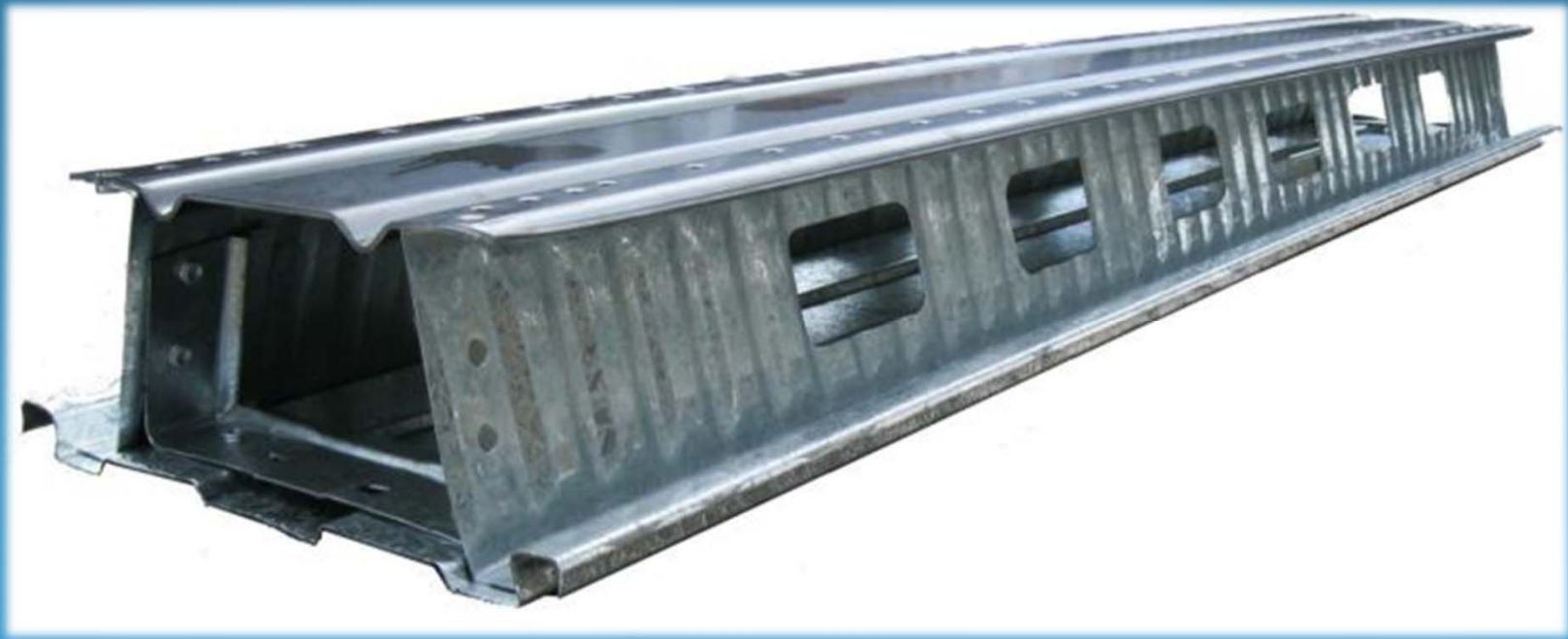
TRUEDEK

The Steel Decking System for the 21st Century



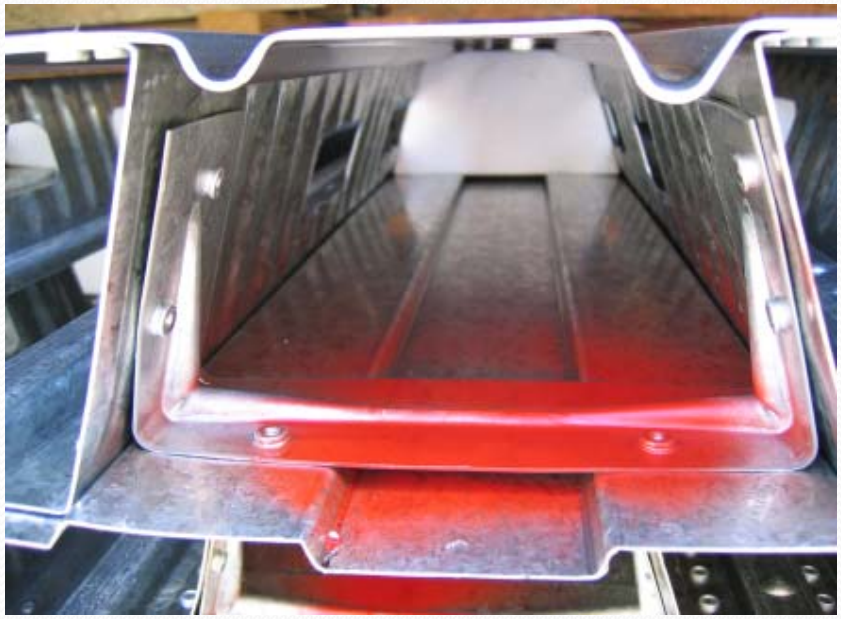
How can you avoid falsework problems?

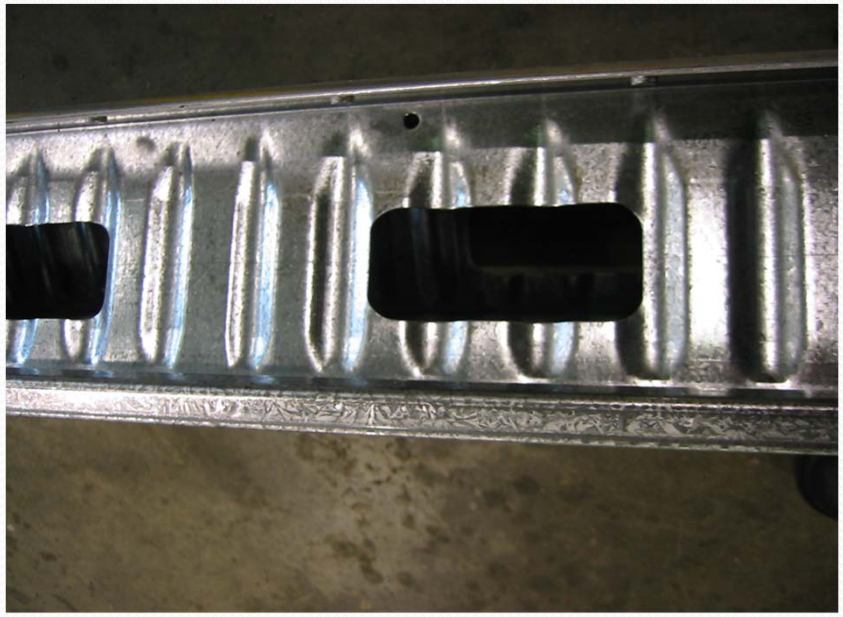
Use TRUEDEK®

TRUEDEK

What is TRUEDEK® ?

