

DELHI PRECAST

Manufacturer of Precast Pre stress Concrete Wall's

**DESIGNING &
MANUFACTURING**

**SUPPLY & ERECTION
ON DEAMND CUSTOMIZED WALLS**

www.DelhiPrecast.com

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18th Edition : Year 23-24

DELHI PRECAST



We are situated in following States & Expanding...

- DELHI – NCR | HARYANA | UTTAR PRADESH | M.P
- RAJASTHAN | PUNJAB | UTTARAKHAND | H.P

INTRODUCTION

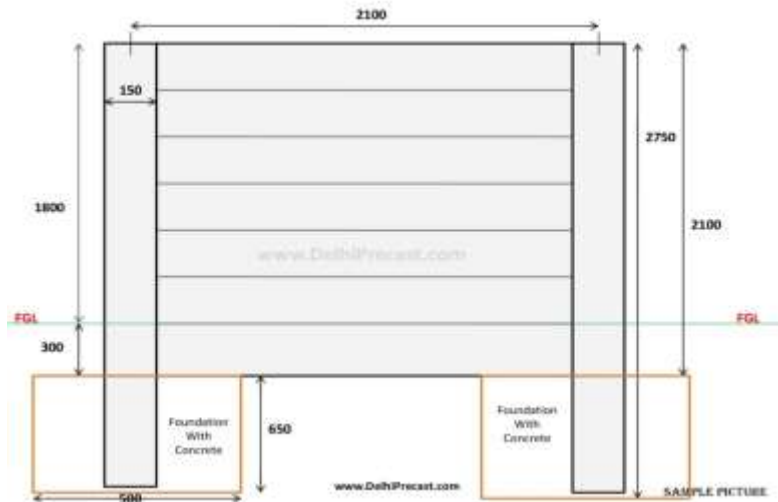
Precast Pres Stress Concrete Wall's & Barriers

Ready to Install – Precast Panels – Prefabricated Wall – Precast Barriers

- Low Cost (comparison to brick/stone)
- Fast to Install
- Longer Life
- No Maintenance
- Weather proof
- RE-Usable
- Aesthetically attractive
- Eco Friendly



OUR PRODUCT RANGE - CUSTOMIZED



Typical Precast Pre-stressed Concrete Wall



Typical Precast Concrete Retaining Panel



Typical 10-ft long precast traffic barrier unit



Earth Retaining Precast Wall for Highways & Railways

Type of Wall's Available

Clear Height above NGL (Minimum 1500 MM , Max 4500 MM)

- 1. COLUMN 150 X 150 MM | PANEL 50 MM THICK , SIZE 2010 X 300 X 50 MM**
- 2. COLUMN 150 X 150 MM | PANEL 52 MM THICK , SIZE 1800 X 300 X 52 MM**
- 3. COLUMN 175 X 175 MM | PANEL 50 MM THICK , SIZE 2140 X 300 X 50 MM**

- 4. COLUMN 200 X 150 MM | PANEL 70 MM THICK , SIZE 2010 X 300 X 70 MM**
- 5. COLUMN 200 X 150 MM | PANEL 70 MM THICK , SIZE 2950 X 450 X 70 MM**
- 6. COLUMN 200 X 200 MM | PANEL 70 MM THICK , SIZE 2950 X 1050 X 70 MM**

- 7. COLUMN 250 X 200 MM | PANEL 80 MM THICK , SIZE 2950 X 450 X 80 MM**
- 8. COLUMN 250 X 200 MM | PANEL 80 MM THICK , SIZE 2340 X 300 X 80 MM**
- 9. COLUMN 250 X 250 MM | PANEL 90 MM THICK , SIZE 2950 X 600 X 90 MM**

- 10. COLUMN 300 X 300 MM | PANEL 100 MM THICK , SIZE 2950 X 1050 X 100 MM**

- 11. L - SHAPE CONCRETE WALL - LOAD BEARING 2400 X 900 X 95 MM | L – 850 MM**

- 12. CUSTOMIZED EARTH RETAINING WALLS AVAILABLE AS PER CLIENTS REQUIREMENT**

PANELS ARE AVAILABLE IN PLANE | www.DelhiPrecast.com BRICK PATTERN & BLOCK PATTERN ON BOTH SIDE

STANDARDS TO FOLLOW

Frequently used as block or brick work replacement Delhi Precast's Heavy Duty Horizontal + Vertical Precast Concrete Wall Panels & Earth Retaining Wall have fast and simple installation on site.

They are made to measure and designed to the structures frame or steel support columns to give foundation free walls.

Heavy weight with 70 to 100 mm thickness designed for non-load bearing applications, pre-stressing gives the concrete far greater strength than its size would suggest meaning that these panels provide a wall that is equivalent to a 9" reinforced wall.

All our Pre-stressed concrete wall panels are designed and manufactured to IS 1343 : Code of practice of Pre-stressed Concrete IS 1343:2012 with industry standards and quality.





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PRE-STRESS CONCRETE GRADES AVAILABLE

Concrete Grade	Mix Ratio (cement : sand : aggregates)	Compressive Strength	
		MPa (N/mm2)	psi
Grades of Concrete			
Standard Grade of Concrete			
M25	1 : 1 : 2	25 MPa	3625 psi
M30	Design Mix	30 MPa	4350 psi
M35 High Strength	Design Mix	35 MPa	5075 psi
M40 High Strength	Design Mix	40 MPa	5800 psi
M45 High Strength	Design Mix	45 MPa	6525 psi
Very High Strength Concrete Grades			
M50	Design Mix	50 MPa	7250 psi
M55	Design Mix	55 MPa	7975 psi
M60	Design Mix	60 MPa	8700 psi

Comparison of Non-Prestressed Beam (top) & Prestressed Concrete Beam (bottom) under Load

