



**KUSCH**  
Engineered.

## **Seismic Brace Installation Details**

Hydraulic & Fire Services

January 2025

NOTE: ANY SUBSTITUTION MUST BE APPROVED BY KUSCH PRIOR TO INSTALLATION

SECTION		BRACE TYPE		PAGE No.
<b>1. SCHEDULES</b>				
1.1	GENERAL - TYPICAL	ALL CABLE TYPES	CABLE BRACE COMPONENT SCHEDULE	3
1.2	GENERAL - TYPICAL	ALL POST & STRUT TYPES	STRUT BRACE COMPONENT SCHEDULE	4
<b>2. OVERALL PRINCIPLES</b>				
2.1	GENERAL - TYPICAL	ALL TYPES / TRADES / SERVICES	TYPICAL INSTALLATION PRINCIPLES	5
<b>3. TYPICAL BRACE DETAILS</b>				
3.1	GENERAL - TYPICAL	ALL CABLE TYPES	CABLE BRACE INSTALLATION ANGLES	6
3.2	GENERAL - TYPICAL	ALL CABLE TYPES	CABLE BRACE CONNECTION TO PURLIN/TRUSS	7
3.3	GENERAL - TYPICAL	ALL CABLE TYPES	HANGER TO PURLIN CONNECTION	8
3.4	GENERAL - TYPICAL	ALL CABLE TYPES	CABLE BRACE INSTALLATION - JOINING CABLES	9
3.5	GENERAL - TYPICAL	ALL TYPICAL TRAPEZE	TRAPEZE CONNECTION DETAILS	10
3.6	GENERAL - TYPICAL	ALL CABLE TYPES	CABLE BRACE ANCHORS	11
3.7	GENERAL - TYPICAL	ALL CABLE TYPES	ROD STIFFENER INSTALLATION	12
<b>4. CABLE BRACES</b>				
4.1	CABLE KIT INSTALLATION	15 & 17	TWO-WAY CABLE BRACE	13
4.2	CABLE KIT INSTALLATION	19	TWO-WAY CABLE BRACE	14
4.3	TRAPEZE WITH CABLE BRACE	16, 18 & 20	FOUR-WAY CABLE BRACE	15
4.4	TRAPEZE WITH CABLE BRACE	22 & 26	FOUR-WAY CABLE BRACE - SPLIT	16
4.6	STRUT WITH CABLE	P4C	P4C - WALL FIXED STRUT WITH CABLE	17
<b>5. CANTILEVER POST BRACES</b>				
5.1	SP50 POST (WELDED)	K1, K1f	K1 - SP50 CANTILEVER POST	18
5.2	SP50 POST (WELDED)	K1 (TRAPEZE)	K1 - SP50 POST WITH STRUT TRAPEZE	19
5.3	41mm STRUT POST	C2 & C3	C2 & C3 - CANTILEVER STRUT POST	20
5.4	SP50, SP80 & SP100 POSTS	J1-3, H1-3, G1-3	SP50, SP80 & SP100 POSTS	21
<b>6. STRUT BRACES</b>				
6.1	WALL MOUNTED	P1, P3, P4 & P4T	P1,3,4 & 4T - WALL FIXED STRUT BRACES	22
6.2	WALL MOUNTED	P6, P9 & P9C	P6, 9 & 9C - STRUT BRACES	23
6.3	STRUT BRACE TO TRAPEZE	P8	P8 - STRUT BRACE TO SOFFIT	24
6.4	STRUT WITH CABLE	S50	S50 - WALL FIXED SP50 WITH CABLE	25

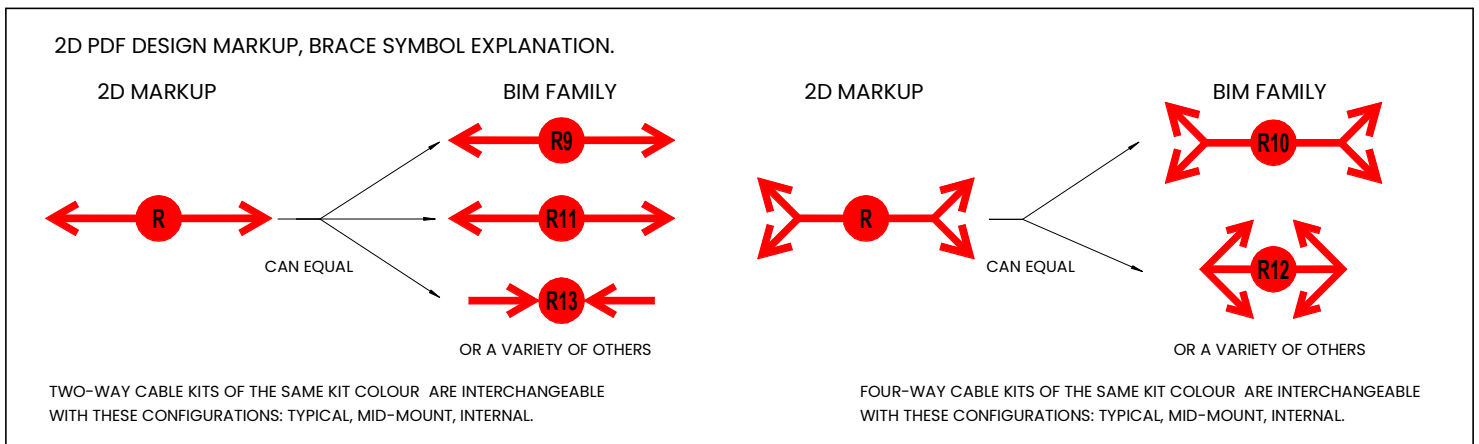
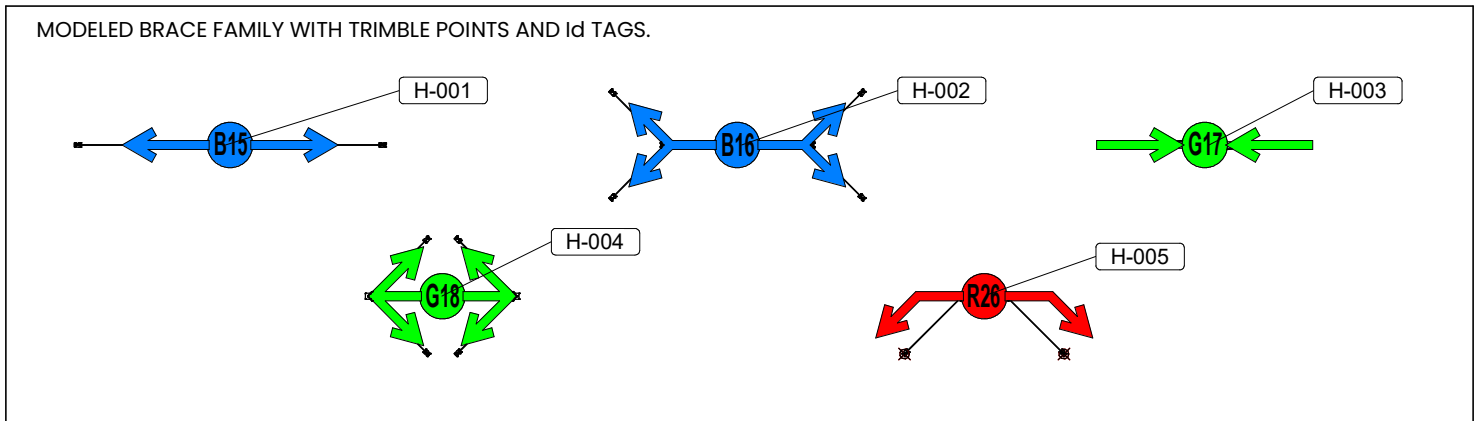
# CABLE BRACE COMPONENT SCHEDULE

A COMPLETE BILL OF MATERIALS AND FULL COORDINATION CAN BE ACHIEVED WHEN THE PROJECT IS MODELED IN REVIT. HERE IS AN EXAMPLE SCHEDULE OF FAMILIES IN A PROJECT AND COMPONENTS WITHIN EACH FAMILY.

CABLE BRACE SCHEDULE HYDRAULIC													
FAMILY	TYPE	Id#	CABLE KIT COLOUR	M10 ROD	41mm STRUT TRAPEZE + STIFFENER STRUT	2m CABLE Qty	3m CABLE Qty	5m CABLE Qty	ROD STIFFENER FIXING	CABLE ANCHORS	ROD ANCHORS	41mm STRUT WASHER	M10 HEXNUT
PIPE 2WAY	15	H- 001	B	1720	1025	2	0	0	0	2	2	4	4
PIPE 4WAY	16	H- 002	B	3559	2664	4	0	0	6	4	2	4	4
PIPE 2WAY INTERNAL	17	H- 003	G	1720	1025	2	0	0	0	2	2	4	4
PIPE 4WAY INTERNAL	18	H- 004	G	1720	1025	4	0	0	0	4	2	4	4
PIPE SPLIT 4WAY	26	H- 005	R	1720	815	4	0	0	4	2	2	4	4

UNIQUE ID      ENGINEERS' SPECIFICATION      VALUES WILL VARY WITH EACH INSTANCE      BILL OF MATERIALS FOR EACH TYPE

'Id#' IS A UNIQUE IDENTIFIER ASSIGNED TO EACH INSTANCE WITHIN A PROJECT TO AID IN QUALITY ASSURANCE, INSTALLATION TRACKING AND INSPECTION. THE Id# WILL BE TAGGED TO THE INSTANCE OF A BRACE FAMILY ON A PLAN VIEW.



# STRUT BRACE COMPONENT SCHEDULE

A COMPLETE BILL OF MATERIALS AND FULL COORDINATION CAN BE ACHIEVED WHEN THE PROJECT IS MODELED IN REVIT. HERE IS AN EXAMPLE SCHEDULE OF FAMILIES IN A PROJECT AND COMPONENTS WITHIN EACH FAMILY.

STRUT BRACE SCHEDULE HYDRAULICS																														
FAMILY	TYPE	Id#	M10 ROD	41mm STRUT	50x5 SLOTTED EA	K1_750	K1_1000	K1_1500	FM1026	FM2346	FM2324	FM2072	FM1546	FM1346	FM1036	FM1031	FM1008	41mm STRUT WASHER	SP50	SP80	SP100	SP50 2072 BASEPLATE	SP80 2072 BASEPLATE	SP100 2072 BASEPLATE	SPBOLT M10S	SPBOLT M12S	BASEPLATE ANCHORS	M10x35 HEXHEAD BOLT	M10 HEXNUT	
C2 POST	C2	H- 001		600	0																							4	0	
C3_TRAY_PIPE	C3	H- 002		520																								4		
P1	P1	H- 004		1000					2	0			0				2												2	
P3	P3	H- 005		470					2	0			0				2												2	
P1 STANDOFF_3LEG	P3	H- 006		1880					0	3	0		0	2	1		10												10	
P4	P4	H- 007		933					1				0				1												1	
P4T	P4T	H- 008		2041					2	1			0				5												5	
P6 DUCT	P6	H- 009		1000					1	0			0				2												1	
P8	P8	H- 010	1640	1127									2				2												2	2
P8	P8	H- 011	1640	1127									2				2												2	2
P9	P9	H- 012		1076					2	0			0				2												2	
K1 POST w_EA	K1	H- 013		0	1000	0	0	1	0								0	2											4	0
K1 POST w_STRUT	K1	H- 014		1000	0	0	0	1	0								2	2											4	0
K1 TRAPEZE to Wall_DOUBLE	K1T	H- 015		1410		0	0	1	4								4												6	4
K1 TRAPEZE to Wall_SINGLE	K1T	H- 016		574		0	0	1	2								2												5	2
K1 TRAPEZE DOUBLE TALL	K1T	H- 017		5548		0	0	2	4								4												8	8
G1 POST	G1	H- 018		0															3000				2		2				8	
J2 POST	J2	H- 019		0																1200				1		6			4	
H3 HURDLE	H3	H- 020																				3820			2	28			8	

UNIQUE ID

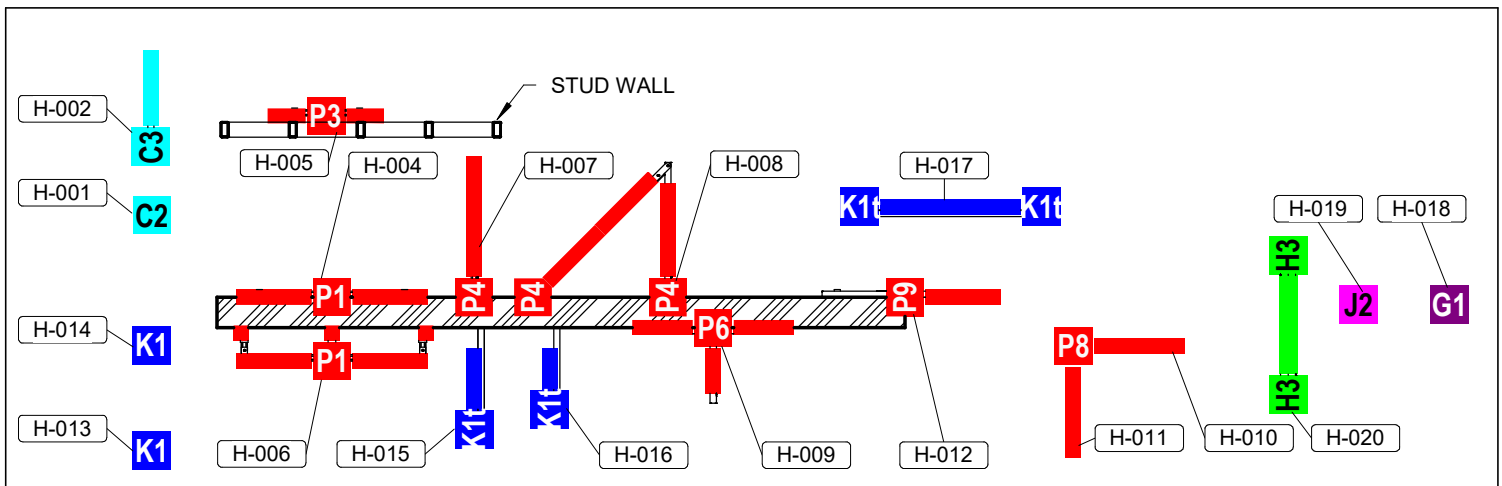
VALUES WILL VARY WITH EACH INSTANCE

BILL OF MATERIALS FOR EACH TYPE

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BILL OF MATERIALS FOR EACH TYPE

