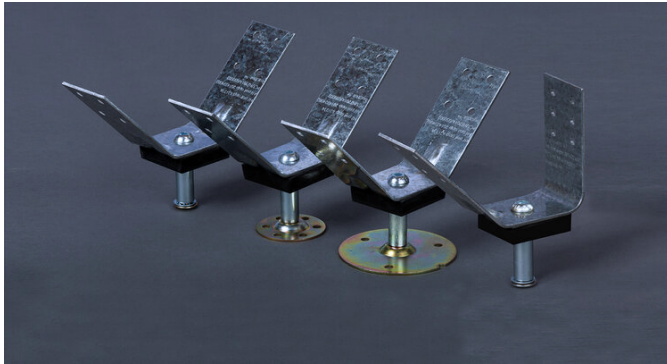




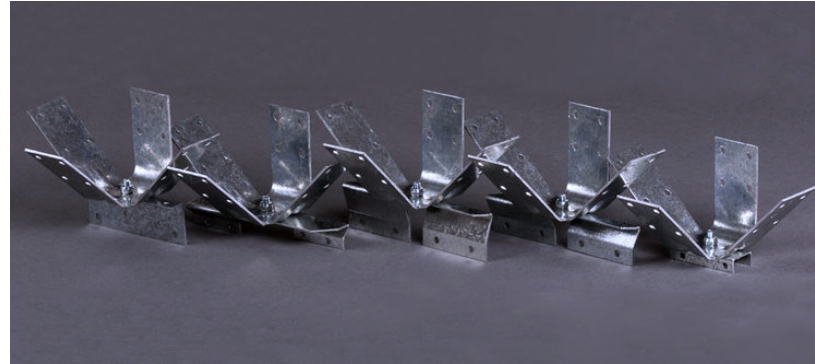
TRACKLOK®

Meet our range of seismic, pre-engineered bracing solutions:

TRACKLOK[®] for walls



GRIDLOK[®] for ceilings



Developed for Architects, Structural Engineers and Construction Professionals to mitigate the risk of Non-Structural failure in the Commercial Built Environment.



Some Facts

70 - 80% of the total repair costs after an earthquake is due to the damage of non structural elements

Non structural element failure is the cause of **61%** of all injuries in an Earthquake

The cost of installing non structural restraints is **3 - 5%** of the total build costs, this almost doubles if these have to be retrofitted



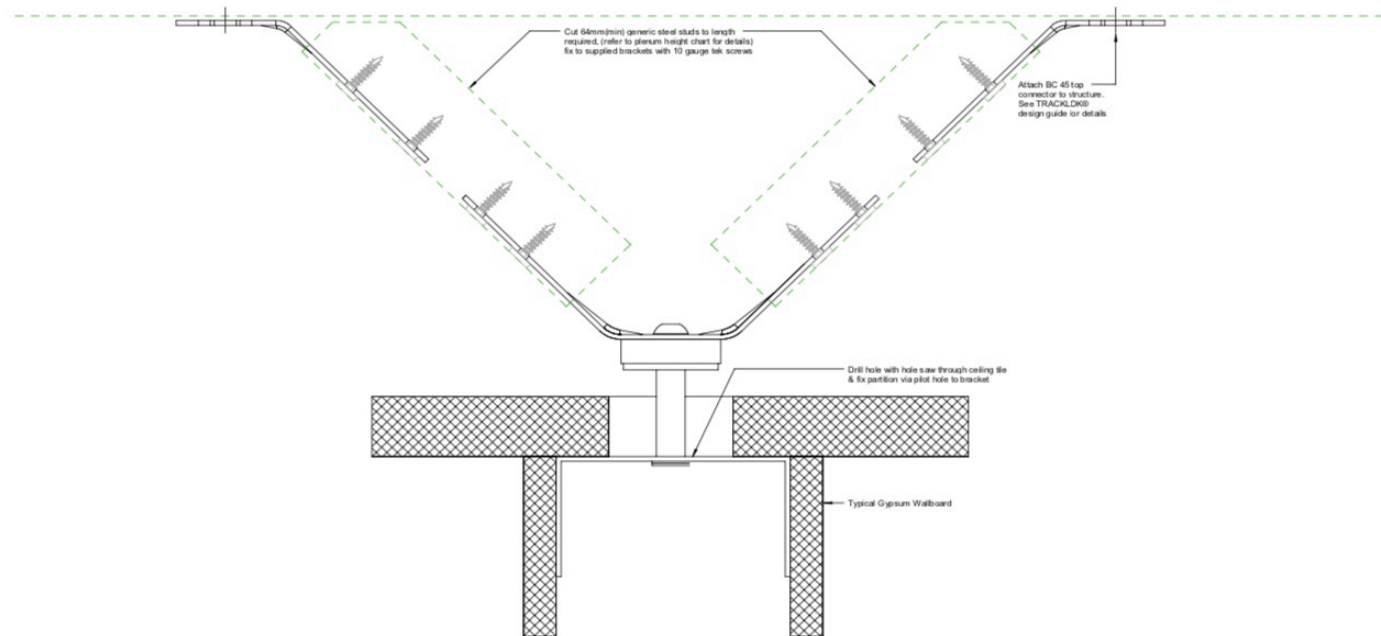
Why Brace Non-Structural Walls & Ceilings?

