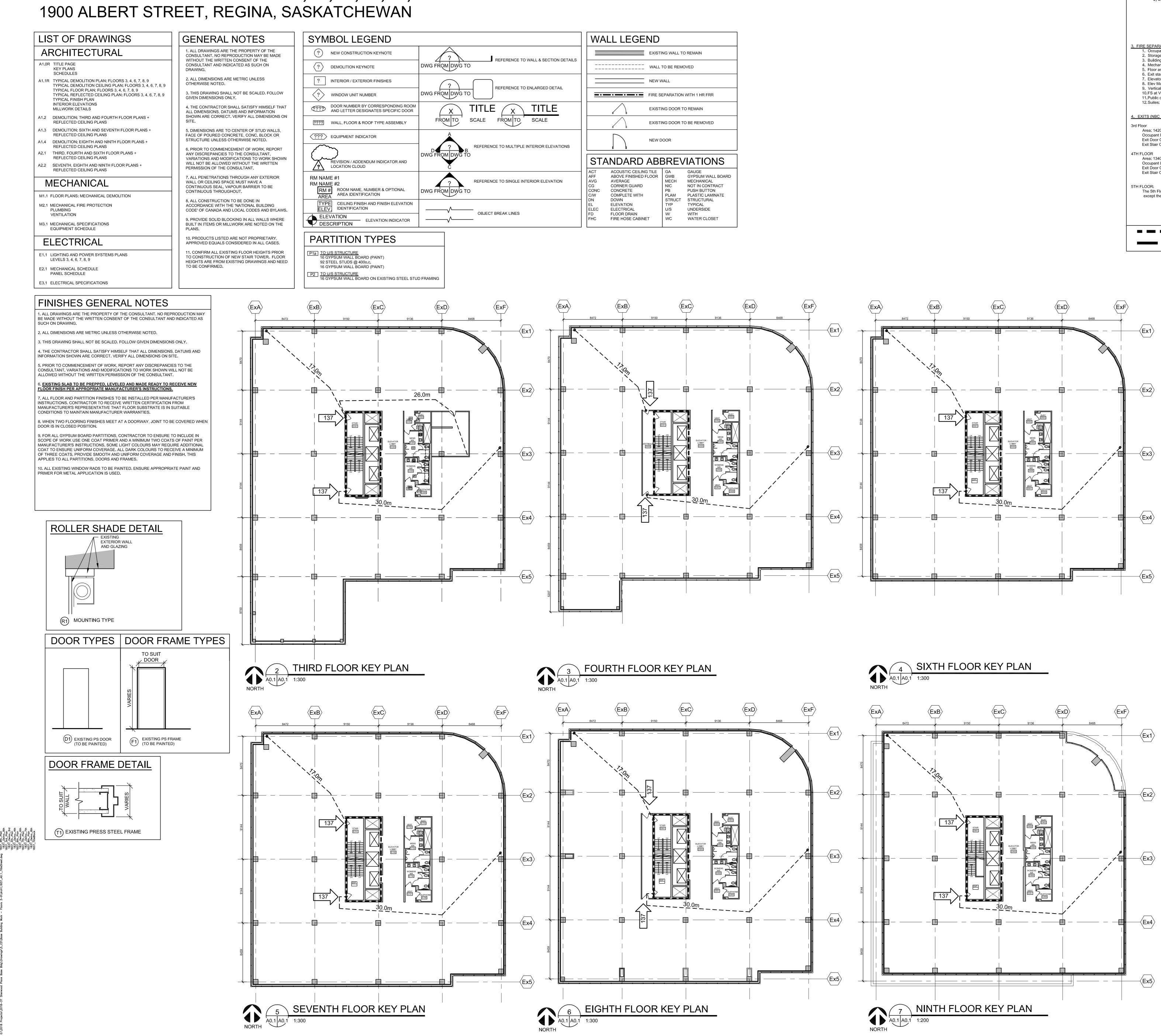
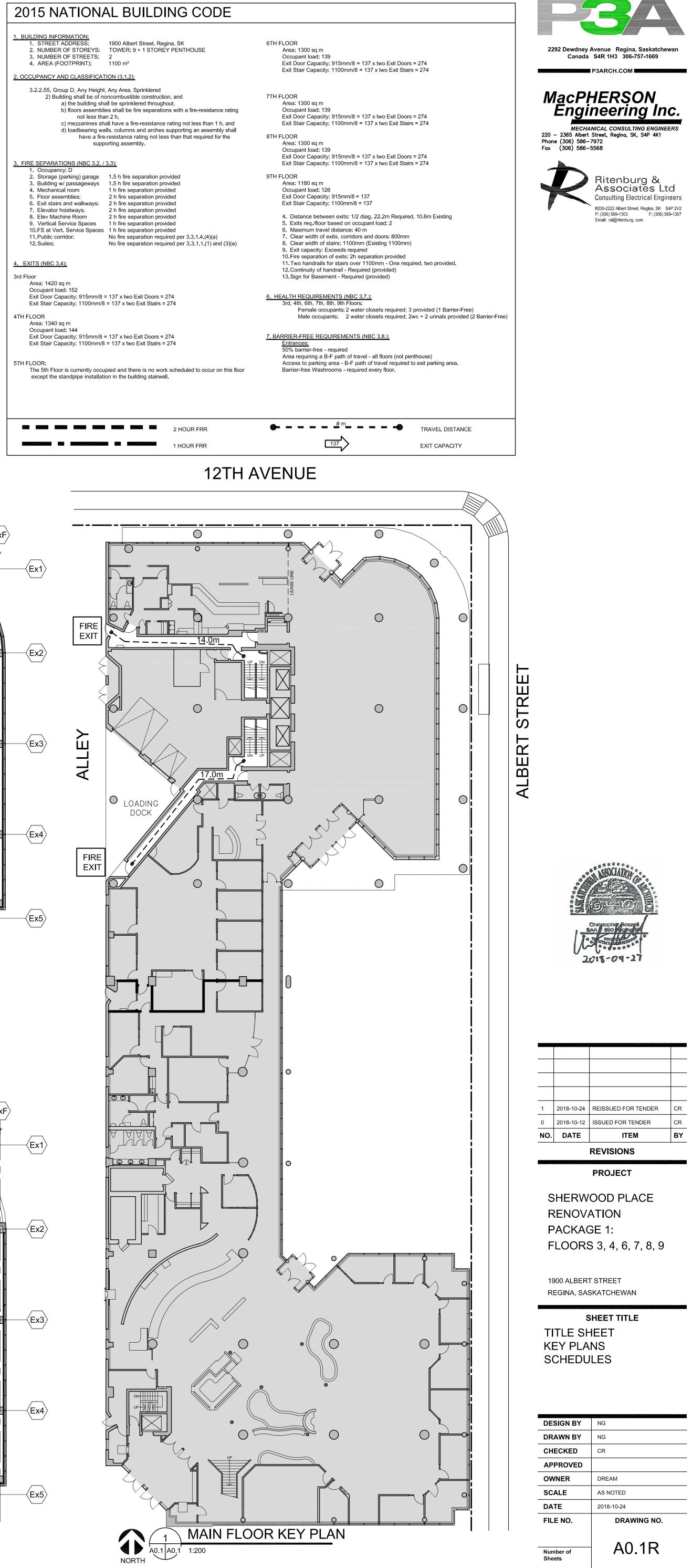
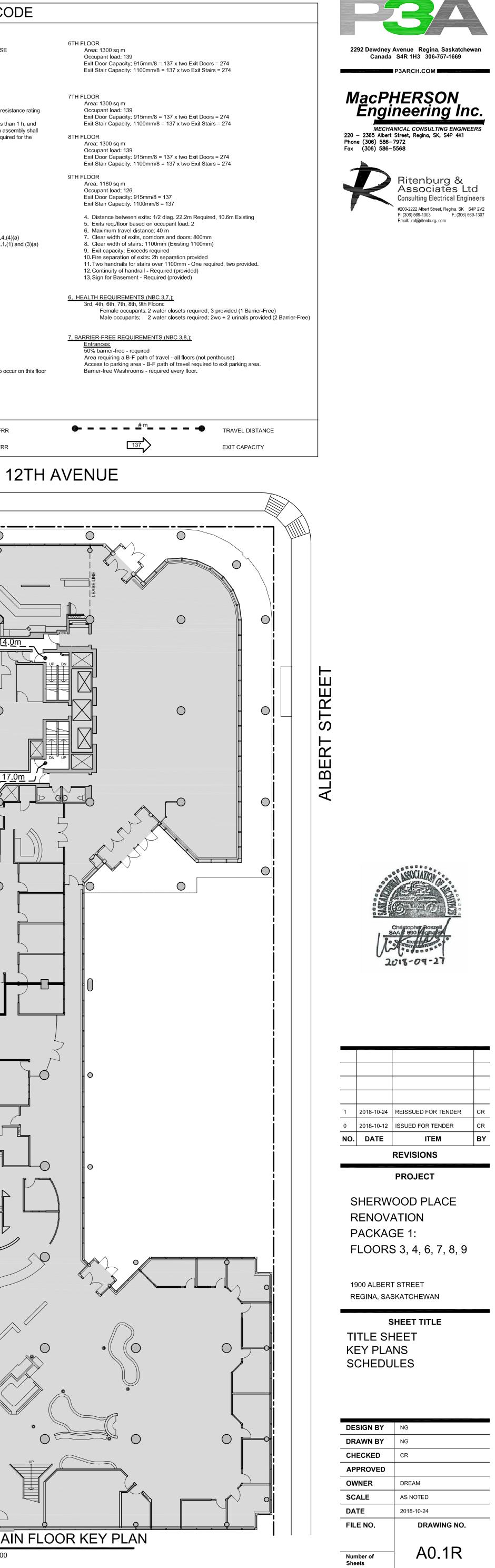
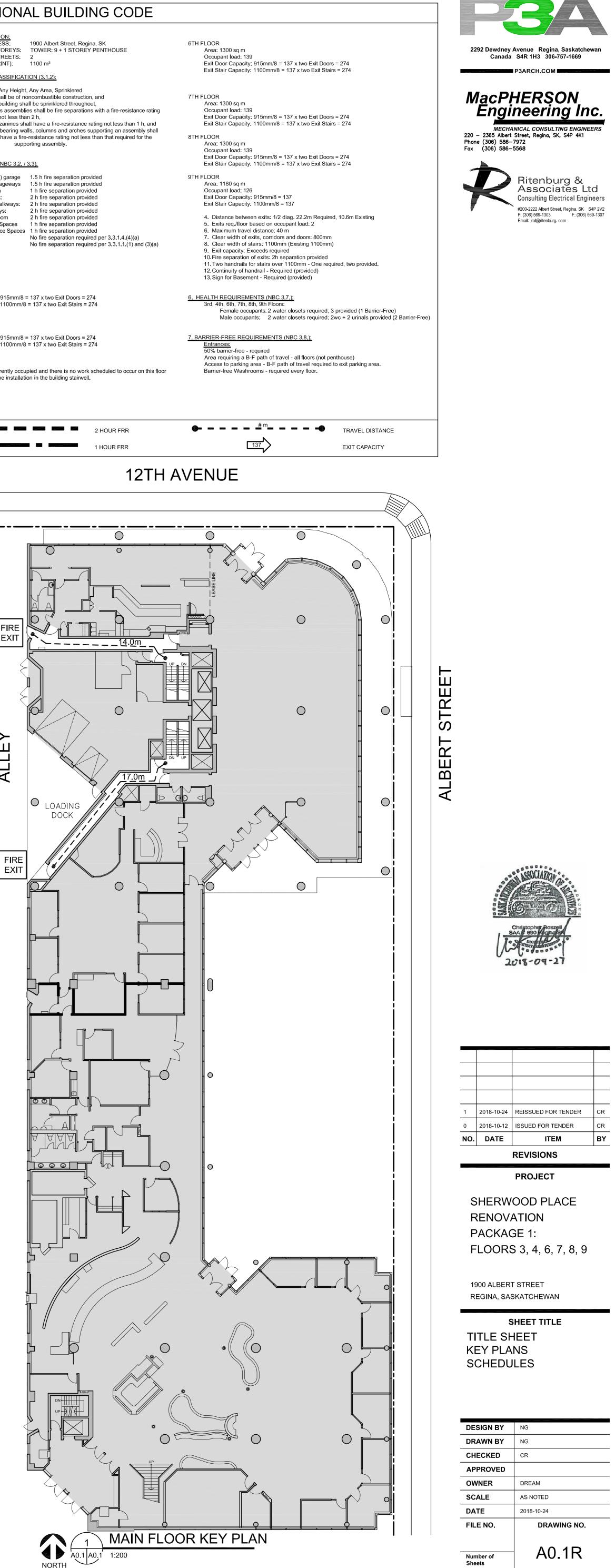
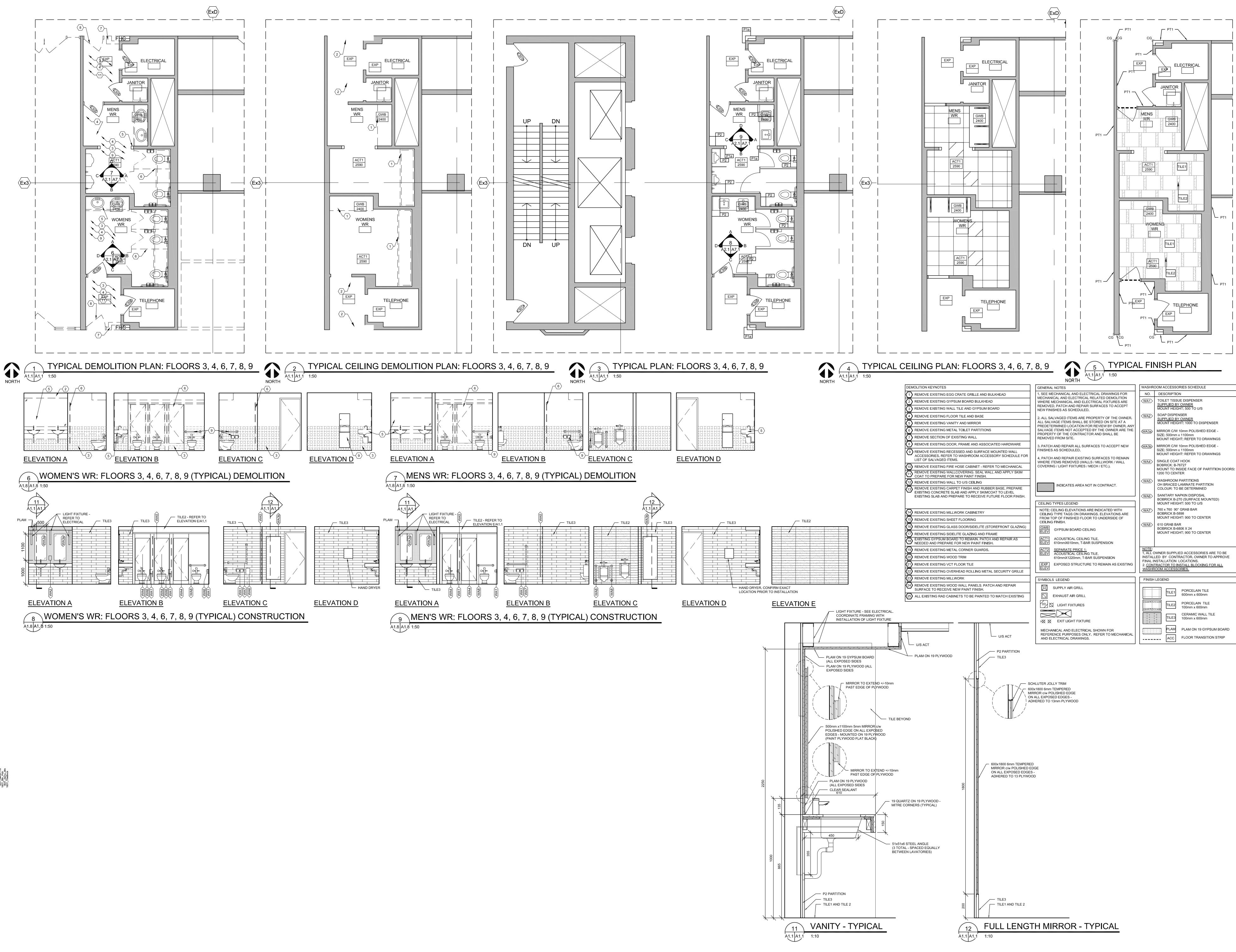
SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3, 4, 6, 7, 8, 9 AND BUILDING FIRE PROTECTION 1900 ALBERT STREET, REGINA, SASKATCHEWAN













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	WASHR	DOM ACCESSO	ORIES SCHEDULE
ECTRICAL DRAWINGS FOR	NO.	DESCRIPTIC	DN
AL RELATED DEMOLITION LECTRICAL FIXTURES ARE AIR SURFACES TO ACCEPT ED.	(WA1)	SUPPLIED B	UE DISPENSER <u>Y OWNER</u> GHT: 500 TO U/S
PROPERTY OF THE OWNER. BE STORED ON SITE AT A FOR REVIEW BY OWNER. ANY	(WA2)	SOAP DISPE SUPPLIED B MOUNT HEIG	
TED BY THE OWNER ARE THE CTOR AND SHALL BE	(WA3a)	SIZE: 500mm	10mm POLISHED EDGE - x 1100mm GHT: REFER TO DRAWINGS
URFACES TO ACCEPT NEW	⟨WA3b⟩	SIZE: 500mm	' 10mm POLISHED EDGE - x 1100mm GHT: REFER TO DRAWINGS
ING SURFACES TO REMAIN ALLS / MILLWORK / WALL 3 / MECH / ETC.).	WA4>	SINGLE COA BOBRICK: B- MOUNT TO II 1200 TO CEN	76727 NSIDE FACE OF PARTITION DOORS:
NOT IN CONTRACT.	WA5	OH BRACED	I PARTITIONS LAMINATE PARTITION) BE DETERMINED
]	(WA6)	BOBRICK B-2	APKIN DISPOSAL 270 (SURFACE MOUNTED) GHT: 500 TO U/S
S ARE INDICATED WITH AWINGS. ELEVATIONS ARE OOR TO UNDERSIDE OF	(WA7)	760 x 760 90 BOBRICK B-5 MOUNT HEIG	
EILING	WA8	610 GRAB BA BOBRICK B-6 MOUNT HEIG	
NG TILE, BAR SUSPENSION			
1: NG TILE, -BAR SUSPENSION	INSTALI	LED BY CONT	IED ACCESSORIES ARE TO BE RACTOR, OWNER TO APPROVE
URE TO REMAIN AS EXISTING	2. CON	NSTALLATION TRACTOR TO I COOM ACCESS	NSTALL BLOCKING FOR ALL
		LEGEND	
		LEGEND	
-		TILE1	PORCELAIN TILE 600mm x 600mm
		TILE2	PORCELAIN TILE 100mm x 600mm
JRE		TILE3	CERAMIC WALL TILE 100mm x 600mm
ICAL SHOWN FOR NLY. REFER TO MECHANICAL			PLAM ON 19 GYPSUM BOARD
GS.		ACC	FLOOR TRANSITION STRIP



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MacPHERSON Engineering Inc. MECHANICAL CONSULTING ENGINEERS 220 — 2365 Albert Street, Regina, SK, S4P 4K1 Phone (306) 586—7972 Fax (306) 586-5568 Ritenburg & Associates Ltd Consulting Electrical Engineers #200-2222 Albert Street, Regina, SK S4P 2V2 P: (306) 569-1303 F: (306) 569-1307 Email: ral@ritenburg.com



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1	2018-10-24	REISSUED FOR TENDER	CR
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PROJECT

SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3, 4, 6, 7, 8, 9

1900 ALBERT STREET REGINA, SASKATCHEWAN

DATE

FILE NO.

Number of

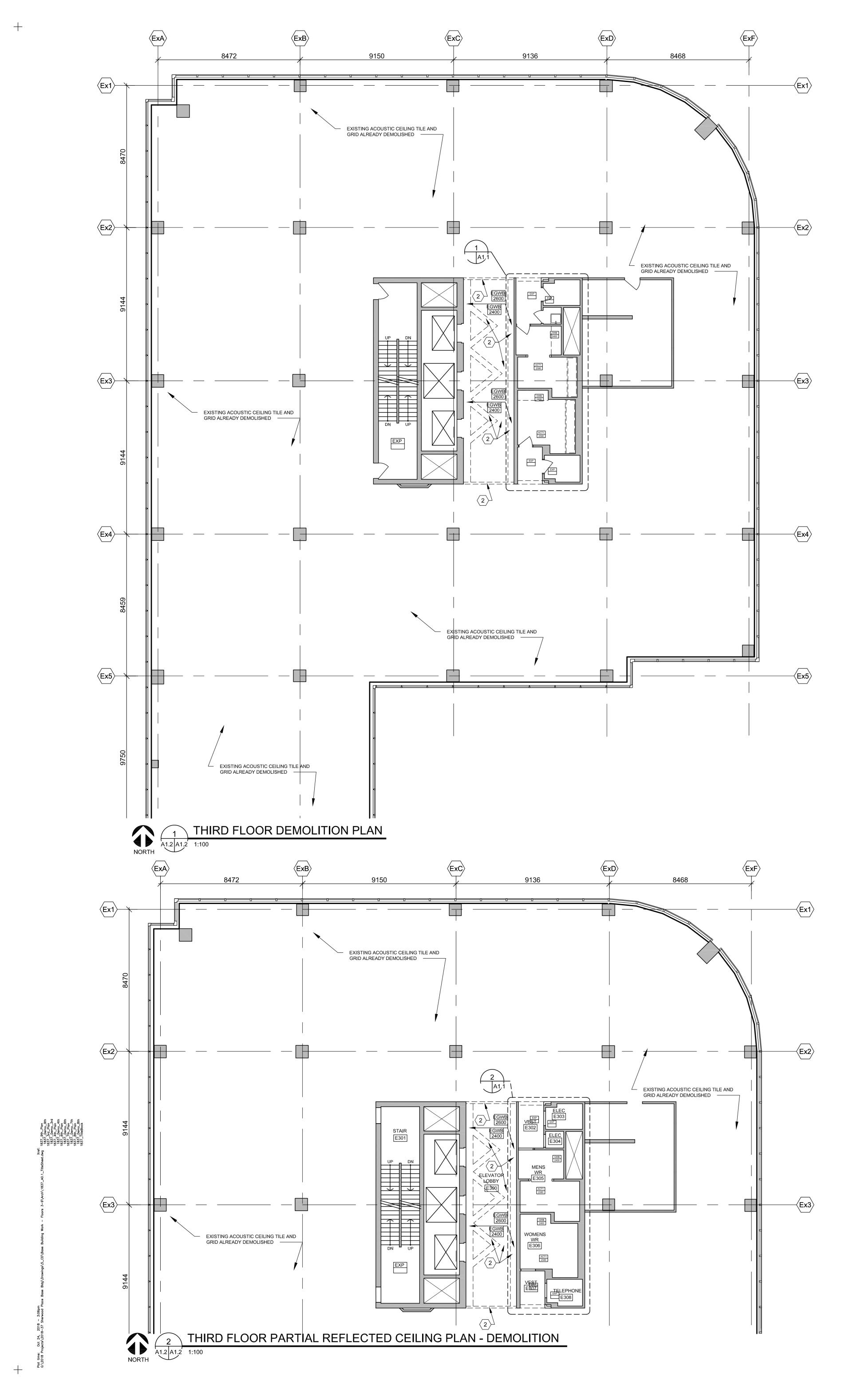
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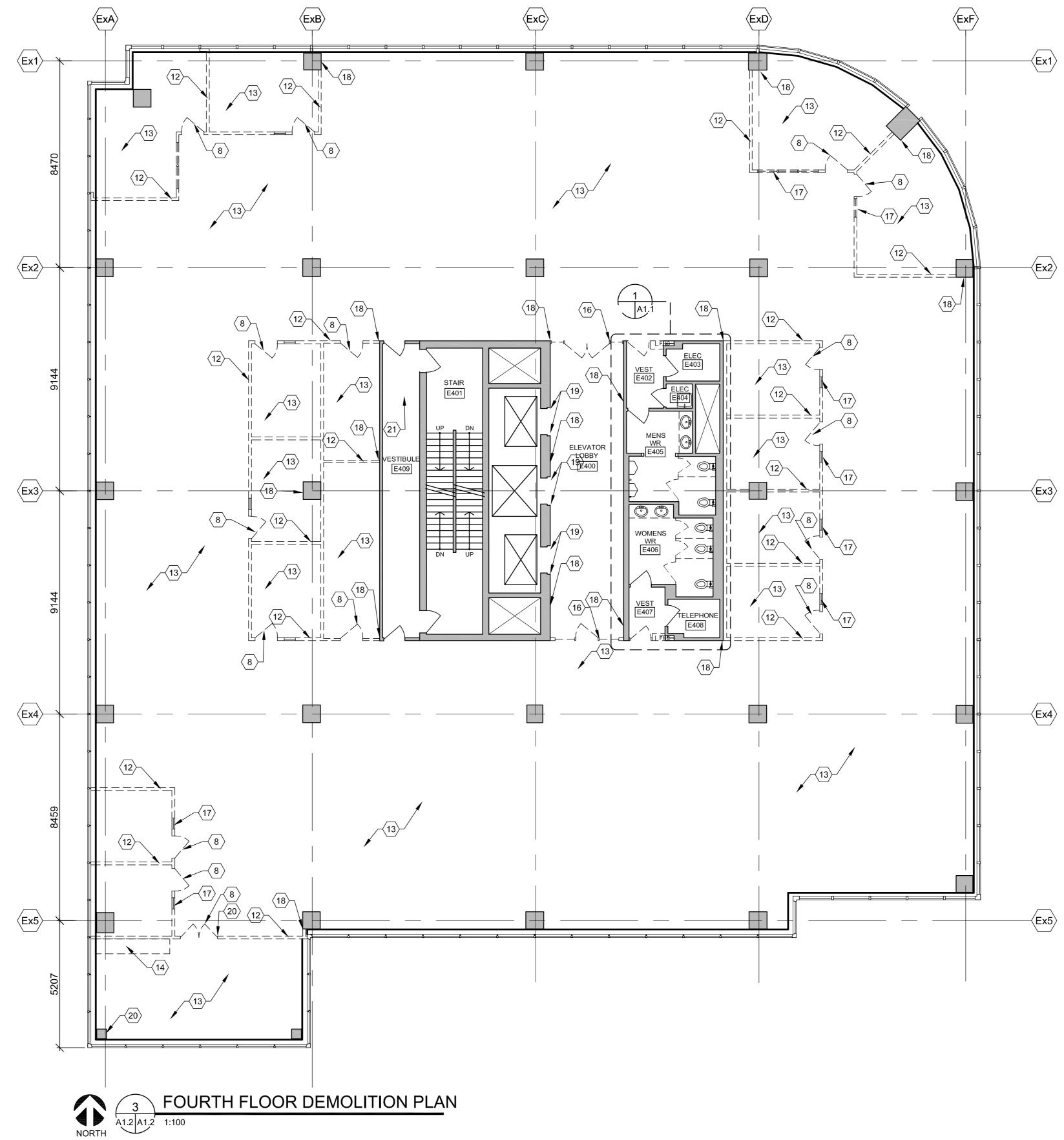
SHEET TITLE		
DEMOLITION PLAN & DEMOLITION CEILING PLAN CONSTRUCTION PLAN & REFLECTED CEILING PLAN INTERIOR ELEVATIONS MILLWORK		
DESIGN BY	DESIGN BY NG	
DRAWN BY NG		
CHECKED CR		
APPROVED		
APPROVED OWNER	DREAM	

