

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

SPECIFICATIONS

FOR THE

LABOR AND MATERIALS

TO BE USED IN THE ERECTION AND COMPLETION OF A

Two-story and Cellar Frame and Brick Building for the Weather Bureau, U. S. Department of Agriculture, at Hatteras, N. C., including preparation of site, etc., according to the plans and these specifications and under the supervision of C. L. Harding, Architect, 1316 G street, Washington, D. C., representing the Chief of the Weather Bureau.

CONTENTS:

Advertisement.
General Conditions.
Excavating and Grading.
Concreting.
Brickwork.
Stonework.
Carpenter Work.
Stair Work.
Plastering.

Glazing.
Painting.
Metal Work.
Mantels.
Range.
Hardware, Screens.
Plumbing.
Heating.
Blank Proposal.

"Sec. 2. Provided that in such case the court in which such action is brought is authorized to require proper security for costs in case judgment is for the defendent. Approved, August 13, 1891." (Statutes at Large, Vol. 28, page 2 (Statutes at Large, Vol. 28, page 278.)

GENERAL CONDITIONS.

The contractor shall furnish all material, labor, transportation, scaffolding, utensils, etc., of every description required for the full performance of the work herein specified, except as otherwise particularly mentioned. He shall lay out his work and be responsible for its correctness; shall be added to the content of the correctness and the content of t particularly mentioned. He shan ray out his work and be responsible for his corrections, shall be a competent foreman on the premises: shall obtain all necessary permits to properly carry out his work, paying all lawful fees therefor; shall give to the proper authorities all requisite notice relating to the work in his charge; shall afford the architect every facility for inspection; shall be responsible for all violations of law or damage to property caused by him or his employees, and shall property protect his work during progress. properly protect his work during progress.

All materials are to be of the best of their several kinds in quality, as hereinafter specified. All

labor to be performed in the best manner by skilled workmen.

The drawings referred to in this specification consist of three elevations, foundation plan, first and second story plan, and section through building, which will be supplemented by detailed drawings to be furnished as the work progresses. All these drawings are intended to cooperate with and form a part of the specification and the accompanying contrast. form a part of the specification and the accompanying contract. Where the figures are given, they

form a part of the specification and the accompanying contract. Where the agures are given, they are to be followed in preference to measurement by scale.

Anything which is not shown on the drawings, but which is mentioned in the specification, or vice versa, or anything not expressly set forth in either but which is reasonably implied, shall be furnished and performed the same as though specially shown and mentioned in both.

Should anything be omitted from the drawings or specification which is necessary to a clear understanding of the work or should any error appear either in the various instruments furnished. understanding of the work, or should any error appear either in the various instruments furnished. understanding of the work, or should any error appear either in the various instruments turnished, or in the work done by other contractors, affecting the work included in the specification, it shall be the duty of the contractor to notify the architect. In the event of the contractor failing to give such notice, he shall make good any damage to or defect in his work caused thereby.

At the completion of his work, the contractor shall clear out all rubbish and surplus material left by him; shall repair any damage to his work and adjacent lawns, no matter by whom caused, and leave the premises brown clean and in perfect repair and order so far as his work is concerned.

and leave the premises broom clean and in perfect repair and order, so far as his work is concerned.

The architect shall have full power to make any alterations during the progress of the work which he may deem necessary or advisable, and such alterations shall not affect or make void this

No claim for extra work shall be considered unless the price for the same shall have been agreed upon in writing between the architect and the contractor prior to the commencement of the same. In the case of any changes in work not considered necessary, or made to reduce cost of con-

struction, a deduction shall be made from the amount of the contract; said deduction to be at market rates and to be agreed upon in writing between the architect and the contractor, and the time for completion of contract will be lengthened or shortened accordingly.

Should any misunderstanding or dispute arise as to the meaning of the drawings or specifications, between the contractor and the architect, the same shall be referred to the Chief of the

tions, between the contractor and the architect, the same shall be referred to the Chief of the Weather Bureau (or in his absence the Acting Chief), whose decision thereon shall be final, conclusive, and binding on the parties.

The contractor shall provide all means necessary to the protection of the work, and shall be entirely responsible for, and make good at his own cost, any damage which may happen thereto by reason of accident, design, fire, or any cause whatsoever.

The contractor shall be entirely responsible for any injury which may happen to any person or persons on or about the building, and shall pay all claims arising therefrom which may have been due to any act or default on his part or the part of any of his agents or employees.

The contractor is to have full charge of the building until completed, and must keep a reliable watchman on guard both night and day if found necessary. He will be held responsible for all property that may be injured or stolen while the building is in his care. He shall provide all necessary guards, rails, and night lights.

The drawings and specifications furnished for this work are to be considered instruments of

The drawings and specifications furnished for this work are to be considered instruments of service; are to be used for this building only; are the property of the architect, and must be returned to him immediately upon completion of the work set forth therein.

Generally, payments will be made as the work progresses, and in accordance with the terms of the contract, 10 per cent of the value of the work done being retained until the final acceptance of the work

If the contractor fails to complete the work within the time specified in the contract, a forfeiture of \$5 will be exacted for each day's delay.

EXCAVATION

Excavate for the cellar and foundation walls, piers, etc., of the dimensions and to the depths as shown on the drawings and required by the grade, and do any other excavating required to fully carry out the work herein specified.

The bottoms of all trenches for walls and piers are to be made wet and thoroughly tamped. All the earth taken from the excavation is to be used for filling in and grading the premises as directed by the architect.

The grade line shown on the drawings is the established grade or line to which the ground will

be graded at completion, and is to be the present grade of the lot.

Fill in around the walls and tamp the filling thoroughly. Grade the earth neatly away from

Rake clear of stones and rubbish, fill in and grade the lot as directed.

CONCRETING.

Cover the entire surface of the cellar bottom with concrete floor 5 inches thick, including top dressing. The work to be performed as follows: The earth is to be wet and tamped thoroughly, upon which a bed of concrete 4 inches thick is to be laid, composed of one part "Atlas" Portland coment, three parts sharp, clean, course sand, and five parts of clean, broken stone all thoroughly mixed. The broken stone must be crushed to pass through a 2-inch ring. This base is to be thoroughly rammed and finished with slight grade toward rear cellar door. Finish with a top dressing of Portland cement mortar mixed in the proportions of one part "Atlas" Portland cement to two parts clean, sharp sand, free from loam and salt, properly screened and washed, to be troweled smooth.

BRICKWORK.

All walls, piers, chimneys, footings, etc., where brickwork is shown on the drawings, and unless otherwise specified, are to be laid up in dimensions as shown, with sound, hard, well-burned brick in lime mortar (except where cement is specified), with joints neatly struck. All brick are to be laid wet in dry weather.

All brickwork to be well bedded, tied in every sixth course, and worked in regular bond with full flush joints, leaving no interstices. All walls and piers are to be made level, to come to the exact height, and to have all necessary flues, channels, and openings, as shown or directed. Point up close to all sills, coping, and projections. Bed all frames solidly.

Fill the walls in solid between joist.

Put down two courses of footings under all walls, piers, chimneys, etc., the size of footings to

be as shown on the plan and section.

All footing and foundation walls to height of grade, all piers entire height, to be of brick as specified above, stepped up as shown, and laid in Portland cement mortar; one part "Atlas" Port-

land cement and three parts coarse, clean sand, with no lime.

All walls will be 13 inches thick and piers 13 inches by 13 inches (porch piers 9 inches by 13 inches), as shown on plans. Furnish and build in a 10-inch terra cotta thimble in chimney in cellar and an S-inch thimble in kitchen flue for smoke pipes; build in 6-inch thimbles in each flue in other rooms, 18 inches from ceiling.

Construct the chimneys as shown on the drawings. In all cases there must be 4 inches of brickconsequet the commeys as shown on the drawings. In an cases there must be a mones of orickwork between the inside of smoke flues and any timber or wood work. The chimneys must be built entirely clear of the framing, all flues to run to the top independently. All flues to be lined their entire height with terra cotta flue lining, jointed in full bed of mortar and laid straight and clear.

There is to be a course of slate, full thickness of the wall, laid in cement mortar bed, at top of grade.

Face all of the exterior walls of the building from grade line to underside of water table, including chimney above roof, base to front porch, with red brick, laid in lime mortar with gints. The joints are to be close struck.

STONEWORK.

Furnish and set sills for all cellar windows, as shown, 3 inches thick and 2 inches longer at each end than the openings; to project I inch beyond wall line and to extend 2 inches under the wood subsills; to be rubbed on top, and set with 1-inch wash.

CARPENTRY.

The carpenter shall do all cutting of timber and woodwork required by the other contractors to properly carry out their work, but he shall not do any cutting which may weaken the work, with-

All lumber, except otherwise particularly specified, is to be of No. 1 Virginia or North Carolina pine, sound, well seasoned, and free from any imperfections materially impairing its durability or strength, and is to be set with the crowning edge up. The girders in cellar are to be 8 inches by 10 inches, and can be made of four 2-inch by 10-inch beams bolted together; floor jeists 2 inches by 10 inches, 16 inches on center. Ceiling joists 2 inches by 6 inches, 16 inches on center. Roof rafters 2 inches by 10 inches, 20 inches on center. Headers and trimmers to be doubled timbers. Studding and plates 2 inches by 4 inches, set 16 inches on center. Corner posts to be 4 inches by 6 inches with 2 inches by 4 inches spiked to side. Wall plates and sills 4 inches by 8 inches.

Braces 4 inches by 4 inches long, having a run of not less than 6 feet, are to be set at all corners of the frame in each story, and are to be framed into the timbers at each end and spiked.

The sills and plates are to be halved at the corners and spliced.

The second story is to be built up on the 2-inch by 10-inch ceiling joist of first story, carefully spiked to the same and braced thoroughly.

Bridge all floor beams with one row of \(\frac{\pi}{\epsilon}\) inches cross bridging to each span of beams exceeding 8 feet, cut in and nailed at each end. Bridge stud partition walls in both stories, running lengthwise of the building twice in each story, and all other partitions once in each story with 2inch by 4-inch pieces, cut horizontally and uniled at each end.

