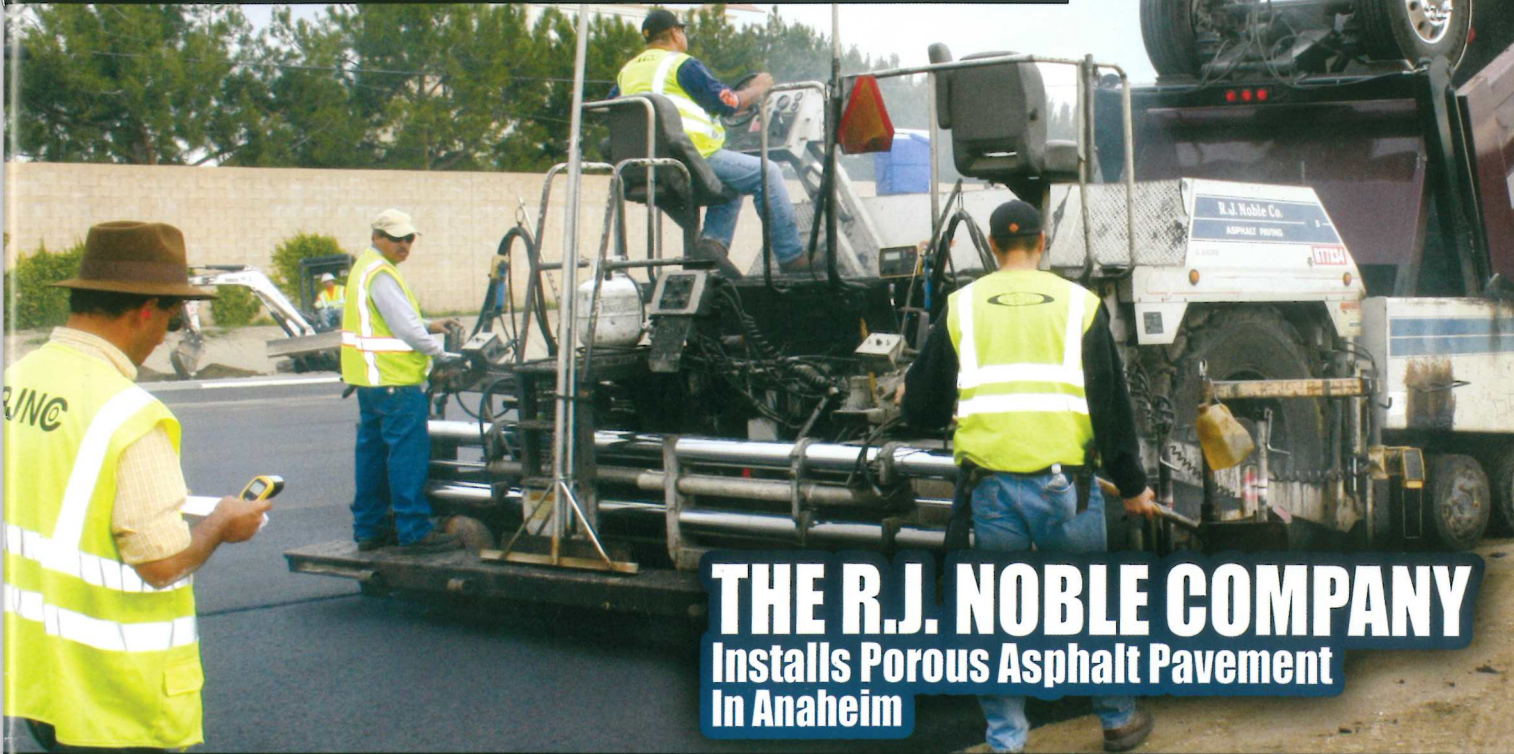


CALIFORNIA ASPHALT MAGAZINE

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THE R.J. NOBLE COMPANY Installs Porous Asphalt Pavement In Anaheim



Ben's Asphalt - Maintains Competitive Edge in Uncertain Times



Blue Diamond Materials - Continues EcoMat® Advancement at Exxon Refinery in Torrance



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THE R.J. NOBLE COMPANY

Installs Porous Asphalt Pavement in Anaheim

Written By: Brian Hoover



Porous asphalt pavements have been utilized effectively in the United States and Europe since the 1970's. The Federal Clean Water Act was adopted in 1972 to address discharges of pollutants from point sources. In 1987 the Clean Water Act was amended to include non-point source programs to prevent contamination of storm water runoff from municipal, industrial and construction facilities. The State of California has adopted general permits to meet the Federal Requirements for storm water runoff.

