

PLOT DATE: August 31, 2017 TIME: 3:24 PM FULL PATH AND FILENAME: \\VEDMAPS01P_DRIVE\ENGINE\7-0002 - JASPER NATIONAL PARK STAFF HOUSING\GSD-DELIV\MECHSHEET\M00-01.DWG PLOTS\SYLVE TABLE - PMA-STD-100.dwg

ENERGY RECOVERY VENTILATOR SCHEDULE													
TAG	EQUIPMENT	SERVICE & LOCATION	MANUFACTURER	MODEL & TYPE	FRESH AIR FLOW, L/S	EXHAUST AIR FLOW, L/S	EXTERNAL AIR TEMPERATURE. (C) WINTER / SUMMER	MOTOR SIZES, FLA, SUPPLY / EXHAUST	POWER SUPPLY (V/PH/ Hz - A)	WATTS	WEIGHT, KG	TYPE	NOTES
ERV-1	ENERGY RECOVERY UNIT	SUITES	VANEE	ERV 60H	49	44	-33 / 29	1 / 0.8	120/60/1/ - 0.12	-	20.4	PACKAGE	C/W SPEED CONTROL. SWITCH TO BE INSTALLED IN THE BATH ROOM
ERV-2	ENERGY RECOVERY UNIT	RESIDENTS STORAGE	NU-AIR	NU305	138	114	-33 / 29	-	115/60/1/	170	-	PACKAGE	C/W SPEED CONTROL. SWITCH, ERV CORE.

EXHAUST FAN SCHEDULE												
TAG	EQUIPMENT	SERVICE & LOCATION	MANUFACTURER	MODEL & TYPE	EXHAUST AIR FLOW, L/S	STATIC PRESSURE (PA)	SONES	MOTOR SIZE, WT	POWER SUPPLY (V/PH/Hz - A)			NOTES
EF-1	EXHAUST FAN	WASHROOM	BROAN	QTR070C	24	50	0.8	25	120/1/60			COMPLETE WITH WALL BOX
RH-1	RANGE HOOD	RANGEHOOD EXHAUST	BROAN	QT230WWN	47 / 95	57.27	-	1.7 AMPS	115/1/60			C/W VARIABLE SPEED SELECTION, CONTROLLED BY LOCAL EXHAUST HOOD SWITCH.
RD-1	RADON EXHAUST	ATTIC SPACE	RADON AWAY	XP151	54	0.5	-	60	120/1/60			PROVIDE SEPARATE PRICE, FOR FUTURE PLAN.

BOILER SCHEDULE												
TAG	SERVICE & LOCATION	MANUFACTURER	MODEL & TYPE	INPUT (KW)	THERMAL EFFICIENCY %	HEATING CAPACITY (KW)	MAX. WATER FLOW (L/S)	AMP	POWER SUPPLY (V/PH/Hz)	W x H x D		NOTES
B-1,2	MECHANICAL ROOM	CAMUS	DMNH-0101 CONDENSING BOILER	29.30	93	27	0.4	15	120/1/60	533x730x420		C/W CONDENSER NEUTRALIZER, ZONE CONTROLLER, CONDENSATE HOSE & QUICK CONNECT INSTALL MANIFOLD

PUMP SCHEDULE												
TAG	SERVICE & LOCATION	MANUFACTURER	MODEL & TYPE	FLOW, L/S	HEAD, (M)	POWER SUPPLY (V/PH/Hz)	AMP	FLA	MOTOR (HP)			NOTES
BP-1,2	MECHANICAL ROOM BOILER PUMP	CAMUS	-	0.4	9.1	120/1/60	15	4	-			FACTORY MOUNTED INTEGRAL BOILER PUMP
P-1,2	MECHANICAL ROOM PRIMARY LOOP HEATING PUMP	ARMSTRONG	E12.2 CI 120V	0.954	12.28	115/1/60	-	-	0.4			HEATING WATER PUMP, EACH AT 100% CAPACITY WITH ONE DUTY AND ONE STANDBY C/W VFD
P-3	MECHANICAL ROOM DHW RECIRCULATION	ARMSTRONG	ASTRO 225B5050S-TA	0.189	1.82	115/1/60	-	-	0.1			INLINE, ALL BRONZE CONSTRUCTION, C/W TIMER AND AQUASTAT.
P-4	MECHANICAL ROOM WEEPING TILE SUMP	MYERS	MSC1050M20	2.4	7	115/1/60	15	-	0.5			C/W SIMPLEX CONTROL PACKAGE, STEEL LID, CHECK VALVE, FLOAT BRACKET, LIFT CHAIN PACKAGE.

ELECTRICAL REHEAT COIL SCHEDULE												
TAG	SERVICE & LOCATION	MANUFACTURER	MODEL & TYPE	FLOW, L/S	EAT, (C)	LAT, (C)	KW	AMPS	POWER SUPPLY (V/PH/Hz)			NOTES
RC-1	SUITES ERV	THERMOLEC	THERMO-AIR HEATER TER-6-2-120	49	3	18	2	16.7	120/1/60			INSTALL AT THE S/S DUCT OF ENERGY RECOVERY UNIT. PROVIDE THERMOSTAT TO CONTROL
RC-2	RESIDENTS STORAGE ERV	THERMOLEC	THERMO-AIR HEATER TER-8-6-240	138	7	-	6	25	240/1/60			INSTALL AT THE O/A DUCT OF ENERGY RECOVERY UNIT. PROVIDE THERMOSTAT TO CONTROL

DOMESTIC WATER HEATER SCHEDULE												
TAG	SERVICE & LOCATION	MANUFACTURER	MODEL & TYPE	CAPACITY (L)	RECOVERY CAPACITY (L/S) @ 38°C RISE	HEIGHT (MM)	DIAMETER (MM)	INPUT (KW)				NOTES
DWH-1	MECHANICAL ROOM	AO SMITH	BTH-199 MXI	378.5000	0.2470	1900	693.75	58.32				HIGH EFFICIENCY CONDENSING WATER HEATER

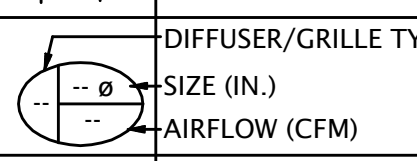
TANK / EXPANSION VESSELS SCHEDULE												
TAG	SERVICE & LOCATION	MANUFACTURER	MODEL & TYPE	VOLUME, L	MAX. ACCEPTABLE VOLUME, L	MAX. OPERATION PRESSURE, KPA	DIAMETER, MM	HEIGHT, MM	WEIGHT, KG			NOTES
ET-1	HEATING WATER	AMTROL	AX-15V	30	9	861	300	500	20			ASME CERTIFIED
ET-2	DOMESTIC HOT WATER	AMTROL	ST-15V	20	14.5	861	275	375	4			ASME CERTIFIED

RADIATION FINS AND ENCLOSURE SCHEDULE												
TAG	MANUFACTURER	MODEL & TYPE	ENCLOSURE HEIGHT, MM	MEDIA	# OF ROWS	EWT / LWT	CAPACITY, KW / M					NOTES
A	HAYDON	HEAT BASE 750	185	WATER	1	82.2 / 71.1	0.152					WALL MOUNTED THERMOSTAT
B	ENGINEERED AIR	WF-5A INVERTED ENCLOSURE	305	WATER	1	82.2 / 71.1	1					WALL MOUNTED THERMOSTAT

GRILLE / DIFFUSER SCHEDULE												
TAG	MANUFACTURER	MODEL & TYPE	FINISH	MOUNTING								NOTES
S	NAILOR	61DV-O	AW	WALL/CEILING								COLOR BY ARCHITECT, MOUNTING TO BE CONFIRMED WITH ARCHITECT'S CEILING PLAN
E	NAILOR	51EC-O-TYPE S	AW	CEILING								COLOR BY ARCHITECT, MOUNTING TO BE CONFIRMED WITH ARCHITECT'S CEILING PLAN
T	NAILOR	51EC-O-TYPE S	AW	WALL								COLOR BY ARCHITECT, MOUNTING TO BE CONFIRMED WITH ARCHITECT'S
L	PRICE	DE439 SERIES	AW	EXTERIOR WALL								COLOR BY ARCHITECT, MOUNTING TO BE CONFIRMED WITH ARCHITECT'S

CABINET UNIT HEATER SCHEDULE												
TAG	MANUFACTURER	MODEL & TYPE	ARRANGEMENT	SERVICE	AIR FLOW (L/S)	EWT / LWT (C)	WATER FLOW (GPM)	WATER P.D. (KPA)	HEATING OUTPUT (KW)			NOTES
CUH-1	ENGINEERED AIR	CUH-1	WALL MOUNTED	BUILDING ENTERY	0.07	82.2 / 65.55	0.92	3.76	5.3			LINE VOLTAGE ROOM TEMPERATURE SENSOR C/W LOCKING COVER

DRAWING LIST	
DRAWING NO.	DRAWING NAME
M00-01-01	MECHANICAL LEGENDS AND SCHEDULES
M01-00-01	MECHANICAL DETAILS
M10-00-01	MECHANICAL SITE PLAN
M20-00-01	MECHANICAL FOUNDATION, BASEMENT PLUMBING & FIRE PROTECTION PLAN
M20-01-01	MAIN & SECOND FLOOR PLUMBING & FIRE PROTECTION PLAN
M50-00-01	BASEMENT & MAIN FLOOR VENTILATION PLAN
M50-01-01	SECOND FLOOR VENTILATION & ROOF MECHANICAL PLAN
M53-00-01	BASEMENT & MAIN FLOOR HEATING PLAN
M53-01-01	SECOND FLOOR HEATING PLAN
M70-01-01	MECHANICAL DIAGRAMS

DESIGNATION	SERVICE	DESIGNATION	SERVICE
-----	DOMESTIC COLD WATER	-----	CONTROL VALVE
-----	DOMESTIC HOT WATER	-----	ISOLATION VALVE
-----	DOMESTIC HOT WATER RETURN	-----	PLUG VALVE
--- V ---	VENT	FD RD	FLOOR / ROOF DRAIN
--- SAN ---	SANITARY ABOVE GRADE	Ⓢ	THERMOSTAT
--- SAN ---	SANITARY BELOW GRADE	---	GAS METER
--- ST ---	STORM ABOVE GRADE	Ⓜ	WATER METER
--- ST ---	STORM BELOW GRADE	Ⓜ	PUMP
---MPC---	MEDIUM PRESSURE GAS	FD	FIRE DAMPER
--- G ---	NATURAL GAS	---	BALANCING DAMPER
--- HWS ---	HOT WATER SUPPLY		DIFFUSER/GRILLE TYPE SIZE (IN.) AIRFLOW (CFM)
--- HWR ---	HOT WATER RETURN		
--- II ---	CLEANOUT ABOVE / BELOW GRADE	---	TYPE
---	BALANCING VALVE	---	CAPACITY (BTU) LENGTH (feet)
---	PRESSURE REDUCING VALVE	S/A	SUPPLY AIR RETURN AIR EXHAUST AIR TRANSFER AIR
---	CONTROL VALVE	R/A	
---	ISOLATION VALVE	E/A	
---	PLUG VALVE	Ⓢ FE	FIRE EXTINGUISHER

PLUMBING FIXTURE SCHEDULE			
FIXTURE	CONNECTIONS		
	COLD WATER (mm)	HOT WATER (mm)	SANITARY (mm)
WC	15	-	75
LAV	15	15	30
TUB	15	15	40
SK	15	15	40
NFHB	20	-	-
AD-1	-	-	75
FD	-	-	75

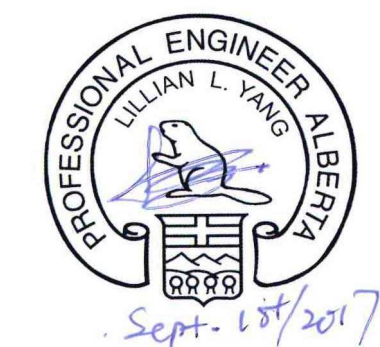
FIRE EXTINGUISHER SCHEDULE						
TAG	MANUFACTURER	LOCATION	FIRE EXTINGUISHER TYPE	MOUNTING	NOM CAP (KG)	TYPE
FE-1	NATIONAL FIRE EQUIPMENT LTD.	MECHANICAL ROOM, LAUNDRY, STORAGE ROOM	ALL PURPOSE	WALL HUNG	4.5	WALL HOOK MOUNTING
FE-2	NATIONAL FIRE EQUIPMENT LTD.	ELECTRICAL ROOM	CO2	WALL HUNG	4.5	WALL HOOK MOUNTING

PLUMBING FIXTURE SCHEDULE	
TAG	TYPE
WC	AMERICAN STANDARD HIGH EFFICIENCY FLOW TANK 2467.100.020 FLOOR MOUNTED, FLOOR OUTLET, WHITE FINISH, VITREOUS CHINA WITH EVERCLEAN ANTIMICROBIAL SURFACE WHICH INHIBITS THE GROWTH OF STAIN AND ODOR CAUSING BACTERIA MOLD AND MILDEW, SIPHON JET FLUSH ACTION, RAISED SANITARY BAR, TWO (2) PIECE, SPEED CONNECT TANK ASSEMBLY, UNBOLTED TANK COVER, 305mm ROUGH IN, ELONGATED BOWL, 54mm FULLY GLAZED INTERNAL TRAPWAY, BOLT CAPS. CONSISTING OF : 3483.001 BOWL AND 4142.100 TANK UNBOLTED TANK COVER. MINIMUM WORKING PRESSURE RANGE: 20PSI TO 80 PSI MAXIMUM. NOMINAL DIMENSIONS: 495mm WIDE x 794mm FRONT TO BACK x 800mm HIGH. WATER SURFACE: 305mm x 254mm WATER SURFACE. SHIPPING WEIGHT: 47kg. WATER CONSUMPTION: LOW CONSUMPTION 4.2L PER FLUSH. EXTRA HEAVY DUTY, FOR ELONGATED BOWL, OPEN FRONT, SOLID PLASTIC, OPEN FRONT WITH COVER, STAINLESS STEEL CHECK HINGES, METAL PLAT WASHERS STAINLESS STEEL POSTS AND NUTS. CHROME PLATED FINISH ALL METAL CONSTRUCTION, LIGHT DUTY RESIDENTIAL ANGLE STOPS, PIPE NIPPLE, ESCUTCHEON AND FLEXIBLE METAL RISER. FLOOR FLANGE WITH ALL BRASS BOLTS AND WITH RUBBER GASKET (SAME MATERIAL AS THE CONNECTING PIPE DRAIN).
LAV	AMERICAN STANDARD 0614.000.020 UNDERCOUNTER BASIN, VITREOUS CHINA, WHITE FINISH, FRONT FINISH, FRONT OVERFLOW, 32mm WASTE ASSEMBLY, TRAPPED BOWL, 047194-0070A MOUNTING KIT. NOMINAL DIMENSIONS: 540mm WIDE x 387mm FRONT TO BACK x 209mm HIGH. BOWL DIMENSIONS: 464mm x 308mm x 171mm. SHIPPING WEIGHT: 12.2kg. BASIN RIM SEALANT, 420-E2805-ABC SINGLE HANDLE LAVATORY FAUCET, CHROME PLATED, 102mm CENTERSET, ECAST CONSTRUCTION LEAD FREE (EQUAL OR LESS THAN 25%) ECAST BRASS CONSTRUCTION, VANDAL RESISTANT 1.9LPM PRESSURE COMPENSATING ECONO-FLO NON-AERATING SPRAY OUTLET, 117mm PROJECTION RIGID CAST BRASS SPOUT, SINGLE METAL LEVER HANDLE, 13mm NPSM SUPPLY INLETS AND COUPLING NUT FOR FLEXIBLE RISER. TMM-1070 BELOW DECK MECHANICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, 10mm INLETS AND OUTLETS COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 48.8°C. INTEGRAL CHECKS, OFFER TEMPERATURE RANGE FROM FULL COLD THROUGH 46°C. TEE, ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE TEMPERED WATER TO HOT SIDE OF FAUCET. P-TRAP, CHROME PLATED, ADJUSTABLE ALL METAL CONSTRUCTION , 32mm SIZE, AND ESCUTCHEON, TEE, ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION.
SK	FRANK LBD6408-1 /1 - 1 HOLE DOUBLE BOWL COUNTERTOP MOUNT SINK, SPIL-WAY, GRADE 18-10-20 GA. 0.9mm TYPE 302 STAINLESS STEEL, SELF RIMMING, BACKLEDGE, STAIN FINISH RIM AND BOWL'S MOUNTING KIT PROVIDED, FULLY UNDERCATED TO REDUCE CONDENSATION AND RESONANCE. FACTORY APPLIED RIM SEAL, 89mm CRUMB CUP WASTE ASSEMBLY WITH 38mm TAILPIECE. NOMINAL DIMENSIONS: 794mm WIDE x 521mm LONG x 203mm HIGH. CHICAGO FAUCET 43-ABCPC SINGLE HANDEL FAUCET, CHROME PLATED, CENTER HOLE ONLY, ECAST CONSTRUCTION LEAD FREE, ECAST BRASS CONSTRUCTION, VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 5.7LPM PRESSURE COMPENSATING LAMINAR FLOW OUTLET, 241mm, 13mm NPSM SUPPLY INLETS AND COUPLING NUT FOR FLEXIBLE RISER. TMM-1070 BELOW DECK MECHANICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTIG DIAL, 10mm INLETS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-OFF WITH AUTOMATIC RESET WHE TEMPERATURE EXCEEDS 48.8°C. INTEGRAL CHECKS, OFFER TEMPERATURE RANGE FROM COLD THROUGH 46°C. TEE, ADAPTORS AND FLEX, COPPER TUBING TO SUIT INSTALLATION.TEMPERED WATER TO HOT SIDE OF FAUCET. FAUCET SUPPLIES, CHROME PLATED FINISH ALL METAL CONSTRUCTION, LIGHT DUTY RESIDENTIAL ANGLE STOPS, ESCUTCHEONS AND FLEXIBLE METAL RISERS, LOW LEAD. P-TRAP, ADJUSTABLE ALL METAL CONSTRUCTION, 38mm SIZE, WITH CLEAN OUT, AND ESCUTCHEON.
TUB	AMERICAN STANDARD BOULEVARD, THERMOSTATIC & PRESSURE BALANCING SHOWER VALVE SET, 2530.102/2530.202 HIGH GLOSS ACRYLIC CAPPED ABS WITH FIBERGLASS REINFORCEMENT CONSTRUCTION RECTANGULAR, RECESSED ALCOVE INSTALLATION, INTEGRAL CURVED APRON, INTEGRAL LUMBAR SUPPORT, INTEGRAL TILING FLANGE ON 3 SIDES, FOR BELOW FLOOR ROUGH INSTALLATION. DIMENSION: INSTALLATION DIMENSIONS OF 1524mm x 762 mm x 470mm. WATER DEPTH TO OVERFLOW: 286mm. CAPACITY: 1.70L. WEIGHT WITH WATER: 197.3 Kg. SHIPPING WEIGHT: 27.2kg. COMPLIANCE: IAMPOM (CUPC). 1905-VOCCP-CP THERMOSTATIC & PRESSURE BALANCING SHOWER VALVE SET, CHROME PLATED FINISH, 2016mm DIA TRIM FACE PLATE, ON/OFF AND TEMPERATURE CONTROL SINGLE LEVER HANDLE, INTEGRAL SERVICE STOPS, 620-LCP SHOWERHEAD, CHROME PLATED FINISH, 5.7LPM FLOW RATE @ 80PSI, PRESSURE COMPENSATING FLOW CONTROL DEVICE, SWIVEL BALL JOINT, 749-016JKCP/415-021JKCP WALL MOUNT SHOWER ARM, ROUND ESCUTCHEON. 749-5JKCP-CP DIVERTER TUB SPOUT, CHROME PLATED FINISH, ZINC DIE CAST CONSTRUCTION, SLIP-ON FOR 1/2" NPT MALE OUTLET, 1.37mm LONG. P-TRAP, SAME MATERIAL AS THE CONNECTING PIPE DRAIN.
NFHB	JAY R. SMITH #5519 BOX TYPE WALL HYDRANT, 1/4 TURN NON-D RIP, 19mm NONE FREEZE WALL TYPE AUTOMATIC DRAINING HYDRANT, AND STAINLESS STEEL WITH FULL 180DEG. COVER OPENING BOX, DUAL CHECK VALVE, SELF DRAINING INTEGRAL VACUUM BREAKER. OPERATING T-HANDLE KEYS, WHEEL HANDLE, STAINLESS STEEL BOX FACE.
FD-1	WATTS FD-100-C-EG EPOXY COATED CAST IRON FLOOR DRAIN, ANCHOR FLANGE, REVERSIBLE MEMBRANE, REVERSIBLE FLASHING CLAMP WITH PRIMARY AND SECONDARY WEEPHOLES, 127mm DIAMETER NICKEL BRONZE. ADJUSTABLE ROUND STRAINER 102mmx229mm OVAL NICKEL BRONZE FUNNEL, TRAP PRIMER CONNECTION WITH PLUG, NO HUB OUTLET.
HD-1	WATTS FD-100-C-EG FUNNEL FLOOR DRAIN EPOXY COATED CAST IRON FLOOR DRAIN, ANCHOR FLANGE, REVERSIBLE MEMBRANE CLAMP WITH PRIMARY AND SECONDARY WEEPHOLES, 6MM THICK ADJUSTABLE ADJUSTABLE NICKEL BRONZE (STANDARD) STRAINER, 100x225mm OVAL NICKEL, BRONZE FUNNEL. C/W TRAP PRIMER CONNECTION

