

NEWSLETTER

TECHNICAL INSIGHT: THE ART OF PRECISION



A Technical Case Study on the Nepal Oil Corporation (NOC)
Head Office Paving Project – Babarmahal



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NEPAL'S LEADER IN CONCRETE INNOVATION

Asian Concreto has established itself as a pioneer in Nepal's concrete landscaping industry. It proudly holds the distinction of being Nepal's first manufacturer to receive the Nepal Standard (NS) certification for concrete pavers and kerbstones.

This certification ensures that every product manufactured meets strict national quality requirements in terms of:

- Strength
- Durability
- Dimensional accuracy
- Material composition



The NS certification reinforces Asian Concreto's commitment to producing reliable & high performance paving products for Nepal's infrastructure development.

Our manufacturing plant located in Hakui, Ramgram-16, Nawalparasi operates with a fully automated German production system.

This level of manufacturing precision guarantees that Asian Concreto pavers deliver long-lasting performance even under heavy traffic conditions.

Our products are engineered to withstand:

- Heavy vehicle loads
- Seasonal monsoon rains
- Temperature fluctuations
- Seismic activity

Through innovation and technical expertise, Asian Concreto continues to support the development of modern, resilient urban infrastructure

PRODUCT SPOTLIGHT

UNI PAVERS: THE DURABLE INTERLOCKING SOLUTION

Introduction

Among the many interlocking paver designs available in the market, the Uni Paver stands out as one of the most reliable solutions for areas experiencing heavy traffic loads.

Due to its unique shape and engineering design, the Uni paver provides exceptional capability and structural stability.



Why Uni Pavers?

The unique geometry of Uni Pavers allows them to lock firmly with surrounding pavers, creating a stable pavement system. This interlocking mechanism helps distribute loads evenly across the surface and prevents individual pavers from shifting or moving over time.

Why NOC Selected Uni Pavers ?

The Nepal Oil Corporation Head Office experiences frequent vehicle movement, including operational and administrative traffic.

To ensure long-term durability, structural reliability and a professional appearance, Asian Uni Pavers were selected as the preferred paving solution for the site.

PROJECT CASE STUDY

STRENGTHENING THE HUB OF NEPAL'S ENERGY SECTOR

Project Overview

Project Name : Nepal Oil Corporation Head Office

Location : Babarmahal, Kathmandu

Application : Parking Area & Circulation Roads

Product Used : Asian Concrete Uni Pavers



Project Objective

The goal of the paving installation was to create a surface that could deliver:

- Long-term durability
- High load-bearing capacity
- Professional institutional appearance
- Reliable drainage performance

Project Environment

The NOC Head Office experiences significant daily activity, including:

- Staff vehicles
- Operational vehicles
- Service vehicles
- Visitor traffic

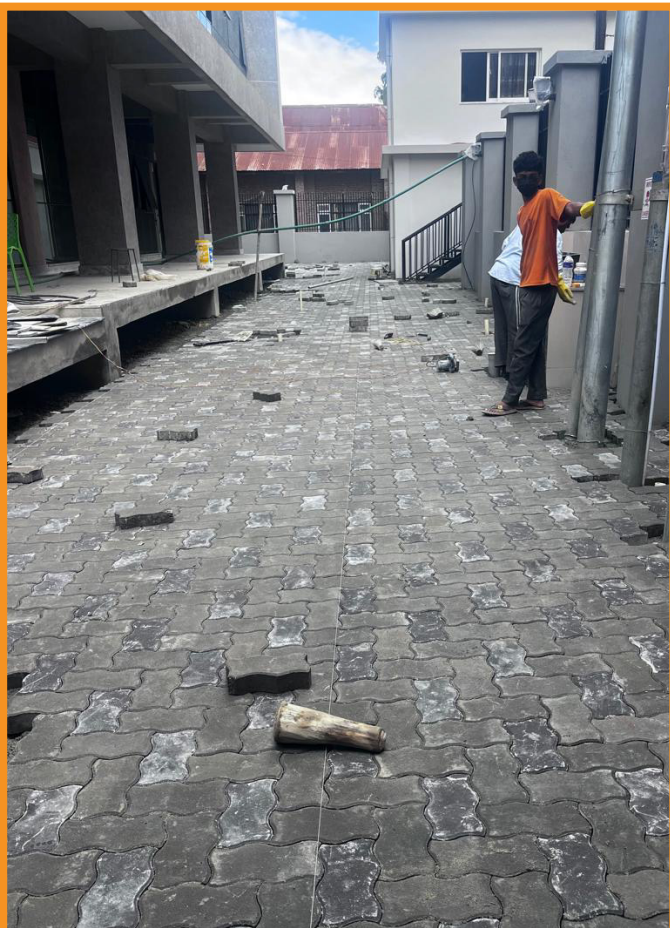
Such high-usage environments require paving systems that can withstand continuous mechanical stress without structural failure



