

SPECIFICATIONS

PROJECT: NEW ADDITION & MISCELLANEOUS RENOVATIONS
ALPINE ANIMAL CLINIC
6 NORTHUMBERLAND ST., DANVILLE, PA
ARCHITECT JOB NO. 08-052

DATED: SEPTEMBER 17, 2009

GENERAL CONDITIONS

Scope of Work: This Project involves the renovation of an existing 2,150 square foot, slab-on-grade building with a 600 square foot addition and shall include all finishes, plumbing, mechanical, and electrical construction work under one General Construction Contract as described and illustrated on the Drawings and herein.

The Drawings and Specifications basically describe the work expected within each contract, however, each contractor is required to anticipate and include all miscellaneous materials necessary to do a complete and properly functioning building and/or system within the building as intended. The Drawings reflect the basic requirements of the latest edition of the IBC, however, the prime contractor and all sub-contractors are responsible to familiarize themselves with the code and provide any and all requirements for compliance as defined and or determined by the local code enforcement officer upon his inspections and reviews of the construction including all other miscellaneous Codes which may apply.

Construction Time: As per the Owner.

Workmanship: Shall be at least of a good quality standard to the industry and acceptable to the Owner. Any details or specifications omitted or unclear shall reference the latest edition of the A.I.A. Architectural Graphic Standards for clarification and requirements for that specific detail or specification.

Insurance: All contractors and/or his subcontractor(s) must carry Workmen's compensation, Auto and General Liability Insurance. A Certificate of Insurance will be required from the successful bidder and all subcontractors on site. The Owner shall be named as an additional insured on all insurance policies that form a part of this contract, except the Workers Compensation. Basic limits shall be as follows:

1. Workers Compensation Liability - \$500,000
2. Comprehensive General Liability - \$500,000 - \$1,000,000
3. Comprehensive Automotive Liability - \$1,000,000

Builders Risk Insurance: Provide by the Owner.

Temporary Heat, Power, & Water: Owner will provide and pay for temporary utilities from existing building and from permanent services once installed by the respective contractors.

Temporary Sanitary Facilities: The general contractor shall provide and maintain temporary sanitary facilities for all contractors working on the site throughout the construction period.

Temporary Barriers, Enclosures, Passageways: General contractor shall provide temporary fencing, barriers, guardrails as necessary to provide for public safety, to prevent unauthorized access to the construction areas and to protect existing facilities and adjacent properties from damage from construction operations.

HVAC Protection: Provide dust barriers at HVAC return grilles and air inlets to prevent spread of dust and clogging of filters during construction as deemed necessary.

Building Permit: The Owner will obtain and pay for building permit.

This Contractor is responsible to contact the local Code Office regarding their International Building Code Regulations. It is the Contractor's responsibility to comply with the Regulations and Inspections as required under this Code. The Owner will pay the costs involved for the Inspections related to the Permit.

Contractor's Permit: If required by the local Code office, this contractor shall be responsible to purchase and pay for a permit required for his construction company to work in the municipality.

Disposal: This contractor is responsible for removal and disposal of all demolition and construction debris made by this contract work for himself and/or his subcontractors. Disposal must be in a safe, timely, and proper manner according to regulations regarding material disposal. Debris must be cleaned on a daily basis. Provide containers with lids. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids. Separate and dispose of construction waste in compliance with waste management regulations of authorities having jurisdiction.

Delivery & Storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store all materials in strict compliance with the manufacturer's recommendations.

Replacements: Provide temporary protection for installed products. In the event of damage of any materials, immediately make all repairs and replacements necessary to the approval of the Owner and at no additional cost to the Owner.

Qualification of Workmen: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in their particular field, under this contract.

Coordination: Coordinate with all other trades to ensure proper and adequate interface of the work of other trades throughout this project.

Coordinate any installations being accomplished by the Owner with the work under this contract.

The general contractor shall provide a construction progress schedule and provide and coordinate the schedule with all other prime contractors and/or his subcontractors on the site.

Inspection: All dimensions shall be verified in the field. Examine the areas and conditions under which work will be performed. Correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected. Notify the Owner of such conditions immediately.

Pennsylvania Act 287: Contractor is responsible to call the PA One Call System at 1-800-242-1776 prior to beginning any excavation work to verify the existence of any underground utilities at the project site.

The Architect and Owner do not assume any responsibility for the accuracy of data or cost and conditions resulting from any inaccuracy of data provided on existing utilities. The utilities are approximate and the contractor shall verify actual location, depth and conditions in the field.

Codes and Regulations: Work shall be accomplished in accordance and conformance with all codes, laws, rules, regulations and standards for the locale of the Project, including local, state and federal standards.

Site Safety: Contractor shall provide all barricades, tarps, etc., necessary to protect the existing facility from damage and to contain construction dirt and debris within the construction area. Contractor is responsible to provide all barricades, covers, signs, etc., necessary to insure the proper safety of all employees and public threatened by any portions of the work. This contractor and all his subcontractors on site must comply with OSHA Safety and Health Standards Digest.

All required scaffolding, rigging, and staging shall be erected and maintained in compliance with governing laws or ordinances promulgated by federal, state or local agencies most stringent of which shall take precedence.

No tree or pole or any part of existing structures shall be used as an anchorage for guys, tackle, or similar device.