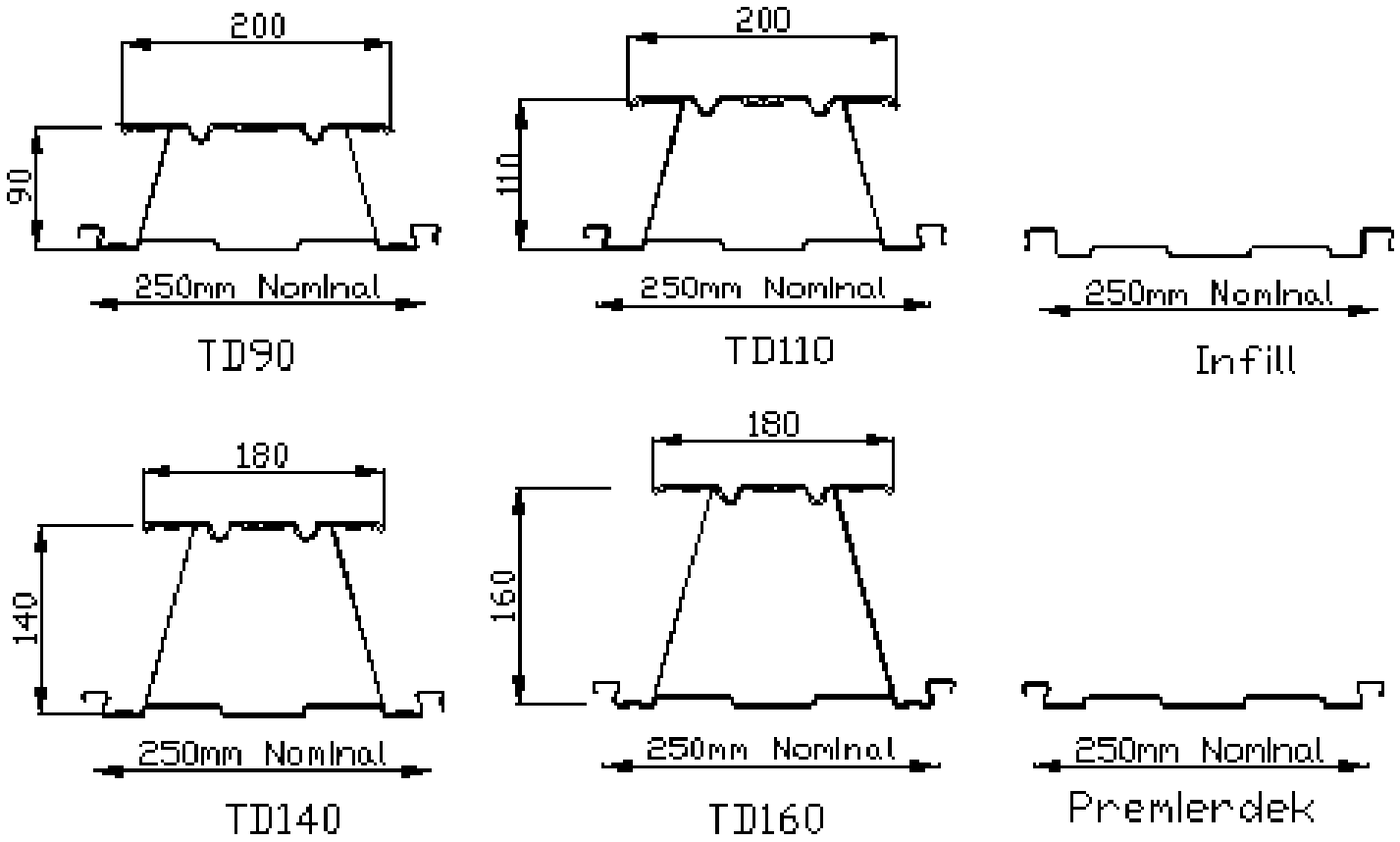
Truedek is an unpropped ultra-long spanning, cold-formed steel permanent formwork and multi-functional composite slab reinforcing system.





TRUEDEK® System

Standard TRUEDEK® Panels from 90 to 160mm high



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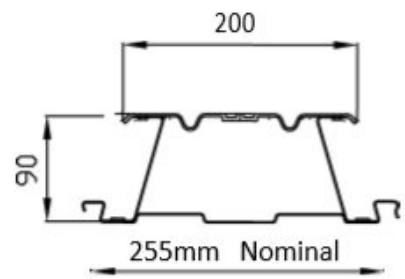
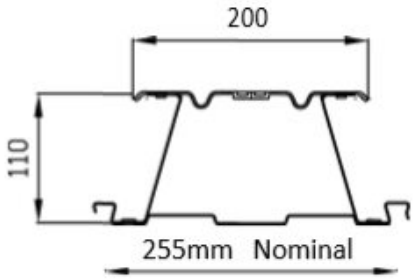
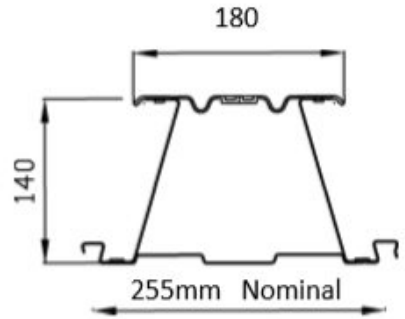