This compression is produced by the tensioning of high-strength "Wires" located within or adjacent to the concrete and is done to improve the performance of the concrete in service

1. Non-prestressed Panel without load

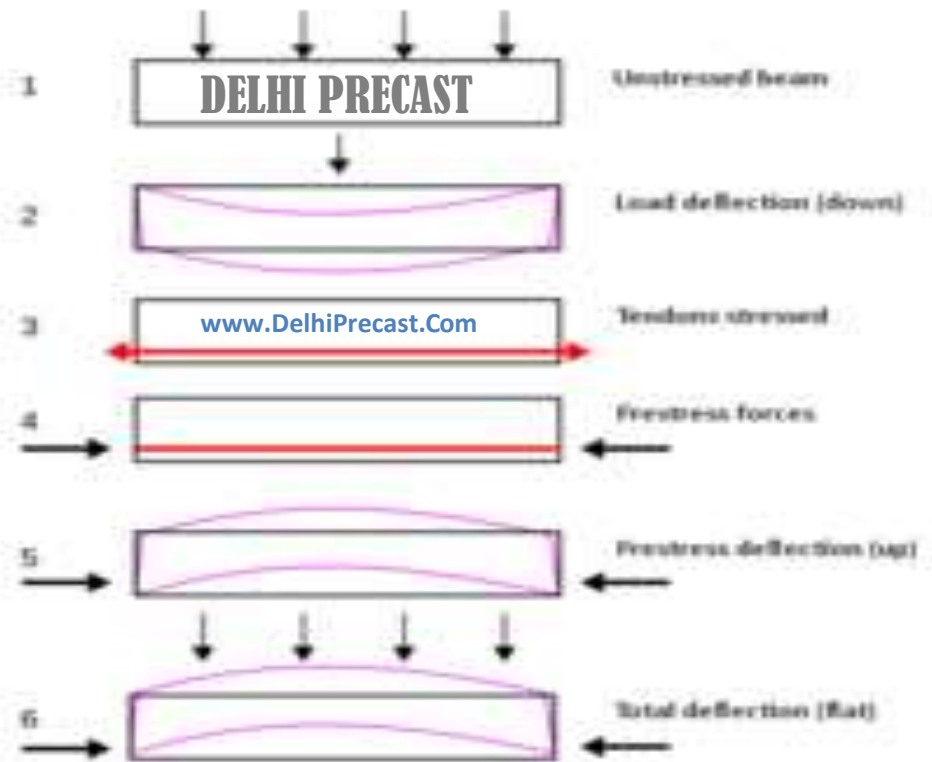
2. Non-prestressed Panel with load

3. Before concrete solidifies, Wires embedded in concrete are tensioned

4. After concrete solidifies, wires apply compressive stress to concrete

5. Prestressed Panel without load

6. Prestressed Panel with load



CURING OF MATERIAL

Precast Material Curing begins immediately after placement in Stock

Curing is the maintaining of an adequate moisture content and temperature in **concrete** Boundary Wall material at early ages so that it can develop properties the mixture was designed to achieve. Precast Boundary Wall **Curing** begins immediately after placement and finishing so that the **concrete** may develop the desired strength and durability.



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Material Testing

Testing the actual concrete for its durability, permeability, strength, and hardness is important to know for reasons of safety. Testing concrete of Precast Boundary Wall is an incredibly important part of Manufacturing out of this material. Also we can know that 'when is our material ready for dispatch'.

Strength of Concrete
"Compressive"
We Manufacture..

1. *M25 Grade*
2. *M30 Grade*
3. *M35 Grade*
4. *M40 Grade*
5. *M45 Grade*
6. *M50 Grade*
7. *M55 Grade*



Is Manufacturing & Transportation Cheaper than Casting on Site ?

ANSWER : YES....

We manufacture approx 400+ Running Meter Precast Wall per day & we have a setup of machinery & moulds with skilled labour working day & night to provide best quality of material without any delay of project.

In Comparison.. Bulk Manufacturing require less labour. Also ,Quality Control is better at manufacturing units.



SITE VISIT & MEASUREMENT

For better understanding with the client & accuracy in work we offer
site visit

FREE OF COST

before finalization of any work

Why Site Visit is Important ?

- To know the site conditions.
- To get approx measurement.
- Soil quality & testing(If Required)
- Water logging conditions at site.
- To know the Path for Material truck to reach the site.
- And many more reasons as per location..depending upon site conditions and availability of the resources.



SITE IMAGES / WALL PICTURES



WAREHOUSE WALL PROJECT

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WARE HOUSE WALL IN NCR REGION



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@ OPPO & VIVO UNITS , G.NOIDA



→ Concertina Barbed Wire Ring

→ Y-Angel 50x50x6

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→ Precast Prestress Panel
Size 2010x300x50 MM

→ Precast Prestress Column
Size 150x150 MM

TNT

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FLIPKART WAREHOUSE WALL



AMAZON WAREHOUSE WALL



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RESIDENTIAL TOWNSHIP SONIPAT

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Precast Wall @ MARRIAGE GARDENS & PARKS

With Paint , Railing & Lights on it.....

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DELHI PRECAST

BLOCK PATTERN DESIGN WALL

**BOTH
SIDE
DESIGN**

Railing on Top

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BEAM →

M35 GRADE

PANEL SIZE : 1800 X 300 X 50 MM

This Wall Pattern has both side "BLOCK DESIGN"
& have Natural Finishing

CALL : 9999-89-6179



Brick Design Wall with & without Paint



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FARM HOUSE PRECAST WALL

UTTAR PRADESH

Precast RCC Panel
50 MM Thick

2 Meter

Precast Rcc Column
6inch x 6 inch or
(150x150 MM) Thick

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Delhi Precast

CALL : 9999-89-6179

PRECAST PRE-STRESS RCC BOUNDARY WALL
8 feet Height Wall , 10 Feet Column
2 feet Foundation

Both Column & Panels are Reinforced
with High Carbon HTPS Steel Wires

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SECURITY PRECAST WALL



L-Angle : 50x50x5

G.I Barbed Wire

2 Meter Wide

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**Solar Plants, Industries , Storage Yards & Units,
Manufacturing Plants, Farmhouses, Play Grounds
, Parks , Schools & Universities, Police Academy
Grounds , Residential Colonies & More..**

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SOLAR PLANT WALL RAJASTHAN

To Bear High Wind Pressure...

