

PROVIDE 150 mm WIDE, RIBBED, PVC WATERSTOPS IN ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS IN ALL EXTERIOR WALLS BELOW GRADE

1.	JOIST FABRICATOR TO CONSULT THE SUPPLEMENTS TO THE NATIONAL BUILDING CODE OF CANADA ON NON-UNIFORM SNOW LOADS.			
2.	JOISTS ARE TO BE CAMBERED FOR THE GREATER OF: FULL DEAD LOAD DEFLECTION OR FOR NOMINAL CAMBER AS SPECIFIED IN CSA \$16-14.			
3.	ALL JOIST BRIDGING TO CONFORM WITH THE LATEST BUILDING CODE REQUIREMENTS, EXCEPT AS NOTED.			
4.	JOISTS BEARING ON BEAMS TO REST ON THE MIDDLE THIRD OF THE FLANGE. JOISTS IN LINE TO BEAR END TO END ON THE SUPPORTING BEAMS WITH A			
	MAXIMUM GAP OF 12 mm 1/2 IN.			
5.	JOIST SUPPLIER TO REFER TO MECHANICAL DRAWINGS FOR LOCATION AND WEIGHTS OF EQUIPMENT SUPPORTED BY JOISTS. JOISTS TO HAVE INTERNAL			
	MEMBERS IN LINE WHERE REQUIRED BY MECHANICAL DUCTS.			
6.	ALL STEEL JOISTS TO RECEIVE ONE COAT OF SHOP PRIMER CISC/CPMA 1-73a QUICK DRYING. JOISTS IN CRAWLSPACE TO HAVE 2 COATS. JOISTS TO BE			
	CLEANED IN CONFORMANCE WITH SSPC-SP2. JOISTS RECEIVING FINISH PAINTING TO HAVE ONE COAT OF CISC/CPMA 2-75 QUICK DRYING SHOP PRIMER.			
	STEEL TO BE CLEANED IN CONFORMANCE WITH SSPC-SP7.			
7.	JOIST SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA TO			
	THE PROJECT DESIGN ENGINEER FOR REVIEW PRIOR TO FABRICATION.			
8.	JOISTS WHICH ARE RESISTANCE WELDED SHALL CONFORM TO CSA W55.2, "RESISTANCE WELDING PRACTICE" AND CSA-W55.3, "RESISTANCE WELDING			
	QUALIFICATION CODE FOR FABRICATORS OF STRUCTURAL MEMBERS USED IN BUILDINGS".			
9.	ALL COLUMNS TO BE STRUTTED BY JOISTS OR BEAMS. WHERE JOISTS DO NOT LINE UP WITH COLUMNS USE L76 x 76 x 6.4 ANGLE FROM COLUMN AT			
	BOTTOM OF BEAM FLANGE TO ADJACENT JOIST TOP CHORD AT PANEL POINTS.			
10.	ALL JOISTS LINING UP WITH COLUMNS ARE TO BE STRUT JOISTS, DESIGNED TO RESIST END MOMENTS AS INDICATED ON THE DRAWINGS.			
11.	LIVE LOAD DEFLECTION CRITERIA SHALL BE L/360 UNLESS OTHERWISE NOTED.			
12.	CONTRACTOR SHALL REPORT TO ENGINEER ANY EQUIPMENT LOADS TO BE SUPPORTED BY JOISTS NOT SHOWN ON DRAWINGS.			
METAL DECK				
1	ROOF DECK SHALL BE 38 mm DEEP PROFILE, 0.76mm, WITH RIB SPACING OF 150 mm			
1.	NOOF DEGN STINES DE 30 title DEET FROMEE, OF OHIGH, WELL RID STAGING OF 130 HILL			

ALL BLOCK WALLS RECEIVING BEAMS TO HAVE 2 COURSES HIGH, 400 mm LONG FILLED WITH 20 MPa CONCRETE UNLESS NOTED ON DRAWINGS.