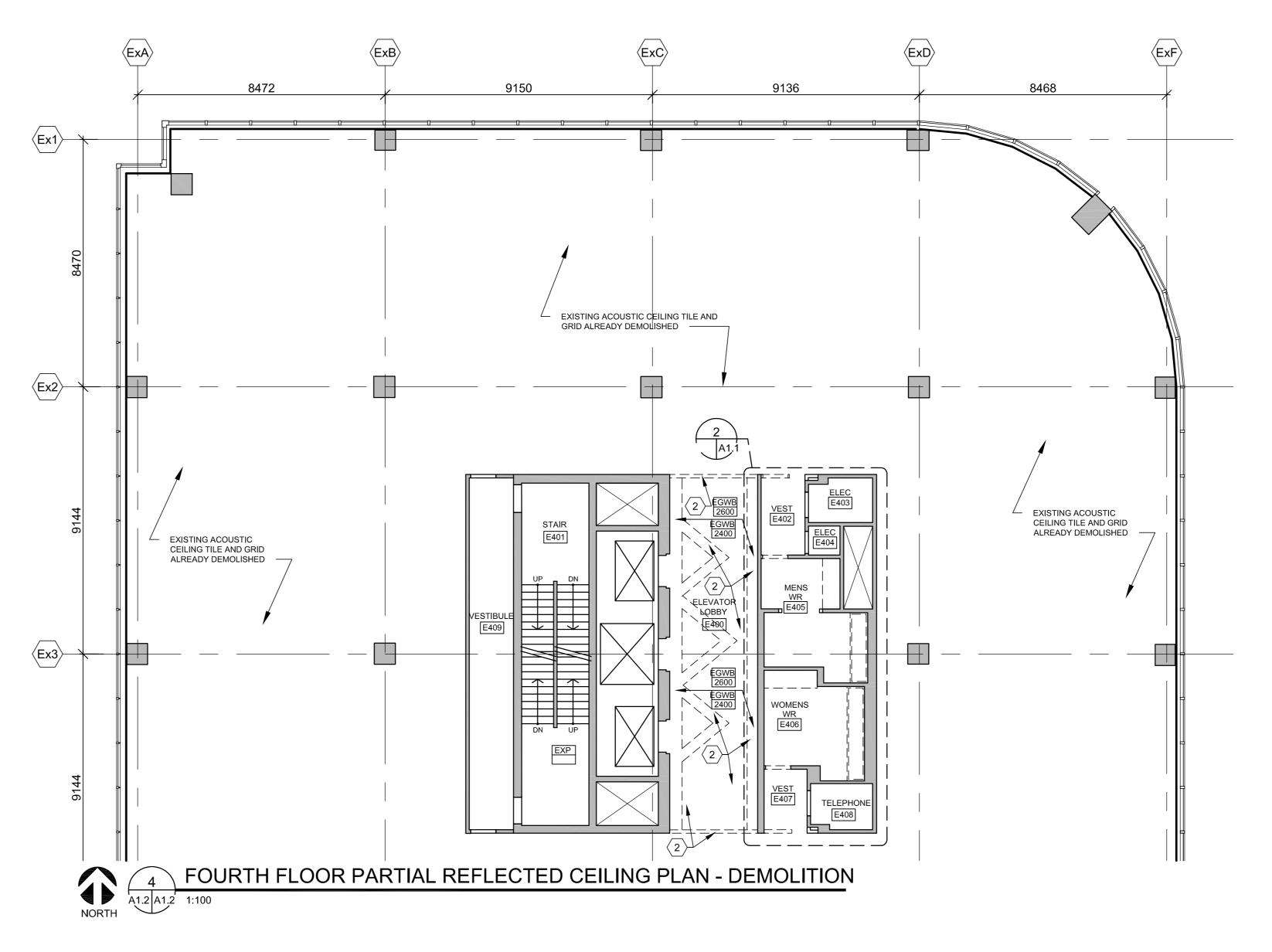
2018-10-24

DRAWING NO.

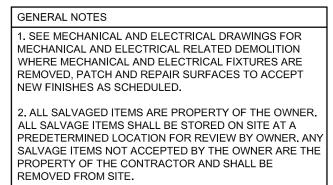
A1.1R







	REMOVE EXISTING EGG CRATE GRILLE AND BULKHEAD
1) 2)	REMOVE EXISTING GYPSUM BOARD BULKHEAD
<u>~</u> 3)	REMOVE EXISTING WALL TILE AND GYPSUM BOARD
₹	
<u>4)</u>	REMOVE EXISTING FLOOR TILE AND BASE
<u>5</u>	REMOVE EXISTING VANITY AND MIRROR
<u>6</u>	REMOVE EXISTING METAL TOILET PARTITIONS
$\overline{2}$	REMOVE SECTION OF EXISTING WALL
<u>8</u>	REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE
9	REMOVE EXISTING RECESSED AND SURFACE MOUNTED WALL ACCESSORIES. REFER TO WASHROOM ACCESSORY SCHEDULE FO LIST OF SALVAGED ITEMS.
0	REMOVE EXISTING FIRE HOSE CABINET - REFER TO MECHANICAL
	REMOVE EXISTING WALLCOVERING. SEAL WALL AND APPLY SKIM COAT TO PREPARE FOR NEW PAINT FINISH.
12	REMOVE EXISTING WALL TO U/S CEILING
13	REMOVE EXISTING CARPET FINISH AND RUBBER BASE. PREPARE EXISTING CONCRETE SLAB AND APPLY SKIMCOAT TO LEVEL EXISTING SLAB AND PREPARE TO RECEIVE FUTURE FLOOR FINISH.
4	REMOVE EXISTING MILLWORK CABINETRY
≼	REMOVE EXISTING MILLWORK CABINETRY REMOVE EXISTING SHEET FLOORING
15	REMOVE EXISTING SHEET FLOORING
15) 16)	REMOVE EXISTING SHEET FLOORING
	REMOVE EXISTING SHEET FLOORING REMOVE EXISTING GLASS DOOR/SIDELITE (STOREFRONT GLAZING)
	REMOVE EXISTING SHEET FLOORING REMOVE EXISTING GLASS DOOR/SIDELITE (STOREFRONT GLAZING) REMOVE EXISTING SIDELITE GLAZING AND FRAME EXISTING GYPSUM BOARD TO REMAIN. PATCH AND REPAIR AS
	REMOVE EXISTING SHEET FLOORING REMOVE EXISTING GLASS DOOR/SIDELITE (STOREFRONT GLAZING) REMOVE EXISTING SIDELITE GLAZING AND FRAME EXISTING GYPSUM BOARD TO REMAIN. PATCH AND REPAIR AS NEEDED AND PREPARE FOR NEW PAINT FINISH.
	REMOVE EXISTING SHEET FLOORING REMOVE EXISTING GLASS DOOR/SIDELITE (STOREFRONT GLAZING) REMOVE EXISTING SIDELITE GLAZING AND FRAME EXISTING GYPSUM BOARD TO REMAIN. PATCH AND REPAIR AS NEEDED AND PREPARE FOR NEW PAINT FINISH. REMOVE EXISTING METAL CORNER GUARDS.
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	REMOVE EXISTING SHEET FLOORING REMOVE EXISTING GLASS DOOR/SIDELITE (STOREFRONT GLAZING) REMOVE EXISTING SIDELITE GLAZING AND FRAME EXISTING GYPSUM BOARD TO REMAIN. PATCH AND REPAIR AS NEEDED AND PREPARE FOR NEW PAINT FINISH. REMOVE EXISTING METAL CORNER GUARDS. REMOVE EXISTING WOOD TRIM REMOVE EXISTING VCT FLOOR TILE
	REMOVE EXISTING SHEET FLOORING REMOVE EXISTING GLASS DOOR/SIDELITE (STOREFRONT GLAZING) REMOVE EXISTING SIDELITE GLAZING AND FRAME EXISTING GYPSUM BOARD TO REMAIN. PATCH AND REPAIR AS NEEDED AND PREPARE FOR NEW PAINT FINISH. REMOVE EXISTING METAL CORNER GUARDS. REMOVE EXISTING WOOD TRIM REMOVE EXISTING VCT FLOOR TILE REMOVE EXISTING OVERHEAD ROLLING METAL SECURITY GRILLE



3. PATCH AND REPAIR ALL SURFACES TO ACCEPT NEW FINISHES AS SCHEDULED.

4. PATCH AND REPAIR EXISTING SURFACES TO REMAIN WHERE ITEMS REMOVED (WALLS / MILLWORK / WALL COVERING / LIGHT FIXTURES / MECH / ETC.).

INDICATES AREA NOT IN CONTRACT.



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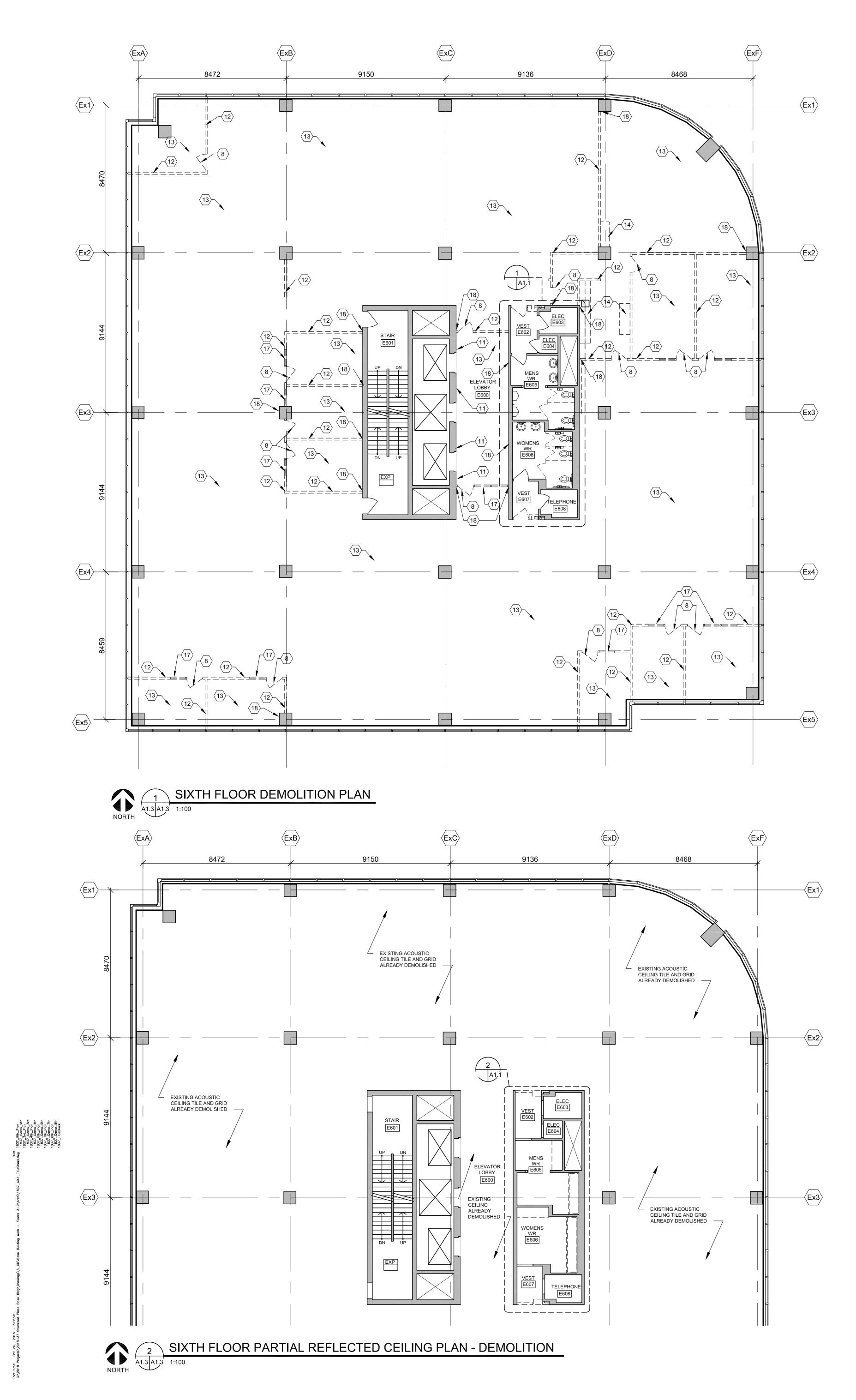
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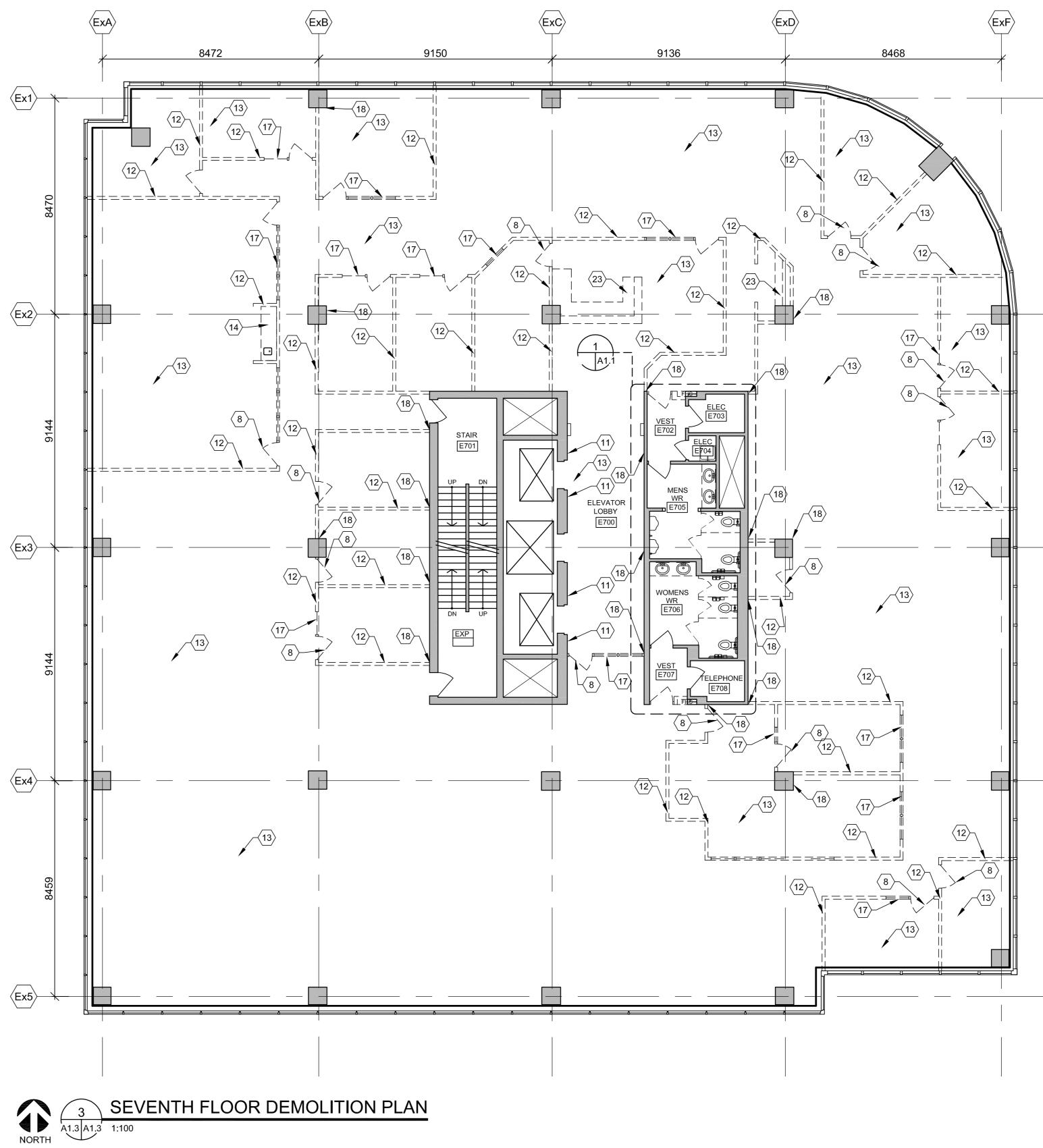
SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3, 4, 6, 7, 8, 9

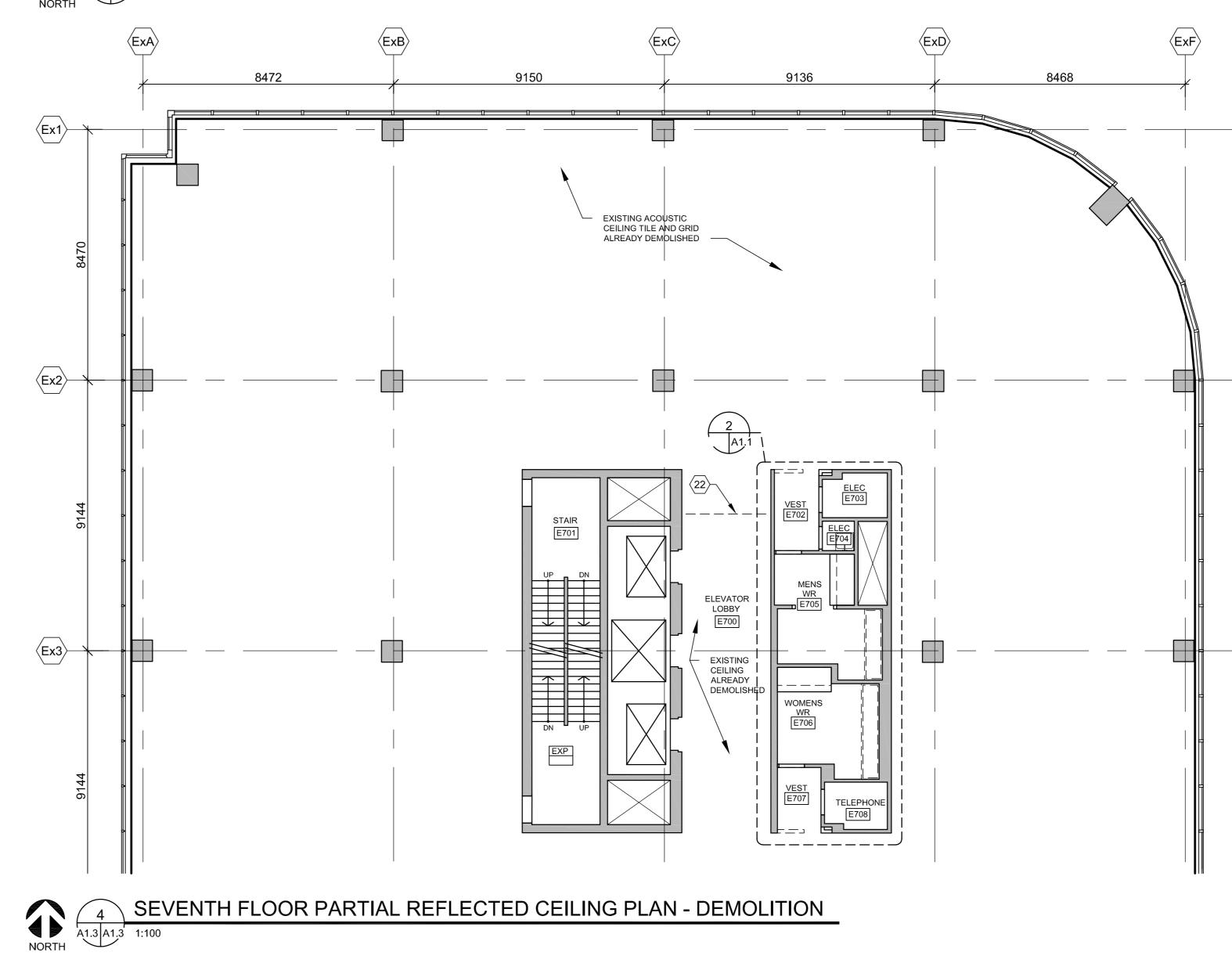
1900 ALBERT STREET REGINA, SASKATCHEWAN

SHEET TITLE DEMOLITION: THIRD AND FOURTH FLOOR PLANS + REFLECTED CEILING PLAN

DESIGN BY	NG
DRAWN BY	NG
CHECKED	CR
APPROVED	
OWNER	DREAM
SCALE	AS NOTED
DATE	2018-10-24
FILE NO.	DRAWING NO.
Number of	
Sheets	A1.2









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DEM	IOLITION KEYNOTES
(1)	REMOVE EXISTING EGG CRATE GRILLE AND BULKHEAD
2	REMOVE EXISTING GYPSUM BOARD BULKHEAD
(3)	REMOVE EXISTING WALL TILE AND GYPSUM BOARD
4	REMOVE EXISTING FLOOR TILE AND BASE
$\overline{5}$	REMOVE EXISTING VANITY AND MIRROR
6	REMOVE EXISTING METAL TOILET PARTITIONS
$\overline{2}$	REMOVE SECTION OF EXISTING WALL
(8)	REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE
(9)	REMOVE EXISTING RECESSED AND SURFACE MOUNTED WALL ACCESSORIES. REFER TO WASHROOM ACCESSORY SCHEDULE FOR LIST OF SALVAGED ITEMS.
$\left< 10 \right>$	REMOVE EXISTING FIRE HOSE CABINET - REFER TO MECHANICAL
(1)	REMOVE EXISTING WALLCOVERING. SEAL WALL AND APPLY SKIM COAT TO PREPARE FOR NEW PAINT FINISH.
$\left(12\right)$	REMOVE EXISTING WALL TO U/S CEILING
13	REMOVE EXISTING CARPET FINISH AND RUBBER BASE. PREPARE EXISTING CONCRETE SLAB AND APPLY SKIMCOAT TO LEVEL EXISTING SLAB AND PREPARE TO RECEIVE FUTURE FLOOR FINISH.
$\left(14\right)$	REMOVE EXISTING MILLWORK CABINETRY
(15)	REMOVE EXISTING SHEET FLOORING
$\left(16\right)$	REMOVE EXISTING GLASS DOOR/SIDELITE (STOREFRONT GLAZING)
(17)	REMOVE EXISTING SIDELITE GLAZING AND FRAME
(18)	EXISTING GYPSUM BOARD TO REMAIN. PATCH AND REPAIR AS NEEDED AND PREPARE FOR NEW PAINT FINISH.
(19)	REMOVE EXISTING METAL CORNER GUARDS.
20	REMOVE EXISTING WOOD TRIM
21	REMOVE EXISTING VCT FLOOR TILE
22	REMOVE EXISTING OVERHEAD ROLLING METAL SECURITY GRILLE
23	REMOVE EXISTING MILLWORK
(24)	REMOVE EXISTING WOOD WALL PANELS. PATCH AND REPAIR SURFACE TO RECEIVE NEW PAINT FINISH.
25	ALL EXISTING RAD CABINETS TO BE PAINTED TO MATCH EXISTING

- (Ex1)

–{Ex2

 $\langle \text{Ex3} \rangle$

-∕Ex4〉

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-{Ex5}

GENERAL NOTES 1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR MECHANICAL AND ELECTRICAL RELATED DEMOLITION WHERE MECHANICAL AND ELECTRICAL FIXTURES ARE REMOVED, PATCH AND REPAIR SURFACES TO ACCEPT NEW FINISHES AS SCHEDULED. 2. ALL SALVAGED ITEMS ARE PROPERTY OF THE OWNER. ALL SALVAGE ITEMS SHALL BE STORED ON SITE AT A PREDETERMINED LOCATION FOR REVIEW BY OWNER. ANY SALVAGE ITEMS NOT ACCEPTED BY THE OWNER ARE THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM SITE. 3. PATCH AND REPAIR ALL SURFACES TO ACCEPT NEW

FINISHES AS SCHEDULED. 4. PATCH AND REPAIR EXISTING SURFACES TO REMAIN WHERE ITEMS REMOVED (WALLS / MILLWORK / WALL COVERING / LIGHT FIXTURES / MECH / ETC.).

INDICATES AREA NOT IN CONTRACT.





