RENAISSANCE CITY HALL

A

THESIS SUBJECT

ORIGINIAL

DRAWINGS AND SPECIFICATIONS

BY

DAN WALTERS

STUDENT IN ARCHITECTURE K. S. A. C.

QLASS 1908

2240

THESIS

DRAWINGS AND SPECIFICATIONS FOR ERECTION OF CITY HALL

by

Dan Walters

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SPECIFICATIONS

Specifications for the erection and completion of a new City Hall for the city of ______, after drawings made for the same by Dan Walters, Student in the Architecture Course, Class of 1908, of the Kansas State Agricultural college, at Manhattan, Kansas, June 1, 1908. 2241

GENERAL REMARKS:

This contract includes the furnishing of all materials and labor necessary for the erection and completion of a city hall, to be built on Lot No._____, Ward No._____, of the city of _______, State of ______.

The specifications and drawings are to be construed according to their full intent, meaning, and spirit, when taken either separately or together.

The drawings and specifications taken conjointly shall be deemed to explain each other, and be descriptive of the necessary work to be performed under the contract, but should there be any discrepancy or any disagreement between the figuring on the drawings and the specifications, or between the drawings and the scale, or between the larger and small scale drawings, or between the descriptive writing on the drawings and the wording of these specifications, the specifications shall take precedence. The detal or larger scale shall be followed in preferance to the smaller scale drawings, and the descriptive writing in preferance to the coloring. The contractor will furnish all labor and material as stated, except that which is specially mentioned in these specifications. 2242

Before making bid, the contractor is cautioned to aquaint himself with the building laws of the state and the ordinances of the city concerning the erection of buildings. THE CONTRACTOR:

The contractor must give his personal supervision to the work.

He will deliver the building to the City Mayor in a finished and cleaned condition, windows well washed, floors scrubbed, and debris removed from the premises.

the Contractor will assume all risks from fire, water, wind, falling walls, settling of soil, and every other cause whatsoever. He will properly protect the building from damage of each and every kind. He will obtain all necessary concessions from the City and from neighboring property owners. He will be responsible for all damage done to life or property, by dirt, falling walls, falling building material, scaffolds, etc.

He will make his own surveys after the Arthitect has established the location and level of the southeast corner of the building

He will be responsible for the correctness of all measurements. He will carefully examine the drawings of the Architect before beginning the building, and should he discover any discrepancy whatsoever in the drawings or specifications, he will inform the architect of the same, before beginning the work. Should there be any discrepancy detected in either drawings or specifications it will be the duty of the Architect to give the correct interpretation.

THE ARCHITECT:

In technical matters pertaining to the contract, the City will be represented by the Architect, Dan Walters, who will superintend the erection of the building, make monthly estimates of the material and labor furnished by the Contractor, interprete the meaning of the drawings and these specifications, furnish detail drawings and inspect the workmanship and the materials used in the construction of the building. He will judge as to the sufficiency of the workmanship and the materials furnished and will have the right to reject any material or labor on the building which, in his estimation, is not according to the drawings and specifications, and will have the right to order the immediate removal of the same. Oversight on the part of the Architect to detect inadequate material or workmanship will not excuse the Contractor from liability for poor work done. The Contractor will be held liable until the work is completed and excepted.

The Architect will have the right to discharge any workman whom he may deem incapable of doing good work.

REJECTED WORK:

Material which have been rejected as insufficient by the Architect, will be immediately removed from the premises by the Contractor.

THE CITY COUNCIL:

The City Council representing the city will c arrange for monthly payments according to the estimates made by the Architect. It will accept the building at its completion, and order the payment of the contract in full, subject to changes that have been made since the leaving of the contract.

PAYMENTS:

Arrangements will be made for monthly payments to the Contractor, amounting to 80% of the furnished labor and material according to the estimates made by the Architect, but such payments shall in no way be construed as to an acceptance of the furnished material and labor. The Contractor will be held responsible with regard to all the conditions of the contract until the job is accepted by the City.

ALTERNATIONS:

The City reserves the right to alter or modify the details of the building without invalidating the contract. If there should be an increase or decrease in the dost of the altered parts, the Architect will, at the time of ordering the change, give the Contractor a written statement, with order, of the increase or decrease. The City will refuse to pay for extra work of any kind, for which at the final settlement, the Contractor cannot show such statement.