Double the ficor beams under partitions running the same way. All beams are to rest at least 4 inches on the walls, and on center partitions must lap each other, and be spiked firmly together. All girders and beams must be wedged up with slate where they rest on the wall.

Frame headers and trimmers for stair openings, and frame around chimneys and for plumber's pipes. Set the partitions, as shown on the plans, with 2-inch by 4-inch studs, set 16 inches on centers, straight and plumb. Partitions directly over girders in cellar or partitions plates below are to be run down to them and are not to rest on the floors. Provide all brick openings with rough wooden sills not less than 4 inches thick, and resting 3 inches on the walls. Construct scuttle on roof over stairway 2 feet 6 inches by 3 left with 500 000

Slope roof in rear as shown on section, to throw water down to gutter.

Cover the entire frame and roof with Virginia pine sheathing, surfaced on one side to an even thickness, put on diagonally and nailed to every bearing. Cover the sheathing with Neponsit red rope sheathing paper laid with not less than 2-inch lap. Line with the same paper under all corner boards, casings, etc.

Cover sheathing on first story to top of window heads, as shown, with No. 1 Virginia rustic

siding 6 inches wide, nailed to every hearing, with nails set in for puttying.

The balance of the frame including the roofs, and excepting deck to second story over office, to be covered with sawed cypress shingles, laid 6 inches to the weather, with narrow open valleys and with a capping course run up the hips and over the other shingles. All shingles are to be dipped

Cover the deck over office on sheathing, with Pariod Roofing Felt (manufactured by F. W. Bird & Son, East Walpole, Mass.), laid with 2-inch lap, with joints in clastic cement and tightly nailed to sheathing. Flash and counter flash under Paroid Roofing and over all window and door heads, valleys, chimneys, etc., and wherever needed with redipped IX tin, painted both sides before

Put on a ridge roll and finish of galvanized-iron to roof of front porch, as shown on elevations. put on. Construct a privy 4 feet by 4 feet in size, in rear of building where architect directs. Ceil up with I-inch by 10-inch matched pine boards plained on both sides. Construct a seat with two large holes and a low seat with one small hole. Form the risers I-inch thick and seats 11 inches thick. Provide lids over the holes hollowed out at the front and hung with iron hinges. Lay the floor with 1-inch by 6-inch matched pine flooring. Form the roof 7 feet high at lowest point and graded to throw off water of 4-inch by 34 inch beaded ceiling boards. Cover roof with Paroid Felt Roofing like deck over office. Provide a four-light sash in the side arranged to slide, and provide and hang a batton door 2 feet 6 inches by 6 feet with thumb latch, handle, and lock complete. Set privy on

a batton door 2 feet 5 inches by 5 feet with thumb latch, nandle, and lock complete. Set privy of heart pine supports with proper uprights, etc., to make all a complete and strong job. Excavate pit for privy and board up sides with 2-inch heart pine planks; dig deep enough to strike water. Construct two tanks, one in cellar 5 feet by 5 feet by 5 feet 6 inches, and one under roof 3 feet by 5 feet by 8 feet, where shown; form the bottom of two thicknesses of 1½ inch surfaced pine plank, lapping at the corners. The parts of the tanks are to be strongly spiked together. Construct a cover of matched and beaded pine boards, with 1-inch by 6-inch battons secured to the under side. Provide handle to lift up. The tanks are to be lined with galvanized iron as specified under "Metal Work"

under "Metal Work."

Form lookouts and brackets for cornice work. Build coal bins and partition to heater and tank rooms in cellar of 5-inch rough boards running from floor to ceiling, with boards to slide in partitions of bins, as shown, for coal opening.

Form openings to doors in heater room and tank room, as shown. Set grounds to all door and

window openings before plastering is commenced.

Build the porches as shown. The flooring to be 13-inch heart pine, 3-inch face, painted in tongue and groove with white lead before laid, and nailed secretly to 2-inch by 6-inch timbers. There to be 1-inch risers and 14-inch treads heart pine boards, dressed both side and edges with nosing on face of treads. Form posts, balusters, and rails of stock white pine material; build all securely and fasten to wall of building. Girders to porches to be 6-inch by 6-inch tumbers. Form the calling to rear porches level with §-inch by 3-inch tongued and grooved and beaded clear pine boards. Fill in under side perches between piers with square lattice work. The columns are to be

6 inches square with moldings to form caps, etc..

The balusters are to be 3 inches by 1½ inches. The top and bottom rails are to be stock material. This applies to rails to balcony also. The balcony posts are to be 4 inches square as material. This applies to rails to balcony is to be made of Linch by 1½-inch strips, as shown. shown. The baluster work between posts is to be made of T-inch by 13-inch strips, as shown. Build seats as shown on front perch—open under seat. Seat to be of 14-inch heart pine boards dressed both sides, arms to be of 2-inch plank sawed to shape, as shown, back to be balusters.

Furnish, and build up as shown, all the facias, moldings, bases, etc., to make work complete

and satisfactory.

All work for porches, except as otherwise particularly specified, is to be of clear, white pine.

Form gutters with proper drain to each end where conductors show. The gutters are to be lined with tin and drain to the rear of the building and connect with downspout to tank in cellar. The gutters are to be made 13-inch by 4-inch strips set on edge and nailed to the roof. Put up 15-inch by 3 inches by 5 inches sawed pine brackets, set 4 feet apart.

The flooring throughout the building is to be No. 1, Virginia pine, 5 inch by 25 inches, tongued

and grooved, blind nailed to every joist, and heading joints struck off.

Fit up the closets and pantries with shelving, as shown on plans, made of 1-inch by 12-inch

white pine boards, dressed both sides and on edges. Furnish and set an oak dripboard around sink in kitchen. Provide heart pine saddles for

All of the exterior woodwork to be clear No. 1, white pine, and all of the interior woodwork to all doors.

The window frames are to be made for ordinary box windows ?-inch sills and 7-inch subsills; 7-inch by 5-inch molding outside casings, as shown, double sash, with 11-inch jambs; the sash are to have weather-lipped meeting rail; to be rebated for glass, and divided into lights as shown. The sash are to be 13 inch thick. Use stock stuff for sash as near these sizes as possible, not to be over 1 inch less. All sash in first and second stories are to be hung with Silver Lake sash cord and iron weights; the cellar sash are to be hinged and swung from top. The windows in first, and second floors, are to be fitted with outside blinds, 14 inch thick, stationary slats. The blinds are and have nill enterps with Timmerman's latest improved

rior are to have 12-inch jambs rebated on one edge. All other jambs are to be rebated on the solid, and to be 11 inch thick.

All doors are to be paneled and molded, and are to be well kill dried. They are to be made in four panels, in size to suit openings. The main front door is to be 2 inches thick, molded and paneled, as shown. Other doors to be 1% inch thick. The doors marked "glazed" are to have upper panels above lock rail left out and made to receive glass.

The contractor is to furnish all inside sills, window beads, corner beads, etc.

All interior woodwork is to finished up perfectly clean, and is to be hand smoothed, scraped,

and sandpapered.

The architraves throughout are to be 5 inches wide by 3 inch, molded, with molded plinth and corner blocks. The base throughout is to be 8 inches high, including 11-inch base molding and shoe at floor. All closet trim is to be Finch by 3 inches and the base Finch by 6 inches, plain beveled. The apron to be same as trim, with return at ends.

Furnish and put a z-inch by 41-inch molded chair rail in the dining room, kitchen, and office, the top of rail to be 3 feet from floor, except in kitchen which is to be 4 feet 6 inches from floor. All mill work, so far as possible, to be stock stuff and sizes.

STAIRWORK.

Construct the stairs as shown on scale drawings. Support properly, and secure in position. The carriages are to be 2 inches by 12 inches—2 to each flight. The risers are to be $\frac{\pi}{2}$ -inch Virginia pine and treads $1\frac{1}{2}$ -inch North Carolina pine, tongued and grooved together. The treads are to have a nosing on edge, with a cove under. The wall string to be $1\frac{1}{2}$ inch, moided on top edge to correspond with adjoining base. The front string is to be $1\frac{1}{2}$ inch, carried around well holes, The rail is to be $2\frac{1}{2}$ inches by $3\frac{\pi}{2}$ inches, double molded, and holted together and to all posts. The balusters are to be $1\frac{\pi}{2}$ inches, square top and bottom and turned in shaft, set 3 to a tread. The main newel to be as shown, 6 inches square, and turned in shaft. Landing newels to be $4\frac{\pi}{2}$ inches square, boxed, with square-turned cap and drop. All stairwork, except risers and treads, inches square, boxed, with square-turned cap and drop. All stairwork, except risers and treads, to be clear No. 1. Virginia pine, ash, or cabinet oak. Form and make a tongued and grooved spandrel under main flight in first story, as shown.

The stairs to roof will have no risers, but treads must be let in front, and wall strings with cleat underneath each end of same. The cellar stairs will have no risers, but treads to be like other stairs, carriages to be rough 2 inches by 12 inches, All stairwork to be made from stock material,

designs to be selected by the architect.

The finish work of stairs is to be put up after plastering is completed and plumbing and radiators are up on second floor.

PLASTERING.

Whitewash all of the brick walls and partitions in cellar with one good coat, using Rockland lime and plaster of paris.

The plasterer is to lath all frame partitions and ceilings of every description in first and second stories, and under stairs on first floor, with sound, dry lath, put on § inches apart, with joints broken every 18 inches. No lath to be put on vertically nor to run from one room to another.

Plaster all work which is lathed after the method known as "laid on" work, as follows: Put on two coats of mortar, a scratch and brown, composed of thoroughly slacked pine lime strained through a \frac{1}{2}-inch mesh screen, and clean, sharp sand, free from loam and salt, the scratch composed of \frac{1}{2} bushel of goat hair and I barrel of lime to 3 barrels of sand, and the brown coat of \frac{1}{2} bushel of cattle hair and 1 barrel of lime to 6 barrels of sand. All hair is to be well beaten, soaked, and thoroughly mixed in. Stack the brown mortar at least 10 days, and the scratch 3 days before using. The brown coat is to be laid on over the scratch immediately after the scratch is applied. The brown coat is to be thoroughly dry before the finish coat is applied. The ceiling of the cellar is to have one coat of plaster floated up smooth.