- The building act says so: NZ/AUS Building Code B1 Structure
- The codes in the act tells us what loads to account for: AS/NZS 1170
- And how ceilings need to perform: AS/NZS 2785
- Life Safety - Protecting Humans is Important and Right
- Business Continuation - Business Interruption Costs Time and Money
- Insurance - This is key



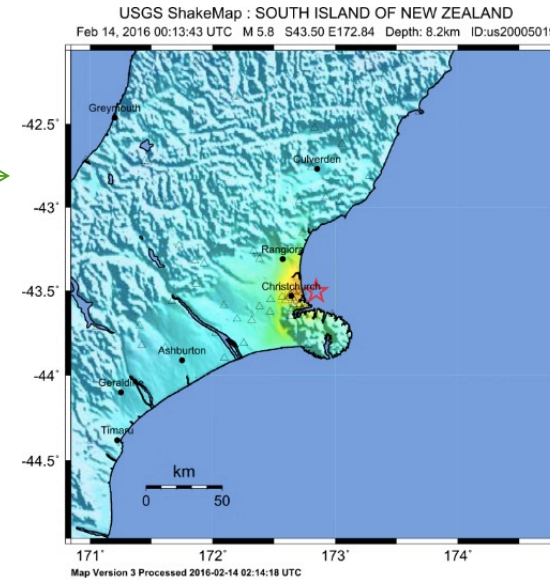
TRACKLOK® is tested

- Parts Loading as per NZS1170.5 and AS1170.4
- Full Quasi Static Testing (2.7m high x 4.8m long with 3 x TRACKLOK® settings)
- International Certification ICC-ESR 4188
- International Certification OSHPD OPM 0377-13

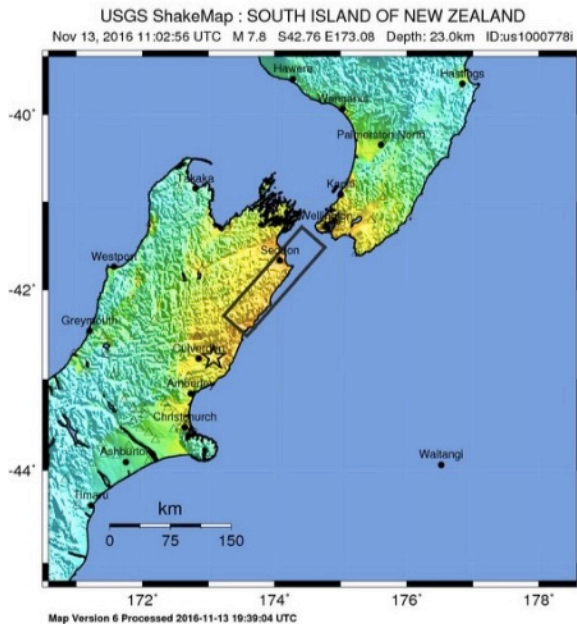


... and in the real world - with no failures!

