IGNACE
Explore Our Possibilities

IGNACE 20-UNIT SENIORS HOUSING COMPLEX

IGNACE-RFP-22-01

Submitted to:

Jeff Lederer, Township of Ignace
May 24, 2022

nelson|architectureinc.

PO BOX 1470, KENORA, ON P9N 0E8
PH 807.468.9442 FAX 807.468.8616
WWW.NELSONARCHITECTURE.COM

FINN WAY
GENERAL CONTRACTOR INC.

1301 WALSH ST., THUNDER BAY, ON P7E 4X6
PH 807.767-2426 FAX 807.468.8616
WWW.FINNWAY.COM

IGNACE APARTMENT COMPLEX
One-bedroom render

nelson|architectureinc.

PRIMARY CONTACT:

DAVID NELSON, OAA, MRAIC
PO BOX 1470 (205 LAKEVIEW DRIVE)
KENORA ONTARIO P9N 3X7
TEL. 807.468.9442
FAX 807.468.8618
DAVID@NELSONARCHITECTURE.COM
WWW.NELSONARCHITECTURE.COM

FINN WAY GENERAL CONTRACTOR INC

CONSTRUCTION CONTACT:

DAVID KARIMI, PRESIDENT
1301 WALSH ST., THUNDER BAY, ON P7E 4X6
PH 807.767-2426
FAX 807.468.8616
WWW.FINNWAY.COM

May 24, 2022

Jeff Lederer, PhD, MUDS, MCIP, RPP
Manager Planning, Development, and Engagement Services
Township of Ignace
PO Box 248, 34 Highway 17 West
Ignace, ON P0T 1T0

RE: IGNACE-RFP-22-01: Ignace - Design-Build 20-Unit Apartment Complex

Mr. Lederer:

On behalf of Nelson Architecture Inc. and Finn Way General Contractor Inc. I would like to thank you for the opportunity to present a design-build proposal for the future 20-Unit Apartment Complex in Ignace, Ontario. We have assembled a highly qualified and experienced design-build team that can work and collaborate with the Township of Ignace to create a modern, economic, and operationally efficient seniors complex.

Our understanding of the proposed scope of work shall include Architectural Consulting Services, Mechanical, Electrical and Structural Engineering, Project Management, as well as Construction Services to comply with the Design-Build Concept.

I hope you find our proposal acceptable. Please do not hesitate to contact me if you have any questions or wish to further discuss this project.

Yours truly

David Nelson, OAA, MRAIC
Nelson Architecture Inc.

PLEASE NOTE: There are no alterations from the EOI or deviations from the RFP.

[DRAWINGS]

IGNACE APARTMENT COMPLEX
Two-bedroom render

IGNACE - 20-UNIT SENIORS APARTMENT COMPLEX
DESIGN-BUILD

IGNACE
Explore Our Possibilities

nelson|architecture inc.

PROJECT TEAM

OWNER

THE CORPORATION OF THE TOWNSHIP OF IGNACE
34 MAIN STREET (HIGHWAY 17)
IGNACE, ON
(807) ***-****

ARCHITECTURAL CONSULTANT

NELSON ARCHITECTURE INC.
BOX 1470 205 LAKEVIEW DRIVE
KENORA, ONTARIO P9N 3X7
TEL:(807) 468-9442
FAX:(807) 468-8618

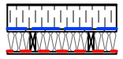
MECHANICAL & ELECTRICAL CONSULTANT

MCW/AGE CONSULT. PROFESSIONAL ENGINEERS
114 HEMLOCK PLACE
THUNDER BAY, ONTARIO P7C 1W4
TEL: (204) 779-7900
FAX: (204) 779-1119

DRAWING LIST

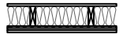
ARCHITECTURAL

BUILDING ASSEMBLIES



W1 EXTERIOR WALL, EIFS (R49):

- 5/8" GYPSUM BOARD, PAINT
- 6 MIL POLY VAPOUR BARRIER
- 2x6 WOOD FRAMING @ 16" O/C
- R21 6" DENSE PACKED CELLULOSE INSULATION
- 3/4" PLYWOOD SHEATHING, TAPED SEAMS
- R28 6.5" RIGID GPS INSULATION (NEOPOR)
- DRAINED EIFS ACRYLIC STUCCO FINISH



P1 CORRIDOR PARTITON (1 HR FRR): (50 STC MIN)

- 5/8" TYPE-X GYPSUM BOARD, PAINT
- 2x6 WOOD FRAMING @ 16" O/C
- MINERAL WOOL SOUND ATTENUATION BATT INSULATION
- 1/2" RESILIENT CHANNEL @ 16" O.C
- 2 LAYERS 5/8 " TYPE-X GYPSUM BOARD, PAINT (CORRIDOR SIDE)

P2 DEMISING PARTITION (1 HR FRR): (50 STC MIN)

- 5/8" TYPE-X GYPSUM BOARD, PAINT
- 2x4 STAGGERED WOOD FRAMING @ 16" O/C
- MINERAL WOOL SOUND ATTENUATION BATT INSULATION
- 1" AIR SPACE
- 2x4 WOOD FRAMING @ 16" O/C
- MINERAL WOOL SOUND ATTENUATION BATT INSULATION
- 1/2" SHEATHING 1 SIDE
- 5/8 " TYPE-X GYPSUM BOARD, PAINT

P3 INTERIOR PARTITON

- 1/2" GYPSUM BOARD
- 2x4 WOOD FRAMING @ 16" O.C
- MINERAL WOOL SOUND ATTENUATION BATT
- 1/2" GYPSUM BOARD

P3B INTERIOR PARTITON
- USE 1/2" WATER RESISTANT GYPSUM BOARD

R1 SHINGLE ROOF (R88):

- ARCHITECTURAL ASPHALT SHINGLE, 30 YEAR WARRANTY
- ROOFING UNDERLAYMENT, ICE AND WATER AT EAVES
- 19 PLYWOOD SHEATHING
- PRE-ENGINEERED/PREFABRICATED WOOD TRUSSES @ 609MM O.C.
- 610 BLOWN IN CELLULOSE INSULATION
- VAPOUR BARRIER
- CEILING FINISH AS PER DRAWINGS

S1 CONCRETE SLAB (R30):

- 152 CONCRETE SLAB ON GRADE
- 10 MIL POLY VAPOUR BARRIER
- 152 RIGID INSULATION

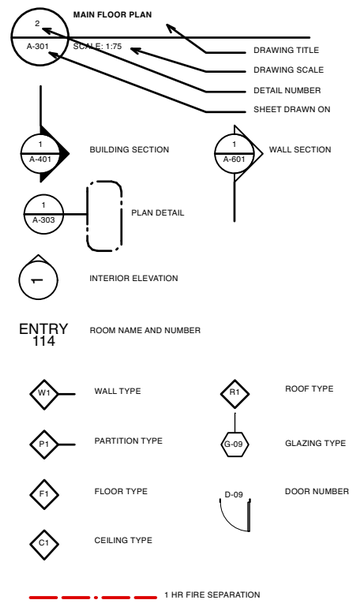
C1 ACOUSTIC TILE CEILING:

- ARMSTRONG/CERTAINTEED OR EQUIVALENT SQAURE LAY-IN ACOUSTIC TILE 609x1219

C2 GYPSUM CEILING:

- 15.9 GYPSUM BOARD, PAINT
  - TYPE-X BOARD WHERE REQUIRED FIRE SEPARATION - 2 LAYERS IN 1 HOUR SEPARATION
  - MOISTURE RESISTANT BOARD IN WASHROOMS AND LAUNDRY ROOMS

DRAWING SYMBOLS



Item	Ontario Building Code Data Matrix Parts 3 & 9		OBC Reference	
1	Project Description	[x] New ☐ Addition ☐ Change of Use ☐ Alteration — Part 11 11.1 to 11.4	Part 3 2.1.1	Part 9 2.1.1 9.10.1.3
2	Major Occupancy(s):	Group C, up to 3 Storeys, Sprinklered	3.1.2.1.(1)	9.10.2
3	Building Area (m²)	Group C: 1804	1.1.3.2	1.1.3.2
5	Number of Storeys	Above Grade: 1 Below Grade: 0	3.2.1.1 & 1.1.3.2	2.1.1.3
6	Number of Streets / Fire Fighter Access	2	3.2.2.10 & 3.2.5	9.10.19
7	Building Classification	Major: 3.2.2.48. Group C, up to 3 Storeys, Sprinklered	3.2.2.20-83	9.10.4
8	Sprinkler System Proposed	x entire building ☐ basement only ☐ in lieu of roof rating ☐ not required	3.2.2.20-.83 3.2.1.5 3.2.2.17	9.10.8
9	Standpipe required	☐ Yes x No	3.2.9	N/A
10	Fire Alarm required	☐ Yes x No	3.2.4	9.10.17.2
11	Water Service / Supply is Adequate	x Yes ☐ No	3.2.5.7	N/A
12	High Building	☐ Yes x No	3.2.6	N/A
13	Permitted Construction Actual Construction	☐ Combustible ☐ Non-Combustible x Both x Combustible ☐ Non-Combustible ☐ Both	3.2.2.20.-.83	9.10.6
14	Mezzanine (s) Area m²:	0	3.2.1.1.(3)-(8)	9.10.4.1
15	Occupant load based on:	☐ m²/person x design of building 1st Floor: Occupancy Load 50 persons 2nd Floor: Occupancy Load persons 3rd Floor: Occupancy Load persons 4th Floor: Occupancy Load persons	3.1.17	9.9.1.3
16	Barrier-free Design:	x Yes ☐ No (Explain) ☐ Not required	3.8	9.5.2
17	Hazardous Substances:	☐ Yes x No	3.3.1.2 & 3.3.1.19	9.10.1.3 (4)
18	Required Fire Resistance Rating (FRR)	Horizontal Assemblies FRR (Hours) Floors 3/4 hour(s) Roof N/A hour(s) Mezz 3/4 hour(s) Multiple Occupancies N/A hour(s) FRR of Supporting Floors 3/4 hours Roof N/A hours Mezz 3/4 hours Listed Designs No. or Descriptions (SG-2) Listed Design No. or Description (SG-2)	3.2.2.20-.83 & 3.2.1.4	9.10.8 9.10.9

WALKING PATH TO CREEK AND SILVER TOPS PROPERTY

SOD

4500

RAISED GARDEN BEDS

RAISED GARDEN BEDS

EXISTING SHED

EXISTING FENCED IN AREA

SNOW STORAGE

5:12 SLOPE R1

5:12 SLOPE R1

20-UNIT APARTMENT COMPLEX

R1 5:12 SLOPE

SOD

TREES

CONCRETE SIDEWALK

ASPHALT

6700

3000 3000 1500 3200

3200

1500

6000

6900

6700

SOD

5:12 SLOPE R1

5:12 SLOPE R1

5:12 SLOPE R1 5:12 SLOPE

SOD

3000

EXISTING BUILDING

EXISTING BUILDING

LOT 09

LOT 10

LOT 11

LOT 12

LOT 14

MULTIPLE RESIDENTIAL ZONE

308 PINE ST

3000

ASPHALT

6700

6000

SLOPE ASPHALT FOR DRAINAGE

SLOPE ASPHALT TO ROAD

6700

3000

SHRUBS

SOD

CONCRETE SIDEWALK

SOD

EXISTING CONCRETE SIDEWALK

EXISTING GRASS

EXISTING CONCRETE SIDEWALK

EXISTING GRASS

FH

SD

HP

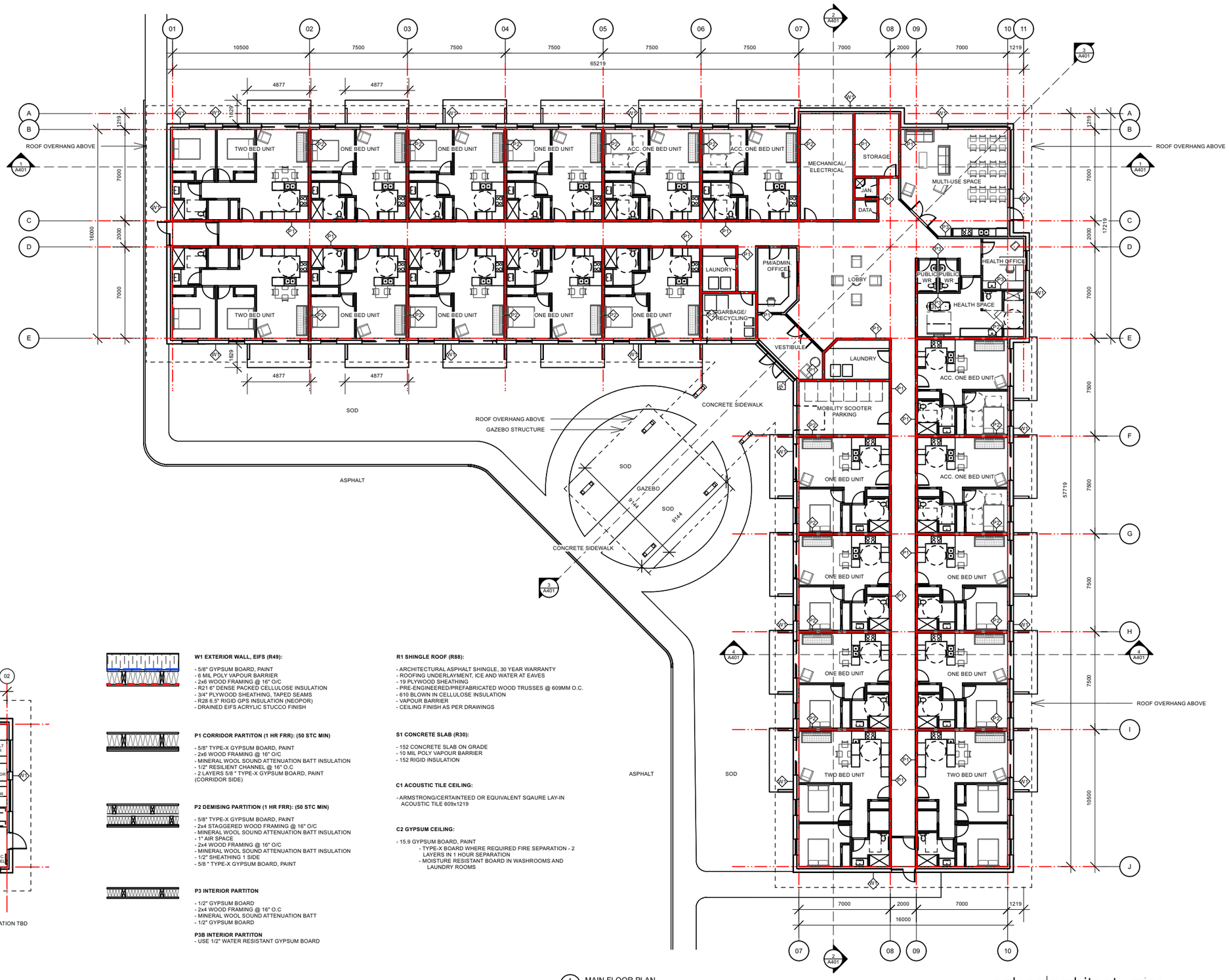
HP

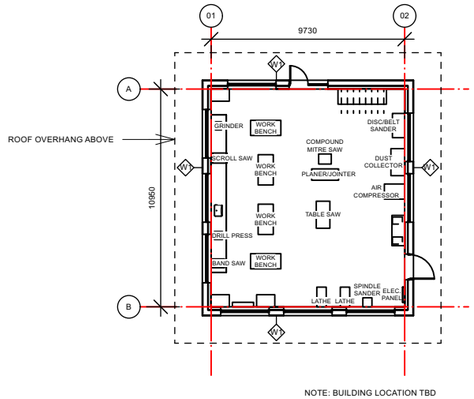
HP

PINE STREET

1 A101 SITE PLAN
Scale: 1:400

nelsonlarchitectureinc.