Finish the rough plaster with a coat of hard finish, composed of lime, putty, white, clean sand, and plaster of paris, finished and troweled to a smooth and polished surface, free from defects or

brush marks.

Run beads on angles to all arches. The plaster in all cases is to run to the floor. Do all patching of plaster work required after other mechanics have finished, repairing all cracks and broken places, and leave the plastering in a first-class condition.

The kitchen is to be plastered 4 feet 6 inches high in cement mortar, using Keene's Victoria or

Adamant cement plaster, white finish, and blocked off to imitate 3 inch by 6 inch tile.

GLAZING.

All sash throughout the building are to be glazed with first quality, single thick, American glass. All doors, where marked, are to be glazed with Chance's figured rolled glass, "Maze" design.

PAINTING.

All of the materials are to be of the best of their several kinds in quality as herein specified; all labor is to be performed in the best manner by skilled workmen, and both are to be subject to the approval of the architect.

Cover all san knots and defeat in wood mank which is (charried 1991)

and ceilings of the porches with three coats of pure linseed oil and pure white lead. Paint all metal work with one coat of Prince's metallic print, and three coats of pure linseed oil and pure

Paint all of the interior wood work of every description, except hard wood to stairs and shingles, with three coats of pure lineed oil paint in such colors as the architect directs.

The hard wood to stairs to be filled with a paste filler and thoroughly rubbed, and three coats of best hard oil rubbed after each coat.

The shingles are to be dipped three-fourths their length in Cabets creesote shingle stain before put on the building, and receive a brush cost after work is completed. The shingles to roof to be colored with No. 225 (red) and the shingles on side of office and those forming frieze to first story under caves to be colored with No. 247 (brown) stain. The clapboards are to be painted colonial yellow, all trimmings, cornices, etc., white.

MANTELS.

There is to be a mantel in parlor and one in dining room, with cabinets, mirrors, etc., at a cost not to exceed \$20 each, with tiling and fireplace work in dining room. The contractor is to furnish these mantels and set in place, the same to be selected by the architect.

RANGE

The contractor is to furnish and set in place, where marked in kitchen, a No. 88, Thatcher portable range, with left-hand oven, water back, etc., complete and with warming closets and boiler above. Range is to set on sheet of zinc which is to run from wall to points indicated by dotted

HARDWARE.

All the following hardware is to be furnished and put on by the contractor. The goods are to be Russell & Erwin Manufacturing Co.'s make, unless otherwise specified, and numbers here given refer to their catalogue. All hardware is to be properly put on with screws in finish to match. The finish throughout is to be oxidized copper on iron, except front door hardware, which is to be

All sash in first and second stories to have Ives patent sash fasteners, two flush lifts, No. 154, to each sash. All cellar sash to have two iron hinges 21 inches by 3 inches, two iron buttons, and

one steel hook and staple.

The outside blinds are to be hung with steel parliament blind hinges and fastened with Zim-

merman's latest and most approved shutter bar and sill catches.

The front door is to have mortise lock with oxidized copper face, No. P-1256, with three keys complete; three 5-inch by 5-inch hinges No. 61, and combined rose and escutcheon No. 901, with knob No. 981, design Wayne. All other doors to have each two 4½-inch by 4½-inch hinges No. 7060, mortise locks with villa door set No. 5218.

The closet doors to have mortise knob latches No. 047, with metal knobs and escutcheon like other doors.

The doors leading from hall to kitchen, and from kitchen to dining room, to be equipped with Bommer double acting spring hinges, japanned on steel finish, with 3-inch by 15-inch push plates. Fit up all closets and pantries with necessary number of hooks, brackets, drawer pulls, etc., complete, and any other articles necessary to make building complete.

SCREENS.

Furnish and set in place to all windows and outside doors in first and second stories, ily screens made by the Barrowes Screen Company, of Portland, Me., or the Higgins metal screen. The wire is to be copper or made impervious to salt air. The screen doors are to correspond in panels to

STEAM HEATING.

DESCRIPTION.

The work covered by the specifications embraces the furnishing and putting in of steam-heating apparatus in Weather Bureau building at Hatteras, N. C.

The apparatus will be arranged for a one-pipe, low pressure, circulating system. The steam is to be derived from the boiler located in cellar and to be furnished to the radiators through a system

The apparatus when completed must have a perfect circulation of steam and return water from all parts with one-pound pressure, and be entirely free from all hammering and cracking noises

BOILER.

The contractor will furnish and set complete in all respects, one sectional cast iron, steam-heating boiler for hard or soft coal as directed, of not less than 475 square feet capacity, equal to the model manufactured by the Model Heating Company, Philadelphia, Pa. Boiler to be provided with the processory coatings including heat court for door and frames coat doors and standard doors and frames are doors are doors and frames are doors and frames vided with the necessary castings, including base, grate, fire door and frame, soot doors, check draft for chimney, shaker, etc.

Grates.—The boiler will be provided with improved rocking and dumping grates of heavy

pattern, furnished with lever handle.

Protection.—All work and material must be properly protected, and before the heating plant is accepted the contractor is to be put every portion of the work in first-class condition, at his expense, and will make good all damage to building caused by his workmen, and will remove all rubbish from the premises.

Furnish and attach to boiler all necessary fixtures, consisting of:

Steam gage.—One 5-inch, brass case, American pattern, improved, full Bourdon, spring steam gage, with black dial and light figures, and provided with gage-cock and siphon.

Water gage. - One g-inch by 10-inch water gage, with finished square body, four guards, bottom

waste cock, top and bottom valves, and hardwood wheels.

Gage cocks.—Three gage cocks, with soft metal seats, stuffing boxes, and hardwood handles.

Safety valve.—One 1½-inch all brass, improved pop safety valve, with side outlet, set for 15

pounds pressure.

Automatic damper regulator.—One improved damper regulator, with adjustable weight, to be attached to boiler above water line, provided with brass gate-valve and cast-iron drum trap and drip cock. The regulator to have brass chain and pulley, and be so adjusted as to regulate the draft and maintain the required pressure without attention.

Tools.—One full set of stoking and firing tools, consisting of a poker, one suitable steel brush

with jointed handle, one scoop, one straight-handled shovel, and one 3½ pounds poll pick.

Water connection.—One 3-inch brass steam cock, with hose connection.

Blow-off.—Provide and connect to the boiler a 12-inch blow-off pipe, with hose connection. Boiler test.—The boiler will be tested to 100 pounds cold hydrostatic pressure before leaving the shop. Certificate of test to be given the officer in charge.

Smoke pipe.—Connect the boiler to the chimney by means of a smoke pipe made of No. 14, galvanized iron of suitable dimensions, and place in pipe a shut-off damper with lever handle and automatic adjustable attachment.

CONNECTING PIPES.

The above-described boiler will be connected to the radiators throughout the building by means of a one-pipe circulating system. Run steam main from top of boiler along ceiling of basement, graded in direction of flow of steam not less than 1 inch in 10 feet. Drop main to basement floor as soon as practicable. All the branches to be taken off from the top of steam mains, with elbow and nipples. The connections between radiators and risers to be made above floors, where possible, with a good fall toward risers. All pipes to be graded toward outlet without forming any traps.

Values on mains.—Provide suitable brass gate valves for feed and return pipe.

Expansion of pipes.—All pipe work will be so constructed that it will be free for contraction and expansion, so that it will not damage any other work or effect injury to itself.

Pipe supports.—All steam and return pipes will be suspended with suspension pipe hangers of

approved pattern.

Flanges and unions.—All risers will be put on with right and left couplings. At suitable places on the main supply and returns locate right and left couplings or flange unions; couplings can be used on all pipes up to 2 inches in size, all over must be made up with flange unions, made tight with asbestos gaskets. Arrange these connections so that any part of the apparatus can be disconnected without injury to the balance. Eccentric fittings to be used in steam mains where necessary to insure unobstructed flow of water condensation.

Risers.—All risers will be run with off-set fittings, so that the pipes will be about 2 inches from

the wall.

Insulation.-Where pipes pass through floors and through wood partitions they will be provided with Vosburg adjustable cast-iron floor thimbles (manufactured by N. O. Nelson Manufacturing Company, St. Louis, Mo.), with floor and ceiling plates, nickel plated, and where they pass through

brick partitions, with neat galvanized-iron sleeves.

Pipe covering.—All exposed steam and return pipes, and fittings in basement, and where risers pass through space between first floor ceiling and office floor, to be covered with best quality magnesia sectional covering, containing not less than 50 per cent magnesia, or with 4-ply air cell covering, composed entirely of asbestos paper, with all cells regular and clearly defined. All coverings to be covered with 6-ounce canvas and put on with pure sheet brass straps, not less than 1 inch wide or more than 18 inches apart. It must be put on true and even in the most workmanlike manner and all joints made tight with plastic ashestos. All magnesia covering to be molded in two sections.

Boiler covering.—Boiler to be covered with 3-ply asbestos air cell covering put on with 11-inch

brass straps, otherwise as specified above.

Pipe. All pipe used will be new, of best make, and of standard weights and sizes, all over $1\frac{1}{4}$

inches to be lap welded; all pipes must have burr removed from ends.

Fittings.—All fittings used in this work will be of standard size and weight, fine-grained, gray cast iron, with double head and clear cut taper threads, without a malleable fitting, lock nut or running thread in any part of the apparatus.

Joints.—All screw joints to be made with taper threads, iron into iron, and perfectly tight without the use of red lead or cement of any kind; all flange joints to be made with best quality packing.

column Rocco radiators of approved pattern and standard weights, 33 inches high. Sections to be put together with heavy right and left cast-iron serew nipples in best manner. Radiator in hall to consist of four 7-foot sections of wall radiators equal to the Fowler & Wolf, put together as above.

Size of radiators.—Location of radiators to be as directed. Where hidder thinks more surface is required for exposed position, he will add the amount needed to furnish the required amount of

heat, and state in his bid the cost of the extra.