Simply put, Federal, State and Municipal environmental regulations require new and redevelopment projects to develop and implement storm

water runoff programs to reduce the amount of pollutants carried to waters of the US by storm water. Urban development increases impervious surfaces and therefore the volume and velocity of storm water runoff. Additionally, impervious surfaces decreases areas available for infiltration to the ground which in turn carries water to the water table. One of the ways to reduce runoff volume and velocity and therefore reducing the amount of pollutants is to use porous pavement. The concept of managing storm water with porous asphalt is fairly new in California, however R. J. Noble Company has been leading the effort for several years now. For over sixty years, R. J. Noble

Company has been one of the largest producers of new asphalt, rubber asphalt and recycled asphalt in California and now they are proud to be a leading supplier of porous asphalt in Southern California.

Traditionally, parking lots were constructed with dense-graded HMA with underground storm drainage systems installed. Because this conventional asphalt method seals the surface, it allows for excess water to become runoff, which may contribute to flooding or introduce contaminants into waterways. In order to better manage the impact that development has on the environment, porous asphalt is being developed and implemented



(Left L - R) Scott Fraser, Q.C. Manager, R.J. Noble Company and Bill Wright, Foreman, R.J. Noble Company onsite at a project in Anaheim, California.

(Below) Studies have shown that porous asphalt shows little or no cracking and no pothole problems even after several years.

across California and the United States. A porous HMA course contains little sand or dust with an interconnected air void space of approximately 16% compared to conventional or densely graded HMA which traditionally has a 3 to 4 percent air void. In

nature, rain water naturally makes its way into the soil and is then filtered by various layers of sediment, before making its way to lakes, ponds or streams. This is the same basic concept and intention of porous asphalt, where the water can percolate

straight down through the asphalt and through the rock base sub section, directly into the water table.

To date, porous asphalt has been most commonly used on parking lots and recreational areas like basketball and tennis





(Left) R.J. Noble Company installing approximately 350,000 sq. ft. of porous asphalt in Anaheim, California.

(Below Left) Porous asphalt manufactured by R.J. Noble Company contains little sand or dust with an interconnected air void space of approximately 16% compared to 3% to 5% with conventional HMA.

(Below) Compacting subgrade prior to paving.