DATE	ISSUED FOR	REV
17-07-06	60% REVIEW	A
17-08-09	TENDER	B
17-09-01	BP	C
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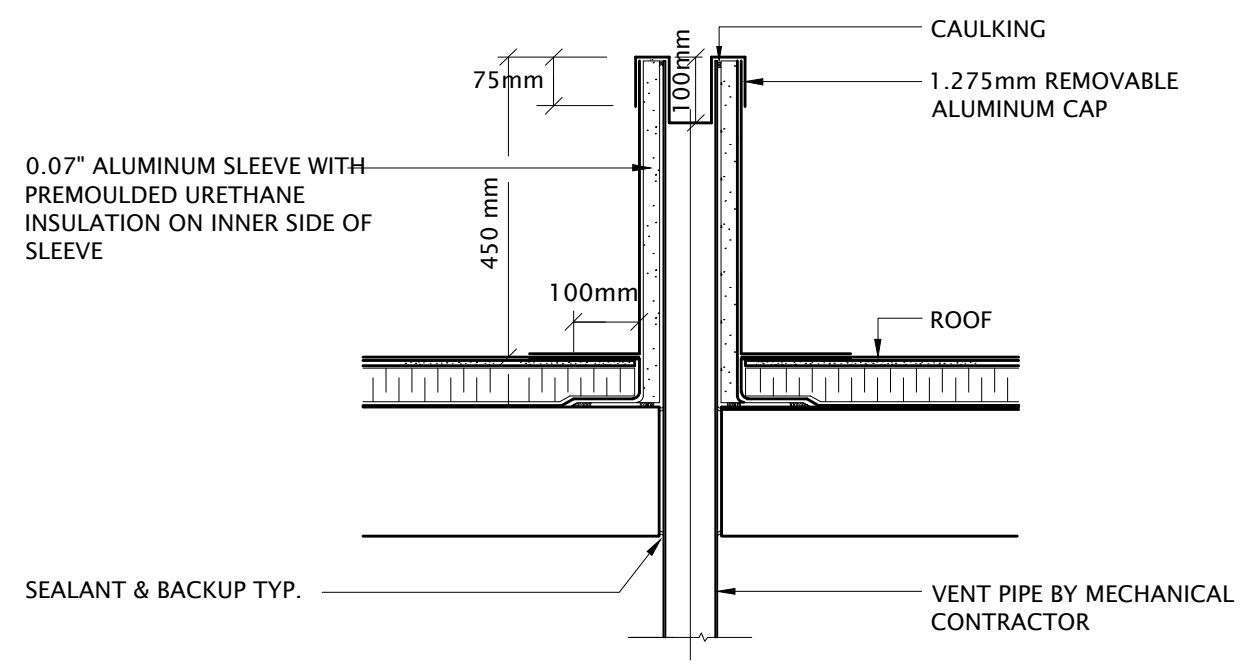
Project Component	
Phase # - Description	
Keyplan	
North Arrow	
Detail Symbol	

Consultants	McElhanney Consulting Services Ltd.
Civil:	NORR Architects Engineers Planners
Landscape:	NORR Architects Engineers Planners
Architectural:	NORR Architects Engineers Planners
Structural:	NORR Architects Engineers Planners
Mechanical:	NORR Architects Engineers Planners
Electrical:	NORR Architects Engineers Planners

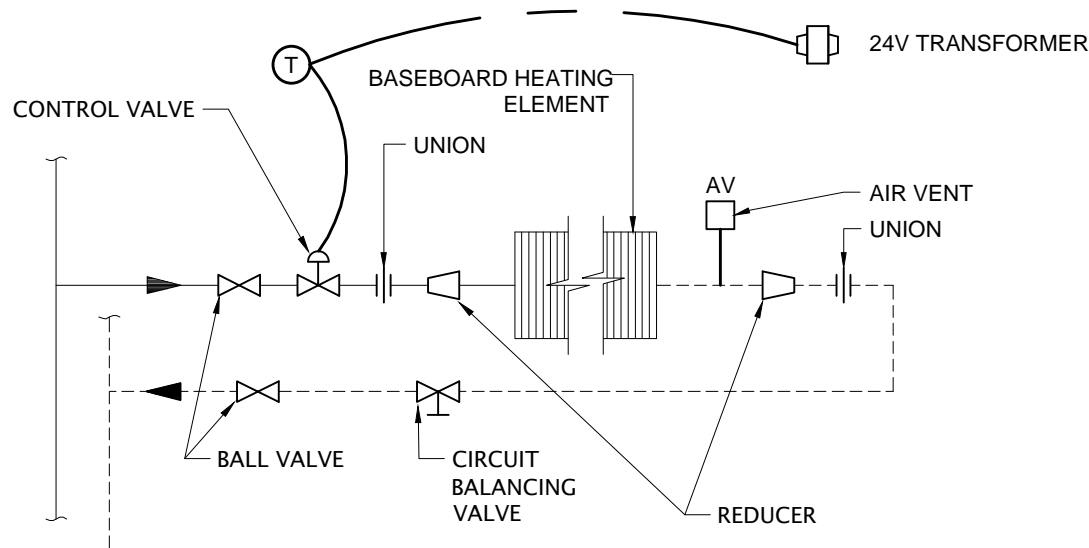
Seal(s)

NORR
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Project Manager	Drawn
C.ODINGA	N.ALY
Project Leader	Checked
T.BERTSCH	L.YANG
Client	PARKS CANADA AGENCY
	Jasper National Park, Jasper, AB
Project	JASPER PARK STAFF HOUSING
	JASPER, AB
Drawing Title	MECHANICAL LEGEND, SCHEDULES AND DRAWING LIST
Check Scale (may be photo reduced)	0 10mm
Project No.	NCEM-1-7-0002
Drawing No.	M00-01-01

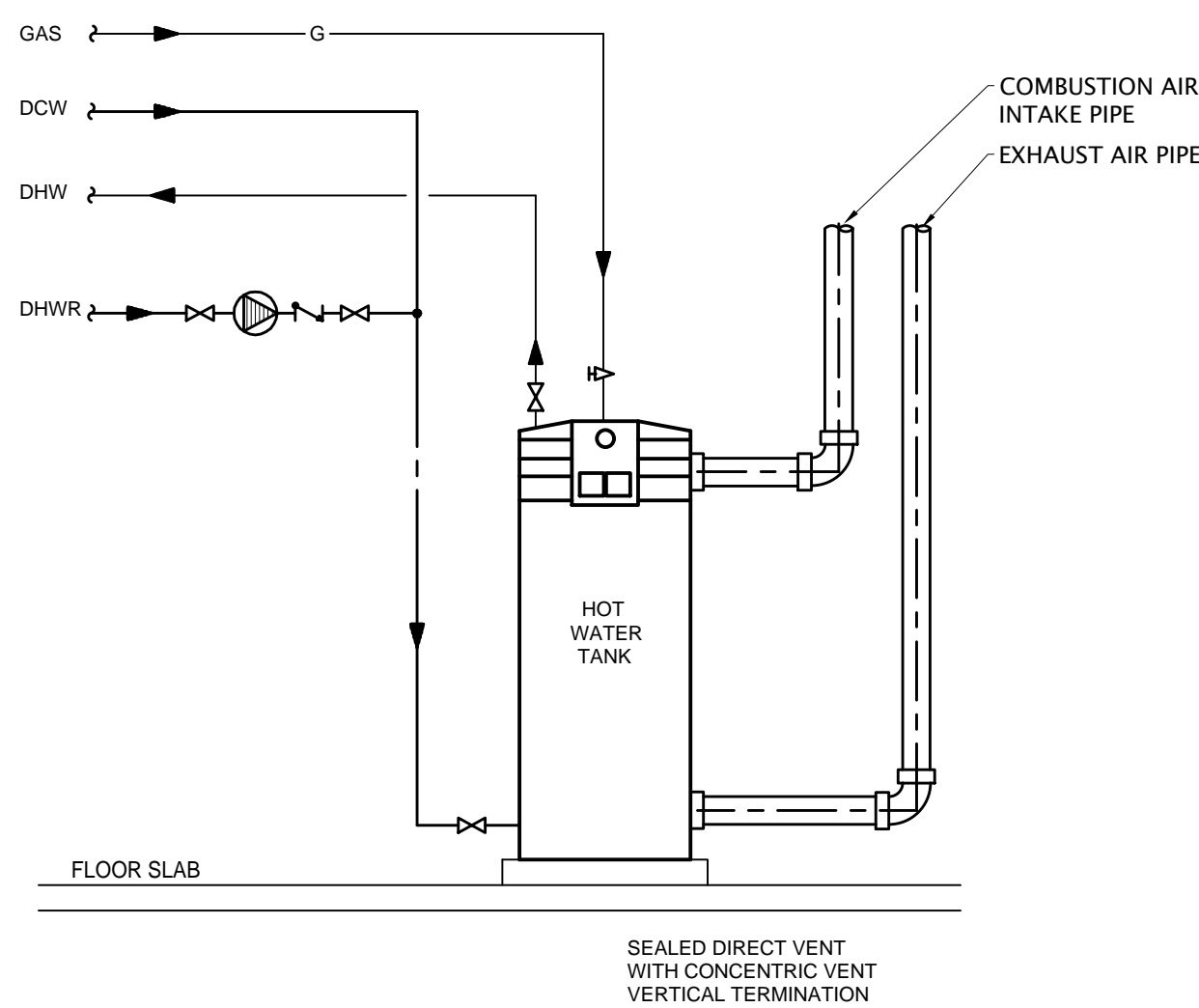
PLOT DATE: August 31, 2017 TIME: 3:24 PM FULL PATH AND FILENAME: \\VEDMAPSP01\PROJECTS\DRIVING\ENGINEERING\02 - JASPER NATIONAL PARK STAFF HOUSING\030-DELIV\MECH\SHEET\M01-00-01.DWG PLOTSYLE TABLE: PMA-STD-100.cbr



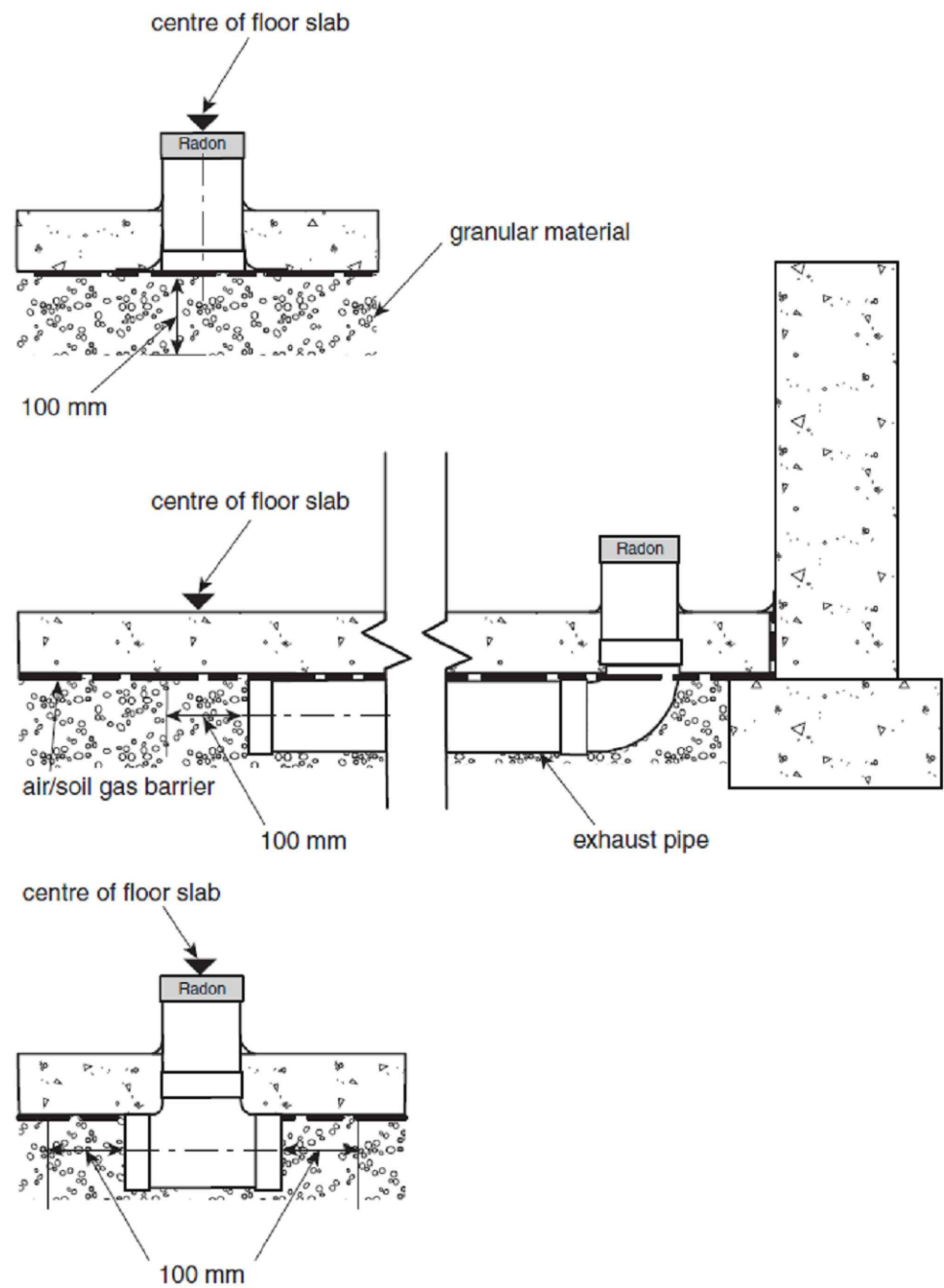
1 TYPICAL PLUMBING VENT STACK
M01-00-01 NTS