14th February 2016 - 5.7Mag Christchurch (following completion of Burwood Hospital)



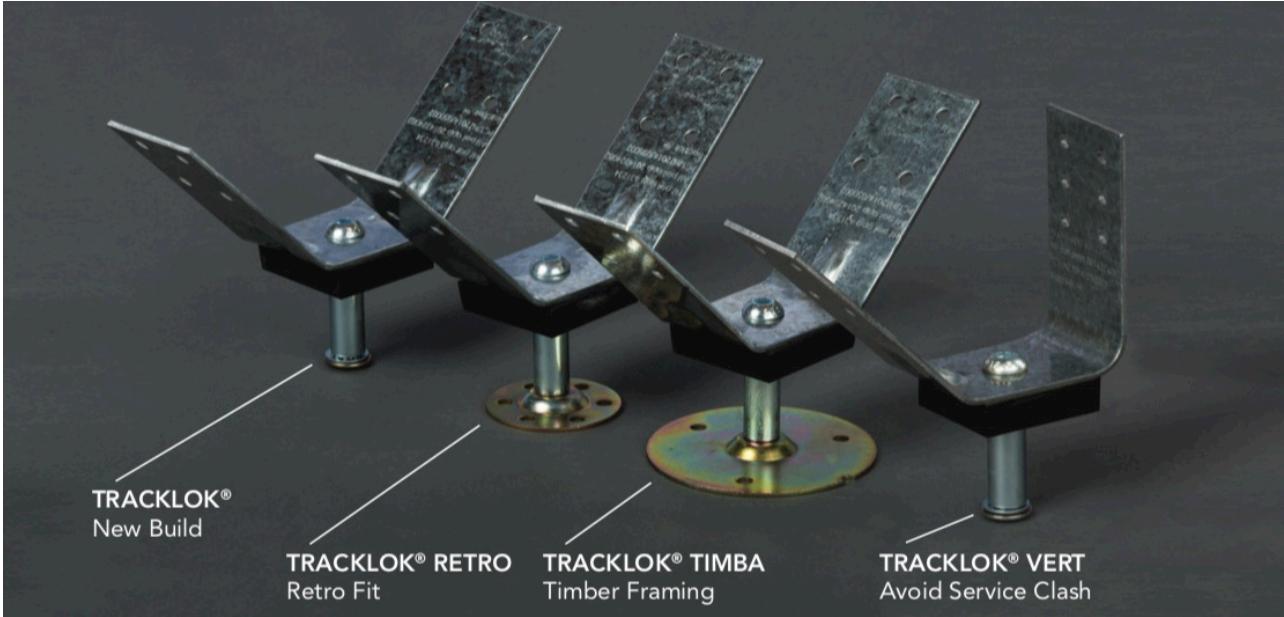
2nd September 2016 - 7.1Mag East Cape (Gisborne Damage)



14th November 2016 - 7.8Mag Kaikoura (Extensive Damage in Wellington)



TRACKLOK® Product List



TRACKLOK® Guidance

PLENUM HEIGHT CHART/

PLENUM HEIGHT MM/	64 OR 92MM X 0.55BMT STUDS*/	64 OR 92MM X 0.55BMT BOXED STUDS*/	64 OR 92MM X 0.75BMT BOXED STUDS*/
0 - 2000	241kgf/2.37kN	241kgf/2.37kN	241kgf/2.37kN
2000 - 3150	-	241kgf/2.37kN	241kgf/2.37kN
3150 - 4000	-	-	241kgf/2.37kN

* Stud to TRACKLOK® connection to consist of 6/10g tek screws.

HEIGHT	< 3M	< 6M	< 9M	9M +
ZONE 1	CHART 1	CHART 1	CHART 1	CHART 1
ZONE 2	CHART 1	CHART 1	CHART 2	CHART 2
ZONE 3	CHART 1	CHART 2	CHART 2	CHART 3

NOTES

- 1/ Height (m) is to floor above partition.
- 2/ Allows for 50mm of inter story drift.
- 3/ For wall heights up to 3.0m.
- 4/ For wall weights up to 40kg per m2.
- 5/ For wall weights heavier than 40kg per m2 and for Importance Level 3 and 4 Buildings please contact TRACKLOK® Ltd.