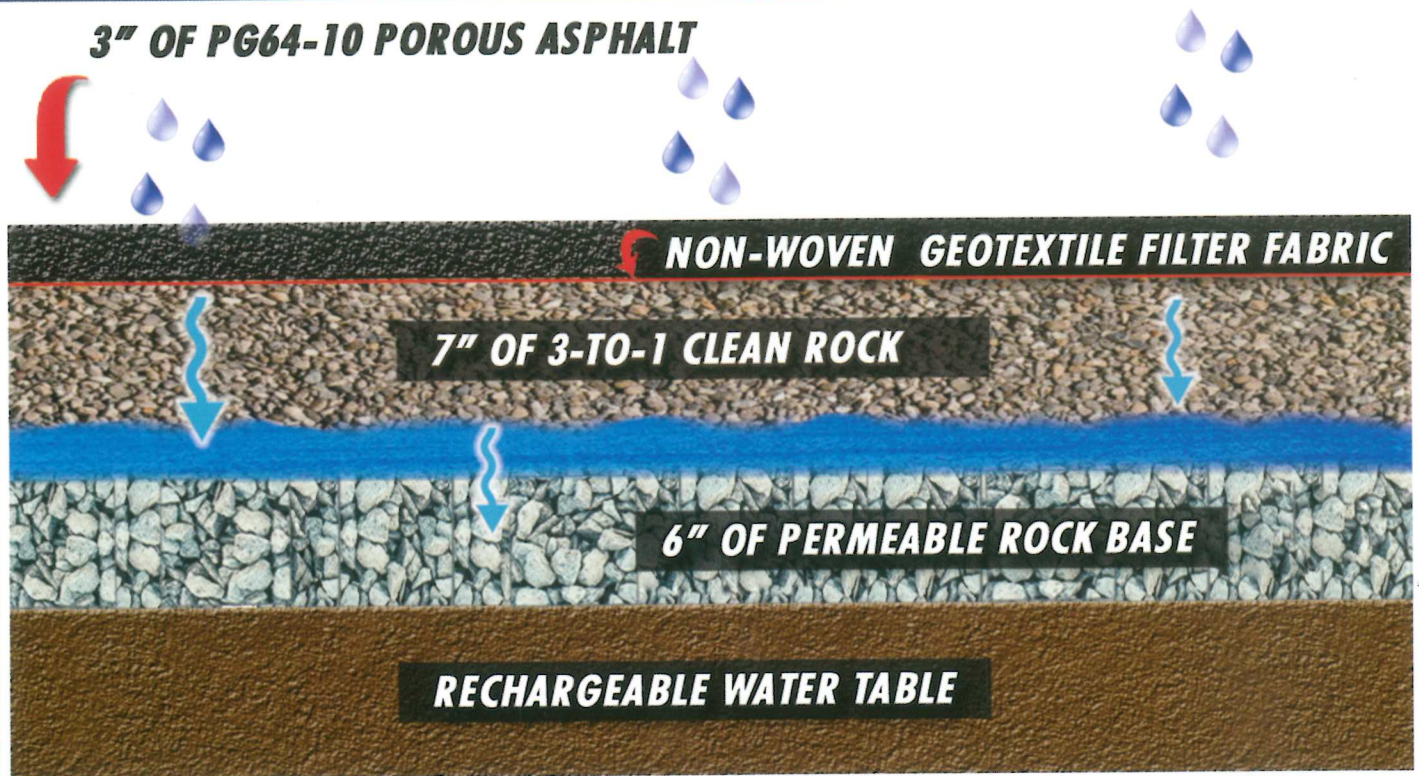


courts, as well as field tracks and playgrounds. Today, California and other states are calling for more stringent regulations, which suggests that mandated usage may spread to roads and highways. Porous asphalt allows developers to be more in harmony with the land by reducing runoff, promoting infiltration which reduces the storm water contamination and increases the amount of water going to the aquifer. Economically speaking, porous asphalt is also a good idea. Costs will be generally the same as conventional asphalt, due to the fact that less grading and excavating is required, as it is designed to fit into the natural topography of the site. The underlying rock sub

base is usually more expensive, but the difference is offset by eliminating detention basins and other storm water management systems. Porous pavements are slightly coarser than standard asphalt, however the average individual will most likely never notice the difference and it has been proven to actually wear as well or better than conventional asphalt. Even after 20 years, studies have shown that porous asphalt shows little or no cracking or pothole problems. R. J. Noble Company has already employed porous asphalt on several projects in Southern California, and they are currently using their product on a parking lot installation in Anaheim, California. Approximately 350,000

sq. ft. of this new parking lot will be constructed with porous asphalt manufactured by R. J. Noble Company. An additional 550,000 square feet will be constructed using 3 inches of conventional AC being paved over the existing native material. The project began in August of 2009 and will be completed sometime in March 2010. The porous asphalt structural section consists of 3 inches of PG64-10 porous asphalt on top of 7 inches of a 3-to-1 inch clean rock. A non-woven geotextile filter fabric will be placed on top of the clean rock in order to prevent the existing uncompacted soil or subgrade from clogging any voids. Below all this will be 6 inches of permeable rock base.

3" OF PG64-10 POROUS ASPHALT



A uniformly graded 1/2" sized aggregate is used to slightly fill in the voids on the large stone base in order to provide a construction platform suitable for paving. The total structural section will be 16 inches thick when completed. The water is able to drain through the porous asphalt, the clean rock and then through the permeable base. Any water that does not simply recharge the water table, will be directed into a newly constructed curb and gutter and then into the water infiltration basin that will surround the perimeter of a portion of the parking lot.

R. J. Noble Company is the General Contractor on this project and by jobs end they will construct all of the curb and

gutter, any necessary storm drain, lighting, landscaping, concrete, electrical and even a new toll booth section. R. J. Noble Company is definitely ahead of the porous asphalt game right now and all indicators show that they plan to stay there. R. J. Noble Company is a Class A, General Engineering Contractor that specializes in grading and asphalt paving, subcontracting underground, electrical and concrete work. Presently the company operates two large asphalt plants, including a rock plant and a re-crush operation. They produce almost a million tons of asphalt mix a year between the two facilities and recycle between 400,000 and 500,000 tons of

recycled material each year, including asphalt, sand, concrete and rubber. R. J. Noble works primarily in Orange and Riverside Counties, and has done work in Los Angeles, San Bernardino and San Diego Counties as well. They own 20-acres in Orange, 100-acres in Corona, in addition to their contracting and trucking companies. For more information of R. J. Noble Company or their porous asphalt product, please visit them online at www.rjnoblecompany.com or call 714-637-1550. CAM