City of Aurora
Building Codes Division
15151 E Alameda Pkwy
Aurora, CO 80012
(303) 739-7420

# Notice

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HEERY design

August 27, 2009

Ms. Rhonda Ritter
**City of Aurora**
**Building Code Division**
15151 E Alameda Pkwy, 2nd Floor
Aurora, CO 80012

Plan Review Clarification
Reference Number (RSN): 481073
Project: Job Address: 1501 S Potomac St – 4th Floor Renovation

Dear Rhonda:

Per our phone conversation today, I am sending a clarification of my understanding of your plan review comments on the Permit Set for the above project, which was picked up by the Contractor yesterday.

Please see the attached plan which shows the Med Prep Rooms off each Nurse Station with a one hour rated wall around it. The intention of your redlines was to separate the rooms not open to the corridor from the corridor, and consider the Nurse Station as part of the corridor, per IBC 2006 section 407.2.2. The Dictation and Pharmacy workstations on the East Wing are considered doctor work areas, and therefore I have shown a one-hour wall added behind the spaces, rather than around them as you had indicated on our permit set. This wall is shown in red for clarification purposes.

These are workstations open to the corridor without a door, so it would be impossible to create a one hour wall or smoke partition around them. I believe the change to the location of the one hour wall shown on the attached meets the intention of your redline.

I appreciate your help and communication about these items. Should you have further questions or concerns, please call me at 303-575-6450, or email me at kcrowthe@heery.com .

Sincerely,
Heery Design

Kelly Crowther, AIA LEED® AP
Project Architect

cc. Greg Menke, MCA
Tim Krabbenhoft, MCA
Rebecca Terrazas, HC



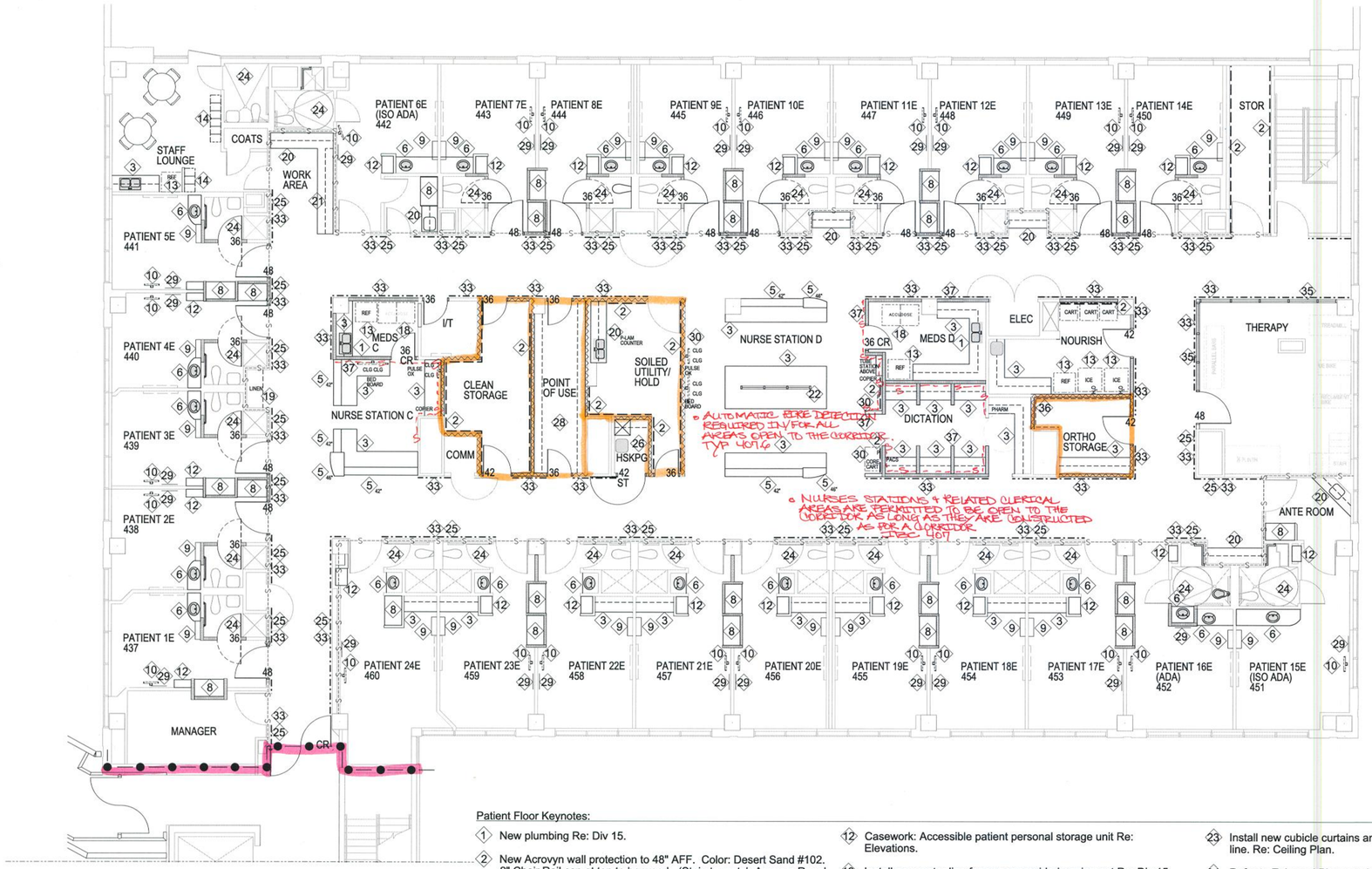

820 16th Street Mall, Suite 200, Denver, CO 80202 | Telephone: 720.946.0276 | Fax: 720.946.0277

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## 1 4TH FLOOR PLAN - EAST
SCALE: 1/8" = 1'-0"

PLAN NORTH

Patient Floor Keynotes:

1. New plumbing Re: Div 15.
2. New Acrovyn wall protection to 48" AFF. Color: Desert Sand #102. 2" Chair Rail cap at top to be wood. (Stain to match Acrovyn Regal Mahogany. Profile TBD.
3. New casework Re: Elevations.
4. New coat rod and shelf.
5. New casework: Solid Surface Transaction Top at height indicated with form storage (3"h x 9"w) below.
6. New countertop in new casework. Sink to be integral bowl in soild surface counter. Re: Finish Plan and Div. 15.
7. New casework: (4) p. laminate lockers @ 12"w x 16"d x 80"h. Re: Elevations
8. New casework: Patient Room cabinet Re: Elevations.
9. New Proximity Systems Single Compartment Work Station with swivel option. Proximity Systems Model # CWT-28-MED. (Cabinet by owner, intallation by GC)
10. Install new wall mount bracket for flat screen TV. (TV by owner, intallation by GC) Center on headwall. In Sitter Room electrical will be from ceiling. Re: Div. 16.
11. Remodeled Patient Toilet to meet accessibility requirements of ANSI-A-117-2003, including new grab bars, accessible toilet, sink,
12. Casework: Accessible patient personal storage unit Re: Elevations.
13. Install new water line for owner provided equipment Re: Div 15.
14. New metal lockers 3 high x 12"w x 16"d. Finish to match P-1
15. Existing elevator to remain. No new finishes (except repaint exterior side of doors/ frames).
16. New double doors with electronic lock activated by ID badge. Doors to be on electronic hold open with fusible link. Re: Div 15 and 16.
17. Furr-out wall to accommodate new door held open so as to not impede drinking fountain access.
18. Accudose system by others.
19. Full height storage units with locking doors. (7) adjustable melamine shelves 18" d. Re: Elevations.
20. Existing casework to be replaced in existing configuration with new finish palette. Re: Finsih Plan.
21. New wall cabinets.
22. Low wall to 54" AFF with 6" header above. Between header and low wall, install 3Form or Lumicor decorative translucent panels. Hardwood frame/ mullions all sides. Re: Elevations and Finish Plan
23. Install new cubicle curtains and track as indicated by dashed line. Re: Ceiling Plan.
24. Refer to Enlarged Plans at sheet A-1.05.
25. Acrovyn Bumper Rail #BCR-80E in color #374: Regal Mahogany.
26. New housekeeping Closet w/ service sink and wall faucet, mop hooks/shelf. (Bobrick B239x34)
27. New 6" stud wall accessed to accommodate Electric Panels Re: Div 16.
28. Storage bins by owner. (Existing to remain).
29. New 24" x 24" dry mark eraser boards.
30. New Electrical Re: Div. 16.
31. New wood framed borrowed lites and door. Re: Elevations.
32. Storage shelves (free standing).
33. New Acrovyn handrail. HBR-4C profile in Regal Mahogany Color #374.
34. Reverse Osmosis Equipment to remain.
35. Custom wood storefront system with wood panels, fritted glass, and clear glass. Re: Elevations.
36. Painted Pegboard on 1x rails @ +/- 48" O.C.
37. Furr wall as required to match dimensions.
38. Existing 1-hour wall to remain (all walls in room).
39. Upgrade walls in room to sound partitions.
40. Upgrade wall to 1 hour construction.
41. Existing smoke doors to remain.

ITEM A-5 / 3 ITEM A-4

General Floor Plan Notes:

A. Reinstall Toilet Accessories in all Toilet Rooms. Reuse salvaged materials and hospital stock. Re: A-101.5

B. All existing doors will be replaced (reuse existing hardware as is possible) with new Acrovyn doors to match Hospital Standard.

C. Confirm existing walls shown to remain meet requirements of current codes (Re: G-1.0) Upgrade to meet current requiremens where required.

D. Re: Div. 16 for new electrical layout.

1 ITEM A-5

Wall Legend:

- New 1 Hour Partition: 3 5/8" metal studs @ 16" O.C. with sound attenuation blankets and 5/8" type 'X' gyp bd both sides to structural deck. UL U465. Sealants to meet GS-36 Standards for VOC. 20 minute door/ frame on closer with smoke seals.
- 1 Hour Partition. Existing partition to be brought into compliance with UL U465. Sealants to meet GS-36 standards for VOC.
- New Sound Partition: 3 5/8" mtl studs @ 16" O.C. with 5/8" type 'X' gyp bd both sides to structural deck. Full thickness sound batts. Sealants to meet GS-36 standards for VOC.
- New Smoke Barrier Wall. 3 5/8" mtl studs @ 16" O.C. with 5/8" type 'X' gyp bd both sides to structural deck. Caulk all penetrations and joints to limit the free passage of smoke. Full thickness sound batts between studs, full height to comply with IBC 2006 section 709.
- New Standard Partition: 3 5/8" mtl studs @ 16" o.c. with 5/8" type 'X' gyp bd both sides to 6" above ceiling.
- Smoke Partition (existing with infill as required at new segments) with "S" label on door/frame. To comply with IBC 2006, 710.

Door Legend:

All doors to be Acrovyn with stainless steel beveled edge on latch side. Door finish: HBR-4C

36 CR — Size of new door for room. Note, if no size indicated, replace in existing frame w/ same size door. Coordinate all hardware groups with Architect and Hospital Facilities Dept.

Denotes breakaway hardare as required on Toilet Room door.

PLAN REVIEW 3 — NOTE: All rooms shown with a 1 hour partition (new or existing) shall have a door/frame assembly with a 45 minutes label, smoke seals, and closer.

Hardware Groups
(Note: replacement hardware is not limited to this list)
P = Privacy Lockset
CR = Door to be accessed by card reader. Electronic lock required.
ST = Storage room lock

1 HR FIRE BARRIER
1 HR SMOKE BARRIER
---S--- SMOKE PARTITIONS (NOTE: SELF CLOSING, AUTO DOORS NOT REQ'D)

09 411495

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED RR
DATE 08/11/09

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Heery International Inc.
820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

project number
0906700

# MEDICAL CENTER OF AURORA

## FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howell Construction
550 Lipan St.
Denver, CO 80204

303-899-4787

seal/signature

STATE OF COLORADO
KELLY A. CROWTHER
202908
08-04-09
LICENSED ARCHITECT

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| ADDENDA | 08/04/2009 |

| item | | date |
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| 1 | PLAN REVIEW RESPONSE | 7.29.09 |
| 2 | THERMOSTAT COORD. | 8.4.09 |
| 3 | PLAN REVIEW RESPONSE | 8.4.09 |

PLAN NORTH
SCALE: 1/8" = 1'-0"

key plan

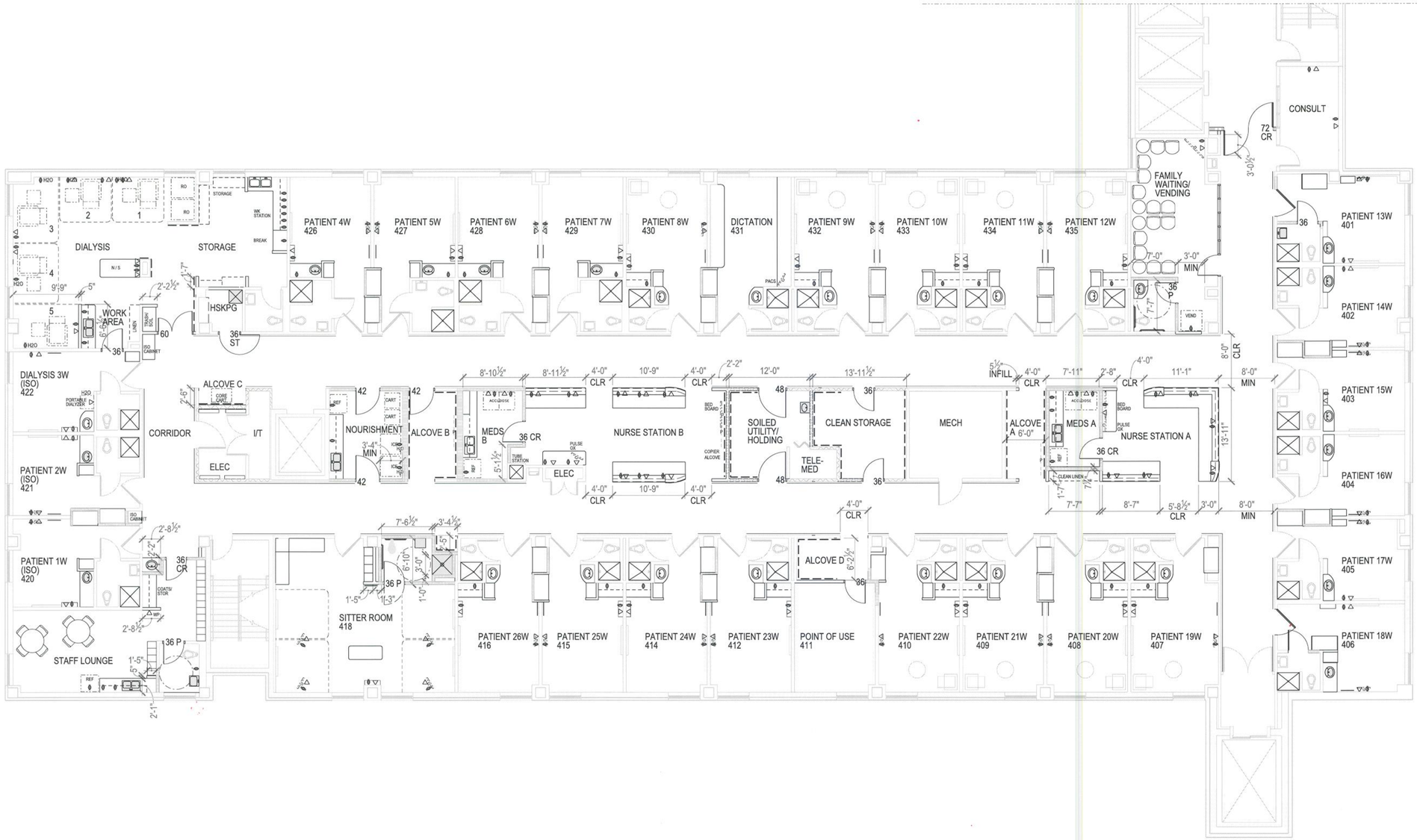
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FOUR EAST FLOOR PLAN

sheet number
A - 1.02R

drawn by LL checked by KC

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1 4TH FLOOR PLAN - WEST
SCALE: 1/8" = 1'-0"

PLAN NORTH

SEE SHEETS 1.01 & 1.03 FOR WALL REQ'S
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CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 07/31/09
BY IBC

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Greenwood Village, CO 80111

303-694-4755

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550 Lipan St.
Denver, CO 80204

303-899-4787

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PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan

sheet title
FOUR WEST DIMENSION PLAN

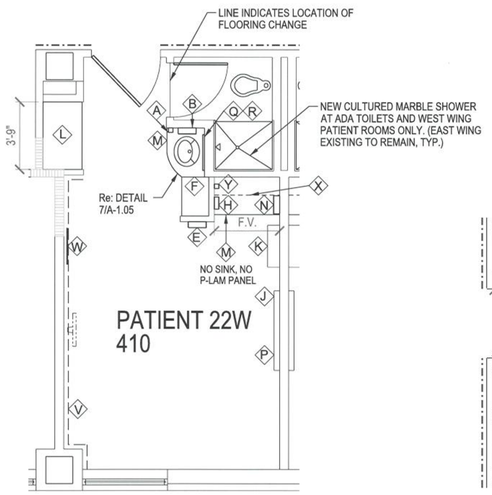
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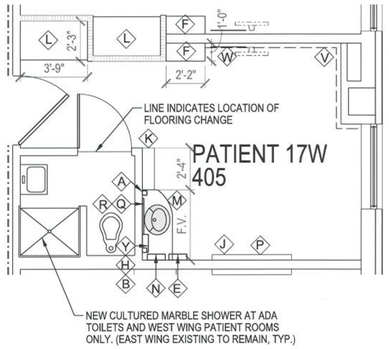
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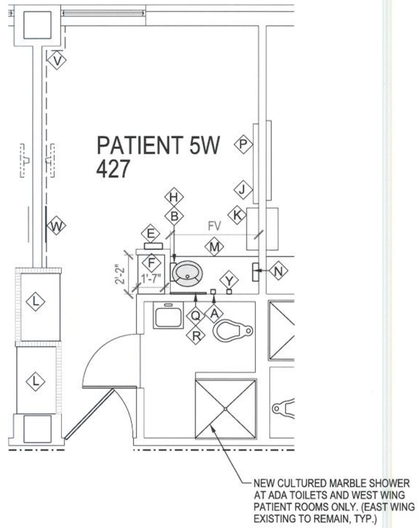

## 1 ENLARGED PATIENT ROOM #410 (TYPICAL)

SCALE: 1/4" = 1'-0"
RE: A 1.01



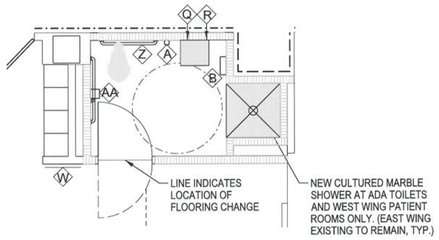

## 2 ENLARGED PATIENT ROOM #405 (TYPICAL)

SCALE: 1/4" = 1'-0"
RE: A 1.01



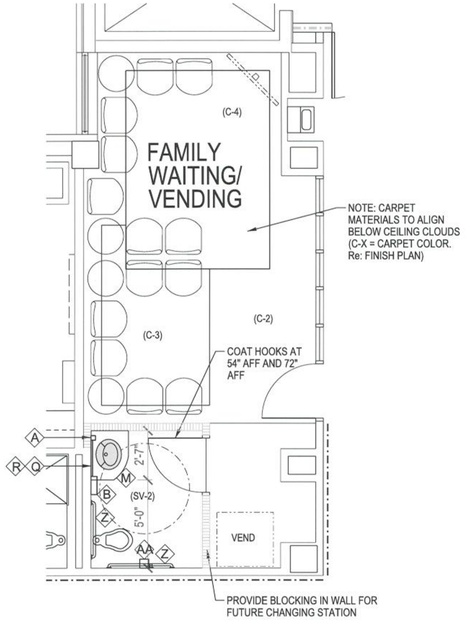

## 3 ENLARGED PATIENT ROOM #427 (TYPICAL)

SCALE: 1/4" = 1'-0"
RE: A 1.01



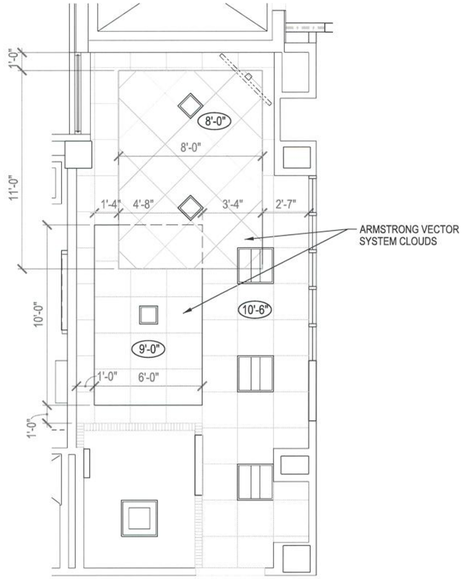

## 4 SITTER ROOM ADA TOILET

SCALE: 1/4" = 1'-0"
RE: A 1.01



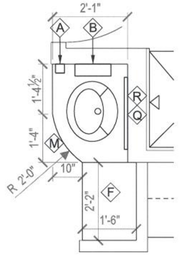

## 5 ENLARGED FAMILY WAITING ROOM

SCALE: 1/4" = 1'-0"
RE: A 1.01



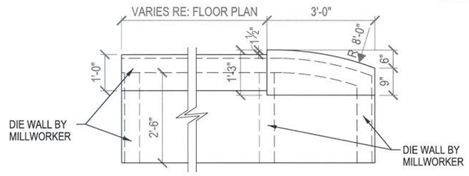

## 6 ENLARGED FAMILY WAITING ROOM REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"
RE: A 2.01




## 7 PATIENT ROOM SINK

SCALE: 1/2" = 1'-0"
RE: A 1.01




## 8 TYPICAL ENLARGED NURSE STATION

SCALE: 1/2" = 1'-0"
RE: A 1.01

This plan was reviewed for adopted codes and NOT reviewed for compliance with ADA or FHA accessibility. Contact 800-949-4232 (ADA) and 303-894-7822x325 (FHA) for federal accessibility requirements that apply to your project.

09 411495

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 07/31/09

Patient Room Keynotes:

- (A) Soap Dispenser
- (B) Paper Towel Dispenser
- (C) Gypsum board soffit above
- (D) Millwork soffit above. Trim at ceiling
- (E) Glove dispenser (by G.C.): 4 box, stainless steel
- (F) Patient wardrobe unit
- (G) Nurse storage drawers
- (H) PPE (by owner install by G.C.)
- (J) Headwall casework Re: Detail
- (K) Prox cabinet Re: Floor Plan for exact location in room. Bottom of prox cabinet to be at 38" A.F.F.
- (L) Nurse storage unit
- (M) Soild surface countertop w/ integral sink (where shown on floor plan), back splash and fascia. Plastic laminate panel below (hold 9" A.F.F. at bottom of panel)
- (N) Sharps container by others
- (P) Patient light
- (Q) Vanity light
- (R) 18" x 24" stainless steel rimmed mirror
- (S) Biohazard or trash by others
- (T) Existing med gases to remain
- (U) 6" coved sheet vinyl base with aluminum j-trim to cap at top
- (V) Wood chair rail at 36" to top over Traffic Patters vinyl wall protection by Koro Gard. Re: Finish Plan
- (W) 24" x 24" dry wall eraser board at 66" to top
- (X) 10" wide solid surface shelf
- (Y) Hand gel dispenser (by others)
- (Z) Grab bars, 42" long adjacent to toilet
  36" long behind toilet
  18" long vertical grab bar
- (AA) Toilet paper dispender

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HEERY design

Heery International Inc.
820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

project number

0906700

# MEDICAL CENTER OF AURORA

## FOURTH FLOOR RENOVATION

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550 Lipan St.
Denver, CO 80204

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PLAN NORTH

key plan

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ENLARGED PLANS

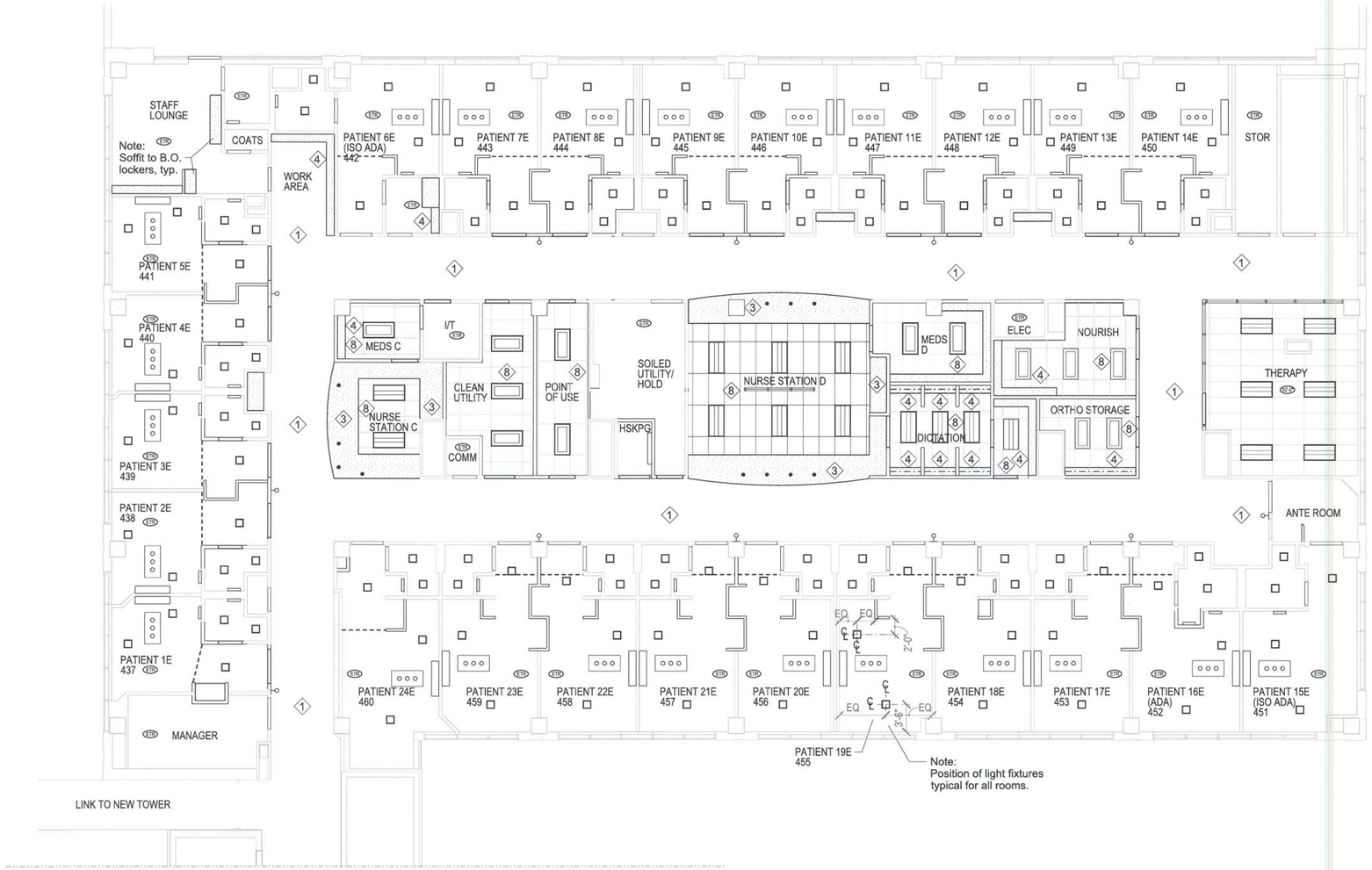
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# 1 REFLECTED CEILING PLAN - FOURTH FLOOR EAST

SCALE: 1/8" = 1'-0"

PLAN NORTH

Ceiling Keynotes:

1. Existing ceiling grid to be removed. Tie off existing lights and mechanical devices to remain. Replace grid and ceiling tiles to match existing layout.
2. New gypsum board ceiling @ 8'-0" AFF
3. 6" high gypsum board soffit.
4. +/- 12" high gypsum board soffit (B.O. soffit @ 84" AFF)
5. 2x2 grid and ceiling tiles @ 10'-6" (prep walls/finishes to extend to 11'-0")
6. Armstrong Axiom Vector trim at edge of dropped cloud @ 9'-0" AFF. 6" Axiom Vector Profile edge trim in Silver Satin finish. Conceal suspension above cloud. For Vector ceiling panels, Re: Finish Plan.
7. Armstrong Axiom Vector trim at edge of dropped cloud @ 8'-0" AFF. 6" Axiom Vector Profile edge trim in Silver Satin finish. Conceal suspension above cloud. For Vector ceiling panels, Re: Finish Plan.
8. New ceiling grid and tiles @ 8'-0" AFF
9. Gypsym board header @7'-0"

Ceiling Legend:

- 14" deep x 12" high gypsum board soffit above wall cabinets.
- New direct/indirect 2x2 or 2x4 fluorescent fixture, Re: Div 16
- Existing ceiling grid to remain. New ceiling tiles and new light fixtures positioned as shown.
- 12x12 fluorescent fixture, Re: Div. 16
- New cubicle curtain track on ceiling. Attach to grid (to clear light fixture maintenance as required).
- New Acrylic lens 2x2 or 2x4 fluorescent fixture, Re: Div 16
- (3) LED downlites in a single 2x4 ceiling tile, Re: Div 16 for fixture.
- Pendant light, Re: Div 16
- Under Cabinet task lights Re: Div 16
- Headwall Light, Re: Div 16
- Strip Lighting, Re: Div 16
- Vanity fixture over handwash sink, Re: Div 16
- Wall Sconce, Re: Div 16

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BUILDING DIVISION
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Heery International Inc.
820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

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AA 0002293
EB 0005176

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AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howell Construction
550 Lipan St.
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303-899-4787

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PLAN NORTH

0 4'-0" 8'-0" 16'-0"
SCALE: 1/8" = 1'-0"

key plan

sheet title

FOUR EAST REFLECTED CEILING PLAN

sheet number

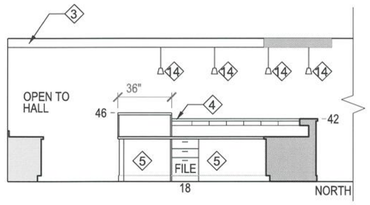
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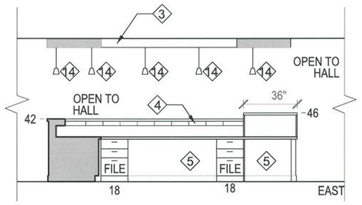
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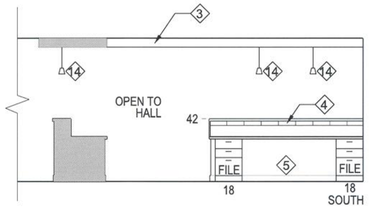
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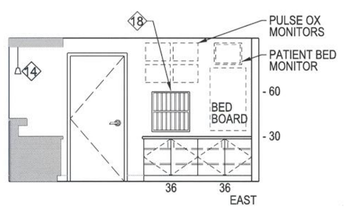
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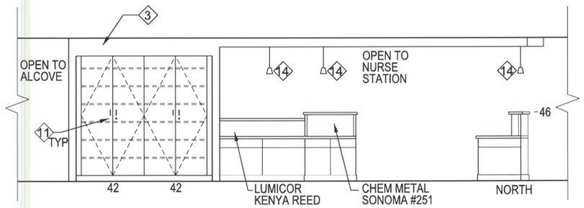


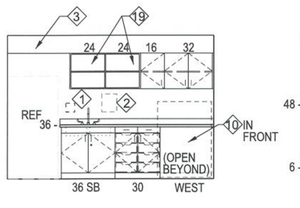



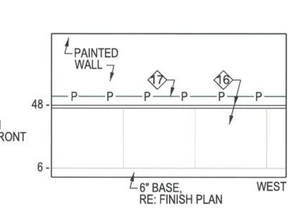

## 1 NURSE STATION A
SCALE: 1/4" = 1'-0"

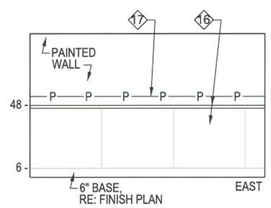



## 2 CORRIDOR / CLEAN LINEN ALCOVE
SCALE: 1/4" = 1'-0"

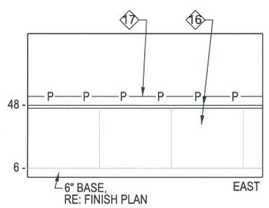


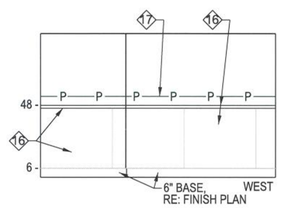

## 3 MEDS ROOM A
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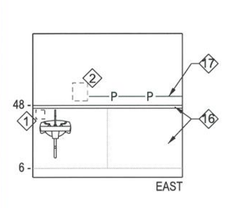

## 4 ALCOVE A
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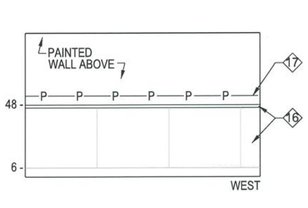


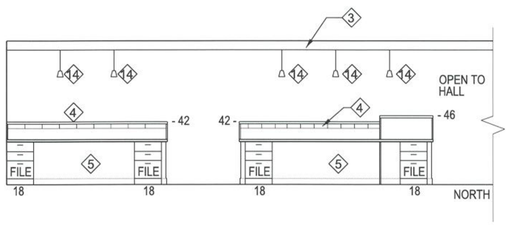

## 5 CLEAN STORAGE
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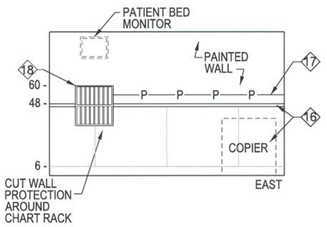
NOTE: OTHER ELEMENTS IN ROOM ARE SIMILAR, RE: PLAN

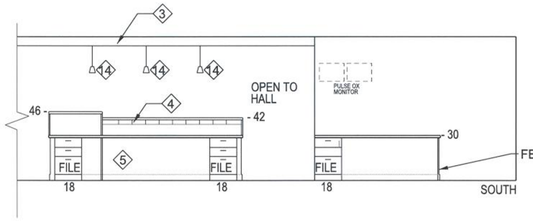


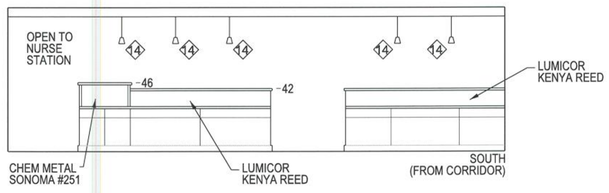




## 6 SOILED UTILITY/HOLDING
SCALE: 1/4" = 1'-0"

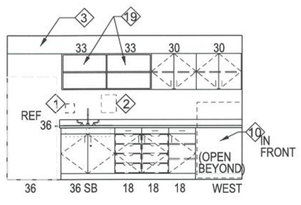


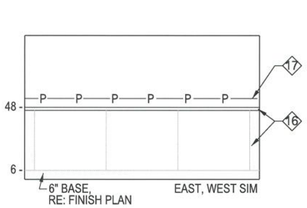



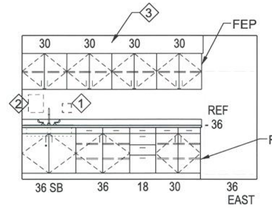

## 7 NURSE STATION B
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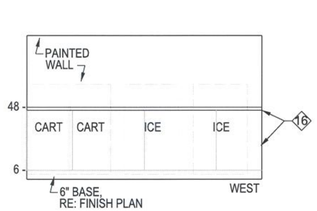



## 8 MEDS ROOM B
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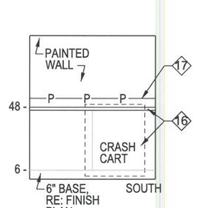



## 9 ALCOVE B
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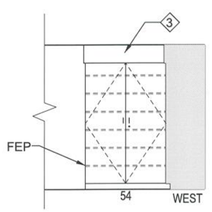


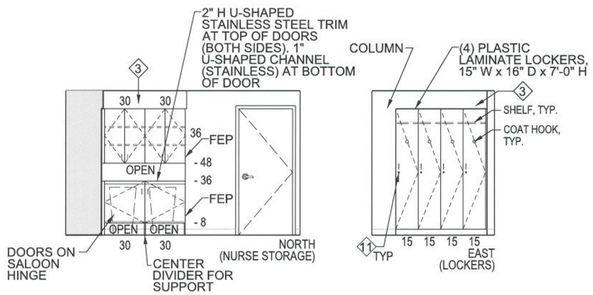




## 10 NOURISHMENT
SCALE: 1/4" = 1'-0"




## 11 ALCOVE
SCALE: 1/4" = 1'-0"







## 12 SITTER ROOM
SCALE: 1/4" = 1'-0"

09 411495

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 07/20/09

Interior Elevation Keynotes:

1. Soap Dispenser
2. Paper Towel Dispenser
3. Gypsum board soffit above. Re: RCP
4. Transaction top with form storage below
5. Knee space
6. Lumicor transluscent panel, ⅛" thick in wood frame. Re: Detail.
7. Tack board
8. 4" Valance with task light beyond
9. Open bookshelf
10. Accudose in front
11. Locking cabinet
12. Pegboard for equipment/ supply storage
13. 3" wide dark stained cheery chair rail @ +/- 33" AFF
14. Pendant light fixture
15. Not used
16. Acrovyn sheet-style wall protection to 48" AFF. Acrovyn chair rail profile at top to cap sheets. Re: Finish Plan
17. Multi-outlet plug mold @ 54" AFF. Re: Div 16. Shown as: —P——P—
18. Chart Rack: 16 slots (8 over 8), w/ plexiglass dividers @ 3" O.C. Each slot to be 10" H x 11" D (clear). Re: Details.
19. Open shelf in cabinet box (adjustable shelf)
20. Metal lockers, 12" W x 26" H x 16 D. Finish to match P-1.
21. Solid surface countertop w/ backsplash, fascia (integral sink). Plastic Laminate panel below (hold 9" above floor).
22. Wood Chair Rail @ 34" AFF w/ traffic patterns wall-protection below. Re: Finish Plan

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WHEN PLOTTED AT FULL SIZE THIS SHEET MEASURES 24"x36"

HEERY design

Heery International Inc.
820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

project number
0906700

# MEDICAL CENTER OF AURORA

# FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howell Construction
550 Lipan St.
Denver, CO 80204

303-899-4787

seal/signature

STATE OF COLORADO
KELLY A. CROWTHER
202908
7.15.09
LICENSED ARCHITECT

| issued for | date |
|---|---|
| CONSTRUCTION | 07/15/2009 |

| item | date |
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PLAN NORTH

SCALE: ¼" = 1'-0"

key plan

sheet title

# FOUR WEST ELEVATIONS

sheet number
**A - 3.01**

drawn by LL checked by KC

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# GENERAL NOTES - ALL HVAC SHEETS

A. INFORMATION CONTAINED ON THE DRAWINGS WAS TAKEN FROM RECORD DRAWINGS DATED 12/3/97 AND FIELD SURVEYS. SEVERAL AREAS WERE UNAVAILABLE FOR INSPECTION. FOR THIS REASON, ACTUAL CONDITIONS MAY VARY FROM THOSE INDICATED. ANY DISCREPANCY THAT PREVENTS THE CONTRACTOR FROM MEETING THE DESIGN INTENT OF THE DRAWINGS SHALL BE DOCUMENTED ON THE PROJECT RECORD DOCUMENTS AND BE REPORTED TO THE ARCHITECT/ENGINEER IMMEDIATELY.

B. ALL MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING CODES. REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS FOR MECHANICAL AND PLUMBING CONSTRUCTION.

C. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, PAY ALL FEES, AND COMPLY WITH ALL NATIONAL, STATE, AND MUNICIPAL LAWS, CODES, AND ORDINANCES RELATING TO BUILDING AND PUBLIC SAFETY.

D. THE CONTRACTOR SHALL PREPARE A FULL SET OF COORDINATION DRAWINGS, SHOWING THE RELATIONSHIP OF ALL EXISTING AND NEW SYSTEMS TO BE INSTALLED. THESE DRAWINGS SHALL INDICATE SIZES, ELEVATIONS, AND EXACT LOCATIONS OF ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS. THESE DRAWINGS SHALL BE COMPLETED PRIOR TO BEGINNING ANY WORK AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW. CONTRACTOR SHALL NOTE ANY ITEMS THAT PREVENT HIM FROM MEETING THE DESIGN INTENT OF THE CONSTRUCTION DOCUMENTS ON THESE DRAWINGS.

E. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED FOR A COMPLETE WORKING AND COORDINATED SYSTEM.

F. COORDINATE THE EXACT LOCATION OF MECHANICAL AND PLUMBING EQUIPMENT WITH THE LOCATIONS OF LIGHT FIXTURES, PIPING, CONDUIT, AND OTHER CONSTRUCTION, TO ALLOW FOR PROPER ACCESS TO SERVICE EQUIPMENT.

G. COORDINATE THE LOCATION OF DUCTWORK AND PIPING WITH ALL OTHER TRADES AND PROVIDE OFFSETS IN DUCTWORK AND PIPING AS REQUIRED.

H. IT IS THE INTENT OF THESE DOCUMENTS TO ALLOW ALL CEILING CONSTRUCTION AND HEIGHTS TO BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS. COORDINATE THE LOCATION OF DUCTWORK AND PIPING AND PROVIDE OFFSETS IN DUCTWORK AND PIPING AS REQUIRED TO MEET THIS INTENT.

I. CONDUIT, PIPING, AND DUCTWORK SHALL BE INDEPENDENTLY SUPPORTED, AND EACH SUPPORT SHALL BE INDEPENDENT OF PARTITION AND CEILING SYSTEM SUPPORTS. WHERE INDEPENDENT SUPPORT IS NOT POSSIBLE AN ENGINEERED SUPPORT SYSTEM SHALL BE UTILIZED.

J. INSTALL ALL FLOOR MOUNTED EQUIPMENT ON PADS AS SPECIFIED. PAD BY GENERAL CONTRACTOR. COORDINATE REQUIREMENTS WITH GENERAL CONTRACTOR.

K. ALL WORK SHALL BE SCHEDULED AND PERFORMED IN STRICT COORDINATION WITH ARCHITECTURAL PHASING PLANS AND WITH HOSPITAL SCHEDULES, OCCUPANCIES, AND WORK.

L. PROTECT EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING AND INSTALLATION UNTIL COMPLETION OF CONSTRUCTION.

M. REMOVE ALL EXCESS MATERIAL AND DEBRIS AND CLEAN ALL EQUIPMENT UPON COMPLETION OF WORK. TOUCH UP WITH PAINT WHERE REQUIRED.

N. CONTRACTOR SHALL VISIT JOBSITE AND VERIFY SIZE AND LOCATION OF ALL EXISTING ITEMS AND CONDITIONS.

O. ALL CONNECTION BETWEEN PIPES OF DISSIMILAR MATERIALS SHALL BE MADE WITH DIELECTRIC UNIONS.

P. CONTRACTOR SHALL COORDINATE ALL WORK CLOSELY WITH EXISTING CONDITIONS AND WITH ALL OTHER TRADES.

Q. ALL EXISTING FACILITIES SHALL BE PROTECTED DURING THE CONSTRUCTION ACTIVITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE AND STORE ITEMS WHICH ARE SUBJECT TO DAMAGE.

R. ARCHITECT SHALL HAVE FINAL APPROVAL OF ALL GRILLE, DIFFUSER, AND THERMOSTAT LOCATIONS.

S. COORDINATE ALL AIR DEVICE LOCATIONS AND MOUNTING FRAME STYLES WITH LIGHTING PLANS AND ARCHITECTURAL REFLECTED CEILING PLANS.

T. COORDINATE ALL WALL MOUNTED DEVICE LOCATIONS WITH ARCHITECTURAL INTERIOR ELEVATIONS.

U. DEMOLITION OF EACH PHASE SHALL OCCUR AS PART OF THE WORK FOR THAT PHASE. REMOVE ONLY THE WORK THAT SERVES THE AREA OF DEMOLITION.

V. PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO PREVENT DISRUPTING ADJACENT AREAS OF THE PHASE IN WHICH WORK IS BEING PERFORMED.

W. PROVIDE ADDITIONAL VALVES, TAPS, TEMPORARY DUCTWORK, ETC. AS NECESSARY TO PROVIDE UNINTERRUPTED SERVICE TO AREAS OUTSIDE OF THE PHASE IN WHICH WORK IS BEING PERFORMED.

X. ALL NECESSARY SHUTDOWNS OR OUT OF PHASE WORK SHALL BE COORDINATED WITH THE HOSPITAL REPRESENTATIVE.

Y. THE CONTRACTOR SHALL COMPLY WITH THE OWNER'S REQUIREMENTS FOR INFECTION CONTROL. MAINTAIN RENOVATION AREA UNDER NEGATIVE PRESSURE AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE A NEGATIVE PRESSURE AIR MACHINE TO PROTECT DUCTWORK AGAINST EXCESSIVE DUST. WHERE PERMISSIBLE, USE EXISTING EXHAUST-TO-EXHAUST AIR FROM CONSTRUCTION AREA(S) DIRECTLY TO THE OUTSIDE. WHERE THE OUTSIDE IS INACCESSIBLE THE DISCHARGE FROM THE NEGATIVE PRESSURE AIR MACHINE SHALL BE DUCTED INTO AN EXISTING EXHAUST SYSTEM AFTER PROPER AIR FILTRATION WITHIN THE MACHINE HAS BEEN ACHIEVED, TO ENSURE THAT THE EXISTING DUCTWORK IS NOT CONTAMINATED WITH CONSTRUCTION DUST.

PROVIDE A VISIBLE PRESSURE GAUGE AT THE ENTRANCE TO THE CONSTRUCTION AREA, TO MONITOR THE PRESSURE RELATIONSHIP BETWEEN THE CONSTRUCTION AREA(S) AND THE ADJACENT SPACES. REFERENCE THE ARCHITECTURAL DRAWINGS FOR THE LOCATION OF CONSTRUCTION BARRIERS. ADJUST THE VOLUME OF THE MACHINE TO PROVIDE A NEGATIVE PRESSURE OF -0.01" W.G. WITHIN THE SPACE DURING THE RENOVATION. IT IS PERMISSIBLE MAINTAIN SUPPLY AIR TO THE SPACE, BUT SPACE PRESSURE SHALL REMAIN UNDER NEGATIVE PRESSURE AS PREVIOUSLY STATED. DECREASE THE RETURN AIR CAPACITY IN ADJACENT CORRIDOR(S) TO BALANCE THE OFFSET BETWEEN SUPPLY AND EXHAUST AIR IN THE RENOVATED AREA(S). DO NOT POSITIVELY PRESSURIZE EXISTING DUCTWORK. USE THE NEGATIVE PRESSURE AIR MACHINE FOR SPOT FILTRATION/EXHAUST SERVICE WHEN WORKING ABOVE THE CEILING, OUTSIDE THE WALLS OF THE RENOVATED SPACE. THE NEGATIVE PRESSURE AIR MACHINE SHALL BE FARR ZEPHYR OR APPROVED EQUAL. FINAL FILTER EFFICIENCY SHALL BE 99.99% OR HIGHER FOR 1 MICRON PARTICLES.

Z. CONTRACTOR SHALL TEST ALL EXISTING FIRE, FIRE/SMOKE, AND SMOKE DAMPERS FOR PROPER OPERATION. ALL FAULTY DAMPERS SHALL BE REPLACED WITH AN APPROVED EQUAL. PROVIDE TAG ON T-GRID AS SPECIFIED FOR ALL NEW AND EXISTING FIRE, FIRE/SMOKE, AND SMOKE DAMPERS.

AA. CONTRACTOR SHALL PREMEASURE ALL SUPPLY, RETURN AND EXHAUST AIRFLOWS ON THE EXISTING AIR HANDLING UNITS AND EXHAUST FANS SERVING ALL AREAS OF CONSTRUCTION AT FULL COOLING AIRFLOWS. THE CONTRACTOR SHALL MEASURE AIR FLOWS AT THE EQUIPMENT, AT EACH BRANCH, AT EACH TERMINAL BOX, AND AT EACH AIR DEVICE. THESE MEASUREMENTS SHALL BE RECORDED NEATLY IN PLAN FORM (SHOWING ALL EQUIPMENT AND DUCTWORK) AND SHALL BE USED TO REBALANCE THE SYSTEMS AFTER CONSTRUCTION IS COMPLETE. CONTRACTOR SHALL BE RESPONSIBLE FOR REBALANCING THE OLD SYSTEMS TO ACCOMODATE NEW AND EXISTING LOAD AND BALANCING THE NEW SYSTEMS.

BB. CONTRACTOR SHALL MAKE PROVISIONS FOR TEMPORARY HEATING AND COOLING FOR AREAS WHERE SERVICE SHUT DOWN WILL BE REQUIRED. PROVIDE TEMPORARY DUCTS, RENTAL AIR HANDLERS AND FANS AS REQUIRED. LOCATIONS OF TEMPORARY SERVICES SHALL BE DETERMINED BY THE CONTRACTOR. AREAS OF CERTAIN SHUT DOWN / TEMPORARY SERVICES INCLUDE BUT IS NOT LIMITED TO THE EMERGENCY DEPARTMENT AND IMAGING AREA.

CC. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF WALLS THAT EXTEND TO STRUCTURE. EACH HVAC DUCT OR PIPE PENETRATION THROUGH THESE WALLS SHALL BE INSTALLED AS SPECIFIED OR DETAILED. WHERE FLEXIBLE DUCT WOULD PENETRATE A WALL WHICH EXTENDS TO STRUCTURE, PROVIDE INSULATED RIGID DUCT EXTENDING 12" ON EITHER SIDE OF THE PARTITION.

DD. ALL DEVIATIONS FROM SCHEDULED EQUIPMENT THAT RESULTS IN ADDITIONAL COST DUE TO LACK OF COORDINATION WITH DIMENSIONS, WEIGHTS, AND CONNECTION POINTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

EE. THE LOW PRESSURE DUCT IMMEDIATELY DOWNSTREAM OF THE TERMINAL BOXES SHALL BE THE SAME SIZE AS THE DISCHARGE OF THE BOX UNLESS NOTED OTHERWISE. IF DIFFERENT THAN DISCHARGE, PROVIDE TRANSITION.

FF. DUCT SIZES ARE NET FREE AREA.

GG. PROVIDE ROUND DUCTS TO ALL AIR DEVICES UNLESS NOTED OTHERWISE. DUCT SIZE SHALL MATCH AIR DEVICE NECK SIZE OR THE TABLE IN AIR DEVICE SCHEDULE, WHICHEVER IS LARGER. FLEXIBLE DUCTS SHALL BE SIZED SIMILARLY. DO NOT USE FLEXIBLE DUCTS ABOVE NON-LAYIN CEILINGS.

HH. PROVIDE FRAMED 0.5" BY 0.5" BIRD SCREEN (GALVANIZED STEEL ASSEMBLY) AT ALL DUCTS TERMINATING WITHOUT AN AIR DEVICE, AT INDOOR FACE OF LOUVERS, AND AT UNDUCTED AIR FLOW OPENINGS AT EQUIPMENT.

II. PROVIDE MANUAL VOLUME DAMPER IN EACH AIR DEVICE RUNOUT DUCT AS FAR FROM AIR DEVICE AS POSSIBLE.

JJ. INSTALL SPACE THERMOSTAT ADJACENT TO LATCH SIDE OF DOOR IN SPACE INDICATED.
INDICATED LOCATIONS ARE APPROXIMATE. AVOID HEAT PRODUCING EQUIPMENT.
FINAL SPACE THERMOSTAT/SENSOR LOCATIONS SHALL BE AS DIRECTED BY THE ARCHITECT.
INSTALL HUMIDISTATS IN SIMILAR FASHION.

KK. INSTALL TURNING VANES IN ALL 90 DEGREE SQUARE ELLS IN SUPPLY, RETURN, AND EXHAUST DUCTS. (NONE ALLOWED IN COMBUSTION AIR DUCTS).

LL. MULTI-BLADE DAMPERS OF ANY TYPE INSTALLED WITHIN 36" OF AN ELL OR OTHER FITTING SHALL MULTI-BLADE DAMPERS OF ANY TYPE INSTALLED WITHIN 36" OF AN ELL OR OTHER FITTING SHALL UPSTREAM OF THE FITTING.

MM. PROVIDE DRAIN PAN UNDER PIPES INSIDE ELECTRICAL AND COMMUNICATION ROOMS.

NN. COORDINATE LOCATION OF ALL DISCONNECTS, CONTROL PANELS AND ELECTRICAL CONNECTIONS FOR MECHANICAL AND PLUMBING EQUIPMENT TO MAINTAIN NEC REQUIRED CLEARANCES OF 42" DEEP AND 30" WIDE IN FRONT OF EQUIPMENT.

OO. ALL FIRE AND COMBINATION FIRE/SMOKE DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION DETAILS AND BE U.L. TESTED AND LISTED.

PP. ALL MEDIUM PRESSURE DUCT RUNOUTS TO INDIVIDUAL TERMINAL BOXES SHALL BE THE SAME SIZE AS THE BOX INLET UNLESS NOTED OTHERWISE.

QQ. HEATING WATER RUN-OUTS TO INDIVIDUAL TERMINAL BOXES SHALL BE 3/4" UNLESS NOTED OTHERWISE.

RR. SLOPE & ARRANGE CHILLED & HOT WATER PIPING TO ESTABLISH HIGH POINTS FOR AIR ELIMINATION AND LOW POINTS TO PERMIT PROPER DRAINING OF EACH LINE. PROVIDE MANUAL AIR VENTS AT HIGH POINTS AND DRAIN VALVES AT LOW POINTS.

SS. LOCATE ISOLATION VALVES FOR EQUIPMENT AS CLOSE TO THE MAIN AS POSSIBLE.

# GENERAL DEMOLITION NOTES:

A. ALL CAPPED DUCT TAPS AND CONNECTING DUCTS THAT ARE NOT BEING USED ARE TO BE REMOVED BACK TO THE MAIN DUCT AND PATCHED AS PER ITEM B BELOW.

B. SEAL AIRTIGHT AND PATCH OPENINGS IN EXISTING DUCTWORK THAT IS TO REMAIN INCLUDING OPENINGS. WHERE TAPS OR DUCTWORK ARE TO BE REMOVED, THE FOLLOWING SHALL OCCUR:

- OPENINGS IN THE MAIN DUCTS ARE TO BE COVERED WITH A SHEET METAL PATCH. THE PATCH IS TO BE LARGER THAN THE EXISTING OPENING AND IS TO BE SECURED WITH SHEET METAL SCREWS FOUR INCHES ON CENTERS.
- A LIBERAL QUANTITY OF FIRE RESISTANT ADHESIVE IS TO BE APPLIED UNDER THE EDGES OF THE METAL PATCH AND THE ASSEMBLY SCREWED IN PLACE.

C. REFER TO THE ARCHITECTURAL PHASING PLAN FOR THE AREAS SHOWN ON THIS PLAN. WORK SHALL BE SCHEDULED AND PERFORMED IN SEQUENCE WITH THE PHASING PLAN.

D. DEMOLITION OF EACH PHASE SHALL OCCUR AS PART OF THE WORK FOR THAT PHASE. REMOVE ONLY THE WORK THAT SERVES THE AREA OF DEMOLITION.

E. PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO PREVENT DISRUPTING ADJACENT AREAS OF THE PHASE IN WHICH WORK IS BEING PERFORMED.

