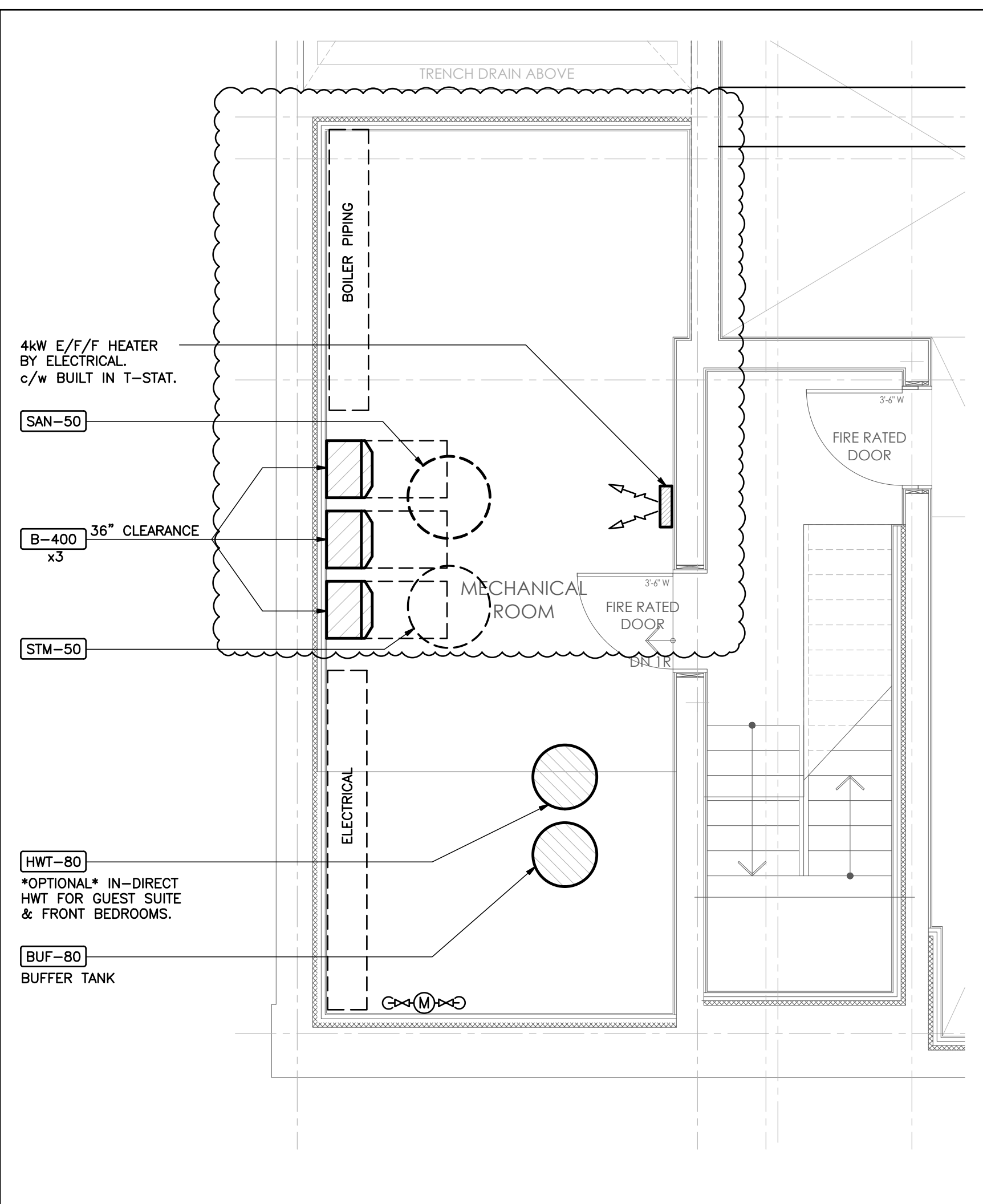
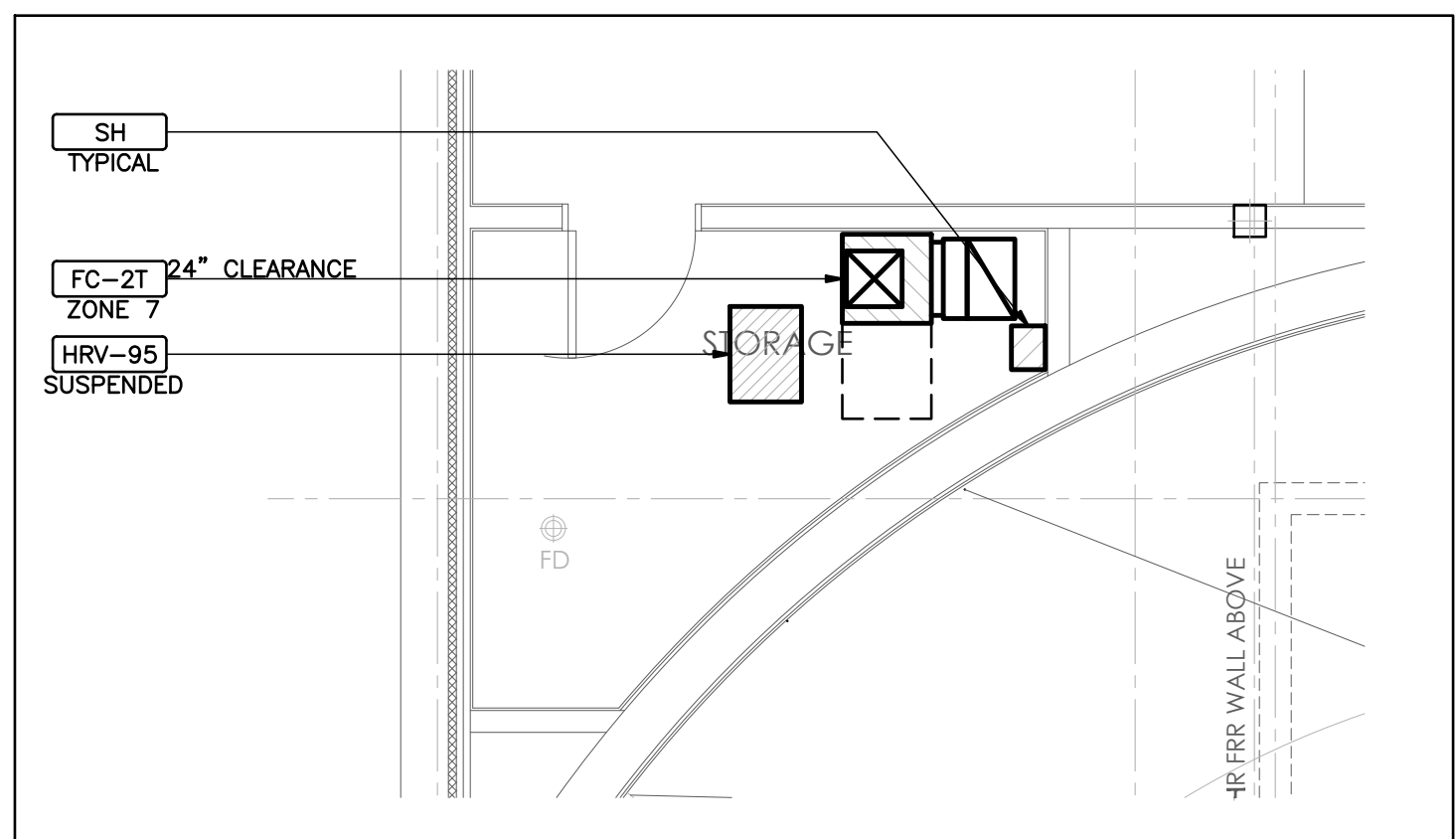


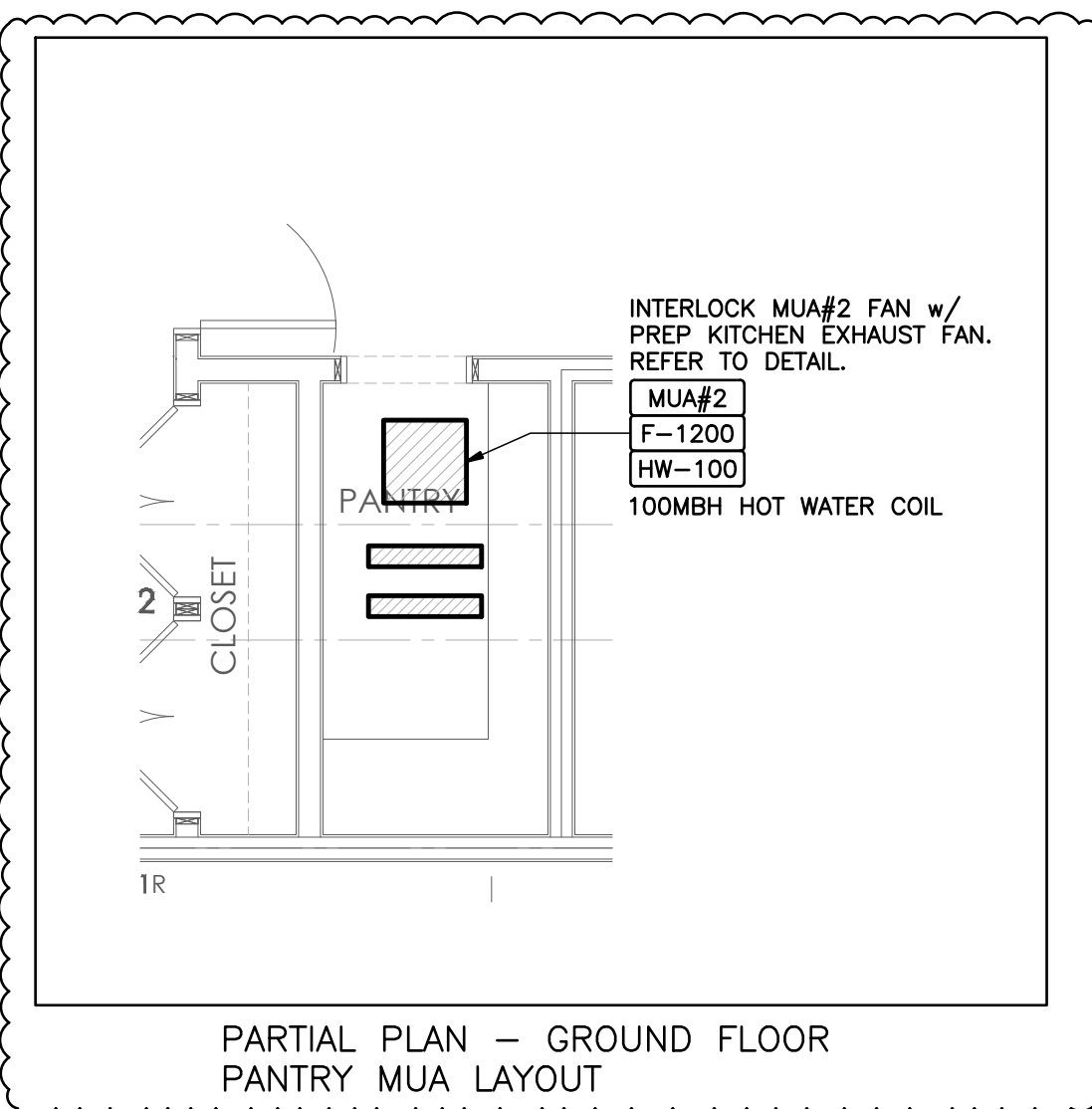
PARTIAL PLAN - BASEMENT NORTH
MECHANICAL ROOM LAYOUT



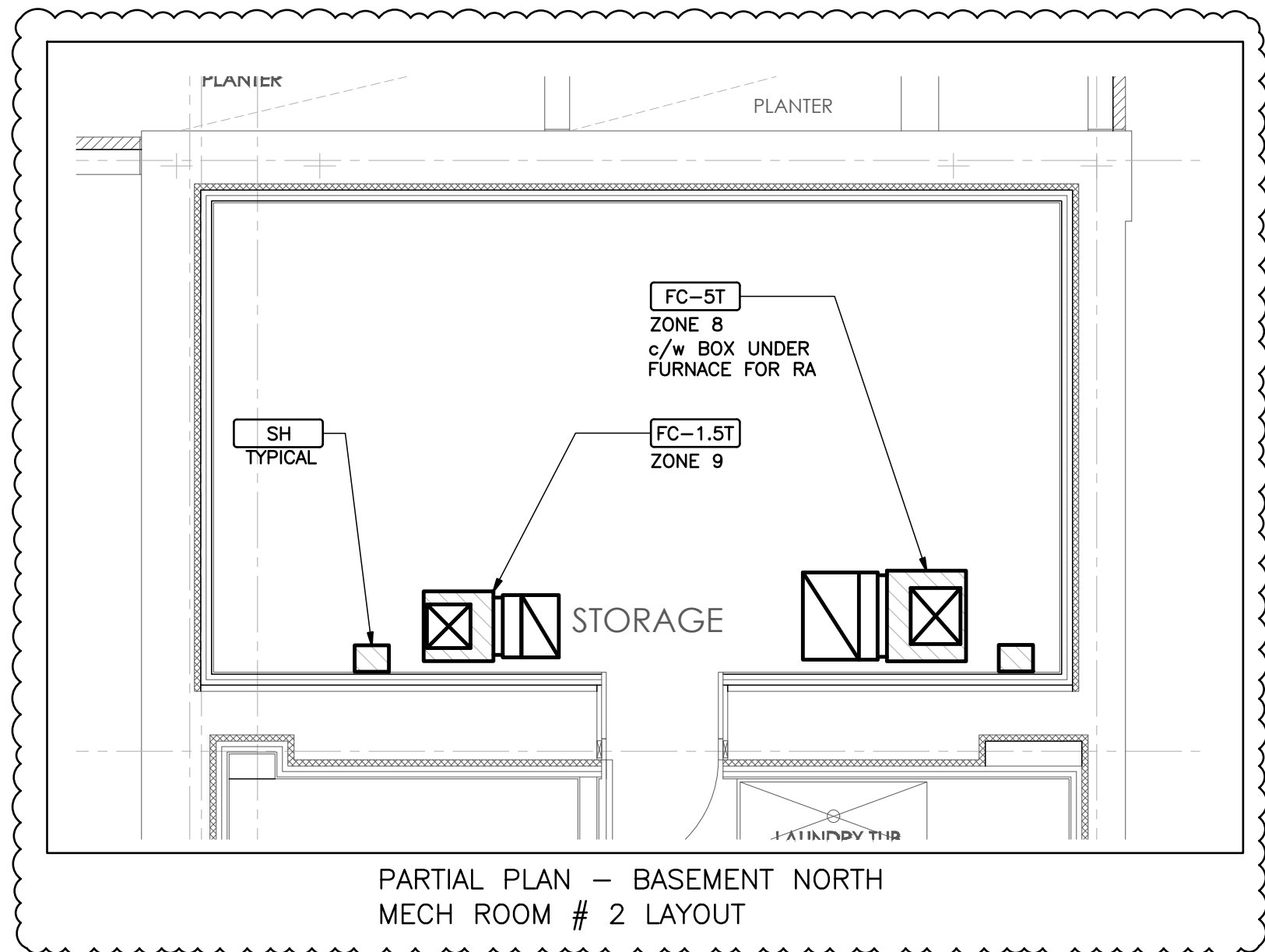
PARTIAL PLAN - BASEMENT SOUTH
MECHANICAL ROOM LAYOUT



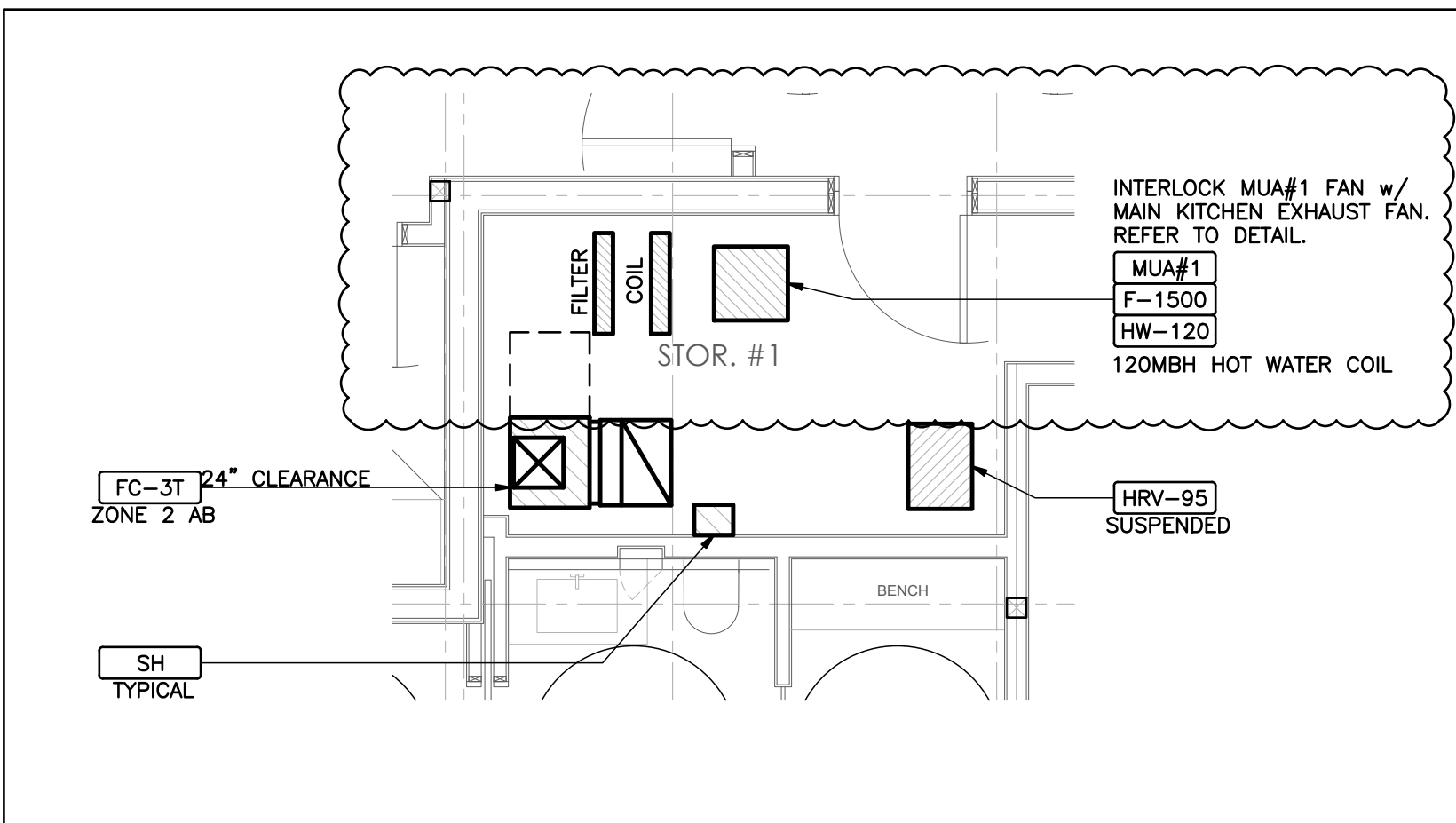
PARTIAL PLAN - BASEMENT REC RM
MECHANICAL LAYOUT



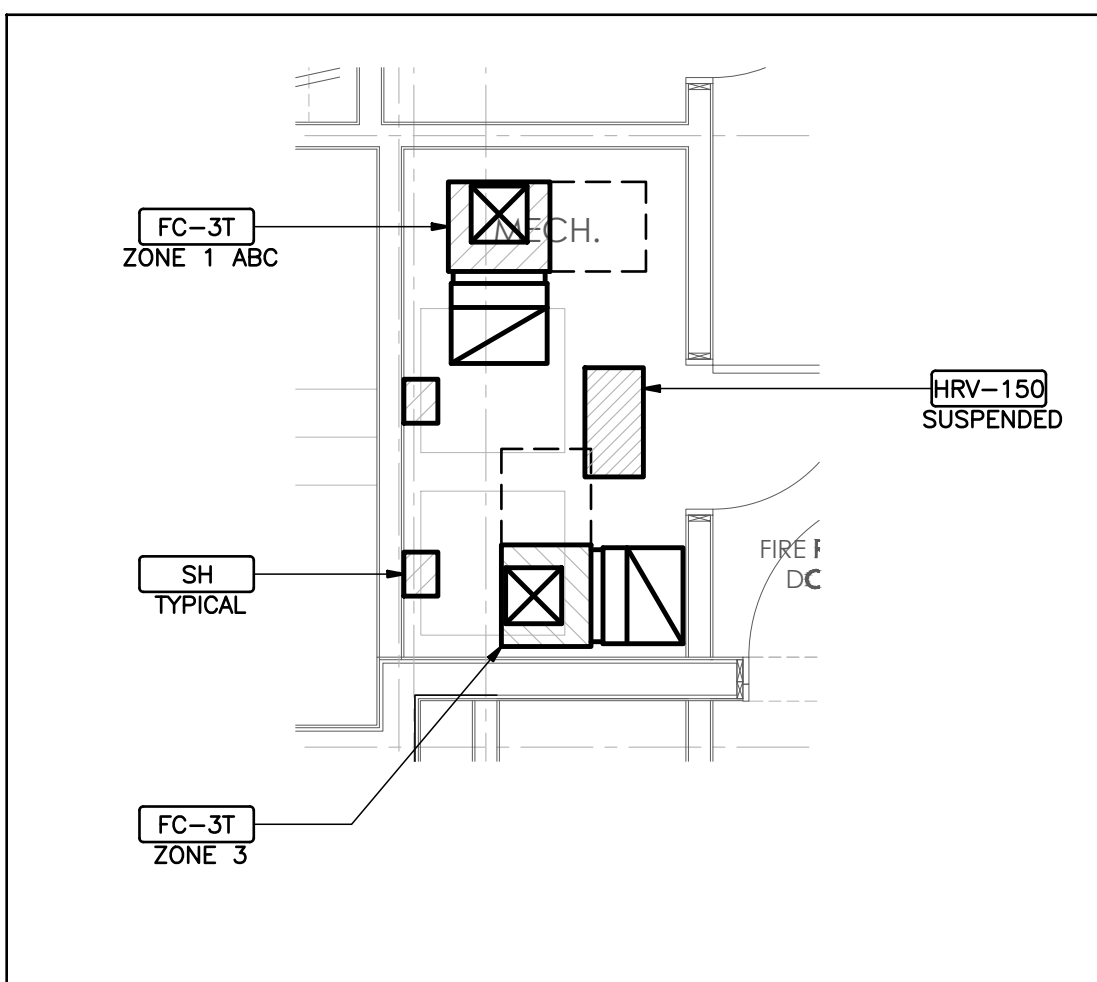
PARTIAL PLAN - GROUND FLOOR
PANTRY MUA LAYOUT



PARTIAL PLAN - BASEMENT NORTH
MECH ROOM # 2 LAYOUT



PARTIAL PLAN - SECOND FLOOR WEST
MECHANICAL ROOM LAYOUT



PARTIAL PLAN - SECOND FLOOR EAST
MECHANICAL ROOM LAYOUT

EXHAUST DUCT THAT PASSES THROUGH OR IS ADJACENT TO UNHEATED SPACE SHALL BE INSULATED AS PER OBC-6.2.4.1.1.(1).

EXHAUST FANS SHALL HAVE SOUND RATING NOT GREATER THAN IN TABLE 9.32.3.9. [OBC-9.32.3.9.(4)]

HVAC EQUIPMENT AND SYSTEM REQUIRING PERIODIC MAINTENANCE SHALL BE INSTALLED WITH PROVISION FOR ACCESS FOR INSPECTION, MAINTENANCE, REPAIR AND CLEANING INCLUDING PROTECTION FROM FREEZING AS PER OBC-6.2.1.8

ALL SUPPLY AND RETURN DUCTS JOINTS LOCATED IN UNCONDITIONED SPACE SHALL BE SEALED TO CLASS-A SEAL LEVEL IN ACCORDANCE WITH SMACNA STANDARDS. HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE AS PER OBC, DIV.-8, 6.2.4.3.(11).

ALL NEW FURNACES SHALL HAVE A BRUSHLESS DIRECT CURRENT (DC) FAN MOTORS AS PER OBC, DIV.-8, 12.3.1.5.(2). FIELD VERIFY IN THE SITE

PROVIDE IN ADVANCE COMPLETE INFORMATION TO BUILDING INSPECTOR FOR THE REQUIRED SEALANT TO ALL DUCTWORKS THAT WILL COMPLY TO ALL REQUIREMENTS IN OBC, DIV.-8, 6.2.4.3.(11) & (12).

PROVIDE PROPER SEPARATING DISTANCE TO ALL AIR INTAKES FOR HRV'S FROM ANY POTENTIAL SOURCES OF CONTAMINANTS AND SHALL BE CLEARLY LABELED FOR THE PROPER IDENTIFICATIONS FROM LOCATIONS OUTSIDE THE DWELLING UNIT AS PER OBC-9.32.3.12.(4) & (5).

ROUTE CONTINUOUS/UNOBSTRUCTED RETURN AIR SYSTEM TO HANDLE THE ENTIRE AIR SUPPLY BACK TO FURNACE EQUIPMENT AS PER OBC-6.2.4.7.(1) AND AIR VELOCITIES AS PER HRV/ASHRAE STANDARDS

6\"/>

SUPPLY DUCT CARRYING OUTDOOR AIR WITHIN HEATED SPACE SHALL BE INSULATED WITH R3 INSULATIONS AND IF THE DUCT EXCEEDS 3 METERS (9'-10') IN LENGTH, R7 INSULATION IS REQUIRED AS PER OBC TABLE-9.32.3.10.A

PROVIDE ADEQUATE INSULATION (R12 MIN.) C/W VAPOUR BARRIER TO ALL DUCTWORKS EXPOSED TO EXTERIOR WALLS AS PER OBC-6.2.4.3. (10).

HRV INSTALLATION SHALL COMPLY TO ALL REQUIREMENTS OF OBC-9.32.3.11, 12 & 13.

PROVIDE VOLUME DAMPER TO ALL NEW & EXISTING BRANCH TAKE-OFF FOR AIR BALANCING AS PER SMACNA STANDARDS (SEE OBC-6.2.1.1.)

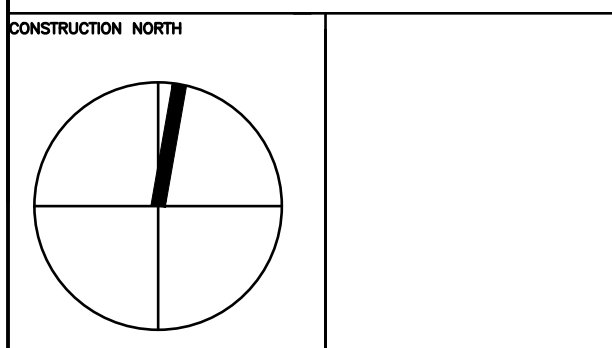
10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAO/DRONWELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR POINT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. DATE DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALED. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9J5
T (905) 773-0200
staff@bkconsulting.ca

**140 LAKE DRIVE
EAST**

GEORGINA, ONTARIO

MECHANICAL

PLOT DATE PROJECT NO.

DRAWING TITLE

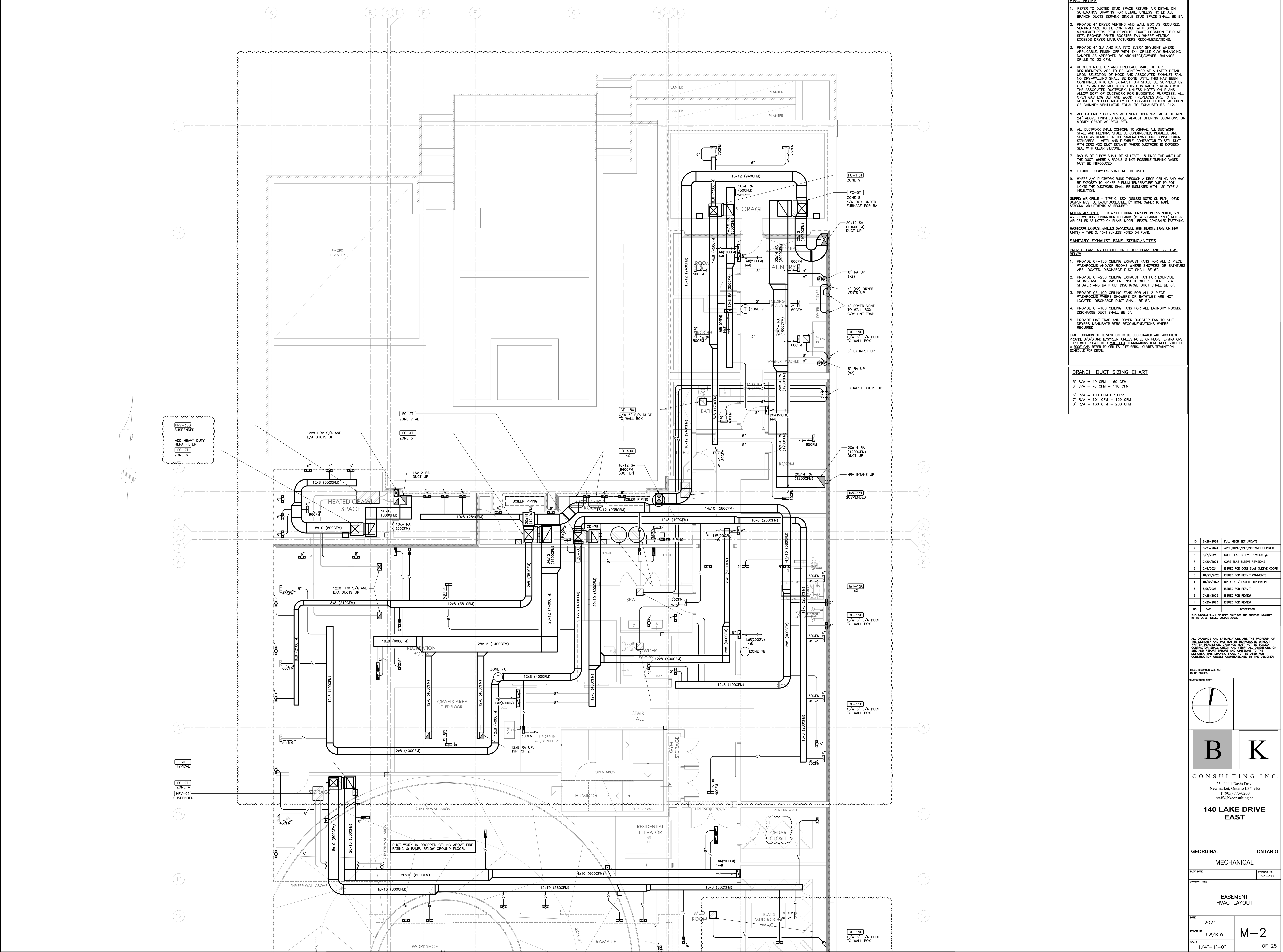
MECHANICAL EQUIPMENT ROOM
LAYOUT

DATE

DRAWN BY J.W./K.W.

SCALE 1/4"=1'-0"

OF 25



HVAC NOTES

1. REFER TO DUCTED STUD SPACE RETURN AIR DETAIL ON SCHEMATICS DRAWING FOR DETAIL. UNLESS NOTED ALL BRANCH DUCTS SERVING SINGLE STUD SPACE SHALL BE 6".
2. PROVIDE 4" DRYER VENTING AND WALL BOX AS REQUIRED. VENTING SIZE TO BE CONFIRMED WITH DRYER MANUFACTURER'S REQUIREMENTS. EXACT LOCATION T.B.D AT SITE. PROVIDE DRYER BOOSTER FAN WHERE VENTING EXCEEDS DRYER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE 4" S.A. AND R.A. INTO EVERY SKYLIGHT WHERE APPLICABLE. FINISH OFF WITH 4X4 GRILLE C/W BALANCING DAMPER AS APPROVED BY ARCHITECT/OWNER. BALANCE GRILLE TO 30 CFM.
4. KITCHEN MAKE UP AND FIREPLACE MAKE UP AIR REQUIREMENTS ARE TO BE CONFIRMED AT A LATER DETAIL UPON SELECTION OF HOOD AND ASSOCIATED EXHAUST FAN. NO DRY-WALLING SHALL BE DONE UNTIL THIS HAS BEEN CONFIRMED. KITCHEN EXHAUST FAN SHALL BE SUPPLIED BY OTHERS AND INSTALLED BY THIS CONTRACTOR ALONG WITH THE ASSOCIATED DUCTWORK. UNLESS NOTED ON PLANS ALLOW SOFT OF DUCTWORK FOR BUDGETING PURPOSES. ALL OPEN GAS LOG SET AND WOOD FIREPLACES ARE TO BE ROUGHED-IN ELECTRICALLY FOR POSSIBLE FUTURE ADDITION OF CHIMNEY VENTILATOR EQUAL TO EXHAUSTO RS-012.
5. ALL EXTERIOR LOUVERES AND VENT OPENINGS MUST BE MIN. 24" ABOVE FINISHED GRADE. ADJUST OPENING LOCATIONS OR MODIFY GRADE AS REQUIRED.
6. ALL DUCTWORK SHALL CONFORM TO ASHRAE. ALL DUCTWORK SHALL AND PLENUM SHALL BE CONSTRUCTED, INSTALLED AND SEALED AS DETAILED IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. CONTRACTOR TO SEAL DUCT WITH ZERO VOC DUCT SEALANT. WHERE DUCTWORK IS EXPOSED SEAL WITH CLEAR SILICONE.
7. RADIUS OF ELBOW SHALL BE AT LEAST 1.5 TIMES THE WIDTH OF THE DUCT. WHERE A RADIUS IS NOT POSSIBLE TURNING VANES MUST BE INTRODUCED.
8. FLEXIBLE DUCTWORK SHALL NOT BE USED.
9. WHERE A/C DUCTWORK RUNS THROUGH A DROP CEILING AND MAY BE EXPOSED TO HIGHER PLENUM TEMPERATURE DUE TO POT LIGHTS THE DUCTWORK SHALL BE INSULATED WITH 1.5" TYPE A INSULATION.

SUPPLY AIR GRILLE - TYPE G, 12X4 (UNLESS NOTED ON PLAN). GRAB DAMPER MUST BE EASILY ACCESSIBLE BY HOME OWNER TO MAKE SEASONAL ADJUSTMENTS AS REQUIRED.

RETURN AIR GRILLE - BY ARCHITECTURAL DIMENSION UNLESS NOTED. SIZE AS SHOWN. THIS CONTRACTOR TO CARRY (AS A SEPARATE PRICE). RETURN AIR GRILLES AS NOTED ON PLANS. MOTED UP/ST/CL CONCEALED FASHIONS.

WASHROOM EXHAUST GRILLES (REPLACEABLE WITH PRIVATE FANS OR HRV UNITS) - TYPE G, 10X4 (UNLESS NOTED ON PLAN).

SANITARY EXHAUST FANS SIZING/NOTES

PROVIDE FANS AS LOCATED ON FLOOR PLANS AND SIZED AS BELOW.

1. PROVIDE CF-150 CEILING EXHAUST FANS FOR ALL 3 PIECE WASHROOMS AND/OR ROOMS WHERE SHOWERS OR BATHTUBS ARE LOCATED. DISCHARGE DUCT SHALL BE 6".
2. PROVIDE CF-250 CEILING EXHAUST FAN FOR EXERCISE ROOMS AND FOR MASTER ENSUITE WHERE THERE IS A SHOWER AND BATHTUB. DISCHARGE DUCT SHALL BE 6".
3. PROVIDE CF-100 CEILING FANS FOR ALL 2 PIECE WASHROOMS WHERE SHOWERS OR BATHTUBS ARE NOT LOCATED. DISCHARGE DUCT SHALL BE 5".
4. PROVIDE CF-100 CEILING FANS FOR ALL LAUNDRY ROOMS. DISCHARGE DUCT SHALL BE 5".
5. PROVIDE LINT TRAP AND DRYER BOOSTER FAN TO SUIT DRYERS. MANUFACTURER'S RECOMMENDATIONS WHERE REQUIRED.