2 A301 OUTBUILDING PLAN
Scale: 1:300

W1 EXTERIOR WALL, EIFS (R49):

- 5/8" GYPSUM BOARD, PAINT
- 6 MIL POLY VAPOUR BARRIER
- 2x6 WOOD FRAMING @ 16" O/C
- R21 6" DENSE PACKED CELLULOSE INSULATION
- 3/4" PLYWOOD SHEATHING, TAPED SEAMS
- R28 6.5" RIGID GPS INSULATION (NEOPOR)
- DRAINED EIFS ACRYLIC STUCCO FINISH

P1 CORRIDOR PARTITON (1 HR FRR): (50 STC MIN)

- 5/8" TYPE-X GYPSUM BOARD, PAINT
- 2x6 WOOD FRAMING @ 16" O/C
- MINERAL WOOL SOUND ATTENUATION BATT INSULATION
- 1/2" RESILIENT CHANNEL @ 16" O.C
- 2 LAYERS 5/8 " TYPE-X GYPSUM BOARD, PAINT (CORRIDOR SIDE)

P2 DEMISING PARTITION (1 HR FRR): (50 STC MIN)

- 5/8" TYPE-X GYPSUM BOARD, PAINT
- 2x4 STAGGERED WOOD FRAMING @ 16" O/C
- MINERAL WOOL SOUND ATTENUATION BATT INSULATION
- 1" AIR SPACE
- 2x4 WOOD FRAMING @ 16" O/C
- MINERAL WOOL SOUND ATTENUATION BATT INSULATION
- 1/2" SHEATHING 1 SIDE
- 5/8 " TYPE-X GYPSUM BOARD, PAINT

P3 INTERIOR PARTITON

- 1/2" GYPSUM BOARD
- 2x4 WOOD FRAMING @ 16" O.C
- MINERAL WOOL SOUND ATTENUATION BATT
- 1/2" GYPSUM BOARD

P3B INTERIOR PARTITON

- USE 1/2" WATER RESISTANT GYPSUM BOARD

R1 SHINGLE ROOF (R88):

- ARCHITECTURAL ASPHALT SHINGLE, 30 YEAR WARRANTY
- ROOFING UNDERLAYMENT, ICE AND WATER AT EAVES
- 19 PLYWOOD SHEATHING
- PRE-ENGINEERED/PREFABRICATED WOOD TRUSSES @ 609MM O.C.
- 610 BLOWN IN CELLULOSE INSULATION
- VAPOUR BARRIER
- CEILING FINISH AS PER DRAWINGS

S1 CONCRETE SLAB (R30):

- 152 CONCRETE SLAB ON GRADE
- 10 MIL POLY VAPOUR BARRIER
- 152 RIGID INSULATION

C1 ACOUSTIC TILE CEILING:

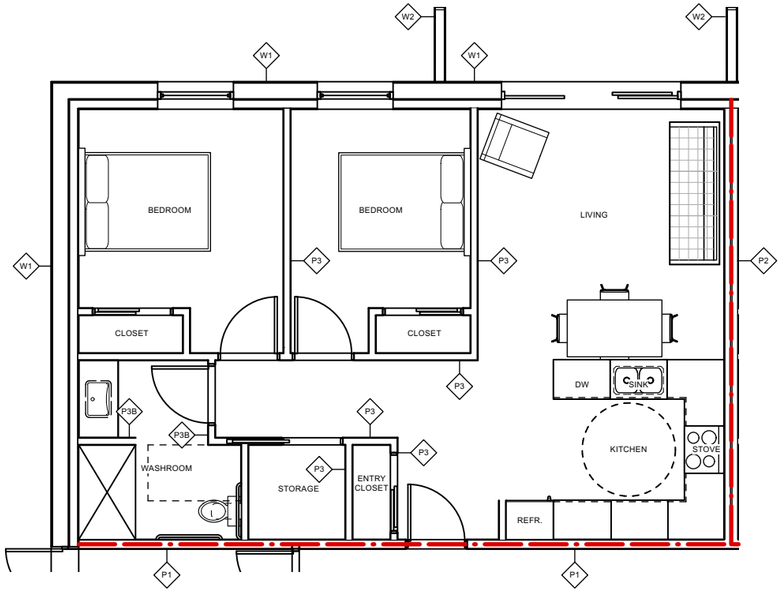
- ARMSTRONG/CERTAINTEED OR EQUIVALENT SQAURE LAY-IN ACOUSTIC TILE 609x1219

C2 GYPSUM CEILING:

- 15.9 GYPSUM BOARD, PAINT
  - TYPE-X BOARD WHERE REQUIRED FIRE SEPARATION - 2 LAYERS IN 1 HOUR SEPARATION
  - MOISTURE RESISTANT BOARD IN WASHROOMS AND LAUNDRY ROOMS

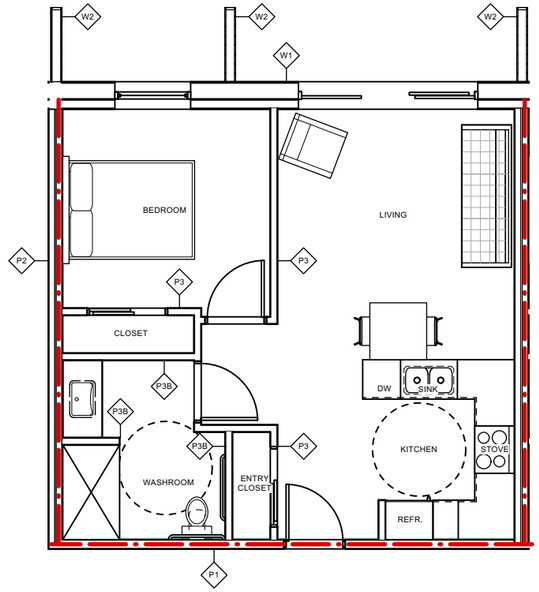
1 A301 MAIN FLOOR PLAN
Scale: 1:300

nelson|architecture inc.



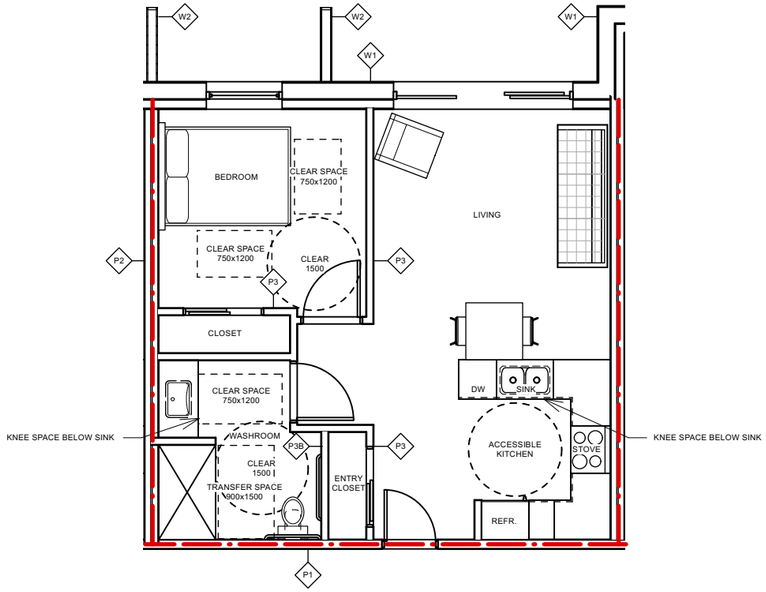
TWO BEDROOM UNIT AREA: 876 SQ. FT
TOTAL UNITS: 4

1 A303 TYP. TWO BEDROOM UNIT FLOOR PLAN
Scale: 1:96



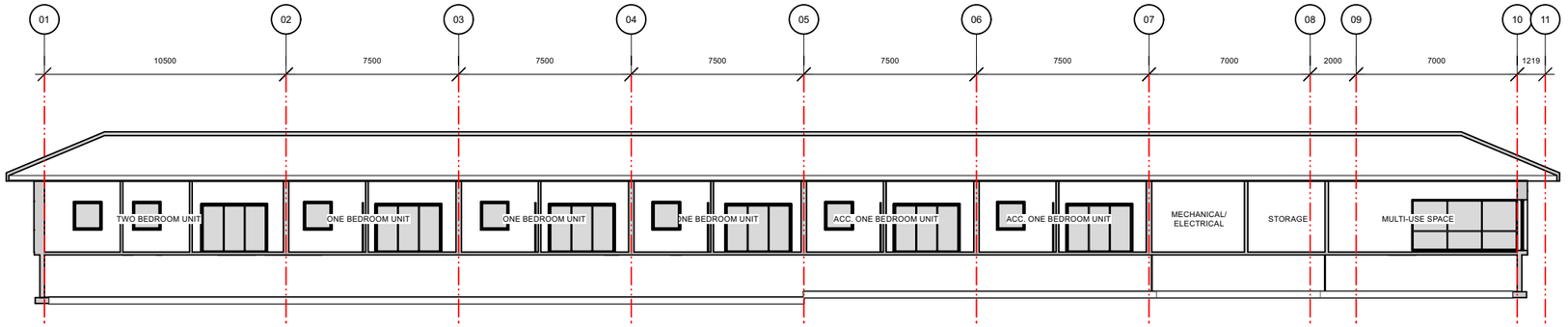
ONE BEDROOM UNIT AREA: 600 SQ. FT
TOTAL UNITS: 16 (4 ACCESSIBILE INCLUDED)

2 A303 TYP. ONE BEDROOM UNIT FLOOR PLAN
Scale: 1:96

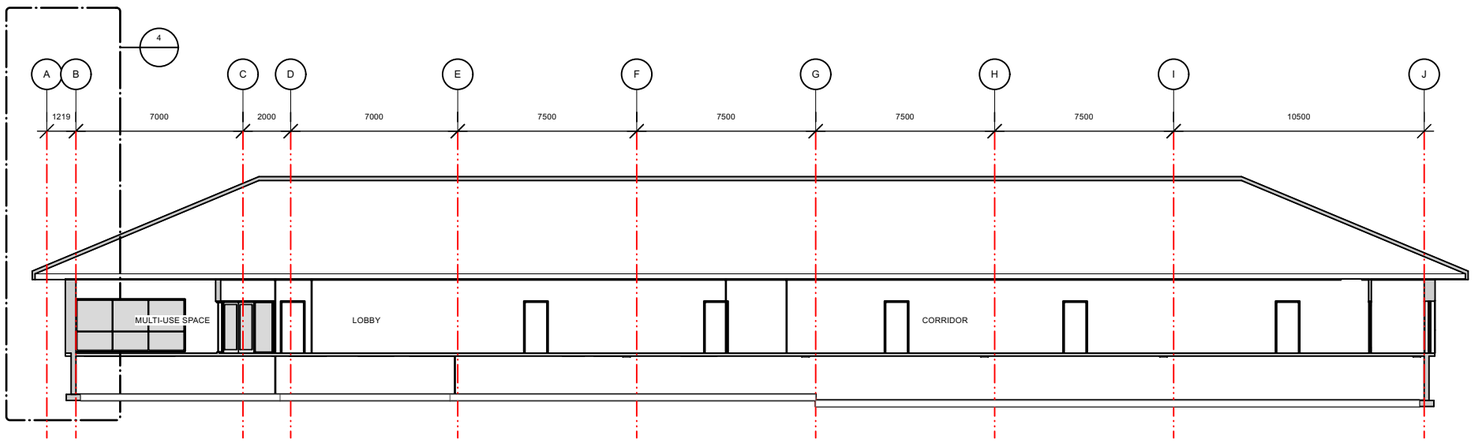


ACCESSIBLE ONE BEDROOM UNIT AREA: 600 SQ.FT.
TOTAL UNITS: 4

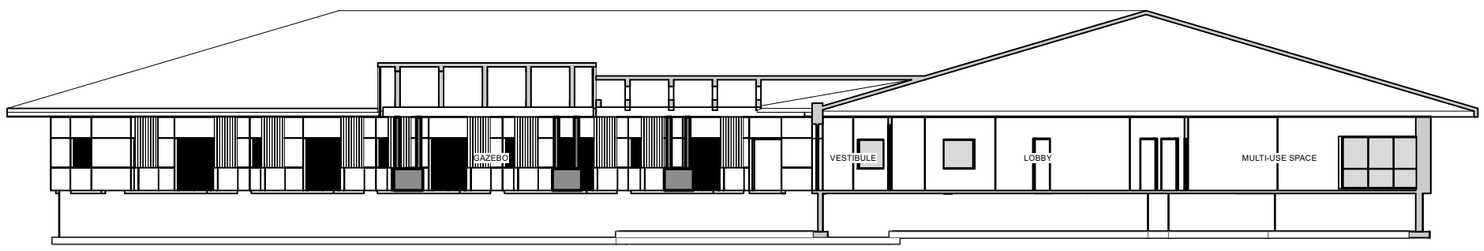
3 A303 TYP. ACCESSIBLE ONE BEDROOM UNIT FLOOR PLAN
Scale: 1:96