THE STRUCTURAL STEEL FABRICATOR'S ENGINEER SHALL BE RESPONSIBLE FOR LOCATING AND DESIGNING PROVISIONS FOR ALL TEMPORARY FALL

ALL ROLLED OR STEEL STRUCTURAL SECTIONS SHALL BE G40.21-350W. ALL HOLLOW STRUCTURAL SECTIONS TO BE G40.21-350W CLASS C. ALL

FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE PERFORMED IN ACCORDANCE WITH CSA S16-14, "DESIGN OF STEEL STRUCTURES".

STRUCTURAL STEEL TO CONFORM TO CSA-G40.21, "STRUCTURAL QUALITY STEELS" AND CSA-G40.20 "GENERAL REQUIREMENTS FOR ROLLED OR WELDED

ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF CSA W59, "WELDED STEEL CONSTRUCTION". FABRICATORS SHALL BE PROPERLY CERTIFIED IN

ALL BEAMS CONTINUOUS OVER COLUMNS ARE TO HAVE WEB STIFFENERS THE SAME SIZE AND ORIENTATION AS THE COLUMN BELOW, UNLESS OTHERWISE

ALL STRUCTURAL STEEL IS TO RECEIVE ONE COAT OF CISC/CPMA 1-73a QUICK DRYING SHOP PRIMER. STEEL TO BE CLEANED IN CONFORMANCE WITH

THE STRUCTURAL STEEL SUPPLIER SHALL PROVIDE AND BE RESPONSIBLE FOR ALL HOLES IN STEEL SECTIONS REQUIRED BY OTHER TRADES. SECTION SHALL BE STRENGTHENED WHERE REQUIRED TO GUARANTEE THE ORIGINAL STRENGTH OF THE BEAM. ANY CUTTING OF STEEL AT THE JOB SITE SHALL BE

ALL DUCTS LARGER THAN 450x450. THROUGH ROOF DECK TO BE FRAMED WITH L76x76x6.4 ANGLES ALL AROUND, EXCEPT AS NOTED. SMALLER

INCLUDE FOR ALL ADJUSTABLE CONNECTIONS REQUIRED TO SUITE FABRICATION AND ERECTION PROCEDURES AND TOLERANCES.

UNLESS NOTED OTHERWISE PROVIDE L76x76x6.4 DIAPHRAGM CHORD ANGLE AROUND ENTIRE PERIMETER OF BUILDING

TRUSS TO BE ADEQUATELY BRACED UNTIL SHEATHING INSTALLED AND JOISTS AND DIAGONAL; BRACES ARE INSTALLED.

THE MANITOBA BUILDING CODE, AND FOR ANY ANTICIPATED SNOW BUILD-UP LOADS.

OPENINGS THROUGH STEEL DECK TO BE STIFFENED BY STEEL DECK SUPPLIER. WHERE STEEL DECK REVERSES ITS FRAMING DIRECTION. USE L51x51x6.4

STRUCTURAL STEEL SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF

MANITOBA COVERING THE DESIGN OF CONNECTIONS, TO THE PROJECT DESIGN ENGINEER FOR REVIEW PRIOR TO FABRICATION. CONNECTION DESIGN TO

STRUCTURAL STEEL WHICH SUPPORTS ARCHITECTURAL FINISHES MUST BE DESIGNED TO SUFFICIENTLY ADJUSTABLE TO MEET REQUIRED INSTALLATION

NAILING PATTERNS AND NAIL LENGTHS SHALL CONFORM TO TABLE 9.23.3.4. AND 9.23.3.5. OF THE NATIONAL BUILDING CODE RESIDENTIAL STANDARDS.

