



# PROVIDENT PARK SQUARE

EXPERIENCE CENTER  
PRESENTATION

16.02.2021

**PROVIDENT  
PARK SQUARE**

**PRECAST  
STRUCTURE**



## WHY PRECAST?

## MYTHS & FACTS

## ABOUT YOUR STRUCTURE

### MASONRY WALL !!

- Walls shall be constructed after completion of RCC frame.
- Internal & external plastering shall be done after hacking of RCC members, fixing of service lines & preparing the surface with laborious procedures .
- Other finishing activities shall be started after stipulated curing time.
- Wall joints are prone to develop cracks unless they are treated with suitable measures.
- Prolonged completion time due to too many interdependent activities.



### CAST-IN-SITU !!

- Setting out of formwork and casting shall be done after reinforcement work for the entire unit is completed.
- Internal plastering shall be done or decided case to case.
- Other finishing activities can be started soon after casting the next floor.
- External plastering not required.
- Monolithic (Joint less) construction.



### WHY PRECAST?

- Wall chasing for service lines eliminated in precast.
- Pre-defined, standardized & in-built provisions for all electrical requirements.
- Environment friendly i.e. reduction in generation of construction waste.
- Speedy work completion due to less number of activities involved during construction.



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HOW PRECAST



## HOW PRECAST?

### Preparing mould

Designated moulds for specific element shall be placed and aligned over the casting table (palettes). All the surfaces comes in contact with concrete shall be applied with de-mould/mould releasing solvent before placing the reinforcement cage.



## HOW PRECAST?

### Steel fabrication

Steel reinforcement (cage) shall be fabricated in a designated place inside the factory by a skilled and professional fabricators.



## HOW PRECAST?

### Steel & mould assembling

Fabricated Steel reinforcement is placed along with dowel tubes at specified intervals.

Moulds are tightened rigidly and firmly with special tools so that moulds will not get disturbed during concreting.



## HOW PRECAST?

### Preparing Moulds

All the moulds are made ready as scheduled for the particular shift for concreting continuously.



## HOW PRECAST?

### Fixing of Services

All inserts like electrical conduits, plumbing sleeves and grooves shall be fixed as per drawings and checked thoroughly by the Professional Service Engineers.



## HOW PRECAST?

### Quality check

Overall checks for the dimensional intactness of reinforcement and moulds shall be checked thoroughly by Qualified Professional Quality Engineers and the same shall be certified by them to carryout further activity.



## HOW PRECAST?

### Concreting

Controlled and high quality concrete shall be poured in to the moulds which are certified by the Quality engineers.



## HOW PRECAST?

### Concrete finishing

- Concrete poured in to the moulds shall be compacted by the vibrators which are fixed underneath the casting table.
- The surface of concrete shall be levelled and finished manually by the professional skilled masons.



## HOW PRECAST?

### Concrete finishing

- The concrete in all the moulds poured in a batch shall be compacted and finished immediately before initial setting.
- The finished surface will be smooth or rough depending on type of finishes as per specification.
- The finished surface will be true to line & level as per tolerance.



## HOW PRECAST?

### Concrete curing

The casted element shall be covered with LDPE sheets for curing purpose till they achieve desired strength before releasing from the moulds.



## HOW PRECAST?

### Concrete curing

Water vapors formed on the exposed surface of the concreted element.



## HOW PRECAST?

### PRECAST WALL

Precast wall is ready for dispatch from factory



#### CONSTRUCTION SEQUENCE & ADVANTAGES

- ❑ Construction time is considerably reduced.
- ❑ Each element is be cast with care.
- ❑ Dimensions are more accurate & precise.
- ❑ Excellent surface finish.
- ❑ Plastering not required on both external & internal side.



