#### LEGEND

T100 - COMMUNICATIONS, IT AND ACCESS CONTROL TITLE PAGE T101- COMMUNICATIONS, IT AND ACCESS CONTROL SCHEMATICS

T102 - B-WING FLOOR 1 COMMUNICATIONS AND SECURITY LAYOUT

T103 - B-WING FLOOR 2 COMMUNICATIONS AND SECURITY LAYOUT

T104 - COMMUNICATIONS PATHWAYS DETAILS T105 - COMMUNICATIONS INSTALLATION DETAILS

T106 - COMMUNICATIONS GROUNDING AND BONDING DETAILS

T107 - RACK ELEVATIONS DETAIL T108 - AV ELEVATIONS WING B LEVEL 1

T109 - AV LAYOUT DRAWINGS T110 AV ELEVATIONS WING B LEVEL 2

#### GENERAL CONSTRUCTION NOTES:

1. REFER TO EACH T DRAWINGS FOR SYMBOLS AND ABBREVIATIONS.

2. CONFIRM ALL OUTLET MOUNTING HEIGHTS PRIOR TO INSTALLATION AS PER DRAWINGS.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND TO INFORM ANY AFFECTED SERVICES SUCH AS BUT NOT LIMITED

TO BUILDING MANAGEMENT, OR SECURITY OF ANY FORESEEN NETWORK OUTAGES.

4. DRAWINGS ARE DIAGRAMMATIC IN NATURE CONTRACTORS TO VERIFY DIMENSIONS PRIOR TO INSTALLATION

5. THESE DRAWINGS ARE TO BE READ WITH THE DIVISION 27 SPECIFICATIONS

#### DIVISION 26 NOTES:

COORDINATE ALL LOCATIONS WITH DIV. 27

ALL CONDUITS SHALL MEET THE FILL CAPACITY AS SHOWN ON DRAWING IN THE CHART BELOW. WHERE CONDUIT OR BASKET TRAY IS UNDERSIZED, THE CONTRACTOR SHALL INFORM THE CLIENT BEFORE PROCEEDING.

ALL DATA DROPS TO HAVE MINIMUM 1" CONDUIT HOMERUN TO WIRE BASKET TRAY.

. ALL DATA DROPS FO HAVE MINIMUM 1" CO.
. ALL CONDUITS TO HAVE PULL STRINGS.

CONTRACTOR TO FIELD VERIFY AND OBTAIN WRITTEN APPROVAL FOR FINAL LOCATIONS PRIOR TO INSTALLATION OF PATHWAYS

DO NOT USE CONDUIT SIZES 13mm  $(\frac{1}{2}")$ 

91 (3.54)

100 (4.02)

7. IF CONDUIT HAS INTERNAL DIAMETER OF 50MM (2") OR LESS, THE BAND RADIUS MUST BE AT LEAST 6 TIMES THE INTERNAL CONDUIT

8. IF THE CONDUIT HAS AN INTERNAL DIAMETER OF MORE THEN 50MM (2"), THE BEND RADIUS MUST BE AT LEAST 10 TIMES THE INTERNAL CONDUIT DIAMETER.

9. ALL CONDUIT SIZES SHOWN REPRESENT NOMINAL TRADE DIMENSIONS AND MAY DIFFER FROM ACTUAL DIMENSIONS.

10. CONTRACTOR TO ENSURE ALL PULL BOXES FOR DIVISION 27 WORK ARE SIZED AS SHOWN IN TABLE.

11. WHERE PULL BOXES ARE NOT READILY AVAILABLE IN THE SIZES INDICATED IN THE TABLES, "OFF-THE-SHELF" SMALLER PULL BOXES

MAY BE USED WHEN APPROVED BY THE CONSULTANT

ALL PENETRATIONS OF FIRE RATED WALLS ARE TO BE FIRST FIRE STOPPED BACK TO ORIGINAL WALL RATING. CHECK ARCHITECTURAL

DRAWINGS FOR WALL RATINGS

13. PLEASE SEE DRAWINGS T102, T103, T104, T105, T108, T109 AND T110 AS A MINIMUM FOR DIVISION 26 DETAILS
14. PLEASE READ SPECIFICATION SECTIONS 27 00 03 AND 27 05 128 AS A MINIMUM FOR DIVISION 26 DETAILS

88.9mm

101.6mm

CONDUIT INSIDE DIAMETER	TRADE SIZE	NUMBER OF CABLES AT 40% FILL RATIO					
mm (in)		4 (0.15)	5 (0.19)	6 (0.23)	7 (0.27)	8 (0.31)	9 (0.35)
21 (0.82)	19.05mm	11	7	5	3	3	2
27 (1.04)	25.4mm	18	11	8	6	4	3
35 (1.38)	31.75mm	30	19	13	10	8	6
41 (1.61)	38.1mm	41	26	18	13	10	8
50 (2.06)	50.8mm	68	43	30	22	17	13
63 (2.46)	63.5mm	96	62	43	31	24	19
75 (3.06)	76.2mm	149	95	66	49	37	29

MAXIMUM SIZE OF CONDUIT IN	SIZE OF	BOX IN MILL	IMETERS	FOR EACH ADDITIONAL CONDUIT	
MILLIMETERS	WIDTH	LENGTH	DEPTH	INCREASE WIDTH	
19.05	101.6	304.8	76.2	50.8MM	
25.4	101.6	406.4	76.2	50.8MM	
31.75	152.4	508	76.2	76.2MM	
38.1	203.2	685.8	101.6	101.6MM	
50.8	203.2	914.4	101.6	127MM	
63.5	254	1066.8	127	152.4MM	
76.2	304.8	1219.2	127	152.4MM	
88.9	304.8	1371.6	152.4	152.4MM	
101.6	381	1524	203.2	203.2MM	

255

163

113

83

64

## DIVISION 27 NOTES:

39

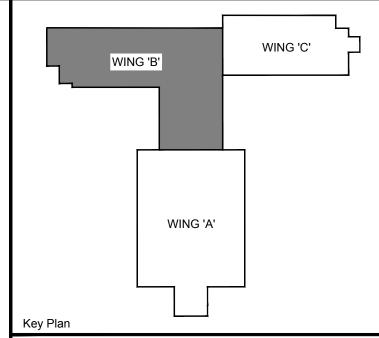
50

COORDINATE ALL LOCATIONS WITH DIV. 26.

DATA CABLING FROM JACKS TO BE CONTINUOUS (NO SPLICING)

3. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH EXTERNAL SERVICE PROVIDERS SUCH AS BELL, COGECO, OR OTHERS FOR ANY EQUIPMENT WHICH MAY NEED TO BE MOVED OR INSTALLED DURING THE UPGRADE. THE CONTRACTOR SHALL PROVIDE ALTERNATIVE SERVICES TO INSURE NO DOWN TIME IS EXPERIENCED DURING THE UPGRADE.

CONTRACTOR TO VERIFY AND ENSURE CONDUIT PATHWAYS DO NOT EXCEED FILL CAPACITY AS PER THE TABLE BELOW



#### DO NOT SCALE DRAWINGS:

Contractors must check and verify all site conditions. Notify the Owner's Representative in writing before proceeding with the work if discrepancies are evident between the drawings and the site condition. No extras to the contract will be allowed if discrepancies were evident prior to start of work.

### UNEXPECTED DISCOVERY OF ASBESTOS:

ISSUED FOR 65% REVIEW

Where a friable material is discovered during construction, renovations and/or demolition, and it is suspected to contain asbestos, the Contractor must stop all work that may disturb the material. The Contractor shall advise the Owner of the discovery and await instructions from the owner.



A = Detail number

B = Drawing number where detailed

5 ISSUED FOR CONVENIENCE TA APR 12, 2019
4 ISSUED FOR PERMIT & TENDER DC NOV 2, 2018
3 ISSUED FOR 95% REVIEW DC OCT 05, 2018
2 ISSUED FOR 95% REVIEW DC SEPT 14, 2018

TA

BY DATE

JULY 12, 2018

Orientation

NO. ISSUED

Seal

# UNIVERSITY &GUELPH

Design, Engineering & Construction Physical Resources Guelph, Ontario. N1G 2W1

sultant



BUILDING #046 RENOVATIONS

Drawing Title

TITLE PAGE

Project No. **504034** 

Cad File No.

UNIVERSITY OF GUELPH BUILDING #046

Date FEB 22, 2019

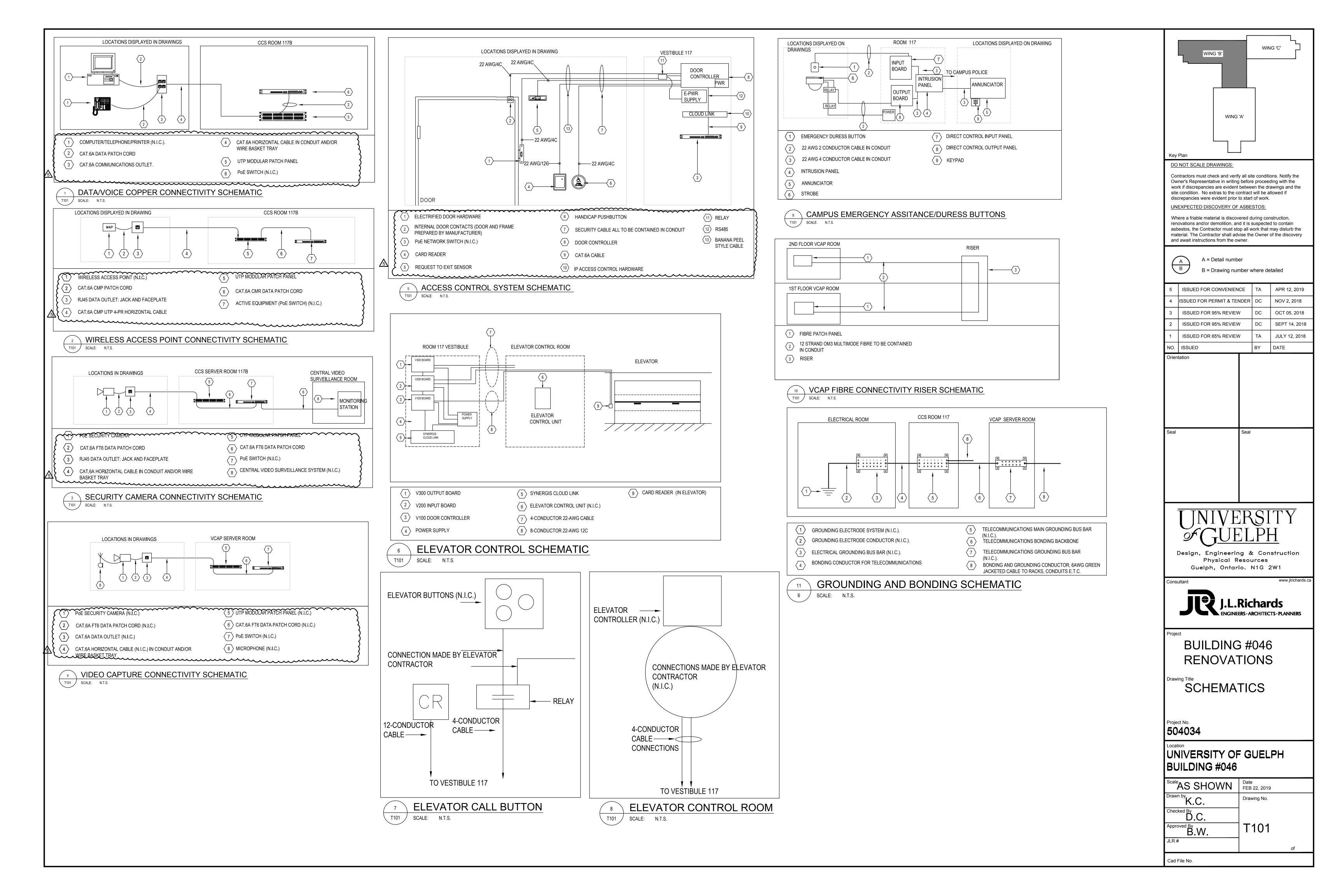
Drawn by K.C.