REVISIONS			
NO.	DATE	ITEM	BY
0	2018-10-12	ISSUED FOR TENDER	CR
1	2018-10-24	REISSUED FOR TENDER	CR

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SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3, 4, 6, 7, 8, 9

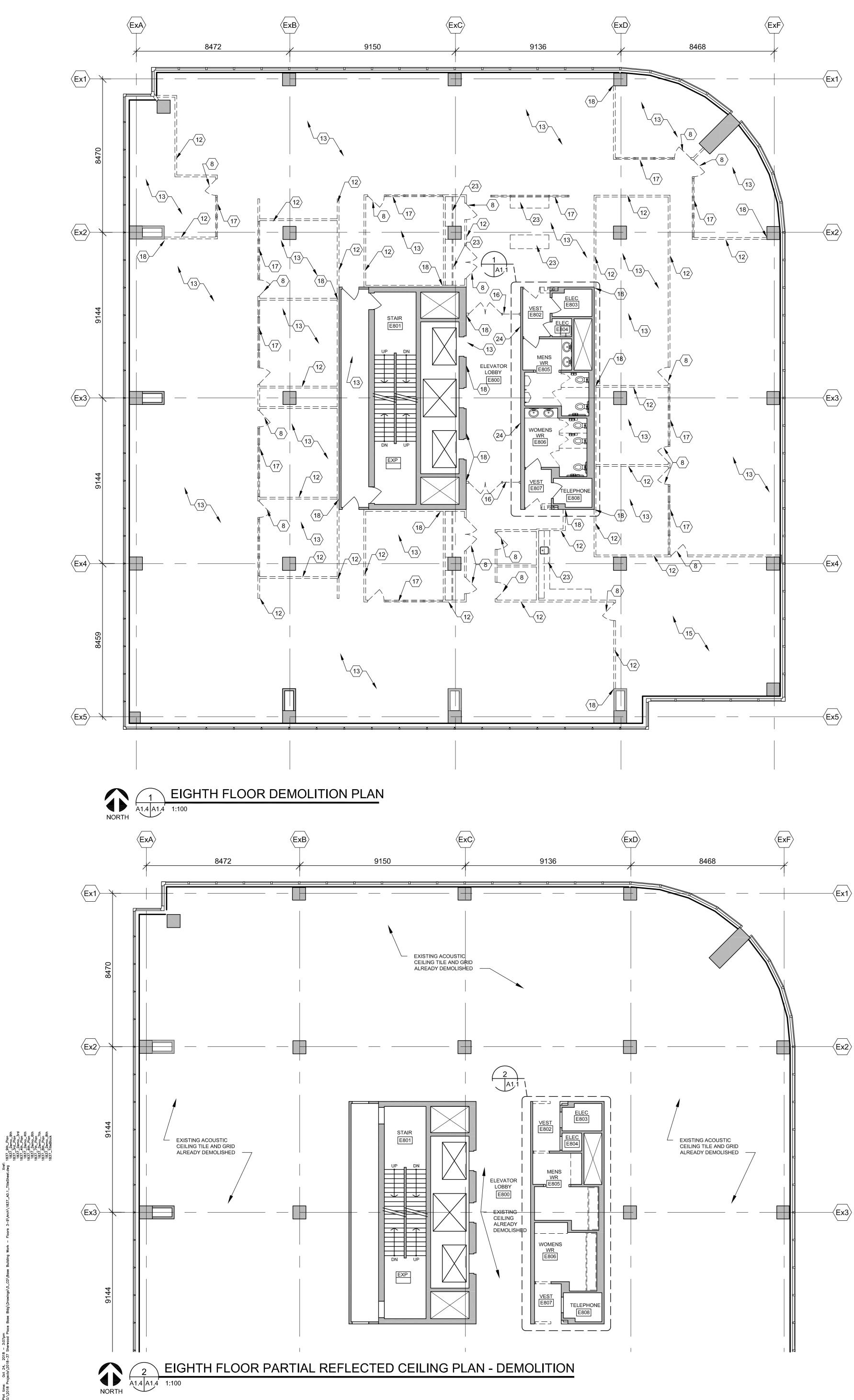
1900 ALBERT STREET REGINA, SASKATCHEWAN

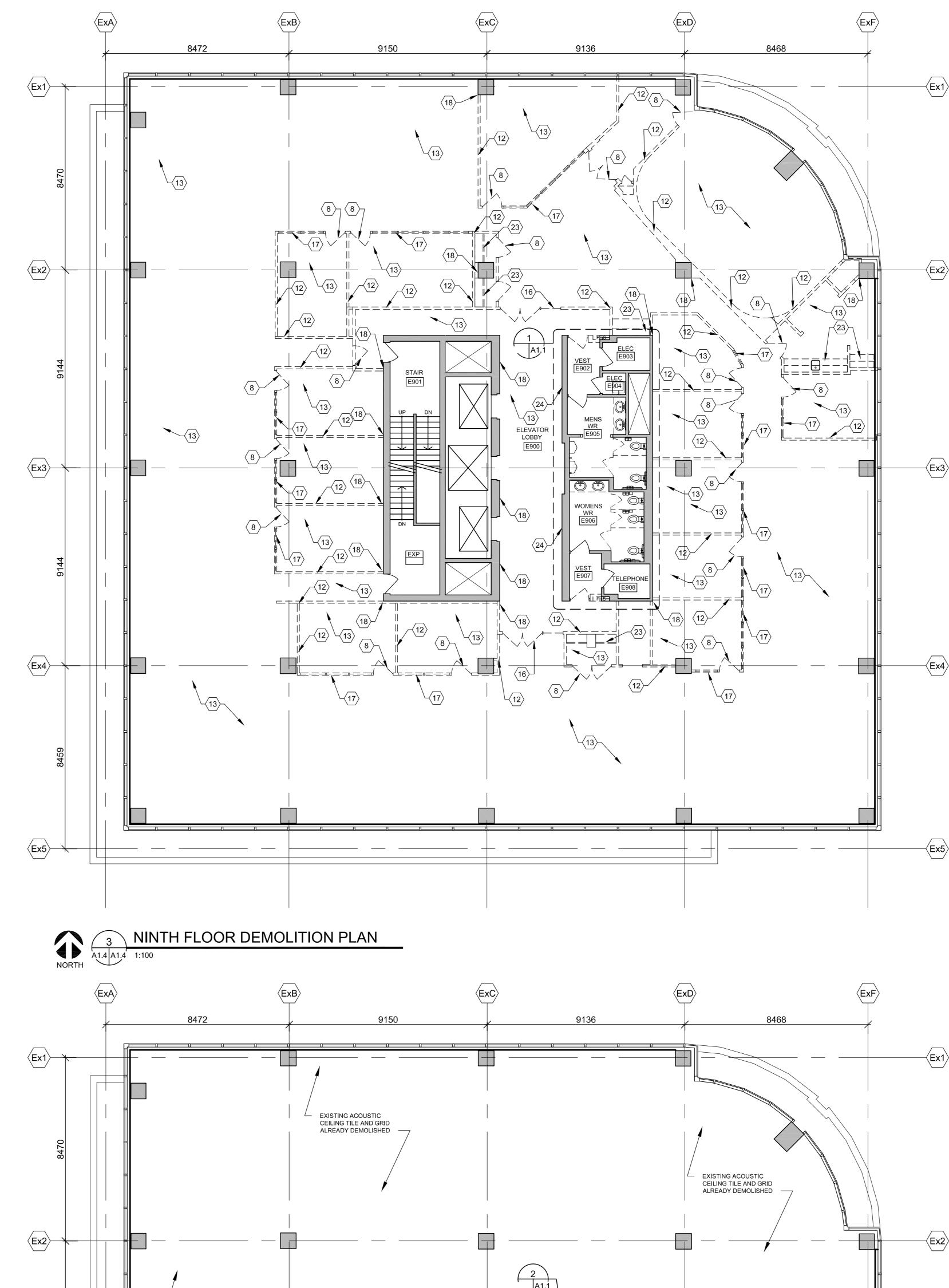
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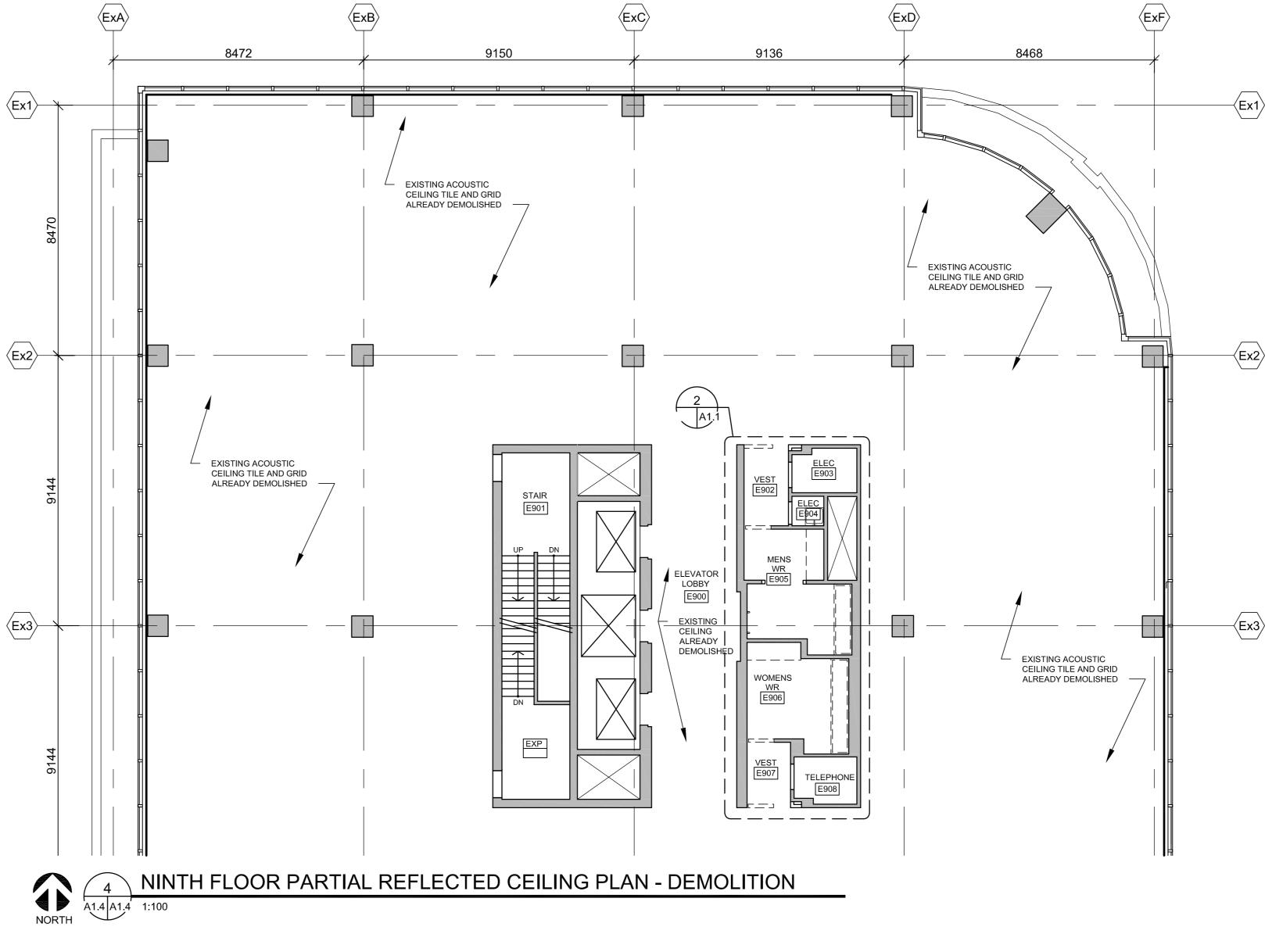
DEMOLITION:

SIXTH AND SEVENTH FLOOR PLANS + REFLECTED CEILING PLAN

DESIGN BY	NG
DRAWN BY	NG
CHECKED	CR
APPROVED	
OWNER	DREAM
SCALE	AS NOTED
DATE	2018-10-24
FILE NO.	DRAWING NO.
Number of	A1.3
Sheets	AIS







1 REMOVE EXISTING EGG CRATE GRILLE AND BULKHEAD
2 REMOVE EXISTING GYPSUM BOARD BULKHEAD
3 REMOVE EXISTING WALL TILE AND GYPSUM BOARD
4 REMOVE EXISTING FLOOR TILE AND BASE
5 REMOVE EXISTING VANITY AND MIRROR
6 REMOVE EXISTING METAL TOILET PARTITIONS
7 REMOVE SECTION OF EXISTING WALL
8 REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE
PREMOVE EXISTING RECESSED AND SURFACE MOUNTED WALL ACCESSORIES. REFER TO WASHROOM ACCESSORY SCHEDULE FOR LIST OF SALVAGED ITEMS.
10 REMOVE EXISTING FIRE HOSE CABINET - REFER TO MECHANICAL
REMOVE EXISTING WALLCOVERING. SEAL WALL AND APPLY SKIM COAT TO PREPARE FOR NEW PAINT FINISH.
12 REMOVE EXISTING WALL TO U/S CEILING
REMOVE EXISTING CARPET FINISH AND RUBBER BASE. PREPARE EXISTING CONCRETE SLAB AND APPLY SKIMCOAT TO LEVEL EXISTING SLAB AND PREPARE TO RECEIVE FUTURE FLOOR FINISH.
14 REMOVE EXISTING MILLWORK CABINETRY
15 REMOVE EXISTING SHEET FLOORING
16 REMOVE EXISTING GLASS DOOR/SIDELITE (STOREFRONT GLAZING)
17 REMOVE EXISTING SIDELITE GLAZING AND FRAME
EXISTING GYPSUM BOARD TO REMAIN. PATCH AND REPAIR AS NEEDED AND PREPARE FOR NEW PAINT FINISH.
19 REMOVE EXISTING METAL CORNER GUARDS.
20 REMOVE EXISTING WOOD TRIM
21 REMOVE EXISTING VCT FLOOR TILE
22 REMOVE EXISTING OVERHEAD ROLLING METAL SECURITY GRILLE
23 REMOVE EXISTING MILLWORK
24 REMOVE EXISTING WOOD WALL PANELS. PATCH AND REPAIR SURFACE TO RECEIVE NEW PAINT FINISH.
25 ALL EXISTING RAD CABINETS TO BE PAINTED TO MATCH EXISTING

GENERAL NOTES

NEW FINISHES AS SCHEDULED.

REMOVED FROM SITE.

1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR

MECHANICAL AND ELECTRICAL RELATED DEMOLITION

2. ALL SALVAGED ITEMS ARE PROPERTY OF THE OWNER.

ALL SALVAGED TIEMS AND FROPERTION THE OWNER. ALL SALVAGE ITEMS SHALL BE STORED ON SITE AT A PREDETERMINED LOCATION FOR REVIEW BY OWNER. ANY SALVAGE ITEMS NOT ACCEPTED BY THE OWNER ARE THE PROPERTY OF THE CONTRACTOR AND SHALL BE

3. PATCH AND REPAIR ALL SURFACES TO ACCEPT NEW FINISHES AS SCHEDULED.

4. PATCH AND REPAIR EXISTING SURFACES TO REMAIN WHERE ITEMS REMOVED (WALLS / MILLWORK / WALL COVERING / LIGHT FIXTURES / MECH / ETC.).

INDICATES AREA NOT IN CONTRACT.

WHERE MECHANICAL AND ELECTRICAL FIXTURES ARE REMOVED, PATCH AND REPAIR SURFACES TO ACCEPT



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SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3, 4, 6, 7, 8, 9

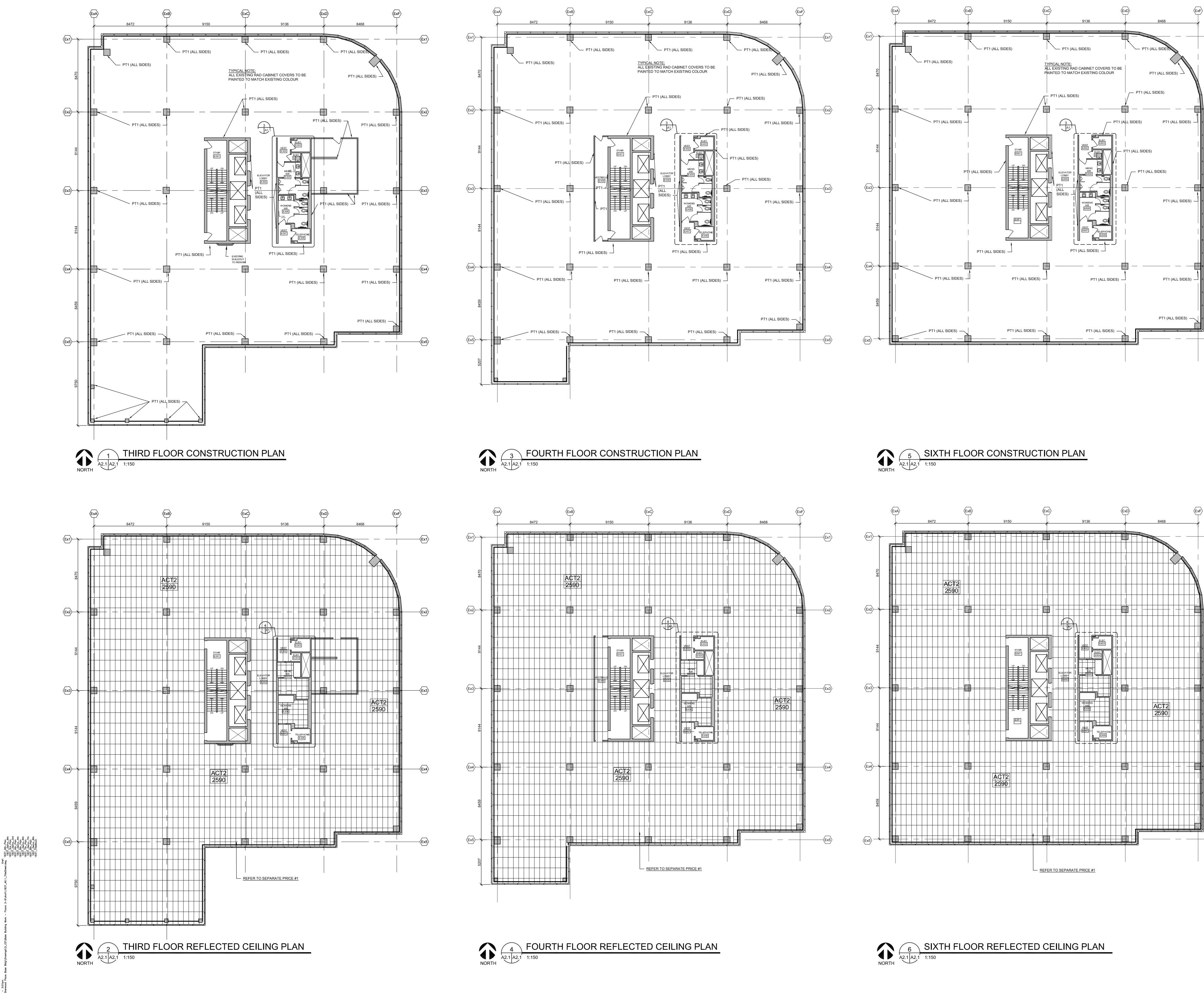
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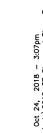
SHEET TITLE

DEMOLITION: EIGHT AND NINTH FLOOR PLANS +

REFLECTED CEILING PLAN

DESIGN BY	NG
DRAWN BY	NG
CHECKED	CR
APPROVED	
OWNER	DREAM
SCALE	AS NOTED
DATE	2018-10-24
FILE NO.	DRAWING NO.
Number of Sheets	A1.4







-Ex1

-Ex2

--{Ex3

— (Ex4)

-Ex5

-Æx1

-Ex2

— (Ex3)

-{Ex4

--{Ex5

Ritenburg & Associates Ltd Consulting Electrical Engineers
 #200-2222 Albert Street, Regina, SK
 S4P 2V2

 P: (306) 569-1303
 F: (306) 569-1307
 Email: ral@ritenburg.com

Fax (306) 586-5568



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0	2018-10-12	ISSUED FOR TENDER	CR
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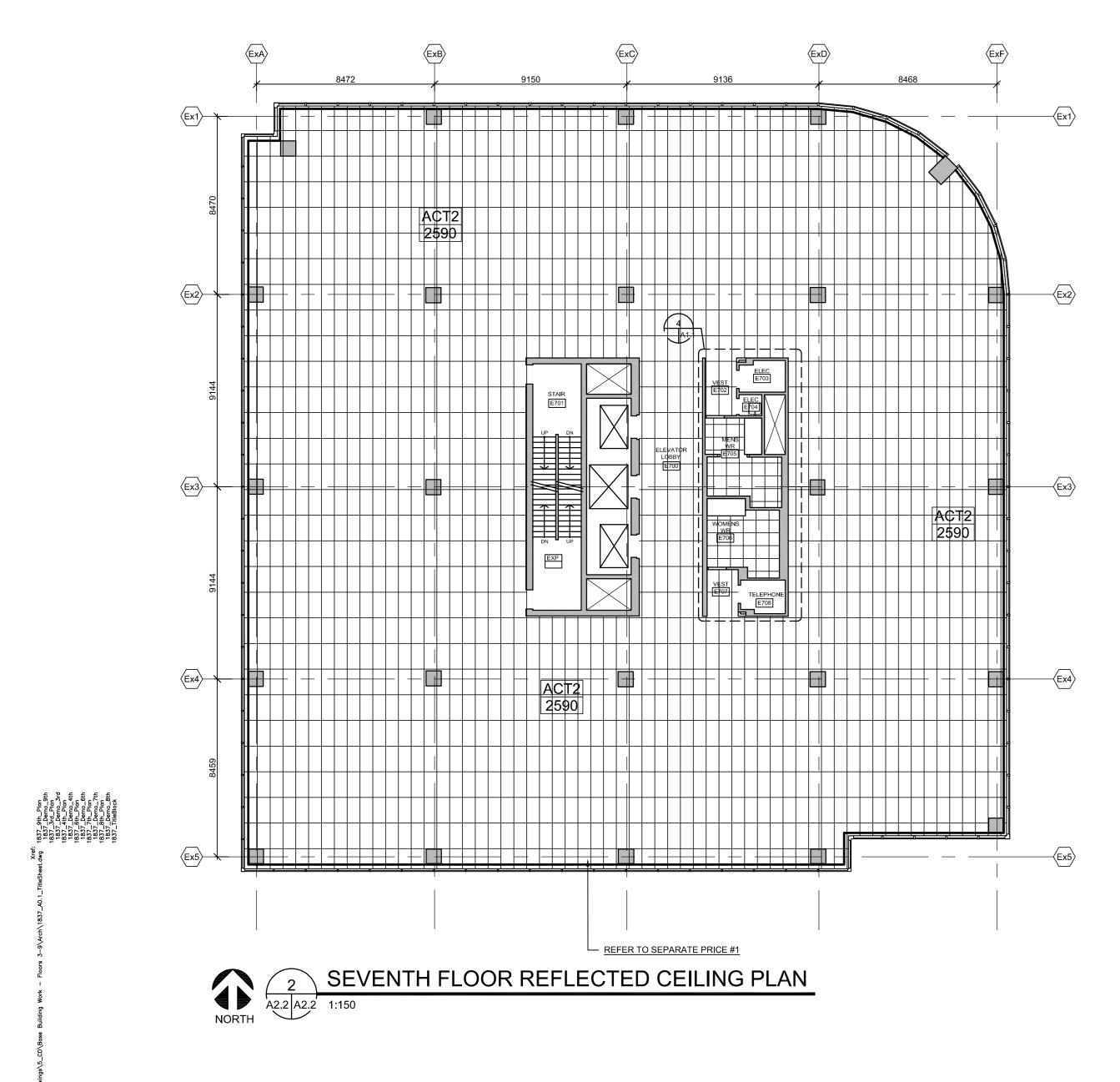
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SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3, 4, 6, 7, 8, 9

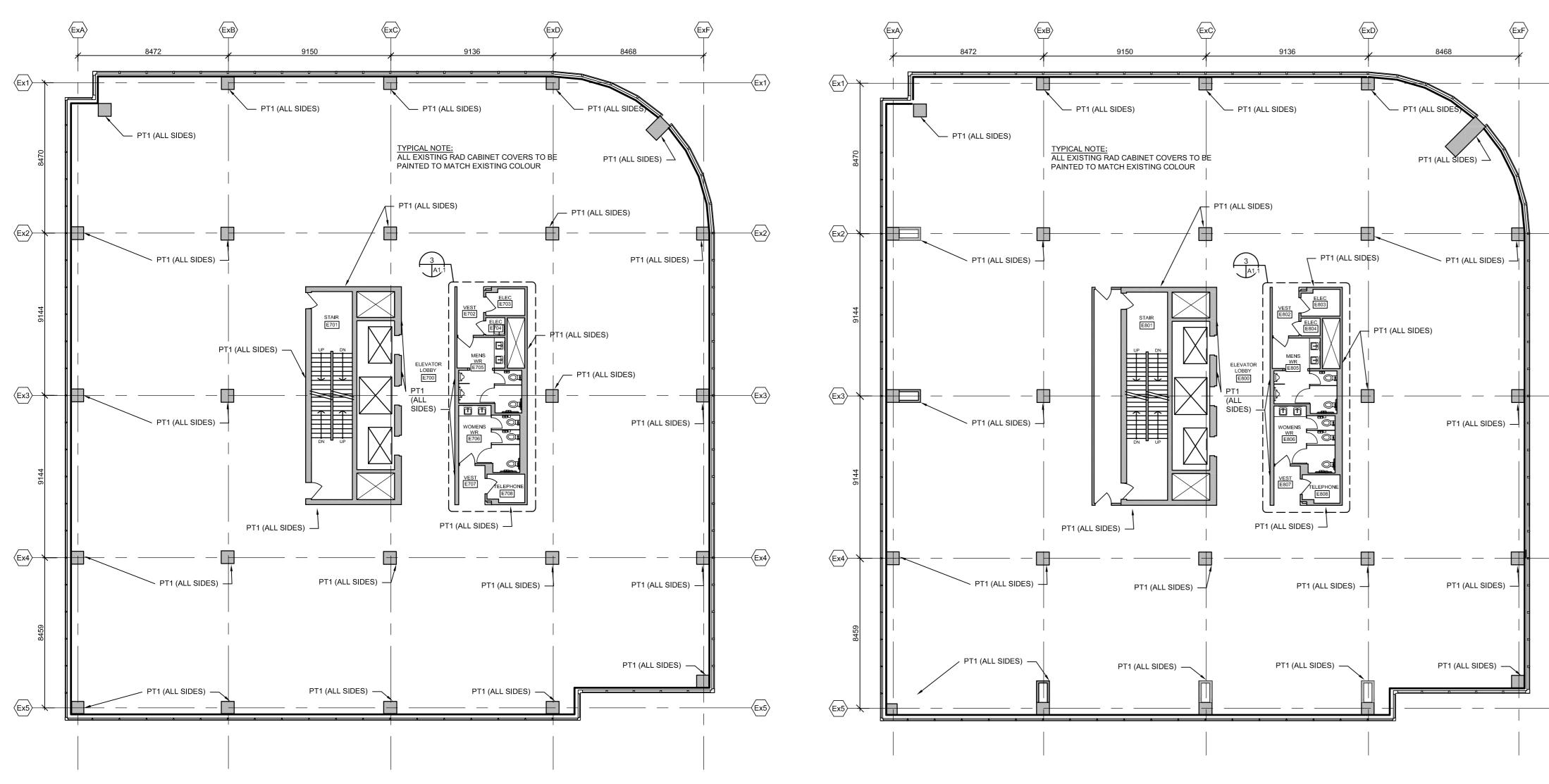
1900 ALBERT STREET REGINA, SASKATCHEWAN

SHEET TITLE THIRD, FOURTH AND SIXTH FLOOR CONSTRUCTION PLAN + REFLECTED CEILING PLAN

DESIGN BY	NG
DRAWN BY	NG
CHECKED	CR
APPROVED	
OWNER	DREAM
SCALE	AS NOTED
DATE	2018-10-24
FILE NO.	DRAWING NO.
Number of	AO 1
Sheets	A2.1

