



INDIAN HEAD AAFC BUILDING B017 ADDITION

INDIAN HEAD, SASKATCHEWAN

NOTES:

Issue Record:
2015.04.07/Issued For Preliminary Budgeting Purposes Only

Revisions:
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GENERAL NOTES

Designed By: PTM Scale: AS INDICATED
Drawn By: - Date: JUNE 2015
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S5.4

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GENERAL NOTES:					
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1. CONTRACTOR IS TO CHECK AND VERIFY ALL SITE CONDITIONS, DIMENSIONS, REPORT ANY VARIANCES ON OR AGAINST THE DRAWINGS TO THE ENGINEER.					
2. CONTRACTOR IS TO CONFIRM ALL BUILDING GRADE ELEVATIONS ON SITE AGAINST THE DRAWINGS.					
3. CONTRACTOR IS TO OBTAIN APPROVAL FROM THE GOVERNING JURISDICTION AND OBTAIN A BUILDING PERMIT.					
4. CONSTRUCTION IS TO BE IN FULL COMPLIANCE WITH THE NATIONAL BUILDING CODE (2005).					
5. ENGINEER IS ENGAGED BY THE OWNER, NOT THE CONTRACTOR TO PROVIDE PERIODIC INSPECTIONS AND IS THUS TAKING RESPONSIBILITY FOR DESIGN AND FOR CONSTRUCTION IN PLACE.					
6. ANY CHANGES TO THE BUILDING STRUCTURE OR LAYOUT REQUIRES THE ENGINEERS REVIEW.					
7. THE CONCRETE SLAB ON GRADE IS "FLOATING" ON COMPACTED GRANULAR BASE ON THE UNDERLYING UNDISTURBED SOIL, &/OR COMPACTED FILL MATERIAL AND IS SUSCEPTABLE TO DIFFERENTIAL VERTICAL MOVEMENT WHICH MAY RESULT IN VERTICAL DISPLACEMENT OF 3" OR MORE AND SEVERE CRACKING TO THE FLOOR SLAB. INTERIOR PARTITION FRAMING SHOULD HAVE A MINIMUM OF 3" FLOAT SPACE IN ITS CONSTRUCTION.					
8. CONTRACTOR IS TO GUARD AGAINST: EXCESSIVE DRYING OR WETNESS OF THE EXCAVATION PRIOR TO POURING CONCRETE SLABS & FOOTINGS; FREEZING OF EXCAVATED BASE; AND FREEZING OF CONCRETE ONCE IN PLACE.					
9. GEOTECHNICAL ENGINEERING REPORT PROPOSED A6 CANADA MAINTENANCE BUILDING ADDITION 66 FILE No.1518 PREPARED BY GROUND ENGINEERING LTD. MARCH 27/ 2015 IS THE BASIS FOR FOUNDATION DESIGN CRITERIA. OWNER IS REQUIRED TO CONTACT GEOTECHNICAL ENGINEER TO INSPECT THE SITE DURING EXCAVATION, TAKING SOIL SAMPLES AND CONDUCTING LABORATORY TESTING AS NECESSARY TO AFFIRM SUITABILITY OF FOUNDATION SOLUTION AND ITS DESIGN VALUES. OWNER IS TO CO-ORDINATE THE GEOTECHNICAL ENGINEER WITH THIS ENGINEER AND MAKE AVAILABLE THE GEOTECHNICAL ENGINEER FINDINGS FOR THIS ENGINEERS RE-EVALUATION OF FOUNDATION DESIGN IF NECESSARY.					
1. FOUNDATIONS					
1. ALL NEW STRUCTURAL WORK, INCLUDING REQUIREMENTS FOR WIND, HAS BEEN DESIGNED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE 2005.					
2. ALL CONCRETE STRENGTHS SPECIFIED ON PLAN ARE FOR STRUCTURAL REQUIREMENTS ONLY. CONCRETE MIX TO BE DESIGNED WITH A MAXIMUM PERMISSIBLE CEMENT-WATER RATIO IN ACCORDANCE TO WITH TABLE 7 OF CSA CAN3-A23.1-M90					
