PACIFIC COMMUNITY PROPOSED EXTENSION TO EXISTING BUILDING-CYRO LAB FNTC ROAD 2, NASINU.

HYDRAULIC SERVICES

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H501	PROPOSED HYDRAULICS DETAILS	T1	2023.01.18	TENDER ISSUE



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	GENERAL NOTES	ABBREV	/IATIONS	
1.	THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE TECHNICAL SPECIFICATIONS AND ALL OTHER RELEVANT DOCUMENTS.	CV	CHECK VALVE	
2.	ALL PLUMBING SHALL BE CARRIED OUT AS PER AS3500 STANDARDS AND LOCAL AUTHORITY REQUIREMENTS, 1.1 AS3500.1 PART 1 WATER SERVICES 1.2 AS3500.2 PART 2 SANITARY PLUMBING AND DRAINAGE	DN	NOMINAL DIAMETER	
	1.3 AS3500.3 PART 3 STORMWATER DRAINAGE	DSW	DOMESTIC SANITARY	WAST
	1.4 AS3500.4 PART 4 HEATED WATER SERVICES 1.5 FIJI NATIONAL BUILDING CODE	DCW	DOMESTIC COLD WAT	ER
3.	USE NEW MATERIALS AND FITTINGS UNLESS OTHERWISE INDICATED.	DW	DRAIN WASTE	
4.	CONFIRM EXACT POSITIONS OF PIPE RUNS AND FIXTURES WITH SERVICES ENGINEER ON SITE. MARK OUT ALL FINAL LOCATIONS WITH CHALK PRIOR TO INSTALLING, DRAWINGS SHOW INDICATIVE AND PROPOSED ROUTING. CO-ORDINATE ALL PIPE ROUTES WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.	FLV	FLOAT VALVE	
5.	ALL WATER SUPPLY PIPEWORK SHALL BE PRESSURE TESTED TO AS/NZS3500 STANDARDS. TO A MINIMUM OF 1500kPA FOR 30 MINUTES TO AS/NZS3500.1	FSL	FINISHED SURFACE LE	EVEL
5.	ALE WATER SUFFET FIFEWORK SHALE BE FRESSURE TESTED TO AS/N235300 STANDARDS, TO A MINIMUM OF 1500RFA FOR 30 MINUTES TO AS/N235300.1	FWG	FLOOR WASTE GULLY	
6.	ALL SANITARY DRAINAGE PIPEWORK AND STORMWATER PIPEWORK TO BE STATIC PRESSURE TESTED TO AS/NZS 3500.2 AND AS NZS 3500.3	FW	FLOOR WASTE	
7.	ALL DCW DISTRIBUTION PIPES TO BE AS SHOWN AND BRANCH CONNECTIONS TO FIXTURES TO BE DN15 OR TO SUIT.	GV	GATE VALVE	
8.	RUN PIPES IN STRAIGHT LINES WITH EASY SWEEPS. PROVIDE ADEQUATE SUPPORTS.	HT	HOSE TAP	
9.	CLEAN ALL PIPES TO REMOVE DIRT AND CONSTRUCTION MATERIAL.			
10.	USE MACHINE-MADE PIPE BENDS, THE USE OF ON-SITE HEATING AND BENDING IS NOT PERMITTED.	LINETYPE	<u>=S</u>	
11.	SEAL ALL PENETRATIONS WITH FIRE RESISTANT MATERIAL, HILTI CP611A - INTUMENESCENT FIRE SEALANT OR APPROVED EQUIVALENT.	COLD WAT	FER LINE	-

- 12. INSTALL PIPES TO ALLOW FOR THERMAL EXPANSION AND TO AVOID AIR LOCKS.
- 13. USE UPVC PIPES FOR SANITARY PLUMBING, DRAINS AND VENTS TO AS/NZS 1260. USE RUBBER RING JOINTS TO JOIN PIPE LENGTHS AS PER MANUFACTURERS SPECIFICATIONS
- 14. ALL DCW PIPES THAT ARE ENCASED IN CONCRETE SLABS OR BLOCKWORK ARE TO BE COVERED WITH DOUBLE DENSO TAPE WRAP. PROVIDE SLEEVES FOR PIPES THROUGH COLUMNS AND BEAMS.
- 15. PROVISION SHALL BE MADE IN ALL PIPE LINES TO ACCOMMODATE EXPANSION DUE TO TEMPERATURE CHANGE WITHOUT STRESS OR DAMAGE TO THE PIPE LINES. PIPE ANCHORS SHALL BE USED ADJACENT TO ALL EXPANSION JOINTS AND GENERALLY FOR THE CONTROL OF THE DIRECTION OF THE EXPANSION.
- 16. CONTRACTOR SHALL ENSURE THAT ADEQUATE FALL IS PROVIDED FOR SANITARY AND CONDENSATE DRAINS.
- 17. CONFIRMED LOCATIONS OF SANITARY FIXTURES & FITTINGS SHALL BE DETERMINED FROM THE ARCHITECTURAL DRAWINGS. REFER TO ARCHITECT'S SCHEDULE OF FIXTURES & TAPWARE.
- 18. ALL SANITARY DRAINS SHALL HAVE A MINIMUM CLEARANCE OF 150MM FROM EACH OTHER.
- 19. HYDRAULICS CONTRACTOR TO OBTAIN APPROVAL FROM STRUCTURAL ENGINEER PRIOR TO ANY PENETRATION IN THE STRUCTURE. ALL PENETRATION THROUGH BEAM TO BE MINIMUM OF 2M AWAY FROM COLUMN.
