BASE LOAD POWER HUB (BLPH)

Electrical Typical Installation Details

Cable Routes System

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
FRONT PAGE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DD-20093

SHEET 001

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

REV.	SHEET NUMBER	DESCRIPTION	REF. CODE
02	001	FRONT PAGE	
02	002	SUMMARY and GENERAL NOTES	
02	003	CABLE TRAY/LADDER SEGREGATION DISTANCES	
02	004	CABLE LADDER FIXING	LF / LU
02	005	CABLE TRAY PERFORATED FIXING	TF / TU
02	006	CABLE WAY CLAMPED TO BEAM WITH U-CHANNEL	T1_1 / T1_2
02	007	CABLE WAY CLAMPED TO BEAM WITH U-CHANNEL (HANGING)	T2
02	008	CABLE WAY FIXING TO WELDED STARTER WITH DOUBLE U-CHANNEL	T3
02	009	CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL	T4
02	010	CABLE WAY WITH WELDED SUPPORT	T5CS
02	011	CABLE WAY ON FRP SUPPORTS	T5FRP
02	012	BLANK SHEET	
02	013	CABLE WAY WITH WELDED SUPPORT (VERTICAL RUN)	T6
02	014	CABLE WAY WITH NELSON STARTER ON SHELTER WALL	T7
02	015	BLANK SHEET	
02	016	SUPPORT FOR CABLE LADDER / TRAY DECK PENETRATION	T101
02	017	BLANK SHEET	
02	018	BLANK SHEET	

02

GENERAL NOTES

1) AS MATERIAL OF THE EQUIPMENT SUPPORTS AND CABLE TRAYS, IN ADDITION TO THE PAINTED CARBON STEEL SUPPORTS, USE U-CHANNEL IN AISI 316L STAINLESS STEEL ON BOTH OUTSIDE AND INSIDE TECHNICAL ROOMS.
2) OUTSIDE AND INSIDE TECHNICAL ROOMS WILL BE INSTALLED AISI 316L STAINLESS STEEL CABLE WAYS.
3) INSTALLATION HEIGHTS OF THE EQUIPMENTS AND CABLE WAYS ARE INDICATED IN THE RESPECTIVE LAYOUTS.
4) ARRANGEMENTS SHOWN ON THIS DOCUMENT ARE GUIDELINES AND SHOULD BE MODIFIED TO SUIT THE LOCATION.
5) PROVIDE NYLON SHEET BETWEEN AISI 316L STAINLESS STEEL AND CARBON STEEL ITEMS TO AVOID GALVANIC CORROSION.
6) SHAPE, DIMENSION AND QUANTITY OF SUPPORTS AND ACCESSORIES FOR INSTALLATION ARE INDICATIVE ONLY.
7) WHEN CABLE GLAND IS USED, ALWAYS ENSURE TO LEAVE AS MUCH CABLE RICHNESS AS POSSIBLE INSIDE JB AND ANY OTHER TYPE OF ENCLOSURE.
8) ALWAYS ENSURE TO LEAVE ENOUGH CABLE RICHNESS FOR FUTURE MAINTENANCE. THIS IS NOT APPLICABLE FOR EARTHING AND BONDING CONDUCTORS (GREEN/YELLOW) SINCE THIS LINK SHOULD BE AS DIRECT AS POSSIBLE. IT SHOULD ALSO NOT BE APPLIED TO SINGLE CORE CABLES.
9) IN THE CASE OF “INCREASED SAFETY” (Ex e) JBs, IN ORDER NOT TO EXCEED THE TEMPERATURE CLASS T OF THE CERTIFICATE, IT IS RECOMMENDED THAT THE MAXIMUM LENGTH OF EACH CONDUCTOR PER TERMINAL TO BE CONNECTED BE HALF THE LONGEST DIAGONAL OF THE JB. (IEC 60079-14:2013 CLAUSE 15.2).
10) CABLE ROUTING TO THE ITEM/EQUIPMENT SHALL BE DONE IN ORDER TO PREVENT DROP-OFF (CABLE SHALL ROUTE LOWER THAN CABLE GLAND SO THAT ANY DROP OF CONDENSATION OR WATER DUE TO ATMOSPHERIC CAUSES WILL DRAINS DOWNWARDS).
11) ALL UNARMOURED CABLES SHALL BE MECHANICAL PROTECTED FOR THE ENTIRE CABLE LENGTH

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TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
SUMMARY and GENERAL NOTES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DD-20093

SHEET 002

REV. 02

F.to UNI A3: 420mmx297mm

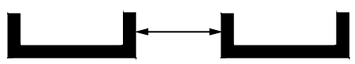
File Name : 123A90-DDL-EL-DD-20093_02.DWG

Type of cable on the tray/ladder and applicable system

Tray sys. code	Application of tray system	Voltage lelvel
HV/MV	High voltage and medium voltage power cables	
LV	Low voltage power cable and Electrical control cables	AC230V/400V/800V DC24V/48V/110V
IN01	Instrumentation control cables (AI/AO/DI/DO)	
IN02	SIS and FG cables	
TEL	Communication and telecom cables	

Table A–Horizontal segregation distance

cable tray system	Minimum distance between trays/ladders (mm)					
The name of cable tray/ladder	tray sys. code	HV/MV	LV	IN01	IN02	TEL
High voltage and medium voltage power	HV/MV	200	200	400	400	400
Low voltage power cable and Electrical control cables	LV	200	200	400	400	400
Instrumentation control cable	IN01	400	400	200	200	400
SIS and FG cables	IN02	400	400	200	200	400
Communication and telecom cables	TEL	400	400	400	400	200

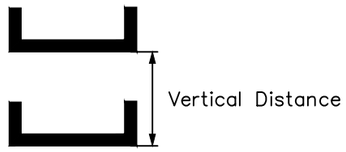




1– Minimum distance are considered as space between side to side
2– In case of cross section, between different type of system, the minimum distance as 50mm side–side
3– In case between different type of system the secondary dedicate cable routing, relating connection item/equipment/package or panel from main cable way, no distance shall be considered.
4– cable tray with cover horizontal distance will be zero.

Table B–Vertical segregation distance

cable tray system	Minimum distance between trays/ladders (mm)					
The name of cable tray/ladder	tray sys. code	HV/MV	LV	IN01	IN02	TEL
High voltage and medium voltage power	HV/MV	400	400	400	400	400
Low voltage power cable and Electrical control cables	LV	400	400	400	400	400
Instrumentation control cable	IN01	400	400	400	400	400
SIS and FG cables	IN02	400	400	400	400	400
Communication and telecom cables	TEL	400	400	400	400	400



5– Minimum distance are considered as space between bottom to bottom
6– In case of cross section, between different type of system, the minimum distance as 50mm top to bottom
7– In case between different type of system the secondary dedicate cable routing, relating connection item/equipment/package or panel from main cable way, no distance shall be considered.

