GENERAL- CONTRACT

SET NO. 17

SPECIFICATIONS

FOR AN

ADDITION TO FACTORY BUILDING

FOR THE

MERRILL INDUSTRIAL FOUNDATION, INC.

AT

MERRILL, WISCONSINL

GUS. A. KRASIN

ARCHITECT

MARSHFIELD, WISCONSIN.



All bids must be made out
on the following form, other-
wise they will not be considered.

BID FOR GENERAL WORK

To the Merrill Industrial Foundation, Inc.
Merrill, Wisconsin.

Gentlemen:

We, or I, the undersigned do hereby propoae to furnish all materials and perform all labor necessary to complete the General Construction in all respects for the Addition to Factory Building for the Merrill Industrial Foundation, Inc. according to plans and specifications as prepared for same by Gus. A. Krasin, Architect of Marshfield, Wisconsin, for the sum of:

_____ $_____

Alternate Bid:

If Asphalt Plank Industrial Flooring is used as specified in the "Special Instructions to Bidders" in place of the wood floor, then add or deduct:

_____ $_____

Inclosed herewith find check for $_____ which is 5% of my bid as a guarantee that I will enter into a contract and furnish a satisfactory surety company's bond for faithful performance of this contract.

Respectfully submitted,

_____

By: _____

Dated at _____

this _____ day of _____, 1938.

NOTICE TO CONTRACTORS

Notice is hereby given that the Merrill Industrial Foundation, Inc. of Merrill, Wisconsin will receive sealed bids up to 2:30 P.M. on the 3rd day of November, 1938, for the furnishing of all materials and labor necessary to erect an Addition to their present Shoe Factory Building, according to plans and specifications as prepared for same by Gus. A. Krasin, Architect of Marshfield, Wisconsin.

Bids shall be made on the General Construction, Heating (Steam Heat), Plumbing and Electrical Work, and must be addressed to Merrill Industrial Foundation, Inc.; Amos P. Gruett, Secretary; Merrill, Wisconsin, and must be accompanied by a certified check in an amount not less than 5% of the maximum bid as a guarantee that the Contractor to whom the award is made, will enter into a contract and furnish a surety bond assuring the faithfull performance of the contract.

The Owner reserves the right to reject any or all bids, or accept any bid which may be to the best of their advantage.

Plans and specifications may be obtained by applying to the Secretary, or Architect. Plans and Specifications will also be on file at the different exchanges.

Merrill Industrial Foundation, Inc.

Amos P. Gruett, Secretary.



SPECIAL INSTRUCTIONS TO BIDDERS

The Owner will remove the ground and level down the knoll which is on the space where the new Addition is to stand, so that the ground will be about 6 inches below the finished floor level. The Contractors are not required to make a bid for removing the knoll as called for in the detailed specifications.

Alternate Bid:

The Contractor for the General Contract is requested to make an alternate bid on the following change of floor construction:

That part of floor which is now called for to be wood shall be changed as follows: "All wood floor sleepers and anchors, floor lining and finish wood flooring shall be omitted, and the cement floor shall be increased to six (6) inches thick and shall be brought up to within 3/8" of the top of cement floor. Floor shall be screeded off to a true, even surface, and shall be floated and trowelled.

On top of this cement floor, (i.e. on that part which is indicated as wood floor on plans), lay an Asphalt Plank Industrial Flooring, 3/8" thick, red in color. Cement floor shall be first coated with primer and the Asphalt Plank shall be laid with cement made for that purpose. All work shall be done by skilled workmen in a neat and workmanlike manner."

All bids must be made out
on the following form, other-
wise they will not be considered.

BID FOR GENERAL WORK

To the Merrill Industrial Foundation, Inc.
Merrill, Wisconsin.

Gentlemen:

We, or I, the undersigned do hereby propose to furnish all materials and perform all labor necessary to complete the General Construction in all respects for the Addition to Factory Building for the Merrill Industrial Foundation, Inc. according to plans and specifications as prepared for same by Gus. A. Krasin, Architect of Marshfield, Wisconsin, for the sum of:

_____ $_____

Alternate Bid:

If Asphalt Plank Industrial Flooring is used as specified in the "Special Instructions to Bidders" in place of the wood floor, then add or deduct:

_____ $_____

Inclosed herewith find check for $_____ which is 5% of my bid as a guarantee that I will enter into a contract and furnish a satisfactory surety company's bond for faithful performance of this contract.

Respectfully submitted,

_____

By: _____

Dated at _____

this _____ day of _____, 1938.

S P E C I F I C A T I O N S

Of materials to be furnished and labor to be performed in the erection and completion of a one story addition to factory building, with concrete foundation for the Industrial Foundation of Merrill, Wisconsin. The building will be located on the South and to the West of present building in the City of Merrill, Wisconsin. The erection of the Building shall be carried out according to plans and these specifications prepared by Gus. A. Krasin, Architect of Marshfield, Wisconsin.

-oOo-

GENERAL CONDITIONS

1. Principles and Definitions:

a. Wherever the term "Architect" is used, it shall mean Gus. A. Krasin, Architect of Marshfield, Wisconsin. Wherever the term "Superintendent" is used, it shall mean such person or persons as the Owners may authorize and designate to have full charge and supervision of the building during the construction period.

b. Wherever the term "Owner" is used, it shall mean the Industrial Foundation Inc. or their duly appointed committee.

c. Wherever the term "Contractor" is used, it shall mean the party whose bid shall be accepted and who signs the contract, furnishing a sufficient bond as guarantee to erect, finish and complete the building, and paying for all materials and labor and other expenses as called for by the plans and these specifications.

d. Wherever the term "or approved" is used it shall mean that any material which has all the qualities, characteristics, and advantages of the particular article or material specified, and is corresponding in size and design, may be used in place of the original specified materials, but not until the full description and necessary details of the materials to be substituted have been submitted to the Building Committee or the Architect for approval. If the Building Committee or the Architect does not approve of the substitution, the article or material specified shall be used.

2. Right to Reject Bids:

The Owner reserves the right to reject any or all bids.

3. Examination of Premises:

The Contractor shall carefully examine the premises before submitting his bid. No allowance will be made him for lack of full knowledge of all condiditons, except such underground conditions as are indeterminable before commencement of the work.

4. Time of Completion:

The Contractor shall state in his proposal the number of working days, from the signing of the contract, in which he will guarantee to complete his work.

5. Changes:

It is understood that the Owner shall have the right, during the progress of construction to make any alterations, additions, or omissions that he may desire to the work or material herein specified or shown on the drawings. The same shall be carried into effect by the Contractor without in any way violating or vitiating the contract. But if such changes are made, the value of same must be agreed upon in writing between the Owner, Architect and Contractor. No omissions will be allowed or extra work paid for unless ordered in writing by the Architect.

6. Special work not included:

The Owner reserves the right to have any special work, not included in the contract, done during the dourse of the work herein specified,

7. Sub-Contractors:

All sub-contractors must be approved by the Architect before the contract is signed.

8. Bond:

The Contractor shall within ten (10) days after signing of the contract, furnish the Owner with a bond of a trust company, acceptable to the Owner, in a sum equal to the amount of the contract price of the work, guaranteeing the faithful performance of the contract and against loss by reason of any lien. Contractor must state whether cost of bond is included in his bid. In a case the Contractor does not make any statement in regard to the cost of bond in his bid, then it shall be taken for granted that cost of bond is included.