## HOW PRECAST?

### PRECAST ELEMENTS

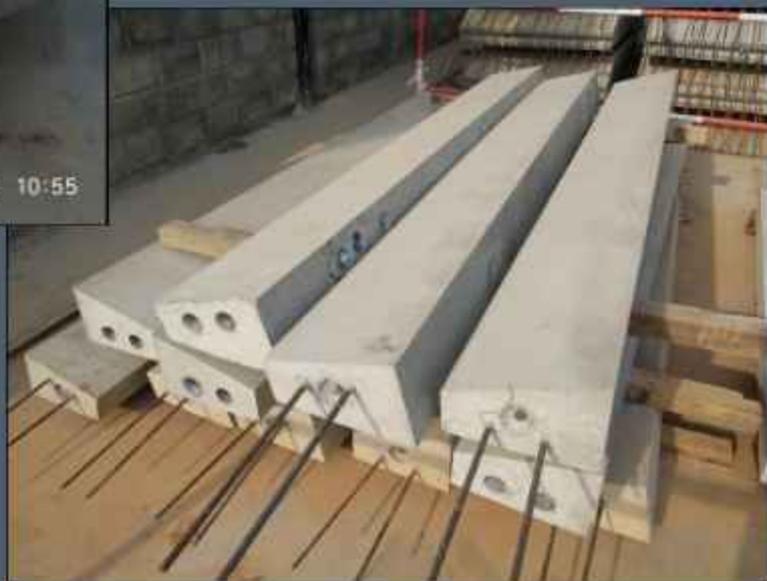
Elements lifted and stacked individually after certification by the authorized person.



## HOW PRECAST?

### PRECAST ELEMENTS

Add elements like staircase, balcony slabs, Chejja, working platforms for shafts, elevation columns etc., shall be cast in a similar method and stacked separately.



## HOW PRECAST?

### SHIFTING OF ELEMENTS TO SITE

Precast elements shall be loaded to truck mounted with A-frame and transported to site for erection at respective areas.



## HOW PRECAST?

### PRECAST ERECTION

The elements shall be unloaded from the truck through tower crane and erected at designated place as per building floor plan.



## HOW PRECAST?

### PRECAST ERECTION

Vertical dowel bars (steel bars) of height as per structural requirement shall be provided for erection of elements, during casting of the first slab.



## HOW PRECAST?

### PRECAST ERECTION

The erected wall elements are supported with push-pull jacks to adjust the alignment and also to support it till all the wall joints are connected rigidly.



## HOW PRECAST?

### PRECAST ERECTION

A non-shrink high strength polymer modified free flow cement grout is prepared to pour into the dowel tube.

The grout is checked for its strength by casting cubes batch wise in the Quality Lab.



## HOW PRECAST?

### WALL JOINT GROUTING

Closed cells polyurethane backer rods shall be prepared and fixed along the wall joints to hold the grout poured into the joint between the walls till it get set.



## HOW PRECAST?

### PRECAST ERECTION

A VIEW AFTER THE  
ERECTION OF  
PRECAST ELEMENTS  
FOR ONE COMPLETE  
FLOOR



## HOW PRECAST?

### SLAB ERECTION

Temporary supports are provided on the vertical elements to place the precast slab



## HOW PRECAST?

### SLAB ERECTION

Precast slabs shall be placed over the walls at designated locations.

Steel reinforcement and electrical conduits are placed in position before pouring topping concrete (2nd layer slab over the precast slab)



## HOW PRECAST?

### SLAB TOPPING CONCRETE

Pouring controlled  
concrete of  
designated grade to  
cast 2nd layer slab  
over the precast slab.



## HOW PRECAST?

### SLAB TOPPING CONCRETE

Finished 2nd layer  
slab (topping  
concrete)



