

GENERAL NOTES:

- THESE NOTES SHALL BE READ IN CONJUNCTION WITH ICON WATER SPECIFICATIONS: STD-SPE-C-003 AND C-004
- DRAWINGS IN THIS SET. SD-8400 THROUGH SD-8405 INCLUSIVE (FORMERLY SDG-S001 THROUGH SDG-S006)

DESIGN PARAMETERS AND DESIGN LOADS

- REGIONAL WIND VELOCITIES
REGION A3
 $V_{500} = 45 \text{ m/s}$
 $V_{25} = 37 \text{ m/s}$
- TERRAIN CATEGORY 2.5
TOPOGRAPHIC MULTIPLIER
 $M_t = 1.3$
- FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 100 kPa U.N.O.
- DAVIT ARM MAXIMUM REACH = 1.1 m
- MAXIMUM VERTICAL LOAD AT DAVIT ANCHOR POINT = (REFER TO LOADING TABLE)
- ULTIMATE MOMENT AT DAVIT BASE = (REFER TO LOADING TABLE)
- SHEAR LOAD = (REFER TO LOADING TABLE)
- A SUITABLY EXPERIENCED STRUCTURAL ENGINEER HOLDING EITHER (i) CHARTERED STATUS WITH IE-AUST. OR (ii) REGISTERED PROFESSIONAL STATUS WITH PROFESSIONALS AUSTRALIA SHALL ASSESS THE SUITABILITY OF EXISTING SUPPORT STRUCTURES PRIOR TO THE DAVIT BASE CERTIFICATION PLATE BEING AFFIXED.
- EXISTING CONCRETE ASSUMED TO BE CRACKED AND UN-REINFORCED. FOR NEW CONSTRUCTION WITH REINFORCED CONCRETE, THE DESIGNER SHALL MODIFY THE EDGE DISTANCE AND CONCRETE THICKNESS ACCORDINGLY.

CHEMICAL ANCHORS

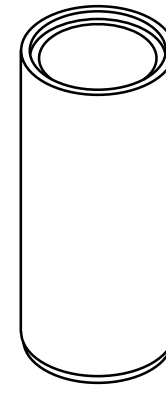
- ALL BOLTS SHALL BE M16 HILTI HIT-RE 500 V3 CHEMICAL ANCHORS WITH HIT-VR (UNO) THREADED ROD (STAINLESS STEEL) U.N.O. THE MINIMUM EMBEDMENT LENGTH SHALL BE 200 mm (UNO). ANCHORS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
- ALL BOLTS SHALL BE PROVIDED WITH 5 mm THICK OVERSIZED WASHERS, GRADE 316 STAINLESS STEEL TO ASTM A272.
- ALL NUTS, WASHERS AND FIXING PLATES SHALL BE GRADE 316 CLASS 70 STAINLESS STEEL TO ASTM A272 (UNO).
- PROVIDE LOCTITE E-60NC HYSOL EPOXY STRUCTURAL ADHESIVE TO ISOLATE DISSIMILAR METALS.
- ALL BOLTS SHALL BE FIXED WITH HILTI NUTS & ADDITIONALLY WITH LOCK NUTS.
- "BOLT ON" DAVIT BASES TO HAVE STUD PROTRUDING ABOVE NUT 1.0D (MIN.) TO 1.5D (MAX.) TO ALLOW FOR BOLT PULL OUT TESTING (WHERE "D" = NOMINAL BOLT DIAMETER).

BOLT THROUGH CONNECTIONS

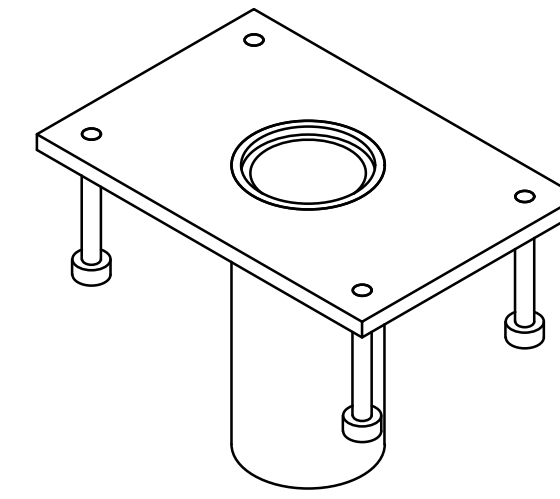
- FOUR (4) 18 DIAMETER HOLES SHALL BE FORMED TO INSTALL M16 GRADE 316 STAINLESS STEEL THREADED BARS / BOLTS TO SUIT DAVIT BASE.
- ALL BACKING PLATES, WASHERS AND NUTS SHALL BE GRADE 316 CLASS 70 STAINLESS STEEL TO ASTM A272 (UNO).
- ALL BOLTS SHALL BE PROVIDED WITH 5 mm THICK OVERSIZED WASHERS TO THE DAVIT BASE, GRADE 316 STAINLESS STEEL TO ASTM A272.
- PROVIDE LOCTITE E-60NC HYSOL EPOXY STRUCTURAL ADHESIVE TO ISOLATE DISSIMILAR METALS.
- ALL BOLTS SHALL BE FIXED WITH HILTI NUTS & ADDITIONALLY WITH LOCK NUTS.

DAVITS

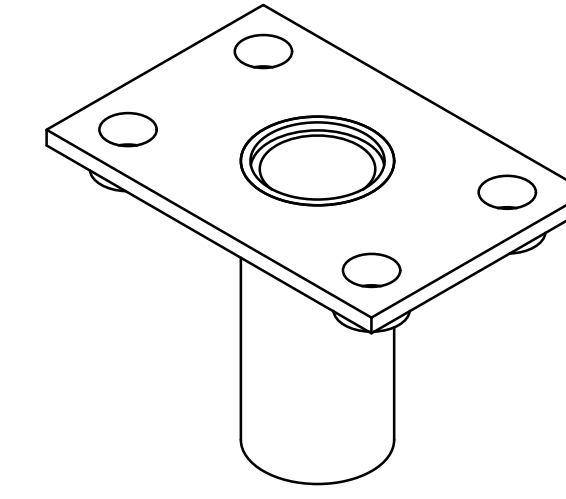
- ONLY THE DBI SALA MODEL NUMBERS SHOWN SHALL BE INSTALLED. NO OTHER MAKE / MODEL OF DAVIT BASE SHALL BE INSTALLED UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE ICON WATER PRINCIPAL ENGINEER.
- FOR INSTALLATION OF DAVIT BASES ON OR INTO STRUCTURAL STEEL, AN INDEPENDENT STRUCTURAL ENGINEER WHO'S QUALIFICATIONS / EXPERIENCE SATISFYING THE REQUIREMENTS OF NOTE 10 SHALL BE ENGAGED TO PROVIDE DESIGN CERTIFICATION TO SUIT THE STRUCTURAL DESIGN REQUIREMENTS. THAT IS, EXISTING INSTALLATIONS SHALL BE CERTIFIED FOR STRUCTURAL DESIGN LOADS BASED ON A 12 kN ANCHOR POINT. NEW INSTALLATIONS SHALL BE CERTIFIED FOR A 15 kN ANCHOR POINT. REFER TO THE LOADING TABLE FOR DETAILS.
- REFER TO THE ICON WATER "APPROVED PRODUCT LIST" FOR A COMPLETE LIST OF APPROVED DAVIT BASES, DAVIT ARMS AND DAVIT MASTS.
- ZINC PLATED DAVIT BASES SHALL NOT BE USED. ONLY STAINLESS STEEL (FOR SEWAGE APPLICATIONS) OR GALVANISED STEEL (FOR WATER / GENERAL APPLICATIONS) ARE APPROVED.



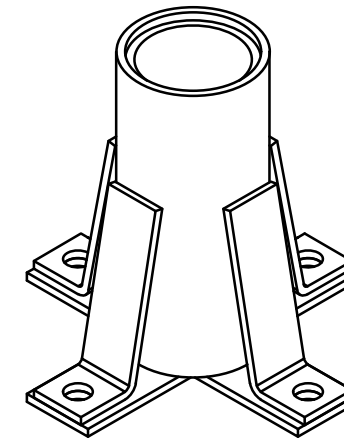
CORE MOUNT SLEEVE
MODEL No. 8510110 (STAINLESS STEEL)



FLUSH MOUNT SLEEVE (CAST IN)
MODEL No. 8512828 (STAINLESS STEEL)
MODEL No. 8510311 (GALV. CARBON STEEL)

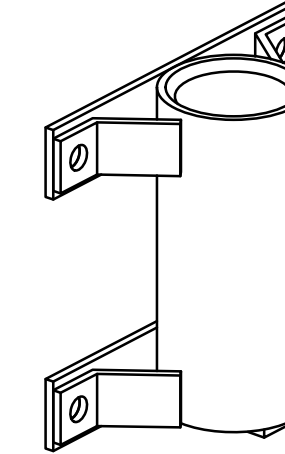


FLUSH MOUNT SLEEVE (BOLT IN)
MODEL No. 8512827 (STAINLESS STEEL)
MODEL No. 8510316 (GALV. CARBON STEEL)



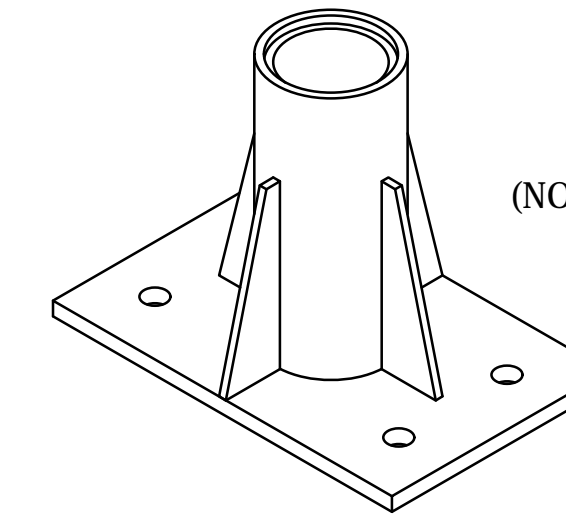
(NOTE 17)

UCL ADVANCED FLOOR MOUNT SLEEVE
MODEL No. 8518347 (STAINLESS STEEL)
MODEL No. 8518503 (GALV. CARBON STEEL)



(NOTE 17)

UCL ADVANCED WALL MOUNT SLEEVE
MODEL No. 8518348 (STAINLESS STEEL)
MODEL No. 8518504 (GALV. CARBON STEEL)



(NOTE 17)

CENTRE MOUNTING SLEEVE
MODEL No. 8516563 (STAINLESS STEEL)

DBI-SALA FIXED DAVIT BASES
ISOMETRIC VIEWS

LOADING TABLE				
PRODUCT NAME	STRUCTURAL DESIGN LOAD (12 kN ANCHOR)	STRUCTURAL DESIGN LOAD (15 kN ANCHOR)	PRODUCT RATED LOAD (FROM MANUFACTURER)	PRODUCT PROOF-TESTING LOAD (FROM MANUFACTURER)
CORE MOUNT SLEEVE	ULTIMATE MOMENT = 13.2 kNm ULTIMATE VERTICAL LOAD = 12.0 kN	ULTIMATE MOMENT = 16.5 kNm ULTIMATE VERTICAL LOAD = 15.0 kN	MOMENT LOAD = 8.8 kNm VERTICAL LOAD = 8.0 kN	MOMENT LOAD = 4.4 kNm PULLOUT LOAD = N/A
FLUSH MOUNT SLEEVE (CAST-IN)	ULTIMATE SHEAR LOAD = 31.0 kN (ONLY APPLICABLE FOR UCL ADVANCED WALL MOUNT SLEEVE)	ULTIMATE SHEAR LOAD = 38.8 kN (ONLY APPLICABLE FOR UCL ADVANCED WALL MOUNT SLEEVE)	SHEAR LOAD = 18.7 kN (ONLY APPLICABLE FOR UCL ADVANCED WALL MOUNT SLEEVE)	MOMENT LOAD = 4.4 kNm PULLOUT LOAD = N/A
FLUSH MOUNT SLEEVE (BOLT-IN)				MOMENT LOAD = 4.4 kNm PULLOUT LOAD = 13.3 kN PER BOLT
UCL ADVANCED FLOOR MOUNT SLEEVE				MOMENT LOAD = 4.4 kNm PULLOUT LOAD = 12.4 kN PER BOLT
UCL ADVANCED WALL MOUNT SLEEVE				MOMENT LOAD = 4.4 kNm PULLOUT LOAD = 10.3 kN PER BOLT
CENTRE MOUNTING SLEEVE				MOMENT LOAD = 4.4 kNm PULLOUT LOAD = 14.4 kN PER BOLT

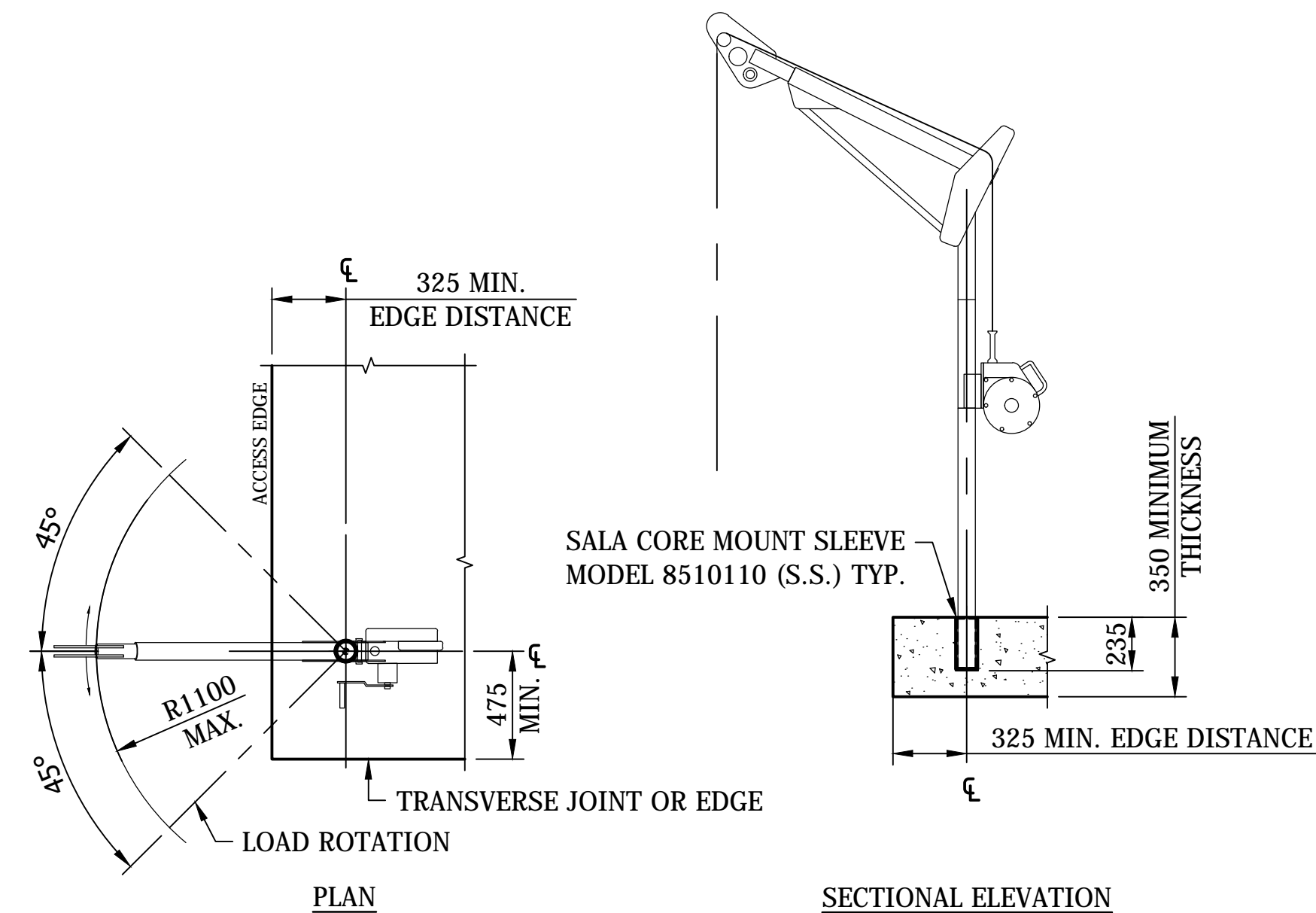
A	INITIAL ISSUE	15/06/2018	K. Patel	K. Danenbergson	D. Eager
No.	ISSUE	DATE	DRAWN	CHECKED	AUTHORISED