- 20. SPECIFICATIONS AND DATASHEETS OF ALL EQUIPMENTS SHALL BE SUBMITTED TO SERVICES ENGINEERS FOR APPROVAL PRIOR TO ORDERING.
- 21. UNLESS IT IS NOTED ON THE DRAWINGS, POWER SUPPLIES FOR HYDRAULICS EQUIPMENT WILL BE PROVIDED BY ELECTRICAL CONTRACTORS AS ELECTRICAL ISOLATORS MOUNTED ADJACENT TO HYDRAULICS EQUIPMENT. ALL WIRING FROM THE ELECTRICAL ISOLATORS ONWARDS SHALL BE DONE BY THE HYDRAULICS CONTRACTOR.
- 22. HYDRAULICS CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR CONDENSATE DRAINAGE CONNECTIONS FOR AIR-CONDITIONING UNITS.
- 23. ALL DCW PIPES SHALL BE TAGGED AND CORRECTLY LABELLED AT EVERY 3 METERS INTERVALS. LABELS SHALL BE SUITED FOR USE.
- 24. THRUST BLOCKS SHALL BE INSTALLED ON STEEP GRADE DRAINS AND WATER PIPES AT INTERVALS NOT EXCEEDING 3 METERS.
- 25. THRUST BLOCKS SHALL BE OF REINFORCED CONCRETE HAVING TWO REINFORCEMENT RODS OF NOT LESS THAN 9MM DIAMETER.
- 26. HYDRAULIC CONTRACTOR TO COORDINATE WITH CIVIL WORKS REGARDING THE EXISTING SEWER MANHOLE STORM DRAINAGE MANHOLE INCLUDING INVERT LEVEL AND LEAD LEVEL ON ACTUAL SITE AND PROVIDE SHOP DRAWINGS FOR ENGINEERS APPROVAL
- 27. HYDRAULICS CONTRACTOR TO PROVIDE VENT PIPES TO AS 3500.2 STANDARD FOR ALL KITCHEN SINK, CLEANERS SINKS, WASH HAND BASINS BRANCH DRAIN PIPES EXCEEDING 2.5M IN LENGTH AND FOR ALL WC'S BRANCH DRAINS EXCEEDING 6M IN LENGTH.









PROJECT TITLE: PACIFIC COMMU PROPOSED EXTENSION TO EXISTING FNTC ROAD 2, NA			
DRAWING TITLE:			
GENERAL NOTES ABBREVIAT			
	TENDER ISSUE	T1 180123	T'
	REVISION:	NO: DATE:	

COLD WATER LINE	DCW
DOMESTIC SANITARY WASTE	DSW

	IL	INVERT LEVEL
	IV	ISOLATION VALVE
STE	KS	KITCHEN SINK
	NRV	NON RETURN VALVE
	PG	PRESSURE GAUGE
	PS	PRESSURE SWITCH
EL	SWIC	STORM WATER INSPECTION CHAMBER
	т	TUNDISH
	TD	TRENCH DRAIN
	TV	TERMINAL VENT
	VP	VENT PIPE



	DESIGN:	SP	
BUILDING-CRYO LAB	DRAWN:	RA	
SINU.	QA:	NP	AUTOCAD FILE NO:
	SCALE:	N/A	3885-H2-T1
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	STATUS:	TENDER ISSUE	$\left(\begin{array}{c} \text{SHEET NO.} \\ \text{H2} \end{array}\right) \left(\begin{array}{c} \text{SIZE:} \\ \text{A3} \end{array}\right) \left(\begin{array}{c} \text{Revision.} \\ \text{T1} \end{array}\right)$

LEGEND	OF S	SYMB	OLS
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E	CAPPED OFF
IH	CLEANOUT
	DIRECTION OF FLOW
•	DRAIN LOCATION
- D	FLOOR WASTE GULLY
<u> </u>	PIPE BREAK
Ø	PIPE CHANGE IN ELEVATION
D	OVERFLOW RELIEF GULLY TRAP

SCHEMATIC SYMBOLS

1	NON-RETURN VALVE
~~~~	FLEXIBLE CONNECTION (TYP.)