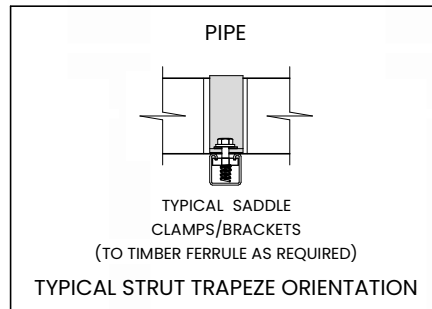
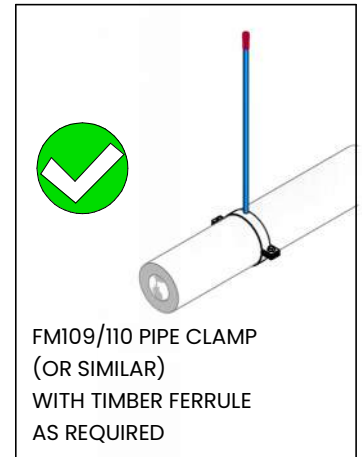
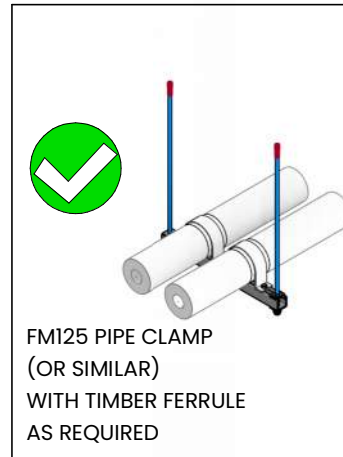
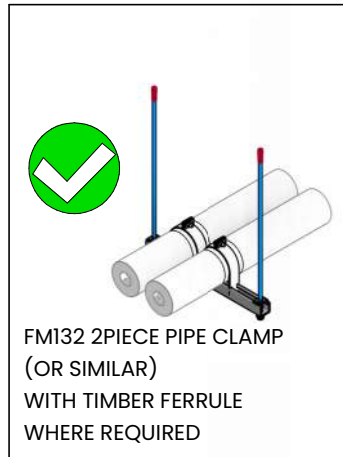
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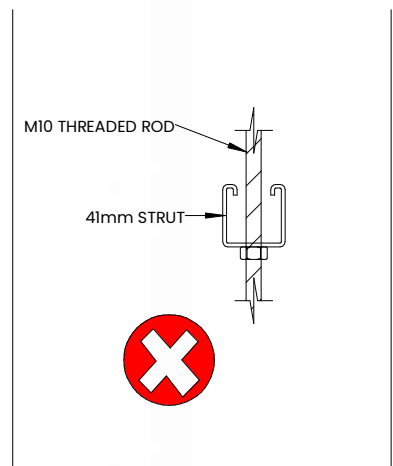
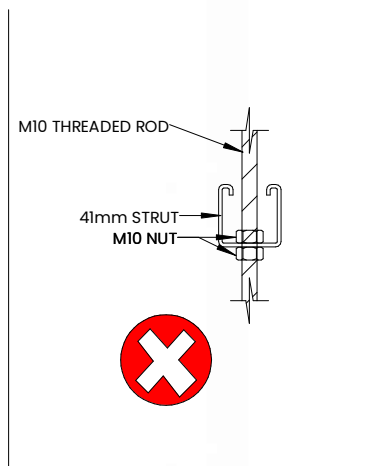
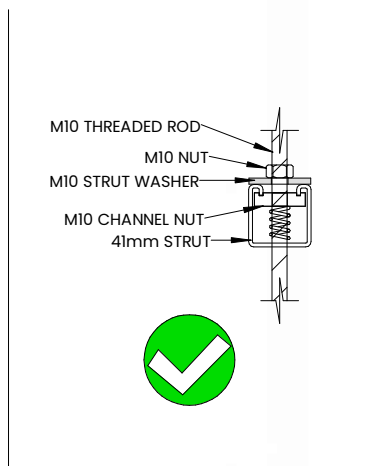
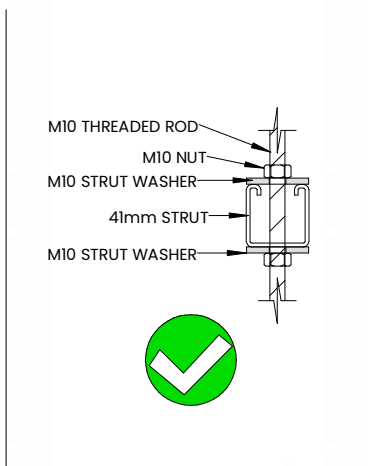
# TYPICAL INSTALLATION PRINCIPLES

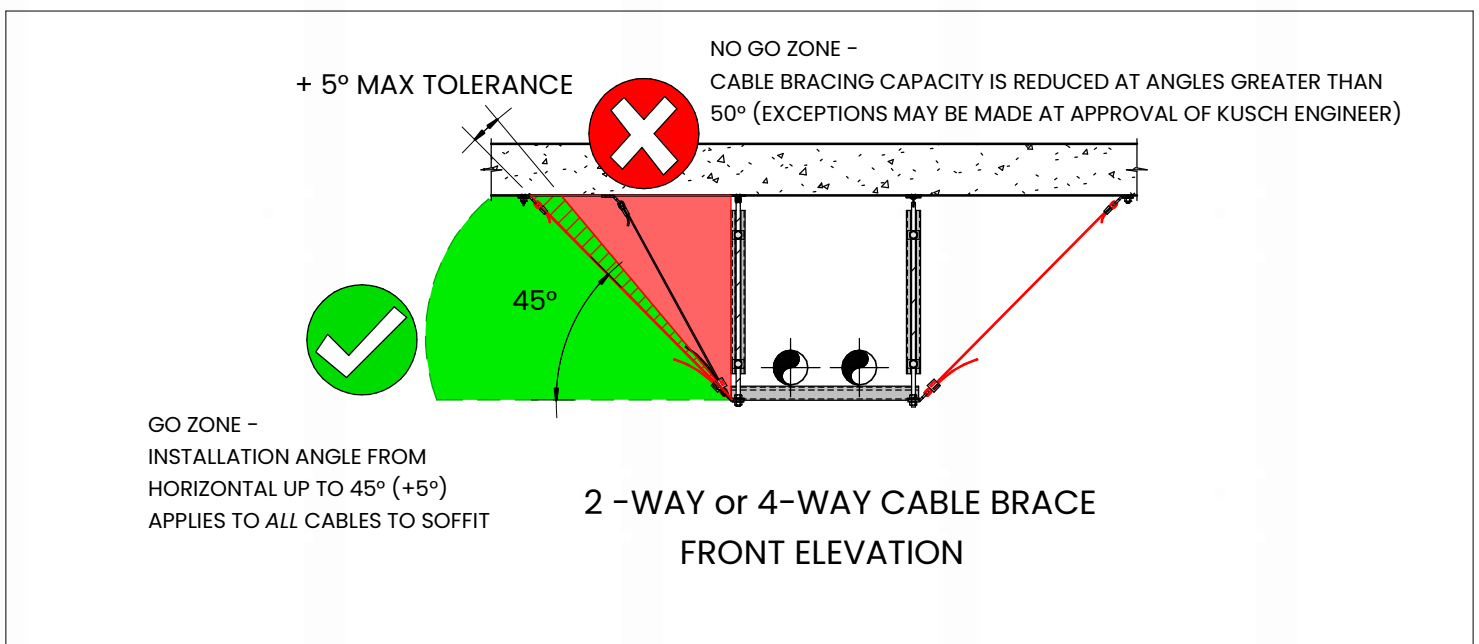
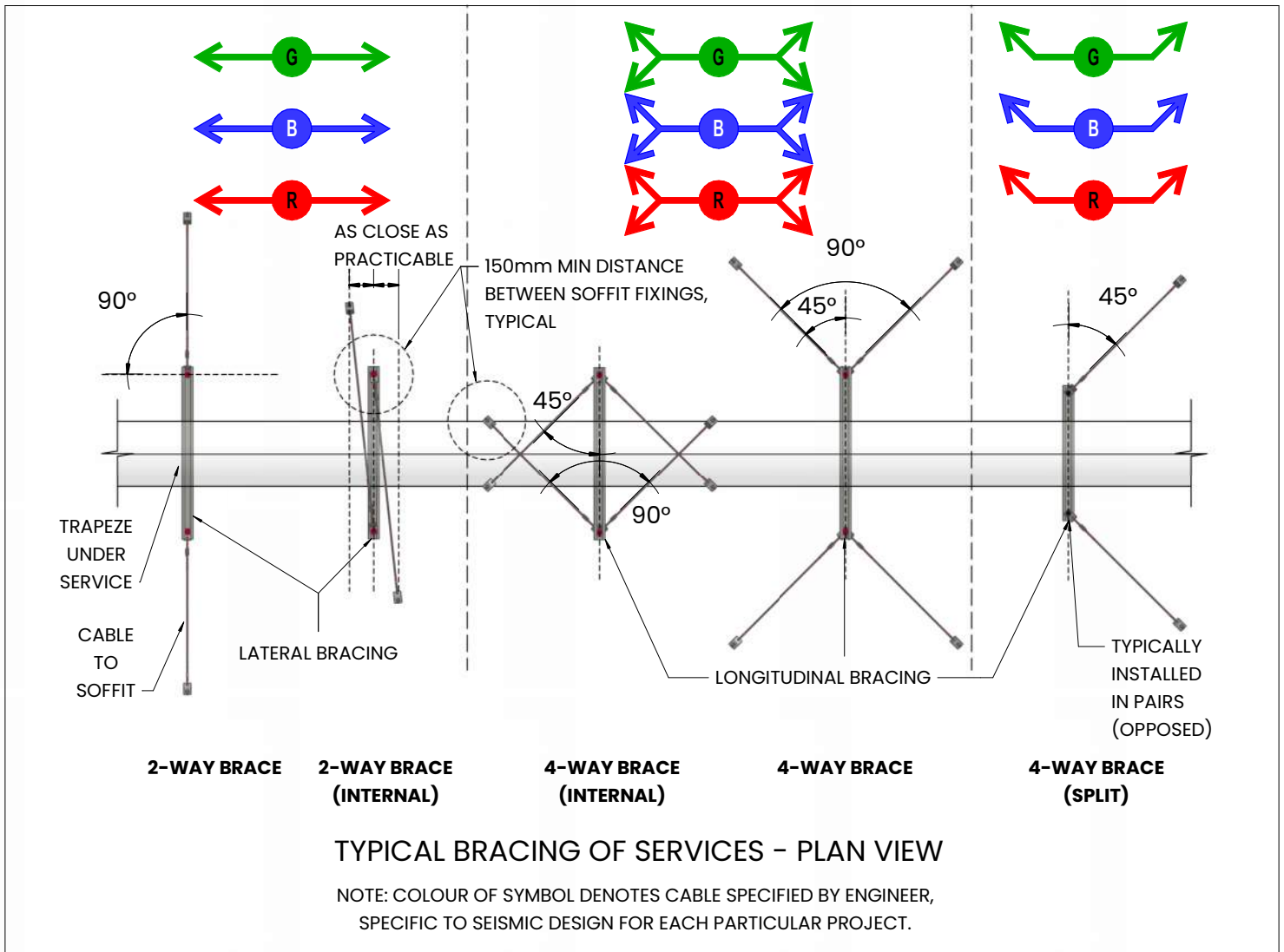
AT EVERY INSTANCE, USE:

- SEISMIC RATED CONCRETE ANCHORS AS APPROVED BY KUSCH
- 41mm STRUT WASHER AND LOCKING NUT ABOVE AND BELOW TRAPEZE
- STIFFENERS TO ROD IF LONGER THAN 750mm.
- M10 (MINIMUM) ROD HANGERS



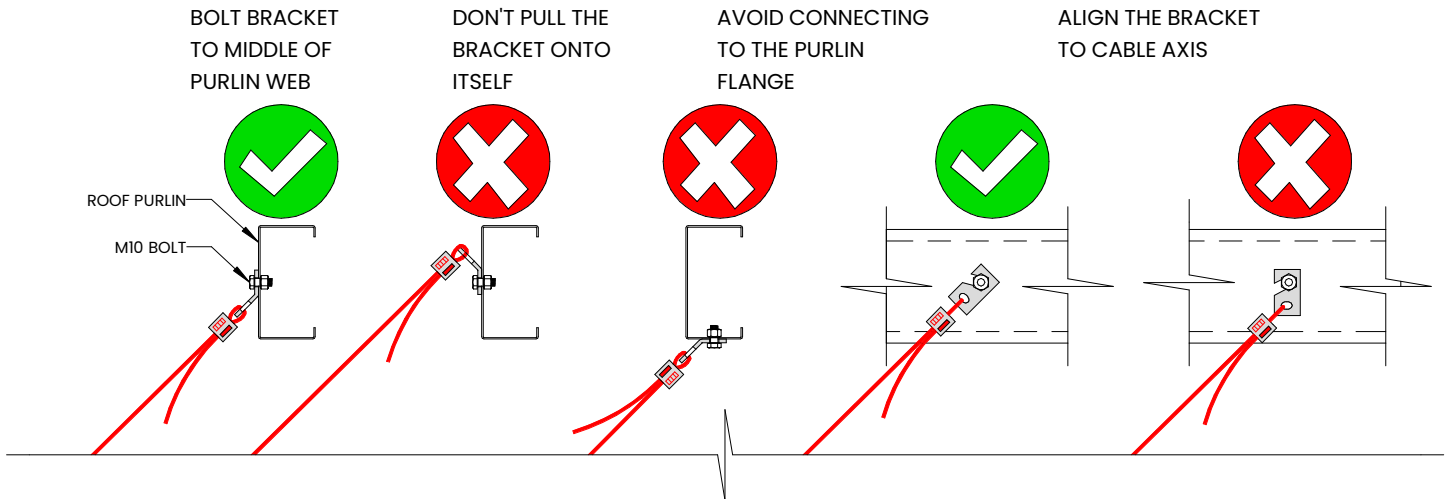
## PIPE TRAPEZE DETAIL SECTION



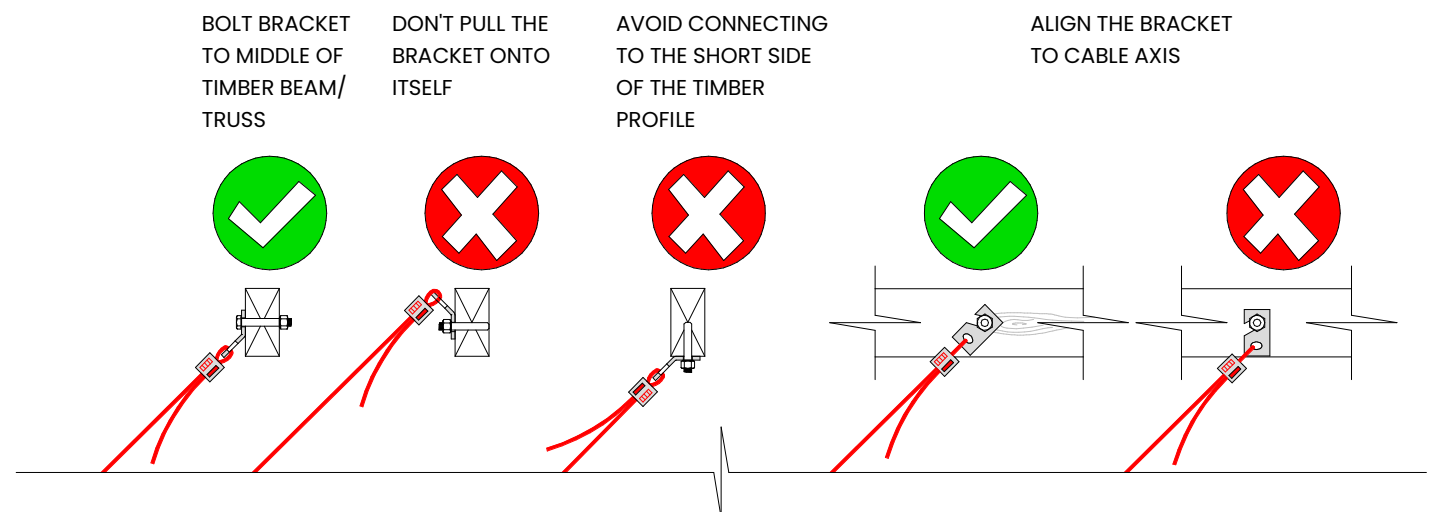


# CABLE BRACE CONNECTION TO PURLIN/TRUSS

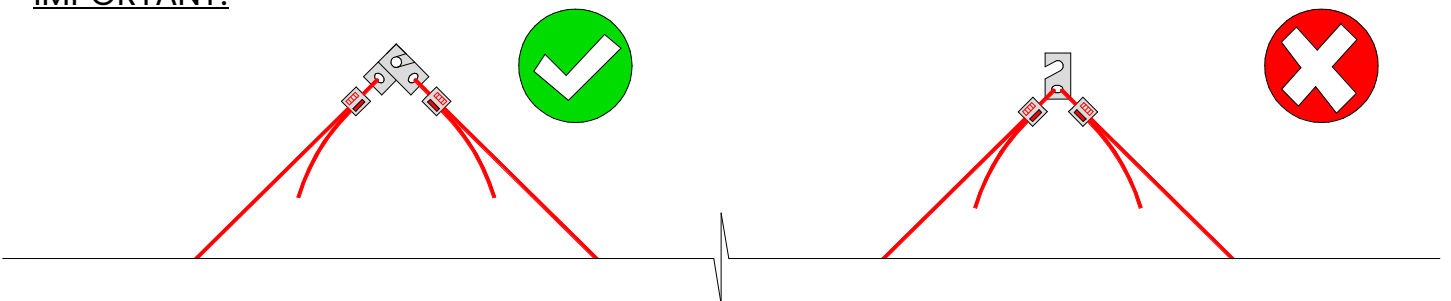
## SEISMIC CABLE TO PURLIN CONNECTION DETAIL