F. PROVIDE ADDITIONAL VALVES, TAPS, TEMPORARY DUCTWORK AND/OR PIPING AS NECESSARY TO PROVIDE UNINTERRUPTED SERVICE TO AREAS OUTSIDE OF THE PHASE IN WHICH WORK IS BEING PERFORMED.

G. ALL WORK SHALL BE PERFORMED IN STRICT COORDINATION WITH HOSPITAL SCHEDULES, OCCUPANCIES AND WORK. CONTRACTOR SHALL COORDINATE WITH HOSPITAL REPRESENTATIVE.

H. ALL NECESSARY SHUTDOWNS OR OUT OF PHASE WORK SHALL BE SCHEDULED WITH THE HOSPITAL REPRESENTATIVE.

# GENERAL PIPING NOTES

A. REFER TO THE ARCHITECTURAL PHASING PLAN FOR THE AREAS SHOWN ON THIS SET OF PLANS. WORK SHALL BE SCHEDULED AND PERFORMED IN SEQUENCE WITH THE PHASING PLAN.

B. DEMOLITION OF EACH PHASE SHALL OCCUR AS PART OF THE WORK FOR THAT PHASE. REMOVE ONLY THE WORK THAT SERVES THE AREA OF DEMOLITION.

C. PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO PREVENT DISRUPTING ADJACENT AREAS OF THE PHASE IN WHICH WORK IS BEING PERFORMED.

D. PROVIDE ADDITIONAL VALVES, TAPS, TEMPORARY DUCTWORK AND/OR PIPING AS NECESSARY TO PROVIDE UNINTERRUPTED SERVICE TO AREAS OUTSIDE OF THE PHASE IN WHICH WORK IS BEING PERFORMED.

E. ALL WORK SHALL BE PERFORMED IN STRICT COORDINATION WITH HOSPITAL SCHEDULES, OCCUPANCIES AND WORK. CONTRACTOR SHALL COORDINATE WITH HOSPITAL REPRESENTATIVE.

F. ALL NECESSARY SHUTDOWNS OR OUT OF PHASE WORK SHALL BE SCHEDULED WITH THE HOSPITAL REPRESENTATIVE.

G. ARCHITECT SHALL HAVE FINAL APPROVAL OF ALL THERMOSTAT LOCATIONS.

H. G.C. TO PROVIDE ACCESS DOORS IF REQUIRED FOR ACCESS TO VAV'S AND ANY VALVES THAT ARE NOT ACCESSIBLE. VERIFY SIZE AND LOCATIONS WITH MECHANICAL CONTRACTOR.

# MECHANICAL LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS.
SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

| SYMBOL | DESCRIPTION |
|---|---|
| (A) | NEW EQUIPMENT DESIGNATION (TOP - EQUIP. ABBREV., BOTTOM - MARK) |
| (A) (B) | DIFFUSER DESIGNATION (TOP - SCHEDULE DESIG., BOTTOM - CFM) |
| | NEW EQUIPMENT |
| | EXISTING EQUIPMENT |
| | NEW DUCT |
| | EXISTING DUCT |
| | EXISTING DUCT TO BE REMOVED OR RELOCATED |
| | NEW SUPPLY DIFFUSER |
| | EXISTING SUPPLY DIFFUSER |
| | EXISTING SUPPLY DIFFUSER TO BE REMOVED OR RELOCATED |
| | NEW R/A OR EXHAUST GRILLE |
| | EXISTING R/A OR EXHAUST GRILLE |
| | EXISTING R/A OR EXHAUST GRILLE TO BE REMOVED OR RELOCATED |
| | NEW SLOT DIFFUSER |
| | FLEXIBLE DUCT |
| | EXISTING SLOT DIFFUSER |
| | EXISTING SLOT DIFFUSER TO BE REMOVED OR RELOCATED |
| | CUT AND CAP |
| T | THERMOSTAT |
| T | EXISTING THERMOSTAT |
| CO2 | CARBON DIOXIDE SENSOR |
| | 45° PRESSURE TAP W/ VOLUME DAMPER |
| | CONICAL TAP WITH VOLUME DAMPER |
| | CONICAL TAP W/O VOLUME DAMPER |
| | MANUAL VOLUME DAMPER |
| | FIRE DAMPER WITH ACCESS DOOR |
| | SMOKE DAMPER WITH ACCESS DOOR |
| | FIRE/SMOKE DAMPER WITH ACCESS DOOR |
| | EXISTING FIRE/SMOKE DAMPER TO REMAIN |
| M | MOTORIZED DAMPER |
| B | BAROMETRIC DAMPER |
| HS | HEATING WATER SUPPLY |
| HR | HEATING WATER RETURN |
| CHS | CHILLED WATER SUPPLY |
| CHR | CHILLED WATER RETURN |
| | DOMESTIC COLD WATER |

# MECHANICAL LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS.
SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

| SYMBOL | DESCRIPTION |
|---|---|
| | DOMESTIC HOT WATER |
| | DOMESTIC HOT WATER RETURN |
| | SANITARY WASTE LINE |
| CD | CONDENSATE DRAIN |
| P | PUMPED SANITARY LINE |
| | VENT LINE |
| | DIRECTION OF SLOPE |
| | DIRECTION OF FLOW |
| | EXPANSION LOOP |
| | GATE VALVE |
| | BUTTERFLY VALVE |
| | BUTTERFLY VALVE (LARGE SCALE - DOUBLE LINE) |
| | BALL VALVE |
| | GLOBE VALVE |
| | TEMPERATURE AND PRESSURE RELIEF VALVE |
| | AUTOMATIC 2-WAY CONTROL VALVE |
| | AUTOMATIC 3-WAY CONTROL VALVE |
| | PLUG VALVE/BALANCING COCK |
| | SOLENOID VALVE |
| | CHECK VALVE |
| | HYDRAULIC SHOCK ARRESTOR |
| | VALVE IN VERTICAL |
| | UNION |
| V | VACCUUM BREAKER |
| | P-TRAP |
| | FLOOR DRAIN W/ P-TRAP |
| | HUB DRAIN |
| | FLOOR CLEANOUT OR GRADE CLEANOUT |
| | CLEANOUT OR WALL CLEANOUT |
| | PETE'S PLUG |
| | GAUGE COCK |
| | THERMOMETER |
| | THERMOMETER WELL |
| | STRAINER WITH BLOW-OFF VALVE |
| | F & T STEAM TRAP |
| | STEAM BUCKET TRAP |
| | CONNECT TO EXISTING |
| | POINT OF DISCONNECT |
| EP | ELECTRIC PNEUMATIC SWITCH |
| H | HUMIDISTAT |
| P | DIFFERENTIAL PRESSURE SENSOR |

MECHANICAL ABBREVIATIONS

| | | | |
|---|---|---|---|
| AC | ABOVE CEILING | EUH | ELECTRIC UNIT HEATER |
| AFF | ABOVE FINISHED FLOOR | FCU | FAN COIL UNIT |
| AI | ANALOG INPUT | FPB | FAN POWERED BOX |
| AO | ANALOG OUTPUT | FPI | FINS PER INCH |
| BF | BELOW FLOOR | GC | GENERAL CONTRACTOR |
| BFC | BELOW FINISHED CEILING | MVD | MANUAL VOLUME DAMPER |
| BG | BELOW GRADE | N | NEW |
| CRU | COMPUTER ROOM UNIT | OBD | OPPOSED BLADE DAMPER |
| CU | CONDENSING UNIT | R | RELOCATED |
| DI | DIGITAL INPUT | RA | RETURN AIR |
| DO | DIGITAL OUTPUT | SA | SUPPLY AIR |
| DS | DISCONNECT SWITCH | UH | UNIT HEATER |
| E | EXISTING | | |
| EF | EXHAUST FAN | | |

MECHANICAL/ELECTRICAL SYSTEM COORDINATION SCHEDULE

| SYSTEM | FURNISHED BY | INSTALLED BY | POWER WIRING BY | CONTROL OR SUPERVISION WIRING BY |
|---|---|---|---|---|
| LIFE SAFETY SYSTEM | --- | --- | --- | --- |
| SMOKE DAMPER/ACTUATOR | DIV 15 | DIV 15 | DIV 16 | DIV 16 |
| FIRE/SMOKE DAMPER/ ACTUATOR | DIV 15 | DIV 15 | DIV 16 | DIV 16 |
| DUCT SMOKE DETECTOR | DIV 16 | DIV 15 | ---- | DIV 16 |
| DISCONNECT SWITCHES (NON-INTEGRAL TO EQUIPMENT) | DIV 16 | DIV 16 | DIV 16 | --- |
| THIS TABLE IS PROVIDED AS A GUIDE TO THE DOCUMENT PREPARATION AND IN NO WAY INDICATES CONTRACTOR MEANS AND METHODS | | | | |

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 8/12/09
06 IMC

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HEERY design

Heery International Inc.
820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

project number
0906700

AA 0002293
EB 0005176

MEDICAL CENTER OF AURORA

FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howel Construction
550 Lpan St.
Denver, CO 80204

303-899-4787

seal/signature

08-05-09
COLORADO REGISTERED PROFESSIONAL ENGINEER

| issued for | date |
|---|---|
| CONSTRUCTION | 07/15/2009 |

| item | date |
|---|---|
| 1 PLAN REVIEW RESPONSE | 07.29.09 |
| 2 ADDENDUM #4 | 08.05.09 |

PLAN NORTH

SCALE: 1/8" = 1'-0"

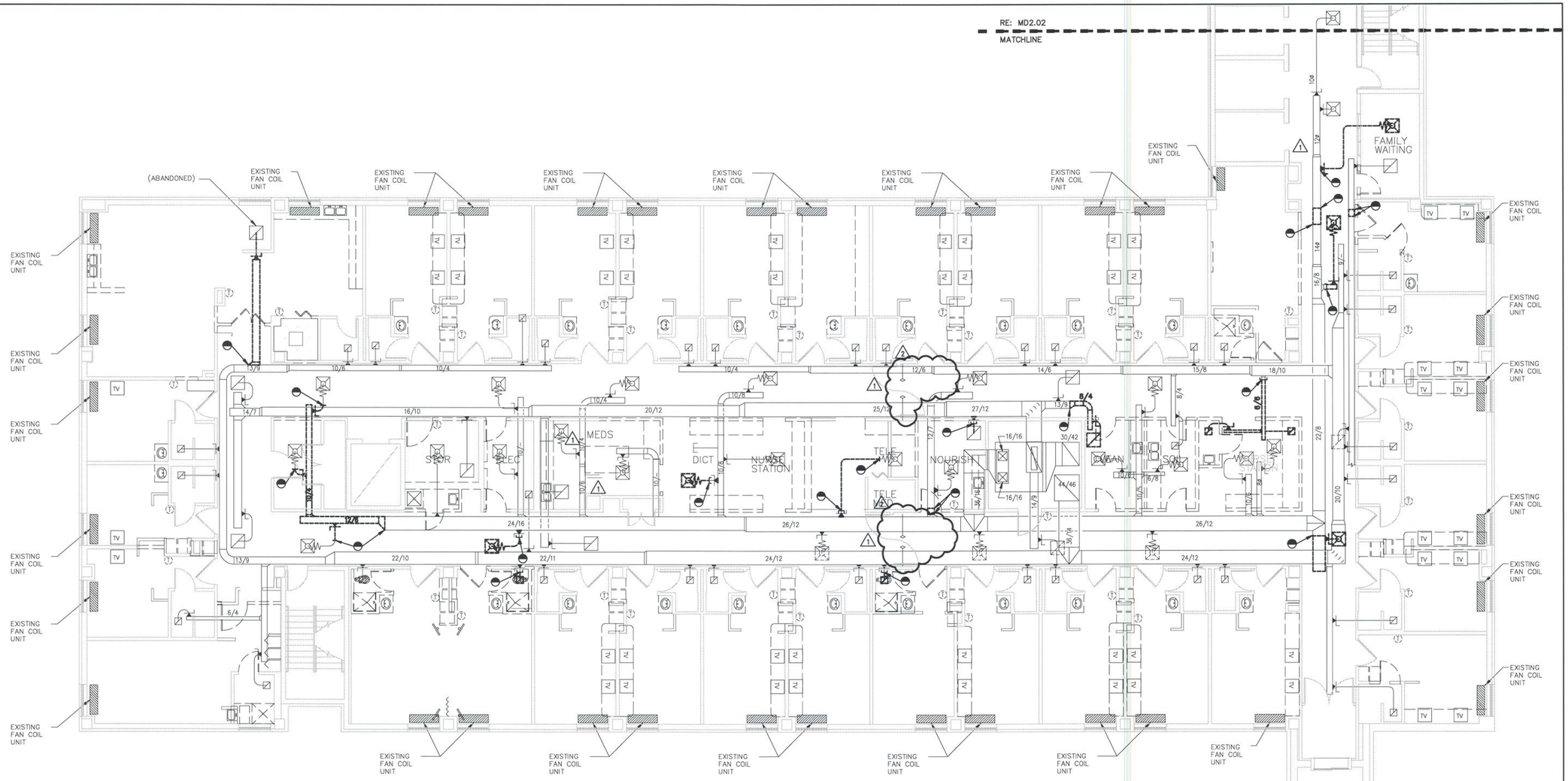
key plan

sheet title
MECHANICAL LEGENDS AND NOTES

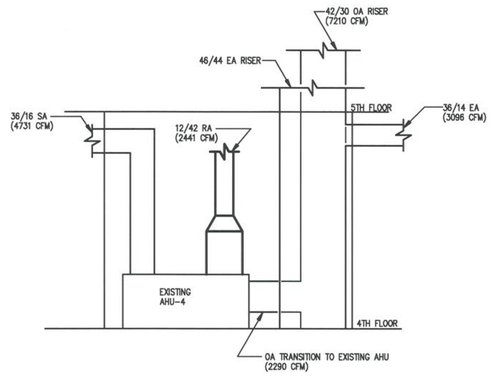
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M0.00

drawn by JF checked by AB

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## 01 FOUR WEST HVAC DUCTWORK DEMOLITION PLAN
SCALE: 1/8" = 1'-0"




## 02 EXISTING AHU-4 PRE-CONSTRUCTION UNIT BALANCE
SCALE: 1/4" = 1'-0"

## GENERAL NOTES

A. REFER TO SHEET M0.00 FOR GENERAL NOTES.

## LEGEND NOTES

1 NOTE USED.

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Heery International Inc.
820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

project number
0906700

AA 0002293
EB 0005176

# MEDICAL CENTER OF AURORA

# FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howel Construction
550 Lipan St.
Denver, CO 80204

303-899-4787

seal/signature

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PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan
sheet title

FOUR WEST HVAC DUCTWORK DEMOLITION PLAN

sheet number
MD2.01

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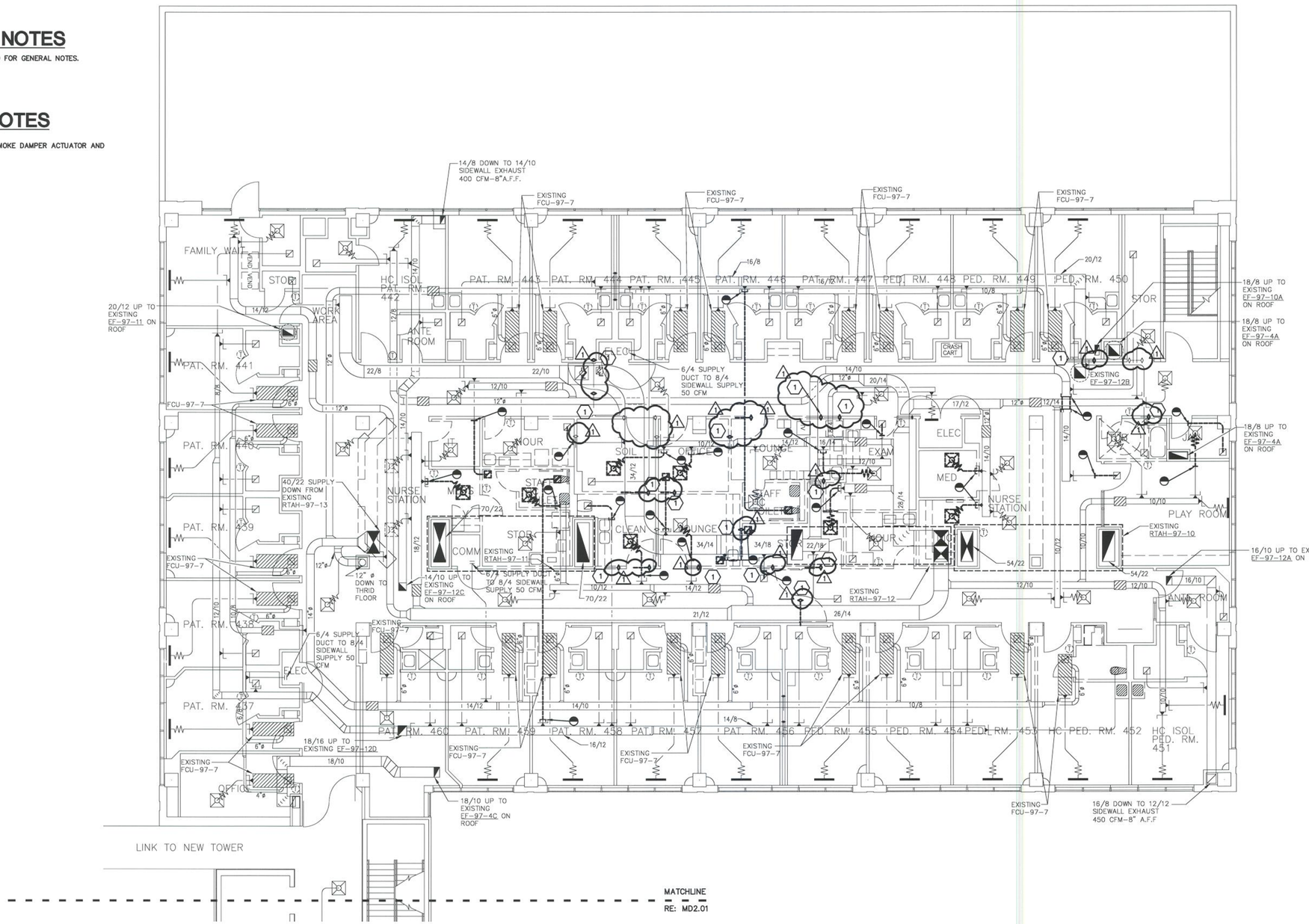
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## GENERAL NOTES

A. REFER TO SHEET M0.00 FOR GENERAL NOTES.

## LEGEND NOTES

(1) REMOVE EXISTING FIRE SMOKE DAMPER ACTUATOR AND WIRE OPEN DAMPER.




## 01 FOUR EAST HVAC DUCTWORK DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

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Denver, CO 80202-3219
720.946.0276

project number

0906700

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consultants/construction managers

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Suite 200
Greenwood Village, CO 80111

303-694-4755

Howel Construction
550 Lipan St.
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PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan

sheet title

FOUR EAST HVAC DUCTWORK DEMOLITION PLAN

sheet number

**MD2.02**

drawn by JF | checked by AB

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## FOURTH FLOOR WEST AIR BALANCE SCHEDULE

| ROOM NAME | SQUARE FEET | CEILING HEIGHT (FEET) | PRESSURE | OUTSIDE AIR CHANGES REQUIRED | MINIMUM OUTSIDE AIR REQUIRED | OUTSIDE AIR PROVIDED | SUPPLY AIR CHANGES REQUIRED | COOLING CFM REQUIRED | SUPPLY CFM PROVIDED | EXHAUST AIR CHANGES REQUIRED | EXHAUST CFM REQUIRED | EXHAUST CFM PROVIDED | RETURN CFM PROVIDED |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consult | 134 | 8 | EQUAL | 0 | 20 | 20 | 2 | 36 | 100 | | 0 | 0 | 100 |
| Neuro 13 – 401 | 191 | 8 | EQUAL | 2 | 51 | 31 | 6 | 153 | 155 | | 0 | 75 | 80 |
| Neuro 14 – 402 | 183 | 8 | EQUAL | 2 | 49 | 30 | 6 | 146 | 150 | | 0 | 75 | 75 |
| Neuro 15 – 403 | 186 | 8 | EQUAL | 2 | 50 | 30 | 6 | 149 | 150 | | 0 | 75 | 75 |
| Neuro 16 – 404 | 186 | 8 | EQUAL | 2 | 50 | 30 | 6 | 149 | 150 | | 0 | 75 | 75 |
| Neuro 17 – 405 | 181 | 8 | EQUAL | 2 | 48 | 30 | 6 | 145 | 150 | | 0 | 75 | 75 |
| Neuro 18 – 406 | 204 | 8 | EQUAL | 2 | 54 | 33 | 6 | 163 | 165 | | 0 | 75 | 90 |
| Neuro 19 – 407 | 252 | 8 | EQUAL | 2 | 67 | 41 | 6 | 202 | 205 | | 0 | 75 | 130 |
| Neuro 20 – 408 | 235 | 8 | EQUAL | 2 | 63 | 40 | 6 | 188 | 200 | | 0 | 75 | 125 |
| Neuro 21 – 409 | 236 | 8 | EQUAL | 2 | 63 | 40 | 6 | 189 | 200 | | 0 | 75 | 125 |
| Neuro 22 – 410 | 235 | 8 | EQUAL | 2 | 63 | 40 | 6 | 188 | 200 | | 0 | 75 | 125 |
| Point of use – 411 | 196 | 8 | EQUAL | 0 | 0 | 25 | 2 | 52 | 150 | | 0 | 0 | 150 |
| Neuro 23 – 412 | 236 | 8 | EQUAL | 2 | 63 | 40 | 6 | 189 | 200 | | 0 | 75 | 125 |
| Neuro 24 – 414 | 236 | 8 | EQUAL | 2 | 63 | 40 | 6 | 189 | 200 | | 0 | 75 | 125 |
| Neuro 25 – 415 | 235 | 8 | EQUAL | 2 | 63 | 40 | 6 | 188 | 200 | | 0 | 75 | 125 |
| Neuro 26 – 416 | 236 | 8 | EQUAL | 2 | 63 | 40 | 6 | 189 | 200 | | 0 | 75 | 125 |
| Sitter Room – 418 | 521 | 8 | EQUAL | 2 | 100 | 138 | 6 | 417 | 420 | | 0 | 150 | 270 |
| Staff Lounge | 355 | 8 | EQUAL | 0 | 0 | 100 | 0 | 0 | 205 | | 0 | 75 | 130 |
| Iso/Neuro 1 – 420 | 186 | 8 | NEGATIVE | 2 | 50 | 60 | 12 | 298 | 300 | | 0 | 75 | 225 |
| Iso/Neuro 2 – 421 | 175 | 8 | NEGATIVE | 2 | 47 | 56 | 12 | 280 | 280 | | 0 | 75 | 205 |
| Iso/Dialysis – 422 | 228 | 8 | NEGATIVE | 2 | 61 | 73 | 12 | 365 | 365 | | 0 | 75 | 290 |
| Dialysis | 662 | 8 | NEGATIVE | 0 | 0 | 120 | 6 | 530 | 775 | | 0 | 0 | 255 |
| Storage | 247 | 8 | EQUAL | 0 | 0 | 25 | 0 | 0 | 50 | | 0 | 75 | 0 |
| Hskpg | 36 | 8 | NEGATIVE | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 48 | 75 | 0 |
| Neuro 3 – 426 | 219 | 8 | EQUAL | 2 | 58 | 35 | 6 | 175 | 175 | | 0 | 75 | 100 |
| Neuro 4 – 427 | 218 | 8 | EQUAL | 2 | 58 | 35 | 6 | 174 | 175 | | 0 | 75 | 100 |
| Neuro 5 – 428 | 218 | 8 | EQUAL | 2 | 58 | 35 | 6 | 174 | 175 | | 0 | 75 | 100 |
| Neuro 6 – 429 | 217 | 8 | EQUAL | 2 | 58 | 35 | 6 | 174 | 175 | | 0 | 75 | 100 |
| Neuro 7 – 430 | 235 | 8 | EQUAL | 2 | 63 | 40 | 6 | 188 | 200 | | 0 | 75 | 125 |
| Dictation – 431 | 235 | 8 | EQUAL | 0 | 0 | 100 | 2 | 63 | 335 | | 0 | 0 | 335 |
| Neuro 8 – 432 | 235 | 8 | EQUAL | 2 | 63 | 40 | 6 | 188 | 200 | | 0 | 75 | 125 |
| Neuro 9 – 433 | 236 | 8 | EQUAL | 2 | 63 | 40 | 6 | 189 | 200 | | 0 | 75 | 125 |
| Neuro 10 – 434 | 235 | 8 | EQUAL | 2 | 63 | 40 | 6 | 188 | 200 | | 0 | 75 | 125 |
| Neuro 11 – 435 | 228 | 8 | EQUAL | 2 | 61 | 40 | 6 | 182 | 200 | | 0 | 75 | 125 |
| Family Waiting/Vending | 336 | 8 | EQUAL | 0 | 280 | 280 | 2 | 90 | 510 | | 0 | 75 | 185 |
| Nurse Station | 230 | 8 | EQUAL | 0 | 0 | 78 | 2 | 61 | 160 | | 0 | 0 | 0 |
| Meds | 86 | 8 | POSITIVE | 0 | 0 | 42 | 4 | 46 | 85 | | 0 | 25 | 0 |
| Alcove | 78 | 8 | EQUAL | 0 | 0 | 5 | 2 | 21 | 25 | | 0 | 0 | 0 |
| Mech | 178 | 8 | POSITIVE | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Nourisment | 142 | 8 | EQUAL | 0 | 0 | 39 | 4 | 76 | 80 | | 0 | 0 | 80 |
| Tele Med | 30 | 8 | EQUAL | 0 | 0 | 0 | 4 | 16 | 0 | | 0 | 50 | 0 |
| Soiled Utility/Holding | 141 | 8 | NEGATIVE | 0 | 0 | 43 | 0 | 0 | 215 | 10 | 188 | 240 | 0 |
| Nurse Station | 365 | 8 | EQUAL | 0 | 0 | 86 | 2 | 103 | 175 | | 0 | 0 | 175 |
| Elec | 9 | 8 | EQUAL | 0 | 0 | 10 | 0 | 0 | 50 | | 0 | 0 | 0 |
| Meds | 105 | 8 | EQUAL | 0 | 0 | 37 | 4 | 56 | 75 | | 0 | 0 | 75 |
| Alcove | 98 | 8 | EQUAL | 0 | 0 | 10 | 2 | 26 | 50 | | 0 | 50 | 0 |
| Clean Storage | 163 | 8 | POSITIVE | 0 | 0 | 20 | 4 | 87 | 100 | | 0 | 0 | 100 |
| I/T | 41 | 8 | EQUAL | 0 | 0 | 10 | 0 | 0 | 50 | | 0 | 0 | 50 |
| Elec | 73 | 8 | EQUAL | 0 | 0 | 10 | 0 | 0 | 50 | | 0 | 0 | 50 |
| Corridor | 3351 | 8 | EQUAL | 0 | 0 | 1308 | 2 | 894 | 3095 | | 0 | 0 | 2030 |

## LEGEND NOTES

1. CLEAN, TEST, AND REFURBISH EXISTING FAN COIL UNIT. REPLACE PARTS AS REQUIRED TO OBTAIN OPTIMAL PERFORMANCE. REPLACE MOTOR AND VALVE ACTUATORS AS REQUIRED TO TIE INTO FMS. UNIT TO BE REBALANCED TO AIRFLOW VALUES INDICATED ON DRAWING. REPORT ANY DISCREPANCIES AND FINDINGS TO ENGINEER.
2. RELOCATE EXISTING THERMOSTAT. PROVIDE ADDITIONAL CONTROL TUBING AS REQUIRED TO ACCOMMODATE RELOCATION. COORDINATE FINAL LOCATION OF THERMOSTAT WITH ARCHITECT.
3. CONNECT TO EXISTING DUCTWORK. SIZE TO MATCH EXISTING.
4. PROVIDE PNEUMATIC PIPING AS REQUIRED TO ACCOMODATE RELOCATION OF TUBE STATION. COORDINATE REQUIREMENTS WITH TRANSLOGIC.

