

Notes:
 • Do not scale drawing.
 • It is the responsibility of the appropriate Contractor to check and verify all dimensions on site and report all errors and/or omissions to the Architect or Engineer.
 • It is the responsibility of the appropriate Contractor to comply with all Codes and Regulations applicable to the performance of their work.
 • All Drawings and Specifications are instruments of service and are the property of the Architect or Engineer. This Drawing is the property of STEPHENS KOZAKI ACI ARCHITECTS AND PLANNERS or the Consultant named on this Drawing and may not be used or reproduced in whole or in part without the express written consent of the Architect or Engineer.
 • All dimensions are in mm unless noted otherwise.

LEGEND:

PROPOSED	EXISTING
FOA	FOA
EDGE OF ASPHALT	EDGE OF ASPHALT
BARRIER CURB	BARRIER CURB
STRAIGHT FACE	STRAIGHT FACE
CURB & GUTTER	CURB & GUTTER
PROPERTY LINE	PROPERTY LINE
EASEMENT	EASEMENT
FENCE	FENCE
OVERHEAD POWER	OVERHEAD POWER
GAS	GAS
POWER	POWER
TELECOM	TELECOM
STM	STM
SAN	SAN
WM	WM
INSULATION	INSULATION
WICK DRAIN	WICK DRAIN
WATER VALVE	WATER VALVE
FIRE HYDRANT	FIRE HYDRANT
MANHOLE/CATCHBASIN MANHOLE	MANHOLE/CATCHBASIN MANHOLE
STREET LIGHT	STREET LIGHT
POWER POLE	POWER POLE
BUILDING ENTRANCE	BUILDING ENTRANCE
TRANSFORMER LOCATION	TRANSFORMER LOCATION
BOREHOLE LOCATION	BOREHOLE LOCATION



Issues/Revisions

No.	Description	Date	By
1	ISSUED FOR 75% DESIGN REVIEW	JUN 26, 18	TAZ
2	ISSUED FOR REV. SOUTH GRADING	SEP 24, 18	TAZ
3	ISSUED FOR 90% REVIEW	OCT 1, 18	TAZ
4	ISSUED FOR TENDER	JAN 9, 19	TAZ

PERMIT TO PRACTICE
 AL-TERRA ENGINEERING LTD.
 Signature: *[Signature]*
 Date: **JANUARY 07, 2019**
PERMIT NUMBER: P 2104
 The Association of Professional Engineers, Geologists and Geophysicists of Alberta