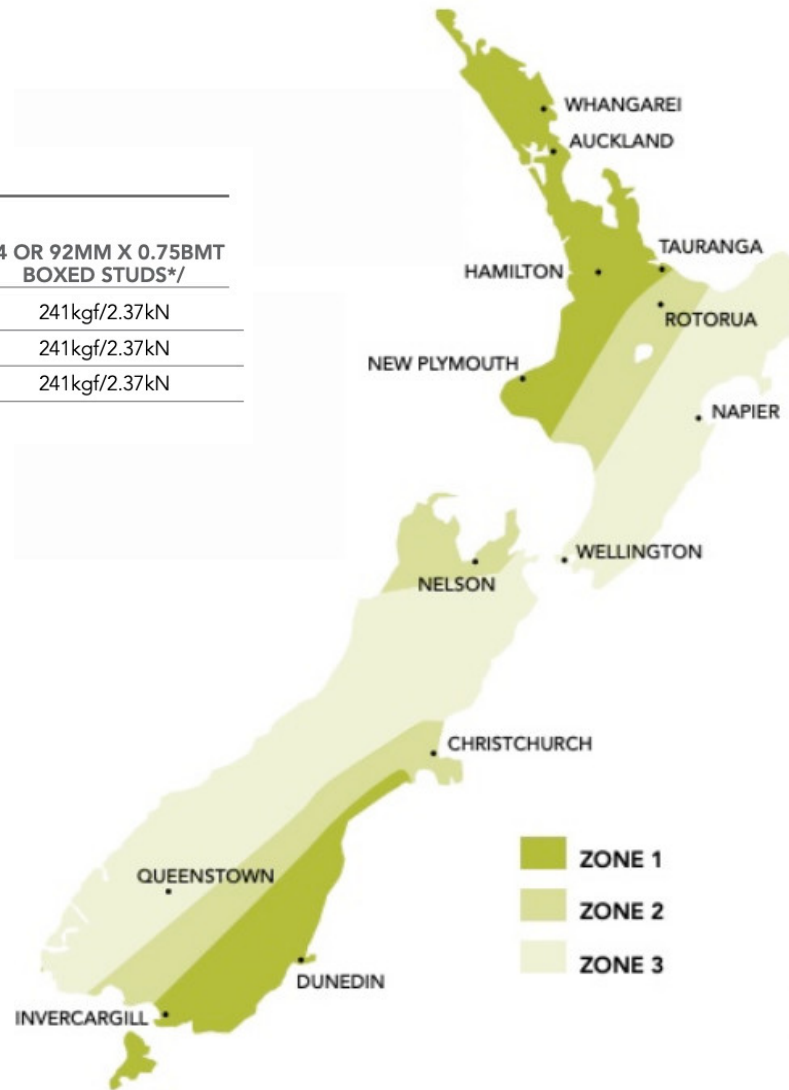
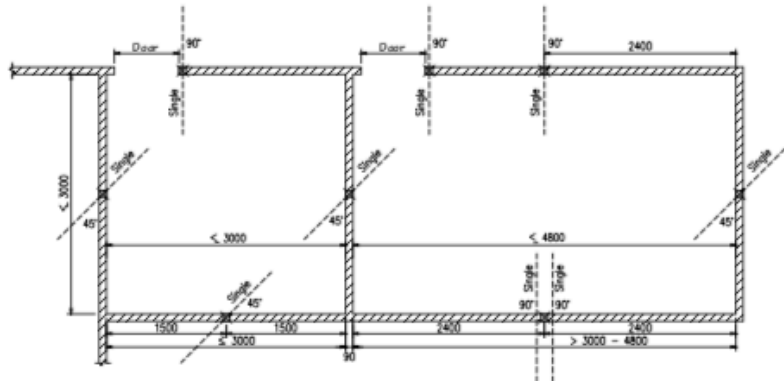
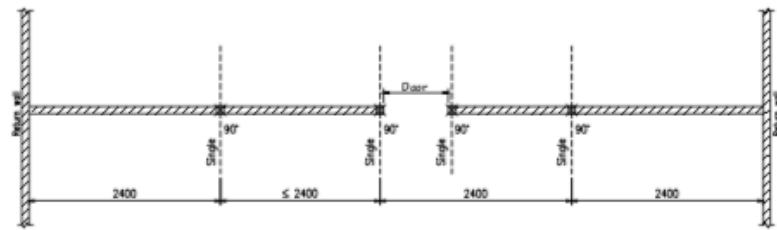