## GENERAL NOTES

A. MECHANICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO CONSTRUCTION AND VERIFY THE NATURE AND EXTENT OF MECHANICAL WORK, AS WELL AS LOCATIONS OF OTHER SYSTEM COMPONENTS.

B. INSTALL DAMPERS TO BE READILY ACCESSIBLE.

C. COORDINATE HVAC WORK WITH THE EQUIPMENT, PIPING, ELECTRICAL CONDUITS, BUILDING STRUCTURES AND CEILING HEIGHTS.

D. CONTRACTOR SHALL INSTALL NEW SYSTEM WITHOUT INTERFERENCE AND IN STRICT COORDINATION WITH OTHER TRADES INVOLVED.

E. VERIFY EXACT LOCATION OF CEILING MOUNTED AIR DEVICES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN.

F. CONTRACTOR SHALL REPAIR AND/OR REPLACE, WITHOUT ANY COST TO THE OWNER, ANY SYSTEMS DAMAGED DUE TO HIS WORK.

G. MASTIC SEAL ALL ROUND CONNECTIONS TO BE PERMANENTLY AIR TIGHT.

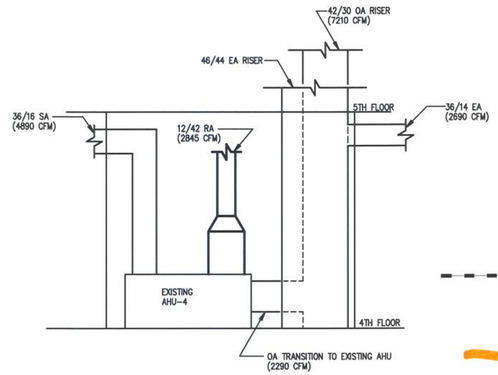
H. CONTRACTOR SHALL PATCH AND REPAIR DUCTWORK AS NEEDED TO PROVIDE AN AIR TIGHT DUCT SYSTEM.

I. ALL RECTANGULAR RETURN AIR DUCT TO BE EXTERNALLY LINED.

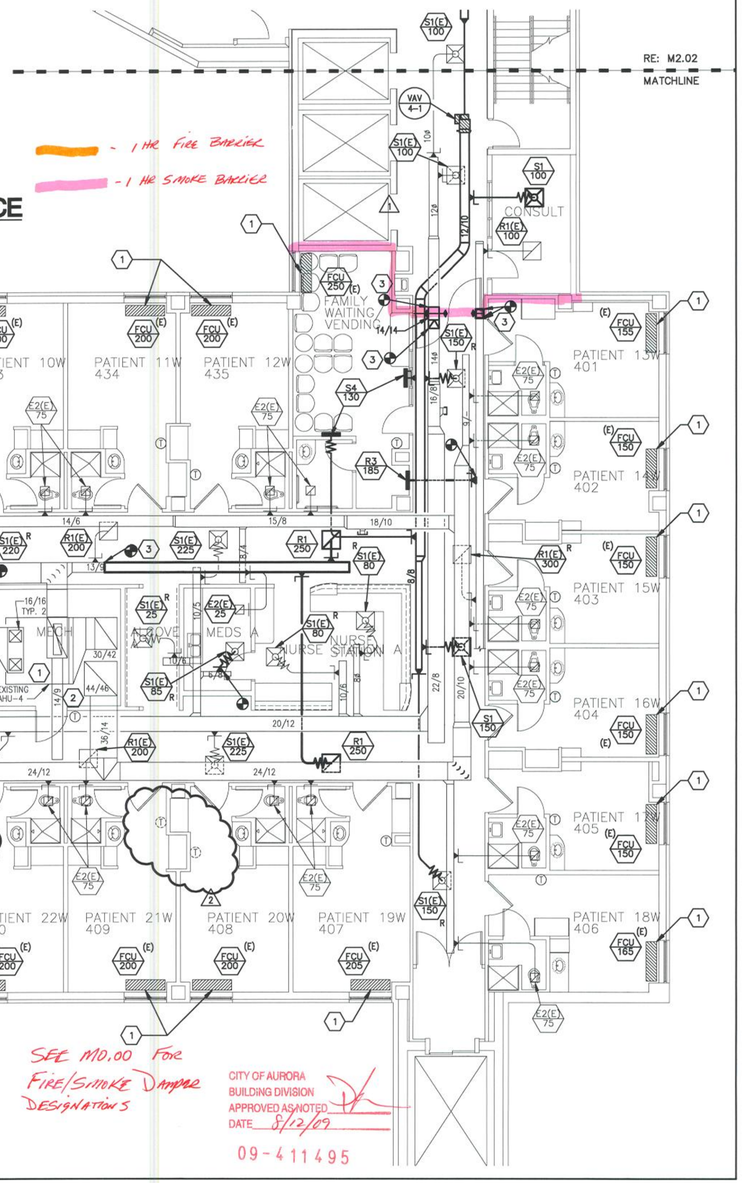
J. ALL RECTANGULAR EXHAUST DUCT TO BE EXTERNALLY LINED FROM FAN TO 20 FEET DOWNSTREAM.

K. ALL CONCEALED SUPPLY AIR DUCT TO BE EXTERNALLY WRAPPED UNLESS NOTED OTHERWISE.

L. REBALANCE ALL DIFFUSERS AND GRILLES TO VALUE INDICATED ON DRAWING.




## 02 EXISTING AHU-4 REBALANCE
SCALE: 1/4" = 1'-0"




## 01 FOUR WEST HVAC DUCTWORK PLAN
SCALE: 1/8" = 1'-0"

SEE M0.00 FOR FIRE/SMOKE DAMPER DESIGNATIONS

CITY OF AURORA
BUILDING DIVISION
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DATE 8/12/09
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HEERY design

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08-05-09
COLORADO
JOHN FREDERICK BOYD
REGISTERED
PROFESSIONAL ENGINEER

| issued for | date |
|---|---|
| CONSTRUCTION | 07/15/2009 |

| item | date |
|---|---|
| 1 PLAN REVIEW RESPONSE | 07.29.09 |
| 2 ADDENDUM #4 | 08.05.09 |

PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan
sheet title

## FOUR WEST HVAC DUCTWORK PLAN

sheet number
**M2.01**

drawn by JF checked by AB

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## FOURTH FLOOR EAST AIR BALANCE SCHEDULE

| ROOM NAME | SQUARE FEET | CEILING HEIGHT (FEET) | PRESSURE | OUTSIDE AIR AIR CHANGES | MINIMUM OUTSIDE AIR CHANGES | OUTSIDE AIR PROVIDED | SUPPLY AIR AIR CHANGES | COOLING CFM REQUIRED | SUPPLY CFM PROVIDED | EXHAUST AIR CHANGES | EXHAUST CFM REQUIRED | EXHAUST CFM PROVIDED | RETURN CFM PROVIDED |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Staff Lounge | 254 | 8 | EQUAL | 0 | 0 | 154 | 2 | 58 | 770 | | 0 | 50 | 730 |
| Corridor | 2809 | 8 | EQUAL | 0 | 0 | 460 | 2 | 749 | 2300 | | 0 | 0 | 3155 |
| Ortho/Iso 6 – 442 | 217 | 8 | NEGATIVE | 2 | 58 | 70 | 6 | 174 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 7 – 443 | 206 | 8 | EQUAL | 2 | 55 | 70 | 6 | 166 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 8 – 444 | 203 | 8 | EQUAL | 2 | 54 | 70 | 6 | 162 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 9 – 445 | 202 | 8 | EQUAL | 2 | 54 | 70 | 6 | 162 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 10 – 446 | 207 | 8 | EQUAL | 2 | 55 | 70 | 6 | 166 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 11 – 447 | 207 | 8 | EQUAL | 2 | 55 | 70 | 6 | 166 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 12 – 448 | 208 | 8 | EQUAL | 2 | 55 | 70 | 6 | 166 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 13 – 449 | 207 | 8 | EQUAL | 2 | 55 | 70 | 6 | 166 | 350 | | 0 | 80 | 270 |
| Manager | 161 | 8 | EQUAL | 0 | 0 | 40 | 6 | 129 | 200 | | 0 | 0 | 180 |
| Meds | 79 | 8 | POSITIVE | 0 | 0 | 44 | 4 | 42 | 220 | | 0 | 0 | 170 |
| Hskpg | 29 | 8 | NEGATIVE | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 39 | 50 | 0 |
| Therapy | 398 | 8 | NEGATIVE | 6 | 318 | 124 | 0 | 0 | 620 | | 0 | 840 | 0 |
| Isolation – 451 | 225 | 8 | NEGATIVE | 2 | 60 | 80 | 6 | 180 | 400 | | 0 | 530 | 0 |
| Ortho/Trauma 14 – 452 | 240 | 8 | EQUAL | 2 | 64 | 70 | 6 | 192 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 15 – 453 | 243 | 8 | EQUAL | 2 | 65 | 70 | 6 | 194 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 16 – 454 | 243 | 8 | EQUAL | 2 | 65 | 70 | 6 | 194 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 17 – 455 | 225 | 8 | EQUAL | 2 | 60 | 70 | 6 | 180 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 18 – 456 | 237 | 8 | EQUAL | 2 | 63 | 70 | 6 | 190 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 19 – 457 | 237 | 8 | EQUAL | 2 | 63 | 70 | 6 | 190 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 20 – 458 | 237 | 8 | EQUAL | 2 | 63 | 70 | 6 | 190 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 21 – 459 | 235 | 8 | EQUAL | 2 | 63 | 70 | 6 | 188 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 22 – 460 | 251 | 8 | EQUAL | 2 | 67 | 70 | 6 | 201 | 350 | | 0 | 80 | 270 |
| Storage | 125 | 8 | EQUAL | 0 | 0 | 22 | 0 | 0 | 110 | | 0 | 0 | 100 |
| Ortho/Trauma 1 – 437 | 181 | 8 | EQUAL | 2 | 48 | 70 | 6 | 145 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 2 – 438 | 197 | 8 | EQUAL | 2 | 53 | 70 | 6 | 158 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 3 – 439 | 183 | 8 | EQUAL | 2 | 49 | 70 | 6 | 146 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 4 – 440 | 178 | 8 | EQUAL | 2 | 47 | 70 | 6 | 142 | 350 | | 0 | 80 | 270 |
| Ortho/Trauma 5 – 441 | 181 | 8 | EQUAL | 2 | 48 | 70 | 6 | 145 | 350 | | 0 | 80 | 270 |
| I/T | 51 | 8 | EQUAL | 0 | 0 | 40 | 0 | 0 | 200 | | 0 | 0 | 0 |
| Nurse Station | 189 | 8 | EQUAL | 0 | 0 | 156 | 2 | 50 | 300 | | 0 | 0 | 300 |
| Nourish | 164 | 8 | EQUAL | 0 | 0 | 104 | 4 | 87 | 200 | | 0 | 0 | 200 |
| Comm | 20 | 8 | EQUAL | 0 | 0 | 26 | 0 | 0 | 50 | | 0 | 0 | 0 |
| Point of Use | 140 | 8 | POSITIVE | 0 | 0 | 104 | 4 | 75 | 200 | | 0 | 0 | 125 |
| Soiled Utility/Mold | 195 | 8 | NEGATIVE | 0 | 0 | 104 | 0 | 0 | 200 | 10 | 280 | 275 | 0 |
| Nurse Station | 552 | 8 | EQUAL | 0 | 0 | 428 | 2 | 147 | 820 | | 0 | 0 | 0 |
| Meds | 138 | 8 | POSITIVE | 0 | 0 | 130 | 4 | 74 | 250 | | 0 | 0 | 225 |
| Dictation | 200 | 8 | POSITIVE | 0 | 0 | 189 | 2 | 53 | 325 | | 0 | 0 | 325 |
| Elec | 28 | 8 | EQUAL | 0 | 0 | 28 | 0 | 0 | 50 | | 0 | 0 | 0 |
| Clean Utility | 184 | 8 | POSITIVE | 0 | 0 | 125 | 4 | 98 | 240 | | 0 | 0 | 200 |
| Ortho Storage | 100 | 8 | POSITIVE | 0 | 0 | 78 | 4 | 53 | 150 | | 0 | 0 | 100 |

## GENERAL NOTES

A. MECHANICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO CONSTRUCTION AND VERIFY THE NATURE AND EXTENT OF MECHANICAL WORK, AS WELL AS LOCATIONS OF OTHER SYSTEM COMPONENTS.

B. INSTALL DAMPERS TO BE READILY ACCESSIBLE.

C. COORDINATE HVAC WORK WITH THE EQUIPMENT, PIPING, ELECTRICAL CONDUITS, BUILDING STRUCTURES AND CEILING HEIGHTS.

D. CONTRACTOR SHALL INSTALL NEW SYSTEM WITHOUT INTERFERENCE AND IN STRICT COORDINATION WITH OTHER TRADES INVOLVED.

E. VERIFY EXACT LOCATION OF CEILING MOUNTED AIR DEVICES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN.

F. CONTRACTOR SHALL REPAIR AND/OR REPLACE, WITHOUT ANY COST TO THE OWNER, ANY SYSTEMS DAMAGED DUE TO HIS WORK.

G. MASTIC SEAL ALL ROUND CONNECTIONS TO BE PERMANENTLY AIR TIGHT.

H. CONTRACTOR SHALL PATCH AND REPAIR DUCTWORK AS NEEDED TO PROVIDE AN AIR TIGHT DUCT SYSTEM.

I. ALL RECTANGULAR RETURN AIR DUCT TO BE EXTERNALLY LINED.

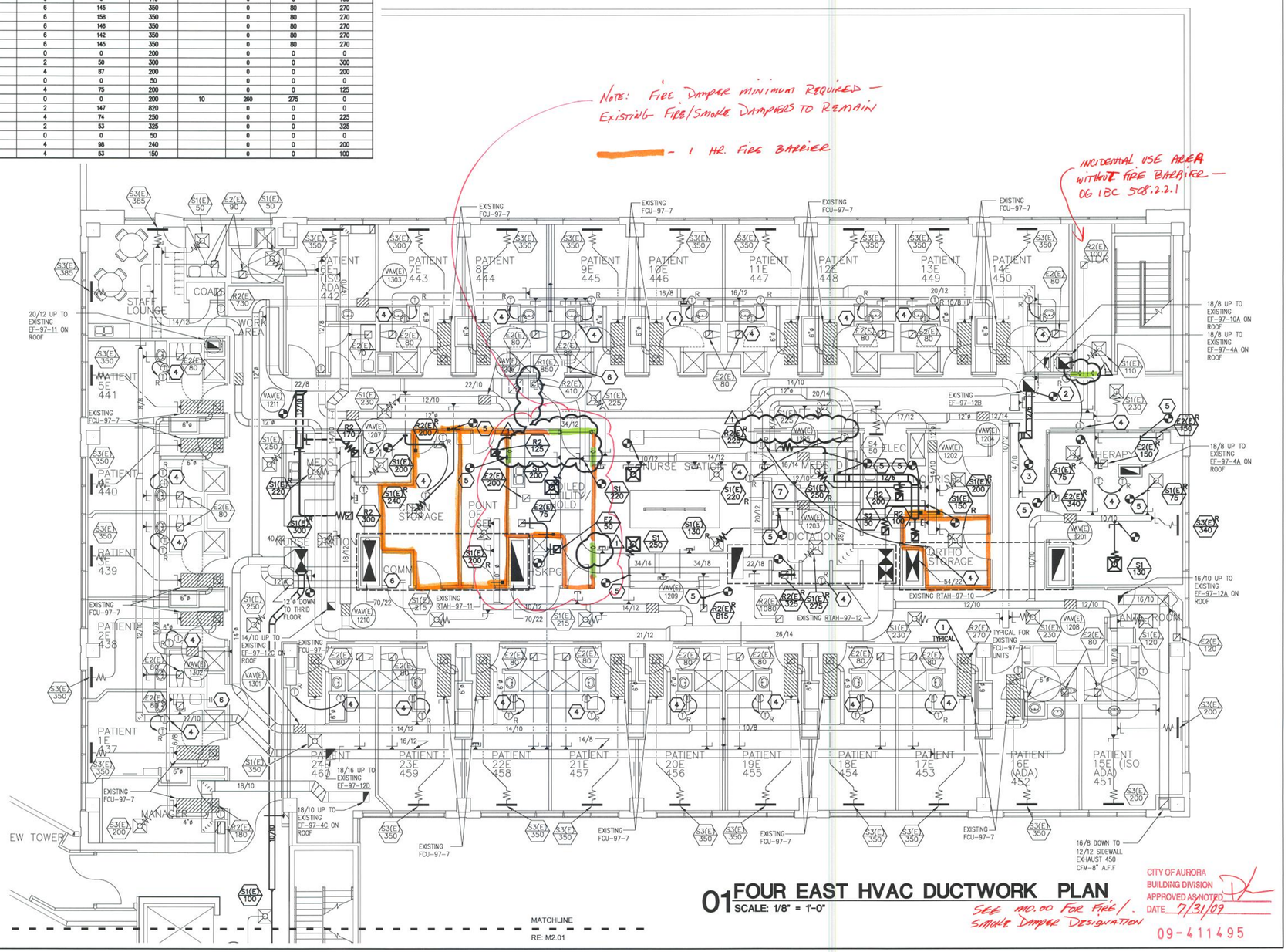
J. ALL RECTANGULAR EXHAUST DUCT TO BE EXTERNALLY LINED FROM FAN TO 20 FEET DOWNSTREAM.

K. ALL CONCEALED SUPPLY AIR DUCT TO BE EXTERNALLY WRAPPED UNLESS NOTED OTHERWISE.

L. REBALANCE ALL DIFFUSERS AND GRILLES TO VALUE INDICATED ON DRAWING.

## LEGEND NOTES

1. CLEAN, TEST, AND REFURBISH EXISTING FAN COIL UNIT. REPLACE PARTS AS REQUIRE TO OBTAIN OPTIMAL PERFORMANCE. UNIT TO BE REBALANCED TO AIRFLOW VALUES INDICATED ON DRAWING. REPORT ANY DISCREPANCIES AND FINDINGS TO ENGINEER.
2. CONNECT 12X6 EXHAUST DUCT TO EXISTING EXHAUST RISER. COORDINATE EXACT LOCATION OF CONNECTION IN THE FIELD.
3. CONNECT 12X6 EXHAUST DUCT TO EXISTING 14X10 DUCT. COORDINATE EXACT LOCATI OF CONNECTION IN THE FIELD.
4. RELOCATE EXISTING THERMOSTAT. PROVIDE ADDITIONAL CONTROL WIRING AS REQUIRE ACCOMMODATE RELOCATION. COORDINATE FINAL LOCATION OF THERMOSTAT WITH ARC
5. CONNECT TO EXISTING DUCTWORK. SIZE TO MATCH EXISTING.
6. 6/4 SUPPLY DUCT TO 8/4 SIDEWALL SUPPLY 50 CFM.
7. PROVIDE PNEUMATIC PIPING AS REQUIRED TO ACCOMODATE RELOCATION OF TUBE STATION. COORDINATE REQUIREMENTS WITH TRANSLOGIC.




## 01 FOUR EAST HVAC DUCTWORK PLAN

SCALE: 1/8" = 1'-0"

SEE M0.00 FOR FIRE/SMOKE DAMPER DESIGNATION

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 7/31/09
09-411495

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HEERY design

Heery International Inc.
820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

project number
0906700

AA 0002293
EB 0005176

# MEDICAL CENTER OF AURORA

# FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howel Construction
550 Lipan St.
Denver, CO 80204

303-899-4787

seal/signature

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|---|---|
| CONSTRUCTION | 07/15/2009 |

| item | date |
|---|---|
| 1 PLAN REVIEW RESPONSE | 07.29.09 |

PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan
sheet title

FOUR EAST HVAC DUCTWORK PLAN

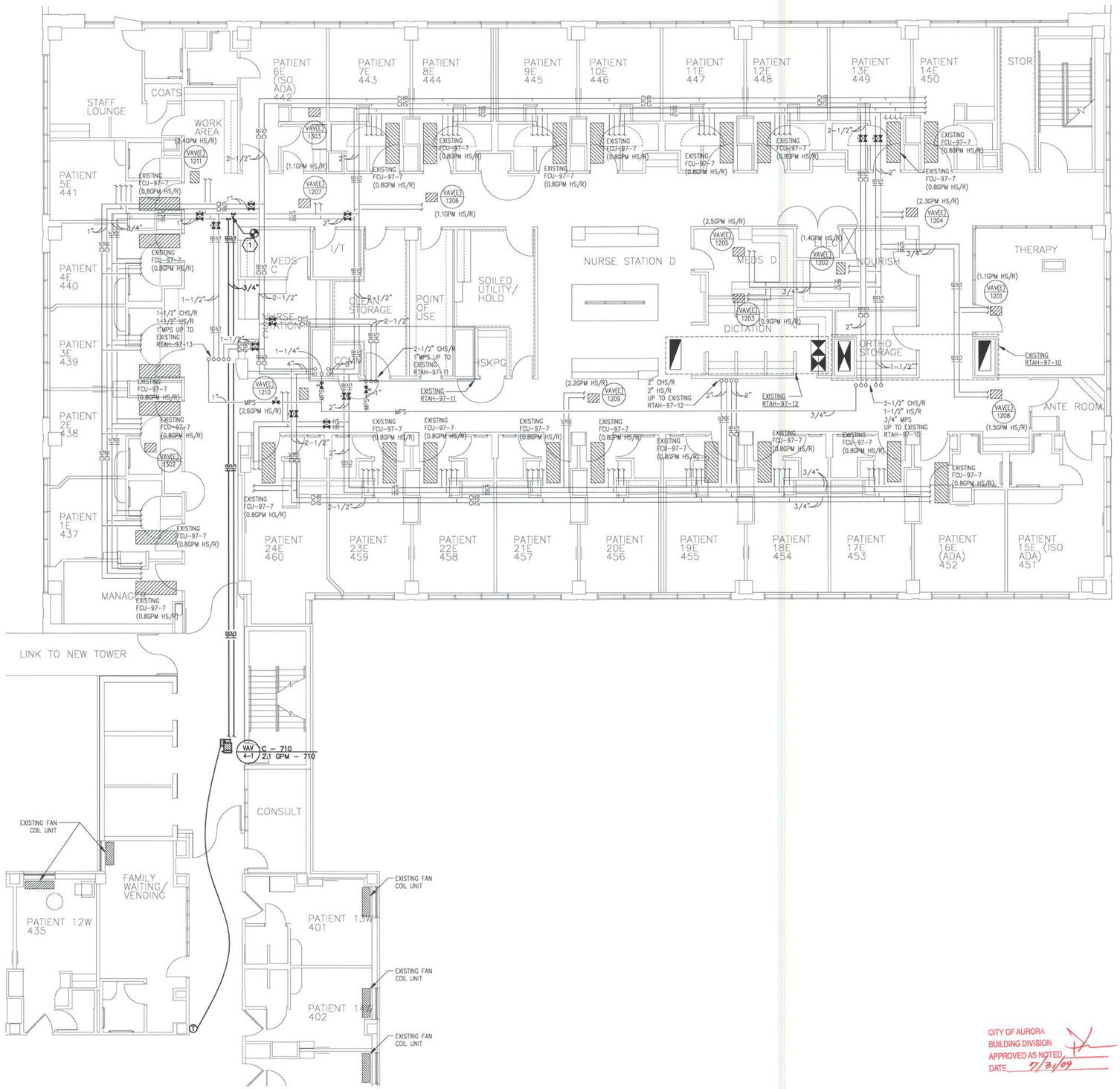
sheet number
M2.02

drawn by JF checked by AB

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## LEGEND NOTES

(1) CONNECT 3/4" HS/R PIPING TO EXISTING 2" HS/R PIPING. COORDINATE EXACT LOCATION OF CONNECTION IN THE FIELD.




## 01 FOURTH FLOOR HVAC PIPING PLAN
SCALE: 1/8" = 1'-0"

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Heery International Inc.
820 16th Street Mall,
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Denver, CO 80202-3219
720.946.0276

project number
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Greenwood Village, CO 80111

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Howel Construction
550 Lipan St.
Denver, CO 80204

303-899-4787

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issued for | date
CONSTRUCTION | 07/15/2009

item | date

PLAN NORTH

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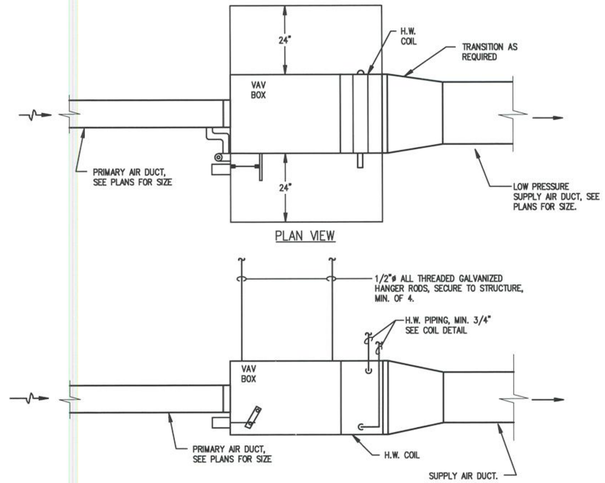
key plan

sheet title
FOURTH FLOOR HVAC PIPING PLAN

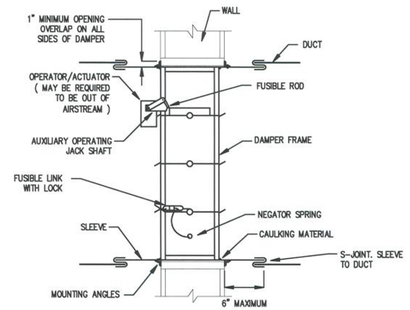
sheet number
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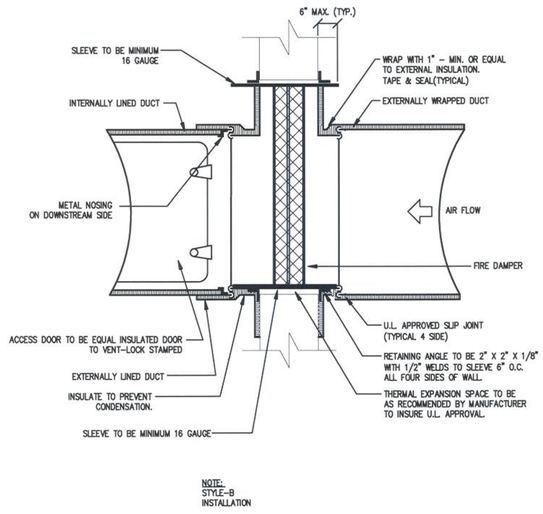



## 01 VAV w/ REHEAT COIL INSTALLATION DETAIL
NO SCALE



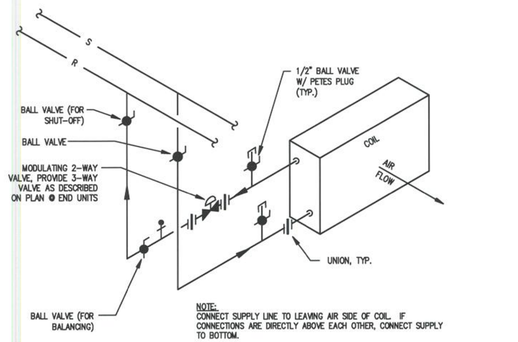

OPERATION:
A. FIRE DAMPER MODE: HIGH TEMPERATURE MELTS FUSIBLE LINK, CLOSING FIRE DAMPER
B. SMOKE DAMPER MODE: SMOKE DETECTOR UPON SENSING HEAT/SMOKE ACTUATES DAMPER MOTOR TO CLOSE DAMPER

## 06 SMOKE/FIRE DAMPER INSTALLATION
NO SCALE



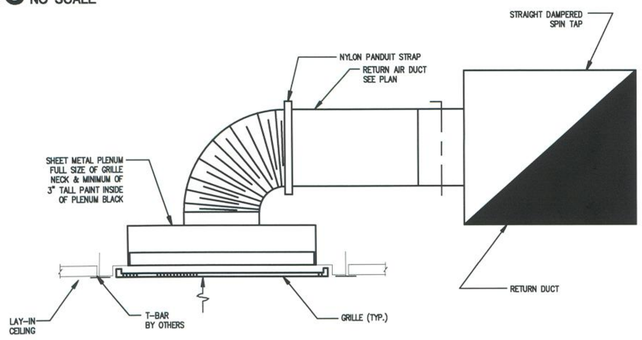

NOTE:
STYLE-B INSTALLATION

## 04 FIRE DAMPER INSTALLATION DETAIL
NO SCALE

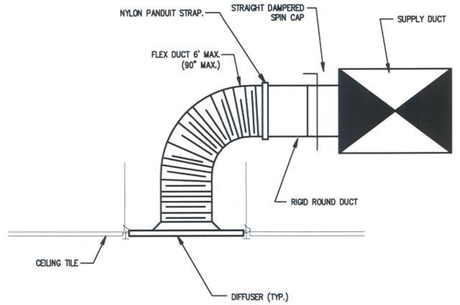



NOTE:
CONNECT SUPPLY LINE TO LEAVING AIR SIDE OF COIL. IF CONNECTIONS ARE DIRECTLY ABOVE EACH OTHER, CONNECT SUPPLY TO BOTTOM.

