

PROCUREMENT SERVICES SECTION

CITY OF SURREY, SURREY CITY HALL 13450 – 104 Avenue, Surrey, B.C., V3T 1V8 Tel: 604-590-7274

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ADDENDUM No. 2

REQUEST FOR QUOTATIONS NO.: 1220-040-2021-049

TITLE: CHILLER REPLACEMENT – SURREY MUSEUM

ADDENDUM ISSUE DATE: JUNE 25, 2021

REVISED DATE: PREFER TO RECEIVE SUBMISSION ON OR

BEFORE JULY 6, 2021

INFORMATION FOR CONTRACTORS

Contractors are advised that Addendum No. 2 to RFQ 1220-040-021-049 is hereby issued by the City. This addendum shall form part of the contract documents and is to be read, interpreted and coordinated with all other parts. The following information is provided to answer questions raised by Contractors for the abovenamed project, to the extent referenced and shall become a part thereof. No consideration will be allowed for extras due to the Contractors or any sub-contractor not being familiar with this addendum. This Addendum No. 2 contains seventeen (17) pages.

1. REFER TO SECTION 3 DATE

DELETE in its entirety and REPLACE with the following:

"3. DATE

The City would prefer to receive Quotations on or before July 6, 2021 (the "Date")."

2. **QUESTIONS/ANSWERS**

- **Q1.** Please provide structural drawings for the original chiller installation.
- A1. Refer to item No. 3 Additional Information Drawing No. 3 as attached to this Addendum No. 2.
- **Q2.** Please confirm the preferred DDC Contractor as original IFT drawings request ESC Automation and Addendum 1 IFR drawings request Control Solutions.
- A2. Control work is to be performed by ESC Automation.
- Q3. Please confirm which mechanical drawings is pricing to be determined from. Originally provided drawings are titled IFT and dated 2021/05/12. Addendum 1 drawings are titled IFR and dated 2021/04/09.
- A3. Please refer to IFT drawings dated 2021/05/12.

- **Q4.** Please confirm who the preferred base building roofing contractor is.
- A4. Must be a qualified roofing contractor.
- **Q5.** We are wondering whether bid bond and surety's Consent will be required to submit with the bid proposal.
- A5. No.
- **Q6.** Does the City has any preferred Air and Balancing contractor, or the Contractors are free to choose any experienced Balancing sub-contractor?
- A6. KD Engineering, Western Mechanical, Design Intent and Kane Consulting are the recommended balancing agents.
- **Q7.** We understand, the new chiller, CH-3 is going to be installed on the existing frame without structural modification of the roof.
- A7. CH-3 is to be provided as a separate price. Unit is to be installed on new sleepers. Contractor is to retain a structural engineer to review weights and locations of chiller and provided signed and sealed design documents complete with letters of assurance. If the question is referring to the new 90-ton chiller (CH-1), structural is to also review. Refer to General Note 2 on drawing M-1.
- **Q8.** Please clarify whether involvement of a third-party commissioning agent will be required; Or will it be performed by the Chiller supplier.
- A8. Chiller supplier may perform commissioning.
- Q9. Please confirm if only damaged areas of the roof need to be repaired / re-roofed.
- A9. Yes, only damaged areas of the roof are to be repaired and should be in good condition.
- **Q10.** Clarify whether the Victaulic fittings are allowed to be used.
- A10. Victaulic piping and fittings are acceptable.
- **Q11.** Clarify whether the weld joints, 2-1/2" & above need to be x-rayed.
- A11. Victaulic piping is to be provided to match existing.
- **Q12.** Can you provide dimension and weight of the existing Chiller?
- A12. Existing Chiller is 16'-3" X 7'-4" X 7'-4". Weight is estimated at 6600lbs 7300lbs.
- 3. ADDITIONAL INFO- DRAWING NO. 3 STRUCTURAL DRAWINGS

CONDUITS, PIPES AND SLEEVES EMBEDDED IN CONCRETE

EXCEPT WHEN APPROVED BY RJC, PIPES, CONDUITS, AND SLEEVES EMBEDDED IN CONCRETE SHALL BE INSTALLED IN ACCORDANCE WITH CAN/CSA-A23.1 - CLAUSE 13.5 AND THE FOLLOWING GUIDELINES:

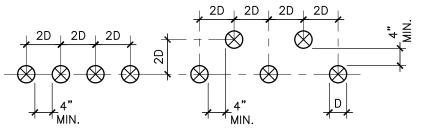
- A. NOT WITHSTANDING THE SATISFYING OF THESE GUIDELINES, THE CONDUIT, SLEEVES, PIPES, ETC. SHALL NOT IMPAIR THE STRUCTURAL STRENGTH AND SHALL BE MOVED IF SO DIRECTED BY RJC.
- CENTRELINE SPACING TO BE NOT LESS THAN 3 DIAMETERS, UNLESS NOTED OTHERWISE
- CENTRELINE SPACING BETWEEN PARALLEL CONDUIT AND REINFORCING BARS TO BE 3 DIAMETERS-UNLESS NOTED OTHERWISE
- ADD REINFORCING AT POINTS OF CONGESTION AS DIRECTED BY THE STRUCTURAL ENGINEER.
- NO CONDUITS, IN-SLAB DUCTS, SLEEVES, ETC., SHALL BE PLACED NEAR POST-TENSIONING ANCHORAGES
- METAL CONDUIT, PIPES, ETC., SHALL NOT BE PLACED IN PARKING SLABS. NO CONDUIT, PIPES, ETC. SHALL BE PLACED IN PARKING TOPPING.
- FOR TOPPINGS ON STEEL DECK, THE CONCRETE THICKNESS IS MEASURED FROM THE TOP OF THE DECK FLUTE.
- 2. FOR SLABS CONDUITS IN THE PLANE OF THE SLAB:
- A. LOCATE BETWEEN TOP AND BOTTOM REINFORCING.
- MAXIMUM SIZE IN ONE LAYER TO BE NOT MORE THAN 1/4 CONCRETE THICKNESS.
- THREE LAYERS OR MORE CROSSING WILL NOT BE PERMITTED.
- 3. FOR COLUMNS ELECTRICAL BOXES, CONDUIT, SLEEVES OR EMBEDDED PIPES

ARE NOT ALLOWED WITHOUT THE WRITTEN APPROVAL OF RJC.

- 4. FOR BEAMS THE TOTAL MAXIMUM SIZE OF HORIZONTAL CONDUIT PARALLEL TO THE BEAM NOT TO EXCEED 4% OF THE AREA. NO SLEEVES THROUGH ANY BEAMS OR SLABBANDS UNLESS APPROVED IN WRITING BY RJC.
- FOR SHEAR WALLS ELECTRICAL BOXES, CONDUIT, SLEEVES OR EMBEDDED PIPES ARE NOT ALLOWED WITHOUT THE WRITTEN APPROVAL OF RJC.
- 6. FOR NON-SHEAR WALLS CONDUIT, SLEEVES OR EMBEDDED PIPES:
- MAXIMUM DIAMETER = 1/4 WALL THICKNESS

MINIMUM CLEAR SPACING OF 4 DIAMETERS.

- NO HORIZONTAL RUNS PERMITTED - VERTICAL RUNS TO HAVE MINIMUM 2" CONCRETE COVER AND SHALL HAVE A
- 7. SPACING OF SLEEVES THROUGH SLABS TO BE NOT LESS THAN THE FOLLOWING:

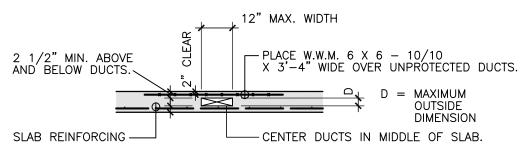


GUIDELINES FOR SLEEVES

- SLEEVES IN FLAT SLABS AND FLAT PLATES NOT TO BE LOCATED NEXT TO COLUMNS UNLESS APPROVED BY RJC IN WRITING. - CLEAR DIMENSION FOR SLEEVES TO COLUMNS TO BE 4'-0" MINIMUM UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS.

GUIDELINES FOR INSLAB DUCTS

- MAXIMUM SIZE IN 6 1/2" SLAB = 1 1/2" OUTSIDE DIMENSION
- MAXIMUM SIZE IN 7" SLAB = 2" OUTSIDE DIMENSION MINIMUM CLEAR SPACING = 2'-0" BETWEEN DUCTS.
- MINIMUM CLEAR SPACING TO COLUMNS AND WALLS = 3'-0" UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS.



TYPICAL DETAIL AT IN-SLAB DUCTS (NON-POST-TENSIONED SLABS)

CONCRETE COLD WEATHER REQUIREMENTS

(SEE ALSO CAN/CSA-A23.1, CLAUSE 21, EXCEPT THE FOLLOWING MINIMUM REQUIREMENTS MUST ALSO BE MET)

1. FORECASTED AIR TEMPERATURE NOT BELOW 2°C

- IF CONCRETE TEMPERATURE DROPS BELOW 5°C AT POINT OF POURING, THE MIXING WATER SHALL BE HEATED TO MAINTAIN A MINIMUM CONCRETE TEMPERATURE OF 10°C.
- CONCRETE SHALL NOT BE PLACED ON OR AGAINST ANY SURFACE WHICH IS AT A TEMPERATURE LESS THAN 5°C.
- CONTRACTOR SHALL BE PREPARED TO COVER SLAB IF UNEXPECTED DROP IN AIR TEMPERATURE SHOULD OCCUR.
- CONCRETE TEMPERATURE SHALL BE MAINTAINED ABOVE 10°C FOR AT LEAST
- 7 DAYS OR UNTIL THE CONCRETE REACHES 70% OF SPECIFIED STRENGTH.
- FORECASTED AIR TEMPERATURE BELOW 2°C BUT NOT BELOW -4°C (NOTE - FOR THESE CONDITIONS STRUCTURAL CONCRETE TOPPINGS ON METAL
- DECK SHALL SATISFY THE REQUIREMENTS OF 3). FORMS AND STEEL SHALL BE FREE FROM ICE AND SNOW.
- MIXING WATER SHALL BE HEATED TO GIVE A MINIMUM CONCRETE TEMPERATURE OF 10°C AT POINT OF POUR.
- CONCRETE SHALL NOT BE PLACED ON OR AGAINST ANY SURFACE WHICH IS
- AT A TEMPERATURE OF LESS THAN 5°C. SLABS SHALL BE COVERED WITH CANVAS OR SIMILAR, KEPT A FEW INCHES
- CLEAR OF SURFACE.
- E. IN WINDY WEATHER, STOREY BELOW SLAB SHALL BE ENCLOSED.
- PROTECTION SHALL BE MAINTAINED FOR AT LEAST 3 DAYS.
- G. CONCRETE TEMPERATURE SHALL BE MAINTAINED ABOVE 10°C FOR AT LEAST 3 DAYS OR UNTIL THE CONCRETE REACHES 7 MPa.

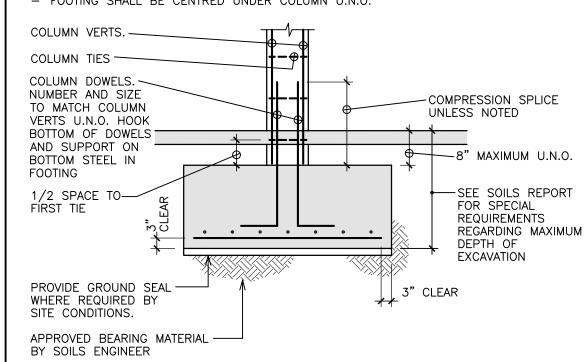
3. FORECASTED AIR TEMPERATURE BELOW -4°C

A, B, C, D, AS UNDER POINT 2.

- STOREY BELOW SHALL BE ENCLOSED AND ARTIFICIAL HEAT PROVIDED. HEATING TO BE STARTED AT LEAST ONE HOUR AHEAD OF POURING AND MAINTAINED FOR A MINIMUM OF 3 DAYS AFTER.
- TEMPERATURE OF THE CONCRETE AT ALL SURFACES SHALL BE KEPT AT A MINIMUM OF 20°C FOR 3 DAYS. OR 10°C FOR 7 DAYS. CONCRETE SHALL BE KEPT ABOVE FREEZING TEMPERATURES UNTIL IT REACHES 7 MPa
- G. ENCLOSURE MUST BE CONSTRUCTED SO THAT AIR CAN CIRCULATE OUTSIDE THE OUTER EDGES AND MEMBERS.

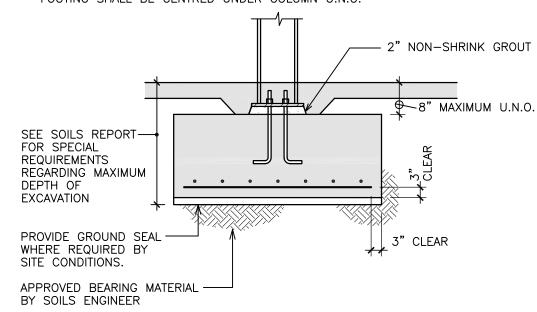
TYPICAL CONCRETE COLUMN FOOTING

- FOR SPLICE LENGTHS, SEE TABLES ON STRUCTURAL DRAWINGS. - FOOTING SHALL BE CENTRED UNDER COLUMN U.N.O.



TYPICAL STEEL COLUMN FOOTING

EXCEPT AS NOTED: - FOOTING SHALL BE CENTRED UNDER COLUMN U.N.O.



CONCRETE NOTES

CEMENT SHALL BE PORTLAND CEMENT TYPE 10 (U.N.O). CONCRETE SHALL BE STONE CONCRETE WITH A UNIT WEIGHT OF 23.6 kN/m3 (150 PCF).

2. <u>CONCRETE PROPERTIES</u>

ELEMENT		I. 28 DAY RENGTH (MPa)		MAX. AGG. (mm)		POSURE SS_
SLAB ON GRADE (INTERIOR NO PARKING)	20	MPa	70	20	NO	REQUIREMENT
SLAB ON GRADE (EXTERIOR)	32	MPa	70	20	C-2	2
FOOTINGS	25	MPa	80	40	NO	REQUIREMENT
WALLS	20	MPa	80	20	NO	REQUIREMENT/
COLUMNS	25	MPa	80	20	NO	REQUIREMENT/
TOPPING ON STEEL DECK	25	MPa	70	20	NO	REQUIREMENT
MECHANICAL HOUSEKEEPING PADS	20	MPa	70	20	NO	REQUIREMENT
NON-POST-TENSIONED SLABS, BEAMS, AND SLAB BANDS (NON-PARKING)	25	MPa	70	20	NO	REQUIREMENT

- NOTES: PUMP MIX SLUMPS ALSO AS ABOVE.
 - WATER CEMENT RATIOS AND AIR CONTENTS FOR EXPOSURE CLASSES AND AGGREGATE SIZES AS TABLES 10, 11, 12, AND 14 CAN/CSA-A23.1
 - SLUMP TOLERANCES: 20 mm FOR SLUMPS LESS THAN 80 mm, OTHERWISE 30 mm.
 - AGGREGATE SIZES SHOWN ARE MAXIMUMS. SMALLER SIZES MAY BE USED (UNLESS NOTED OTHERWISE).
 - LOWER SLUMPS MAY BE USED SUBJECT TO APPROVAL BY R.J.C.
 - MIX DESIGNS SHALL STATE THE ELEMENT FOR WHICH THEY ARE
- ALL BOTTOM EDGES OF EXPOSED SLABS AND BEAMS, AND EXPOSED COLUMN AND WALL EDGES TO BE BEVELLED 3/4" X 3/4". ALL TOP EDGES OF EXPOSED SLABS, BEAMS, UPSTANDS AND STAIRS TO BE TOOLED UNLESS NOTED OTHERWISE. SEE ALSO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
- NO CALCIUM CHLORIDE, IN ANY FORM, IS PERMITTED IN ANY CONCRETE MIX, WITHOUT THE WRITTEN PERMISSION OF READ JONES CHRISTOFFERSEN.
- CURING AND PROTECTION OF CONCRETE FOR HOT, COLD OR DRY WEATHER AS PER CAN/CSA-A23.1 - CHAPTER 21, EXCEPT FOR COLD WEATHER, SEE ALSO "COLD WEATHER REQUIREMENTS" ON STRUCTURAL DRAWINGS.

STRUCTURAL MOVEMENTS/TOLERANCES

THIS STRUCTURE WILL UNDERGO NORMAL TYPES OF MOVEMENT AND DEFLECTION, AND THE FOLLOWING ARE ESTIMATES FOR THIS STRUCTURE. NON-STRUCTURAL COMPONENTS MUST BE DETAILED TO ACCOMMODATE THIS. DESIGN, DETAILING, AND FIELD REVIEW OF THESE NON-STRUCTURAL ELEMENTS IS BY OTHERS, AND NOT READ JONES

- DIFFERENTIAL VERTICAL MOVEMENTS BETWEEN ADJACENT COLUMNS AND BETWEEN ADJACENT COLUMNS AND WALLS = APPROXIMATELY 3/4".
- VERTICAL DEFLECTION OF COLUMNS AND WALLS DUE TO SHRINKAGE AND CREEP = APROXIMATELY 0.15" PER 12'-0" OF HEIGHT.
- VERTICAL DEFLECTIONS OF EDGE BEAMS AND EDGES OF SLABS =
- APPROXIMATELY 1" DIFFERENTIAL DEFLECTIONS OF EDGE BEAMS AND EDGES OF SLABS = ± 5/8".
- VERTICAL DEFLECTIONS AT INTERIOR OF FLOORS = APPROXIMATELY 1". DIFFERENTIAL DEFLECTIONS AT INTERIOR OF FLOORS = \pm 5/8".
- HORIZONTAL DRIFT DURING WIND AND EARTHQUAKE PER 12'-0" OF HEIGHT:
- 1/2" DRIFT WITHOUT DAMAGE TO NON-STRUCTURAL COMPONENTS. ± 2" DRIFT WITHOUT COLLAPSE OF NON-STRUCTURAL COMPONENTS.
- ALL STRUCTURES ARE ALSO SUBJECT TO CONSTRUCTION TOLERANCES. THIS SHOULD BE ALLOWED FOR IN DETAILING NON-STRUCTURAL COMPONENTS.

EXCAVATION NOTE

DESIGN AND FIELD REVIEW OF EXCAVATION, SHORING, AND BACKFILL IS NOT DONE BY READ JONES CHRISTOFFERSEN.

FOUNDATION NOTES

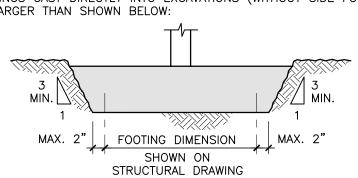
THE SOILS ENGINEER.

14.

