- B. Solder for galvanized metal shall be 40-bu or 50-50 conforming to
- ASTM B32. Solder containing antimony shall not te ased. C. Metal Primer Shall be compatible with finish material applied by Painting Contractor.
- D. Mastic Non-hardening black plastic cement computible with modified aspiralt.
- E. <u>Caulking</u> Elastic non-hardening type as specified under specification section "Caulking".
- F. <u>Gravity soof Jents</u>: Formed rotary jalvanized aron type complete with self-flashing and bird screens, see drawings for size. Scient shop drawings prior to fabrication. Provide themal dampers.
- G. Prefinished Architectural sheet metal.
- HOKKMAYSHIP:
- allowance for expansion and contraction without undue stresses. D. All sheet metal work on the exterior shall be watertight and weather-
- E. All work shall conform to SMACNA Manual of Accepted Practice.
- H. Soldering Thoroughly clean and tin joints prior to soldering. Solder with heavy well-heated coppers of blunt design, properly tinned before use. Heat seams thoroughly and completely fill with solder. Make exposed soldering with finish surfaces neatly full, flowing and smooth.
- PAINTING AND CLEANING:
- A. Sheet metal shall be cleaned of all grease, oil, etc., and given one oat of approved metal primer prior to painting COPING:
- A. Provide initered corners, and sections and expansion joints not over 201-0" O/cl, caulk all joints. See plans for material.
- renty for entire sneet metal watertightened work.

WOOD DOORS

- Materials: (Not to be construed as a complete list)
- A. Solid Sore Flush Doors. Sustom Grade Wood Hoors, T.M. COBB or equal,
- O. Louvers: Approved factory finished stationary types to indicated sizes, minimum 18 gauge steel plades and straddle type frames. Joints welded
- and smooth. Finish: One 1, coat primer. Install louvers at door E. Openings in doors for view lites, where indicated on the grawings shall be metal framed in accordance with more manufacturers changed out to be metal framed in accordance with more manufacturers.
- framed in accordance with door manufacturers standard subject to approval of the Architect. EXECUTION

FINISH HARDWARE

Section shall include the furnishing of and delivery to the Russian) of all tems of Fanish mandware and related liters to complete the building in accor nce with the architectural drawings and or specified hereinder. The hardware responsibility of the Contractor to list his qualities and furnish items finish randware for normal function of the building whether specifically

- Principal items of work included but are not imited to 1. Finish Hardware for Joors.
- B. Related fork Specified in Other Sections: 1. Installation of Hardware

A. work included in This Section:

- General Requirements
- A. As far as practicable, all locks shall be of one hinge and/or pivot manufacturer's make.

Materials (Not to be construed as a complete list).

- A. Easteners of the proper type, quality, size, quantity and finish shall De supplied with the hardware. All fasteners exposed to the weather small match the finish of the trim as closely as possible. There mardware is of stainless steel, screws and fusturings shall also be of Stainless steel. Fasteners shall be of the type necessary to accomplish a permanent installation. All wood screws shall be full threaded.
- B. Einishes. All nardware shall have LEIO finish.
- Locathons of hardware on hinged toors shall be as follows, unless indicated on specified otherwise herein:
- snobs small be located so that the center line of the strike is 40-5/16 inches (nominal) above the finished floor. Deadlocks shall be mounted so that the center line of the cylinder
- and strike is sixty (60) inches (nominal) above the finished 3 Soor pulls shall be located so that the center line of the grip. or the bar, where a single bar is used is 42 inches (nominal)
- 4. Push plates shall be located so that the center line of the push plate is 45 inches (nominal) above the finished floor.
- 5. Combination push and pull bars shall be mounted independent of other hardware and located so that the lower longitudinal edge is flush with the bottom of the Joor.
- 6. Kick, mop and armor plates. Kick plates and armor plates shall be located on the push sides of single-acting doors. Mop plates shall be located so that the lower longitudinal edge is flush with the bottom of the door 7. Hinges shall be located as follows
- Not over 11-3/4 inches from the inside of frame rabbet at head to center line of hinge.
- Not over 13 inches from finished ottom Hinge: floor to center line of hinge.
- Midway between top and bottom hinges Packaging and Marketing: Items of hardware shall be installed following manufacturer's instructions. Except as indicated or specified

NE ABOVE BRAWINGS AND SPECIFICATIONS AND IDEAS, DESIGNS AND ARRANGEMENTS REPI

otherwise, fasteners furnished with the hardware to wood surfaces with full-threaded wood screws. Use machine screws set in expansion shields for fastening nardware to solid concrete and surfaces. Use toggle bolts where required for fastening to hollow-core construction Use through-bolts where indicated or specified and where necessary fo paint, stains, blemishes and other damage until acceptance of the work

- All hardware shall be adjusted properly and checked and all hinges, locks, latches, bolts, holders closers and other items shall operate
- After hardware is checked, keys shall be tagged, identified, and delivered to the lwner. All errors in cutting and fitting and all damage to adjuining work shall be corrected, repaired and finished as directed. where handware for fine doors must be shipped to the door manufacturen. for installution, the hardware installation shall conform to the applicable requirements of NFPA 80 except that hardware application on labeled fire doors that also serve as exit applicable requirements

