



## MagnumStone Gravity Walls Bolster Residential Landscape Design

Located in the stunning region of Lake Chelan, WA, this residential property features three unique MagnumStone gravity retaining walls, which reinforced steep slopes and maximized backyard landscape design potential.

The gravity walls, with blocks produced by [Mutual Materials](#), also enhanced development capacity for an elegant, natural-feeling backyard extension.

This remarkable landscape project reflects the design flexibility, strength, and natural stone textures of MagnumStone's precast retaining wall system.

<b>Total Block Installed</b>	2,050 sq. ft. (190 sq. m.)
<b>Maximum Height</b>	12 ft. (3.6 m.)
<b>MagnumStone Manufacturer</b>	<a href="#">Mutual Materials</a>
<b>Contractor</b>	<a href="#">CR Industries</a>
<b>Engineer</b>	<a href="#">Bill Christman</a>
<b>Geotechnical Engineer</b>	<a href="#">Doug McFarland</a>

# MAGNUMSTONE GRAVITY WALLS BOLSTER RESIDENTIAL LANDSCAPE DESIGN

Lake Chelan, WA, USA



## PROJECT OVERVIEW: GRAVITY WALLS EXTEND HOME'S OUTDOOR LIVING SPACE

This steep-sloped residential property with stunning views of Lake Chelan Valley was transformed by three purpose-driven MagnumStone gravity retaining walls. The home sits atop a hillside corner lot with limited outdoor living space, surrounded by sloped terrain on all sides. An outstanding backyard landscape design was planned; however, more usable land was required to make the vision possible.

The contractor recommended MagnumStone gravity retaining walls' design versatility, natural stone appearance and efficient installation to overcome these slope-related issues. [Mutual Materials](#), the region's licensed MagnumStone producer, supplied over 2,050 sq. ft. (190 sq. m.) of block for the project.

MagnumStone's precast retaining wall system delivered several advantages to the project:

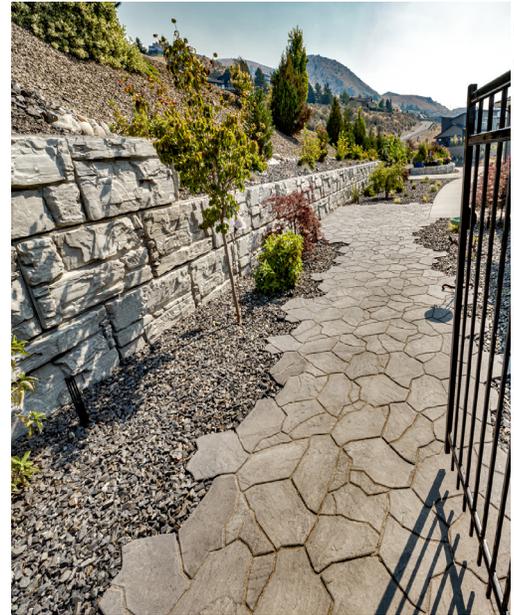
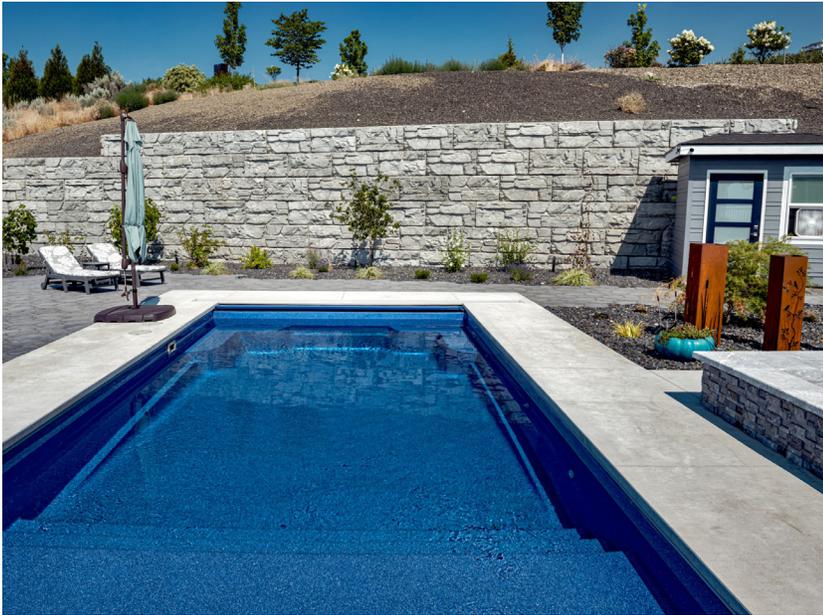
- Increased usable backyard space with space-saving gravity wall designs
- Versatile wall designs met multiple landscape and structural goals
- Hollow core blocks and extender units can be installed by compact equipment
- Cost-efficient, diverse solutions for hillside reinforcement and development
- Created a safe, level outdoor area for year-round enjoyment

