

INTERMOUNTAIN MEDICAL CENTER

ARCHITECTS

CATH LAB #6- BUILDING 4 LEVEL 1 CONSTRUCTION DOCUMENTS

Project No. 18226.00

Project Address: 5121 S Cottonwood Street,

Murray, Utah 84107

Date: March 27, 2019

PROJECT IS LOCATED AT LEVEL 1 OF BUILDING 4.







OWNER INTERMOUNTAIN HEALTHCARE

36 SOUTH STATE STREET 23RD FLOOR

SALT LAKE CITY, UT 84111

ARCHITECT NJRA ARCHITECTS, INC.

5272 SOUTH COLLEGE DRIVE SUITE 104

MURRAY, UT 84123

MECHANICAL/ PLUMBING VAN BOERUM & FRANK ASSOCIATES, INC.

PLUMBING 330 SOUTH 300 EAST **ENGINEER** SALT LAKE CITY, UT 84111

ELECTRICAL ENGINEER

SPECTRUM ENGINEERS

324 SOUTH STATE STREET, SUITE 400

SALT LAKE CITY, UT 84111

STRUCTURAL ENGINEER

REAVELEY ENGINEERS

675 EAST 500 SOUTH, SUITE 400 SALT LAKE CITY, UT 84102

DIAMETER

MLDG

MO MON

NTS

MOLDING

NORTH **NURSE CALL** NEGATIVE NOT IN CONTRACT

NOMINAL

NOT TO SCALE

MONUMENT METAL

MASONRY OPENING

GENERAL NOTES GENERAL SYMBOL LEGEND

RIGID INSULATION

GYPSUM BOARD

CONCRETE (SECTION)

CONCRETE MASONRY UNIT

ACOUSTICAL CEILING TILE

GRAVEL

PLYWOOD

BRICK

EARTH

ALUMINUM

BATT INSULATION

CORNER GUARD

ASPHALT PAVING

STONE

GRID LINE

KEYED NOTE

DETAIL REFERENCE

DIRECTION NORTH

WINDOW TAG

DOOR TAG

WALL TYPES

BUILDING / WALL SECTION

ROOM NAME AND NUMBER

FINISH WOOD

WOOD FRAMING - CONTINUOUS

WOOD FRAMING - NON-CONTINUOUS

STEEL (SECTION OR STUD PARTITION)

STUCCO OR CONCRETE (ELEVATION)

1. MECHANICAL AND ELECTRICAL DRAWINGS ARE SUPPLEMENTAL TO THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO CHECK WITH THE ARCHITECTURAL DRAWINGS BEFORE THE INSTALLATION OF MECHANICAL OR ELECTRICAL CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND CONSULTING ENGINEERS' DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR CLARIFICATION. ANY CONSTRUCTION INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE GENERAL CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.

2. ALL WORK SHALL COMPLY WITH THE 2010 ADA ACCESSIBILITY GUIDELINES (AMERICANS WITH DISABILITIES ACT).

3. CODES GOVERNING THIS WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: 2015 INTERNATIONAL BUILDING CODE, APPLICABLE OSHA REGULATIONS. REQUIREMENTS OF CODES AND REGULATIONS SHALL BE CONSIDERED AS MINIMUM. WHERE THE CONTRACT DOCUMENTS EXCEED (WITHOUT VIOLATING) CODE AND REGULATION REQUIREMENTS, CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE. WHERE CODES CONFLICT, THE MORE STRINGENT SHALL

4. THE CONTRACTOR SHALL PROVIDE ADEQUATE BARRICADES AND PROTECTIVE DEVICES SEPARATING CONSTRUCTION AREAS. TEMPORARY PASSAGES SHALL BE PROVIDED AS REQUIRED. THE CORRIDORS AND OTHER AREAS SHALL BE SEPARATED FROM THE CONSTRUCTION ZONE BY A NON-COMBUSTIBLE BARRIER FASTENED SECURELY TOP AND BOTTOM AND AT EACH END. PRIOR TO DELIVERY OF MATERIALS TO CONSTRUCTION ZONE AND REMOVAL OF WASTE FROM SITE THE CONTRACTOR SHALL CHECK WITH THE OWNER FOR AN ACCEPTABLE ROUTE AND TIME. ALL DOORS IN THE TEMPORARY PASSAGES SHALL HAVE A 44" CLEAR WIDTH AND BE FUNCTIONAL AT ALL TIMES TO SERVE AS THE REQUIRED EXIT FROM THE

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATION AND SIZE OF OPENINGS FOR ALL TRADES AND SHALL COORDINATE ALL CONSTRUCTION AS INDICATED BY THE CONTRACT DOCUMENTS, INCLUDING SHOP DRAWINGS REVIEWED BY THE ARCHITECT.

6. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.

7. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER ALL MEASURES TO ACCOMPLISH THE WORK WITH THE MINIMUM OF INTERRUPTION TO NORMAL BUILDING PROCEDURES. SYSTEM SHUTDOWNS OF HVAC, PLUMBING, ELECTRICAL, AND NOISY CONSTRUCTION INCLUDING ROTO HAMMER, SAW CUTTING, CONCRETE ANCHORS, ETC. SHALL BE COORDINATED WITH THE OWNER AT LEAST 72 HOURS PRIOR TO COMMENCEMENT.

8. ALL DIMENSIONS ARE SHOWN TO FACE OF FINISH OF NEW CONSTRUCTION AND FACE OF FINISH OF EXISTING CONSTRUCTION, UNLESS NOTED OTHERWISE.

9. ALL DRAWINGS, THOUGH NOTED TO SCALE ARE FOR ILLUSTRATION ONLY. THE CONTRACTOR SHALL NOT SCALE DRAWINGS.

10. WHEN A DETAIL IS IDENTIFIED AS TYPICAL, THE CONTRACTOR IS TO APPLY THIS DETAIL IN ESTIMATING AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT THE REFERENCE IS REPEATED IN EVERY INSTANCE. 11. ALL PENETRATIONS INTO SOUND OR FIRE RATED PARTITIONS, FLOORS OR

CEILING ASSEMBLIES SHALL BE SEALED WITH APPROVED PERMANENT RESILIENT SEALANT. REFER TO IBC 2015 FOR REQUIREMENTS FOR OPENINGS IN FIRE RATED WALLS. FOR OPENINGS LESS THAN 16 SQUARE INCHES, THE SPACE BETWEEN THE WALL AND ALLOWED PENETRATIONS MUST BE SEALED TO PREVENT THE MOVEMENT OF HOT FLAME OR GASES. ELECTRICAL DEVICES, RECESSED CABINETS, ETC. SHALL BE SEALED, LINED, INSULATED OR OTHERWISE TREATED TO MAINTAIN THE INTEGRITY OF THE ASSEMBLY. SEE PENETRATION DETAILS.

12. DRAWINGS HAVE BEEN DETAILED IN COMPLIANCE WITH U.L. LISTING REQUIREMENTS AND ICBO REPORTS FOR THE MATERIALS SPECIFIED. IF AN ALTERNATE OR SUBSTITUTED MATERIAL IS ACCEPTED AS AN EQUAL BY THE GENERAL CONTRACTOR, HE/SHE WILL ASSUME THE RESPONSIBILITY FOR WHATEVER CONSTRUCTION MODIFICATION AND/OR ADDITIONAL COSTS ARE

13. ALL TRASH SHALL BE REMOVED DAILY. BUILDING MATERIALS MAY NOT BE STORED IN THE CORRIDORS AT ANY TIME. BLOCKAGE OF ANY REQUIRED EXIT IS PROHIBITED.

14. THE CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF WATER AND DRAIN INSTALLATIONS AND OTHER REQUIRED SERVICES WITH EQUIPMENT MANUFACTURERS.

15. ABBREVIATIONS THROUGHOUT THE PLAN ARE THOSE IN COMMON USE. THE ARCHITECT SHALL DEFINE THE INTENT OF ANY IN QUESTION.

16. INTERIOR FINISHES SHALL CONFORM TO THE REQUIREMENTS OF 2015 I.B.C. 17. CONTRACTOR SHALL REFER TO THE PROJECT MANUAL FOR A COMPLETE LIST

OF GENERAL CONDITIONS, SPECIAL CONDITIONS AND OTHER NOTES.

18. INSTALL METAL CORNER BEADS AT ALL EXPOSED WALLBOARD EDGES. INSTALL CASING BEADS WHEREVER WALLBOARD, PLASTER, ETC ABUTS A DISSIMILAR FINISH MATERIAL. ALL DOOR SIZES SHOWN ON DOOR SYMBOLS ARE OPENING SIZES. ALLOWANCE FOR THRESHOLDS, ETC. SHOULD BE CONSIDERED. ALL DOORS AND FRAMES SHALL BE REINFORCED WHERE REQUIRED FOR CLOSERS, STOPS AND

