

Cornerstones of Spokane

A guidebook to the building stones of downtown Spokane

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[Ed. note: the building names might be different now, so the street address will help identify the buildings]

THE COMMON BUILDING STONES AND METHODS OF QUARRYING THEM

Granite

For many, many centuries, man has used natural stone in the building of temples, mausoleums, commercial buildings, houses, etc. The stone itself has not changed over the centuries, but the methods of extracting it from the ground have changed considerably. Granite, an igneous rock, is the hardest of the commercially usable stones, and is also one of the most difficult to quarry. When a deposit of granite is identified, generally an overburden of soil or decayed rock must be removed before the stone extraction process can start. Good commercial granite must be extracted in large reasonably rectangular blocks. The most common method of removing a large block has been by drilling deep holes close together in a straight line, and then broaching along this line so as to make a channel cut. Additional long holes are drilled horizontally and then black powder is placed in the holes to "lift" the block from the bottom. Years ago, before the days of electric refrigerators, the ice delivery man would chop out blocks of ice with an ice pick in a similar manner. The more modern method of quarrying granite, however, is with the use of wire saws and jet piercing drills. In the wire saw method, the saw consists of a single three strand cable five millimeters to one centimeter in diameter and several kilometers in length. The wire passes over a drive pulley and rolls on many other pulleys and sheaves mounted on standards. The latter are sunk in large pre-cut drilled holes in the quarry floor so that the wire is brought against the stone. When fed with an abrasive in a stream of water, the wire cuts a narrow vertical channel through the stone. Two to six centimeters per hour is a common cutting speed for granite.

The jet piercing method cuts a channel several centimeters wide by a flame drill. Combustion of oxygen (brought to the quarry in liquid form in tank trucks) and fuel oil fed through a nozzle generates a temperature of over 22,760 degrees centigrade. A stream of water joins the flame and the rock is disintegrated into fragments that are blown from the cut. The vertical channel is made from an open face by guiding the nozzle up and down in an arch. The wire sawing method is more expensive, but is highly efficient because waste is negligible and smooth surfaces are produced. The jet piercing method cuts a channel several times as fast as the other methods. One disadvantage is that it produces a deafening noise.

The large blocks are then taken into a fabricating building and are sawed into slabs by different methods. An older method is to use a series of large steel blades which are notched every ten or fifteen centimeters. As the blades are drawn back and forth over the block of granite, steel shot or "Beebees" are constantly fed over the top of the block and it is this steel shot which does the actual cutting. A more common method now is the use of wire saws similar to those used in the wire quarry operation. Strands of wire are drawn across the granite block, and a carborundum abrasive is constantly fed with water into the cuts. The granite is then gradually cut, yielding slabs, the surfaces of which can be finished in a variety of ways. A third method of cutting the block of granite is to use a large circular saw, the outside surface of which is embedded with small industrial diamonds. This is the fastest method of cutting the granite, but the diamond wheels are extremely expensive.

Many years ago, the principal use of granite was confined to making solid base courses of buildings, and oftentimes complete walls, but the finish of the granite was generally what we would call rock face. In other words, pieces of granite were shaped and finished to a relatively smooth surface on the top and bottom joints, but the face of the piece was left rough after being broken with chisels and pitching tools. In recent years, however, manufacturers have developed different ways of finishing the surface of granite. Generally speaking, the granites quarried in the Minnesota-Wisconsin-South Dakota area have reddish and brownish colors. With different colors and different methods of finishing the surface, designers can utilize granite in a variety of architectural ways.

Marble

Deposits of marble, a metamorphic rock, are found in many parts of the world. Because marbles contain a variety of mineral impurities, the architect can choose from many different colors and textures. Generally speaking, marble is quarried in somewhat the same manner as granite, but because it is a much softer material, the sawing and

drilling can be done faster. Some of the more colorful and decorative marbles have so much variegation that the material is fragile and becomes difficult to handle in block and slab form. It is not uncommon to "repair" the finished product with cement and epoxy colored glues. The more variegation in a marble, the easier it is to "repair" Mother Nature's faults.

One of the major marble producing areas in the world is in Italy on the west coast near the towns of Carrara, Massa, Viareggio, and Pietrasanta. Several varieties of colored marbles come from this area, but most of the very good quality white marble favored for sculpture work comes from the Carrara quarries. The famous statues by Michelangelo were carved from quarries in this area. The states of Vermont, Tennessee, and Georgia are blessed with large deposits of marble. The Vermont and Georgia deposits are generally white or light grey in color, and the Tennessee marbles are pink. The pink Tennessee marbles have been used throughout the United States in many places for beautiful flooring. The Georgia white marble is coarsely crystalline in texture. One of the most famous places this marble has been used is on the exterior of the large United Nations Building in New York.

Limestone

Limestone is another commercially used rock, and generally speaking it is quarried by methods similar to those used for marble and granite. Travertine is a limestone which is generally hard to polish. Most travertine has many holes in it, and often these holes are artificially filled with colored cement so as to leave a smooth honed or polished surface. Huge deposits of travertine are found near Rome, Italy, and the material has been used for centuries. Much of the stone used in buildings of the Vatican is Roman travertine. Because of its abundance and beauty, it has also been used extensively around the world.