200 MM THICK COLUMN

DELHI PRECAST

15 Ft height

www.DelhiPrecast.com



PRECAST WALL HIGH STRENGTH

HIGH STRENGTH LOAD BEARING WALL

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T.N.T

Column : 200x150 MM

Panel : 1500x200x80 MM

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BEFORE & AFTER



PRECAST WALL @ AIRPORT



PRECAST WALL IGI AIRPORT EXT. DELHI



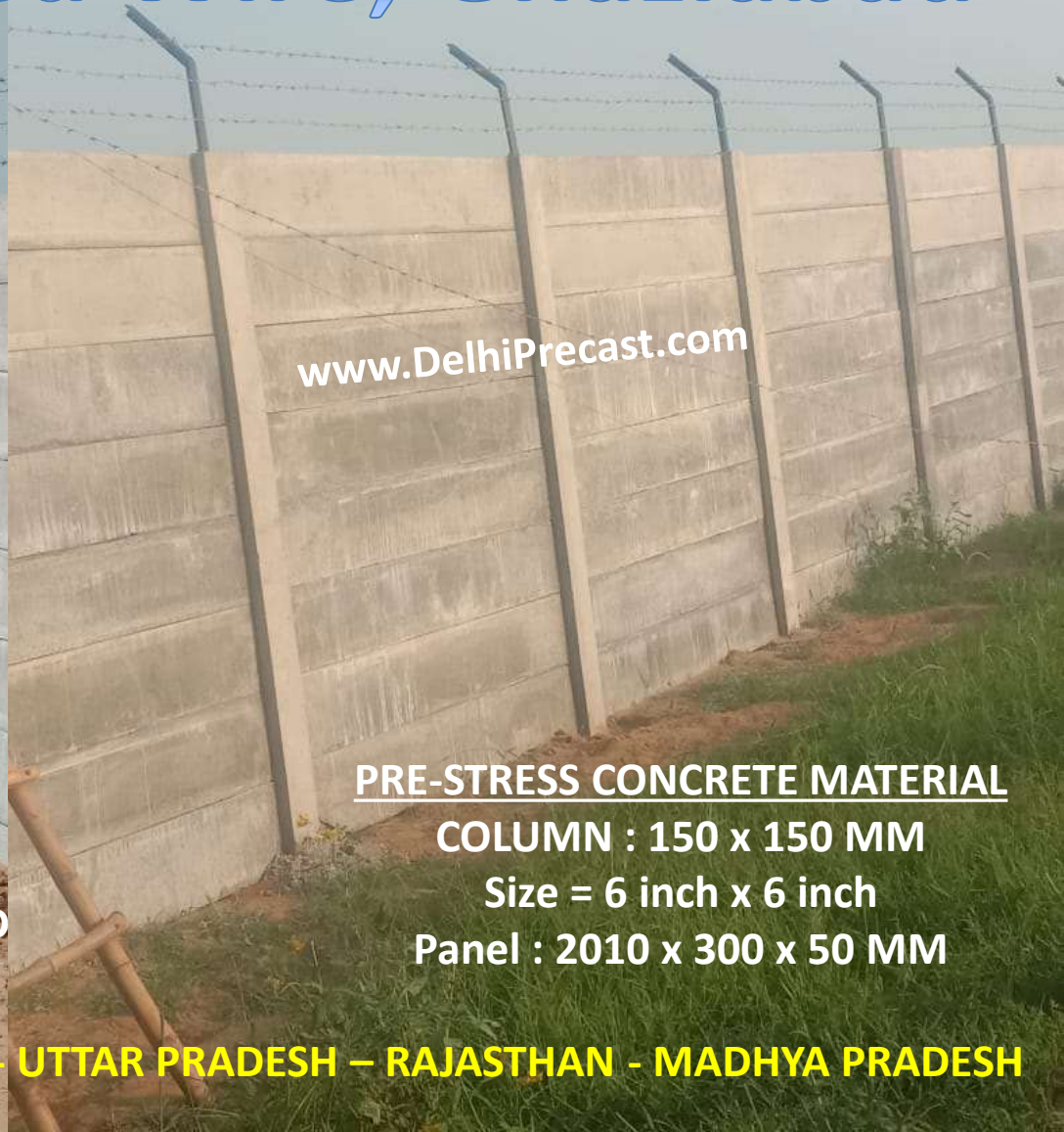
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RCC PRECAST BOUNDARY WALL