## SEISMIC CABLE TO TIMBER TRUSS CONNECTION DETAIL



### IMPORTANT!



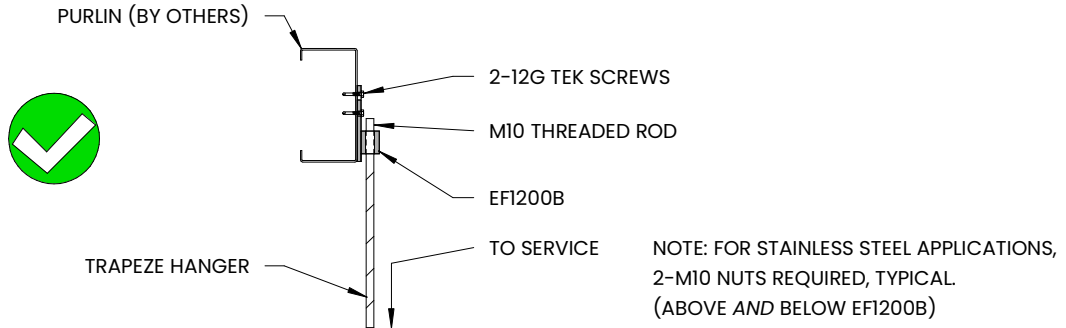
#### DO:

- HAND TIGHTEN CABLE USING ZIP-CLIP CABLE JOINER.
- ADJUST Zip-Clip CABLE JOINER USING RELEASE PINS IF REQUIRED.
- LEAVE A TAIL AT FREE END OF CABLE PASSING THROUGH Zip-Clip CABLE JOINER, MIN. 150mm.
- ALIGN 45° ANGLE BRACKETS AT EACH END SO THAT BOTH HOLES ON ANGLE BRACKETS ARE IN LINE WITH CABLE, AND CABLE IS PULLING ON NEAREST HOLE.
- USE ROD STIFFENERS FOR HANGING RODS >750mm LONG.

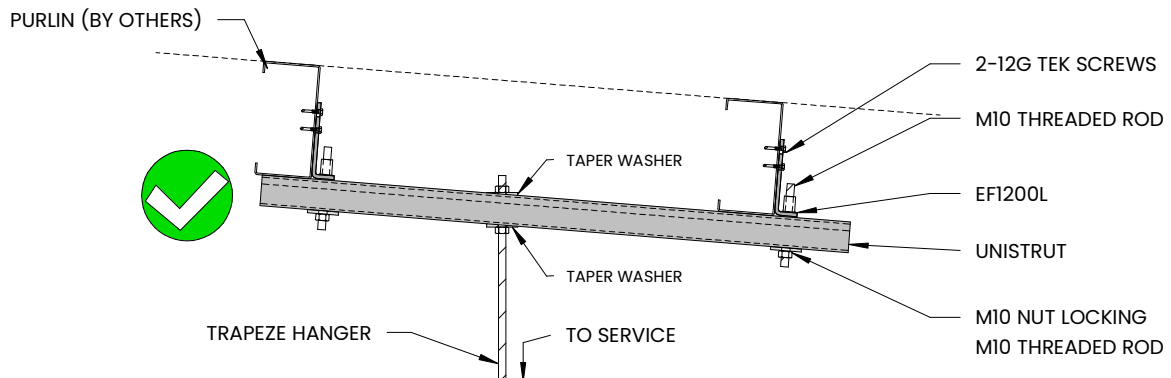
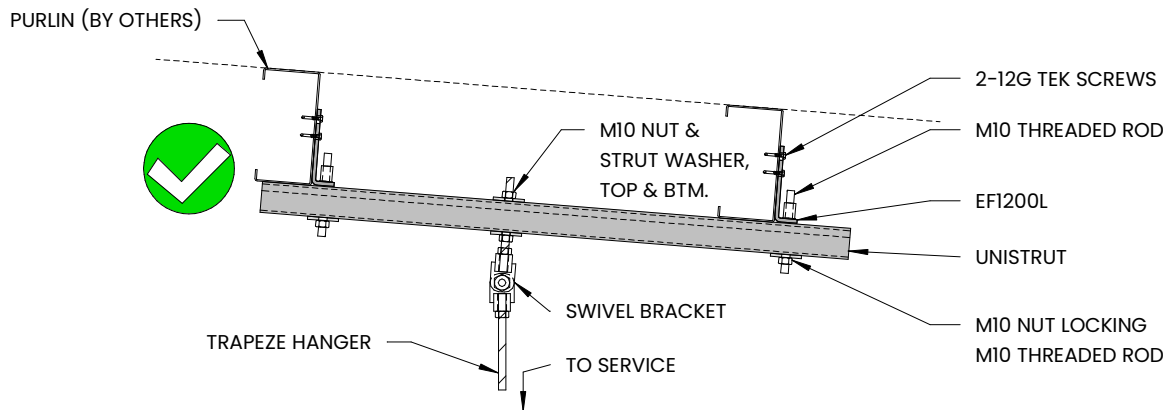
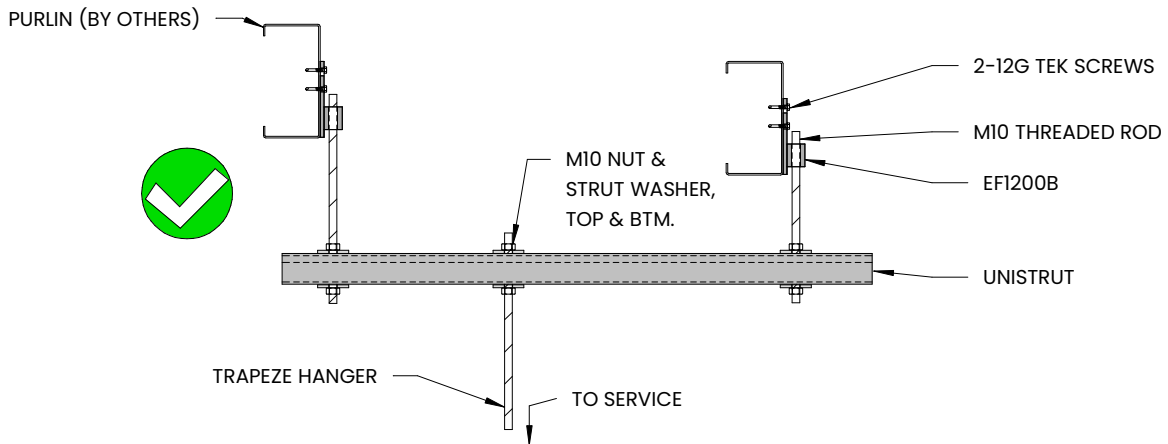
#### DO NOT:

- DO NOT ALLOW CABLE TO CONTACT ANY SERVICE, STRUCTURE, PLANT, HANGING ROD, BRACE ETC. ALONG ITS ENTIRE LENGTH.
- DO NOT ATTACH 2off OR MORE CABLES TO 1off SB /NR 45° ANGLE BRACKET.
- DO NOT OVER-TIGHTEN CABLE IN ABSENCE OF ROD-STIFFENER. IF HANGING ROD BUCKLES, THE CABLE CANNOT PROVIDE ADEQUATE RESTRAINT.
- DO NOT BOLT 45° BRACKETS TO PURLIN FLANGES.

## SERVICE HANGER DIRECTLY FROM PURLIN



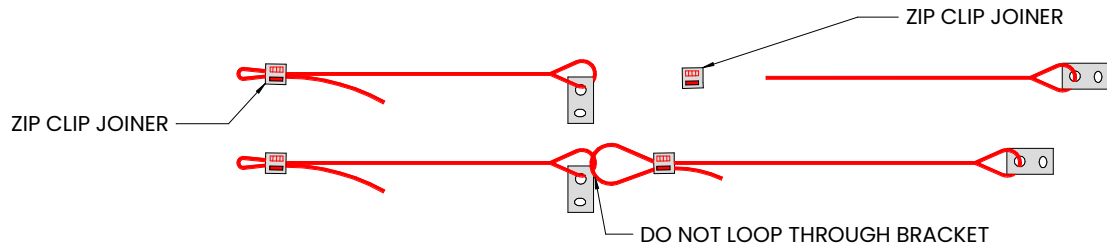
## WHERE SERVICE HANGER IS NOT DIRECTLY BELOW PURLIN



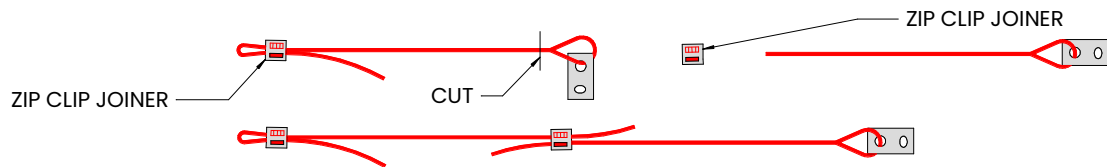


# CABLE BRACE INSTALLATION - JOINING CABLES

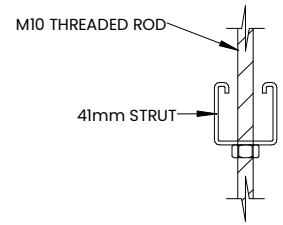
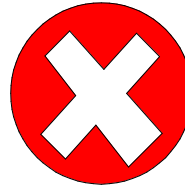
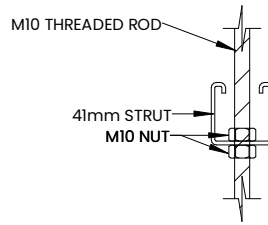
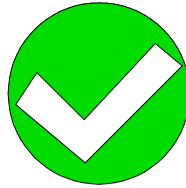
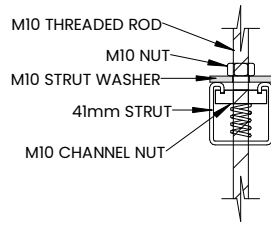
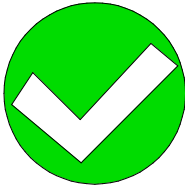
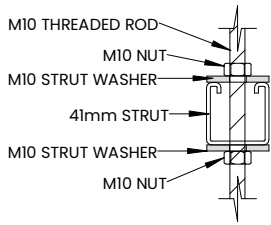
## OPTION 1: ELIMINATE BRACKET AND JOIN LOOP-TO-LOOP











## OPTION 2: ELIMINATE BRACKET, REMOVE FIXED LOOP WITH WIRE CUTTERS AND JOIN WITH ZIP CLIP JOINER



## PIPE AND TRAY TRAPEZE DETAIL SECTION



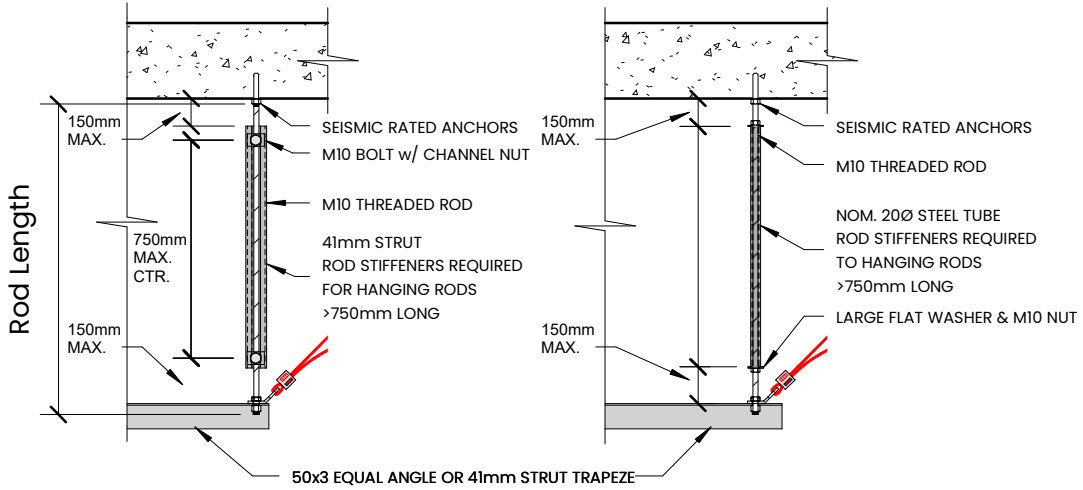
 <b>ZIP-CLIP SEISMIC RATED BRACE SCHEDULE</b> <b>C1 ANCHORS</b> <b>Brace Angle MAX 45°</b>					
BRACE SYMBOL	Zip-Clip Cable Type	DEWALT Slab Connection	ICCONS Thru-bolt Slab Connection	HILTI HST3	ICCONS FM753 Slab Connection
	RED (2mm)	M10x90 PTB-ETA1-PRO	M10x90 Thru-bolt	M10x90 HST3	M10x90 ICCONS-FM753
	BLUE (3mm)		M12x140 Thru-bolt	M10x90 HST3	M10x90 ICCONS-FM753
	GREEN/YELLOW (4mm)		M12x140 Thru-bolt	M12x115 HST3	M12x110 ICCONS-FM753

 <b>ZIP-CLIP SEISMIC RATED BRACE SCHEDULE</b> <b>C2 ANCHORS</b> <b>Brace Angle MAX 45°</b>				
Brace Symbol	Zip-Clip Cable Type	HILTI Slab Connection	ICCONS Thru-bolt Slab Connection	ICCONS FM753 Slab Connection
	RED (2mm)	M10x90 HST3	M10x90 Thru-bolt	M10x90 ICCONS-FM753
	BLUE (3mm)	M10x90 HST3	M12x140 Thru-bolt	M10x90 ICCONS-FM753
	GREEN/YELLOW (4mm)	M12x115 HST3		

USING M12x110 ICCONS FM753 FOR A BLUE KIT REQUIRES A SEPARATE PURCHASE OF AN ANGLE BRACKET WITH A 13mm DIAMETER HOLE

C2 ANCHORS ARE USUALLY REQUIRED IN IMPORTANCE LEVEL 4 (IL4) BUILDINGS.

