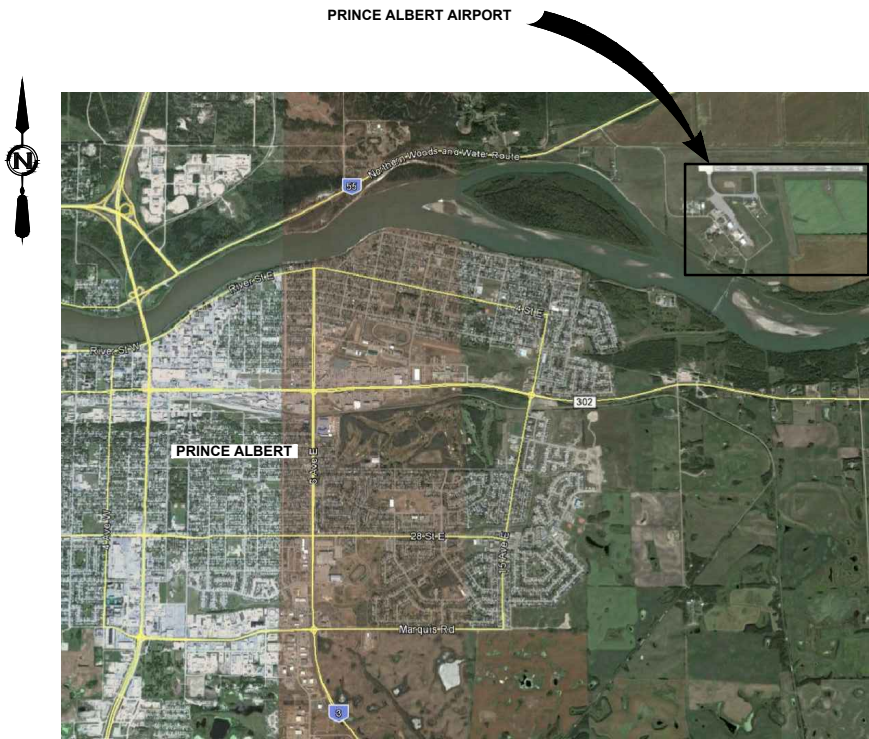


**Royal Canadian Mounted Police
RCMP Hangar
190 Veteran's Way
Aircraft Fueling System Modifications**

**Prince Albert, Saskatchewan
Project No. R042523.006**

ISSUED FOR TENDER

DRAWING LIST	
GENERAL	
TITLE	COVER AND DRAWING LIST
G-100	LOCATION PLAN
G-101	GENERAL ARRANGEMENT
CIVIL	
C-100	PLAN AND DETAILS
C-101	PLAN AND DETAILS
STRUCTURAL	
S-101	PLAN AND DETAILS
MECHANICAL	
P-101	PLAN AND DETAILS
ELECTRICAL	
E-101	DETAILS



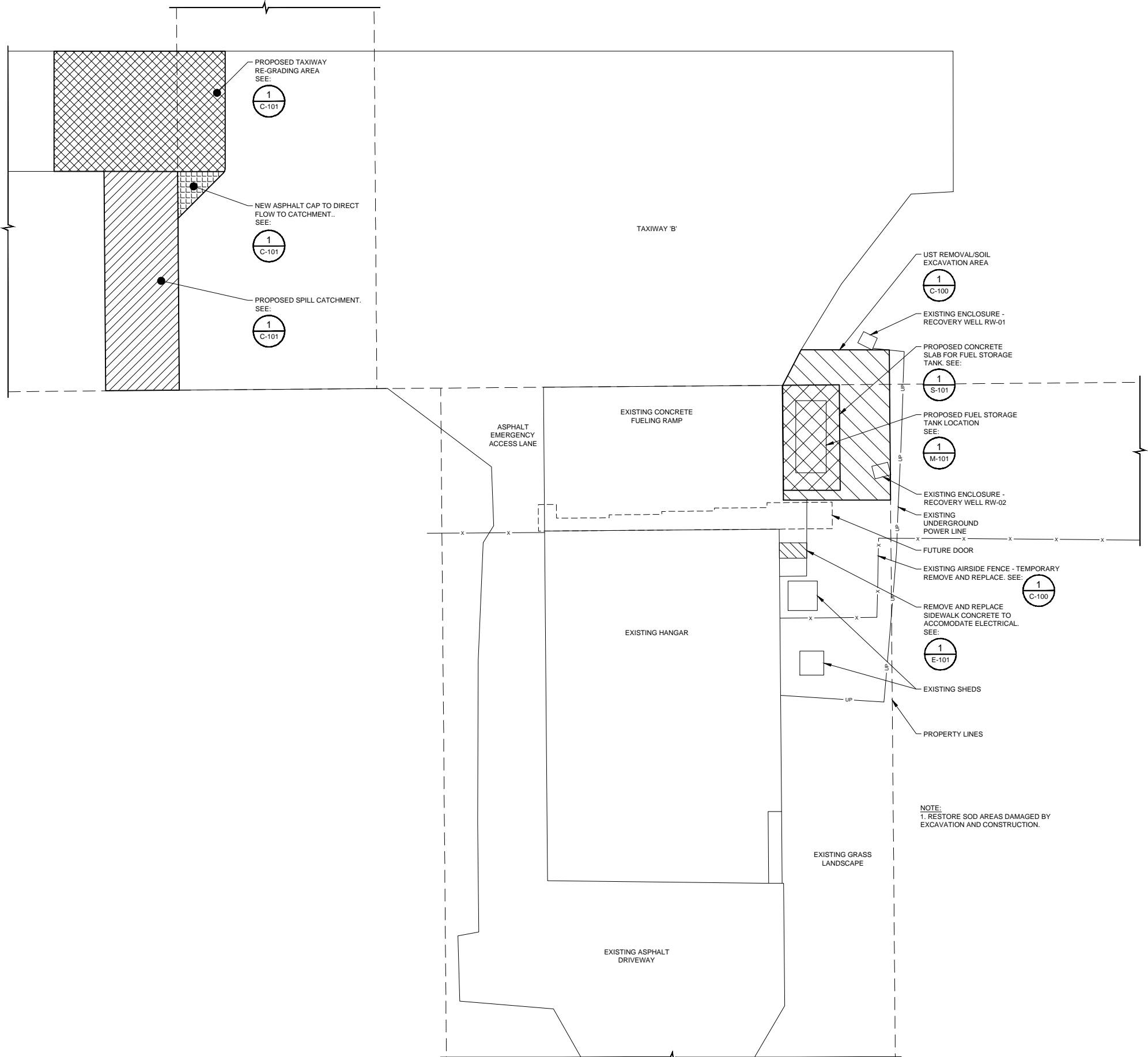
1 PLAN NTS
PRINCE ALBERT AIRPORT
LOCATION PLAN