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–CABLE ROUTES SYSTEM
CABLE TRAY/LADDER SEGREGATION DISTANCES

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20093

SHEET 003

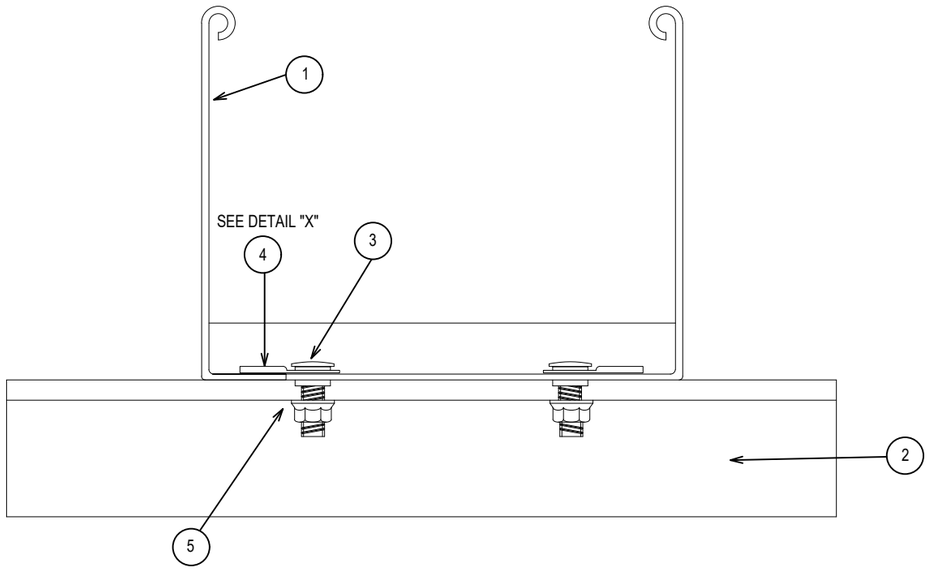
REV. 02

F.to UNI A3: 420mmx297mm

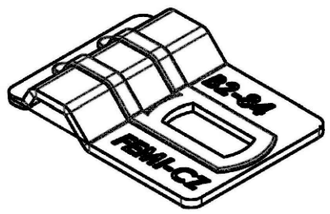
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CABLE LADDER FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SQUARE NECK SCREW	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	FLANGED NUT	AISI 316L	M8	2	



DETAIL "X"

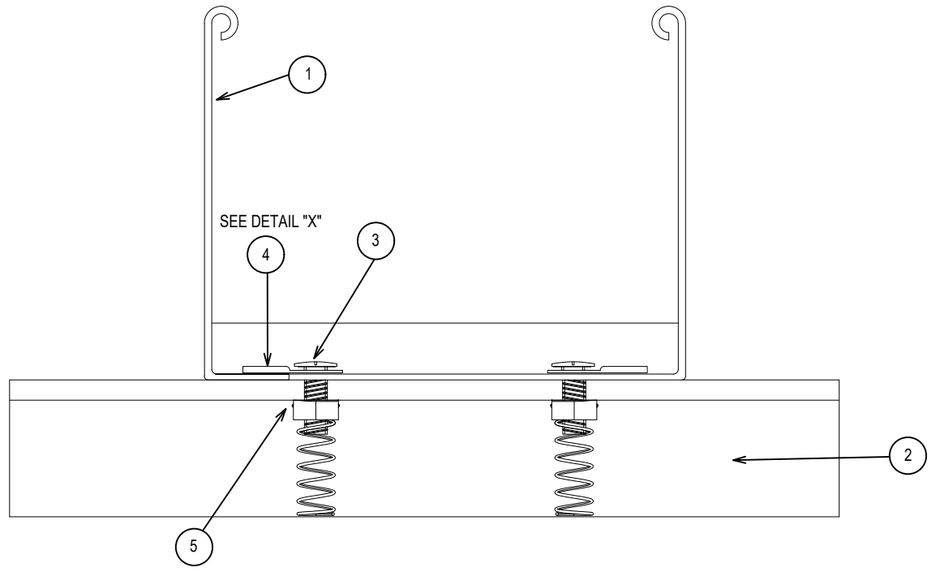


TYPICAL

LF

CABLE LADDER FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M8x20	2	
4	HOLD DOWN CLAMP	AISI 316L		2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M8x40	2	



TYPICAL

LU

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE LADDER FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

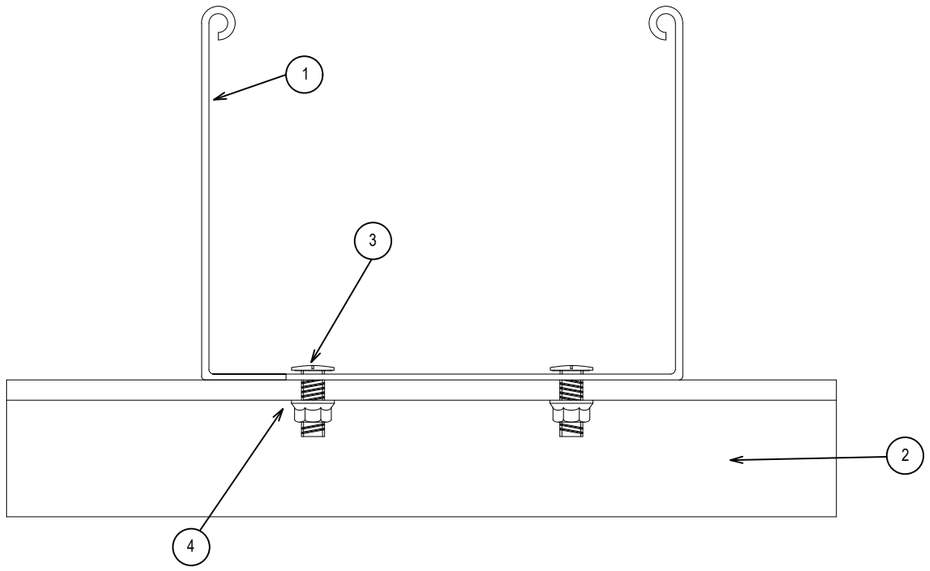
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F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

CABLE TRAY PERFORATED FIXING ON FRP RACK

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	PROFILE SUPPORT	FRP			
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
4	FLANGED NUT	AISI 316L	M6	2	

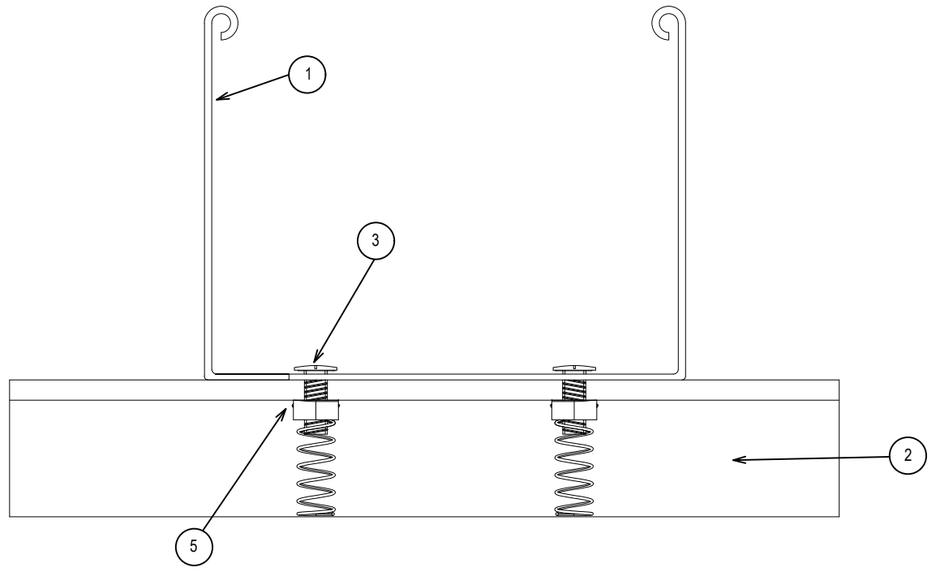


TYPICAL

TF

CABLE TRAY PERFORATED FIXING ON UNISTRUT

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY PERFORATED	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		
3	ROUND HEAD SCREW DOUBLE SLOT	AISI 316L	M6x20	2	
5	NUT FOR CHANNEL WITH SPRING	AISI 316L	M6x40	2	



