GENERAL

1. THIS SET OF DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE STRUCTURAL SPECIFICATIONS AND WITH THE DRAWINGS AND SPECIFICATIONS FROM ALL OTHER CONSULTANTS. ANY DISCREPANCIES NOTED SHALL BE REPORTED IMMEDIATELY FOR CLARIFICATION.

2. THIS SET OF DRAWINGS SHOWS THE COMPLETED STRUCTURE AND DOES NOT SHOW WORK WHICH MAY BE REQUIRED FOR SAFETY DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR GENERAL SAFETY ON AND ABOUT THE JOB SITE DURING THE CONSTRUCTION PERIOD AND FOR DESIGN AND ERECTION OF ALL FALSEWORK, SHORING, BRACING ETC. TO ENSURE THE SAFETY OF ALL CONSTRUCTION TEMPORARY LOADS AND TO COMPLETE THE WORK. ADHERE STRICTLY TO ALL REQUIREMENTS OF THE WORKERS' COMPENSATION BOARD OF BRITISH COLUMBIA. ALL TEMPORARY WORKS AND SHORING ETC. SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN BRITISH COLUMBIA.

3. ALL CODE REFERENCES ARE TO LATEST EDITIONS AS REFERENCED IN THE NBCC 2010.

4. REFER TO SPECIFICATIONS FOR ALL MATERIAL SPECIFICATIONS AND CODE REFERENCES.

FIELD REVIEW:

1. DEPARTMENTAL REPRESENTATIVE THROUGH CWMM CONSULTING ENGINEERS PROVIDES FIELD REVIEW FOR THE WORK SHOWN ON THE STRUCTURAL DRAWINGS, THIS REVIEW IS A PERIODIC REVIEW AT THE PROFESSIONAL JUDGMENT OF DEPARTMENTAL REPRESENTATIVE, THE PURPOSE IS TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS AND TO FULFILL THE REQUIREMENTS FOR THE COMPLETION OF LETTERS OF ASSURANCE REQUIRED BY THE APPLICABLE BUILDING CODE.

2. ALL NON-CONFORMING WORKS THAT REQUIRE REMEDIAL ACTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY EXTRA TIME OR COST INCURRED TO PWGSC IN RECTIFYING THE WORK SHALL BE BORNE BY THE CONTRACTOR IN ACCORDANCE WITH THE CONTRACT.

3. ENSURE THAT WORK TO BE INSPECTED IS COMPLETE AT THE TIME OF INSPECTION AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ADDITIONAL INSPECTIONS REQUIRED DUE TO THE INCOMPLETE WORK OR POORLY EXECUTED WORK, AS JUDGED BY DEPARTMENTAL REPRESENTATIVE, AS WELL AS ADDITIONAL DESIGN OR REMEDIAL WORK CAUSED BY DEVIATIONS FROM THESE DRAWINGS MAY BE CHARGED TO THE CONTRACTOR.

4. A MINIMUM 48 HOURS NOTICE SHALL BE GIVEN TO THE DEPARTMENTAL REPRESENTATIVE BY THE CONTRACTOR FOR ANY INSPECTION TO BE CARRIED OUT.

NON-STRUCTURAL COMPONENTS:

1. NON-STRUCTURAL COMPONENTS OF THE PROJECT ARE DESIGNED, DETAILED, SPECIFIED AND REVIEWED IN THE FIELD BY OTHERS. LETTERS OF CERTIFICATION OF ADEQUACY, INSTALLATION ETC. OF SUCH COMPONENTS ARE BY OTHERS.

2. MANUFACTURERS OF NON-STRUCTURAL COMPONENTS WHICH AFFECT THE STRUCTURAL FRAMING SHALL SUBMIT SHOP DRAWINGS TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW. THE SHOP DRAWINGS SHALL CLEARLY INDICATE LOADS IMPOSED ON THE STRUCTURE. REVIEW WILL BE LIMITED TO THE EFFECT OF THE COMPONENTS ON THE STRUCTURAL FRAMING.