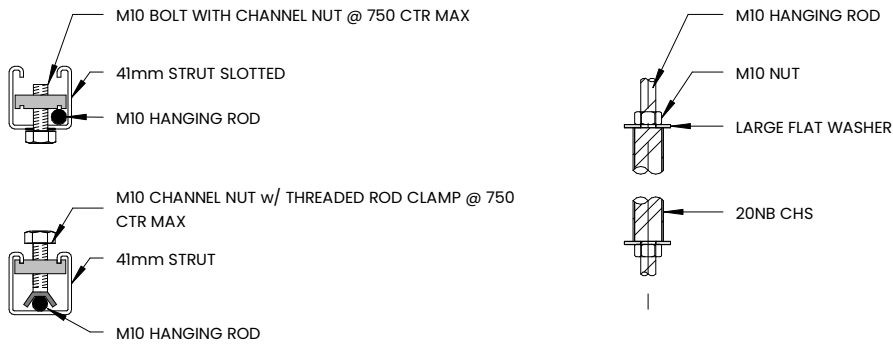
PLEASE CONTACT KUSCH FOR CLARIFICATION IF YOU ARE UNSURE WHETHER C1 OR C2 ANCHORS ARE REQUIRED. IF YOU WOULD LIKE TO USE AN ANCHOR NOT LISTED ABOVE, PLEASE CONTACT KUSCH AND WE CAN ASSESS THE ANCHOR TO DETERMINE IT'S SUITABILITY.



TYPICAL ROD STIFFENER  
(USING 41mm STRUT)  
NOTE: MUST BE USED IF  
'ROD LENGTH' >750mm  
U.N.O.

OR

TYPICAL ROD STIFFENER  
(USING 20NB CIRCULAR HOLLOW  
SECTION)  
NOTE: MUST BE USED IF ROD  
LENGTH >750mm U.N.O.



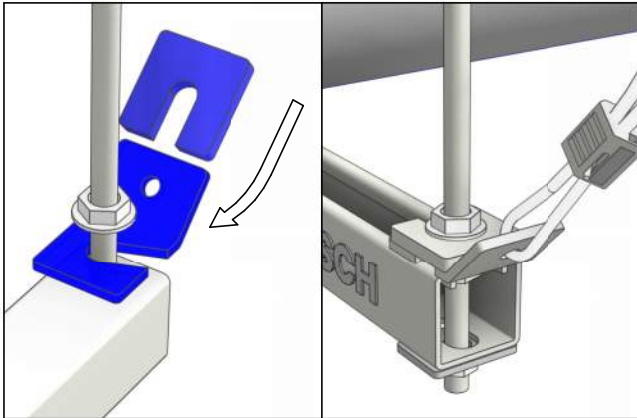
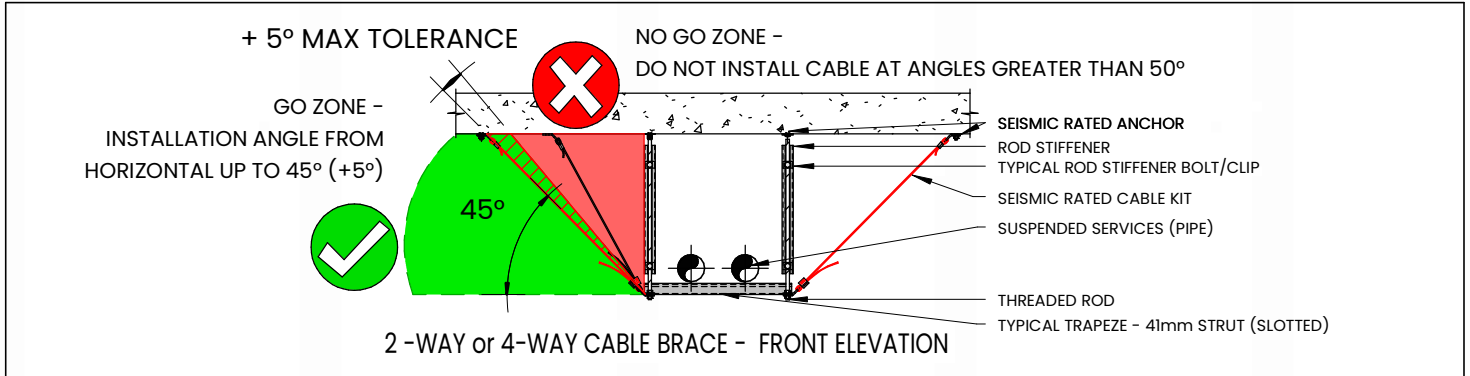
TYPICAL STRUT ROD STIFFENER CLAMPING METHODS

# TWO-WAY CABLE BRACE

READ THESE INSTRUCTIONS IN CONJUNCTION WITH THE PLANS AND DETAILS ON PAGES 3-12 TO ACHIEVE OPTIMAL CAPACITY FROM CABLE.

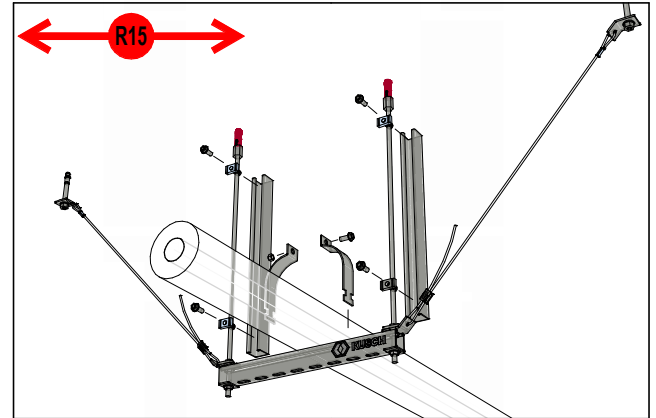


COLOURS DENOTE CABLE SPECIFIED BY SEISMIC DESIGN ENGINEER



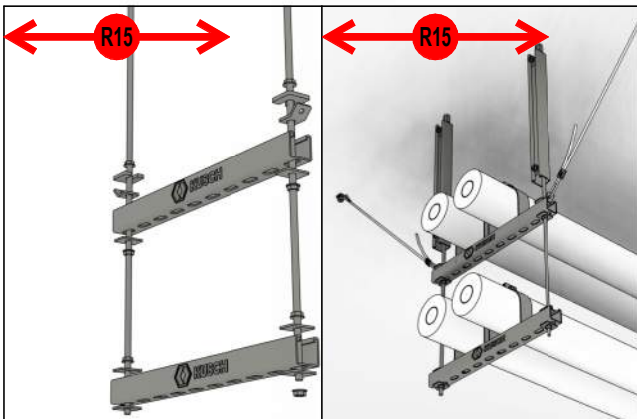
CABLE KIT BRACKET 'HOOKS' ONTO THREADED ROD. FIT SLOTTED SQUARE WASHER OVER THE CABLE BRACKET WITH EVERY KIT, IN THE ORIENTATION SHOWN.

TIGHTEN TOP LOCKING NUT AND THREAD CABLE THROUGH CABLE LOCK AND BRACKET. TIGHTEN CABLE AS PER KIT INSTRUCTIONS. STRUT WASHER AND LOCKING NUT UNDER 41mm TRAPEZE.

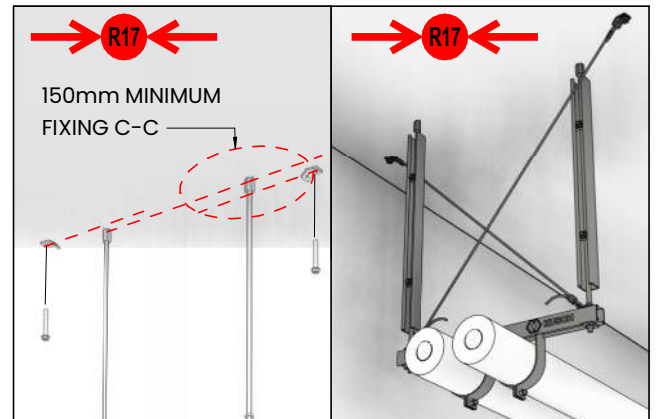


TYPICAL 2-WAY CABLE KIT TO TYPICAL TRAPEZE, SHOWN WITH ROD STIFFENERS BEING FITTED.

FIX PIPE USING TYPICAL FM32 PIPE CLAMPS TO TRAPEZE (OPEN UP).



TOP TRAPEZE WITH M10 NUT AND STRUT WASHER TOP AND BOTTOM, CABLE KIT BRACKET AND SPACER. BOTTOM TRAPEZE WITH M10 NUT AND STRUT WASHER TOP & BOTTOM. FIX PIPE USING TYPICAL FM32 PIPE CLAMPS TO TRAPEZE (OPEN UP).



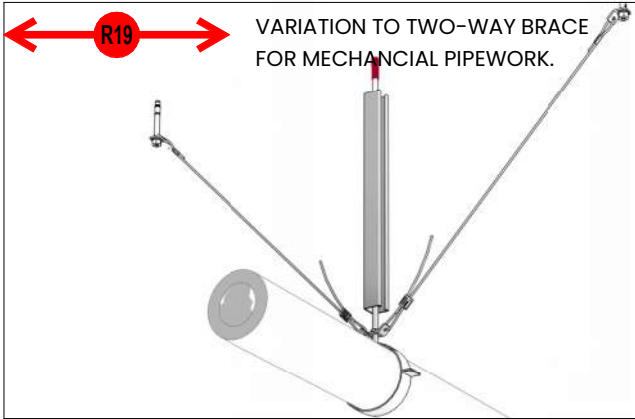
CABLE IN LINE WITH TRAPEZE - AS CLOSE AS PRACTICABLE, WHILE MAINTAINING MINIMUM 150mm BETWEEN SOFFIT FIXINGS. OPTION TO SECURE PIPES UNDER TRAPEZE TO MAINTAIN CLEARANCE TO ADJACENT SERVICES.

# TWO-WAY CABLE BRACE

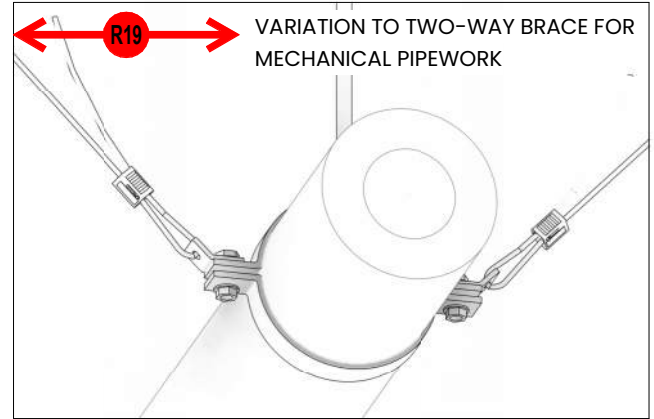
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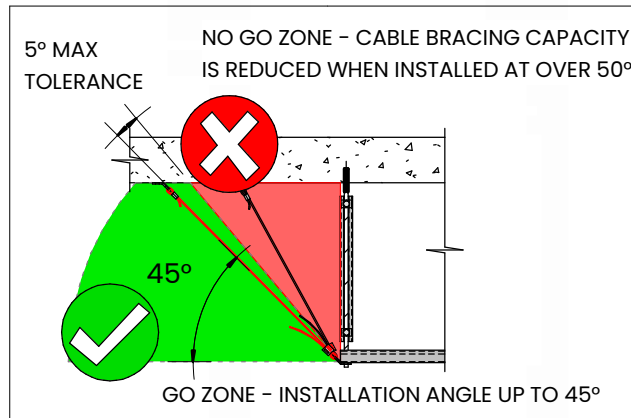
COLOURS DENOTE CABLE SPECIFIED BY SEISMIC DESIGN ENGINEER



CABLE BRACKET LOCKED TO BTM OF THREADED ROD HANGER WITH M10 NUT WITH STRUT STIFFENER FITTED TO HANGER

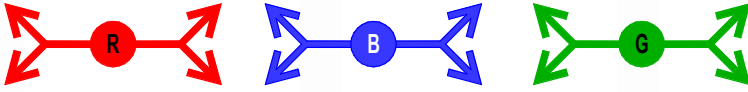


CABLE BRACKET FIXED TO PIPE CLAMP TAG.

