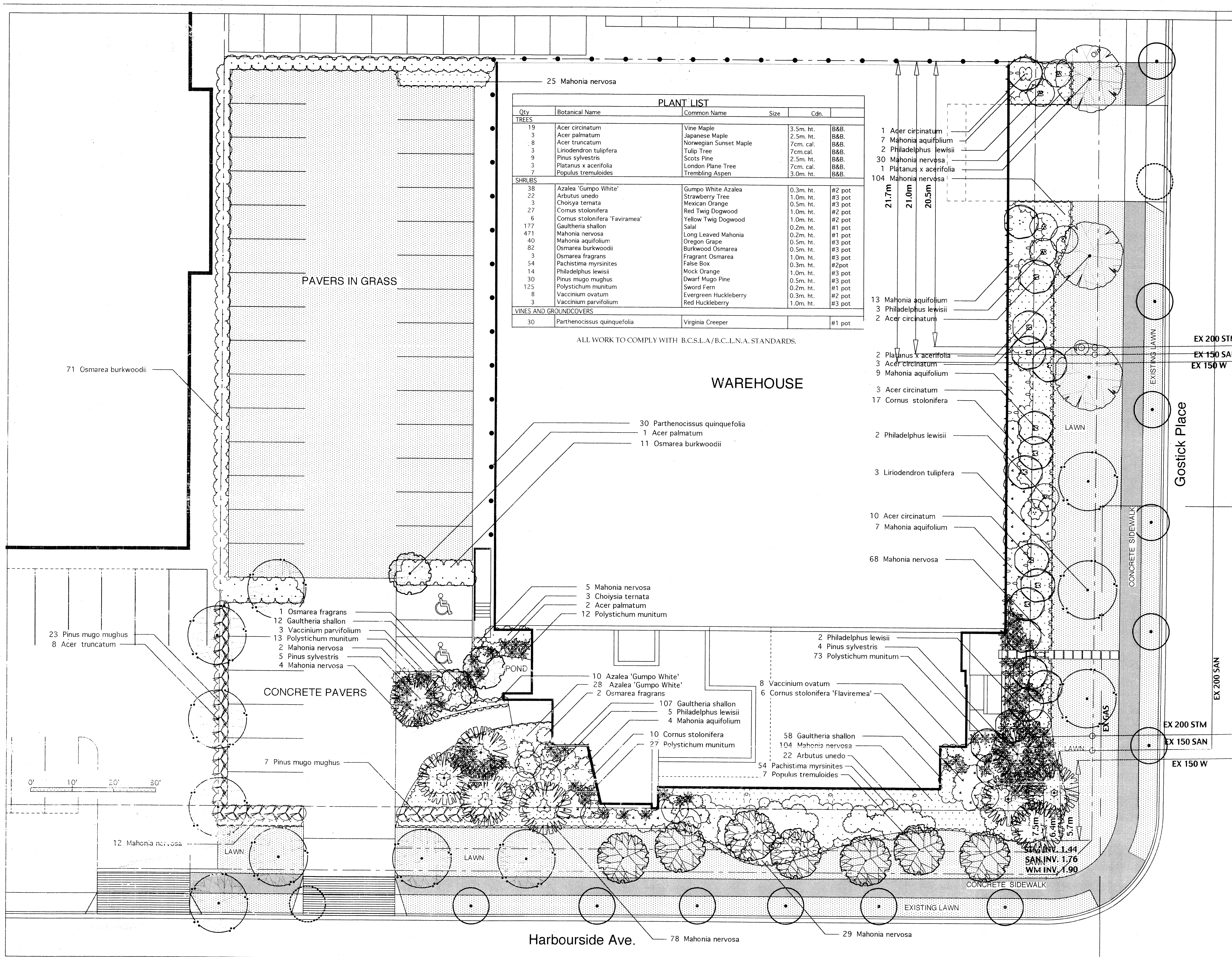


PLANT LIST

Qty	Botanical Name	Common Name	Size	Cdn.
TREES				
19	Acer circinatum	Vine Maple	3.5m. ht.	B&B.
3	Acer palmatum	Japanese Maple	2.5m. ht.	B&B.
8	Acer truncatum	Norwegian Sunset Maple	7cm. cal.	B&B.
3	Liriodendron tulipfera	Tulip Tree	7cm.cal.	B&B.
9	Pinus sylvestris	Scots Pine	2.5m. ht.	B&B.
3	Platanus x acerifolia	London Plane Tree	7cm. cal.	B&B.
7	Populus tremuloides	Trembling Aspen	3.0m. ht.	B&B.
SHRUBS				
38	Azalea 'Gumpo White'	Gumpo White Azalea	0.3m. ht.	#2 pot
22	Arbutus unedo	Strawberry Tree	1.0m. ht.	#3 pot
3	Choisya ternata	Mexican Orange	0.5m. ht.	#3 pot
27	Cornus stolonifera	Red Twig Dogwood	1.0m. ht.	#2 pot
6	Cornus stolonifera 'Faviramea'	Yellow Twig Dogwood	1.0m. ht.	#2 pot
177	Gaultheria shallon	Salal	0.2m. ht.	#1 pot
471	Mahonia nervosa	Long Leaved Mahonia	0.2m. ht.	#1 pot
40	Mahonia aquifolium	Oregon Grape	0.5m. ht.	#3 pot
82	Osmarea burkwoodii	Burkwood Osmarea	0.5m. ht.	#3 pot
3	Osmarea fragrans	Fragrant Osmarea	1.0m. ht.	#3 pot
54	Pachistima myrsinites	False Box	0.3m. ht.	#2pot
14	Philadelphus lewisii	Mock Orange	1.0m. ht.	#3 pot
30	Pinus mugo mughus	Dwarf Mugo Pine	0.5m. ht.	#3 pot
125	Polystichum munitum	Sword Fern	0.2m. ht.	#1 pot
8	Vaccinium ovatum	Evergreen Huckleberry	0.3m. ht.	#2 pot
3	Vaccinium parvifolium	Red Huckleberry	1.0m. ht.	#3 pot
VINES AND GROUNDCOVERS				
30	Parthenocissus quinquefolia	Virginia Creeper		#1 pot

ALL WORK TO COMPLY WITH B.C.S.L.A/B.C..L.N.A. STANDARDS.

PROJECT NORTH

CITY OF NORTH VANCOUVER ENGINEERING DEPT.
REVIEWED
OFF SITE INFORMATION NOTED ONLY
WATER
DRAINAGE
... not confirm the accuracy of ... City does not accept ... costs or damages ... deficiencies or
Shrubs and grass to be maintained by owner.
July 19/01
for City Engineer.

RECEIVED
JUL 12 2001
City of North Vancouver Community Development Department

ISSUED FOR TENDER
MAY 2, 2001

REV.	DATE	DESCRIPTION
4	07/11/01	Platanus x acerifolia moved to avoid existing services
3	06/20/01	EXISTING SERVICES ADDED
2	04/30/01	1 Acer truncatum added to plant list
1	04/10/01	ADDITION OF LAWN BUILDING CHANGE ADDED PLANTING AMMENDED

RESUBMITTED FOR REVIEW APRIL 11, 2001
SUBMITTED FOR B.P. JUNE 20, 2001
RESUBMITTED FOR B.P. JULY 11, 2001

BRITISH COLUMBIA SOCIETY OF LANDSCAPE ARCHITECTS
REGISTERED MEMBER
DON W. VAUGHAN
31

Vaughan
Landscape Planning and Design
3069 Mathers Ave.,
West Vancouver, B.C.
Canada V7V 2K3
PH:922-1885
FAX:922-5485
vaughan@telus.net

CLIENT
Maxem Holdings Inc.

DESIGNED	JMV
SCALE	1" = 10'
DATE	SEPT 13, 00

TITLE
PLANTING PLAN

DRAWING NO. L1 REV 4

THIS REVISION SUPERCEDES DRAWINGS BEARING PREVIOUS REVISION NUMBER

GENERAL NOTES

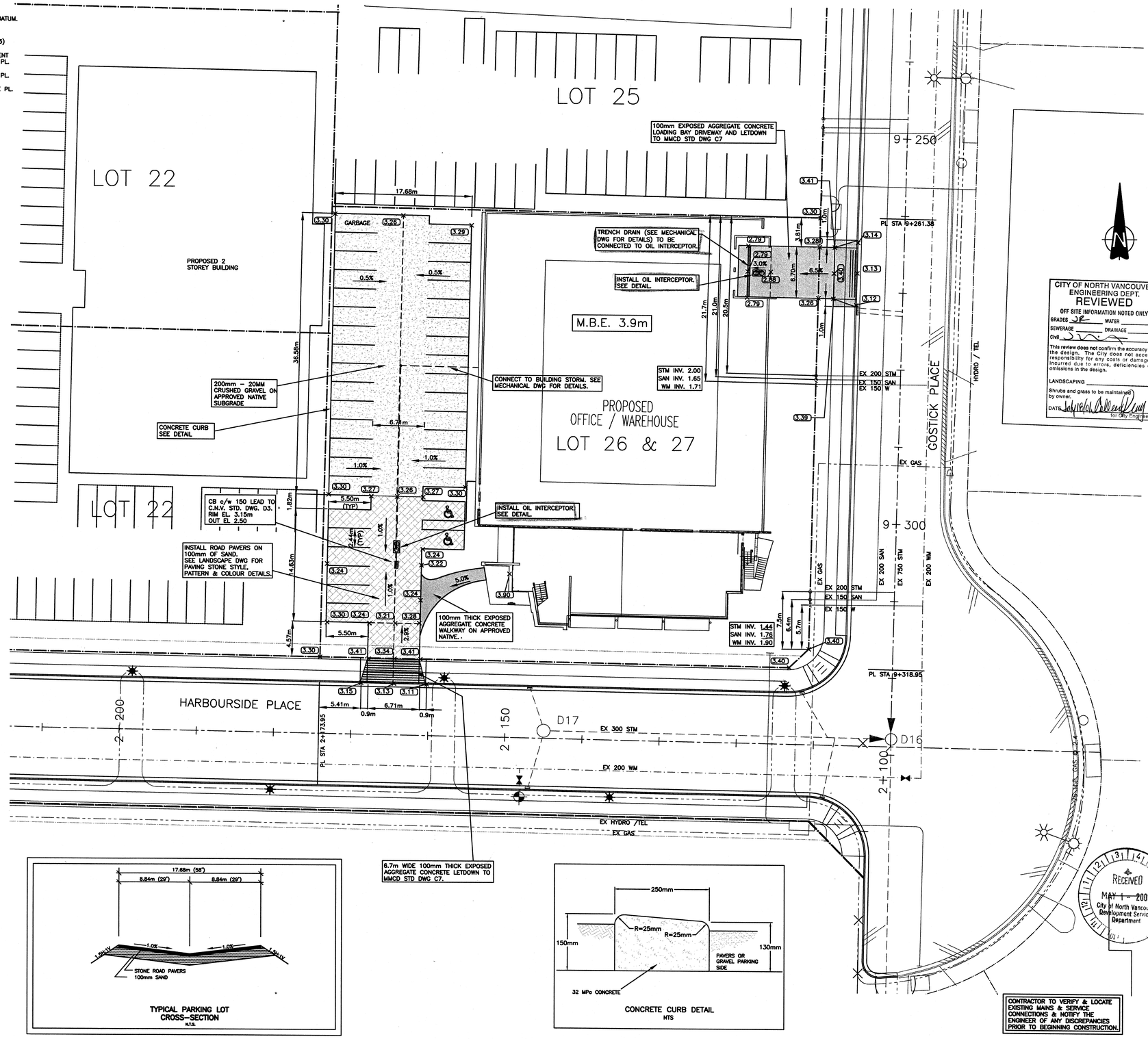
1. THE TERM 'ENGINEER' REFERS TO WEBSTER ENGINEERING LTD. THEIR CONTACT IS FRED CIAMBRELLI AND CAN BE CONTACTED AT 983-0458.
2. ALL CONSTRUCTION IN CITY OF NORTH VANCOUVER RIGHT OF WAY MUST CONFORM TO THE MASTER MUNICIPAL SPECIFICATIONS AND STANDARD DRAWINGS AS MODIFIED BY THE CITY OF NORHT VANCOUVER CONSTRUCTION SPECIFICATIONS (SCHEDULE C OF BYLAW 6200) AND STANDARD DRAWINGS.
3. THE CONTRACTOR SHALL ENSURE THAT ALL APPROVALS REQUIRED FOR THE PROPOSED WORK HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
4. LOCATIONS OF EXISTING UNDERGROUND SERVICES DETERMINED FROM THE CITY OF NORTH VANCOUVER RECORDS AND UTILITY COMPANIES INFORMATION. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING SERVICES AND TO NOTIFY ENGINEER OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS PRIOR TO CONSTRUCTION.
5. ALL CUTS IN EXISTING ASPHALT REQUIRED FOR CONSTRUCTION SHALL BE VERTICAL, 115mm DEEP, WITH A DIAMOND SAW AND REPLACED WITH MINIMUM 115mm ASPHALT CONCRETE FOR MAIN ROADS AFTER BACKFILL AND COMPACTION. ALL PAVEMENTS, BOULEVARDS, DRIVEWAYS, FENCES, ETC. ARE TO BE RESTORED TO THE SATISFACTION AND APPROVAL OF THE CITY WHEN NO IMPROVEMENT IS PROPOSED UNDER THIS CONTRACT.
6. THE CONTRACTOR MUST NOTIFY THE ENGINEER 48 HOURS PRIOR TO STARTING OR RESTARTING CONSTRUCTION TO ESTABLISH AN INSPECTION SCHEDULE. HE MUST ALSO CONTACT THE ENGINEER 48 HOURS BEFORE ANY REQUIRED INSPECTION.
7. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR EXISTING SERVICES AND ANY SERVICES DISTURBED ARE TO BE REPLACED TO THE SATISFACTION OF THE ENGINEER AND THE CITY.
8. THE ENGINEER MUST NOTIFY THE CITY NOT LESS THAN 24 HOURS BEFORE WORK OUTSIDE THE PROPERTY IS STARTED, RESTARTED OR INSPECTIONS ARE REQUIRED.
9. EXISTING ROADWAY NOT INCLUDED IN THESE PROPOSED WORKS SHALL BE KEPT CLEAN AND CLEAR FOR THE DURATION OF CONSTRUCTION AND LEFT IS SAME CONDITION AS PRIOR TO CONSTRUCTION SURROUNDING STREETS SHALL BE SWEPT DAILY IF NECESSARY.
10. TRAFFIC CONTROL TO BE TO THE MINISTRY OF TRANSPORTATION AND HIGHWAYS 'TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS'.
11. PEDESTRIANS SHALL BE PROTECTED AT ALL TIMES. ANY CLOSURE OF THE SIDEWALK TO BE COORDINATED WITH THE CITY AT LEAST 48 HOURS AND WITH SURROUNDING PROPERTIES AT LEAST 24 HOURS BEFORE ANY REQUIRED CLOSURE.
12. ENGINEER SHALL PROVIDE CERTIFIED AS-BUILT RECORD INFORMATION TO THE CITY OF NORTH VANCOUVER ENGINEERING DEPARTMENT.
13. DRIVEWAY AND PARKING AREA TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
14. CATCH BASIN LEADS LEADS TO BE 200mm DIAMETER P.V.C. S.D.R. 35.
15. MINIMUM GRADE ON CATCH BASIN LEADS TO BE 2% UNLESS NOTED OTHERWISE.
16. PIPE BEDDING TO CONFORM WITH THE CNV STANDARDS.
17. CATCH BASIN RIMS TO BE SET 25mm BELOW GUTTERLINE ELEVATION.
18. CATCH BASINS TO BE CNV STANDARD DWG. D3.
19. CHANGES IN GRADE TO BE FORMED WITH SMOOTH CURVES.
20. COMPACTION & CONCRETE TESTING TO BE PERFORMED IN ACCORDANCE WITH THE MASTER MUNICIPAL SPECIFICATIONS.
21. THE CONTRACTOR WILL ROUGHLY GRADE THE BOULEVARDS 100mm BELOW THE PROFILE SHOWN ON THE CROSS SECTIONS.
22. CONCRETE BARRIER CURB TO MMCD STD. DWG C4.
23. CONCRETE DRIVEWAY LETDOWN TO MMCD STD. DWG C7.

BENCH MARK CONTROL

ALL ELEVATIONS REFER TO GEODETIC DATUM.

CITY OF NORTH VANCOUVER
BENCHMARK AND UTM CONTROL (NAD83)

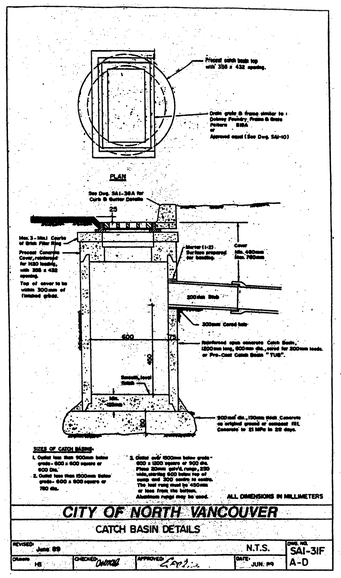
"*" ESTABLISHED FROM NAD83 MONUMENT
HYD. AT GOSTICK AVE. & HARBORSIDE PL.
(SW QUAD. - ELEV. 3.987*)
HYD. AT GOSTICK AVE. & HARBORSIDE PL.
(E.SIDE QUAD. - ELEV. 3.812*)
KIOSK AT GOSTICK AVE. & HARBORSIDE PL.
(S.SIDE QUAD. - ELEV.3.683*)



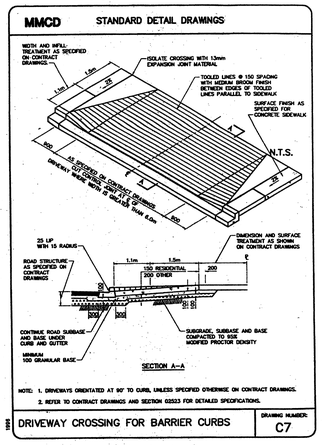
CITY OF NORTH VANCOUVER
ENGINEERING DEPT.
REVIEWED
OFF SITE INFORMATION NOTED ONLY
GRADES JE WATER
SEWERAGE DRAINAGE
CWB
This review does not confirm the accuracy of the design. The City does not accept responsibility for any costs or damages incurred due to errors, deficiencies or omissions in the design.
LANDSCAPING
Shrubs and grass to be maintained by owner.
DATE July 18/01 for City Engineer.

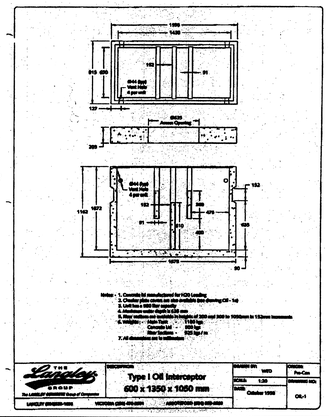
RECEIVED
MAY 1 - 2001
City of North Vancouver
Development Services
Department

CONTRACTOR TO VERIFY & LOCATE EXISTING MAINS & SERVICE CONNECTIONS & NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING CONSTRUCTION.



D3





TYPICAL PARKING LOT CROSS-SECTION
N.T.S.

CONCRETE CURB DETAIL
NTS

no.	date	revision	chk'd	no.	date	revision	chk'd
8	24APR01	MOVE STORM CONNECTION	FMC				
7	24APR01	GENERAL REVISION	JKW				
6	23APR01	BUILDING OUTLINE REVISED	AS				
5	01MAR01	ADD CURB DETAIL	FMC	9	01MAY01	REVISE OIL INTERCEPTOR	FMC

client: MAXEM HOLDINGS INC.
project: LOT 26 & 27 HARBOURSIDE BUSINESS PARK NORTH VANCOUVER

WEBSTER ENGINEERING LTD.
PROFESSIONAL ENGINEERS — LAND DEVELOPMENT CONSULTANTS
3745 DELBROOK AVENUE, NORTH VANCOUVER, B.C. V7N 3Z4 983-0458

approved
designed by F.M.C.
drawn by A.Z.K.
checked by F.M.C.
date JULY.04, 2000

title: PROPOSED SERVICING PLAN

scales hor: 1:250 vert: -
file no. 2745
drawing no. 2745-1
rev. 9

G:\Land Projects\2745\dwg\plan.dwg, 05/01/2001 01:32:32 PM, Fred

OFFICE / WAREHOUSE

FOR MAXEM HOLDINGS INC.

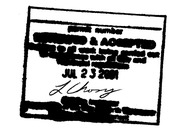
758 HARBOURSIDE DRIVE, NORTH VANCOUVER, BC, CANADA

OFFICE / WAREHOUSE
FOR MAXEM HOLDINGS INC.
758 HARBOURSIDE DRIVE, NORTH VANCOUVER, BC, CANADA

ARCHITECTURAL

Bunting Coady Architects
Suite 300-171 Water Street
Vancouver, BC
V6B 1A7

BLD01-02153



REISSUED FOR:
BUILDING PERMIT

DATE:
20 APRIL 2001

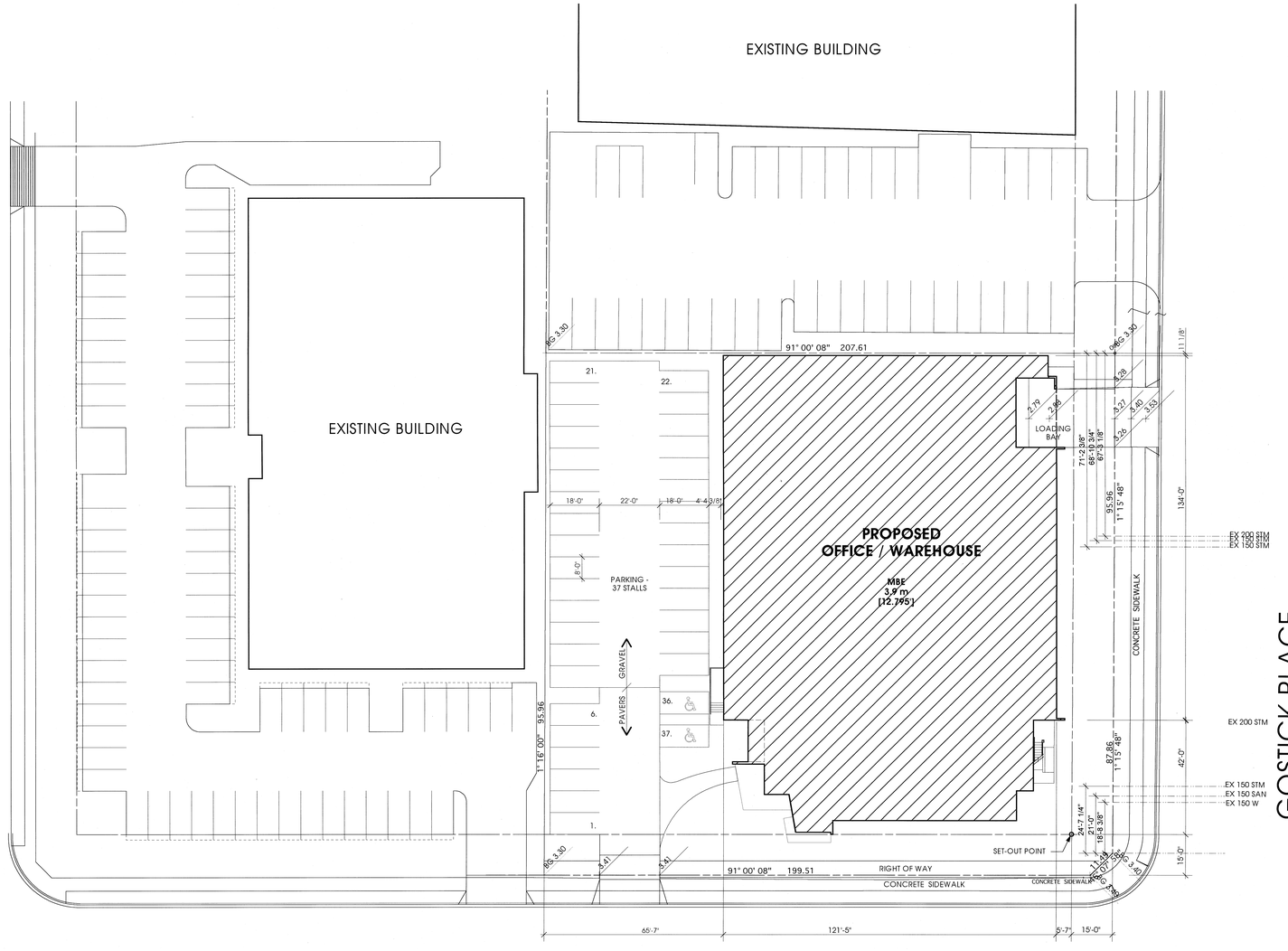
SET NO.:

BLD01-02193

BUNTING COADY
ARCHITECTS

BCA PROJECT NUMBER 0019

APPLICANT'S COPY



SITE PLAN

SCALE: 1/20"= 1'-0"

BUILDING NORTH

PROJECT STATISTICS

LEGAL DESCRIPTION
LOTS 26 AND 27, DISTRICT LOT 2654, GROUP ONE,
NEW WESTMINSTER DISTRICT, PLAN 45092

CIVIC ADDRESS
758 HARBOURSIDE DRIVE

ZONING
CD-360

SITE AREA	3,698.67 sq.m.	39,813 sq.ft.
FLOOR AREA RATIO PERMITTED	0.75 FAR	29,860 sq.ft.
FLOOR AREA RATIO PROPOSED		
	OFFICE	WAREHOUSE
GROUND FLOOR	3,674 sq. ft	15,988 sq. ft
SECOND FLOOR/MEZZANINE	3,552 sq. ft	1,558 sq. ft
THIRD FLOOR	1,838 sq. ft	
TOTAL	9,064 sq. ft	17,546 sq. ft
GROSS FLOOR AREA		26,610 sq.ft.
FLOOR AREA RATIO		0.67 FAR
BUILDING COVERAGE PERMITTED	50 %	19,906 sq. ft
BUILDING COVERAGE PROPOSED		
OFFICE		3,674 sq. ft
WAREHOUSE		15,988 sq. ft
TOTAL		19,662 sq. ft
BUILDING COVERAGE	49 %	
BUILDING HEIGHT PERMITTED	3 STOREYS	40'
BUILDING HEIGHT PROPOSED	3 STOREYS	

NOTES:

1. THE CITY MAY MAKE ELEVATION CHECKS:
   ON GRADED SUB-BASE OF ALL PROPOSED CONCRETE OR BLACKTOP PAVED AREAS.
   ON FORMS OF ALL SIDEWALK ENTRANCES, DOORWAYS AND RETAINING WALLS ADJACENT TO OR CROSSING PROPERTY LINE
   ON FORMS FOR DRIVEWAY DRAINAGE GATES
2. 24 HOURS NOTICE IS REQUIRED FOR ALL ELEVATION CHECKS
3. A CITY WORKS PERMIT IS REQUIRED FOR ANY CONSTRUCTION ON CITY PROPERTY
4. TELEPHONE SERVICE IS TO BE UNDERGROUND
5. HYDRO SERVICE IS TO BE UNDERGROUND
6. REFER TO GEODETIC BENCHMARK (3.987m) LOCATED AT THE SOUTH WEST CORNER OF GOSTIC & HARBOURSIDE
7. ALL SITE DIMENSIONS AND, BEARING AND BUILDING GRADES TO BE CONFIRMED BY PROFESSIONAL SITE SURVEY
8. GRADE ELEVATIONS ON THIS SITE PLAN ARE METRIC, UNLESS NOTED OTHERWISE

BG 0.00 + BUILDING GRADE
0.00 + FINISHED GRADE

THE GENERAL CONTRACTOR SHALL REVIEW THE DOCUMENTS FOR CONFORMANCE CODES AND BY-LAWS AND SHALL ADVISE THE ARCHITECT OF ANY DISCREPANCIES HE MAY NOTE. THE GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE DESIGNER.
DO NOT SCALE THE DRAWINGS.

THESE DRAWINGS ARE INTENDED FOR ARCHITECTURAL INFORMATION ONLY. THE CONTRACTOR AND ANY PERSON USING THESE DRAWINGS FOR INFORMATION ARE ADVISED TO REFER TO CIVIL, STRUCTURAL, MECHANICAL, SPRINKLER, ELECTRICAL AND INTERIOR DESIGN DISCIPLINE DRAWINGS FOR INFORMATION RELATING TO THOSE DISCIPLINES.

CITY OF NORTH VANCOUVER
ENGINEERING DEPT.
REVIEWED
OFF SITE INFORMATION NOTED ONLY
GRADES OK WATER
SEWERAGE DRAINAGE
DWE
This review does not confirm the accuracy of the design. The City does not accept responsibility for any errors or omissions incurred due to errors, deficiencies or omissions in the design.
LANDSCAPING
Shrubs and grass to be maintained by owner.
DATE July 19/01

NO	DATE	REVISIONS
2	APR. 20,2001	RE-ISSUED FOR BLDG. PERMIT
1	FEB. 19,2001	ISSUED FOR BLDG. PERMIT

SEAL

REGISTERED ARCHITECT THOMAS RICHARD BUNTING PROVINCE OF BRITISH COLUMBIA

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Drive
North Vancouver

SITE PLAN & PROJECT INFORMATION

BUNTING COADY
ARCHITECTS
Suite 300 - 171 Water Street
Vancouver, B.C.
Canada, V6B 1A7
Tel (604) 685-9913
Fax (604) 685-0694
www.buntingcoady.com

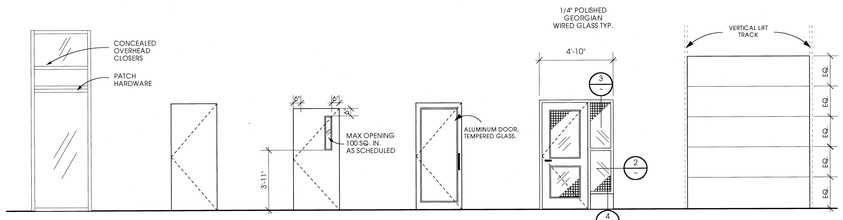
BID01-02153

RECEIVED
APR 23 2001
City of North Vancouver
Development Services
Department

A101

SCALE	PROJECT
1/20" = 1'-0"	0019
DRAWN: IE RMM	DATE: 1 FEB 2001

DOOR SCHEDULE



TYPE A FLUSH PANEL

TYPE B FLUSH PANEL

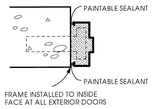
TYPE C FLUSH PANEL W/ LITE

TYPE D ALUMINUM GLAZED

TYPE E

TYPE F SECTIONAL STEEL DOOR

DOOR FRAME TYPES



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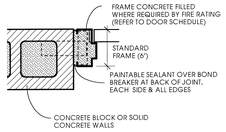
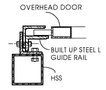


FRAME TYPE 3

FRAME TYPE 5



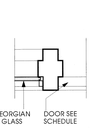
FRAME TYPE 7

FRAME TYPE 2

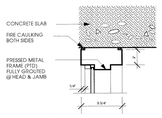
FRAME TYPE 4

FRAME TYPE 6

WINDOW FRAME DETAILS



DETAIL 1



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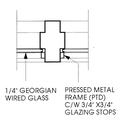

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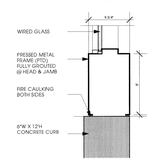

DETAIL 4

LEGEND

ACT	ACOUSTIC CEILING TILE
CONC	CONCRETE
CT	CERAMIC TILE
CB	CONCRETE BLOCK
MTL. FR.	METAL FRAME
GWB	GYPSUM WALLBOARD
GL	GLAZED
P	PAINT
SGWB	SUSPENDED GYPSUM WALLBOARD
Rubber	RUBBER BASE
Sealer	SEALED CONCRETE
CWB	CEMENTIOUS WALL BOARD
WD	WOOD
ST	STAINED
SLT	SLATE

DOOR SCHEDULE

ROOM NAME	NO.	LEAF WIDTH	LEAF HEIGHT	LEAF THICKNESS	MATERIAL TYPE	MATERIAL ALUMINUM	MATERIAL FLUSH METAL	MATERIAL GLASS	MATERIAL WOOD	CORE HOLLOW	CORE SOLID	CORE INSULATED	FRAME GLAZED	FRAME ALUMINUM	FRAME PRESSED STEEL	FRAME WOOD	FRAMELESS	FRAME TYPE	GLASS STANDARD	GLASS IMPACT SAFETY	GLASS WIRED SAFETY	HARDWARE BUTT HINGES	PIVOT HINGE	PATCH HARDWARE	LATCH LOCK	LOCKSET	DEADBOLT	PRIVACY SET	PASSAGE LATCH	PUSH/PULL	FLUSH BOLTS	CLOSER	FLOOR STOP	WALL STOP	THRESHOLD	KICKPLATE	WSTRIPPING	ASTRAGAL	PANIC SET	DOOR VIEWER	BUTT HINGES NRP	AUTO OPENER	SECURITY	MAG. HOLD OPEN	FIRE RATING (MIN.)	REMARKS
GROUND FLOOR																																															
Security Gate	100	2x36"	8'0"	–																																							X			Security Gate (w/ panic bar & closer)
Lobby	101	2x36"	8'0"	5/8"	A				X					X	X																												X			Vision Gl. Door, Patch hrdware, Exiting Hardware
Meeting	104	3'0"	7'0"	1 3/4"	B				X		X					X																														
Boardroom	105	3'0"	7'0"	1 3/4"	B				X		X					X																														
Human Resources	106	3'0"	7'0"	1 3/4"	B				X		X					X																														
Office Area Exit	107	3'0"	7'0"	1 3/4"	C		X					X				X																											X		45	Exit Hardware
I.T. Office	108	3'0"	7'0"	1 3/4"	B				X		X					X																														
I.T. Room	109	3'0"	7'0"	1 3/4"	B				X		X					X																														
Office Area Exit	110	3'0"	7'0"	1 3/4"	B		X					X				X																											X		180	
Storage	111	3'0"	7'0"	1 3/4"	B				X		X					X																														
Corridor/Printer	112	3'0"	7'0"	1 3/4"	B		X					X				X																											X	180		
H/ W.C.	113	3'0"	7'0"	1 3/4"	B				X		X					X																														
Warehouse Access Corr.	114	3'4"	7'0"	1 3/4"	C		X					X				X																														
Women's Washroom	115	3'0"	7'0"	1 3/4"	B				X		X					X																														Grille
Women's Shower	116	3'0"	7'0"	1 3/4"	B				X		X					X																														Grille
Janitor	117	3'0"	7'0"	1 3/4"	B				X		X					X																														Grille
Men's Washroom	118	3'0"	7'0"	1 3/4"	B				X		X					X																														Grille
Mens' Shower	119	3'0"	7'0"	1 3/4"	B				X		X					X																														Grille
Warehouse Area Exit	121	3'0"	7'0"	1 3/4"	B		X					X				X																											X		45	Exit Hardware
Bike Storage	122	3'0"	7'0"	1 3/4"	B		X					X				X																											X		45	
Elevator Machine Rm.	123	3'0"	7'0"	1 3/4"	B		X			X						X																														
First Aid Rm.	126	3'0"	7'0"	1 3/4"	B		X					X				X																														
Electrical	130	3'0"	7'0"	1 3/4"	B		X					X				X																											X			Exit Hardware
Loading (Overhead Doo	131A	8'0"	10'0"	1 3/4"	F																																					X			Overhead door
Loading (Overhead Doo	131B	8'0"	10'0"	1 3/4"	F																																					X			Overhead door
SECOND FLOOR																																														
Waiting Area	201	3'0"	7'0"	1 3/4"	B				X		X					X																														Pocket slide hardware
Staff/Copy/Coffee	202	3'0"	7'0"	1 3/4"	D	X								X	X																												X			
Meeting	204	3'0"	7'0"	1 3/4"	B				X					X		X																														
Office Area Exit	205	3'0"	7'0"	1 3/4"	C		X							X		X																											X			
Mezzanine Office	206A	3'0"	7'0"	1 3/4"	C		X							X	X	X																											X			
Mezzanine Office	206B	3'0"	7'0"	1 3/4"	C		X							X	X	X																											X			
Mezzanine Exit	206C	3'0"	7'0"	1 3/4"	B		X							X		X																											X		45	Exit Hardware
THIRD FLOOR																																														
Elevator Lobby	301	3'0"	7'0"	1 3/4"	E		X								X		X																											X	45	Smoke separation, Wired glass
Executive Office	302	3'0"	7'0"	1 3/4"	B				X		X				X		X																												
Executive Office	303	3'0"	7'0"	1 3/4"	B				X		X				X		X																												
W/C	305	3'0"	7'0"	1 3/4"	B				X		X					X																														
Office/Meeting	306	3'0"	7'0"	1 3/4"	B				X						X		X																												
Corridor	307	3'0"	7'0"	1 3/4"	B	X									X	X																											X			Access to Exit
Office Meeting	308	3'0"	7'0"	1 3/4"	B				X						X		X																												

REFER TO SPECIFICATIONS

ROOM FINISH SCHEDULE

		Floor Matr'l	Floor Finish	Base Matr'l	Base Finish	Walls North Matr'l	Walls North Finish	Walls South Matr'l	Walls South Finish	Walls East Matr'l	Walls East Finish	Walls West Matr'l	Walls West Finish	Sunlite 9724 Ceiling Matrl	Ceiling Finish	Height A.F.F.	Remarks
Ground Floor																	
Stair One		Concrete	Sealer	n/a		-	-	Glass		Conc/Glass	Sealer/Glass	Conc/Glass	Sealer/Glass	Steel	Paint	n/a	
Lobby	101	Concrete	Stain,Seal	Conc/GWB	Wood/Rubber	Conc/Wood	Sealer/Stain	Glass		Conc/GWB	Sealer/Paint	Glass/Conc	Glass/Sealer	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Reception	102	Concrete	Stain,Seal	Conc/GWB	Wood - Stain	Wood/Glass	Stain	Concrete	Sealer	Concrete	Sealer	Glass	Glass	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Corridor	103	Concrete	Carpet	GWB	Rubber	GWB	Paint	GWB	Paint	-	-	-	-	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Meeting	104	Concrete	Carpet	Conc/GWB	Rubber	GWB	Paint	GWB/Glass	Paint/Glass	GWB	Paint	Concrete	Sealer	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Boardroom	105	Concrete	Carpet	Conc/GWB	Rubber	GWB/Glass	Paint/Glass	GWB/Glass	Paint/Glass	GWB	Paint	Concrete	Sealer	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
H.R.	106	Concrete	Carpet	GWB	Rubber	GWB	Paint	GWB/Glass	Paint/Glass	GWB/Glass	Paint/Glass	GWB	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Office Area	107	Concrete	Carpet	Conc/GWB	Rubber	GWB/Glass	Paint/Glass	GWB/Glass	Paint/Glass	GWB/Glass	Paint/Glass	GWB/Glass	Paint/Glass	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
I.T. Office	108	Concrete	Carpet	GWB	Rubber	GWB	Paint	GWB/Glass	Paint/Glass	GWB/Glass	Paint/Glass	GWB/Glass	Paint/Glass	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
I.T. Room	109	Concrete	Sealer	GWB	Rubber	-	-	GWB/Glass	Paint/Glass	GWB/Glass	Paint/Glass	GWB	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Elect./Data/Printer	110	Concrete	Sealer	GWB	Rubber	GWB	Paint	GWB/Glass	Paint/Glass	GWB	Paint	GWB	Paint	Steel/Wood	Paint/Stain		10'10"
Storage	111	Concrete	Sealer	GWB	Rubber	GWB	Paint	GWB	Paint	GWB	Paint	GWB	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Corridor/Printer	112	Concrete	Carpet	GWB	Rubber	-	-	-	-	GWB	Paint	GWB	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
H/W.C.	113	Concrete	Porcelain Tile	GWB	Ceramic	GWB	Ceramic Tile	GWB	Ceramic Tile	GWB	Ceramic Tile	GWB	Ceramic Tile	Steel/Wood	Paint/Stain		8'0"
Warehouse Access Corr.	114	Concrete	Sealer	GWB	Rubber	GWB	Paint	-	-	GWB	Paint	GWB	Paint	Steel/Wood	Paint/Stain		9'0"
Women's Washroom	115	Concrete	Porcelain Tile	GWB	Ceramic	GWB	Ceramic Tile	GWB	Ceramic Tile	GWB	Ceramic Tile	GWB	Ceramic Tile	Steel/Wood	Paint/Stain		8'0"
Shower	116	Concrete	Porcelain Tile	Cement.WB	Ceramic	Cement.WB	Ceramic Tile	Cement.WB	Ceramic Tile	Cement.WB	Ceramic Tile	Cement.WB	Ceramic Tile	Steel/Wood	Paint/Stain		8'0"
Janitor	117	Concrete	Sealer	GWB	Rubber	Concrete	Paint	GWB	Paint	GWB	Paint	GWB	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Men's Washroom	118	Concrete	Porcelain Tile	GWB	Ceramic	GWB	Ceramic Tile	GWB	Ceramic Tile	GWB	Ceramic Tile	GWB	Ceramic Tile	Steel/Wood	Paint/Stain		8'0"
Shower	119	Concrete	Porcelain Tile	Cement.WB	Ceramic	Cement.WB	Ceramic Tile	Cement.WB	Ceramic Tile	Cement.WB	Ceramic Tile	Cement.WB	Ceramic Tile	Steel/Wood	Paint/Stain		8'0"
Warehouse Area	121	Concrete	Sealer	GWB	Rubber	Concrete	Paint	Conc/GWB	Paint/Paint	Concrete	Paint	Concrete	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Bike Storage	122	Concrete	Sealer	GWB	Rubber	GWB	Paint	Concrete	Paint	GWB	Paint	Concrete	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Elevator Machine Room	123	Concrete	Sealer	GWB	Rubber	GWB	Paint	Concrete	Paint	GWB	Paint	GWB	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Office	124	Concrete	Sealer	GWB	Rubber	-	-	-	-	GWB	Paint	-	-	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Office	125	Concrete	Sealer	GWB	Rubber	-	-	Concrete	Paint	GWB	Paint	Conc.Block	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
First Aid Room	126	Concrete	VCT	GWB	Rubber	GWB	Paint	GWB	Paint	GWB	Paint	GWB	Paint	Steel/Wood	Paint/Stain		8'0"
Kitchenette	127	Concrete	VCT	GWB	Rubber	GWB	Paint	GWB	Paint	-	-	GWB	Paint	Steel/Wood	Paint/Stain		10'10"
Office	128	Concrete	VCT	GWB	Rubber	-	-	Concrete	Paint	-	-	GWB	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Staff/Meeting	129	Concrete	VCT	GWB	Rubber	-	-	Concrete	Paint	Concrete	Paint	-	-	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Electrical Area	130	Concrete	Sealer	GWB	Rubber												
Shipping/Receiving/Loac	131	Concrete	Sealer	GWB	Rubber												
Second Floor																	
Stair One		Concrete	Sealer	n/a		-	-	Glass		Conc/Glass	Sealer/Glass	Conc/Glass	Sealer/Glass	Steel	Paint	n/a	
Waiting Area	201	Concrete	Stain,Seal	GWB	Rubber	GWB	Paint	Glass/Conc	Glass/Sealer	Concrete	Sealer	Glass	Glass	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Staff/Copy/Coffee	202	Concrete	VCT	GWB	Rubber	GWB	Paint	GWB	Paint	GWB	Paint	Glass/GWB	Glass/Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Elevator Lobby	203	Concrete	Stain,Seal	GWB	Wood/Rubber	Conc/Wood	Sealer/Stain	-	-	GWB	Paint	GWB	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Meeting	204	Concrete	Carpet	GWB	Rubber	GWB	Paint	GWB/Glass	Paint/Glass	GWB	Paint	Concrete	Sealer	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Office Area	205	Concrete	Carpet	GWB	Rubber	GWB	Paint	GWB/Glass	Paint/Glass	GWB/Glass	Paint/Glass	Concrete	Sealer	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Mezzanine Office Area	206	Concrete	Sealer	GWB	Rubber	GWB*	Paint	Concrete	Painted	GWB*	Paint	GWB*	Paint	Steel/Wood	Paint/Stain	u/s Struct. - Varies	GWB* Half wall guard wall to warehouse area
Third Floor																	
Stair One		Concrete	Sealer	n/a		-	-	Glass		Conc/Glass	Sealer/Glass	Conc/Glass	Sealer/Glass	Steel	Paint	n/a	
Elevator Lobby	301	Concrete	Carpet	GWB/Conc.	Wood/Rubber	Conc/Wood	Sealer/Stain	GWB	Painted	GWB	Painted	GWB	Painted	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Executive Office	302	Concrete	Carpet	GWB/Conc.	Rubber	GWB	Paint	GWB/Glass	GWB/Glass	GWB	Painted	GWB/Glass	Paint/Glass	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Executive Office	303	Concrete	Carpet	GWB/Conc.	Rubber	GWB	Paint	GWB	Paint	GWB	Painted	GWB/Glass	Paint/Glass	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Corridor	304	Concrete	Carpet	GWB	Rubber	GWB	Paint	GWB	Paint	GWB	Painted	GWB	Painted	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
W/C	305	Concrete	Porcelain Tile	GWB	Ceramic	GWB	Ceramic Tile	GWB	Ceramic Tile	GWB	Ceramic Tile	GWB	Ceramic Tile	Steel/Wood	Paint/Stain		8'0"
Office/Meeting	306	Concrete	Carpet	GWB/Conc.	Rubber	GWB	Paint	GWB	Paint	GWB	Paint	GWB/Conc	Paint/Sealer	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Corridor	307	Concrete	Carpet	GWB	Rubber	GWB	Paint	GWB	Paint	GWB	Paint	-	-	Steel/Wood	Paint/Stain	u/s Struct. - Varies	
Office Meeting	308	Concrete	Carpet	GWB/Conc.	Rubber	GWB	Paint	GWB	Paint	GWB	Paint	Concrete	Sealer	Steel/Wood	Paint/Stain	u/s Struct. - Varies	

BLD01-02153

* UNRATED FIRE SEPARATION
** **ROUGH IN CONDUIT ONLY FOR FUTURE SECURITY SYSTEM**
*** PROVIDE INTERCONNECTION WITH ALARM
**** SPRINKLER FOLOW SWITCH ALARM TO ACTIVATE POWER OPERATED OPENER

NO	DATE	REVISIONS
2	APR. 20,2001	RE-ISSUED FOR BLDG. PERMIT
1	FEB.19,2001	ISSUED FOR BLDG. PERMIT

SEAL

THOMAS RICHARD BUNTING REGISTERED ARCHITECT BRITISH COLUMBIA

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Drive North Vancouver

WALL, DOOR AND FINISH SCHEDULES

BUNTING COADY ARCHITECTS

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Canada, V6B 1A7

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A111

SCALE	PROJECT
AS NOTED	0019
DRAWN: IE RMM	DATE: FEBRUARY 2001

WATER PROOFING AND ROOFING SCHEDULES

ROOFING TYPE A

ROOFING ASSEMBLY (WAREHOUSE ROOF)
GRAVEL BALLAST
LOOSE LAID EPDM MEMBRANE
R15 RIGID INSULATION MECHANICALLY FASTENED
SLOPED METAL Ω-DECK

ROOFING TYPE B

ROOFING ASSEMBLY (ROOF DECK)
24" X 24" X 1-1/2" CONCRETE PAVERS ON SETTING PEDESTALS, OR SOIL AS SPECIFIED BY LANDSCAPE ARCHITECT,
PLASTIC DRAINAGE MAT C/W INTEGRAL FILTER FABRIC,
SBS GREEN ROOFING SYSTEM,
PROTECTION BOARD,
R20 RIGID INSULATION
SLOPED METAL DECK TO DRAIN

ROOFING TYPE C

ROOFING ASSEMBLY (OFFICE ROOF)
SBS UV-PROTECTED ROOFING SYSTEM,
PROTECTION BOARD,
R20 RIGID INSULATION
SLOPED METAL DECK TO DRAIN

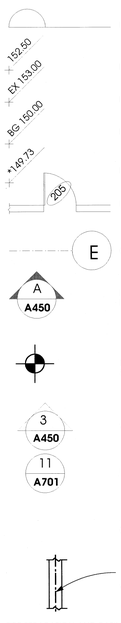
ROOFING TYPE D

ROOFING ASSEMBLY (BALCONY AND EXTERIOR STAIR LANDINGS)
URETHANE TRAFFIC TOPPING ON
CONCRETE TOPPING
SLOPE FOR DRAINAGE AS SHOWN ON DRAWINGS.

ROOFING TYPE E

ROOFING ASSEMBLY (ENTRANCE CANOPY)
SBS UV-PROTECTED ROOFING SYSTEM,
PROTECTION BOARD,
SLOPED METAL DECK TO DRAINS

SYMBOLS USED IN THIS SET OF DRAWINGS



NEW FLOOR ELEVATION IN SECTION

NEW FLOOR ELEVATION IN PLAN

EXIST. FLOOR ELEVATION IN PLAN

BUILDING GRADES

INTERPOLATED GRADES

DOOR NUMBER

GRID LINE

BUILDING SECTION FLAG WITH DETAIL NO. ABOVE SHEET NO.

BUILDING ELEVATION, SETTING-OUT POINT ON PLANS

WALL/PARTIAL SECTION FLAG

DETAIL FLAG

ROOM NUMBER (FIFTH ROOM ON 2ND FLOOR)

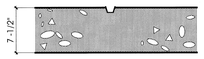
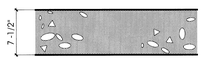
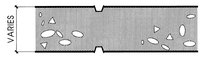
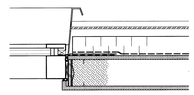
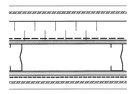
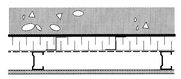
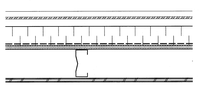
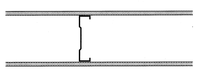
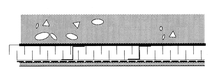
FRR REQUIRED (SEE BELOW)
WALL TYPE

FIRE SEPARATION AND RATING LINE TYPES ON PLANS

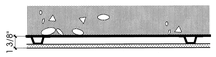
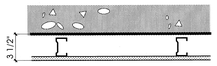
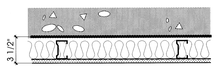
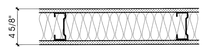
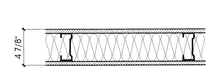
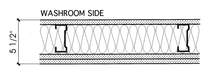
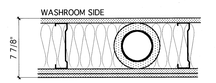
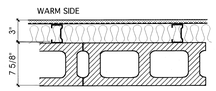
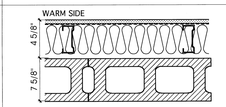
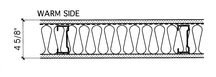
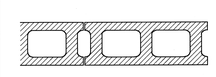
SMOKE SEPARATION
1 HR. FIRE RESISTANCE RATING (FRR)
2 HR. FIRE RESISTANCE RATING (FRR)
3 HR. FIRE RESISTANCE RATING (FRR)

ANY PENETRATIONS THROUGH THESE AREAS MUST MAINTAIN FIRE RESISTANCE RATING BY ULC APPROVED FIRE STOP SYSTEM AND FIRE DAMPERS TO DUCTWORK.

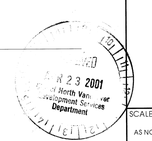
EXTERIOR WALL TYPES SCHEDULE

NO.	ILLUSTRATION	ASSEMBLY
E1		**E1 TILT-UP CONCRETE WALL - TYPICAL, WAREHOUSE & OFFICES** TILT-UP CONCRETE WALL AS SHOWN STRUCTURAL DRAWINGS. REVEALS AS NOTED ON DRAWINGS.
E2		**E2 TILT-UP CONCRETE WALL - 4 HR FIRE WALL** TILT-UP CONCRETE WALL AS SHOWN ON STRUCTURAL DRAWINGS. REVEAL AS NOTED ON DRAWINGS
E3		**E3 TILT-UP CONCRETE WALL - FEATURE WALL, OFFICES** TILT-UP CONCRETE WALL AS SHOWN STRUCTURAL DRAWINGS. THICKNESS VARIES, AS SHOWN ON DRAWINGS. REVEALS BOTH SIDES, AS NOTED ON DRAWINGS.
E4		**E4 HORIZONTAL RAIN SCREEN CORRUGATED SHEET METAL CLADDING** 7/8" RAIN SCREEN VERTICAL CORRUGATED SHEET METAL CLADDING, 1" AIR SPACE, R12, 2 1/2" RIGID INSULATION WITH NOTCHED TROWEL MASTIC ON BACK SURFACE, WP MEMEBRANE (ACTING AS AIR/VAPOUR BARRIER) , 1/2" WATER RESISTANT FIBRE RE-INFORCED EXTERIOR GYPSUM SHEATHING, 3 5/8" METAL STUDS, 1/2" GWB, SPRAY POLYURETHANE FOAM INSULATION AS CLOSURE TO STUD CAVITY AT GLAZING FRAMES WHERE SUNSHADES AND HSS FRAMES CONNECT TO SHEATHING PLANE. .REFER TO ELEVATIONS AND DETAILS.
E5		**E5 RAIN SCREEN CORRUGATED SHEET METAL PARAPET** 7/8" RAIN SCREEN CORRUGATED PREFINISHED SHEET METAL CLADDING, 1" AIR SPACE, R12 (2 1/2") RIGID INSULATION WITH NOTCHED TROWEL MASTIC ON BACK SURFACE TO TOP OF PARAPET, PEEL & STICK MEMEBRANE (ACTING AS AIR/VAPOUR BARRIER) , 1/2" WATER RESISTANT FIBRE RE-INFORCED EXTERIOR GYPSUM SHEATHING, 3 5/8" METAL STUDS 16" O/C MIN., 5/8" PRESSURE TREATED PLYWOOD SHEATHING, ROOFING MEMBRANE UP AND OVER 1" AIR SPACE 7/8" RAIN SCREEN CORRUGATED PREFINISHED SHEET METAL CLADDING REFER TO ELEVATIONS AND DETAILS.
E6		**E6 FURRED EXTERIOR CONCRETE PANEL INSULATED** CAST IN PLACE TILT-UP CONCRETE PANEL C/W REVEALS AS INDICATED ON ELEVATIONS, 2 " RIGID INSULATION. AIR VAPOUR BARRIER, 2 1/2" METAL STUDS, 1/2" GWB.
E7		**E7 HORIZONTAL RAIN SCREEN CORRUGATED SHEET METAL CLADDING** 7/8" RAIN SCREEN HORIZONTAL CORRUGATED SHEET METAL CLADDING, 1" AIR SPACE, R12, 2 1/2" RIGID INSULATION WITH NOTCHED TROWEL MASTIC ON BACK SURFACE, WP MEMEBRANE (ACTING AS AIR/VAPOUR BARRIER) , 1/2" WATER RESISTANT FIBRE RE-INFORCED EXTERIOR GYPSUM SHEATHING, 3 5/8" METAL STUDS, 5/8" PLYWOOD PAINTED SPRAY POLYURETHANE FOAM INSULATION AS CLOSURE TO STUD CAVITY AT GLAZING FRAMES
E8		**E8 INFILL WALL ABOVE LOADING BAY WALLS** 1/2" WATER RESISTANT FIBRE RE-INFORCED EXTERIOR GYPSUM SHEATHING EACH SIDE OF 6" METAL STUDS, PAINTED TO WAREHOUSE INTERIOR
E9		**E9 FURRED EXTERIOR CONCRETE PANEL INSULATED** CAST IN PLACE TILT-UP CONCRETE PANEL C/W REVEALS AS INDICATED ON ELEVATIONS 1 1/2 " RIGID INSULATION Z GIRTS@24" O.C. AIR VAPOUR BARRIER 1/2" GWB.

EXTERIOR WALL TYPES SCHEDULE

NO.	ILLUSTRATION	ASSEMBLY
W1		**W1 FURRED CONCRETE WALL - INTERIOR LOCATION** CONCRETE WALL, TYPE AS NOTED ON PLANS, FURRED WITH 1/2" GWB ON 7/8" HAT CHANNELS @ 24" O.C. TO 6" ABOVE HEIGHEST CEILING OR TO EXPOSED STRUCTURE ,INTERIOR FINISHES AS SCHEDULED
W2		**W2 FURRED CONCRETE WALL - INTERIOR LOCATION** CONCRETE WALL, TYPE AS NOTED ON PLANS, FURRED WITH 1/2" GWB ON METAL STUDS @ 24" O.C. TO 6" ABOVE HIGHEST CEILING OR TO EXPOSED STRUCTURE
W3		**W3 FURRED CONCRETE WALL - THERMAL INSULATED - INTERIOR LOCATION** CONCRETE WALL, TYPE AS NOTED ON PLANS, FURRED WITH METAL STUDS @ 24" O.C BATT INSULATION 6MIL POLY VAPOUR BARRIER AND R12 BATT INSULAITON 1/2" GWB
W4		**W4 PARTITION WALL TYPICAL INTERIOR** 1/2" GWB EACH SIDE OF 3 5/8" METAL STUDS @ 24" O.C. TO U/S OF DECK ABOVE, ACOUSTIC SEALANT TO METAL DECK
W4A		**W4A PARTITION WALL PARTIAL HEIGHT** 1/2" GWB EACH SIDE OF 3 5/8" METAL STUDS @ 24" O.C. W/ STRUCTURAL POSTS FLOOR TO CEILING STRUCTURE. SEE INTERIOR ELEVATIONS FOR WALL HEIGHT
W4B		**W4B PARTITION WALL TYPICAL ACOUSTIC** 1/2" GWB EACH SIDE OF 3 5/8" METAL STUDS @ 24" O.C. GLASS FIBER BATT INSUL.
W5		**W5 PARTITION WALL 1 HR. RATED ASSEMBLY (ULC W407)** 5/8" TYPE X GWB EACH SIDE OF 3 5/8" METAL STUDS @ 24" O.C. TO U/S OF DECK ABOVE, ACOUSTIC INSULATION. FIRE RATED CAULK BOTH SIDES FULL PERIMETER.
W6		**W6 WASHROOM WALL ACOUSTIC WALL ASSEMBLY** 1 LAYER 5/8" GWB EACH SIDE ON 3 5/8" METAL STUDS TO U.S./ SLAB OVER @ 16" O.C. BATT INSULATION, C/W ACOUSTIC CAULK FULL PERIMETER, BOTH SIDES. ADDITIONAL LAYER 5/8" GWB ON CORRIDOR SIDE.
W7		**WASHROOM WALL ACOUSTIC WALL ASSEMBLY** 1 LAYER 5/8" GWB EACH SIDE ON 6" METAL STUDS @ 16" O.C.BATT INSULATION, C/W ACOUSTIC CAULK FULL PERIMETER. ADDITIONAL L AYER 5/8" GWB ON CORRIDOR SIDE.INSULATE PLUMBING CHASES (1/2" TOLERANCE) FOR ACOUSTICS.
W8		**INSULATED CONCRETE PARTITION WALL** 1/2" GWB WITH 6MIL POLY VAPOUR BARRIER BATT INSULAITON METAL STUDS @ 24" O.C 8" CONCRETE BLOCK WALL
W9		**INSULATED CONCRETE PARTITION WALL** 1/2" GWB WITH 6MIL POLY VAPOUR BARRIER AND R12 BATT INSULAITON ON 3 5/8" METAL STUDS @ 24" O.C., FULL HEIGHT 8" CONCRETE BLOCK WALL
W10		**INSULATED PARTITION WALL** 1/2" GWB WITH 6MIL POLY VAPOUR BARRIER AND R12 BATT INSULAITON ON 3 5/8" METAL STUDS @ 24" O.C., FULL HEIGHT 1/2" GWB
W11		**W11 MASONRY WALL** CONCRETE MASONRY UNITS THICKNESS AS INDICATED ON DRAWINGS.