Client: **Government of Canada / Gouvernement du Canada**



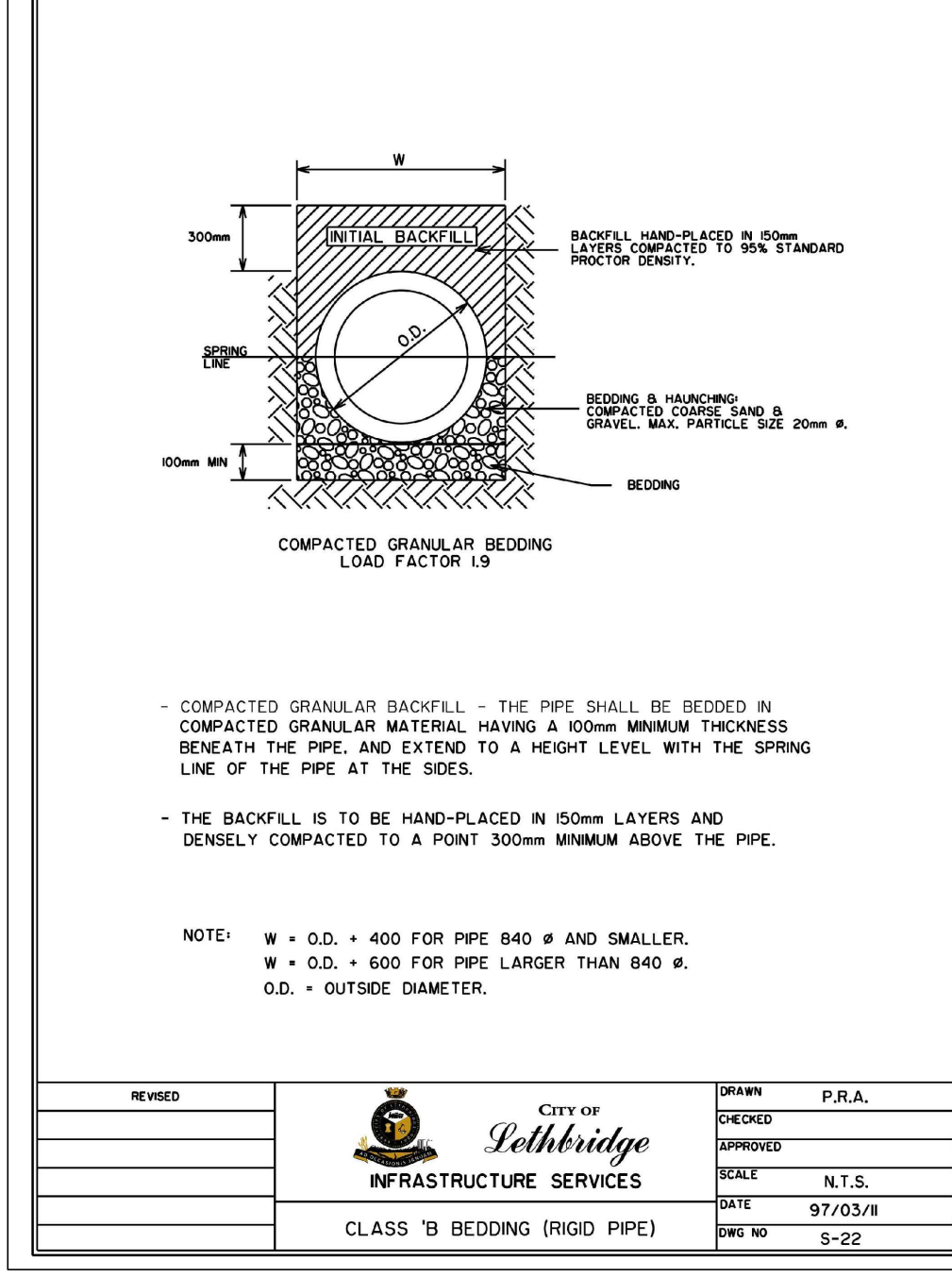
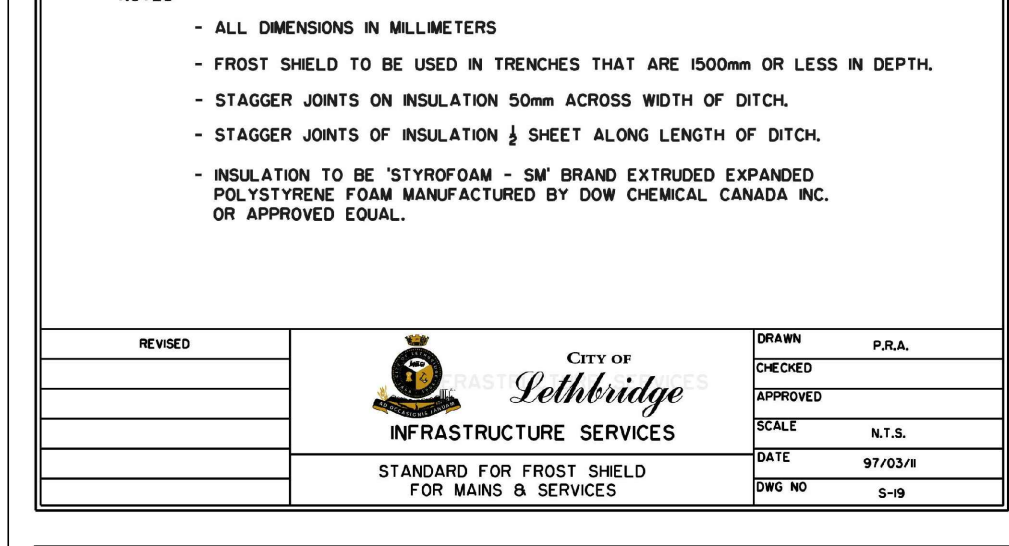
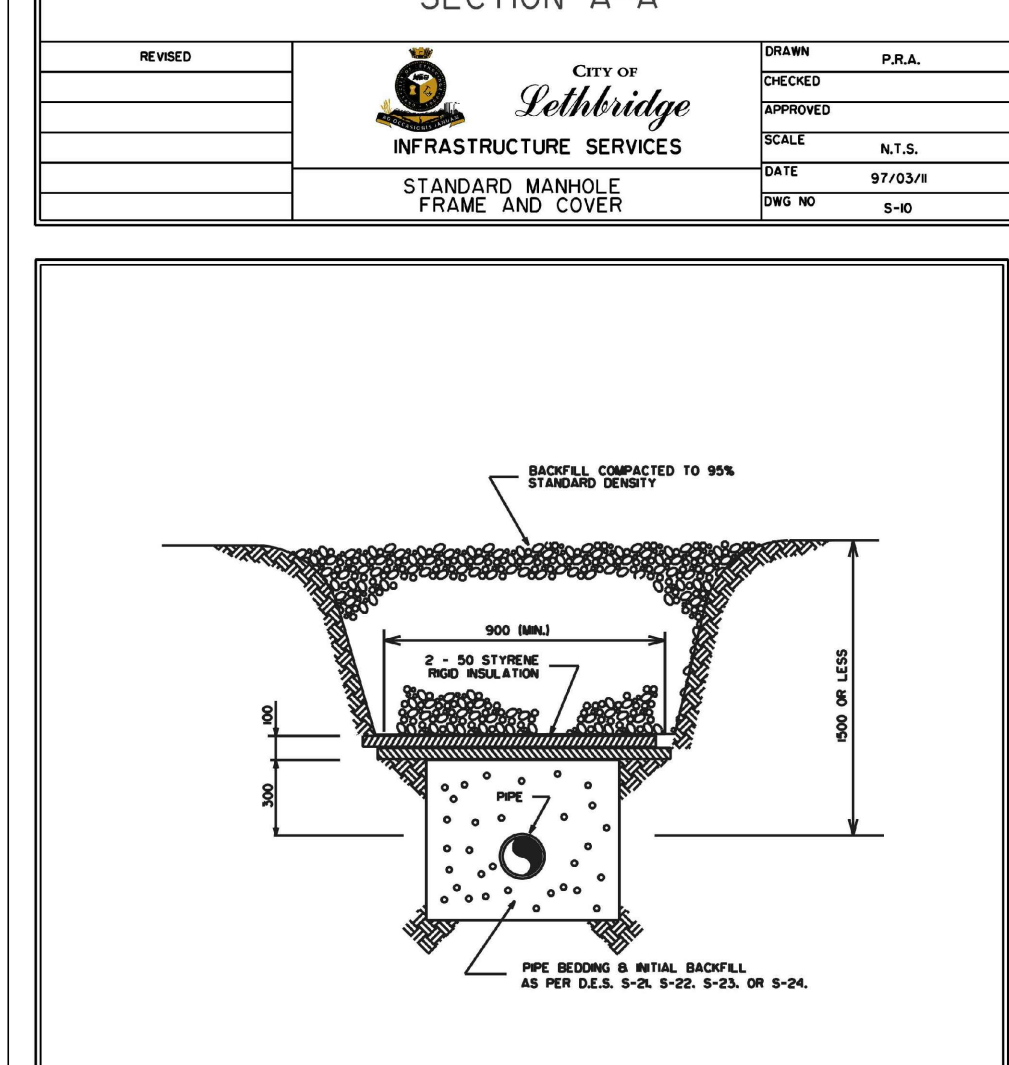
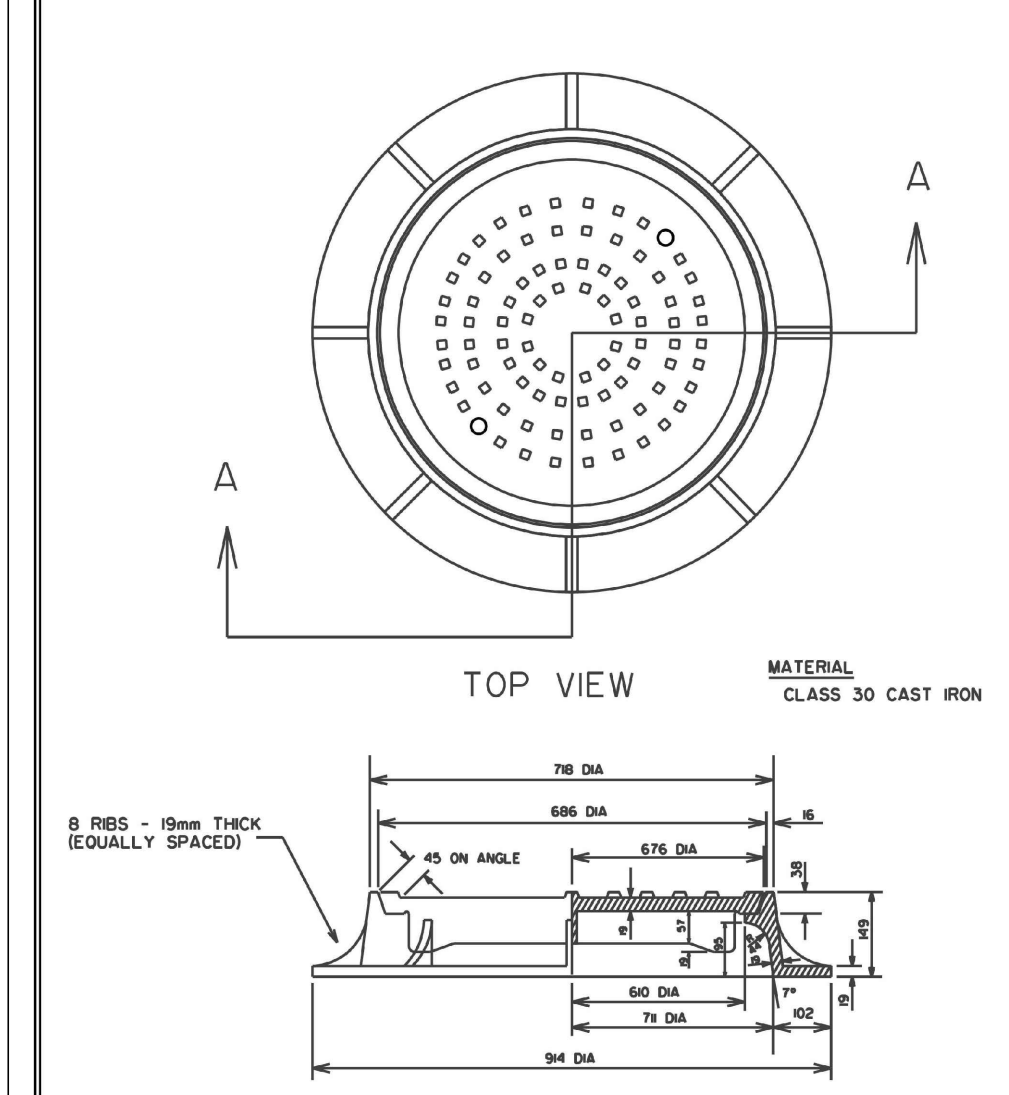
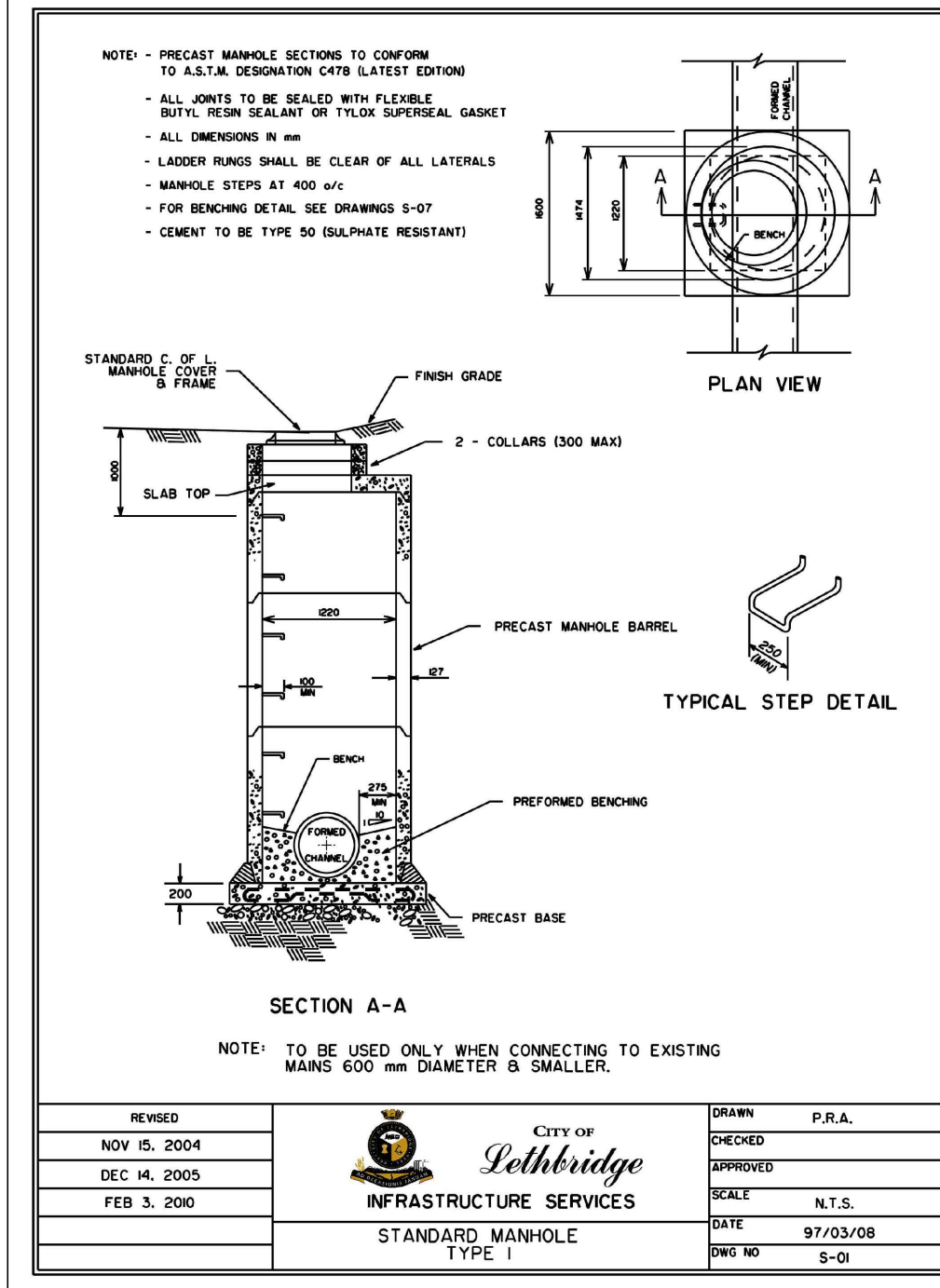
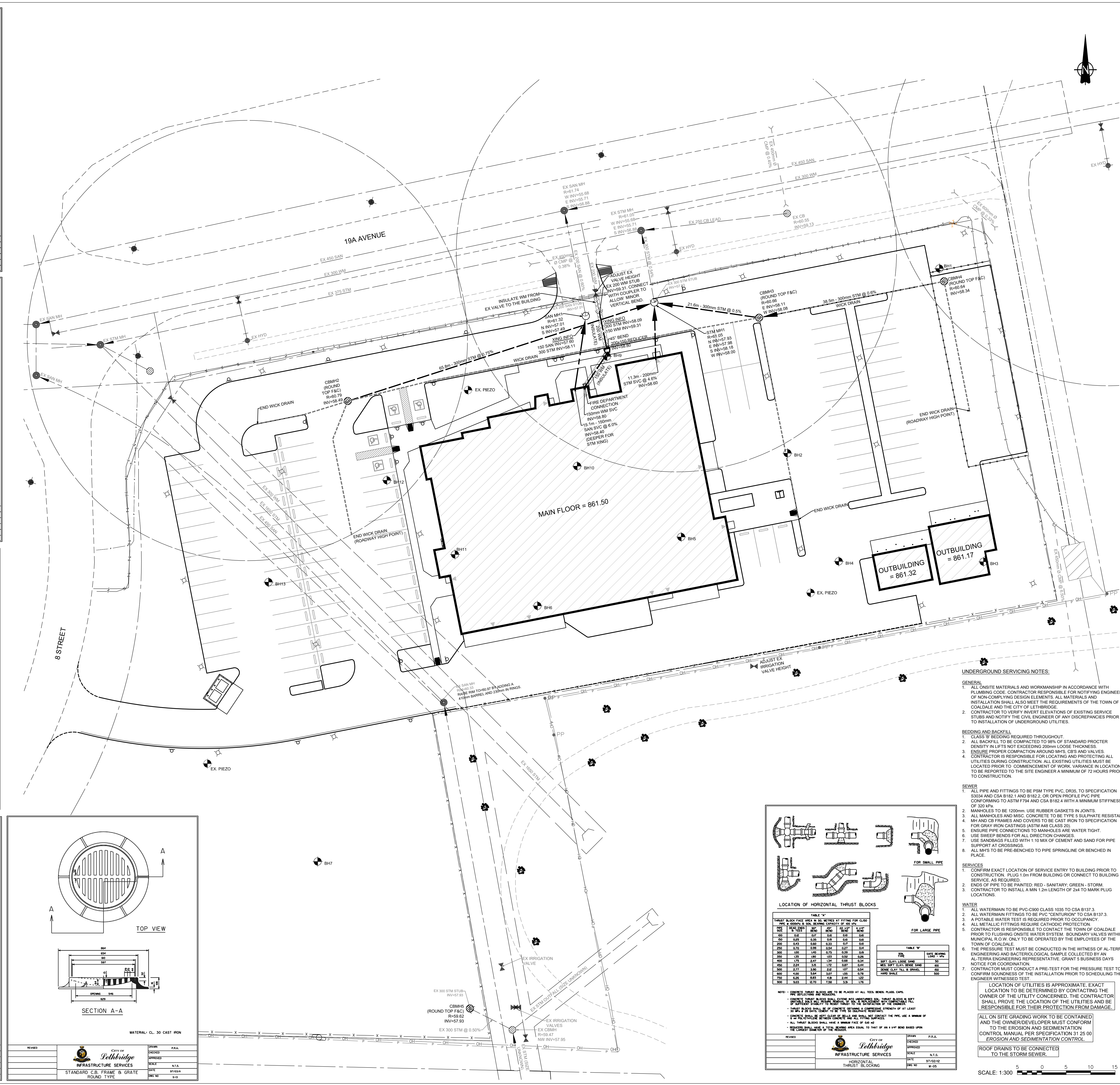
Project: **COALDALE PROTECTIVE SERVICES BUILDING**

Scale: 1:300
 Project No.: 8126
 Date: 2018 NOV 30

Designed By: TAZ
 Drawn By: TAZ
 Checked By: GWT

Drawing Title: **UNDERGROUND SERVICING PLAN**

Drawing No.: **C1.1**



LOCATION OF HORIZONTAL THRUST BLOCKS

SIZE	DEPTH	SPACING	MIN. DIST. FROM END	MIN. DIST. FROM JOINT
100	100	100	50	50
150	150	150	75	75
200	200	200	100	100
250	250	250	125	125
300	300	300	150	150
350	350	350	175	175
400	400	400	200	200
450	450	450	225	225
500	500	500	250	250
550	550	550	275	275
600	600	600	300	300
650	650	650	325	325
700	700	700	350	350
750	750	750	375	375
800	800	800	400	400

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS. ALL THRUST BLOCKS SHALL BE PLACED AT ALL 90° BENDS AND AT ALL 45° BENDS. ALL THRUST BLOCKS SHALL HAVE A MINIMUM FACE OF 50mm. ALL THRUST BLOCKS SHALL BE PLACED AT THE END OF EACH RUN OF PIPE.

REVISED: NOV 6, 2004; DEC 4, 2005; FEB 3, 2006

City of **Lethbridge** INFRASTRUCTURE SERVICES
 HORIZONTAL THRUST BLOCKING

UNDERGROUND SERVICING NOTES:

GENERAL:

- ALL CHASE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH PLUMBING CODE. CONTRACTOR RESPONSIBLE FOR NOTIFYING ENGINEER OF NON-COMPLYING DESIGN ELEMENTS. ALL MATERIALS AND INSTALLATION SHALL ALSO MEET THE REQUIREMENTS OF THE TOWN OF COALDALE AND THE CITY OF LETHBRIDGE.
- CONTRACTOR TO VERIFY INVERT ELEVATIONS OF EXISTING SERVICE STUBS AND NOTIFY THE CIVIL ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLATION OF UNDERGROUND UTILITIES.