DAM	RES	SPS	
BWS	WAT	STP	
WTP	SEW		
WPS	REC		
ASSET AREA APPLICABILITY			

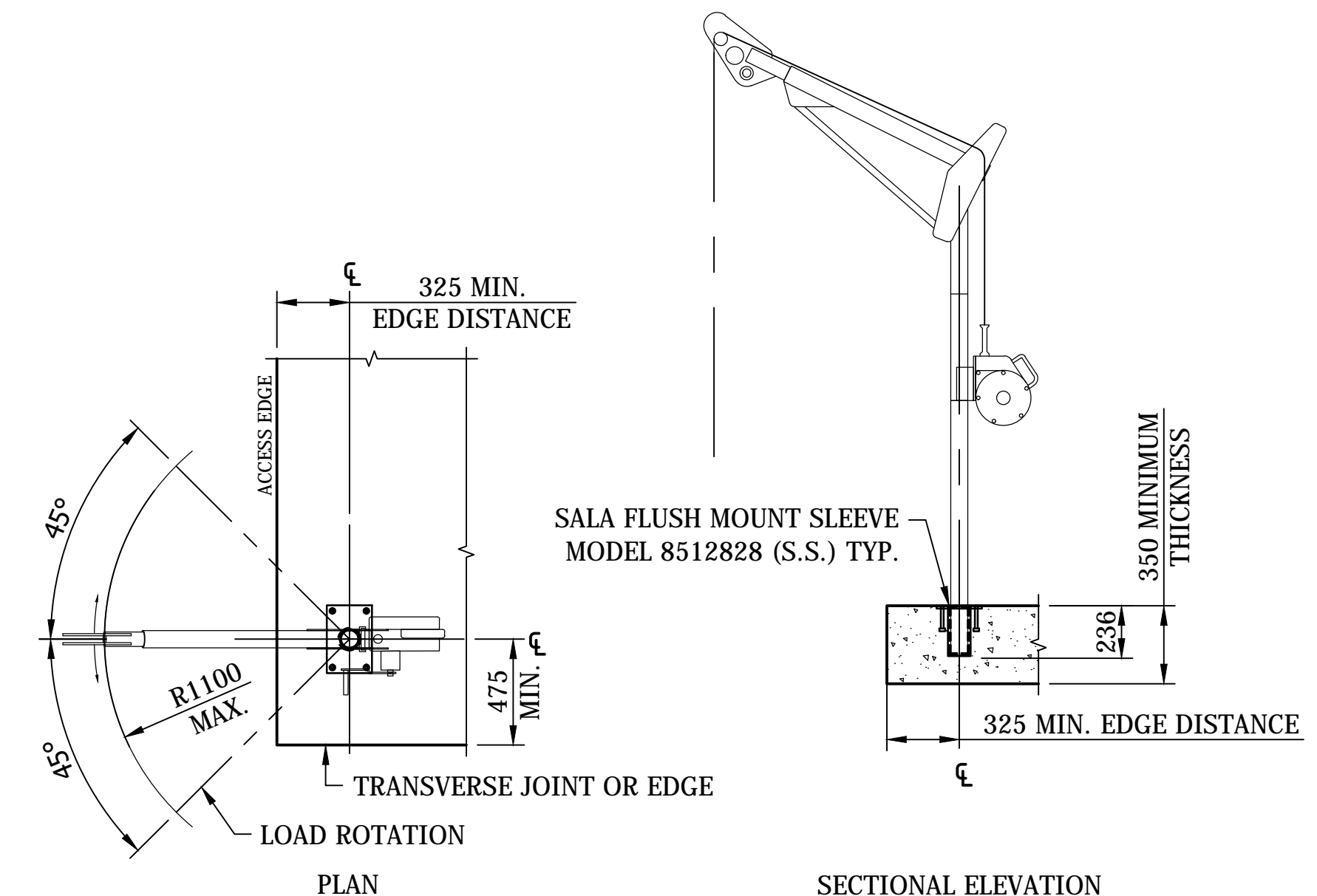


STANDARD DRAWING
PERMANENT DAVIT BASES (DBI SALA)
INSTALLATION INTO / ON UNREINFORCED CONCRETE
GENERAL NOTES

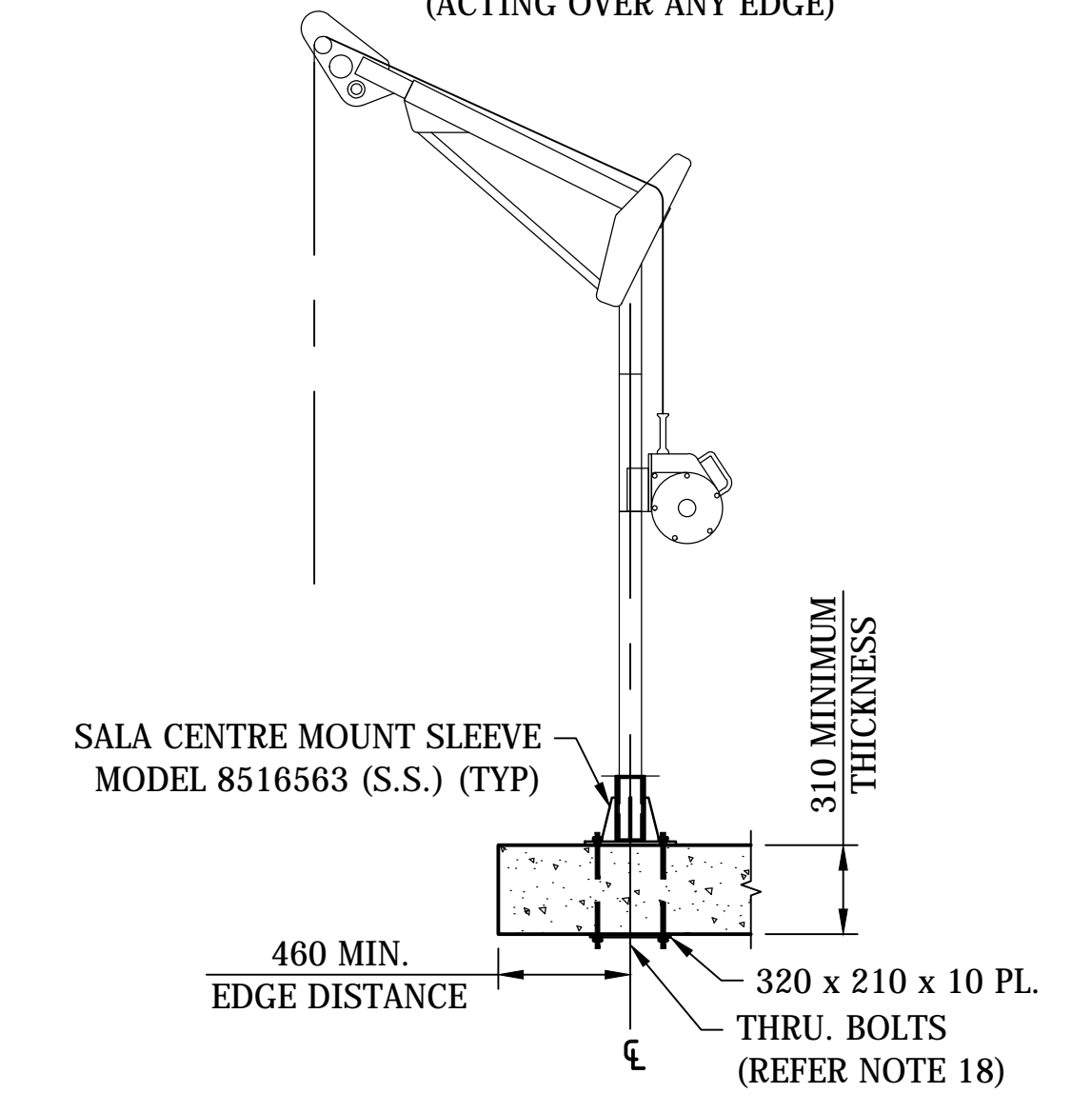
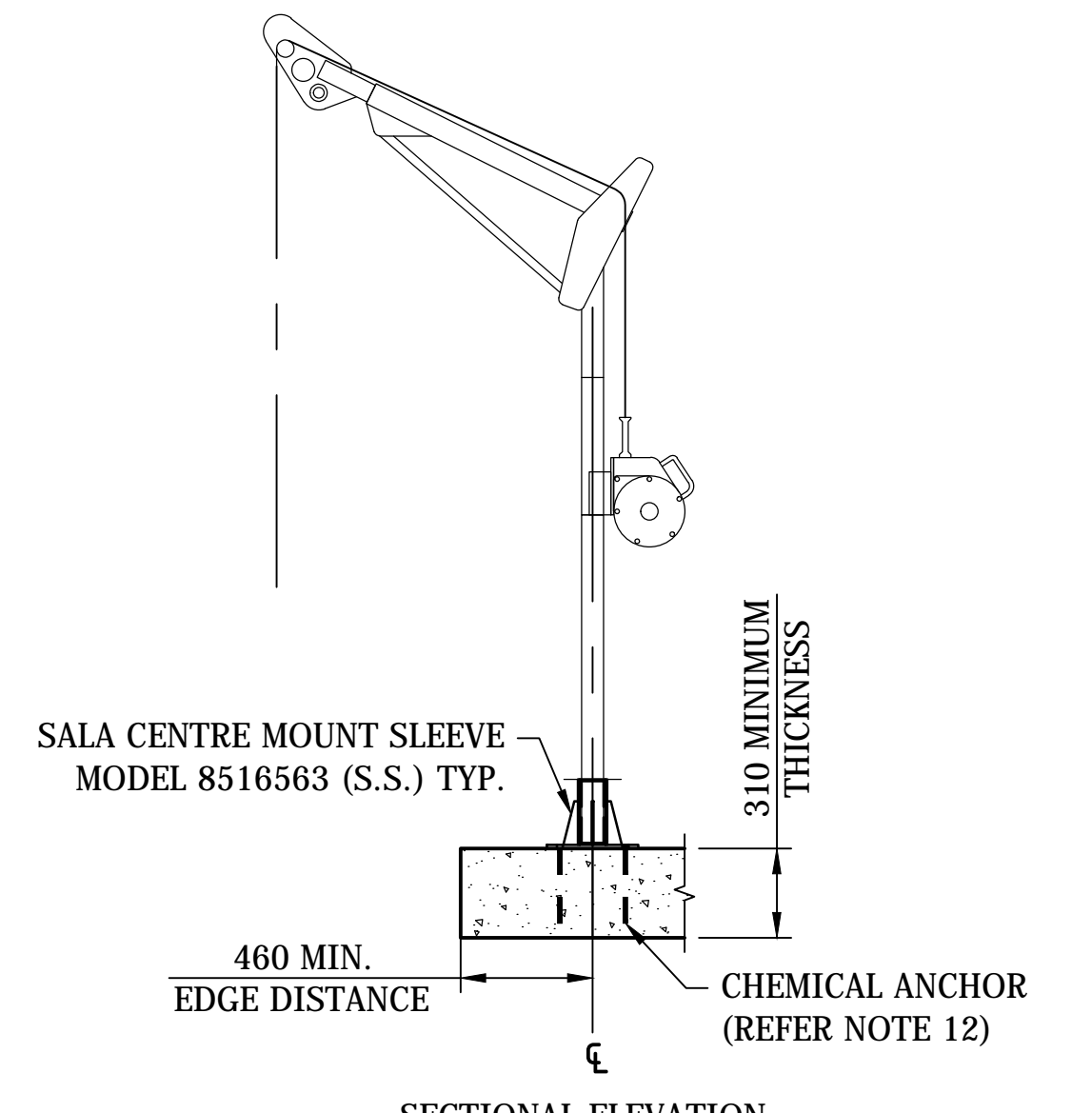
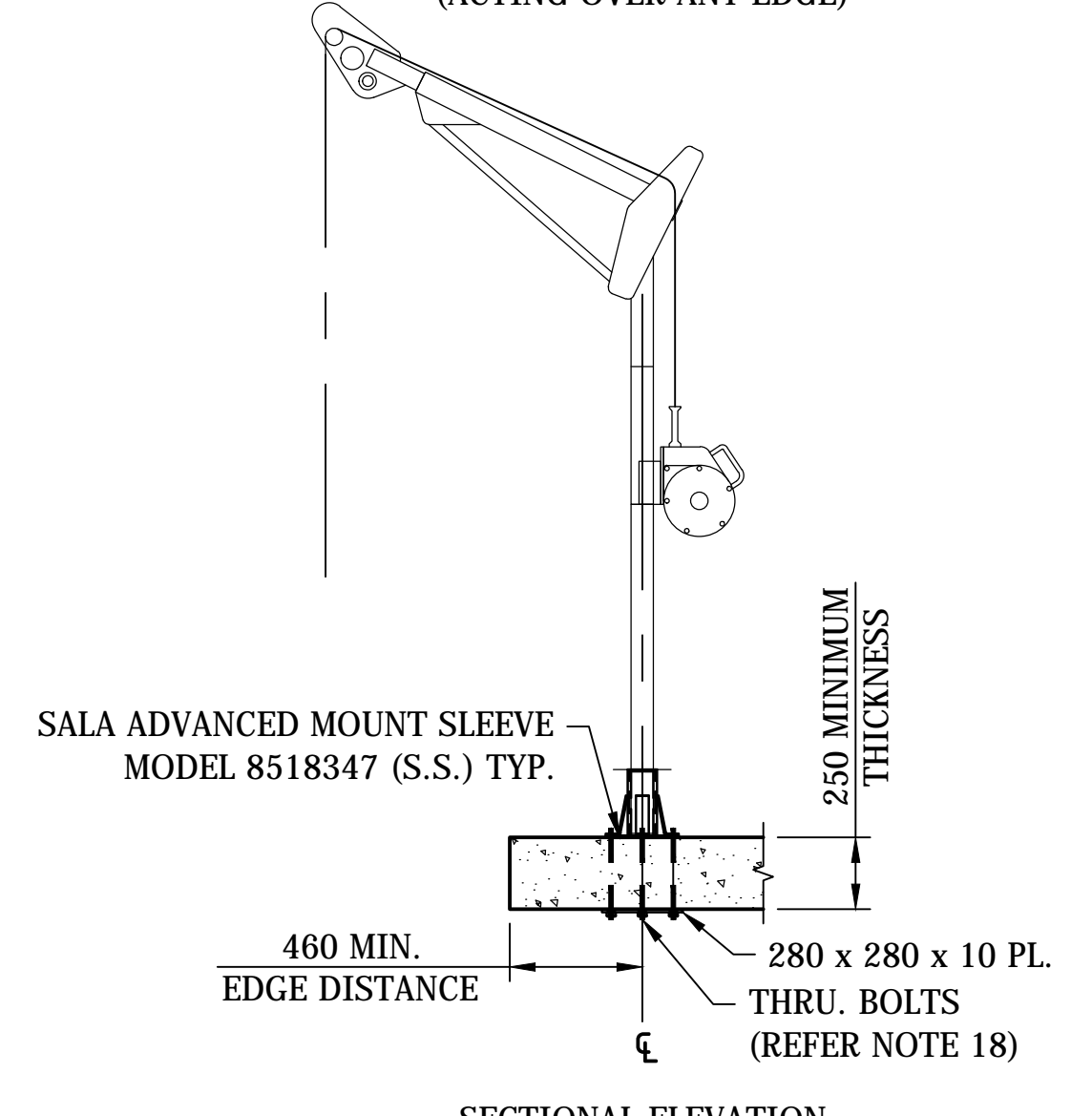
