

# STONY MOUNTAIN INSTITUTION

## STONY MOUNTAIN, MANITOBA

### SMI UNIT 6, SANITARY LINE FAILURE SOLUTION



Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES Western Region / SERVICES IMMOBILIERS Région de l'ouest

#### PRIME/STRUCTURAL CONSULTANT

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2017-1050



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CONSULTING STRUCTURAL ENGINEERS

#### MECHANICAL CONSULTANT



#### DRAWING INDEX

##### STRUCTURAL DRAWINGS

- S0.1 DRAWING INDEX, GENERAL NOTES, KEY PLAN
- S2.1 PARTIAL FOUNDATION PLAN, PARTIAL MAIN FLOOR PLAN
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##### MECHANICAL DRAWINGS

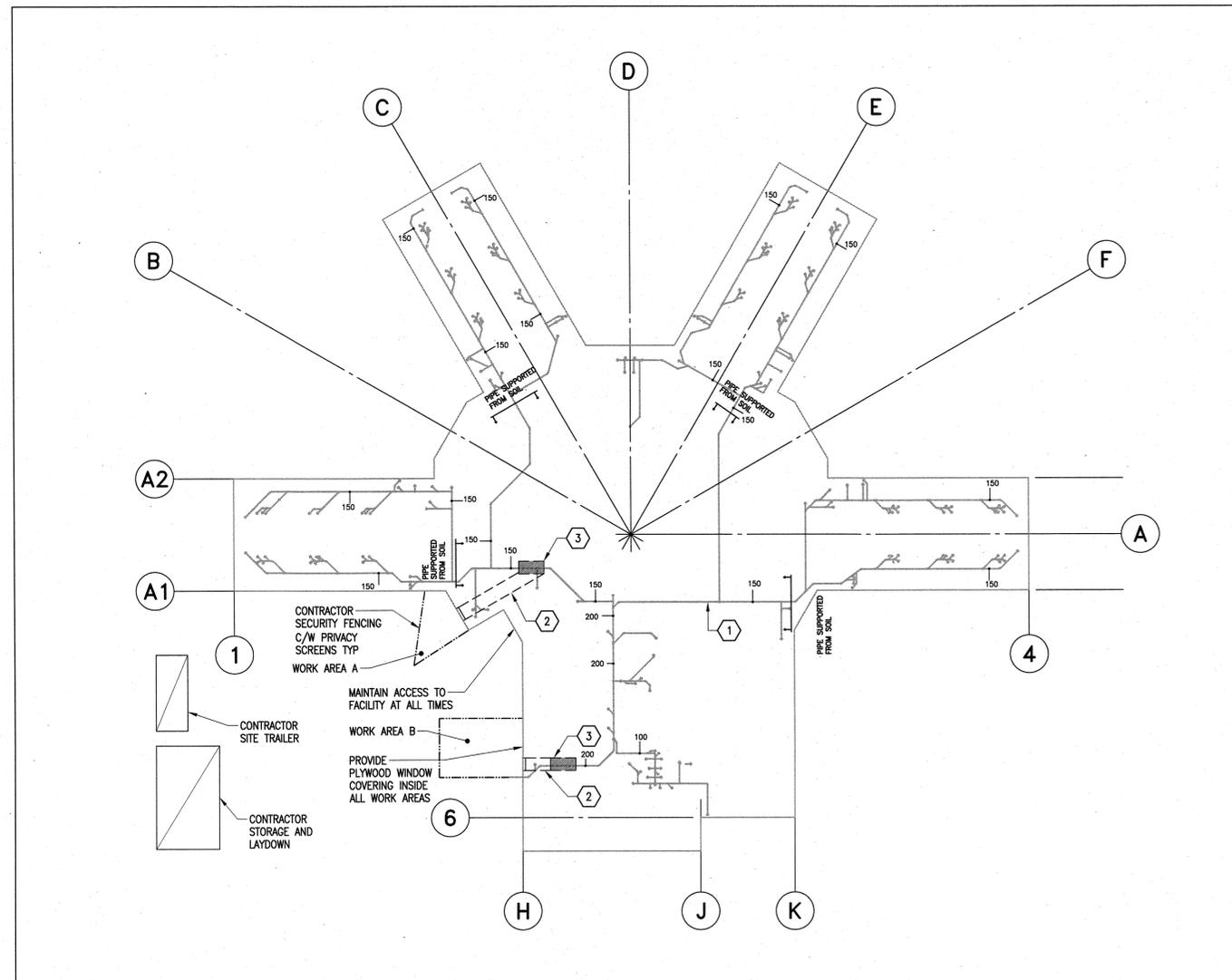
- MP2.1 MAIN FLOOR - PLUMBING PLAN



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#### KEY NOTES

- 1 FLUSH & CLEAN ALL SANITARY LINES. CONDUCT SONDE LOCATION SCAN. REFER TO MP2.1 FOR FULL SCOPE OF WORK.
- 2 EXCAVATE ACCESS TO TWO KNOWN REPAIR AREAS AND RESTORE FOLLOWING COMPLETION OF PIPE INVESTIGATION AND REPAIR WORK. REFER TO S2.1 AND S4.1 FOR FULL SCOPE OF WORK.
- 3 AFTER ON-SITE REVIEW OF PIPING CONDITIONS WITH DEPARTMENTAL REPRESENTATIVE AND CONSULTANT REPAIR SANITARY LINES AT TWO KNOWN LOCATIONS AND VERIFY REPAIRS AS PER MECHANICAL DRAWINGS AND SPECIFICATIONS. REFER TO MP2.1 FOR FULL SCOPE OF WORK.

Revision	Description	Date
1	RE-ISSUED FOR CONSTRUCTION	18-05-01
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Client: PUBLIC WORKS AND GOVERNMENT SERVICES CANADA / client

User: CORRECTIONAL SERVICE CANADA / Utilisateur

Project title: SMI UNIT 6, SANITARY LINE FAILURE SOLUTION / Projet

STONY MOUNTAIN INSTITUTION  
STONY MOUNTAIN, MANITOBA

Designed by: IM / Conçu par  
 Drawn by: MAH / Dessiné par  
 Approved by: JAW / Approuvé par  
 PWGSC Project Manager: TL / Administrateur de Projets TPSGC

Drawing title: DRAWING INDEX, COORDINATION KEY PLAN / Titre du dessin