TD90

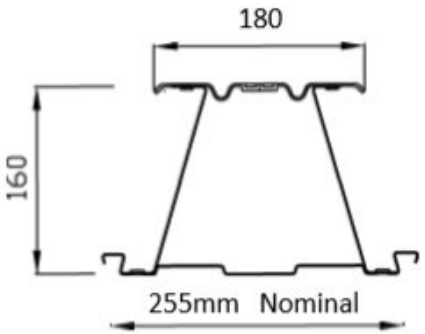


TD110

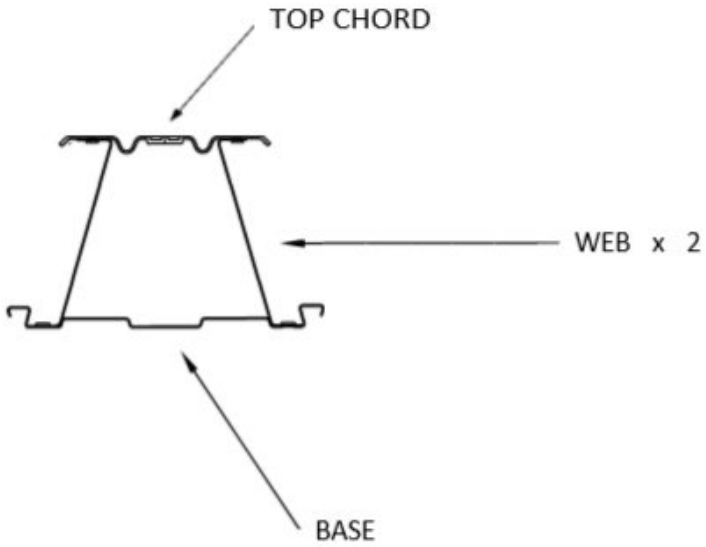
Infill



TD140



TD160

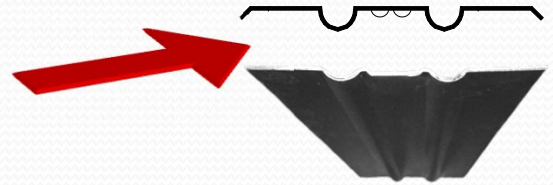


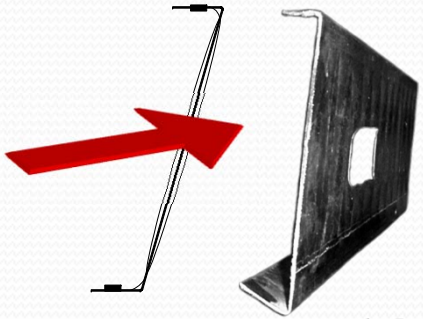
TRUEDEK® System

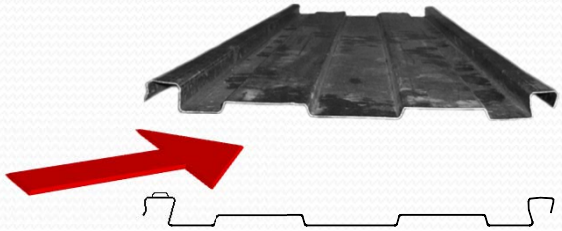
G250 black top plate

G350 galvanised web

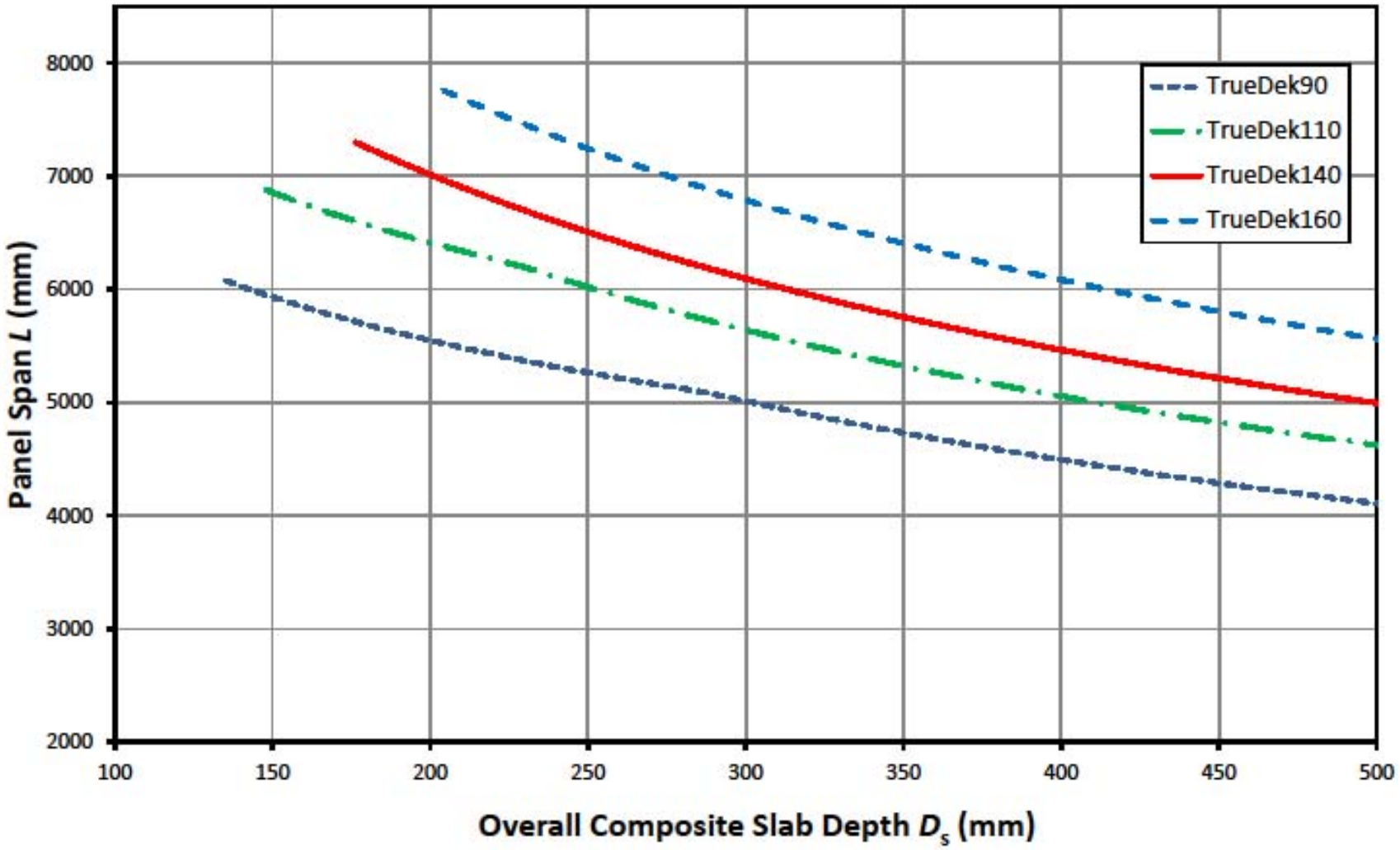
Zinc Hi-Ten G550 galvanised base sheet



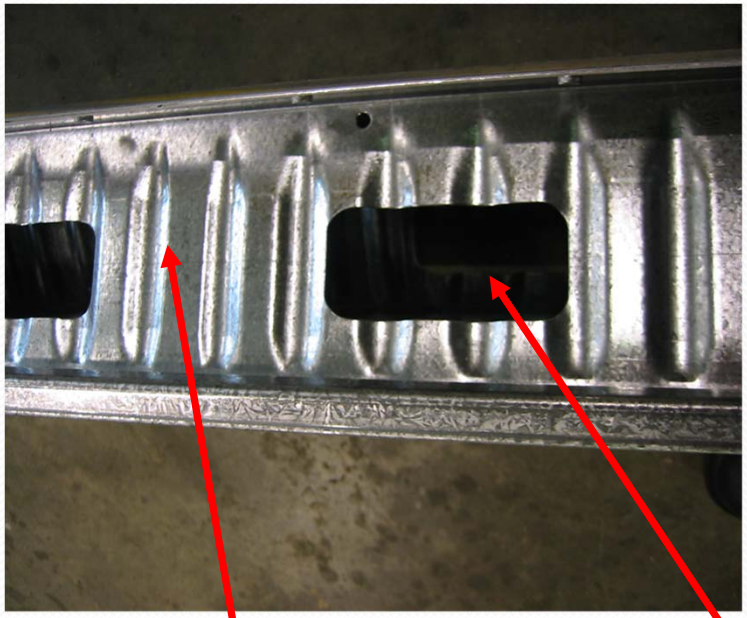


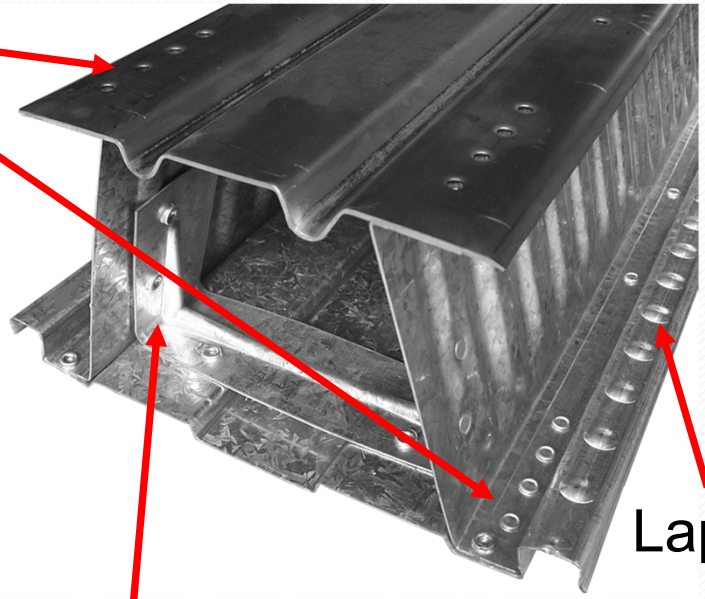


TRUEDEK


TrueDek90
TrueDek110
TrueDek140
TrueDek160
Panel Span L (mm)
8000
7000
6000
5000
4000
3000
2000
100
150
200
250
300
350
400
450
500
Overall Composite Slab Depth D_s (mm)

TRUEDEK® System





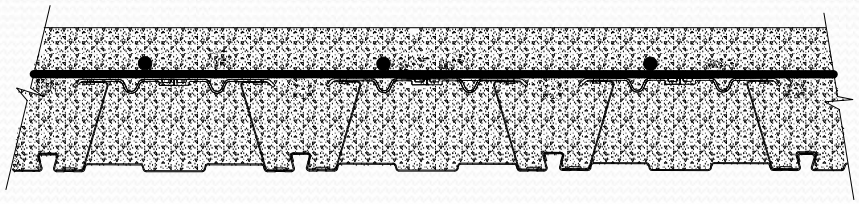
Tox

Lap Ribs

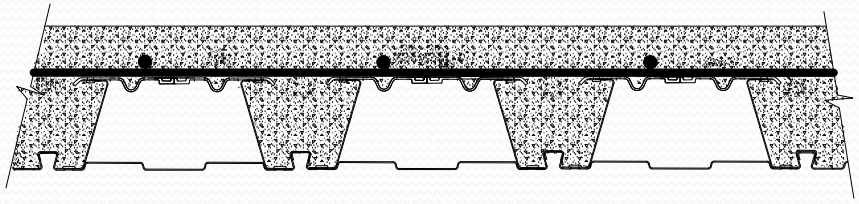
High Strength Open
Ended Shear Bracket

Corrugated Web