With G.I Barbed Wire, Ghaziabad



WALL HEIGHT AVAILABLE
MINIMUM : 5 FEET ABOVE GROUND
MAXIMUM : 12 FEET ABOVE GROUND



PRE-STRESS CONCRETE MATERIAL

COLUMN : 150 x 150 MM

Size = 6 inch x 6 inch

Panel : 2010 x 300 x 50 MM

DELHI NCR - HARYANA – PUNJAB - UK - UTTAR PRADESH – RAJASTHAN - MADHYA PRADESH

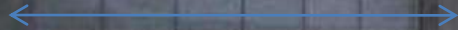
BRICK PATTERN BOUNDARY WALL

150
MM



BRICK PATTERN

www.DelhiPrecast.com



6 feet

50 MM Thick

PRE-STRESS CONCRETE

Precast Boundary Wall
8 Feet Height above
ground

PATTERN : BRICK DESIGN

Y-Angle and Concertina
Coil at top

Y-Angle = 50 x 50 x 6 Size
G.I Concertina Coil
Size = 600 MM Dia

JAIPUR INT. AIRPORT EXT PH-III WALL

Y-Angle 50x50x6 Size ,
800 MM Height

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www.DelhiPrecast.com

Motion Sensor

2 Meter Wide

CALL : 9999-89-6179

Height of Wall : 9 Feet above NGL

Foundation : 3 Feet below NGL

Column : 150 x 150 MM

Panel : 2010x300x50 MM

Concrete : M40 Grade

Wall Brand : DELHI PRECAST

DELHI PRECAST

DELHI NCR - HARYANA - PUNJAB - UK - UTTAR PRADESH - RAJASTHAN - MADHYA PRADESH



DelhiPrecast.com

Delhi Precast

RCC PRECAST PRESTRESS BOUNDARY WALL FARMHOUSE

LOW COST | HIGHER STRENGTH | LIFE 50+ YEARS
M35 Grade

DELHI NCR - HARYANA – PUNJAB - UK - UTTAR PRADESH – RAJASTHAN - MADHYA PRADESH

PRECAST COTTAGE | ROOM



Delhi NCR Rajasthan Haryana Punjab Uttar Pradesh Madhya Pradesh Maharashtra

TYPES OF EARTH RETAINING PRECAST WALLS AND PRECAST PANELS



PRECAST CONCRETE EARTH RETAINING PANELS

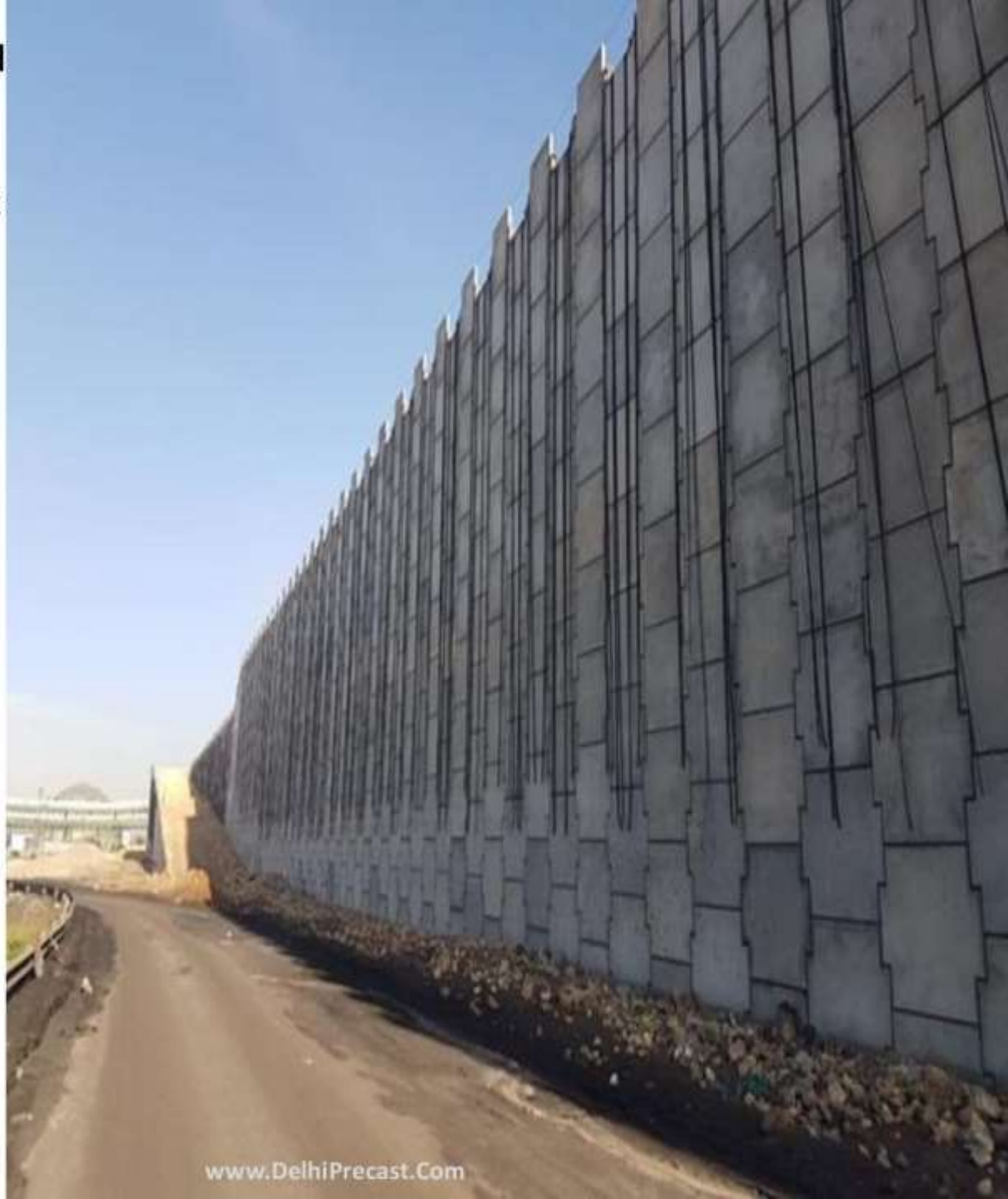
Our Professional Engineers design Precast structures with checks for internal and external stability, considering the static loads and the predicted dynamic loads. We optimize the design for your project using a calculative choice of materials and proper quantities that suit your specific plans for use and intended service life

These concrete Precast panels generally come in three types : Cruciform (5' x 5'), square (5' x 5') and rectangular (5' x 10'). Each panel shape has benefits related to differential settlement and aesthetics. The panels typically have a structural thickness of 75 to 125 MM.