3. EXAMPLES OF NON-STRUCTURAL COMPONENTS INCLUDE, BUT ARE NOT LIMITED TO:

- ARCHITECTURAL COMPONENTS SUCH AS HANDRAILS, GUARDRAILS, RAILINGS, FLAG POST, REMOVABLE CANOPIES, CEILINGS, VEHICLE PROTECTION SYSTEMS, ORNAMENTAL COMPONENTS, ETC.
- ARCHITECTURAL PRECAST CONCRETE AND ITS ATTACHMENTS.
- ARCHITECTURAL GLASS BLOCKS AND THEIR ATTACHMENTS.
- BRICK AND BLOCK VENEERS, THEIR REINFORCING IF ANY AND TIES
- LANDSCAPING COMPONENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS, ETC.
- CURTAIN WALL SYSTEMS, CLADDING, SKYLIGHT, WINDOW MULLIONS, ETC.
- INTERIOR AND EXTERIOR NON-LOAD BEARING STEEL STUD WALLS.
- SUPPORT AND BRACING OF MECHANICAL AND ELECTRICAL SYSTEMS AND EQUIPMENTS FOR NON-GRAVITY AND SEISMIC LOADS.
- WINDOW WASHING EQUIPMENTS AND ITS ATTACHMENT.
- ELEVATORS, ESCALATORS AND OTHER CONVEYING SYSTEMS, INCLUDING PROPRIETARY SUPPORT BEAMS AND THEIR ATTACHMENTS.
- NON-STRUCTURAL MASONRY.

EXISTING STRUCTURES:

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY ALL RELEVANT DIMENSIONS TO

   AND OF EXISTING STRUCTURES. NOTIFY DEPARTMENTAL REPRESENTATIVE IMMEDIATELY IF DISCREPANCIES ARE NOTED.

2. THE CONTRACTOR SHALL AT HIS OWN EXPENSE REPAIR AND MAKE GOOD ANY DAMAGE TO THE EXISTING STRUCTURE, EQUIPMENT AND FINISHES CAUSED BY THE CONSTRUCTION ACTIVITIES. REPAIRS SHALL BE TO THE SATISFACTION OF THE ARCHITECT.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY SUPPORT OF ANY ADJACENT EXISTING STRUCTURES DURING CONSTRUCTION. UNDERPINNING OR BRACING SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL AREA. SUBMIT 4 COPIES OF SIGNED AND SEALED DESIGN DRAWINGS TO DEPARTMENTAL REPRESENTATIVE FOR REVIEW OF CONFORMANCE WITH GENERAL DESIGN CRITERIA.

DESIGN LOADS:

1. THIS STRUCTURE HAS BEEN DESIGNED FOR SNOW, WIND AND SEISMIC FORCES IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN THE NBCC 2010.

GROUND SNOW: Ss = 2.0 kPa
RAIN LOAD: Sr = 0.3 kPa

IMPORTANCE FACTORS FOR SNOW Is = 1.0 FOR STRENGTH
Is = 0.9 FOR SERVICEABILITY

WIND LOAD: PROBABILITY 1/50 = 0.44 kPa

IMPORTANCE FACTORS FOR WIND Iw = 1.0 FOR STRENGTH
Iw = 0.75 FOR SERVICEABILITY

EARTHQUAKE FACTORS:

Sa(0.2)	Sa(0.5)	Sa(1.0)	Sa(2.0)
0.98	0.66	0.32	0.17

I_E = 1.0 FOR STRENGTH

I_E = 1.0 FOR SERVICEABILITY

(CLAUSE 4.1.8.13 FOR SERVICEABILITY)

F_a = 1.0 F_v = 1.0

R_d = 3.0 R_o = 1.7

SITE CLASS C

2. SPECIFIED UNIFORM SUPERIMPOSED DEAD LOADS ON ROOF AND FLOORS:

GROUND FLOOR	1.0 kPa
2nd FLOOR	2.0 kPa
ROOF	0.75 kPa

- UPPER FLOORS AND MAIN FLOOR LOADS INCLUDE GENERAL PARTITION LOAD OF 1.0kPa AND NON-STRUCTURAL CONCRETE TOPPING. FOR MASONRY PARTITIONS, ACTUAL WEIGHTS SHALL BE USED.
- THESE LOADS DO NOT INCLUDE SELFWEIGHT OF STRUCTURE, SELFWEIGHT OF MASONRY PARTITIONS, WEIGHTS OF MECHANICAL EQUIPMENT AND CONCRETE EQUIPMENT PADS.

3. SPECIFIED UNIFORM LIVE LOADS ON FLOORS:

GROUND FLOOR		4.8 kPa
2nd FLOOR	ADMINISTRATION AREA	2.4 kPa
	BEDROOM AREA	1.9 kPa
	STORAGE AREA	4.8 kPa
	CORRIDOR	4.8 kPa

4. DESIGN SPECIFIED CONCENTRATED LIVE LOADS ON ROOF: 1.3 kN

5. WORST CASE OF UNIFORM OR CONCENTRATED LIVE LOADS WILL BE USED FOR DESIGN OF STRUCTURAL MEMBERS.

CONSTRUCTION LOADS:

1. CONSTRUCTION LOADS ON COMPLETED FLOORS MUST NOT EXCEED THE LOAD CARRYING CAPACITY OF FLOOR AT THE TIME OF THE LOADING UNLESS IT IS PROPERLY SHORED TO SUPPORT THE INTENDED LOAD. MOVING OF HEAVY EQUIPMENT AND PILING UP OF MATERIAL SHALL NOT BE PERMITTED UNLESS DESIGNED SHORING IS IN PLACE.