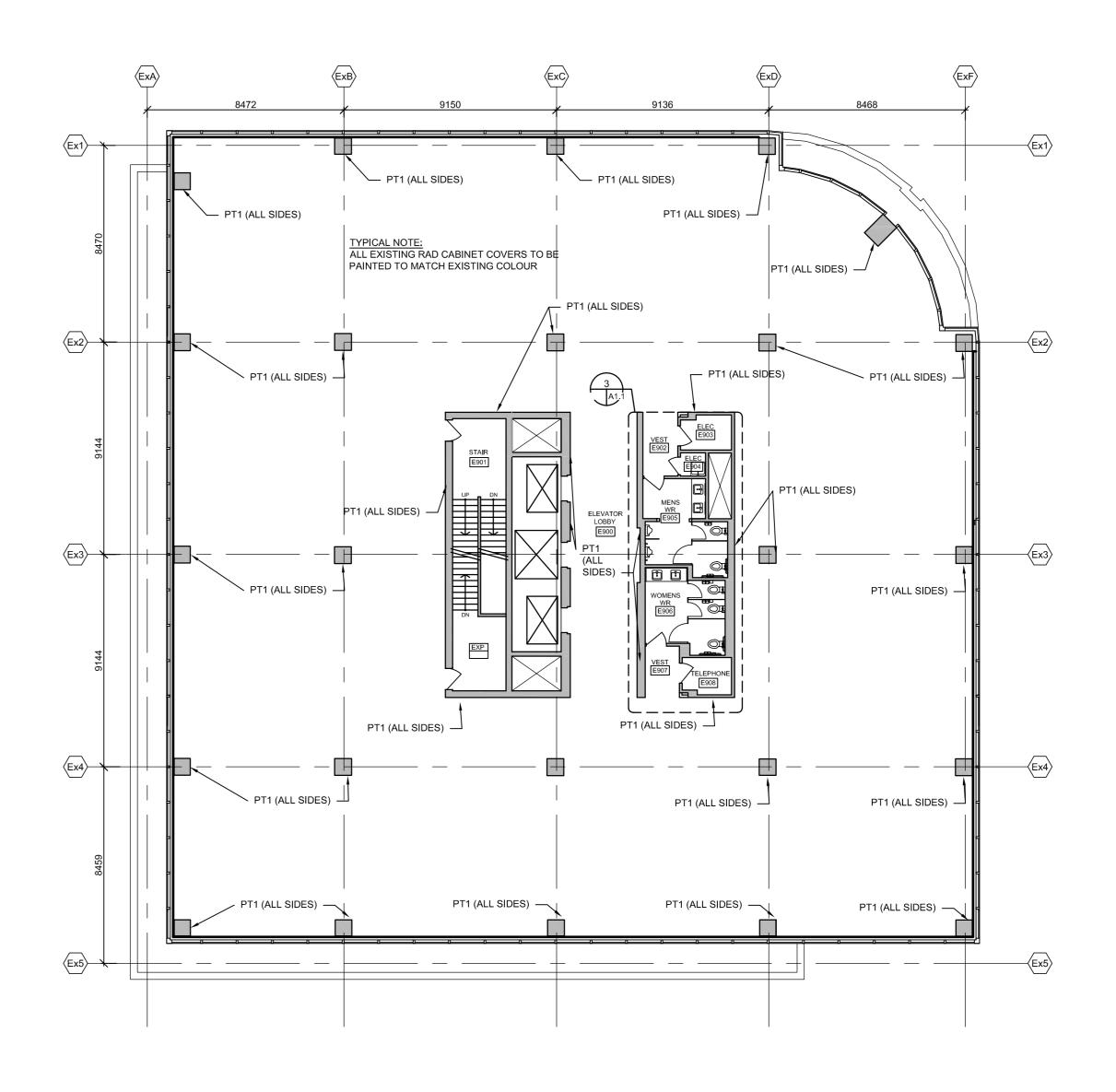


NORTH 1 SEVENTH FLOOR CONSTRUCTION PLAN A2.2 A2.2 1:150









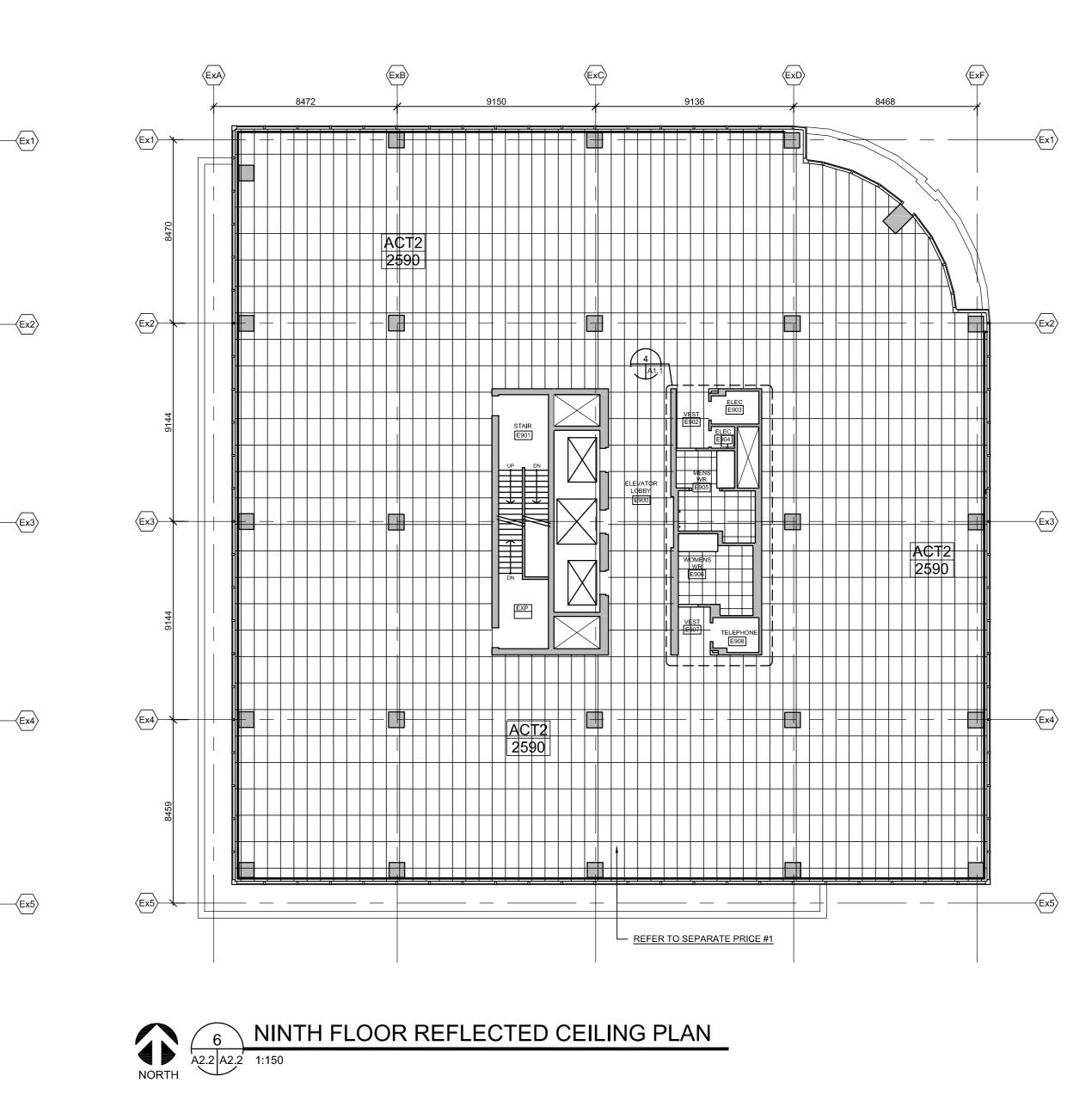


-----(Ex1)

— (Ex2)

— (Ex3)

------Ex4









1	2018-10-24	REISSUED FOR TENDER	CR
0	2018-10-12	ISSUED FOR TENDER	CR
NO.	DATE	ITEM	BY
	REVISIONS		

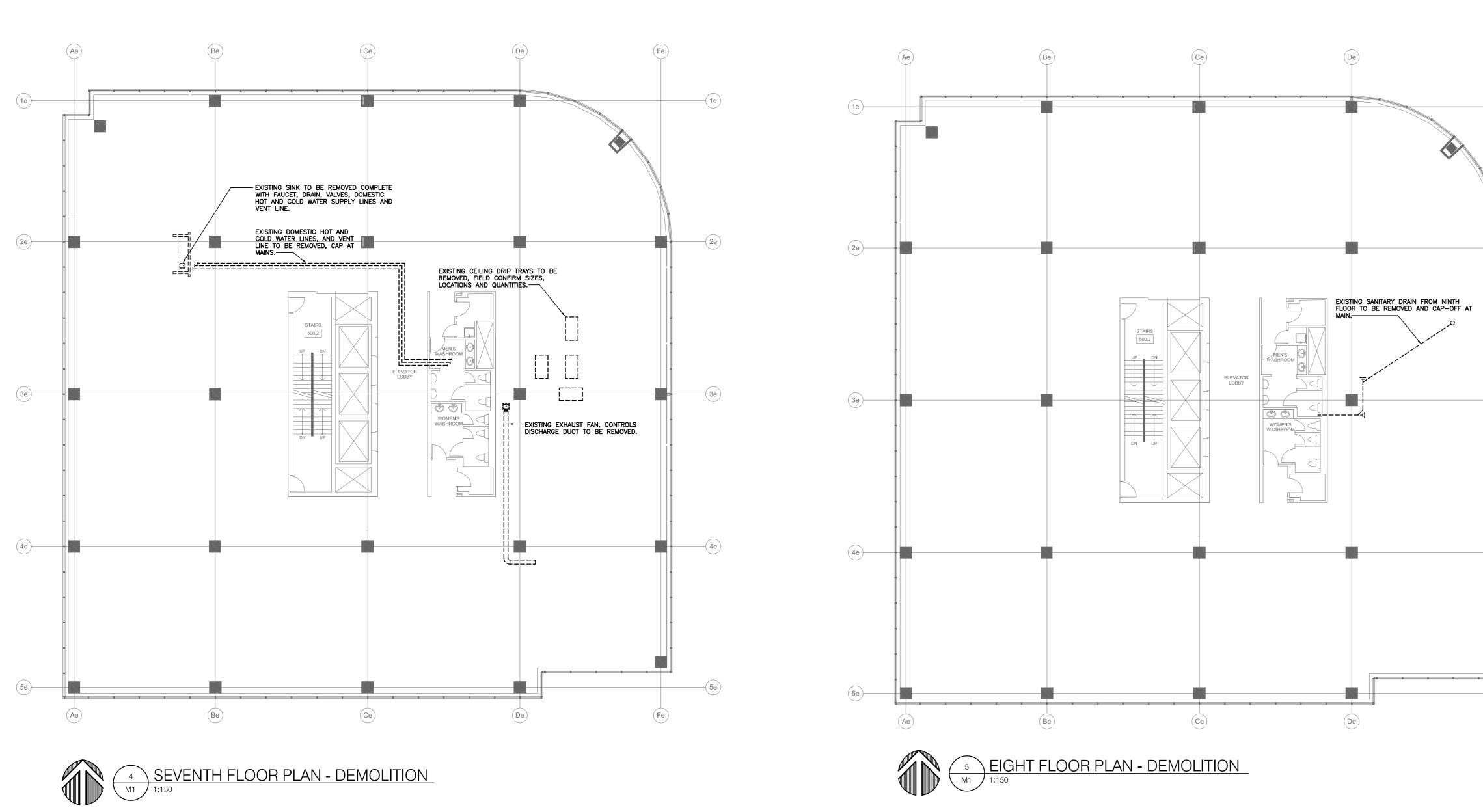
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SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3, 4, 6, 7, 8, 9

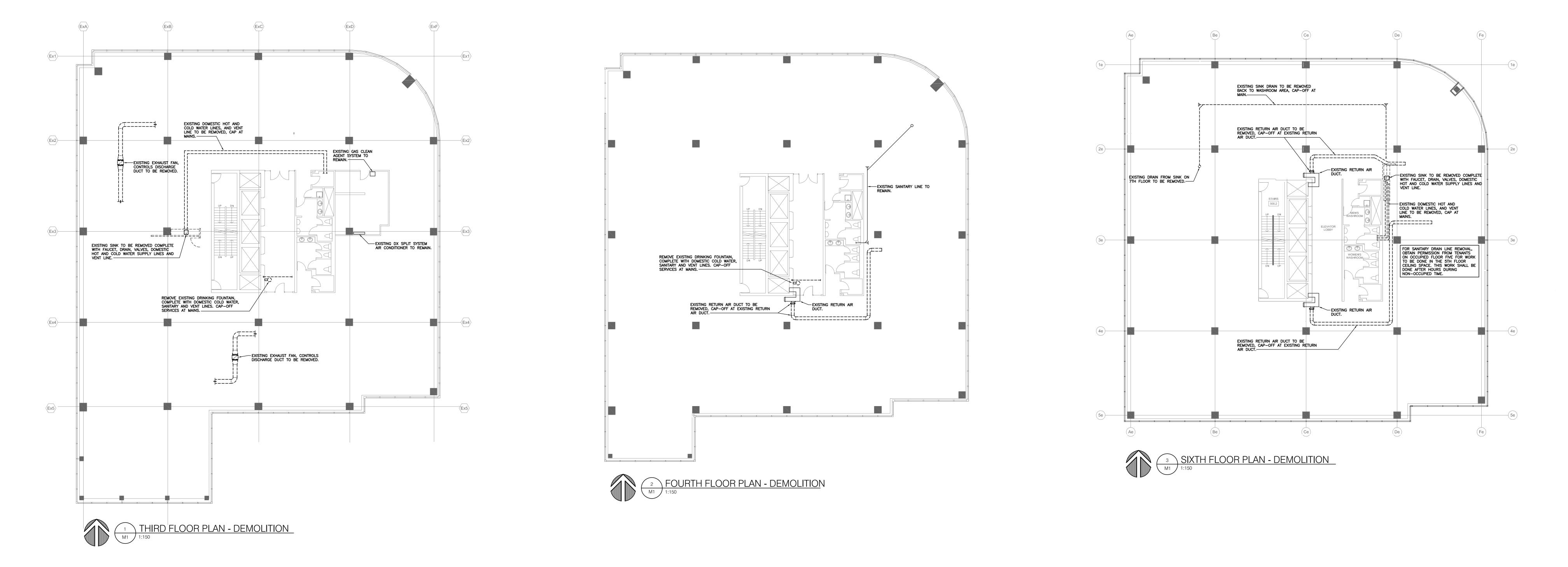
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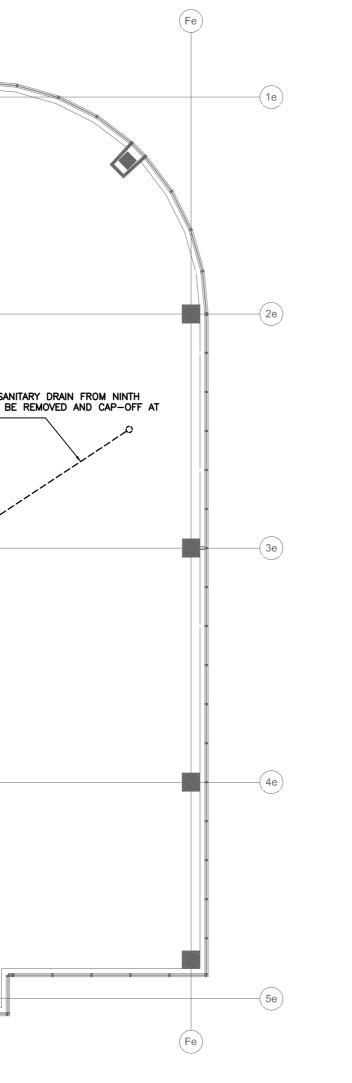
SHEET TITLE SEVENTH, EIGHTH AND NINTH FLOOR CONSTRUCTION PLAN + REFLECTED CEILING PLAN

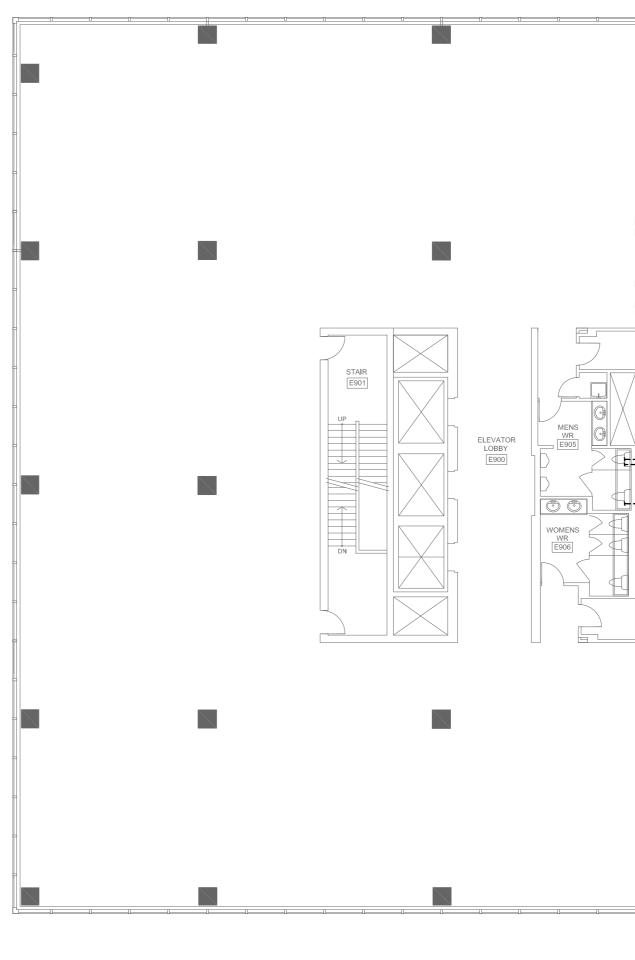
DESIGN BY	NG
DRAWN BY	NG
CHECKED	CR
APPROVED	
OWNER	DREAM
SCALE	AS NOTED
DATE	2018-10-24
FILE NO.	DRAWING NO.
Number of	A2.2
Sheets	



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6 NINTH FLOOR PLAN - DEMOLITION 1:150



EXISTING WATER LINES AND FAUCET TO BE REMOVED, TYPICAL OF TWO.	
EXISTING SINK TO BE REMOVED COMPLETE WITH FAUCET, DRAIN, VALVES, DOMESTIC HOT AND COLD WATER SUPPLY LINES AND VENT LINE.	
EXISTING DOMESTIC HOT AND COLD WATER LINES, AND VENT LINE TO BE REMOVED, CAP AT MAINS.	

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NO.	DATE	ITEM	BY
REVISIONS			

PROJECT

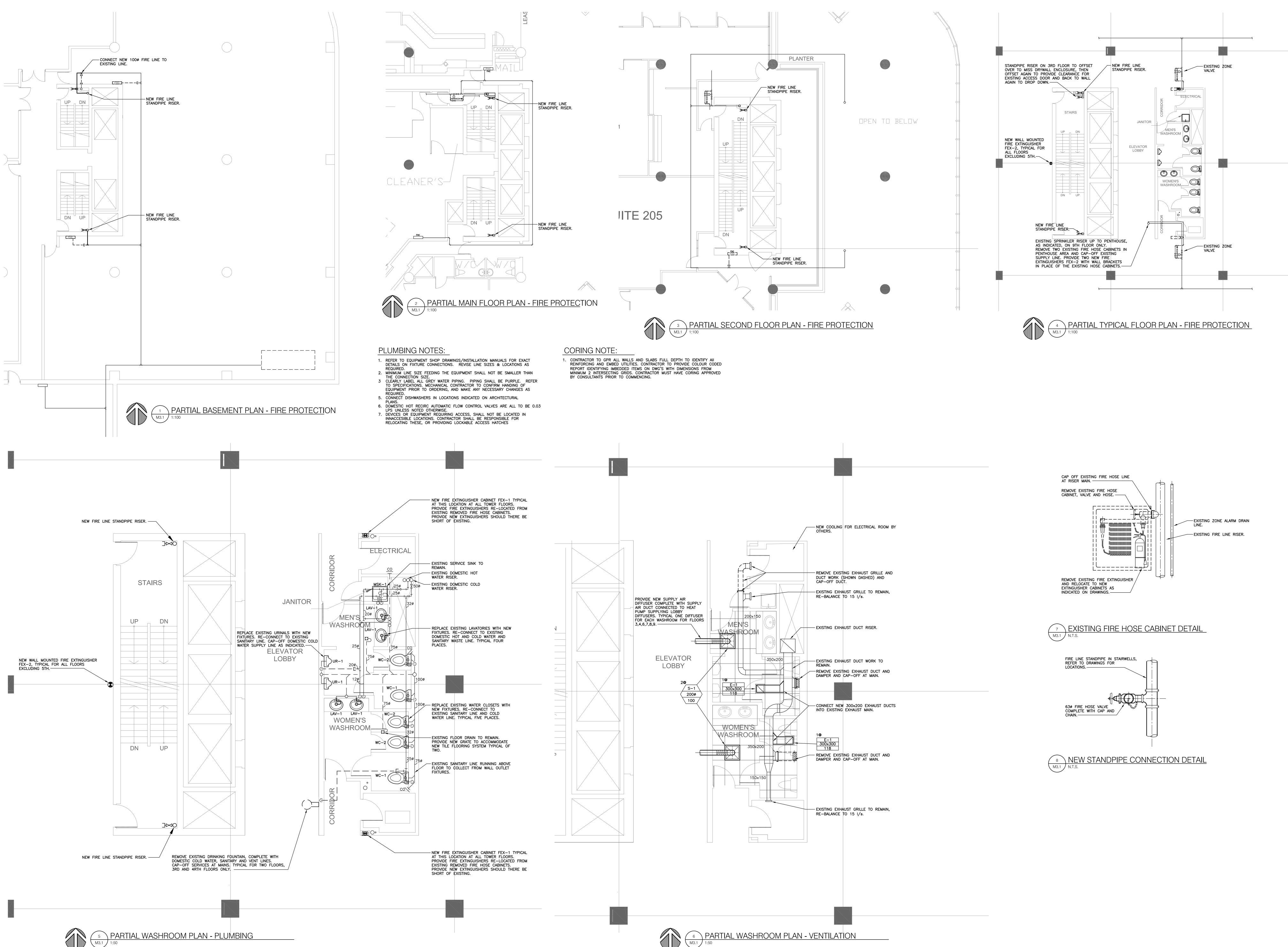
SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3,4,6,7,8,9

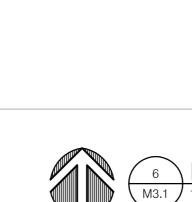
1900 ALBERT STREET REGINA, SASKATCHEWAN

SHEET TITLE

FLOOR PLANS DEMOLITION MECHANICAL

DESIGN BY	G.F.
DRAWN BY	W.T.
CHECKED	G.F.
APPROVED	
OWNER	DREAM
SCALE	AS NOTED
DATE	2018/10/10
FILE NO.	DRAWING NO.
Number of	M1.1
Sheets	







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NO.	DATE	ITEM	BY
	REVISIONS		

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SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3,4,6,7,8,9

1900 ALBERT STREET REGINA, SASKATCHEWAN

SHEET TITLE

MECHANICAL FIRE PROTECTION PLUMBING VENTILATION

DESIGN BY	G.F.
DRAWN BY	W.T.
CHECKED	G.F.
APPROVED	
OWNER	DREAM
SCALE	AS NOTED
DATE	2018/10/10
FILE NO.	DRAWING NO.
Number of Sheets	M2.1

MECHANICAL SPECIFICATIONS GENERAL PROVISIONS

LOCATION OF IDENTIFICATION:

-EQUIPMENT AND CONTROLS SHOP DRAWINGS.

-SYSTEM BALANCING REPORTS.

