buildings within the H Historic Preservation Overlay Zone to the Planning Staff. Staff shall ensure that the proposed changes are consistent with the standards of chapter 21A.34.020. G. of the Salt Lake City Code. Staff may use the recommendations identified in the State Historic Preservation Office publication “Bracing for the Big One” (1993) and the “Utah Guide for Seismic Improvements to Unreinforced Masonry Dwellings” (2016) to provide guidance in its review.

### **Attachments**

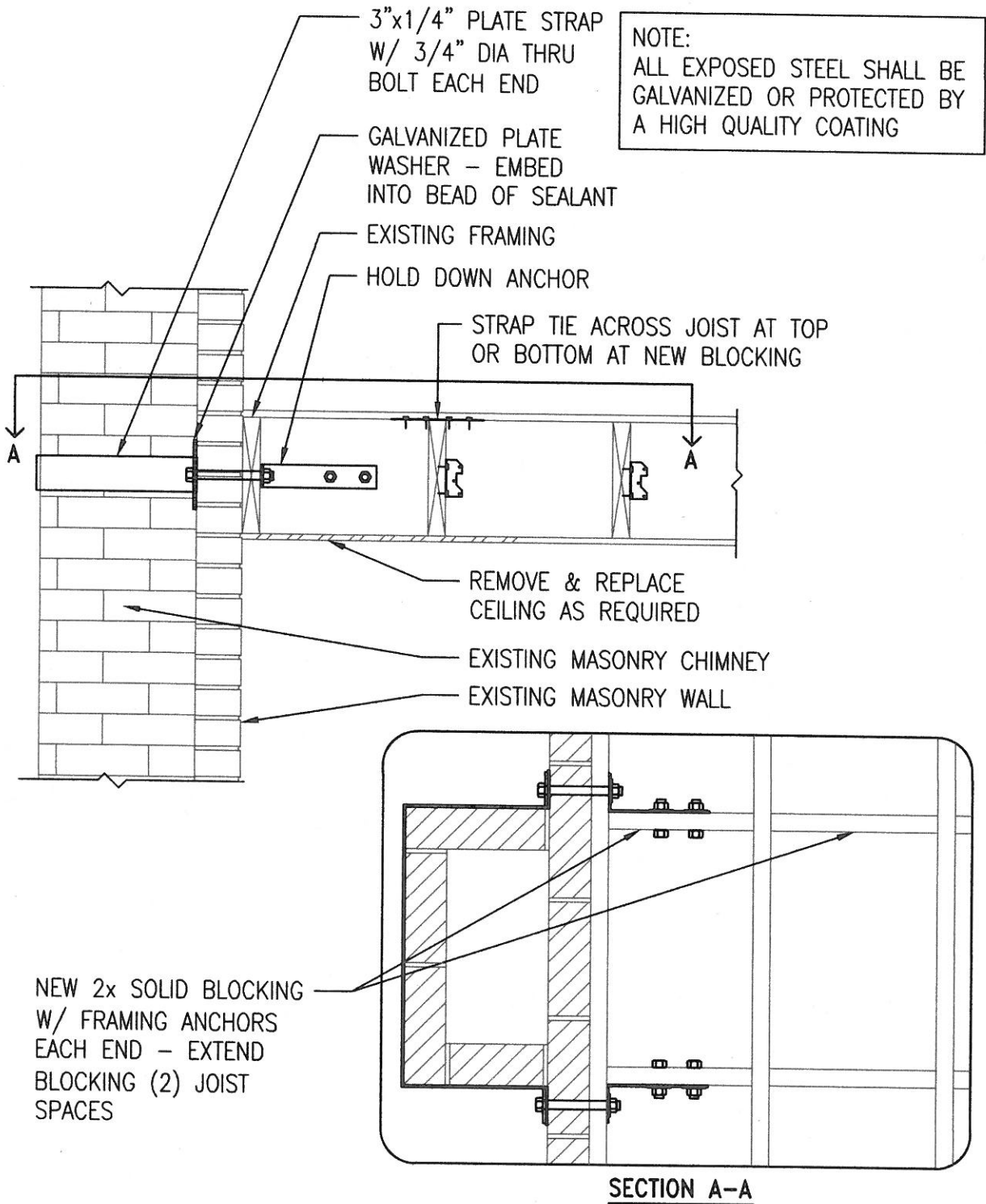
- A) Excerpts showing chimney bracing details from “The Utah Guide for the Seismic Improvement of Unreinforced Masonry Dwellings”
- B) “The Utah Guide for the Seismic Improvement of Unreinforced Masonry Dwellings” & “Bracing for the Big One”



