GENERAL NOTES

1. STRUCTURAL DESIGN BASED ON THE MANITOBA BUILDING CODE 2011 EDITION.
   A) IMPORTANCE CATEGORY: NORMAL
   B) WIND LOAD: q50 = 0.45 kPa
   C) GROUND SNOW LOAD: Ss = 1.9 kPa
   D) ASSOCIATED RAIN LOAD: Sr = 0.2 kPa
2. SEISMIC SITE CLASSIFICATION: NOT APPLICABLE
3. DO NOT SCALE DRAWINGS.
4. ALL DIMENSIONS ARE TO BE VERIFIED WITH THE EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
5. THESE STRUCTURAL DRAWINGS SHOW THE COMPLETED STRUCTURE AND DO NOT INDICATE ALL COMPONENTS NECESSARY FOR SAFETY DURING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY ON AND AROUND THE JOBSITE DURING CONSTRUCTION.
6. THE EXISTING BUILDING SUPERSTRUCTURE AND FOUNDATION HAVE BEEN REVIEWED AND CAN SUPPORT ALL NEW LOADING CONDITIONS IN ACCORDANCE WITH PART 4 OF THE 2011 MANITOBA BUILDING CODE, UNLESS NOTED.

STRUCTURAL STEEL

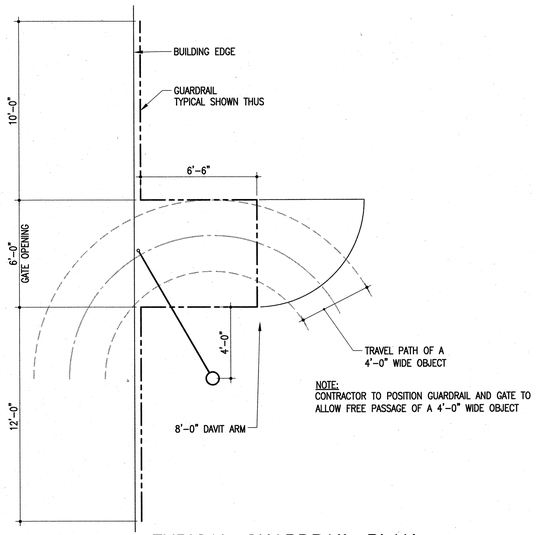
1. THE STRUCTURAL STEEL FABRICATOR'S ENGINEER SHALL BE RESPONSIBLE FOR LOCATING AND DESIGNING PROVISIONS FOR ALL TEMPORARY FALL PROTECTION SYSTEMS REQUIRED DURING CONSTRUCTION TO MEET MANITOBA WORKPLACE HEALTH AND SAFETY REGULATIONS.
2. STRUCTURAL STEEL TO CONFORM TO CSA-G40.21, "STRUCTURAL QUALITY STEELS" AND CSA-G40.20 "GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL", ASTM A572/A572M "STANDARD SPECIFICATION FOR HIGH-STRENGTH LOW-ALLOY COLUMBIUM-VANADIUM STRUCTURAL STEEL' OR ASTM A992/A992M "STANDARD SPECIFICATION FOR STRUCTURAL STEEL SHAPES'.
3. ALL ROLLED OR STEEL STRUCTURAL SECTIONS SHALL BE G40.21-350W, ASTM A992 OR ASTM A572 GRADE 50. ALL HOLLOW STRUCTURAL SECTIONS TO BE G40.21-350W CLASS C OR ASTM A500-C. ALL ANGLES, CHANNELS AND PLATES SHALL BE G40.21-300W.
4. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE PERFORMED IN ACCORDANCE WITH CSA S16-14, "DESIGN OF STEEL STRUCTURES".
5. ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF CSA W59, "WELDED STEEL CONSTRUCTION". FABRICATORS SHALL BE PROPERLY CERTIFIED IN ACCORDANCE WITH CSA W47.1, "CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL STRUCTURES".
6. ALL BOLTED CONNECTIONS TO USE A325 HIGH STRENGTH BOLTS. MINIMUM CONNECTION SHALL CONSIST OF 2 BOLTS.
7. ALL STRUCTURAL STEEL IS TO RECEIVE ONE COAT OF CISC/CPMA 1-73a QUICK DRYING SHOP PRIMER. STEEL IN CRAWLSPACES SHALL RECEIVE 2 COATS. STEEL TO BE CLEANED IN CONFORMANCE WITH SSPC-SP2. STEEL 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.
8. NO HOLES PERMITTED IN TOP FLANGE OF BEAMS AT COLUMNS WHERE BEAMS ARE CONTINUOUS OVER COLUMNS.
9. FABRICATOR TO NOTIFY ENGINEER OF ANY PROPOSED MEMBER SUBSTITUTIONS AND CHANGED CONNECTION DETAILS.
10. 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 DONE ONLY AS DIRECTED AND APPROVED BY THE ENGINEER.
11. 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 INCLUDE FOR ALL ADJUSTABLE CONNECTIONS REQUIRED TO SUIT FABRICATION AND ERECTION PROCEDURES AND TOLERANCES.