EXACT LOCATION OF TERMINATION TO BE COORDINATED WITH ARCHITECT. PROVIDE E/D/D AND B/SCREEN. UNLESS NOTED ON PLANS TERMINATIONS THRU WALLS SHALL BE A WALL BOX. TERMINATIONS THRU ROOF SHALL BE A ROOF CAP. REFER TO GRILLES, DIFFUSERS, LOUVERES TERMINATION SCHEDULE FOR DETAIL.

BRANCH DUCT SIZING CHART

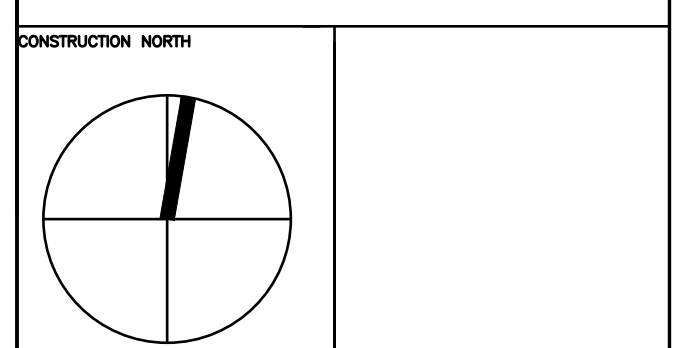
5" S/A	= 40 CFM - 69 CFM
6" S/A	= 70 CFM - 110 CFM
6" R/A	= 100 CFM OR LESS
7" R/A	= 101 CFM - 159 CFM
8" R/A	= 160 CFM - 200 CFM

10	8/29/2024	FULL MESH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAID/2ND/MELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR POINT
2	7/28/2023	ISSUED FOR REVIEW
1	8/20/2023	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. UNLESS NOTED, ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS CONTRASIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B

K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

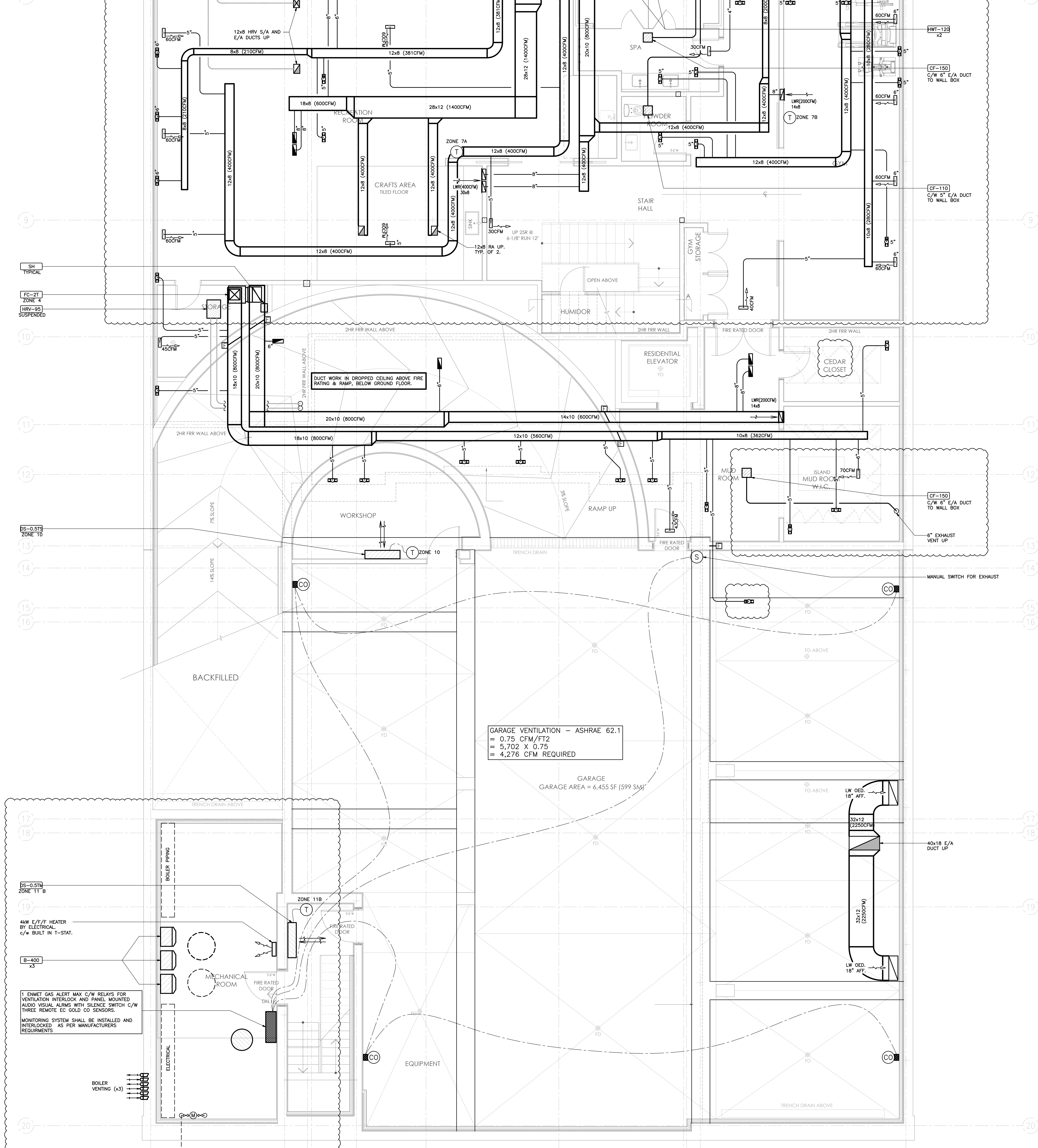
140 LAKE DRIVE EAST

GEORGINA, ONTARIO
MECHANICAL

PLOT DATE
DRAWING TITLE

BASEMENT
HVAC LAYOUT

DATE	2024	M-2
DRAWN BY	J.W./K.W.	
SCALE	1/4"=1'-0"	
PROJECT NO.		23-317



- ### HVAC NOTES
1. REFER TO DUCTED STUD SPACE RETURN AIR DETAIL ON SCHEMATICS DRAWING FOR DETAIL. UNLESS NOTED ALL BRANCH DUCTS SERVING SINGLE STUD SPACE SHALL BE 8".
 2. PROVIDE 4" DRYER VENTING AND WALL BOX AS REQUIRED. VENTING SIZE TO BE CONFIRMED WITH DRYER MANUFACTURER'S REQUIREMENTS. EXACT LOCATION T.B.D AT SITE. PROVIDE DRYER BOOSTER FAN WHERE VENTING EXCEEDS DRYER MANUFACTURER'S RECOMMENDATIONS.
 3. PROVIDE 4" S/A AND R/A INTO EVERY SKYLIGHT WHERE APPLICABLE. FINISH OFF WITH 4X4 GRILLE C/W BALANCING DAMPER AS APPROVED BY ARCHITECT/OWNER. BALANCE GRILLE TO 30 CFM.
 4. KITCHEN MAKE UP AND FIREPLACE MAKE UP AIR REQUIREMENTS ARE TO BE CONFIRMED AT A LATER DETAIL UPON SELECTION OF HOOD AND ASSOCIATED EXHAUST FAN. NO DRY-WALLING SHALL BE DONE UNTIL THIS HAS BEEN CONFIRMED. KITCHEN EXHAUST FAN SHALL BE SUPPLIED BY OTHERS AND INSTALLED BY THIS CONTRACTOR ALONG WITH THE ASSOCIATED DUCTWORK. UNLESS NOTED ON PLANS ALLOW SOFT OF DUCTWORK FOR BUDGETING PURPOSES. ALL OPEN GAS LOG SET AND WOOD FIREPLACES ARE TO BE ROUGHED-IN ELECTRICALLY FOR POSSIBLE FUTURE ADDITION OF CHIMNEY VENTILATOR EQUAL TO EXHAUSTO HS-012.
 5. ALL EXTERIOR LOUVERES AND VENT OPENINGS MUST BE MIN. 24" ABOVE FINISHED GRADE. ADJUST OPENING LOCATIONS OR MODIFY GRADE AS REQUIRED.
 6. ALL DUCTWORK SHALL CONFORM TO ASHRAE. ALL DUCTWORK SHALL AND PLENUM SHALL BE CONSTRUCTED, INSTALLED AND SEALED AS DETAILED IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. CONTRACTOR TO SEAL DUCT WITH ZERO VOC DUCT SEALANT. WHERE DUCTWORK IS EXPOSED SEAL WITH CLEAR SILICONE.
 7. RADIUS OF ELBOW SHALL BE AT LEAST 1.5 TIMES THE WIDTH OF THE DUCT. WHERE A RADIUS IS NOT POSSIBLE TURNING VANES MUST BE INTRODUCED.
 8. FLEXIBLE DUCTWORK SHALL NOT BE USED.
 9. WHERE A/C DUCTWORK RUNS THROUGH A DROP CEILING AND MAY BE EXPOSED TO HIGHER PLENUM TEMPERATURE DUE TO POT LIGHTS THE DUCTWORK SHALL BE INSULATED WITH 1.5" TYPE A INSULATION.
- SUPPLY AIR GRILLE** - TYPE G, 12X4 (UNLESS NOTED ON PLAN). ORND DAMPER MUST BE EASILY ACCESSIBLE BY HOME OWNER TO MAKE SEASONAL ADJUSTMENTS AS REQUIRED.
- RETURN AIR GRILLE** - BY ARCHITECTURAL DIMENSION UNLESS NOTED. SIZE AS SHOWN. THIS CONTRACTOR TO CARRY (AS A SEPARATE PRICE). RETURN AIR GRILLES AS NOTED ON PLANS. MOVE UP/ST/BL CONCEALED FASHIONS.
- HUSKROOM EXHAUST GRILLES (APPLICABLE WITH REMOTE FANS OR HRY UNITS)** - TYPE G, 10X4 (UNLESS NOTED ON PLAN).
- ### SANITARY EXHAUST FANS SIZING/NOTES
- PROVIDE FANS AS LOCATED ON FLOOR PLANS AND SIZED AS BELOW
1. PROVIDE CF-150 CEILING EXHAUST FANS FOR ALL 3 PIECE WASHROOMS AND/OR ROOMS WHERE SHOWERS OR BATHTUBS ARE LOCATED. DISCHARGE DUCT SHALL BE 6".
 2. PROVIDE CF-250 CEILING EXHAUST FAN FOR EXERCISE ROOMS AND FOR MASTER ENSUITE WHERE THERE IS A SHOWER AND BATHTUB. DISCHARGE DUCT SHALL BE 6".
 3. PROVIDE CF-100 CEILING FANS FOR ALL 2 PIECE WASHROOMS WHERE SHOWERS OR BATHTUBS ARE NOT LOCATED. DISCHARGE DUCT SHALL BE 5".
 4. PROVIDE CF-100 CEILING FANS FOR ALL LAUNDRY ROOMS. DISCHARGE DUCT SHALL BE 5".
 5. PROVIDE LINT TRAP AND DRYER BOOSTER FAN TO SUIT DRYERS MANUFACTURER'S RECOMMENDATIONS WHERE REQUIRED.
- EXACT LOCATION OF TERMINATION TO BE COORDINATED WITH ARCHITECT. PROVIDE E/D/O/D AND B/SCREEN. UNLESS NOTED ON PLANS TERMINATIONS THRU WALLS SHALL BE A WALL BOX. TERMINATIONS THRU ROOF SHALL BE A ROOF CAP. REFER TO GRILLES, DIFFUSERS, LOUVERES TERMINATION SCHEDULE FOR DETAIL.
- ### BRANCH DUCT SIZING CHART
- | | |
|--------|---------------------|
| 5" S/A | = 40 CFM - 69 CFM |
| 6" S/A | = 70 CFM - 110 CFM |
| 6" R/A | = 100 CFM OR LESS |
| 7" R/A | = 101 CFM - 159 CFM |
| 8" R/A | = 160 CFM - 200 CFM |

10	8/29/2024	FULL WEEK SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/2ND/3RD/4TH UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED

ORIENTATION NORTH

B

K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

GEORGINA, ONTARIO

MECHANICAL

PLOT DATE: PROJECT No: 23-317

DRAWING TITLE: BASEMENT HVAC LAYOUT

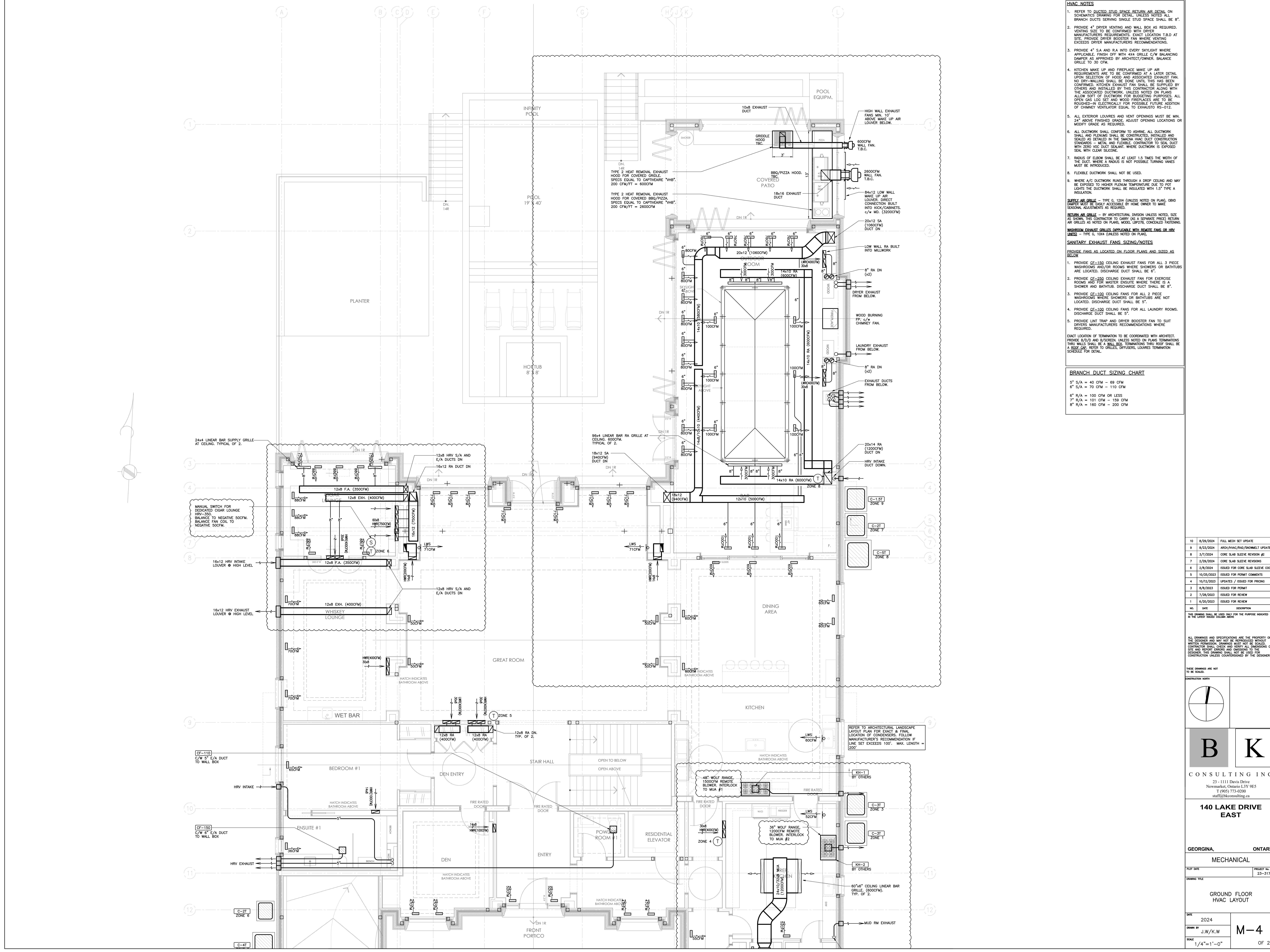
DATE: 2024

DRAWN BY: J.W./K.W.

SCALE: 1/4"=1'-0"

M-3

OF 25



HVAC NOTES

- REFER TO DUCTED STUD SPACE RETURN AIR DETAIL ON SCHEMATICS DRAWING FOR DETAIL. UNLESS NOTED ALL BRANCH DUCTS SERVING SINGLE STUD SPACE SHALL BE 8".
- PROVIDE 4" DRYER VENTING AND WALL BOX AS REQUIRED. VENTING SIZE TO BE CONFIRMED WITH DRYER MANUFACTURERS REQUIREMENTS. EXACT LOCATION T.B.D AT SITE. PROVIDE DRYER BOOSTER FAN WHERE VENTING EXCEEDS DRYER MANUFACTURERS RECOMMENDATIONS.
- PROVIDE 4" S.A. AND R/A INTO EVERY SKYLIGHT WHERE APPLICABLE. FINISH OFF WITH 4x4 GRILLE C/W BALANCING DAMPER AS APPROVED BY ARCHITECT/OWNER. BALANCE GRILLE TO 30 CFM.
- KITCHEN MAKE UP AND FIREPLACE MAKE UP AIR REQUIREMENTS ARE TO BE CONFIRMED AT A LATER DETAIL UPON SELECTION OF HOOD AND ASSOCIATED EXHAUST FAN. NO DRY-WALLING SHALL BE DONE UNTIL THIS HAS BEEN CONFIRMED. KITCHEN EXHAUST FAN SHALL BE SUPPLIED BY OTHERS AND INSTALLED BY THIS CONTRACTOR ALONG WITH THE ASSOCIATED DUCTWORK. UNLESS NOTED ON PLANS ALLOW 50% OF DUCTWORK FOR BUDGETING PURPOSES. ALL OPEN GAS LOG SET AND WOOD FIREPLACES ARE TO BE ROUGHED-IN ELECTRICALLY FOR POSSIBLE FUTURE ADDITION OF CHIMNEY VENTILATOR EQUAL TO EXHAUST HS-012.
- ALL EXTERIOR LOUVERS AND VENT OPENINGS MUST BE MIN. 24" ABOVE FINISHED GRADE. ADJUST OPENING LOCATIONS OR MODIFY GRADE AS REQUIRED.
- ALL DUCTWORK SHALL CONFORM TO ASHRAE. ALL DUCTWORK SHALL AND PLUMBING SHALL BE CONSTRUCTED, INSTALLED AND SEALED AS DETAILED IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE CONTRACTOR TO SEAL DUCT WITH ZERO VOC DUCT SEALANT. WHERE DUCTWORK IS EXPOSED SEAL WITH CLEAR SILICONE.
- RAVINGS OF BLOW SHALL BE AT LEAST 1.5 TIMES THE WIDTH OF THE DUCT. WHERE A RADIUS IS NOT POSSIBLE TURNING VANES MUST BE INTRODUCED.
- FLEXIBLE DUCTWORK SHALL NOT BE USED.
- WHERE A/C DUCTWORK RUNS THROUGH A DROP CEILING AND MAY BE EXPOSED TO HIGH TEMPERATURES DUE TO HOT LIGHTS THE DUCTWORK SHALL BE INSULATED WITH 1.5" TYPE A INSULATION.

SUPPLY AIR GRILLE - TYPE G, 12x4 (UNLESS NOTED ON PLAN). GRD DAMPER MUST BE EASILY ACCESSIBLE BY HOME OWNER TO MAKE SEASONAL ADJUSTMENTS AS REQUIRED.

RETURN AIR GRILLE - BY ARCHITECTURAL DIMENSION UNLESS NOTED. SIZE AS SHOWN. THIS CONTRACTOR TO CARRY (AS A SEPARATE PRICE) RETURN AIR GRILLES AS NOTED ON PLANS. MOVE UP/ST/BL CONCEALED FASTENING.

HWSROOM EXHAUST GRILLES (APPLICABLE WITH REMOTE FANS OR HRV UNITS) - TYPE G, 10x4 (UNLESS NOTED ON PLAN).

SANITARY EXHAUST FANS SIZING/NOTES

PROVIDE FANS AS LOCATED ON FLOOR PLANS AND SIZED AS BELOW

- PROVIDE CF-150 CEILING EXHAUST FANS FOR ALL 3 PIECE WASHROOMS AND/OR ROOMS WHERE SHOWERS OR BATHTUBS ARE LOCATED. DISCHARGE DUCT SHALL BE 6".
- PROVIDE CF-250 CEILING EXHAUST FAN FOR EXERCISE ROOMS AND FOR MASTER ENSUITE WHERE THERE IS A SHOWER AND BATHTUB. DISCHARGE DUCT SHALL BE 6".
- PROVIDE CF-100 CEILING FANS FOR ALL 2 PIECE WASHROOMS WHERE SHOWERS OR BATHTUBS ARE NOT LOCATED. DISCHARGE DUCT SHALL BE 5".
- PROVIDE CF-100 CEILING FANS FOR ALL LAUNDRY ROOMS. DISCHARGE DUCT SHALL BE 5".
- PROVIDE LINT TRAP AND DRYER BOOSTER FAN TO SUIT DRYERS MANUFACTURERS RECOMMENDATIONS WHERE REQUIRED.

EXACT LOCATION OF TERMINATION TO BE COORDINATED WITH ARCHITECT. PROVIDE E/D/O AND B/SCREEN. UNLESS NOTED ON PLANS TERMINATIONS THRU WALLS SHALL BE A WALL BOX. TERMINATIONS THRU ROOF SHALL BE A ROOF DAP. REFER TO GRILLES, DIFFUSERS, LOUVERS TERMINATION SCHEDULE FOR DETAIL.

BRANCH DUCT SIZING CHART

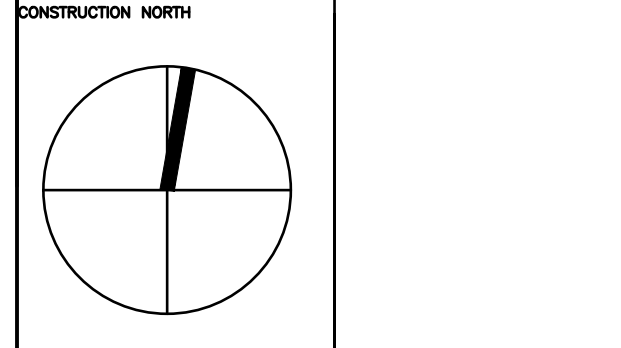
5" S/A	= 40 CFM - 69 CFM
6" S/A	= 70 CFM - 110 CFM
6" R/A	= 100 CFM OR LESS
7" R/A	= 101 CFM - 159 CFM
8" R/A	= 160 CFM - 200 CFM

10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAID/DRUMWELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. UNLESS NOTED, THE DESIGNER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B

K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9J5
T (905) 773-0200
staff@bkconsulting.ca

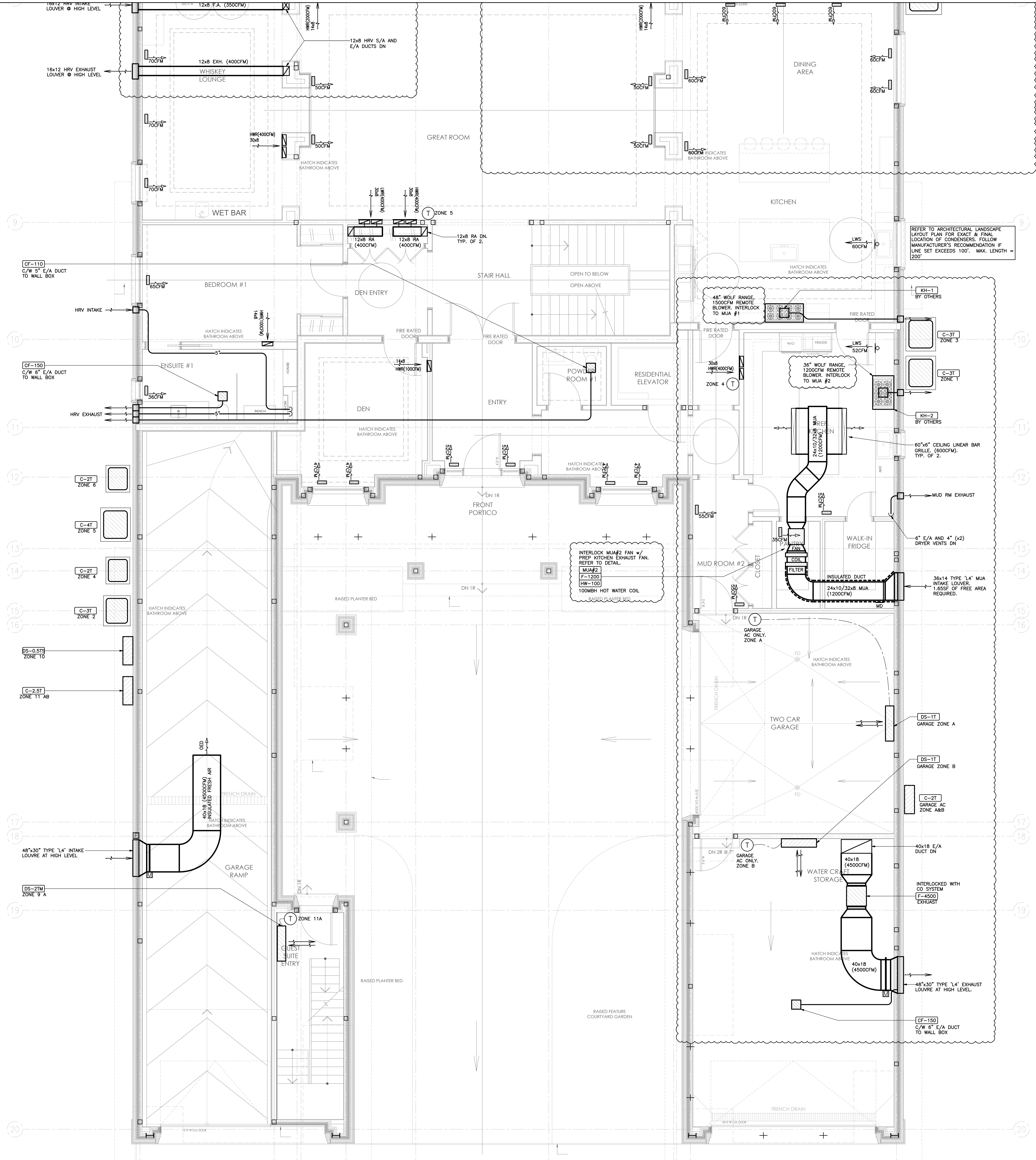
140 LAKE DRIVE EAST

GEORGINA, ONTARIO
MECHANICAL

PLOT DATE PROJECT NO.
DRAWING TITLE 23-317

GROUND FLOOR
HVAC LAYOUT

DATE	2024	M-4
DRAWN BY	J.W./K.W.	
SCALE	1/4"=1'-0"	
		OF 25



- HVAC NOTES**
1. REFER TO DUCTED STUD SPACE RETURN AIR DETAIL ON SCHEMATICS DRAWING FOR DETAIL. UNLESS NOTED ALL BRANCH DUCTS SERVING SINGLE STUD SPACE SHALL BE 8".
 2. PROVIDE 4" DRYER VENTING AND WALL BOX AS REQUIRED. VENTING SIZE TO BE CONFIRMED WITH DRYER MANUFACTURER'S REQUIREMENTS. EXACT LOCATION T.B.D AT SITE. PROVIDE DRYER BOOSTER FAN WHERE VENTING EXCEEDS DRYER MANUFACTURER'S RECOMMENDATIONS.
 3. PROVIDE 4" S/A AND R/A INTO EVERY SKYLIGHT WHERE APPLICABLE. FINISH OFF WITH 4x4 GRILLE C/W BALANCING DAMPER AS APPROVED BY ARCHITECT/OWNER. BALANCE GRILLE TO 30 CFM.
 4. KITCHEN MAKE UP AND FIREPLACE MAKE UP AIR REQUIREMENTS ARE TO BE CONFIRMED AT A LATER DETAIL UPON SELECTION OF HOOD AND ASSOCIATED EXHAUST FAN. NO DRY-WALLING SHALL BE DONE UNTIL THIS HAS BEEN CONFIRMED. KITCHEN EXHAUST FAN SHALL BE SUPPLIED BY OTHERS AND INSTALLED BY THIS CONTRACTOR ALONG WITH THE ASSOCIATED DUCTWORK. UNLESS NOTED ON PLANS ALLOW SOFT OF DUCTWORK FOR BUDGETING PURPOSES. ALL OPEN GAS LOO SET AND WOOD FIREPLACES ARE TO BE ROUGHED-IN ELECTRICALLY FOR POSSIBLE FUTURE ADDITION OF CHIMNEY VENTILATOR EQUAL TO EXHAUSTO HS-012.
 5. ALL EXTERIOR LOUVERES AND VENT OPENINGS MUST BE MIN. 24" ABOVE FINISHED GRADE. ADJUST OPENING LOCATIONS OR MODIFY GRADE AS REQUIRED.
 6. ALL DUCTWORK SHALL CONFORM TO ASHRAE. ALL DUCTWORK SHALL AND PLENUM SHALL BE CONSTRUCTED, INSTALLED AND SEALED AS DETAILED IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. CONTRACTOR TO SEAL DUCT WITH ZERO VOC DUCT SEALANT. WHERE DUCTWORK IS EXPOSED SEAL WITH CLEAR SILICONE.
 7. RADIUS OF BLOW SHALL BE AT LEAST 1.5 TIMES THE WIDTH OF THE DUCT. WHERE A RADIUS IS NOT POSSIBLE TURNING VANES MUST BE INTRODUCED.
 8. FLEXIBLE DUCTWORK SHALL NOT BE USED.
 9. WHERE A/C DUCTWORK RUNS THROUGH A DROP CEILING AND MAY BE EXPOSED TO HIGHER PLENUM TEMPERATURE DUE TO POT LIGHTS THE DUCTWORK SHALL BE INSULATED WITH 1.5" TYPE A INSULATION.

SUPPLY AIR GRILLE - TYPE G, 12x4 (UNLESS NOTED ON PLAN). GRID DAMPER MUST BE EASILY ACCESSIBLE BY HOME OWNER TO MAKE SEASONAL ADJUSTMENTS AS REQUIRED.

RETURN AIR GRILLE - BY ARCHITECTURAL DIMENSION UNLESS NOTED. SIZE AS SHOWN. THIS CONTRACTOR TO CARRY (AS A SEPARATE PRICE) RETURN AIR GRILLES AS NOTED ON PLANS. MOVES UP/DN, CONCEALED FASTENING.

MUDROOM EXHAUST GRILLES (APPLICABLE WITH REMOTE FANS OR HRV UNITS) - TYPE G, 10x4 (UNLESS NOTED ON PLAN).

SANITARY EXHAUST FANS SIZING/NOTES

PROVIDE FANS AS LOCATED ON FLOOR PLANS AND SIZED AS BELOW

1. PROVIDE CF=150 CEILING EXHAUST FANS FOR ALL 3 PIECE WASHROOMS AND/OR ROOMS WHERE SHOWERS OR BATHTUBS ARE LOCATED. DISCHARGE DUCT SHALL BE 6".
2. PROVIDE CF=250 CEILING EXHAUST FAN FOR EXERCISE ROOMS AND FOR MASTER ENSUITE WHERE THERE IS A SHOWER AND BATHTUB. DISCHARGE DUCT SHALL BE 6".
3. PROVIDE CF=100 CEILING FANS FOR ALL 2 PIECE WASHROOMS WHERE SHOWERS OR BATHTUBS ARE NOT LOCATED. DISCHARGE DUCT SHALL BE 5".
4. PROVIDE CF=100 CEILING FANS FOR ALL LAUNDRY ROOMS. DISCHARGE DUCT SHALL BE 5".
5. PROVIDE LINT TRAP AND DRYER BOOSTER FAN TO SUIT DRYERS MANUFACTURER'S RECOMMENDATIONS WHERE REQUIRED.

EXACT LOCATION OF TERMINATION TO BE COORDINATED WITH ARCHITECT. PROVIDE E/D/D AND B/SCREEN. UNLESS NOTED ON PLANS TERMINATIONS THRU WALLS SHALL BE A WALL BOX. TERMINATIONS THRU ROOF SHALL BE A ROOF CAP. REFER TO GRILLES, DIFFUSERS, LOUVER TERMINATION SCHEDULE FOR DETAIL.

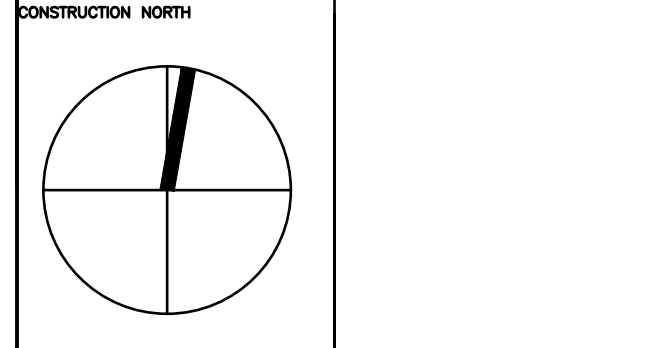
BRANCH DUCT SIZING CHART	
5" S/A	= 40 CFM - 69 CFM
6" S/A	= 70 CFM - 110 CFM
6" R/A	= 100 CFM OR LESS
7" R/A	= 101 CFM - 159 CFM
8" R/A	= 160 CFM - 200 CFM

10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/2ND/MECH UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. UNLESS NOTED, THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K
CONSULTING INC.
23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

GEORGIANA, ONTARIO

MECHANICAL

PLOT DATE: 2024 PROJECT NO: 23-317

DRAWING TITLE: GROUND FLOOR HVAC LAYOUT

DATE: 2024
DRAWN BY: J.W./K.W.
SCALE: 1/4"=1'-0"
PROJECT NO: M-5
OF 25

EXHAUST DUCT THAT PASSED THROUGH OR IS ADJACENT TO UNHEATED SPACE SHALL BE INSULATED AS PER OBC-6.2.4.1.(1).

EXHAUST FANS SHALL HAVE SOUND RATING NOT GREATER THAN IN TABLE 9.32.3.9. [OBC-9.32.3.9.(4)]

HVAC EQUIPMENT AND SYSTEM REQUIRING PERIODIC MAINTENANCE SHALL BE INSTALLED WITH PROVISION FOR ACCESS FOR INSPECTION, MAINTENANCE, REPAIR AND CLEANING INCLUDING PROTECTION FROM FREEZING AS PER OBC-6.2.1.8

ALL SUPPLY AND RETURN DUCTS JOINTS LOCATED IN UNCONDITIONED SPACE SHALL BE SEALED TO CLASS-A SEAL LEVEL IN ACCORDANCE WITH SMACNA STANDARDS. "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" AS PER OBC, DIV-B, 6.2.4.3.(1).

ALL NEW FURNACES SHALL HAVE A BRUSHLESS DIRECT CURRENT (DC) FAN MOTOR AS PER OBC, DIV-B, 12.3.1.5.(2). FIELD VERIFY IN THE SITE.

PROVIDE IN ADVANCE COMPLETE INFORMATION TO BUILDING INSPECTOR FOR THE REQUIRED SEALANT TO ALL DUCTWORKS THAT WILL COMPLY TO ALL REQUIREMENTS IN OBC, DIV-B, 6.2.4.3.(1) & (12).

PROVIDE PROPER SEPARATING DISTANCE TO ALL AIR INTAKES FOR HRV'S FROM ANY POTENTIAL SOURCES OF CONTAMINATIONS AND SHALL BE CLEARLY LABELED FOR THE PROPER IDENTIFICATIONS FROM LOCATIONS OUTSIDE THE DWELLING UNIT AS PER OBC-9.32.3.12.(4) & (5).