BLD 01-02153



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NO	DATE	REVISIONS
2	APR. 20,2001	RE-ISSUED FOR BLDG. PERMIT
1	FEB. 19,2001	ISSUED FOR BLDG. PERMIT

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Office / Warehouse

758 Harbourside Drive
North Vancouver

SCHEDULES
WALL SCHEDULES

BUNTING COADY
ARCHITECTS

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Canada, V6B 1A7

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A112

SCALE	PROJECT
AS NOTED	0019
DRAWN: IE RMM	DATE: JANUARY 2001

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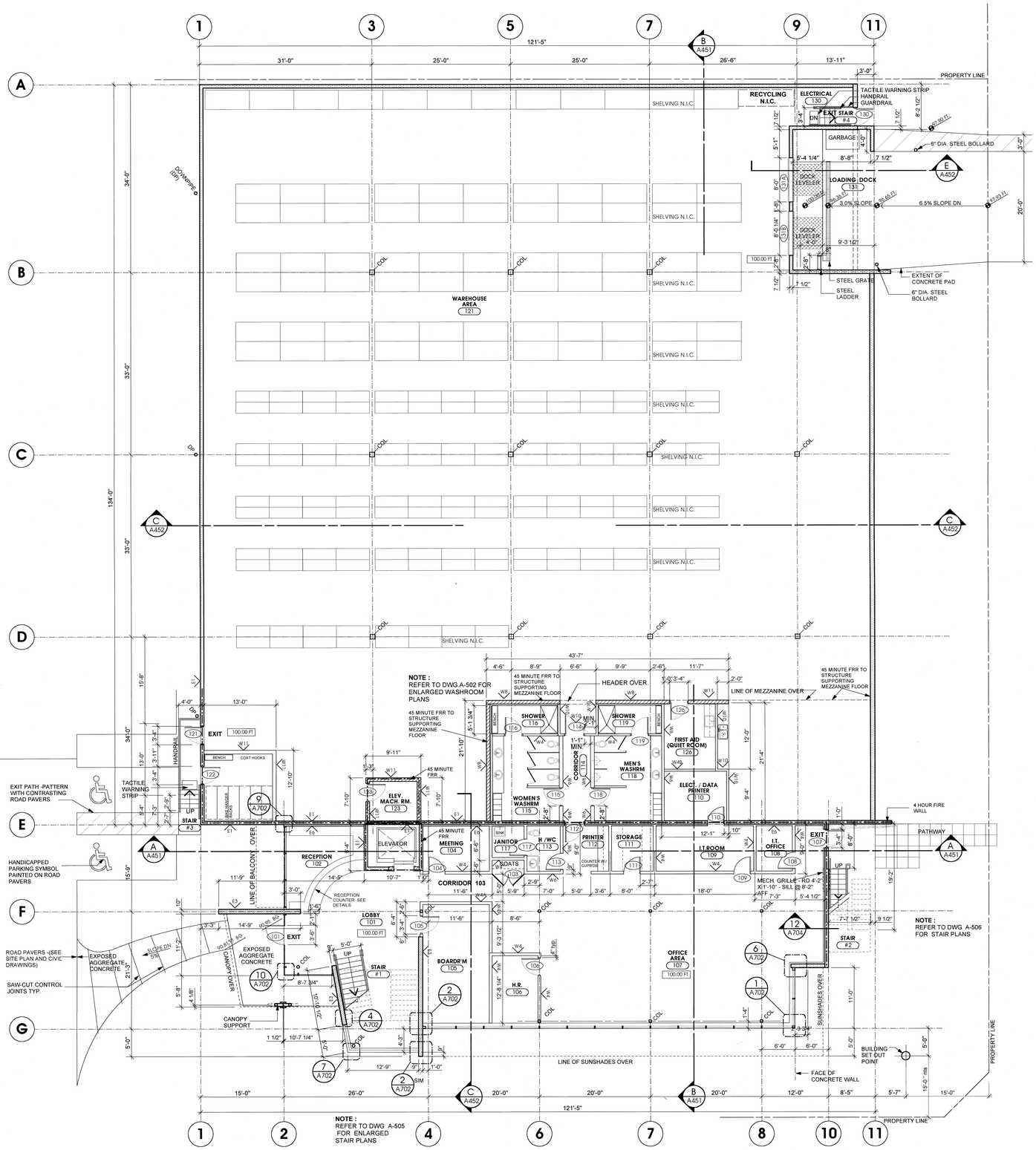

GROUND FLOOR PLAN

SCALE: 1/8"= 1'-0"

0 10 20 feet
6 m

BUILDING NORTH

NO	DATE	REVISIONS
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GROUND FLOOR PLAN

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BLD01-02153

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A201

SCALE	PROJECT
AS NOTED	0019
DRAWN: IE RMM	DATE: FEBRUARY 2001

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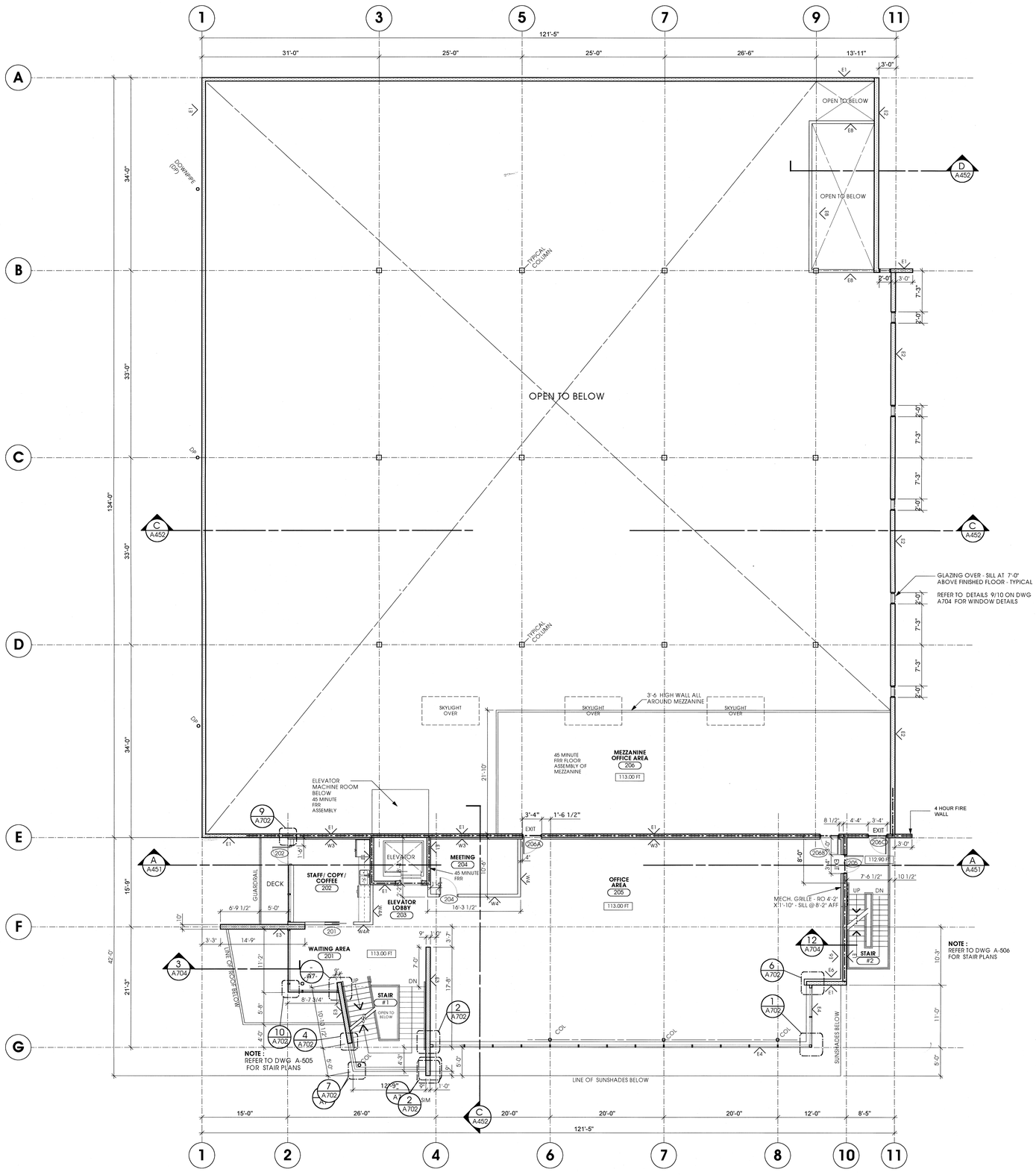

SECOND FLOOR PLAN

SCALE: 1/8"= 1'-0"

0 10 20 feet
6 m

BUILDING NORTH

BLD 01 - 02155

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APR 23 2001
City of North Vancouver
Development Services
Department

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North Vancouver

SECOND FLOOR PLAN

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A202

SCALE	PROJECT
AS NOTED	0019
DRAWN	DATE
IE / RMM	FEBRUARY 2001

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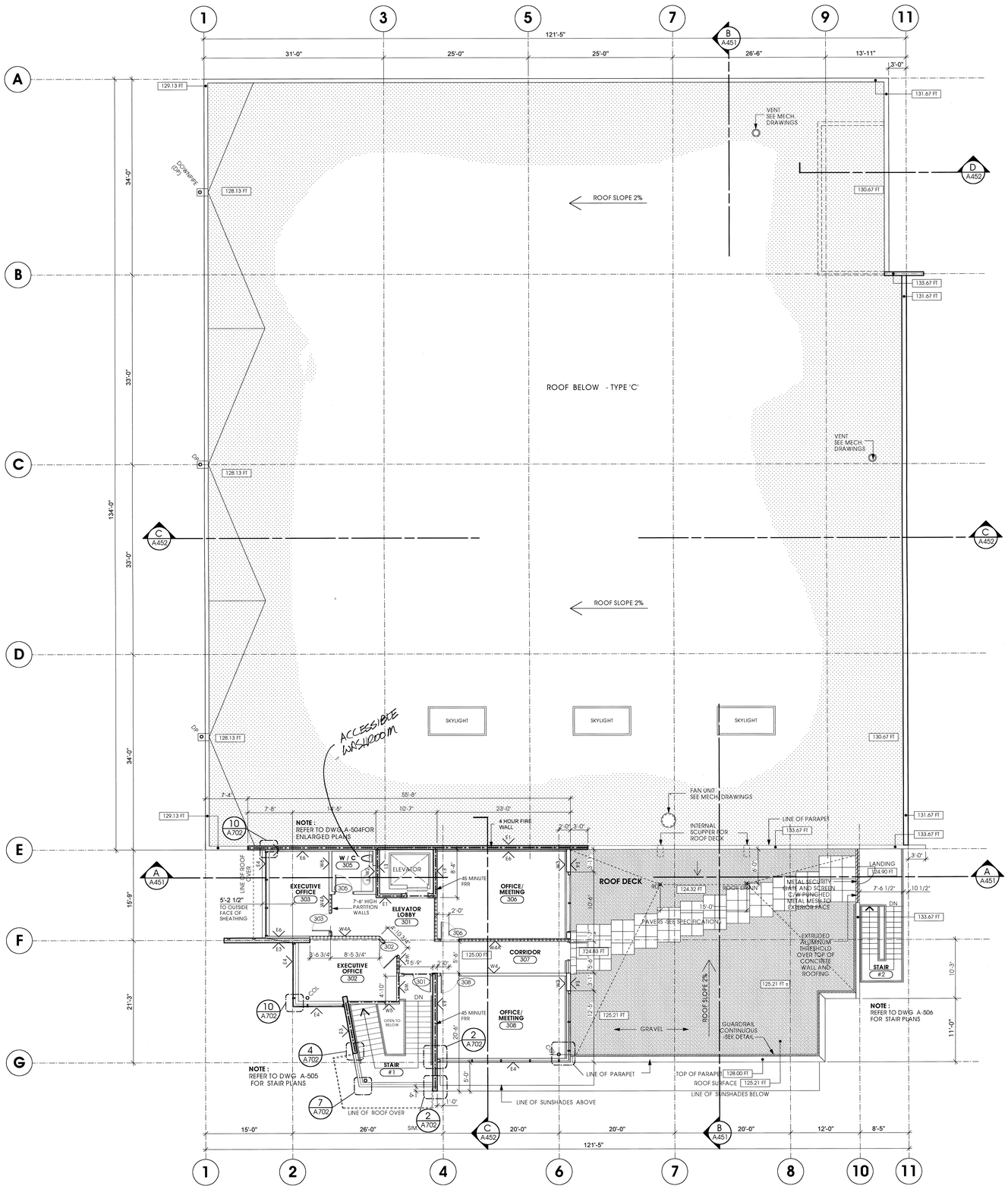

THIRD FLOOR PLAN

SCALE: 1/8"= 1'-0"

0 10 20 feet
6 m

BUILDING NORTH

NO	DATE	REVISIONS
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THIRD FLOOR PLAN

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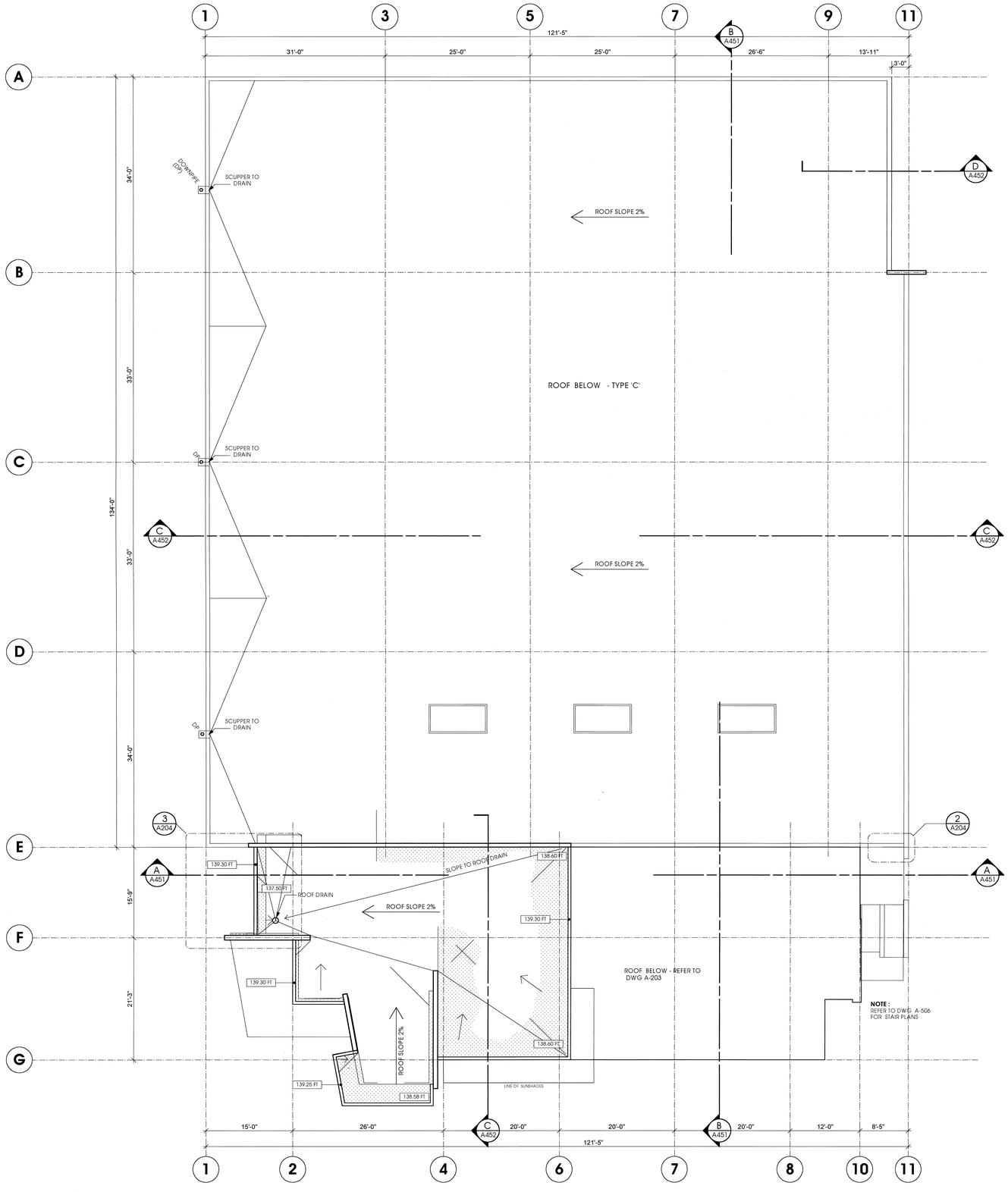
A203

SCALE	PROJECT
AS NOTED	0019
DRAWN	DATE
IE / RMM	FEBRUARY 2001



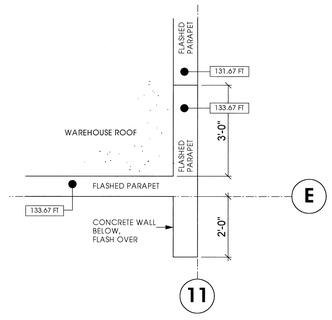
ROOF PLAN

SCALE: 1/8"= 1'-0"

0 10 20 feet

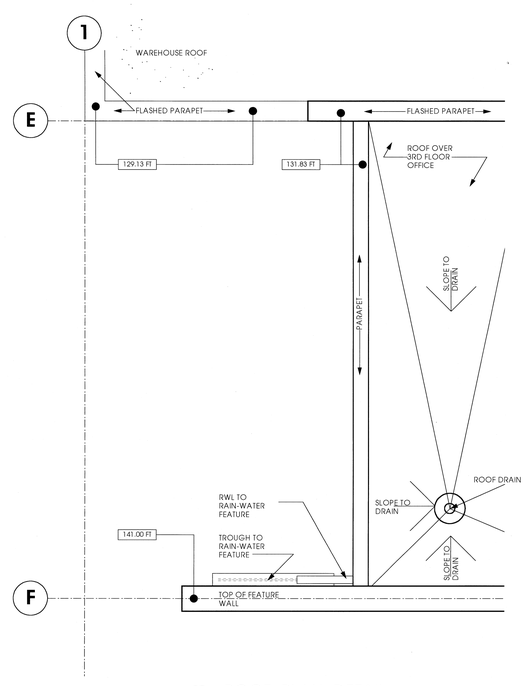
6 m

BUILDING NORTH



2 ROOF PLAN DETAIL

SCALE: 1/2"= 1'-0"



3 ROOF PLAN DETAIL

SCALE: 1/2"= 1'-0"

BLD 01 - 02153

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ROOF PLAN

BUNTING COADY ARCHITECTS

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A204

SCALE	PROJECT
AS NOTED	0019
DRAWN	DATE
IE / RMM	FEBRUARY 2001

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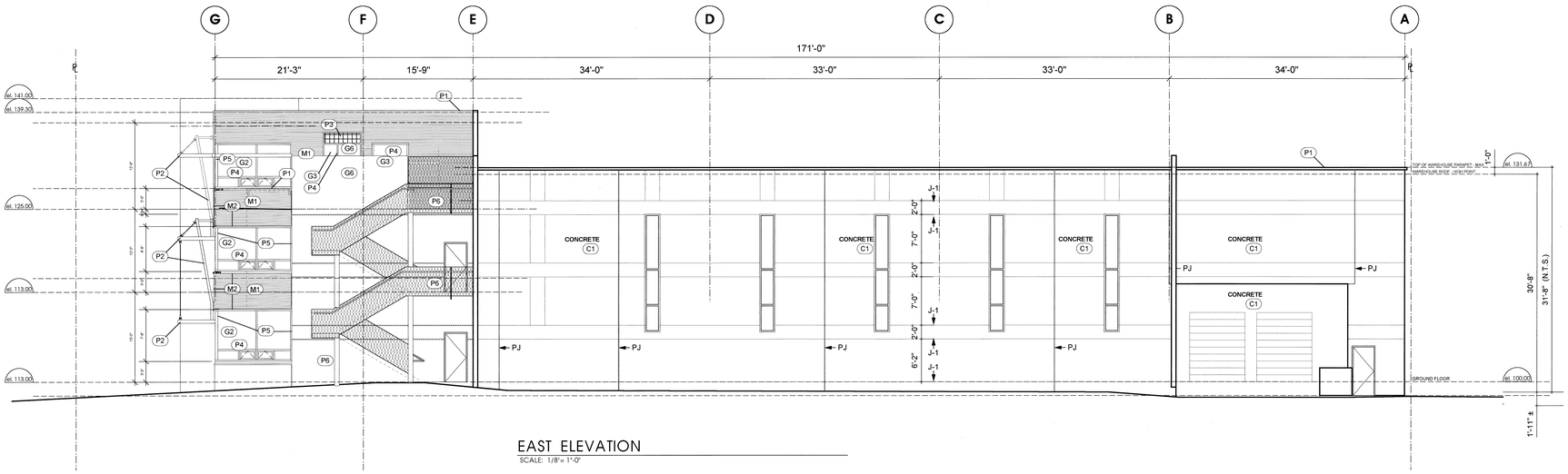
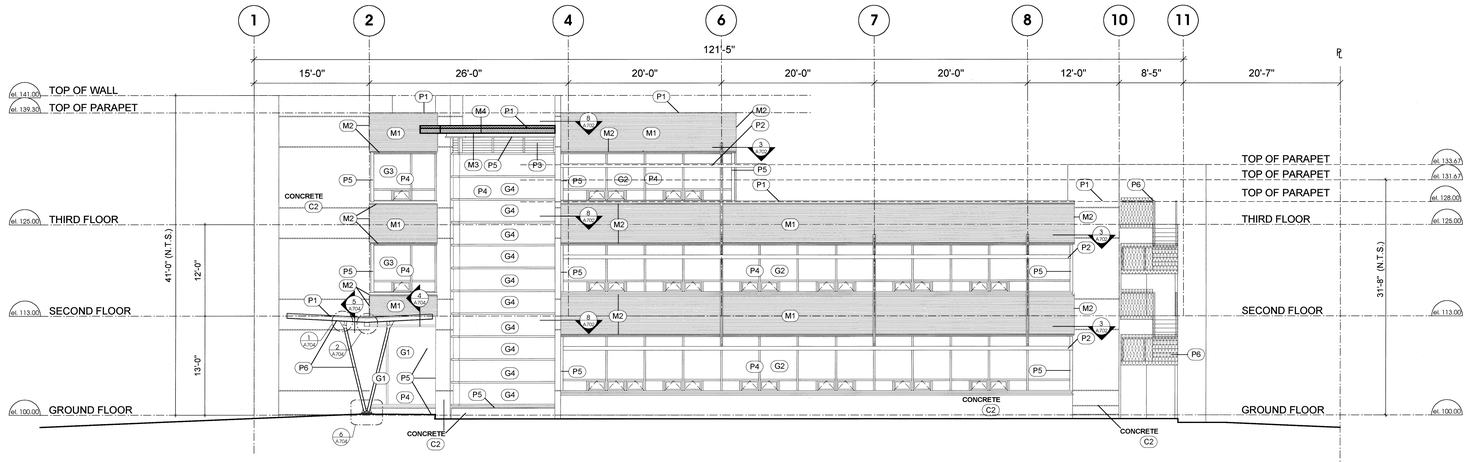


EAST ELEVATION
SCALE: 1/8"= 1'-0"



SOUTH ELEVATION
SCALE: 1/8"= 1'-0"

0 20 feet
6 m

LEGEND

PJ	PANEL JOINT	Sim to 8/A201 & See structural dwgs.
J-1	REVEAL JOINT	See 5/A201

EXTERIOR FINISH SCHEDULE

TAG	MATERIAL	FINISH	COLOUR
C-1	CONCRETE (GRIND SMOOTH & SACK FINISH	ACRYLIC PAINT SYSTEM	P+L 2251 Appaloosa
C-2	CONCRETE (GRIND SMOOTH & SACK FINISH	MEDIUM SANDBLAST	P+L 2263 Foam
P-1	METAL FLASHING	PREFINISHED PAINT (CUSTOM COLOR)	BM 1267 Oxblood
P-2/P-3	SUNSHADE/FRAME/VANES	ALKYD ENAMEL PAINT (CUSTOM COLOR	P+L 2263 Foam
P-4	ALUMINUM GLAZING FRAMES		Clear Anodized Aluminum
P-5	METAL FLASHING @ GLAZING		Clear Anodized Aluminum
P-6	MISC METAL	ALKYD ENAMEL PAINT(CUSTOM COLOR)	BM 1267 Oxblood
M-1	METAL CLADDING-HORIZ. CORRUGATED	PREFINISH PAINT (CUSTOM COLOR)	BM 1267 Oxblood
M-2	METAL FLASHING	PREFINISH PAINT (CUSTOM COLOR)	BM 1267 Oxblood
M-3	RIBBED METAL PANEL SOFFIT	PREFINISH PAINT (CUSTOM COLOR)	P+L 2263 Foam
M-4	METAL FLASHING FACIA	PREFINISH PAINT (CUSTOM COLOR)	P+L 2263 Foam
G-1	VISION GLASS - DOUBLE GLAZED		Clear
G-2	VISION GLASS - DOUBLE GLAZED	LOW 'E'	Green
G-3	VISION GLASS - DOUBLE GLAZED	REFLECTIVE	Silver on Green
G-4	TEMPERED & LAMINATED - DOUBLE GLAZED	REFLECTIVE	Silver on Green
G-5	TEMPERED & LAMINATED - DOUBLE GLAZED		Clear
G-6	TEMPERED & LAMINATED		Clear

NOTE: ALL GROUND LEVEL GLAZING MUST BE LAMINATED SAFETY GLASS

NO	DATE	REVISIONS
2	APR. 20,2001	RE-ISSUED FOR BLDG. PERMIT
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BUILDING ELEVATIONS
EAST (GOSTIC) ELEVATION
SOUTH (FRONT) ELEVATION

BUNTING COADY ARCHITECTS

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Vancouver, B.C.
Canada, V6B 1A7

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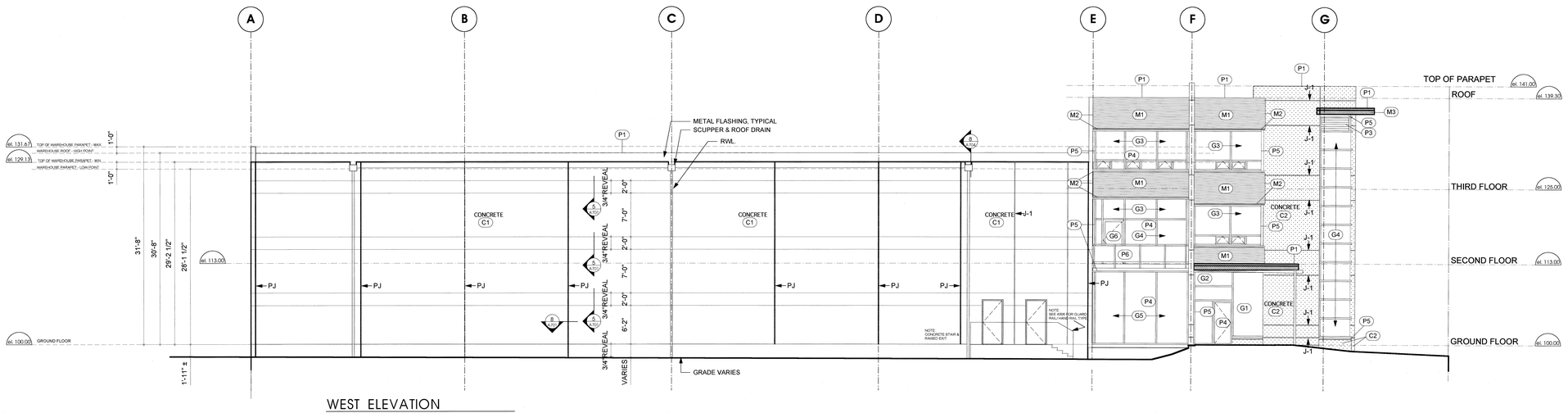
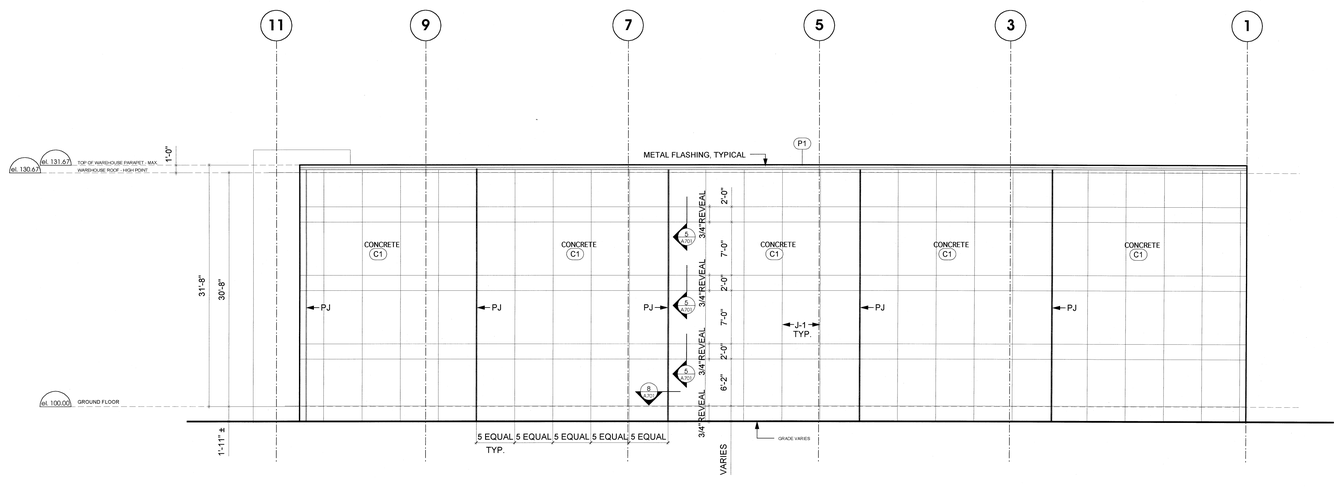
A401

SCALE	PROJECT
1/8" = 1'-0"	0019
DRAWN	DATE
IE RMM	JANUARY 2001



WEST ELEVATION

SCALE: 1/8"= 1'-0"



NORTH ELEVATION

SCALE: 1/8"= 1'-0"

0 20 feet
6 m

LEGEND

PJ	PANEL JOINT	Sim to 8/A201 & See structural dwgs.
J-1	REVEAL JOINT	See 5/A201

EXTERIOR FINISH SCHEDULE

TAG	MATERIAL	FINISH	COLOUR
C-1	CONCRETE (GRIND SMOOTH & SACK FINISH)	ACRYLIC PAINT SYSTEM	P+L 2251 Appaloosa
C-2	CONCRETE (GRIND SMOOTH & SACK FINISH)	MEDIUM SANDBLAST	P+L 2263 Foam
P-1	METAL FLASHING	PREFINISHED PAINT (CUSTOM COLOR)	BM 1267 Oxblood
P-2/P-3	SUNSHADE/FRAME/VANES	ALKYD ENAMEL PAINT (CUSTOM COLOR	P+L 2263 Foam
P-4	ALUMINUM GLAZING FRAMES		Clear Anodized Aluminum
P-5	METAL FLASHING @ GLAZING		Clear Anodized Aluminum
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M-4	METAL FLASHING FACIA	PREFINISH PAINT (CUSTOM COLOR)	P+L 2263 Foam
G-1	VISION GLASS - DOUBLE GLAZED		Clear
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G-3	VISION GLASS - DOUBLE GLAZED	REFLECTIVE	Silver on Green
G-4	TEMPERED & LAMINATED - DOUBLE GLAZED	REFLECTIVE	Silver on Green
G-5	TEMPERED & LAMINATED - DOUBLE GLAZED		Clear
G-6	TEMPERED & LAMINATED		Clear

NOTE: ALL GROUND LEVEL GLAZING MUST BE LAMINATED SAFETY GLASS

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THOMAS RICHARD BUNTING
BRITISH COLUMBIA

Maxem Holdings Inc.

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North Vancouver

BUILDING ELEVATIONS
WEST ELEVATION
NORTH ELEVATION

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ARCHITECTS

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A402

SCALE	PROJECT
1/8" = 1'-0"	0019
DRAWN	DATE
IE RMM	JANUARY

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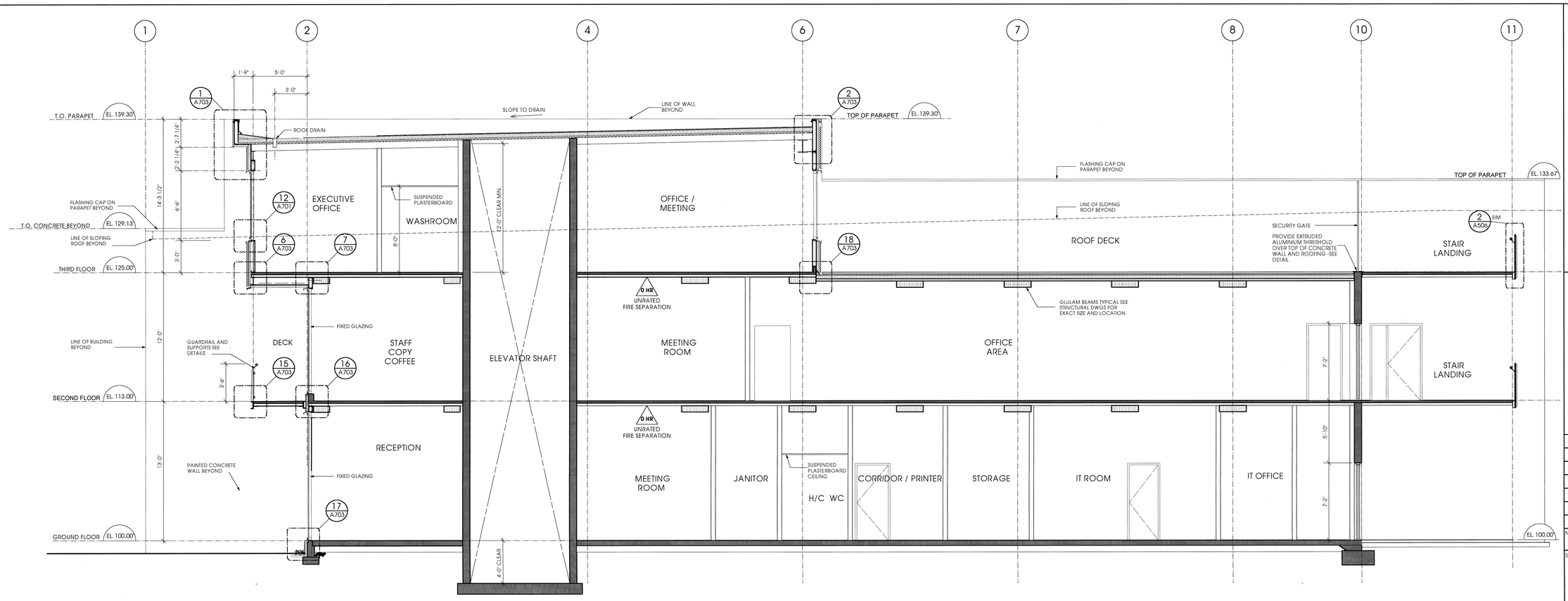
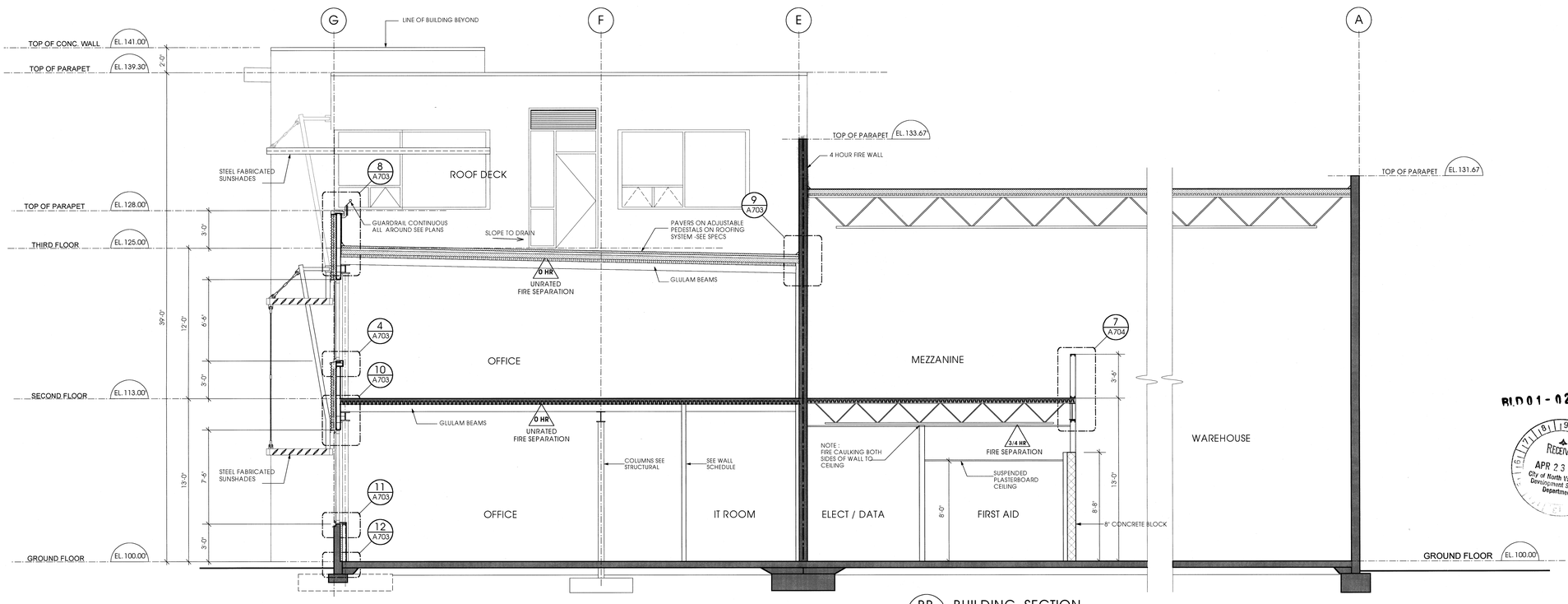


AA A201 BUILDING SECTION
SCALE: 1/4" = 1'-0"



BB A201 BUILDING SECTION
SCALE: 1/4" = 1'-0"

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NO	DATE	REVISIONS

SEAL

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BUILDING SECTIONS

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RECEIVED APR 23 2001 City of North Vancouver Development Services Department

A451

SCALE	PROJECT
1/8" = 1'-0"	0019
DRAWN: IE RMM	DATE: JANUARY

THE GENERAL CONTRACTOR SHALL REVIEW THE DOCUMENTS FOR CONFORMANCE CODES AND BY-LAWS AND SHALL ADVISE THE ARCHITECT OF ANY DISCREPANCIES HE MAY NOTE. THE GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE DESIGNER.
DO NOT SCALE THE DRAWINGS.

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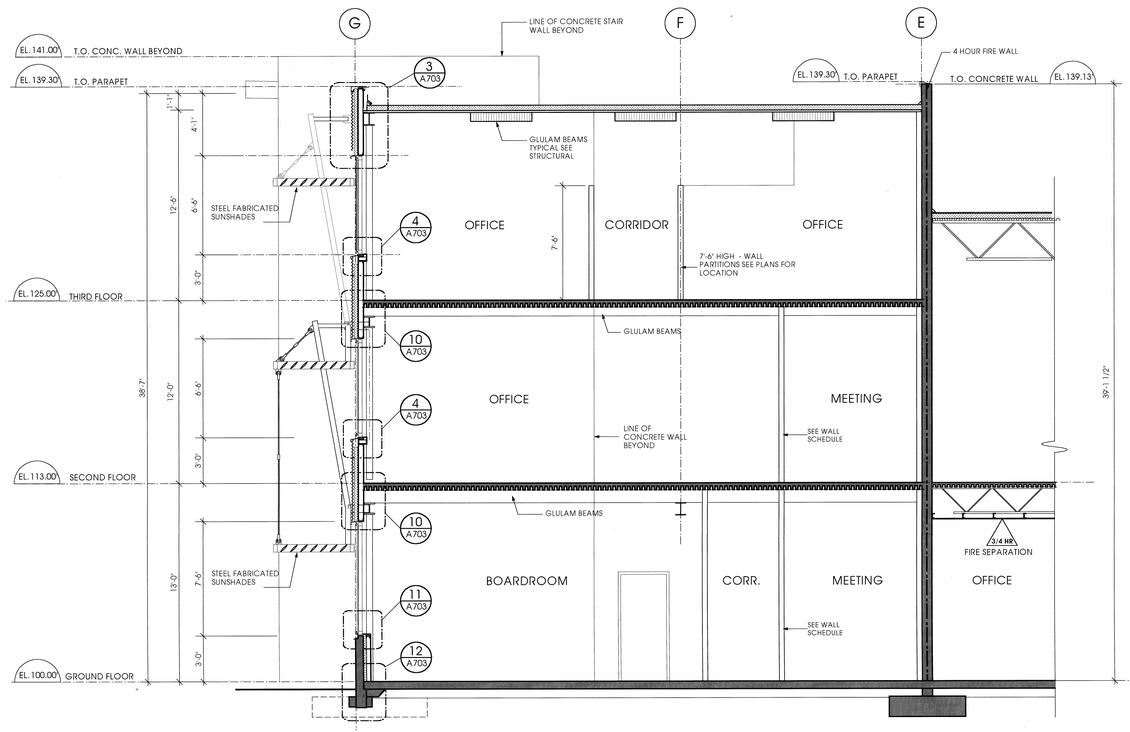
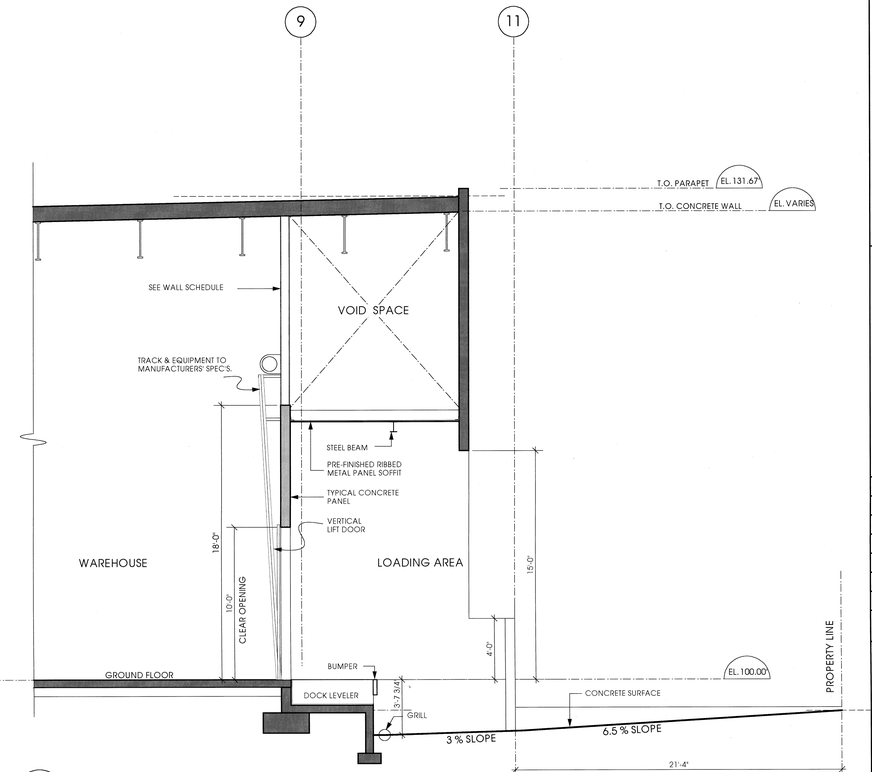
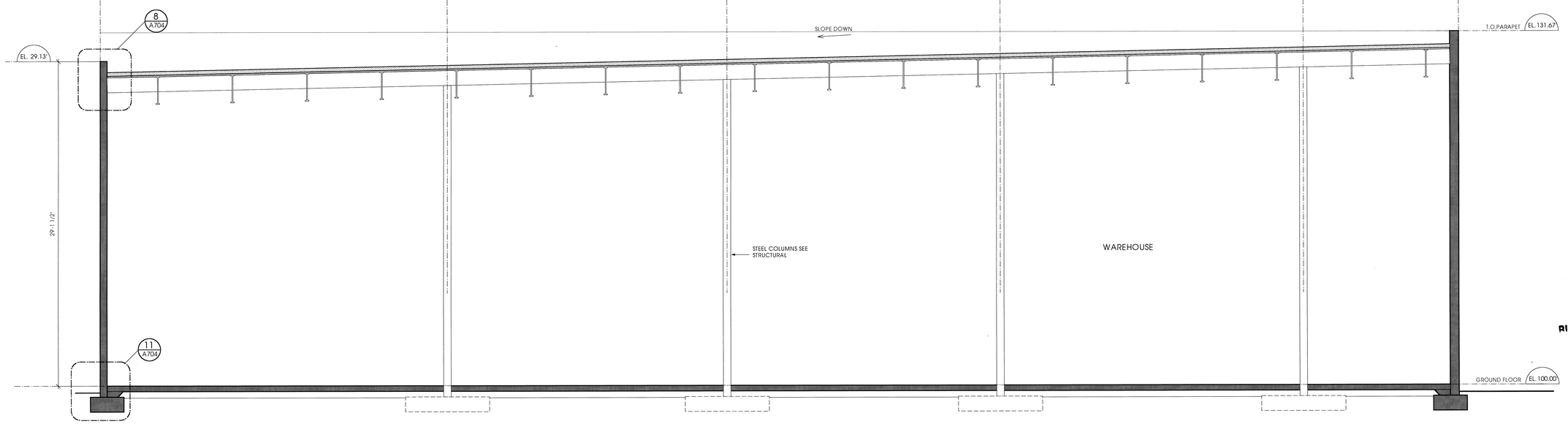


D / A201 BUILDING SECTION
SCALE: 1/4" = 1'-0"



E / A201 SECTION THRU LOADING DOCK
SCALE: 1/4" = 1'-0"



CC / A201 BUILDING SECTION
SCALE: 1/4" = 1'-0"

B1001-02155

RECEIVED
APR 23 2001
City of North Vancouver
Development Services
Department

NO	DATE	REVISIONS
2	APR. 20,2001	RE-ISSUED FOR BLDG. PERMIT
1	FEB.19,2001	ISSUED FOR BLDG. PERMIT

SEAL

REGISTERED ARCHITECT · THOMAS RICHARD BUNTING · BRITISH COLUMBIA

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Drive North Vancouver

BUILDING SECTIONS
SHEET - 2

BUNTING COADY
ARCHITECTS

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Canada, V6B 1A7

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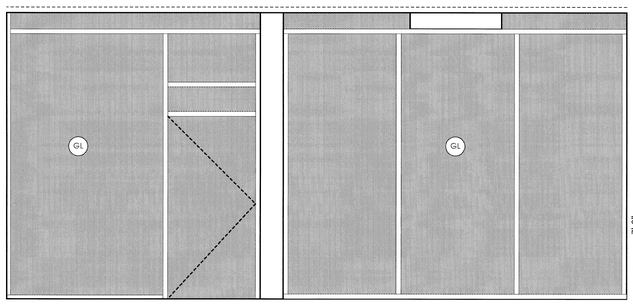
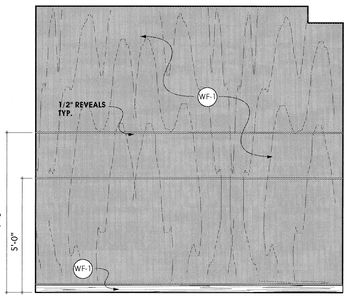
A452

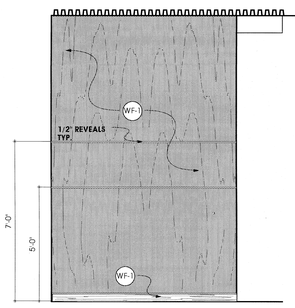
SCALE	PROJECT
1/8" = 1'-0"	0019
DRAWN: IE RMM	DATE: JANUARY



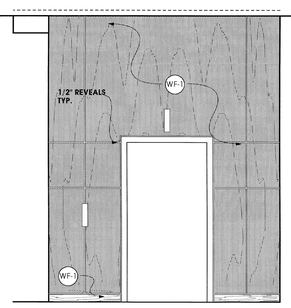
2 **INTERIOR ELEVATION - LOBBY**
SCALE: 3/8"=1'-0"



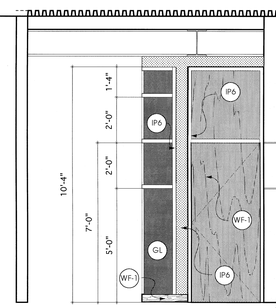
3 **INTERIOR ELEVATION - LOBBY**
SCALE: 3/8"=1'-0"



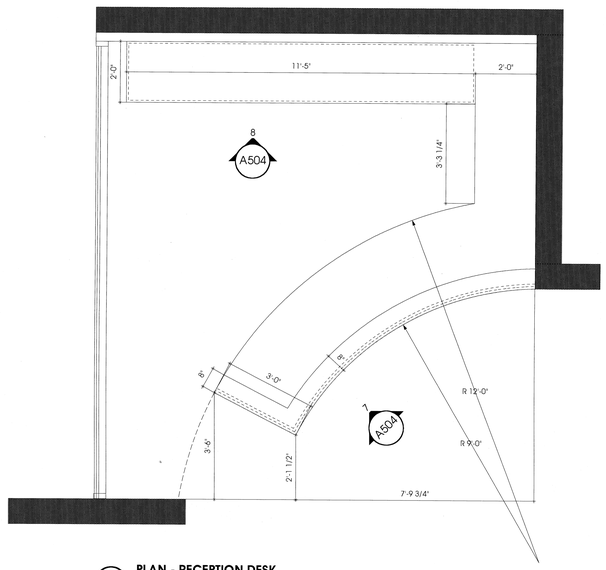
4 **INTERIOR ELEVATION - LOBBY**
SCALE: 3/8"=1'-0"



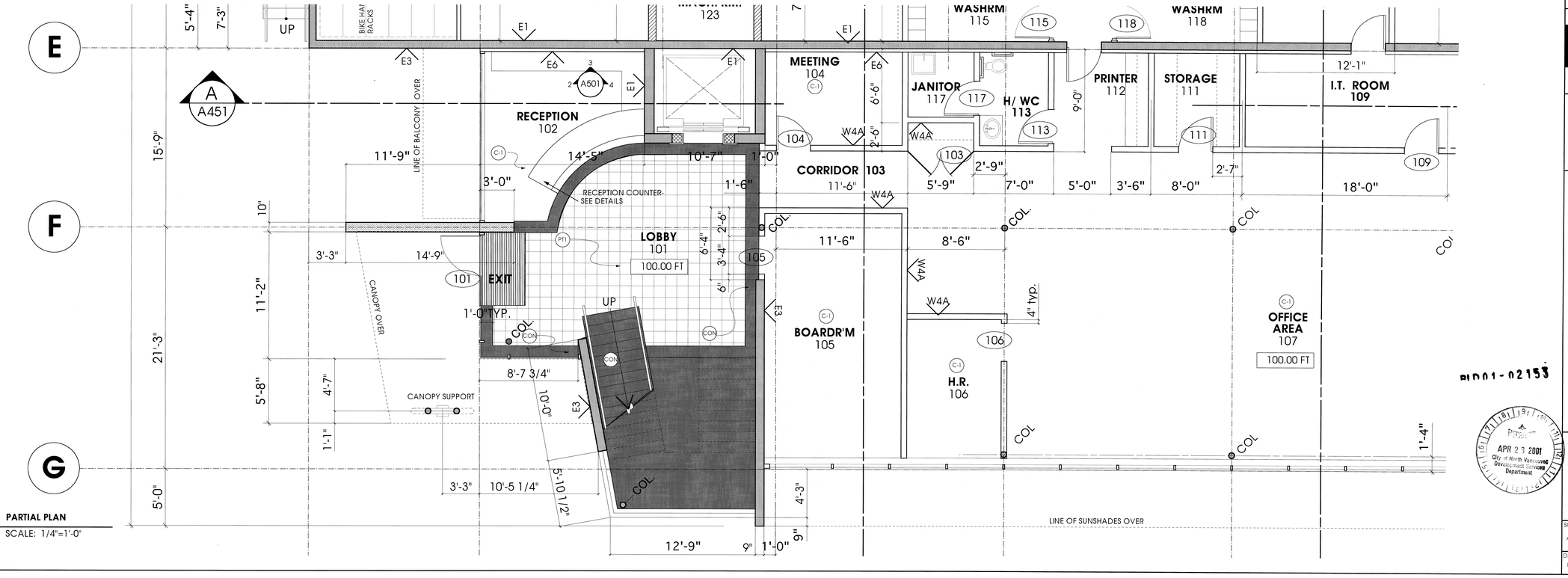
5 **INTERIOR ELEVATION - LOBBY**
SCALE: 3/8"=1'-0"



6 **INTERIOR ELEVATION - LOBBY STAIRS**
SCALE: 3/8"=1'-0"



7 **PLAN - RECEPTION DESK**
SCALE: 1/2"=1'-0"



1 **PARTIAL PLAN**
SCALE: 1/4"=1'-0"

BP001-02153

APR 23 2001
City of North Vancouver Development Services Department

NO	DATE	REVISIONS
2	APR. 20,2001	RE-ISSUE FOR BLDG. PERMIT

SEAL

REGISTERED ARCHITECT
THOMAS RICHARD BUNTING
BRITISH COLUMBIA

Maxem Holdings Inc.

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North Vancouver

DETAIL PLANS
INTERIOR ELEVATIONS
LOBBY/STAIRS

BUNTING COADY
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Canada, V6B 1A7

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Fax (604) 685-0694

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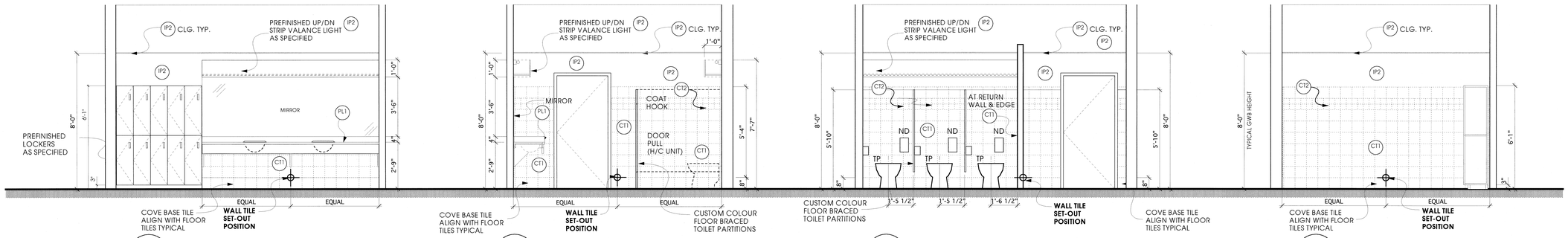
A501

SCALE	PROJECT
AS NOTED	0019
DRAWN	DATE
RMM	30 JANUARY 2001

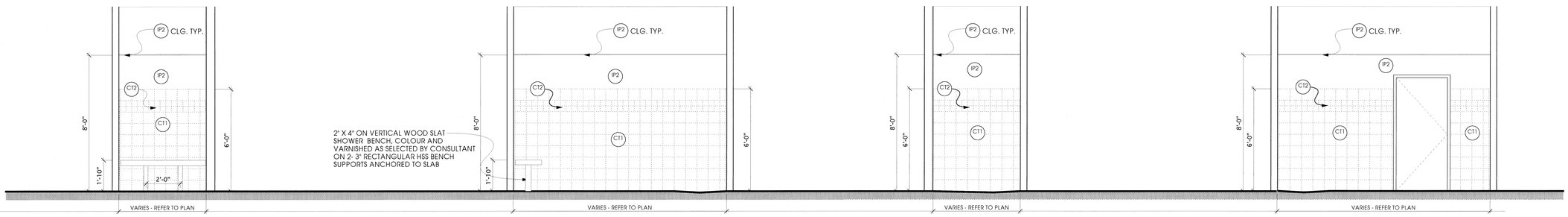


1 **WOMEN'S WASHROOM - LEVEL 1**
3/8" = 1'-0"

2 **WOMEN'S WASHROOM - LEVEL 1**
3/8" = 1'-0"

3 **WOMEN'S WASHROOM - LEVEL 1**
3/8" = 1'-0"

4 **WOMEN'S WASHROOM - LEVEL 1**
3/8" = 1'-0"

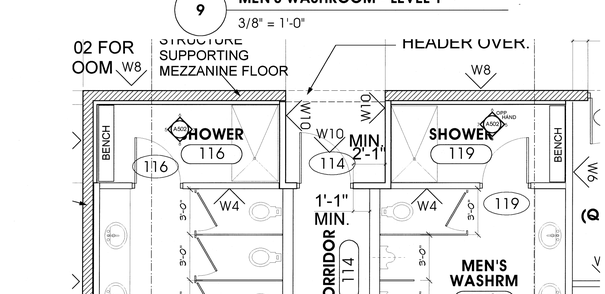


5 **WOMEN'S + MEN'S SHOWER - LEVEL 1**
3/8" = 1'-0"

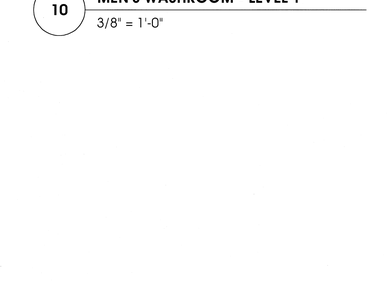
6 **WOMEN'S + MEN'S SHOWER - LEVEL 1**
3/8" = 1'-0"

7 **WOMEN'S + MEN'S SHOWER - LEVEL 1**
3/8" = 1'-0"

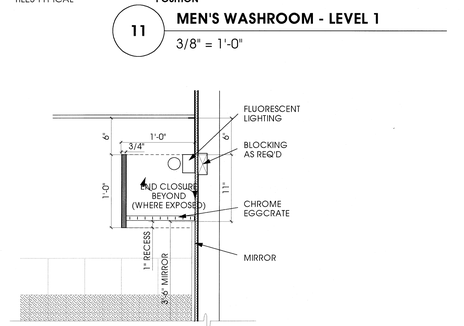
8 **WOMEN'S + MEN'S SHOWER - LEVEL 1**
3/8" = 1'-0"



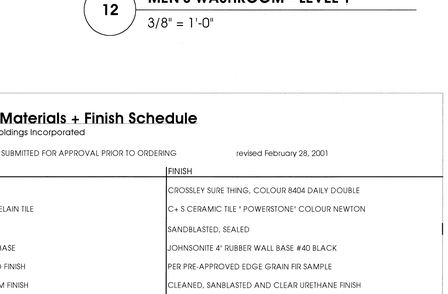
9 **MEN'S WASHROOM - LEVEL 1**
3/8" = 1'-0"



10 **MEN'S WASHROOM - LEVEL 1**
3/8" = 1'-0"



11 **MEN'S WASHROOM - LEVEL 1**
3/8" = 1'-0"



12 **MEN'S WASHROOM - LEVEL 1**
3/8" = 1'-0"

13 **WASHROOM FLOOR PLAN - LEVEL 1**
1/4" = 1'-0"

14 **SECTION AT VALANCE AND COUNTER**
NTS

Interior Materials + Finish Schedule

For Maxem Holdings Incorporated

SAMPLES TO BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING — revised February 28, 2001

TAG	MATERIAL	FINISH
C1	CARPET (FIELD)	CROSSLEY SURE THING, COLOUR 8404 DAILY DOUBLE
PT1	12" X 12" PORCELAIN TILE	C+ S CERAMIC TILE " POWERSTONE" COLOUR NEWTON
CON	CONCRETE	SANDBLASTED, SEALED
RB1	RUBBER COVE BASE	JOHNSONITE 4" RUBBER WALL BASE #40 BLACK
WF1	STAINED WOOD FINISH	PER PRE-APPROVED EDGE GRAIN FIR SAMPLE
WF2	GLUE LAM BEAM FINISH	CLEANED, SANBLASTED AND CLEAR URETHANE FINISH
CT1	8" x 8" CERAMIC TILE - WC WALLS FIELD COLOUR	LANKA ALABASTER MATTE LAM88
CT2	4.25" x 4.25" CERAMIC TILE - WC WALLS ACCENT	LANKA HERB GREEN GLOSSY SO773
CT3	8" x 8" PORCELAIN TILE - WC FLOORS	LANKA STONEWARE 3755
PL1	PLASTIC LAMINATE COMPOSITE - ALL COUNTERTOPS	PHENIX BIOCOMPOSITES GREY GRANITE MATTE
PL2	PLASTIC LAMINATE COMPOSITE - TRANSACTION TOPS	PHENIX BIOCOMPOSITES MIDNIGHT SEMI GLOSS
PL3	PLASTIC LAMINATE - ELEVATOR CABS	ARBORITE PLUS W-404 WILD CHERRY, GLOSS FINISH
CG	CORNER GUARD	NO. 4 STAINLESS STEEL
IP1	PAINT (GWB CEILING AND CEILING PLENUM - GENERAL)	BENJAMIN MOORE #970 (OFF WHITE)
IP2	PAINT (WC WALLS + CEILING)	PRATT + LAMBERT 2251 APPALOOSA (LIGHT GREEN)
IP3	PAINT (WALLS)	BENJAMIN MOORE #1069 (LIGHT CARMEL)
IP5	PAINT (MISC. METAL + PAINTED FLOORS)	BENJAMIN MOORE #1631 (CHARCOAL)
IP6	PAINTED METAL FRAME/METAL DOORS	BENJAMIN MOORE #1631 (CHARCOAL)
IP7	METAL TRUSSES	BENJAMIN MOORE #1267 (OXBLOOD)

NO	DATE	REVISIONS
2	APR. 20, 2001	ISSUED FOR BLDG. PERMIT

SEAL

REGISTERED ARCHITECT THOMAS RICHARD BUNTING BRITISH COLUMBIA

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Drive
North Vancouver

DETAIL PLANS
INTERIOR ELEVATIONS
WASHROOMS

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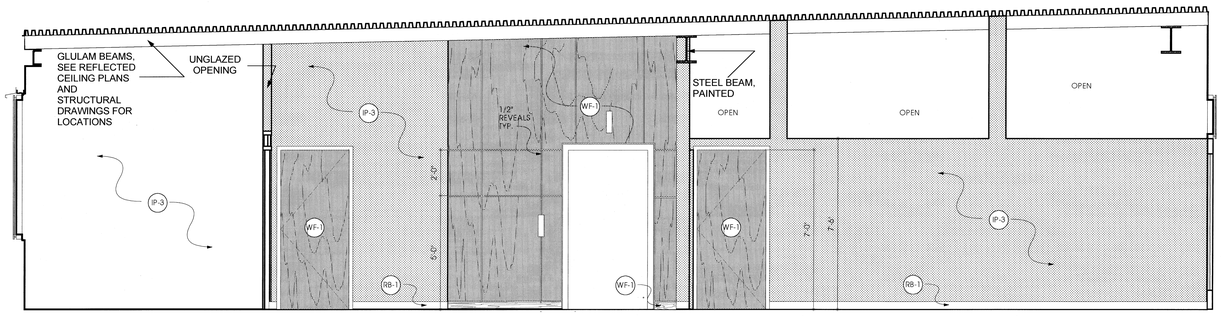
BLD 01 - 02153