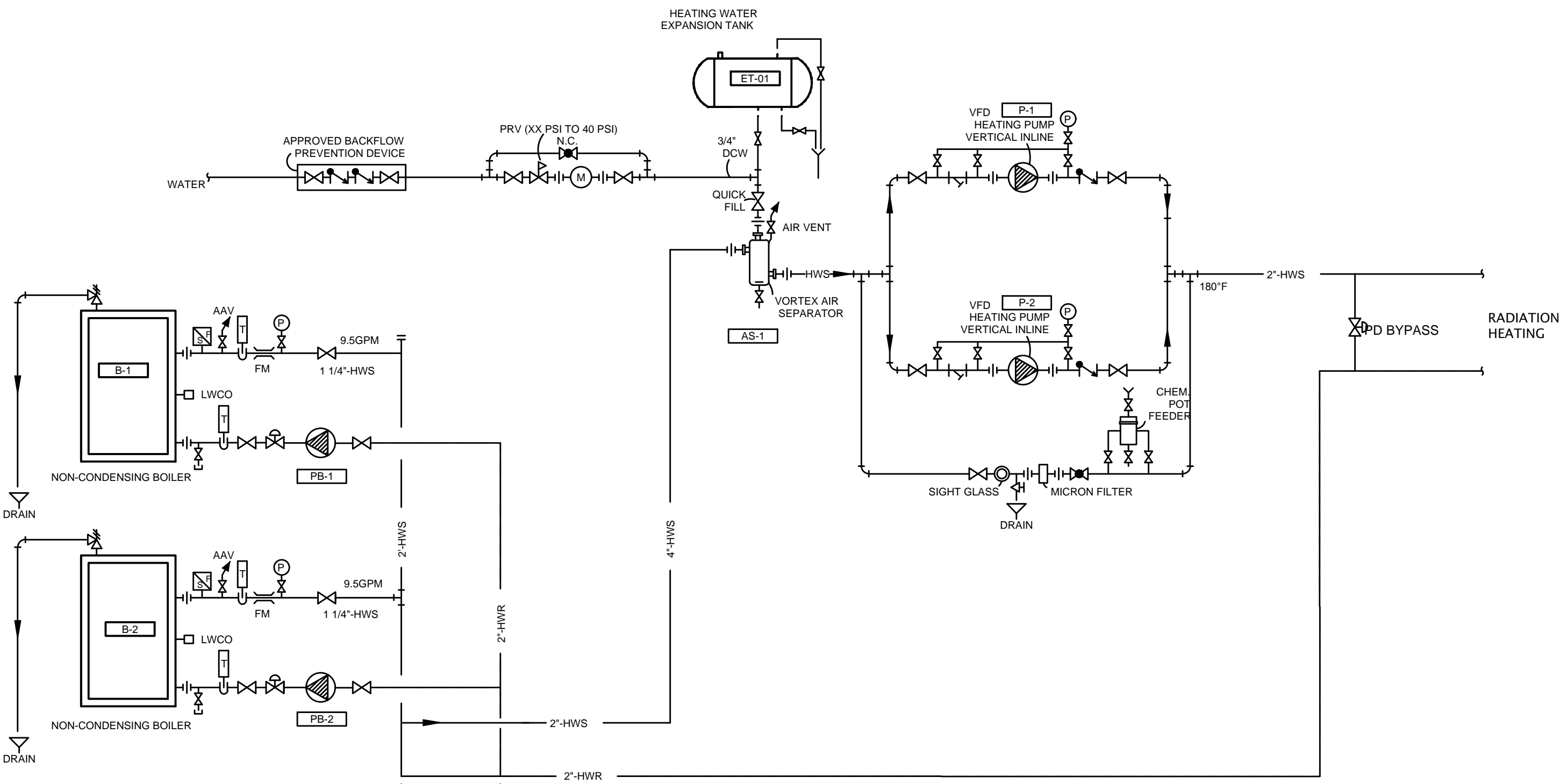
2 BASEBOARD HEATING CONNECTION
M01-00-01 NTS



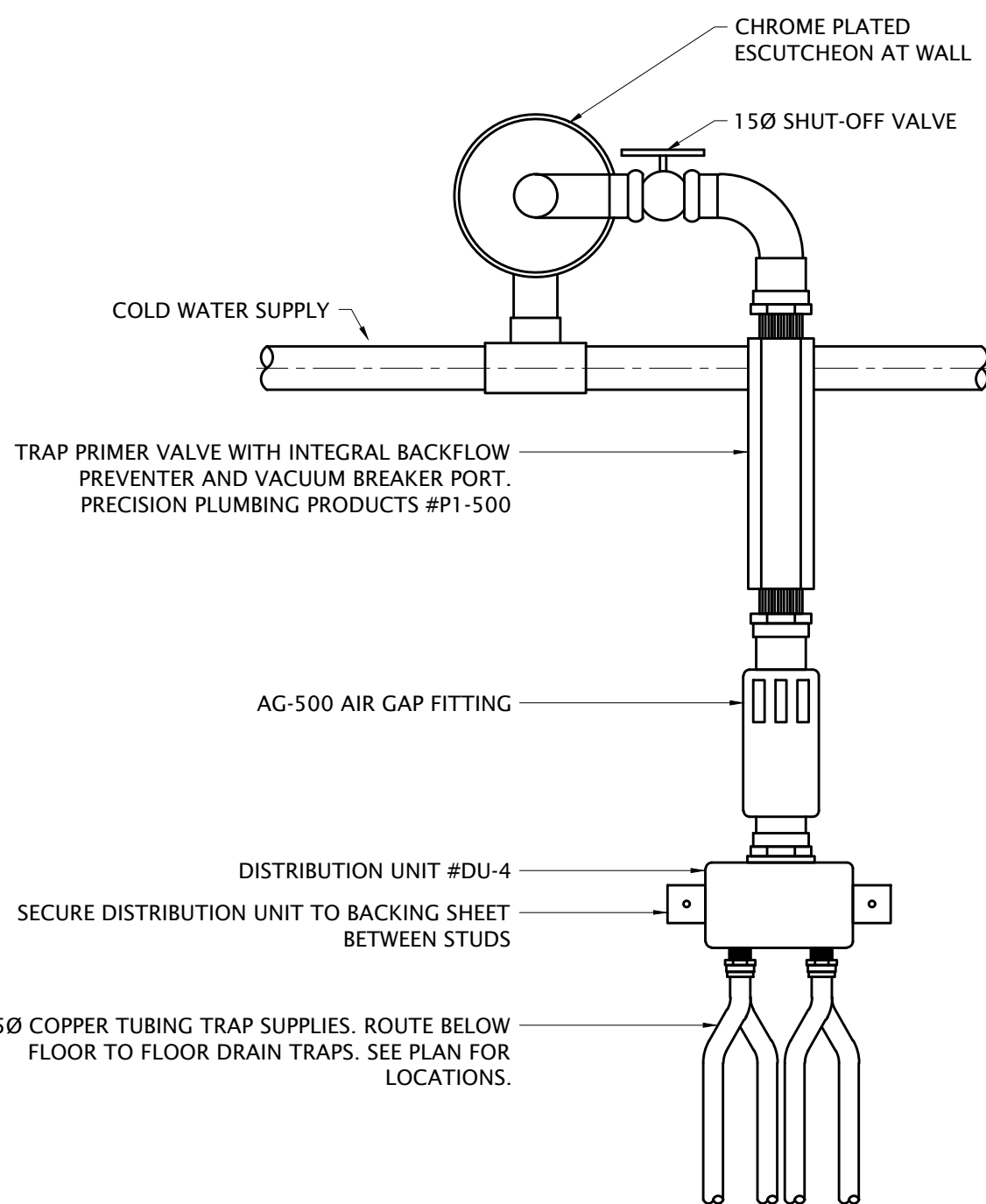
3 DOMESTIC HOT WATER HEATER DETAIL
M01-00-01 NTS



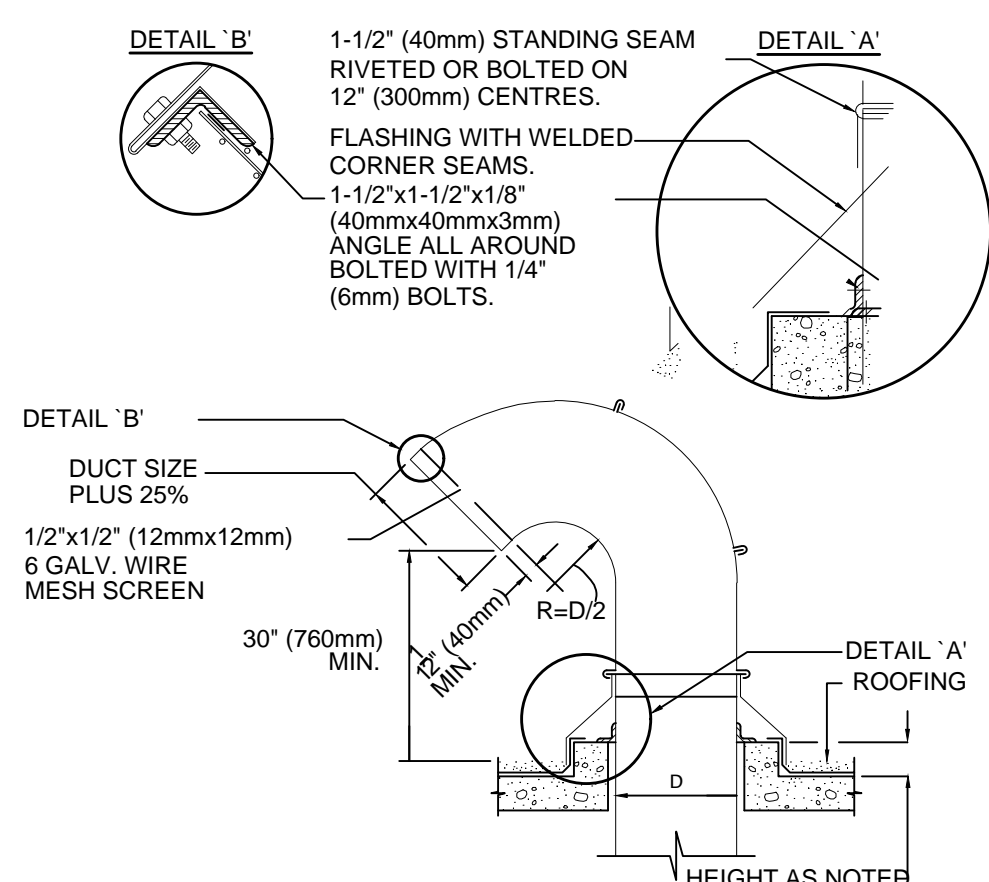
4 RADON DEPRESSURIZATION SYSTEM DETAIL
M01-00-01 NTS



5 BUILDING HEATING SCHEMATIC
M01-00-01 NTS

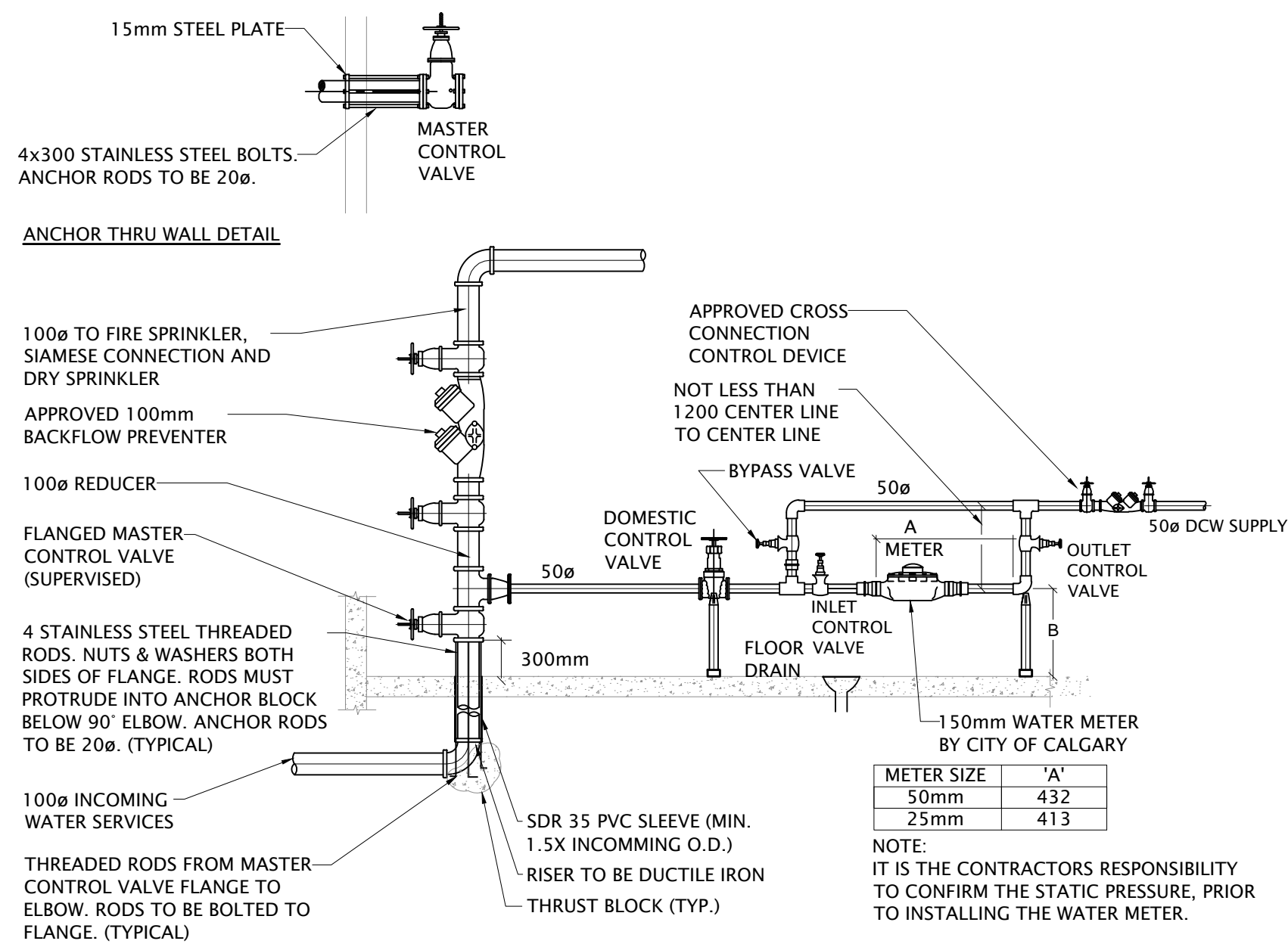


6 TRAP PRIMER DETAIL
M01-00-01 NTS

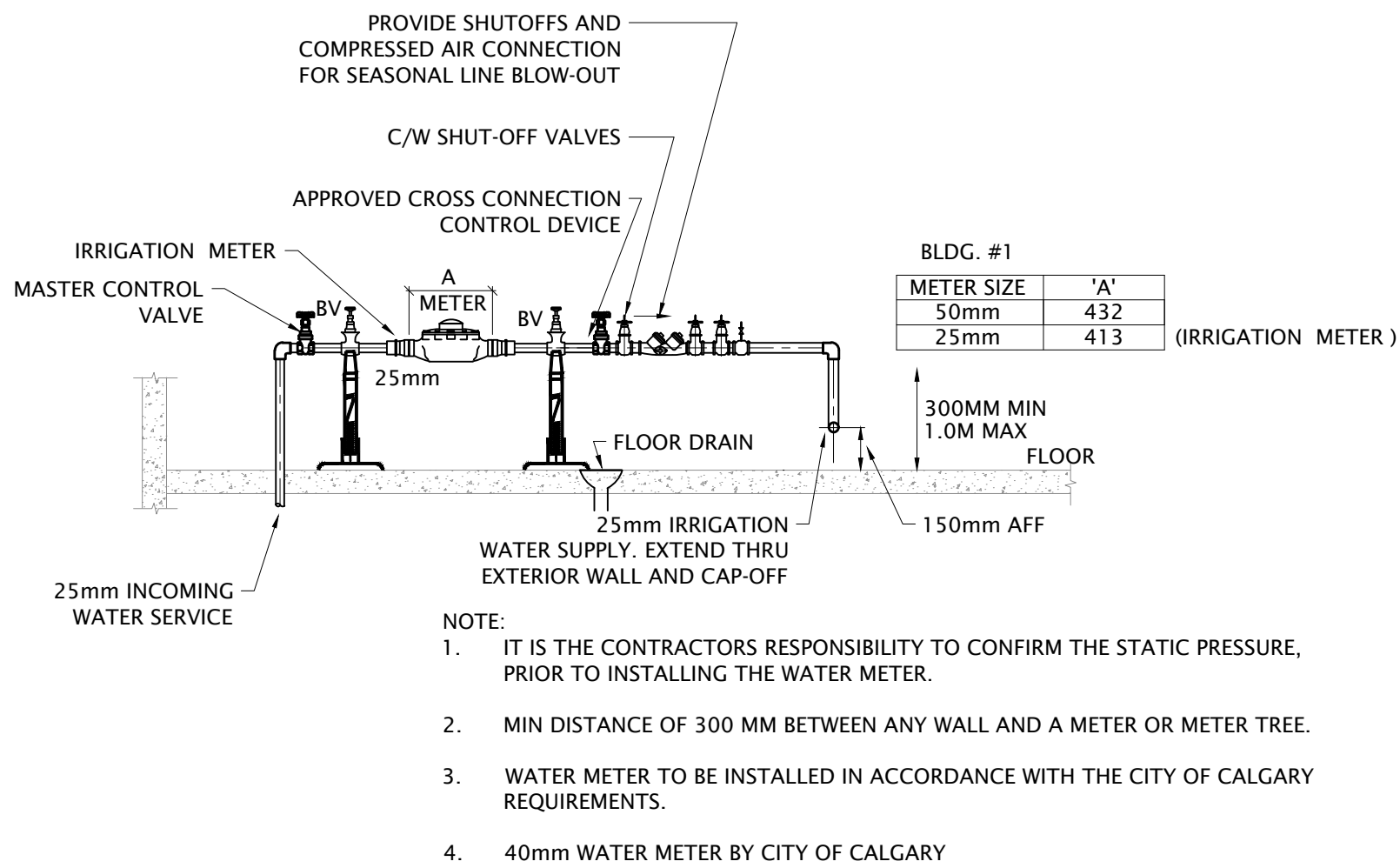


NOTES:
1. WIND BRACING MAY BE REQUIRED ON LARGER SIZES.
2. ALL JOINTS SHALL BE SOLDERED WATER TIGHT.
3. FOR DUCT & GOOSENECK SIZES SEE DRAWINGS.