۲	PUMP
×	ISOLATION VALVE
×	SHUT-OFF VALVE

MINIMUM CLEARANCE OF VENT PIPES FROM BUILDING OPENINGS

TYPE OF OPENING VERTICAL (mm)	MINIMUM CLEARANCE FROM OPENING		
	HORIZONTAL (mm)	VERTICAL (mm)	
WINDOWS, ROOF LIGHT, DOORS	3000	600	
EAVES/ PARAPET	-	600	
ROOF	-	150	
DECK	3000	3000	
AIR INTAKE (FANS, ETC)	6000	-	

PIPE SCHEDULE

APPLICATION	LOCATION	PIPEWORK MATERIAL
SANITARY DRAINAGE	ABOVE GROUND	UNPLASTICISED POLY VINYL CHLORIDE (SEWER GRADE)
SANITART DRAINAGE	UNDER GROUND	
COLD WATER SUPPLY	ABOVE GROUND	COPPER / POLYETHYLENE
RETICULATION PIPES	UNDER GROUND	UPVC
DRAIN VENTS	ALL LOCATIONS	UNPLASTICISED POLY VINYL CHLORIDE

DEPTH OF	RECTA	NGULAR	CIRCULAR
FLOOR HAMBER	WIDTH (mm)	LENGTH (mm)	DIAMETER (mm)
< 600	450	600	600
600 ≤ 900	600	900	900
> 900	750	1200	1050

MINIMUM PIPE SIZES FOR SANITARY APPLIANCES

SANITARY FIXTURE	MINIMUM SIZE OF TRAP OUT LET & DISCHARGE PIPE			
HAND BASIN	DN40			
SINKS	DN50			
SHOWER	DN50			
WATER CLOSET	DN100			
MININUM ODADJENIT FOD STODAWATED DIDES				

MINIMUM GRADIENT FOR STORMWATER PIPES

NOMINAL SIZE	MINIMUM GRADIENT