TYPICAL

TU

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE TRAY PERFORATED FIXING

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

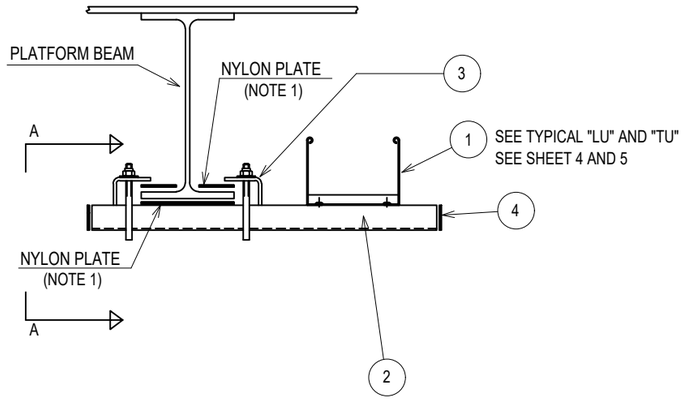
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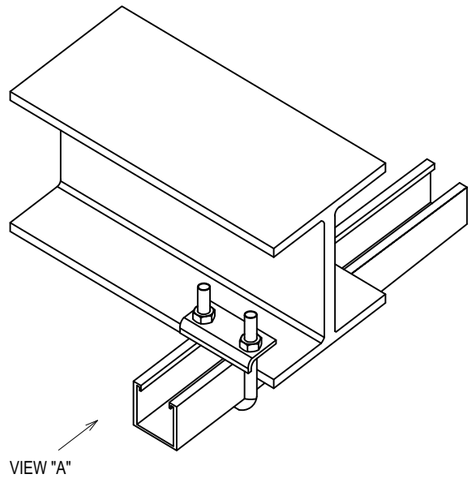
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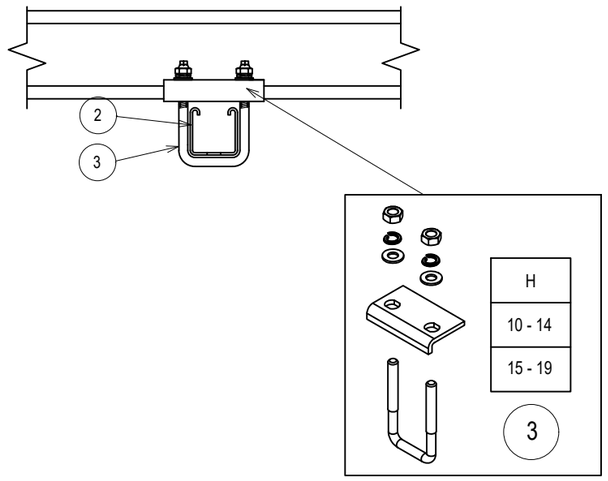
T1_1

SINGLE CABLE LADDER/TRAY





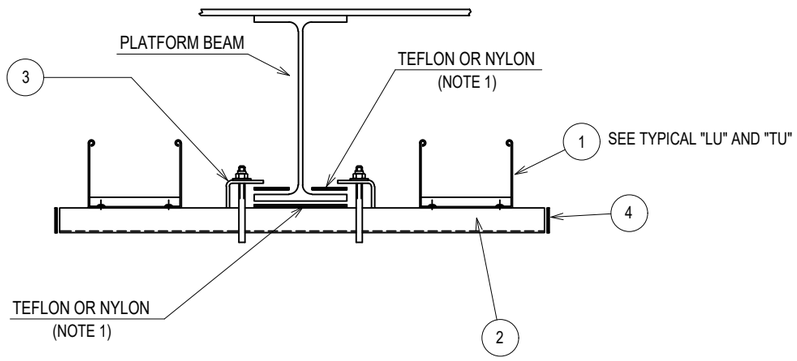
VIEW "A"



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	GRP			
2	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 2
3	SINGLE U-CHANNEL BEAM ATTACHMENT (10-14) OR (15-19) WITH COLLAR COMPLETE WITH HARDWARE.	AISI 316L		2	NOTE 3
4	PLUG FOR U-CHANNEL	LPDE		2	

T1_2

DOUBLE CABLE LADDER/TRAY



NOTES:
1) INTERPOSING NYLON PLATE BETWEEN DISSIMILAR CONDUCTING MATERIALS (NYLON THK=1mm).
2) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
3) SINGLE U-CHANNEL BEAM ATTACHMENT (CLAMP) IS PRODUCED IN NO. 2 DIFFERENT SIZES (10-14 OR 15-19) SIZE REFERS TO THE THICKNESS OF THE BEAM WHERE THE CLAMP IS INSTALLED.

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY CLAMPED TO BEAM WITH U-CHANNEL

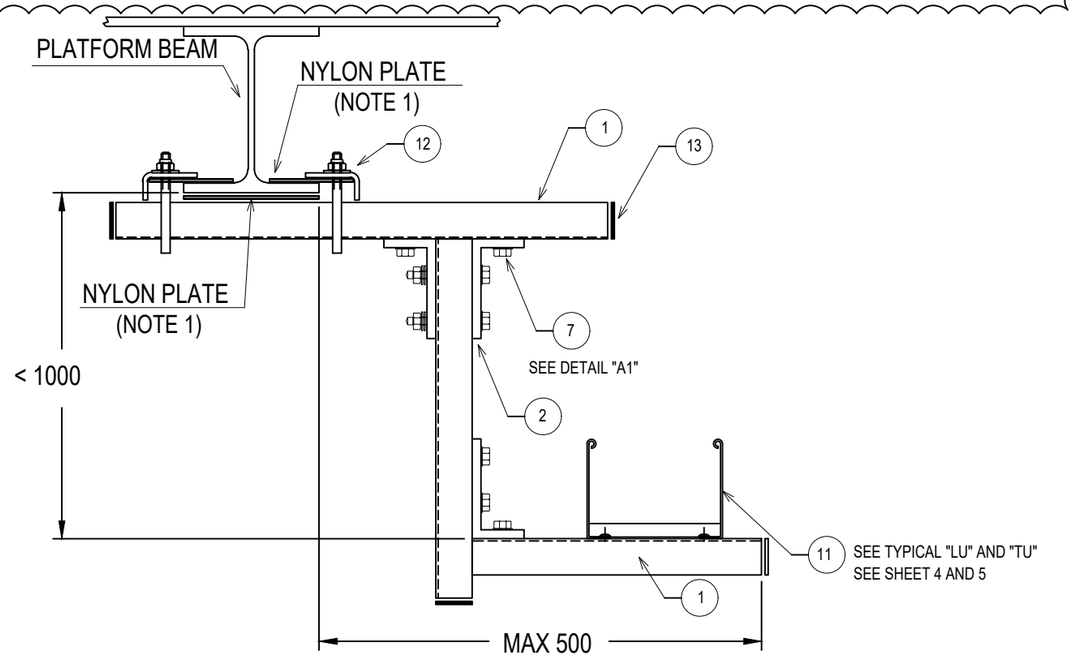
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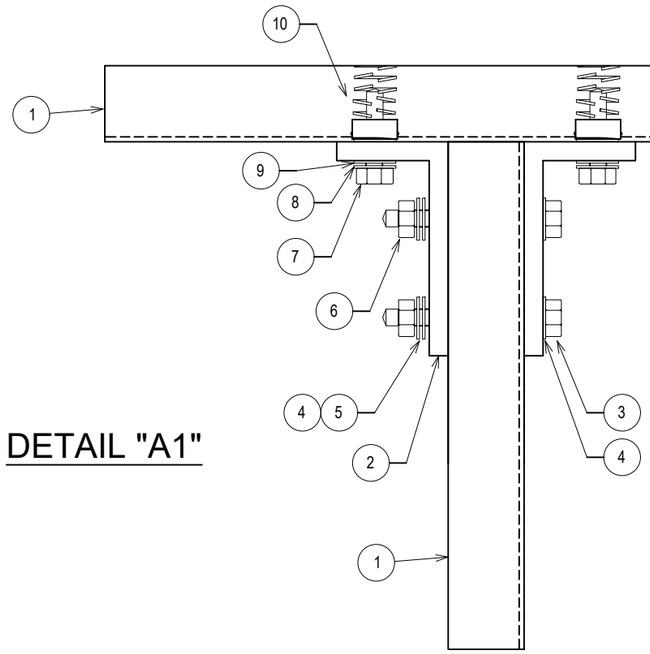
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F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