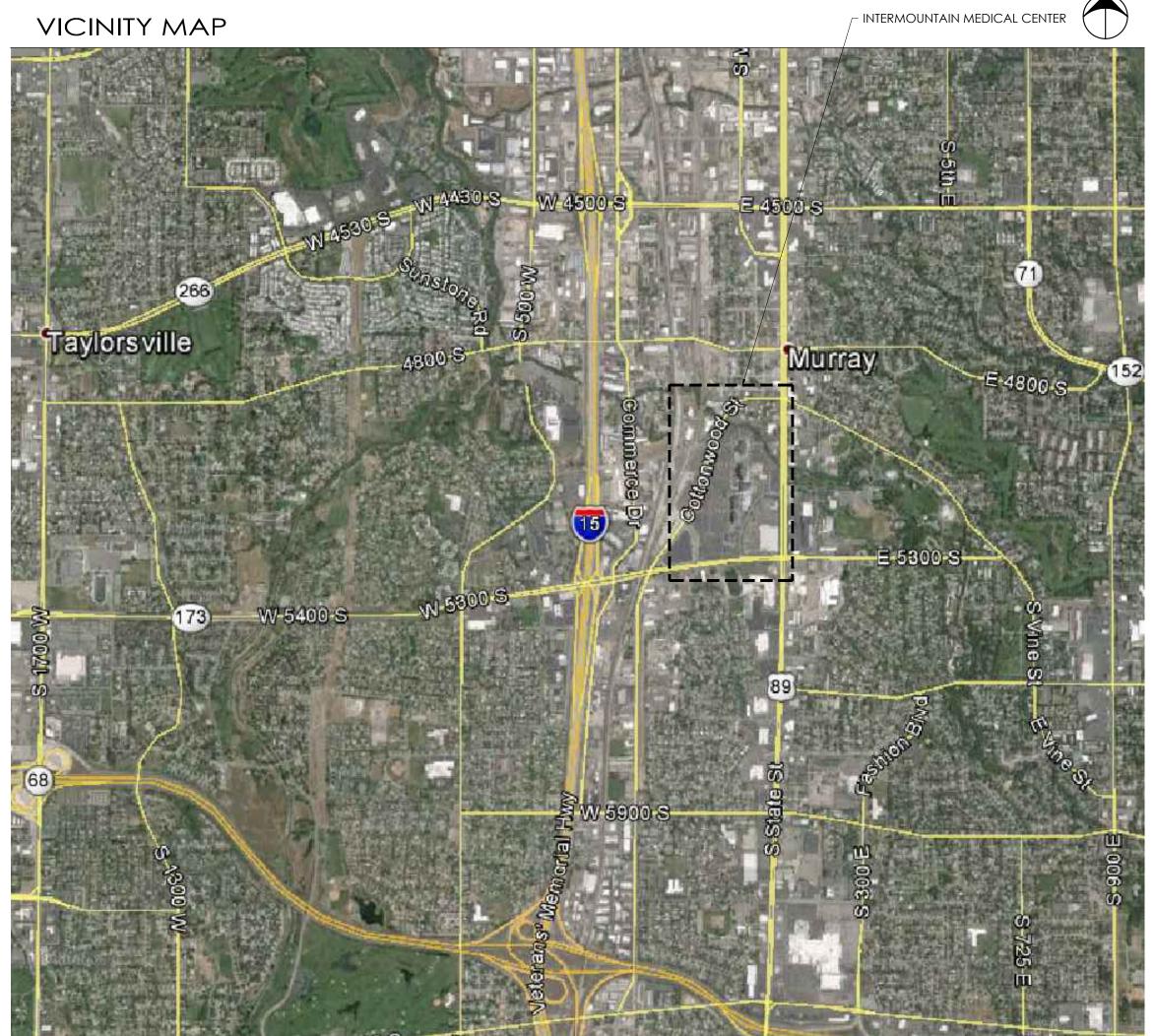
19. ALL WOOD TRIMS, SPACER, FILLER, ETC. THROUGHOUT JOB SHALL BE FIRE RETARDANT PRESSURE-TREATED, AS PER 2015 I.B.C. CONTRACTOR SHALL LOCATE BACKING PLATES BEHIND ALL WALL MOUNTED EQUIPMENT, CASEWORK, WALL MOUNTED DOOR STOPS AND ACCESSORIES TO ENSURE POSITIVE ATTACHMENT TO THE STRUCTURE. SEE RELEVANT DETAILS.

20. ELEVATIONS ARE WITH RESPECT TO FINISH FLOOR ELEVATION. VERIFY FINISH FLOOR HEIGHT.

INTERIM LIFE SAFETY MEASURES

Implementation of ILSM is required in or adjacent to all construction areas and throughout buildings with existing LSC deficiencies. ILSM apply to all personnel, including construction workers, must be implemented upon project development, and continuously enforced through project completion. ILSM are intended to provide a level of life safety comparable to that described in chapters 1 through 7, 31 and the applicable occupancy chapters of the LSC. Each ILSM action must be documented through written policies and procedures. Except as stated below, frequencies for inspection, testing, training, and ILSM consist of the following actions:

- a. Ensuring exits provide free and unobstructed egress. Personnel shall receive training if alternative exits must be designated. Buildings or areas under construction must maintain escape facilities for construction workers at all times. Means of egress in construction areas must be inspected daily.
- b. Ensuring free and unobstructed access to emergency departments/ services and for emergency forces.
- c. Ensure fire alarm, detection, and suppression systems are not impaired. A temporary, but equivalent, system shall be provided when any fire system is impaired.
- Temporary systems must be inspected and tested monthly. d. Ensuring temporary construction partitions are smoke tight and built of noncombustible or limited combustible materials that will not contribute to the
- development or spread of fire. e. Providing additional fire-fighting equipment and use training of personnel.
- f. Prohibiting smoking in accordance with MA.1.3.15 and in or adjacent to all construction areas.
- g. Developing and enforcing storage, housekeeping, and debris removal practices that reduce the flammable and combustible fire load of the building to the lowest level necessary for daily operations.
- h. Conducting a minimum of two fire drills per shift per quarter.
- i. Increasing hazard surveillance of buildings, grounds, and equipment with special attention to excavations, construction areas construction storage, and
- j. Training personnel when structural or compartment features of fire safety are compromised.
- k. Conducting organization wide safety education programs to ensure awareness of any LSC deficiencies, construction hazards, and these ILSM.



DRAWING INDEX

GENERAL DRAWINGS

G - 001 COVER SHEET G - 002 GENERAL INFORMATION SHEET G - 003 CODE COMPLIANCE PLAN

STRUCTURAL DRAWINGS

SE001 - GENERAL STRUCTURAL NOTES SF101 - MEDICAL EQUIPMENT SUPPORT PLANS SF501 - MEDICAL EQUIPMENT SUPPORT DETAILS

ARCHITECTURAL DRAWINGS

A100 - DEMOLITION PLAN- LOWER LEVEL 1 A101 - DEMOLITION FLOOR PLAN- LEVEL 1 A111 - NEW FLOOR PLAN- LEVEL 1 A131 - REFLECTED CEILING PLAN- LEVEL 1 A151 - FINISH FLOOR PLAN- LEVEL 1

MECHANICAL DRAWINGS

A501 DETAILS

M000 MECHANICAL SYMBOLS & LEGEND M001 MECHANICAL SYMBOLS & LEGEND

M101 MECHANICAL DEMOLITION PLAN M111 MECHANICAL PLAN

M201 MECHANICAL PIPING DEMOLITION PLAN M211 MECHANICAL PIPING PLAN

M501 MECHANICAL SCHEDULES

P111 PLUMBING PLAN

P101 PLUMBING DEMOLITION PLAN

P201 MED GAS DEMOLITION PLAN P211 MED GAS PLAN

P501 PLUMBING SCHEDULES

ELECTRICAL DRAWINGS

EE001 SHEET INDEX, ABBREVIATIONS AND GENERAL NOTES

EE701 TYPICAL MOUNTING HEIGHT DETAILS EP100 OVERALL POWER PLAN

EE501 ELECTRICAL DETAILS

EP101 ELECTRICAL PLANS EP601 ONE-LINE DIAGRAM EP701 SKYTRON DRAWINGS EP702 SIEMENS DRAWINGS

EP704 SIEMENS DRAWINGS

EP703 SIEMENS DRAWINGS

ET601 TELECOMM DETAILS

EQUIPMENT DRAWINGS (FOR REFERENCE ONLY)