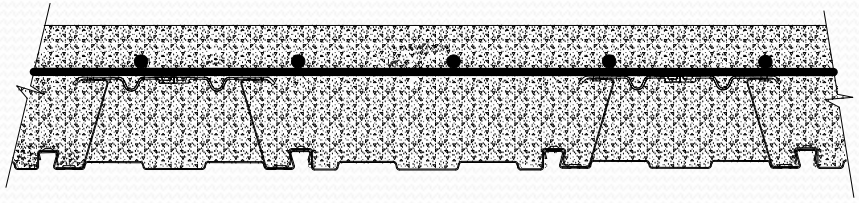
Web Holes (90x50mm)
Staggered or Opposite



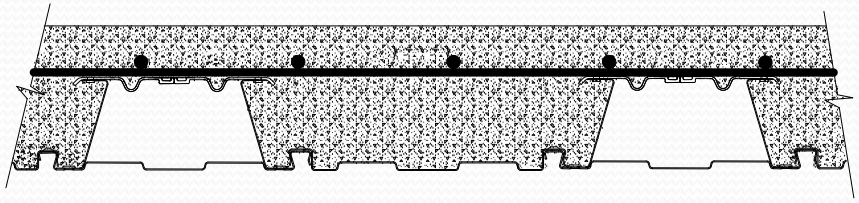
Truss – solid / Truss – solid (Group I)



Truss – voided / Truss – voided (Group II)

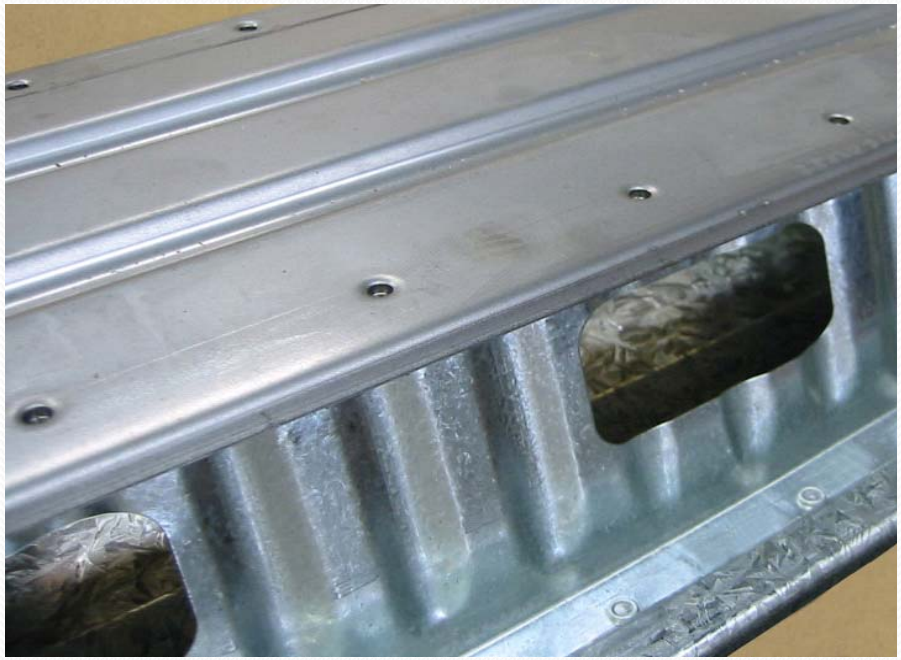


Truss – solid / Infill – solid (Group III)

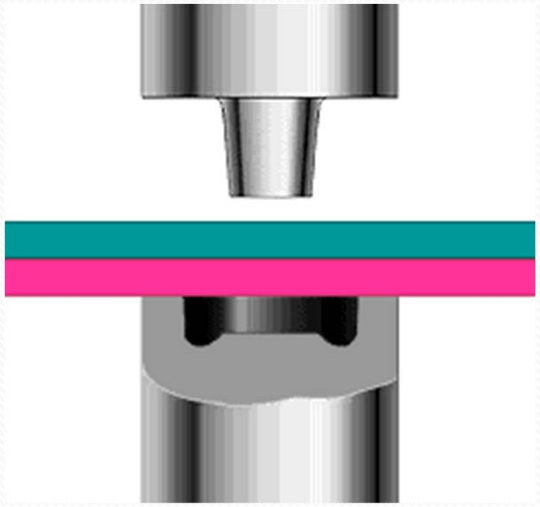


Truss – voided / Infill – solid (Group IV)

TRUEDEK® System



TRUEDEK® System



German TOX clinching system

TRUEDEK® Applications

- **Concrete-frame buildings**
  - Bandbeam/slab arrangements, precast/masonry supports.
- **Steel-frame buildings**
  - Long-spanning suspended floors, fewer steel beams.
- **Large floor-to-ceiling heights**
  - Reduced construction costs.
- **Infill slabs for lift shafts**
  - Avoids falsework & back-propping.
- **Limited-access areas**
  - Voided light-weight panels.