9. Release of Liens:

The Contractor shall furnish the Owner, before final payment is made, a full release of liens, signed by all sub-contractors and material men associated in any way with the work.

10. Permits:

The Contractor shall obtain and pay for all permits, surveys, and inspector's fees without extra cost to the Owner.

11. Responsibility for Accidents:

The Contractor must bear all loss or damage from accidents which may occur to any person or persons, by or on account of the prosecution of the work until possession is taken by the Owner. The Contractor must provide all legal and necessary guards, railings, lights, warning signs, etc., during the progress of the work.

12. Workmen's Compensation Law:

The Contractor must assume all risks and bear all losses occasioned by neglect or accident during the progress of the work until same shall have been completed and accepted by the Architect.

The Contractor shall obtain and pay for liability insurance covering the entire work, in accordance with any Workmen's Compensation Law which is now in operation or put into effect before completion of the contract.

13. Payments:

The Contractor shall prepare and furnish to the Owner or Superintendent a detailed statement, showing the amount of labor and material incorporated in the building and the amount delivered on the building ground, on or about the first of each month, and the Superintendent shall, within a reasonable time. issue a certificate which shall become due and payable by the Owner on or before the tenth of each month.

No such payment or certification shall be construed as an acceptance of the work or any part thereof. The work shall not be considered accepted until the final certificate is issued.

14. Extras:

Should any changes occur, involving any extra work or extra cost, the same shall be carefully estimated by the Contractor and submitted in a detailed statement and shall be approved by the Superintendent in duplicate before any work is begun. All omissions and deductions shall also be carried out in the above manner. No extras or deductions will be allowed unless the above stipulations are carried out.

15. Arbitration:

Should the dispute arise between the Contractor or Contractors and Owner, this difference shall be submitted to a Board of Arbitration, consisting of three capable disinterested parties, one selected by the complainant, one by the defendant, and the third selected by the aforementioned two members. These three shall consider the different arguments, points and disputes, and shall within as short a time as possible, give their decision on these matters. This decision shall be binding to both parties concerned.

16. Omissions:

It is intended that the drawings and the specifications cooperate. Anything shown on the drawings but not mentioned in the specifications, or vice versa, or anything not expressly set forth in either, but which is reasonably implied, shall be furnished as though specifically shown and mentioned in both, without extra charge. Should anything which is necessary to the proper construction of the work herein described be omitted from the drawings, it shall be the duty of the Contractor to notify the Architect before signing the contract. In the event that the Contractor fail to give such notice, he shall make good any damage or defect in his work caused thereby without extra charge.

17. Plans and Drawings:

Plans and drawings are drawn to scale as marked, but no drawings are to be scaled where dimensions are given by figures. Drawings and specifications are the property of the Architect and same must be returned to the Architect when building is completed. Any person or persons using same for any other project or copying any part thereof shall be liable for the full fees.

18. Detail and Working Drawings:

Additions and detail working drawings in amplification of the contract drawings will be furnished as they may be required. All such drawings are to be considered as possessing equal weight to those which accompany these specifications.

A complete set of drawings and specifications shall be kept on the job at all times during the progress of the work.

19. Shop Drawings:

The Contractor shall, upon request, submit shop drawings for the approval of the Architect.

20. Dimensions:

Figures given on the drawings shall govern over scale dimensions, and larger scales shall govern smaller scales.

21. Questions and Disagreements:

All questions and disagreements between Owner and the Contractor relating to the interpretation of the drawings and specifications or the kind and quality of the work, and material required thereby, shall be referred to the decision of the Architect.

22. Laying out the Building:

The Contractor shall layout the work from the drawings, subject to the approval of the Architect, and he shall be responsible for any damage that may be sustained by the Owner or others caused by the incorrect location of the building.

23. Foreman:

The Contractor shall have at the building at all times a responsible foreman. In addition, the Contractor shall give his work his personal supervision. Any instructions or notices given to the foreman shall have the same force as if given to the Contractor in person. The foreman shall be on duty during all working hours.

24. Workmen:

Any workmen, who, in the opinion of the Architect, is incapable or careless in the execution of his work, shall be removed upon the request of the Architect.

25. Materials and Workmanship:

All materials and workmanship, unless otherwise specified, shall be of the best of their several kinds.

The Contractor, unless otherwise specified, shall furnish all necessary accessoried needed, such as, scaffolding, forms, protection, and all other temporary work.

26. Delay:

Should the Contractor, at any time during the progress of the work, refuse to, neglect to, or from any cause be unable to supply a sufficiency of suitable materials or workmen to carry out the work in his charge properly, the Owner shall have the power to provide suitable materials and workmen at market rates, after three day's notice in writing has been given to the Contractor, in order to finish said work. The cost of same shall be deducted from the amount of the contract.

27. Construction Superintendent:

Should the Owner, at any time during the construction, desire to engage a regular superintendent or clerk of the work, it is to be understood that said superintendent must be an experienced and practical man, fully qualified to judge as to

27. Construction Superintendent: (Cont'd)

the proper execution of the work, capable of following all plans and specifications, and fully capable of furnishing instruction to Contractors and coping with emergencies which may arise.

The selection and engagement of said superintendent shall be approved by the Architect so that there will be no impracical or incapable supervision by unqualified superintendents, as such unqualified supervision shall have no bearing whatever upon the true meaning and intent of the plans and specifications. It shall be the duty of such superintendent, during the entire construction, to ascertain from the Architect, a thorough interpretation of the entire work as shown and as specified and not to allow same to be executed in uncertainty.

28. Building Law and Ordinances:

All materials and construction shall conform to the requirements of all building and sanitary laws in force in the locality in which the building is to stand. The Contractor shall be responsible for any violation of the same and shall make all work acceptable to the Building Department without extra charge.

29. Defective and Improper Work:

Any work or materials not acceptable to the Architect shall be removed by the Contractor and replaced with approved materials or work without extra compensation. All condemned material shall be removed from the premises immediately after rejection.

30. Inspection:

The Contractor shall afford the Architect every facility for inspecting the work and materials.

31. Closing in Work:

No piping, wiring, ducts, etc., shall be covered up until properly inspected, approved, and certificates, if required, have been issued for the same.

32. Cutting:

All cutting and repair work shall be done without extra charge by the Contractor or Sub-Contractor. Each party shall take care of his part of the work in a proper manner.

33. Protection:

All materials in or designed for the work shall be at all times suitably housed or protected, particular care being taken of all finished parts.

34. Privy:

The general Contractor shall provide a temporary privy with a proper enclosure. This shall be removed upon completioh of the work, and the premises left in perfect condition.

35. Frost and Dampness:

The general Contractor shall furnish all usual heating apparatus and fuels, or other appliances to protect the work from frost and dampness. No interior finish will be permitted in the building until the Architect is satisfied that the rooms are sufficiently dry.

36. Temporary Water Supply:

The Contractor shall make his own arrangements for water supply unless otherwise specified.

37. Cleaning and Refitting:

The building must, at all times, be kept free from all surplus material, dirt, and rubbish. At the completion of the work, all paint spots must be removed from the walls and floors, and, where required, windows and doors refitted. All windows must be cleaned and such minor repairs and alterations made as may be necessary to make the building ready for occupancy.

38. Guarantee:

The Contractor shall be responsible for and shall make good any defects due to faulty labor or material which may arise or be discovered within one year after completion of the work and its acceptance by the Architect.

Contractors figuring on this work are requested to read over the general conditions, as they apply to all parts and branches of the work.