ACOUSTICAL TILE WORK

- A. Work Included in This Section: Principal items of work include but are not limited to: 1. 24" X 48" INERMEDIATE DITY T. BAR CLG. SYSTEM - CHICAGO METALLIC 1200 SYSTEM OR APPROVED EQUAL OF # 1811 MAIN RUNNERS! 1814 CROSS TEES MYNON- GRECTIONAL BAYONETT COUPLINGS.
- A. Verify dimensions in the drawings with field conditions at the start of the work and check continuously during construction. Accept responsibility for inaccuracies built into the work
- B. Inspect related work and surfaces; report in writing to the Architect those conditions which prevent proper provision of this work. Any required removal, repair, or replacement of this work caused by unsuitable conditions shall be done at no additional cost to the owner.
- C. Submit four copies of shop and layout drawings for all segments of the work in accordance with the requirements of the General Conditions. Show suspension system in detail and location of all mechanical and electrical WORK. ALL WORK SHALL CONFORM TO TITLE 24 REOS D. In accordance with the requirements of the General Conditions and in addi-
- tion thereto, accoustical material manufacturer shall provide a speparate guarantee of dimensional stability. Maintenance Materials:
- A. At completion of this work, deliver to the Owner one unopened box of each type of acoustical tile and panels matching materials installed.

A. Provide as specified herein and where indicated on the drawings.

PRODUCTS

- Materials: (Not to be construed as a complete list). Refer to reflected ceiling plan for Type and location of ceiling systems.
- A. <u>Cooperation</u>:
- 1. Provide information to other trades as required to assure a symmetrical

D. Layout:

1. Establish centerline of ceiling areas and work towards perimeters

C. Scribing and Cutting:

- 1. Scribe acoustic tile to walls with a close snug fit. Lay-in panels to rest in angle trim. SEE DL.BB/A-2Neatly cut in for electrical fixtures, etc., so that finish and fixture
- trim will cover the cut and leave a neat appearance. Special attention shall be given to joints where acoustic tile butts metal plaster casings, or wall intersections. The butts shall be neat, true and finished to an alignment. Provide trim of metal with baked enamel finish for exposed edges. Plastic trim not acceptable. D. Moisture Conditions:
- 1. Acoustic material to be removed from boxes or bundles at least 24 hours before application and spread in a manner that will allow them to adjust to prevailing moisture conditions.

A. Each door shall be individually protected, identified and delivered to the GLASS AND GLAZING

- A. $\frac{Glass}{noted}$. Size and type as indicated of $1/4^{\circ}$ thickness unless otherwise noted. See drawings for glass doors. All glass to be glazing quality.
- Stazing Compounds: DAP 10-12 OR BOUAL in consistency for ribbon, gun, or knife application to suit glazing conditions. C. <u>Wire Glass</u> Provide code approved with wires running vertical and
- norizontal no diagonal wire glass will be accepted. A. Grade and label each light, setting forth quality and grade of glass and manufacturer's name and brand designation. Leave labels intact

until completion of work or until directed to remove.

- A. All glazing work shall be performed in accordance with the standards of the "Glazing Manual" of the Flat Jobbers Association.
- B. Glaze opening at job site unless otherwise approved. C. Accurately cut and fit glass with allowable tolerance of 1/32" per each 1/8" thickness of glass. Set with convex side out.
- O. <u>Glass Fastenings</u>: Set glass in rebates, using manufacturer's standard glazing fittings, chairs, angles, or bars. Set glass to pre-
- clude looseness and rattling.
- E. Glazing channels and Beads: Install in one piece on each glass edge, corners neatly and tightly fitted. F. At fixed glass in wood or steel stops, back putty both sides or glass in specified glazing compound. Putty shall be neatly and cleanly run
- to straight lines, even with edges of sash members. Set all stops in G. <u>Wire Glass</u>: Code approval wire glass - Misco or equal. Run wires horizontaly and Vertically 45° is not acceptable.
- PROTECTION, REPLACEMENT, AND CLEANING: A. Protect glass against damage. Replace cracked, broken or imperfect glass and glass which cannot be properly cleaned at completion of
- B. Thoroughly clean and polish glass surfaces upon completion of work

- A. This portion of the work includes the furnishing of all labor and materials necessary for the complete wiring system to outlets and all equipment shown on the drawings or covered by this Section of the
- B. The Contractor shall furnish and install all work necessary to make complete systems, whether or not such details are mentioned in these Specifications or shown on the drawings, but which are necessary in order to make complete working systems, excepting only those ortions that are specifically mentioned therein or plainly marked on the accompanying drawings as being installed by other Contractors.
- C. Electrical Contractor must coordinate his work with the other trades so as to provide raceways, conductors and outlets in the correct location for the equipment served, including all mechanical, and signal equipment and connect same. Electrical Contractor must provide power of the correct voltage and phase to each item of
- D. The above list is given for the convenience of the contractor and is not considered all-inclusive.