3. ALL FOUNDATIONS SHALL BE SYMMETRICAL UNDER COLUMNS AND WALLS UNLESS OTHERWISE NOTED.					
4. REINFORCING STEEL IN FOUNDATIONS TO BE CSA G30.18 DEFORMED BARS. GRADE 600					
5. BACKFILL BELOW SLAB-ON-GRADE TO BE GRANULAR MATERIALS COMPACTED TO 98% STANDARD PROCTOR DRY DENSITY. RESULTS OF COMPACTION TO BE REPORTED TO THIS OFFICE. ALSO SEE SOIL REPORT FOR RECOMMENDATIONS. DO NOT USE ADMIXTURES OTHER THAN AIR ENTRAINMENT. STANDARD WATER REDUCERS, OR SUPER PLASTICIZERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.					
7. DO NOT ADD WATER TO THE CONCRETE ON SITE UNLESS AUTHORIZED BY THE ENGINEER.					
8. INSTALL CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.					
9. CONCRETE TESTING (AS SPECIFIED IN SECTION 03300)					
TEST CONCRETE IN ACCORDANCE WITH CSA A23.2.					
TYPE/LOCATION	STRENGTH F _c (MPa)	CEMENT SYMBOL	ACGREG MAX 9mm	SLUMP mm	TOTAL AIR %
Grade Beams	32	50	20	75±25	4-7
Grade Supported Slabs *1	32	50	20	50-75	4-7
Piles	32	50	20	75±25	4-7
CONCRETE STRENGTH FOR ALL CONCRETE INTERFACED WITH SOIL SHALL HAVE 32MPa STRENGTH TO SATISFY CSA REQUIREMENTS WHEN SOILS GEOTECHNICAL REPORT SPECIFIES SULPHATE RESISTANT CONCRETE.					
(*1) CONCRETE FLOOR SLABS, EXTERIOR WALKS, PATIOS, ETC. THAT ARE SUPPORTED BY A GRANULAR BASE, IE, NOT DIRECTLY ON NATIVE SOIL. CONCRETE STRENGTH SHALL BE 25MPa, WHERE FLAT SLAB CONCRETE IS BEARING DIRECTLY ON NATIVE SOIL. 32MPa CONCRETE STRENGTH IS REQUIRED WHEN SOILS GEOTECHNICAL REPORT SPECIFIES SULPHATE RESISTANT CONCRETE.					
10. CONSOLIDATE ALL CONCRETE USING MECHANICAL VIBRATORS.					
11. PROTECT CONCRETE FROM ADVERSE WEATHER CONDITIONS IN ACCORDANCE WITH CSA A23.1 OR AS DETERMINED BY THE ENGINEER.					
12. CONSTRUCT FORMWORK IN ACCORDANCE WITH WCB REGULATIONS AND CSA S269.3. FORMWORK DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR					
13. PROVIDE CONCRETE AND CO-OPERATE IN THE PREPARATION OF TEST CYLINDERS. TAKE THREE CYLINDERS FOR EVERY 75 CU METERS OR LESS OF CONCRETE PLACED. MINIMUM ONE TEST OF THREE CYLINDERS FOR EACH POUR.					
14. PLACE REINFORCEMENT TO CSA A23.1. TIE ALL BARS SECURELY IN PLACE TO PREVENT DISPLACEMENT. SUPPORT SLAB REINFORCEMENT ON SUITABLE CHAIRS OR SUPPORTS AT MAXIMUM 4 FT CENTERS. PROVIDE CORNER BARS TO MATCH HORIZONTAL BEAM REINFORCEMENT.					
15. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES IN SOIL CONDITIONS DURING PILING AND EXCAVATION.					
16. CENTER PILES UNDER COLUMNS OR WALLS UNLESS NOTED OTHERWISE ON DWGS.					
17. TIE ALL DOWELS AND ANCHOR BOLTS IN PLACE BEFORE POURING CONCRETE. USE TEMPLATES TO ENSURE CORRECT PLACEMENT.					
18. SEE ARCHITECTURAL DRAWINGS FOR GROUND ELEVATIONS AND DRAINAGE SLOPES.					
19. SEE SITE PLAN FOR EXTERIOR CONCRETE ELEVATIONS.					

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ALL THREADED ROD ANCHORS SHALL CONFORM TO ASTM SPECIFICATION A36, Fy=248 MPA (36 KSI).

ANCHOR BOLT TYPES MAY BE SELECTED BY THE CONTRACTOR AS PER THE FOLLOWING CRITERIA AND THE REQUIREMENTS OF DIVISION 6.1 – CHEMICALLY TREATED WOOD AND CORROSION OF CONNECTORS AND FASTENERS.

TYPE OF ANCHORAGE	TYPE OF ANCHOR
POST & COLUMN BASES	CIP, EXPANSION* OR EPOXY
LEGGERS TO CONCRETE OR CMU	CIP, EXPANSION* OR EPOXY
WALL TIES TO CONCRETE OR CMU	CIP OR EPOXY
MUDSILL TO FOUNDATION	CIP, EXPANSION* OR EPOXY
HOLD-DOWN TO FOUNDATION	CIP OR EPOXY
HIGH-STRENGTH ANCHORAGE	CIP
EQUIPMENT ANCHORAGE	CIP OR EPOXY

* EXPANSION ANCHORS MAY NOT BE USED WHERE THE ANCHOR IS EXPOSED TO EARTH OR WEATHER

DIVISION 6B: TIMBER

FRAMING LUMBER SHALL BE KILN-DRIED OR MC-19 AND GRADED AND MARKED IN CONFORMANCE WITH NLGA STANDARD GRADING RULES FOR CANADIAN LUMBER, LATEST EDITION, AND FURNISHED TO THE STANDARDS INDICATED ON THE PLANS, SCHEDULES AND DETAILS. THE DESIGN SHOWN IN THESE DRAWINGS IS BASED ON THE 'ENGINEERING DESIGN IN WOOD' MANUAL (CAN/CSA-086-01) PUBLISHED BY CSA, LATEST EDITION. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME SPECIES AND GRADE AS MEMBERS CONNECTED.

MANUFACTURED LUMBER PRODUCTS SPECIFIED IN THESE DRAWINGS ARE BASED ON LUMBER MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALL JOIST HANGERS AND OTHER HARDWARE NOT SHOWN SHALL BE DESIGNED AND SUPPLIED BY THE MANUFACTURER. PROVIDE P. ENG. SEAL FOR THE PROVINCE IN WHICH THE PROJECT IS LOCATED FOR DESIGN OF MEMBERS ON SHOP DRAWINGS.

THE FOLLOWING LUMBER PRODUCTS SHALL BE MANUFACTURED TO AND EVALUATED FOR CHARACTERISTIC VALUES IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D5456. EASY-CECE SHALL BEAR THE MARK OF CERTIFICATION ORGANIZATION (CO) INDICATING CERTIFICATION BY THE CO AS MEETING THE APPLICABLE REQUIREMENTS OF CLAUSES 19.4.2 TO 13.4.6 IN THE 'ENGINEERING DESIGN IN WOOD' MANUAL (CAN/CSA-086-01) PUBLISHED BY THE CSA.

STRUCTURAL COMPOSITE LUMBER PRODUCTS

1. PARALLEL STRAND LUMBER (PSL). ADHESIVES USED IN THE MANUFACTURE OF STRUCTURAL COMPOSITE LUMBER SHALL CONFORM TO CSA STANDARD 0112.6, 0112.7 OR 0112.9.

ALL COMMON WIRE NAILS AND SPIKES, BOX NAILS, THREADED HARDENED-STEEL NAILS AND SPIKES AND STAPLES SHALL CONFORM TO THE NOMINAL SIZES SPECIFIED IN CSA B11-1974. ALL NAILS SPECIFIED ON THESE DRAWINGS, EITHER DRIVEN WITH A HAMMER OR PNEUMATIC DEVICE, SHALL BE COMMON WIRE NAILS WITH THE PROPERTIES SHOWN ON THE FOLLOWING TABLE:

PENNY-WEIGHT	8d	10d	12d	16d	20d
DIAMETER (INCHES) ¹	0.113	0.148	0.148	0.148	0.192
LENGTH (INCHES)	2½	3	3½	3½	4

NOTES:

1. TABULATED DIAMETERS APPLY TO NAILS PRIOR TO ANY PROTECTIVE COATING

FABRICATION AND INSTALLATION OF TIMBER FASTENERS SHALL CONFORM TO THE 'ENGINEERING DESIGN IN WOOD' MANUAL (CAN/CSA-086-01) PUBLISHED BY THE CSA, LATEST EDITION. DRILLED HOLES IN WOOD MEMBERS (EXCLUDING MFR. PLYWOOD WEB JOISTS) SHALL BE AS SHOWN IN THE FOLLOWING TABLE:

FASTENERS	LEAD HOLE DIAMETER	SHANK HOLD DIAMETER D-½s" TO D+½s"
BOLTS ⁴	-	D
LAG SCREWS ^{2,3,4}	0.7D	0.88D
WOOD SCREWS ³	0.88D	
NAILS (PRE-DRILLED ONLY)	0.75D	

NOTES:

1. 'D' INDICATES THE SHANK DIAMETER OF THE FASTENER. D SHALL NOT EXCEED 1". D_r INDICATES THE ROOT DIAMETER.
2. THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF THE UNTHREADED SHANK.
3. LAG AND WOOD SCREWS SHALL BE INSTALLED BY TURNING OF A WRENCH OR SCREW DRIVER; NOT DRIVEN WITH A HAMMER.
4. ALL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A307, Fy = 248 MPA (36 KSI). LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1. WASHERS SHALL BE PLACED UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

WOOD CONSTRUCTION CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE 'STRONG-TIE' OR SIMILAR COMPANY, AS SPECIFIED IN THEIR CATALOG (LATEST EDITION). PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

UNLESS NOTED OTHERWISE, TYPICAL CONNECTIONS SHALL CONFORM TO THE FOLLOWING:

CONNECTION	MINIMUM LENGTH OF NAILS	MINIMUM NUMBER OR MAXIMUM SPACING
JOIST TO SILL OR BEAM, TOENAIL	3½"	2
BRIDGING TO JOIST, TOENAIL EACH END	2½"	2
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL TYP.	3½"	16" o/c
STUD TO PLATE (TOP OR SOLE) EACH END	TOENAIL	2½"
	END NAIL	3½"
BLOCKING BETWEEN JOISTS TO TOP PLATE, TOENAIL	2½"	3
RIM JOIST TO TOP PLATE, TOENAIL	2½"	6" o/c
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	3½"	2

STUD WALL FRAMING SHALL BE 2x4 HF #2 STUDS AT 16" o.c. AT INTERIOR WALLS AND 2x6 HF #2 STUDS @ 16" o.c. AT EXTERIOR WALLS WHERE INDICATED ON DRAWINGS. STUD WALLS SHALL HAVE DOUBLE 2x TOP PLATES AND 2x SOLE OR SILL PLATES MATCHING STUD SIZE, SPECIES AND GRADE. ALL LOWER WOOD SOLE PLATES SHALL BE ATTACHED TO WOOD FRAMING BELOW WITH SIMPSON S05S25412 SCREWS @ 12" o.c.

TWO STUDS (MINIMUM) SHALL BE PROVIDED AT THE ENDS OF WALLS, AT EACH SIDE OF ALL OPENINGS, AND AT THE ENDS OF ALL BEAMS AND HEADERS. POSTS OF BUILT-UP 2x STUDS SHALL BE NAILED TO EACH OTHER PER THE POST SCHEDULE. SOLID BLOCKING FOR WOOD POSTS SHALL BE PROVIDED THROUGH ALL FLOORS TO SUPPORTING MEMBERS (FOUNDATION) BELOW. (2) 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS.