SUB CONTRACTORS:

Sub-Contractors will not be recognized.

ACCEPTANCE OF JOB:

The job will be accepted at its completion by the City Mayor and Council with the advice of the Architect. BEGINNING THE WORK:

In case the Contractor does not begin and pursue the work within one month of the leaving of the contract, enerjetically and effectively, the city reserves the right to inquire into the cause of such delay and urge the immediate beginning of the building operations and in case the Contractor should fail to answer such notice satisfactorily, make other arrangements for the erection and completion of the building at the expense of the Contractor and his bondsman.

The right is also reserved by the City that should the Contractor at any time fail to push the contract job with the requisite speed, effect, and energy, to inquire into the cause of such delay and after having given written notice for six days, to proceed with the erection of the building at the expense of the Contractor and his bondsman.

EXCAVATIONS:

Excavate for the basement and foundation walls in accordance with the drawings.

Remove all surplus earth from the premises. Grade the East side of the building in accordance with the drawings.

If, during the process of the excavating, it should appear necessary to make deeper excavations for the foundation work, the

Architect will give written order for the needed extension and the City will pay for such extra foundation stone and concrete work a total sum of \$6 per perch of stone wall thus added. This amount will cover all expenses of each and every kind.

CONCRETE FOOTINGS:

The footings of the building will be of cement concrete. The cement concrete will be made of two (2) parts of Kansas Portland cement, five (5) parts clean, sharp, course river sand and one (1) part broken rock. No rock will be used that will not pass through a 2" ring.

The sand and cement will be well mixed dry, then thoroughly wetted and mixed again. Then it will be immediately deposited in the trenches and tamped until the water rises to the surface. The footings will be kept moist for twenty-four hours (24) after they have been tamped.

RUBBLE WALLS:

All division walls, the north wall, and also the contour walls to the grade line are to be made of first quality of rubble stone work of best grade Manhattan lime stone, and cement mortar. (See mortar specifications.)

The mason will not be allowed to throw in spalls with the trowel or to use spalls except the occasional insertion of a few, well fitting pieces. The joints will be pointed up with a liberal quantity of mortar, and squeezed on with the flat throwel.

The outside of the contour walls will be plastered to the grade

line with cement mortar one-inch thick. The cement mortar will be made of one part of Kansas Portland cement to three parts of clean, sharp river sand.

PIERS:

The piers in the baxement will be built of first class rubble stone work, 4' x 4' square, on a base of concrete, one foot thick, mixed as for wall footings. The top slap will consist of a single stone not less than 6" thick, and bush-hammered on top to receive the beams.

MORTAR:

The mortar used in the contour walls below the grade line will be made of one part Kansas Portland cement to three parts of clean, sharp, course, river sand; to each wheel-b_arrow load of mortar may be added a shovel full of slaked lime.

The mortar used in the other parts of the building will be made of one part Kansas Portland cement and one part slaked lime to not over five parts of clean, sharp river sand. The cement will be added just before using. The sand, cement, and lime must be measured with a carefully constructed box -- not the shovel.

Note: The Western States brand of cement, made in Independence, Kansas will be preferred and Fort Scott Hydraulic cement will not be accepted.

Mortar used in the safe closet and the chimneys will be the same as that used for the contour basement.

ASHLER:

The parts of the foundation walls (basement walls) below

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the water table, visable from the outside are to be faced with large pitched ashler 1° first class, solid bottom rock stone, laid in strictly horizontal courses, the "elevations" show the desired character and sizes of this work. On the west front and south sides, three courses will be used below the water table. On the east side eight (8) courses will be used. The courses will be about 1' 6" in height.

WATER TABLE:

This will be formed of one course of pitched ashler with a 45 degree tooled wash at the top. At this point the contour walls reduce 3"

RANGE WALLS:

The walls above the water table will consist of pitched ashler courses alternating 6" and 12" in height as indicated on the elevations. Should the ledges of the quarry make these heights impracticable, the Architect may allow a slight deviation from these heights, but in all cases the total height of a light and heavy course will be 18".

JAMBS:

All jamps will be bush hammered on the side toward the frame.