The General Contractor shall install "No Trespassing" signs around construction area. Provide other public warning notices as may be required by law or as deemed necessary.

Site Access: Contractor's access road into site shall be limited, insofar as practical, to entrance road or roads proximate to the Work. The General Contractor shall maintain necessary warning devices or barriers at each entrance.

Parking: Limited Contractor parking will be provided at a temporary location designed by Owner. Repaint parking and traffic control markings if damaged by construction traffic.

Temporary Fire Protection (BOCA): All areas of new construction shall be protected during construction from hazards due to fire. The General Contractor shall install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."

Protection of Installed Work: Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.

Snow Removal: General Contractor will be responsible for snow removal in his own work area and material storage area. No calcium or sodium products will be used within the building or on any finished exterior surfaces during the construction program.

Weather Closures: Provide temporary weather-tight closures at exterior openings to prevent intrusions of water, to create acceptable working conditions, to protect completed work and to maintain temporary heating, cooling, and ventilation. Provide access doors with self-closing hardware and locks.

Asbestos Discovery: The Contractor shall be responsible to report any questionable discovery of asbestos uncovered or molested by this construction and to stop progress of the Work until proper authorities can be notified and a plan of action made to handle the material.

Warranties: The contractor warrants all materials, with the exception of those not supplied by the contractor, and workmanship for a period of one (1) year after substantial completion of the project unless superseded by a manufacturer's warranty extending longer than one (1) year.

Finish Materials: This contractor shall be responsible to review in detail all finish materials planned for the interior and exterior of the building structure with the Owner to verify materials, style, colors, application, etc. prior to ordering and installation of the finish materials. Particular selections made and specified herein or indicated on the Drawings are intended to provide a basis for bidding and should not be considered final until actual materials are reviewed and approved by the Owner.

Building Code Requirements: Comply with requirements for testing and inspections of applicable Codes, including additional requirements for testing and inspection, as adopted and interpreted by local authorities having jurisdiction.

Commonwealth of Pennsylvania Uniform Construction Code Inspections: Under the Uniform Construction Code, inspections are required to be conducted by a Construction Code Official from the local reviewing Agency. Inspections required but not necessarily limited to the following (Refer to the Code or Local Reviewing Agency):

1. Footer Inspection;
2. Foundation and Masonry Inspection;
3. Under-Slab Inspection;
4. Framing Inspection;
5. Plumbing Rough-In Inspection;
6. Mechanical Rough-In Inspection;
7. Electrical Rough-In Inspection & Final Electrical Inspection. Electrical inspections are provided by a third party agency. A list of approved third party agencies will be made available from the reviewing Agency;
8. Insulation and Wallboard Inspections;
9. Final Inspection/Issuance of Certificate of Occupancy.

The Owner will be responsible for the costs involved in obtaining the above inspections.

Special Inspections may be required under local municipalities. It is the responsibility of the contractor to familiarize himself with all such Code requirements.

GENERAL CONSTRUCTION TECHNICAL SPECIFICATIONS

SITE WORK:

Demolition: Provide any and all interior and exterior demolition and/or relocation of any items as indicated on Drawings and as required for a proper or satisfactory completion of the intended work. Work included but not necessarily limited to the following:

Demolition construction shall be in strict compliance with all Federal, State, and Local Codes governing this procedure, including the proper handling and disposal of demolished materials.

Dust created by the demolition of walls, ceilings, etc. must be contained within the areas being reconstructed and any dust being exhausted naturally or mechanically to the exterior environment must be controlled and kept from entering other areas of the building or from being deposited on neighboring ground.

Debris being disposed of through chutes to exterior containers must be dampened occasionally to prevent excessive air borne dust into the environment.

Thoroughly investigate existing structure, utilities, finishes, etc. involved in the demolition work scheduled prior to starting of work. Any questions should be brought to the attention of the Owner & Owner's Representative prior to engaging in the demolition work.

All debris shall be removed from the site on a daily basis and premises including work area and interior adjoining spaces and corridor shall be kept clean and free from loose debris.

Investigate and coordinate the removal and modification of any existing utilities with the Owner and keep any shut-off of utilities to a minimum.

The Owner will reserve the right to maintain ownership of any of the fixtures, finishes, and materials scheduled to be demolished. Any materials to be salvaged for the Owner will be determined and be made known prior to the start of the demolition work. Materials shall be disconnected, removed, and set aside for removal and storage by the Owner.

Excavation: Strip topsoil from building area. Excavate to depth required. Finish grade as indicated with topsoil in seeded areas and crushed stone in pavement areas.

This contractor shall furnish all excavation required for both rough and finish grading as required to do a complete job as indicated on the Drawings.

Downspout Drain: Pipe all downspout leads to grade away from building with concrete splash blocks.

Seeding: Seed all disturbed areas with standard blend of new crop seed.

Trenching: It will be the responsibility of the General Contractor to provide trenching as required for the installation of materials included in each contract including proper backfilling and compaction of that trench ready for finish grading by the general contractor. All trenching must be backfilled to a 95% compaction utilizing 2-B crushed stone.

Asphaltic Concrete: Provide asphaltic concrete consisting of a mixture of sand, mineral aggregate, and a liquid asphalt mixed in such proportions that the percentage by weight will be within the following limits:

BCBC Binder Course: As per "Penn-DOT Specification Form 408, Section 421".