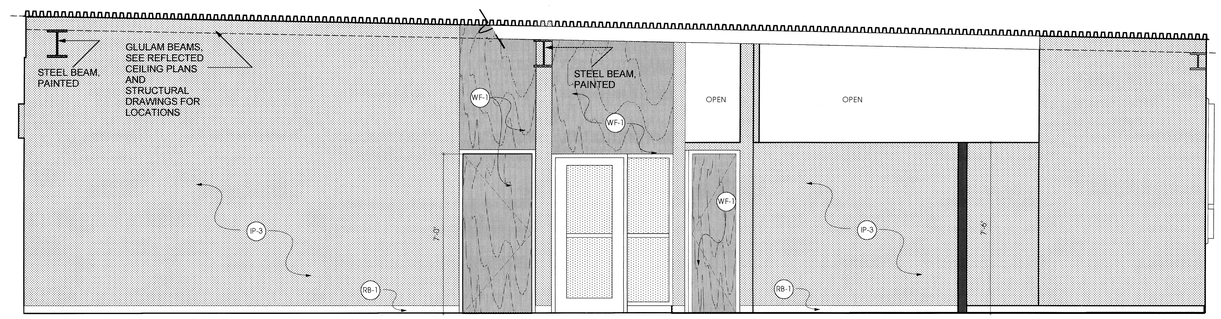
RECEIVED APR 23 2001 City of North Vancouver Development Services Department

A502

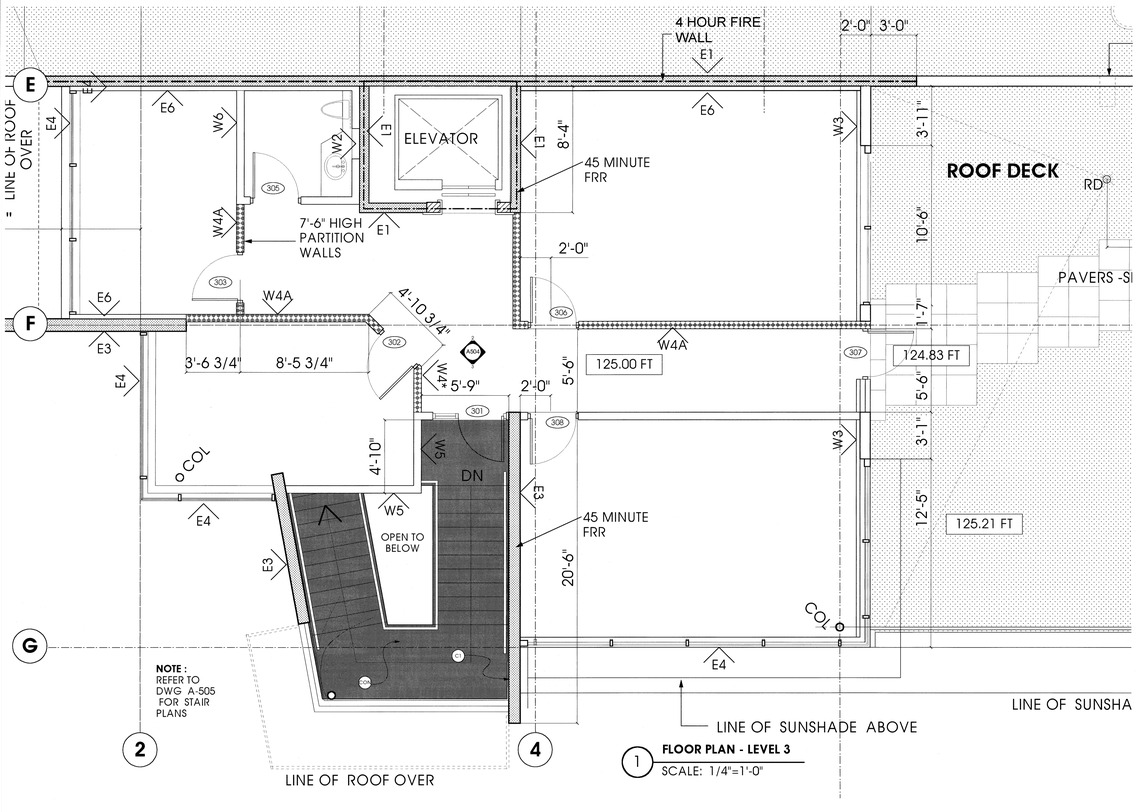
SCALE	PROJECT
AS NOTED	0019
DRAWN: RMM	DATE: 30 JANUARY 2001



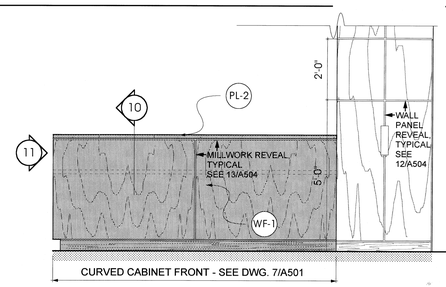
2 **INTERIOR ELEVATION**
SCALE: 3/8"=1'-0"



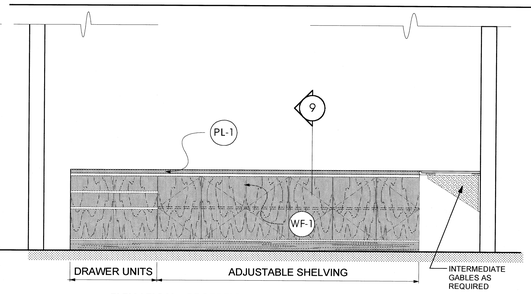
3 **INTERIOR ELEVATION**
SCALE: 3/8"=1'-0"



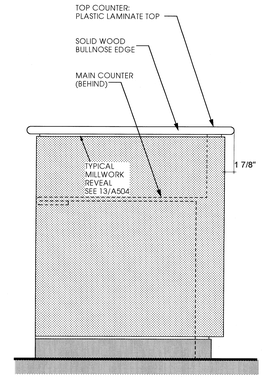
1 **FLOOR PLAN - LEVEL 3**
SCALE: 1/4"=1'-0"



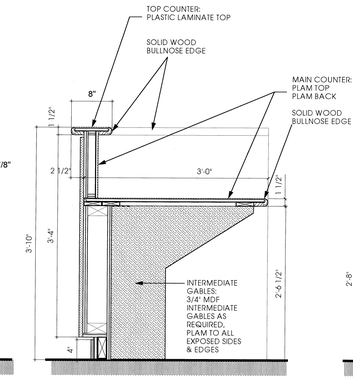
7 **ELEVATION - RECEPTION (@LOBBY)**
SCALE: 1/2"=1'-0"



8 **ELEVATION - RECEPTION (@N.WALL)**
SCALE: 1/2"=1'-0"



11 **ELEVATION - RECEPTION**
SCALE: 1"=1'-0"



10 **SECTION - RECEPTION**
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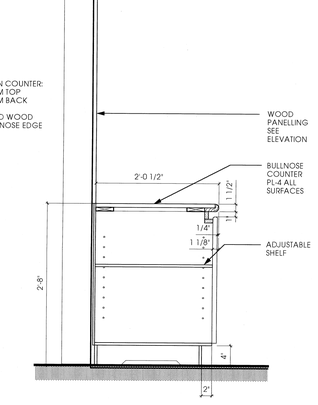
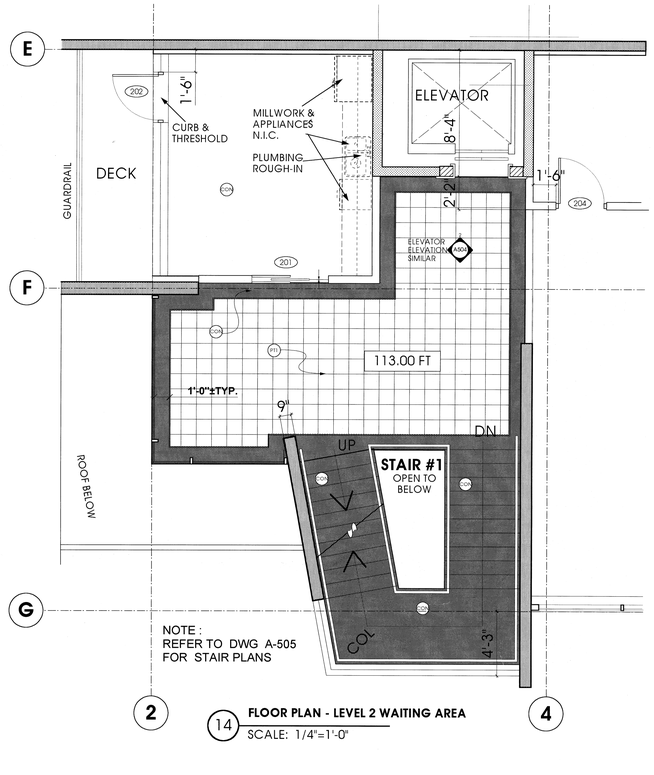
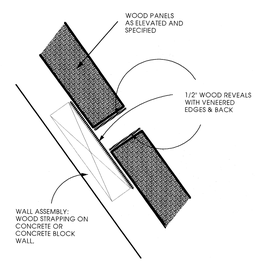


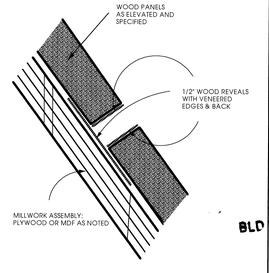
9 **SECTION - RECEPTION**
SCALE: 1"=1'-0"



14 **FLOOR PLAN - LEVEL 2 WAITING AREA**
SCALE: 1/4"=1'-0"



12 **TYPICAL WOOD PANELLING REVEALS**
SCALE: N.T.S.



13 **TYPICAL WOOD PANELLING REVEALS**
SCALE: N.T.S.

NO	DATE	REVISIONS
4	MAY 3, 2001	ISSUED FOR TENDER BY ADDENDUM 1
2	APR. 20, 2001	ISSUED FOR BLDG. PERMIT

SEAL

REGISTERED ARCHITECT MICHAEL RICHARD BUNTING BRITISH COLUMBIA

Maxem Holdings Inc.

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DETAIL PLAN & INTERIOR ELEVATIONS LEVEL 3

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RECEIVED
MAY 28 2001
City of North Vancouver
Development Services
Department

BLD01-02153

A504

SCALE	PROJECT
AS NOTED	0019
DRAWN	DATE
RMM	12 FEBRUARY 2001

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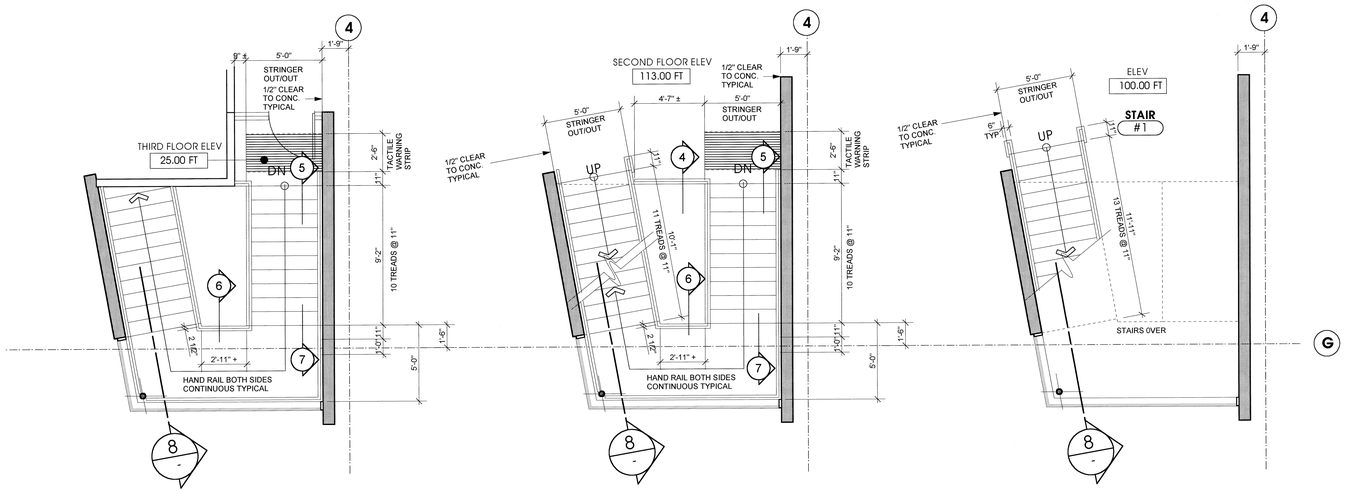
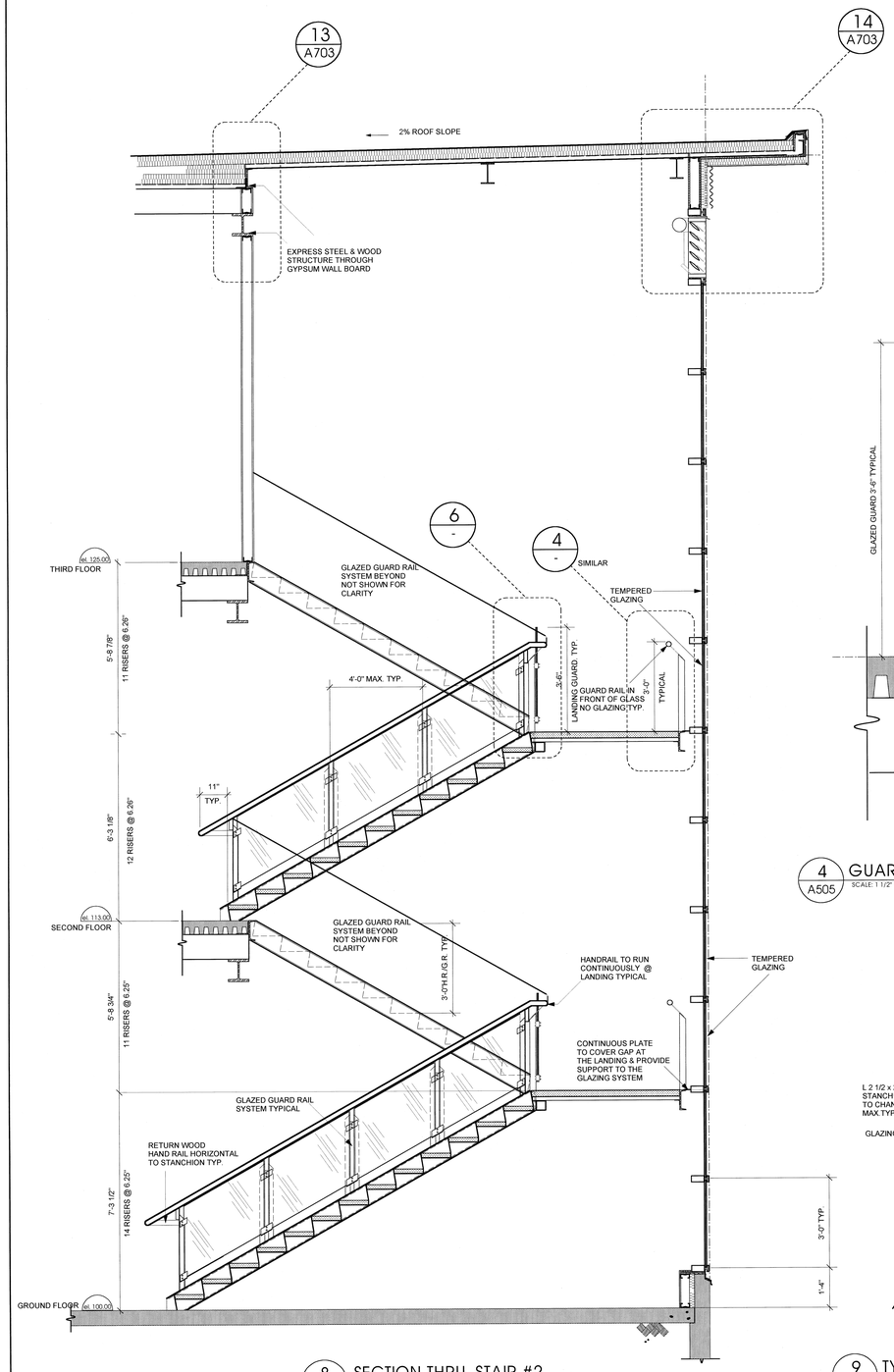


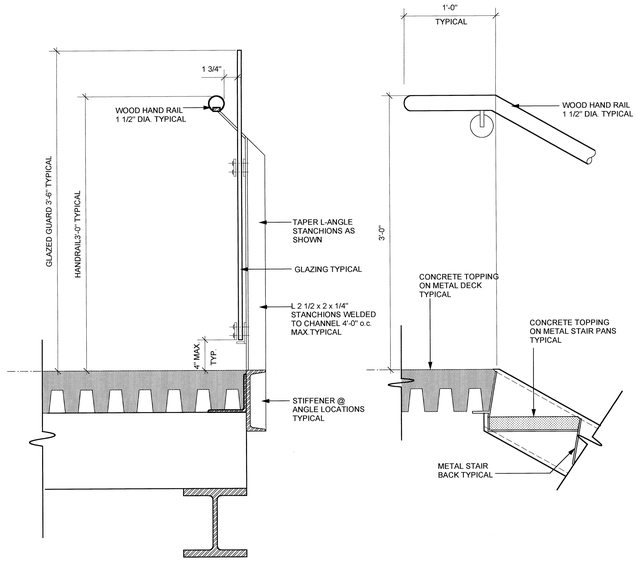
1 A505 STAIR #1 - THIRD FLOOR
SCALE: 1/4" = 1'-0"

2 A505 STAIR #1 - SECOND FLOOR
SCALE: 1/4" = 1'-0"

3 A505 STAIR #1 - GROUND FLOOR
SCALE: 1/4" = 1'-0"

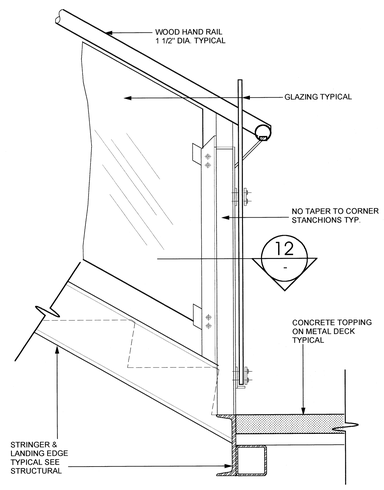


8 A505 SECTION THRU STAIR #2
SCALE: 1/2" = 1'-0"

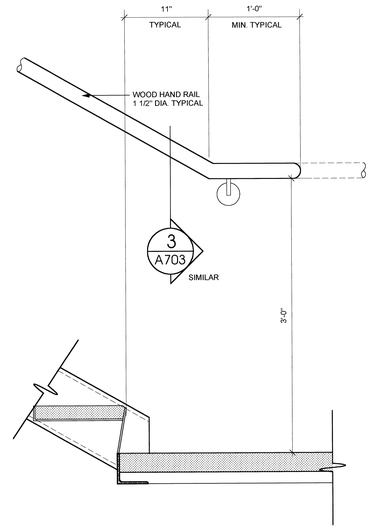


4 A505 GUARDRAIL @ LANDING
SCALE: 1 1/2" = 1'-0"

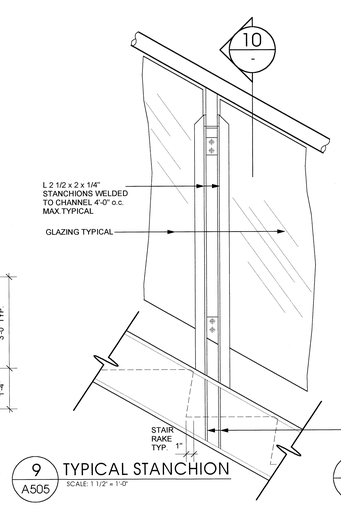
5 A505 TOP TREAD DETAIL
SCALE: 1 1/2" = 1'-0"



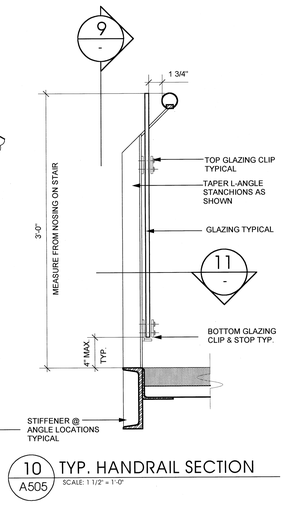
6 A505 GUARDRAIL - STAIR LANDING
SCALE: 1 1/2" = 1'-0"



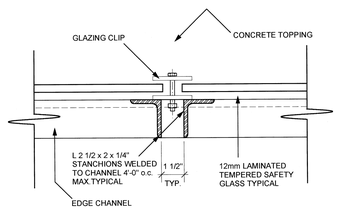
7 A505 GUARDRAIL - STAIR LANDING
SCALE: 1 1/2" = 1'-0"



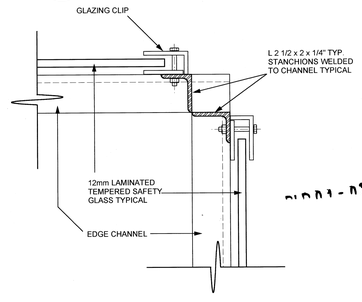
9 A505 TYPICAL STANCHION
SCALE: 1 1/2" = 1'-0"



10 A505 TYP. HANDRAIL SECTION
SCALE: 1 1/2" = 1'-0"



11 A505 TYP. HANDRAIL SECTION
SCALE: 3" = 1'-0"



12 A505 TYP. STANCHION PLAN DETAIL
SCALE: 3" = 1'-0"

NO	DATE	REVISIONS
3	APR.25,2001	ISSUED FOR TENDER
2	APR. 20,2001	RE-ISSUED FOR BLDG. PERMIT
1	FEB.19,2001	ISSUED FOR BLDG. PERMIT

SEAL

REGISTERED ARCHITECT THOMAS RICHARD BUNTING PROVINCE OF BRITISH COLUMBIA

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Drive North Vancouver

STAIR-1 SECTION DETAILS

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Canada, V6B 1A7
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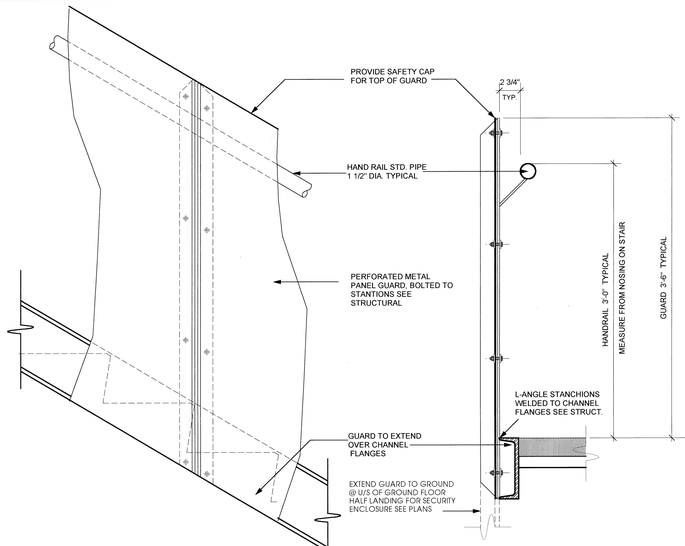
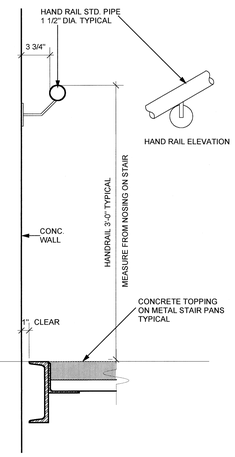
RECEIVED
MAY 28 2001
City of North Vancouver
Development Services Department

A505

SCALE	PROJECT
AS NOTED	0019
DRAWN: IE	DATE: DECEMBER



1 A506 TYPICAL HANDRAIL
SCALE: 1 1/2" = 1'-0"



3 A506 TYPICAL HANDRAIL SECTION
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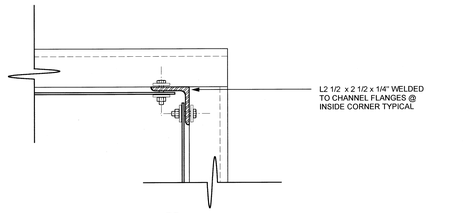
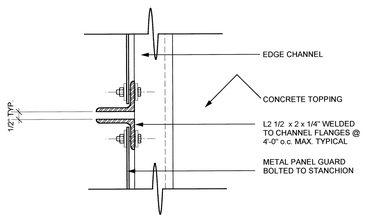
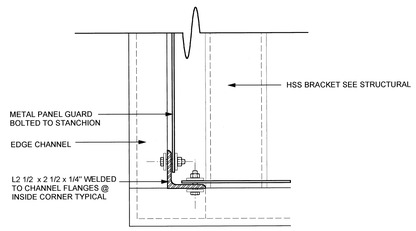


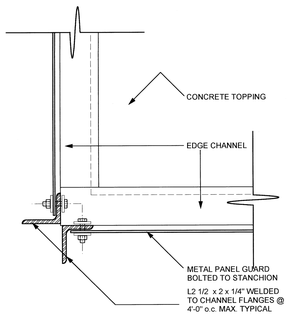
4 A506 INSIDE CORNER STANCHION PLAN
SCALE: 3" = 1'-0"



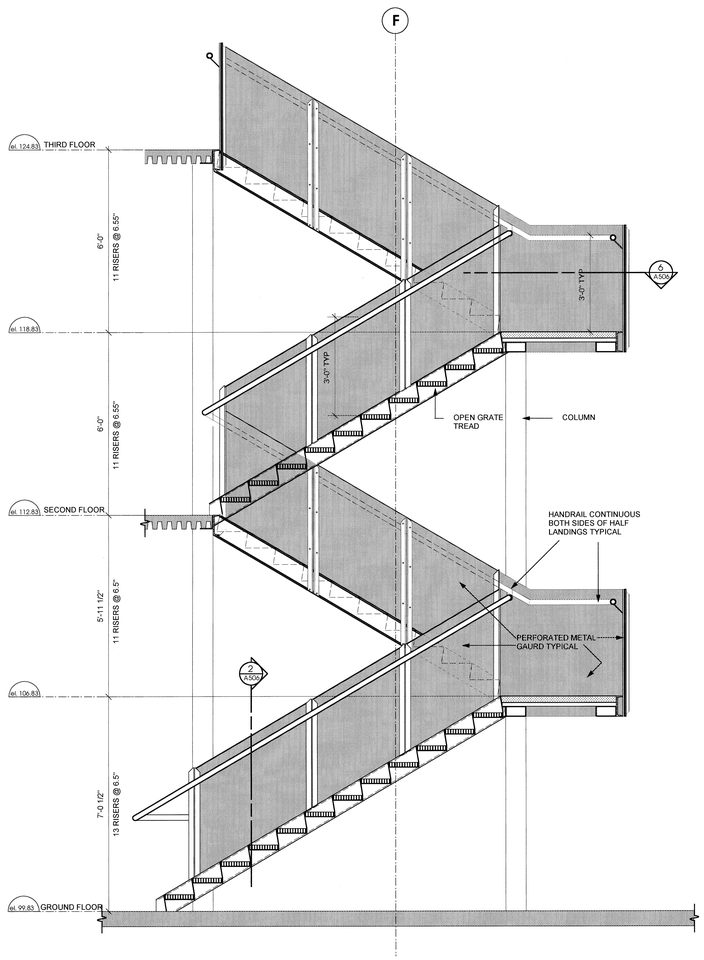
6 A506 TYP STANCHION PLAN
SCALE: 3" = 1'-0"



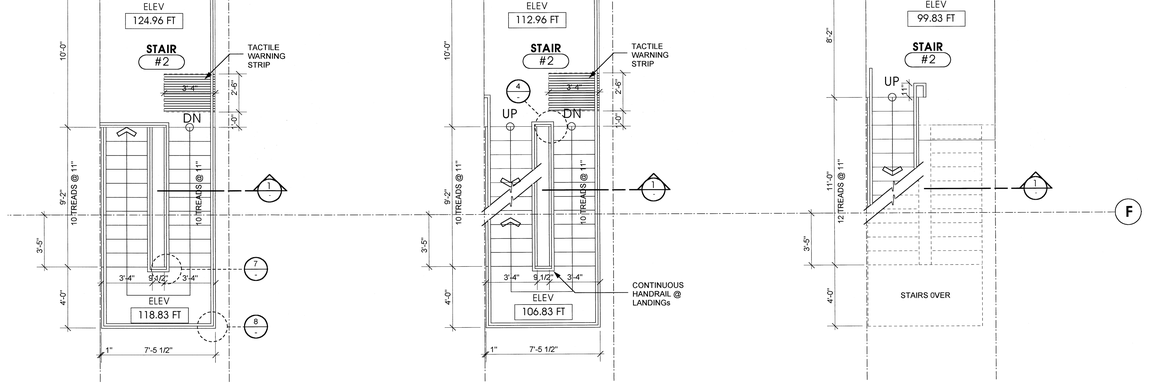
7 A506 HALF LANDING -STANCHION PLAN
SCALE: 3" = 1'-0"



8 A506 OUTSIDE CORNER STANCHION
SCALE: 3" = 1'-0"



9 A506 SECTION THRU STAIR #1
SCALE: 1/4" = 1'-0"



10 A506 STAIR #2 - THIRD FLOOR
SCALE: 1/4" = 1'-0"

11 A506 STAIR #2 - SECOND FLOOR
SCALE: 1/4" = 1'-0"

12 A506 STAIR #2 - GROUND FLOOR
SCALE: 1/4" = 1'-0"

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DO NOT SCALE THE DRAWINGS.

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NO	DATE	REVISIONS
3	APR.25,2001	ISSUED FOR TENDER
2	APR.20,2001	RE-ISSUED FOR BLDG. PERMIT
1	FEB.19,2001	ISSUED FOR BLDG. PERMIT

SEAL

Maxem Holdings Inc.

Office / Warehouse

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STAIR NO. 2 PLANS AND SECTIONS

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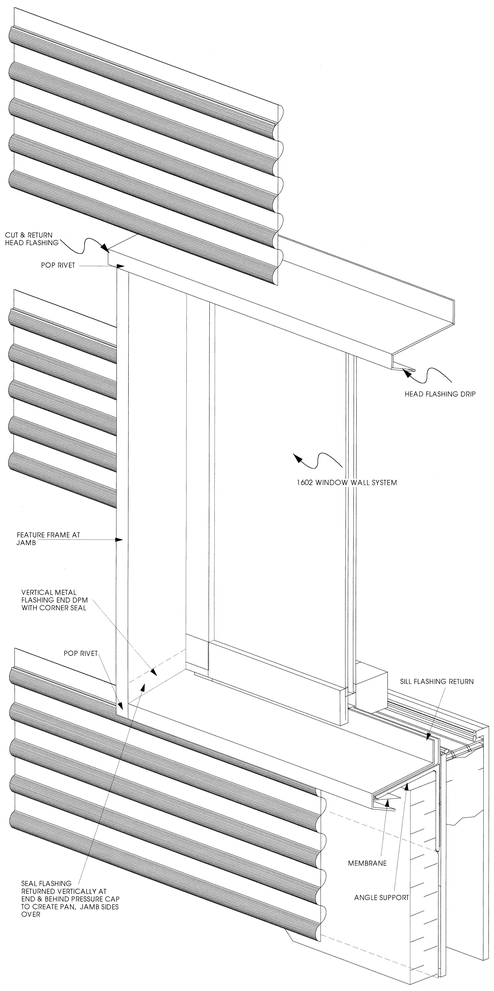
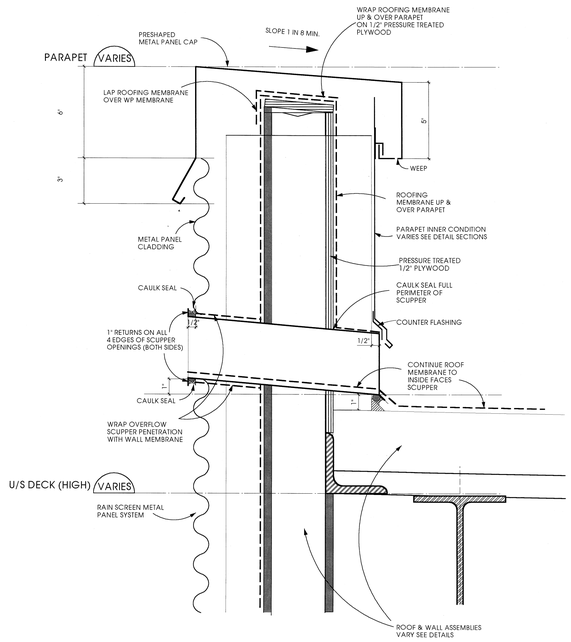
BLD01-02193

A506

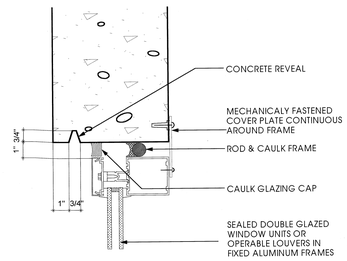
SCALE	PROJECT
AS NOTED	0019
DRAWN: IE	DATE: DECEMBER



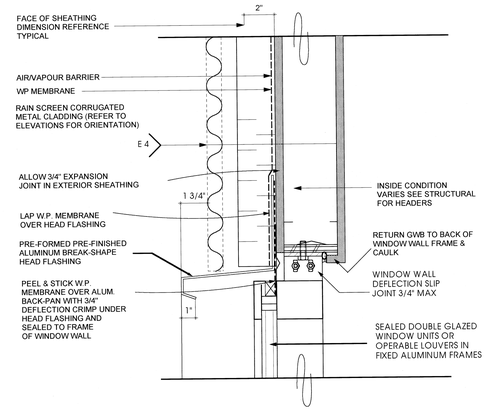
1 A701 WINDOW DETAIL
SCALE: 3" = 1'-0"



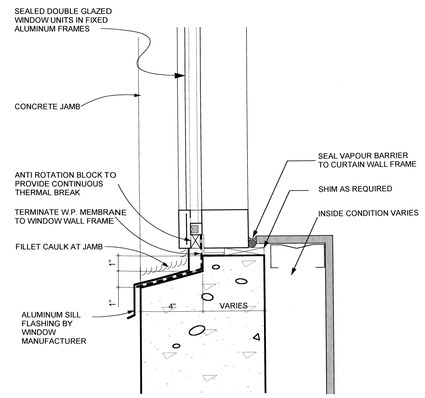
3 A701 SCUPPER / PARAPET DIAGRAM
SCALE: 3" = 1'-0"



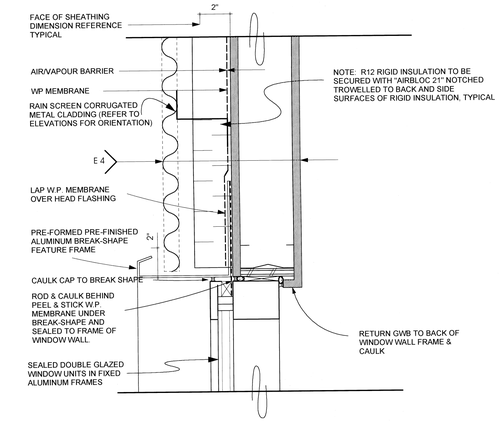
6 A701 CONCRETE HEAD
SCALE: 3" = 1'-0"



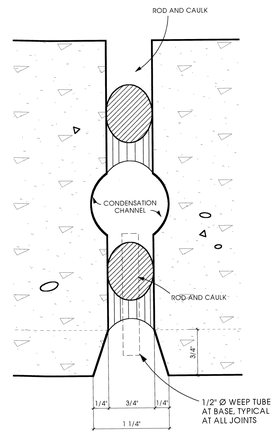
10 A701 WINDOW HEAD DETAIL
SCALE: 3" = 1'-0"



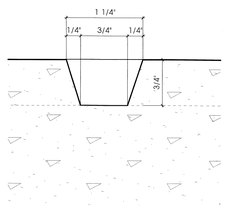
7 A701 CONCRETE SILL
SCALE: 3" = 1'-0"



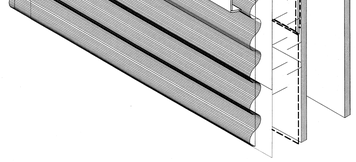
11 A701 WINDOW JAMB DETAIL
SCALE: 3" = 1'-0"



8 A701 TYP. EXPANSION JOINT
FULL SCALE

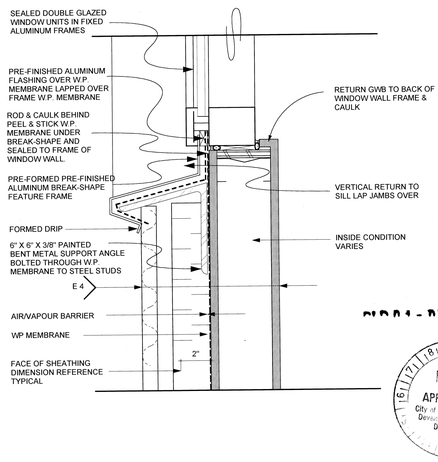


5 A701 TYP. REVEAL DETAIL
FULL SCALE



4 A701 WINDOW SILL ISOMETRIC
N.T.S.

2 A701 NOT USED
SCALE: 1 1/2" = 1'-0"



12 A701 WINDOW SILL DETAIL
SCALE: 3" = 1'-0"

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NO	DATE	REVISIONS
1	APR. 20,2001	RE-ISSUED FOR BLDG. PERMIT
1	FEB.19,2001	ISSUED FOR BLDG. PERMIT

SEAL

REGISTERED ARCHITECT THOMAS RICHARD BUNTING BRITISH COLUMBIA

Maxem Holdings Inc.

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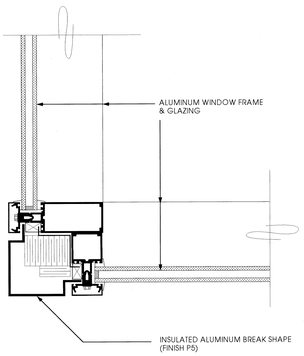
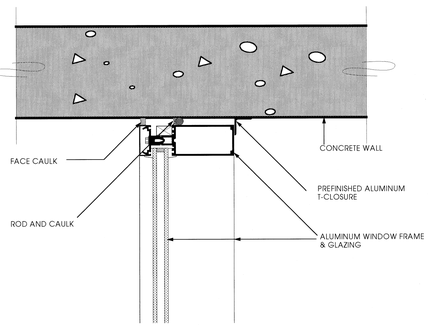
RECEIVED
APR 23 2001
City of North Vancouver
Division of Surveying
Department

A701

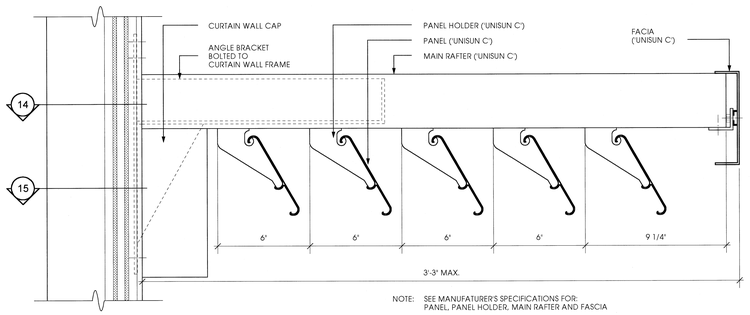
SCALE	PROJECT
AS NOTED	0019
DRAWN	DATE
IE RMM	DECEMBER



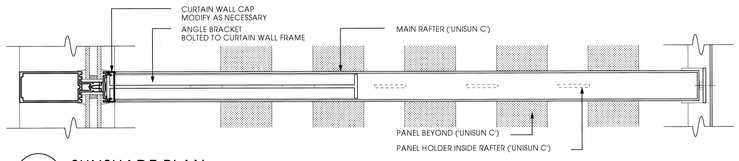
1 A702 CORNER MULLION PLAN
SCALE: 3" = 1'-0"



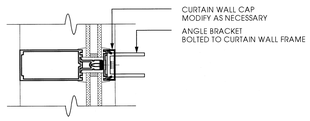
2 A702 MULLION TO CONC. TYP.
SCALE: 3" = 1'-0"



13 A702 SUNSHADE ELEVATION
SCALE: 3" = 1'-0"



14 A702 SUNSHADE PLAN
SCALE: 3" = 1'-0"



15 A702 SUNSHADE BRACKET PLAN
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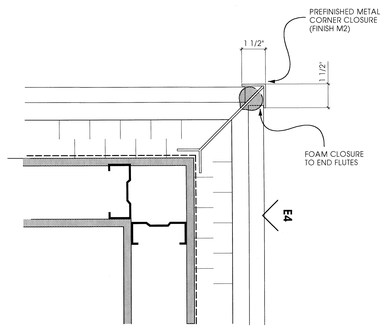
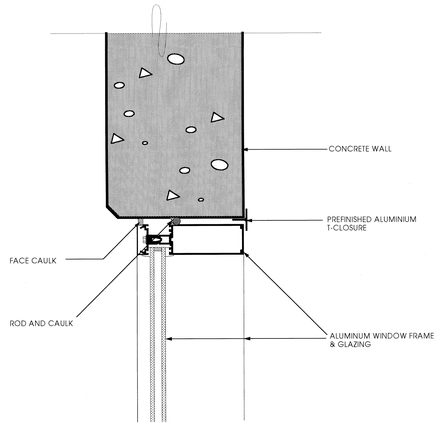
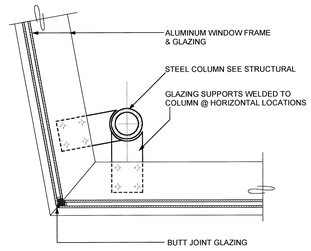


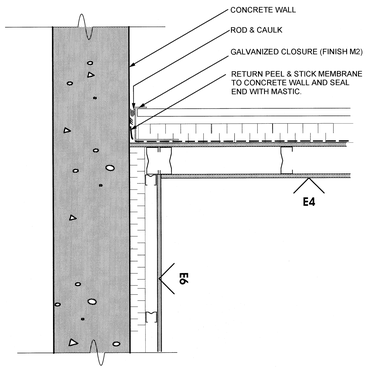
12 A702 CLADDING CORNER PLAN
SCALE: 3" = 1'-0"



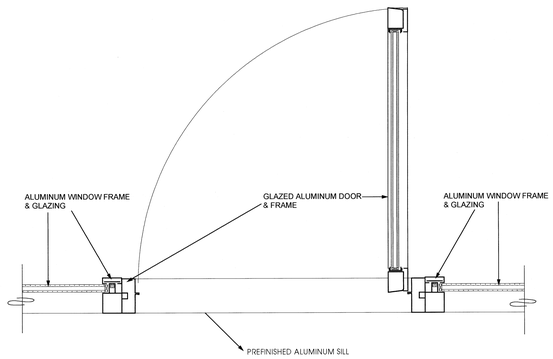
4 A702 MULLION TO CONC. @ STAIR
SCALE: 3" = 1'-0"



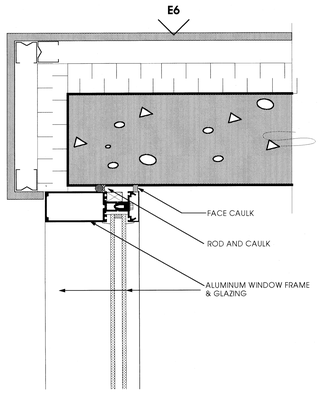
7 A702 GLAZING AT STAIR CORNER
SCALE: 1 1/2" = 1'-0"



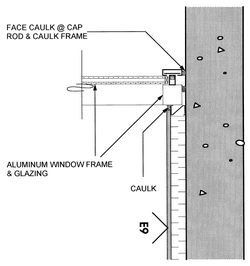
8 A702 CLADDING @ CONC. PLAN
SCALE: 1 1/2" = 1'-0"



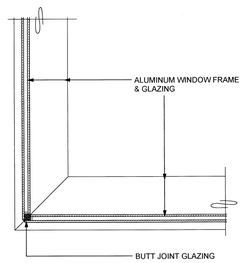
5 A702 DOOR @ BALCONY
SCALE: 1 1/2" = 1'-0"



6 A702 MULLION @ INSULATED WALL
SCALE: 3" = 1'-0"



9 A702 MULLION @ INSULATED CONC.
SCALE: 1 1/2" = 1'-0"



10 A702 GLASS BUTT JOINT @ LOBBY
SCALE: 1 1/2" = 1'-0"

NO.	DATE	REVISIONS
2	APR.20.2001	RE-ISSUED FOR BLDG. PERMIT
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SEAL

THOMAS RICHARD BUNTING · REGISTERED ARCHITECT · BRITISH COLUMBIA

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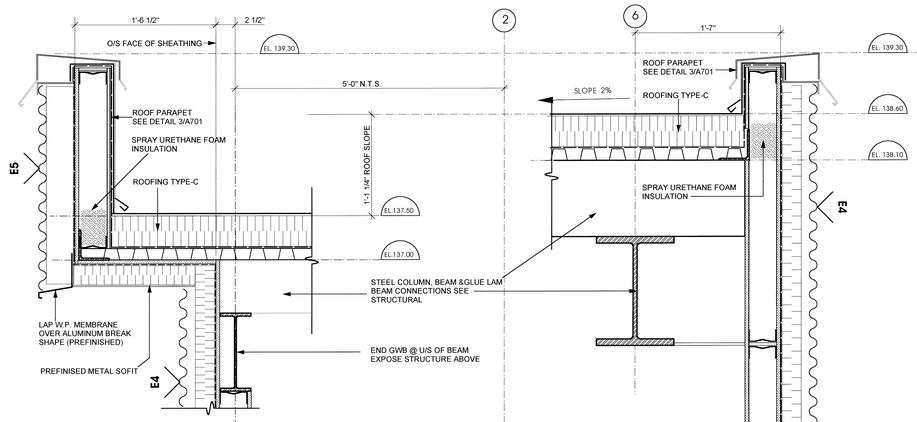
BLD 01 - 02153

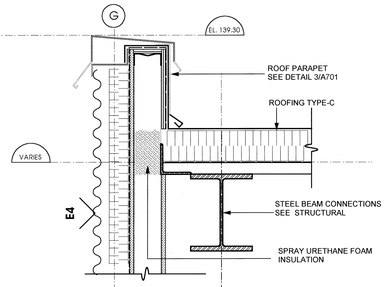
A702

SCALE	PROJECT
AS NOTED	0019
DRAWN	DATE
IE RMM	DECEMBER

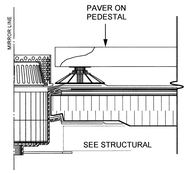


1 A703 ROOF DETAIL
SCALE: 1'-0" = 1 1/2"

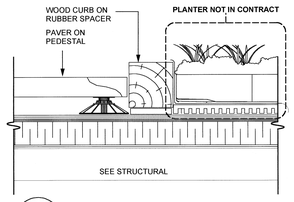
2 A703 ROOF PARAPET HIGH
SCALE: 1 1/2" = 1'-0"



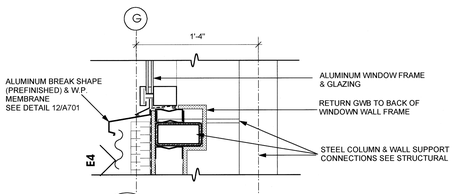
3 A703 PARAPET ABOVE 3RD FLOOR
SCALE: 1'-0" = 1 1/2"



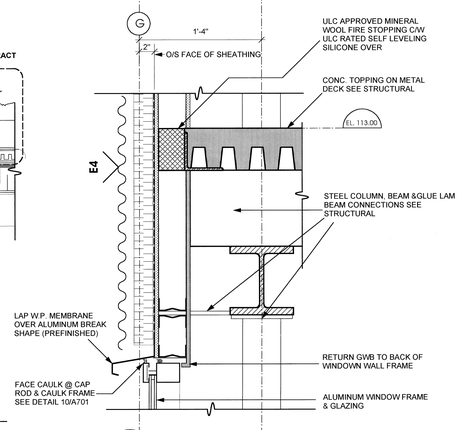
5A A703 ROOF DRAIN
N.T.S.



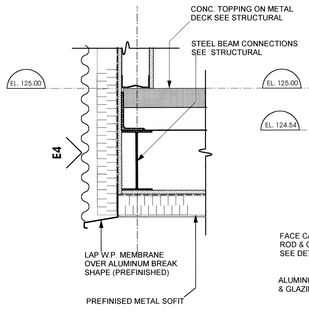
5B A703 ROOF PAVERS
N.T.S.



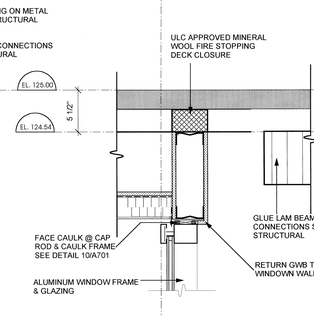
4 A703 OFFICE SILL BRACED
SCALE: 1 1/2" = 1'-0"



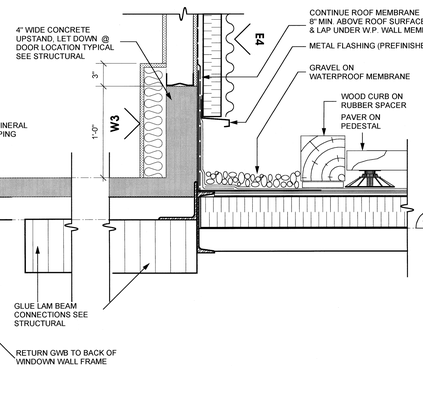
10 A703 OFFICE FLOOR CONNECTION
SCALE: 1 1/2" = 1'-0"



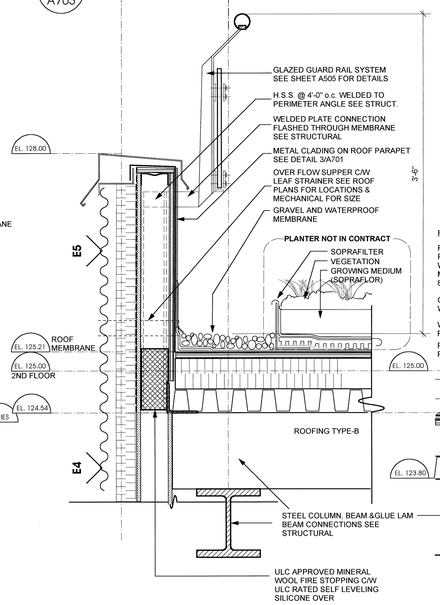
6 A703 BALCONY SOFFIT
SCALE: 1 1/2" = 1'-0"



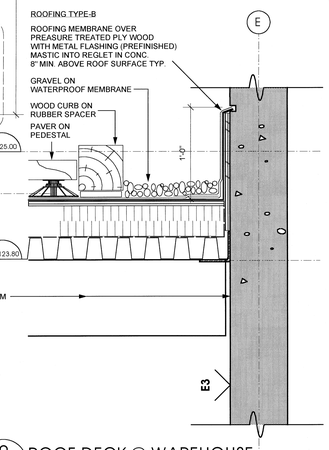
7 A703 BALCONY WINDOW HEAD
SCALE: 1 1/2" = 1'-0"



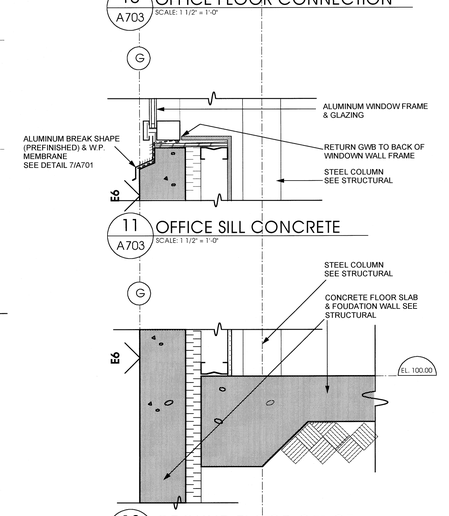
18 A703 ROOF DECK CONNECTION
SCALE: 1 1/2" = 1'-0"



8 A703 ROOF DECK PARAPET
SCALE: 1 1/2" = 1'-0"

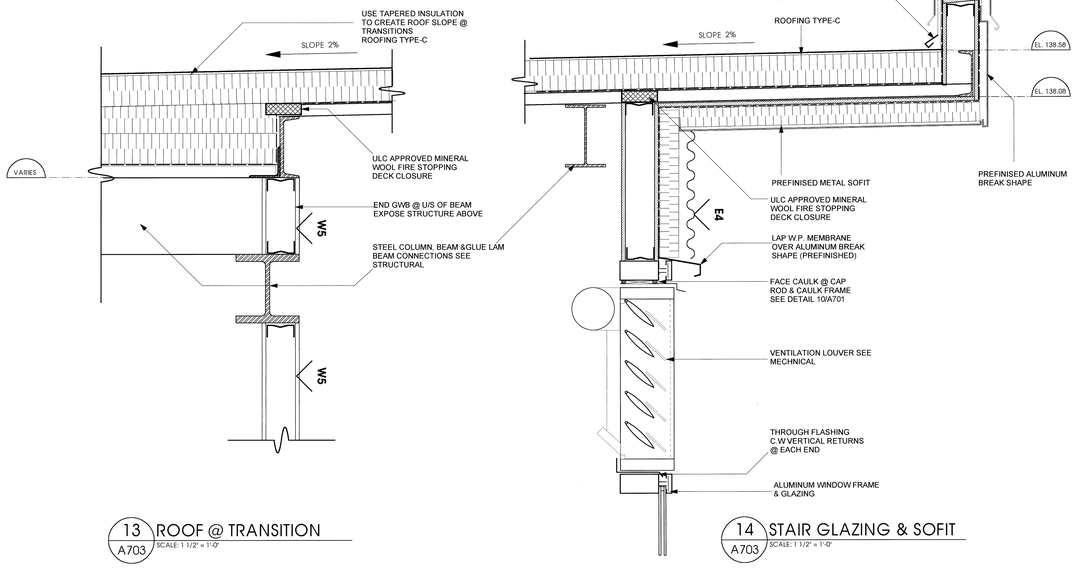


9 A703 ROOF DECK @ WAREHOUSE
SCALE: 1 1/2" = 1'-0"



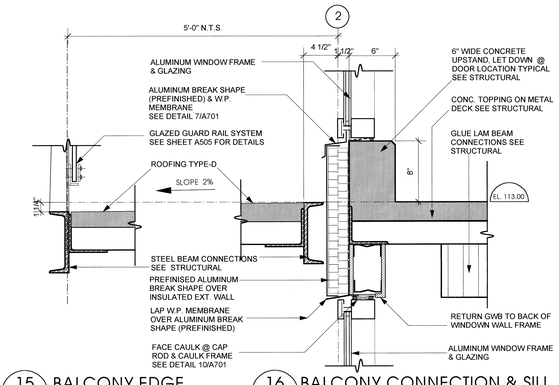
11 A703 OFFICE SILL CONCRETE
SCALE: 1 1/2" = 1'-0"

12 A703 GROUND FLOOR OFFICE
SCALE: 1 1/2" = 1'-0"



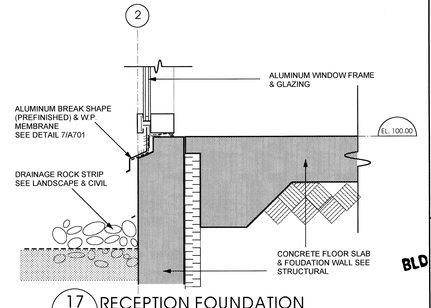
13 A703 ROOF @ TRANSITION
SCALE: 1 1/2" = 1'-0"

14 A703 STAIR GLAZING & SOFIT
SCALE: 1 1/2" = 1'-0"



15 A703 BALCONY EDGE
SCALE: 1 1/2" = 1'-0"

16 A703 BALCONY CONNECTION & SILL
SCALE: 1 1/2" = 1'-0"



17 A703 RECEPTION FOUNDATION
SCALE: 1 1/2" = 1'-0"

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NO	DATE	REVISIONS
3	APR.25.2001	ISSUED FOR TENDER
1	FEB.19.2001	ISSUED FOR BLDG. PERMIT

SEAL

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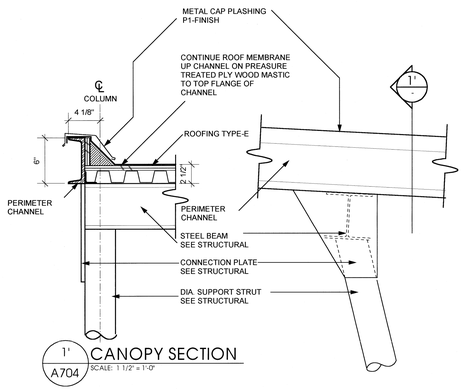
BLD01-02153

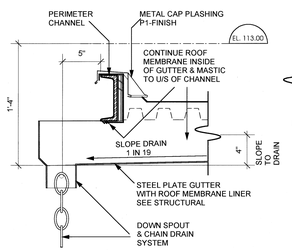
A703

SCALE	PROJECT
AS NOTED	0019
DRAWN	DATE
IE	FEB. 2001



1' A704 CANOPY SECTION
SCALE: 1 1/2" = 1'-0"

1 A704 CANOPY SUPPORT
SCALE: 1 1/2" = 1'-0"



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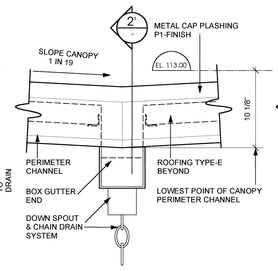
SCALE: 1 1/2" = 1'-0"



2 A704 DRAIN ELEVATION
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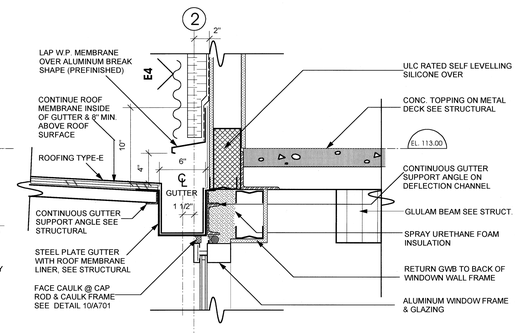
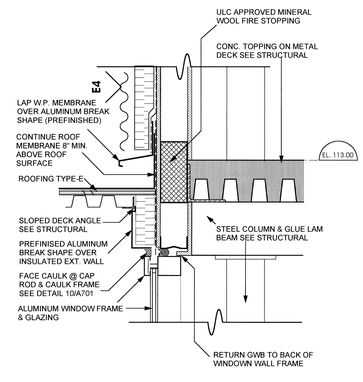


3 A704 CANOPY @ ENTRY DOOR
SCALE: 1 1/2" = 1'-0"



4 A704 CANOPY @ BUILDING WALL
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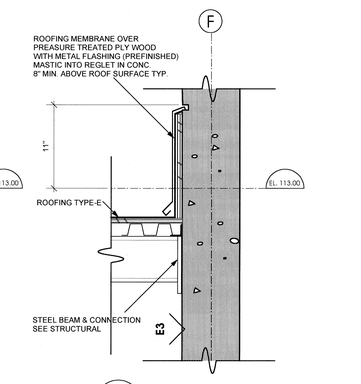

5 A704 CANOPY @ CONC. WALL
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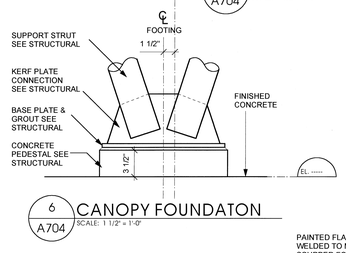

6 A704 CANOPY FOUNDATON
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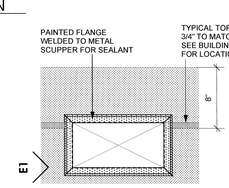
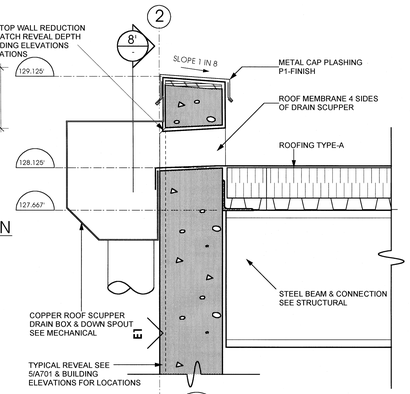
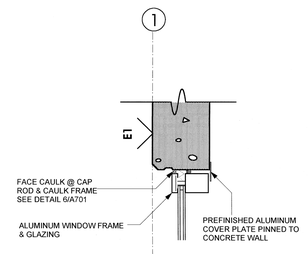


8' A704 SCUPPER ELEVATION
SCALE: 1 1/2" = 1'-0"



8 A704 WAREHOUSE PARAPET
SCALE: 1 1/2" = 1'-0"



9 A704 CONCRETE HEAD
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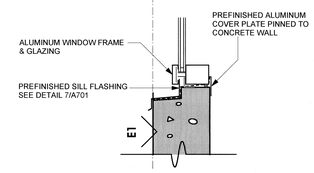

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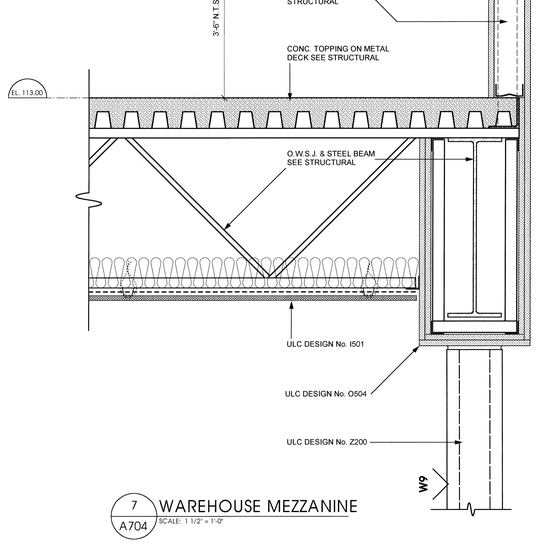

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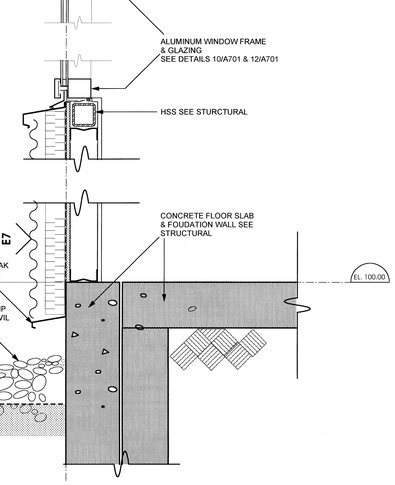

7 A704 WAREHOUSE INFILL
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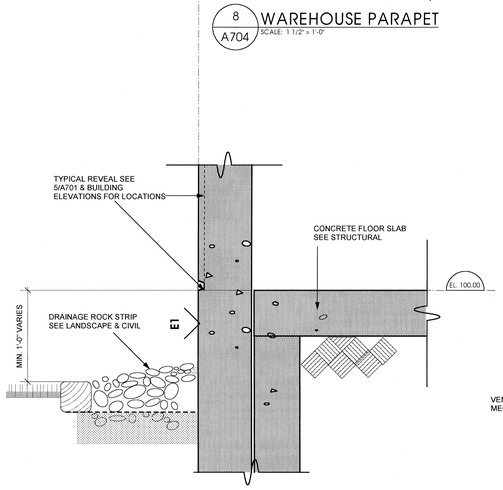

11 A704 WAREHOUSE FLOOR
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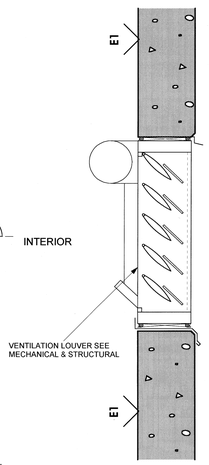

12 A704 MECHANICAL LOUVER
SCALE: 1 1/2" = 1'-0"

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NO	DATE	REVISIONS
2	APR. 20,2001	RE-ISSUED FOR BLDG. PERMIT
1	FEB.19,2001	ISSUED FOR BLDG. PERMIT

SEAL

REGISTERED ARCHITECT THOMAS RICHARD BUNTING BRITISH COLUMBIA

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A704

SCALE	PROJECT
AS NOTED	0019
DRAWN: IE	DATE: FEB. 2001

A. GENERAL

1. Structural drawings are to be read in conjunction with other related drawings including existing drawings, for dimensions, elevations and presence of openings, inserts, and mechanical/electrical elements.
2. Prior to commencement of work, contractor shall compare all related drawings; confirm all dimensions and field measure/confirm all existing conditions. Report any discrepancies to the Architect and Engineer of Record ("Engineer" henceforth).
3. If discrepancies relating to structural work are found in the various documents, the more stringent provisions shall apply, unless approved by the Engineer. Specifications shall control over these drawings and General Notes only where the specifications provide for more stringent requirements. Contractor, suppliers and subtrades are to ensure that they are working with the 'Issued for Construction' drawings.
4. Bracing of the structure and all components during construction, including any underpinning, shall remain the sole responsibility of the Contractor.
5. These drawings show requirements for completed structure only. The design and inspection of falsework, shoring and reshoring is the responsibility of the Contractor and shall conform to WCB standards.
6. All shop drawing reviews by the Engineer constitute review for general concepts only; the detailed design remains the responsibility of Contractor/Fabricator. All components shall be assembled and erected in accordance with final reviewed shop and erection drawings. No fabrication/erection shall proceed until review has been completed by the Engineer.
7. Design Loads:

a) Specified uniform loads (u.n.o. on plan)	Live Load	Superimposed Dead loads
Roof (snow load base on)	Ss=2.5 kPa (52 psf) Sr=0.3 kPa (6.3 psf)	0.65 kPa (13.5 psf)
Roof Patio	Per Snow Drift	1.9 kPa (40 psf) paver 0.75 kPa (15 psf) no paver
2nd Floor/3rd Floor	2.4 kPa (100 psf)	3.3 kPa (70 psf)
Main Floor (LL including partition	4.8 kPa (100 psf)	1.2 kPa (25 psf)
Warehouse	19 kPa (400 psf)	0.5 kPa (10 psf)
Stairs, and Lobby	4.8 kPa (100 psf)	2.4 kPa (50 psf)

Superimposed dead loads are non-structural dead loads including architectural topping, partitions, roofing material, pavers, ceiling finishes and mechanical/electrical conduits/fixtures.

b) Seismic and Wind

Seismic is based on Za = 4 Zv = 4
v = 0.2
I = 1.0
SxF = 3.0
R = 2.0

Wind is based on q 1/30 = 0.44 kPa (9.2 psf)
q 1/10 = 0.36 kPa (7.5 psf)

8. These drawings show structural work required to meet provisions of Part 4 of the BCBC 1998.

Seismic design of Secondary component items including their attachment to the structure is the responsibility of others.