## HOW PRECAST?

### INTERNAL WALL FINISHES

Putty / Gypsum  
plaster and Paint  
application



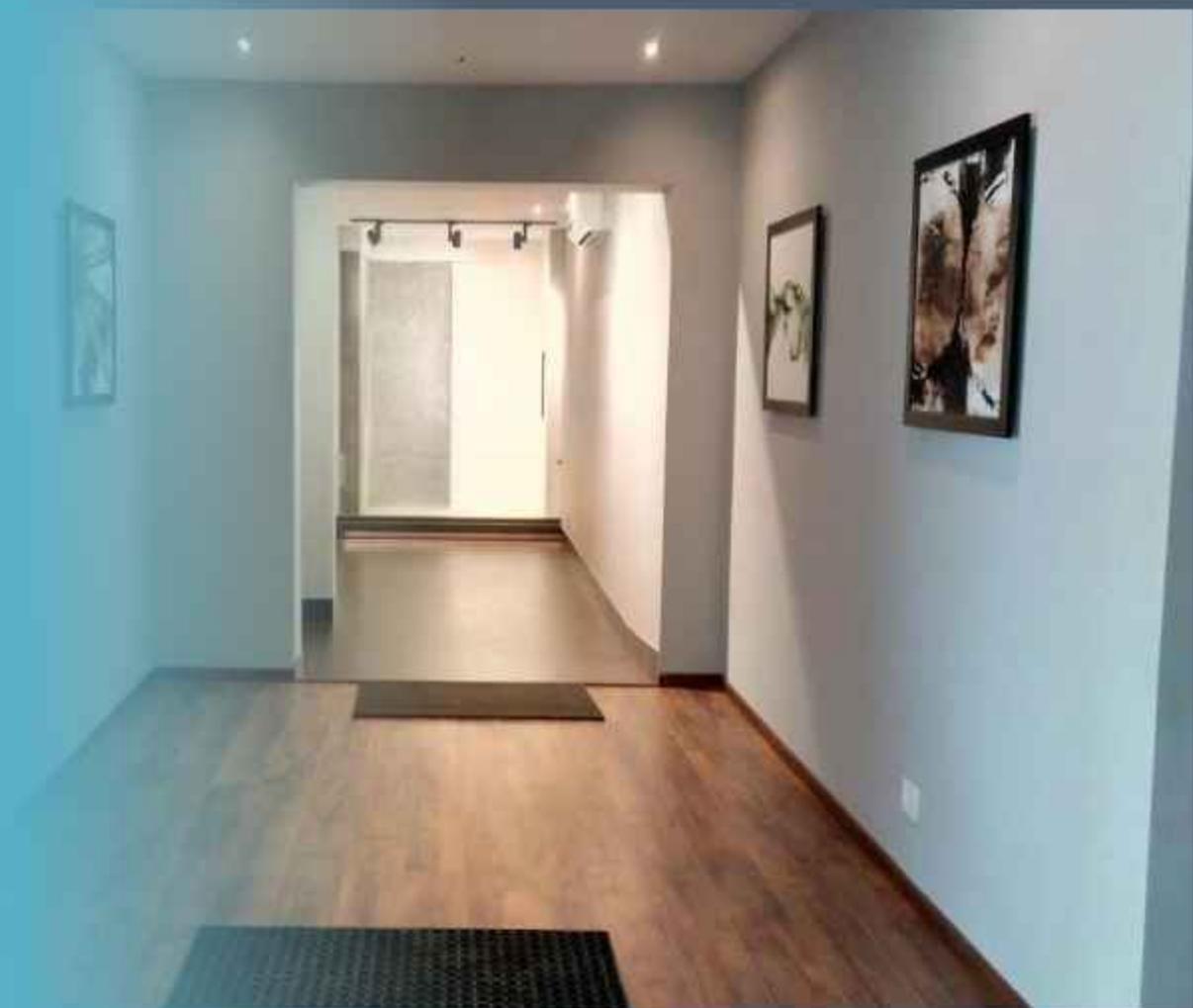
#### CONSTRUCTION SEQUENCE & ADVANTAGES

- ❑ Internal wall & ceiling surfaces finished directly with wall putty and paint which gives smooth, even & excellent finish.
- ❑ Service life of wall putty comparatively more.
- ❑ Time saving in finishing other successor activities like tiling, door & window installation, fixing of bathroom fittings etc.,.



