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EQUIPMENT

tDenta RVICES · SUPPLIES

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MIDWEST DENTAL
Equipment *Services * Supplies
2429 109th Street
Grand Prairie, Texas 75050
Toll Free: 800 766 2025

Dr. Asha Patel

TBD.

	Austin, TX 78727
Equipment Rep:	Scott Jovich
Date:	April 19, 2024
Drawn By:	DDS
Checked By:	WC
Architect :	William Cruz, AAIA

Dental Floor Plan

Interpretations of codes can vary...Midwest Dental accepts no responsibilities for any costs or delays in construction due to code misunderstandings.....

ELECTRICAL

- 1. Permanent power needs to be connected to the building & suite.
- 2. Power needs to be ON during all of installation; so, that equipment can be tested. **FLOORING**
- Flooring needs to be installed on all areas where dental equipment is being installed (Operatories, Sterilization area, Lab, X-ray room & Mechanical closet).

AIR CONDITIONER & HEATER

1. Both the air conditioner and heating system needs to be installed and running during installation.

PAINTING

1. All painting needs to be completed.

1. The office needs to be secured with locks and/or security system.

1. The acquisition computer for Panoramic X-ray needs to be installed and running so that panoramic X-ray can be tested and calibrated.

2. Internet access; so, that digital equipment can be installed and calibrated. **RECEIVING**

1. An office representative needs to be at the jobsite to receive & sign off on the dental equipment. Failure will result on the equipment being brought back to warehouse and installation delayed.

2. Multi-level buildings must have functioning freight elevators or equal with access to dental facility.. Any other method of delivering dental equipment could void the manufacturers warranty...

Pre-installation checklist

In order to ensure a more successful equipment installation, these items needs to be finalized prior to the pre-installation check.

ADOPTED CODE FOR 2012...TEXAS ACCESSIBILITY STANDARDS...

"CLEAR FLOOR SPACE"...DEFINED....THE MINIMUM LEVEL AND UNOBSTRUCTED FLOOR OR GROUND SPACE REQUIRED TO ACCOMODATE A SINGLE, STATIONARY WHEELCHAIR AND OCCUPANT ADOPTED MARCH 15, 2012....

TOILET FACILITIES: IF TOILET ROOMS ARE PROVIDED, THEN EACH PUBLIC AND COMMON USE TOILET ROOM SHALL COMPLY WITH TAS.......

OTHER TOILET ROOMS PROVIDED FOR THE USE OF OCCUPANTS OF SPECIFIC SPACES (i.e. A PRIVATE TOILET ROOM FOR THE OCCUPANT OF A PRIVATE OFFICE) SHALL BE ADAPTABLE...

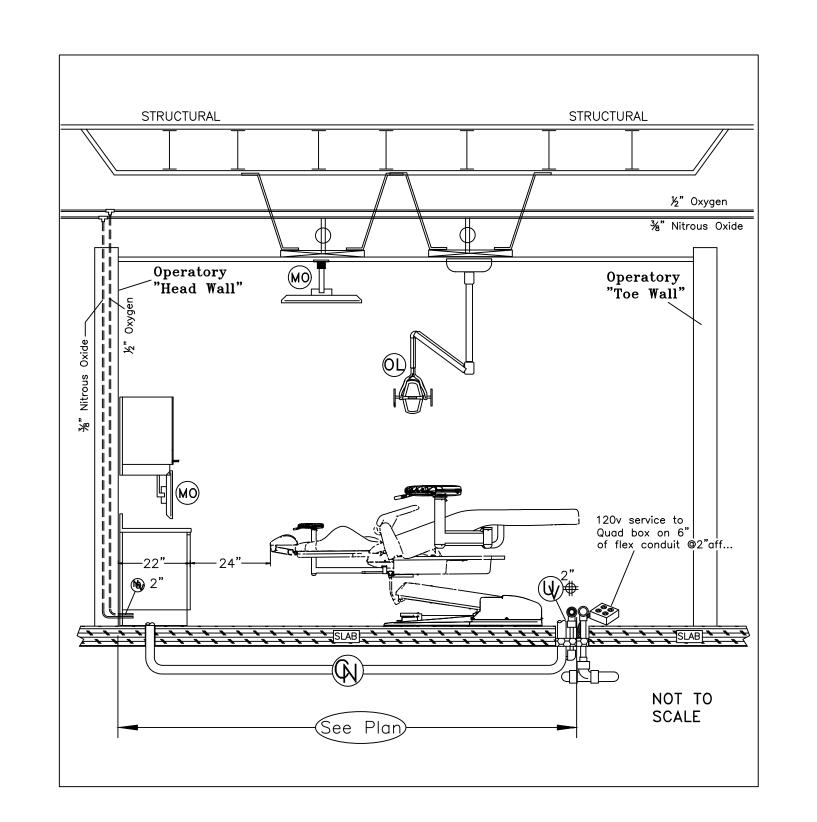
TAS HAS BEEN CERTIFIED AS EQUIVALENT TO ADA....

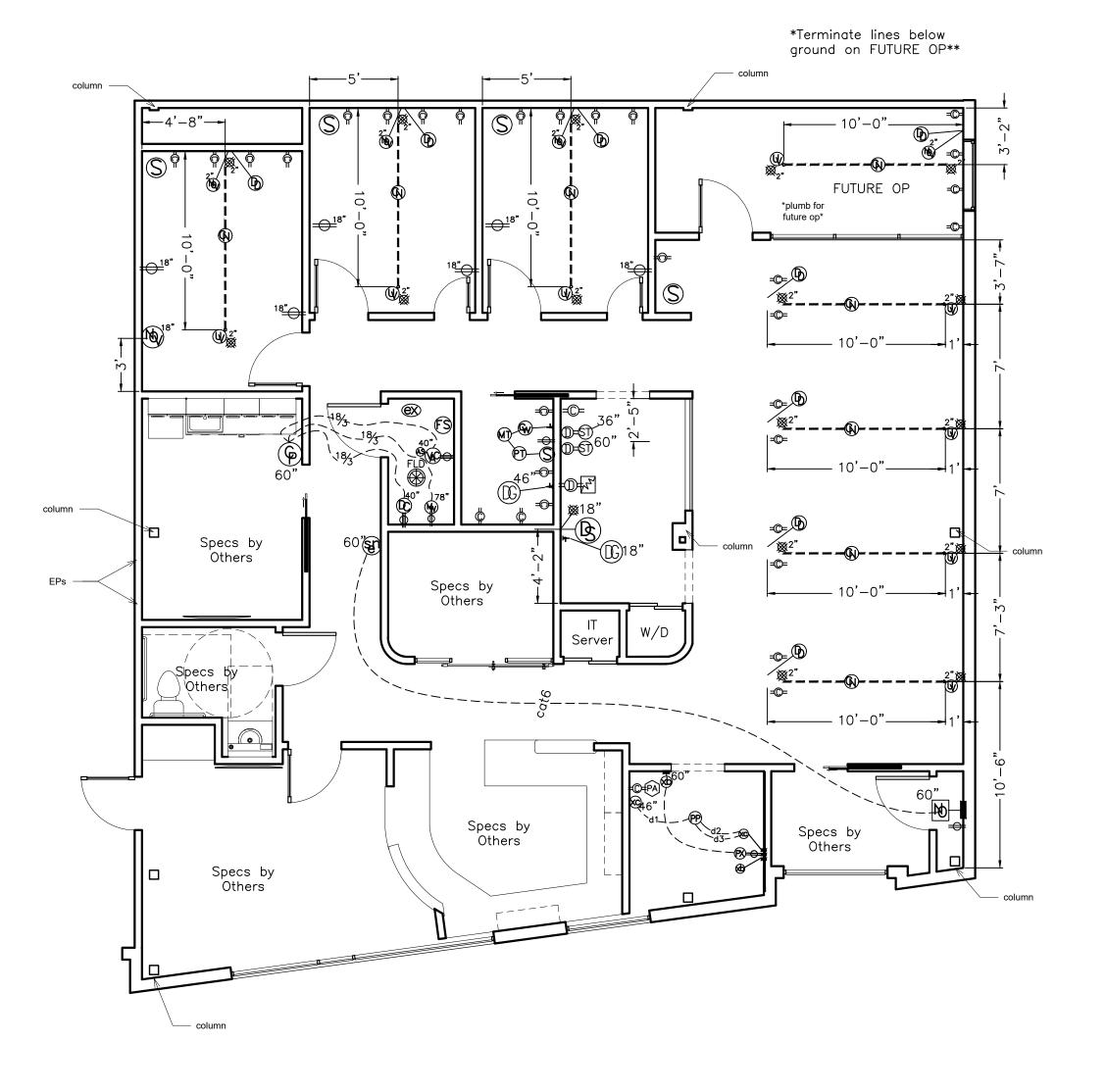
AND ARE AS STRINGENT (IN SOME INSTANCES MORE STRINGENT) THAN
THE ADAAG AND HAS BEEN DEEMED EQUIVALENT BY THE UNITED STATES
DEPT OF JUSTICE......

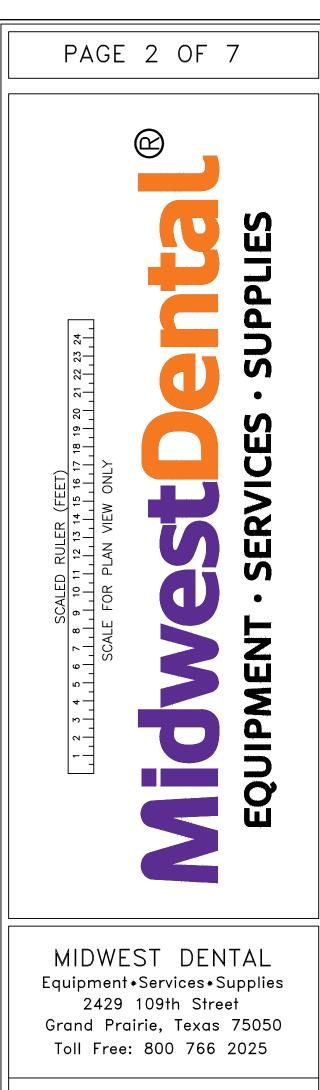
IF PROJECT'S ESTIMATED TOTAL COST IS LESS THAN \$50,000.00 YOU ARE NOT REQUIRED TO SUBMIT FOR REGISTRATION OR REVIEW...HOWEVER, THE PROJECT IS STILL REQUIRED TO COMPLY WITH TAS....

