

SPECIFICATIONS
FOR
HENRY COUNTY E. M. S.
BUILDING RENOVATION

701
~~1000~~ N. Perry

PREPARED FOR:
HENRY COUNTY COMMISSIONERS

PREPARED BY:
NAPOLEON ENGINEERING &
SURVEYING, INC.
925½ N. SCOTT ST.
P. O. BOX 671
NAPOLEON, OHIO

CONDITIONS & RESPONSIBILITY OF ALL CONTRACTORS

GENERAL:

All work listed under this heading shall be done in accordance with the specifications and drawings. Contractor is held to have familiarized himself with the provisions contained therein.

CONDITIONS AT SITE OF BUILDING:

The contractor shall visit the site prior to the bidding and shall be responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the site, the character and extent of the existing work, within or adjacent to the site and any other work being performed thereon at the time.

RESPONSIBILITY OF CONTRACTORS:

It shall be understood by all contractors employed on the project that normal operations and activities will be maintained in the building.

It is the responsibility of the Contractor to maintain adequate safety measures at all times to protect the building, there occupants, employees, pedestrians and anyone who may have occasion to frequent the premises in the course of maintaining normal operations. There shall be complete cooperation between the supervising engineer, the owner and the contractors to see that all safety requirements are carried out.

The General Contractor shall be responsible for preventing damage to the existing building, drives, sidewalks, etc. The Contractor shall make all necessary repairs that may occur and do all patching to meet existing conditions as specified and called for on the drawings.

Adequate protection measures, satisfactory to the Owner and Engineer, shall also be provided to guard against anyone who may have occasion to frequent the premises in the course of maintaining normal operations.

During working hours the Contractor shall either be on the job himself or he shall be represented by a competent foreman. The General Contractor shall co-ordinate all trades and sub-contractors and provide adequate labor, equipment and materials as needed.

In the interior of the building where remodeling work occurs the contractor at the end of each working day shall remove all debris and rubble and leave the area broom clean.

DEBRIS AND RUBBLE:

Burning of debris will not be permitted on the site. It is the responsibility of the Demolition Contractor to dispose of all debris and rubble wherever he can find a legal place to dump. All debris and rubble shall be hauled away from the site and any fees arising for same shall be paid by the Contractor.

DEMOLITION WORK

SCOPE OF WORK:

The General Contractor shall furnish all labor, materials, equipment insurance and service necessary for the proper and entire completion of the demolition work required as hereinafter specified and called for on the drawings.

DEMOLITION WORK:

Shall be as listed below but not limited to the following items:

- 1) Saw cut and remove existing concrete floor for grade beam and plumbing work.
- 2) Cut opening in the existing exterior masonry wall for new Door "A" and patch to match existing conditions.
- 3) Cap with concrete all existing floor drains with concrete where called for on the drawings.

CONCRETE WORK

CONCRETE:

All concrete used for patching of floors, mechanical base, etc., shall be 5- $\frac{1}{2}$ bag, 3,000 lb. psi., transit mix. Concrete floors shall be floated and troweled to a smooth even finish.

MISCELLANEOUS METAL

STRUCTURAL STEEL:

Furnish and install all structural steel lintels and angles for all openings as called for on the drawings.

All steel shall receive one shop coat of rust inhibitive metal primer.

METAL DOORS AND FRAMES

METAL DOORS AND FRAMES:

Furnish all steel doors and frames for all openings, sizes and type as called for on the drawings.

All materials used in the fabrication of pressed steel doors and frames shall be free from defects impairing their strength, durability of appearances.

Exterior door frame shall be standard 16 gauge steel, set up and internally welded. Frame shall have mitered corners and shall be reinforced with wedge lock corner clips to provide a firm interlock at heat and jamb.

Interior door frames shall be standard 18 gauge steel knocked down construction. Frames shall have mitered corners and shall be reinforced with wedge lock corner clips to provide a firm interlock located 4" from the top of the door opening and shall have a welded in base anchor attaching plate which will allow for field installation of loose base anchors.

All frames shall be supplied with three rubber bumpers per strike jamb installed at the factory. All frames shall be mortised and reinforced for hardware with mortised hardware reinforcements drilled and tapped at the factory.

Exterior doors shall be fabricated from 16 gauge steel and interior doors 18 gauge steel "L" series, standard seams flush type design. Core of doors shall be insulated for sound and heat.