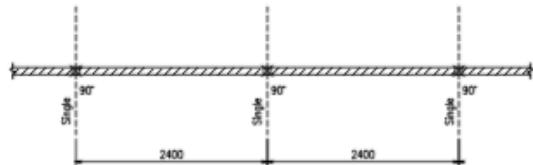
CHART ONE/



BRACING AROUND SMALL ROOMS

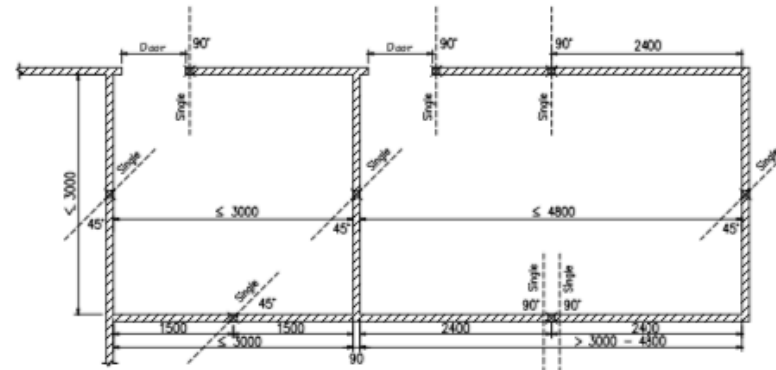


BRACING BETWEEN RETURN WALLS

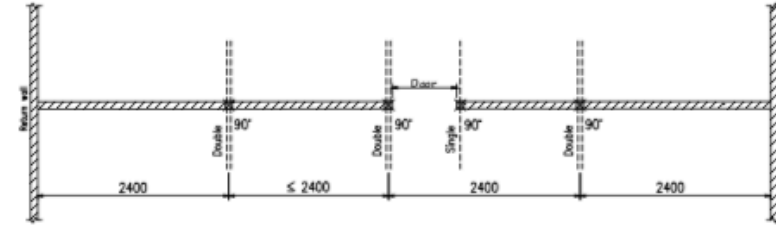


STRAIGHT WALLS WITH NO RETURN WALLS

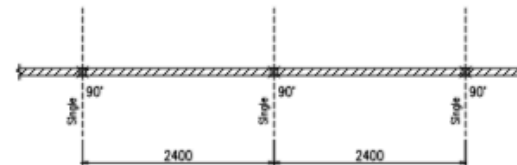
CHART TWO/



BRACING AROUND SMALL ROOMS



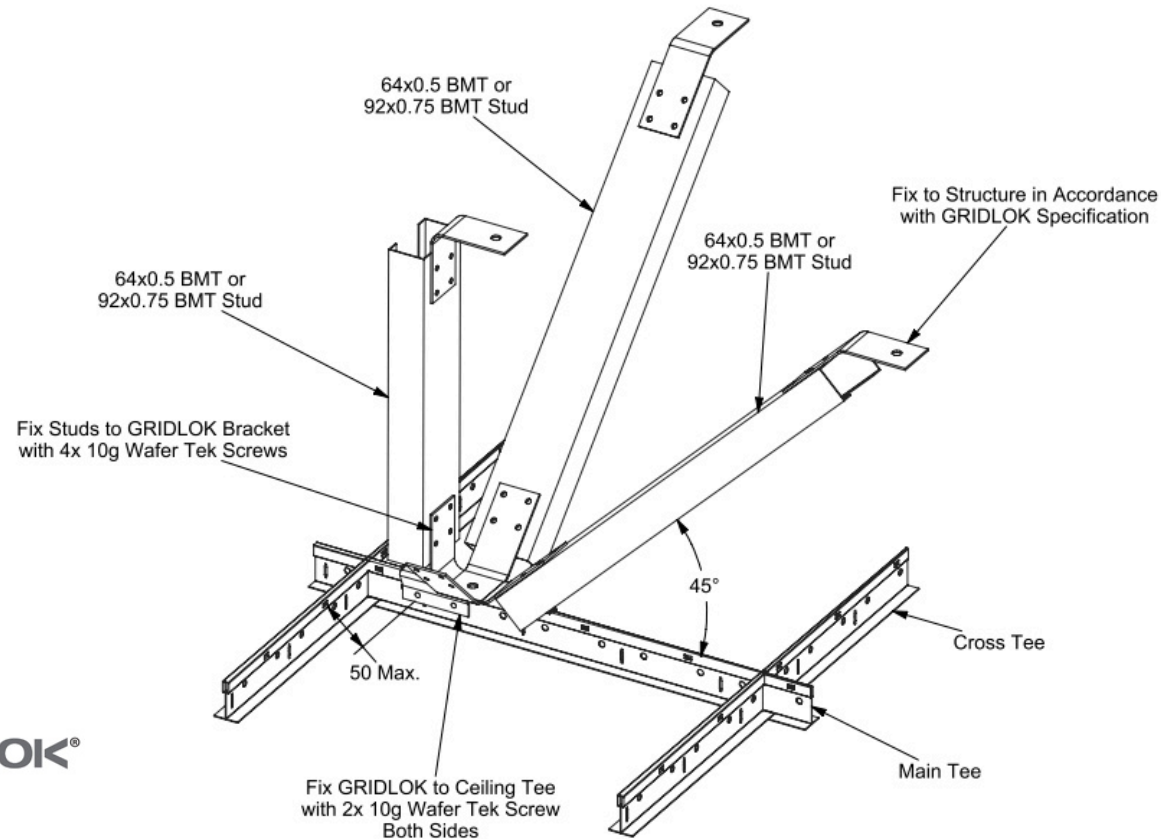
