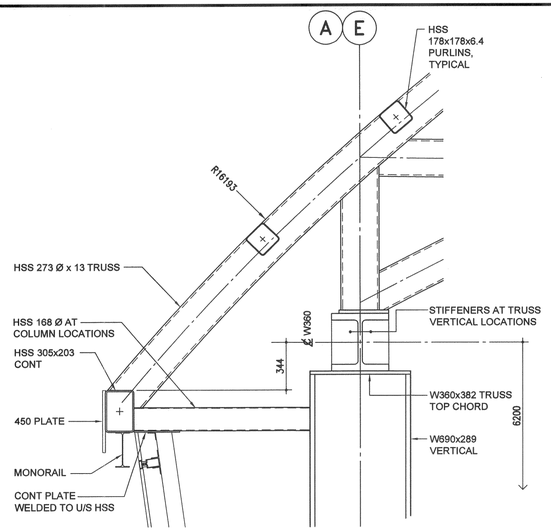

DETAIL A
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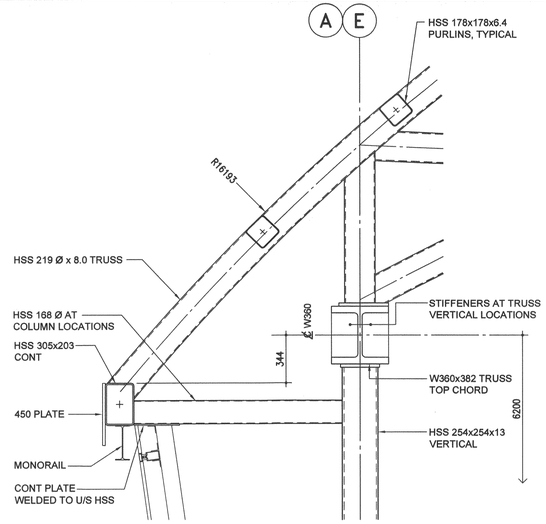
87 88



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SCALE 1:20
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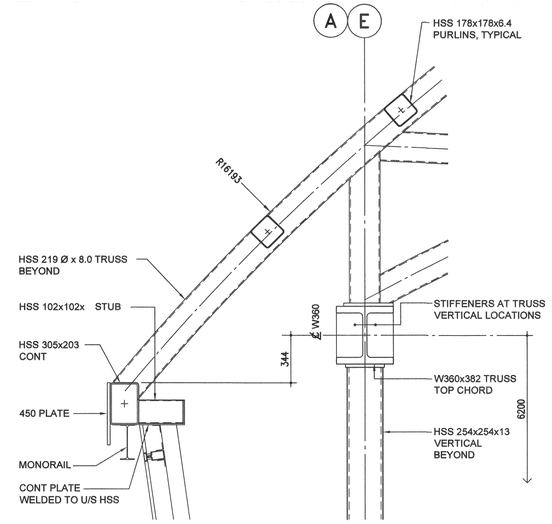