All metal for doors and frames shall be treated at the mill to insure superior prime coat adhesion. All metal surfaces on doors and frames shall be bonderized and receive one coat of baked on prime paint.

Where noted or required, provide for the door and frame, Underwriter's Laboratories, Inc., labels for the class of opening as indicated.

All metal doors and frames shall be as manufactured by Steel Works, Republic, Tennessee or approved equal. Provide shop drawings for Engineers approval.

MASONRY WORK

GENERAL:

All work under this heading shall be done in accordance with the specifications and drawings. Contractor is held to have familiarized himself with the provisions contained therein.

SCOPE OF WORK:

This division of the general work includes the furnishing of all materials, labor, services and equipment to complete the masonry work and other work shown on the plans and mentioned in the specifications. Also complete all work reasonably incidental to the completion of the work.

GENERAL:

All masonry work shall be built in exact conformity with the drawings furnished and special care shall be taken to start correctly and walls, piers, etc. All work shall be perfectly plumb, square and level and all sills, lintels, etc. set true and braced across. Contractor shall take down any work without extra charge that may interfere with the correctness of the work of any other contractor. Lay up slots of heating, soil pipe, conduit and other piping where directed.

CONCRETE BLOCKS:

Concrete block throughout, interior walls, partitions, etc. where indicated on the drawings shall be constructed of hollow load bearing units made with light weight aggregate.

All concrete blocks shall meet all requirements of ASTM Specification C-90 for hollow, load bearing, Grade "A" block. Lightweight aggregate shall be expanded slag equal to "Haydite", "Waylite", or "Buildex". All concrete block shall be 8 x 16 inch nominal face size and of thicknesses required by the construction shown. Provide fractional units necessary to complete the bond. Concrete blocks shall be free from carbonaceous materials and iron oxides to insure freedom from staining and popping. Texture for all concrete block used for exposed facings shall be uniformly medium coarse, to provide a satisfactory effect when painted.

Concrete block shall be cured by the high pressure steam (Autoclave) method in saturated steam at approximately 140 psi and at approximately 350 degrees for 8 to 10 hours. Low pressure steam cured concrete block will be acceptable provided they are at least 28 days old when delivered to the job site. All concrete blocks shall be sound and whole, properly cured and seasoned. Block with chipped or broken edges will be rejected.

Provide bullnose block for all external corners and jambs for all new walls.

All block delivered to the job shall be stacked in a dry place, off the ground, in a manner to promote circulation of air through and around the block. All stacked block shall be covered with tarpaulins or plastic to protect from the weather.

All exposed blocks to have joints rodded with a 3/4" round tool. Cut all blocks for the mechanical trades. All mechanical work to be concealed.

MORTAR:

All mortar for face and common brickwork, concrete blocks and backup work unless otherwise specified, shall be ASTM C-91, Huron, General Portland, Atlas, Miami, Medusa or equal brick mortar mixed in accordance with manufacturer's directions. Use a good grade of clean washed sand, as approved by the Engineers.

FINALLY: (Blockwork)

All exposed concrete block units, before completion for work, shall be carefully tuck pointed and cleaned leaving the walls free from all foreign matters ready to receive paint. Walls to be rubbed down with a 2"x4" wood block covered with metal lath.

ACOUSTICAL CEILING SYSTEMS

GENERAL:

All work under this heading shall be done in accordance with the specifications and drawings. Contractor is held to have familiarized himself with the provisions contained therein.

SCOPE OF WORK:

This division of work includes all labor, materials and equipment necessary to install all acoustical suspension systems, acoustical ceiling panels, etc. in the types, sizes and patterns as called for on the drawings and as herein specified.

CONDITIONS:

Ceiling systems and panels shall be installed in accordance with the Acoustical Material Association recommendations and shall not begin when the building is excessively cold, damp, hot or dry. Temperature and humidity conditions closely approximating the internal conditions which will exist when the building is occupied shall be maintained. Contractor shall be thoroughly experienced with the type of installation and workmanship shall be of quality and character specified and or shown.

Acoustical ceiling products listed in this specification are as manufactured by Armstrong and are intended as a standard of quality appearance and performance. Similar products as manufactured by Owens-Corning, Johns-Manville, Celotex or United States Gypsum will be acceptable provided the individual product meets or exceeds all properties as specified below. If different than specified the Contractor shall submit samples to the Engineer for his approval before ordering any materials.

INSTALLATION:

The ceiling systems shall be installed to permit border units of the greatest possible size. All members shall be aligned for true level surface and straight lines. All work to be done in strict accordance with the recommended manufacturer's specifications.