9. All codes and documents referred to in these General Notes are to be the latest edition.

B. FIELD REVIEW AND TESTING

1. The Contractor is solely responsible to give the Engineer reasonable advance notice of when structural work is ready for reviews by the Engineer. (Min. 24 hours prior to pour or concealment) Contractor is responsible for reviewing his own work and the work of his subtrades prior to review by the Engineer.
2. All structural work requires written review by the Engineer, including:
   a) Concrete Reinforcement (including concrete tilt-up panels)
   b) Masonry Reinforcement (including non-load bearing partitions)
   c) Structural Steel (including decking)
3. Material testing shall be directed by the Engineer at the expense of the Owner.
4. Concrete testing shall be in accordance with CAN/CSA A23.2-94 and carried out by an independent testing agency approved by the Engineer. Unless permitted by the Engineer, a minimum of 3 test cylinders shall be cast for each 50 cu. meter/50 cu.yards or each day's pour, whichever is less. Test one at 7 days and two at 28 days and submit written reports for review by the Engineer.

   Test reports shall identify the locations where concrete is being tested with gridlines and elevations.
5. The Owner shall appoint an independent CSA certified testing agency to carry out representative testing of bolt torque and welding on structural steel work, including decking. This testing shall take place prior to concealment of all structural steel.
6. The Owner shall appoint an independent CSA certified testing agency to carry out required testing of protective membranes to concrete parkade surfaces where required in accordance with CSA S413 -94.
7. Submit concrete test results max. 24 hours after test.
8. Additional testing and field review resulting from rejection of more than 5% of work will be at the Contractor's expense.

C. FOUNDATIONS

1. Design of foundation is based on soils report of August 21,2000 by Geo Pacific Consultants Ltd. with an allowable bearing pressure of 2000psf on preloaded ground for strip & spread footings. All footings shall bear on soil capable of this pressure without failure or undue settlement. If native soil or fill are found during construction to have a lower allowable bearing pressure, notify the Engineer, and provide revised foundation to the Engineer's specifications.
2. Follow all recommendations given in soils report for preloading, backfill, drainage, sub-base preparation and other requirements.
3. Contractor is solely responsible to ensure that Geotechnical Engineer reviews and confirms allowable bearing pressure and approves subgrade installation prior to pouring concrete for footings foundations.
4. The Owner shall retain an approved testing agency to carry out density testing of subgrade and base material. Testing of subgrade material is to be carried out immediately prior to installation of slab on grade components and during lifts as specified by the Geotechnical Engineer. Care must be taken not to disturb subgrade after approval and prior to pouring concrete.
5. Contractor shall be responsible for all temporary drainage during excavation.
6. Do not backfill retaining walls until cured min. 14 days unless otherwise approved by the Engineer. Consult the Engineer prior to pour to confirm if floor/roof restraint required prior to backfilling.
7. All footings shall be centred on columns and walls unless noted otherwise.
8. Concrete placed under water shall conform to Section 19.6, CAN/CSA-A23.1-94.
9. Provide 50mm (2") thick concrete ground seal under footings/grade beam if required by site conditions.
10. For all elevations and drainage slopes, see Architectural Drawings and requirements identified in the geotechnical report.
11. Unless otherwise noted, design and supervision of excavation, shoring and underpinning of adjacent structures, where required, shall be carried out by a Professional Geotechnical Engineer retained by the Contractor. All costs are to be included in this contract.
12. Where footing elevations vary, follow requirements of typical details shown on drawing. Contractor shall establish footing elevations based on all requirements including maximum slopes, and Electrical, Mechanical and Architectural information.
13. Footing elevations, if shown, are for bidding purposes only, are not final, and may vary according to site conditions. All footings must be taken to a bearing layer approved by the Geotechnical Engineer.
14. Bearing surfaces must be protected from freezing before and after footings are poured.

D. CONCRETE NOTES

1. a) All concrete shall conform to the requirements of CAN/CSA. A23.1- 94. Cement shall be Type 10 Portland Cement unless otherwise noted. Normal weight concrete for various purposes shall be as follows:

ELEMENTS	MIN. 28 DAY STRENGTH MPa(psi)	MAX. SLUMP mm.(inch)	MAX. SIZE AGGREGATE mm.(inch)	EXPOSURE CLASSIFICATION	Fly Ash Content % Total
Foundations and Footings	25 (3600)	75 (3")	20 (3/4")	-	50
Walls (tilt-up)	35 (5000)	75 (3")	20 (3/4")	F2	30
Slabs on grade:					
Exterior/Warehouse	32 (4640)	75 (3")	20 (3/4")	C2	30
Office area	30 (4350)	75 (3")	20 (3/4")	-	50
Topping concrete	30 (4350)	100 (4")	10 (3/8")	-	50
Masonry Grout	20 (3000)	200 (8")	10 (3/8")	-	-

   b) Air contents to meet the requirements of the latest CSA 23.1 Concrete Exposure Classification.

   c) Slumps listed are before the addition of super plasticizers. Tolerance in specified slump shall be ± 20 mm (3/4").

   d) No calcium chloride is permitted in any form in the concrete mixes.

   e) Submit mix designs to the Engineer and testing agency for review and approval prior to placement. Mix design submittals shall identify the elements for which they are intended.

2. Perform all works in accordance with CSA CAN3-A23.1-94, including the following:
   a) Construction Tolerances
   b) Fabrication and placement of reinforcing
   c) Placement of concrete, including proper vibration and curing.
3. Take all precautions to ensure exposed concrete achieves finish desired by the Architect, including proper forming, mix design, site care and adequate vibration. Protect against damage during stripping and entire construction period.
4. See Architectural drawings for slab elevations, drainage, slopes and locations of reglets, reveals and chamfers.

   Unless noted otherwise, exposed corners of slabs, beams, slab bands, columns and walls shall be bevelled 20mm x 20mm (3/4" x 3/4").
5. Blockouts, nailers, conduits, ducts, pipes, sleeves and other openings are subject to approval by the Engineer.

   a) Openings and conduits are not permitted in wall zones, within 990 mm (39") of wall ends and intersections and columns.

   b) Where permitted, space openings 2 diameters, or minimum 150 mm (6") apart.

   c) Single openings larger than 300 mm (12") or a group of openings occupying together more than 300X300mm (1.0 sq. ft.) in any 1 sq. meter (10 sq. ft.) area shall not be permitted without the approval of engineer.
6. Expansion and/or construction sequence joints shall be installed in concrete structures greater than 45m (150 ft.) in length, details and locations shall be discussed with and approved by the Engineer in writing prior to construction.
7. Stripping of forms for structural elements is not allowed until concrete strength has reached 12 MPa for columns and walls and 17 MPa for slabs and beams. Strength of concrete shall be determined from field-cured cylinders.
8. All hot and cold weather concrete work shall be carried out in accordance with CAN/CSA A23.1-94
   a) When temperature is expected to fall between 3°C and -10°C within 3 days of pouring concrete, the Contractor shall carry out one or more of the following procedures:
      i) Make provisions to heat mix water or aggregate to maintain a minimum concrete temperature of 10°C.
      ii) Make provisions to heat the form work or soil surface. Concrete shall not be poured against any surface with a temperature less than 3°C. (Calcium chloride or other de-icing salts are not permitted.)
      iii) Cover concrete with insulation blanket for the first 36 hours after pouring concrete. Do no pour when temperature is expected to fall below -10°C within 3 days after pouring.
      iv) Make provisions for a heated enclosure to maintain the temperature of all concrete surfaces above 10°C for a minimum of 3 days after the pour.
      v) Provide alternate mix designs for cold weather.
   b) When the temperature is expected to rise above 25°C the Contractor shall:
      i) Make provisions to cool concrete to maintain a max. temperature of 30°C.
      ii) Make provisions to prevent concrete from drying.
9. Take measures to minimize shrinkage cracking including covering and dampening concrete in the curing stage.
10. Unless otherwise noted, provide 3.2mm wide x T/4 deep(1/8" x T/4) deep control joints in two directions in grade slabs centred on column lines, and maximum at 4500mm (15 ft.) o.c.
11. Unless otherwise noted, where expansion anchors are required, use Hilti KB II or approved equal; where chemical anchors are required, use Hilti HIT HY150 epoxy, or approved equal.

E. REINFORCING NOTES

1. Reinforcing shall be new billet steel conforming to the following standards:
   a) 10M and larger CSA G30.18-M92 400 Mpa
   b) Weldable reinforcement CSA G30.18-M92 (welding to CSA W186-M1990)
   c) Welded wire mesh CSA G30.5-M1983 (R1991)
   d) Epoxy coated reinforcement ASTM A775M-91

   Note: weldable reinforcement (including deformed bar anchors) must be clearly identified on each piece.
2. Reinforcement shall have concrete protection as follows, unless otherwise noted.:

	Fire Resistance Rating 0-2 hrs.	3 hrs.
a) All surfaces placed in contact with ground	75mm (3")	75mm (3")
b) Formed surfaces exposed to ground or weather	50mm (2")	50mm (2")
c) Walls	32mm (1 1/4")	32mm (1 1/4")
d) Column ties - interior	40mm (1 1/2")	50mm (2")
e) Column ties - exterior	50mm (2")	50mm (2")
f) Slabs	25mm (1")	40mm (1 1/2")
g) Slab bands and Beams	40mm (1 1/2")	50mm (2")
h) Parking slab - top	40mm (1 1/2")	40mm (1 1/2")
- bottom	25mm (1")	40mm (1 1/2")
i) Slab on grade (from top of slab)	40mm (1 1/2")	-----
j) Other, unless otherwise noted	40mm (1 1/2")	40mm (1 1/2")

3. All reinforcing bars shall be accurately placed, chaired and tied securely to prevent displacement and to maintain the specified cover. Install column reinforcement accurately with templates. Provide hooked dowels from bottom of footing to match and lap with verticals. Install masonry dowels accurately to align with centre of walls. Chairs shall be protected against rusting where required for appearance. Do not wet dowel reinforcement unless approved by the Engineer.
4. Provide epoxy coated rebars where noted on plan in accordance with CAN/CSA S413-94. Chair bars with plastic chairs and tie with plastic coated wire.
5. Minimum reinforcement shall be as follows unless otherwise noted:
   a) Wall reinforcement:
      150mm (6") wall - 10M @ 300 (12") VERT., 10M @ 300 (12") HOR.
      200mm (8") wall - 15M @ 450 (18") VERT., 15M @ 450 (18") HOR.
      250mm (10") wall - 15M @ 400 (16") VERT., 15M @ 400 (16") HOR.
      300mm (12") wall - 10M @ 450 (18") VERT., EACH FACE STAG.
      10M @ 300 (12") HOR., EACH FACE STAG.

   b) Slab reinforcing (or temperature reinforcing)
      100mm (4") 10M @ 500 (20") o.c. TWO WAYS
      125mm (5") 10M @ 400 (16") o.c. TWO WAYS
      150mm (6") or less 10M @ 300 (12") o.c. TWO WAYS
      175mm (7") 15M @ 500 (20") o.c. TWO WAYS
      190mm to 215mm (7 1/2" to 8 1/2") 15M @ 450 (18") o.c. TWO WAYS
      225mm to 250mm (9" to 10") 15M @ 400 (16") o.c. TWO WAYS
      275mm to 300mm (11" to 12") 15M @ 350 (14") o.c. TWO WAYS

   c) Footing reinforcement:
      2-15M continuous plus dowels of same size and spacing as wall vertical reinforcing.

   d) Other locations: 15M @ 400 (16")
6. All bars shall be continuous, properly lapped at splices. At corners and intersections; horizontal reinforcement shall be bent and lapped.
7. a) Unless otherwise noted, lap lengths, including dowels, for 400 MPa (58 Ksi) reinforcement shall be as follows:

10M - 400mm (16")	Epoxy coated bars:	10M - 500mm (20")
15M - 600mm (24")		15M - 750mm (30")
20M - 750mm (30")		20M - 980mm (39")
25M - 1170mm (46")		25M - 1530mm (60")
30M - 1400mm (55")		30M - 1840mm (72")

   b) Lap splices not shown on drawings shall not be allowed unless approved in writing by the Engineer.
8. Unless otherwise noted, openings in walls shall have 2-15M extra each side extending 600mm (2'-0") past corners, plus 1-15M x 1200mm (4'-0") diagonal each corner.
9. Welding of reinforcing to embedded plates is permitted only with weldable deformed bar anchors with the following fillet weld sizes:
   10 (3/8")@---6mm (1/4")
   16 (5/8")@---10mm (3/8")
   20 (3/4")@---12mm (1/2")
10. Provide contingency reinforcing additional to all other requirements, with "add" and "delete" unit prices included in bid. Include reinforcing required for non-structural concrete and masonry shown on the various drawings.

F. TILT-UP PANELS

1. Refer to concrete and reinforcing notes for concrete work in tilt-up panels.
2. Provide min. 2-15M bars at each side of openings, extend 600mm (2'-0") past edge. Provide 1-15M corner bar x 1200mm (4'-0") at all openings larger than 600mm (2'-0"). Chair all reinforcing with plastic tipped chairs. Do not use curry bars.
3. Tie lifting and bracing inserts securely to reinforcing steel.
4. Provide shop drawings 1:50 (1/4"=1'-0") for each panel type. Show all construction details including:
   a) Concrete outline and opening locations.
   b) Location and details of embedded items.
   c) Reinforcing details.
   d) Lifting and bracing requirements (including seal by a P.Eng. registered in B.C.)
5. Panel lift design shall conform to the following:
   a) Use computer based methods to locate lifting inserts for min. flexural stresses. Conform to WCB IH&S 3.4.3.4.
   b) Required concrete strength at time of lift:
      Flexural 2.9 Mpa (420PSI)
      Compressive 17 MPa (2500 PSI)
   c) Minimum safety factor on lift inserts 2.5:1.
   d) Provide reinforcing steel to carry loads when working flexural stresses exceed 1.7MPa (250 PSI).
   e) Indicate on drawings where flexural stress exceeds 2.9MPa (420 PSI).
6. Provide temporary bracing for panels until permanently attached to building as detailed. Design bracing for 0.7 kPa (14psf) wind load on gross panel area with a min. safety factor of 1.67.
7. Unless noted otherwise, chamfer all exposed (outside) corners, all joints shall be 20mm (3/4") wide.
8. Panels shall be viewed from interior of building as numbered on plans.
9. All embeds shall be secured to formwork with a minimum 2-4.8mm (3/16") nails.
10. Grout fill all recesses and pockets in panels, and gaps between floor slab and panels with a flowable consistency non-shrink grout with a minimum 7 day strength of 35 MPa (5000 psi). Follow the manufacturer's specification and instructions for mixing and placement of grout.
11. Steel trowel finish all inside surfaces of panels, unless noted otherwise.

G. STRUCTURAL STEEL/METALS

1. All structural steel work shall conform to CAN/CSA S16.1-M94.
2. All structural steel material shall conform to CSA G40.20/G40.21 -1992 with the following grades:
   a) Rolled shapes and plates -300W
   b) HSS shapes -350W
   c) Bolts -ASTM A325
   d) Anchor bolts and miscellaneous hardware -ASTM A307
3. All welding shall conform to CSA W59-1989 and to be performed by welders under CSA W47.1-92, fabricators to CWB approval. Welds shall be E-70xx. Nelson stud welding shall meet specifications of the manufacturer.
4. Unless otherwise noted, apply one shop coat of primer to all steel work, to CISC/CPMA 1-73A. Primer for exterior exposure shall be zinc-chromate Type 1, conforming to CGSB1-GP-40d.
5. Where required, all hot dip galvanizing shall conform to CSA G164.M92
6. Unless otherwise noted, design structural steel connections for minimum half the shear or compression capacity of the members connected (Design by the Fabricator's Engineer). Bolted connections shall consist of minimum 2-19mmø (3/4"ø) A325 bolts with 9mm (3/8") connector plate.
7. Submit shop drawings (4 sets) for the above to the Engineer for review prior to fabrication. Shop drawings shall show all details, and indicate all applicable design loads and material specifications and shall be sealed by the Fabricator's B.C. Registered Engineer.
8. All fabrication and welding exposed to view to be appearance quality to the Architect's satisfaction.

H. OPEN WEB STEEL JOISTS

1. Open web steel joists, bridging, and connections shall be designed, manufactured, and supplied according to CAN/CSA S16.1-M94 (S136 for cold rolled) for dimensions and loads shown on the drawings.
2. Design for deflections and provide camber to CSA S16 unless otherwise noted.
3. Where bottom chord extensions are required, design for minimum 13.0 kN (3000 lbs) factored axial tension or compression.
4. Paint OWSJ and bridging with one coat of primer to CISC/CPMA 1-73A.
5. Unless otherwise noted, bridging locations shall be coordinated with all other Architectural and Mechanical requirements.
6. Submit shop drawings (4 sets) for the above to the Engineer for review prior to fabrication. Shop drawings shall show all connections and details, and indicate all applicable design loads and material specifications and shall be sealed by a Professional Engineer registered in the Province of B.C. The same P.Eng. shall submit sealed letter stating that fabrication of the open web steel joists have met all structural requirements.
7. Following fabrication and erection, the sub-contractor shall retain a P.Eng. registered in B.C. to review installation of the open web steel joist structure and submit a sealed letter stating that installation of same meets all structural requirements.

J. STEEL DECKING

1. Steel roof decking and floor decking shall be as per plan. Roof decking shall conform to CSSBI 10M-86; composite floor decking shall conform to CSSBI 12M-84. Interior decking shall have a minimum zinc coating of Z275 to CSSBI 10M-84. Exterior decking shall have a minimum zinc coating of Z275 to the same standard. The following decking profiles are acceptable :
   Roof :- Mercury RD BC/D-Rib, and RD900 or Vicwest RD308 and RD38.
   Floor :- Mercury QL BC/D-Rib, and QL900 or Vicwest HB308 and HB38.
2. Unless otherwise noted, as a minimum, weld deck to supports and perimeter elements with 20mm (3/4") puddle welds @300mm (12"), button punch laps @ 300mm (12") o.c. maximum. Place sheets in minimum 3 span lengths.
3. Paint welds and repair damaged coating with Galvacon coating.
4. a) Unless otherwise noted, reinforce all roof deck openings greater than 150mm (6") square and less than 400mm (18") square with L38x38x5 (L1 1/2"x1 1/2"x3/16") extended and puddle welded to minimum two flutes on each side of opening. Frame larger openings with L75x75x6 (L3"x3"x1/4") extending to main structural members or as shown on the drawings.

   b) Unless otherwise noted, provide L100x100x6 (L4"x4"x1/4") frame under all roof top mechanical units. Contractor shall be responsible to coordinate the number and locations of mechanical units with the mechanical consultant.
5. Unless otherwise noted, reinforce all floor deck openings greater than 150mm (6") square and less than 400mm (18") square with 3-10M, 4-sides of opening, extend bars 200mm (8") min. past edge of opening, plus 1-10M x 600mm (24") at each corner. Frame larger openings with L100x100x6 (L4"x4"x1/4") extending to main structural members or as shown on drawing.
6. Shop drawings for decking (4 sets) shall be submitted for review prior to fabrication and are to be sealed by a Professional Engineer registered in B.C. Shop drawings shall show all details and indicate all applicable design loads and material specifications.

K. SECONDARY COMPONENTS AND THEIR ATTACHMENTS

1. Secondary components include but are not limited to the following:
   a) Architectural components such as guard and hand rails, flag posts, canopies, ceilings, etc.
   b) Site work elements exterior to the base building such as landscaping components, lamp standards, pools, signs, and civil work.
   c) Cladding, window mullions, glazing and store fronts.
   d) Skylights and glass canopies.
   e) Attachments and bracing for electrical and mechanical components.
   f) Glass block including attachments.
   g) Elevators.
   h) Architectural precast and precast cladding.
   i) Window washing equipment and attachments.
   k) Interior and exterior light gauge steel stud walls.
   l) Roofing material.
   m) Architectural brick veneer.
   n) Parking slab membrane.
   o) Storage racks.
2. Design and detailing of the above items and their attachments are not the responsibility of the Engineer. They shall be designed by specialty structural engineers, registered in the province of British Columbia retained by the Contractor, who will seal all related shop drawings, review the components in the field and provide all required sealed letters to the authorities having jurisdiction.
3. Secondary or non-structural components and their attachments shall be designed in accordance with Part 4 of the same Building Code as in GENERAL section, line 8 of this drawing.
4. Sealed shop drawings of the secondary or non-structural components which may affect the primary structural system shall be submitted to the Engineer only for the review of their effect on the primary structural system.
5. Subcontractor of these components is responsible for protection of aluminum-steel connections against galvanic corrosion.
6. In addition to construction tolerance, non-structural components shall be detailed for the following building movement and deflection:
   a) Vertical deflections of beams, slabs and decking: ± 25mm (1")
      Differential deflections of edge beams and edges of slabs: ± 16mm (5/8")
   b) Horizontal drift during wind and earthquake between floors:
      Drift without damage to non-structural components: ± 13mm (1/2")
      Drift without collapse of non-structural components: ± 50mm (2")
   c) Movement at expansion joints:
      Perpendicular: ± 50mm (2")
      Parallel: ± 50mm (2")
      Vertical: ± 25mm (1")

ABBREVIATIONS

ALT.	- ALTERNATE	MAX	- MAXIMUM
B.L.L.	- BOTTOM LOWER LAYER	Mf	- FACTORED MOMENT
BOT	- BOTTOM	MIN	- MINIMUM
B.U.L.	- BOTTOM UPPER LAYER	ML	- MICROLAM
BOE	- BOTTOM CHORD EXTENSION	N.T.S.	- NOT TO SCALE
B.S.	- BOTH SIDES	O.C.	- ON CENTER
B/U	- BUILT UP	O/F	- OUTSIDE FACE
CANTILV.	- CANTILEVERED	PSL	- PARALLAL STRAND LUMBER
Cf	- FACTORED COMPRESSION FORCE	PL	- PLATE
CONT	- CONTINUOUS	P/T	- POST-TENSION
CSK	- COUNTER SUNK	RS	- ROUGH SAWN LUMBER
C/W	- COMPLETE WITH	R/W	- REINFORCED WITH
D.L.	- DEAD LOAD	S.D.L.	- SUPERIMPOSED DEAD LOAD
EA.	- EACH	S.O.G.	- SLAB ON GRADE
E.E.	- EACH END	S.S.	- STAINLESS STEEL
E.F.	- EACH FACE	STAG	- STAGGER
EL.	- ELEVATION	STIR	- STIRRUP
E.S.	- EACH SIDE	Tf	- FACTORED TENSILE FORCE
E.W.	- EACH WAY	THK	- THICK
EXT	- EXTERIOR	TJI	- TRUSS JOIST
FDN	- FOUNDATION	T.L.L.	- TOP LOWER LAYER
FTG	- FOOTING	T.O.	- TOP OF
GALV	- GALVANIZED	T.U.L.	- TOP UPPER LAYER
GL	- GLULAM	TYP	- TYPICAL
H1E	- HOOK ONE END	T & B	- TOP AND BOTTOM
H2E	- HOOK TWO ENDS	U.D.L.	- UNIFORMLY DISTRIBUTED LOAD
H & V	- HORIZONTAL AND VERTICAL	U.N.O.	- UNLESS NOTED OTHERWISE
HDR	- HEADER	U/S	- UNDER SIDE
HOR	- HORIZONTAL	VERT	- VERTICAL
I/F	- INSIDE FACE	Vf	- FACTORED SHEAR FORCE
INT	- INTERIOR		
L.L.	- LIVE LOAD		
L.V.	- LENGTH VARIES		
LSL	- LAMINATED STRAND LUMBER		
LVL	- LAMINATED VENEER LUMBER		

STRUCTURAL DRAWING LIST

DRAWING NO.	DRAWING TITLE
S01	GENERAL NOTES
S02	FOUNDATION/GROUND FLOOR PLAN
S03	2nd FLOOR FRAMING PLAN
S04	3rd FLOOR FRAMING AND ROOF PLANS
S05	TILT UP PANEL DETAILS
S06	TILT UP PANEL ELEVATIONS
S07	TILT UP PANEL ELEVATIONS
S08	TILT UP PANEL ELEVATIONS
S09	TILT UP PANEL ELEVATIONS
S10	SECTIONS AND DETAILS
S11	SECTIONS AND DETAILS
S12	COMPOSITE TRUSS DETAILS

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER
-	FEB.21/01	ISSUED FOR BUILDING PERMIT

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K. Z. LAM
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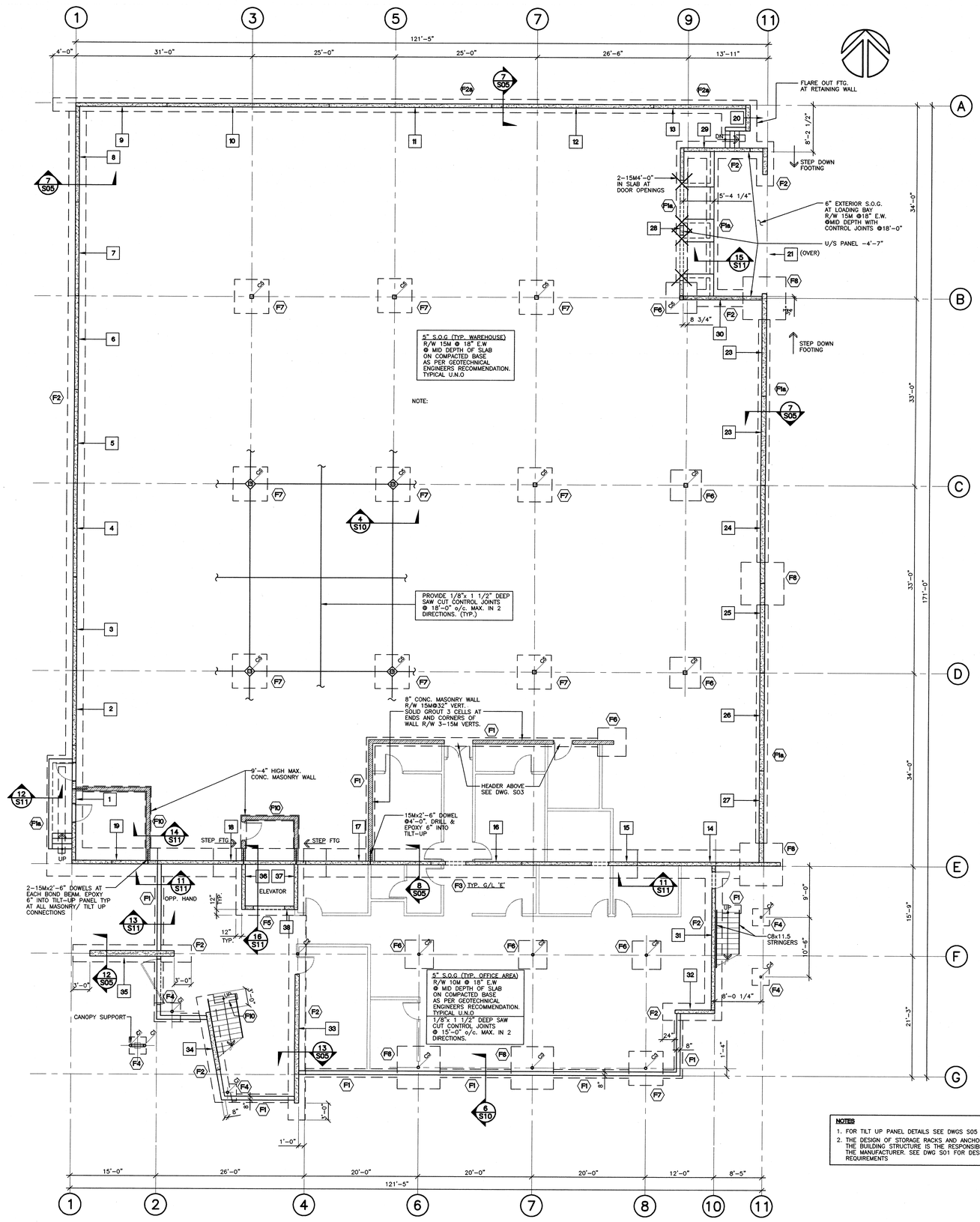
S01

SCALE	PROJECT
N.A.	C911
DRAWN	DATE
KJB	JAN.2001



FOUNDATION + GROUND FLOOR PLAN

1/8"=1'-0"

LEGEND

	TILT UP CONCRETE PANEL
	CONCRETE MASONRY WALL
	NON LOADBEARING STUD PARTITIONS AS PER REQUIREMENTS OF SECTION K, DRAWING S01
CJ	STEEL COLUMN & BEAM
	RECYCLED GLULAM BEAM. SEE DRAWINGS S06 TO S09
1	TILT UP PANEL TYPE
Vfw, Tf=Cf	STEEL CONNECTION FORCES

FOOTING SCHEDULE

	FOOTING DIMENSION	REINFORCEMENT
F1	18"x8" STRIP FTG.	2-15M BOT. CONT.
F1a	2'-0"x8" STRIP FTG.	2-15M TOP LONGIT. C15M @18" TOP TRANSV.
F2	3'-0"x16" STRIP FTG.	5-20M BOT. LONGIT. 15M @14" BOT. TRANSV.
F2a	2'-4"x18" STRIP FTG.	5-20M BOT. CONT.
F3	5'-0"x16" STRIP FTG.	8-20M BOT. LONGIT. 15M @14" BOT. TRANSV.
F4	3'-0"x3'-0"x12"	4-15M BOT. EACHWAY
F5	12" PAD	15M @ 12" EACHWAY TOP & BOT.
F6	5'-0"x5'-0"x14"	5-20M BOT. EACHWAY
F7	6'-0"x6'-0"x14"	6-20M BOT. EACHWAY
F8	7'-6"x7'-6"x16"	8-20M BOT. EACHWAY
F9	7'-0"x14'-0"x16"	8-20M BOT. LONGIT. 16-20M BOT. TRANSV.
FK1	12" WIDE x12" DEEP SLAB THICKENING	2-15M BOT. CONT.

ALL FOOTINGS TO BEAR ON COMPACTED FILL WITH A MIN. ALLOWABLE BEARING CAPACITY OF 2000 psf (96 kPa) GEOTECHNICAL ENGINEER TO CONFIRM BEARING CAPACITY ON SITE PRIOR TO POURING CONCRETE.

COLUMN SCHEDULE

TYPE	COLUMN SIZE	CAP PLATE	BASE PLATE
C1	HSS 4"ø x 3/16"	HOLD	BP1
C2	HSS 5 1/2"ø x 3/16"	BP6	BP1
C3	HSS 5 1/2"ø x 3/8"	BP6	BP1
C4	HSS 4" x 4" x 1/4"	BP4 or BP5	BP1
C5	HSS 8" x 8" x 1/4"	BP3	BP2

BASE PLATE + (CAP PLATE) SCHEDULE

TYPE	SIZE
BP1	10"x10"x3/4" PLATE C/W 4-3/4"øx12" LONG ANCHOR BOLTS
BP2	13"x13"x3/4" PLATE C/W 4-3/4"øx12" LONG ANCHOR BOLTS
BP3	9"x13"x3/4" PLATE C/W 4-3/4"ø BOLTS
BP4	5"x10"x5/8" PLATE C/W 2-3/4"ø BOLTS
BP5	5"x7"x5/8" PLATE C/W 4-3/4"ø BOLTS
BP6	6"x11"x5/8" PLATE C/W 4-3/4"ø BOLTS

NOTES

1. FOR TILT UP PANEL DETAILS SEE DWGS S05 TO S09
2. THE DESIGN OF STORAGE RACKS AND ANCHORAGE TO THE BUILDING STRUCTURE IS THE RESPONSIBILITY OF THE MANUFACTURER. SEE DWG S01 FOR DESIGN REQUIREMENTS

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER
-	FEB.21/01	ISSUED FOR BUILDING PERMIT

SEAL

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FOUNDATION & GROUND FLOOR PLAN

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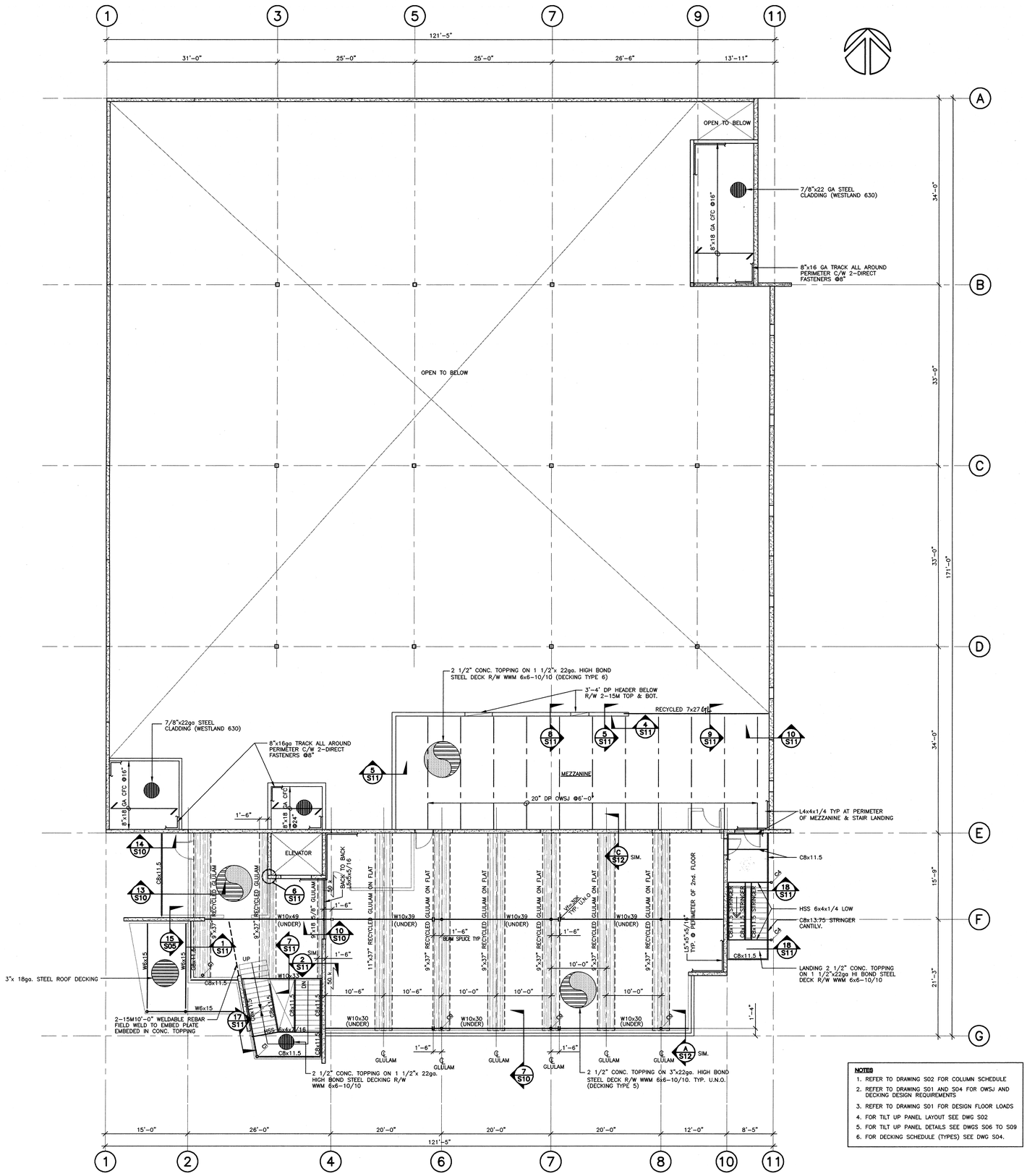
S02

SCALE	PROJECT
1/8"=1'-0"	C911
DRAWN	DATE
KJB	JAN.2001



SECOND FLOOR FRAMING PLAN

1/8"=1'-0"

LEGEND

- TILT UP CONCRETE PANEL
- CONCRETE MASONRY WALL
- NON LOADBEARING STUD PARTITIONS AS PER REQUIREMENTS OF SECTION K, DRAWING S01
- STEEL COLUMN & BEAM
- RECYCLED GLULAM BEAM. SEE DRAWINGS S06 TO S09
- 1 TILT UP PANEL TYPE
- STEEL CONNECTION FORCES

NOTES

1. REFER TO DRAWING S02 FOR COLUMN SCHEDULE
2. REFER TO DRAWING S01 AND S04 FOR OWSJ AND DECKING DESIGN REQUIREMENTS
3. REFER TO DRAWING S01 FOR DESIGN FLOOR LOADS
4. FOR TILT UP PANEL LAYOUT SEE DWG S02
5. FOR TILT UP PANEL DETAILS SEE DWGS S06 TO S09
6. FOR DECKING SCHEDULE (TYPES) SEE DWG S04.

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER
-	FEB.21/01	ISSUED FOR BUILDING PERMIT

SEAL

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2nd FLOOR FRAMING PLAN

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S03

SCALE	PROJECT
1/8"=1'-0"	C911
DRAWN	DATE
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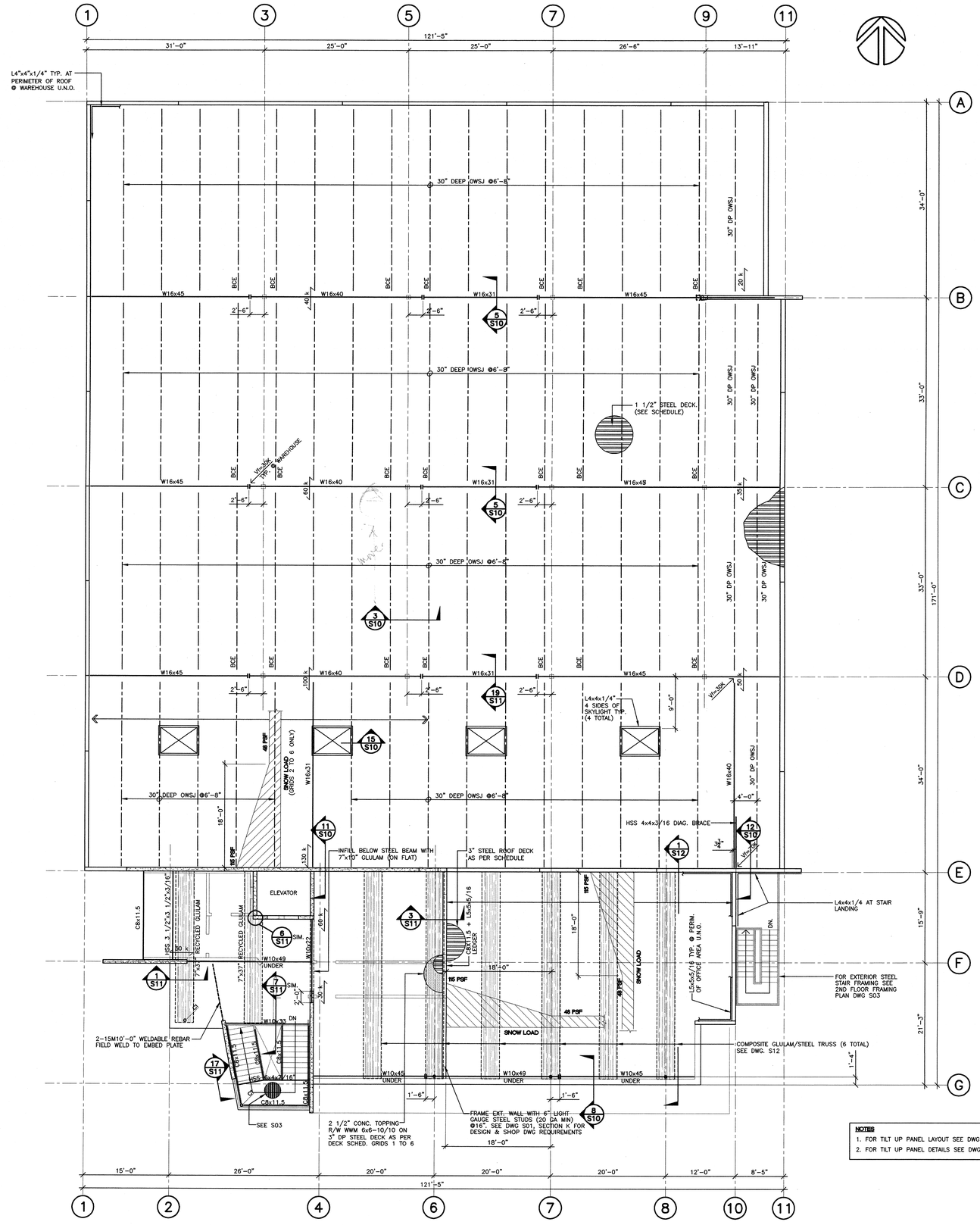


THIRD FLOOR + ROOF PLAN

1/8"=1'-0"

DECKING SCHEDULE

(SEE ALSO NOTES ON DWG. S01)

TYPE	STEEL DECKING	CONNECTION
1	1 1/2"x 22GA	WELD ALL FLUTES AT SUPPORT, SIDE LAP BUTTON PUNCH @ 12"
2	1 1/2"x 20GA	WELD ALL FLUTES AT SUPPORT, SIDE LAP BUTTON PUNCH @ 6"
3	1 1/2"x 18GA	WELD ALL FLUTES AT SUPPORT, SIDE LAP BUTTON PUNCH @ 6"
4	3"x 18GA	FASTEN TO GLULAM SUPPORT WITH 6-1/4"@x3" LAG SCREWS AT EACH FLUTE. PUDLE WELD TO STEEL SUPPORT EVERY OTHER FLUTE OR 12" O.C. 1" SIDE LAP SEAM WELD @6"
5	COMPOSITE DECKING 2 1/2" CONC TOPPING ON 3"x22 GA HB DECKING TOTAL THICKNESS 5 1/2"	FASTEN TO GLULAM SUPPORT WITH 6-1/4"@x3" LAG SCREWS AT EACH FLUTE. PUDLE WELD TO STEEL SUPPORT EVERY OTHER FLUTE OR 12" O.C.
6	COMPOSITE DECKING 2 1/2" CONC TOPPING ON 1 1/2"x22 GA HB DECKING TOTAL THICKNESS 4"	WELD EVERY 2ND FLUTE TO SUPPORT

LEGEND

Vf=c – FACTORED SHEAR FORCE FOR CONNECTION

Tf=Cf – FACTORED TENSION AND COMPRESSION FOR CONNECTION

NOTES TO OWSJ

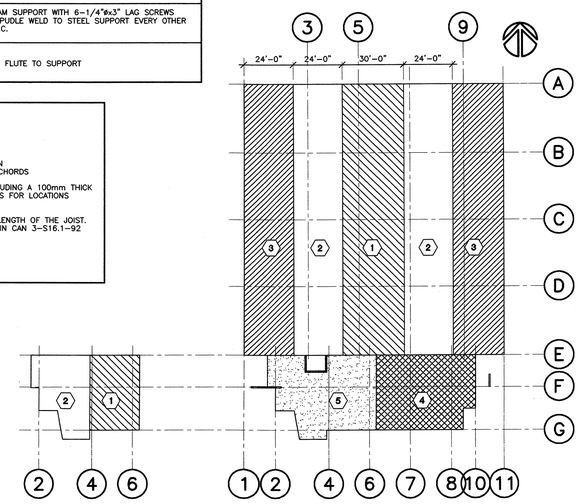
1) SEE ADDITIONAL NOTES ON DRAWING S01

2) DESIGN LOADS (SPECIFIED):

a) ROOF SNOW: 48 psf PLUS BUILD UP AS SHOWN
b) FACTORED TENSION OR COMPRESSION ON TOP CHORDS AS PER PLANS.
c) ADDITIONAL LOAD FROM MECHANICAL UNITS INCLUDING A 100mm THICK HOUSEKEEPING PAD, SEE MECHANICAL DRAWINGS FOR LOCATIONS AND WEIGHTS.
d) NET UPLIFT OF 0.50 kPa (UNFACTORED).
e) POINT LOAD OF 45 kN ANYWHERE ALONG THE LENGTH OF THE JOIST.
f) ADDITIONAL POINT LOADS AS PER CLAUSE 16.6 IN CAN 3-S16.1-92
g) SEE DRAWING S03 FOR FLOOR LIVE LOADS.

3) DEFLECTION CRITERIA:

a) ROOF AREAS: L/300



KEY PLAN - UPPER ROOF DECKING SCHEDULE

SCALE: 1"=30'-0"

KEY PLAN - ROOF DECKING SCHEDULE

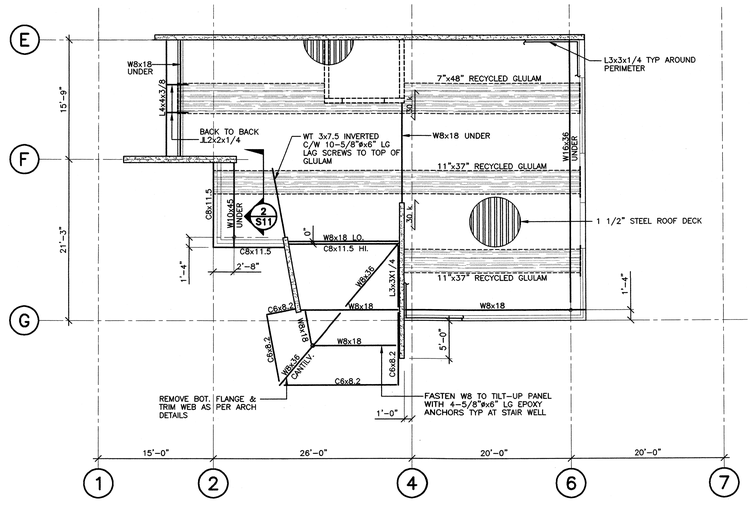
SCALE: 1"=30'-0"

LEGEND

- TILT UP CONCRETE PANEL
- CONCRETE MASONRY WALL
- NON LOADBEARING STUD PARTITIONS AS PER REQUIREMENTS OF SECTION K, DRAWING S01
- STEEL COLUMN & BEAM
- RECYCLED GLULAM BEAM. SEE DRAWINGS S06 TO S09
- 1 – TILT UP PANEL TYPE
- Vf=c / Tf=Cf – STEEL CONNECTION FORCES

NOTES

1. FOR TILT UP PANEL LAYOUT SEE DWG S02
2. FOR TILT UP PANEL DETAILS SEE DWGS S06 TO S09



UPPER ROOF PLAN

1/8"=1'-0"

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER
-	FEB.21/01	ISSUED FOR BUILDING PERMIT

SEAL

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May 2/01

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3rd FLOOR FRAMING & ROOF PLANS

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RECEIVED MAY 3 - 2001 City of North Van Development Department

S04

SCALE	PROJECT
1/8"=1'-0"	C911
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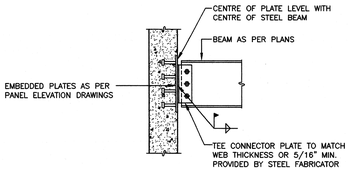
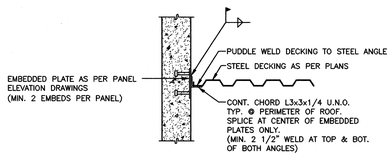
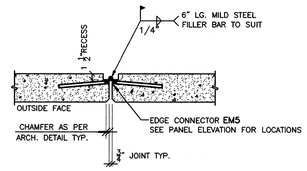
KJB	JAN.2001



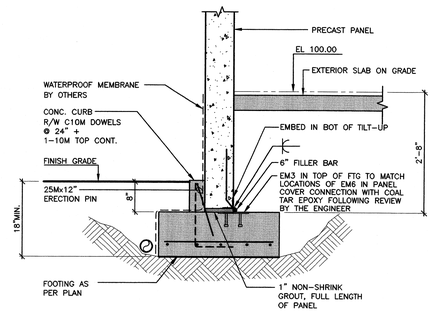
1 – TYPICAL STEEL BEAM TO TILT-UP PANEL CONNECTION 3/4"=1'-0"



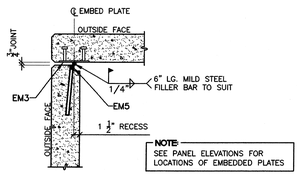
2 – TYPICAL STEEL DECK TO TILT-UP PANEL CONNECTION AT ROOF 3/4"=1'-0"



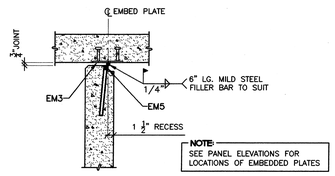
3 – TYPICAL PANEL TO PANEL CONNECTION (PLAN) 3/4"=1'-0"



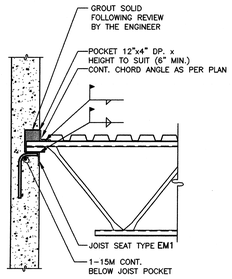
12 S02 SECTION 3/4"=1'-0"



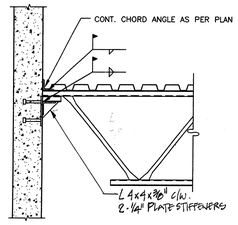
4A – TYPICAL TILT-UP PANEL CONNECTION AT OUTSIDE CORNER (PLAN) 3/4"=1'-0"



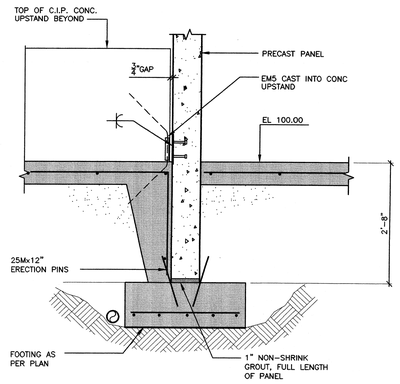
4B – TYPICAL TILT-UP PANEL CONNECTION AT INSIDE CORNER (PLAN) 3/4"=1'-0"



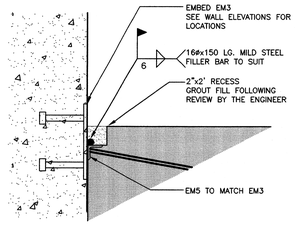
5 – TYPICAL JOIST POCKET 3/4"=1'-0"



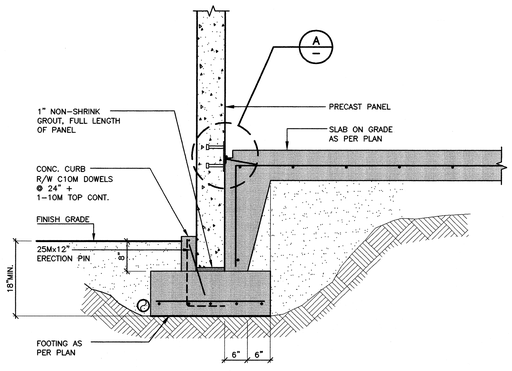
5A – TYPICAL JOIST FACE MOUNT 3/4"=1'-0"



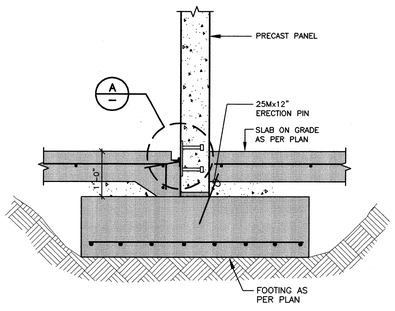
13 S02 SECTION 3/4"=1'-0"



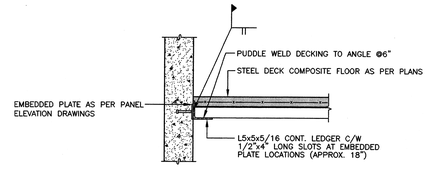
A – DETAIL 1 1/2"=1'-0"



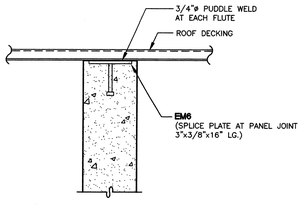
7 S02 TYPICAL TILT-UP PANEL TO FOUNDATION (EXTERIOR WALL) 3/4"=1'-0"



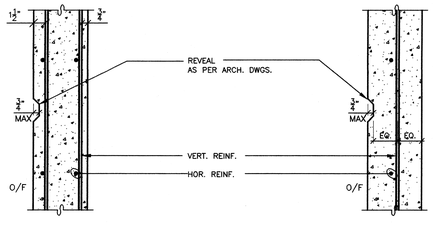
8 S02 TYPICAL TILT-UP PANEL TO FOUNDATION (INTERIOR WALL) 3/4"=1'-0"



14 – TYPICAL STEEL DECK TO TILT-UP PANEL CONNECTION AT FLOOR 3/4"=1'-0"

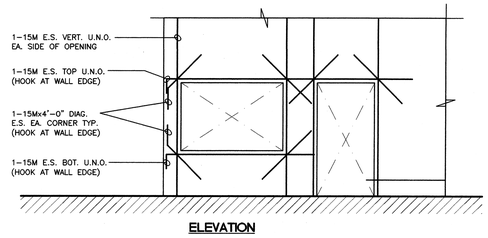


9 – TYPICAL ROOF DECKING CONNECTION 3/4"=1'-0"



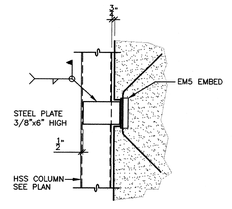
2 LAYERS REINF. SINGLE LAYERS REINF.

10 – TYPICAL PANEL REINFORCING 1 1/2"=1'-0"



ELEVATION

10 – TYPICAL PANEL REINFORCING AT OPENING (U.N.O.) NTS



15 S08 SECTION 3/4"=1'-0"

NOTES
1. REFER TO DRAWING S01 FOR NOTES ON CONCRETE REINFORCING AND TILT UP PANELS
2. FOR EMBEDDED PLATE SCHEDULE SEE DWG S06.

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER
-	FEB.21/01	ISSUED FOR BUILDING PERMIT

SEAL

PROFESSIONAL ENGINEER K. T. LAM ENGINEERING

May 2/01

Maxem Holdings Inc.