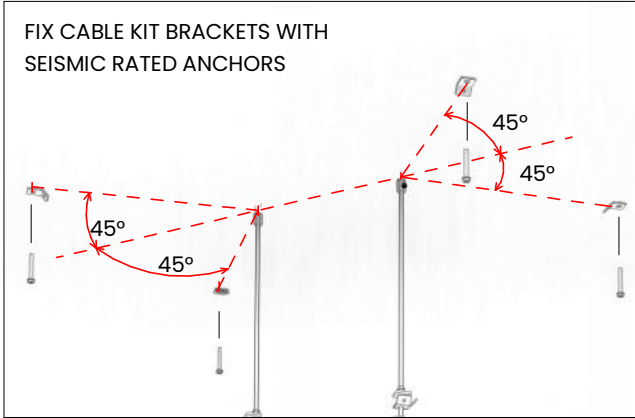


# FOUR-WAY CABLE BRACE

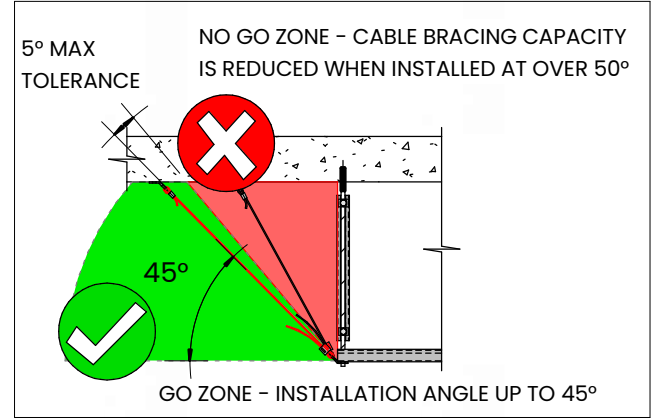
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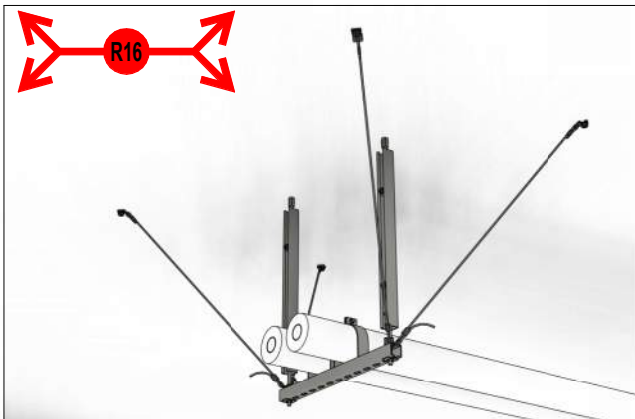
COLOURS DENOTE CABLE SPECIFIED BY SEISMIC DESIGN ENGINEER



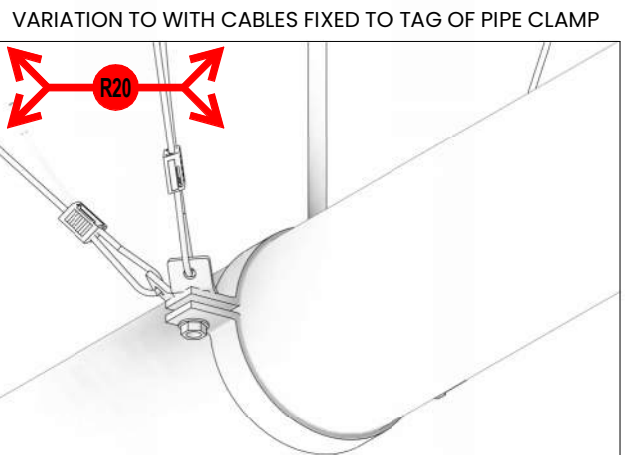
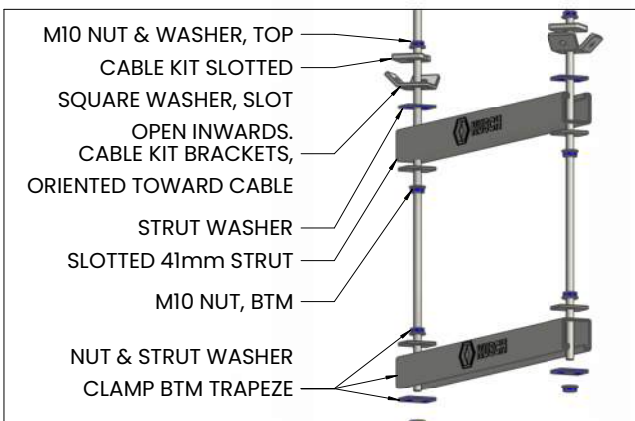
LAYOUT OF CABLE ANCHORS ON SOFFIT CRITICAL TO ACHIEVE DESIGN CAPACITY.



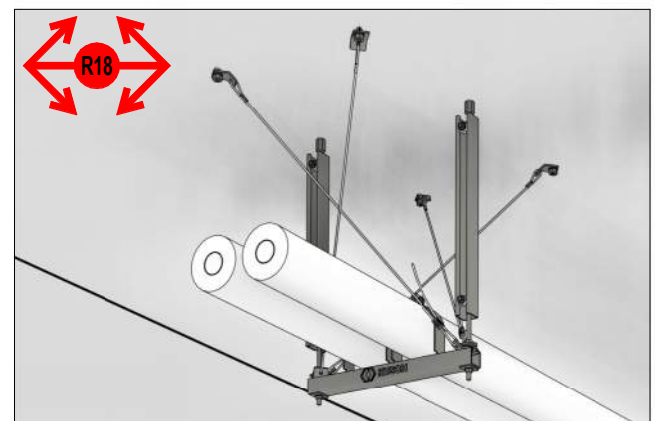
TYPICAL 4-WAY CABLE TRAPEZE SHOWN WITH ROD STIFFENERS



TYPICAL 4-WAY CABLE, TRAPEZE FIXING TO ROD HANGER ARRANGEMENT (SHOWN INCLUDING HANGER MID-LEVEL TRAPEZE).



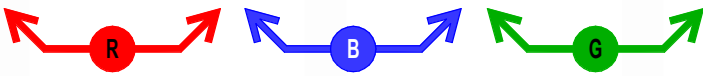
VARIATION TO WITH INTERNALLY ORIENTED CABLES FIXED TO PIPES ON SHARED TRAPEZE



FIX PIPE USING TYPICAL FM132 PIPE CLAMPS TO TRAPEZE (OPEN UP)

# FOUR-WAY CABLE BRACE - SPLIT

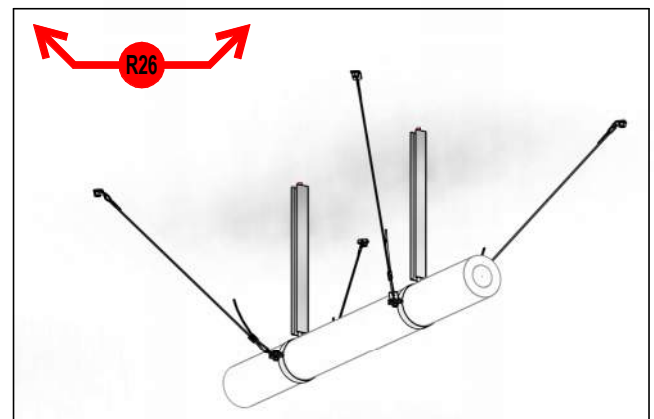
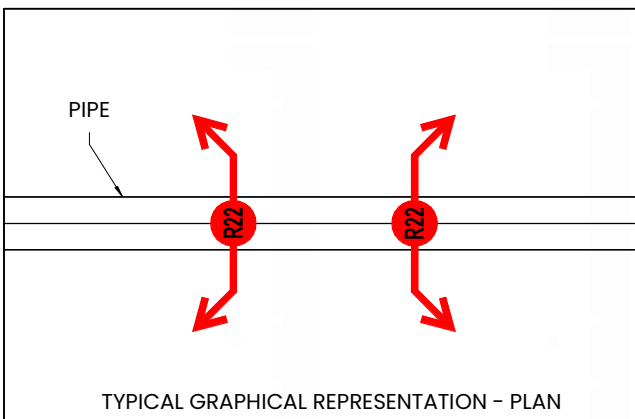
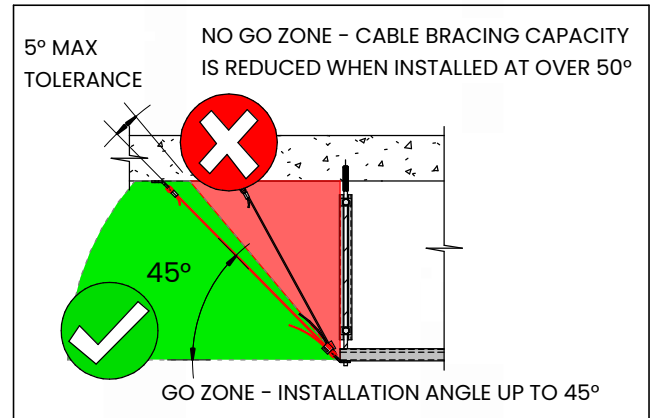
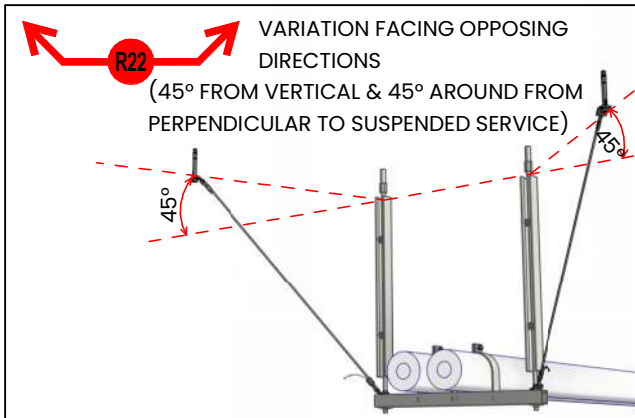
READ THESE INSTRUCTIONS IN CONJUNCTION WITH THE PLANS AND DETAILS ON PAGES 3-12 TO ACHIEVE OPTIMAL CAPACITY FROM CABLE.



COLOURS DENOTE CABLE SPECIFIED BY SEISMIC DESIGN ENGINEER

INSTALLED IN PAIRS TO PROVIDE LATERAL AND LONGITUDINAL RESTRAINT.

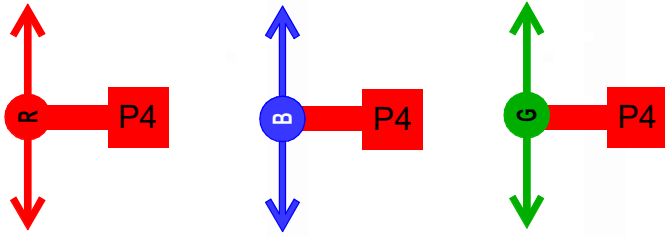
VARIATION TO TYPICAL FOUR-WAY CABLE BRACE - SPLITTING THE CABLES INTO TWO PAIRS TO HELP AVOID CLASH.



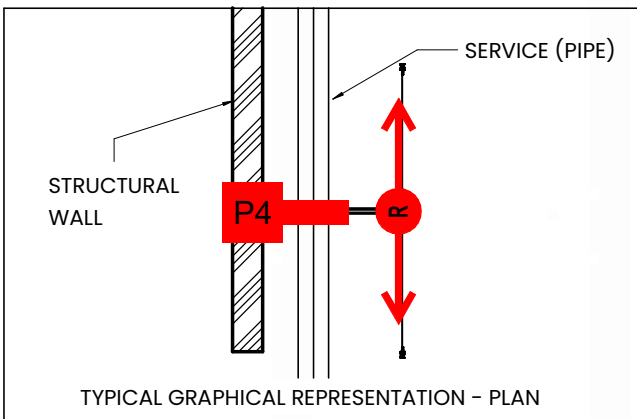
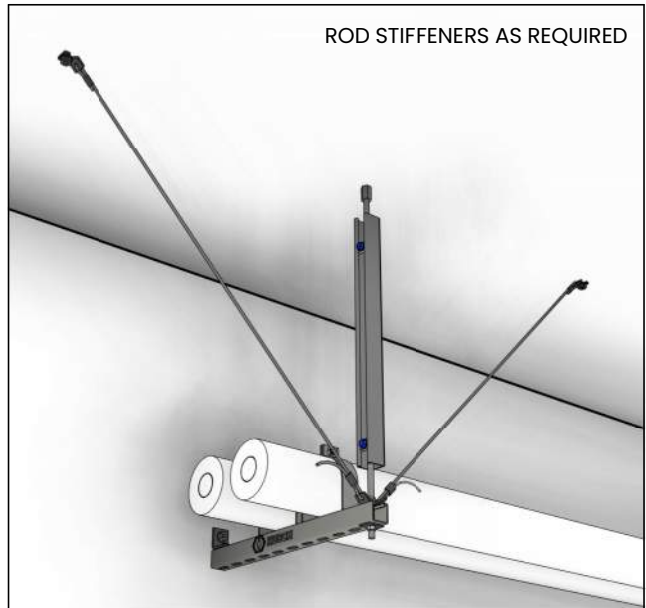
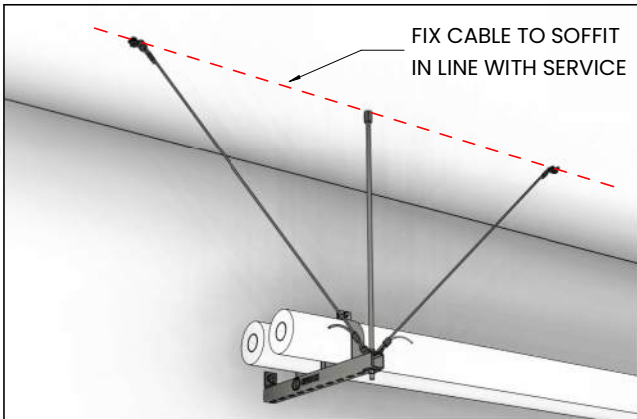
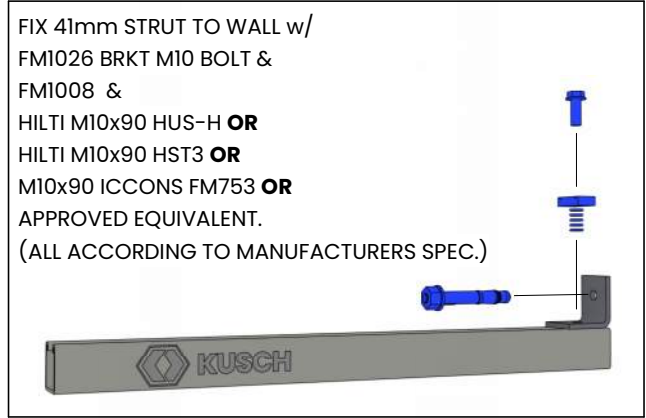
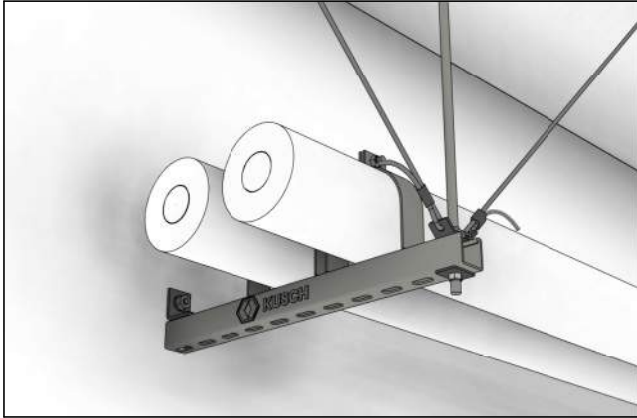
VARIATION TO 4WAY CABLE BRACE, TYPICALLY INSTALLED IN PAIRS FACING OPPOSING DIRECTIONS. ALLOWS FOR CLEARANCE TO ADJACENT SERVICES.



# P4C - WALL FIXED STRUT WITH CABLE



COLOURS DENOTE CABLE SPECIFIED BY KUSCH ENGINEER

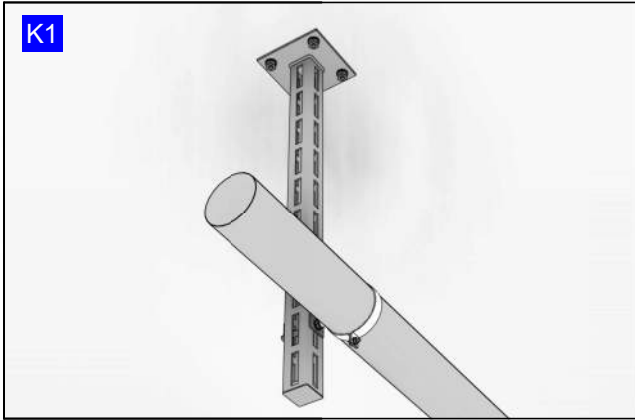


# K1 - SP50 CANTILEVER POST

NOTE: K1 POSTS ARE AVAILABLE IN 1500, 1000 & 750mm LENGTHS.

