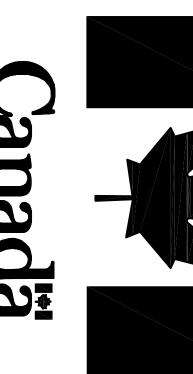
# FISHERIES AND OCEANS



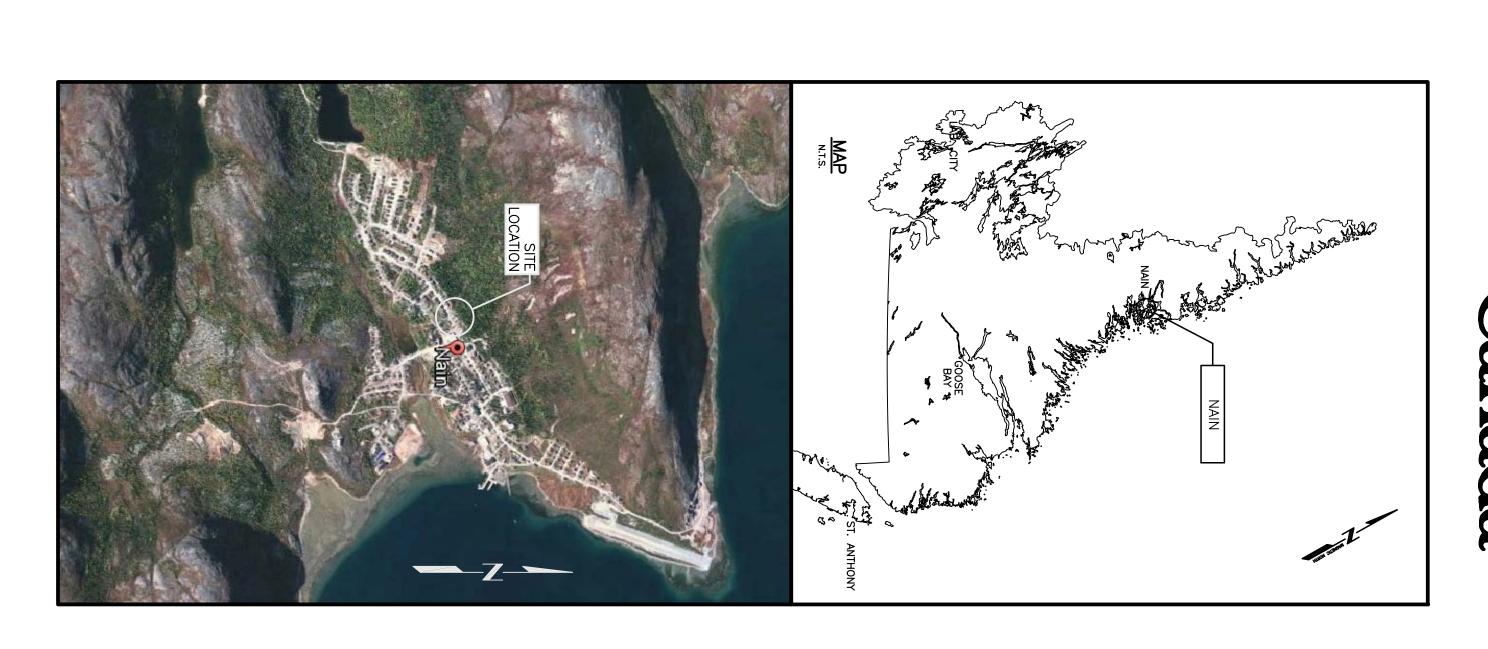
## TRAILER IMPROVEMENTS

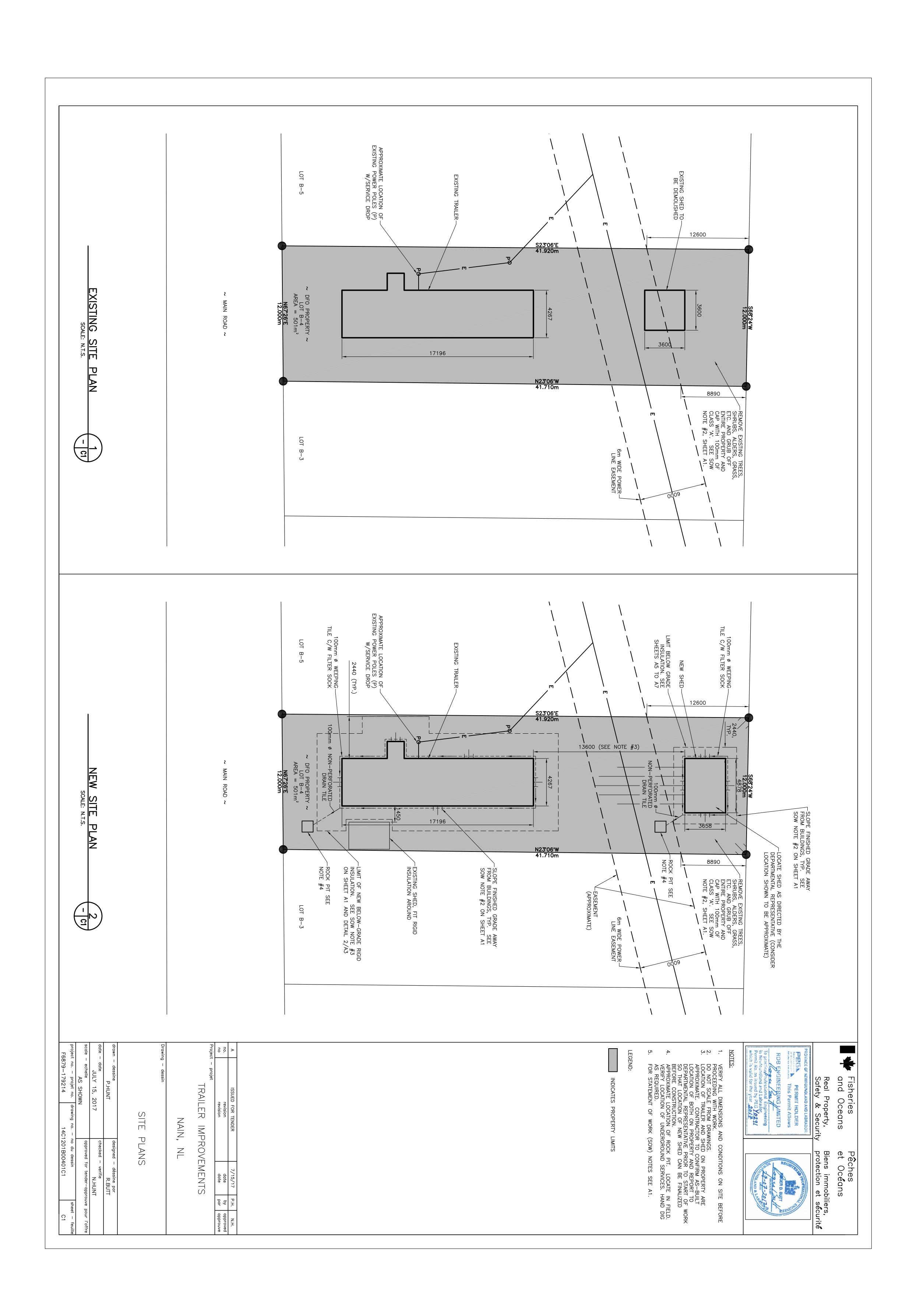
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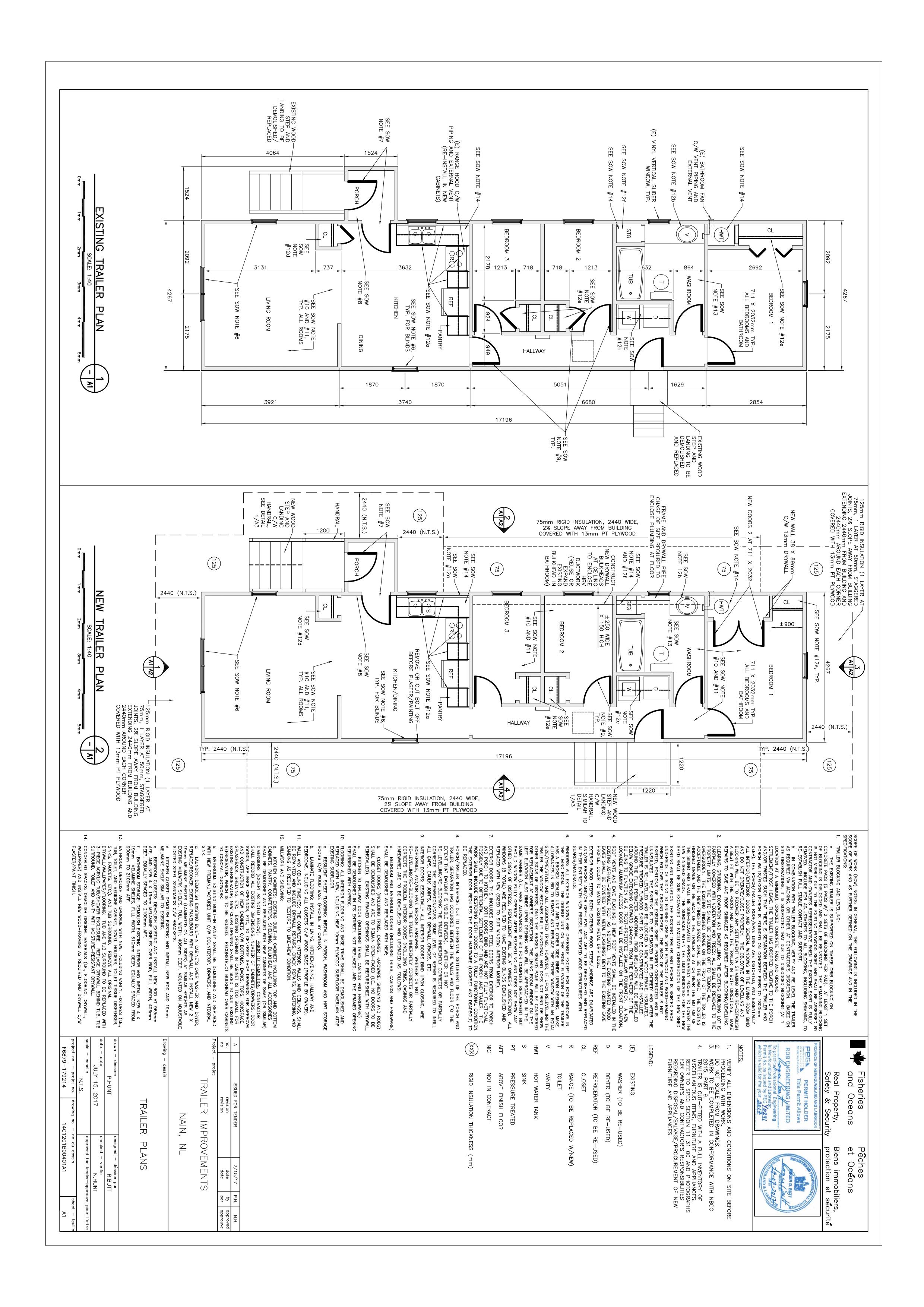
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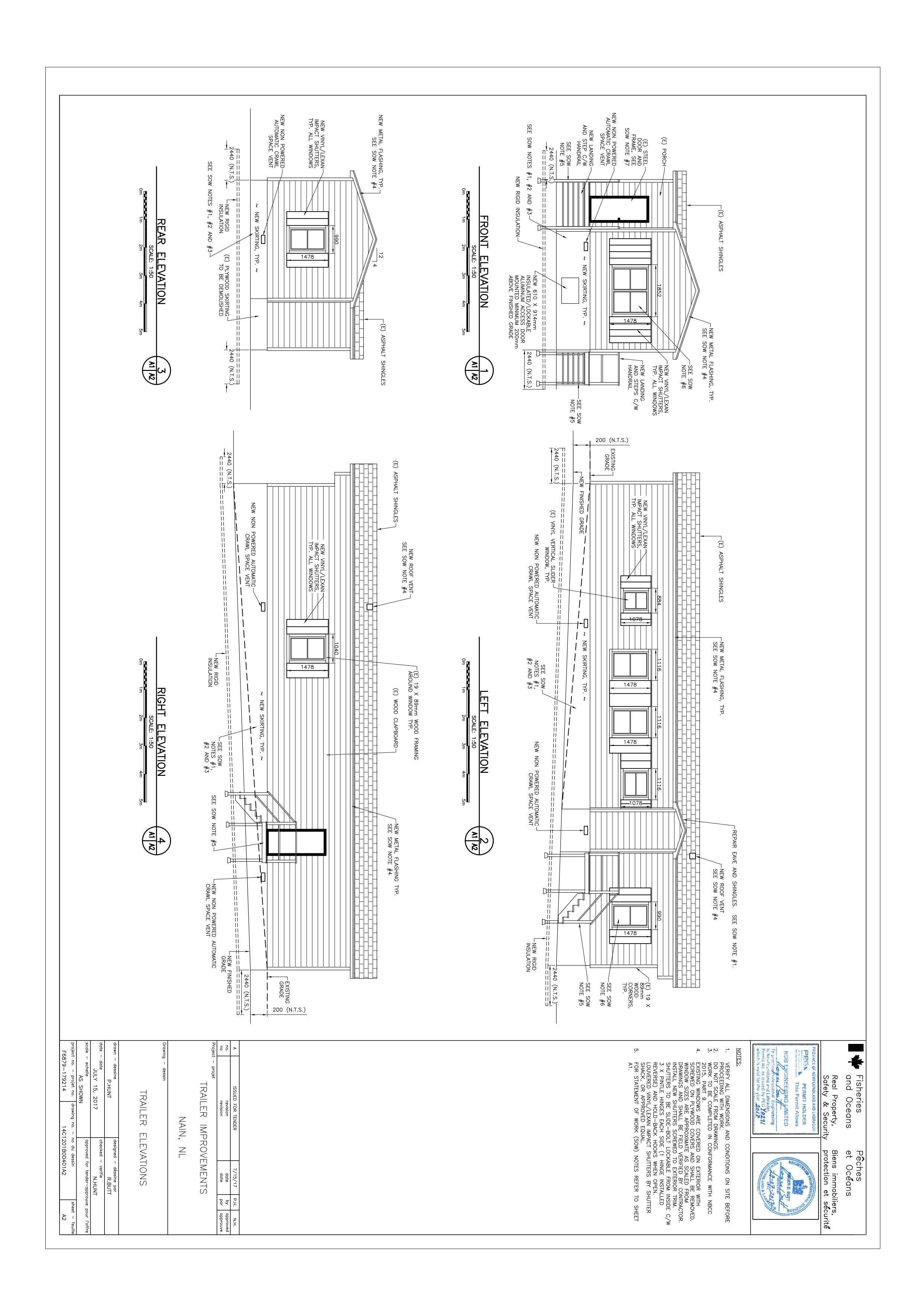
DATE: JULY 15, 2017