STAIRS AND GUARDRAILS

1. FOR ALL METAL STAIRS AND GUARDRAILS, SUPPLIERS ARE TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA FOR REVIEW BY THE PROJECT ENGINEER, PRIOR TO FABRICATION. ENGINEERING SHOP DRAWINGS SHALL INCLUDE DESIGN LOADS, LAYOUT PLAN, CONNECTION DETAILS, AND ALL OTHER PERTINENT INFORMATION.
2. FOR ALL METAL STAIRS AND GUARDRAILS, SUPPLIERS/DESIGNERS SHALL PROVIDE A FINAL INSPECTION AND A LETTER SEALED BY THE ENGINEERS RESPONSIBLE FOR THE STAIR AND GUARDRAIL DESIGNS, CERTIFYING THAT STAIRS AND GUARDRAILS ARE CONSTRUCTED AND INSTALLED AS PER DESIGN ASSUMPTIONS AND INSTALLATION REQUIREMENTS.
3. IF CONTRATOR IS SUPPLYING A PRE-FABRICATED STAIR OR GUARDRAIL SYSTEM, THE CONTRACTOR SHALL PROVIDE ALL CERTIFICATION DOCUMENTS THAT DEMONSTRATE SUITABLE USE FOR INTENDED PURPOSE AND COMPLIANCE WITH APPLICABLE CODES.
4. ALL STAIRS, GUARDS OR GUARDRAILS TO COMPLY WITH THE REQUIREMENTS OF THE MANITOBA BUILDING CODE AND MANITOBA REGULATION 217/2006 – WORKPLACE SAFETY AND HEALTH REGULATION.

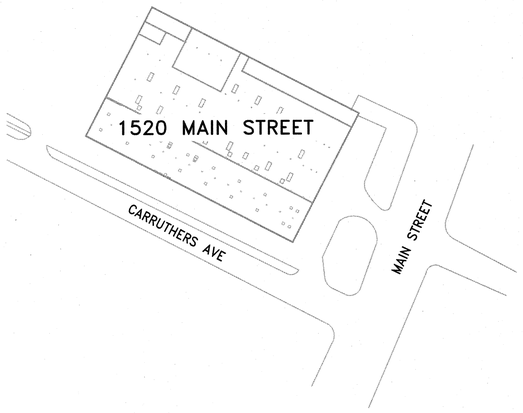
EQUIPMENT SCHEDULE

EQUIPMENT	421 OSBORNE ST FORT ROUGE BUILDING 'A'	421 OSBORNE ST FORT ROUGE BUILDING 'B'	600 BRANDON AVE BRANDON GARAGE	1520 MAIN ST NORTH GARAGE	SPECIFICATIONS/ DESCRIPTION	MANUFACTURER
NEW GUARDRAIL ON EXISTING PARAPET	1	–	–	–	PRE-FABRICATED ALUMINUM GUARD MOUNTED TO THE EXISTING PARAPET, USING 10 MM DIAMETER BY 100 MM EMBEDMENT DEPTH HILTI-HAS-R ROD, C/W HILTI HIT-HY 200.	KEE SAFETY INC. OR APPROVED EQUIVALENT AS PER BID OPPORTUNITY CLAUSE B7.
NEW FREESTANDING GUARDRAIL	9 (SEE PLAN FOR LENGTHS)	2 (SEE PLAN FOR LENGTHS)	9 (SEE PLAN FOR LENGTHS)	4 (SEE PLAN FOR LENGTHS)	FREESTANDING ROOF EDGE GUARD, COMPLETE WITH GUARDRAILS, POSTS, COUNTERWEIGHTS AND ALL REQUIRED FITTINGS.	KEEGUARD® BY KEE SAFETY INC. OR APPROVED EQUIVALENT AS PER BID OPPORTUNITY CLAUSE B7.
NEW FREESTANDING STAIR STRUCTURE	5	–	–	1	PRE-FABRICATED FREESTANDING ACCESS OR CROSS-OVER STAIR STRUCTURE.	ROOFTOP CROSSOVER BY KEE SAFETY INC. OR APPROVED EQUIVALENT AS PER BID OPPORTUNITY CLAUSE B7.
NEW MATERIAL LIFTING DAVIT CRANE	2	1	1	1	1500 LB CAPACITY, MOTORIZED ELECTRIC MATERIAL LIFTING DAVIT HOIST, WITH A MINIMUM 4' CLEARANCE PAST BUILDING EDGE, WITH A MAXIMUM 8' BOOM REACH. DESIGNED FOR ALL-WEATHER OUTDOOR USE. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.	PROBEL ROOF-MOUNTED MATERIALS WINCH-HOIST, OR APPROVED EQUIVALENT AS PER BID OPPORTUNITY CLAUSE B7. TYPICAL DAVIT BASE FRAMING DETAILS AND ELECTRICAL SERVICES ARE DESIGNED FOR PRO-BEL HOIST DAVIT BASE. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH DESIGN BASE REVISIONS REQUIRED FOR ALTERNATE DAVIT MODELS.
NEW ROOF HATCH	–	–	–	1	PREFABRICATED INSULATED ROOF ACCESS HATCH WITH SAFETY ACCESS POSTS AND GUARDS.	BILCO TYPE S ROOF HATCH, OR APPROVED EQUIVALENT AS PER BID OPPORTUNITY CLAUSE B7.