EQ101 SIEMENS EQUIPMENT- ARCHITECTURAL EQ102 SIEMENS EQUIPMENT- ARCHITECTURAL

EQ103 SIEMENS EQUIPMENT- STRUCTURAL EQ104 SIEMENS EQUIPMENT- STRUCTURAL

EQ108 SIEMENS EQUIPMENT- MECHANICAL

EQ105 SIEMENS EQUIPMENT- ELECTRICAL EQ106 SIEMENS EQUIPMENT- ELECTRICAL EQ107 SIEMENS EQUIPMENT- ELECTRICAL

EQ109 SKYTRON EQUIPMENT EQ110 SKYTRON EQUIPMENT EQ111 SKYTRON EQUIPMENT

EQ112 SKYTRON EQUIPMENT

ARCHITECTS NJRA Architects, Inc. 5272 S. College Drive, Suite 104

Murray, Utah 84123

www.njraarchitects.com



NJRA Project #

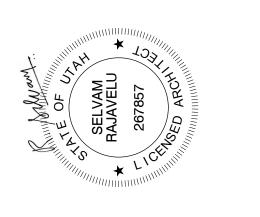
Construction Documents March 27, 2019

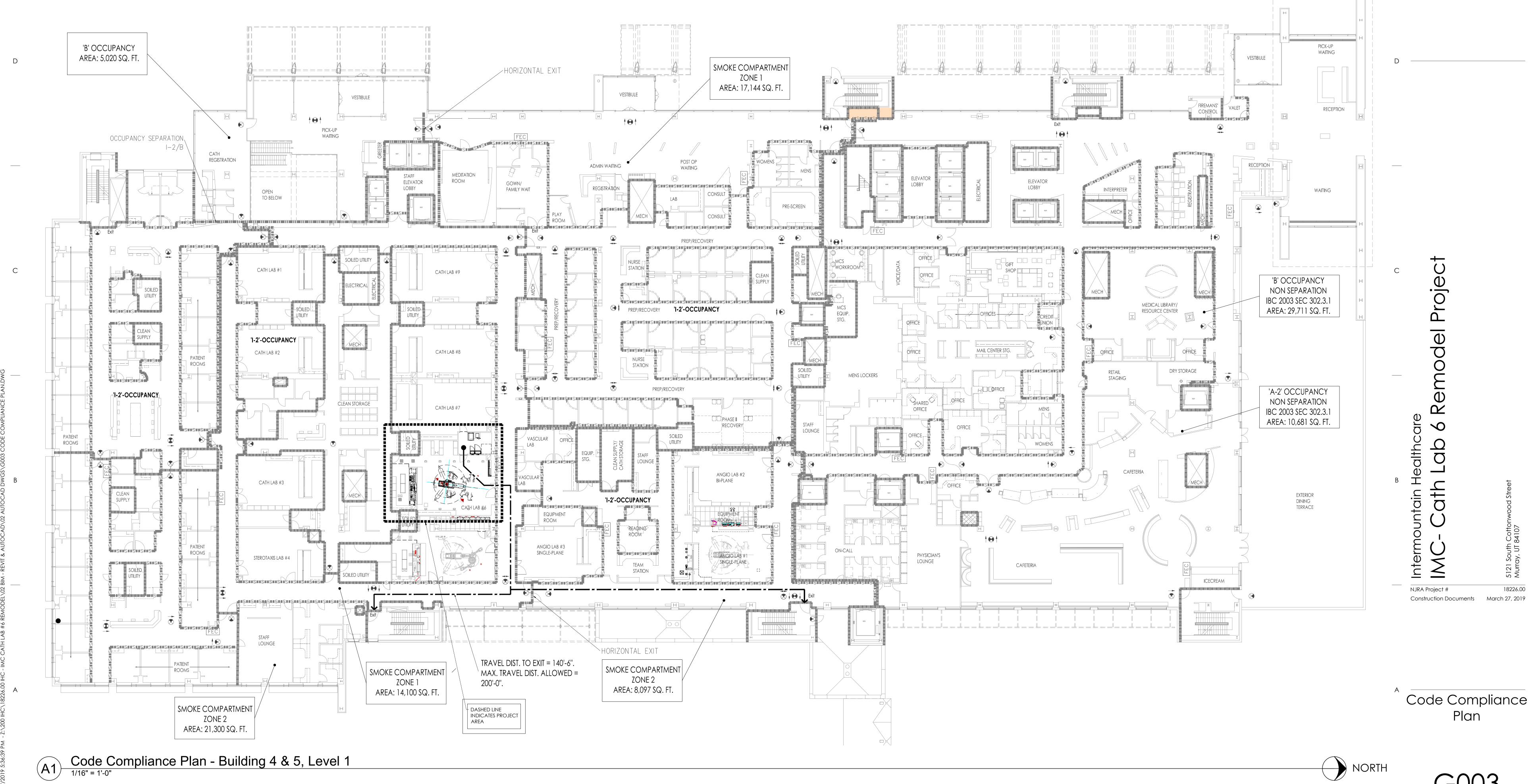
General Information

| | 2015 - I E | B C REVIEW | | APPLICABLE CODI | ES | LEGEND | |
|--|---|--|--|-------------------------------------|------|---------------------|---------------------------------|
| Main Hospital | Allowable Area For I-2 Occupancy & Type I-A Const.: Unlimited sq. ft. per floor (Table 503) | Construction Type : Type I-A | Sprinkler System Entire Building is fully equipped with automatic sprinkler system. | International Building Code (IBC) | 2015 | | 0-HR SMOKE PARTITION WALL |
| Actual Stories: 15 (New Cath Lab at Level 1 of Building 4) | Area increase due to frontage: N/A Total allowable area per floor: Unlimited sq. ft. (Table 503) | Fire resistance rating requirements for building elements (Table 601) Structural frame - 3 Hours | Incidental use areas | International Fire Code | 2015 | | 1-HR FIRE RATED SMOKE BARRIER |
| Project Square feet (BGSF): 900 | Project Remodel Area: 900 sq. ft. (Total area 1200 sq. ft.) | Exterior Bearing walls - 3 Hours Interior Non-Bearing walls- 0 Hours | Waste & linen collection rooms located in I-2 occupancy - 1 hour (IBC Table 509) Storage rooms larger than 100 sq.ft. and storing combustible material- 1 hour | International Mechanical Code (IMC) | 2015 | | WALL SEPARATING SMOKE ZONES |
| Occupancy: I-2 | Allowable Stories | Floor Construction - 2 Hours Roof Construction - $1-\frac{1}{2}$ Hours | (NFPA 18.3.2.1) Storage rooms larger than 50 sq.ft and not exceeding 100 sq.ft- provide door | International Plumbing Code | 2015 | | 1-HR FIRE RATED WALL |
| Construction Type: 1A | For I-2 Occupancy & Type I-A Const.: Unlimited Stories (Table 503) Actual Stories: 13 above grade and 2 below grade | 2 | closer. (NFPA 18.3.6.3.11) | National Electric Code | 2017 | | 2-HR FIRE RATED WALL |
| Fireproofing: Yes | Common path of egress travel in exit access areas | | Occupant Load (Table 1004.1.1) Inpatient Treatment areas- 240 sq.ft. per person | NFPA 101 Life Safety Code | 2015 | | DENOTES PATH OF TRAVEL TO EXIT. |
| Highrise: Yes | For I-2 Occupancy - 75 feet (1014.3) | | Total Occupant Load = 5 occupants | ANSI 117.1 | 2009 | FEC | FIRE EXTINGUISHER CABINET |
| Automatically Sprinkled: Yes | Exit access travel distance For I-2 Occupancy - 200 feet (with sprinkler system) (Table 1016.1) | | Egress width calculation: Required egress width per IBC sec. 1005.1 = occupant load x 0.3 | | | | EVIT CLONI |
| Structure: Unbonded Brace Frame | Corridor Width | | 5 x 0.3= 1.5 inches Egress width provided = 36 inches | | | | EXIT SIGN |
| | For 1-2 Occupancy - 96 inches in areas where required for bed movement (1018 | 5.2) | Egress width provided – 50 menes | | | $\langle 2 \rangle$ | OCCUPANT LOAD |



5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com





- 1.1. Governing Building Code: 2015 International Building Code (IBC) and 2015 International Existing Building Code (IEBC) A. Risk Category:
- 1.2. Earthquake: A. Seismic Design Category... B. Spectral Response Accelerations: $S_S = 1.55 g$ $S_{DS} = 1.035 g$ $S_1 = 0.529 g$ $S_{D1} = 0.529 g$ C. Soil Site Class:

 $F_a = 1.0$

D. Importance Factor, I_E:

 $F_{v} = 1.5$

2. Structural Steel

- 2.1. Material: A. W-Shapes: ASTM A992, $(F_v = 50 \text{ ksi})$, except as noted otherwise B. All Other Shapes and Plates: ASTM A36 (Fy = 36 ksi), except as noted otherwise
 - C. Rectangular and Square Hollow Structural Sections (HSS): ASTM A500, Grade C (Fy = 50 ksi) D. Round HSS: ASTM A500, Grade C (Fy = 46 ksi)
 - E. Steel Pipe: ASTM A53, Grade B (Fy = 35 ksi)
- F. Deformed Bar Anchors (DBA): ASTM A496 G. Headed Stud Anchors (HSA): ASTM A108, with dimensions complying with AISC specifications H. Anchor Rods: ASTM F1554, Grade 36, unless noted otherwise, with ASTM A563 heavy hex nuts and ASTM F436 hardened washers
- 2.2. Fabrication and construction shall comply with the following Codes and Standards: A. American Institute of Steel Construction (AISC) 360-10, "Specification for Structural Steel
- Buildings" B. AISC 341-10, "Seismic Provisions for Structural Steel Buildings"
- C. AISC 303-10, "Code of Standard Practice for Steel Buildings and Bridges" excluding the following: Section 3.3 (last sentence of first paragraph), Section 4.4, Section 4.4.1, Section 4.4.2, Section 4.5, and Section 7.13.3
- 1. The architectural drawings are the prime contract drawings. Consultants' drawings by other disciplines are supplementary to the architectural drawings. The structural drawings shall be used in conjunction with the architectural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in architectural, structural, and/or other consultants' drawings. Refer to the Special Instructions section of the general notes, below.
- D. AISC/RCSC 2009, "Specification for Structural Joints Using ASTM A325 or A490 Bolts" E. American Welding Society (AWS) D1.1:2010, "Structural Welding Code – Steel" (specific items do not apply when they conflict with the AISC requirements) F. American Welding Society (AWS) D1.8:2009, "Structural Welding Code – Seismic Supplement"
- (specific items do not apply when they conflict with the AISC requirements) G. American Iron and Steel Institute (AISI) 2007, "North American Specification for the Design of
- Cold-Formed Steel Structural Members"
- 2.3. Structural shapes and plates shall be fabricated from newly rolled (milled) one-piece sections without splices, unless specifically noted otherwise on the structural drawings. Connections for structural steel shall comply with the structural drawings, unless written approval is given by the structural engineer.
 - A. It is recommended the steel erection contractor and steel fabricator contact the Quality Assurance
- Agency prior to beginning any welds. A program of joint preparation and welding procedures should be worked out between the two parties before the welding is started so that correct welds will be made from the beginning. B. Certification of Welders: All shop and field welding shall be executed by AWS certified welders
- who have been specifically certified for the process of welding being performed. The welder's certification will be considered as being current unless the welder is not engaged in the process of welding being performed for a period exceeding six months or there is a specific reason to question a welder's ability as required by AWS. Certification and records must comply with AWS Standards. Certification and appropriate records must be provided to the architect prior to
- C. Electrodes: E-70 XX or as noted otherwise. E60 XX may be used for welding steel floor and roof D. Minimum Welds: All intersecting steel shapes that are not bolted shall be connected by a fillet weld all around, unless noted otherwise. Fillet weld sizes that are not shown shall be 1/16" less
- than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates less than 1/4" shall be of the same size as the thinnest of the connected parts. E. Bolts: Do not apply any welds, including "tack" welds to bolts, including anchor bolts, except as
- specifically detailed in the drawings. F. Headed Stud Anchor (HSA) welding and Deformed Bar Anchor (DBA) welding shall conform to
- the manufacturer's specifications. Welding shall comply with AWS D1.1 Section 7.6 through 7.9 and Annex G.

2.5. Bolted Connections:

- A. Provide snug tightened joints with ASTM A325N Type 1 bolts for steel to steel connections, as noted herein or as noted on the drawings. Snug tightened joints shall be used in connections for simple span framing and beam (or girder) to bearing plate connections. The snug tightened condition is usually attained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench. Bolts shall be tightened until all plies of the joint are in firm contact.
- B. Provide hardened washers beneath the turned element of all bolts or nuts. Provide hardened beveled washers, to compensate for the lack of parallelism, where the outer face of the bolted parts has a slope greater than one in twenty with respect to the plane normal to the bolt axis. Hardened washers or plates installed over oversized holes or slotted holes shall be at least 5/16" thick and shall conform to ASTM F436. Plates or bars installed at slotted holes shall have a size
- sufficient to completely cover the slot after installation. C. Where a steel to steel beam connection is not detailed in the drawings, provide a standard AISC framed connection with the capacity to support one half of the total uniform load capacity of the given shape for the span and for the steel specified. D. Bolts, nuts and washers shall not be reused.

2.6. Beam Web Stiffener Plates:

A. Provide full-height web stiffener plates to each side of all beams above all bearing points. Unless noted otherwise, stiffener plates shall be the thickness indicated in the typical stiffener plate detail.