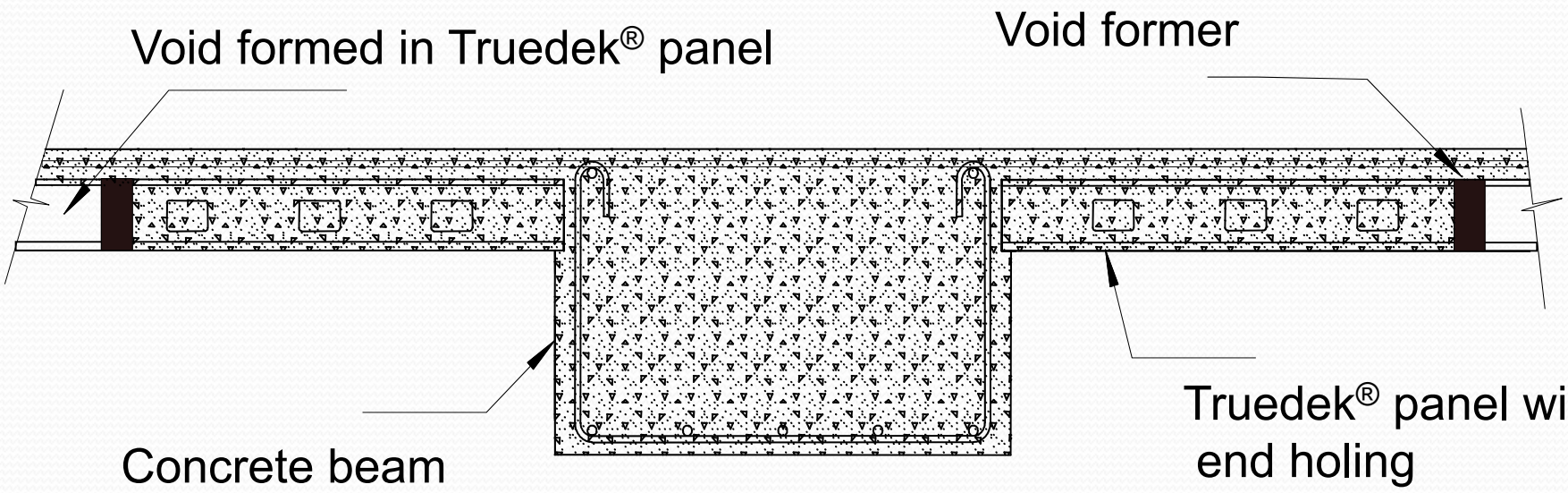
TRUEDEK® Advantages

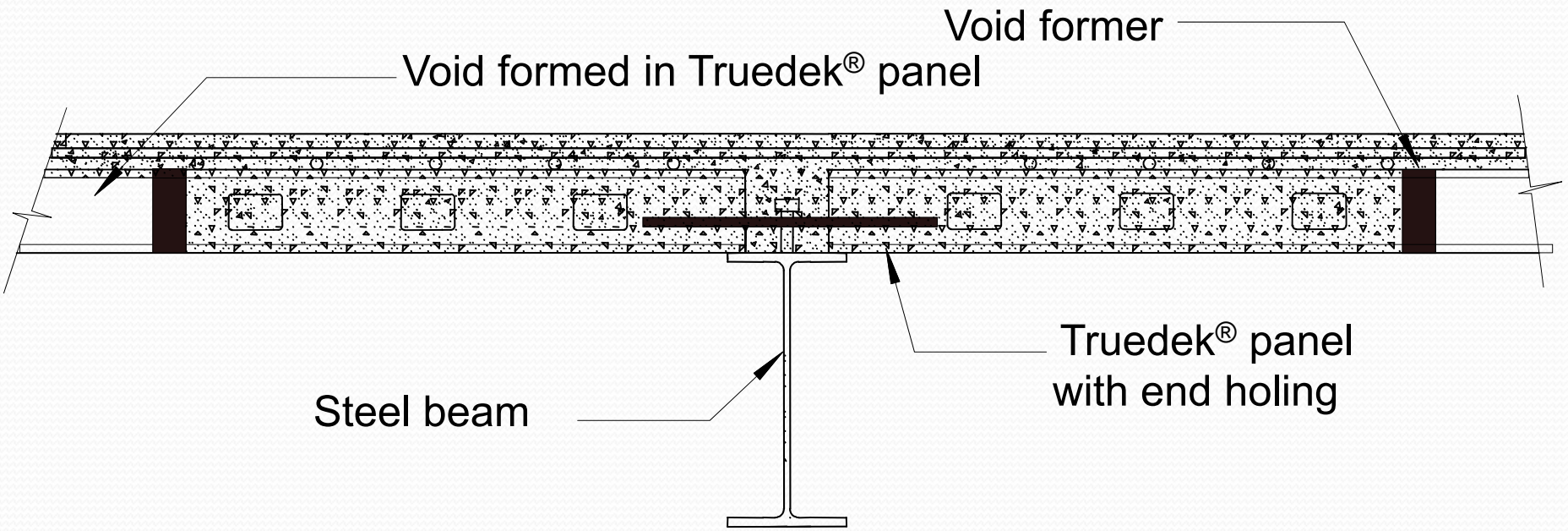
- **Spanning capability 7 + metres**
  - Un-propped - supports construction dead & live loads.
- **Pre-cambered panels & composite action reduces overall slab depth and flexural cracking of concrete**
  - Solid slab or modified voided slab.
- **Two-way action of composite slab**
  - Addition of reinforcing bars through web holes.
- **Simple reinforcing details**
  - Reduced reinforcement (short continuity steel, less transverse shrinkage reo and top plate as fire reo).