ALL EXAM ROOMS IN A DOCTOR'S/DENTIST'S OFFICE IS REQUIRED TO BE ACCESSIBLE PER CODE

A TOILET ROOM MAY BE PROVIDED AS "ADAPTABLE" WHEN IT IS PROVIDED FOR THE EXCLUSIVE USE OF A PARTICULAR INDIVIDUAL...TYPICALLY, THE TOILET ROOM IS ACCESSED DIRECTLY FROM A PRIVATE OFFICE...IF THE TOILET ROOM IS AVAILABLE FOR USE BY MORE THAN ONE PERSON, IT MAY NOT BE PROVIDED AS ADAPTABLE...







Dr. Asha Patel

Austin, TX 78727

DDS Checked By: William Cruz, AAIA

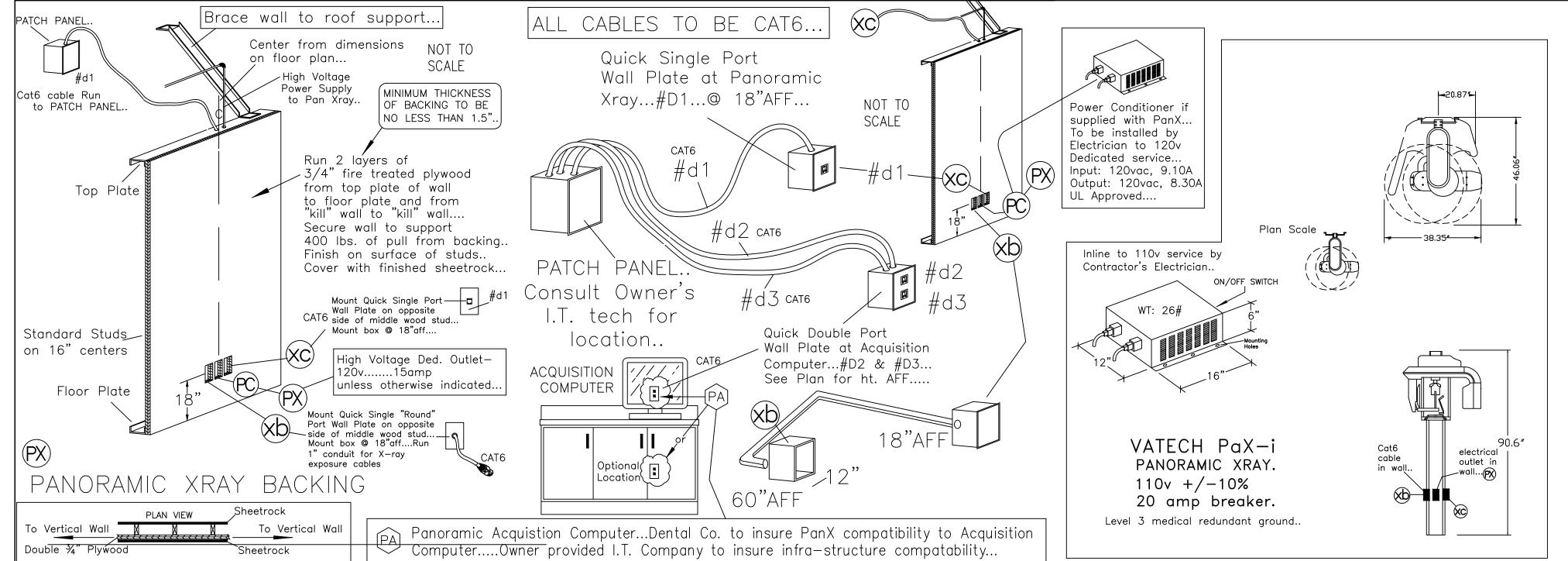
Dental Equip. Specs.

1 EA. Gleco Plaster Trap

1 EA. BOBCAT PRO 115V

2 EA. Water QD with flow control

DENTAL SPECIFICATIONS ON THIS PLAN MAY CHANGE IF EQUIPMENT LIST IS ALTERED AFTER SUBMITTAL OF MEPS...



SPECIFICATIONS BASED ON QUOTE 1034-230918014

EA. QUATTROcare PLUS 2124A Handpiece

1 EA. QuickClean Ultrasonic Cleaner

1 EA. Aeras 5 Vac System

EA. Aeras 5 Compressor,

EA. Sound Cover. Aeras C4-1

EA. Master Water Control Valve, EA. Remote Panel 3

EA. User Service Filter Set For 5-12 User

EA. HD sensor 1.5

EA. HD sensor 1.0

1 EA. HD sensor 1.0

4 EA. Series 4 Dental Chair with 50 Watt

2 EA. OCI Edge Swing Mount

2 EA. OCI Edge Swing Mount 4 EA. Ceiling Mount Series 4 Light

4 EA. Rear Mount Assistant's Package

4 EA. Series 5 Doctor's Stool

2 EA. Series 5 Assistant's Stool

1 EA. DCI Stencenter 1 EA. EzRay Air P(Handheld)

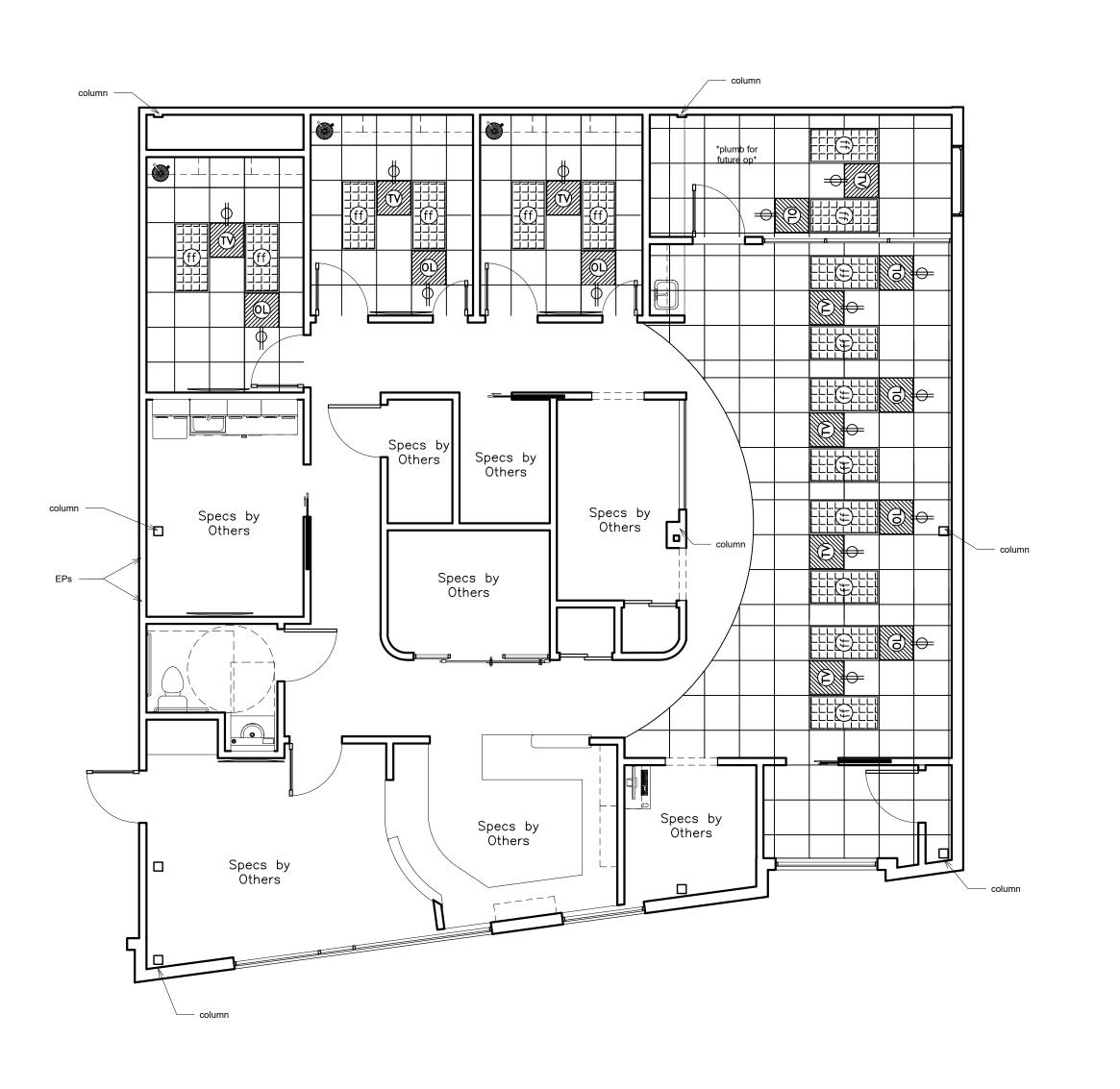
2 EA. Ultra PC percent Cabinet Mount Flowmeter