Values on radiators.—Each radiator or heater will be operated by one Jenkins Bros. diamond brand valve, with unions of proper size, which shall be of the best steam metal, extra heavy, finished with rough body heavily nickeled and provided with polished hard wood handles. All radiator valves to be offset or corner valves where required, and will be connected to the heaters by ground brass, nickel plated unions, so that any one radiator can be disconnected without reducing the steam pressure or interfering with the balance of apparatus.

Air valves.—Each radiator will be provided with perfected duplex automatic air valve (manufactured by the Monash Younker Manufacturing Company, Chicago, Ill.), full nickel plated. All

yalves must have the above-named stamp on outside.

Printing.—All direct radiators will be finished in aluminum bronze. All exposed pipes, castings, etc., to be painted with galvanic varnish, manufactured by the Chicago Fireproof Covering Company. All pipes exposed in rooms will be painted to match radiators.

Cutting .- Do all cutting to admit work, and make same good again, and any damage done to

the building during progress of the work to be made good at contractor's expense.

Carpenter work, etc.—The contractor will do all cutting and replacing of woodwork. Where joints are cut to allow for passage of flues, they will be properly trimined. All plastering and fluish soiled or damaged by operations of contractor to be thoroughly replaced.

Workmanship.—All work to be done in a neat, substantial, and workmanlike manner, and the apparatus when completed to be thoroughly tested and left perfect in its working, to the entire

satisfaction of the officer in charge.

The sizes of branches and risers to radiators and radiator valves to be in accordance with tapping list for one pipe system on page 66, American Radiator Company's catalogue.

METAL WORK.

Furnish to the carpenter for flashing all the redipped tin necessary to properly flash around all window and door heads, chimneys, cornice tops, etc. The tin work is all to be painted both sides before put in place. The wood gutter on roof to be lined with tin forming proper grade to rear of building. The scuttle top to be covered with tin and sides of scuttle to be tinned and extend under finished roofing at least 6 inches, as is also the cornice top. The back of cornice on rake of deck to be tinned and flashed and counter flashed, and thoroughly soldered and made water tight. There will be two 3-inch down spouts in rear from gutter to run into tank in cellar from outside of building, and of galvanized iron. Furnish and set on ridge of porch roof a ridge roll and finish, as shown, with galvanized iron.

The valleys to roof to be lined with tin 20 inches wide, well soldered and nailed to sheathing.

The tanks are to be lined with heavy galvanized iron and made water tight, all joints to be

well soldered.

PLUMBING.

Furnish and set in kitchen, where shown, an 18 inch by 32 inch galvanized-iron sink set on galvanized-iron brackets, with two faucets, lead waste, connected with tank under roof, and boiler over range with 4-inch galvanized-iron pipe, with all fittings, etc., complete. The boiler will come with the range as specified but the plumber is to make all connections between range, boiler, sink, and tank so that sink can be supplied with both hot and cold water. The waste from sink to have 5 trap and run down through cellar and to a point outside of the wall of the building at least 50 feet, under ground and below frost line.

feet, under ground and below frost line.

The plumber is to furnish and set in place, where directed by the architect, a force pump, of approved make and guaranteed, which is to be connected with both tanks, and force water from tank in cellar to tank under roof. He is to furnish both tanks with 3-inch galvanized-iron overflow pipes, run through the roof and side wall, as the case may be. All work to be strictly first-class,

complete, and guaranteed.

PROPOSAL FOR A TWO-STORY AND CELLAR FRAME AND BRICK BUILDING FOR THE WEATHER BUREAU, U. S. DEPARTMENT OF AGRICULTURE, AT HATTERAS, N. C.

Place	
HE HONORABLE	
HE HONORABLE	, 1901.
	2001
SECRETARY OF AGRICULTURE	
Washington, D. C.	
IR:	
The undersigned horsely and	
The undersigned hereby agrees to furnish all labor and materia	als required for the erection and
Translated blick billiding for the Weather Design	T 0 35
uated at Hatteras, N. C., in strict accordance with the specifica	tions and decire Agriculture,
L. Harding, Architect Washington D. G. C.	nons and drawings prepared by
L. Harding, Architect, Washington, D. C., for the sum of \$	
Time to complete	
[Signature]	
Members of firm:	
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SPIRITICATIONS FOR WEATHER .

DESCRIPTION.

The work covered by the appellications cobraces the furnishing and otting in of steam-heating apparatus in Moother Duresu building of -----

The apparatus will be arranged for a one-pipe, lew-pressure circulatng system. The steem is to be derived from the beiler located in collar and to be furnished to the redictors through a system of riping. The itiated air to be exhausted through the rireplaces, or through vents.

The apparatus when completed must have a perfect direclation of steam nd return veter from all parts with one-pound pressure, and be entirely

too from all harmoring and oracking noises when in operation.

BOILER.

The Centractor will Turnish and set complete in all respects, one unning, or equal, wrought-iron, steam-heating beller for hard or soft coal s directed, of not less than 400 square feet especity. Beller to be malosed in a casing of galvanized from with a sheathing of heavy asbectos . Beiler to be provided with the necessary eastings, including base, fire door and frame, seet deers, check draft for chimney, shaker, etc.,

offore the heating plant is accepted the contractor is to put every pertion of the work in first-class condition, of his expense, and will make sood all drange to beilding caused by his verkmen, and remove all rubbish from the premises.

BOILER FIXTURES.

Furnish and ettach to boiler all the necessary fixtures, consisting

STELL CAUCE. - One 5-inch, brass case, American pattern, improved, Tull

jourdon, or equal, apring steem gauge, with black dial and light figures, and provided with gauge dock and siphon.

WATER GAUGE.-One 5/8 x 10-inch water gauge, with finished square body, four guards, bettem waste cook, top and bettem valves, and hard-wood wheels. Towes Cours .- Three gouge cooks, with soft metal seats, stuffing beces,

and hard-wood handles. SAFERY VALVE. - One 1 1/8-inch all brass, improved per safety valve,

with side outlet, set for 16 pounds pressure.

AUPOMATIC DAUPER REGULATOR .- One improved desper regulator or equal,

with adjustable weight, to be attached to beller above water line, provided. bruss gate valve and east-iron drum trap and drip cook. The reguto bave breas chain and pulley, and be so edjusted as to regulate

in draft and maintain the required pressure without attention.

TOOLS. One full set of stoking and firing tools; consisting of a poker, one suitable steel brush with jointed hendle, one scoop, one straight-handled shevel, and one 3 1/2 pound poll pick.

WATER CONCECTION. One 3/4-inch brass steem cock, with hose connection.

BLOY-OW .- Provide and connect to the boiler a 1 1/2-inch blow-off

pipe with hose connection.

DOTEDR THAT .- The boiler will be tested to 100 pounds cold hydrostatic prossure before leaving the shop. Certificate of test to be given the officer in charge.

CLOKE PIPE .- Commect the boiler to the chimney by neurs of a smoke of gold back of goldenized from of subtable dimensions, and place in <u>นางเก็บ และเหมียน เพียง โดยสามากลาสาก การสาราชาก วาร์บาร์กวิก กรรวิกิก กรรวิกิน</u>

Commeching Pipes.

The chove described botter will be connected to the redistors through, out the building by reams of a one-pipe circulating system. Our steam amin from top of botter along coiling of basement, graded in direction of flow of steam not less them I inch in ten feet. Drop main to basement floor as seen as practicable. All the brenches to be taken off from the top of steam mains with elber and nipples. The connections between redistors and risers to be made above floors where possible with a good fall toward risers. All pipes to be product toward outlet without formfoll toward risers. All pipes to be graded toward outlet without forming my trapa.

VALVES OF HATES .- Provide switable bross gate valves for feed and

roturn pipe.
EXPANSION OF PIPUS .- All pipe work will be so constructed that it will be free for contraction and expansion, so that it will not damage any

other work or effect injury to itself.

PIPS SUPPORTS.- All steam and return pipes will be suspended with suspension pipe hangers of opproved pattern.

PLANCES AND UNIONS.- All risers will be put on with right and left couplings. At suitable places on the main supply and returns locate right and left couplings or flange unions; couplings can be used on all pipe up to 2 inches in size, all over must be made up with flange unions, made tight with asbestos gaskets. Arrange these connections so that

part of the apparatus can be discommented without injury to the ance. Eccentric fittings to be used in steam mains where necessary to insure wnobstructed flow of water condensation.

PIGURS.- All risers will be run with off-sets, so that the pipes will

be about 2 inchés from the walls.

RISULATION .- Where pipes pass through floors and through wood pertitions, they will be provided with Vosburg or equal (manufactured by M.O. Relson Mrg. Go., St. Louis), adjustable cast-iron floor thimbles, with floor and ceiling plates miskel plated, and where they pass through brick par-

titions, with neat galvanized iron sleeves.
PIPE COVERING - All exposed steam and return pipes, and fittings in basement, and where pipes pass through closets in upper floors, to be covared with best quality magnesia sectional covering, containing not less then 50 per cent magnesic, or with A-ply air cell covering, composed entirely of asbestos paper, with all cells regular and clearly defined. coverings to be covered with 6-curce canvas and put on with pure sheet brass strops not less then I inch wide or more than 18 inches apart. It must be put on true and even in the most verkmanlike manner and all joints made tight with pleasic seestes. All magnesia devering to be moulded in two sections.

PIPE .- All pipe used will be new, of best make, and of standard veights and sinos, all over 1 1/4 inches to be lap velded; all pipes must have burn

removed from the ends.

PITTINGS.-All fittings used in this work will be of standard size and woight, fine gained, gray cast-iron, with double head and clear out taper pads, without a mallocable fitting, lock nut or running thread in any t of the apparatus.

JOINES .- All screw joints to be made with taper throads, iron into iron, and perfectly tight without the use of red lead or cement of any hind; all flange joints to be made with best quality packing.

HMATING SURPACES, ETC.