ROUTE CONTINUOUS/UNOBSTRUCTED RETURN AIR SYSTEM TO HANDLE THE ENTIRE AIR SUPPLY BACK TO FURNACE EQUIPMENT AS PER OBC-6.2.4.7.(1) AND AIR VELOCITIES AS PER HRA/ASHRAE STANDARDS

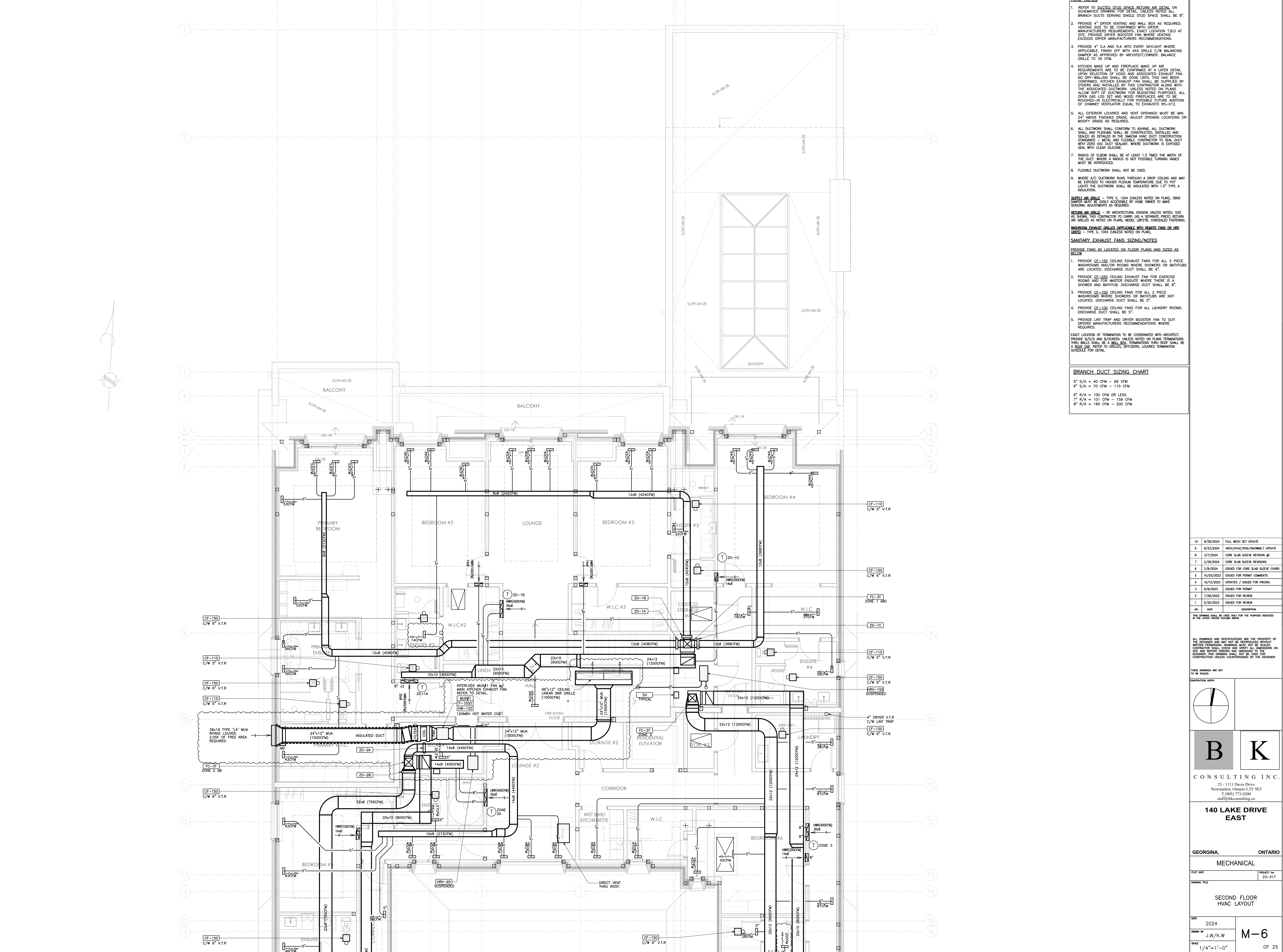
6"-5" MIN. CLEARANCE BELOW DUCT WORK
DRYER VENT TO OUTSIDE COMPLETE WITH BACK DRAFT DAMPER

SUPPLY DUCT CARRYING OUTDOOR AIR WITHIN HEATED SPACE SHALL BE INSULATED WITH R3 INSULATIONS AND IF THE DUCT EXCEEDS 3 METERS (9'-10") IN LENGTH, R7 INSULATION IS REQUIRED AS PER OBC TABLE-9.32.3.10.A

PROVIDE ADEQUATE INSULATION (R12 MIN.) C/W VAPOUR BARRIER TO ALL DUCTWORKS EXPOSED TO EXTERIOR WALLS AS PER OBC-6.2.4.3. (10).

HRV INSTALLATION SHALL COMPLY TO ALL REQUIREMENTS OF OBC-9.32.3.11, 12 & 13.

PROVIDE VOLUME DAMPER TO ALL NEW & EXISTING BRANCH TAKE-OFF FOR AIR BALANCING AS PER SMACNA STANDARDS (SEE OBC-6.2.1.1)



HVAC NOTES

1. REFER TO DUCTED STUD SPACE RETURN AIR DETAIL ON SCHEMATICS DRAWING FOR DETAIL. UNLESS NOTED ALL BRANCH DUCTS SERVING SINGLE STUD SPACE SHALL BE 8".
2. PROVIDE 4" DRYER VENTING AND WALL BOX AS REQUIRED. VENTING SIZE TO BE CONFIRMED WITH DRYER MANUFACTURERS REQUIREMENTS. EXACT LOCATION T.B.D AT SITE. PROVIDE DRYER BOOSTER FAN WHERE VENTING EXCEEDS DRYER MANUFACTURERS RECOMMENDATIONS.
3. PROVIDE 4" S.A. AND R.A. INTO EVERY SKYLIGHT WHERE APPLICABLE. FINISH OFF WITH 4x4 GRILLE C/W BALANCING DAMPER AS APPROVED BY ARCHITECT/OWNER. BALANCE GRILLE TO 30 CFM.
4. KITCHEN MAKE UP AND FIREPLACE MAKE UP AIR REQUIREMENTS ARE TO BE CONFIRMED AT A LATER DETAIL UPON SELECTION OF HOOD AND ASSOCIATED EXHAUST FAN. NO DRY-WALLING SHALL BE DONE UNTIL THIS HAS BEEN CONFIRMED. KITCHEN EXHAUST FAN SHALL BE SUPPLIED BY OTHERS AND INSTALLED BY THIS CONTRACTOR ALONG WITH THE ASSOCIATED DUCTWORK. UNLESS NOTED ON PLANS ALLOW SOFT OF DUCTWORK FOR BUDGETING PURPOSES. ALL OPEN GAS LOG SET AND WOOD FIREPLACES ARE TO BE ROUGHED-IN ELECTRICALLY FOR POSSIBLE FUTURE ADDITION OF CHIMNEY VENTILATOR EQUAL TO EXHAUSTO HS-012.
5. ALL EXTERIOR LOUVERES AND VENT OPENINGS MUST BE MIN. 24" ABOVE FINISHED GRADE. ADJUST OPENING LOCATIONS OR MODIFY GRADE AS REQUIRED.
6. ALL DUCTWORK SHALL CONFORM TO ASHRAE. ALL DUCTWORK SHALL AND PLUMBING SHALL BE CONSTRUCTED, INSTALLED AND SEALED AS DETAILED IN THE SWACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. CONTRACTOR TO SEAL DUCT WITH ZERO VOC DUCT SEALANT. WHERE DUCTWORK IS EXPOSED SEAL WITH CLEAR SILICONE.
7. ROUNDS OF ELBOW SHALL BE AT LEAST 1.5 TIMES THE WIDTH OF THE DUCT. WHERE A RADIUS IS NOT POSSIBLE TURNING VANES MUST BE INTRODUCED.
8. FLEXIBLE DUCTWORK SHALL NOT BE USED.
9. WHERE A/C DUCTWORK RUNS THROUGH A DROP CEILING AND MAY BE EXPOSED TO HIGHER PLENUM TEMPERATURE DUE TO POT LIGHTS THE DUCTWORK SHALL BE INSULATED WITH 1.5" TYPE A INSULATION.

SUPPLY AIR GRILLE - TYPE G, 12x4 (UNLESS NOTED ON PLAN). GRD DAMPER MUST BE EASILY ACCESSIBLE BY HOME OWNER TO MAKE SEASONAL ADJUSTMENTS AS REQUIRED.

RETURN AIR GRILLE - BY ARCHITECTURAL DIVISION UNLESS NOTED. SIZE AS SHOWN. THIS CONTRACTOR TO CARRY (AS A SEPARATE PRICE). RETURN AIR GRILLES AS NOTED ON PLANS. MOST UP/STR. CONCEALED FASHIONS.

WASHROOM EXHAUST GRILLES (APPLICABLE WITH PRIVATE FANS OR HRV UNITS) - TYPE G, 10x4 (UNLESS NOTED ON PLAN).

SANITARY EXHAUST FANS SIZING/NOTES

PROVIDE FANS AS LOCATED ON FLOOR PLANS AND SIZED AS BELOW.

1. PROVIDE CF-150 CEILING EXHAUST FANS FOR ALL 3 PIECE WASHROOMS AND/OR ROOMS WHERE SHOWERS OR BATHTUBS ARE LOCATED. DISCHARGE DUCT SHALL BE 6".
2. PROVIDE CF-250 CEILING EXHAUST FAN FOR EXERCISE ROOMS AND FOR MASTER ENSUITE WHERE THERE IS A SHOWER AND BATHTUB. DISCHARGE DUCT SHALL BE 6".
3. PROVIDE CF-100 CEILING FANS FOR ALL 2 PIECE WASHROOMS WHERE SHOWERS OR BATHTUBS ARE NOT LOCATED. DISCHARGE DUCT SHALL BE 5".
4. PROVIDE CF-100 CEILING FANS FOR ALL LAUNDRY ROOMS. DISCHARGE DUCT SHALL BE 5".
5. PROVIDE LINT TRAP AND DRYER BOOSTER FAN TO SUIT DRYERS. MANUFACTURERS RECOMMENDATIONS WHERE REQUIRED.

EXACT LOCATION OF TERMINATION TO BE COORDINATED WITH ARCHITECT. PROVIDE E/D/O AND B/SCREEN. UNLESS NOTED ON PLANS TERMINATIONS THRU WALLS SHALL BE A WALL BOX. TERMINATIONS THRU ROOF SHALL BE A ROOF DAP. REFER TO GRILLES, DIFFUSERS, LOUVERES TERMINATION SCHEDULE FOR DETAIL.

BRANCH DUCT SIZING CHART

5" S/A	= 40 CFM	- 69 CFM
6" S/A	= 70 CFM	- 110 CFM
6" R/A	= 100 CFM	OR LESS
7" R/A	= 101 CFM	- 159 CFM
8" R/A	= 160 CFM	- 200 CFM

10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/2ND/MECH UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. DATE DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. UNLESS NOTED, ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED

CONSTRUCTION NORTH

B

K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

GEORGINA, ONTARIO

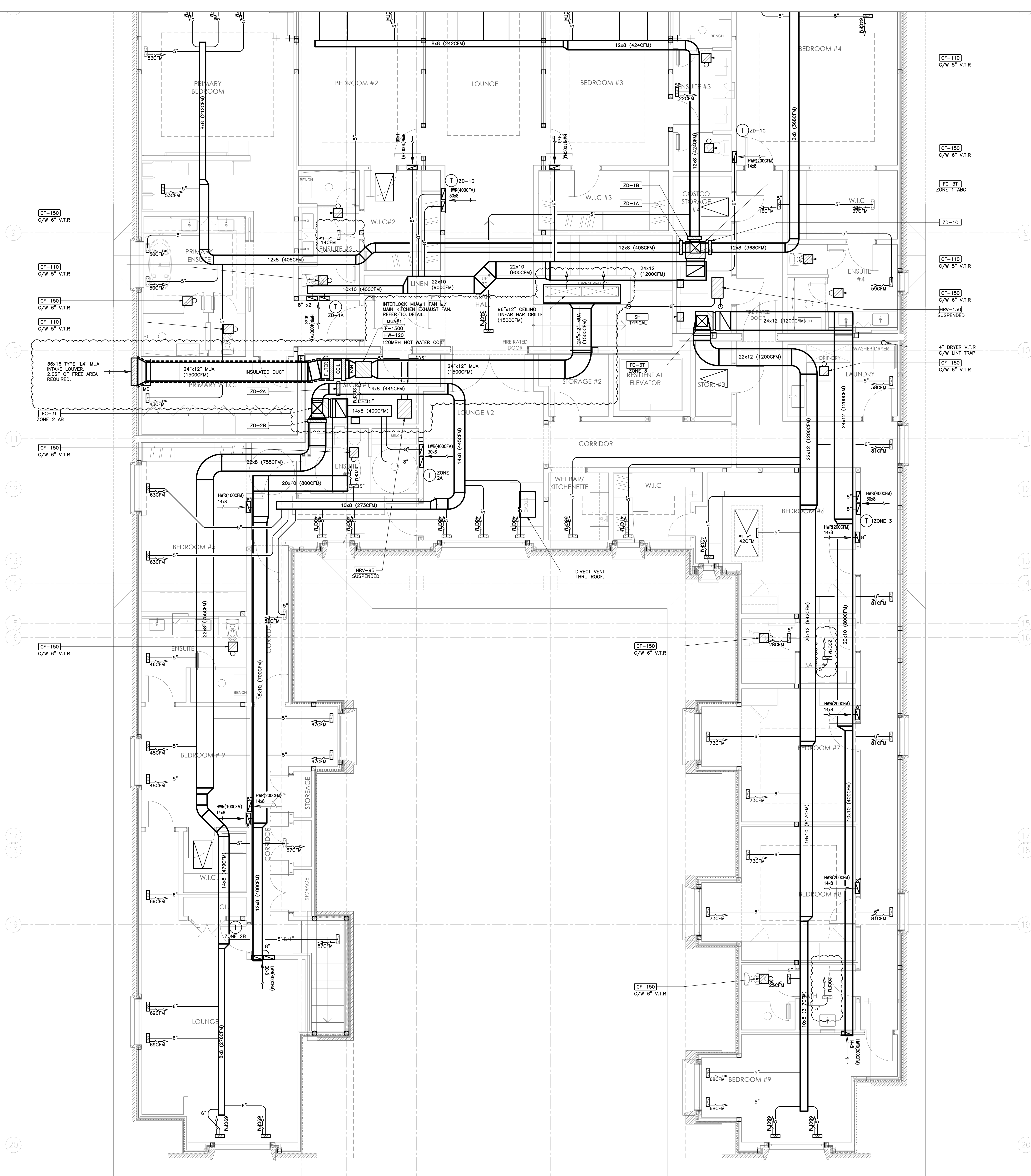
MECHANICAL

PLOT DATE PROJECT NO.
DRAWING TITLE 23-317

SECOND FLOOR
HVAC LAYOUT

DATE 2024
DRAWN BY J.W./K.W.
SCALE 1/4"=1'-0"

M-6
OF 25



- HVAC NOTES**
1. REFER TO DUCTED STUD SPACE RETURN AIR DETAIL ON SCHEMATICS DRAWING FOR DETAIL. UNLESS NOTED ALL BRANCH DUCTS SERVING SINGLE STUD SPACE SHALL BE 8".
 2. PROVIDE 4" DRYER VENTING AND WALL BOX AS REQUIRED. VENTING SIZE TO BE CONFIRMED WITH DRYER MANUFACTURER'S REQUIREMENTS. EXACT LOCATION T.B.D AT SITE. PROVIDE DRYER BOOSTER FAN WHERE VENTING EXCEEDS DRYER MANUFACTURER'S RECOMMENDATIONS.
 3. PROVIDE 4" S.A. AND R/A INTO EVERY SKYLIGHT WHERE APPLICABLE. FINISH OFF WITH 4x4 GRILLE C/W BALANCING DAMPER AS APPROVED BY ARCHITECT/OWNER. BALANCE GRILLE TO 30 CFM.
 4. KITCHEN MAKE UP AND FIREPLACE MAKE UP AIR REQUIREMENTS ARE TO BE CONFIRMED AT A LATER DETAIL UPON SELECTION OF HOOD AND ASSOCIATED EXHAUST FAN. NO DRY-WALLING SHALL BE DONE UNTIL THIS HAS BEEN CONFIRMED. KITCHEN EXHAUST FAN SHALL BE SUPPLIED BY OTHERS AND INSTALLED BY THIS CONTRACTOR ALONG WITH THE ASSOCIATED DUCTWORK. UNLESS NOTED ON PLANS ALLOW SOFT OF DUCTWORK FOR BUDGETING PURPOSES. ALL OPEN GAS LOG SET AND WOOD FIREPLACES ARE TO BE ROUGHED-IN ELECTRICALLY FOR POSSIBLE FUTURE ADDITION OF CHIMNEY VENTILATOR EQUAL TO EXHAUSTO HS-012.
 5. ALL EXTERIOR LOUVERES AND VENT OPENINGS MUST BE MIN. 24" ABOVE FINISHED GRADE. ADJUST OPENING LOCATIONS OR MODIFY GRADE AS REQUIRED.
 6. ALL DUCTWORK SHALL CONFORM TO ASHRAE. ALL DUCTWORK SHALL AND PLENUM SHALL BE CONSTRUCTED, INSTALLED AND SEALED AS DETAILED IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. CONTRACTOR TO SEAL DUCT WITH ZERO VOC DUCT SEALANT. WHERE DUCTWORK IS EXPOSED SEAL WITH CLEAR SILICONE.
 7. RADIUS OF GLOW SHALL BE AT LEAST 1.5 TIMES THE WIDTH OF THE DUCT. WHERE A RADIUS IS NOT POSSIBLE TURNING VANES MUST BE INTRODUCED.
 8. FLEXIBLE DUCTWORK SHALL NOT BE USED.
 9. WHERE A/C DUCTWORK RUNS THROUGH A DROP CEILING AND MAY BE EXPOSED TO HIGHLY PLUMEN TEMPERATURE DUE TO POT LIGHTS THE DUCTWORK SHALL BE INSULATED WITH 1.5" TYPE A INSULATION.
- SUPPLY AIR GRILLE** - TYPE G, 12x4 (UNLESS NOTED ON PLAN). ORND DAMPER MUST BE EASILY ACCESSIBLE BY HOME OWNER TO MAKE SEASONAL ADJUSTMENTS AS REQUIRED.
- RETURN AIR GRILLE** - BY ARCHITECTURAL DIVISION UNLESS NOTED. SIZE AS SHOWN. THIS CONTRACTOR TO CARRY (AS A SEPARATE PRICE) RETURN AIR GRILLES AS NOTED ON PLANS. NOTES UPSTAIR, CONCEALED FASTENING.
- HVAC EXHAUST GRILLES (APPLICABLE WITH PRIVATE FANS OR HRV UNITS)** - TYPE G, 10x4 (UNLESS NOTED ON PLAN).
- SANITARY EXHAUST FANS SIZING/NOTES**
- PROVIDE FANS AS LOCATED ON FLOOR PLANS AND SIZED AS BELOW.
1. PROVIDE CF-150 CEILING EXHAUST FANS FOR ALL 3 PIECE WASHROOMS AND/OR ROOMS WHERE SHOWERS OR BATHTUBS ARE LOCATED. DISCHARGE DUCT SHALL BE 6".
 2. PROVIDE CF-250 CEILING EXHAUST FAN FOR EXERCISE ROOMS AND FOR MASTER ENSUITE WHERE THERE IS A SHOWER AND BATHTUB. DISCHARGE DUCT SHALL BE 6".
 3. PROVIDE CF-100 CEILING FANS FOR ALL 2 PIECE WASHROOMS WHERE SHOWERS OR BATHTUBS ARE NOT LOCATED. DISCHARGE DUCT SHALL BE 5".
 4. PROVIDE CF-100 CEILING FANS FOR ALL LAUNDRY ROOMS. DISCHARGE DUCT SHALL BE 5".
 5. PROVIDE LINT TRAP AND DRYER BOOSTER FAN TO SUIT DRYERS MANUFACTURER'S RECOMMENDATIONS WHERE REQUIRED.
- EXACT LOCATION OF TERMINATION TO BE COORDINATED WITH ARCHITECT. PROVIDE E/D/O AND B/SCREEN. UNLESS NOTED ON PLANS TERMINATIONS THRU WALLS SHALL BE A WALL BOX. TERMINATIONS THRU ROOF SHALL BE A ROOF CAP. REFER TO GRILLES, DIFFUSERS, LOUVER TERMINATION SCHEDULE FOR DETAIL.

BRANCH DUCT SIZING CHART	
5" S/A	= 40 CFM - 69 CFM
6" S/A	= 70 CFM - 110 CFM
6" R/A	= 100 CFM OR LESS
7" R/A	= 101 CFM - 159 CFM
8" R/A	= 160 CFM - 200 CFM

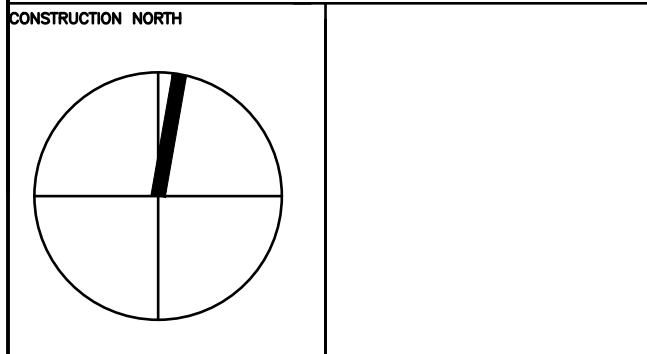
10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/2ND/MECH UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. DATE DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. OWNERS MUST NOT BE SOLELY CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SOLD



B K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

GEORGIANA, ONTARIO

MECHANICAL

PLOT DATE PROJECT NO.

23-317

DRAWING TITLE

SECOND FLOOR HVAC LAYOUT

DATE 2024

OWN BY J.W./K.W.

SCALE 1/4"=1'-0"

OF 25

EXHAUST DUCT THAT PASSES THROUGH OR IS ADJACENT TO UNHEATED SPACE SHALL BE INSULATED AS PER OBC-6.2.4.11.(1).

EXHAUST FANS SHALL HAVE SOUND RATING NOT GREATER THAN IN TABLE 9.32.3.9. (OBC-9.32.3.9.(4)).

HVAC EQUIPMENT AND SYSTEM REQUIRING PERIODIC MAINTENANCE SHALL BE INSTALLED WITH PROVISION FOR ACCESS FOR INSPECTION, MAINTENANCE, REPAIR AND CLEANING INCLUDING PROTECTION FROM FREEZING AS PER OBC-6.2.1.8.

ALL SUPPLY AND RETURN DUCTS JOINTS LOCATED IN UNCONDITIONED SPACE SHALL BE SEALED TO CLASS-A SEAL LEVEL IN ACCORDANCE WITH SMACNA STANDARDS. "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" AS PER OBC, DV-B, 6.2.4.3.(11).

ALL NEW FURNACES SHALL HAVE A BRUSHLESS DIRECT CURRENT (DC) FAN MOTORS AS PER OBC, DV-B, 12.3.1.5.(2). FIELD VERIFY IN THE SITE.

PROVIDE IN ADVANCE COMPLETE INFORMATION TO BUILDING INSPECTOR FOR THE REQUIRED SEALANT TO ALL DUCTWORKS THAT WILL COMPLY TO ALL REQUIREMENTS IN OBC, DV-B, 6.2.4.3.(11) & (12).

PROVIDE PROPER SEPARATING DISTANCE TO ALL AIR INTAKES FOR HRV'S FROM ANY POTENTIAL SOURCES OF CONTAMINATIONS AND SHALL BE CLEARLY LABELED FOR THE PROPER IDENTIFICATIONS FROM LOCATIONS OUTSIDE THE UNWELING UNIT AS PER OBC-9.32.3.12.(4) & (5).

ROUTE CONTINUOUS/UNOBSTRUCTED RETURN AIR SYSTEM TO HANDLE THE ENTIRE AIR SUPPLY BACK TO FURNACE EQUIPMENT AS PER OBC-6.2.4.7.(1) AND AIR VELOCITIES AS PER HRA/ASHRAE STANDARDS.

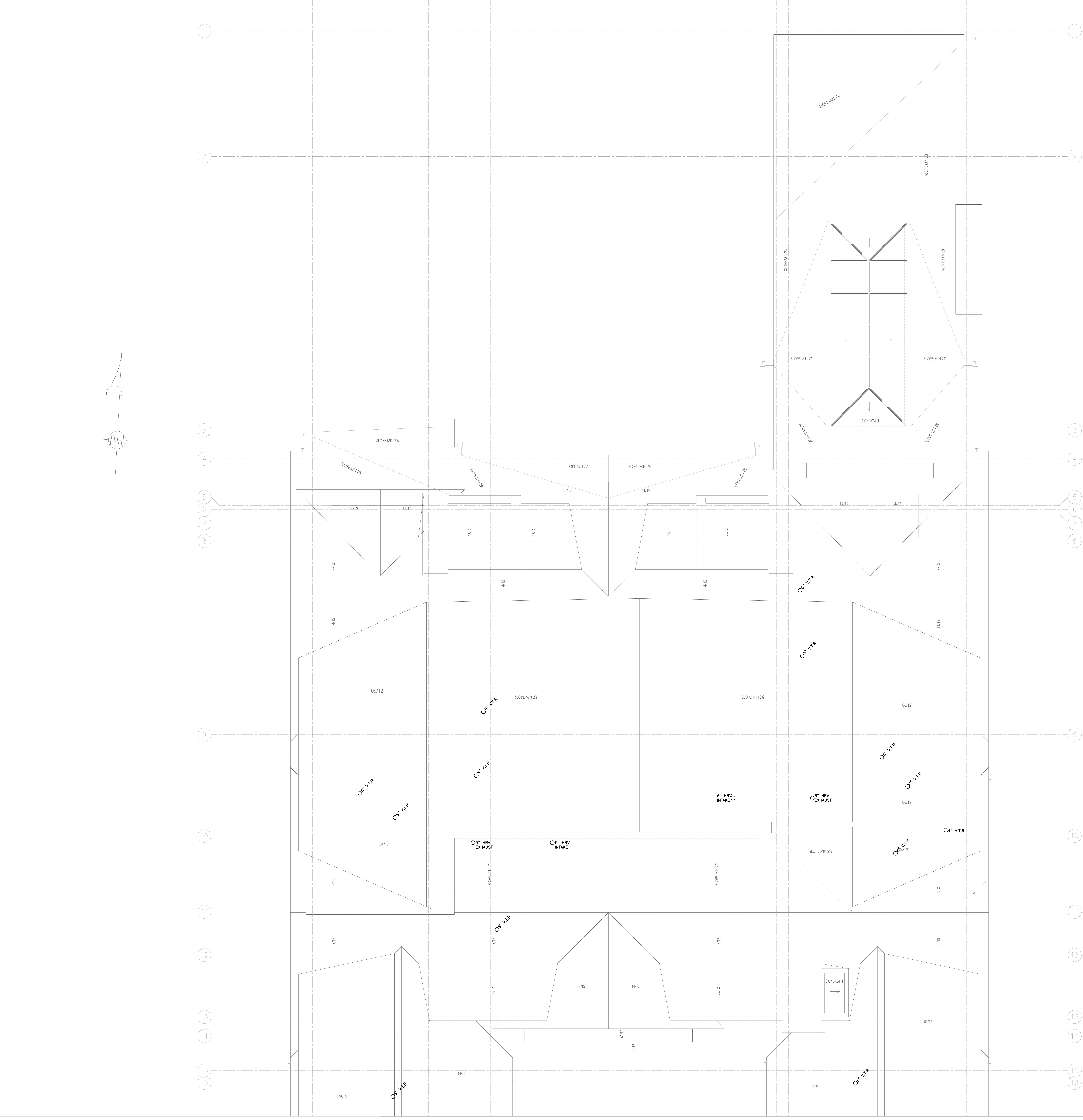
6"-5" MIN. CLEARANCE BELOW DUCT WORK DRYER VENT TO OUTSIDE COMPLETE WITH BACK DRAFT DAMPER

SUPPLY DUCT CARRYING OUTDOOR AIR WITHIN HEATED SPACE SHALL BE INSULATED WITH R3 INSULATIONS AND IF THE DUCT EXCEEDS 3 METERS (9'-10") IN LENGTH, R7 INSULATION IS REQUIRED AS PER OBC TABLE-9.32.3.10.A.

PROVIDE ADEQUATE INSULATION (R12 MIN.) C/W VAPOUR BARRIER TO ALL DUCTWORKS EXPOSED TO EXTERIOR WALLS AS PER OBC-6.2.4.3. (10).

HRV INSTALLATION SHALL COMPLY TO ALL REQUIREMENTS OF OBC-9.32.3.11, 12 & 13.

PROVIDE VOLUME DAMPER TO ALL NEW & EXISTING BRANCH TAKE-OFF FOR AIR BALANCING AS PER SMACNA STANDARDS (SEE OBC-6.2.1.1).



HVAC NOTES

1. REFER TO DUCTED STUD SPACE RETURN AIR DETAIL ON SCHEMATICS DRAWING FOR DETAIL. UNLESS NOTED ALL BRANCH DUCTS SERVING SINGLE STUD SPACE SHALL BE 8".
2. PROVIDE 4" DRYER VENTING AND WALL BOX AS REQUIRED. VENTING SIZE TO BE CONFIRMED WITH DRYER MANUFACTURER'S REQUIREMENTS. EXACT LOCATION T.B.D AT SITE. PROVIDE DRYER BOOSTER FAN WHERE VENTING EXCEEDS DRYER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE 4" S.A. AND R.A. INTO EVERY SKYLIGHT WHERE APPLICABLE. FINISH OFF WITH 4X4 GRILLES C/W BALANCING DAMPER AS APPROVED BY ARCHITECT/OWNER. BALANCE GRILLE TO 30 CFM.
4. KITCHEN MAKE UP AND FIREPLACE MAKE UP AIR REQUIREMENTS ARE TO BE CONFIRMED AT A LATER DETAIL UPON SELECTION OF HOOD AND ASSOCIATED EXHAUST FAN. NO DRY-WALLING SHALL BE DONE UNTIL THIS HAS BEEN CONFIRMED. KITCHEN EXHAUST FAN SHALL BE SUPPLIED BY OTHERS AND INSTALLED BY THIS CONTRACTOR ALONG WITH THE ASSOCIATED DUCTWORK. UNLESS NOTED ON PLANS ALLOW SOFT OF DUCTWORK FOR BUDGETING PURPOSES. ALL OPEN GAS LOG SET AND WOOD FIREPLACES ARE TO BE ROUGHED-IN ELECTRICALLY FOR POSSIBLE FUTURE ADDITION OF CHIMNEY VENTILATOR EQUAL TO EXHAUSTO RS-012.
5. ALL EXTERIOR LOUVERES AND VENT OPENINGS MUST BE MIN. 24" ABOVE FINISHED GRADE. ADJUST OPENING LOCATIONS OR MODIFY GRADE AS REQUIRED.
6. ALL DUCTWORK SHALL CONFORM TO ASHRAE. ALL DUCTWORK SHALL AND PLENUM SHALL BE CONSTRUCTED, INSTALLED AND SEALED AS DETAILED IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. CONTRACTOR TO SEAL DUCT WITH ZERO VOC DUCT SEALANT. WHERE DUCTWORK IS EXPOSED SEAL WITH CLEAR SILICONE.
7. ROUNDS OF ELBOW SHALL BE AT LEAST 1.5 TIMES THE WIDTH OF THE DUCT. WHERE A RADIUS IS NOT POSSIBLE TURNING VANES MUST BE INTRODUCED.
8. FLEXIBLE DUCTWORK SHALL NOT BE USED.
9. WHERE A/C DUCTWORK RUNS THROUGH A DROP CEILING AND MAY BE EXPOSED TO HIGHER PLENUM TEMPERATURE DUE TO PIOT LIGHTS THE DUCTWORK SHALL BE INSULATED WITH 1.5" TYPE A INSULATION.

SUPPLY AIR GRILLE - TYPE G, 12X4 (UNLESS NOTED ON PLAN). ORND DAMPER MUST BE EASILY ACCESSIBLE BY HOME OWNER TO MAKE SEASONAL ADJUSTMENTS AS REQUIRED.

RETURN AIR GRILLE - BY ARCHITECTURAL DIVISION UNLESS NOTED. SIZE AS SHOWN. THIS CONTRACTOR TO CARRY (AS A SEPARATE PRICE) RETURN AIR GRILLES AS NOTED ON PLANS. MODEL UP/STRI. CONCEALED FASTENING.

KITCHEN EXHAUST GRILLES (APPLICABLE WITH EXISTING FANS OR HWY UNITS) - TYPE G, 10X4 (UNLESS NOTED ON PLAN).

SANITARY EXHAUST FANS SIZING/NOTES

PROVIDE FANS AS LOCATED ON FLOOR PLANS AND SIZED AS BELOW.

1. PROVIDE CE-150 CEILING EXHAUST FANS FOR ALL 3 PIECE WASHROOMS AND/OR ROOMS WHERE SHOWERS OR BATHTUBS ARE LOCATED. DISCHARGE DUCT SHALL BE 6".
2. PROVIDE CE-250 CEILING EXHAUST FAN FOR EXERCISE ROOMS AND FOR MASTER ENSUITE WHERE THERE IS A SHOWER AND BATHTUB. DISCHARGE DUCT SHALL BE 6".
3. PROVIDE CE-100 CEILING FANS FOR ALL 2 PIECE WASHROOMS WHERE SHOWERS OR BATHTUBS ARE NOT LOCATED. DISCHARGE DUCT SHALL BE 5".
4. PROVIDE CE-100 CEILING FANS FOR ALL LAUNDRY ROOMS. DISCHARGE DUCT SHALL BE 5".
5. PROVIDE LINT TRAP AND DRYER BOOSTER FAN TO SUIT DRYERS MANUFACTURER'S RECOMMENDATIONS WHERE REQUIRED.

EXACT LOCATION OF TERMINATION TO BE COORDINATED WITH ARCHITECT. PROVIDE E/D/O/D AND B/SCREEN. UNLESS NOTED ON PLANS TERMINATIONS THRU WALLS SHALL BE A WALL BOX. TERMINATIONS THRU ROOF SHALL BE A ROOF DAP. REFER TO GRILLES, DIFFUSERS, LOUVERES TERMINATION SCHEDULE FOR DETAIL.