Custom panel dimensions and thicknesses can be manufactured if necessary based on project needs such as geometry, extreme wall height, or for protective structures. Panel joints have a ship lap, as well as geo textile on the back face, to provide adequate drainage of the structure while preventing loss of backfill.



A Reinforced earth wall is designed and constructed to resist the lateral pressure of the soil and supports the soil laterally so that it can be maintained at different levels on both sides. The lateral pressure could be also due to earth filling, liquid pressure, sand, and granular materials. The walls are used to bound soils between two different elevations often in areas of terrain possessing undesirable slopes. These walls are an economical way to meet every-day earth retention needs for highway and bridge grade separations, railroads and mass transit systems. They are also used in response to difficult design conditions such as very high structures, restricted space, where obstructions within the soil mass are present.

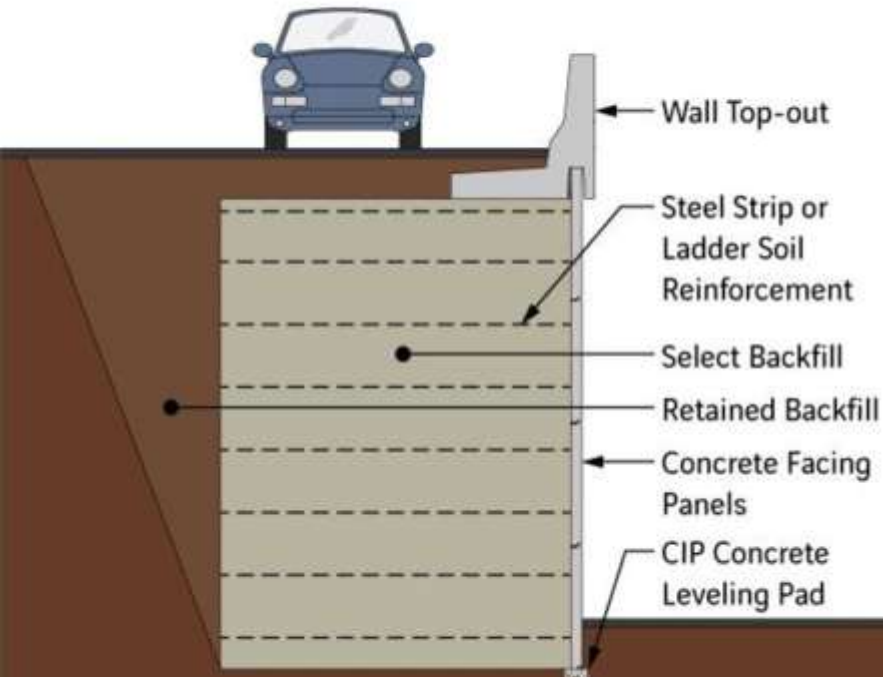
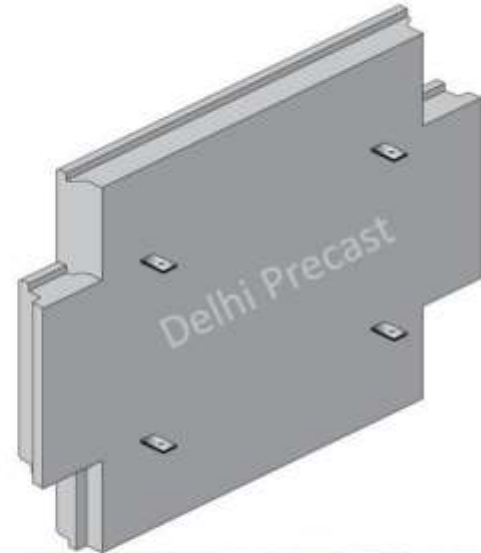