CORNERS:

All corners will be of height even with the ranges. No draft on the angle.

CAPS:

Window caps will be made as shown in the detail drawings of

first class cotton rock.

SILLS:

Sills for the first story and second story will be as shown in the detail drawings; they will be a part of the 6" course, as shown in the "Elevations." Sills for the basement windows are intended to be continous bands and require evenly colored and pitched faces. The lugs of the sill will be bush hammered. Slant of tops about one inch.

STONE STEPS:

The steps on the east side of the building will be made of select bush hammered stone -- no drafts. 12" treads and 6" risers. The front steps will be built of extra select, bush hammeted stone -- no drafts. 12" treads and 6" risers.

PEDIMENT:

Build the pediment and its foundation as shown in the drawings. The peidment floor will be formed of not more than two rectangular stone slabs with bush hammered or sawed tops, well fitted together, and not less than 6" in thickness. The slabs to rest on the wall at each end.

PIERS:

Build the piers in the store room from the level of the main wall foundation, and top out with a single slab for beam and cast iron post to rest on. The footings for the piers will be of cement concrete as mixed for the main wall footings. The **pier** will be built of rubble work as described for the wall.

CHIMNEY:

The chimney will be built of good, coffeeville building brick #1, laid in good cement mortar (see mortar). Plaster the inside of the flue as it is being laid up. Start the chimney 2' from the basement floor and on solid masonary. The fotting course of the chimney will be of cement concrete as under the walls and will project six inches beyond the masonry. Provide 20" thimble opening 1 1/2' below the floor joists of the first story for the heating furnace and provide a 2' cast iron soot door at the base of the chimney. Run the chimney 7' above the roof line and top out with select brick.

CRAMPS:

All walls where the headers are easily placed are to be held together by iron cramps made $1/4" \ge 1" \ge 18"$ wrought iron cramps. The ends of these cramps will be bent at right angles to the outside end about 1/2", the inside end about 1".

Cramp all walls under the ends of every sill, transom-sill, and cap. Where brick walls and stone walls join together, they will be cramped together well.

PARTITION BOLTS:

The end stud of every partition terminating against the wall will be securely bolted to the wall by two 5/8" bolts, 12" long, laid in the wall.

ROOF ANCHORS:

Anchor the wall plates every 4' with well made 5/8" - 3' anchors of usual construction. (See detail drawings).

ANCHORS:

All girders and every alternate floor timber, beam, or joist will be solidly anchored to the wall. All this timbering rests on stone seats which must be true and even.

WALL PLATES:

The floor joists of the second floor will rest directly on the stone wall which will be level with large flat stones. There will be a full size joist or beam next to the wall in all cases with anchors or lugs soldily built into the wall.

BACK LINTELS:

All back lintels will be of 2" x 6" joist material well spiked together and well bedded on both sides on large, flat stones. There will be no stone back lintels or arches.

DRILL HOLES:

No drill holes is to be seen in the face of any stone.

LUMBER:

All lumber not otherwise specified is to be of good quality of Southern Yellow Pine, free of large knots, sap, splits, or any other defects. The joists and studsare to be of No. A surfaced on one side and end. No. /2" material will be accepted that does not measure over 11 - 1/2" when perfectly dry. All 14" joists are to measure over 13 1/2" when dry. All 16" joist are to measure over 15 1/2" when dry, and all 3" material is to

measure full size.

SHEATHING OF PARTITIONS, FLOORS, AND ROFF:

Sheath all floors, frame partitions with $7/8" \times 10"$ boards laid close and at right angles to the joists or studs. Use 8-p nailes for all sheathing not less than over two-inch timber. 2252

PLASTERING:

The entire building, with the exception of the store r_0 om, furnace room, and the ceiling of the police court room and the assembly room, will be plastered with Agatite, or Acme cement plaster.

All contour walls that are to be plastered, except that on the north side, are to be furred with 1" x 2" furring strips placed 16" O-C., and lathed with best dry white pine lath laid with full 3/9" open joints; joints properly broken and all parts securely nailed.

All mortar for lath work shall be fibered and in all cases shall be made ready for application according to the directions of the manufacturer.

The browncoat shall be laid in two thicknesses, the same being throughly trowled into each other.