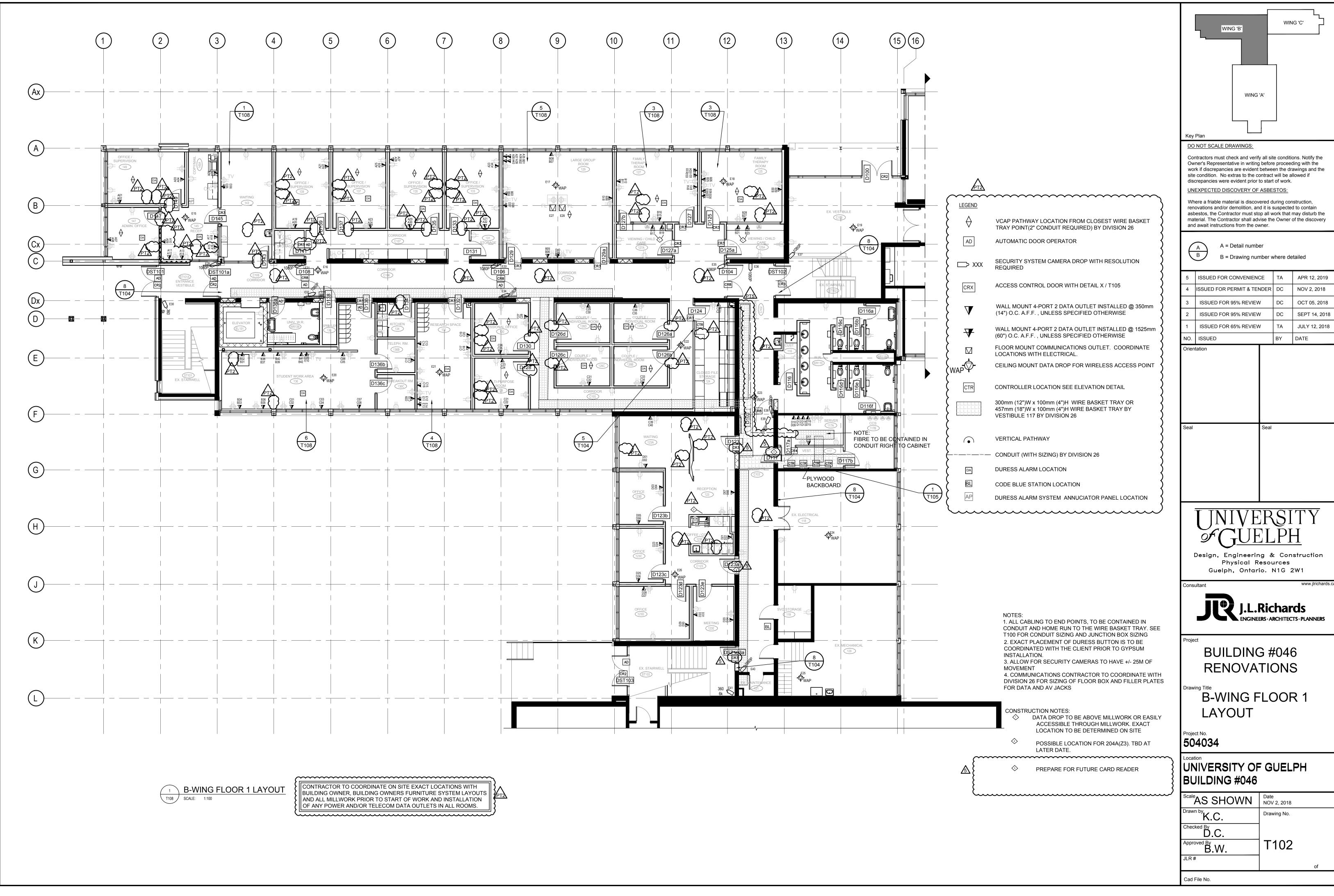
Checked By D.C.

Approved By B.W.

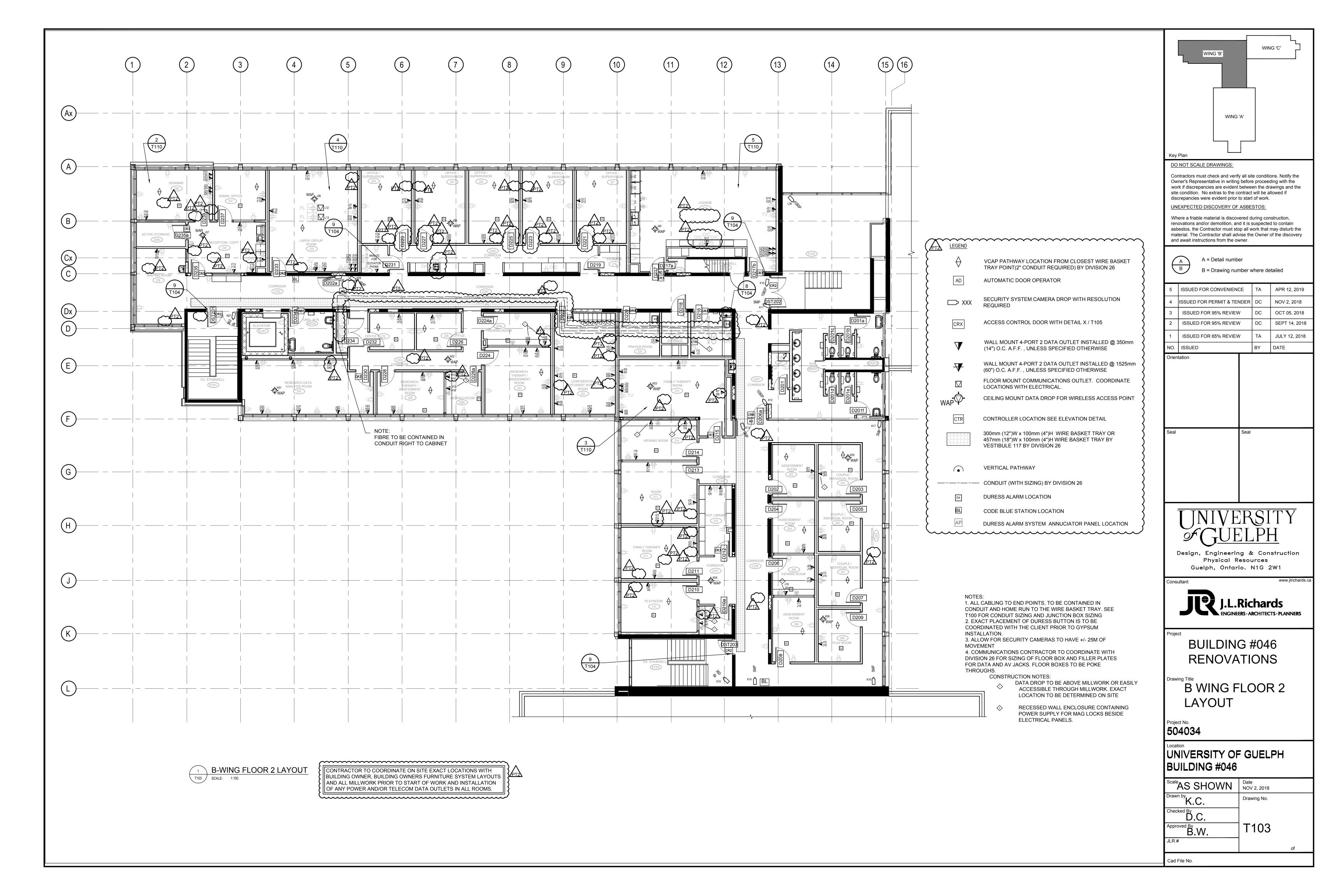
JLR #

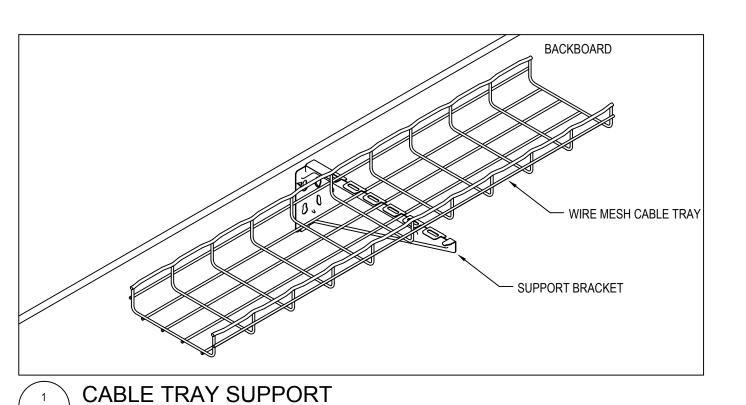
Of





5	ISSUED FOR CONVENIENCE	TA	APR 12, 2019
4	ISSUED FOR PERMIT & TENDER	DC	NOV 2, 2018
3	ISSUED FOR 95% REVIEW	DC	OCT 05, 2018
2	ISSUED FOR 95% REVIEW	DC	SEPT 14, 2018
1	ISSUED FOR 65% REVIEW	TA	JULY 12, 2018
NO.	ISSUED	BY	DATE





T104 / SCALE: N.T.S.

CABLE TRAY, HANGERS, FASTENERS AND GROUNDING TO BE SUPPLIED AND INSTALLED BY DIVISION 26. WIRE MESH CABLE TRAY WILL BE MANUFACTURED BY WBT THREADED ROD TRAY, HUBBELL OR CABLOFIL. ALL SECTION CONNECTION WILL UTILIZE PROPER CONNECTING CLIPS AS DESIGNED. CEILING SUPPORTS WILL USE  $\frac{1}{4}$ " THREADED ROD ON THE OUTSIDES OF THE TRAY. CENTRE SUPPORTS AND WIRE HANGER SUPPORTS ARE NOT ALLOWED UNLESS AUTHORIZED BY THE TELECOMMUNICATIONS CONSULTANT. WIRE MESH CABLE TRAY CABLE TRAY MUST BE GROUNDED. CENTRE DIVIDER IS OPTIONAL. CEILING SUPPORT

1. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL 200LBS. NYLON PULL STRING IN EACH CONDUIT STUB. 2. PULL BOXES SHALL NOT BE USED AS BENDS. 3. USE ONLY STEEL CONNECTORS.

4. CONDUIT, PULL BOXES, AND BACK BOXES BY ELECTRICAL CONTRACTOR 5. ALL CONDUITS TO BE BONDED TO GROUND ON ONE OR BOTH ENDS IN ACCORDANCE WITH CANADIAN ELECTRICAL CODE

FLUSHED-MOUNT OUTLET DETAILS

FINISHED FLOOR

PULL BOX

TO TELECOM ROOM OR

T104 SCALE: N.T.S.

WIREBASKET TRAY

PULL BOX SHALL NOT BE USED FOR 90 DEGREE BENDS OR FOR 'U'

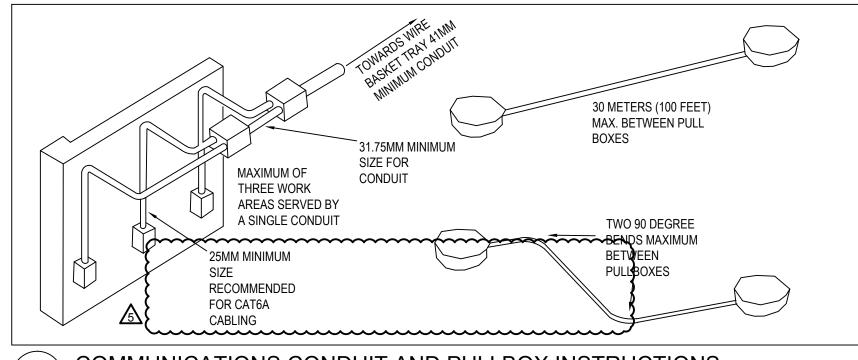
**PULLBOX DETAILS** 

T104 SCALE: N.T.S.

PA6 PA5 PA4PA3 PA2PA1 PA19 PA SYSTEM CAT6 FOR Z2 DELETED FROM PA11PA12 PA13PA14 CONTRACT CAT6 FOR Z2 PA10 PA15 PA9 PA18 PA8 CAT6 FOR Z3 PA7 PA16 PA17 SECURITRON 204A(Z1) 204A(Z2) ELECTRICAL POWER

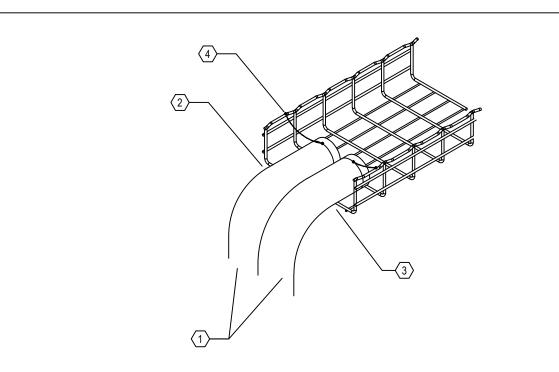
PA SPEAKERS ELEVATION

### CABLE TRAY DETAIL T104 / SCALE: N.T.S.



© COMMUNICATIONS CONDUIT AND PULLBOX INSTRUCTIONS

T104 SCALE: N.T.S.