BRACING BETWEEN RETURN WALLS



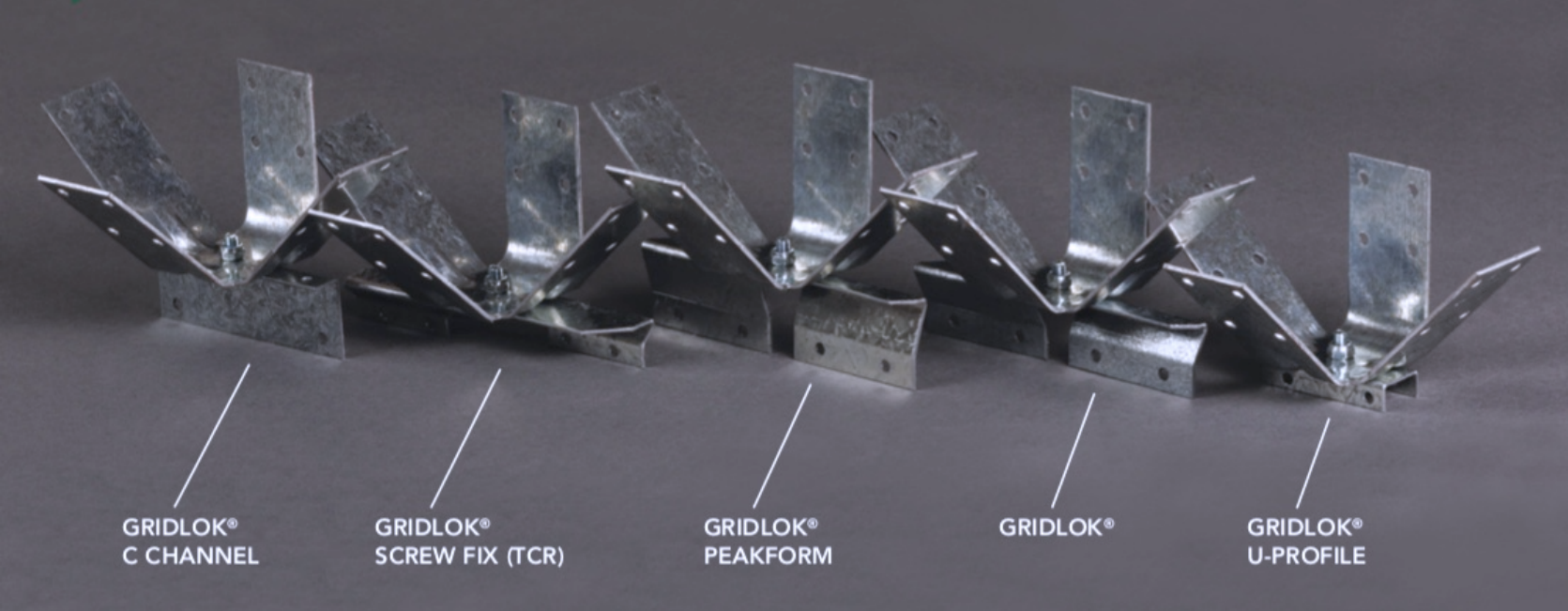
STRAIGHT WALLS WITH NO RETURN WALLS

GRIDLOK® is tested:

- Parts Loading as per NZS1170.5 and AS1170.4
- Invented the methodology for testing ceiling bracing
- International Certification ICC-ESR 4187
- International Certification OSHPD OPM 0544-19



GRIDLOK® Product List

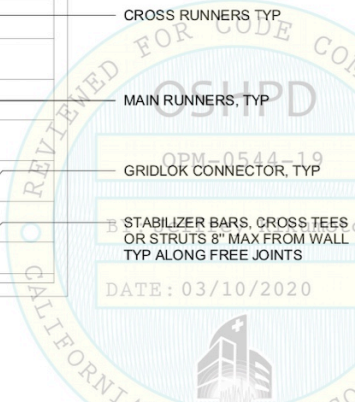
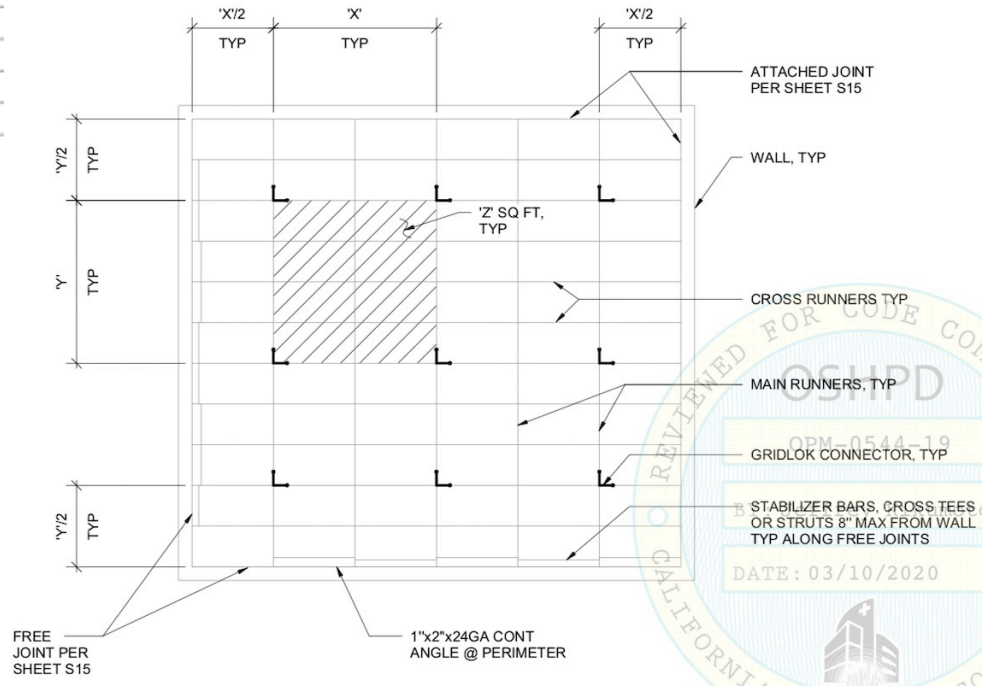


GRIDLOK® RCP

PLENUM HEIGHT CHART/

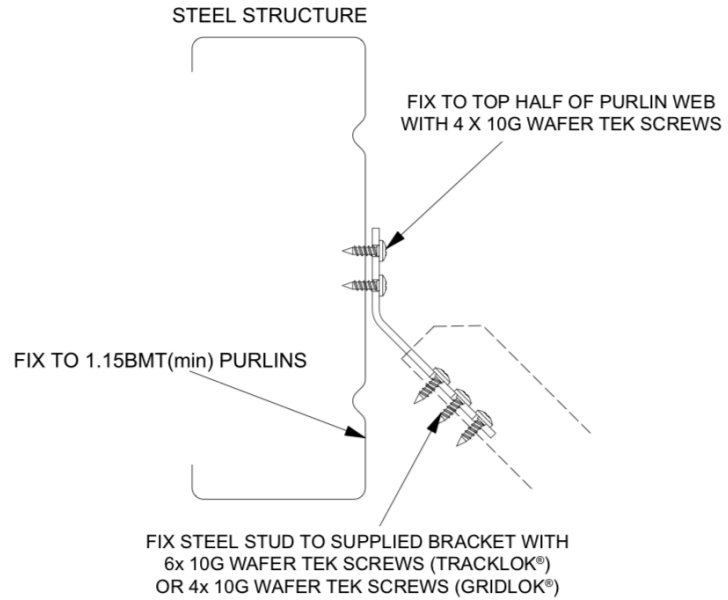
PLENUM HEIGHT MM/	64 X 0.55BMT STUDS*/	92 X 0.75BMT STUDS*/	64 X 0.55BMT BOXED STUDS*/	92 X 0.75BMT BOXED STUDS*/
0 - 600	250kgf/2.45kN	280kgf/2.75kN	250kgf/2.45kN	280kgf/2.75kN
600 - 1000	250kgf/2.45kN	280kgf/2.75kN	250kgf/2.45kN	280kgf/2.75kN
1000 - 1400	250kgf/2.45kN	280kgf/2.75kN	250kgf/2.45kN	280kgf/2.75kN
1400 - 1800	160kgf/1.57kN	270kgf/2.65kN	250kgf/2.45kN	280kgf/2.75kN
1800 - 2200	110kgf/1.07kN	180kgf/1.77kN	250kgf/2.45kN	280kgf/2.75kN
2200 - 2600	80kgf/.78kN	130kgf/1.27kN	250kgf/2.45kN	280kgf/2.75kN
2600 - 3000	60kgf/.58kN	100kgf/.98kN	190kgf/1.86kN	280kgf/2.75kN
3000 - 3500	-	-	140kgf/1.37kN	280kgf/2.75kN
3500 - 4000	-	-	100kgf/.98kN	210kgf/2.05kN