Wearing Course: To meet "Penn-DOT Specification Form 408, Section 420".

CONCRETE:

Concrete: All concrete shall be 3,000 psi batch mixed concrete Air entrained for all exterior concrete work.

Reinforcing: Provide two No.5 or No. 4 diameter reinforcing bars continuous in all concrete footings as indicated on the Drawings.

Provide one No. 4 diameter rebar at 48" O.C. full height in new perimeter masonry walls of addition.

Finish: Trowel finish on interior slabs and light broom finish on exterior slabs.

Curing: All concrete shall receive a liquid membrane curing/sealer applied as per manufacturer's written recommendations.

MASONRY:

Block: All block shall be Grade 'A' standard size units including all sizes, shapes, and miscellaneous pieces necessary to do a complete job.

Reinforcement: Provide Dur-O-Wall every other course in all block walls. Provide metal wall ties at 24" on center both directions for brick veneer.

Mortar: 5-2-1 standard mix. Use colored Portland Lime Cement at brick and decorative block areas. Color as selected by Architect.

Brick Masonry: Provide an allowance of \$800.00 per one thousand brick, contractor's price delivered to site. Brick to be standard size, 3-5/8" x 8" with concave mortar joint. Brick type and color to be selected by the Owner.

Decorative Block: Split-faced block shall be 7-5/8" x 15- 5/8" x 8" decorative block as manufactured by Beavertown Block Co. or approved equal. Price Category (D).

Ground Faced Block shall be 7-5/8" x 4" & 8" decorative block w/ single score as manufactured by Beavertown Block or approved equal. Price Category (D).

Provide Chamfer Block Caps for sills where indicated on the Drawings.

All colors to be selected by the Owner from full range of colors available from the manufacturer within the price category indicated.

Masonry Insulation: Zonolite masonry insulated block fill for all exterior masonry walls.

Sample Panel: Contractor shall be required to lay up a sample panel of decorative block including mortar mix selected for review and approval by the Owner, correcting and relaying panel as many times as necessary for proper selection of final materials.

Masonry Coating: After all exposed decorative block areas have been properly cleaned as determined by the Owner, all surfaces shall have a spray coating of colorless liquid membrane applied at the rate of 300 sq. ft. per gallon. Material shall be Hydrozo Clear No. 7, or approved equal.

STRUCTURAL STEEL:

Provide steel beams, columns, and lintels as indicated on the Drawings and/or as required for a proper structural support for the building.

Provide all miscellaneous screws, bolts, plates, fasteners, etc., required to construct the building.

ASTM Standards apply to all structural steel used for this project.

MISCELLANEOUS METALS:

Provide and install K-Series web steel joists, and steel roof deck complete with accessories, anchors, fasteners, etc. as required to do a complete job. Size as indicated on Drawings.

Roof deck shall be 22 gauge "B" Type painted steel deck 1-1/2" deep with 2-1/2" ribs at 6" O.C.

Provide shop drawings stamped by a professional engineer registered in the Commonwealth of PA.

CARPENTRY:

Materials:

Stud: S-P-F Construction Grade

Posts, Beams, Joists, & Rafters: S-P-F Construction Grade

Roof Mansard Sheathin: 5/8" CDX Fir Plywood

Wood Trim: No. 1 Clear Grade White Pine

Coatrail & Shelves: Vinyl wire coated Closet Maid or equal

Miscellaneous Shelves: 3/4" A.C. plywood with pine nosing (paint grade)

Pressure Treated Lumber: .40 lb. per cubic foot Wolmanized

Solid Surface Backer: 1/4" lauan plywood

Reception Counter Finish: Beaded solid oak vertical T & G boards (stain grade).

Miscellaneous: Provide all nails, fasteners, common and finish necessary to do a complete and proper job. Use galvanized fasteners in exterior exposed locations.

Cabinetry: Work Included: Provide all base and wall cabinets, countertops, backsplashes, shelving and all other miscellaneous case work, complete in place and with door and drawer handles.

Cabinetry shall be custom laminated flush construction as manufactured by Wood-Metal Industries or approved equal.

Cabinet Specifications:

Melamine & Plastic Laminate Colors: As selected by the Owner from standard available.

Door and Drawer Front: 3/4" thick thermally fused melamine covered 45 lb. density industrial grade particle board (MCP) with 5 MM PVC bands on all edges.

Top, Bottom, End: 3/4" thick thermal fused melamine covered 45 lbs. density industrial grade particle board (MCP) with 5MM PVC bands on front edge and bottom of ends.

Shelves: 3/4" thick MCP with 5 MM PVC bands on front edge.

Back Panels: 1/2" thick MCP with all edges machined, glued, and fully housed into dado in top, bottom, and end panels.

Drawer Box Sides: ½" thick 45 lb. density industrial grade particle board wrapped with a continuous piece of vinyl laminate.

Countertops: 1-1/4" thick 45 lb. density industrial grade particle board with finish color horizontal grade high pressure plastic laminate on top face neutral color phenolic backer sheet on bottom face and matching complementary colored 5 MM PVC bands on exposed edges.

Drawer Slides: Full extension steel ball bearing type with 100 lb. load rating.