Role of Asian Concrete Engineers

During the installation stage, Asian Concrete engineers monitored the site to evaluate the implementation process and ensure that the recommended paving procedures were followed.

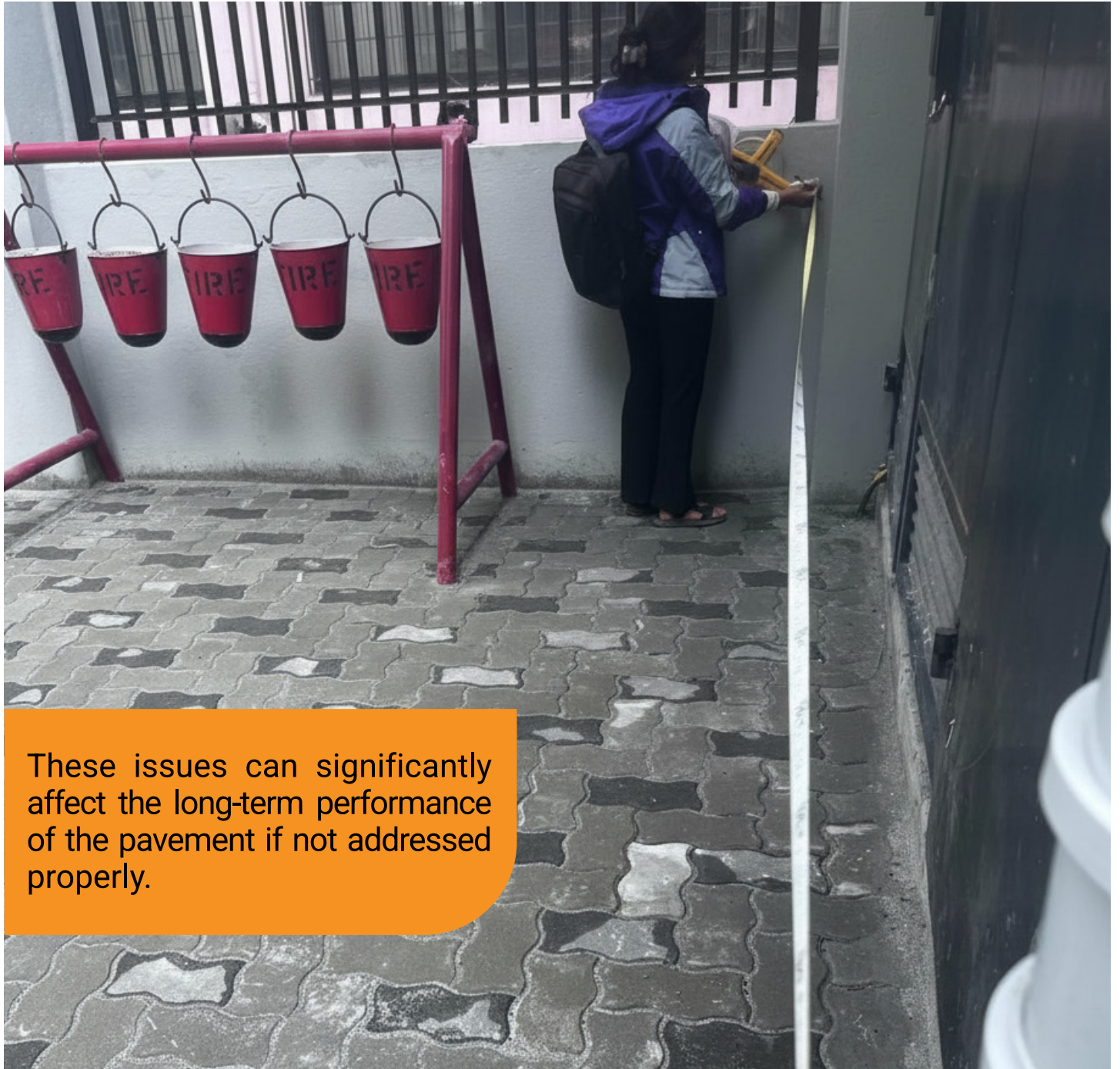
These observations helped identify key installation challenges and opportunities for improvement, allowing the team to ensure the long-term performance of the paving system.