DN90	1:90
DN100	1:120
DN150	1:200
DN225	1:350
DN300	1:350
DN375	1:350

PIPES SPECIFICATION FOR STORMWATER DRAINAGE

SIZES	
UP TO DN150	UPVC
DN 200 AND LARGER	PRE-CAST

MINIMUM GRADIENT FOR SANITARY PIPES

NOMINAL SIZE	MINIMUM GRADIENT
DN40-65	1:40
DN80	1:60
DN100	1:60
DN150	1:100
DN200	1:200
DN300	1:350
DN500	1:500

MINIMUM DISCHARGE RATES AND SUPPLY SIZES FOR FIRE HOSE REELS

NOMINAL HOSE DIAMETER (mm)	MINIMUM DISCHARGE AT INLET PRESSURE	220kPa (I/sec)	MINIMUM SUPPLY PIPE SIZE (DN)
13	0.24		19
19	0.45		25
25	0.55		25

1 H3

LEGEND OF SYMBOLS AND PIPE SCHEDULES



ENGINEER:





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				DRAWING TITLE:	
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	T1	180123	TENDER ISSUE	SCHEDULES	
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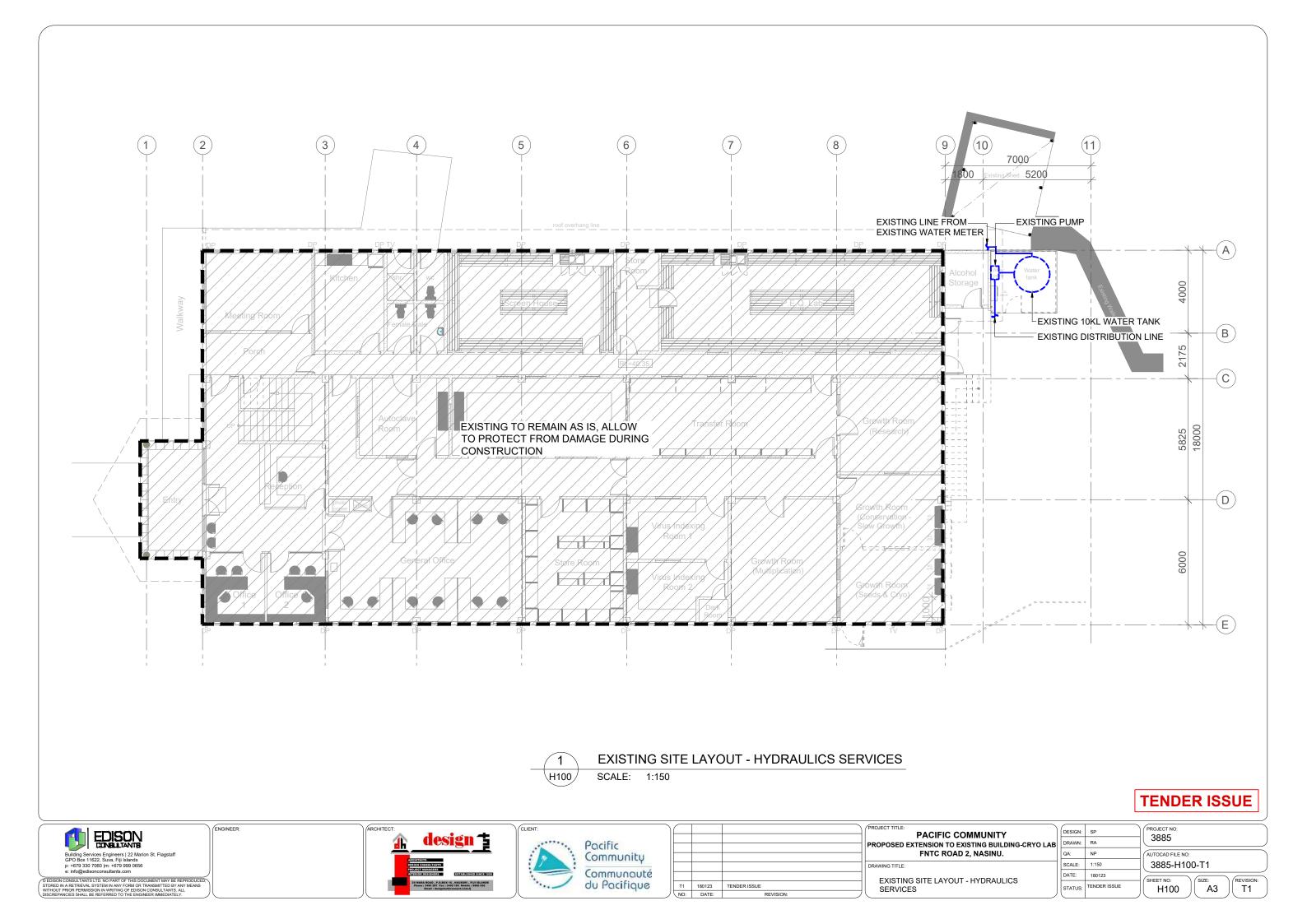
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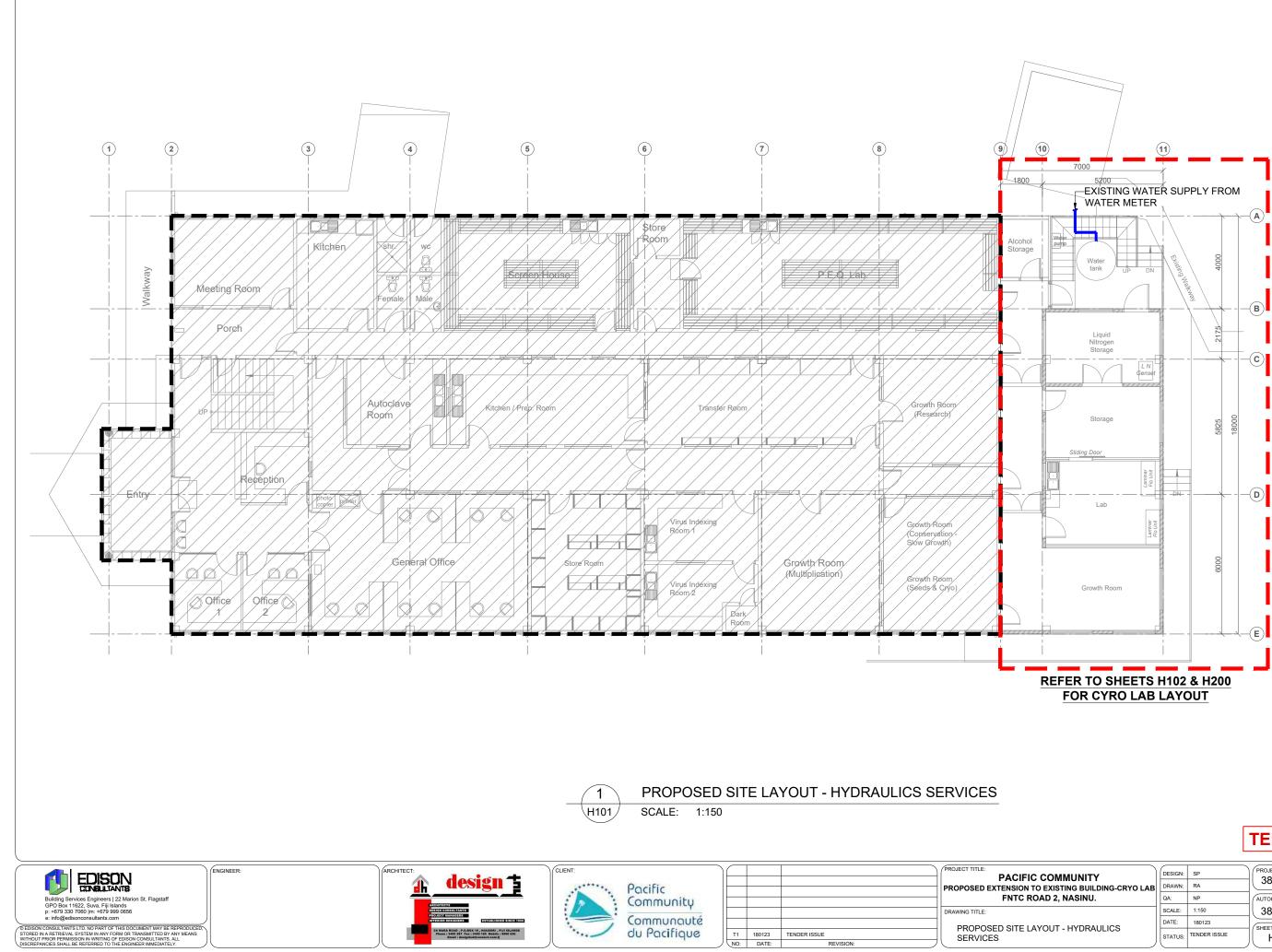
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T CONCRETE CULVERT PIPES