7 GOOSENECK DETAIL
M01-00-01 NTS



8 RESIDENTIAL WATER METER DETAIL
M01-00-01 NTS



9 IRRIGATION WATER METER DETAIL
M01-03-01 N.T.S

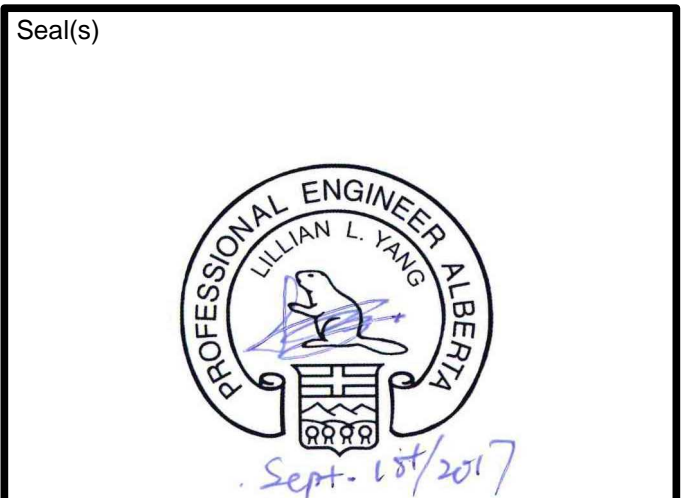
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Project Component	
Phase # - Description	
Keyplan	
North Arrow	
Detail Symbol	
DETAIL# SHEET #	
Symbol not to scale	

Consultants	
Civil:	McElhanney Consulting Services Ltd.
Landscaping:	NORR Architects Engineers Planners
Architectural:	NORR Architects Engineers Planners
Structural:	NORR Architects Engineers Planners
Mechanical:	NORR Architects Engineers Planners
Electrical:	NORR Architects Engineers Planners



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Project Manager	Drawn
C.ODINGA	N.ALY
Project Leader	Checked
T.BERTSCH	L.YANG
Client	
PARKS CANADA AGENCY	
Jasper National Park, Jasper, AB	
Project	
JASPER PARK STAFF HOUSING	
JASPER, AB	
Drawing Title	
MECHANICAL DETAILS	
Check Scale (may be photo reduced)	
0 10mm	
Project No.	
NCEM-17-0002	
Drawing No.	
M01-00-01	

PLOT DATE: August 31, 2017 TIME: 3:24 PM FULL PATH AND FILENAME: \\EDMAPPS01P_DRIVE\ENGIN\7-0002_JASPER NATIONAL PARK STAFF HOUSING\600-DELIV\MECH\SHEETS\M10-00-01.DWG PLOTSYLE TABLE: PMA-STD-100.cdb

LOT 11
BLOCK 31
PLAN 4061 EO
(LTO)
37651 CLSR

EXISTING 150mm PVC SANITARY SERVICES
(LOCATION, TYPE AND SIZE OF SERVICE TO BE CONFIRMED)
PROPOSED TO BE UTILIZED FOR THE NEW HOUSE IF IN GOOD CONDITION

INVERT EL. @
SANITARY MAIN
1064.63 (APPROXIMATE)
PROPOSED 50mm COPPER WATER
SERVICE, 50mm OFFSET IN A SIMILAR TRENCH
FROM THE SANITARY SERVICE TO BE ABANDONED
(EXISTING 25mm WATER SERVICE, LOCATION, TYPE
AT THE MAIN CORPORATION STOP, LOCATION, TYPE
AND SIZE TO BE CONFIRMED IN THE FIELD)

PROPOSED 25mm COPPER WATER
SERVICE COMPLETE WITH
SUB-METER CAPPED IN THE
WATER METER ROOM FOR FUTURE IRRIGATION SYSTEM

INVERT EL. @
PROPERTY LINE
1064.71

70°12'50"

15.25

1000 SAN BUILD. LEAVING
INV.= 65.11 GEO.
CIVIL INV.@ BUILD.= 64.95 GEO.

1000 WATER TO BUILD.
250 IRRIGATION WATER TO
BUILD. REFER TO CIVIL FOR
CONTINUATION

BELOW GRADE GAS PIPE.
REFER TO CIVIL DRAWINGS
FOR CONTINUATION.
GAS METER @ 3.5KPa. GAS
LOAD: 117.2 KW (399 MBH
@ 0.5PSI)

GAS LOAD SCHEDULE		
EQUIPMENT	INPUT (KW)	LOAD (CFH)
1. MECHANICAL ROOM:		
1.1 DOMESTIC HOT WATER HEATER (DWH-1)	58.32	199
1.2 BOILER @2 (B-1&B-2)	58.6	200
TOTAL	116.920000	399
PRIOR TO COMMENCING INSTALLATION WITHIN THE BUILDING, THE MECHANICAL CONTRACTOR SHALL CHECK THE LOCATION AND INVERT ELEVATIONS OF ALL SERVICE LINES INCLUDING SANITARY SEWER, STORM SEWER, WATER MAINS, AND GAS MAINS WITH LOCAL AUTHORITIES TO INSURE THAT THESE SERVICES CAN BE INSTALLED AS SHOWN, MINIMUM DISTANCE BETWEEN GAS LINE AND UNDERGROUND SERVICES - 2 METERS (6 FEET).		
ADDITIONAL NOTES: - CONFIRM SERVICE PRESSURE BEFORE CONSTRUCTION; - GAS LINE ARE SIZED ON 2PSIG PRESSURE DOWNSTREAM OF REGULATOR; - LONGEST PIPE RUN IS BASED ON 15METER.		

FIRE DEPARTMENT CONNECTION
C/W BACK FLOW PREVENTER.
MOUNT 450mm ABOVE GRADE.

LOT 12
BLOCK 31
PLAN 4061 EO
(LTO)
37651 CLSR

LOT 13
BLOCK 31
PLAN 4061 EO
(LTO)
37651 CLSR
PROP BUILDING

LOT 15
BLOCK 31
PLAN 4061 EO
(LTO)
37651 CLS

WILLOW AVENUE

PATRICIA STREET

01
MECHANICAL SITE PLAN
1:50

DATE	ISSUED FOR	REV
17-07-06	60% REVIEW	A
17-08-09	TENDER	B
17-09-01	BP	C

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Project Component
Phase # - Description
Keyplan

North Arrow

Detail Symbol
DETAIL#
SHEET #
Symbol not to scale

Consultants	McElhanney Consulting Services Ltd.
Civil:	NORR Architects Engineers Planners
Landscap:	NORR Architects Engineers Planners
Architectural:	NORR Architects Engineers Planners
Structural:	NORR Architects Engineers Planners
Mechanical:	NORR Architects Engineers Planners
Electrical:	NORR Architects Engineers Planners

Seal(s)

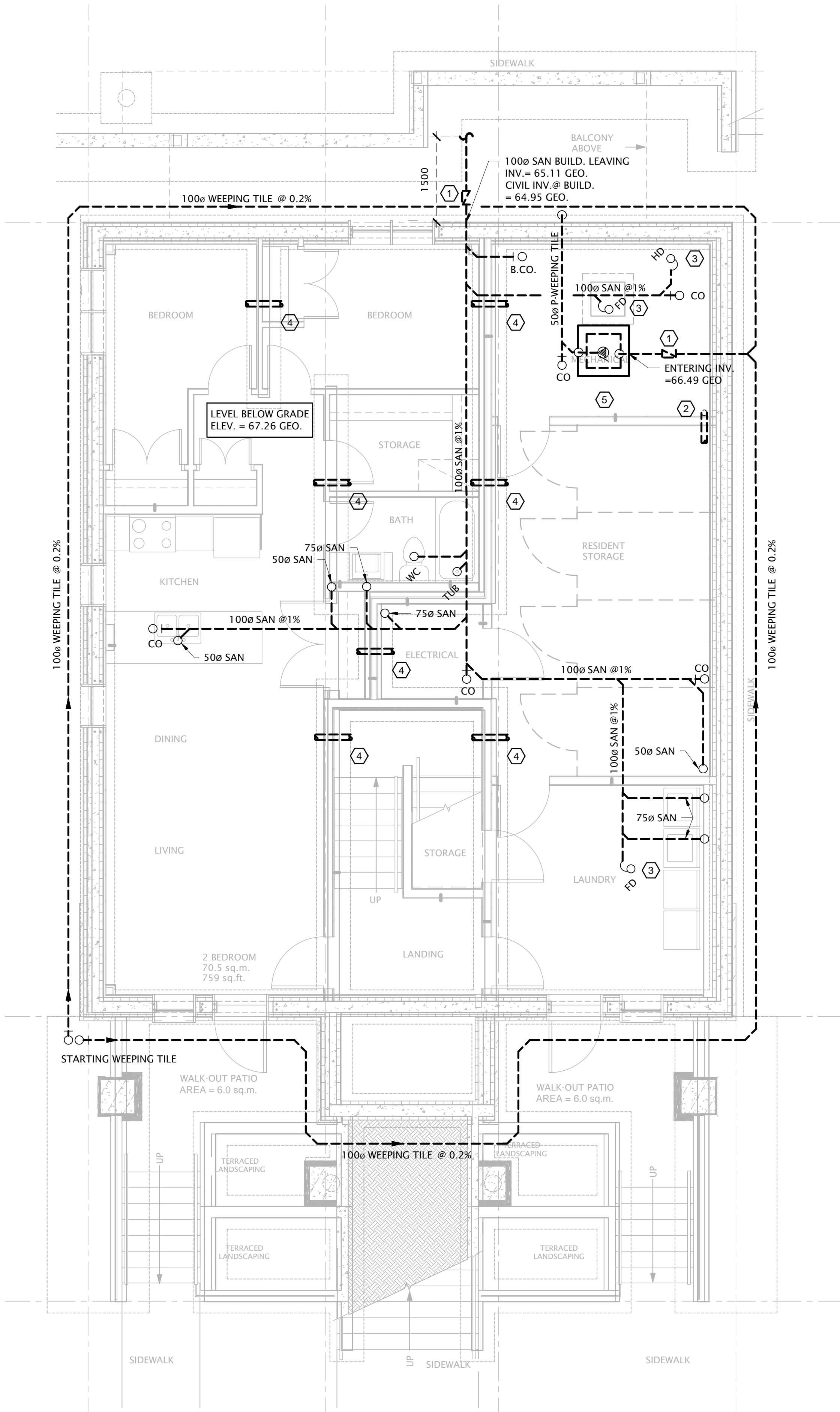
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Project Manager C.ODINGA	Drawn N.ALY
Project Leader T.BERTSCH	Checked L.YANG
Client PARKS CANADA AGENCY Jasper National Park, Jasper, AB	
Project JASPER PARK STAFF HOUSING JASPER, AB	
Drawing Title MECHANICAL SITE PLAN	
Check Scale (may be photo reduced) 0 1inch 0 10mm	
Project No. NCM-17-0002	
Drawing No. M10-00-01	

PLOT DATE: August 31, 2017 TIME: 3:24 PM FULL PATH AND FILENAME: \\EDMAPPS01P_DRIVE\ENGIN7-0002_JASPER NATIONAL PARK STAFF HOUSING\00-DELIV\MECH\MECH\SM20-00-01.DWG PLOTS\STYLE TABLE: PMA-STD-100.cdb



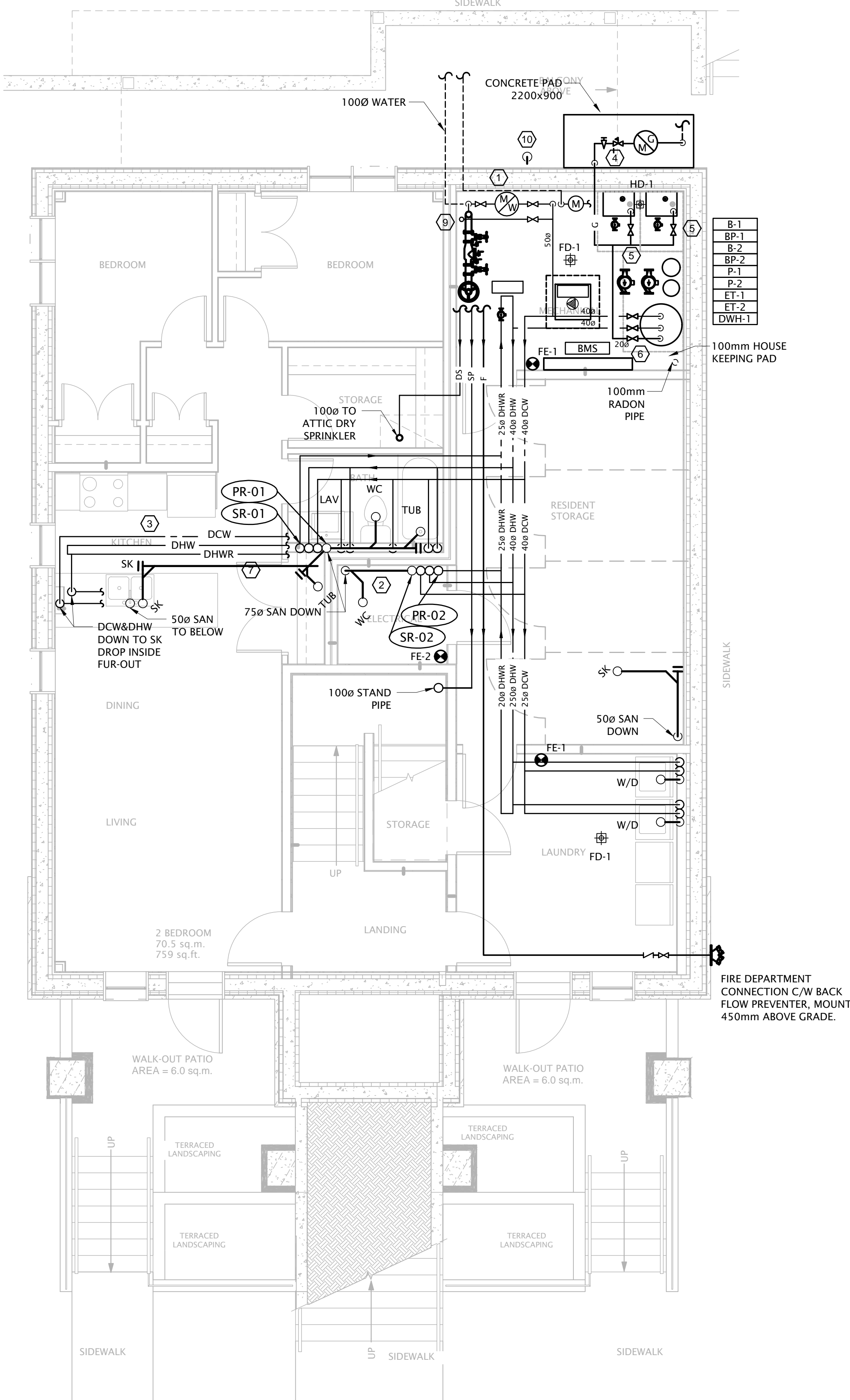
KEYNOTES:

- BACK WATER VALVE C/W ACCESS LID.
- PROVIDE 100mm PVC VENT PIPE AND CAPPED FOR FUTURE RADON EXTRACTION SYSTEM. REFER TO DETAIL DRAWING 4/M01-01-01. FOR FUTURE PLAN: RADON VENT TO DISCHARGE THROUGH ROOF. PROVIDE RADON EXHAUST FAN IN ATTIC SPACE. FAN AND PIPING IN THE ATTIC MUST BE INSULATED TO PREVENT FREEZING.
- PROVIDE P-TRAP.
- 100mm PVC SLEEVE PIPE THROUGH FOUNDATION WALL FOR RADON EXTRACTION.
- (600X600)X2000 DEEP WEEPING TILE SUMP WITH REMOVABLE AIR-TIGHT STEEL LID C/W GASKET.

01

MECHANICAL FOUNDATION PLAN

1:50



KEYNOTES:

- 1000 DCW UP THROUGH GROUND TO MECHANICAL ROOM. INSTALL BACKFLOW PREVENTER AT 500 DCW IN WATER METER ROOM TO SUPPLY TO THE SUITS. INSTALL BACKFLOW PREVENTER AT 250 DCW PIPING IN WATER METER ROOM AND CAP FOR IRRIGATION.
- PROVIDE DRIP TRAY UNDER SANITARY AND PLUMBING PIPING.
- RUN DCW,DHW,SAN PIPING IN JOIST SPACE TO/FROM PLUMBING FIXTURE.
- GAS METER WITH PRESSURE REDUCING VALVE TO REDUCE GAS PRESSURE TO 3.5 KPA. INSTALL 300 GAS LINE UP AND INTO BASEMENT FLOOR CEILING SPACE. CLEAR, UNOBSTRUCTED AREA NEAR GAS METERS REQUIRE 2.2M x0.9M CLEARANCE.
- 150 GAS LINE @ 3.5KPA TO CONNECT TO BOILER IN MECHANICAL ROOM AS PER MANUFACTURER'S RECOMMENDATIONS.
- 200 GAS LINE @ 3.5KPA TO CONNECT TO DOMESTIC WATER HEATER IN MECHANICAL ROOM AS PER MANUFACTURER'S RECOMMENDATIONS.
- 500 SAN @2%.
- 200 DCW FROM BELOW TO NON FREEZE HOSE BIBB.
- 200 DCW UP TO NON FREEZE HOSE BIBB ABOVE.
- 500 PUMPED WEEPING TILE, DISCHARGE TO LANDSCAPE.