Detailed Specifications for General Work

Specifications of Materials to be furnished and labor to be performed in the erection and completion of an addition to Shoe Factory Building to present Factory Building, for The Merrill Industrial Foundation of Merrill, Wisconsin, according to the plans and these specifications prepared for same by Gus. A. Krasin, Architect of Marshfield, Wisconsin.

1. Description of Work:

The work contemplated to be done and as shown by the plans and described by these specifications shall consist of furnishing all materials that will be required and the furnishing and performing of all labor of every description necessary to make all preparation for and building an addition to present Shoe Factory Building located in the city of Merrill, Wisconsin.

It shall include all excavating, backfilling, concrete and masonry, plastering, carpenter work, sheet metal and roofing, steel and iron work, painting steel sash and glazing; and shall include the proper connecting of new to old work.

It shall also include the bricking in of all openings to shut off the new building from old building, and cutting new openings, new stairs, inclosing of smoke stack, fire doors, changing doors, etc., The Contractor shall make a personal visit to the building and make a thorough check up on all conditions as they exist.

Also state a separate price for taking down the knoll which is to the South and West of present building where the new addition is to stand, and fill in the old gravel pit up to a height of 4 feet below the finished floor line in new addition. The balance of ground shall be moved on the space between new addition and the river, and shall be spread out evenly to form a gradual slope towards said river.

The ground shall be leveled down so that the finished grade will be 7" below finished floor line, and shall be carried out 20' to the West, and to the North to form a gradual slope toward river.

2. Preliminary Work:

The building has been approximately located by stakes driven into the ground, and the exact location and grades are shown on the plan.

2. Preliminary Work: (Cont'd)

Lines and grades will be given by the Owner, and grades will be established by the Owner or Architect.

3. General Excavation:

After the knoll has been leveled down to proper level, dig trences for all walls and holes for all footings, of size so that there is sufficient room to build form work. Where ground is of such nature that is is apt to cave in, the ground shall be sloped back, so that forms can be started on natural undisturbed ground, as any ground that has been disturbed shall be removed, as in no case will any footing or walls be permitted to start on or rest on disturbed or filled in ground.

4. Footing Excavation:

The excavation for the footings shall be the exact width and the exact depth as shown on the plans.

Wherever the ground will not remain in position after excavation, the trench shall be dug sufficiently large to allow a formwork of planks to be placed in the trench. Care shall be used in the digging of the footings, as any place that has been dug too deep shall be filled with concrete.

The bottom of the footings shall be flat and level.

5. Filling In and Grading:

After the walls have properly set and all rough spots have been pointed up, back-filling shall be begun. All rough filling shall be carried up to a point four inches below the finish grade line. This rough filling shall be carefully tamped and settled.

All dirt or ground which has come from the excavations shall be distributed and levelled off over the lot as will be directed.

The final grading and seeding will be done by the Owner under a separate contract.

6. Concrete Wall Forms:

The forms for all walls, piers and columns shall be built of good sound material of even thickness. The material shall be driven tightly together so that the concrete, when finished, will have a smooth even and true surface.

The forms shall be supported with studding placed close enough together that no bulges or spreading of the forms will occur. Forms shall be tied together and shall be well braced to keep the forms in line and rigid when the concrete is placed Use wales to keep forms straight and in line.

Before the concrete is poured the forms shall be cleaned out to remove all rubbish and foreign material.

7. Forms for Reinforced Concrete:

Forms for reinforced concrete work shall be of sound material free from knot holes and must be surfaced to even thickness, shall be tight and close fitting. Form work shall have stringers of proper size and supported with 4" x 4" or similar sized posts or struts; stringers and posts shall be placed close enough so that form work will not sag or settle out of shape. Put block under posts to prevent settling.

The forms for beams and girders shall be crowned 1/4" to each ten feet of span length.

All forms for beams and columns shall be well-tied and braced to prevent buckling of the forms.

A bevelled strip shall be placed in the corners of the forms an in the angles of beams wherever shown on the plans.

8. Removal of Forms:

Slab forms and all supports shall remain in place for not less than 10 days, when temperature is above 50 deg. Fahr. and in c of lower temperature the supports shall remain until the concr has been thoroughly hardened, which shall be determined by test

Forms for columns may be removed four days after the concrete was poured except in low temperature, then they shall remain for not less than one week.

Forms for bottom of girders and beams shall remain supported at least fourteen days after the false work has been removed.

8. Removal of Forms: Con't.

No load of any kind shall be placed upon any part of the concrete construction until it has set sufficiently to carry t load. Care shall be taken not to overload any part of the concrete construction by piling material upon it or by placing the load of freshly poured concrete upon it. If the weight of a floor of fresh concrete is greater than the live load assumed for the floor, this floor shall be kept shored up until the load is removed. If the load from materials is likely to be an overload for the floor beams and slabs, temporary supports shall be placed beneath the loaded areas.

9. Concrete - Without Reinforcement:

The concrete shall consist of one (1) part of Portland Cement two and one-half ($2\frac{1}{2}$) parts of fine aggregate, and five (5) parts of coarse aggregate. The proportions of the concrete shall be based upon volumetric measurements.

a. Cement:-All cement used in the works shall be of the best quality American Portland Cement. It shall comply with the specifications and the tests as prescribed by the American Society of Testing Materials in its current specification for Portland Cement.

b. Fine Aggregate:-The fine aggregate shall consist of a sharp, coarse, well-graded sand. It shall also be clean and free fro quicksand, vegetable loam, perishable organic matter, or other deleterious material.

c. Coarse Aggregate:-The coarse aggregate shall consist of broken stones or screened and washed gravel. The largest piece of aggregate shall pass through a two and one-half inch ring.

d. Pit-run Aggregate:-A good grade of bank run or river gravel ma be used providing it is free from loam, clay or other injurious materials, and providing it has the proper grading of coar and fine materials. The concrete shall then, using this aggregate, consist of a one (1) to five (5) mix.

e. Water:-The water used in mixing the concrete shall be clean, a free from strong acids, alkalies, or organic matter.

f. Mixing:-The materials composing the concrete shall be thoroughly mixed in a concrete batch mixer of an approved design and th mix shall continue at least one minute after all of the materia are in the drum. In any event, mixing shall continue until th various ingredients have been throughly and evenly mixed and t mixture has a uniform color. The drum shall be completely emptied before the following batch is added.

9. CONCRETE *- Without Reinforcement: Con't:

The materials shall be mixed with a sufficient amount of water to produce a concrete which when deposited will settle to a flattened mass, but shall not be so wet as to cause segregation of the mortar from the coarse aggregate while the concrete is handled or placed, or so as to show free water on the surface.

g. Superintendence:-A competent man shall be in constant attendance at the mixer to give his approval of every batch which leaves the mixer. All concrete mixed shall be subject to the inspection and approval of the Architect or Superintendent.

h. Retempering:-Retempering of mortar or concrete which has partially hardened will not be permitted.

i. Hand-mixing:-Hand mixing shall be done only when permitted by the Superintendent. If mixed by hand, the concrete shall be turned over at least four times dry and three times wet.

10. Concrete - With Reinforcement:

The concrete for reinforced work shall consist of one (1) part of Portland Cement, two (2) parts of fine aggregate, and four (4) parts of coarse aggregate. The proportions of the concrete shall be based upon volumetric measurements.