PLYWOOD SHEATHING SHALL BE EXTERIOR DOUGLAS FIR PLYWOOD CONFORMING TO CSA 0121-08(R2013) "DOUGLAS FIR PLYWOOD" UNLESS OTHERWISE

TRUSSES FRAMING INTO BEAMS OR OTHER TRUSSES SHALL BE CONNECTED WITH PROPER METAL FRAMING ACCESSORIES APPROVED BY THE PROJECT

THE TRUSS SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF AN ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA TO THE

BRACING NOTED ABOVE SHALL BE SPECIFIED BY TRUSS SUPPLIER UNLESS NOTED OTHERWISE ON THE DRAWINGS, AND SUPPLIED AND INSTALLED BY

NOTE: TRUSS SUPPLIER SHALL INCLUDE IN CONTRACT PRICE ALLOWANCE FOR FINAL INSPECTION AND A LETTER SEALED BY A PROFESSIONAL ENGINEER

NOTE: IN PREPARATION OF TRUSS DESIGNS, THE WEB ORIENTATIONS, LUMBER GRADE AND MEMBER SIZES EMPLOYED ARE TO MINIMIZE THE REQUIREMENT

PERMANENT WEB AND CHORD BRACING REQUIRED BY TRUSS DESIGN, AND TEMPORARY BRACING. ALL MISCELLANEOUS METAL FRAMING CONNECTORS AND

PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. ENGINEERING SHOP DRAWINGS SHALL INCLUDE A LAYOUT PLAN SHOWING ALL TRUSSES,

REGISTERED IN THE PROVINCE OF MANITOBA CERTIFYING THAT TRUSSES ARE CONSTRUCTED AND ERECTED AS PER TRUSS SUPPLIER'S DESIGN

ALL JOISTS OR BEAMS FLUSH FRAMED INTO OTHER BEAMS SHALL BE CONNECTED USING METAL JOIST OR BEAM HANGERS. ALL EXTERIOR TRELLIS METALWORK SUCH AS HANGERS, BOLTS, NUTS, WASHERS, PLATES AND ANGLES TO BE GALVANIZED.

ALL TRELLIS JOISTS AND BEAMS TO BE DOUGLAS FIR-L, ALL WOOD TO BE KILN DRIED AND PRESERVATIVE TREATED FOR EXTERIOR EXPOSURE.

THE STRUCTURAL STEEL ERECTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND ERECTING ALL TEMPORARY GUYING AND BRACING OF THE STEEL FRAMING

TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE. THESE SHALL REMAIN IN PLACE UNTIL ALL STEEL DECKING IS ERECTED, WELDED IN PLACE AND

SSPC-SP2. STEEL RECEIVING FINISH PAINTING TO HAVE ONE COAT OF CISC/CPMA 2-75 QUICK DRYING SHOP PRIMER. STEEL TO BE CLEANED IN

PROTECTION SYSTEMS REQUIRED DURING CONSTRUCTION TO MEET MANITOBA WORKPLACE HEALTH AND SAFETY REGULATIONS.

ACCORDANCE WITH CSA W47.1. "CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL STRUCTURES". ALL BOLTED CONNECTIONS TO USE A325 HIGH STRENGTH BOLTS, MINIMUM CONNECTION SHALL CONSIST OF 2 BOLTS

FABRICATOR TO NOTIFY ENGINEER OF ANY PROPOSED MEMBER SUBSTITUTIONS AND CHANGED CONNECTION DETAILS.

DOOR AND WINDOW LINTELS IN BLOCK WALLS SHALL BE AS FOLLOWS UNLESS NOTED ON DRAWINGS:

200 mm HIGH `U' BLOCK

20 MPa CONCRETE FILL

400 mm HIGH 'U' BLOCK

20 MPa CONCRETE FILL

2-10M BOTTOM

2-15M BOTTOM

MASONRY TIES AND ANCHORS SHALL BE DESIGNED IN CONFORMANCE WITH CSA-A370-14, "CONNECTORS FOR MASONRY". DESIGN WIND PRESSURE FOR

UP TO 1200 mm

1200 mm TO 2400 mm

CONFORMANCE WITH SSPC-SP7.

TIES IN EXTERIOR WALLS SHALL BE 1.4 kPa

ANGLES, CHANNELS AND PLATES SHALL BE G40.21-300W.