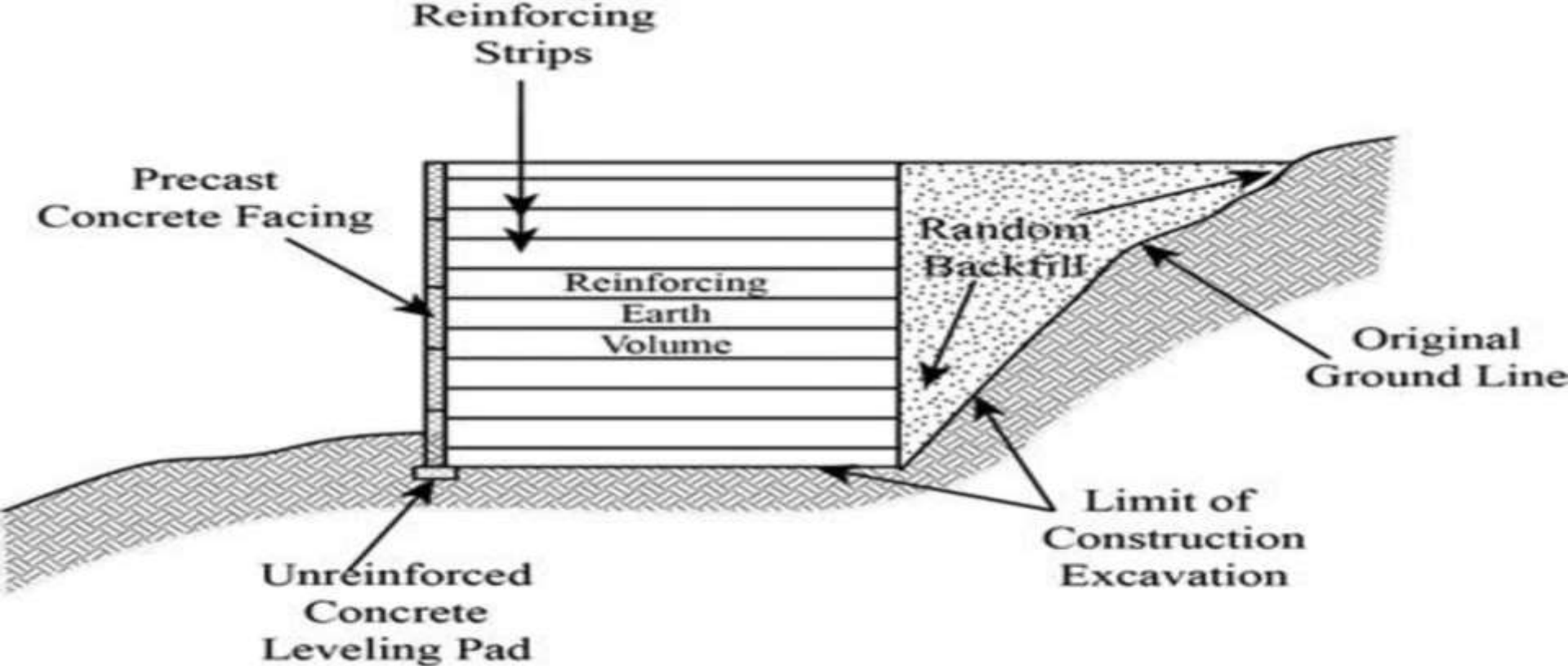
REINFORCED EARTH PRECAST WALL PANELS

Earth retaining walls, also known as reinforced earth Precast walls, support a mass of earth to form a vertical or near-vertical face. They may be required on a sloping site to create terraces with minimum footprint, to relieve lateral earth pressure from adjacent structures, or to carry surcharge and live loading.

The system's soil reinforcements are inextensible High-Adherence (HA) steel reinforcing strips or ladders, which are bolted to tie strips embedded in precast concrete facing panels.

PANEL →





Components of Reinforced Earth Wall

A reinforced earth wall comprises various components that are necessary for the stability and functions of the structure. Each of them are below.

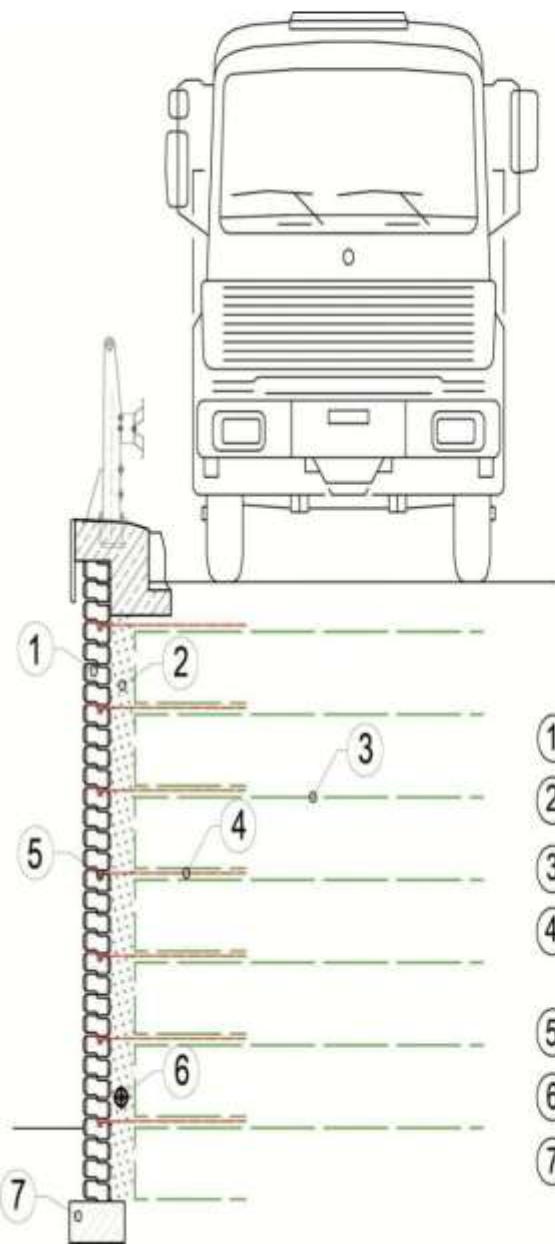
1. Reinforcement elements
2. Backfill elements
3. Facing elements
4. Drainage elements
5. Levelling pads & Filter cloth