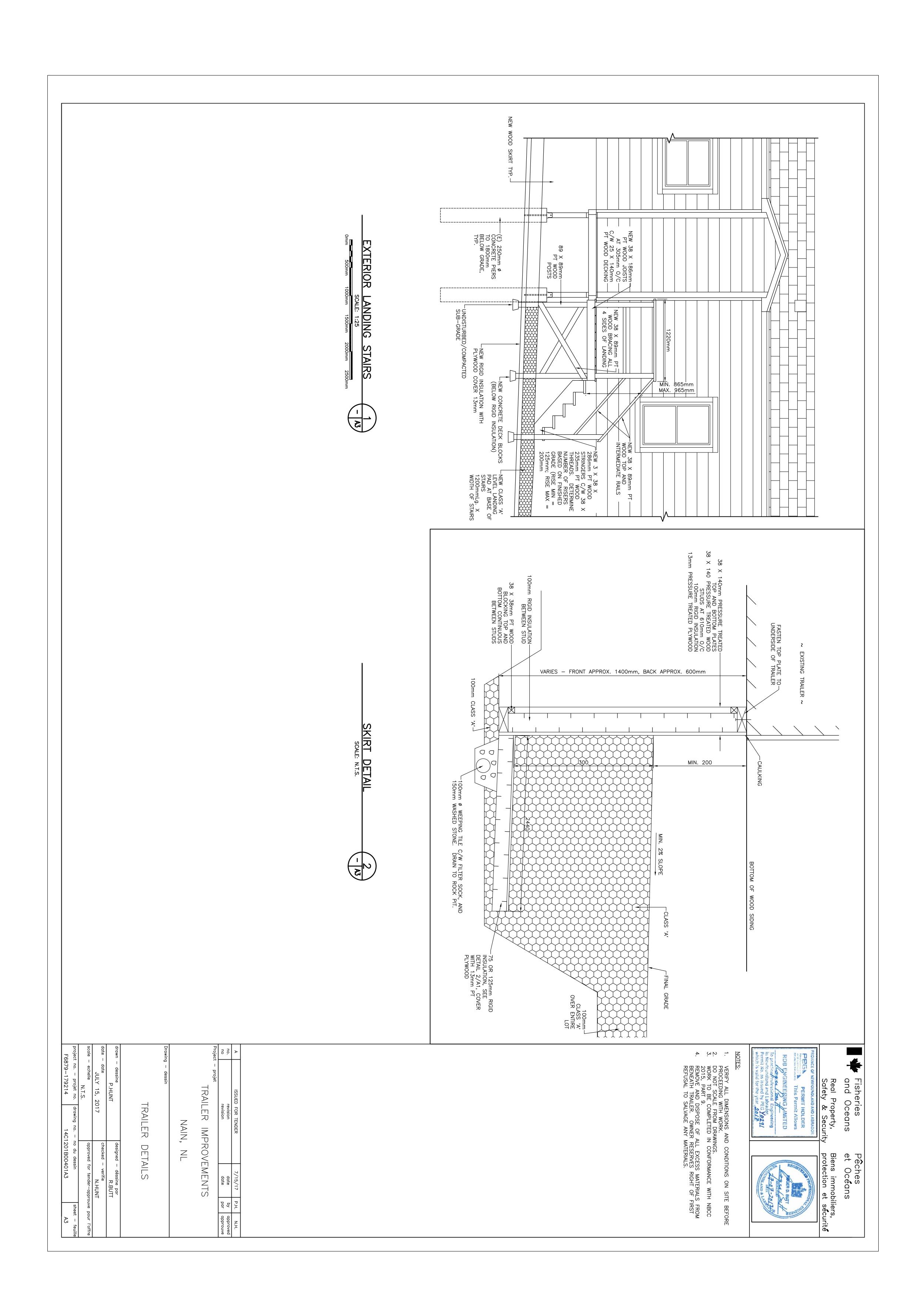
CLIENT/OWNER:
DEPARTMENT OF FISHERIES & OCEANS,
REAL PROPERTY, SAFETY & SECURITY