A. All materials, appliances and equipment except that furnished by the Owner shall be new and the best of their respective kinds, free from all derects, bear U.L. Label and of the make, brand or quality specified or as accepted by the Architect as herein provided. This shall also apply to all parts of the work whether or not this particular paragraph is referred to by

- MATERIALS

- B. All apparatus, conduit systems, etc., shall be installed and interconnected so as to form complete systems as herein specified and/or shown on all the accompanying drawings. This Contractor shall furnish and install all work necessary to make complete working systems, excepting only those portions that are specifically mentioned herein or plainly marked on accompanying drawings as being furnished by other Contractors.
- C. Raceways and Fittings:

 1. Non-Metallic Conduit shall be PVC Schedule 40;
 approved only for underground runs. Approved manufacturers are Carlon or equal. Rigid Steel Conduit shall be National Electric Products, Triangle Conduit and Cable Co., or walker "Dual-Coat", or equal. 3. Electrical Metallic Tubing shall be National Electric Products Corp., "X" Duct Junior or equal. E.M.T. fittings shall be watertight, glandular
- D. <u>Pull Boxes:</u> Pull Boxes shall meet all code requirements as to size for conduits terminating therein and to thickness of material used in fabrication. Fabricated sheet steel pull boxes shall be installed only in dry, protected locations and shall be furnished with knockouts and removable screw cover. Box shall be finished with one coat of zinc chromate and a coat of primer sealer and where exposed to public view shall be painted to match the surrounding surface. weatnerproof sheet steel pull boxes shall be fabricated of code gauge galvanized sheet steel with two coats of rust resistant finish and shall

be furnished with gasket and made completely

- Approved manufacturers for metal boxes are Circle Aw, Crouse Hinds, Steel City or equal. weatherproof concrete pull boxes junction boxes and telephone boxes shall be Christy Concrete Products, Forni Division, Precast Concrete Products or equal. All boxes shall have ligs marked "Electrical Power", "Electrical Signal",
- E. Time Switches: Flush mounted. with Astro Dial & 6 hour spring carry over. Paragon, Tork or equal. F. $\frac{\text{Outlets:}}{1. \quad \text{All}}$ outlets boxes shall be standard one or two

weathertight.

- piece galvanized knock-out outlet boxes, National, Steel City, Appleton, Bowers or approved equal. All outlet box covers, rings or other fittings shall be standard galvanized, National, Steel City, Appleton, Bowers or approved equal. 3. No outlet box shall be smaller than four inches
- (4") square and 1-1/2" in depth, except in concrete block construction where Bowers concrete block boxes are approved. 4. Floor outlets on grade shall have fully adjustable cast type Hubble or equal with flush flip top duplex service fittings, Hubble #S3825 or equal for 120V power and Hubble #S2025 with 1" stand pipe except where larger diameter noted on drawings and flange support for telephones or s nals. All visible finish to be brass. Provide carpet flange in carpeted areas.
- 5. All special outlets shall be as hereinafter specified or as shown on drawings.
- G. Panelboards: The panelboards shall be constructed in accordance with the standard set up by the Underwriters' background by Laboratories, Inc., and as manufactured by westinghouse, Square "D", G.E., or approved equal, and each shall contain the number and type of circuit breakers as indicated on the drawings. The panelboards shall be equipped with hinged doors, "Uni-Flat" front, typewritten circuit directories. All finish in offices, corridors or areas subject to public view shall be prime coat for finish coat by painter. In storage rooms, equipment rooms, etc., finish shall be standard tactory gray Hammertone. Provide catch only on all
- Seven copies of detailed construction drawings for the panelboards and terminal cabinets shall be submitted to the Architect for approval before their construction is started.

 4. All panel boards shall have a bakelife name plate

 H. Terminal Cabinets: fastemen to be front of each panel

 1. Terminal cabinets shall be flush or surface mounted as indicated with hinged doors and catch Exterior finish to be prime coat or hammertone Provide 3/4" plywood backing inside of
- cabinet. Provide proper number of terminals in cabinets as required. Provide a bakelite nameplate fastened with screws to the face of each terminal cabinet which will identity it.
- I. Receptacles and Plates: Furnish and install 20A, 125 volt, 3 wire, brown grounding type duplex receptacles at all eceptacle outlets as indicated on drawings. specification grade Leviton, Bryant, Sierra or approved equal. All receptacle plates shall be stainless steel .(.U4O*) satın finish,
- J. Local switches and Plates: 1. Furnish and install flush tumbler type switches, brown, quiet type 120/277V AC only controlling wall and switches shall be specification grade Leviton Bryant, Sierra or approved equal and have ampere
- Switch plates shall match receptable plates. where two or more switches are in proximity they shall be ganged in the same box and they will be set under one plate.
- Special receptacles or switches shall be as noted on drawings. All wire installed in this contract shall be of a standard manufacturer as approved by the National board of Fire Underwriters and be of the size as
- indicated on the drawings. All wire shall bear the Underwriters' label and shall be brought to the job in unbroken packages and approved by the Job Inspector before same is installed. All branch circuit wiring conductors shall be type
- copper, unless otherwise noted. All subfeeders and main services shall be type THW, copper, unless noted otherwise. Number 12 AwG gauye wire shall be the smallest gauge wire used, except for signal circuits which shall be as snown on plans or as specified under
- ther sections of these specifications. All wire #6 AwG gauge or larger shall be stranded The neutral conductor of all lighting feeders shall be of the same size as the phase conductors. Splices on all wire less than 8 gauge shall be with insulated Ideal "wing Nuts", "Scotchlock", or
- Splices in wires 8 gauge and larger shall be made with crimp on solderless connector, Scotch, Burnd r equal. Connectors to switches or bus bar shall be made with one piece lugs for all wires, sized or conductors as shown on plans. 8. Each branch circuit shall be marked with the circuit number at the panel and at the first outlet nearest the panel. E-Z Code Markers
- (western Lithograph Co.) or equal shall be used to mark the circuits. Lighting Fixtures:
 1. This Contractor shall submit for approval seven (7) portfolios with full description and cuts of all fixtures he proposes to use.
- This Contractor shall furnish and install all lighting fixtures and lamps as indicated on the Electrical Drawings and in accordance with these specifications. This Contractor shall be held responsible for the
- complete equipment of all fixture outlets with fixtures of the proper design as shown. All surface and stem suspension fixture shall be securely anchored to the outlet boxes or ceiling structure to prevent any possible chance of their falling. Continuous runs of fixtures shall be installed straight and true
- Stem lengths shall be adjusted to meet conditions where required. Furnish aligners to ensure vertical alignment (ball aligner) Electrical Contractor shall coordinate outlets