2. SHORING DESIGN BY CONTRACTOR. INFORM CWMM CONSULTING ENGINEERS LTD. PRIOR TO LOAD APPLICATION.

FOUNDATION AND SITE WORK

1. REFER TO GEOTECHNICAL REPORT PREPARED BY KLOHN CRIPPEN BERGER LTD. (DECEMBER 10, 2010 & SUPPL.) AND STANTEC CONSULTING ENGINEERS DATED DEC. 01, 2011 AND ALL ITS SUPPLEMENTS AND AMENDMENTS FOR EXCAVATION, BACKFILLING, FILL MATERIALS, COMPACTION, FROST PROTECTION AND OTHER SITE PREPARATION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS.

2. DESIGN SOIL BEARING CAPACITIES
PAD FOOTINGS & STRIP FOOTINGS SLS = 150 kPa ULS = 250 kPa

3. THE SOIL BEARING CAPACITY AND THE DESIGN SOIL LATERAL PRESSURE SHALL BE VERIFIED AND CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO USE FOR ANY SPECIFIC PROJECT.

4. ANY FOOTING ELEVATIONS INDICATED ON THE DRAWINGS ARE GENERAL AND SHALL BE USED FOR ESTIMATING AND BIDDING PURPOSES. FOOTINGS MAY HAVE TO BE PLACED AT DIFFERENT ELEVATIONS AS A RESULT OF LOCAL SOILS CONDITIONS, UNDERGROUND SERVICES AND TO ACCOMMODATE OTHER MECHANICAL AND ELECTRICAL SERVICES. FOLLOW TYPICAL DETAILS SHOWN ON THESE DRAWINGS FOR FOOTING PLACEMENT RELATIVE TO ADJACENT FOOTINGS, SUMP AND OTHER EXCAVATED STRUCTURES AND LOCATE AS DIRECTED BY GEOTECHNICAL ENGINEER.

5. THE BASES OF FOUNDATIONS SHALL BE PROTECTED FROM RAIN, SNOW AND ANY WATER INFILTRATION.

6. NO FOUNDATIONS MAY BE POURED BEFORE THE BEARING MATERIAL HAS BEEN INSPECTED.

7. IMMEDIATELY AFTER INSPECTION AND APPROVAL BY THE DEPARTMENTAL REPRESENTATIVE. THE BEARING SURFACE SHALL BE COVERED BY A 50mm THICK CONCRETE GROUND SEAL OF 10MPa STRENGTH.

8. COORDINATE CONSTRUCTION WITH UNDERSLAB SERVICES AS SHOWN ON MECHANICAL, ELECTRICAL, ARCHITECTURAL AND LANDSCAPING DRAWINGS.

9. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SITE DRAINAGE, GROUND ELEVATIONS AND DRAINAGE SLOPES.

10. CENTRE ALL FOOTINGS UNDER COLUMNS OR WALLS UNLESS NOTED OTHERWISE.

11. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR WATERPROOFING AND SEALING REQUIREMENTS.

12. DO NOT BACKFILL RETAINING WALLS INCLUDING PERIMETER BASEMENT WALLS BEFORE THEY ARE ADEQUATELY SUPPORTED BY THE SUPPORTING FLOOR(S). ALL CONCRETE SUPPORTING FLOORS MUST HAVE CURED FOR MINIMUM 7 DAYS OR ATTAINED MINIMUM 75% OF THEIR 28-DAYS STRENGTH. ALL BACKFILLING TO COMPLY WITH THE REQUIREMENTS PROVIDED BY THE GEOTECHNICAL ENGINEER.

REINFORCED CONCRETE :

1. REFER TO SPECIFICATIONS FOR CONCRETE STRENGTH, EXPOSURE CLASS & OTHER REQUIREMENTS.

2. REINFORCING BARS f_y=400 MPa. ALL DOWELS ANCHOR BOLTS AND INSERTS SHALL BE PLACED BEFORE THE CONCRETE IS POURED.

3. PROVIDE MINIMUM CONCRETE COVER TO REINFORCEMENT AS FOLLOWS:

CAST AGAINST EARTH	75mm
EXPOSED TO EARTH OR WEATHER:	50mm
ELSEWHERE:	40mm

4. UNLESS NOTED OTHERWISE, PROVIDE MINIMUM SPLICE LENGTHS TO REINFORCEMENT AS FOLLOWS:

10M	450mm
15M	600mm
20M	750mm

WOOD PRODUCTS

1. REFER TO SPECIFICATIONS FOR TIMBER GRADE, CODE REFERENCES AND OTHER REQUIREMENTS.

2. PROVIDE 2x BLOCKING AT MIDHEIGHT OF STUDS OVER 2400 IN HEIGHT.

3. 2x SOLID BLOCK SHALL BE PLACED BETWEEN ALL JOISTS AND RAFTERS AT SUPPORTS

4. PLACE 2x SOLID BLOCK OR METAL CROSS BRIDGING OF EQUAL STRENGTH AS FOLLOWS:
- ROOF JOIST OVER 185 NOMINAL DEPTH AND OVER 3000 SPAN, SPACE BRIDGING AT 3000 O/C OR PLACE AT MIDSPAN IF SPAN LESS THAN 6000.