All rooms will be heated by direct radiation. DIRECT RADIATION .- The direct radiation will consist of ornamental cast-iron 3 column Rococo radiators, or equal, of approved pattern and standard weights, 53 inches high, Sections to be served together with

heavy right and left east-iron nipples in cest mamor. STAN OF RADIATORS .- Location of radiators to be as directed. bidder thinks more surface is required for exposed position, he will add the amount needed to furnish the required amount of heat, and state in his

Office, 1 direct Rad. 60 sc.ft. 53 sq.ft. Bedroom, 1 direct Rad. 26 sq.ft. 20 sq.ft. Bedroom, l direct Rad. 26 sc.ft. 20 sc.ft. Badroom. I direct Rad. 26 sc.ft. 20 sq.ft. Dining Room, 1 direct Rad. 33 sc.ft. 26 sq.ft. 1. direct Rad. Bedroom. 26 sq.ft. 20 sq.ft. Family Room, 1 direct Rad. 53 sc.ft. 46 sq.ft. Hall. 3-7 ft sections of 2-7 ft.sections Wall Radiators. of Wall Radiators.

VALVES ON RADIATORS .- Each radiator or heater will be operated by one Jenkins Bros. diamond brand valve, or equal, with unions of proper size, which shall be of the best steem metal, extra heavy, finished with rough body heavily nickeled and provided with polished hard wood handles. All radiator valves to be off-set or corner valves where required, and will be connected to the heaters by ground brass, nickel-plated unions, so that any one radiator can be disconnected without reducing the steam pressure or interfering with the balance of apparatus.

AIR VAINES. - Fach radiator will be previded with a Perfected duplex

automatic air valve (manufactured by the Monash Younker Manufacturing Co. Chicago, Ill.), or equal, full nickel-plated. All valves must have the

above name stamped on the outside.

PAINTING.- All direct radiators will be finished in aluminum bronze. All exposed pipes, casting, etc., to be painted with galvanic varnish, manufactured by the Chicago Fire-proof Covering Co., or equal. All pipes exposed in rooms will be painted to match radiators.

CUTTING .- Do all cutting to admit work, and make same good again, and any damage done to the building during progress of the work to be

made good at Contractor's expense.

CARPENTER WORK, ETC .- The Contractor will do all cutting and replac-Where joints are cut to allow for passage of flues, ing of woodwork. they will be properly trimmed. All plastering and finish soiled or damaged by operations of Contractor to be thoroughly replaced.

WORKMANSHIP .- All work to be done in a neat, substantial and workmanlike manner, and the apparatus when completed to be thoroughly tested and left perfect in its working, to the entire satisfaction of the officer

in charge.

The sizes of branches and risers to radiators and radiator valves to be in accordance with tapping list for one pipe system on page 66,

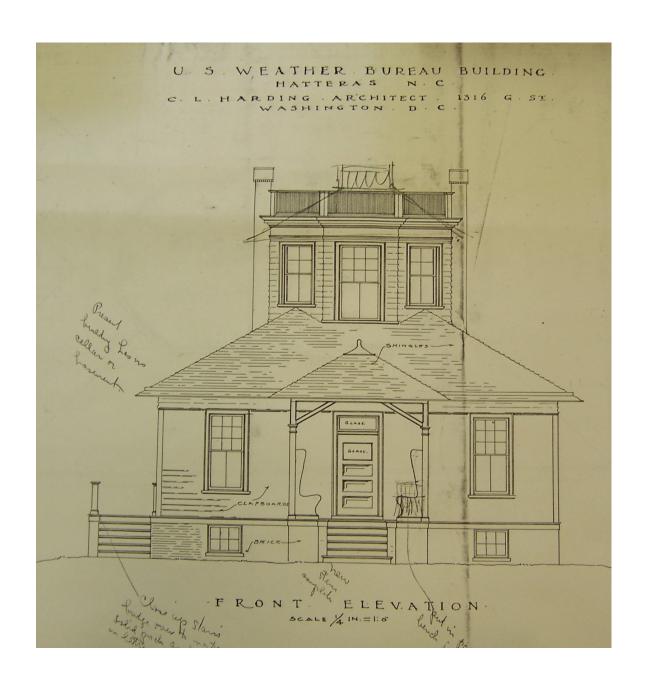
American Radiator Go., catalogue.
Relief pipes must be put in at each offset in steam main or wherever water of condensation is liable to obstruct the free flow of steam.

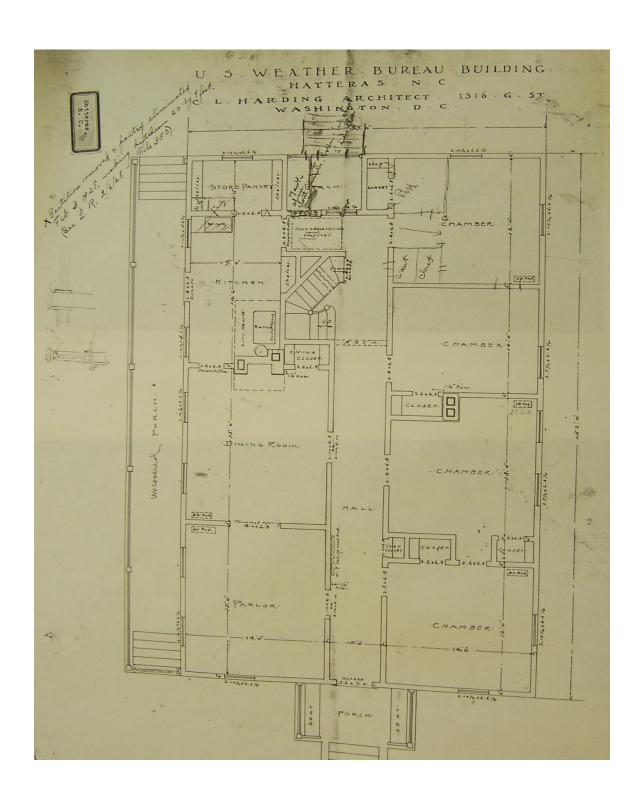
The sizes of steem mains to be not less than given on schedule be-

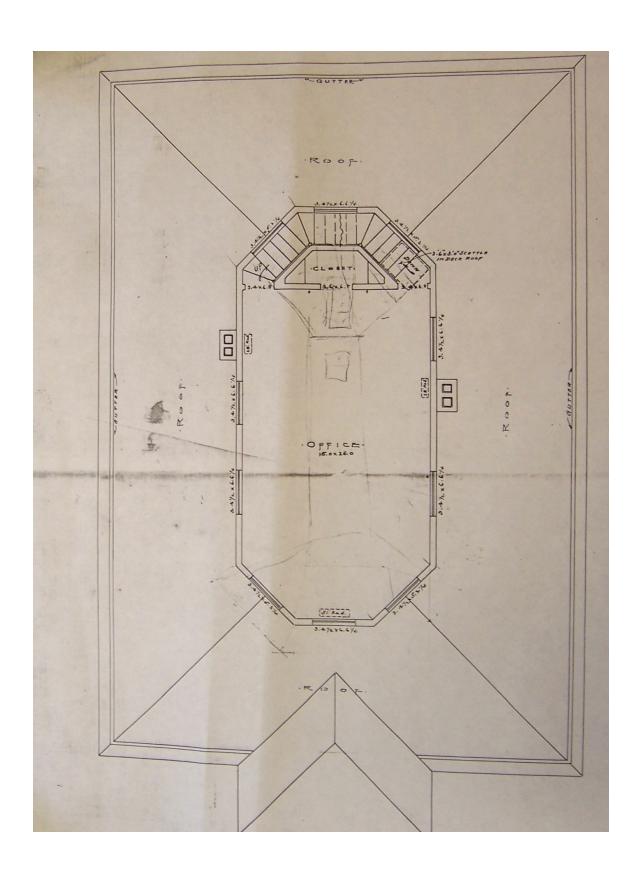
Size of Steam Mains.

from 150 to 250 to be 2 inches. from 250 to 450 to be 2 1/2 inches.

U. F. Department of Agriculture, Division of Accounts and Disbursements. (Weather Bureau Branch.) Washingwon, D. C., _____, 190 at Hatteron unde Basement door at Hatteras Court Rege must be 3 feet wide Basement down at Bromarix, ND., must e 4 feet.







L.R.12946 - 1906 WLM

UNITED STATES DEPARTMENT OF AGRICULTURE. WEATHER BUREAU, OFFICE OF THE CHIEF, WASHINGTON. D. C.

December 29, 1902.

Mr. Alfred H. Thiessen,
Local Forecast Official,

Manteo, N. C.

Sir:

In answer to your letter of the 26th inst., making recommendations concerning the work in experiments in wireless telegraphy, you are hereby directed to arrange to close the station at Manteo. Sell at public auction such property as, in your opinion, is not worth shipping here; the other property you will have boxed and sent to this office. What do you recommend in regard to the disposal of the flagstaff? Could we get a bid on it if it were put up at public auction? The services of Mr. Wilson, the laborer, will be dispensed with. When you have closed the station, you and Mr. Pickels will report to this office for temporary duty while awaiting assignment. You can hire such temporary help in the boxing of property and in transporting the same to the steamboat wharf as, in your judgment, is necessary. Y you with a test between martin and left Hen Very respectfully, the statem you can do so I am super Weather Bureau.

Read APR 9 1903

Anememerer circuit.

I.R. 24-1903

M. S. Department of Agriculture, Weather Queens.

Matteras, N. C. Mar. 27, 1903.

The Chief of the Weather Eureau. Vashington, D. C.

Bir: -

I have the honor to report as to anemometer circuit.

Upon taking charge here last April, the large battery required on this circuit was noted, but as long as it worked well, nothing was done to disturbe it. New instrument case arriving this month coused a change all around. Each circuit was tested in the most positive. manner and all have worked well except the anemometer which requires no less than seven large gordon cells. The trouble has been located in the magnet or fine connecting wires.

If your office considers oction necessary, it is believed the observer can take off present magnet and armature and put on a new set.

Albert J. Devis.
Observer, Weather Bureau.

Cir.Chief Clerk May 15-03.

U. S. Department of Agriculture, Meather Sureau.

Tatteras, N.C. May 20,1903.

TO

The Chief of the Weather Bureau, Woshington, D. C.

S1r: -

I have the honor to acknowledge receipt of Circular, dated office of the Chief Glerk, May 15,1903, relative to changes of title of officials of this bureau, and to say in reply to last paragraph of said circular, that the only one affected by the change at this station, is the undersigned.