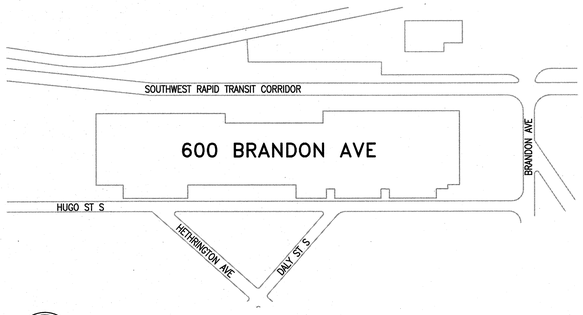


NOTE:
CONTRACTOR TO POSITION GUARDRAIL AND GATE TO ALLOW FREE PASSAGE OF A 4'-0" WIDE OBJECT

A S1.0 | S1.0 TYPICAL GUARDRAIL PLAN AT DAVIT LOCATIONS
1/4" = 1'-0"



KEY PLAN
NTS



KEY PLAN
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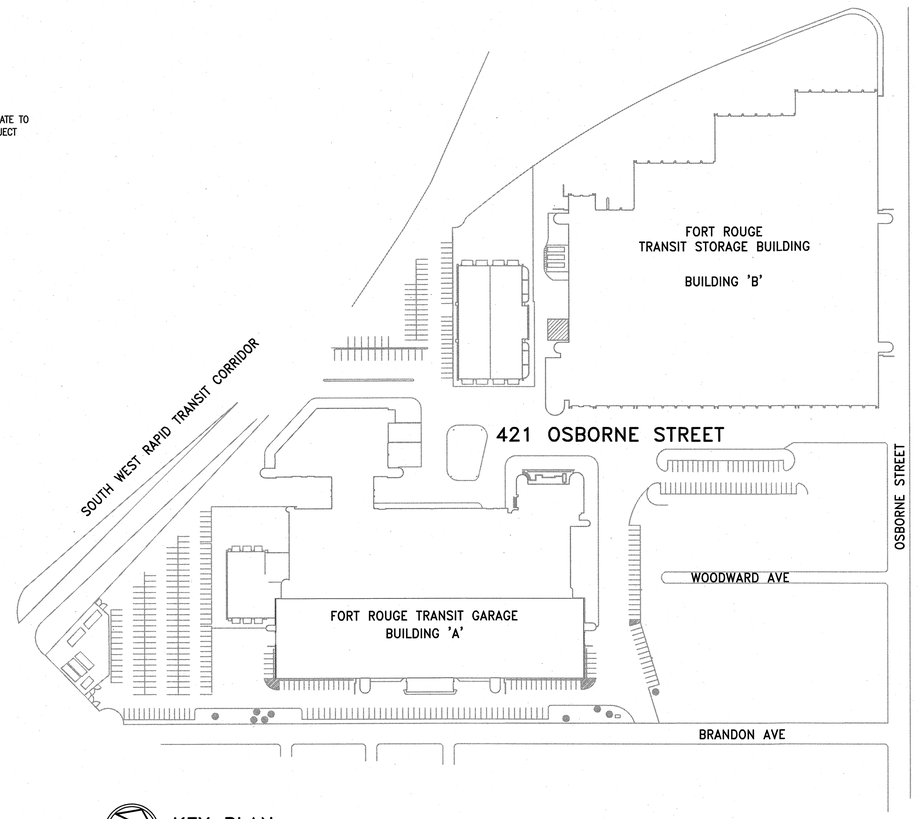

KEY PLAN
NTS

The General Contractor shall check & verify all dimensions and report any errors or omissions to the designers.

No.	Date	Issue/Revision	By
0	2019-05-03	ISSUED FOR CONSTRUCTION	IM

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
Crosier Kilgour & Partners Ltd.
No. 235

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Project
WINNIPEG TRANSIT
ROOF FALL ARREST MEASURES
BID OPPORTUNITY 236-2019
VARIOUS SITES
WINNIPEG, MANITOBA

Sheet Title
GENERAL NOTES, EQUIPMENT SCHEDULE AND KEY PLANS

File	Date
2018-0794	2019-05-03
Design: IM	Drawn: CJM
Revision: 0	Sheet No.: S1.0