The phased project included three gravity wall designs that improved slope stability, optimized drainage, and significantly increased functional backyard space. These walls enabled construction of modern outdoor living and landscaping features, including walkways, backyard pool, hot tub, and raised patio.

This project is a standout example of how residential retaining walls can maximize backyard potential while further bolstering property value.

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## ■ CHALLENGES & SOLUTIONS: CREATING MORE USABLE BACKYARD SPACE

The hillside lot presented multiple challenges common in slope stabilization and backyard retaining wall construction. The slope behind the house was unusable due to its natural grade that impeded further development of the backyard. The team needed a wall system that could be built close to the property lines using a cut wall design.

The backyard soil profile included loamy and sandy soils, requiring a solution with reliable drainage and erosion control. Equipment access was tight, particularly for the wall behind the pool. Additional challenges included a buried power vault near the driveway that needed to remain accessible but hidden for visual appeal.

The [MagnumStone gravity wall system](#) solved each of these problems. Gravity extenders added mass to reinforce taller gravity wall designs with more efficient excavation depths compared to geogrid-reinforced wall designs. Compact excavators installed blocks in tight spaces, allowing for quicker wall construction around existing infrastructure. MagnumStone's hollow core block design provides superior drainage to safely streamline stormwater removal, maintaining the walls' long-term strength and durability.

MagnumStone's design and installation benefits achieved this residential project's backyard goals by:

- Minimizing retaining wall depth, gravity wall extenders build closer to property lines
- Hollow core blocks handled by compact equipment in tight access areas
- Safely and efficiently retaining soil and mitigating erosion risks with built-in drainage
- Flexible design capabilities worked around structures including a large power vault

Overall, this system delivered cost-effective retaining wall solutions that optimized space, minimized construction delays and securely reinforced the property's hillsides.

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## ■ WALL DESIGN: GRAVITY WALLS SECURE SLOPES & EXTEND BACKYARD

The project features three distinct gravity retaining wall designs tailored to the property's unique requirements and landscape topography. Each wall was engineered and designed to handle different heights, loading capabilities and functional considerations. Together, these three MagnumStone walls maximize usable land, align complementary visual elements and provide resilient retaining walls with engineered strength:

- Built taller gravity wall reinforced with [MagnumStone's gravity extender units](#)
- Delivered safe slope stabilization and land development for backyard features
- Integrated elegant curves with MagnumStone's tight radius capabilities
- Retained soil, handled heavy loading, created spacious new outdoor living areas

The first wall, at the base of the property, is 4 ft. (1.2 m.) tall and stabilizes the corner lot's lower edge. This securely retains and reinforces the sharp hillside above the roadway and controls erosion to protect the home.

The second wall is the project's largest and most structural. Located behind the home, this wall reaches 12 ft. (3.6 m.) high and extends the full width of the property. This gravity wall is a cut design reinforced by MagnumStone's gravity extender units. Cut walls require excavation to remove the lower portion of a slope, which creates level, usable land below the wall. This space-optimizing technique developed more backyard space to install the pool, patio, and hot tub. Engineers used MagnumStone's shortest gravity extenders to add weight and build a taller gravity wall closer to the property line.

The third wall is a 2 ft. (0.6 m.) high, single course semi-circular wall design beside the driveway. This clever feature created a gardening area for raised planters to make the home's power vault more subtle. Its 180-degree curve adds character and greenery to the driveway and is purposely located near the garage for convenience. The elevated gardening space allowed for a wider driveway, plus added extra parking and a turnaround area.

