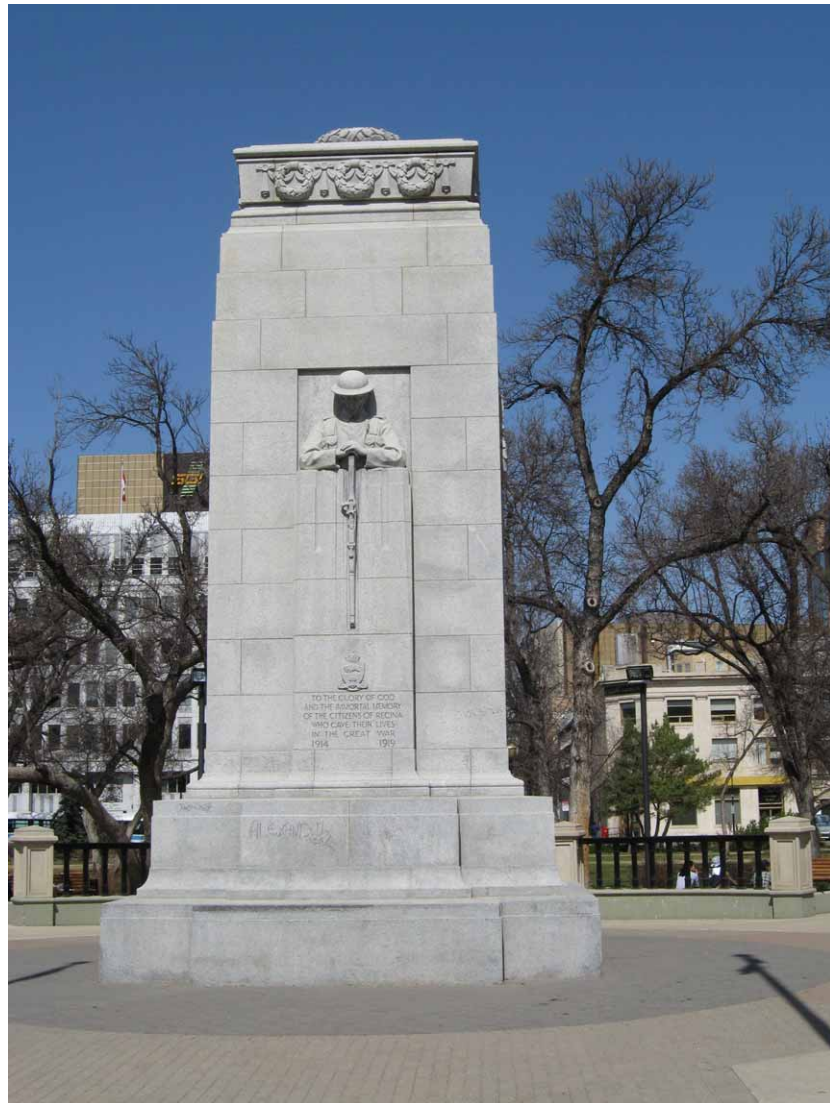


Once Around the Park...

An Architectural & Geological Tour of Downtown Regina



The Cenotaph in Regina's Victoria Park

AN INTRODUCTION TO GEOLOGICAL TERMS

Building stones are naturally occurring rocks, quarried and used nowadays in buildings mainly for their decorative value. Rocks are made up of various mixtures of minerals, which are naturally occurring chemical compounds. Common rock-forming minerals include the light-coloured (or 'felsic') minerals **quartz**, and the large clan known as **feldspars**; and dark grey to black minerals (the so-called 'mafic' minerals) such as **biotite mica, pyroxene, olivine** and **hornblende**. The principal cause of dark colouration in rock forming minerals is a high iron content. Because of this, dark-coloured rocks usually also contain significant amounts of **magnetite**, which is a magnetic iron oxide.

Rocks are classified into three major groups; **igneous, sedimentary** and **metamorphic**, according to the way in which they were formed. Igneous rocks are those that crystallized from molten material, either lava thrown out of volcanoes at the surface of the Earth (volcanic rocks), or large masses of magma deep within the Earth's crust that never reached the surface, and which cooled slowly to create rocks made of large interlocking mineral grains clearly visible to the naked eye. Igneous rocks in this subdivision are known as plutonic (after Pluto, Greek god of the underworld). Plutonic igneous rocks are popular decorative building stones because of their coarse grain size, strength and durability and the fact that they can be polished to a mirror-like finish. Common plutonic igneous rocks used as building stones include the light coloured pink, grey or white **granites** and **granodiorites**; red **syenites** and the dark-grey to black **gabbros** and **anorthosites**. Granites, granodiorites and syenites are made up mainly of various mixtures of quartz and feldspar with only minor amounts of hornblende and biotite mica. Gabbros are made mainly of iron-rich feldspars and the mafic minerals olivine and pyroxene. Anorthosites may be made up either of light coloured feldspar, or in the case of **larvikite**, (named after the town of Larvik in Norway), black iron-rich feldspar. Dark feldspars contain their high iron content not as part of the crystal structure but instead, as minute inclusions. In the feldspar **labradorite**, these inclusions are microscopic parallel rods which cause light penetrating the crystal to be scattered; hence the iridescence.

Sedimentary rocks are those created from the debris formed by the weathering and erosion of other rocks and include such familiar types as **sandstone** and **limestone**. Unlike plutonic igneous rocks, they are not resistant to weathering, do not take a good polish, and are not as strong. Tyndall Stone is a popular variety of limestone that contains a wide variety of fossils from a period known as the Ordovician which lasted from 490 to 443 million years ago. These include both **colonial** and **solitary corals, bryozoans, gastropods, orthocones** and **stromatolites**.

Metamorphic rocks are those derived from other rocks that have been subjected to extreme heat and pressure deep within the Earth's crust. The most familiar metamorphic rock is probably **marble**, the commonest material used for statuary. Some, such as **migmatitic gneiss** show evidence of partial melting. Metamorphic rocks are not as favoured for building stone as plutonic igneous rocks because of their texture is uneven and they may have inherent structural weaknesses. Marble is susceptible to weathering, hence is used on the outsides of buildings only sparingly.

**ONCE AROUND THE PARK – AN ARCHITECTURAL & GEOLOGICAL TOUR
OF DOWNTOWN REGINA**

Victoria Park (formerly Victoria Square) started life as an open air summer market place, and in 1895 hosted the Territorial Exhibition and Fair. It was laid out in its present form in 1905, after a plan by F. G. Todd of Montréal. A fountain donated by Nicholas Flood Davin¹ was originally placed in the centre in 1908, but replaced by the Cenotaph in 1925.

1. Start at the **CENOTAPH** - Built in 1925 from the result of a design competition won by R. W. G. Heugen of Ross & MacDonald, Montréal architects. Local architect F. H. Portnall contributed to the final design. Unveiled on 11th November 1926 in memory of those killed in the Great War²: Regina lost around 600 men and another 2000 were wounded. Originally the War Memorial was to have been placed in the Legislative Grounds. The monument is made of an even-grained grey *biotite granite* or *granodiorite*, largely free of *xenoliths* (literally 'foreign stones') and other inclusions. The Regina Leader Post article reporting one of the November 11th ceremonies described it as being made of 'grey concrete'! The bust of the soldiers either side wearing First World War uniform stand with arms reversed, a traditional pose in honour of the dead. Additional inscriptions have been added to commemorate those killed in the Second World War, 1939-1945 and the Korean War, 1950-1953.
2. **CENTRAL LIBRARY** – Architects: Izumi, Arnott & Sugiyama; contractors Smith Bothers & Wilson Ltd. Opened 2nd December 1962 it replaced an earlier structure, the Carnegie Library which had been built in 1911, and had been badly damaged in the 1912 cyclone³. The Carnegie Library was demolished to make way for the new library in 1961. Pillars and other ornamental stonework from the old library stand in the lower courtyard and at the rear of the present building.

This is probably the most geological diverse building in the city. Parts of the north and east walls are faced with squared field-stone cobbles representing a wide variety of rock derived from the *Canadian Shield*. These were rocks brought south by the vast ice sheets that covered most of Canada during the Great Ice Age⁴ that lasted until about 10,000 years before present.

The north steps are made of a *metamorphic* rock called *migmatitic gneiss*. This example shows xenoliths, some of them partially melted into the host rock. The pillars and most of the remaining north wall are faced with three varieties of *plutonic igneous rock*. The baseboard is of dark grey *diorite* containing small centimetre-scale xenoliths, small *blue quartz* grains and pin-head *red garnets*. Pillars clad with the same polished stone separate panels of chased pink *even-grained granite*. The same pink granite, in polished form, is used for the window surrounds.

The flower tubs either side of the north steps are decorated with four geological relief panels featuring three *fossils*: a *trilobite*; an *ammonite*, an *ichthyosaur* and

BUILDING STONE TOUR OF DOWNTOWN REGINA

- hands covering a human face. The large sculpted medallion on the north-east corner of the building is from the old library. Made of *Tyndall Stone*, it bears the Latin motto *Qvi Legit Regit* (he who reads, rules).
- SPORT, CULTURE & RECREATION, 1870 LORNE** – Originally the Saskatchewan Telephone Exchange Building, then later the School Board Offices. Architects: Storey & Van Egmond. Built in the Italian Renaissance style in 1914 on the site of the earlier exchange building which had been destroyed by the 1912 cyclone. A heritage building largely faced with yellow brick but with cream-coloured *sandy shell fragment limestone* used in the ground-floor layer and as window and door lintels, sills and surrounds. Note the Provincial coat of arms above the east door and the decorative garlands of fruit and flowers on either side.
 - SASKTEL TRANSMISSION CENTRE BUILDING, 12TH AVENUE & LORNE** – Architects: Stock Ramsey & Associates; contractors Smith Brothers & Wilson. Ltd. The south wall is clad with black *larvikite* made up of distinctive iridescent *labradorite feldspars*. The lower base panels of stone are *gabbro*. Set in the brick wall on the west side along Lorne Street are five bas-relief sculptures in *Tyndall Stone* by Ralph Vawter which illustrate the history of communication.
 - BANK OF CANADA BUILDING** – Faced with light grey *granite* showing 10 cm-scale rhythmic banding of light-coloured and dark-coloured layers. This is an original igneous texture, formed during cooling and crystallization. Inset panels are of a darker grey *diorite*. A modern rendering of the Canadian coat of arms in open metalwork is above the front entrance.
 - CREDIT FONCIER BUILDING & ALDON BLOCK** – Architects: Storey & Van Egmond. Built in 1911. The former Credit Union Building is of *Tyndall Stone* with a good selection of fossils, including both *colonial* and *solitary corals*, *stromatolites* (a cabbage-like algal growth), *gastropods* (sea-snails), and *orthocones* (which housed creatures related to octopuses and squids). Built in 1912, the Aldon Block to the east has an ornamental entablature along the top of the red brick which is actually metal painted to look like marble (compare this to the real marble entablature on the Land Titles Building across the square). The ground-floor level is faced with the same cream-coloured *sandy shell fragment limestone* seen earlier at the Sport, Culture & Recreation Annex.
 - TWIN TOWERS; THE MCCALLUM-HILL CENTRE** – The West Tower stands on the site of the former McCallum-Hill Building, which was demolished by implosion on 31st October 1982. The East Tower stands on the site of the Trading Company Building, a department store built in 1920 and demolished in 1981. Flooring in the lobby of the West Tower is made of two varieties of polished stone: squares of pink *syenite* or *granite* trimmed with black *gabbro*. In the East Tower, the floor of Timothy's Coffee House is made of very coarse chaced grey *porphyritic granite* containing large (1 – 5 cm) white *euhedral*

BUILDING STONE TOUR OF DOWNTOWN REGINA

microcline phenocrysts (large perfectly-shaped crystals) and some small xenoliths or *mafic* clots. Narrow insets are of grey *marble*.

8. **THE CANADA LIFE BUILDING** – Was built as the Crown Life Building when that company was induced to move its headquarters from Toronto. Part of the site was previously occupied by the famous Capitol Theatre⁵. It uses four types of stone: grey *non-porphyritic granite* cladding; a band of black polished *gabbro* around the base; a coarse grey *diorite* around the entrance way and paving outside the main entrance of grey *porphyritic diorite* having 1 – 3 cm *feldspar* crystals. This has been ‘chased’ (had the surface roughened with chisel marks) to stop anyone from slipping on the surfaces when they are wet. The grey non-porphyritic granite contains small *xenoliths*, black *biotite mica*, *hornblende* and possibly *tourmaline*. The Canada Life coat of arms in burnished metal is above the main doors.
9. **THE DOMINION GOVERNMENT BUILDING (now THE FEDERAL GOVERNMENT BUILDING)** - Architects: Francis B. Reilly and Francis H. Portnall. Originally housed the Canadian Customs & Excise Department. Built in 1935 as an unemployment-relief project on the site of the Dominion Lands Office, which itself replaced the courthouse where Louis Riel was tried for Treason in 1885.

The ground floor level is clad with *Tyndall Stone*, the upper levels with beige brick; the baseboard is three courses of grey *granite* or *granodiorite* similar to that used in the Cenotaph. In the Tyndall Stone, a wide variety of fossils is weathered out in relief. These include *chain corals*, *sunflower corals*, *orthocones*, *gastropods*, *horn corals* and *stromatolites*. The entrance foyer (not open on weekends) is faced with a pinkish-cream *banded marble*.

The Imperial Crowns decorating the tops of the solid bronze ground floor window frames denotes that this is a Federal building.

10. **THE SASKATCHEWAN HOTEL** – Architects: Ross & MacDonald of Montréal; contractors Smith Brothers & Wilson Ltd. The hotel opened in 1927 as the 14th Canadian Pacific Railway Hotel in Canada, only 11 months after construction started. It was at the time the largest hotel in the province. The building work had employed 1,000 men working non-stop in shifts 24 hours a day. From 1945 to 1984 the hotel housed the offices and residence of the Lieutenant Governor of Saskatchewan.

The steel framework, which was salvaged from the ill-fated Chateau Qu’Appelle⁶, is clad with *Tyndall Stone* from the basement to third floor level, and with brick on the upper stories. Tyndall Stone also forms the trim, window surrounds, lintels and sills.

BUILDING STONE TOUR OF DOWNTOWN REGINA

Described by the architects as ‘modern classical’ the lower front of the building features bas-relief pillars topped with Corinthian capitals separating the windows and urns and other decorations along the top. The building also combines some Baroque elements in the lower levels, particularly in the carved window arches.

11. **THE LAND TITLES BUILDING (now THE SPORTS HALL OF FAME)** – Built in the Romanesque style from 1906 to 1909 as the first land titles office for Regina and district, from a design by architects Darling & Pearson of Toronto, it was used as such from 1910 until 1977. The building escaped serious damage in the 1912 cyclone. The building is largely clad with red brick. Streaked grey and white *marble* forms the entablature above the brick pillars, the door surround, and the window sills and lintels. Note the provincial coat of arms carved above the door.

12. **FIRST BAPTIST CHURCH** – Architect: William W. Hilton; contractors Smith Bothers & Wilson Ltd. Building commenced in 1911; it sustained serious damage in the 1912 cyclone, the cupola being later found three city blocks away.

Most of the building is faced with red brick. The two decorated Ionic pillars supporting the pediment, which is made of painted wood, are made of a *sandy limestone* filled with shell fragments and a few *bryozoans* (a primitive type of coral). This stone also forms the door and window lintels, sills and surrounds.

13. **THE BALFOUR APARTMENTS** – Named after James Balfour, a prominent Edwardian citizen of Regina who served as town clerk and then city clerk before becoming Mayor in 1915 and again in 1931. He commissioned architects Storey & Van Egmond to design the apartment block which was to replace his own residence. The building is a composite Baronial-Mediterranean style. Its seven stories gave it the distinction of being Saskatchewan’s tallest apartment building until as late as 1955. It was the first apartment building in the city to have self-operating elevators. The building is faced with various shades of brown brick and is trimmed with *Tyndall Stone* bands, cornices and window lintels, sills and surrounds. The arched entrance way is made entirely of Tyndall Stone.

14. **KNOX METROPOLITAN CHURCH** – Designed by Darling & Pearson of Toronto; built in 1906-07, destroyed in the Regina Cyclone of 1912 and rebuilt to a revised design from F. H. Portnall and James H. Puntin the same year. The Metropolitan Methodist and Knox Presbyterian congregations united in 1925 to form the United Church of Canada. The tower houses the Darke Memorial Carillion⁶.

The building is clad with dark reddish-brown brick. The triple-arched entrance with its massive twin columns is in the Norman style and is made of a *sandy limestone* filled with shell fragments, chased with a millimeter-scale grooved pattern. The same stone also forms window surrounds, lintels and sills.

BUILDING STONE TOUR OF DOWNTOWN REGINA

15. **MASONIC TEMPLE** – Architects: Portnall & Reilly. Built in 1926 on the site of the YMCA, which had been totally destroyed by the Regina Cyclone in 1912. The building is clad with red to dark red brick. *Tyndall Stone* forms the banisters and steps to the front entrance, the pediment of which is supported by Doric columns. Note the compass and set-square symbol of the Masons in the pediment.

This completes our circuit of the park.

REFERENCES

Argan, W. A., Cowan P. and Staseson G. W. (2002): Regina – The First 100 Years; the history of Regina told through its buildings and monuments; published by the Leader-Post Carrier Foundation Inc. 396pp.

Bocking, D. H. (Ed.) (1979): Saskatchewan, a Pictorial History; Published by Modern Press, Saskatoon, 209pp.

Brennan, J. W. (Ed.) (1978): Regina before Yesterday: a visual history 1882 to 1945; published by Centax of Canada Ltd., Regina, 228pp.

Marsh J. H. (Editor-in-Chief) (1985): The Canadian Encyclopedia; published by Hurtig Publishers Ltd., Volume 1, 666pp.

Riddell, W. A. (1981): Regina: from Pile O' Bones to Queen City of the Plains – An Illustrated History; published by Windsor Publications (Canada) Ltd., 232pp.

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FOOTNOTES

1. An immigrant from Ireland, Nicholas Flood Davin (1843-1901) was the founder (in 1883) and first editor of the Regina *Leader*, the first newspaper to be published in the District of Assiniboia. He was conservative Member of Parliament for Assiniboia West from 1887 to 1900 and was a strong supporter of provincial status for the Territory, the franchise for women and of the settlement of the prairies by immigrants from eastern Canada and Europe.
2. Note that the date for the end of the Great War is given as 1919 rather than the more usual 1918. The Armistice of 11th November 1918 was not in fact the end of the war. That came with the signing of the Treaty of Versailles on 28th June 1919, five years to the day after the day after the assassination of Archduke Franz Ferdinand – the event that triggered the First World War. The United States refused to sign and was technically at war with Germany until signing the Treaty of Berlin, 2nd July 1921.
3. The Regina Cyclone struck on Sunday, 30th June 1912 at around 5:00 p.m. Two storms that had developed during the day met over Wascana Park, creating a tornado that moved north across Wascana Lake and along the line of Smith Street & Lorne Street, destroying a swath two city blocks wide. Twenty-eight people were killed, hundreds were seriously injured and 2,500 people were rendered homeless by the disaster. Damage was estimated at over \$5 million.
4. The Great Ice Age is estimated to have started between 2 and 2.5 million years ago. There were four major advances of the continental ice sheets, which exceeded one kilometer in thickness, interspersed with three interglacials, some of which enjoyed climates warmer than today's. Contrary to current popular views on Global Warming, some scientists regard the present 'warm period' as just another interglacial, to be followed by yet another advance of the ice.
5. The Capitol Theatre was built as a vaudeville theatre in 1920, and was where the actor Boris Karloff once appeared on stage. During an earlier theatrical tour in 1912 was a volunteer rescue worker after the devastation caused by the Regina Cyclone.
6. The Grand Trunk & Pacific Railway hotel The Chateau Qu'Appelle was to have been built at the corner of Albert Street and College Avenue, where the present Royal Saskatchewan Museum now stands. After the railway company went bankrupt in 1919, the five-storey steel frame of the hotel remained on the site for over ten years. The museum was built over the original basement and piling, which is why the building is at an angle to both thoroughfares.
7. The Darke Carillon donated by the family of Regina merchant and philanthropist F. N. Darke, is played regularly on Sundays during the summer. Mr. Darke provided the funds for the Darke Hall for Music and Art on College Avenue.

OTHER GEOLOGIC TERMS

Ammonite – a marine creature related to octopuses and squids that flourished in the oceans during the Jurassic and Cretaceous periods (206 to 65 million years ago). They became extinct at the end of the Cretaceous at the same time as the dinosaurs, possibly for the same reasons. A related species, the pearly nautilus, still inhabits the Indian Ocean.

Blue Quartz – the distinctive blue colour is caused by microscopic inclusions of rutile, a titanium oxide mineral. These scatter blue reflected light in the same way that dust particles in the atmosphere do, creating a blue colour.

Canadian Shield – a vast area of Precambrian rock that forms the core of North America and which ranges in age from 4 to 1.8 billion years.

Euhedral – a perfectly formed crystal showing all its crystal faces

Fossil – originally the term meant ‘thing dug up’ and included archaeological remains as well as the traces and remains of ancient forms of life, to which it is now restricted. Fossils form in a number of ways from dead creatures, some being replacements in mineral others being the actual remains.

Garnet – a silicate mineral (i.e. containing silicon and oxygen in a 3-D network that holds metals such as iron, magnesium and chromium. Common garnet is red; other varieties may be green, purple or black. Some may be transparent and of gem quality. The presence of garnet in an igneous or metamorphic rock is a sign that the rock experienced both high pressures and temperatures during its formation.

Ichthyosaur – a marine reptile that thrived in the Jurassic. The form of the skeleton shows that its streamlined body resembled that of the modern dolphin.

Porphyritic – said of igneous rocks that contain large, usually well-formed crystals set in a very fine groundmass.

Trilobite – an extinct arthropod, related to modern crabs and lobsters that lived in the seas from Cambrian to Carboniferous times (540 to ~330 million years ago). They lived on the ocean floors and had the ability to roll up if in danger, much as wood lice do.

Tourmaline – a silicate mineral containing boron. The common form is usually black; transparent coloured varieties are used as gemstones.

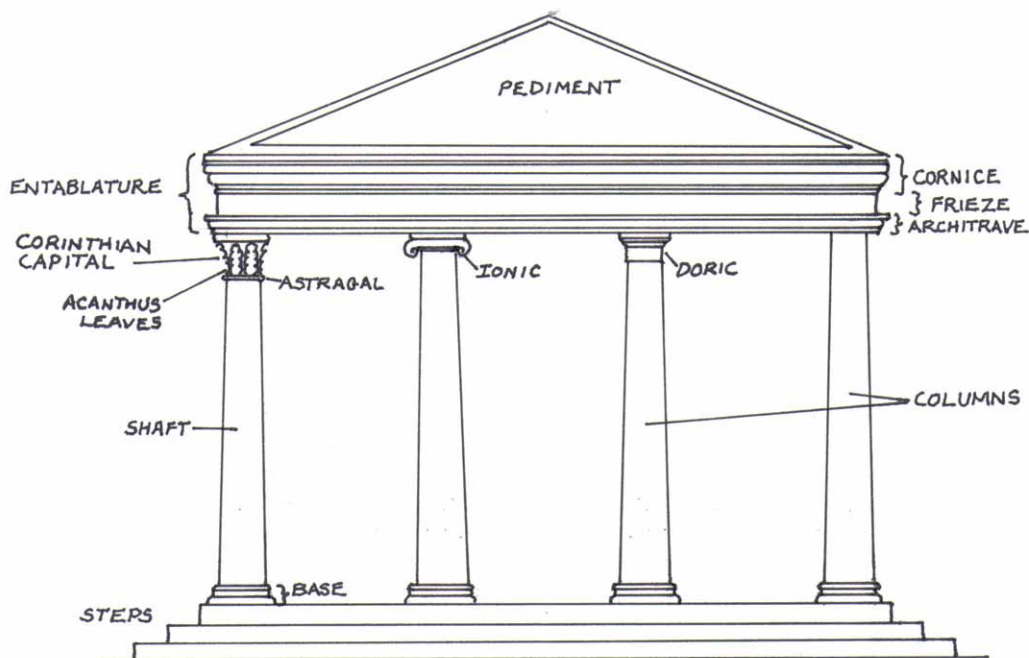
Tyndall Stone – a dolomitized limestone (that is a rock made of both calcium and magnesium carbonate), from a quarry in Tyndall, Manitoba. It has been used extensively across Canada as both a structural and a facing stone on many public buildings including the Houses of Parliament in Ottawa, many of the Canadian Pacific hotels, provincial legislatures and city halls. In Regina, it can be seen at the Provincial Legislature, the CBC

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Building, Royal Saskatchewan Museum, T.C. Douglas building and the Cornwall Centre. It was laid down as a limey mud bank deposit in warm Ordovician seas ~440 million years ago, when this part of North America was at the equator. It contains abundant fossils, including colonial and solitary corals, brachiopods, bryozoans, orthocones and stromatolites. Its most noticeable feature however, is the network of worm burrows that have created the darker mottled pattern.

Xenoliths – literally ‘foreign stones’, the term is used for pieces of rock that have been included in igneous rocks as they intruded the areas of the crust where they are now exposed.

ELEMENTS OF CLASSICAL ARCHITECTURE



BUILDING STONE TOUR OF DOWNTOWN REGINA

GEOLOGICAL FEATURES OF THE CENTRAL LIBRARY



Field stone cobbles: rocks from the Canadian Shield Pink granite facing stone



North side of Regina Central Library



Flower tub – Trilobite



Flower tub – Ammonite



Flower tub – Ichthyosaur

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The Bank of Canada Building



The Crown Life Building



The Dominion Building
Features of the stonework in the Dominion Building



Grey granite baseboard



Typical Tyndall Stone containing fossil coral