103mm (4") EMT CONDUITS (VOICE AND DATA CABLING)

MIN 25mm (1") EMT CONDUIT OR AS

INDICATED ON DRAWINGS TO PULL BOX

– 90° EMT ELBOW

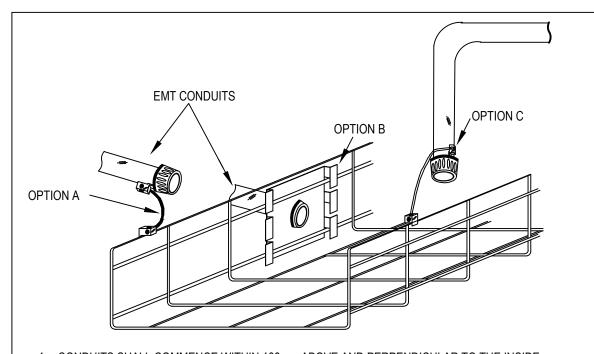
✓ DRYWALL PARTITION

FINISHED CEILING LINE

COMMUNICATIONS BACKBOX

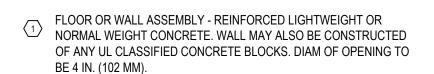
- (2) CONDUITS ENTERING THE CABLE TRAY SHALL TERMINATE 53-100mm (2-4") INSIDE THE TRAY AND NOT OBSTRUCT THE MAIN CABLE PATH.
- THE OPENING MADE IN THE THE CABLE TRAY SHALL BE FREE OF SHARP EDGES. BOTTOM OF CONDUITS SHALL REST ON THE CABLE TRAY. CABLE TRAY SHALL HAVE SUSPENSION 600mm (24") ON EITHER SIDE OF THE CONDUIT ENTRY POINT.
- CONDUITS WILL BE TERMINATED AT BOTH ENDS WITH A GROUND BUSHING AND BONDED TO THE CABLE TRAY AT BOTH ENDS WITH MINIMUM #6 AWG.

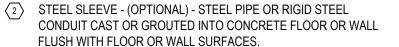
### CONDUIT ENTRY INTO CABLE TRAY 1 T104 / SCALE: N.T.S.

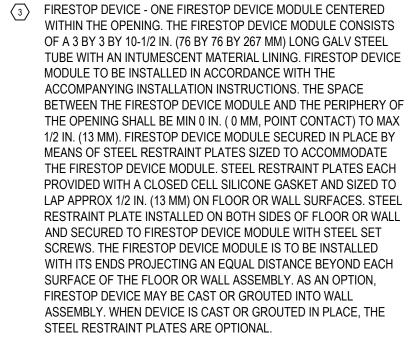


- 1. CONDUITS SHALL COMMENCE WITHIN 100mm ABOVE AND PERPENDICULAR TO THE INSIDE EDGE OF THE EXISTING CABLE TRAY ON THE CLOSEST SIDE TO THE OUTLET BOX
- 2. CONDUITS SHALL BE REAMED AND BUSHED
- 3. CONDUITS SHALL BE BONDED WITH GREEN-JACKETED, #6 AWG RW90 STRANDED COPPER CONDUCTOR (OPTIONS A AND C) OR MECHANICALLY BONDED TO THE CABLE TRAY WITH ELECTRICALLY CONDUCTIVE MATERIAL NOT PRONE TO GALVANIC CORROSION (OPTION B)
- 4. CONDUITS SHALL USE IRREVERSIBLE COMPRESSION ON OR EXOTHERMIC WELD TYPE LUGS/CONNECTORS, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS
- 5. MATERIALS BOLTED OR RIVETED TO THE CABLE TRAY SHALL BE FREE OF BURRS AND OR SHARP EDGES. DO NOT ALLOW BOLTS AND OR RIVETS TO OBSTRUCT OR INTERFERE WITH INTERIOR SPACE OF THE TRAY

CONDUIT ENTRY INTO CABLE TRAY 2 T104 / SCALE: N.T.S.





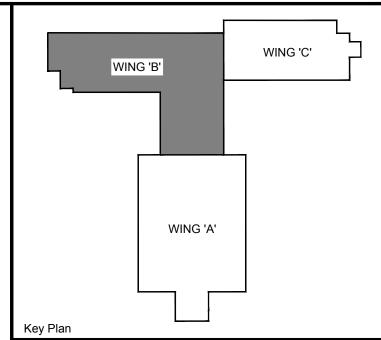


FILL, VOID OR CAVITY MATERIAL - SEALANT OR PUTTY - PRIOR TO INSTALLATION OF STEEL RESTRAINT PLATES, MIN 1 IN. (25 MM) THICKNESS OF SEALANT OR PUTTY INSTALLED IN ANNULAR SPACE FLUSH WITH TOP SURFACE OF FLOOR OR BOTH SURFACES OF

5 CABLES - WITHIN THE LOADING AREA FOR EACH FIRESTOP DEVICE MODULE, THE CABLES MAY REPRESENT A 0 TO 100 PERCENT VISUAL FILL. CABLE FILL TO BE DISTRIBUTED AT A UNIFORM HEIGHT ACROSS THE WIDTH OF THE FIRESTOP DEVICE MODULE. CABLES TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR OR WALL ASSEMBLY.



SECTION A-A



DO NOT SCALE DRAWINGS:

Contractors must check and verify all site conditions. Notify the Owner's Representative in writing before proceeding with the work if discrepancies are evident between the drawings and the site condition. No extras to the contract will be allowed if discrepancies were evident prior to start of work. UNEXPECTED DISCOVERY OF ASBESTOS:

Where a friable material is discovered during construction, renovations and/or demolition, and it is suspected to contain asbestos, the Contractor must stop all work that may disturb the material. The Contractor shall advise the Owner of the discovery and await instructions from the owner.



NO. ISSUED

Orientation

SECURITON BOX 355MM(14")H

X355MM(14"W) X120MM(4.75")D

 $\left\langle \begin{array}{c} 2 \end{array} \right\rangle$  FIRE RATED PLYWOOD BACKBOARD

 $\langle 3 \rangle$  4 PORT 3 DATA OUTLET SEE

T102 FOR MORE DETAIL

 $\langle$  4  $\rangle$  VP - 1124D POWER SUPPLY

838MM(33")W X914MM(36")H X19MM( $\frac{3}{4}$ ")D

1.MUSIC SOURCE CABLE IS RCA TO IPOD. IPAD

2. 204A(Z3) MAY BE RELOCATED. TBD AT LATER

OR OTHER TYPE OF MUSIC SOURCE

CONNECTION

A = Detail number B = Drawing number where detailed

5 ISSUED FOR CONVENIENCE APR 12, 2019 ISSUED FOR PERMIT & TENDER DC NOV 2, 2018 ISSUED FOR 95% REVIEW DC OCT 05, 2018 DC SEPT 14, 2018 ISSUED FOR 95% REVIEW ISSUED FOR 65% REVIEW JULY 12, 2018

BY

DATE

Design, Engineering & Construction Physical Resources Guelph, Ontario. N1G 2W1

J.L.Richards

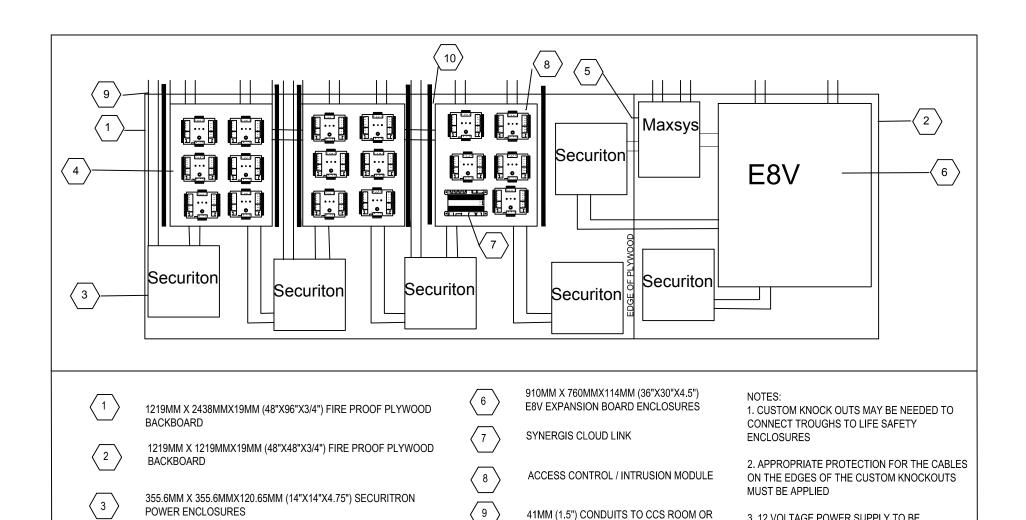
BUILDING #046 RENOVATIONS

**PATHWAYS DETAILS** 

504034

UNIVERSITY OF GUELPH BUILDING #046

AS SHOWN Date NOV 2, 2018 K.C. Drawing No. hecked By C. T104 B.W. Cad File No.



MAIN DISTRIBUTION PATH

W (H 2.5" X W 2.5")

CABLE TROUGH 63.5MM H X 63.5MM

3. 12 VOLTAGE POWER SUPPLY TO BE

IN DOOR AND IN ENCLOSURE

CONTAINED IN FIRST SECURITRON ENCLOSURE AND MAXSYS SECURITRON ENCLOSURE

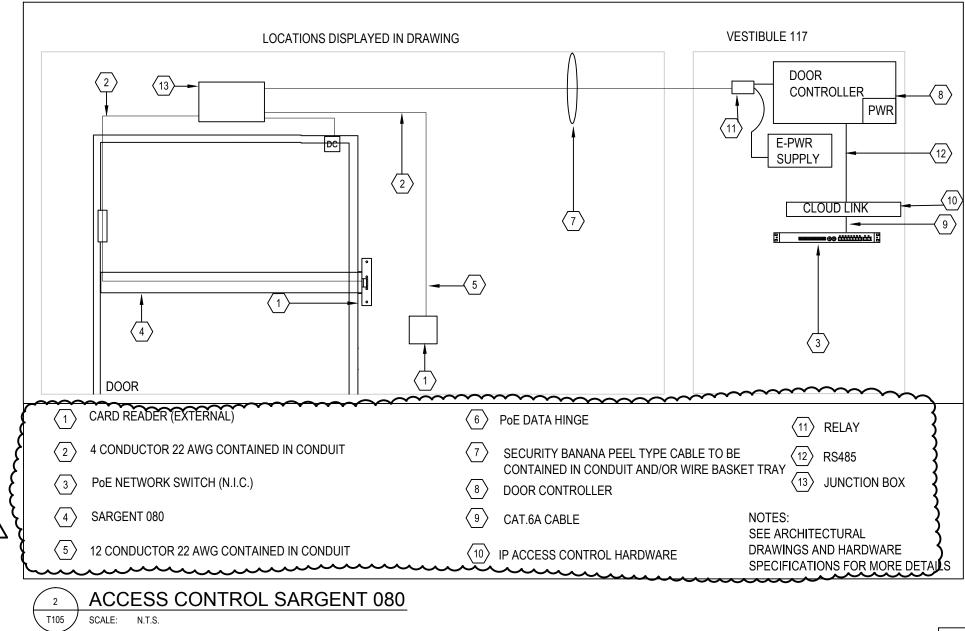
4. LIFESAFETY ENCLOSURES CONTAIN DEVICES

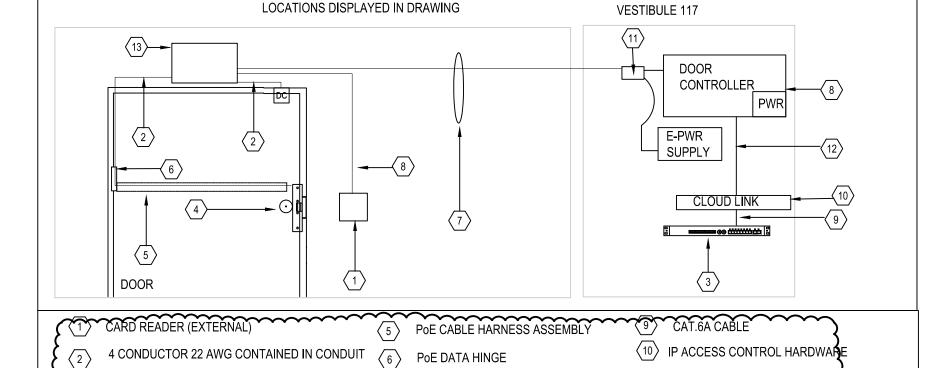
### ACCESS CONTROL AND SECURITY ELECTRICAL ROOM ELEVATION T105 / SCALE: N.T.S.

