E.W. Howell Co., LLC
113 Crossways Park Drive
Woodbury, NY 11797
Phone: 516-921-7100
Fax: 516-921-7920

REQUEST FOR INFORMATION
No. 00034

TITLE: Roof Curbs II

DATE: 12/3/2009

PROJECT: BNL CCWF-II

JOB:

TO: Attn: Alan Raphael
Brookhaven National Laboratory
Brookhaven Sciences Associates, LLC
Project Modernization Office
Upton, NY 11973-5000
Phone: 631-344-5854

STARTED:
COMPLETED:
REQUIRED: 12/10/2009

WORK	SCHEDULE	COST
IMPACT: Unknown	**IMPACT:** Unknown	**IMPACT:** Unknown

QUESTION:

December 3, 2009
Roof Curbs II

Please advise if attached alternate roof curb detail is acceptable. REVISED SKETCH RECEIVED 2-1-10.

CC: File, Bill Harrison, George Santorilla

PROPOSED SOLUTION:

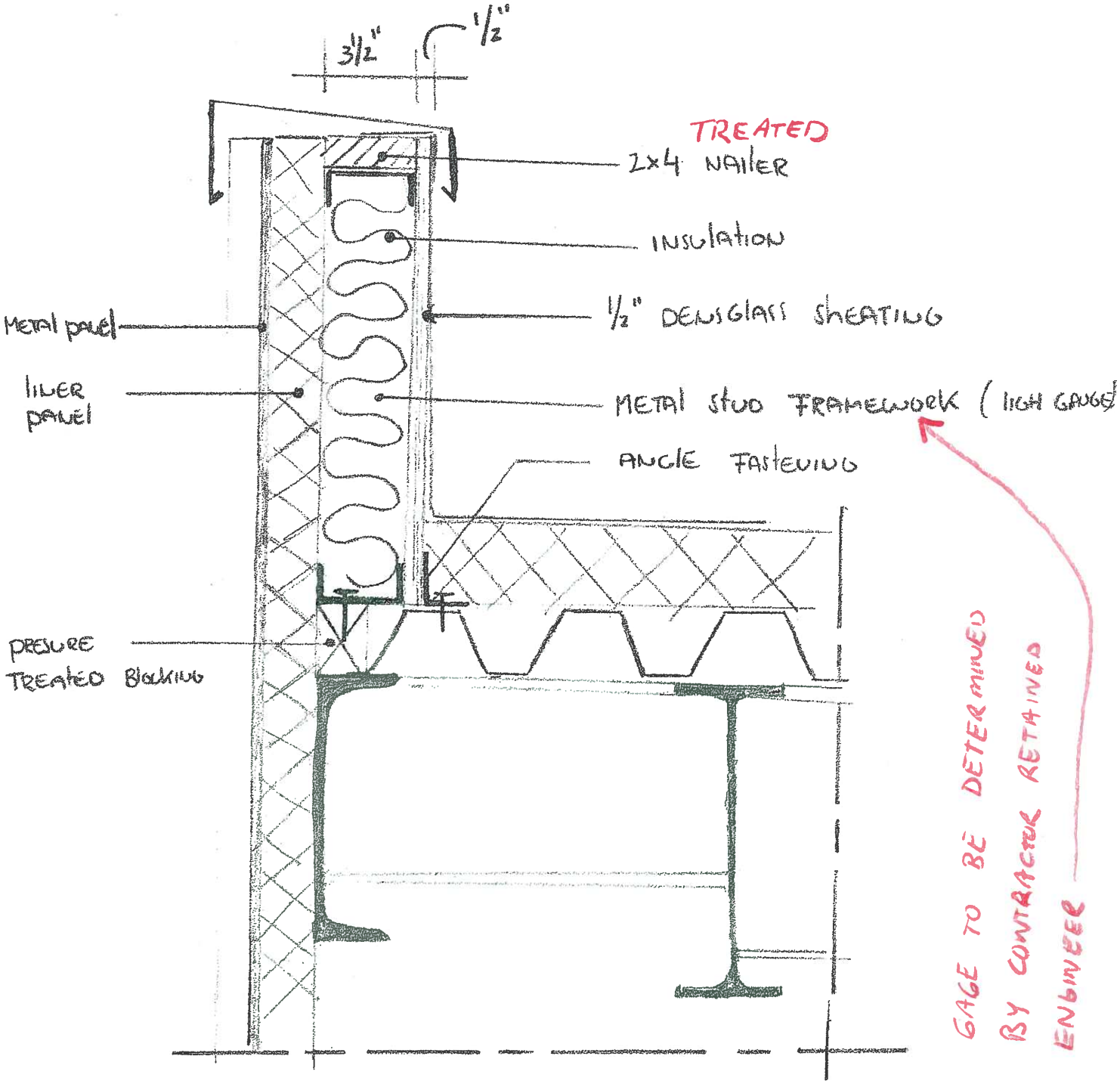
ANSWER:

APPROVED PER MARKED-UP SKETCH ATTACHED. RESUBMISSION NOT REQUIRED.

D. SMITH/W. HARRISON 2-15-10

Requested By: E.W. Howell Co., LLC **Date:** _____

Signed: _____
Lauren Bergin


3½"
1/2"
TREATED
2x4 NAILER
INSULATION
1/2" DENSGLASS SHEATING
METAL PANEL
LINER PANEL
METAL STUD FRAMEWORK (HIGH GAUGE
ANGLE FASTENING
PRESURE TREATED BLOCKING
GAGE TO BE DETERMINED BY CONTRACTOR RETAINED ENGINEER

Georgia-Pacific

DensGlass® Sheathing

Technical Service Hotline 1.800.225.6119 or
www.gpgypsum.com

Manufacturer

Georgia-Pacific Gypsum LLC
133 Peachtree Street
Atlanta, GA 30303

Georgia-Pacific Canada LP
6711 Mississauga Road,
Mississauga, ON L5N 2W3

Technical Service Hotline: 1-800-225-6119

Description

DensGlass® Sheathing is a gypsum panel made of a treated, water-resistant core, surfaced with fiberglass mats and a GOLD colored primer coating. Providing superb protection from the elements, DensGlass Sheathing is resistant to decay, delamination and deterioration due to weather exposure—even during construction delays that last as long as twelve months after installation and are backed by a 12-month limited warranty against normal weather exposure.* DensGlass Sheathing panels are also mold-resistant, scoring a 10, the highest score, when tested, as manufactured, per ASTM D 3273.

DensGlass Sheathing exhibits a dimensional stability that assures resistance to warping, rippling, buckling and sagging for a flat and even substrate and is noncombustible as defined and tested in accordance with ASTM E 136. Since DensGlass Sheathing is strong in both directions, it may be installed either parallel or perpendicular to wall framing members (always follow specific assembly installation instructions).

Primary Uses

Because of the superior performance of DensGlass Sheathing, it is specified for exterior walls, ceilings and soffits in a wide variety of applications. These include exterior insulation and finish systems (EIFS); cavity brick or stone veneer applications; cladding such as wood siding, vinyl siding, composition siding, wood shingles, shakes, conventional stucco systems, plywood siding panels; and interior finish systems that require a substrate panel with superior fire and moisture resistance.

For EIFS applications, DensGlass Sheathing is an ideal substrate for adhesive or mechanical application of expanded polystyrene (EPS) or extruded polystyrene insulation, and is recommended in all climate zones.

Consult with the local building code, design professional, owner or cladding manufacturer for weather resistive barrier requirements. Manufacturers of weather resistive barriers, which include flexible membranes, self-adhered membrane and liquid applied, have found DensGlass Sheathing to be a suitable substrate for their systems.