5. DOUBLE UP ALL TRIMMER JOISTS AROUND ALL ROOF OPENING, I.E.,CHIMNEY ETC.

6. ALL FLUSH FRAMED MEMBERS TO BE SECURED WITH APPROVED METAL JOIST HANGER.

7. NAILS SHALL BE PLACED NOT LESS THAN 9mm FROM THE PANEL EDGE AND SHALL NOT BE OVER-DRIVEN MORE THAN 15% OF THE PANEL THICKNESS.

ABBREVIATIONS

A.BOLT	ANCHOR BOLT	L.V.	LENGTH VARIES
ALT.	ALTERNATE	LG.	LONG
ARCH.	ARCHITECTURAL	LL	LOW LEVEL
BLDG.	BUILDING	LLV	LONG LEG VERTICAL
BOT.	BOTTOM	LLH	LONG LEG HORIZONTAL
BTW.	BETWEEN	LONG.	LONGITUDINAL
C/C	CENTER TO CENTER	MAX.	MAXIMUM
C/W	COMPLETE WITH	MECH.	MECHANICAL
C.I.P.	CAST IN PLACE	MIN.	MINIMUM
CANT.	CANTILEVER	N/A	NOT AVAILABLE
CL.	CLEAR	N.S.	NEAR SIDE
COL.	COLUMN	N.STUD	NELSON STUD
CONC.	CONCRETE	N.T.S.	NOT TO SCALE
CONT.	CONTINUOUS	O/C	ON CENTRES
DL	DEAD LOAD	OPP.	OPPOSITE HAND
DN	DOWN	OWSJ	OPEN WEB STEEL JOIST
DO.	DITTO	P.C.	PRECAST CONCRETE
DP.	DEEP	PL	PLATE
DWG.	DRAWIING	PLY.	PLYWOOD
E.W.	EACH WAY	PROJ.	PROJECTION
E.F.	EACH FACE	R/W	REINFORCED WITH
ELEC.	ELECTRICAL	R/C	REINFORCED CONCRETE
ELEV.	ELEVATION	S.O.G.	SLAB ON GRADE
EXIST.	EXISTING	SIM.	SIMILAR
EXT.	EXTERIOR	STAGG.	STAGGERED
FL	FLOOR	T&B	TOP AND BOTTOM
F.S.	FAR SIDE	T&G	TONGUED & GROOVED
FDN.	FOUNDATION	T.O.C/S	TOP OF CONCRETE/STEEL
FTG.	FOOTING	THK.	THICK
G.L.	GRID LINE	TJ	TIE JOIST
GALV.	GALVANIZED	TRAN.	TRANSVERSE
H1E	HOOK ONE END	TYP.	TYPICAL
H2E	HOOK TWO ENDS	U/S	UNDERSIDE
HL	HIGH LEVEL	U.N.O.	UNLESS NOTED OTHERWISE
HORIZ.	HORIZONTAL	VERT.	VERTICAL
INT.	INTERIOR		

DRAWING LIST

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA L. K. S. LAM

NOV 2 8 2012

11704

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Pacific Region
SERVICES IMMOBILIERS
Région de Pacifique

CWMM CONSULTING ENGINEERS LTD.
1412 West 7th Ave.
Vancouver, B.C.
Canada, V6H 1C1
Tel: (604) 731-8584
Fax: (604) 738-5110
engineer@cwmm.com

1	ISSUED FOR TENDER	SEP 13 2012
Revision/ Revision	Description/Description	Date/Date

Client/client

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet

FRASER VALLEY INSTITUTION
33344 KING ROAD, ABBOTSFORD, Bc

TWENTY BED LIVING UNIT

Consultant Approval Box Only

Designed by/Concept par
LL

Drawn by/Dessine par
LH

PWGSC Project Manager/Administrateur de Projets TPSGC
Patrick Truong

PWGSC, Regional Manager, Architectural and Engineering Services/ Gestionnaire régionale, Services d'architectural et de génie, TPSGC

Drawing title/Titre du dessin

GENERAL NOTES

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
R.052462.001	S101	

0 10 20 30 40 50 60 70 80 90 100mm