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Recessed fixtures shall be complete with plaster

frames, supporting brackets and hanger wires.

- with Acoustic Tile Contractor and other trades and locate outlets in center or at intersections of acoustical tile in all acoustical tile ceilings. All fixtures must be kept 1-1/2" clear of all acoustic tile and any combustible material by use of approved to be surface mounted. 9. Inless otherwise specified, all fluorescent ballasts in office areas shall be classified as the "A" level in the G.E. bal-
- ast sound rating standard. Ballasts in shop, storage or maintenance areas shall have a "C" rating. Acceptable manufacturen's are universal, Advance, G.E. on equal. Fluorescent ballasts on non-dimming stroutts, small be Mark III Energy Savers or equal. In Dimming circuits, use G.E. or Advance ballasts with a peaking circuit. All fluorescent lamps shall be standard cool white color "Watt Mizer" except on dimmed circuits use standard F40 'amps, and a'l fi'ament lamps shall be 3.E., MDA. 120 volts inside frosted, unless otherwise spec ified. Ballasts for HID fixtures shall be high power factor regulated type.
- 10. Before submitting a proposal, each bidder shall determine that all fixtures will perform satisfactorily in the application shown on the plans. This includes operation of the "P" rated ballasts. There shall be no nuisance tripping o lits thermal element. By the act of submitting a proposal, each bidder shall be deemed to have mage such determination and it will be assumed that he is familiar with, accepts and has based his proposal on all existing conditions and limitations
- M. Photo Control

0. <u>Dimmers</u>

1. Paragon or equal, adjustable type.

N. <u>Underfloor Duct System</u> See Drawings

- 1. Shall be Lutron "Nova" series, brown color with brown plate. Provide RFI noise filter. P. <u>Transformers</u>
- 1. Ory type (1) class н, 59° с max. temperature rise (2) two FCAN - GENERAL REQUIREMENTS AND INSTALLATION

A. Conduit Systems:

- 1. A concealed Metallic Conduit System shall be installed for all interior wiring including controls. Conduit shall be run continuous between outlets, etc., and with the minimum number of bends. 2. PVC 40 or rigid steel factory wrapped with PVC tape shall be used for underground runs.

 3. All conduct shall be delivered to the site of
- construction in their original bundles. Each length of conduit shall bear the label of the National Board of Fire Underwriters. All conduct subjected to rough usage while on the job before installation and not acceptable to the Architect shail be removed from the premises upon notice The joints in all conduits installed under concrece slabs on the ground, or underground, o exposed to the weather, shall be made liquid and gas-tight. The conduit threads shall be thoroughly tilled with conductive joint compound nerore screwing into couplings and all wrench abrasions shail be painted with asphaltic compound. All
- underground conduit outside of the buildings shall be buried to a depth of not less than 24" below finish grade. Utility services shall comply with utility company requirements. Two or more conduit runs installed in a common trench shall be separated horizontally by at least four inches Electrical conduit runs installed in a common trench with other utility lines shall be separated norizontally from such lines by at least * twelve inches (12") Changes in direction shall be made with conduit sweep elbows or long radius bends made on the job.
- where two or more conduits are grouped in exposed locations, the sweeps shall be struck from the same center torming concentric arcs. All joints in conduit shall be made with standard coupling. In making joints, conduits must be truly and accurately out and threaded (where applicable) with straight thread, smoothly reamed and squarely butted. All conduit small be kept corked and dry during construction, using plastic caps or conduit pennies held in place with conduit bushings. should dirt or moisture collect in any conduit, the Contractor shall swap them out to the