The specifications "Concrete - Without Reinforcement" shall be followed in mixing the concrete with reinforcement, with the following exceptions:

The proportions of the concrete shall be as specified in the first paragraph of this section.

Bit-run aggregates shall not be used for mixing concrete with reinforcement.

The maximum size of the coarse aggregate shall not be larger than 1-1/2 largest dimension and in no case larger than 3/4 of the minimum clear spacing between reinforcing bars.

11. Pouring Concrete:

All concrete work shall be incharge of a competent foreman or engineer who has had sufficient experience in this work to insure satisfactory results.

All concrete shall be deposited in the forms within ten minutes after leaving the mixer.

11. Pouring Concrete: Cont.

When concrete is to be laid against a surface of concrete which is already set, this surface shall be carefully and thoroughly cleaned and washed, and then carefully and completely covered with a coating of neat cement and water, laid on evenly with a broom or brush. This coating of neat cement shall be placed just before the concrete is poured.

Columns shall be poured 30 minutes ahead of slabs and beams to allow for settling.

All beams and floors shall be filled to the top surface in one continuous operation, that is, from the bottom of the beam to the top of the floor construction. Care shall be taken so that the concrete flows under and around, thoroughly gripping all reinforcing member.

All walls shall be poured in 12" layers.

During the pouring, the concrete shall be worked continuously with suitable tools to insure the complete filling of all forms and the thorough imbedment of all steel. The sides of all beams and girders shall be well spaded to secure a perfectly smooth surface when the forms are removed. The constant working or puddling of the concrete during the pouring is very important and shall be carefully and thoroughly done.

No concrete shall be placed in freezing weather or during such time when the temperature will reach as low as 32 degrees Fahr. during the night, unless specifically permitted to do so by the Architect. In case permission is given to place concrete durin cold weather, precautions shall be taken to house and protect the concrete from freezing. Fires or steam heat shall be used in that case to keep the newly placed concrete from being affec ed by the frost. The aggregate and water shall be heated sufficiently so that when the concrete is poured into the forms it shall be at a temperature not lower than 40 degrees Fahr. All concrete permitted during freezing weather shall be placed in accordance with the directions from the Architect.

When concrete is exposed to rapid drying conditions, precautions shall be taken to keep it moist for a period of at least 7 days after being deposited. Where practical this shall be done by covering with wet sand, burlap, or wetting the concrete twice a day.

Concrete after it has been poured shall not be disturbed by walking or wheeling over it until it has thoroughly set.

11. Pouring Concrete: Con't.

The surface of all floors shall be roughened with a rake to provide a bond for the cement finish.

All sleeves for plumbing, electric wiring, etc., shall be placed before the concrete is poured, and in no case shall concrete be cut without the special permission of the Superintendent.

Construction joints shall be avoided wherever practicable, but when necessary, they shall be located at such sections as will least affect the structural strength and shall be made at right angles to the principal compressive stress. In members of floor systems joints shall be made within the middle third of the span where practical. In columns, joints will only be permitted at the bottom face of the lowest connecting member. In no event shall such joints be placed where the future shearing stress is great, as at the ends of beams or directly under a heavy concentrated load.

12. Reinforcing Steel:

a. Rods: Metal reinforcement shall conform to the requirements of the Standard Specifications for Billet-Steel Concrete Reinforcement Bars, Serial Designation A15-30, or for Rail-Steel Concrete Reinforcement Bars, Serial Designation A16-14 of the American Society for Testing Materials. The provisio in these specifications for machining deformed bars before testing shall be eliminated.

b. Wire Mesh: The wire for concrete reinforcement shall conform to the requirements of the Standard Specifications for Cold-Drawn Steel Wire for Concrete Reinforcement, Serial Designation A82-27 of the American Society for Testing Materials.

c. Shop Drawings: Contractor furnishing the reinforcing steel shall furnish complete shop and setting drawings which shall have the approval of the Wisconsin Industrial Commission.

13. Placement of Reinforcing Rods:

The metal reinforcing shall be accurately placed and shall be supported by concrete or metal chairs or spacers.

The bars at the upper face of any member shall be imbedded a clear distance of not less than one diameter nor less than one inch. In slabs and walls the rods shall have a cover of more than one inch of concrete, and not less than 1-1/2" in beams, girders, and columns.

14. Concrete Lintels:

Reinforced tile lintels shall be built over all openings as so designated on the plans.

15. Concrete Stairs:

The stair slab shall be supported upon a well constructed form work. The slab shall be of the thickness shown on the plans and shall be reinforced as indicated on the plans,

The treads shall be formed to a rise and run as indicated on the drawings.

16. Ground and Basement Floors:

a. Preparation:- The ground shall be carefully levelled off and well tamped.

b. Cinder Fill:- After the ground over the entire ground floor and basement has been properly levelled and tamped solid, it shall be filled in with three inches of coarse cinders or gravel. This material shall be spread to an even thickness, tamped will, and made ready to receive the concrete floors.

c. Wire Mesh:- The floor in the basement shall be reinforced with a 6 x 6" No. 6 wire mesh.

The wire mesh shall be placed just below the center of the concrete floor slab. This mesh shall be placed in the base coat and shall be lapped at least three inches at all joints and twelve inches at the ends.

The wire mesh shall be new, electrically welded, and free from oil or rust.

d. Concrete Proportions:- A base coat of concrete mixed as in paragraph 10 of this section "Excavation, Concrete, Masonry" and entitled "Concrete-With Reinforcement" shall be placed over the entire area in the basement.

The finish coat shall be mixed in the following proportions: one (1) part of Portland Cement and one and one-half (1½) parts of clean, sharp, coarse sand.

e. Workmanship:- The base coat shall be of thickness marked on plans or sections. The base coat shall be tamped to an even and true surface.

16. Ground and Basement Floors (Cont'd):

Wherever a cement finish is specified, the finish coat shall be placed upon the base coat before the base coat is thoroughly set. The finish coat shall be screeded to an even and true surface and shall be trowelled and floated to an even and smooth glossy surface.

All floors shall have the proper slope towards the drains.

e. Cement Base and Curbs:- All rooms which have cement floors and plastered walls or otherwise indicated shall have a five inch cement base on all walls. A neat cove shall be formed at the bottom of the base. The top edge of the base shall be rounded. The bases shall be smooth, true and straight.

f. Cement Sub Floor: - That part of the building which is so indicated on the plans shall have cement floor laid of thickness shown, and shall be kept below the surface of the finished floor level as marked. Also put heavy Bull Dog sleeper anchors in rows 2 feet center to center, and 3 feet center to center in the rows. Sleeper anchors shall be placed as soon as floor is screeded off to an even, and true surface, and before same has set.

16A. Window Sills:

Window sills shall be built in as shown with a depression on inside to form trough to retain condensation, and shall be reinforced as shown. All exposed parts shall be trowelled smooth.

16B. Smoke Stack:

The large smoke stack shall be inclosed with a 6-inch concrete wall, reinforced with 3/8" rods, 6" center to center bothways, as shown and called for on plans.

17. Removing Rubbish:

All rubbish shall be cleaned out of the building from time to time as the progress of the work may require, and at any time when ordered by the Superintendent.

STRUCTURAL STEEL

18. Material:

The structural steel shall be manufactured by the open hearth process and shall conform to the Standard Specifications of the American Society for Testing Materials for Structural Steel for Buildings, Serial Designation A9-29.

19. Unit Stresses:

The stresses in the various members shall not exceed the limits given in the State Building Code.