SITE OBSERVATIONS

LESSONS FROM THE FIELD

During the paving installation at the NOC site, our engineering team observed several issues that commonly occur when recommended paving procedures are not fully followed.



These issues can significantly affect the long-term performance of the pavement if not addressed properly.

Understanding these challenges helps ensure better construction practices, improved pavement life, and higher structural reliability.

TECHNICAL CHALLENGES

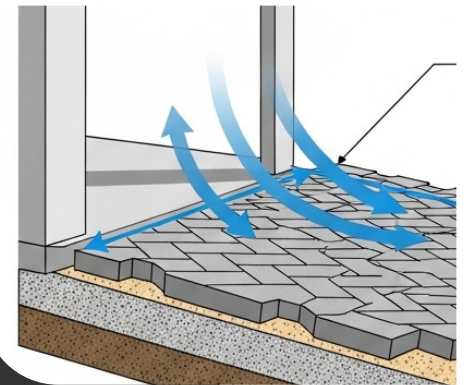


Uneven Surface and Settlement

Improper soil compaction or an uneven sub-base can cause pavers to sink over time. This results in surface depressions, potholes & tripping hazards reducing the overall performance of the pavement.

Poor Drainage

If proper grading is not maintained during installation, water may accumulate on the pavement surface rather than draining away. Standing water can weaken the base layers and lead to long-term pavement damage.



Poor Pattern Alignment

Without proper layout planning, string lines, and square starting points, the paver pattern may become misaligned. This affects both the visual quality & structural stability of the pavement system.

Incorrect Joint Sanding

Using low-quality sand or failing to properly fill the joints can cause pavers to loosen over time. Open joints may also allow weed growth between the pavers, affecting the appearance and durability of the pavement.



Efflorescence

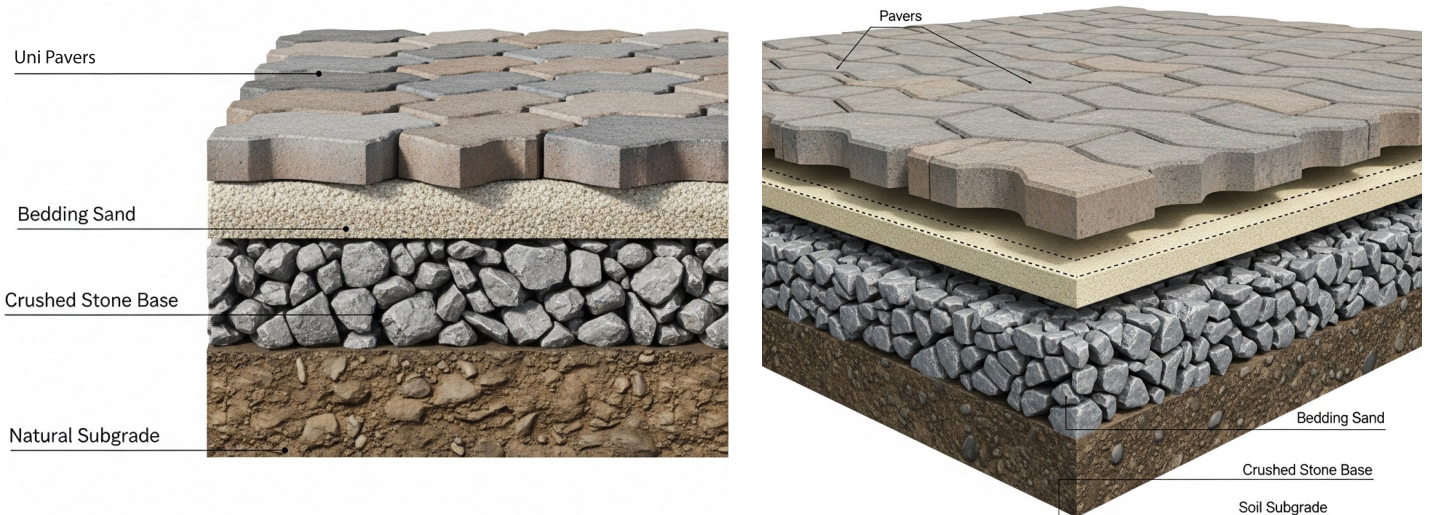
Efflorescence appears as white powdery deposits on the surface of concrete. It occurs when moisture reacts with minerals inside the concrete. While efflorescence is a natural process, poor drainage & trapped moisture can make it more visible.