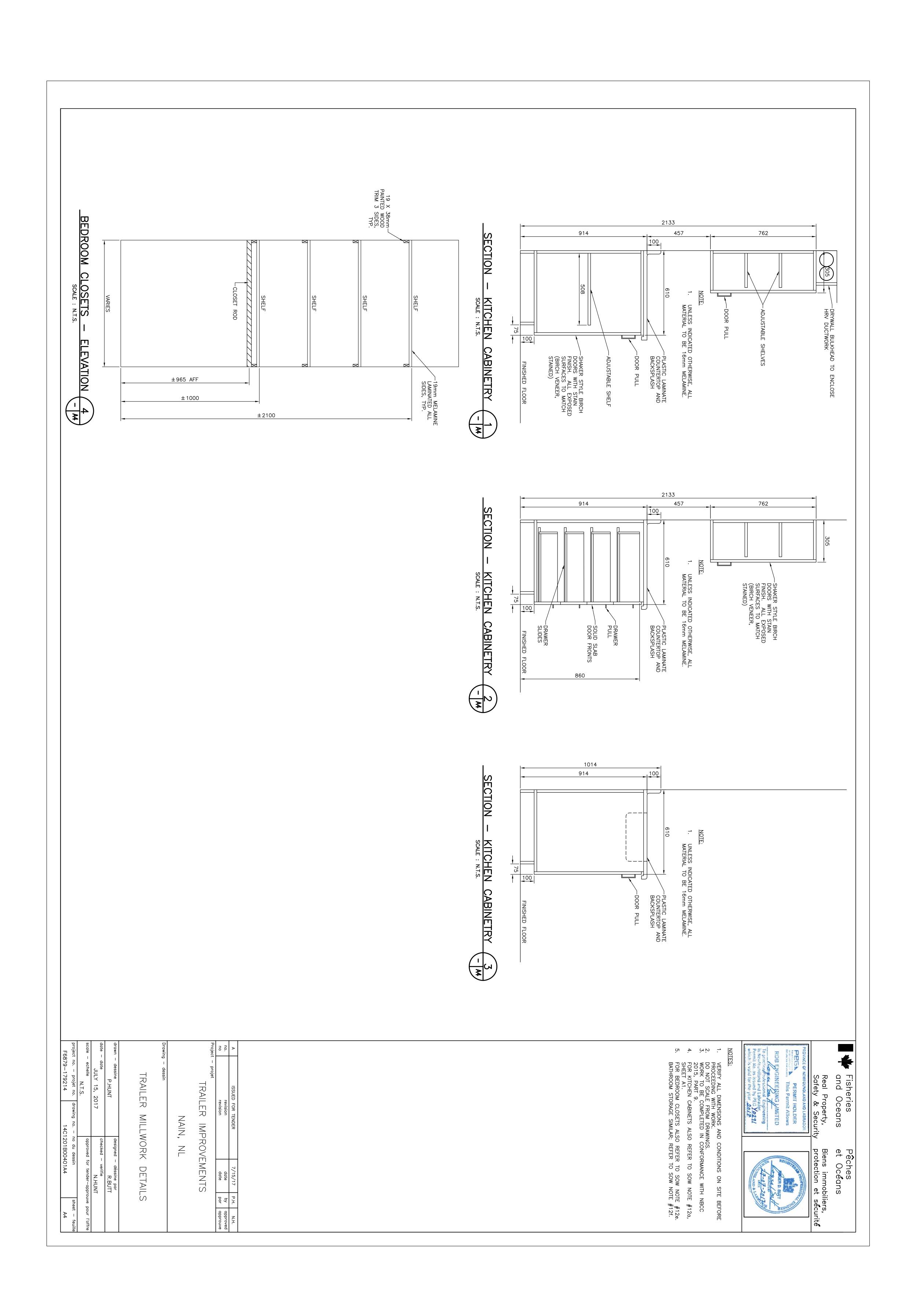


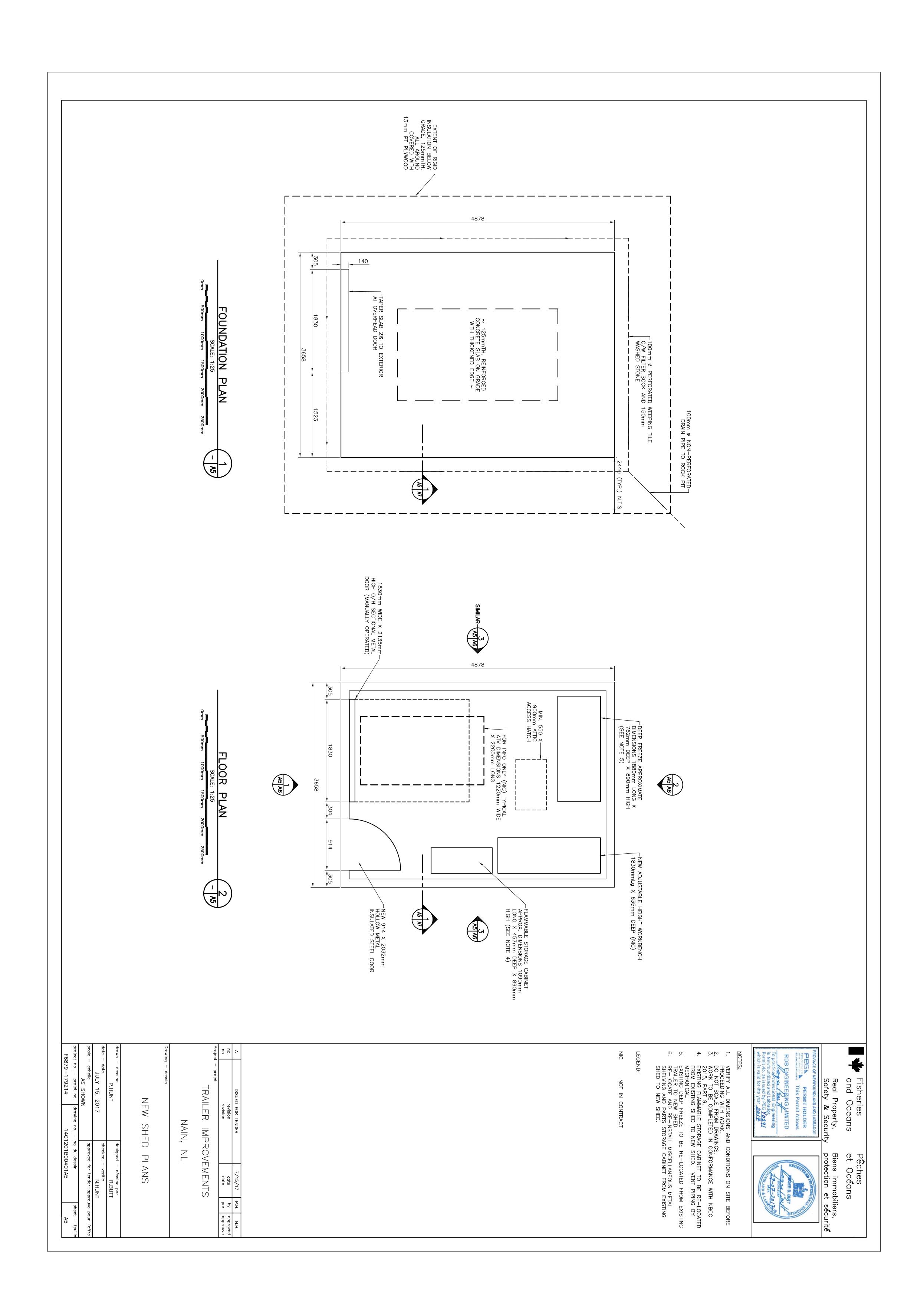


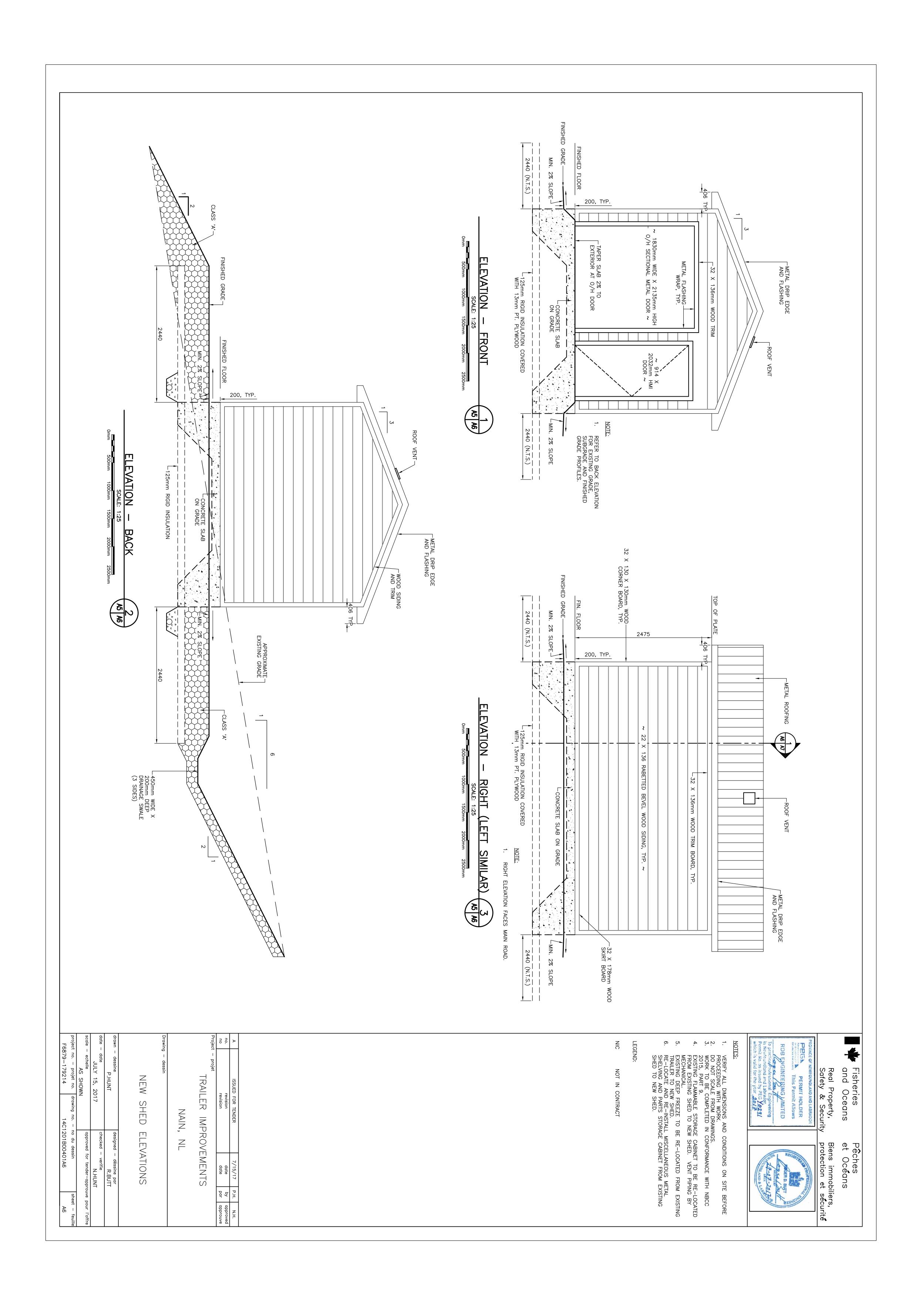


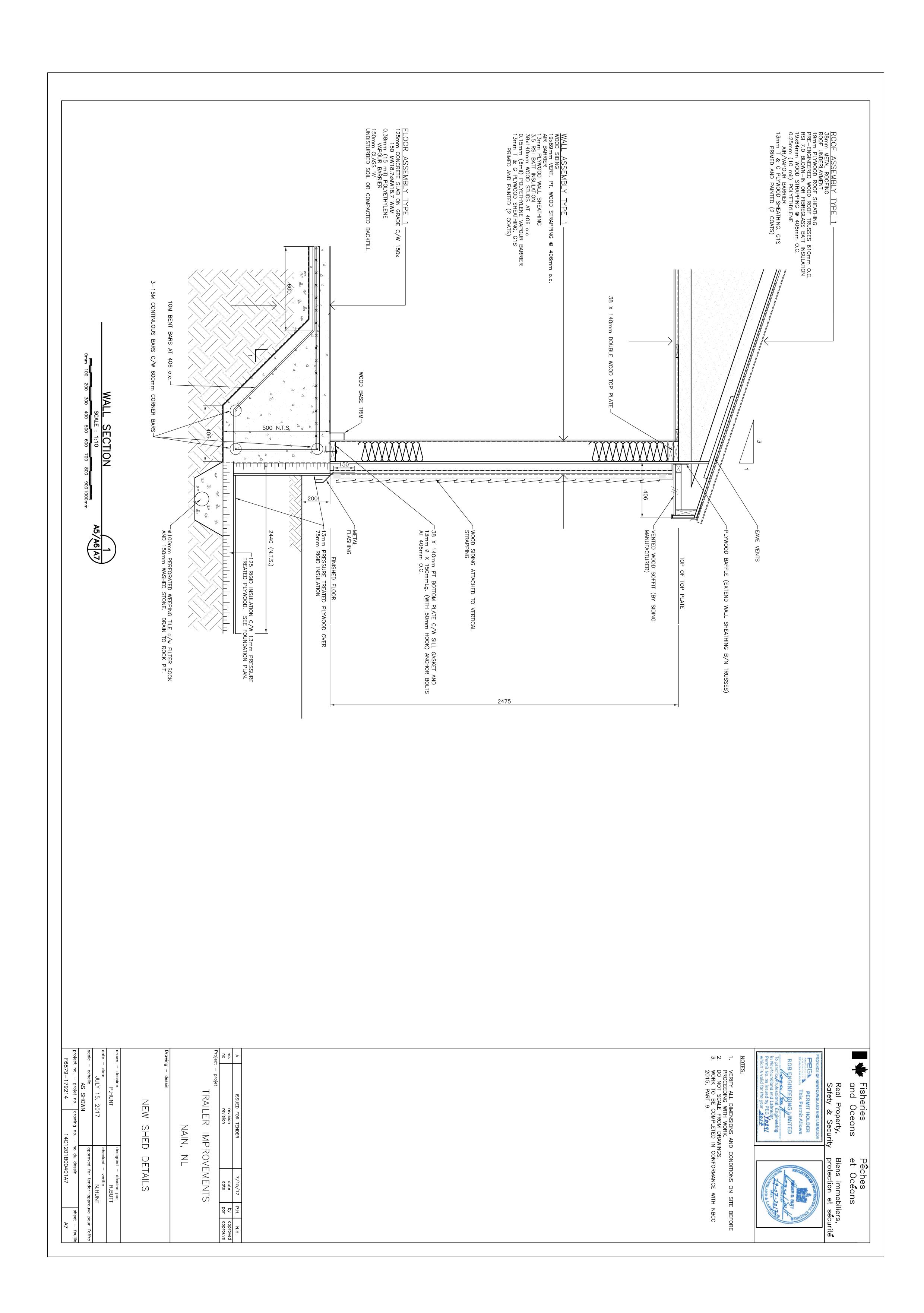


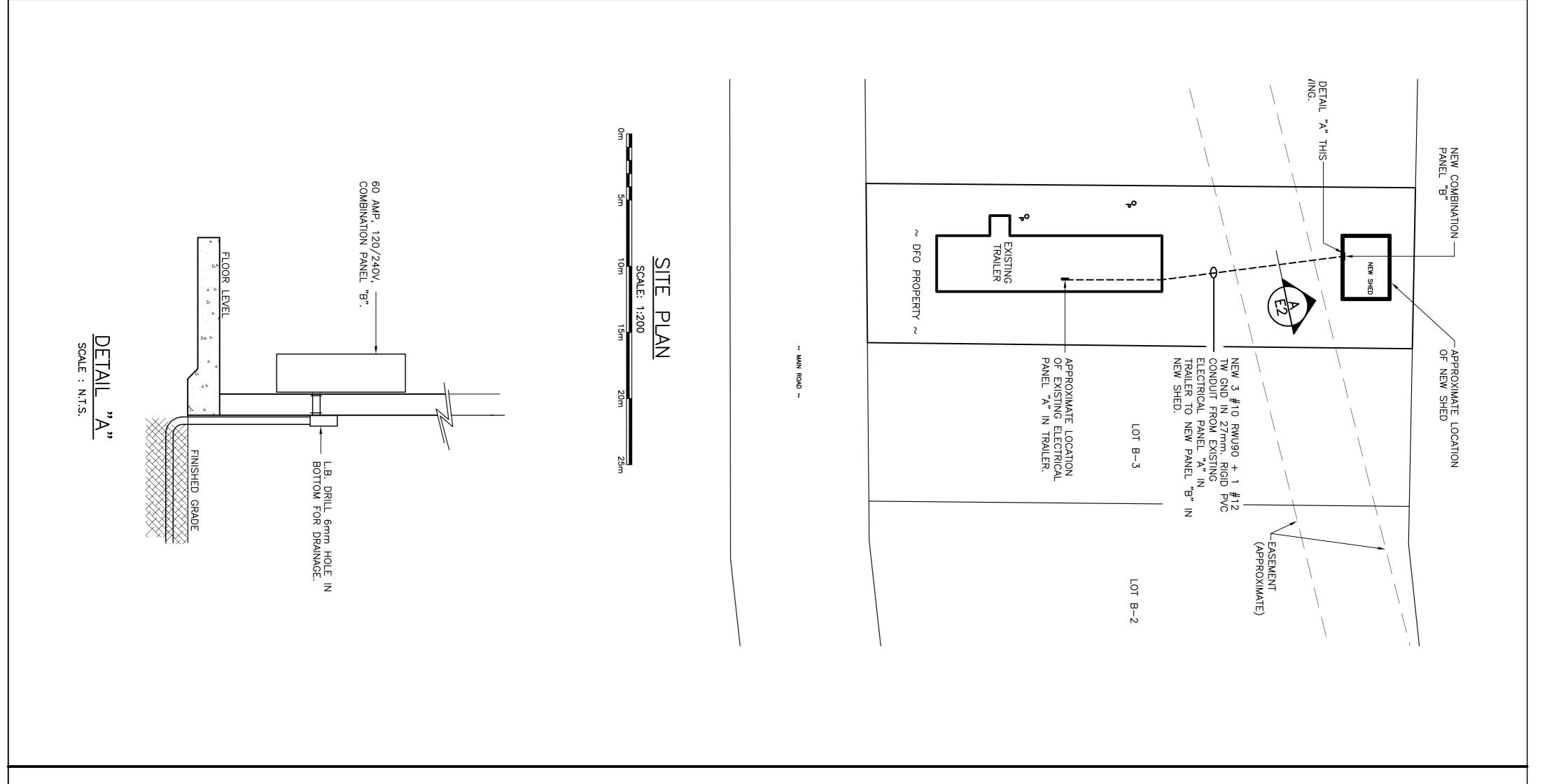












GENERAL DEMOLITION NOTES:

1. CONTRACTOR TO PROVIDE ALL CUTTING, PATCHING AND PAINTING TO MATCH EXISTING. SEE SPECIFICATION FOR DETAILS. COORDINATE ON SITE.