Hinges: Heavy duty semi-concealed European type with 270 degree opening angle.

Pulls: Brushed chrome plated solid brass 3-1/2" wire type.

Wall Shelf Supports: Steel angle pine type with white vinyl non-slip coat adjustable by ¼" increments in system holes along the full height of cabinet.

Cabinet Locks: Provide surface mounted cabinet lock including trim collar and strike #46-002 as manufactured by Schlage or approved equal. Color as selected by the Owner. Locks to be provided on (1) cabinet in Exam #106, Exam #109, Pharmacy #105 and Treatment #115. Location as designated by the Owner in the field.

Provide H/C Style cabinets where indicated on Drawings, finished end panels throughout where exposed, finished 4" & 8" high toe kicks throughout and pull out shelves at all base cabinets (2 per cabinet).

Plastic Laminate Wall Finish and Countertops, Backsplash, Aprons: Grade #10 plastic laminate with matte finish as manufactured by Wilsonart, Formica or approved equal. All tops to be constructed from ¾" medium density particleboard with all exposed surfaces covered with plastic laminate. Color as selected by the Owner from full range of colors available from the manufacturer. Multiple colors will be selected.

Plastic Laminate shall be installed on wall to underside of cabinets at all countertop locations indicated on Drawings.

Counters, sills, and caps must be custom fit, leveled and finished as required on site to create a complete and finished looking installation as might be required by job conditions. Verify all dimensions and job conditions prior to the manufacture of all custom millwork and cabinetry. All colors shall be as selected by the Owner from full range of standard available from the manufacturer.

Solid surface material to be Corian as manufactured by DuPont or approved equal. Color as selected by the Owner from standard available. Edge to be built-up receding type as indicated on Drawings.

Solid surface to be provided at upper reception counter and continue on low wall as cap.

Low wall adjacent to filing cabinets to be solid surface top with same profile.

Counters and caps must be custom fit, leveled and finished as required on site to create a complete and finished looking installation as might be required by job conditions. Verify all dimensions and job conditions prior to the manufacture of all custom millwork and cabinetry. All color shall be as selected by the Owner from full range available from the manufacturer.

THERMAL AND MOISTURE PROTECTION:

Parging: Exterior face of all exposed masonry walls shall receive 2 coats of fiber reinforced parging. Color as selected by Owner.

Insulation: Insulate all exterior frame walls with 3-1/2" kraft-faced fiberglass insulation, R-15.

See roofing system for roof insulation.

Insulate perimeter of concrete slab with two inch (2") extruded polystyrene insulation board, R-10.

Insulate perimeter of exterior foundation walls with two inch (2") extruded polystyrene insulation board R-10.8.

Flashing: .024 prefinished white aluminum.

Downspouts: Shall be 3" x 4" prefinished rectangular corrugated aluminum with required elbow to splash block as manufactured by Alcoa or approved equal. Color as selected by the Owner.

Asphalt Saturated Roofing Felt: ASTM D-226-68. Approx. weight, 30 lbs./square, organic, perforated, 36" wide.

Roofing System:

Single Ply Membrane Roofing: .045 reinforced EPDM single ply membrane roofing complete with all flashings, adhesives, fasteners, and all miscellaneous accessories necessary to make a complete and watertight roofing membrane system as manufactured by Carlisle Syntec or approved equal. System to have manufacturer's ten (10) year warranty.

Fascia to be formed from .032 embossed sheet aluminum with factory applied baked enamel finish. Color as selected by the Owner.

Insulation board to be 1-1/2" rigid insulation board below tapered polyisocyanurate insulation board with acceptable facer sheet as manufactured by NRG or approved equal. Slope – 1/8" per foot R-8.0 per inch.

Roof Edging: Edging shall be a factory formed system consisting of galvanized water dam with .050 smooth aluminum snap-on type roof edge with factory applied kynar paint finish. System to include concealed splice plates and preformed inside and outside corners as required to make a complete and finished system. Anchor-Tite HG Fascia as manufactured by Metal-Era or approved equal. Size to match existing. Color as selected by Owner.

Roof Scupper: Roof scuppers shall be downspout scupper Type DSB (flat), 10" x 7" for use with 3 x 4 downspouts as manufactured by Metal-Era or approved equal. Color as selected by the Owner.

Metal Roofing: Snap-on batten type 24 gauge, SB 12 Craftsman Series with concealed fastening system as manufactured by MBCI or approved equal.

Install over 5/8" plywood and 30 lb. roofing felt.

Provide all accessories including trim and flashing as necessary for a watertight installation as per manufacturer's written installation requirements for a mansard system. Color as selected by Owner from Signature 300 standard kynar 500 colors available.

Soffit Material: 24 gauge soffit material to be Flexloc as manufactured by MBCI or approved equal to provide all accessories and trim necessary for a complete installation. Color as selected by the Owner from Signature 300 standard kynar 500 colors available.

DOORS AND WINDOWS:

Interior Doors: Interior doors shall be flush type 7-ply Gold Series particle core with one-quarter inch pre-finished Masonite skins, Oak/2020, as manufactured by Mohawk Door, or approved equal. Color as selected by Owner from (8) available. Door D-18 to be lead lined 1/16" minimum.