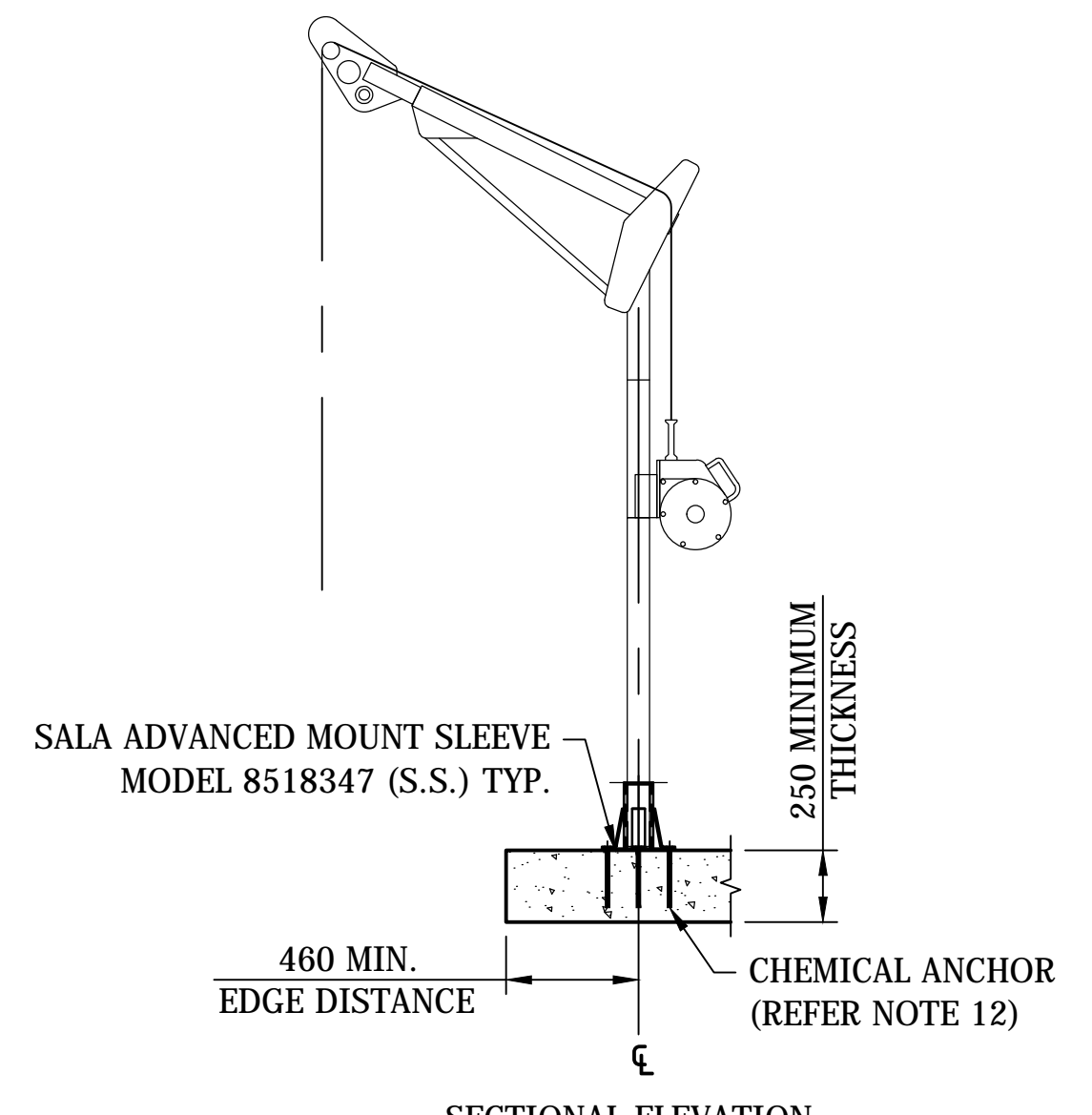
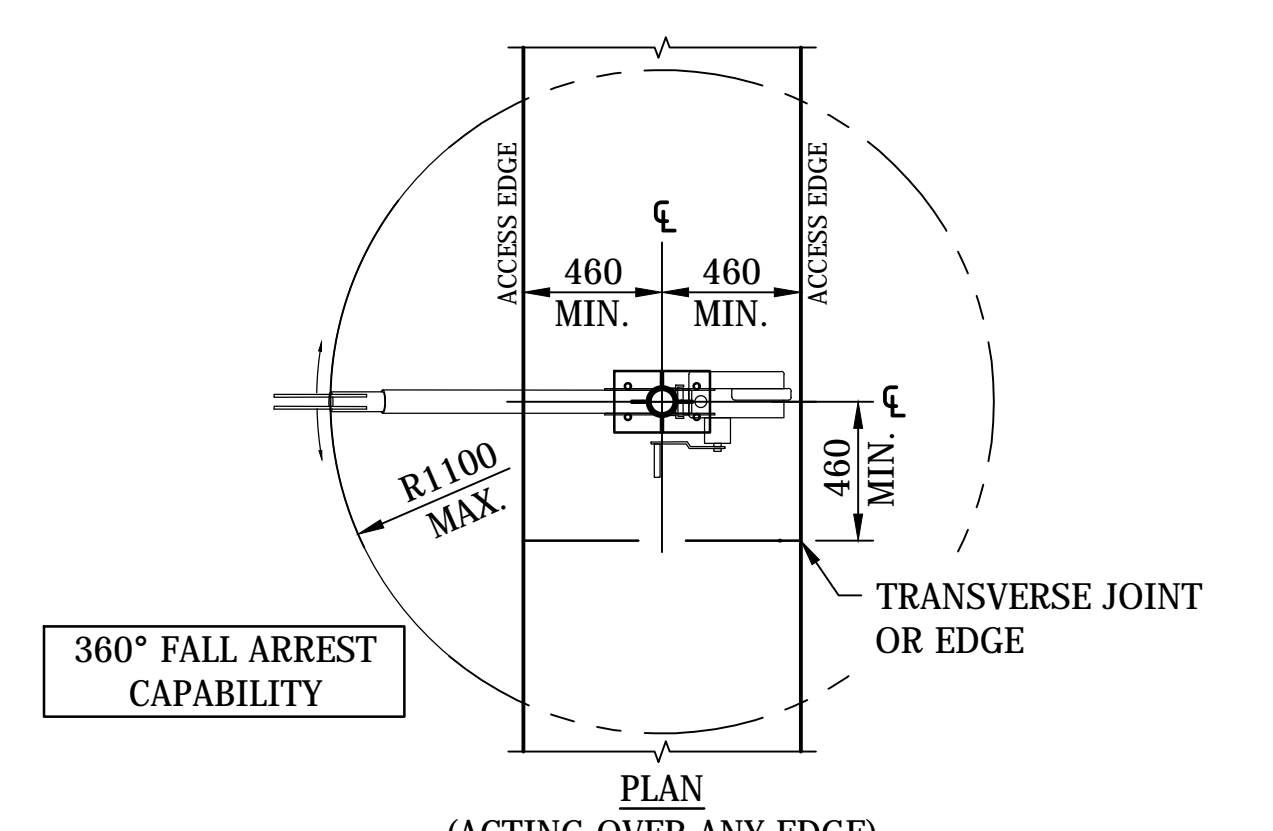
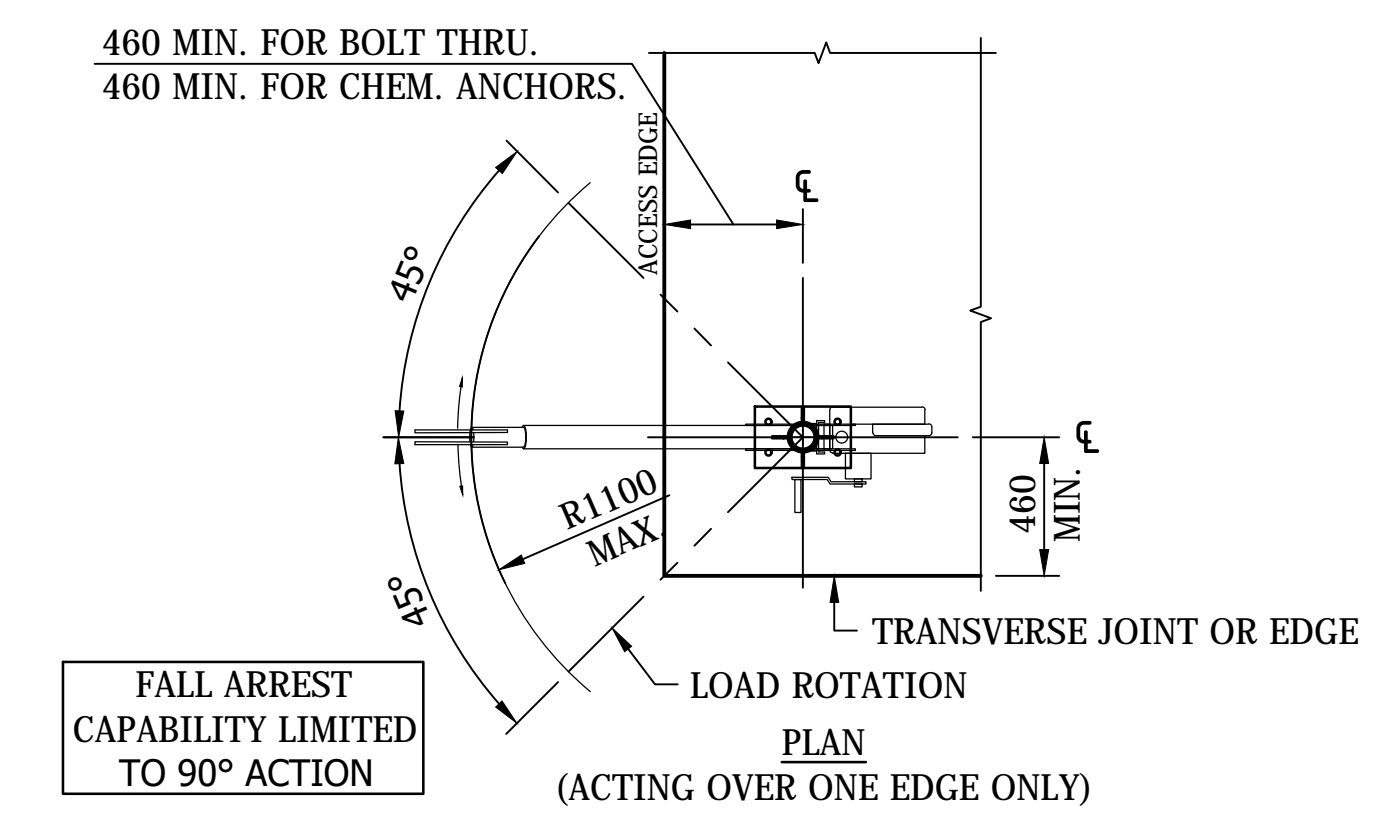
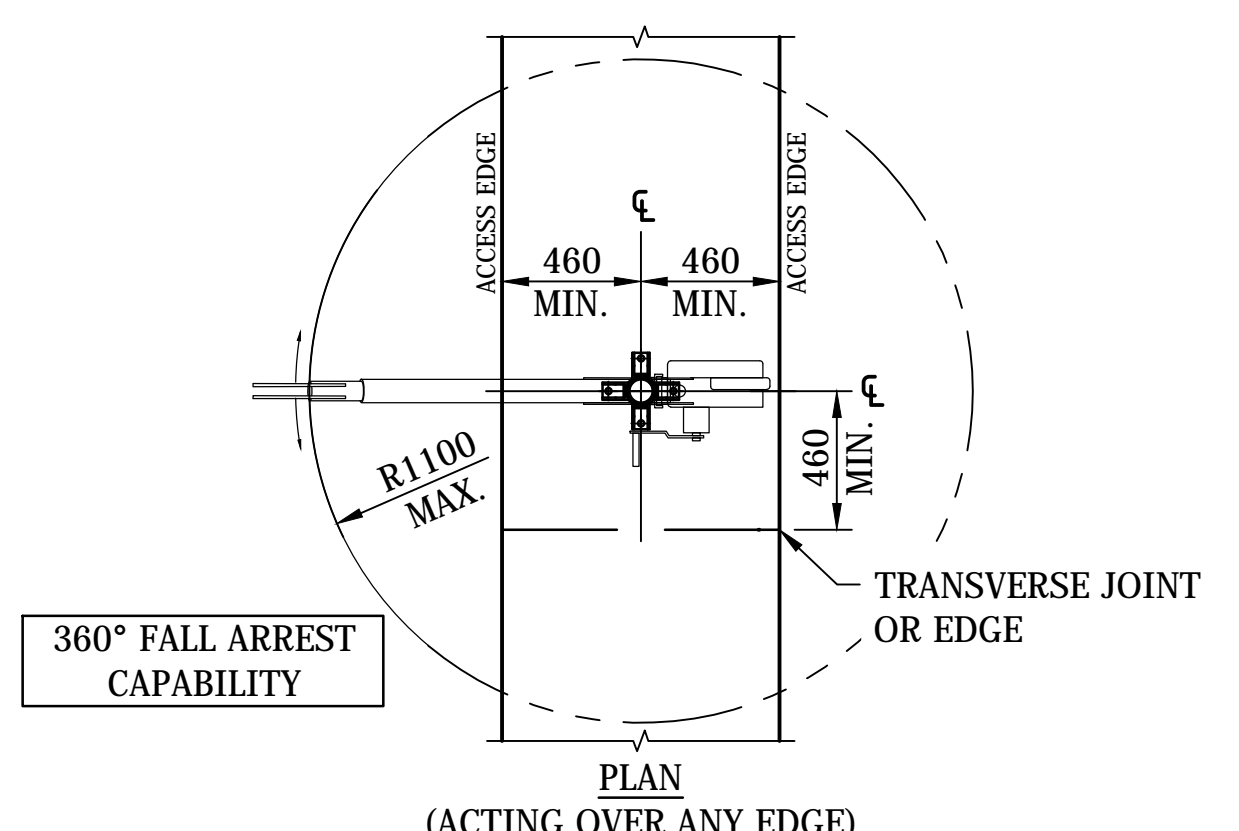
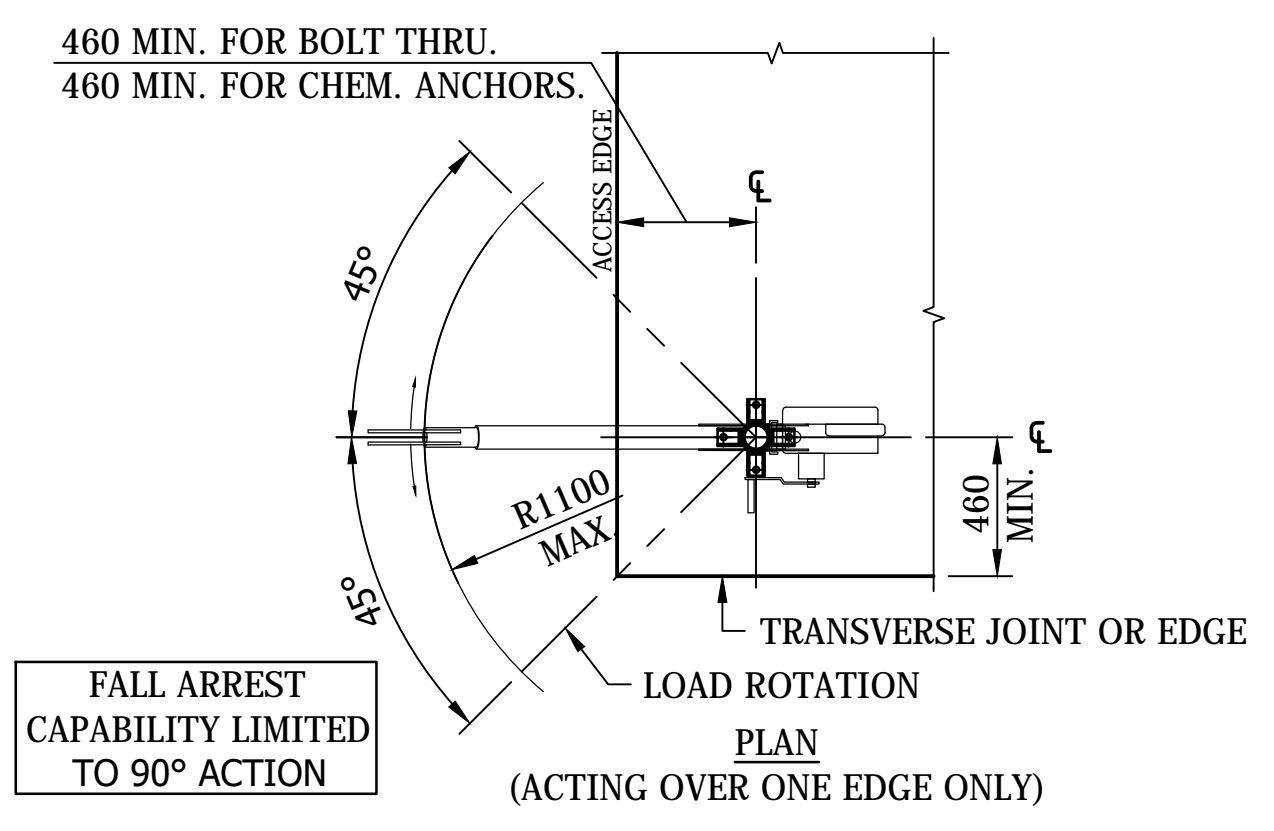
DRAWING STATUS	
Current	
SD-8400-C	
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TYPE A INSTALLATION - CORE MOUNT SLEEVE
SCALE 1:20