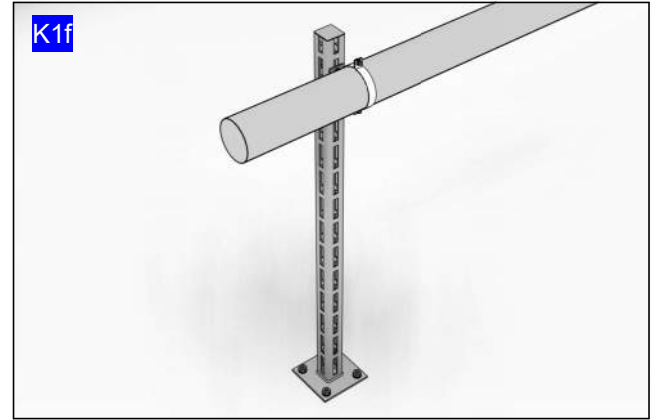
K1 K1f

FIX 4- HILTI M10x90 HUS-H OR HILTI M10x90 HST3 OR M10x90 ICCONS FM753 OR APPROVED EQUIVALENT. ALL INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPEC. 80mm MIN. EDGE DISTANCE. ANY OF THE FOLLOWING FIXING METHODS APPLY.



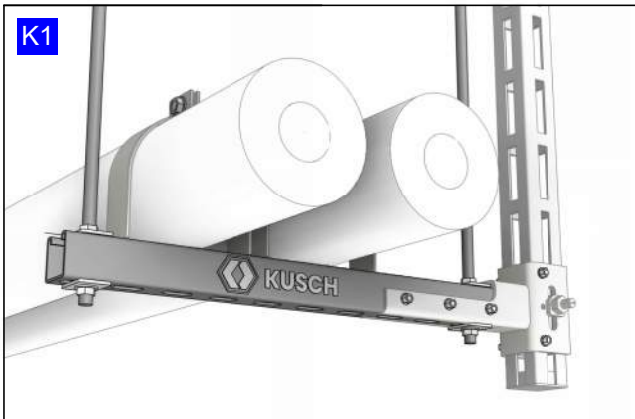
SUSPENDED POST.  
CUT POST HEIGHT TO SUIT & FIT SAFETY CAP.

VARIATION, TO EXISTING HANGER, SP50-TRAPEZE CLAMP, RETRO-FIT OPTION

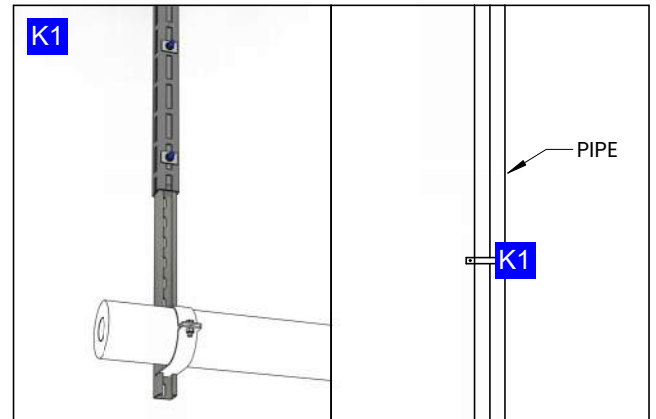


FLOOR FIXED POST.  
CUT POST HEIGHT TO SUIT & FIT SAFETY CAP.

VARIATION FOR BRACE HEIGHTS >1500mm



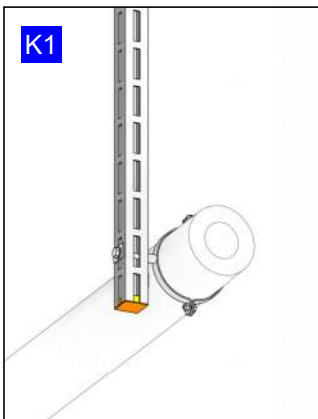
VARIATION, TO EXISTING HANGER, SP50-TRAPEZE CLAMP BOLTED TO K1 WITH 2-SPBOLT M10, 6-12G TEKSCREWS TO TRAPEZE, TYPICAL FM32 PIPE CLAMPS TO TRAPEZE (OPEN UP). LOCK TRAPEZE AND TRAPEZE CLAMP TO HANGING ROD WITH LARGE SQUARE STRUT WASHERS TOP AND BOTTOM.



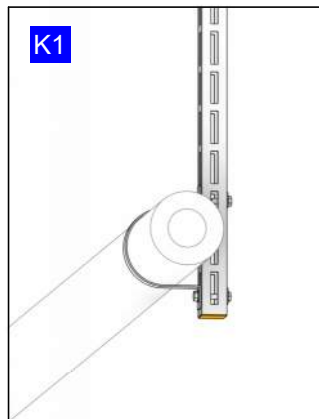
FIX41mm STRUT TO SP50 WITH MIN. 2-M12 BOLTS & FM1010 MIN 300 CTS WITH STRUT WASHERS

TYPICAL GRAPHICAL REPRESENTATION - PLAN

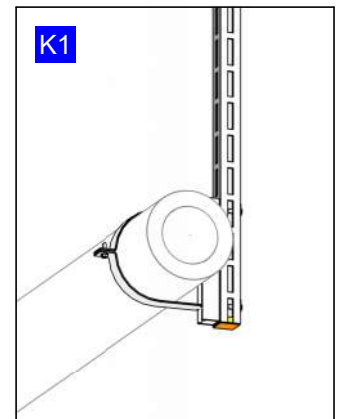
VARIATIONS TO HYDRAULIC & FIRE PIPEWORK. (TIMBER FERRULE AS REQUIRED)



NUT CLAMP AND STRUT WASHER.



SADDLE CLAMP WITH 2-M10 BOLTS & STRUT WASHERS.



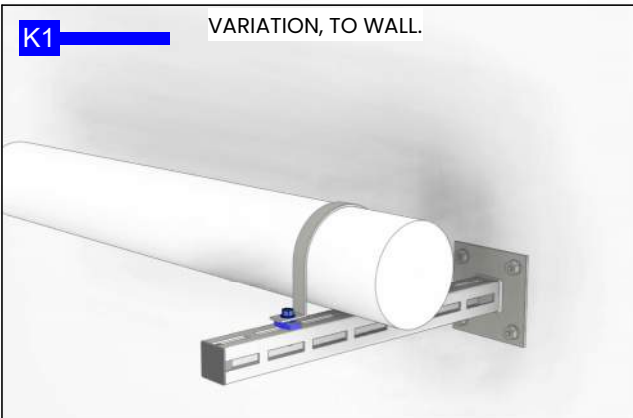
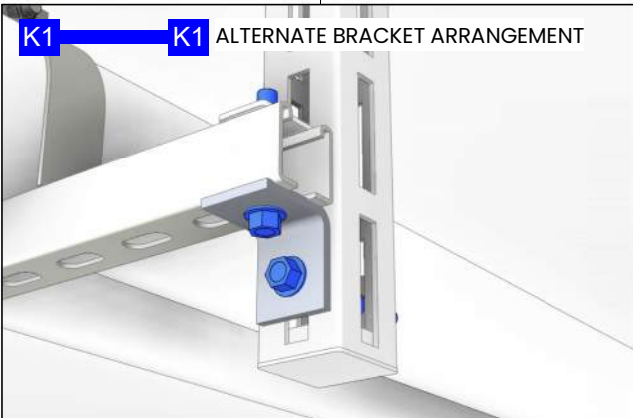
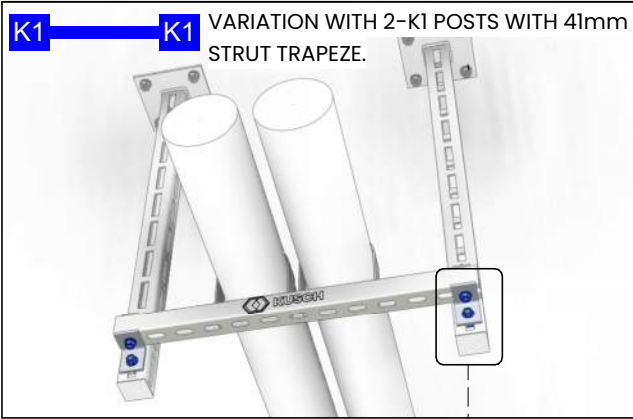
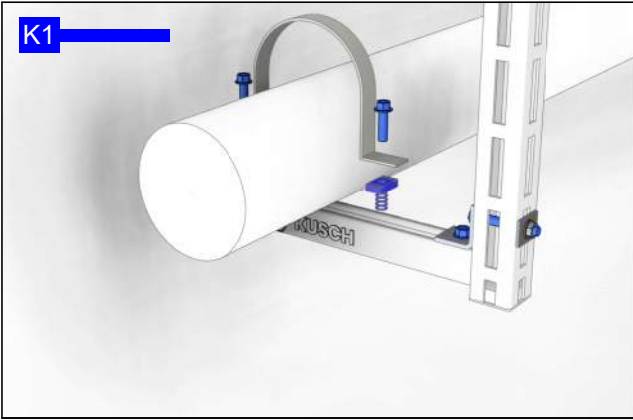
FM132 CLAMP WITH 41mm STRUT, 2-M10 BOLTS AND STRUT WASHERS.

# K1 - SP50 POST WITH STRUT TRAPEZE

K1

NOTE: K1 POSTS ARE AVAILABLE IN 1500, 1000 & 750mm LENGTHS.

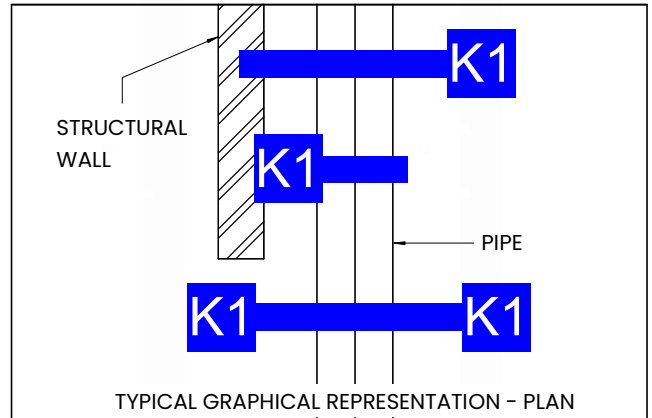
FIX 41mm STRUT TO PIPEWORK, SHOWN WITH SADDLE CLAMP, M10 BOLTS AND FM1008.



K1

FIX 4- HILTI M10x90 HUS-H OR HILTI M10x90 HST3 OR M10x90 ICCONS FM753 OR APPROVED EQUIVALENT. ALL INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPEC.80mm MIN. EDGE DISTANCE.

FM1026 BOLT THROUGH FM1008

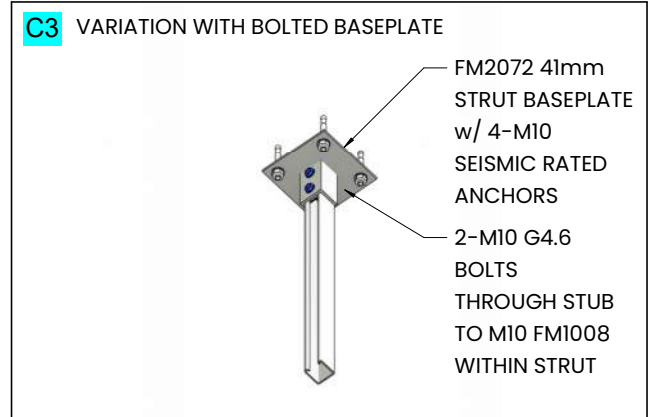
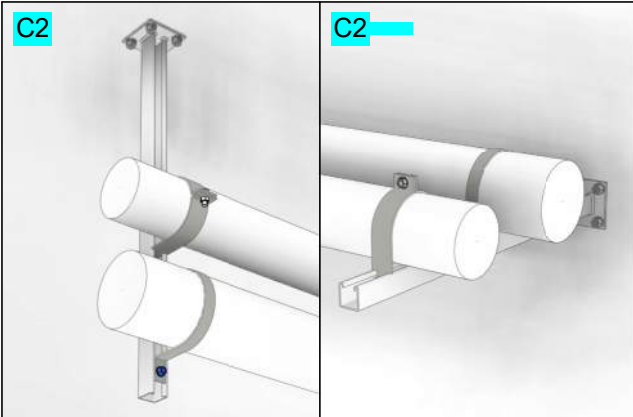


# C2 & C3 - CANTILEVER STRUT POST

C2

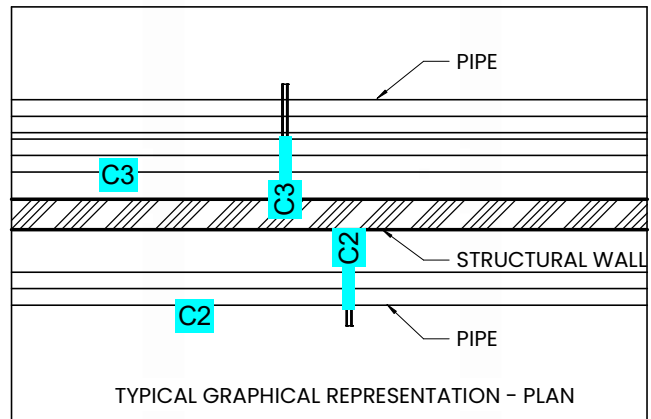
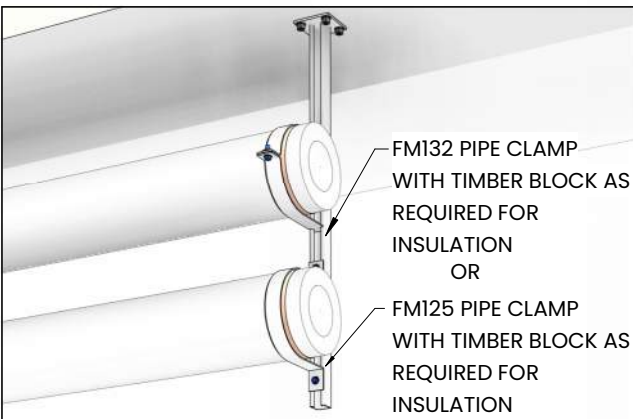
C3

WELDED BASEPLATE    BOLTED BASEPLATE



FIX FM2073 WELDED 41mm STRUT w/ HILTI M10x90 HUS-H **OR** HILTI M10x90 HST3 **OR** M10x90 ICCONS FM753 **OR** APPROVED EQUIVALENT. ALL INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPEC. 80mm MIN. EDGE DISTANCE. NOTE: FM2073 (L) LENGTHS ARE MADE TO ORDER.

C2 VARIATION FIXING TO MECHANICAL PIPEWORK

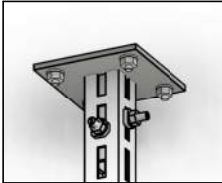


# SP50, SP80 & SP100 POSTS

SOFFIT-FIXED	J1	FLOOR-FIXED	H1	FLOOR-SOFFIT	G1	SUPA 50	M10 SPBOLTS WITH M12 ANCHORS
	J2		H2		G2	SUPA 80	M12 SPBOLTS WITH M16 ANCHORS
	J3		H3		G3	SUPA 100	M12 SPBOLTS WITH M16 ANCHORS

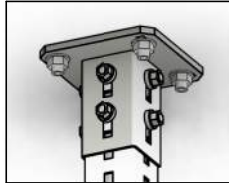
**FOR DETAILS ON FIXING TO SERVICES, SEE Pg 19**  
 FOR SP80 & SP100: - USE M12 FIXINGS FOR STRUT METHOD  
 - TEK SCREW TO POST FOR EA METHOD  
 INSTALLATION DETAILS ON THIS PAGE CAN BE APPLIED TO **ALL SUPA SIZES** BY CHANGING BASEPLATE AND BOLT SIZE.