ENGINEERING SOLUTIONS

BUILD IT RIGHT, BUILD IT ONCE.

Layered Base Compaction

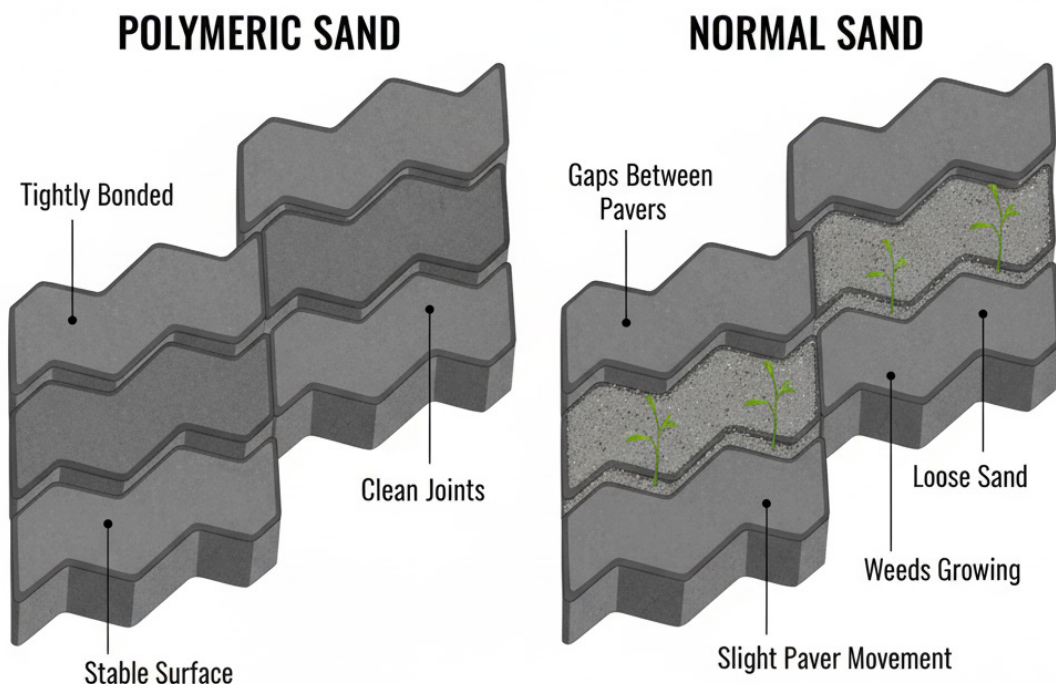
Always compact the sub-base in multiple thin layers rather than one thick layer. This ensures maximum density and prevents future settlement.