609.6MM X 508MMX114.3MM (24"X20"X4.5") LIFE SAFETY

376MM X 305MMX125MM (14.8"X12"X4.9") MAXSYS DURESS SYSTEM

ACCESS CONTROL ENCLOSURE





WIRE BASKET TRAY

(8) 12 CONDUCTOR 22 AWG CONTAINED IN

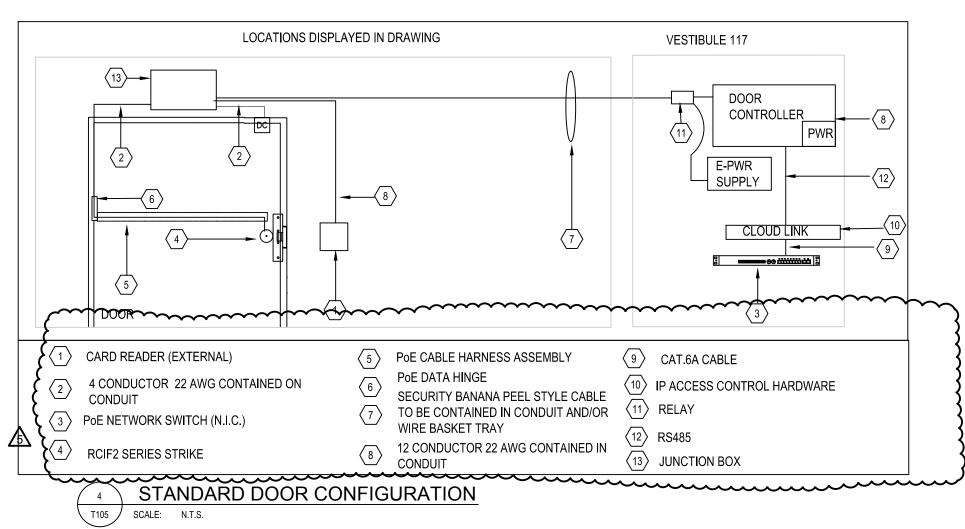
SECURITY BANANA PEEL TYPE CABLE
TO BE CONTAINED IN CONDUIT AND/OR

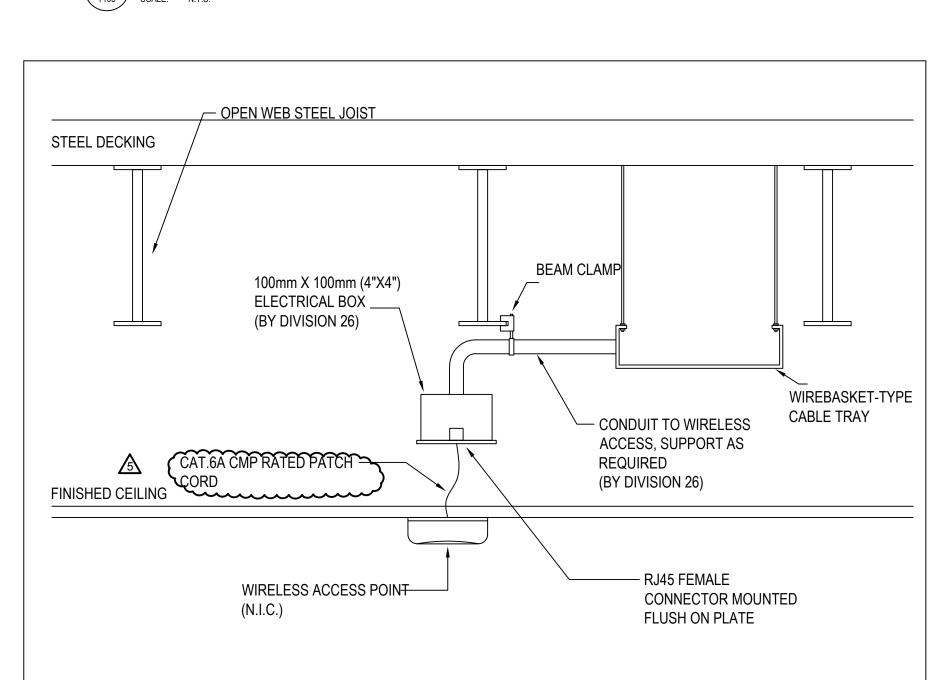
TIED RELAY

ACCESS CONTROL CORBIN ML20900 T105 SCALE: N.T.S.

3 PoE NETWORK SWITCH (N.I.C.)

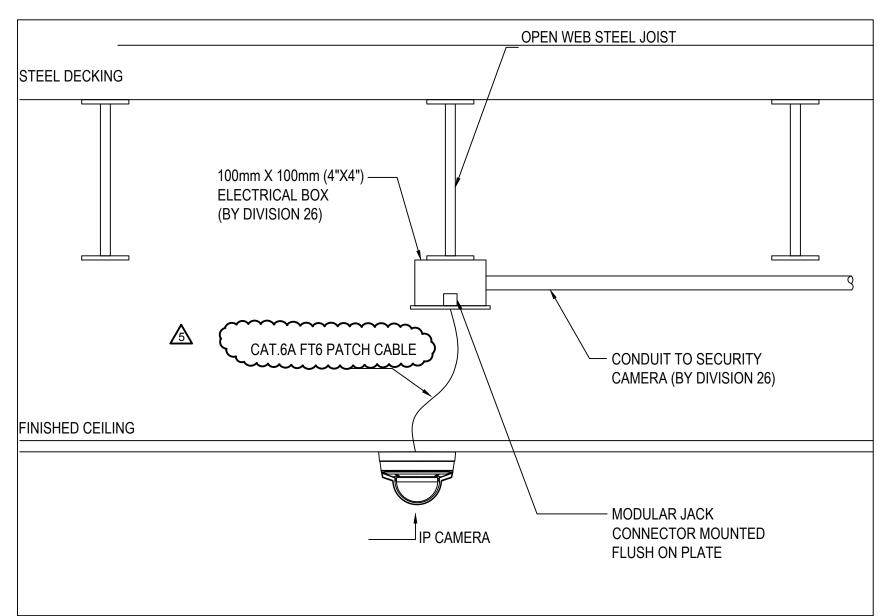
(4) CORBIN ML20900 ECL XM92



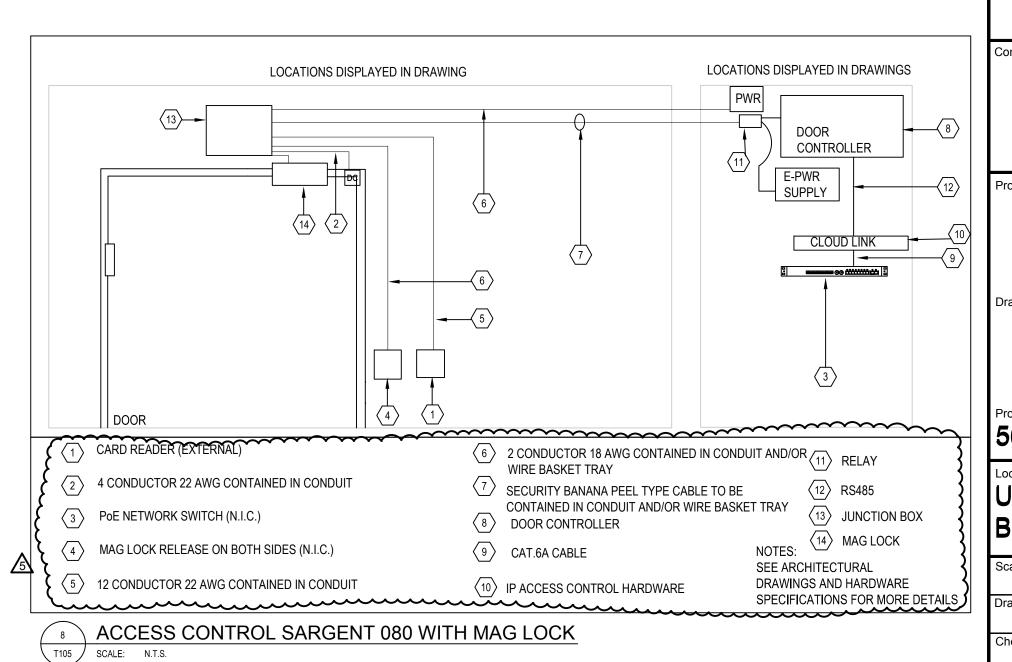


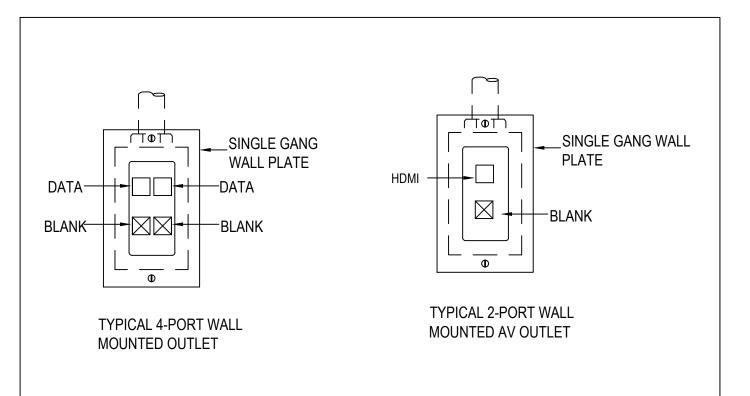
## WIRELESS ACCESS POINT INSTALLATION

T105 / SCALE: N.T.S.

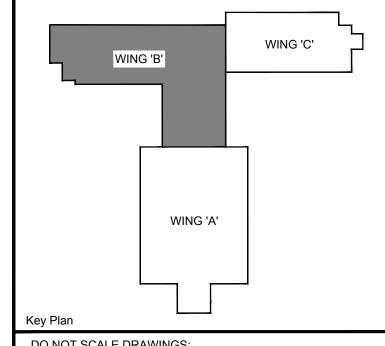








**OUTLET DETAILS** T105 / SCALE: N.T.S.



DO NOT SCALE DRAWINGS:

Contractors must check and verify all site conditions. Notify the Owner's Representative in writing before proceeding with the work if discrepancies are evident between the drawings and the site condition. No extras to the contract will be allowed if discrepancies were evident prior to start of work. **UNEXPECTED DISCOVERY OF ASBESTOS:** 

Where a friable material is discovered during construction, renovations and/or demolition, and it is suspected to contain asbestos, the Contractor must stop all work that may disturb the material. The Contractor shall advise the Owner of the discovery and await instructions from the owner.

A = Detail number B = Drawing number where detailed

5 ISSUED FOR CONVENIENCE APR 12, 2019 ISSUED FOR PERMIT & TENDER DC NOV 2, 2018 ISSUED FOR 95% REVIEW OCT 05, 2018 ISSUED FOR 95% REVIEW SEPT 14, 2018 ISSUED FOR 65% REVIEW JULY 12, 2018 NO. ISSUED BY DATE Orientation

Design, Engineering & Construction Physical Resources Guelph, Ontario. N1G 2W1



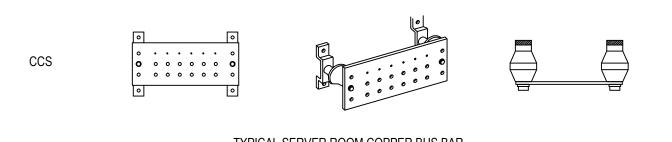
BUILDING #046 **RENOVATIONS** 

INSTALLATIONS **DETAILS** 

504034

**UNIVERSITY OF GUELPH** BUILDING #046

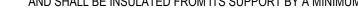
AS SHOWN Date FEB 22, 2019 Drawing No. hecked By C. T105 B.W. Cad File No.

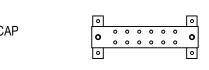


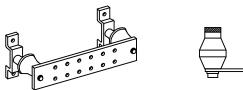
#### TYPICAL SERVER ROOM COPPER BUS BAR

AN INSULATED PRE-DRILLED ELECTRO TIN PLATED COPPER BUSBAR, MINIMUM DIMENSIONS OF 6MM THICK X 100MM WIDE X 300MM LONG (0.24" X 4" X 12"), (LONGER LENGTH MAY BE REQUIRED TO ACCOMMODATE LARGE OR FUTURE CONNECTION REQUIREMENTS), SHALL BE INSTALLED ON THE WALL OF THE CCS ADJACENT TO THE CABLE ENTRANCE CONDUITS, 150MM (6") FROM THE CORNER OF THE CCS AND 150MM (6") AFF.