• SPECIFICATIONS AND DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, AND ELECTRICAL SPECIFICATIONS AND DRAWINGS, INCLUDING ADDENDA. • CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE AND HIS TENDER SHALL REFLECT THE SITE CONDITIONS. • CONTRACTOR SHALL BID ON, AND INSTALL COMPLETE & FULLY OPERATIONAL MECHANICAL SYSTEMS BASED ON HIS SITE EVALUATION AND THE INFORMATION PRESENTED IN THE MECHANICAL DRAWINGS & SPECIFICATIONS. • ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL BUILDING CODE, NATIONAL PLUMBING CODE (& SASKATCHEWAN SUPPLEMENT), CANADIAN STANDARDS ASSOCIATION, CANADA FIRE UNDERWRITER'S ASSOCIATION, SASKATCHEWAN DEPARTMENT OF LABOUR, SASKPOWER & THE CITY OF REGINA. • CONTRACTOR TO APPLY FOR, OBTAIN AND PAY FOR ALL FEES, PERMITS, ETC., UNDER THIS SECTION AS NECESSARY FOR THE WORK HEREINAFTER SPECIFIED TO CONFORM TO THE LAWS AND REGULATIONS OF THE CITY OF REGINA AND THE PROVINCE OF SASKATCHEWAN. • ALL MECHANICAL EQUIPMENT INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. • PROVIDE LABOUR AND MATERIALS REQUIRED TO INSTALL, TEST AND PLACE INTO OPERATION THE COMPLETE MECHANICAL SYSTEM. CONTRACTOR TO PROVIDE EQUIPMENT, DUCTWORK & PIPING STRUCTURAL SUPPORTS TO ALLOW SUPPORT FROM EITHER THE FLOOR, WALL OR CEILING/ROOF STRUCTURE. • PROVIDE ULC LISTED FIRE STOPPING FOR ALL PIPING PASSING THROUGH FIRE SEPARATIONS. PROVIDE DONUTS FOR PLASTIC PIPING, ULC LISTED FOR SPECIFIC ASSEMBLY. • WHERE PIPING OR DUCTWORK PASSES THROUGH WALLS, FLOORS OR CEILINGS WITH A FIRE / TEMPERATURE (FT) RATING, INSULATE LINES IN VICINITY OF PENETRATION WITH TREMCO OR EQUAL ULC LISTED MINERAL WOOL FIRE-STOPPING SYSTEM TO ACHIEVE REQUIRED • PROVIDE LABOUR AND MATERIALS REQUIRED TO INSTALL, TEST AND PLACE INTO OPERATION THE COMPLETE MECHANICAL SYSTEM. • THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVISION FOR ALL MECHANICAL SLEEVING, CUTTING, PATCHING, FURRING-IN AND FIRE-STOPPING REQUIRED TO ACCOMMODATE PIPING AND DUCTWORK ETC. • CONTRACTOR TO PROVIDE DUCTWORK & PIPING SUPPORTS TO ALLOW HANGING SUPPORT FROM STRUCTURE. • THE MECHANICAL CONTRACTOR SHALL PROVIDE THE GENERAL CONTRACTOR WITH LOCATIONS AND ROUGHING-IN DIMENSIONS OF SLEEVES AND LOCATIONS OF ROUGH-IN DIMENSIONS, FOR CUTTING FOR WALL AND ROOF OPENINGS, ETC. • THE MECHANICAL CONTRACTOR SHALL FURNISH A WRITTEN WARRANTY STATING THAT ALL WORK SHALL BE FREE FROM DEFECTS OF MATERIAL, EQUIPMENT AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION. • THE MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ACCESS DOORS TO ALL MECHANICAL EQUIPMENT, VALVES, CLEANOUTS, DAMPERS, ETC. IN DRYWALL OR NON-ACCESSIBLE CEILINGS, ACCESS HATCHES TO BE MIFAB MODEL UA-VP-SS-C FOR DRYWALL INSTALLATIONS & MIFAB MPFR-SS-C FOR RATED DRYWALL INSTALLATIONS. • PIPING ARRANGEMENT TO BE GENERALLY AS INDICATED ON THE DRAWINGS. ALL LINES SHALL BE STRAIGHT, PLUMB, FORMING RIGHT ANGLES AND PARALLELS TO THE BUILDING STRUCTURE. ARRANGE PIPING TO MAXIMIZE HEADROOM AND TO NOT RESTRICT FINISHED CEILING HEIGHTS, OR SERVICEABILITY OF EQUIPMENT. PROVIDE OFFSETS AS REQUIRED. • WHERE PIPING CAN BE ROUTED THROUGH STRUCTURAL MEMBERS TO INCREASE CEILING HEIGHT, COORDINATE SLEEVE / OPENING LOCATIONS WITH GENERAL CONTRACTOR. GC TO ACQUIRE APPROVAL FROM STRUCTURAL ENGINEER AND TO PROVIDE OPENINGS THROUGH STRUCTURAL MEMBERS FOR MECHANICAL. • MAKE PIPING CONNECTIONS TO EQUIPMENT, PRESSURE REGULATING AND RELIEF VALVES AND ANY OTHER DEVICES REQUIRING SERVICING USING UNIONS. • PIPING SYSTEMS SHALL BE ARRANGED SO THAT ENTIRE SYSTEM MAY BE DRAINED. PROVIDE DRAIN BALL VALVES WITH CAP & CHAIN IN ACCESSIBLE LOCATION AT ALL LOW POINTS. • IDENTIFY PIPING, DUCTWORK, AND EQUIPMENT THROUGHOUT WITH PRE-MANUFACTURED LABELS AND DIRECTION OF FLOW ARROWS TO MATCH BASE-BUILDING STANDARD. • TAG VALVES WITH 2" DIA BRASS TAG WITH IMPRESSION-STAMPED SERVICE & VALVE NO. WHEN VALVES ARE LOCATED ABOVE SUSPENDED CEILINGS, PROVIDE BRADY VALVE-FINDER CEILING TACK TO IDENTIFY VALVE LOCATION. • LOCATE NAMEPLATES SO THAT THEY ARE EASILY READ. DO NOT INSULATE OR PAINT OVER PLATES.

LOCATE MARKERS ON PIPING SYSTEMS SO THEY CAN BE READ FROM FLOOR PLATFORM. IDENTIFY PIPING & DUCTWORK RUNS AT 30' INTERVALS AND AT LEAST ONCE IN EACH ROOM. IDENTIFY BOTH SIDES WHERE PIPING PASSES THROUGH WALLS, PARTITIONS AND FLOOR PLATFORM. IDENTIFY PIPING AT STARTING AND ENDING POINTS OF RUNS AND AT EACH PIECE OF EQUIPMENT. IDENTIFY PIPING AT MAJOR MANUAL AND AUTOMATIC VALVES IMMEDIATELY UPSTREAM OF VALVES. WHERE THIS IS NOT POSSIBLE, PLACE IDENTIFICATION AS CLOSE TO VALVE AS POSSIBLE. .6 IDENTIFY BRANCH, EQUIPMENT OR BUILDING SERVED AFTER SUCH VALVE.

• ESCUTCHEONS - PROVIDE CHROME PLATED ESCUTCHEONS TO ALL PIPING THROUGH WALLS, FLOORS, PARTITIONS, ETC. • INSULATING COUPLINGS - PROVIDE DIELECTRIC INSULATING COUPLINGS AT ALL CONNECTIONS OF COPPER PIPING TO EQUIPMENT AND/OR WHERE DISSIMILAR METALS ARE CONNECTED. • ALL MECHANICAL EQUIPMENT QUOTED MUST BE EQUAL TO THAT SPECIFIED, SUBJECT TO ENGINEER'S APPROVAL. MATERIAL AND EQUIPMENT IS SUBJECT TO APPROVAL OR REJECTION WHEN SHOP DRAWINGS ARE PROCESSED. • SUBMIT SHOP DRAWINGS IN .PDF FORMAT FOR EACH PIECE OF MECHANICAL EQUIPMENT FOR REVIEW, INCLUDING DIMENSIONS, CONNECTION LOCATIONS, PERFORMANCE CURVES, CERTIFIED RATINGS AND IDENTIFICATION NUMBERS. THE CONTRACTOR IS RESPONSIBLE FOR FURTHER REPRODUCTION OF REVIEWED SHOP DRAWINGS AS REQUIRED FOR MAINTENANCE MANUALS, ETC. • PROVIDE ONE SET OF AS-BUILT RED-MARKED PRINTS FOR REVIEW AT PROJECT COMPLETION. • PROVIDE THREE BOUND COPIES OF MAINTENANCE MANUALS, WHICH SHALL INCLUDE THE FOLLOWING INFORMATION: -SYSTEM DESCRIPTION AND CONTROLS SEQUENCES. -MANUFACTURERS RECOMMENDED MAINTENANCE SCHEDULES FOR EACH PIECE OF EQUIPMENT.

-START-UP & COMMISSIONING REPORTS • AFTER SUBSTANTIAL COMPLETION, HOLD A SEMINAR TO INSTRUCT THE OWNER'S MAINTENANCE PERSONNEL IN THE OPERATION AND PREVENTATIVE MAINTENANCE OF EACH PIECE OF EQUIPMENT SUPPLIED AND INSTALLED. EQUIPMENT SALES REPRESENTATIVES TRAINED IN • THE OPERATION OF THE EQUIPMENT MUST BE PRESENT FOR OWNER TRAINING. PLUMBING

• ALL PLUMBING INSTALLATIONS IN STRICT ACCORDANCE WITH THE CANADA PLUMBING CODE & SASKATCHEWAN SUPPLEMENT. SASKATCHEWAN DEPARTMENT OF HEALTH & CITY OF REGINA REQUIREMENTS. • SANITARY & VENT PIPING ABOVE GROUND (50 mm (2") AND LARGER) SHALL BE TYPE XFR DWV. SMALLER TYPE DWV HARD COPPER WITH WROUGHT COPPER FITTINGS AND SOLDER JOINTS. • PLUMBING VENT PIPING GENERALLY NOT INDICATED ON DRAWINGS. CONTRACTOR TO DESIGN AND INSTALL COMPLETE VENTING SYSTEM AS REQUIRED IN ACCORDANCE WITH NATIONAL PLUMBING CODE AND CITY OF REGINA REQUIREMENTS. TIE INTO EXISTING PLUMBING VENTING SYSTEM WHERE SUITABLE OR PROVIDE NEW VENT TERMINATIONS THROUGH ROOF. • WHERE PLUMBING PIPING IS INSTALLED WITHIN RETURN AIR PLENUMS OR CEILING SPACES USED AS RETURN AIR PLENUMS, IT SHALL BE MEET PLENUM MATERIAL FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS. • WATER LINES ABOVE GROUND TYPE L HARD COPPER WITH WROUGHT COPPER FITTINGS AND SOLDER JOINTS. SOLDER SHALL BE LEAD-FREE. • USE CAST IRON PIPING WITH MECHANICAL JOINTS OR DWV COPPER PIPING WITH SOLDERED JOINTS WHERE INSTALLED IN VERTICAL SHAFTS, WHERE DRAINING HOT FLUIDS ABOVE 140 DEG F AND IN OTHER LOCATIONS WHERE THE USE OF PLASTIC PIPING IS NOT APPROVED

• PROVIDE BACK-FLOW PREVENTORS WHERE INDICATED AND WHERE REQUIRED IN ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION. VENTILATION

• SUPPLY AND INSTALL DUCTWORK, GRILLES, DIFFUSERS AND ALL ASSOCIATED CONNECTIONS. FABRICATION OF DUCTWORK & COMPONENTS SHALL BE IN ACCORDANCE WITH SMACNA DUCT MANUALS AND ASHRAE HANDBOOKS. • DUCT DIMENSIONS INDICATE INSIDE CLEAR DIMENSIONS. • GALVANIZED DUCTWORK: GALVANIZED STEEL LOCK FORMING QUALITY, HAVING GALVANIZED COATING TO ASTM A525 G90 DESIGNATION FOR BOTH SIDES. • LOW PRESSURE DUCTWORK IS DEFINED AS HAVING AN INTERNAL STATIC PRESSURE OF LESS THAN 590 PA AND VELOCITY LESS THAN 10 M/S. • FASTENERS: USE RIVETS AND BOLTS THROUGHOUT; SHEET METAL SCREWS ACCEPTED ON LOW PRESSURE DUCTS. • SEALANT: DUCTMATE PRO-SEAL. WATER-PROOF, FIRE RESISTIVE, COMPATIBLE WITH MATING MATERIALS, ULC LISTED

• DUCT CONNECTIONS: ALL SHEET METAL DUCTWORK WITH ONE SIDE 600 mm OR LONGER SHALL BE JOINED USING NEXUS OR DUCTMATE BOLTED, SEALED CONNECTIONS. • SHEET METAL GAUGES SHALL BE IN STRICT ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS.

• PROVIDE ULC APPROVED FIRE DAMPERS IN DUCTWORK PASSING THROUGH FIRE-RATED WALLS, FLOORS, CEILINGS AND ASSEMBLIES. • PROVIDE FIRE DAMPER SUPPORT ANGLES AND ACCESS DOORS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND CODE REQUIREMENTS. CONFIRM LOCATIONS OF FIRE-RATED WALLS, FLOORS, CEILINGS WITH ARCHITECTURAL / GENERAL CONTRACTOR AND

• PROVIDE FIRE DAMPERS ACCORDINGLY. • SEAL ALL DUCTWORK, FITTINGS CONNECTIONS TO DIFFUSERS AND EQUIPMENT WITH ULC LISTED DUCT SEALANT TO SMACNA SEAL CLASS

• CONNECT DIFFUSERS TO RUN-OUT DUCTWORK USING MAXIMUM 600mm LENGTH OF FLEXIBLE DUCTWORK. REFER TO TYPICAL DIFFUSER INSTALLATION DETAIL. • PROVIDE BUTTERFLY BALANCING DAMPERS AT ALL DIFFUSER GRILLE RUN-OUTS EQUAL TO RUSKIN MDRS25 WHERE INSTALLED ABOVE ACCESSIBLE CEILINGS.

• PROVIDE INTEGRAL OPPOSED BLADE BALANCING DAMPERS ON EXHAUST GRILLES WHERE INSTALLED IN ACCESSIBLE CEILINGS. • INTERNAL ACOUSTIC DUCT LINING: FLEXIBLE DUCT LINER FIBREGLASS INSULATION WITH "K" VALUE AT 24C 0.035 W/M/C. • ABSOLUTE ROUGHNESS OF EXPOSED SURFACE NOT TO EXCEED 0.58 mm, COATED TO PREVENT FIBRE EROSION AT AIR VELOCITIES UP TO 20 M/S, 24 KG/M3 MINIMUM DENSITY, 25 mm THICK. APPLY WITH FULL COVERAGE ADHESIVE & IMPALE ANCHOR TABS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. APPLY TO HATCHED DUCTWORK ON PLANS.

ENT SCHEDULE				
IG FIXTURES	(
LOSETS				
AMERICAN STANDARD M	DDEL 3695001 PRIOLO FLOWISE ELONGATED FLUSHOMETER TOILET, VITREOUS CHINA WITH EVERCLEAN, HIGH EFFICIENCY WATER CLOSET. FLOOR MOUNTED, BACK OUTLET, TOP SPUD, BARRIER			
COMPLETE WITH:	FREE. DIRECT FED SIPHON JET ACTION, LOW CONSUMPTION 6.0 L / FLUSH (1.6 GALLONS / FLUSH) ELONGATED BOWL WITH EXTRA HEAVY DUTY ELONGATED SEAT WITH COVER, AND STAINLESS STEEL			
FLUSH VALVE:	CHECK HINGE. TOTO MODEL TET6GA32#CP 40MM FLUSHOMETER VALVE, HYDROPOWER SELF GENERATING SYSTEM, MOUNT WITH 600MM EXTENSION TO CLEAR TOILET SEAT COVER IN UP POSITION. MODEL VBXCP-32 VACUUM BREAKER TUBE AND 25mm ANGLE STOP SET, 6.0 I/FLUSH			
AMERICAN STANDARD M	DDEL 3690001 PRIOLO FLOWISE ELONGATED FLUSHOMETER TOILET, VITREOUS CHINA WITH EVERCLEAN, HIGH EFFICIENCY WATER CLOSET. FLOOR MOUNTED, BACK OUTLET, TOP SPUD, NON-BARRIER FREE.			
COMPLETE WITH:	DIRECT FED SIPHON JET ACTION, LOW CONSUMPTION 6.0 L / FLUSH (1.6 GALLONS / FLUSH)			
FLUSH VALVE:	ELONGATED BOWL WITH EXTRA HEAVY DUTY ELONGATED SEAT LESS COVER, AND STAINLESS STEEL CHECK HINGE. TOTO MODEL TET1GA#CP 40MM FLUSHOMETER VALVE, HYDROPOWER SELF GENERATING SYSTEM. MODEL VB9CP-32 VACUUM BREAKER AND ANGLE STOP SET, 6.0 I/FLUSH			
COMPLETE WITH:	URIMAT MODEL ECO 15001 WATERLESS URINAL WALL MOUNTED POLYCARBONATE BOWL SIPHON HOUSING SIPHON WITHOUT SECONDARY FLUID 50mm OUTLET CONNECTION			
WEIGHT	WALL BRACKET WITH FULL INSTALLATION HARDWARE 4 KG			
DRIES				
KOHLER VERTICYL RECT/ COMPLETE WITH: TRIM :	ANGLE MODEL K-2882 VITREOUS CHINA UNDER-COUNTER LAVATORY FRONT OVERFLOW, 438mm WIDE x 330mm FRONT TO BACK x 171mm DEEP TOTO MODEL TEL105-D10EM#CP SINGLE HOLE FAUCET, WITH HOT/COLD MIXING VALVE BRASS CONSTRUCTION, 1.9 LPM FLOW RATE, OS&B MODEL 3700 OPEN GRID STRAINER OS&B MODEL 3700WC OFFSET WASTE AND STRAINER TRUBRO MODEL 103 E-Z LAV GUARD UNDERSINK PIPING COVERS CHROME PLATED ANGLE STOPS AND ESCUTCHEONS WITH BRAIDED HOSE FLEX SUPPLIES			
<u>ES</u>				
E.H. PRICE MODEL COMPLETE WITH:	600X600 / SPD / 31 / B12. SQUARE PLAQUE DIFFUSER. TBAR CEILING MOUNTED EQUALIZING GRID SIZES AS INDICATED ON DRAWINGS			
E.H. PRICE MODEL 81D COMPLETE WITH:	/ F BORDER / B12 ALUMINUM EGGCRATE FACE EXHAUST GRILLE MOUNTING SUITABLE FOR CEILING TYPE OPPOSED BLADE DAMPER SIZES AS PER SCHEDULE ON DRAWING			
FIRE EXTINGUISHER				
NATIONAL FIRE EQUIPME MODEL CE-950-3 RECI DIMENSIONS COMPLETE WITH	NT FIRE EXTINGUISHER AND CABINET ESSED CABINET 229mm X 610mm X 152mm CABINET DIMENSIONS 22 GAUGE STEEL TUB, 16 GAUGE STEEL DOOR AND TRIM FULL LENGTH CONCEALED PIANO HINGE			
	AMERICAN STANDARD MC COMPLETE WITH: FLUSH VALVE: AMERICAN STANDARD MC COMPLETE WITH: FLUSH VALVE: FLUSH VALVE: COMPLETE WITH: WEIGHT WEIGHT WEIGHT ELS KOHLER VERTICYL RECT/ COMPLETE WITH: TRIM : ES E.H. PRICE MODEL 81D COMPLETE WITH: TRIM SIONS			

STAINLESS STEEL DOOR LATCH

4.5 KG ABC FIRE EXTINGUISHER

BAKED ENAMEL FINISH

4.5 KG ABC FIRE EXTINGUISHER COMPLETE WITH WALL BRACKET

FEX-2 NATIONAL FIRE EQUIPMENT FIRE EXTINGUISHER

4. ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PIPING ETC. TO BE REMOVED AS INDICTATED BY A DASHED HEAVY LINE. 5. ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PIPING ETC. TO REMAIN AS INDICATED BY A SOLID LIGHT LINE. 6. DEMOLITION CONTRACTOR TO REMOVE EXISTING HOT WATER UNIT HEATERS COMPLETE WITH CONTROLS AND SALVAGE TO OWNERS. 7. DEMOLITION CONTRACTOR TO REMOVE ALL EXISTING VENTILATION SUPPLY, THE EXTENT OF WORK. CARE MUST BE TAKEN NOT TO DAMAGE EXISTING REMAINING WALLS AND FLOORS WHEN REMOVING COMPONENTS. 8. DEMOLITION CONTRACTOR TO REMOVE ALL HOT WATER BASEBOARD WALL FIN AND CONVECTORS. REMOVE ALL HOT WATER HEATING SUPPLY & RETURN BE TAKEN NOT TO DAMAGE EXISTING WALLS & FLOORS WHEN REMOVING COMPONENTS. 9. DEMOLITION CONTRACTOR TO REMOVE ALL EXISTING PLUMBING FIXTURES & TRIM, DOMESTIC HOT, COLD & VENT TO RECIRCULATION LINES, VALVES, FITTINGS AND HANGERS BACK TO WATER HEATER, SOFTENER AND WATER METER. 10. DEMOLITION CONTRACTOR TO REMOVE ALL SANITARY DRAINAGE FROM ALL PLUMBING FIXTURES TO BASEMENT FLOOR. EXISTING SANITARY UNDER BASEMENT FLOOR FROM SUMP PITS AT EAST & WEST ENDS OF BUILDING

REMAIN

REGULATIONS.

GENERAL DEMOLITION NOTES: 1. DEMOLITION DRAWINGS INDICATE GENERAL ARRANGEMENT OF EXISTING MECHANICAL SYSTEMS. CONTRACTOR TO VERIFY ON SITE EXACT ARRANGEMENT AND EXTENT OF EXISTING MECHANICAL SYSTEMS. REFER TO NOTES FOR PIPING, DUCTWORK, EQUIPMENT, CONTROLS AND ACCESSORIES TO BE REMOVED.

2. DRAIN EXISTING SYSTEMS BEING REMOVED AND DISPOSE OF

FLUIDS OR REFRIGERANTS IN ACCORDANCE WITH GOVERNING 3. PIPING, DUCTWORK AND EQUIPMENT THAT IS BEING REMOVED TO BE DISMANTLED INTO SECTIONS SMALL ENOUGH TO ALLOW FOR EASY EXTRACTION AND REMOVAL FROM BUILDING.

RETURN AND EXHAUST DUCTWORK AND HANGERS, DIFFUSERS AND GRILLES AND ALL FITTINGS EXCEPT FOR INDICATED TO REMAIN ITEMS ON DRAWINGS. REMOVE EXISTING SUPPLY AIR UNIT AND EXHAUST FANS INCLUDING DAMPERS AND CONTROLS, CONTRACTOR MUST VISIT SITE TO FAMILIARIZE HIMSELF WITH

PIPING VALVES, FITTINGS & HANGERS BACK TO BOILER, CONTRACTOR MUST VISIT SITE TO FAMILIARIZE HIMSELF WITH THE EXTENT OF WORK. CARE MUST

TO WHERE SANITARY LEAVES THE BUILDING TO REMAIN. REMOVE BRANCH RUNS UNDER BASEMENT FLOOR AS INDICATED AND CAP-OFF AT MAIN. REMOVE EXISTING PLUMBING VENT RISERS AND BRANCH CONNECTIONS FROM REMAINING WALLS AND FLOORS WHEN REMOVING COMPONENTS.



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	2018-10-10	ISSUED FOR TENDER	wт

PROJECT

SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3,4,6,7,8,9

1900 ALBERT STREET REGINA, SASKATCHEWAN

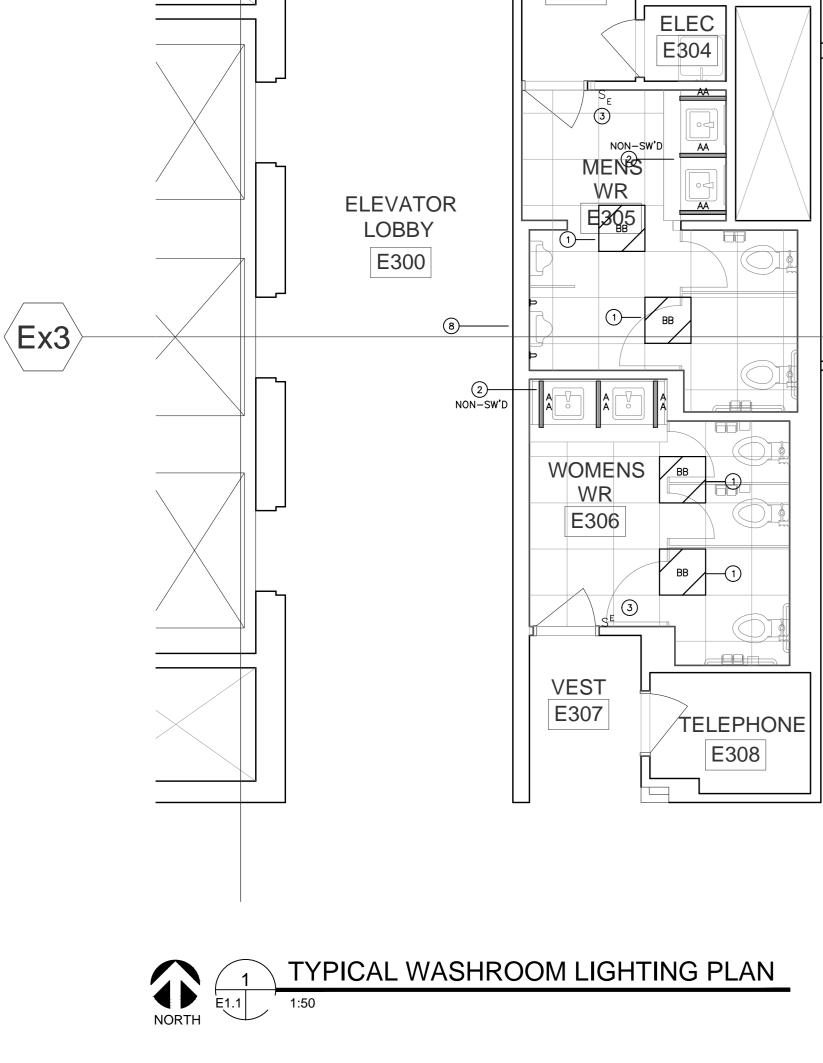
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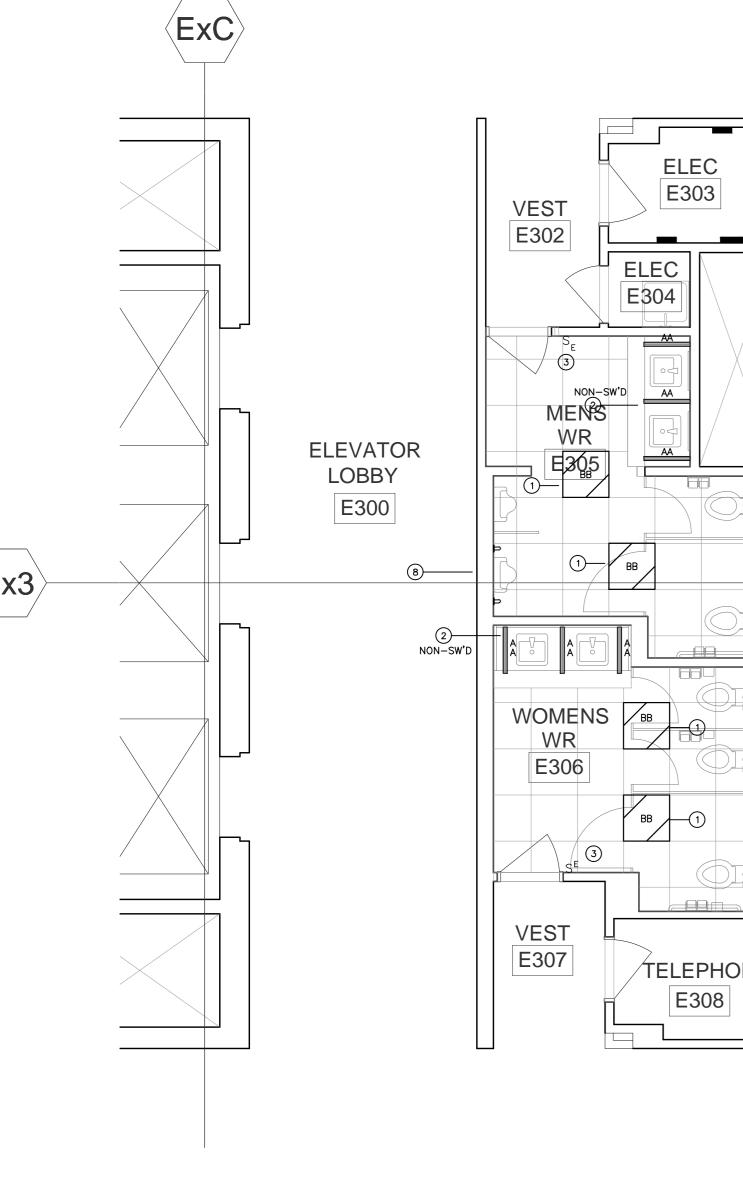
MECHANICAL SPECIFICATION EQUIPMENT SCHEDULE