3. Miscellaneous

- 3.1. Post-Installed Anchors in Concrete
 - A. Anchorage to hardened concrete shall include all mechanical and adhesive anchors and epoxy doweled reinforcing bars of size, quantity, spacing, and embedment as shown on the drawings. Additional anchors shall not be used without approval from the Engineer prior to installation. B. Special inspection is required during the installation of all post-installed anchors. Refer to applicable code evaluation reports and the Quality Assurance and Statement of Special Inspections sections of the General Structural Notes.
- C. Anchorage to Concrete: 1. All post-installed anchors into hardened concrete shall be selected from the following pre-

| approved products, unless noted otherw | /ISe: |
|--|----------------------------|
| Steel Screw Anchor | Evaluation Report (ICC_ES) |
| Hilti KWIK HUS-EZ | ESR-3027 |
| Powers Wedge-Bolt+ | ESR-2526 |
| Simpson Titen HD | ESR-2713 |
| Steel Expansion/Wedge Anchor | Evaluation Report (ICC_ES) |
| Hilti KWIK Bolt TZ | ESR-1917 |
| ITW Red Head Trubolt+ | ESR-2427 |
| Powers Power-Stud+ SD2 | ESR-2502 |
| Simpson Strong-Bolt 2 | ESR-3037 |

- D. Alternate anchors or adhesives are permitted with approval of the engineer. The Contractor shall submit the proposed anchor product data and code evaluation report demonstrating the anchor
- is equivalent or exceeds the capacity of the specified anchor. E. Installation of adhesive anchors horizontally or upwardly inclined to support sustained tension loads shall be performed by personnel certified by an applicable certification program. Certification shall include written and performance tests in accordance with the ACI/CRSI Adhesive Anchor Installer Certification program, or equivalent. Proof of current certification shall
- be submitted to the engineer for approval prior to commencement of installation. F. Anchors shall be installed according to the manufacturer's published instructions and applicable code evaluation reports including:
- 1. Hole diameter, depth, and cleaning procedure 2. Adhesive mixing, preparation, and placement

. Carbon steel anchors are limited to use in dry, interior locations.

3. Installation torque G. Locate all existing reinforcement and embedded items prior to drilling into concrete or masonry elements. Do not damage rebar or embeds while drilling or installing anchors. H. Grout all defective or abandoned holes with non-shrink grout or an injectable epoxy adhesive matching the surrounding concrete compressive strength. Consult the Architect for additional requirements at architecturally exposed concrete.

4. Special Instructions

- 4.1. The project specifications are not superseded by the General Structural Notes but are intended to be complementary to them. Consult the specifications for additional requirements in each section. Notes and specific details on the drawings shall take precedence over General Structural Notes and typical
- 4.2. The architectural drawings are the prime contract drawings. Consultant drawings by other disciplines are supplementary to the architectural drawings. All omissions or conflicts, including dimensions, between the various elements of the consultants' drawings and/or specifications shall be brought to the attention of the Architect before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the Architect without additional cost to the owner. Any work done by the contractor after discovery of such discrepancy shall be done at the contractor's risk.
- 4.3. The structural drawings shall be used in conjunction with the architectural drawings. Primary structural elements and overall structural layout are indicated within the structural plans and details. Some secondary elements, architectural layouts, alcoves, elevations, slopes, depressions, curbs, mechanical equipment and electrical equipment, are not indicated within the structural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings.

4.4. Shoring and Bracing Requirements:

- A. Floor and Roof Structures -- The General Contractor is responsible for the method and sequence of all structural erection. He shall provide temporary shoring and bracing as his method of erection requires to provide adequate vertical and lateral support. Shoring and bracing shall remain in place as the chosen method requires until all permanent members are in place and all final connections are completed, including all roof and floor attachments. The building shall not be considered stable until all connections are complete.
- 4.5. Submittals: A copy of all shop drawings that have been submitted for review must be kept at the construction site for reference. These drawings must bear the appropriate review stamps. The shop drawing review shall not relieve the contractor of the responsibility of completing the project according to the contract documents. The general contractor shall review and mark all shop drawings prior to submitting them to the Architect for his review. Shop Drawings made from reproductions of (these) contract drawings will be rejected.
- 4.6. Project Coordination: It shall be the responsibility of the general contractor to coordinate with all trades any and all items that are to be integrated into the structural system. Openings or penetrations through, or attachments to the structural system that are not indicated on these drawings shall be the responsibility of the general contractor and shall be coordinated with the Architect/Engineers. The order of construction is the responsibility of the general contractor. It is the contractor's obligation to provide all items necessary for his chosen procedure.
- 4.7. Contractor shall field verify all dimensions, and conditions. If the contract drawings do not represent actual conditions, contractor shall notify architect/engineer prior to fabrication or construction within
- 4.8. Notice of Copyright: The structural drawings, plans, schedules, notes and details are hereby copyrighted by Reaveley Engineers and Associates, Inc., All Rights reserved. Submission or distribution of documents to meet official regulatory requirements or for similar purposes in connection with the project is not to be construed as publication in derogation of Reaveley Engineers and Associates, Inc.'s reserved rights. The documents defining the structure are instruments of service prepared by Reaveley Engineers and Associates, Inc. for one use only. Furthermore, these documents shall not be reproduced, or copied, in whole or in part by the contractor or his subcontractors for preparation of shop drawings or other submittals.

5. Quality Assurance

- 5.1. Quality Assurance Agency Requirements: A. The Owner shall engage a qualified Quality Assurance Agency (QAA) to provide all special
- inspection and quality assurance testing for the project. The QAA shall provide all information necessary for the building official to determine that the agency meets the applicable requirements 1. The QAA shall be objective, competent and independent from the contractor responsible for the work being inspected. The agency shall also disclose possible conflicts of interest to confirm objectivity.
- 2. The QAA shall have adequate equipment to perform required tests. 3. The QAA shall employ experienced personnel educated in conducting, supervising and evaluating tests and/or inspections. Experience or training shall be considered relevant when the documented experience or training is related in complexity to the same type of special inspection activities for projects of similar complexity and material qualities.
- 4. Prior to the start of construction, the QAA shall submit to the building official, the owner architect and engineer copies of the following: a. Current calibration records for all equipment to be used for the work being inspected and/or
- b. Current certification and training records for each individual performing the inspections and/or testing.
- c. Sample inspection and testing reports and the distribution list for the records. d. Proposed inspection procedures and frequency for each inspection required by the work.
- e. Proposed testing methods and frequency of testing required by the work. 5. The QAA shall send copies of all inspection and testing reports to the building official, owner, architect, engineer and contractor. Reports shall indicate that the work inspected was or was not completed in conformance to the approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected,
- 6. The QAA shall submit a final report documenting required special inspections and correction of any discrepancies noted in the inspections. The final report shall be distributed to the building official, owner, architect and engineer in a timely manner prior to the completion of the project.

the discrepancies shall be brought to the attention of the building official, architect and

5.2. Contractor Responsibilities:

- A. Each contractor responsible for the construction of a system or component requiring special inspections or testing shall submit a written statement of responsibility to the building official, owner, architect and engineer prior to the commencement of the work. The contractor's statement of responsibility shall contain the following: 1. Acknowledgement of awareness of the special requirements defined in the statement of
- special inspections.
- 2. Acknowledgement that control will be exercised in order to obtain conformance to the approved construction documents. 3. Contractor's internal quality control procedures, methods and measures to be used in order to
- reports, frequency of reporting and distribution of reports. 4. Identification and qualifications of the person(s) responsible for quality control and their position(s) within the organization.

obtain conformance to the approved construction documents. Include copies of quality control

- B. Notification of Engineer: The contractor shall notify the engineer twenty-four hours prior to the
- items listed in the Structural Observations by the Engineer of Record section. C. Notification of QAA: The contractor shall notify the QAA in a timely manner so that inspection and testing may be performed as outlined in the statement of special inspections.

5.3. Structural Observations by the Engineer of Record.

- A. The Engineer of Record will perform structural observations at critical phases of the project as listed below. Observations will be made on a periodic basis throughout the construction of the structural system. During this time frame, one site visits will be made. Copies of the engineer's report will be distributed to the architect, contractor, owner, and building official. 1. Completing the structural steel framing
- B. Observation visits to the site by the Engineer's field representatives shall not be construed as inspection or approval of construction.

6. Statement of Special Inspections

- 6.1. The following materials, systems and components require special inspection or testing per Chapter 17 of the International Building Code (IBC).
- 6.2. For items requiring continuous inspection, a special inspector must be present onsite during the performance of that task. In most cases, periodic inspections/tests shall be performed prior to commencing the task, intermittently during the task, and at the completion of the task.

Structural Steel per IBC Section 1705.2.1, 1705.11.1 & 1705.12.2

| Item | Frequency | Detailed Instructions |
|---|--------------|---|
| Prior to Welding (Table N5.4-1, AISC 3 | 60-10)· | |
| Verify welding procedures (WPS) and consumable certificates | Continuous | |
| Material identification | Periodic | Verify type and grade of material. |
| Welder identification | Periodic | A system shall be maintained by which a welder who has welded a joint or member can be identified. |
| Fit-up groove welds | Periodic | Verify joint preparation, dimensions, cleanliness, tacking, and backing. |
| Access holes | Periodic | Verify configuration and finish. |
| Fit-up of fillet welds | Periodic | Verify alignment, gaps at root, cleanliness of sterour surfaces, and tack weld quality and location. |
| During Welding (Table N5.4-2, AISC 36 | 60-10): | |
| Use of qualified welders | Periodic | Verify that welders are appropriately qualified. |
| Control and handling of welding consumables | Periodic | Verify packaging and exposure control. |
| Cracked tack welds | Periodic | Verify that welding does not occur over cracked tack welds. |
| Environmental conditions | Periodic | Verify win speed is within limits as well as precipitation and temperature. |
| WPS followed | Periodic | Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position. |
| Welding techniques | Periodic | Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass |
| After Welding (Table N5.4-3, AISC 360 | -10)· | |
| Welds cleaned | Periodic | Verify that welds have been propyl cleaned. |
| Size, length, and location of welds | Continuous | |
| Welds meet visual acceptance criteria | Continuous | |
| Arc strikes | Continuous | |
| k-area | Continuous | |
| Backing & weld tabs removed | Continuous | |
| Repair activities | Continuous | |
| Document acceptance or rejection of welded joint/member | Continuous | |
| Nondestructive Testing (Section N5.5, | AISC 360-10) | |
| CJP welds (Risk Cat. II) | Periodic | Ultrasonic testing shall be performed on 10% of |
| | | CJP groove welds in butt, T- and corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater. Testing rate must be increased if > 5% of welds tested have unacceptable defects. |
| CJP welds (Risk Cat. III or IV) | Continuous | A reduction in the rate of ultrasonic testing is allowed per Section N5.5e. |
| Prior to Bolting (Table N5.6-1, AISC 36 | 0-10): | |
| Certifications of fasteners | Continuous | |
| | 1 | |

| Periodic | Verify appropriate faying surface condition and hole preparation, if specified, meet requirements. |
|-------------------|---|
| Periodic | Observe and document verification testing by installation personnel for fastener assemblies and methods used. |
| | |
| Frequency | Detailed Instructions |
| Periodic | Verify proper storage of bolts, nuts, washers, and other fastener components. |
| 60-10): | |
| Periodic | Verify that fastener assemblies are of suitable |
| | condition, paced in all holes, and washers are positioned as required. |
| Periodic | positioned as required. |
| Periodic Periodic | positioned as required. Verify that joints are brought to snug-tight condition |
| | Periodic Frequency Periodic 60-10): |

Periodic

Verify that fasteners have been marked in

Verify grade, type, and bolt length if threads are

Verify proper procedure is used for the joint detail.

accordance with ASTM requirements.

excluded from the shear plane.