THIS BUSBAR IS KNOWN AS THE TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB) AND SHALL BE INSULATED FROM ITS SUPPORT BY A MINIMUM OF 50MM (2").







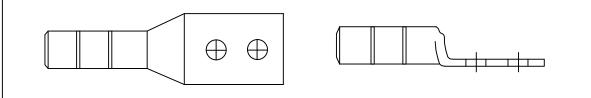
TYPICAL TR BUS BAR

AN INSULATED PRE-DRILLED ELECTRO TIN PLATED COPPER BUSBAR, MINIMUM DIMENSIONS OF 6MM THICK X 50MM WIDE X 255MM LONG (0.24" X 2" X 10"), (LONGER LENGTH MAY BE REQUIRED TO ACCOMMODATE LARGE OR FUTURE CONNECTION REQUIREMENTS), SHALL BE INSTALLED ON THE WALL OF EACH VCAP ROOM, ADJACENT TO THE CABLE ENTRANCE SLEEVES, 150MM (6") FROM THE CORNER OF THE VCAP ROOM AND 150MM (6") AFF. THESE BUSBARS ARE KNOWN AS THE TELECOMMUNICATIONS GROUNDING BUSBAR (TGB) AND SHALL BE INSULATED FROM ITS SUPPORT BY A MINIMUM OF 50MM (2").

- 1. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ONE MOUNTED GROUND BUS AT EACH VOICE/DATA EQUIPMENT ROOM.
- 2. GROUND BUS BAR SHALL BE INSTALLED 150mm (6") AFF.
- 3. ALL BRANCH GROUNDING WITHIN THE CCS AND VCAP ROOMS SHALL BE FURNISHED AND INSTALLED BY THE COMMUNICATIONS CONTRACTOR.
- 4. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A GROUND CONNECTION BETWEEN THE BASE BUILDING SERVICE ENTRANCE GROUNDING ELECTRODE AND THE MDF GROUND BUS. ALSO PROVIDE A GROUND CONNECTION BETWEEN THE MDF AND IDF GROUND BUSES (WHERE REQUIRED).
- 5. ALL GROUNDING TERMINATIONS SHALL BE DONE WITH U.L. LISTED HYPRESS LUGS AND GROUNDING
- 6. TGB TO BE LOCATED IN CCS ROOM.



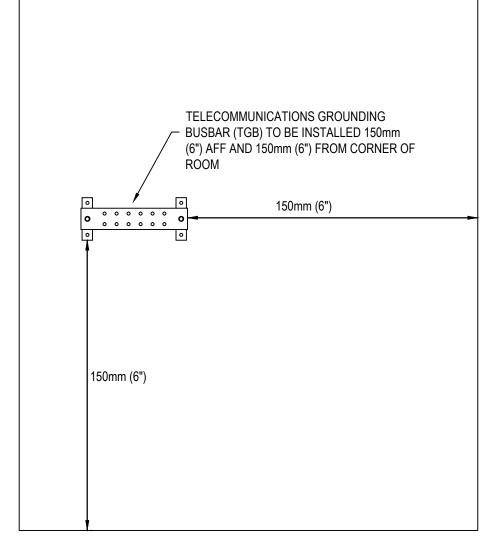
T106 SCALE: N.T.S.



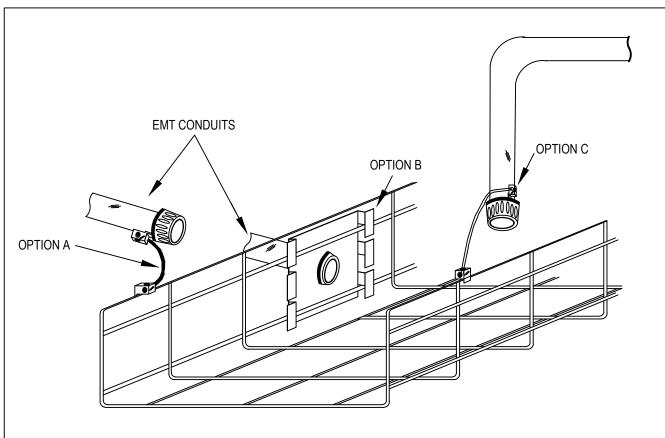
TWO HOLE, TIN PLATED, LONG BARREL COMPRESSION LUGS MUST BE USED. THE COMPRESSION LUG MUST BE SIZED TO ACCOMMODATE A 6 AWG STRANDED COPPER WIRE . THE DISTANCE BETWEEN THE TWO HOLES ARE 16mm (0.63") CENTRE. THE HOLES ARE TO BE 6.35mm (0.25") IN DIAMETER.

### GROUNDING LUG DETAIL

T106 SCALE: N.T.S.



**BUS BAR INSTALLATION DETAIL** T106 SCALE: N.T.S.

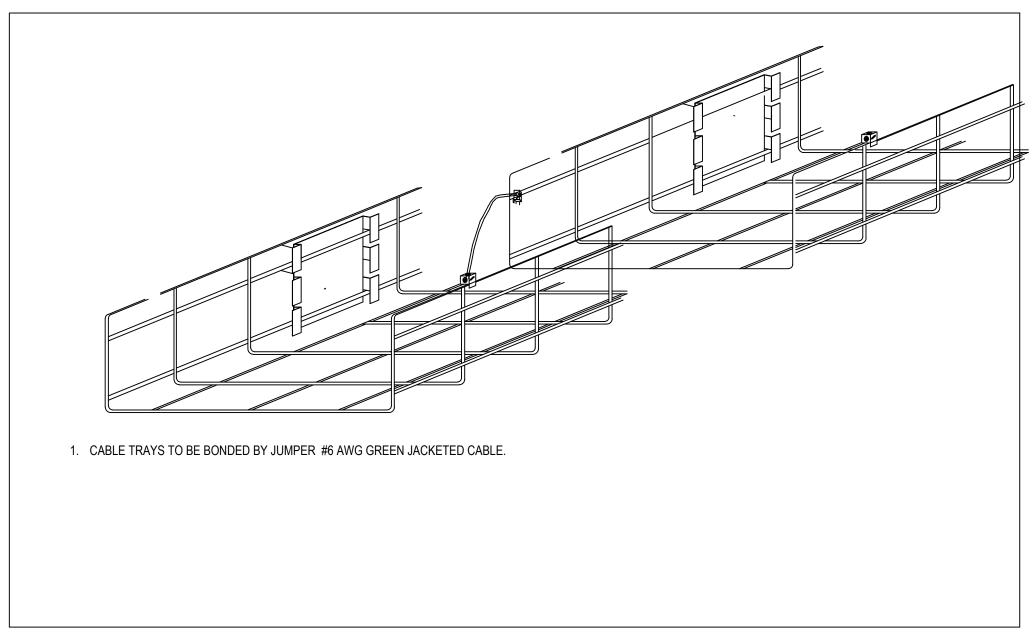


- 1. CONDUITS SHALL COMMENCE WITHIN 100mm ABOVE AND PERPENDICULAR TO THE INSIDE EDGE OF THE EXISTING CABLE TRAY ON THE CLOSEST SIDE TO THE OUTLET BOX
- 2. CONDUITS SHALL BE REAMED AND BUSHED

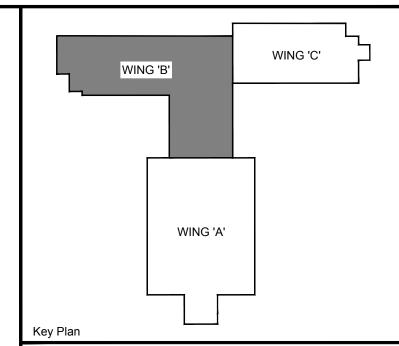
OF THE TRAY

- 3. CONDUITS SHALL BE BONDED WITH GREEN-JACKETED, #6 AWG RW90 STRANDED COPPER CONDUCTOR (OPTIONS A AND C) OR MECHANICALLY BONDED TO THE CABLE TRAY WITH ELECTRICALLY CONDUCTIVE MATERIAL NOT PRONE TO GALVANIC CORROSION (OPTION B)
- 4. CONDUITS SHALL USE IRREVERSIBLE COMPRESSION ON OR EXOTHERMIC WELD TYPE LUGS/CONNECTORS, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS 5. MATERIALS BOLTED OR RIVETED TO THE CABLE TRAY SHALL BE FREE OF BURRS AND OR SHARP EDGES. DO NOT ALLOW BOLTS AND OR RIVETS TO OBSTRUCT OR INTERFERE WITH INTERIOR SPACE

### CABLE TRAY/CONDUIT GROUNDING DETAIL T106 SCALE: N.T.S.



CABLE TRAY BONDING DETAIL 5 CABLE T



DO NOT SCALE DRAWINGS:

Contractors must check and verify all site conditions. Notify the Owner's Representative in writing before proceeding with the work if discrepancies are evident between the drawings and the site condition. No extras to the contract will be allowed if discrepancies were evident prior to start of work.

UNEXPECTED DISCOVERY OF ASBESTOS:

Where a friable material is discovered during construction, renovations and/or demolition, and it is suspected to contain asbestos, the Contractor must stop all work that may disturb the material. The Contractor shall advise the Owner of the discovery and await instructions from the owner.



A = Detail number B = Drawing number where detailed

5	ISSUED FOR CONVENIENCE	TA	APR 12, 2019
4	ISSUED FOR PERMIT & TENDER	DC	NOV 2, 2018
3	ISSUED FOR 95% REVIEW	DC	OCT 05, 2018
2	ISSUED FOR 95% REVIEW	DC	SEPT 14, 2018
1	ISSUED FOR 65% REVIEW	TA	JULY 12, 2018
NO.	ISSUED	BY	DATE