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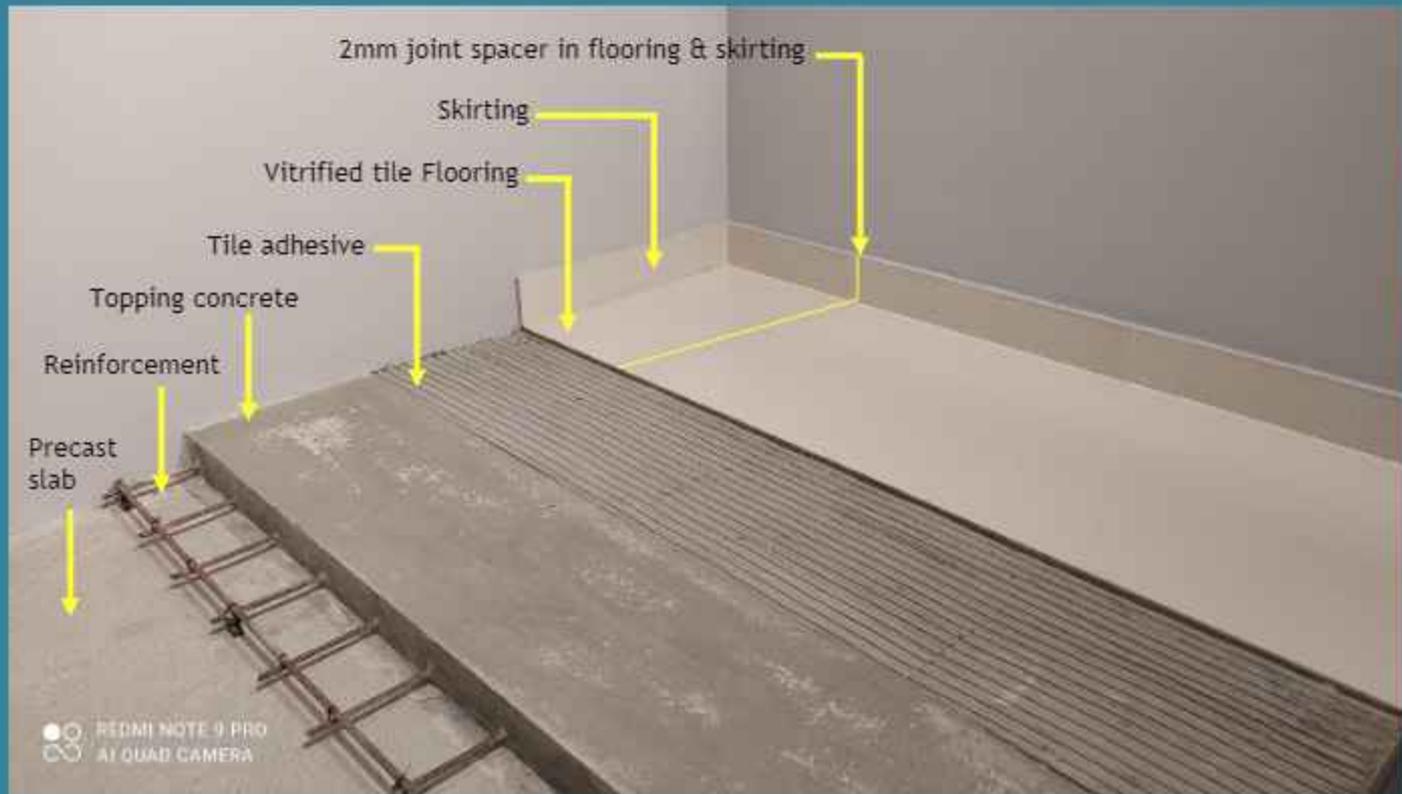
EXPERIENCE  
CENTER



# 1.

## INTERNAL FLOORING

Vitrified tile flooring laid with tile adhesive to have a strong bonding with slab and for even surface, joint spacers of 2mm between each tile joint filled with semi contrast grout enhances the grand appearance of the entire flooring.