Detailed Instructions

ACI 318: 17.8.2

approved ICC-ES report.

All post-installed anchors/dowels shall be specially inspected as required by the

accordance with RCSC Specification, progressing systematically from the most rigid point toward the free edges. After Bolting (Table N5.6-3, AISC 360-10): Document acceptance or rejection of Continuous

Other Steel Inspections (Section N5.7, AISC 360-10: Table J8-1, J10-1, AISC 341-10): Structural steel details

Concrete Construction per IBC Sections 1705.3 & 1705.12.1

Post-installed anchors or dowels

bolted connections

Fasteners marked

Proper fasteners for joint

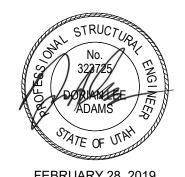
Proper bolting procedure

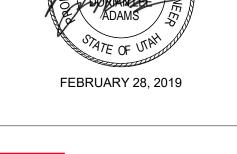
All fabricated steel or steel frames shall be inspected to verify compliance with the details shown in the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection.

Frequency

NJRA Architects, Inc. 5272 S. College Drive, Suite 104

Murray, Utah 84123 www.njraarchitects.com







Salt Lake City, UT 84102 P 801 486 3883 F 801 485 0911 www.reaveley.com

9 _

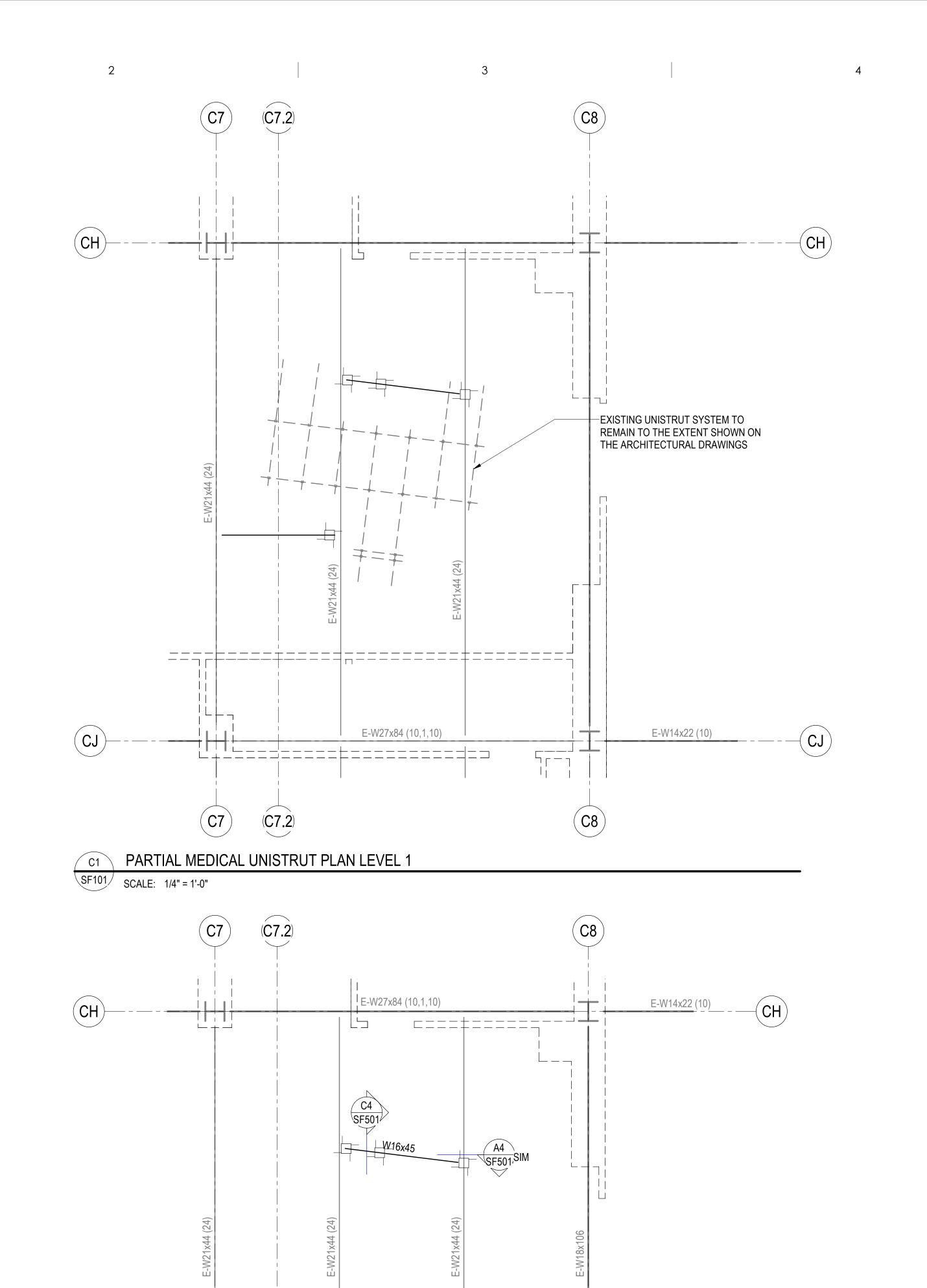
NJRA Project #

Construction Documents

GENERAL

18226.00

Feb 28, 2019



(C7)

SF101 SCALE: 1/4" = 1'-0"

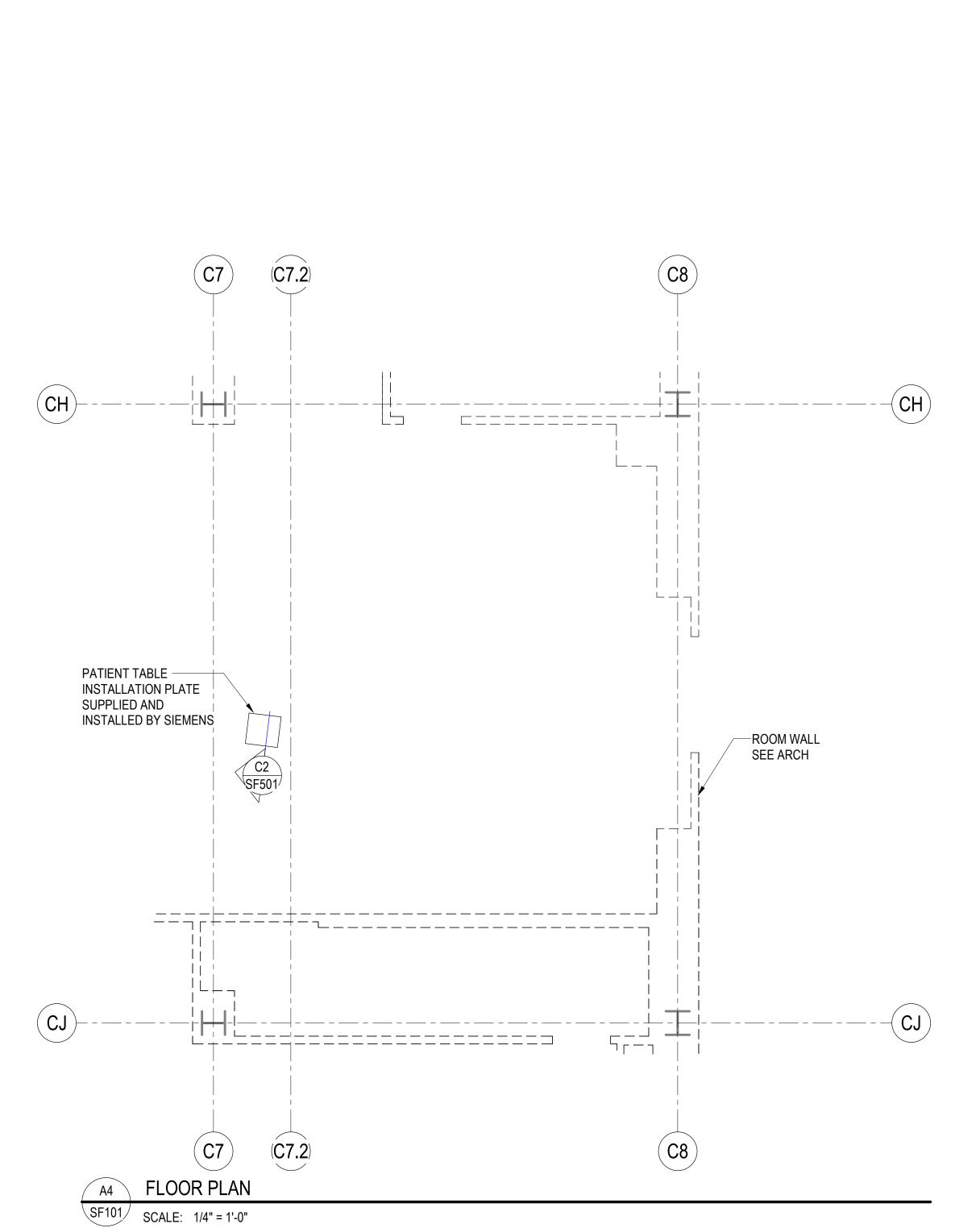
C:\Revit Models\2018-351 IMC Cath Lab #6-RS2018-Centralrvt_rharris@reaveley.com.rvt