In regard to taking the oath, it is doubtful if the observer will be able to comply, as there is no one here at present with authority to administer oaths. There is an official several miles distant, to whom the observer can apply, if authority to incur expense of horse hire is allowed.

Very respectfully,

Albert J. Beris.

Observer, Weather Bureau.

Stranded Vossel.

U. H. Department of Agriculture, Weather Bureau.

Tatteros, N.C. May 25,1903.

To

The Chief of the Weather Sqreau, Washington, D. C.

31r: -

I have the honor to report that about 1:30 a.m. the 23d, four masted schooner Inez.N. Carver went ashore two miles south of New Inlet L.S. Station.

A heavy thunder squall was in progress with wind from all directions estimated 70 to 90 miles per hour.

Vessel was light, bound from New York for Brunswick, &c. Crew of 8, who remained on board ship, there being no danger.

Life saving crews from New Inlet and Chicamacomico boarded her 2 a.m. and remained on board till she was ready to float, which took place 3 a.m. 24th, inst.

Very respectfully,

Observer, Weather Bureau.

M. J. Department of Agriculture,

Meather Bureau.

Watteras, N. C. June fth, 1903.

TI, the undersigned, owners rigree, to sell, bransfer and convey to the U.S. Weather Bureau, Department of Agriculture, a strip of land adjoining present Weather Bureau property on Northwest side, extending full length, 112 feet along Northwest line and 35 feet in width, for the sum of seventy five dollars (375.00).

Also in consideration of this sale, they agree to give roadway from this piece of land to the boat landing for the of landing freight and supplies for this station, forever.

whohn MRollinger

MATERIA.

former.

J. J. Walz Chroid der Alber J. Beris. Wreck.

N. S. Department of Agriculture, Weather Kureau.

Hatteras, N.C. June 24, 1905.

Chief of Weather Bureau,

Washington, D.C.

Sir: -

I have the honor to report stranding of four masted schooner "Lucy H.Russell" half mile south of Gull Shoals, L.S.S. about 2 a.m. 21st, inst.during a heavy thundersquall and northeast gale.

Vessel was bound from Boston, Mass. light, for Brunswick, Ga.
Capt. Bursh and crew of 10 men remained on board till daylight,
as there was no immediate danger, then came ashere.

The vessel has since suffered by reason of easterly winds and pounding on the bar so that she is filled with water and will probably become a wreck.

Very respectfully,

Aller 2, Daise.

Observer, Weather Bureau.

of station.

Hatteras, N.C. July 16th, 1905.

Chief of the Weather Bureau, Washington, D. C.

Sir:

I have the honor to report that paragraph 6, page 10, Instruction to Observers, 1895, relative to transfer of station, has been complied with in the transfer of this station to Mr.S.L.Desher.

I have informed Mr.Dosher as to the location of all Government property, introduced him to such citizens here as are interested in the work of the Bureau, and given him all the information possible so as to enable him to intelligently take up the duties of the station.

Turned station and property and records over to Mr. Dosher this 10 a.m.

Very respectfully,

Asst. Gbserver, Weather Buresus

Assistant Observer, Weather Bureau.

FOR CELL PT.

D. S. DEPARTMENT OF AGRICULTURE WEATHER BUHLAU.

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Hatteras, North Carelina, April 19th, 1905.

Chief U. S. Weather Bureau,

Washington D. C.

(Thre. Chief Operator, Norfolk, Va.)

Sir:-

Referring to the wreck of the schooner Blance Hopkins at Gull Sheal life saving station; 50 miles north of Hatteras, on the 12th instant, I have the honor to enclose herewith copy of wreck report made to the Chief Operator at Norfolk at the time of the stranding of the vessel. This vessel received assistant from this station in the way of sending and receiving reports and in making arrangements with the wrecking companies at Norfolk for aid. The vessel, however, was in such a position that she could not be floated, and after being stripped by the Merrit Wrecking Company, of Norfolk, was finally abandened.

Very respectfully,

Weather Bureau.

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Station

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Hatteras, North Carolina, March 22nd, 1906.

Chief U. S. Weather Bureau,

Washington, D. C.

(Thro. Chief Operator, Norfolk, Va.)

Sir:-

Referring to the stranding of the English sail-ship Clyde at Chicanicomico life saving station on the 9th instant, I have the honor to report that this ship received assistance from this station in the way of sending and receiving reports and in making arrangements with the wrecking company at Norfolk for aid. Prompt assistance was rendered the ship through the medium of the reports from this station, and every effort is being made to float the ship.

This report has been held with a view that the ship would be floated and that a complete report could be made, but as there seems no immediate prospect of getting her off, the report is made now.

Very respectfully,

Weather Bureau.



U. S. DEPARTMENT OF AGRICULTURE

WEATHER BUREAU

ORIGINAL MONTHLY RECORD

OF

OBSERVATIONS

AT Hatteras, N. C

For the Month of 192
*Station is supplied with a barograph, thermograph, sunshine recorder, and self-recording rain gage.
†No. of dry thermometer in use,; No. of wet thermometer in use,; No. of maximum thermometer in use,; No. of minimum
thermometer in use,
†Elevation above ground of the dry thermometer,
If the office has been moved during the month, give date; amount of change in height of barometer, feet (higher or lower)
No. of extra barometer, 1e45.; sum of corrections,e.1.2; date and observation upon which use of station barometer commenced, 9e1.17, 19.3.3.
8 am elegentation, station elevation, // feet; actual elevation, 26 feet.
Location of office: Number 4. Sub Bldy street, room 2nd flas, first observation taken in present office, 8 am.
Jan 1 190 2
*Cancel words that are not appropriate. †To be univered only in December union changes are made during the year. Changes made during the year will be noted in the appropriate months. \$-154
New standard instrument shelter erected Fet. 7, 1928, Same location

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UNITED STATES DEPARTMENT OF AGRICULTURE WEATHER BUREAU WASHINGTON

OFFICE OF THE CHIEF

November 25, 1936.

Official in Charge, Weather Bureau Office, Hatteras, N. C.

Sir:

A quite extensive 6-hourly weather reporting system is being organized during the current fiscal year under appropriations granted by the last Congress. In this connection, it is desired to have 6-hourly reports from your station. These 6-hourly reports at 2 a, m, and 2 p. m., E. S. T., from your station, will be in addition to your regular 8 a. m. and 8 p. m. SGL DandA reports.

It is realized that it would not be possible for your present station force to take these observations and in order to obviate this difficulty, it is planned to authorize you to employ an airway observer at 65 cents an observation for taking the 2 a, m. observation daily, and such of the 2 p. m. ones as may be necessary on Saturday afternoons, Sundays, and holidays. You are requested, therefore, to look into the matter of securing a suitable observer and to make recommendations to the Central Office for his or her employment on Form 4076. A supply of this form is inclosed herewith, in the event that none are available at your station,

The 2 a. m. and 2 p. m. observations will, of course, conform with the rules laid down for their taking and transmission in the revised Weather Code, 1936, copy of which has been sent to your station. The observer should be selected as promptly as possible, in order that he may be trained in the taking of observations prior to January 1, 1937, when it is anticipated that the new program will go into effect.

Your prompt cooperation to secure a suitable person for the compensation outlined above, and making report of this to the Central Office as promptly as possible, are requested and will be appreciated.

The type of observation required at 2 a.m. and 2 p.m. is similar to the SGL DandA reports now sent from your station and accordingly, the observer selected should be of sufficient intelligence to make certain that he will be able to take and encipher the message in code properly.

It is requested that you advise whether or not it will be practicable to transmit observations at 2 a.m. and 2 p.m. by telegraph from Hatteras. If not, advise to where they could be telephoned in order to be placed in the Western Union ar Postal systems.

A complete circular on the matter of the 6-hourly service will be issued to all stations concerned within the near future, which will contain further instructions for your guidance.

A copy of this letter is being forwarded to the Official in Charge of the Weather Bureau Airport Station at Atlanta, Ga., who will furnish you additional information concerning this arrangement upon your request to him.

Respectfully,

W. R. Gregg, Chief of Bureau.

Copy to Atlanta, Ga. and Airport Station.

Hatteras .N.C.

December 7, 1936.

Chief U. S. Westher Bureau, Washington, D. C.

Sir :

Reference is made to letter from Chief of Bureau, dated Movember 25, 1936, relative to the new 6-hourly weather reporting system which is to go into effect with the 2 a.m. observation January 1, 1937, and particularly to the employment of an airway observer, as outlined in the second paragraph of that letter.

As directed, I have given this matter a very therough study, and as strange as it may seem to you, there is but one individual in this entire community whose services could be secured, and who is also sufficiently intelligent to ever learn to take and encipher the messages in code properly, and that happens to be the young man, Mr. Marvin M. Robinson, who is already working for us at this station as Emergency Assistant. I am therefore recommending that Mr. Robinson be employed to take care of this work, in addition of course, to the duttes which he already performs.

For your information perhaps I should explain why it is so difficult to secure satisfactory clerical or office assistance in this locality. Nearly all the people are fishermon, and very few have been able to send their children away to high school. It is true that for the past few years the high school here has been on the accredited list, however it is far below the standard high schools on the mainland. Furthermore, a great many of the young people here, even now, leave the school before they graduate. It is exceedingly rare also, that even one of the graduates is sufficiently intelligent to be relied upon to assume any responsibilities worth while. I had one of them working for me here for a year or more, as janitor, and tried every possible way to get him where he could take an observation, but he never could. In fact, Mr. Robinson is the only young man out of the four who has worked for us since July 1929, who has ever been able to assist me at all, even in an emergency, with the observation work. He is very good and is improving all the while.

Mr. Robinson is employed as Emergency Assistant under L.A. 66-W, dated July 1, 1936, and his present duties are as follows:

Each week day except Saturday he works one hour, performing our regular janitor and labor duties. Every Saturday p.m. he works four hours, relieving me for the afternoon, or perhaps mowing the lawn or taking care of some similar necessary work. Approximately half of the Sundays he works eight hours, relieving me, (the \$400.00 per amum allowed for his employment is not sufficient to allow me to take every Sunday off) also eight hours each holiday. He also relieves me while I am absent on sanual leave.

Mr. Robinson is paid 50 cents per hour for his services, not to exceed eight hours on any one day, or \$400.00 per annum.