20. Shop Drawings:

Drawings shall be furnished by this Contractor showing all steel work. After the drawings have been approved by the Industrial Commission, the work shall be performed in accordance with the drawings.

21. Painting:

All steel work shall be painted with one coat of red lead and linseed oil paint before it leaves the shop.

22. Workmanship:

The workmanship on all steel work shall be first class in every respect.

23. Punching:

All steel work shall be punched for bolting nailing strips or any other woodwork to the steel, as shown by the plans and sections. The steel work shall also be punched so that it can be anchored to the concrete or masonry construction.

24. Bearing Plates:

All beams which rest on brickwork shall be provided with bearing plates as shown on the plans.

All bearing plates shall be set true and level with cement mortar.

25. Columns:

All columns shall be of the size shown on the plans.

The ends of the columns shall be milled to provide a full bearing. Bases for the columns shall be provided as shown on the plans.

Columns shall be provided with all required connections.

26. Beams:

All beams shall be of the size and weight shown on the plans.

These beams shall be properly connected to the columns.

All beams shall be set level and all webs shall be set plumb.

27. Connections:

All field connections shall be made with long shank bolts of the proper size, using a 1/4" sasher on the burr side.

The number and size of the bolts shall be governed by the requirements of the Wisconsin State Building Code.

28. Railings:

All railings as shown on the plans shall be furnished by this Contractor.

29. Lintels:

Lintels shall be provided over all brick openings and wherever shown on the plans.

The lintels shall be of the size and style indicated on the plans. They shall be long enough to have a six-inch bearing on each end.

30. Joist Anchors:

The contractor shall furnish 3/16 by 1" anchors, 2 feet long with a 5/8 by 8" pin at one end for building into the brick-work. The other end of the anchor shall be punched for securing to the joists. ~~Space anchors every 4th joist~~.

These anchors shall be used where the joists run into brick walls. Where the joists run parallel to the brick walls, these strap anchors shall be five feet long, and punched with five holes for securing to headers between the joists.

31. Thresholds:

Cast iron threshold or non-slip surface shall be furnished for all outside doors and wherever called for on the plans.

These thresholds shall be 4" wide and 5/8" thick. The edges shall be bevelled down to about 1/8" on each side leaving a flat surface in the center 1-1/2" wide. Holes shall be provided to fasten the threshold down.

31A. Steel Sash:

Windows for the Addition shall be steel sash of size as shown and provided with swinging sections as indicated.

Steel sash shall have all joints electrically welded in a neat and rigid manner, and must be complete with hand operating and locking devices.

31B. Glazing for Steel Sash:

All steel sash shall be glazed with D.S.B. glass which shall be of the proper size. A thin layer of steel sash putty shall be placed against the sash and the glass shall be set into same and shall be held in place with four spring wire clips, and shall then be puttied in with the best grade steel sash putty in a neat manner, and all putty stains shall be wiped off from glass. After completion all broken lights must be replaced and all damaged putty shall be repaired.

32. Miscellaneous:

Furnish a 24" x 36" door with a 3" x 3" angle frame. Doors shall be of 1/4" plate with strong hinges and locking device.

Also furnish 1/4" x 1" straps 30" long with nails to tie joist together over steel beams.

The contractor for this work shall furnish all structural steel and iron work as shown and required by the plans, sections, and details, whether specifically mentioned in this specification or not.

MASON WORK

32. General:

The mason contractor shall read over the general conditions of this specification as they apply to all branches of the work.

33. Preparation of the Work:

The mason contractor shall make preparation for attaching wood work to masonry.

The mason contractor shall leave all openings and chases as will be required.

34. Common, Hard and Fire Brick:

a. Common Brick:- The common brick to be used in the building shall be a common merchantable brick.

b. Hard Brick:- Piers and parts of walls that have to support concentrated loads or parts of walls so indicated on the plans shall be laid up with a special, selected hard brick.

c. Fire Brick:- Wherever the plans call for the chimneys or fire boxes to be lined with fire brick, same shall be done in a workmanlike manner. Fire brick shall be of standard size and type, and shall stand a fire test of 2700 degrees Fahr., shall be laid flat or set on edges as indicated on plans, joints shall be of fire clay and shall not exceed 1/8" in thickness.

35. Face brick:

Brick for facing the exterior of all outside walls shall be well burned and hard, absorbtion shall not be more than 6%, brick shall be thoroughly dired and weighed, and then submerged in water 48 hours. Corners and edges must be full, true and straight. The brick shall be 2-1/4" thick and not less than 8" long, and 3-3/4" wide, and shall weigh not less than 4-1/2 pounds average by weighing ten (10) brick.

Color and texture of brick shall be to match the brick on present building.

36. Loadbearing and Partition Tile:

All walls, and parts of walls or partitions which are indciated on plans to be of tile, shall be built of hard burnt clay tile, of thickness marked. For load bearing walls or partitions the tile shall be such as are approved by the Wisconsin State Industrial Commission, and shall be so marked.

36. Loadbearing and Partition Tile: (Cont'd)

Non-bearing walls or partitions shall be built of ordianry hard burnt clay partition tile of thickness required. Corners shall be well tied and bonded.

37. Back-Up Material:

The walls shall be backed up, and piers between windows shall be laid up with same kind of load bearing material; and in the same manner as in present building. Special care shall be taken with the end or vertical joints so that they are full and solid. All joints shall be neatly struck. All mortar or stains shall be removed from exposed faces. All courses and jambs shall be laid straight to a line and must be plumb and true.

All back up shall be tied to face brick with a full header course every sixth course in height, and the block shall be cut out for this purpose.

All units shall be straight and true and shall have a full course.

38. Mortar for Hard Brick:

The hard bricks shall be laid up in a mortar of the following proportions: One (1) part of Portland cement, and three (3) parts of masons sand. Dry hydrated lime in volume equal to not more than 15% of the volume of the Portland cement may be added to the mortar. The above proportions are on a volumetric basis.

39. Mortar for Other Masonry:

The mortar for all masonry with the exception of the hard brickwork shall be one (1) part Portland cement, one (1) part dry hydrated lime, and six (6) parts of masons sand, all measurements by volume.

Waterproof masons cement mixed not leaner than one (1) part of masons cement to three (3) parts of masons sand according to the manufacturer's specifications, may be used in place of the above mortar. The masons cement, in this case, must meet and be in full compliance with Federal Specifications for Masonry Mortar "SS-C-181b" of January 12, 1938, for Type II mortars.

39a. Waterproofing Mortar:

All mortar for laying up face brick, and for back-plastering of same, shall be waerproofed with either Truscon Mortite; Toch Bros' R.I.W. Mortar Toxement; or Master Builders' Omicron, or equal, which shall be mixed with mortar according to the specifications of the manufacturer.

40. Mixing Mortar:

The materials of the mortar shall be well mixed together dry until they possess a uniform color. Water, in sufficient amounts only to afford a workable mix, shall be added. The mortar shall be mixed wet sufficiently long to provide a homogeneous, uniform mortar.

Any mortar in which cement has been mixed for more than an hour shall not be used.

In freezing weather the mortar shall be heated and kept at a temperature of not less than 90 degrees Fahrenheit. In no case shall mortar be allowed to freeze before it is used.

41 Common Brickwork:

Common brick shall be laid up in regular bond, using a full header course every sixth course in height. The brick shall be laid on a full bed of mortar with all end and vertical joints filled with mortar.

Walls and piers shall be carried up straight, true, and plumb, in level courses, the entire length of the walls.