Exterior Doors: Shall be 24 gauge galvanized steel faced doors with foamed-in-place polyurethane foamed core, pre-hung complete with weatherstripping, butt hinges, and aluminum sill. Steelcraft, or approved equal.

Interior Door Frames: 16 gauge knock down type primed hollow metal door frames. Door frame D-18 to be lined with a single lead sheet and work into the contour of the frame to provide an effect of overlap with the adjoining barrier.

Hardware: provide all hardware as required for proper use and function of all doors. All exterior doors shall have keyed locking devices and master keyed. Finish for all hardware to be selected by the Owner.

Hinges: Stanley

Locksets, Rim Cylinders, Passage Sets, Cabinet Locks: Schlage

Panic Devices: Precision

Closers: Dorma

Flush Bolts & Strikes: Ives

Wall Stops, Base Stops, Push Plates, Pull Plates, Kick Plates: Rockwood

Thresholds, Weatherstripping, Door Sweeps, Astragal Seals: National Guard

Signs: Rockwood.

Provide Tactile Exit Signs as per Section 1011.3 of the IBC for Doors as indicated.

Provide Tactile HC Sign BFM683 for mounting at Reception Counter.

Masterkey all locks as directed by the Owner. Provide Owner with 5 masterkeys and two keys for each individual lock.

Hardware Schedule

Existing Entry Doors:

2	lock cylinder	
2	tactile exit sign	BFM682

Door D-1 & D-9

3	pair butt hinge	FBB 179
2	privacy latch	AL40S-SAT
1	closer	8600
2	wall stop	403
2	tactile sign	(1) BFM 687, (1) BFM 688

Door D-2, D-6, D-7, D-10, D-12, D-18

9	pair butt hinge	FBB-179
6	storeroom latch	AL80PD
4	wall stop	403
2	overhead stop (D-12 & 18)	90H
1	weatherstrip (D-10)	5050
1	threshold (D-10)	LP-426
1	adjustable sweep (D-10)	36EV

Door D-3, D-4, D-5, D-17

6	pair butt hinge	FBB-179
4	office latch	AL50PD-SAT
3	wall stop	403
1	overhead stop (D-5)	90H

Door D-8, D-15, D-21

4	½ pair butt hinge	FBB-191-NRP
3	closer	8600
2	exit device	51-808A
3	aluminum threshold	LP-426
3	weatherstrip	160S
3	door sweep	100V
2	tactile exit sign	BFM 682

Door D-11, D-13, D-16, D-19

6	pair butt hinge	FBB-179
4	passage latch	AL10S-SAT
4	closer	8600

Door D-14

3	pair butt hinge	FBB-179
1	passage latch	AL10S-SAT
1	dummy trim	AL170-SAT
1	strike	DP2
2	flush bolt (Inactive Leaf)	FB-358
2	overhead stop	90H

Door D-20

All hardware provided by bifold door manufacturer.

Windows: All windows shall be casement or awning type wood windows with vinyl exterior finish complete with ¾" insulated glass, insect screens and operating hardware as manufactured by Andersen Corporation or approved equal. Color as selected by Owner from standard available.

FINISHES:

Gypsum Wallboard: 5/8" wallboard to be taped and spackled three (3) coats. Use M-R type in all bathrooms. Supply gypsum in 48" widths and joints. Use casing beads, corner beads, and edge beads as required to do a finished job. Use Type (X) where required to be fire-rated.

Gypsum wallboard shall be fastened with groove grip-type nails specifically designed for use with gypsum wallboard or Type S Drywall screws, lengths as required for each application.

Provide 1/16" lead lined gyp. board sheets at all walls of X-Ray Room. Lining from floor to 7'-0" A.F.F. Install as per manufacturer's installation requirements.

Vinyl Base: 1/8" gauge x 4" high continuous roll cove type vinyl base as manufactured by Johnsonite, or approved equal. Color as selected by the Owner.

Vinyl Sheet Flooring: Sheet flooring shall be commercial high performance safety flooring Maxis Stain Resistant as manufactured by Altro or approved equal. Hot weld seaming all joints and provide integral 4" or 6" base as indicated and as per manufacturer's installation requirements. Color as selected by Owner from standard available.

Carpet Tile: Multi-level pattern loop "No Rules" Collection as manufactured by Shaw or approved equal. Style and color as selected by Owner from standard available. Provide proper leveling and preparation as necessary.

Epoxy Flooring: Texture decorative slip resistant epoxy system "Stonshield SLT" as manufactured by Stonhard or approved equal. Color and texture as selected by Owner from standard available. Properly prepare substrate and apply as per manufacturer's strict installation instructions.

Acoustical Tile: Install square lay-in type acoustical tile ceilings where indicated to be 24" x 24" x 3/4" smooth textured mineral fiber tile #1715 Clean Room Mylar as manufactured by Armstrong or approved equal. Metal grid to be 15/16" Prelude interlocking type. Color: White.

Fiberglass Reinforced Polyester Panel (FRP): Panels for Toilet Rooms to be Class "C" rated 3/32" thick, 4' wide x 8' high sheets, "Symmetrix 2" square pattern as manufactured by Marlite or approved equal.

Provide all required color integral trim moldings and accessories. Color to be selected by the Owner from Manufacturer's full range of standard colors available. Panels in Treatment Area are to match existing color and style.