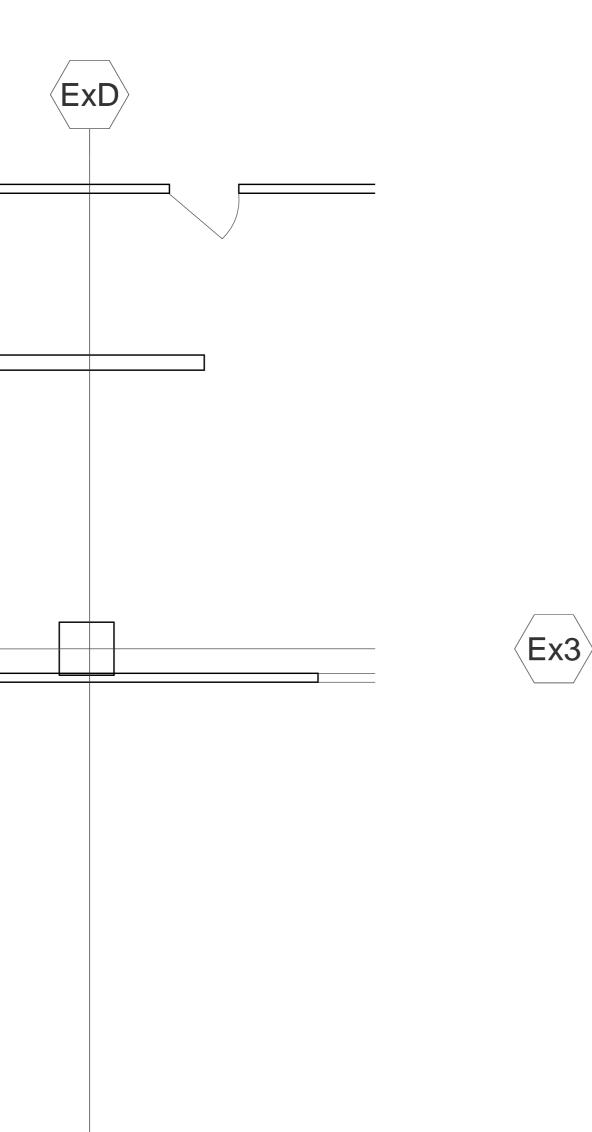
DESIGN BY	G.F.
DRAWN BY	W.T.
CHECKED	G.F.
APPROVED	
OWNER	DREAM
SCALE	AS NOTED
DATE	2018/10/10
FILE NO.	DRAWING NO.
	M3.1
Number of Sheets	

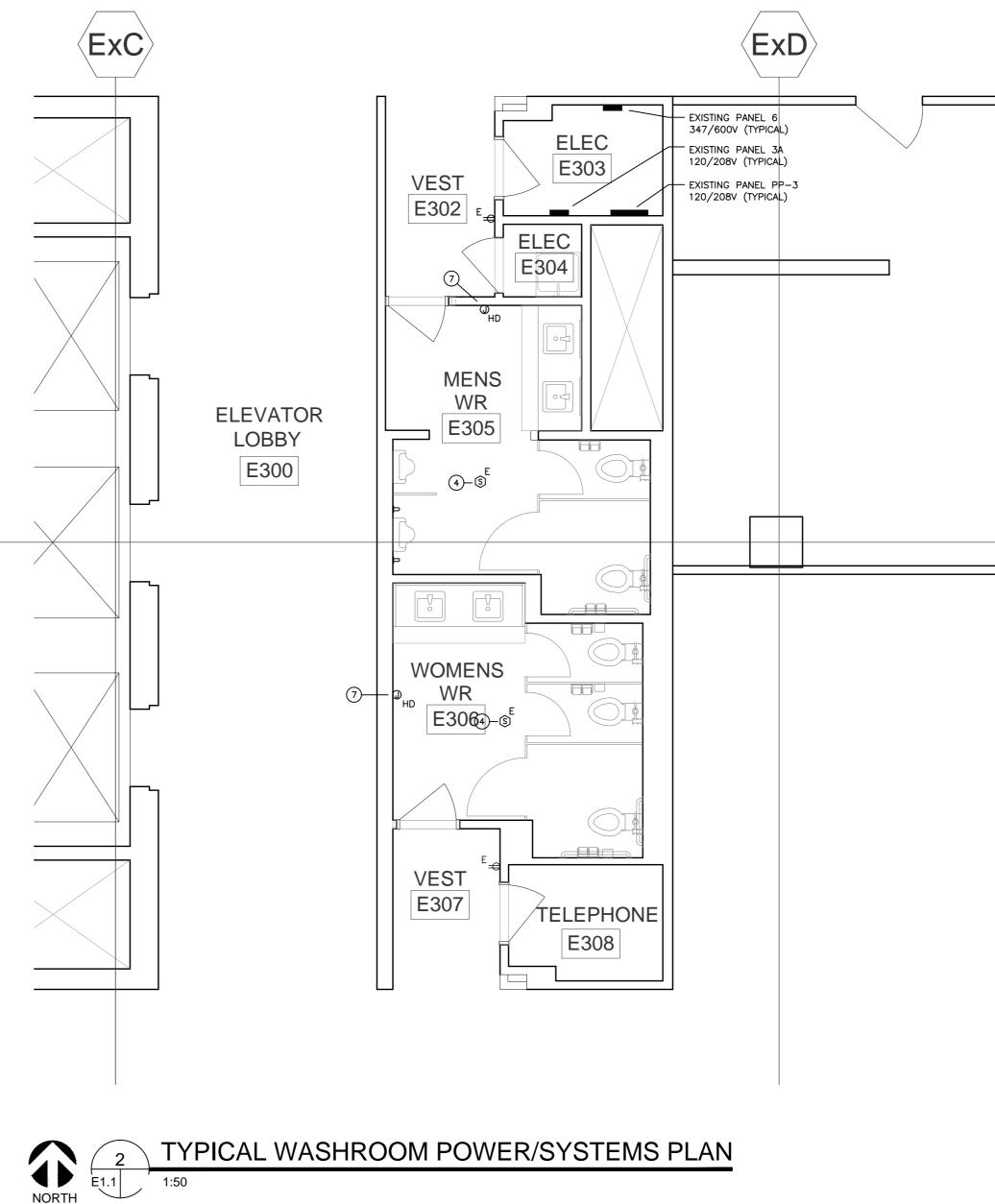
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- HEIGHT PRIOR TO ROUGH IN. PROVIDE NEW 20A 1P BREAKER IN EXISTING PANEL AND CABLING, USE OF AC-90 SHALL BE ACCEPTABLE FOR HAND DRYER. (8) APPROXIMATE LOCATION FOR NEW SWITCHES IDENTIFIED IN SEPARATE PRICE NOTES.
- 7 PROVIDE HARDWIRED CONNECTION TO HAND DRYER, CONNECTION SHALL BE 120V, 20A DEDICATED CONNECTION. CONFIRM FINAL LOCATION AND MOUNTING
- FROM NEAREST JUNCTION BOX IN CEILING SPACE. 6 TYPE AA SHALL BE 1220mm OVERALL LENGTH, PROVIDE 610mm VERTICAL SECTION AND 610mm HORIZONTAL SECTION, COMPLETE WITH 90° FULLY ILLUMINATED AND CONTINUOUS CORNER.
- (4) EXISTING FIRE ALARM SPEAKER SHALL BE RE-INSTALLED IN NEW CEILING. 5 PROVIDE NEW CONNECTED TO RECESSED TYPE A LIGHT FROM EXISTING VESTIBULE LIGHTING CIRCUIT. PROVIDE NEW FLEXIBLE ARMOURED CONNECTED
- 3 EXISTING WALL MOUNTED OCCUPANCY SENSOR SHALL REMAIN AND CONTROL NEW TYPE BB LIGHTING.
- (2) FIXTURE SHALL BE CONNECTED TO EXISTING EMERGENCY LIGHTING CIRCUIT IN WASHROOM. PROVIDE NEW FLEXIBLE ARMOURED CONNECTION FROM NEAREST JUNCTION BOX IN CEILING SPACE.
- CONNECTION FROM EXISTING JUNCTION BOX, PER LIGHT, FOR NEW LUMINAIRES.
- WASHROOM LIGHTING. CONTRACTOR SHALL PROVIDE NEW FLEXIBLE ARMOURED
- DETAIL 1 AND 2 DRAWING NOTES: (1) EXISTING WASHROOM LIGHTING CIRCUITRY SHALL BE REUSED FOR NEW LED









GENERAL NOTES

- 1. DETAILS 1 AND 2 DRAWING E1.1 REFERENCE TYPICAL LIGHTING, POWER AND SYSTEMS LAYOUTS. PROVISIONS SHALL BE PROVIDED FOR LEVELS 3, 4, 6, 7, 8 AND 9.
- 2. EXISTING FIRE ALARM DEVICES ON ALL LEVELS SHALL BE MAINTAINED DURING AND POST CONSTRUCTION. 3. ALL HEAT PUMP CONNECTIONS SHALL BE MADE FROM EXISTING TYPICAL 'PP' ON

EACH FLOOR. REFER TO E2.1 FOR TYPICAL PANEL SCHEDULE.

GENERAL DEMOLITION NOTES

- 1. EXISTING LIGHTING IN ALL WASHROOMS AND ELEVATOR LOBBIES SHALL BE REMOVED. PULL CABLING BACK TO NEAREST JUNCTION BOX.
- 2. EXISTING ELEVATOR LOBBY BULKHEADS SHALL BE REMOVED ANY FIRE ALARM DEVICES SHALL BE MAINTAINED DURING AND POST DEMOLITION.
- 3. REMOVE WALL MOUNTED LIGHTS IN VESTIBULES.
- 4. EXISTING FIRE ALARM SYSTEM IS NOTIFIER.
- 5. DEMOLITION SHALL BE COMPLETED FOR LEVELS 3, 4, 6, 7, 8 AND 9.

SEPARATE PRICE NOTES

LITHONIA EPANL SERIES

METALUX 14RTC SERIES

- 1. CONTRACTOR SHALL PROVIDE A SEPARATE PRICE TO PROVIDE NEW LED LUMINAIRES FOR LEVELS 3, 4, 6, 7, 8, AND 9. 347 VOLT IN SLAB CONDUIT LIGHTING GRID IS EXISTING AND SHALL BE REUSED. CONTRACTOR SHALL PROVIDE NEW AC-90 WHIPS, PER LUMINAIRE DAISY CHAINING SHALL NOT BE ACCEPTABLE, FROM NEAREST JUNCTION BOX.
- 2. REVISE LIGHTING CONTROL TO PROVIDE ON/OFF SWITCH AT ELEVATOR LOBBY, PER CIRCUIT.
- 2. PROVIDE QUANTITY OF 160 LUMINAIRES, PER FLOOR TO BE INSTALLED ON AN 2440mm (8') X 3000mm (10') OC PATTERN.
- 3. SEPARATE PRICE SHALL PROVIDE BREAKOUT PRICE INDICATING SASKPOWER
- COMMERCIAL LIGHTING INCENTIVE CREDIT FOR NEW TYPE CC AND DD LUMINAIRES. 4. PROVIDE BREAKOUT PRICE FOR LABOUR AND MATERIALS FOR TYPICAL FLOOR FOR EACH LUMINAIRE TYPE.
- 5. TYPE CC SHALL BE RECESSED LED FLAT PANEL. 347 VOLT, 300mm X 1220mm, 40 WATT, 4000 LUMEN, 4000K COLOUR TEMPERATURE. FIXTURE SHALL BE EQUIPPED WITH INTEGRAL 0-10 VOLT DIMMING AND SHALL HAVE FULLY DIFFUSED ACRYLIC LENS, WHITE TRIM. MAGIC LITE LED PANEL SERIES CFI FLUXPANEL SERIES
- 6. TYPE DD SHALL BE LUMINAIRE SHALL BE RECESSED LED TROFFER. 347 VOLT, 40 WATT, 4000 LUMENS, 4000K COLOUR TEMPERATURE, CENTER DIFFUSED OPAL ACRYLIC LENS 0-10 VOLT DIMMING CAPABLE. LITHONIA BLT 1X4 SERIES CFI FLUXGRID 1X4 SERIES

SYMBOL SCHEDULE • J J JUNCTION BOX/OUTLET BOX.

- XX / Q RECESSED FIXTURE, REFER TO FIXTURE SCHEDULE
- RECESSED LUMINAIRE CONNECTED TO EMERGENCY LIGHTING CIRCUIT. 'NON-SW'D' INDICATES NON-SWITCHED LUMINAIRE.
- WP M MOTOR CONNECTION. COORDINATE FINAL LOCATION ON SITE. REFER TO MOTOR CONTROL SCHEDULE 'STP' DESIGNATES MOTOR THERMAL SWITCH MOUNTED AT UNIT.
- HD HARDWIRED HAND DRYER CONNECTION
- ELECTRICAL DISTRIBUTION PANEL, SURFACE/RECESSED.
- (S) CEILING MOUNTED F/A SPEAKER.
- E SUFFIX 'E' INDICATES DEVICE IS EXISTING AND SHALL REMAIN ⇒ DUPLEX GROUNDED RECEPTACLE

FIXTURE SCHEDULE TYPE AA SHALL BE RECESSED LED LUMINAIRE SUITABLE FOR DRYWALL INSTALLATION.

347 VOLT, 1000 LUMENS/1220mm SECTION, 4000K COLOUR TEMPERATURE. FIXTURE SHALL BE 50mm (W) X 1220mm OVERALL LENGTH. PROVIDE 610mm VERTICAL SECTION, 90° CONTINUOUS, FULLY ILLUMINATED CORNER AND 610mm HORIZONTAL SECTION. FIXTURE SHALL BE EQUIPPED WITH OPAL DIFFUSED ACRYLIC LENS, FLUSH LENS WITH FLANGE. HIGHLY REFLECTIVE INTERIOR, WHITE FINISH.

AXIS SCULPT SERIES LUMENWERX VIA1.5 PATTERNS SERIES 3G LIGHTING LINEA SERIES

LUMENS, 30 WATT, 4000K COLOUR TEMPERATURE 610mm (W) x 610mm (L). LUMINAIRE SHALL BE SUITABLE FOR RECESSED T-BAR INSTALLATIONS. FIXTURE SHALL BE BAKED ON PAINTED WHITE HOUSING WITH HIGHLY REFLECTIVE INTERIOR AND COMPLETE WITH DIFFUSED ACRYLIC OPAL LENS.

METALUX ENCOUNTER SERIES PHILIPS SILKSPACE LED SERIES MARK LIGHTING WHISPER SERIES



ASSOCIATION OF PROFESSIONAL ENGINEERS OF SASKATCHEWAN CERTIFICATE OF AUTHORIZATION RITENBURG & ASSOCIATES LTD. NUMBER 52 PERMISSION TO CONSULT HELD BY: DISCIPLINE SASK. REG. No. 11167 Du ELECTRICAL

FIXTURE TYPE BB SHALL BE RECESSED LED LINEAR LUMINAIRE. 347 VOLT, 3000

0	2018-10-05	ISSUED FOR TENDER	LKV
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PROJECT

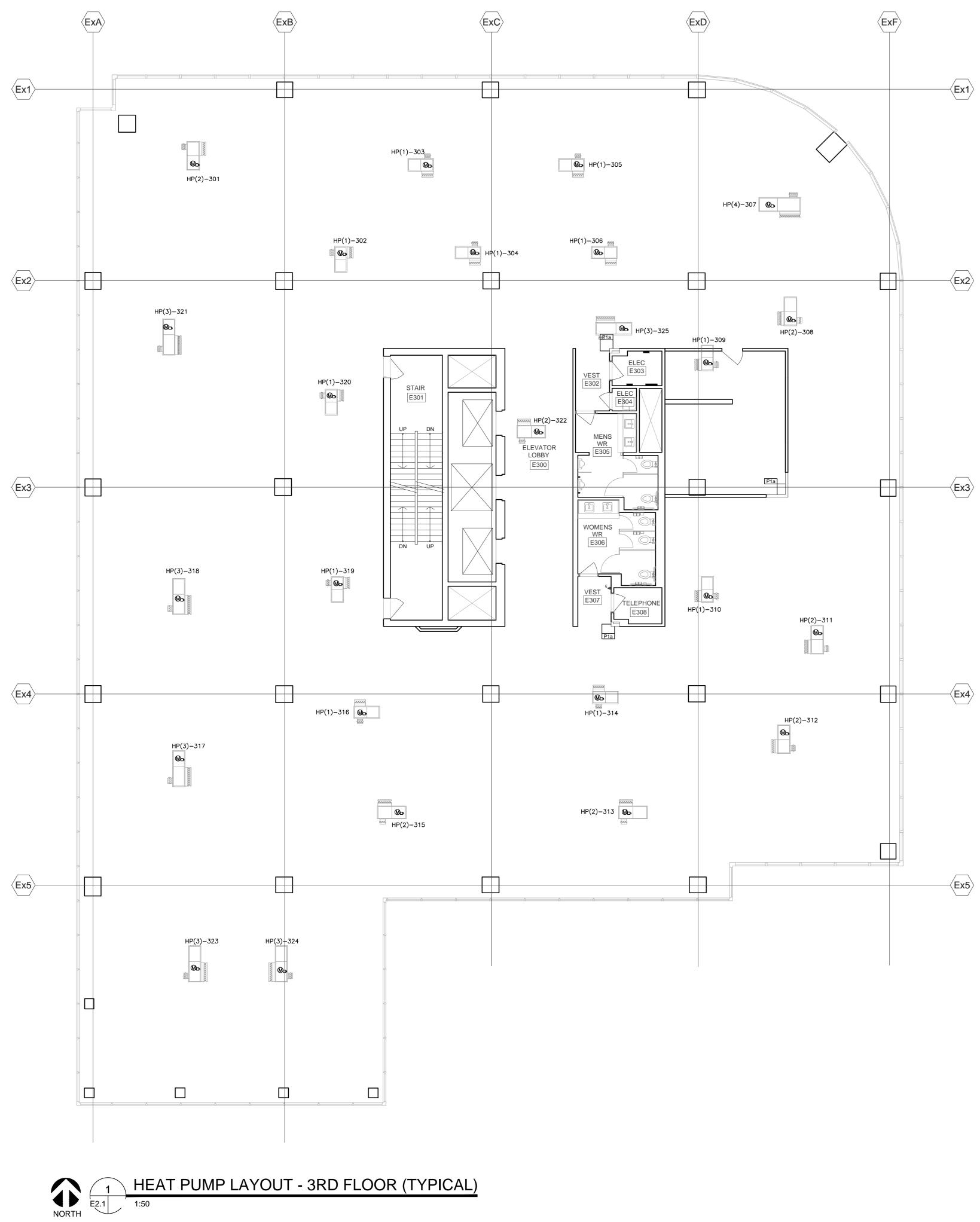
SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3, 4, 6, 7, 8, 9

1900 ALBERT STREET REGINA, SASKATCHEWAN

SHEET TITLE

LIGHTING AND POWER SYSTEMS PLANS LEVELS 3, 4, 6, 7, 8, 9

DESIGN BY	LKV
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ITEM	DESCRIPTION	MCA	HP	кw	VOLTAGE	ø	FLA	OCPD	FEEDERS
HP(1)-XX	TYPE 1 HEAT PUMP (XX = IDENTIFIER)	6.82	1/10	-	208	1	5.64	15A 2P	2 #12 RW90 + #12 INS. Cu. BND IN 21C
HP(2)-XX	TYPE 2 HEAT PUMP (XX = IDENTIFIER)	11.3	1/3	-	208	1	9.4	20A 2P	2 #12 RW90 + #12 INS. Cu. BND IN 21C
HP(3)-XX	TYPE 3 HEAT PUMP (XX = IDENTIFIER)	20	3	-	208	-	16.5	30A 2P	2 #10 RW90 + #12 INS. Cu. BND IN 21C
HP(4)-XX	TYPE 4 HEAT PUMP (XX = IDENTIFIER)	22.6	1/2	-	208	1	19.10	30A 2P	2 #10 RW90 + #12 INS. Cu. BND IN 21C

MECHANICAL EQUIPMENT SCHEDULE GENERAL NOTES

1. PROVIDE LOCAL DISCONNECT TO BE MOUNTED AT EQUIPMENT. 2. ALL CABLING AND CONDUIT SHALL BE NEW.

HP-311

HP-312 -

HP-313 [

GENERAL MECHANICAL HEAT PUMP NOTES	<u>GENERAL</u>	MECHANICAL	HEAT	PUMP	NOTES
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- DEMOLITION OF EXISTING HEAT PUMPS ON LEVELS 3, 4, 5, 6, 7, 8 AND 9 SHALL BE INCLUDED BY ELECTRICAL CONTRACTOR. HEAT PUMP DEMOLITION AND INSTALLATION SHALL BE COORDINATED AND PHASED WITH MECHANICAL CONTRACTOR INSTALLING HEAT PUMP PACKAGE. REFER TO FRONT END DOCUMENTATION FOR PHASING DOCUMENTATION AND NOTES.
- LOCATIONS OF HEAT PUMPS SHOWN FOR LEVEL 3 ARE TYPICAL SHALL BE PROVIDED FOR LEVELS 3, 4, 5, 6, 7, 8, AND 9. FINAL LOCATIONS OF MECHANICAL EQUIPMENT SHALL BE CONFIRMED PRIOR TO ROUGH IN.
- 3. UPDATED TYPICAL PANEL SCHEDULE PP-3 SHOWN IS BASED ON EXISTING PANEL PP-3 CONDITIONS AND SHALL BE CONFIRMED ON SITE BY CONTRACTOR PER LEVEL. EXISTING 20A-2P AND 30A-2P BREAKERS SHALL BE RE-USED WHERE POSSIBLE. ALL 15A-2P BREAKERS REQUIRED TO FEED NEW HEAT PUMPS SHALL BE NEW.
- 4. ALL BREAKERS NOT USED AS PART OF THIS RENOVATION SHALL REMAIN SPARE. HEAT PUMP QUANTITIES (PER FLOOR) ARE INCLUSIVE AND AS FOLLOWS:
 a. 4TH FLOOR - HP-401 TO HP-424
 b. 5TH FLOOR - HP-501 TO GP-525
 c. 6TH, 7TH, 8TH AND 9TH FLOORS - HP-X01 TO HP-X23

HP-306 $-\frac{31}{15}$ HP-309 - * 15 37

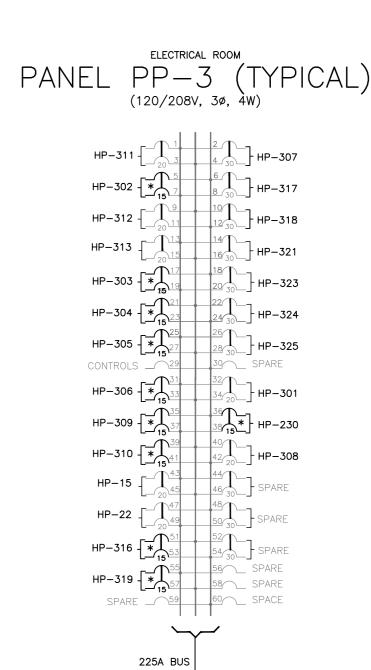
HP-310 - * 15⁴¹ HP-15 $\begin{bmatrix} 43 & 44 \\ 45 & 46 \end{bmatrix}$ S HP-22 - 49 HP-316 - * 15⁵³ $\sim \sim$ 225A BUS

PANEL SCHEDULE NOTES 1. BREAKERS SHOWN WITH '*' SHALL BE NEW.