The second coat shall be mixed with fine screened sand and shall be worked down to a uniformly even granulated surface, using cork or carpet covered floats for the purpose.

2253

All lines, corners and angles, shall be cut clean and true, all vertical lines shall be plumb and all horizontal surfaces level.

The rounded edges of the window jambs shall be worked out uniformly in all cases.

The back lintles shall be set back and furred with lath before lathing.

All interior or open arches shall have neat, rounded corners, and all parts shall be executed in a clean and workmanlike manner

The plastering throughout the building will extend down to the line of the chair railing nailings and the part of the work below this line will be finished in cement plaster mixed in a proportion of one part Western States Cement to three parts of clean river sand.

SEWERAGE AND PIPING:

This Contractor shall leave apprtures in walls where directed for the sewerage and other pipes. that The pipes,go beneath the cement floor in the basement shall be installed under separate contract before this is laid.

STRUCTURAL IRON:

The wall plate bolts shall be placed ince in 5 feet around the entire circumference of the building.

The floor beams next to the walls shall have three 5/8" anchor bolts screwed in from the wall side and extending to the back of the stone facings with 2" turned down ends.

2254

All parts of the roof constructeion shall be thoroughly tied and bolted wherever needful, whether the same be shown or specified.

The cast iron columns and the shoes for the same shall be made as shown. All columns shall be perfect and no flaws will be allowed.

The cast iron columns shall be delivered upon the job unpainted and be thoroughly inspected before being installed in place.

The steel girders shall be as indicated in all places where called for; shall be of ample length; shall be drilled and supplied with strap iron for tieing around the columns; shall have standare supporters placed as specified under Cambris rules and all parts shall be made complete.

All columns bearings shall be faced of to true surfaces and all parts shall be set in sheat lead.

Care shall be taken to check all measurements before casting. SHEAT METAL WORK:

The conductor outlets from the gutters to the outside walls shall be made of 14 oz. copper; the same being lock seamed and soldered and all cross joints made and warranted water tight. After having made connection between the gutter and the copper pipe sections, tin pipe sections at least 6" long shall be set into copper work and then throughly soldered connected with the tin of the gutters and protected with wire screens. The conductors from the outside lines of the wall to the ground shall be of corrugated galvanised iron. They shall be rigidly secured in place once in 7° of height with malleable iron conductor cramps driven into the joists of the masonry, but in all cases the conductors shall be set at least 2" from the masonry. 2255

The conductors shall extend to the ground and shall be left with straight ends for the connections with the tile drains.

The entire roof of the building shall be covered with Merchants & Cos. Old Method IC roffing tin. The under side of the tin will be painted before being laid, and to be laid on two thicknesses of Barret's Black Waterproof Sheathing Paper, or its equal, as approved by the Architect. The roof will be the standing seam tin roof securely soldered.

At all gutters the tin of the main roof shall lock to the sides of the same.

The roofing shall, in all cases, be properly counter-flashed with counter flashing not less than 6" wide; the same to be laid into joints, secured to the counter strip and properly turned down and tack soldered where necessary.

All gaintering seams shall be printed with thick lead and oil paint, adding fine screened sand.

The grades of all guttering shall be made ample and true.

The plates for the main roof covering shall be 20" x 28" size and each sheat shall have six cleats; the same being nailed to the roof with wire roofing nails.

The main cornice mounding will be made of 16 oz" sheet copper.

2256

It shall be formed as shown by detail and rigidity secured in place to the lookouts, which will be placed once in two feet on the plain surfaces. A mitre block will be placed at all corners.

All mitres are to over-lap and be both rivited and soldered.

This is also true of the running joints.

The necessary elbows for the various off-sets in the conductors shall be neatly and uniformly made.

The ornamental lions over the main entrance will be made of heavy sheet copper. These will be bought by the Architect at the expense of the Contractor. The price of the same shall not exceed the sum of six hundred (\$600) dollars for each. They will be shipped and placed by the Contractor.

METAL CELLING:

The ceiling of the Police Court Room and of the Assembly Room will be made of pressed steel, of a design similar to Rococo design #5276 Catalog #16 of the Berger Mfg. Co., Canton, Ohio.

This ceiling material shall be placed according to the specifications for the same issued by the manufacturer.