J1  
H1

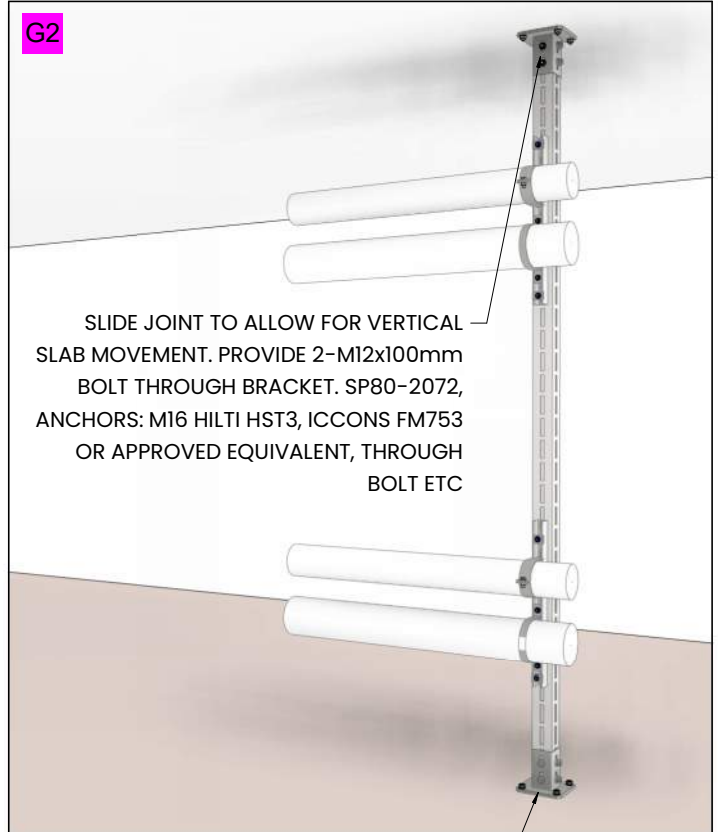


FIX SP50-2072 BASEPLATE TO SUPA WITH 2-SPBOLT-M10S. FIX BASEPLATE TO SOFFIT WITH 4-M12 HILTI HST3, ICCONS FM753 OR APPROVED EQUIVALENT SEISMIC RATED ANCHORS

J2 J3  
H2 H3



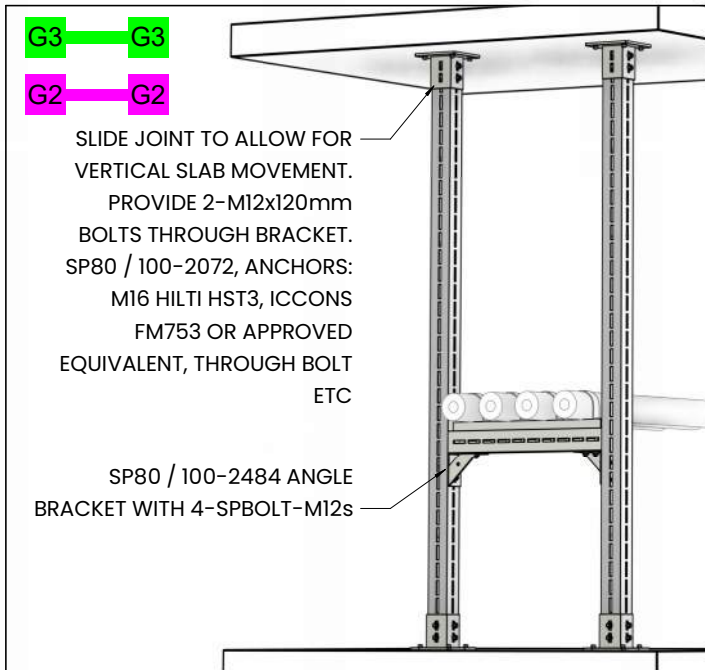
FIX SP80 OR SP100-2072 BASEPLATE TO SUPA WITH 6-SPBOLT-M12S. FIX BASEPLATE TO SOFFIT WITH 4-M16 HILTI HST3, ICCONS FM753 OR APPROVED EQUIVALENT SEISMIC RATED ANCHORS



SLIDE JOINT TO ALLOW FOR VERTICAL SLAB MOVEMENT. PROVIDE 2-M12x100mm BOLT THROUGH BRACKET. SP80-2072, ANCHORS: M16 HILTI HST3, ICCONS FM753 OR APPROVED EQUIVALENT, THROUGH BOLT ETC

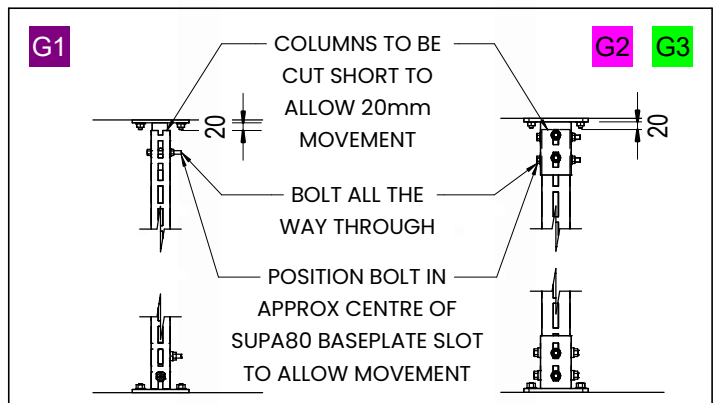
STANDARD SP80 BASEPLATE CONNECTION AS PER DETAIL AT TOP OF PAGE (NO SLIDE JOINT REQUIRED)

### HURDLE VARIATION TO G3 POST

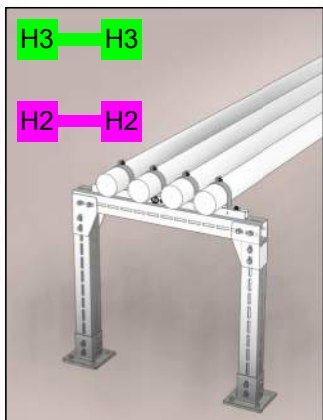


SLIDE JOINT TO ALLOW FOR VERTICAL SLAB MOVEMENT. PROVIDE 2-M12x120mm BOLTS THROUGH BRACKET. SP80 / 100-2072, ANCHORS: M16 HILTI HST3, ICCONS FM753 OR APPROVED EQUIVALENT, THROUGH BOLT ETC

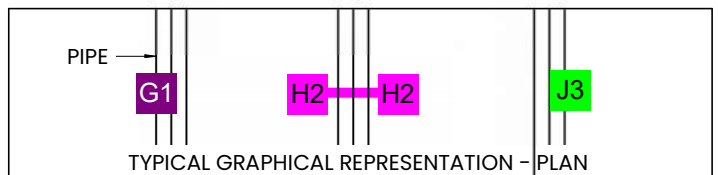
SP80 / 100-2484 ANGLE BRACKET WITH 4-SPBOLT-M12s



COLUMNS TO BE CUT SHORT TO ALLOW 20mm MOVEMENT  
 BOLT ALL THE WAY THROUGH  
 POSITION BOLT IN APPROX CENTRE OF SUPA80 BASEPLATE SLOT TO ALLOW MOVEMENT



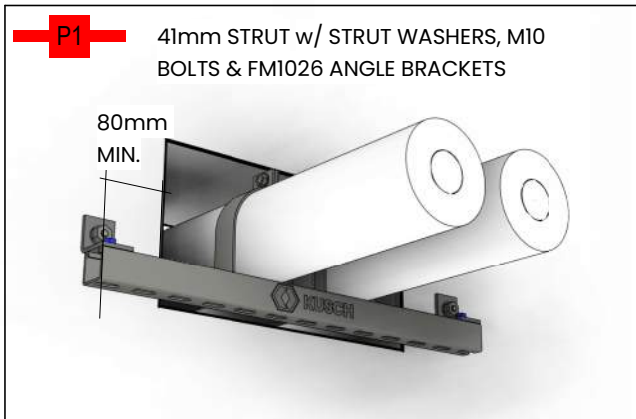
VARIATION TO H2 / H3 POST, WITH 2-SP80 / 100 -156 SHOE BRACKETS EACH WITH 8-SPBOLT-M12S. FIX PIPE TO HURDLE WITH 41mm STRUT.



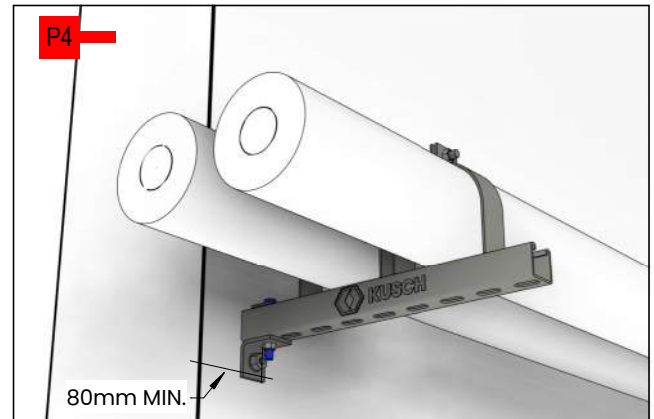
TYPICAL GRAPHICAL REPRESENTATION - PLAN

# P1,3,4 & 4T - WALL FIXED STRUT BRACES

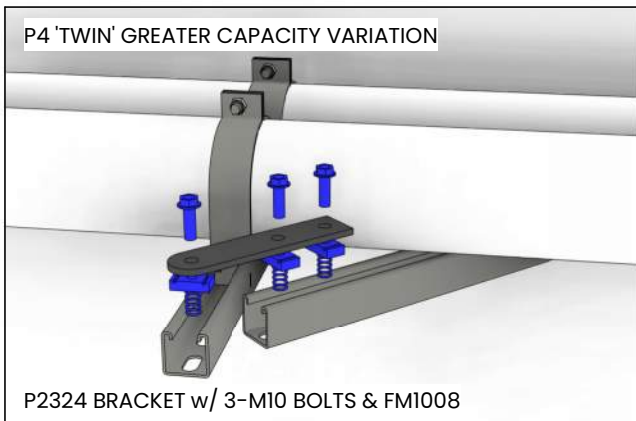
**P1**   **P3**   **P4**



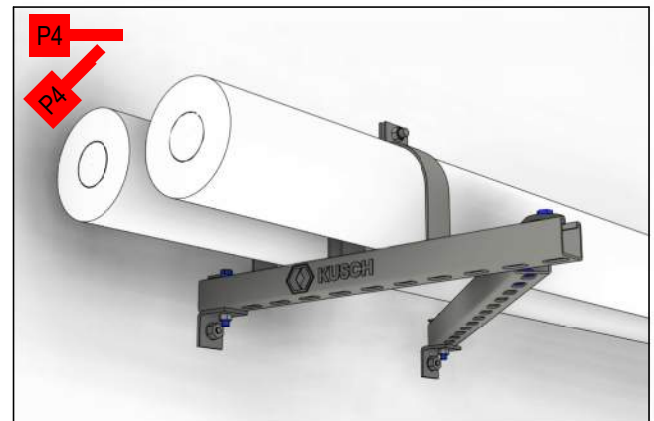
FIX PIPE TO STRUT WITH PIPE CLAMP



FIX PIPE TO STRUT WITH PIPE CLAMP



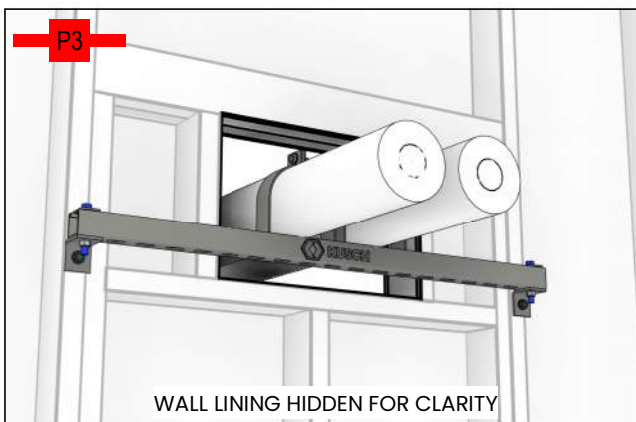
FIX PIPE TO STRUT WITH PIPE CLAMP



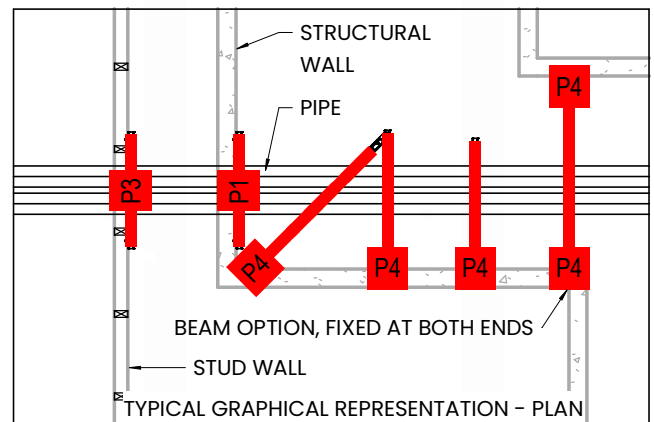
FIX TO: CONCRETE / CORE-FILLED BLOCK WALL WITH HILTI M10x90 HUS-H **OR** HILTI M10x90 HST3 **OR** M10x90 ICCONS FM753 **OR** APPROVED EQUIVALENT. (ALL ACCORDING TO MANUFACTURERS SPEC.)

FIX PIPE TO STRUT WITH PIPE CLAMP

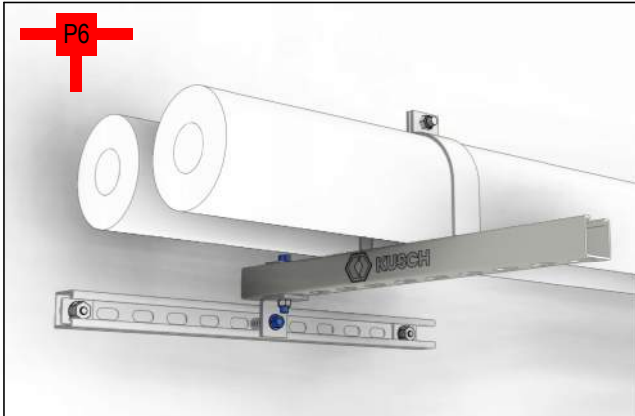
VARIATION OF P1, TO STUD WALL.