02

BASEMENT PLUMBING PLAN

1:50

PLUMBING GENERAL NOTES:

- SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE AND THE LOCAL AUTHORITIES.
- PROVIDE PLUMBING VENTING AS REQUIRED AND AS PER CODE.
- PROVIDE P-TRAPS AS REQUIRED AND AS PER CODE.
- COORDINATE SANITARY RISERS AND VENT LINES WITH STRUCTURAL FRAMING BEFORE INSTALLATION.
- PROVIDE SLEEVES AS REQUIRED THRU FOOTINGS, PADS AND STRUCTURAL SLABS FOR MECHANICAL.
- COORDINATE AND SLEEVE FOR ALL PLUMBING FIXTURES.
- PROVIDE SHUT-OFF VALVES C/W ACCESS PANELS IN ALL SUITES FOR COLD WATER, HOT WATER LINES.
- PROVIDE CLEANOUTS ON EVERY LEADER, SOIL OR WASTE STACK AS REQUIRED AND AS PER CODE.
- SLOPE ALL 100mm SANITARY PIPING @ 1% AND SLOPE ALL SANITARY PIPING LESS THAN 100mm @ 2%.
- ALL SANITARY 100mm @ 1% SLOPE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ENSURE ALL MECHANICAL IS INSTALLED AT A MINIMUM HEAD HEIGHT OF 7'.
- OFFSET SOIL OR WASTE RISERS FROM EACH OTHER AS REQUIRED AND AS PER THE PLUMBING CODE.
- ALL PIPING TO BE IN BULKHEAD OR CROSS THE BEAM. COORDINATE HOLES LOCATION WITH STRUCTURAL PRIOR TO DRILL.

FIRE PROTECTION GENERAL NOTES:

- THIS DRAWING IS FOR REFERENCE ONLY. THE SPRINKLER CONTRACTOR MUST VERIFY THE BUILDING STRUCTURE AND INSTALL THE SPRINKLER SYSTEM TO MEET ALL RELEVANT CODES.
- THE SPRINKLER CONTRACTOR / ENGINEER IS RESPONSIBLE TO PRODUCE A FULLY ENGINEERED SET OF SPRINKLER DRAWINGS FOR THE PROJECT. SUBMIT DRAWINGS AND HYDRAULIC CALCULATIONS TO THE LOCAL AUTHORITIES FOR APPROVAL.
- SPRINKLER CONTRACTOR TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SPRINKLER SYSTEM.
- REFER TO MECHANICAL SPECIFICATIONS FOR THE REQUIREMENTS OF THE SPRINKLER SYSTEM.
- ALL EXPOSED SPRINKLER PIPING SHALL RUN PARALLEL TO BUILDING LINES.
- SPRINKLER SYSTEM SHALL CONFORM TO REQUIREMENTS OF NFPA 13R AS REQUIRED BY LOCAL CODES.
- SPRINKLER CONTRACTOR SHALL PROVIDE FLOW AND TAMPER SWITCHES FOR EACH ZONE AND AT THE MAIN WATER ENTRY. COORDINATE ALL ASSOCIATED ELECTRICAL WIRING WITH THE ELECTRICAL SUB-CONTRACTOR.
- A SPRINKLER TEST CERTIFICATE INDICATING A HYDROSTATIC TEST OF 200 PSI FOR TWO HOURS AS WELL AS VERIFICATION THAT ALL SPRINKLER ALARMS FUNCTION PROPERLY AS PER NFPA 13R MUST BE PRODUCED. THE MECHANICAL ENGINEER SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF ANY VERIFICATION AND TESTING.
- THE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR ANY DEVIATIONS FROM THE ENGINEERED SPRINKLER DRAWINGS. ALL CHANGES MUST BE SUBMITTED TO THE AUTHORITIES FOR APPROVAL.
- WATER SUPPLY INFORMATION IS TO BE CONFIRMED FROM THE MUNICIPALITY. THE SPRINKLER CONTRACTOR IS RESPONSIBLE TO COMMISSION A TEST TO CONFIRM ALL WATER SUPPLY INFORMATION.

DATE	ISSUED FOR	REV
17-07-06	60% REVIEW	A
17-08-09	TENDER	B
17-09-01	BP	C

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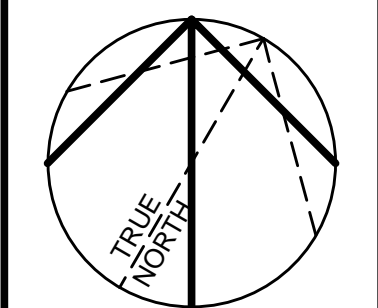
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Project Component

Phase # - Description

Keyplan

North Arrow



Consultants

Civil:	McElhanney Consulting Services Ltd.
Landscape:	NORR Architects Engineers Planners
Architectural:	NORR Architects Engineers Planners
Structural:	NORR Architects Engineers Planners
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NORR Process Engineers Inc.
NORR Transportation Engineers Inc.
NORR Water Engineers Inc.

Project Manager	Drawn
C.ODINGA	N.ALY
Project Leader	Checked
T.BERTSCH	L.YANG

Client

PARKS CANADA AGENCY
Jasper National Park, Jasper, AB

Project

**JASPER PARK STAFF
HOUSING**
JASPER, AB

Drawing Title

**MECHANICAL FOUNDATION,
BASEMENT PLUMBING & FIRE
PROTECTION PLAN**

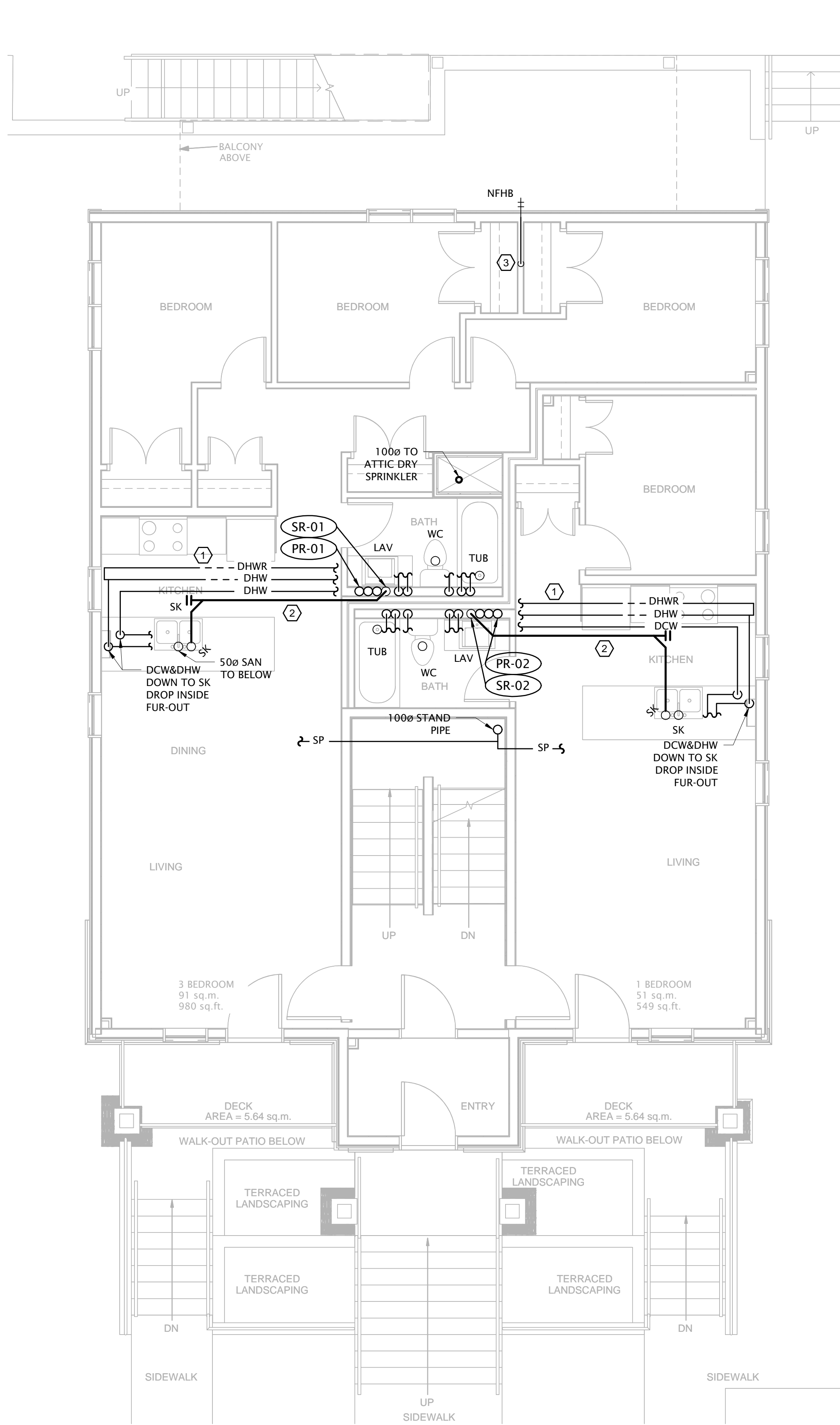
Check Scale (may be photo reduced)
0 1 inch 0 10mm

Project No. NCEM-17-0002

Drawing No.

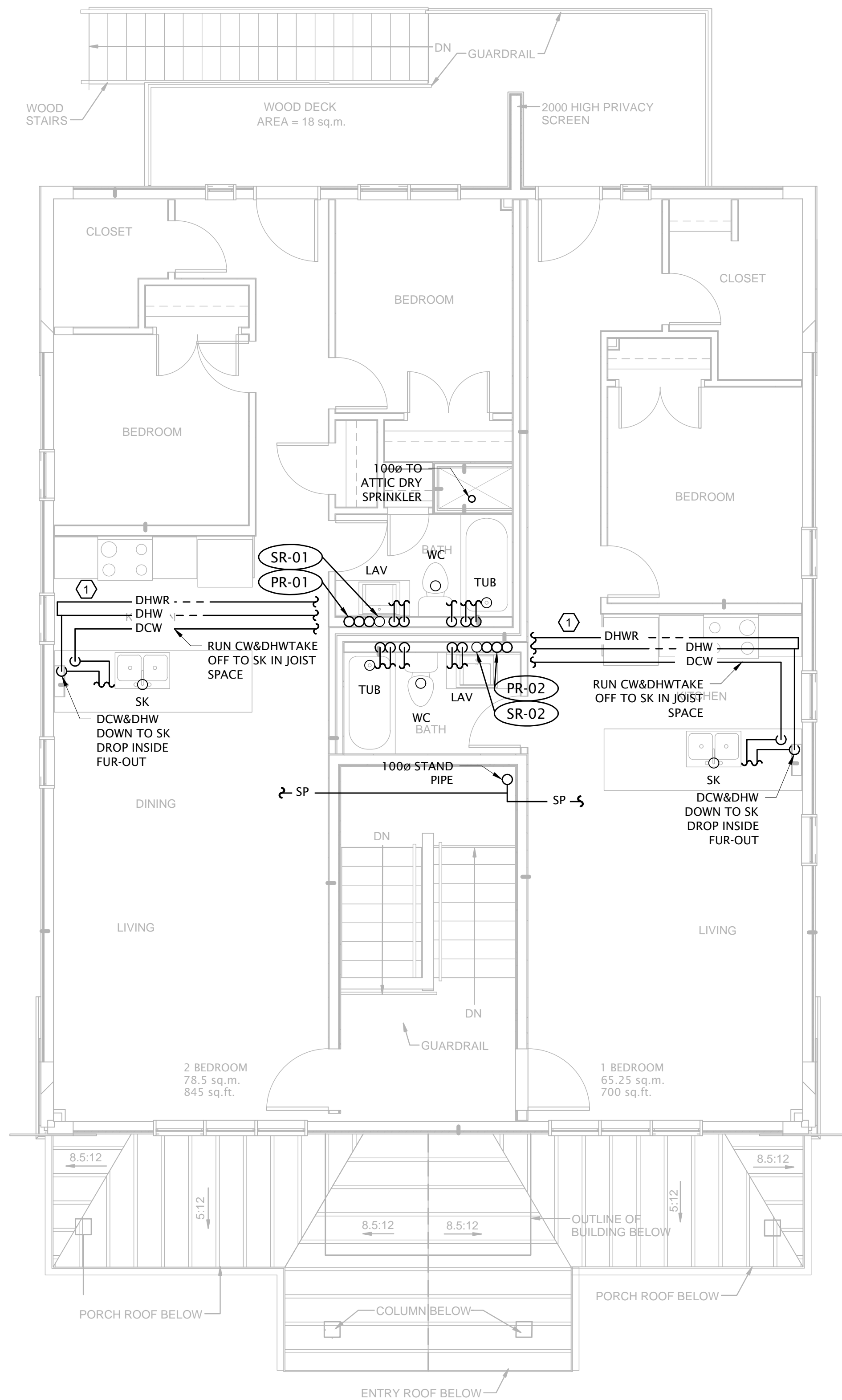
M20-00-01

PLOT DATE: August 31, 2017 TIME: 3:24 PM FULL PATH AND FILENAME: \\EDMAPPS01\PROJECTS\DRIVE\NCEM17-0002 - JASPER NATIONAL PARK STAFF HOUSING\B00-DELIV\MECHSHEETS\M20-01-01.DWG PLOTSYLE TABLE: PMA-STD-100.dtb



- # KEYNOTES:
1. RUN DCW,DHW,SAN PIPING IN JOIST SPACE TO/FROM PLUMBING FIXTURE.
 2. 600 SAN @2%.
 3. 200 DCW FROM BELOW TO NON FREEZE HOSE BIBB.

01
M20-01-01
MAIN FLOOR PLUMBING PLAN
1:50



- # KEYNOTES:
1. RUN DCW,DHW,SAN PIPING IN JOIST SPACE TO/FROM PLUMBING FIXTURE.

02
M20-01-02
SECOND FLOOR PLUMBING PLAN
1:50

PLUMBING GENERAL NOTES:

- A. SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE AND THE LOCAL AUTHORITIES.
- B. PROVIDE PLUMBING VENTING AS REQUIRED AND AS PER CODE.
- C. PROVIDE P-TRAPS AS REQUIRED AND AS PER CODE.
- D. COORDINATE SANITARY RISERS AND VENT LINES WITH STRUCTURAL FRAMING BEFORE INSTALLATION.
- E. PROVIDE SLEEVES AS REQUIRED THRU FOOTINGS, PADS AND STRUCTURAL SLABS FOR MECHANICAL.
- F. COORDINATE AND SLEEVE FOR ALL PLUMBING FIXTURES.
- G. PROVIDE SHUT-OFF VALVES C/W ACCESS PANELS IN ALL SUITES FOR COLD WATER, HOT WATER LINES.
- H. PROVIDE CLEANOUTS ON EVERY LEADER, SOIL OR WASTE STACK AS REQUIRED AND AS PER CODE.
- I. SLOPE ALL 100mm SANITARY PIPING @ 1% AND SLOPE ALL SANITARY PIPING LESS THAN 100mm @ 2%.
- J. ALL SANITARY 100mm @ 1% SLOPE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- K. ENSURE ALL MECHANICAL IS INSTALLED AT A MINIMUM HEAD HEIGHT OF 7'.
- L. OFFSET SOIL OR WASTE RISERS FROM EACH OTHER AS REQUIRED AND AS PER THE PLUMBING CODE.
- M. ALL PIPING TO BE IN BULKHEAD OR CROSS THE BEAM. COORDINATE HOLES LOCATION WITH STRUCTURAL PRIOR TO DRILL.

FIRE PROTECTION GENERAL NOTES:

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- C. SPRINKLER CONTRACTOR TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SPRINKLER SYSTEM.
- D. REFER TO MECHANICAL SPECIFICATIONS FOR THE REQUIREMENTS OF THE SPRINKLER SYSTEM.
- E. ALL EXPOSED SPRINKLER PIPING SHALL RUN PARALLEL TO BUILDING LINES.
- F. SPRINKLER SYSTEM SHALL CONFORM TO REQUIREMENTS OF NFPA 13R AS REQUIRED BY LOCAL CODES.
- G. SPRINKLER CONTRACTOR SHALL PROVIDE FLOW AND TAMPER SWITCHES FOR EACH ZONE AND AT THE MAIN WATER ENTRY. COORDINATE ALL ASSOCIATED ELECTRICAL WIRING WITH THE ELECTRICAL SUB-CONTRACTOR.
- H. A SPRINKLER TEST CERTIFICATE INDICATING A HYDROSTATIC TEST OF 200 PSI FOR TWO HOURS AS WELL AS VERIFICATION THAT ALL SPRINKLER ALARMS FUNCTION PROPERLY AS PER NFPA 13R MUST BE PRODUCED. THE MECHANICAL ENGINEER SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF ANY VERIFICATION AND TESTING.
- I. THE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR ANY DEVIATIONS FROM THE ENGINEERED SPRINKLER DRAWINGS. ALL CHANGES MUST BE SUBMITTED TO THE AUTHORITIES FOR APPROVAL.
- J. WATER SUPPLY INFORMATION IS TO BE CONFIRMED FROM THE MUNICIPALITY. THE SPRINKLER CONTRACTOR IS RESPONSIBLE TO COMMISSION A TEST TO CONFIRM ALL WATER SUPPLY INFORMATION.