TRUEDEK® Advantages

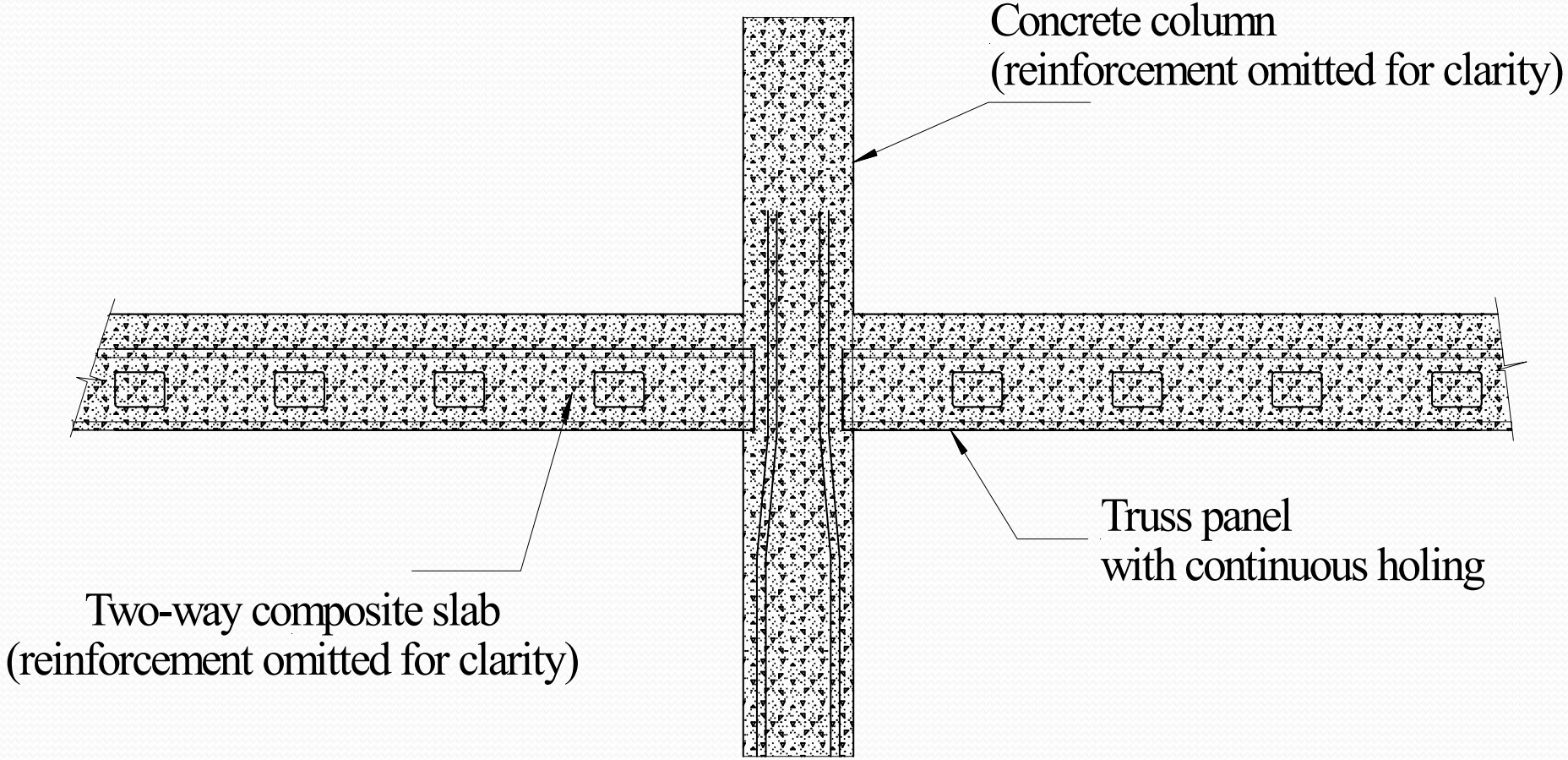
- **Improved construction cycle time**
  - Fewer trades, faster installation of services, shorter pour cycles, faster reinforcement installation.
- **Reduced falsework costs**
  - No conventional falsework - no propping.
- **Flexible panel configuration**
  - Solid and voided configurations.
- **Panel pre-camber to provide flat soffit**
  - Limit deflection, thinner slabs, reduced concrete volume, easier installation of services.
- **Improved site safety**
  - Reduced trip hazards, safe work platform, lighter panels.

TRUEDEK


Void formed in Truedek® panel
Void former
Concrete beam
Truedek® panel with
end holing

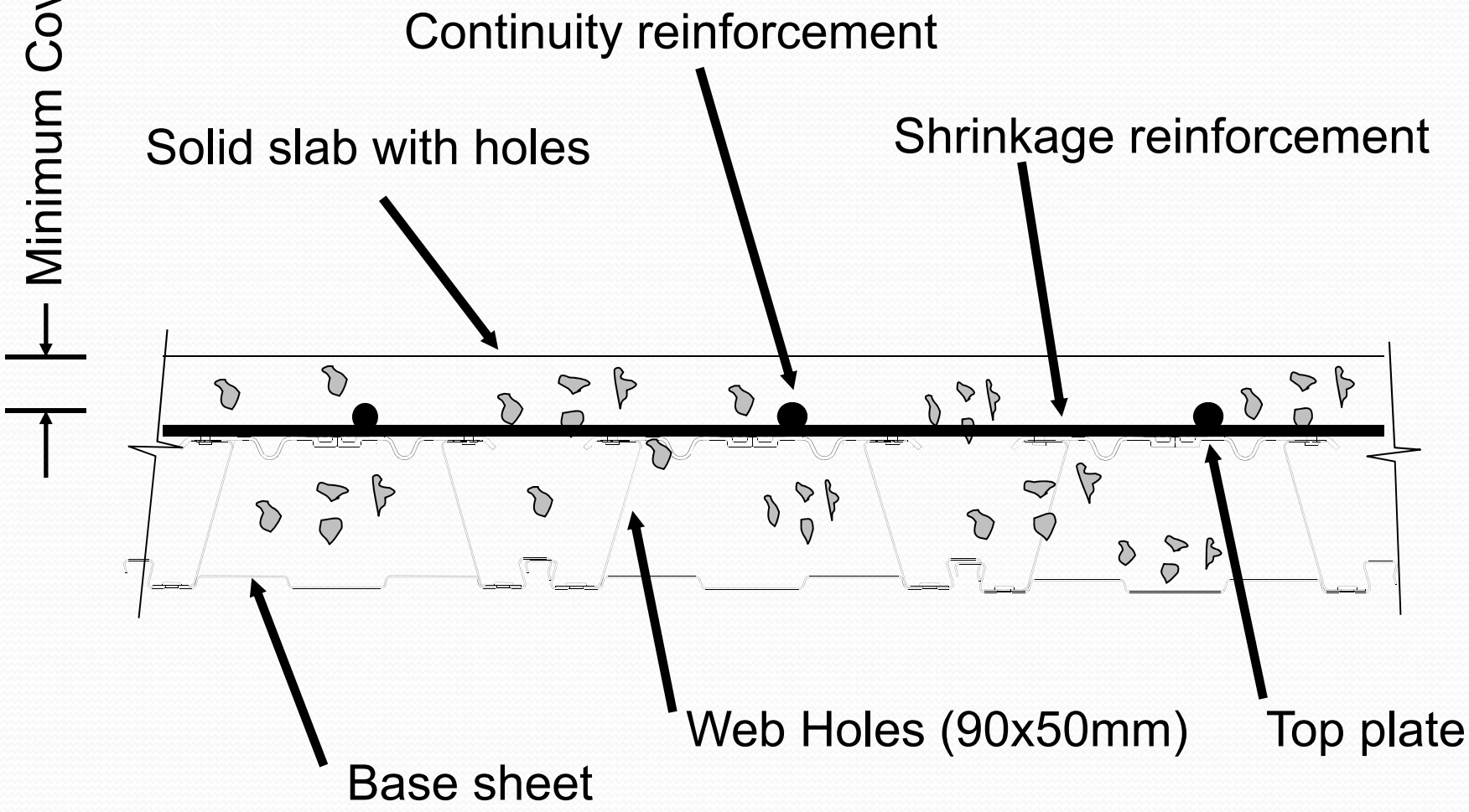

Void former
Void formed in Truedek® panel
Truedek® panel
with end holing
Steel beam