One of the most famous limestone deposits is near Bedford Indiana. "Indiana limestone" has been used extensively in United States Post Office buildings, the Rockefeller Center in New York City and in many of the large buildings in our main cities such as Chicago and New York.

Sandstone

Many colored sandstones from the Arizona, Colorado, Nevada, and Utah area are quarried by breaking out the natural flagstone pieces by splitting the stone on the natural beds or planes which are inherent in the stone itself. After the flagstone is quarried and split, large stones are run through a mechanical splitting machine. This consists of a cutting table which has at the edge sharp chisel-like cutters above and below the surface of the flat stone. Hydraulic pressure is placed on the upper or lower blades forcing the stone to break. This is then repeated every ten centimeters, and the result is stone that can be laid in a wall similar to the way the mason lays brick.

A WALKING TOUR OF THE CORNERSTONES OF DOWNTOWN SPOKANE

A do-it-yourself walking tour of downtown Spokane is described here with visits to 40 separate locations to see the 58 different types of stones used in our buildings. The tour starts at the Dairy Goat and proceeds for a total of four miles. The tour can be started anywhere along the route, of course, and it isn't necessary to follow the exact route or to do it all at once. The map in the center of the book will help you regardless of how you take your tour. The fun is seeing the different types of stones and learning what they are and where they're from. Take along a magnifying glass if you have one—it will help you see and appreciate fine-grained crystals and fossils in some of the rocks.

1. Ecology Goat (east of the carousel in Riverfront Park)

The large basalt columns which surround the "garbage eating" goat are excellent examples of the way volcanic lava cools when extruded in thick masses on the surface. Basalt is a common building stone in the Spokane area, and is mined from local quarries. The road cuts on the airport road expose the basalt in its normal formation.

2. City Hall (North 221 Wall)

The rough cut "Silver Lake Granite" foundation facing the east and north sides was quarried near Spokane. Note the sparkling muscovite flakes. The entrance is oolitic "Indiana Limestone" from Bedford, Indiana; the same stone is used in St. John's Cathedral and the Spokane Post Office. The interior walls and base are white marble from Alaska. The quarries at Tokeen on Marble Island, Alaska, extract a rock that contains 99 percent calcium carbonate formed 420 million years ago during the Silurian time. Production from the quarry ended in 1938. The marble was formed by the recrystallization of limestone beds deposited in the deep sea, as a result of a hot intrusion.

3. The Bon Marche (North 214 Wall)

The exterior facing on Main and Wall is called "Emerald Pearl Granite" quarried near Larvik, Norway. The technical term for this type of rock is labradorite, from its classic exposure in Labrador. Labradorite is a variety of gabbro (anorthosite) named after the distinctive species of calcium rich feldspars which comprise most of the rock. Labradorite crystals have the special property of chatoyance—an iridescent play of colors caused by parallel structures in the twinned crystals (a similar property is the changing iridescence of a cat's eye). It is composed largely of feldspar crystals. The highly polished surface showing the large feldspars gives the rock its sparkle.

4. First Interstate Bank (North 120 Wall)

The red, gneissic, biotite granite facing the Wall Street exterior is "Swedish Red Granite" from Sweden. The walls in the foyer and the stairway down to the left of the entry are "Roman Travertine" quarried near Rome, Italy. Note the pinkish Tennessee marble steps leading up and down from the foyer, and the green marble trim as well as the beautiful countertop in the foyer.

5. The Crescent (West 710 Riverside)

The Riverside and Wall Street entrance foyers are walled with a fine grained, cream-colored marble called "Perlato" from Italy. The northern Wall Street entrance is flanked by green marble. The exterior facing on the northeast (Main and Wall) side is "Silver Lake Granite" from Washington; the Riverside and Wall corner is faced by "Platinum Grey Granite" from Minnesota. Note the lighter color (higher content of quartz and feldspars) and the dark inclusions in the "Silver Lake Granite." The northwest corner and the eastern Main Avenue entrance are faced with dark labradorite "Emerald Pearl Granite" from Norway, similar to that at the Bon Marche and the Peyton Building.

6. J. C. Penney Company, Inc. (West Main and North Post)

The exterior wall panels (just above the sidewalk) are a polished Precambrian "Oxford Grey" granite from St. Cloud Township, Minnesota. Here, as with most granites, the color of the feldspars determines the tone of the rock. The grey feldspars combine with the black hornblende, dark biotite mica, and a little quartz to give a somber dark color.

7. Lincoln Statue and Memorial (Intersection of Monroe, Spokane Falls Blvd., and Main)

The base of the statue is fabricated from blocks of a grey "Silver Lake Granite" quarried near Medical Lake, Washington.

8. Chamber of Commerce (West 1020 Riverside)

The entrance steps are made of the durable grey "Silver Lake Granite" from near Medical Lake, Washington, and the front columns are the Wilkeson Sandstone of Eocene age mined from quarries near Tacoma, Washington. Along with sand and mica grains, this tan sandstone also contains small pieces of granite, magnetite, and other dark rock fragments. The plaque commemorating the building is a dark red mottled, foliated, gneissic granite from Sweden. Its reddish color is due to a red feldspar called orthoclase.