FLOORS:

The floors of the Main Corridor on the first and second

floors and the floors of the Police Court Room, and Assembly Room will be of Mosaic tile, of a design similar to that found on border No. 43 and body No. 504, of the Zanesville Tile Co., of Zanesville, Ohio. This tile floor will be laid a ccording to the specifications issued for the same by the Manufacturer, and shall be laid by a mechanic skilled in such work.

The masaic floors will be laid in the following manner: On top of the joists lay a sub-floor of 7/8" sheathing boards. Over this sub-floor lay two thicknesses of heavy tar board building paper. On this paper spread a layer of concrete 2" thick, mixed in a proportion of one part Kansas Portland Cement to two parts of clean, sharp, course river sand. On this spread a layer of "top coat" 1" in thickness, mixed_in the proportion of one part of Kansas Portland cement to two parts clean, sharp, river sand. The tile will be put down immediately upon this cement concrete floor.

The cement concrete of this floor will be handled as in the specifications for the cement walks.

The other floors of the first and second stories will be laid, in all cases, on a sub-floor of 7/8" sheathing boards.

On this floor lay two thicknesses of heavy tar board, then strip the floor with 1" x 2" strips laid 16" O. C. The space between these strips will be completely filled with a good quality of asbestos mineral wool, to deaden the sound and as fire protection. The finish floor used throughout the entire building, not otherwise specified will be of best quality extra narrow, ver-

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tical grained, white oak flooring.

The floors of the basement will be of cement concrete laid as hereinafter specified; level, wet, solidly tamp the earth floor to a depth of 11" below the level of the finish floor line. Over this spread a layer of Coal cinders which shall measure not less than 6" after being wetted and solidly tamped. Over this place the cement floor in the following manner: The cement and sand shall be handled as described under the head of CEMENT CON-CRETE WALKS, and shall be formed of a ratio of one part Kansas Portland Cement to three parts of course clean, sharp river sand and five parts broken stone. No stone shall be used that will not pass through a 2" ring. The finish coat shall have a thickness of not less than 1" and shall be mixed in a proportion of one part of sand to two parts clean, sharp, river sand.

When this cement concrete floor is completed it shall in no place have a thickness of less than 5".

Not more than one brand of cement shall be used in the same room.

The surface of the top coat shall be finished with a cork float and then with a steel strowel.

The floor shall be cut into regular blocks as directed by the Architect. The "cuts" shall be 1/4" wide and go entirely thru the blocks.

STARIS:

Construct the main staris as shown by the detail drawings. All finish wood shall be of best quality, kiln dried, verticle grained, white oak. The treads will be 1 3/4 inches in thickness and will be of extra select white oak.

The balustrades will be made of white bronze (zinc bronze) and of the form shown in the detail drawings. Build the rear stairs, leading from the Plice Court room down to the Store room as shown on the detail drawings, of extra select, dry, hard pine.

The balustrades and hand rail and newel post will be of the same as shown for the main stairway. The hand rail of these stairs will be made of white oak, i. e. same as main stairs.

The railing for the light well in the main corridor will be of same as that used in the stairways. That is, white bronze balustrades and vertical grained white oak hand rail.

The basement stairs will be held in place at its junction with the cement concrete floor by 4" x 4" horizontal piece set into the floor.

This stairway shall be built after the cement floor has been laid in order that the cement floor may be placed under the covered space under the stairs.

WINDOWS:

The windows of the basement, first story, and second story, will be made of 2" x 1 3/4" white pine, hanged with castiron weights to balance, with good quality of 1/4" woven sash cord.

All frames shall be provided with the Norris Sash Pulle #325 a, made by the Frank B. Sloan Co., of Baltimore Md. 2260

The upper part of all outside sash in the first and second stories will be made of florentine glass.

The sach used in the light well in the rear of the building will be fitted with hardward as for the outside windows, they will also be fitted with florintine glass thruout.

All transparent glass used in this building will be Double Strength American, unless otherwise specified.

The height of the windows from the floor in the rear light well will be 30" from the finish floor to the window seat, in all stories.

All lower sash measuring more than 12" in width shall be fitted with two solid bronze lifts of the usual design.