TYPE B INSTALLATION - FLUSH MOUNT SLEEVE
SCALE 1:20



**TYPE C INSTALLATION
ADVANCED FLOOR MOUNT SLEEVE
CHEMICAL ANCHOR FIXING**
SCALE 1:25

**TYPE D INSTALLATION
ADVANCED FLOOR MOUNT SLEEVE
BOLTED THROUGH FIXING**
SCALE 1:25

**TYPE E INSTALLATION - CENTRE MOUNT SLEEVE
CHEMICAL ANCHOR FIXING**
SCALE 1:25

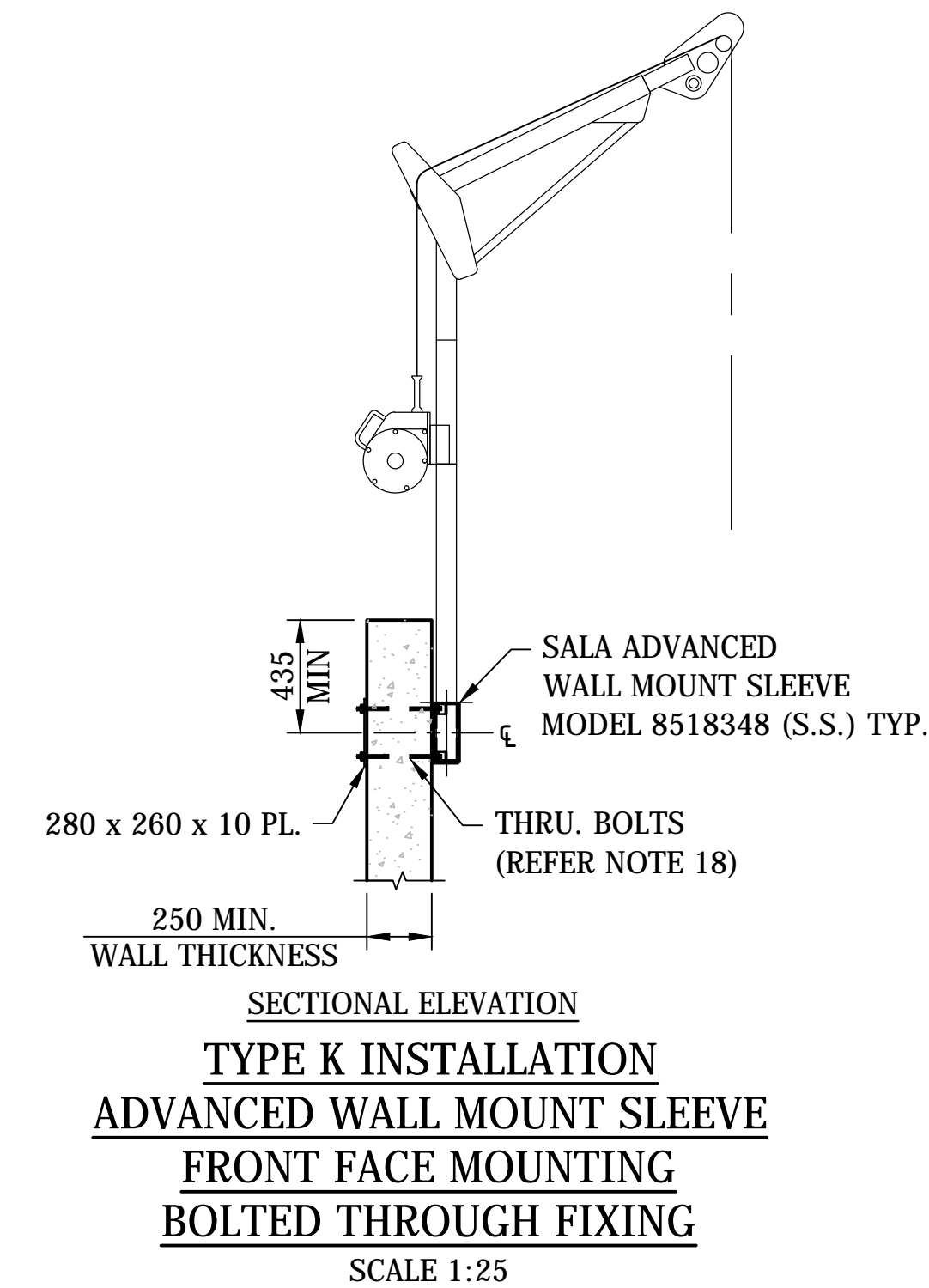
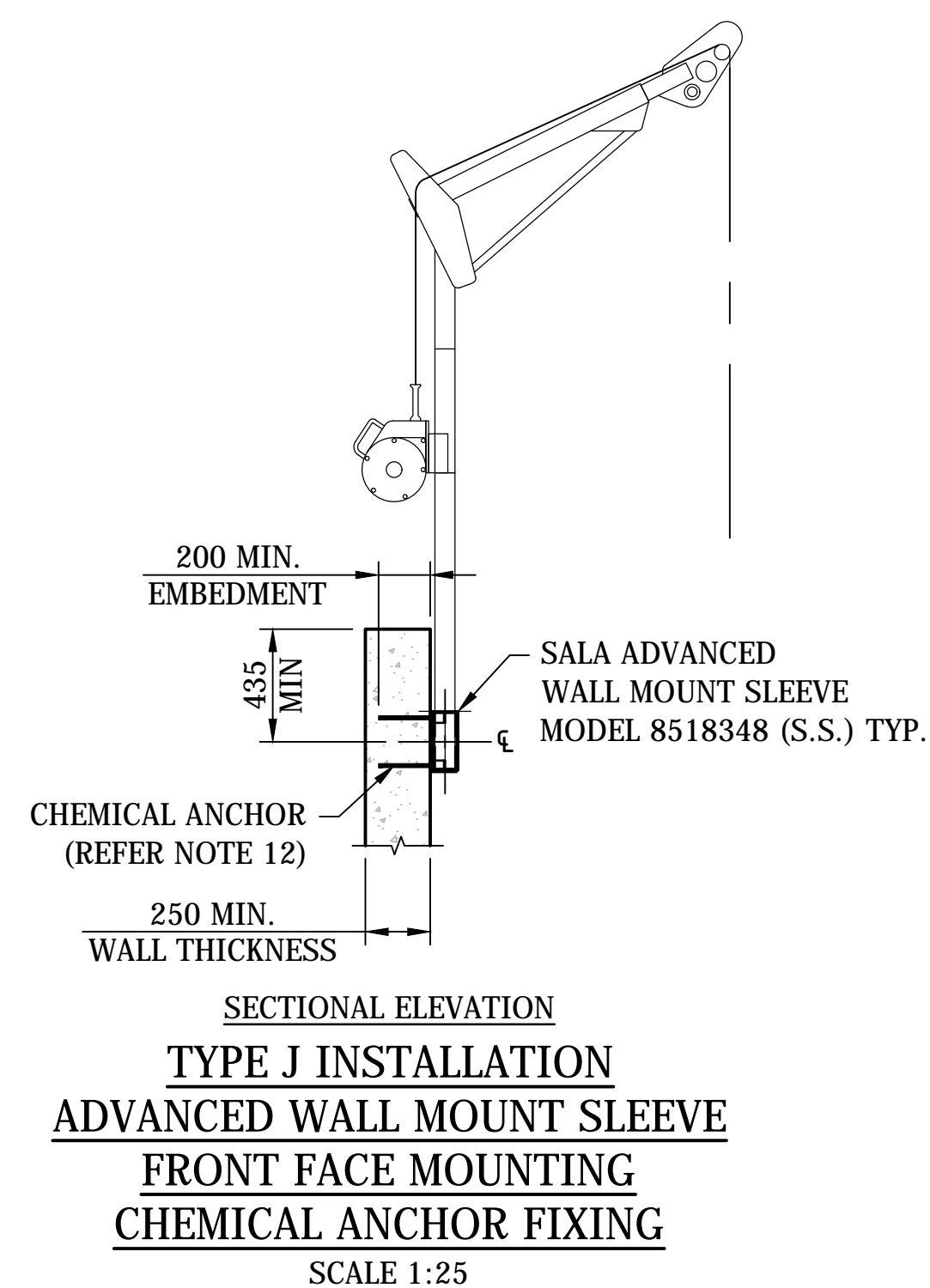
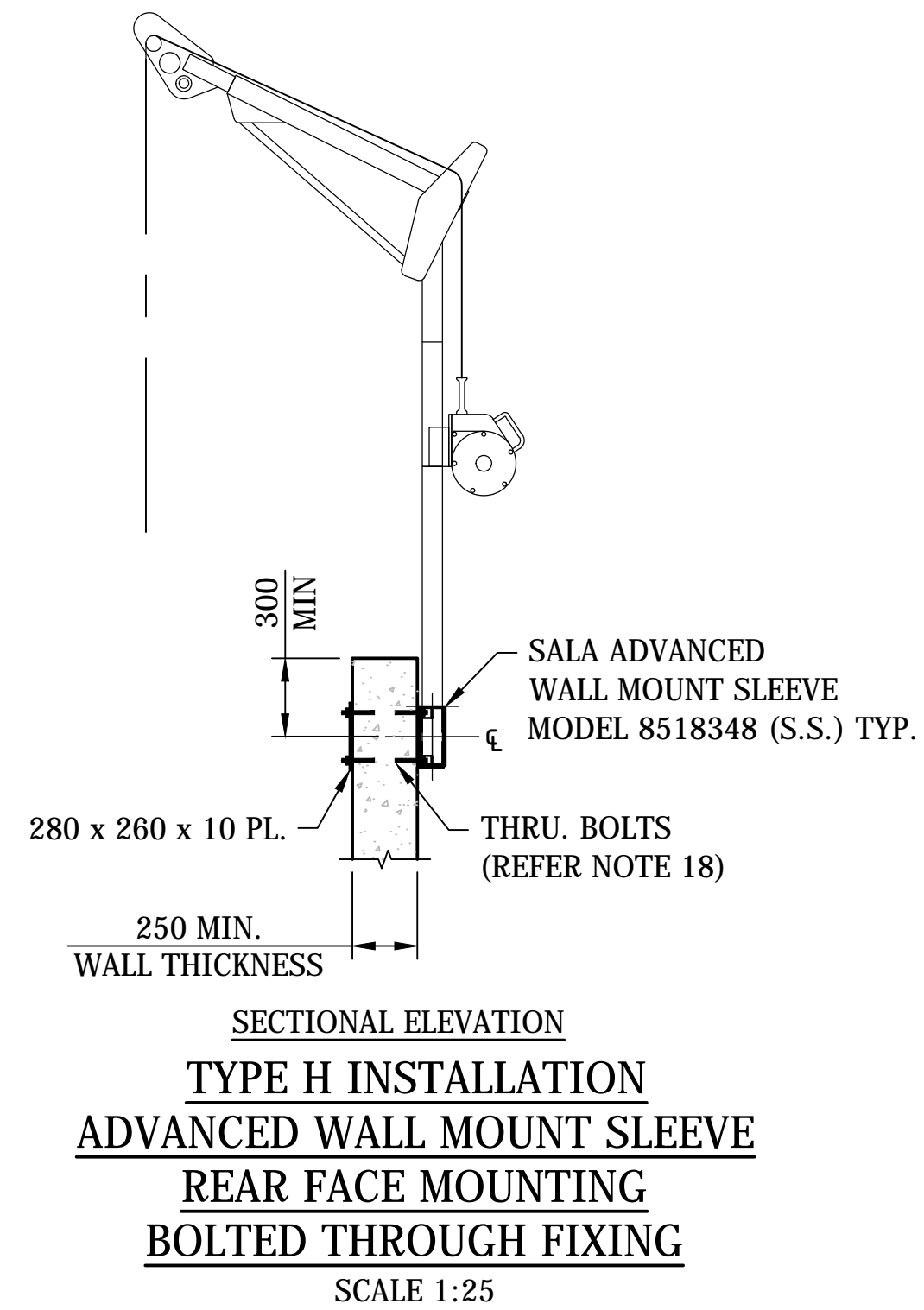
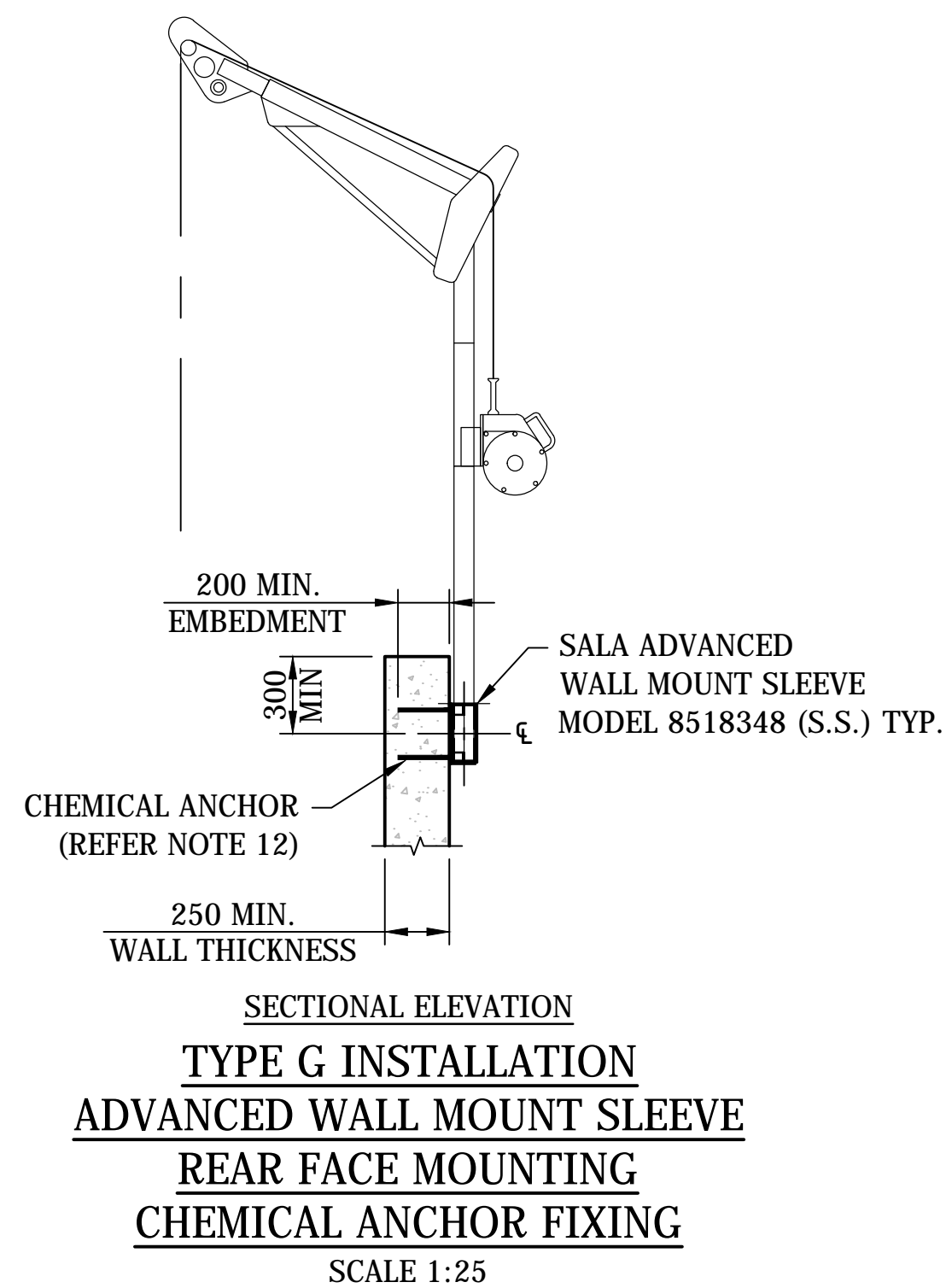
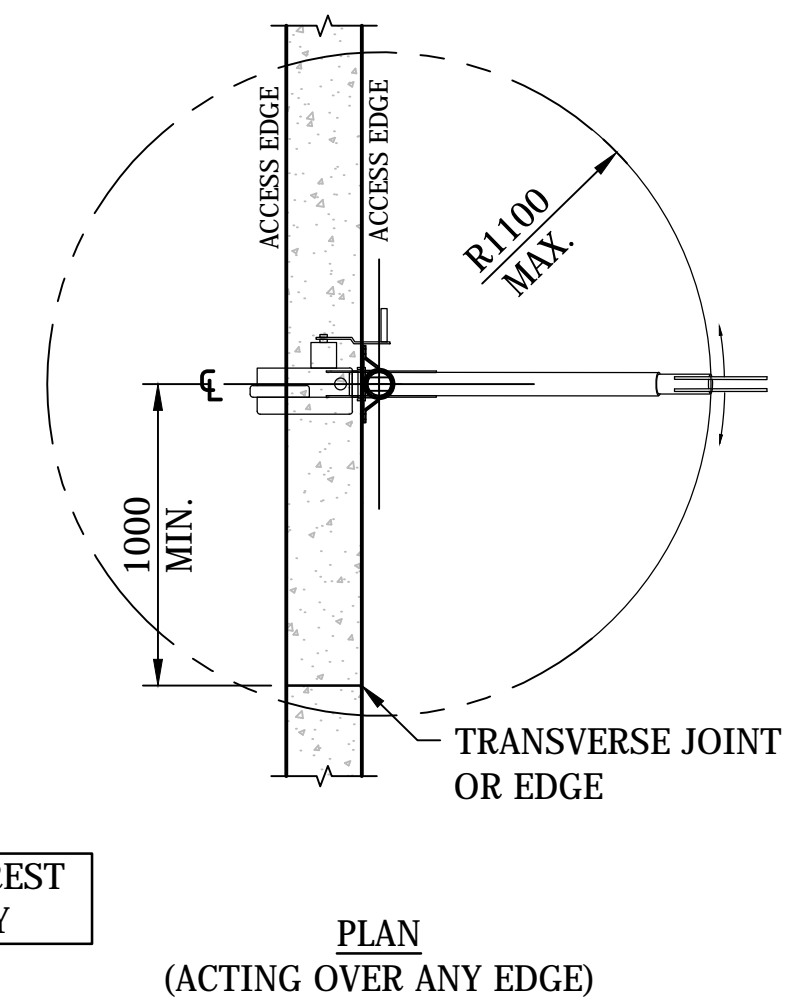
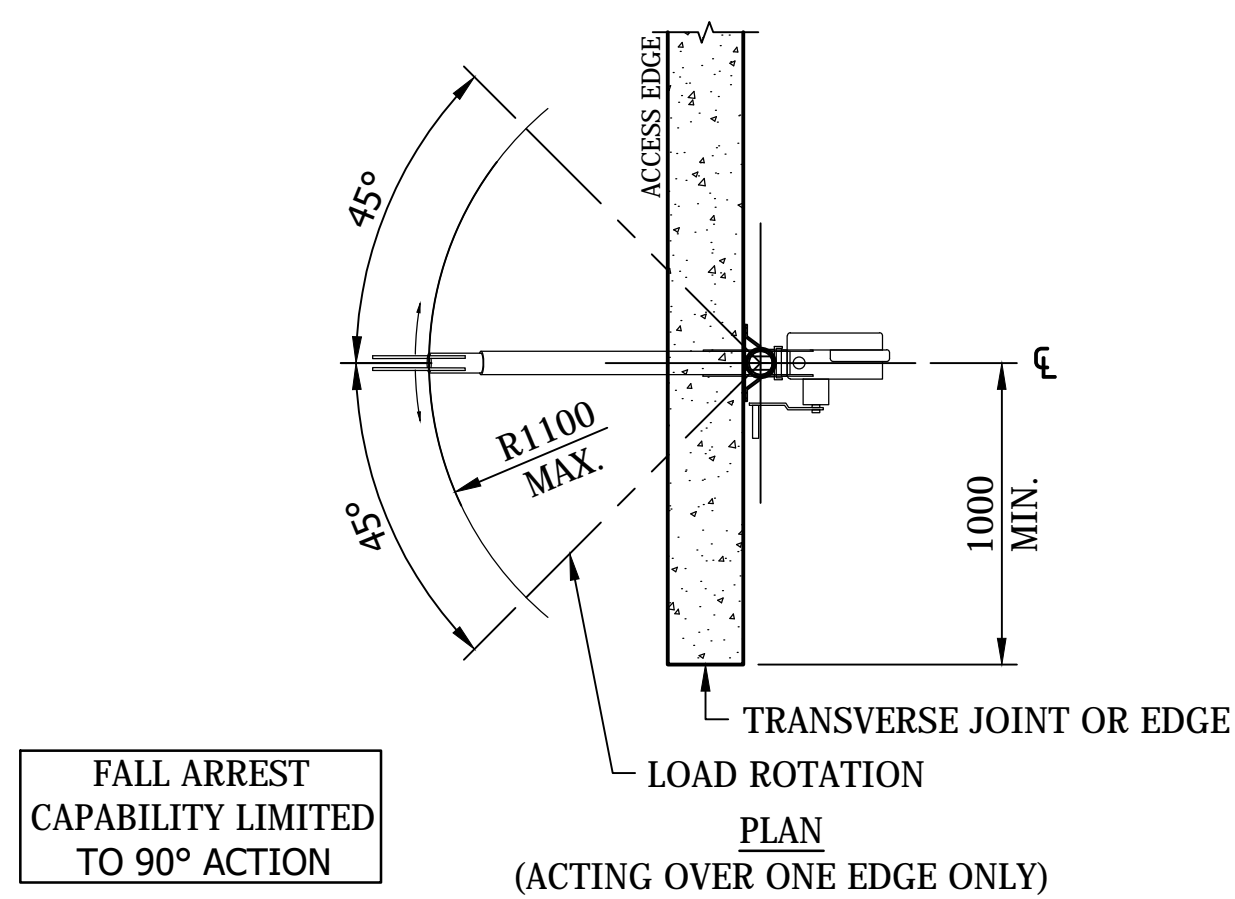
**TYPE F INSTALLATION - CENTRE MOUNT SLEEVE
BOLTED THROUGH FIXING**
SCALE 1:25

DAM	RES	SPS	
BWS	WAT	STP	
WTP	SEW		
WPS	REC		



STANDARD DRAWING
PERMANENT DAVIT BASES (DBI SALA)
12 kN INSTALLATION INTO / ON UNREINFORCED CONCRETE
DETAILS SHEET 1 OF 2