PARTIAL MEDICAL EQUIPMENT PLAN LEVEL 1

E-W27x84 (10,1,10)

—ROOM WALL SEE ARCH

E-W14x22 (10)



PLAN NOTES

1. Once the ceiling are partially removed to install new

examine existing unistrut system.

medical Boom, contact engineer, with 72 hours' notice, to

PLAN LEGEND

EXISTING STEEL COLUMN - WIDE FLANGE

EXISTING STEEL BEAM OR GIRDER

EXISTING STEEL JOIST OR PURLIN

STEEL BEAM OR GIRDER

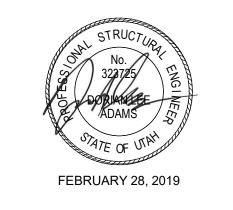
___ EQUIPMENT SUPPORT

STEEL JOIST OR PURLIN

MEDICAL EQUIPMENT LEGEND



NJRA Architects, Inc. 5272 S. College Drive, Suite 104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com





Intermountain Healthcare

IMC- Cath Lab 6 Remodel Proje

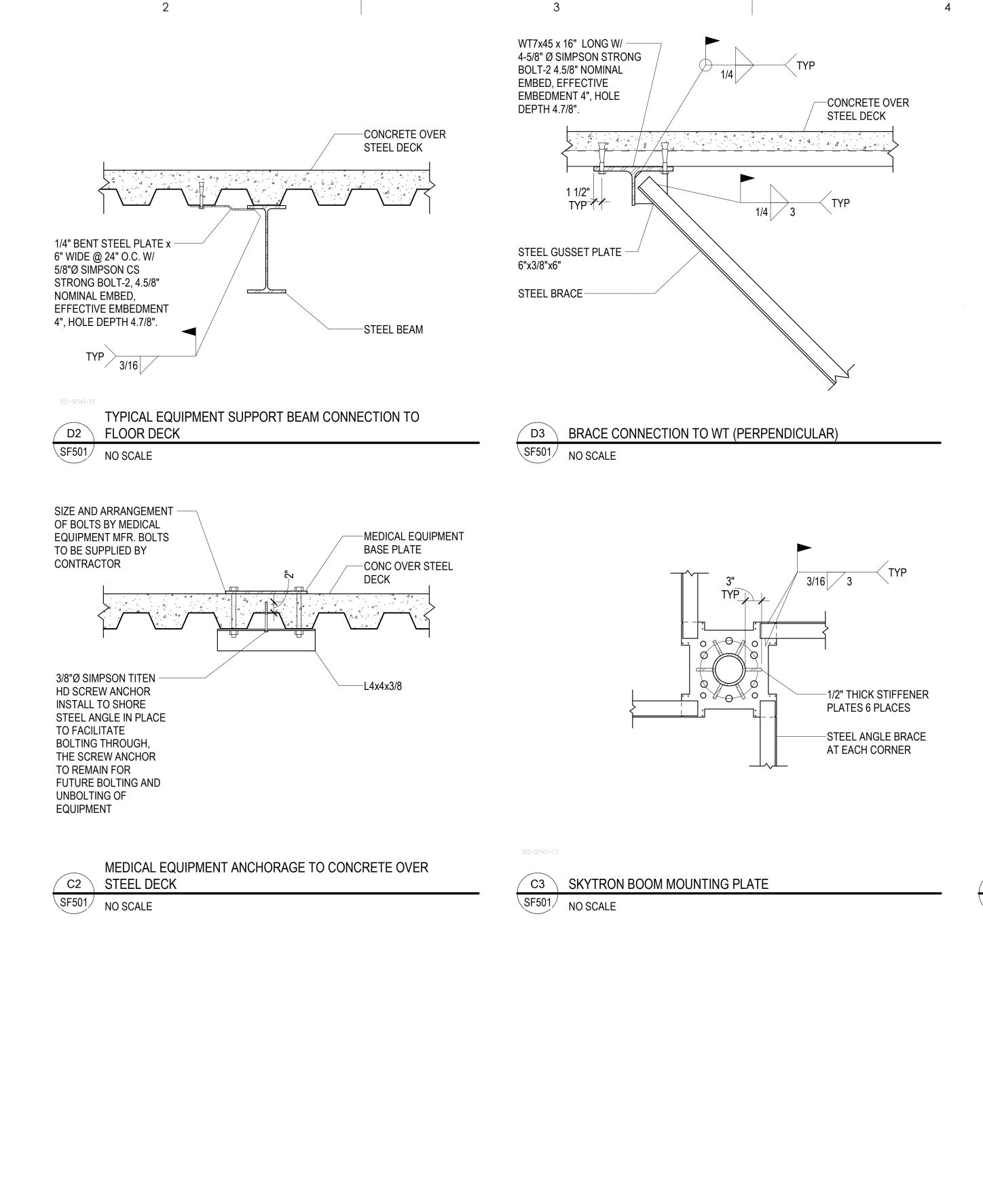
Stat South Cottonwood Street

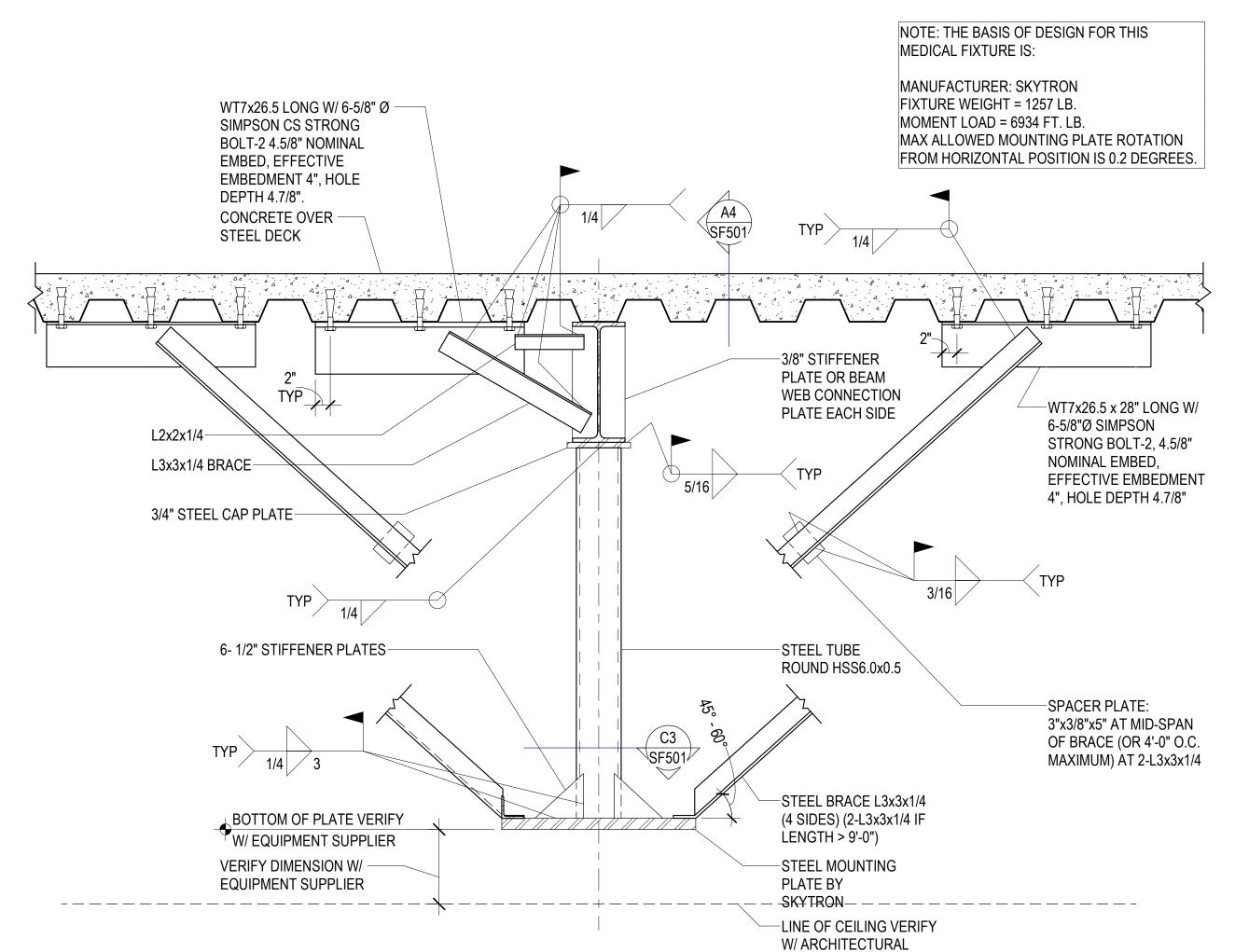
Construction Documents

Eep 58

MEDICAL EQUIPMENT SUPPORT PLANS

SF101





SKYTRON MEDICAL EQUIPMENT MOUNT SUPPORT DETAIL

SKYTRON MEDICAL EQUIPMENT MOUNT SUPPORT DETAIL



Remodel

9

+

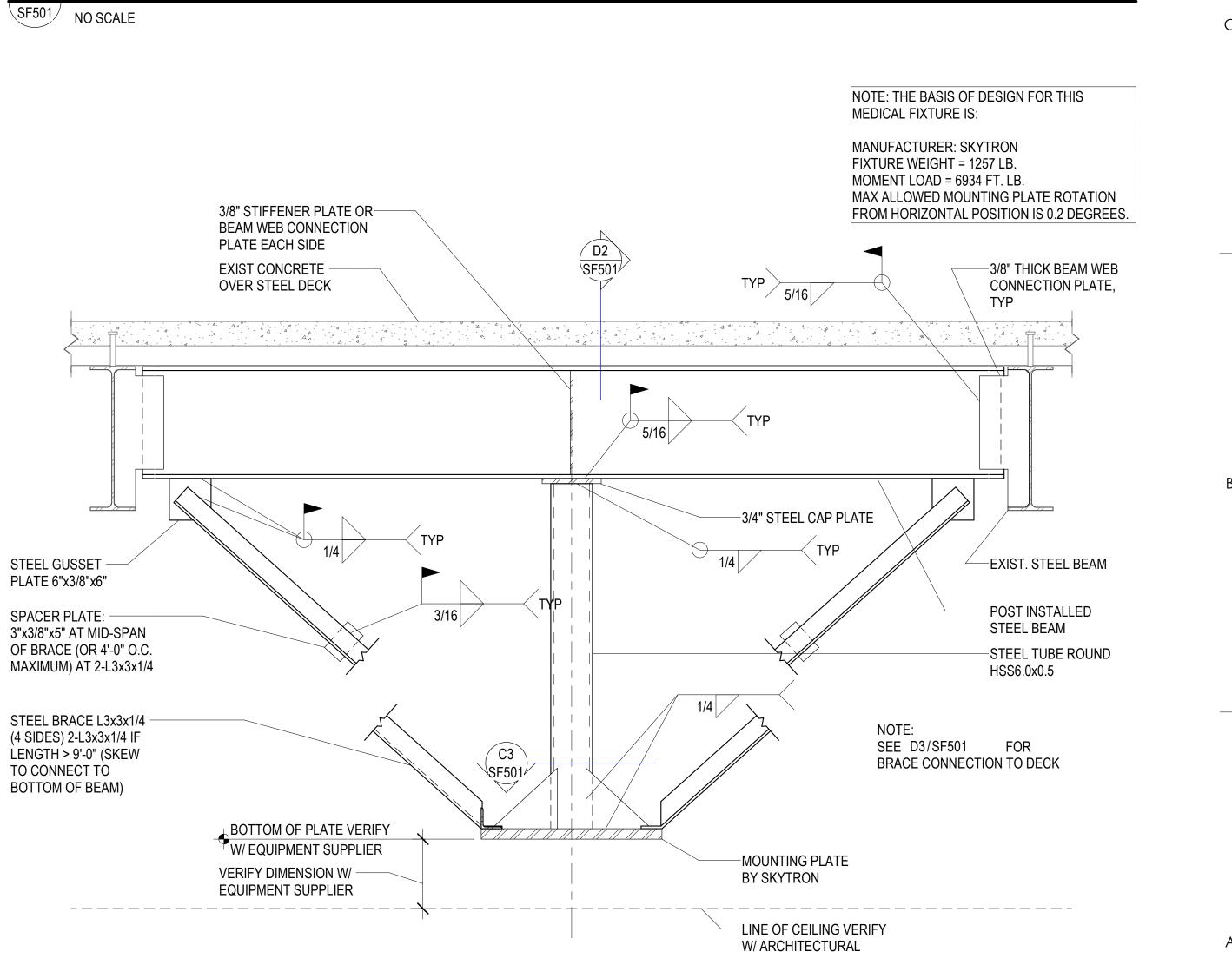
NJRA Project #

Construction Documents

alth

ARCHITECTS

NJRA Architects, Inc.



MEDICAL EQUIPMENT SUPPORT DETAILS

18226.00

Feb 28, 2019

SF501

KEY NOTES - FLOOR PLAN

- 1. DASHED LINE INDICATES REMOVAL OF PORTIONS OF EXISTING GYPSUM BOARD CEILING, LAY IN CEILING, GRID SYSTEM, LIGHTING, DIFFUSERS ETC. FOR INSTALLATION OF THE NEW STRUCTURAL SUPPORT AT THE BOTTOM OF THE FLOOR DECK ABOVE FOR THE NEW CATH LAB EQUIPMENT AS REQUIRED. GENERAL CONTRACTOR SHALL COORDINATE WORK WITH SIEMENS TO DETERMINE THE EXTENT OF CEILING REMOVAL. SEE STRUCTURAL MECHANICAL, ELECTRICAL DRAWINGS FORE MORE INFORMATION.
- 2. RE-INSTALL REMOVED GYPSUM BOARD AND LAY IN CEILING TO ORIGINAL CONDITION AFTER WORK IS COMPLETED ABOVE CEILING. PATCH, REPAIR, REFINISH AND REPAINT TO MATCH WITH ADJACENT EXISTING. REMOVE AND REINSTALL ELECTRICAL AND MECHANICAL ITEMS ALSO AS REQUIRED IN ORDER TO COMPLETE WORK IN THIS AREA TO ORIGINAL CONDITION.