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Project Component	
Phase # - Description	
Keyplan	
North Arrow	Detail Symbol
Symbol not to scale	

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Landscape:	NORR Architects Engineers Planners
Architectural:	NORR Architects Engineers Planners
Structural:	NORR Architects Engineers Planners
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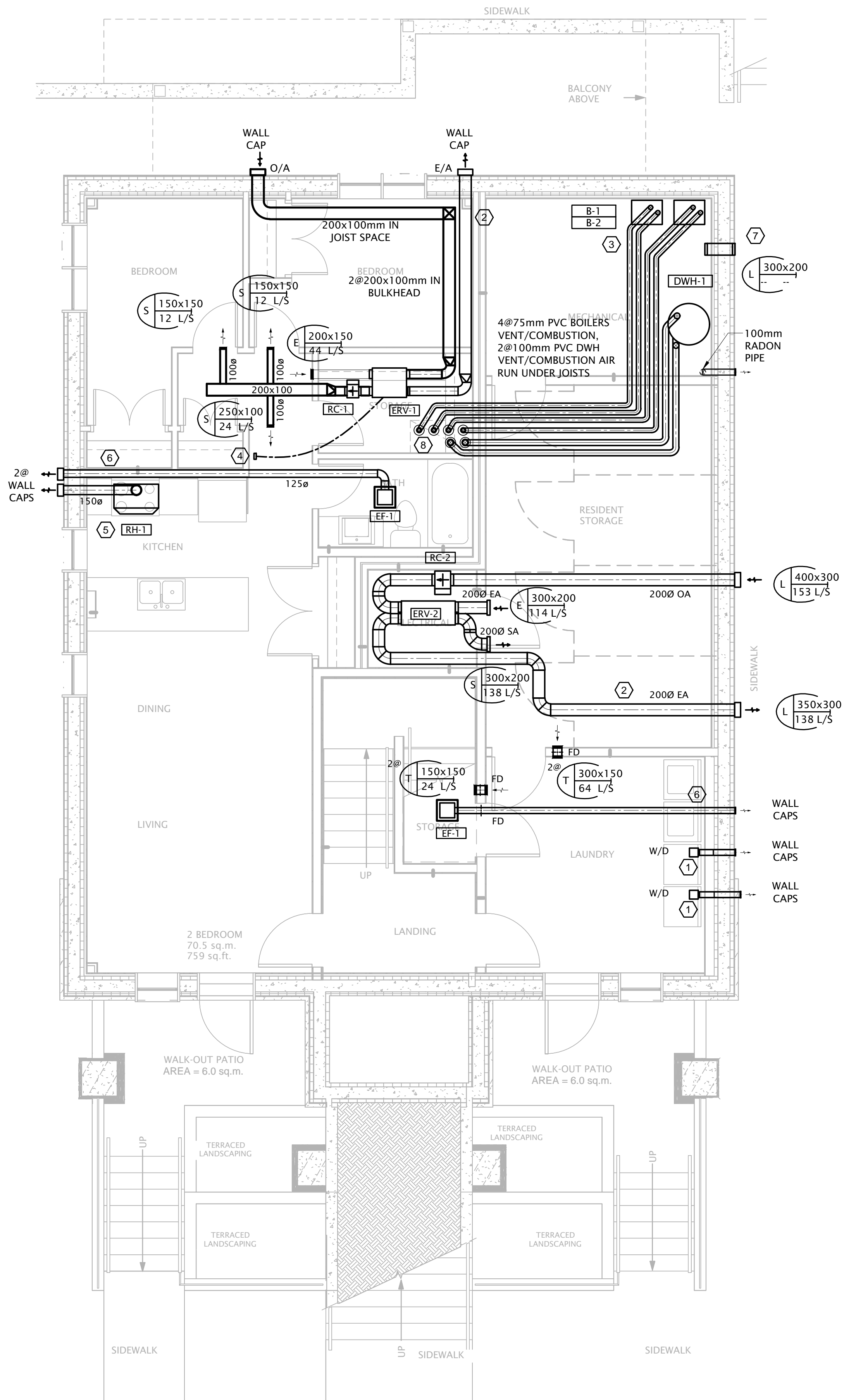
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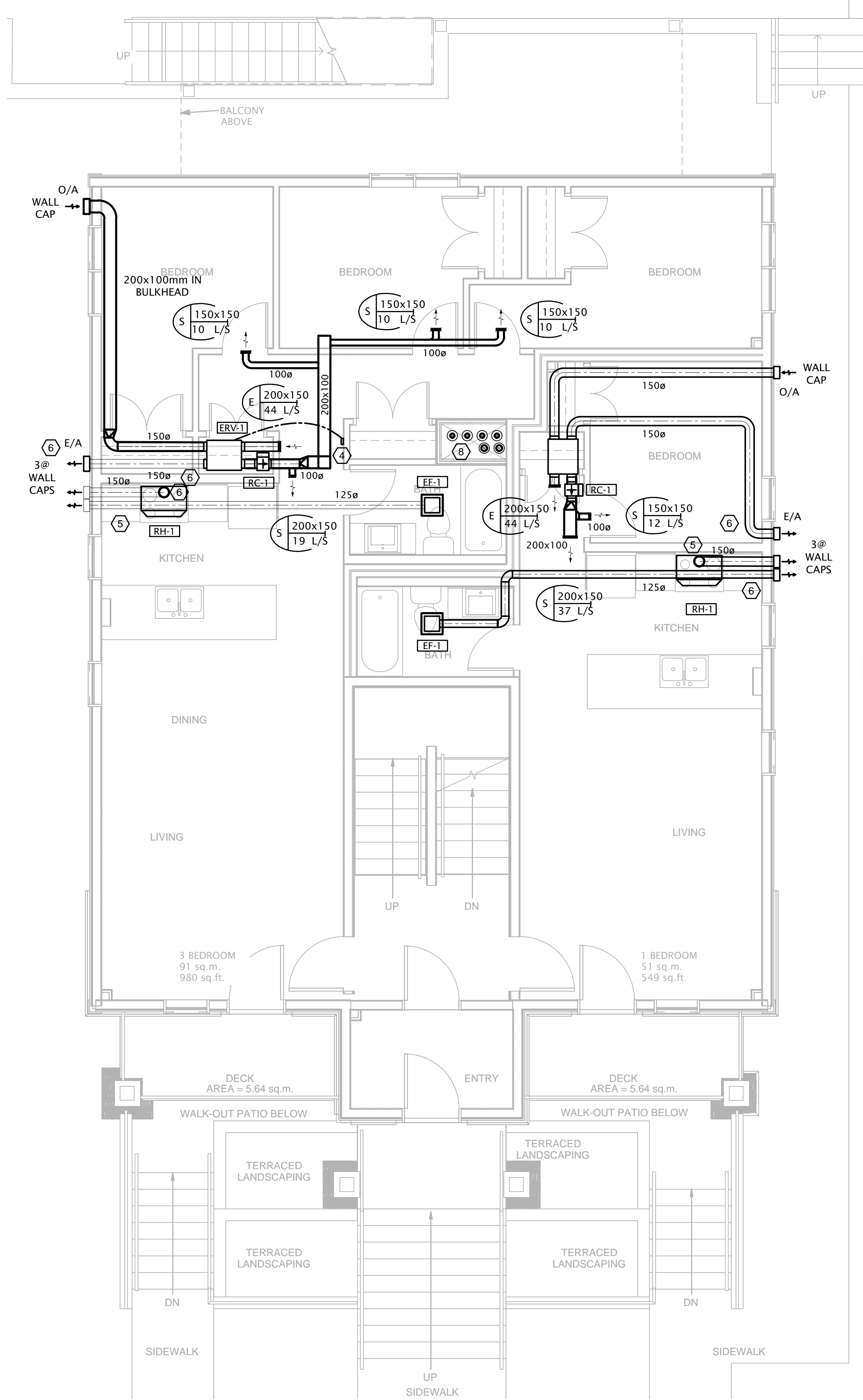
David McElhanney, Architect, AIA, B.Arch, M.Arch, M.Sc.
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David McElhanney, Architect, AIA, B.Arch, M.Arch, M.Sc.

Project Manager	Drawn
C.ODINGA	N.ALY
Project Leader	Checked
T.BERTSCH	L.YANG
Client	
PARKS CANADA AGENCY Jasper National Park, Jasper, AB	
Project	
JASPER PARK STAFF HOUSING JASPER, AB	
Drawing Title	
MAIN & SECOND FLOOR PLUMBING & FIRE PROTECTION PLAN	
Check Scale (may be photo reduced)	
0 10mm	
Project No.	NCEM-17-0002
Drawing No.	M20-01-01

PLOT DATE: August 31, 2017 TIME: 3:24 PM FULL PATH AND FILENAME: \\VEDMAPS01\PROJECTS\DRIVE\NCEN17-0002 - JASPER NATIONAL PARK STAFF HOUSING\B00-DELIV\MECHSHEETS\M50-00-01.DWG PLOTSYLE TABLE: PMA-STD-100.cdb



02
M50-00-01
BASEMENT VENTILATION PLAN
1:50



02
M50-00-01
MAIN FLOOR VENTILATION PLAN
1:50

GENERAL NOTES:

- SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE AND THE LOCAL AUTHORITIES.
- ALL WASHROOM FANS ARE TO BE LOCATED IN THE CEILING. COORDINATE EXACT LOCATION OF ALL FANS AND ASSOCIATED DUCTWORK ON SITE.
- ALLOW FOR WALL CAPS AT ALL DUCTWORK ON EXTERIOR WALLS AS REQUIRED.
- AIR BALANCING DAMPERS TO BE PROVIDED FOR ALL BRANCH DUCTWORK FEEDING INDIVIDUAL AIR TERMINALS.
- ENSURE ALL DUCTWORK EXTENDING TO EXTERIOR OF BUILDING IS INSULATED.
- INSTALL 100mm THICK HOUSEKEEPING PAD UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM, COORDINATE WITH GENERAL CONTRACTOR.
- INSTALL ALL WALL CAPS, EXHAUST OR INTAKE LOUVERS AT THE EXTERIOR WALLS 450mm ABOVE THE FLOOR LEVEL.

KEY NOTES:

- 150Ø DRYER EXHAUST THROUGH WALL WITH EXTERNAL INSULATION.
- 150Ø ERV EXHAUST UP THROUGH EXTERIOR WALL WITH EXTERNAL INSULATION.
- 4@75ø (BOILERS) AND 2@100ø (DWH) PVC COMBUSTION AIR DUCT AND VENT TO BE 25MM INSULATED AS PER MANUFACTURER'S RECOMMENDATIONS FROM/TO THE BOILER TO/ FROM ROOF.
- DECO-TOUCH #40300 ERV CONTROLLER ON WALL, SET SUPPLY AIR TEMPERATURE FOR 21° C, INTERLOCK HEATING COIL WITH ERV.
- 150Ø KITCHEN EXHAUST DUCTWORK THROUGH WALL WITH TAIN CAP AND BACKDRAFT DAMPER. EXTERNALLY INSULATE KITCHEN EXHAUST E/A DUCT WITH EXTERNAL INSULATION AND BACKDRAFT DAMPER.
- 200x150mm RELIEF AIR DUCT, INSTALL AS HIGH AS POSSIBLE IN THE MECHANICAL ROOM.
- 4@75mm PVC, 2@100mm, VENT/COMBUSTION AIR TO FROM BOILERS AND DOMESTIC WATER HEATER IN MECHANICAL SHAFT UP TO ROOF.

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Project Component	
Phase # - Description	
Keyplan	
North Arrow	
Detail Symbol	
DETAIL# SHEET #	
Symbol not to scale	

Consultants	McElhanney Consulting Services Ltd.
Civil:	NORR Architects Engineers Planners
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Architectural:	NORR Architects Engineers Planners
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Electrical:	NORR Architects Engineers Planners

Seal(s)

PROFESSIONAL ENGINEER
ALBERTA
S. 187/2017

NORR

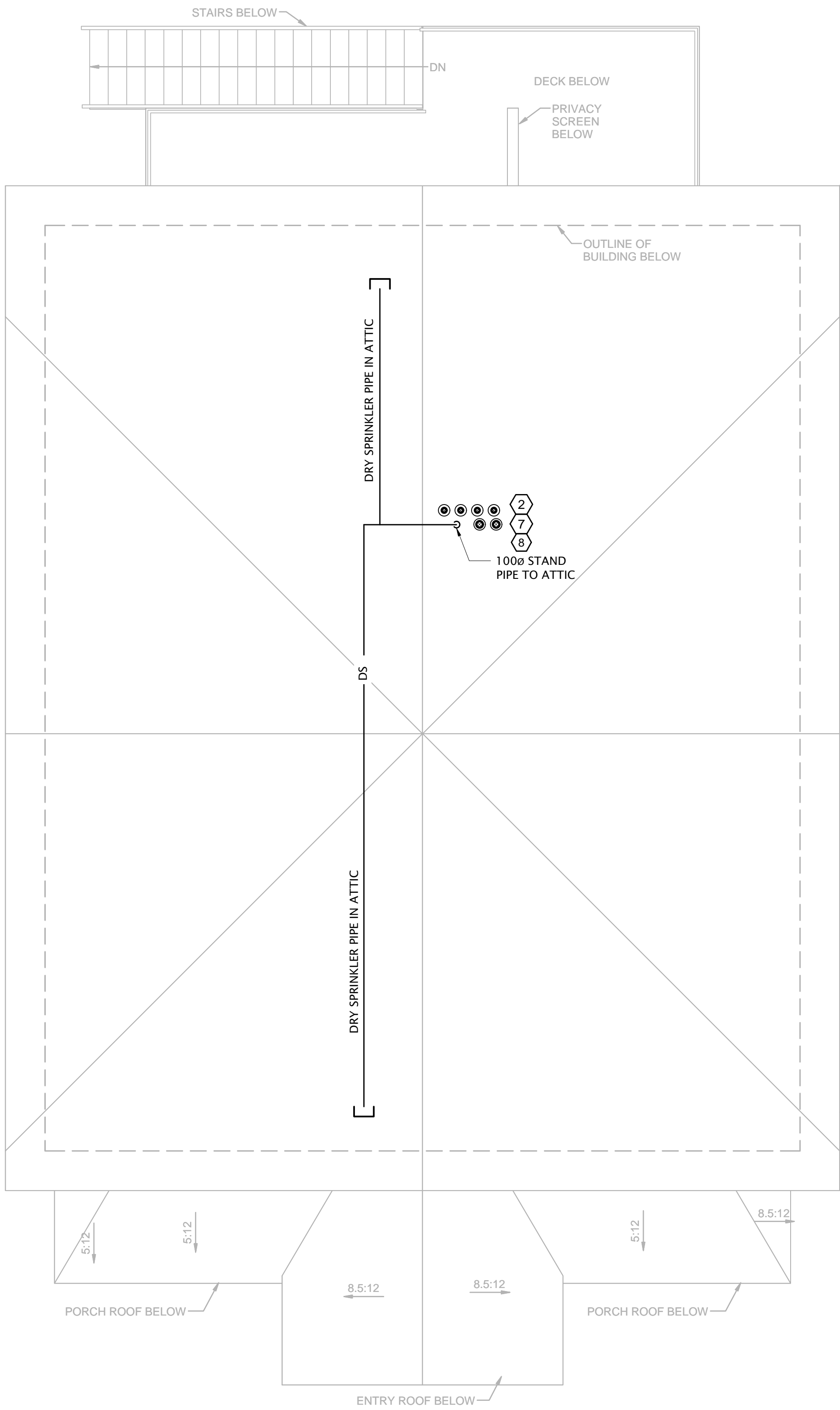
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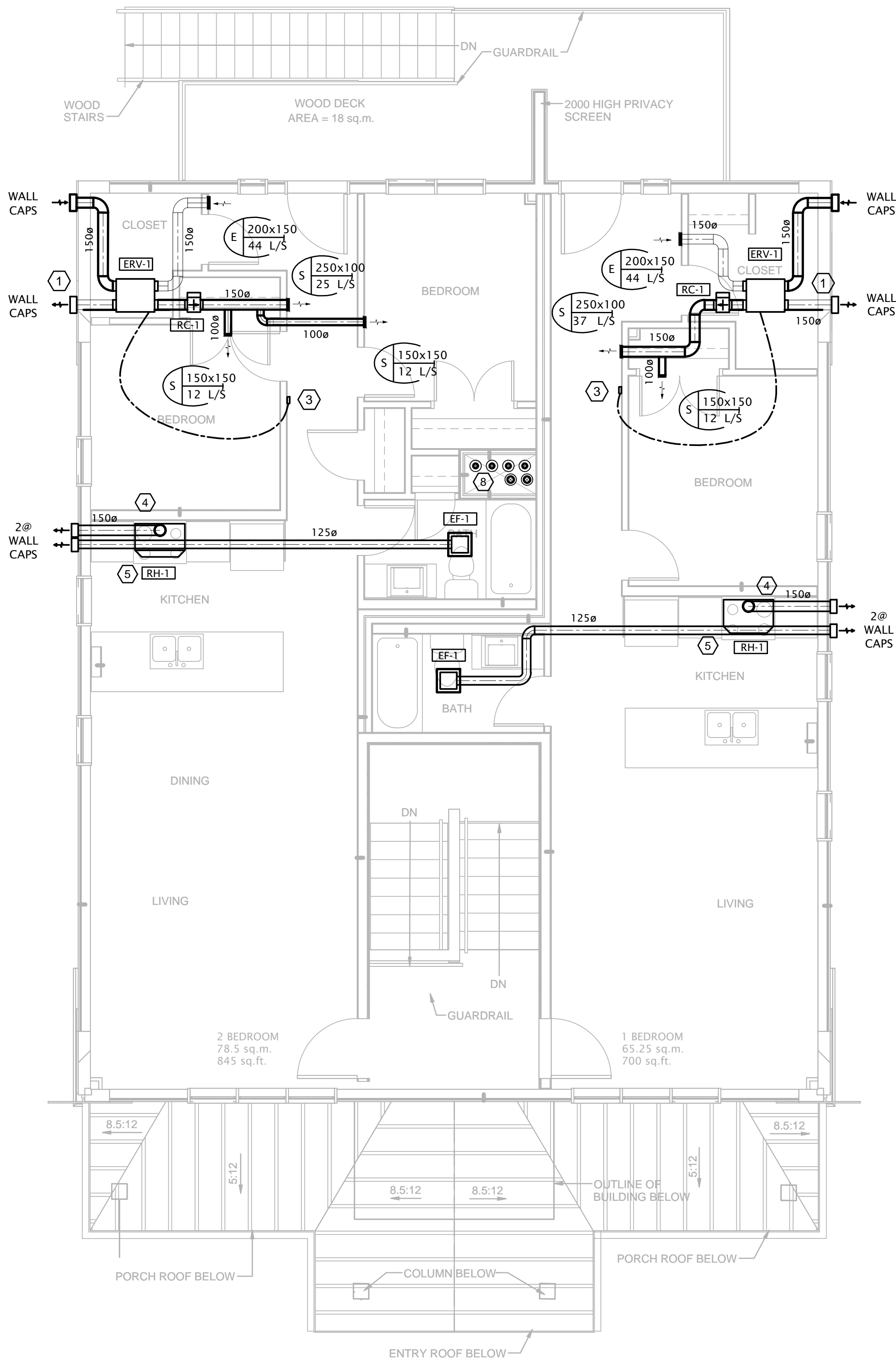
David McElhanney, Architect, AIA, B.Arch, M.Arch.
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Project Manager	Drawn
C.ODINGA	N.ALY
Project Leader	Checked
T.BERTSCH	L.YANG
Client	PARKS CANADA AGENCY Jasper National Park, Jasper, AB
Project	JASPER PARK STAFF HOUSING JASPER, AB
Drawing Title	BASEMENT & MAIN FLOOR VENTILATION PLAN
Check Scale (may be photo reduced)	0 10mm
Project No.	NCEN-17-0002
Drawing No.	M50-00-01

PLOT DATE: August 31, 2017 TIME: 3:24 PM FULL PATH AND FILENAME: \\EDMAPPS01P_DRIVE\ENGINEER\2002_JASPER NATIONAL PARK STAFF HOUSING\00-DELIV\MECHSHEETS\M50-01-01.DWG PLOTSYLE TABLE: PMA-STD-100.cdb



01
M50-01-01
MECHNAICAL ROOF PLAN
1:50



02
M50-01-01
SECOND FLOOR VENTILATION PLAN
1:50

HVAC GENERAL NOTES:

- SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE AND THE LOCAL AUTHORITIES.
- ALL WASHROOM FANS ARE TO BE LOCATED IN THE CEILING. COORDINATE EXACT LOCATION OF ALL FANS AND ASSOCIATED DUCTWORK ON SITE.
- ALLOW FOR WALL CAPS AT ALL DUCTWORK ON EXTERIOR WALLS AS REQUIRED.
- AIR BALANCING DAMPERS TO BE PROVIDED FOR ALL BRANCH DUCTWORK FEEDING INDIVIDUAL AIR TERMINALS.
- ENSURE ALL DUCTWORK EXTENDING TO EXTERIOR OF BUILDING IS INSULATED.
- INSTALL 100mm THICK HOUSEKEEPING PAD UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM, COORDINATE WITH GENERAL CONTRACTOR.
- INSTALL ALL WALL CAPS, EXHAUST OR INTAKE LOUVERS AT THE EXTERIOR WALLS 450mm ABOVE THE FLOOR LEVEL.