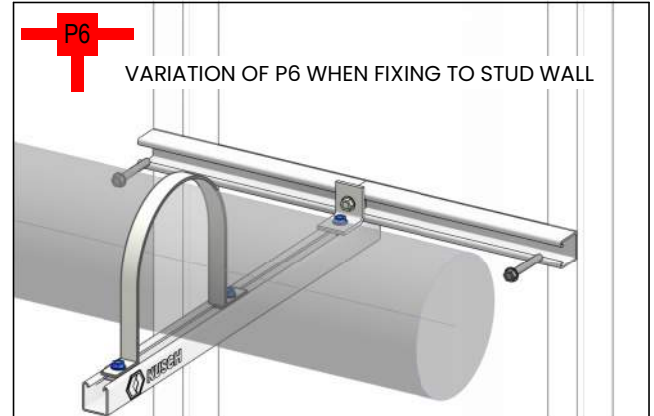
FIX PIPE TO STRUT WITH PIPE CLAMP



# P6, 9 & 9C - STRUT BRACES

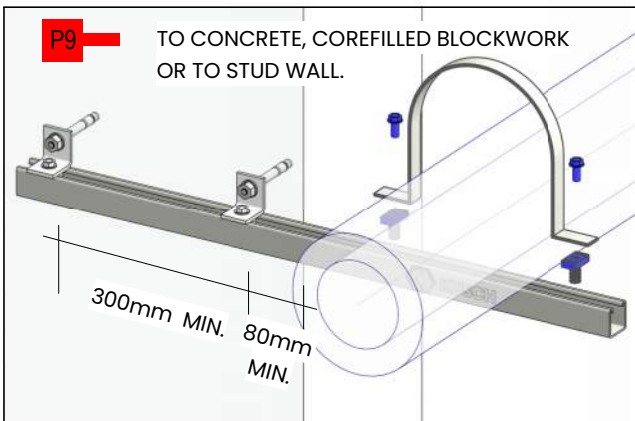


FIX PIPE TO STRUT WITH PIPE CLAMP. FIX FM1026 ANGLE BRACKET TO STRUT w/ 2-M12 BOLT & FM1008.



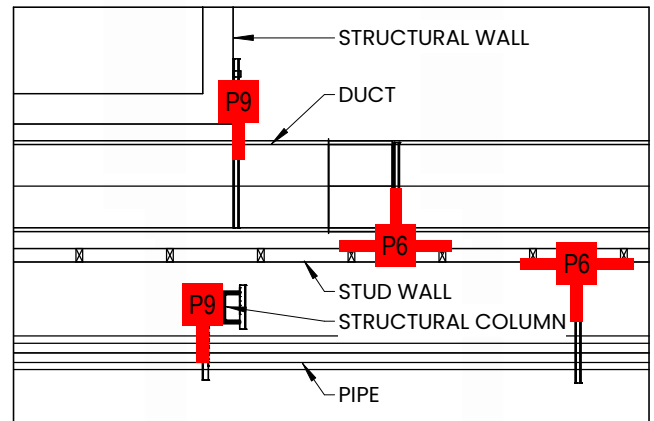
VARIATION OF P6 WHEN FIXING TO STUD WALL

STEEL FRAME - 14g TEK SCREWS  
TIMBER FRAME - M10 COACH BOLTS

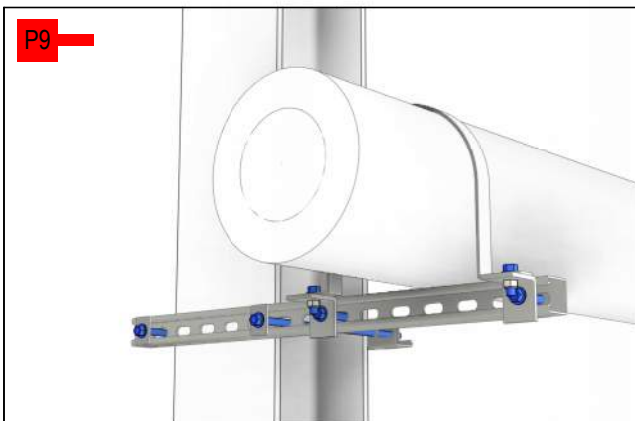


TO CONCRETE, COREFILLED BLOCKWORK OR TO STUD WALL.

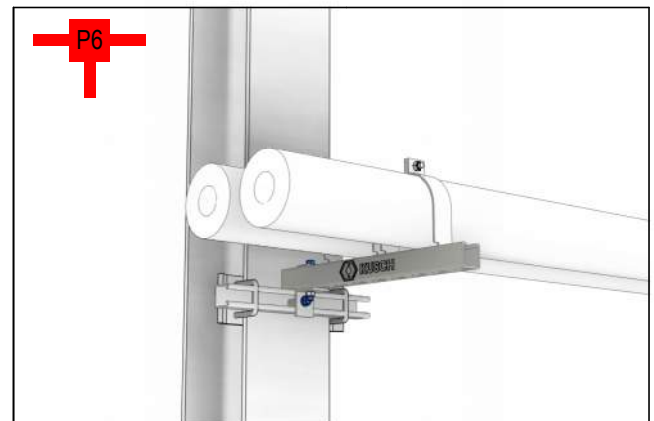
FIX PIPE w/ TYPICAL SADDLE CLAMP, M12 BOLTS & FM1008



TYPICAL GRAPHICAL REPRESENTATION - PLAN

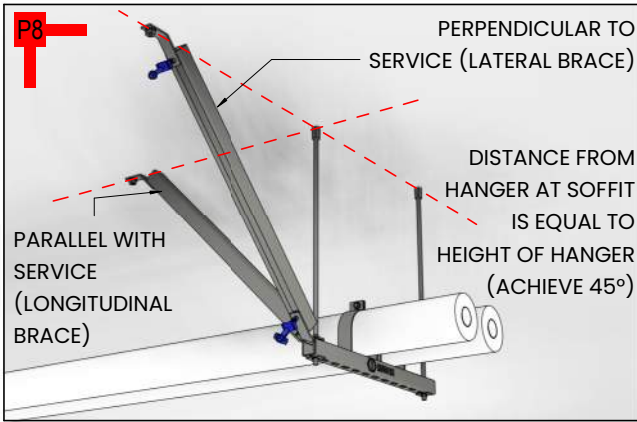


VARIATION OF P9 TO STRUCTURAL COLUMN WITH SLOTTED STRUT

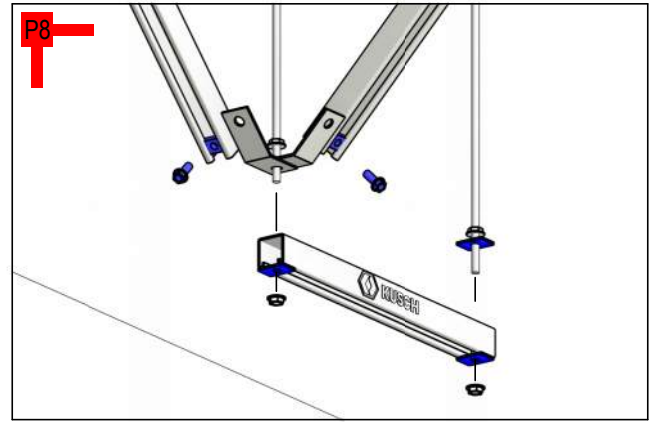


VARIATION OF P6, TO STRUCTURAL COLUMN WITH 2-FM174 CLAMPS

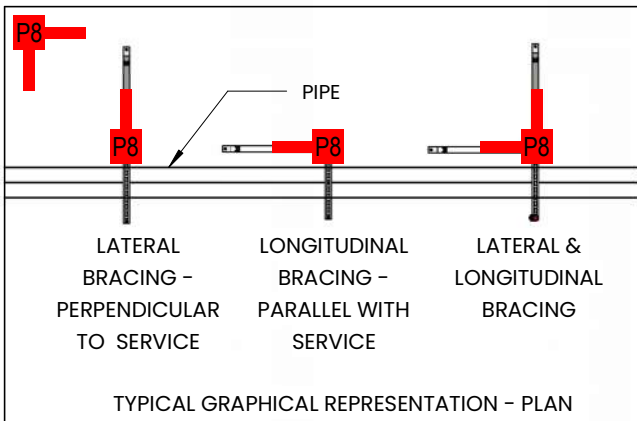
# P8 - STRUT BRACE TO SOFFIT



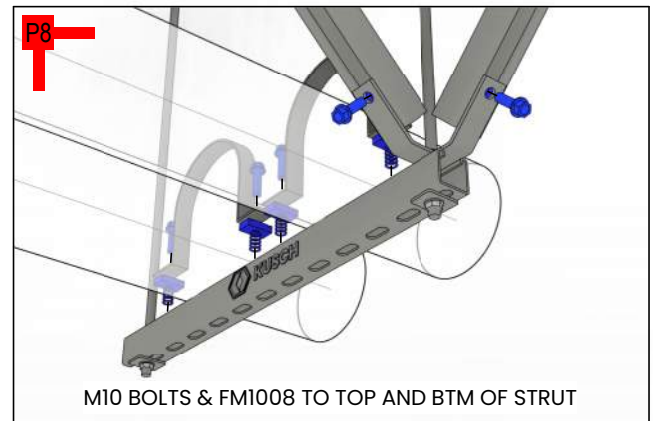
FM1546 BRACKETS TO SOFFIT TO THIS LAYOUT WITH HILTI M10x90 HUS-H OR HILTI M10x90 HST3 OR M10x90 ICCONS FM753 OR APPROVED EQUIVALENT. ALL INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPEC.80mm MIN. EDGE DISTANCE.



FM1546 BRACKETS TO HANGING RODS ABOVE STRUT TRAPEZE, & STRUT WASHERS ELSEWHERE.



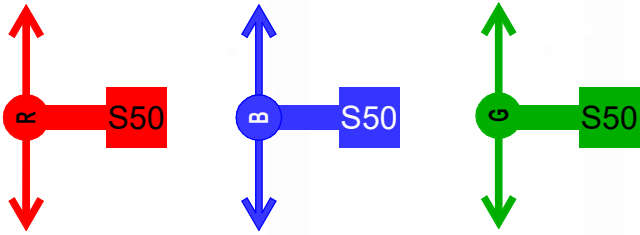
VARIATIONS ON P8 AS APPLIED BY DESIGN ENGINEER TO SPECIFIC SCENARIOS



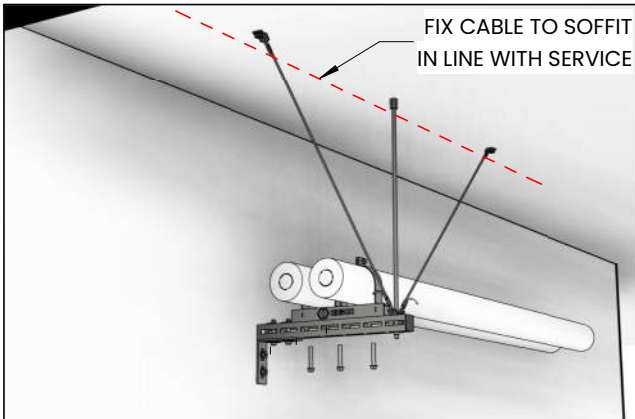
M10 BOLTS & FM1008 TO TOP AND BTM OF STRUT  
FIX PIPE w/ TYPICAL SADDLE CLAMP, M12 BOLTS & FM1008



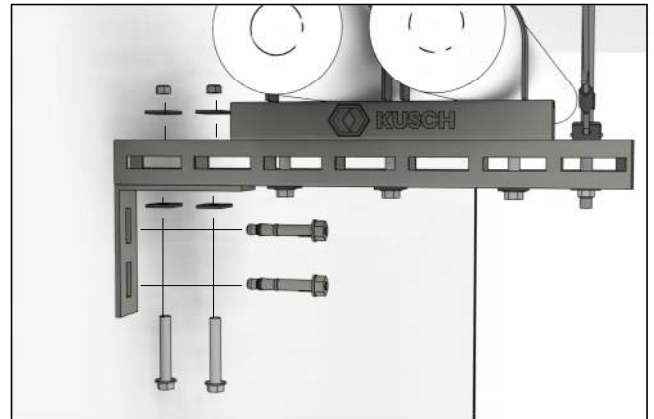
# S50 - WALL FIXED SP50 WITH CABLE



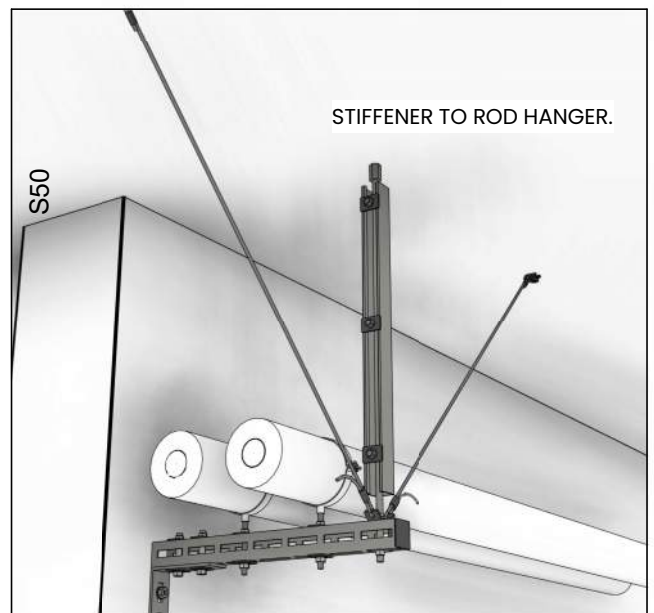
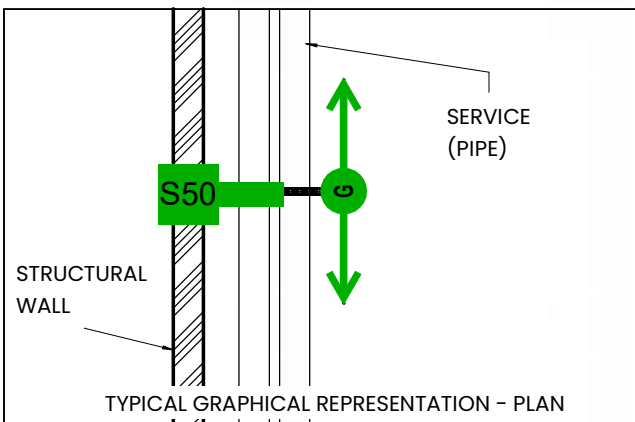
COLOURS DENOTE CABLE SPECIFIED BY SEISMIC DESIGN ENGINEER



FIX SP50 TO HANGER WITH M10 NUT & LARGE WASHERS. FIX SP50 TO STRUT WITH M10x70mm TO FM1008. USE LARGE FLAT WASHERS TO M10 BOLTS.



SP1325 ANGLE BRACKET TO WALL w/ 2-SPBOLTS M12S & HILTI M12x105 HST3 OR M10x110 ICCONS FM753 OR APPROVED EQUIVALENT. ALL INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPEC.



NOTE: S50 CAN BE APPLIED TO PIPE BY DELETING 41MM STRUT & USING TYPICAL PROPRIETARY FIXINGS AND CLAMPS DIRECTLY TO SP50. ALL ANCHOR FIXING 80mm MIN. DISTANCE TO CONCRETE EDGE.