

Omni Infinity Media

within a Vegetative Roof Assembly

Installation Instructions



Thank you for choosing to build your Vegetative Roof Assembly with Omni Infinity Media! We are excited about sharing the opportunity to transform the urban landscape into a more beautiful, life-sustaining habitat. Following the correct installation process, a Vegetative Roof Assembly using Omni Infinity Media yields exceptional stormwater management and robust, resilient ecosystems that provide many ecological services.

Overview

A Vegetative Roof Assembly (VRA) is the growth media, vegetation, and certain other accessories which are above the waterproofing system on a landscaped area installed above a waterproofed structure. Other accessories making up the VRA do not include components essential to the waterproofing system but may include edging, irrigation system, erosion control blanket, etc. A VRA is also known as a green roof.

Omni Infinity Media® (OIM) is a lightweight, high-porosity growth media that is used as the rooting substrate supporting plant growth in many on-structure or at-grade applications. OIM is comprised of GEO and BIO, plus a Slow-Release Fertilizer, and is 100% peat free. GEO is a geological substrate comprised of lightweight mineral aggregate, and BIO is a proprietary set of probiotic, mineral, geological, and cellulosic components. Through colonization, biochemistry, and strategic ecosystem development, OIM supports microbial communities and plant life within the geological substrate. By creating the conditions for life to flourish and encouraging that natural process, these materials transform into a robust landscape that grows within weeks after installation during a region's typical growing season.



Omni Infinity Media's high infiltration rate and high porosity make it an effective stormwater management tool. OIM has been used in bioinfiltration and bioretention depressions and berms, bioswales, rain gardens, and VRAs. OIM used within a VRA is highly accommodating to your project goals. A built-in-place VRA can be employed from a minimum depth of 3" to 48" or deeper to support the growth of grasses, annuals, perennials, shrubs, and trees—all with Omni Infinity Media.

Preparation

- **Read all installation instructions prior to installation.**
- **Follow all OSHA and job site safety requirements, using good judgment and common sense.**
- **Follow approved architectural specifications and drawings.**
- To successfully install OIM used within a VRA, installers should have the following skills, experience, or access to licensed professionals and/or certified technicians, including:
 - Access to certified and/or licensed irrigation contractors as required by state and local codes.
 - Familiarity with installation of irrigation controller, solenoids, and related wiring.
 - Familiarity with OSHA regulations and standard jobsite safety practices, particularly those involving working at heights and with cranes or other equipment for material hoisting.
 - Access to any tools and equipment required for installation.
 - Basic landscaping installation knowledge.
- A site analysis by a licensed professional must take place prior to any project to assess site suitability.
- **Roofing System:** Inspect the roofing system with the general contractor, roofer, and other persons per the project specifications to determine suitability of the roofing system to receive the VRA. Note any defect and request roofer to repair or guarantee the performance of roofing system. If damage to roof membrane does occur during the installation process, report any such occurrence, and do not proceed with installation until damage has been addressed and tested, if required.
- **Irrigation:** Due to the need to saturate OIM and provide for plant establishment, active water at the Point of Connection (POC) with adequate pressure and flow must be available at the VRA level, and the irrigation system *must* be confirmed to work properly at all areas of the VRA prior to OIM installation. In addition to confirming adequate water supply for VRA irrigation by testing pressure and flow on site before installation begins, confirm the location of the irrigation controller and electrical supply is provided to that location and suitable conduit from that location to the irrigation valves. To maintain the long-term vitality of the assembly, all VRA using OIM must be installed with an irrigation system to ensure proper vegetation establishment and survival of the ecosystem during periods of drought. Once the vegetation is established, the irrigation system can and should be adjusted to reduce non-essential water consumption.
- **Wind:** Due to the lightweight nature of OIM, only install OIM when winds are less than 15 mph.
- **Temperature & Season:** Confirm that the season is appropriate for installation based on plant selection and local climate conditions. Proceed with installation only when existing and forecasted weather conditions permit VRA to be installed according to manufacturer's written instructions.
 - Daytime temperatures must exceed 55 degrees Fahrenheit throughout the 8-week plant establishment period following seeding (for seeded VRAs) to allow for proper germination and growth of most seeds. Seedlings must be free of frost for 8 weeks to germinate and develop properly.
 - Avoid installation when heat indices exceed tolerable levels for plant selection.
- **Foot Traffic:** No other trades should be permitted on the roof after it has been inspected for leaks prior to the VRA installation. Once the OIM has been unpackaged and distributed to the desired thickness,

any unnecessary foot traffic should be prohibited. Foot traffic disturbs the VRA by over-compacting OIM and killing emerging young plants. Prompt plant establishment is essential to the success of the VRA, and such foot traffic severely damages the assembly. OIM is a multi-component growth media, applied in layers. Mixing of layers must be avoided. OIM mimics the soil horizons found in undisturbed natural ecosystems to provide a growing environment suitable for plants.