EXPOSED SUSPENSION SYSTEM:

The exposed grid suspension system shall be erected in a pattern as indicated on the reflected ceiling plan with all edges in alignment and all faces in a plane. The main runners shall be 1½" deep steel "T" beams installed 48" l/c with 1½" deep steel double web cross T's installed 24" o/c. Main runners are to be suspended by means of #12 gauge wire from the structural members and spaced not over 48" o/c. Install angle mold at all vertical surfaces. Suspension shall be made from the wood joists above.

All metal sections shall be cold rolled steel and are to not be mechanically and chemically cleansed, electro-galvanized and all surface exposed and unexposed shall have received a high white bake enameled finish. All stamped parts shall be mechanically cleansed, electro galvanized and treated with a chromate conversion coating.

Systems other than Armstrong are acceptable provided they meet this specification and a specification or sample is submitted to and approved by the Engineer before ordering of any material.

GENERAL:

Light fixtures and ceiling diffusers may be supported directly from the joists above or to the main tees of the suspension system. Supporting light fixtures from the cross tees is not acceptable.

If supported on the suspension system, then the main tees are to be suspended by means of #9 gauge wire, spaced not over 48" o/c.

CEILING MATERIALS:

See Room Schedule, Building Cross Sections, and Electrical Plan.

GENERAL:

Following installation, clean soiled or discolored surfaces or units. Remove and replace units which are damaged or improperly installed. Leave six (6) pieces of each size unit with the Owner at the completion of the job for replacement purposes. Remove all excess materials and debris from the site.

CARPET

GENERAL:

All work under this heading shall be done in accordance with the specifications and drawings. Contractor is held to have familiarized himself with the provisions contained therein.

SCOPE OF WORK:

Provide all labor, materials and equipment necessary to install all carpeting where called for on the drawings and as hereinafter specified.

The carpet contractor shall verify all dimensions at the building site before ordering and cutting materials.

It shall be the carpet contractors responsibility to contact the manufacturer for proper installation instructions for the material laying and seam treatment.

All workmanship, installation and materials shall be guaranteed by the contractor for a period of one year after final acceptance.

PREPARATION OF SUB-SURFACE:

Inspect all sub-flooring which shall be in a smooth level plane, free from any imperfections and free from dirt and dust. If any conditions existing that would be detrimental to proper installation notify the General Contractor and Engineer before starting work. The application of any carpet shall be an indication of the Carpet Contractor's acceptance of the sub-surface conditions and he shall be held responsible for any defects after laying the carpet.

CARPET:

Carpet in rooms 101, 104, & 105 shall be Pepperell Carpets, Multispec Series,

Spec. One (P3-094), 26 oz. pile yarn weight of Antron III nylon yarn installed by the direct glue down method in accordance with manufacturers instructions. Color to be selected by the Owner.

TESTS:

Submit satisfactory proof that wearing surfaces of floors has at least a Class "D" or better flame spread rating, (200 or Less), by either a copy of the DCC FF 1-70 (Pill Test) or ASTM E-84, (Tunnel Test) from an approved testing laboratory or an affidavit (Notorized statement) from the manufacturer, that their product has passed this test.

RUBBER COVE BASE:

Provide and install 4: rubber cove base in all rooms where called for on the room schedule and where shown on the drawings. Base is to be cemented carefully with contact cement as recommended by the manufacturer. Color to be as selected by the Owner.

CAULKING

SCOPE OF WORK:

Caulk around both sides of all hollow metal door frames set in masonry prior to decorating. Caulk under all exterior metal thresholds.

Caulking material shall be Mono-Lastro Metric, 1 part factory mix as manufactured by Dap, Tremco or Sonneborn.

PAINTING

Work under this section includes the painting of all carpentry work, steel, and wall surfaces. Painting under this division is in addition to any shop coats required under other divisions.

Paint and finish shall be equal to Pittsburg Paint Company or Sherwin Williams applied in accordance with best standards of workmanship and with the recommendations of the manufacturer of the paint being used and as directed by the Engineer. The door edges, sides, bottom and top shall be painted the same as the face and shall receive the same number of coats. Colors where not specified will be selected by the Owner.

This specification is intended to cover the painting of all wood, metal, and masonry walls.

For convenience of description and to establish a measure of quality, paint in the following schedule is designated by name or number of specific manufacturers. The use of these names and numbers indicate no preference for the products of the companies named and the use of paints of equal quality and characteristics, produced by other reputable manufacturers of high grade paints, will be approved and permitted.

SCHEDULE

Exterior Door and Frame	1 Coat Waterspar Primer
Interior Frames	2 Coat Waterspar Auto Enamel
Window Frames	1 Coat Waterspar Primer
	2 Coat Waterspar Auto Enamel
Masonry Walls	1 Coat Primer
	2 Coat Waterproof Cement Paint

FINISH HARDWARE

All work under this heading shall be done in accordance with the specifications.

SCOPE:

All finish hardware shall be furnished and set by the General Contractor and shall include all items necessary to complete the building properly whether or not specifically mentioned in the following specifications or hardware schedule.

GENERAL:

All finish hardware shall be in accordance with the Ohio State Building Code, notwithstanding these specifications.

The General Contractor shall fit and apply all hardware to the building and shall make all necessary adjustments required for its proper operation.

The metal door and frame manufacturer shall make all necessary provisions for fitting and attaching template mortise hardware. Reinforcements only are to be supplied for attaching surface hardware, drilling and tapping for which is to be done in the field. All finish hardware used in conjunction with hollow metal doors and frames shall be made to template and packed with machine screws. Templates and a complete schedule of hardware shall be sent to the manufacturer of metal doors as soon as the Engineer has given approval.

A complete hardware schedule shall be submitted to the Owner in triplicate for approval before ordering any hardware.

PLUMBING SPECIFICATION

GENERAL:

All work under this heading shall be done in accordance with the specifications and drawings. Contractor is held to have familiarized himself with the provisions contained therein.

SCOPE OF WORK:

This division of work covered by these specifications and accompanying drawings shall include all labor, materials, equipment and services necessary for and reasonably incidental to the complete installation of the Plumbing system for the project.

PLUMBING FIXTURES:

The Plumbing Contractor shall provide and install all fixtures, complete and connect all equipment furnished by others.

Fixtures as manufactured by Fiat, Kohler, American Standard, Crane or Eljer will be acceptable. Catalog numbers specified below are those of Fiat and Kohler to be used as a guide.

WALL HUNG LAVATORIES:

Kohler, Greenwich, K-2020, 21"x18", vitreous china, elongated siphon jet, 3/8" angle supply with stops and annealed vertical tube. Provide a #44 Olsonite white plastic seat with cover.

SERVICE SINK:

Fiat, Model TSB-12, 24"x36"x12" precast terrazzo floor sink with integral drain body and a #830-AA chrome plated service faucet with vacuum breaker.

DOMESTIC WATER SERVICE:

New water service shall be continued off existing water lines in building. All new hot and cold water piping shall be type "L" copper one size larger than fixture requirement. Provide and install dielectric union fittings at all connections between copper and steel pipe.

SANITARY SEWERING:

The Plumbing Contractor shall saw cut the existing concrete floor and install a sanitary sewer and vent system to all new fixtures.

Remove and dispose of all concrete and earth from trenches. All excavations shall be backfilled with compacted stone or sand. No earth shall be used for backfilling.

Service weight cast iron no-hub soil pipe and fittings or approval ABS or PVC schedule #40, polyvinyl chloride pipe will be accepted for sanitary work.

CUTTING AND PATCHING:

Each contractor is to do all cutting as required by their respective trade in a neat workmanlike manner and remove all debris. Each Contractor shall be responsible for their own patching where necessary to meet the existing conditions or as called for on the drawings in a satisfactory manner.

HEATING & VENTILATING

GENERAL:

All work under this heading shall be done in accordance with the specifications and drawings. Contractor is held to have familiarized himself with the provisions contained therein.

SCOPE OF WORK:

This division of work covered by these specifications and accompanying design drawings shall include all labor, materials, equipment and service necessary for and reasonably incidental to the complete installation of the Heating & Ventilating systems for the project.

SPACE HEATERS:

The existing space heaters shall be disconnected and relocated where shown on the drawings. Extend flue pipe to the existing chimney outlet, or provide new flue if required.

The existing space heaters shall be utilized for the heating system. Clean and check controls and bearings.

Provide a new room thermostat for the system installed where called for on the drawings.

EXHAUST FANS:

Provide Nutone or equal fan-light units in the Toilet Rooms and exhaust fan with humidistat in Equipment Room installed where called for on the drawings complete with ductwork and exterior wall vents. Wiring shall be by the Electrical Contractor.

FINAL:

At the close of the job after all mechanical equipment is in proper working order, the Heating Contractor shall instruct the Owner on changing of filters and mechanical operation of all equipment etc.

GUARANTEE:

The Heating Contractor shall guarantee, in writing, to the Owner that all work included therein shall be free from defects in workmanship and materials, that apparatus will develop capacities and characteristics required on drawings and that, if during a period of one year after date of certificate of completion and acceptance of project, any such defects appear he shall remedy them without any cost to the Owner.

ELECTRICAL SPECIFICATIONS

All work under this heading shall be done in accordance with the specifications. Contractor is held to familiarize himself with the provisions contained therein.

EXTENT:

The work required under this specification includes all labor and materials necessary for the completion of the electrical work as shown on the drawings and herein specified.

The contractor shall examine the engineering drawings and if any discrepancies occur between them or between the mechanical drawings and these specifications, he shall report them to the Engineer in writing before the bids are opened and obtain written instructions for changes in the work. If not reported before the opening of bids, rectifying the same becomes the responsibility of this contractor. The architectural drawings shall take precedence over the mechanical drawings.

Upon request the contractor shall prepare all shop, equipment and other drawings at his own expense and shall submit same to the Engineer for approval before starting the work. The drawings are diagramatic but shall be followed as closely as actual construction of the building and the work of other trades will permit. All changes from drawings necessary to fit the work of other trades or to conform drawings necessary to fit the work of other trades or to conform to the rules of the State Code and local power and lighting company shall be made by the contractor at his own expense. Contractor shall verify with the local power company the service voltage.

This work shall be complete and in first class mechanical and electrical condition upon completion of all contracts pertaining to the entire structure. Building to be as shown on the drawings.

The entire installation shall be made in accordance with the latest edition of the National Electric Code, special requirements of the State Fire Marshall and the State Department of Workshops and Factories and in conformity with the local power and lighting company and the inspection bureau. All changes from the plans or specifications required to meet these codes shall be made by the contractor at his own expense.

All materials shall be approved by the Underwriter's Laboratories. Material approved "provisionally" or for "field tests" may be used as well as standard approved articles and shall be so marked or certified.

The contractor shall base his proposal upon furnishing of materials specified and equal products will be accepted by the Owner only upon written order from the Engineer.

LOCATIONS:

The exact location of lights, panels, switches, receptacles and other work shown on drawings are approximate, and any shift in location of these items due to construction of the building or equipment shall be done by the contractor without any cost to the Owner, but all such locations shall meet with the approval of the Engineer.

CONDUIT:

All conduit shall be galvanized, Youngstown, or E.E. or equal conduit. Conduit shall not be bent to a radius less than 5" for 1/2", 6" for 3/4" and 8" for 1". Conduit bends shall not show flattening. Conduit shall be reamed free of burrs at our ends.

Wherever possible reuse existing conduit raceways. All new conduit shall be concealed in the new partitions.

OUTLET BOXES:

All outlet boxes shall be standard knockout type. No round outlet boxes will be permitted.

Outlet boxes with not more than two conduits shall be standard 4" octagon, 1 1/2" deep, pressed steel. Outlet boxes shall be mechanically rigid and secure.

SWITCH BOXES:

One-gang outlets for a single switch or receptacle shall be the standard knockout type of the proper depth to fit the wall.

Two-gang outlets for a single switch or receptacle shall be the standard 4" or 5" square boxes with two-gang plaster covers, or two gang boxes.

WIRE AND CABLE:

Reuse existing wire where possible. All new wire to be as manufactured by General Electric, Habirshaw, National Electric Products or equal. All wire #10 AWG and smaller to be solid. All wire #8 AWG or larger to be stranded. No wire smaller than #12 AWG shall be used.

GROUNDING:

All electrical devices shall be grounded in accordance with the National Electric Code.

HEIGHT OF OUTLETS:

The Electrical contractor shall coordinate his work with the work and equipment of others. Check heights with Engineer's superintendent.

SWITCHES AND RECEPTACLES:

The contractor is to furnish and install all wall switches and receptacles as shown on the drawings. The devices shall be of the types, ratings and any one of the catalog numbers as specified below:

DEVICE	CIRCLE "F"	HUBBEL	PASS & SEYMORE
Single Pole	3421	1221	20AC1
Three Way Switch	3423	1223	20AC5
Duplex Receptacles	R-2515	5362	5262