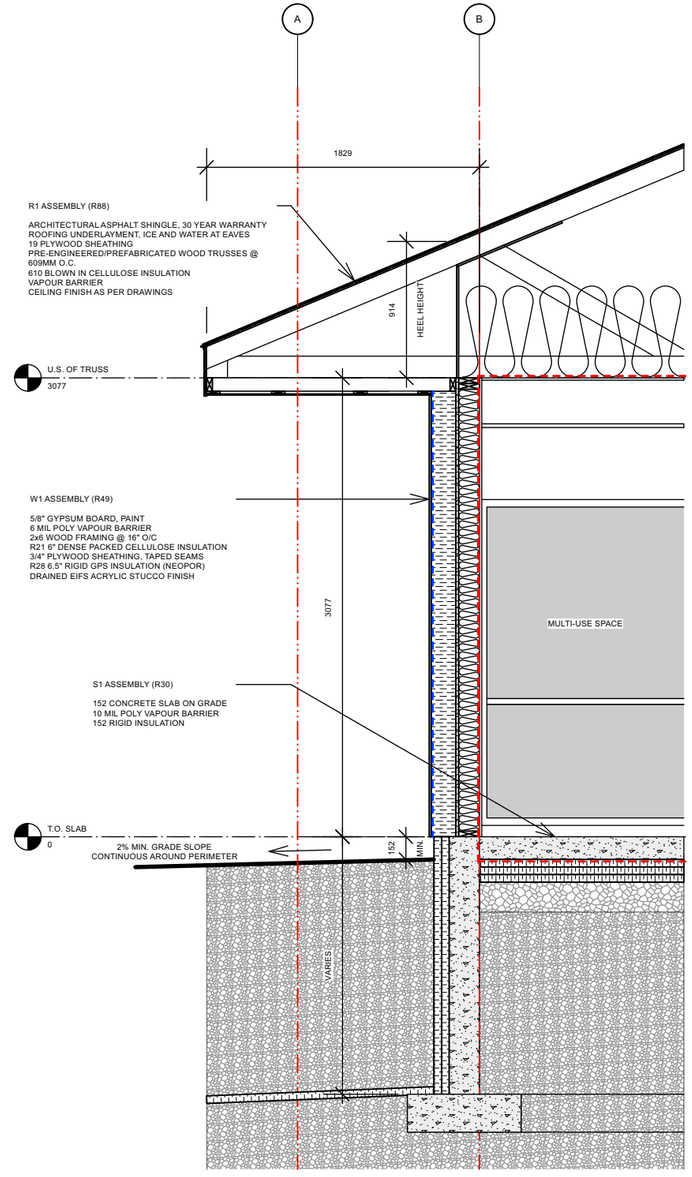
1 BUILDING SECTION
Scale: 1:250



2 BUILDING SECTION
Scale: 1:250



3 BUILDING SECTION
Scale: 1:250

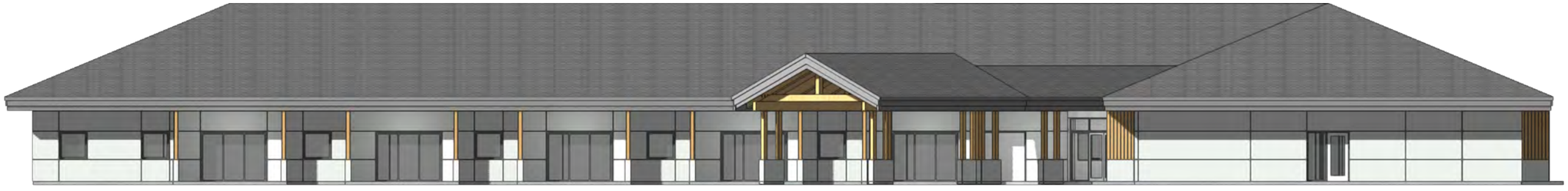


4 TYPICAL EXTERIOR WALL SECTION
Scale: 1:40

nelsonlarchitectureinc.

1 NORTH BUILDING ELEVATION
Scale: 1:200

5 NORTH OUTBUILDING ELEVATION
Scale: 1:200



2 EAST BUILDING ELEVATION
Scale: 1:200

6 EAST OUTBUILDING ELEVATION
Scale: 1:200

3 SOUTH BUILDING ELEVATION
Scale: 1:200

7 SOUTH OUTBUILDING ELEVATION
Scale: 1:200

4 WEST BUILDING ELEVATION
Scale: 1:200

8 WEST OUTBUILDING ELEVATION
Scale: 1:200

nelson|architecture inc.

ONE BEDROOM UNIT

TWO BEDROOM UNIT

[OUTLINE SPECIFICATIONS]

[OUTLINE SPECIFICATIONS]

The Ignace 20-Unit Seniors Apartment Complex proposal strives to provide comfortable, accessible and a mix of affordable and full market rental housing for tenants who are 60 years and older. The proposed complex will support independent living while also ensuring tenants have access to health support services to promote aging-in-place living.

The 19,425 sq.ft. single storey complex consists of 16 one-bedroom units and 4 two-bedroom units. In line with CMHC's National Housing Strategy Minimum Environmental and Accessibility Requirements for New Construction document, 20% of the complex's dwelling units will meet accessibility standards outlined in the technical design criteria. There will be a total number of 4 one-bedroom units that will meet these accessibility standards. The remaining 16 units, common spaces and ancillary programming will comply with barrier-free design. The one-bedroom units consist of approximately 600 sq.ft. and the two-bedroom units consist of approximately 876 sq.ft. Each unit features an outdoor patio area which adds approximately 60 sq. ft. of living space to each unit.

The building is designed with two typical double loaded corridors which intersect at 90 degrees where ancillary programming and common spaces are provided. The centrally located entrance, lobby, multi-use space and covered outdoor space promotes social interaction between tenants as well as guests. Two common laundry rooms, mobility scooter parking, garbage and recycling collection and additional storage is centrally located.

Costing has been provided for a 1,220 sq.ft. outbuilding for maintenance storage and potential future woodworking shop. The outbuilding may be located on a separate lot.

Structurally, the complex will be stick-framed on site on a shallow strip footing foundation and slab on grade. The roof structure will utilize conventional pre-engineered wood trusses to complement the neighbourhood. The covered gazebo structure at the entrance of the building adds a timber element to the design. The building will use a higher level of continuous rigid insulation throughout the envelope to effectively reduce energy consumption and retain heat. The project team confirms that the building will achieve between 41-55% reduction in operating energy consumption and greenhouse gas emissions. This will be confirmed by the submission of an energy model completed by a qualified professional.

The paved parking area will include 29 parking stalls for the complex, including 5 barrier-free stalls. The parking stalls have been drawn away from the building facade to give more privacy to the units and more grass areas. The outdoor green space at the rear of the building can accommodate raised garden beds.

Proposed Outline Specifications

DIVISION 03 - Concrete

1. Foundations
    i. The building will be constructed on a concrete strip footing and foundation wall bearing on prepared granular subgrade fill compacted to the required level documented in the Geotechnical report. For footing depths shallower than 2.4m, rigid polystyrene insulation is required at a positive slope away from the footing for drainage. Rigid polystyrene insulation on foundation walls shall extend beyond grade level and be covered with a cement protection panel where exposed above grade.
2. Floor Slabs
    i. The ground floor slab shall consist of a 127mm thick concrete slab on grade over compacted granular material specified in the Geotechnical report. The slab will be poured over a 10 mil poly vapour barrier.

DIVISION 06 - Wood, Plastics, and Composites

1. Rough Carpentry and Framing
    i. Non-structural light framing, and studding shall consist of SPF species 1-2 grade with a 19% maximum moisture content. Pressure treated wood blocking shall be SPF. Provide all necessary bucks, backing and blocking.
    ii. Roof sheathing shall consist of OSB, and wall sheathing shall consist of plywood Structural I grade. Provide pressure treated plywood as required.
2. Architectural Cabinetwork
    i. Cabinet bases shall be constructed from hardwood plywood constructed in accordance with 'Millwork Standards' latest issue of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), custom grade. Cabinets shall be constructed to accommodate adjustable shelving by fitted rests spaced at 25mm centres. Cabinet bottom interiors shall be white.
    ii. Cabinet doors and drawer fronts shall be constructed from MDF and receive either an opaque finish or veneer finish.
    iii. Countertops shall consist of 19mm plywood with a Plastic Laminate finish.
    iv. Hinges shall be the steel knuckle disappearing type with a satin finish.

DIVISION 07 - Thermal and Moisture Protection

1. Building Insulation
    i. Exterior walls shall be insulated to R-49 using 152mm of dense packed cellulose insulation in the wall cavity and a 165mm continuous layer of rigid insulation on the exterior.
    ii. The roof shall be insulated to R-81 using 559mm of blown in cellulose insulation.

iii. Interior partitions shall be insulated with a mineral wool batt soundproofing insulation. Interior partitions that are constructed as fire separations required to have a fire-resistance rating shall be insulated with a fire-proof mineral wool batt insulation.

2. Exterior Insulation and Finish System
    i. The exterior insulation and finish system (EIFS) shall be composed of a continuous water resistive barrier (air and/or vapour barrier) installed over an approved substrate, a geometrically designed EPS drainage and insulation plane, a glass fibre reinforcement mesh embedded in a non-combustible acrylic base coat, and an acrylic primer and finish coat, by Adex or equivalent.
3. Vapour Retarders
    i. A vapour barrier shall be installed on the interior face of all exterior walls, below the roof trusses, sealed to the edges of all window and door openings.
4. Air Barriers
    i. A vapour permeable air and moisture barrier shall be installed on all exterior wall sheathing prior to exterior rigid insulation placement. Edges are to be sealed around all window and door openings.
5. Shingle Roofing
    i. The shingle roofing shall be an architectural asphalt product with a minimum 30 year warranty, including roofing underlayment and ice and water protection at all eaves.
6. Prefinished Sheet Metal Flashing and Trim
    i. All metal flashing and trim shall be stainless steel type 304 alloy 24 gauge.

DIVISION 08 - Openings

1. Standard Metal Doors and Frames
    i. Doors to the mechanical room, janitor closets, electrical/data rooms, the mobility scooter parking, and the garbage and recycling room shall be hollow metal core doors with a paint finish and fire rated as required. Fire rated doors and frames shall be fire labelled in conformance with CAN-S104M NFPA 252 for ratings indicated. Hollow metal frames will receive a paint finish.
2. Wood Doors
    i. Interior doors will be solid core wood with a birch or maple veneer to receive a clear or coloured stain. Fire rated doors shall be fire labelled.
    ii. Interior unit doors will be solid core MDF.
3. Overhead Coiling Doors
    i. Overhead coiling doors for the mobility scooter parking and garbage/recycling storage will be a pre-painted galvanized steel coiling door.
4. Aluminum Frame Entrances
    i. All exterior doors and frames including lobby doors, and exterior corridor doors will be fully glazed thermally broken aluminum by Alumicor, Kawneer or equivalent.
5. Windows

i. All apartment unit windows will be a PVC triple glazed window with LowE coating(s) and inert spacers.

6. Door Hardware
    i. Door hardware shall be Schlage or equivalent.
    ii. Locks shall be Grade 1 cylindrical or mortise locks.
    iii. Door closers shall be installed on all doors that will be installed in a fire separation. Door closers shall be Dormakaba, Assa Abloy, Nabco or equivalent.
    iv. Exit devices shall be the horizontal rim or vertical type surface mounted to the door by Schlage or equivalent.
    v. Power door operators shall be Assa Abloy or equivalent.
    vi. Protective door plates shall be aluminum or stainless steel and shall be installed on interior doors of heavy use such as the laundry rooms, storage rooms etc.

DIVISION 09 - Finishes

1. Interior Partitions
    i. Fire rated interior partitions between suites shall be constructed from two rows of 38x89mm wood studs spaced at 406mm O.C. complete with a 25mm air space between the studs. Both stud cavities will be filled with mineral wool fire and sound proofing batt insulation. A 12.7mm sheet of plywood will be installed on one side of the framing. Both sides of the demising partition will receive a 15.9mm layer of Type-X gypsum board. This will provide a 1 hour fire separation, and an STC rating of 50.
    ii. Fire rated interior partitions between suites and corridors shall be constructed from 38x140mm wood studs spaced at 406mm O.C. The stud cavity will be filled with mineral wool fire and sound proofing batt insulation. 12.7mm resilient channels space at 406mm O.C. will be installed horizontally on the stud wall complete with 2 layers of 15.9mm Type-X gypsum board, and the other side of the assembly will receive 1 layer of 15.9mm Type-X gypsum board. This will provide a 1 hour fire separation, and an STC rating of 50.
    iii. Non-rated interior partitions shall be constructed of either 38x89mm or 38x140mm wood studs spaced at 406mm O.C. filled with mineral wool sound attenuation batt and complete with 12.7mm gypsum board on either side. In all washrooms, behind kitchens and in laundry rooms the gypsum board shall be moisture resistant.
    iv. The common rooms will receive gypsum board ceilings.
2. Acoustic Panel Ceilings
    i. Suspended acoustic ceiling tile shall be installed in corridors, and offices. The suspension system will be a two directional exposed t-bar system to support a 609x1219 Armstrong, Certainteed or equivalent product.
3. Resilient Flooring
    i. The majority of flooring throughout the complex will be a Luxury Vinyl Tile or Plank flooring. This will include in apartment units, and common spaces, as well as

corridors. The mechanical room will have exposed concrete complete with a robust concrete sealer.

4. Interior Painting
    i. Interior painting will be applied to all drywall surfaces exposed to view. All exposed miscellaneous steel shall be painted. All hollow metal doors and frames shall be paint finish.

DIVISION 10 - Specialties

1. Toilet and Bath Accessories
    i. Public washrooms shall receive institutional grade accessories including soap dispensers, paper towel dispensers, toilet paper holders, napkin disposals and garbage cans. All public washroom accessories shall have a stainless steel finish.
2. Fire Extinguishers and Cabinets
    i. Required fire extinguishers shall be supplied in metal cabinets with clear glazing in the door.

MCW Consultants Ltd.

Mechanical Systems Concept Report

FOR

20-UNIT APARTMENT COMPLEX IN IGNACE,ON

Prepared for:

Nelson Architecture Inc

205 Lakeview Dr
Kenora, ON
P9N 0H2

Prepared by:

MCW CONSULTANTS LTD.

131 Court Street North
Thunder Bay, ON
P7A 4V1

2022-05-24
Revision-R01
MCW Project No. 12873-01

INDEX

1.0 PURPOSE

The purpose of this Systems Concept Report is to outline the Mechanical systems concept based upon design work which has been completed for this project to date and based on meetings/discussions that we have had with the client, and the project architect.

The intent of this report is to provide a basic overview of the proposed systems in order to allow the general contractor to prepare preliminary mechanical and electrical construction cost estimates.

2.0 PROJECT DESCRIPTION

This project is a new build of an 20-unit apartment complex in Igance, ON. The apartment complex will be a single story building and have an approximate a gross floor area of 20,000 +/- square feet. The apartment complex will contain 20 seniors apartment units, a bathing room and health room and a common space. There will also be a 30'x40' outbuilding for maintenance storage and a future senior's communal woodworking program

3.0 MECHANICAL SYSTEMS CONCEPT

3.1 Design Criteria

The following design criteria are proposed for the heating, cooling and ventilating of this facility.

3.1.1 General

Building services and systems will not be sized for any future building expansion.

Mechanical systems will be provided in accordance with applicable code and standards including, but not limited to:

- Air Conditioning and Refrigeration Institute (ARI)
- American National Standards Institute (ANSI)
- American Standard for Testing and Materials (ASTM)
- American Society of Mechanical Engineers (ASME)
- American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE)
- Canadian/American Air Balance Council (CAABC)
- National Energy Code of Canada for Buildings (NECCB)
- National Fire Protection Association (NFPA)
- Ontario Building Code (OBC) 2012
- Ontario Fire Code (OFC) 2010
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

3.1.2 Energy Efficiency

The building will be designed in conjunction with the Architect to comply with the Ontario Building Code and will follow sustainable design principles. The building will not seek a LEED certification.