2 EA. Universal Cabinet Slide 1 EA. N20 Check Valve Riser

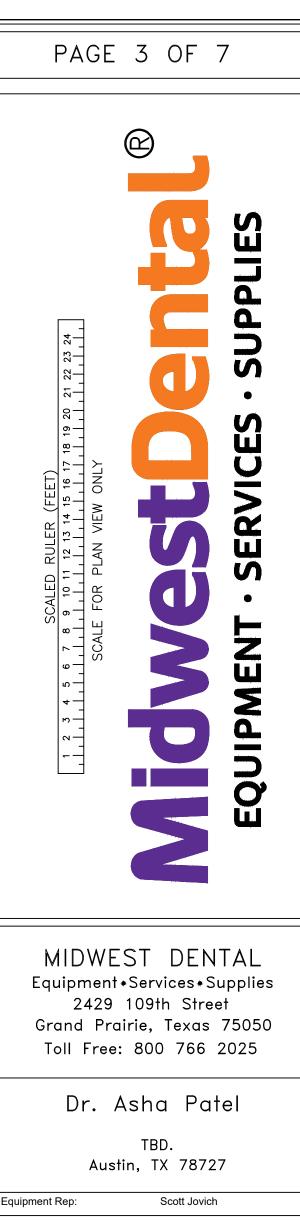
1 EA. 02 Check Valve Riser

1 EA. Nó 1A Vibrator, 120V AC, 3 Speed,

1 EA. Digi—Flo Automatic Switching Manifold EA. M/T 1 0" 1/3 Hp 115V



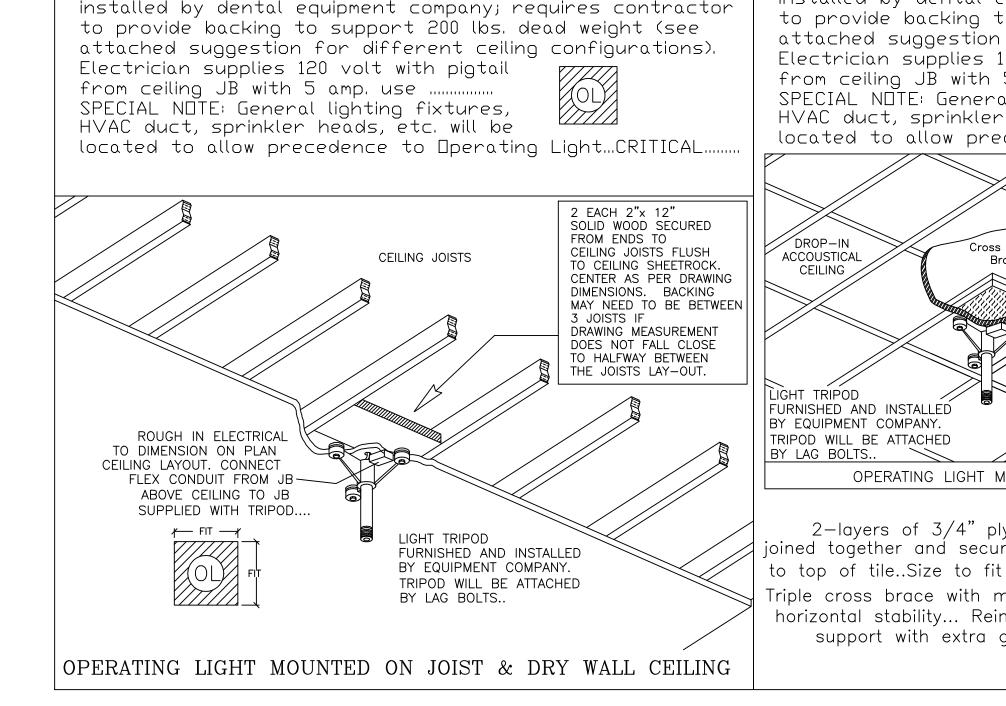
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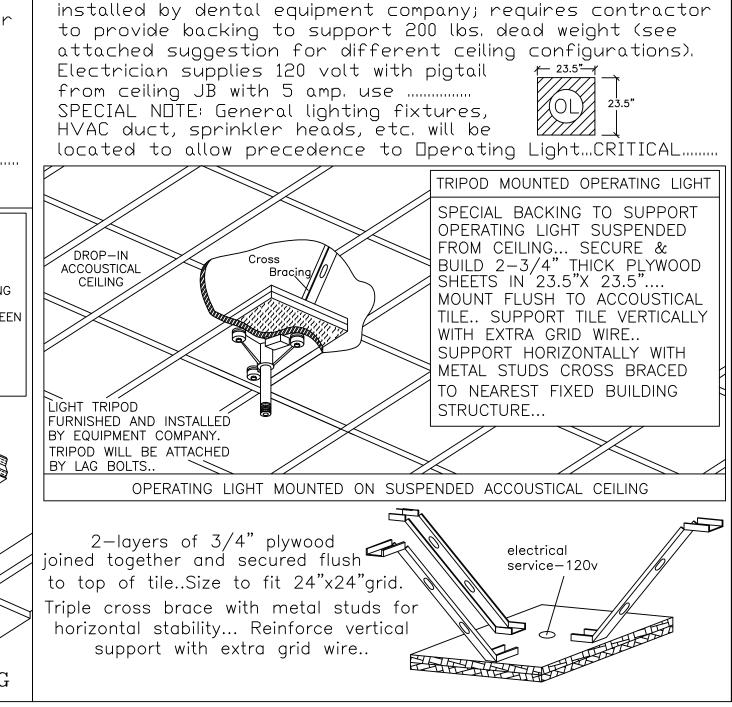
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SEE SCALED RULER

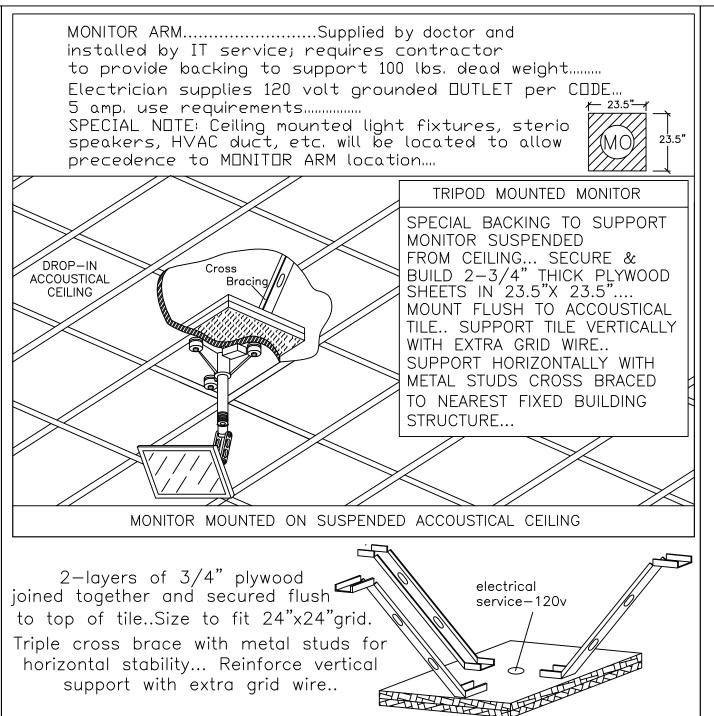


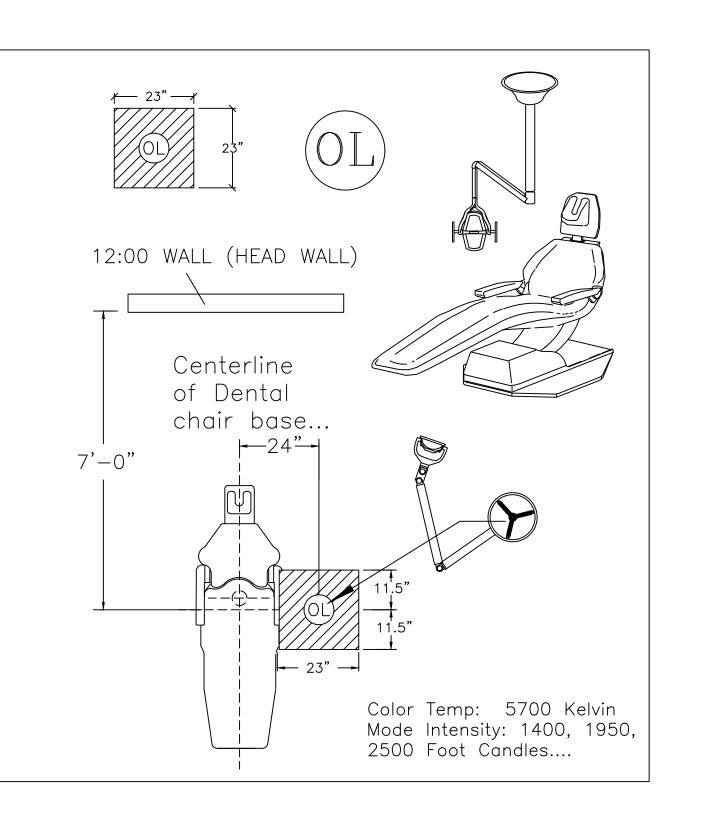
..Supplied by doctor and

OPERATING LIGHT (DENTAL)..



OPERATING LIGHT (DENTAL) ..





SYMBOL DESCRIPTIONS FOR DENTAL ELECTRICAL—Catogory 3

120 volt duplex outlet @ 18"aff unless otherwise indicated..

See plans by others for any additional outlets & I.T. cables that may be required for non-dental use.. GFI required per code... Measurement on plan is from finished floor to center of outlet box.... Mount outlet horizontally where indicated by symbol....."horz."..

CAT 3 medical Hospital grade outlet with "Redundant Ground" in all "Patient Care Areas"...

_ 120 volt floor mounted flush to finished floor, brass finished rim with duplex outlet...Spring caps....4.3 amp use calculation... CAT 3 medical Hospital grade outlet with "Redundant Ground" in all "Patient Care Areas"...

220 volt outlet. See attached cut sheet for specific symbol to determine breaker size...Conform to code..

STERILIZER 120 volt dedicated, GFIC outlet to code for CAT 3 hospital grade redundant ground... Verify location from attached plan.... See plans by others for any additional outlets that may be required in non-treatment areas. 20 amp. breaker....single phase...GFI per code requirements.... Measurement on plan is from finished floor to center of outlet box..

120 volt wall mounted general service outlet. Ht. AFF to be coordinated with cabinet shop drawings... CAT 3 medical Hospital grade outlet with "Redundant Ground" in all "Patient Care Areas"...

120 volt fourplex (QUAD) outlet. 4 amp usage... GFIC where required by code..
CAT 3 medical Hospital grade outlet with "Redundant Ground" in all "Patient Care Areas"...

Switched duplex 120 volt outlet. Switch (above countertop) outlet under lab sink at 18"aff...This outlet will power the on/off of dust collector under cabinet....GFI where required by code..... Switch located above countertop @ 46"aff unless otherwise indicated on plan.....

XRAY—DENTAL location. Provide dedicated 120 volt A.C. wiring on CAT 3 medical hospital grade "redundant ground"... Confirm breaker amps. with cut sheet attached... Contractor to run Cat6 back to xray button marked..