2. BREAKERS SHOWN WITHOUT '*' SHALL BE EXISTING AND REUSED AS SHOWN



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PROJECT

SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3, 4, 6, 7, 8, 9

1900 ALBERT STREET REGINA, SASKATCHEWAN

SHEET TITLE

MECHANICAL SCHEDULE AND PANEL SCHEDULE

DESIGN BY	LKV
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- 1. PROVIDE LABOUR AND MATERIALS REQUIRED TO INSTALL, TEST AND PLACE INTO OPERATION A COMPLETE ELECTRICAL SYSTEM WITH FACILITIES AND SERVICES TO MEET THE REQUIREMENTS DESCRIBED HEREIN, AS SHOWN ON THE DRAWINGS, AND IN COMPLETE ACCORD WITH APPLICABLE CODES AND ORDINANCES. 2.ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2015 CANADIAN ELECTRICAL CODE, SASKATCHEWAN HUMAN RIGHTS ACCESSIBILITY STANDARD, LOCAL BY-LAWS, AND UTILITY REQUIREMENTS. WORK INVOLVING FIRE PROTECTION SHALL ALSO BE IN ACCORDANCE WITH UNDERWRITERS' LABORATORY OF CANADA, NATIONAL BUILDING CODE, NATIONAL FIRE CODE, NATIONAL STANDARD OF CANADA/UNDERWRITERS' LABORATORIES OF
- CANADA STANDARDS CAN/ULC-S524-06, CAN/ULC-S536-04, AND CAN/ULC-S537-04. 3.ALL WORK SHALL COMPLY WITH SASKPOWER'S REQUIREMENTS AND REGULATIONS. SUBMIT TO SASKPOWER TH NECESSARY NUMBER OF DRAWINGS AND SPECIFICATIONS FOR EXAMINATION AND APPROVAL PRIOR TO COMMENCEMENT OF WORK. PAY ASSOCIATED FEES. IN THE EVENT OF ANY INSPECTION AUTHORITY REQUESTING DEVIATION FROM THE DESIGN, NOTIFY THE CONSULTANT, AND OBTAIN APPROVAL BEFORE PROCEEDING WITH ANY
- 4.ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE AND SUBSTANTIAL MANNER, NEAT IN ITS MECHANICAL APPEARANCE AND ARRANGEMENT. A COMPETENT REPRESENTATIVE SHALL CONSTANTLY SUPERVISE THE WORK OF THIS DIVISION FROM BEGINNING TO COMPLETION AND FINAL ACCEPTANCE. SO FAR AS POSSIBLE, THE SAME SUPERVISOR AND WORKMEN SHALL BE EMPLOYED THROUGHOUT THE PROJECT'S DURATION. MATERIAL AND WORKMANSHIP NOT MEETING THE STANDARD INTENDED AND REQUIRED BY THIS SPECIFICATION SHALL, UPON INSTRUCTION FROM THE CONSULTANT, BE PROPERLY REPLACED WITHOUT FURTHER CHARGE OR CONSIDERATION. 5.ALL REFERENCES TO KNOWN STANDARD SPECIFICATIONS SHALL MEAN AND INTEND THE LATEST EDITION OF SUCH SPECIFICATION.
- 6.EXAMINE ALL DRAWINGS TO ENSURE THAT WORK UNDER THIS DIVISION CAN BE PROPERLY INSTALLED WITHOUT INTERFERENCE. WHERE DISCREPANCIES, AMBIGUITIES, OBVIOUS OMISSIONS OR ERRORS HAVE BEEN MADE IN DRAWINGS AND SPECIFICATIONS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLARIFY SAME PRIOR TO TENDER CLOSING. NO ALLOWANCE WILL BE MADE AFTER CONTRACT AWARD FOR ANY EXPENSE INCURRED BY THE CONTRACTOR FOR HAVING TO ADJUST THE WORK TO PROPERLY CONFORM. 7.ELECTRICAL DRAWINGS FOR THE WORK UNDER THIS DIVISION ARE DIAGRAMMATIC AND APPROXIMATELY TO SCALE, UNLESS DETAILED OTHERWISE. THEY ESTABLISH SCOPE, MATERIAL AND INSTALLATION QUALITY, AND ARE NOT
- DETAILED INSTALLATION INSTRUCTIONS. FOLLOW MANUFACTURER'S RECOMMENDED INSTALLATION DETAILS AND PROCEDURES FOR EQUIPMENT SUPPLEMENTED BY DETAILS GIVEN HEREIN AND ON PLANS SUBJECT TO APPROVAL OF THE CONSULTANT. 8.ASSUME FULL RESPONSIBILITY FOR LAYOUT OF THIS WORK, AND FOR ANY DAMAGE CAUSED TO THE OWNER OR OTHER DIVISIONS BY IMPROPER LOCATION OR CARRYING OUT OF THIS WORK. WHERE OUTLETS OR EQUIPMENT AY EFFECT ARCHITECTURAL OR SITE TREATMENT DESIRED, CONTACT THE CONSULTANT AND FOR INSTRUCTIONS
- OR DETAILED DRAWINGS. 9. THE ELECTRICAL CONTRACTOR SHALL CONNECT TO EQUIPMENT FURNISHED IN OTHER DIVISIONS AND BY OWNER. COOPERATE FULLY WITH THE CONSULTANT AND OTHER TRADES OF ELECTRICALLY OPERATED EQUIPMENT TO ENSURE PROPER ARRANGEMENT OF, AND PROVISIONS FOR ALL ELECTRICAL EQUIPMENT.
- 10. BEFORE COMMENCING THE WORK, THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE WORK OF OTHER SUB-TRADES, AND REPORT AT ONCE ANY DEFECTS OR INTERFERENCE AFFECTING THE WORK UNDER THIS CONTRACT, OR THE GUARANTEE OF SAME. 11. INSTALL EQUIPMENT GENERALLY IN LOCATIONS AND ROUTES SHOWN, CLOSE TO BUILDING STRUCTURE WITH MINIMUM INTERFERENCE WITH OTHER SERVICES OR FREE SPACE. REMOVE AND REPLACE IMPROPERLY INSTALLED EQUIPMENT TO THE SATISFACTION OF THE CONSULTANT AT NO EXTRA COST.
- 12. CEILING AND FLOOR OUTLET SYMBOLS ARE SCALED TO CENTRE LINE OF SYMBOL; SYMBOL DOES NOT INDICATE THE SIZE OR SHAPE. MOUNTING HEIGHT SHALL BE MEASURED TO THE LOWEST POINT OF CEILING MOUNTED EQUIPMENT 13. WALL OUTLETS ARE SCALED TO THE PERPENDICULAR CENTRE LINE OF THE SYMBOL. MOUNTING HEIGHTS FOR ALL WALL MOUNTED OUTLETS SHALL BE MEASURED TO THE HORIZONTAL CENTRE LINE.
- 14. LOCATION OF LIGHTING OUTLETS AND RECEPTACLES IN MECHANICAL OR EQUIPMENT ROOMS AND SIMILAR AREAS SHALL BE FINALIZED DURING CONSTRUCTION TO GIVE OPTIMUM ARRANGEMENT. THE CONSULTANT SHALL APPROVE FINAL LOCATION BEFORE INSTALLATION. 15. CHANGE LOCATION OF OUTLETS AT NO EXTRA COST OR CREDIT, PROVIDING DISTANCE DOES NOT EXCEED
- 3000 MM, AND INFORMATION IS GIVEN BEFORE INSTALLATION. 16. AS THIS PROJECT INVOLVES A RENOVATION TO AN OCCUPIED EXISTING BUILDING, THE CONTRACTOR SHALL VISIT THE SITE DURING THE TENDERING PERIOD, AND THOROUGHLY SATISFY HIMSELF THAT THE WORK CONTAINED IN THESE DRAWINGS AND SPECIFICATIONS CAN BE CARRIED OUT. NO ALLOWANCE WILL BE MADE AFTER CONTRACT AWARD FOR ANY EXPENSE INCURRED BY THE CONTRACTOR FOR HAVING TO ADJUST THIS WORK TO PROVIDE A COMPLETE, FULLY OPERATIONAL INSTALLATION.
- 17. SHOULD ANY CUTTING OR REPAIRING OF EITHER UNFINISHED OR FINISHED WORK BE REQUIRED, THE CONTRACTOR SHALL EMPLOY THE PARTICULAR TRADE WHOSE WORK IS INVOLVED, TO SO SUCH CUTTING AND PATCHING, AND SHALL PAY FOR ANY RESULTING COSTS. 18. HOLES REQUIRED IN EXISTING CONSTRUCTION TO ACCOMMODATE CONDUITS OR WIREWAYS SHALL BE CUT NEATLY OR DRILLED BY THIS DIVISION. MATERIALS
- 1. PROVIDE MATERIALS AND EQUIPMENT IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS. ALL GOODS AND MATERIALS SHALL BE NEW UNLESS OTHERWISE NOTED. ALL MATERIALS SHALL CARRY CSA APPROVED SEAL QUIPMENT AND MATERIAL TO BE CSA CERTIFIED. WHERE THERE IS NO ALTERNATIVE TO SUPPLYING EQUIPMEN WHICH IS NOT CSA CERTIFIED, OBTAIN SPECIAL APPROVAL FROM THE CONSULTANT AND THE ELECTRICAL INSPECTION DEPARTMENT.
- 2.ALL FIRE ALARM EQUIPMENT SHALL CARE ULC APPROVAL SEAL. 3.IN NO INSTANCE SHALL THE STANDARD ESTABLISHED BY THE DRAWINGS AND SPECIFICATIONS BE REDUCED BY ANY CODE OR ORDINANCE. ALL REFERENCES TO CODES SHALL BE TO THE LATEST EDITION. 4.ALL TENDERS SHALL BE BASED ON MATERIALS SPECIFIED, EXCEPT WHERE APPROVAL OF EQUIVALENT PRODUCTS HAS BEEN OBTAINED IN WRITING FROM THE CONSULTANT
- 5.NO DEVIATION FROM SPECIFIED MATERIALS SHALL BE ALLOWED, EXCEPT WHERE ALTERNATIVE MATERIALS HAVE BEEN SPECIFICALLY ACCEPTED IN WRITING.
- 6. WHERE MATERIALS ARE NOT DIRECTLY SPECIFIED BY CATALOGUE NUMBER AND MANUFACTURER'S NAME, A HIGH INDUSTRY SPECIFICATION GRADE PRODUCT SHALL BE PROVIDED. THE CONSULTANT SHALL BE THE SOLE JUDGE OF WHETHER THIS STANDARD IS BEING MET. SHOP DRAWINGS
- 1.SUBMIT SHOP DRAWINGS FOR NEW EQUIPMENT REQUIRED. THESE SHOP DRAWINGS SHALL BE SUFFICIENTLY DETAILED TO PERMIT THE OWNER'S TECHNICIANS TO TROUBLESHOOT AND REPAIR THE EQUIPMENT. EQUIPMENT SHALL NOT BE ORDERED AND/OR FABRICATED UNTIL THE CONSULTANT HAS REVIEWED SHOP DRAWINGS. 2.ALL SHOP DRAWINGS MUST BEAR AN APPROVAL STAMP AND BE SIGNED BY THE CONTRACTOR. THIS REVIEW DOES NOT RELIEVE THIS DIVISION FROM THE RESPONSIBILITY FOR THE FINAL INSTALLATION BEING CORRECT IN
- ALL DETAIL. AND FULLY ACCEPTABLE TO THE CONSULTANT 3.SHOP DRAWINGS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING SYSTEMS: 347/600 AND 120/208 VOLT PANELBOARDS, TRANSFORMERS, SWITCHES, FUSED AND NON-FUSED DISCONNECTS, MOTOR STARTERS, FUSES, WIRING DEVICES, LIGHT FIXTURES, BALLASTS, UNIT EQUIPMENT FOR EMERGENCY LIGHTING, EXIT SIGNS DOOR ACCESS CONTROL SYSTEMS, FIRE ALARM SYSTEMS, COMMUNICATIONS RACKS, COMMUNICATION CABLES AND PATCH PANELS. PROGRESS CLAIMS
- 1.ELECTRICAL PROGRESS CLAIMS SHALL BE BROKEN DOWN INTO TWELVE (12) PARTS TO FACILITATE ASSESSMENT OF WORK DONE AND MATERIAL SUPPLIED. THE BREAKDOWN SHALL INDICATE LABOUR AND MATERIAL TO THE NEAREST DOLLAR. OVERHEAD, PROFIT AND JOB EXPENSE SHALL BE APPORTIONED TO ALL PARTS. BREAKDOWN SHALL BE AS FOLLOWS: 1. MAIN SERVICES
- 2.DISTRIBUTION / PANELS CONDUIT AND BOXES 4.WIRE AND CABLE
- 5.MOTOR CONTROL 6. WIRING DEVICES LIGHTING FIXTURES AND LAMPS
- 8.ALARM SYSTEMS 9.COMMUNICATIONS SYSTEMS 10. SPECIALS
- MISCELLANEOUS 8% MAXIMUM 12. EXTRAS AND CREDITS
- AS BUILT DRAWINGS
- 1. MAINTAIN, ON A DAILY BASIS, A COMPLETE SET OF MARKED-UP PRINTS AS AS-BUILT DRAWINGS THAT SHOW IN COMPLETE DETAIL THE FINAL ARRANGEMENT AND LOCATION OF ALL ELECTRICAL COMPONENTS AND THE INTERCONNECTING WIRING. ALL RISER CONDUITS, PANEL FEEDS, CONDUIT RUNS OVER 200 AMP AND MAIN COMMUNICATIONS SHALL BE MARKED ON PLANS. THESE ARE TO BE MAINTAINED IN A NEAT AND SUBSTANTIAL MANNER, SO AS TO PROPERLY AND FULLY ILLUSTRATE THE WAY IN WHICH THE INSTALLATION HAS BEEN COMPLETE <u>WARRANTY</u>
- 1.ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION. PROPERLY REPAIR AND REPLACE ALL DEFECTIVE WORK AND OTHER WORK WHICH BECOMES DEFECTIVE DURING THE TERM OF WARRANTY. SERVICE ON EQUIPMENT OR SYSTEMS CRITICAL TO THE OWNER'S OPERATION SHALL BE PROVIDED ON EMERGENCY BASIS WHICH MAY NECESSITATE OVERTIME AND ERVICE OUTSIDE THE NORMAL WORKING HOURS. THE CONTRACTOR SHALL ENSURE THAT ALL SUPPLIERS COMPLY WITH THIS REQUIREMENT. MAINTENANCE MANUALS
- 1. UPON COMPLETION OF THE INSTALLATION, PROVIDE THREE (3) COMPLETE AND COMPREHENSIVE IDENTICAL SETS OF OPERATING AND MAINTENANCE MANUALS TO BE REVIEWED BY THE CONSULTANT PRIOR TO THE MANUALS BEING SENT TO THE OWNER. 2.THE OPERATING AND MAINTENANCE MANUALS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING INFORMATION:
- a.CERTIFICATION REPORTS. **b.DOCUMENTATION INDICATING OWNER'S RECEIPT OF OPERATING INSTRUCTIONS.**
- C.COMPLETE LIST OF ALL MATERIALS TURNED OVER TO THE OWNER C/W RECEIPTS FOR SAME. d SHOP DRAWINGS PROPERLY INDEXED AND CONTAINED IN SUITABLY SIZED ENVELOPES. e. MANUFACTURER'S INSTALLATION MANUALS AS SUPPLIED WITH THE EQUIPMENT OR DEVICE
- f. SCHEMATIC DRAWINGS FOR ALL SYSTEMS INDEXED AND CONTAINED IN SUITABLY SIZED ENVELOPE g.CATALOGUE BROCHURES FOR LIGHT FIXTURES, PANELBOARDS, SWITCHES, RECEPTACLES, FUSES, ETC. h. PHASE ROTATION CONFIRMATION BY THE CONTRACTOR. i. CERTIFICATE OF OWNER'S ELECTRICAL EQUIPMENT TRAINING. i. ACCEPTANCE TESTING REPORTS.
- 3. THE ABOVE INFORMATION SHALL BE BOUND IN BLACK, HARD-BACKED, THREE-RING, LETTERHEAD SIZE BINDERS. INCOMPLETE OR POORLY REPRODUCED MANUALS WILL BE REJECTED.
- 4.OPERATING AND MAINTENANCE MANUALS, AS WELL AS ALL OWNER INSTRUCTIONS, SHALL BE COMPLETE BEFORE SUBSTANTIAL COMPLETION (AS OUTLINED BY THE BUILDERS' LIEN ACT) WILL BE CONSIDERED. ALSO, PRELIMINARY MAINTENANCE MANUALS MUST BE SUBMITTED PRIOR TO 70% COMPLETION. NO FURTHER PROGRESS PAYMENTS WILL BE PERMITTED UNTIL THESE PRELIMINARY MAINTENANCE MANUALS HAVE BEEN SUBMITTED AND APPROVED. IDENTIFICATION
- 1. THIS CONTRACTOR SHALL INCLUDE IDENTIFICATION OF ALL NEW EQUIPMENT, JUNCTION BOXES, CIRCUITRY, ETC. TO ASSIST THE OWNERS IN FOLLOW UP MAINTENANCE OF THE SYSTEM. 2.LAMECOID NAMEPLATES SHALL BE PROVIDED FOR ALL NEW ELECTRICAL EQUIPMENT INCLUDING POWER PANELS,
- DISTRIBUTION PANELS, LIGHTING PANELS, TRANSFORMERS, DISCONNECT SWITCHES, CONTACTORS, TELEPHONE PANELS, MISCELLANEOUS SYSTEMS, MECHANICAL EQUIPMENT AND PANELS. LAMECOID LABELS TO IDENTIFY SUCH EQUIPMENT SHALL AS FOLLOWS: a.NORMAL POWER EQUIPMENT: BLACK SHEET WITH WHITE ENGRAVED LETTERS b.EMERGENCY POWER EQUIPMENT: RED SHEET WITH WHITE ENGRAVED LETTERS
- 3.LAMECOID NAMEPLATES, APPROXIMATELY 75 MM X 25 MM, SHALL BE PROVIDED ON FRONT DOORS OF EACH SWITCH FOR IDENTIFICATION, SHOWING THE NAME AND RATING. ALSO, A 150 MM X 50 MM NAMEPLATE SHALL BE PROVIDED ON TOP PORTION OF PANELBOARD FOR IDENTIFICATION. 4.NAMEPLATES FOR EACH ELECTRICAL PANEL SHALL INDICATE PANEL DESIGNATION, MAINS VOLTAGE AND PANEL

LETTERING.

- ELECTRICAL SYSTEMS, COMMUNICATION SYSTEMS, MEDICAL EMERGENCY AND FIRE ALARM SYSTEMS WITHIN THE RENOVATION AREA AS OUTLINED IN THE ELECTRICAL, MECHANICAL, AND ARCHITECTURAL DRAWINGS. SHALL BE STOCKPILED AS PER THE OWNER'S INSTRUCTIONS. THE SALVAGEABLE MATERIALS SHALL BE REMOVED FOR THE PURPOSES OF REUSE, AND UNUSED MATERIALS SHALL BE RETURNED AS PER THE OWNER'S INSTRUCTIONS. THE FOLLOWING MATERIALS SHALL BE SALVAGED AND RETURNED TO OWNER: LIGHTING FIXTURES, WIRING DEVICES, NURSE CALL STATIONS AND COMPONENTS, MEDICAL EMERGENCY ALARM PUSHBUTTON STATIONS AND ASSOCIATED MONITOR MODULES AND COVERPLATES, FIRE ALARM FIELD DEVICES.
- **DEMOLITION** 1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEMOLITION OF ALL EXISTING LIGHTING, 2.ALL SALVAGED MATERIALS SHALL REMAIN THE PROPERTY OF THE OWNER, UNLESS OTHERWISE NOTED, AND 3.EXISTING LIGHTING FIXTURES AND WIRING DEVICES BEING REMOVED SHALL BE RE-USED/RELOCATED AS SHOWN ON THE FLOOR PLANS. UNUSED FIXTURES AND WIRING DEVICES (SWITCHES, DUPLEX RECEPTACLES) SHALL BE
- TURNED OVER TO OWNER. 4.ALL ABANDONED CONDUIT, DUCTS, BOXES, WIRE AND CABLE (EXISTING CONDITIONS AND AS A RESULT OF THE RENOVATIONS) SHALL BE COMPLETELY REMOVED BACK TO THE SOURCE OR ORIGIN. 5. ALL EXISTING CEILING POWER DISTRIBUTION (CONDUIT, CABLE, OUTLET BOXES) THAT IS ABANDONED BY THE RENOVATION SHALL BE COMPLETELY REMOVED BACK TO THE EXISTING ELECTRICAL PANELS. 6.ALL EXISTING DATA AND VOICE CABLING, CONDUITS AND TRAY THAT IS ABANDONED SHALL BE COMPLETELY REMOVED BACK TO THE BIX BLOCKS OR DATA RACK, WHICH SHALL REMAIN. 7.EXISTING ELECTRICAL DEVICES ON WALLS NOT AFFECTED BY THE RENOVATION THAT ARE NOT SHOWN ON THE DRAWINGS SHALL REMAIN. 8. WHERE WALLS ARE TO BE REMOVED, THE CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL DEVICES SUCH AS RECEPTACLES, SWITCHES, COMMUNICATIONS AND DATA OUTLETS AND FIRE ALARM DEVICES. 9.ALL FIRE ALARM SYSTEM DEVICES REMOVED DURING THIS RENOVATION SHALL BE COMPLETELY REMOVED BACK TO THE NEAREST JUNCTION BOX. DEVICES SHALL BE SALVAGED FOR REUSE IN THE FINAL LAYOUT.