T2





DETAIL "A1"

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 2
2	ORTHOGONAL-TRASVERSAL CONNECTION (3 HOLE)	AISI 316L		3	
3	HEXAGONAL SCREW	AISI 316L	M10x70	2	
4	PLANE WASHER	AISI 316L	M10	2	
5	GROWER SPRING WASHER	AISI 316L	M10	2	
6	NUT	AISI 316L	M10	2	
7	HEXAGONAL SCREW	AISI 316L	M12x30	2	
8	PLANE WASHER	AISI 316L	M12	2	
9	GROWER	AISI 316L	M12	2	
10	NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M12	2	
11	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
12	SINGLE U-CHANNEL BEAM ATTACHMENT (10-14) OR (15-19) WITH COLLAR COMPLETE WITH HARDWARE.	AISI 316L		2	NOTE 3
13	PLUG FOR U-CHANNEL	LPDE		4	

NOTES:
1) INTERPOSING NYLON PLATE BETWEEN DISSIMILAR CONDUCTING MATERIALS (NYLON THK=1mm).
2) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
3) SINGLE U-CHANNEL BEAM ATTACHMENT (CLAMP) IS PRODUCED IN NO. 2 DIFFERENT SIZES (10-14 OR 15-19) SIZE REFERS TO THE THICKNESS OF THE BEAM WHERE THE CLAMP IS INSTALLED.

02

CROSSWIND

ROSETTI MARINO

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00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY CLAMPED TO BEAM WITH U-CHANNEL (HANGING)

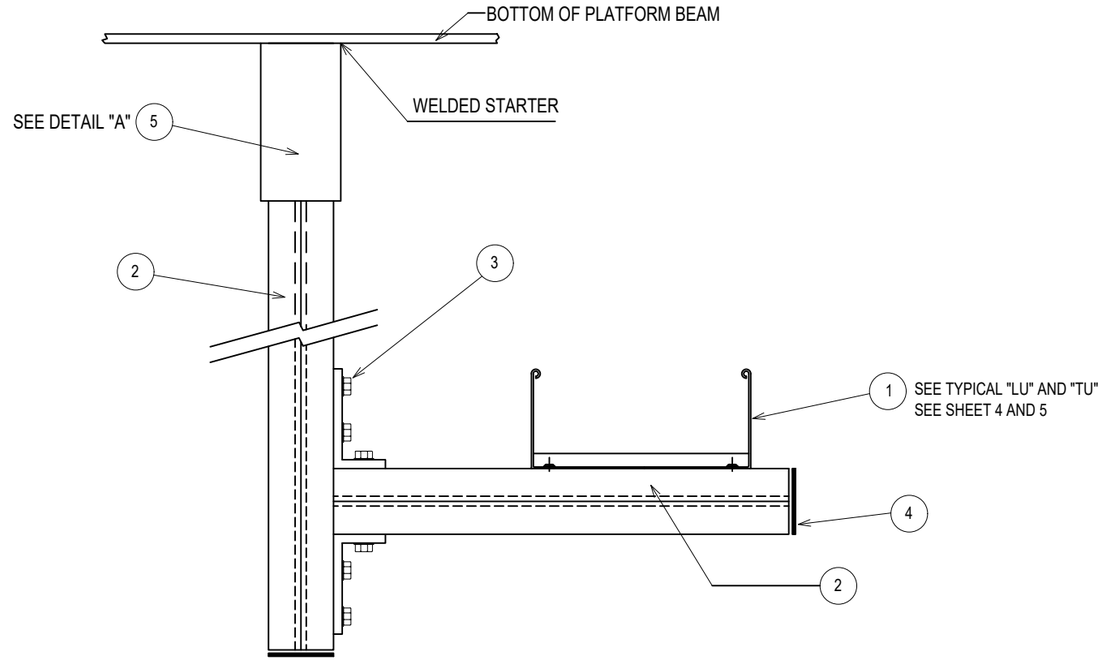
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A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 007 | REV. 02

F.to UNI A3: 420mmx297mm

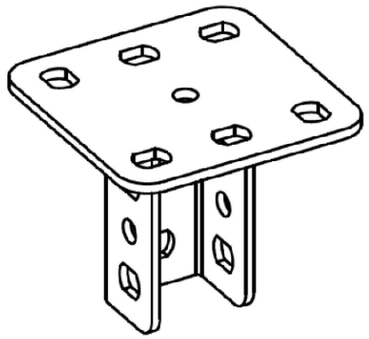
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T3

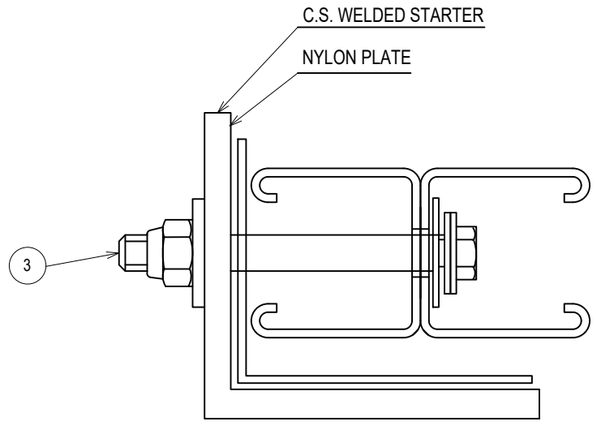


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	DOUBLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	81x41x2		NOTE 1
3	HEXAGONAL BOLT M10X80 COMPLETE WITH PLANE WASHERS, LARGE PLANE WASHER, GROWER, WASHER AND NUT	AISI 316L	M10X80		
4	PLUG FOR U-CHANNEL	LPDE			
5	"L" PROFILE STARTER	C.S.			

ALTERNATIVELY, IN PLACE
OF C.S. WELDED STARTER:



DETAIL "A"



VIEW FROM TOP

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) TYPICAL VALID ALSO FOR THE SUPPORTING OF LIGHTING FIXTURES.