XRAY BUTTON location...Contractor to pull CAT6 cable back from xray location. Pull CAT6 into single gang box @ 60"aff...Stub out other end with 120 volt at xray location.—

PANORAMIC XRAY (PanX) machine location. Contractor provide required dedicated electrical per detail... (3) wires with CAT 3 medical grade "redundant ground" per plan and cut sheet of mfg's specifications attached to this set of plans. Place outlet at 18" aff unless otherwise indicated on plan.... If an electrical UL approved line conditioner (PowerVar) is provided with Pan Xray, it will be required to be installed on incoming power source to outlet (PX) .. Electrician to install at location to be established by consulting with Midwest Xray Technician ... Xray must be hard wired by electrician..

(XC) d1 Cable Run...I.T. to pull CAT6 cable from PanX (PX) to "patch panel" location per Plan..... Locate cable in Quick Port Single gang wall plate at (PX) to 18"AFF...Mark as "D1"... d2 Cable Run...I.T. to pull CAT6 back from Pan Acquisition computer (PA) location to "patch panel"... d3 Cable Run...I.T. to pull CAT6 back from Pan Acquisition computer (PA) location to "patch panel"...

Run to Quick Port Double gang wall plate at (PA) per plan.....Mark as "d2" & "d3"... — Cable Run...I.T. to pull CAT6 cable back from (XC) at panx (PX) location...18"AFF.. to single gang box located 60" aff at (xb) location on plan. Dental Co. to supply xray button

that secures to the single gang box and Dental Co. will complete connection of CAT6 to button.. Panoramic Acquistion Computer...Dental Co. to insure PanX compatibility to Acquisition Computer... Owner provided I.T. Company to insure infra-structure compatability...

(PC) POWER CONDITIONER....If provided with Pan Xray, it shall be installed by Electrician....

(PP) patch panel (if supplied by i.t. sub-contractor...) location by i.t. contractor...

TV (Television) monitor mounted to wall or ceiling with backing, electrical, and cable services as directed by owner... Owner provided.. Consult if I.T. sub-contractors are (TV) providing cable or satellite runs...

DATA DROP required by I.T./Electrician. STERILE SINK & MECH. ROOM data drops will be used for dental equipment mfg. test communication.

ELECTRICAL PANEL to suite....Electrician to locate per code...The "Clearance code" in front of panel (EP) normally will not permit the panel to be placed in the dental mechanical room.. Plus the code restricts the electrical panel exposure to a water source..

TASK LIGHTING under "overhead cabinets"... Electrician to furnish 120v service, color, and fixture to contractor's specs....Confirm ht. above floor & location with Cabinet Shop Drawings.. Supply appropriate "Red" and/or "Blue" colorized lights in sterilization where indicated on Plan.... SWITCH with appropriate room GENERAL LIGHTING...... Where Task Lighting is "built into Steri-Center, run service under sterile sink....

120v service to Ceiling or Track mounted operating light mounted to suggested backing per attached cut sheet... Light supplied and installed by dental company... Electrician to complete electrical connection to code at dental install.... CAT 3 medical Hospital grade outlet with "Redundant Ground" in all "Patient Care Areas"...

COMPUTER MONITOR mounted to ceiling with backing, electrical, and cable services as (MO) directed by owner...Owner provided.. Consult if I.T. sub-contractors are providing cable runs..

COMPUTER SERVER location, backing, venting, and electrical...See attached cut sheet......

<u>UNIT</u> utility center location. Provide CAT 3 medical 120v outlet with hospital "redundant ground" on flex conduit per mfg's specifications. Add 2" conduit chase where indicated on plans...... Keep all Utilities within 5" RADIUS where indicated on plans.. Cap if marked "FUTURE"....

<u>UNIT</u> utility center location. Provide CAT 3 medical 120v outlet with hospital "redundant ground" on flex conduit per mfg's specifications. Add 2" conduit chase where indicated on plans...... Keep all Utilities within 5" RADIUS where indicated on plans.. Cap if marked "FUTURE"....

GENERAL NOTE: HVAC REQUIREMENTS ARE APPROX. 1 TON PER 275 SQ. FT. WITH NORMAL WINDOW EXPOSURES TO THE SOUTH AND EAST...ZONE OPERATORIES SEPARATE AND ON THEIR OWN THERMOSTAT CONTROL ... CLASS A ELECTRICAL SERVICE SHOULD BE IN THE 400-500 AMP. RANGE....SINGLE PHASE...... MECHANICAL ROOM SHOULD BE A MINIMUM OF 5'-6" X 5'-6" & VENTED PROPERLY PLUS SOUND PROOF WALLS..GENERAL LIGHTING SHOULD BE 1:10 RATIO OF OPERATING LIGHTS.. NORMAL OPERATING LIGHTS ARE APPROX. 2500 FOOT CANDLES.. GENERAL LIGHTING SHOULD BE IN THE 250 FOOT CANDLE RANGE ...

STANDARD CEILING HEIGHT FOR CLINICAL AREAS (OPERATORIES, STERILE, XRAY, LAB, AND MECHANICAL) IS 9'-0"... NOTIFY DENTAL COMPANY IF CEILING IS OUT OF THIS RANGE... DENTAL EQUIPMENT COULD BE NEGATIVELY AFFECTED...

GENERAL NOTE: CABINETS SUPPLIED BY CONTRACTOR THAT WILL HOUSE COMPUTERS MUST BE DESIGNED TO HAVE FREE FLOW VENTALATION AND DUST FILTRATION SYSTEM FOR THE PRESERVATION OF HARDWARE COMPONENTS....PROPER VENTS SIZED TO A MINIMUM OF 3" HIGH X 4" WIDE SHOULD BE PLACED IN A POSITION TO ENHANCE AIR FLOW AND MINIMIZE DUST COLLECTION...LOUVERED COVERS ARE REQUIRED AND SOME FORM OF SECONDARY FILTER INSERTED TO COLLECT DUST THAT IS PULLED IN BY THE COMPONENTS FAN COOLING SYSTEM ...

CABINETS SUPPLIED BY CONTRACTOR THAT WILL HOUSE SPECIALTY DENTAL EQUIPMENT MAY REQUIRE ACCESS HOLES DRILLED TO ACCOMODATE SERVICES ... ALL HOLES OF THIS NATURE WILL BE DRILLED BY CONTRACTOR OR CABINETMAKER.....

AVERAGE DENTAL EQUIPMENT LOADS (In Amps)...Note: all dental equipment is single phase...

Dental Chair... 115V.... 5.0 amp.....general service... CATAGORY 3 medical code...

Operating Light... 115V/24V transformed... 2.0 amp.....general service... CATAGORY 3 medical..

Drive Gas Compressor...230V max...Confirm amp breaker from cut sheet attached..

Vacuum System230V max...Confirm amp. breaker from cut sheet attached... Each. Computer Server ... 115V...4.0 amp...dedicated 10 amp. breaker....

Dental Delivery Unit ...115V...2.0 amp....general service... CATAGORY 3 medical code...

Digital Film Processing ...115V... 1.0 amp....general service... Each.

Intraoral Xray Unit ...115V...8.0 amps @ emission..15 amp. dedicated circuit..CAT 3 medical code.

Model Trimmer ...115V...8.0 amp....general service...

Lathe ...115V...6.0 amp....general service.. Each.

Sterilizer ...115V...12 amp....15 amp breaker...dedicated...50/60hz.....

Pano X-ray Unit...115V..dedicated...Confirm breaker with attached cut sheet.. CAT 3 medical..

Ultrasonic Cleaner ...115V dedicated...10 amp breaker.... CATAGORY 3 medical code..

Med Gas tank room electrical ..115V... 1.5 amp....general service..

Master Water Control system ...115V/24v transformed.. 1.5 amp....general service....

ELECTRICAL LEGEND

- A: All electrical outlets & locations of utility call outs will be measured to the center of a 2X4 or 4X4 electrical box..... Electrical outlets not specified are 18"AFF or 4" above countertop. All outlets above cntrtop should be verified with cabinet elevations for conflict with backsplash.
- B: If dims of electrical and utility locations are not specified, verify and discuss with owner....
- C: Midwest equipment installers are not licensed contractors, thus all of the final "hard" dental equipment connections must be made by the applicable sub contractors at the time of the dental equipment installation....
- D: Operating Lighting information: 1. Style of task lighting mounted
- under upper wall-hung cabinetry. 2. See plans by others for general & decorative lighting and wall switching.
- 3. Emergency lighting to be provided per code...

4.Do not locate electrical panel in dental mech. room.. Clear Space required by code will not allow proper positioning of dental mechanical systems...

5. The contractor shall verify location and access to existing building utilities, including water, gas, air, vacuum, vents, electrical and waste lines when not designated on plans. Obtain approval of building owner before discontinuing service prior to hook up.

6. Contractor connects all dental equipment to code...

I.T. SPE<u>CS</u>

ALL I.T. CABLES, CONNECTIONS, MONITOR MOUNTS, MONITORS, TELEVISION UNITS, (UNLESS CONTRA-INDICATED) WILL BE PROVIDED AND INSTALLED BY OWNER PROVIDED I.T. SUB-CONTRACTOR..... CONTRACTOR IS REQUESTED TO GIVE A MINIMUM OF 10 DAY NOTICE BEFORE SHEETROCK IS TO BE INSTALLED SO THAT CABLES CAN BE PULLED PRIOR TO THE CLOSING OF WALLS.....

Ceiling mounted light fixtures, sterio speakers, hvac duct, sprinkler heads, etc. will be located to allow precedence to "Operating Light" location.

CONTRACTOR...Make sure the Mech. Room has proper air circulation..... Room should be kept at constant 40 to 104 degrees F...HVAC damper should be restricted from heating.. A FAN SYSTEM should operate to cool room to the desired $40^{\circ}-104^{\circ}$ F. The fan should be of the "exhaust" style set to remove heat.. An opposing intake louver should be located near the exhaust fan leading to conditioned air source.. Sound proof all mech. room walls with insulation or equal...

> **ELECTRICAL CONTRACTOR PROVIDES:** "RING AND STRING" service to each data drop location shown on IT plan.. This plan is to be supplied by owner's IT/Computer

sub-contractor...

Electrician provides single gang sheetrock ring and a pull string to above wall plate. Electrician provides access hole in top wall plate for string. Secure string to nearest conduit run above ceiling.....

DENTAL X-RAY

Dental Dealer.... There is no requirement in our regulations for lead walls..... Because dental x-ray is typically low dose, the standard of 6 feet (from the x-ray tube to the operator or any other person besides the one getting the x-ray exam) or a normal construction sheet-rock wall should provide sufficient protection. If you have any further questions, let me know and we will get you the answers.....