NOTE:  
ALL EXPOSED STEEL SHALL BE GALVANIZED OR PROTECTED BY A HIGH QUALITY COATING

22 BRACE INTERIOR CHIMNEY BRACING W/ HEADER AT JOIST

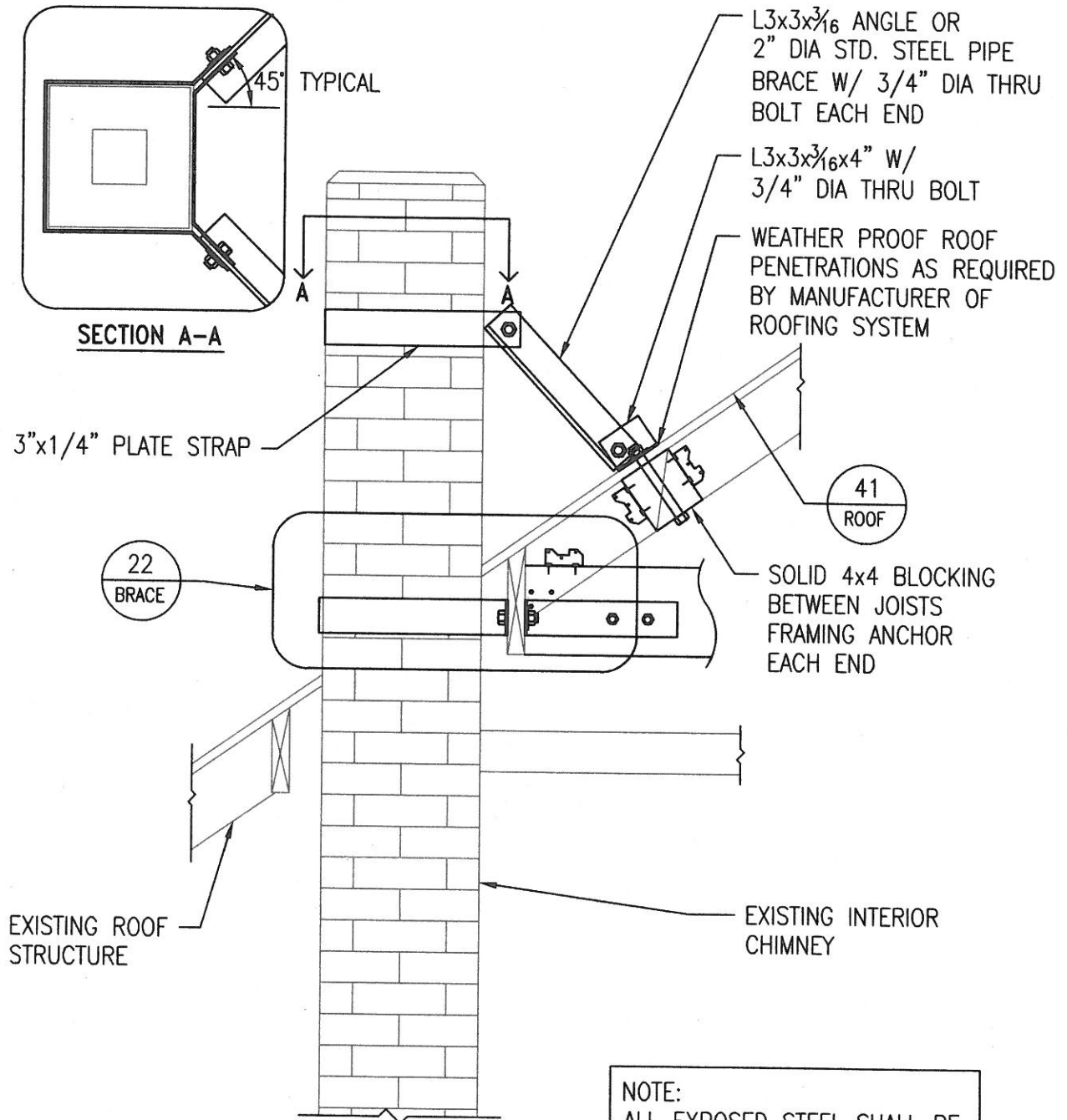
Seismic Improvement Structural Detail	HOME TYPE: VARIES	Structural Bracing	DETAIL: 22
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24  
BRACE

EXTERIOR CHIMNEY TO FLOOR ANCHORAGE  
© JOISTS PARALLEL TO WALL

Seismic Improvement Structural Detail	HOME TYPE: VARIES	Structural Bracing	DETAIL: 24
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NOTE:  
ALL EXPOSED STEEL SHALL BE GALVANIZED OR PROTECTED BY A HIGH QUALITY COATING

25 BRACE EXTERIOR CHIMNEY TO ROOF ANCHORAGE

Seismic Improvement Structural Detail	HOME TYPE: VARIES	Structural Bracing	DETAIL: 25
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