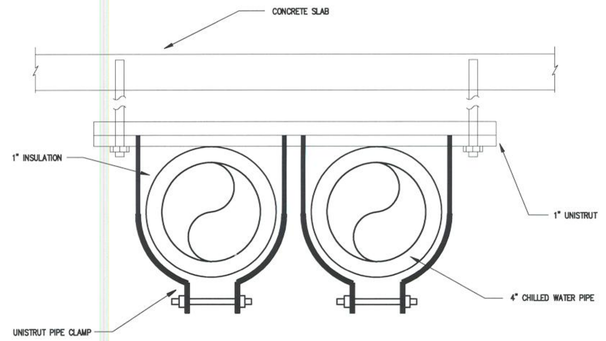
## 02 TERMINAL BOX COIL PIPING DETAIL
NO SCALE




## 07 RETURN AIR GRILLE DUCT CONNECTION
NO SCALE




## 05 DIFFUSER CONNECTION DETAIL
NO SCALE




## 03 PIPING SUSPENDED BY UNISTRUT
NO SCALE

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|---|---|
| | |

PLAN NORTH
SCALE: 1/8" = 1'-0"

key plan
sheet title

HVAC DETAILS

sheet number
M4.01

drawn by JF checked by AB

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# EXISTING AIR HANDLING UNIT SCHEDULE

| DESIGNATION | | EXISTING RTAH-97-13 |
|---|---|---|
| LOCATION | | 4TH FLOOR ROOF |
| SERVICE | | OUTSIDE AIR |
| SUPPLY FAN | CFM (MAX) | REBALANCE TO 4000 |
| | ESP / TSP ("WG) | 2.25 |
| | FAN MOTOR HP (MIN) | 5 |
| | POWER (VOLTS / PH) | 460 / 3 |
| | FAN WHEEL DIAMETER (IN) | – |
| | FAN WHEEL TYPE | FC |
| | DRIVE | – |
| | FAN RPM | – |
| RETURN FAN | CFM (MAX / MIN) | 14,800 |
| | ESP / TSP ("WG) | 2.0 |
| | FAN MOTOR HP (MIN) | 15 |
| | POWER (VOLTS / PH) | 460/3 |
| | FAN WHEEL DIAMETER (IN) | 25 |
| | FAN WHEEL TYPE | FC |
| | DRIVE | VFD |
| | FAN RPM | 678 |
| COOLING COIL DATA | TYPE / SQ FT (MIN) | CHW / 31.1 |
| | CFM | 4000 |
| | MAX FACE VEL (FPM) | 600 |
| | MAX AIR P.D. ("WG) | 0.5 |
| | TOTAL / SENS | 128 / 126 |
| | EAT °F DB/WB | 93 / 64 |
| | LAT °F DB/WB | 54 / 53 |
| | EWT °F/ LWT °F | 45 / 55 |
| | GPM (MAX) | 58.95 |
| | WATER P.D. (FT) | 26 |
| | MIN ROWS / MAX FINS PER FOOT | – |
| HEATING COIL DATA | TYPE / POSITION | HW / PREHEAT |
| | CFM | 4000 |
| | MAX FACE VEL (FPM) | 600 |
| | MAX AIR P.D. ("WG) | 0.25 |
| | SENS (MBH) | 198 |
| | EAT °F DB | -10 |
| | LAT °F DB | 53 |
| | EWT °F/ LWT °F | 180 / 154 |
| | GPM (MAX) | 21 |
| | WATER P.D. (FT) | 5 |
| | MIN ROWS / MAX FINS PER FOOT | – |
| OUTSIDE AIR CFM (MIN) (AT FULL COOLING) | | 4000 |
| BASED ON (MANUF / MODEL NO.) | | TRANE TSC8 |
| REMARKS / NOTES | | 1 |

NOTES:

1. CLEAN FILTERS ON EXISTING ROOFTOP AIR HANDLING UNIT. ISP EQUALS AHU SP LOSS WITH CLEAN FILTERS. TSP EQUALS ESP + ISP. TSP LISTED IS FOR REFERENCE ONLY.

# AIR DEVICE SCHEDULE

| DESIG. | FACE SIZE | OBD | FINISH | THROW | NECK SIZE | MANUFACTURER /MODEL NO. | MAX. NC NOTE B | REMARKS/NOTES |
|---|---|---|---|---|---|---|---|---|
| S1 | 24"X24" | NO | OFF WHITE | 4-WAY | NOTE – 1 | PRICE/MATCH EXISTING | 25 | CEILING S.A. DIFFUSER, LOUVER FACE/G |
| S2 | 12"X12" | NO | OFF WHITE | 4-WAY | NOTE – 1 | PRICE/MATCH EXISTING | 25 | CEILING S.A. DIFFUSER, LOUVER FACE/G |
| S3 | – | NO | – | – | – | – | 25 | EXISTING LINEAR SLOT DIFFUSER |
| S4 | DUCT SIZE + 1 3/4" | YES | OFF WHITE | – | SEE PLANS | PRICE/520 | 25 | SIDEWALL SUPPLY REGISTER/G,2 |
| R1 | 24"X24" | NO | OFF WHITE | – | NOTE – 5 | PRICE/MATCH EXISTING | 30 | CEILING R.A. GRILLE/G,5 |
| R2 | 12"X12" | NO | OFF WHITE | – | NOTE – 5 | PRICE/MATCH EXISTING | 30 | CEILING R.A. GRILLE/G,5 |
| R3 | DUCT SIZE + 1 3/4" | NO | OFF WHITE | | SEE PLANS | PRICE/620 | 30 | SIDEWALL R.A. GRILLE/G,3 |
| E1 | 24"X24" | NO | OFF WHITE | – | NOTE – 5 | PRICE/MATCH EXISTING | 30 | CEILING EXHAUST OUTLET/G,5 |
| E2 | 12"X12" | NO | OFF WHITE | – | NOTE – 5 | PRICE/MATCH EXISTING | 30 | CEILING EXHAUST OUTLET/G,5 |

NOTES:

1. MARK 'S1' – 'S6'

| NECK SIZE (INCHES) | MAXIMUM CFM | DUCT SIZE (INCHES) |
|---|---|---|
| 6" DIA | 100 | 6" DIA |
| 8" DIA | 225 | 8" DIA |
| 10" DIA | 400 | 10" DIA |
| 12" DIA | 600 | 12" DIA |
| 14" DIA | 900 | 14" DIA |
| 15" DIA | 1000 | 15" DIA |

2. TWO SETS OF BLADES, 0.75" SPACING.
3. 45 DEGREE BLADES, 0.5" SPACING.
4. PRICE LFDC NECK SIZE AS INDICATED BELOW, LAMINAR FLOW, ALL ALUMINUM, PERFORATED DAMPER ADJUSTMENT THROUGH FACE. INTERNAL AIR DISTRIBUTION BAFFLES AND HEPA FILTER.

| CFM | NECK SIZE | MIN. DUCT SIZE |
|---|---|---|
| UP TO 200 | 8" Ø | 8" Ø |
| 201 TO 300 | 10" Ø | 10" Ø |
| 301 TO 400 | 12" Ø | 12" Ø |

5. MARK 'R1','R2','R3', &'E1','E2','E3'

| NECK SIZE (INCHES) | MAXIMUM CFM | APPLICATION | |
|---|---|---|---|
| 6" DIA | 100 | WHERE INDICATED | |
| 8" DIA | 225 | WHERE INDICATED | |
| 10" DIA | 400 | WHERE INDICATED | |
| 12" DIA | 500 | WHERE INDICATED | |
| 14" DIA | 650 | WHERE INDICATED | |
| 16" DIA | 800 | WHERE INDICATED | |
| 22/10 | 1000 | WHERE INDICATED | |
| 22/22 | 2000 | WHERE INDICATED | |

6. PROVIDE FACTORY INSULATION BLANKET.

GENERAL NOTES(AIR DEVICES):

A. FRAME TYPE SHALL MATCH CEILING TYPE AND CEILING MODULE DIMENSIONS.
B. NC LEVEL = 45 MAXIMUM IN PUMP, CHILLER, FAN AND GENERATOR ROOMS.
C. INDICATED NECK SIZES SHALL NOT BE REDUCED.
D. PROVIDE OBD WHERE INDICATED ON FLOOR PLANS.
E. DUCT MOUNTED AIR DEVICES SHALL BE FLANGE MOUNTED.
F. NO MOUNTING SCREWS SHALL BE VISIBLE EXCEPT ON EXPOSED DUCTWORK.
G. OFF WHITE POWDER COAT FINISH IN CEILINGS, FIELD PAINTED IN OTHER LOCATIONS TO MATCH ADJACENT SURFACES.
H. AIR DEVICE IN SHOWER ROOMS, TUB ROOMS, WHIRLPOOLS, ETC. (EXCLUDING PATIENT ROOM TOILETS) SHALL BE ALUMINUM.
I. NOT ALL AIR DEVICE LISTED ARE USED, REFER TO PLANS.
J. ALL RETURN AIR GRILLES USED FOR PLENUM RETURN SHALL BE PROVIDED W/ SITE BAFFLE.

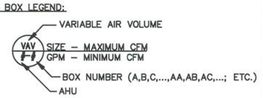
# VAV & CAV BOX W/ HOT WATER COIL SCHEDULE

| | VAV | | | | | | H.W. COIL | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SIZE | VAV VALVE SIZE (IN) | CFM RANGE COOLING MIN.-MAX. | INLET DUCT SIZE (INCHES) | OUTLET PLENUM WIDTH x HEIGHT (INCHES) (NOTE 10) | VALVE MAX. A.P.D. IN. W.G. | MAX. N.C. | EAT. DB °F | MIN. MBH | GPM | EWT °F | LWT °F | MAX. P.D. AIR IN. W.G. AT COOLING CFM | MAX. WATER P.D. (FT.) | MIN. # ROWS (NOTE 13) | ENVIROTECH MODEL NO. | NOTES |
| A | 6" | 0-400 | 8" | 10/12 | 0.25 | 35 | 53 | NOTE 1 | NOTE 1 | 175 | 145 | 0.25 | 10 | 2 | SDR-WC-6 | ALL |
| B | 8" | 0-700 | 10" | 12/12 | 0.25 | 35 | 53 | NOTE 1 | NOTE 1 | 175 | 145 | 0.40 | 10 | 2 | SDR-WC-8 | ALL |
| C | 10" | 0-1000 | 10" | 14/12 | 0.25 | 35 | 53 | NOTE 1 | NOTE 1 | 175 | 145 | 0.40 | 10 | 2 | SDR-WC-10 | ALL |
| D | 12" | 0-1450 | 12" | 16/16 | 0.25 | 35 | 53 | NOTE 1 | NOTE 1 | 175 | 145 | 0.50 | 10 | 2 | SDR-WC-12 | ALL |
| E | 14" | 0-2000 | 16" | 18/16 | 0.25 | 35 | 53 | NOTE 1 | NOTE 1 | 175 | 145 | 0.50 | 10 | 2 | SDR-WC-14 | ALL |
| F | 16" | 0-3000 | 18" | 20/18 | 0.25 | 35 | 53 | NOTE 1 | NOTE 1 | 175 | 145 | 0.60 | 10 | 2 | SDR-WC-16 | ALL |
| | | | | | | | | | | | | | | | | |

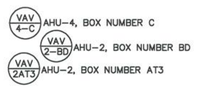
NOTES:

1. REFER TO PLANS FOR H.W. COIL OPERATING GPM; MBH= GPM x 15
2. REFER TO PLANS FOR ACTUAL MAX. COOLING CFM AND MINIMUM CFM.
3. BOX COOLING AND HEATING CFM'S ARE PER PLANS.
   COOLING CFM = BOX MAXIMUM CFM.
   HEATING CFM = MINIMUM COOLING CFM = BOX MINIMUM CFM.
4. UNIT MOUNTED/WIRED FACTORY CONTROL PANEL.
   PROVIDE INTEGRAL 120V/24 V CONTROL TRANSFORMER WITH BOX.
5. PRESSURE INDEPENDENT CONTROLS COMPATIBLE WITH BUILDING CONTROL SYSTEMS.
6. CONSTANT AIR VOLUME (CAV) BOXES SHALL BE IDENTICAL TO VARIABLE AIR VOLUME (VAV) BOXES.
7. FACTORY INTERNAL INSULATION: 1 INCH THICK, 2LB DENSITY, FOIL FACED AND SEALED FROM AIRSTREAM.
8. CFM DELIVERY SHALL BE ACCURATE WITHIN 5% FROM 100% TO 25% FLOW RATE.
9. HW COIL SHALL BE LOCATED AT DISCHARGE SIDE OF BOX.
10. OUTLET PLENUM BY CONTRACTOR.
    PROVIDE PLENUM WHERE INDICATED ON PLANS.
    DIMENSIONS ARE MINIMUM. COORDINATE WITH RUNOUT DUCT SIZES TO AIR DEVICES.
    PROVIDE TRANSITION FROM BOX OUTLET TO THE PLENUM.
11. CONTROLS SHALL BE FURNISHED AND SHIPPED TO VAV BOX FACTORY BY TEMPERATURE CONTROLS CONTRACTOR. CONTROLS SHALL BE INSTALLED AT VAV BOX FACTORY BY VAV BOX MANUFACTURER.
12. NOT USED
13. SHOP DRAWING:
    SUBMIT TABULATION (SPREADSHEET GENERATED) FOR EVERY BOX IN PROJECT SHOWING COMPLIANCE TO REQUIRED CFM'S, GPM'S, ETC., ON PLANS AND IN SCHEDULE. ONE ROW HW COILS MAY BE UTILIZED WHERE MBH ALLOWS IT. HW COILS SHALL BE CONTAINED WITHIN THE BOX AS MANUFACTURED.

VAV BOX LEGEND:




EXAMPLES:




CITY OF AURORA
BUILDING DIVISION
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DATE 12/3/09

09-411495

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Heery International Inc.
820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

project number
0906700

AA 0002293
EB 0005176

MEDICAL CENTER OF AURORA

FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

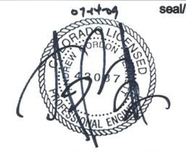
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8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howel Construction
550 Lipan St.
Denver, CO 80204

303-899-4787

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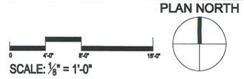



issued for — date

CONSTRUCTION — 07/15/2009

item — date

PLAN NORTH




SCALE: 1/8" = 1'-0"

key plan
sheet title

MECHANICAL SCHEDULES

sheet number
M5.01

drawn by — checked by

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# GENERAL NOTES - DEMOLITION

A. ALL CAPPED SANITARY WASTE, VENTS AND DOMESTIC WATER PIPING THAT ARE NOT BEING USED ARE TO BE REMOVED BACK TO THE MAINS VALVED AND CAPPED.

B. PROVIDE ADDITIONAL VALVES, FITTINGS AND/OR PIPING AS NECESSARY TO PROVIDE UNINTERRUPTED SERVICE TO AREAS OUTSIDE AND INSIDE OF THE AREA WORK IS BEING PERFORMED.

C. ALL WORK SHALL BE PERFORMED IN STRICT COORDINATION WITH HOSPITAL SCHEDULES, OCCUPANCIES AND WORK. CONTRACTOR SHALL COORDINATE WITH HOSPITAL REPRESENTATIVE.

D. ALL NECESSARY SHUTDOWNS OR OUT OF PHASE WORK SHALL BE SCHEDULED WITH THE HOSPITAL REPRESENTATIVE.

E. INFORMATION PROVIDED ON THESE DRAWINGS HAVE BEEN TAKEN FROM DESIGN DRAWING AND FIELD OBSERVATIONS. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO PRICING AND COMMENCEMENT OF WORK.

F. WHERE EXISTING WALLS ARE DEMOLISHED, REMOVE ALL EXISTING PLUMBING FIXTURES AND THEIR ASSOCIATED PIPING BACK TO THE POINT OF ORIGINATION. ALL EXISTING PIPING THAT WAS SHUT DOWN DURING DEMOLITION SHALL BE TURNED ON AND CHECKED FOR LEAKS.

G. PROVIDE FOR ANY AND ALL DEMOLITION WORK NECESSARY TO ACCOMMODATE ALL NEW CONSTRUCTION, INCLUDING ARCHITECTURAL, MECHANICAL, PLUMBING OR ELECTRICAL WORK.

H. IF DEMOLITION IS REQUIRED TO INSTALL AN ITEM, THE CONTRACTOR SHALL RESTORE THE AREA TO PREVIOUS CONDITION, OR REPLACE DAMAGED ITEMS WITH NEW ITEMS TO MATCH EXISTING.

I. A DEVICE, OR PIPING, WITH AN 'X' INDICATES EXISTING TO BE REMOVED INCLUDING ALL ASSOCIATED VALVES AND FIXTURES. PIPING TO BE VALVED AND CAPPED AT POINT OF ORIGIN.

J. CONTRACTOR SHALL REMOVE ALL FIXTURES AND ASSOCIATED PIPING AND EQUIPMENT TO BE REMOVED AND/OR RELOCATED UNLESS NOTED OTHERWISE. PROVIDE AND INSTALL ALL NECESSARY FIXTURES, EQUIPMENT AND ACCESSORIES REQUIRED TO MAINTAIN SERVICE TO ALL "EXISTING TO REMAIN" FIXTURES AND EQUIPMENT THAT MAY BE INTERRUPTED DURING DEMOLITION.

K. WHERE EXISTING MECHANICAL EQUIPMENT IS DEMOLISHED, REMOVE ALL RELATED PLUMBING TO THE EQUIPMENT AND THEIR ASSOCIATED PIPING BACK TO THE POINT OF ORIGINATION.

L. SPACE LOCATIONS FOR MATERIALS, EQUIPMENT AND FIXTURES HAVE BEEN MADE ON THE BASIS OF PRESENT AND KNOWN FUTURE REQUIREMENTS AND THE DIMENSIONS OF ITEMS OF EQUIPMENT OR FIXTURES OF A PARTICULAR MANUFACTURER WHETHER INDICATED OR NOT. THE CONTRACTOR SHALL VERIFY THAT ALL MATERIALS, EQUIPMENT AND FIXTURES PROPOSED FOR USE ON THIS PROJECT ARE WITHIN THE CONSTRAINTS OF THE ALLOCATED SPACE.

L. REMOVE EXISTING PIPING WHERE NOTED AND REQUIRED, TO BEYOND FINISHED SURFACES AND CAP OR AS INDICATED ON PLANS. VERIFY LOCATION OF EXISTING PLUMBING AT SITE.

M. ITEMS REMOVED AND NOT REINSTALLED OR RETURNED TO OWNER SHALL BE DISPOSED OF LEGALLY (COORDINATE WITH OWNER FOR THE DISPOSAL).

N. ALL EXISTING PLUMBING RISER LOCATED IN THE REMOVED WALLS/CHASES MUST BE RELOCATED TO AN APPROVED LOCATION BY THE ARCHITECT THEN RECONNECTED ON FLOOR BELOW.

P. ANY FLOOR DRAINS OR FLOOR SINKS NOT REQUIRED SHALL BE REMOVED COMPLETELY.

# GENERAL NOTES - ALL PLBG. SHEETS

A. ALL MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING CODES. REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS FOR MECHANICAL AND PLUMBING CONSTRUCTION.

B. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, PAY ALL FEES, AND COMPLY WITH ALL FEDERAL, STATE, AND MUNICIPAL LAWS, CODES, AND ORDINANCES RELATING TO BUILDING AND PUBLIC SAFETY.

C. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED FOR A COMPLETE WORKING AND COORDINATED SYSTEM.

D. COORDINATE THE EXACT LOCATION OF PLUMBING PIPING AND EQUIPMENT WITH THE LOCATIONS OF LIGHT FIXTURES, MECHANICAL SYSTEMS, CONDUIT, AND OTHER CONSTRUCTION, TO ALLOW FOR PROPER ACCESS TO SERVICE EQUIPMENT.

E. IT IS THE REQUIREMENT OF THESE DOCUMENTS TO ALLOW ALL CEILINGS TO BE CONSTRUCTION AT HEIGHTS AS SHOWN ON THE ARCHITECTURAL DRAWINGS. COORDINATE THE LOCATION OF PIPING AND PROVIDE OFFSETS IN PIPING AS REQUIRED TO MEET THIS REQUIREMENT.

F. ALL PIPING SHALL BE INDEPENDENTLY SUPPORTED, AND EACH SUPPORT SHALL BE INDEPENDENT OF PARTITION AND CEILING SYSTEM SUPPORTS. WHERE INDEPENDENT SUPPORT IS NOT POSSIBLE AN ENGINEERED SUPPORT SYSTEM SHALL BE UTILIZED.

G. ALL WORK SHALL BE SCHEDULED AND PERFORMED IN STRICT COORDINATION WITH ARCHITECTURAL PLANS AND WITH HOSPITAL SCHEDULES, OCCUPANCIES, AND WORK.

H. PROTECT EQUIPMENT AND FIXTURES FROM DAMAGE DURING HANDLING AND INSTALLATION UNTIL COMPLETION OF CONSTRUCTION.

I. REMOVE ALL EXCESS MATERIAL AND DEBRIS AND CLEAN ALL EQUIPMENT UPON COMPLETION OF WORK. TOUCH UP WITH PAINT WHERE REQUIRED.

J. CONTRACTOR SHALL VISIT JOB SITE AND VERIFY SIZE AND LOCATION OF ALL EXISTING ITEMS AND CONDITIONS.

K. ALL CONNECTION BETWEEN PIPES OF DISSIMILAR MATERIALS SHALL BE MADE WITH DIELECTRIC UNIONS.

L. COORDINATE ALL NEW WORK WITH ALL TRADES. WORK SHOWN ON THESE DRAWINGS ARE INTENDED TO PROVIDE THE OVER- ALL ENGINEERING DESIGN CONCEPT AND DOES NOT PROVIDE FOR RELOCATIONS, OFFSETS, ETC., THAT ARE REQUIRED BY THE COORDINATION OF TRADES SHALL BE PROVIDED BY THE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

M. THE EXISTING FACILITIES SHALL BE PROTECTED DURING THE CONSTRUCTION ACTIVITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO STORE, RELOCATE, AND REUSE ITEMS WHICH ARE SUBJECT TO DAMAGE.

N. COORDINATE ALL WALL MOUNTED DEVICE LOCATIONS WITH ARCHITECTURAL INTERIOR ELEVATIONS.

P. DEMOLITION OF THE AREA SHALL OCCUR AS PART OF THE WORK FOR THAT AREA. REMOVE ONLY THE PLUMBING THAT SERVES THE AREA OF DEMOLITION.

Q. PROVIDE ADDITIONAL VALVES, TAPS, TEMPORARY PIPING, ETC. AS NECESSARY TO PROVIDE UNINTERRUPTED SERVICE TO AREAS OUTSIDE OF THE PROJECT IN WHICH WORK IS BEING PERFORMED.

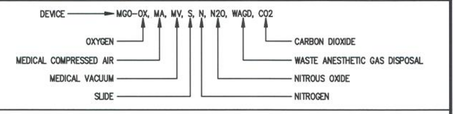
R. ALL NECESSARY SHUTDOWNS IN OR OUT OF THE WORK AREA SHALL BE COORDINATED WITH THE HOSPITAL REPRESENTATIVE.

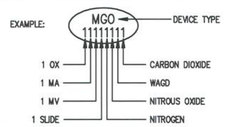
S. LOCATE ISOLATION VALVES FOR EQUIPMENT AND FIXTURES AS CLOSE TO THE MAIN AS POSSIBLE. PROVIDE CEILING OR WALL ACCESS PANELS AS NEEDED.

T. ALL PLUMBING EQUIPMENT OR VALVES REQUIRING ACCESS THAT IS LOCATED ABOVE GYP. BOARD OR OTHERWISE INACCESSIBLE CEILING SHALL BE PROVIDED WITH A CEILING ACCESS PANEL SUPPLIED AND INSTALLED BY THE GENERAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF THESE ACCESS PANELS WITH THE GENERAL CONTRACTOR.

# MEDICAL GAS LEGEND

MAI = MEDICAL AIR INTAKE
MA = MASTER ALARM PANEL
MGB = MEDICAL GAS CEILING BOOM
MGC = MEDICAL GAS CEILING COLUMN
MGD = MEDICAL GAS DROP
MGH = MEDICAL GAS HEADWALL
MGO = MEDICAL GAS WALL OUTLET
MGP = MEDICAL GAS PEDESTAL
MVE = MEDICAL VACUUM EXHAUST
NCP = NITROGEN CONTROL PANEL
ME = MEDICAL EQUIPMENT COMPRESSED AIR (FOR BRAKES ON MEDICAL BOOMS)
MA = MEDICAL COMPRESSED AIR
MV = MEDICAL VACUUM
OX = OXYGEN
S = SLIDE
N = NITROGEN
N2O = NITROUS OXIDE
CO2 = CARBON DIOXIDE GAS
WAGD = WASTE ANESTHETIC GAS DISPOSAL
AAP = AREA ALARM PANEL
ZVB = ZONE VALVE BOX




MEDICAL GAS NOTES:

A. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF MEDICAL GAS OUTLETS, ZONE VALVE BOXES AND ALARM PANELS.

B. NOT ALL GASES ARE TO BE USED AT EACH LOCATION. THE GAS ORDER SHOWN IN THE EXAMPLE IS TYPICAL FOR ALL OUTLETS.

C. COORDINATE MEDICAL GAS PIPE ROUTINGS WITH ALL OTHER TRADES BEFORE INSTALLATION.

| | |
|---|---|
| ZONE VALVE BOX: | 5'-6" (66 INCHES) TO THE TOP OF THE ZONE VALVE BOX |
| AREA ALARM: | 5'-6" (66 INCHES) TO THE TOP OF THE ALARM |

* ALL DIMENSION HEIGHT SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATION.

# MEDICAL GAS SYMBOLS

| SYMBOL | DESCRIPTION |
|---|---|
| OX | MEDICAL OXYGEN PIPING |
| MA | MEDICAL AIR PIPING |
| MV | MEDICAL VACUUM PIPING |
| | MEDICAL GAS PIPING DROPS IN WALL FULL SIZE |
| MGO | MEDICAL GAS OUTLETS |
| | MASTER ALARM SENSOR |
| AA | AREA ALARM |
| | AREA ALARM SENSOR |
| ZVB | ZONE VALVE BOX |

# GENERAL NOTES - (CONT.)

U. THE CONTRACTOR SHALL PROVIDE DETAILED AND DIMENSIONED PIPING FABRICATION DRAWINGS FOR APPROVAL BY THE ARCHITECT/ENGINEER. ONE BLUE-LINE SET OF THE APPROVED DRAWINGS SHALL BE KEPT ON-SITE AT ALL TIMES AND ANY CHANGES REQUIRED IN THE FIELD SHALL BE MARKED ON THESE DRAWINGS. AT THE END OF THE PROJECT, ALL CHANGES SHALL BE TRANSFERRED TO A REPRODUCIBLE DRAWING TO BE GIVEN TO THE OWNER FOR "AS-BUILT" DRAWINGS. REPRODUCTIONS OF THIS DRAWING WILL NOT BE CONSIDERED AS PIPING FABRICATION DRAWINGS.

V. ALL PLUMBING PIPING SHALL BE IDENTIFIED IN ACCORDANCE WITH SECTION 22/23 OF THE SPECIFICATIONS. ALL MEDICAL GAS PIPING SHALL BE LABELED PER NFPA-99.

W. ALL MAJOR AND SECTIONAL/BALANCING VALVES SHALL BE TAGGED AND NOTED ON THE "AS-BUILT" DRAWINGS.

X. SLOPE AND ARRANGE WATER PIPING SYSTEMS TO ESTABLISH HIGH POINTS FOR AIR ELIMINATION AND LOW POINTS TO PERMIT PROPER DRAINING OF EACH LINE.

Y. COORDINATE ALL PIPING FLOOR PENETRATIONS WITH STRUCTURAL.

Z. CONTRACTOR SHALLL BE RESPONSIBLE FOR REPAIRING ALL CEILING DAMAGE THAT OCCURS DURING DEMOLITION AND NEW CONSTRUCTION.

# FIRE PROTECTION NOTES

1. SPRINKLER CONTRACTOR SHALL RELOCATE EXISTING SPRINKLER SERVICE AS REQUIRED. EXTEND EXISTING SPRINKLER SYSTEM FOR COVERAGE IN NEW AREAS. PROVIDE QUICK RESPONSE SPRINKLER HEADS AND LOCATE IN CENTER OF TILE. EXCEPT IN MECHANICAL ROOM, ALL NEW SPRINKLERS SHALL BE CONCEALED TYPE. SPRINKLER CONTRACTOR SHALL LOCATE NEW SPRINKLER PIPING AND PROVIDE NEW QUICK RESPONSE SPRINKLER HEADS AS REQUIRED PER N.F.P.A. 13 TO PROVIDE PROPER COVERAGE.
2. WHEN FIRE PROTECTION VALVES ARE CLOSED FOR SYSTEM MODIFICATION, THE FM GLOBAL RED TAG PERMIT KIT SHOULD BE USED TO MONITOR THESE VALVE CLOSURES.
3. FIRE PROTECTION CONTRACT TO BE PURCHASED DIRECTLY BY OWNER.

# PLUMBING SYMBOLS

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATICALLY AND MAY NOT BE TO SCALE.

| SYMBOL | DESCRIPTION |
|---|---|
| | DOMESTIC COLD WATER |
| | DOMESTIC HOT WATER (TEMP. AS NOTED) |
| | DOMESTIC HOT WATER RETURN (TEMP. AS NOTED) |
| HP | HIGH PRESSURE COLD WATER |
| | COLD OR HOT REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER (RPZ) |
| | EXISTING PIPING TO BE REMOVED |
| | PIPING TO BE ELECTRICALLY HEAT TRACED |
| SS | SANITARY SEWER PIPING (SOIL OR WASTE) |
| GW | GREASY WASTE SEWER PIPING |
| | SANITARY VENT PIPING |
| SSD | SUB-SOIL DRAIN PIPING, FOOTING DRAIN PIPING |
| AW | ACID WASTE PIPING |
| AV | ACID VENT PIPING |
| IW | INDIRECT WASTE |
| SED | SEWAGE EJECTOR DISCHARGE PIPING (PUMPED SANITARY) |
| CD | CONDENSATE DRAIN PIPING |
| D | DRAIN PIPING |
| | CONNECT NEW TO EXISTING |
| SD | STORM DRAIN PIPING |
| OD | STORM OVERFLOW DRAIN PIPING |
| CA | COMPRESSED AIR PIPING |
| SPD | SUMP PUMP DISCHARGE PIPING (PUMPED STORM WATER) |
| F | FIRE PROTECTION (STANDPIPE, SPRINKLER, SERVICE) |
| G | NATURAL GAS PIPING |
| SP | SPRINKLER PIPING (SPRK.) |
| DSP | DRY SPRINKLER PIPING |
| PASP | PRE-ACTION SPRINKLER PIPING |
| | GATE VALVE |
| | BUTTERFLY VALVE |
| | BALL VALVE |
| | GLOBE VALVE |
| | TEMPERATURE AND PRESSURE RELIEF VALVE |
| | GAS COCK / PLUG VALVE |
| | SOLENOID VALVE |
| | PRESSURE REGULATION VALVE (PRV) |
| AQ | AQUASTAT |
| | CHECK VALVE |
| | CHECK VALVE WITH AUTOMATIC BALL DRIP |
| | VALVE IN VERTICAL |
| R | GAS PRESSURE REGULATOR VALVE |
| | BALANCING VALVE |
| | STRAINER WITH BLOW-OFF VALVE |
| | STRAINER |
| SA-A | SHOCK ARRESTOR SA-(A) |
| V | VACCUUM BREAKER |
| HD | HUB DRAIN |
| FD | FLOOR DRAIN |
| FS | FLOOR SINK |
| | 2-WAY CLEANOUT (GRADE) (GCO) |
| | PRESSURE GAUGE WITH GAUGE COCK |
| | THERMOMETER WITH SHUT-OFF COCK |
| | HOSE BIBB (HB) OR WALL HYDRANT (WH) |
| | YARD HYDRANT |
| | SLEEVE THRU WALL |
| | EXPANSION LOOP |
| FCO GCO | FLOOR CLEANOUT OR GRADE CLEANOUT |
| RD | ROOF DRAIN |
| OD | OVERFLOW ROOF DRAIN |

| SYMBOL | DESCRIPTION |
|---|---|
| | DOWNSPOUT NOZZLE (18"A.F.F.) |
| WCO | WALL CLEANOUT |
| CO CO | CLEANOUT PLUG |
| | OS & Y VALVE SUPERVISED (HORIZ. POSITION/VERT. POSITION) |
| FCA | SPRINKLER SYSTEM FLOOR CONTROL VALVE ASSEMBLY (FCVA) |
| | DOUBLE CHECK VALVE ASSEMBLY (DCVA) WITH OS & Y VALVES SUPERVISED |
| FS | FLOW SWITCH |
| | FIRE HOSE VALVE |
| | SIAMESE FIRE DEPARTMENT CONNECTION |
| | DIRECTION OF SLOPE |
| | DIRECTION OF FLOW |
| | CAP OUTLET OR PLUGGED OUTLET |
| | UNION |
| | CAP SANITARY SEWER OR STORM PIPING |
| | |
| | |

# EXISTING PLUMBING SYMBOLS

| SYMBOL | DESCRIPTION |
|---|---|
| | EXISTING DOMESTIC COLD WATER |
| | EXISTING DOMESTIC HOT WATER (TEMP. AS NOTED) |
| | EXISTING DOMESTIC HOT WATER RETURN (TEMP. AS NOTED) |
| EX SS | EXISTING SANITARY SEWER PIPING (SOIL OR WASTE) |
| | EXISTING SANITARY VENT PIPING |
| EX AW | EXISTING ACID WASTE PIPING |
| EX AV | EXISTING ACID VENT PIPING |
| EX SD | EXISTING STORM DRAIN PIPING |
| EX OD | EXISTING STORM OVERFLOW DRAIN PIPING |
| | EXISTING GATE VALVE |
| | EXISTING BALL VALVE |
| | EXISTING GAS COCK / PLUG VALVE |
| | EXISTING CHECK VALVE |
| HD | EXISTING HUB DRAIN |
| FD | EXISTING FLOOR DRAIN |
| FS | EXISTING FLOOR SINK |
| RD | EXISTING ROOF DRAIN |
| OD | EXISTING OVERFLOW ROOF DRAIN |
| | EXISTING HOSE BIBB (HB) OR WALL HYDRANT (WH) |
| FCO GCO | EXISTING FLOOR CLEANOUT OR GRADE CLEANOUT |
| CO CO | EXISTING CLEANOUT PLUG |
| | EXISTING CAP OUTLET OR PLUGGED OUTLET |
| | EXISTING UNION |
| | EXISTING DIRECTION OF FLOW |
| | EXISTING TO NEW TRANSITION |
| | EXISTING CAP SANITARY SEWER OR STORM PIPING |
| | |

## PLUMBING ABBREVIATIONS

| | | | |
|---|---|---|---|
| A/C | ABOVE CEILING | HD | HUB DRAIN |
| AFF | ABOVE FINISH FLOOR | IE | INVERT ELEVATION |
| AFG | ABOVE FINISH GRADE | IA | INSTRUMENT AIR |
| AP | ACCESS PANEL OR DOOR | MH | MANHOLE |
| AD | AREA DRAIN | OD | OVERFLOW DRAIN |
| BFF | BELOW FINISH FLOOR | PD | PLANTER DRAIN |
| B/G | BELOW GRADE | PRV | PRESSURE REDUCING VALVE |
| CA | COMPRESSED AIR | RD | ROOF DRAIN |
| CM | CONSTRUCTION MANAGER | VTR | VENT THROUGH ROOF |
| DS | DOWNSPOUT | WH | WALL HYDRANT |
| FD | FLOOR DRAIN | YCO | YARD CLEANOUT |
| FS | FLOOR SINK | YH | YARD HYDRANT |
| GC | GENERAL CONTRACTOR | | |
| GCO | GRADE CLEANOUT | | |
| HB | HOSE BIBB | | |

MECHANICAL/ELECTRICAL SYSTEM COORDINATION SCHEDULE

| SYSTEM | FURNISHED BY | INSTALLED BY | POWER WIRING BY | CONTROL OR SUPERVISION WIRING BY |
|---|---|---|---|---|
| LIFE SAFETY SYSTEM | --- | --- | --- | --- |
| SMOKE DAMPER/ACTUATOR | DIV 15 | DIV 15 | DIV 16 | DIV 16 |
| FIRE/SMOKE DAMPER/ ACTUATOR | DIV 15 | DIV 15 | DIV 16 | DIV 16 |
| DUCT SMOKE DETECTOR | DIV 16 | DIV 15 | ---- | DIV 16 |
| DISCONNECT SWITCHES (NON-INTEGRAL TO EQUIPMENT) | DIV 16 | DIV 16 | DIV 16 | --- |

THIS TABLE IS PROVIDED AS A GUIDE TO THE DOCUMENT PREPARATION AND IN NO WAY INDICATES CONTRACTOR MEANS AND METHODS.

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 7/31/09

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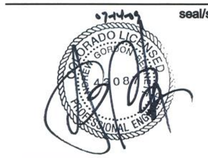
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PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan
sheet title

PLUMBING SYMBOLS & LEGENDS

sheet number
P0.00

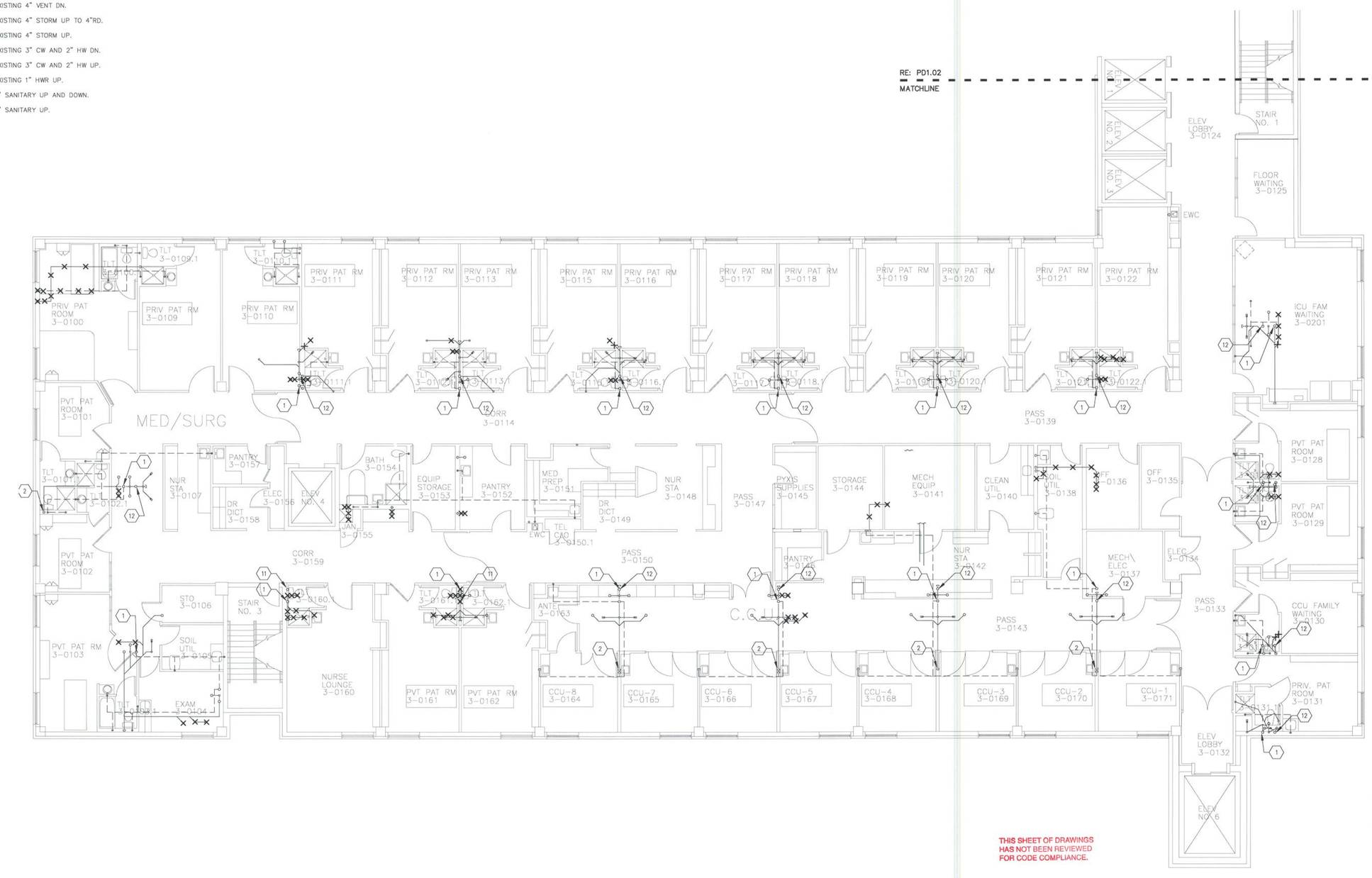
drawn by STM checked by AB

## GENERAL NOTES

A. DEMOLISH ALL PIPING MARKED WITH "X". ALL OTHER EXISTING PIPING TO REMAIN UNLESS NOTED OTHERWISE. FOR CONTINUATION TO NEW PLUMBING SEE P1.01–P1.02.

## LEGEND EXISTING NOTES

1. 4"VENT STACK UP.
2. 4" SANITARY DN.
3. EXISTING 6" STORM DN.
4. EXISTING 6" STORM UP.
5. EXISTING 4" VENT DN.
6. EXISTING 4" STORM UP TO 4"RD.
7. EXISTING 4" STORM UP.
8. EXISTING 3" CW AND 2" HW DN.
9. EXISTING 3" CW AND 2" HW UP.
10. EXISTING 1" HWR UP.
11. 4" SANITARY UP AND DOWN.
12. 4" SANITARY UP.




THIS SHEET OF DRAWINGS HAS NOT BEEN REVIEWED FOR CODE COMPLIANCE.

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Heery International Inc.
820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276


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# MEDICAL CENTER OF AURORA

## FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

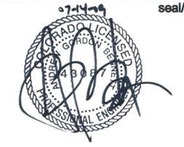
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PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan

sheet title

## THREE WEST PLUMBING PLAN DEMOLITION

sheet number
**PD1.01**

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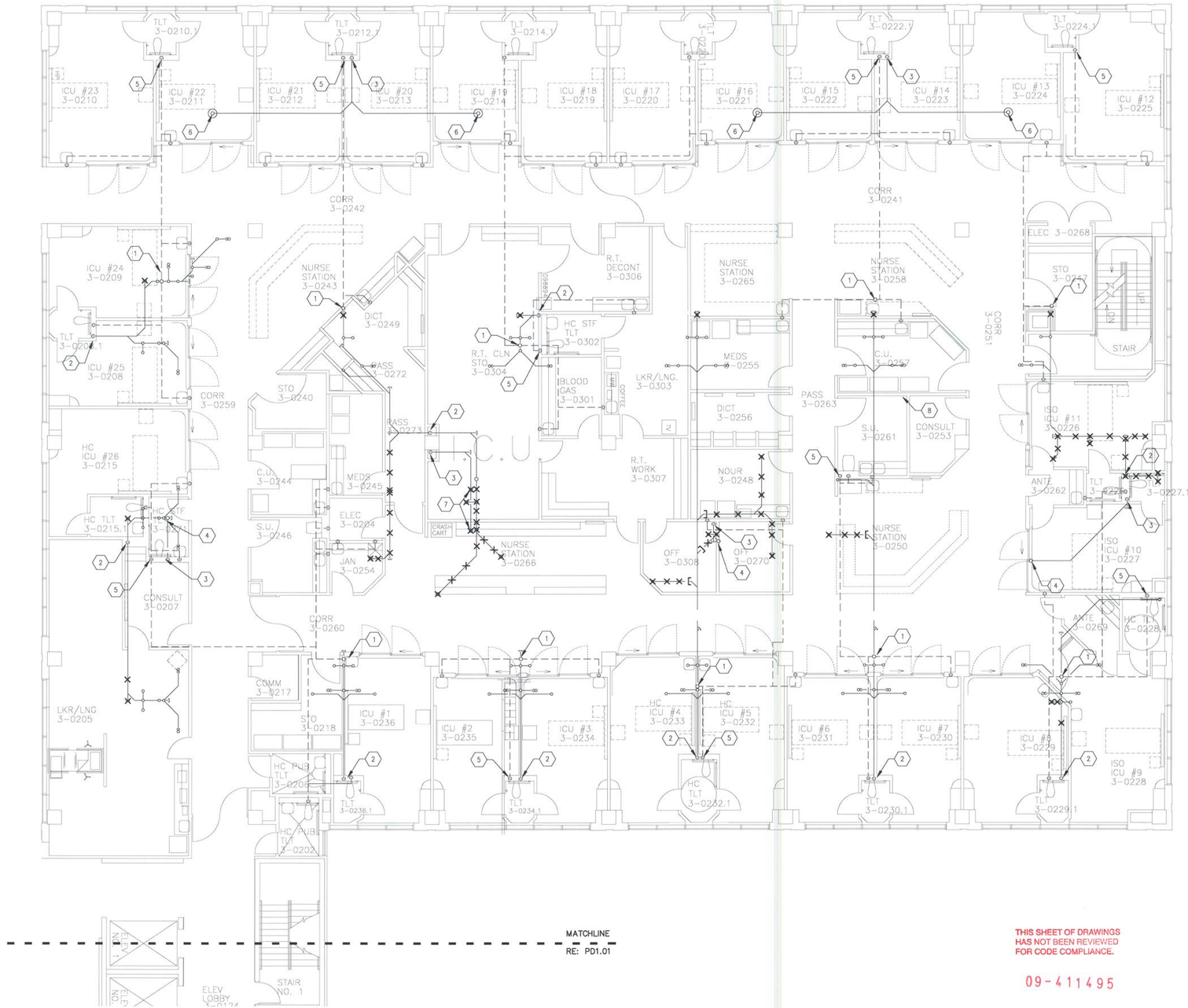
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## GENERAL NOTES

A. DEMOLISH ALL PIPING MARKED WITH "X". ALL OTHER EXISTING PIPING TO REMAIN UNLESS NOTED OTHERWISE. FOR CONTINUATION TO NEW PLUMBING SEE P1.01–P1.02.

## LEGEND EXISTING NOTES

1. 4"VENT STACK UP.
2. 4" SANITARY DN.
3. EXISTING 6" STORM DN.
4. EXISTING 6" STORM UP.
5. EXISTING 4" VENT DN.
6. EXISTING 4" STORM UP TO 4"RD.
7. EXISTING 4" STORM UP.
8. EXISTING 3" CW AND 2" HW DN.
9. EXISTING 3" CW AND 2" HW UP.
10. EXISTING 1" HWR UP.
11. 4" SANITARY UP AND DOWN.
12. 4" SANITARY UP.




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820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

project number
0906700

AA 0002293
EB 0005176

# MEDICAL CENTER OF AURORA

# FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

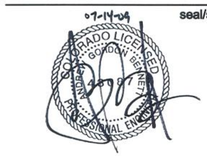
CCRD Partners
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303-694-4755

Howel Construction
550 Lipan St.
Denver, CO 80204

303-899-4787

seal/signature




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| CONSTRUCTION | 07/15/2009 |

| item | date |
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PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan

sheet title

## THREE EAST PLUMBING PLAN DEMOLITION

sheet number
**PD1.02**

drawn by STM checked by MM

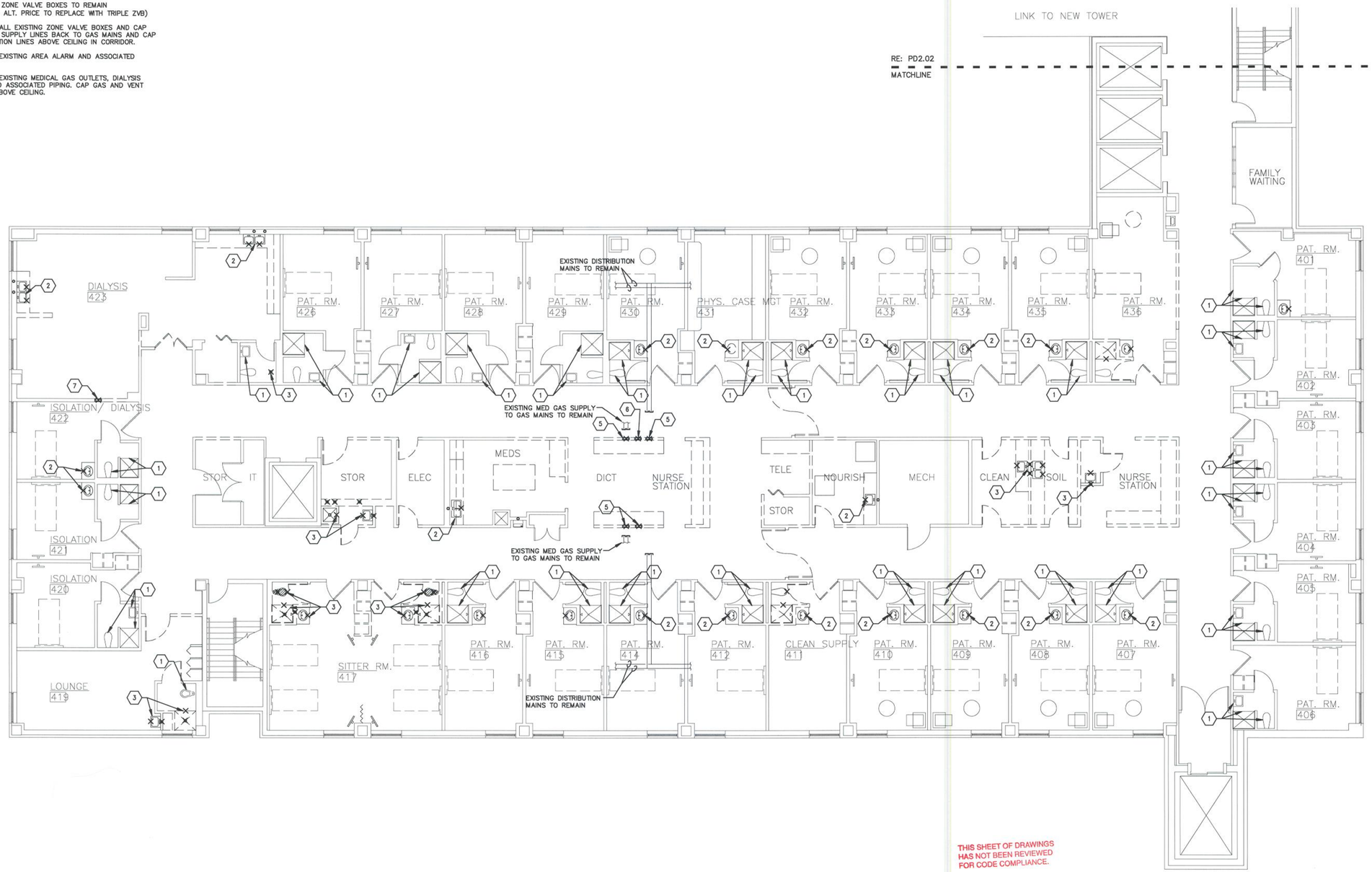
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## GENERAL NOTES

A. DEMOLISH ALL PIPING MARKED "X". ALL OTHER EXISTING PIPING TO REMAIN UNLESS NOTED OTHERWISE.

## LEGEND NOTES

1. EXISTING FIXTURES TO REMAIN.
2. REMOVE EXISTING FIXTURE AND ASSOCIATED PIPING.
3. REMOVE EXISTING FIXTURE AND ASSOCIATED PIPING. FILL PENETRATIONS WITH CONCRETE FLUSH WITH FINISH FLOOR.
4. EXISTING ZONE VALVE BOXES TO REMAIN (PROVIDE ALT. PRICE TO REPLACE WITH TRIPLE ZVB)
5. REMOVE ALL EXISTING ZONE VALVE BOXES AND CAP EXISTING SUPPLY LINES BACK TO GAS MAINS AND CAP DISTRIBUTION LINES ABOVE CEILING IN CORRIDOR.
6. REMOVE EXISTING AREA ALARM AND ASSOCIATED PIPING.
7. REMOVE EXISTING MEDICAL GAS OUTLETS, DIALYSIS BOX, AND ASSOCIATED PIPING. CAP GAS AND VENT PIPING ABOVE CEILING.




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project number
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# MEDICAL CENTER OF AURORA

## FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

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PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan
sheet title

## FOUR WEST PLUMBING PLAN DEMOLITION

sheet number
**PD2.01**

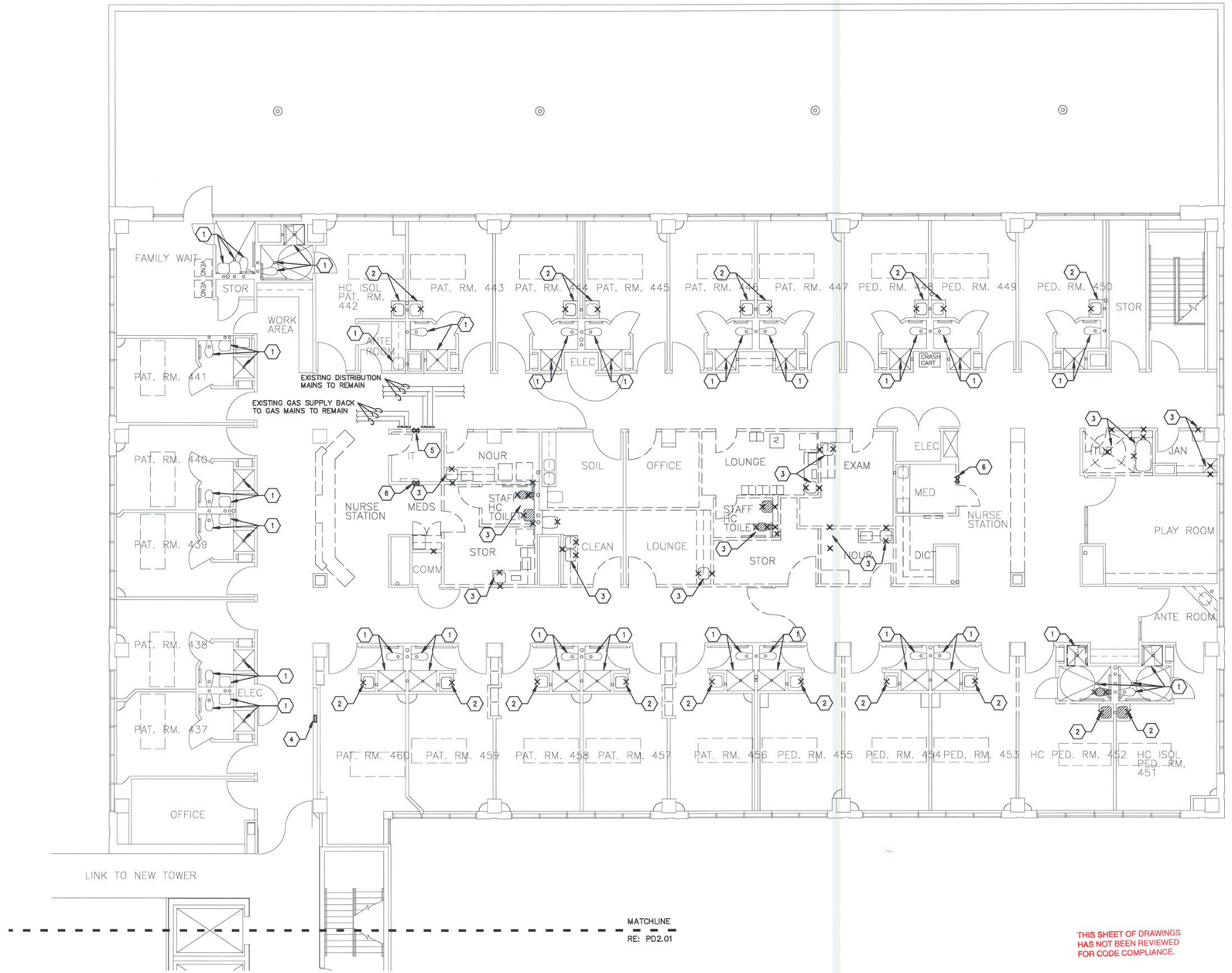
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## GENERAL NOTES

A. DEMOLISH ALL PIPING MARKED "X". ALL OTHER EXISTING PIPING TO REMAIN UNLESS NOTED OTHERWISE.

## LEGEND NOTES

1. EXISTING FIXTURES TO REMAIN.
2. REMOVE EXISTING FIXTURE AND ASSOCIATED PIPING.
3. REMOVE EXISTING FIXTURE AND ASSOCIATED PIPING. FILL PENETRATIONS WITH CONCRETE FLUSH WITH FINISH FLOOR.
4. EXISTING ZONE VALVE BOXES TO REMAIN (PROVIDE ALT. PRICE TO REPLACE WITH TRIPLE ZVB)
5. REMOVE ALL EXISTING ZONE VALVE BOXES AND CAP EXISTING SUPPLY LINES BACK TO GAS MAINS AND CAP DISTRIBUTION LINES ABOVE CEILING IN CORRIDOR.
6. REMOVE EXISTING AREA ALARM AND ASSOCIATED PIPING.




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720.946.0276

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# MEDICAL CENTER OF AURORA

## FOURTH FLOOR RENOVATION

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AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

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Denver, CO 80204

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CONSTRUCTION — 07/15/2009

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PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan

sheet title

## FOUR EAST PLUMBING PLAN DEMOLITION

sheet number
**PD2.02**

drawn by STM checked by MM

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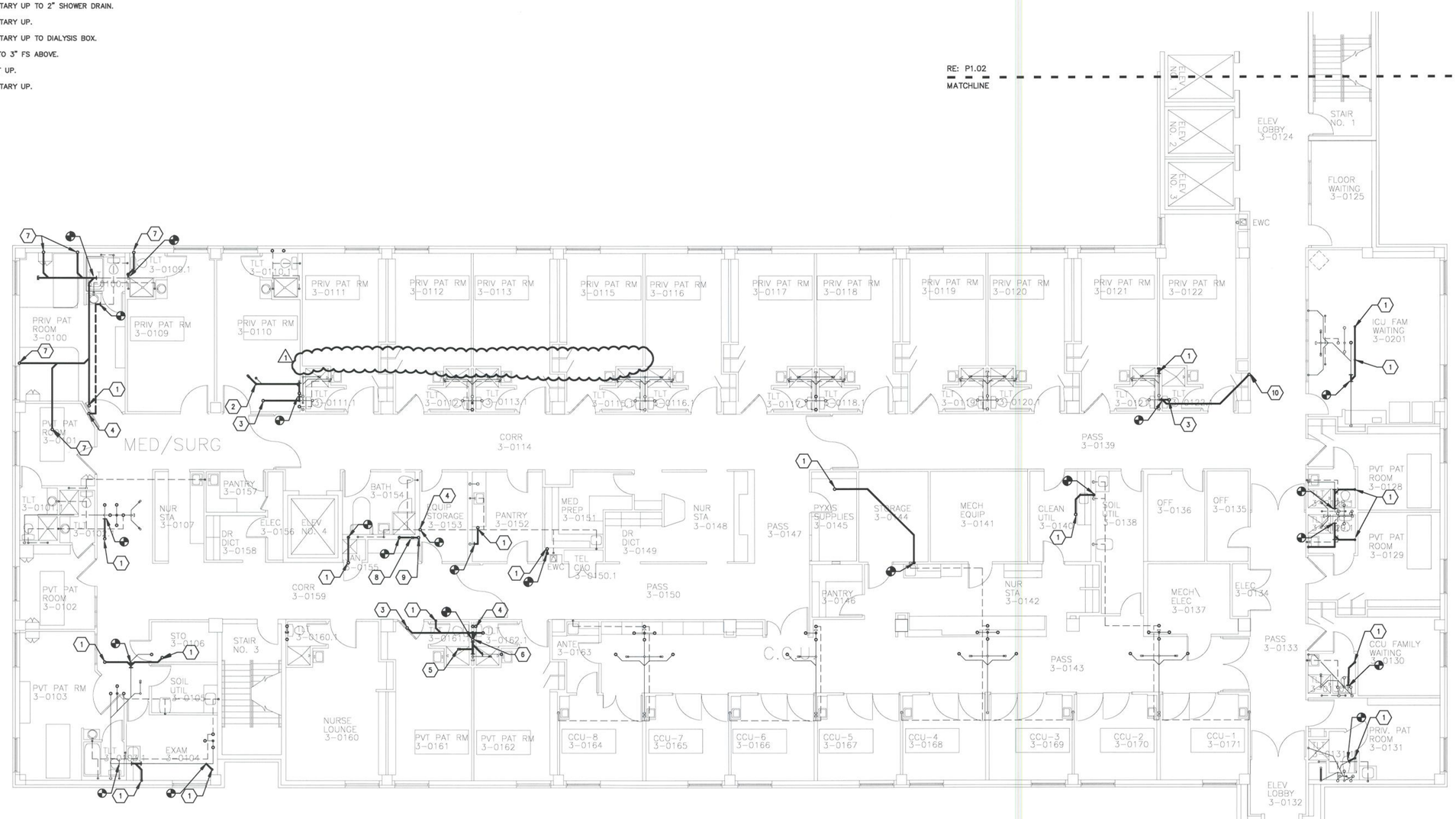
## GENERAL NOTES

A. ROUTE ALL PLUMBING PIPING AS TIGHT AS POSSIBLE TO BOTTOM OF FLOOR STRUCTURE AND FLOOR JOISTS.

B. REPAIR AND REPLACE CEILNG AS NECESSARY.

## LEGEND NOTES

1. 2" SANITARY UP.
2. 3" SANITARY UP.
3. 4" UP TO WATER CLOSET.
4. 4" VENT UP.
5. 2" SANITARY UP TO 2" SHOWER DRAIN.
6. 4" SANITARY UP.
7. 2" SANITARY UP TO DIALYSIS BOX.
8. 3" UP TO 3" FS ABOVE.
9. 2" VENT UP.
10. 2" SANITARY UP.




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# MEDICAL CENTER OF AURORA

# FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

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Denver, CO 80204

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| 1 ADDENDUM #4 | 08.05.09 |

PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan
sheet title

## THREE WEST PLUMBING PLAN

sheet number
**P1.01**

drawn by STM checked by MM

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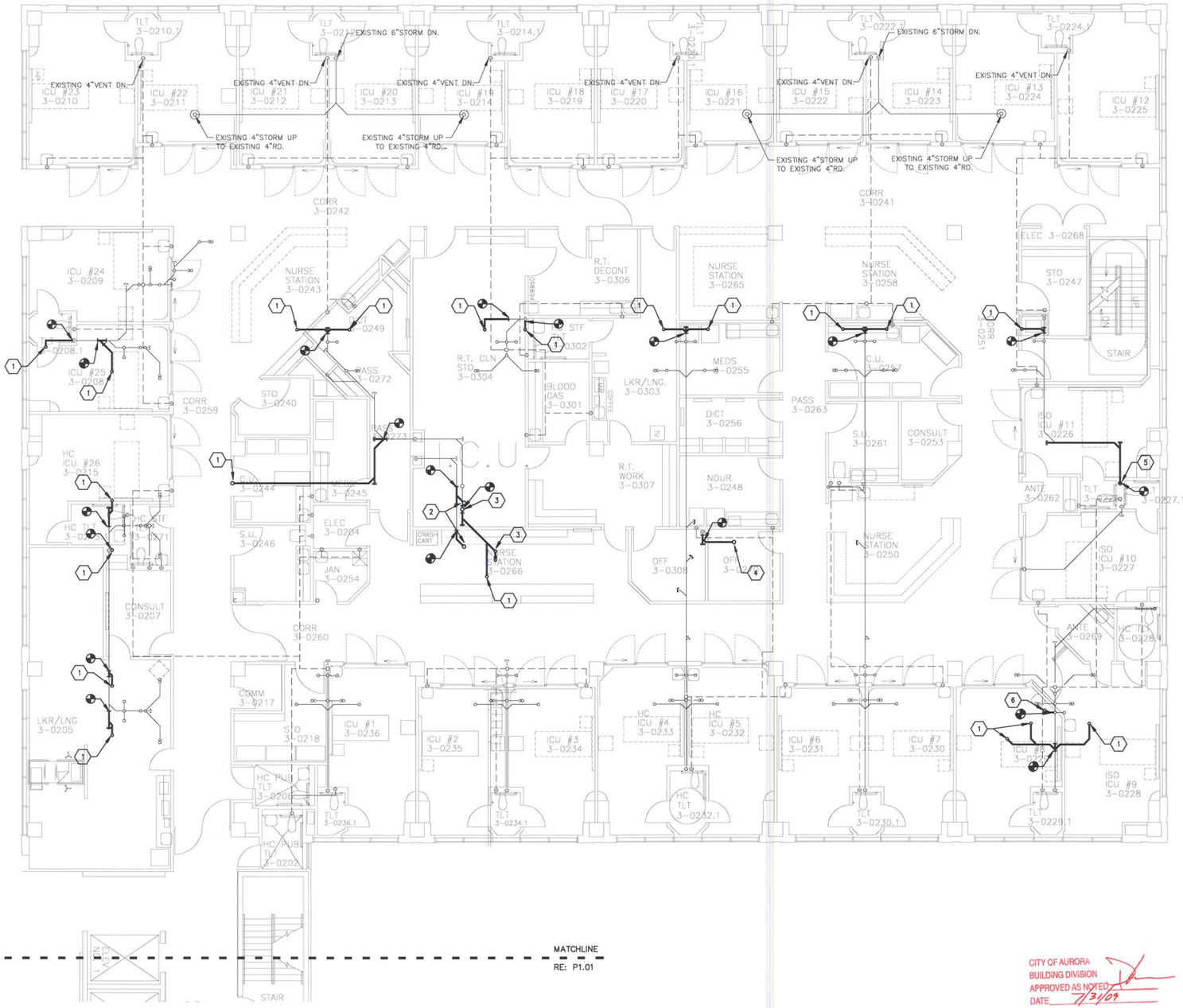
## GENERAL NOTES

A. ROUTE ALL PLUMBING PIPING AS TIGHT AS POSSIBLE TO BOTTOM OF FLOOR STRUCTURE AND FLOOR JOISTS.

B. REPAIR AND REPLACE CEILNG AS NECESSARY.

## LEGEND NOTES

1. 2" SANITARY UP.
2. 4" STORM UP.
3. 3" SANITARY UP.
4. 6" STORM UP.
5. 4" SANITARY DN.
6. 4" UP TO WATER CLOSET.




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720.946.0276

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# MEDICAL CENTER OF AURORA

# FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

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550 Lipan St.
Denver, CO 80204

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item | date

PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan

sheet title
THREE EAST PLUMBING PLAN

sheet number
P1.02

drawn by STM | checked by MM

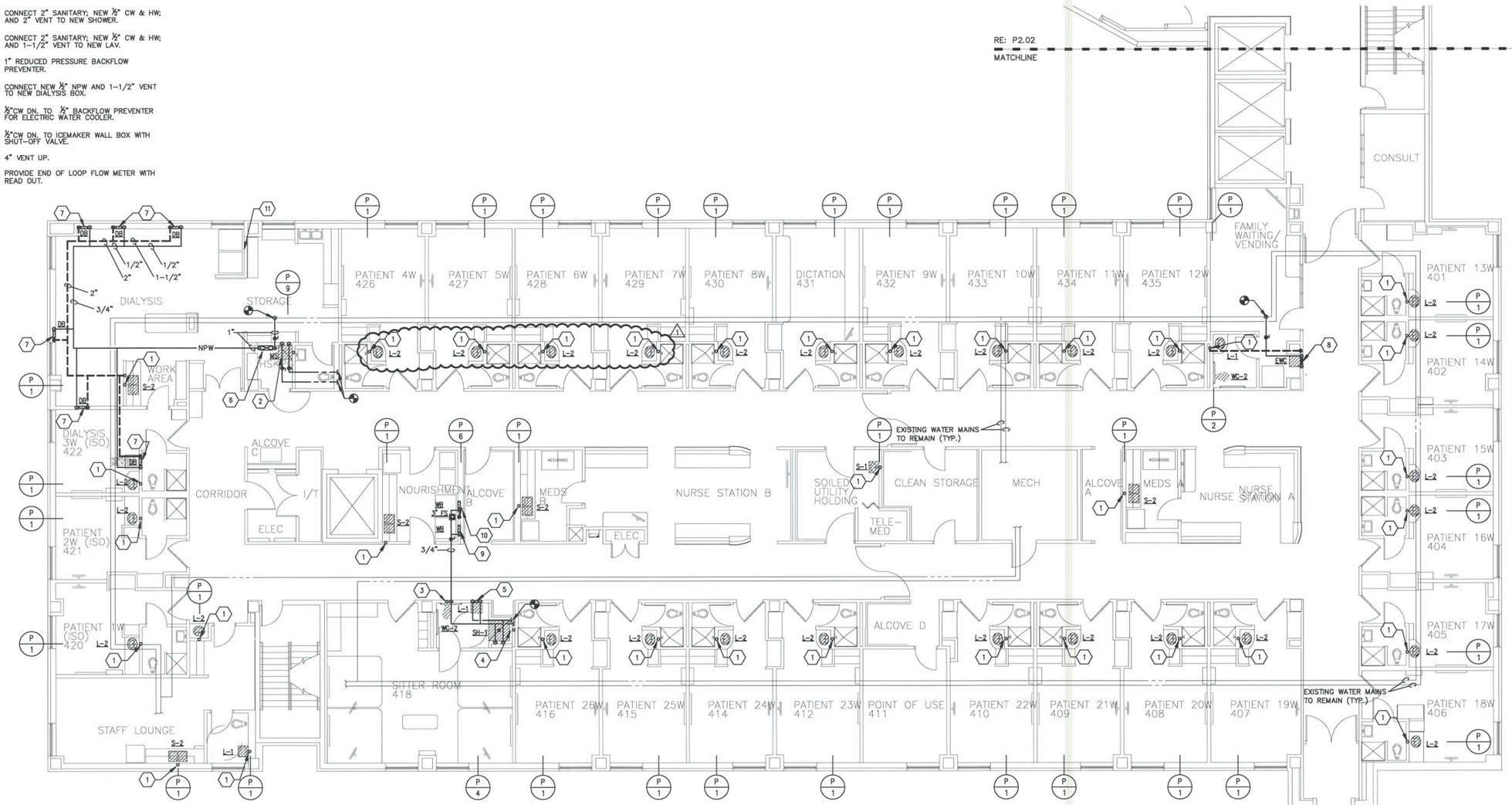
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## GENERAL NOTES

A. CONCERNING ALL SHOWERS STALLS: REPLACE ALL SHOWER VALVES AND MIXING VALVES. IF DAMAGED OR MISSING, REPLACE SHOWER DRAIN STRAINERS. REPLACE SHOWERHEADS WHERE HARD WATER CALCIFICATION EXISTS.

## LEGEND NOTES

1. CONNECT NEW ½" CW & HW; 1-1/4" P-TRAP FOR LAV. 1-1/2" P-TRAP FOR SINK.
2. CONNECT ¾" CW & HW AND 2"DRAIN FOR MOP SINK.
3. CONNECT 4" SANITARY AND 1" CW TO WATER CLOSET.
4. CONNECT 2" SANITARY; NEW ½" CW & HW; AND 2" VENT TO NEW SHOWER.
5. CONNECT 2" SANITARY; NEW ½" CW & HW; AND 1-1/2" VENT TO NEW LAV.
6. 1" REDUCED PRESSURE BACKFLOW PREVENTER.
7. CONNECT NEW ½" NPW AND 1-1/2" VENT TO NEW DIALYSIS BOX.
8. ½"CW DN. TO ½" BACKFLOW PREVENTER FOR ELECTRIC WATER COOLER.
9. ½"CW DN. TO ICEMAKER WALL BOX WITH SHUT-OFF VALVE.
10. 4" VENT UP.
11. PROVIDE END OF LOOP FLOW METER WITH READ OUT.




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720.946.0276

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AA 0002293
EB 0005176

# MEDICAL CENTER OF AURORA

# FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howel Construction
550 Lipan St.
Denver, CO 80204

303-899-4787

seal/signature

08-05-09
COLORADO REGISTERED PROFESSIONAL ENGINEER

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| CONSTRUCTION | 07/15/2009 |

| item | date |
|---|---|
| 1 ADDENDUM #4 | 08.05.09 |

PLAN NORTH

SCALE: ⅛" = 1'-0"

key plan

sheet title
FOUR WEST PLUMBING PLAN

sheet number
P2.01

drawn by STM checked by MM

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## GENERAL NOTES

A. CONCERNING ALL SHOWERS STALLS: REPLACE ALL SHOWER VALVES AND MIXING VALVES. IF DAMAGED OR MISSING, REPLACE SHOWER DRAIN STRAINERS. REPLACE SHOWERHEADS WHERE HARD WATER CALCIFICATION EXISTS.

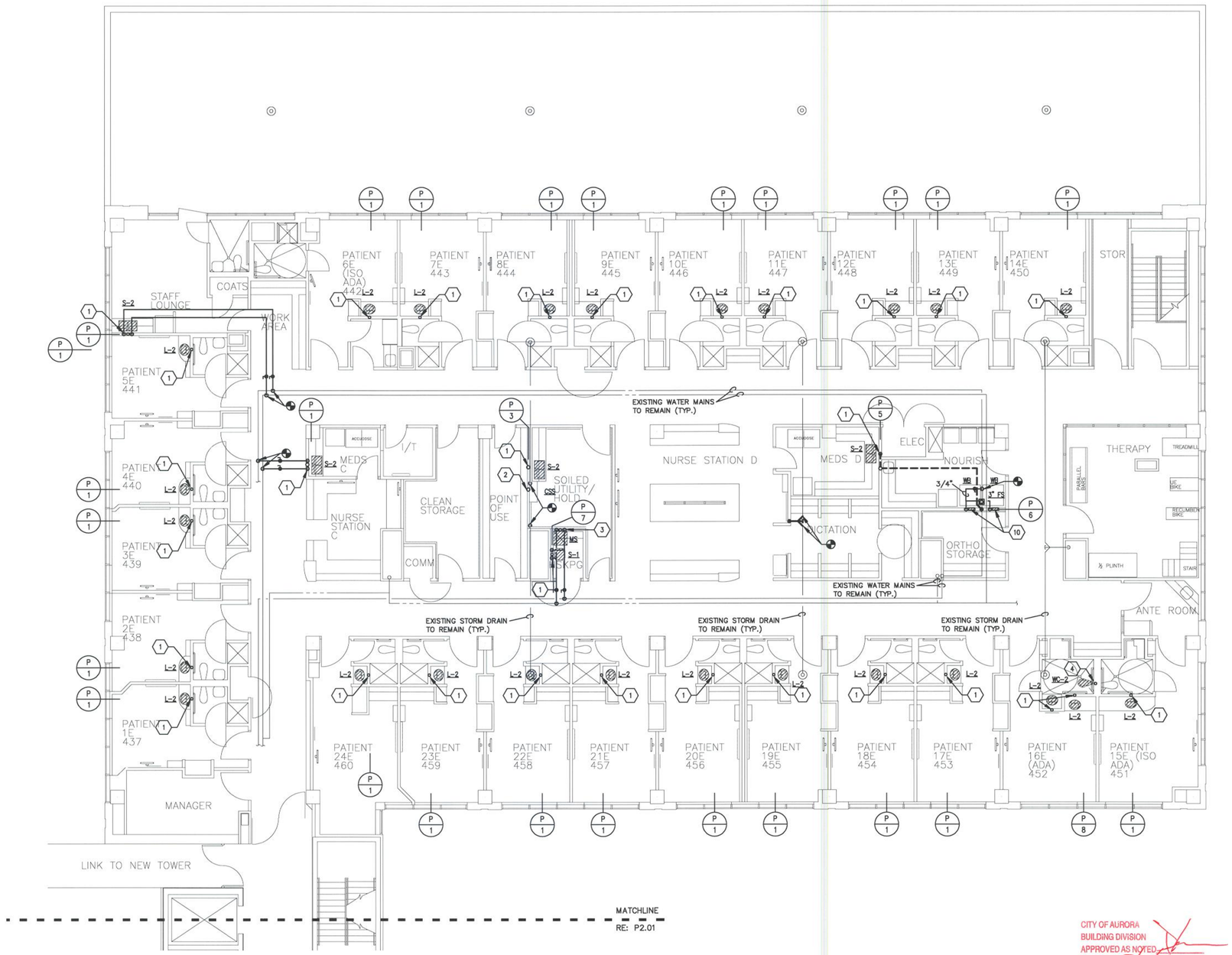
## LEGEND NOTES

(1) CONNECT NEW ½" CW & HW; 1-1/4" P-TRAP FOR LAV. 1-1/2" P-TRAP FOR SINK.

(2) CONNECT ¾" CW & HW AND 3"DRAIN FOR CLINICAL SINK.

(3) CONNECT ¾" CW & HW AND 2"DRAIN FOR MOP SINK.

(4) ½"CW DN. TO ICEMAKER WALL BOX WITH SHUT-OFF VALVE.




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# MEDICAL CENTER OF AURORA

# FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howel Construction
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45907
STEVEN T. MCCLAIN

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PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan

sheet title

## FOUR EAST PLUMBING PLAN

sheet number
**P2.02**

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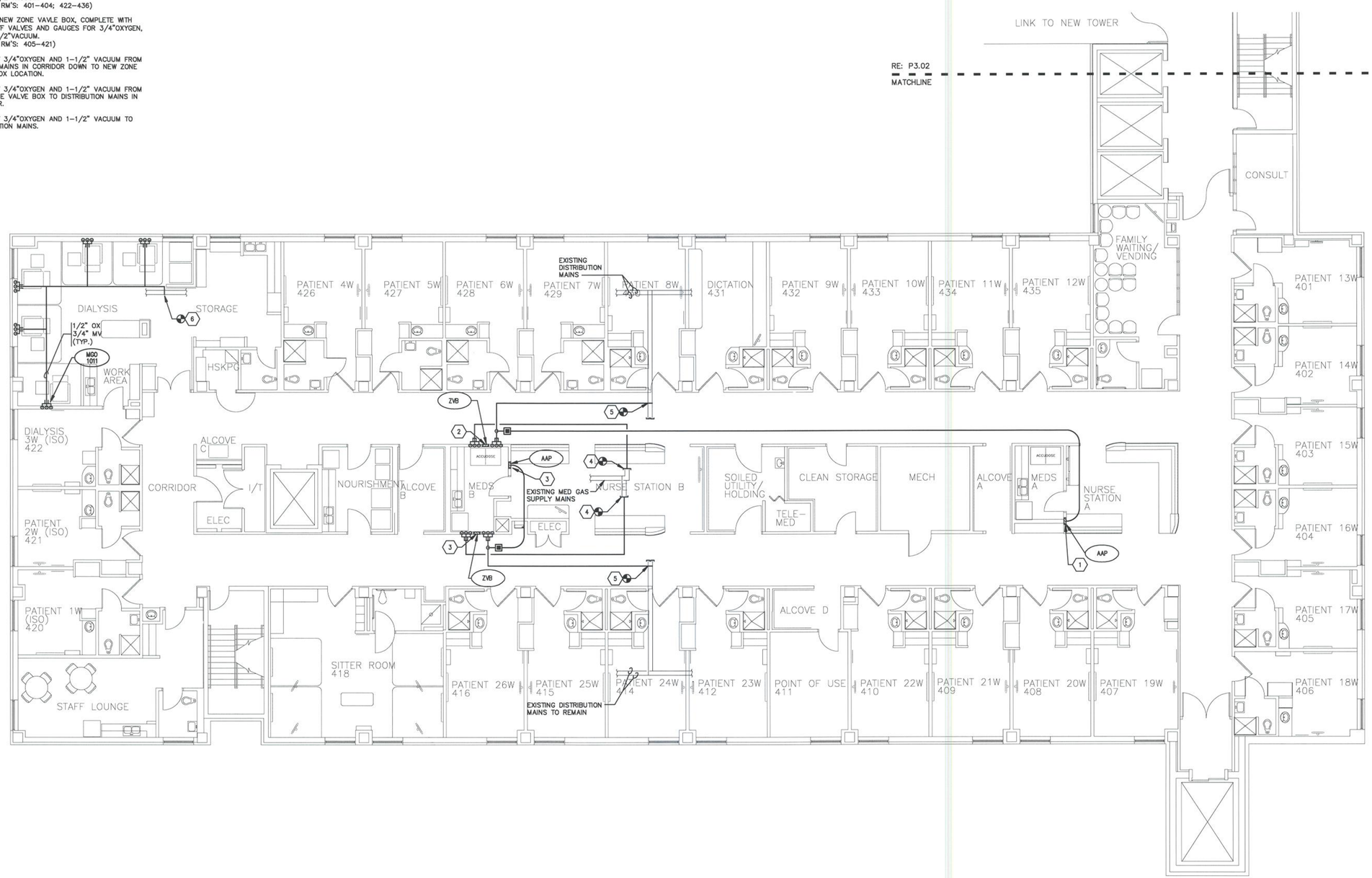
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## GENERAL NOTES

A. ROUTE ALL PLUMBING PIPING AS TIGHT AS POSSIBLE TO BOTTOM OF FLOOR STRUCTURE AND FLOOR JOISTS.

## LEGEND NOTES

1. INSTALL NEW AREA ALARM.
2. INSTALL NEW ZONE VAVLE BOX, COMPLETE WITH SHUT-OFF VALVES AND GAUGES FOR 3/4"OXYGEN AND 1-1/2"VACUUM. (SERVES RM'S: 401-404; 422-436)
3. INSTALL NEW ZONE VAVLE BOX, COMPLETE WITH SHUT-OFF VALVES AND GAUGES FOR 3/4"OXYGEN, AND 1-1/2"VACUUM. (SERVES RM'S: 405-421)
4. CONNECT 3/4"OXYGEN AND 1-1/2" VACUUM FROM SUPPLY MAINS IN CORRIDOR DOWN TO NEW ZONE VALVE BOX LOCATION.
5. CONNECT 3/4"OXYGEN AND 1-1/2" VACUUM FROM NEW ZONE VALVE BOX TO DISTRIBUTION MAINS IN CORRIDOR.
6. CONNECT 3/4"OXYGEN AND 1-1/2" VACUUM TO DISTRIBUTION MAINS.




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# MEDICAL CENTER OF AURORA

## FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howel Construction
550 Lipan St.
Denver, CO 80204

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| CONSTRUCTION | 07/15/2009 |

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| | |

PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan
sheet title

# FOUR WEST MED GAS PLUMBING PLAN

sheet number
**P3.01**

drawn by STM checked by MM

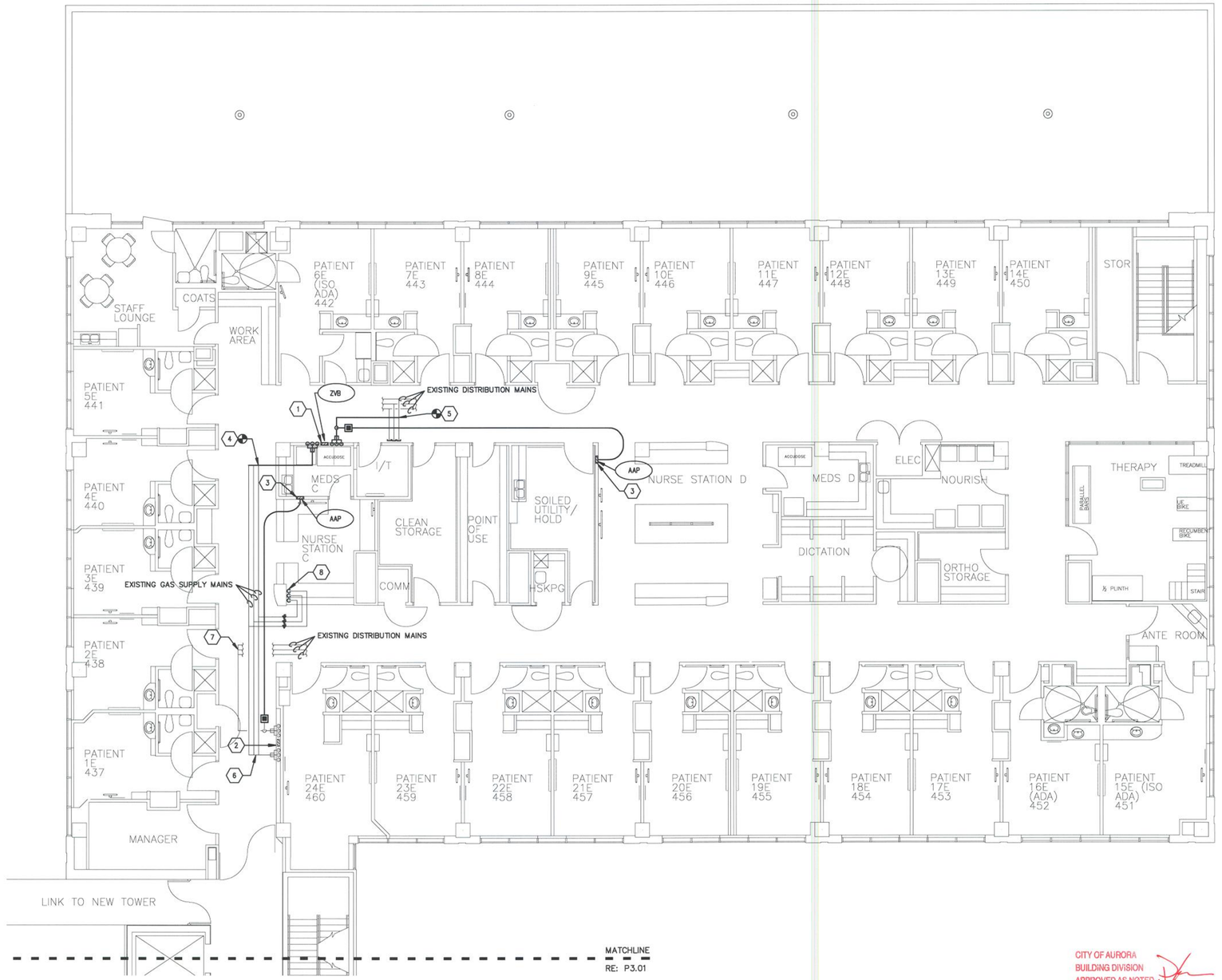
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## GENERAL NOTES

A. ROUTE ALL PLUMBING PIPING AS TIGHT AS POSSIBLE TO BOTTOM OF FLOOR STRUCTURE AND FLOOR JOISTS.

## LEGEND NOTES

1. INSTALL NEW ZONE VAVLE BOX, COMPLETE WITH SHUT-OFF VALVES AND GAUGES FOR 3/4"OXYGEN, 3/4"MEDICAL AIR, AND 1-1/2"VACUUM. (SERVES RM'S: 440-450)
2. EXISTING ZONE VAVLE BOXES; (SERVES RM'S: 438-437; 451-460.) PROVIDE ALTERNATE PRICING FOR INSTALLATION OF NEW TRIPLE ZONE VAVLE BOX, COMPLETE WITH SHUT-OFF VALVES AND GAUGES FOR 3/4"OXYGEN, 3/4"MEDICAL AIR, AND 1-1/2"VACUUM.
3. INSTALL NEW AREA ALARM.
4. CONNECT 3/4"OXYGEN, 3/4"MEDICAL AIR, AND 1-1/2" VACUUM FROM SUPPLY MAINS IN CORRIDOR DOWN TO NEW ZONE VALVE BOX LOCATION.
5. CONNECT 3/4"OXYGEN, 3/4"MEDICAL AIR, AND 1-1/2" VACUUM FROM NEW ZONE VALVE BOX TO DISTRIBUTION MAINS IN CORRIDOR.
6. FROM EXISTING SUPPLY MAINS IN CORRIDOR.
7. TO EXISTING DISTRIBUTION MAINS IN CORRIDOR.
8. EXISTING GAS RISERS FROM 3RD FLR. BELOW.




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# MEDICAL CENTER OF AURORA

# FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howel Construction
550 Lipan St.
Denver, CO 80204

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PLAN NORTH

SCALE: 1/8" = 1'-0"

key plan

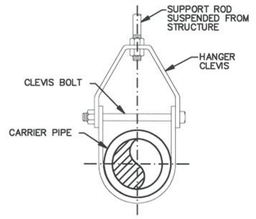
sheet title

## FOUR EAST MED GAS PLUMBING PLAN

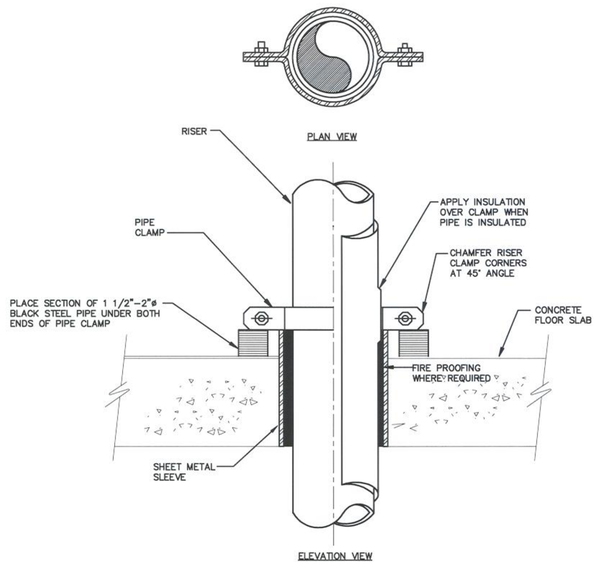
sheet number
**P3.02**

drawn by STM checked by MM

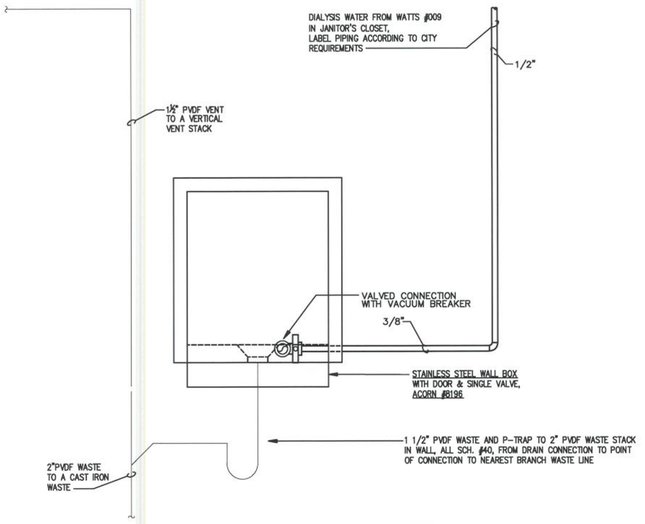
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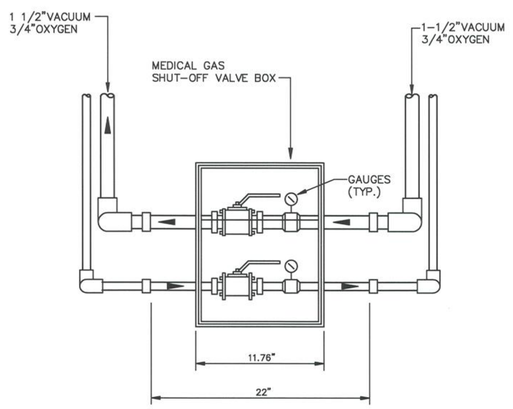

## 01 TYPICAL ADJUSTABLE CLEVIS FOR CAST IRON PIPE
NO SCALE




## 02 TYPICAL FLOOR PENETRATION DETAIL
NO SCALE

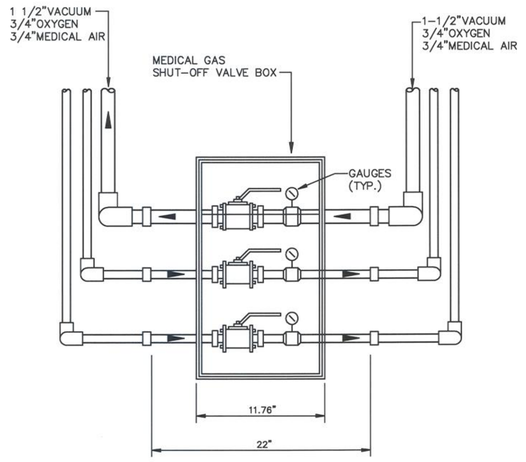



## 03 DIALYSIS WALL BOX DETAIL
NOT TO SCALE




FRONT VIEW

## 04 MEDICAL GASES ZONE VALVE BOX DETAIL - WEST
NO SCALE




FRONT VIEW

## 05 MEDICAL GASES ZONE VALVE BOX DETAIL - EAST
NO SCALE

MED GAS - NFPA 99 2002

- Qualification of installers - 5.1.10.6.11
- Testing - 5.1.12.3.1.3
- Installation of Level 1 systems shall comply with Chapter 5

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 7/31/09
09-411495

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HEERY design

Heery International Inc.
820 16th Street Mall,
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Denver, CO 80202-3219
720.946.0276

project number
0906700

AA 0002293
EB 0005176

# MEDICAL CENTER OF AURORA

## FOURTH FLOOR RENOVATION

1501 S. POTOMAC ST.
AURORA, CO 80012

consultants/construction managers

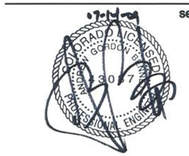
CCRD Partners
8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

Howel Construction
550 Lipan St.
Denver, CO 80204

303-899-4787

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PLAN NORTH

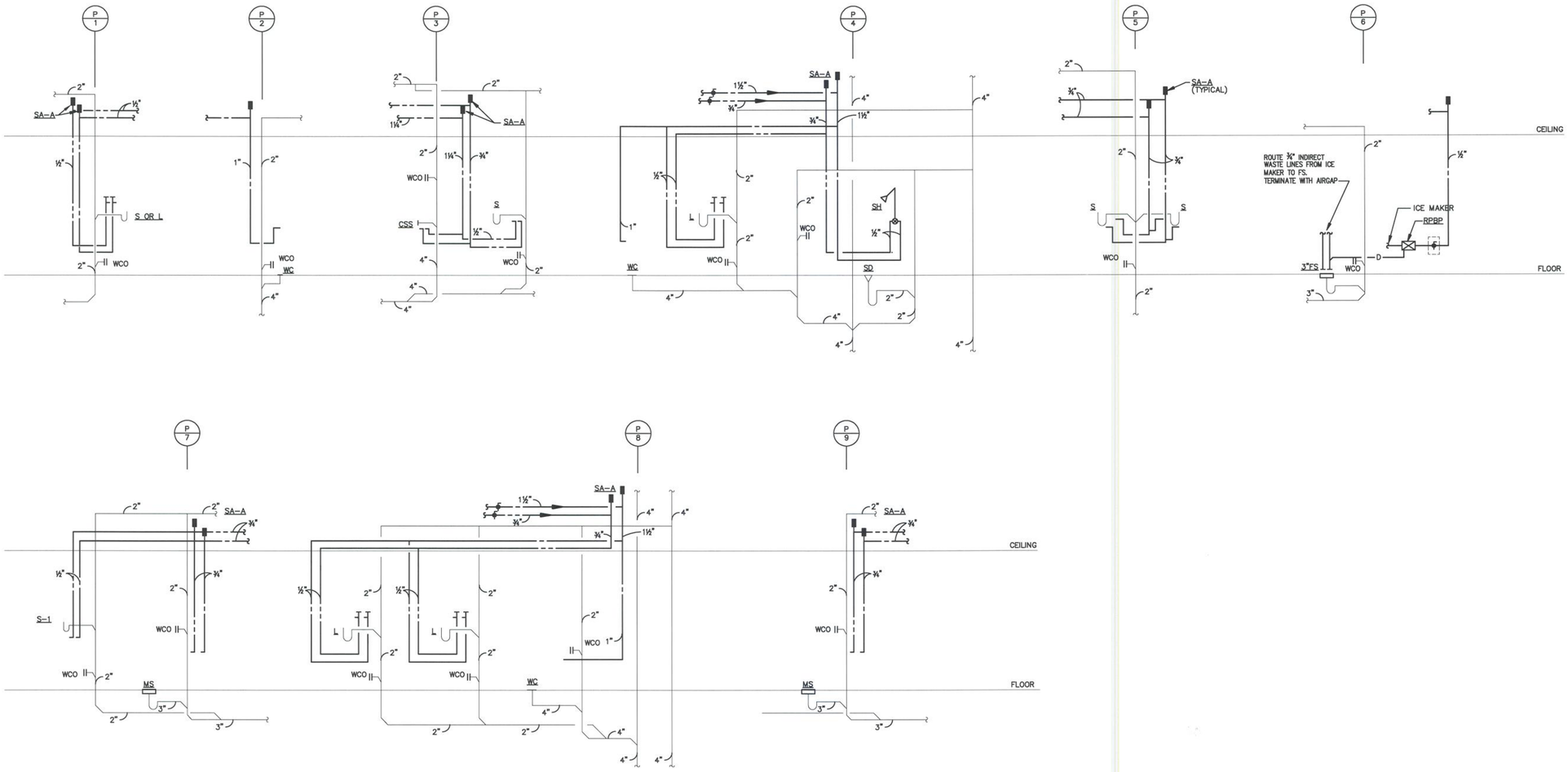
SCALE: 1/8" = 1'-0"

key plan
sheet title

PLUMBING DETAILS

sheet number
P4.01

drawn by STM checked by AB




CITY OF AURORA
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HEERY design

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## FOURTH FLOOR RENOVATION

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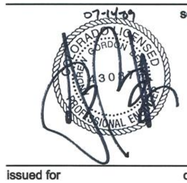
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# PLUMBING RISERS

sheet number
**P5.01**

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# PLUMBING FIXTURE SCHEDULE

| DESIG. | FIXTURE TYPE | CONNECTION SIZE | | | | DESCRIPTION |
|---|---|---|---|---|---|---|
| | | San. Sewer | Vent | Cold Water | Hot Water | |
| WC-1 | WATER CLOSET<br>HANDICAP<br>ADA COMPLIANT<br>PUBLIC/STAFF | 4" | 3" | 1" | – | AMERICAN STANDARD "MADERA" MODEL No. 3043.160 (WHITE) FLUSH VALVE WATER CLOSET FLOOR MTD., VITREOUS CHINA, 16-1/2" RIM HEIGHT, 10" ROUGHING-IN, LOW CONSUMPTION 1.6 GALLONS PER FLUSH, ELONGATED BOWL, DIRECT FED SIPHON JET ACTION, FULLY GLAZED TRAPWAY, 1½" TOP SPUD, COMPLETE WITH EXPOSED WATER CLOSET WITH INFRARED SENSOR, FLUSHOMETER "SLOAN" ROYAL OPTIMA MODEL No. 111 ES-S, LOW CONSUMPTION, CHROME PLATED, HIGH BACK PRESSURE VACUUM BREAKER FLUSH CONNECTION WITH ONE-PIECE BOTTOM HEX COUPLING NUT, 1" I.P.S. SCREWDRIVER BACK-CHECK ANGLE STOP, FREE SPINNING, VANDAL RESISTANT STOP CAP, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE FOR 1½" TOP SPUD, PROVIDED WHITE OPEN SEAT FRONT LESS COVER BY "OLSONITE" MODEL No. 95, ADA COMPLIANT. |
| WC-2 | WATER CLOSET<br>HANDICAP<br>ADA COMPLIANT<br>PATIENT ROOMS | 4" | 3" | 1" | – | AMERICAN STANDARD "MADERA" MODEL No. 3043.160 (WHITE) FLUSH VALVE WATER CLOSET, FLOOR MTD., VITREOUS CHINA, 16-1/2" RIM HEIGHT, 10" ROUGHING-IN, LOW CONSUMPTION 1.6 GALLONS PER FLUSH, ELONGATED BOWL, DIRECT FED SIPHON JET ACTION, FULLY GLAZED TRAPWAY, 1½" TOP SPUD, COMPLETE WITH EXPOSED WATER CLOSET FLUSHOMETER ZURN BEDPAN WASHER MODEL No. Z6011-AV-BWN-WS1, DUAL FILTERED BY-PASS, VACUUM BREAKER FLUSH CONNECTION WITH ONE-PIECE BOTTOM HEX COUPLING NUT, 1" I.P.S. SCREWDRIVER BACK-CHECK ANGLE STOP, FREE SPINNING, VANDAL RESISTANT STOP CAP, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE FOR 1½" TOP SPUD, PROVIDED WHITE OPEN SEAT FRONT LESS COVER BY "OLSONITE" MODEL No. 95, ADA COMPLIANT. |
| L-1 | LAVATORY<br>WALL HUNG<br>ADA COMPLIANT | 2" | 2" | ½" | ½" | AMERICAN STANDARD "LUCERNE" MODEL No. 0356.015 WALL HUNG, VITREOUS CHINA, SELF RIMMING, COMPLETE WITH SERVICE FAUCET ZURN MODEL No. Z831A4-FC, ADJUSTABLE CENTERS (6"-20"), 2.2 GPM PRESSURE COMPENSATING AERATOR, 4" VANDAL-RESISTANT COLORCODED METAL WRIST BLADE HANDLES, MOUNTING HARDWARE, "McGUIRE 155A CAST BRASS, P-TRAP McGUIRE PW2125 SUPPLIES McGUIRE No. 170LK SUPPLY WITH LOOSE KEY ANGLE VALVE |
| L-2 | LAVATORY<br>SOLID SURFACE | 2" | 2" | ½" | ½" | SOLID SURFACE COUNTERTOP WITH INTEGRAL BOWL, ( REFER TO ARCHITECTURAL SPECIFICATION SECTION 066116). COMPLETE WITH SERVICE FAUCET "CHICAGO" MODEL No. 650-CP, SINGLE ELECTRONIC LAVATORY FITTING WITH INFRARED SENSOR, "McGUIRE 155A CAST BRASS, P-TRAP McGUIRE 8872; SUPPLIES McGUIRE No. 170LK SUPPLY WITH LOOSE KEY ANGLE VALVE |
| S-1 | HAND SINK | 2" | 2" | ½" | ½" | AMERICAN STANDARD "DECLYN" MODEL No. 0321.075 WALL HUNG, VITREOUS CHINA, WITH CONCEALED ARM SUPPORTS, COMPLETE WITH FAUCET "MONTERREY" MODEL No. 7502.170, 4" CENTER SET, PRESSURE COMPENSATING AERATOR. VANDAL RESISTANT WRIST BLADE HANDLES. GRID STRAINER "McGUIRE 155A CAST BRASS, P-TRAP McGUIRE PW2125 SUPPLIES McGUIRE No. 170LK SUPPLY WITH LOOSE KEY ANGLE VALVE |
| S-2 | DOUBLE COMPARTMENT SINK | 2" | 2" | ½" | ½" | DOUBLE COMPARTMENT SINK SHALL BE "ELKAY" MODEL No. DLR-3322, 10" DEPTH, SEAMLESS DIE-DRAWN CONSTRUCTION OF 18 GAUGE TYPE 302, STAINLESS STEEL. INTERIOR SURFACES POLISHED TO A NON-POROUS HAND, WITH HIGHLIGHTED BOWL RIM. SMOOTH, FULLY COATED UNDERSIDE INSULATES FOR SOUND AND REDUCES CONDENSATION. STRAIGHT-SIDE COMPARTMENT WITH 1 3/4" RADIUS CORNERS PROVIDES GREATER CAPACITY. SELF-RIMMING TOP MOUNT GRIP RIM PLUS WITH 300 SERIES STAINLESS STEEL MOUNTING CHANNELS. PROVIDE SINK FAUCET, CHANNELS. PROVIDE SINK FAUCET, "CHICAGO" MODEL No. 786-E29, 8" CENTER SET, PLATED FINISH, LAMINAR FLOW STREAM REGULATOR WITH 2.2 GPM FLOW RATE, STRAINER McGUIRE 152 FLAT PLATED FINISH, LAMINAR FLOW CHROME, P-TRAP McGUIRE MODEL 8912 AND SUPPLIES McGUIRE No. 170LK |
| SH-1 | SHOWER<br>ADA ACCESSIBLE | 2" | 2" | ½" | ½" | SHOWER STALL FINISHED BY OTHERS, REFER TO ARCHITECTURAL DWG FOR SIZE. PROVIDED WITH SINGLE HANDLE PRESSURE BALANCING MIXING SHOWER UNIT, CERAMIC CONTROL CARTRIDGE WITH STAINLESS STEEL BALANCING PISTON, TWO SERVICE STOPS / CHECK STOPS, AND ADJUSTABLE LIMIT STOP. ALL EXPOSED TRIM AND HANDLE ARE METAL WITH POLISHED NICKEL CHROME PLATED SURFACE. VALVE SUPPLIED STANDARD HAND/WALL SHOWER HEAD, HAND/WALL UNIT, 60" FLEXIBLE METAL HOSE, 24" MOUNTING BAR, SUPPLY ELBOW AND FLANGE. INSTALL FAUCET ASSEMBLY OFFSET AS DIRECTED BY ADA RULES. PROVIDE A 2"ID Z |
| MS | MOP SINK<br>JANITOR'S CLOSET | 3" | 2" | 3/4" | 3/4" | "AMERICAN STANDARD" MODEL NO. 7741.000 "FLORWELL", CORNER ENAMELED CAST IRON MOP SINK COMPLETE "CHICAGO" FAUCET MODEL No. 814-VB WITH VACUUM BREAKER, PAIL HOOK, LEVER HANDLES, INTEGRAL STOPS, CROME PLATED AND SUPPORT ROD BACK TO WALL FLANGE. |
| CSS | CLINICAL<br>SERVICE SINK | 4" | 3" | 1½" | 3/4" | AMERICAN STANDARD # 9512.013 WALL HUNG, VITREOUS CHINA CLINIC SERVICE SINK; J.R SMITH CARRIER; (FRONT ACCESS); SLOAN "REGAL" 117-H-O-V FLUSH VALVE (FRONT ACCESS); CHICAGO # 814-VB FAUCET W/INTEGRAL VAC BRKR AND STOPS; CHICAGO # S-910-G WALL MTD BEDPAN WASHER COMBINATION WITH FOOT PEDAL MIXING VALVE, LOOSE-KEY STOPS, ELEVATED VAC BRKR, 69" WHITE VINYL REINFORCED HOSE WITH CHROME PLATED BRASS WALL FLANGE, SUPPLY ELL, SPRAY OUTLET AND WALL HOOK. |
| EWC | ELECTRIC<br>WATER COOLER<br>ADA COMPLIANT | 2" | 2" | ½" | – | "HASLEY TAYLOR" MODEL No. HAC8FS-Q, ALL STAINLESS, WATER COOLER, WITH CAPACITY OF 7.6 GPH, STAINLESS STEEL BASIN WITH INTEGRAL DRAIN STRAINER. TWO STREAM BUBBLER WITH SEPARATE VALVE AND AUTOMATIC STREAM REGULATOR MOUNTED WITHIN CABINET. HIGH EFFICIENCY REFRIGERATION R134A |
| FS-1 | FLOOR SINK | AS NOTED ON PLANS | | | | "J R SMITH" # 3150 8" EXTRA DEEP CAST IRON FLOOR SINK, ALUMINUM DOME STRAINER, TRAP PRIMER CONNECTION & DEEP SEAL TRAP. |
| WB | ICE MAKER<br>CONNECTION WALL BOX | AS NOTED ON PLANS | | | | GUY GRAY MAUNFACTURING, CO. MODEL No. BIM-875, RECESSED IN WALL. |
| DB | DIALYSIS<br>CONNECTION WALL BOX | – | | | | ACORN #8196. STAINLESS STEEL WALL BOX WITH DOOR & SINGLE VALVE. |

GENERAL NOTES:

1. VERIFY ALL MOUNTING HEIGHTS WITH ARCHITECTURAL DRAWINGS.
2. ALL P-TRAPS SHALL HAVE INTEGRAL CLEANOUT PLUGS.
3. ALL PLUMBING FIXTURES MUST CONFORM TO CURRENT "ADA" REQUIREMENTS FOR PERFORMANCE AND ACCESSIBILITY AS REQUIRED.
4. ALL VITREOUS CHINA FIXTURES TO BE WHITE ENAMELED.
5. ALL EXPOSED PIPING TO BE CHROME PLATTED.
6. PROVIDE AND INSTALL J.R. SMITH #0710 CONCEALED ARM SUPPORT FOR ALL WALL HUNG LAVATORIES.
7. REPLACEMENT OF ALL EXISTING SHOWER VALVES/MIXING VALVES SHALL BE: "SYMMONS" No. S-96-300-B30-X-L-V PRESSURE BALANCING SHOWER VALVE, ADA COMPLIANT WITH LEVERTROL VOLUME CONTROL, INLINE VACUUM BREAKER, STOPS AND LEVER HANDLE. PROVIDE SHOWER HEAD ASSEMBLY SYMMONS HAND HELD SHOWER, 60" HOSE, 30" SLIDE BAR.

Provide self closing or metering type of faucets in restrooms per 2006 COA 22-323(b) PUBLIC

CITY OF AURORA
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DATE 8/12/09

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820 16th Street Mall,
Suite 200,
Denver, CO 80202-3219
720.946.0276

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FOURTH FLOOR RENOVATION

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consultants/construction managers

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8301 E. Prentice Ave.
Suite 200
Greenwood Village, CO 80111

303-694-4755

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550 Lipan St.
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STATE OF COLORADO — REGISTERED PROFESSIONAL ENGINEER

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|---|---|
| CONSTRUCTION | 07/15/2009 |

| item | date |
|---|---|
| 1 ADDENDUM #4 | 08.05.09 |

PLAN NORTH

SCALE: ⅛" = 1'-0"

key plan

sheet title

PLUMBING SCHEDULES

sheet number
P6.01

drawn by STM checked by AB

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