DRAWING STATUS	
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No.	ISSUE	DATE	DRAWN	CHECKED	AUTHORISED
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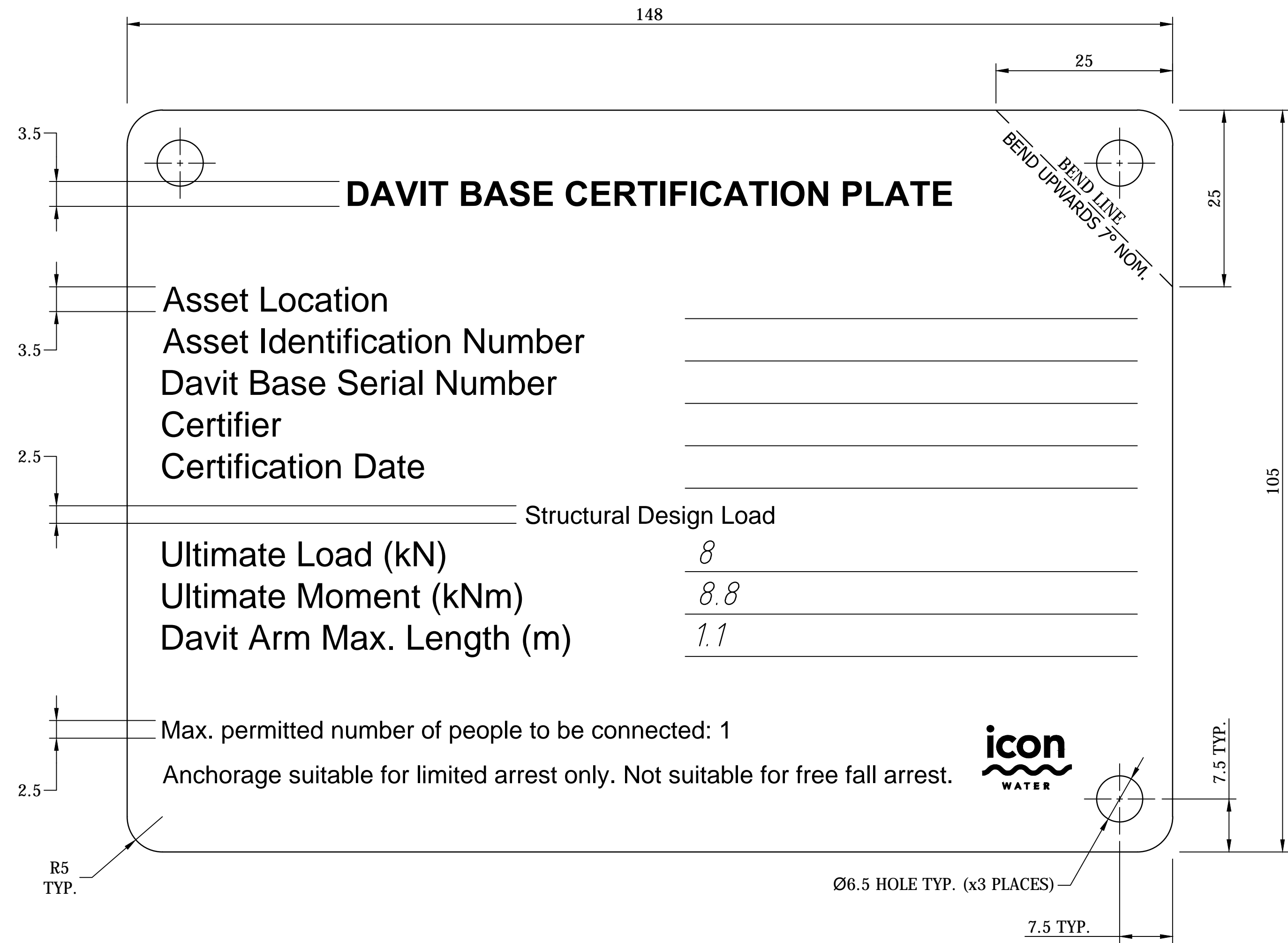
DAM	RES	SPS
BWS	WAT	STP
WTP	SEW	
WPS	REC	

ASSET AREA APPLICABILITY



**STANDARD DRAWING
PERMANENT DAVIT BASES (DBI SALA)
12 kN INSTALLATION INTO / ON UNREINFORCED CONCRETE
DETAILS SHEET 2 OF 2**

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DAVIT BASE CERTIFICATION PLATE
SCALE 2:1

MATERIAL: 1.6 mm THK. STAINLESS STEEL GRADE 304 PLATE
FINISH: "2B" FINISH
QTY: ONE PER INSTALLED DAVIT BASE

NOTES:

- CERTIFICATION PLATE TO BE INSTALLED WITHIN 2.0 m OF DAVIT BASE WHEREVER PRACTICABLE. REGARDLESS, INSTALLATION LOCATION SHALL MEET THE REQUIREMENTS OF AS 1891.4.
- TEXT TO BE ARIAL FONT, TEXT COLOUR TO BE BLACK AND APPLIED THROUGH LASER ENGRAVING OR SIMILAR.
- FIX TO EXISTING STRUCTURE VIA 2 x M6 S.S. CONCRETE SCREWS OR SIMILAR.
- REFER TO THE ICON WATER INTEGRATED MANAGEMENT SYSTEM IN CONJUNCTION WITH WORK INSTRUCTION WI05.14.04 "ENGINEERING ASSET IDENTIFICATION" FOR ASSET LOCATION AND IDENTIFICATION NUMBERING. "X" REFERS TO LETTER CHARACTERS; "n" REFERS TO NUMERICAL CHARACTERS.
- TEXT SHOWN IN *ITALICS* ARE EXAMPLES ONLY AND TO BE ENGRAVED PRIOR TO INSTALLATION.
- THE Ø6.5 HOLE ABOVE THE BEND LINE IS FOR ATTACHMENT OF THE INSPECTION TAG.

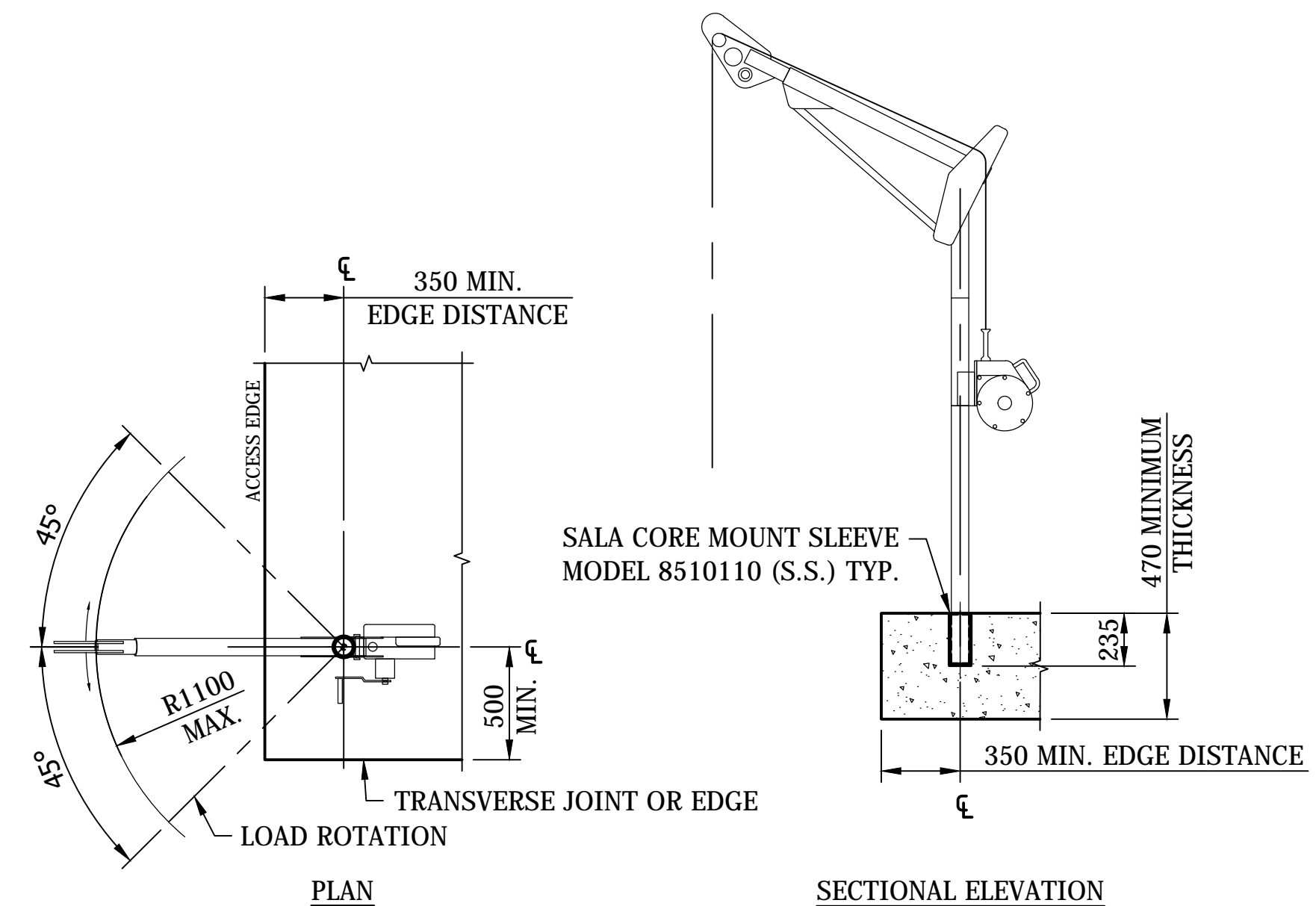
No.	ISSUE	DATE	DRAWN	CHECKED	AUTHORISED
A	INITIAL ISSUE	15/06/2018	K. Patel	K. Danenbergsons	D. Eager
B	DRAWING NOW -D	19/06/2019	S. Essey	K. Danenbergsons	C. Patrick

ASSET AREA APPLICABILITY					
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WTP	<input checked="" type="checkbox"/>	SEW	<input checked="" type="checkbox"/>		
WPS	<input checked="" type="checkbox"/>	REC	<input checked="" type="checkbox"/>		