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
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#### PROJECT KEY PLAN AND CONTRACTOR STAGING PLAN

1:300



**GENERAL NOTES**

- STRUCTURAL DESIGN BASED ON THE MANITOBA BUILDING CODE 2011 EDITION.
- IMPORTANCE CATEGORY: HIGH
- SEISMIC SITE CLASSIFICATION: NOT APPLICABLE
- DO NOT SCALE DRAWINGS.
- DO NOT BACKFILL UNTIL GROUND FLOOR STRUCTURE IS IN PLACE AND BASEMENT SLABS HAVE BEEN POURED AND CURED.
- ALL DIMENSIONS ARE TO BE VERIFIED WITH THE PROJECT DRAWINGS AND EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
- 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.

**CAST-IN-PLACE CONCRETE**

**I CONCRETE**

- ALL CONCRETE IS TO BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF CSA-A23.1-14 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION" AND CSA-A23.2-14 "METHOD OF TEST FOR CONCRETE". PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF QUALITY, YIELD AND STRENGTH AS SPECIFIED IN CONCRETE MIXES, AND WILL COMPLY WITH CSA-A23.1. CERTIFICATION LETTER TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.
- PROVIDE CERTIFICATION THAT PLANT, EQUIPMENT, AND MATERIALS TO BE USED IN CONCRETE COMPLY WITH REQUIREMENTS OF CSA-A23.1. CERTIFICATION LETTER TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.
- CONCRETE PROPERTIES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

EXTERIOR WALL AND GRADE BEAM REPAIRS: 32 MPA MIN. AT 28 DAYS  
 CLASS OF EXPOSURE: F-2  
 ENTRAINED AIR/CATEGORY: 2 (4% TO 7%)  
 AGGREGATE MAX. 20 MM  
 CURING TYPE: TYPE 2 - ADDITIONAL  
 PLACEABILITY: SELF-CONSOLIDATING CONCRETE

UNLESS INDICATED OTHERWISE THE GENERAL CONTRACTOR SHALL SPECIFY CONCRETE SLUMP APPROPRIATE WITH PLACEMENT METHODS AND SITE CONDITIONS. THE GENERAL CONTRACTOR SPECIFIED SLUMP MUST BE SHOWN ON THE CERTIFICATION LETTER AND CONCRETE DELIVERY TICKET.