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TILT-UP PANEL DETAILS

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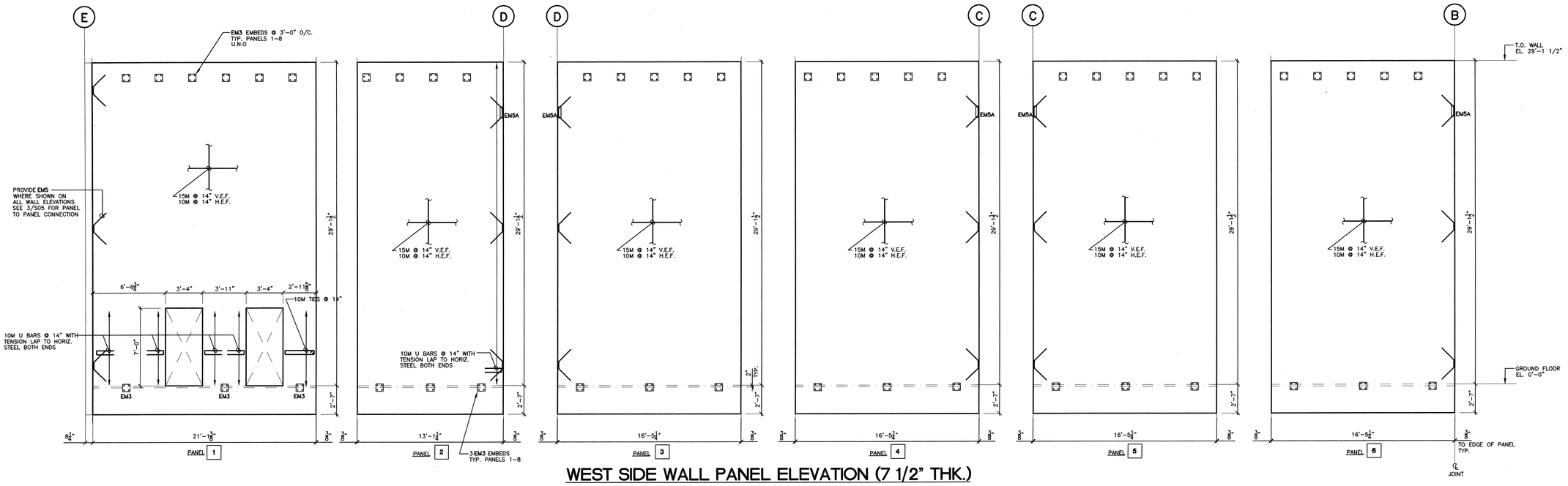
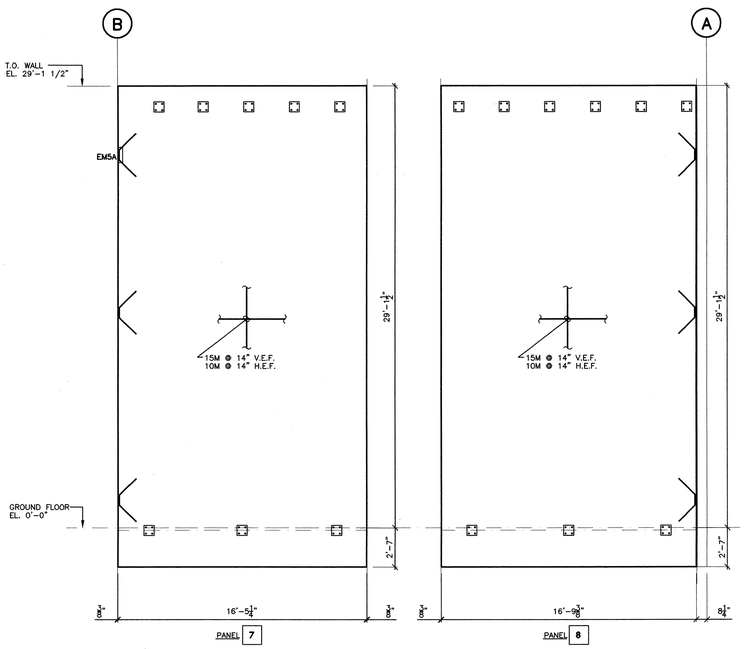
RECEIVED MAY 3 - 2001 City of North Van. Development Services Department

S05

SCALE	PROJECT
AS NOTED	C911
DRAWN	DATE
KJB	JAN.2001



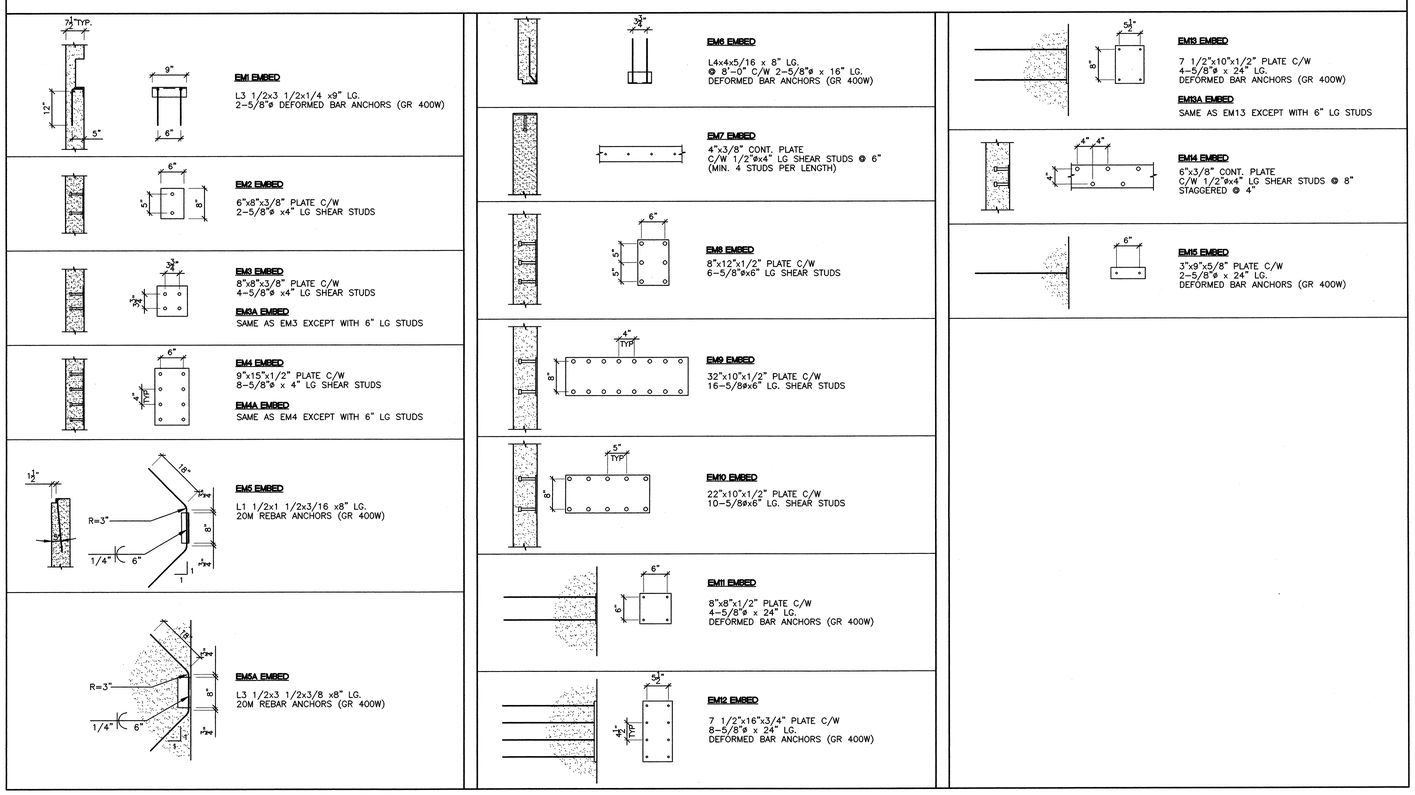
WEST SIDE WALL PANEL ELEVATION (7 1/2" THK.)



WEST SIDE WALL PANEL ELEVATION-CONT.D (7 1/2" THK)

NOTES
1. REFER TO DRAWING S01 FOR NOTES ON CONCRETE, REINFORCING, AND TILT UP PANELS
2. REFER TO DRAWING S05 FOR TYPICAL TILT UP PANEL DETAILS. - U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR REVEALS AND RECESSES

EMBED SCHEDULE FOR TILT-UP PANELS



EM1 EMBED
L3 1/2x3 1/2x1/4 x9" LG.
2-5/8"ø DEFORMED BAR ANCHORS (GR 400W)

EM2 EMBED
6"x8"x3/8" PLATE C/W
2-5/8"ø x4" LG SHEAR STUDS

EM3 EMBED
8"x8"x3/8" PLATE C/W
4-5/8"ø x4" LG SHEAR STUDS

EM3A EMBED
SAME AS EM3 EXCEPT WITH 6" LG STUDS

EM4 EMBED
9"x15"x1/2" PLATE C/W
8-5/8"ø x 4" LG SHEAR STUDS

EM4A EMBED
SAME AS EM4 EXCEPT WITH 6" LG STUDS

EM5 EMBED
L1 1/2x1 1/2x3/16 x8" LG.
20M REBAR ANCHORS (GR 400W)

EM5A EMBED
L3 1/2x3 1/2x3/8 x8" LG.
20M REBAR ANCHORS (GR 400W)

EM6 EMBED
L4x4x5/16 x 8" LG.
@ 8'-0" C/W 2-5/8"ø x 16" LG.
DEFORMED BAR ANCHORS (GR 400W)

EM7 EMBED
4"x3/8" CONT. PLATE
C/W 1/2"ø x4" LG SHEAR STUDS @ 6"
(MIN. 4 STUDS PER LENGTH)

EM8 EMBED
8"x12"x1/2" PLATE C/W
6-5/8"ø x6" LG SHEAR STUDS

EM9 EMBED
32"x10"x1/2" PLATE C/W
16-5/8ø x6" LG. SHEAR STUDS

EM10 EMBED
22"x10"x1/2" PLATE C/W
10-5/8ø x6" LG. SHEAR STUDS

EM11 EMBED
8"x8"x1/2" PLATE C/W
4-5/8"ø x 24" LG.
DEFORMED BAR ANCHORS (GR 400W)

EM12 EMBED
7 1/2"x16"x3/4" PLATE C/W
8-5/8"ø x 24" LG.
DEFORMED BAR ANCHORS (GR 400W)

EM13 EMBED
7 1/2"x10"x1/2" PLATE C/W
4-5/8"ø x 24" LG.
DEFORMED BAR ANCHORS (GR 400W)

EM13A EMBED
SAME AS EM13 EXCEPT WITH 6" LG STUDS

EM14 EMBED
6"x3/8" CONT. PLATE
C/W 1/2"ø x4" LG SHEAR STUDS @ 8"
STAGGERED @ 4"

EM15 EMBED
3"x9"x5/8" PLATE C/W
2-5/8"ø x 24" LG.
DEFORMED BAR ANCHORS (GR 400W)

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER
-	FEB.21/01	ISSUED FOR BUILDING PERMIT

SEAL

May 2/01

Maxem Holdings Inc.

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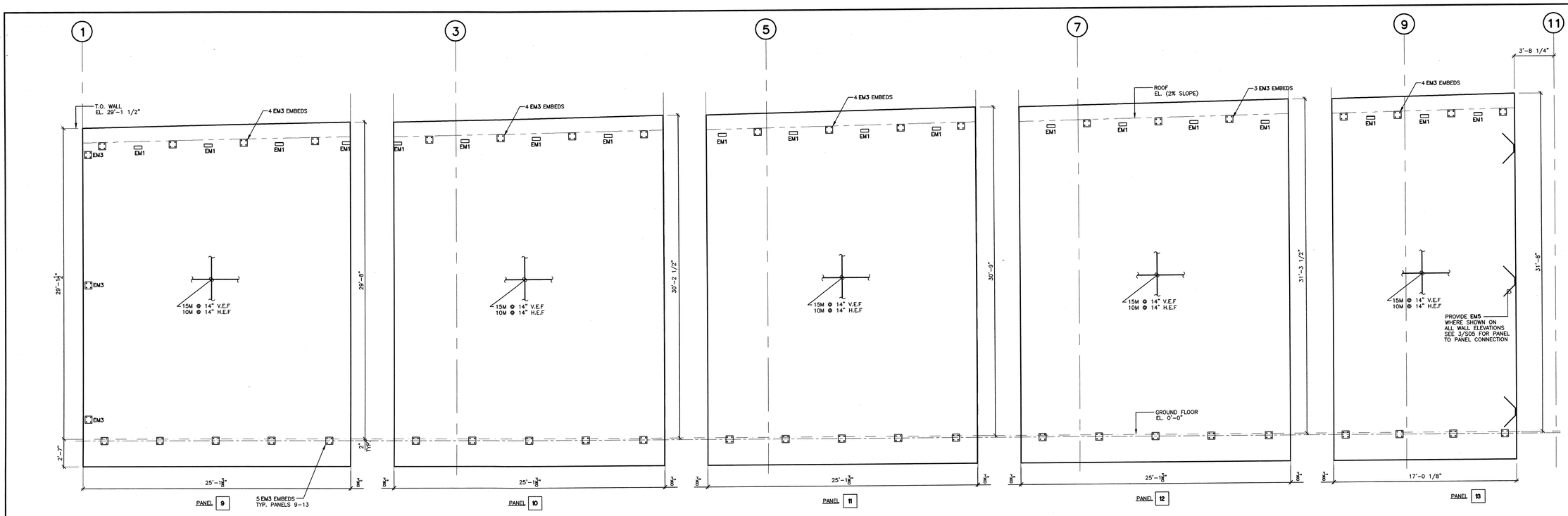
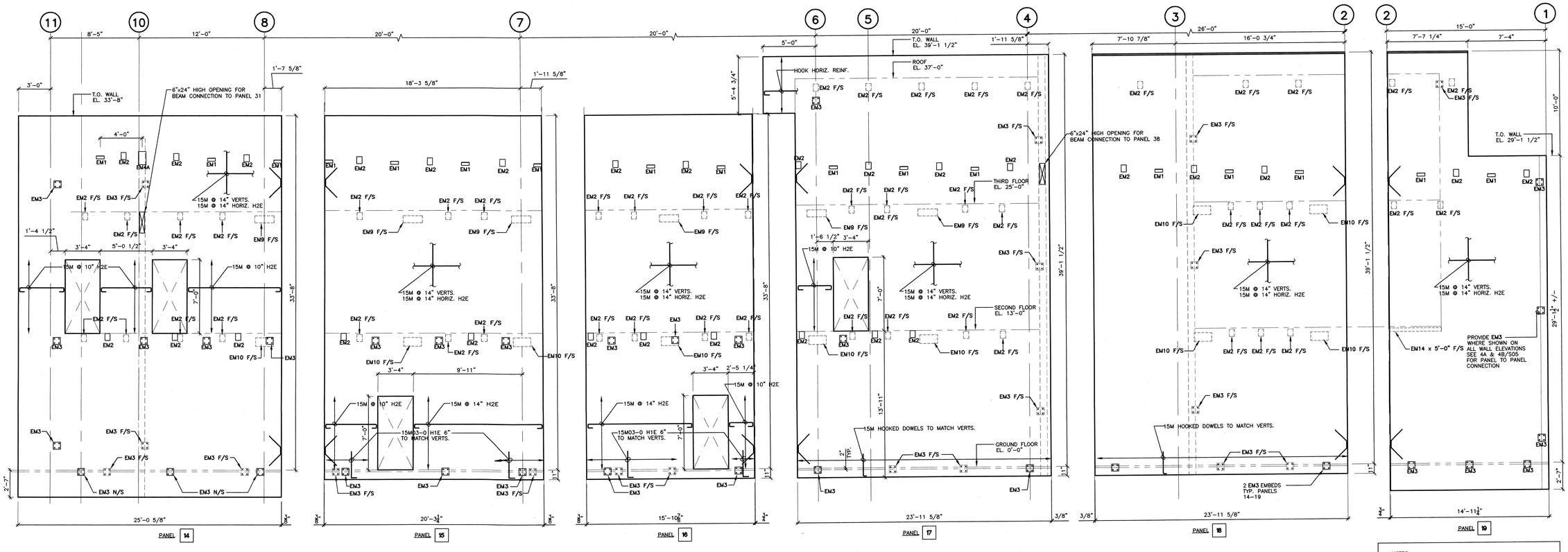
RECEIVED
MAY 3 - 2001
City of North Vancouver
Development Services
Department

S06

SCALE	PROJECT
1/4"=1'-0"	C911
DRAWN	DATE
KJB	JAN.2001



NORTH SIDE WALL PANEL ELEVATION (7 1/2" THK.)



INTERIOR WALL PANEL ELEVATION ON G/L 'E' (7 1/2" THK.)

NOTES
1. REFER TO DRAWING S01 FOR NOTES ON CONCRETE, REINFORCING, AND TILT UP PANELS
2. REFER TO DRAWING S05 & S06 FOR EMBED SCHEDULE AND TYP. TILT UP PANEL DETAILS. – U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR REVEALS AND RECESSES

NO	DATE	REVISIONS
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-	FEB.21/01	ISSUED FOR BUILDING PERMIT

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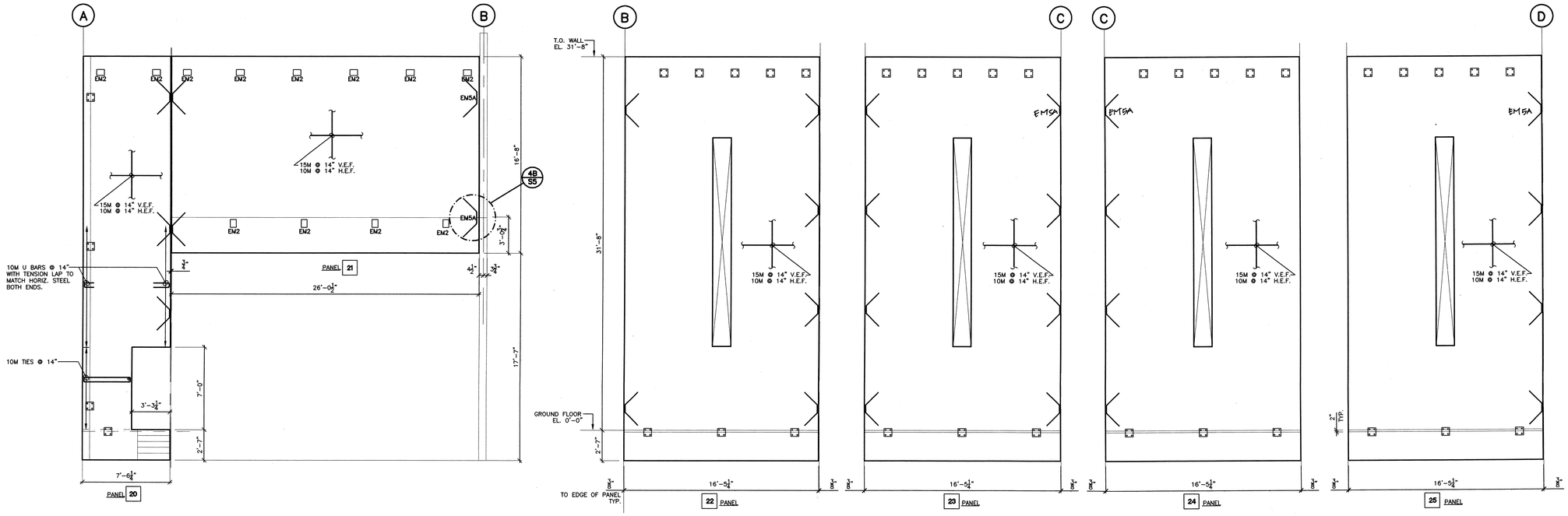
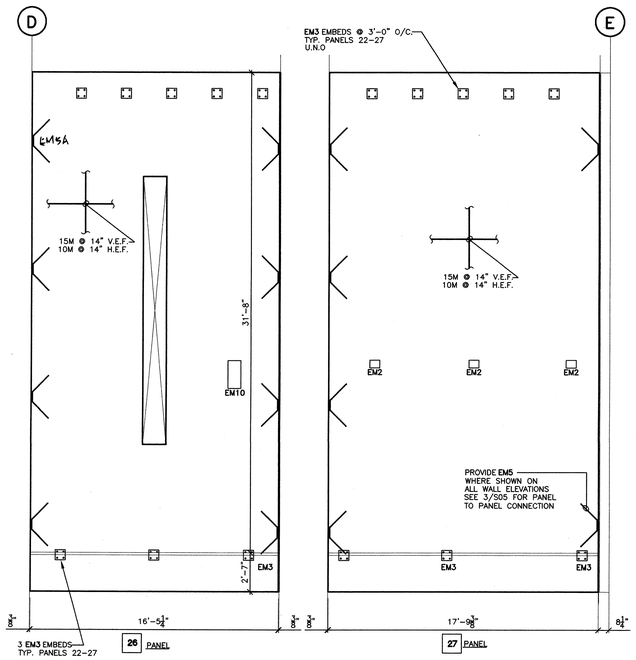
RECEIVED MAY 3 - 2001 City of North Vancouver Development Services Department

S07

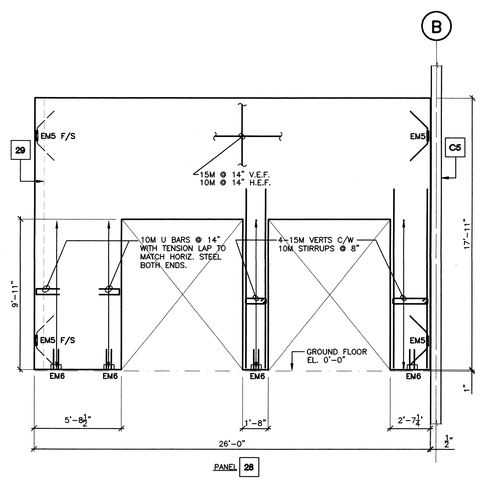
SCALE	PROJECT
1/4"=1'-0"	C911
DRAWN	DATE
KJB	JAN.2001



EAST SIDE WALL PANEL ELEVATION (7 1/2" THK.)

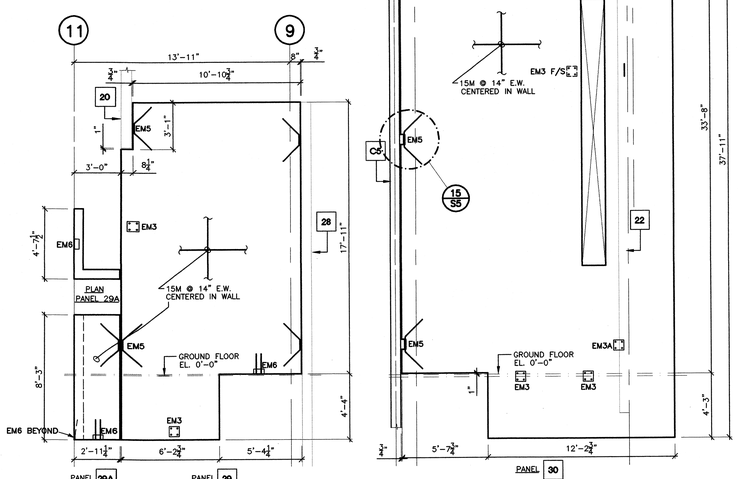


EAST SIDE WALL PANEL ELEVATION-CONT.D (7 1/2" THK.)



WALL PANEL ELEVATION ON G/L '9' (LOADING DOCK) - 7 1/2" THK.

NOTES
1. REFER TO DRAWING S01 FOR NOTES ON CONCRETE, REINFORCING, AND TILT UP PANELS
2. REFER TO DRAWING S05 & S06 FOR EMBED SCHEDULE AND TYP. TILT UP PANEL DETAILS. - U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR REVEALS AND RECESSES



SIDE WALL PANEL ELEVATIONS @ LOADING DOCK (7 1/2" THK.)

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER
-	FEB.21/01	ISSUED FOR BUILDING PERMIT

SEAL

May 2/01

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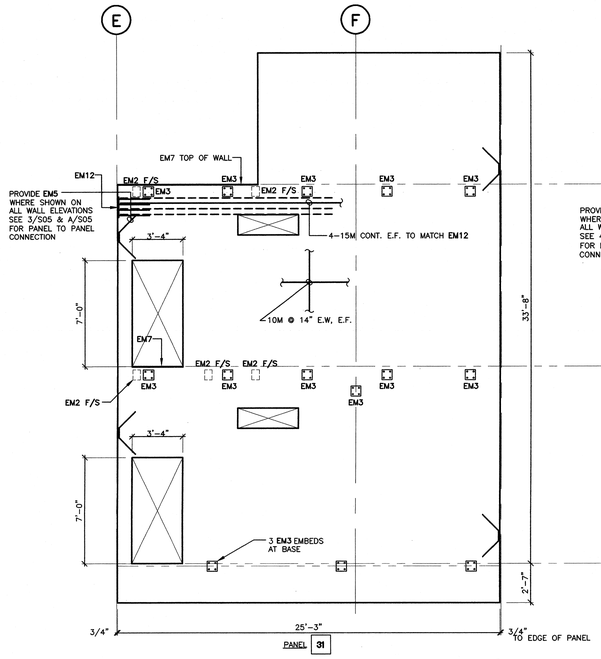
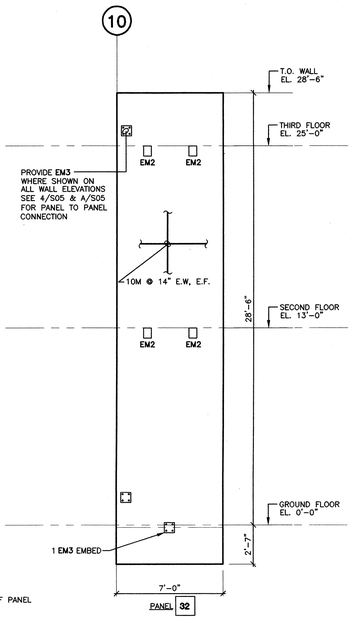
RECEIVED
MAY 3 - 2001
City of North Vancouver
Development Services
Department

S08

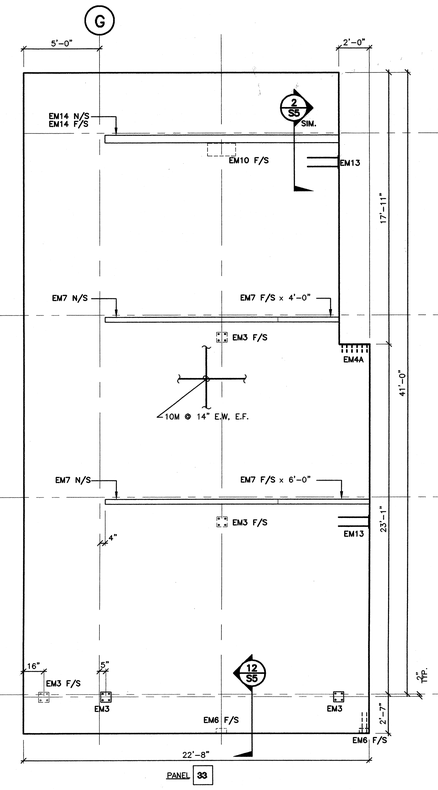
SCALE	PROJECT
1/4"=1'-0"	C911
DRAWN	DATE
KJB	JAN.2001



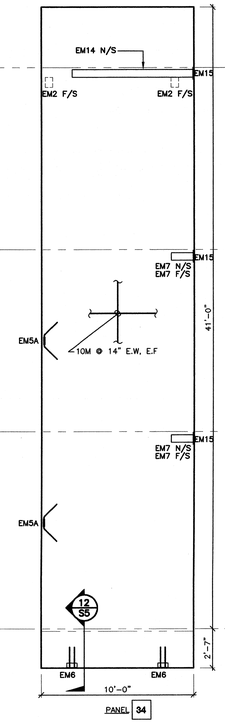
EAST SIDE WALL PANEL ELEVATION ON G/L '10' (7 1/2" THK.)



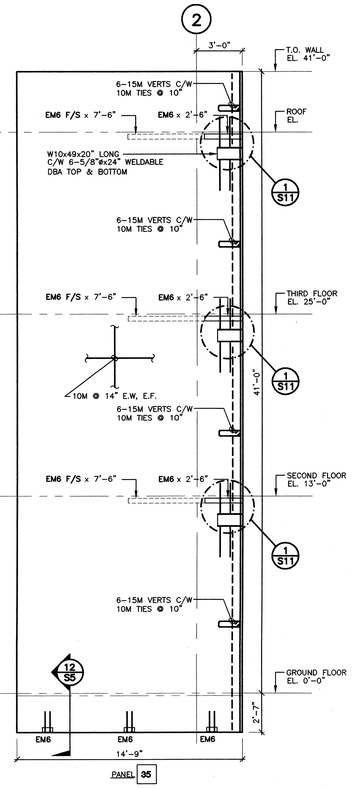
SOUTH WALL PANEL ELEVATION (7 1/2" THK.)



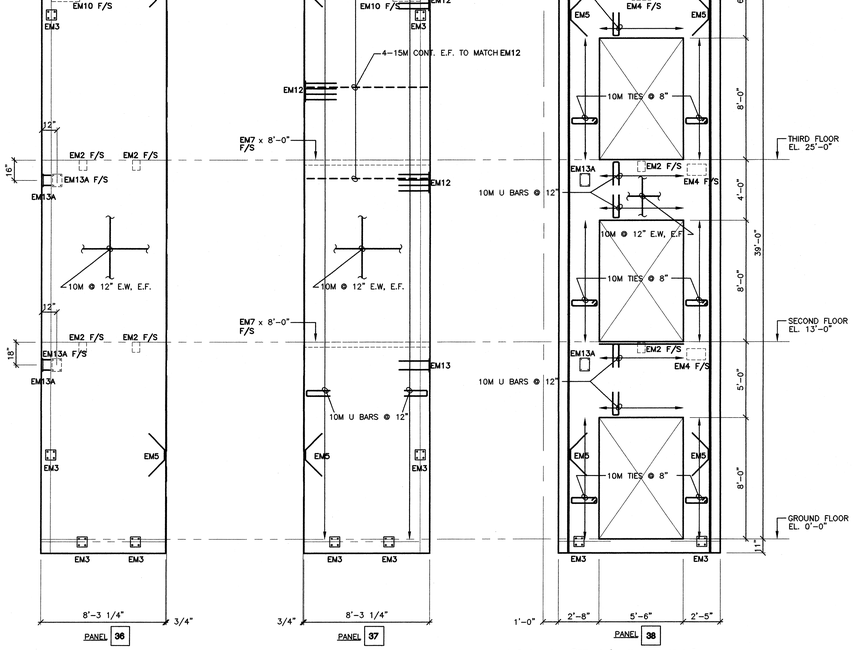
INTERIOR WALL PANEL ON G/L '4' (9" THK.)



WALL PANEL ADJACENT MAIN STAIRS (9" THK.)



WALL PANEL ON G/L 'F' (10" THK.)



ELEVATOR WALL PANEL ELEVATIONS (7 1/2" THK.)

NOTES
1. REFER TO DRAWING S01 FOR NOTES ON CONCRETE, REINFORCING, AND TILT UP PANELS
2. REFER TO DRAWING S05 & S06 FOR EMBED SCHEDULE AND TYP. TILT UP PANEL DETAILS. – U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR REVEALS AND RECESSES

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER
-	FEB.21/01	ISSUED FOR BUILDING PERMIT

SEAL

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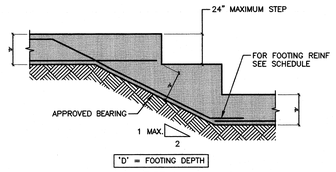
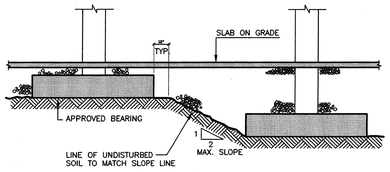
S09

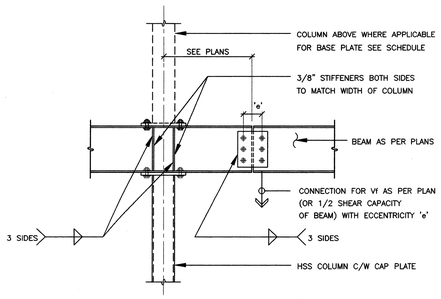
SCALE	PROJECT
1/4"=1'-0"	C911
DRAWN	DATE
KJB	JAN.2001



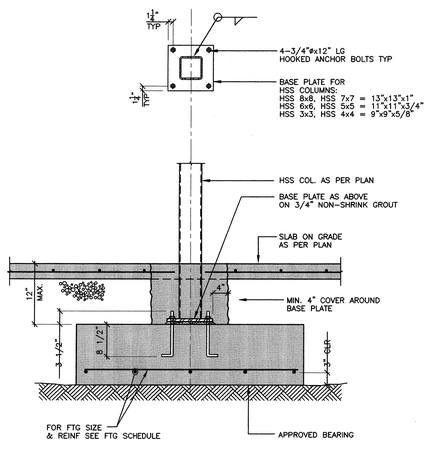
1 — TYPICAL STEPPED STRIP FOOTING



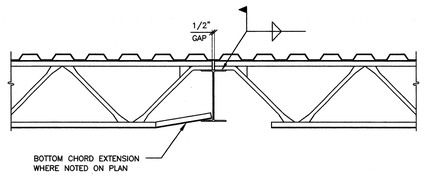
2 — TYP. ADJACENT FOOTING



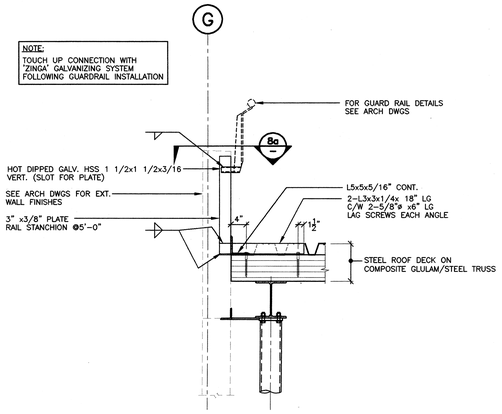
3 — TYP STEEL BEAM TO HSS COLUMN
S04 — 3/4"=1'-0"



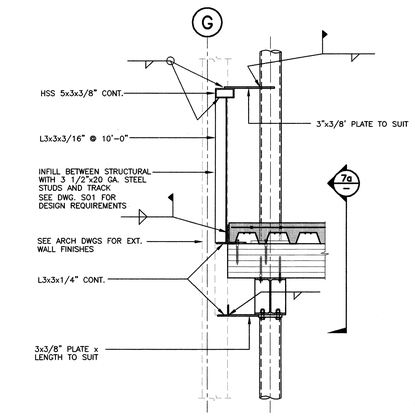
4 — TYP HSS COL. AT FOOTING
S02 — 3/4"=1'-0"



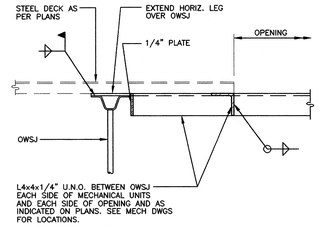
5 — TYPICAL OWSJ TO BEAM CONNECTION
S04 — 3/4"=1'-0"



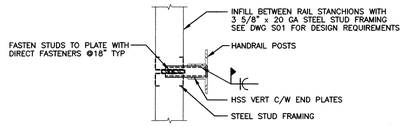
8 — SECTION
S04 — 3/4"=1'-0"



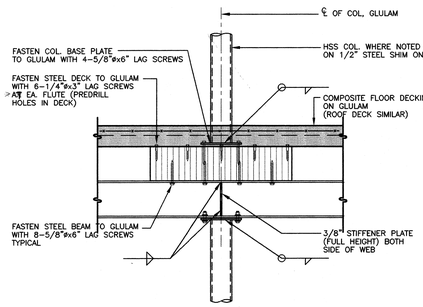
7 — SECTION
S03 — 3/4"=1'-0"



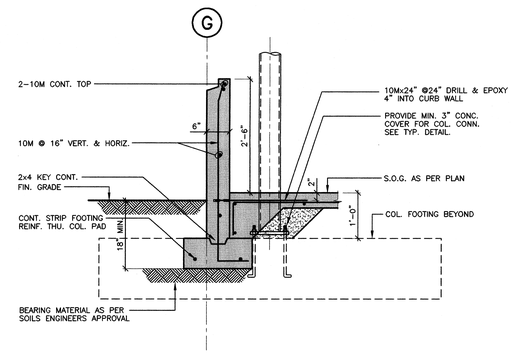
9 — TYPICAL ROOF TOP UNITS AND OPENING SUPPORT DETAIL AT OWSJ
1 1/2"=1'-0"



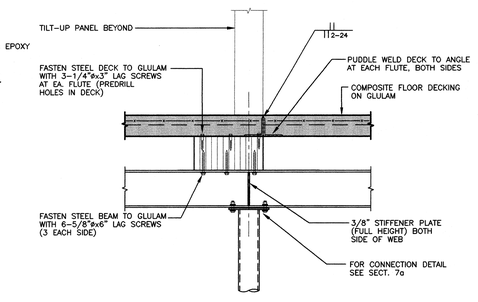
8a — SECTION
1 1/2"=1'-0"



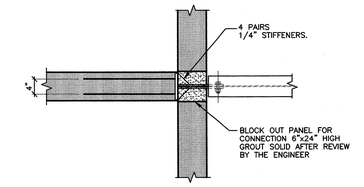
7a — TYP STEEL TO GLULAM BEAM CONNECTION
3/4"=1'-0"



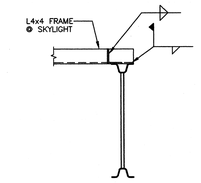
6 — SECTION
S02 — 3/4"=1'-0"



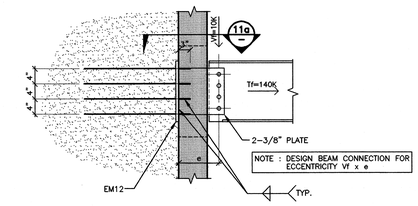
10 — SECTION
S03 — 3/4"=1'-0"



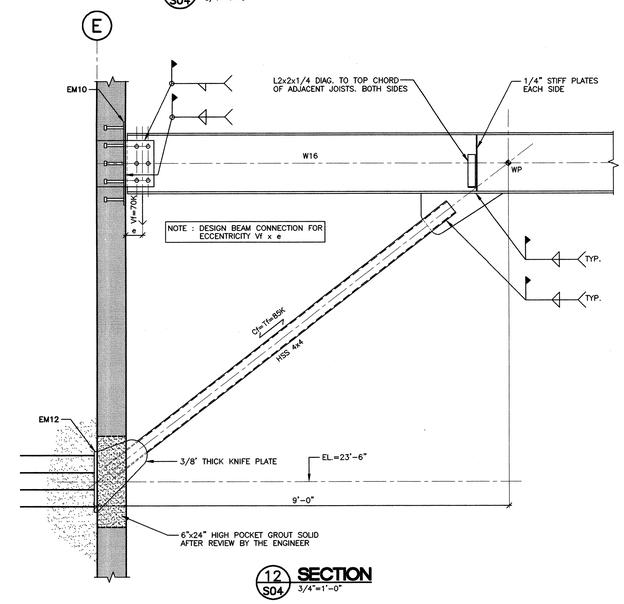
11a — SECTION
3/4"=1'-0"



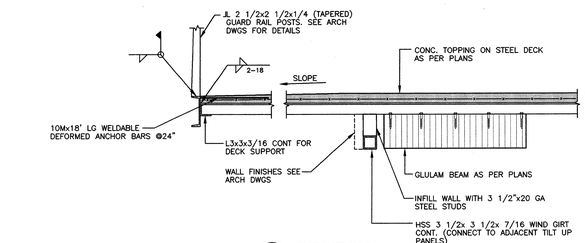
15 — SECTION AT SKYLIGHT
S04 — 3/4"=1'-0"



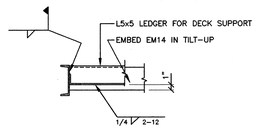
11 — SECTION
S04 — 3/4"=1'-0"



12 — SECTION
S04 — 3/4"=1'-0"



13 — SECTION
S03 — 3/4"=1'-0"



14 — SECTION
S03 — 3/4"=1'-0"

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER
-	FEB.21/01	ISSUED FOR BUILDING PERMIT

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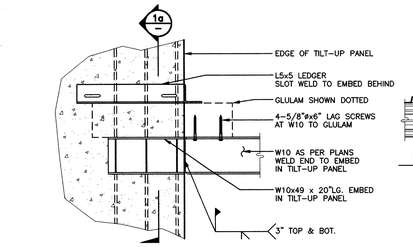
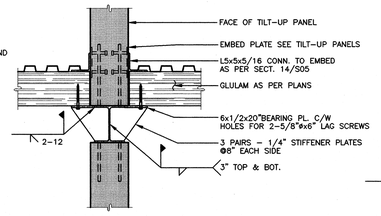
RECEIVED
MAY 3 - 2001
City of North Vancouver
Development Services
Department

S10

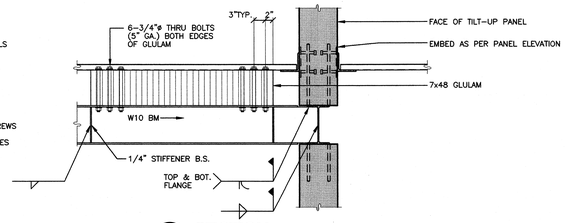
SCALE	PROJECT
AS NOTED	C911
DRAWN	DATE
KJB	JAN.2001



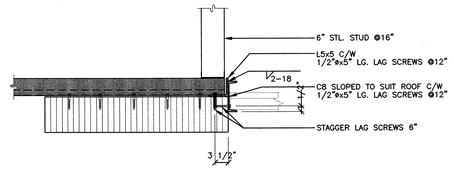
1 S04 **SECTION** 3/4" = 1'-0"



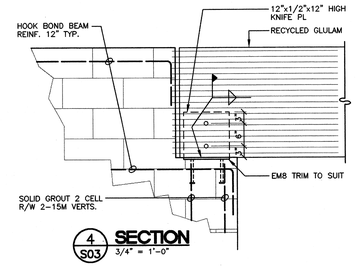
1a – **SECTION** 3/4" = 1'-0"



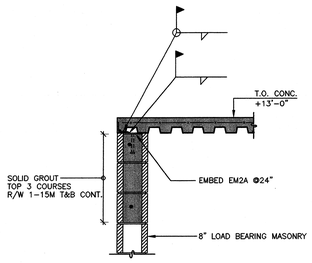
2 S04 **SECTION** 3/4" = 1'-0"



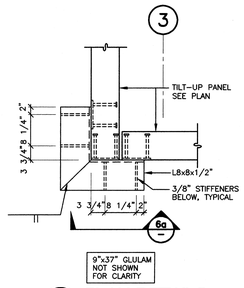
3 S04 **SECTION** 3/4" = 1'-0"



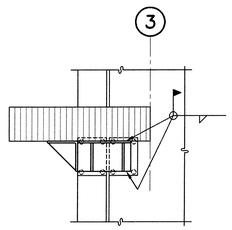
4 S03 **SECTION** 3/4" = 1'-0"



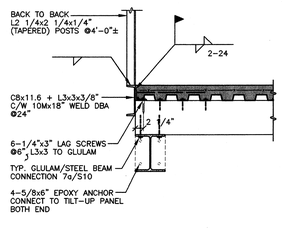
5 S03 **SECTION** 3/4" = 1'-0"



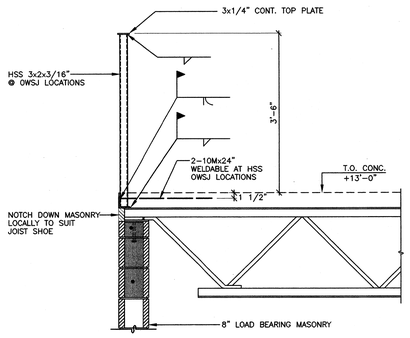
6 S03 **PLAN DETAILS** 3/4" = 1'-0"



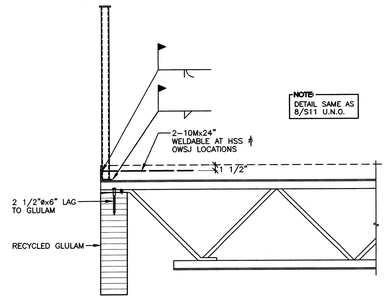
6a S03 **SECTION** 3/4" = 1'-0"



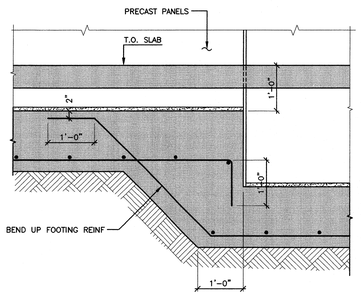
7 S03 **SECTION** 3/4" = 1'-0"



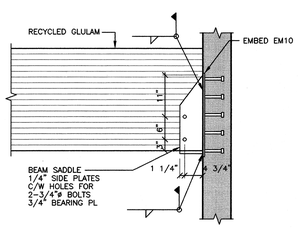
8 S03 **SECTION** 3/4" = 1'-0"



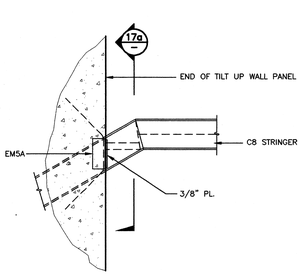
9 S03 **SECTION** 3/4" = 1'-0"



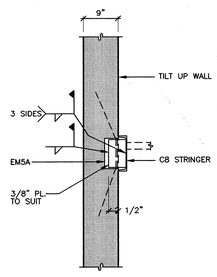
11 S02 **SECTION AT FOOTING STEP** 3/4"=1'-0"



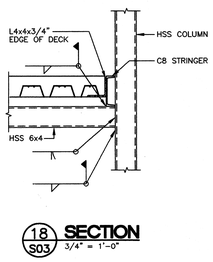
10 S03 **SECTION** 3/4" = 1'-0"



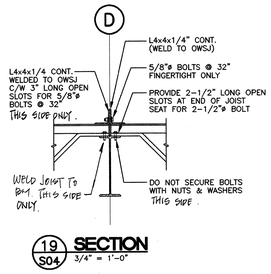
17 S03 **SECTION** 3/4" = 1'-0"



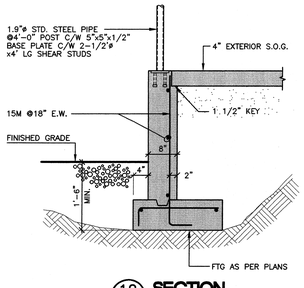
17a – **SECTION** 3/4" = 1'-0"



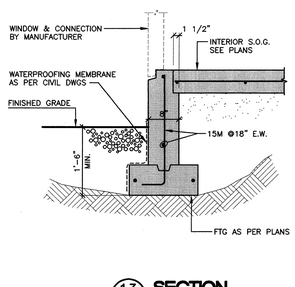
18 S03 **SECTION** 3/4" = 1'-0"



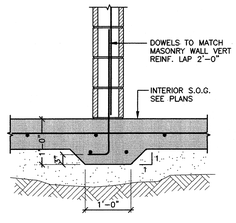
19 S04 **SECTION** 3/4" = 1'-0"



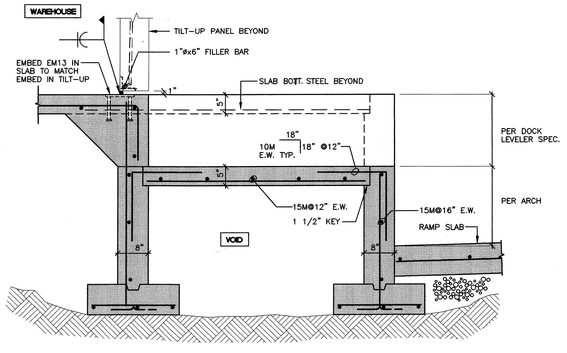
12 S02 **SECTION** 3/4"=1'-0"



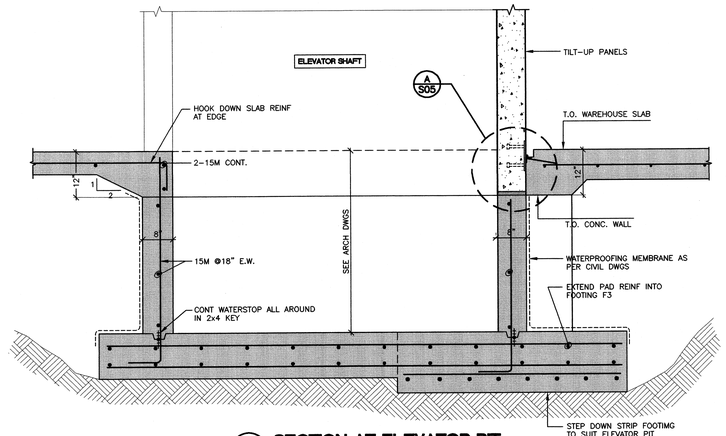
13 S02 **SECTION** 3/4"=1'-0"



14 S02 **SECTION** 3/4"=1'-0"



15 S02 **SECTION** 3/4"=1'-0"



16 S02 **SECTION AT ELEVATOR PIT** 3/4"=1'-0"

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER

SEAL

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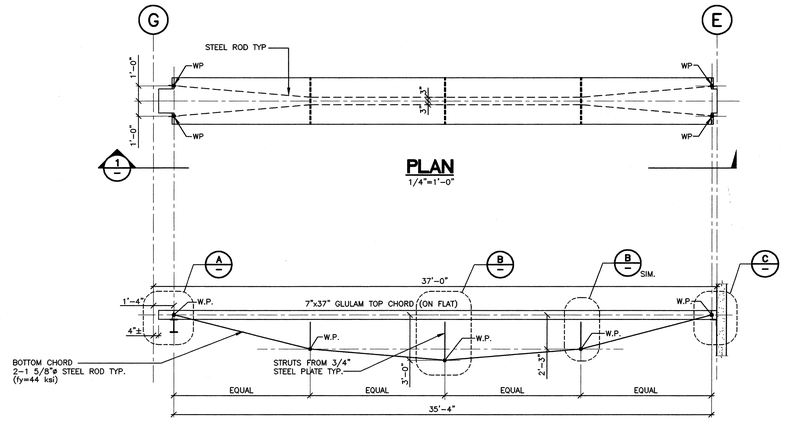
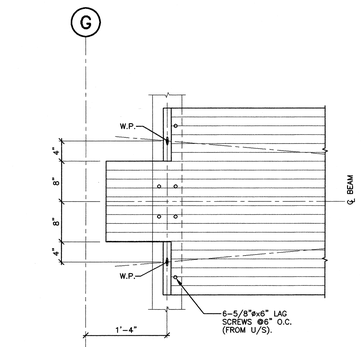
S11

SCALE	PROJECT
AS NOTED	C911
DRAWN	DATE
KJB	JAN.2001



1/S04 TYP. COMPOSITE GLULAM/STEEL TRUSS (ELEVATION)
1/4"=1'-0"



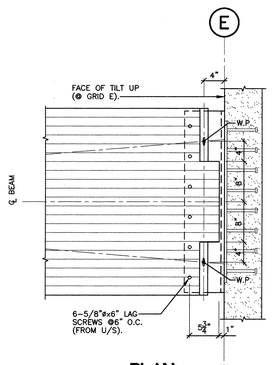
PLAN
1"=1'-0"

NOTES TO CUSTOM TRUSSES:

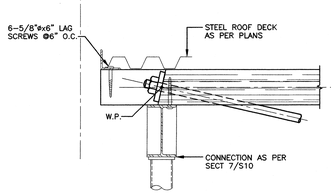
1. TRUSS CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS PRIOR TO FABRICATION, INCLUDING COORDINATION WITH STEEL SHOP DRAWINGS, AND AS-BUILT LOCATIONS OF SUPPORTS AND ADJACENT STRUCTURES. SUBMIT STEEL, TIMBER SHOP DRAWINGS FOR REVIEW BY THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION.
2. ALL GLULAM MEMBERS TO BE SAND FINISHED AND TO BE FREE OF STAINING, GRADE STAMPS, ETC. STORE TIMBER UNDER COVER AND PROTECT FROM DAMAGE & STAINING.
3. ALL STEEL TO BE 300W (44ksi) IN ACCORDANCE WITH GENERAL NOTES ON DRAWING S1. WELD TO BE FULL STRENGTH PREPARED WELDS.
4. REFER TO GENERAL NOTES AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS.
5. ALL STEEL HARDWARE TO BE PAINTED OR GALVANIZED IN ACCORDANCE WITH ARCHITECTS SPECIFICATIONS.
6. ALL WORK TO BE ARCHITECTURAL QUALITY, INCLUDING PRECISION CUTTING AND FITTING, STEEL WELDING, ETC. TAKE PRECAUTIONS TO AVOID DAMAGE AND STAINING OF WOOD DURING CONSTRUCTION PROCESS.
7. WORK POINTS SHOWN ARE TO CENTRELINE OF MEMBERS UNLESS OTHERWISE NOTED.
8. WASHERS & COUNTERSUNK HOLES FOR RODS/BOLTS (AS APPLICABLE) TO BE AS FOLLOWS:

ROD/BOLT	WASHER SIZE	COUNTERSINK
5/8" & 3/4"ø	2 1/2"ø x 1/4" BEARING ON WOOD	3/4"
5/8" & 3/4"ø	1"ø x 3/16" BEARING ON STEEL	–

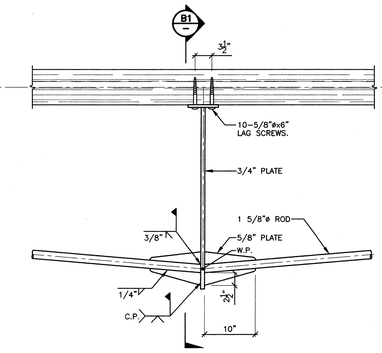
9. PRE-DRILL FOR ALL LAG SCREWS WITH HOLES PER CSA-086
10. WHERE PRACTICAL, SHOP FIT INITIALLY FABRICATED MEMBERS EARLY DURING FABRICATION ON A TRIAL BASIS. REVIEW WITH ENGINEER PRIOR TO PROCEEDING FURTHER.



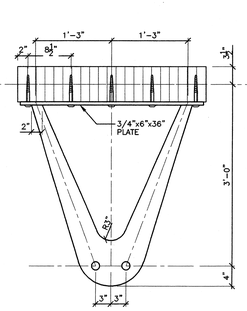
PLAN
1"=1'-0"



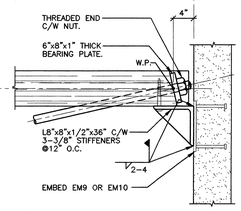
A END DETAIL
1" = 1'-0"



B CENTRE DETAIL
1" = 1'-0"



B1 SECTION
1" = 1'-0"



C END DETAIL
1" = 1'-0"

NO	DATE	REVISIONS
-	APR.30/01	ISSUED FOR TENDER
-	FEB.21/01	ISSUED FOR BUILDING PERMIT

SEAL

K. T. LAM

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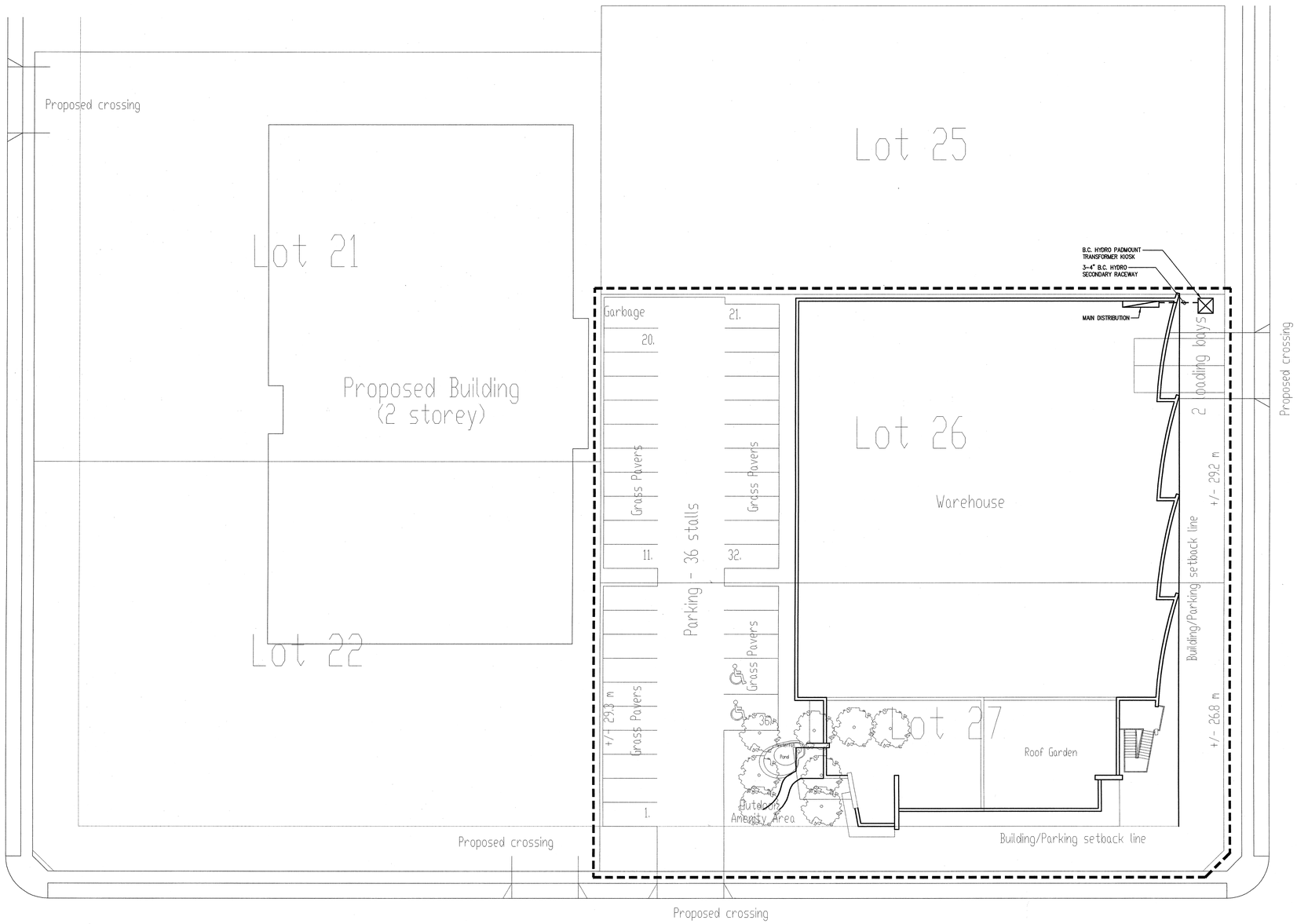
RECEIVED
MAY 3 - 2001
City of North Vancouver
Development Services
Department

S12

SCALE	PROJECT
AS NOTED	C911
DRAWN	DATE
KJB	JAN.2001

THE GENERAL CONTRACTOR SHALL REVIEW THE DOCUMENTS FOR CONFORMANCE CODES AND BY-LAWS AND SHALL ADVISE THE ARCHITECT OF ANY DISCREPANCIES HE MAY NOTE. THE GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE DESIGNER.
DO NOT SCALE THE DRAWINGS.
THESE DRAWINGS ARE INTENDED FOR ARCHITECTURAL INFORMATION ONLY. THE CONTRACTOR AND ANY PERSON USING THESE DRAWINGS FOR INFORMATION ARE ADVISED TO REFER TO CIVIL, STRUCTURAL, MECHANICAL, SPRINKLER, ELECTRICAL AND INTERIOR DESIGN DISCIPLINE DRAWINGS FOR INFORMATION RELATING TO THOSE DISCIPLINES.



SITE PLAN - ELECTRICAL

NO	DATE	REVISIONS
-	FEB. 19/01	ISSUED FOR BUILDING PERMIT

SEAL

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. J. WONG

RECEIVED FEB 23 2001 City of North Vancouver Development Services Department

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Avenue North Vancouver

PROJECT TITLE

SITE PLAN ELECTRICAL

CONSULTANT

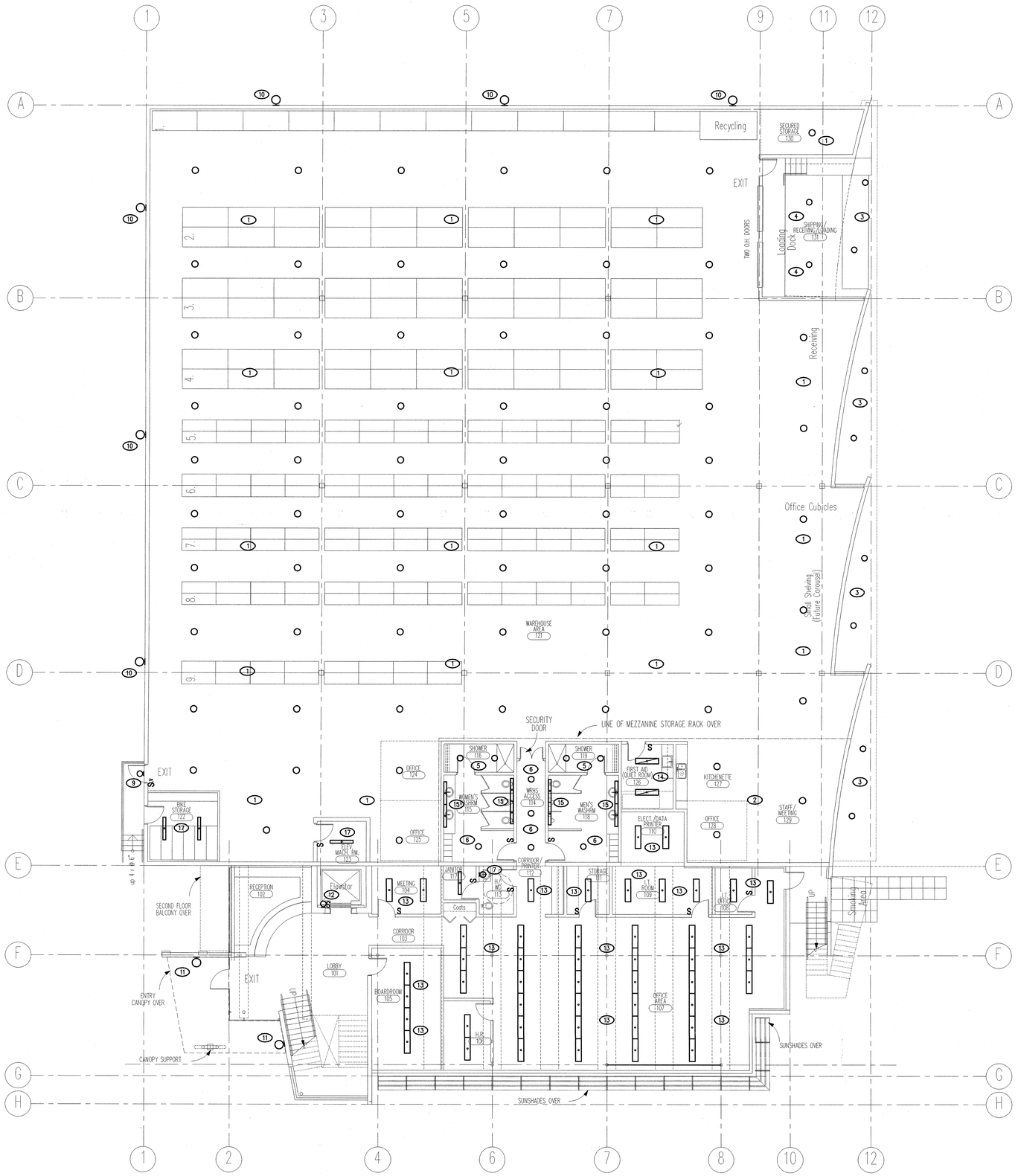
ARNOLD NEMETZ & ASSOCIATES LTD.
2009 WEST 4TH AVENUE, VANCOUVER, B.C. CANADA V6J 1N3
TEL: (604) 736-6562 FAX: (604) 736-9805
E-MAIL: ENGINEERS@NEMETZ.COM

"YEAR 2000 COMPLIANCE" AND CERTIFICATION IS REQUIRED OF ALL SUPPLIERS, CONTRACTORS AND SUBCONTRACTORS. REFER TO SPECIFICATION FOR DETAILS.