- 3. DASHED LINE INDICATES FLOOR TO DECK TEMPORARY DUST PROOF CONSTRUCTION BARRIER TO PREVENT DUST & DIRT MIGRATION AND TO SEPARATE AREAS OCCUPIED BY OWNER FROM FUMES AND NOISE. CONSTRUCTION BARRIER TO BE ERECTED WITH 3 5/8" 20 GA. MTL. STUDS @16" O.C. FRAMING WITH 5/8" TYPE 'X' ABUSE RESISTANT GYPSUM BOARD ON BOTH SIDES. TAPE AND SEAL ALL JOINTS AND OPENINGS. SEAL JOINTS AT PERIMETER. PARTITION TO BE EQUIPPED WITH 4'-0" LOCKABLE MAN DOOR WITH STICKY MATS ON BOTH SIDES OF DOOR. COORDINATE WITH OWNER AND FIELD VERIFY FOR EXACT LOCATION OF CONSTRUCTION BARRIER.EXISTING GYPSUM BOARD CEILING ALONG WITH EXISTING CEILING LIGHTS, MECHANICAL DIFFUSERS ETC. IN THIS AREA TO REMAIN. PROTECT DURING CONSTRUCTION. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.
- 4. EXISTING DOORS TO REMAIN. PROTECT DURING CONSTRUCTION.
- 5. NOT USED.
- 6. EXISTING CABINET, COUNTERTOP, PLUMBING FIXTURE, ETC. TO REMAIN. PROTECT DURING CONSTRUCTION.
- 7. EXISTING 4" DIA. HOLE ON FLOOR TO REMAIN AND RE-USED FOR THE NEW CATH LAB EQUIPMENT BY SIEMENS. THIS IS IDENTIFIED AS THE ORIENTATION POINT FOR THE PATIENT TABLE. FIELD VERIFY TO ESTABLISH ACTUAL LOCATION AND EXISTING CONDITIONS. SEE STRUCTURAL DRAWINGS FOR DETAILS ON ANCHORAGE. ALL EXPOSED STEEL TO BE SPRAY APPLIED FIRE PROOFED TO RETAIN FIRE RATINGS OF THE ADJACENT EXISTING AFTER ALL WORK IS COMPLETED.
- 8. EXISTING FLOORING TO REMAIN. PROTECT DURING CONSTRUCTION.
- 9. EXISTING 4" DIA. HOLE & CINDUIT TO REMAIN AND CONTINUE TO FUNCTION WITH THE NEW EQUIPMENT REPLACED BY SIEMENS, IDENTIFIED AS "B10" ON SIEMENS PLANS. FIELD VERIFY EXACT LOCATION.
- 10. EXISTING CEILING, LIGHTING, MECHANICAL DIFFUSER ETC TO REMAIN. PROTECT DURING CONSTRUCTION.
- 11. DASHED LINES INDICATE CATH LAB EQUIPMENT ANCHOR PLATES TO BE INSTALLED UNDER THE FLOOR DECK ABOVE THE CEILING. FIELD VERIFY EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK. RELOCATE AND OR RE-ROUTE EXISTING HVAV DUCT DIFFUSER, PLUMBING PIPING, ELECTRICAL ETC. AS REQUIRED TO COMPLETE THE WORK.
- 12. EXISTING TWO HOUR FIRE RATED METAL STUD FRAMED HORIZONTAL EXIT WALL TO REMAIN. PROTECT DURING CONSTRUCTION.
- 13. EXISTING WALL TO REMAIN, PROTECT DURING CONSTRUCTION. REPAINT WALL AS REQUIRED TO ORIGINAL CONDITION AFTER ABOVE CEILING WORK IS COMPLETED.



NJRA Architects, Inc. 5272 S. College Drive, Suite 104 Murray, Utah 84123

801.364.9259

www.njraarchitects.com



Intermountain Healthcare

Intermountain Healthcare

IMC- Cath Lab 6 Remodel Project

S121 South Cottonwood Street

March 27, 2018

Watch 27, 2018

Demolition Plan-Lower Level 1

Demolition Floor Plan

SCALE: 1/2" = 1'-0"