DensGlass Sheathing is an ideal product for exterior ceilings and soffits for both cold and warm climate zones. It resists sagging, even under exceptionally humid conditions. Panels are applied directly to structural framing. Surface and joints may be finished and painted, or surfaced with an exterior finish system.

Limitations

DensGlass Sheathing is resistant to normal weather conditions, but it is not intended for immersion in water. Cascading roof/floor water should be directed away from the sheathing until appropriate drainage is installed.

Avoid any condition that will create moisture in the air and condensation on the exterior walls during periods when the exterior temperature is lower than the interior. The use of forced air heaters creates volumes of water vapor which, when not properly vented, can condense on building materials. The use of these heaters and any resulting damage is not the responsibility of Georgia-Pacific Gypsum. Consult heater manufacturer for proper use and ventilation. Vapor barrier may also restrict ventilation.

When DensGlass Sheathing panels are used in slanted wall applications, that portion of the wall must be temporarily protected from the elements by the use of a water-resistant barrier prior to application of the cladding. Do not allow water to pond or settle on sheathing. Also, exposed wall ends such as those that may be found in parapets must be covered to prevent water from infiltrating the cavity.

Georgia-Pacific Gypsum does not warrant and is not responsible or liable for the performance of the cladding or exterior systems applied over DensGlass Sheathing. The suitability and compatibility of any system is the responsibility of the system manufacturer or design authority.

Do not laminate DensGlass Sheathing to masonry surfaces; use furring strips or framing.

DensGlass Sheathing is not intended for roof applications. For roof applications, consult our DensDeck® Roof Board brochure.

DensGlass Sheathing is not intended for interior or exterior tile applications. For interior tile applications, consult our DensShield® Tile Backer brochure.

DensGlass Sheathing should not be used in lieu of plywood where required.

Do not apply DensGlass Sheathing below grade.

For all installations, design details such as fasteners, sealants and control joints per system specifications must be properly installed. Openings and penetrations must be properly flashed and sealed. Failure to do so will void the warranty.

Do not use DensGlass Sheathing as a base for nailing or mechanical fastening. Fasteners should be flush to the face of the board, not countersunk.

Technical Data

DensGlass Sheathing is noncombustible as described and tested in accordance with ASTM E 136.

DensGlass Sheathing exceeds ASTM C 1396 sheathing standards for humidified deflection by a factor of 10 in tests over the standard for regular gypsum sheathing.

5/8" (15.9 mm) DensGlass® Fireguard® Sheathing is UL classified, Type DGG in the following UL assemblies: Design Nos. G501, G520, G531, L501, L508, L532, L556, L591, N501, N502, N505, N602, P225, P227, P230, P235, P254, P259, P266, P302, P516, P517, P701, P710, P711, P713, P714, P717, P718, P719, P720, P722, P725, P728, P729, P730, P731, P732, P733, P734, P735, P738, P739, P740, P741, P742, P801, P811, P815, P819, P824, P825, P826, P827, P828, S728, S736, U017, U032, U040, U204, U207, U301, U302, U305, U309, U326, U329, U330, U332, U337, U338, U339, U341, U342, U351, U354, U355, U356, U357, U358, U360, U364, U369, U379, U396, U411, U418, U420, U425, U434, U436, U439, U442, U449, U450, U460, U465, U467, U473, U475, U487, U494, U495, U502, U504, U505, U506, U510, U512, U531, U603, U617, U623, U626, U633, U640, U646, U647, U648, U649, U651, U652, U926, V415 , V417, V419, V420, V421, V430, V432, V434, V435, V450, V473, V486, V487, V490, X508, X516, X517, X525, X526, X527, X528, X535, X602, X604 and ULC classified, Type DGG in ULC designs EW10, EW17, U301, U302, W301, W404, W415, W442 and W465.

When tested, as manufactured, DensGlass Sheathing conforms to ASTM C 1177.