- UNLESS NOTED OTHERWISE CONCRETE CURING TO CONFORM TO THE LATEST EDITION OF CSA-A23.1-14 AS FOLLOWS:
  - TYPE 1 - BASIC: 3 DAYS  $\geq 10^{\circ}\text{C}$  AND FOR A TIME NECESSARY TO ATTAIN 40% OF THE SPECIFIED STRENGTH.
  - TYPE 2 - ADDITIONAL: 7 DAYS  $\geq 10^{\circ}\text{C}$  AND FOR A TIME NECESSARY TO ATTAIN 70% OF THE SPECIFIED STRENGTH.
  - TYPE 3 - EXTENDED: 7 DAYS WET CURING  $\geq 10^{\circ}\text{C}$ .
- AIR ENTRAINING ADMIXTURES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C260/C260M-10A "STANDARD SPECIFICATION FOR AIR ENTRAINING ADMIXTURES FOR CONCRETE". SUPERPLASTICIZING ADMIXTURES SHALL CONFORM TO ASTM C494/C494M "STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE" OR ASTM C1017/C1017M "STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR USE IN PRODUCING FLOWING CONCRETE" WHEN FLOWING CONCRETE IS APPLICABLE. AIR ENTRAINING ADMIXTURES TO HAVE A DURABILITY FACTOR GREATER THAN 75, WHEN TESTED TO ASTM STANDARDS C666/C666M PROCEDURE A. SPACING FACTOR FOR ANY AIR ENTRAINING ADMIXTURE MUST BE 0.17MM OR LESS WHEN TESTED IN ACCORDANCE WITH ASTM C457 "STANDARD TEST METHOD FOR MICROSCOPICAL DETERMINATION OF PARAMETERS OF THE AIR-VOID SYSTEM IN HARDENED CONCRETE".

**II REINFORCING STEEL**

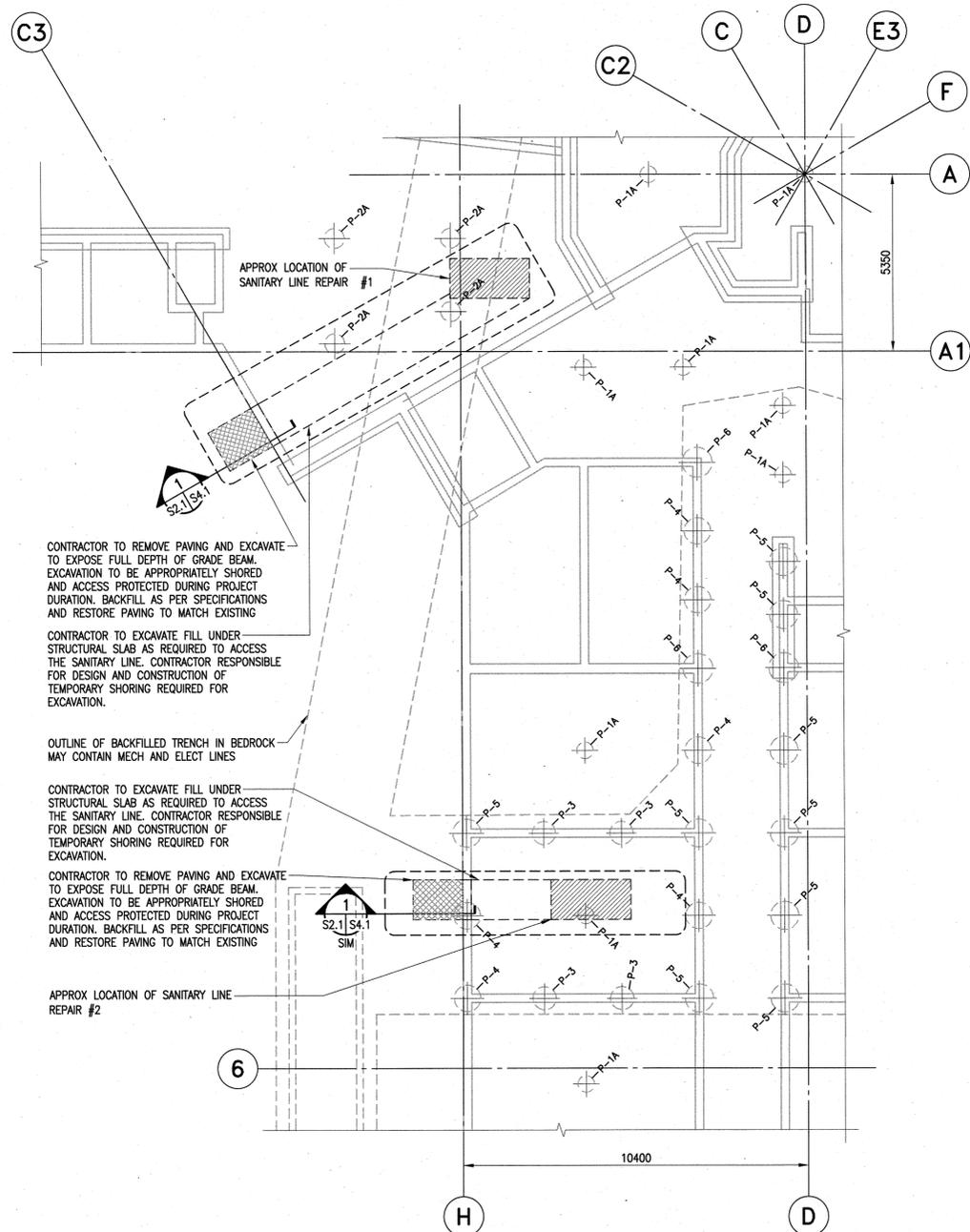
- ALL REINFORCING STEEL TO BE CSA-G30.18M-09 GRADE 400R DEFORMED BARS EXCEPT COLUMN TIES AND BEAM STIRRUPS WHICH SHALL BE GRADE 400W STEEL.
- ALL REINFORCING IS TO BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE REINFORCING STEEL INSTITUTE OF CANADA - MANUAL OF STANDARD PRACTICE, EXCEPT OTHERWISE NOTED.
- REINFORCING STEEL COVER IS TO CONFORM TO CAN/CSA A23.3-14 "DESIGN OF CONCRETE STRUCTURES FOR BUILDINGS" AND AS FOLLOWS:

GRADE BEAMS:  
 EXPOSURE CLASS: F-2 50 MM BOTTOM TO TIES 40MM SIDES AND TOP TO TIES.

- ALL REINFORCING TO BE HELD IN PLACE, AND TIED BY THE USE OF PROPER ACCESSORIES, SUCH AS HI-CHAIRS, SPACERS, ETC. TO BE SUPPLIED BY THE REINFORCING STEEL FABRICATOR. HI-CHAIRS TO HAVE 4 LEGS AND TO BE STAPLED OR NAILED TO THE FORMWORK.
- ALL MISCELLANEOUS CONCRETE PADS AND CURBS ARE TO BE REINFORCED WITH A MINIMUM OF 10M AT 400 MM O/C EACH WAY, UNLESS NOTED.
- WHEN CONCRETE BEAMS ARE CAST INTO A WALL CHASE, DOWELS SIZE AND NUMBER SAME AS BEAM REINFORCING ARE TO BE PROVIDED FROM WALL, UNLESS OTHERWISE SHOWN ON PLAN.

**III FORMWORK**

- SHEARMAT OR APPROVED CARDBOARD VOIDFORM WITH A MIN. DEPTH OF 150 MM SHALL BE USED AS THE BOTTOM FORM FOR STRUCTURAL SLABS. SELECT AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ACCESSORIES SUCH AS HI-CHAIRS, SPACERS, ETC. SHALL BE SUPPORTED BY PADS OF PLYWOOD OR TEMPERED HARDBOARD TO PREVENT PUNCTURING THE VOIDFORM.
- UNLESS NOTED OTHERWISE PROVIDE SLIP JOINT ALL PAVING OR CONCRETE SLABS ON GRADE AGAINST STRUCTURAL MEMBERS WITH 12 MM ASPHALT IMPREGNATED FIBREBOARD.
- ALL CONSTRUCTION JOINT KEYS ARE TO BE A MINIMUM OF 40 MM DEEP.
- PLACE 10 MIL POLYETHYLENE UNDER ALL SLABS ON FILL AND OVER TOP OF VOIDFORM.