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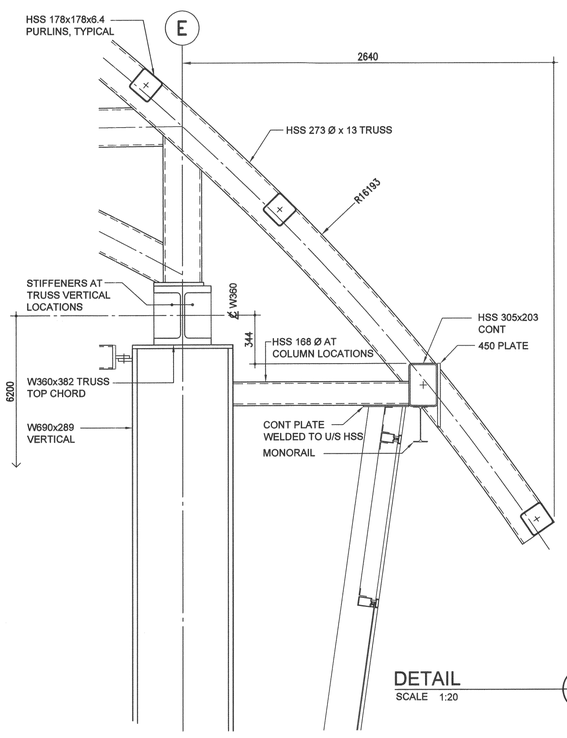
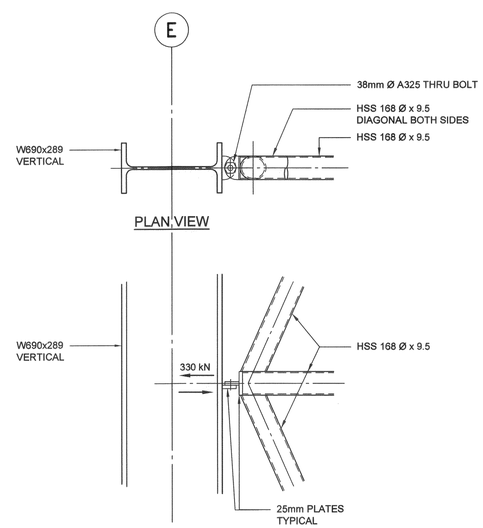
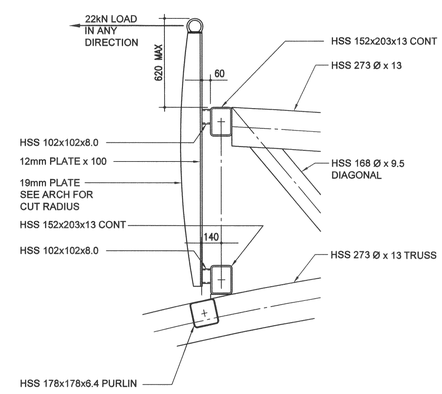


DETAIL D
SCALE 1:20
87 88



DETAIL E
SCALE 1:20
87 88



DETAIL F
SCALE 1:20
87 88

GENERAL NOTES

1. STRUCTURAL DESIGN BASED ON THE MANITOBA BUILDING CODE OF CANADA 2006 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 ARCHITECTURAL DRAWINGS AND 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.

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".
3. ALL ROLLED OR STEEL STRUCTURAL SECTIONS SHALL BE G40.21-50W. ALL HOLLOW STRUCTURAL SECTIONS TO BE G40.21-50W CLASS C. ALL ANGLES, CHANNELS AND PLATES SHALL BE G40.21-44W.
4. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE PERFORMED IN ACCORDANCE WITH CAN/CSA S16.1-01, "STEEL STRUCTURES FOR BUILDINGS".
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 TO BE ZINC METALLIZED. REFER TO SPECIFICATION FOR REQUIREMENTS.
8. NO HOLES PERMITTED IN TOP FLANGE OF BEAMS AT COLUMNS WHERE BEAMS ARE CONTINUOUS OVER COLUMNS.
9. ALL BEAMS CONTINUOUS OVER COLUMNS ARE TO HAVE WEB STIFFENERS THE SAME SIZE AND ORIENTATION AS THE COLUMN BELOW, UNLESS OTHERWISE NOTED.
10. ANCHOR BOLTS TO BE GRADE ASTM A307 UNLESS NOTED OTHERWISE ON DRAWINGS, PROVIDED BY STEEL SUPPLIER AND SET BY THE GENERAL CONTRACTOR.
11. FABRICATOR TO NOTIFY ENGINEER OF ANY PROPOSED MEMBER SUBSTITUTIONS AND CHANGED CONNECTION DETAILS.
12. 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.
13. 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 ALL MASONRY/CONCRETE WALLS CONSTRUCTED.
14. 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 SUITE FABRICATION AND ERECTION PROCEDURES AND TOLERANCES.
15. STRUCTURAL STEEL WHICH SUPPORTS ARCHITECTURAL FINISHES MUST BE DESIGNED TO BE SUFFICIENTLY ADJUSTABLE TO MEET REQUIRED INSTALLATION TOLERANCES. SEE ARCHITECTURAL FOR REQUIRED FINISH TOLERANCES.