DONE ONLY AS DIRECTED AND APPROVED BY THE ENGINEER.

ALL WOOD TRUSSES ARE TO BE DESIGNED IN ACCORDANCE WITH:

CSA 086-14 "ENGINEERING DESIGN IN WOOD".

THE NATIONAL BUILDING CODE OF CANADA.

ASSUMPTIONS AND INSTALLATION REQUIREMENTS.

UNFACTORED DESIGN LOADS FOR TRUSSES ARE AS FOLLOWS:

TOP CHORD DEAD LOAD 0.15 kN/m PLUS TRUSS SELF-WEIGHT BOTTOM CHORD DEAD LOAD 0.50 kN/m PLUS TRUSS SELF-WEIGHT

TOP CHORD LIVE LOAD 0.30 kN/m

ALL MASONRY/CONCRETE WALLS CONSTRUCTED.

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DECK SHALL BE MINIMUM GRADE A WITH A MINIMUM GALVANIZE GALVANIZED ZINC COATING TO ZF75. DECK SHALL BE ARC SPOT WELDED TO BEARING SUPPORTS AT 300 mm O/C. WELDS SHALL BE 20 mm DIAMETER. SIDE LAPS SHALL BE MECHANICALLY FASTENED (BUTTON-PUNCHED) AT 600 mm ON-CENTRE. DECK SUPPLIER SHALL REINFORCE OPENINGS OVER 150 mm TO 300 mm ACROSS THE FLUTES WITH MINIMUM L65 x 65 x 6.4 EACH SIDE OF OPENING				
PERPENDICULAR TO FLUTES. ANGLE SHALL BE WELDED TO AT LEAST TWO FLUTES ON EACH SIDE OF OPENING. DECK SUPPLIER SHALL REINFORCE OPENINGS OVER 300 mm TO 450 mm ACROSS THE FLUTES WITH SUITABLE REINFORCEMENT BASED ON A STRUCTURAL ANALYSIS OF THE LOADS INVOLVED.	CONCRETE SLAB SCHEDULE			
TOUCH UP DECK WITH ZINC RICH PAINT WHERE ZINC COATING HAS BEEN BURNED BY WELDING.	MARK	THICKNESS	REINFORCING/DESCRIPTION	
CONCRETE BLOCKS TO CONFORM TO CSA-A165-14 SERIES "STANDARDS FOR CONCRETE MASONRY UNITS". A. STANDARD HOLLOW MASONRY UNITS SHALL BE H/15/A/M. (COMPRESSIVE STRENGTH IS BASED ON NET AREA). B. HIGH STRENGTH HOLLOW MASONRY UNITS SHALL BE H/30/A/M.	S1	150	15M @ 300 O/C TOP EACH WAY 15M x 1500 LONG @ 450 O/C BOTTOM LOWER LAYER 15M @ 450 O/C BOTTOM UPPER LAYER ON 150 CARDBOARD VOID FORM & COMPACTED GRANULAR FILL C/W THICKENED EDGE	
(COMPRESSIVE STRENGTH IS BASED ON NET AREA). EXTERIOR AND LOAD BEARING WALLS ARE TO BE BUILT WITH TYPE 'S' MORTAR HAVING A MINIMUM STRENGTH OF 12 MPa AT 28 DAYS. INTERIOR MASONRY NON-LOAD BEARING WALLS MAY BE BUILT WITH TYPE 'N' MORTAR HAVING A COMPRESSIVE STRENGTH OF 5 MPa AT 28 DAYS. MORTAR SHALL CONFORM TO CSA A179-14, "MORTAR AND GROUT FOR UNIT MASONRY". USE DUR-O-WAL OR EQUAL EVERY SECOND COURSE. EVERY COURSE FOR STACK BOND.	S2	150	150 CONCRETE SLAB ON GRADE R/W 10M @ 300 O/C EACH WAY TOP 10M @ 300 O/C TOP DOWELS @ DOOR WAYS ON 150 MIN COMPACTED GRANULAR FILL AS PER GEOTECHNICAL REPORT + 10 MILL POLY	
THE TOP COURSE OF ALL BLOCK WALLS IS TO BE A 'U' BLOCK WITH 2-10M CONTINUOUS CENTERED AND FILLED WITH 20 MPa CONCRETE UNLESS NOTED ON PLAN. ALL MASONRY WALLS TO BE PROPERLY BRACED UNTIL STRUCTURE IS CLOSED IN AND WALL PERMANENTLY SUPPORTED.	S3	175	15M @ 225 O/C EACH WAY BOTTOM 15M @ 300 O/C TOP DOWELS FROM CONCRETE BEAM 12-15M CONTINUOUS @ 150 O/C EACH WAY TOP CENTRED OVER DROP	