BRANCH DUCT SIZING CHART

- 5" S/A = 40 CFM - 69 CFM
- 6" S/A = 70 CFM - 110 CFM
- 6" R/A = 100 CFM OR LESS
- 7" R/A = 101 CFM - 159 CFM
- 8" R/A = 160 CFM - 200 CFM

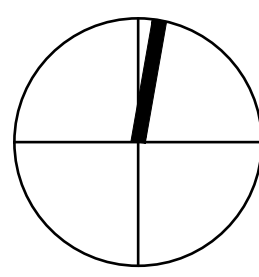
10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/2ND/MECH UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. DATE DESCRIPTION
THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. OWNERS MUST NOT BE SOLELY CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SIGNED

CONSTRUCTION NUMBER



B

K

CONSULTING INC.
23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

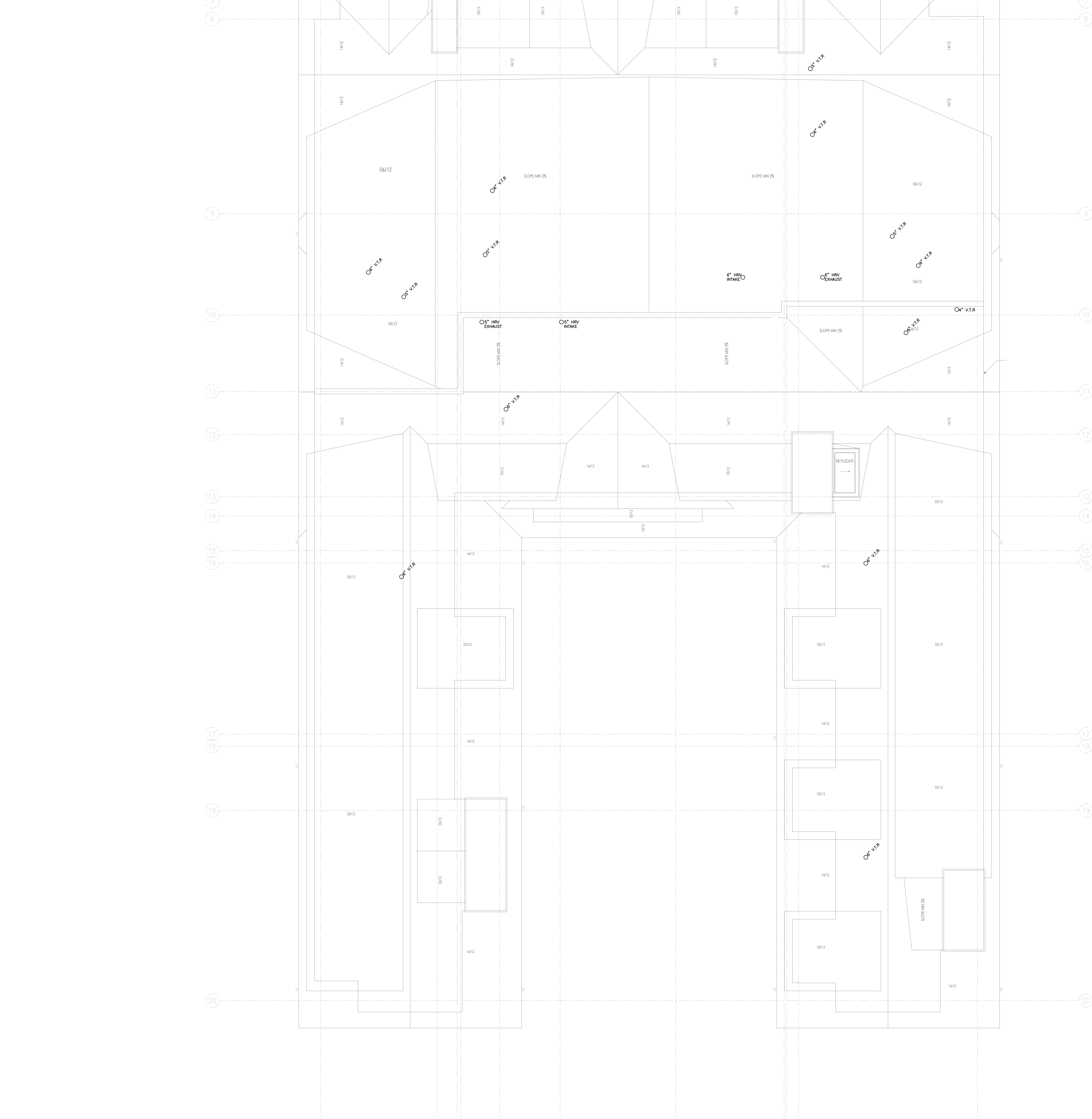
140 LAKE DRIVE EAST

GEORGINA, ONTARIO
MECHANICAL

PLOT DATE PROJECT NO.
DRAWING TITLE 23-317

ROOF LAYOUT

DATE	2024	M-8
DRAWN BY	J.W./K.W.	
SCALE	1/4"=1'-0"	
		OF 25



- HVAC NOTES**
1. REFER TO DUCTED STUD SPACE RETURN AIR DETAIL ON SCHEMATICS DRAWING FOR DETAIL. UNLESS NOTED ALL BRANCH DUCTS SERVING SINGLE STUD SPACE SHALL BE 8".
 2. PROVIDE 4" DRYER VENTING AND WALL BOX AS REQUIRED. VENTING SIZE TO BE CONFIRMED WITH DRYER MANUFACTURER'S REQUIREMENTS. EXACT LOCATION T.B.D AT SITE. PROVIDE DRYER BOOSTER FAN WHERE VENTING EXCEEDS DRYER MANUFACTURER'S RECOMMENDATIONS.
 3. PROVIDE 4" S/A AND R/A INTO EVERY SKYLIGHT WHERE APPLICABLE. FINISH OFF WITH 4X4 GRILLE C/W BALANCING DAMPER AS APPROVED BY ARCHITECT/OWNER. BALANCE GRILLE TO 30 CFM.
 4. KITCHEN MAKE UP AND FIREPLACE MAKE UP AIR REQUIREMENTS ARE TO BE CONFIRMED AT A LATER DETAIL UPON SELECTION OF HOOD AND ASSOCIATED EXHAUST FAN. NO DRY-WALLING SHALL BE DONE UNTIL THIS HAS BEEN CONFIRMED. KITCHEN EXHAUST FAN SHALL BE SUPPLIED BY OTHERS AND INSTALLED BY THIS CONTRACTOR ALONG WITH THE ASSOCIATED DUCTWORK. UNLESS NOTED ON PLANS ALLOW SOFT OF DUCTWORK FOR BUDGETING PURPOSES. ALL OPEN GAS LOG SET AND WOOD FIREPLACES ARE TO BE ROUGHED-IN ELECTRICALLY FOR POSSIBLE FUTURE ADDITION OF CHIMNEY VENTILATOR EQUAL TO EXHAUSTO HS-012.
 5. ALL EXTERIOR LOUVERES AND VENT OPENINGS MUST BE MIN. 24" ABOVE FINISHED GRADE. ADJUST OPENING LOCATIONS OR MODIFY GRADE AS REQUIRED.
 6. ALL DUCTWORK SHALL CONFORM TO ASHRAE. ALL DUCTWORK SHALL AND PLUMBING SHALL BE CONSTRUCTED, INSTALLED AND SEALED AS DETAILED IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. CONTRACTOR TO SEAL DUCT WITH ZERO VOC DUCT SEALANT. WHERE DUCTWORK IS EXPOSED SEAL WITH CLORP SUGGEST.
 7. RADIUS OF BLOW SHALL BE AT LEAST 1.5 TIMES THE WIDTH OF THE DUCT. WHERE A RADIUS IS NOT POSSIBLE TURNING VANES MUST BE INTRODUCED.
 8. FLEXIBLE DUCTWORK SHALL NOT BE USED.
 9. WHERE A/C DUCTWORK RUNS THROUGH A DROP CEILING AND MAY BE EXPOSED TO HIGHER PLENUM TEMPERATURE DUE TO POT LIGHTS THE DUCTWORK SHALL BE INSULATED WITH 1.5" TYPE A INSULATION.

SUPPLY AIR GRILLE - TYPE G, 12X4 (UNLESS NOTED ON PLAN). GRD DAMPER MUST BE EASILY ACCESSIBLE BY HOME OWNER TO MAKE SEASONAL ADJUSTMENTS AS REQUIRED.

RETURN AIR GRILLE - BY ARCHITECTURAL DIVISION UNLESS NOTED. SIZE AS SHOWN. THIS CONTRACTOR TO CARRY (AS A SEPARATE PRICE) RETURN AIR GRILLES AS NOTED ON PLANS. MOSTLY UPSTAIRS CONCEALED FACTURING.

MUSCOON EXHAUST GRILLES (APPLICABLE WITH PRIVATE FANS OR HRV UNITS) - TYPE G, 10X4 (UNLESS NOTED ON PLAN).

SANITARY EXHAUST FANS SIZING/NOTES

PROVIDE FANS AS LOCATED ON FLOOR PLANS AND SIZED AS BELOW

1. PROVIDE CE-150 CEILING EXHAUST FANS FOR ALL 3 PIECE WASHROOMS AND/OR ROOMS WHERE SHOWERS OR BATHTUBS ARE LOCATED. DISCHARGE DUCT SHALL BE 6".
2. PROVIDE CE-250 CEILING EXHAUST FAN FOR EXERCISE ROOMS AND FOR MASTER ENSUITE WHERE THERE IS A SHOWER AND BATHTUB. DISCHARGE DUCT SHALL BE 6".
3. PROVIDE CE-100 CEILING FANS FOR ALL 2 PIECE WASHROOMS WHERE SHOWERS OR BATHTUBS ARE NOT LOCATED. DISCHARGE DUCT SHALL BE 5".
4. PROVIDE CE-100 CEILING FANS FOR ALL LAUNDRY ROOMS. DISCHARGE DUCT SHALL BE 5".
5. PROVIDE LINT TRAP AND DRYER BOOSTER FAN TO SUIT DRYERS MANUFACTURERS RECOMMENDATIONS WHERE REQUIRED.

EXACT LOCATION OF TERMINATION TO BE COORDINATED WITH ARCHITECT. PROVIDE E/D/O AND B/SCREEN. UNLESS NOTED ON PLANS TERMINATIONS THRU WALLS SHALL BE A WALL BOX. TERMINATIONS THRU ROOF SHALL BE A ROOF DAP. REFER TO GRILLES, DIFFUSERS, LOUVERES TERMINATION SCHEDULE FOR DETAIL.

BRANCH DUCT SIZING CHART	
5" S/A	= 40 CFM - 69 CFM
6" S/A	= 70 CFM - 110 CFM
6" R/A	= 100 CFM OR LESS
7" R/A	= 101 CFM - 159 CFM
8" R/A	= 160 CFM - 200 CFM

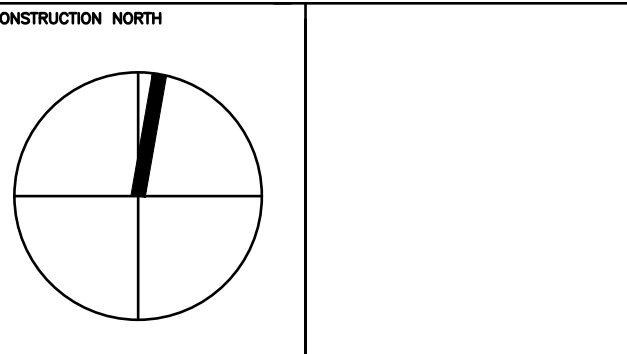
10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/2ND/MECH/1 UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. | DATE | DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. UNLESS NOTED, THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS CONTRASIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K

CONSULTING INC.

23 - 1111 Davis Drive #25
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

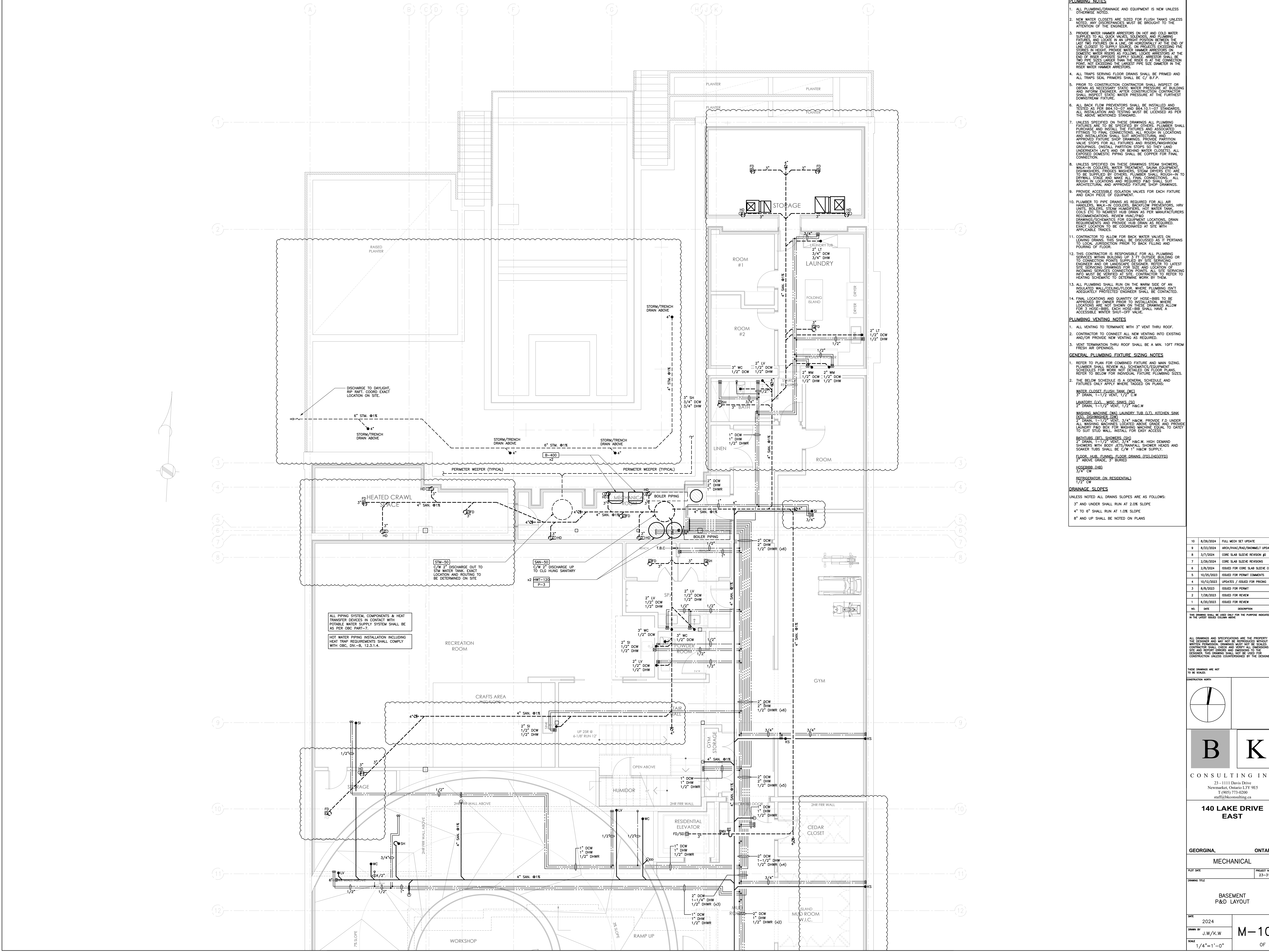
GEORGINA, ONTARIO

MECHANICAL

PLOT DATE PROJECT NO.
DRAWING TITLE 23-317

**SECOND FLOOR
HVAC LAYOUT**

DATE	2024	M-9
DRAWN BY	J.W./K.W.	
SCALE	1/4"=1'-0"	
		OF 25



- PLUMBING NOTES**
1. ALL PLUMBING/DRAINAGE AND EQUIPMENT IS NEW UNLESS OTHERWISE NOTED.
 2. NEW WATER CLOSETS ARE SIZED FOR FLUSH TANKS UNLESS NOTED. ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 3. PROVIDE WATER HAMMER ARRESTORS ON HOT AND COLD WATER SUPPLIES TO ALL QUICK VALVES, SOLENOIDS, AND PLUMBING FIXTURES. LOCATE IN AN UPRIGHT POSITION BETWEEN THE LAST TWO FIXTURES ON A LINE OR HORIZONTALLY AT THE END OF LINE CLOSEST TO SUPPLY SOURCE. ON PROJECTS EXCEEDING FIVE STORES IN HEIGHT, PROVIDE WATER HAMMER ARRESTORS ON DOMESTIC WATER RISERS AS FOLLOWS: LOCATE ARRESTORS AT THE END OF RISER OPPOSITE SUPPLY SOURCE. ARRESTOR SHALL BE TWO PIPE SIZES LARGER THAN THE RISER IS AT THE CONNECTION POINT, NOT EXCEEDING THE LARGEST PIPE SIZE DIAMETER IN THE RISER WATER HAMMER ARRESTORS.
 4. ALL TRAPS SERVING FLOOR DRAINS SHALL BE PRIMED AND ALL TRAPS SEAL PRIMERS SHALL BE C/ B.F.P.
 5. PRIOR TO CONSTRUCTION CONTRACTOR SHALL INSPECT OR OBTAIN AS NECESSARY STATIC WATER PRESSURE AT BUILDING AND IN-ROOM ENGINEER. AFTER CONSTRUCTION CONTRACTOR SHALL INSPECT STATIC WATER PRESSURE AT THE FURTHEST DOWNSTREAM FIXTURE.
 6. ALL BACK FLOW PREVENTORS SHALL BE INSTALLED AND TESTED AS PER B64.10-07 AND B64.10.1-07 STANDARDS. ALL INSTALLATION AND TESTING MUST BE LICENSED AS PER THE ABOVE MENTIONED STANDARD.
 7. UNLESS SPECIFIED ON THESE DRAWINGS ALL PLUMBING FIXTURES ARE TO BE SPECIFIED BY OTHERS. PLUMBER SHALL FITTINGS TO FINAL CONNECTIONS. ALL ROUGH IN LOCATIONS AND INSTALLATION SHALL SUIT ARCHITECTURAL AND APPROVED FIXTURE SHOP DRAWINGS. PROVIDE PARTITION VALVE STOPS FOR ALL FIXTURES AND RISERS/WASHROOM GROUPINGS. (INSTALL PARTITION STOPS SO THEY LAND UNDERNEATH LAY'S AND OR BEHIND WATER CLOSETS). ALL EXPOSED DOMESTIC PIPING SHALL BE COPPER FOR FINAL CONNECTION.
 8. UNLESS SPECIFIED ON THESE DRAWINGS STEAM SHOWERS, WALK-IN COOLERS, WATER TREATMENT, SAUNA EQUIPMENT, DISHWASHERS, WALK-IN COOLERS, BACKFLOW PREVENTORS, HRV UNITS, BOILERS, STEAM HUMIDIFIERS, HOT WATER TANK COILS ETC TO NEAREST HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HWC/PAD DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION TO BE COORDINATED AT SITE WITH APPLICABLE TRADES.
 9. PROVIDE ACCESSIBLE ISOLATION VALVES FOR EACH FIXTURE AND EACH PIECE OF EQUIPMENT.
 10. PLUMBER TO PIPE DRAINAGE AS REQUIRED FOR ALL AIR HANDLERS, WALK-IN COOLERS, BACKFLOW PREVENTORS, HRV UNITS, BOILERS, STEAM HUMIDIFIERS, HOT WATER TANK COILS ETC TO NEAREST HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HWC/PAD DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION TO BE COORDINATED AT SITE WITH APPLICABLE TRADES.
 11. CONTRACTOR TO ALLOW FOR BACK WATER VALVES ON LEAVING DRAINS. THIS SHALL BE DISCUSSED AS IT PERTAINS TO DRAINAGE PRIOR TO BACK FILLING AND POURING OF FLOOR.
 12. THIS CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING SERVICES WITHIN BUILDING UP TO 3' FT OUTSIDE BUILDING OR TO CONNECTION POINTS SUPPLIED BY SITE SERVING ENGINEER AND OR LANDSCAPE DESIGNER. REFER TO LATEST SITE SERVING DRAWINGS FOR SIZE AND LOCATION OF INCOMING SERVICES CONNECTION POINTS. ALL SITE SERVING INFO MUST BE VERIFIED AT SITE. CONTRACTOR TO REFER TO HEATING SCHEMATIC TO DETERMINE WORK BY THEM.
 13. ALL PLUMBING SHALL RUN ON THE WARM SIDE OF AN INSULATED WALL/CILING/FLOOR, WHERE PLUMBING ISNT ADEQUATELY PROTECTED ENGINEER SHALL BE CONTACTED.
 14. FINAL LOCATIONS AND QUANTITY OF HOSE-BIBS TO BE APPROVED BY OWNER PRIOR TO INSTALLATION. WHERE LOCATIONS ARE NOT SHOWN ON THESE DRAWINGS ALLOW FOR 3 HOSE-BIBS. EACH HOSE-BIB SHALL HAVE A ACCESSIBLE WINTER SHUT-OFF VALVE.

- PLUMBING VENTING NOTES**
1. ALL VENTING TO TERMINATE WITH 3" VENT THRU ROOF.
 2. CONTRACTOR TO CONNECT ALL NEW VENTING INTO EXISTING AND/OR PROVIDE NEW VENTING AS REQUIRED.
 3. VENT TERMINATION THRU ROOF SHALL BE A MIN. 10FT FROM FRESH AIR OPENINGS.

- GENERAL PLUMBING FIXTURE SIZING NOTES**
1. REFER TO PLAN FOR COMBINED FIXTURE AND MAIN SIZING. PLUMBER SHALL REVIEW ALL SCHEMATICS/EQUIPMENT SCHEDULES FOR WORK NOT DETAILED ON FLOOR PLANS. REFER TO BELOW FOR INDIVIDUAL FIXTURE PLUMBING SIZES.
 2. THE BELOW SCHEDULE IS A GENERAL SCHEDULE AND FIXTURES ONLY APPLY WHERE TAGGED ON PLANS:

WATER CLOSET (WC) FLUSH TANK (WC)	
3" DRAIN, 1-1/2" VENT, 1/2" C/W	
LAUNDRY (LV), MISC SINKS (SI)	
2" DRAIN, 1-1/2" VENT, 1/2" H&C W	
WASHING MACHINE (WAL), LAUNDRY TUB (LT), KITCHEN SINK (KS), DISHWASHER (DW)	
2" DRAIN, 1-1/2" VENT, 3/4" H&C W, PROVIDE F.D. UNDER ALL WASHING MACHINES LOCATED ABOVE GRADE AND PROVIDE LAUNDRY PAD BOX FOR WASHING MACHINE EQUAL TO OATEY TO SUIT STUD WALL. INSTALL FOR EASY ACCESS.	
BATHTUBS (BT), SHOWERS (SH)	
2" DRAIN, 1-1/2" VENT, 3/4" H&C W, HIGH DEMAND SHOWERS WITH BODY JETS/RAINFALL SHOWER HEADS AND SOAKER TUBS SHALL BE C/W 1" H&C W SUPPLY.	
FLOOR HUB, TUNNEL FLOOR DRAINS (FD), (HD)/(FD)	
2" ABOVE GRADE, 3" BURED	
HOSEBIBS (HB)	
3/4" C/W	
REFRIGERATOR (IN RESIDENTIAL)	
1/2" C/W	

- DRAINAGE SLOPES**
- UNLESS NOTED ALL DRAINS SLOPES ARE AS FOLLOWS:
- 3" AND UNDER SHALL RUN AT 2.0% SLOPE
 - 4" TO 6" SHALL RUN AT 1.0% SLOPE
 - 8" AND UP SHALL BE NOTED ON PLANS

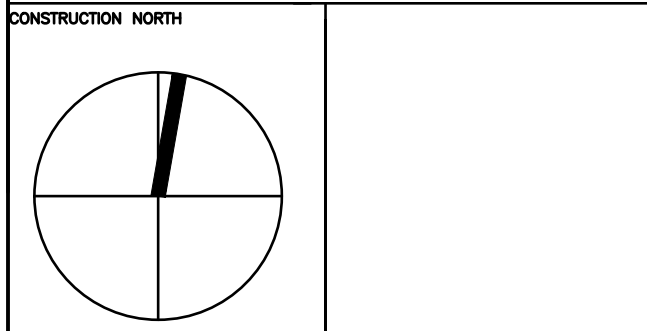
10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HWC/PAD/2ND/MECH UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR POINT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. DATE DESCRIPTION

THESE DRAWINGS SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND WILL NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

GEORGINA, ONTARIO

MECHANICAL

PLOT DATE PROJECT NO.

23-317

DRAWING TITLE

BASEMENT P&D LAYOUT

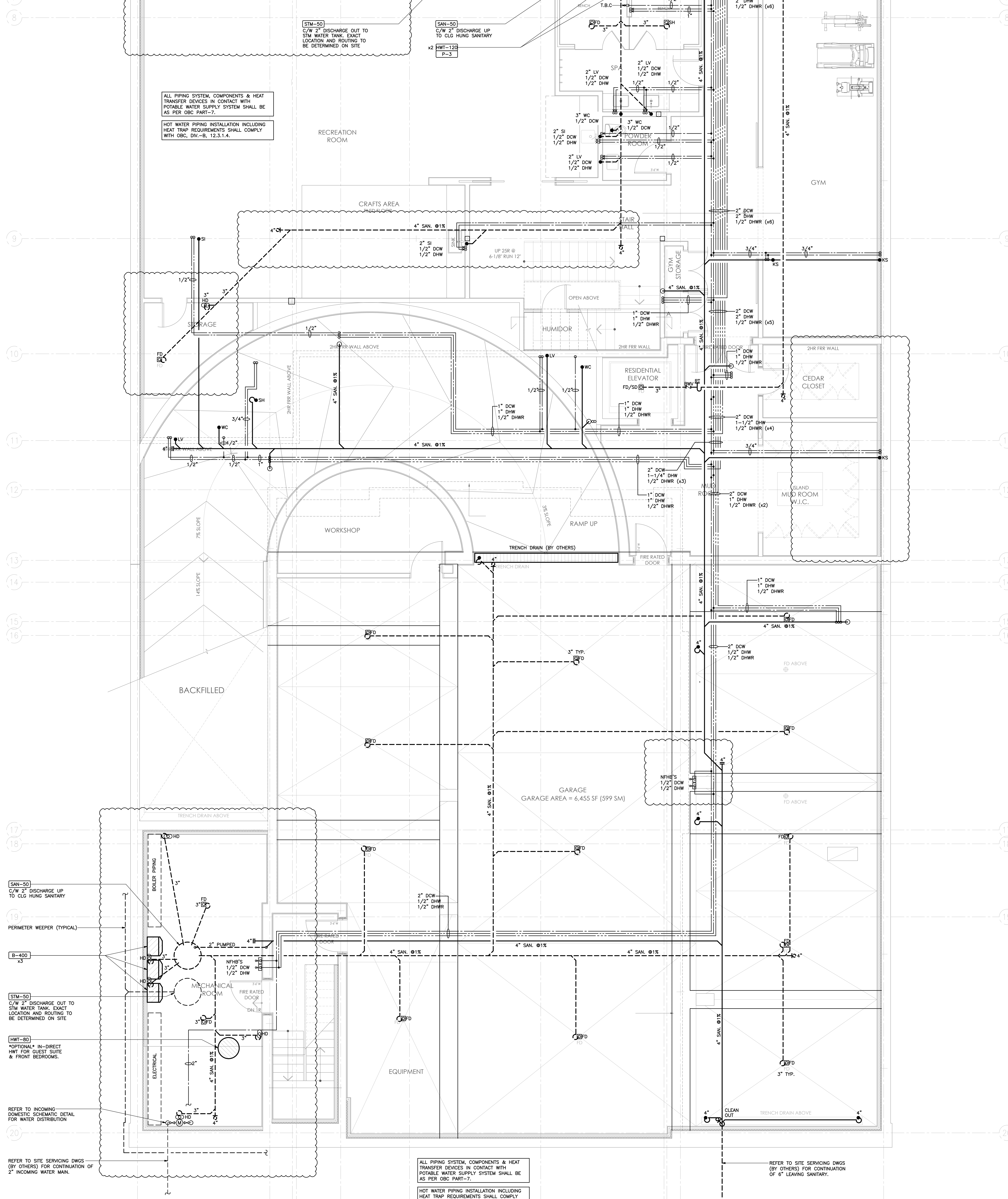
DATE 2024

DRAWN BY J.W./K.W.

SCALE 1/4"=1'-0"

M-10

OF 25



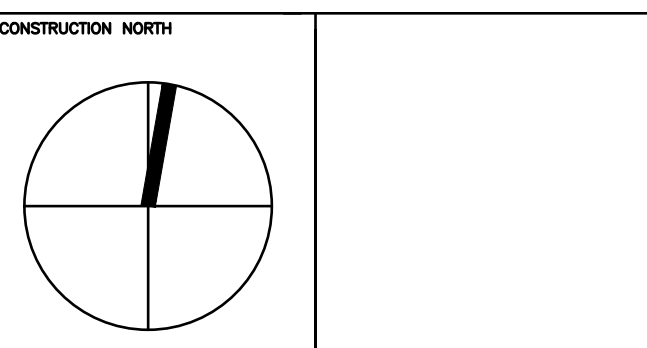
- PLUMBING NOTES**
1. ALL PLUMBING/DRAINAGE AND EQUIPMENT IS NEW UNLESS OTHERWISE NOTED.
 2. NEW WATER CLOSETS ARE SIZED FOR FLUSH TANKS UNLESS NOTED. ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 3. PROVIDE WATER HAMMER ARRESTORS ON HOT AND COLD WATER SUPPLIES TO ALL QUICK VALVES, SOLENOIDS, AND PLUMBING FITTINGS. PROVIDE WATER HAMMER ARRESTORS ON THE LAST TWO FIXTURES ON A LINE OR HORIZONTALLY AT THE END OF LINE CLOSEST TO SUPPLY SOURCE. ON PROTECT EXCEEDING FIVE STORES IN HEIGHT, PROVIDE WATER HAMMER ARRESTORS ON DOMESTIC WATER RISERS AS FOLLOWS: LOCATE ARRESTORS AT THE END OF RISER OPPOSITE SUPPLY SOURCE. ARRESTOR SHALL BE TWO PIPE SIZES LARGER THAN THE RISER IS AT THE CONNECTION POINT. NOT EXCEEDING THE LARGEST PIPE SIZE DIAMETER IN THE RISER WATER HAMMER ARRESTORS.
 4. ALL TRAPS SERVING FLOOR DRAINS SHALL BE PRIMED AND ALL TRAPS SEAL. PRIMERS SHALL BE C/ B.F.P.
 5. PRIOR TO CONSTRUCTION CONTRACTOR SHALL INSPECT OR RETAIN AN INDEPENDENT STATIC WATER PRESSURE AT BUILDING AND IN-ROOM ENGINEER. AFTER CONSTRUCTION CONTRACTOR SHALL INSPECT STATIC WATER PRESSURE AT THE FURTHEST DOWNSTREAM FLOOR.
 6. ALL BACK FLOW PREVENTORS SHALL BE INSTALLED AND TESTED AS PER B64.10-07 AND B64.10.1-07 STANDARDS. ALL INSTALLATION AND TESTING MUST BE LICENSED AS PER THE ABOVE MENTIONED STANDARD.
 7. UNLESS SPECIFIED ON THESE DRAWINGS ALL PLUMBING FIXTURES ARE TO BE SPECIFIED BY OTHERS. PLUMBER SHALL PURCHASE AND INSTALL THE FIXTURES AND ASSOCIATED FITTINGS TO FINAL CONNECTIONS. ALL ROUGH IN LOCATIONS AND INSTALLATION SHALL SUIT ARCHITECTURAL AND APPROVED FUTURE SHOP DRAWINGS. PROVIDE PARTITION VALVE STOPS FOR ALL FIXTURES AND RISERS/WASHROOM GROUPINGS. (INSTALL PARTITION STOPS SO THEY LAND UNDERNEATH LAY'S AND OR BEHIND WATER CLOSETS). ALL EXPOSED DOMESTIC PIPING SHALL BE COPPER FOR FINAL CONNECTION.
 8. UNLESS SPECIFIED ON THESE DRAWINGS STEAM SHOWERS, WALK-IN COOLERS, WATER TREATMENT, SAUNA EQUIPMENT, HOT TUBS, AND OTHERS SHALL BE SUPPLIED BY OTHERS. PLUMBER SHALL ROUGH-IN TO BE SUPPLIED BY OTHERS. PLUMBER SHALL ROUGH-IN TO DRYWALL STAGE AND PROVIDE HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HVAC/PAD DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION TO BE COORDINATED AT SITE WITH APPLICABLE TRADES.
 9. PROVIDE ACCESSIBLE ISOLATION VALVES FOR EACH FIXTURE AND EACH PIECE OF EQUIPMENT.
 10. PLUMBER TO PIPE DRAIN AS REQUIRED FOR ALL AIR HANDLERS, WALK-IN COOLERS, BACKFLOW PREVENTORS, HRV UNITS, BOILERS, STEAM HUMIDIFIERS, HOT WATER TANK COILS ETC TO NEAREST HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HVAC/PAD DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION TO BE COORDINATED AT SITE WITH APPLICABLE TRADES.
 11. CONTRACTOR TO ALLOW FOR BACK WATER VALVES ON LEAVING DRAINS. THIS SHALL BE DISCUSSED AS IT PERTAINS TO LOCALIZATION PRIOR TO BACK FILLING AND POURING OF FLOOR.
 12. THIS CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING SERVICES WITHIN BUILDING UP TO 3 FT OUTSIDE BUILDING OR TO CONNECTION POINTS SUPPLIED BY SITE SERVING ENGINEER AND OR LANDSCAPE DESIGNER. REFER TO LATEST SITE SERVING DRAWINGS FOR SIZE AND LOCATION OF INCOMING SERVICES CONNECTION POINTS. ALL SITE SERVING INFO MUST BE VERIFIED AT SITE. CONTRACTOR TO REFER TO HEATING SCHEMATIC TO DETERMINE WORK BY THEM.
 13. ALL PLUMBING SHALL RUN ON THE WARM SIDE OF AN INSULATED WALL/CEILING/FLOOR, WHERE PLUMBING ISNT ADEQUATELY PROTECTED ENGINEER SHALL BE CONTRACTED.
 14. FINAL LOCATIONS AND QUANTITY OF HOSE-BIBS TO BE APPROVED BY OWNER PRIOR TO INSTALLATION. WHERE LOCATIONS ARE NOT SHOWN ON THESE DRAWINGS ALLOW FOR 3 HOSE-BIBS. EACH HOSE-BIB SHALL HAVE A ACCESSIBLE WINTER SHUT-OFF VALVE.
- PLUMBING VENTING NOTES**
1. ALL VENTING TO TERMINATE WITH 3" VENT THRU ROOF.
 2. CONTRACTOR TO CONNECT ALL NEW VENTING INTO EXISTING AND/OR PROVIDE NEW VENTING AS REQUIRED.
 3. VENT TERMINATION THRU ROOF SHALL BE A MIN. 10FT FROM FRESH AIR OPENINGS.
- GENERAL PLUMBING FIXTURE SIZING NOTES**
- PLUMBER SHALL REVIEW ALL SCHEMATICS/EQUIPMENT SCHEDULES FOR WORK NOT DETAILED ON FLOOR PLANS. REFER TO BELOW FOR INDIVIDUAL FIXTURE PLUMBING SIZES.
2. THE BELOW SCHEDULE IS A GENERAL SCHEDULE AND FIXTURES ONLY APPLY WHERE TAGGED ON PLANS:
- WATER CLOSET (WC) FLUSH TANK (WC)**
3" DRAIN, 1-1/2" VENT, 1/2" CW
- LAVATORY (LV), MISC SINKS (SI)**
2" DRAIN, 1-1/2" VENT, 1/2" H&C W
- WASHING MACHINE (WAL), LAUNDRY TUB (LT), KITCHEN SINK (KS), DISHWASHER (DW)**
2" DRAIN, 1-1/2" VENT, 3/4" H&C W, PROVIDE F.D. UNDER ALL WASHING MACHINES LOCATED ABOVE GRADE AND PROVIDE LAUNDRY PAD BOX FOR WASHING MACHINE EQUAL TO OATEY TO SUIT STUD WALL. INSTALL FOR EASY ACCESS.
- BATHTUBS (BT), SHOWERS (SH)**
2" DRAIN, 1-1/2" VENT, 3/4" H&C W, HIGH DEMAND SHOWERS WITH BODY JETS/RAINFALL SHOWER HEADS AND SOAKER TUBS SHALL BE C/W 1" H&C W SUPPLY.
- FLOOR, HUB, TUNNEL, FLOOR DRAINS (FD), (HD), (FTD)**
2" ABOVE GRADE, 3" BURED
- HOSEBIB (HB)**
3/4" CW
- REFRIGERATOR (IN RESIDENTIAL)**
1/2" CW
- DRAINAGE SLOPES**
- UNLESS NOTED ALL DRAINS SLOPES ARE AS FOLLOWS:
- 3" AND UNDER SHALL RUN AT 2.0% SLOPE
 - 4" TO 6" SHALL RUN AT 1.0% SLOPE
 - 8" AND UP SHALL BE NOTED ON PLANS

10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/2ND/MECH UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

THESE DRAWINGS SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND WILL NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B

K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T: (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