All corners shall be well bonded and carried up straight, true and plumb.

Where wall are to be plastered, the joints shall be cut flush. Where walls or piers are to be left unplastered, the joints shall be neatly struck.

42. Back-Up and Inside Walls:

The back-up material and tile shall be laid upon a full bed of mortar with the end joints well-filled. The joint between the face brick and the unit need not be filled with mortar. The units shall be laid up in level courses, straight, and true. The joints shall be broken every course. The backing shall be tied to the exterior brick with a full header course every sixth course of brickwork.

Where walls are to be plastered, the joints shall be cut flush Where walls are to be left unplastered, the joints shall be neatly struck.

43. Pilaster Work:

Where pilasters are to be laid up of selected hard brick and Portland cement mortar, great care shall be exercised so that only selected hard brick are used and that all joints and spaces are well filled with mortar.

44. Face Brick Work:

The face brick shall be laid up in regular bond, every sixth course shall be a full header course. The joints shall be struck in a neat manner using a round or "V" iron.

The inside of the face brick shall be back plastered with the mortar used in laying the face brick. This back plastering shall cover the entire surface of the fade brick and shall possess a minimum thickness of 1/4".

45. Workmanship of Masons:

All masonry shall be laid up in full bed of mortar.

In brick work, the vertical joints shall be made full of mortar by using the "shove joint" method of laying bricks. The horizontal joints shall be made with a full bed of mortar. The practice of making end joints by buttering the outside of the brick will absolutely not be permitted.

The common practice of tapping the brick into line after they have been laid will not be allowed. It is highly essential that the bond of any masonry unit be not broken after it has been laid. Anything which will disturb the bond must be prevented from doing so.

If the bricks are laid in warm weather, they shall be sprinkled liberally with water before they are laid.

46. Setting Frames:

The masons shall assist the carpenter in setting the frames and windows which come in connection with and are built into the masonry walls. They shall see that the frames are securely braced so that the walls will be kept plumb and in line. All frames shall be built in solid so that there will not be any empty spaces left around the frames.

The mason shall build in all wood brick or nailing bricks which will be prepared and furnished by the carpenter for securing the door frames and trim.

47. Chases and Recesses:

All chases and recesses shall be left in the masonry for soil and vent pipes. These recesses shall be sufficiently large, straight and true.

All recesses required for the running of pipes or conduit shall be left in the masonry.

Openings in the brickwork for vent openings shall be left as required.

48. Cut Stones:

All trim which is so marked on plans, and window sills for the building shall be of Bedford Stone, and shall be grooved for metal strip.

All stone shall be of size and dimensions to conform with the dimensions shown on the plans. All measurements shall be taken at the building and all details shall be verified.

All stone work shall be free from any flaws or defects which might impair the appearance or the durability of the stone.

All projecting stone shall have a drip cut on the lower edge to throw water away from the building. All carving and cutting of the stone shall be done neatly. Wherever necessary, anchor holes shall be provided in the stone.

49. Setting Cut Stone:

All window sills shall be imbedded on ends only. They shall be neatly pointed up at completion. All joints that have been filled while the stone was erected shall be raked out and neatly pointed up.

50. Protection:

The stone trim shall be protected during the construction of the building so that the exposed surface will not be spotted with mortar or any other stain.

51. Cleaning Down:

After the brickwork is completed, it shall be cleaned down with a weak solution of muriatic acid. Care shall be taken so that the muriatic acid does not come into contact with the cut stone or the cast cement tile.

The cut stone and cement trim shall be washed with water if necessary.

All nail holes and defective places shall be neatly pointed up.

52. Cutting:

Cut in all new openings as required and finish same in a neat manner.

53. Closing up Openings:

Wherever indicated on plans, and wherever required, remove doors or windows and close up the opening in a neat manner with same kind of material to correspond with adjoining walls.

54. Coping:

All walls that project above roof, and wherever called for, shall be covered with a vitrified salt glazed wall coping. Coping shall have a lap joint and straight face, and rounded top. The sides shall lap over the brick not less than 3/4" and shall be set in Portland cement mortar. Coping shall be laid straight, true and to a line.

LATHING AND PLASTERING

56. Preparations:

Lathing and plastering contractor must see to it that corners and angles are made solid by the carpenter before the lathing is started. No lath shall run through behind the studds or through the angles.

57. Enclosing Stack:

The large smoke stack shall be inclosed with a reinforced concrete wall as called for under in concrete work .

58. Bond Coat:

Tile walls which are to be plastered shall receive an approved make of plaster bond. This shall be applied either by a brush or a spray process, spray process preferred.

The entire surface shall have a black, glossy appearance. While the surface is still somewhat tacky, the plaster shall be applied.

59. Lathing:

All ceilings, walls and partitions when called for on plans shall be lathed with a plaster base as indicated.

Whenever metal lath is called for on ceilings or underside of stairs, such lath shall be a lath made from copper bearing sheets, and shall be treated against rust, and shall weigh not less than 3.0# per square yard.

Lath for studding or vertical surfaces shall be of same kind above mentioned, and shall not weigh less than 2.5# per square yard.

All lath shall be applied according to manufacturers directions either with galv. iron wire staples or large headed galv. nails. All end joints shall be lapped, and must be tied between bearings to prevent sagging or buckling.

60. Corner Lath:

In all lathed corners of rooms and in all corners formed by walls and ceilings, a 3" diamond expanded corner lath shall be fastened in place.

All joints of wood and asonry will be covered with an 8" strip of metal lath.

60. Corner Lath: (Cont'd)

A 4" strip of metal lath shall be used for fasteneing onto door bucks lapping onto masonry.

Metal lath shall be used around the windows.

61. Corner Beads:

Expanded metal corner beads as manufactured by the Milwaukee Corrugating Company, or approved, shall be provided and placed on all outside corners.

They shall run the full length of the corners and the full height of the corners. They shall be put on straight, true, and plumb.

62. Plastering:

a. The walls and ceilings in toilet and dressing rooms when so indicated on plans; and other parts which are lathed, shall be plastered with Water-proof mason cement, and mixed in proportions of one (1) part of cement to three (3) parts of clean sharp sand. The first coat shall be brought out to an even and true surface and left rough; the second coat shall be applied to an even and true surface, floated and trowelled down to a smooth even surface.

The water proof cement in this case shall pass the Federal Specifications for Masonry Mortar "SS-C-181b" of January 12, 1938 for Type II mortars.

As little water as possible shall be used to avoid killing the surface.

All metal lath shall receive a scratch coat which has been prepared with double-fibred material before the browning coat is applied.

When the scratch coat is properly set, a browning coat of single-fibred material shall be applied over the scratch coat and over all parts that are to be plastered. This coat shall be applied with a sufficient force to form a proper clinch. This brown coat shall be struck off with a straight edge not less than six feet long, bringing the surface to an even and true surface. All corners shall be left true and straight.

Plastering: Cont.

After the brown coat has properly set, a sand float finish shall be applied, using a fine washed sand, and a mix according to the manufacturer's specifications. The finish shall be even and true and floated to a firm medium texture with a carpet float, and then trowelled smooth.

All work shall be done by skilled workmen. All angles and corners shall be perfectly straight and true and plumb. All plastering shall finish flush with the ground so that the casings will fit snugly around all openings. All plastering shall be brought down to all floors and up to all jambs.