Karen Blanchard Incident Investigations Program... Radiation... Radiation Inspections Branch....MC: 1986 Texas Department of State Health Services.. EMAIL: karen.blanchard@ dshs.state.tx.us

P.O. Box 149347 Austin, TX 78714-9347 Office: 512-834-6770 ext 2026 Fax; 512-834-6654

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ERVICES QUIPM

MIDWEST DENTAL Equipment *Services *Supplies 2429 109th Street Grand Prairie, Texas 75050 Toll Free: 800 766 2025

Dr. Asha Patel

Austin, TX 78727 William Cruz, AAIA

Dental Equip. Specs.

MIDWEST DENTAL EQUIPMENT DOCUMENTS ARE TO BE APPLIED TO CONTRACTOR'S CONSTRUCTION DOCUMENTS BEFORE SUBMITTAL TO CITY FOR PERMITS..NO OTHER DOCUMENTS WILL BE SUPPLIED BY MIDWEST DENTAL OTHER THAN MFG. SPECS AND CUT SHEETS FOR DENTAL EQUIPMENT..... ANY ENGINEERING DRAWINGS, POWER AND/OR LOAD CALCULATIONS, IBC SUBMITTALS, ADA/TAS COMPLIANCE REQUIREMENTS, NFPA CODE INTERPRETATIONS, ELECTRICAL CODES, AND UNITED PLUMBING CODES ARE THE RESPONSIBILITY OF THE CONTRACTOR.....

A COMPLETE SET OF CONSTRUCTION DOCUMENTS SHOULD BE SUPPLIED BY THE CONTRACTOR TO THE CITY FOR PLAN REVIEW BEFORE ANY DEMOLITION OR TRENCHING PROCEDES ...

SYMBOL DESCRIPTIONS FOR DENTAL PLUMBING & ELECTRICAL—Catagory 3



UNIT w/VACUUM utility center location. Provide drive gas with shut—off valve, vacuum line, and 120v on flex conduit per CAT 3 medical specs. Add 2" conduit chase where indicated on plans.... Keep all Utilities within 5" RADIUS where indicated on plans.. Cap if marked "FUTURE".... Add "water treatment" supply line when indicated...See cut sheet for details.....



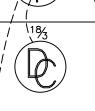
UNIT—Dental utility center location. Provide CAT 3 medical 120v & 1/2" drive gas per cut sheet.... Provide 2" conduit chase per plan...(A)...A utility box will cover the chase, drive gas, and electrical... Keep all Utilities within 5" RADIUS where indicated on plans.. Cap if marked "FUTURE"... Utility box supplied and installed by dental company....



MASTER WATER shut—off / by—pass valve location. Provide water from suite's main incoming water line for shut-off of all water. Valve by Midwest, contractor/plumber to install...See_cut sheet for size.. Electrician provide 120 volt outlet and run 18/3 L.V. to control panel...



CONTROL PANEL for switching dental mechanical.... Installation by electrician to: vacuum pump(s), drive gas compressor(s), and water shut—off valve. Install appropriate number of 18/3 low voltage wires to Control Panel supplied by Midwest and Installed by electrician in appropriate sized wall box.....



Provide voltage & breaker to code per Mfg. Cut Sheet.. DRIVE GAS COMPRESSOR—Dental location. See attached Cut Sheet for amps to circuit breaker.. Single phase...Provide wiring per mfg's specifications. Install 18/3 LV wires to control panel location per mfg. specs.. Catagory 3 drive gas requires Disconnect Switch(es).. Notify Midwest of voltage variance in building electrical supply. Electrician to provide "Buck or Boost" transformer if voltage is out of Mfg's. Cut Sheet range....

Plumber Provide....1/2" min. copper air lines to outlets as noted... Provide 1" min. PVC "FRESH AIR INTAKE" to outside atmosphere with rain preventive attachments. If this is not possible, provide 1" min. PVC to conditioned air space within facility and confirm noise insulated room such as storage closet or normally unoccupied area. Confirm separation with City Code.. Do NOT use MECH. ROOM....Ambient temperature must stay between 40 degrees and 104 degrees F... See cut sheets provided by Midwest designed for specifics on air compressor for this project.....



VACUUM—dental motor pump location. Provide electrical service to code per Mfg's. Cut Sheet.... See attached Cut Sheet for amp breaker size per mfg. specs... Electrician confirm usage/breaker ratio... Install 18/3 LV wires to control panel location per mfg. specs....

Electrician provide "Buck or Boost" transformer if voltage is out of Mfg's. Cut Sheet range.... Motors are single phase, 60 hz...

Catagory 3 requires Disconnect switch & must be fusable and sized per UL98, UL489, or UL508..

Plumber Provide waste drain to sewer and cold water hookup if required (Min. 30 PSI to Max. 70 PSI..... Provide piping continuous to location shown and size per plan and mfg. specs. Provide 1.5" copper or galvanized pipe to outside of building for exhaust of pump per mfg specs. Confirm code separation.. Most cities require 10' minimum separation..

Ambient temperature must be between 40 degrees and 104 degrees F... See cut sheets provided by Midwest designed for specifics on vacuum for this project.....



CONDUIT NETWORK.... Electrician provide & install EMPTY 2" conduit unless noted otherwise. ===(N)====== Indicates conduit routing...cut excess off at finished floor at cabinets & Utility boxes.. Where conduit used for I.T. cables terminates in wall, run 2" conduit up wall to above ceiling grid... Use standard 90'sNOTE: long sweep 90's will NOT be needed for dental equipment or I.T. cables... CHASE TO BE USED BY DENTAL COMPANY and/or I.T. ONLY....

EXHAUST FAN.....

Dental Mechanical & Server Rooms exhaust fan should be thermostatically controlled to "ON" at 75 degrees F...Lab exhaust (if required) to have separate control switch.. See plans by others for additional exhaust fans that may be required, i.e... restrooms, etc...

CONTRACTOR...Make sure the Mechanical Room & Server Room have proper air circulation...Rooms should be kept at a constant 40 to 104 degrees F... A HVAC damper is not recommended because of heating cycle in Winter... A fan of the "exhaust" style with a thermostat set to the recommended temperature should be installed at a high point in the room with an opposing intake louver for "conditioned air" set at a low point in the room in order to circulate "conditioned air" up thru the heat producing units and out to atmosphere for year round temp. control.



COLD WATER valve. Contractor furnish and install 1/2" cold water supply with 1/2"x 3/8" compression right angle shut—off for model trimmer and/or vacuum pump(s) if required...back flow prevention to code...



DRIVE GAS location...1/2" air supply from dental air...Terminate with 1/2" x 3/8" compression right angle shut—off...center at "above finished floor" dimension next to symbol on plan...



DENTAL SINK and hardware part of dental equipment supplied by Midwest. Contractor provide plumbing requirements indicated on plan... See cut sheets provided by Midwest. Plumber to connect per manufacturer's specifications and do final plumbing connections.



"ISLAND" sinks require loop vents or "studer" vents... verify to code....STUDER VENTS PREFERRED... Plumber to connect per manufacturer's specifications and do final plumbing connections. See cut sheets provided by Midwest.



SINK... Contractor furnish and install sink, hardware and shut-off valves. Sink to be specified by owner..... Note: Typical sink size and type where applicable: (Verify with tenant) Install vegetable sprayer in lounge, sterile, and lab areas on large, deep sink specified by owner.... Lavatories and staff lounge: per building standards, accessible codes, and/or tenant specs. Provide foot controlled faucets or electric eye faucets as specified by tenant.



WATERLINE TREATMENT system.... See attached detail for installation instructions...Supplied by Midwest Dental...Installed by Plumber... "HOME RUN" supply lines from this unit to dental cabinet delivery system marked..... Main unit requires drive gas line, main city water supply min. 30 PSI-max.70 PSI,

drain, and backflow prevention to code....SEE ATTACHED CUT SHEET



DISTILLER for sterilizer water...Supplied by dental company and installed on cold water line to sink by plumber.... (Dis) Special faucet supplied with distiller..Plumber installs distiller "WAND" on sink in leau of vegitable sprayer...Electrician supplies 120v GFI outlet under sink...

CONTRACTOR-PLEASE CONFIRM PLUMBER SUPPLIES SINK WITH VEGITABLE SPRAYER HOLE..

PLUMBING TERMINATIONS FOR EQUIPMENT REQUIRED BY DENTAL CO. ALL VACUUM LINES RUN UNDER SLAB UNLESS NOTED....

Vacuum Systems:

Operatory -1/2" female pvc fitting with male cap or plug for test. Pump - DWV fittings sized to pump...

Water -1/2" x 3/8" compression fitting (angle stop) Water pressure requires Min. 30 PSI to Max. 70 PSI...

Test — Negative pressure to not less than 19 HqV for 24 hours... Less than 12 HqV drop is acceptable.

NFPA99 (2012) SECTION 5.3.12.2.8.1 thru SECTION 5.3.12.2.8.3......

SLOPE A MIN. OF $\frac{1}{4}$ " IN 10 FEET WITH LOW END TOWARDS PUMP. USE DRAIN, WASTE, AND VENT (DWV) FITTINGS... IF AN IN-LINE LOW SPOT IS UNAVOIDABLE, PLACE IT IN A KNOWN LOCATION AND ADD A CLEAN-OUT ... ALL WORK MUST COMPLY WITH 2012 NFPA 99c...

Drive Gas Compressor Systems: NFPA 2012 99.5.3.7 At compressor -1/2" female pipe thread... Operatory termination -1/2" x 3/8" compression right angle stop... TEST—To not less than 150 psi for 24 hours with nitrogen...

Less than 5 psi drop is acceptable... NFPA (2012) SECTION 99.5.3.7



Distiller for ULTRA-PURE WATER to sterilizers & lounge... Supplied by dental Co. and installed in Mechanical Room on cold water line in location by Plumber... Special faucet supplied with distiller to be installed at sterile sinks and in staff lounge...Run special 1/4" ID tubing supplied by dental co. from distiller in mech. room to sterilization sinks and lounge... Plumber installs faucet on sinks in leau of vegitable sprayer and connects tubing to faucet supplied with Distiller.....