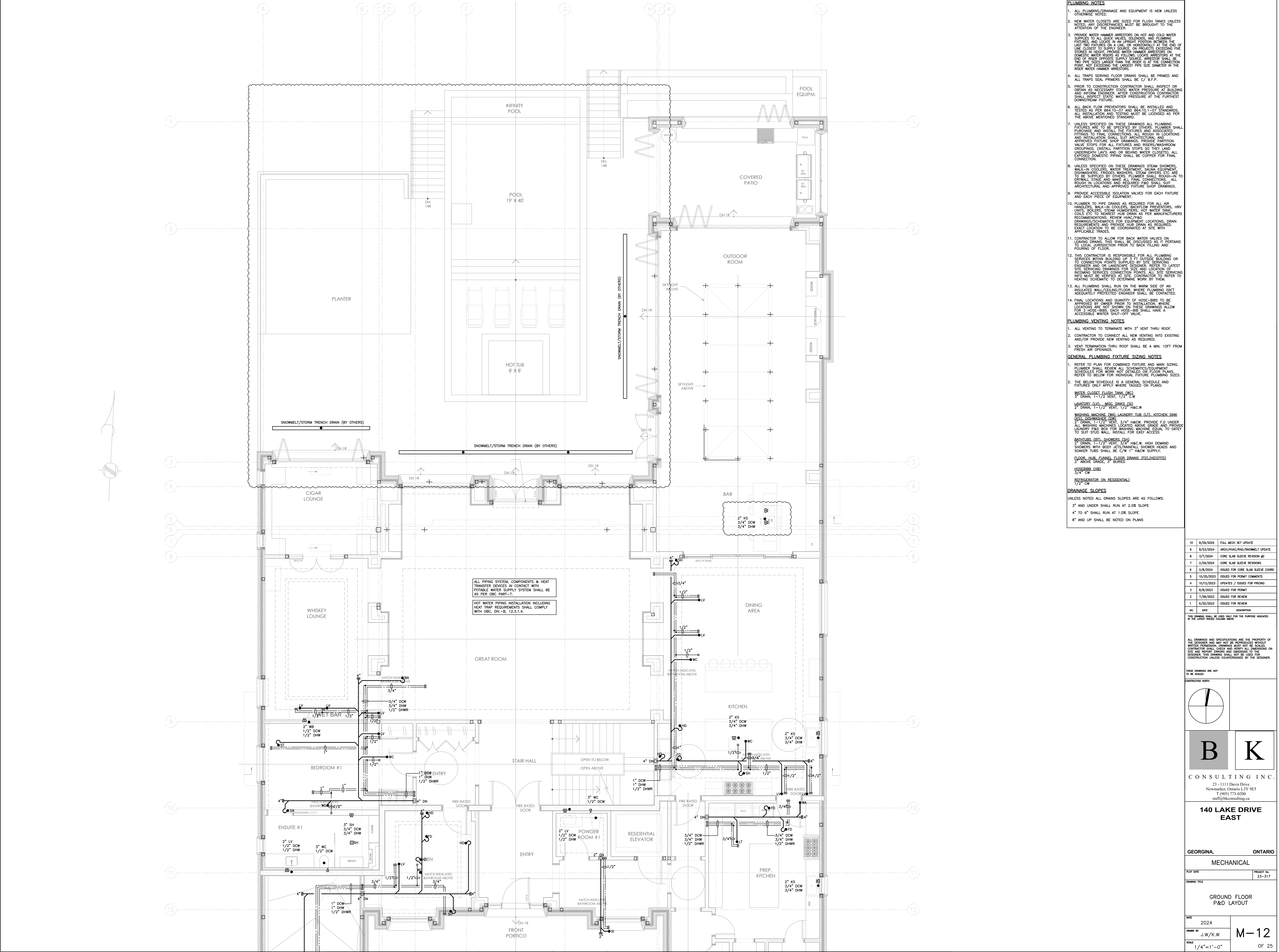
GEORGIANA, ONTARIO

MECHANICAL

PLOT DATE PROJECT NO.
DRAWING TITLE 23-317

BASEMENT P&D LAYOUT

DATE	2024	M-11
DRAWN BY	J.W./K.W.	
SCALE	1/4"=1'-0"	
		OF 25



- PLUMBING NOTES**
1. ALL PLUMBING/DRAINAGE AND EQUIPMENT IS NEW UNLESS OTHERWISE NOTED.
 2. NEW WATER CLOSETS ARE SIZED FOR FLUSH TANKS UNLESS NOTED. ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 3. PROVIDE WATER HAMMER ARRESTORS ON HOT AND COLD WATER SUPPLIES TO ALL QUICK VALVES, SOLENOIDS, AND PLUMBING FITTINGS IN AN UPRIGHT POSITION BETWEEN THE LAST TWO FIXTURES ON A LINE OR HORIZONTALLY AT THE END OF LINE CLOSEST TO SUPPLY SOURCE. ON PROJECTS EXCEEDING FIVE STORES IN HEIGHT, PROVIDE WATER HAMMER ARRESTORS ON DOMESTIC WATER RISERS AS FOLLOWS: LOCATE ARRESTORS AT THE END OF RISER OPPOSITE SUPPLY SOURCE. ARRESTOR SHALL BE TWO PIPE SIZES LARGER THAN THE RISER IS AT THE CONNECTION POINT, NOT EXCEEDING THE LARGEST PIPE SIZE DIAMETER IN THE RISER WATER HAMMER ARRESTORS.
 4. ALL TRAPS SERVING FLOOR DRAINS SHALL BE PRIMED AND ALL TRAPS SEAL PRIMERS SHALL BE C/ B.F.P.
 5. PRIOR TO CONSTRUCTION CONTRACTOR SHALL INSPECT OR OBTAIN AS NECESSARY STATIC WATER PRESSURE AT BUILDING AND IN-ROOM ENGINEERING. AFTER CONSTRUCTION CONTRACTOR SHALL INSPECT STATIC WATER PRESSURE AT THE FURTHEST DOWNSTREAM FIXTURE.
 6. ALL BACK FLOW PREVENTORS SHALL BE INSTALLED AND TESTED AS PER B64.10-07 AND B64.10.1-07 STANDARDS. ALL INSTALLATION AND TESTING MUST BE LICENSED AS PER THE ABOVE MENTIONED STANDARD.
 7. UNLESS SPECIFIED ON THESE DRAWINGS ALL PLUMBING FIXTURES ARE TO BE SPECIFIED BY OTHERS. PLUMBER SHALL PURCHASE AND INSTALL THE FIXTURES AND ASSOCIATED FITTINGS TO FINAL CONNECTIONS. ALL ROUGH IN LOCATIONS AND INSTALLATION SHALL SUIT ARCHITECTURAL AND APPROVED FUTURE SHOP DRAWINGS. PROVIDE PARTITION VALVE STOPS FOR ALL FIXTURES AND RISERS/WASHROOM GROUPINGS. (INSTALL PARTITION STOPS SO THEY LAND UNDERNEATH LAY'S AND OR BEHIND WATER CLOSETS). ALL EXPOSED DOMESTIC PIPING SHALL BE COPPER FOR FINAL CONNECTION.
 8. UNLESS SPECIFIED ON THESE DRAWINGS STEAM SHOWERS, WALK-IN COOLERS, WATER TREATMENT, SAUNA EQUIPMENT, DESHAWERS, WALK-IN COOLERS, BACKFLOW PREVENTORS, HRV UNITS, BOILERS, STEAM HUMIDIFIERS, HOT WATER TANK, COILS ETC TO NEAREST HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HVAC/PAID DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION TO BE COORDINATED AT SITE WITH APPLICABLE TRADES.
 9. PROVIDE ACCESSIBLE ISOLATION VALVES FOR EACH FIXTURE AND EACH PIECE OF EQUIPMENT.
 10. PLUMBER TO PIPE DRAIN AS REQUIRED FOR ALL AIR HANDLERS, WALK-IN COOLERS, BACKFLOW PREVENTORS, HRV UNITS, BOILERS, STEAM HUMIDIFIERS, HOT WATER TANK, COILS ETC TO NEAREST HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HVAC/PAID DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION TO BE COORDINATED AT SITE WITH APPLICABLE TRADES.
 11. CONTRACTOR TO ALLOW FOR BACK WATER VALVES ON LEAVING DRAINS. THIS SHALL BE DISCUSSED AS IT PERTAINS TO LOCAL JURISDICTION PRIOR TO BACK FILLING AND POURING OF FLOOR.
 12. THIS CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING SERVICES WITHIN BUILDING UP TO 3 FT OUTSIDE BUILDING OR TO CONNECTION POINTS SUPPLIED BY SITE SERVING ENGINEER AND OR LANDSCAPE DESIGNER. REFER TO LATEST SITE SERVING DRAWINGS FOR SIZE AND LOCATION OF INCOMING SERVICES CONNECTION POINTS. ALL SITE SERVING INFO MUST BE VERIFIED AT SITE. CONTRACTOR TO REFER TO HEATING SCHEMATIC TO DETERMINE WORK BY THEM.
 13. ALL PLUMBING SHALL RUN ON THE WARM SIDE OF AN INSULATED WALL/CEILING/FLOOR, WHERE PLUMBING ISNT ADEQUATELY PROTECTED ENGINEER SHALL BE CONSULTED.
 14. FINAL LOCATIONS AND QUANTITY OF HOSE-BIBS TO BE APPROVED BY OWNER PRIOR TO INSTALLATION. WHERE LOCATIONS ARE NOT SHOWN ON THESE DRAWINGS ALLOW FOR 3 HOSE-BIBS. EACH HOSE-BIB SHALL HAVE A ACCESSIBLE WINTER SHUT-OFF VALVE.

- PLUMBING VENTING NOTES**
1. ALL VENTING TO TERMINATE WITH 3" VENT THRU ROOF.
 2. CONTRACTOR TO CONNECT ALL NEW VENTING INTO EXISTING AND/OR PROVIDE NEW VENTING AS REQUIRED.
 3. VENT TERMINATION THRU ROOF SHALL BE A MIN. 10FT FROM FRESH AIR OPENINGS.
- GENERAL PLUMBING FIXTURE SIZING NOTES**
1. REFER TO PLAN FOR COMBINED FIXTURE AND MAIN SIZING. PLUMBER SHALL REVIEW ALL SCHEMATICS/EQUIPMENT SCHEDULES FOR WORK NOT DETAILED ON FLOOR PLANS. REFER TO BELOW FOR INDIVIDUAL FIXTURE PLUMBING SIZES.
 2. THE BELOW SCHEDULE IS A GENERAL SCHEDULE AND FIXTURES ONLY APPLY WHERE TAGGED ON PLANS:
- WATER CLOSET (WC), FLUSH TANK (WC)**
3" DRAIN, 1-1/2" VENT, 1/2" C/W
- LAVATORY (LV), MISC SINKS (SI)**
2" DRAIN, 1-1/2" VENT, 1/2" H&C/W
- WASHING MACHINE (WM), LAUNDRY TUB (LT), KITCHEN SINK (KS), DISHWASHER (DW)**
2" DRAIN, 1-1/2" VENT, 3/4" H&C/W, PROVIDE F.D. UNDER ALL WASHING MACHINES LOCATED ABOVE (GRADE AND PROVIDE LAUNDRY PAD BOX FOR WASHING MACHINE EQUAL TO OATEY TO SUIT STUD WALL. INSTALL FOR EASY ACCESS.
- BATHTUBS (BT), SHOWERS (SH)**
2" DRAIN, 1-1/2" VENT, 3/4" H&C/W, HIGH DEMAND SHOWERS WITH BODY JETS/RAINFALL SHOWER HEADS AND SOAKER TUBS SHALL BE C/W 1" H&C/W SUPPLY.
- FLOOR, HUB, TUNNEL, FLOOR DRAINS (FD)(HD)(FFD)**
2" ABOVE GRADE, 3" BURED
- HOSEBIB (HB)**
3/4" C/W
- REFRIGERATOR (IN RESIDENTIAL)**
1/2" C/W
- DRAINAGE SLOPES**
- UNLESS NOTED ALL DRAINS SLOPES ARE AS FOLLOWS:
- 3" AND UNDER SHALL RUN AT 2.0% SLOPE
 - 4" TO 6" SHALL RUN AT 1.0% SLOPE
 - 6" AND UP SHALL BE NOTED ON PLANS

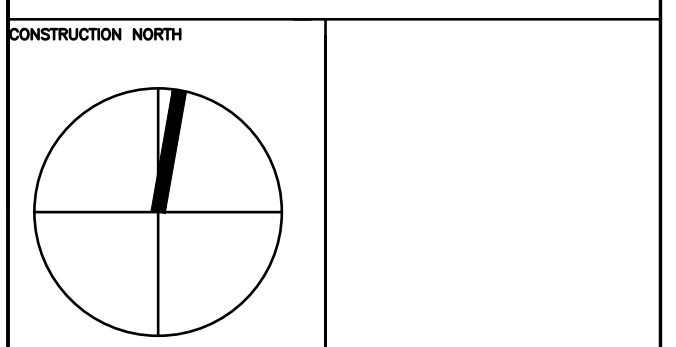
10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/SNOWMELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. DATE DESCRIPTION

THESE DRAWINGS SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K
CONSULTING INC.
23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

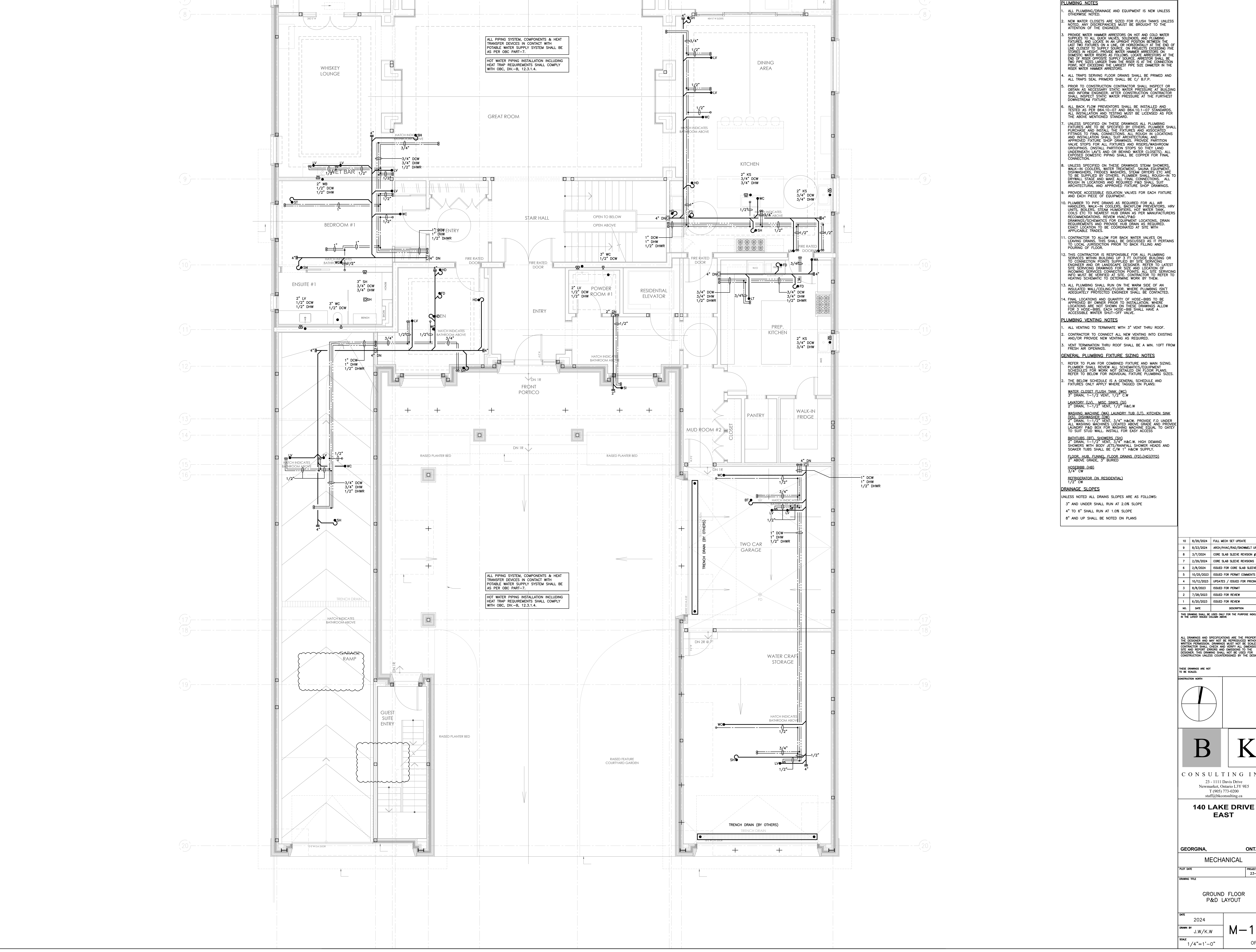
140 LAKE DRIVE EAST

GEORGINA, ONTARIO
MECHANICAL

PLOT DATE PROJECT NO.
DRAWING TITLE 23-317

GROUND FLOOR P&D LAYOUT

DATE 2024
DRAWN BY J.W/K.W
SCALE 1/4"=1'-0"
PROJECT NO. 23-317
M-12
OF 25



ALL PIPING SYSTEM, COMPONENTS & HEAT TRANSFER DEVICES IN CONTACT WITH POTABLE WATER SUPPLY SYSTEM SHALL BE AS PER CBC PART-7.

HOT WATER PIPING INSTALLATION INCLUDING HEAT TRAP REQUIREMENTS SHALL COMPLY WITH CBC, DIV.-5, 12.3.1.4.

ALL PIPING SYSTEM, COMPONENTS & HEAT TRANSFER DEVICES IN CONTACT WITH POTABLE WATER SUPPLY SYSTEM SHALL BE AS PER CBC PART-7.

HOT WATER PIPING INSTALLATION INCLUDING HEAT TRAP REQUIREMENTS SHALL COMPLY WITH CBC, DIV.-5, 12.3.1.4.

- PLUMBING NOTES**
1. ALL PLUMBING/DRAINAGE AND EQUIPMENT IS NEW UNLESS OTHERWISE NOTED.
 2. NEW WATER CLOSETS ARE SIZED FOR FLUSH TANKS UNLESS NOTED. ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 3. PROVIDE WATER HAMMER ARRESTORS ON HOT AND COLD WATER SUPPLIES TO ALL QUICK VALVES, SOLENOIDS, AND PLUMBING FIXTURES. PROVIDE WATER HAMMER ARRESTORS ON THE LAST TWO FIXTURES ON A LINE, OR HORIZONTALLY AT THE END OF LINE CLOSEST TO SUPPLY SOURCE. PROVIDE WATER HAMMER ARRESTORS IN HEIGHT, PROVIDE WATER HAMMER ARRESTORS ON DOMESTIC WATER RISERS AS FOLLOWS: LOCATE ARRESTORS AT THE END OF RISER OPPOSITE SUPPLY SOURCE. ARRESTOR SHALL BE TWO PIPE SIZES LARGER THAN THE RISER IS AT THE CONNECTION POINT, NOT EXCEEDING THE LARGEST PIPE SIZE DIAMETER IN THE RISER WATER HAMMER ARRESTORS.
 4. ALL TRAPS SERVING FLOOR DRAINS SHALL BE PRIMED AND ALL TRAPS SEAL PRIMERS SHALL BE C/ B.F.P.
 5. PRIOR TO CONSTRUCTION CONTRACTOR SHALL INSPECT OR OBTAIN AS NECESSARY STATIC WATER PRESSURE AT BUILDING AND IN-USE ENGINEER. AFTER CONSTRUCTION CONTRACTOR SHALL INSPECT STATIC WATER PRESSURE AT THE FURTHEST DOWNSTREAM TUBING.
 6. ALL BACK FLOW PREVENTORS SHALL BE INSTALLED AND TESTED AS PER B64.10.-07 AND B64.10.1-07 STANDARDS. ALL INSTALLATION AND TESTING MUST BE LICENSED AS PER THE ABOVE MENTIONED STANDARD.
 7. UNLESS SPECIFIED ON THESE DRAWINGS ALL PLUMBING FIXTURES ARE TO BE SPECIFIED BY OTHERS. PLUMBER SHALL PURCHASE AND INSTALL THE FIXTURES AND ASSOCIATED FITTINGS TO FINAL CONNECTIONS. ALL ROUGH IN LOCATIONS AND INSTALLATION SHALL SUIT ARCHITECTURAL AND APPROVED FUTURE SHOP DRAWINGS. PROVIDE PARTITION VALVE STOPS FOR ALL FIXTURES AND RISERS/WASHROOM GROUPINGS. (INSTALL PARTITION STOPS SO THEY LAND UNDERNEATH LAY'S AND OR BEHIND WATER CLOSETS). ALL EXPOSED DOMESTIC PIPING SHALL BE COPPER FOR FINAL CONNECTION.
 8. UNLESS SPECIFIED ON THESE DRAWINGS STEAM SHOWERS, WALK-IN COOLERS, WATER TREATMENT, SAUNA EQUIPMENT, DEWASERS, WALK-IN COOLERS, BACKFLOW PREVENTORS, HWY UNITS, BOILERS, STEAM HUMIDIFIERS, HOT WATER TANKS, COILS ETC TO NEAREST HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HVAC/PAD DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION IS TO BE DETERMINED AT SITE WITH APPLICABLE TRADES.
 11. CONTRACTOR TO ALLOW FOR BACK WATER VALVES ON LEAVING DRAINS. THIS SHALL BE DISCUSSED AS IT PERTAINS TO LOCAL JURISDICTION PRIOR TO BACK FILLING AND POURING OF FLOOR.
 12. THIS CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING SERVICES WITHIN BUILDING UP TO 3 FT OUTSIDE BUILDING OR TO CONNECTION POINTS SUPPLIED BY SITE SERVING ENGINEER AND OR LANDSCAPE DESIGNER. REFER TO LATEST SITE SERVING DRAWINGS FOR SIZE AND LOCATION OF INCOMING SERVICES. CONNECTION POINTS ALL SITE SERVING INFO MUST BE VERIFIED AT SITE. CONTRACTOR TO REFER TO HEATING SCHEMATIC TO DETERMINE WORK BY THEM.
 13. ALL PLUMBING SHALL RUN ON THE WARM SIDE OF AN INSULATED WALL/CEILING/FLOOR, WHERE PLUMBING ISNT ADEQUATELY PROTECTED ENGINEER SHALL BE CONSULTED.
 14. FINAL LOCATIONS AND QUANTITY OF HOSE-BIBS TO BE APPROVED BY OWNER PRIOR TO INSTALLATION. WHERE LOCATIONS ARE NOT SHOWN ON THESE DRAWINGS ALLOW FOR 3 HOSE-BIBS. EACH HOSE-BIB SHALL HAVE A ACCESSIBLE WINTER SHUT-OFF VALVE.

- PLUMBING VENTING NOTES**
1. ALL VENTING TO TERMINATE WITH 3" VENT THRU ROOF.
 2. CONTRACTOR TO CONNECT ALL NEW VENTING INTO EXISTING AND/OR PROVIDE NEW VENTING AS REQUIRED.
 3. VENT TERMINATION THRU ROOF SHALL BE A MIN. 10FT FROM FRESH AIR OPENINGS.

- GENERAL PLUMBING FIXTURE SIZING NOTES**
1. REFER TO PLAN FOR COMBINED FIXTURE AND MAIN SIZING. PLUMBER SHALL REVIEW ALL SCHEMATICS/EQUIPMENT SCHEDULES FOR WORK NOT DETAILED ON FLOOR PLANS. REFER TO BELOW FOR INDIVIDUAL FIXTURE PLUMBING SIZES.
 2. THE BELOW SCHEDULE IS A GENERAL SCHEDULE AND FIXTURES ONLY APPLY WHERE TAGGED ON PLANS:

WATER CLOSET (FLUSH TANK (WC))
3" DRAIN, 1-1/2" VENT, 1/2" C.W.

LAVATORY (LV), MISC SINKS (SI)
2" DRAIN, 1-1/2" VENT, 1/2" H&C.W.

WASHING MACHINE (WAL), LAUNDRY TUB (LT), KITCHEN SINK (KS), DISHWASHER (DW)
2" DRAIN, 1-1/2" VENT, 3/4" H&C.W. PROVIDE F.D. UNDER ALL WASHING MACHINES LOCATED ABOVE (GRADE) AND PROVIDE LAUNDRY PAD BOX FOR WASHING MACHINE EQUAL TO OATEY TO SUIT STUD WALL. INSTALL FOR EASY ACCESS.

BATHTUBS (BT), SHOWERS (SH)
2" DRAIN, 1-1/2" VENT, 3/4" H&C.W. HIGH DEMAND SHOWERS WITH BODY JETS/RAINFALL SHOWER HEADS AND SOAKER TUBS SHALL BE C/W 1" H&C.W. SUPPLY.

FLOOR, HUB, TUNNEL, FLOOR DRAINS (FD)(HD)(FTD)
2" ABOVE GRADE, 3" BURED

HOSEBIB (HB)
3/4" C.W.

REFRIGERATOR (IN RESIDENTIAL)
1/2" C.W.

DRAINAGE SLOPES

UNLESS NOTED ALL DRAINS SLOPES ARE AS FOLLOWS:

- 3" AND UNDER SHALL RUN AT 2.0% SLOPE
- 4" TO 6" SHALL RUN AT 1.0% SLOPE
- 8" AND UP SHALL BE NOTED ON PLANS

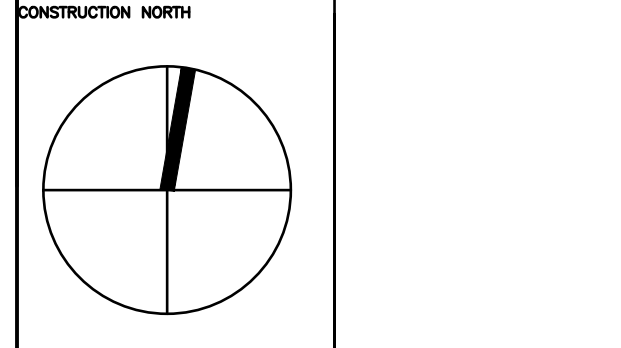
10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/DRAIN/MECH UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	UPDATES / ISSUED FOR PRICING
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR POINT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. DATE DESCRIPTION

THESE DRAWINGS SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

GEORGIANA, ONTARIO

MECHANICAL

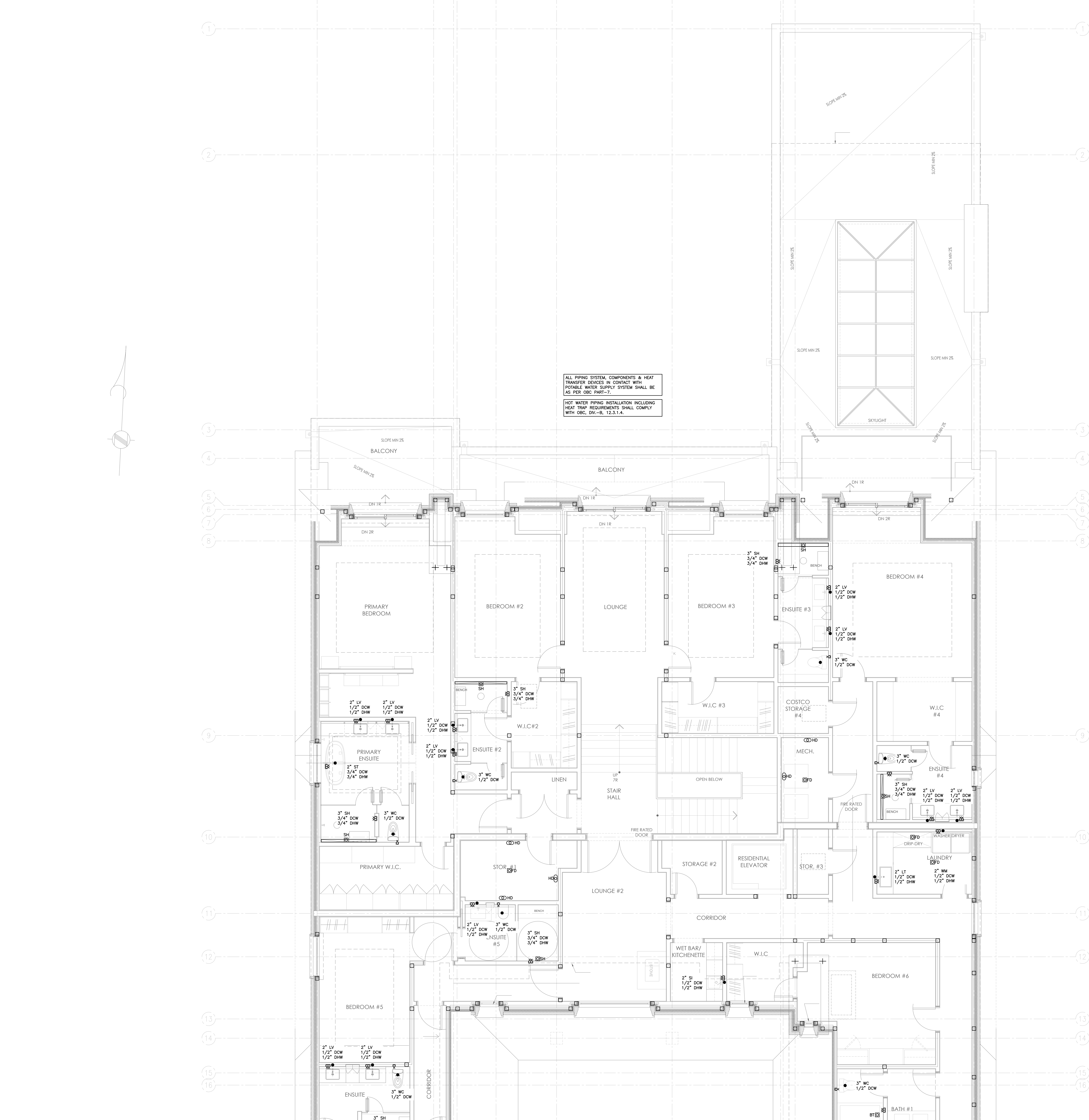
PLOT DATE PROJECT NO.
DRAWING TITLE 23-317

GROUND FLOOR P&D LAYOUT

DATE 2024
DRAWN BY J.W./K.W.
SCALE 1/4"=1'-0"

M-13

OF 25



ALL PIPING SYSTEM, COMPONENTS & HEAT TRANSFER DEVICES IN CONTACT WITH POTABLE WATER SUPPLY SYSTEM SHALL BE AS PER CBC PART-7.

HOT WATER PIPING INSTALLATION INCLUDING HEAT TRAP REQUIREMENTS SHALL COMPLY WITH CBC, DIV-B, 12.3.1.4.

- PLUMBING NOTES**
1. ALL PLUMBING/DRAINAGE AND EQUIPMENT IS NEW UNLESS OTHERWISE NOTED.
 2. NEW WATER CLOSETS ARE SIZED FOR FLUSH TANKS UNLESS NOTED. ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 3. PROVIDE WATER HAMMER ARRESTORS ON HOT AND COLD WATER SUPPLIES TO ALL QUICK VALVES, SOLENOIDS, AND PLUMBING FIXTURES AND LOCATE IN AN UPRIGHT POSITION BETWEEN THE LAST TWO FIXTURES ON A LINE OR HORIZONTALLY AT THE END OF LINE CLOSEST TO SUPPLY SOURCE. ON PROTECT EXCEEDING FIVE STORES IN HEIGHT, PROVIDE WATER HAMMER ARRESTORS ON DOMESTIC WATER RISERS AS FOLLOWS: LOCATE ARRESTORS AT THE END OF RISER OPPOSITE SUPPLY SOURCE. ARRESTOR SHALL BE TWO PIPE SIZES LARGER THAN THE RISER IS AT THE CONNECTION POINT, NOT EXCEEDING THE LARGEST PIPE SIZE DIAMETER IN THE RISER WATER HAMMER ARRESTORS.
 4. ALL TRAPS SERVING FLOOR DRAINS SHALL BE PRIMED AND ALL TRAPS SEAL PRIMERS SHALL BE C/ B.F.P.
 5. PRIOR TO CONSTRUCTION CONTRACTOR SHALL INSPECT OR RETAIN AS NECESSARY CIVIL, WATER PRESSURE, AT-BUILDING AND IN-COM ENGINEER. AFTER CONSTRUCTION CONTRACTOR SHALL INSPECT STATIC WATER PRESSURE AT THE FURTHEST DOWNSTREAM FIXTURE.
 6. ALL BACK FLOW PREVENTORS SHALL BE INSTALLED AND TESTED AS PER B64.10-07 AND B64.10.1-07 STANDARDS. ALL INSTALLATION AND TESTING MUST BE LICENSED AS PER THE ABOVE MENTIONED STANDARD.
 7. UNLESS SPECIFIED ON THESE DRAWINGS ALL PLUMBING FIXTURES ARE TO BE SPECIFIED BY OTHERS. PLUMBER SHALL PURCHASE AND INSTALL THE FIXTURES AND ASSOCIATED FITTINGS TO FINAL CONNECTIONS. ALL ROUGH-IN LOCATIONS AND INSTALLATION SHALL SUIT ARCHITECTURAL AND APPROVED FIXTURE SHOP DRAWINGS. PROVIDE PARTITION VALVE STOPS FOR ALL FIXTURES AND RISERS/WASHROOM GROUPINGS. (INSTALL PARTITION STOPS SO THEY LAND UNDERNEATH LAY'S AND OR BEHIND WATER CLOSETS). ALL EXPOSED DOMESTIC PIPING SHALL BE COPPER FOR FINAL CONNECTION.
 8. UNLESS SPECIFIED ON THESE DRAWINGS STEAM SHOWERS, WALK-IN COOLERS, WATER TREATMENT, SAUNA EQUIPMENT, DRYERS, WALK-IN COOLERS, BACKFLOW PREVENTORS, HRV UNITS, BOILERS, STEAM HUMIDIFIERS, HOT WATER TANK, COILS ETC TO NEAREST HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HVAC/PAD DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION TO BE COORDINATED AT SITE WITH APPLICABLE TRADES.
 9. PROVIDE ACCESSIBLE ISOLATION VALVES FOR EACH FIXTURE AND EACH PIECE OF EQUIPMENT.
 10. PLUMBER TO PIPE DRAIN AS REQUIRED FOR ALL AIR HANDLERS, WALK-IN COOLERS, BACKFLOW PREVENTORS, HRV UNITS, BOILERS, STEAM HUMIDIFIERS, HOT WATER TANK, COILS ETC TO NEAREST HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HVAC/PAD DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION TO BE COORDINATED AT SITE WITH APPLICABLE TRADES.
 11. CONTRACTOR TO ALLOW FOR BACK WATER VALVES ON LEAVING DRAINS. THIS SHALL BE DISCUSSED AS IT PERTAINS TO LOCALISATION PRIOR TO BACK FILLING AND POURING OF FLOOR.
 12. THIS CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING SERVICES WITHIN BUILDING UP TO 3 FT OUTSIDE BUILDING OR TO CONNECTION POINTS SUPPLIED BY SITE SERVING ENGINEER AND OR LANDSCAPE DESIGNER. REFER TO LATEST SITE SERVING DRAWINGS FOR SIZE AND LOCATION OF INCOMING SERVICES CONNECTION POINTS. ALL SITE SERVING INFO MUST BE VERIFIED AT SITE. CONTRACTOR TO REFER TO HEATING SCHEMATIC TO DETERMINE WORK BY THEM.
 13. ALL PLUMBING SHALL RUN ON THE WARM SIDE OF AN INSULATED WALL/CILING/FLOOR, WHERE PLUMBING ISNT ASSURELY PROTECTED ENGINEER SHALL BE CONTACTED.
 14. FINAL LOCATIONS AND QUANTITY OF HOSE-BIBS TO BE APPROVED BY OWNER PRIOR TO INSTALLATION. WHERE LOCATIONS ARE NOT SHOWN ON THESE DRAWINGS ALLOW FOR 3 HOSE-BIBS. EACH HOSE-BIB SHALL HAVE A ACCESSIBLE WINTER SHUT-OFF VALVE.