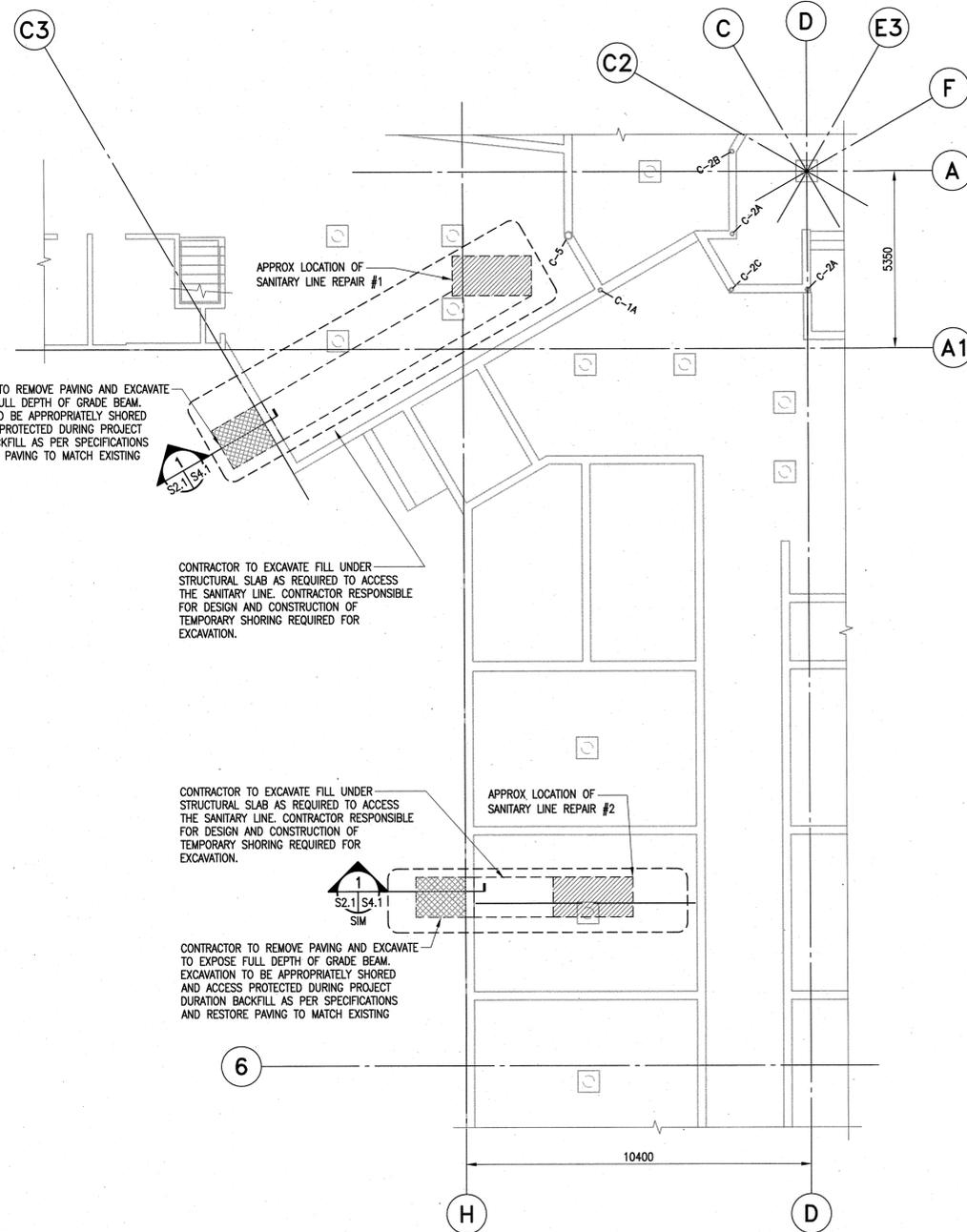


**PARTIAL FOUNDATION PLAN**

1 : 100

**NOTE:**

- P-# INDICATES EXISTING PILE
- EXCAVATION ROUTES MAY ENCOUNTER BURIED SERVICES. CONTRACTOR TO EXERCISE ALL CAUTION DURING EXCAVATION. ALL SERVICES TO REMAIN OPERATIONAL DURING EXCAVATION

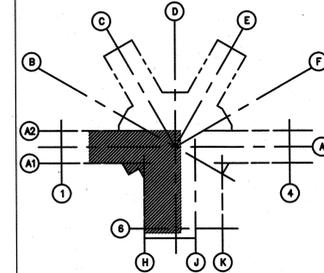


**PARTIAL MAIN FLOOR PLAN**

1 : 100

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 Drawn by: **RJMMAH** Dessiné par  
 Approved by: **JAW** Approuvé par  
 PWGSC Project Manager: **TL** Administrateur de Projets TPSGC

Drawing title: **PARTIAL FOUNDATION PLAN PARTIAL MAIN FLOOR PLAN GENERAL NOTES** Titre du dessin

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