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SINU.	QA:	NP	AUTOCAD FILE NO:
	SCALE:	N/A	3885-H3-T1
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	STATUS:	TENDER ISSUE	H3 $A3$ $T1$
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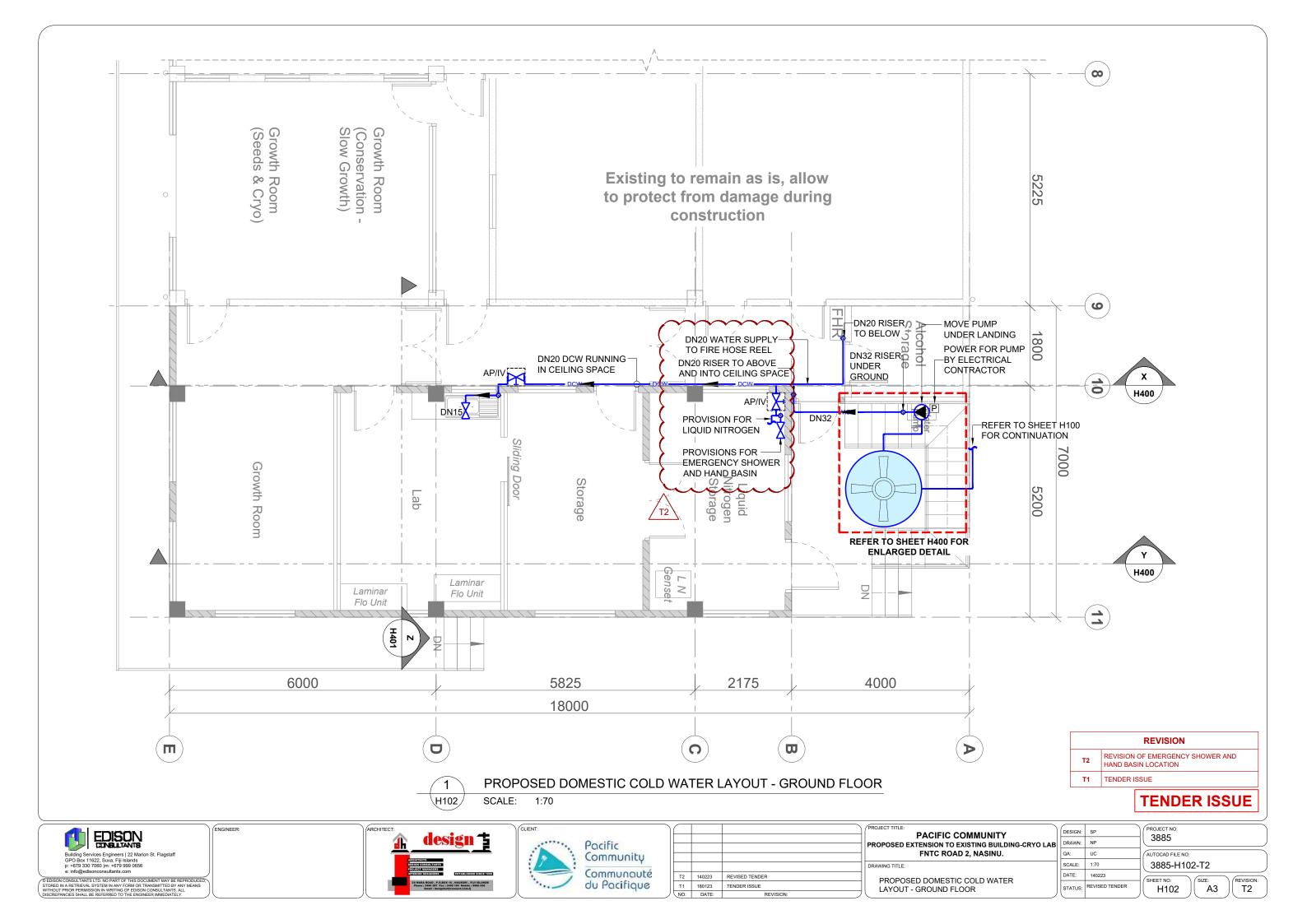


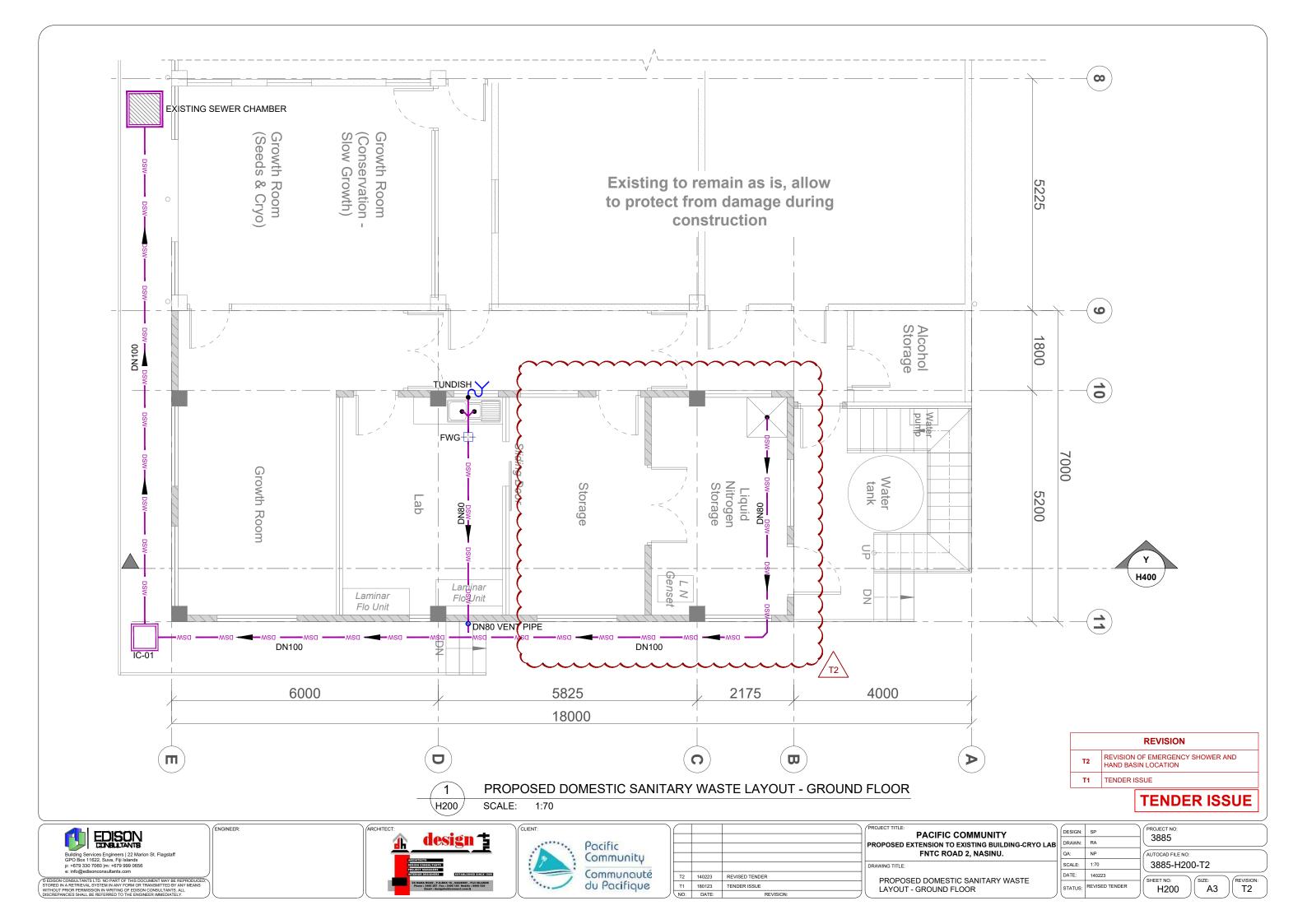
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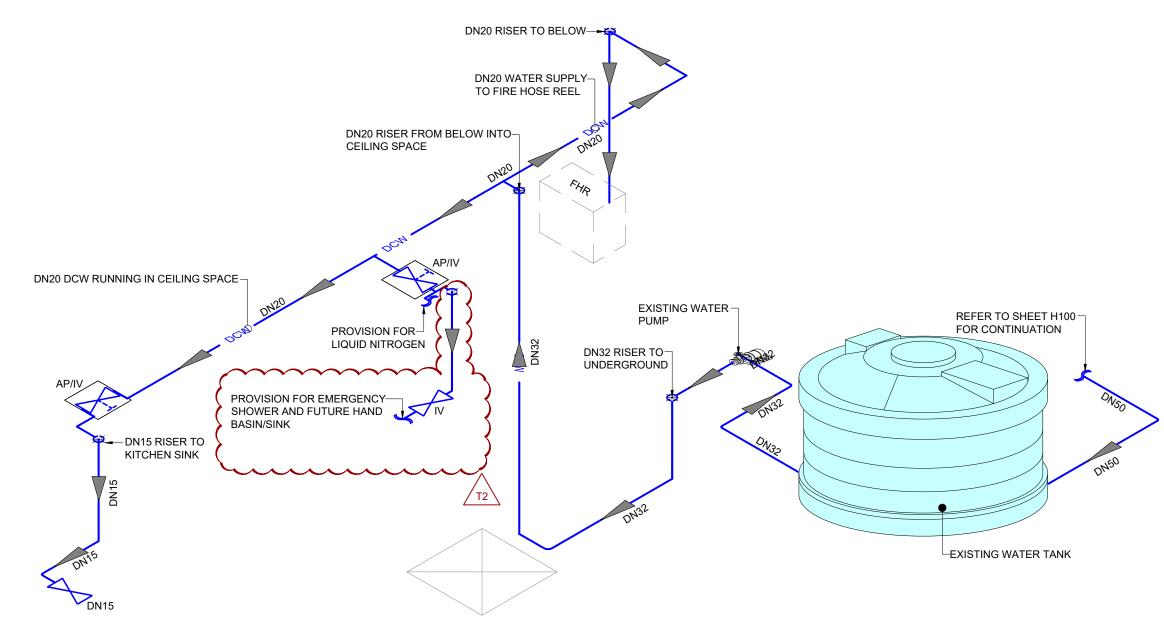
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SINU.	QA:	NP	AUTOCAD FILE NO:		
	SCALE:	1:150	3885-H101-T1		