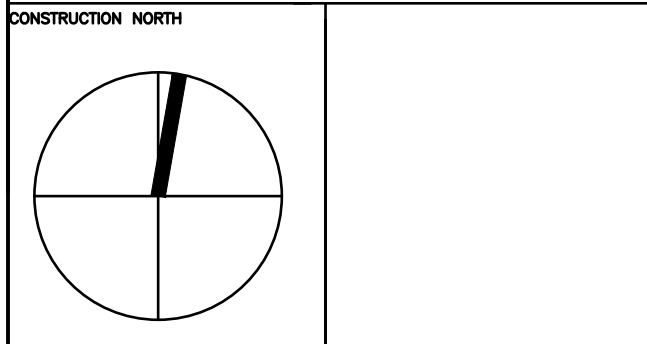
- PLUMBING VENTING NOTES**
1. ALL VENTING TO TERMINATE WITH 3" VENT THRU ROOF.
 2. CONTRACTOR TO CONNECT ALL NEW VENTING INTO EXISTING AND/OR PROVIDE NEW VENTING AS REQUIRED.
 3. VENT TERMINATION THRU ROOF SHALL BE A MIN. 10FT FROM FRESH AIR OPENINGS.
- GENERAL PLUMBING FIXTURE SIZING NOTES**
- PLUMBER SHALL REVIEW ALL SCHEMATICS/EQUIPMENT SCHEDULES FOR WORK NOT DETAILED ON FLOOR PLANS. REFER TO BELOW FOR INDIVIDUAL FIXTURE PLUMBING SIZES.
2. THE BELOW SCHEDULE IS A GENERAL SCHEDULE AND FIXTURES ONLY APPLY WHERE TAGGED ON PLANS:
- WATER CLOSET (WC) FLUSH TANK (WC)**
3" DRAIN, 1-1/2" VENT, 1/2" C/W
- LAVATORY (LV), MISC SINKS (SI)**
2" DRAIN, 1-1/2" VENT, 1/2" H&C/W
- WASHING MACHINE (WAL), LAUNDRY TUB (LT), KITCHEN SINK (KS), DISHWASHER (DW)**
2" DRAIN, 1-1/2" VENT, 3/4" H&C/W, PROVIDE F.D. UNDER ALL WASHING MACHINES LOCATED ABOVE GRADE AND PROVIDE LAUNDRY PAD BOX FOR WASHING MACHINE EQUAL TO OATEY TO SUIT STUD WALL. INSTALL FOR EASY ACCESS.
- BATHTUBS (BT), SHOWERS (SH)**
2" DRAIN, 1-1/2" VENT, 3/4" H&C/W, HIGH DEMAND SHOWERS WITH BODY JETS/RAINFALL SHOWER HEADS AND SOAKER TUBS SHALL BE C/W 1" H&C/W SUPPLY.
- FLOOR, HUB, TUNNEL, FLOOR DRAINS (FD), (HD), (FD)**
2" ABOVE GRADE, 3" BURED
- HOSEBIB (HB)**
3/4" C/W
- REFRIGERATOR (IN RESIDENTIAL)**
1/2" C/W
- DRAINAGE SLOPES**
- UNLESS NOTED ALL DRAINS SLOPES ARE AS FOLLOWS:
- 3" AND UNDER SHALL RUN AT 2.0% SLOPE
- 4" TO 6" SHALL RUN AT 1.0% SLOPE
- 8" AND UP SHALL BE NOTED ON PLANS

10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/HAD/2ND/MECH UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO.	DATE	DESCRIPTION
THESE DRAWINGS SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.		

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALED. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K
CONSULTING INC.
23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

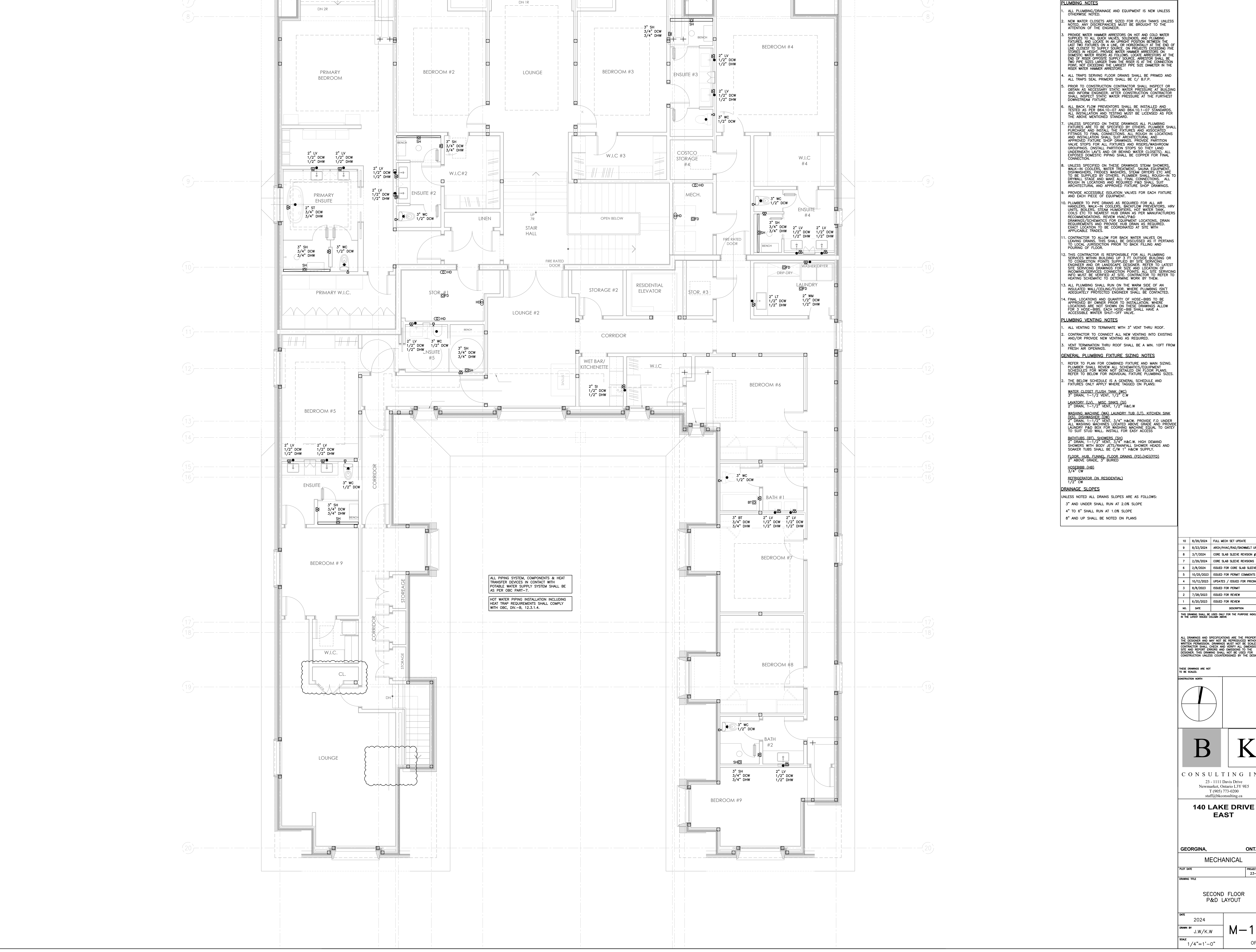
140 LAKE DRIVE EAST

GEORGINA, ONTARIO

MECHANICAL

SECOND FLOOR P&D LAYOUT

DATE	2024	M-14
DRAWN BY	J.W./K.W.	
SCALE	1/4"=1'-0"	
		OF 25



- PLUMBING NOTES**
1. ALL PLUMBING/DRAINAGE AND EQUIPMENT IS NEW UNLESS OTHERWISE NOTED.
 2. NEW WATER CLOSETS ARE SIZED FOR FLUSH TANKS UNLESS NOTED. ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 3. PROVIDE WATER HAMMER ARRESTORS ON HOT AND COLD WATER SUPPLIES TO ALL QUICK VALVE, SOLENOIDS, AND PLUMBING FIXTURES. LOCATE IN A DRY POSITION BETWEEN THE LAST TWO FIXTURES ON A LINE, OR HORIZONTALLY AT THE END OF LINE CLOSEST TO SUPPLY SOURCE. ON PROLONG EXCEEDING FIVE STORES IN HEIGHT, PROVIDE WATER HAMMER ARRESTORS ON DOMESTIC WATER RISERS AS FOLLOWS: LOCATE ARRESTORS AT THE END OF RISER OPPOSITE SUPPLY SOURCE. ARRESTOR SHALL BE TWO PIPE SIZES LARGER THAN THE RISER IS AT THE CONNECTION POINT, NOT EXCEEDING THE LARGEST PIPE SIZE DIAMETER IN THE RISER WATER HAMMER ARRESTORS.
 4. ALL TRAPS SERVING FLOOR DRAINS SHALL BE PRIMED AND ALL TRAPS SEAL PRIMERS SHALL BE C/ B.F.P.
 5. PRIOR TO CONSTRUCTION CONTRACTOR SHALL INSPECT OR RETAIN AS NECESSARY STATIC WATER PRESSURE AT BUILDING AND IN-USE ENGINEER. AFTER CONSTRUCTION CONTRACTOR SHALL INSPECT STATIC WATER PRESSURE AT THE FURTHEST DOWNSTREAM FIXTURE.
 6. ALL BACK FLOW PREVENTORS SHALL BE INSTALLED AND TESTED AS PER B64.10-07 AND B64.10.1-07 STANDARDS. ALL INSTALLATION AND TESTING MUST BE LICENSED AS PER THE ABOVE MENTIONED STANDARD.
 7. UNLESS SPECIFIED ON THESE DRAWINGS ALL PLUMBING FIXTURES ARE TO BE SPECIFIED BY OTHERS. PLUMBER SHALL PURCHASE AND INSTALL THE FIXTURES AND ASSOCIATED FITTINGS TO FINAL CONNECTIONS. ALL ROUGH IN LOCATIONS AND INSTALLATION SHALL SUIT ARCHITECTURAL AND APPROVED FIXTURE SHOP DRAWINGS. PROVIDE PARTITION VALVE STOPS FOR ALL FIXTURES AND RISERS/WASHROOM GROUPINGS. (INSTALL PARTITION STOPS SO THEY LAND UNDERNEATH LAY'S AND OR BEHIND WATER CLOSETS). ALL EXPOSED DOMESTIC PIPING SHALL BE COPPER FOR FINAL CONNECTION.
 8. UNLESS SPECIFIED ON THESE DRAWINGS STEAM SHOWERS, WALK-IN COOLERS, WATER TREATMENT, SAUNA EQUIPMENT, DRYERS, WALK-IN COOLERS, BACKFLOW PREVENTORS, HRV UNITS, BOILERS, STEAM HUMIDIFIERS, HOT WATER TANK, COLDS ETC TO NEAREST HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HVAC/PAD DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION TO BE COORDINATED AT SITE WITH APPLICABLE TRADES.
 9. PROVIDE ACCESSIBLE ISOLATION VALVES FOR EACH FIXTURE AND EACH PIECE OF EQUIPMENT.
 10. PLUMBER TO PIPE DRAINS AS REQUIRED FOR ALL AIR HANDLERS, WALK-IN COOLERS, BACKFLOW PREVENTORS, HRV UNITS, BOILERS, STEAM HUMIDIFIERS, HOT WATER TANK, COLDS ETC TO NEAREST HUB DRAIN AS PER MANUFACTURERS RECOMMENDATIONS. REVIEW HVAC/PAD DRAWINGS/SCHEMATICS FOR EQUIPMENT LOCATIONS, DRAIN REQUIREMENTS AND PROVIDE HUB DRAIN AS REQUIRED. EXACT LOCATION TO BE COORDINATED AT SITE WITH APPLICABLE TRADES.
 11. CONTRACTOR TO ALLOW FOR BACK WATER VALVES ON LEAVING DRAINS. THIS SHALL BE DISCUSSED AS IT PERTAINS TO LOCAL JURISDICTION PRIOR TO BACK FILLING AND POURING OF FLOOR.
 12. THIS CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING SERVICES WITHIN BUILDING UP TO 3 FT OUTSIDE BUILDING OR TO CONNECTION POINTS SUPPLIED BY SITE SERVING ENGINEER AND OR LANDSCAPE DESIGNER. REFER TO LATEST SITE SERVING DRAWINGS FOR SIZE AND LOCATION OF INCOMING SERVICES CONNECTION POINTS. ALL SITE SERVING INFO MUST BE VERIFIED AT SITE. CONTRACTOR TO REFER TO HEATING SCHEMATIC TO DETERMINE WORK BY THEM.
 13. ALL PLUMBING SHALL RUN ON THE WARM SIDE OF AN INSULATED WALL/CEILING/FLOOR, WHERE PLUMBING ISNT ADEQUATELY PROTECTED ENGINEER SHALL BE CONSULTED.
 14. FINAL LOCATIONS AND QUANTITY OF HOSE-BIBS TO BE APPROVED BY OWNER PRIOR TO INSTALLATION. WHERE LOCATIONS ARE NOT SHOWN ON THESE DRAWINGS ALLOW FOR 3 HOSE-BIBS. EACH HOSE-BIB SHALL HAVE A ACCESSIBLE WINTER SHUT-OFF VALVE.

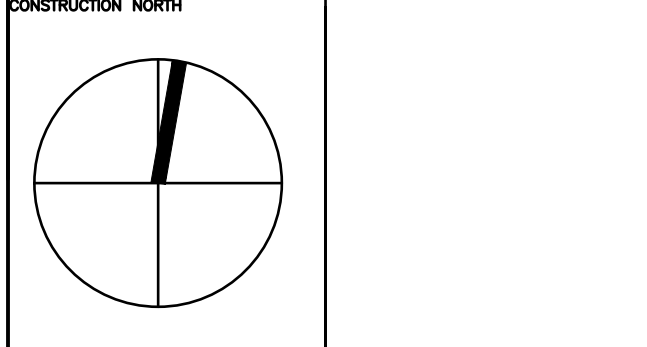
- PLUMBING VENTING NOTES**
1. ALL VENTING TO TERMINATE WITH 3" VENT THRU ROOF.
 2. CONTRACTOR TO CONNECT ALL NEW VENTING INTO EXISTING AND/OR PROVIDE NEW VENTING AS REQUIRED.
 3. VENT TERMINATION THRU ROOF SHALL BE A MIN. 10FT FROM FRESH AIR OPENINGS.
- GENERAL PLUMBING FIXTURE SIZING NOTES**
1. REFER TO PLAN FOR COMBINED FIXTURE AND MAIN SIZING. PLUMBER SHALL REVIEW ALL SCHEMATICS/EQUIPMENT SCHEDULES FOR WORK NOT DETAILED ON FLOOR PLANS. REFER TO BELOW FOR INDIVIDUAL FIXTURE PLUMBING SIZES.
 2. THE BELOW SCHEDULE IS A GENERAL SCHEDULE AND FIXTURES ONLY APPLY WHERE TAGGED ON PLANS:
- WATER CLOSET (FLUSH TANK) (WC)**
3" DRAIN, 1-1/2" VENT, 1/2" C.W.
- LAVATORY (LV), MISC SINKS (SI)**
2" DRAIN, 1-1/2" VENT, 1/2" H&C.W.
- WASHING MACHINE (WAL), LAUNDRY TUB (LT), KITCHEN SINK (KS), DISHWASHER (DW)**
2" DRAIN, 1-1/2" VENT, 3/4" H&C.W. PROVIDE F.D. UNDER ALL WASHING MACHINES LOCATED ABOVE GRADE AND PROVIDE LAUNDRY PAD BOX FOR WASHING MACHINE EQUAL TO OATEY TO SUIT STUD WALL. INSTALL FOR EASY ACCESS.
- BATHTUBS (BT), SHOWERS (SH)**
3" DRAIN, 1-1/2" VENT, 3/4" H&C.W. HIGH DEMAND SHOWERS WITH BODY JETS/RAINFALL SHOWER HEADS AND SOAKER TUBS SHALL BE C/W 1" H&C.W. SUPPLY.
- FLOOR, HUB, TUNNEL, FLOOR DRAINS (FD), (HD), (FTD)**
2" ABOVE GRADE, 3" BURED
- HOSEBIBS (HB)**
3/4" C.W.
- REFRIGERATOR (IN RESIDENTIAL)**
1/2" C.W.
- DRAINAGE SLOPES**
- UNLESS NOTED ALL DRAINS SLOPES ARE AS FOLLOWS:
- 3" AND UNDER SHALL RUN AT 2.0% SLOPE
- 4" TO 6" SHALL RUN AT 1.0% SLOPE
- 8" AND UP SHALL BE NOTED ON PLANS

10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/DRINKWELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

THESE DRAWINGS SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K
CONSULTING INC.
23 - 1111 Davis Drive #3
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

GEORGINA, ONTARIO

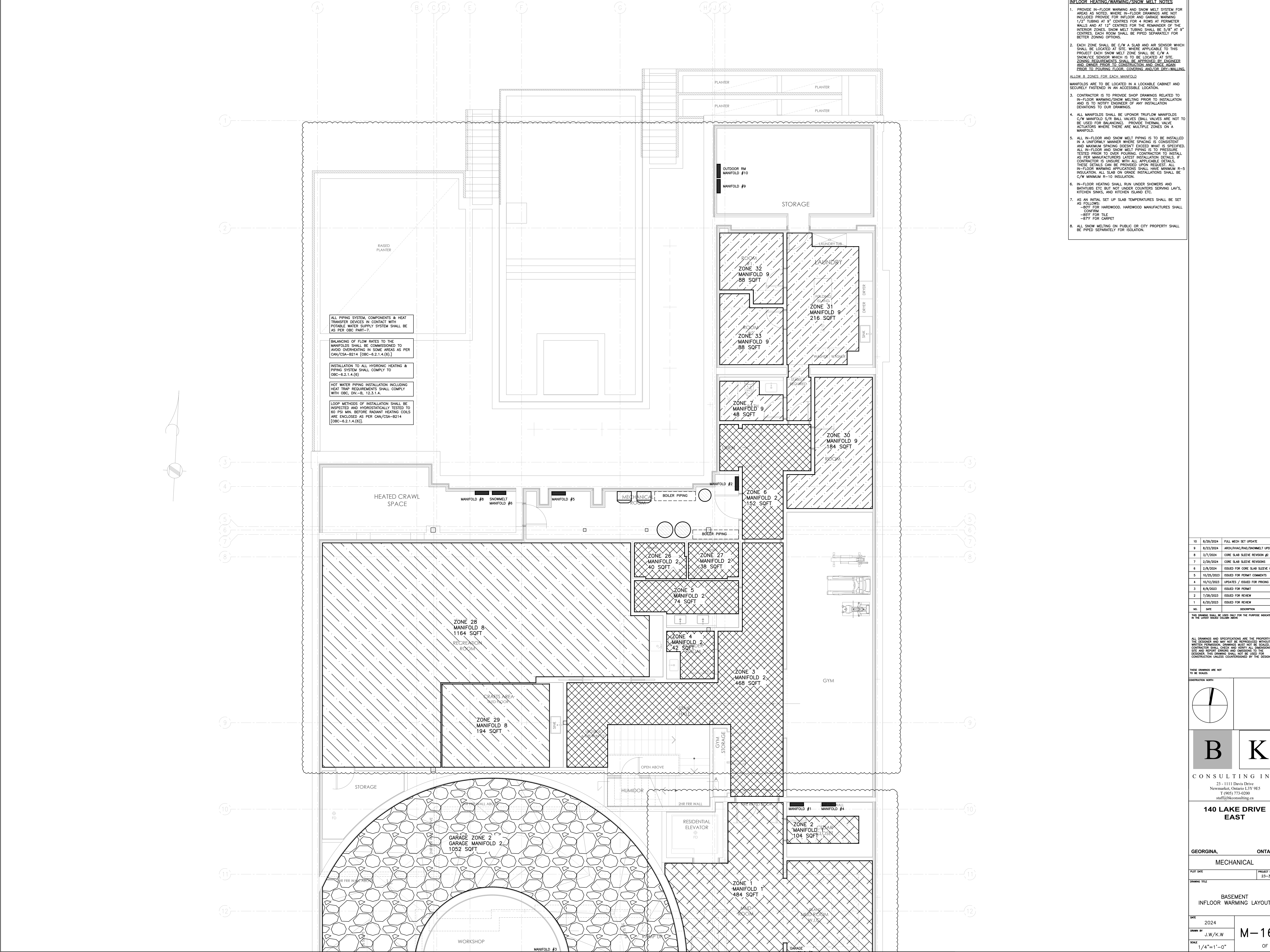
MECHANICAL

PLOT DATE	PROJECT NO.
	23-317

DRAWING TITLE

SECOND FLOOR P&D LAYOUT

DATE	2024	M-15
DRAWN BY	J.W./K.W.	
SCALE	1/4"=1'-0"	
		OF 25



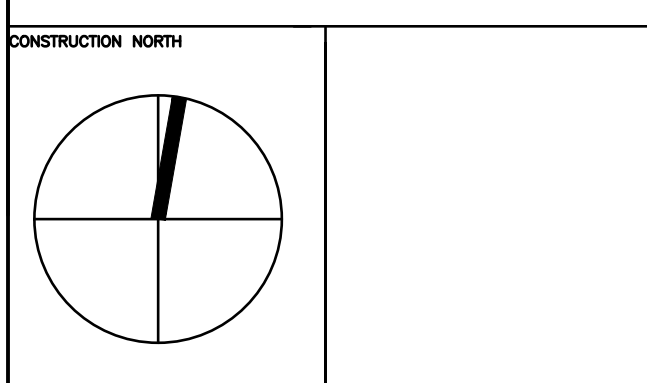
- INFLOOR HEATING/WARMING/SNOW MELT NOTES**
1. PROVIDE IN-FLOOR WARMING AND SNOW MELT SYSTEM FOR AREAS AS NOTED. WHERE IN-FLOOR DRAWINGS ARE NOT INCLUDED PROVIDE FOR INFLOOR AND GARAGE WARMING 1/2" TUBING AT 9" CENTRES FOR 4 ROWS AT PERIMETER WALLS AND AT 12" CENTRES FOR THE REMAINDER OF THE INTERIOR ZONES. SNOW MELT TUBING SHALL BE 3/8" AT 9" CENTRES. EACH ROOM SHALL BE PIPED SEPARATELY FOR BETTER ZONING OPTIONS.
 2. EACH ZONE SHALL BE C/W A SLAB AND AIR SENSOR WHICH SHALL BE LOCATED AT SITE. WHERE APPLICABLE TO THIS PROJECT EACH SNOW MELT ZONE SHALL BE C/W A SNOW/ICE SENSOR WHICH IS TO BE LOCATED AT SITE. ZONING REQUIREMENTS SHALL BE APPROVED BY ENGINEER AND OWNER PRIOR TO CONSTRUCTION AND LANCE AGAIN PRIOR TO POURING FLOOR COVERING AND/OR DRY-WALLING.
 - ALLOW 8 ZONES FOR EACH MANIFOLD
 - MANIFOLDS ARE TO BE LOCATED IN A LOCKABLE CABINET AND SECURELY FASTENED IN AN ACCESSIBLE LOCATION.
 3. CONTRACTOR IS TO PROVIDE SHOP DRAWINGS RELATED TO IN-FLOOR WARMING/SNOW MELTING PRIOR TO INSTALLATION AND IS TO NOTIFY ENGINEER OF ANY INSTALLATION DEVIATIONS TO OUR DRAWINGS.
 4. ALL MANIFOLDS SHALL BE UPONOR TRIFLOW MANIFOLDS C/W MANIFOLD 5/8 BALL VALVES (BALL VALVES ARE NOT TO BE USED FOR BALANCING). PROVIDE THERMAL VALVE ACTUATORS WHERE THERE ARE MULTIPLE ZONES ON A MANIFOLD.
 5. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE INSTALLED IN A UNIFORM MANNER WHERE SPACING IS CONSISTENT AND MAXIMUM SPACING DOESN'T EXCEED WHAT IS SPECIFIED. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE TESTED PRIOR TO OVER POURING. CONTRACTOR TO INSTALL AS PER MANUFACTURERS LATEST INSTALLATION DETAILS. IF CONTRACTOR IS UNSURE WITH ALL APPLICABLE DETAILS, THESE DETAILS CAN BE PROVIDED UPON REQUEST. ALL IN-FLOOR WARMING APPLICATIONS SHALL HAVE MINIMUM R-5 INSULATION. ALL SLAB ON GRADE INSTALLATIONS SHALL BE C/W MINIMUM R-10 INSULATION.
 6. IN-FLOOR HEATING SHALL RUN UNDER SHOWERS AND BATHTUBS ETC BUT NOT UNDER COUNTERS SERVING LAVS, KITCHEN SINKS, AND KITCHEN ISLAND ETC.
 7. AS AN INITIAL SET UP SLAB TEMPERATURES SHALL BE SET AS FOLLOWS:
 - 87°F FOR HARDWOOD. HARDWOOD MANUFACTURES SHALL CONFIRM
 - 87°F FOR TILE
 - 87°F FOR CARPET
 8. ALL SNOW MELTING ON PUBLIC OR CITY PROPERTY SHALL BE PIPED SEPARATELY FOR ISOLATION.

10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/MECH/HAZ/SNOWMELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B

K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

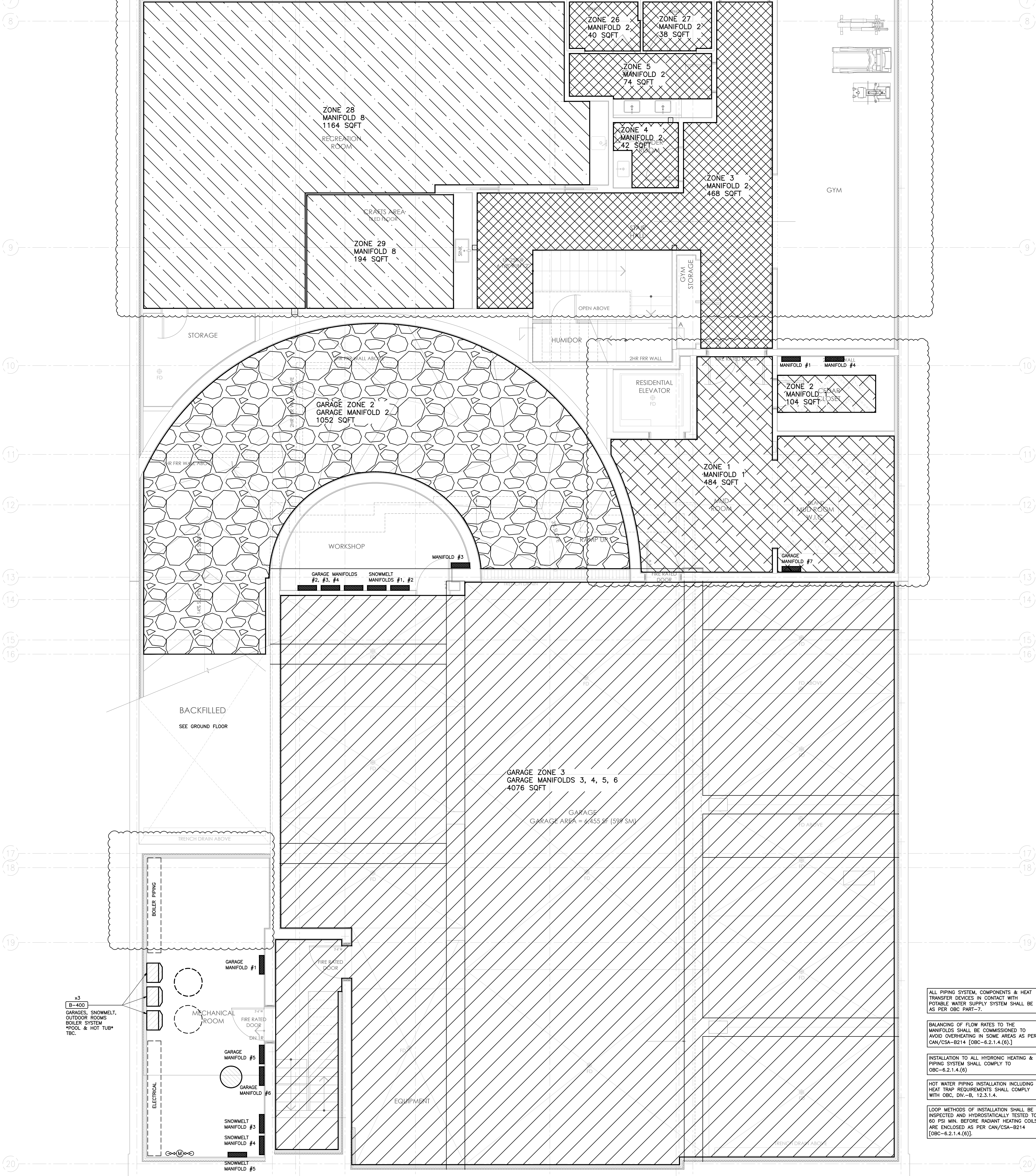
140 LAKE DRIVE EAST

GEORGINA, ONTARIO
MECHANICAL

PLOT DATE PROJECT NO.
DRAWING TITLE 23-317

BASEMENT
INFLOOR WARMING LAYOUT

DATE	2024	M-16
DRAWN BY	J.W./K.W.	
SCALE	1/4"=1'-0"	
		OF 25



- INFLOOR HEATING/WARMING/SNOW MELT NOTES**
1. PROVIDE IN-FLOOR WARMING AND SNOW MELT SYSTEM FOR AREAS AS NOTED. WHERE IN-FLOOR DRAWINGS ARE NOT INCLUDED PROVIDE FOR INFLOOR AND GARAGE WARMING 1/2" TUBING AT 9" CENTRES FOR 4 ROWS AT PERIMETER WALLS AND AT 12" CENTRES FOR THE REMAINDER OF THE INTERIOR ZONES. SNOW MELT TUBING SHALL BE 5/8" AT 9" CENTRES. EACH ROOM SHALL BE PIPED SEPARATELY FOR BETTER ZONING OPTIONS.
 2. EACH ZONE SHALL BE C/W A SLAB AND AIR SENSOR WHICH SHALL BE LOCATED AT SITE. WHERE APPLICABLE TO THIS PROJECT EACH SNOW MELT ZONE SHALL BE C/W A SNOW/ICE SENSOR WHICH IS TO BE LOCATED AT SITE. ZONING REQUIREMENTS SHALL BE APPROVED BY ENGINEER AND OWNER PRIOR TO CONSTRUCTION AND ONCE AGAIN PRIOR TO POURING FLOOR COVERING AND/OR DRY-WALLING.
 - ALLOW 8 ZONES FOR EACH MANIFOLD
 - MANIFOLDS ARE TO BE LOCATED IN A LOCKABLE CABINET AND SECURELY FASTENED IN AN ACCESSIBLE LOCATION.
 3. CONTRACTOR IS TO PROVIDE SHOP DRAWINGS RELATED TO IN-FLOOR WARMING/SNOW MELTING PRIOR TO INSTALLATION AND IS TO NOTIFY ENGINEER OF ANY INSTALLATION DEVIATIONS TO OUR DRAWINGS.
 4. ALL MANIFOLDS SHALL BE UPONOR TRUFLOW MANIFOLDS C/W MANIFOLD 5/8" BALL VALVES (BALL VALVES ARE NOT TO BE USED FOR BALANCING). PROVIDE THERMAL VALVE ACTUATORS WHERE THERE ARE MULTIPLE ZONES ON A MANIFOLD.
 5. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE INSTALLED IN A UNIFORM MANNER WHERE SPACING IS CONSISTENT AND MAXIMUM SPACING DOESN'T EXCEED WHAT IS SPECIFIED. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE PRESSURE TESTED PRIOR TO OVER POURING. CONTRACTOR TO INSTALL AS PER MANUFACTURERS LATEST INSTALLATION DETAILS. IF CONTRACTOR IS UNSURE WITH ALL APPLICABLE DETAILS, THESE DETAILS CAN BE PROVIDED UPON REQUEST. ALL IN-FLOOR WARMING APPLICATIONS SHALL HAVE MINIMUM R-5 INSULATION. ALL SLAB ON GRADE INSTALLATIONS SHALL BE C/W MINIMUM R-10 INSULATION.
 6. IN-FLOOR HEATING SHALL RUN UNDER SHOWERS AND BATHTUBS ETC. BUT NOT UNDER COUNTERS SERVING LAV'S, KITCHEN SINKS, AND KITCHEN ISLAND ETC.
 7. AS AN INITIAL SET UP SLAB TEMPERATURES SHALL BE SET AS FOLLOWS:
-80°F FOR HARDWOOD, HARDWOOD MANUFACTURES SHALL CONFIRM
-80°F FOR TILE
-87°F FOR CARPET
 8. ALL SNOW MELTING ON PUBLIC OR CITY PROPERTY SHALL BE PIPED SEPARATELY FOR ISOLATION.