* For complete warranty details, visit www.gpgypsum.com.

continued

Submittal Approvals

Job Name _____

Contractor _____

Date _____

Stamps/Signatures

Georgia-Pacific

DensGlass® Sheathing

Technical Service Hotline 1.800.225.6119 or
www.gpgypsum.com

Product Data
Thicknesses: 1/2" (12.7 mm); 5/8" (15.9 mm) is Type X
Width: 4' (1220 mm) standard, tolerance up to ± 1/8" (3.2 mm)
Lengths: 8' (2438 mm), 9' (2743 mm) or 10' (3048 mm) standard, tolerance ± 1/4" (6 mm) Other lengths available upon request
Edges: Square

Physical Properties

Properties	1/2" DensGlass® Sheathing	5/8" DensGlass® Fireguard® Sheathing
Thickness, Nominal	1/2" (12.7 mm)	5/8" (15.9 mm)
Width, Nominal	4' (1219 mm) ± 1/8" (3 mm)	4' (1219 mm) ± 1/8" (3 mm)
Length, Standard	8' (2440 mm), 9' (2743 mm), 10' (3048 mm), ± 1/4" (6 mm)	8' (2440 mm), 9' (2743 mm), 10' (3048 mm), ± 1/4" (6 mm)
Weight/lbs./sq. ft. (kg/m²)	1.9 (9)	2.5 (12)
Surfacing	Fiberglass mat	Fiberglass mat
Racking Strength, lbs./ft. (dry) (N/m) (Ultimate — not design value)	>540 (>7878)	>654 (>9544)
Flexural Strength[3], parallel, lbf. (N) (4' weak direction)	80 (356)	100 (445)
Humidified Deflection[3]	1/8" (3 mm)	2/8" (6 mm)
Permeance (perms)[1] [ng/Pa•s•m²]	23 (1300)	17 (970)
R value[2] °F•ft²•hr/BTU (K•m²/W)	.56 (0.099)	.67 (0.118)
Linear Expansion with Change in Moisture in/in/%RH (mm/mm %RH)	6.25×10^{-6}	6.25×10^{-6}
Bending Radius[4]	6' (1829 mm)	8' (2438 mm)
Compressive Strength	min. 500 psi (3445 kPa)	min. 500 psi (3445 kPa)

Values are based on tests conducted in accordance with ASTM C 473 and ASTM E 72 where applicable.
[1] Tested in accordance with ASTM E 96 (dry cup method).
[2] Tested in accordance with ASTM C 518 (heat flow meter).
[3] Minimum requirements for ASTM C 1177 standard specification.
[4] Double fasteners on ends as needed.

Georgia-Pacific Gypsum

U.S.A.– Georgia-Pacific Gypsum LLC
Canada – Georgia-Pacific Canada LP

SALES INFORMATION AND ORDER PLACEMENT
U.S.A. Midwest: **1-800-876-4746** West: **1-800-824-7503**
South: **1-800-327-2344** Northeast: **1-800-947-4497**
CANADA Canada Toll Free: **1-800-387-6823**
Quebec Toll Free: **1-800-361-0486**

TECHNICAL INFORMATION
U.S.A. and Canada: **1-800-225-6119**
www.gpgypsum.com

TRADEMARKS Unless otherwise noted, all trademarks are owned by or licensed to Georgia-Pacific Gypsum LLC.

WARRANTIES, REMEDIES AND TERMS OF SALE For current warranty information for this product, please go to www.gpgypsum.com and select the product for warranty information. All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at www.gpgypsum.com.

UPDATES AND CURRENT INFORMATION The information in this document may change without notice. Visit our website at www.gpgypsum.com for updates and current information.

CAUTION For product fire, safety and use information, go to www.gp.com/safetyinfo or call 1-800-225-6119.

HANDLING AND USE–CAUTION This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

FIRE SAFETY CAUTION Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product or assembly/system.