Painting: All surfaces shall be properly prepared before and between paint coats to receive and obtain clean, smooth finish.

Paint Products as manufactured by Sherwin-Williams or approved equal.

Paint all existing and new Walls and Ceilings: 1 coat Promar 200 latex primer
2 coats Promar 200 Eg-shell enamel

Stain interior wood: 1 coat stain
2 coats satin varnish

Paint interior wood Shelving and Trim: 1 coat Promar 200 enamel undercoater
2 coats Promar 200 latex semi-gloss enamel

Paint metal Doors and Frames: 1 coat KEM Bond HS universal primer
2 coats DTM acrylic coating semi-gloss enamel (Interior)
2 coats DTM acrylic coating gloss enamel (Exterior)
Proclassic Waterborn

Paint Restroom walls above FRP: 1 coat Prep Rite interior oil primer/undercoater
2 coats Promar 200 interior alkyd eg-shel enamel

Paint Aluminum: 1 coat universal primer
2 coats A-100 exterior acrylic latex satin enamel

H/C Parking Symbol: Set Fast – Fast dry latex traffic marking paint

Brick Masonry: 1 coat Loxon primer
2 coats water based catalyzed epoxy

Miscellaneous Metals: 1 coat universal primer
2 coats industrial oil enamel

Comply with State and Local Air Quality Regulations and all Local Regulations for recycling of unused paint and coatings.

Room Finish Schedule: A Room Finish Schedule is provided on the Drawings.

SPECIALTIES:

Bathroom Accessories: Provide and install accessories as indicated on the Schedule. Provide blocking for accessories. Verify locations with Owner prior to closing in rough framing.

Fire Extinguishers: Ten (10) lb. multi-purpose dry chemical fire extinguishers (4A-60BC Rating) with surface mounting wall bracket as manufactured by Larsens Mfg. Co., or approved equal. Quantity required: 2 required.

Interior Panels: Provide and install Design Wall Panels as manufactured by Homasote or approved equal. Color as selected by Owner. Install in accordance with manufacturer installation requirements. Install (1) - 1/2" x 4' x 8' panel vertical adjacent to door D-3 near platform scale and (1) panel vertical adjacent to door D-5 both on corridor side. Apply over 1/4" luaun and install in place of gypsum board at each location. Adjacent gypsum board at sides and above to have zip strip edge. Panel will protrude 1/8" beyond face of drywall.

Handicapped Parking Sign: Sign shall be 12" wide x 18" high x .063" thick aluminum with radius corners. Blue/White silk-screened baked enamel finish as manufactured by Spencer Industries, Inc., Philadelphia, PA or approved equal. Provide 12" wide x 6" high "Van Accessible" sign below parking sign. Sign shall be secured to a galvanized steel channel post, mounted at height to meet IBC. Quantity: 2 required.

Corner Guards: Corner guards shall be LG-250, 2-1/2" polycarbonate with chrome plated screw mounting as manufactured by Construction Specialties, Inc. or approved equal. Color as selected by Owner.

HEATING/COOLING CONSTRUCTION SPECIFICATIONS:

Demolition: See demolition under General Construction Technical Specifications.

See Mechanical Demolition Plan on Drawings Sheet M-1.

Work Included: Mechanical work required is shown on the Drawings and includes but is not limited to:

- 1) Install supply and return air ductwork to transition to (2) existing natural gas fired packaged rooftop heating /cooling units.
- 2) Install ductwork, grilles, registers, transitions, etc. required for a complete installation.
- 3) Install zone and bypass dampers and control panel as indicated on Drawings.
- 4) Install control wiring, capacity controllers, transformers and thermostats as indicated and as required for a complete and functioning HVAC System.
- 5) Install volume control dampers.

System Layout: The drawings indicate a proposed schematic layout of all equipment, fixtures, etc. This contractor shall verify on-site location of all fixtures, equipment, etc., with the Owner, and make any field adjustments required for final accepted locations and requirements for all areas. All final adjustments and verifications must be done prior to installation of finished materials.

Equipment Schedule: Provided on the Drawings.

Piping: Type L Copper.

Equipment: Provide and install a complete and functioning heating system as indicated on the Drawings including miscellaneous valves, brackets, hangers, and components necessary for a complete and functioning system.

Workmanship: All workmanship shall be of a good quality standard to the industry and acceptable to the Owner.

Testing: Completely test and balance system to comply with requirements indicated on the Drawings and provide the Owner with instructions for proper use and maintenance.

Thermostats: Provide and install Heat/Cool programmable setback type thermostat, Robert Shaw, Trane or approved equal.

Ductwork: Rectangular ductwork in concealed locations shall be formed from 1-1/2" foil-faced fiberglass duct board with heat-seal foil-faced tape on all hand sealed corners and ends and reinforced foil air barrier laminate.

Rectangular ductwork exposed shall be galvanized steel sheet lock forming.

Round ductwork in concealed locations shall be insulated flexible duct with polyester inner lining, steel wire helix, 1-1/2" fiberglass insulation and polyethylene outer jacket. Round ductwork exposed shall be galvanized steel.