9. Federal Building (West 920 Riverside)

The fountain in front of the building includes several blocks of local basalt which demonstrate columnar jointing.

Inside the Federal Building, the lobby is faced with large mirrored slabs of "Temple Cream" travertine, quarried 84 kilometers southwest of Albuquerque, New Mexico. The banded appearance was produced as calcite was rapidly precipitated where hot, mineral-rich spring water evaporated and cooled. The tan color is caused by the iron carbonate minerals siderite and ankerite. The occasional red-tan layers are caused by small amounts of hematite and goethite staining the calcite. Many small holes have been filled by the stone manufacturer with a camouflaging tan cement. These holes probably represent layers of algae that once thrived in the hot springs waters.

10. U. S. Post Office (West 904 Riverside)

On the exterior the base of the building consists of blocks of medium grained, uniform grey granite. Notice the two different types of granite in the base. "Little Spokane Granite," of unknown age, but thought to be Cretaceous, is quarried just north of Spokane and makes up the base of the original Post Office which comprises the southern two-thirds of the present building. The northern extension is "Diamond Grey Granite," of Precambrian

age, from Cold Spring, Minnesota. The two granites are remarkably well matched despite the fact they were quarried 1,500 kilometers apart and differ hundreds of millions of years in age.

Most of the building's exterior is faced with "Indiana limestone." This 320 million year old Mississippian Bedford Limestone from southern Indiana is one of the most popular building stones in this country, facing such famous buildings as the Lincoln Memorial in Washington, DC and the Empire State Building in New York. The rock is composed of calcite oolites and fine skeletal fragments of corals bryozoa, crinoids, brachiopods, foraminifera, and an occasional shark's tooth. Such rock is formed in a shallow, warm sea where currents or waves sort the particles into a uniform size.

Inside, the first floor lobby is floored with green "Verde Antique" serpentine marble. The walls and columns are made of a white "Alaskan Marble" with green veining. The veining consists of bands of fine-grained green epidote and chlorite. The main stairs are treaded with another white "Alaskan Marble" with grey veining. The stairs from the second floor up are treaded with a black slate reportedly brought from eastern Pennsylvania.

On the third floor, on the north end of the building is the bankruptcy court. The entrance to the courtroom is lavishly decorated with the same white, green veined, "Alaskan Marble" as used on the first floor.

11. Lincoln Building (West 818 Riverside)

The trim around the main door and the base of the building's exterior is a highly polished "Ruby Red Granite" from Wausau, Wisconsin. This Precambrian granite consists of red feldspars, clear quartz, and black mica. The rest of the building exterior is faced with a light grey "Carthage limestone" quarried from the 320 million year old Mississippian Burlington Formation near Carthage, Missouri. The rough finish of the limestone obscures most of the details of this fossiliferous rock. The same rock can be viewed polished at the Cheney Cowles Museum lobby. Compare the color difference between this building and the post office to the west. Both limestone facades were probably the same color when quarried; the post office has 50 more years exposure to weathering than the Lincoln Building. The trim around the Trio Restaurant portion of the building on Post Street includes several highly polished slabs of black "Andes Black Granite." This Brazilian "granite" is actually a gabbro and is composed of plagioclase, pyroxene, and small amounts of magnetite and pyrite.

The bank's lobby is paneled with a beautiful Mesozoic (225 to 65 million year old) "Rouge Matador" marble mined in arid mountains near the city of Alicante, Spain. The marble is a red and tan limestone-breccia recemented by white calcite. Looking closely at the fractured pieces of limestone you can see a variety of fossils including beautiful cross sections of ammonites—distant, extinct cousins of the chambered nautilus.

12. Zale's Jewelers (West 722 Riverside)

Green Vermont slates in ten by twenty centimeter tiles are used as facing. Slate is a metamorphic shale and the green color is due to ferrous iron oxide minerals.

13. J. J. Newberry Co. (West 610 Riverside)

The brown exterior facing and the pillar on the corner of Riverside and Wall Streets are highly polished Precambrian "Mahogany Granite" from Grant County, South Dakota. Precambrian in age, these highly polished slabs display a weakly foliated medium grained igneous rock with occasional 20 centimeter long streaks of coarser grained material called pegmatite. The color, and its variation, is due to the abundance of the reddish feldspar orthoclase. Note the black and white mica that gives the stone a speckled appearance. The same stone is used in the Arcade and the new SeaFirst Financial Center.

14. Fidelity Building (West 524 Riverside)

At the Fidelity Building on the corner of Riverside and Howard, note the base of the building and the dark stone plaque, commemorating Spokane's first skyscraper, set in the base course. It is carved in a stone known as "Opalescent Granite" quarried in the town of Cold Spring, Minnesota. The opalescence is caused by internal and external reflections on the eight centimeter long calcium rich feldspar crystals. This rock is a metamorphosed gabbro which was formed at least a billion years ago, and subsequently subjected to heat and pressure deep within the earth.

Inside the bank to the right is a line of elevators. The pink, tan, and grey marble facing the wall is called "Ste. Genevieve Rose" after Ste. Genevieve, Missouri, where it is quarried. The marble is taken from the Kimmswick Formation of middle Ordovician age (450 million years before present). Lead and iron are mined from this formation 30 kilometers from the quarry but inclusions of pyrite, iron oxide or galena in the quarried slabs reduce its beauty as a building stone. The marble was originally laid down as part of a reef of algae. Fossil

bivalves, bryozoans, corals, and crinoids are also preserved in this brecciated fossil rich marble. Some quartz grains and many chips of dried mud can be seen.