The facility will achieve between 41-55% reduction in operating energy consumption and greenhouse gas emissions over the most recent national building and energy code. This will be further demonstrated through detailed design by preparing an Energy Model using IES<VE>, eQUEST or equivalent software.

3.1.3 Outdoor Design Conditions (OBC)

Summer	27ºC DB/22ºC WB (2-1/2%)
Winter	-36ºC DB (1%)

3.1.4 Internal Design Conditions

Area	Summer		Winter	
	Temp.	Humidity	Temp.	Humidity
Apartment Units	23.9ºC	50% +/- 5%	22.2ºC	30% +/- 5%
All Public Areas	23.9ºC	50% +/- 5%	22.2ºC	30% +/- 5%
Offices	23.9ºC	50% +/- 5%	22.2ºC	30% +/- 5%
Washrooms	23.9ºC	50% +/- 5%	22.2ºC	30% +/- 5%
Service Areas			20ºC	
Laundry Rooms			20ºC	
Storage			20ºC	

3.1.5 Noise Criteria:

Apartment Units	NC-35 to NC-40
Admin and Public Areas	NC-35
Outdoors (Property Line)	NC-45

3.1.6 Air Filtration:

Direct exhaust air systems to outside	None
Building exhaust through the ERV	MERV 13
Suite supply air systems	MERV 8

3.2 Outside Air/Exhaust Requirements

Outdoor air ventilation rates shall be in accordance with the Ontario Building Code and ASHRAE Standard 62 and generally would be:

Apartments:	2.5 L/s per person plus 0.3 L/s/sq.m
Multi-Use Space:	2.5 L/s per person plus 0.3 L/s/sq.m
Offices:	2.5 L/s per person plus 0.3 L/s/sq.m
Common Spaces:	2.5 L/s per person plus 0.3 L/s/sq.m

3.3 HVAC System Overview

All normally occupied areas will be provided with controlled heating, cooling and ventilation. All other areas such as mechanical, service areas and receiving area will be ventilated and heated only.

Insulation for HVAC systems shall be in accordance with ASHRAE 90.1

3.4 Heating

3.4.1 General

The apartment complex will be heated in-floor heating. Each of the suites will be an individual zone complete with in-floor loops, supply and return headers, control valve and thermostat. Other room such as the multi-use room, lobby and health space may consist of a combined zone.

There will be two (2) boilers in total, each boiler will be sized for 60% of the facility peak heating load to provide some redundancy and pick-up capability. New breaching will be provided up through the roof. The capacity of the plant will be approximately 780 MBH.

The heating system shall be sized to serve radiant in-slab, heating service space heating, and entrance heating.

The heating water pumping system shall consist of two pumps in a run/standby configuration, each sized for 80 USGPM (5.1 l/s). The pumps shall have variable speed drives. The heating supply water temperature shall be adjusted in relationship with outdoor air through the use of a three-way mixing valve.

Expansions tanks, in-line filters and glycol fill tanks will be located each the mechanical room to serve both the load heating loop and building heating loop.

35% propylene glycol shall be used in the hydronic heating system.

Force flow entrance heaters will be provided to heat all entrance areas. These units will be fully recessed, heavy duty type units. If units cannot be fully recessed then they will be ceiling mounted.

Chemical treatment systems shall be provided for all heating water systems.

3.5 Cooling

3.5.1 General

Cooling shall be provided though indoor fan coil units with direct expansion cooling coils. Each of the apartments fan coil will have a cooling coil using R-410A refrigeration and remotely located condensing unit outside on a support

stand. The building total cooling is approximately 25 tons and will be divided between the areas and suites.

A fan coil will be located in each suite to supply ventilation and cooling. Cooling to be direct expansion (DX) with a condensing unit located outside each suite. Refrigeration piping to run to individual air cooled condensing unit mounted on the exterior of the building.

Each fan coil in the suite to be 700cfm with 1 ton of cooling. The fan coil for the multipurpose room and office to be 1000cfm with 2 tons of cooling.

3.6 Air Handling Systems

3.6.1 An air-to-air reverse flow Energy Recovery Ventilator (ERV) will be used to provide ventilation air throughout the building. The ERV will be suspended on the mechanical room and connect to all the fan coils and balanced to delivery designed air flow to each zone.

The ERV will be complete with supply and exhaust fans, sized to provide sufficient outside air to the building to comply with ASHRAE 62.1 requirements, including effectiveness factor. The minimum efficiency of the ERV shall be 85% in the winter. The ERV shall provide outside air to pressurize the corridor. Provide motorized dampers on the intake and exhaust openings to prevent cold air from entering the building when unit is off.

The capacity of the ERV serving shall be 800 CFM.

3.6.2 Typical 1-Bedroom Apartment Fan Coil (FC-1): (528sf)

The fan coil shall be residential / light commercial grade equal to Lennox, Trane, or Carrier and shall consist of filters, dx refrigeration cooling coil and a supply fan.

Supply air to the space will be through supply air ductwork above the ceiling with linear bar diffusers equal to Price 520 series. A common return air grille will be in the suite corridor close to the fan coil.

The capacity of F-1 is 1 tons of cooling and 700 cfm.

3.6.3 Typical 2-Bedroom Apartment Fan Coil (FC-2): (724sf)

The fan coil shall be residential / light commercial grade equal to Lennox, Trane, or Carrier and shall consist of filters, dx refrigeration cooling coil and a supply fan.

Supply air to the space will be through supply air ductwork above the ceiling with linear bar diffusers equal to Price 520 series. A common return air grille will be in the suite corridor close to the fan coil.

The capacity of F-1 is 1.5 tons of cooling and 1050 cfm.

3.6.4 Multi-Use, Lobby and Health Space Fan Coil (FC-3): (724sf)

The fan coil shall be light commercial grade equal to Lennox, Trane, or Carrier and shall consist of filters, dx refrigeration cooling coil and a supply fan.

Supply air to the space will be through perforated supply air ductwork above the ceiling with square cone diffusers. The ceiling space shall be used as return air.

The capacity of F-1 is 4 tons of cooling and 1600 cfm

3.6.5 Miscellaneous Systems

Ventilation systems, comprising filtered outdoor and return air and an exhaust air fan, shall be provided for the electrical and mechanical rooms. Each system shall modulate the outside, return and exhaust air dampers and exhaust air fan to maintain a minimum space temperature of 18.3 deg. C (65 deg. F).

Split system air conditioning units shall be provided for server/LAN rooms. Further discussion on the level of redundancy of these systems will be undertaken.

The Laundry rooms will be provided with heat only and ventilation outside air from the ERV. The room will maintain a minimum space temperature of 20 deg. C (68 deg. F).

3.7 Vibration Isolation and Noise Control

Mechanical systems vibration isolation and noise control will be designed to incorporate silencers and vibration isolation as required and as recommended by Acoustic Consultant.

3.8 Mechanical Spaces

Co-ordination to take place with the Architect for planning of mechanical rooms has been taking place.

3.9 Site Services

All mechanical site services such as water and sanitary will be coordinated with the site services engineer. Our scope of work will terminate one (1.0) meter from the building and connect to site services at this point. Current estimate for the sanitary connection is 150 mm (225.5 FU’s).

A 50 mm domestic water service (161.8 FU, 58 USGPM, 3.64 L/s) from the site main shall be brought into the building for domestic water services. The domestic water shall isolated by backflow prevention devices as defined by CSA.

3.10 Fire Protection

The new building will be fully sprinklered.

The sprinkler system will be designed to NFPA-13R Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies, Ontario Building Code, and National Fire Code of Canada. Incorporated in the design will be portable fire extinguishers, which will be located to the Fire Code requirements.

The building is not expected to require a fire standpipe system. Refer to the Code Report.

Sprinklers heads will be upright brass type where no ceiling exists. Sprinkler heads will be concealed type where ceilings occur. All sprinkler heads in areas with no dropped ceilings will be upright brass type with wire guards.

All supervised valves shall have end switches. Division 26 shall wire valves and switches into the main fire alarm panel.

Fire department siamese connection shall be provided for the sprinkler system.

3.11 Plumbing and Drainage

3.11.1 Site Drainage:

The below slab on grade and external foundation drainage (weeping tile) will be designed by the hydrological consultant. The extent of the work will be shown on the architectural foundation plans. The hydrological consultant will review these plans and provide written approval of the arrangement. Flow rates from these drainage systems will be provided by the hydrological consultant.

Weeping tile shall be collected in settling sumps and transferred to sump pits with duplex submersible pumps. Pits shall be pumped into gravity drainage piping.

3.11.2 Domestic Hot Water:

Domestic water will be heated using a condensing gas fired domestic hot water heater located in a main floor mechanical room. Two (2) AO Smith model BTH-300 Mxi 119 USG, 300 MBH, (349 USGPH recovery).

3.11.3 Plumbing Fixtures:

.1 Water Closets:

a) Suites – Elongated, floor mounted, comfort height, barrier-free, two piece lined tank type toilet, vitreous china elongated bowl. 1.28 gpf (4.8 lpf), fully glazed 2⅛” trapway.

b) Public washrooms – Elongated, floor mounted, comfort height, barrier-free, two piece lined tank type toilet, vitreous china elongated bowl. 1.28 gpf (4.8 lpf), fully glazed 2⅛” trapway.

.2 Lavatories:

a) Counter mounted lavatories – Vitreous china counter top drop-in sink with overflow. 4" center holes for faucet. Dimensions: 20¼" x 17½" x 8½". Heavy Duty Cast Brass 102mm (4") Centerset. Polished chrome plated finish. Ceramic cartridge with rotational limit stop. Vandal resistant 89mm (3½") Barrier-free compliant lever handle with color index. Vandal Resistant outlet (wrench flats) 1.5 USGPM (5.7L/min)

b) Wall hung lavatories – Vitreous china, barrier-free wall-mount lavatory with shroud. Overflow. 4" center holes for faucet. Dimensions: 21-15/16" (557mm) in length x 19¾" (502mm) in width x 6-9/16" (162mm) in depth. Single Hole Deck mount ASSE 1070 thermostatic electronic lavatory faucet with above deck electronics. Mixing handle to adjust temperature. Adjustable comfort limit stop. Chrome finish. Sensor detects user's hand to activate water flow, Outlet: 0.66 gpm (2.5 L/min) spray (0.17 gal/cycle, 0.64 L/cycle max. based on 15 second run time).

.3 Shower:

a) One (1) piece acrylic shower shall. Wide three level corner shelves. Centered drain. Textured floor. Dimensions: 60" (1524mm) x 36" (914mm) x 79" (2000mm). Chrome plated finish, Thermostatic Pressure Balance cartridge, Temperature only controlled with handle, Field adjustable to limit handle rotation into hot water zone. Integral checks in the cartridge prevent crossflow between Hot and Cold water inlets. Non-Removable Blue/Red visual cover indicator for Cold, Mixing and Hot handle positions. Lever Blade Handle - Barrier-free compliant-57 mm (2.24"). ½" IPS metal spout with pull up diverter. Forged brass valve body only with screwdriver stops. ½" NPT male thread with ½" C.W.T. female sweat. Showerhead, Arm & Flange - Flow Rate MAX: 1.5 GPM @ 80 PSI (5.7 L/min @ 552 kPa)

.4 Shower (Barrier-free)

a) Barrier Free Shower. Gelcoat finish reinforced with fiberglass. Integrated textured bottom Center drain. OPT20089-R/L CSA B651-04 Compliant Option, L/R Rectangular Naugahyde Cushion Fold-up Seat (Phenolic Available), 24" Straight Grab Bar, 30" Straight Grab Bar, 2 – 42" Straight Grab Bars, 60" Curtain Rod (factory installed) (106 Stainless Steel), 60" White Vinyl Shower Curtain with S.S. Hooks, Solid Brass drain with Stainless Steel Grid. Dimensions: 62¾" (1594mm) x 39 1/2" (1003mm) x 78⅜" (2000mm). Polished chrome plated finish, Pressure Balance cartridge, Temperature only controlled with handle, Field adjustable to limit handle rotation into hot water zone. Integral checks in the cartridge prevent crossflow between Hot and Cold water inlets. Non-Removable Blue/Red visual cover indicator for Cold, Mixing and Hot handle positions. Lever Blade Handle - Barrier-free compliant-57mm (2.24"). Forged brass valve body only with screwdriver stops. Standard

24” Stainless Steel Bar with Barrier-free Slide hand shower.

.5 Kitchen Sinks:

a) Double compartment self-rimming drop-in sink with faucet ledge. 20 gauge (0.9mm), type 302 (CNS 18/8) stainless steel. Exposed surfaces are #4 satin finished. Center back waste location includes 3½” (89mm) crumb cup strainer with 1½” (DN38) brass tailpiece, with spillway. Dimensions: 20½” (52cm) x 31¼” (79cm) x 7” (18cm). Single handle kitchen deck faucets for exposed mounting on three hole sinks. All metal fabricated body. 8 11/16” (221 mm) long spout swings 180 degrees. 1.5 gpm (5.7 L\min) vandal resistant aerator. Lever handle shall return to neutral position when faucet is turned off.

.6 Washing Machine Box:

a) Washing machine outlet box complete with quarter turn brass ball valves. Size 11¾” wide x 10⅛” high x 3⅝” deep. 2” drain opening, and constructed of high impact polystyrene.

.7 Janitor sinks:

a) Floor mounted service basin with 10” (254mm) deep, plain curbs. Integral drain is molded into a one piece unit and designed to connect to a 3” drain pipe. Dimensions: 24” (600mm) x 24” (600mm) x 10” (254mm). Provide stainless steel bumper guards on all exposed edges and stainless steel wall splash shield. Heavy duty cast brass wall mount service sink faucet with integral stops, 203mm (8”) centers adjustable from 7.75” to 8.25”. 76 mm (3”) Lever Blade Handles.

.8 Hose Bibbs:

a) Frost-proof automatic self-draining wall hydrant. Hydrant to be manufactured with brass body with nickel-plated finish, brass vacuum breaker mechanism, metal handle, and 0.8mm copper tube wall thickness.

.9 Trap Primer:

a) 120 volt solenoid valve comes with, atmospheric vacuum breaker, pre-set 24 hour adjustable timer, manual over ride switch, 120 volt solenoid valve, calibrated manifold for equal water distribution, outlet compression fittings, 16 gauge galvanized steel cabinet.

.10 Floor drains in mechanical room for condensate.

a) Epoxy coated cast iron floor drain with anchor flange, weep holes, ½” (13mm) thick nickel bronze strainer, and no hub outlet.

.11 ARJO Parker Tub

a) Refer to attached document

3.6.1 Plumbing General:

.1 Domestic cold water and hot water piping will be type L copper pipe for above grade applications and type K copper below grade.

.2 PEX piping is acceptable for the domestic water piping within the apartment suites.

.3 All sanitary drainage piping above and below grade will be PVC DWV.