All windows shall be fitted with one Genuine Fitch Sash Lock, #20, made by the W. &. E. T. Fitch Co., of New Haven, Conn. or its equal as may be approved by the Architect.

The large windows over the main entrance doors shall have its sash fitted with a heavy plate glass.

SKY LIGHT:

Make the skylight as shown on the detail drawings and on the roof plan.

The Upper or outside glass will be made of 1/4" wire glass of a

maze pattern.

The lower or insideglass of the skylight will be made of 1/4" maze glass but not a wire glass.

2261

All steel used shall be made according to the specifications of the structural iron work.

This skylight must be water tight and stay water tight for the period of one year.

DOORS AND HARDWARE:

All doors shall be of vertical grained, white oakpr pattern shown in the detail drawings.

All glass used in the inside doors will be of a maze pattern, with a polished, beveled edge of one inch.

The glass in the rear entrance door and the transom for the same will be of a maze of glass, but shall have no bevel.

The glass used in the main entrance doors will be of a polished plate glass with a $1 \frac{1}{2}$ bevel.

All transom glass will be maze glass, but shall have no bevel.

No hardward will be needed for the transoms; they will be stationary.

The locks of the main entrance doors will be bought by the Architect at the expense of the Contractor. The maximum price shall be twenty dollars. (\$20.00.) The locks of the rear entrance door shall be exhibited to the Architect for inspection before insertion. The price for this lock shall be about six dollars (\$6.00.). 2262

All doors will be hanged with three 3 1/2" x 3" bronze hinges.

The locks of all interior doors will be heavy bronze locks, Mortice) bought by the contractor at his own expense, but subject to the approval of the Architect before being set. The maximum price shall be five dollars (\$5) each.

All doors leading to the jail rooms will require special hardware, which will be bought by the Architect at the expense of the Contractor. The Contractor shall set aside a sum of \$50 for this purpose.

All doors will be provided with neat bronze, rubber tipped, door bumpers.

The main entrance doors will be provided with an Ogden Door Check each.

PLUMBING AND SEWERS: :

This is not a part of the general contract and will be performed under separate contract. The general Contract must leave all holes where main pipes go thru the wall, and will so arrange his work as to faciliate the work of the Plumbing and Sewer Contractor.

The main pipes that go beneath the cement floor in the basement will be laid by the Plumbing and Sewer Contractor before the floor is laid. The general Contractor shall give ample notice to the Architect in writing before he places this floor.

HEATING:

The installation and furnishing of the heating plant is not a part of the general contract, but the general Contractor shall so arrange his work so as to facilitate the work of the Heating Contractor.

ELECTRIC WIRING:

The electric wiring shall be a part of the general contract and the chandeliers will not be furnished by the Contractor. He shall provide the building with the required number of drops as shown in the floor plans. These drops will be bronze finish.

The chandeliers will be furnished by the City free of charge on the job but they will be installed the same as a part of this Contract.

The Contractor will not be required to furnish electric light globes.

All electric wiring shall be done according to the latest code of the American Fire Underwriters' Association.

JAIL CELLS:

These will be furnished by the City to the General Contractor free of cost on the job.

It shall be the duty of the Contractor to install the same accord-

ing to the directions given by the Architect at the proper time. These cells will be made of $3/8" \ge 2"$ steel bars, laid 2" apart and being laid both ways.

They will be of sizes as shown on the Basement plan and will be eight feet in height.

PLATFORM IN COURT ROOM:

The platform in the Court Room will be 1' 2" above the floor as shown on the first floor plans.

The floor of this platform will be made of perfectly dry, vertical grained white oak as specified for the main part of the building.

The sides of this platform shall be made of a matched wainscoating of the same material.

The floor will project some and be nosed off and a neat concave moulding placed beneath.

There will be a quarter round at the base but no base board.

The hand rail of this platform will be of the same material as that used on the main stairs.

The newell posts shall be made the same as those of the main stairs and placed as shown on the first floor plan.

The gates will be made of white bronze balustrades with the oak hand rail as for the rest of the platform. These gates will be made to swing both ways and will have apring hinges of

a neat design, but no locks will be required.

Dan Walters, '08.











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EAST ELEVATION SCALE 1/8-INCH = 1-FOOT-







THESIS-'08 (12) Dain Waltens.