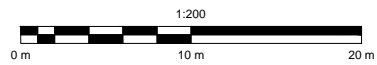
2 PLAN NTS
PRINCE ALBERT RCMP
HANGAR LOCATION PLAN




0	ISSUED FOR TENDER	5/27/16
Revision	Description	Date
Client		client
Project title		
Project		
AIRCRAFT FUELING SYSTEM MODIFICATIONS RCMP HANGAR PRINCE ALBERT, SK		
Designed by		
M. AKISTER		
Conçu par		
Drawn by		
N. MARKHAM		
Dessiné par		
Approved by		
Approuvé par		
PWGSC Project Manager		
J. LA RUE-VAN ES		
Administrateur de Projets TPSGC		
Drawing title		
Titre du dessin		
LOCATION PLAN		
Project no./No. du projet		
Drawing no./No. du dessin		
Revision no.		
G-100		
0		



1 PLAN
SITE PLAN 1:200






Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

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



Associated
Engineering

1 - 2225 Northridge Drive, Saskatoon, Saskatchewan, S7L 6X6
Ph: 306 653 4969 Fax: 306 242 4904
www.ae.ca

0	ISSUED FOR TENDER	5/27/16
Revision	Description	Date
Client		client

Project Title

Projet

AIRCRAFT FUELING SYSTEM
MODIFICATIONS
RCMP HANGAR
PRINCE ALBERT, SK

Designed by

Conçu par

M. AKISTER

Drawn by

Dessiné par

N. MARKHAM

Approved by

Approuvé par

PWGSC Project Manager

Administrateur de Projets TPWGC

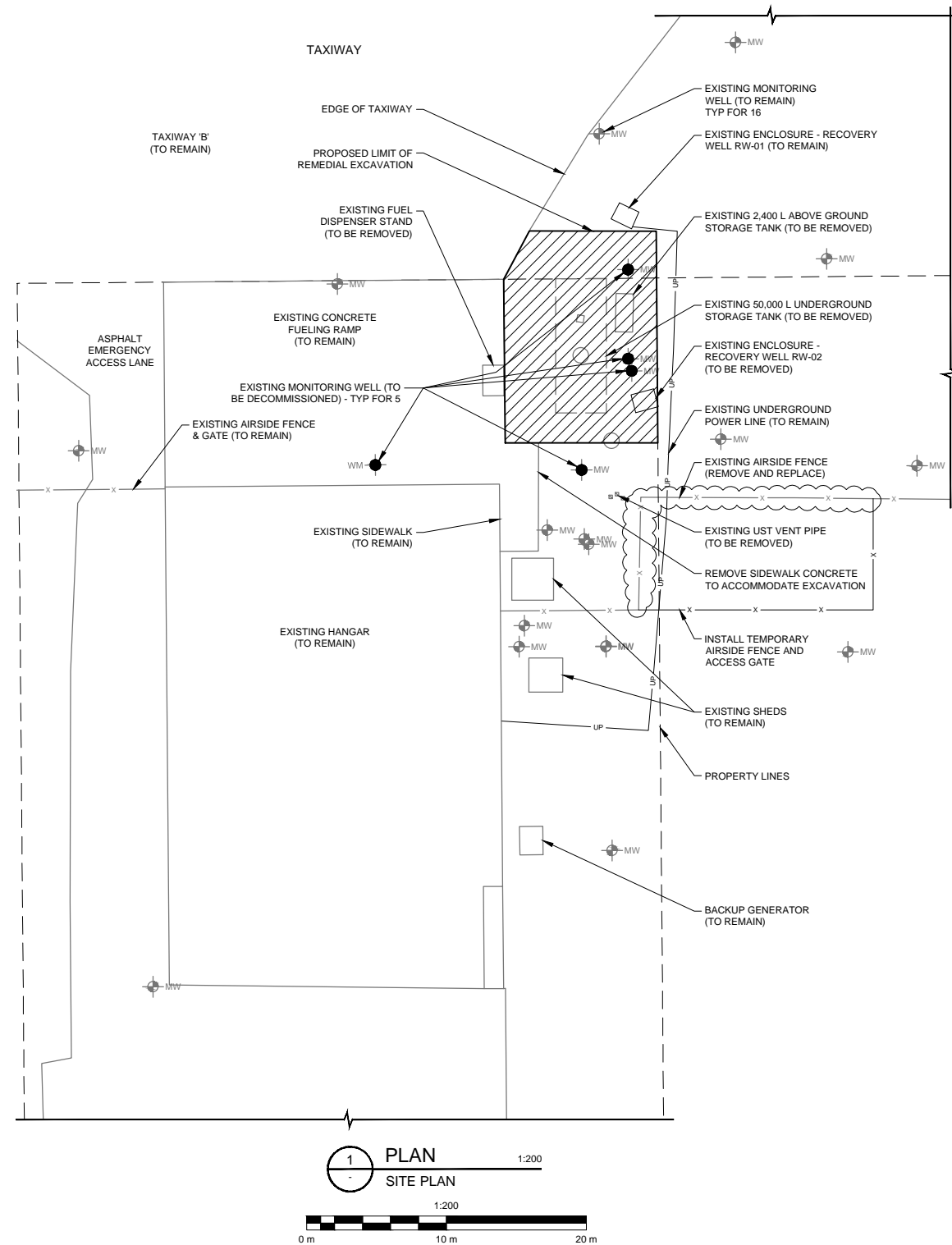
J. LA RUE-VAN ES

Drawing Title

Titre du dessin

GENERAL
ARRANGEMENT

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
	G-101	0



NOTES:

1. SHORING AND PROTECTION OF EXCAVATIONS ADJACENT PROPERTIES, AND EXISTING STRUCTURES TO PRE-CONSTRUCTION CONDITION REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
2. DESIGN AND PROVISION OF SHORING REMAINS THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE SHORING DESIGN ENGINEER IS RESPONSIBLE TO ENSURE THAT ALL EXISTING STRUCTURES AND PAVED SURFACES ARE TO REMAIN WITHOUT DISRUPTION OF SERVICE. CONTRACTOR TO MAINTAIN THE INTEGRITY OF ALL BUILDINGS AND PAVED SURFACES ONSITE TO PRE-CONSTRUCTION CONDITIONS THROUGH THE USE OF SHORING AND PROTECTION DURING EXCAVATION AND CONSTRUCTION. ENGINEER SHALL SUBMIT SHORING DETAIL DESIGN DRAWING(S) TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW PRIOR TO PROCEEDING WITH THE WORK. THE DESIGN AND DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF SASKATCHEWAN AND HOLDS A CURRENT 'CERTIFICATION OF AUTHORIZATION' OF APEGS.
4. PROTECT ALL MONITORING WELLS NOT IDENTIFIED TO BE DECOMMISSIONED.