* Stud to GRIDLOK® connection to consist of 4/10g tek screws

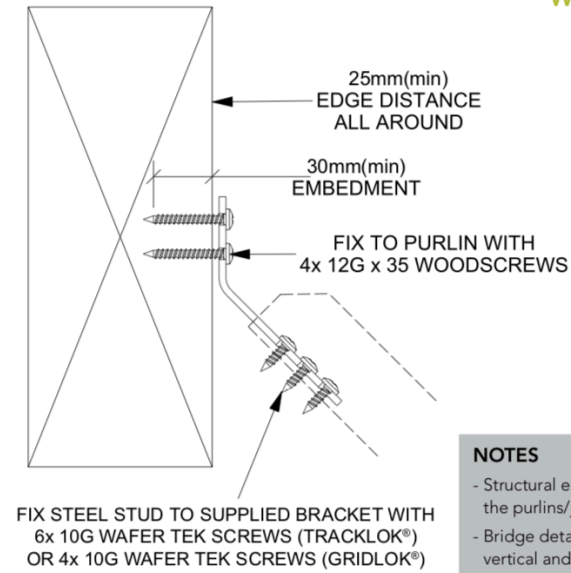


Top connection details

TEK SCREW FIXING



TIMBER STRUCTURE

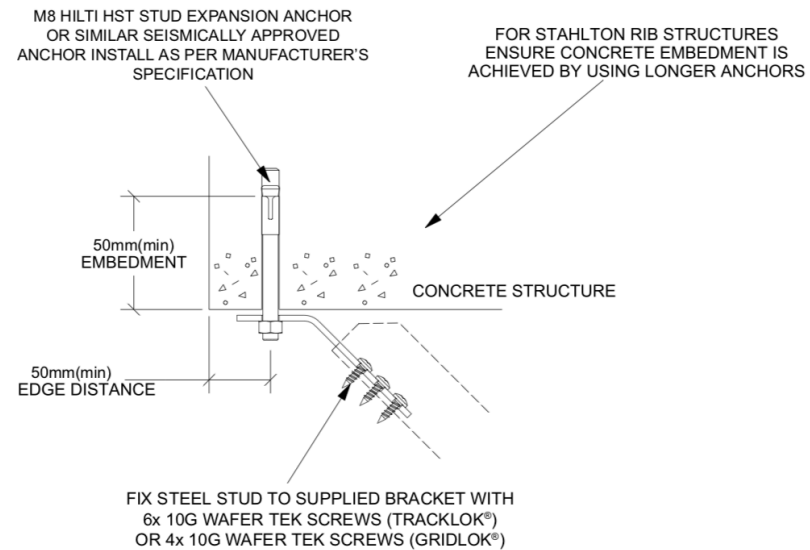


WOOD SCREW FIXING

NOTES

- Structural engineer should confirm loading into the purlins/joists is acceptable
- Bridge detail suitable for TRACKLOK® (241kg vertical and horizontal)

CONCRETE CONNECTION DETAILS/



A Word on Insurance*

- Re-Insurance companies require each country to comply to their building codes to reduce risk.
- New Zealand contributes 0.01% to the global insurance pool.
- Christchurch represented a \$40 billion loss – 50% covered by private insurers and 50% covered by tax payers.
- Modelling suggests a 40% increase in “risk profile” for New Zealand.



**Economic benefits of code compliant non-structural elements in new buildings.*