2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE BEFORE PROCEEDING WITH ANY PORTION OF THIS WORK. DO NOT SCALE FROM DRAWINGS. CONTRACTOR TO ASSESS WORK AREA IN ADVANCE WITH OWNER REPRESENTATIVE FOR COORDINATION OF RELATED DAILY WORK SCHEDULES, PARKING, BUILDING ACCESS, AND STORAGE OF EQUIPMENT.

3. ALL WORK SHALL BE SCHEDULED DURING NORMAL WORKING HOURS. CONTRACTOR MAY WORK AFTER NORMAL WORKING HOURS AS COORDINATED BY OWNER REPRESENTATIVE.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN UP AND DISPOSALS OF WORK AREA ON A DAILY BASIS. AFTER EACH WORKING SHIFT BUILDING TO BE CLEANED AND FREE OF DEBRIS. BUILDING GARBAGE BINS ARE NOT TO BE USED.

6. WORK TO BE CARRIED OUT IN CONSIDERATION OF CLIENT COMFORT AND OPERATIONS. 5. ANY ELECTRICAL SYSTEM SHUTDOWN TO BE SCHEDULED AFTER NORMAL BUSINESS HOURS AND SHALL BE COORDINATED WITH OWNER REPRESENTATIVE. SUFFICIENT NOTICE SHALL BE GIVEN. 5 WORKING DAYS NOTICE IS REQUIRED FOR ANY DISRUPTION.

7. ALL WIRING TO BE INSTALLED IN CONDUIT AS INDICATED. ACCESS TO FACILITY TO BE COORDINATED WITH OWNER REPRESENTATIVE.

9. PROVIDE TYPED REVISED PANELBOARD DIRECTORIES FOR ALL PANELBOARDS WHERE BRANCH CIRCUITS WERE REMOVED, ADDED OR MODIFIED. 10. LABEL ALL EQUIPMENT WITH LAMACOID TAGS AS PER SPECIFICATION.

11. ALL EXISTING ELECTRICAL EQUIPMENT REMOVED TO BE TURNED OVER TO OWNER. IF OWNER REFUSES THEN CONTRACTOR TO REMOVE FROM SITE AND DISPOSE.

NEW SHED PANEL

						AMP	<u>_</u>	X W	2.66	LOAD
								1110	ø B TOTAL : 1110	Ø B
								1550	Ø A TOTAL :	Ø A
SPARE		12 15	•	15 11						SPARE
SPARE		10 15	+	15 9						SPARE
SPARE		8 15	•	15 7						SPARE
SPARE		6 15	+	15 5	12	500				FREEZER
	750	4 /2 '-	•	15 3	360 12			ACLES	INTERIOR RECEPTACLES	INTERIOR
INTERIOR HEAT	750	2 15/ 13	+	15 1	12	300	TING	NTERIOR & EXTERIOR LIGHTING	R & EXTE	INTERIOF
	Ø A Ø B				Ø B	ø A			7	
DECIGNATION	WATTAGE		א מ			WATTAGE		DESIGNATION	DESIG	
CIRCUITS12		ENTER AT	Ш	PANEL "A"	PANE	FED FROM _	FED		3	WIRE
		MOONLING GOIN ACE	7	BOILDING	שטור	LOCATION _	רסכי		ř    -	THAVE
BREAKER	RAIEU <u>60</u> AMUS	MAINS RAIED_	• -		<u> </u>	PANEL NAME	PAN	240	S 120/240	VOLIS
_				į				)		
NEW SHED TANEL										

•					•		1
NOTES 1, 2	WALL SURFACE	OFM0750	OUELLET	750	240V. 1ø	BASEBOARD	D
NOTES 1, 2	WALL SURFACE	OFM2000	OUELLET	2000	240V, 1ø	BASEBOARD	C
NOTES 1, 2	WALL SURFACE	OFM1000	OUELLET	1000	240V, 1ø	BASEBOARD	B
NOTES 1, 2	WALL SURFACE	OFM1500	OUELLET	1500	240V, 1ø	BASEBOARD	Þ
REMARKS	MOUNTING	CAT. NO.	MANUFACTURER	WATTS	VOLTS	DESCRIPTION	TYPE
		SCHEDULE	HEATER	ELECTRIC			

NOTES

BOTTOM OF ELECTRIC HEATER TO BE MOUNTED 25mm. ABOVE FINISHED FLOOR. ALL HEATERS TO BE WHITE IN COLOR.

ZL1NL485000LMFST35K C/W WGZ48 WIRE GUARD	ZL1NL485000LMFST35K	LITHONIA	120	33W LED	CEILING SURFACE	LED	В
C/W INTERGRAL PHOTOCELL	OLWX1 40W 40K	LITHONIA	120	30W LED	WALL SURFACE	LED	>
REMARKS	CAT. NO.	MANUFACTURER	VOLTS	LAMPS	MOUNTING	LIGHT SOURCE	SYMBOL
	DULE	IXTURE SCHEDULE	ING F	LIGHTING			

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F.E.	D.R.	7/31/17	ISSUED FOR REVIEW	Α
F.E.	D.R.	8/04/17	ISSUED FOR REVIEW	В
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TRAILER IMPROVEMENTS

	JULY 2017
checked – verifie	date — date
F.E.	D.R.
designed — déssine par	drawn — dessine
CHEDULES	PANEL AND SCHEDULES
D ELECTRICAL	SITE PLAN AND ELECTRICAL

Real Property, Safety & Security Biens immobiliers, protection et sécurité PROVINCE OF NEWFOUNDLAND
PERMIT HOLDER
Class "A"
This Permit Allows
CROSBIE ENGINEERING LIMITED To practice Professional Engineering in Newfoundland and Labrador Permit No. as issued by PEG-NL <u>D0123</u> which is valid for the year <u>2017.</u>

Frederick Earle SIGNATURE

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AUG.09/17

DATE

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Fisheries and Oceans

Pêches et Océans

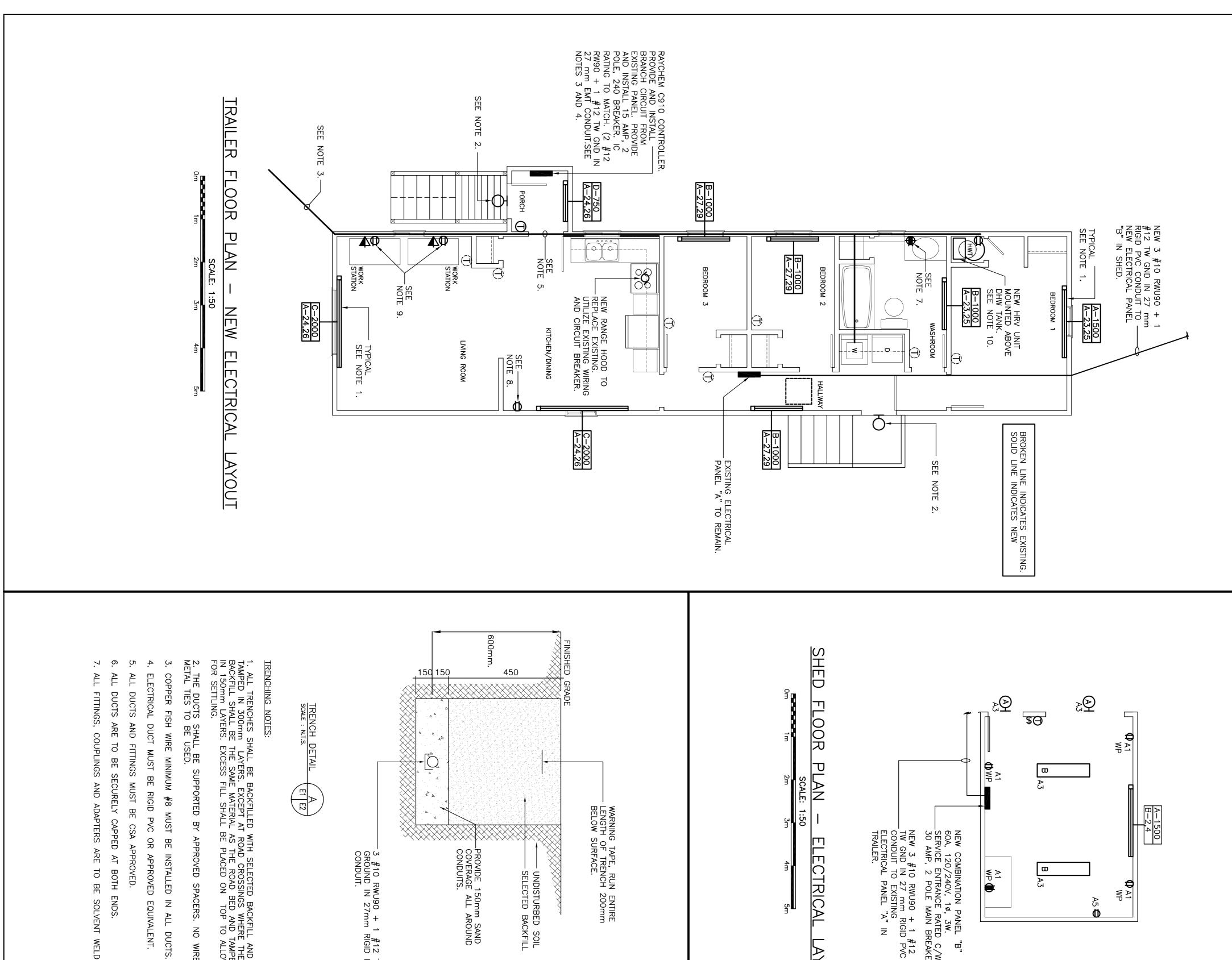
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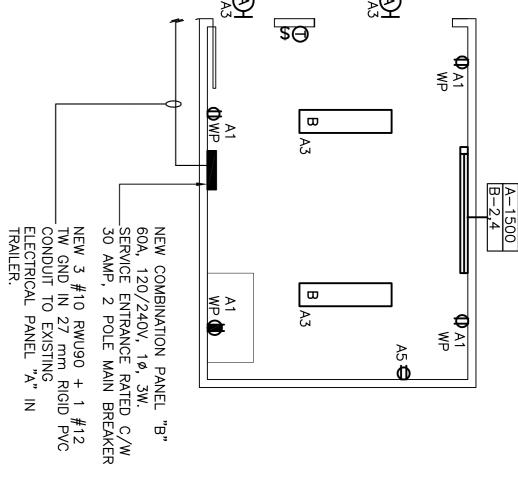
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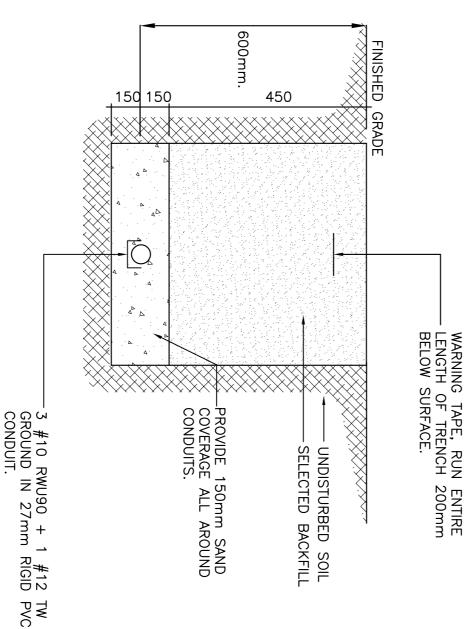
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pour l'offre





## 1:50 **ECTRICAL** <u>AYOUT</u>



1. ALL TRENCHES SHALL BE BACKFILLED WITH SELECTED BACKFILL AND TAMPED IN 300mm LAYERS. EXCEPT AT ROAD CROSSINGS WHERE THE BACKFILL SHALL BE THE SAME MATERIAL AS THE ROAD BED AND TAMPED IN 150mm LAYERS. EXCESS FILL SHALL BE PLACED ON TOP TO ALLOW FOR SETTLING.