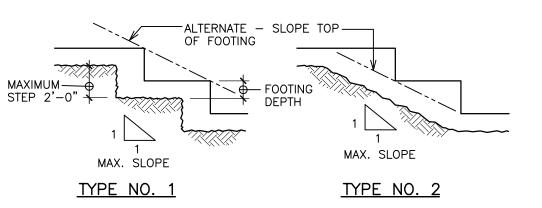
- FOOTINGS HAVE BEEN DESIGNED FOR THE FOLLOWING ALLOWABLE (WORKING STRESS) BEARING PRESSURES IN ACCORDANCE WITH THE SOILS REPORT. LEVELTON ENGINEERING LTD. OCTOBER 9, 2003 AND SUBSEQUENT MEMO DATED APRIL 14.
- A. STRIP FOOTINGS AND SPREAD FOOTINGS:
- 1200 PSF FOR FOOTINGS NO GREATER THAN 2'-0" BELOW EXISTING GRADE, 1000 PSF FOR FOOTINGS DEEPER THAN 2'-0" WITH SUBGRADE PREPARED IN ACCORDANCE WITH LEVELTON ENGINEERING LTD. MEMO OF APRIL 14,
- BEARING SURFACES MUST BE APPROVED BY THE SOILS ENGINEER IMMEDIATELY BEFORE FOOTING CONCRETE IS PLACED. RJC IS NOT RESPONSIBLE FOR CONFIRMING BEARING CAPACITIES OF SOILS.
- REFER TO SOILS REPORT FOR OTHER SPECIFIC DESIGN REQUIREMENTS FOR FOOTINGS, SOIL SLOPES, FROST PROTECTION, MINIMUM COVER, ETC.
- UNLESS OTHERWISE SHOWN, CENTER FOOTINGS UNDER COLUMNS AND WALLS.
- DOWELS SHALL BE PLACED BEFORE CONCRETE IS PLACED. TEMPLATES SHALL BE USED TO ENSURE CORRECT PLACEMENT OF DOWELS.
- PROVIDE 2" GROUND SEAL UNDER FOOTINGS AS REQUIRED BY SOIL CONDITIONS.
- FOR GROUND ELEVATIONS AND DRAINAGE SLOPES, SEE ARCHITECT'S DRAWINGS. VARY FOOTING ELEVATIONS WHERE REQUIRED IN ACCORDANCE WITH DETAIL FOR
- "TYPICAL STEPPED FOOTING", SHOWN ON STRUCTURAL DRAWINGS. FOOTINGS MAY HAVE TO BE LOWERED TO ACCOMMODATE MECHANICAL OR ELECTRICAL SERVICES. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR

ELEVATIONS OF SAME. FOOTINGS ARE NOT TO BE UNDERMINED BY EXCAVATIONS

- FOR SERVICES, PITS, ETC. 10. FOOTING ELEVATIONS, IF SHOWN, ARE FOR BIDDING PURPOSES ONLY. ARE NOT FINAL, AND MAY VARY ACCORDING TO SITE CONDITIONS OR AS REQUIRE SERVICES. ALL FOOTINGS MUST BE TAKEN TO A BEARING LAYER APPROVED BY
- 11. BEARING SURFACES MUST BE PROTECTED FROM FREEZING BEFORE AND AFTER FOOTINGS ARE POURED.
- 12. SUB-BASE DESIGN OF SOIL UNDER THE SLAB ON GRADE SHALL BE IN ACCORDANCE WITH THE SOIL REPORT.
- 13. CONCRETE PLACED UNDER WATER SHALL CONFORM TO CAN/CSA-A23.1.
- FOOTINGS CAST DIRECTLY INTO EXCAVATIONS (WITHOUT SIDE FORMS) SHALL NOT BE LARGER THAN SHOWN BELOW:

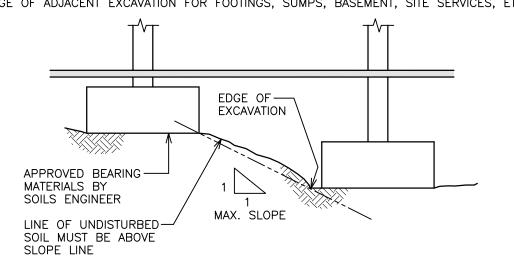


TYPICAL STEPPED FOOTINGS (WALLS)



TYPICAL FOOTING ADJACENT TO EXCAVATION

EDGE OF ADJACENT EXCAVATION FOR FOOTINGS, SUMPS, BASEMENT, SITE SERVICES, ETC.



DESIGN CODE

THE COMPLETED BASE BUILDING STRUCTURE SHOWN ON THE STRUCTURAL DRAWINGS HAS BEEN DESIGNED IN SUBSTANTIAL ACCORDANCE WITH THE BRITISH COLUMBIA BUILDING CODE 1998 WHICH IS BASED ON THE NATIONAL BUILDING CODE OF CANADA 1995.

DESIGN LOADS

1.	SPEC	IFIED UNIFORM LOADS PSF		SUPERIMPOSED DEAD LOAD (S.D.L.
	A. B. C. D. E. F.	ROOF — BASED ON A GROUND SNOW LOAD OF— PLUS A RAIN LOAD OF———— MAIN FLOOR ———————————————————————————————————	6.3 100 200 100 75	} 25 20 0 20 50
	CONT	RACTORS CONSTRUCTION LOADS MUST NOT EXCEED) THE	ABOVE DESIGN

SUPERIMPOSED DEAD LOADS (S.D.L.) ARE NON-STRUCTURE DEAD LOADS DUE TO ARCHITECTURAL TOPPINGS, FINISHES, PARTITIONS, ROOFING MATERIALS, PAVERS,

STRUCTURAL DEAD LOADS (D.L.) ARE DUE TO THE WEIGHT OF THE STRUCTURE

ITSELF. THEY VARY WITH THE STRUCTURAL SYSTEM AND INCLUDE CONCRETE

LOADS. DESIGN LOADS MAY ONLY BE APPLIED AFTER CONCRETE REACHES ITS

TOPPINGS ON STEEL DECK.

2. UNLESS NOTED OTHERWISE, SPECIFIED CONCENTRATED LOADS ARE:

ROOFS ----- 0.3 KIPS FLOORS - OFFICES, HOSPITALS, STAGES, MANUFACTURING BUILDINGS, RETAIL ----2 KIPS FLOORS - PARKING -----2.5 KIPS

LOADING DOCKS AND SUSPENDED PLAZAS WITH TRUCK ACCESS

- (TANDEM AXLE LOADS) -----56 KIPS 3. WIND UPLIFT LOADS ON STEEL OR WOOD ROOFS SHALL BE 20 PSF NET
- FACTORED UNLESS NOTED OTHERWISE. SEISMIC AND WIND DESIGN:

DESIGN STRENGTH.

THE LATERAL SYSTEM FOR THIS PROJECT CONSISTS OF MD CONCENTRICALLY BRACE FRAMES AND IS DESIGNED FOR:

- Za = 4, Zv = 4v = 0.2I = 1.0F = 2.0
- AND THE FOLLOWING WIND LOADS: q30 = 11.4 PSF, q10 = 9.4 PSF

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 A PERIODIC REVIEW AT THE SOLE DISCRETION OF READ JONES CHRISTOFFERSEN'S ENGINEERS IN ORDER 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.

- 2. 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.

NON-STRUCTURAL ELEMENTS

- 1. "NON-STRUCTURAL" OR "SECONDARY STRUCTURAL" ELEMENTS ARE NOT PART OF THE STRUCTURAL DESIGN SHOWN ON THESE DRAWINGS. SUCH ELEMENTS ARE DESIGNED, DETAILED AND REVIEWED IN THE FIELD BY OTHERS. THEY APPEAR ON DRAWINGS OTHER THAN THESE DRAWINGS OF READ JONES CHRISTOFFERSEN LTD., WHERE STRUCTURAL ENGINEERING RESPONSIBILITY IS REQUIRED FOR THESE ELEMENTS, THIS SHALL BE PROVIDED BY SPECIALTY STRUCTURAL ENGINEERS, WHO SHALL ALSO PROVIDE ANY LETTERS REQUIRED BY BUILDING PERMIT AUTHORITIES.
- 2. EXAMPLES OF NON-STRUCTURAL ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO: ARCHITECTURAL COMPONENTS SUCH AS GUARDRAILS, HANDRAILS, FLAG POSTS, CANOPIES, CEILINGS, MILLWORK, ETC.
- LANDSCAPE ELEMENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS, ETC. CLADDING, GLAZING, WINDOW MULLIONS, INTERIOR STUD WALLS AND EXTERIOR STUD WALLS. ARCHITECTURAL PRECAST, PRECAST CLADDING.
- SKYLIGHTS. MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS, AND THEIR ATTACHMENT DETAILS.
- WINDOW WASHING EQUIPMENT AND ITS ATTACHMENTS. ESCALATORS, ELEVATORS, AND CONVEYING SYSTEMS.
- GLASS BLOCK AND ITS ATTACHMENTS BRICK OR BLOCK VENEERS AND THEIR ATTACHMENTS.
- NON-LOAD BEARING MASONRY NON-STRUCTURAL CONCRETE TOPPINGS.
- PRIMARY STRUCTURAL SYSTEM SHALL BE SUBMITTED TO READ JONES CHRISTOFFERSEN LTD. THESE DRAWINGS WILL BE REVIEWED ONLY FOR THE EFFECT OF THE ELEMENT ON THE PRIMARY STRUCTURAL SYSTEM.

SHOP DRAWINGS FOR NON-STRUCTURAL ELEMENTS WHICH MAY AFFECT THE

- 4. THE DESIGN WIND LOAD TO BE USED FOR INTERIOR STUDS AND PARTITIONS IS 5 PSF (UNFACTORED) UNLESS NOTED OTHERWISE.
- 5. THE MAXIMUM ALLOWABLE DEFLECTIONS FOR GLAZING, STUDS, PARTITIONS AND CLADDING UNDER THE WIND LOADS SHOWN ABOVE SHALL MEET THE ARCHITECTURAL SPECIFICATIONS, THE NATIONAL BUILDING CODE AND THE MANUFACTURER'S SPECIFICATIONS. IN NO CASE SHALL THE DEFLECTIONS EXCEED THE FOLLOWING:
- A. ELEMENTS SUPPORTING BRICK VENEER ----- L/720, MAX. 1"
- ELEMENTS SUPPORTING PRECAST PANELS OR STUCCO-- L/360, MAX. 1" ELEMENTS SUPPORTING WOOD SIDING, METAL SIDING --- L/180, MAX. 1" OR EXTERIOR INSULATION
 - D. ELEMENTS SUPPORTING GLAZING ----- L/180, MAX. 1"

LIST OF STRUCTURAL DRAWINGS

- S1-01 GENERAL NOTES
- S1-02 GENERAL NOTES S1-03 - GENERAL NOTES
- S2-01 MAIN FLOOR (FOUNDATION) PLAN

S4-01 - FOUNDATION SECTIONS AND DETAILS

- S2-02 SECOND FLOOR PLAN S2-03 - MECHANICAL MEZZANINE/LOW ROOF PLAN
- S2-04 ROOF PLAN
- S3-01 BRACE AND TRUSS ELEVATIONS
- S4-02 STAIR SECTIONS AND DETAILS - STAIR SECTIONS AND DETAILS S4-04 - SECOND FLOOR AND LOWER ROOF (MECH. MEZZ.) SECTIONS AND DETAILS
- S4-05 ROOF AND MISCELLANEOUS SECTIONS AND DETAILS
- S4-06 BRACE SECTIONS AND DETAILS

architect@iredale.ca

DRAWINGS

- THIS SET OF DRAWINGS SHOWS THE COMPLETED PROJECT. THE DRAWINGS DO NOT SHOW COMPONENTS THAT MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE 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 WORK.
- 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.

GENERAL

- 1. SECTION MARK SHOWN THUS $\left(\frac{4}{3}\right)$ 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. THE GENERAL CONTRACTOR SHALL REVIEW ALL THE DRAWINGS AND CHECK

DIMENSIONS BEFORE CONSTRUCTION. REPORT DISCREPANCIES BETWEEN

- STRUCTURAL AND OTHER DISCIPLINES DRAWINGS FOR CLARIFICATION. SHALL CONFORM TO CAN/CSA-A23.1, A23.2, A23.3 AND REFERENCED
- STRUCTURAL STEEL WORK
 SHALL CONFORM TO CSA STANDARD S16 AND REFERENCED DOCUMENTS.
- SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PRECISE LOCATION OF
- REQUIRED FIRE RESISTANCE RATINGS. DO NOT CUT OR DRILL ANY OPENINGS IN STRUCTURAL MEMBERS WITHOUT WRITTEN PERMISSION OF R.J.C.

CONDUIT AND PIPING. PROVIDE FOR SAME.

REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND LANDSCAPE DRAWINGS FOR LOCATIONS, CONFIGURATIONS, EXTENT, AND SIZES OF ALL CURBS, UPSTANDS, DOWNTURNS; AND FOR OPENINGS THROUGH FLOORS AND WALLS FOR DUCTS,

ABBREVIATIONS:

DOCUMENTS.

A.B	ANCHOR BOLT	I.I.B.B	LONG LEGS BACK TO BACK
ALT	AI TERNATE		LONG LEG HORIZONTAL
	ARCHITECTURAL		LONG LEG VERTICAL
	BOTTOM CHORD EXTENSION		LONG SIDE HORIZONTAL
BOT			LONG SIDE VERTICAL
	CANTILEVER	L.W	
	CAST IN PLACE	MAX	
	CONTROL JOINT		MECHANICAL
	CENTER LINE	MIN	
CLR			NOT IN CONTRACT
CONC. ——		N.S. ———	
	CONTINUOUS		NOT TO SCALE
	COMPLETE PENETRATION		ON CENTRE
CTRS			ON CENTRE
	COMPLETE WITH	OPP	
DET			OPEN WEB STEEL JOIST
	DEAD LOAD		PARTIAL PENETRATION
	DO OVER - (DITTO)		POST-TENSIONING
	DEEP (I.E. DEPTH OF BEAM)		
DWG		RTN. ———	
DWLS			REINFORCED WITH
E.E			SUPERIMPOSED DEAD LOAD
	EACH FACE	SIM. ———	
EL			SHORT LEGS BACK TO BACK
ELEV			SLAB ON GRADE
	ELECTRICAL		SPECIFICATIONS
E.S	EACH SIDE	STAG. ——	STAGGER
E.WAY	EACH WAY	STIR	
E.W	EACH WAY		SHORT WAY
EXIST	EXISTING	SYM	SYMMETRICAL
EXT. ———	EXTERIOR	THK	THICK
F.D. ———	FLOOR DRAIN	THRU	
F.S	FAR SIDE	T.O	TOP OF
GALV	GALVANIZED	T.O.C. ——	TOP OF CONCRETE
G.L	GRID LINE	T.O.S	TOP OF STEEL
	HOOK ONE END	TYP	
H.2.E. ——	HOOK 2 ENDS	T & B	TOP AND BOTTOM
	HORIZONTAL AND VERTICAL		TENSION AND COMPRESSION
	HORIZONTAL		TONGUE AND GROOVE
	HORIZONTAL	T.J	
	LIODIZONIAL		TOD OF CLAD (CTEF)

11. <u>DEFINITIONS</u>

HORIZ. — HORIZONTAL

INT. --- INTERIOR

L.L. ---- LIVE LOAD

JT. ---- JOINT

LG. ---- LONG

- A. RJC: READ JONES CHRISTOFFERSEN OR ITS REPRESENTATIVE.
- <u>SPECIALTY STRUCTURAL ENGINEER</u>: A STRUCTURAL ENGINEER REGISTERED AND LICENSED TO PRACTICE BY THE PROFESSIONAL ENGINEERING ASSOCIATION HAVING JURISDICTION IN THE AREA WHERE THE STRUCTURE IS TO BE BUILT AND WHO IS RESPONSIBLE FOR THE DESIGN AND FIELD
- STRUCTURAL ELEMENTS DESIGNED BY THE CONTRACTOR OR SUBCONTRACTORS, SUCH AS OPEN WEB STEEL JOISTS, PRECAST DOUBLE TEES, PRECAST PLANKS, STRUCTURAL STEEL CONNECTIONS, LIGHT WOOD FRAME ROOF TRUSSES, ETC.

U/S --- UNDERSIDE

W.P. --- WORK POINT

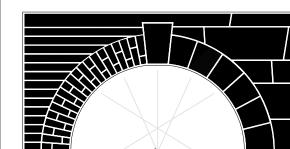
VERT. --- VERTICAL

T.O.S. --- TOP OF SLAB/STEEL

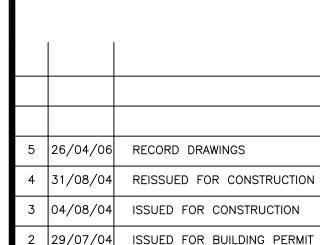
U.N.O. — UNLESS NOTED OTHERWISE

- SECONDARY STRUCTURAL ELEMENTS AND NON-STRUCTURAL ELEMENTS. SEE ALSO "NON-STRUCTURAL ELEMENTS" GENERAL NOTES,
- C. <u>CONTINUOUS</u>: FULL TENSION SPLICE AND EMBEDMENT.

IREDALE GROUP ARCHITECTURE



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05/07/04 ISSUED FOR TENDER

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Surrey Museum

56A Avenue & 176A Street

Cloverdale, Surrey, BC

Drawing Title **GENERAL NOTES**

Project No 39004.02

S1-01

AS NOTED

EMBEDMENT AND SPLICE LENGTH NOTES

BASED ON CAN/CSA-A23.3-M94

WHERE EMBEDMENT OR SPLICES ARE DIMENSIONED ON THE DRAWINGS. SUCH DIMENSION SHALL APPLY.

WHERE THE DRAWINGS INDICATE COMPRESSION EMBEDMENT IT SHALL BE AS NOTED

WHERE NO EMBEDMENT OR EMBEDMENT TYPE IS CALLED FOR ON THESE DRAWINGS, IT SHALL BE A TENSION EMBEDMENT, EXCEPT FOR COLUMNS WHICH SHALL BE A COMPRESSION EMBEDMENT.

WHERE NO SPLICE OR SPLICE TYPE IS CALLED FOR ON THESE DRAWINGS, IT SHALL BE A TENSION SPLICE, EXCEPT FOR COLUMNS WHICH SHALL BE A COMPRESSION SPLICE. IN TABLES BELOW, EMBEDMENT LENGTHS ARE SHOWN WITHOUT BRACKETS, AND SPLICE

- ALL LENGTHS ARE FOR Fy = 400 MPa REBAR.
- ALL TENSION SPLICE LENGTHS ARE CLASS "B".

LENGTHS ARE SHOWN IN BRACKETS.

COMPRESSION EMBEDMENT AND SPLICE LENGTHS

REBAR		CONCRETE STRENGTH				
DESIGNATION	FUNCTION	20MPa	25MPa	30MPa & GREATER		
10M	EMBEDMENT	10"	9"	8"		
	(SPLICE)	(13")	(13")	(13")		
15M	EMBEDMENT	14"	12"	11"		
	(SPLICE)	(19")	(19")	(19")		
20M	EMBEDMENT	17"	15"	14"		
	(SPLICE)	(23")	(23")	(23")		
25M	EMBEDMENT	21"	19"	17"		
	(SPLICE)	(29")	(29")	(29")		
30M	EMBEDMENT	25"	22"	21"		
	(SPLICE)	(34")	(34")	(34")		
35M	EMBEDMENT	30"	27"	25"		
	(SPLICE)	(41")	(41")	(41")		

TENSION EMBEDMENT AND SPLICE LENGTHS

CASE 1 CONDITIONS

TENSION EMBEDMENT AND SPLICE LENGTHS ARE TO BE AS PER THE FOLLOWING TABLE

- COLUMNS.
- BEAM AND GRIDER TOP AND BOTTOM BARS. SLAB BAND TOP BARS.
- TWO WAY SLAB TOP AND BOTTOM BARS.
- ONE WAY SLAB BOTTOM BARS.
- WALL HORIZONTAL AND VERTICAL DISTRIBUTED REINFORCING.
- SEE ALSO NOTES ON TOP BARS AND EPOXY COATED REINFORCEMENT. - MEMBERS WHICH DO NOT SATISFY THE ABOVE CONDITIONS SHALL HAVE TENSION

EMBEDMENTS AND SPLICES AS PER CASE 2 TABLE BELOW.