Conduits ending at the motors and transformers

Satisfaction of the Architect

- shall be carried as close as possible to the terminal blocks making allowance for the movement of the motors when they are equipped with slid rails. The connection between the conduit terminals on the motor and the conduit shall be made with liquid-tight flexible conduit using the All conduits where they enter panel boxes, pull boxes, or putlet boxes shall be secured in place by galvanized locknuts and busnings - one (1) locknut inside and one (1) locknut outside of box Bushing shall be plastic where conductors are #4 or larger
- installed straight and true with reference to the adiacent construction lu. Conduits l'and above shall have plastic insulated grounding bushings 11. Any conduit installed under buildings shall be under the slap. 12. All boxes for bracket outlets shall be equipped

where conduits are run exposed, the same shall be

- with a 3/8" "No-Bolt" fixture stud. These boxes snail be so set that when in place the fixture shall be at right angles to the ceiling or walls. 13. All empty conduit shall be equipped with a #12 galvanized iron pull wire continuous from outlet to outlet.
- 14. Flexible conduit will be permitted for connecting lighting fixtures to junction boxes 15. Flexible connections in outdoor and damp locations shall be flexible liquid-tight metal conduit or non-corrosive seamless metallic tubing with water-tight connections.
- 16. Install roof jacks for this construction in accordance with other sections of this Specification. 17. The maximum allowed length of flex conduit at equipment connections is 18".
- 18. Expansion Joints: Expansion joints for conduit snall be povided where required to compensate for thermal expansion and contraction 19. Minimum Size: No conduit smaller than 3/4 inch electrical trade size shall be used.
- In general, the locations of electrical outlets shall be as shown on the drawings; however, the Contractor shall make any changes necessary to suit conditions on the job or rearrangement of built-in fixtures and equipment as directed by the Architect or his representative The Contractor shall study the general building plans with relation to spaces surrounding each outlet in order that his work may fit the work of others and that when fixtures or other equipmen

discrepancies promptly to the Architect.

Conductor identification & Installation:

1. The drawings indicate the arrangement of outlets on each branch circuit and the circuit tags show the number of the circuit, and the board to which it will be connected. Circuits indicated with the same numbers shall be connected to the same breaker on the panelboard. All feeders and branch circuits shall be tagged in all pull boxes and in the gutters of all panels to

are installed they will be symmetrically located

according to room layout. Refer all conflicts and

3. All wiring shall be done in identified neutrals. 4. No wire shall be installed until all work for other contractors that might cause injury to the said wire has been completed. Care shall be used to pull wires to insure that no damage occurs to the insulation. Powdered soapstones or wire ease shall be used for pulling in wires. In making the connection of all branch circuits to the terminals of switches, base plugs, etc., the wires shall be looped around the binding screws or be fitted with connecting lugs. At the ceiling outlets, this Contractor shall leave not less than 6" of free ends on each wire for connections to

No splices shall be permitted except in outlet

Switches and receptacles shall be securely

fastened to the outlet box. Where the outlet box '

covers are back of the finished walls the switch

or receptacle shall be built out from the same

with washers so that it is rigidly held in place to the box. The floating of any switch or

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14

REVISIONS

1 6.13.85 06A CHANGES/REBID

boxes, and in panelboard gutters.

receptacles will not be permitted.

PRINTS ISSUED FOR:

5.10.85 BOARD APPROVAL

23.85 BIDDING

5.20.85 OSA

the fixtures.

- D. Grounding:

 1. The conduit system supports, capinets, switchboards, etc., and neutral conductors must be permanently and effectively grounded by means of approved ground clamps, accordance with Title 24 of the California Administrative Code. 2. This Contractor shall exercise every precaution to optain good contacts of all panel boxes, pull poxes, etc.; where it is not possible to obtain good contacts, the conduits shall be bonded around
- the poxes with a #6 AwG gauge, THWN wire with ground clamps. 3. All equipment cases, motor frames, etc. shall be completely grounded to satisfy applicable code requirements.
- E. Mounting Reights of Equipment: Unless Otherwise specified elsewhere or shown on the
- plans, the following mounting heights shall apply: . Panelboards & Signal Terminal Capinets: 6'-0" Top of Box.

Disconnect Switches: 4'-6'' to center line. Contractors: 4'-6'' to center line.

- identification of Special outlets
 All Computer, Radio, Sound, Screw control, IV, etc., outlets snall be properly identified with bakelite nameplates 1/2 x 2". All such nameplates shall be submitted to the Architect before being setured to the wall above the cover plate. Nameplate to be brown with engraved white letters.
- Earthquake Proofing of Light Fixtures:

 1. Fixtures weighing more than 6 pounds or exceeding 16" in diameter, shall not be supported on the screw shell of the lamp 2. Fixtures weighing more than 50 pounds shall be supported independently of the outlet box.
- Hooks shall be twisted closed when ring type fixtures are speci-4. Pendant type fixtures shall be designed so that they may swing norizontally in any direction a minimum of 45 degrees from the COORDINATION
- A. Heating and Air Conditioning Work:

 1. The Mechanical Contractor shall furnish equipment such as motors, starters, thermostats, wiring diagrams, etc. However, the Elecrical Contractor snall be responsible for furnishing and installing of all fused disconnect switches, conduit, wire, fittings,
- etc. for all control circuits, heating and air conditioning equipment, etc. 2. Install all electrical equipment where it is not already installed as a part of a unit furnished by Heating Contractor. (see mechanical drawings) Install outlet boxes where required for controls and equipment 4. The Electrical Contractor shall furnish fused disconnect switches
- for motors and units, if they are not furnished by others. Fuses shall be dual element, rated per equipment manufacturers recom-5. Thermal overload switches shall be furnished for all fractional horsepower motors where such protection is not included as a part of another contract. 6. All control wire shall be as recommended by Control Contractor.
- 7. This Contractor shall do all control wiring for a complete and satisfactory system even though mechanical and control equipment is substituted which is of different manufacturer from specified and detailed. All motor outlets and control outlets shown on the plans are approximate only. Verity exact location of same with equipment Contractor.
 The installation of wiring for controls shall be
- made under supervision of the Controls Contractor. 10. Furnish and install w.P., convenience outlet (120V) within 25 ft. of all roof, mounted A.C. units. MISCELLANEOUS

B. INTERRUPTION OF SERVICE

- A. MISCELLANEOUS EQUIPMENT:
 Contractor shall be responsible for electrical hook up and connections to all electrical equipment whether turnished by this Contractor or others, including wiring, conduit, disconnects, circuit breakers, etc., even if not snown on drawings. Verify all requirements with equipment supplier before rough in.
- Interruption of service in existing buildings shall not be made at a time which will inconvenience the Owner. Before making an final connections to the existing buildings or doing any other work that will interrupt the service, the Contractor small consult with the Owner and schedule the work at Owner's convenience even if it is necessary to make such connections after regular working nours. This Contractor shall do all rerouting and

reconnecting of existing electrical facilities

made necessary by this construction. Care shall be taken not to disrupt existing facilities. If any tacilities are disrupted, this Contractor shall replace or repair them at his expense and to the satisfaction of the Architect. Should it be necessary to change any of the sizes,

dimensions, or locations of any of the equipmen-

- trom those shown on the plans, the same shall be made with the approval of the Architect but without any additional expense to the Owner. 2. Electrical Contractor shall consider the number of outlets for electric equipment shown on plans as final, but the Architect reserves the right to shift same, within reason, to a location and position which will meet more completely final
- D. $\frac{\text{GUARANTEE}}{1}$ AND TESTS $\frac{1}{2}$ Equipment of all kinds installed by this Contractor snall be tested to determine whether it fulfills the requirements of these specifications The Contractor shall furnish all labor necessary to adjust the operation of the apparatus and make the connections for the tests. After the tests shave been completed, the Contractor shall restore all connections, apparatus, etc., to their

Should any piece of apparatus or any material or

work fail in any of these tests, it shall be

immediately removed and be repliced by perfect

material by this Contractor at his expense and the

original condition

- portion of the work replaced be again tested by the Contractor 3. The entire installation shall be free from short circuits and improper grounds. Tests shall be made in the presence of the Architect, his Engineer or his representative. Panels and circuits shall be tested for grounds and shorts with mains disconnected from the feeder, branches connected lamps removed or omitted from the sockets and all wall switches closed. Each individual circuit shall be tested at the panel with the equipment meet the requirements of the National Electrica Code. Upon completion of the work, a final authorities shall be conducted. This Contractor shall guarantee to repair or replace at his expense any material or equipment that develops
- E. <u>UTILITY COMPANY SERVICE CHARGES</u>
 All service charges shall be included in the Contractor's bid price. Monthly charges shall be paid by the General Contractor. provide metal detector above all electrical conduit not under bldg. slab -12"

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DATE 5.10.85

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detects or is determined not to be in conformance

or one year after the work is accepted by the

RESILIENT FLOORING

- Materials: (Not to be construed as a complete list).
- A. 12 x 12 /A: Shall be /g/ through chip color , Armstrong, EXELON #52112

 OR equal. REDUCER STRIPS: VIN. EDGE-BUTTING (NOT LAPPING) TYPE
- Adhesives, Primers and Fillers: Of type and composition recommended in writing by the manufacturer of the material which is to be installed.

EXECUTION

- Installation: Conform to flooring manufacturer's recommended installation procedures and requirements herein.
- A. General: Do not start flooring and stair work until work of other trades, including painting, is substantially completed. Keep areas of installation and materials at minimum temperature of 70 degrees f for at least 48 hours prior to, during, and for 10 days after installation. Maintain adequate ventilation for removal of moisture and fumes
- Preparation: Clean substrates of dust, dirt, paint, wax, grease, oil, plaster proppings, and other foreign matter. Fill cracks or depressions with material as recommended by flooring manufacturer for the specific job conditions. Prior to 'aying flooring, test for adequate dryness using testing procedure per flooring manufacturer's directions.
- Colors and Patterns: Each color and pattern small be ordered in sufficient quantity initially to insure manufacture in a single lot or run. Each roll shall have lot number stamped thereon.
- Examination of Surfaces: Contractor shall examine the surfaces over which the coverings are to be applied, and if for any reason a perfect job is impossible or anything is detrimental to obtaining a perfect job with assurance of obtaining the utmost value of the material, it shall be reported to the Architect before proceeding with the work.
- <u>Layout</u>: of resilient flooring shall be square with axis of rooms. Install reducer strips at doorways, exposed edges, and similar locations where other material is not installed. Cut flooring and stairs mechanically to pro-

tend flooring into cabinets without bottoms.