2. THE DUCTS SHALL BE SUPPORTED BY APPROVED SPACERS. METAL TIES TO BE USED. NO WIRE R

COPPER FISH WIRE MINIMUM #8 MUST BE INSTALLED IN ALL DUCTS

ELECTRICAL DUCT MUST BE RIGID PVC OR APPROVED EQUIVALENT.

AND FITTINGS MUST BE CSA APPROVED.

GENERAL DRAWING

NOTES:

and

Oceans

Real Property, Safety & Security

Biens immobiliers, protection et sécurité

Fisheries

Pêches

et Océans

1. REPLACE ALL EXISTING ELECTRIC BASBOARD HEATERS WITH NEW AS INDICATED ON FLOOR PLAN. SEE HEATER SCHEDULE FOR DETAILS. EXISTING 20 AMP CIRCUIT BREAKERS AND WIRING TO REMAIN FOR HEATING CIRCUITS A-23,25 AND A-27,29. EXTEND WIRING AS REQUIRED. REMOVE EXISTING 20 AMP CIRCUIT BREAKER AND WIRING FOR HEATING CIRCUIT A-24,26. SUPPLY AND INSTALL NEW 30 AMP, 2 POLE CIRCUIT BREAKER C/W MOUNTING HARDWARE AND WIRING (2 #10 NMD90 PLUS GROUND). IC RATING TO MATCH. UTILIZE EXISTING THERMOSTATS WITH THE EXCEPTION OF THE PORCH WHICH WILL BE NEW TO MATCH EXISTING.

2. REPLACE EXISTING EXTERIOR LIGHTING FIXTURES WITH NEW AS FLOOR PLAN. EXISTING WIRING AND CIRCUIT BREAKER TO REMAIN. FIXTURE SCHEDULE FOR DETAILS. INDICATED ON SEE LIGHTING

3. INSTALL RAYCHEM 5XL1CT HEAT TRACE ON 3/4" WATER PIPING. LOOP HEAT TRACE SUCH THAT BOTH ENDS TERMINATE INSIDE BUILDING. PROVIDE AND INSTALL RAYCHEM RTD10CS TEMPERATURE SENSOR ON WATERLINE AND CONNECT TO C910 CONTROLLER. PROVIDE AND INSTALL RAYCHEM RTD200 AIR TEMPERATURE SENSOR. MOUNT TO EXTERIOR OF BUILDING AND CONNECT TO CONTROLLER. PROVIDE AND INSTALL 240 VOLT, 15 AMP 2 POLE CIRCUIT BREAKER AND MOUNTING HARDWARE. IC RATING TO MATCH. COORDINATE EXACT ELECTRICAL REQUIREMENTS PRIOR TO ORDERING MATERIALS AND ROUGH—IN.

4. PROVIDE AND INSTALL RAYCLIC PC POWER CONNECTION KIT. PROVIDE AND INSTALL ALL NECESSARY JUNCTION BOXES, CONDUIT, WIRING AND CLIPS FOR A COMPLETE INSTALLATION. WATER LINE TO BE HEAT TRACED IN CRAWL SPACE AND EXTENDED TO WATER MAIN.

5. APPROXIMATE LOCATION OF WATER LINE IN CRAWL SPACE. COORDINATE EXACT LOCATION ON SITE.

6. CONTRACTOR TO REMOVE ALL EXISTING ELECTRICAL DEVICES IN TRAILER TO FACILITATE THE INSTALLATION OF NEW DRYWALL AND PAINTING. REINSTALL ELECTRICAL DEVICES WHEN WORK IS COMPLETE.

7. SUPPLY AND INSTALL NEW 15 AMP, 1 POLE CIRCUIT BREAKER HARDWARE AND WIRING (2 #14 NMD90 PLUS GROUND) FOR NEW RECEPTACLE. IC RATING TO MATCH. MOUNT RECEPTACLE 150mm. ABOVE COUNTER. R C/W MOUNTING V GFCI DUPLEX TO CENTER

8. SUPPLY AND INSTALL NEW 15 AMP, 1 POLE CIRCUIT BREAKER HARDWARE AND WIRING (2 #14 NMD90 PLUS GROUND) FOR NEW RECEPTACLE (STAND—UP FREEZER). IC RATING TO MATCH. C/W MOUNTING

9. SUPPLY AND INSTALL 2 NEW RECEPTACLES AND 2 DUAL VOICE SUPPLY AND INSTALL NEW 15 AMP, 1 POLE CIRCUIT BREAKER C, HARDWARE AND WIRING (2 #14 NMD90 PLUS GROUND) FOR NEW RECEPTACLES (WORK STATIONS). IC RATING TO MATCH. E/DATA OUTLETS. /W MOUNTING DUPLEX

10. SUPPLY AND INSTALL NEW 15 AMP, 1 POLE CIRCUIT BREAKER C/W MOUNTING HARDWARE AND WIRING (2 #14 NMD90 PLUS GROUND) FOR NEW DUPLEX RECEPTACLE. (HRV UNIT). IC RATING TO MATCH.

### EGEND

ಶ LED FLUORESCENT LIGHTING FIXTURE, CEILING MOUNTED. LETTER DENOTES TYPE. SEE LIGHTING FIXTURE SCHEDULE & SPECIFICATIONS FOR DESCRIPTION. LED LIGHTING FIXTURE, WALL MOUNTED. LETTER DENOTES TYPE. SEE LIGHTING FIXTURE SCHEDULE & SPECIFICATIONS FOR DESCRIPTION.

SINGLE POLE TOGGLE SWITCH. 15 AMP, SPECIFICATION GRADE, WHITE C/W STAINLESS STEEL COVERPLATE. SEE SPEC. FOR MORE INFORMATION. MOUNT 1200mm ABOVE FINISHED FLOOR.

**⇔** 

ELECTRIC HEATER. SEE HEATER FIXTURE SCHEDULE AND/OR SPECIFICATION FOR DESCRIPTION. LINE VOLTAGE ELECTRONIC THERMOSTAT. MOUNT 1200mm ABOVE FINISH FLOOR. RATED 3600 WATTS AT 240 VOLT.

DUPLEX U-GROUND RECEPTACLE. 120 VOLT, 15 AMP, SPECIFICATION GRADE. WHITE & C/W STAINLESS STEEL COVERPLATE. WALL MOUNT 400mm ABOVE FINISHED FLOOR. "WP" INDICATES WEATHERPROOF COVERPLATE.

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DUPLEX U-GROUND RECEPTACLE. 120 VOLT, 15 AMP, SPECIFICATION GRADE. WHITE & C/W STAINLESS STEEL COVERPLATE. WALL MOUNT 150mm TO CENTER ABOVE COUNTER. "WP" INDICATES WEATHERPROOF COVERPLATE.

GFCI DUPLEX RECEPTACLE. 120 VOLT, 15 AMP, WHITE, SPECIFICATION GRADE C/W STAINLESS STEEL COVERPLATE. WALL MOUNT 150mm TO CENTER ABOVE COUNTER.

Frederick Earle

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ALC 00 117 08 PROVINCE OF NEWFOUNDLAND

CROSSIE ENGINEERING LIMITED

CROSSIE ENGINEERING LIMITED

CROSSIE ENGINEERING LIMITED n practice Professional Engineering
Newfoundland and Labrador
ermit No. as issued by PEG-NL <u>D0123</u>
hich is valid for the year <u>2017</u>.

FLOOR PLANS - NEW ELECTRICAL LAYOUT AND LEGEND	- Cessiii
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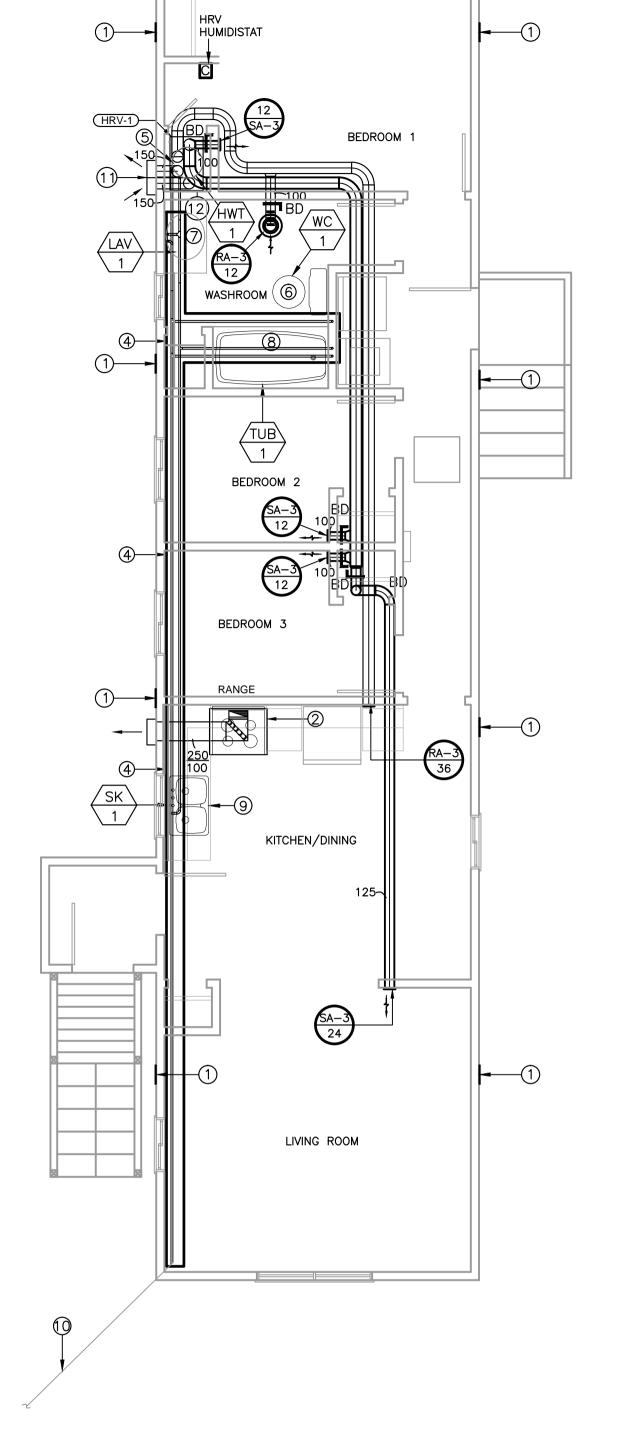
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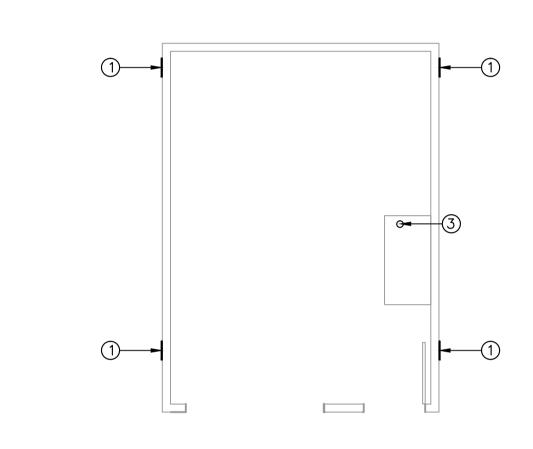
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AS NOTED

n — dessine D.R.  — date JULY 2017	FLOOR PL ELECTRICA LEGEND		ct - projet  TRAILER	ISSUED FOR REVIEW
designed - checked -	ANS —	NAIN, NL	IMPROV	REVIEW
<ul> <li>déssine par F.E.</li> <li>verifie</li> <li>F.E.</li> <li>for tender-approuve pour l'offre</li> </ul>			date by approved appr	17 D.R.





SHED FLOOR PLAN - NEW VENTILATION LAYOUT SCALE: 1:50 .