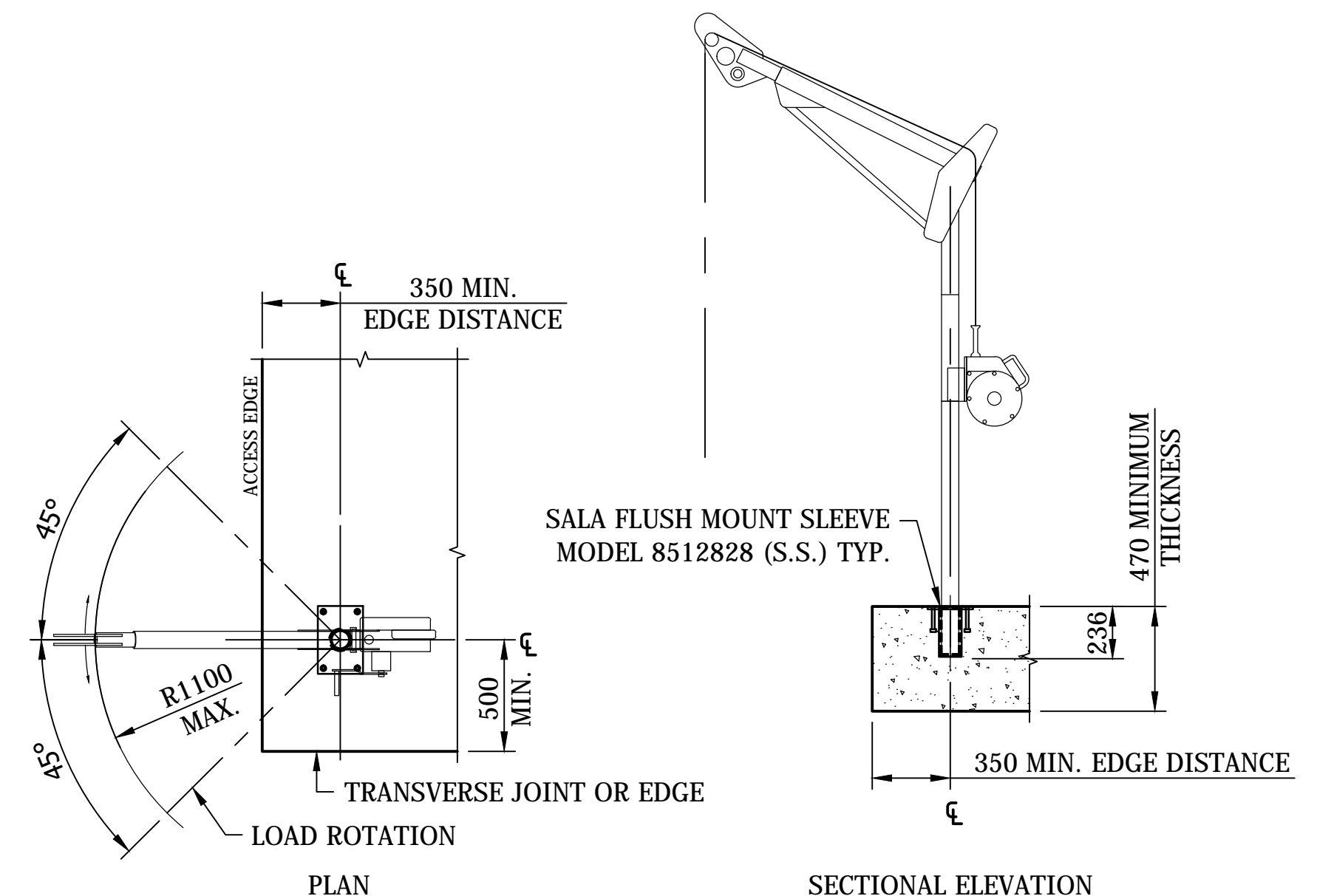


STANDARD DRAWING
PERMANENT DAVIT BASES (DBI SALA)
CERTIFICATION PLATE

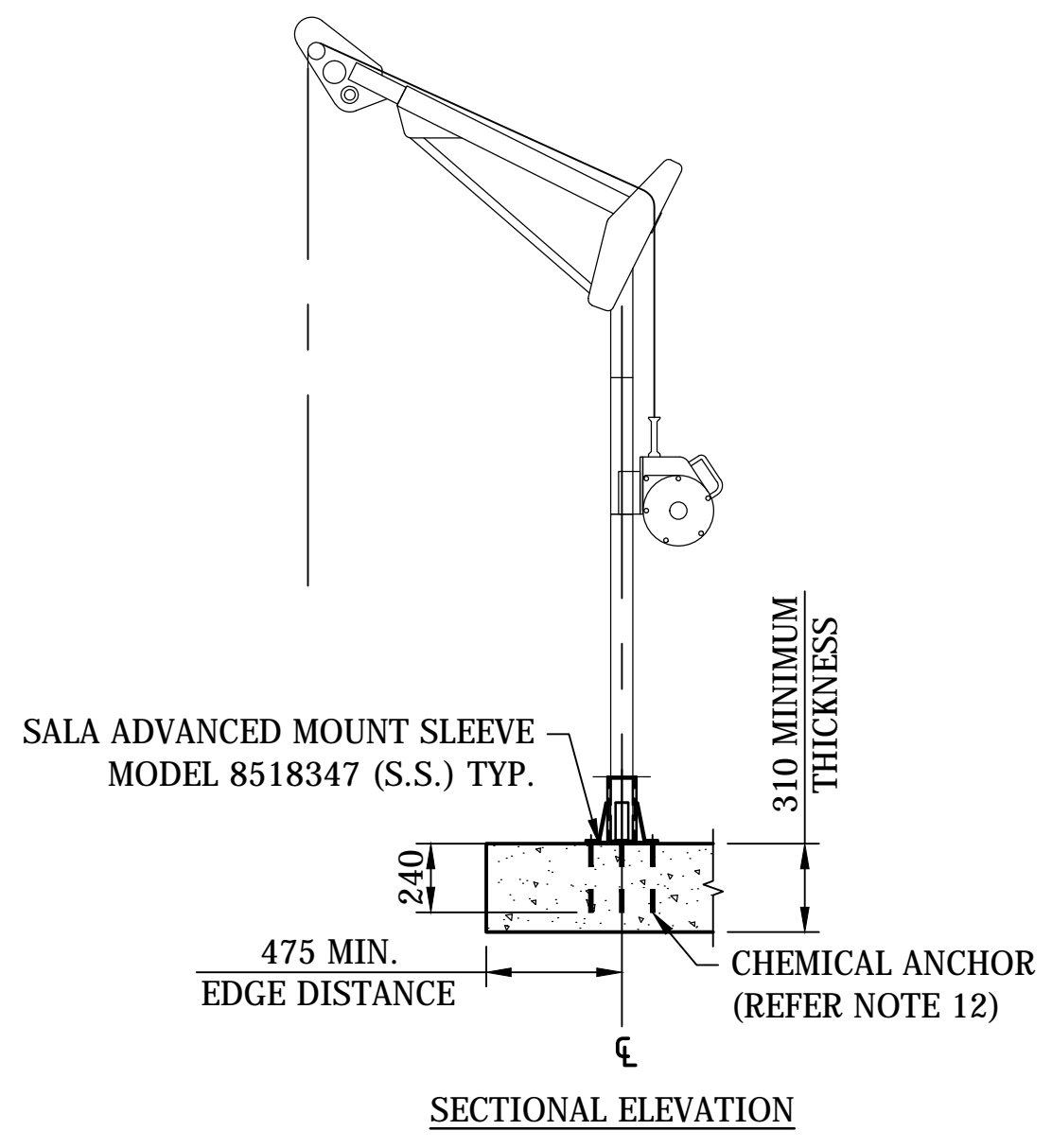
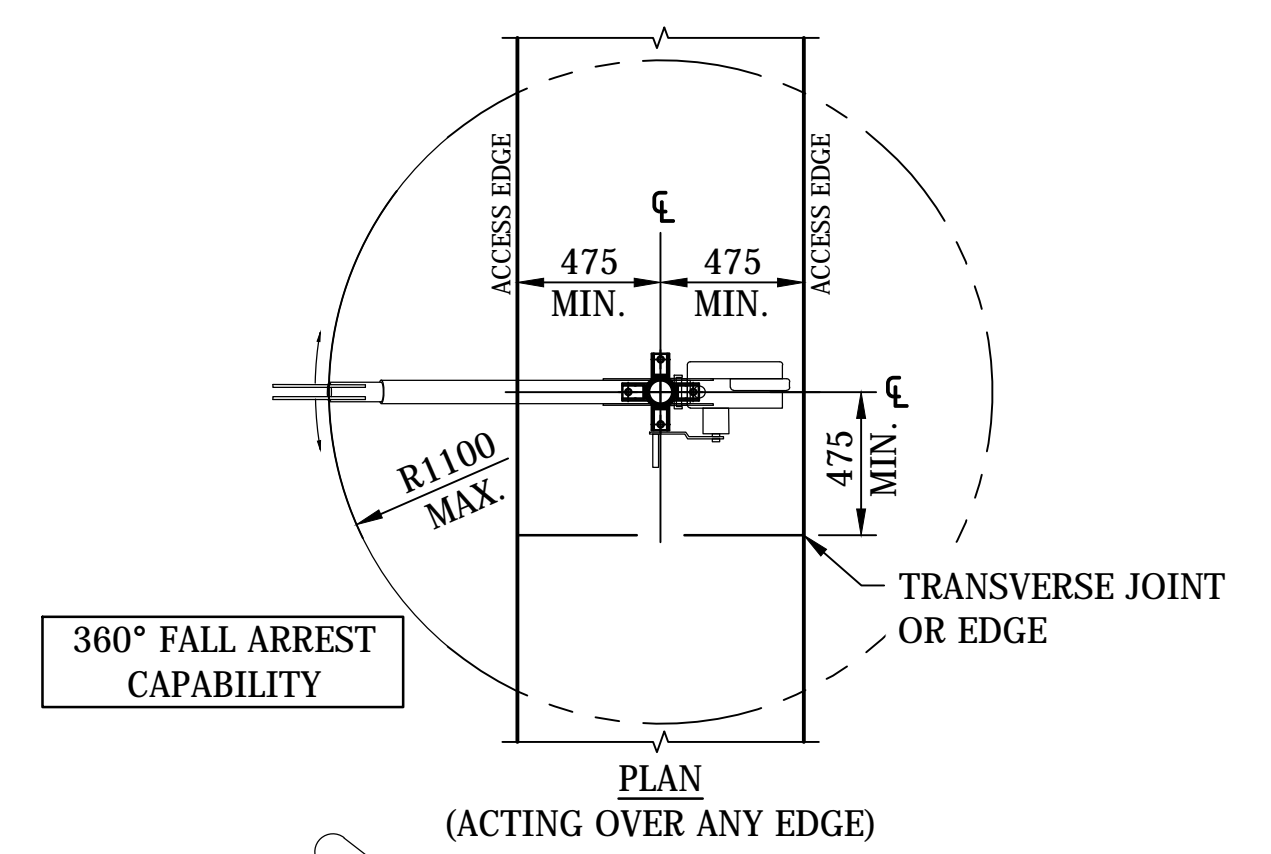
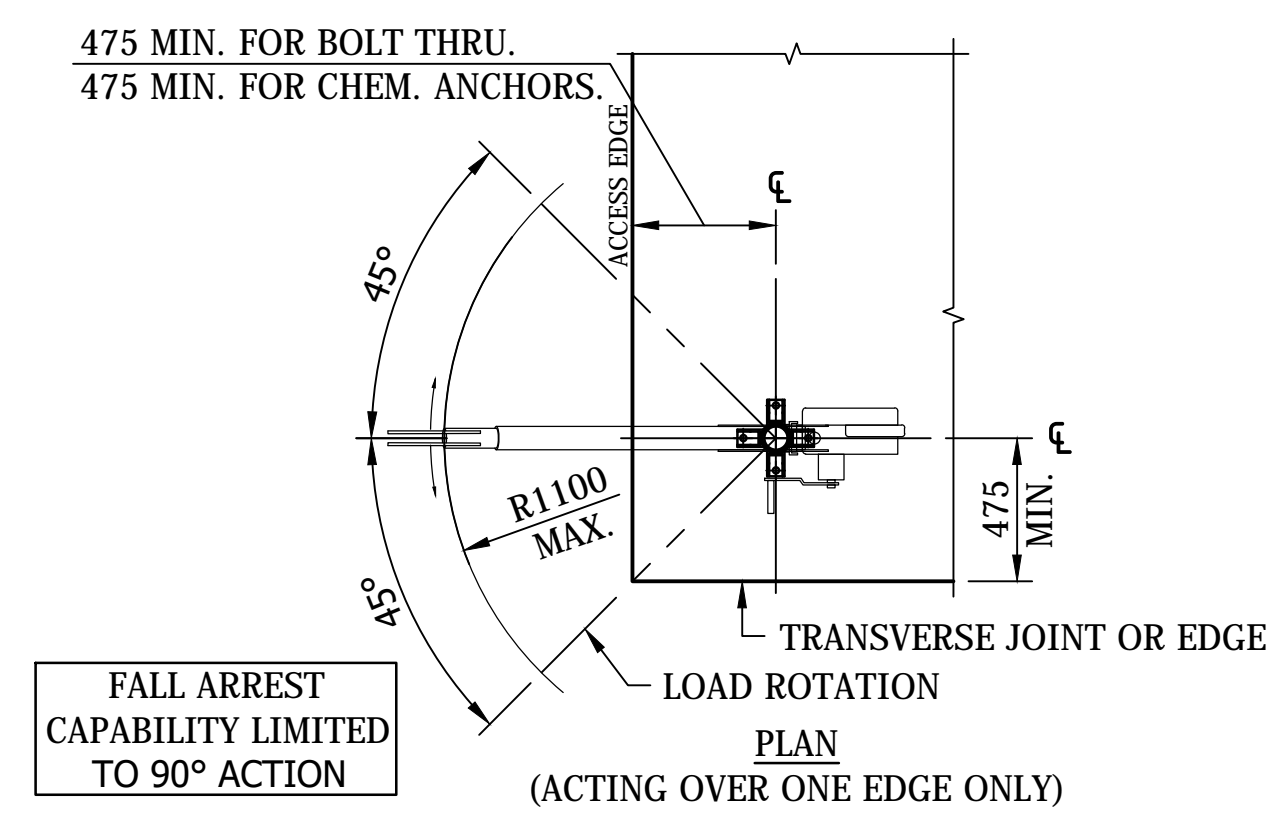
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Current	
SD-8403-D	
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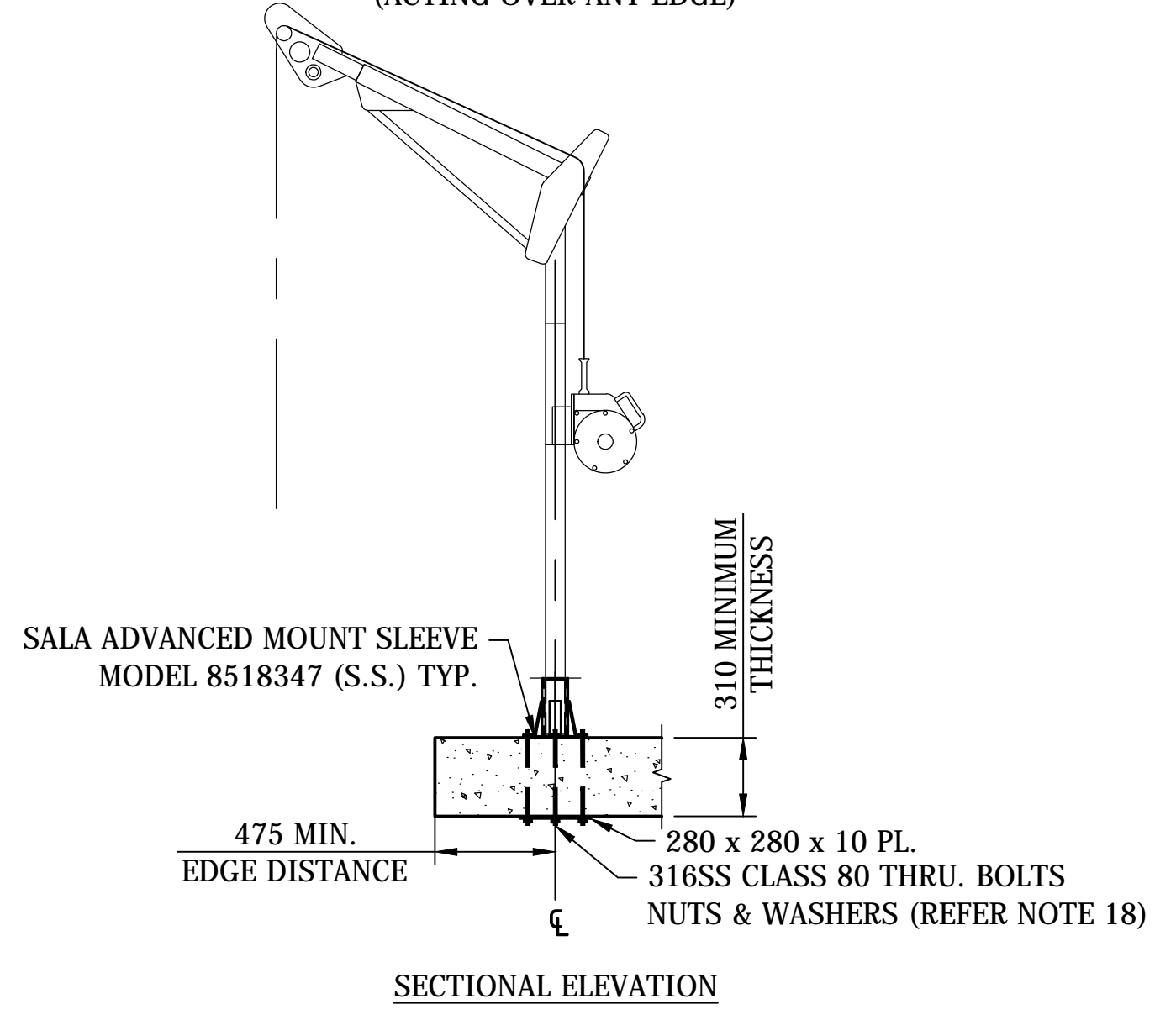
TYPE A INSTALLATION - CORE MOUNT SLEEVE
SCALE 1:20



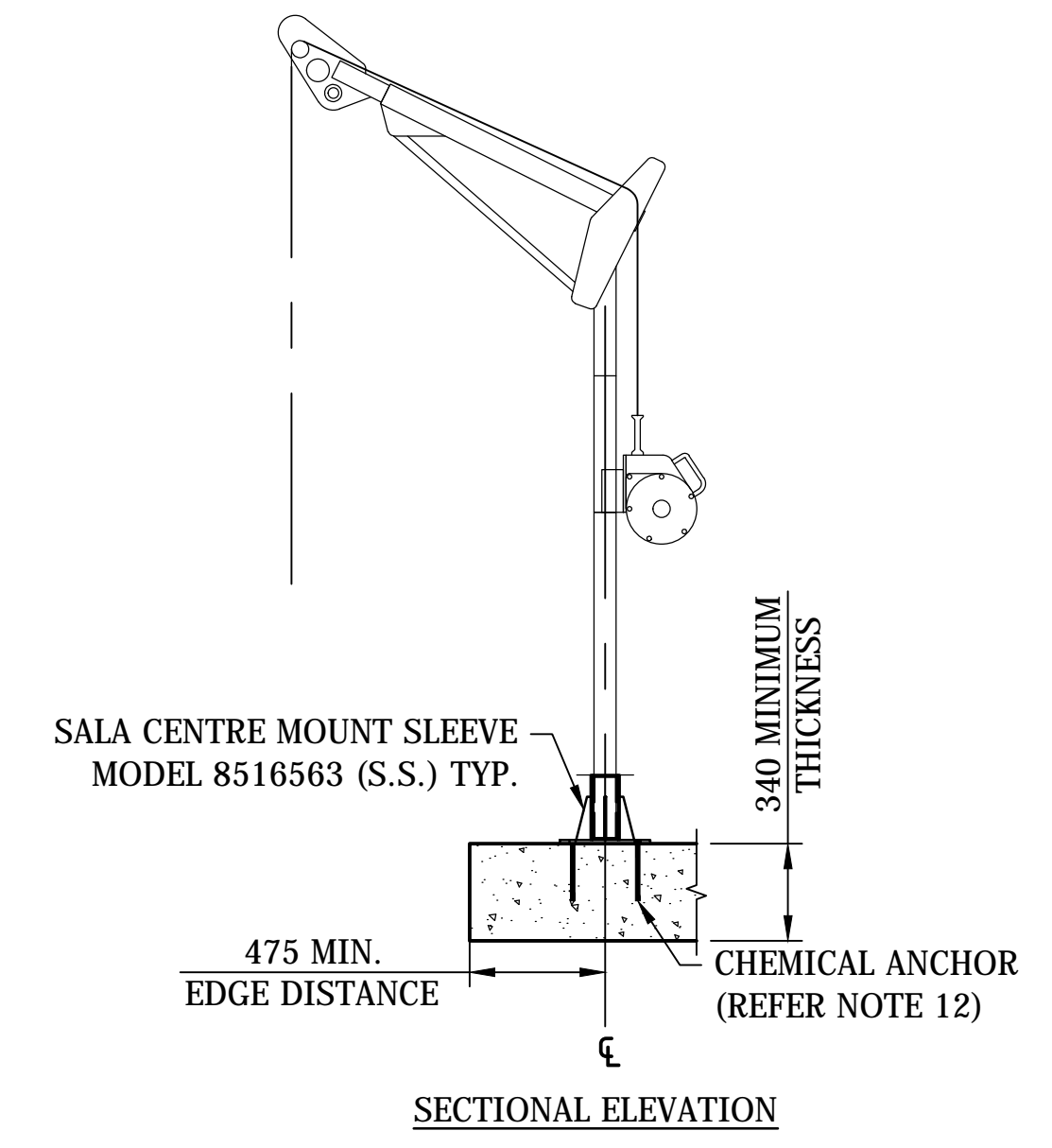
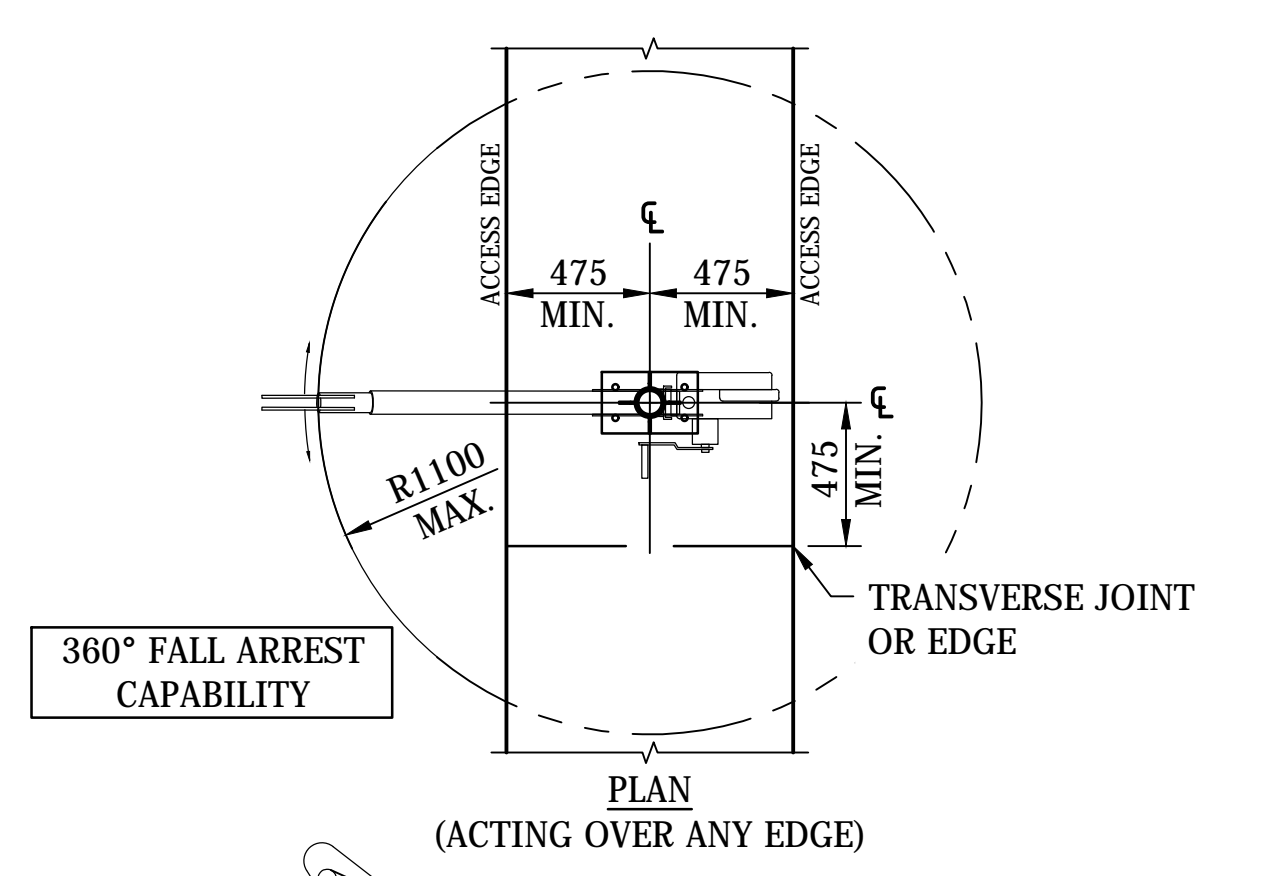
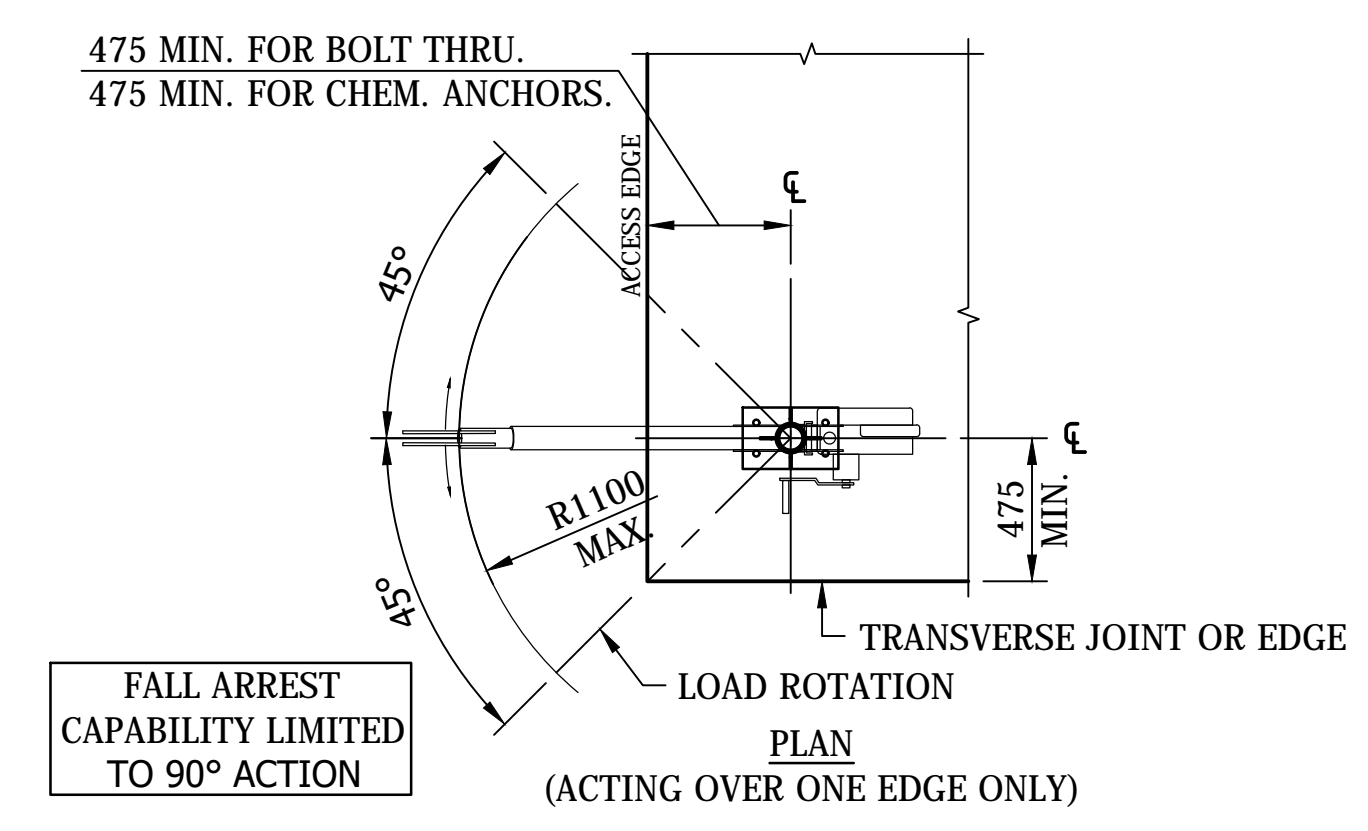
TYPE B INSTALLATION - FLUSH MOUNT SLEEVE
SCALE 1:20