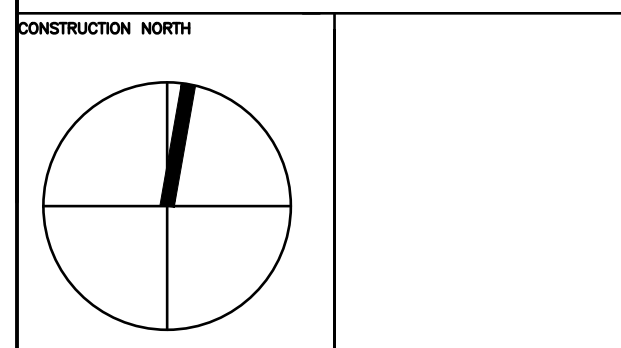
10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/MECH/RAO/SNOWMELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. DATE DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K
CONSULTING INC.
23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

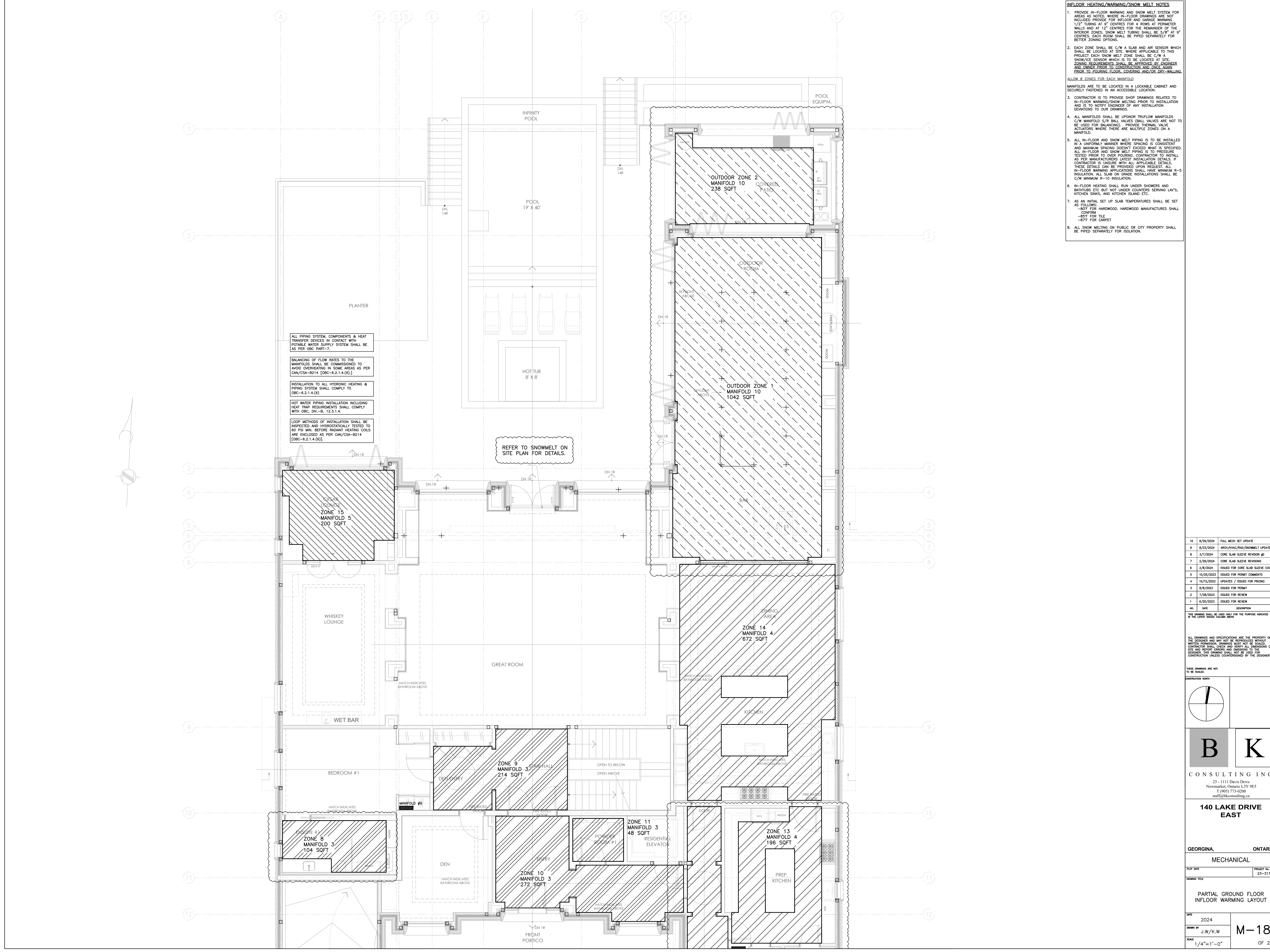
140 LAKE DRIVE EAST

GEORGINA, ONTARIO
MECHANICAL

PLOT DATE PROJECT No.
DRAWING TITLE 23-317

BASEMENT
INFLOOR WARMING LAYOUT

DATE 2024
DRAWN BY J.W./K.W.
SCALE 1/4"=1'-0"
PROJECT No. 23-317
M-17
OF 25



- INFLOOR HEATING/WARMING/SNOW MELT NOTES**
1. PROVIDE IN-FLOOR WARMING AND SNOW MELT SYSTEM FOR AREAS AS NOTED. WHERE IN-FLOOR DRAWINGS ARE NOT INCLUDED PROVIDE FOR INFLOOR AND GARAGE WARMING. 1/2" TUBING AT 9" CENTRES FOR 4 ROWS AT PERIMETER WALLS AND AT 12" CENTRES FOR THE REMAINDER OF THE INTERIOR ZONES. SNOW MELT TUBING SHALL BE 5/8" AT 9" CENTRES. EACH ROOM SHALL BE PIPED SEPARATELY FOR BETTER ZONING OPTIONS.
 2. EACH ZONE SHALL BE C/W A SLAB AND AIR SENSOR WHICH SHALL BE LOCATED AT SITE. WHERE APPLICABLE TO THIS PROJECT EACH SNOW MELT ZONE SHALL BE C/W A SNOW/ICE SENSOR WHICH IS TO BE LOCATED AT SITE. ZONING REQUIREMENTS SHALL BE APPROVED BY ENGINEER AND OWNER PRIOR TO CONSTRUCTION AND LANCE AGAIN PRIOR TO POURING FLOOR COVERING AND/OR DRY-WALLING.
 - ALLOW 8 ZONES FOR EACH MANIFOLD
 - MANIFOLDS ARE TO BE LOCATED IN A LOCKABLE CABINET AND SECURELY FASTENED IN AN ACCESSIBLE LOCATION.
 3. CONTRACTOR IS TO PROVIDE SHOP DRAWINGS RELATED TO IN-FLOOR WARMING/SNOW MELTING PRIOR TO INSTALLATION AND IS TO NOTIFY ENGINEER OF ANY INSTALLATION DEVIATIONS TO OUR DRAWINGS.
 4. ALL MANIFOLDS SHALL BE UPONOR TRUFLOW MANIFOLDS C/W MANIFOLD 5/8 BALL VALVES (BALL VALVES ARE NOT TO BE USED FOR BALANCING). PROVIDE THERMAL VALVE ACTUATORS WHERE THERE ARE MULTIPLE ZONES ON A MANIFOLD.
 5. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE INSTALLED IN A UNIFORM MANNER WHERE SPACING IS CONSISTENT AND MAXIMUM SPACING DOESNT EXCEED WHAT IS SPECIFIED. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE PRESSURE TESTED PRIOR TO OVER POURING. CONTRACTOR TO INSTALL AS PER MANUFACTURERS LATEST INSTALLATION DETAILS. IF CONTRACTOR IS UNSURE WITH ALL APPLICABLE DETAILS, THESE DETAILS CAN BE PROVIDED UPON REQUEST. ALL IN-FLOOR WARMING APPLICATIONS SHALL HAVE MINIMUM R-5 INSULATION. ALL SLAB ON GRADE INSTALLATIONS SHALL BE C/W MINIMUM R-10 INSULATION.
 6. IN-FLOOR HEATING SHALL RUN UNDER SHOWERS AND BATHTUBS ETC BUT NOT UNDER COUNTERTOPS SERVING LAVS, KITCHEN SINKS, AND KITCHEN ISLAND ETC.
 7. AS AN INITIAL SET UP SLAB TEMPERATURES SHALL BE SET AS FOLLOWS:
 - 80°F FOR HARDWOOD. HARDWOOD MANUFACTURES SHALL CONFIRM
 - 80°F FOR TILE
 - 87°F FOR CARPET
 8. ALL SNOW MELTING ON PUBLIC OR CITY PROPERTY SHALL BE PIPED SEPARATELY FOR ISOLATION.

ALL PIPING SYSTEM, COMPONENTS & HEAT TRANSFER DEVICES IN CONTACT WITH POTABLE WATER SUPPLY SYSTEM SHALL BE AS PER OBC PART-7.

BALANCING OF FLOW RATES TO THE MANIFOLDS SHALL BE COMMISSIONED TO AVOID OVERHEATING IN SOME AREAS AS PER CAN/CSA-B214 [OBC-6.2.1.4.(6)].

INSTALLATION TO ALL HYDRONIC HEATING & PIPING SYSTEM SHALL COMPLY TO OBC-6.2.1.4.(6)

HOT WATER PIPING INSTALLATION INCLUDING HEAT TRAP REQUIREMENTS SHALL COMPLY WITH OBC, DIV.-B, 12.3.1.4.

LOOP METHODS OF INSTALLATION SHALL BE INSPECTED AND HYDROSTATICALLY TESTED TO 60 PSI MIN. BEFORE RADIANT HEATING COILS ARE ENCLOSED AS PER CAN/CSA-B214 [OBC-6.2.1.4.(6)].

REFER TO SNOWMELT ON SITE PLAN FOR DETAILS.

10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/MECH/RAO/SNOWMELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

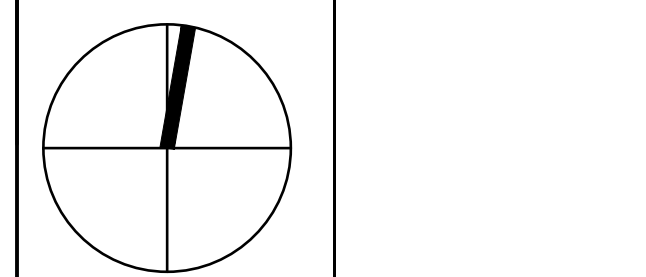
NO. DATE DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED

CONSTRUCTION NORTH



B K
CONSULTING INC.
23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

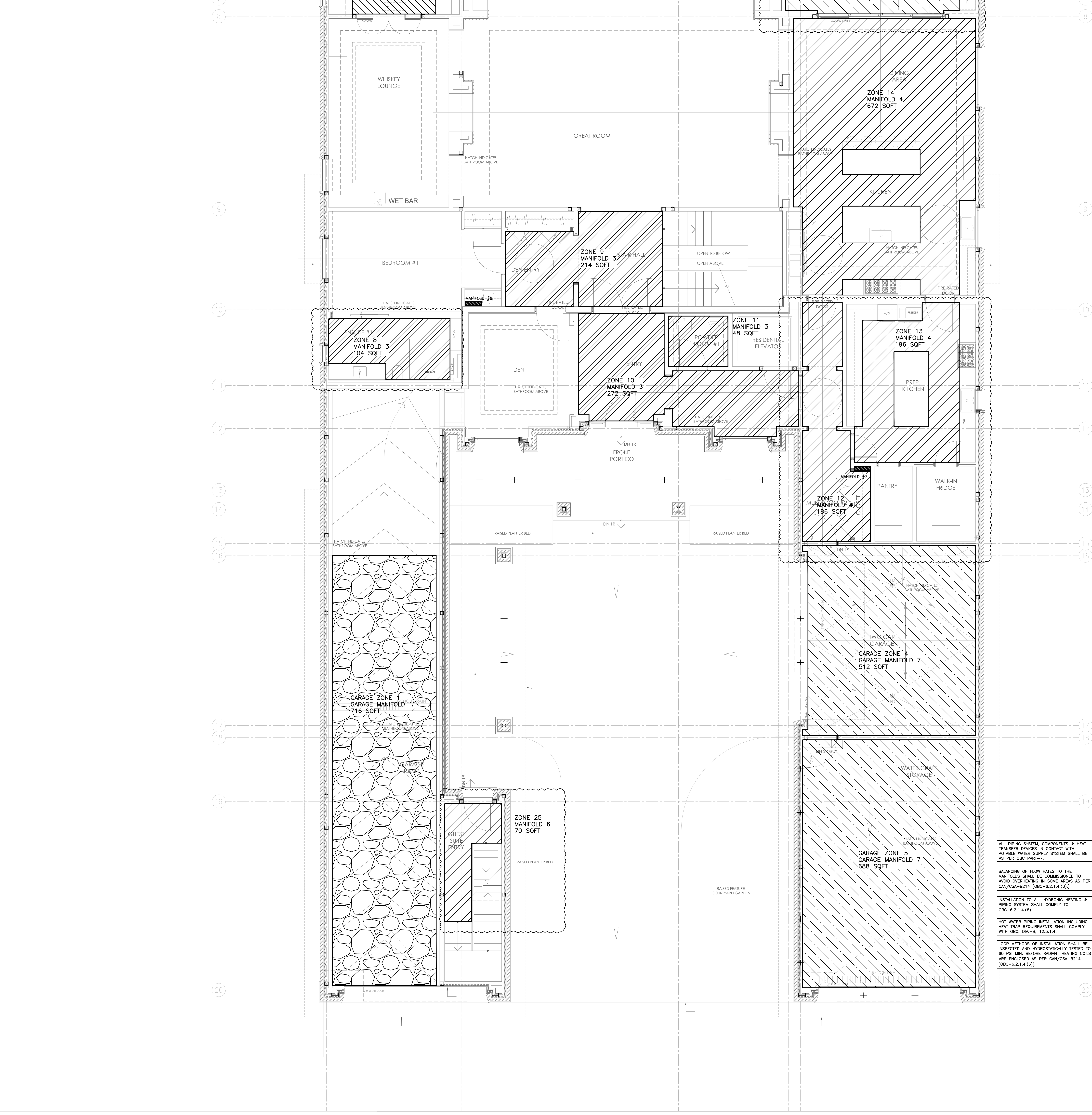
140 LAKE DRIVE EAST

GEORGIANA, ONTARIO
MECHANICAL

PLOT DATE PROJECT NO.
DRAWING TITLE
23-317

PARTIAL GROUND FLOOR
INFLOOR WARMING LAYOUT

DATE 2024
DRAWN BY J.W./K.W.
SCALE 1/4"=1'-0"
M-18
OF 25



- INFLOOR HEATING/WARMING/SNOW MELT NOTES**
1. PROVIDE IN-FLOOR WARMING AND SNOW MELT SYSTEM FOR AREAS AS NOTED. WHERE IN-FLOOR DRAWINGS ARE NOT INCLUDED PROVIDE FOR INFLOOR AND GARAGE WARMING. 1/2" TUBING AT 9" CENTRES FOR 4 ROWS AT PERIMETER WALLS AND AT 12" CENTRES FOR THE REMAINDER OF THE INTERIOR ZONES. SNOW MELT TUBING SHALL BE 5/8" AT 9" CENTRES. EACH ROOM SHALL BE PIPED SEPARATELY FOR BETTER ZONING OPTIONS.
 2. EACH ZONE SHALL BE C/W A SLAB AND AIR SENSOR WHICH SHALL BE LOCATED AT SITE. WHERE APPLICABLE TO THIS PROJECT EACH SNOW MELT ZONE SHALL BE C/W A SNOW/ICE SENSOR WHICH IS TO BE LOCATED AT SITE. ZONING REQUIREMENTS SHALL BE APPROVED BY ENGINEER AND OWNER PRIOR TO CONSTRUCTION AND LANCE AGAIN PRIOR TO POURING FLOOR COVERING AND/OR DRY-WALLING.
 - ALLOW 8 ZONES FOR EACH MANIFOLD
 - MANIFOLDS ARE TO BE LOCATED IN A LOCKABLE CABINET AND SECURELY FASTENED IN AN ACCESSIBLE LOCATION.
 3. CONTRACTOR IS TO PROVIDE SHOP DRAWINGS RELATED TO IN-FLOOR WARMING/SNOW MELTING PRIOR TO INSTALLATION AND IS TO NOTIFY ENGINEER OF ANY INSTALLATION DEVIATIONS TO OUR DRAWINGS.
 4. ALL MANIFOLDS SHALL BE UPONOR TRUFLOW MANIFOLDS C/W MANIFOLD 5/8 BALL VALVES (BALL VALVES ARE NOT TO BE USED FOR BALANCING). PROVIDE THERMAL VALVE ACTUATORS WHERE THERE ARE MULTIPLE ZONES ON A MANIFOLD.
 5. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE INSTALLED IN A UNIFORM MANNER WHERE SPACING IS CONSISTENT AND MAXIMUM SPACING DOESN'T EXCEED WHAT IS SPECIFIED. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE PRESSURE TESTED PRIOR TO OVER POURING. CONTRACTOR TO INSTALL AS PER MANUFACTURERS LATEST INSTALLATION DETAILS. IF CONTRACTOR IS UNSURE WITH ALL APPLICABLE DETAILS, THESE DETAILS CAN BE PROVIDED UPON REQUEST. ALL IN-FLOOR WARMING APPLICATIONS SHALL HAVE MINIMUM R-5 INSULATION. ALL SLAB ON GRADE INSTALLATIONS SHALL BE C/W MINIMUM R-10 INSULATION.
 6. IN-FLOOR HEATING SHALL RUN UNDER SHOWERS AND BATHTUBS ETC BUT NOT UNDER COUNTERS SERVING LAV'S, KITCHEN SINKS, AND KITCHEN ISLAND ETC.
 7. AS AN INITIAL SET UP SLAB TEMPERATURES SHALL BE SET AS FOLLOWS:
 - 80°F FOR HARDWOOD. HARDWOOD MANUFACTURES SHALL CONFIRM
 - 80°F FOR TILE
 - 87°F FOR CARPET
 8. ALL SNOW MELTING ON PUBLIC OR CITY PROPERTY SHALL BE PIPED SEPARATELY FOR ISOLATION.

- ALL PIPING SYSTEM, COMPONENTS & HEAT TRANSFER DEVICES IN CONTACT WITH POTABLE WATER SUPPLY SYSTEM SHALL BE AS PER OBC PART-7.
- BALANCING OF FLOW RATES TO THE MANIFOLDS SHALL BE COMMISSIONED TO AVOID OVERHEATING IN SOME AREAS AS PER CAN/CSA-B214 [OBC-6.2.1.4.(6)].
- INSTALLATION TO ALL HYDRONIC HEATING & PIPING SYSTEM SHALL COMPLY TO OBC-6.2.1.4.(6)
- HOT WATER PIPING INSTALLATION INCLUDING HEAT TRAP REQUIREMENTS SHALL COMPLY WITH OBC, DIV.-B, 12.3.1.4.
- LOOP METHODS OF INSTALLATION SHALL BE INSPECTED AND HYDROSTATICALLY TESTED TO 60 PSI MIN. BEFORE RADIANT HEATING COILS ARE ENCLOSED AS PER CAN/CSA-B214 [OBC-6.2.1.4.(6)].

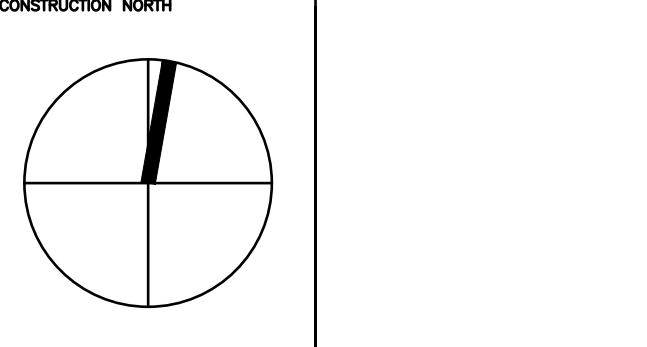
10	8/29/2024	FULL WEEK SET UPDATE
9	8/23/2024	ARCH/ANAC/RAO/SNOWMELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. DATE DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

GEORGINA, ONTARIO

MECHANICAL

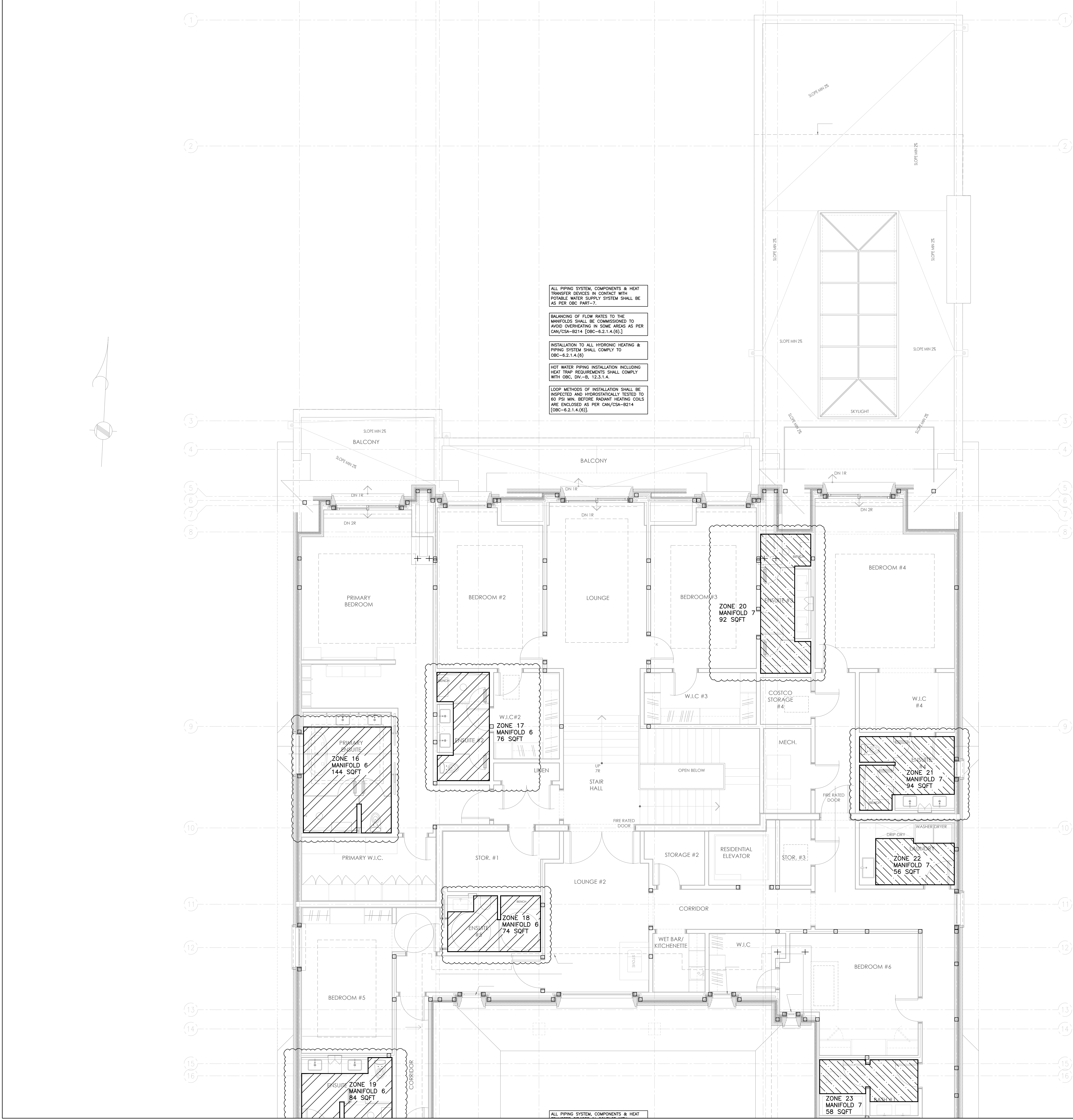
PLOT DATE PROJECT NO.
DRAWING TITLE 23-317

PARTIAL GROUND FLOOR
INFLOOR WARMING LAYOUT

DATE 2024
DRAWN BY J.W./K.W.
SCALE 1/4"=1'-0"

M-19

OF 25



ALL PIPING SYSTEM, COMPONENTS & HEAT TRANSFER DEVICES IN CONTACT WITH POTABLE WATER SUPPLY SYSTEM SHALL BE AS PER OBC PART-7.

BALANCING OF FLOW RATES TO THE MANIFOLDS SHALL BE COMMISSIONED TO AVOID OVERHEATING IN SOME AREAS AS PER CAN/CSA-B214 [OBC-6.2.1.4.(6).]

INSTALLATION TO ALL HYDRONIC HEATING & PIPING SYSTEM SHALL COMPLY TO OBC-6.2.1.4.(6)

HOT WATER PIPING INSTALLATION INCLUDING HEAT TRAP REQUIREMENTS SHALL COMPLY WITH OBC, DIV.-B, 12.3.1.4.

LOOP METHODS OF INSTALLATION SHALL BE INSPECTED AND HYDROSTATICALLY TESTED TO 60 PSI MIN. BEFORE RADIANT HEATING COILS ARE ENCLOSED AS PER CAN/CSA-B214 [OBC-6.2.1.4.(6)].

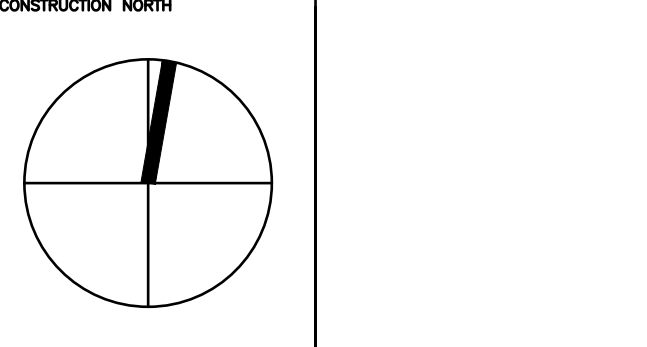
- INFLOOR HEATING/WARMING/SNOW MELT NOTES**
1. PROVIDE IN-FLOOR WARMING AND SNOW MELT SYSTEM FOR AREAS AS NOTED. WHERE IN-FLOOR DRAWINGS ARE NOT INCLUDED PROVIDE FOR INFLOOR AND GARAGE WARMING 1/2" TUBING AT 9" CENTRES FOR 4 ROWS AT PERIMETER WALLS AND AT 12" CENTRES FOR THE REMAINDER OF THE INTERIOR ZONES. SNOW MELT TUBING SHALL BE 5/8" AT 9" CENTRES. EACH ROOM SHALL BE PIPED SEPARATELY FOR BETTER ZONING OPTIONS.
 2. EACH ZONE SHALL BE C/W A SLAB AND AIR SENSOR WHICH SHALL BE LOCATED AT SITE. WHERE APPLICABLE TO THIS PROJECT EACH SNOW MELT ZONE SHALL BE C/W A SNOW/ICE SENSOR WHICH IS TO BE LOCATED AT SITE. ZONING REQUIREMENTS SHALL BE APPROVED BY ENGINEER AND OWNER PRIOR TO CONSTRUCTION AND SENSE AGAIN PRIOR TO POURING FLOOR COVERING AND/OR DRY-WALLING.
- ALLOW 8 ZONES FOR EACH MANIFOLD
- MANIFOLDS ARE TO BE LOCATED IN A LOCKABLE CABINET AND SECURELY FASTENED IN AN ACCESSIBLE LOCATION.
3. CONTRACTOR IS TO PROVIDE SHOP DRAWINGS RELATED TO IN-FLOOR WARMING/SNOW MELTING PRIOR TO INSTALLATION AND IS TO NOTIFY ENGINEER OF ANY INSTALLATION DEVIATIONS TO OUR DRAWINGS.
 4. ALL MANIFOLDS SHALL BE UPONOR TRIFLOW MANIFOLDS C/W MANIFOLD 5/8 BALL VALVES (BALL VALVES ARE NOT TO BE USED FOR BALANCING). PROVIDE THERMAL VALVE ACTUATORS WHERE THERE ARE MULTIPLE ZONES ON A MANIFOLD.
 5. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE INSTALLED IN A UNIFORM MANNER WHERE SPACING IS CONSISTENT AND MAXIMUM SPACING DOESN'T EXCEED WHAT IS SPECIFIED. ALL IN-FLOOR AND SNOW MELT PIPING IS TO PRESSURE TESTED PRIOR TO OVER POURING. CONTRACTOR TO INSTALL AS PER MANUFACTURERS LATEST INSTALLATION DETAILS. IF CONTRACTOR IS UNSURE WITH ALL APPLICABLE DETAILS, THESE DETAILS CAN BE PROVIDED UPON REQUEST. ALL IN-FLOOR WARMING APPLICATIONS SHALL HAVE MINIMUM R-5 INSULATION. ALL SLAB ON GRADE INSTALLATIONS SHALL BE C/W MINIMUM R-10 INSULATION.
 6. IN-FLOOR HEATING SHALL RUN UNDER SHOWERS AND BATHTUBS ETC BUT NOT UNDER COUNTERS SERVING LAVS, KITCHEN SINKS, AND KITCHEN ISLAND ETC.
 7. AS AN INITIAL SET UP SLAB TEMPERATURES SHALL BE SET AS FOLLOWS:
 - 80°F FOR HARDWOOD. HARDWOOD MANUFACTURERS SHALL CONFIRM
 - 80°F FOR TILE
 - 87°F FOR CARPET
 8. ALL SNOW MELTING ON PUBLIC OR CITY PROPERTY SHALL BE PIPED SEPARATELY FOR ISOLATION.

10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/MECH/RAD/SNOWMELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/28/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	8/20/2023	ISSUED FOR REVIEW

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALED. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K
CONSULTING INC.
23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

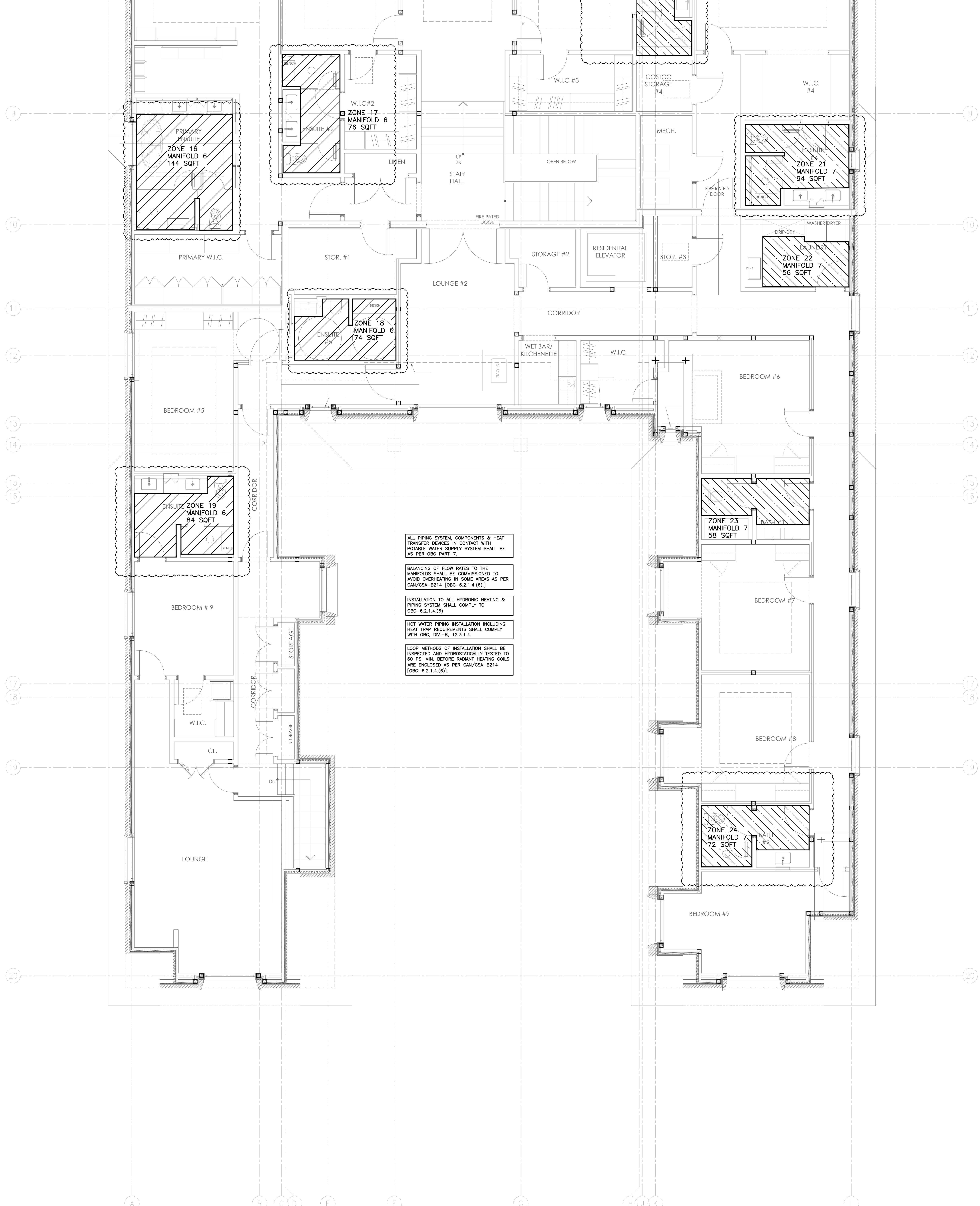
140 LAKE DRIVE EAST

GEORGINA, ONTARIO
MECHANICAL

PLOT DATE PROJECT No.
DRAWING TITLE 23-317

PARTIAL SECOND FLOOR
INFLOOR WARMING LAYOUT

DATE	2024	M-20
DRAWN BY	J.W./K.W.	
SCALE	1/4"=1'-0"	
		OF 25



ALL PIPING SYSTEM, COMPONENTS & HEAT TRANSFER DEVICES IN CONTACT WITH POTABLE WATER SUPPLY SYSTEM SHALL BE AS PER OBC PART-7.

BALANCING OF FLOW RATES TO THE MANIFOLDS SHALL BE COMMISSIONED TO AVOID OVERHEATING IN SOME AREAS AS PER CAN/CSA-B214 [OBC-6.2.1.4 (6)].

INSTALLATION TO ALL HYDRONIC HEATING & PIPING SYSTEM SHALL COMPLY TO OBC-6.2.1.4 (6).

HOT WATER PIPING INSTALLATION INCLUDING HEAT TRAP REQUIREMENTS SHALL COMPLY WITH OBC, DIV.-8, 12.3.1.4.

LOOP METHODS OF INSTALLATION SHALL BE INSPECTED AND HYDROSTATICALLY TESTED TO 60 PSI MIN. BEFORE RADIANT HEATING COILS ARE ENCLOSED AS PER CAN/CSA-B214 [OBC-6.2.1.4 (6)].

- INFLOOR HEATING/WARMING/SNOW MELT NOTES**
1. PROVIDE IN-FLOOR WARMING AND SNOW MELT SYSTEM FOR AREAS AS NOTED. WHERE IN-FLOOR DRAWINGS ARE NOT INCLUDED PROVIDE FOR INFLOOR AND GARAGE WARMING 1/2" TUBING AT 9" CENTRES FOR 4 ROWS AT PERIMETER WALLS AND AT 12" CENTRES FOR THE REMAINDER OF THE INTERIOR ZONES. SNOW MELT TUBING SHALL BE 5/8" AT 9" CENTRES. EACH ROOM SHALL BE PIPED SEPARATELY FOR BETTER ZONING OPTIONS.
 2. EACH ZONE SHALL BE C/W A SLAB AND AIR SENSOR WHICH SHALL BE LOCATED AT SITE. WHERE APPLICABLE TO THIS PROJECT EACH SNOW MELT ZONE SHALL BE C/W A SNOW/ICE SENSOR WHICH IS TO BE LOCATED AT SITE. ZONING REQUIREMENTS SHALL BE APPROVED BY ENGINEER AND OWNER PRIOR TO CONSTRUCTION AND LANCE AGAIN PRIOR TO POURING FLOOR COVERING AND/OR DRY-WALLING.
 - ALLOW 8 ZONES FOR EACH MANIFOLD
 - MANIFOLDS ARE TO BE LOCATED IN A LOCKABLE CABINET AND SECURELY FASTENED IN AN ACCESSIBLE LOCATION.
 3. CONTRACTOR IS TO PROVIDE SHOP DRAWINGS RELATED TO IN-FLOOR WARMING/SNOW MELTING PRIOR TO INSTALLATION AND IS TO NOTIFY ENGINEER OF ANY INSTALLATION DEVIATIONS TO OUR DRAWINGS.
 4. ALL MANIFOLDS SHALL BE UPONOR TRUFLOW MANIFOLDS C/W MANIFOLD 5/8" BALL VALVES (BALL VALVES ARE NOT TO BE USED FOR BALANCING). PROVIDE THERMAL VALVE ACTUATORS WHERE THERE ARE MULTIPLE ZONES ON A MANIFOLD.
 5. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE INSTALLED IN A UNIFORM MANNER WHERE SPACING IS CONSISTENT AND MAXIMUM SPACING DOESN'T EXCEED WHAT IS SPECIFIED. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE PRESSURE TESTED PRIOR TO OVER POURING. CONTRACTOR TO INSTALL AS PER MANUFACTURERS LATEST INSTALLATION DETAILS. IF CONTRACTOR IS UNSURE WITH ALL APPLICABLE DETAILS, THESE DETAILS CAN BE PROVIDED UPON REQUEST. ALL IN-FLOOR WARMING APPLICATIONS SHALL HAVE MINIMUM R-5 INSULATION. ALL SLAB ON GRADE INSTALLATIONS SHALL BE C/W MINIMUM R-10 INSULATION.
 6. IN-FLOOR HEATING SHALL RUN UNDER SHOWERS AND BATHTUBS ETC. BUT NOT UNDER COUNTERTOPS SERVING LAV'S, KITCHEN SINKS, AND KITCHEN ISLAND ETC.
 7. AS AN INITIAL SET UP SLAB TEMPERATURES SHALL BE SET AS FOLLOWS:
 - 80°F FOR HARDWOOD. HARDWOOD MANUFACTURES SHALL CONFIRM
 - 80°F FOR TILE
 - 87°F FOR CARPET
 8. ALL SNOW MELTING ON PUBLIC OR CITY PROPERTY SHALL BE PIPED SEPARATELY FOR ISOLATION.

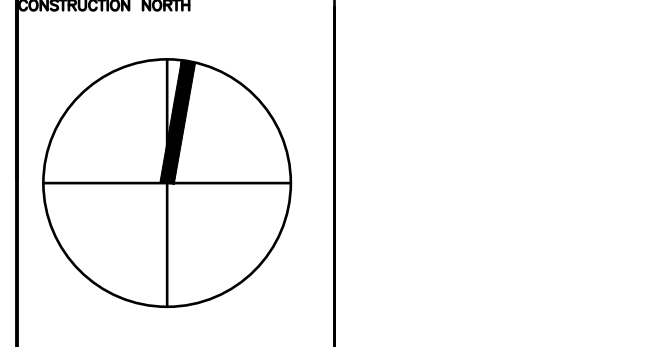
10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/SNOWMELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

NO. DATE DESCRIPTION

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K

CONSULTING INC.