15. Sherwood Building (West 510 Riverside)

The pillars decorating the front of the Sherwood Building are polished "Silver Lake Granite" quarried in the hills near Medical Lake. Note the small inclusions of finer grained tan and grey granite. These fragments were trapped inside the molten "Silver Lake Granite" as it pushed its way upward about 50 million year ago. The quarry is no longer active, but in its heyday "Silver Lake Granite" was used as facings for buildings at Fort Wright, Washington State University, and the University of Washington. Inside the Sherwood Building, tan, white, and pink toned marble faces the foyer walls. These fossil rich marbles are mined in eastern Tennessee and were deposited 395 million years ago. They are noted for their purity (99% CaCO₃) and are recognizable by the presence of "stylolites"—thin black zigzags or sutures. Small disc and circle fossils are fragments of crinoids—extinct animals related to present day sea lilies. Branching or lace-like fossils are bryozoans—animals that lived in colonies and attached themselves to seaweed and shelled animals.

16. First National Bank (West 502 Riverside)

Two different kinds of beautiful Minnesota building stones cover the exterior of the First National Bank Building. The majority of the building is covered with a dark greenish black gneiss, with long (up to eight centimeters) feldspar crystals, known in the stone trade as "Opalescent Granite." The quarries are located near the town of Cold Spring, Minnesota. Due to its many cracks and irregularities, the cost of extracting large size pieces proved to be prohibitive, and this quarry is no longer in production.

Several large accent panels and corner details are made of a red biotite granite gneiss with pegmatite (coarse grained, light colored) segregations. It contains intergrown orthoclase and microcline crystals, as well as abundant quartz and scattered biotite. Black mica knots, pegmatite masses, and close joints (fractures) are present in the rock and must be avoided in quarrying as such "defects" may produce weaknesses in the rock strength. This stone is called "Autumn Brown" or "Agate" and is located in Ortonville, Minnesota. Both Minnesota rocks are of Precambrian age and are probably on the order of a billion years old.

17. Old National Bank (West 422 Riverside)

The base course (first two meters up from sidewalk) surrounding the Old National Bank Building is made of cut and polished granite from Barre, Vermont. The rock is fine-grained in contrast to the coarse pink and red granites used in the Paulsen Building across the street. Look closely to find two kinds of mica (platy, reflective sheet-like minerals)-- muscovite (clear white), and biotite (black or brown).

The entrance to the ONB Building on Riverside is framed in a very different dark rock known as "Minnesota Black." It was quarried southeast of Ely, Minnesota, in the Superior National Forest. The rock is a coarse grained variety of gabbro composed primarily of calcium rich plagioclase crystals up to eight centimeters long with small amounts of augite and yellow green olivine. When polished, the cleavage faces of the feldspars refract light-like mirrors and internal structures refract light giving the rock a silvery appearance. Compare this rock with the single facing panel to the right of the entrance, the trade name of which is "Emerald Pearl Granite." This panel is made of labradorite, which is also found on the Bon Marche Building. A third type of gabbro can be found at the teller's windows forming the "deal plates" inside the bank. This finer grained variety is composed of plagioclase, pyroxene, and minor magnetite and pyrite—all crystals of which are less than two millimeters in diameter. The rock is quarried in Brazil and is commercially known as "Andes Black." "Alaskan marble" wainscoting and "Tennessee marble" floor tiles are used to decorate all floors in this beautiful example of Spokane architecture.

18. WCTU Fountain (Corner of Stevens and Riverside in front of the Old National Bank Building)

This graceful drinking fountain, dedicated to a leader of the WCTU, was carved from some of the oldest rocks on earth—at least 3.5 billion years old! The polished pink and green stone is known commercially as "Rainbow Granite." Geologists call it "Morton Gneiss" after the type locality in Morton, Minnesota, where it was quarried and shipped to Spokane. The swirls in the rock were formed when hundred of millions of years ago the rock was subjected to intense heat and pressure to the point that it nearly melted. Light and dark mineral components with textures like stiff toothpaste were squeezed together, cooled, and hardened to form the swirling pattern we see today.

The variety of colors and patterns consist of combinations of five major minerals: quartz (clear to white), orthoclase (pink), plagioclase (cream to white), biotite (black-brown), and hornblende (black). The same "Rainbow

granite" was used extensively in the old Spokane and Eastern Building at Howard and Riverside (torn down in 1981).

19. Arcade (West 309 Riverside)

The dark to greyish red "Mahogany Granite" that covers the front and entryway of this building is mined from exposures of Milbank Granite in Grant County, South Dakota. This stone may also be seen at Newberry's and the new SeaFirst Financial Center.

20. Bell Furniture (West 315 Riverside)

The front of the store is covered with a white to tan banded and very fine-grained rock called "colorosa" travertine. Crystallized rapidly from hot ground and surface waters, the calcium carbonate precipitates as a hard dense limestone. Note the vuggy texture and the different color banding. These rocks are mined from quarries near Salida in Fremont County, Colorado.