## 2.

### BATHROOM WALL

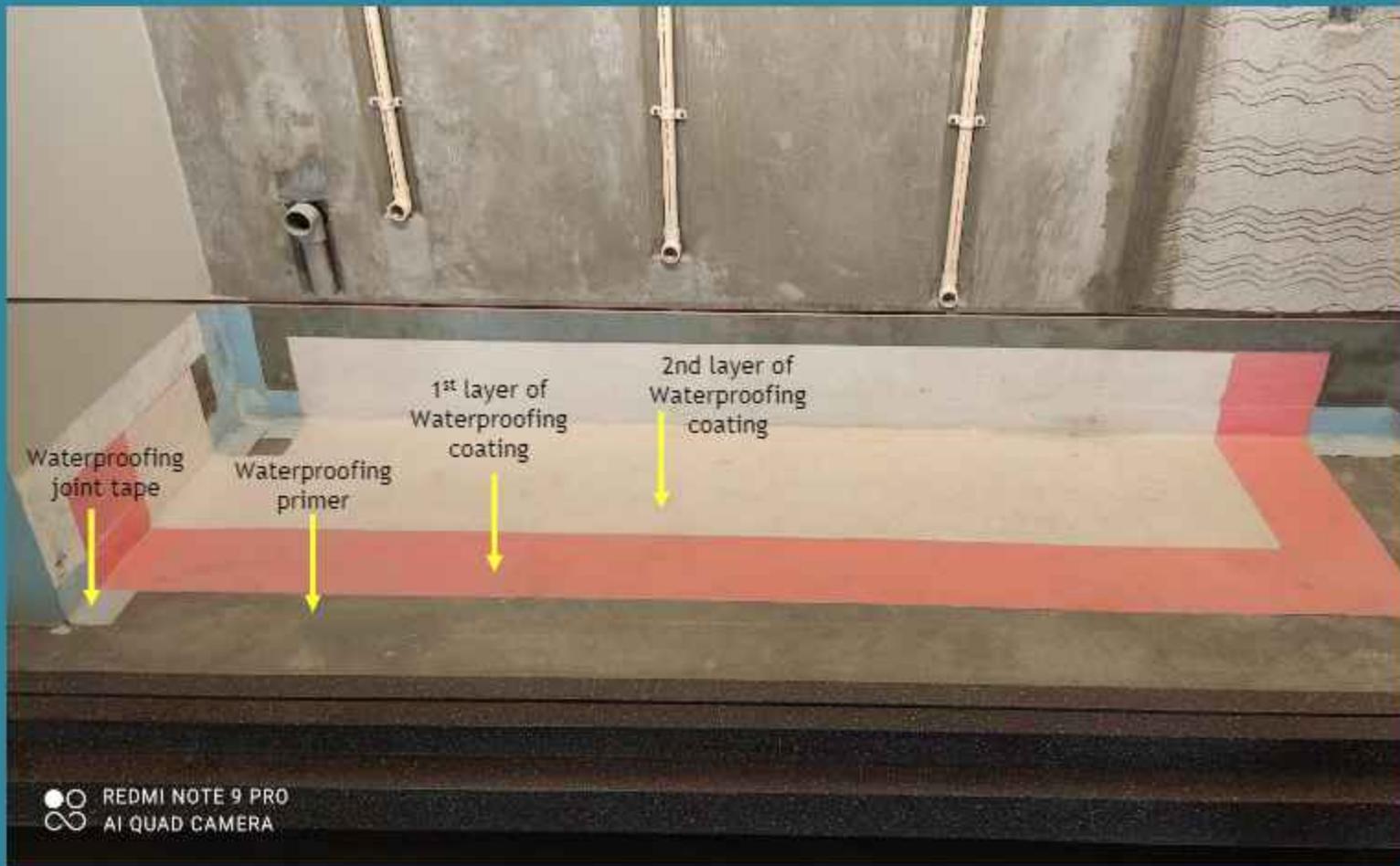
Groove made for plumbing lines in precast wall of bathrooms provides neat and stronger walls without chipping walls to fix service lines.



# 3.

## TOILET WATERPROOFING

Advanced waterproofing system has been adopted for Toilets and other wet areas such as utility & balcony, which makes the slab impermeable to water ingress and provides effective and excellent water tightness to sunken slabs



# 4.

## PLUMBING SHAFT

A systematic and well finished plumbing shafts provided to accommodate PHE lines for uninterrupted service.