E. Filling: Fill all cracks, markings, saw cuts, etc., with a filler recom-

mended by floor covering manufacturer and in accordance with their instruc-

duce square true edges. Closely trim to pipes, jambs, and flike work. Ex-

- : All exposed edges of floor covering to terminate with
- Protection: This Contractor shall cover all his work as necessary to protect from damage until completion and acceptance of the building. Replacement of damaged flooring and final cleaning shall be performed after all other work has been completed. After clearing, and where practical, areas shall be locked and only authorized personnel permitted access to same. Cleaning and waxing: Jpon completion of the work, all flooring and base shall be thoroughly cleaned free of all dirt and other soiling and left in a condition satisfactory to owner. Adhesive shall be removed in a manner recommended by manufacturer. The use of spivents and wet mopping and wasning will not be

CURTAINS (NOT IN CONTRACT)

OWNER

PRODUCTS MATERIALS

- A. FIRE RATED CURTAIN AS SUPPLIED BY THE BERNSTEIN CO. B. OLD STYLE TRACK C. ASSORTED OPENG/CLOSING HARDWARE
- A. COLOR SHALL BE BERNCO BEIGE

- 1. The following specifications cover the complete painting, and finishing of all wood, plaster, masonry, concrete, metal, con duits, stucco, piping and other surfaces throughout the inter-
- work generally consists of, but is not limited to the following: . A./ Interior and exterior surfaces and items of block wood, gypboard, metal and concrete.
- B. Items projecting through or mounted on the roof, i.e., attice vents, plumbing vents, conduit, exhaust fans, etc.
- E. Touch-up and finish painting of shopcoated metal and touch-up of factory finished items, i.e., toilet compartments etc. Eights required for proper painting.
- ouvers, plaster expansion screeds, exposed ducts and electrical and telephone panel boards. G. The contractor shall examine the specifications for the various other trades and small thoroughly familiarize himself with all their provisions regarding their painting; he shall understand that all surfaces that are left unfinished for primed, unless excluded hereafter, are to be finished
- ing equipment and etc B. Related work Specified in Other Sections
- 2. Removal and reinstallation of finished hardware. C. Materials Not to be Painted: The following surfaces are not to receive painter's finishes unless otherwise indicated on the drawings:
- 1. Work having complete factory finish other than prime coat, unless approved by Architect.
- Regulatory Requirements: All material must comply with air pollution control regulations; environmental requirements. Nothing nerein is in-
- Product Handling labels and other markings intact. Store paint materials and equip-
- waste, and empty cans from site every night. Mixing and Tinting: Do no tinting of finish coats at job site, unless otherwise approved by Architect.

B. Take every precaution to avoid danger of fire. Remove oily rags,

BAKERSFIELD · KERN COUNTY · CALIFORNIA

Material List: The colors indicated on the drawings and the materials listed herein are a product of the Dunn Edwards Company and are used as a guide. If one of the alternate manufacturers as listed under products or an equivalent are proposed, the Contractor shall submit two (2) copies of material list and manufacturers material data to the

Architect for approval. Method of application will be left to the descretion of the Contractor except where finishing material manufacturer recommends a specific type. In all cases finished appearance shall be uniform, free from all streaks,

holidays, sags, runs, laps, brush marks, etc. Changes in color shall be neat and straight.

- Materials: (Not to be construed as a complete list) A. Shall be the product of Ameritane, Dutch Boy, Piopeer, Dunn Edwards,
 - or equivalent, subject to approval of the Architect.

8. colors small be as indicated on the anawings.

Schedule of Finishes: Refer to the drawings and the following material and coats schedule and in the event a sunface is not listed, the contractor shall obtain a clarification from the Architect prior to bidding. No extras will be allowed for failure to obtain clarification or in-

16 Series (or)

7 Series

Ext. Acrylic

Ext. Alkyd

#=901 (or)

50 Series

FINISHES

Vinyl-Acrylic

Acrylic Enamel

Alkyd Enamel

Vinyl-Acrylic

Acrylic Enamel

Alkyd Enamel

Vinyl-Acrylic

Acrylic Erame

W-901 cr

* SPECIAL 90 * SPECIAL 90

SATIN ENAMEL SATIN ENAMEL

Alkyd Enginel

Acrylic Ename

Alkyd Enamel

Acrylic Enamel

5 Series

W-901 (or)

5 Series

Alkyd Enamel

Vinyl-Acrylic

* SPECIAL 90

GATIN ENAMEL

5 Series

w-401

W-901 (or)

1 - Ac
SHES
Πι

Concrete Plaster Stucco (Flat)	Vinyl-Acrylic W-201	None	Vinyl-Acryll W-201
Concrete Block (Flat)	Block Filler Smooth (W-305) or Medium (W-304)	vinyl-Acrylic w-201	Vinyl-Acryli ₩-201
wood (Semi-Gloss)	V1ny1 ⊶-708	Ext. Acrylic w-901 (or)	Ext. Acrylic W-901 (or)
or (Gloss)	orl 42-9	Ext. Alkyd 60 Series	Ext. Alkyd 60 Series
	* OFF EXT	BLEVIS OR M	ATCH COLOR

lo Series (or)