21. Paulsen Medical and Dental Building (West 421 Riverside)

The Paulsen Medical and Dental Building was built in 1929. The base course was fashioned of "California Grey Granite" from Raymond, Madera County, California. The granite is fine grained and colored slightly yellow due to the slight coloration of the feldspars.

Inside of the lobby is a spectacular treasure of colored marbles. The square floor tiles are made of buff to white colored Tennessee marble. These tiles are used on all upper floors of the Paulsen Building as well. Geologically it belongs to the Holston member of the Chickamauga Formation of Silurian age. These tiles are rimmed with a ten centimeter band of pink fossiliferous marble also from eastern Tennessee. Surrounding that is a three centimeter border of "Verde Antique," green serpentine from Rutland, Vermont. The wall facing is a fourth and very distinctive cream colored marble from Perlato, Italy. The Perlato marble contains many stylolites (black zigzag sutures between marble blocks), some fossils, and cavities.

Floors above the first have "Alaskan marble" wainscotting and Tennessee marble floor tiles.

22. Paulsen Building (West 421 Riverside)

The Paulsen Building exterior walls and entrance are faced with a stunning pink and black granite known commercially as "Diamond Pink" and to geologists as porphyritic quartz monzonite. The billion year old slabs were quarried from rocks located northwest of St. Cloud, Minnesota, where red, pink, and grey granite are found. The large pink crystals are potassium-rich feldspars, a common rock forming constituent. The smaller black minerals—hornblende and biotite—are rich in iron and manganese, and form an even grained matrix with quartz. Look for the white sodium-rich feldspar crystals (some five centimeters long) that have pink rims of potassium feldspar. Note also the twelve centimeter inclusion of finer grained granite made up of quartz (clear), white sodium feldspar, and a little biotite or hornblende. This inclusion is a piece of another kind of rock mixed in when the pink granite was still in a molten liquid state. On the Stevens Street wall, foliation or parallel layering can be seen which resulted from high pressure metamorphism over millions of years. Painted blocks of Belknap limestone from Indiana face the first story. Inside, all the floors are tiled with squares of white-tan marble of the Chickamauga Formation of Silurian (425 million years) age from Tennessee. Wainscotting in the halls was carved from white marble quarried on Marble Island in southeast Alaska. The "Alaskan marble" formed also in the Silurian period.

23. Mohawk Building (West 515 Riverside)

The building is faced in two different kinds of marble. On the east is the dark green "Verde Antique" marble quarried near Rutland, Vermont. In contrast on the west is a clear white marble from Italy near Carrara and Viareggio on the west coast. Geologically the green stone is an altered mafic (iron and magnesium rich) dike called serpentine. As the dike is heated by metamorphism, calcium and magnesium carbonate is squeezed out into cracks forming the pink, white, and tan veins running through the rock. "Verde Antique" is one of the few marbles that will retain a high polish even when exposed to the weather. White marble is formed by the recrystallization of fossil shells and limestone into calcium carbonate crystals through geologic time.

24. Rookery Building (North 14 Howard)

West 523 Riverside in the Rookery Building is faced with the delicate lavender granite from Ymir, British Columbia called "Mother of Pearl Granite." The entire Rookery Building was faced in this unique stone until it was replaced in the 1950's by a combination of colorful pink, black, and grey facing stones. See if you can find the small shimmery blue crystals that give this rock its trade name.

The pink granite facing at West 527 Riverside (on the corner of the Rookery Building) hails from Marble Falls, Texas, where it is sold as "Texas Pink" or "Sunset Red." Geologically, it is known as the Town Mountain Granite, dated to be one billion years old. The rock is composed of microcline feldspar (up to five centimeter crystals), plagioclase, feldspar, and quartz with lesser amounts of biotite, hornblende, rutile, apatite, zircon, and alunite. Note the included pieces of finer grained and clusters of biotite. "Texas Pink" granite has been quarried at the Marble Falls location since the late 19th century.

A portion of the office at West 527 Riverside, in striking contrast to the pink Texas granite, is faced with granite from Porterville, California, known as "Sierra White." The rock, part of the Sierra Nevada Batholith, is a light grey medium to coarse grained biotite granite which is prized for its very straight cleavage and ability to take a polish. It has been used as dimension stone since 1915.

The entrance to the Rookery Building is covered with dark greenish brown "Opalescent Granite" from Minnesota. The rock was quarried in Cold Spring, Minnesota, from metamorphosed gabbro. Large calcium rich plagioclase crystals reflect and refract light to give a subtle play of colors. The same stone is used on the National Bank and Fidelity Buildings across the street. These rocks are similar in composition to the "Minnesota Black" gabbro on the Old National Bank Building, but the quarries are over one hundred kilometers apart.

25. Sartori Fine Jewelery (North 10 Howard)

The Corn Poppers Caramel Corn Shoppe (North 12 Howard)

The corners of each entrance are framed in an unusual stone known as "Mother of Pearl Granite" from Ymir, British Columbia. Only this small portion of what used to cover the entire base of the Rookery Building was left after remodeling in the 1950's. The large orthoclase crystals impart a unique lavender-pink color to the stone which has only been found at one locality—the Swanson quarry—which was abandoned many years ago when the best stone became inaccessible.