REBAR		CONCRETE STRENGTH					
DESIGNATION	FUNCTION	20 MPa	25 MPa	30 MPa	35 MPa	40 MPa	
10M	EMBEDMENT	13"	12"	12"	12"	12"	
	(SPLICE)	(16")	(15")	(15")	(15")	(15")	
15M	EMBEDMENT	19"	17"	16"	14"	13"	
	(SPLICE)	(25")	(22")	(20")	(19")	(17")	
20M	EMBEDMENT	25"	23"	21"	19"	18"	
	(SPLICE)	(33")	(29")	(27")	(25")	(23")	
25M	EMBEDMENT	40"	35"	32"	30"	28"	
	(SPLICE)	(51")	(46")	(42")	(39")	(37")	
30M	EMBEDMENT	48"	43"	39"	36"	34"	
	(SPLICE)	(62")	(55")	(50")	(47")	(44")	
35M	EMBEDMENT	55"	47"	45"	42"	39"	
	(SPLICE)	(72")	(64")	(59")	(54")	(51")	

NOTE: "TOP BAR" VALUES ARE 1.3 TIMES THE ABOVE LENGTHS.

"TOP BAR" APPLIES TO HORIZONTAL REINFORCEMENT CAST WITH 12" OR MORE OF CONCRETE BELOW THE BAR.

NOTE: EPOXY REINFORCEMENT

INCREASE THESE TABLE LENGTHS BY 1.5 FOR EPOXY COATED REINFORCEMENT. INCREASE THESE TABLE LENGTHS BY 1.7 FOR EPOXY COATED TOP REINFORCEMENT

CASE 2 CONDITIONS

TENSION EMBEDMENT AND SPLICE LENGTHS ARE TO BE AS PER THE FOLLOWING TABLE FOR MEMBERS NOT SATISFYING CASE 1 CONDITIONS AS SET OUT ABOVE. FOR EXAMPLE:

- ONE WAY SLAB TOP BARS (SEE TOP BAR NOTE). - SLAB BAND BOTTOM BARS.
- BARS (EXCLUDING THE SPLICE) SPACED CLOSER TOGETHER THAN 2 BAR DIAMETERS. STIRRUPS IN BEAMS AND GIRDERS.
- SEE ALSO NOTES ON TOP BARS AND EPOXY COATED REINFORCEMENT

REBAR		CONCRETE STRENGTH					
DESIGNATION	FUNCTION	20 MPa	25 MPa	30 MPa	35 MPa	40 MPa	
10M	EMBEDMENT	17"	15"	14"	13"	12"	
	(SPLICE)	(22")	(20")	(18")	(17")	(16")	
15M	EMBEDMENT	25"	23"	21"	19"	18"	
	(SPLICE)	(33")	(29")	(27")	(25")	(23")	
20M	EMBEDMENT	34"	30"	28"	26"	24"	
	(SPLICE)	(44")	(39")	(36")	(33")	(31")	
25M	EMBEDMENT	53"	47"	43"	40"	37"	
	(SPLICE)	(69")	(61")	(56")	(52")	(49")	
30M	EMBEDMENT	63"	57"	52"	48"	45"	
	(SPLICE)	(82")	(74")	(67")	(62")	(58")	
35M	EMBEDMENT	74"	66"	60"	56"	52"	
	(SPLICE)	(96")	(86")	(78")	(73")	(68")	

NOTE: "TOP BAR" VALUES ARE 1.3 TIMES THE ABOVE LENGTHS.

"TOP BAR" APPLIES TO HORIZONTAL REINFORCEMENT CAST WITH 12" OR MORE OF CONCRETE BELOW THE BAR.

NOTE: EPOXY REINFORCEMENT

INCREASE THESE TABLE LENGTHS BY 1.5 FOR EPOXY COATED REINFORCEMENT. INCREASE THESE TABLE LENGTHS BY 1.7 FOR EPOXY COATED TOP REINFORCEMENT

SLAB NOTES

- UNLESS OTHERWISE NOTED, THE MINIMUM BOTTOM REINFORCING IN BOTH DIRECTIONS IN SLABS SHALL BE AS SHOWN ON SLAB TEMPERATURE REINFORCING NOTES. THIS DOES NOT APPLY TO POST-TENSIONED SLABS IN THE DIRECTION OF
- UNLESS OTHERWISE NOTED, EDGES OF ALL SLABS SHALL HAVE 2-15M BOTTOM CONTINUOUS LAPPED 25". AT RE-ENTRANT CORNER EXTEND 25" BEYOND THE
- ALL OPENINGS IN SLAB SHALL HAVE 2-15M BARS PARALLEL TO ALL EDGES EXTENDING 25" BEYOND CORNERS.
- UNLESS OTHERWISE NOTED. SLAB REINFORCING SHALL NOT BE CUT AT PLUMBING OR OTHER OPENINGS. SPREAD REINFORCING AROUND OPENINGS.
- SUPPORT SLAB BOTTOM REINFORCING ON SUFFICIENT SLAB BOLSTERS OR EQUIVALENT TO MAINTAIN CONCRETE PROTECTION AS SPECIFIED.
- SUPPORT SLAB TOP REINFORCING ON HIGH CHAIRS AND/OR 15M SUPPORT BARS WHERE REQUIRED. ALL BARS AND CHAIRS MUST BE SECURELY TIED TOGETHER. 15M BARS USED AS SUPPORT BARS SHALL BE CONSIDERED AS ACCESSORIES.

PROVIDE SUFFICIENT CHAIRS AND SUPPORT BARS TO MAINTAIN CONCRETE PROTECTION AS SPECIFIED, AND TO MAINTAIN REINFORCING STEEL SECURELY IN PLACE DURING CONCRETE PLACEMENT.

TEMPERATURE BARS MAY BE DROPPED AND USED TO SUPPORT THE MAIN REBAR ON ONE WAY SLABS. FOR TWO WAY SLABS, DROPPED BARS USED TO SUPPORT THE MAIN TWO WAY REINFORCING STEEL SHALL BE IN ADDITION TO THE REINFORCING SHOWN ON PLAN.

- 7. CAMBERS: FOR SLABS, BEAMS, GIRDERS
- CIRCLED NUMBERS, E.G. (5/8") INDICATES POSITION AND MAGNITUDE OF POINTS WHERE SLABS SHALL BE CAMBERED.
- FOR SPANS OVER 15'-0" WHEN CAMBERS ARE NOT INDICATED ON DRAWINGS, SPANS SHALL BE CAMBERED 0.002 OF SPAN.
- C. U.N.O. POST-TENSIONED SLABS AND BEAMS NEED NOT BE CAMBERED
- LOCATIONS AND DETAILS OF CONSTRUCTION JOINTS TO BE SUBMITTED TO RJC FOR REVIEW AND APPROVAL, PRIOR TO CONSTRUCTION.
- UNLESS OTHERWISE NOTED, SLAB TEMPERATURE REINFORCING SHALL BE SPLICED USING A CLASS B TENSION SPLICE.

SLAB TEMPERATURE REINFORCING

MINIMUM BOTTOM UNLESS NOTED OTHERWISE.

SLAB THICKNESS (INCHES)	TEMPERATURE REINFORCING
5" 5 1/2" 6" 6 1/2" 7	10M @ 16" 10M @ 14" 10M @ 13" 10M @ 12" 10M @ 11" 15M @ 20" 15M @ 19" 15M @ 18" 15M @ 17" 15M @ 16" 15M @ 16"
12"	15M @ 13"

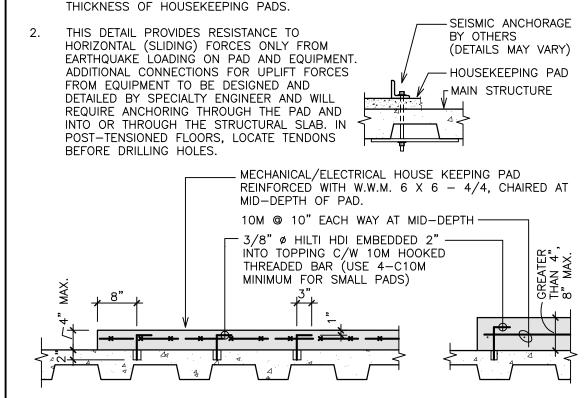
- FOR OTHER THICKNESSES REINFORCEMENT TO BE PROPORTIONAL TO ABOVE.

- BASED ON CAN/CSA-A23.3: 0.002 X AREA.

- 15M AT 20" MAY BE SUBSTITUTED FOR 10M @ 11".

TYPICAL MECHANICAL/ELECTRICAL HOUSEKEEPING PAD DETAIL

SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION, EXTENT, AND



HICKNESS <= 8

PAD THICKNESS <= 4"

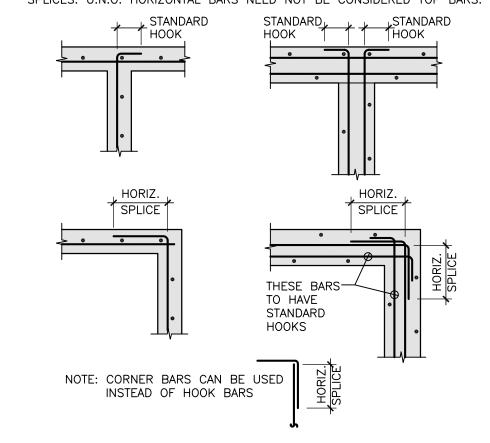
WALL NOTES

1. UNLESS OTHERWISE NOTED, WALLS SHALL BE REINFORCED AS FOLLOWS: 10M @ 18" VERT. ----- 10M @ 13" HORIZ. 8" 10M @ 13"VERT. --------- 10M @ 10"HORIZ. OR 15M @ 20" 10" 10M @ 10" VERT. OR 15M @ 20" --- 10M @ 8" HORIZ. OR 15M @ 16" 12" 10M @ 18" VERT. E.F. STAG. ----- 10M @ 13" HORIZ. E.F. STAG.

FOR OTHER THICKNESSES, REINFORCEMENT TO BE PROPORTIONAL TO ABOVE. 15M @ 20" MAY BE SUBSTITUTED FOR 10M @ 13" ONLY WITH THE APPROVAL OF RJC. FOR WALLS WITH A SINGLE LAYER OF STEEL, THE WALL REINFORCING SHALL BE PLACED IN THE CENTRE OF THE WALL U.N.O.

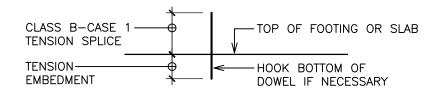
14" 10M @ 15" VERT. E.F. STAG. ----- 10M @ 11" HORIZ. E.F. STAG.

- ALL WALL REINFORCING SHALL BE CONTINUOUS, WITH HOOKS OR CORNER BARS USED AT ALL WALL JUNCTIONS. EXTEND HOOKS TO FAR FACE OF WALL. CORNER BARS TO BE LOCATED ON OUTSIDE FACE OR CENTRE OF WALL.
- HORIZONTAL AND VERTICAL SPLICES SHALL BE CLASS B-CASE 1 TENSION SPLICES. U.N.O. HORIZONTAL BARS NEED NOT BE CONSIDERED TOP BARS.

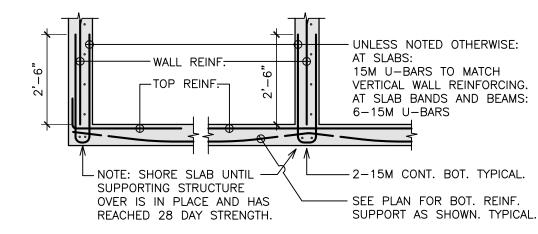


DETAILS OF HORIZONTAL REINFORCEMENT AT CORNERS SEE ALSO ZONE REINFORCING DETAILS)

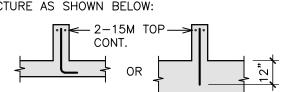
- ENDS OF ALL WALLS SHALL HAVE 2-15M VERTICAL LAPPED 25" UNLESS OTHERWISE NOTED ON DRAWINGS.
- ADD 2-15M PARALLEL TO ALL EDGES AND EXTENDING 25" BEYOND CORNERS AT
- UNLESS NOTED OTHERWISE, PROVIDE DOWELS AT BOTTOM OF WALLS (I.E. AT FOOTINGS OR WHEREVER WALL BEGINS) AS SHOWN BELOW. DOWELS TO MATCH VERTICAL STEEL.



UNLESS NOTED OTHERWISE, PROVIDE U-BARS AS SHOWN WHERE FLOORS ARE SUPPORTED FROM THE BOTTOM OF WALLS.



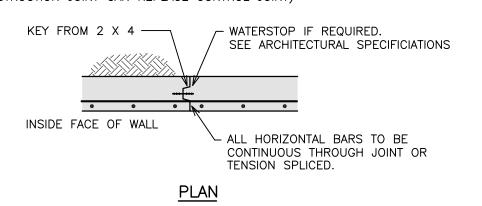
SEE ARCHITECTURAL DRAWINGS FOR EXTENT AND LOCATION OF CONCRETE UPSTAND WALLS. PLANTER WALLS AND CURBS. UNLESS NOTED OTHERWISE PROVIDE REINFORCING AS GIVEN IN ITEM 1. VERTICAL BARS TO BE EMBEDDED IN MAIN STRUCTURE AS SHOWN BELOW:



UNLESS NOTED OTHERWISE, ALL RETAINING WALLS BELOW GRADE AND ALL EXTERIOR WALLS EXPOSED TO THE WEATHER ABOVE GRADE SHALL HAVE CONTROL JOINTS. SEE CONTROL JOINT DETAIL. CONSTRUCTION JOINT MAY REPLACE CONTROL JOINT WHERE REQUIRED. THE LOCATION OF CONTROL JOINTS IN EXPOSED CONCRETE WALLS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW.

WALL CONSTRUCTION JOINT

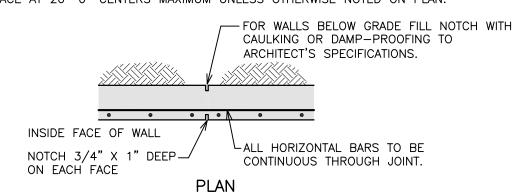
(CONSTRUCTION JOINT CAN REPLACE CONTROL JOINT)



WALL CONTROL JOINT

UNLESS NOTED OTHERWISE FOR EXTERIOR WALLS BELOW GRADE AND EXTERIOR WALLS EXPOSED TO WEATHER ABOVE GRADE.

SPACE AT 20'-0" CENTERS MAXIMUM UNLESS OTHERWISE NOTED ON PLAN.



REINFORCING NOTES

- REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS:
- CAN/CSA-G30.18R CSA STANDARD G30.5 CAN/CSA-G30.18W

- GRADE 400 MPa - 10M AND LARGER (U.N.O.) - GRADE 400 MPa - WELDED WIRE MESH GRADE 400 MPa - ALL REINFORCING THAT WILL BE WELDED OR IS PART OF THE SEISMIC RESISTING ELEMENTS: REINFORCING FOR SHEAR WALLS, HEADERS AND ZONES (INCLUDING ZONE TIES AND HEADER TIES/STIRRUPS) AND MOMENT FRAME COLUMNS AND BEAMS

(INCLUDING COLUMN TIES AND BEAM

FIRE RATINGS

(NOTE: G30.18W MAY BE SUBSTITUTED FOR G30.18R) 2. UNLESS OTHERWISE NOTED CONCRETE COVER TO REINFORCEMENT SHALL BE:

A. FOR FIRE RATINGS

		ATINGS
	0-2 HRS	3 HRS
i) BEAMS, GIRDERS, COLUMNS, FORMED PILES (TO TIES OR STIRRUPS)	1 5/8"	1 5/8"
ii) SLABS AND SLAB BANDS (NON-PARKING), ZONE TIES, NON RETAINING WALLS.	1" (30M=1 1/4")	1 3/8"
iii) SLABS AND SLAB BANDS: TOP BARS (PARKING WITH MEMBRANE) BOT. BARS	1 1/2" 1 1/4"	1 1/2" 1 3/8"
iv) RETAINING WALLS: INSIDE FACE GROUND OR EARTH SIDE	1" (30M=1 1/4") 1 1/2" (30M = 1 3/4")	1 3/8" 1 1/2" (30M = 1 3/4")

B. CONCRETE CAST AGAINST EARTH OR GROUND ----- 3" NOTES:

LARGEST COVER REQUIRED GOVERNS.

3. DESIGNATION OF REINFORCING BARS:

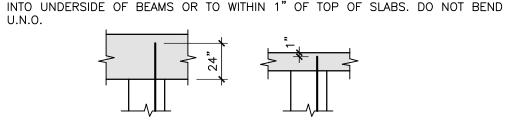
SEE ARCHITECTURAL DRAWINGS AND STRUCTURAL DRAWINGS FOR AREAS WHICH MAY REQUIRE 3 HOUR RATINGS.

SEE STRUCTURAL DRAWINGS FOR AREAS CLASSIFIED AS (C) or (D) ABOVE FOR WEATHER EXPOSURE.

- BARS SHOWN THUS IN BOTTOM OF BEAMS AND SLABS OR IN FAR FACE OF WALL.
- NEAR FACE OF WALL. STRAIGHT E.G. 6-10M13.9 MEANS 6-10M BARS 13'-9" LONG. E.G. 15M12.6 + 15M10.6 ALT. @ 12" MEANS 1-15M12.6 BAR THEN 1-15M10.6 BAR SPACED 12" AWAY
- E.G. 13-A20M13.4 MEANS 13-20M BARS 13'-4" H.1.E. 180°. E.G. 3-C25M09.10 MEANS 3-25M BARS 9'-10" LONG
- 4. DO NOT SUBSTITUTE DEFORMED WIRE FOR REINFORCING BARS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
- 5. TESTING OF REINFORCING STEEL SHALL CONFORM TO THE SPECIFICATIONS.

COLUMN NOTES — U.N.O.

- 1. CONCRETE STRENGTH IN COLUMNS IS INDICATED IN COLUMN SCHEDULE.
- 2. TIE COLUMN CAGES TO FORMS AND SQUARE BEFORE PLACING CONCRETE.
- 3. CONDUITS, BOXES OR OTHER INSERTS MAY NOT BE PLACED IN COLUMNS UNLESS OTHERWISE APPROVED BY RJC.
- 4. UNLESS OTHERWISE NOTED ON COLUMN SCHEDULE, ALL COLUMN SPLICES SHALL BE AS STANDARD DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
- HOOKS ON TIES SHALL BE BENT AT LEAST 135°. MULTIPLE TIES ARRANGED AS ON STANDARD DETAILS OR COLUMN SCHEDULE. 6. UNLESS OTHERWISE NOTED, PARKADE COLUMNS SHALL BE CHAMFERED (3/4" X
- UNLESS OTHERWISE NOTED, ALL COLUMN SPLICES SHALL BE COMPRESSION
- WHERE COLUMNS DO NOT EXTEND OVER, EXTEND VERTICAL REINFORCING 600

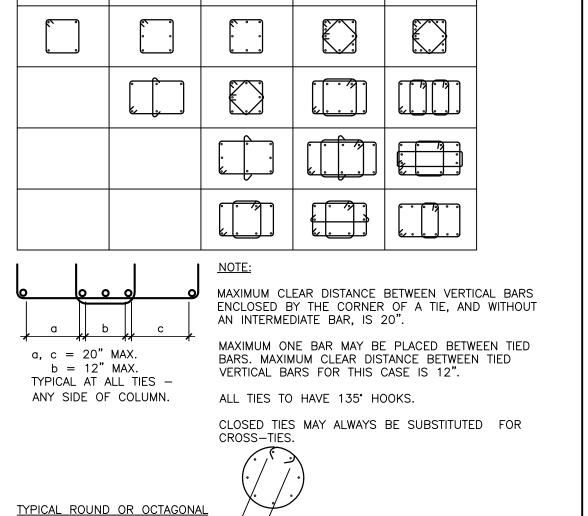


9. UNLESS NOTED OTHERWISE, COLUMNS SHOULD BE CENTRED ON COLUMNS BELOW. 10. UNLESS NOTED OTHERWISE, COLUMNS SHALL BE CENTRED ON GRID LINES.