Project Title
**AIRCRAFT FUELING SYSTEM
MODIFICATIONS
RCMP HANGAR
PRINCE ALBERT, SK**

Designed by
A. PASSALIS (EGE)

Drawn by
N. MARKHAM

Approved by

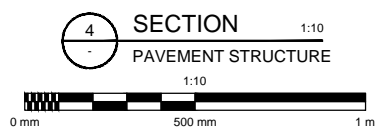
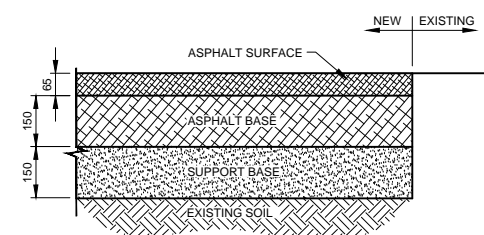
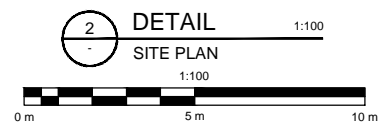
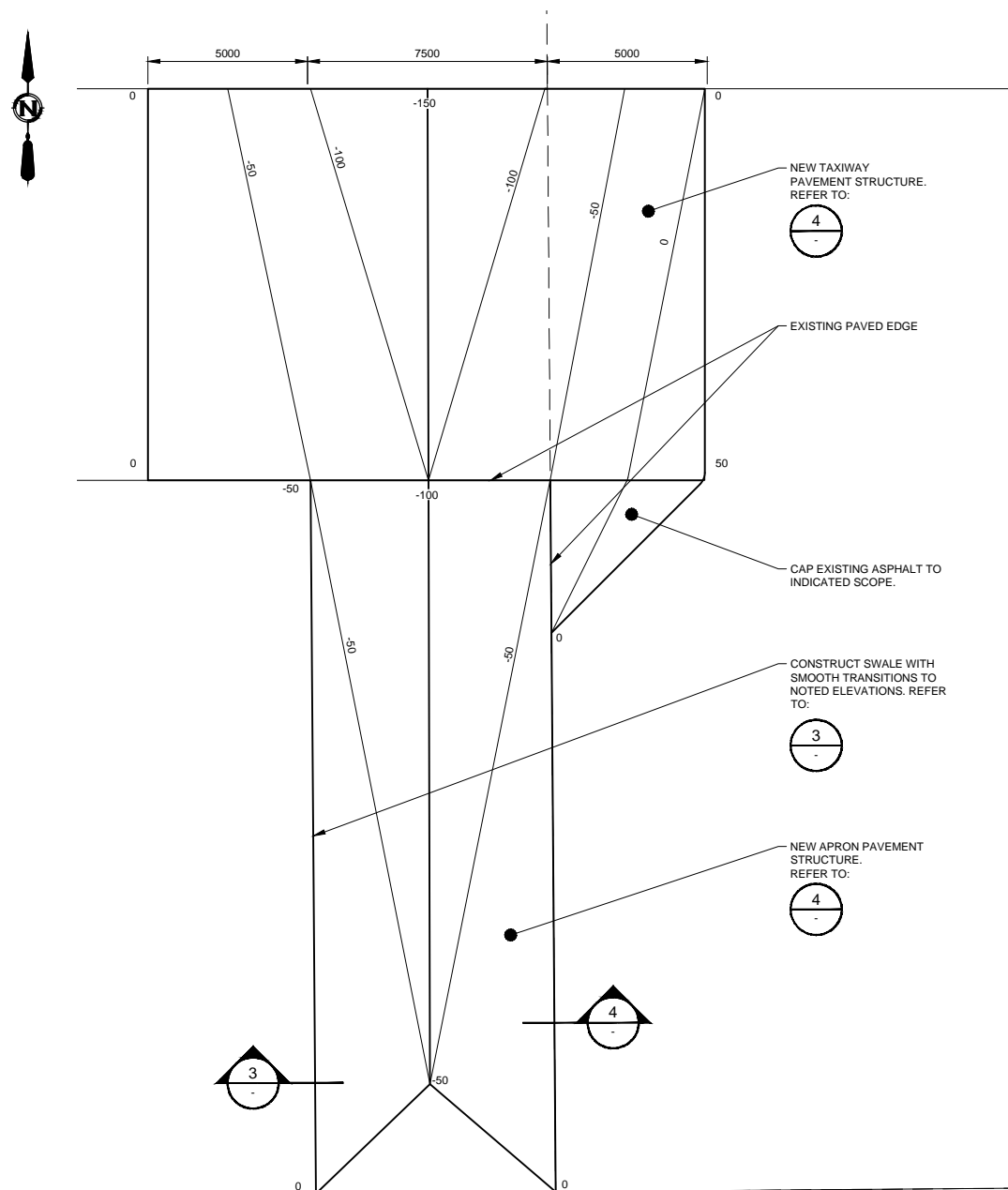
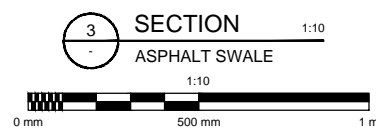
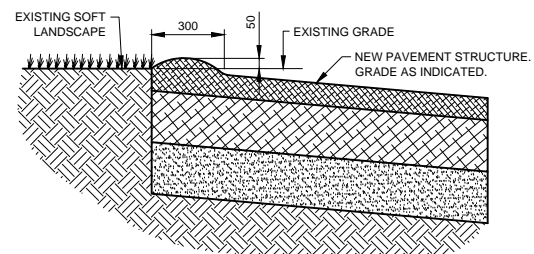
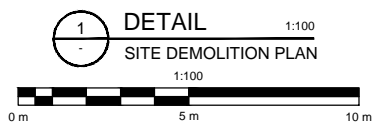
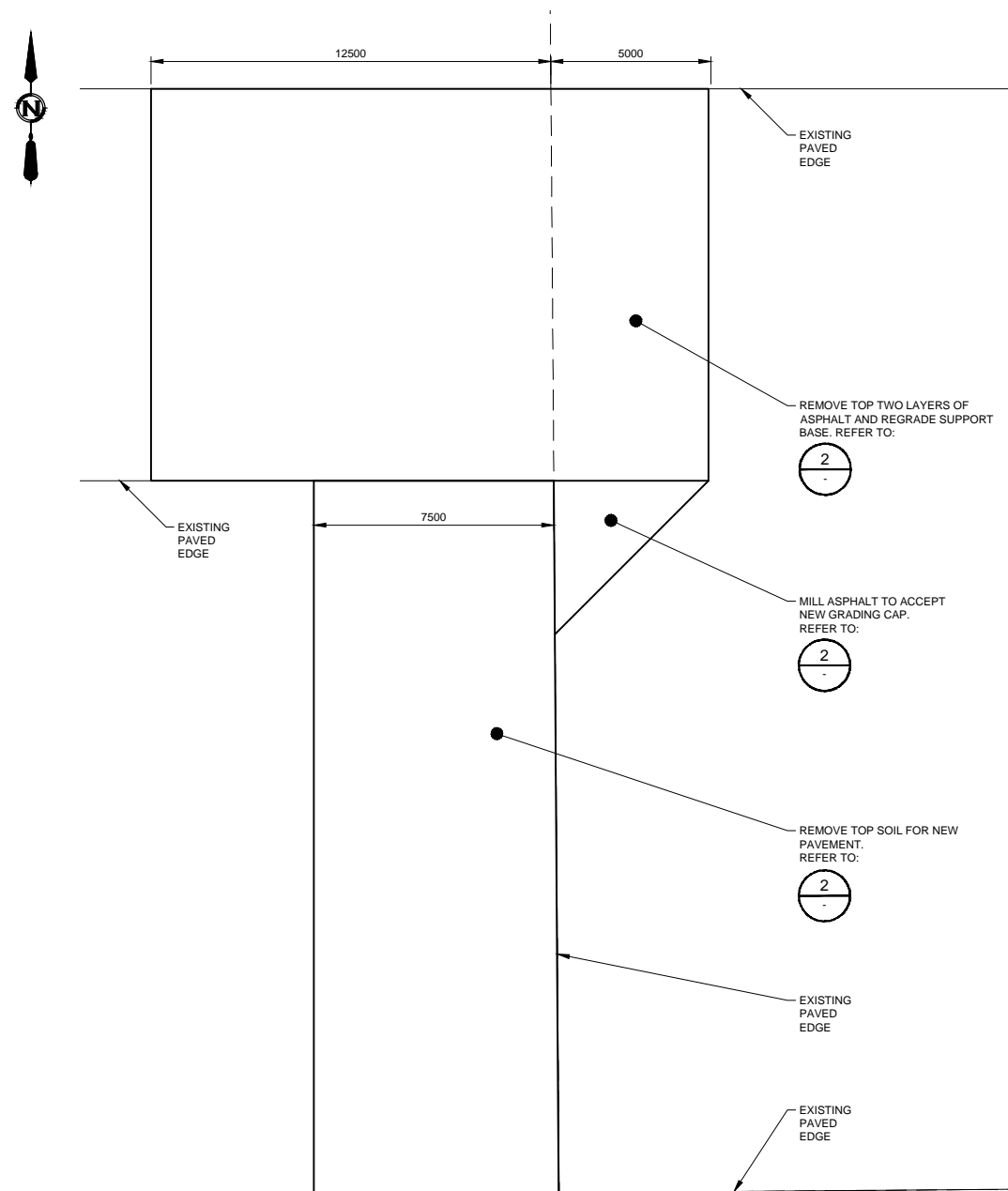
PWSC Project Manager
J. LA RUE-VAN ES

Administrateur de Projets TPSCG

Drawing Title
**EXCAVATION
PLAN**

Project no./No. du projet
C-100

Drawing no./No. du dessin
0



- NOTES:**
1. EXISTING ASPHALT BASE MATERIAL CAN BE SALVAGED FOR USE AS NEW SUPPORT BASE MATERIAL AS REVIEWED AND ACCEPTED IN WRITING BY THE DEPARTMENTAL REPRESENTATIVE
 2. ASPHALT CAP AREA TO BE ESTABLISHED IN FIELD BASED ON EXISTING ELEVATIONS



0	ISSUED FOR TENDER	5/27/16
Revision	Description	Date
Client		client

Project title	Project
---------------	---------

**AIRCRAFT FUELING SYSTEM
MODIFICATIONS
RCMP HANGAR
PRINCE ALBERT, SK**

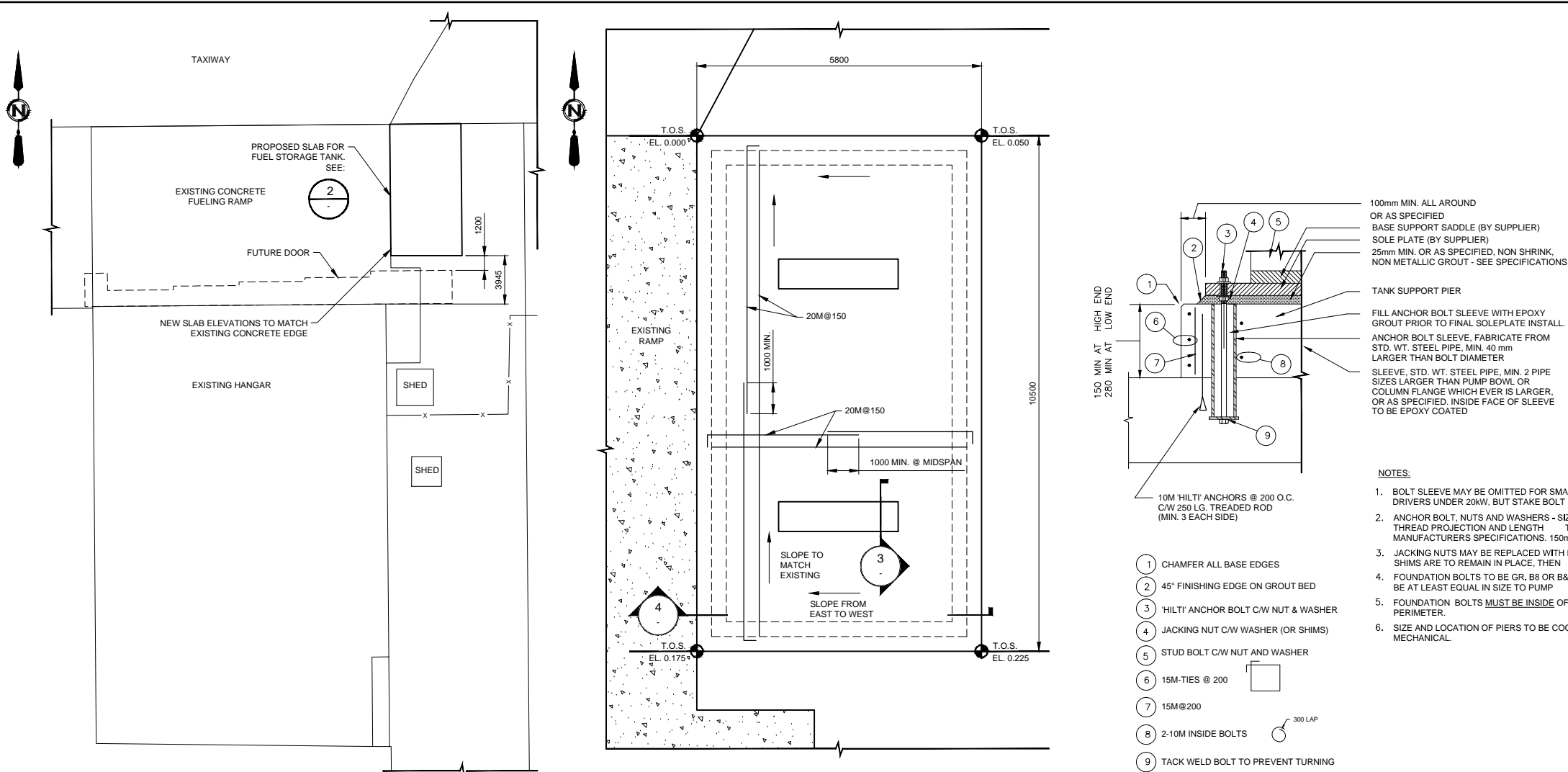
Designed by M. AKISTER	Conçu par
Drawn by N. MARKHAM	Dessiné par
Approved by	Approuvé par

PWGSC Project Manager Administrateur de Projets TPSGC
J. LA RUE-VAN ES

Drawing title	Titre du dessin
---------------	-----------------

**CIVIL
PLAN & DETAILS**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
	C-101	0



GENERAL NOTES

A. COORDINATION

1. ALL WORKMANSHIP, COMPONENT DESIGN AND MATERIAL SHALL BE TO THE NATIONAL BUILDING CODE OF CANADA - NBCC2010 OR BETTER.

2. CHECK ALL DIMENSIONS, ELEVATIONS AND DETAILS PRIOR TO CONSTRUCTION OR FABRICATION. REPORT ANY DISCREPANCIES OR DESIRED MODIFICATIONS TO THE DEPARTMENTAL REPRESENTATIVE.

3. FOR ATTACHMENT AND LEVELLING OF TANK, THE ANCHOR BOLTS, NUTS AND WASHERS - SIZE, NUMBER REQUIRED, THREAD PROJECTION AND LENGTH TO SUIT TANK MANUFACTURERS SPECIFICATIONS.

4. SLEEVE TYPE ANCHOR BOLT MAY BE REPLACED WITH J-BOLT TYPE ANCHOR OR EPOXY ADHESIVE. ANCHOR BOLT IF APPROVED BY DEPARTMENTAL REPRESENTATIVE AND PUMP SUPPLIER.

B. FOUNDATIONS

1. FOUNDATION DESIGN IS BASED UPON THE FOUNDATION INVESTIGATION SOILS REPORT PREPARED BY P. MACHIBRODA ENGINEERING LTD, TITLED "GEOTECHNICAL INVESTIGATION PROPOSED SHORED EXCAVATION, RCMP HANGAR - PRINCE ALBERT AIRPORT, 190 VETERANS WAY, PRINCE ALBERT, SASKATCHEWAN, PMEL FILE NO. 10121" DATED NOVEMBER 30, 2015. ENSURE THAT THE REQUIREMENTS OUTLINED IN THIS REPORT ARE READ & UNDERSTOOD PRIOR TO COMMENCING WITH FOUNDATION WORK.

- a. SOIL CONDITIONS ARE ASSUMED TO HAVE AN ALLOWABLE BEARING PRESSURE = 50 kPa.
- b. UNDER NO CIRCUMSTANCE IS THE SOIL UNDER THE STRUCTURE TO BE ALLOWED TO FREEZE, DRY OUT OR BECOME SATURATED PRIOR TO, DURING OR SUBSEQUENT TO CONSTRUCTION.

C. EXCAVATION AND BACKFILL.

1. EXCAVATE AND BACKFILL TO THE DETAILS ON THIS DRAWING, REFER TO SPECIFICATIONS FOR REQUIREMENTS.

D. REINFORCED CONCRETE

1. REINFORCING STEEL: GRADE 400 DEFORMED BARS. HOOK BARS AT OPPOSITE FACE AT DISCONTINUOUS ENDS. PROVIDE CLASS 'B' LAP SPLICES THROUGHOUT EXCEPT WHERE OTHER DIMENSIONS ARE SHOWN. TIE AND SECURE IN PLACE PRIOR TO PLACING CONCRETE. WHERE REINFORCING IS SHOWN IN ONE DIRECTION ONLY, PROVIDE 15M @ 250 O/C EACH FACE AND PERPENDICULAR TO THAT SHOWN.

2. CONCRETE COVER TO REINF. STEEL:

-75 mm FOR CONCRETE CAST AGAINST SOIL.

-50 mm FOR CONCRETE CAST AGAINST ALL OTHER SURFACES UNLESS SPECIFICALLY NOTED.