### FLOOR PLAN - NEW PLUMBING & VENTILATION LAYOUT SCALE: 1:50

- 1) PROVIDE NEW VENTING FOR CRAWLSPACE BELOW, SIZE 250mm X 300mm IN SIZE.
- ② EXISTING RANGE HOOD TO BE REPLACED WITH NEW. EQUAL TO BROAN QT230WWN, 84L/s, 25Pa, 0.2 hP,
- (3) PROVIDE NEW VENT PIPING FROM STORAGE INCLOSURE TO ROOF. 50mmø VENT UP, INCREASING TO 75mmø
- TRACED AND THERMALLY INSULATED UNDER TRAILER. ELECTRICAL TO SUPPLY AND INSTALL HEAT TRACING AND MECHANICAL TO PROVIDE PIPE INSULATION 50mm THICK C/W WEATHERPROOF CASING. COORDINATE ON
- (5) REPLACE EXISTING HOT WATER TANK WITH NEW DOMESTIC HOT WATER TANK. RE CONNECT HOT AND COLD WATER PIPING. SEE SCHEDULE ON THIS SHEET.
- 6 REMOVE EXISTING WATER CLOSET, DISPOSE OFF SITE. REPLACE WITH NEW FIXTURE AS INDICATED.
- REMOVE EXISTING LAVATORY INCLUDING TRAP, AND HOT AND COLD SUPPLIES AND DISPOSE OFF SITE. REPLACE WITH NEW LAVATORY AS INDICATED. PROVIDE ANY NEW SANITARY PIPING OR HOT AND COLD PIPING TO
- (8) REMOVE EXISTING TUB UNIT INCLUDING TRAP, AND HOT AND COLD SUPPLIES AND DISPOSE OFF SITE. REPLACE WITH NEW TUB AS INDICATED.PROVIDE ANY NEW SANITARY PIPING OR HOT AND COLD PIPING TO
- REMOVE EXISTING SINK INCLUDING TRAP, AND HOT AND COLD SUPPLIES AND DISPOSE OFF SITE. REPLACE SINK WITH NEW AS INDICATED, PROVIDE ANY NEW SANITARY
- (O) EXISTING WATER MAIN TO BE HEAT TRACED AND INSULATED. PROVIDE UNDERGROUND CASING TO SUIT UNDER GROUND CONDITIONS. COORDINATE WITH ALL
- 2 ALL HRV UNITS ARE TO BE SUSPENDED FROM CEILING STRUCTURE PROVIDE AND INSTALL WALL MOUNTED CONTROLLER C/W 24 VOLT WIRING. INSTALL 20mmø CONDENSATE DRAIN. DRAIN TIE INTO NEAREST DRAIN.
- 1. VARIATION IN DUCTWORK ROUTING TO BE COORDINATED & APPROVED BY OWNER.
- 2. CONTRACTOR TO PROVIDE ALL OFFSETS FOR DUCT CROSSOVERS.
- 3. ALL SUPPLY DUCTWORK TO BE THERMALLY INSULATED
- CONDENSATE DRAIN LINES FOR ALL HRV'S TO BE
- 5. INSTALLATION, CLEARANCES BALANCING AND ANY OTHER FORESEEN ITEMS FOR ALL EQUIPMENT INSTALLED.

### DRAWING NOTES:

- THRU ROOF
- 4 ALL DOMESTIC HOT AND COLD PIPING SHALL BE HEAT
- RECONNECT.
- PIPING OR HOT AND COLD PIPING TO RECONNECT.
- TRADES.
- 1 THERMALLY INSULATED SUPPLY/EXHAUST DUCT TO RUN TO EXTERIOR FROM HRV. INSTALL WALL CAP C/W BIRD SCREEN. TRANSITION TANDAM WALL CAP MODEL VENMAR 14690.

### GENERAL NOTES:

- 4. DRAINED TO PLUMBING.
- FOLLOW MANUFACTURE'S RECOMMENDATIONS FOR

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and Oceans

Real Property,

Pêches

Safety & Security protection et sécurité

et Océans

Biens immobiliers,

PROVINCE OF NEWFOUNDLAND

CROSBIE ENGINEERING LIMITED

To practice Professional Engineering in Newfoundland and Labrador Permit No. as issued by PEG-NL D0123 which is valid for the year 2017.

PERMIT HOLDER Class "A" This Permit Allows

TRAILER IMPROVEMENTS

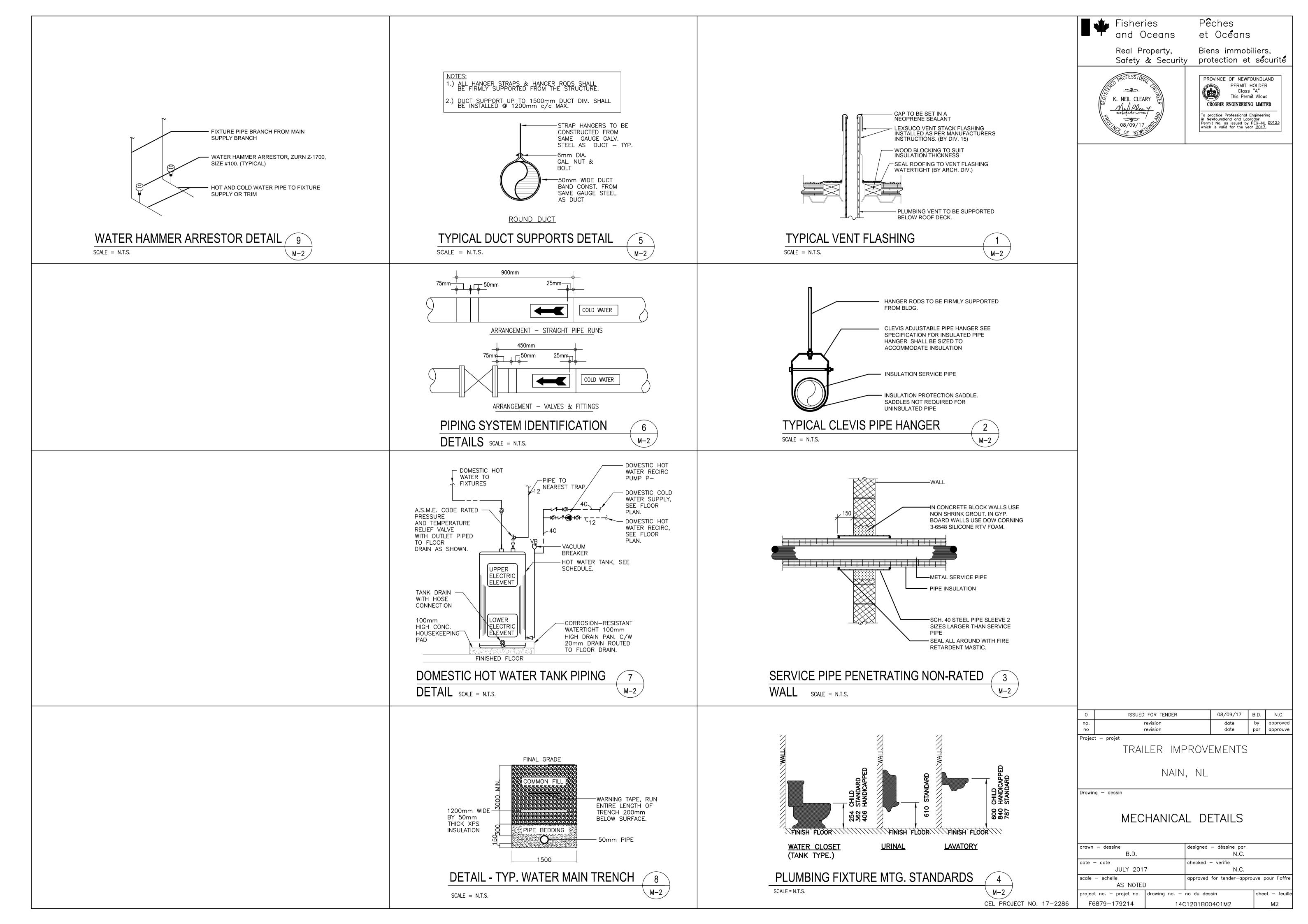
NAIN, NL

Drawing — dessin

FLOOR PLAN - NEW MECHANICAL LAYOUT AND SCHEDULES

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B.D.		N.C.		
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PLUN	PLUMBING FIXTURE AND TRIM SCHEDULE																				
FIXTURE	MANUF.	MODEL NO.	COLOUR	WATER CLOSET & URINAL TRIM			SINK & LAVATORY TRIM				SHOWER & BATH TRIM			MOUNTING	ROUGHING				DEMARKS		
TAG				SUPPLY/VALVE	TANK	CARRIER	SEAT	FAUCET	WASTE	TRAP	SUPPLIES	CARRIER	HEAD	FAUCET OR MIXING VALVE	WASTE & OVERFLOW	MOUNTING	WASTE	VENT	HOT WATER	COLD WATER	REMARKS
WC-1	AMERICAN STANDARD	CADET FLOWISE 2467.100	WHITE	DELTA 47T1316SD	Y	_	BEMIS 2L2150T	-	-	_	_	-	-	-	_	FLOOR MTD.	75mm	40mm	-	12mm	BARRIER FREE, ELONGATED 419mm HIGH BOWL.
TUB-1	LONGEVITY	ESSENTIA 2060 (LEFT SIDE)	WHITE	-	_	_	-	_	-	_	_	-	-	DELTA T13H253-25	Υ	FLOOR MTD.	50mm	40mm	12mm	12mm	INSTALL GRAB BARS. C/W INTERGRAL OVERFLOW AND UNIVERSAL BATH DRAIN. & RIOOOO—UNWS VALVE.
LAV-1	MATRIX DESIGNS	2237RSW	WHITE	-	_	_	_	DELTA 21C134	DELTA 33T290	DELTA 33T311	DELTA 47T2512SD	_	-	-	_	COUNTER MTD.	32mm	40mm	12mm	12mm	INTEGRAL SINK AND VANITY TOP SUPPLIED BY ARCHITECTURAL. PIPES TO BE INSULATED WHERE EXPOSED.
SK-1	KINDRED FRANKE	LBD6408-1	S.S.	_	-	_	_	DELTA 27C4834	CRUMB CUP STRAINER	DELTA 33T360	DELTA 47T2512SD					COUNTER MTD.	50mm	40mm	12mm	12mm	BARRIER FREE C/W 89mm CRUMB CUP STRAINER, LEDGE BACK DRILLED FOR 203mm O.C. DECK FAUCET. ALL PIPES TO BE INSULATED WHERE EXPOSED & C/W R2570—MIXLF THERMOSTATI MIXING VALVE.
HWT-1	NEW HWT_1 40 CALLON PHEEM STAINLESS STEEL HOT WATER TANK 4500																				



### GENERAL MECHANICAL SPECIFICATION

<u>SCOPE OF WORK</u>

MECHANICAL DIVSION SHALL FURNISH ALL LABOUR, MATERIALS AND EQUIPMENT NECESSARY FOR THE PROPER AND TIMELY COMPLETION OF THE MECHANICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND/OR AS SPECIFIED. THE SPECIFICATIONS SHALL BE CONSIDERED AS AN INTEGRAL PART OF THE PLANS WHICH ACCOMPANY THEM. NEITHER THE PLANS NOR THE SPECIFICATIONS SHALL BE USED ALONE. ANY ITEMS OR SUBJECT OMITTED FROM ONE BUT WHICH IS MENTIONED OR REASONABLY ADOPTED IN THE OTHER SHALL BE CONSIDERED AS PROPERLY AND SUFFICIENTLY SPECIFIED, AND MUST, THEREFORE, BE PROVIDED. MISINTERPRETATIONS OF EITHER THE PLANS OR THE SPECIFICATIONS SHALL NOT RELIEVE THIS DIVISION OF RESPONSIBILITY.

IT IS THE INTENT THAT THE DRAWINGS AND SPECIFICATIONS TO DESCRIBE COMPLETE MECHANICAL SYSTEMS. ALL MATERIALS AND EQUIPMENT AND THE FURNISHING OF ALL LABOUR REASONABLY IMPLIED BY THESE DRAWINGS AND/OR THE SPECIFICATIONS SHALL BE INCLUDED TO PROVIDE SYSTEMS READY FOR SATISFACTORY OPERATION. REFER TO ALL OTHER TRADE DRAWINGS AND SPECIFICATIONS TO FULLY COORDINATE THE INSTALLATION OF THE WORK.

STANDARD OF ACCEPTANCE

THE ITEM NAMED AND SPECIFIED BY MODEL OR CATALOGUE NUMBER FORMS PART OF SPECIFICATION AND SETS THE STANDARD REGARDING PERFORMANCE QUALITY OF MATERIAL

TENDER PRICES SHALL BE BASED ON THE SPECIFIED EQUIPMENT LISTED AS ACCEPTABLE PRODUCT OR AS BASE BID. ALL ALTERNATES OF LISTED EQUIPMENT MUST BE LISTED SEPARATELY ON THE TENDER FORM WITH COST SAVINGS. THE OWNERS AND THE CONSULTANT HAVE THE OPTION OF ACCEPTING OR REJECTING ALTERNATE EQUIPMENT.

### CODES, REGULATIONS AND PERMITS

THE COMPLETE MECHANICAL INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL BUILDING CODE, NFPA 13, CANADIAN PLUMBING CODE, ASHRAE AND SMACNA STANDARDS AND LOCAL BY- LAWS CURRENTLY IN FORCE IN THE PROVINCE AND MUNICIPALITY.