TRUEDEK

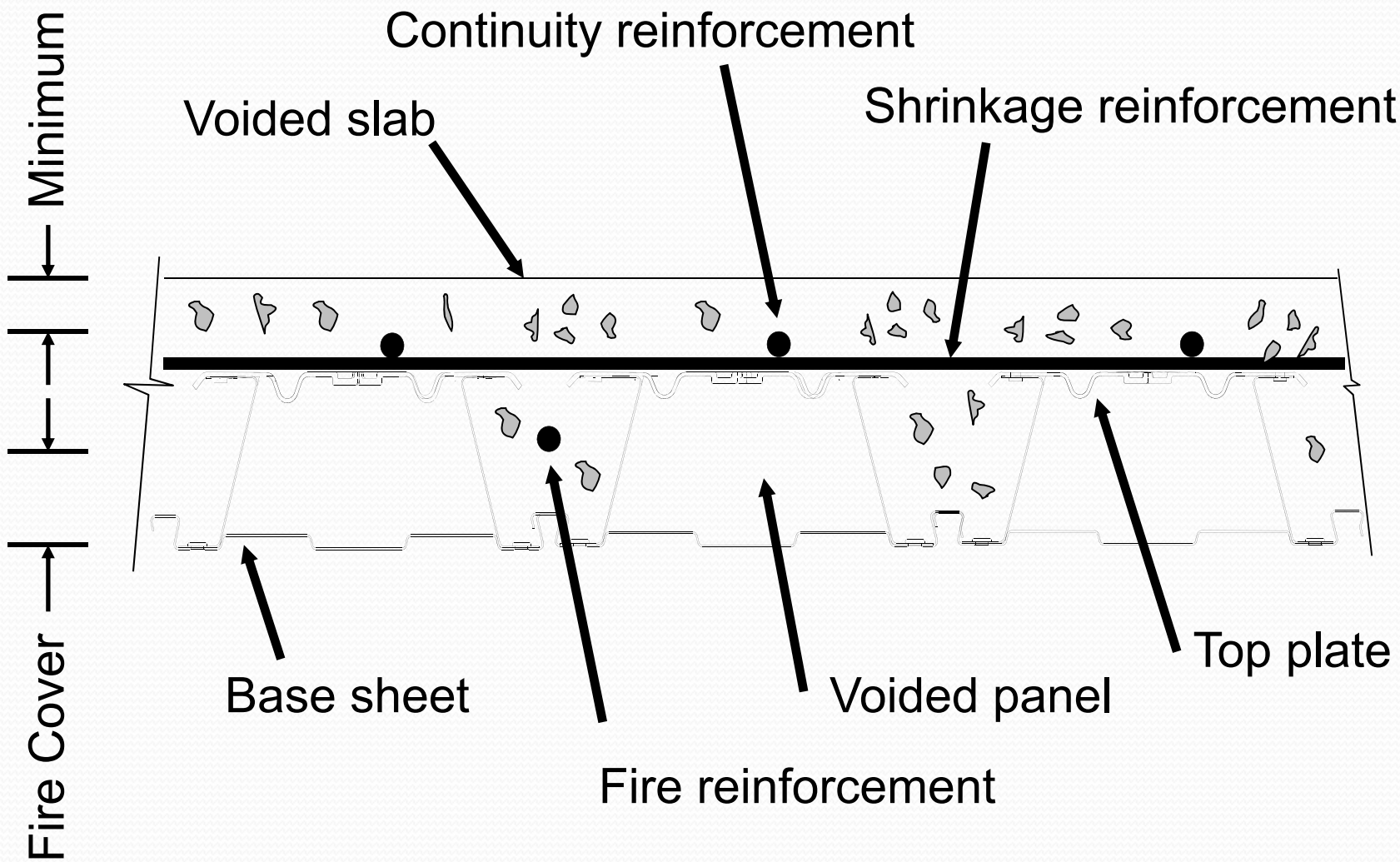

Concrete column
(reinforcement omitted for clarity)
Truss panel
with continuous holing
Two-way composite slab
(reinforcement omitted for clarity)

TRUEDEK® System

Solid TRUEDEK® Slab



Voided TRUEDEK® Slab



TRUEDEK

Golf Club

- Mezzanine extension, steel frame structure, 6.3 metre spans, 5 kPa storage and 3 kPa live loads, floor to floor 4.2m, pour ground level after suspended slab

- Solution: 220mm and 190 mm thick solid slabs reinforced with TD110, N16 reinforcing @ 150 ctrs continuity reinforcing, N12 @ 250 ctrs shrinkage reinforcing, 40 mm end bearing, 40mm camber and 30mm set-downs

Goods Warehouse

- Three level goods warehouse, supported on conventional band beams and perimeter precast, spans from 5.0 to 7.1 metres, loads of 5.0 and 8.5 kPa, 2 and 3 hour fire rating

- Solution: 220 mm thick voided slab reinforced with TD140, N16 reinforcing @ 200 ctrs and 250 ctrs, 30 mm end bearing, varying camber and propping penetration

TRUEDEK

Resort Development

- Hotel, convention and apartment development, proprietary walls and conventional concrete, spans to 3.5 to 7.2 metres, FRL120/120/120 and short construction program

- Solution: 160 to 200mm mm thick solid slab reinforced with TD90, N10 reinforcing @ 200 ctrs and 300 ctrs, 40 mm end bearing, varying configurations for economy

TRUEDEK

Apartments

- 13 Level Apartment development, precast walls, spans to 6.1 to 7.4 metres, FRL120/120/120, small construction site and short construction program

- Solution: 200mm mm thick solid slab reinforced with TD140, N16 reinforcing @ 250 ctrs and N10 @ 250 ctrs, 40 mm end bearing, 4 day floor cycle, min. crane lifts

TRUEDEK

Warehouse

- 4200m2 suspended Warehouse complex, primary and secondary steel beams, spans to 4.8 to 5.5m, 14.4 tonne point racking loads, FRL120/120/120 and high floor to floor 10.8m