1								
	CONCRETE BEAM SCHEDULE							
	MARK	WIDTH	HEIGHT	REINFORCING				
	B1	300	900	2-30M TOP & BOTTOM CONTINUOUS 1-10M HORIZONTAL EACH FACE 10M TIES @ 300 O/C				
	B2	350	900	2-30M TOP & BOTTOM CONTINUOUS 10M DOWELS @ 300 O/C AT DOOR OPENINGS 1-10M HORIZONTAL EACH FACE 10M TIES @ 300 O/C				

MASONRY WALL SCHEDULE

15MPa BLOCKS

30MPa BLOCKS

DESCRIPTION

Standard Horizontal Reinforcing @ 400 o/c

TANDARD HORIZONTAL REINFORCING @ 400 O/C

STANDARD HORIZONTAL REINFORCING @ 400 O/C

1000 LONG DOWELS FROM WALL TO CONCRETE BEAM TO MATCH WALL VERTICAL REINFORCING

R/W 15M @ 600 O/C IN GROUTED CORES

R/W 15M @ 400 O/C IN GROUTED CORES

R/W 15M @ 400 O/C IN GROUTED CORES

2-25M AT EACH END/CORNER

2-25M AT EACH END/CORNER

2-25M AT EACH END/CORNER

MARK | WIDTH

1:25

COORDINATE OUANTITY AND LOCATIONS REQUIRED WITH