GAS (Natural) VALVE location. Provide 1/2" rigid pipe thread (black iron) code approved through wall and install valve supplied by owner.... (V)



AIR VALVE location. Provide 1/2" copper air line through wall @ 46"aff and install air valve by owner... (A)



VACUUM ONLY...run under slab, up nearest wall to 12"aff and turn out of wall 6"... This vacuum line terminates under noted sink with a reducing 1/2" female pvc fitting... Vacuum horizontal trunk line to be 2"I.D. pvc...reduce to 3/4" riser...reduce to 1/2"FPT... "Plug" this fitting with a 1/2" male cap for testing and leave cap installed... Dental company will make final connection to dental equipment.... NOT RECOMMENDED FOR ULTRASONIC CLEANERS WHEN USED WITH DRY VACUUM SYSTEM!!!



AMALGAM SEPARATOR-REQUIRED BY NEW CODE OF 2017.... Designed to remove trace amalgum residue from non-potable water being dumped into City sewer system... Suppled by Dental Co. and installed by licensed plumber to vacuum intake... (A)



FILM PROCESSORProvide Water -3/4" male "garden hose" bib fitting on 1/2" cold water supply and drain — separate "P" trap for processor with silver saver to code... Back flow prevention to code....



DISINFECTOR for dental instrument cleaning..Designed and plumbed similar to a typical under counter dishwasher... (6) See attached Cut Sheet for plumbing & electrical details...



PLASTER TRAP......To UPC requirements...Plumber install per mfg. specs included with trap... (PT) Gleco Trap (United Plumbing Code Approved) or equal will be supplied by plumber... The 64—ounce Gleco Plaster Trap requires a 15.5 inch minimum clearance from center of outlet to base of cabinet....The 32-ounce (special order only) requires 13.5 inch minimum clearance...



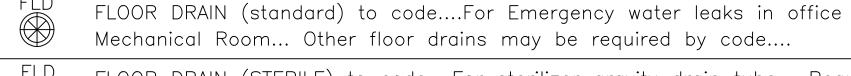
MODEL TRIMMER...installed by plumber to drain with UPC plaster trap (confirm city code)... 🐠 Requires cold water supply with STANDARD shut-off above countertop...(do not use 1/4 turn valve)... Provide 120 volt power (GFIC/20amp breaker).. See cut sheet for details.. Plumber to install...



MOP SINK to code... (MS)



FLOOR SINK to code... (FS)



FLOOR DRAIN (STERILE) to code....For sterilizer gravity drain tube... Requires self-priming device to code.. Locate 16" from wall under Sterilization Sink... Sterilization Sink module requires access panel in floor of sink cabinet......



DRINKING FOUNTAIN only if required by code or owner.. Not recommended by Dental Co. for dental facilities... Plumber & Electrician supplies services as required by mfg. specs.... GFIC PER CODE...



ULTRASONIC CLEANER..Provide 120 volt outlet on dedicated 15 amp breaker at ht. above finished floor indicated on plan... Supply dishwasher type drain "T" fitting to nearest sink, "T" to be 23" maximum height. If recessed in countertop, see manfuacturer's templates provided by Midwest. 🛱 GFIC PER CODE...

Provide insulation in Mech. Room for sound reduction

PLUMBING LEGEND

A: If dimensions of plumbing and utility locations are not specified, verify and discuss with Midwest, designer, and owner / tenant.

B: Midwest equipment installers are not licensed contractors thus the final "hard" dental connections must be made by the applicable sub contractors at the time of equipment installation.

C: The contractor shall verify location and access to existing building water, gas, air, vacuum, vents, electrical and waste lines when designated on plans. Incoming water pressure must be between 30#-70# Notify and obtain approval of building manager, if applicable, before discontinuing service prior to hookup.

D: All vacuum pumps & air compressors to be hooked up by contractor as well as sinks, control valves, nitrous controls and outlets.

E: Most areas require back flow prevention—consult local codes and install as necessary.

CONTRACTOR CONFIRM BEFORE CONSTRUCTION IF "PLENUM" RATED ELECTRICAL WILL BE REQUIRED FOR THIS PROJECT.....

SUGGESTED PIPING LAYOUT, SEE MFG.'s SPECIFICATIONS, TYPICAL

Run 1/2" copper drive gas line. Terminate all locations with compression shut-offs. Termination of above finished floor (aff) will be noted on plan... Provide 24 hour leak test at 100 PSI with oilless clean air.

MIDWEST DENTAL Equipment *Services *Supplies 2429 109th Street Grand Prairie, Texas 75050 Toll Free: 800 766 2025

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ERVICES

Dr. Asha Patel

Austin, TX 78727

		,		
	Equipment Rep:		Scott Jovich	
	Date:		April 19, 2024	
	Drawn By:		DDS	
1	Checked By:		WC	
-	Architect :		William Cruz, AAIA	

Dental Equip. Specs Where indicated on rough—in plan, cap lines for future use.

UNDER SLAB FLOOR VACUUM LINE SPECIFICATIONS:

Sanitary/

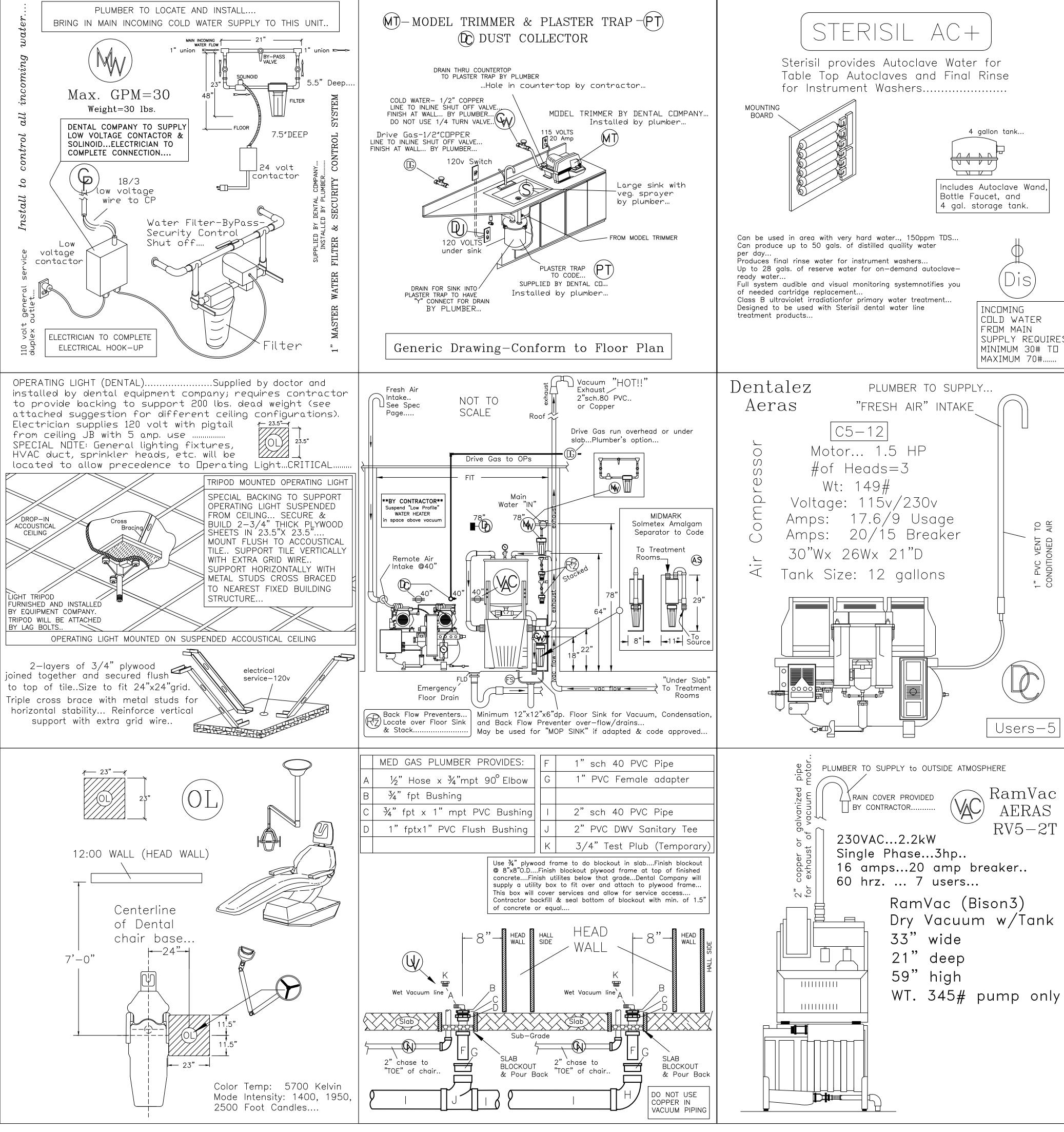
Dental vacuum lines. Use schedule 40 PVC pipe (DO NOT USE COPPER)... 2" dia. PVC main trunk line,... slope 1/4" for every 10 feet of run toward pump location. AVOID 90 DEGREE CONNECTIONS...... Use DWV fittings or equal.... Elbow (Sanitary Tee) off of main trunk line with 1" risers to termination point...Reduce to 3/4" pvc female fitting with test plug at termination connection....Run Sanitary Tee with flow.... SEE ATTACHED PIPING SCHEMATIC FOR PARTS DETAILS.... Final hook up by plumber. Vacuum lines to run sub grade and to follow trench layout.

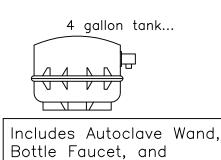
LEVEL 3 PIPING PERMITTED UNDERGROUND/UNDER FLOOR...NFPA99(2005) section 5.3.10.10.5.2(A) Waste Pipe... 2" pvc schedule 40 with DWV fittings...Trap & Drain lines min. 2 sizes larger than waste....Trap seal min. 4" deep..Vents must extend min. of 6" above tank top before turning horizontal.. Exhaust ("HOT") vent 1.5" copper or galvanized and dedicated (not tied to plumbing vents)....All joints must be oil tight...Slope all horizontal lines toward vacuum unit... Terminate exhaust pipe a sufficient distance from rubber roof material...Shroud & screen outside end to prevent entry of water, debris, & creatures...Locate to code from air intake.. Standard separation is 10'-0'' min, but confirm with city code enforcement... Follow NFPA 99c 2005 Edition, mfg. instructions, and local code...