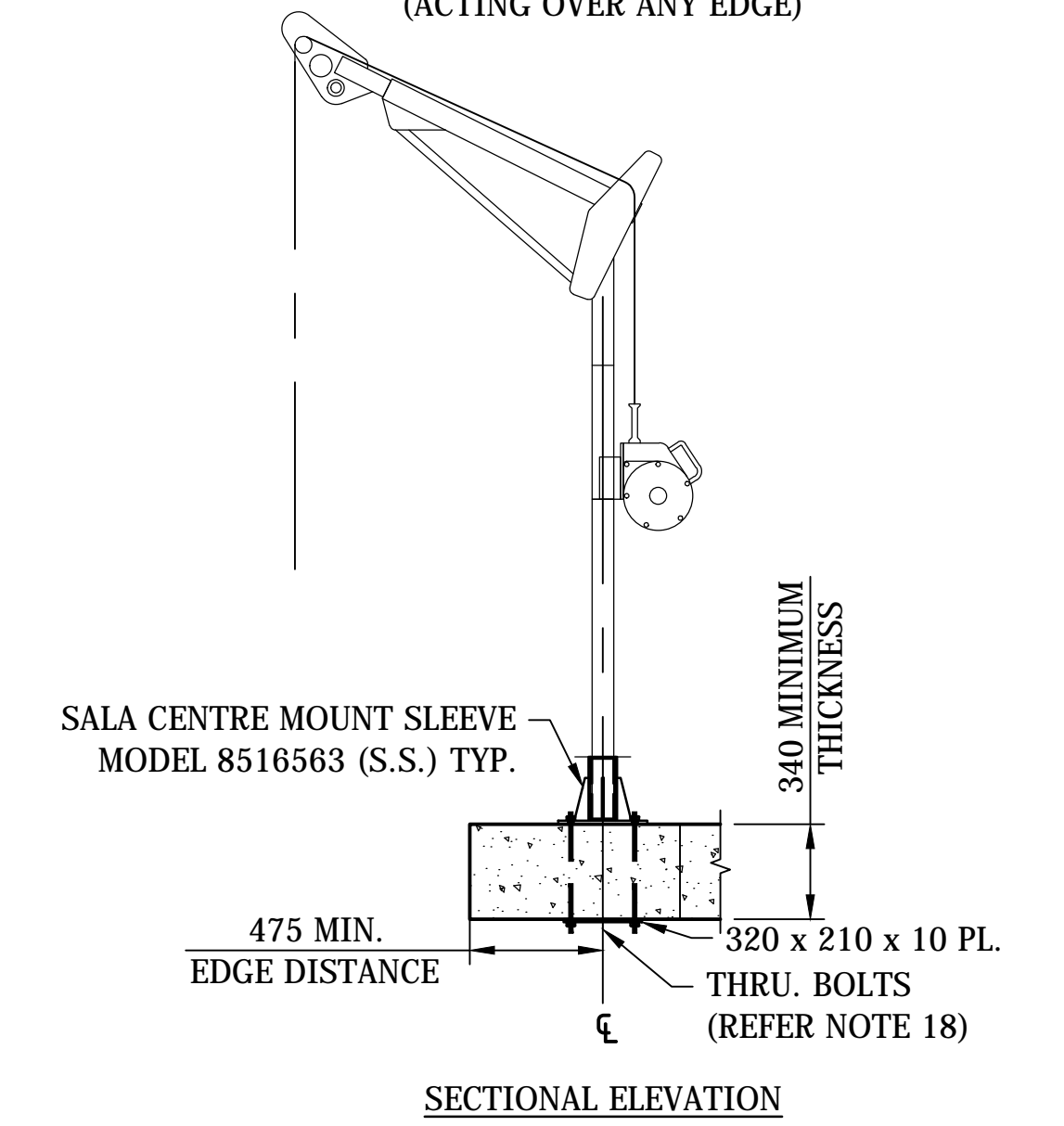
**TYPE C INSTALLATION
ADVANCED FLOOR MOUNT SLEEVE
CHEMICAL ANCHOR FIXING**
SCALE 1:25



**TYPE D INSTALLATION
ADVANCED FLOOR MOUNT SLEEVE
BOLTED THROUGH FIXING**
SCALE 1:25



**TYPE E INSTALLATION - CENTRE MOUNT SLEEVE
CHEMICAL ANCHOR FIXING**
SCALE 1:25



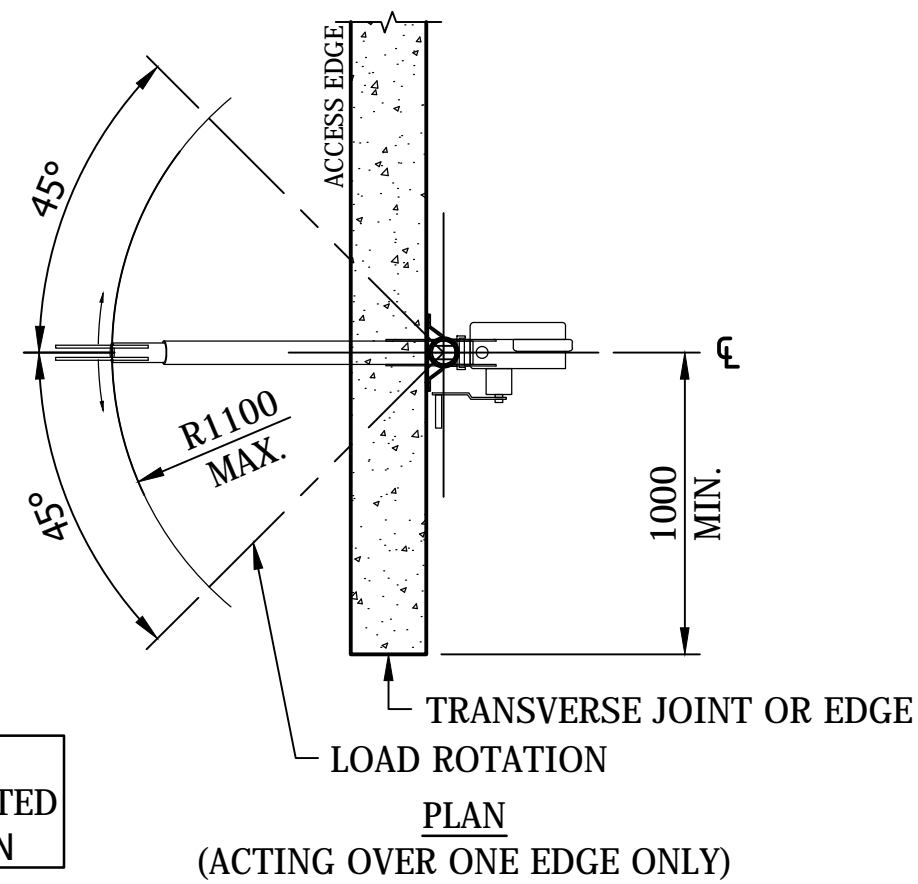
**TYPE F INSTALLATION - CENTRE MOUNT SLEEVE
BOLTED THROUGH FIXING**
SCALE 1:25

DAM	RES	SPS	
BWS	WAT	STP	
WTP	SEW		
WPS	REC		

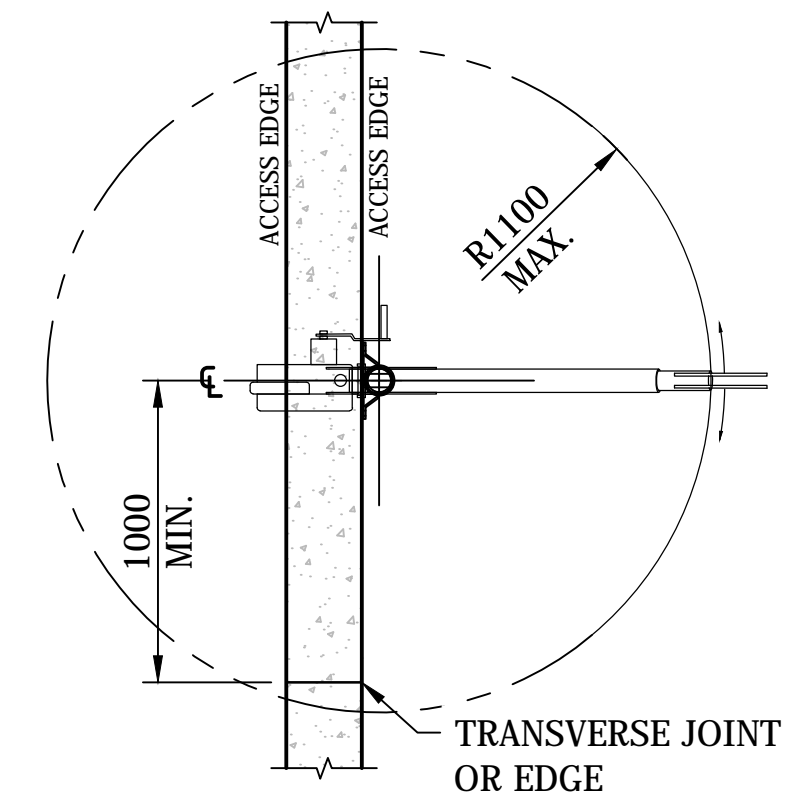


STANDARD DRAWING
PERMANENT DAVIT BASES (DBI SALA)
15 kN INSTALLATION INTO / ON UNREINFORCED CONCRETE
DETAILS SHEET 1 OF 2

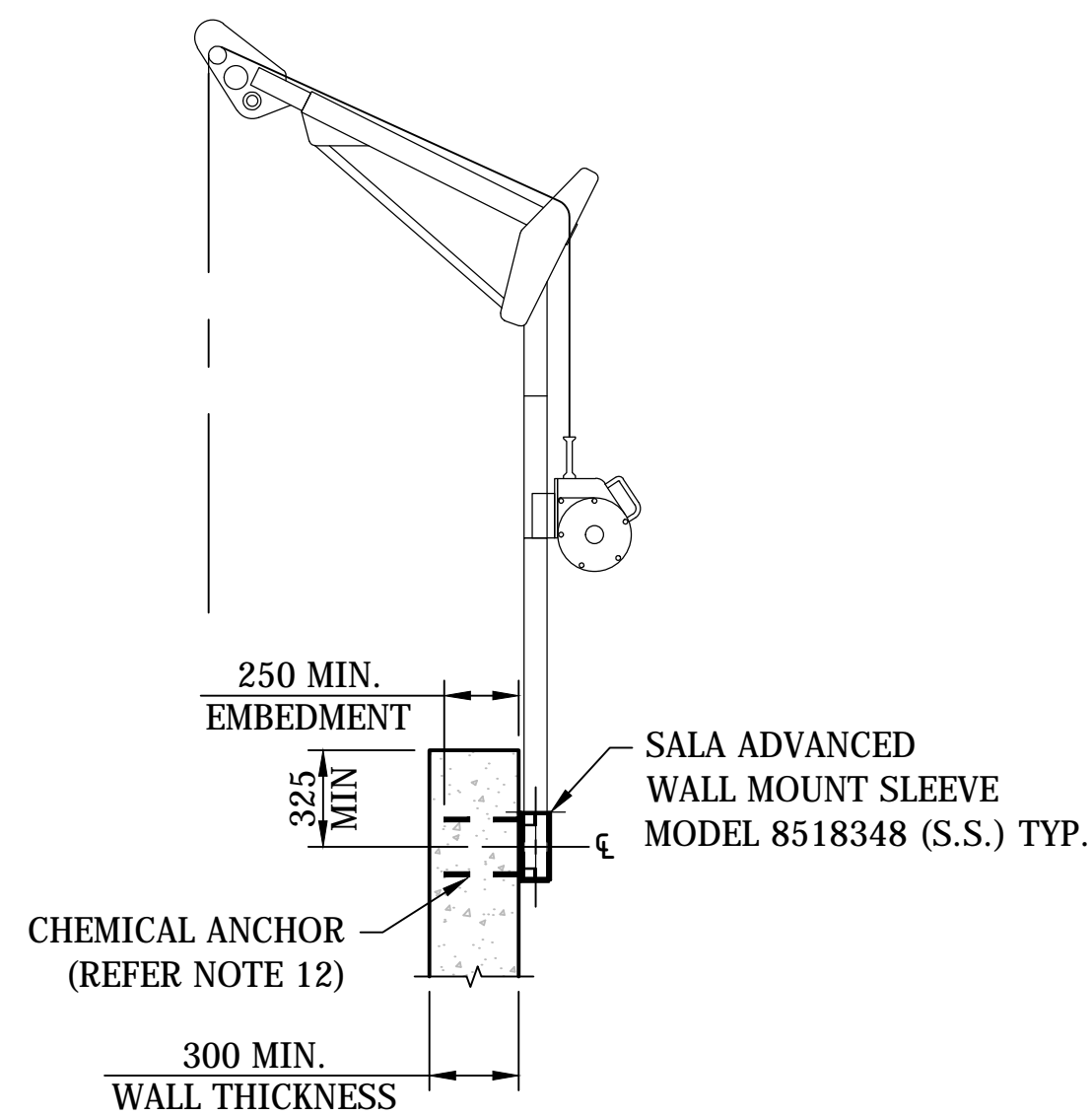
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Current	
SD-8404-C	
A1	ISSUE A



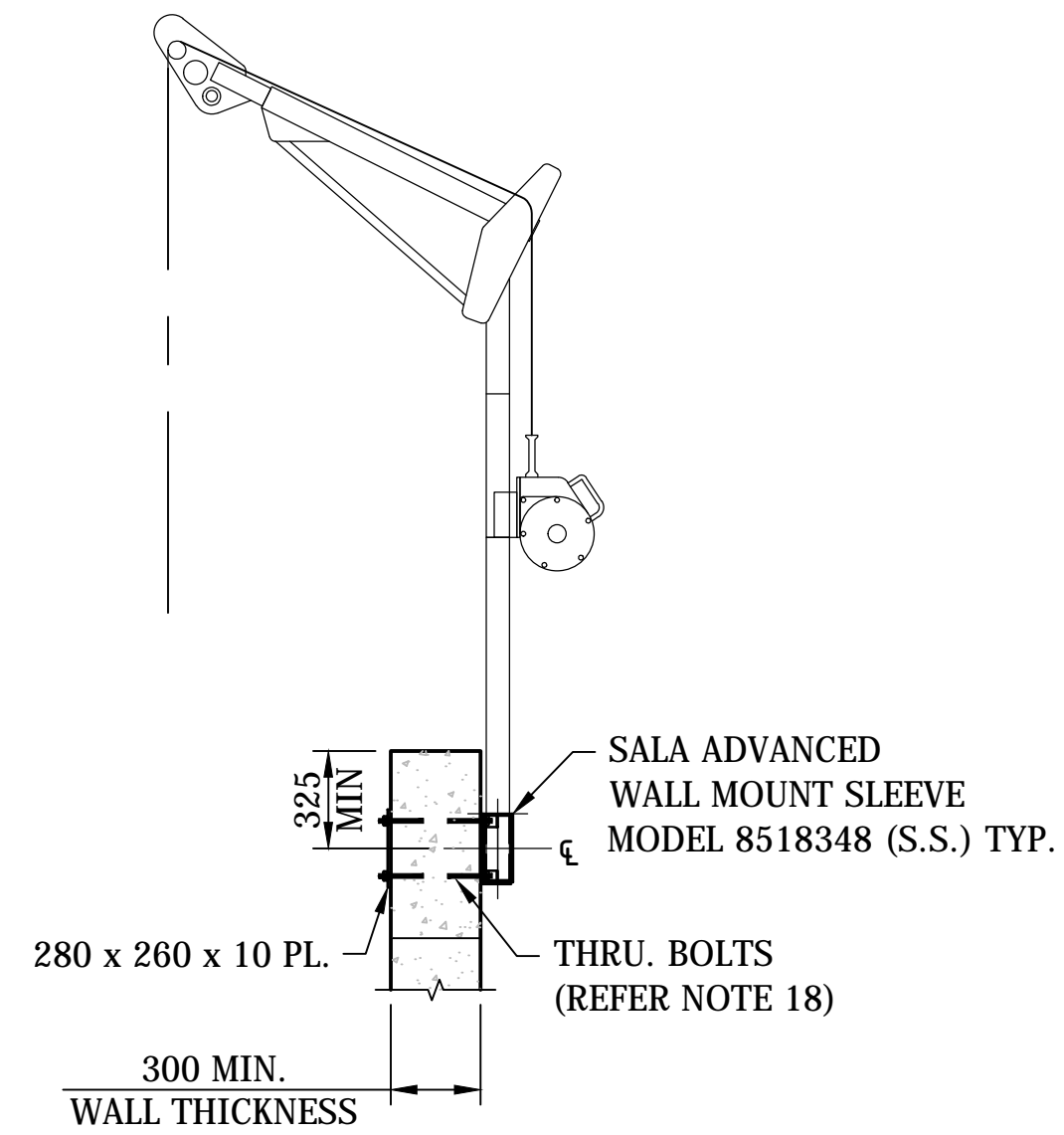
FALL ARREST
CAPABILITY LIMITED
TO 90° ACTION