E-1

SCALE	PROJECT
1/16" = 1'-0"	8109
DRAWN	DATE
DRF/DM	FEB. 5, 2001

Plot Date: February 19, 2001 - 8109



GROUND FLOOR LIGHTING PLAN

SCALE: 1/8" = 1' - 0"

THE GENERAL CONTRACTOR SHALL REVIEW THE DOCUMENTS FOR CONFORMANCE CODES AND BY-LAWS AND SHALL ADVISE THE ARCHITECT OF ANY DISCREPANCIES HE MAY NOTE. THE GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE DESIGNER.
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PROJECT NORTH

NO	DATE	REVISIONS
–	FEB. 19/01	ISSUED FOR BUILDING PERMIT

SEAL

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Avenue North Vancouver

PROJECT TITLE

GROUND FLOOR LIGHTING PLAN

CONSULTANT

ARNOLD NEMETZ & ASSOCIATES LTD.
2009 WEST 4TH AVENUE, VANCOUVER, B.C. CANADA V6J 1N3
TEL: (604) 736-6562 FAX: (604) 736-9805
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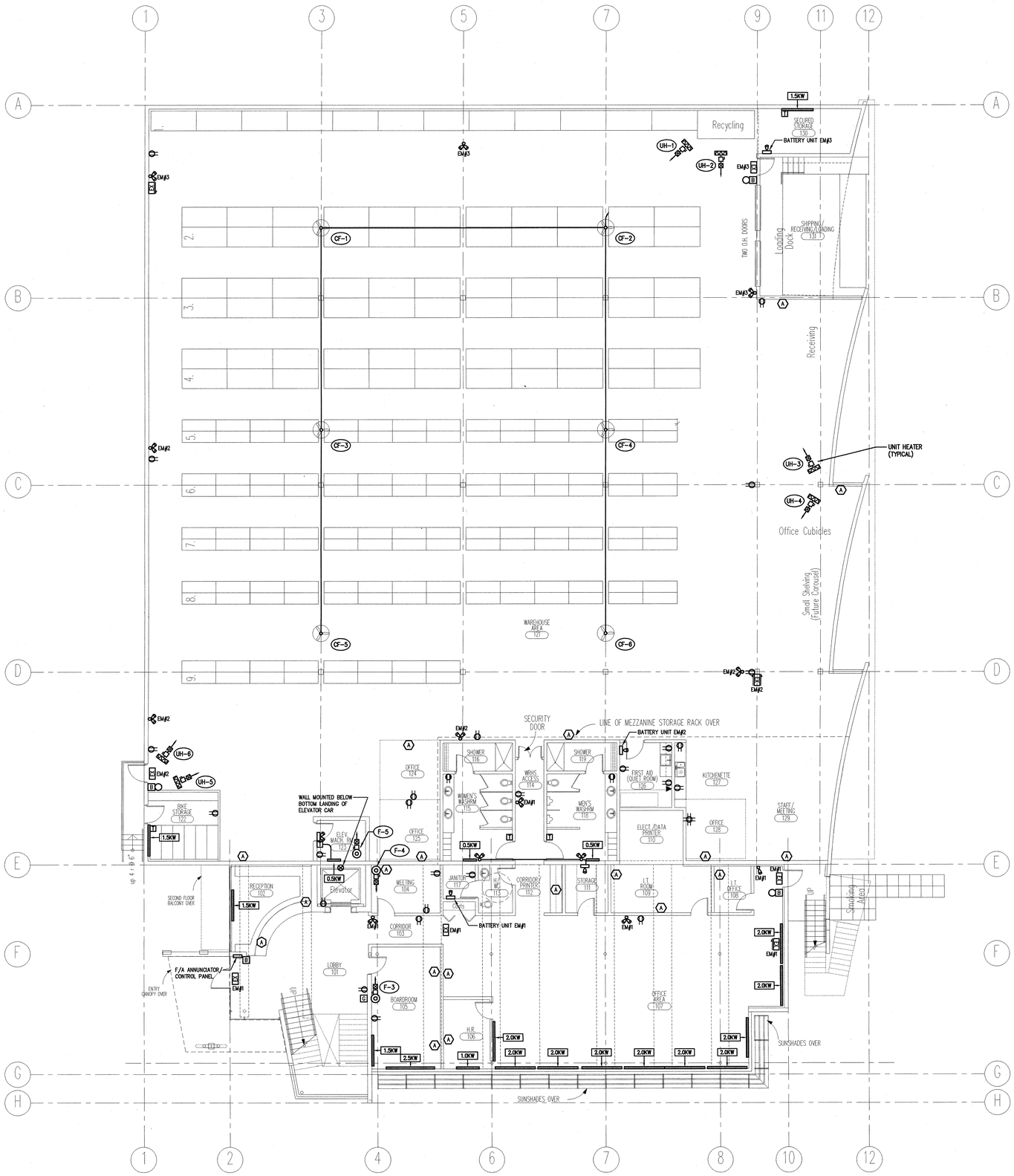
PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. J. WONG

RECEIVED FEB 23 2001 City of North Vancouver Development Services Department

E-2

SCALE	PROJECT
1/8" = 1'-0"	8109
DRAWN	DATE
DRF/DM	FEB. 5, 2001

Plot Date: February 19, 2001 – 8109

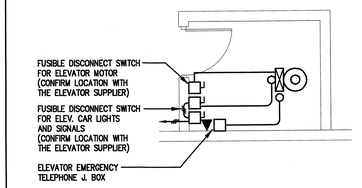


GROUND FLOOR POWER PLAN

SCALE: 1/8" = 1' - 0"

LEGEND:

- (A) — 1"C STUB TO CEILING SPACE
- MOUNTED ON WALL 4 CAT. 5e EACH STATION TO EACH OUTLET



ELEV. MACHINE ROOM LAYOUT

SCALE: 1/4" = 1'- 0"

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PROJECT NORTH

NO	DATE	REVISIONS
–	FEB. 19/01	ISSUED FOR BUILDING PERMIT

SEAL

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Avenue
North Vancouver

PROJECT TITLE

GROUND FLOOR POWER PLAN

CONSULTANT

ARNOLD NEMETZ & ASSOCIATES LTD.
2009 WEST 4TH AVENUE, VANCOUVER, B.C. CANADA V6J 1N3
TEL: (604) 736-6562 FAX: (604) 736-9805
E-MAIL: ENGINEERS@NEMETZ.COM

"YEAR 2000 COMPLIANCE" AND CERTIFICATION IS REQUIRED OF ALL SUPPLIERS, CONTRACTORS AND SUBCONTRACTORS. REFER TO SPECIFICATION FOR DETAILS.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. J. WONG 17160

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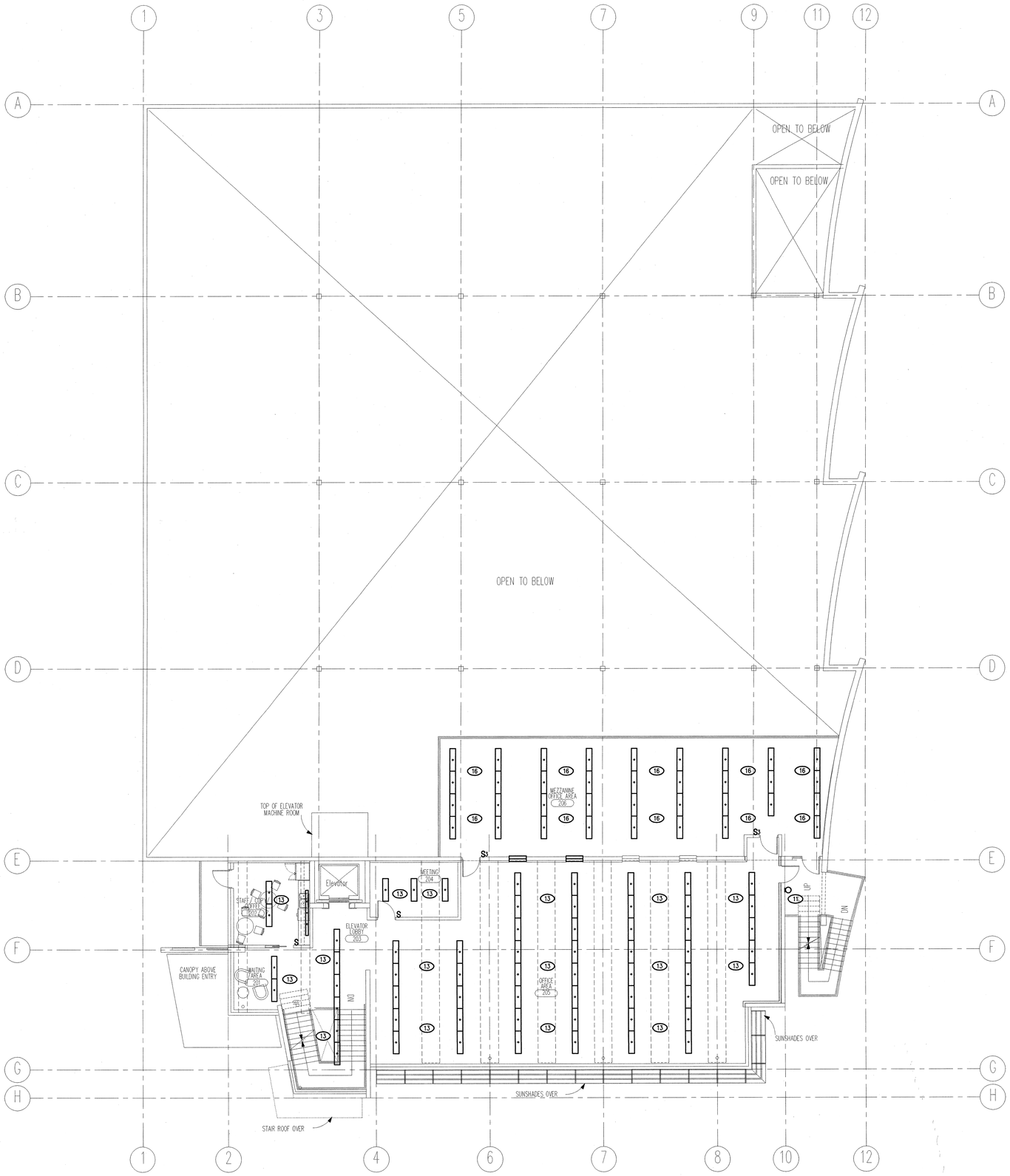
E-3

SCALE	PROJECT
1/8" = 1'-0"	8109
DRAWN	DATE
DRF/DM	FEB. 5, 2001

Plot Date: February 19, 2001 – 8109



SECOND FLOOR LIGHTING PLAN

SCALE: 1/8" = 1' - 0"

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E-4

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DRAWN	DATE
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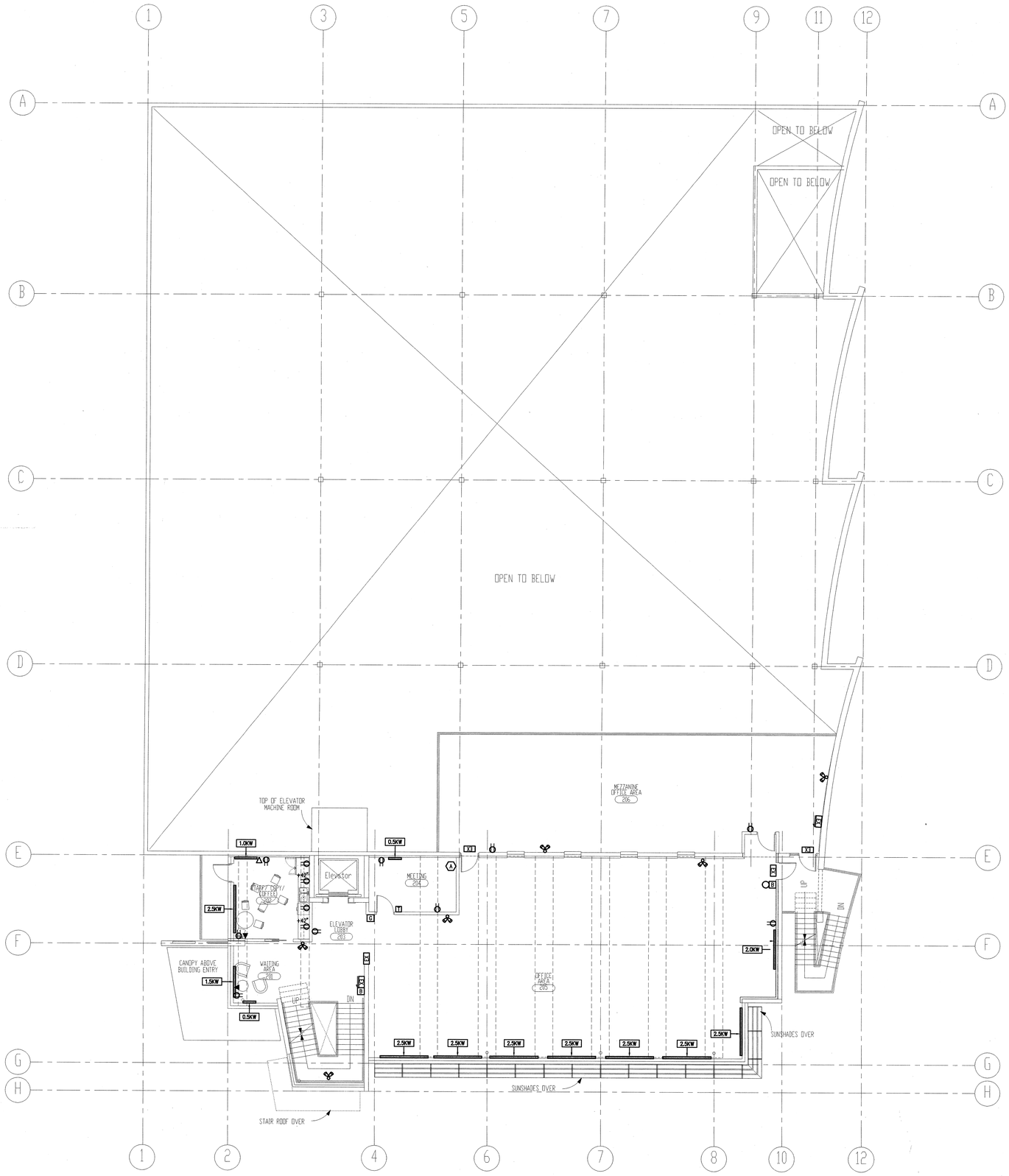
Plot Date: February 19, 2001 – 8109



SECOND FLOOR POWER PLAN

SCALE: 1/8" = 1' - 0"

LEGEND:

- (A) — 1"C STUB TO CEILING SPACE – MOUNTED ON WALL 4 CAT. 5e EACH STATION TO EACH OUTLET

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E-5

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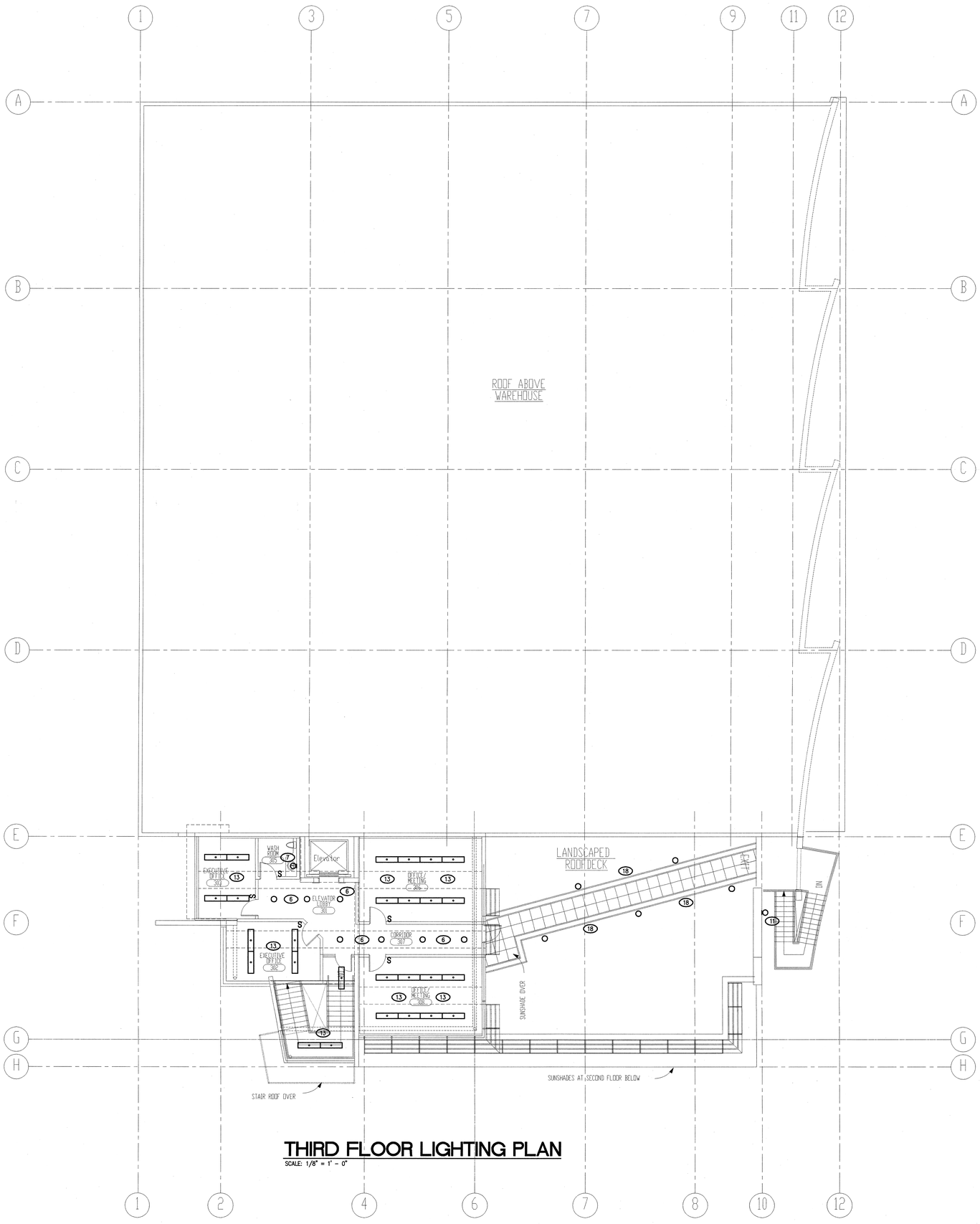

THIRD FLOOR LIGHTING PLAN

SCALE: 1/8" = 1' - 0"

PROJECT NORTH

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THIRD FLOOR
LIGHTING PLAN

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E-6

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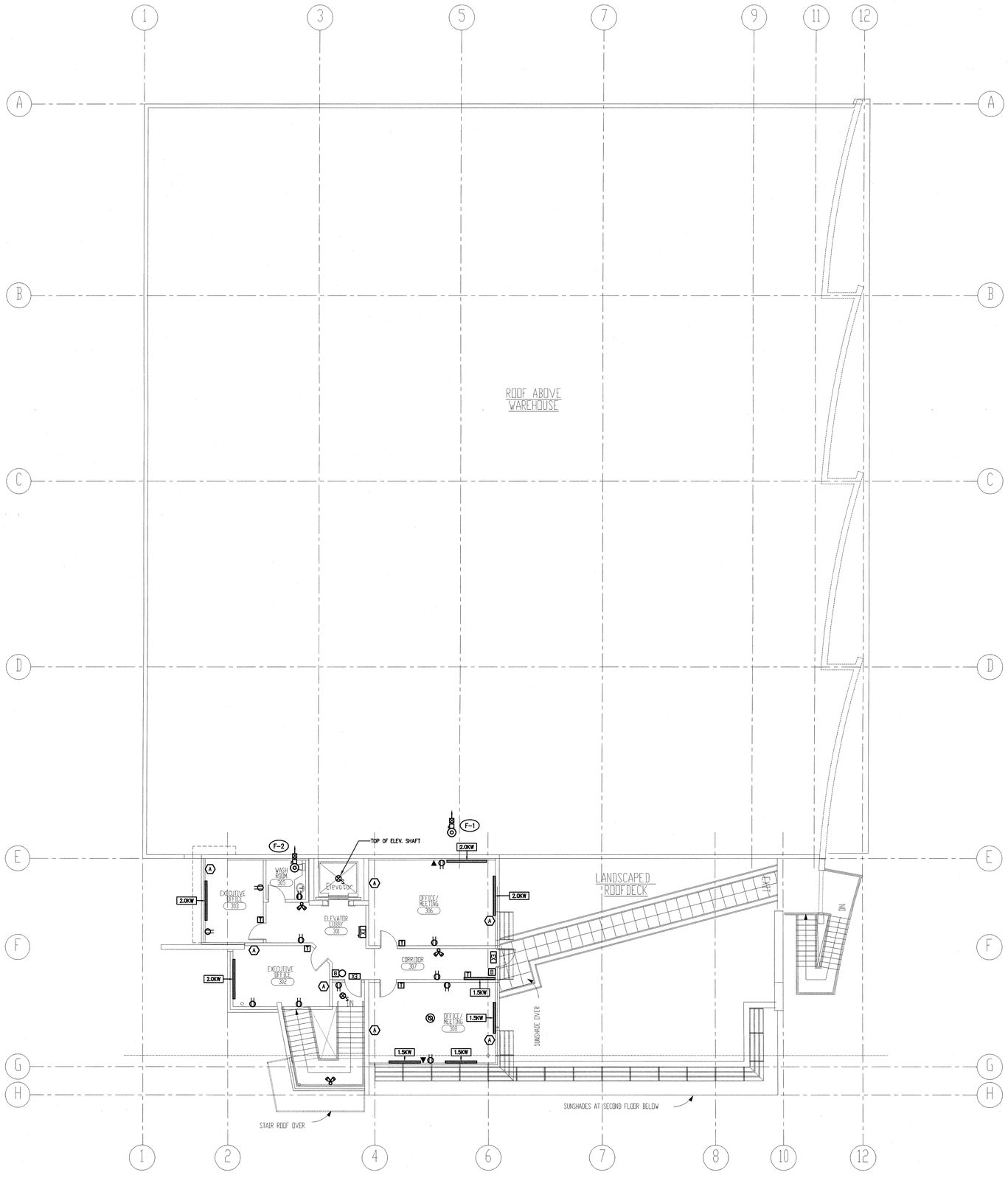

THIRD FLOOR POWER PLAN

SCALE: 1/8" = 1' - 0"

LEGEND:

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E-7

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NOTE A: FIRE ALARM FOR LOW BUILDING (B.C.)

1. WITHIN EACH FIRE COMPARTMENT PROVIDE SEPARATE ANNUNCIATION FOR SMOKE DETECTORS, HEAT DETECTORS, MANUAL PULL STATIONS, SMOKE DAMPERS AND SPRINKLER RISERS.
2. WIRE TO ALARM SUPPLIERS SPECIFICATIONS.
3. FIRE ALARM INSTALLATION TO COMPLY WITH CAN 4 – S 524, NATIONAL BUILDING TABLE 3.2.4A AND LOCAL BYLAWS.
4. FIRE ALARM SYSTEM TO BE ZONED AND SUPERVISED, STAIRS AND ELEVATOR TO HAVE SEPARATE ZONES AS REQUIRED.
5. FIRE ALARM TO HAVE MINIMUM OF 2 BELL OR SPEAKER CIRCUITS PER FLOOR IN SEPARATE CONDUIT.
6. FOR EXACT NUMBER OF DEVICES, SEE FLOOR PLANS.
7. FIRE ALARM CABINET TO HAVE PROVISION FOR CONNECTING TO "OFF PREMISE" MONITORING AUTHORITY; SYSTEM SHALL BE CONNECTED TO MONITORING AUTHORITY.
8. SEE ELECTRICAL SPECIFICATIONS.
9. ELECTRICAL CONTRACTOR TO WIRE AND CONNECT MOTORIZED DAMPER AS REQUIRED BY MECHANICAL SPECIFICATIONS. ANNUNCIATE AND CONNECT TO C.C.F. AS REQUIRED C/W OVERRIDE AND INDICATOR PILOT LIGHT. DAMPER PILOT LIGHT TO BE ACTIVATED BY DAMPER END SWITCH, FOR POSITIVE STATUS INDICATION.
10. PROVIDE A SMOKE DETECTOR AND A HEAT DETECTOR ON A SINGLE ZONE IN THE MAIN HIGH VOLTAGE ELECTRICAL ROOM. THIS ZONE SHALL SHUT DOWN ALL VENTILATION FANS TO THIS ROOM. ALL TO BE IN ACCORDANCE WITH BUILDING CODE CLAUSE 3.2.4.8.(1)(b). (NOT REQUIRED IN LOW VOLTAGE ROOMS)
11. THE ELECTRICAL CONTRACTOR TO PROVIDE A BUILDING GRAPHIC TO THE APPROVAL OF THE ARCHITECT, AND THE LOCAL FIRE AUTHORITY PRIOR TO PROCESSING.
12. ADDRESSABLE AND MICROPROCESSOR SYSTEMS SHALL BE WIRED WITH CLASS A RETURN LOOP CONNECTIONS.
13. THE "END OF LINE" RESISTORS SHALL BE GROUPED IN THE TYPICAL FLOOR ELECTRICAL CLOSETS AND LABELLED PER ZONE AND FUNCTION. THEY SHALL NOT BE SCATTERED ON LOBBY AND CORRIDOR WALLS.
14. THE FIRE ALARM SYSTEM SHALL INCLUDE THE COMPLETE WIRING AND ANNUNCIATION OF ALL SPRINKLER SYSTEM MONITORING DEVICES AS OUTLINED IN BCBC 3.2.4.16.(5)(a)to(g). LOCATIONS SHALL BE TO LATER DETAIL IN SPRINKLER DESIGN. THE ELECTRICAL CONTRACTOR MUST COORDINATE WITH THE DIVISION 15 SPRINKLER DESIGN TO CONFIRM COUNT AND LOCATION OF ALL FLOW SWITCHES AND SUPERVISORY MONITORING AND PROVIDE ALL NECESSARY WIRING AND CONTROLS IN THE FIRE ALARM SYSTEM.
15. REMOTE ANNUNCIATORS AT FIRE FIGHTERS ENTRY AND CONTROL AREA SHALL BE c/w ALL FUNCTIONS SUCH AS SILENCING AND RESETTING.
16. ANNUNCIATORS LOCATED OUTDOORS SHALL BE EQUIPPED WITH A HEATER KIT TO PREVENT CONDENSATION.
17. ANNUNCIATOR SHALL BE MOUNTED SO THAT THE TOP READOUT OR CONTROL WILL NOT BE HIGHER THAN 1800mm (70") ABOVE FINISHED FLOOR.
18. THE FIRE PUMP SHALL BE SUPERVISED TO INDICATE RUNNING AND FIRE PUMP TROUBLE IN THE F.A. ANNUNCIATOR, TO CONFORM WITH NFPA 13-7.2.2.2.
19. THE E.M. GENERATORS SHALL BE SUPERVISED TO INDICATE GENERATOR RUNNING AND GENERATOR TROUBLE AT THE ANNUNCIATOR.

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NOTE D: SPRINKLER /FIREALARM INTERFACE

1. SYMBOLS
   - (A) VALVES C/W SUPERVISORY SWITCH , WIRING TO BE CONNECTED TO FIRE ALARM PANEL AND ANNUNCIATED FOR TROUBLE.
   - (B) DOMESTIC COLD WATER PIPE TO BE HEAT TRACED BY QUALIFIED ELECTRICAL PERSONEL UNDER THE RESPONSIBILITY OF THE CONTRACTOR IN DIV. 15. DIV. 16 TO PROVIDE CIRCUITS TO PANEL "EMM" IF SUCH A PANEL IS PROVIDED, OTHERWISE CONNECT CIRCUITS TO PANEL "M".
   - (C) PIPE TO BE HEAT TRACED BY QUALIFIED ELECTRIC PERSONEL UNDER THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR HEAT TRACING FOR STANDPIPES AND SPRINKLER TO BE SUPERVISED ELECTRICALLY BY DIV. 15 ELECTRIC PERSONEL AND CONNECTED TO ANNUNCIATOR PANEL BY THE DIV. 16 ELECTRICAL CONTRACTOR. DIV. 16 TO PROVIDE CIRCUITS TO PANEL "EMM" IF SUCH A PANEL IS PROVIDED, OTHERWISE CONNECT CIRCUITS TO PANEL "M".
   - (D) SPRINKLER FLOW SWITCH AND TROUBLE TO BE SUPERVISED AT THE FIRE ALARM PANEL AND ANNUNCIATED.
2. HEAT TRACE AND CONTROL DEVICES TO BE SUPPLIED AND INSTALLED BY ELECTRICAL PERSONEL UNDER THE RESPONSIBILITY OF THE DIVISION 15 MECHANICAL CONTRACT.
3. TESTING AND ACCEPTANCE SHALL BE BY MECHANICAL DIVISION 15.

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NOTE F: FIRE ALARM, EXIT & EMERGENCY LIGHTING SYSTEMS VERIFICATION

1. CONTRACTOR SHALL RETAIN A PROFESSIONAL ELECTRICAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA, CANADA TO PROVIDE VERIFICATIONS OF THE FIRE ALARM SYSTEM AND THE INSTALLATION OF EXIT AND EMERGENCY LIGHTING SYSTEM IN ACCORDANCE WITH THE BRITISH COLUMBIA BUILDING CODE 1992. ALL COSTS ASSOCIATED WITH PERFORMANCE OF THIS ITEM SHALL BE INCLUDED.
2. A REVIEW AND TEST OF THE FIRE ALARM AND ASSOCIATED SYSTEMS SHALL BE ORGANIZED AS FOLLOWS:
   a) AFTER THE FIRE ALARM HAS BEEN VERIFIED.
   b) TWO WEEKS PRIOR TO ISSUANCE OF LETTER OF ASSURANCE.
   c) TIMING SHALL BE ARRANGED BY GENERAL CONTRACTOR FOR REVIEW TO BE PLACED DURING "NON-WORKING HOURS".
   d) REVIEW TO INCLUDE PERSONNEL FAMILIAR WITH THE PROJECT FROM:
      GENERAL CONTRACTOR
      ELECTRICAL CONTRACTOR
      MECHANICAL CONTRACTOR
      FIRE ALARM SUPPLIER
      ELECTRICAL CONSULTANT
      MECHANICAL CONSULTANT
      CERTIFIED PROFESSIONAL (IF APPLICABLE)
   e) ALL TESTING EQUIPMENT AND MATERIAL SHALL BE PROVIDED BY THE CONTRACTORS AND SUBTRADES.

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NOTE Y: EXIT SIGNS

EXIT SIGNS TYPICAL THROUGHOUT, ALL FLOORS – FINAL LOCATION AND MOUNTING HEIGHT OF ALL EXIT SIGNS TO TAKE INTO ACCOUNT VISIBILITY REQUIREMENTS OF EXIT SIGNS FROM A DISTANCE WHERE INTRAVENING STRUCTURE, MECHANICAL AND ELECTRICAL SERVICES MAY OTHERWISE OBSTRUCT VISIBILITY OF EXIT SIGNS, IF THEY ARE MOUNTED IN EXACT CONFORMANCE WITH THIS LAYOUT, ALLOW FOR ALL NECESSARY COSTS TO ADJUST LOCATION OF EXIT SIGNS TO ALLOW VISIBILITY TO THE SATISFACTION OF THE ARCHITECT, FIRE MARSHALL AND CERTIFIED PROFESSIONAL AS DETERMINED ON SITE.

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NOTE I: DISTRIBUTION AND MISCELLANEOUS ITEMS

1. INSTALL A PROPER DRAINAGE SYSTEM FOR ANY UNDERGROUND CONDUITS.
2. PROVIDE ADEQUATE CLEARANCE AROUND UNIT SUBSTATION AND DISTRIBUTION CUBICLES, MAIN SERVICE EQUIPMENT, SUB-DISTRIBUTION METER CENTRES AND OTHER ELECTRICAL EQUIPMENT IN ACCORDANCE WITH BULLETIN 2-7-0.
3. GROUND ALL UTILITY SUPPLY PULL BOXES AS PER C.E.C. TABLE #17.
4. PROVIDE PERMANENT MARKERS FOR THE CABLES CONNECTED TO THE GROUND PAD.
5. PROVIDE CONDUCTOR SUPPORTS ON ALL RISER RACEWAYS IN ACCORDANCE WITH TABLE 21.
6. ENSURE THAT DOUBLE TUB PANELS ARE FACTORY APPROVED FOR THE APPLICATION.
7. PROVIDE 1.5 METER CLEARANCE BETWEEN EQUIPMENT ON OPPOSITE WALLS IN THE ELECTRICAL ROOM.
8. ENCASE SERVICE CONDUITS IN CONCRETE TO COMPLY WITH BULLETIN 6-4-0.
9. DO NOT RUN P.V.C. CONDUIT ON THE SURFACE IN BUILDINGS OF NON-COMBUSTIBLE CONSTRUCTION (BRITISH COLUMBIA BUILDING CODE). E.M.T. OR RIGID GALVANIZED STEEL CONDUIT MAY BE USED.
10. DO NOT USE PROCESS PIPING IN LIEU OF C.S.A. APPROVED CONDUIT.
11. ENSURE THAT ADDITIONAL SEALS ARE PROVIDED IN EACH RUN OF CONDUIT ENTERING OR LEAVING A CLASSIFIED AREA.
12. VENTILATED ELECTRICAL EQUIPMENT IN SPRINKLERED ELECTRICAL ROOM REQUIRES SHIELDING. (NOTE: GENERALLY SPRINKLERS CAN BE ELIMINATED FROM ELECTRICAL ROOMS IF THEY ARE CONSTRUCTED WITH A 3-HOUR FIRE RATING).
13. PROVIDE SMOKE DETECTOR WITH AUXILIARY CONTACT TO STOP ELECTRICAL ROOM VENTILATION FANS WHEN SMOKE DETECTOR IS ACTIVATED.

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NOTE HH: CONDUITS PIPES & SLEEVES EMBEDDED IN CONCRETE

EMBEDDING OF PIPES, CONDUITS AND SLEEVES IN CONCRETE SHALL BE ALLOWED ONLY IN THE SLABS OF SPECIFICALLY DESIGNATED LEVELS, IF INSTALLED IN ACCORDANCE WITH THE FOLLOWING GUIDELINES. ARRANGE A SITE MEETING WITH ELECTRICAL CONSULTANT, ELECTRICAL CONTRACTOR, STRUCTURAL ENGINEER PRIOR TO THE PLACEMENT OF ANY ELECTRICAL CONDUIT.

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE, WITHIN 25 CALENDAR DAYS OF CONTRACT SIGNING, A COMPLETE RED LINE DETAIL OF ALL CONDUIT ROUTING AND SLEEVING FOR REVIEW AND APPROVAL OF ALL CONSULTANTS.
2. CENTERLINE SPACING TO BE NOT LESS THAN 3 DIAMETERS MIN. 50mm (2") CLEAR.
3. CENTERLINE SPACING BETWEEN PARALLEL CONDUIT AND REINFORCING BARS TO BE 3 DIAMETERS MIN. 50mm (12") CLEAR.
4. SUBMIT LAYOUT OF CONDUITS AT POINTS OF CONGESTION FOR COORDINATION OF REINFORCING AND/OR RE-ROUTE AS DIRECTED BY THE STRUCTURAL ENGINEER AT NO ADDITIONAL COST.
5. FOR SHEAR WALLS
   A) MAXIMUM CONDUIT DIAMETER SHALL BE 1/10.
   B) MINIMUM SPACING SHALL BE THE LESSER OF 1.5t OR 15d.
   C) CONDUITS SHALL BE CONTAINED BETWEEN THE TWO CURTAINS OF STEEL IN WALL 300mm (12") AND THICKER.
   D) NO CONDUITS ALLOWED IN OR WITHIN 300mm (12") OF CONCENTRATED ZONE REINFORCING.
   E) NO CONDUITS ALLOWED IN SHEAR WALL HEADERS UNLESS SHOWN ON STRUCTURAL DRAWINGS.
   F) t = WALL THICKNESS d = CONDUIT DIAMETER
6. FOR SLABS AND WALLS – (CONDUITS IN THE PLANE OF)
   A) LOCATE BETWEEN TOP AND BOTTOM OR EACH FACE OF REINFORCING.
   B) MAXIMUM SIZE IN ONE LAYER TO BE NOT MORE THAN 1/4 CONCRETE THICKNESS.
   C) MAXIMUM TOTAL SIZE OF CONDUITS CROSSING SHALL BE NOT MORE THAN 0.3 THE CONCRETE THICKNESS.
   D) THREE OR MORE LAYERS CROSSING WILL NOT BE PERMITTED.
7. FOR COLUMNS – OBTAIN APPROVAL OF THE STRUCTURAL ENGINEER. CONDUIT AND FITTINGS IN EXCESS OF 2% OF THE COLUMN AREA WILL NOT BE ALLOWED. EMBEDDED PIPING WILL NOT BE ALLOWED.

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NOTE G: STRUCTURAL AND FEEDERS

1. ELECTRICAL CONTRACTOR IS TO REFER TO STRUCTURAL NOTES ON STRUCTURAL DRAWINGS RE WIRING METHODS AND SIZING OF CONDUCTORS IN RELATION TO THE STRUCTURAL REQUIREMENTS. ALL WORK IS TO BE CONCEALED. THIS WORK IS CONSIDERED WITHIN THE BASE CONTRACT, THERE WILL BE NO EXTRAS CONSIDERED FROM ANY DISCIPLINE TO MEET THIS CRITERIA.
2. ELECTRICAL CONTRACTOR TO SUBMIT REDLINE MARKUP DRAWINGS OF THE GROUPED CONDIT RUNS TO BE PLACED IN CONCRETE, PRIOR TO INSTALLATION TO BE USED AS SHOP DRAWINGS FOR REVIEW BY ALL CONSULTANTS.

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NAMETAGS ADDITIONAL REQUIREMENTS:

1. ALL RECEPTACLE OUTLETS ARE TO HAVE LAMICOID NAMETAG ON COVER PLATE INDICATING PANEL AND CIRCUIT DESIGNATION.

NOTE Q: B.C. HYDRO & B.C. TELEPHONE

1. B.C. TELEPHONE SERVICE DUCTS SHALL BE PVC TYPE DBII (ORANGE).
2. B.C. HYDRO RACEWAYS ARE TO BE CSA APPROVED EITHER FOR DIRECT BURIAL OR FOR CONCRETE ENCASEMENT AND SIZED AS PER DRAWING.
   A. PRIMARY RACEWAYS:
      a) TO KIOSKS – NO CONCRETE REQUIRED BUT ADDITIONAL SAND COVER IS REQUIRED.
      b) TO BUILDINGS (VAULTS, UNIT SUBSTATIONS, ETC.)
         – MUST BE CONCRETE ENCASED.
   B. SECONDARY RACEWAYS:
      a) EXTERNAL TO A BUILDING – NO CONCRETE REQUIRED UNLESS:
         i) UNDER A DRIVEWAY AND LESS THAN 36" BELOW DRIVEWAY GRADE.
         ii) UNDER GRADE PARKING SLABS WHICH ARE LESS THAN 4" THICK.
      b) WITHIN A BUILDING – MUST BE CONCRETE ENCASED.
3. ALL PRECAST PULL BOXES, KIOSK PADS, JUNCTION BOXES AND RACEWAYS SHOWN ON THE PROPERTY ARE TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND SUBJECT TO THE REQUIREMENT OF B.C. HYDRO REPRESENTATIVE AND B.C. TELEPHONE REPRESENTATIVE. RACEWAY INSTALLATION SHALL BE IN ACCORDANCE WITH CEC SECTION 6-300, 12-92 AND TABLE 53 c/w IDENTIFICATION MARKERS AND TO THE REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
4. KIOSK GROUNDING, HIGH VOLTAGE WIRING AND SECONDARY WIRING TO LINE SIDE OF MAIN SWITCH IS SUPPLIED AND INSTALLED BY B.C. HYDRO FORCES
5. KIOSK GROUNDING MATERIAL IS SUPPLIED BY B.C. HYDRO. E.C. TO RECEIVE AND INSTALL.
6. B.C. TELEPHONE CABLING IS SUPPLIED AND INSTALLED BY B.C. TELEPHONE FORCES.
7. ELECTRICAL CONTRACTOR TO CONFIRM HYDRO AND TELEPHONE SERVICE ENTRIES AND DISTRIBUTION. ARRANGE FOR ALL PERMITS AND INSPECTIONS BY BOTH ELECTRICAL AND UTILITY AUTHORITIES. B.C. HYDRO INSPECTION IS REQUIRED ON ALL SERVICE ENTRY DUCTS PRIOR TO COVER. CALL B.C. HYDRO CIVIL DEPARTMENT (328-8566).
8. ALL WORK TO BE DONE ACCORDING TO ELECTRICAL STANDARD ESS4 S2-01.01 TO ESS4 S2-01.14 INCLUSIVE & ESS4 F3-04.01 TO ESS4 F3-04.04 INCLUSIVE.
9. ALL RACEWAYS SHALL BE DRAINED WITH T-FITINGS AT THE LOW POINT AND AT ENTRY TO BUILDING.
10. ALL RACEWAYS SHALL BE SEALED WITH DUCT-SEAL AT ENTRY TO BUILDING.

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NOTE U: PRICING

1. B.C. HYDRO CHARGES BY OWNER.
2. B.C. TEL CHARGES BY OWNER.
3. REFER TO FIXTURE SCHEDULE FOR LIGHTING FIXTURES AND LAMPS.
   E.C. TO INCLUDE RECEIVING, UNCRATING & INSTALLATION OF ALL LIGHTING, FIXTURES, AND LAMPS IN BASE PRICE. E.C. SHALL ALSO INCLUDE IN HIS BASE PRICE FOR ADMINISTRATING THE FIXTURE PURCHASE AS DIRECTED BY THE OWNER.
4. REFER TO T.V. NOTES FOR T.V. CABLE CHARGES.
5. REFER TO TELEPHONE NOTES FOR TELEPHONE CABLE CHARGES.
6. ALL ELECTRIC HEATERS, KICK SPACE HEATERS, RELAYS, L.V. TRANSFORMERS AND LINE VOLTAGE THERMOSTATS AS REQUIRED TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. THE DESIGN IS BASED ON STANDARD DENSITY UNITS. THERMOSTATS TO BE PROVIDED IN EACH ROOM WHERE THERE IS A BASEBOARD HEATER.
7. REFER TO VERIFICATION OF FIRE PROTECTION OF EMERGENCY CONDUCTORS FOR ON SITE REVIEW CASH ALLOWANCE.

6519 010595

NOTE LL: TELEPHONE

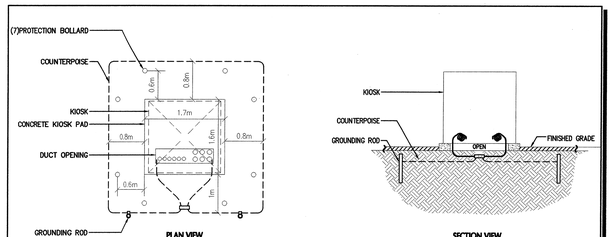
1. WIRE TO MANUFACTURER'S SPECIFICATIONS.
2. ALL TELEPHONE CONDUIT MUST BE PROVIDED WITH A WATERPROOF STRING.
3. PULL BOXES MUST BE PROVIDED IF THE LENGTH OF THE CONDUIT FOR INSIDE TELEPHONE WIRES EXCEEDS 100 FT. (30M) OR IF THERE ARE MORE THAN TWO 90° BENDS.
4. L.B. BENDS ARE NOT ACCEPTABLE.
5. FOR EXACT NUMBER OF OUTLETS SEE FLOOR PLANS.
6. CHARGES FOR THE SUPPLY AND INSTALLATION OF TELEPHONE CABLES AND FINISHING DEVICES, FOR EQUIPMENT BEYOND THE DEMARCATION POINT TO BE PAID BY OWNER.

6535 120795

NOTE E: MECHANICAL

1. GENERALLY THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELECTRICAL CONNECTIONS FROM STARTERS TO EQUIPMENT MOTORS, AND:
   A. ALL DISCONNECT SWITCHES OR LOCK-OUT STATION AT MOTOR LOCATIONS WHERE REQUIRED BY CODE.
   B. WIRING TO LINE VOLTAGE THERMOSTAT AND PRESSURE SWITCHES FOR FORCED FLOW UNIT AND UNIT HEATERS, WIRING TO PRESSURE SENSING ON FLOAT DEVICES FOR SUMP PUMPS, ETC., WIRING OF ELECTRIC HEATING ELEMENTS AND ASSOCIATED THERMOSTATS.
   C. WIRING TO ALTERNATORS FOR PUMPS WHERE SPECIFIED.
   D. PROVIDE 15 AMP. CIRCUIT WHERE REQUIRED FOR CONTROLS.
   E. SUPPLY AND INSTALLATION OF THE PROPER SIZE OVERLOAD HEATERS IN THE MAGNETIC STARTERS AND THERMAL OVERLOAD SWITCHES.
   F. WIRING AS REQUIRED FOR OPERATION OF MOTORIZED DAMPERS ON FIRE EMERGENCY CONDITIONS.
   G. COORDINATE WITH MECHANICAL INSTALLER AND PROVIDE A 1/2" CONDUIT c/w 3/18 PVC FROM WATER METER TO REMOTE READER ON EXTERIOR WALL.

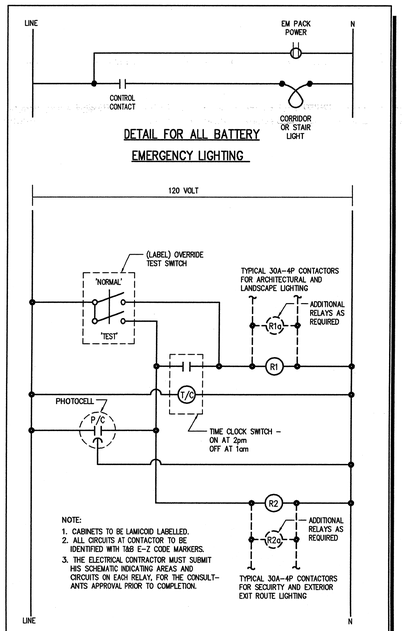
6505 110594



NOTES:
1. KIOSK PAD MUST BE 3'-0" FROM ANY FENCE, PROPERTY LINE OR NON COMBUSTIBLE BUILDING WITH NO OPENINGS (IE. NO WINDOWS OR DOORS).
2. KIOSK PAD MUST BE 10'-0" FROM ANY COMBUSTIBLE BUILDING WITH NO OPENINGS.
3. KIOSK PAD MUST BE 20'-0" FROM ANY BUILDING WITH OPENINGS.
4. COUNTERPOISE MUST BE 10'-0" FROM ANY SUBSURFACE CONDUCTIVE MATERIALS SUCH AS LIGHT BASES OR REINFORCED CONCRETE WALLS (EPOXY COATED REBAR IN REINFORCED WALLS IS THE EXCEPTION) AND 12" FROM ANY OTHER OBSTRUCTION.
5. THE COUNTERPOISE MUST BE PLACED INSIDE THE PROPERTY.
6. CONFIRM PAD CONFORMS TO LOCAL POWER AUTHORITY'S STANDARDS.
7. BOLLARDS MUST BE TO B.C. HYDRO REQUIREMENTS C/W PVC COVER.
8. ALL REBAR WITHIN 1.5M, MUST BE EPOXY COATED.

1 / E-1 KIOSK PAD SYSTEM DETAIL
SCALE: 1/4"=1'-0"

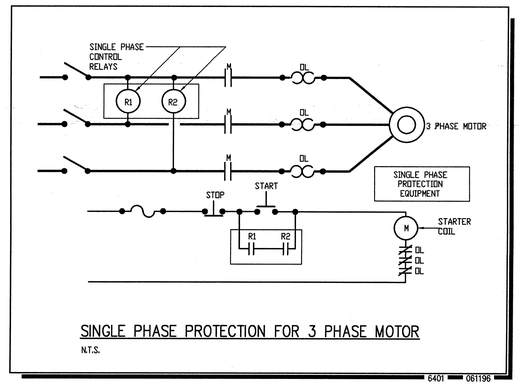
6468 061099



DETAIL FOR ALL BATTERY EMERGENCY LIGHTING

SCHEMATIC CONTROL DIAGRAM FOR HOUSE & COMMON AREA LIGHTING

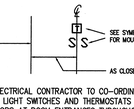
6426 070395



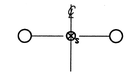
SINGLE PHASE PROTECTION FOR 3 PHASE MOTOR
N.T.S.

6401 061196

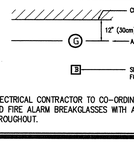
MOUNTING DETAILS N.T.S.



1. ELECTRICAL CONTRACTOR TO CO-ORDINATE THE LOCATION OF LIGHT SWITCHES AND THERMOSTATS ADJACENT TO DOORS AT ROOM ENTRANCES THROUGHOUT.



2. ELECTRICAL CONTRACTOR TO CO-ORDINATE SMOKE AND HEAT DETECTOR LOCATIONS WITH CEILING OUTLETS THROUGHOUT.



3. ELECTRICAL CONTRACTOR TO CO-ORDINATE FIRE ALARM BELLS AND FIRE ALARM BREAKGLASSES WITH ARCHITECTURAL DETAILS THROUGHOUT.

8407 130195

NO	DATE	REVISIONS
–	FEB. 19/01	ISSUED FOR BUILDING PERMIT

SEAL

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Avenue
North Vancouver

PROJECT TITLE

ELECTRICAL NOTES AND DETAILS

CONSULTANT
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"YEAR 2000 COMPLIANCE" AND CERTIFICATION IS REQUIRED OF ALL SUPPLIERS, CONTRACTORS AND SUBCONTRACTORS. REFER TO SPECIFICATION FOR DETAILS.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. J. WONG

RECEIVED FEB 23 2001 City of North Vancouver Development Services Department

E-8

SCALE	PROJECT
N.T.S.	8109
DRAWN: DRF/DM	DATE: FEB. 5, 2001

Plot Date: February 19, 2001 – 8109

NOTE AA:

GROUNDING TO BE PROVIDED AS REQUIRED BY SECTION 36 C.E.C.

GENERAL NOTES

1. CONFIRM METERING ARRANGEMENT WITH THE POWER SUPPLY AUTHORITY.
2. WIRE SIZED FOR RW90 COPPER.
3. QMQB BOARD OR GUTTER AND SWITCHES ACCEPTABLE AS SPACE AND/OR BUS BRACING ALLOWS.
4. ✓ DENOTES THAT FUSE TO HOLD LOCKED ROTOR CURRENT FOR 30 SECONDS.
5. ✳ DENOTES TIME DELAY BUSS FRSR FUSE FOR 600V DISTRIBUTIONS AND BUSS FRNR FUSE FOR 250V DISTRIBUTIONS.
6. FPL (MGFR-1200 (VERY INVERSE TIME) GROUND FAULT RELAY OR APPROVE EQUAL RELAY MUST BE OF A VERY INVERSE CHARACTERISTIC AND BE CAPABLE OF BEING SET AT 1200 AMPS PICKUP AT 1 SECOND. SETTING CLEAR THE FAULT AT 1000 AMPS.

7A. FUSE SPECIFICATION 120/208 120/240 VOLTS

1. MAINS AND FEEDERS

a) SERVICE ENTRANCE MAINS AND FEEDER FUSES OVER 800 AMPERES SHALL BE BUSSMANN HRC-L TYPE KRP-C WITH '0' RING SEAL BETWEEN THE END BELLS AND THE GLASS MELAMINE FUSE BARREL. TERMINALS OF FUSE TO BE GLASS PEENED.

b) ALL MAINS AND FEEDERS, 70 THROUGH 800 AMPERES, PROTECTING CIRCUIT BREAKERS, SHALL BE BUSSMANN HRC-T TYPE JJN. THE FUSES AND BREAKERS SHALL BE A CSA APPROVED SERIES TESTED COMBINATION. LABELING OF THE EQUIPMENT MUST BE APPLIED PER THE CANADIAN ELECTRICAL CODE RULE #14-014.

c) ALL OTHER MAINS AND FEEDERS, 15 AMPS THROUGH 600 AMPS, OTHER THAN THOSE PROTECTING CIRCUIT BREAKERS, SHALL BE HRC-J TIME-DELAY TYPE LPJ-amps SP.

d) ALL FUSE SHALL BE OF THE SAME MANUFACTURER TO FACILITATE SELECTIVE COORDINATION OF THE SYSTEM.

2. MOTORS

ALL MOTORS SHALL BE PROTECTED BY BUSSMANN HRC-J TIME-DELAY TYPE LPJ-amps SP HRC J FUSES. THESE FUSES SHALL BE SIZED AT 150% OF MOTOR FULL LOAD AMPERES FOR STANDARD DUTY, AND 175% FOR HEAVY DUTY. FUSES SHALL PROVIDE "NO DAMAGE" PROTECTION TO THE MOTOR STARTER FOR ALL SHORT CIRCUIT CURRENTS UP TO 100,00 AMPERES RMS.

3. TRANSFORMER

THE PRIMARY FUSES PROTECTING 600 TO 120/208 VOLT TRANSFORMERS, SHALL BE BUSSMANN HRC1-R, DUAL ELEMENT, TIME -DELAY TYPE FRS-R FUSES. THE FUSES SHALL BE SIZED AT 125% OF THE TRANSFORMER FULL LOAD CURRENT IN ACCORDANCE WITH THE CEC RULE 26-256. THE FUSE SHALL BE CAPABLE OF HANDLING 15 TIMES THE TRANSFORMER FULL LOAD CURRENT FOR 0.1 SECONDS.

7B. FUSE SPECIFICATION 600/347 VOLTS

1. MAINS AND FEEDERS

a) SERVICE ENTRANCE MAINS AND FEEDER FUSES OVER 600 AMPERES SHALL BE BUSSMANN HRC-L TYPE KRP-C WITH '0' RING SEAL BETWEEN THE END BELLS AND THE GLASS MELAMINE FUSE BARREL. TERMINALS OF FUSE TO BE GLASS PEENED.

b) ALL MAINS AND FEEDERS, 15 THROUGH 400 AMPERES, PROTECTING CIRCUIT BREAKERS, SHALL BE BUSSMANN HRC-J TYPE LPJ. THE FUSES AND BREAKERS SHALL BE A CSA APPROVED SERIES TESTED COMBINATION. LABELING OF THE EQUIPMENT MUST BE APPLIED PER THE CANADIAN ELECTRICAL CODE RULE #14-014.

c) ALL OTHER MAINS AND FEEDERS, 15 AMPS THROUGH 600 AMPS, OTHER THAN THOSE PROTECTING CIRCUIT BREAKERS, SHALL BE HRC-J TIME-DELAY TYPE LPJ-amps SP.

2. MOTORS

ALL MOTORS SHALL BE PROTECTED BY BUSSMANN HRC-J TIME-DELAY TYPE LPJ-amps SP HRC J FUSES. THESE FUSES SHALL BE SIZED AT 150% OF MOTOR FULL LOAD AMPERES FOR STANDARD DUTY, AND 175% FOR HEAVY DUTY. FUSES SHALL PROVIDE "NO DAMAGE" PROTECTION TO THE MOTOR STARTER FOR ALL SHORT CIRCUIT CURRENTS UP TO 100,00 AMPERES RMS.

THE PRIMARY FUSES PROTECTING 600 TO 120/208 VOLT, OR 600 TO 120/240 VOLT TRANSFORMERS, SHALL BE BUSSMANN TYPE HRC1-R, DUAL ELEMENT, TIME DELAY TYPE FRS-R FUSES. THE FUSES SHALL BE SIZED AT 125% OF THE TRANSFORMER FULL LOAD CURRENT IN ACCORDANCE WITH THE CEC RULE 26-256. THE FUSE SHALL BE CAPABLE OF HANDLING 20 TIMES THE TRANSFORMER FULL LOAD CURRENT FOR 0.1 SECONDS.

7C. GROUND FAULT RELAYS

__ 1. GROUND FAULT RELAYS (One level)

THE MAIN GROUND FAULT RELAY SHALL BE FPL TYPE MGFR-1200 INVERSE TIME BAND SET AT 1200 AMPERES ONE SECOND INVERSE TIME. ALL FEEDERS OVER 600 AMPERES SHALL BE EQUIPPED WITH GROUND FAULT RELAYS TYPE FPL MGFR-1200 SET AT 1200 AMPERES 0.1 SECOND INVERSE TIME BAND. ALL FEEDER SWITCHES 600 AMP AND SMALLER SHALL BE EQUIPPED WITH BUSSMANN FUSES TYPE LPJ WHICH MEET THE GROUND FAULT REQUIREMENTS OF THE CEC RULE 14-102-(2).

GROUND FAULT RELAYS THAT ARE AN INTEGRAL PART OF OVER CURRENT RELAYS WILL NOT BE ACCEPTABLE BECAUSE OF THEIR INABILITY TO SELECTIVELY COORDINATE WITH DOWN STREAM PROTECTIVE DEVICES.

PROVIDE ZERO SEQUENCE CURRENT TRANSFORMERS ENCIRCLING ALL PHASES AND NEUTRAL CONDUCTORS. GROUND STRAP CURRENT TRANSFORMERS ARE NOT ACCEPTABLE AS UNDER CODE THEY RESTRICT THE MAXIMUM RELAY SETTING TO 1000 AMPERES.

2. GROUND FAULT RELAYS (Two level)

THE MAIN GROUND FAULT RELAY SHALL BE FPL TYPE MGFR-1200 (VERY INVERSE TIME) SET AT 1200 AMPERES ONE SECOND INVERSE TIME BAND. FEEDERS GROUND FAULT RELAYS, FPL TYPE MGFR-1200 SET AT 1200 AMPERES 0.1 SECOND INVERSE TIME BAND, SHALL BE PROVIDED FOR ALL FEEDER SWITCHES OVER 600 AMPERES. ALL FEEDER FUSES SHALL BE BUSSMANN TYPE JJN OR LPJ AS SHOWN ON THE DRAWINGS.

GROUND FAULT RELAYS THAT ARE AN INTEGRAL PART OF OVER CURRENT RELAYS WILL NOT BE ACCEPTABLE BECAUSE OF THEIR INABILITY TO SELECTIVELY COORDINATE WITH DOWN STREAM PROTECTIVE DEVICES.

PROVIDE ZERO SEQUENCE CURRENT TRANSFORMERS ENCIRCLING ALL PHASES AND NEUTRAL CONDUCTORS. GROUND STRAP CURRENT TRANSFORMERS ARE NOT ACCEPTABLE AS UNDER CODE THEY RESTRICT THE MAXIMUM RELAY SETTING TO 1000 AMPERES.

7D. ONLY "APPROVED" SERIES RATED COMBINATION TO BE USED.

8. ANY REQUEST FOR USE OF ALTERNATE PROTECTION DEVICES SHALL BE ACCOMPANIED BY A FULL COORDINATION STUDY AND FAULT CURRENT CALCULATION ONE FULL CALENDAR WEEK PRIOR TO CLOSE OF TENDER FOR REVIEW BY THE ENGINEER.
9. MINIMUM TRANSFORMER IMPEDANCE TO BE 6%.
10. (M) – PROVIDE CABINET C/W REMOVABLE SIDE FOR FUTURE METERING AND LAMICOID LABEL TO READ "CHECK METER PROVISIONS".
11. (FR) – INDICATES CABLES OVERSIZED TO SUSTAIN SHORT TERM TEMPERATURE RISE.
12. PROVIDE SPARE FUSE CABINET AND THREE SPARE FOR EACH TYPE AND SIZE. (SEE SECTION 16163.2.5)
13. THE FAULT LIMITATIONS FOR SERIES RATED COMBINATIONS MUST COMPLY WITH CEC 14-014.