Polymeric Sand for Joints

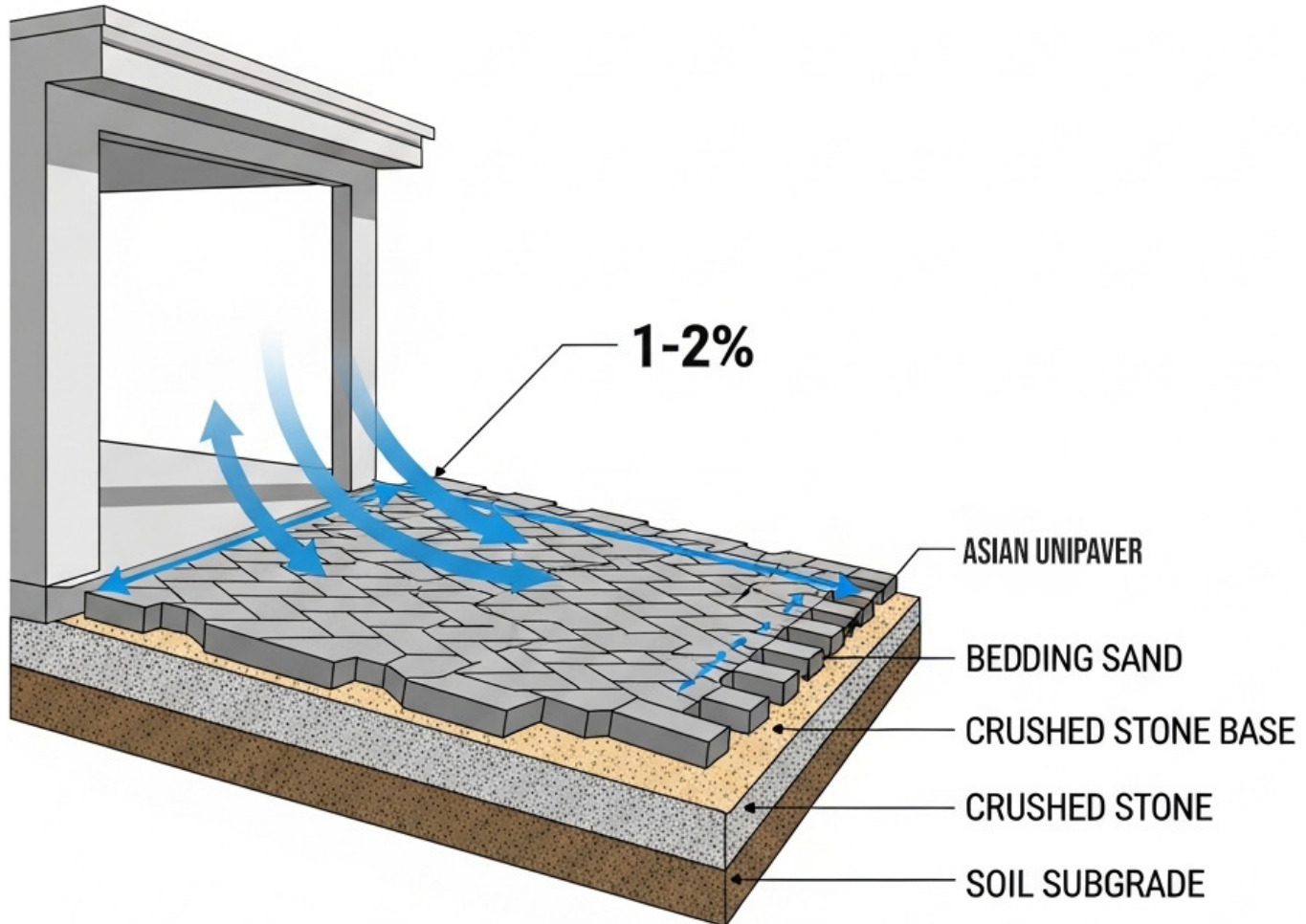
Using high-quality polymeric sand improves the stability of the paving system by:

- Preventing sand washout
- Preventing weed growth
- Increasing joint strength
- Enhancing the overall durability of the pavement



Proper Drainage Slope

Maintaining a slope of 1% to 2% away from structures ensures that rainwater flows away from the paved area, preventing water accumulation.



ASIAN CONCRETO EXPERT TIP

Engineering Insight

A properly installed Uni-Paver pavement system functions as a flexible structural surface. When the base layers, paver alignment, and joint filling are executed correctly, the pavement can perform effectively for many years with minimal maintenance requirements.



TESTIMONIAL



Er. Ram Prasad Banjara

Project Manager
Nepal Oil Corporation Limited



The use of paving blocks manufactured by Asian Concreto in the premises of the newly constructed corporate building of Nepal Oil Corporation Limited at Babarmahal, Kathmandu, is a commendable initiative in enhancing both the functionality and aesthetic appeal of the facility.

The pavers demonstrate good manufactured quality with uniform shape, proper strength, and fine surface finishing. Their systematic installation has significantly improved the overall appearance of the surrounding open spaces, pedestrian areas, and vehicular circulation zones within the corporate premises. In addition to providing a neat and well-organized surface, such paving solutions contribute to durability, ease of maintenance, and effective surface management.

Overall, the use of these pavers reflects a thoughtful approach to infrastructure development and stands as a positive example of utilizing reliable construction materials in modern institutional buildings.





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Asian Matrix



Asian Italia

Asian Fusion



Asian Arena

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