- 10. ALL EXISTING EXIT SIGNS SHALL REMAIN UNLESS NOTED OTHERWISE. FIRE BARRIERS 1. ALL CONDUIT AND CABLE PENETRATIONS IN HORIZONTAL AND VERTICAL FIRE BARRIERS SHALL BE SEALED WITH AN APPROVED FIRE SEAL SYSTEM CONSISTING OF A FIREPROOF CEMENT AND/OR SEALANT. ALL FIRE SEALS SHALL COMPLY WITH THE REQUIREMENTS OF THE PROVINCIAL FIRE COMMISSIONER AND THE LOCAL AUTHORITY HAVING JURISDICTION. COORDINATE WITH GENERAL CONTRACTOR AND CONFIRM FIRE BARRIER LOCATIONS. 2.WHERE POWER OR COMMUNICATION CABLES PASS THROUGH A FIRE BARRIER WITHOUT THE PROTECTION OF CONDUIT, A MULTI-CABLE TRANSIT SHALL BE USED WITHIN THE SLEEVED OPENING, AS MANUFACTURED BY HILTI, FIRESTOP PUTTY COMPOUND. FIRESTOP PUTTY PADS SHALL BE MANUFACTURED BY HILTI, STI - SPECIFIED TECHNOLOGIES INC., OR APPROVED EQUAL 4.FIRE PROOFING AND FIRE STOPPING OF ELECTRICAL RACEWAYS, CABLING, AND OUTLET BOXES FOR THIS
- STI SPECIFIED TECHNOLOGIES INC, OR LEGRANDE WIRELMOLD.
 3.ALL ELECTRICAL OUTLET BOXES INSTALLED IN PARTITIONS IDENTIFIED ON THE ARCHITECTURAL DRAWINGS AS A FIRE BARRIER OR SEPARATION SHALL BE PROTECTED WITH A NON-HARDENING, INTUMESCENT MOLDABLE
- CONDUIT/RACEWAYS/CONNECTIONS 1. CONDUIT FOR ALL POWER, COMMUNICATIONS AND SIGNAL SYSTEMS SHALL BE SUPPLIED AND INSTALLED AS HEREIN SPECIFIED. 2.CONDUIT AND CABLES IN FINISHED AREAS SHALL BE RUN CONCEALED, ABOVE FINISHED CEILINGS, AND IN WALLS AND PARTITIONS. CONDUIT AND CABLES IN UNFINISHED AREAS SUCH AS ELECTRICAL/ COMMUNICATION ROOMS, SHALL BE RUN EXPOSED. ALL CONDUIT/CABLING SHALL BE RUN AT RIGHT ANGLES OR PARALLEL TO BUILDING LINES AND MECHANICAL DUCTWORK, ACCURATE IN LINE AND LEVEL. 3.RUNS OF CONDUIT AND CABLES. WHERE SHOWN, ARE INDICATED ONLY BY GENERAL LOCATION AND ROUTING. CONDUITS AND CABLES SHALL BE INSTALLED TO PROVIDE MAXIMUM HEADROOM AND SPACE WITHIN ACCESSIBLE
- CEILINGS, AND TO INTERFERE AS LITTLE AS POSSIBLE WITH FREE USE OF SPACES THROUGH WHICH THEY PASS.
- WHERE SPACE IS INDICATED FOR FUTURE EQUIPMENT, LEAVE SPACE CLEAR. 4. CONDUITS SHALL NOT BE INSTALLED WITHIN OR BELOW THE CONCRETE POUR OF FLOORS OR WITHIN COLUMNS EXCEPT WHERE SPECIFICALLY NOTED 5. CONDUIT SHALL NOT BE BENT OVER SHARP OBJECTS. IMPROPERLY FORMED BENDS AND RUNNING THREADS
- WILL NOT BE ACCEPTED. BENDS AND FITTINGS SHALL NOT BE USED TOGETHER. COMPLIANCE WITH THE CANADIAN ELECTRICAL CODE. 7.CONDUIT AND CABLES SHALL BE INSTALLED TO AVOID PROXIMITY TO WATER AND HEATING PIPES. THEY SHALL NOT RUN WITHIN 150MM OF SUCH PIPES, EXCEPT WHERE CROSSINGS ARE UNAVOIDABLE, IN WHICH CASE THEY SHALL BE KEPT AT LEAST 25MM FROM COVERING OF PIPE CROSSED.
- 6.PROPER SUPPORTS OF MANUFACTURED CHANNELS SHALL BE INSTALLED, AND SHALL BE SPACED IN 8.CONDUIT SHALL BE OF SUFFICIENT SIZE TO PERMIT EASY REMOVAL OF CONDUCTORS AT ANY TIME. CONDUIT SIZES, WHERE SHOWN ON DRAWINGS, ARE MINIMUM AND SHALL NOT BE REDUCED. THE MINIMUM SIZE OF CONDUIT SHALL BE 21MM.
- 9.ALL EMPTY CONDUIT PROVIDED SHALL BE COMPLETE WITH PULL TWINE. 10. NOT MORE THAN FOUR (4) 90 DEGREE BENDS OR EQUIVALENT OFFSETS WILL BE PERMITTED BETWEEN PULL BOXES. WHEN MAXIMUM NUMBER OF BENDS IS USED, THE TOTAL RUN BETWEEN PULL BOXES SHALL NOT
- EXCEED 18000 MM. 11. JUNCTION BOXES OR CABLE ANCHOR BOXES SHALL BE INSTALLED WHEREVER NECESSARY FOR PROPER PULLING OR ANCHORING OF CABLES. THEY SHALL BE INSTALLED TO BE ACCESSIBLE AFTER BUILDING IS COMPLETED, AND SHALL BE SET TO COME WITHIN FINISHED LINES OF THE BUILDING. CONDUIT TO OUTLETS BOXES SHALL NOT BE RUN HORIZONTALLY WITHIN WALLS. ALL CONNECTIONS SHALL BE MADE VERTICALLY THROUGH THE WALL STRUCTURE. 13. EMT COUPLINGS AND CONNECTORS SHALL BE SET-SCREW TYPE EXCEPT IN ELECTRICAL, MECHANICAL, COMMUNICATION, AND SPRINKLER ROOMS, WHICH SHALL BE WATER-TIGHT.
- 14. FLEXIBLE CONDUIT AND EMT CONNECTORS SHALL BE OF THE INSULATED THROAT TYPE. 15. ALL CONDUITS SHALL BE TERMINATED WITH A SUITABLE BUSHING TO PROTECT CONDUCTORS OR CABLE FROM 16. EMT ENTERING BOXES OR ENCLOSURES SHALL BE TERMINATED WITH NYLON INSULATED CONCRETE TIGHT
- CONNECTORS. 17. PVC CONDUIT AND NON-METALLIC TUBING SHALL NOT PASS THROUGH A FIRE PARTITION OR FLOOR
- SEPARATION. WHERE IT IS NECESSARY FOR PVC CONDUITS OR NON-METALLIC TUBING TO PASS THROUGH A FIRE BARRIER, A HILTI FIRE STOP COLLAR SHALL BE PROVIDED FOR EITHER SIDE OF THE FIRE BARRIER. ALSO, PVC CONDUIT AND NON-METALLIC TUBING SHALL NOT BE USED IN RETURN AIR PLENUMS. CONDUCTORS
- 1. ALL CONDUCTORS SHALL BE COPPER AND MINIMUM #12 AWG (COPPER). ALL CONDUCTORS #12 AWG TO #8 AWG SHALL BE RATED FOR MINIMUM 600V RW-90 XLPE. CONDUCTORS #6 AWG AND LARGER SHALL BE RATED FOR MINIMUM 1000V RW-90 XLPE. WIRING IN CHANNEL BACK OF FLÜORESCENT FIXTURES SHALL BE 600V TYPE GTF OR TEW. SIZE, GRADE OF INSULATION, VOLTAGE AND MANUFACTURER'S NAME SHALL BE MARKED AT REGULAR INTERVALS. 2.CONDUCTORS SHALL BE COLOR CODED. CONDUCTORS #2 AWG AND SMALLER SHALL HAVE COLOR IMPREGNATED INTO INSULATION AT TIME OF MANUFACTURE. CONDUCTORS SIZE NO. 1 AWG AND LARGER MAY BE COLOR CODED WITH ADHESIVE COLOR CODING TAPE, BUT ONLY BLACK INSULATED CONDUCTORS SHALL B EMPLOYED IN THIS CASE, EXCEPT FOR NEUTRALS, WHICH SHALL BE WHITE WHEREVER POSSIBLE. COLOR CODING SHALL ALSO APPLY TO BUSING IN PANELS. COLOR CODING SHALL BE AS FOLLOWS:
- PHASE 'A' RED GROUND GREEN OR BARE PHASE 'B' – BLACK NEUTRAL – WHITE
- PHASE 'C' BLUE CONTROL ORANGE 3.HOME RUNS TO 120/208 VOLT LIGHTING AND RECEPTACLE PANELS WHICH EXCEED 30000 MM IN LENGTH SHALL BE MINIMUM NO. 10 GAUGE.
- 4.BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED TO PERFORM AT A MAXIMUM VOLTAGE DROP OF 3% BASED ON THE CIRCUIT LOAD OF 80% OF THE CIRCUIT PROTECTIVE DEVICE. 5.ALL CONDUCTOR SIZES SHOWN ARE BASED ON THE 750C AMPACITY RATING OF THE CANADIAN ELECTRICAL CODE DUE TO THE VARYING ELECTRICAL EQUIPMENT TERMINATION RATINGS. ELECTRICAL CONTRACTOR MAY REVISE CONDUCTOR SIZES BASED ON 900C RATINGS BUT IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE TERMINATIONS RATINGS FOR ALL EQUIPMENT IS COORDINATED WITH THE APPROPRIATE CONDUCTOR AND BONDING AMPACITY RATING AS REQUIRED BY THE C.E.C. CONTRACTOR SHALL CONFIRM WITH THE CONSULTANT THAT THEY
- ARE USING 90 DEGREE LUGS AND CABLE PRIOR TO INSTALLATION. 6. WHERE CONDUCTOR SIZES ARE SHOWN ON DRAWINGS THEY HAVE BEEN BASED ON A MAXIMUM OF 3 HOT CONDUCTORS INSTALLED IN A CONDUIT. THESE CONDUCTOR SIZES ARE BASED ON TABLES IN C.E.C. WHERE ADDITIONAL CONDUCTORS ARE INSTALLED WITHIN A CONDUIT CONDUCTORS SIZES MAY NEED TO BE INCREASED D REFLECT THE NEW CORRECTION FACTOR. FOR ALL CIRCUITS EXCEEDING 15A CONTRACTOR SHALL CONFIRM WITH THE CONSULTANT ALL NECESSARY INCREASES IN CONDUCTOR SIZES REQUIRED PRIOR TO INSTALLING MORE THAN 3 CONDUCTORS IN A CONDUIT. IN NO CASE UNLESS APPROVED BY THE CONSULTANT SHALL MORE THAN 6 HOT CONDUCTORS BE INSTALLED IN ONE CONDUIT.
- 7.ALL CONDUCTORS SHALL BE INSTALLED WITHIN EMT UNLESS NOTED OTHERWISE. TECK CABLE AND FLEXIBLE ARMOURED CABLE MAY BE INSTALLED ONLY WHERE SPECIFICALLY INDICATED ON DRAWINGS OR SPECIFICATIONS OR WHERE THE BUILDING CONSTRUCTION DOES NOT ALLOW FOR THE PROPER INSTALLATION OF CONDUIT OR RACEWAY. THE USE OF TECK AND FLEXIBLE ARMOURED CABLES SHALL BE APPROVED BY THE CONSULTANT PRIOR TO INSTALLATION.
- 8.FLEXIBLE ARMOURED CABLE SHALL BE TYPE AC90 WITH INTERLOCKING ARMOUR FABRICATED FROM ALUMINUM STRIP. CONDUCTORS SHALL BE COPPER WITH RW90 INSULATION. ARMOURED CABLE SHALL BE USED ONLY WHERE INDICATED. 9.FLEXIBLE ARMOURED CABLE MAY BE INSTALLED FOR MOTOR CONNECTIONS AND FROM CEILING JUNCTION BOXES GHT FIXTURES 10. FLEXIBLE ARMOURED CABLE MAY BE INSTALLED IN FINISHED WALLS OR CEILINGS WHERE WIRING IS TO BE
- FISHED AND IS IMPRACTICABLE TO INSTALL CONDUIT AND WITHIN MILLWORK CONSTRUCTION. 11. FLEXIBLE ARMOURED CABLE SHALL NOT BE EXPOSED OR INSTALLED HORIZONTALLY WITHIN WALLS.
- 12. ALL CONNECTIONS TO SWITCHES, OUTLETS, ETC SHALL BE MADE VERTICALLY THROUGH THE WALL 13. TERMINATION FOR #8 AWG AND LARGER SHALL BE BY MEANS OF APPROVED SOLDERLESS CONNECTOR LUG. FOR PARALLEL CONDUCTORS, A COMMON LUG WITH SEPARATE TERMINATION FOR EACH CONDUCTOR SHALL BE EMPLOYED.
- 14. WIRE SHALL BE AS MANUFACTURED BY NEXANS OR BICC GENERAL WIRE.

CIRCUIT NUMBER FROM WHICH THE PANEL IS FED.

5.NAMEPLATES FOR DISCONNECTS SHALL INDICATE EQUIPMENT BEING CONTROLLED AND VOLTAGE. 6.LAMECOID NAMEPLATES SHALL BE FASTENED TO EQUIPMENT IN A CONSPICUOUS LOCATION WITH SELF TAPPING 7. FEEDER PULL BOXES AND JUNCTION BOXES SHALL BE IDENTIFIED WITH WATERPROOF INK, SHOWING FEEDER OR SYSTEM CONCERNED. CONDUIT ENTERING JUNCTION BOXES FOR COMMUNICATIONS SYSTEMS SHALL BE IDENTIFIED WITH THE ROOM NUMBER THAT EACH CONDUIT SERVES. 8.BRANCH CIRCUIT IDENTIFICATION SHALL BE PROVIDED ON ALL PLUG-IN TYPE RECEPTACLES AND LOCAL SWITCHES, AND SHALL BE IDENTIFIED BY A CLEAR 12MM LAMINATED MARKER TAPE WITH CONTRASTING BLACK

DIVISION SHALL BE A COMPLETE UL/ULC CERTIFIED SYSTEM, AND SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER'S RECOMMENDED INSTALLATION DETAILS AND PROCEDURES.

<u>DUTLET BOXES</u>

- . PROVIDE OUTLET BOXES SUITABLE FOR THE APPLICATION AND LOCATION OF THE DEVICES. ALL BOXES SHALL BE SIZED IN ACCORDANCE WITH CSA C22.1. 2.ALL OUTLET BOXES FOR COMMUNICATIONS SYSTEMS SHALL BE 102MM SQUARE OUTLET BOXES WITH EXTENSION AND PLASTER RINGS FOR FLUSH MOUNTING DEVICES IN FINISHED WALLS
- 3.EACH OUTLET BOX INSTALLED IN STEEL STUD AND GYPROC WALLS SHALL BE MOUNTED ON CADDY #BHA, SERIES SGB OR TSGB SCREW GUN BRACKETS. WOOD STRAPPING WITH STEEL STUDS SHALL NOT BE UTILIZED FOR SUPPORTING OUTLET BOXES.
- 4.EACH OUTLET BOX INSTALLED IN ACOUSTIC TILE CEILINGS SHALL BE MOUNTED ON DOUBLE CADDY "TEE BAR HANGER" #512 IN SUCH A MANNER THAT THE OUTLET BOX WILL NOT TWIST IN ANY DIRECTION. 5. WHERE BOXES ARE SURFACE MOUNTED IN UNFINISHED AREAS, SUCH AS FURNACE OR BOILER ROOMS, STAMPED GALVANIZED STEEL 100 MM SQUARE BOX TO ACCEPT #8300 SERIES RAISED COVERS SHALL BE USED.
- 6.PROVIDE BLANK COVER PLATES FOR BOXES WITHOUT WIRING DEVICES. 7. WHERE SURFACE WIRING METHODS ARE ALLOWED AND APPROVED IN FINISHED AREAS, USE HUBBELL OR WIREMOLD BOXES AS PER DRAWINGS C/W SUITABLE ADAPTER FOR WIREWAY ENTRANCE. COVERPLATES
- 1.METAL WALL PLATES SHALL BE PROVIDED FOR ALL SWITCHES, RECEPTACLES, BLANKS, TELEPHONE AND SPECIAL PURPOSE OUTLETS. THE WALL PLATES SHALL BE OF SUITABLE CONFIGURATION FOR THE DEVICE FOR WHICH IS TO COVER WITH COLOR MATCHED MOUNTING SCREWS. USE GANGED PLATE WHERE MORE THAN ONE DEVICE OCCURS AT ONE LOCATION. METAL WALL PLATES SHALL BE STAINLESS STEEL
- 2.BLANK COVER PLATES IN FINISHED CEILING AREAS SHALL BE COLUMBIA ELECTRIC #9002 BAKED WHITE ENAMEL FOR WHITE CEILINGS, OR PAINTED TO MATCH COLORED FINISHES. 3. WHERE SURFACE WIRING METHODS NEED TO BE EMPLOYED IN A HIGH FINISH AREA, STAINLESS STEEL WALL PLATES SHALL BE USED IN CONJUNCTION WITH WIREMOLD SURFACE BOX TO SUIT THE DEVICE.
- CONVENIENCE OUTLETS & SWITCHES 1. CONVENIENCE OUTLETS SHALL BE WHITE, SPECIFICATION GRADE, STRAIGHT BLADE, 15A, 125 VOLT, 3 WIRE, SELF-GROUNDING, BACK AND SIDE WIRED C/W HIGH IMPACT CHEMICAL RESISTANT MOLDED NYLON OR POLYCARBONATE FACE. DEVICE TO ACCEPT UP TO #10 COPPER CONDUCTORS ON BACK WIRING. ALL RECEPTACLES TO BE OF ONE OF THE FOLLOWING MANUFACTURERS: ARROW HART, BRYANT, EAGLE, HUBBELL, LEVITON OR PASS & SEYMOUR.
- 2.120/277 VOLT SWITCHES SHALL BE QUIET SPECIFICATION GRADE TYPE, RATED AT 15A, C/W WHITE TOGGLE FULL RATED CURRENT CAPACITY ON FLUORESCENT, TUNGSTEN AND RESISTIVE LOADS; MOTOR LOAD CAPACITY UP TO 80% OF SWITCH RATING. ACCEPT UP TO #10 COPPER CONDUCTOR, BACK AND SIDE WIRED. ALL SWITCHES SHALL BE OF ONE OF THE FOLLOWING MANUFACTURERS: ARROW HART, EAGLE, HUBBELL, LEVITON, PASS & SEYMOUR.
- 3.347 VOLT SWITCHES SHALL BE QUIET SPECIFICATION GRADE 15A SWITCHES SHALL BE C/W WHITE TOGGLE EXCEPT FOR EMERGENCY LIGHTING WHERE RED TOGGLE SHALL BE USED, AND SHALL NOT BE INTERCHANGEABLE WITH 120/277 VOLT SWITCHES. SWITCHES SHALL ACCEPT UP TO #10 COPPER CONDUCTOR, AND SHALL BE SIDE OR BACK WIRED. SPECIAL BARRIERED OUTLET BOXES REQUIRED. ALL SWITCHES SHALL BE OF ONE OF THE FOLLOWING MANUFACTURERS: ARROW HART, EAGLE, HUBBELL, LEVITON, PASS & SEYMOUR. GROUNDING
- 1. THE ENTIRE INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE 2015 CANADIAN ELECTRICAL CODE AND DETAILS AS SHOWN ON THE DRAWINGS 2.ALL GROUND CONDUCTORS SHALL BE BARE OR INSULATED, STRANDED, MEDIUM HARD DRAWN COPPER WIRE.
- ALL INSULATED GROUND WIRES SHALL BE GREEN. 3.ALL NON-CURRENT CARRYING METALLIC PARTS OF EQUIPMENT IN ELECTRICAL ROOMS AND MECHANICAL EQUIPMENT ROOMS SHALL HAVE A DIRECT COPPER CONNECTION RUN TO THE GROUND BUS IN EACH.
- 4.ALL METALLIC RACEWAYS AND CONDUITS FOR COMMUNICATIONS, CABLE AND CONDUCTORS SHALL BE GROUNDED. 5.ALL BRANCH CIRCUITS SHALL INCLUDE A GROUND WIRE. CONDUIT SHALL NOT BE USED AS A GROUND.
- PANELBOARDS I.ALL BREAKER PANELS SHALL BE LOAD BALANCED SUCH THAT THE MAXIMUM VARIATION BETWEEN THE TWO WORST PHASES DOES NOT EXCEED 5%. 2.BRANCH CIRCUIT BREAKER SHALL HAVE QUICK-MAKE, QUICK-BREAK TOGGLE MECHANISM WITH SINGLE, TWO OR
- THREE POLE COMMON TRIP THERMAL MAGNETIC UNITS IN AMPERE RATINGS AS DESIGNATED ON THE DRAWINGS. BREAKER HANDLES SHALL HAVE THREE POSITIONS: 'ON', 'OFF' AND 'TRIPPED'. ALL CIRCUIT BREAKERS AND PANEL BUS SHALL HAVE AN INTERRUPTING CAPACITY OF 10,000 AMPS SYMMETRICAL. 3.EACH PANEL SHALL BE COMPLETE WITH A TYPED DIRECTORY, WHICH SHALL BE MOUNTED INSIDE THE DOOR IN A METAL FRAME WITH CLEAR PLASTIC COVER.
- 4.ALL PANEL DIRECTORIES AFFECTED BY THIS PROJECT SHALL BE UPDATED. PROVIDE A NEW UPDATED TYPED PANEL DIRECTORY WITHIN A CLEAR PLASTIC COVER AS REQUIRED. STICKERS OR WRITING ON THE PANEL DOOR IS NOT ACCEPTABLE. MOTOR CONTROL
- I.PROVIDE ALL MOTOR CONNECTIONS, INCLUDING STARTERS, OVERLOAD PROTECTION AND DISCONNECTING DEVICES AT MOTORS. ALL MOTOR DRIVEN EQUIPMENT SHALL BE PROVIDED WITH A LOCKABLE DISCONNECTING DEVICE. 2.SUPPLY AND INSTALL COMPLETE WIRING REQUIREMENTS FOR FULL VOLTAGE IN-LINE DEVICES ON SINGLE PHASE EQUIPMENT SUCH AS THERMOSTATS, MULTI-SPEED SWITCHES FOR FORCE FLOWS, CABINET HEATERS, ETC. SINGLE PHASE TYPE MOTOR THERMAL SWITCHES THAT ARE LOCATED IN ENTRANCE VESTIBULES SHALL BE THE
- FLUSH MOUNTED. KEY OPERATED TYPE TO PREVENT TAMPERING BY UNAUTHORIZED PERSONNEL 3.ALL THREE PHASE STARTERS SHALL BE COMBINATION QUICK-MAKE, QUICK-BREAK, SWITCH, FUSE AND MAGNETIC STARTER C/W RED AND GREEN INDICATOR LIGHTS, H.O.A. OR START-STOP SWITCH AND TWO SPARE AUXILIARY CONTACTS, IN ADDITION TO THOSE REQUIRED FOR THE PILOT LIGHTS. EACH STARTER SHALL I EQUIPPED WITH A SEPARATE 120 VOLT CONTROL TRANSFORMER, SIZED SUFFICIENTLY LARGE ENOUGH TO ALLOW FOR 50 VA SUPPLY TO EXTERNAL CONTROL DEVICES IN ADDITION TO THE STARTER INTERNAL REQUIREMENT. PROVIDE PRIMARY FUSE FOR THIS CONTROL TRANSFORMER. STARTERS SHALL NOT BE EQUIPPED WITH AN AUTOMATIC THERMAL OVERLOAD RESET. THE OVERLOAD RELAYS SHALL BE THE AMBIENT TEMPERATURE COMPENSATED TYPE, AND THE TRIP RATING OF A SPECIFIC HEATER ELEMENT SHALL BE FIELD ADJUSTABLE OVER A RANGE OF APPROXIMATELY 85% + 115% OF ITS RESPECTIVE RATING.
- 4.CHECK OTHER DIVISIONS TO ENSURE THAT SUITABLE PROVISIONS HAVE BEEN PROVIDED FOR ALL MOTORS. IT IS POSSIBLE THAT SOME MOTORS MAY VARY IN SIZE, NUMBERS AND CHARACTERISTICS, DEPENDING ON THE EQUIPMENT MANUFACTURER'S SPECIFIC REQUIREMENTS. ANY VARIATIONS IN THIS REGARD WILL NOT CONSTITUTE CAUSE FOR FURTHER CONSIDERATION
- <u>ED LIGHTING LAMP MODULES AND DRIVERS</u> 1.SOLID-STATE LIGHTING (LED LUMINAIRES) SHALL COMPLY WITH ENERGY STAR® SSL TEST STANDARDS FOR THE FOLLOWING QUALIFICATION REQUIREMENTS: .1 TESTING: SSL TESTING STANDARDS INCLUDING IES LM-79-2008 AND LM-80-2008 AS PERFORMED BY AN INDEPENDENT TEST LAB.
- .2 EFFICACY: THE LUMINAIRE TEST DATA AND SUBMITTED REPORT SHALL DEMONSTRATE A MINIMUM OF 35 LUMENS PER WATT AND 575 LUMENS FOR THE LEAST EFFICIENT LED FOR APERTURES 2 4.5" (345 LUMENS FOR APERTURES \leq 4.5"), LOWEST EFFICIENT OPTIC, AND HOTTEST LUMINAIRE CONFIGURATION FOR THE PRODUCT GROUP SUBMITTED FOR QUALIFICATION.
- .3 COLOUR: LED LUMINAIRE SHALL DEMONSTRATE COLOUR UNIFORMITY ACROSS THE APERTURE. .4 POWER: THE DRIVER/POWER SUPPLY MUST HAVE A POWER FACTOR OF > 0.90 FOR ALL NON-RESIDENTIAL PRODUCTS, MEET FCC REQUIREMENTS, SOUND RATING OF A AND PROVIDE TRANSIENT PROTECTION.
- .5 RELIABILITY: THE LED LUMINAIRE SHALL DEMONSTRATE 70% LUMEN MAINTENANCE AT 35,000 HOURS FOR NON-RESIDENTIAL PRODUCTS, AS CALCULATED USING THE DOE'S LINEAR EXTRAPOLATION MODEL. 2.TIGHT CHROMATICITY SPECIFICATION AND LED COLOUR BINNING PROCESS SHALL ENSURE LED COLOUR
- UNIFORMITY, SUSTAINABLE COLOUR RENDERING INDEX (CRI) AND CORRELATED COLOUR TEMPERATURE (CCT) CONSISTENCY OVER THE USEFUL LIFE OF THE LED. CONSISTENT COLOUR UNIFORMITY AND TIGHT COLOUR CONTROL SHALL BE MAINTAINED EVEN DURING DIMMING. 3.LED MODULES SHALL BE INGAN (INDIUM GALLIUM NITRIDE) SEMICONDUCTOR MATERIAL, ABSENT OF UV AND
- MINIMAL IR WAVELENGTHS. THE CONGLOMERATION OF DIODES COVERED WITH REMOTE PHOSPHOR TECHNOLOGY SHALL PROVIDE CONSISTENT COLOUR UNIFORMITY AND TIGHT COLOUR CONTROL. 4.LED LIGHT ENGINE (DRIVER) .1 OVER-VOLTAGE, OVER-CURRENT AND SHORT-CIRCUIT PROTECTED
- .2 THERMAL MANAGEMENT OF THE LED SYSTEM SHALL BE DESIGNED TO YIELD 70% LUMEN MAINTENANCE AFTER 50,000 HOURS OF OPERATION .3 TOTAL HARMONIC DISTORTION: < 20% THD
- 5.LED FIXTURES WHERE SPECIFIED AS DIMMABLE, SHALL HAVE A DIMMING RANGE OF 100% TO 10% UNLESS OTHERWISE NOTED. 6.WARRANTY: THE LIGHT ENGINE AND POWER COMPONENTS OF LED LUMINAIRES INSTALLED FOR INDOOR APPLICATIONS SHALL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A MINIMUM PERIOD OF HREE (3) YEARS FROM DATE OF ORIGINAL PURCHASE. WARRANTY SHALL COVER ONLY PRODUCT FAILURE DUE
- TO DEFÈCTIVE MATERIAL OR WORKMANSHIP, AND DOES NOT INCLUDE LABOUR TO REMOVE OR INSTALL FIXTURES CTIVE LED'S SHALL BE CONSIDERED IF A MINIMUM OF 5% OF LEDS PER LUMINAIRE ARE NON-OPERATIVE IN THE FIXTURE OR MODULE. LIGHTING FIXTURES
- I.THE ELECTRICAL CONTRACTOR SHALL CONFIRM EXISTING FIXTURE COUNT PRIOR TO TENDER CLOSING TO ENSURE HAT LAYOUT SHOWN CAN BE CARRIED OUT. NEW FIXTURES SHALL BE ORDERED AS REQUIRED TO SUIT LAYOUT SHOWN. 2.ALL LIGHT FIXTURES WITHIN THE RENOVATION AREA SHALL BE CLEANED AND RE-LAMPED BY THE CONTRACTOR.
- ANY DAMAGED LENSES AND SOCKETS, DAMAGED AS AN EXISTING CONDITION OR DURING RELAMPING SHALL BE REPLACED. 3.ALL FIXTURES SHALL BE SUPPORTED FROM STRUCTURAL MEMBERS OF THE BUILDING OR CEILING.
- 4.ALL FLUORESCENT LUMINARIES INSTALLED ON BRANCH CIRCUITS WITH VOLTAGES EXCEEDING 150 VOLTS-TO-GROUND SHALL BE PROVIDED WITH A DISCONNECTING MEANS INTEGRAL WITH THE LUMINAIRE THAT SIMULTANEOUSLY OPENS ALL CIRCUIT CONDUCTORS BETWEEN THE BRANCH CIRCUIT CONDUCTORS AND THE CONDUCTORS SUPPLYING THE BALLAST(S), AND SHALL BE MARKED IN A CONSPICUOUS AND PERMANENT MANNER ADJACENT THE DISCONNECTING MEANS SO AS TO IDENTIFY THE DISCONNECT.
- 5.EACH FIXTURE SHALL HAVE A SEPARATE FEED FROM THE NEAREST JUNCTION BOX ABOVE THE REMOVABLE CEILINGS. BRANCH WIRING TO LIGHTING FIXTURES FROM CEILING JUNCTION BOXES MAY BE FLEXIBLE ARMORED CABLE OR FLEXIBLE CONDUIT, 12MM SIZE MINIMUM, AND SHALL BE A MAXIMUM LENGTH OF 3000MM. LOOPING BETWEEN FIXTURES OR WIRING ROWS THROUGH BALLAST CHANNEL WILL NOT BE ACCEPTED. ALL OTHER BRANCH CIRCUITRY SHALL BE WITHIN EMT CONDUIT.
- 6.THE LIGHTING FIXTURES SHALL BE AS SPECIFIED IN THE FOLLOWING SCHEDULE, AND THE MANUFACTURER'S NUMBERS SHOWN SHALL NOT REDUCE OR AMEND THE REQUIREMENTS AS OUTLINED UNDER THE DESCRIPTION OF EACH FIXTURE TYPE.



ASSOCIATION OF PROFESSIONAL ENGINEERS OF SASKATCHEWAN CERTIFICATE OF AUTHORIZATION RITENBURG & ASSOCIATES LTD. NUMBER 52 PERMISSION TO CONSULT HELD BY: DISCIPLINE SASK, REG. No. A BRIGNATURE ELECTRICAL 11167 Flexin

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NO.	DATE	ITEM	BY
		REVISIONS	•

PROJECT

SHERWOOD PLACE RENOVATION PACKAGE 1: FLOORS 3, 4, 6, 7, 8, 9

1900 ALBERT STREET REGINA, SASKATCHEWAN

SHEET TITLE

ELECTRICAL SPECIFICATIONS

DESIGN BY	LKV
DRAWN BY	LKV
CHECKED	MKL
APPROVED	
OWNER	DREAM
SCALE	AS NOTED
DATE	
DATE FILE NO.	DRAWING NO.
	drawing no. E3.1