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

GEORGINA, ONTARIO

MECHANICAL

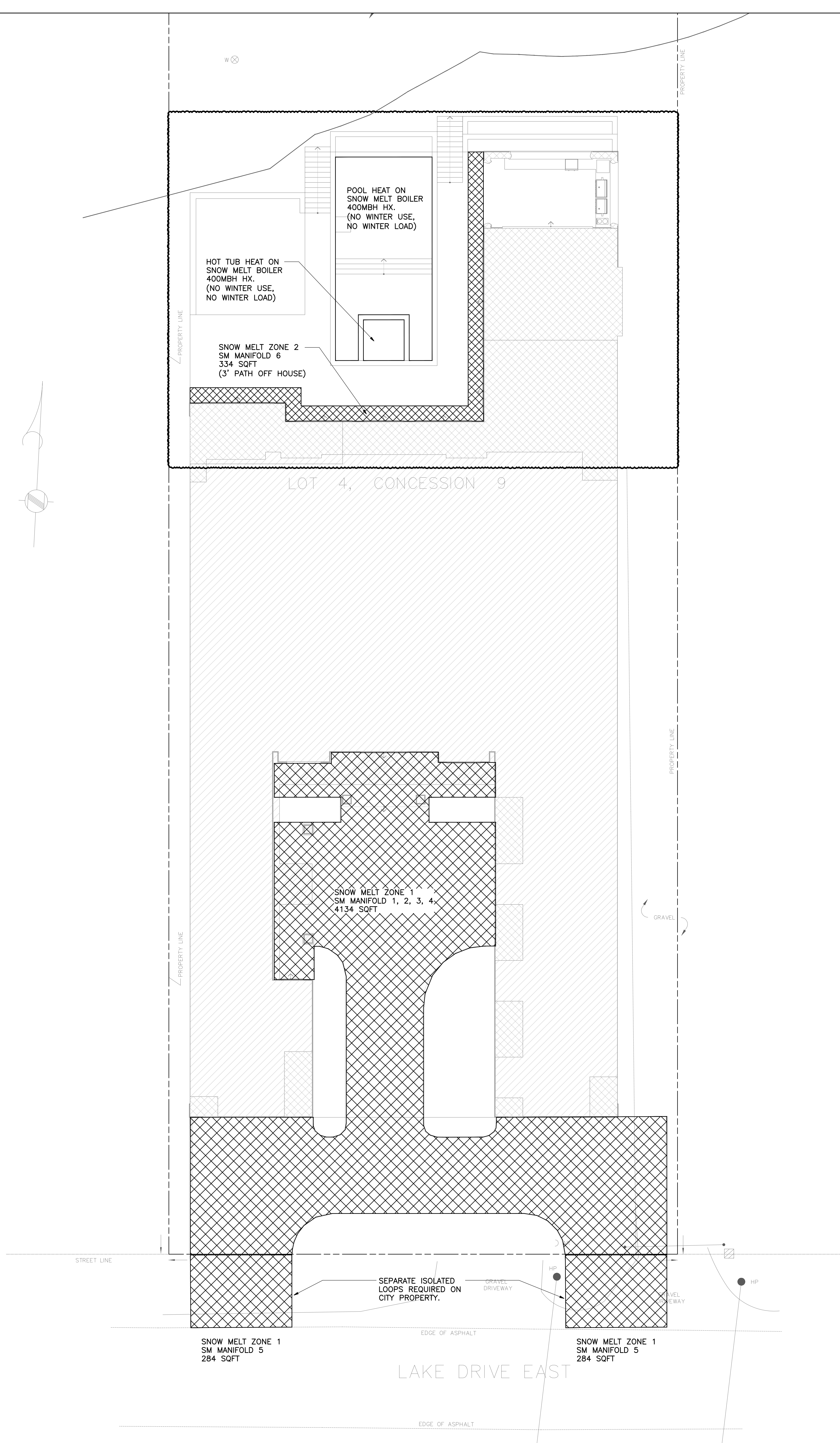
PLOT DATE PROJECT NO.
DRAWING TITLE

PARTIAL SECOND FLOOR
INFLOOR WARMING LAYOUT

DATE 2024
DRAWN BY J.W./K.W.
SCALE 1/4"=1'-0"

M-21

OF 25



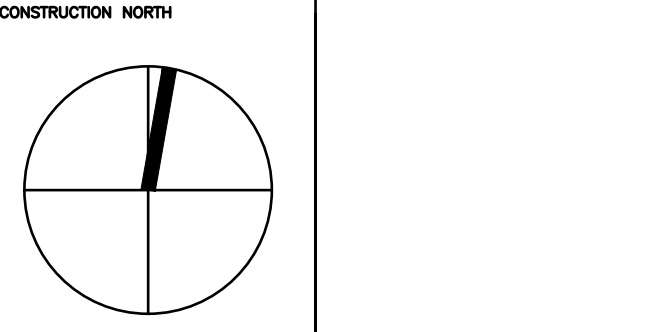
- IN-FLLOOR HEATING/WARMING/SNOW MELT NOTES**
1. PROVIDE IN-FLOOR WARMING AND SNOW MELT SYSTEM FOR AREAS AS NOTED. WHERE IN-FLOOR DRAWINGS ARE NOT INCLUDED PROVIDE FOR IN-FLLOOR AND GARAGE WARMING. 1/2" TUBING AT 9" CENTRES FOR 4 ROWS AT PERIMETER WALLS AND AT 12" CENTRES FOR THE REMAINDER OF THE INTERIOR ZONES. SNOW MELT TUBING SHALL BE 5/8" AT 9" CENTRES. EACH ROOM SHALL BE PIPED SEPARATELY FOR BETTER ZONING OPTIONS.
 2. EACH ZONE SHALL BE C/W A SLAB AND AIR SENSOR WHICH SHALL BE LOCATED AT SITE. WHERE APPLICABLE TO THIS PROJECT EACH SNOW MELT ZONE SHALL BE C/W A SNOW/ICE SENSOR WHICH IS TO BE LOCATED AT SITE. ZONING REQUIREMENTS SHALL BE APPROVED BY ENGINEER AND OWNER PRIOR TO CONSTRUCTION AND LANCE AGAIN PRIOR TO POURING FLOOR COVERING AND/OR DRY-WALLING.
 - ALLOW 8 ZONES FOR EACH MANIFOLD
 - MANIFOLDS ARE TO BE LOCATED IN A LOCKABLE CABINET AND SECURELY FASTENED IN AN ACCESSIBLE LOCATION.
 3. CONTRACTOR IS TO PROVIDE SHOP DRAWINGS RELATED TO IN-FLOOR WARMING/SNOW MELTING PRIOR TO INSTALLATION AND IS TO NOTIFY ENGINEER OF ANY INSTALLATION DEVIATIONS TO OUR DRAWINGS.
 4. ALL MANIFOLDS SHALL BE UPONOR TRUFLOW MANIFOLDS C/W MANIFOLD 5/8 BALL VALVES (BALL VALVES ARE NOT TO BE USED FOR BALANCING). PROVIDE THERMAL VALVE ACTUATORS WHERE THERE ARE MULTIPLE ZONES ON A MANIFOLD.
 5. ALL IN-FLOOR AND SNOW MELT PIPING IS TO BE INSTALLED IN A UNIFORM MANNER WHERE SPACING IS CONSISTENT AND MAXIMUM SPACING DOESNT EXCEED WHAT IS SPECIFIED. ALL IN-FLOOR AND SNOW MELT PIPING IS TO PRESSURE TESTED PRIOR TO OVER POURING. CONTRACTOR TO INSTALL AS PER MANUFACTURERS LATEST INSTALLATION DETAILS. IF CONTRACTOR IS UNSURE WITH ALL APPLICABLE DETAILS, THESE DETAILS CAN BE PROVIDED UPON REQUEST. ALL IN-FLOOR WARMING APPLICATIONS SHALL HAVE MINIMUM R-5 INSULATION. ALL SLAB ON GRADE INSTALLATIONS SHALL BE C/W MINIMUM R-10 INSULATION.
 6. IN-FLOOR HEATING SHALL RUN UNDER SHOWERS AND BATHTUBS ETC BUT NOT UNDER COUNTERS SERVING LAVS, KITCHEN SINKS, AND KITCHEN ISLAND ETC.
 7. AS AN INITIAL SET UP SLAB TEMPERATURES SHALL BE SET AS FOLLOWS:
 - 80°F FOR HARDWOOD. HARDWOOD MANUFACTURES SHALL CONFIRM
 - 80°F FOR TILE
 - 87°F FOR CARPET
 8. ALL SNOW MELTING ON PUBLIC OR CITY PROPERTY SHALL BE PIPED SEPARATELY FOR ISOLATION.

10	8/29/2024	FULL WEEK SET UPDATE
9	8/23/2024	ARCH/MECH/RAD/SNOWMELT UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COORD
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW

THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUED COLUMN ABOVE.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALE. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT TO BE SCALED



B K
CONSULTING INC.
23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE EAST

GEORGINA, ONTARIO

MECHANICAL

PLOT DATE PROJECT NO.
23-317

DRAWING TITLE

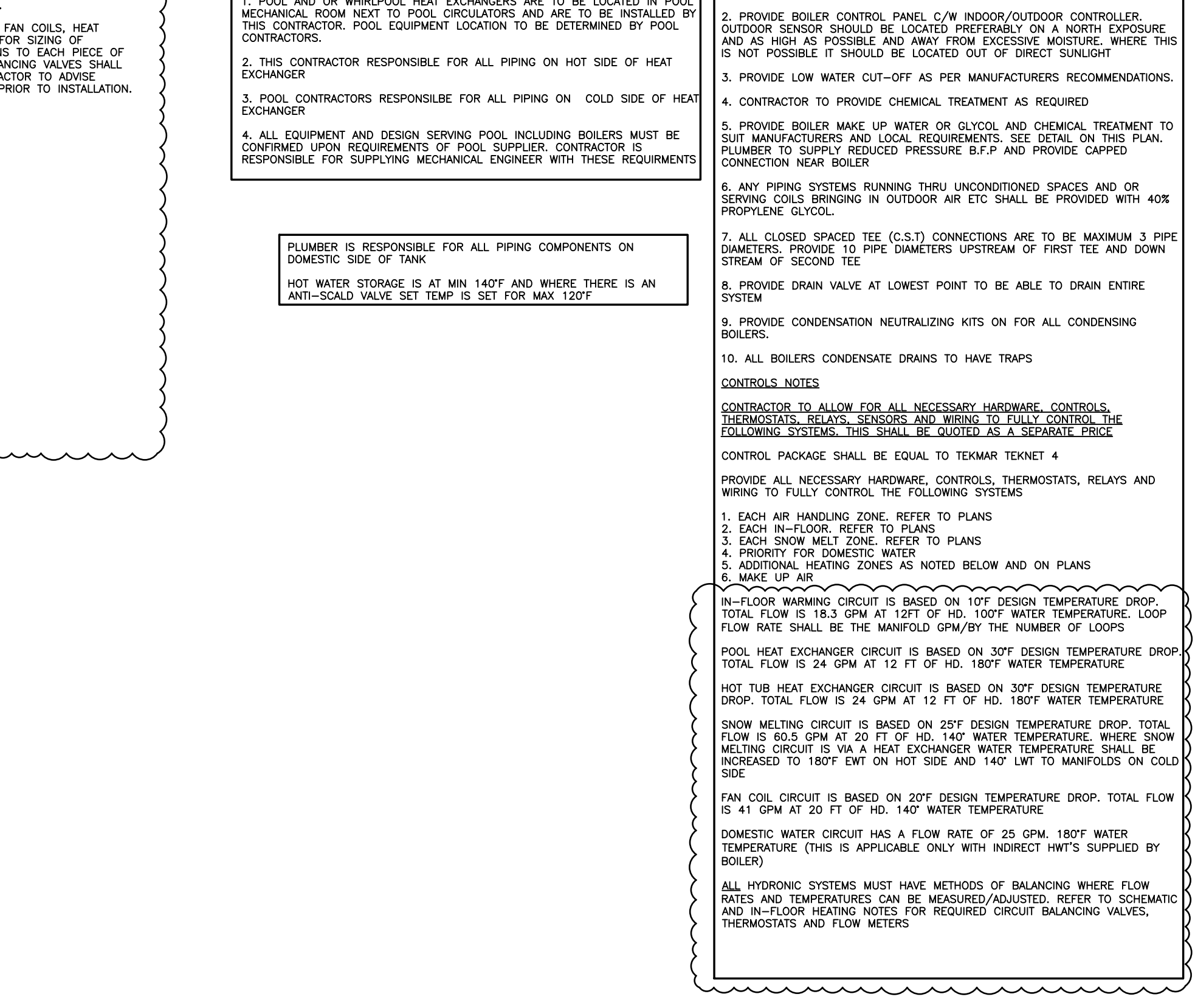
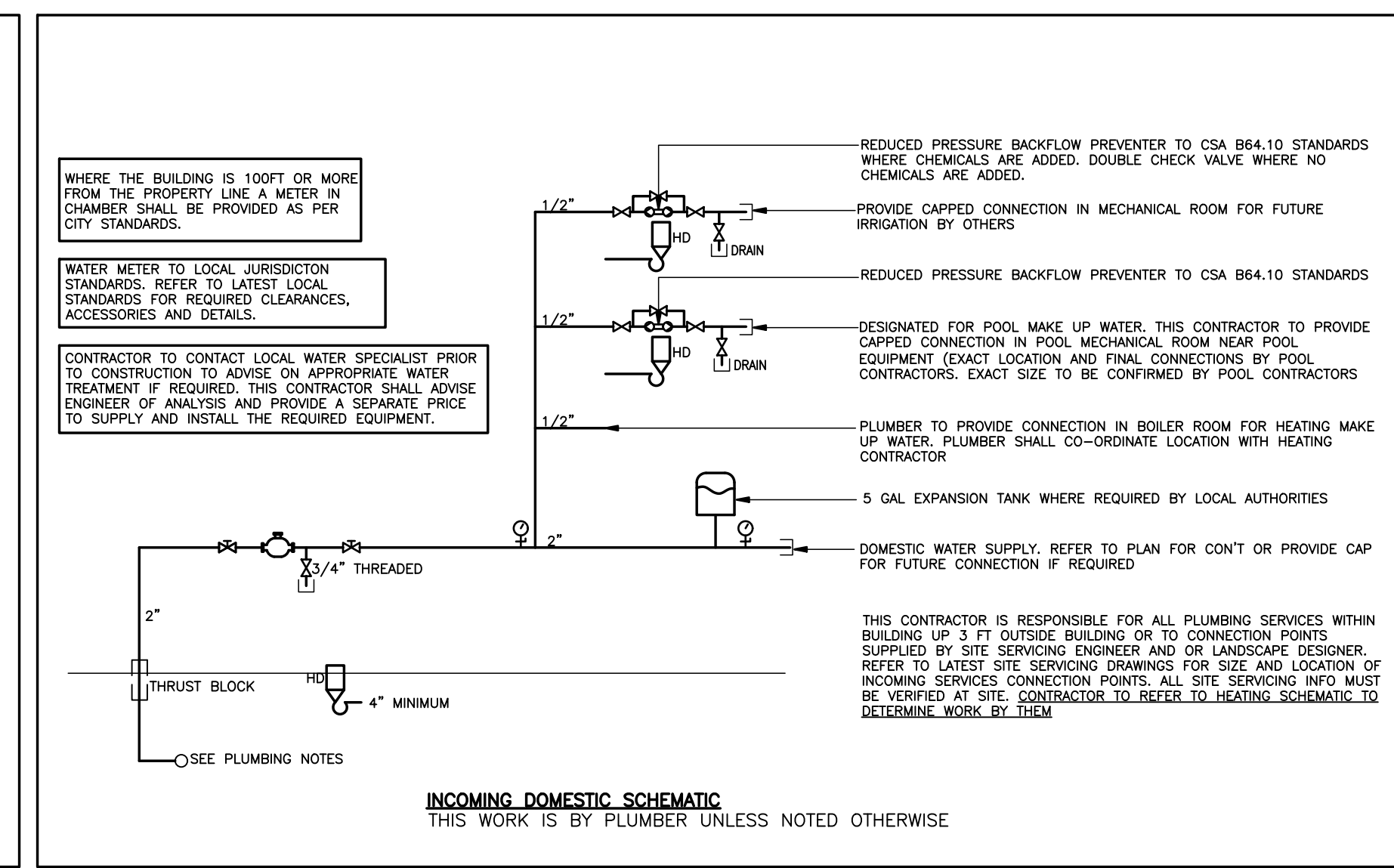
SITE PLAN
SNOW MELT LAYOUT

DATE 2024

DRAWN BY J.W./K.W.

SCALE 1/8"=1'-0"

M-22
OF 25



140 LAKE DRIVE EAST	
GEORGINA, ONTARIO	
MECHANICAL	
PLOT DATE	PRODUCT NO. 23-317
DRAWING TITLE	
DETAILS	
DATE 2024	M-23
DRAWN BY J.W./K.W	
SCALE N.T.S.	
OF 25	

RESIDENTIAL FAN COIL UNIT SCHEDULE																
MARK	MANUFACTURER	MODEL	SUPPLY AIR FAN DATA			WATER HEATING DATA			COOLING DATA			ELECRICAL DATA	SIZE(IN) LXWXH	RA DROP	WEIGHT	
			CFM	E.S.P.	H.P.	ROWS	GPM	HEATING COIL @160°F	TYPE	TOTAL	SENSIBLE	VOLTAGE				MCA
FC-15T	LENNOX	CBX32MV-018-230-6	600	0.5"	0.5HP	3	3	35.8 MBH	DX	-	18MBH	208/1/60	5	20k16x45	20x19	126LS
FC-2T	LENNOX	CBX32MV-024-230-6	800	0.5"	0.5HP	3	4	41.4 MBH	DX	-	24MBH	208/1/60	5	20x21x49	24x19	152LS
FC-3T	LENNOX	CBX32MV-036-230-6	1200	0.5"	1HP	3	4	55.9 MBH	DX	-	36MBH	208/1/60	11	22x21x51	24x21	183LS
FC-4T	LENNOX	CBX32MV-048-230-6	1600	0.5"	1HP	4	5	88.4 MBH	DX	-	48MBH	208/1/60	11	24x21x58	30x23	212LS
FC-5T	LENNOX	CBX32MV-060-230-6	2000	0.5"	1HP	4	5	105.7 MBH	DX	-	60MBH	208/1/60	11	24x21x58	30x23	212LS
<div>NOTES</div> <ul style="list-style-type: none"> - R410A REFRIGERANT - MANUFACTURER TO CONFIRM THE ACTUAL REFRIGERANT PIPING LENGTH ON SITE AND CONFIRM SIZES - UNLESS NOTED ALL FAN COILS C/W CIRCULATOR PUMP (SEE SCHEMATIC FOR DETAIL), VARIABLE SPEED BLOWER, ECM ENERGY EFFICIENT MOTOR. - HONEYWELL VISION PRO 9000 T-STAT (T-STAT SHALL BE CONFIRMED UPON FINAL SELECTION OF CONTROLS), VIBRATION ISOLATORS, FLEXIBL - PIPE CONDENSATE TO NEAREST HUB C/W AIR GAP, UNLESS NOTED ON PLAN. - PROVIDE LENNOX MERV 10 FILTER IN 5" FILTER BOX, WHERE STEAM HUMIDIFIERS ARE NOT SPECIFIED ON THIS PROJECT PROVIDE APRILAIRE MODEL 400 BY-PASS HUMIDIFIER 24V/60, .5AMP C/W BUILT IN TRANSFORMER - ALL SUPPLY DROPS ARE FULL SIZE UNLESS NOTED ON PLAN. - ALL DIMENSIONS SHOWN ARE FOR UPFLOW MODEL. - CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR DUCT MOUNTED WATER HEATING COIL. 																

TAG NO.	LOCATION	SERVING	MANUFACTURER	MODEL NO.	CAPACITY	AIRFLOW	ELECTRICAL			EMERGENCY POWER
							V/PH/Hz	MCA	FLA	
SH	MECH RM	FAN COIL	CONDAIR	RH	5-10LBHR	600-1200CFM	208/1/60	20	16	NO
NOTE: 1. PROVIDE VAPOUR LOGIC CONTROLLER, CW 4 FT STEAM HOSE, S.S. STEAM DISTRIBUTOR MODULATING DUCT MOUNT CONTROL HUMIDISTAT, MODULATING HI LIMIT HUMIDITY SENSOR, OUTDOOR TEMPERATURE HUMIDITY RESET SENSOR, AIR PROVING SWITCH. 2. PROVIDE 1/2" VALVED COPPER ONLY WATER UP TO 4 FT OF HUMIDIFIER CW BACKFLOW APPROVED DUMPSTOCK. 3. PROVIDE 1" INSULATED COPPER DRAIN LINE TO HUB DRAIN, HUB DRAIN TO BE LOCATED WITHIN 5 FT OF HUMIDIFIER, FOR STEAM LINES LONGER THAN 4 FT USE 1" TYPE M COPPER AND INSULATE WITH 1" SNAP ON INSULATION										

TAG	MODEL	TYPE	NOMINAL TONAGE	VOLTAGE	MCA	MCCP	WEIGHT(LBS)	OUTDOOR FAN MOTOR	EMERGENCY POWER	SIZE(IN) LXXXH
C-1.5	KC25-024	OUTDOOR COOLING ONLY	1.5T	230/180V	14.9	25	303	1/3 HP	NO	40x36x47
C-2.0	KC25-024	OUTDOOR COOLING ONLY	2T	230/180V	14.9	25	303	1/3 HP	NO	40x36x47
C-3.0	KC25-036	OUTDOOR COOLING ONLY	3T	230/180V	19.5	30	303	1/3 HP	NO	40x36x47
C-4.0	KC25-048	OUTDOOR COOLING ONLY	4T	230/180V	32.9	50	330	1/3 HP	NO	40x36x47
C-5.0	KC25-060	OUTDOOR COOLING ONLY	5T	230/180V	34.1	50	330	1/3 HP	NO	40x36x47

NOTES: 1. OUTDOOR CONDENSERS ARE 36" WIDE X 36" DEEP X 37" HIGH UP TO 3 TONS (250lbs) and 47" HIGH FOR 4 AND 5 TONS (500lbs).
2. OUTDOOR CONDENSERS ARE TO BE LENNOX MODEL XC-16S. TONNAGE TO MATCH FAN COIL. MIN. 16 SEER.
3. EXACT LOCATION OF CONDENSERS TO BE DETERMINED AT SITE AND APPROVED BY ARCHITECTOR. REFER TO MANUFACTURERS GUIDE FOR RECOMMENDED MOUNTING DETAILS.
4. LOW AMBIENT KIT (DN TO 30°F). CLEARANCE FROM WALL IS 12" - 48" ON TOP OF UNIT, 36" ON ALL OTHER SIDES. C/W CRANK CASE HEATER, FREEZE STAT, REFRIGERANT LINE SET SIZED TO SUIT SITE CONDITIONS.
5. FOR REFRIGERANT LENGTHS OVER 50FT PROVIDE NON BLEED PORT TXV. LIQUID SOLENOID VALVE.

[illegible]

IDENTICAL CEILING FAN SCHEDULE											
MARK	MANUFACTURER	MODEL #	FAN DATA			VOLTAGE	RPM	OPERATION	WEIGHT(LBS)	LOCATION	MOUNTING
			CFM	E.S.P.	H.P.						
CF-110	PANASONIC	FV-1115VQ1	110	25	1/4	120/180		SWITCH / SENSOR	10	AS SHOWN	CEILING MOUNT
CF-150	PANASONIC	FV-1115VQ1	150	25	1/4	120/180		SWITCH / SENSOR	10	AS SHOWN	CEILING MOUNT

NOTES: 1. DISCHARGE FROM FAN TO BE MIN. 10FT. FROM INTAKE OPENINGS.
2. C/W TIMER (AS DECIDED BY OWNER/ARCHITECT) EXCEPT LAUNDRY ROOM BY HUMIDISTAT. INSULATED DUCT 10FT FROM INSIDE FACE OF EXTERIOR WALL, ROOF, SOFFIT OR SIDEWALL AS SHOWN.
3. EXACT LOCATION OF TERMINATION TO BE CO-ORDINATED WITH ARCHITECT.
4. PROVIDE B/D/D AND B/SCREEN. UNLESS NOTED ON PLANS TERMINATIONS THRU WALLS SHALL BE A WALL BOX. TERMINATIONS THRU ROOF SHALL BE A ROOF CAP. REFER TO TERMINATION SCHEDULE FOR DETAIL.

WIRE PANEL SCHEDULE											
MARK	MANUFACTURER	MODEL #	FAN DATA			VOLTAGE	RPM	OPERATION	WEIGHT(LBS)	SIZE	LOCATION
			CFM	E.S.P.	H.P.						
F-1200	GREENHECK	SQ-130	1200	.5	1/4	120/160	1400	HOOD INTERLOCK	200	21" DEEP	PANTRY
F-1500	GREENHECK	SQ-140	1500	.5	1/3	120/160	1100	HOOD INTERLOCK	250	23" DEEP	2ND FL MECH
F-4500	GREENHECK	BDF-150	4500	.5	1	120/160	685	CO INTERLOCK	221	34"x32"x23"H	GARAGE
<ul style="list-style-type: none"> - DISCONNECT - FLEXIBLE CONNECTIONS - 50FT. OF CONTROL WIRING OR AS NOTED ON PLANS - INSULATED CABINET - MOTOR COVERS - SPRING ISOLATORS - ALUMINUM CONSTRUCTION FOR HIGH HUMIDITY AREAS - SPEED CONTROLLERS 											

SUMP PUMP SCHEDULE											
TAG NO.	TYPE	ARRANGEMENT	MANUFACTURER	MODEL NO	FLOW (GPM)	HEAD (FT)	RPM	DISCHARGE SIZE	PIT DEPTH	ELECTRICAL	EMERGENCY POWER
5AN-50	SANITARY	DUPLX	BARNES	2SE-51	50	20		3"	36"	60" REG 2301/160	YES
5TM-50	STORM	DUPLX	BARNES	2SE-51	50	20		3"	36"	60" REG 2301/160	YES

NOTE: 1. PROVIDE 1 FLOAT FOR SIMPLEX. FOR PUMPS WITH MAGNETIC STARTERS PROVIDE 2 FLOATS AND CONTROL PANEL. FOR DUPLX PUMPS PROVIDE 3 FLOATS AND CONTROL PANEL.
2. CONTRACTOR TO CONFIRM WITH MANUFACTURER THAT PIT AND COVER IS RATED FOR THE EXPECTED TYPE OF TRAFFIC LOADING.
3. CITY INVERTS MUST BE VERIFIED (BY OTHERS) BEFORE ORDERING AND INSTALLATION OF SANITARY SUMP AND UNDERGROUND DRAINAGE.
4. CWV 20" POWER COVER, LHW 11" HIGH WATER ALARM PANEL, C/W EXTRA RELAY IN CEMA 1 ENCLOSURE.
5. FOR DUPLX COMBED DISCHARGE PIPE SHALL BE ONE SIZE LARGER THAN INDIVIDUAL PUMP DISCHARGE.
6. ENSURE PIT IS A MIN 3FT BELOW INCOMING INVERT. MODIFY PIT DEPTH AS REQUIRED. CONTRACTOR TO VERIFY INCOMING INVERT AT SITE PRIOR TO ORDERING PIT.

HYDRONIC BOILER SCHEDULE															
TAG	LOCATION	MANUFACTURER	MODEL	INPUT (MBH)		OUTPUT (MBH)	FLUE	COMBUSTION AIR	MAX. VENT LENGTH (FT.)	BOILER EFFICIENCY A.F.U.E.	ELECTRICAL V/F/PHZ	WEIGHT (LBS)	SIZE W x L x H	GAS CONNECTION (IN)	WATER CONNECTION (IN)
				MINIMUM	MAXIMUM										
B-400	BSMT	IBC	SL40-399	40	399	383	4"	4"	100	90%	120/1/60	250	27" x 20" x 40"	¾"	½"
-	BOILER POWER VENTING POST PURGE TO BE SET TO 90 SECONDS. BOILER PUMP POST PURGE TO BE SET TO 3 MINUTES.														
-	VENTING AS PER MANUFACTURERS RECOMMENDATIONS														
-	PIPE COND. TO NEAREST HUB DRAIN C/W AIR GAP. CONDENSATE SHALL HAVE A NEUTRALIZING FILTER														
-	OUTDOOR RESET CONTROL WITH OUTDOOR AIR SENSOR														
-	BUILT-IN CASCADING SEQUENCER														
-	THREE PUMP CONTROLLER														
-	DOMESTIC HOT WATER PRIORITIZATION														
-	WIRELESS OUTDOOR TEMPERATURE SENSOR														
-	CONDENSATE NEUTRALIZATION KIT														

TAG NO.	LOCATION	MANUFACTURER	MODEL NO.	BOILER OUTPUT	COIL FLOW RATE	STORAGE CAPACITY	RECOVERY @ 115°F RISE	EMERGENCY POWER	SIZE(IN) DIA XH	WEIGHT
HWT-120	AS SHOWN	NTI	INDIRECT NTI S120	290MBH	13.4GPM	119 GAL	636GPH	NO	29x70-1/4	190
NOTES: C/W HEAT TRAP, TEMPERATURE SENSOR C/W 10°F DEADBAND AND DRAIN AS PER MANUFACTURER TO BE ABLE TO DRAIN TANK										

SUPER PUMP SCHEDULE									
TAG NO.	MANUFACTURER	MODEL NO.	TANK VOLUME (US GAL.)	HEIGHT (IN.)	DIAMETER (IN.)	MAX. PRESSURE (PSI)	CONNECTION (IN.)	NUMBER OF SENSOR WELLS	WEIGHT (LBS)
BUF-80	HOT WATER PRODUCTS INC.	BB-60 (3W)	80	71-1/4	23-1/8	75	2-1/2	1	128
NOTES:	- NOT FOR USE WITH POTABLE WATER								
	- ALL MODELS C/W 3/4" NH(M) DRAIN CONNECTION, 1/2" AIR VENT (NPT)								

TAG NO.	MAKE	MODEL #	FLOW RATE (GPM)	HEAD (FT.)	VOLTAGE	POWER	AMPS	LOCATION	NOTES
P-1	GRUNDFOS	UPS-26-99FC	0-33	0-29	120/160	1/6 HP	1.8	HEATING LOOP	3 SPEED
P-2	GRUNDFOS	UPS-15-58FC	0-17.5	0-19	120/160	1/25 HP	0.75	HEATING LOOP	3 SPEED
P-3	GRUNDFOS	UPS-14-52BT	0-17	0-15	120/160	1/25 HP	0.74	HOT WATER LOOP	CW AQUASTAT AND TIMER
P-4	GRUNDFOS	UPS-43-44FC	35-45	6-8	120/160	1/6 HP		HWT	3 SPEED
P-5	GRUNDFOS	MAGNA3 40-80F	0-45	0-16	230/160	1/4 HP	1.36	HEATING LOOP	VARIABLE SPEED
P-12	GRUNDFOS	ALPHA 15-55F	0-22	0-18	120/160	0.06HP	0.65	HEATING LOOP	VARIABLE SPEED
P-15	GRUNDFOS	MAGNA3 65-120F	0-105	0-39	230/160	0.6HP	3.32	HEATING LOOP	VARIABLE SPEED

- ALL PUMPS ARE TO BE CW ISOLATION VALVE AND CHECK VALVES.

DUPLICATE OF UNIT AIR CONDITIONER SCHEDULE												
MARK	MANUFACTURER	INDOOR MODEL #	OUTDOOR MODEL #	TYPE	NOMINAL TONS	HEATING DATA		COOLING DATA		ELECTRICAL DATA		
						BTU/HR @17°F	BTU/HR	LOW AMBIENT	VOLTAGE	MCA	MOP	
DS-0.5TS	mitsubishi	MSZ-FS06NA	MUZ-FS06NA	WALL MOUNTED	1/2	12,840	6,000	-14°F	208/1/60	10	15	
DS-0.5TM	mitsubishi	MSZ-GL06NA	--	WALL MOUNTED	1/2	7,200	6,000	-14°F	208/1/60	1.0	--	
DS-1T	mitsubishi	MSZ-GL12NA	--	WALL MOUNTED	1	NA	12,000	-14°F	208/1/60	1.5	--	
DS-2TM	mitsubishi	MSZ-GL24NA	--	WALL MOUNTED	2	27,600	22,400	-14°F	208/1/60	1.0	--	
C-2T	mitsubishi		MXZ-4C24NAHZ	CONDENSER	2	NA	24,000	-14°F	208/1/60	30	35	
C-2.5T	mitsubishi		MXZ-4C36NAHZ	CONDENSER	2.5	36,000	36,000	-14°F	208/1/60	42	52	

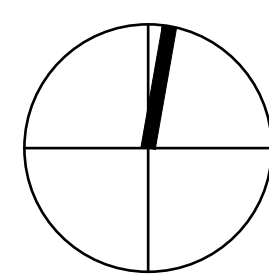
- * 3% PROGRAMMABLE T-STAT
- CONDENSATE PUMP
- PIPE CONDENSATE TO NEAREST HUB DRAIN C/W AIR GAP.
- PROVIDE AND INSTALL MOUNTING HARDWARE AS REQUIRED.
- CONDENSER IN PARKING GARAGE TO BE MOUNTED AT HIGH LEVEL. CONDENSER ON ROOF ARE TO BE MOUNTED ON SLEEPERS.
- LAYOUT AND DETAIL OF PIPING TO BE COORDINATED WITH MANUFACTURERS INSTALLATIONS GUIDELINES.
- CONDENSING UNIT TO BE C/W BRANCH BOX. MODEL: PAC-MKA31BC. MAX 3 DUCTLESS SPLITS PER BOX.

MARK	MANUFACTURER	MODEL NO.	SIZE	NOTES
ZD-1A	LENNOX	X4218	12x6	
ZD-1B	LENNOX	X4218	12x6	
ZD-1C	LENNOX	X4218	12x6	
ZD-2A	LENNOX	X4219	14x8	
ZD-2B	LENNOX	X4223	22x8	
ZD-7A	LENNOX	X4218	12x6	
ZD-7B	LENNOX	X4218	12x6	
NOTES: HONEYWELL: ZONE SYSTEM TO BE CW H2432 TRUZONE PANEL, WIRELESS ADAPTER, DISCHARGE AIR TEMPERATURE SENSOR, TRANSFORMER, PRESTIGE HD THERMOSTAT FOR EACH ZONE, WIRELESS OUTDOOR SENSOR AND ALL NECESSARY WIRING ETC. FOR A COMPLETE SYSTEM. LENNOX: C/W HARMONY DAMPER CONTROL MODULE, ICOMFORT THERMOSTAT, IN-ZONE THERMOSTATS, MOTORIZED ZONE DAMPERS, DISCHARGE AIR TEMP. SENSORS 				

10	8/29/2024	FULL MECH SET UPDATE
9	8/23/2024	ARCH/HVAC/RAD/SNO/MENAL UPDATE
8	3/7/2024	CORE SLAB SLEEVE REVISION #2
7	2/29/2024	CORE SLAB SLEEVE REVISIONS
6	2/8/2024	ISSUED FOR CORE SLAB SLEEVE COR
5	10/25/2023	ISSUED FOR PERMIT COMMENTS
4	10/12/2023	UPDATES / ISSUED FOR PRICING
3	8/8/2023	ISSUED FOR PERMIT
2	7/28/2023	ISSUED FOR REVIEW
1	6/20/2023	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION
THIS DRAWING SHALL BE USED ONLY FOR THE PURPOSE INDICATED IN THE LATEST ISSUE COLUMN ABOVE.		

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. DRAWINGS MUST NOT BE SCALED. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ERRORS AND OMISSIONS TO THE DESIGNER. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS COUNTERSIGNED BY THE DESIGNER.

THESE DRAWINGS ARE NOT
TO BE SCALED.



B K

CONSULTING INC

23 - 1111 Davis Drive
Newmarket, Ontario L3Y 9E5
T (905) 773-0200
staff@bkconsulting.ca

140 LAKE DRIVE
EAST

GEORGINA, ONTARIO

MECHANICAL	
PLOT DATE	PROJECT No. 23-317

DRAWING TITLE

EQUIPMENT SCHEDULES

DATE	0004
------	------

DRAWN BY J.W./K.W. SCALE	M-24
--------------------------------	------

NTS	OF 25
-----	-------