Applications Reinforced Earth Wall

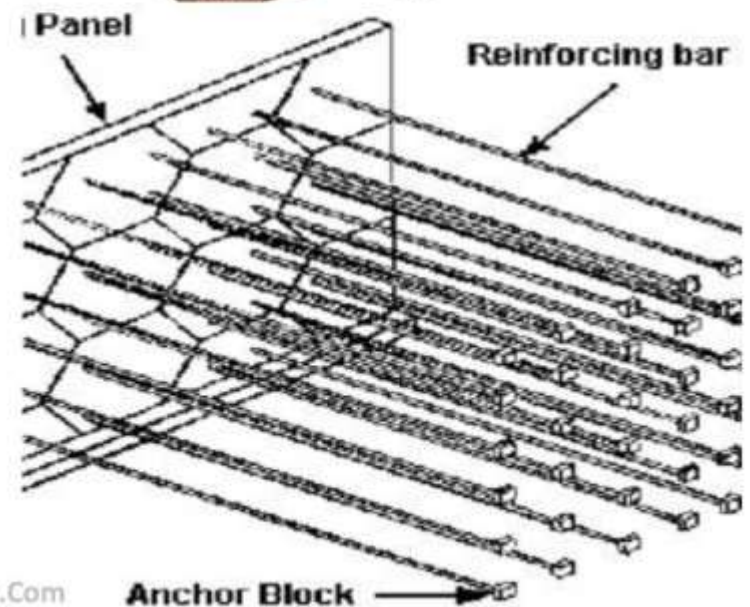
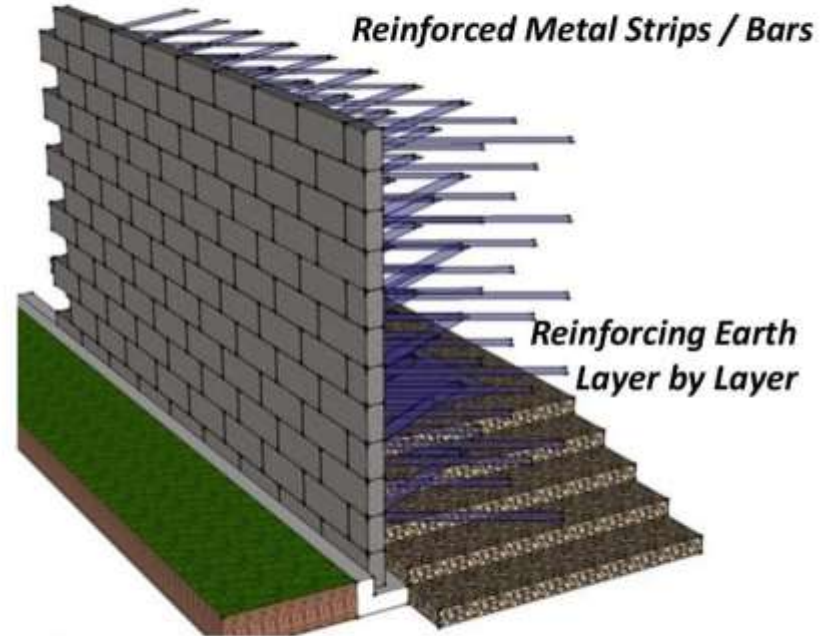
Reinforced earth wall is compatible with large-sized discrete concrete panels, segmental panels, small-sized modular concrete blocks.

1. Highway and roads
2. Bridges & Railways
3. Waterways and dams
4. Protective structures
5. Commercial and public facilities

Design considerations for Reinforced Earth Wall



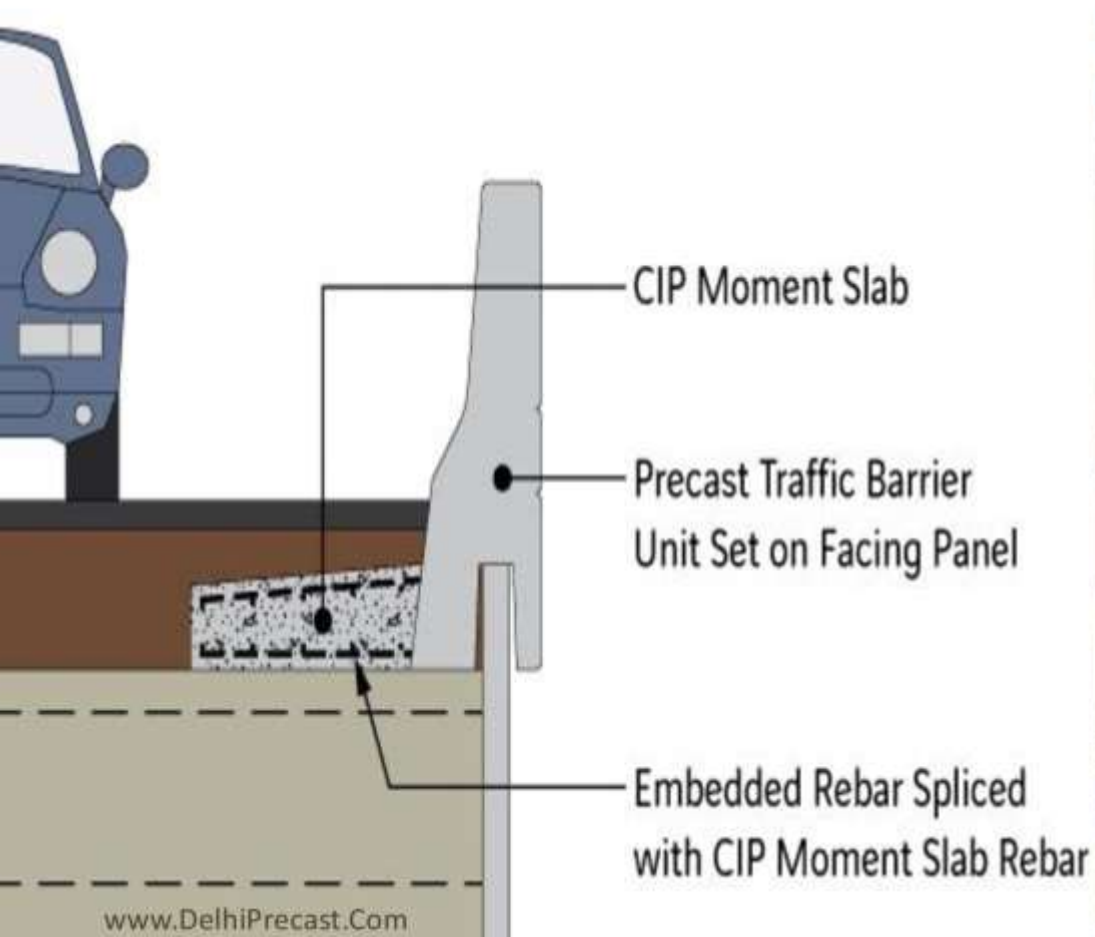
- ① Concrete modular blocks (facing)
- ② Drainage layer
- ③ Main geosynthetic reinforcement
- ④ Secondary geosynthetic inserts for facing anchorage
- ⑤ Connectors
- ⑥ Drainage pipe
- ⑦ Concrete foundation