Diffusers/Grilles/Hood and Accessories: All diffusers and grilles shall be as manufactured by Hart-Cooley or approved equal. Provide smoke detectors, motorized dampers, turning vanes, volume control dampers, etc. as indicated on drawings or as required for a complete and functioning system and as required by all Local and State Codes.

HVAC Protection: Provide dust barriers at HVAC return grilles and air inlets to prevent spread of dust and clogging of filters. Provide construction filters and replace following completion of the work.

Metal Ducts and Accessories: Ductwork and installation products shall comply with Sheet Metal and Air Conditioning Contractor's National Association (SMACNA) recommendations for fabrication, construction and details, and installation procedures, except as otherwise indicated.

Zoning System: Provide and install a complete zoned system as indicated on the Drawings including governor zone dampers, by-pass dampers, control system panel, thermostats, capacity controllers, transformers, wiring, etc. and all components necessary for a complete and functioning system as manufactured by Zonex Systems or approved equal.

PLUMBING CONSTRUCTION SPECIFICATIONS:

Demolition: See demolition under General Construction Technical Specifications.

See Drawing Sheet A-1 for Plumbing Demolition.

Work Included: Plumbing work required is shown on the Drawings and includes but is not limited to:

- 1) Install cold water distribution.
- 2) Install hot water distribution from existing gas-fired wall mounted water heater.
- 3) Install waste and vent piping.
- 4) Install plumbing fixtures and trim as indicated on the Drawings.
- 5) Install oxygen piping as indicated and stat panel, emergency shut-off panels, change over and alarm panels as per Code.
- 6) Install all other plumbing items needed for a complete and proper installation.

Codes and Standards: All plumbing installation and materials shall be in strict compliance with the latest edition of the National Plumbing Code, IBC and all Local Codes.

System Layout: The drawings indicate a proposed schematic layout of all equipment, fixtures, etc. This contractor shall verify on-site location of all fixtures, equipment, etc., with the Owner, and make any field adjustments required for final accepted locations and requirements for all areas. All final adjustments and verifications must be done prior to installation of finished materials.

Fixture Schedule: Provided on the Drawings.

Certification: Check with local utility for requirements, inspections and certifications required. The contractor is required to pay for any fees associated with the requirements.

Fixtures: Provide and install all fixtures as indicated on the Drawings, complete with all required stops, supplies, backing drain, trim and other items necessary for a functioning installation.

Soil and Vent Piping: Sewer, Waste, and Vent – PVC Schedule 40

Below Slab Waste Piping: SDR-35 PVC pipe and fittings.

Water Supply Piping: Hot & Cold Water Supply – Type L Copper

Oxygen Piping: Type K or L Copper.

Shut-Off Valves: Provide and install a ¼ turn ball type shut-off valve at each fixture location.

Pipe Insulation: Insulate all hot water piping with ½" foam type wrap around pipe insulation with glued joints. Cut all 90 degree angles at 45 degrees, glued neatly and tightly to form a complete insulation wrap.

Fire Rated Sealant: One part intumescent fire-stop putty, expandable on exposure to heat. Firestop FSP as manufactured by Nelson Fire-Stop Systems or approved equal.

Workmanship: Workmanship shall be of a good quality standard to the industry and acceptable by the Owner.

Materials and Installation: Materials and installation shall meet all State and Local Codes.

Testing: Test all systems for leaks and proper function and make any repairs or adjustments necessary to make a complete and functioning job at no additional charge to the Owner.

Water Service: Existing location of water service entrance to building including water meter must be modified as necessary so as not to interfere with the new cabinetry. Provide main shut-off valve and backflow preventer as per Local Water Authority Requirements.

Pipe Sleeves: Provide and install PVC or steel pipe sleeves through walls where any piping penetrates through a wall.

Soil & Waste Testing: Unless otherwise directed, plug all openings and fill with water to a height equal to the lowest vent. Allow to stand one hour or longer as required. Recaulk leaking joints as directed and then retest.

Water Lines Testing: Test and make tight at 150 psi water gage. Retain for four hours; repair all leaking joints as directed; and then retest.

Valves Testing: Test all valve bonnets for tightness. Test operate all valves at least once from closed-to-open positions while valve is under pressure. Test all automatic valves for proper operation at the settings indicated. Test pressure relief valves at least three times.

Escutcheons: Provide chrome plated escutcheons on all water and waste line penetrations in walls, floors, and cabinets sized to suite pipe diameter.

Clean Outs: Plastic Oddities, or approved equal, adjustable type, sized to match pipe size, with nickel bronze finish.

Backflow Preventer: Provide a testable reduced pressure zone backflow preventor on water supply main in accordance with the requirements of the local utility company. Backflow preventor assembly shall have two shut off valves and drain pipe with air gap, and shall be installed where water supply line enters building.

Handicapped Pipe Insulation: Water and drain lines beneath handicapped accessible lavatories shall be insulated with True-Bro, Inc. wrap, or approved equal. Insulation shall be removable and reusable, molded to fit piping and fittings, with flip open caps at water shut-off valves.

ELECTRICAL CONSTRUCTION SPECIFICATIONS:

Demolition: See Demolition under General Construction Technical Specifications.

See Electrical Demolition Plan on Drawing Sheet E-1.