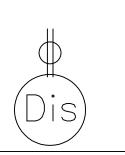
OVERHEAD VACUUM LINE SPECIFICATIONS:

Sanitary/

Use DWV fittings or equal...Make inverted "P" trap with 4-3/4"PVC ells.... Use Sanitary Tee to 90 up off of main horizontal line with 3/4" risers to inverted "P" trap. Make turns and run down wall in 1/2"pvc...Use 1/2" FPT pvc fitting at termination connections on 1/2"PVC ell..Final hook up by plumber. Vacuum lines to run overhead as per attached detail sheet....Highest point of Inverted P trap not to exceed 12'-0" aff "maximum lift"..... Run 1/2" PVC "dry line" with vacuum relief valve per mfg. drawings....Attach scavenger line for Med Gas to "dry line" per mfg. drawings...VRV to be above inverted "P" trap... Waste Pipe...2" pvc schedule 40 with DWV fittings...Trap & Drain lines 2 sizes larger than waste....Trap seal min. 4" deep..Vents must extend min. of 6" above tank top before turning horizontal.. Exterior exhaust pipe to be 1.5" copper or glavanized..dedicated (not tied to plumbing vents)....All joints must be oil tight...Slope all horizontal lines toward vacuum unit.. Terminate exhaust pipe a sufficient distance from rubber roof material...Shroud & screen outside end to prevent entry of water, debris, & creatures...Locate to code from air intake.. Follow NFPA 99c 2005 Edition (confirmed to 2012), mfg. instructions, and local code...







COLD WATER FROM MAIN SUPPLY REQUIRES MINIMUM 30# TO MAXIMUM 70#.....

FOR MOUNTING- ELECTRICIAN PLEASE SUPPLY A PROPER SIZE PLASTIC LOW VOLTAGE WALL BOX WITH 12" OF EXCESS LOW VOLTAGE WIRES.....

Control

Panel

3 SETS DF 18/3

PULLED BY ELECTRICIAN to

low voltage wires

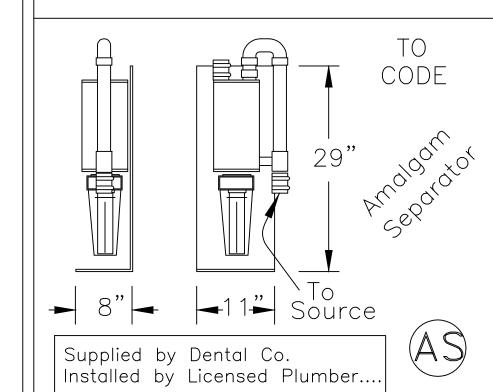
Air Compressor, Vacuum(s),

and Master Water Control.

SEE PLAN FOR LOCATION ...

PLASTIC

CONTROL PANEL PROVIDED BY & INSTALLED BY MIDWEST TECHS



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Q. S ER

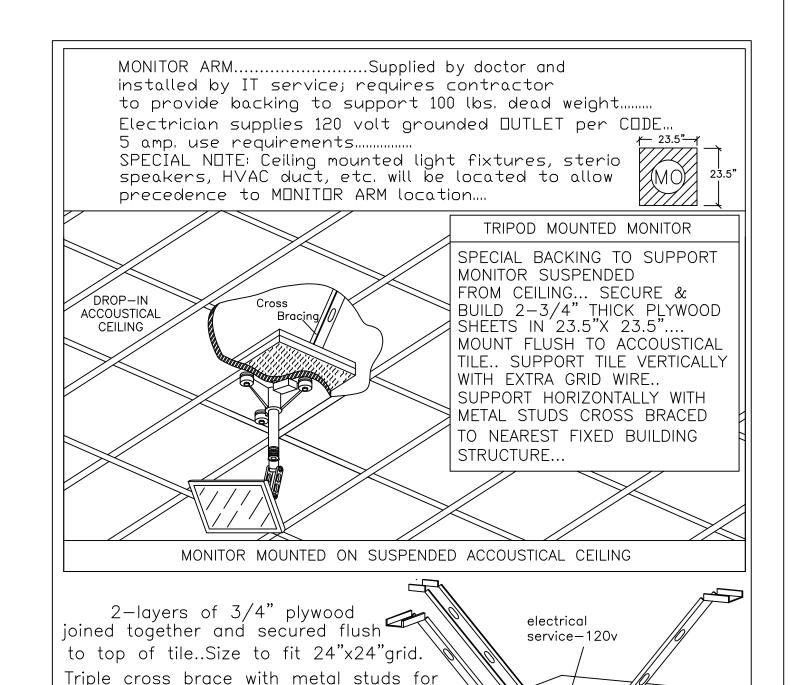
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Dr. Asha Patel

Austin, TX 78727

Dental Equip. Cut Sheet

William Cruz, AAIA



horizontal stability... Reinforce vertical

support with extra grid wire..

Cat 3-Dental

NFPA 99 (2012ed)—Category 3 Piped Gas Systems:

Sedation levels limited to minimal/light & moderate/medium sedation,,NO ANESTHESIA.

Central Storage (ref. 2015 99.5.3.3.4)

Patients remain conscious & "capable of self-preservation".

Appointments are "Elective"...

atio

<u>a</u>

arm

7

<u>0</u>

ifo

ACCUTRON ULTRA PC FLOWMETER

8.13"

Flowmeter

36800 CUTOUT FOR CABINET...

-6.25"**-**

Flowmeter

cutout

Patients may NOT be kept overnight..

"Systems serving occupancies where interruption of the piped medical gas would terminate procedures but would not place patients at risk of morbidity or mortality." (PIP)

Category 3 Medical Gas Varifier (ref. 2015 99.5.3.12.1.2)

Dental Air Supply System (ref. 2015 99.5.3.3.6.1)

Confirm Compliance to NFPA Standard 99(2015 Edition)

Manifold Systems comply with requirements for Category 3, Non-Flammable Medical Gas Systems established by the National Fire Protection Association NFPA 2012 99.5.3.6 Confirmed code to year 2015....

Category 3 Non-Flammable Medical Gas Systems (ref. 2015 99.5.3) ■ Have not more than 3000 cu. ft. total capacity of all gases (excluding nitrogen and air)

- connected and in storage at one time. ■ Have a listed pressure regulator directly connected to each cylinder.
- Supply either a single treatment facility.
- Supply system storage location shall be provided with 2 louvered openings having
- a minimum of 72 square inches each...(IBC standards require 36 sq. inches each) ■ Supply system locations that are remote must be locked...
- Where the central gas supply system is remote from the outlet stations, a zone valve (pressure sensitive shut-off valve) is required...

Catagory 3 Medical Gas Piping (ref. 2015 99.5.1.10)

- Piping to be annealed (soft temper) ASTM B819 (Type K or L) copper tubing that has been cleaned for oxygen service, and capped prior to installation.
- Joints to be brazed without use of flux.
- TO PREVENT CROSS CONNECTION OF OXYGEN AND NITROUS OXIDE:
- All oxygen tubing to be 1/2" O.D.
- All nitrous oxide tubing to be 3/8" O.D. All vacuum tubina to be 5/8" O.D.
- While brazing, purge piping system with low flow oil—free dry nitrogen to prevent formation of copper oxide in the lines.
- 2. After brazing of all joints, pressurize piping system to 150 psig with oil—free dry nitrogen and leak test all joints by means of soapy water or other equally effective means of leak detection safe for use with oxygen
- 3. Allow piping system to remain pressurized to 150 psig for 24 hours with source shut—off valve closed. Maximum allowable pressure loss is 5 psig. 4. Blow piping system clear with oil—free dry nitrogen
- 5. Purge piping system with intermittent high flow oil-free dry nitrogen to remove particulate matter. Flow each outlet fully until purging produces no discoloration in

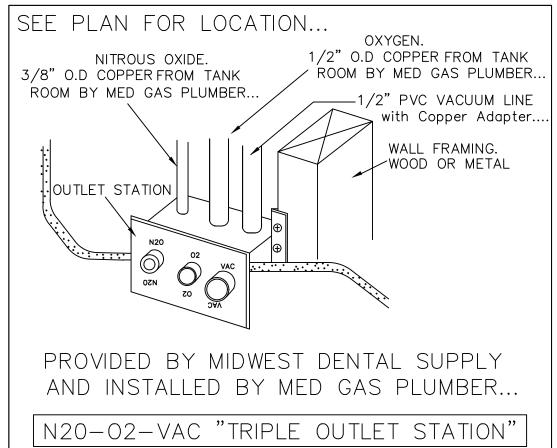
6. Cap piping system. No further brazing shall be performed.

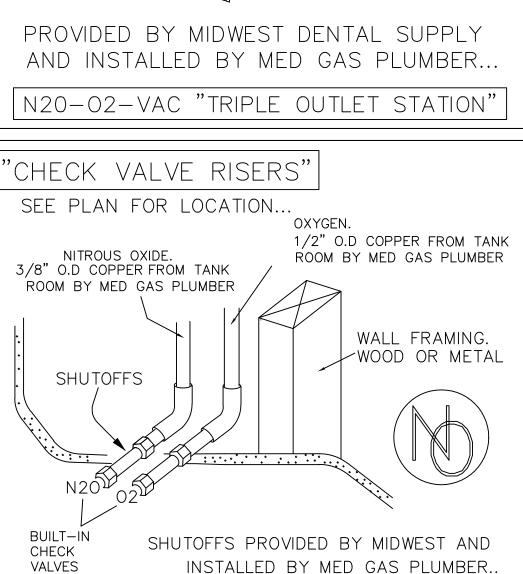
Category 3 Non-Flammable Medical Gas Systems (ref. 2015 99.5.3.10.1.6)