.4 Domestic hot water recirculation loops will be provided as required to ensure the hot water within the system remains hot at all times. Pump for recirculation system will be connected to a time clock.

.5 Below grade drains should be able to be handled by the gravity site sanitary service connection. If any services are below this level, they shall be collected in a sanitary sump pit with duplex submersible pumps. Pits shall be pumped into the gravity drainage piping.

.6 The ARJO tub is to have a 2" (50mm) sanitary drain, vent and ¾" (19mm) hot and cold water piping and all associated connections.

3.6.2 Gas Service

We will contact the Gas Company of this project and submit plans with proposed location of gas meter and gas load such that they can ascertain availability of adequate gas supply to the property

Natural gas shall be distributed to the MER to serve the domestic hot water heaters and the boilers as required. All gas piping shall be threaded schedule 40.

Gas line will be installed to the building by the local utility.

3.6.3 General

Insulation: Insulation for plumbing systems shall be in accordance with ASHRAE 90.1

3.7 Controls

All fan coils, heating plant, pumps, ERV and fan controls shall be microprocessor based incorporating DDC and shall be addressable from wall mounted thermostats and temperature sensors associated with each system.

Each fan coil will have independent controls. A seven-day programmable thermostat will be used to maintain set points. The thermostat shall be able to control both the Dx cooling and in-floor heating.

The HRV will operate on a time clock set to owners recommended hours of operations.

The hot water tanks will maintain 140°F / 60°C. Each lavatory or sink will use a point of use mixing valve to achieve minimum temperatures.

The recirculating pump will operate on a time clock set to owners recommended hours of operations.

Sequence of Operation:

Energy Recovery Ventilator (ERV)

a) The supply and exhaust fan speeds on the HRV shall be controlled to by the exhaust air system. As the exhaust dampers open and close in the suites and buildings the duct static pressure shall be monitored and maintained constant by varying the exhaust fan speed. The supply fan speed shall track with the exhaust fan speed so both fans are moving the same air volumes.
b) The HRV shall run constantly.
c) If there is a fan, VFD or general fault, annunciate an alarm to the DDC system.
d) Provide motorized exhaust and intake dampers that close when the HRV is off or fails.

Fan Coils – Apartment Suites

a) The fan coil associated shall be constant volume and shall be set to run constantly.
b) Provide PIR motion sensors to detect if the suite is occupied. One sensor is required in each bedroom, the living room and the kitchen. Where more than one sensor is required to provide complete coverage of the room, then more shall be provided. When the suite is unoccupied the motorized washroom and kitchen exhaust dampers shall be closed.
c) When the suite is occupied the washroom and kitchen exhausts shall be controlled by the occupant.
    - The washroom exhausts shall be controlled by a dedicated low voltage switch next to the washroom light switch. When the switch is off, the damper for that washroom shall be closed. When the switch is on, the damper shall be fully open. Where there is more than one washroom in a suite, provide a dedicated motorized damper for each.
    - The kitchen exhaust fan shall be controlled by a dedicated low voltage rotary dial percent switch located next to the kitchen light switch. When the switch is off, the damper shall be closed. When the switch is set to a percentage open, the damper shall be open to that percentage.
    - Provide a permanent label on the kitchen exhaust rotary dial indicating ‘Primary Exhaust’.

Fan Coils – Multi-use, Lobby and Health

a) The fan coil shall be controlled from a 7 day digital programmable thermostat. The supply fan shall start/stop based on the occupied/unoccupied schedule as set from the programmable thermostat. When the furnace supply fan is on the HRV shall operate continuously.

In-Floor Heating

a) Temperature Control: The floor temperature shall be maintained at setpoint by modulating the In-floor zone heating control valve on the heating water supply. The floor temperature setpoint shall be reset from the associated room temperature sensor by ± 2ºC, as room temperature various ±1.5ºC from setpoint.
b) The floor temperature setpoint shall be further reset from outdoor temperature setpoint. Appropriate timing shall be provided to prevent over or under-

shooting the setpoint.

- OAT at -30ºC floor temperature setpoint shall be 30ºC.
- OAT at +4ºC floor temperature setpoint shall be 24ºC.
- OAT at + 5ºC In-Floor valves closed.

Heating Plant

a) The boiler control system shall come complete with an outdoor air reset controller. The controller shall continuously monitor the outside air temperature and the boiler supply and return water temperature.
b) When outdoor air temperature is below 10□C the boiler system shall be enabled. The controller shall energize the pumps to run continuously. The controller shall modulate to maintain supply water temperature at set point. The boiler shall supply water temperature set point shall be reset based on outdoor air temperature.
c) The outdoor air reset controller shall modulate both boilers to on a duty cycle to equalize runtime on all boilers. The controller shall modulate the boilers to maximize most efficient firing rate range for each boiler.]
d) When outdoor air temperature is above 10□C the boilers and pumps shall be disabled. During warm weather shut down the control system shall cycle the boiler pumps periodically.
e) The boiler shall be supplied with all high limit, low water shut downs and flow switch as required by manufacture.

HEIGHT-ADJUSTABLE RECLINING ASSISTED BATHING

Parker®

Featuring a distinctive swinging door, Parker® is designed to enable independent to assisted transfers into and out of the tub. Parker is height-adjustable and goes from sitting to reclining, allowing the carer and resident to choose their preferred position to enhance the bathing experience.

Designed with Albert, Barbara and Carl in mind. Also suitable for Doris when paired with a passive lifter.

Independent and Assisted transfers

Height-adjustable Parker can be positioned in sitting and reclining positions. Its swing-up side door is designed to facilitate smooth access for patients and residents with mobility levels A through C without the need for additional bath lifters. Parker is also appropriate for residents with mobility level D when paired with a passive ceiling lifter.

Multiple levels of anti-scalding protection

Including temperature displays, temperature and pressure regulated mixing valves, and automatic hot water shut off when exceeding safe temperatures.

Enhance the wellness benefits of bathing

Parker offers a choice of still immersion bathing, Air Spa™ and Sound and Vision™ to enhance relaxation and make the most of the wellness benefits of bathing.

Key features

SIDE-ENTRY ACCESS
Integrates with wide range of transfer aids to facilitate independent and assisted transfers for those with limited mobility.

HEIGHT-ADJUSTABLE AND RECLINING
Allows carer to reach preferred working height without compromising resident comfort.

MULTIPLE ANTI-SCALDING PROTECTION FEATURES

SHOWER WAND WITH LOCKABLE TRIGGER
Enables caregiver to activate shower when close to resident.

HEAD AND BACK CUSHIONS
For additional comfort.

INTEGRATED CLEANING AND DISINFECTION SYSTEM (OPTIONAL) ✓

AIR SPA (OPTIONAL) ✓
With nine speed-controlled jet streams.

AUTO-FILL
Automatically fills bath to pre-set water level.

SOUND AND VISION (OPTIONAL)
For an enhanced multisensory experience.

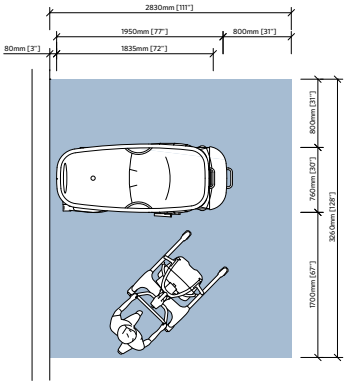
GENERAL	
Max safe working load (SWL) (patient + water)	300 kg (661 lbs)
Maximum patient weight	210 kg (463 lbs)
Total weight of tub	126 kg (280 lbs)
Total length in the upright position	1855 mm (73 in)
Total length in reclined position	1960 mm (77 ⅛ in)
Total width	750 mm (29 ½ in)
Height of door with bathtub in highest position, feet in lowest position	2510 mm (98 ⅞ in)
Seat height at lowest position	565 mm (22 ¼ in)
Seat height at highest position	685 mm (27 in)
Water consumption (prefilled foot well volume/autofill level)	96 litres (25.4 gallons)
Water consumption up to overflow level	230 litres (60.8 gallons)
Filling time at 3 bar (43.5 PSI) dynamic pressure (prefill)	1.7 min
Emptying time from auto-fill level	3 min
IP Class according to IEC 60529	IP X4
IP Class hand control and Sound and Vision hand control	IP X7
Maximum static water pressure	6 bar (600 kPa, 87 psi)
Minimum operating pressure (some variants depending on the country)	1 bar (100 kPa, 14.5 psi)

STANDARD FEATURES
- Water temperature display
- Multiple anti-scalding protection functions
- Shower wand with lockable trigger
- Auto-fill
- Overflow
- Lock function for control panel
- Emergency tilting and lowering
- Emergency stop
- Head support cushion

OPTIONAL FEATURES
- Integrated cleaning and disinfection system
- Air Spa therapy
- Sound & Vision therapy
- Hot water flush kit
- Foot rest and back/seat cushions
- Tub trim available in Blue or Grey

SPACE REQUIREMENT

Blue area denotes the required working area to facilitate transfer and hygiene activities for resident with mobility level A to C while providing adequate access for the resident, equipment and assisting carer. Additional space might be required to facilitate transfer of resident with mobility level D using passive lifter.



For more detailed information visit www.arjo.com

Arjo AB • Hans Michelsensgatan 10 • 211 20 Malmö • Sweden • +46 10 335 4500

ELECTRICAL DESIGN BRIEF REPORT

FOR

20-UNIT APARTMENT COMPLEX IN IGNACE, ON

Prepared for:

Nelson Architecture Inc.
205 Lakeview Dr.
Kenora, ON
P9N 0H2

Prepared by:

MCW Consultants Ltd.
210 – 1821 Wellington Avenue
Winnipeg, MB R3H 0G4
Tel: 204-779-7900

MCW Project No. 12873-01
Date: May 13, 2022
Revision: R00

PROJECT DESCRIPTION

This project is a new build of a 20-unit apartment complex in Igance, ON. The apartment complex will be a single story building and have an approximate a gross floor area of 20,000 +/- square feet. The apartment complex will contain 20 seniors apartment units, a bathing room and health room and a common space. There will also be a 30'x40' outbuilding for maintenance storage and a future senior's communal woodworking program.

PURPOSE

The purpose of this Design Brief Report is to outline the Electrical systems based upon design work outlined in the Request for Proposal.

The intent of this report is to provide a basic overview of the proposed systems in order to prepare preliminary electrical construction drawings.

ELECTRICAL

1. **Site Services**
    a. Incoming power by Hydro One is to be provided within five feet of the building. No costs or contingencies included for primary cabling, transformer, terminations, etc.

2. **Power Distribution**
    a. Normal Power Distribution
        i. A Pad mounted utility owned transformer, fed from a 3-phase hydro line located near the property, will service the new building. The incoming services will be run underground to the main electrical room where power will be distributed for public loads and individual suites. To be located at a future date.
        ii. The choice for individual suite metering will be confirmed during detailed design.
        iii. A 120/208 volt, 3 phase, 4 wire main distribution shall be provided.
        iv. 120/208 volt, 3 phase, 4 wire branch circuit panels shall be provided throughout to serve public loads. Each wing of the building will be provided with a panelboard to serve loads in the respective half of the building.
        v. A separate 120/208V panelboard will be provided to serve public mechanical loads.
        vi. Each suite will be provided with a 30-circuit 120/208V panelboard to serve individual suite loads.
    b. Emergency Power
        i. Emergency power for lighting and exit signage shall be provided via battery packs in accordance with the Ontario Electrical Safety Code and the Ontario Building Code. Standby generation will not be provided.

3. **Lighting**

a. Service/storage and corridor areas will be illuminated with LED linear lighting.
b. Offices and Staff Areas will be illuminated with direct/indirect LED luminaires controlled by occupancy sensors.
c. Lobby and Multipurpose Space will be illuminated with a mixture of downlighting and suspended luminaires to provide flexibility in these spaces.
d. All LED luminaries will have high-efficiency drivers and high colour rendering.
e. The Workshops shall utilize LED type luminaires of an enclosed type, suitable for use in a woodshop equipped with local dust collection.
f. Lighting in the apartments shall be recessed LED type.
g. Lighting in the Washrooms shall utilize recessed LED type.
h. All lights will be controlled by line voltage switching or dimming – refer to next section.

4. Lighting Controls

a. All apartments shall be controlled by means of dimmable switching in all areas including bedrooms, kitchens, living and dining areas. Washrooms will not be provided with dimmable lighting.
b. Storage areas shall be occupancy sensor controlled.
c. Office areas shall be occupancy switched.
d. Public washrooms & change rooms shall be occupancy sensor controlled.
e. Corridor lighting shall be key switched in a secure location.

5. Exterior Lighting

a. Building exterior lighting comprising of parking lot lighting, building security lighting and decorative lighting shall utilize LED technology.
b. Luminaires shall generally be selected to provide downward illumination with no spillage of light above the horizontal plane or onto adjacent properties. The average maintained lighting level for the area lighting shall be 1 foot candle.
c. Exterior lighting shall be automatically controlled by means of photoelectric cells.
d. Parking lot lighting will be achieved with the use of pole mounted luminaires. Where luminaires are located near property lines, house side shielding will be provided to mitigate light trespass and glare onto neighboring properties.

6. Receptacles / Power Outlets

a. Apartment units will have general power receptacles located per wall in every room as defined by the OESC.
b. Typically each Meeting Room or Office will be equipped with four (4) receptacles. Washrooms to be equipped with ground fault receptacles.
c. Receptacles to be provided in corridors to suit requirements for housekeeping, point of sales, maintenance, etc.
d. Power will be provided to Multipurpose Room to suit the specific requirements of the Client.
e. IPLC controlled parking receptacles will be provided in parking lots.
f. Receptacles in the woodshop will be rated for a minimum of 20A and shall be equipped with individual receptacle dust covers.
g. Where speciality equipment is provided (scooter charging, large woodworking equipment, etc) a dedicated receptacle matching the cord-set for the equipment will be provided.
h. Power in the woodshop will be interlocked with the dust collection system such that these receptacles will not be energized without running the dust collector.

7. **Wiring and Conduit**
    a. All branch circuit wiring will be in conduit – either E.M.T. and/or AC-90 as permitted by local codes.
    b. All conduit in direct contact with earth will be PVC.
    c. Minimum wire size will be No. 12 AWG copper only. Aluminum not acceptable for any conductor sizes.
    d. The main service cables will be provided by Hydro One or Synergy North.

8. **Outlet Boxes**
    a. Sectional boxes may be utilized, except in concrete or masonry construction.

9. **Cover Plates**
    a. All cover plates in the apartment units shall be white phenolic plastic. All other areas to be stainless steel.
    b. Receptacles and switches throughout the project will be decorator (Decora) style with associated decorator faceplates. Final colours to be selected and confirmed by the Architect.

10. **Mechanical Equipment**
    a. All mechanical equipment shall be wired and connected.
    b. All manual motor starters, magnetic starters, and disconnect switches shall be provided for all mechanical motors.
    c. Electric force flows at entrances and unit heater in mechanical room.