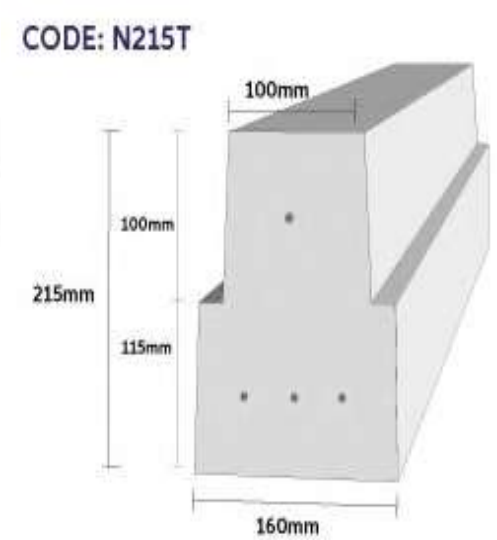
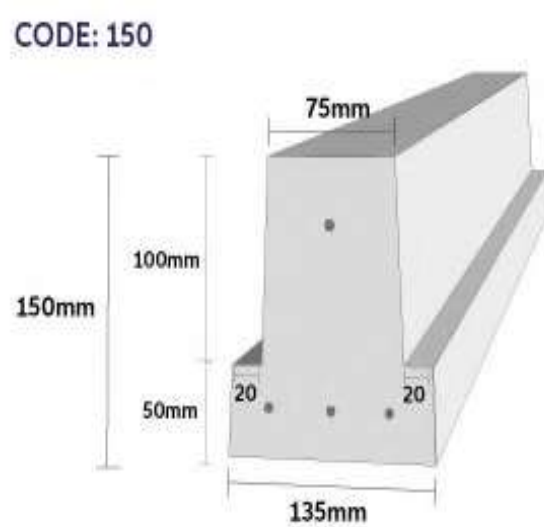




PRECAST CONCRETE TRAFFIC BARRIERS

Precast traffic barrier is a traffic safety solution for retaining walls with vehicular or pedestrian traffic on top. It allows a contractor to set precast barrier units along the top of the wall, greatly reducing the use of cast-in-place concrete. The barrier units are typically eight to twelve feet long, are designed to rest atop the retaining wall, and are delivered to the site with protruding dowels to tie in to the cast-in-place moment slab





RETAINING CONCRETE WALLS



Mechanically Stabilized Earth (MSE) retaining wall

It's a composite structure consisting of alternating layers of compacted backfill and soil reinforcement elements, fixed to a wall facing. It is a integral precast concrete facing and traffic barrier. It is ideal for eliminating the process of a separate installation of traffic barrier and moment slab on top of a retaining wall. Especially over a long stretch of road, considerable time will be saved.

The precast concrete panels are eight feet wide and designed to be full height, up to sixteen feet tall, not including the traffic barrier. Additional height can be reached by including starter panels below the full height Piano Wall. Both steel or geosynthetic soil reinforcements may be used. In addition to satisfying the MSE wall internal stability design, the uppermost level of soil reinforcements resists dynamic loading in the event of a vehicle impact on the barrier. The need for a cast-in-place moment slab is eliminated.

Benefits of this Precast Wall System

- Full height monolithic units eliminate the need for separate traffic barrier installation.
- Durable precast units up to 16-ft tall are perfect for low-height grade separations designed for highway impact loading.
- This Precast design eliminates the need for costly cast-in-place moment slabs.



PRECAST CONCRETE BARRIERS

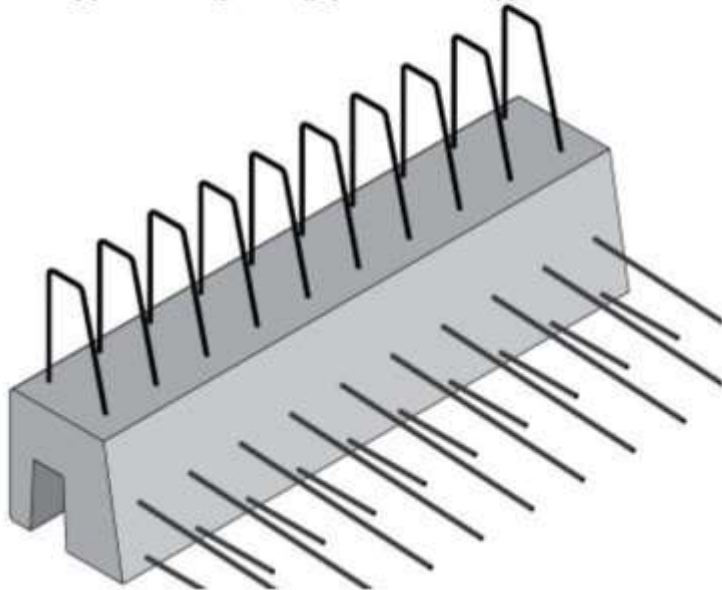
Sizes Available

Height : Minimum 4 Feet to Maximum 15 Feet

Width : Minimum 4 Feet to Maximum 15 Feet



Typical 10-ft long precast traffic barrier unit



Typical precast half-connector unit

The design of a precast traffic barrier depends on the pavement section, the geometry of the barrier's section, and the impact loading it is expected to resist.

Special barrier units can be designed to accommodate light poles, electrical conduits, drainage inlets, sound wall posts, sign structures, guide rail transition barrier, bridge approach slabs, tight curves and other odd geometry in the barrier's alignment. These are all items that can slow down a cast-in-place process, especially on long stretches of road or large projects with many walls



Crash testing to study the effect of traffic impact loads on wall

Our 3 C Rule

- **Communicate with clarity**
- **Commitment to provide quality**
- **Complete with satisfaction**

DELHI PRECAST

"OUR EXPERIENCE, YOUR SUCCESS..."

CALL : 9999-89-6179

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PRECAST PRE-STRESS CONCRETE WALL & EARTH RETAINING WALLS SUPPLY & INSTALLATION BY DELHI PRECAST

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