Design, Engineering & Construction Physical Resources Guelph, Ontario. N1G 2W1



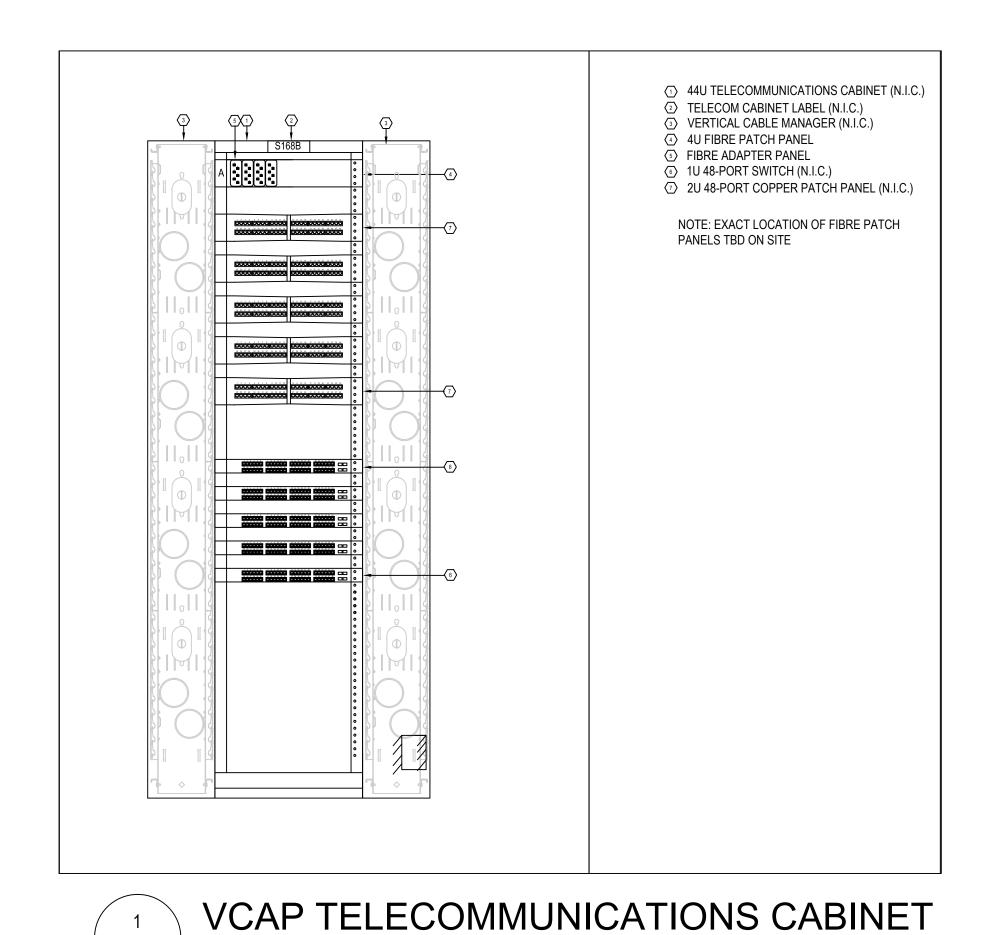
BUILDING #046 RENOVATIONS

**GROUNDING AND BONDING DETAILS** 

504034

UNIVERSITY OF GUELPH BUILDING #046

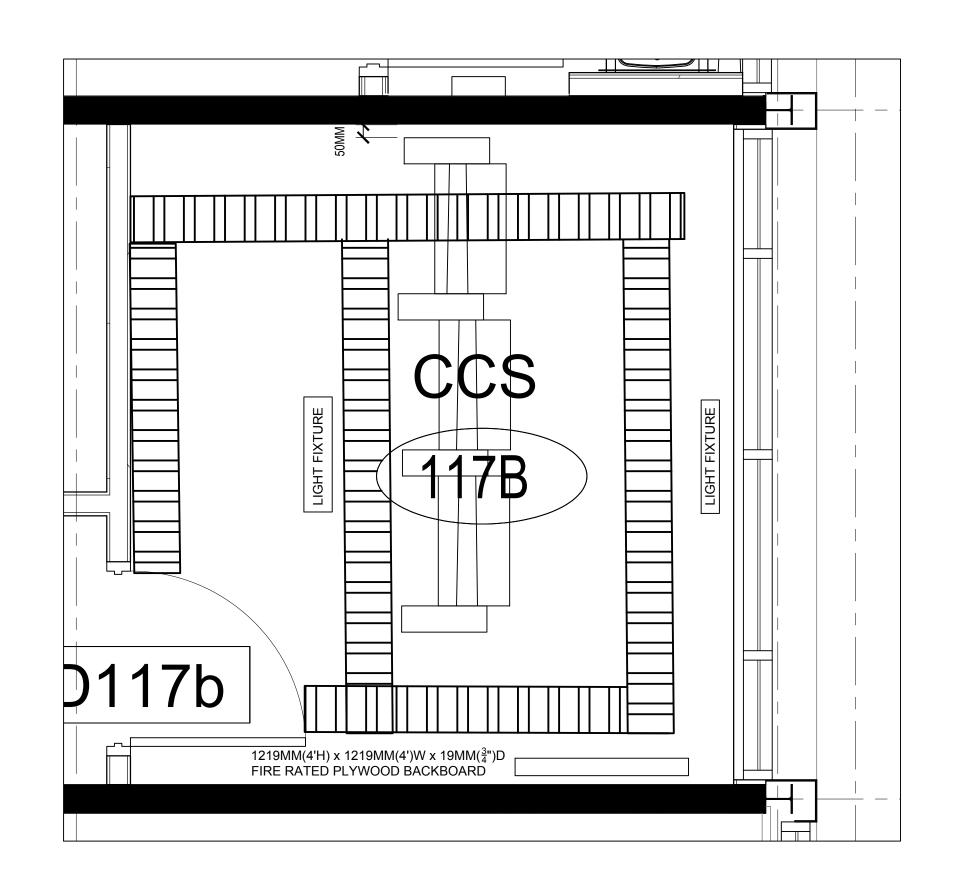
AS SHOWN Date FEB 22, 2019 Drawing No. Checked By D.C. T106 Spproved By B.W. Cad File No.



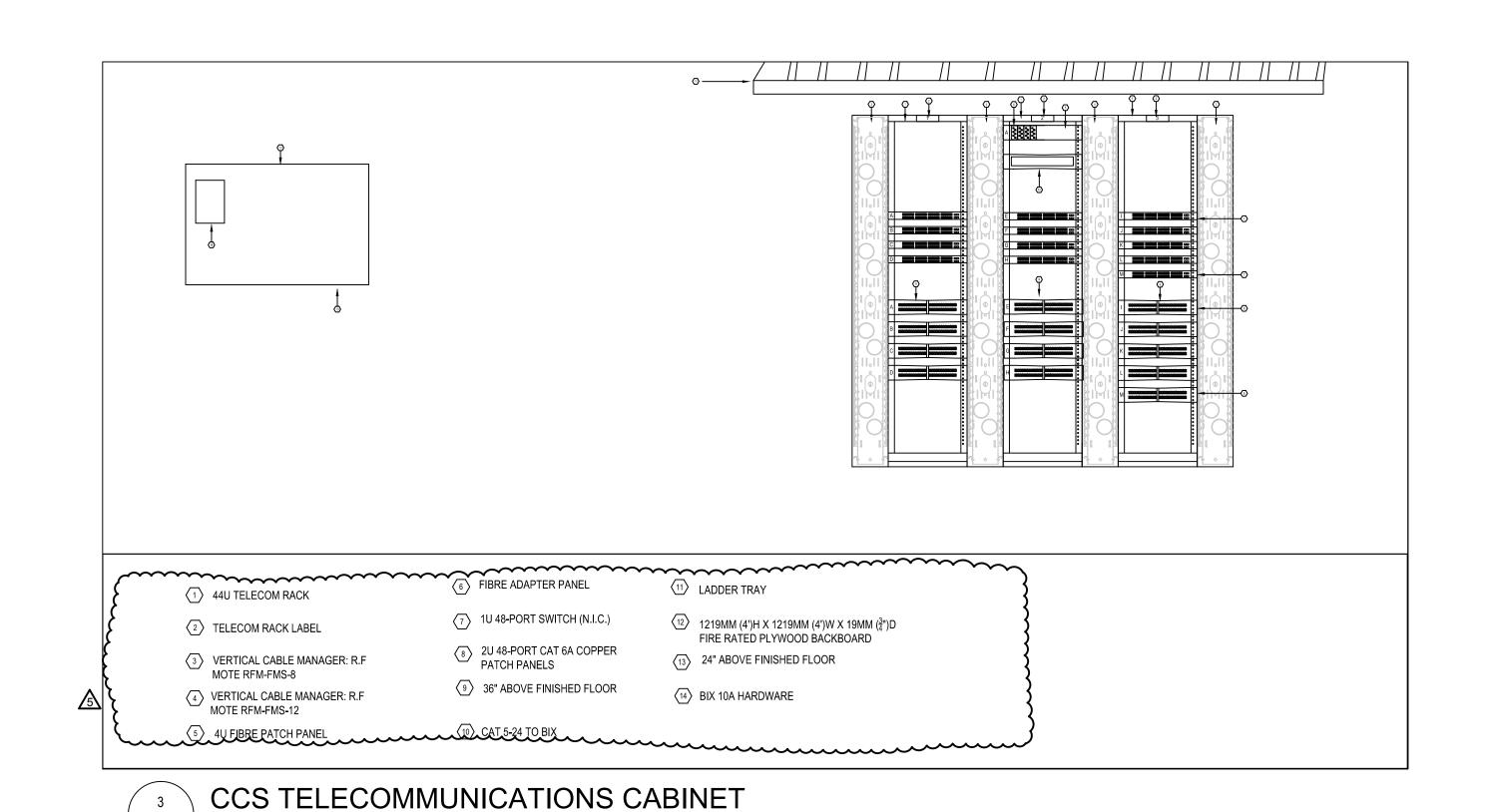
SCALE: N.T.S.

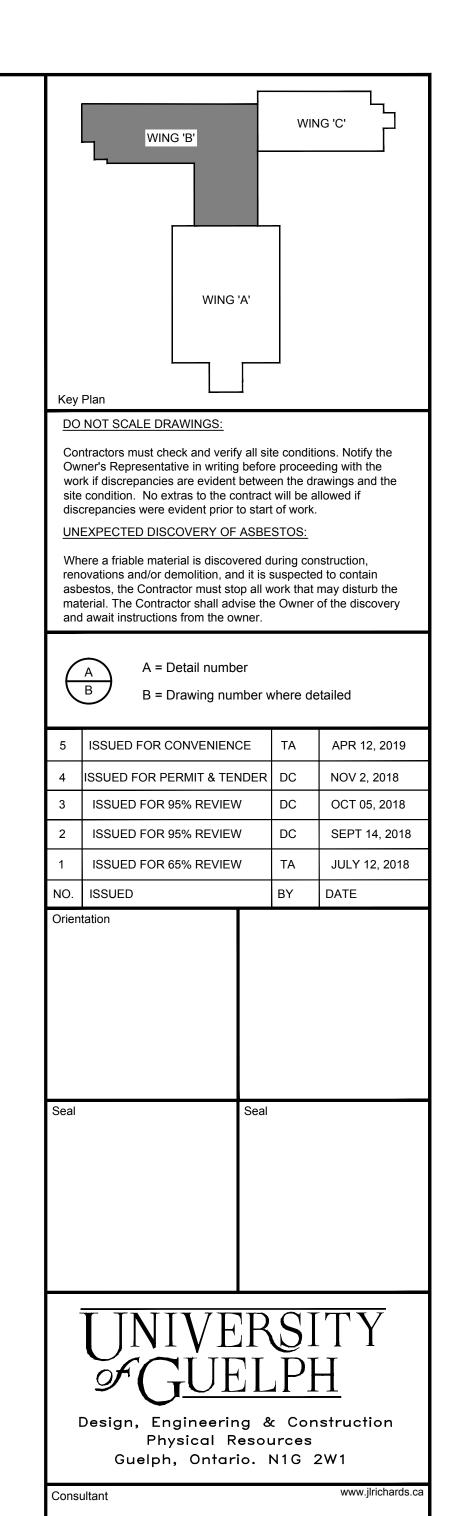
T107 /

SCALE: N.T.S.