11. **Data Communication**
    a. Provide voice / data connections in each office, meeting room and any other owner requested area.
    b. Network cabling shall be category 6 FT6 rated.
    c. Local service provider shall provide communication equipment, provide final connections and test to ensure connectivity.
    d. J-hooks and cable trays shall be utilized throughout.
    e. All installations shall be in compliance with standard communications cabling practices.
    f. Provide a complete wireless network throughout the building public spaces for tenant access. Wireless access points will be located every 50’ along public corridors to ensure strong wireless coverage throughout the facility.

12. **Access Control/Security System**
    a. Raceways only from devices through accessible ceiling space. System by Owner’s Vender.
    b. Exterior entrance doors will be controlled by a Kantech Card Access control system. These doors shall be equipped with a card reader, electric strike and door contact to monitor it’s position.
    c. Where card access is installed on doors with automated door operators, integrate door controls with operator to require credentials prior to activation of the actuator.
    d. A complete instruction alarm system as a component of the access control system will be provided including door contactors on exterior doors and motion detection throughout the building will be provided.

13. **CCTV System**

a. Owner will provide a complete CCTV system including cameras, NVR, and all associated wiring. CCTV system will monitor the complete exterior of the building and all facility entrances and public areas.
b. Contract to allow for coordination with the owners vender and provide raceways only from devices through accessible ceiling space.

14. Fire Alarm

a. The building shall be provided with a single stage, zoned, non-coded addressable fire alarm system, Type 3 as defined in the Ontario Building Code. The system shall be complete with all required pull stations, heat and smoke detectors, duct smoke detectors, horn/strobes etc. and shall be zoned to comply with the local fire department requirements.

[PROJECTED OPERATION COSTS]

[PROJECTED OPERATION COSTS]

Budget operational costs are expected to be according to the following table. It should be noted that all costs are approximate. More accurate utility cost budgets will be established on completion of the energy model. Expected taxes on the property are an estimate only and can only be known upon an actual assessment of the completed project.

Utility Expenditure	$ 61,750
Custodial Expenditure	$19,000
Maintenance	$21,850
Taxes	$25,000
TOTAL	$127,600

[IMPLEMENTATION **PLAN**]

PROJECT PHASES

The following describes the major phases and elements of work within the design-build project delivery methodology. While listed sequentially, this methodology should be read in conjunction with the project schedule to illustrate the timing of the specific activities, many of which happen concurrently. Each major phase will develop the project to an increasing level of decision-making detail and concludes with a summary document to be reviewed and approved by the client and project team prior to moving on to the next phase of development. Each phase is characterized by a meeting between the design-build team and the owner to ensure the project team is understanding of the financial and technical requirements of the project. to either establish direction for the phase or optimize and provide feedback for work accomplished during the phase.

Project Initiation Phase

Upon notification by the client, the consultant contract will be prepared. It is assumed that the project will be governed by the latest version of the CCDC 14 between Design Builder and Client and the CCDC 15 between the Design Builder and Consultant. Additionally the sub-consultant contract will be prepared and executed.

An introductory visioning/design workshop will be scheduled where the project team will be introduced and the goals and objectives for the project will be established between the client and the consultant team. This workshop will allow the client and technical advisors to distribute any pertinent background information to the Design Build team. The project scope, schedule, initial budget information, and organizational structure of the project team will be reviewed. All project team members are present so that the goals and objectives are clear to all. Special meetings may be held during the pre-planning phase to elicit comment from user groups as required.

Preplanning Phase

This phase is characterized by the review of existing and collection of new and required background information.

A site review will be undertaken with architectural, structural, mechanical, electrical consultants and client team members. Special site conditions will be noted.

Base mapping of the site will proceed based on available digital and paper documentation and the survey and geotechnical study will be initiated.

Concurrently the Design Builder will proceed with the site preparation and servicing.

Design Development

This phase develops the preferred design from the RFP proposal, further refining and detailing the concept, and modifying it based on the review of the Client. The building systems have been selected and further developed during this stage. This will include site servicing, structural, mechanical, and electrical systems to be further evaluated.

Key activities during this phase include:

- Review schematic documents for compliance with all applicable codes and regulations.
- Develop passive house energy model.

- Review program and verify compliances.
- Develop and forward to consultants a list of specialized systems or equipment such as:
  - Door hardware
  - Communication systems (networking)
  - Energy management systems
  - Security
  - Telephone and intercom
  - Waste recycling and storage
  - Computer equipment
  - Power distribution equipment
- Contact utility companies and public authorities regarding all services.
- Prepare all necessary drawings.
  - Plans, Elevations, Sections, Schedules
- Client approval to proceed.

Construction Documents

This phase develops the completed design documentation with the optimized building systems and documents the project for competitive tendering by qualified General Contractors. It involves generally the preparation of technical specifications and drawings which clearly delineate the intent and technical procedures for building construction. It is the most important phase and the largest phase in the process as the clarity and coordination of the documents will have a substantial effect on the process by which construction takes place.

Good documentation during this phase will prevent procedural and cost problems from occurring during construction.

Cost analysis will happen at the 66% completion stage of this phase to ensure cost compliance with the budget.

Activities during this phase include:

- Prepare final drawings and specifications.
- Develop finish hardware schedule and colour and finish schedules.
- Check completed documents for coordination, compliance with program, and accuracy.
- File documents for approval and permits.

Contract Administration

Activities during this phase include:

- Review Design Builder's schedule, required shop drawings and samples, schedule of values, bonds, and insurance policies.
- Review shop drawings.
- Issue supplemental details and instructions as required.
- Advise on the interpretation of contract documents and contemplated changes.
- Site reviews to determine construction conformity.
- Evaluate the work performed.
- Certify substantial performance.
- Review reported defects during the one-year warranty period.

IGNACE APARTMENT COMPLEX
Exterior render

The following outlines specific responses to the RFP, related to our company's project methodology:

Methodology

Finn Way's effective project management outline includes strategies, tactics, and tools for managing the design and construction delivery processes and for controlling key factors to ensure the client receives a facility that matches their expectations and functions as it is intended to function. Improvements in building quality directly contribute to reduced operational costs and increased satisfaction for all the stakeholders. To provide successful project delivery, Finn Way implements management systems that will control changes in the key factors of scope, schedule, budget, resources, and risk to effectively optimize the quality of a high-performance building project.

We establish the qualities of the project that are necessary to satisfy client and end user needs and expectations. We provide value for money by completing the project on time, on budget, and to the level of functionality that meets the determined needs.

The early investment in planning, programming and design are benefits for project delivery and avoid unnecessary costs and delays. Our traditional forms of management are always being streamlined based on technologies and efficiencies not previously available. Successful delivery of our projects is based on the assembly of a project's effective management team, risk management and building commissioning.

Finn Way typically administers our Design and Build contracts using the following processes;

Initiation: Finn Way meets with the Owner, Owner's representatives, design team and stakeholders to discuss the project scope, timelines, costs, milestones and constraints. Regular meetings are held until details of the final scope of the project is agreed on and signed by all the parties.

Design/Planning: After the initiation process, the design team starts designing and planning with agreed upon progress review meetings and approvals for the final design. Quality control is provided during the design process, with consultation from selected subcontractors which becomes beneficial to the entire team and project. The subcontractors provide invaluable experience-added advice as to the suitability and constructability of the design and its components, including material selections that suit the climate and use and schedule factors. Many of these considerations are recognized, identified, and controlled at this stage to ensure adherence to the budget and timeline, yet providing quality and longevity of the building. After the design has been completed, selected sub trades are asked to submit shop drawing for approval, the schedule for the project is finalized and a project plan to execute the project is established.

Execution: Once the design/planning stage is complete, the execution stage begins. We mobilize to site and the actual construction starts. Throughout each of these stages, communication with the various stakeholders continues and on-site quality control and

quality assurance begins.

Monitoring and Controlling: This process occurs simultaneously with the execution process; we monitor the on-site progress of work vs. schedule and projected cost vs. actual cost. It is also at this stage that we perform and monitor for most of our quality control and quality assurance. Regular meetings are held with the owner, project team members and other stakeholders to deliver information about the state of the project. We monitor actual time against projected work for a specified period in order for us to know if the project is going according to plan or not. If we determine that we need to take action to bring the project back on course, we either fast track or crash the project. Cost is another big constraint that we have on all projects, every project has limited budget to which the work is supposed to be accomplished. We monitor our cost by ensuring that approved materials are shopped from the best supplier, logistics & deliveries are properly planned for; so time delays are best avoided. Every extra day spent on site increases our overhead costs. Quality control and quality assurance is very important to us, are noted under our quality assurance program.

Closing: At the end of every project, a company close out procedure is followed. Operations and maintenance manuals that have been compiled throughout the project are finalized and submitted to the consultants for approval with the completed as-built drawings, commissioning and training of Owner staff is organized and deficiencies are completed. Finn Way has adopted a policy of review and action. With this policy we review the overall project process and document "Lessons Learned". Through this process, we are able to recognize and address mistakes and errors so they can be avoided on future projects. Our intent is to be as effective as possible, as stated previously time is money, if we do not have to spend the time re-working something, we have just saved money which in turn provides better workmanship and a better end product.

Our management strategies allow us to control risks, costs and schedule by using a risk registry at the early stages of the project, identifying risks and providing controls to mitigate the identified risks. In hand with this, we utilize the construction schedule to manage the work on site and control costs. This allows us to determine at a moments notice how the schedule conforms with the work on the site and if required, provide controls to fast-track areas of work or plan ahead for issues that may arise. We also control quality by working with select subcontractors we have a good working relationship and history with, their specific experience as to practical materials, equipment, systems, timelines, and scheduling is invaluable at the design stage, the planning stage and the execution stage.

Finn Way's project communication and documentation has been streamlined by the use of Procore, construction management software. With this system allows a collaborative environment and real time accessibility for every project team member. It keeps the project up to date and the team in the loop, so no change goes unnoticed. With regularly scheduled site meetings, each team member will be part of the scheduling and review, help identify issues that arise and be part of their resolution and be part of quality control and assurance.

The following outlines specific responses to the RFP, related to our company's project quality control and quality assurance program:

Quality Control and Assurance Program

We build quality assurance and quality control (QA/QC) into all of our Design-Build projects starting in design stages and straight through to construction and commissioning.

During the course of the design stage, Nelson Architecture has an approach to QA/QC that is directly linked into the Integrated Design Process (IDP). The basic intent of this procedure is to provide a fully sustainable building where the operation and maintenance are evaluated for long-term durability and optimizes costs. In addition, the QA/QC is seen as process of improvement for our staff and consultants to prevent mistakes before they happen, to monitor the standards of work after execution and to feed the findings back into a learning loop:

Quality Planning – Quality Planning clearly identifies what we intend to do.

- Process-oriented approach where decision-making is to be pre-emptive, not reactive
- Quality control procedures are established at the outset.
- The Integrated Design Process **(IDP)** is a cornerstone to this planning enabling the design team to work as a unified whole to a common goal.
- Partnering Sessions start this IDP where personal relationships are formed or enhanced between team members.

Quality Control – Quality Control clearly identifies how we are planning to do what we planned.

- The IDP provides a methodology for Quality Control with a charette forum for decision-making and engages the entire planning team in an interactive process in real time to make each member fully accountable for quality control.
- We propose to use a process of Preview, Review and Endorsement that enables the Owner to have several opportunities to review a component before acceptance.
- A final critical link in quality control is to provide a commissioning checklist to ensure the ability to evaluate and verify compliance in a project after completion.

Quality Assurance – Quality Assurance clearly verifies that the final product reflects the intent.

- We are committed to provide feedback loops to our projects so our staff and consultants can learn from each project.
- We produce a Basis of Design document at the end of design development stage as a framework to assure compliance as the project proceeds.
- Fully open office workspace to encourage open communication style
- Staff meetings designed to encourage teamwork, sharing of knowledge and cooperation between peers.

For Finn Way, QA/QC addresses the overall objective of obtaining the quality of the facility to be built in the most efficient, economical, and satisfactory manner possible. It involves

continued evaluation of the activities of planning, design, development of plans and specifications, advertising and awarding of contracts, and throughout the construction.

During the design stages, Finn Way and their sub-trades assist the consultants to provide them with tried-and-true building systems and practices that ensure quality assurance in design and drive quality control on the construction site. By having the contractors and the design consultants liaise, the best systems can be designed for specific projects. This practice has always fostered mutual respect between the designers and the constructors which delivers a better overall project; supporting better communication between all parties involved in the project and promoting more accurate pricing which is highly beneficial.

Quality assurance requires that we utilize procedures for incorporating design changes into the construction plans. The earlier that design changes are recognized and implemented the lower the cost. The project team closely monitors how well management of the design and change of design processes are functioning. These represent the quality issues that need to be monitored during the quality assurance efforts.

Throughout the construction, Finn Way's Quality Control program ensures that the work is done correctly the first time. This is achieved by focusing on preventing problems or errors rather than reacting to them. Quality is controlled by adequate planning, coordination, supervision and technical direction which benefit the constructor as much as it does the stakeholders.
Examples of Finn Way's quality control process include:

- The review and study of all shop drawings to ensure all materials to be used are exactly as specified
- The field superintendent provides clear decisions, direction, and constant supervision of all activities and performs start-up review, ongoing review throughout the activity, and immediate review of all completed activities for accuracy and completeness
- Consultants are also regularly scheduled to check progress and quality of the work to ensure an independent verification
- Project Managers also attend the monthly meetings and independently inspect the site and report to the field superintendent as another level of quality control.

Finn Way minimizes construction cost while meeting all the specifications in the plans and design by closely monitoring the advertising for bids and awarding of contracts. We ensure the qualifications of the contractors and subcontractors to perform the services advertised.

Finally, the actual construction activities are closely monitored to ensure that the plans and specifications are being met or exceeded throughout the construction process.

In addition, each month the consultants from the design team and the stakeholders of the project visit each site and review the work completed. During these monthly site-review meetings, the progress of the project as reflected in the monthly financial Progress Claims are reviewed and compared to the progress completed on site. These meetings are partially used to monitor and report on the quality of the work performed. Reports are generated and remedial work ordered if required. These meetings also allow the project team to review the entirety of the project and openly discuss timelines, finances, changes, issues, and schedules.

Health and Safety Management

Finn Way prides itself on its safety culture. Employees at all levels of the company are enthusiastic to contribute to maintaining a safe and healthy working environment. Finn Way has an extensive health and safety program that is enforced and supported on all work sites. This program meets all requirements of the provincial Regulations for Construction Projects and the Occupational Health and Safety Act.

Finn Way's commitment of our comprehensive Corporate Health and Safety Management System is demonstrated in our Health and Safety Manual. We employ a full-time Health & Safety Coordinator and utilize a management program (eCompliance) for document control and communications. The health and safety program includes Safe Work Practices and Safe Job Procedures, PPE requirements, emergency procedures and rescue plans, company rules, a hazardous materials program, and procedures for communication, documentation, and inspections. Due to file size of Finn Way's Company Health and Safety Manual, it has not been provided with this RFQ, however, we can provide this document separately if requested.