FIRE PROTECTION GENERAL NOTES:

- THIS DRAWING IS FOR REFERENCE ONLY. THE SPRINKLER CONTRACTOR MUST VERIFY THE BUILDING STRUCTURE AND INSTALL THE SPRINKLER SYSTEM TO MEET ALL RELEVANT CODES.
- THE SPRINKLER CONTRACTOR / ENGINEER IS RESPONSIBLE TO PRODUCE A FULLY ENGINEERED SET OF SPRINKLER DRAWINGS FOR THE PROJECT. SUBMIT DRAWINGS AND HYDRAULIC CALCULATIONS TO THE LOCAL AUTHORITIES FOR APPROVAL.
- SPRINKLER CONTRACTOR TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SPRINKLER SYSTEM.
- REFER TO MECHANICAL SPECIFICATIONS FOR THE REQUIREMENTS OF THE SPRINKLER SYSTEM.
- ALL EXPOSED SPRINKLER PIPING SHALL RUN PARALLEL TO BUILDING LINES.
- SPRINKLER SYSTEM SHALL CONFORM TO REQUIREMENTS OF NFPA 13R AS REQUIRED BY LOCAL CODES.
- SPRINKLER CONTRACTOR SHALL PROVIDE FLOW AND TAMPER SWITCHES FOR EACH ZONE AND AT THE MAIN WATER ENTRY. COORDINATE ALL ASSOCIATED ELECTRICAL WIRING WITH THE ELECTRICAL SUB-CONTRACTOR.
- A SPRINKLER TEST CERTIFICATE INDICATING A HYDROSTATIC TEST OF 200 PSI FOR TWO HOURS AS WELL AS VERIFICATION THAT ALL SPRINKLER ALARMS FUNCTION PROPERLY AS PER NFPA 13R MUST BE PRODUCED. THE MECHANICAL ENGINEER SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF ANY VERIFICATION AND TESTING.
- THE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR ANY DEVIATIONS FROM THE ENGINEERED SPRINKLER DRAWINGS. ALL CHANGES MUST BE SUBMITTED TO THE AUTHORITIES FOR APPROVAL.
- WATER SUPPLY INFORMATION IS TO BE CONFIRMED FROM THE MUNICIPALITY. THE SPRINKLER CONTRACTOR IS RESPONSIBLE TO COMMISSION A TEST TO CONFIRM ALL WATER SUPPLY INFORMATION.

KEY NOTES:

- 150ø ERV EXHAUST UP THROUGH EXTERIOR WALL WITH EXTERNAL INSULATION.
- COMBUSTION AIR DUCT AND VENT TO BE 25MM INSULATED AS PER MANUFACTURER'S RECOMMENDATIONS FROM/TO THE BOILER TO TO/ FROM ROOF.
- DECO-TOUCH #40300 ERV CONTROLLER ON WALL. SET SUPPLY AIR TEMPERATURE FOR 21° C. INTERLOCK HEATING COIL WITH ERV.
- 150ø KITCHEN EXHAUST DUCTWORK THROUGH WALL WITH TAIN CAP AND BACKDRAFT DAMPER. EXTERNALLY INSULATE KITCHEN EXHAUST
- E/A DUCT WITH EXTERNAL INSULATION AND BACKDRAFT DAMPER.
- EXTEND BOILERS FLUES 915mm HIGHER THAN ANY PORTION OF BUILDING WITHIN A HORIZONTAL DISTANCE OF 3METERS.
- ALL DUCTWORK ABOVE THE MECHANICAL SHAFT TO BE ENDED WITH GOOSENECK.
- 4ø75mm PVC, 2ø100mm, VENT/COMBUSTION AIR TO FROM BOILERS AND DOMESTIC WATER HEATER, STAND PIPE UP TO ATTIC DRY SPRINKLER.

DATE	ISSUED FOR	REV
17-07-06	60% REVIEW	A
17-08-09	TENDER	B
17-09-01	BP	C

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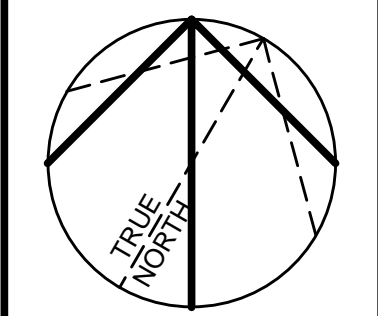
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Project Component

Phase # - Description

Keyplan

North Arrow



Detail Symbol



Consultants

Civil:	McElhanney Consulting Services Ltd.
Landscape:	NORR Architects Engineers Planners
Architectural:	NORR Architects Engineers Planners
Structural:	NORR Architects Engineers Planners
Mechanical:	NORR Architects Engineers Planners
Electrical:	NORR Architects Engineers Planners

Seal(s)



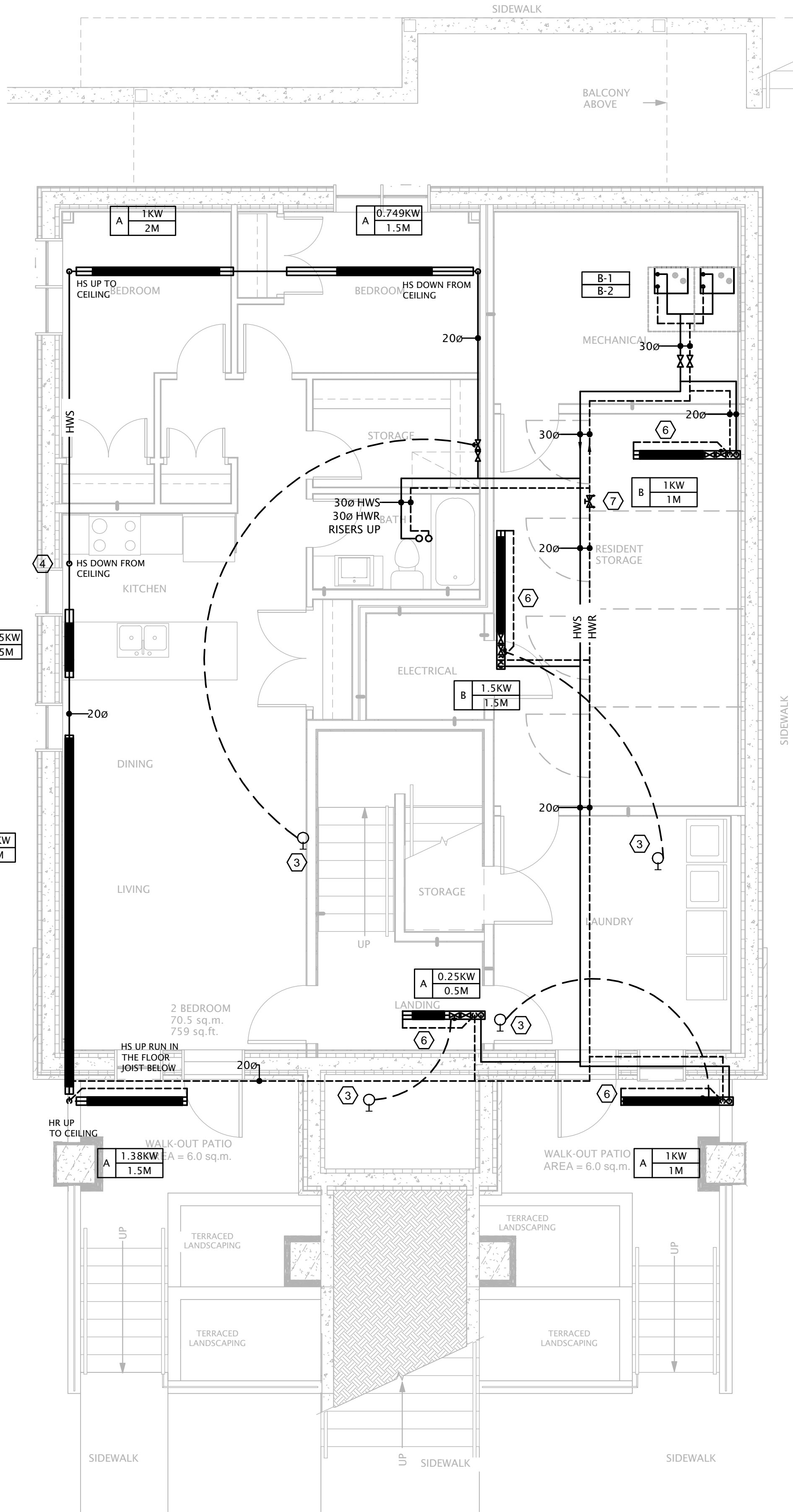
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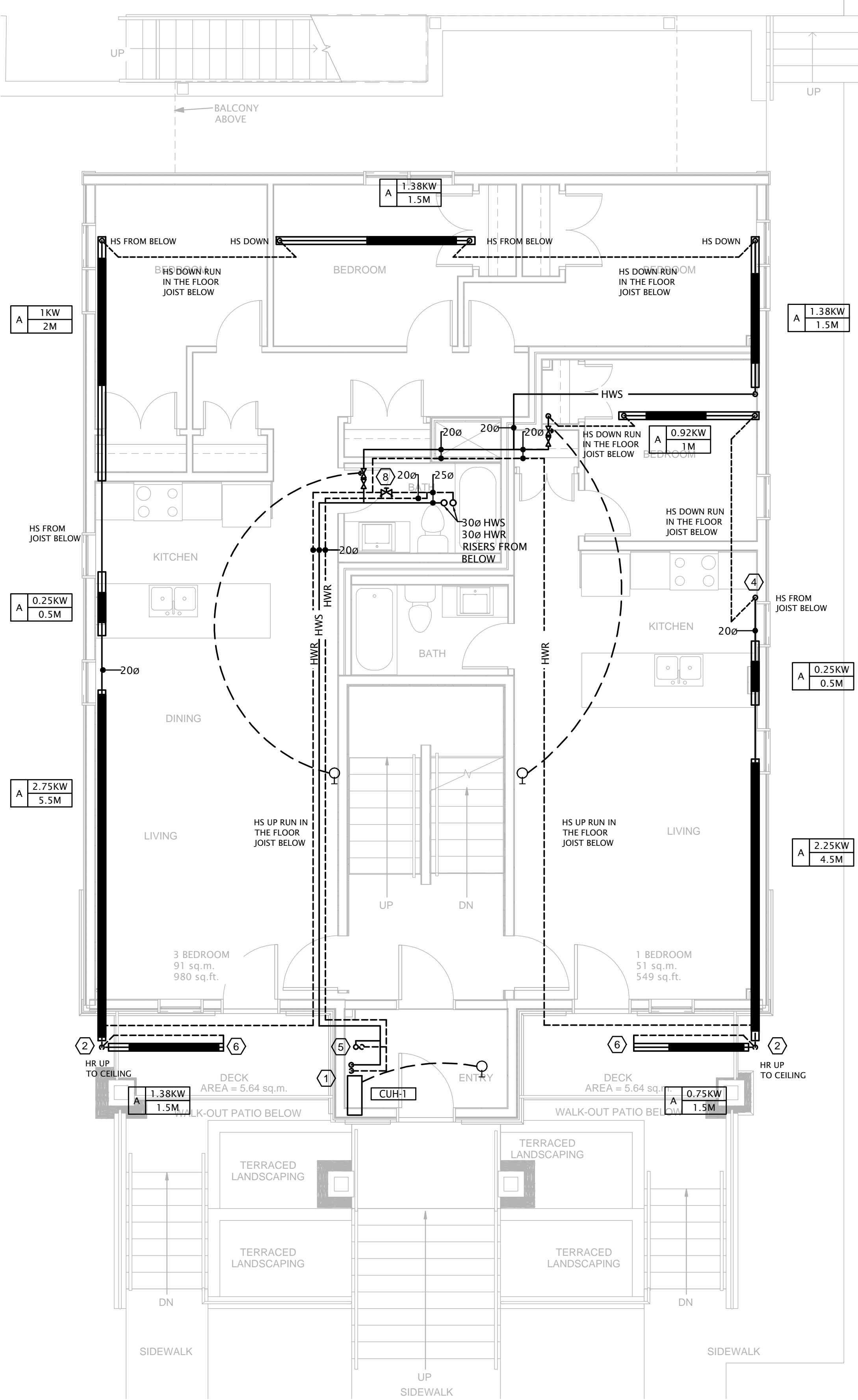
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Project Manager	Drawn
C.ODINGA	N.ALY
Project Leader	Checked
T.BERTSCH	L.YANG
Client	
PARKS CANADA AGENCY	
Jasper National Park, Jasper, AB	
Project	
JASPER PARK STAFF HOUSING	
JASPER, AB	
Drawing Title	
SECOND FLOOR VENTILATION & ROOF MECHANICAL PLAN	
Check Scale (may be photo reduced)	0 10mm
Project No.	NCM-17-0002
Drawing No.	M50-01-01

PLOT DATE: August 31, 2017 TIME: 3:24 PM FULL PATH AND FILENAME: \\EDMAPPS01P_DRIVE\ENGIN7-0002_JASPER NATIONAL PARK STAFF HOUSING\B00-DELIV\MECH\SHEETS\M53-00-01.DWG PLOTSYLE TABLE: PMA-STD-100.cdb



02
M53-00-01 BASEMENT HEATING PLAN
1:50



02
M53-00-01 MAIN FLOOR HEATING PLAN
1:50

GENERAL NOTE:

1. ALL HWS AND HWR SHALL BE 200 OR OTHERWISE NOTED.
2. PROVIDE RADIATION CABINET FOR HEATING PIPING AS INDICATED.
3. AIR TRAP TO BE PROVIDED AS REQUIRED.

KEYNOTES:

1. 200 HWS & HWR PIPING CONNECT TO CABINET UNIT HEATER AT ENTRANCE. CONTROLLED BY THERMOSTAT.
2. INSTALL HWR UNDER THE RADIATION FINS IN RADIATION CABINET AND UP TO CEILING SPACE.
3. MOUNT THERMOSTAT @ 1100 MM A.F.F. TYP. FOR GROUND FLOOR UNITS ONLY.
4. PIPING TO DROP INSIDE WALL CAVITY TO BE FILLED WITH SPRAY FOAM INSULATION.
5. 200 FROM / TO ABOVE HWS / HWR PIPING.
6. INSTALL HWR UNDER THE RADIATION FINS IN RADIATION CABINET.
7. CIRCUIT BALANCING VALVE AT 0.13 L/S.
8. CIRCUIT BALANCING VALVE AT 0.26 L/S.