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## ■ INSTALLATION: BUILDING BENEFITS OF MAGNUMSTONE

The retaining wall installation and landscaping was completed by the expertise of [CR Industries](#), an experienced Wenatchee-based contractor. The project was built in two summer phases to coordinate with the property's pool, fencing, walkways, and patio construction. Installation advantages of MagnumStone include:

- Gravity extender units interlock with standard blocks for to reinforce gravity walls
- Can be installed easily with compact construction equipment
- Blocks capable of tight radius curves for unique design features
- Two-person crews can build MagnumStone walls quickly and safely
- Gravel-filled blocks simplified improve drainage and long-term performance

Each wall had its own critical design considerations based on its location and surrounding infrastructure. The hollow core MagnumStone blocks are filled with drainage gravel [during installation](#), this adds weight and promotes efficient drainage.

For the largest wall behind the house, site access was narrow and confined between the home and planned wall location. MagnumStone's hollow core block design was a major advantage. With less weight than solid block systems, MagnumStone units can be handled by compact excavators for sites with tight access. The lower wall near the road was installed using a compact excavator positioned in front of the wall, from the street.

The curved raised patio wall is backfilled with finer aggregate along the surface. MagnumStone offers the tightest curve radii of all precast modular block systems at 14 ft. (4.3 m.). This allows designers and contractors to plan and build tight retaining wall curves with precision to fit more creative projects.

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## ■ AESTHETICS: UPSCALE NATURAL STONE APPEARANCE

While structural performance was the project's top priority, visual appeal played a role in the project's design goals. MagnumStone's blocks have a [rugged, natural stone appearance](#), ideal for mountain landscapes like those around Lake Chelan. The blocks' natural color pairs well with the region's tones and the home's modern exterior.

- Textured block facings mimic natural stone and complement any landscape
- Neutral concrete color pairs with surrounding hardscaping and finishes
- Random running bond pattern eliminates visual repetition of block facings
- No caps required, top blocks designed to offer top-of-wall finishing detail options
- Enhances backyard design and looks exceptional with hardscape lighting

Blocks were installed in a randomized running bond pattern to eliminate repeating face textures throughout the wall. This installation method helps the wall look natural and cohesively integrated with the landscaped gravel, boulders, and surrounding hardscaping details. No cap units were used; instead, MagnumStone top blocks allowed CR Industries to landscape directly up to the block facings.

The block faces align well with the poured concrete patio, and random natural flagstone-style paving slab walkways. Large aggregate buffers and well-placed plantings soften the transitions between the backyard's hardscapes and softscapes. At night, landscape lighting highlights the wall textures, enhancing the pool area's ambiance and safety.

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## PROJECT SUMMARY: GRAVITY WALLS MAXIMIZE RESIDENTIAL DESIGN POTENTIAL

The Lake Chelan project shows how residential retaining walls can solve difficult slope challenges, plus enhance yard designs and appearances. Using MagnumStone's gravity wall system reinforced the home's foundation and converted an unusable slope into a stunning outdoor living area.

Each of the three MagnumStone gravity retaining walls was tailored to a specific challenge. From slope stabilization and developing relaxing outdoor spaces, to disguising a power vault, MagnumStone solved all this project's challenges.

MagnumStone's precast modular blocks enabled fast installation with compact equipment too, saving installation time and costs. The [system's hollow core blocks](#) filled with drainage gravel ensured long-term wall durability, while gravity extenders maximized land use.

This project exceeded the homeowner's expectations, with MagnumStone playing a major role. The property now features a luxurious backyard that feels natural, elegant, and functional.

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## WHY CHOOSE MAGNUMSTONE

MagnumStone's gravity retaining walls delivered secure, creative solutions and a natural stone appearance to achieve this project's goals. Advantages of the system's gravity retaining walls for this residential property:

- Resolved slope challenges and increased functional backyard space
- Capable of diverse wall heights and designs, curves, corners & creative features
- Delivers long-term performance with built-in drainage and precast strength
- Supported a high-end backyard design vision
- Reduced labor and excavation with gravity extenders and modular blocks

Plan your next retaining wall project with [MagnumStone's Retaining Wall Design & Analysis Software](#). Its customizable features provide creative design versatility for engineers and architects to build strong, durable residential and commercial retaining walls. Learn more about MagnumStone retaining walls today by [finding your nearest MagnumStone block supplier](#) for further insight and installation details.

This project was successfully completed thanks to [Mutual Materials](#) (MagnumStone block producer), [CR Industries](#) (Contractor), Bill Christman (Engineer) and Doug McFarland (Geotechnical Engineer).

**CONTACT OUR TEAM TODAY**

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Contact our MagnumStone experts for more details.

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