3. ENSURE ALL REINFORCING STEEL IS 50 mm CLEAR OF ANY EMBEDDED ITEMS.

4. ACCURATELY PLACE REINFORCEMENT AND SECURE AGAINST DISPLACEMENT DURING CONCRETE PLACING. SUPPORT BY MEANS OF EPOXY COATED OR PLASTIC CHAIRS AND SPACERS, AND THE RECOMMENDATIONS OF "REINFORCING STEEL - MANUAL OF STANDARD PRACTICE" (REINFORCING STEEL INSTITUTE OF CANADA).

5. USE TOP BAR CLASS 'B' TENSION SPLICES UNLESS NOTED OTHERWISE.

6. CONCRETE MIXES SHALL BE PROPORTIONED IN ACCORDANCE WITH CSA A23.1. SEE SPECIFICATIONS FOR DETAILED REQUIREMENTS.

7. PROVIDE 20 mm CHAMFER AT ALL EXPOSED CONCRETE EDGES UNLESS NOTED OTHERWISE.

8. CONCRETE MIXES SHALL BE PROPORTIONED IN ACCORDANCE WITH CSA A23.1/A23.2 TO MEET THE FOLLOWING REQUIREMENTS:

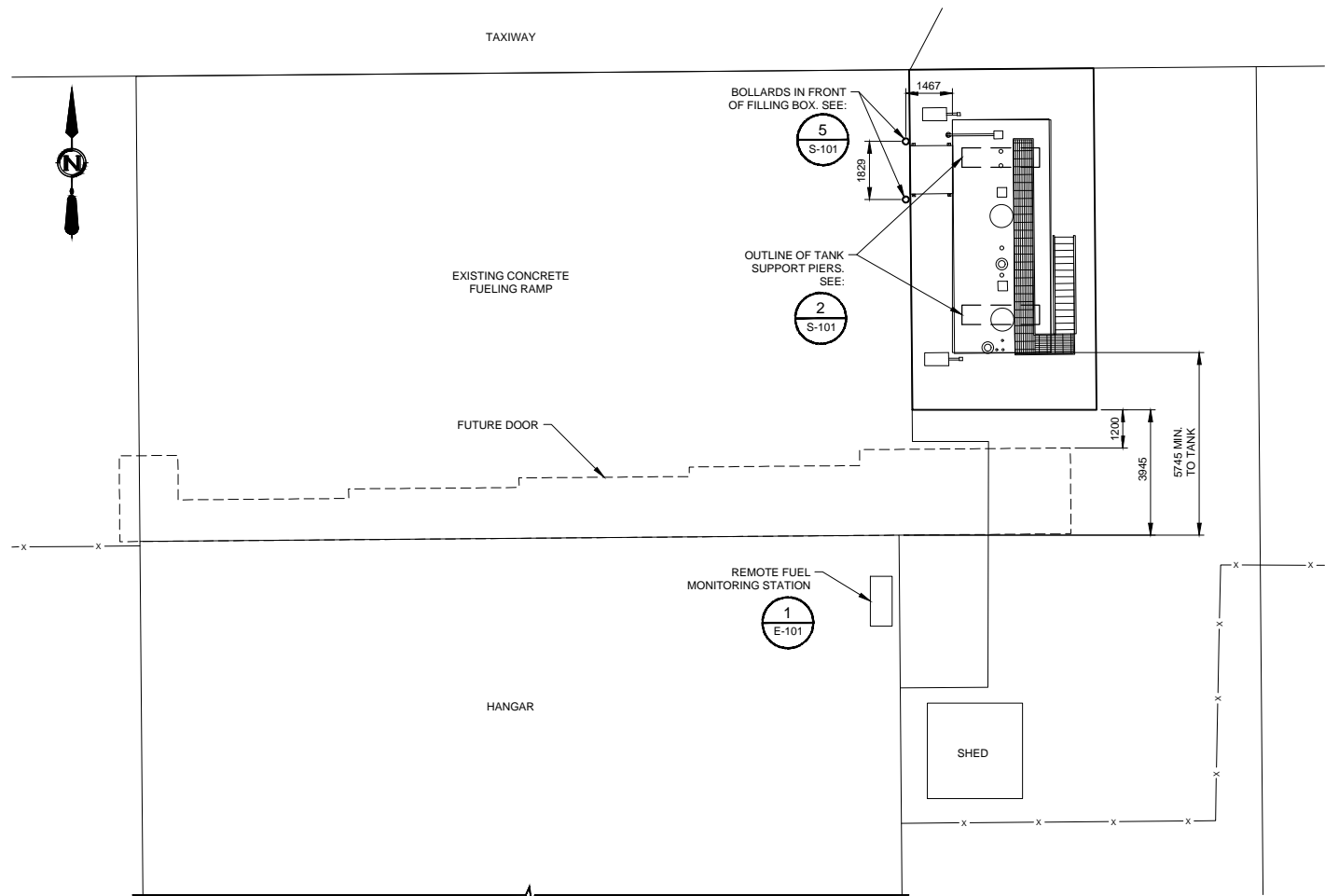
- a. -EXPOSURE CLASS: s-1
- b. -56 DAY COMPRESSIVE STRENGTH: 35 MPa
- c. -MAX W/CM RATIO: 0.4
- d. -NOMINAL AGGREGATE SIZE: 20 mm
- e. -MAX SLUMP: 120 mm - ON SITE SLUMP TEST TO BE DONE BY 3RD PARTY HIRED BY CONTRACTOR.
- f. -4 CONCRETE SLAB FINISHED BY FLOATING FOLLOWED BY TROWELING.

9. SANDBLAST, CLEAN AND ROUGHEN ALL EXISTING CONCRETE AND CONSTRUCTION JOINTS TO A FULL 5 mm AMPLITUDE PRIOR TO POURING NEW CONCRETE. APPLY EPOXY BASED BONDING AGENT PRIOR TO POUR.

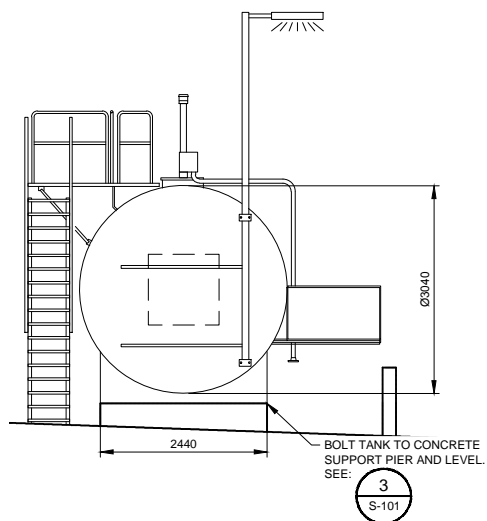
10. MAKE AND TEST FOUR CYLINDERS FOR EACH CONCRETE PLACEMENT (1@7 DAYS, 3@28 DAYS).

