### Sustainability Notes: (Architecture 2030 Challenge for Products - LEED v4 EPD/LCA improvements)

- USG Sheetrock® Brand EcoSmart Panels Firecode® X are formulated and produced with the most sustainable manufacturing method to date, these gypsum panels offer the following attributes:
  - 25% less global warming potential (GWP)
  - 25% less water used in the manufacturing process
  - 20% less weight, this reduces transportation fuel energy by 20%
- Living Building Challenge Compliant.
- May assist in achieving credits with USGBC LEED v4.0.
- Up to 99% recycled content (regionally available).
- USG Sheetrock® Brand EcoSmart Panels Firecode® X are certified GREENGUARD Gold and qualifies as a low VOC emitting material (meets CA 01350).
- USG Sheetrock® Brand EcoSmart Panels Firecode® X have significantly lower carbon dioxide emissions and water usage than standard Type X gypsum board. These values are defined by the Gypsum Associations type III EPD per ISO 14040 for North American type X gypsum board.

<table>
<thead>
<tr>
<th>Gypsum Panel</th>
<th>CO₂ eq. (kg CO₂/1000 ft²)</th>
<th>Water per 1000 ft² (m³/1000 ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USG Sheetrock® Brand EcoSmart Panels Firecode® X – Eastern USA Per LCA (number forthcoming).</td>
<td>214</td>
<td>0.78</td>
</tr>
<tr>
<td>USG Sheetrock® Brand EcoSmart Panels Firecode® X – Western USA Per LCA (number forthcoming).</td>
<td>232</td>
<td>1.00</td>
</tr>
<tr>
<td>GA Industry Average - Standard Type X 5/8″</td>
<td>317</td>
<td>1.33</td>
</tr>
</tbody>
</table>

1 Compared to standard 3/8 in. Type X gypsum panels as presented in the Gypsum Association’s 3/8 in. Type X Environmental Product Declaration (FPI/GA/01/2014) with fresh water usage updated to be in accordance with ISO 14046.

### Product Summary:

- The most sustainable lightweight wall and ceiling panel for interior applications.
- UL Classified as ULIX in the UL R1319 fire resistance file, for use in fire-rated partitions when installed either vertically or horizontally with aligned tapered edges on standard and equivalent UL-approved 25-gauge studs (per UL Design U419).
- Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
- Complies with ASTM C1396 physical properties for 5/8” Type X gypsum wallboard.
- Offers comparable sound, strength, sag and impact resistance compared to standard 5/8 in. Type X panels.
- Contact USG at 800.874.4968 for technical questions.

### Note to specification writers:

- This document is not intended to function as a standalone specification. It is intended to assist the specifier in inserting the proper language into the following recommended specification sections:
  - 09 29 00 – GYPSUM BOARD.
- This product will be produced at USG gypsum board plants, substantially reducing distances and carbon footprint for transport.
- For more information, reference product submittal sheet WB2859 and USG.com/eco.
PART 2 –PRODUCTS

2.1 SUSTAINABLE INTERIOR GYPSUM BOARD

A. Gypsum Board ASTM C1396/C1396M: Type X.
   1. Basis of Design: Subject to compliance with project requirements, the design is based on the following: United States Gypsum Company, LLC, “USG Sheetrock® Brand EcoSmart Panels Firecode® X”.
   2. ISO 14040 Environmental Management, Life Cycle Assessment, Principles and Framework:
      a. Carbon emissions per Gypsum Association; Industry Standard Type III EPD for North American Type X wallboard with a manufacturing Global Warming Potential of 317.4 kg CO₂-eq./1000MSF: [Eastern USA 214kg CO₂-eq./1000 ft²] [Western USA 232kg CO₂-eq./1000 ft²].
      b. Water reduction per Gypsum Association; Industry Standard Type III EPD for North American Type X wallboard having net use of fresh water value of 1.329 m³/1000 ft²: [Eastern USA 0.78 m³/1000 ft²] [Western USA 1.0 m³/1000 ft²].
      c. Primary Energy from non-renewable resources per Gypsum Association; Industry Standard Type III EPD for North American Type X wallboard have a value of 5,291 MJ/1000 ft²: [Eastern USA 3,695 MJ/1000 ft²] [Western USA 3,986 MJ/1000 ft²].
   3. UL Type Designation “ULIX”.
   4. ASTM E136 Noncombustibility: Meets or exceeds criteria.
   5. ASTM E84 Surface-Burning Characteristics:
      1) Flame Spread: 5.
      2) Smoke Developed: 5.
      3) Classification: Class A.
   6. ASTM C473:
      a. Core Hardness: Meets or Exceeds 11 (ASTM C473 B).
      b. Flexural Strength (lbft).
         1) Parallel: Not less than 46.
         2) Perpendicular: Not less than 147.
      c. Nail Pull Resistance (lbft) ASTM C473 (B): Not less than 87.
   7. Thickness: 5/8 inch (15.9 mm).
   8. Length: [8'-0" (2440 mm)] [10'-0" (3050 mm)] [12'-0" (3660 mm)] [14'-0" (4267 mm)].
   9. Width: [4'-0" (1220 mm)] [4'-6" (1372 mm)].
   10. Weight: 1.75-1.85 lbs./sq. ft.

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