- **Hoisting & Staging:** Determine the hoisting plan to safely deliver materials to the roof level. Determine the staging plan to safely and cleanly stage materials between the time of delivery at ground level and the time of hoisting and during any staging on the roof level itself. Review with the appropriate licensed professionals load limits for staging materials on structure, and consider the maximum weight, not just the delivered weight of materials, and the impact of other factors such as wind during the staging and hoisting periods.
- **Logistics:** Determine access to the site, bathrooms, construction waste disposal, etc.
- **Pre-installation Meeting:** Meet with the project stakeholders and participants, such as the owner, architect, landscape architect, structural engineer, roofing manufacturer, roofing contractor, general contractor, landscaping and/or hardscaping contractor, irrigation contractor, hoisting contractor, traffic control, vegetative roof assembly maintenance provider, and others to review preparation items in advance of the installation.

Components of a Vegetative Roof Assembly using Omni Infinity Media

A VRA includes accessory components in addition to the growth media and vegetation. These accessories may include root barrier or separation geotextile, drainage mat, edging, irrigation, mulch, and erosion control blanket. Please consult the manufacturer of the accessory components for installation instructions.

Omni Infinity Media consists of:

- **GEO:** Lightweight Mineral Aggregate. This lightweight and inorganic material makes up the bulk of the depth of the VRA and must be wetted during application to prevent erosion and excessive dust.
- **BIO:** Probiotic, Mineral, Geological, and Cellulosic amendments. A blend of inorganic and organic components to be distributed in a thin layer or “top dressing” above GEO.
- **Fertilizer:** Slow-Release Fertilizer. Controlled-release granular fertilizer (14-14-14) to be distributed evenly above BIO.

Plantings may include accent plants, sod, sedum mats, trees, and/or seeds. Omni offers the following seed mixes:

- **Omni Meadow Seed Mix:** seed mix designed to facilitate the establishment of a robust and biodiverse meadow landscape.
- **Omni Edge Seed Mix:** seed mix designed to accompany the Omni Meadow Seed Mix for use around the edges of a VRA. This mix is comprised of heartier plants that can survive along landscape edges.
- **Custom Seed Mix:** available upon request.

Installation: Accessory Components of the Vegetative Roof Assembly

- **Root Barrier / Geotextile Separator Installation** (as needed) – Refer to project specifications and manufacturer’s installation instructions.
- **Drainage Layer Installation** – Refer to project specifications and manufacturer’s installation instructions.
- **Edging Installation** – Refer to project specifications and manufacturer’s installation instructions.
- **Irrigation Installation** – Irrigation should be designed and installed according to local codes and regulations. Since every VRA has its own unique microclimate, there is no set length of irrigation cycle. The irrigation system should aim to saturate OIM twice a day during establishment period (generally 6-8 weeks after planting). Once plant establishment has been observed, irrigation cycle can be reduced. Contact Omni Ecosystems using the contact information below with questions.
- **Erosion Control Blanket Installation** (as needed—*to be installed after OIM and seeding*) – Refer to project specifications and manufacturer’s installation instructions.

Installation: Omni Infinity Media

Before you begin OIM installation:

- Install OIM when winds are **less than 15 mph**.
- **Confirm that the irrigation system is complete, tested, and achieves full coverage** before OIM installation.
- Identify supplemental water sources if possible. **Speed of GEO installation is a function of how quickly water is applied.** Hoses, hydrants, and the completed irrigation system are all water sources useful to achieve suitable GEO saturation during its installation.

OIM Installation with Sequencing for Various Plantings:

- Place Trees or Other Large Specimens (if applicable).
 - Place trees prior to GEO installation.
 - Remove caging, burlap, and twine from root ball as specified.
 - Anchor as specified.
- Apply GEO.
 - Recommended personal protective equipment (PPE): goggles or safety glasses; MSHA/NIOSH approved respirator; use appropriate gloves and footwear to prevent skin contact and potential irritation, clothing should fully cover arms and legs.
 - While distributing GEO from its bag or supersack, saturate GEO, spread to desired depth and grade, and continue to wet thoroughly.
 - Gently tamp GEO via non-mechanical means. **DO NOT OVERCOMPACT.** Typical settling rate for GEO is 1:1.3 (30%).
 - For assemblies 8 inches or greater in depth, apply growth media in lifts of 4 inches and gently tamp at each lift.