With our increase in annual leave the \$400.00 is not sufficient to take care of the employment of Mr. Robinson. I referred the matter to the Central Office under date of June 19, 1936, requesting a flat monthly salary for Mr. Robinson of \$40.00 per month, for which consideration he would continue to perform all the duties as enumerated above and relieve me during my entire leave period, when and as I saw fit to utilize it, as well as taking one of the regular observations for me, a privilege I have not had since July 1, 1929. In a letter from the Assistant Chief of Democrated June 23, 1936, he advised it would not be practicable, as a salary of \$40.00 per month would require an appointment status. He advised however, that I could employ Mr. Robinson as needed and later on in the fiscal year, should I find that an additional \$80.00 would be needed, and so advise the Central Office, same could be authorized. This was very highly appreciated by me and solved my problems very nicely. I made this plain to Mr. Robinson and he has been taking one of the regular observations for me for quite some time, which has certainly been a great relief. I merely mention these facts, in order that you will understand that while the authorization covering the employment of Mr. Robinson as Emergency Assistant for the present fiscal year only permits an expenditure of \$400.00, it is understood that in order for me to use my annual leave, and Mr. Robinson relieve me. and carry on his other regular duties at the station, an additional \$80.00 will be authorized.

In addition towar. Robinson's present duties, he is very anxious to take on the extra work incident to the 6-hourly reports. That is, all the 222.m. observations, and such of the 2 p.m. ones as may be necessary.

According to any estimate Mr. Robinson's total compensation would be approximately \$720.00 per annum.

2 4 4 4

Perhaps you would prefer to give him an appointment, if practicable, where his total duties would aggregate around \$60.00 per month. It would somewhat simplify matters.

As directed, I am forwarding Form4076, recommending the appointment of Mr. Robinson as Airway Observer at 65 cents per observation. If however, under the circumstances and duties explained, it is deemed better to give Mr. Robinson an appointment carrying some other title, surely it is agreeable to both of us.

It is not precticable to transmit observations at a.m. by telegraph from Hatteras. We do have direct telegraph line connections with the Western Union system in Morfolk, but due to the present unsatisfactory condition of the line, the signals will simply just not carry over the line. I have understood unofficially, that the Coast Guard is now contemplating installing new No. 8 wire for the telegraph line. When that is done, I have every reason to believe, we will be able to transmit any or all of our messages direct to the Western Union system in Norfolk.

The 2 p.m. observations, daily except Saturday afternoons, Sundays and holidays, we can give to our Cape Henry
Office by telegraph, for relay to Norfolk, as we now do
with our 8 s.m. and 8 p.m. observations. Our Cape Henry
Office does not have an operator on watch Saturday afternoons, Sundays nor holidays; neither do they have any one
on watch at 2 s.m.

We have a very good telephone connection through the Cape Henry Coast Guard Station, direct with either the Postal or Western Union system, by which we will be able to effect prompt delivery of our 2 a.m. messages, and such of the 2 p.m. ones as may be necessary, direct to either of those systems in Horfolk.

You may rest assured we will be prepared to put the program into effect with the 2 a.m. observation January I, 1937.

Information is requested as to which of the systems mentioned it is desired that the messages be given.

Respectfully.

R. B. Dailey, Junior Meteorologist.

OFFICE OF THE CHIEF

December 11, 1936.

Official in Charge, Weather Bureau Office, Hatteras, N. C.

Sir:

This will acknowledge receipt of your letter dated December 7, 1936, relative to the employment of an airway observer for six-hourly work at your station.

In reply, you are advised that it will not be practicable to employ Mr. Robinson as both airway observer and emergency assistant, for reason that this would constitute dual employment. However, Mr. Robinson can be employed as airway observer at \$2.00 a day and his services can then be utilized for taking all the 2 a. m. six-hourly observations on Saturday afternoons, Sundays and holidays. Also, he can relieve you in the taking of other necessary observations, the changing of sheets and entry of data on forms, on such days as you deem this necessary. This plan would, of course, provide all the assistance that you now have and also provide for the taking of the six-hourly observations.

With reference to laboring work at the station, the observer should not be required to do this. Instead, it is suggested that you issue invitations for bids for this work at a stated rate per hour and after replies are received, forward these to the Central Office with a Purchase Requisition and Project Sheet, with recommendations for award.

In connection with the appointment of Mr. Robinson as airway observer at \$2.00 per diem, this appointment will be at a rate of over \$45 a month and, therefore, it must be approved by the Secretary of Agriculture prior to his assuming these duties. Therefore, under no circumstances should you permit Mr. Robinson to begin work until you have been notified from the Central Office that his appointment has been approved.

Please advise immediately whether or not the above plan will be satisfactory. If so, action will then be taken here to recommend Mr. Robinson's appointment at \$2.00 per diem, effective January 1, 1937, to the Secretary of Agriculture for approval, basing such recommendation on your

Form 4076 of December 7, 1936. A new Form 4076 for Mr. Robinson is unnecessary as we can change the wage rate on the form already submitted.

Your prompt advice is requested.

Respectfully,

C. C. Clark, Acting Chief of Bureau.



Postal Telegraph the international system

Commercial Cables All America Cables



This is a full rate Telegram, Cablegram or Radiogram unless otherwise indicated by signal in the check or in the address.

DL DAY LETTER
NM NIGHT MESSAGE
LCO DEFERRID CABLE
NLT, NIGHT CABLE LETTER
WLY WECK END CABLE LETTER
RADIOGRAM

RXWA140 18 WEA

PSO WASHINGTON DC 31 450P

1936 DEC 31 PM 5 02

OBSERVER

266 HATTERAS NCAR

APPOINTMENT ROBINSON AIRWAY OBSERVER TWO DOLLARS PER DIEM APPROVED BY SECRETARY EFFECTIVE JANUARY FOUR

GREGG ..

75

OFFICE OF THE CHIEF

February 2, 1937.

Official in Charge, Weather Bureau Office, Hatteras, N. C.

Sir:

Beginning February 10, 1937, it is requested that in addition to your present procedure of telegraphing these reports to "Observer, Chicago, Ill.", you also telegraph your 1:30 a. m. and 1:30 p. m., E. S. T., six-hourly reports to "Airway Observer, Atlanta, Ga.", and "Airway Observer, Newark, N. J."

Beginning March 1, 1937, it is requested that you discontinue telegraphing your 1:30 a. m. and 1:30 p. m., E. S. T., six-hourly reports to "Observer, Chicago, Ill." and telegraph them on and after that date only to "Airway Observer, Atlanta, Ga.", and "Airway Observer, Newark, N. J."

The above arrangements are being made in order that the Atlanta and Newark Airport Stations may receive the necessary reports from your station for use in forecasting work earlier than is possible under present procedure.

Your cooperation in the matter is requested and will be appreciated.

Respectfully,

W. R. Gregg, Chief of Bureau.

Copy to Atlanta, Ga. and Airport Station Chicago, Ill. and Airport Station Newark, N. J. and New York, N. Y.

Hatteras.N.C.

February 18, 1937.

Chief U. S. Weather Bureau, Washington, D. C.

Sir :

Information is desired as to what procedure should be followed in the way of accounting with the telegraph company in the handling of our 1:30 a.m. and 1:30 p.m. E. S. T., six-hourly reports.

In the past we have never done any accounting whatever with the telegraph companies in connection with any of our weather messages.

In "Instructions for Six-hourly Airway Service, Beginning January 15, 1937, "from Office of the Chief, dated December 15, 1936, It appears to me that we are to prepare an abstract for accounting with the telegraph company. We have no forms on the station for this purpose however, and the book-keeper in the Western Union Telegraph Office, Norfolk, Va., with whom I have talked regarding the matter, advises that she is under the impression that their General Accounting Office, where her statement has been forwarded, will handle the matter directly with our Gentral Office in Washington. This however, does not seem to me to be the correct method of handling the account.

Our regular SGL MA reports, (7:30 a.m. and p.m.) we continue to give to our Cape Henry office on the telegraph line, as we have always done in the past, and that office relays them to the Western Union in Norfolk. Our 1:30 a.m. and 1:30 p.m. reports, however, are given to the Western Union Company in Norfolk, Va., direct, over the Government telephone line.

If those messages are to be abstracted by this office, which it is assumed they should be, kindly forward a supply of the necessary forms, together with instructions.

Respectfully,

R. B. Dailey, Junior Meteorologist.

OFFICE OF THE CHIEF

July 22, 1937.

Recommend N. e. 1937
Haguly RIDE

Official in Charge, Weather Bureau Office, Hatteras, N. C.

Sir:

Beginning on or as soon after September 15, 1937 as possible, it is desired to have reports telegraphed from your station daily at not later than 4:50 and 10:30 a.m. and p.m., E.S.T. to "Airway Observer, Arlington, Va.". These reports will consist of a regular airway report (see Paragraph 4 of Circular N, 1935 for elements included in a regular airway observation) in plain English followed in order by code word for 3-hour pressure change and characteristic, using words for 0 to 100-degree temperature, and a code word or words for clouds.

It is realized of course that you will not be able to furnish these reports without additional assistance and the Central Office has in mind the assignment of a Junior Observer to your station for this purpose. However, if you feel that the work could be handled more satisfactorily by the employment of an airway observer, the Central Office will give consideration to this.

It is requested that you consider the matter and forward your recommendations concerning the personnel and organization of this work at your station at the earliest possible date together with any comment that you may consider advisable and necessary. You should outline fully any circumstances which might require the telephoning of any of the reports to some other point for telegraphing or require them to be transmitted entirely by telephone to their destinations, giving costs involved, routings, etc.

Your cooperation in the matter is requested and will be appreciated.

Respectfully,

W. R. Gregg, Chief of Bureau.

By:

Acting Chief of Bureau.

Office of the Chief

August 11, 1937.

Official in Charge, Weather Bureau Airport Station Arlington, Va.

Atlanta, Ga.
Burbank, Calif.
Chicago, Ill.
Cleveland, Ohio
Dallas, Tex.

