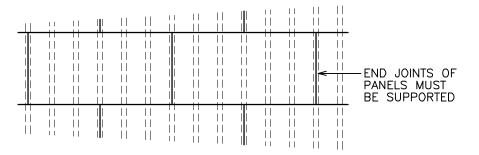
WOOD FRAMING CONTINUED **SHEATHING** SLOPED ROOF (SLOPE > 15%) 1/2" PLYWOOD WITH H-CLIPS AT 1. A. <u>ROOF SHEATHING</u> UNSUPPORTED JOINTS. FLAT ROOF (SLOPE < 15%) 5/8" TONGUE AND GROOVE PLYWOOD.

LAY ROOF SHEATHING WITH THE SURFACE GRAIN AT RIGHT ANGLES TO THE JOISTS. STAGGER THE JOINTS PARALLEL TO THE JOISTS.



NAILING

- NAILING SHALL CONFORM TO THE BUILDING CODE PART 9. AND "WOOD BUILDING TECHNOLOGY" PUBLISHED BY THE CANADIAN WOOD COUNCIL. NAILING CALLED UP ON THESE DRAWINGS (I.E. FOR SHEATHING) IS BASED ON COMMON NAILS. SEE NOTE 3 UNDER MATERIALS FOR COMMON NAIL SIZES.
- 2. UNLESS NOTED OTHERWISE, NAIL ALL ROOF SHEATHING WITH 3" NAILS @ 6" o.c. AT SUPPORTED EDGES OF SHEATHING SHEETS AND @ 12" o.c. AT INTERMEDIATE
- DO NOT USE PNEUMATICALLY DRIVEN NAILS IN SHEATHING UNLESS THE NAILS MEET THE LENGTH AND DIAMETER OF NOTE 3 UNDER MATERIALS.
- 4. DO NOT USE PNEUMATICALLY DRIVEN NAILS WITH JOIST HANGERS OR CONNECTING HARDWARE, NAILS FOR HARDWARE SHOULD BE AS SPECIFIED OR SUPPLIED BY

RENOVATIONS

- THE CONTRACT DOCUMENTS ARE BASED ON ASSUMED AS-BUILT DIMENSIONS FOR THE EXISTING BUILDING STRUCTURE AND ASSUMPTIONS IN ACCORDANCE WITH DETAILING AND PLACING PRACTICE. THESE ASSUMPTIONS MAY VARY FROM THE ACTUAL ON-SITE CONDITIONS. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE CONSULTANT OF ANY ACTUAL VARIATIONS FROM THE ASSUMED CONDITIONS.
- MINOR MODIFICATIONS WILL BE REQUIRED TO THE WORK INDICATED ON THESE DRAWINGS TO REFLECT ACTUAL SITE CONDITIONS. THE CONTRACTOR WILL COOPERATE WITH THE CONSULTANT AND RJC IN THIS REGARD. MINOR MODIFICATIONS WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR AND WILL NOT RESULT IN A CHANGE IN THE CONTRACT PRICE.
- ENSURE THAT ALL NECESSARY JOB DIMENSIONS ARE TAKEN AND ALL TRADES ARE COORDINATED FOR THE PROPER EXECUTION OF THE WORK. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF SUCH DIMENSIONS, AND FOR COORDINATION.
- PRIOR TO FABRICATION OF ANY STRUCTURAL MEMBERS, THE CONTRACTOR SHALL COMPLETE THIS SITE REVIEW OF CRITICAL "TIE-IN" DIMENSIONS AND CONFIRM ALL DIMENSIONS TO ENSURE PROPER FIT OF NEW WORK TO EXISTING. REPORT ANY DISCREPANCIES TO RJC PRIOR TO STARTING WORK.
- COMMENCEMENT OF CONSTRUCTION OR ANY PART THEREOF CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS AND MEANS DIMENSIONS AND ELEVATIONS HAVE BEEN CONSIDERED, VERIFIED AND ARE ACCEPTABLE.
- THE CONTRACTOR IS RESPONSIBLE FOR SAFETY IN AND ABOUT THE JOB SITE DURING CONSTRUCTION, AND THE DESIGN AND ERECTION OF ALL TEMPORARY STRUCTURES, FORMWORK, FALSEWORK, SHORING, BRACING, ETC., REQUIRED TO COMPLETE THE WORK (SUBMIT SHORING DRAWINGS SEALED BY A SPECIALTY STRUCTURAL ENGINEER).

WOOD FRAMING

GENERAL

- ALL DESIGN, DETAILS, MATERIAL AND CONSTRUCTION PROCEDURES SHALL CONFORM TO CURRENT EDITIONS OF THE FOLLOWING AS A MINIMUM:
 - VANCOUVER BUILDING BY-LAW 2014 PART 9. CAN/CSA-086 - ENGINEERING DESIGN IN WOOD. CSA 0121 - DOUGLAS FIR PLYWOOD CSA B111 - WIRE NAILS, SPIKES AND STAPLES. CAN/CSA-B34 - MISCELLANEOUS BOLTS AND SCREWS. CANADIAN WOOD-FRAME HOUSE CONSTRUCTION - CMHC. "WOOD DESIGN MANUAL" — CANADIAN WOOD COUNCIL. "WOOD BUILDING TECHNOLOGY" - CANADIAN WOOD COUNCIL.
- ANY CHANGES TO THE FRAMING SHOWN ON THESE DRAWINGS SHALL HAVE PRIOR WRITTEN APPROVAL OF RJC. FRAMING CHANGES WHICH HAVE NOT BEEN SO APPROVED WILL BE REJECTED.
- 3. ANY TIMBER NOT GRADE MARKED WILL BE REJECTED.
- FINISHES SHALL BE DETAILED TO ACCOMMODATE SHRINKAGE OF THE TIMBER OVER
- DO NOT COVER WOOD FRAMING WITH FINISHES UNTIL RJC'S FRAMING REVIEW IS COMPLETE. PROVIDE 24 HOURS ADVANCE NOTIFICATION WHEN FRAMING REVIEWS
- NOTCHING AND DRILLING OF STRUCTURAL ELEMENTS SHALL FOLLOW THE GUIDELINES SET FORTH IN THE BUILDING CODE PART 9, UNLESS OTHERWISE APPROVED IN WRITING BY RJC.
- 7. ALL TIMBER ELEMENTS ARE DESIGNED FOR DRY-SERVICE CONDITIONS. SEE ARCHITECTURAL DRAWINGS FOR WATERPROOFING AND VENTILATION DETAILS.

MATERIALS

- 1. PLYWOOD TO BE DOUGLAS FIR SHEATHING GRADE.
- TIMBER CONNECTION HARDWARE TO BE SIMPSON STRONG-TIE, OR EQUIVALENT APPROVED BY RJC. COMPLETE WITH NAILS SUPPLIED BY MANUFACTURER. DO NOT USE P NAILS.
- NAILS SHALL BE COMMON ROUND STEEL WIRE NAILS. NAILS ARE CALLED UP BY LENGTH AND SHALL CONFORM TO THE FOLLOWING TABLE:

LENGTH	DIAMETER	PENNY-WEIGHT
2" (50 mm)	0.113" (2.9 mm)	6d
2 1/2" (65 mm)	0.131" (3.3 mm)	8d
3" (75 mm)	0.148" (3.8 mm)	10d
3 1/4" (80 mm)	0.148" (3.8 mm)	12d
3 1/2" (90 mm)	0.162" (4.1 mm)	16d
4" (100 mm)	0.192" (4.9 mm)	20d
4 1/2" (115 mm)	0.207" (5.3 mm)	30d
5" (125 mm)	0.225" (5.8 mm)	40d

NOTE: SPIRAL OR PNEUMATIC NAILS MAY BE USED IF THEY CONFORM TO THE TABLE ABOVE.

- MOISTURE CONTENT OF ALL TIMBER ELEMENTS SHALL NOT EXCEED 19% AT THE TIME OF CONSTRUCTION OR FABRICATION.
- ALL FASTENERS AND CONNECTION HARDWARE THROUGH PRESERVATIVE TREATED MATERIALS OR OUTSIDE OF THE MOISTURE BARRIER TO BE HOT DIPPED GALVANIZED OR STAINLESS STEEL AS SPECIFIED.

LIST OF STRUCTURAL DRAWINGS

- S1.1 GENERAL NOTES
- S2.1 ROOF PLANS
- S3.1 DETAILS

DRAWINGS

- THIS SET OF DRAWINGS SHOWS THE COMPLETED PROJECT. THE DRAWINGS DO NOT SHOW COMPONENTS THAT MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SAFETY IN AND ABOUT THE JOB SITE DURING CONSTRUCTION, AND THE DESIGN AND ERECTION OF ALL TEMPORARY STRUCTURES, FORMWORK, FALSE WORK, SHORING, ETC. REQUIRED TO COMPLETE
- THE USE OF THESE DRAWINGS IS LIMITED TO THAT IDENTIFIED IN THE REVISIONS COLUMN. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION" IN THE REVISIONS COLUMN, BY READ JONES CHRISTOFFERSEN LTD. THE DRAWINGS SHALL NOT BE USED FOR PRICING, COSTING, OR TENDER UNLESS SO INDICATED IN THE REVISION COLUMN. PRICING OR COSTING DRAWINGS ARE NOT COMPLETE AND ANY PRICES BASED ON PRICING OR COSTING DRAWINGS MUST INCLUDE ALLOWANCES FOR THIS.
- THE INFORMATION ON THESE DRAWINGS SHALL NOT BE USED FOR ANY OTHER PROJECT OR WORKS. THE INFORMATION ON THESE DRAWINGS APPLIES SOLELY TO THIS PROJECT.

GENERAL

- SECTION MARK SHOWN THUS $\frac{4}{3}$ MEANS SECTION #4 ON DRAWING S-3.
- SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SLEEVES, NAILERS, INSERTS, ETC., TO BE ENCASED IN CONCRETE.
- SEE ARCHITECTURAL DRAWINGS FOR FLOOR AND ROOF ELEVATIONS, RECESSES, DRAINAGE SLOPES, ETC.
- 4. THE GENERAL CONTRACTOR SHALL REVIEW ALL THE DRAWINGS AND CHECK DIMENSIONS BEFORE CONSTRUCTION. REPORT DISCREPANCIES BETWEEN STRUCTURAL AND OTHER DISCIPLINES DRAWINGS FOR CLARIFICATION.
- WOOD SHALL CONFORM TO CAN/CSA-086 AND ITS REFERENCED DOCUMENTS.

ANALYSIS AND DESIGN CRITERIA

- THE STRUCTURAL DESIGN SHOWN ON THESE DRAWINGS TARGET THE "LIFE SAFETY" DESIGN CRITERIA PER THE STRUCTURAL ENGINEERING GUIDELINES FOR PERFORMANCE BASED SEISMIC ASSESSMENT AND RETROFIT OF LOWRISE BRITISH COLUMBIA SCHOOL BUILDINGS, 2ND EDITION PUBLISHED NOV. 2013.
- ANALYSIS COMPLETED USING SEISMIC PERFORMANCE ANALYZER 1 (VERSION 2.1) WITH THE FOLLOWING PARAMETERS: A. LOCATION = VANCOUVER
- B. DESIGN PROBABILITY OF DRIFT EXCEEDENCE (PDE) FOR ASSESSMENT
- AND DESIGN = 2% IN 50 YEARS (LIFE SAFÉ) C. SOIL TYPE = SITE CLASS C (PER SRG2 GEOTECH MAPS).
- SNOW LOADING DESIGN CRITERIA HAS BEEN DEVELOPED IN SUBSTANTIAL ACCORDANCE WITH NBCC 2010.
- 4. SCOPE OF EVALUATION WAS LIMITED TO THE ROOF DIAPHRAGM UNDER SEISMIC LOAD CASE ONLY.

FIELD REVIEW BY READ JONES CHRISTOFFERSEN (RJC)

READ JONES CHRISTOFFERSEN PROVIDES FIELD REVIEW ONLY FOR THE WORK SHOWN ON THESE STRUCTURAL DRAWINGS. THIS REVIEW IS NOT A "FULL TIME" REVIEW BUT IS CONDUCTED WITH SUCH FREQUENCY AS RJC DEEMS APPROPRIATE TO OBSERVE VARIOUS STAGES OF THE WORK AND TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS PREPARED BY READ JONES CHRISTOFFERSEN. FIELD REVIEW BY READ JONES CHRISTOFFERSEN IS NOT CARRIED OUT FOR THE CONTRACTOR'S BENEFIT, NOR DOES IT MAKE READ JONES CHRISTOFFERSEN GUARANTORS OF THE CONTRACTOR'S WORK. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. RJC SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

RJC WILL REVIEW SHOP DRAWINGS PERTAINING TO WORK SHOWN ON RJC'S DRAWINGS. THE EXTENT OF THIS REVIEW IS AT THE SOLE DISCRETION OF RJC'S ENGINEER AND IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMANCE WITH THE STRUCTURAL DESIGN CONCEPT. THE REVIEW IS NOT AN APPROVAL OF THE DESIGN, DETAILS, AND DIMENSIONS INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR OR SUBCONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OR SUBCONTRACTOR OF HIS OR HER RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

- PROVIDE 24 HOURS ADVANCE NOTICE OF EACH REQUIRED FIELD REVIEW. FIELD REVIEWS SHALL BE SCHEDULED TO BE CARRIED OUT DURING NORMAL BUSINESS HOURS UNLESS SPECIAL ARRANGEMENTS ARE MADE WITH RJC.
- 3. THE WORK TO BE REVIEWED SHALL BE GENERALLY COMPLETE



Read Jones Christoffersen Ltd. Engineers rjc.ca

> 1285 West Broadway, Suite 300 Vancouver, BC V6H 3X8 Canada tel 604-738-0048 fax 604-738-1107

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Drawing Notes

- 1. All drawings, plans, models, designs, specifications and other documents prepared by Read Jones Christoffersen Ltd. ("RJC") and used in connection with this project are instruments of service for the work shown in them (the "Work") and as such are and remain the property of RJC whether the Work is executed or not, and RJC reserves the copyright in them and in the Work executed from them, and they shall not be used for any other work or project.
- 2. These drawings are "design drawings" only. They may not be suitable for use as shop drawings. Use of these drawings as base drawings for "shop drawings" is not permitted unless written permission containing certain conditions and limitations is obtained from RJC. The work "as constructed" may vary from what is shown on these drawings.
- 3. Use of these drawings is limited to that identified in the Revision column. Do not construct from these drawings unless marked "Issued for Construction" by RJC in the Revision column, and then only for the parts noted. The drawings shall not be used for "pricing", "costing", or "tender" unless so indicated in the Revision column. "Pricing" or "Costing" drawings are not complete and any prices based on such drawings must allow for this.

Project Name

2090 WEST 5th AVENUE **ROOF REPLACEMENT** DIAPHRAGM UPGRADES

2090 W 5th AVE, VANCOUVER, BC

GENERAL NOTES

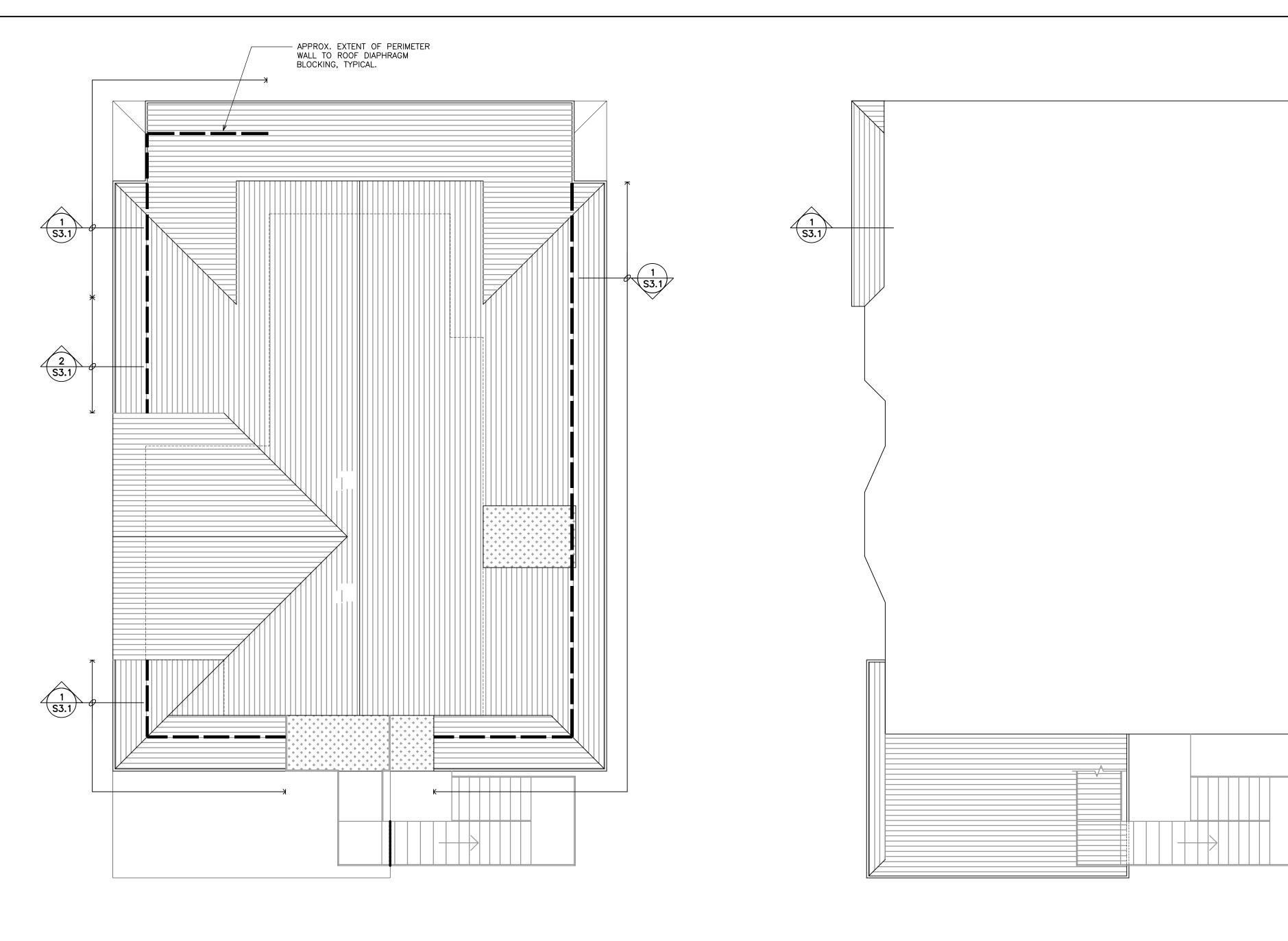
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Scale Designed By AL

Date **MAY**, **2017** VAN.107371.0007 RJC Project Number

Sheet Number

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HOUSE - UPPER ROOF PLAN



NOTES

- APPROXIMATE EXTENT OF PERIMETER WALL TO ROOF DIAPHRAGM SHOWN FOR BIDDING PURPOSES. CONTRACTOR TO FIELD VERIFY ALL EXTENTS ON SITE FOR CONSTRUCTION.
- 2. REFER ALSO TO DWGS. A1.002 AND A5.401 FOR EXTENT OF DETAIL 1/S3.1.
- 3. REFER ALSO TO DWGS. A1.002 AND A5.402 FOR EXTENT OF DETAIL 2/S3.1.
- 4. FOR BIDDING PURPOSES:
- A. BASE PRICE TO INCLUDE RENAILING OF ALL EXISTING 3/8" PLYWOOD ROOF SHEATHING WITH 3" NAILS @ 4" o.c. SPACING INTO ALL EXISTING FRAMING
- B. EXTENDED PRICE TO INCLUDE 1/2" PLYWOOD ROOF SHEATHING OVERLAY ON ALL EXISTING 3/8" ROOF SHEATHING WITH 3" NAILS PER GENERAL NOTES U.N.O.



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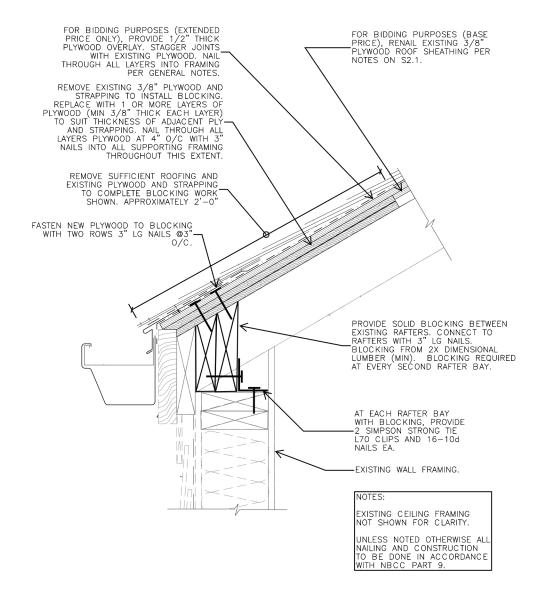
ROOF PLANS

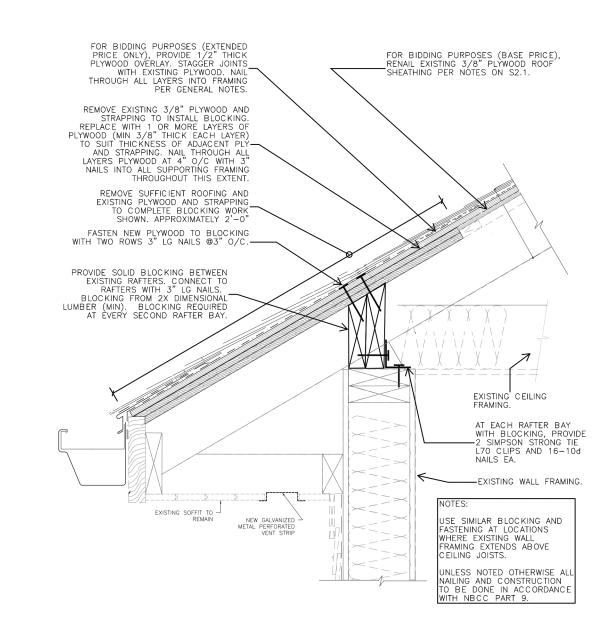
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Sheet Number

S2.1

VAN.107371.0007







2 EAVE DETAIL WITHOUT SOFFIT



EAVE DETAIL WITH SOFFIT



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2090 WEST 5th AVENUE ROOF REPLACEMENT **DIAPHRAGM UPGRADES**

2090 W 5th AVE, VANCOUVER, BC

DETAILS

Date **MAY**, **2017** VAN.107371.0007 RJC Project Number Sheet Number

S3.1