- Plant (if applicable).
 - If planting plugs or potted nursery plants, proceed with planting before starting BIO application.
 - Gently remove any weeds and excess potting soil from nursery pots. Collect excess potting soil, remove it from the VRA, and dispose of it according to local regulations. For a VRA with many potted nursery plants, advance planning and coordination may be required for hoisting equipment to remove the potting soil and to avoid point loading on the structure. When planting, gently spread the root mass without damaging roots. Plant in GEO slightly higher than GEO's top of grade to account for forthcoming mulch application.
 - For landscape features such as mounds, provide biodegradable mounding containment units such as jute-based erosion blanket as needed after planting and BIO application.
- Apply BIO.
 - Recommended PPE: goggles or safety glasses; MSHA/NIOSH approved respirator; use appropriate gloves and footwear to prevent skin contact and potential irritation, clothing should fully cover arms and legs.
 - Distribute BIO evenly over GEO, at a rate of 1 bag per 38 ft², achieving 100 percent coverage of GEO.
 - If present, break up clumped materials by hand to achieve even coverage.
 - Do not mix BIO into GEO.
- Apply Slow-Release Fertilizer.
 - Recommended or supplied: Osmocote 14-14-14, 3- to 4-month release.
 - Recommended PPE: goggles or safety glasses; MSHA/NIOSH approved respirator; use appropriate gloves and footwear to prevent skin contact and potential irritation, clothing should fully cover arms and legs.
 - Distribute granules evenly over BIO & GEO, at a rate of 1 pound per 100 ft², achieving 100 percent coverage of GEO.
 - Use of a hand-held broadcaster is recommended.
 - Do not mix Fertilizer into GEO or BIO.
- Seed (if applicable).
 - Distribute seeds evenly over completed Omni Infinity Media. Do not broadcast seeds when winds exceed 15 mph.
 - Smaller seeds tend to settle to the bottom of the provided bag, so mix seeds prior to sowing to ensure good species distribution.
 - Use of a hand-held seed broadcaster is recommended for Omni Meadow Seed Mix up to 12" away from edges and corners.
 - Apply Omni Edge Seed Mix by hand, within 12" parallel to all assembly edges.
- Apply Erosion Control Blanket and/or Mulch (if applicable).
 - If applicable, install erosion control blanket to manufacturers' specifications to cover the VRA. To ensure effective erosion control, securely fasten the erosion control blanket and overlap the adjacent rolls during installation to provide comprehensive coverage. Site-specific

environmental, geographical, geological, and climatic factors may affect the installation, performance, and longevity of material and anchoring method. Where additional seed is required after initial seeding and erosion control blanket installation, apply on top of the erosion control blanket.

- If applicable, mulch after OIM installation and planting according to project specifications is complete. Take care not to damage/step on plants or bury their crowns.
- Place Sod or Sedum Mats (if applicable).
 - If sodding or placing sedum mats, place sod or sedum mats after Fertilizer application.
 - For sod areas with expected heavy foot traffic, install geosynthetic reinforcement according to project specifications and manufacturer's instructions.
- Carry out Initial Watering
 - Water the VRA areas thoroughly, to the point of runoff (full saturation), immediately after installation of OIM and any seed and/or plantings. (This may involve multiple waterings for installations of a significant duration or size.)
 - Set irrigation system for regular watering twice a day during establishment phase. Keep the OIM thoroughly hydrated during the establishment phase.

Maintenance

Maintenance should commence from the time of seeding or planting Omni Infinity Media (and possibly during installations of a significant duration or size). Follow Omni Ecosystems maintenance guidelines for the landscape desired, found at this [link](#) or via the QR code, including at a minimum:

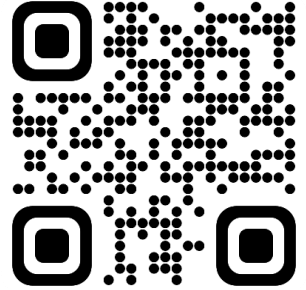
- Once yearly visits to test growth media.
- Twice yearly visits to close and open the irrigation system.
- Once monthly visits during the growing season to hand weed non-target species, to adjust irrigation, check drainage, and clear debris.
- Further tasks and visits as required to maintain a healthy plant and soil ecosystem.

The most critical period for a VRA using OIM is the plant establishment period, which often coincides with the close-out rushes of a construction job site and the plants, especially seedlings, will suffer if trampled, irrigation is disrupted, or other neglect or damage occurs.

Additional Resources

Further information for Omni Infinity Media including detailed maintenance guidelines and Safety Data Sheets for GEO and BIO can be found at www.omniecosystems.com, by calling or emailing Omni, at this [link](#), or via the QR code.

No two VRAs with OIM are the same. There will be times when situations arise that are not covered in this document. For any further questions, please contact rewild@omniecosystems.com.



Information herein is based on the technical data Omni Ecosystems considered true and correct at publication. Omni Ecosystems reserves the right to update this document at any time and assumes no liability for its use. User assumes sole responsibility for considering, verifying, and determining applicability of any data herein based upon local regulations and unique site conditions and for engaging qualified professionals. Refer to authority having jurisdiction, seek approval from roofing manufacturer, and analyze unique site conditions to determine suitability and installation process of assembly and each component for use, as well as interfacing materials and other details.