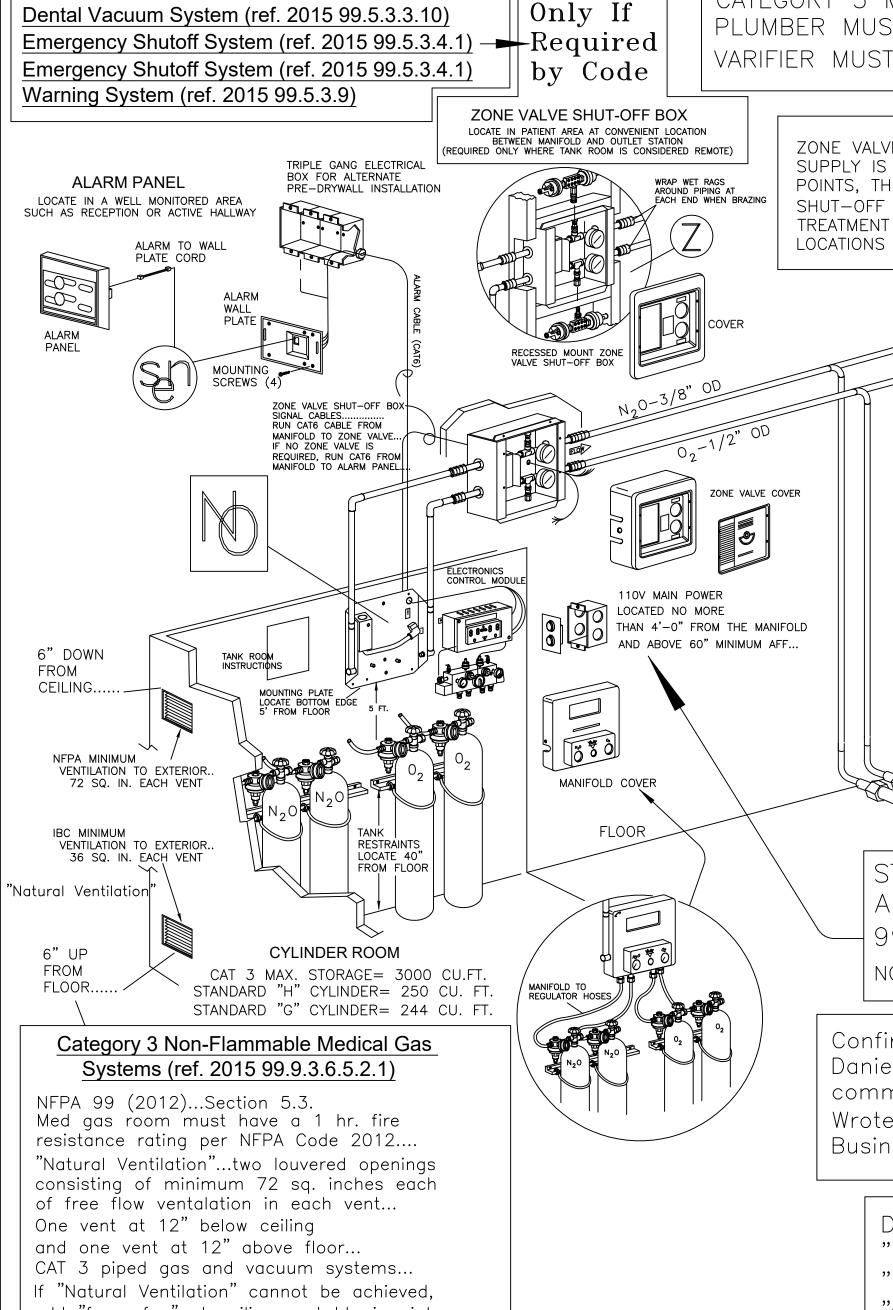
MED GAS PLUMBER TO CONFER WITH CITY CODE OFFICIALS TO DETERMINE VACUUM, DENTAL AIR, AND MED GAS LINE ROUTING .. TO RUN DENTAL GAS (AIR, NITROUS OXIDE, & OXYGEN) UNDER A SOLID CONCRETE FLOOR, REQUIRES A PVC SLEEVE SEPARATING THE COPPER LINE FROM ANY CONTACT WITH CONCRETE DUE TO THE NEGATIVE CHEMICAL REATION BETWEEN THE TWO MATERIALS. NFPA CLARIFICATION FOR 2015 PERMITS THE UNPROTECTED RUN OF DENTAL GAS IN FILL DIRT. RESPONSIBILITY OF MEETING THESE CODES, BOTH WITH THE CITY AND WITH THE THIRD PARTY CERTIFICATION AUTHORITY REQUIRED BY THE STATE. WILL BE MET BY LICENSED MED GAS PLUMBER .. DIFFERENT OPTIONS ARE SHOWN WITH THESE PLANS

TO ASSIST IN MEETING THE MECHANICAL NEEDS

OF THE DENTAL EQUIPMENT AND LOCAL CODES ..

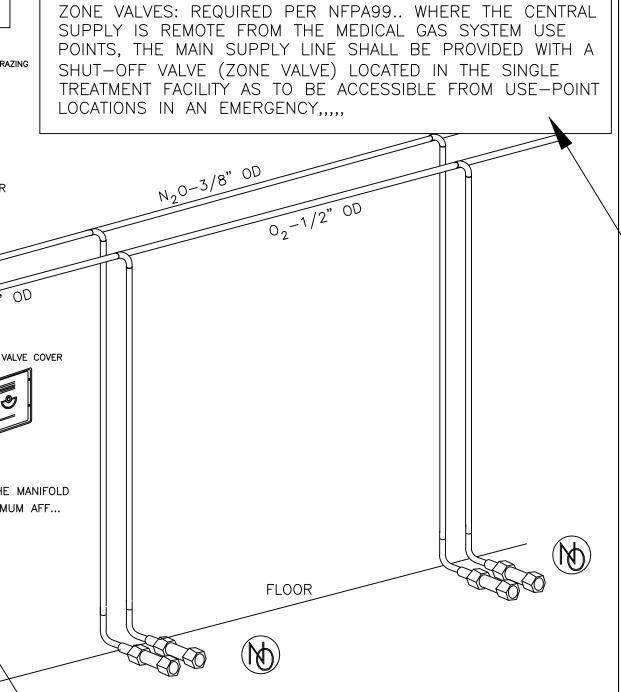






add "force fan" at ceiling vent blowing into room to force air exhaust thru lower vent... Both vents should be routed to outside...... Confirm "room changes per hour" rating of fan.. Fan system should be "continuous run" (24/7).. Consult IBC code for sprinkler requirements......

A MEDICAL GAS LICENSED PLUMBER MUST BE RESPONSIBLE FOR THE INSTALLATION OF THE CATEGORY 3 MEDICAL GAS SYSTEM..... PLUMBER MUST HAVE ASSE 6010 ACCREDITATION .. VARIFIER MUST HAVE ASSE 6030 ACCREDITATION.



STANDARD ELECTRICAL OUTLET ALLOWED BY NFPA CODE 99 (2012) 5.3. NOT AN OXYGEN ENRICHED ATMOSPHERE.

Confirmation Contact: Daniel Shoemaker....Accutron NFPA commitee member...

Wrote Standard NFPA M99 (2015) 5.3.1 Business phone: 623-780-2020.....

DENTAL CYLINDER SIZES: "E" CYLINDER....24 CUBIC FEET "M" CYLINDER....122 CUBIC FEET "G" CYLINDER.....244 CUBIC FEET "H" OR "K" CYLINDER.....250 CU.FT.

Midwest Dental[®]

EQUIPMENT · SERVICES · SUPPLIES

Some cities have adopted the following code:

Contractor confirm with local municipality if this code

is being enforced at time of construction...

Confirm Compliance to NFPA Standard 99(2021 Edition)

Chapter 15.4.2.6.1

Chapter 15.4.2.6.1 "All (dental) medical gas systems shall have an emergency

shutoff valve accessible from all use-point locations in an emergency."

Thus... a Zone Valve will be required in the facility when the municipality

has adopted this edition of the NFPA Standard 99 code...

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Dr. Asha Patel

Austin, TX 78727

Equipment Rep:	Scott Jovich	_
)ate:	April 19, 2024	
rawn By:	DDS	
Checked By:	WC	
Architect :	William Cruz, AAIA	

Dental Medical Gas

NOT TO SCALE

At this time, NFPA 2005, 2012, & 2015 are in use in North America...Consult with your local municipality to confirm which code(s) they have currently adopted..

Use specs only for Symbols on Plan

CAT6 OR EQUAL CABLE

PROVIDED BY MIDWEST

TO MED GAS PLUMBER &

INSTALLED BY ELECTRICIAN

SEE PLAN FOR LOCATION.

CONFIRM WITH THIRD

PARTY CERTIFIER...

PULLED BY ELECTRICIAN to

MANIFOLD IN TANK ROOM -

NITROUS OXIDE AND OXYGEN MANIFOLD location. Provide copper tubing per code and instal continuously to MED GAS locations. Manifold supplied by Midwest, plumbing contractor to install per MFG. specs. Nitrous storage closet to be constructed per NFPA Guidelines. Installation by Medical Gas Certified plumber. Vent to NFPA code...NFPA 2012 99.5.3.6

CONTRACTOR to install tank restraints provided with manifold per cut sheet & to NFPA code...

Nitrous oxide and oxygen "tubing", when run within floor slabs and underground, must be installed in one (or more) continuous conduit sleeves...No joints permitted within conduit...

NFPA (2012) 99.5.3.6 . NITROUS OXIDE & OXYGEN outlet location. Provide copper tubing per codes. NFPA 2012 99..5.3.6 Risers or Dual Outlet Station supplied by dental company... Contractor install per codes. Must be Medical Gas Certified Plumber.....See cut sheets provided by Midwest Dental....

NITROUS OXIDE, OXYGEN & VACUUM outlet location. Provide copper piping per codes. Triple Outlet Station supplied by dental company.. Med Gas plumber install per codes. Must be Medical Gas Certified.... Oxyen & Nitrous Oxide=NFPA 2012 99.5.3.6 Vacuum=NFPA 99.5.3.8...

SENTINEL/ALARM system for med gas...Required by fire code.. Measurement on plan is from finished floor to center of Sentinel box.... Run special cable (Cat6, Ethernet4 twisted pr.,RJ45 end connects) from tank room to sentinel/alarm location...

Electrician to acquire above cable from Med Gas Plumber.

Med Gas Manifold to be installed by Med Gas Licensed Plumber....

Electrician install: \rightarrow 120v duplex in tank room no more than 4'-0" from manifold and above 60" from floor....

Sentinel must be located at a point in the office where it can be continually visually monitored by staff during working hours... Confirm location approval with Med Gas third party certifiers..... *

ZONE VALVE for nitrous oxide and oxygen with wiring per manufacturer's specifications. Valve provided by Midwest installed by med gas licensed plumber....

Electrician provide cat6 or equal from Tank Room manifold to Zone valve... (Z)