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED STARTER WITH DOUBLE U-CHANNEL

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

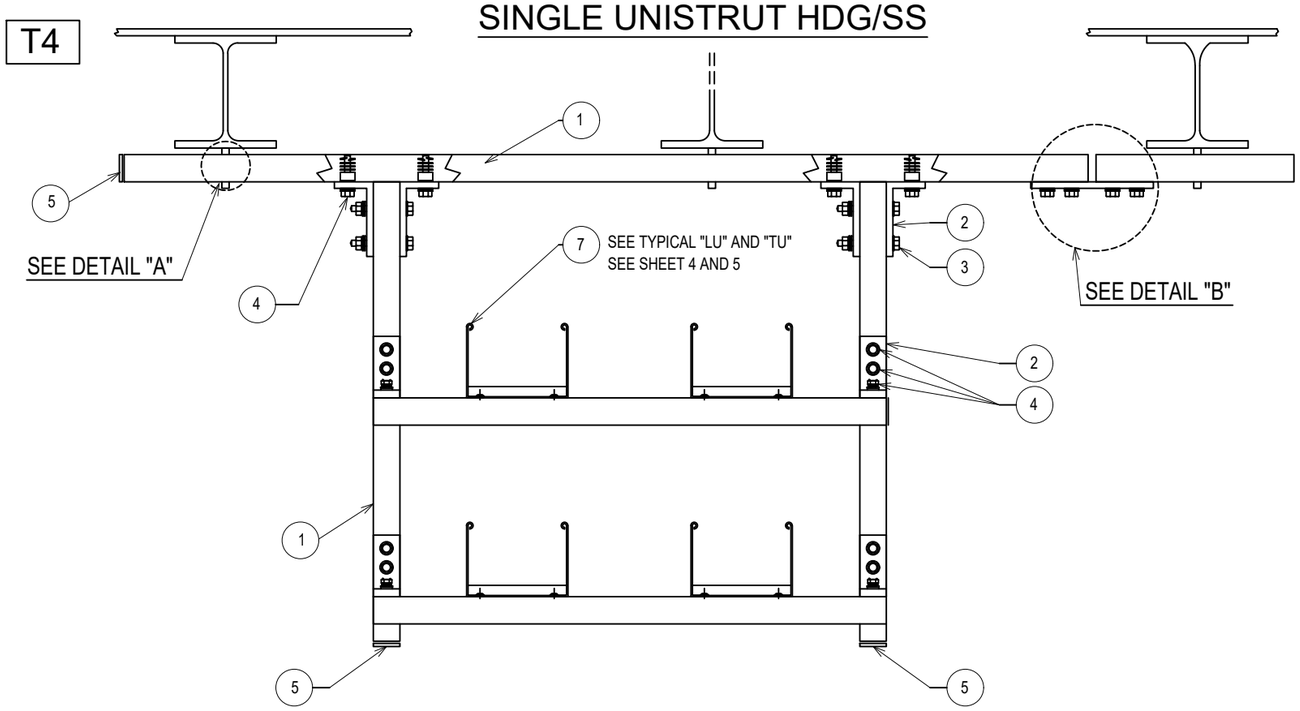
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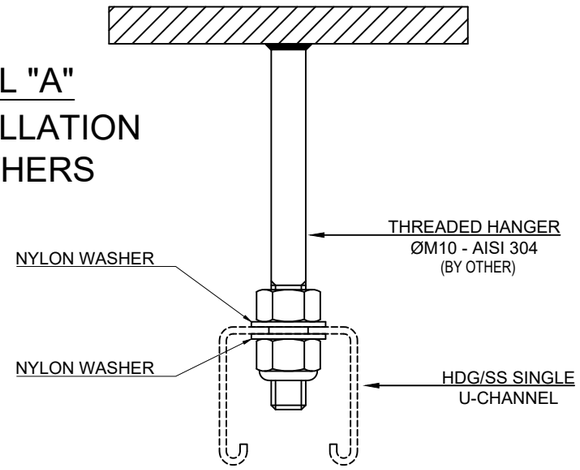
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SINGLE UNISTRUT HDG/SS

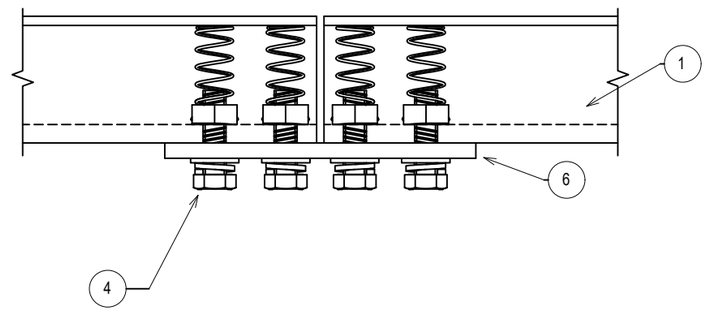


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	SINGLE U-CHANNEL PERFORATED ON NO. 3 SIDE	AISI 316L	41x41x2		NOTE 1
2	PLATE FOR ORTHOGONAL TRASVERSAL CONNECTION WITH 3 HOLES	AISI 316L		8	
3	HEXAGONAL BOLT COMPLETE WITH PLANE WASHERS, GROWER AND NUT	AISI 316L	M10x70	4	
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10	16	
5	PLUG FOR U-CHANNEL	LPDE		AS R	
6	CONNECTION PLATE (4 HOLES)	AISI 316L		AS R	
7	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
8	DOUBLE SLOT CROWNED HEAD SCREW C/W PLANE WASHER, GROWER AND NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M6x20	AS R	

DETAIL "A"
INSTALLATION
BY OTHERS



DETAIL "B"



TYPICAL VALID INSIDE TECHNICAL ROOMS

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) THIS TYPICAL SHALL BE USED ONLY FOR INDOOR INSTALLATION.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–CABLE ROUTES SYSTEM
CABLE WAY FIXING TO WELDED THREADED HANGER WITH U-CHANNEL

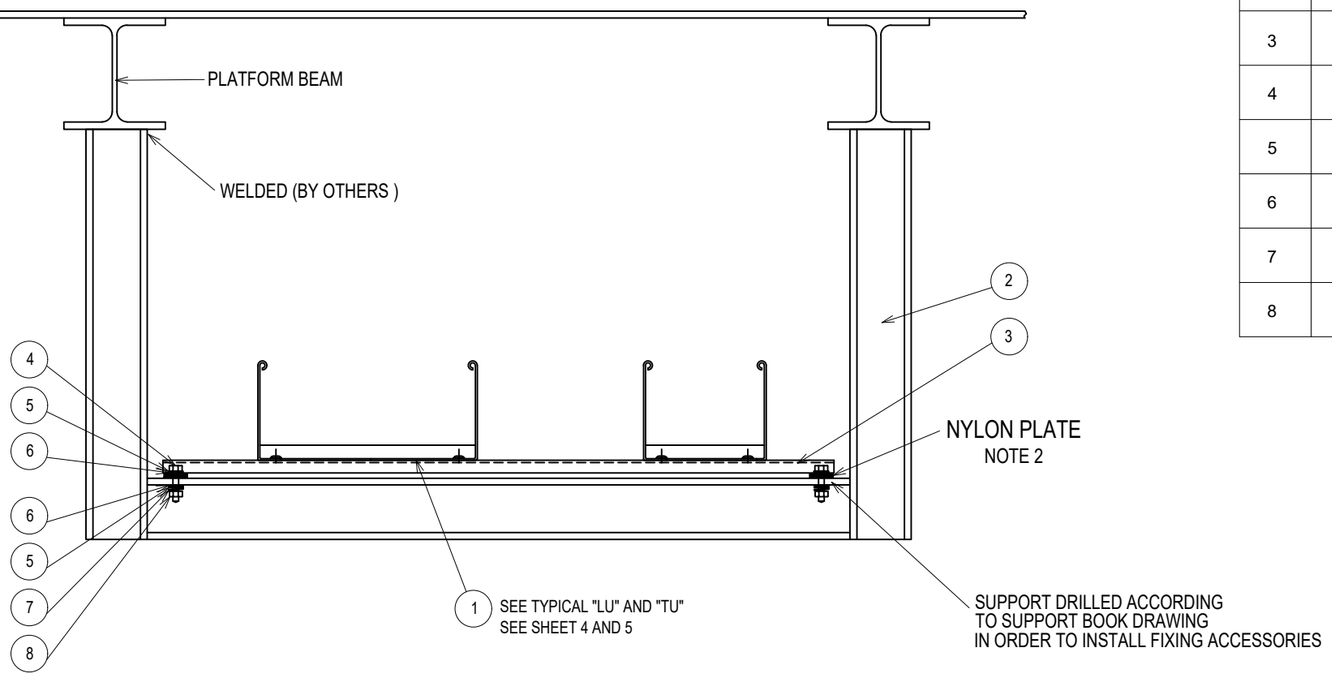
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 009 | REV. 02