11. HONEYCOMB OR EMBEDDED DEBRIS IN CONCRETE IS NOT ACCEPTABLE. NOTIFY THE DEPARTMENTAL REPRESENTATIVE UPON DISCOVERY. REMOVE AND REPLACE DEFECTIVE CONCRETE AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE.

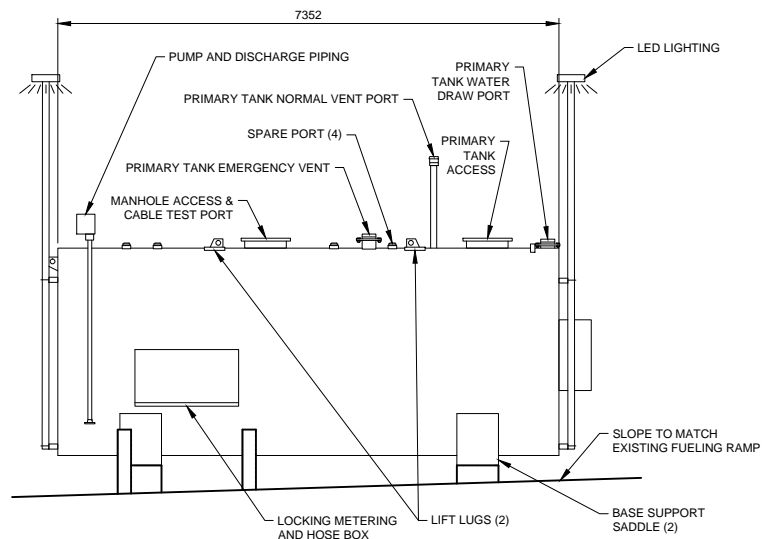
12. VIBRATE FRESH CONCRETE AND/OR FORM WORK ADEQUATELY TO PRODUCE SOUND CONCRETE WITHOUT HONEYCOMBS.



1 PLAN
1:100
0 m 5 m 10 m



2 ELEVATION
1:50
0 m 1 m 5 m



3 ELEVATION
1:50
0 m 1 m 5 m

NOTES:

1. ABOVE GROUND STORAGE TANK TO INCLUDE THE FOLLOWING:
 - 1.1. 45,000 L CAPACITY FOR JET "A" FUEL
 - 1.2. COMPLY WITH ULC-S601
 - 1.3. 100% SECONDARY CONTAINMENT
 - 1.4. 30m HOSE WITH MOTORIZED REEL AND DISPENSING METER IN LOCKING CABINET
 - 1.5. ACCEPTABLE HOSES: API BULL 1529 TYPE C, F, OR CT
 - 1.6. DUAL 2 STAGE FILTRATION WITH AUTOMATIC SWITCHOVER
 - 1.7. ACCESS STAIRS AND INSPECTION PLATFORM TO PROVIDE ACCESS TO ALL TOP OPENINGS
 - 1.8. CONTINUOUS PRODUCT LEVEL AND LEAK DETECTION MONITORING SYSTEMS, INCLUDING AUDIBLE AND VISUAL ALARMS, DISPENSING VOLUME RECORDING LOGS & REMOTE CONTROL CONNECTION PROVISIONS.
 - 1.9. ON TANK LIGHTING
 - 1.10. GRAVITY FILLING WITH SPILL BOX FOR TANK TRUCKS
 - 1.11. SECURITY AGAINST THEFT AND VANDALISM
 - 1.12. FACTORY PRE-WIRED
 - 1.13. WEATHER PROOF CABINET FOR ELECTRICAL CONNECTIONS AND DISCONNECTS
2. TURN OVER STATUS MONITORING AND DISPENSING RECORDER TO ELECTRICAL TRADE FOR INSTALLATION INSIDE HANGAR
3. COORDINATE CONCRETE PIER DIMENSIONS AND ANCHOR BOLT PLACEMENT WITH STRUCTURAL
4. BOLT TANK BASE SUPPORT TO CONCRETE PIER. LEVEL AND GROUT.
5. COORDINATE SIZE AND LOCATION OF EACH PIER WITH STRUCTURAL TO MINIMIZE GROUTING REQUIREMENTS
6. PAD ELEVATION TO MATCH FUELING RAMP