COLUMN TIE ARRANGEMENTS - U.N.O.

COLUMN TIES 6 VERTICAL BARS MIN.

4 BAR COL | 6 BAR COL | 8 BAR COL | 10 BAR COL | 12 BAR COL



CONCRETE CONSTRUCTION TOLERANCES

(TOLERANCES AS PER CAN/CSA-A23.1 CLAUSE 10, EXCEPT AS NOTED BELOW.) CLOSER TOLERANCES SHALL BE MAINTAINED WHERE ARCHITECTURAL DETAILS OR OTHERS

WHERE ANY DEVIATION OCCURS, AND IT IS ACCEPTABLE TO THE ENGINEER AND ARCHITECT. THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTMENT OF OTHER BUILDING ELEMENTS TO ACCOMMODATE SUCH DEVIATION. COSTS FOR REMEDIAL WORK FOR DEVIATIONS NOT ACCEPTED SHALL BE BOURNE BY THE CONTRACTOR.

VARIATION FROM THE PLUMB.

IN THE LINES AND SURFACES OF COLUMNS, PIERS, WALLS AND IN ARRISES: 0.25% OF HEIGHT (1 IN 400), MAXIMUM 1 1/2" OVER THE ENTIRE HEIGHT OF THE STRUCTURE.

ONLY ONE CURVATURE ALLOWED PER 10'-0".

THE TOLERANCE GIVEN IS THE MAXIMUM VARIATION FROM A PLUMB LINE. ALL MEASUREMENTS SHALL BE TO THE SAME SIDE OF THE PLUMB LINE.

UNLESS SPECIFIED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS - THE TOLERANCES FOR EXPOSED CORNER COLUMNS, CONTROL-JOINTS GROOVES, AND OTHER CONSPICUOUS LINES SHALL BE: (SEE ALSO ELEVATOR SHOP 0.125% OF HEIGHT (1 IN 800), MAXIMUM 3/4".

ONLY ONE CURVATURE ALLOWED PER 20'-0".

VARIATION FROM THE LEVEL OR FROM THE GRADES OR CAMBERS INDICATED ON THE DRAWINGS:

MAXIMUM VARIATION IN WINDOW BAYS 0.2% OF OPENING.

UNLESS SPECIFIED ELSEWHERE, FLOOR FINISHES SHALL BE CLASS A "INSTITUTIONAL AND COMMERCIAL FLOOR" \pm 5/16" PER 10'-0". ONLY ONE CURVATURE ALLOWED IN 10'-0".

TOLERANCES GIVEN ARE MAXIMUM DISTANCE FROM SPECIFIED LEVELS. CLOSER TOLERANCES MAY BE REQUIRED TO GIVE THE QUALITY OF FINISH FLOOR SURFACES CALLED FOR ELSEWHERE IN THE CONTRACT DOCUMENTS.

- 3. LOCATION OF COLUMNS AND WALLS: AS FOR COLUMNS IN CAN/CSA-A23.1.
- VARIATION IN CROSS-SECTIONAL DIMENSIONS OF COLUMNS AND BEAMS AND IN THE THICKNESS OF SLABS AND WALLS: AS IN CAN/CSA-A23.1.
- ONLY ONE CURVATURE ALLOWED PER 10'-0".

A. VARIATION IN DIMENSIONS IN PLAN: MINUS ----- 3/8"

PLUS ----- 2

TWO (2) PERCENT OF THE FOOTING WIDTH IN THE DIRECTION OF

MINUS -----5% OF SPECIFIED THICKNESS

MISPLACEMENT OR ECCENTRICITY:

MISPLACEMENT BUT NOT MORE THAN ----- 2" C. REDUCTION IN THICKNESS:

THE ABOVE REQUIREMENTS DO NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY OF MEETING MORE RIGID REQUIREMENTS SPECIFIED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS OR AS REQUIRED BY EQUIPMENT SHOP DRAWINGS OR SPECIFICATIONS SUCH AS THOSE FOR ELEVATORS ETC.

STRIPPING NOTES

5. FOOTINGS:

- THE DESIGN AND FIELD REVIEW OF FORMWORK, SHORING AND RESHORING IS THE RESPONSIBILITY OF THE CONTRACTOR. RESHORING DRAWINGS SHALL BE SUBMITTED TO RJC FOR THE EFFECT ON THE BASE BUILDING STRUCTURE ONLY.
- NO COLUMN OR WALL FORMS SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 10 MPa FOR ARCHITECTURAL CONCRETE OR 8 MPa FOR OTHER COLUMNS OR WALLS.
- NO SLABFORMS OR BEAMFORMS SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 17 MPa. FOR PARKING SLABS THE CONCRETE SHALL REACH 75% OF THE 28 DAY STRENGTH BEFORE STRIPPING.
- STRENGTH OF CONCRETE FOR STRIPPING TO BE DETERMINED BY FIELD-CURED CYLINDERS. ALTERNATE METHODS, IF ACCEPTABLE TO RJC, MAY BE USED.
- ALL SLABS, BEAMS, GIRDERS ETC. TO BE SHORED UNTIL CONCRETE REACHES DESIGN STRENGTH.
- SOME MULTI LEVEL OR HANGER ASSEMBLIES REQUIRE FULL SHORING FOR A NUMBER OF LEVELS. SEE STRUCTURAL DRAWINGS FOR SPECIAL SHORING

NON-STRUCTURAL CONCRETE TOPPING ON CONCRETE SLABS

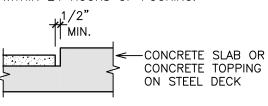
- SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR EXTENT, THICKNESS, AND
- REINFORCE AS SHOWN ON STRUCTURAL OR ARCHITECTURAL PLANS AND SPECIFICATIONS, EXCEPT MINIMUM REINFORCING TO BE:

TOPPING THICKNESS	REINFORCING (TO BE PLACED AT MID-DEPTH)
UP TO 2"	1 SHEET OF W.W.M. 6 X 6 - 10/10 LAP 12"
3"	1 SHEET OF W.W.M. 6 X 6 - 8/8 LAP 12" OR 2 SHEETS OF W.W.M. 6 X 6 - 10/10 LAP 12"
4"	2 SHEETS OF W.W.M. 6 X 6 - 10/10 LAP 12" OR 10M @ 20" EACH WAY AT MID-DEPTH OF TOPPING
5" OR GREATER	TEMPERATURE REINFORCING EACH WAY, SEE "SLAB NOTES".

FOR OTHER THICKNESSES, REINFORCEMENT TO BE PROPORTIONAL TO ABOVE. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR CONTROL JOINTS AND

EXPANSION JOINTS, DETAILS, JOINT SPACING AND PATTERN. UNLESS NOTED OTHERWISE, PROVIDE 1" DEEP SAWCUTS OR TOOLED JOINTS. MINIMUM SPACING OF JOINTS IN EACH DIRECTION IS 10'-0". IF SAWCUTS ARE USED, DO NOT CUT REINFORCING AND MAKE THE SAWCUTS WITHIN 24 HOURS OF POURING.

PROVIDE 1/2" GAP (MIN.) AT EDGES TO ALLOW FOR EXPANSION. SEE ALSO ARCHITECTURAL DETAILS AND REQUIREMENTS.

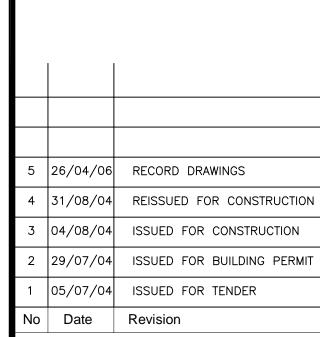


SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR JOINT FILLERS AND SLIP SHEETS, IF REQUIRED.

FIELD REVIEW OF ARCHITECTURAL TOPPING DETAILS SUCH AS REINFORCING, JOINTS, JOINT SPACING, JOINT FILLER, SLIP SHEETS ETC., BY OTHERS, NOT BY RJC. CALL ARCHITECT TO SCHEDULE FIELD REVIEW OF THOSE ELEMENTS.

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56A Avenue & 176A Street Cloverdale, Surrey, BC

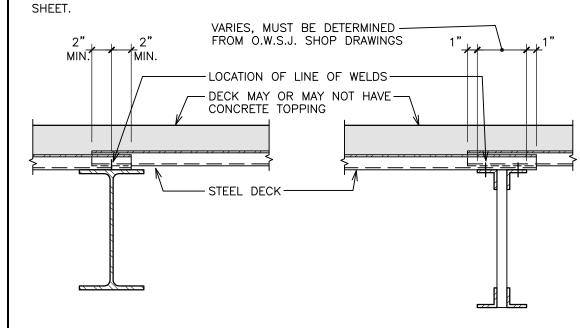
GENERAL NOTES

Project No 39004.02 AS NOTED

S1-02

STEEL DECK LAP OVER SUPPORTING MEMBERS

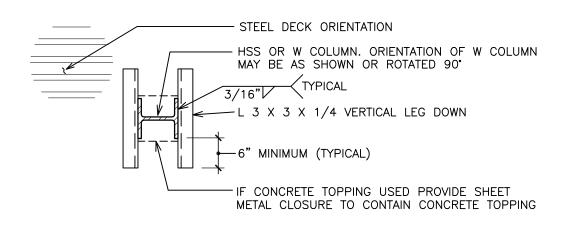
AT SPLICE LOCATIONS, STEEL DECKING SHALL BE INSTALLED WITH SUFFICIENT LAPS TO ENSURE THAT BOTH PIECES OF DECK ARE FASTENED TO THE SUPPORTING MEMBER. AS A MINIMUM, OVER SUPPORTING MEMBERS WITH UNBROKEN TOP SURFACES, SUCH AS W-BEAMS AND CHANNELS, THE LAP SHALL BE 4" AND THE WELDS OR DECK FASTENERS SHALL BE AT OR NEAR THE CENTRELINE OF THE SUPPORTING MEMBERS OVER SUPPORTING MEMBERS WITH INTERRUPTED TOP SURFACES. SUCH AS O.W.S.J.'S WITH DOUBLE ANGLE OR HAT SHAPED TOP CHORDS, THE LAP SPLICE SHALL BE A MINIMUM EQUAL TO THE OVERALL WIDTH OF THE TOP CHORD PLUS 1" ON EACH SIDE. IN THIS CASE THE WELDS OR DECK FASTENERS MAY BE CENTRED ON THE SUPPORTING SURFACE ON THE SIDE OF THE TOP CHORD TOWARDS THE END OF THE TOP DECK



TYPICAL DETAIL AT SUPPORTING MEMBER WITH UNBROKEN TOP SURFACE

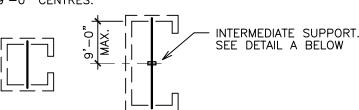
TYPICAL DETAIL AT MEMBER WITH INTERRUPTED TOP SURFACE

TYPICAL DECK SUPPORT AT COLUMNS



ELEVATOR NOTES

- 1. SEE ELEVATOR SHOP DRAWINGS FOR ELEVATOR REQUIREMENTS, IN PARTICULAR
- CONFIRM SHAFT DIMENSIONS CONFIRM PIT DEPTH
- CONFIRM LOCATION OF DIVIDER BEAMS - CONFIRM ROUGH OPENING SIZE FOR DOORS
- STEEL BEAMS PROVIDING PERMANENT SUPPORT FOR ELEVATOR MACHINERY AND EQUIPMENT ARE NOT SHOWN ON THESE DRAWINGS. THEY SHALL BE DESIGNED AND DETAILED BY THE ELEVATOR SUB-CONTRACTOR. SHOP DRAWINGS SHOWING THESE BEAMS SHALL BE REVIEWED BY RJC FOR THEIR EFFECT ON THE BASE. BUILDING STRUCTURE. THE CONCRETE INFILL SLAB AT THE TOP OF THE ELEVATOR SHAFT IS NOT DESIGNED TO SUPPORT THE ELEVATOR MACHINERY AND EQUIPMENT. IF THE ELEVATOR MANUFACTURER NEEDS THE SLAB TO SUPPORT THE ELEVATOR THEN THE ELEVATOR MANUFACTURER SHALL ADVISE RJC AND SHALL PROVIDE LOADS AND DETAILS REQUIRED FOR THE RE-DESIGN OF
- PROVIDE AN S8 X 18 HOIST BEAM IN THE CEILING OF THE ELEVATOR MACHINE ROOM, SPANNING OVER THE ELEVATOR SHAFT. THE HOIST BEAM SHALL BE SUPPORTED AT EACH END BY CONNECTING TO THE STRUCTURAL STEEL. IF THE SPAN EXCEEDS 9'-0", PROVIDE INTERMEDIATE SUPPORTS TO THE SLAB OVER AT 9'-0" CENTRES.



ARCHITECTURAL BRICK VENEER NOTES (U.N.O.)

- 1. SEE ARCHITECTURAL DRAWINGS FOR BRICK VENEERS. UNLESS NOTED OTHERWISE 3 1/2" BRICK VENEERS SHALL BE SUPPORTED AT BOTTOM BY DIRECT BEARING ON CONCRETE SLAB OR CORBEL (IF SHOWN ON STRUCTURAL DRAWINGS) OR ON A STEEL LEDGER ANGLE AS SHOWN ON STRUCTURAL AND ARCHITECTURAL
- 2. CORROSION PROTECTION OF LEDGER ANGLES SHALL BE HOT-DIP GALVANIZING. AFTER WELDING GRIND SMOOTH ALL WELDS. AFTER WELDING OR BOLTING THE ANGLE IN PLACE, COAT ALL NON-GALVANIZED STEEL (EXPOSED PORTION OF EMBED PLATES, WELDS AND BOLT HEADS) WITH GALVACON.
- 3. SEE ARCHITECTURAL DRAWINGS FOR BRICK SUPPORTS (TYPICAL). SHOP DRAWINGS SHOWING ALL STEEL SUPPORTS FOR BRICK VENEER SHALL BE SUBMITTED FOR
- 4. LOOSE LINTELS AT OPENINGS IN BRICK VENEER AS FOLLOWS UNLESS NOTED OTHERWISE:

		LOOSE	LINTEL SCHEDULE	
OPE	NING WIDTH	LINTEL SIZE	V///// IN A I	
0'-0	0" TO 4'-0"	L4x4x5/16	4" STONE/MASONRY VENEER	
4'-(0" TO 6'-0"	L6x4x5/16 L.L.V.		
6'-0	0" TO 8'-0"	L8x4x3/8 L.L.V.	LINTEL, SEE SCHEDULE	
NOTE	ES:			
1. SEE ARCHITECTURAL DRAWINGS FOR OPENINGS.				
2.	. PROVIDE LINTELS FOR ALL OPENINGS IN STONE/BRICK MASONRY.			
3.	PROVIDE MIN	NIMUM 4" BEARING A	AT LINTEL ENDS, TYPICAL.	

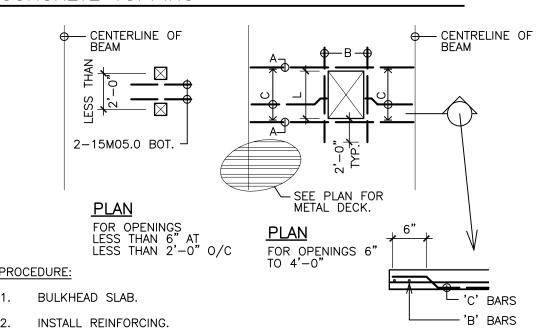
CONCRETE TOPPING ON STEEL DECK

- ALL CONCRETE TOPPING ON STEEL DECK WHICH IS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE STRUCTURAL CONCRETE TOPPING. THICKNESSES SHOWN ARE MEASURED FROM TOP OF DECK
- CONCRETE IS TO BE WELL VIBRATED, ESPECIALLY AT COLUMNS AND AROUND EMBEDDED METAL.
- ALL POUR JOINT LOCATIONS SHALL BE PRE-APPROVED. EXCEPT AT SLAB EDGES AND EXPANSION JOINTS, POUR JOINTS SHALL GENERALLY BE AT LOCATIONS WHICH ARE AT THE MID-SPAN OF BOTH BEAM AND DECK.
- SCREEDING SHALL CONFORM TO CAMBERS IN STRUCTURAL STEEL, TO MAINTAIN THE REQUIRED CONCRETE THICKNESSES. HOWEVER, ALLOWANCE SHOULD BE MADE FOR ADDITIONAL CONCRETE REQUIRED DUE TO STEEL DECK DEFLECTION AND STRUCTURAL STEEL TOLERANCES.
- ALL CONCRETE TOPPING SHALL BE REINFORCED. WHERE NO REINFORCING IS SHOWN ON THE DRAWINGS, PROVIDE W.W.M. 6 X 6 - 10/10.
- WELDED WIRE MESH SHALL BE SUPPORTED 1" BELOW THE TOP OF THE SLAB. LAP WIRE MESH A MINIMUM OF 2 CROSS WIRES + 2".
- U.N.O. PROVIDE 15MO3.3 @ 12" ADDITIONAL TOP REINFORCING CENTRED OVER ALL SUPPORTS WHERE THE STEEL DECK IS NOT A CONTINUOUS SHEET. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING LOCATIONS:
- AT SUPPORTS WHERE THE DECK IS LAPPED. - AT SUPPORTS WHERE THE DECK CHANGES DIRECTION.
- AT SUPPORTS WHERE CHANGES IN DECK ELEVATION OCCUR. - AT SUPPORTS WHERE THE CONCRETE TOPPING MEETS A FORMED CONCRETE
- U.N.O. PROVIDE 15M05.0 @ 20" ADDITIONAL TOP REINFORCING CENTRED OVER ALL INTERIOR GIRDERS.
- AT ALL OPENINGS GREATER THAN 6", REINFORCE EACH SIDE OF THE OPENING
- 10. OPENINGS SMALLER THAN 6" X 6" WHICH ARE CLOSER THAN 24" SPACING SHALL

WITH REINFORCING BARS, SEE ALSO STANDARD DETAIL AND FLOOR PLANS.

- HAVE 2-15M BARS, 5'-0" LONG PLACED BETWEEN THEM.
- 11. ALL EXTRA REINFORCING SHOWN ON PLANS, TOP AND BOTTOM, SHALL BE CHAIRED, U.N.O.
- TOPPING/COVER SLAB THICKNESS
- TOTAL OVERALL THICKNESS
- CONCRETE TOPPING THICKNESSES ON DRAWINGS ARE FROM TOP OF FLUTE TO TOP OF SLAB
- 13. AT ALL RE-ENTRANT CORNERS OF BUILDING PERIMETER, PROVIDE 2-15M04.11 ALONG EACH EDGE EXTENDING 2'-0" BEYOND THE CORNER.

TYPICAL OPENING THROUGH STEEL DECK AND CONCRETE TOPPING



- PLACE CONCRETE.
- WHEN CONCRETE HAS REACHED THE DESIGN STRENGTH, CUT OUT THE METAL DECK WITHIN THE OPENING.

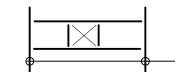
OPENING REINFORCING SCHEDULE

OF EINING INCING SCHEDOLE						
DIM. L	'A' BARS BOT. OF FLUTE	'B' BARS ON TOP OF DECK	'C' BARS BOT. OF FLUTE			
6" TO 2'-0"	1-15M EACH SIDE	1-15M EACH SIDE	1-10M/FLUTE			
2'-0" TO 4'-0"	2-15M EACH SIDE	2-15M EACH SIDE	2-10M/FLUTE			
ABOVE 4'-0"	STRUCTURAL STEEL	FRAMING REQUIRED				

OPENINGS LARGER THAN 2'-0" IN EITHER DIRECTION WHICH ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY R.J.C. PRIOR TO PLACING CONCRETE.

