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A BRIEF REPORT ON

HONEYCOMB SANDWICH PANELS

FOR

LOW COST HOUSING IN JAMAICA

BY

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FOR

PROJECT DEVELOPMENT SERVICES & ASSOCIATES LIMITED

APRIL 1983

building this load is not expected to be greater than 160 pounds/foot, thus giving a factor of safety of approximately 6.0.

COMMENTS/RECOMMENDATIONS

The foregoing assessment is based on certain panel geometries and materials. It appears that the proposed system is quite conservative from a structural viewpoint, and it may, therefore, be possible to reduce component sizes and/or use different skin materials (e.g., compressed fibre board); thus leading to a less costly system. By prefabricating entire units in a shop could lead to the elimination of the 2x4 studs at 4'-0" on centres, for example. However, from a practical viewpoint, with time being the essence, it may not be feasible to investigate alternatives now, as further testing would be required.

Since the structure is relatively lightweight, an immediate concern would be fixing it to the foundation to provide overall stability. In order to enhance durability, strict quality control in the shop will be mandatory to ensure waterproofing and general air tightness of the Sandwich Panel System. To increase the fire rating of the assembly, it would be appropriate to look into the use of an intumescent type paint. Finally, although shear strength at the skin/honeycomb interface is always expected to be miniscule, a good connection between skin and core is imperative to provide a fully composite system.

CONCLUSION

The Honeycomb Sandwich Panel System described appears to have all

The structural characteristics required for applications in Jamaica. A mass production shop-type operation with good quality control should lead to a low-cost housing system compatible with local conditions without detracting from or sacrificing any of the current conveniences enjoyed and expected by people wanting to own a home.

REFERENCES

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