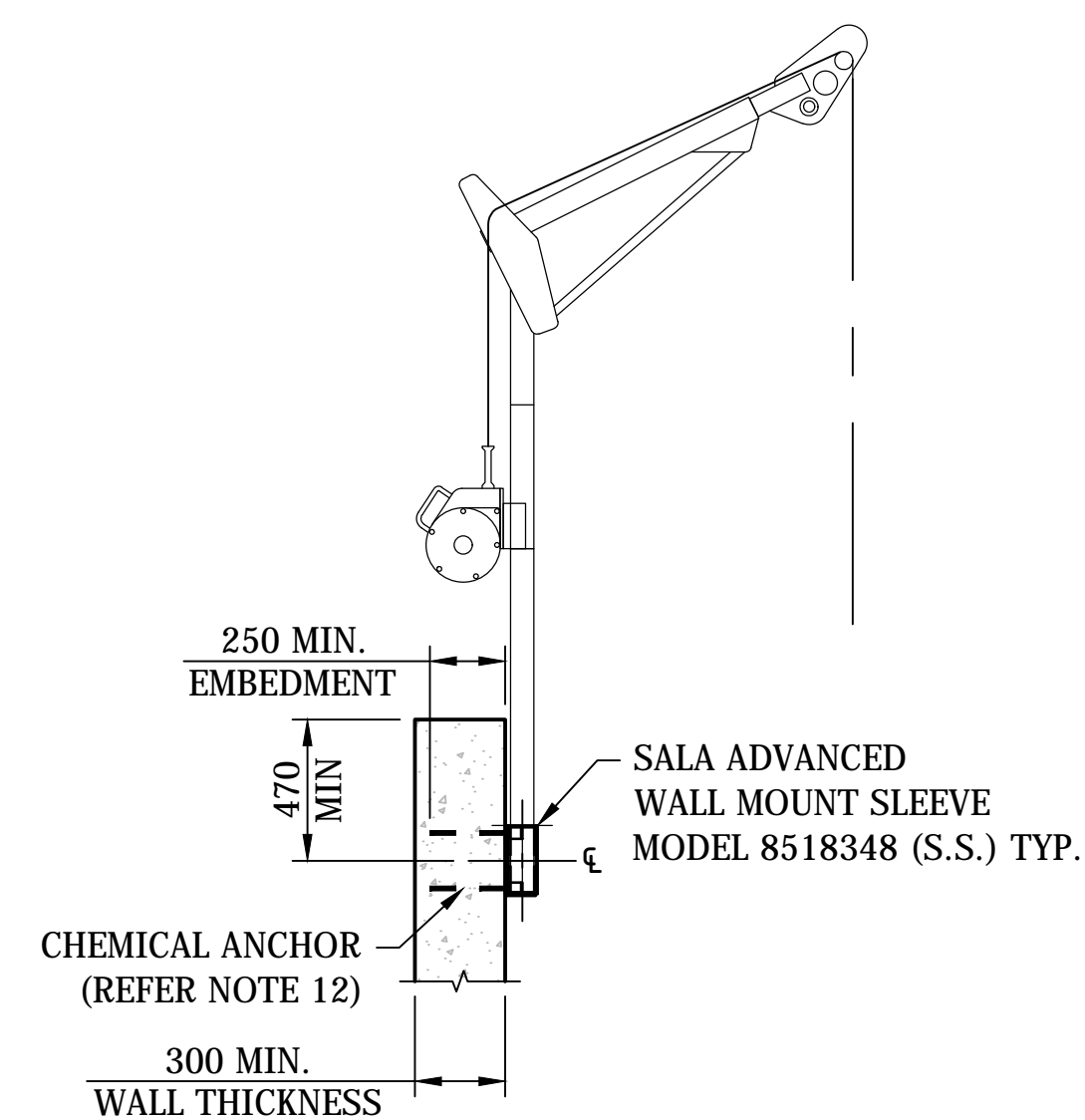
360° FALL ARREST
CAPABILITY



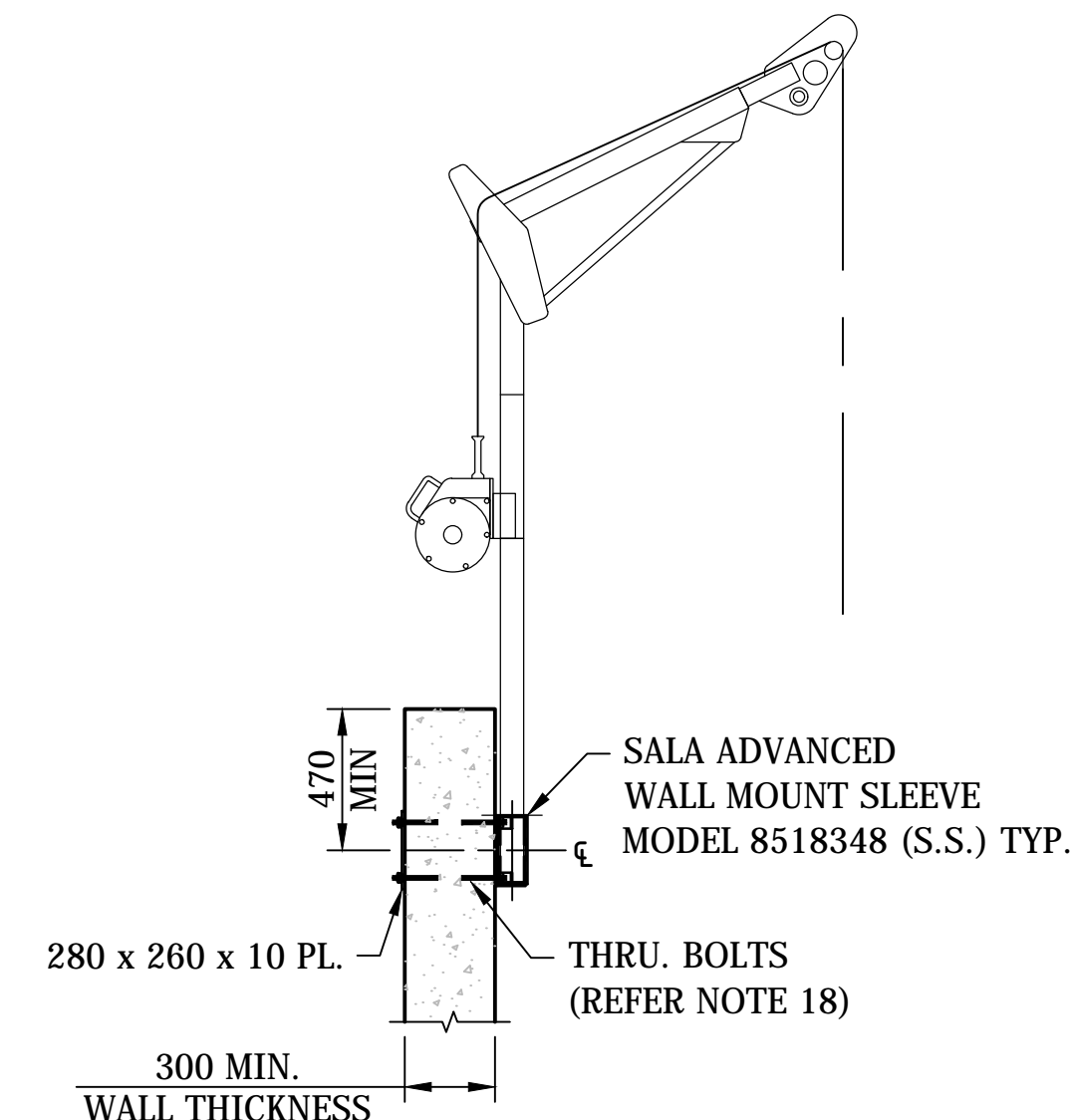
SECTIONAL ELEVATION
TYPE G INSTALLATION
ADVANCED WALL MOUNT SLEEVE
REAR FACE MOUNTING
CHEMICAL ANCHOR FIXING
SCALE 1:25



SECTIONAL ELEVATION
TYPE H INSTALLATION
ADVANCED WALL MOUNT SLEEVE
REAR FACE MOUNTING
BOLTED THROUGH FIXING
SCALE 1:25



SECTIONAL ELEVATION
TYPE J INSTALLATION
ADVANCED WALL MOUNT SLEEVE
FRONT FACE MOUNTING
CHEMICAL ANCHOR FIXING
SCALE 1:25



SECTIONAL ELEVATION
TYPE K INSTALLATION
ADVANCED WALL MOUNT SLEEVE
FRONT FACE MOUNTING
BOLTED THROUGH FIXING
SCALE 1:25

DAM	RES	SPS
BWS	WAT	STP
WTP	SEW	
WPS	REC	

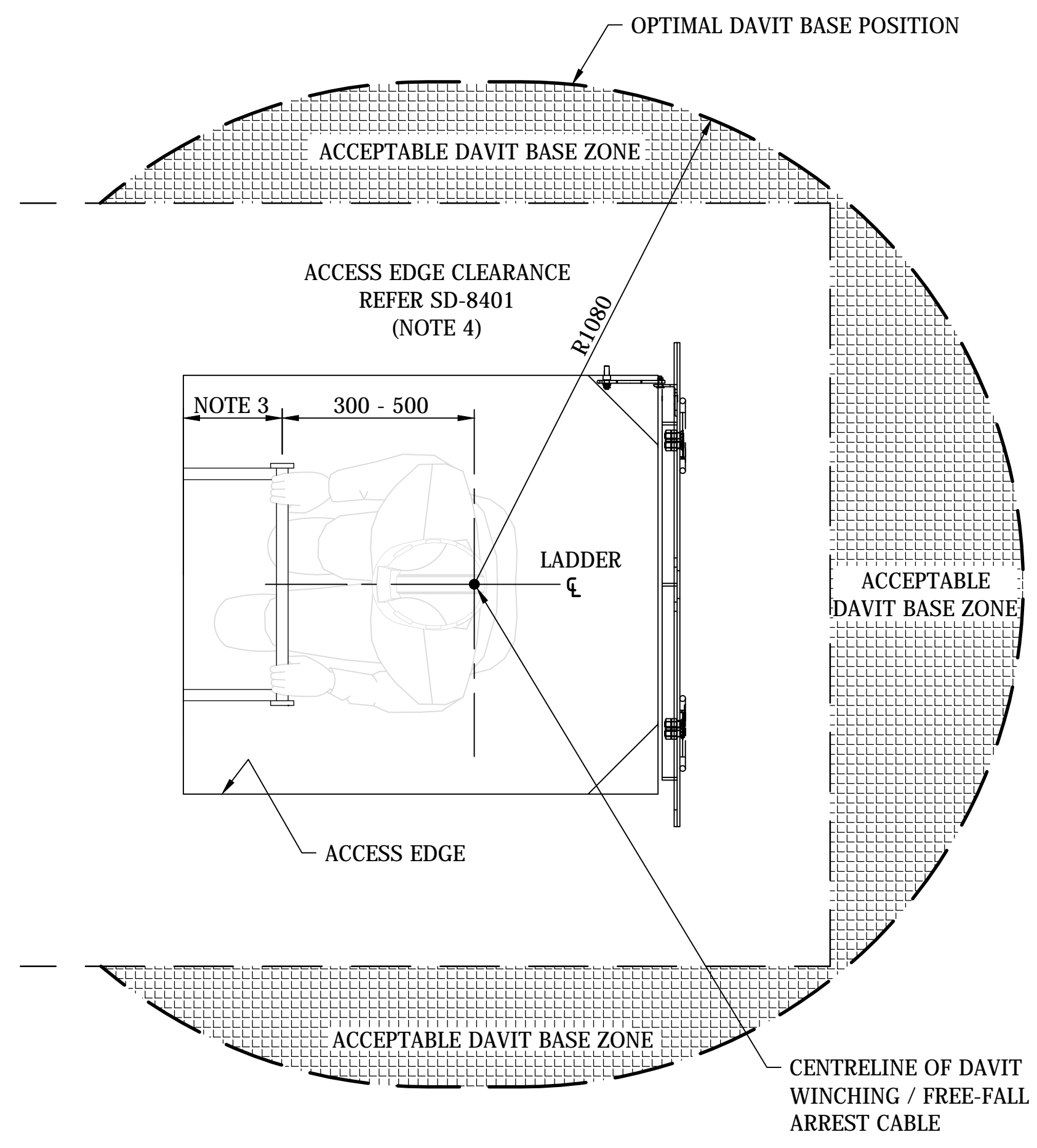


STANDARD DRAWING
PERMANENT DAVIT BASES (DBI SALA)
15 kN INSTALLATION INTO / ON UNREINFORCED CONCRETE
DETAILS SHEET 2 OF 2

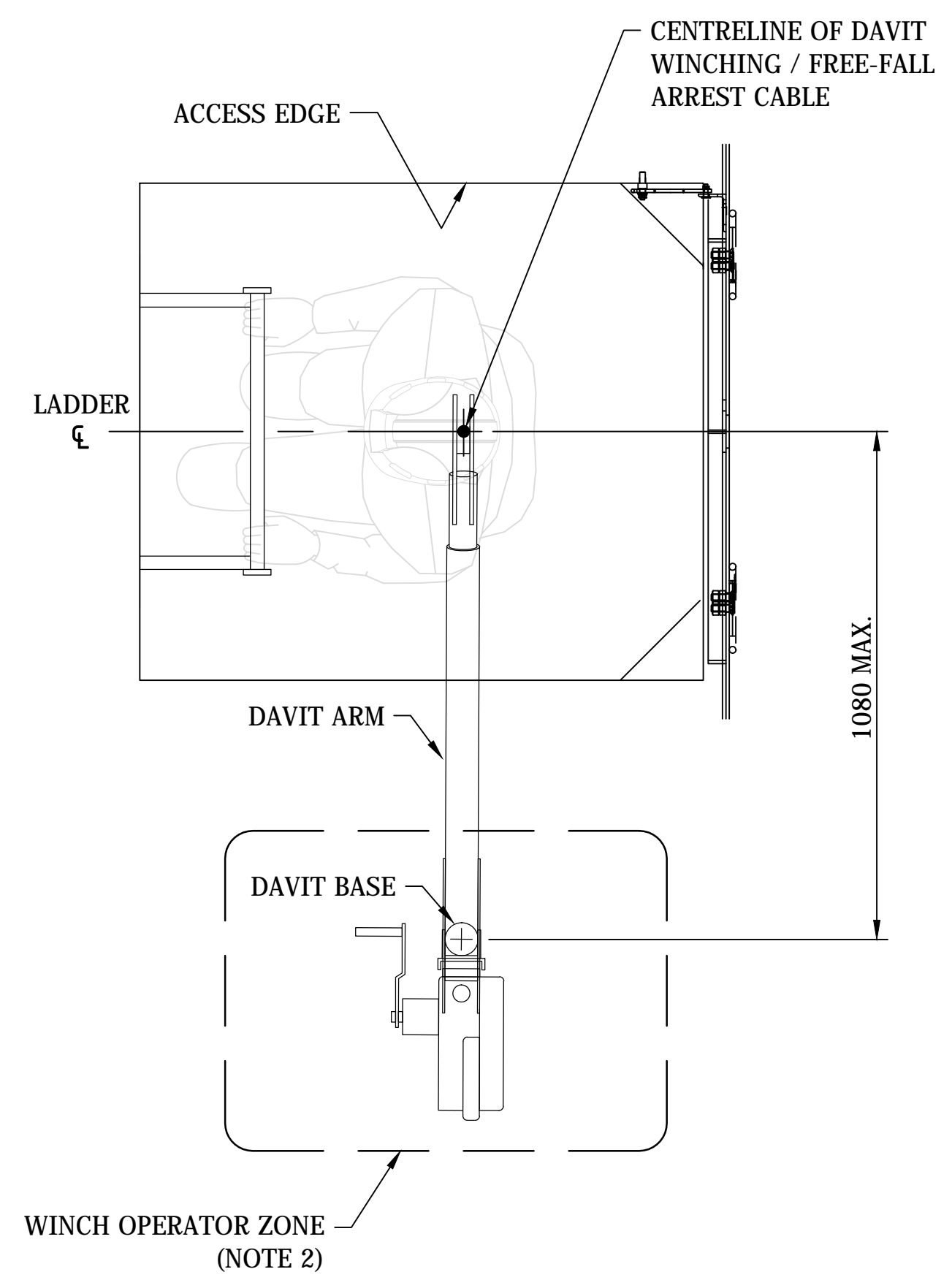
DRAWING STATUS	
Current	
SD-8405-C	
A1	ISSUE A

NOTES:

1. PERMANENT DAVIT BASE LOCATION SUITABILITY IS DEPENDENT UPON HATCH SIZE AND COVER DESIGN. THE ACCEPTABLE BASE ZONES SHOWN MAY NOT BE APPLICABLE FOR EVERY CIRCUMSTANCE.
2. ENSURE PERMANENT DAVIT BASE LOCATION ALSO TAKES INTO CONSIDERATION SUFFICIENT SPACE FOR THE WINCH OPERATOR. THIS SPACE MAY VARY DEPENDING UPON THE ACCESS ARRANGEMENTS.
3. RUNG SPACING FROM WALL SHALL BE 200 mm AS PER AS/NZS 1657 FOR ALL NEW VERTICAL LADDER INSTALLATIONS. LEGACY SITES MAY VARY.
4. THE EDGE CLEARANCES SHOWN ON SD-8401 ARE APPLICABLE FOR LEGACY (UNREINFORCED) CONCRETE STRUCTURES. EDGE CLEARANCES FOR NEW STRUCTURES SHALL BE PROJECT SPECIFIC.
5. REFER TO ICON WATER SPECIFICATION STD-SPE-G-008 FOR SPECIFIC DESIGNER (AND DESIGN) REQUIREMENTS FOR PERMANENT DAVIT BASE INSTALLATIONS. COMPLIANCE WITH STD-SPE-G-008 IS A MANDATORY REQUIREMENT.



PLAN
ACCEPTABLE PERMANENT DAVIT BASE
INSTALLATION ZONES



PLAN
EXAMPLE DAVIT LOCATION

A	INITIAL ISSUE	5/09/2018	S. Essery	K. Danenbergsons	C. Patrick
No.	ISSUE	DATE	DRAWN	CHECKED	AUTHORISED

DAM	RES	SPS
BWS	WAT	STP
WTP	SEW	
WPS	REC	
ASSET AREA APPLICABILITY		



STANDARD DRAWING
PERMANENT DAVIT BASES (DBI SALA)
PREFERRED LOCATIONS AT HATCHES AND COVERS

DRAWING STATUS	
Current	
SD-8406-C	
A1	ISSUE A
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