ALL MECHANICAL WORK SHALL BE INSTALLED, INSPECTED AND TESTED IN ACCORDANCE WITH GOVERNING CODES, RULES AND REGULATIONS OF THE MUNICIPALITY IN WHICH THE WORK IS PERFORMED AND ALSO OF PROVINCIAL AND FEDERAL AUTHORITIES HAVING JURISDICTION. THE MECHANICAL CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK, ARRANGE FOR INSPECTIONS AND TESTS AND PAY ALL FEES AND COSTS FOR THE PERMITS AND INSPECTIONS. ALL NECESSARY PERMITS SHALL BE OBTAINED IMMEDIATELY AFTER NOTIFICATION OF AWARD OF CONTRACT

IN ADDITION TO THE FOREGOING, THE MECHANICAL CONTRACTOR SHALL PERFORM SUCH OTHER INSPECTIONS AND TESTS AS MAY BE DEEMED NECESSARY BY THE PRIME CONSULTANT.

THE NATIONAL BUILDING CODE AND THE APPLICABLE REQUIREMENTS OF CSA, ASTM, ANSI, ULC, AND NFPA STANDARDS INCLUDING THEIR LATER AMENDMENTS, AS WELL AS PROVINCIAL AND MUNICIPAL BYLAWS AND REGULATIONS SHALL BE CONSIDERED PART OF THIS SPECIFICATION. LACK OF POSSESSION OR KNOWLEDGE OF ANY CODE OR STANDARD REQUIRED FOR PROPER COMPLETION OF THE WORK SHALL NOT CONSTITUTE SUFFICIENT REASON FOR DEVIATION THEREFROM.

### RECORD DRAWINGS

CLEARLY RECORD ALL CONTRACT CHANGES AND DEVIATIONS FROM THE CONTRACT DRAWINGS ON A SET OF DRAWINGS AVAILABLE FROM THE GENERAL CONTRACTOR FOR THIS PURPOSE AND FORWARDED TO THE GENERAL CONTRACTOR AT THE COMPLETION OF THE PROJECT.

THIS CONTRACTOR SHALL VISIT THE SITE AND EVALUATE ALL EXISTING SITE CONDITIONS AS THEY MAY AFFECT THIS WORK. NO EXTRAS WILL BE ALLOWED FOR ANY EFFECTS FROM FAILING TO COMPLETE A COMPREHENSIVE SITE TOUR TO UNDERSTAND AND ACCOUNT FOR THE IMPACT OF EXISTING SITE CONDITIONS ON THE CONTRACT SCOPE OF

### CUTTING AND PATCHING

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR AND PAY FOR ALL CUTTING AND PATCHING REQUIRED IN THE SCOPE OF WORK AS DEFINED IN THE GENERAL CONDITIONS. ALL NEW FINISHES SHALL BE EQUAL TO THOSE OF SURROUNDING SURFACES FOR MATERIALS, COLOUR, TEXTURE AND WORKMANSHIP. THIS DIVISION SHALL CLEARLY MARK OUT ALL OPENINGS REQUIRED AND REVIEW WITH THE GENERAL CONTRACTOR BEFORE CUTTING PROCEEDS. THIS DIVISION SHALL INSTALL ALL OPENING FRAMES, SLEEVES, DUCTWORK AND PIPING, LOUVRES, ETC., INTO THE BUILDING STRUCTURE AS CONSTRUCTION PROGRESSES. ANY ITEMS MISSED DURING CONSTRUCTION THAT MUST BE ADDED WILL BE THE RESPONSIBILITY OF THIS DIVISION AND WILL BE COORDINATED WITH THE GENERAL TRADES.

### CO-ORDINATION

CONFER AND COOPERATE WITH OTHER TRADES IN ORDER TO ELIMINATE ANY UNNECESSARY DELAYS TO THE CONSTRUCTION SCHEDULE. WHERE DOUBT EXISTS REGARDING OTHER TRADES, CONFER WITH THE SUPERINTENDANT WITHOUT DELAY FOR EXPEDITED INSTRUCTIONS CONCERNING HOW TO PROCEED WITH THE WORK. EXPEDITE DELIVERY OF ALL EQUIPMENT AND MATERIALS TO MEET CONSTRUCTION SCHEDULE. ANY INTERFERENCE ISSUES THAT ARISE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO DUCTWORK FABRICATION.

ENSURE THAT ALL EQUIPMENT AND SYSTEMS ARE OPERABLE AND SAFE FOR NORMAL OPERATION. ALL TESTING, ADJUSTING, BALANCING WORK AND RECORD KEEPING SHALL BE PERFORMED PRIOR TO COMMISSIONING. OPERATIONAL TESTS ON EQUIPMENT, DUCTWORK, PIPING AND CONTROL SYSTEMS SHALL BE PERFORMED PRIOR TO COMMISSIONING TO VERIFY THAT PRESSURE AND FLOW RATES MEET DESIGN REQUIREMENTS.

### SHOP DRAWINGS

SHOP DRAWINGS AND DATA SHEETS FOR EQUIPMENT INTENDED FOR INSTALLATION UNDER THIS CONTRACT SHALL BE SUBMITTED FOR REVIEW. AFTER CHECKING AND WHEN REVIEWED, COPIES WILL BE RETURNED TO THE CONTRACTOR.

SUPPLY ACCESS DOORS FOR FURRED CEILINGS OR SPACES FOR SERVICING EQUIPMENT AND DUCT ACCESSORIES OR FOR INSPECTION OF LIFE SAFETY OR OPERATING DEVICES. SUPPLY STAINLESS STEEL ACCESS DOORS FOR TILED, MARBLE, TERRAZZO OR SPECIAL SURFACES, STANDARD OF ACCEPTANCE ZURN, ACUDOR, ANCON, ACCESS DOORS SHALL BE FLUSH MOUNTED 600 X 600 MM FOR BODY ENTRY AND 450 X 450 MM FOR SERVICE ENTRY UNLESS OTHERWISE NOTED. DOORS SHALL OPEN 1800 HAVE ROUNDED SAFETY CORNERS, CONCEALED HINGES, SCREWDRIVER LATCHES AND ANCHOR STRAPS. STEEL SHALL BE PRIME COATED. ANY ACCESS DOORS IN FIRE RATED ASSEMBLIES OR SEPARATIONS SHALL BE ULC RATED FOR APPROPRIATE SEPARATION RATING.

### MAINTENANCE INSTRUCTIONS

SUPPLY CERTIFIED PERSONNEL TO INSTRUCT OWNERS OPERATING STAFF ON OPERATION OF MECHANICAL EQUIPMENT. SUPPLY MAINTENANCE SPECIALIST PERSONNEL TO INSTRUCT OPERATING STAFF ON MAINTENANCE AND ADJUSTMENT OF MECHANICAL EQUIPMENT AND ANY CHANGES OR MODIFICATIONS IN EQUIPMENT MADE UNDER THE TERMS OF THE GUARANTEE. PROVIDE INSTRUCTION TO OWNERS STAFF DURING REGULAR WORK HOURS PRIOR TO ACCEPTANCE OF THE SYSTEMS FOR REGULAR OPERATION.

### BUILDING STRUCTURE

INITIATE NO DRLLING, CUTTING OR WELDING OF THE BUILDING STEEL OR CONCRETE CONSTRUCTION FOR THE PURPOSE OF SUPPORTING MATERIALS OR EQUIPMENT WITHOUT PRIOR APPROVAL OF THE PRIME CONSULTANT.

### HVAC AND EQUIPMENT IDENTIFICATION

IDENTIFY ALL HVAC SYSTEMS. INDICATE DUCT SIZE, SERVICE AND DIRECTION OF FLOW. THE LETTERING SHALL BE PROPORTIONAL TO THE OUTSIDE DIAMETER OF THE DUCTWORK. BRADEY TAGS SHALL BE THE STANDARD OF LABELS.

### AIR DISTRIBUTION

**DUCTWORK SYSTEMS** 

THE DUCTWORK AND ACCESSORIES SHALL BE GALVANIZED STEEL AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH A.S.H.R.A.E. AND S.M.A.C.N.A. STANDARDS FOR METHODS OF SUSPENSION, JOINTS, REINFORCEMENT, CROSS BREAKING, INSULATION AND MATERIAL GAUGES FOR THE REQUIRED FAN SYSTEM OPERATING PRESSURES. FITTINGS SHALL BE FABRICATED WITH SMOOTH TRANSITIONS, PROPER SMACNA RADII AND TRANSITION ANGLES AND QUALITY BALANCING DEVICES.

- 1											
	LONGEST SIDE		TYPE OF JOINTS								
	<u>LONGEST SIDE</u>	GAUGE(US)	<u>HEIGHT</u>	<u>SLIP</u>	BAR SLIP	<u>LOCK</u>	<u>"T"</u>				
	UP TO 11"(275mm)	26	25	24	_	24	_				
	12"(300mm) T0 24"(600mm)	24	25	22	-	22	ı				
	25"(625mm) T0 60"(1500mm)	22	25	_	22	22	22				
	61"(1525mm) TO 108"(2700mm)	20	37	_	22	22	22				

SEAL ALL DUCT SYSTEM JOINTS WITH GREY HIGH PRESSURE DUCT SEALER. CIRCULAR DUCTWORK SHALL BE FACTORY FABRICATED GALVANIZED SPIRAL SEAM WITH FABRICATE FITTINGS.

1. ALL BRANCH TAKE OFFS TO BE 45 DEG. CONICAL LATERALS. 2. SLEEVE TYPE COUPLING JOINTS ALL SEALED WITH FLEXIBLE MEDIUM PRESSURE DUCT SEALANT AND SCREWS.

FLEXIBLE DUCTWORK SHALL BE U.LC. LISTED, SOUNDLINED WITH VAPOUR BARRIER THERMAFLEX MAKE OR EQUIVALENT. MAXIMUM LENGTH TO DIFFUSERS 2000 MM UNLESS OTHERWISE INDICATED. FASTEN WITH SCREWS, WASHERS AND FOIL TAPE AT JOINTS. DUCT PREVENTION DEVICES IN ACCORDANCE WITH PDI-WH201 TAPE SHALL NOT BE USED.

FLEXIBLE CONNECTIONS: PROVIDE AT ALL FANS AND LIKE EQUIPMENT SUBJECT TO VIBRATION. SUITABLE MATERIALS NEOPRENE COATED GLASS FABRIC, DURO-DYNE OR EQUAL, NOT MORE THAN 4" (100mm) LONG BETWEEN METAL PARTS AND INSTALLED WITH SUFFICIENT SLACK TO PREVENT VIBRATION TRANSMISSION.

LEAKAGE TESTING: WITH FANS OPERATING CARRY OUT VISUAL JOINT INSPECTION USING A SMOKE PENCIL; RESEAL ANY JOINTS WITH OBVIOUS LEAKAGE

RECTANGULAR DUCTWORK DESCRIBED IN THE SCOPE OF WORK BELOW SHALL BE INSULATED WITH 25 MM THICK FIBREGLASS FLEXIBLE, EMBOSSED FOIL FACED VAPOUR SEALED DUCT INSULATION APPLIED OVER SPOT WELDED PINS ON 85 MM CENTRES. WITH INSULATION CAPPED WITH SPRING CLIP WASHERS OF 25 MM DIAMETER. SEAL ALL JOINTS, PUNCTURES AND BREAKS WITH 100 MM WIDE STRIPS OF ALUMINUM FOIL VAPOUR BARRIER TAPE ADHERING WITH SUITABLE FIRE RETARDANT ADHESIVE. ROUND DUCTWORK SHALL BE INSULATED WITH FLEX 40 MM THICK FOIL FACED SEALED DUCT INSULATION WITH ALL JOINTS TAPED VAPOUR TIGHT.

### INSULATE THE FOLLOWING:

- SUPPLY AIR DUCTWORK. 2. EXHAUST DUCTS WITHIN 1500 MM OF EXTERIOR WALLS.
- 3. EXTERIOR CONNECTIONS TO HVAC UNITS.

### GRILLES AND DIFFUSERS

SUPPLY AND INSTALL DIFFUSERS AND GRILLES AS INDICATED ON DRAWINGS. DIFFUSERS IN RATED ASSEMBLIES SHALL BE U.L.C. LISTED OR EQUIPPED WITH U.L.C. FIRE STOP FLAPS. SEE SCHEDULE FOR GRILLE AND DIFFUSER TYPES.