26. Gayle's Home Cookin' (North 6 Howard)

"Nevada Sandstone" and "Utah Sandstone" combine to face the multicolored front of this downtown business. Both sandstones were hardened from beach or river sands deposited during the Mesozoic era between 70 and 200 million years ago. The pink to tan rock is the Aztec Sandstone, which crops out in the extreme southern tip of Nevada. The reddish color is due to ferric iron oxide included in the sediment. Green blocks come from an unknown formation in Utah. In these rocks the green color is due to ferrous iron oxide in the sediments. Compare this façade with that of Larsen's Furniture on Sprague Avenue, made of rocks from the same Nevada quarry.

27. SeaFirst Financial Center (West 600 block of Riverside)

The interior of this building, when completed, will make extensive use of "Mahogany Granite." this is the same dark to reddish brown Precambrian Milbank Granite from South Dakota that is used in the Arcade and Newberry's. The floor is large honed and flame finished slabs, while the walls will be flame finished—a process that heats and rapidly cools the surface of the stones and leaves a rough surface.

28. Peyton Building (North 10 Post)

The granite footings are mostly "Little Spokane Granite." At the United Air Lines office, the base is granite from Minnesota. The Post Street entrance and public lobby are walled with Norwegian "Emerald Pearl Granite," the same labradorite as used on the Bon Marche Building. The elevator walls are veneered with "Blue Pearl" labradorite also from Norway. Both stones show a weak alignment of the crystals, which is a relic of the way the individual crystals settled out of the hot magma.

29. First Interstate Bank (West 801 Riverside)

The entire exterior and much of the interior facing stone is Precambrian Milbank granite from Grant County, South Dakota, which is also seen at Newberry's and the Arcade. this greyish red "Mahogany Granite" is composed of medium to coarse crystals (up to three centimeters long) of which 60 percent are red feldspars, 25 percent clear quartz, 14 percent dark biotite mica, and 1 percent accessory minerals. The dull surface of the facing is called a "honed" finish. Other parts of the ground level of the bank exhibit panels of grey granite from St. Cloud, Minnesota. the rough "flame" finish obscures most of the detail of the rock.

30. Great Western Building (West 905 Riverside)

Panels on the remodeled façade of the Great Western Savings Building are composites of ten by ten centimeter rough cut blocks of granite from Minnesota and South Dakota. Compare these blocks to polished

versions of the same rock on the First Interstate Bank and the J. C. Penney Building. Notice how the different physical properties of each mineral caused a slightly different appearance on a rough, broken surface. The feldspars cleave on a planar surface that is often stepped. Micas cleave on a smooth, mirror-like surface and quartz shows a curved or conchoidal surface.

The old lobby of the Great Western Building is extravagantly paneled using a white "Alaskan Marble" with grey veining. The grey and white striped marble panels around the lobby are also from Alaska, the same as used in City Hall.

31. Spokesman-Review Building (West 927 Riverside)

The striking exterior of the building has a base of light grey granite from Jefferson County, Montana. The steeply dipping roof is shingled with black slate. Roofing slate is quarried from metamorphosed shale beds where slabs of the correct thickness readily break out. The front entrance has a checkered floor of pink and red Tennessee marble.

Inside the lobby the floor is tiled with pink Tennessee marble quarried from the Holston member of the 395 million year old (Silurian) Chickamauga Formation. This marble is fossiliferous; however, due to the recrystallized texture of the rock, the fossils are usually pure white calcite without detail. Vermont "Verde Antique" serpentine marble is used for baseboards. Of special note are the large slabs of "Verde Antique" used for counters in the office just west of the lobby. The walls in the lobby are a yellow "Brocatello di Siena" marble from central Italy. Siena marble is a recemented, brecciate limestone. Iron oxide stain has colored some of the recementing calcite a deep red. The marble contains bits of fossils, corals, brachiopods, and bryozoans.

32. Chronicle Building (West 926 Sprague)

The exterior base course is 101 to 109 million year old Cretaceous "Porterville White Granite." This granite is a light grey, medium-grained, biotite granite that is quarried out of the Sierra Nevada Batholith near Porterville in central California.

The lobby and entrance room are floored with pink Tennessee marble and green Vermont "Verde Antique" serpentine marble. "Verde Antique," a very popular decorative stone for this building era in Spokane, is also used for baseboards and sills. The walls are surfaced with an imported grey, French "Napoleon Marble." This marble is a mixture of limestone fragments, called breccia, that have been recemented with calcite, the white vein material.

The floors above the first floor are paved with a concrete made with magnesite, a magnesium carbonate mined near Addy, Washington. Magnesite concrete's resistance to heat makes the building fireproof.

33. Davenport Hotel (West 807 Sprague)

On the exterior of the building the base course is of "Little Spokane" granite. The first two stories are faced with Wilkeson sandstone, a 40 million year old, arkosic sandstone of Eocene age quarried near Wilkeson, Washington. Unfortunately, the exterior has been painted over obscuring the beauty of the rock.

The spacious lobby has a beautiful parquet floor of pink and grey "Tennessee marbles" and Vermont "Verde Antique" marble that was formed by the same force that pushed up the Appalachian Mountains 400 million years ago. The rich, dark green, fibrous mineral is serpentine, a name derived from the Latin word "serpens," a serpent, in allusion to the serpent-like colors.

Most of the stair treads off the first floor are "Tennessee marbles" that are fossiliferous and have stylolitic seams. Variations in colors from tread to tread are due to the fact that many of the steps of relatively soft marble have been replaced over the years.

The statue and its base in the center of the lobby are carved from Italian "Carrara" marble, from the same area that Michelangelo obtained most of his statue marble. This is the same marble as seen on the Mohawk Building

The hallway walls of the level beneath the lobby are paneled with a cream colored marble quarried on Yule Creek near Marble, Colorado. The marble is notable for its even color and absence of veins or other inclusions. Similar "Yule" marble is found in the Lincoln Memorial in Washington, D.C.

34. Washington Trust Financial Center (West 717 Sprague)

The exterior and some interior walls are faced with white "Italian Marble" with a honed finish on the exterior and polished finish in the interior. On the elevator walls on all upper floors the Italian white is used in a different form. Brick-like strips are installed with the broken or "split face" surface exposed. The deal plates in the main lobby are "Andes Black Granite" from South America and the polished marble trim on the counters is the beautiful "Red Levanto" marble from Italy.

35. Pacific's Big and Tall Shop (West 525 Sprague)

An unusual application of building stone faces the walls of this clothing shop. Pebbles of Italian "Verde Marble" and white marble were preset in a cement matrix and polished as whole sheets. Large slabs of rock are polished with an abrasive, such as sand, run rapidly under pressure over the surface to wear off rough edges. When the rock is exceptionally rough, steel shot is the abrading medium. Fine polish is achieved with silicon carbide and the final finish applied with tin oxide under a rotating felt pad. In this way all surfaces are evenly polished to a beautiful high luster. The base course of the building is a dark grey to black granite, quarried in Minnesota. Compare this true black "granite" with the "Petite Granite" of the Symons block up the street which is a limestone in spite of its trade name.

36. Symons Building (South 7 Howard)

The interior foyer of the Symons Building is decorated with white marble accented with bands of dark veined grey marble, both quarried on Marble Island in southeast Alaska. Black and grey veins were formed by the inclusion of organic matter as the original limestone was deposited. Heat and pressure from a nearby igneous intrusion caused the limestone to recrystallize into marble and the organic matter into graphite. Much of the "Alaskan Marble" (no longer quarried today) was shipped to finishing mills in Tacoma and used extensively in the northwest.

The black pillar bases in the outside entryway are known by the trade name "Petit Granite" or "Little Granite." Actually the rock is a dark fossiliferous limestone that at first glance looks a little like a granite. Closer inspection reveals abundant pink and white fossils of crinoids and bryozoans. The abundance and fragmented nature of the fossils suggests a high energy environment such as would be found on a shoreline or beach. This limestone is imported from Soignies, Belgium (325 kilometers southeast of Brussels) and has been used to secure the dikes of Belgium and the Netherlands. It also forms the masonry for the church of St. Vincent built in Europe in 960 A.D. The rock itself is of Paleozoic age—several hundred million years old.

37. Larsen and Associates, Inc. Fine Furniture (West 523 Sprague)

Blocks of sandstone cut along the bedding planes in "split face finish" style are stacked to form the facing of Larsen's furniture store. The sandstone, called by the trade name "Nevada Sandstone," is an ancient deposit of beach or river sand rich in oxidized iron (red color). It was quarried near Jean, Nevada, in the Birdsprings Mountains south and west of Las Vegas. Outcrops of the Jurassic (136 million years before present) Aztec sandstone formation host several small quarries in the area.

38. Ridpath Hotel (West 515 Sprague)

Two unique uses of decorative stone are combined in the Ridpath Hotel on West Sprague. Oversized window frames on the King Cole Room exterior are fashioned from "Colorosa Travertine" from Canon City, Colorado. Travertine is a banded deposit of calcium carbonate precipitated from hot mineralized water and steam around hot springs. Contrasted with the billion year old granites of Minnesota, Colorado travertine is young, less than a million years old. Inside the hotel lobby the columns, walls, and stair steps are also covered with travertine. As travertine is soft it can be easily carved into curved forms such as columns and corners. In striking contrast to the tan and brown travertine are whimsical bright red door knobs and facing trim made of red granite imported from Sweden (known commercially as "Swedish Red"). Red potassium-rich feldspar imparts the bright hue to this coarse grained porphyritic granite. Compare this red granite with the red granite of the Lincoln Saving Bank on Riverside and Lincoln. The granites may look the same but they come from opposite sides of the globe.

39. Farm Credit Banks (West 705 First)

This is an excellent example of the use of stone in new construction. The exterior on the south, east, and north sides is flame finished granite. The light colored granite was quarried in Sardinia. Note the small, black biotite flakes. The interior floor on the main level is rough-quarried slate from Pennsylvania. The countertops are white marble. At the northwest corner, just off the sidewalk, note the three centimeter thickness of the granite facing on the concrete wall and the gap left between the stone and concrete to accommodate the connecting devices.