DATE	ISSUED FOR	REV
17-07-06	60% REVIEW	A
17-08-09	TENDER	B
17-09-01	BP	C

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Project Component Phase # - Description	
Keyplan	
North Arrow	Detail Symbol
Symbol not to scale	

Consultants	McElhanney Consulting Services Ltd.
Civil:	NORR Architects Engineers Planners
Landscaping:	NORR Architects Engineers Planners
Architectural:	NORR Architects Engineers Planners
Structural:	NORR Architects Engineers Planners
Mechanical:	NORR Architects Engineers Planners
Electrical:	NORR Architects Engineers Planners

Seal(s)

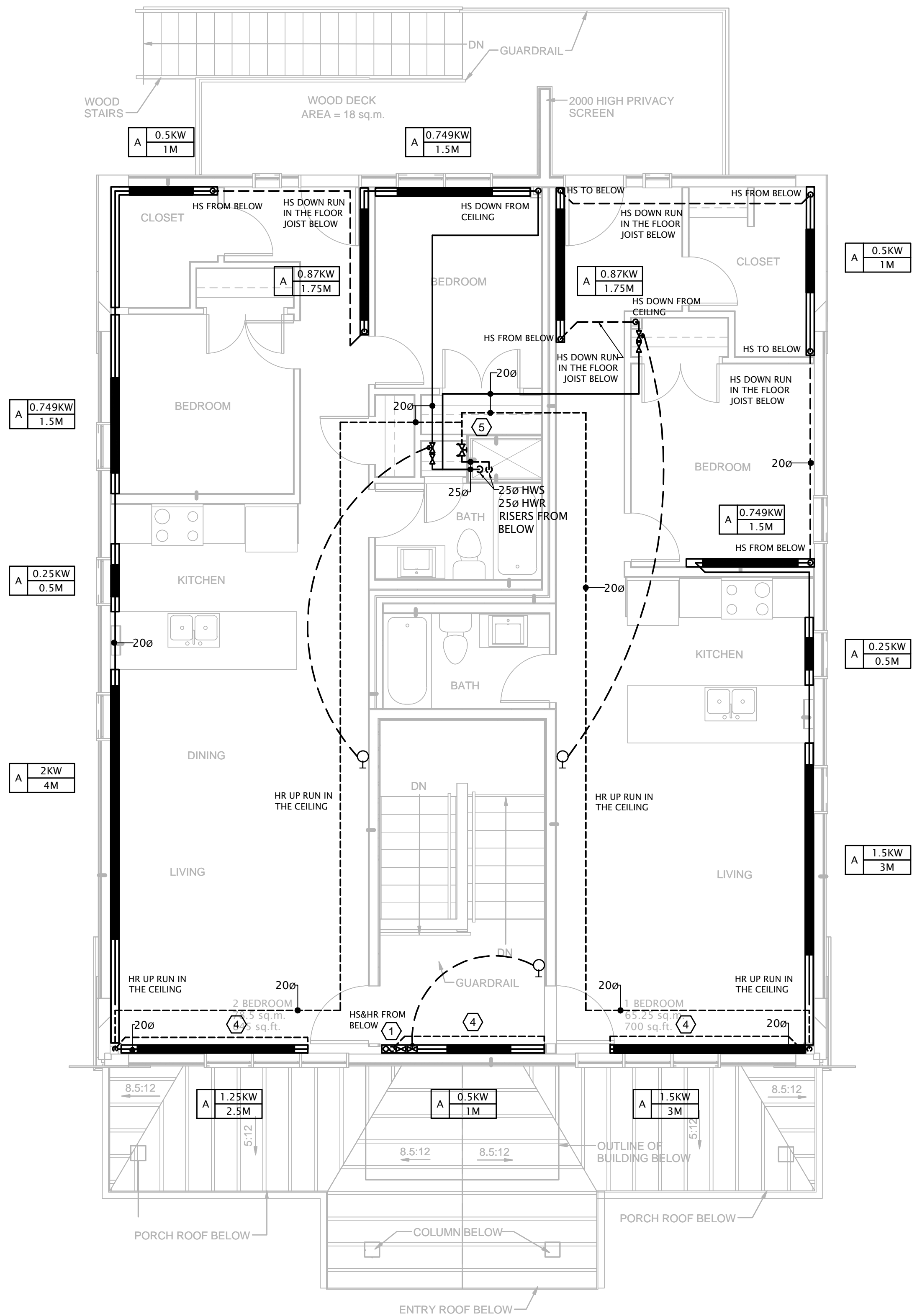
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Project Manager C.ODINGA	Drawn N.ALY
Project Leader T.BERTSCH	Checked L.YANG
Client PARKS CANADA AGENCY Jasper National Park, Jasper, AB	
Project JASPER PARK STAFF HOUSING JASPER, AB	
Drawing Title BASEMENT & MAIN FLOOR HEATING PLAN	
Check Scale (may be photo reduced) 0 10mm	
Project No. NCEM-17-0002	
Drawing No. M53-00-01	



GENERAL NOTE:

1. ALL HWS AND HWR SHALL BE 20Ø OR OTHERWISE NOTED.
2. PROVIDE RADIATION CABINET FOR HEATING PIPING AS INDICATED.
3. AIR TRAP TO BE PROVIDED AS REQUIRED.

KEYNOTES:

1. 20Ø HWS & HWR PIPING CONNECT TO RADIATION CONTROLLED BY THERMOSTAT.
2. INSTALL HWR UNDER THE RADIATION FINS IN RADIATION CABINET AND UP TO CEILING SPACE.
3. PIPING TO DROP INSIDE WALL CAVITY TO BE FILLED WITH SPRAY FOAM INSULATION
4. INSTALL HWR UNDER THE RADIATION FINS IN RADIATION CABINET .
5. CIRCUIT BALANCING VALVE T 0.17 L/S.

02
M53-01-01 SECOND FLOOR HEATING PLAN
1:50

DATE	ISSUED FOR	REV
17-07-06	60% REVIEW	A
17-08-09	TENDER	B
17-09-01	BP	C

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Project Component

Phase # - Description

Keyplan

North Arrow

Detail Symbol

Consultants	McElhanney Consulting Services Ltd.
Civil:	NORR Architects Engineers Planners
Landscaped:	NORR Architects Engineers Planners
Architectural:	NORR Architects Engineers Planners
Structural:	NORR Architects Engineers Planners
Mechanical:	NORR Architects Engineers Planners
Electrical:	NORR Architects Engineers Planners

Seal(s)

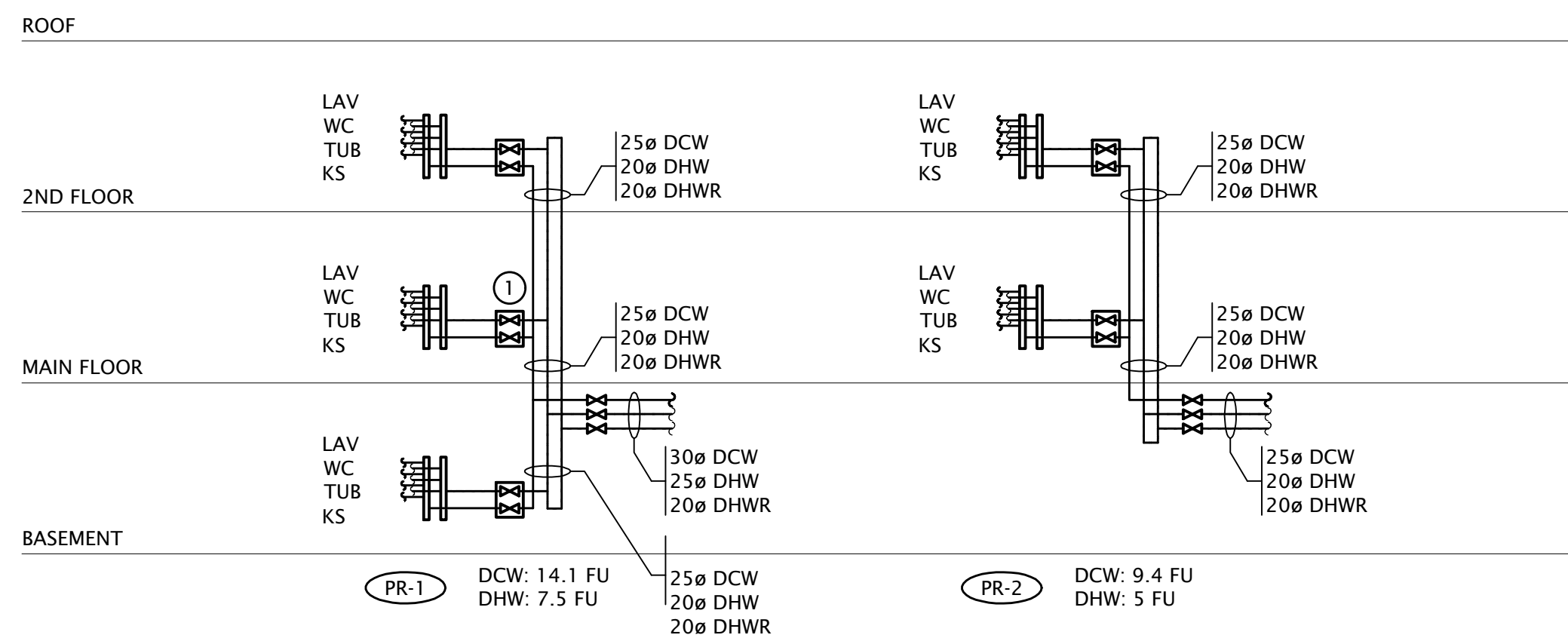
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Project Manager	Drawn
C.ODINGA	N.ALY
Project Leader	Checked
T.BERTSCH	L.YANG
Client	PARKS CANADA AGENCY Jasper National Park, Jasper, AB
Project	JASPER PARK STAFF HOUSING JASPER, AB
Drawing Title	SECOND FLOOR HEATING PLAN
Check Scale (may be photo reduced)	0 10mm
Project No.	NCM-17-0002
Drawing No.	M53-01-01

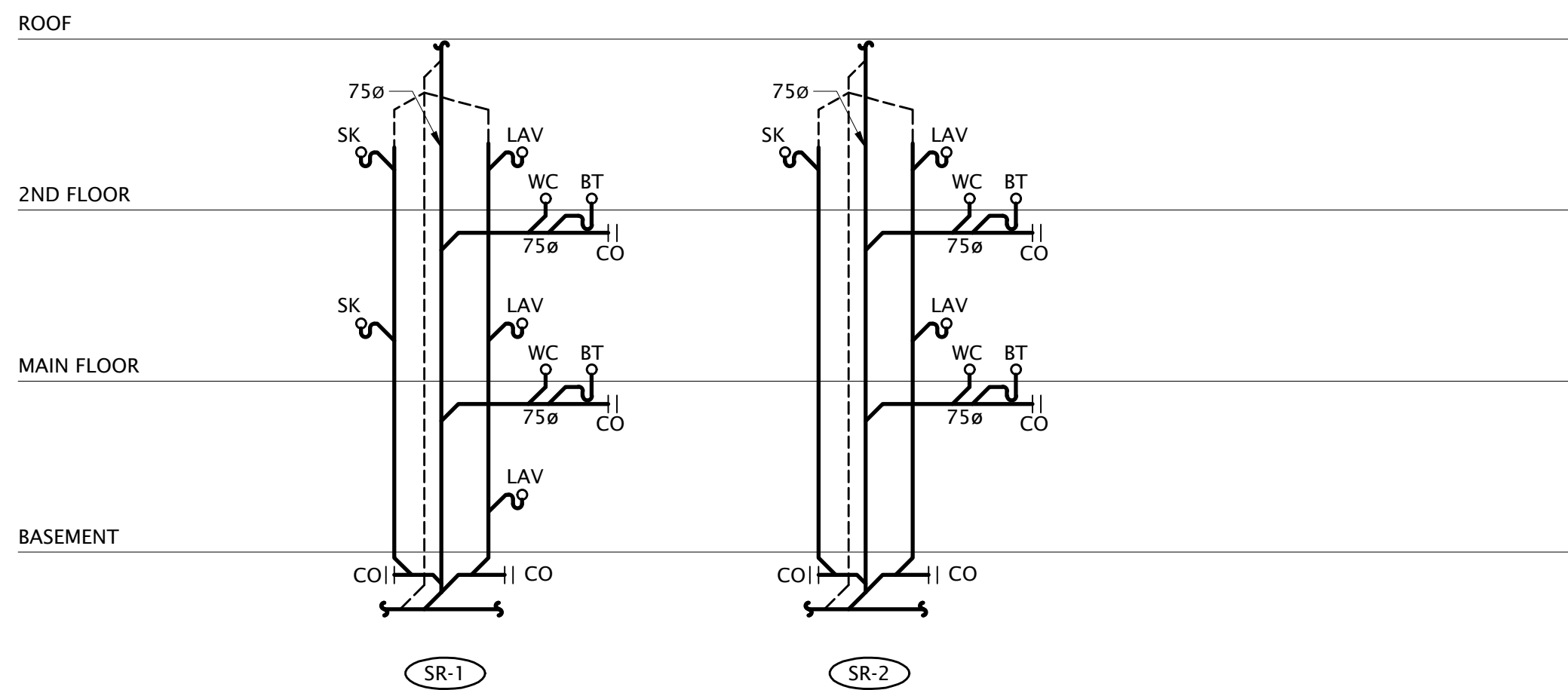


PLUMBING GENERAL NOTES:

- A. PROVIDE INDIRECT HOT WATER CONNECTION TO DISHWASHER (TYP.)
- B. OFFSETS AS PER FLOOR PLUMBING LAYOUT.

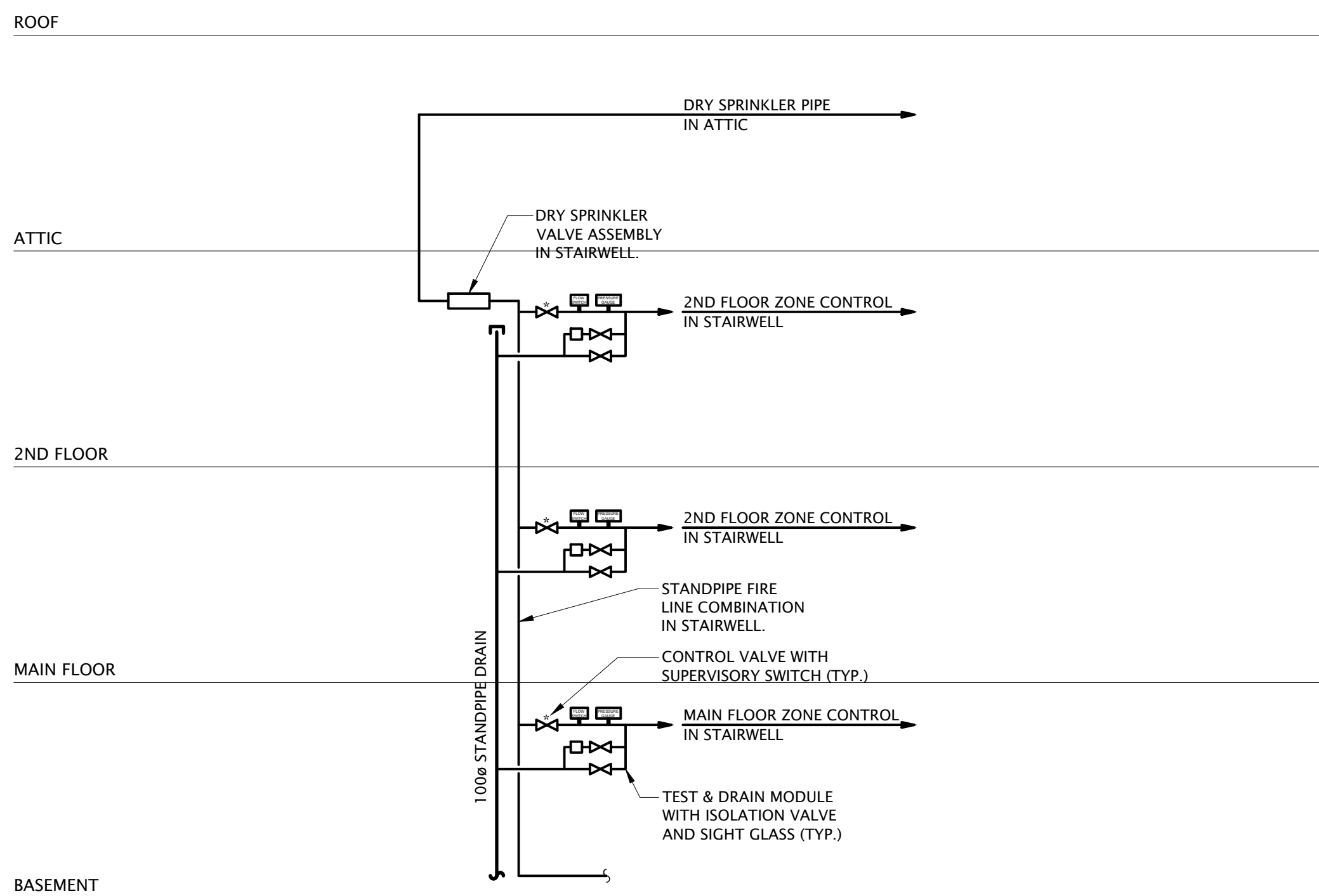
① KEY NOTES:

1. ACCESS PANEL (TYPICAL).



GENERAL NOTES:

- A. PROVIDE ALL VENTING AS REQUIRED AND AS PER CODE.



GENERAL NOTES:



- A. REFER TO PLUMBING & FIRE PROTECTION DRAWINGS FOR PIPING OFFSETS.



DATE	ISSUED FOR	REV
17-07-06	60% REVIEW	A
17-08-09	TENDER	B
17-09-01	BP	C

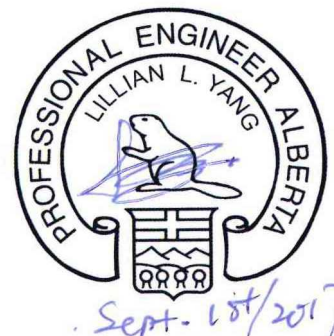
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Project Component	
Phase # - Description	
Keyplan	
North Arrow	Detail Symbol
	
	Symbol not to scale

Consultants	
Civil:	McElhanney Consulting Services Ltd.
Landscape:	NORR Architects Engineers Planners
Architectural:	NORR Architects Engineers Planners
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 Adrian Todella, P.Eng., APEGA
 Chris Pui, P.Eng., APEGA

Project Manager C.ODINGA	Drawn N.ALY
Project Leader T.BERTSCH	Checked L.YANG
Client PARKS CANADA AGENCY Jasper National Park, Jasper, AB	
Project JASPER PARK STAFF HOUSING JASPER, AB	
Drawing Title MECHANICAL DIAGRAMS	
Check Scale (may be photo reduced) 	
Project No. NCEM-17-0002	
Drawing No. M70-01-01	