BEDDING AND BACKFILL:

- CLASS 'B' BEDDING REQUIRED THROUGHOUT.
- ALL BACKFILL TO BE COMPACTED TO 98% OF STANDARD PROCTER DENSITY IN LIFTS NOT EXCEEDING 200mm LOOSE THICKNESS.
- ENSURE PROPER COMPACTION AROUND MHTS, CBS AND VALVES.
- CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES DURING CONSTRUCTION. ALL EXISTING UTILITIES MUST BE LOCATED PRIOR TO COMMENCEMENT OF WORK. VARIANCE IN LOCATION IS TO BE REPORTED TO THE SITE ENGINEER A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION.

SEWER:

- ALL PIPE AND FITTINGS TO BE PPM TYPE PVC, DR36, TO SPECIFICATION S3034 AND CSA B182.1 AND B182.2 OR OPEN PROFILE PVC PIPE CONFORMING TO ASTM F794 AND CSA B182.4 WITH A MINIMUM STIFFNESS OF 500 kPa.
- MANHOLES TO BE 1200mm. USE RUBBER GASKETS IN JOINTS.
- ALL MANHOLES AND MISC. CONCRETE TO BE TYPE S SULPHATE RESISTANT.
- MH AND CB FRAMES AND COVERS TO BE CAST IRON TO SPECIFICATION FOR GRAY IRON CASTINGS (ASTM A88 CLASS 20).
- ENSURE PIPE CONNECTIONS TO MANHOLES ARE WATER TIGHT.
- USE SWEEP BENDS FOR ALL DIRECTION CHANGES.
- USE SANDBAGS FILLED WITH 1:1 MIX OF CEMENT AND SAND FOR PIPE SUPPORT AT CROSSINGS.
- ALL MHTS TO BE PRE-BENCHED TO PIPE SPRINGLINE OR BENCHED IN PLACE.

SERVICES:

CONFIRM EXACT LOCATION OF SERVICE ENTRY TO BUILDING PRIOR TO CONSTRUCTION. PLUG 1.0m FROM BUILDING OR CONNECT TO BUILDING SERVICE, AS REQUIRED.

- ENDS OF PIPE TO BE PAINTED: RED - SANITARY; GREEN - STORM.
- CONTRACTOR TO INSTALL A MIN 1.2m LENGTH OF 2x4 TO MARK PLUG LOCATIONS.

WATER:

- ALL WATERMAIN TO BE PVC-C900 CLASS 1035 TO CSA B137.3.
- ALL WATERMAIN FITTINGS TO BE PVC 'CENTURION' TO CSA B137.3.
- A POTABLE WATER TEST IS REQUIRED PRIOR TO OCCUPANCY.
- ALL METALLIC FITTINGS REQUIRE CATHODIC PROTECTION.
- CONTRACTOR IS RESPONSIBLE TO CONTACT THE TOWN OF COALDALE PRIOR TO FLUSHING ONSITE WATER SYSTEM. BOUNDARY VALVES WITHIN MUNICIPAL R.O.W. ONLY TO BE OPERATED BY THE EMPLOYEES OF THE TOWN OF COALDALE.
- THE PRESSURE TEST MUST BE CONDUCTED IN THE WITNESS OF AL-TERRA ENGINEERING AND BACTERIOLOGICAL SAMPLE COLLECTED BY AN AL-TERRA ENGINEERING REPRESENTATIVE. GRANT'S BUSINESS DAYS NOTICE FOR COORDINATION.
- CONTRACTOR MUST CONDUCT A PRE-TEST FOR THE PRESSURE TEST TO CONFIRM SOUNDNESS OF THE INSTALLATION PRIOR TO SCHEDULING THE ENGINEER WITNESSED TEST.

LOCATION OF UTILITIES IS APPROXIMATE. EXACT LOCATION TO BE DETERMINED BY CONTACTING THE OWNER OF THE UTILITY CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF THE UTILITIES AND BE RESPONSIBLE FOR THEIR PROTECTION FROM DAMAGE.

ALL ON SITE GRADING WORK TO BE CONTAINED AND THE OWNER/DEVELOPER MUST CONFORM TO THE EROSION AND SEDIMENTATION CONTROL MANUAL PER SPECIFICATION 31 05 00 EROSION AND SEDIMENTATION CONTROL.

ROOF DRAINS TO BE CONNECTED TO THE STORM SEWER.