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SERVICES

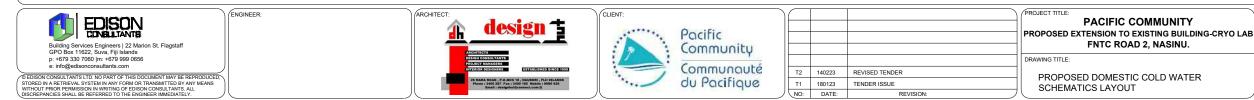
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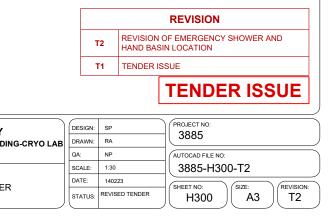


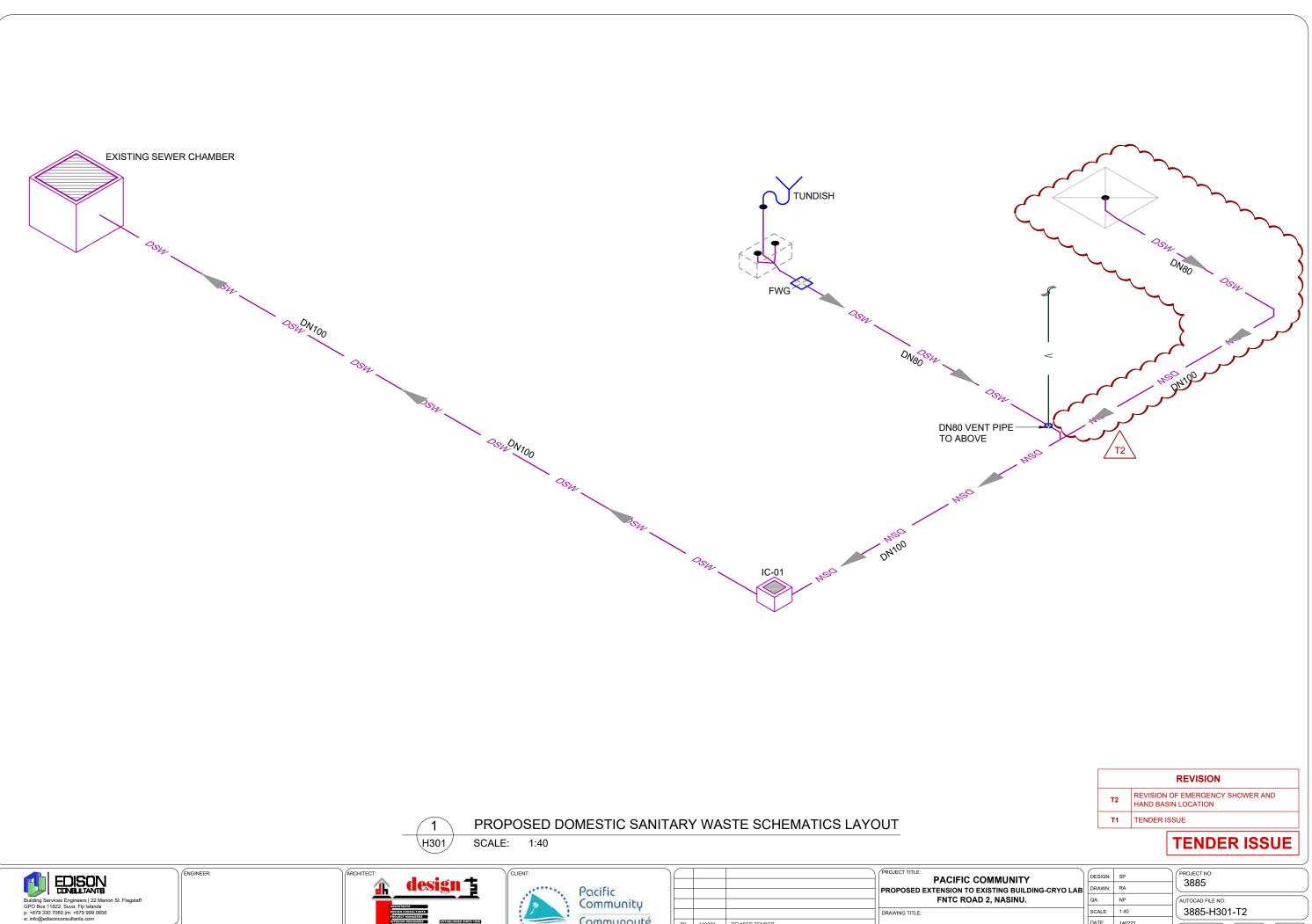
















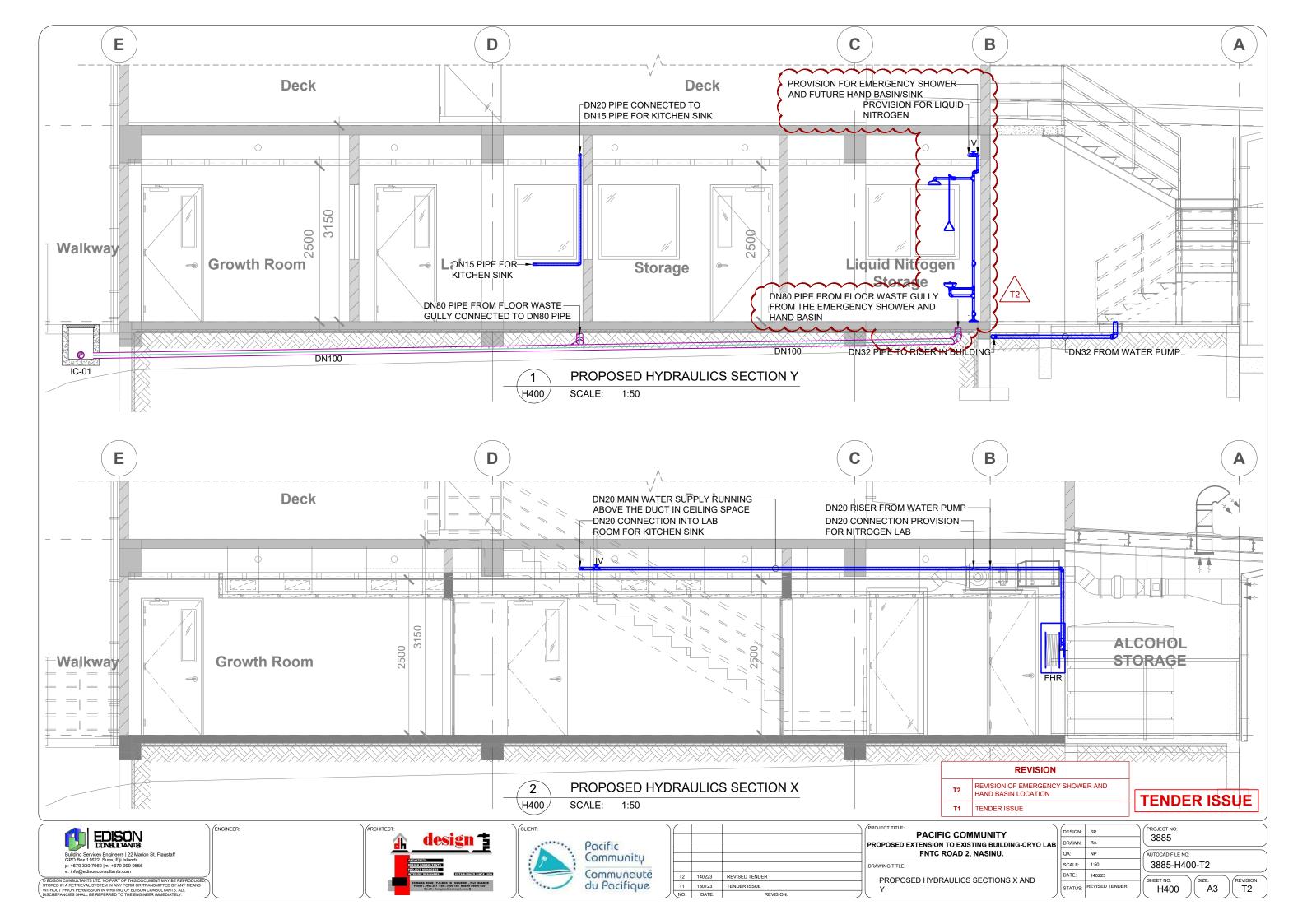


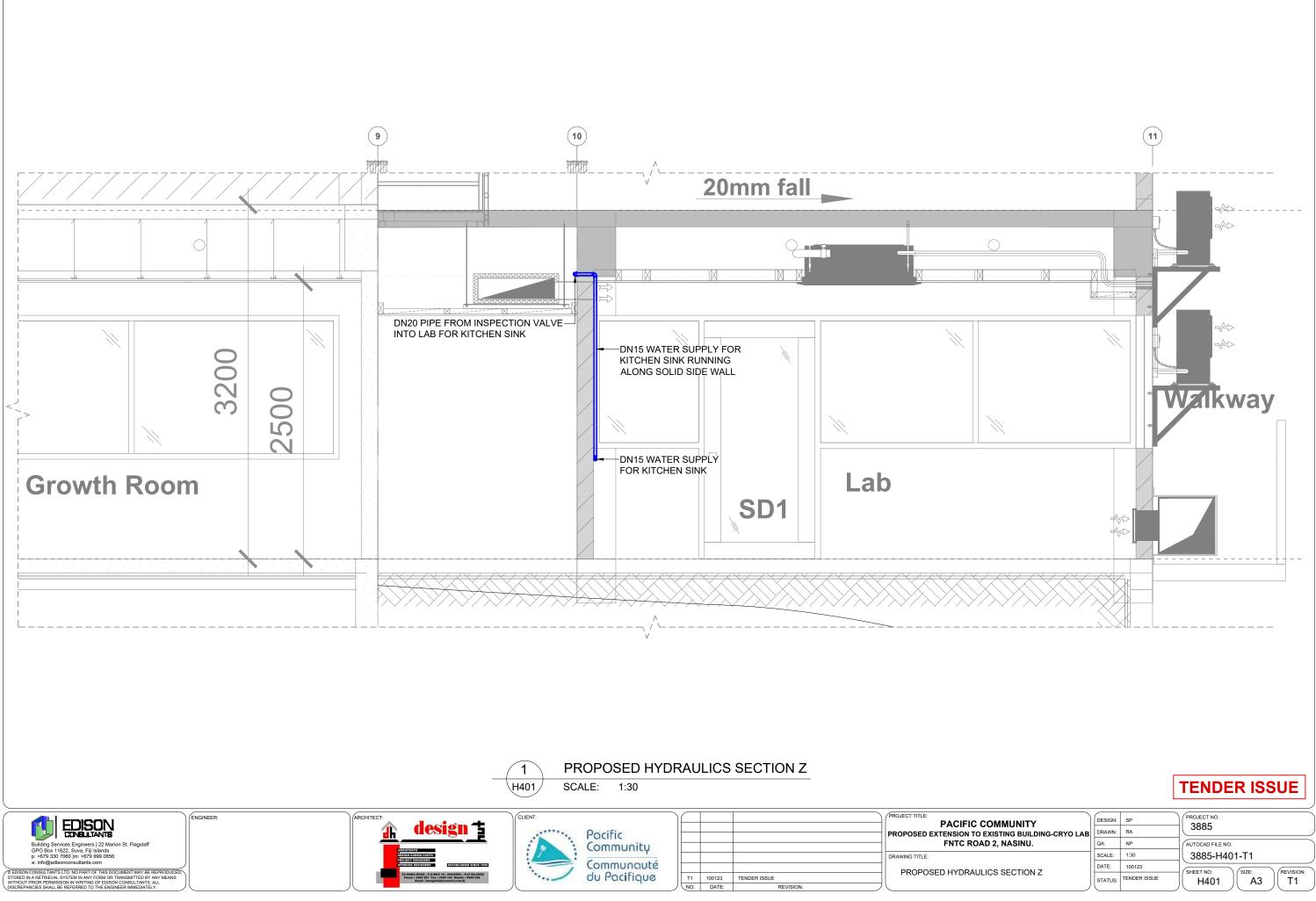
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DATE: 140223

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REVISION: T2





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