Work Included: Electrical work required is shown on the Drawings and includes but is not necessarily limited to:

- 1) Maintain existing 120/240 volt, 3-phase electric service.
- 2) Install new power and lighting system.
- 3) Provide and install power wiring and lighting fixtures.
- 4) Provide final connections to all equipment, motors, transformers, etc. provided by Others.
- 5) Install exhaust fans and ductwork.
- 6) Install interconnected smoke detector system.
- 7) Install all internal television cable and outlets.
- 8) Install all telephone/data wiring and outlets.
- 9) Install emergency lighting system.
- 10) Install relocated light fixtures and paddle fans.

- 11) Install any and all conduits, wiring, boxes, supports, grounding, fittings necessary for a complete installation.
- 12) Install photocell and timers for circuits indicated.
- 13) Provide and install all components necessary for a properly functioning x-ray system. Coordinate and determine exact requirements from x-ray equipment provider.

Installation Requirements: All electrical equipment and installation shall meet all local codes, PA Uniform Construction Code, ADA and the latest edition of the National Electric Code.

Codes and Standards: In addition to complying with all pertinent codes, and regulations, comply with:

- (1) National Electric Code, (latest edition; (NEC)
- (2) Local Utility Company Regulations; (PPL)
- (3) Americans with Disabilities Act; (ADA)
- (4) International Building Code; (IBC)
- (5) Uniform Construction Code (UCC).

System Layout: The drawings indicated a proposed schematic layout of all equipment, receptacles, fixtures, etc. This contractor shall verify on-site location of all exposed terminations of wiring and conduit, fixtures, equipment, etc., with the Owner, and make any field adjustments required for final accepted locations and requirements for all areas. All final adjustments and verifications must be done prior to installation of finished materials and any finished wiring accomplished.

Fixture Schedule: Provided on the Drawings.

Coordination: Arrange and coordinate installation of new electric service. Provide power wiring and final electrical connections to all mechanical equipment and appliances as indicated on the Drawings. Coordinate with all other trades on site.

Wiring: Wiring shall be Romex, insulated wire, #12 AWG minimum, copper where concealed in walls or in truss space and shall be run in an organized manner securely attached to the building structure. All wiring above A/C tile ceiling or exposed must be run in EMT or MC cable.

Equipment Wiring: All electrically operated equipment including HVAC accessories, X-ray equipment, kitchen equipment shall be wired and final connected by this contractor to receptacle, junction box, disconnect switch, etc. Packaged rooftop HVAC equipment and water heater is existing and presently wired to an existing panel which is to remain and be maintained.

Fixtures: Provide and install all lighting fixtures as shown on Drawings, complete with accessories and lamps required to do a complete and functioning installation.

Substitutions: Substitutions for approved equal of all fixtures and equipment indicated on schedules must be reviewed and approved by the Owner.

Workmanship: Workmanship shall be of a good quality, standard to the industry and acceptable by the Owner and Architect.

Electrical Identification/ Labeling Panels: This contractor is responsible to label panel box switching and conduit relating to fire alarm, security and emergency power systems and all other electrical devices as deemed necessary or required by the Owner.

Television Outlets and Wiring: Provide and install one (1) television outlet and RG-6 Tri-Shield Cable from location back to Dmark location. Outlet location and Dmark location to be verified in field with the Owner.

Receptacles: 20 amp commercial grade with white plastic cover plates. GFI where required by Code. Provide infiltration seals on all receptacles located in exterior walls.

Switches: 20 amp commercial grade Quiet-Break toggle type switches with white plastic cover plates.

Telephone and Data Outlets and Wiring: Combine into one recessed wall outlet with (2) – RJ45 receptacles and white cover plate. Install ¾" conduit in wall to above ceiling.

Wiring shall be CAT 5E, Type 8 conductor cable. Provide isolated ground from each receptacle back to distribution panel with its' own established ground at D-mark location. Final connection to punch down block by E.C., punch down block provided by E.C.

Electric Service Equipment: All equipment is presently manufactured by Cutler-Hammer. New panel to be manufactured by same.

Junction Boxes: All junction boxes including all switches and receptacles shall be metal.

Smoke Detectors: Smoke detectors shall be two-pole type detectors for interconnecting all detectors and shall be wired 120 volt unit as manufactured by BRK or approved equal to meet all local and state code requirements.

Emergency Lighting System: Emergency lighting system shall consist of sealed battery pack units with self contained and remote light heads capable of being lighted for a minimum of 1-1/2" hour duration. All units shall have test switch and shall have trickle charge for maintaining charge in battery. Emergency lighting system shall be in conformance with the requirements of N.E.C. and shall be as manufactured by Dual-Lite or approved equal.

Battery units shall be 12 volt, 100 watt, with sealed maintenance sealed lead battery. Battery shall have 12 year life expectancy with 5 year full warrant and 5 year prorated warranty.

Emergency light heads shall be 12 watt, 12 volt, halogen type light heads. Light heads shall be suitable for remote mounting and exterior mounting, with lamp capable of producing 300 lumens minimum.

Electrical Inspection: As required by Local Code. If required, the electrical installation shall be inspected by an approved independent inspection agency with certificate of approval issued for both rough and finish wiring. Costs for this inspection service is the responsibility of the contractor and shall be included as part of the bid proposal price.

Electrical System: Tie onto existing electrical system as noted or indicated on the Drawings.

END OF SPECIFICATIONS