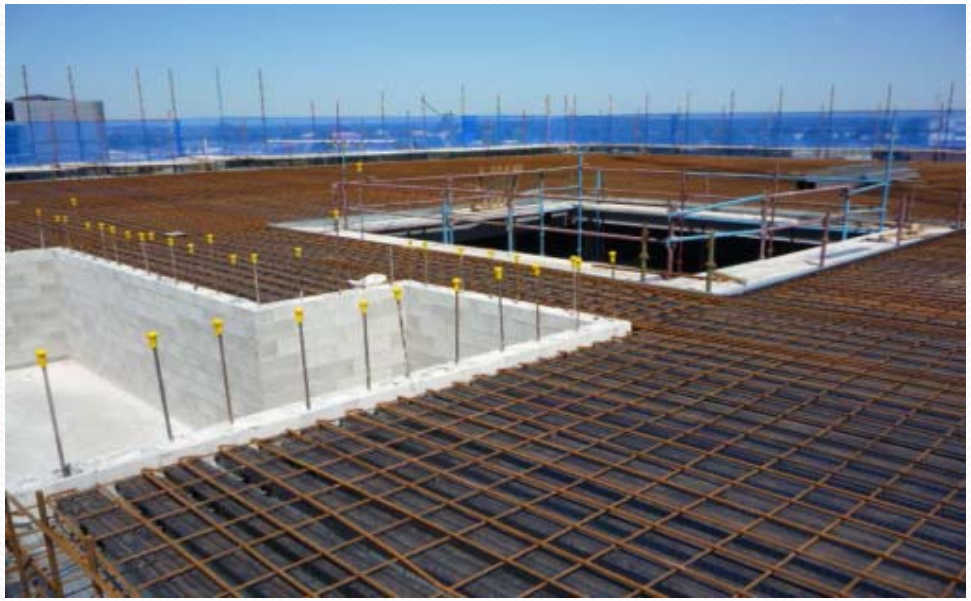
- Solution: 250mm mm thick voided slab reinforced with TD140, N20 reinforcing @ 200 ctrs and N12 @ 200 ctrs, 40 mm end bearing, additional N16 @ 500 ctrs bottom reinforcing

TRUEDEK

Office

- 2 Floor office extension over existing building, steel beams on existing 8.4m grids, spans of 8.4m, FRL120/120/120 and restrictive access

- Solution: 250 mm thick voided slab reinforced with TD160, N16 reinforcing @ 200 ctrs and N12 @ 250 ctrs, 50 mm end bearing



TRUEDEK

Warehouse

- Suspended Warehouse development, steel beams and precast walls, spans of 4.6 to 6.0m, FRL120/120/120, 7.2 tonne point loads and short construction cycle

- Solution: 200 mm thick voided slab reinforced with TD140, N20 reinforcing @ 250 ctrs and N12 @ 250 ctrs, 50 mm end bearing

TRUEDEK

Apartment

- Student apartment development, proprietary walls and precast balcony slabs, spans of 5.9 to 7.0m, FRL120/120/120 and residential design parameters

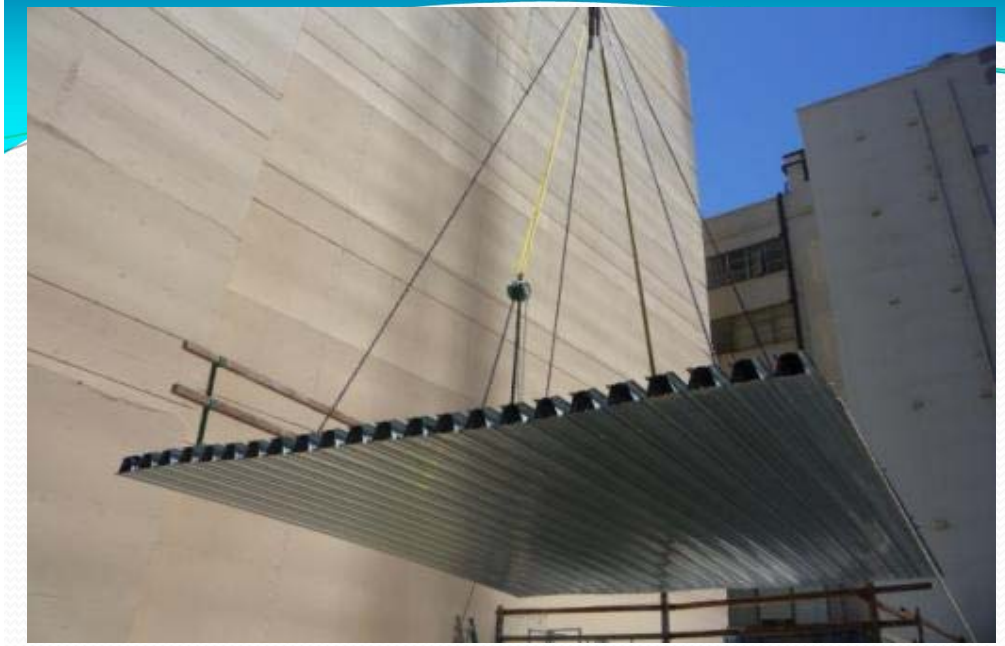
- Solution: 160mm and 200 mm thick solid slabs reinforced with TD110 and TD140, N16 reinforcing @ 250 ctrs and N10 @ 250 ctrs, 50 mm end bearing


PRESTON
PRESTON

TRUEDEK

Commercial Highrise

- Commercial project, infill slabs, spans of 7.2m, FRL180/180/180 and 10 to 20 kPa design loads
- Solution: 280 to 350mm thick solid slabs reinforced with TD160, prefabricated sections, various reinforcing, 75mm end bearing



TRUEDEK

Apartment

- Apartment development, precast walls and steel beams, spans of 3.6 to 6.4m, FRL120/120/120 and 50mm set-downs residential design parameters

- Solution: 220 mm thick voided slab reinforced with TD140 and TD110 (solid set-downs), N16 reinforcing @ 250 ctrs and N10 @ 200 ctrs, 50 mm end bearing

TRUEDEK

Apartment

- Apartment development, precast walls, spans to 6.5m, FRL120/120/120 and residential design parameters plus concrete roof

- Solution: 200 mm thick solid slab reinforced with TD140, N16 reinforcing @ 250 ctrs and N10 @ 250 ctrs, 50 mm end bearing

TRUEDEK

Key Feature Summary

1. Reduced propping or back propping of TRUEDEK® system requiring reduced labour for installation.
2. Reduced cycle time.
3. Reduction of reinforcing by up to 50%.
4. Reduced material handling and crane usage – TRUEDEK® is lifted in position and then there are no further lifting requirements for the “working” level.
5. Reduced material / formwork scrap as cutting is limited with TRUEDEK® manufactured to order.
6. Pre-cambered panels to remove dead load camber avoiding “ponding” and providing accurate concrete volumes – flatter TRUEDEK® soffits also make fit-out simpler.
7. Safer working platform designed to take full construction 5 kPa working loads (code requirements – alternative systems typical limits of 1 kPa).
8. Fit-out can commence the day after pour – reduced labour on site for services and fit-out due to “catch-up” required at top levels once “typical” propping and back propping removed.