roject

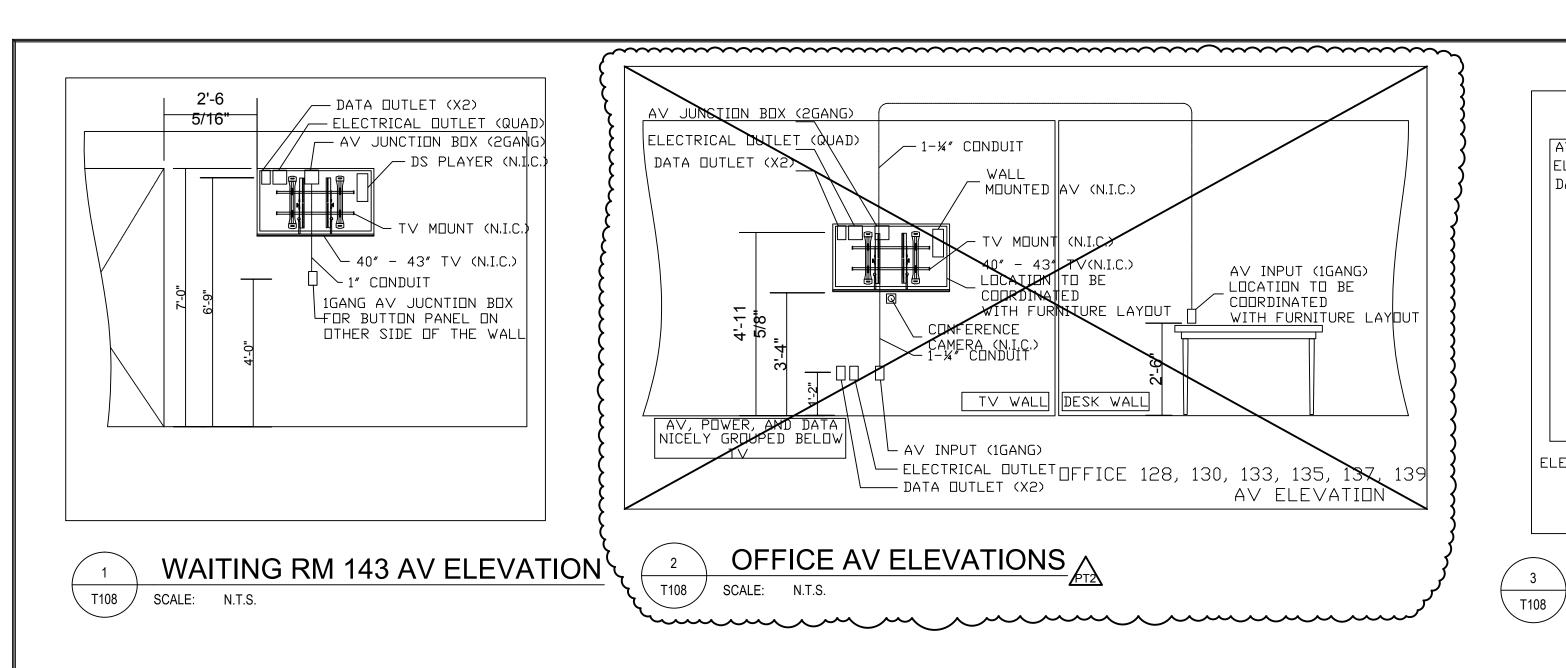
BUILDING #046 RENOVATIONS

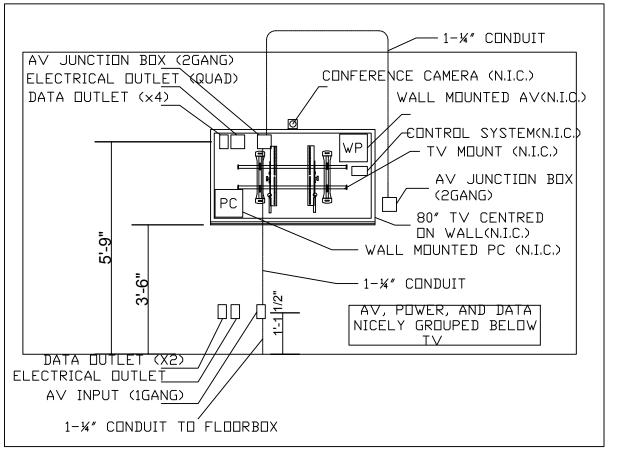
RACK ELEVATIONS

Project No. **504034** 

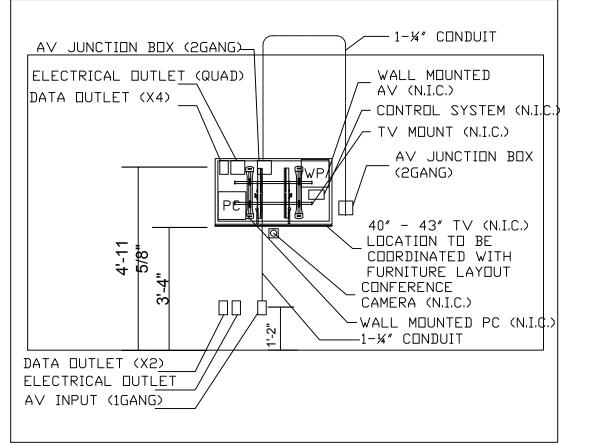
UNIVERSITY OF GUELPH BUILDING #046

Scale AS SHOWN	Date FEB 22, 2019
Drawn by K.C.	Drawing No.
Checked By D.C.	
Approved By B.W.	T107
JLR#	of
Cad File No.	



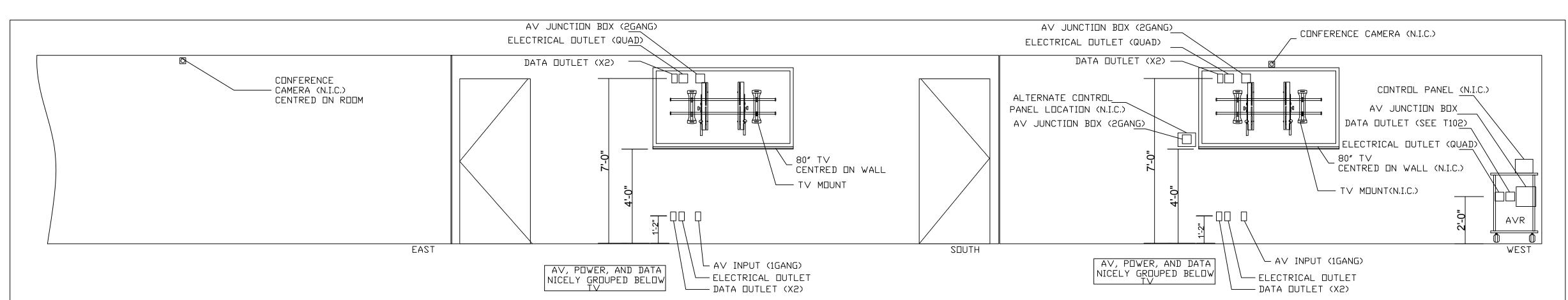


SCALE: N.T.S.

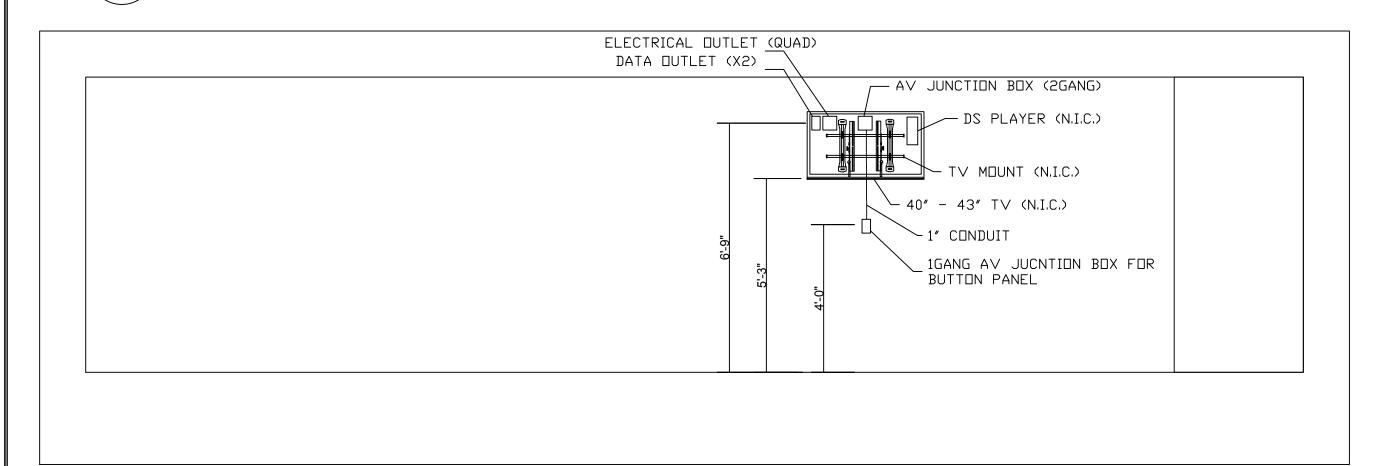


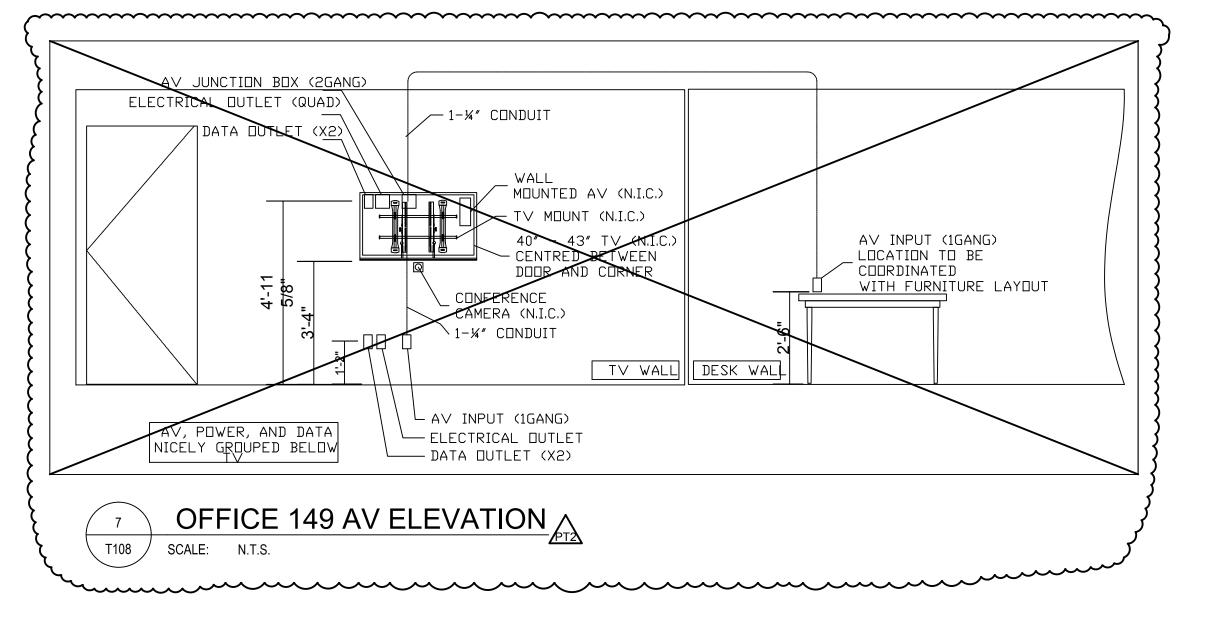
**RESEARCH SPACE 132 AV ELEVATION** T108 / SCALE: N.T.S.

THERAPY ROOM 125, 127 AV ELEVATION



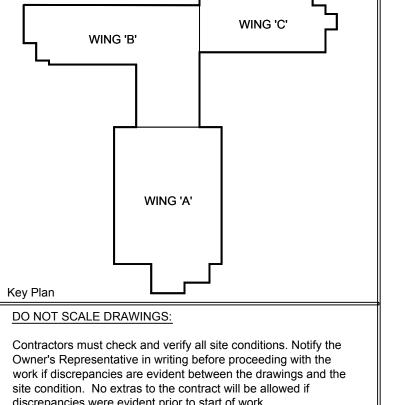






STUDENT WORK ROOM 136 AV ELEVATION

T108 SCALE: N.T.S.



discrepancies were evident prior to start of work.

#### **UNEXPECTED DISCOVERY OF ASBESTOS:**

Where a friable material is discovered during construction, renovations and/or demolition, and it is suspected to contain asbestos, the Contractor must stop all work that may disturb the material. The Contractor shall advise the Owner of the discovery and await instructions from the owner.



A = Detail number B = Drawing number where detailed

5	ISSUED FOR CONVENIENCE	TA	APR 12, 2019
4	ISSUED FOR PERMIT & TENDER	DC	NOV 2, 2018
3	ISSUED FOR 95% REVIEW	DC	OCT 05, 2018
2	ISSUED FOR 95% REVIEW	DC	SEPT 14, 2018
1	ISSUED FOR 65% REVIEW	TA	JULY 12, 2018
NO.	ISSUED	BY	DATE