Finn Way is also proud to have achieved certification in **IHSA's Certificate of Recognition (COR) program.** This certification shows that Finn Way maintains an extremely high level of health and safety performance throughout the company. Achieving COR could not have been possible without the dedication and passion of all employees and management to constantly improve.

Finn Way ensures to abide by the Accessibilities for Ontarians with Disabilities Act (AODA) by training all employees and providing accommodations whenever required. Finn Way also maintains a zero-tolerance policy for violence and harassment in the workplace, as all workers have the right to feel safe and supported in the workplace.

wsib ONTARIO

Your clearance(s) / Vos certificats de décharge

We confirm that the business(es) listed below are active and in good standing with us.
Nous confirmons que la ou les entreprises énumérées ci-dessous sont actives et que leurs comptes sont en règle.

Contractor legal or trade name / Raison sociale ou appellation commerciale de l'entrepreneur	Contractor address / Adresse de l'entrepreneur	Contractor NAICS Code and Code Description / Code du SCIAN de l'entrepreneur et description	Clearance certificate number / Numéro du certificat de décharge	Validity period (dd-mmm-yyyy) / Période de validité (jj-mmm-aaaa)
FINN WAY GENERAL CONTRACTOR INC.	1301 WALSH ST WEST, THUNDER BAY, ON, P7E4X6, CA	236220: Commercial and institutional building construction 007060: Non-Exempt Partners and Executive Officers in Construction - G6	A0000I1XIH	20-May-2022 to 19-Aug-2022

[PROPOSED COSTING]

BID SUBMISSION FORM

RFP No.: **IGNACE-RFP-22-01**	Project Address: **306, 308 & 310 Pine Street, Ignace, ON**	Closing Date: **March 24, 2022**	Closing Time: **4:30 pm CST**
Submitted to (Owner): **The Corporation of the Township of Ignace** Via Email: **Jeff Lederer planning@ignace.ca**		To Provide full Design-Build Services related to the: **Design-Build services for a 20-unit Seniors Apartment Complex** as per the RFP, appendices, General Requirements, General Conditions, Supplementary Conditions, Bid Forms and all project documents.	

In accordance with the terms of the General Conditions and the Request for Proposal (RFP) forming part of this submission, I/We confirm that our Proposal and this Bid Submission is valid for a period of one hundred and twenty (120) days from the date of closing. The Proponent may choose to extend the validity period as part of their Proposal.

My/Our price for performing the work as described in the RFP documents and the proposal submitted in the response to the RFP is as follows: **TOTAL LUMP SUM PRICE** (PLEASE QUOTE IN WORDS AND IN NUMERALS)

Eight Million Five Hundred Eighty Four Eight Hundred Thirty Six $ 8,584,836.00

(LUMP SUM PRICE INCLUDES PAYMENT OF ALL APPLICABLE FEDERAL, PROVINCIAL AND MUNICIPAL TAXES, UTILITY PERMITS, HST, ETC., - LESS TRADE IN VALUE)

I/WE HAVE INCLUDED IN THE LUMP SUM FIXED PRICE THE AMOUNT OF $ 987,636.00 FOR HARMONIZED SALES TAX (HST).

I/We have received and allowed for Addenda number, as follows, 1,2,3 in preparing my/our proposed prices for the work of this contract. (If no addenda received, indicate "nil" in space provided.)

I/We certify that all terms and conditions contained herein shall be strictly adhered to if we are awarded this contract and that all work on this contract will be completed and invoiced prior according to the RFP's project Schedule**.**

I/we can meet this deadline yes X **no**____**. If no, state alternative completion date** _____**.**

It is understood that in order to be considered, this Bid Submission Form must be received by The Corporation of the Township of Ignace as part of the Proponent's submitted proposal not later than 4:30 p.m. CST on Thursday, March 24, 2022.

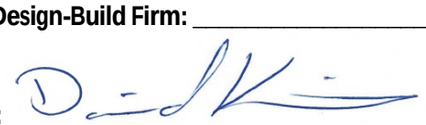
In submitting this Bid Submission Form, I/We certify that with the exception of the undermentioned firms, I/We have no financial interest in any other firms, businesses or enterprises which either presently, or in the past, are or have rendered goods or services to the Corporation or which are also bidding on the present job.

Furthermore, I/We expressly warrant that the prices contained in my/our proposal whether as unit prices or lump sums, are quoted in utmost good faith on my/our part, without any collusive arrangement or agreement with any other person, partnership or corporation.

I/We expressly represent that I/We and/are not party or privy to any deceit tending to mislead the Owner into accepting this proposal as a truly competitive price whether to the prejudice, injury or benefit of the Owner.

SIGNED this 20th **day of** May**, 2022**

Name of Design-Build Firm: Finn Way General Contractor Inc.

Signature: 

Name and Title of Authorized Signature: David Karimi; President
(Please Print)

Address: 1301 Walsh Street, West, Thunder Bay, Ontario

Postal Code: P7E 4X6 **Telephone:** [807] 767-2426 ext: 8235

NOTE: PROPONENTS ARE ADVISED THAT FAILURE TO COMPLETE THIS FORM MAY BE CAUSE FOR DISQUALIFICATION

SCHEDULE OF ITEMS AND PRICES

PROJECT DESCRIPTION:	Design-Build services for a 20-unit Seniors Apartment Complex
RFP NUMBER:	IGNACE-RFP-22-01
PROJECT NAME:	Ignace – 20-unit Seniors Apartment Complex
PROJECT ADDRESS:	306, 308 & 310 Pine Street, Ignace, ON
PROPOSALS ACCEPTED BY:	Jeff Lederer planning@ignace.ca
PROPOSALS DUE:	4:30 p.m. CST on Thursday, March 24, 2022

Soft Costs	
Architectural	$ 166,800.00
Engineering	$ 88,400.00
Management, Co-ordination, and Related Work	$ 40,000.00
Disbursements and Other Fees	$ 15,000.00
Soft Cost Total	**$** 310,200.00

Hard Costs	
Division 01 — General Requirement	$ 746,930.00
Division 02 — Site Construction	$ 865,700.00
Division 03 — Concrete	$ 357,500.00
Division 04 — Masonry	$ N/A
Division 05 — Metals	$ 50,000.00
Division 06 — Wood and Plastics	$ 907,500.00
Division 07 — Thermal and Moisture Protection	$ 612,370.00
Division 08 — Doors and Windows	$ 330,000.00
Division 09 — Finishes	$ 550,000.00
Division 10 — Specialties	$ 30,000.00
Division 11 — Equipment	$ N/A
Division 12 — Furnishings	$ N/A
Division 13 — Special Construction	$ N/A
Division 14 — Conveying Systems	$ N/A
Division 15 — Mechanical/Plumbing	$ 1,650,000.00

Division 16 — Electrical	$ 620,000.00
Cash Allowance – Material Testing	$10,000.00
Cash Allowance – Hardware Allowance	$50,000.00
Cash Allowance – Signage Allowance	$5,000.00
Cash Allowance – Card Reader System	$15,000.00
Cash Allowance – Security Systems	$20,000.00
Cash Allowance – Appliances	$100,000.00
Cash Allowance – Landscaping	$20,000.00
Hard Cost Sub-Total	$ 6,940,000.00
Contingency (5% of Hard Cost Sub-Total)	$ 347,000.00
Hard Cost Total	**$** 7,287,000.00

If an item is Not Applicable, indicate "nil" in space provided.

Total Proposed Cost	
Soft Cost Total	$ 310,200.00
Hard Cost Total	$ 7,287,000.00
Sub-Total	$ 7,597,200.00
HST (13%)	$ 987,636.00
TOTAL PROPOSED COST	**$** 8,584,836.00

Optional Add-On Items (Before HST)	
OUTBUILDING (Per Section 3.9)	$ 250,000.00
Proponent Proposed Value Added Component (if applicable) –	$ "nil"
Proponent Proposed Value Added Component (if applicable) –	$ "nil"
Proponent Proposed Value Added Component (if applicable) –	$ "nil"
Proponent Proposed Value Added Component (if applicable) –	$ "nil"

SUBMIT ONE COPY OF THIS FORM WITH YOUR PROPOSAL.

Company/Business Name: Finn Way General Contractor Inc.

Name and Title of Authorized Signature: David Karimi; President

Signature: 

Date: May 9th, 2022

LIST OF SUB-CONTRACTORS

PROJECT DESCRIPTION: Design-Build services for a 20-unit Seniors Apartment Complex

RFP NUMBER: IGNACE-RFP-22-01

PROJECT NAME: Ignace – 20-unit Seniors Apartment Complex

PROJECT ADDRESS: 306, 308 & 310 Pine Street, Ignace, ON

PROPOSALS ACCEPTED BY: Jeff Lederer planning@ignace.ca

PROPOSALS DUE: 4:30 p.m. CST on Thursday, March 24, 2022

Name of Sub-Contractor	Division of Work
Thunder Contracting	Site Services
Finn Way General Contractor	Concrete Work
Thermal Mechanical	Plumbing
Rugged Air Systems	HVAC
Thermal Building Automation	Controls
MC Lough Electric	Electrical
Vipond	Fire Protection

List all anticipated sub-trades you intend to engage if you are the successful Proponent chosen for this contract.

ALL SUB-CONTRACTORS MUST BE APPROVED BY THE OWNER AND MEET ALL REQUIREMENTS DESCRIBED IN THIS REQUEST FOR PROPOSAL PACKAGE.

SUBMIT ONE COPY OF THIS FORM WITH YOUR PROPOSAL.

Company/Business Name: Finn Way General Contractor Inc.

Name and Title of Authorized Signature: David Karimi; President

Signature: 

Date: May 9th, 2022

[BONDING **DOCUMENTS**]

ZURICH

BID BOND

Bond No: **6359175-22-05**

Bond Amount: **10% of Tender**

Finn Way General Contractor Inc. as Principal, hereinafter called the Principal, and **Zurich Insurance Company Ltd** a corporation created and existing under the laws of Canada and duly authorized to transact the business of Suretyship in Canada as Surety, hereinafter called the Surety, are held and firmly bound unto **The Corporation of the Township of Ignace** as Obligee, hereinafter called the Obligee, in the amount of **Ten Percent of Tender** (**10% of Tender**) lawful money of Canada, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Principal has submitted a written bid to the Obligee, dated this **May 9, 2022,** for **Request for Proposal, IGNACE-RFP-22-01, Design–Build, 20-Unit Apartment Complex in Ignace, ON.**

The condition of this obligation is such that if the Principal shall have the bid accepted within the time period prescribed in the Obligee's bid documents, or, if no time period is specified in the Obligee's bid documents, within **One Hundred Twenty (120)** days from the closing date as specified in the Obligee's bid documents, and the Principal enters into a formal contract and gives the specified security, then this obligation shall be void; otherwise, provided the Obligee takes all reasonable steps to mitigate the amount of such excess costs, the Principal and the Surety will pay to the Obligee the difference in money between the amount of the bid of the Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be in excess of the former.

The Principal and Surety shall not be liable for a greater sum than the Bond Amount.

It is a condition of this bond that any suit or action must be commenced within seven (7) months of the date of this Bond.

No right of action shall accrue hereunder to or for the use of any person or corporation other than the Obligee named herein, or the heirs, executors, administrators or successors of the Obligee.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond dated May 2, 2022.

SIGNED and SEALED

in the presence of :

Finn Way General Contractor Inc.
Principal

David Karimi
Name of Signator for Principal

Signed electronically by
David Karimi
on May 09, 2022 - 2:28 PM GMT
Signature

Signed electronically by
Zurich Insurance Company Ltd
Kim Grant
on May 02, 2022 - 9:05 PM GMT
Kim Grant, Attorney-in-Fact

Zurich Insurance Company Ltd

FINN WAY GENERAL CONTRACTOR INC
ONTARIO CORPORATION

(CCDC 220 – 2002 has been approved by the Surety Association of Canada)

ZURICH

SURETY'S CONSENT / AGREEMENT TO BOND

BOND NO: **6359175-22-05**

WHEREAS **Finn Way General Contractor Inc.** (Principal) has submitted a written tender to **The Corporation of the Township of Ignace** (Obligee) dated the **May 9, 2022**, concerning: **Request for Proposal, IGNACE-RFP-22-01, Design–Build, 20-Unit Apartment Complex in Ignace, ON.**

and the condition of this obligation being such that if the Principal shall have the bid accepted within the time period prescribed in the Obligee's bid documents, or, if no time period is specified in the Obligee's bid documents, within **One Hundred Twenty (120)** days from the closing date as specified in the Obligee's bid documents, we, **Zurich Insurance Company Ltd**, a corporation created and existing under the laws of Canada and duly authorized to transact the business of Suretyship agree to issue for the Principal if the Principal shall enter into a written contract with the Obligee, the following bond(s):

1. a contract performance bond for **Fifty Percent (50%)** of the contract price.

2. a labour and material payment bond for **Fifty Percent (50%)** of the contract price.

This consent shall be null and void unless an application for the said bond(s) is made within thirty (30) days following the award of the contract.

Signed and Sealed May 2, 2022.

Signed electronically by
Zurich Insurance Company Ltd
Kim Grant
on May 02, 2022 - 9:05 PM GMT

Kim Grant, Attorney-In-Fact

Zurich Insurance Company Ltd

Zurich Insurance Company Ltd
Surety Department
400 University Ave., 21st Floor
Toronto, ON M5G 1S7

Zurich Insurance Company Ltd

RE: Notice under Part XIII of the Insurance Companies Act (Canada)

For purposes of the Insurance Companies Act (Canada), this document was issued in the course of Zurich Insurance Company Ltd's insurance business in Canada.