STEEL DECK WITHOUT CONCRETE TOPPING NOTES

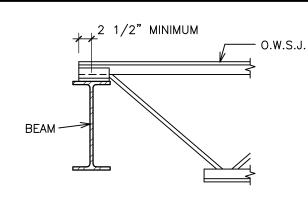
- STEEL DECK TO BE AS NOTED ON DRAWINGS. U.N.O. ALL STEEL DECK SHALL BE WELDED TO SUPPORTING STEEL AND TO STEEL PARALLEL TO THE DECK SPAN IN ACCORDANCE WITH THE PLANS AND SCHEDULE. INTERIOR EXPOSURE DECK SHALL BE ZINC COATED WIPE COAT ZF075 FOR FLOORS AND Z275 FOR ROOFS. EXTERIOR EXPOSURE DECK SHALL BE Z275 ZINC COATED U.N.O.
- SEE DRAWINGS FOR DECK THICKNESSES.
- REMOVE WATER BETWEEN THE DECK AND SUPPORTING STEEL BEFORE WELDING
- 4. SEE ALSO MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS FOR ALL
- OPENINGS IN DECK.
- U.N.O. REINFORCE OPENINGS BETWEEN 6" TO 16" MAXIMUM DIMENSION WITH L 3 X 3 X 3/16 X 4'-0" LONG. WELD TO
- U.N.O. ALL OPENINGS FROM 16" TO 24" SHALL BE FRAMED WITH L 3 X 3 X 1/4 AS SHOWN BELOW UNLESS NOTED OTHERWISE ON PLANS.



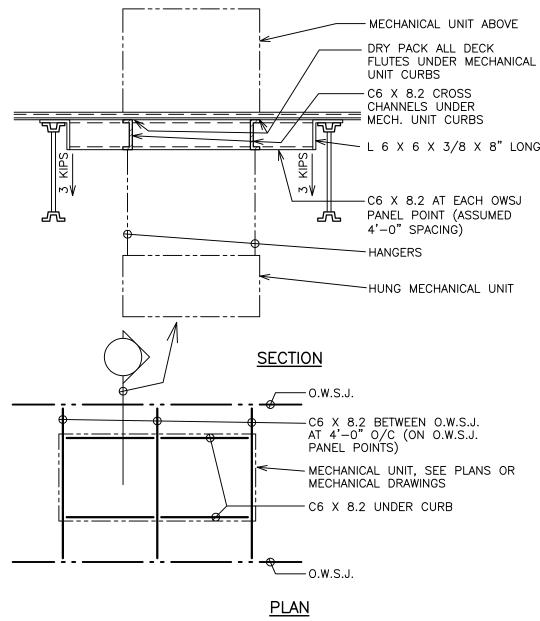
- JOIST OR BEAM

- U.N.O. AREAS OR OPENINGS UNDER EQUIPMENT WEIGHING BETWEEN 50 LBS TO 550 LBS SHALL BE REINFORCED AS IN (7) ABOVE.
- WHERE DECK IS CALLED UP ON THE DRAWINGS, ALTERNATES MUST BE THE SAME DEPTH, BE EQUIVALENT FOR DEFLECTIONS, VERTICAL LOAD, AND SHEAR CAPACITY,

TYPICAL O.W.S.J. BEARING AT END SPANS OF JOISTS



TYPICAL MECHANICAL UNIT SUPPORT



SEE MECHANICAL DRAWINGS FOR SEISMIC RESTRAINT OF MECHANICAL EQUIPMENTS. - FOR MECHANICAL DUCT OPENINGS SEE "STEEL DECK WITHOUT CONCRETE TOPPING

STEEL DECK WITH CONCRETE TOPPING NOTES

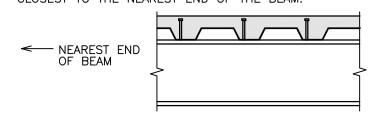
- STEEL DECK TO BE AS NOTED ON DRAWINGS. ALL DECK RECEIVING CONCRETE TOPPING TO BE COMPOSITE DECK, WIPE COAT GALVANIZED (ZF075) U.N.O.
- IT IS INTENDED THAT ALL STEEL DECK BE UNSHORED DURING CONSTRUCTION
- THE STEEL DECK THICKNESS SHALL BE AS REQUIRED TO CARRY THE WET CONCRETE WITHOUT SHORING AND TO MEET THE LOADING REQUIREMENTS LISTED BELOW, AND WILL DEPEND ON THE ACTUAL PROFILE AND LAYOUT OF DECK USED. TOPPING THICKNESS ON THE DRAWINGS ARE MEASURED FROM THE TOP OF DECK
- DESIGN FLOOR LOADS (SPECIFIED OR UNFACTORED):
- CONSTRUCTION DEAD LOAD = WEIGHT OF WET CONCRETE
- CONSTRUCTION LIVE LOAD = 20 PSFSUPERIMPOSED DEAD LOAD = AS INDICATED ON DRAWINGS
- SERVICE LIVE LOAD = AS INDICATED ON DRAWINGS
- 5. ALL DECK TO BE THREE SPAN MINIMUM WHERE POSSIBLE.
- THE STEEL DECK PROFILES SHALL BE AS REQUIRED TO ACHIEVE FIRE SEPARATIONS AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS. IN ADDITION, ALL COMPOSITE FLOOR DECK PROFILES SHALL HAVE AN AVERAGE BOTTOM FLUTE WIDTH AT LEAST 2 X DECK DEPTH WHERE USED ON COMPOSITE BEAMS WITH
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH SUBTRADES FOR PROVIDING STEEL DECK AS INDICATED ON THE DRAWINGS, AND ALL NECESSARY FORMING AT THE DECK EDGES FOR THE FULL DECK AND CONCRETE DEPTH TO PREVENT LEAKING OF THE CONCRETE TOPPING. THIS INCLUDES BUT IS NOT LIMITED TO ALL SLAB EDGES AT THE BUILDING EDGE AND ALL SLAB OPENINGS FRAMED BY STRUCTURAL STEEL, INCLUDING ELEVATOR SHAFTS AND STAIRWELLS AND AROUND THE WEBS AND FLANGES OF ALL COLUMNS.
- BEAMS NOTED AS COMPOSITE ON THE DRAWINGS REQUIRE STUD SHEAR CONNECTIONS, SEE ALSO SHEAR CONNECTOR NOTES. SEE ALSO PLANS, SECTIONS, DETAILS AND SCHEDULES FOR STUDS SHOWN ON BEAMS/GIRDERS/DRAG-STRUTS ETC. OTHER THAN COMPOSITE BEAMS. THE CONTRACTOR SHALL CO-ORDINATE THE DESIGN, SUPPLY, AND INSTALLATION OF ALL STUDS.
- STEEL DECK SHALL BE WELDED TO SUPPORTING STEEL USING 3/4" Ø PUDDLE WELDS AT EACH FLUTE AND TO STEEL PARALLEL TO THE DECK SPAN. REFER TO PLANS FOR WELD SPACING REQUIREMENTS.
- WATER ON THE STEEL DECK OR BETWEEN THE DECK AND SUPPORTING STEEL SHALL BE REMOVED BEFORE WELDING.
- FOR OPENINGS THAT MAY BE CUT AFTER TOPPING PLACED, SEE STANDARD DETAILS ON STRUCTURAL DRAWING.
- 12. SEE ALSO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR OPENINGS, HOLES ETC. IN DECKING.
- 13. SUBMIT SHOP DRAWINGS SEALED BY A SPECIALTY STRUCTURAL ENGINEER FOR DESIGN OF DECK.

SHEAR CONNECTOR NOTES - COMPOSITE BEAMS

- BEAMS AND GIRDERS DENOTED ON THE DRAWINGS AS COMPOSITE BEAMS REQUIRE SHEAR STUD CONNECTORS. THE CONTRACTOR SHALL CO-ORDINATE THE SUPPLY, AND INSTALLATION OF THE STUDS, WHETHER SHOP OR FIELD APPLIED, AND WHETHER APPLIED THROUGH STEEL DECK OR TO BARE BEAMS. SEE ALSO REQUIREMENTS OF THE STRUCTURAL STEEL SPECIFICATION (SECTION 05100) AND THE STEEL DECK SPECIFICATION (SECTION 05300) FOR OTHER REQUIREMENTS.
- 2. UNLESS OTHER SYSTEMS ARE APPROVED IN ADVANCE BY RJC, ALL SHEAR CONNECTORS SHALL BE HEADED STUD-WELDED SHEAR CONNECTORS, INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS, OR SHOP FILLET WELDED. FIELD FILLET WELDED STUDS WILL BE REJECTED.
- 3. SHEAR CONNECTORS ARE TO BE UNIFORMLY SPACED UNLESS OTHERWISE NOTED, AND STAGGERED ABOUT BEAM WEB WHERE POSSIBLE.
- MINIMUM STUD HEIGHT SHALL BE THE GREATER OF:

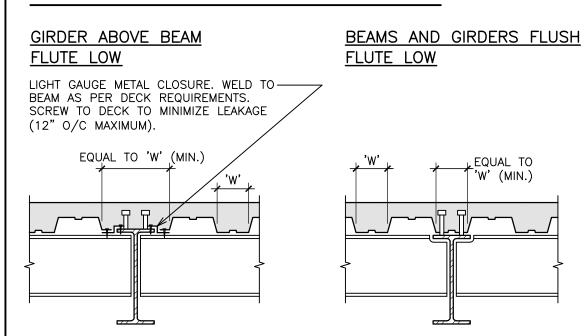
4 X STUD DIAMETER, OR STEEL DECK DEPTH + 2 X STUD DIAMETER OR LENGTH SHOWN ON DRAWINGS

- MAXIMUM STUD HEIGHT SHALL MAINTAIN 3/4" ± MINIMUM CONCRETE COVER TO TOP OF STUD.
- 6. MAXIMUM STUD DIAMETER SHALL BE 2.5 X THICKNESS OF SUPPORTING STEEL
- 7. STUDS SHALL BE PLACED IN BOTTOM FLUTES OF STEEL DECK ON THE SIDE CLOSEST TO THE NEAREST END OF THE BEAM.



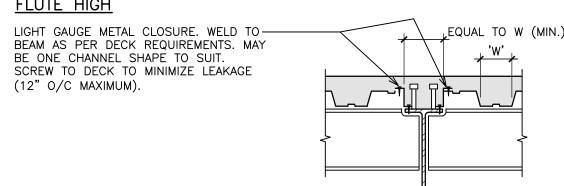
- 9. MINIMUM DISTANCE TO EDGE OF FLANGE SHALL BE 2 X STUD DIAMETER.
- 10. MINIMUM SPACING BETWEEN STUDS (LATERAL OR LONGITUDINAL) SHALL BE 4 X STUD DIAMETER. MAXIMUM SPACING SHALL BE 2'-0".

TYPICAL DETAILS AT COMPOSITE GIRDERS



BEAM OR GIRDER FLUSH OR ABOVE BEAM

FLUTE HIGH



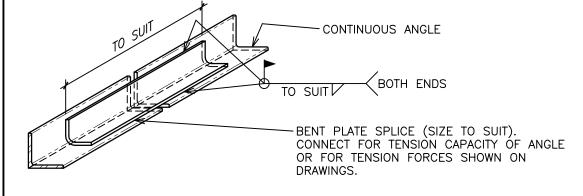
<u>NOTE:</u> LARGER LIGHT GAUGE METAL CLOSURES MAY ALSO BE USED TO SUIT DECK FLUTES.

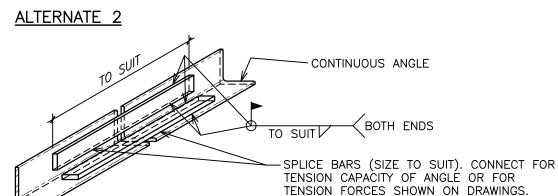
DRILLED WEDGE OR ADHESIVE (EPOXY) ANCHORS

- 1. INSTALL AS PER THE MANUFACTURER'S SPECIFICATION.
- 2. WEDGE ANCHORS TO HAVE HOLES CLEANED WITH BRUSH OR HIGH PRESSURE AIR
- 3. ADHESIVE (EPOXY) ANCHORS TO HAVE HOLES WELL CLEANED WITH HIGH PRESSURE AIR BLAST THEN BY BRUSHING.

TYPICAL TENSION SPLICE FOR ANGLES

ALTERNATE 1





MINIMUM BEND RADIUS FOR STEEL PLATES

"R"	
į–,	

"R" (MINIMUM INSIDE RADIUS) "T" (PLATE THICKNESS) 3 x "T" 0 TO 1/4" 4 × "T" 1/4" TO 1/2"

STRUCTURAL STEEL NOTES

DISTRIBUTED LOADS

1. GENERAL

DESIGN FORCES INDICATED ON DRAWINGS FOR STRUCTURAL STEEL WORK ARE FACTORED FORCES UNLESS NOTED OTHERWISE. FORCES ARE VERTICAL SHEAR FORCES U.N.O.

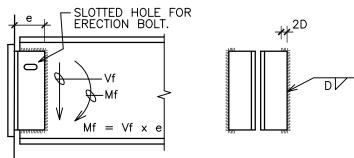
IMPERIAL

KIPS (K) FORCES KIP-FEET (K-FT) MOMENTS KIPS/FOOT (K/FT) LINE LOADS

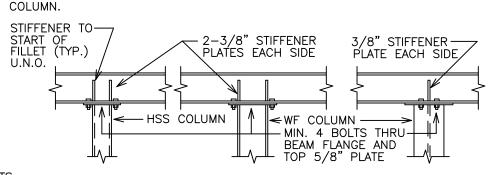
SEE "GENERAL NOTES - LOADS" FOR DEFINITIONS AND VALUES OF LIVE LOAD, DEAD LOAD AND SUPERIMPOSED DEAD LOAD. SEE ALSO PLANS FOR OTHER LOAD/FORCE REQUIREMENTS.

KIPS/SQ. FT. (KSF)

- ALL CONNECTIONS TO BE DESIGNED BY FABRICATOR UNLESS NOTED OTHERWISE. ALL BEAM CONNECTIONS TO BE STANDARD FRAME BEAM CONNECTIONS OR EQUIVALENT, UNLESS NOTED OTHERWISE.
- SHOP DRAWINGS SHALL BE PREPARED UNDER THE DIRECTION OF A SPECIALTY STRUCTURAL ENGINEER. FOR THOSE CONNECTIONS AND COMPONENTS DESIGNED BY THE FABRICATOR. THIS ENGINEER OR THEIR REPRESENTATIVE SHALL VISIT THE SITE TO REVIEW IN PLACE THE CONNECTIONS AND COMPONENTS DESIGNED BY THIS ENGINEER TO SATISFY THEMSELVES THAT THESE CONNECTIONS AND COMPONENTS COMPLY WITH THEIR DESIGN ON THE SHOP DRAWINGS. THIS ENGINEER SHALL PROVIDE A SCHEDULES B1, B2, AND CB TO THIS EFFECT. THIS ENGINEER SHALL ALSO PROVIDE SEALED SKETCHES FOR ALL FIELD MODIFICATIONS MADE TO THEIR
- PRIOR TO SUBMITTING SHOP DRAWINGS THE CONTRACTOR SHALL NOTIFY RJC IN WRITING THAT THE FABRICATOR IS CERTIFIED TO A MINIMUM OF DIVISION 2.1 OF CSA STANDARD W47.1
- DRAWINGS OF COMPONENTS AND CONNECTIONS DESIGNED BY THE FABRICATOR'S ENGINEER SHALL BE SIGNED AND SEALED BY THIS ENGINEER OR A LETTER SHALL BE SUBMITTED AT THE END OF SHOP DRAWING PRODUCTION SIGNED AND SEALED BY THIS ENGINEER, IDENTIFYING WHAT WAS DESIGNED AND LISTING THE FINAL DRAWINGS WITH DATES AND REVISION
- CONNECTIONS AND SPLICES NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUESTED BY THE FABRICATOR MUST BE ACCEPTABLE TO RJC AND DETAILED ON THE SHOP DRAWINGS. TESTING OF THESE CONNECTIONS SHALL BE AT THE DISCRETION OF RJC AND TO THE CONTRACTORS ACCOUNT.
- G. BOLTS SHALL BE A325 3/4" Ø MINIMUM U.N.O.
- BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF TWO BOLTS IN EACH CONNECTED PIECE AND BE DESIGNED AS BEARING CONNECTIONS, U.N.O.
- ALL WELDED HEADED STUDS AND WELDED DEFORMED BAR ANCHORS SHALL BE INSTALLED AS PER THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS OR SHOP FILLET WELDED. ANY FIELD FILLET WELDED DEFORMED BARS OR STUDS WILL BE REJECTED. SEE PLANS, SECTIONS, DETAILS, AND SCHEDULES FOR LOCATIONS ETC., THE CONTRACTOR SHALL CO-ORDINATE THE DESIGN, SUPPLY, AND INSTALLATION OF ALL STUDS AND ANCHORS, INCLUDING, BUT NOT LIMITED TO STUDS AND DEFORMED BAR ANCHORS ON COMPOSITE BEAMS, DRAG STRUTS, EMBEDDED PLATES, ETC.
- ROLLED SHAPES, (EXCEPT WIDE FLANGES) AND ROLLED PLATE SHALL BE TO CSA STANDARD G40.21-M-300W OR EQUIVALENT (Fy = 300 MPa). - ROLLED WIDE FLANGES AND WELDED WIDE FLANGE SECTIONS SHALL BE TO CSA STANDARD G40.21-M-350W OR EQUIVALENT (Fy = 350 MPa). - HOLLOW STRUCTURAL SECTIONS SHALL BE TO CSA STANDARD G40.21-M-350W (Fy = 350 MPa) CLASS C U.N.O.
- DESIGN DRAWINGS INCLUDE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. SEE ALSO ARCHITECTURAL DRAWINGS FOR ROOF AND FLOOR ELEVATIONS, ROOF SLOPES, EDGE DETAILS, AND ADDITIONAL DIMENSIONS AND DETAILS. WHERE ELEVATIONS, ROOF SLOPES, ETC., ARE SHOWN ON THE STRUCTURAL DRAWINGS, THEY MUST BE CONFIRMED WITH THE ARCHITECTURAL DRAWINGS.
- MEANS BEAM IS MOMENT CONNECTED M. THIS SYMBOL: THROUGH SUPPORTING BEAM OR COLUMN PROVIDE FULL STRENGT MOMENT CONNECTION U.N.O.
- N. PROVIDE 1/4" CAP PLATES FOR ALL HSS MEMBERS U.N.O.
- 2. BEAMS AND GIRDERS
 - UNLESS NOTED, BEAM AND GIRDER CONNECTIONS TO EMBEDDED PLATES SHALL BE DOUBLE ANGLE FRAMING CONNECTIONS WELDED TO THE BEAM



- B. STEEL BEAM CAMBERS SHOWN THUS (3") MEAN CAMBER BEAMS 3" AT
- TOP FLANGES OF BEAMS TO BE FREE OF ALL PAINT, DIRT, HEAVY RUST, MILL SCALE, SAND AND OTHER MATERIALS WHICH WILL INTERFERE WITH WELDING OF STUD SHEAR CONNECTIONS AND STEEL DECK TO BEAMS.
- BEAMS NOTED AS COMPOSITE ON THE DRAWINGS REQUIRE STUD SHEAR CONNECTIONS, SEE ALSO SHEAR CONNECTOR NOTES. SEE ALSO PLANS, SECTIONS, DETAILS AND SCHEDULES FOR STUDS SHOWN ON BEAMS/GIRDERS/DRAG-STRUTS ETC. OTHER THAN COMPOSITE BEAMS. THE CONTRÁCTOR SHALL CO-ORDINATE THE DESIGN, SUPPLY, AND INSTALLATION OF ALL STUDS.
- UNLESS NOTED OTHERWISE WHERE BEAMS SIT OVER COLUMNS, PROVIDE FULL HEIGHT, FULL WIDTH 3/8" STIFFENER PLATES EACH SIDE OVER

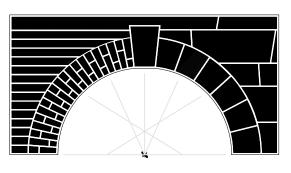


2. <u>JOISTS</u>

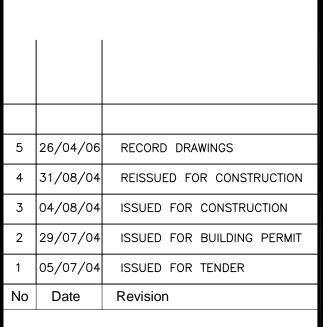
- ALL OPEN WEB STEEL JOISTS TO HAVE BUILDING SERVICES PASSING THROUGH THEM. WEB MEMBERS OF ADJACENT JOISTS TO LINE UP TO ACCOMMODATE CONTINUOUS PENETRATION OF SERVICES.
- B. JOISTS BRIDGING TO CONFORM TO CSA STANDARD S16.1 AS A MINIMUM. JOISTS CAMBERS - AS PER CSA STANDARD S16.1 EXCEPT A MINIMUM OF
- D. JOIST SHALL BE DESIGNED FOR THE LOADS SHOWN ON THE DRAWINGS.
- IN ADDITION TO THE POINT LOADS CALLED FOR ON THE DRAWINGS AND IN THE GOVERING BUILDING CODE. DESIGN JOISTS FOR A 0.75 KIP FACTORED LOAD AT ANY LOCATION ON TOP CHORD (INCLUDING THE EFFECTS OF LOCAL BENDING) CONCURRENT WITH OTHER DESIGN LOADS. OVER MECHANICAL ARÉAS THE DESIGN LOADS SHALL BE 1.25 KIP FACTORED.
- IN ADDITION TO THE POINT LOADS CALLED FOR ON THE DRAWINGS AND IN THE GOVERING BUILDING CODE, DESIGN JOISTS FOR A 0.75 KIP FACTORED LOAD AT ANY LOCATION ON BOTTOM CHORD (INCLUDING THE EFFECTS OF LOCAL BENDING) CONCURRENT WITH OTHER DESIGN LOADS. OVER MECHANICAL AREAS THE DESIGN LOADS SHALL BE 1.25 KIP FACTORED.

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ARCHITECTURE



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Consultant READ JONES



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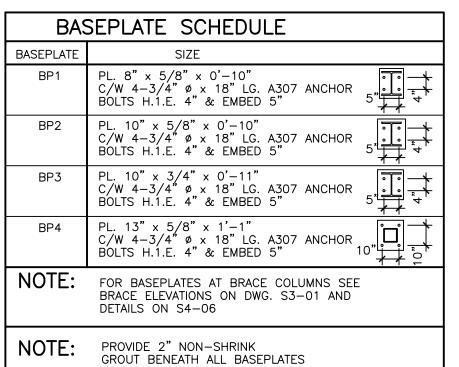
56A Avenue & 176A Street

Cloverdale, Surrey, BC

GENERAL NOTES

Project No.		39004.02
DRAWN BY	CHECKED BY	
Scale		AS NOTED

S1-03



FO	OTING SCHEDULE
FOOTING	SIZE AND REINFORCING
F1	6'-0" x 6'-0" x 12" DP. R/W 7-15M EA. WAY BOT.
F2	8'-6" x 8'-6" x 12" DP. R/W 12-15M EA. WAY BOT.
F3	10'-6" x 10'-6" x 14" DP. R/W 14-15M EA. WAY BOT.
F4	6'-0" x 6'-0" x 12" DP. R/W 6-15M EA. WAY TOP & BOT. SEE PLAN FOR DOWELS.

COLUM	N SCHEDULE
COLUMN	SIZE
C1	W8 x 21
C2	W8 x 24
С3	W8 x 28
C4	W8 x 31
C5	W8 x 40
C6	W8 x 48
C7	HSS 7 x 7 x .250
C8	W8 x 58
C9	W8 x 67
C10	W10 x 79

PEDESTAL	SCHEDULE
PEDESTAL P1 —	16" X 16" SQUARE R/W 8-C25M VERTS 10M @ 12" TIES + 3-10M EXTRA TIES @ 2" TOP OF PEDESTAL SEE DETAIL 4A/4-06

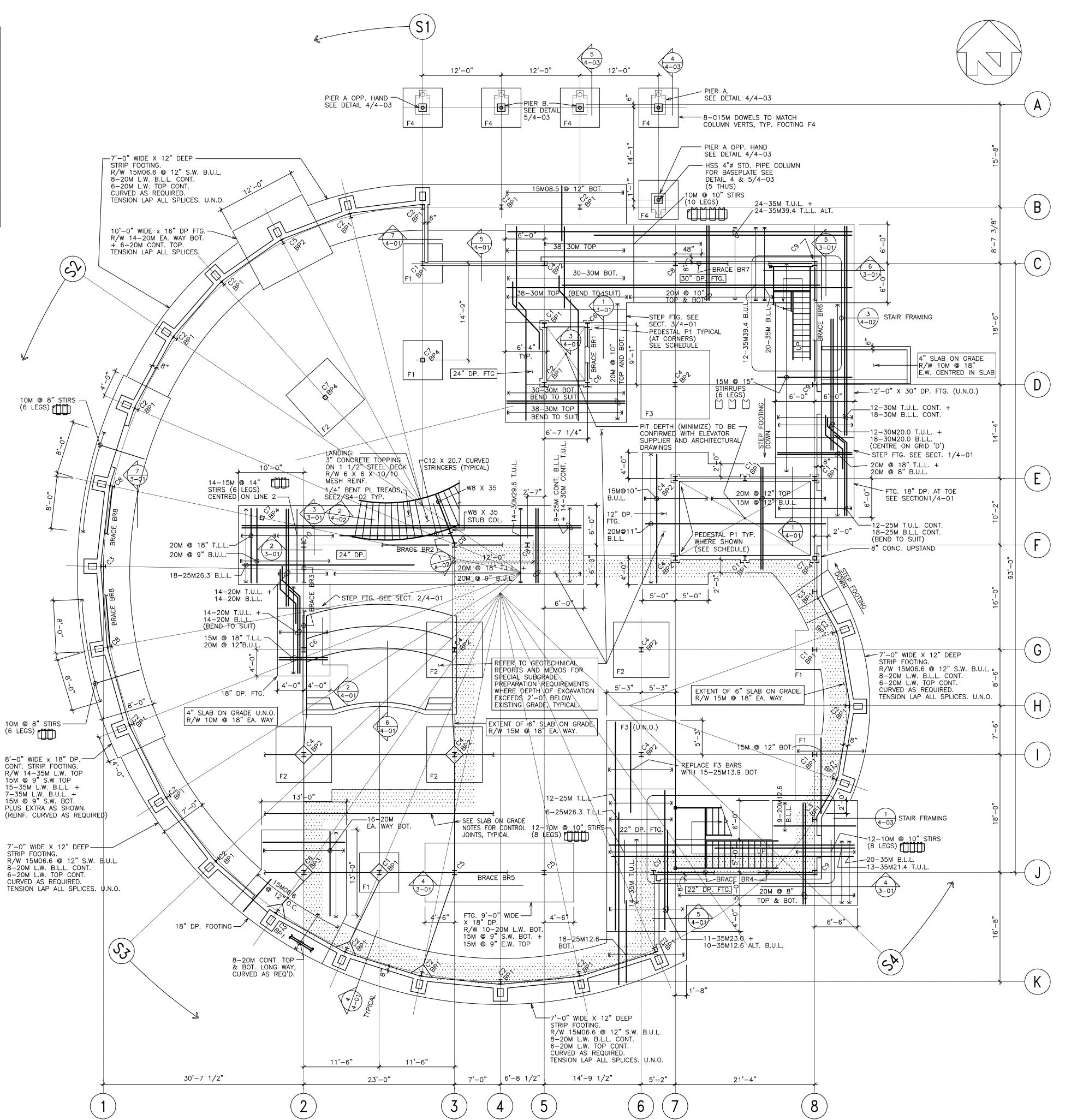
SLAB ON GRADE NOTES

SEE PLAN FOR SLAB ON GRADE THICKNESS AND REINFORCING.
ALL REINFORCING TO BE PLACED AT MID—DEPTH OF SLAB.
SAWCUT CONTROL JOINTS IN SLAB ON GRADE AS FOLLOWS:

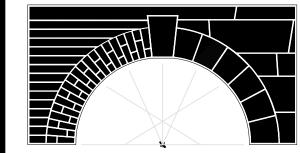
4" SLABS — 12'-0" O/C MAXIMUM.

6" SLABS — 16'-0" O/C MAXIMUM.

PROVIDE DIAMOND—SHAPED ISOLATION JOINTS AROUND—
ALL COLUMNS EXCEPT AT BRACED BAY COLUMNS.
DO NOT PROVIDE ISOLATION JOINTS AROUND
BRACED BAY COLUMNS. FOR SUB—BASE DESIGN
SEE SOILS REPORT.







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5 26/04/06 RECORD DRAWINGS 4 31/08/04 REISSUED FOR CONSTRUCTION 3 04/08/04 ISSUED FOR CONSTRUCTION 2 29/07/04 ISSUED FOR BUILDING PERMIT 1 05/07/04 ISSUED FOR TENDER

No Date Revision

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CHRISTOFFERSEN

LTD.

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VANCOUVER, BC, V6H 3X8

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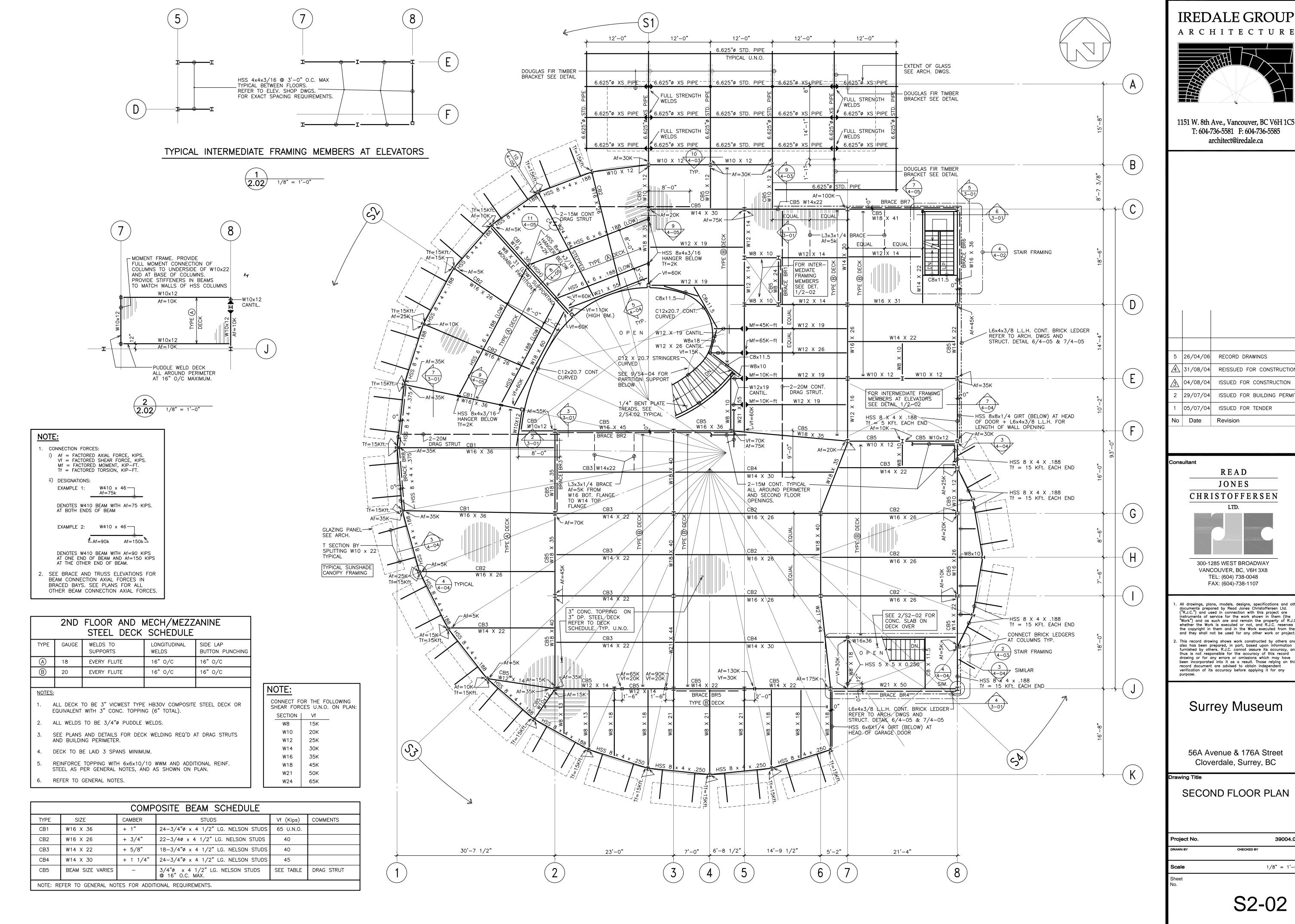
56A Avenue & 176A Street Cloverdale, Surrey, BC

..... Title

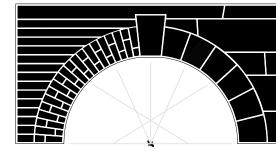
MAIN FLOOR PLAN (FOUNDATIONS)

Project No.		39004.02
DRAWN BY	CHECKED BY	
Scale		1/8" = 1'-0"
Sheet	_	

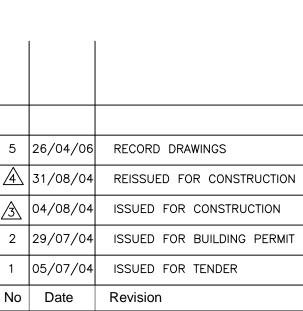
S2-01

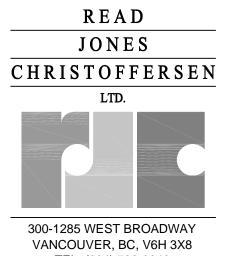


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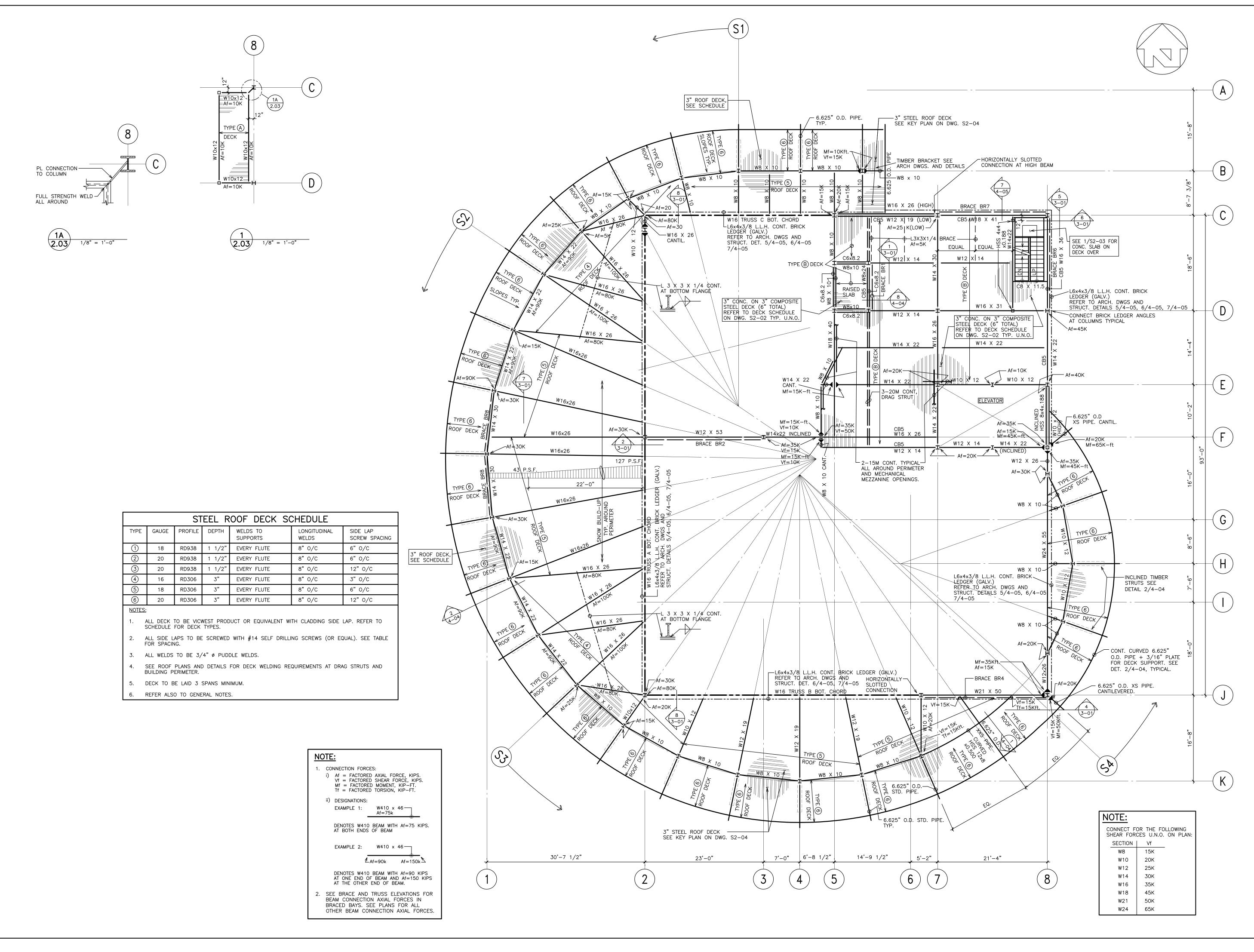
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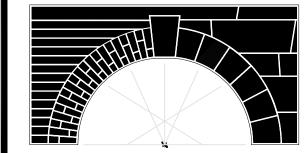
SECOND FLOOR PLAN

Project No.		39004.02
DRAWN BY	CHECKED BY	
Scale		1/8" = 1'-0"
Sheet		

S2-02

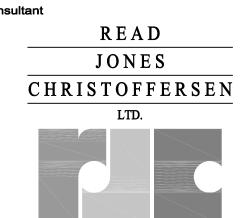


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5	26/04/06	RECORD DRAWINGS
4	31/08/04	REISSUED FOR CONSTRUCTION
<u>3</u>	04/08/04	ISSUED FOR CONSTRUCTION
2	29/07/04	ISSUED FOR BUILDING PERMIT
1	05/07/04	ISSUED FOR TENDER
No	Date	Revision



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MECHANICAL MEZZANINE/ LOW ROOF PLAN

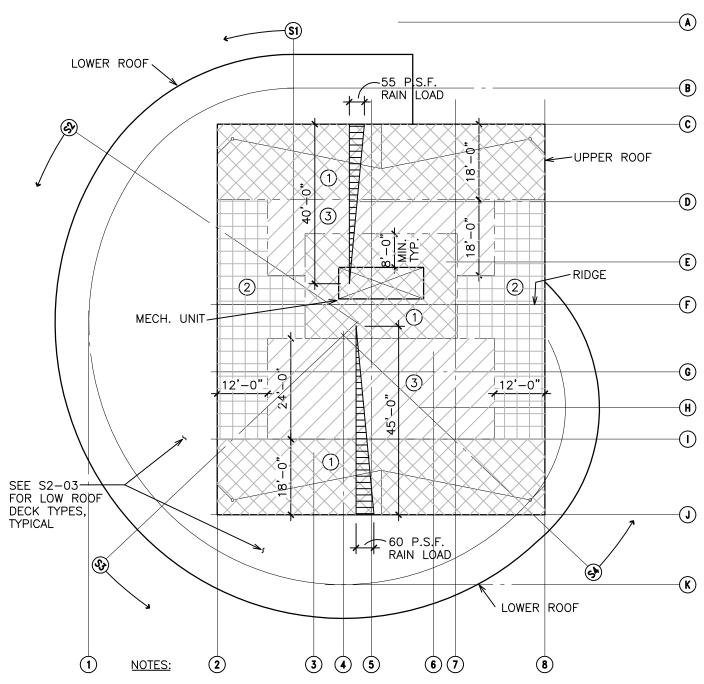
Project No.	39004.02
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Scale	1/8" = 1'-0"
Sheet No.	

S2-03

	OP	EN WEB S	TEEL JOIST	S (O.W.S.J.)	SCHEDULE
JOIST	DEPTH	UNFACTORED TOTAL DEAD LOAD (P.L.F.)	UNFACTORED LIVE LOAD (P.L.F.)	NET FACTORED WIND UPLIFT (P.L.F.)	COMMENTS
J1	32"	25 x S	44 x S	SEE NOTES	
J1A	32"	25 x S	44 x S	SEE NOTES	LL DEFLECTION < L/720
J2	32"	25 x S	44 x S	SEE NOTES	
J2A	32"	25 x S	44 x S	SEE NOTES	LL DEFLECTION < L/600
J2B	32"	25 x S	44 x S	SEE NOTES	DESIGN JOIST FOR 1.25K POINT LOAD ANYWHERE ALONG TOP OR BOTTOM CHORD
J2C	32"	25 x S	44 x S	SEE NOTES	DESIGN JOIST FOR 1.25K POINT LOAD ANYWHERE ALONG TOP OR BOT CHORD, LL DEFLECTION < L/600

NOTES:

- 1. SEE STEEL NOTES ON DRAWING S1-03
- 2. DESIGN OWSJ FOR LOADS DUE TO SNOW BUILD-UP SHOWN ON PLAN. WEIGHTS SHOWN ARE LOADS IN PSF. TOTAL DEAD LOAD INCLUDES JOIST WEIGHT.
- 3. DESIGN OWSJ FOR EXTRA LOADS DUE TO ROOF TOP MECHANICAL UNITS (R.T.U) AND HOUSEKEEPING PADS. MECHANICAL UNIT LOADS ARE UNFACTORED LOADS IN LBS. REFER TO MECHANICAL DRAWINGS FOR SIZE AND LOCATION.
- 4. ACTING IN ADDITION TO THE LOADS ABOVE, ALL OWSJ TO BE CAPABLE OF CARRYING A CONCENTRATED FACTORED LOAD OF 0.75 KIPS ANYWHERE ALONG TOP OR BOTTOM CHORDS (LOCAL BENDING). U.N.O. IN SCHEDULE
- 5. SEE PLANS AND DETAILS FOR FRAMING TO SUPPORT MECHANICAL UNITS AND SNOW BUILD-UP AROUND MECHANICAL UNITS. FRAMING TO BE SUPPLIED BY STRUCTURAL STEEL CONTRACTOR.
- 6. LIVE LOAD DEFLECTION < L/360 U.N.O.
- 7. CAMBER JOIST = $\triangle_D + 1/4\triangle_L$
- 8. T.J. = TIE JOIST, B.C.E. = BOTTOM CHORD EXTENSION (Af = 5 KIPS U.N.O.)
- 9. DESIGN ALL ROOF JOISTS FOR NET FACTORED UPLIFT OF 20 PSF. PROVIDE BOTTOM CHORD BRIDGING AT FIRST PANEL POINT FOR ALL JOISTS RESISTING UPLIFT. PROVIDE OTHER BRIDGING IN ACCORDANCE WITH S16.1.
- 10. S = TRIBUTARY LOAD WIDTH FOR JOISTS IN FEET.
- 11. AXIAL LOADS IN OWSJ'S ARE FACTORED LOADS DUE TO EARTHQUAKE.
- 12. DESIGN JOISTS FOR WORST CASE OF SCHEDULED LIVE LOADS, SNOW BUILD-UP LOADS AS SHOWN ON PLAN, OR RAIN LOADS AS SHOWN ON KEY PLAN

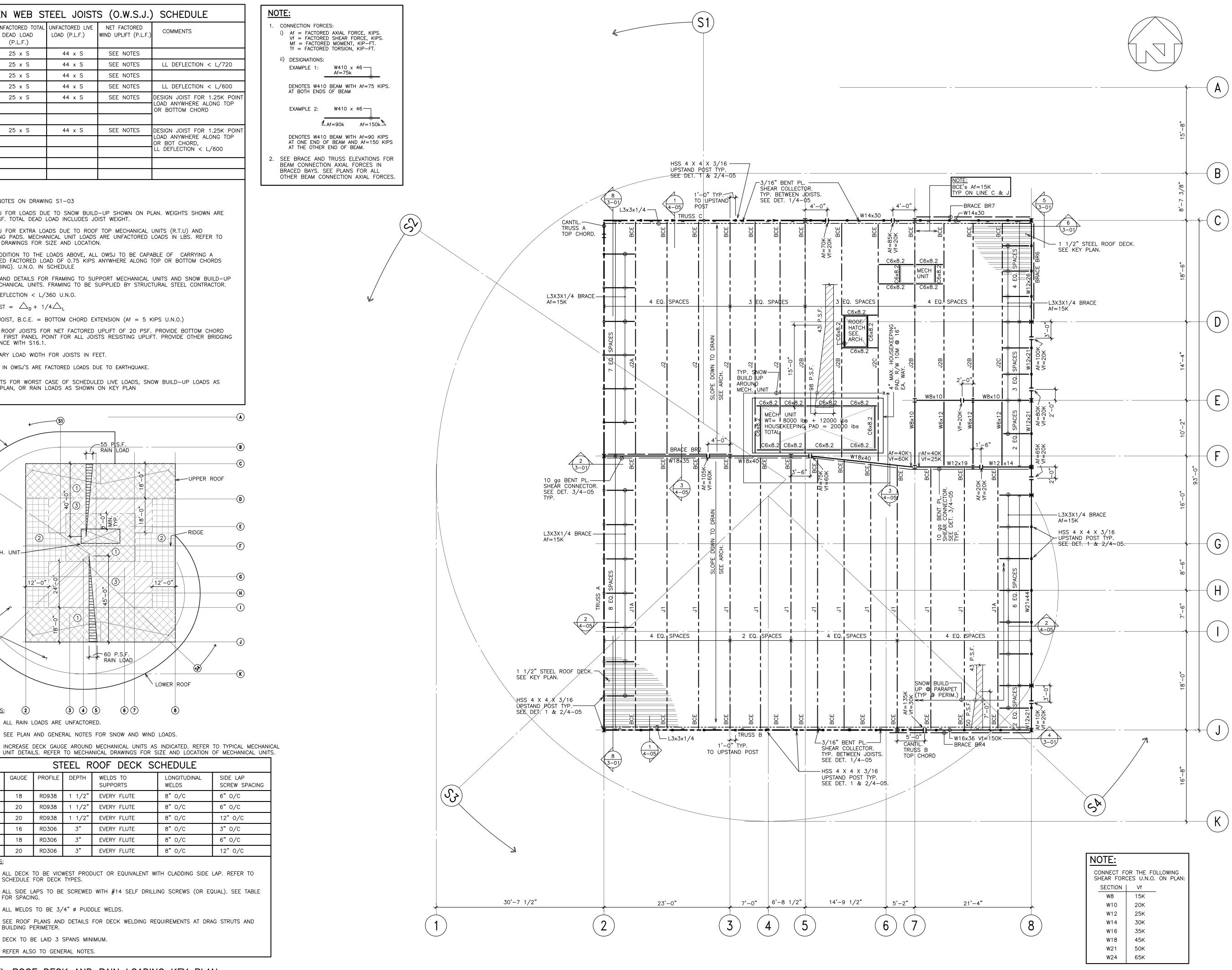


- ALL RAIN LOADS ARE UNFACTORED.
- SEE PLAN AND GENERAL NOTES FOR SNOW AND WIND LOADS.
- INCREASE DECK GAUGE AROUND MECHANICAL UNITS AS INDICATED. REFER TO TYPICAL MECHANICAL

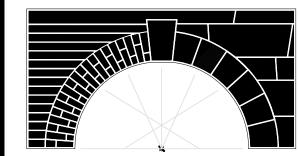
	STEEL ROOF DECK SCHEDULE					
TYPE	GAUGE	PROFILE	DEPTH	WELDS TO SUPPORTS	LONGITUDINAL WELDS	SIDE LAP SCREW SPACING
1	18	RD938	1 1/2"	EVERY FLUTE	8" O/C	6" O/C
2	20	RD938	1 1/2"	EVERY FLUTE	8" O/C	6" O/C
3	20	RD938	1 1/2"	EVERY FLUTE	8" O/C	12" O/C
4	16	RD306	3"	EVERY FLUTE	8" O/C	3" O/C
5	18	RD306	3"	EVERY FLUTE	8" O/C	6" O/C
6	20	RD306	3"	EVERY FLUTE	8" O/C	12" O/C

NOTES:

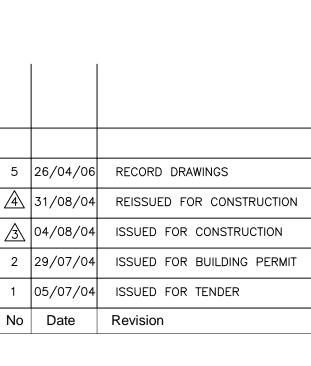
- ALL DECK TO BE VICWEST PRODUCT OR EQUIVALENT WITH CLADDING SIDE LAP. REFER TO SCHEDULE FOR DECK TYPES.
- ALL SIDE LAPS TO BE SCREWED WITH #14 SELF DRILLING SCREWS (OR EQUAL). SEE TABLE FOR SPACING.
- 3. ALL WELDS TO BE 3/4" Ø PUDDLE WELDS.
- 4. SEE ROOF PLANS AND DETAILS FOR DECK WELDING REQUIREMENTS AT DRAG STRUTS AND BUILDING PERIMETER.
- 5. DECK TO BE LAID 3 SPANS MINIMUM.
- 6. REFER ALSO TO GENERAL NOTES.

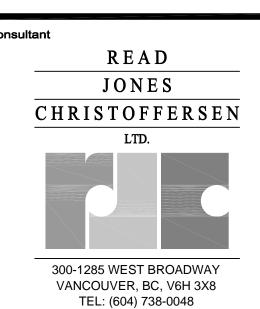






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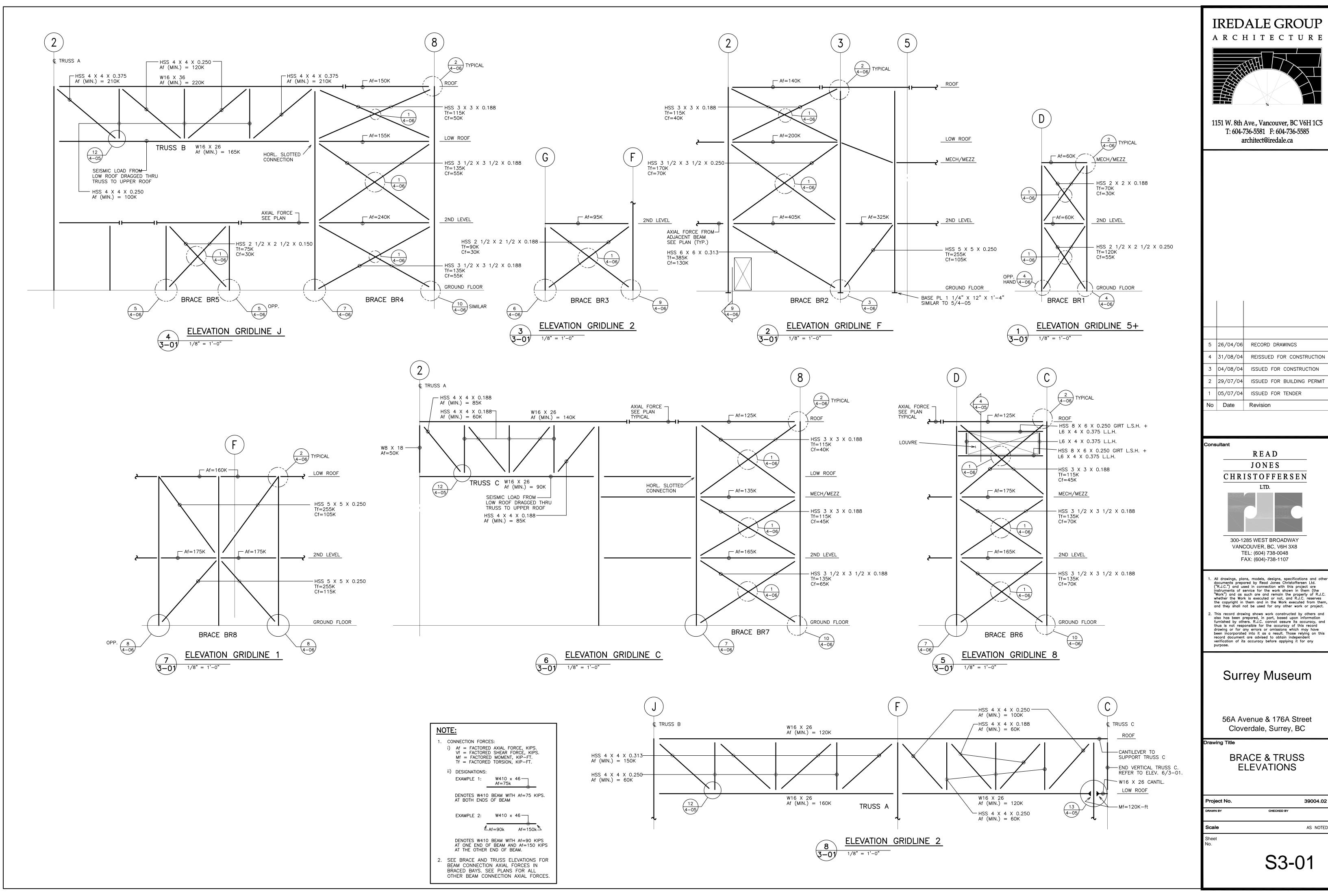
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ROOF PLAN

Project No.	39004.02
DRAWN BY	CHECKED BY
Scale	1/8" = 1'-0"
Sheet No.	

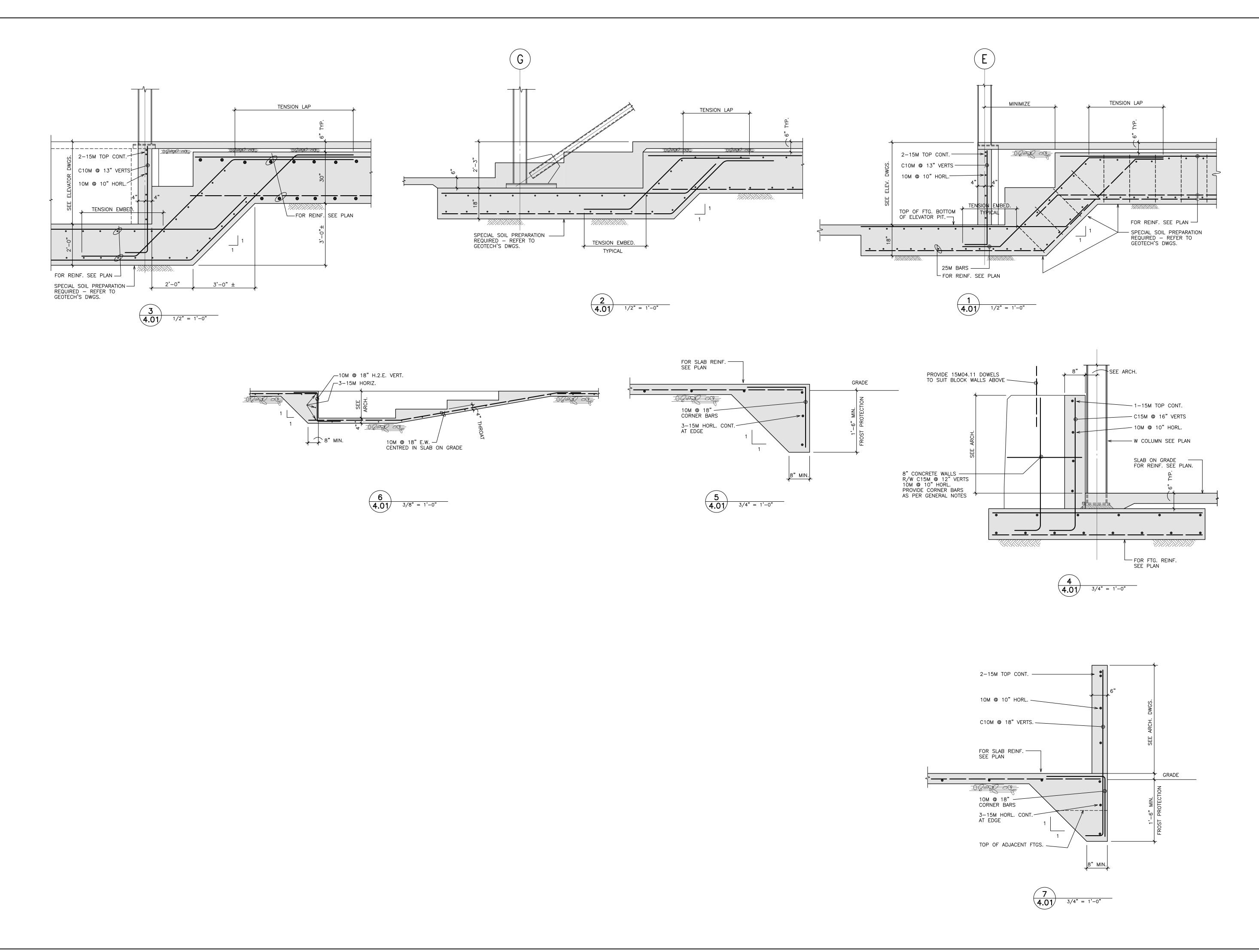
S2-04

STEEL ROOF DECK AND RAIN LOADING KEY PLAN



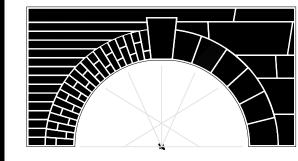
5	26/04/06	RECORD DRAWINGS
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1	05/07/04	ISSUED FOR TENDER
No	Date	Revision