BASE FEEDER SCHEDULE

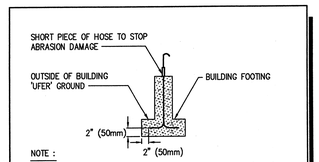
1. EXCEPT AS NOTED ON THE ONE-LINE THE FOLLOWING BASE FEEDERS SHOULD BE PROVIDED:

FUSE/BREAKER SIZE:	CONDUIT & WIRE SIZE:
30A	3/4" - 4#10 RW90
40A	3/4" - 4#8 RW90
50/60A	1 1/4" - 4#6 RW90
70/80A	1 1/2" - 4#4 RW90
100A	1 1/2" - 4#3 RW90
125A	2" - 4#1 RW90
150A	2" - 4#1/0 RW90
175A	2 1/2" - 4#2/0 RW90
200A	2 1/2" - 4#3/0 RW90
250A	3" - 4#250MCM RW90
300A	2 x 2" - 4#1/0 RW90
400A	2 x 2 1/2" - 4#3/0 RW90
500A	2 x 3" - 4#250MCM RW90
600A	2 x 3" - 4#300MCM RW90
700A	2 x 3 1/2" - 4#350MCM RW90
800A	2 x 4" - 4#500MCM RW90
1000A	3 x 3 1/2" - 4#350MCM RW90
1200A	3 x 4" - 4#500MCM RW90
1400A	4 x 4" - 4#400MCM RW90
1600A	4 x 4" - 4#500MCM RW90
2000A	6 x 4" - 4#500MCM RW90

2. CONDUCTOR SIZE FOR HYDRAULIC ELEVATORS TO BE 200% OF THE LISTED C.E.C., UNLESS OTHERWISE NOTED.

FEEDERS AND DISTANCES

DISTANCE	FEEDER
0.0-75 FT	BASE
75-150 FT	INCREASE ONE SIZE FROM BASE
150-200 FT	INCREASE TWO SIZES FROM BASE



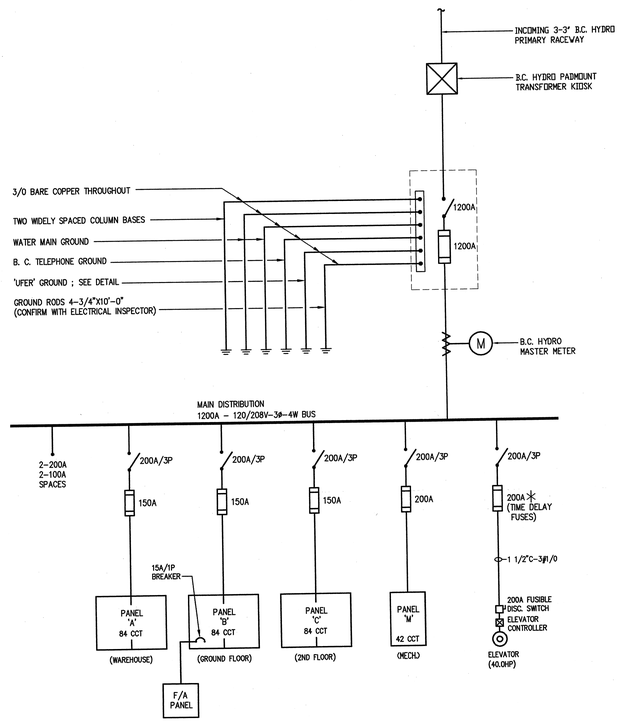
NOTE :

PROVIDE AND INSTALL 75'-0" (23M) OF 3/0 BARE COPPER 'UFER' GROUND IN THE BUILDING FOOTINGS. COMPRESSION CRIMP THE CONDUCTORS TO RE-BAR IN THE FOOTINGS OF EVERY 20'-0" (6M), EXTEND 'UFER' GROUND PIGTAILS TO MAIN SWITCH.

UFER GROUNDING DETAIL

N.T.S.

6403 060700



ONE LINE DIAGRAM

THE GENERAL CONTRACTOR SHALL REVIEW THE DOCUMENTS FOR CONFORMANCE CODES AND BY-LAWS AND SHALL ADVISE THE ARCHITECT OF ANY DISCREPANCIES HE MAY NOTE. THE GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE DESIGNER. DO NOT SCALE THE DRAWINGS. THESE DRAWINGS ARE INTENDED FOR ARCHITECTURAL INFORMATION ONLY. THE CONTRACTOR AND ANY PERSON USING THESE DRAWINGS FOR INFORMATION ARE ADVISED TO REFER TO CIVIL, STRUCTURAL, MECHANICAL, SPRINKLER, ELECTRICAL AND INTERIOR DESIGN DISCIPLINE DRAWINGS FOR INFORMATION RELATING TO THOSE DISCIPLINES.

NO	DATE	REVISIONS
–	FEB. 19/01	ISSUED FOR BUILDING PERMIT

SEAL

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Avenue North Vancouver

PROJECT TITLE

ONE LINE DIAGRAM

CONSULTANT

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PROFESSIONAL ENGINEER – PROVINCE OF B.C. – R. J. WONG – BRITISH COLUMBIA

RECEIVED FEB 23 2001 City of North Vancouver Dev.&permit Services Department

E-9

SCALE	PROJECT
N.T.S.	8109
DRAWN	DATE
DRF/DM	FEB. 5, 2001

Plot Date: February 19, 2001 – 8109

SYMBOL SCHEDULE

NOTES:

- BX AND NON METALLIC CABLE MAY BE USED WHERE PERMITTED BY CODE
- ALL WIRE DESIGNATED SHALL BE COPPER ONLY.
- ALL CONDUCTORS SHALL BE #12 UNLESS OTHERWISE NOTED.
- ALL 15 AMP CIRCUITS OVER 100'-0" (30 METERS) TO BE #10 THROUGHOUT UNLESS OTHERWISE NOTED.
- MOUNTING HEIGHTS SHOWN ON DRAWINGS SUPERCEDE MOUNTING HEIGHTS SHOWN ON SYMBOL SCHEDULE. ELECTRICAL CONTRACTOR TO VERIFY MOUNTING HEIGHTS WITH SITE CONDITIONS.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE VAPOUR BARRIERS AT ALL OUTLETS IN EXTERIOR WALLS & CEILINGS THAT HAVE INSULATION AND BARRIERS BY FITTING THE OUTLETS WITH PROTECTOR PLATES AND OUTLET BOX BARRIERS, AS MANUFACTURED BY IBERVILLE OR HUBBELL. THE PROTECTOR PLATES SHALL SUPPORT THE BOX BARRIERS TO ENSURE A GOOD SEAL.

SYMBOL	DESCRIPTION	MOUNTING (TO ℄)
○	OUTLET BOX OR CONDULET	
⊖	FLUSH DUPLEX RECEPTACLE	UP 1'-0" (305mm)
⊖	FLUSH DUPLEX RECEPTACLE – PROVIDE GROUND FAULT PROTECTION	UP 1'-0" (305mm)
●	FLUSH DUPLEX RECEPTACLE – TOP OUTLET ON SWITCHES	UP 1'-0" (305mm)
⊕	MICROWAVE OUTLET – SEE DRAWINGS FOR MOUNTING	VARIES
⊖	ISOLATED GROUND RECEPTACLE – HUBBELL IG 5262	UP 1'-0" (305mm)
⊜	SPECIAL OUTLET – STRAIGHT BLADE	UP 1'-0" (305mm)
◐	SPECIAL OUTLET – TWISTLOCK TYPE	VARIES
◐	SPECIAL OUTLET – TWISTLOCK TYPE	VARIES
⊖ WPC	WEATHERPROOF DUPLEX RECEPTACLE ON GFI CIRCUIT C/W TAYMAC #10310 COVER PLATE	VARIES
⌖	TWO DUPLEX RECEPTACLES IN DOUBLE GANG BOX – ONE DUPLEX RED OR GREY IN COLOUR FOR COMPUTER POWER. – ONE DUPLEX WHITE IN COLOUR FOR GENERAL POWER.	VARIES
⊘	DUPLEX RECEPTACLE IN FLOOR BOX – T&B 1900 SERIES C/W 202 COVER	FLUSH IN FLOOR
I.G.	DENOTES ISOLATED GROUND	
G.F.I.	DENOTES GROUND FAULT INTERRUPT	
W.P.	DENOTES WEATHER PROOF	
↗	INDICATES CONDUIT HOME RUN TO DESIGNATED PANEL	
///	INDICATES NUMBER OF CONDUCTORS IN CONDUIT	
– – –●	INDICATES CONDUIT IN OR NEAR FLOOR TURNED UP	
—✕	INDICATES CONDUIT IN OR NEAR CEILING TURNED DOWN	
▨	PANEL BOARD	AS NOTED
▼	TELEPHONE OUTLET WITH 1" (25mm) CONDUIT STUB TO CEILING SPACE	
▽	TELEVISION OUTLET WITH 1"C STUB TO CEILING SPACE	
▼	DATA OUTLET – (1) 4"x4"x2 1/8" BOX C/W IBERVILLE 52-C-49 1/2 MUD RING ABD 1" CONDUIT TO 12" ABOVE FINISHED CEILING C/W PLASTIC BUSHING AND MUD RING	UP 1'-0" (305mm)
◀◁	COMBINED DATA/TEL OUTLET (1) 4"x4"x2 1/8" BOX C/W IBERVILLE 52-C-49 1/2 MUD RING AND 1" CONDUIT TO 12" ABOVE FINISHED CEILING. PROVIDE PULL STRING AND PLASTIC BUSHING. JACKS & FACEPLATE AS SPECIFIED.	UP 1'-0" (305mm)
▼P	PUBLIC TELEPHONE OUTLET – 1" (25mm) CONDUIT TO EACH OUTLET (WIRING BY TELEPHONE CO.)	UP 4'-0" (1220mm)
⊛	TELEPHONE OUTLET IN FLOOR BOX – T & B 1900 SERIES C/W 204 COVER	FLUSH IN FLOOR
○	CEILING MOUNTED INCANDESCENT/PL/H.I.D. FIXTURE	CEILING
|○	WALL MOUNTED INCANDESCENT/PL/H.I.D. FIXTURE	WALL
▨	CEILING MOUNTED INCANDESCENT/PL FIXTURE ON 24 HOURS (NIGHT LIGHT)	AS NOTED
▭	SURFACE MOUNTED FLUORESCENT FIXTURE	AS NOTED
▭	RECESSED MOUNTED FLUORESCENT FIXTURE	AS NOTED
▨	FLUORESCENT FIXTURE ON 24 HOURS (NIGHT LIGHT)	
	TRACK LIGHTING (HEADS AS SHOWN)	AS NOTED
T/C	TIME CLOCK	
S	SINGLE POLE SWITCH	UP 4'-2" (1270mm) TO CENTRE
S3	THREE WAY SWITCH	UP 4'-2" (1270mm) TO CENTRE
S4	FOUR WAY SWITCH	UP 4'-2" (1270mm) TO CENTRE
SD	DIMMER SWITCH C/W PRESET SWITCH AND SLIDE CONTROL	UP 4'-2" (1270mm) TO CENTRE
SU	MANUAL MOTOR STARTER WITH PILOT LIGHT	UP 4'-2" (1270mm) TO CENTRE
SK	KEY SWITCH – G.E. 5911 OL	UP 4'-2" (1270mm) TO CENTRE
SP	SINGLE POLE SWITCH WITH PILOT LIGHT IN TWO GANG BOX	UP 4'-2" (1270mm) TO CENTRE
SR	REMOTE CONTROL SWITCH – C.G.E. R.F.S. – 6	UP 4'-2" (1270mm) TO CENTRE
ST	TIMER SWITCH – INTERMATIC #FD30M	UP 4'-2" (1270mm) TO CENTRE
SV	MANUAL VARIABLE SPEED CONTROL	UP 4'-2" (1270mm) TO CENTRE
SLV	LOW VOLTAGE SWITCH	UP 4'-2" (1270mm) TO CENTRE
SO	OCCUPANCY SENSOR	UP 4'-2" (1270mm) TO CENTRE
SPS	POWER SWITCH FOR SECURITY MONITOR	
⊡	DOOR BUTTON	
◧	DOOR JAMB SWITCH – EDWARDS #502-120V-6A	HINGE SIDE
◗	DUAL TECHNOLOGY MOTION DETECTOR (PIR)	
D	DOOR RELEASE – CONNECT TO INTERCOM AND BUILDING F.A. SYSTEM	
M	SECURITY KEY PAD	UP 4'-2" (1270mm) TO CENTRE
K	SECURITY CARD READER	UP 4'-2" (1270mm) TO CENTRE
A	ALARM CONTACT – DOOR/WINDOW; MOUNT IN JAMB	VARIES
P	PUSH BUTTON DOOR RELEASE	UP 4'-2" (1270mm) TO CENTRE
EX	EXIT LIGHT	
	EMERGENCY LIGHTING UNIT – EXIDE B 200 SERIES C/W HALOGEN LAMP. NUMBER OF HEADS AS SHOWN ON DRAWING. SIZE BATTERY PACK TO SUIT NUMBER OF HEADS CONNECTED. EQUAL TO: LUMACELL; DUAL-LITE; EMERGI-LITE; READY-LITE LD24-60; LITHONIA TITAN SERIES	HIGH AS POSSIBLE. COORDINATE ON SITE WITH SITE CONDITIONS FOR SIGHT LINE VISIBILITY
	REMOTE EMERGENCY LIGHTING HEAD – 12W	
B○	FIRE ALARM BREAKGLASS [EDWARDS 270-SPO] WITH FIRE ALARM GONG ABOVE [EDWARDS 10" (254mm)]	BREAKGLASS: UP 4'-2" (1270mm) GONG: DOWN 1'-0" (305mm)
B	FIRE ALARM BREAKGLASS – EDWARDS 270-SPO	
G	FIRE ALARM GONG – EDWARDS 10" (254mm)	
Ⓑ	MINI-HORN SIGNAL C/W SIGNAL SILENCE: MODEL 683-1C & 683-1CR.	DOWN 1'-0" (305mm) FLUSH
Ⓖ	FIRE ALARM BELL & GRILL – EDWARDS 6" (152mm)	DOWN 1'-0" (305mm) FLUSH
⊗	AUTOMATIC HEAT DETECTOR – EDWARDS 281-A	CEILING OR WALL
⊗F	AUTOMATIC HEAT DETECTOR – EDWARDS 284-A	CEILING
⊗S	AUTOMATIC SMOKE DETECTOR – EDWARDS 6250 C / 6251 C-001	CEILING
	SECURITY CAMERA WITH 1/2"C TO SECURIY PANEL IN COMM. ROOM	AS NOTED
◎	MOTOR	
	DISCONNECT SWITCH	
⊠	MAGNETIC MOTOR STARTER C/W PILOT LIGHT AND HAND/OFF/AUTO BUTTON	
M	MOTORIZED DAMPER	VARIES
T	TAMPER SWITCH	VARIES
F	FLOW SWITCH	VARIES
	KICKSPACE HEATER	
	ELECTRIC BASEBOARD HEATER – STANDARD DENSITY – WHITE	SURFACE
T	THERMOSTAT – COLOUR TO MATCH SWITCH PLATE – THERMOSTAT TO READ °C	UP 5'-0" (1525mm)
H	HUMIDISTAT TO OVERRIDE FAN SWITCH – SUPPLIED BY DIV. 15, COORDINATE WITH DIV. 15	UP 5'-0" (1525mm)

MECHANICAL SCHEDULE

NOTES

A. CONFIRM FINAL LOCATION AND POSITION OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN

B. CONFER WITH MECHANICAL PLANS AND SPECIFICATION TO COORDINATE AND PROVIDE FOR ALL FIRE MEASURE CONTROLS AND MONITORING AS REQUIRED AT THE FIRE ALARM CONTROL CENTRE.

C. ALL MOTORS SHALL BE FITTED WITH A DISCONNECT SWITCH BY DIVISION 16.

D. ALL CONDUCTORS SHALL BE #12 RW90 AND LARGER AS REQUIRED BY MCA & VOLTAGE DROP.

E. ELECTRICAL CONTRACTOR TO REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS AND:
  a) PROVIDE OUTLETS AS REQUIRED FOR 'HEAT TRACE'.
  b) PROVIDE 'WIRING' AND CONNECTION AS REQUIRED FOR MECHANICAL EQUIPMENT INCLUDING DAMPER CONTROL.

F. ALL PARKADE FANS SHALL BE PROVIDED WITH LOCKABLE DISCONNECT SWITCHES.

G. ALL THREE PHASE MOTOR STARTERS TO HAVE SINGLE PHASE PROTECTION.

REMARKS

1. PROVIDE A SEPARATE EM CIRCUIT FOR ALARM CONTROL(S) C/W CONNECTIONS TO FLOATS AND REMOTE ALARM IN THE LOBBY.
2. CONTROLLED BY REDUCED VOLTAGE STARTER AS SUPPLIED BY MECH. (DIV. 15) & INSTALLED BY ELEC. (DIV. 16).
3. PROVIDE G.F.I. PROTECTION TO CODE.
4. PROVIDE AND INSTALL A LOCK AND KEY AT THE DISCONNECT SWITCH.
5. PROVIDE A SMOKE DETECTOR ZONE IN THE FIRE ALARM TO SHUT DOWN FAN WHEN SMOKE IS DETECTED.
6. INTERLOCK WIRING TO DDC BY DIV. 15.
7. CONTROL WIRING BY DIV. 15.

E = COMPLETE INSTALLATION BY DIV. 16

M = COMPLETE INSTALLATION BY DIV. 15

C = SUPPLIED + MOUNTED BY DIV. 15 AND WIRED BY DIV. 16

B = CONDUIT BY DIV. 16 AND WIRING BY DIV. 15

											Equipment				Control																
											MAGNETIC MOTOR STARTER C\ H.O.A. CONTROL	MAGNETIC STARTER	MANUAL MOTOR STARTER	CONTROLLER TO BE SUPPLIED & MOUNTED BY DIV. 15 WIRING & DISCONNECTS PROVIDED BY DIV. 16	CONTROLLED BY C.O. DETECTOR	INTERLOCK WITH DAMPERS	CONNECT TO MANUAL SWITCH	CONNECT TO REVERSE ACTING THERMOSTAT	CONTROLLED BY PRESSURE SWITCH	CONTROLLED BY THERMOSTAT (SUPPLIED BY OTHERS)	CONNECT TO VARIABLE SPEED SWITCH (BY OTHERS)	CONNECT TO HUMIDISTAT OVERRIDE CONTROL	CONNECT TO FLOAT CONTROLS	TO RUN CONTINUOUSLY	CONNECT TO OVERHEAD DOOR SWITCH	CONTROLLED BY TIME CLOCK (SUPPLIED BY OTHERS)	CONTROLLED BY A KEY OPERATED SWITCH CONFIRM FINAL LOCATION PRIOR TO ROUGH-IN	REFER TO MECHANICAL PLANS & SPECS FOR FIRE ALARM CONTROL INTERFACE		
ITEM	SERVICE	HP	KW	VOLT	Ø	FLA	MCA	CIRCUIT	FEEDER	BREAKER	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	REMARKS	LOCATION
F-1	GROUND FL. WASHRM EXHAUST FAN	1/4		120	1			–		15A/1P										C										–
F-2	3RD FL. WASHROOM EXHAUST FAN		0.04	120	1			–		15A/1P							C													–
F-3	BOARDROOM TRANSFER FAN		0.08	120	1			–		15A/1P																				–
F-4	MEETING ROOM TRANSFER FAN		0.08	120	1			–		15A/1P																				–
F-5	ELEV. MACHINE RM EXHAUST FAN		0.11	120	1			–		15A/1P								C												–
										15A/1P																				–
UH-1	GAS FIRED UNIT HEATER		0.28	120	1			–		15A/1P										C										WAREHOUSE
UH-1	GAS FIRED UNIT HEATER		0.28	120	1			–		15A/1P										C										WAREHOUSE
UH-1	GAS FIRED UNIT HEATER		0.28	120	1			–		15A/1P										C										WAREHOUSE
UH-1	GAS FIRED UNIT HEATER		0.28	120	1			–		15A/1P										C										WAREHOUSE
UH-1	GAS FIRED UNIT HEATER		0.28	120	1			–		15A/1P										C										WAREHOUSE
UH-1	GAS FIRED UNIT HEATER		0.28	120	1			–		15A/1P										C										WAREHOUSE
CF-1	CEILING FANS		0.08	120	1			–		15A/1P																				WAREHOUSE

FIXTURE SCHEDULE

NOTES

1. LIGHTING IS DESIGNED TO COMPLY WITH ENERGY CODE. THE CONTRACTOR SHALL NOT CHANGE LIGHTING WITHOUT ENGINEERS APPROVAL.
2. PAKRKADE LIGHTING LOCATED IN SPRAY-ON INSULATION SHALL BE SET DOWN TO CLEAR THE INSULATION.
3. LIGHTING IN MECHANICAL ROOMS TO BE SUSPENDED AS NECESSARY TO CLEAR MECHANICAL LINES AND DUCTS.
4. LIGHTING IN SPRINKLER MECHANICAL ROOMS AND ELECTRICAL ROOMS SHALL BE ON EM POWER.
5. SURFACE MOUNTED WALL LIGHTS SHALL NOT BE SET LOWER THAN 6'-8" (205mm) TO CENTER OF OUTLET BOX WITHOUT SPECIAL PERMISSION FROM ELECTRICAL INSPECTOR.
6. ALL RECESSED LIGHTS LOCATED IN INSULATED CEILINGS MUST BE SUPPLIED C/W I.C. RATED HOUSINGS.
7. ANY CONTRACTOR PROPOSED ALTERNATE LIGHT FIXTURE IN LIEU OF SPECIFIED SHALL BE SUBJECT OF APPROVAL BY THE DESIGNER AND ENGINEER. SUBMIT A BREAKDOWN OF COST SHOWING THE NET DIFFERENCE TO THE DEDUCTED OR ADDED TO THE TENDER PRICE IF ACCEPTED. INCLUDE FOR AND ASSUME RESPONSIBILITY FOR ANY ADDITIONAL COST INCURRED BY OTHER DISCIPLINES AND TRADES, RESULTING FROM SUBSTITUTION AS WELL AS LIGHTING SYSTEM PERFORMANCE.

TYPE	DESCRIPTION	LOCATION	LAMP	MOUNTING
1	LITHONIA THR-400M	WAREHOUSE	1-400W M.H.	SUSPENDED
2	LITHONIA THR-250M	WAREHOUSE – KITCHENETTE, OFFICE	1-250W M.H.	SURFACE/CEILING
3	PACE SMVR-100M	EXTERIOR	1-100W M.H.	SURFACE/CEILING
4	LITHONIA THP-400M	SHIPPING/RECEIVING	1-400W M.H.	SUSPENDED
5	LITHONIA LP6F-6LD3	SHOWER ROOM	1-PL26 TRT	RECESSED/CEILING
6	LITHONIA AFV-8AR-1/32TRT	CORRIDOR	1-PL32 TRT	RECESSED/CEILING
7	–	H/C WASHROOM	2-60W	WALL MUNTED
8	LITHONIA S132-GEB	STAFF ROOM 202	1-F32 T8 3500K	SURFACE MTD IN VALENCE
9	PACE SCWM-32TRT	EXTERIOR LIGHTING	1-PL32 TRT	SURFACE/WALL
10	PACE SCWM-100M	EXTERIOR LIGHTING	1-100W M.H.	SURFACE/WALL
11	PACE SCWM-70M	EXTERIOR LIGHTING	1-70W M.H.	SURFACE/WALL
12	CANLET GFWF18-H1-D-GHC	ELEVATOR PIT	1-PL18 TRT	SURFACE/WALL
13	LITHONIA PRIMA SERIES	OFFICES	2-F32 T8 3500K	SUSPENDED INDIRECT
14	LITHONIA GT232	FIRST AID ROOM	2-F32 T8 3500K	RECESSED/CEILING
15	LITHONIA P232-GEB	WASHROOM	2-F32 T8 3500K	SURFACE MTD IN VALENCE
16	–	MEZZANINE	2-F32 T8 3500K	SUSPENDED
17	LITHONIA P232-GEB	ELEV. MACH. ROOM	2-F32 T8 3500K	SURFACE/CEILING
18	–	ROOF DECK	–	MOUNTED ON GROUND

THE GENERAL CONTRACTOR SHALL REVIEW THE DOCUMENTS FOR CONFORMANCE CODES AND BY-LAWS AND SHALL ADVISE THE ARCHITECT OF ANY DISCREPANCIES HE MAY NOTE. THE GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE DESIGNER.
DO NOT SCALE THE DRAWINGS.
THESE DRAWINGS ARE INTENDED FOR ARCHITECTURAL INFORMATION ONLY. THE CONTRACTOR AND ANY PERSON USING THESE DRAWINGS FOR INFORMATION ARE ADVISED TO REFER TO CIVIL, STRUCTURAL, MECHANICAL, SPRINKLER, ELECTRICAL AND INTERIOR DESIGN DISCIPLINE DRAWINGS FOR INFORMATION RELATING TO THOSE DISCIPLINES.

NO	DATE	REVISIONS
–	FEB. 12/01	ISSUED FOR BUILDING PERMIT

SEAL

Maxem Holdings Inc.

Office / Warehouse

758 Harbourside Avenue
North Vancouver

PROJECT TITLE

SCHEDULES

CONSULTANT

ARNOLD NEMETZ & ASSOCIATES LTD.
2009 WEST 4TH AVENUE, VANCOUVER, B.C. CANADA V6J 1N3
TEL: (604) 736-6562 FAX: (604) 736-9805
E-MAIL: ENGINEERS@NEMETZ.COM

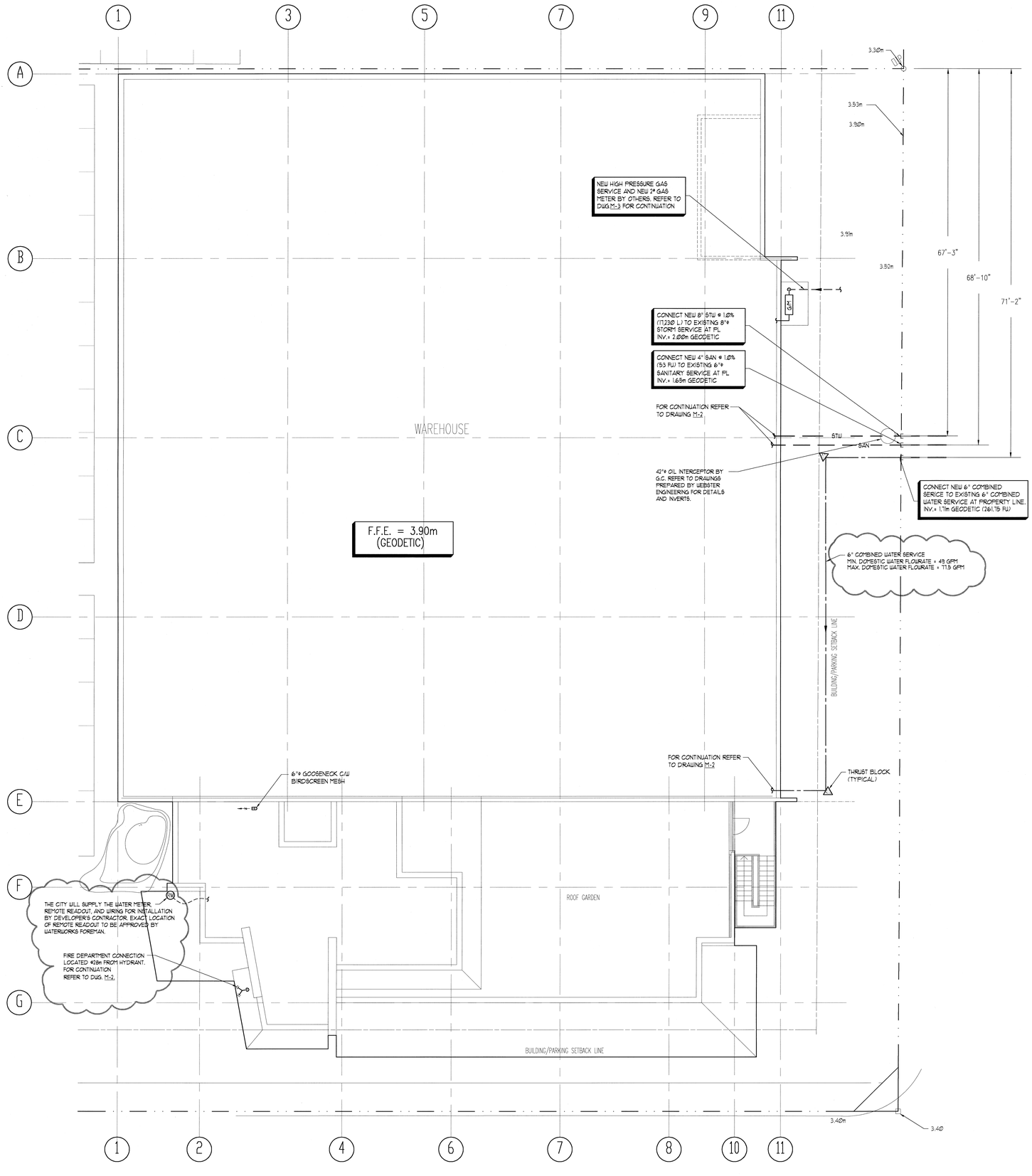
"YEAR 2000 COMPLIANCE" AND CERTIFICATION IS REQUIRED OF ALL SUPPLIERS, CONTRACTORS AND SUBCONTRACTORS. REFER TO SPECIFICATION FOR DETAILS.

R. J. WONG

E-10

SCALE	PROJECT
N.T.S.	8109
DRAWN	DATE
DRF/DM	FEB. 5, 2001

Plot Date: February 19, 2001 – 8109



SITE PLAN – MECHANICAL

SCALE: 1/8" = 1'-0"

BARSCALE: 1/8" = 1'-0"

MECHANICAL LEGEND

SANITARY DRAIN	SAN	SANITARY DRAIN – BURIED	SAN
STORM DRAIN	STW	STORM DRAIN – BURIED	STW
VENT PIPE	V	INDIRECT DRAIN	D
COLD WATER		HOT WATER	
HEAT TRACE		HOT WATER RECIRC.	
GAS LINE	G	HOT WATER RECIRC.	
CLEANOUT	CO.	HOSE BIBB	H.B.
FLOOR DRAIN		ROOF DRAIN	
PLUMBING FIXTYRE TAG	L-1	HUB DRAIN	
SPRINKLER – UPRIGHT		SPRINKLER – PENDANT	
SPRINKLER – SIDEWALL		SPRINKLER – DRY SIDEWALL	
SPRINKLER SUPPLY – WET	SPR	SPRINKLER SUPPLY – DRY	DRY
FIRE PROTECTION SUPPLY	F	SIAMESE CONNECTIONS	
FIRE HOSE CABINET		FIRE EXTINGUISHER / RECESSED	
ZONE CONTROL VALVE	ZCV# #	FIRE HYDRANT	
ELBOW RISING / DROPPING		P & T RELIEF VALVE	
SHUT-OFF VALVE		BALANCING VALVE	
CHECK VALVE		PRESSURE REDUCING VALVE	
UNION OR FLANGE		FLEXIBLE CONNECTION	
STRAINER -Y OR BASKET		PUMP	
AUTOMATIC AIR VENT		ANCHOR	
CAP OR PLUG		PRESSURE GAUGE	
THERMOSTAT	T	SPEED SWITCH	S
THERMOMETER		WATER METER	W / M
SUPPLY DUCT (UP & DOWN)		RETURN DUCT (UP & DOWN)	
EXHAUST DUCT (UP & DOWN)		O.A. DUCT (UP & DOWN)	
ROUND DUCT (UP & DOWN)		FLEXIBLE DUCT	
MANUAL DAMPER		SPLITTER	
MOTORIZED DAMPER		MOTORIZED DAMPER (2 POSTION)	
SUPPLY OUTLET		DIFFUSER	
RETURN OR EXHAUST INLET		RETURN OR EXHAUST INLET	
DOOR GRILLE – UNDERCUT	DU	FIRE OR SMOKE DAMPER	F/D
TURNING VANES		CEILING ACCESS PANEL	A.P.
ACOUSTIC LINED DUCTWORK		ACCESS DOOR	A.P.
AIR OUTLET OR INLET	S-1 TYPE, 8"ø SIZE, 2ØØ CAPACITY	ELECTRIC BASEBOARD HEATER	Ø KW

SPRINKLER PERFORMANCE SPECIFICATIONS

1. BUILDING SHALL BE ENTIRELY SPRINKLERED IN ACCORDANCE WITH THE DIVISION B SPRINKLER SYSTEM SPECIFICATIONS, NFPA 13, AND NFPA 231C STANDARDS SPRINKLER SYSTEM SHALL BE HYDRAULICALLY DESIGNED BASED ON THE FOLLOWING CRITERIA:

AREA	SYSTEM	DENSITY GPM/FT 2	DESIGN AREA (FT2)	HAZARD GROUP	MAX AREA PER HEAD (ft2)
OFFICE AREAS	WET	Ø.1Ø	195Ø	LIGHT	225
MECHANICAL/ SERVICE	WET	Ø.16	15ØØ	ORD. GROUP 1	13Ø
WAREHOUSE	WET	NFPA 231C	12 HEADS	ESFR SYSTEM	-
STORAGE	WET	Ø.1Ø	15ØØ	LIGHT	225

2. PROVIDE SEISMIC SWAY BRACING IN ACCORDANCE WITH NFPA 13 AND B.C. BUILDING CODE ON STANDPIPE AND SPRINKLER SYSTEM.
3. REVIEW MECHANICAL, STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR DETAILS AND CO-ORDINATE CO-ORDINATE FINAL PIPE ROUTES WITH OTHER SUB-TRADES AND GENERAL CONTRACTOR BEFORE START OF SHOP DRAWINGS.
4. WAREHOUSE TO BE HYDRAULICALLY DESIGNED TO NFPA-231C REQUIREMENTS FOR HIGH PILED RACK STORAGE USING 30" HIGH WAREHOUSE HEIGHT WITH 25'-0" HIGH RACKS FOR CLASS IV COMMODITIES (ENCAPSULATED) USING K-14 HEADS PROVIDE 75 PSIG AT HEAD, USING K-25 HEADS PROVIDE 30 PSIG @ HEAD.
5. PROVIDE 1½" HOSE CONNECTIONS IN WAREHOUSE C/W Ø0Ø' OF HOSE AS PER SCHEMATIC DRAWINGS.
6. PROVIDE ADDITIONAL HEADS UNDER OBSTRUCTION IN WAREHOUSE AS NECESSARY TO MEET ESFR SYSTEM REQUIREMENTS.
7. WAREHOUSE TO BE DESIGNED FOR ESFR SYSTEM. NO IN RACK SPRINKLER SYSTEM WILL BE CONSIDERED AS EQUIVALENT.
8. PROVIDE FIRE EXTINGUISHERS THROUGHOUT BUILDING TO NFPA-1Ø REQUIREMENTS. ALLOW FOR FULLY RECESSED CABINETS TO BE COORDINATED WITH ARCHITECTURAL.

CIVIC ADDRESS:
758 HARBOURSIDE DRIVE.
CITY OF NORTH VANCOUVER

LEGAL DESCRIPTION:
LOTS 26 AND 27 – DISTRICT LOT 2654
GROUP 1 NWD. PLAN 45092

DRAWING LIST:

DWG. No.	DESCRIPTION (TITLE)	SCALE
M-1	SITE PLAN – MECHANICAL	1/8"
M-2	FOUNDATION PLAN – MECHANICAL	1/8"
M-3	GROUND FLOOR PLAN – MECHANICAL	1/8"
M-4	SECOND FLOOR PLAN – MECHANICAL	1/8"
M-5	THIRD FLOOR PLAN – MECHANICAL	1/8"
M-6	DETAILS & SCHEDULES – MECHANICAL	N.T.S.
M-7	SPECIFICATIONS – MECHANICAL	N.T.S.

FOR GAS COMPANY

EQUIPMENT	INPUT
DUH-1	18Ø MBH
UH-1,2,3,4,5 & 6 6@ 25Ø MBH	15ØØ MBH
TOTAL	1680 MBH

MINIMUM DISTANCE BETWEEN GAS LINE AND UNDERGROUND SERVICES = 3'-0"

FOR MECHANICAL CONTRACTOR

PRIOR TO COMMENCING INSTALLATION WITHIN THE BUILDING, THE MECHANICAL CONTRACTOR SHALL CHECK THE LOCATION AND INVERT ELEVATIONS OF ALL SERVICE LINES INCLUDING SANITARY SEWER, STORM SEWER, WATER MAINS, AND GAS MAINS WITH LOCAL AUTHORITIES TO INSURE THAT THESE SERVICES CAN BE INSTALLED AS SHOWN.

N

CITY OF NORTH VANCOUVER ENGINEERING DEPT.
REVIEWED
OFF SITE INFORMATION NOTED ONLY
GRADES _____ WATER JR
SEWERAGE JR DRAINAGE JR
CIVIL _____
This review does not confirm the accuracy of the design. The City does not accept responsibility for any costs or damages incurred due to errors, deficiencies or omissions in the design.
LANDSCAPING _____
Shrubs and grass to be maintained by owner.
DATE _____ for City of North Vancouver

REVISION:	DATE:	NOTES:
–	MAY.30/01	RE-ISSUED FOR B.P.
–	APR.27/01	ISSUED FOR TENDER
–	FEB.19/01	ISSUED FOR B.P.

SEAL:

MAXEM HOLDINGS INC.

OFFICE / WAREHOUSE
HARBOURSIDE AVENUE

CITY OF NORTH VANCOUVER

PLAN:
Site Plan

VEL ENGINEERING
CONSULTING MECHANICAL ENGINEERS
Suite 305 – 12Ø3Ø West Pender St
Vancouver, BC V6E 2S9
Tel : (604) 687-18ØØ
FAX : (604) 687-18Ø2
E-MAIL : info@veleng.com

VEL JOB# 6195-00

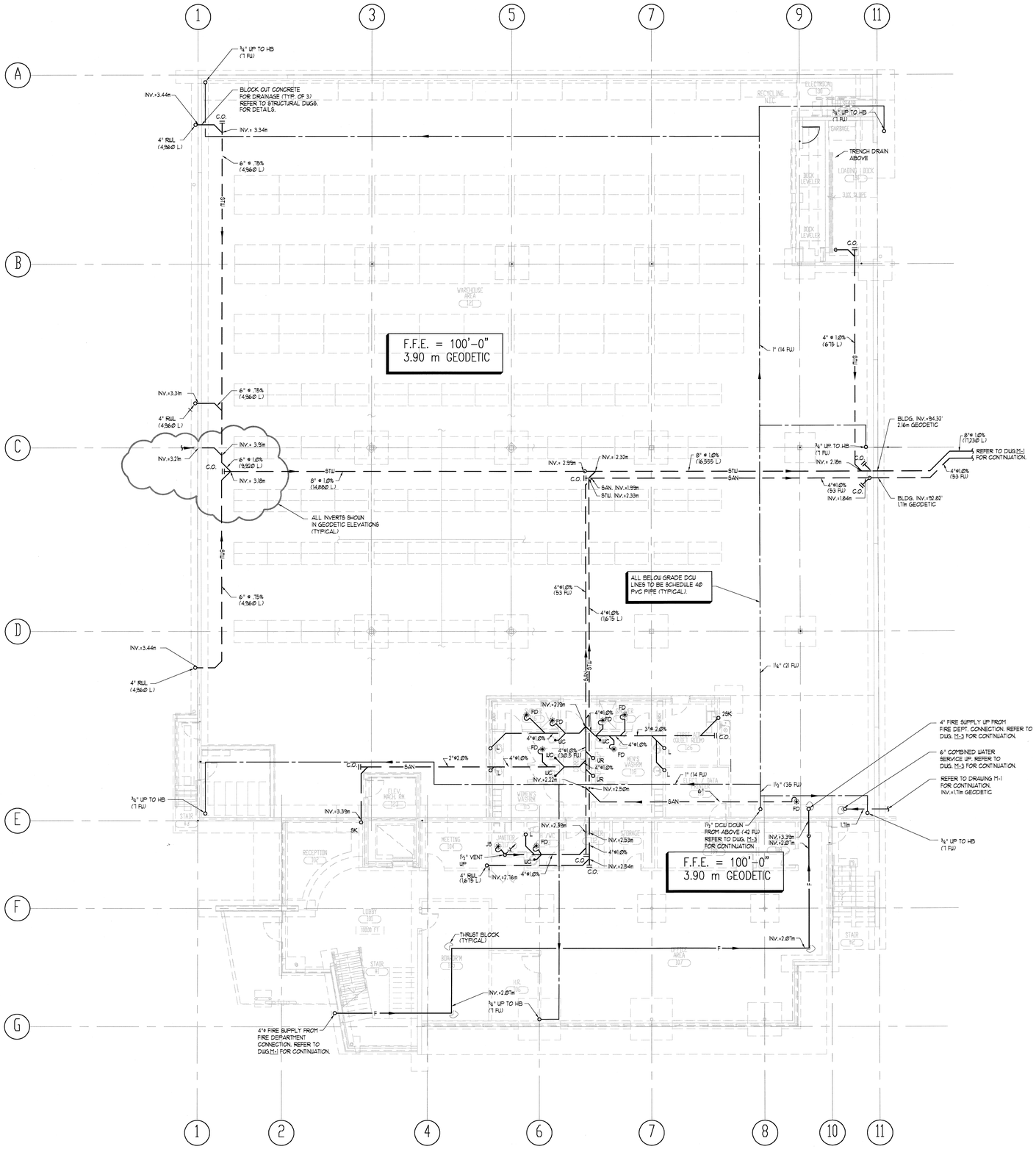
PROFESSIONAL ENGINEER

RECEIVED
MAY 31 2001
City of North Vancouver Development Services

M-1

OF 7

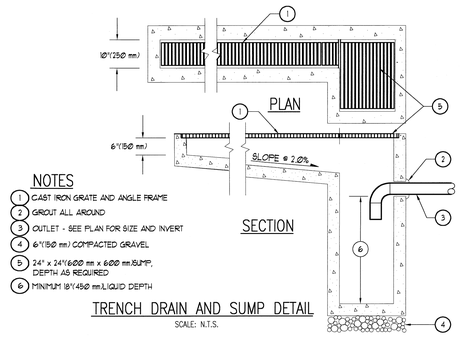
SCALE:	PROJECT:
AS NOTED	6195-00
DRAWN:	DATE:
–	–



FOUNDATION – MECHANICAL

SCALE: 1/8" = 1'-0"

BARSCALE: 1/8" = 1'-0"

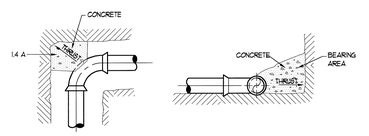


NOTES

1. CAST IRON GRATE AND ANGLE FRAME
2. GROUT ALL AROUND
3. OUTLET - SEE PLAN FOR SIZE AND INVERT
4. 6"(150 mm) COMPACTED GRAVEL
5. 24" x 24"(600 mm x 600 mm)SUMP, DEPTH AS REQUIRED
6. MINIMUM 18"(450 mm)LIQUID DEPTH

TRENCH DRAIN AND SUMP DETAIL

SCALE: N.T.S.



BASIC THRUST BLOCK BEARING AREA

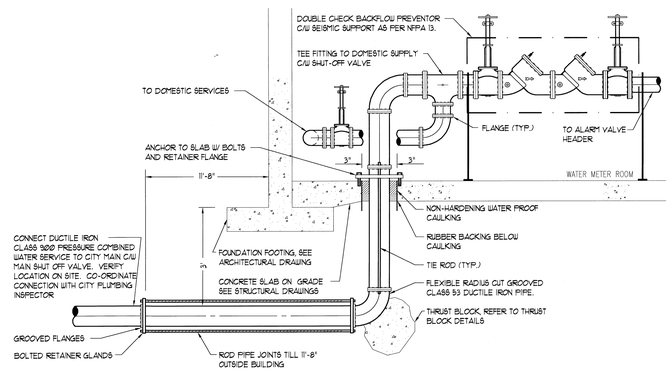
PIPE SIZE	4"	6"	8"	10"
A (FT²)	1.0	2.0	3.2	5.3

THRUST BLOCK BEARING AREAS FOR

- WATER PRESSURE UP TO 100psi (690 Kpa)
- ALLOWABLE SOIL BEARING PRESSURE 14.4 psi (100 Kpa)

THRUST BLOCK DETAILS FOR WATER PRESSURE PIPE

SCALE: N.T.S.



WATER ENTRY DETAIL – SLAB ON GRADE

SCALE : N.T.S.

REVISION:	DATE:	NOTES:
–	MAY.30/01	RE-ISSUED FOR B.P.
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–	FEB.19/01	ISSUED FOR B.P.

SEAL:

MAXEM HOLDINGS INC.

OFFICE / WAREHOUSE
HARBOURSIDE AVENUE

CITY OF NORTH VANCOUVER

PLAN:

Foundation Plan

VEL ENGINEERING
CONSULTING MECHANICAL ENGINEERS
Suite 305 – 1200 West Pender St
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E-MAIL : info@veleng.com

VEL JOB# 6195-00

MAY 31 2001

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MAY 31 2001
City of North Vancouver
Development Services
Department

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SCALE:	PROJECT:
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DRAWN:	DATE:
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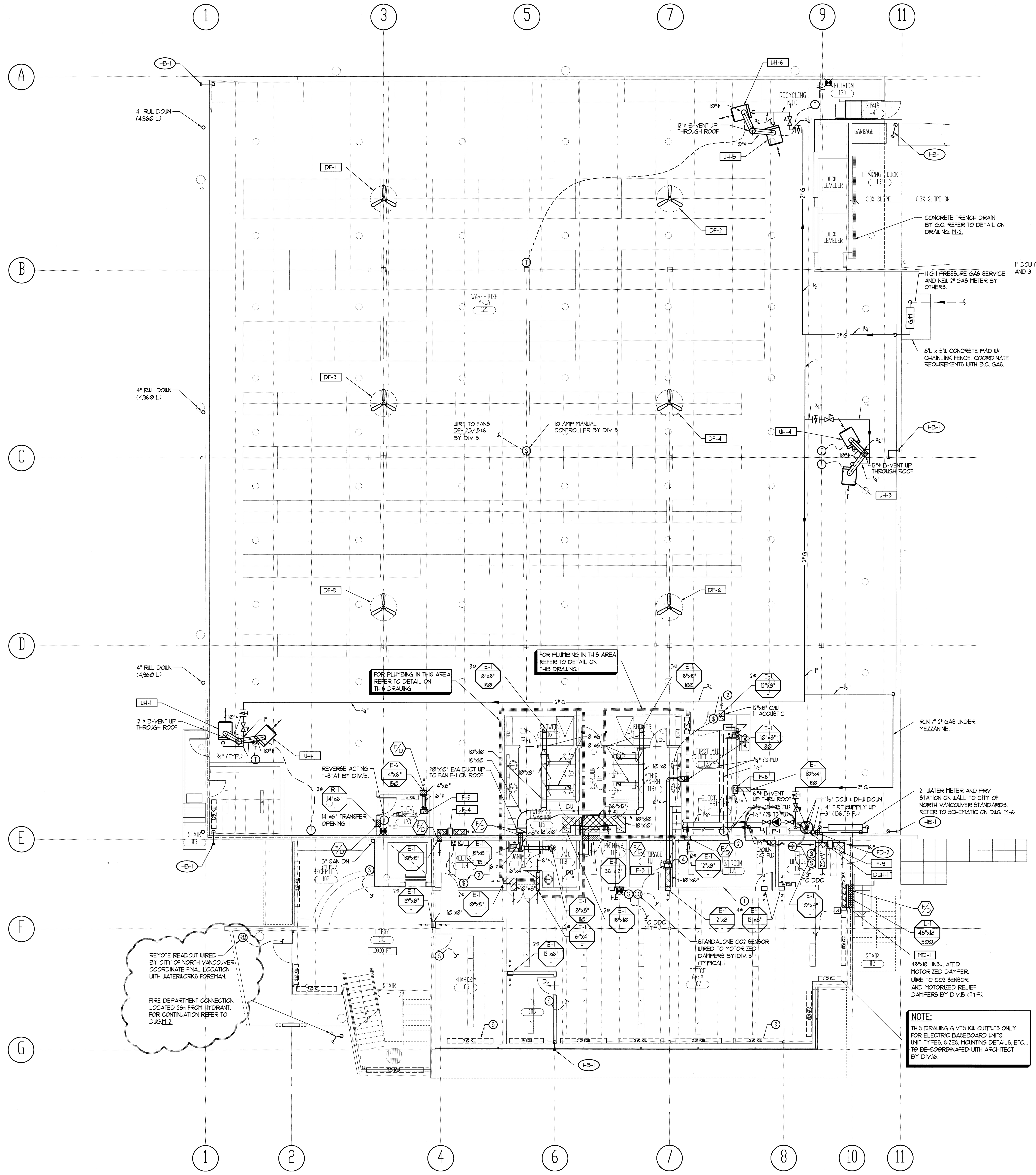
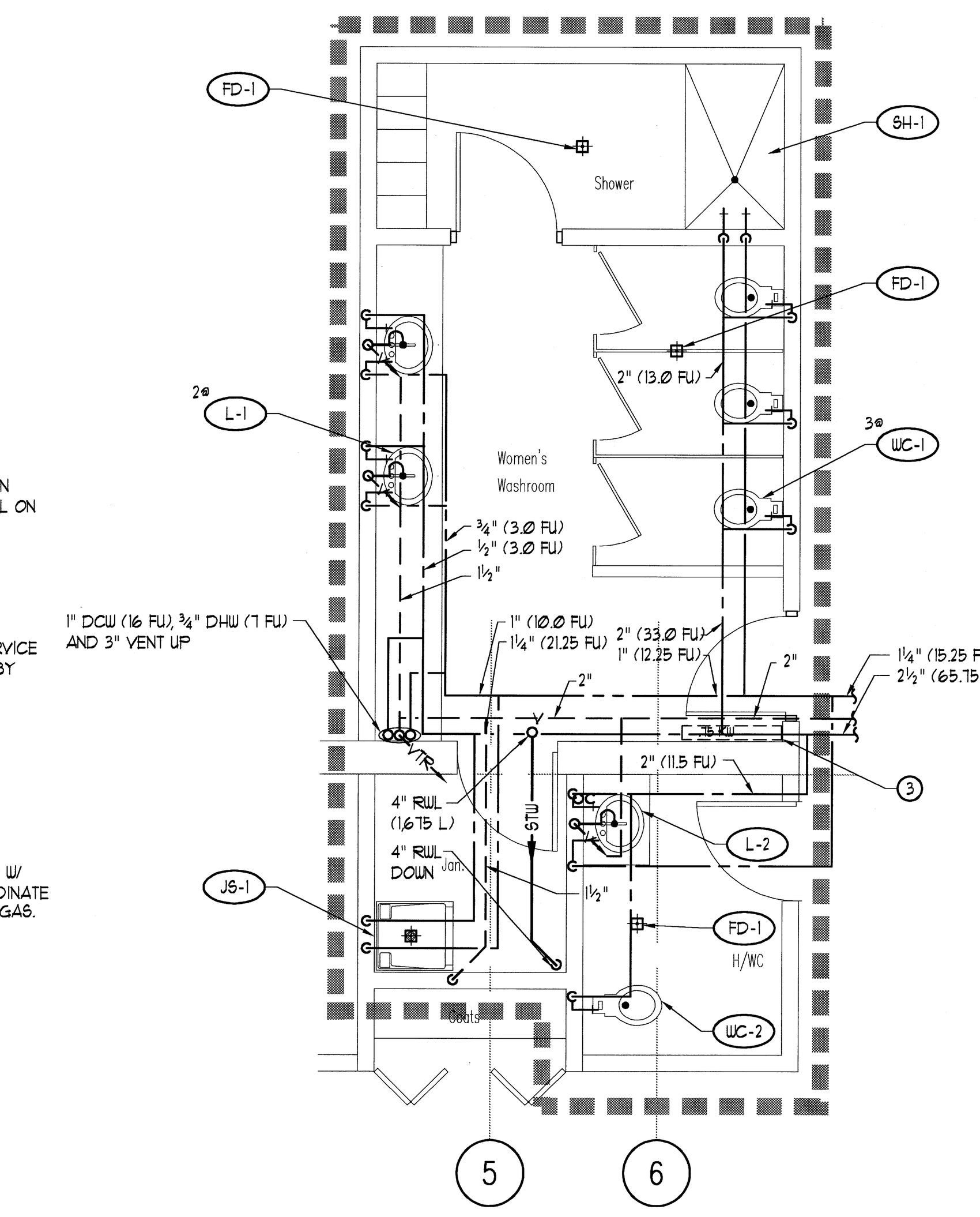
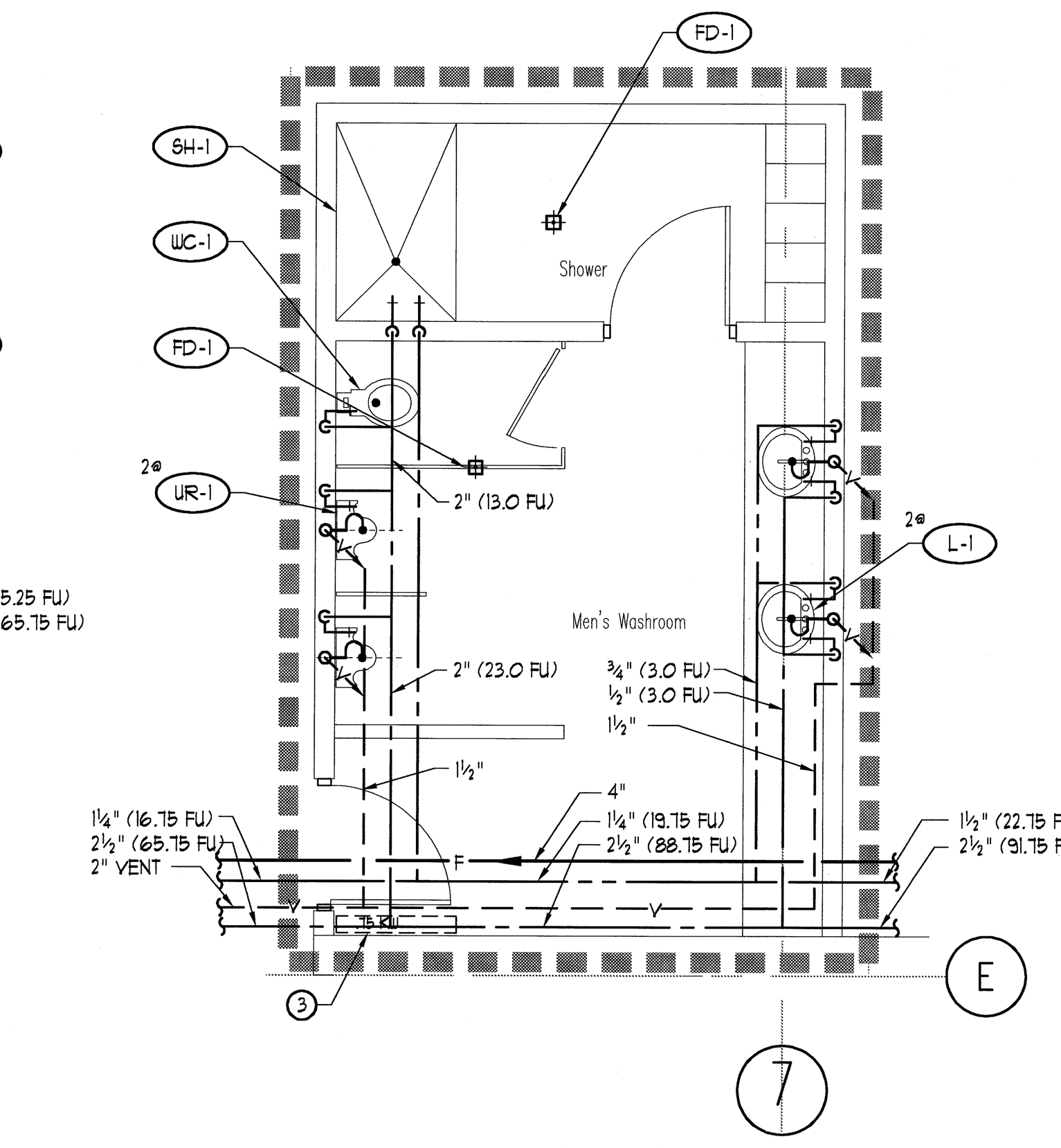


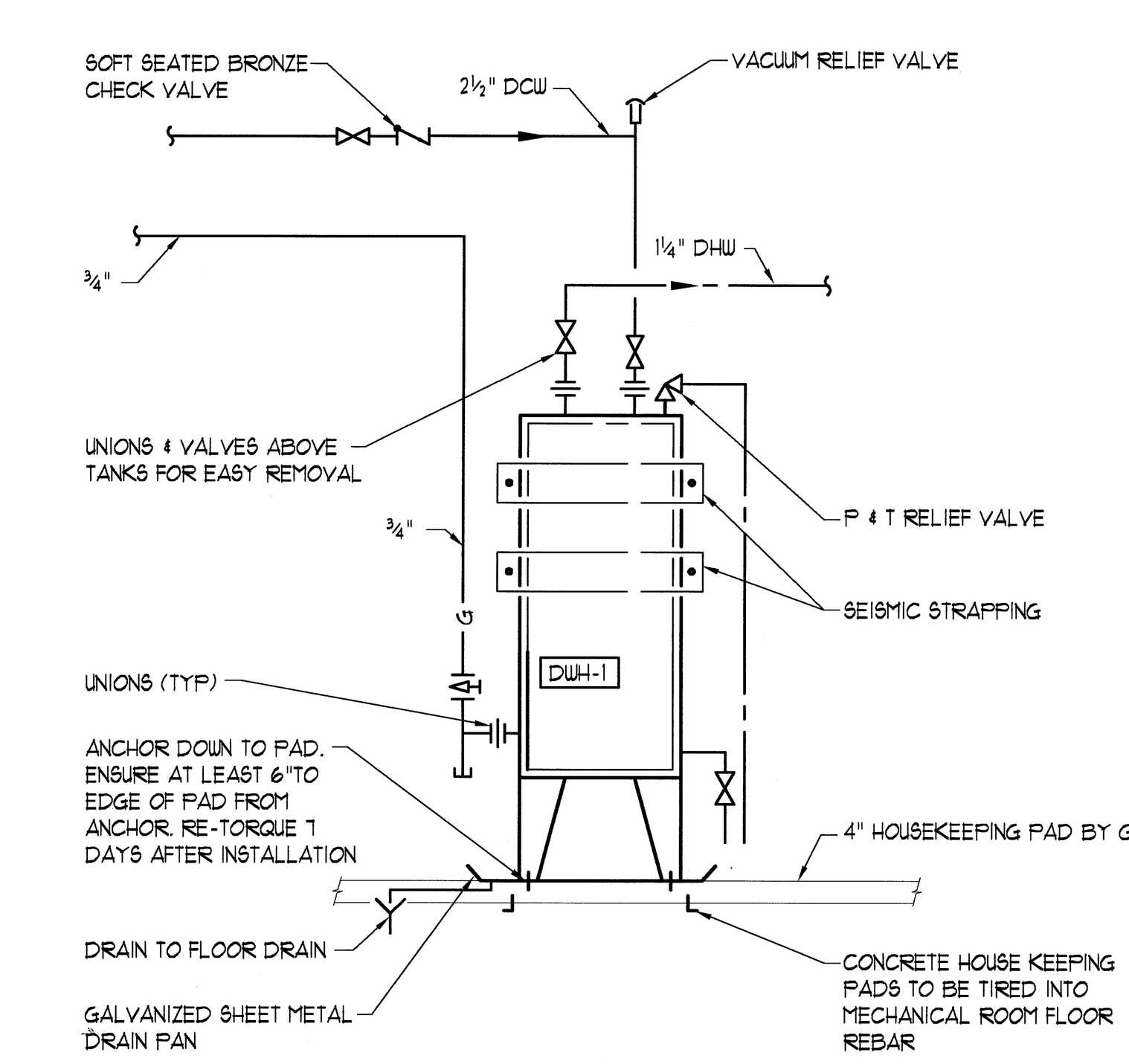
GROUND FLOOR - MECHANICAL
SCALE: 1/8" = 1'-0"
BARSCALE: 1/8" = 1'-0"



GROUND FLOOR WOMEN'S W/R PLUMBING DETAIL
SCALE: 1/4" = 1'-0"



GROUND FLOOR MEN'S W/R PLUMBING DETAIL
SCALE: 1/4" = 1'-0"



DOMESTIC WATER HEATER PIPING SCHEMATIC
SCALE: N.T.S.

KEYED NOTES

1. EXISTING SANYO DUCTLESS SPLIT SYSTEM MODEL KS1211W INDOOR UNIT AND C1211 OUTDOOR UNIT SUPPLIED BY OWNER. MECHANICAL CONTRACTOR TO INSTALL WITH NEW REFRIGERANT AND CONDENSATE LINES.
2. ON/OFF CONTROL SWITCH BY DIV.16.
3. ELECTRIC BASEBOARD HEATER C/W INTEGRAL THERMOSTAT BY DIV. 16. COORDINATE EXACT LOCATION ON SITE (TYPICAL).
4. PROVIDE ACCESS PANEL TO SERVICE EXHAUST FAN (TYPICAL FOR DRYWALL CEILINGS).