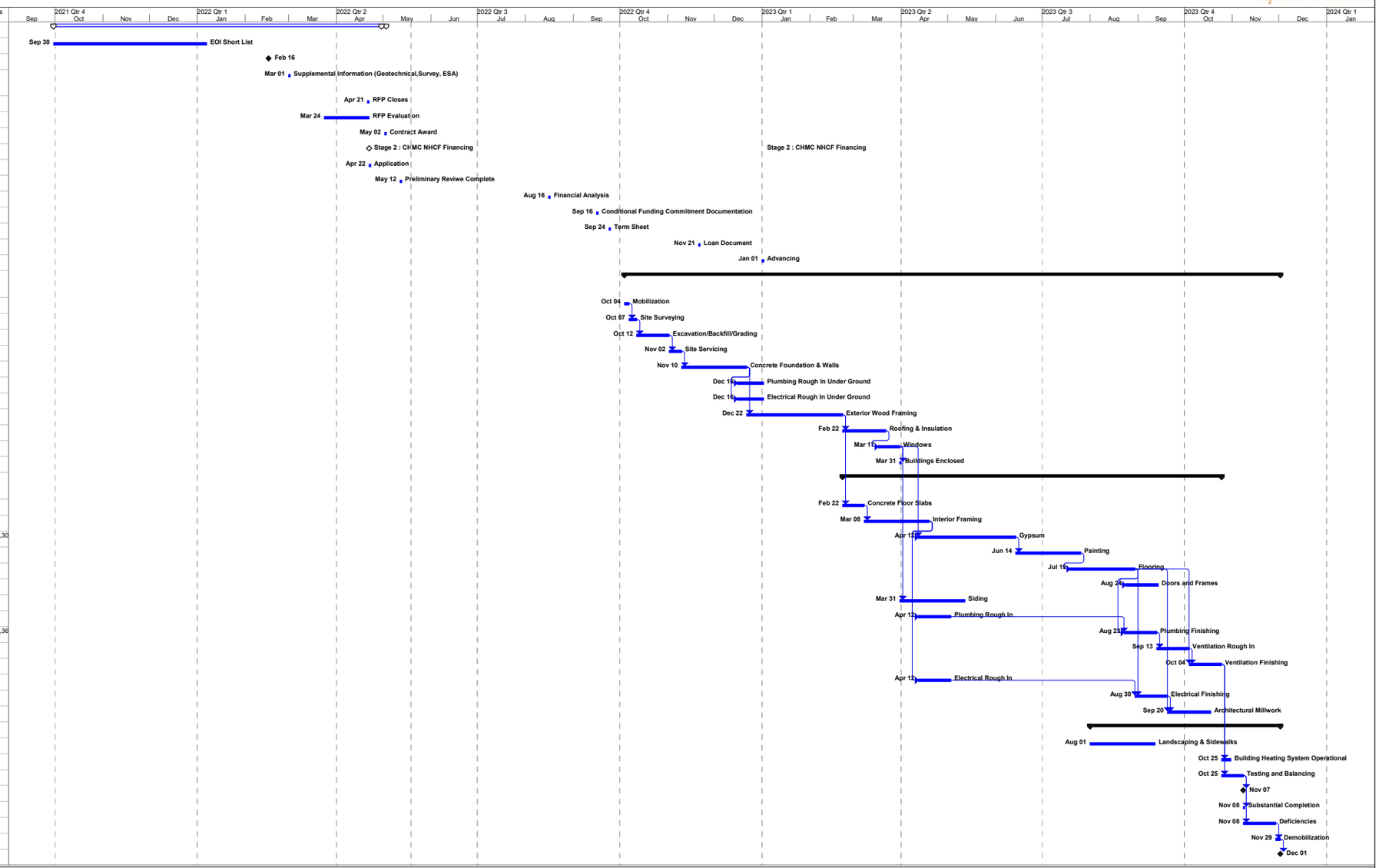
[SCHEDULE]

Design-Build 20-Unit Apartment Complex in Ignace ON

FINN WAY GENERAL CONTRACTOR INC.

IGNACE Explore Our Possibilities

ID	Task Name	Duration	Est Start	Est Finish	Predecessors
1	**Stage 1 : Procrement**	**152 days?**	**Thu 21-09-30**	**Fri 22-04-29**	
2	EOI Short List	71 days	Thu 21-09-30	Thu 22-01-06	
3	RFP Issued to Short-List	0 days	Wed 22-02-16	Wed 22-02-16	
4	Supplemental Information (Geotechnical,Survey, ESA)	1 day	Tue 22-03-01	Tue 22-03-01	
5	RFP Closes	1 day	Thu 22-04-21	Thu 22-04-21	
6	RFP Evaluation	21 days?	Thu 22-03-24	Thu 22-04-21	
7	Contract Award	1 day	Mon 22-05-02	Mon 22-05-02	
8	**Stage 2 : CHMC NHCF Financing**	**1 day**	**Fri 22-04-22**	**Fri 22-04-22**	
9	Application	1 day	Fri 22-04-22	Fri 22-04-22	
10	Preliminary Revive Complete	1 day	Thu 22-05-12	Thu 22-05-12	
11	Financial Analysis	1 day	Tue 22-08-16	Tue 22-08-16	
12	Conditional Funding Commitment Documentation	1 day	Fri 22-09-16	Fri 22-09-16	
13	Term Sheet	1 day	Sat 22-09-24	Sat 22-09-24	
14	Loan Document	1 day	Mon 22-11-21	Mon 22-11-21	
15	Advancing	1 day	Sun 23-01-01	Sun 23-01-01	
16	**Stage 3 : Construction Site & Pre-Enclosed Building Works**	**305 days**	**Tue 22-10-04**	**Fri 23-12-01**	
17	Mobilization	3 days	Tue 22-10-04	Thu 22-10-06	
18	Site Surveying	3 days	Fri 22-10-07	Tue 22-10-11	17
19	Excavation/Backfill/Grading	15 days	Wed 22-10-12	Tue 22-11-01	18
20	Site Servicing	6 days	Wed 22-11-02	Wed 22-11-09	19
21	Concrete Foundation & Walls	30 days	Thu 22-11-10	Wed 22-12-21	20
22	Plumbing Rough In Under Ground	12 days	Fri 22-12-16	Sun 23-01-01	21FS-4 days
23	Electrical Rough In Under Ground	12 days	Fri 22-12-16	Sun 23-01-01	21FS-4 days
24	Exterior Wood Framing	45 days	Thu 22-12-22	Tue 23-02-21	21
25	Roofing & Insulation	20 days	Wed 23-02-22	Tue 23-03-21	24
26	Windows	10 days	Fri 23-03-17	Thu 23-03-30	25FS-3 days
27	Buildings Enclosed	1 day	Fri 23-03-31	Fri 23-03-31	26
28	**Interior/Exterior Building Works & Finishes Both Buildings**	**175 days**	**Wed 23-02-22**	**Tue 23-10-24**	
29	Concrete Floor Slabs	10 days	Wed 23-02-22	Tue 23-03-07	24
30	Interior Framing	30 days	Wed 23-03-08	Tue 23-04-18	29
31	Gypsum	45 days	Wed 23-04-12	Tue 23-06-13	26FS-5 days,30
32	Painting	30 days	Wed 23-06-14	Tue 23-07-25	31
33	Flooring	30 days	Wed 23-07-19	Tue 23-08-29	32FS-5 days
34	Doors and Frames	15 days	Thu 23-08-24	Wed 23-09-13	33FS-4 days
35	Siding	30 days	Fri 23-03-31	Thu 23-05-11	26
36	Plumbing Rough In	15 days	Wed 23-04-12	Tue 23-05-02	30FS-5 days
37	Plumbing Finishing	15 days	Wed 23-08-23	Tue 23-09-12	33FS-5 days,36
38	Ventilation Rough In	15 days	Wed 23-09-13	Tue 23-10-03	37
39	Ventilation Finishing	15 days	Wed 23-10-04	Tue 23-10-24	33,38
40	Electrical Rough In	15 days	Wed 23-04-12	Tue 23-05-02	30FS-5 days
41	Electrical Finishing	15 days	Wed 23-08-30	Tue 23-09-19	33,40
42	Architectural Millwork	20 days	Wed 23-09-20	Tue 23-10-17	33,41
43	**Final Site Works & Completion**	**89 days**	**Tue 23-08-01**	**Fri 23-12-01**	
44	Landscaping & Sidewalks	30 days	Tue 23-08-01	Mon 23-09-11	
45	Building Heating System Operational	4 days	Wed 23-10-25	Mon 23-10-30	39
46	Testing and Balancing	10 days	Wed 23-10-25	Tue 23-11-07	39
47	As-Builts and O&M Manuals Training	0 days	Tue 23-11-07	Tue 23-11-07	46
48	Substantial Completion	1 day	Wed 23-11-08	Wed 23-11-08	46
49	Deficiencies	15 days	Wed 23-11-08	Tue 23-11-28	46
50	Demobilization	3 days	Wed 23-11-29	Fri 23-12-01	49
51	Total Completion	0 days	Fri 23-12-01	Fri 23-12-01	50



Date: Thu 22-05-19

Task	Baseline Milestone	Rolled Up Milestone	Rolled Up Baseline Milestone	Baseline Split	Group By Summary	Manual Task	Manual Summary	External Tasks	Deadline		
Baseline	Summary	Baseline Summary	Rolled Up Progress	External Tasks	Inactive Milestone	Duration-only	Start-only	External Milestone			
Milestone	Rolled Up Task	Rolled Up Baseline	Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Progress			

[APPENDICES]

This is to certify

Nelson Architecture Inc., Architect

is granted a

CERTIFICATE OF PRACTICE

to practise architecture as a

Corporation

by the

ONTARIO ASSOCIATION OF ARCHITECTS

Founded as the successor to the Architectural Guild of Toronto in the year Eighteen hundred and eighty-nine. Incorporated by an Act of the Legislature of Ontario in the year Eighteen hundred and ninety and continued as a Corporation under the Architects Act.

Given under the Corporate Seal of the Association at Toronto this 28th day of August, 2002.

Registrar

Certificate No 3828

RENEWAL POLICY DECLARATIONS

TRAVELERS

The Dominion of Canada General Insurance Company - *the Insurer*
165 University Avenue, Toronto, ON M5H 3B9 travelerscanada.ca

The Dominion of Canada General Insurance Company, St. Paul Fire and Marine Insurance Company and Travelers Insurance Company of Canada are the Canadian licensed insurers known as Travelers Canada.

Number
EOL 2277081

OFFICE CLIP

The named insured
NELSON ARCHITECTURE INC.

Entity
CORPORATION

Location of the premises:
Applicable to all insured locations under this policy unless otherwise stated

Insured's occupancy/operations

POLICY PERIOD FROM: 26 APRIL 2022 TO: 26 APRIL 2023
12:01 a.m. Standard Time at the Mailing Address of the Named Insured as stated herein

---

This Policy insures only the Coverages specifically indicated below.
Reference should be made to the applicable forms or riders for details.

SUMMARY OF COVERAGES AND LIMITS OF INSURANCE

APPLICABLE FORMS	COVERAGES	DEDUCTIBLE ($)	CO-INSURANCE	LIMITS OF INSURANCE ($)	PREMIUM ($)	
	COMMERCIAL GENERAL LIABILITY					
651700	EACH OCCURRENCE	See Below		5,000,000		DEPOSIT
	Property Damage Deductible	1,000				
	PERSONAL & ADVERTISING INJURY			5,000,000		
	MEDICAL EXPENSES - ANY ONE PERSON			10,000		
	GENERAL AGGREGATE			5,000,000		
	TENANTS LEGAL LIABILITY - BROAD FOR	1,000		500,000		
	FUNGI OR SPORES	1,000		250,000		
	PRODUCTS-COMPLETED OPERATIONS AGGRE			5,000,000		
	CONDOMINIUM SPECIAL ASSESSMENT			1,000,000		
653900	VOLUNTARY COMP. - WEEKLY INDEMNITY	0		100		
654300	ADDITIONAL INSURED - MORTGAGEES					
115300	BLANKET WAIVER - SUBROGATION RIGHTS					
774000	EXCLUSION - ACCESS OR DISCLOSURE					
653400	EMPLOYERS' LIABILITY EXTENSION			Included		
653600	EMPLOYEE BENEFITS LIABILITY	1,000		1,000,000		
774200	EXCLUSION - ACCESS OR DISCLOSURE					
652900	NON-OWNED AUTOMOBILE CLIP EXT (ONT)			5,000,000		
	S.E.F. 96, S.E.F. 99			Included		
	LEGAL LIAB DAMAGE HIRED AUTO	1,000		50,000		
	REDUCTION OF COVERAGE - O.E.F.98B			Included		

INSURED'S ORIGINAL

# INDICATES A CHANGE TO FORM WORDINGS. PLEASE READ CAREFULLY.

Pro-Demnity Insurance Company
POLICY NO. 4

Certificate of Insurance

Certificate

Of Insurance No. 0401-36-0148

1. NAMED INSURED — Nelson Architecture Inc., Architect
in its capacity as a holder of a Certificate of Practice

2. PERIOD OF INSURANCE

Inception Date	1 April 2022	12:01 a.m. Standard Time
Expiration Date	1 April 2023	12:01 a.m. Standard Time

at the address shown on the OAA Register as required by Section 27 of the Architects Act.

3. LIMITS OF LIABILITY

Claim Limit	$1,000,000.00
Project Limit	$2,000,000.00
Aggregate Limit	$4,000,000.00

4. DEDUCTIBLE — $25,000.00 each claim

5. FIXED PREMIUM

	$42,779.00
PLAN CREDIT	$0.00
	$42,779.00

6. ENDORSEMENT NO(S) 1-9 Form(s) part of this Certificate of Insurance.

Signed Andrea LaLonde

Authorized Person

Dated April 1, 2022

PD.FORM 2c/03

PETRELA WINTER
BONDING • RISK ADVISORS

NAVACORD®

Tel: (705) 280-6554

Fax: (416) 488-8527

36 York Mills Road, Suite 501

Toronto, ON, M2P 2E9

CERTIFICATE OF INSURANCE UNDERTAKING

DATE: May 2, 2022

TO: **The Corporation of the Township of Ignace**

RE: Finn Way General Contractor Inc. & 1526183 Ontario Ltd.

PROJECT: **Request for Proposal IGNACE-RFP-22-01**
Design-Build Services for a 20-Unit Seniors Apartment Complex,
306, 308, 310 Pine Street, Ignace, ON

To Whom It May Concern:

Our client, Finn Way General Contractor Inc. & 1526183 Ontario Ltd.**,** have advised us of their interest in prequalifying, tendering, or submitting a proposal with respect to the above captioned project.

In this respect we confirm Finn Way General Contractor Inc. & 1526183 Ontario Ltd. carry Liability Insurance covering all operations in the total amount of **$10,000,000.**

We will further confirm that we undertake to provide any additional insurance coverage as may be required by the Contract documents following award of a contract to Finn Way General Contractor Inc. & 1526183 Ontario Ltd.**,** including All Risk Builder's Risk Insurance, Boiler and Machinery, and the specific insurances as set out in the insurance specifications for the project.

Any questions pertaining to this insurance coverage may be directed to the undersigned.

Yours truly,

Jocelyn Horsfall

c.c. Finn Way General Contractor Inc. & 1526183 Ontario Ltd.

Professional Engineers
Ontario

CERTIFICATE OF AUTHORIZATION ANNUAL FEE RECEIPT

Paid To: Aug-31-2022 **Date: Aug-18-2021**

Lavergne Draward & Associates Inc./100052241
200 - 193 Dumoulin Street
Winnipeg MB Canada R2H 0E4

Annual Fee	$400.00
HST	$52.00
Total Paid	$452.00

Johnny F. Zuccon, P.Eng.
CEO/Registrar

H.S.T. R106733066

nelson|architectureinc.

PO BOX 1470, KENORA, ON P9N 0E8
PH 807.468.9442 FAX 807.468.8616
WWW.NELSONARCHITECTURE.COM

FINN WAY
GENERAL CONTRACTOR INC.

1301 WALSH ST., THUNDER BAY, ON P7E 4X6
PH 807.767-2426 FAX 807.468.8616
WWW.FINNWAY.COM