F.to UNI A3: 420mmx297mm

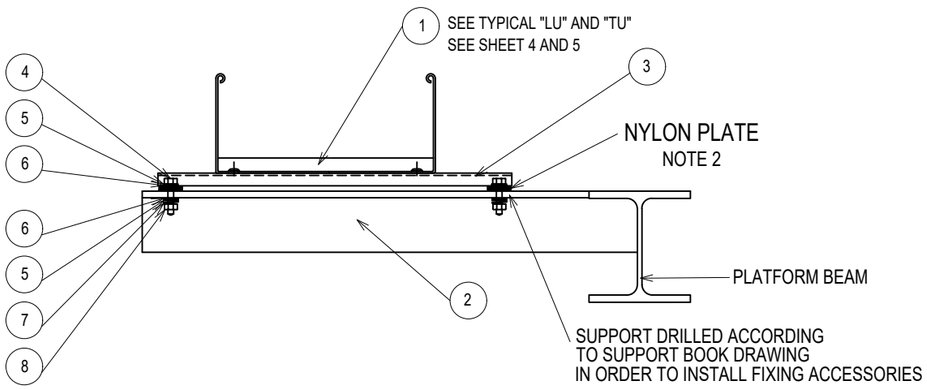
File Name : 123A90-DDL-EL-DD-20093_02.DWG

T5CS



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	PROFILE SUPPORT	PAINTED C.S.			
3	SINGLE U-CHANNEL PERFORATED LOW PROFILE	AISI 316L	41x22x2		NOTE 1
4	BOLT	AISI 316L	M10x30	2	
5	PLANE WASHER	AISI 316L	M10	2	
6	NYLON WASHER	AISI 316L	M10	2	
7	GROWER	AISI 316L	M10	2	
8	NUT	AISI 316L	M10	2	

TYPICAL VALID FOR SUPPORTS ON PERIMETER:



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.
3) INTERPOSING NYLON PLATE BETWEEN DISSIMILAR CONDUCTING MATERIALS (NYLON THK=1 mm).

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH WELDED SUPPORT

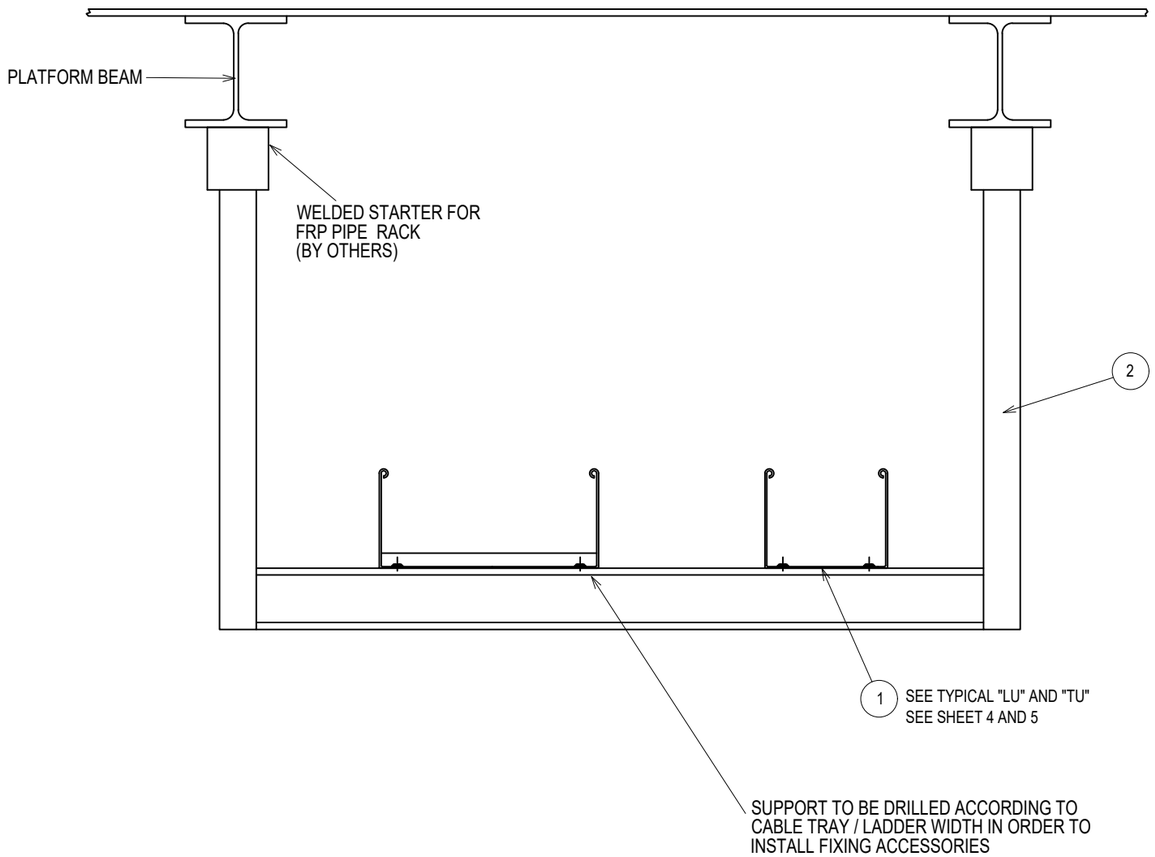
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 010 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

T5FRP



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER / TRAY	AISI 316L			
2	PROFILE SUPPORT	FRP			

NOTES:
1) FOR DISTANCE BETWEEN CABLE LADDERS/TRAYS, SEE SEGREGATION DISTANCES DETAIL ON SHEET 003.