Weather Bureau Office, Atlantic City, N. J. Dodge City, Kans. Williston, N. Dak. Huron, S. Dak. Kansas City, Mo.
Newark, N. J.
Oakland, Calif.
Portland, Oreg.
Salt Lake City, Utah

Grand Junction, Colo. North Head, Wash. Tatoosh Island, Wash. Hatteras, N. C. Eureka, Calif.

Sir:

Reference is made to letter dated July 22, 1937, relative to organizing three-hourly reporting service from selected off-airway stations.

In this connection, the Bureau of Air Commerce advises that their revised teletype circuit line-up will not be installed until October 1, 1937. In view of this, the beginning date of the three-hourly service will be October 1, 1937, or as soon thereafter as possible, instead of September 15, 1937, as given in our letter of July 22, 1937. If the work is organized at any station, prior to this date, it will be satisfactory to have the reports telegraphed to the general supervising station, but these will not be placed on the teletype circuits until beginning on October first.

For the further information of the general supervising stations, it is now planned to have three-hourly reports from Sault Ste. Marie, instead of Houghton, Michigan.

Respectfully.

William Weber, Acting Chief of Bureau.

Copy to Bureau of Air Commerce.

Office of the Chief

August 17, 1937.



Official in Charge, Weather Bureau Office, Dodge City, Kans. Williston, N. Dak.

Hatteras, N. C. Eureka, Calif.

Sir:

With further reference to our letter dated July 22, 1937, and your reply thereto, relative to inaugurating three-hourly observations at your station, you are advised that action is being taken to appoint a new Junior Observer to your station to carry out this program.

Respectfully,

William Weber, Acting Chief of Bureau.

Office of the Chief

August 18, 1937.

Sceneral Vol93

Official in Charge, Weather Bureau Office, Hatteras, N. Car.

Sir:

Reference is made to previous correspondence relative to the organization of 3-hourly reporting service at your station, particularly concerning the time.

In this connection, it has now been decided that it is advisable to have these observations taken beginning is advisable to have these observations taken beginning at 4:10 and 10:10 a.m., and p.m., E.S.T., and filed at about 4:30 and 10:30 a.m. and p.m., instead of taken beginning at about 4:30 and 10:30 a.m. and p.m., and filed at about 4:50 and 10:50 a.m. and p.m. Accordingly, if and when this service is inaugurated at your station, the observations should be begun at 4:10 and 10:10 a.m. and p.m., E.S.T. and filed at 4:30 and 10:30 a.m. and p.m., E.S.T.

Respectfully,

W. R. Gregg, Chief of Bureau.

Airport station

Arlington, Vir.

Sept. 28, 1937.

Official in charge, Weather Bureau Office, Hatteras, N. C.

Dear Sir:

PHA = W.B. office, Hatterest NHA = Radio str. Cafe Statters NCL = ... Cape Lackout

This office has a note from the Official in charge, Weather Eureau Airport station, Cleveland, Ohio calling attention to the fact that there is quite a spread between the NHA and the Pha berometer reports. He states that the difference has been noted due to the fact that NHA is used on auxiliary charts because it is usually in sooner than the PHA report. He suggests that the idea on the lower half of page 419 of the last copy of Topics be applied.

While assigned to the Atlanta airport station, the writer saw a copy of a letter from the Weather Bureau to the Navy requesting that mercurial barometers be installed at NHA and NCL and it was thought that this was one. It is barely possible that the difficulty is not so much instrumental as it is personnel.

If you can assist in any way in bringing about better readings at NHA and NCL, it will be appreciated by this office.

Very truly yours,

E. M. Barto, Metlgst.

> Received Hatteras, n.C. Sept. 30, 1937

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

CLASS OF SERVICE

This is a full-rate Telegram or Cable-gram unless its de-ferred character is in-dicated by a suitable symbol above or pre-ceding the address.

ESTERN

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APPOINTMENT RECEIVED ARRIVE HATTERAS TONIGHT WIRE CENTRAL OFFICE

WESTERN UNION GIFT ORDERS ARE APPROPRIATE GIFTS FOR ALL OCCASIONS

AND HATTERAS

REUBEN W BANKS

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1940A

Hatteras, N.C.

February 12, 1938.

Chief U. S. Weather Bureau, Washington, D. C.

Sir :

Since our new Junior Observer, Mr. Reuben W. Banks, is now taking and transmitting both regular and airway observations unassisted, it seems in order to establish a definite schedule of hours of duty for each employee, whereby the maximum amount of work may be performed in the most systematic and regular manner.

It is seldom necessary that more than one man must be on duty at the same time, although with the inauguration of our three-hourly observation work; that is, the 4:30 and 10:30 a.m. and p.m. observations, in addition to those which we are already covering, it will practically require a continuous watch. In fact, in order that there will be no possibility of delay in taking and transmitting any observation, that all work may be kept fully in hand and right up to date at all time, and that the regular 39 hours of duty per week for each employee may be closely observed, the following schedule to be put into effect March 1, 1938, is submitted for your approval:

Monday to Friday of each week, I will come on duty at 8 a.m. and remain until 4 p.m., with one hour off for lunch between noon and 1 p.m. At 4 p.m. Mr. Banks or Mr. Marvin M. Robinson, the Airway Observer, will come on duty and remain until midnight, with one hour off for dinner between 6 and 7 p.m. The other to come on duty at 1 a.m. and remain until 8 a.m. Mr. Banks and Mr. Robinson to alternate their watches each month. Each Saturday I am to perform 4 hours duty between 8 a.m. and noon, but no Sunday or holiday duties. Between the hours of 1 a.m. Saturday and 1 a.m. Monday, as well as on holidays, Mr. Banks and Mr. Robinson are to be exempt from all duties except the taking, transmitting and recording observations and changing record sheets, which duties they may alternate weekly or monthly. This schedule will just about as nearly embrace a 39 hour week for each of us as I am able to fix.

It will be noted from the above tentative schedule that I will not take either of the regular observations. If you feel that this is at all objectionable, surely I would just as soon come on duty at 7 a.m. instead of 8 a.m. In that case I can take the regular 7:30 a.m. observation.

My reason for recommending that my hours of duty begin at 8 a.m. is because it seems to me that the hours recommended would work out in a more regular and systematic manner, affording the best opportunity to properly get in the desired and required number of hours regularly. We have an observation at present which we have to start at 1:10 a.m. The man who comes on duty at 1 a.m. would be just in time for that. He would complete his 7 hours of duty, practically, with the completion of the 7:30 a.m. observation. Likewise, we will have an observation to begin at 4:10 p.m. The man coming on duty at 4 p.m. will be just in time for that.

Mr. Banks and Mr. Robinson occupy a house together and the one of them going off duty at midnight will call the other who will report for duty at 1 a.m. I feel that in the realization of the fact, that an observation must be started promptly upon reporting for duty at 1 a.m. and 4 p.m. might prompt almost any one to be more regular than if it were felt that perhaps no great hurry was essential.

Any changes or suggestions you care to offer will certainly be entirely satisfactory to us.

Respectfully.

R. B. Dailey. Junior Meteorologist.

ADMINISTRATIVE DIVISION

March 4, 1938.

Official in Charge, Weather Bureau Office, Hatteras, N. C.

Sir:

Reference is made to your letter dated February 12, 1938, relative to a schedule of duties at your station.

Your letter has been considered carefully and it is believed that the plan which you outline is satisfactory. It would, of course, be preferable if the 7:30 a.m. and p.m. observations were taken by one of the Weather Bureau commissioned personnel at the station, but it appears that to do so would require an extensive change in the proposed schedule, particularly with reference to the matter of one observer waking the other at midnight.

In view of the foregoing, it is suggested that you proceed to place the schedule outlined into effect.

Respectfully,

William Weber, Chief of Division

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Hatteras, N.C.

May 21, 1940.

Chief U. S. Weather Bureau, Washington, D. C.

Sir:

Reference is made to previous correspondence, particularly to our letter dated April 16, 1940, and reply from Aerological Division dated April 25, 1940, relative to probable employment of an airway observer at our station, in addition to the present station personnel, in order that we may take advantage of the regular 39-hour week, with Sunday and holiday privileges; also to relieve members of the station force when on sick or annual leave.

A tentative working schedule is submitted below, for your consideration:

My shift, Monday to Friday inclusive, 7:00 a.m. to Noon and 12:30 to 2:30 p.m. Saturday, 7:00 a.m. to Noon. This gives me a total of 40 hours per week regularly, with no duties on Sundays or holidays.

Mr. Byrum's shift, Monday through Friday, 10:00 a.m. to Noon and 1:00 p.m. to 5:00 p.m. Saturday, 1:00 p.m. to 2:00 p.m. and 4:00 p.m. to 5:00 p.m., also on Sundays and holidays 4-5, 7-8 and 10-11 p.m. This gives him a total of 40 hours per week.

Mr. Gaskins' shift, Monday through Friday, 7:00 p.m. to 2:00 a.m. Saturday 1-2 a.m., 7-8 p.m. and 10-11 p.m. Sunday and holidays 1-2 a.m. This gives him a total of 39 hours per week. He is off duty continuously however, from 2:00 a.m. Sunday morning until 7:00 p.m. Monday evening.

Mr. Byrum and Mr. Gaskins propose to alternate their shifts each month. This is entirely satisfactory to me and is therefore recommended.

Mr. Stowe, the proposed new airway observer will get the 4:30 a.m. airway observation every day, including Sundays and holidays. Sundays, (also holidays) he will get the 4:30 a.m., 7:30 a.m., 10:30 a.m. and 1:30 p.m. observations. This will give him an average of 10 observations each week.

During the absence of one of the regular members of the station force Mr. Stowe's services would be needed for probably 3 observations each day.

We are enclosing a rough sketch showing the tour of duty for each member of our force, as well as for the proposed new airway observer, as outlined in the fore-going.

If the proposed working schedule does not seem to you to be entirely in order, surely we will be very glad to make any changes you suggest.

If the employment of Mr. Stowe can be approved as recommended; that is, for an average of 10 observations regularly each week, with continuous employment in the case, of a member of our station force, I feel that our relief problems will be solved. Recommendation is made that compensation for Mr. Stowe's services be fixed at 50% for each observation taken.

Respectfully,

R. B. Dailey, Junior Meteorologist.

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