REDMI NOTE 9 PRO  
AI QUAD CAMERA



# 5.

## BATHROOM DADO

- Attractive & sober colour tiles from reputed brand laid using polymer based high quality tile adhesive.
- Tiles laid after marking the wall with pre-defined attractive layout enhancing aesthetics.
- Spacer joint between the tiles filled with suitable coloured water repellent cementitious grout adds beauty to the entire bathroom.



Precast wall

Tile adhesive

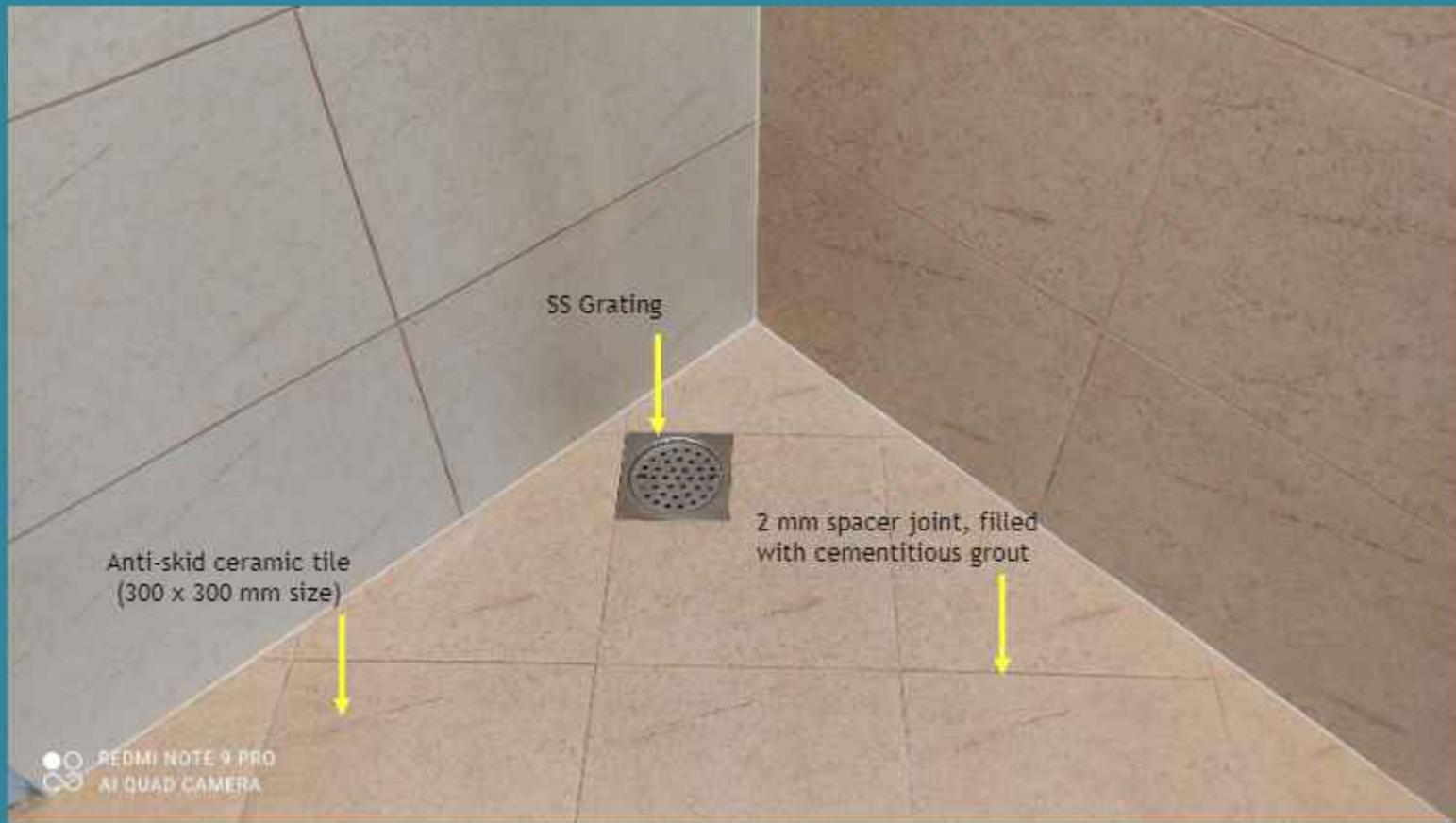
Ceramic tile (450 x 300 mm size)

2 mm spacer joint, filled with cementitious grout

# 6.

## TOILET FLOORING

- Anti-skid ceramic tiles laid in slope using polymer based high quality tile adhesive.
- Tiles laid in diagonal pattern with 2mm spacer joint and filled with water repellent cementitious grout gives an attractive look to the bathroom
- Stainless steel grating fixed for floor trap oriented as per tile layout is true to the purpose and good looking.