0 ISSUED FOR TENDER 5/27/16

Revision	Description	Date
----------	-------------	------

Client		client
--------	--	--------

Project Title

**AIRCRAFT FUELING SYSTEM
MODIFICATIONS
RCMP HANGAR
PRINCE ALBERT, SK**

Designed by M. AKISTER Conçu par

Drawn by N. MARKHAM Dessiné par

Approved by Approuvé par

PWGC Project Manager J. LA RUE-VAN ES Administrateur de Projets TPSC

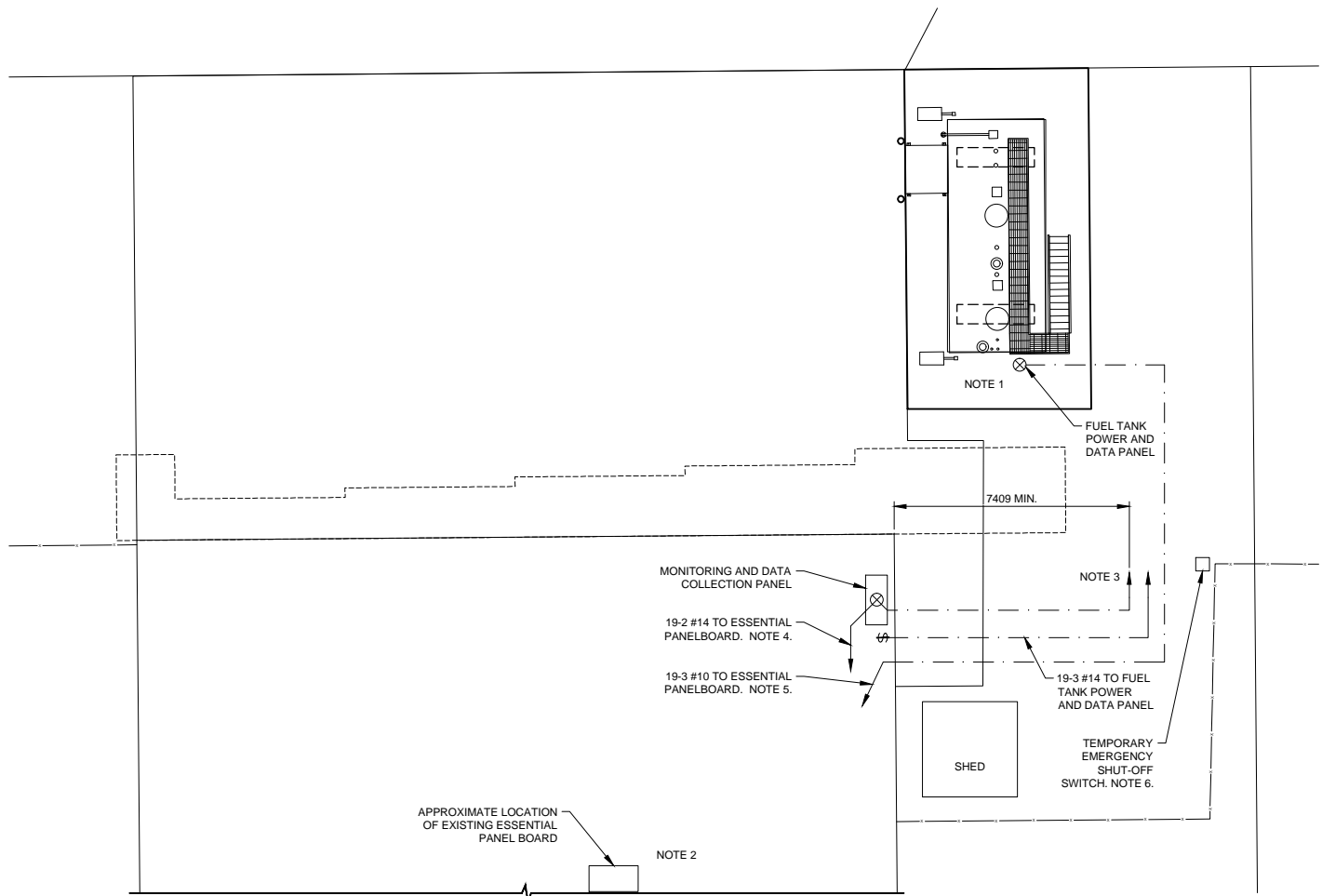
Drawing Title Titre du dessin

**MECHANICAL
PLAN & DETAILS**

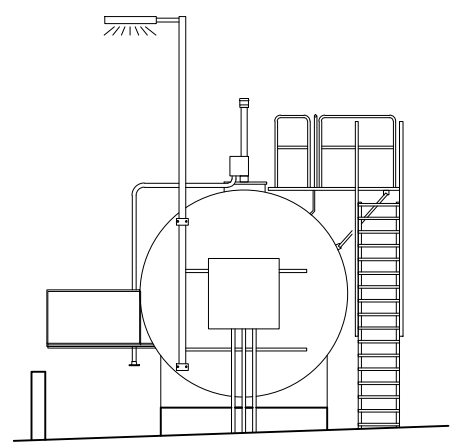
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
---------------------------	---------------------------	--------------

P-101

0

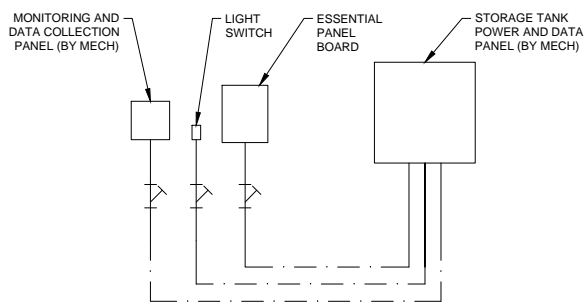


1 PLAN
1:100
ABOVE GROUND STORAGE TANK
0 m 5 m 10 m




2 ELEVATION
1:50
ABOVE GROUND STORAGE TANK NORTH ELEVATION
0 m 1 m 5 m


- ELECTRICAL LEGEND**
- ⊗ EQUIPMENT CONNECTION
 - SURFACE CONDUIT
 - - - BURIED CONDUIT
 - \$ SPST SWITCH
 - ⌋ EYS FITTING
- NOTES:**
1. ROUGH IN CONDUITS IN SLAB. COORDINATE LOCATION WITH STRUCTURAL AND MECHANICAL.
 2. USE EXISTING 3P-30A FUEL DISPENSING BREAKER IN ESSENTIAL PANELBOARD TO FEED NEW FUEL TANK CONNECTIONS TO FUEL TANK
 3. PROVIDE INSULATION SEALS ON CONDUITS
 4. ROUTE NEW CONDUIT IN HARMONY WITH EXISTING
 5. SALVAGE OF EXISTING FUEL DISPENSING FEEDER INSIDE THE HANGAR IS ACCEPTABLE
 6. STORAGE TANK EMERGENCY SHUT-OFF SWITCH AND LABELING SHALL BE RELOCATED AFTER HANGAR DOOR MODIFICATION. PERMANENT LOCATION TO BE CONFIRMED ON-SITE WITH OWNER.



3 SCHEMATIC
NTS
STORAGE TANK CONNECTIONS




Public Works and
Government Services
Canada



Travaux publics et
Services gouvernementaux
Canada

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



**Associated
Engineering**

1 - 2225 Northridge Drive, Saskatoon, Saskatchewan, S7L 6X6
Ph: 306 653 4969 Fax: 306 242 4904
www.ae.ca

0	ISSUED FOR TENDER	5/27/16
Revision	Description	Date
Client		client

Project Title
**AIRCRAFT FUELING SYSTEM
MODIFICATIONS
RCMP HANGAR
PRINCE ALBERT, SK**

Designed by
M. AKISTER
Congu par

Drawn by
N. MARKHAM
Dessiné par

Approved by
Approuvé par

PWGSC Project Manager
J. LA RUE-VAN ES
Administrateur de Projets TPSGC

Drawing Title
**ELECTRICAL
DETAILS**
Titre du dessin

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
	E-101	0