ELECTRICAL AND ARCHITECHURAL DRAWINGS

190

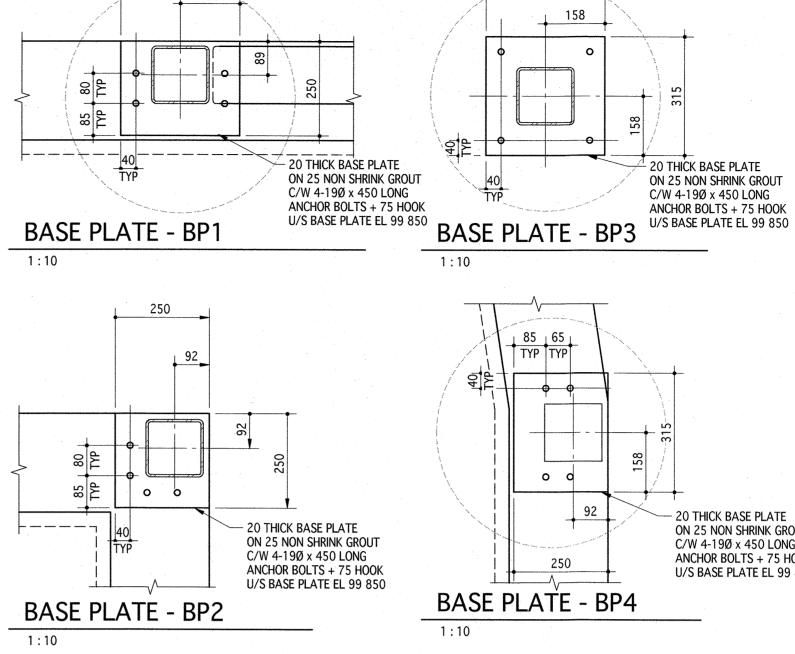
ON 150 CARDBOARD VOID FORM

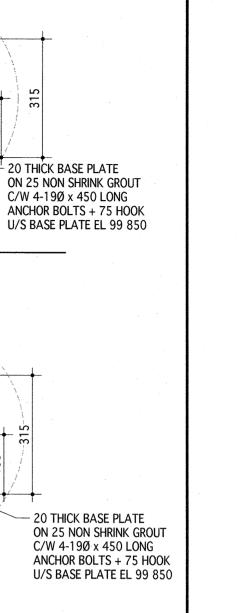
12-15M CONTINUOUS @ 150 O/C EACH WAY TOP CENTRED OVER DROP

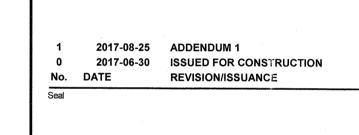
COLUMN SCHEDULI

DESCRIPTION

HSS 152x152x6.4







Crosier Kilgour & Partners Ltd

No. 235 Date: 2017-08-25

architecture inc

Engineer 300-275 Carlton Street Winnipeg, Manitoba R3C 5R T 204. 943. 7501 F 204. 943. 7507

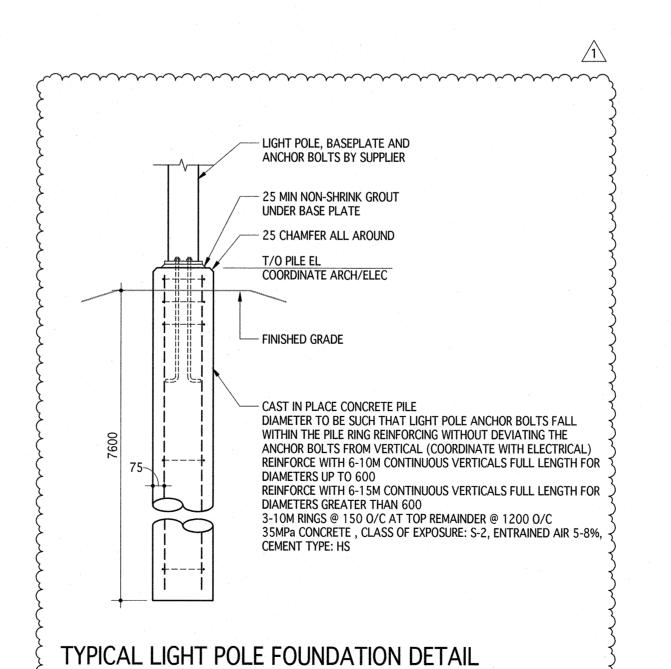
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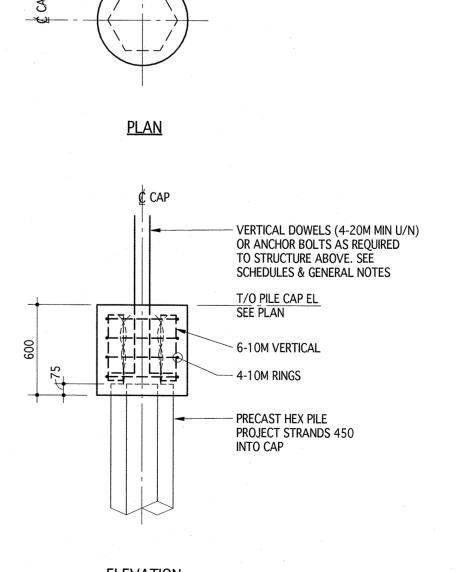
& Partners Ltd. CONSULTING STRUCTURAL ENGINEERS

BID OPPORTUNITY 450-2017 KILDONAN PARK MAINTENANCE BUILDING

GENERAL NOTES, **SCHEDULES & PILE DETAILS**

2017-08-25





- 600Ø PILE CAP

ELEVATION SINGLE PILE CAP DETAIL