# 7.

## GRID FALSE CEILING

Modular grid false ceiling of silhouette design provided for bathroom ceiling to cover service lines, are more elegant with their design and user friendly during maintenance.



# 8.

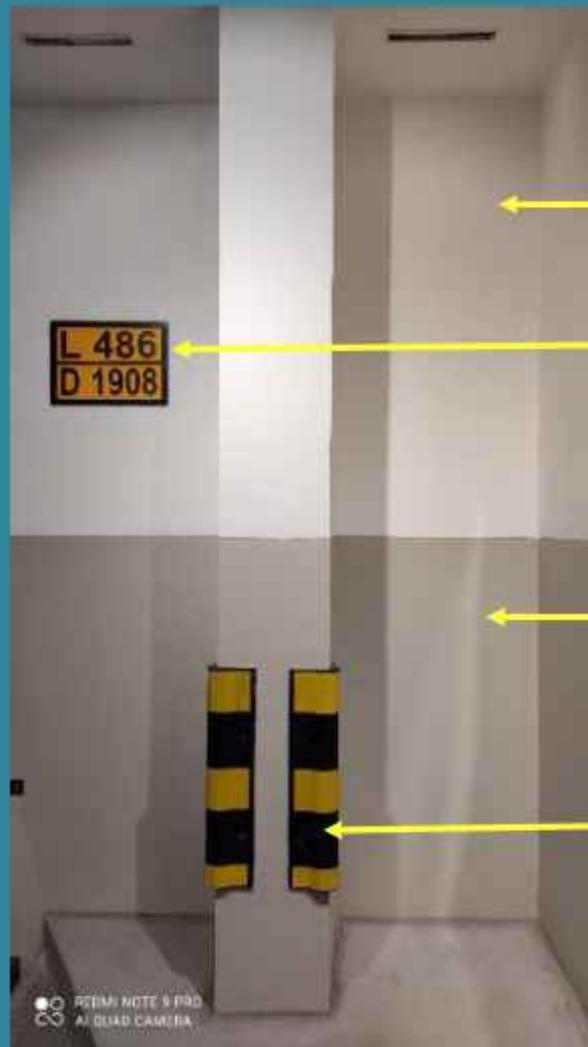
## TERRACE WATERPROOFING

Advanced and highly durable Polyurethane waterproofing applied to terrace slab provides excellent water tightness and permanent solution to the probable seepage and dampness during rainy season.



# 9. CAR PARKING

- Walls, columns and ceiling are finished neatly with 2 coats of OBD paint over one coat of primer.
- Lower Part of the wall & columns are painted with weatherproof emulsion of good quality & selected shade for easy maintenance
- Column guards of good quality are fixed on corners to avoid damages due to vehicular movement.



Wall finished with OBD paint

Car park numbering

Wall finished with weather proof emulsion

Column fender/ guard

# 10.

## CAR PARK FLOORING

- Flooring in car parking area with Vacuum Dewatered Flooring (VDF) provides neat and strong flooring to withstand dynamic loads acting over the flooring.
- Flexible Polyurethane sealant shall be filled inside the groove provided to avoid cracks around the column and along the wall.



# 11.

## WOODEN DOORS

Engineered doors with flush shutters selected veneer and Laminate provided for Main door, Bedrooms and Bathrooms.



# 12.

## UPVC DOORS & WINDOWS

UPVC sliding windows & sliding doors provided with safety grill gives an elegant look to the interior of the home and safe & easy to operate.



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**THANK YOU**

16.02.2021