Any blisters which may come out or may show through, or cracks which may appear when finished, will be condemned, and the surface replaced or repaired. All required patching shall be performed after all other craftsmen have finished their respective works. All damaged plaster shall be repaired without extra charge.

The plasterer shall furnish and build his own necessary scaffolding.

All rubbish shall be cleaned away and the premises left broom clean for the General Contractor, also clean off all plaster from glass, etc.

The plasterer will be held responsible for any damage done to the finish woodwork by him.

63. General Remarks:

If the plastering is done in cold or freezing weather, the plastering contractor shall furnish his own stoves, or if the heating apparatus is in place, he shall get a permit from the heating contractor to use it. In that case, he will be held responsible for the safety of the heating apparatus while it is in his use.

The plasterer shall keep the plastered work from freezing, but should any plaster freeze, it shall be removed and replaced, for in no case will any frozen plaster be allowed to remain in place.

CARPENTER AND JOINERS WORK

64. General:

Contractors figuring on this work are requested to read over the general conditions, as they apply to all branches of the work.

65. General Instructions:

The carpenter shall see to it that all preparations are made as the work progresses for fastening and installing all wood trim.

He shall set all frames and see to it that they are kept to line, straight, and plumb. He shall see to it that they are well braced.

This contractor shall furnish and see to it that "Heavy Bull Dog" floor clips are properly placed for securing wood sleepers to concrete where wood floors are shown over same.

66. Materials and Labor:

All joists and timbers which are twenty feet or longer shall be Select Coast Type Douglas Fir; those which are eighteen feet or longer, but shorter than twenty feet shall be of Common Coast Type Douglas Fir; and those shorter than eighteen feet shall be No. 1 Hemlock or equal.

All other lumber shall be of the different kinds as specified.

All dimension materials and lumber shall be well seasoned.

All joists and timbers that enter into masonry walls shall have proper bearing and shall be sized to even widths. This lumber shall be placed with the crowning edge up.

All framing shall be done with tight and close fitting joints in a thorough and workmanlike manner.

67. Cutting:

The carpenter shall do all cutting of timbers and woodwork, which may be required by the other mechanics to carry out their work properly. He shall not, however, do any cutting which may weaken the work, without the consent of the Architect.

The carpenter shall prepare and furnish all bond timbers and wooden blocks for the masons and he shall provide all needed outside doors, etc., so that the building may be locked up as soon as possible.

68. Framing:

The carpenter shall exercise care in framing so that the important timbers will not require cutting for pipes, flues, etc.

All timbers, joists, and girders that enter the masonry walls shall have a 4" fire cut.

All headers and trimmers shall be double thick, well framed and spiked together. All girders and trimmers shall rest at least 4" on the walls and bearings.

69. Partitions Studs:

All door studs shall be set double and trussed substantially over all the openings where required.

All partitions shall be of the size shown on the plans, set plumb and straight. All bearing partitions shall have a plate at the bottom and a double plate on the top. Two inch headers shall be pladed between all partition studs full width every 4' feet in height.

70. Bridging:

All joists shall be bridged with 1 x 3" No. 1 Hemlock dimension stuff. They shall be cut to fit close and shall be nailed at each end with two 8d nails.

All joists having a span of 8 to 12 feet shall be bridged once. Those from 12 to 18 feet shall be bridged twice, and all joists having a span from 18 to 23 feet shall be bridged three times between bearings.

71. Joists:

The joists for the first floor, ceilings, and the roof framing shall be of wood construction unless otherwise shown on the plans.

The contractor shall refer to the plans and sections for the sizes and dimensions of the different joists and framing required.

All joists shall be spaced as shown and indicated, using triple joists, and double joists wherever required, and shown.

72. Joist and Stud Anchors:

Joist anchors shall be placed on every 4th joist, and when joist run parallel to walls, joist anchors shall be placed five feet c.c., 2" x 6" headers shall be placed between joist for securing of anchors.

Partition studs shall be secured to masonry walls with 5/8" bolts, with large washers which shall be built 8-1/2" into wall and every 3'0" in height.

73. Framing for Roofs:

The roof shall be of wood construction. Roof and ceiling joist shall be of size as marked, and spaced as called for. Roof shall have a gradual slope of 1/4" to the foot run, the last part shall have a steep pitch as shown on section.

74. Roof Sheathing:

Roof boards shall be 2"x6" or 2"x8" D&M No. 2 Hemlock and shall be of such lengths that joints will come on bearings. Lumber shall be driven up tight and shall be nailed on all bearings with two 16d Cement Coated nails.

In all angles formed by roof and walls, place and securely fasten a cant strip on top of insulation made by ripping a 2"x4" diagonal.

75. Loading Platform:

On South side of building erect a loading platform with 1-3/4" No. 1 Hemlock or Fir floor constructed as shown on drawings.

76. Door Bucks:

All door bucks shall be furnished in place as required. They shall be made of 2" material, of the proper width. They shall be straight, set plumb and anchored well.

77. Grounds:

Grounds shall be placed on the walls for the base boards and other trim. The grounds used shall be of the proper size.

78. Exterior Door Frames:

Exterior door frames shall be made of clear White Pine or Cypress according to the detail, with casing on inside.

Transoms shall be provided where shown.

79. Frames for Interior Partitions:

Frames for interior partitions shall be of 13/16" thick material same as specified for finish and must be wide enough to come flush on both sides.

79. Frames for Interior Partitions: (Cont'd)

Partition frames shall be neatly cased off on both sides.

80. Partition Sash:

Sash in partitions shall be made of White Pine 1-3/8" thick of size required, and glazed with D.S.A. glass.

81. Priming:

All door frames shall receive one good coat of linseed oil and white lead paint before leaving the factory.

82. Outside Doors:

Outside doors shall be made of Clear White Pine or Cypress of size and thickness as shown on the drawings.

They shall be complete with plate glass of the size as shown or as marked on the plans. The glass shall be set in with stops and backed up with putty on both sides.

83. Caulking:

All outside door frames shall be caulked with an approved caulking paste to make them windproof.

84. Interior Finish:

All interior finish shall be unselected as to color and shall be clear short Leaf Yellow Pine, free from any defects that would impair the appearance of the woodwork.

No interior finish woodwork shall be brought into the building until after the plastering has been finished and the plaster is thoroughly dry.

85. Workmanship:

The nailing of the finish woodwork shall be done with finish nails of the proper size, set well below the surface of the wood.

Care shall be taken not to scratch the wood or leave any hammer marks on the surface.

86. Door Jambs and Trim:

The door jambs for all interior doors throughout the entire building shall be 1-3/4" thick and as wide as the wood partition or the masonry wall as shown.

Those jambs shall be of the finish specified.

86. Door Jambs and Trim: (Cont'd)

They shall be well fastened and secured into place. They shall be kept straight, true and plumb.

They shall have casings or rounded plaster corners on both sides as shown on the details.

The carpenter shall give the exact openings to the lather so that the proper and even margins will show on all frames.

87. Window Trim:

All windows shall have a round plastered jamb and have a cement stool.

All wookwork shall be put into place by skilled workmen.

88. Interior Doors:

All doors shall be two panel doors of the size marked and 1-3/4" thick, unless marked otherwise. Stiles shall be built up with White Pine stiles and rails. Panels shall be 3/8" thick of five (5) ply, veneer, grain to run vertical.

Door with glass pantels shall be provided where shown.

Glue used in making the doors shall be waterproof.

89. Hand Rails:

A 1-3/4" hand rail shall be provided for all stairs or wherever marked on the plans.

