



Angelus
 SOUTHERN CALIFORNIA
OUTDOOR LIVING
 PAVERS & WALLS
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LEASING

Angelus HOA Solutions

The Homeowners Association (HOA) market has grown greatly in Southern California and with that growth comes a need to differentiate themselves from other HOAs, add value for their residents and control costs through the life of the development. One of the long-term costs for an HOA is street installation, maintenance and repair. Streets are typically limited to three pavement options: asphalt, poured concrete and interlocking concrete pavers. This guide will provide information for decision makers of an HOA to compare these pavement options and understand the advantages in materials, maintenance, aesthetics and costs of Interlocking Concrete Pavements (ICP).



Materials & Construction

Angelus Interlocking Concrete Pavement

- Individual pavers consist of sand and gravel, bound together by cement that is vibrated and densified in a factory to achieve high strength. The pavers are set by hand or machine in a sand bedding layer over a compacted miscellaneous aggregate base. The pavers are then interlocked by sweeping and vibrating sand into the joints between the units.
- Individual pavers are manufactured in a factory and arrive at the jobsite fully cured.
- Product can be installed and opened to traffic on the same day.
- Paver units have an average strength of 8,000 psi.

Asphalt

- Consists of a layer or layers of sand and gravel, bound together by Bitumen (a petroleum derivative), placed at the jobsite by machine, and roller compacted over a compacted crushed miscellaneous aggregate base.
- Contractor must monitor regularly to assure product is meeting specification.
- Typically requires 24 cure time (weather dependent) prior to traffic.
- Low compressive strengths, softens in high heat and under heavy loading.

Poured Concrete

- Consists of sand and gravel, bound together by cement, placed at the jobsite by machine, and may be over compacted native soil or compacted miscellaneous aggregate base. May require fiber or steel reinforcement to improve durability.
- Contractor forms or cuts in control joints to limit cracking.
- Requires up to a seven-day cure time (weather and mix dependent) prior to traffic.
- Strength of finished concrete is between 2,500 to 4,000 psi.

Maintenance, Repair and Life Expectancy

Angelus Interlocking Concrete Pavement

- Requires minimal maintenance consisting of a cleaning of the surface with a Street Sweeper machine to prevent dirt build up.
- Units are durable concrete and will not degrade from oil and fuel spills.
- Individual units can be removed and reinstated if surface or base is damaged or to repair underground utilities.
- Life expectancy is 50 years or more.

Asphalt

- Requires regular cleaning of the surface, prompt crack filling, and seal coating every 2-5 years.
- Pavement will degrade from oil and fuel spills.
- Pavement will require patching with new material for repairs.
- Life expectancy is 15-20 years.

Poured Concrete

- Requires minimal maintenance consisting of a cleaning of the surface with a Street Sweeper machine to prevent dirt build up.
- Monolithic pavement is susceptible to cracking during seismic movements.
- Loss of pavement structural integrity if cut for repairs.
- Pavement will require patching with new material for repairs.
- Life expectancy 20-30 years.

Aesthetics, Safety and Sustainability

Angelus Interlocking Concrete Pavement

- Variety of shapes, colors, patterns and textures available. Greater design options to match surrounding architecture or create a sense of place on a human scale.
- No unsightly patches after repairs.
- Light colored units can reduce heat island effect.
- Contrasting colored units can be used to do striping for road centers, crosswalks or parking areas.
- Manufactured with recycled materials and low carbon cement.

Asphalt

- Limited in colors, patterns and textures.
- Patching may not match original material.
- Dark color increases heat island potential.
- Surface colorants applied for striping.
- Manufactured with Bitumen, a petroleum product.

Poured Concrete

- Limited in colors and patterns.
- Surface colorants may require frequent sealing to maintain longevity.
- Patching may not match original material especially when stamped, colored or textured.
- Surface colorants applied for striping.
- Can be manufactured with recycled materials, cement substitutes or low carbon cement.



Costs

Angelus Interlocking Concrete Pavement

- Initial costs are higher, however with a longer life expectancy and lower maintenance costs, it leads to a greater return on the initial investment.
- Machine installation can reduce initial costs.
- Repair costs are minimal since pavers can be reused.
- Minimal construction time and immediate use lowers impact on residents.

Asphalt

- Low initial cost, however shorter life expectancy and higher maintenance cost, leads to lower return on initial investment.
- Repair costs are higher due to the need for replacement material.
- Cure times lead to loss of pavement use, impacting residents.

Poured Concrete

- Moderate to higher initial costs, however shorter life expectancy affects the return on investment.
- Repair costs are higher due to the need for replacement material.
- Cure times lead to loss of pavement use, impacting residents.



Permeable interlocking concrete pavements (PICP) have similar advantages when compared to porous asphalt and pervious concrete. These specially engineered pavements are designed to control and improve the quality of stormwater. Talk to your Angelus representative for more information and if this option may be beneficial for your HOA.

For over 35 years Angelus Paving Stones, a branch of Angelus Block Co. Inc., has been manufacturing interlocking concrete paving stones in the Southern California market. From a small one machine operation with just a few shapes Angelus Paving Stones now has two state-of-the-art paving stone manufacturing facilities, one in Rialto the other in Oxnard and has expanded their offerings to include interlocking concrete paving stones, permeable interlocking concrete paving stones, concrete grid paving units, concrete paving slabs and concrete plank units. Looking toward the future, we began an innovative use of recycled material and low carbon cement, supporting sustainability goals, while providing products that meet or exceed the American Society of Testing and Materials (ASTM) standards.



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