WOOD

1. ALL FLOOR JOISTS AND LINTELS TO BE NO.1/NO.2 SPF , WALL STUDS AND PLATES TO BE NO.1/NO.2 SPF. ALL WOOD TO BE KILN DRIED.
2. ALL WALLS TO BE ADEQUATELY BRACED UNTIL SHEATHING INSTALLED ON WALLS, FLOOR BELOW AND STRUCTURES ABOVE.
3. THE BOTTOM PLATE AT THE MAIN FLOOR IS TO BE BOLTED TO THE FOUNDATION WITH A MINIMUM OF 1/2" DIAMETER ANCHOR BOLTS X 200 MM LONG AT 1200 MM O/C.
4. 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.
5. PLYWOOD SUB-FLOORING AND SHEATHING SHALL BE EXTERIOR DOUGLAS FIR PLYWOOD CONFORMING TO THE LATEST EDITION OF CSA O121 "DOUGLAS FIR PLYWOOD" UNLESS OTHERWISE NOTED.
6. ALL WOOD TRUSSES ARE TO BE DESIGNED IN ACCORDANCE WITH:
   A) THE LATEST EDITION OF CAN/CSA O86 "ENGINEERING DESIGN IN WOOD".
   B) THE NATIONAL BUILDING CODE OF CANADA.
   C) THE MANITOBA BUILDING CODE AND FOR ANY ANTICIPATED SNOW BUILD-UP LOADS.
7. TRUSSES FRAMING INTO BEAMS OR OTHER TRUSSES SHALL BE CONNECTED WITH PROPER METAL FRAMING ACCESSORIES APPROVED BY THE PROJECT ENGINEER.
8. THE TRUSS SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF A ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. ENGINEERING SHOP DRAWINGS SHALL INCLUDE A LAYOUT PLAN SHOWING ALL TRUSSES, PERMANENT WEB AND CHORD BRACING REQUIRED BY TRUSS DESIGN, AND TEMPORARY BRACING. ALL MISCELLANEOUS METAL FRAMING CONNECTORS AND BRACING NOTED ABOVE SHALL BE SPECIFIED BY TRUSS SUPPLIER AND SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

   NOTE: TRUSS SUPPLIER SHALL INCLUDE IN CONTRACT PRICE ALLOWANCE FOR FINAL INSPECTION AND A LETTER SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA CERTIFYING THAT TRUSSES ARE CONSTRUCTED AND ERECTED AS PER TRUSS SUPPLIER'S DESIGN ASSUMPTIONS AND INSTALLATION REQUIREMENTS.

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

9. DESIGN LOADS FOR TRUSSES ARE AS FOLLOWS:
   A) TOP CHORD LIVE LOAD 1.72 KPA
   B) TOP CHORD DEAD LOAD 0.75 KPA
   C) BOTTOM CHORD DEAD LOAD 1.0KPA

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300-275 Carlton Street
Winnipeg, Manitoba R3C 5R6
T 204. 943. 7501
F 204. 943. 7507
2009-1280
Crosier Kilgour & Partners Ltd.
CONSULTING STRUCTURAL ENGINEERS

APEGM
Certificate of Authorization
Crosier Kilgour & Partners Ltd.
No. 235 Date: May 14, 2010

LOCATION APPROVED
UNDERGROUND STRUCTURES
SUPV. U/G STRUCTURES COMMITTEE — DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONSTRUCTION PERSONNEL MUST VERIFY LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. ELEV.

NO.	REVISIONS	DATE	BY
1	ISSUED FOR TENDER	10/05/14	TKM

DESIGNED BY BMN / TKM
DRAWN BY CL
CHECKED BY BMN / TKM
APPROVED BY
HOR. SCALE
VERTICAL
DATE 2010/05/14

DILLON CONSULTING
RELEASED FOR CONSTRUCTION
ORIGINAL SIGNED BY RANDY FINGAS
DATE 2010/05/14

ENGINEER'S SEAL
PROVINCE OF MANITOBA
T.K. MALKIEWICZ
REGISTERED PROFESSIONAL ENGINEER
May 13/10
CONSULTANT PROJECT NO.
088813

Winnipeg
THE CITY OF WINNIPEG
TRANSIT DEPARTMENT

SOUTHWEST RAPID TRANSIT CORRIDOR - STAGE 1
OSBORNE STATION & ASSOCIATED WORKS

SECTIONS & GENERAL NOTES

CITY DRAWING NUMBER B237-10-88
SHEET 88 OF 121
CONSULTANT DRAWING NUMBER C5-2104-T