FOR MANUFACTURED LUMBER ROOF FRAMING, ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS, STIFFENERS, ETC. SHALL BE DETAILED AND FURNISHED BY THE MANUFACTURER. INSTALLATION OF THE ABOVE ITEMS SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST SPAN AND AROUND ALL OPENINGS.

WALL SHEATHING SHALL BE IN CONFORMANCE WITH CLAUSE 7 OF 'THE ENGINEERING DESIGN IN WOOD' MANUAL (CAN/CSA-086-01) AND CSA STANDARD 0121 (FOR DOUGLAS-FIR PLAYWOOD) OR CSA STANDARD CAN/CSA-0925.0 (FOR CONSTRUCTION SHEATHING OSB). SEE PLAN NOTES AND SCHEDULES FOR THICKNESS, SPAN RATING, BLOCKING AND NAILING REQUIREMENTS.

ALL WOOD SILL PLATES IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE. PROVIDE 2 LAYERS OF ASPHALT-IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGES, BLOCKING, ETC. AND CONCRETE OR MASONRY.

WOOD SILL PLATES SHALL BE BOLTED TO CONCRETE WITH ½" DIAMETER ANCHOR BOLTS (EMBED 4" MIN.) AT 4'0" o.c. WITH 3x3 PLATE WASHERS. THERE SHALL BE A MINIMUM OF (2) BOLTS PER PIECE WITH (1) BOLT LOCATED NOT MORE THAN 12" OR LESS THAN (7) BOLT DIAMETERS FROM EACH END OF EACH PIECE.

DIVISION 6.1: CHEMICALLY TREATED WOOD AND CORROSION OF CONNECTORS AND FASTENERS

WOOD MATERIALS REQUIRED TO BE TREATED WITH A PRESERVATIVE PER NBC CLAUSE 9.3.2.9; SHALL BE TREATED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA 080.1, CSA 080.2, CSA 080.9, CSA 080.15, CSA 080.34, OR CSA 080.36. SUCH WOOD MATERIAL SHALL BE IDENTIFIED BY A MARK TO INDICATE ITS CONFORMANCE TO THE RELEVANT REQUIRED STANDARD.

TIMBER CONNECTORS AND FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED OR FIRE-RETARDANT TREATED WOOD MEMBERS SHALL BE HOT-DIPPED ZINC COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.

A BARRIER BETWEEN PRESERVATIVE-TREATED OR FIRE RETARDANT TREATED MEMBERS CAN BE USED WHEN APPROVED BY THE ENGINEER AND ARCHITECT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTION OF THE APPROPRIATE CONNECTOR AND FASTENER COATING BASED ON THE INTENDED END USE OF THE CONNECTOR OR FASTENER AND THE CHEMICAL PRESERVATIVE USED IN THE TREATMENT OF MEMBER FOR WHICH IT IS IN CONTACT.

THE FOLLOWING TABLE SHALL BE USED FOR SELECTION OF CONNECTORS BASED ON GALVANIZED COATING OR STAINLESS STEEL. FASTENERS USED SHALL BE MADE OF THE SAME MATERIAL AS THE CONNECTOR.

CHEMICAL PRESERVATIVE	PRODUCT COATINGS	0.960 oz/sf (90)	1.85 oz/sf (185) HDG PER ASTM A653, A153 OR A123	STAINLESS STEEL
UNTREATED WOOD SBX CCA-C		YES	YES	YES
ACQ-C & ACQ-D CBA-A & CA-B NON-DOT		NO	YES	YES
ACZA		NO	NO	YES

NOTES:

1. SBX = DOT SODIUM BORATE
CCA-C = CHROMIATED COPPER ARSENATE
ACQ-C & ACQ-D = ALKALINE COPPER QUAT
CBA-A & CA-B = COPPER AZOTE
NON-DOT = OTHER BORATE
ACZA = AMMONIACAL COPPER ZINC ARSENATE