40. Towne Centre Motel (West 901 First)

The lobby exterior on the northeast corner of the motel is faced with blocks of Aztec sandstone from Jean, Nevada. The blocks are oriented with the tan and red bedding layers horizontal, the same orientation in which the sand was deposited in a shallow inland sea. This same sandstone can be seen at Larsen's Fine Furniture.

41. Mayfair Café (West Second and South Washington)

Tan to red uncut flagstones face the single story building. This wind blown sand formed in desert-like conditions 250 million years ago and is composed of uniformly small grains of quartz. The stone owes its color to the variable amounts of iron oxides that surround each grain, and is mined from the Coconino Sandstone in Coconino County, Arizona. The trade name for this stone is "Arizona Flagstone" (Kaibab Formation).

42. St. John's Episcopal Cathedral (East 127 Twelfth)

The dimension stone is the grey to tan Walker-Wilkeson Sandstone from sites near Wilkeson not far from Tacoma, Washington. Bedding is rare in this 40 million year old rock, and the color is due to sparse iron minerals coating the quartz grains. Small amounts of white mica gives the stone a slightly shiny appearance. The interior of the Narthex, Nave, Crossing, and Trancepts is "Idaho Sandstone" from near Boise. The interior of the All Saints Chapel, Channel, and Sanctuary Recedes at the high altar are the 300 million year old oolitic Salem limestone from Bedford, Indiana. Oolites are very small spheres of calcium carbonate formed around fossil shell fragments by gentle water current washing back and forth across the sea floor.

43. Westminster Congregational United Church of Christ (South 411 Washington)

The building is constructed of rocks from two granites mined from local quarries now abandoned. The west side of the building includes the light grey coarsely crystalline "Little Spokane Granite" found in quarries near the Little Spokane River, north of Spokane. Composed of quartz and white feldspar (some up to two centimeters in size), the crystals of the rock are easily seen. The grey color is accented by dark biotite micas. The stone around the window and doors of the west side and the entire north side are "Silver Lake Granite." Finer grained than the "Little Spokane," this weakly foliated, light to medium grey rock contains inclusions of biotite-rich gneiss rocks that must have fallen into the molten magma before it cooled.

44. First Presbyterian Church (South 318 Cedar)

The exterior of the building is made of a fairly soft fine to medium grained tan colored sandstone. The color is largely due to iron oxide minerals surrounding poorly rounded quartz grains. Mica and magnetite are also present in the rocks. Mined from sites near Olympia, Washington, the Tenino Sandstone is nearly 200 million years old. Bedding is rare and poorly defined, possibly signifying rapid deposition.

45. Cheney Cowles Memorial State Museum (West 2316 First)

The exterior front and carved sign are highly polished Precambrian "Autumn Brown Granite," sometimes called "Agate," from Minnesota. A medium grained granite with red orthoclase feldspar, it contains criss-crossing coarse grained segregations called pegmatite. Crystals up to ten centimeters are easily seen and give the stone a unique appearance from any distance. The facing of the building is "Kasota Limestone" of the Onesta Dolomite formed 460 million years ago, from near Kasota, Minnesota. Tan to pink in color, the limestone is very fine grained and owes its color to varying amounts of fine grained silt particles. The grey Burlington Formation ("Carthage") limestone in the interior entrance is from Carthage, Missouri, and is at least 320 million years old. Notice that the darker grey lines in this rock are fragments of shell fossils. This rock is the host for the major lead-zinc deposits of the Tri-State District in Missouri. The dark grey to black faced pillar in the building is a pyritic, fossiliferous 420 million year old marble quarried near Rutland, Vermont. Note the small white pebble (one to two centimeters) and the fragments of fossil snails. The overall color is due to the presence of carbon, mostly in the form of graphite.

- 1 Ecology Goat
- 2 City Hall
- 3 The Bon Marche
- 4 First Interstate Bank
- 5 The Crescent
- 6 J. C. Penney Company, Inc.
- 7 Lincoln Statue and Memorial
- 8 Chamber of Commerce
- 9 Federal Building
- 10 U.S. Post Office
- 11 Lincoln Building
- 12 Zale's Jewelers
- 13 J. J. Newberry Co.
- 14 Fidelity Building
- 15 Sherwood Building
- 16 First National Bank
- 17 Old National Bank
- 18 WCTU Fountain
- 19 Arcade
- 20 Bell Furniture
- 21 Paulsen Medical and Dental Building
- 22 Paulsen Building
- 23 Mohawk Building
- 24 Rookery Building
- 25 The Corn Poppers Caramel Corn Shoppe AND Sartori Fine Jewelry
- 26 Gayle's Home Cookin'
- 27 SeaFirst Financial Center
- 28 Peyton Building
- 29 First Interstate Bank
- 30 Great Western Building
- 31 Spokesman-Review Building
- 32 Chronicle Building
- 33 Davenport Hotel
- 34 Washington Trust Financial Center
- 35 Pacific's Big and Tall Shop
- 36 Symons Building
- 37 Larsen and Associates, Inc. Fine Furniture
- 38 Ridpath Hotel
- 39 Farm Credit Banks
- 40 Towne Centre Motel
- 41 Mayfair Cafe
- 42 St. John's Cathedral Episcopal
- 43 Westminster Congregational United Church of Christ
- 44 First Presbyterian Church
- 45 Cheney Cowles Memorial State Museum