N

REVISION:	DATE:	NOTES:
–	MAY.30/01	RE-ISSUED FOR B.P.
–	APR.27/01	ISSUED FOR TENDER
–	FEB.19/01	ISSUED FOR B.P.

SEAL:

MAXEM HOLDINGS INC.

OFFICE / WAREHOUSE
HARBOURSIDE AVENUE

CITY OF NORTH VANCOUVER

PLAN:

Ground Floor Plan

VEL ENGINEERING
CONSULTING MECHANICAL ENGINEERS
Suite 305 – 1200 West Pender St
Vancouver, BC V6E 2S9
Tel : (604) 687-1800
FAX : (604) 687-1802
E-MAIL : info@veleng.com

VEL JOB# 6195-00

PROFESSIONAL PROVINCE OF BRITISH COLUMBIA E. SMITH ENGINEER

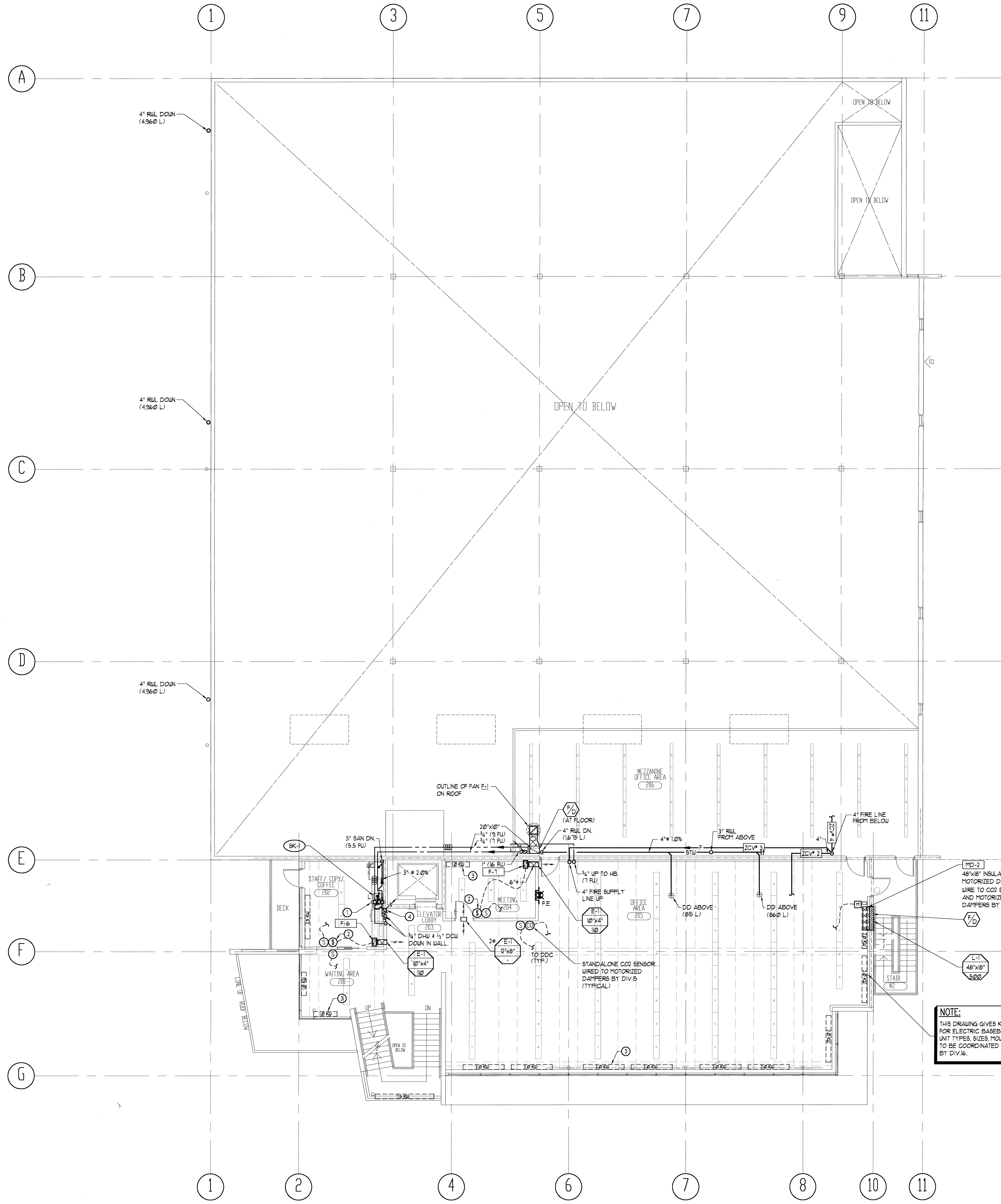
MAY 31 2001

RECEIVED MAY 31 2001 City of North Vancouver Development Services Department

M-3

OF 7

SCALE:	PROJECT:
AS NOTED	6195-00
DRAWN:	DATE:
–	–



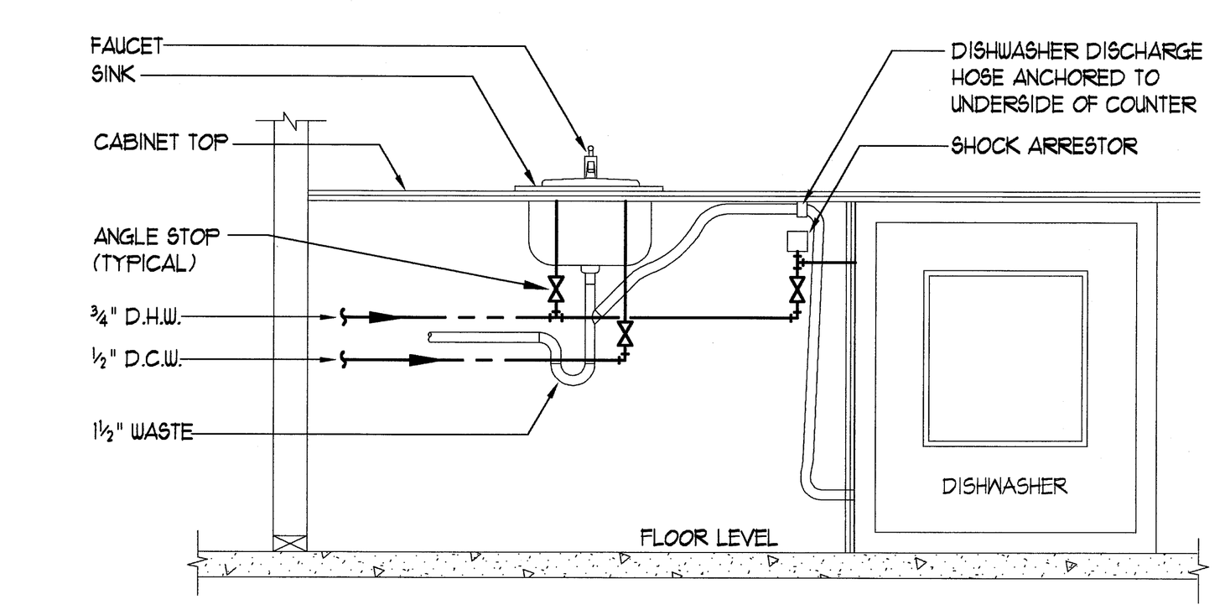
SECOND FLOOR - MECHANICAL

SCALE: 1/8" = 1'-0"

BARSCALE: 1/8" = 1'-0"

NOTE:

THIS DRAWING GIVES KW OUTPUTS ONLY FOR ELECTRIC BASEBOARD UNITS. UNIT TYPES, SIZES, MOUNTING DETAILS, ETC... TO BE COORDINATED WITH ARCHITECT BY DIV.16.



DISHWASHER CONNECTION DETAIL

N.T.S.

KEYED NOTES:

1. ¾" DCW (6.5 FU) AND ½" DHW UP TO WASHROOM ABOVE.
2. ON/OFF CONTROL SWITCH BY DIV.16.
3. ELECTRIC BASEBOARD HEATER C/W INTEGRAL THERMOSTAT BY DIV. 16. COORDINATE EXACT LOCATION ON SITE (TYPICAL).
4. RUN SANITARY DRAIN FOR SINK AND DISHWASHER UNDER COUNTER AND CONNECT TO 3" SANITARY STACK.

N

REVISION:	DATE:	NOTES:
–	MAY.30/01	RE-ISSUED FOR B.P.
–	APR.27/01	ISSUED FOR TENDER
–	FEB.19/01	ISSUED FOR B.P.

SEAL:

MAXEM HOLDINGS INC.

OFFICE / WAREHOUSE
HARBOURSIDE AVENUE

CITY OF NORTH VANCOUVER

PLAN:

Second Floor Plan

VEL ENGINEERING
CONSULTING MECHANICAL ENGINEERS
Suite 305 - 1200 West Pender St
Vancouver, BC V6E 2S9
Tel : (604) 687-1800
FAX : (604) 687-1802
E-MAIL : info@veleng.com

VEL JOB# 6195-00

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — E. SMITH

MAY 31 2001

RECEIVED MAY 31 2001 City of North Vancouver Development Services Department

M-4

OF 7

SCALE:	PROJECT:
AS NOTED	6195-00
DRAWN:	DATE:
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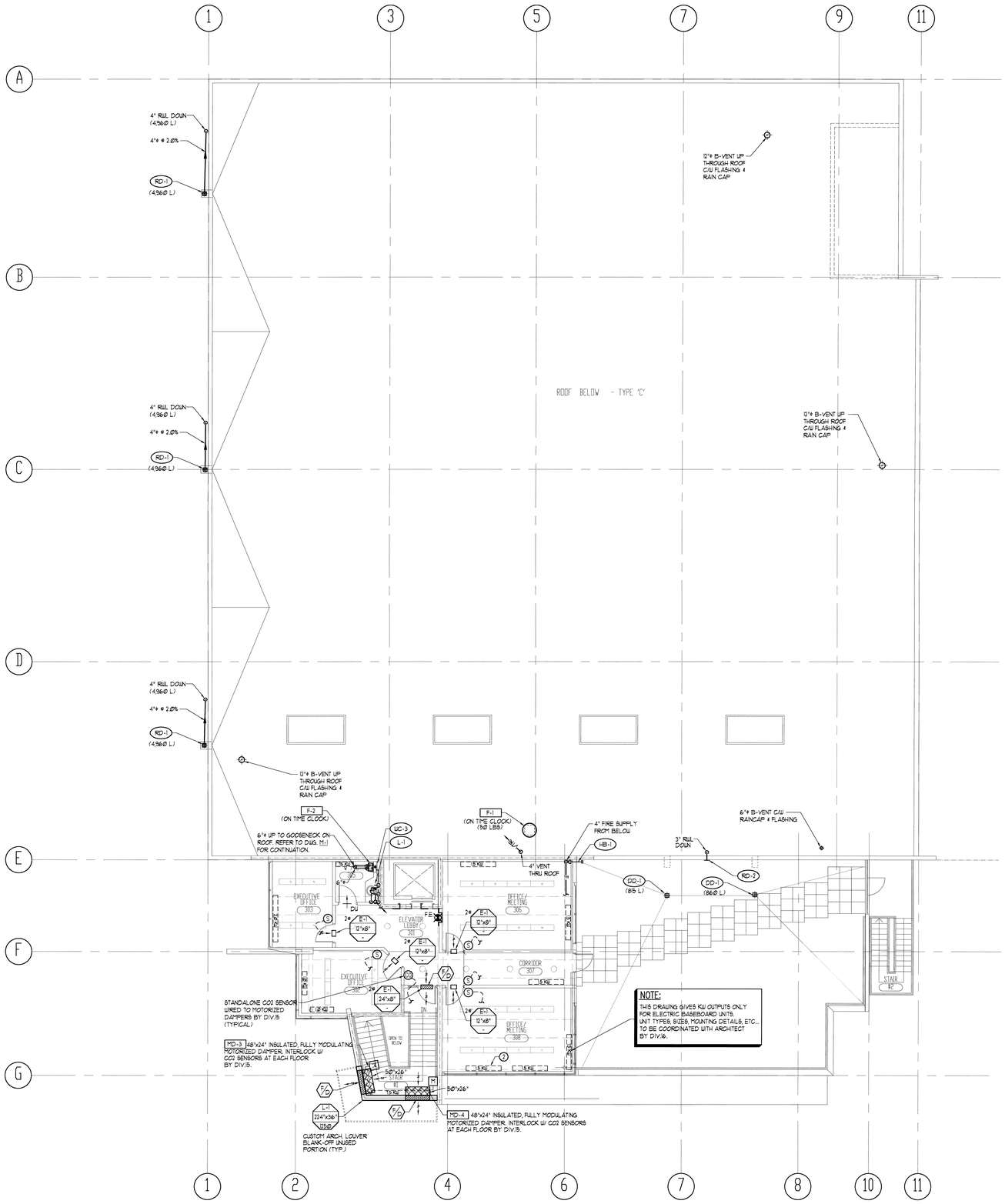
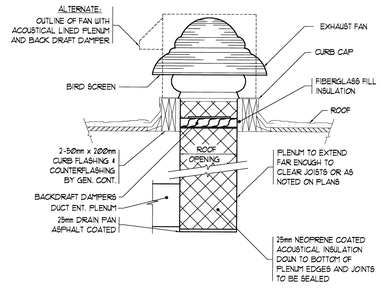


THIRD FLOOR – MECHANICAL

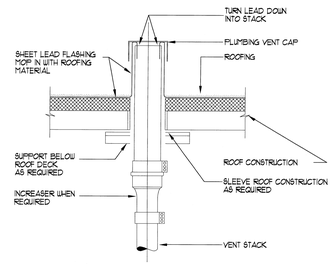
SCALE: 1/8" = 1'-0"

BARSCALE: 1/8" = 1'-0"



TYPICAL ROOF MOUNTED EXHAUST FAN DETAIL

N.T.S.



PLUMBING VENT ROOF PENETRATION DETAIL

N.T.S.

KEYED NOTES

1. ON/OFF CONTROL SWITCH BY DIV.16.
2. ELECTRIC BASEBOARD HEATER C/W INTEGRAL THERMOSTAT BY DIV. 16. COORDINATE EXACT LOCATION ON SITE (TYPICAL).

N

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SEAL:

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OFFICE / WAREHOUSE
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CITY OF NORTH VANCOUVER

PLAN:

Warehouse Roof/Office Third Floor Plan

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E. SMITH
ENGINEER

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Development Services Department

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OF 7

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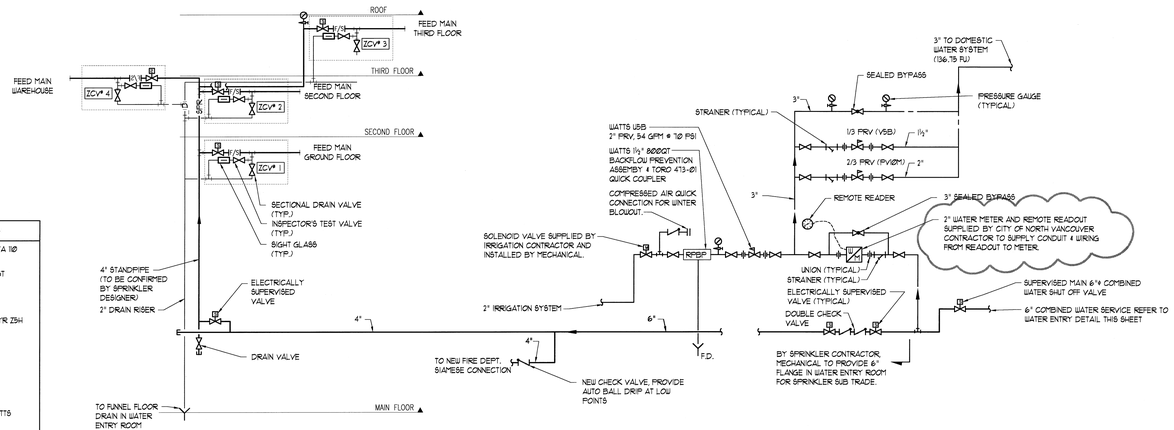
DIFFUSER SCHEDULE

TAG No.	S-1	E-1	E-2	R-1	R-2	L-1
MANUFACTURER & TYPE	EH PRICE 510/F/L/A/	EH PRICE 80 SERIES	EH PRICE 510/F/L/A/	EH PRICE 530/F/L/A/	EH PRICE 80 SERIES	ALUMAVENT 430D
DESCRIPTION	LOUVERED SUPPLY GRILLE	EGG CRATE EXHAUST/ TRANSFER GRILLE	LOUVERED EXHAUST GRILLE	LOUVERED RETURN GRILLE	EGG CRATE GRILLE	INTAKE/EXHAUST LOUVER
FINISH	SELECT BY ARCHITECT	WHITE	SELECT BY ARCHITECT	SELECT BY ARCHITECT	WHITE	SELECT BY ARCHITECT
MOUNTING	SURFACE	SURFACE	SURFACE	SURFACE	T-BAR MOUNT	SURFACE
ACCESSORIES	C/W BALANCING DAMPER	-	-	-	-	1.5" FLANGE & INSECT SCREEN

FAN SCHEDULE

TAG No.	F-1	F-2	F-3 & F-9	F-4	F-5	F-6	F-7	F-8
LOCATION	WAREHOUSE ROOF	3RD FLOOR ROOF	FIRST AID ROOM/ IT OFFICE 108	GROUND MTG RM.	ELEV. MACHINE RM.	STAFFROOM	2ND FLR. MTG. RM	ELEC. DATA 110
SERVICE	W/R EXHAUST	W/R EXHAUST	TRANSFER	TRANSFER	EXHAUST	EXHAUST	TRANSFER	EXHAUST
MANUFACTURER	PENN	PENN	PENN	PENN	PENN	PENN	PENN	PENN
MODEL	DOMEX DXIB	ZEPHYR ZSH	ZEPHYR ZSHTDA	ZEPHYR ZSHTDA	Z6H	ZEPHYR ZSH	ZEPHYR ZSH	ZEPHYR ZSH
CAP. (CFM)	1255	75	80	110	150	75	110	110
SP ("W.C.)	Ø.25"	Ø.25"	Ø.25"	Ø.25"	Ø.25"	Ø.25"	Ø.25"	Ø.25"
FAN RPM	950	1550	1550	1550	1550	1550	1550	1550
VOLTAGE/PHASE	120/1	120/1	120/1	120/1	120/1	120/1	120/1	120/1
MOTOR HP (WATTS)	1/4	39 WATTS	83 WATTS	83 WATTS	109 WATTS	39 WATTS	83 WATTS	83 WATTS
SONES	7.3	2.3	2.1	2.0	3.0	2.3	2.0	2.0
NOTES	C/W B.D.D., BIRDSCREEN MESH & ROOF CURB	C/W GRILLE & WALL SWITCH	C/W WALL SWITCH	C/W WALL SWITCH	C/W GRILLE & REVERSE ACTING T'STAT BY DIV.15.	C/W GRILLE & WALL SWITCH	C/W GRILLE & WALL SWITCH	C/W GRILLE & WALL SWITCH



DOMESTIC WATER & SPRINKLER PIPING SCHEMATIC

SCALE : N.T.S.

GAS-FIRED UNIT HEATER SCHEDULE

TAG No.	UH-1,2,3,4,5&6
LOCATION/ SERVICE	WAREHOUSE -
MANUFACTURER	REZNOR
MODEL	F
CAPACITY (mbh)	200
AIR FLOW (cfm)	3360
RMIN / RFM	850
TD (°C / °F)	-
MOTOR (hp)	1/6
NOTES:	C/W VERTICAL LOUVERS SUSPENSION KITS, AND THERMOSTAT & RELAY KITS.

DHW TANK SCHEDULE

TAG No.	DWH-1
LOCATION	WAREHOUSE AREA UNDER MEZZ.
MAKE	RHEEM/RUUD
MODEL	RFD76-180C
GAS INPUT (MBH)	180
STORAGE CAP. (USGPM)	76
RECOVERY (GPH @ 100°F) RATE	175
WEIGHT EMPTY (lbs)	540

PLUMBING ROUGH-IN SCHEDULE

TYPE	FIXTURE	SANITARY	CW	HW	VENT	REMARKS
WC	WATER CLOSET	3"	¾" / 1½"	-	1½"	FLUSH TANK / FLUSH VALVE
L	LAVATORY	1½"	½"	½"	1¼"	-
SK	SINK	1½"	½"	½"	1¼"	-
JS	JANITOR SINK	3"	¾"	¾"	1½"	
SH	SHOWER	2"	¾"	¾"	1½"	
UR	URINAL	2"	½" / 1½"		1½"	FLUSH TANK / FLUSH VALVE
FD	FLOOR DRAIN	3"	-	-	-	C/W TRAP PRIMER
DW	DISHWASHER	2"	-	¾"	1½"	-
HB	HOSEBIBB	-	¾"	-	-	-

DESTRATIFICATION FAN SCHEDULE

DF-1 TO DF-6

1. PLEASANTAIRE MODEL CP-56 CEILING DESTRATIFICATION FAN C/W MC-15 CONTROLLER FOR 15 AMP/120V/1 PHASE POWER. PROVIDE ONE CONTROLLER. MOUNT FANS ABOVE BOTTOM CHORD OF OWJ'S. (TYPICAL OF 6)

PLUMBING SCHEDULE

TYPE	FIXTURE	DESCRIPTION	TRIM	ACCESSORIES
WC-1	STANDARD FLOOR MOUNTED CLOSET BOWL W/ FLUSH VALVE	AMERICAN STANDARD 2234.Ø16 MADERA SIPHON JET, ELONGATED BOWL, 1½" TOP SPUD AND BOLT CAPS.	III-YO-XL EXPOSED CHROME PLATED FLUSH VALVE W/ VACUUM BREAKER, LOW CONSUMPTION.	-CENTOCO 5Ø0CC56 OPEN FRONT SEAT. -FLOOR FLANGE, WAX SEAL AND MOUNTING HARDWARE.
WC-2	HANDICAPPED FLOOR MOUNTED CLOSET BOWL W/ FLUSH VALVE	AMERICAN STANDARD 2305.ØØ MADERA SIPHON JET, ELONGATED BOWL, 1½" TOP SPUD AND BOLT CAPS.	III-YG-XL EXPOSED CHROME PLATED FLUSH VALVE W/ VACUUM BREAKER, LOW CONSUMPTION, ANGLE STOP EXTENDED SEAT BUMPER.	-CENTOCO 83ØCCST OPEN FRONT SEAT W/ COVER. -FLOOR FLANGE, WAX SEAL AND MOUNTING HARDWARE.
L-1	COUNTERTOP LAVATORY (HANDICAPPED & NORMAL USE.)	AMERICAN STANDARD Ø476.Ø28 VITREOUS CHINA SELF-RIMMING BASIN W/ 4" CENTERS.	SYMMONS S-6Ø-H-STE METERING BASIN FAUCET W/ CAST METAL LEVER HANDLE.	-156A DRAIN W/ OPEN GRID STRAINER (OFFSET FITTING ON H/C) -PAIR OF ANGLE SUPPLIES W/ SCREWDRIVER STOPS AND ESCUTCHEONS. -ADJUSTABLE CAST BRASS P-TRAP W/ WALL FLANGE.
L-2	WALL HUNG HANDICAPPED LAVATORY.	AMERICAN STANDARD 9141.Ø11 VITREOUS CHINA SELF-RIMMING WALL HUNG BASIN W/ 4" CENTERS.	SYMMONS S-6Ø-H-STE METERING BASIN FAUCET W/ CAST METAL LEVER HANDLE.	-156A DRAIN W/ OPEN GRID STRAINER (OFFSET FITTING ON H/C) -PAIR OF ANGLE SUPPLIES W/ SCREWDRIVER STOPS AND ESCUTCHEONS. -ADJUSTABLE CAST BRASS P-TRAP W/ WALL FLANGE. -SMITH 1Ø0-27-M31 CARRIER.
UR-1	WALL HUNG URINAL	AMERICAN STANDARD 6501.ØØ VITREOUS CHINA WALL HUNG URINAL W/ ¾" TOP SPUD, WALL HANGERS, 2" OUTLET CONNECTION AND B/S STRAINER.	732-ØM-VB-HST06LKSB-N3 EXPOSED CHROME PLATED METERING FLUSH VALVE.	-SMITH 637 CARRIER.
JS-1	MOP SINK.	FIAT MSB-2424 MOULDED STONE WITH 3" DRAIN, DOME STRAINER, LINT BASKET. (24" x 24" x 10" HIGH BASIN).	TECK 2872383 WALL MOUNT SINK FAUCET WITH RIGID SPOUT, TOP BRACE, BODY MOUNTED VACUUM BREAKER, 10mm LEVER HANDLES, HOSE SPOUT W/ PAIL HOOK, 6Ø" OF HOSE WITH STAINLESS STEEL HANGER BRACKET, INTEGRAL STOPS.	-EXTRA BACKING FOR ATTACHMENT OF TOP BRACE AND HOOK SUPPORT FOR A 6Ø lbs. PAIL. MOUNT FAUCET AT 36" ABOVE FLOOR. -1 PAIR ½" FLEXIBLE SUPPLIES W/ SCREW DRIVER STOPS AND ESCUTCHEONS. MOUNT FAUCET AT 36" ABOVE FLOOR.
SH-1	SHOWER	BUILT UP ENCLOSURE BY G.C.	POWERS P413CK1ØØØ HYDROGUARD PRESSURE BALANCED VALVE WITH LEVER HANDLE, INTEGRAL ANGLE CHECK STOPS, Ø.19 l/s VANDAL PROOF SHOWER HEAD, ARM AND FLANGE. SET TEMP. STOPS FOR MAX. 42°C SUPPLY WATER.	-ZURN ZN-4Ø1 SHOWER DRAIN WITH 3½" CHROME STRAINER.
SK-1	DOUBLE BOWL SINK	KINDRED GDL2 DOUBLE BOWL STAINLESS STEEL SINK WITH BACKLEDGE, REMOVABLE DRAIN ASSEMBLY, CENTER SPILLWAY, 3 HOLE DRILLING AND UNDERCOATING	TECK 2672134 WALL MOUNT SINK FAUCET WITH RIGID SPOUT, BOTTOM BRACE, BODY MOUNTED VACUUM BREAKER, LING HANDLES, HOSE SPRAY AND INTEGRAL STOPS.	-CONTINUOUS WASTE -P-TRAP W/ WALL FLANGE -1 PAIR ⅜" WHEEL CHAIR LAVATORY SUPPLIES WITH STOPS

DRAIN SCHEDULE

TYPE	FIXTURE	DESCRIPTION	ACCESSORIES
FD-1	GENERAL PURPOSE FLOOR DRAIN	ZURN ZN-415-B-P-VP, EPOXY COATED CAST IRON BODY AND CLAMP COLLAR, POLISHED 5" ROUND NICKEL BRONZE STRAINER HEAD AND GRATE, 3" CONNECTION.	-TRAP PRIMER AND TRAP PRIMER CONNECTION -VANDAL PROOF SCREWS
FD-2	GENERAL PURPOSE FUNNEL FLOOR DRAIN	ZURN ZN-415-BF-P, EPOXY COATED CAST IRON BODY AND CLAMP COLLAR, POLISHED 5" ROUND NICKEL BRONZE STRAINER HEAD AND GRATE WITH 3½"x8" OVAL FUNNEL, 4" CONNECTION.	-TRAP PRIMER AND TRAP PRIMER CONNECTION -SEDIMENT BUCKET.
DD-1	CONVENTIONAL INVERTED PROMENADE DECK DRAIN (MEDIUM TRAFFIC)	ZURN ZN-135-7 8"x8" SQUARE GRATE, EPOXY COATED CAST IRON BODY AND BODY CLAMP COLLAR, POLISHED NICKEL BRONZE GRATE AND FRAME.	-UNDERDECK CLAMP. -WATERPROOF FLANGE. -ROOF SUMP RECEIVER. -EPOXY COATED PERFORATED DRAINAGE EXTENSION TO SUIT SLAB/INSULATION THICKNESS. -SEDIMENT BUCKET.
RD-1	ROOF DRAIN FOR FLAT/ ROOF	ZURN Z-121-ERC EPOXY COATED CAST IRON BODY, CLAMP COLLAR WITH 12" INTEGRAL GRAVEL GUARD, HARDWARE AND ALUMINUM DOME.	-UNDERDECK CLAMP. -WATERPROOF FLANGE -ROOF SUMP RECEIVER. -STAINLESS STEEL MESH OVER DOME. -CAST IRON EXTENSION TO SUIT ROOF THICKNESS. -SEDIMENT BUCKET.
RD-2	ROOF DRAIN FOR FLAT/ ROOF	ZURN Z-181 PARAPET SCUPPER ROOF DRAIN C.I. BODY, CLAMP COLLAR WITH 12" INTEGRAL OBLIQUE STRAINER AND ALUMINUM CLAMP COLLAR	-WATERPROOF FLANGE
HB-1	ENCASED EXTERIOR HOSE BIBB	ZURN ZN-1389-WB, ¾" ENCASED NON-FREEZE HYDRANT WITH BRASS INTERIOR PARTS, GALVANIZED STEEL CASING, CHROME PLATE BRASS HEAD, STRAIGHT HOSE THREAD OUTLET, REMOVABLE KEY.	-SELF DRAINING ATMOSPHERIC VACUUM BREAKER
HB-2	INTERIOR HOSE BIBB	EMCO MODEL Ø241, ¾" SEDIMENT FAUCET WITH HOSE END.	-SELF DRAINING ATMOSPHERIC VACUUM BREAKER

PUMP SCHEDULE

TAG No.	P-1
LOCATION	GROUND FLOOR
MANUFACTURER	BELL & GOSSETT
MODEL	SERIES PL
SERVICE	DOMESTIC HOT
SIZE	PL-36
WEIGHT (lbs)	-
CAPACITY (gpm)	15
HEAD (ft.)	27
MOTOR (hp)	FRACT.
MOTOR (r/min.)	1750
VOLTAGE	120/1/60
SUCTION SIZE (in.)	1½
DISCHARGE SIZE (in.)	1½
IMPELLER SIZE (in.)	-
FRAME SIZE (in.)	-
NOTES:	-ALL BRONZE CONSTRUCTION

N

CITY OF NORTH VANCOUVER
ENGINEERING DEPT.
REVIEWED
OFF SITE INFORMATION NOTED ONLY
GRADES _____ WATER JR
SEWERAGE JR DRAINAGE JR
CIVIL _____
This review does not confirm the accuracy of the design. The City does not accept responsibility for any costs or damages incurred due to errors, deficiencies or omissions in the design.
LANDSCAPING _____
Shrubs and grass to be maintained by owner.
DATE July 19/01 for City Engineer

REVISION:	DATE:	NOTES:
-	MAY.30/01	RE-ISSUED FOR B.P.
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SEAL:

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OFFICE / WAREHOUSE
HARBOURSIDE AVENUE

CITY OF NORTH VANCOUVER

PLAN:

Details & Schedules

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PROFESSIONAL ENGINEER E. SMITH

MAY 31 2001

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MAY 31
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SCALE:	PROJECT:
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1.1 INTENT

1. The intent of this specification and drawings is to provide a complete and fully operating mechanical system in complete accord with applicable codes. The Mechanical Contractor shall make provisions for labour, material and equipment necessary to complete the mechanical work.

1.2 EXISTING CONDITIONS

1. The work shall include the relocation or connection onto existing piping as indicated. Make good equipment, insulation and piping damaged or disturbed during the work to match existing.

2. Protect all existing services encountered. Arrange work to avoid shutdowns of existing services. Where interruptions are unavoidable, obtain approval for timing of shutdowns from Landlord and coordinate with authorities (i.e. Fire Department) where fire protection services are interrupted.

3. Drawings indicate general locations of existing services. Verify exact locations of services on site prior to fabrication of work.

1.3 LIABILITY

1. Assume responsibility for laying out work and for damage caused to the Owner or others by improper execution of work.

2. Protect finished and unfinished work from damage.

3. Take responsibility for condition of materials and equipment supplied and protect until work is completed and accepted.

1.4 CERTIFICATES

1. Give notices, obtain permits, and pay fees so work specified may be carried out. Furnish certificates, if requested, as evidence that work conforms with laws and regulations of Authorities having jurisdiction.

1.5 CUTTING AND PATCHING

1. Give locations for holes for mechanical equipment and provide sleeves required for the mechanical installations.

2. Be responsible for cutting and patching of building structure required by work unless otherwise indicated.

1.6 TESTING

1. Test equipment and materials where required by Authorities having jurisdiction, to demonstrate proper operation.

1.7 GUARANTEE

1. Provide the Landlord with a written guarantee warranting apparatus furnished to remain in serviceable condition for a period of one (1) year from date of final acceptance by the Landlord and the Tenant.

1.8 STANDARD OF MATERIALS AND WORKMANSHIP

1. Make and quality of materials used are subject to approval by the Engineer and the Tenant. Remove condemned materials and install suitable materials in their place.

2. Materials shall be new and of uniform pattern throughout, where specifically identified in this specification. This is for the purpose of establishing a standard of quality of materials and workmanship and not to limit selection.

3. Workmanship shall follow the best tradition and tradesmanship. Employ only tradesmen properly licensed for work requiring tradesmen with special skill.

1.9 SHOP DRAWINGS

1. Submit 3 copies of shop drawings for rooftop equipment, sprinklers, thermostats, fans, air outlets and plumbing fixtures to the Engineer for review including all performance data, physical dimensions, electrical data and operating weights.

1.10 RECORD DRAWINGS

1. Keep on site an extra set of white prints and specifications, recording changes and deviations daily. Upon completion of work, submit record drawings to the Engineer. Before Total Performance, turn marked up white prints over to Consultant. Allow $750.00 for Consultant to transfer site changes to original tracings and provide Owner 3 sets of "record drawings" prints and one copy of drawings on AutoCAD diskette.

1.11 MAINTENANCE MANUALS

1. Provide 3-8 1/2" x 11" catalogue binders .
One copy of final manuals to remain with Consultant during warranty period.

1.12 FIELD REVIEW

1. The Mechanical Contractor shall notify the Engineer, in writing, of start up of work, 50% completion and 100% completion for field review purposes.

2. Balancing report to be submitted to Engineer before Substantial Completion Field Review is performed.

2. IDENTIFICATION

1. Provide identification systems for materials used in mechanical systems which require control by Workplace Hazardous Materials Information system (WHMIS) issued by Occupational Safety and Health Division of Worker's Compensation Board of British Columbia in accordance with classification and application requirements of WHMIS standards for the following general categories:

2. Provide safety data sheets and labels to WHMIS standards for materials required. Provide copy of safety data sheets in Mechanical Maintenance Manuals.

3. Provide for identification of piping with markers showing service and direction of flow. Apply labels at maximum 50'-0" intervals, before and after passing through walls, at access door openings, at each shut off valve and adjacent to each piece of equipment. Labels shall be waterproof and heat resistant with yellow background, minimum 1" lettering and dry adhesive backing. Provide 3M No. 76 adhesive in addition to dry adhesive backing.

4. Provide 2" wide colour band of plastic pressure sensitive tape for piping systems. Obtain colour schedule from Consultant. Spacing shall be same as labels.

5. Provide 3/4" diameter brass number tags or "Altiex" plastic tags with number stamped in black, secured to valve wheel with key chain for valves not in sight of apparatus controlled. Provide typewritten valve directory giving number, service and location. Include in Maintenance Manuals.

6. Provide lamicoid labels with 1/2" letters on equipment and motor starters.

3. BALANCING

3.1 INTENT: Perform work as an integral part of contract.

3.2 QUALITY ASSURANCE

1. Acceptable Balancing Firms: KD Engineering Co., Inland Technical Services and Western Mechanical Services Ltd.

2. Procedures shall be in accordance with current edition of AABC's National Standards for Field Measurement and Instrumentation, Total System Balance.

3.3 INSTRUMENTS: Instruments for testing and balancing of air and hydronic systems shall have been calibrated within six months and verified for accuracy before start of work.

3.4 PROCEDURES

1. General: Before balancing, review with Contractor methods and instruments to be used. Provide and include descriptive data, procedure data and performance data sheets in the balancing report.

2. Data sheets required are as follows:

1. Air Moving Equipment Test Sheet
2. Exhaust Fan Test Sheet

3. Balance to maximum flow deviation from specified values of 10% at terminal device and 5% at equipment or mean sound level deviation of 20 db.

4. Permanently mark setting on valves, splitters, dampers and other adjustment devices.

5. Take measurements to verify balance has not been disrupted or such disruption has been rectified.

6. At final field review, recheck random selections of data recorded in report. Recheck points or areas as selected and witnessed by Owner.

7. When building is occupied before completion, continue execution of work outside occupied hours.

3.5 ACCEPTANCE

1. Mechanical systems shall not be considered ready for final field review until balancing results are acceptable to Consultant.

2. If found that specified flows cannot be achieved on portions of system, actual conditions shall be reported to Consultant for consideration of corrective action before continuing balancing procedure.

3. If measured flow at final field review shows deviation of 10% or more or mean sound level deviation of 10 db or more from certified report listings, by more than 10% of selected areas, report shall be rejected.

4. If report rejected, systems shall be re-balanced and new certified report submitted at no extra cost.

3.6 BALANCING REPORT

1. Submit draft copies of reports before final acceptance of project. Provide 3 copies of final report for inclusion in Operating & Maintenance Manuals.

2. Include types, serial numbers and dates of calibration of instruments.

3. Submit with report, fan curves with operating conditions plotted.

4. Report shall be indexed as follows:

Section 1 Instrumentation and Measurement Procedures

Section 2 System Data (Designed, Installed and Recorded)
–Air Moving Equipment
–Duct System
–Air Inlets/Outlets

Section 3 Drawings
– Balancing Drawings
– Equipment Shop Drawings

Section 4 Discussion of Results

Section 5 Warranty and Certification

3.7 AIR SYSTEM PROCEDURES

1. Execute air systems balancing for each air system in accordance with AABC specifications and as described herein.

2. Make tests with supply, return and exhaust systems operating and doors and windows closed or in normal operation condition.

3. Test and adjust blower rpm to design requirements.

4. Test and record motor full load amps.

5. Make air quantity measurements in ducts by pilot tube traverse of entire cross-sectional area. Take minimum of 16 readings.

6. Test and record required and measured system static pressures; filter differential, coil differential and fan total static pressure.

7. Test and adjust systems for design recirculated air flow rates.

8. Test and adjust systems for design outdoor air quantities.

9. Test and record entering air temperatures (DB heating)(DB/WB cooling).

10. Test and record leaving air temperatures (DB heating)(DB/WB cooling).

11. Adjust main supply and return ducts to design flow rates.

12. Adjust zones to design, supply and return flow rates.

13. Test and adjust each diffuser, grille and register to within 10% of design requirements.

14. Identify each diffuser, grille and register as to location and area.

15. Control and/or equipment manufacturer shall set adjustments of automatically operated dampers to operate as indicated in co-operation with balancing firm.

16. Adjust diffusers, grilles and registers to minimize drafts.

17. Use volume control devices to regulate air quantities only to extent that adjustments do not create objectionable air motion or sound levels. Effect volume control by duct internal devices such as dampers and splitters.

18. Vary total system air flow rates by adjustments of fan speeds. Vary branch air quantities by damper regulation.

19. Provide system schematic with required and actual air flow rates at each outlet or inlet.

20. Record installed fan drive assemblies, fan sheaves, motor sheaves and belts.

21. Complete balancing to achieve positive building pressure unless otherwise instructed. Positive pressure relative to outside pressure of 0.04"w.g. minimum and 0.07"w.g. maximum shall be achieved, measured with negligible outside wind velocity.

4. TESTING

4.1 Test equipment and material where specified or required by Authority having jurisdiction. Test in accordance with applicable portions of ASME, ASHRAE, SMACNA, NFPA, CSA and other recognized test codes.

4.2 Provide notice of tests to Consultant. On completion of installation, provide certification of tests with required detail. Itemize tests as to time performed and personnel responsible. Include copy of field data in Operating and Maintenance Manuals.

4.3 PRESSURE TESTS

1. Piping, fixtures or equipment shall not be concealed until inspected and approved by Consultant.

2. Carry out hydraulic tests for 8 hours. Maintain pressure. Where leakage occurs, repair and re-test.

3. Domestic Water Piping: Test to 1-1/2 times maximum working pressure or 150psi water pressure measured at system low point.

4. Drainage System: Test by filling with water to produce water pressure of 5 ft. water column minimum and 25 ft. water column maximum. Check for proper grade and obstruction by ball test.

5. Gas Piping: Test as required by authority having jurisdiction.

6. Low Pressure Ducts: Test for tightness such that leakage is inaudible and not detectable by feel.

7. Check systems during test including visual check for leakage of water test medium and soap bubbler test for air or nitrogen test medium.

8. Should tests indicate defective work or variance with specified requirements, correct defects. Correct leaks by re-making joints in screwed fittings, cutting out and re-welding welded joints and re-making joints in copper lines. Do not caulk.

4.4 PERFORMANCE TESTS

1. Gas fired appliances shall be subjected to operational testing established by Gas Safety Branch and pass these tests before being approved for operation.

2. Lubricate bearings, adjust and/or replace and set direct and "V"-belt drives for proper alignment and tension.

3. Calibrate and adjust thermostats, thermometers, gauges, linkages and dampers.

4. Operate and test motors and speed switches for correct wiring and sequences. Check overload heaters in motor starters.

5. Fasten loose and rattling pieces of equipment to ensure quiet operation.

6. Provide Rooftop unit start-up reports.

5. VIBRATION ISOLATION AND SEISMIC RESTRAINT

5.1 Provide Vibration Isolators and Seismic Restraint systems meeting requirements of Authority having jurisdiction and Commentary J, Effects of Earthquakes, in Supplement to National Building Code of Canada with regard to seismic forces transmitted to piping/equipment from building structure during an earthquake at project location. Seismic restraint for sprinkler systems shall conform to NFPA 13 and requirements of local Authorities.

5.2 Provide aircraft cable and fastening materials capable of restraining 1.5 times calculated seismic forces transmitted through equipment or piping restrained.

5.3 Installation of restraint systems and fastening methods used shall follow manufacturer's recommendations.

5.4 For suspended equipment where sway will exceed 4", slack cable restraints shall be connected from each support point (minimum 4) to structure at angle of 45o in elevation and at 90o to each other in plan view.

5.5 Provide steel band straps above centre of gravity on vertical tanks anchored to structure. Straps, anchor bolts and straps shall be capable of withstanding seismic forces in all directions. Provide minimum 2 anchor straps around horizontal tanks mounted on saddles with anchor bolts to floor structure.

5.6 Where top of individually suspended pipe or duct is less than 12" below supporting structure, transverse and longitudinal bracing shall not be required.

5.7 Provide transverse and longitudinal seismic restraint on nominally horizontal piping as follows:

Service	Sizes Where Required	Longitudinal Restraint Spacing	Transverse Restraint Spacing
gas piping	1" and larger	40'-0" on centre	20'-0" on centre
All other pipe services	21/2" and larger	80'-0" on centre	40'-0" on centre

5.8 Cables shall be tightened to remove slack (1-1/2" deflection under thumb pressure), but shall not support any weight under normal operating conditions. Allowances shall be made for normal expansion and contraction of piping systems where applicable.

6. FIRE STOPPING

6.1 WORK INCLUDED: Furnish labour, material, equipment and services necessary to provide firestopping and smoke seals around mechanical service piping and duct penetrations through fire rated wall and floor assemblies to CSA standard CAN4-S115-M85 and Authorities having Jurisdiction.

6.2 Work shall be carried out by approved specialist firm, employing tradesmen experienced in firestopping and smoke seals application. Installing Contractors shall be certified by the British Columbia Insulation Contractors Association for work specified. Work shall be installed in accordance with manufacturer's recommended installation procedures.

6.3 Acceptable firestopping systems; for Vertical Penetrations: 3M Fire Barrier Penetration Sealing System, BIO-Fire Protection Ltd. Fire Stopping and Smoke Seals, Dow Corning Fire Stop Sealant; for Horizontal and Poke Through Penetrations: Fyre Sleeve and Fyre Flange as manufacturer by Fyre Sleeve Industries Inc.

6.4 Location and extent of fire separations shall be confirmed with architectural drawings.

7. INSULATION

7.1 Insulation thicknesses and performance shall conform to requirements of ASHRAE/IES Standard 90.1-1989 (Table 9-1 Minimum Pipe Insulation, Table 9 Minimum Duct Insulation).

7.2 Work shall be carried out by skilled workmen regularly engaged in this type of work. Deliver material to project site in original non-broken factory packaging, labelled with manufacturer's density and thickness.

7.3 British Columbia Insulation Contractors Association (BCICA) Standards Manual, latest edition, shall form part of this specification for mechanical insulation. Copy of current Standard shall be available at site.

7.4 Materials and application temperatures shall be as recommended by adhesive, coating or sealer manufacturer. Make good separations of joints or cracking or insulation due to thermal movement or poor workmanship.

7.5 Composite fire and smoke hazard ratings for adhesives, insulation, coatings and jackets shall not exceed 25 for flame spread and 50 for smoke developed or otherwise as required by Code. Use only ULC listed or tested recovering materials.

7.6 PIPING: Mineral fibre insulation preformed for piping with integral all service jacket, Standard 1501-A.2.

1. Insulation Thickness Schedule:

Piping to be Insulated	Insulation Thickness
Domestic Cold (except run-outs to individual fixtures less than 12'-0" concealed in length)	1"
Domestic Hot and Recirculation (except run-outs to individual fixtures less than 12'-0" concealed in length) up to 2"	1"
Domestic Hot and Recirculation over 2"	11/2"

2. Application: Hot piping 1501-H; Cold piping 1501-C.

3. Finishes: Exposed piping PF2 Premium 2 (or 15 mil PVC jacket with solvent weld); Concealed piping PF3 Economy. All finishes complete with 25/50 rated PVC fitting covers.

7.7 DUCTWORK AND PLENUMS (STANDARD 1502)

1. Insulation Thickness Schedule:

Ducts and Equipment to be Insulated	Insulation Thickness
Outside and combustion air ducts	2"
Acoustic Duct Liners As Indicated	1"
Plenums Below Roof Mounted Fans (Acoustical Lining)	1"

2. Applications:
1. Rigid Insulation External Application: Exposed in finished areas and in mechanical rooms, ER/1 hot duct and plenum and ER/2 cold duct and plenum.
2. Flexible Insulation External Application: Concealed hot duct EF/1; Concealed cold duct ER/2.
3. Duct Liner (Internal Application): Semi-rigid 1S/1; Rigid 1R/1.

3. Finishes:
1. Concealed: Insulation on concealed ductwork shall be left factory finished with no further finish required.
2. Mechanical Rooms: Rectangular RF/2 Custom; Round RD/2 Custom.
3. Exposed Ductwork and Plenums (in finished areas): Rectangular RF/3 Premium/Custom Alternate; Round RD/3 Premium/Custom Alternate.

4. ACOUSTIC LINING: Fibreglass insulation with neoprene surface coating or matt faced to prevent fibre erosion, Standard 1502-C.2 for ductwork and 1502-C.1 for plenums. Acoustic lining as indicated on drawings; all joints and raw edges to be sealed.

8. PLUMBING

8.1 Provide and/or relocate plumbing fixtures with trim, and water heater with required accessories as specified on the drawings.

8.2 PIPE AND FITTINGS

Size	Pipe	Fittings
1. Sanitary Drainage and Vent Piping Above Grade:		
To 21/2"	DWV copper	Wrought or cast brass with 50-50 solder; recessed drainage pattern
All sizes Cast iron		Mechanical joints with s.s. couplings

Types of piping used "inside building" shall be used to 12'-0" outside building.

2. Sanitary Drainage and Vent Piping Below Grade (Inside Building):

All sizes Cast iron ABS-DWV	Mechanical joints with s.s. couplings Solvent joints

3. Storm Drainage Below Grade (Inside Building):

All sizes Cast iron ABS-DWV	Mechanical joints with s.s. couplings Solvent joints

4. Storm Drainage Piping Above Grade (Inside Building):

All sizes Cast iron	Mechanical joints with s.s. couplings

5. Sanitary and Storm Drainage (Outside Building):

All sizes Cast iron	Mechanical joints with s.s. couplings or grooved mechanical joints
ABS-DWV Storm only	Solvent joints Concrete Rubber gasket

6. Domestic Water Piping Below Grade (Outside Building):

To 3"	Type "K" soft copper Ductile iron	Flared tube Hub and spigot with mechanical clamp and rod on long radius bends or push on rubber gasket joints to CSA B131.10
to 21/2"	Class 150 or Series 200 PVC	Solvent Joints/ Schedule 40 fittings

7. Domestic Water Piping Above Grade:

All sizes Certified type "L" or type "K" hard copper	Wrought bronze or cast brass with Silvabrite 100 lead free solder. Roll grooved copper may be used in lieu of sweated joints; all grooved couplings to be designed with angle bolt pads to provide a rigid joint. Standard of acceptance: VICTAULIC Style 606.

8. Gas Piping:

All sizes Sch 40 black steel	Malleable screwed or butt welded joints. Piping over 2" inside building shall be welded. Buried pipe shall be yellow jacketed with cathodic protection.

8.3 WATER SPECIALTIES

1. Hose Bibbs: Provide as specified in Hose Bibb and Drain Schedule.

2. Water Hammer Arresters:

1. Provide 18-8 stainless steel all-welded bellows type arrester complete with isolation valve on water lines connected to but not limited by the following:
1. Each fixture or group of fixtures.
2. Commercial dishwashers.
3. Other devices with solenoid valves.

2. Size arresters as per P.D.I. Standard WH201.
3. Arrester and isolation valve shall be completely accessible.

3. Back Flow Preventer Assemblies:

1. Provide vacuum breaker on domestic water supply to commercial dishwashers and janitor sinks and other required fixtures as noted in the fixture schedule.

2. Provide air gap fitting on drain from required fixtures. Equal to Watts 900 AG.

4. Meters:

1. Water meter shall conform to AWWA C-700 for displacement meter and AWWA C-702 for compound meter complete with direct reading sealed encoder register to AWWA C-707. Water meter shall conform to the requirements of local authority.
2. Provide water meter and three valve bypass of size indicated on drawings; provide water pressure gauge with isolation valve on incoming service line. Meter to have remote reader with conduit and wiring under Division 16.

5. Trap Seal Primers: Provide priming device and piping to nearest acceptable fixture so that device will introduce regulated amount of water into trap. Equal to Watts 200.

6. Potable Water System Pressure Reducing Valve

1. Provide pilot operated globe type pressure reducing valve with bronze strainer assembly to limit static water pressure to 85psi on incoming water line to Plumbing Code requirements. PRV shall be WATTS Model PV-10M with Y strainer to sizes indicated.
2. Provide pressure reducing valves with isolation valves on hot and cold risers as indicated on riser diagrams.

8.4 CLEAN-OUTS AND ACCESS COVERS

1. Clean-outs in concrete shall be adjustable type for level installation.

2. In unfinished areas (e.g. mechanical rooms, storage rooms), floor clean-out access covers shall be round cast iron scoriated frames and plates, Zurn Z-1500.

3. In finished areas, covers shall have depressed centre to accept floor finish, Zurn ZN-1508.

4. Clean-outs on subsurface drainage system extensions shall be Zurn Z-1500 in unfinished concrete (e.g. parking, mechanical rooms), Zurn Z-1440 encased in 16" x 16" x 4" thick concrete pad in soft landscaping and Zurn Z-1502 in finished concrete or pavers.

5. Wall clean-outs shall have chrome plated cap.

6. Provide clamping collar and flashing on clean-outs passing through waterproofing membrane.

8.5 DRAINS

1. Provide drains as specified in Hose bibb and Drain Schedule with lacquered cast iron body (except as noted otherwise) and clamping collar.

2. Provide drains by single manufacturer throughout.

3. Drains shall be 4" unless noted otherwise.

8.6 DOMESTIC HOT WATER HEATERS

1. Construct propane-fired domestic hot water heaters to CSA B204.1-T and CSA B204.3-T. Heaters with input larger than 200mbh shall be ASME labelled.

2. Provide heaters as indicated complete with factory installed controls and safety devices.

3. Provide lever operated temperature and pressure relief valve for waterheater.

4. Provide check valve between domestic cold water supply and heaters.

8.7 PORTABLE HAND FIRE EXTINGUISHER

1. Multi-Purpose Dry Chemical: Pressurized with hose and shut-off nozzle or integral shut-off nozzle and mounting brackets suitable for Class A, B and C fires; charge indicator. Provide installation in surface mounted cabinet in public areas.

8.8 PLUMBING FIXTURES AND TRIM

1. Provide new fixtures, CSA approved, free from defects with clear, smooth and bright finished surfaces.

2. Fixtures shall be product of one manufacturer and of same colour for washroom or location used throughout project.

3. Provide CSA approved plumbing brass with metal work heavy chromium plated and product of one manufacturer throughout.

4. Provide flexible angle type hot and cold water supplies with screwdriver stop, hexagonal reducer and escutcheon. Provide heavy chromium plating where exposed.

5. Review millwork drawings and advise Consultant of discrepancies before ordering fixtures.

6. Provide fixtures and trim as specified in Plumbing Fixture Schedule or approved alternate.

8.9 GENERAL

1. No pipe shall be installed in any part of wall where temperature is less than 5oC under winter design conditions.

2. Upon completion, water piping systems shall be flushed with water before installation of fixtures in order to remove any foreign material in piping. Plumbing fixtures and equipment shall be thoroughly cleaned and left in good operating condition.

3. Provide connections as required including shut-off valves with unions or flanges to equipment installed by other trades.

8.10 PIPE CONNECTIONS

1. Ream pipes and tubes. Clean scale and dirt, inside and outside, before assembly. Remove foreign material from piping.

2. Grade drainage lines minimum 2%, piping 4" and larger may be graded at 1% slope. Plug or cap pipe and fittings to keep out debris during construction. Lay pipe in proper compacted bedding material; do not lay pipe when water in trench. Provide 1500psi concrete for buried lines within 45 deg. of footing.

3. Grade vents so condensation will not form trap.

4. Pipe with stainless steel type mechanical joints shall be supported by means of two hangers located on each side of joint.

5. Reduce horizontal piping with eccentric reducer fittings installed to provide drainage and eliminate air pockets.

6. Make screwed joints in steel or iron piping with full cut standard taper pipe threads. Use non-corrosive and non-toxic lubricant or teflon tape applied to male thread.

7. Joints in copper drainage pipe shall be made in accordance with manufacturer's recommendations. Use soft solder. Joints in buried copper pressure piping shall be flared joint type. Joints in above grade copper pressure pipe shall be Silvabrite 100 lead free solder and flux. Flux shall be full strength when applied and not diluted.

8. Wherever dissimilar metals are joined or supported, piping shall have non-conducting type connections or hangers to prevent galvanic corrosion. Brass adapters and valves are acceptable for pipe connections.

9. Provide equipment drainage lines to discharge into hub or funnel drain. Review with Consultant where equipment cannot be piped to drain; do not run lines across floor.

10. Install piping to allow for expansion and contraction without stressing pipe or equipment connected.

11. Provide clearance for insulation and access to valves, air vents, drains and unions.

12. Install gas piping in open ventilated spaces. Pitch lines and provide drip legs. Where gas piping is run in concealed space, provide ventilation grilles as required. Gas piping larger than 2" installed within building shall be welded. After approval of piping installation, connect appliances and purge gas piping and conduct gas leakage tests.

8.11 UNIONS AND FLANGES

1. Provide unions or flanges to permit equipment removal without disturbing piping systems.

8.12 VALVES

1. Use gate valves for shut-off and globe valves for throttling. Globe valve discs shall be suitable for service intended. Mount valves with stems upright or horizontal, not inverted. Ball valves shall be acceptable for shut-off or throttling service.

2. Provide line size bronze check valve on cold water supply to domestic water heaters.

8.13 WATER SPECIALTIES

1. Provide hose bibbs as indicated.

2. Provide water hammer arresters as specified.

3. Provide back flow preventers as specified and required by Authorities.

4. Provide trap primers to floor drains as indicated and required by Code.

8.14 CLEAN-OUTS AND ACCESS COVERS

1. Install accessible clean-outs at traps, where required by Code and as indicated on drawings.

2. Provide pipe extensions on underslab and on perimeter subsurface drainage systems for inspection and clean-out locations indicated on drawings complete with clean-outs.

3. Clean-outs shall be suitable for surface finish detailed on Architectural drawings and traffic loading requirements.

8.15 FLOOR DRAINS: Review location of drains on Architectural drawings and confirm with Consultant that drains will be at low points on floor. Improperly located drains shall be relocated at no cost to Owner.

8.16 DOMESTIC HOT WATER HEATERS

1. Provide as specified complete with sheet metal drain pan; ensure good access to heaters for servicing. Pipe relief outlet to drain.

2. Provide type B vents on gas fired units.

8.17 FIRE PROTECTION: Provide extinguishers as specified; confirm charge at final inspection.

8.18 PLUMBING FIXTURES

1. Install each fixture with its own trap, easily removable for servicing and cleaning. At completion, thoroughly clean plumbing fixtures and equipment.

2. Install wall mounted fixtures with approved wall carriers, model to suit installation.

3. Where fixtures or trim come in contact with wall and/or floor, make joint watertight with white silicone base non-hardening caulking compound, finished in neat manner.

4. Mount wall hung fixtures the following heights above finished floor:

1. Water Closet: Standard 15" to top of bowl rim and handicapped 18" to top of seat.
2. Urinal: Standard 22" to top of bowl rim with one urinal mounted 20" to top of bowl rim in each washroom.
3. Lavatory: Standard 31" to top of basin rim and handicapped 32" to top of basin rim.

5. Attach floor mounted water closets to floor with lag screws. Lead flashing shall not hold closet in place.

6. Provide fixed cover on handicapped water closet tank.

8.19 SERVICE CONNECTIONS

1. Coordinate obtaining and arrange for payment of utility and service connection fees with General Contractor.

2. Before commencing work, confirm invert elevations required for sewer and water connections.

3. Provide concrete thrust blocks on water service lines at each bend, elbow, cross tee and valve.

4. Domestic water lines shall be disinfected with chlorine content solution for 24 hours.

9. VENTILATION

9.1 DUCTWORK

1. Ductwork shall be galvanized steel. Fabricatea in accordance with recent SMACNA Duct Manuals and ASHRAE Handbooks. Ductwork shall meet the requirements of NFPA 90A and 91 and conform to applicable codes.

2. Prior to fabrication of ductwork, check all ceiling spaces and heights and conflictions with other trades.

3. Duct Sizes: Inside clear dimensions. For acoustically lined or internally insulated ducts, maintain sizes inside ducts.

4. The minimum sheet metal thickness for low pressure ducts, medium pressure 2"w.g. and 1"w.g. including fittings, access doors and other accessories, shall be as in accordance with SMACNA 1985 "HVAC Duct Construction Standards – Metal and Flexible".

5. All transverse duct joints shall be sealed (Class C SMACNA) with duct sealant.

9.2 AIR OUTLETS: Provide and/or relocate air outlets as specified on the drawings.

9.3 SUPPLY/EXHAUST FANS: Provide fans as specified on the drawings. Fans to be AMCA rated centrifugal wheels with non-overloading power characteristic, stable pressure curve and self aligning bearings.

10. CONTROLS

1. Provide a complete ddc system of automatic controls to acheive the following sequence:
(a). Exhaust fans F-1 & F-2 controlled according to programmed occupancy schedule.
(b). Summer Day Cycle:
–Relief Dampers MD-3 & MD-4 open depending on wind direction. Provide wind vane c/w finger switches to detect wind direction.
–MD-1 & MD-2 open to maintain space temperature.

(c). Summer Night Cycle:
–Relief Dampers MD-3 & MD-4 open depending on wind direction. Provide wind vane c/w finger switches to detect wind direction.
–MD-1 & MD-2 open if outdoor air temperature falls below 72dF.
–MD-1&2 and MD-3&4 remain open until slab temperature moss sensor detects a temperature below 60dF.
–Electric baseboards are locked out when outdoor air temperature is above 40dF.

(b). Winter Day Cycle:
–Electric baseboards are cycled by room sensors to maintain space temperature.
–CO2 sensor modulates MD-1 & MD-2 to maintain 550ppm CO2 level in space.
–Relief dampers MD-3 & MD-4 open depending on wind direction.

(c). Winter Night Cycle:
–Electric baseboards are cycled to maintain the night setback temperature.
–Moss slab temperature system to function until outdoor air temperature falls below 50dF.

2. Provide all components and coordinate with the electrical trade for power connections. All control wiring by Div. 15 forces.

3. All thermostats and sensors shall be wall or column mounted at 60" above floor unless specifically noted otherwise. Coordinate final mounting locations with Interior Designer/Architect and Consultant on site before rough-in.

N

REVISION:	DATE:	NOTES:
–	MAY.30/01	RE-ISSUED FOR B.P.
–	APR.27/01	ISSUED FOR TENDER
–	FEB.19/01	ISSUED FOR B.P.

SEAL:

MAXEM HOLDINGS INC.

OFFICE / WAREHOUSE
HARBOURSIDE AVENUE

CITY OF NORTH VANCOUVER

PLAN:

Specifications

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M-Y

OF

SCALE:	PROJECT:
AS NOTED	6195-00
DRAWN: –	DATE: –