Orientation

Design, Engineering & Construction Physical Resources Guelph, Ontario. N1G 2W1

Consultant LENGINEERS · ARCHITECTS · PLANNERS

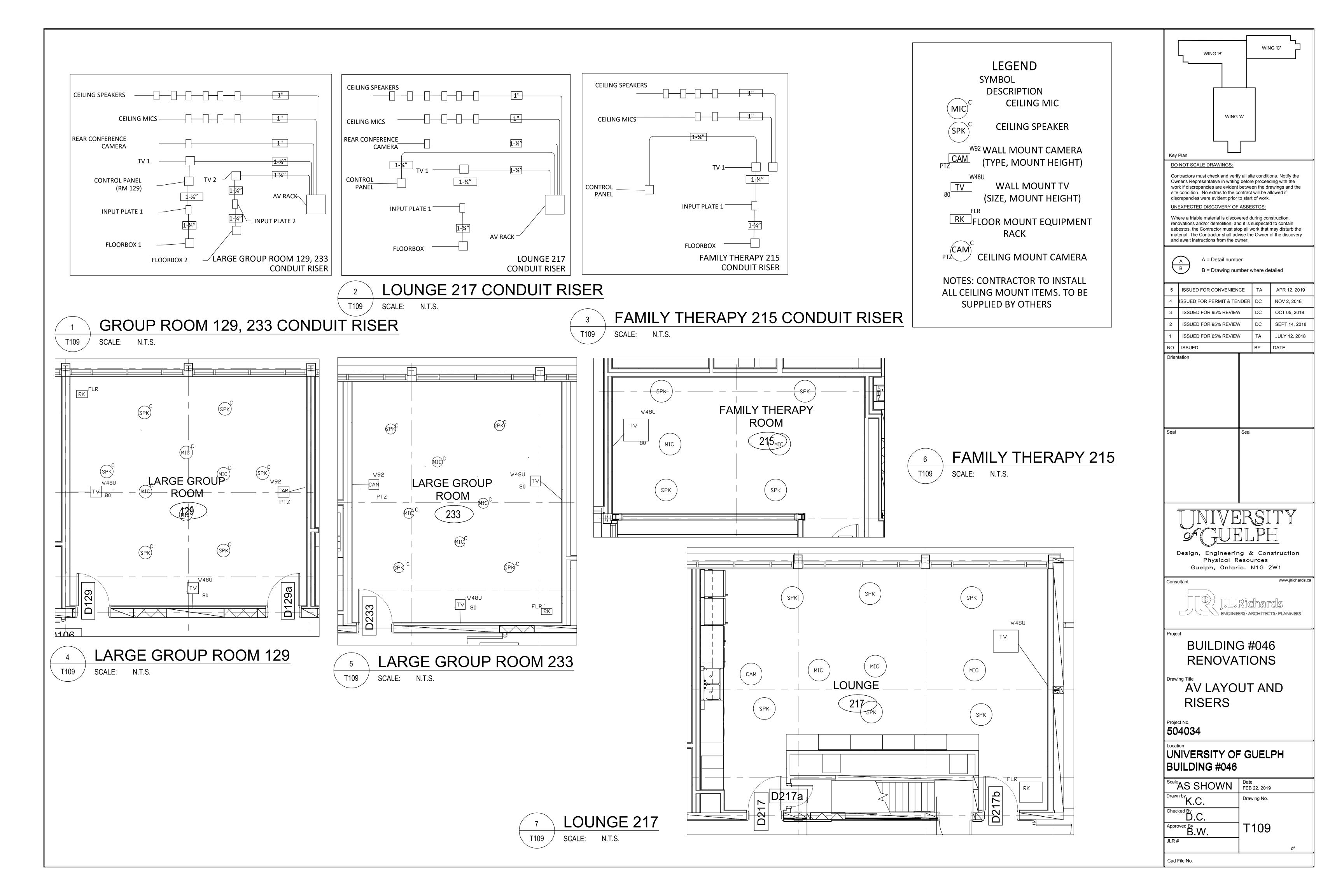
BUILDING #046 RENOVATIONS

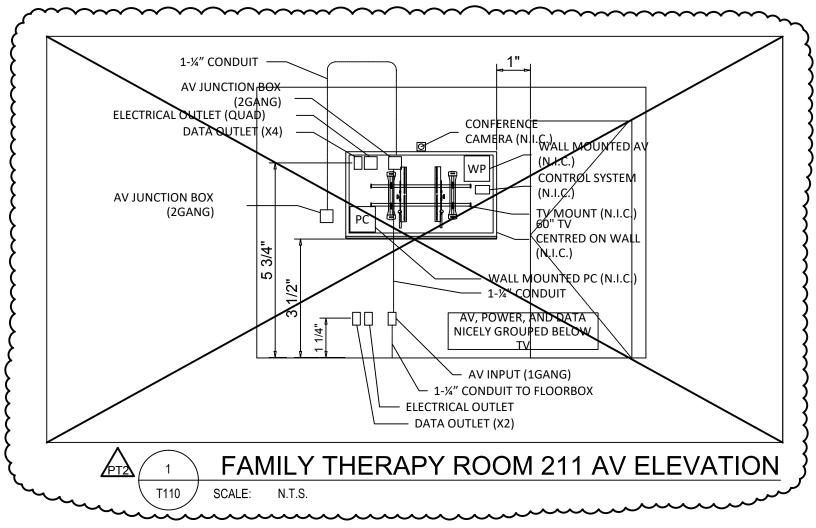
**AV ELEVATIONS** WING B LEVEL 1

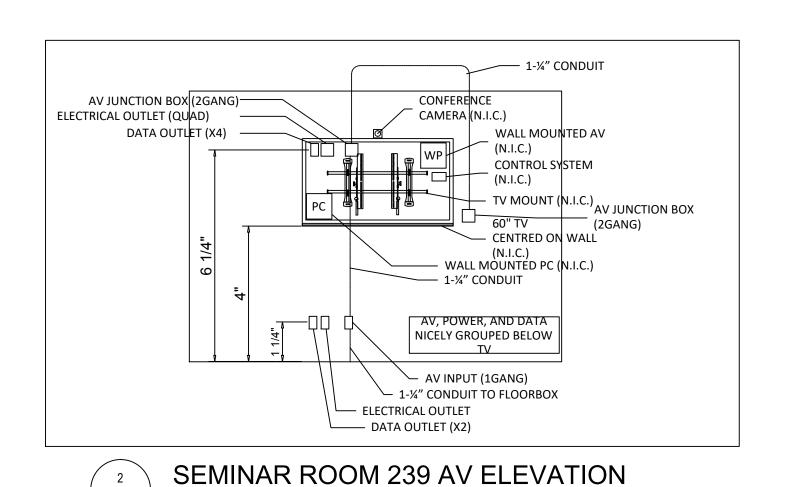
Project No. 504034

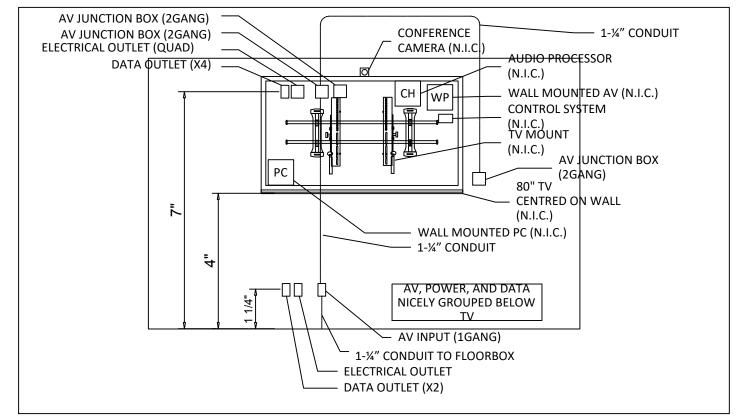
UNIVERSITY OF GUELPH BUILDING #046

Scale AS SHOWN	Date NOV 2, 2018	
Drawn by K.C.	Drawing No.	
Checked By C.		
Approved By B.W.	T108	
JLR#		of
Cad File No.	•	_









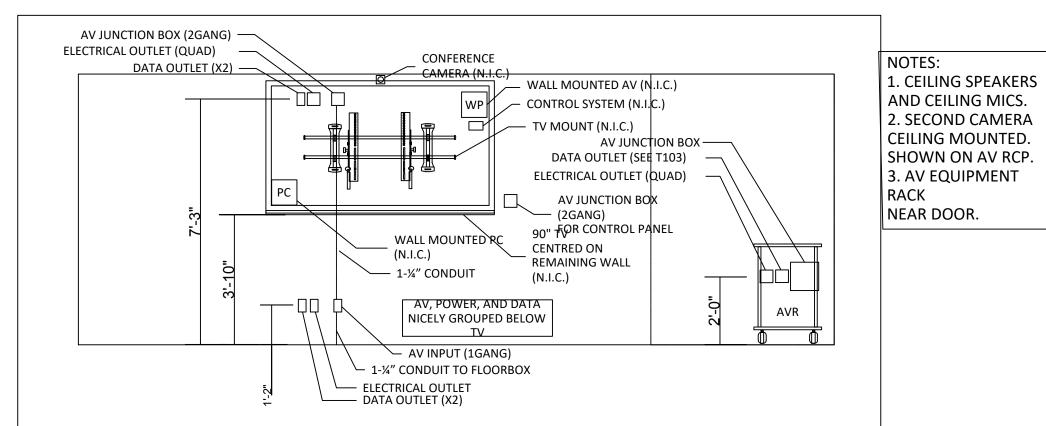
FAMILY THERAPY ROOM 215 AV ELEVATION

SCALE: N.T.S.

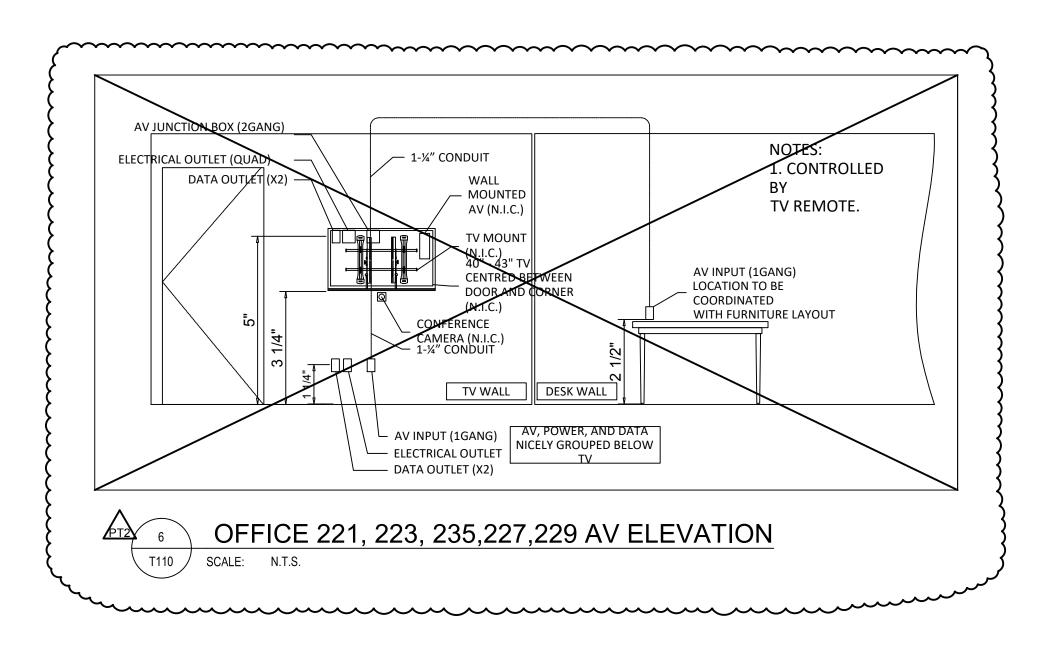
AV JUNCTION BOX (2GANG)— AV JUNCTION BOX (2GANG)— CONFERENCE ELECTRICAL OUTLET (QUAD) ELECTRICAL OUTLET (QUAD) CAMERA (N.I.C.) DATA OUTLET (X2)— DATA OUTLET (X2)-CONFERENCE CAMERA CONTROL PANEL (N.I.C)\_ CENTRED ON ROOM (N.I.C.) AV JUNCTION BOX— DATA OUTLET SEE T103 ξήΕςτRICAL OUTLET (QUAD) 1. CEILING SPEAKERS AND - CENTRED ON WALL CEILING MICS. CENTRED ON WALL (N.I.C.) (N.I.C.) 2. CONTROL PANEL ON TOP TV MOUNT TV MOUNT (N.I.C.) (N.I.C.) AV EQUIPMENT RACK. AV INPUT (1GANG) AV, POWER, AND DATA — AV INPUT (1GANG) AV, POWER, AND DATA ELECTRICAL OUTLET | NICELY GROUPED BELOW | ELECTRICAL OUTLET | NICELY GROUPED BELOW | └── DATA OUTLET (X2) L DATA OUTLET (X2)

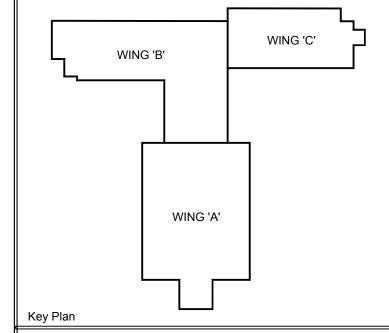
T110 / SCALE: N.T.S.

# LARGE GROUP ROOM 233 AV ELEVATION SCALE: N.T.S.









DO NOT SCALE DRAWINGS:

Contractors must check and verify all site conditions. Notify the Owner's Representative in writing before proceeding with the work if discrepancies are evident between the drawings and the site condition. No extras to the contract will be allowed if discrepancies were evident prior to start of work.

UNEXPECTED DISCOVERY OF ASBESTOS:

Where a friable material is discovered during construction, renovations and/or demolition, and it is suspected to contain asbestos, the Contractor must stop all work that may disturb the material. The Contractor shall advise the Owner of the discovery and await instructions from the owner.



A = Detail numberB = Drawing number where detailed

5	ISSUED FOR CONVENIENCE	TA	APR 12, 2019
4	ISSUED FOR PERMIT & TENDER	DC	NOV 2, 2018
3	ISSUED FOR 95% REVIEW	DC	OCT 05, 2018
2	ISSUED FOR 95% REVIEW	DC	SEPT 14, 2018
1	ISSUED FOR 65% REVIEW	TA	JULY 12, 2018
NO.	ISSUED	BY	DATE

Seal Seal



Design, Engineering & Construction Physical Resources Guelph, Ontario. N1G 2W1

consultant www.jlricha

Project

BUILDING #046 RENOVATIONS

AV ELEVATIONS
WIND B LEVEL 2

Project No. **50403**4

UNIVERSITY OF GUELPH BUILDING #046

Scale AS SHOWN	Date NOV 2, 2018
Drawn by K.C.	Drawing No.
Checked By D.C.	
Approved By B.W.	T110
JLR#	of
Cad File No.	