Pretreatment Engercoat

* PIONEER PAINT MIX

42-23

INTERMEDIATE

Acrylic Enamel

Alkyd Enamel

Acrylic Ename

W-901 (or)

5 Series

PIONEER PAINT MIX

V-199

* PIONEER PAINT COLOR

(GOLDEN OAK)*

<u>LQ-120 Series</u> <u>LQ-104</u> Sanding

Epoxy Polyester Acrylic Enamel

Alkyd Enamel

Alkyd Enamel

5 Series

Undercoat *

5 Series

Single Comp. #-901 (or

Epoxy Polyester Undercoat *

Epoxy Polyester Undercoat

* PIONEER PAINT MIX

in appropriate finish, as adjacent walls or ceiling

Apply undercoat when water based finish is used on ferrous metal.

Single Comp. 42-31 42-44

/-108 Series

V-106

Seale

42-44

None

None None Transparent

(Opaque Stain)

Metals

(Semi-Gloss)

(Semi-Gloss)

Concrete Block

(Semi-Gloss)

Gyp. Board

(Semi-Gloss

(Semi-Gloss)

PLYWOOD

Varnish Sys.

(Seiii1-Gloss)

(Semi-Gloss)

Galvanized

(Semi-Gloss)

Ferrous Metal

Ferrous Metal

(Semi-Gloss)

em. Asbestos

or (Gloss)

#-901 (or) Ext. Alkyd Semi-Gloss) 42-36 2nd Priner or Gloss) 60 Serves kea Oxide * SPECIAL 90 Metals 43-4 Semi-Gloss)

Touch-up

PRIMER

Sea'er

Pigmented

(011) 28-1

Promented

Sealer (011) 28-1

Block-Filler

(mea.) w-304

Block-filler

w-:01

EXECUTION INSTALLATION

CONFORM TO CURTAIN MFGS RECCOMENDED INSTALLATION PROCEEDURES & REQUIREMENTS APPLY TRACK AFTER TRIM HAS BEEN PAINTED VER. STACKING/OPENIG/CLOSING OPERATION OF OWNER Plaster Concrete B. HOOK- SHALL BE 8"% C. SIZINO - VER. LENGTHS/COVERAGE W/

- A. Work Included
 - for and exterior of the building except as otherwise noted.
- . Wood and metal doors, including top, bottom and side edges, grilles, wood trim, jambs and interior cabinet work. D. Exposed pipe, conduit, ducts, etc.
- F. All exposed metal work, metal extinguisher cabinets, sheet metal, gravel stops, roof flashings, metal grilles, metal
- as part of this section, i.e., bumper posts, air condition-

Finish hardware, except prime-coated items.

Acoustical treatment.

- 1. Items specified to be factory finished or prefinished.
- Aluminum, stainless steel, brass, bronze, and plated finished metals (not zinc or cadmium or galvanizing).
- $\frac{Sample's}{Indicated}: Prepare ~8" \times 10-1/2" samples in quaduplicate for each color indicated on the drawings and gloss finish specified for material to$ which it is to be applied. Submit samples for approval to the Architect in accordance with the General Conditions.
- A. Deliver materials in manufacturer's original sealed containers with

SPECIFICATIONS

NEW PORTABLE CLASSROOM FOR BAKERSFIELD CITY SCHOOL DISTRICT.

Note: Registers, grilles, electrical panels, etc., shall have same color,

SCRIED THEREBY ARE AND SHALL BEWAIN THE PROPERTY OF THE ARCHITECE AND NO PART THEREOF SHALL BE COPIED DISCUSSED TO OTHERS OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND AWINGS OR SPECIFICATIONS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE O ON THE JUBAND THIS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS FROM THE DIRENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS. SHOP DETAILS MUST BE SUBMITTED TO THIS OFFICE FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION.

 All hardware and finishing trim for work of this Section. A. Work shall be erected on a first-class workmanlike lanner, straight, true, free from warp or mackles, and small be accorately formed to General Requirements: details, curved surfaces shall be true to carvature, and lin straight and true, angle and arises sharp and all intersections neatly fitted. Provide expansion joints as required. B. All concealed joints shall be flat lock seams and seated full of solder.

All sheet netal work shall be so formed and installed is to provide tight. Joints shall be flush butt joints reinforced on the back.

F. Furnish and set in place with all necessary fusteners to support and secure the metal work and to insure a straight and true installation. Inspection. Sheet metal prime coat shall be approved by the Painting Contractor for complete and proper primer.

Thoroughly wash flux with a soda solution after soldering. I. Caulking Provide caulking as indicated and required to make work of its section water and weathertight. Conform to section 'Caulking'

ROOFING SHEET METAL. A. Pertorm installation of sneet netal items to be built into roofing in strict accordance with directions of roofing sub-contractor. Set ishëetimetal anstalled an or adjoining roofing in a continuous bed of rooter's black bituminous cement. Provide two (2) year written war-

- C. Face leneers for all doors shall be BIRHTO receive PAINT
- Delivery: