



Baker Klein Engineering, P.L.

STRUCTURAL ENGINEERING SERVICES

November 30, 2010

Building Official
c/o Ms. Jane Koechlin
Earthcore Industries, LLC
6899 Phillips Industrial Blvd.
Jacksonville, FL 32256

Re: Maximum Chimney Height Above Roof (BKE # 10-195)
ASCE 7-05, Exposure C, One Story Residences

Dear Sir:

This letter is intended to provide information that would allow a building official, contractor or owner to determine the maximum allowable height an un-reinforced chimney can extend above the roof line of a one story residence. The system that this letter is based on is an Isokern fireplace and chimney system that uses a light-weight concrete Isokern DM54 "Outercasing Block" and this element will be the portion of the chimney that is exposed to the wind forces. The system's components will be connected with "WallMix 901" by C-Cure of Seal Beach California, used as mortar.

<u>Design Wind Speed</u>	<u>Maximum Height above Roof Line</u>
90 MPH.....	26'-0"
100 MPH.....	24'-0"
110 MPH.....	21'-8"
120 MPH.....	19'-8"
130 MPH.....	18'-0"
140 MPH.....	17'-6"
146 MPH.....	16'-8"
150 MPH.....	16'-4"

We have performed calculations based on a design wind speeds noted above and an exposure classification of C, using the 2007 Florida Building Code and ASCE 7-05.

It is our professional opinion, based on the information and criteria above, that a if the height of the chimney is limited to the heights noted in the table above, the chimney system will perform properly without additional support under code required wind loads.

If you should need additional information or require any further clarifications, please feel free to contact us.

Sincerely,

Christopher R. Sube, P.E.
Senior Structural Engineer
Florida PE #58290

1334 Walnut Street
Jacksonville, Florida 32206
Certificate of Authorization #26227
(904) 356-8520 Phone (904) 356-8524 Fax



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Earthcore Industries, LLC
6899 Phillips Industrial Blvd.
Jacksonville, FL 32256

Re: Maximum Chimney Height Above Roof (BKE # 10-195)
ASCE 7-05, Exposure C, Two Story Residences

Dear Sir:

This letter is intended to provide information that would allow a building official, contractor or owner to determine the maximum allowable height an un-reinforced chimney can extend above the roof line of a two story residence. The system that this letter is based on is an Isokern fireplace and chimney system that uses a light-weight concrete Isokern DM54 "Outercasing Block" and this element will be the portion of the chimney that is exposed to the wind forces. The system's components will be connected with "WallMix 901" by C-Cure of Seal Beach California, used as mortar.

<u>Design Wind Speed</u>	<u>Maximum Height above Roof Line</u>
90 MPH.....	25'-0"
100 MPH.....	22'-8"
110 MPH.....	20'-6"
120 MPH.....	18'-8"
130 MPH.....	18'-0"
140 MPH.....	16'-8"
146 MPH.....	15'-8"
150 MPH.....	15'-6"

We have performed calculations based on a design wind speeds noted above and an exposure classification of C, using the 2007 Florida Building Code and ASCE 7-05.

It is our professional opinion, based on the information and criteria above, that a if the height of the chimney is limited to the heights noted in the table above, the chimney system will perform properly without additional support under code required wind loads.

If you should need additional information or require any further clarifications, please feel free to contact us.

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c/o Ms. Jane Koechlin
Earthcore Industries, LLC
6899 Phillips Industrial Blvd.
Jacksonville, FL 32256

Re: Maximum Chimney Height Above Roof (BKE # 10-195)
ASCE 7-05, Exposure B, One & Two Story Residences

Dear Sir:

This letter is intended to provide information that would allow a building official, contractor or owner to determine the maximum allowable height an un-reinforced chimney can extend above the roof line of a one or two story residence. The system that this letter is based on is an Isokern fireplace and chimney system that uses a light-weight concrete Isokern DM54 "Outercasing Block" and this element will be the portion of the chimney that is exposed to the wind forces. The system's components will be connected with "WallMix 901" by C-Cure of Seal Beach California, used as mortar.

<u>Design Wind Speed</u>	<u>Maximum Height above Roof Line</u>
90 MPH.....	29'-6"
100 MPH.....	26'-4"
110 MPH.....	24'-0"
120 MPH.....	22'-0"
130 MPH.....	20'-0"
140 MPH.....	18'-6"
146 MPH.....	18'-0"
150 MPH.....	18'-0"

We have performed calculations based on a design wind speeds noted above and an exposure classification of B, using the 2007 Florida Building Code and ASCE 7-05.

It is our professional opinion, based on the information and criteria above, that a if the height of the chimney is limited to the heights noted in the table above, the chimney system will perform properly without additional support under code required wind loads.

If you should need additional information or require any further clarifications, please feel free to contact us.

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