They shall be fastened with hand rail brackets on the walls with a minimum of three to eqch rail.

Hand rails shall be provided with curved ends for returning against walls.

90. Toilet Partitions:

Build toilet partitions of 3/4" thick laminated (5ply) wood panels with 2-1/2" by 1-1/8" frame on the back and top with neat 1/4" quarter round trim in corners, as shown by detail. Glue used for the panels shall be waterproof.

91. Cornice:

Eaves of roof shall be finished off with a cornice as shown on drawings. Lumber used for same shall be No. 1 White Pine free from black knots or pitchy spots; must be well seasoned and planed smooth. Work must be done in a neat workmanlike manner.

HARDWARE

92. Finish Hardware:

The Contractor shall figure a sum of $100.00 for all finish Hardware which will be selected by Owner. If the hardware selected costs more, the Owner will pay the difference; if it costs less, the amount of the difference will be deducted from contract price.

PAINTING SPECIFICATIONS

92A. Work Included:

All steel windows shall receive one coat of paint before glass is set and another coat of paint after glass is set and puttied. Putty and exposed parts of steel lintels shall also be painted.

Metal doors, gutters and downspouts and metal edge strip on roof shall be washed with a vinegar solution and be painted two coats.

All door frames, doors and also brick siding on platform inclosure shall bepainted two coats.

Paint all steel beams and columns one coat in color as will be directed.

Paint shall be of first grade of ready mixed paint or pure White Lead and Linseed Oil. Color will be selected by Owner or Architect.

Labor shall be done by skilled workman in a thorough and workmanlike manner.

92B. Floor Treatment:

Wood Floors shall have all uneven spots smoothed off , and shall receive a penetrating floor treatment using Sonneborn Lignophol, or equal, which shall be applied according to Manufacturer's directions, one coat shall be applied.

Cement floors, as soon as they are dry, shall be treated with Truscon Agatex, or Sonneborn Lapidolith, or equal. Treatment shall be applied in not less than two coats, and according to the manufacturer's directions.

ROOFING AND SHEET METAL WORK

93. General:

Furnish and install all sheet metal work as called for and indicated on the plans, and as will be required to make a complete and finished job.

94. Covering for Curbs:

The curbs for ventilators shall be covered with roofing so that base of ventilators will lap over same, also flash around chimneys to make same water tight.

95. Fire Doors:

Fire doors of the size and type as marked shall be installed where shown on the plans.

These doors shall be installed according to the manufacturer's specifications. All rules and regulations of the State Code shall be complied with. Hardware as necessary shall be provided.

96. Gutters:

Wherever shown or called for on plans, furnish and put up a 9" double beaded hanging gutter made of No. 22 gauge galvanized iron. All joints must be well soldered and supported with hangers, not more than 3 feet apart.

97. Rain Leaders:

Furnish and connect 4-inch corrugated galvanized iron down spouts to gutters with proper shoe at bottom secured onto brick wall with proper fasteners.

98. Vent Ducts:

Install vent ducts from toilet rooms as shown on drawings and provide same with roof ventilators as called for, also furnish and install the registers.

ROOFING OVER WOOD SHEATHING

99. Work Included:

The work contemplated under this specifications shall include all materials, labor, equipment, and services necessary for and reasonably incidental to the installation of a Johns-Manville, or B. F. Nelson 15-year Bond asbestos Built-up Roofing and Johns-Manville or B.F. Nelson Co. flashing to all walls.

The work shall be done by a roofing contractor approved by the Johns-Manville, or B.F. Nelson Co., subject to their inspection during application, and subsequent approval.

100. Work Not Included:

The following work will be furnished and installed as specified under other provisions of the specifications which this Contractor shall read so as to ascertain what is called for therein.

a. All materials composing the roof construction, including cants, coves or fillets, properly graded to drain all water into gutters, and roof drains, leaving all surfaces smooth and clean, in a satisfactory conditions to receive the roofing.

b. Nailing strips as required, embedded in the wall structure, to which to secure the flashing.

c. Roof drains, sheet metal flashing required at structural iron work, pipes, etc., passing through the roof, and at roof drains, etc.

d. Where flashings are to extend through walls or under copings, walls will be built to proper height and left ready to receive flashing.

101. Insulation:

The entire roof surface shall be covered with 1" thick rigid roof insulation, which shall be made up of two layers or 1/2" cemented together with asphalt, and shiplap joints.

This insulation shall be laid tight to all walls, etc., and shall be nailed down to roof sheathing with 1-3/4" long, large headed galv. roofing nails using not less than 1-1/2" nails to each square foot.

102. Guarantee:

The Roofing Contractor shall furnish a Johns-Manville, or B.F. Nelson Co. fifteen-year Guaranty Bond to cover the roofing applied under this contract.

A ten year Flashing endorsement shall be attached thereto to cover the flashing applied under this contract.

103. Connecting Work:

The Roofing Contractor shall examine all surfaces on which or against which his work is to be applied and he shall notify the Architect in writing of any defects that he may discover, which he considers detrimental to the installation of his materials. He shall see that surfaces are properly sloped to drains and otherwise in proper condition to receive his materials.

This Contractor shall see to it that all defects are corrected, that all grades are properly constructed, etc., and that all roof surfaces are clean and dry before installing his work. The application of materials by this Contractor shall be considered an indication of the acceptance by him of the base, both horizontal and vertical.

104. Materials:

All felts, asphalt primer, roof coating and asphalt and Asbestile referred to in these specifications shall be those manufactured by Johns-Manville, or B.F. Nelson Co. and shall bear the manufacturer's label.

Felt: - Twenty-pound Asbestos
All felt, referred to in these specifications as "twenty-pound asbestos felt", shall be J-M, or B.F. Nelson Co. Asbestos Roofing Felt Twenty-pound, 32" wide, weighing approximately 20 lbs. per 108 square feet. Laid in three layers and four moppings.

Felt: - 3-ply Flashing Material
All felt, referred to in these specifications as "3-ply flashing material", shall be J-M, or B. F. Nelson Co. 3-Ply Flashing Material, weighing approximately 60 lbs. per 108 square feet.

Asphalt: - All material referred to in these specifications as "asphalt", shall be J-M, or B.F. Nelson Co. Bonded Roofing Asphalt.

105. Installation:

General: If the pitch of the roof is 3" to the foot or less, the felt may be laid either paralleling, or at right angles to, the pitch. The twenty-pound felts shall be laid at right angles to the pitch. If the pitch of the roof is over 3" to the foot, all felts shall be laid parallel to the pitch. All felts shall be turned up 2" on all vertical surfaces (unless sheet metal base flashing is to be used) without being cemented thereto. All nails except those used to secure the 3-ply flashing material shall be driven through flat metal discs.

Over the Insulation, lay three plies of the twenty-pound asbestos felt, with the coated side down, lapping each sheet 22" over the preceding one, mopping the full width under each with the asphalt and nailing at 9" centers adjacent to the back edge.

Coat the entire surface, including the flashing, with the roof coating.

Flashing: Flashing shall be applied in accordance with the manufacturer's Standard Specification. It shall be applied on parapet walls "not less than 8" high, or to extend full height and under coping. It shall be applied on high walls same height as on adjoining parapet walls.

Note: The above roofing is specified so as to establish a standard for roofing; any other brand of Materials that meet the requirements of the above specifications, and if applied by approved roofers, and covered by a satisfactory surety bond, will be approved.