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–CABLE ROUTES SYSTEM
CABLE WAY ON FRP SUPPORTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20093 | SHEET 011 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

BLANK SHEET

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
BLANK SHEET

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DD-20093

SHEET 012

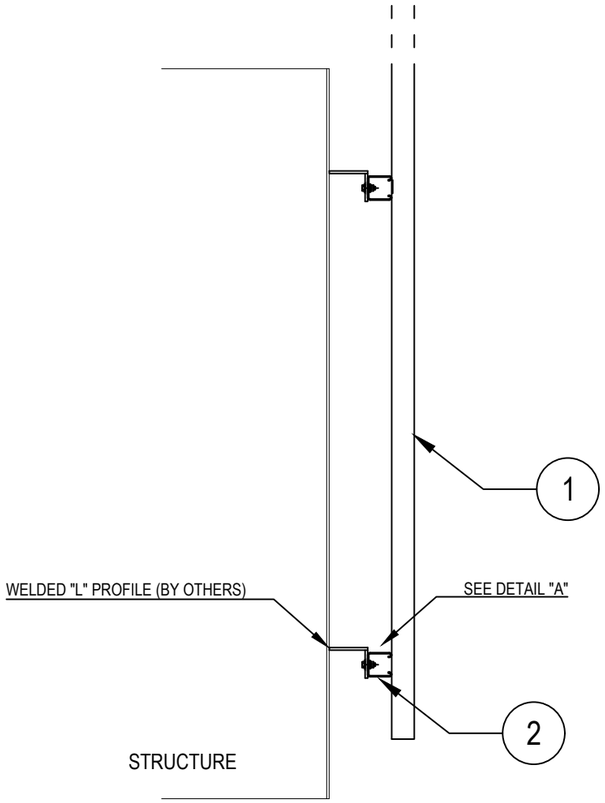
REV. 02

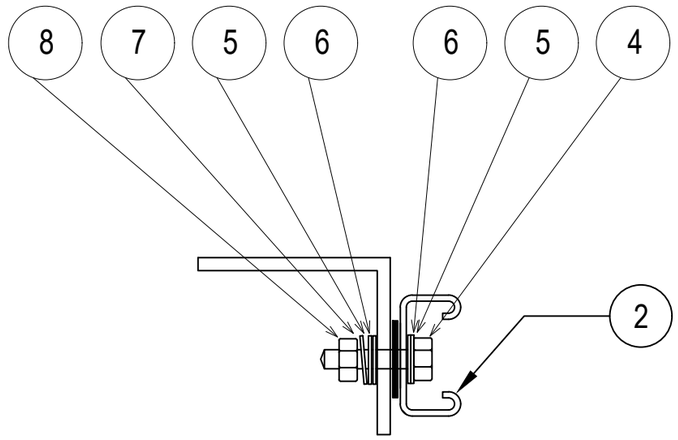
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

T6

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED LOW PROFILE	AISI 316L	41x22x2		NOTE 1
4	BOLT	AISI 316L	M10x30	2	
5	PLANE WASHER	AISI 316L	M10	2	
6	NYLON WASHER	AISI 316L	M10	2	
7	GROWER	AISI 316L	M10	2	
8	NUT	AISI 316L	M10	2	





DETAIL "A"

CONNECTION BETWEEN WELDED "L"
PROFILE AND SINGLE U-CHANNEL

NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH WELDED SUPPORT (VERTICAL RUN)

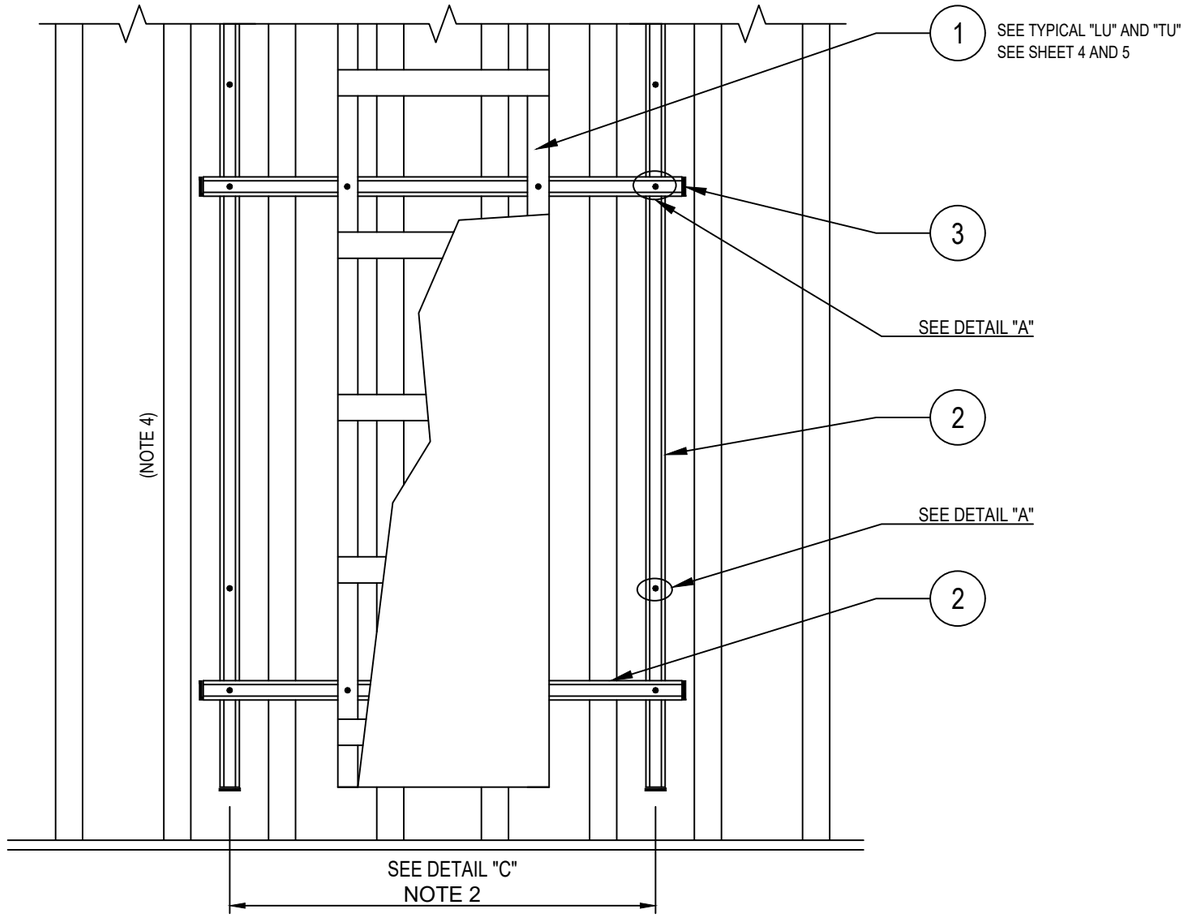
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 013 | REV. 02

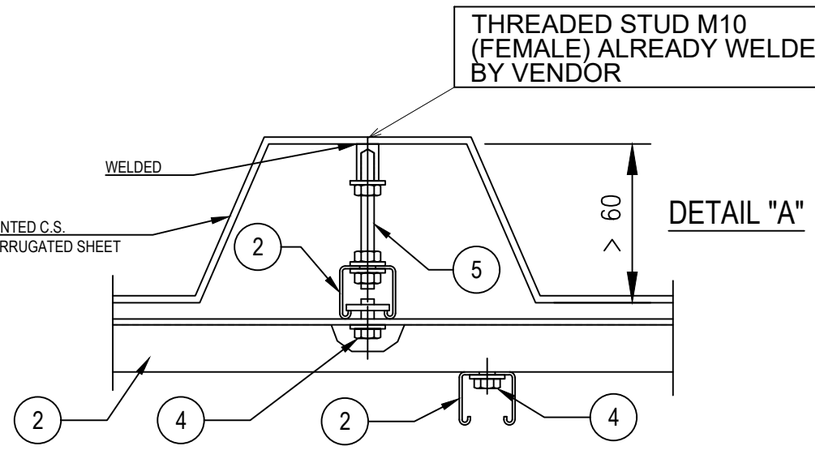
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