Project No.		39004.02
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Scale		AS NOTED
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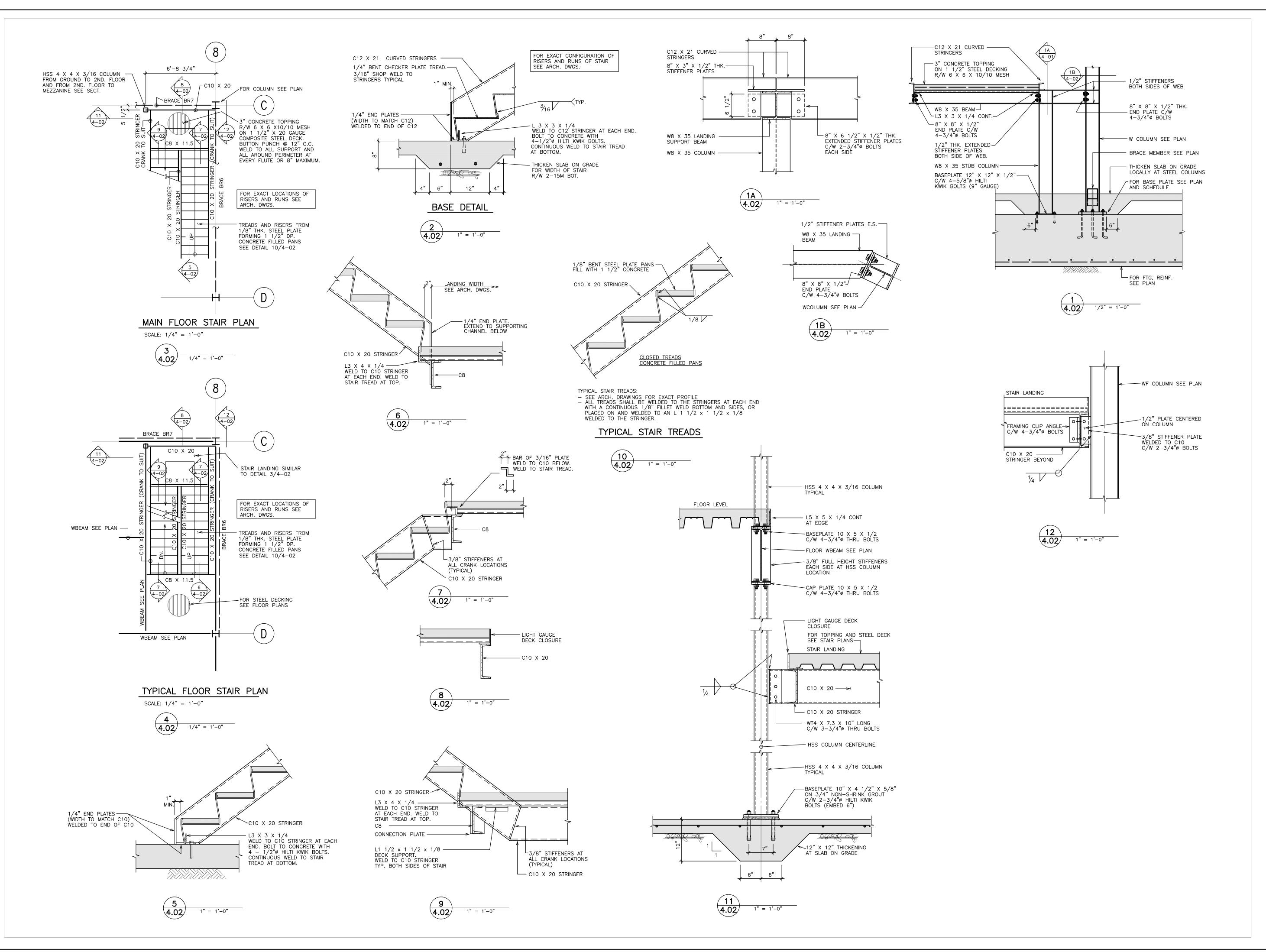
56A Avenue & 176A Street Cloverdale, Surrey, BC

Drawing Title

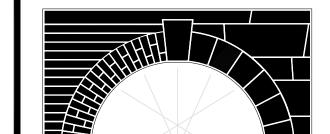
FOUNDATION SECTIONS AND DETAILS

Project No.		39004.02
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S4-01







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I		
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No	Date	Revision

Consultant

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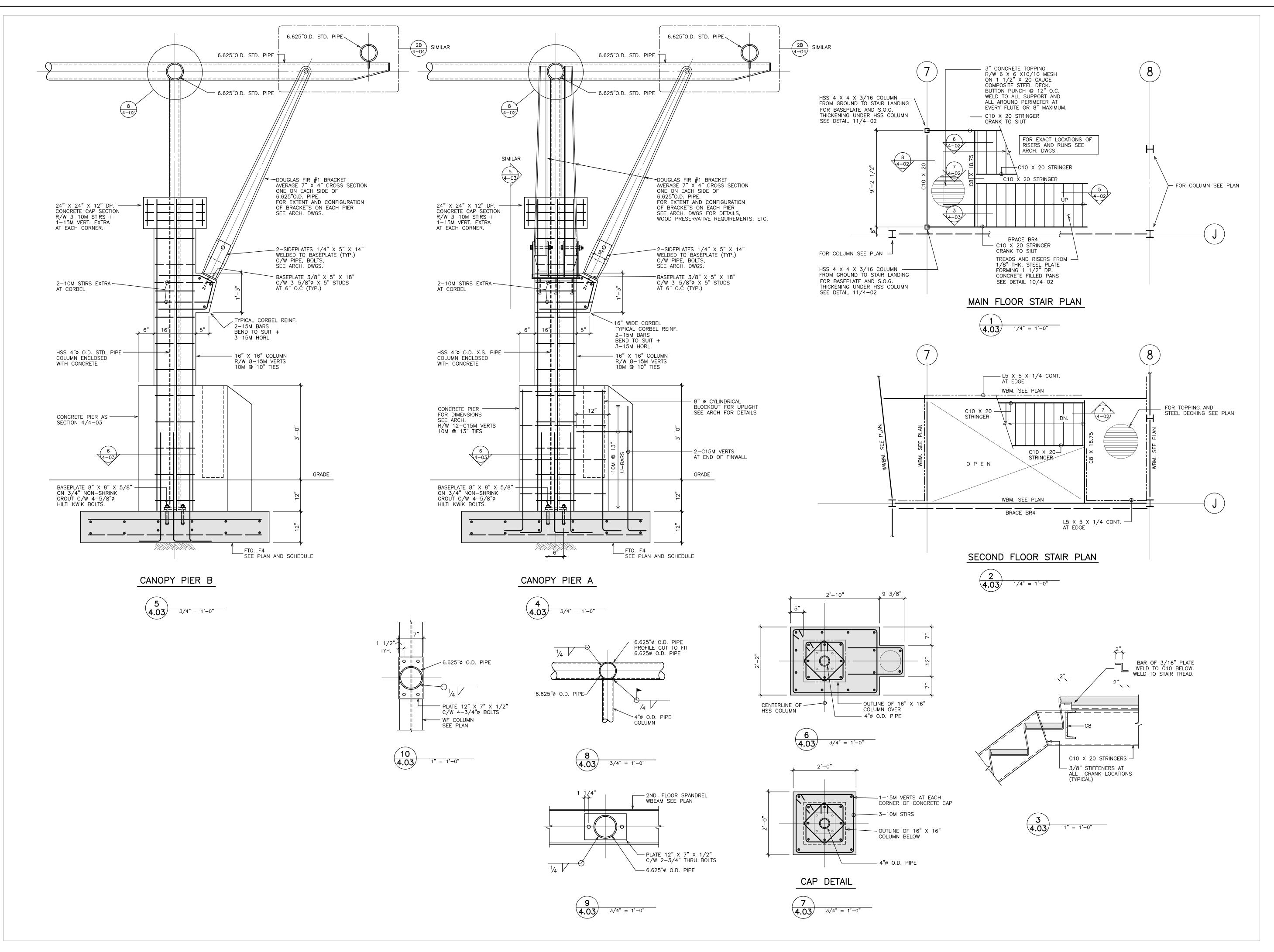
56A Avenue & 176A Street Cloverdale, Surrey, BC

Drawing Tit

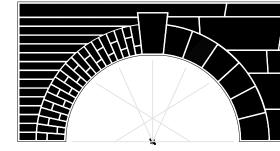
STAIR SECTIONS AND DETAILS

Project No.		39004.02
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Scale		AS NOTED
Sheet No		

S4-02







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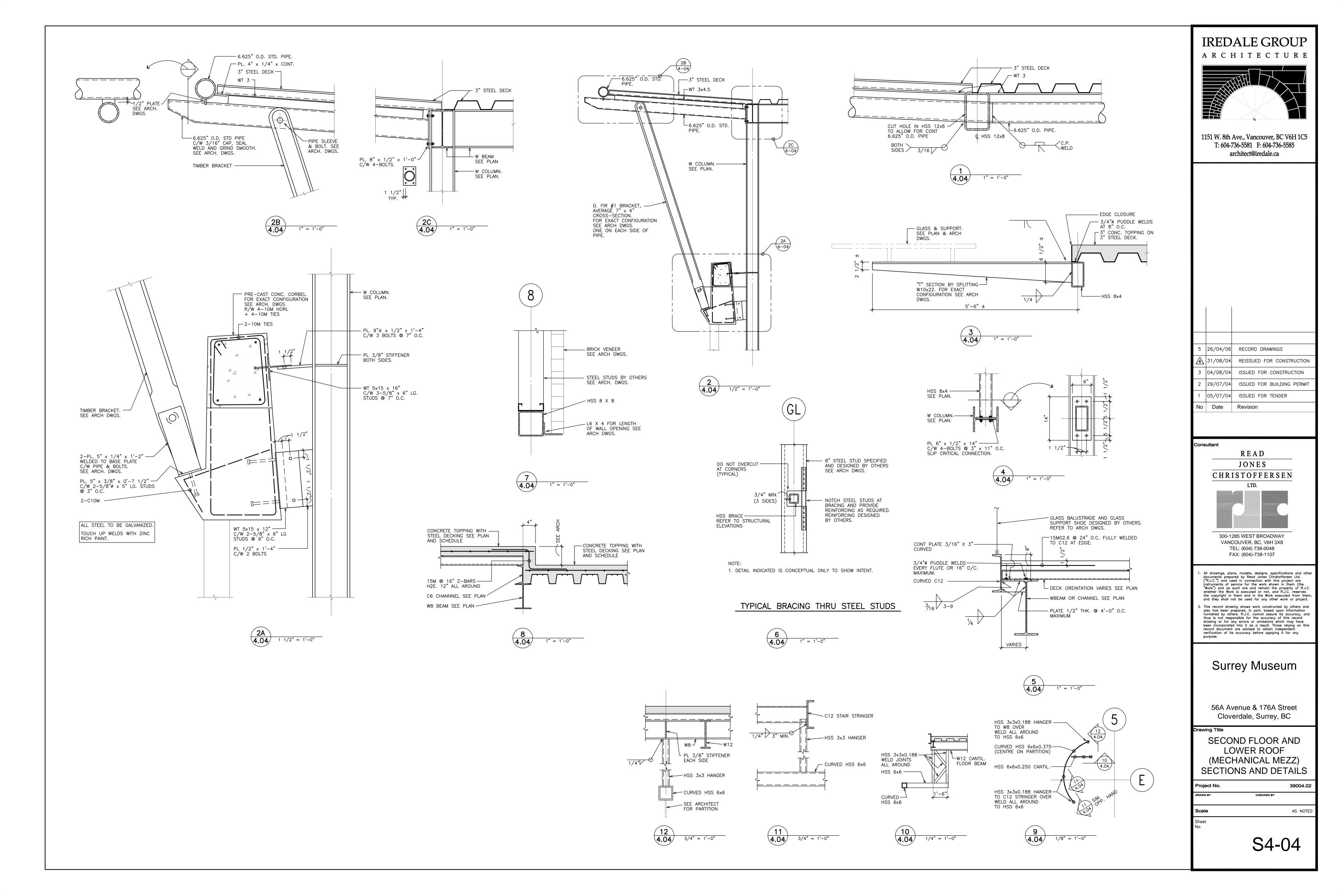
Surrey Museum

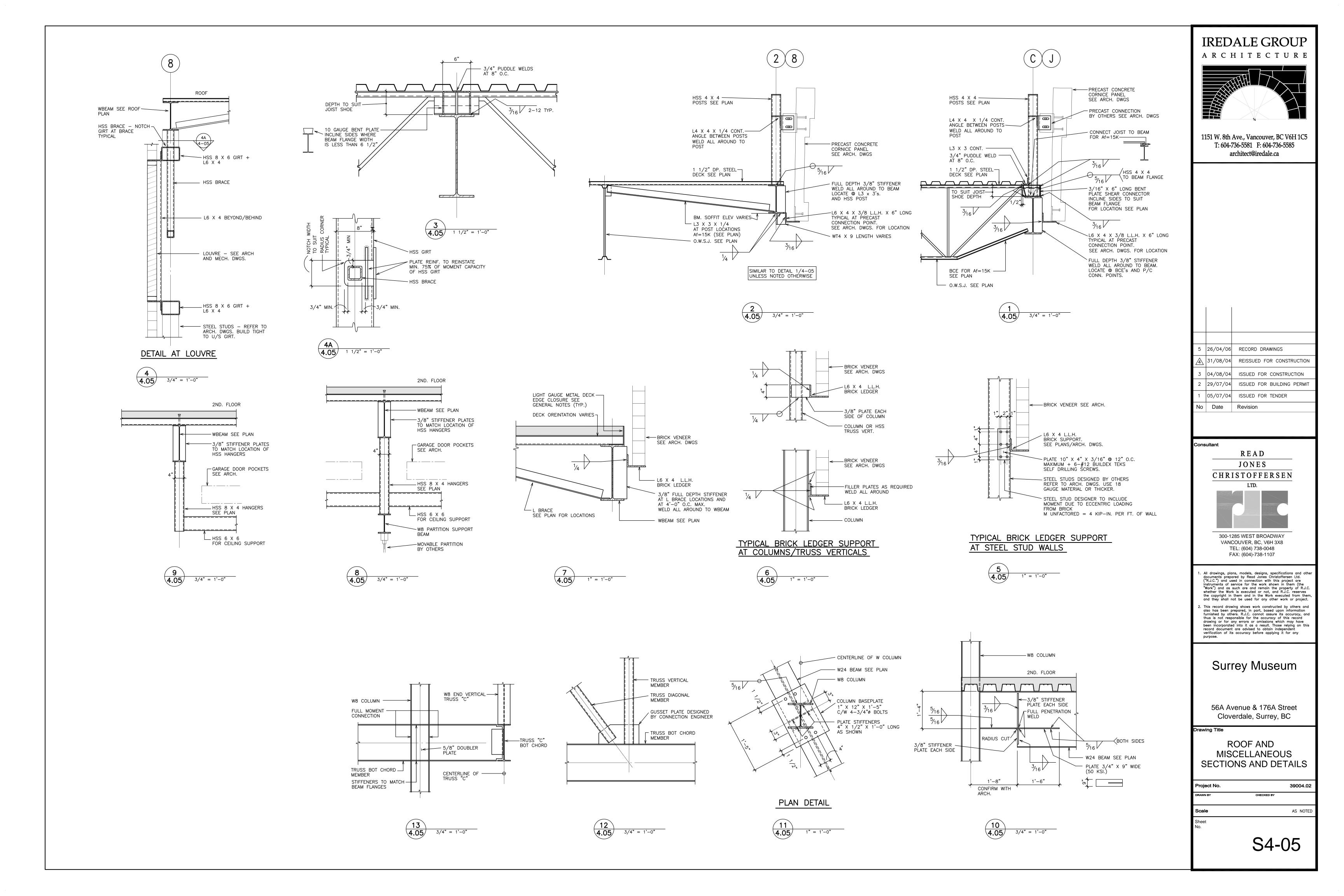
56A Avenue & 176A Street Cloverdale, Surrey, BC

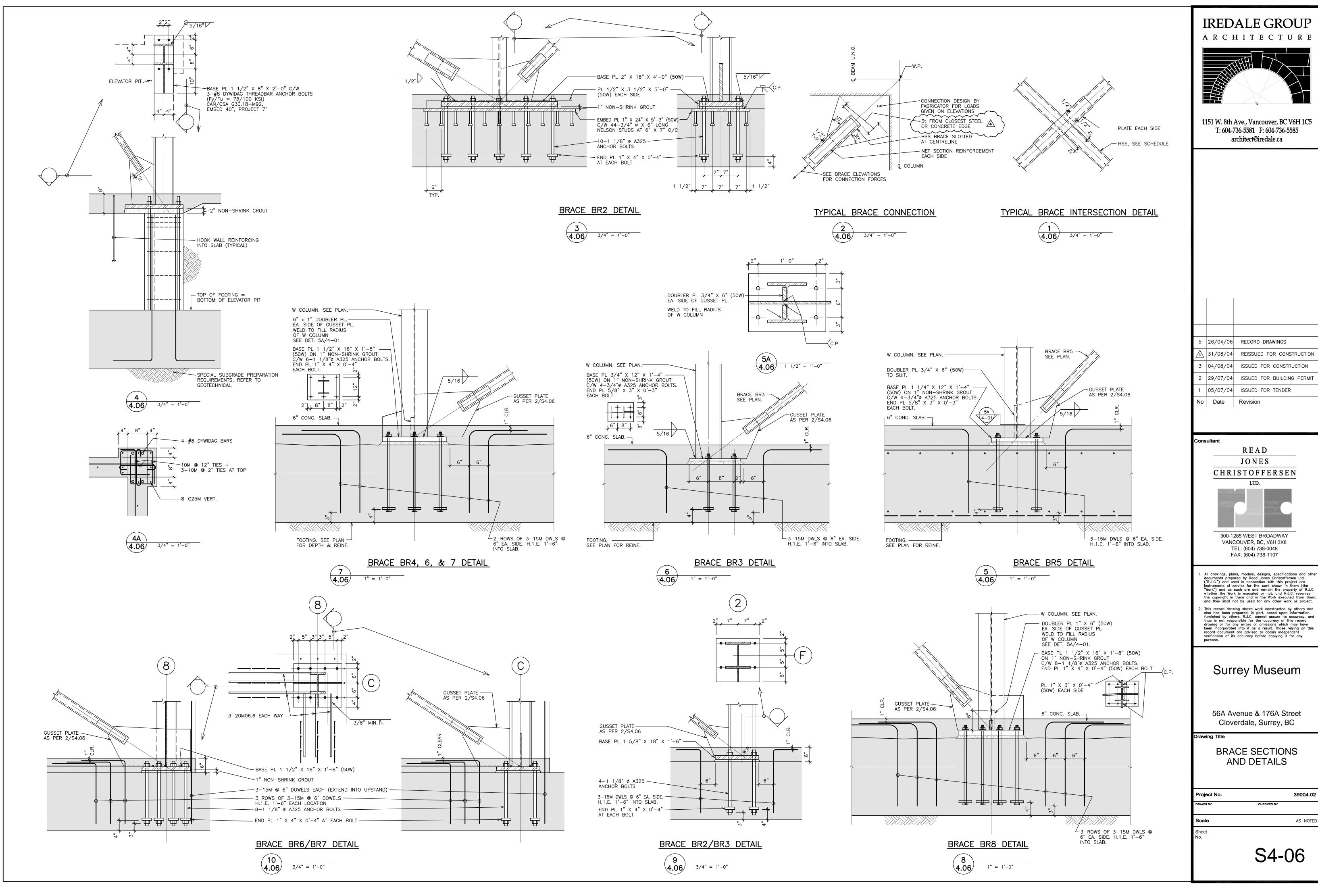
STAIR AND ENTRANCE **CANOPY SECTIONS** AND DETAILS

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4 31/08/04 REISSUED FOR CONSTRUCTION 3 04/08/04 ISSUED FOR CONSTRUCTION 2 29/07/04 ISSUED FOR BUILDING PERMIT

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All Addenda will become	e part of the Contr	act Documents.		
		- END OF A	DDENDUM -	