APPENDIX 1C – Acoustical Chart

1.1 General Requirements

1.1.1 All wall and floor/ceiling assemblies will comply with the STC ratings in Table 1 of this Appendix 1C.

1.1.2 In order to achieve the required level of speech privacy, extend the STC rated assembly full-height from the floor to the underside of the structure above for all walls and partitions requiring an STC rating of 45 or higher per Table 1 below. If such a wall or partition cannot extend full height, provide an alternate system and provide an acoustic consultant's report verifying that the required level of speech privacy will be achieved together with submission of the applicable designs.

1.1.3 The sound isolation ratings in Table 1 are considered to be laboratory STC ratings except where noted.

1.1.3.1 Details such as the ceiling plenum conditions, windows, doors, penetrations through the construction, etc. shall be addressed to optimize the field performance sound isolation rating.

1.1.4 Design Principles

1.1.4.1 Locate noise sources remote from sensitive areas.

1.1.4.2 Isolate noise generated within the building at the source.

1.1.4.3 Isolate plumbing and mechanical noise from the structure.

1.2 Performance Criteria

1.2.1 Walls and floors between the following spaces will meet or exceed the STC value indicated in the table below:

Minimum requirements for STC ratings between spaces:

Table 1

Type	1	2	3	4	5	6	7	8	9
1	60								
2	60								
3	65	65							
4	65	60	60	53					
5	60	53	60	60					
6	65	55	60	53	55	50			
7	65	53	66	53	60	50	53		
8	60	53	53	53	53	50	50	45	45
9	65	55	60	50	55	45	50	45	50
Type	1	2	3	4	5	6	7	8	9

Space Types:

1. Automotive / Mechanics, Woodworking Shop, Metal Shop
2. Mechanical and service rooms
3. Multi-Purpose Space, Music Room – Band Choir, Drama Room, Dance Room / Yoga Studio, Flex Classroom / Phys Ed / Performing Arts Flex Studio, Special Education/ Inclusive Education, Indigenous Language & Cultural Centre
4. TED Space – Robotics / Electronics & Design Hub
5. Gymnasium Activity Space
6. Administration, Counselling, Health & Wellness Centre, SD79 Facilitation Space
7. Learning Commons, Indigenous Education, Computer Room, Home Economics, Visual Arts, Science Department, Learning Communities
8. Circulation spaces, General Storage, washrooms, janitor rooms
9. Classroom, Exploration Classroom

1.2.2 In all teaching spaces where moveable partitions are incorporated, moveable partitions will have an STC rating of 45.

1.2.3 Field testing is required to confirm conformance of as-built conditions with specified minimum standards for acoustic requirements for sound transmission. The Design-Builder is responsible for any remedial work required to meet specified minimum standard.

1.2.4 STC 55 or higher walls require double stud systems; or the equivalent in poured concrete or concrete masonry units (CMUs).

1.2.5 Although it is acknowledged that partitions containing windows or doors may not meet the STC requirements of Table 1, when assessed as a composite construction, such partitions, when assessed without consideration of the applicable windows or doors, will comply with the STC requirements of Table 1, and the composite partition (including windows and doors) will provide the highest STC rating practicable.

1.3 Background Noise Level

1.3.1 Background noise comprises noise from building systems, exterior sound transmission, and sound transmission from adjacent spaces. Excessive background noise can seriously degrade the ability to communicate. The background noise level limits are for unoccupied and finished space.

1.3.1.1 Design and construct the Facility so that for all learning spaces one-hour steady-state background noise levels will not exceed 35-40 dBA.

1.4 Acoustic Doors

1.4.1 Provide wood or metal doors that achieve STC 33 for music room doors with glazing, including doors into the room from circulation routes, practice room doors and recording room doors. Doors forming an acoustic vestibule may be utilized with STC 28 per door to achieve these results.

1.5 Reverberation Times

1.5.1 Maximum reverberation time will meet or exceed performance criteria in Table 1.5-1.

Table 1.3.1.1-1

Room Type	Max. unoccupied reverberation time (seconds)
Instructional Spaces -250 m3 volume or less	0.6
Instructional Spaces -250 to 500 m3 volume	0.7
Drama Room	0.8 – 1.0
Music Room – Band / Choir	0.6
Offices	0.7
Learning Commons	0.8
Multi-Purpose Space / Gathering Area	0.8
Indigenous Language & Culture Centre Gathering Place / Longhouse / Meeting Place / Learning Space	0.7
Gymnasium Activity Space	1.5
Lobbies and Circulation	1.1
Automotive/Mechanics Woodworking Shop Metals Shop	1.3
Multi-Media Studio	0.3 – 0.4