### **HANGERS**

SUPPORT EACH SECTION OF THE DUCTWORK WITH STEEL RODS ANGLE IRON, "C" CLAMPS AND OR CONCRETE INSERTS ALL AS PER SCHEDULE BELOW:

<u>DUCT_SIZES</u>	ANGLE DIM.	RODS DIA.	<u>SPACING</u>
UP TO 24" (750)	1"x 1"x $\frac{1}{8}$ " (24x25x3mm)	<u>‡</u> "(6mm)	108"(2700mm)
31" TO 48" (755 TO 1200mm)	2"x 2"x {}" 37x37x3mm)	<u>‡</u> "(6mm)	108"(2700mm)
49" TO 72" (1225 TO 1800mm)	2"x 2"x \frac{1}{8}" 37x37x3mm)	3/8"(9mm)	108"(2700mm)
73" TO 96" (1825 TO 2400mm)	2"x 2"x <del>1</del> " 37x37x3mm)	3/8"(9mm)	108"(2700mm)

DUCTS UP TO 18" (450mm) MAY BE SUPPORTED WITH GALVANIZED STEEL STRAP HANGERS MANUFACTÙRED TÓ SMACNA STANDARDS, SCREWED AT THE TOP AND ON THE BOTTOM OF DUCT. DO NOT BREAK CONTINUITY OF INSULATION VAPOR BARRIER BY HANGERS OR RODS.

### FIRE SEPARATIONS

SUPPLY AND INSTALL. ALL FIRE DAMPERS AND FIRE STOP FLAPS C/W FUSIBLE LINKS AND ACCESS DOORS AS REQUIRED UNDER THE NATIONAL BUILDING CODE & NATIONAL FIRE CODE. DAMPERS SHALL BE TYPE 'B', 100% FREE AREA UNLESS NOTED AND SHALL BE ULC. LISTED FOR THE SPECIFIC APPLICATION AND INSTALLATION ORIENTATION. INSTALL AT OUTLETS OR DUCTS PASSING THROUGH FIRE SEPARATIONS. REFER TO THE ARCHITECTURAL DRAWINGS FOR DESIGNATED FIRE SEPARATIONS. INSTALL FIRE DAMPERS IN ACCORDANCE WITH NFPA 90A AND ULC STANDARDS WITH BACKUP ANGLES AND BREAKAWAY JOINTS. PROVIDE DUCT ACCESS DOORS AS WELL AS DRYWALL ACCESS DOORS FOR COMPLETE ACCESSIBILITY. THE CONTRACTOR SHALL DEMONSTRATE COMPLETE KNOWLEDGE AND ABILITY TO INSTALL THESE DEVICES TO THE U.L.C. INSTRUCTIONS BEFORE PROCEEDING WITH SITE WORK. FIRE DAMPERS THAT HAVE BEEN INSTALLED PRIOR TO THE APPROVAL OF THE SHOP DRAWINGS SHALL BE REMOVED FROM THE MOUNTING POSITION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATIONS OF ALL FIRE RATED SEPARATIONS APPARENT FROM MECHANICAL OR ARCHITECTURAL DRAWINGS.

### SPARE BELTS AND KEYS

PROVIDE A SPARE SET OF BELTS FOR ALL EQUIPMENT BEING SUPPLIED UNDER THIS CONTRACT. EACH SPARE BELT SHALL BE MARKED WITH SIZE, MODEL ETC... AND WHICH PIECE OF EQUIPMENT IT SERVES. PROVIDE A SET IN DUPLICATE OF KEYS FOR THERMOSTATS, KEY OPERATED SWITCHES ETC... EACH KEY SHALL BE MARKED CONCERNING ITS USE.

### **PLUMBING**

### PIPE SYSTEMS

PIPING & VALVES: HOT AND COLD WATER: ABOVE GROUND WATER SUPPLY PIPING TO BE TYPE "L" HARD DRAWN COPPER FOR THE WATER ENTRANCE.

ALL PIPING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE. PROVIDE INSERTS, SLEEVES AND ANCHORS WHERE NECESSARY AND COORDINATE WITH OTHER TRADES TO THE FULLEST EXTENT IN THE PROVISION OF OPENINGS, CHASES, ETC. TO ACCOMMODATE THE PIPING SYSTEMS.

### PIPE MATERIAL SHALL BE AS SPECIFIED BELOW:

BURIED DWV PIPING: PVC TO CSA BI81.1, B181.2, INSTALLED ON A 150 MM BED OF GRANULAR A OR SAND AND BACKFILLED TO 150 MM ABOVE PIPE WITH SAME. <u>ABOVE GROUND DWV</u>: CAST IRON

COLD, HOT DOMESTIC PIPING: COPPER ASTM B-88 TYPE 'L' HARD FOR EXPOSED PIPING, 95-5 LEAD FREE SOLDER

### SEAL OPENING AROUND PIPES PASSING THROUGH FIRE PARTITIONS WITH A FIRE RESISTANT SEALANT.

- PIPE INSTALLATION GENERAL: WITH THE EXCEPTION OF VENTS, PIPING SHALL NOT BE INSTALLED IN EXTERIOR WALLS OR OTHER LOCATIONS WHERE THERE IS A RISK OF FREEZING; INSTALL ALL ABOVE GRADE PIPING TO ALLOW COMPLETE DRAINAGE; CAULK GAPS AROUND PIPING PASSING THROUGH FLOORS, DEMISING WALLS, AND PARTITIONS. AT FLOOR AND ROOF WITH NON SETTING COMPOUND; FIRE RATED WHERE WALLS OR FLOORS ARE FIRE RATED.

- SHUT OFF: GATE OR BALL, PROVIDE ISOLATING MEANS FOR ALL INDIVIDUAL FIXTURES, EQUIPMENT, BATHROOM GROUPS & ON BRANCHES.

### PLUMBING SPECIALITIES:

- PRESSURE REGULATOR, VACUUM BREAKERS, CHECK VALVES, & BACKFLOW PREVENTORS: PROVIDE WHERE REQUIRED BY CODES EVEN WHEN NOT INDICATED ON

- THE DRAWINGS. - PIPE DRAINS TO NEAREST FLOOR DRAIN OR SERVICE SINK.
- WATER HAMMER PREVENTION: PROVIDE PISTON OR BELLOW TYPE WATER HAMMER

### TESTING AND COMMISSIONING:

- CONFIRM OPERATION OF ALL HOT, COLD AND DRAINAGE FUNCTIONS;
- ADJUST ALL AUTOMATIC FAUCETS / SHOWER VALVES TO PROVIDE SAFE DELIVERY TEMPERATURE.
- ADJUST PRESSURE AS REQUIRED TO PROVIDE ADEQUATE FLOW WITHOUT SPLASHING.

ALL PIPING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE NPC OF CANADA, UNLESS OTHERWISE SPECIFIED HERE. PROVIDE INSERTS, SLEEVES AND ANCHORS WHERE NECESSARY AND COORDINATE WITH OTHER TRADES TO THE FULLEST EXTENT IN THE PROVISION OF OPENINGS, CHASES, ETC. TO ACCOMMODATE THE PIPING SYSTEMS.

PROVIDE AND INSTALL ON NEW PIPING SYSTEMS, IDENTIFICATION CONSISTING OF FLUID DESCRIPTION AND FLOW SECTION. LANGUAGE: ENGLISH COLORS: BLACK ON GREEN

### SIZE: 1" (25mm) MIN.

MANUFACTURER: BRADY OR EQUIVALENT

### PIPING INSULATION

ALL WATER LINES INDICATED IN THE SCOPE OF WORK ITEM .3 BELOW SHALL BE INSULATED WITH 25 MM THICK DUAL TEMPERATURE GLASS FIBRE PIPE INSULATION. INSULATION SHALL BE MANUFACTURED BY FIBREGLASS OF CANADA

THIS INSULATION SHALL BE SUPPLIED COMPLETE WITH FLAME RETARDANT VAPOUR BARRIER JACKET CONSISTING OF GLASS FIBRE. REINFORCED LAMINATE OF ALUMINUM FOIL AND KRAFT PAPER. LONGITUDINAL SEAMS OF THE VAPOUR BARRIER JACKET SHALL BE SEALED WITH VAPOUR PROOF ADHESIVE, TYPE 32. INSULATE AND TAPE ALL VALVES AND FITTINGS. EXPOSED PIPING INSULATION TO BE FINISHED WITH 8 OZ. FATTAL U.LC. LISTED CANVAS AND CHILDERS LAGGING. NON U.LC. LISTED CANVAS WILL NOT BE ACCEPTED.

### INSULATE THE FOLLOWING: 1. DOMESTIC COLD WATER PIPING

2. DOMESTIC HOT WATER PIPING AND RECIRCULATION

### 3. STORM DRAINAGE AND DWV PIPING ABOVE GRADE

### PLUMBING FIXTURES

ALL ROUGH IN SHALL BE ACCURATELY LAID OUT, AND NO OFFSETS WILL BE ACCEPTED. ALL FIXTURES SHALL BE THE BEST OF THEIR RESPECTIVE KIND, FREE FROM ALL DEFECTS AND ANY FIXTURE WHICH IN THE OPINION OF THE ENGINEER IS DAMAGED SHALL BE REMOVED AND REPLACED BY A FIXTURE WHICH IS ACCEPTABLE. THE FIXTURES SHALL INCLUDE ALL TRIM, TRAPS AND WASTE WATER CONNECTIONS, TANKS, ETC., USUALLY CLASSED AS FITTINGS AND REQUIRED TO COMPLETE THE FIXTURE IN EVERY RESPECT. FIXTURES PROVIDED AS PER PLUMBING FIXTURE SCHEDULE.

### SUBMITTALS

STANDING.

### TESTING AND BALANCING

BALANCE AND TEST AIR AND WATER SYSTEMS AT EACH OUTLET AND AT FAN AND PUMP SYSTEMS. SUPERVISE OPERATING TESTS IN PREPARATION OF THE FINAL EIGHT (8) HOUR OPERATING TEST TO ENSURE THAT ALL SYSTEMS CONFORM TO THE PLAN AND SPECIFICATIONS. PROVIDE THREE TYPED REPORTS OF SYSTEM BALANCE AND OPERATING CONDITIONS, WITH AIR FLOWS AT EACH POINT SHOWN ON THE DRAWINGS.

WATER PRESSURE TEST SHALL BE CONDUCTED ON POTABLE WATER SYSTEM AS PER NATIONAL PLUMBING CODE OF CANADA LATEST EDITION.

### ALL DUCTWORK TO BE LEAKAGE TESTED.

INSTRUCT THE OWNER'S REPRESENTATIVE IN THE STARTUP AND OPERATION OF THE SYSTEMS INCLUDING ALL THE AIR SYSTEMS AND HEATING SYSTEMS FOR A MINIMUM OF ONE EIGHT (8) HOUR DAY.

THE TESTING COMPANY SHALL PREPARE FIVE (5) COMPLETELY BOUND BROCHURES CONTAINING AN OUTLINE OF THE SYSTEMS OPERATIONS AND A RECOMMENDED MAINTENANCE PROCEDURE SCHEDULE WITH THE WRITTEN INSTRUCTIONS AND CONTROL DIAGRAMS OF ALL MECHANICAL SYSTEMS IN THESE BROCHURES. INCLUDE IN THIS THE MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS. THE TESTING AND BALANCING FIRM SHALL BE CERTIFIED.

### ADDITIONAL TESTING AND WITNESSING

- CONTRACTOR TO PROVIDE TRADE CERTIFICATE IN APPLICABLE DISCIPLINE BEFORE START OF WORK. - CONTRACTOR REGISTRATION CORE, WHSCC, ETC. PROVIDE PROOF OF CLEAR

Fisheries and Oceans

Real Property,

4

K. NEIL CLEARY

Man Plany SISMATURE

08/09/17

et Océans

Pêches

Biens immobiliers, Safety & Security protection et sécurité

> PROVINCE OF NEWFOUNDLAND PERMIT HOLDER Class "A" This Permit Allows

CROSBIE ENGINEERING LIMITED

o practice Professional Engineering in Newfoundland and Labrador
Permit No. as issued by PEG-NL D0123
which is valid for the year 2017.

08/09/17 B.D. N.C. ISSUED FOR TENDER by approved revision date par approuve Proiect - proiet

TRAILER IMPROVEMENTS

NAIN, NL

Drawing - dessin

### MECHANICAL SPECIFICATION

drawn — dessine	designed — déssine par					
B.D.	N.C.					
date — date	checked – verifie					
JULY 2017	N.C.					
scale — echelle	approved for tender—approuve pour l'offre					
AS NOTED						
project no - projet no Idrawing no -	no du dessin	sheet – feuille				

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