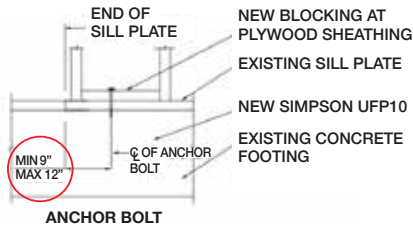


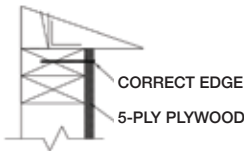
# Six ESS Construction Mistakes to Avoid

(First and foremost: Do not start construction before approval by ESS)

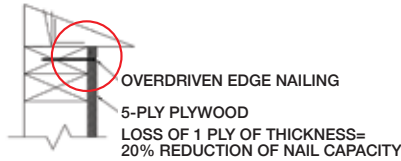
## #1 Incorrect Anchor Bolt End Distance in Mud sill



## #2 Nails Overdriven or Misplaced



CORRECT EDGE NAILING

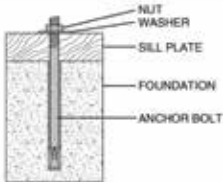


INCORRECT EDGE NAILING



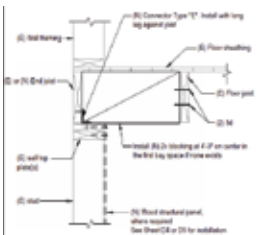
NAILS ON SEAM

## #3 Bolts and Nuts Improperly Installed

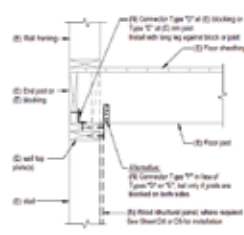


- Install bolts with proper diameter, embedment, edge distance, and with approved washer. Confirm acceptability with building department.
- Bolts should be flush with the top of the nut.

## #4 Use of Non-Approved Angles, Hold-downs, Clips and Foundation Plates



FLOOR-TO-WALL CONNECTION AT PARALLEL JOISTS



FLOOR-TO-WALL CONNECTION AT PERPENDICULAR JOISTS

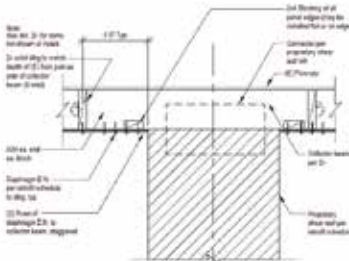
- FEMA P-1100 requires installation of pre-approved hardware with minimum capacity values.
- Do not substitute non-approved hardware.

## #5 Installation of Anchor Bolts into Brick or Unreinforced Masonry Foundations



- FEMA P-1100 requires that the house have a continuous concrete perimeter footing and concrete slab on grade in the garage area.
- Brick and unreinforced masonry foundations are not allowed.

## #6 Only Use Manufacturer Specified Anchors in Proprietary Hardware and Elements



FLOOR CONNECTION AT PROPRIETARY SHEAR WALL FLOOR FRAMING PARALLEL TO GARAGE FRONT

- Proprietary hardware must be installed per the manufacturer's requirements.
- Check the manufacturer's requirements for approved concrete/masonry/steel anchors.