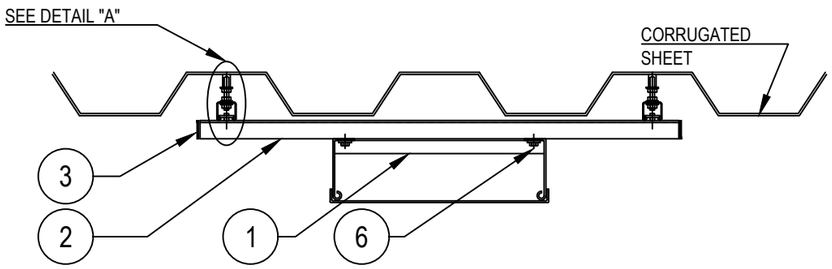
T7



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER OR PERFORATED TRAY	AISI 316L			
2	SINGLE U-CHANNEL PERFORATED	AISI 316L	41x41x2		NOTE 1
3	PLUG FOR U-CHANNEL	LPDE			
4	HEXAGONAL BOLT COMPLETE WITH LARGE PLANE WASHER, NUT FOR U-CHANNEL WITH SPRING	AISI 316L	M10x30		
5	THREADED ROD M10 (L=110mm) COMPLETE WITH PLANE WASHER, LARGE PLANE WASHERS, SPRING WASHER AND NUTS	AISI 316L	M10x110		



DETAIL "C"



NOTES:
1) THE EXACT DIMENSIONS WILL BE DEFINED DURING ASSEMBLY FASE.
2) THE DISTANCE BETWEEN SUPPORTS SHALL BE DEFINED ACCORDING TO THE SIZE OF THE CABLE LADDER AND TYPE OF CORRUGATED SHEET

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
CABLE WAY WITH NELSON STARTER ON SHELTER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

BLANK SHEET

02

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
BLANK SHEET

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DD-20093

SHEET 015

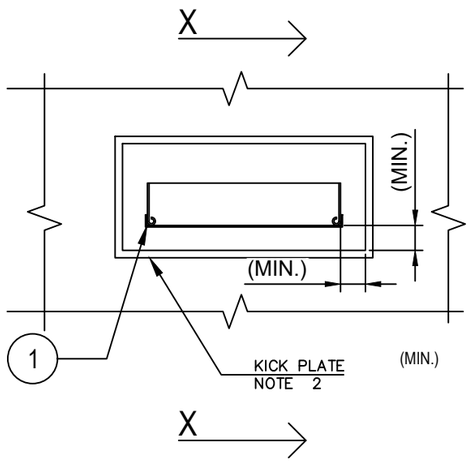
REV. 02

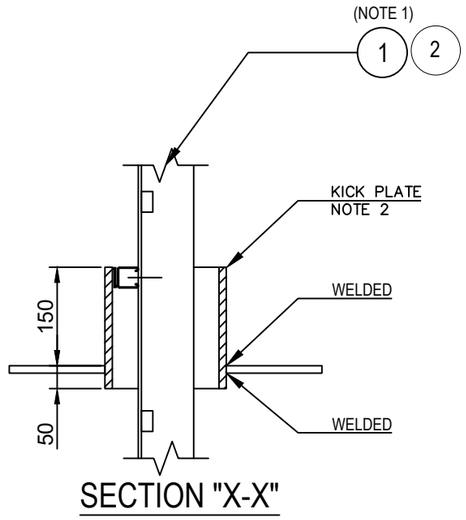
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

T101

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	CABLE LADDER WITH COVER	AISI 316L			
2	CABLE TRAY WITH COVER	AISI 316L			
3	COVER CLAMP WITH SCREW FOR CABLE LADDER COMPLETE WITH M6 SCREW WITH ROUND HEAD, FLAT WASHER, NUT	AISI 316L	H=100 mm		
4	COVER CLAMP WITH SCREW FOR CABLE TRAY COMPLETE WITH M6 SCREW WITH ROUND HEAD, FLAT WASHER, NUT	AISI 316L	H=50 mm		

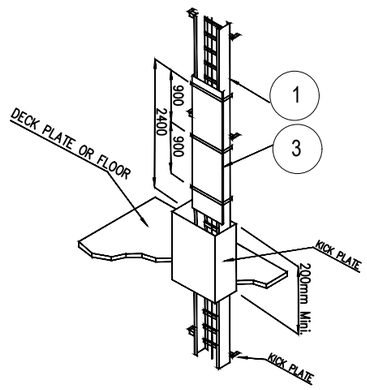




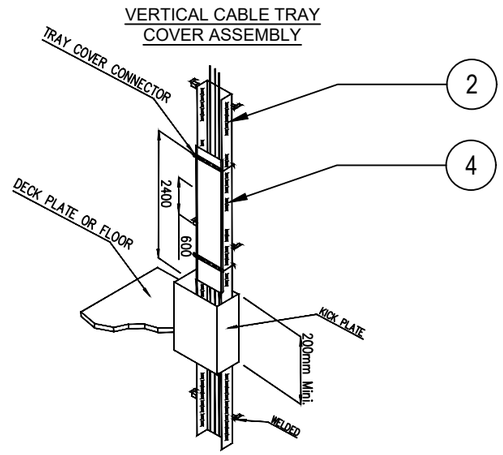
SECTION "X-X"

DETAIL FOR COVER INSTALLATION ON VERTICAL DECK PENETRATION

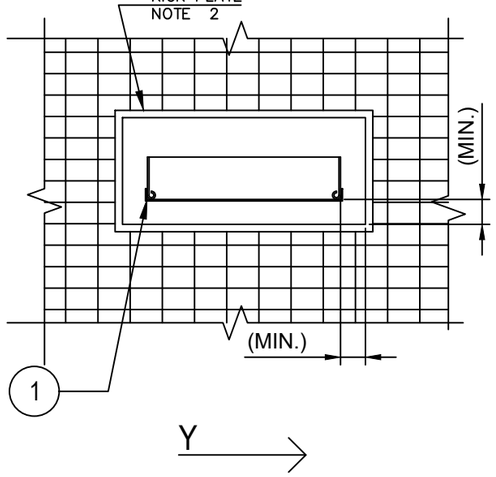
VERTICAL CABLE LADDER COVER ASSEMBLY

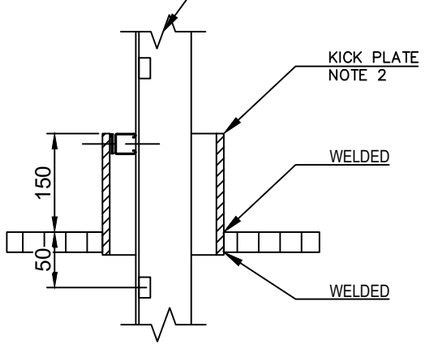


VERTICAL CABLE TRAY COVER ASSEMBLY



UNISTRUT TO BE INSTALLED IF NECESSARY





SECTION "Y-Y"

NOTES:
1) THIS TYPICAL IS ONLY APPLICABLE ON PENETRATIONS IN THE AREAS WITH THE SAME HAZARDOUS CLASSIFICATION AREA.
2) SEPARATE KICK PLATES TO ALLOW GRATING REMOVAL

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

02

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
SUPPORT FOR CABLE LADDER CABLE LADDER / TRAY DECK PENETRATION

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20093 | SHEET 016 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

BLANK SHEET

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
BLANK SHEET

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DD-20093

SHEET 017

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG

BLANK SHEET

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	05/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	29/04/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 02 BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
BLANK SHEET

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DD-20093

SHEET 018

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20093_02.DWG