KEY NOTES - FLOOR PLAN

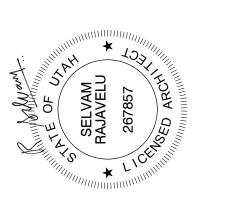
- REMOVE EXISTING GYPSUM BOARD CEILING, PATCH AND REPAIR AS REQUIRED FOR INSTALLATION AND OR REMOVAL OF HVAC EQUIPMENT, DUCT, DIFFUSERS, STRUCTURAL SUPPORT FOR THE CATH LAB EQUIPMENT, MEDGAS & SKYTRON LIGHT BOOMS ETC. ABOVE. SEE NEW FLOOR PLANS, STRUCTURAL MECHANICAL, ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- DASHED LINE INDICATES EXTENT OF DEMOLITION OF THE EXISTING GYPSUM BOARD CEILING. SEE REFLECTED CEILING PLAN A131 FOR NEW CEILING TO BE INSTALLED AFTER STRUCTURAL, MECHANICAL AND ELECTRICAL WORK IS COMPLETED ABOVE CEILING.
- EXISTING MEDGAS COLUMN TO BE REMOVED ALONG WITH ASSOCIATED STRUCTURAL SUPPORTS ABOVE. SEE MECHANICAL AND PLUMBING DRAWINGS FOR RECONNECTING THE EXISTING GAS LINES TO THE NEW SKYTRON MED GAS BOOM. COORDINATE WITH OWNER'S VENDOR SKYTRON FOR MORE INFORMATION ON THE воом.
- EXISTING GYPSUM BOARD CEILING ALONG WITH EXISTING CEILING LIGHTS, MECHANICAL DIFFUSERS ETC. IN THIS AREA TO REMAIN U.N.O. PROTECT DURING CONSTRUCTION. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.
- EXISTING WALL SCONCES TO REMAIN, TYP. PROTECT DURING CONSTRUCTION. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- 6. EXISTING LEAD LINED DOORS & HARDWARE TO REMAIN. PROTECT DURING CONSTRUCTION.
- REMOVE EXISTING SHEET VINYL FLOORING & COVED BASE. DASHED LINE INDICATES EXTENT OF REMOVAL. NOTE THAT UNDER FLOOR MAGNETIC SHIELDING SHALL REMAIN. PROTECT SHIELDING DURING REMOVAL & INSTALLATION OF NEW FLOORING. SEE FINISH FLOOR PLAN A151 FOR MORE INFORMATION ON NEW FINISHES.
- REMOVE EXISTING ACOUSTICAL CEILING TILES, GRID SYSTEM, LIGHTS, DIFFUSERS ETC. AS REQUIRED TO INSTALL NEW MECHANICAL DUCT, D VAV BOX ETC. ABOVE CEILING. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION. RE-INSTALL CEILING TILES, LIGHTS & DIFFUSERS BACK AFTER WORK IS COMPLETED. SEE REFLECTED CEILING PLAN ON SHEET A131 AND ELECTRICAL DRAWINGS.
- 9. EXISTING MED GAS AND POWER OUTLET FLOOR PEDESTAL BOX TO REMAIN. PROTECT DURING CONSTRUCTION. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.
- 11. EXISTING CABINET, COUNTERTOP, PLUMBING FIXTURE, ETC. TO REMAIN. PROTECT DURING CONSTRUCTION.
- 12. ELECTRICAL PANELS. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- 13. EXISTING WALL MOUNTED MECHANICAL GRILL TO REMAIN. PROTECT DURING CONSTRUCTION.
- 14. EXISTING LEAD SHIELDED GLASS TO REMAIN. PROTECT DURING
- 15. EXISTING 4" DIA. HOLE ON FLOOR TO REMAIN AND RE-USED FOR THE NEW CATH LAB EQUIPMENT BY SIEMENS. THIS IS IDENTIFIED AS THE ORIENTATION POINT FOR THE PATIENT TABLE. FIELD VERIFY TO ESTABLISH ACTUAL LOCATION AND EXISTING CONDITIONS.
- 16. EXISTING SHEET VINYL FLOORING AND COVED BASE TO REMAIN. PROTECT DURING CONSTRUCTION. SEE FINISH FLOOR PLAN.
- 17. REMOVE EXISTING 3'-0" DEEP PLASTIC LAMINATE COUNTERTOP. REPLACE WITH NEW COUNTERTOP AS INDICATED IN THE NEW FLOOR PLAN. SUPPORTS AND BRACKETS SHALL BE RE-USED.
- 18. EXISTING 4" DIA. HOLE AND CONDUIT ON FLOOR TO REMAIN AND RE-USED FOR THE NEW CATH LAB EQUIPMENT. THIS IS IDENTIFIED AS HOLE "B10" ON SIEMENS PLANS. FIELD VERIFY TO ESTABLISH ACTUAL LOCATION AND EXISTING CONDITIONS.
- 19. DASHED LINE INDICATES FLOOR TO DECK TEMPORARY DUST PROOF CONSTRUCTION BARRIER TO PREVENT DUST & DIRT MIGRATION AND TO SEPARATE AREAS OCCUPIED BY OWNER FROM FUMES AND NOISE. CONSTRUCTION BARRIER TO BE ERECTED WITH 3 5/8" 20 GA. MTL. STUDS @16" O.C. FRAMING WITH 5/8" TYPE 'X' ABUSE RESISTANT GYPSUM BOARD ON BOTH SIDES. TAPE AND SEAL ALL JOINTS AND OPENINGS. SEAL JOINTS AT PERIMETER. PARTITION TO BE EQUIPPED WITH 4'-0" LOCKABLE MAN DOOR WITH STICKY MATS ON BOTH SIDES OF DOOR. COORDINATE WITH OWNER AND FIELD VERIFY FOR EXACT LOCATION OF CONSTRUCTION BARRIER.EXISTING GYPSUM BOARD CEILING ALONG WITH EXISTING CEILING LIGHTS, MECHANICAL DIFFUSERS ETC. IN THIS AREA TO REMAIN. PROTECT DURING CONSTRUCTION. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION.
- 20. EXISTING VCT FLOORING TO REMAIN. PROTECT DURING CONSTRUCTION. PATCH AND REPAIR FLOORING AS REQUIRED IN ORDER TO ACCOMPLISH THE WORK OUTLINED IN THE CONSTRUCTION DOCUMENTS.
- CUT AND REMOVE EXTENDED PORTION OF THE EXISTING UNISTRUT AT THE CEILING AND ASSOCIATED STRUCTURAL SUPPORT ABOVE. REST OF THE CEILING UNISTRUT SYSTEM SHALL REMAIN (U.N.O) AND USED FOR THE NEW SIEMENS EQUIPMENT. NOTIFY STRUCTURAL ENGINEER FOR EXAMINATION BEFORE PROCEEDING WITH THE WORK. SEE REFLECTED CEILING PLAN FOR ADDITIONAL INFORMATION AND EXTENT OF REMOVAL.
- 22. EXISTING SIEMENS EQUIPMENT & CABINET FOR ADJACENT CATH LAB #7 SHALL REMAIN, PROTECT DURING CONSTRUCTION. SIEMENS SHALL MODIFY CABINET AS REQUIRED.

NORTH

- 23. TWO EXISTING COOLING UNITS SHALL NEED TO BE STACKED. COORDINATE WITH SIEMENS TO SCHEDULE WORK.
- 24. EXISTING SIEMENS CATH LAB EQUIPMENT AND PATIENT TABLE TO BE REMOVED BY OWNERS VENDOR SIEMENS. SCHEDULE WORK WITH

ARCHITECTS

NJRA Architects, Inc. 5272 S. College Drive, Suite 104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



NJRA Project # Construction Documents March 27, 2019

Demolition Floor Plan-Level 1

, Floor Plan-Level 1

SCALE: 1/2" = 1'-0"

KEY NOTES - FLOOR PLAN

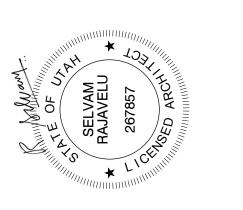
- 1. ELECTRICAL PANEL. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- NEW CATHLAB EQUIPMENT & PATIENT TABLE, PROVIDED & INSTALLED BY OWNERS VENDOR SIEMENS. SEE VENDOR DRAWINGS FOR MORE INFORMATION.
- 3. ISO-CENTER LOCATION OF THE CATH-LAB EQUIPMENT. FIELD VERIFY AND COORDINATE WITH OWNER'S VENDOR (SIEMENS) FOR MORE INFORMATION.
- 4. EXISTING STAINLESS STEEL MED GAS PEDESTAL FLOOR BOX TO REMAIN. ADD ONE DUPLEX POWER OUTLET AND CHANGE SINGLE DATA PORT TO FOUR DATA PORT IN THE BOX. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- FOUR PLEX ON THE WALLS. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION. NOTE THAT ALL EXISTING WALLS HAVE 4 LB LEAD SHIELDING UP TO 7'-0" HIGH AND MAGNETIC SHIELDING. INTEGRATION OF ALL SHIELDING SHALL NEED TO BE RETAINED AND REPAIRED TO ORIGINAL CONDITION AFTER ALL WORK IS COMPLETED, TYPICAL THROUGHOUT THE PROJECT.
- 6. EXISTING LEAD LINED DOORS, FRAME & HARDWARE TO REMAIN. PROTECT DURING CONSTRUCTION.
- 7. EXISTING EMERGENCY POWER OFF SWITCH TO REMAIN. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- 8. NEW SHEET VINYL FLOORING WITH 4" COVED BASE. CONTRACTOR TO NOTE THAT ANY EXISTING SHIELDING UNDER THE FLOOR FINISH WILL NEED TO BE PROTECTED DURING CONSTRUCTION AND INSTALLATION OF NEW FLOORING. COORDINATE WITH OWNERS VENDOR SIEMENS REGARDING ACCEPTABLE SLOPE TOLERANCES ON THE FLOOR. BEFORE PROCEEDING WITH THE WORK. SEE FINISH FLOOR PLANS AND SIEMENS DRAWINGS FOR MORE INFORMATION.
- 9. EXISTING CABINETS, COUNTERTOP, PLUMING FIXTURES, ETC. TO REMAIN. PROTECT DURING CONSTRUCTION.
- 10. REFINISH AND PAINT EXISTING GYPSUM BOARD WALL. SEE FINISH FLOOR PLAN FOR MORE INFORMATION.
- 11. REPAINT EXISTING H.M. DOOR FRAME. SEE FINISH FLOOR PLAN.
- 12. EXISTING LEAD SHIELDED WINDOW & GLAZING TO REMAIN. PROTECT DURING CONSTRUCTION.
- 13. ORIENTATION POINT OF THE PATIENT TABLE SHALL ALIGN WITH THE EXISTING 4" DIA. HOLE ON THE FLOOR AT THIS LOCATION. FIELD VERIFY EXACT LOCATION AND COORDINATE WITH OWNER'S VENDOR (SIEMENS) FOR MORE INFORMATION.
- 14. DASHED LINE SHOWS EXTENT OF NEW FLOORING. SEE FINISH FLOOR PLAN FOR MORE INFORMATION.
- 15. EXISTING FLOOR FINISH TO REMAIN AT THIS LOCATION. PROTECT DURING CONSTRUCTION.
- 16. VERIFY FLOOR LEVELNESS. FLOOR SHOULD BE ±1/8" IN 10'-0"
 THROUGH THE ROOM. IF FLOOR IS UNEVEN, POUR SELF LEVELING
 EPOXY COMPOUND (ARDEX OR EQUAL) TO ACHIEVE THE REQUIRED
 FLOOR LEVELNESS. UNISTRUTS FOR SIEMENS EQUIPMENT RAILS SHALL
 BE INSTALLED AFTER FLOOR IS LEVELED. MEASURE HEIGHT TO THE
 BOTTOM OF THE UNISTRUTS ABOVE FINISHED FLOOR PER SIEMENS
 DRAWINGS. PREP FLOOR FOR NEW FINISHES. SEE SIEMENS
 DRAWINGS FOR ACCEPTABLE TOLERENCE LEVEL.
- 17. NEW PLASTIC LAMINATE COUNTERTOP WITH BULL-NOSED EDGE. SEE DETAIL A6/A-501 AND FINISH FLOOR PLAN FOR LAMINATE COLOR REQUIRED TO MATCH ADJACENT EXISTING & MORE INFORMATION. HEIGHT OF COUNTERTOP SHALL MATCH WITH THE ADJACENT EXISTING. PROVIDE 4'-0" W X 1'-1" D OPENING IN COUNTERTOP FOR INSTALLATION OF LARGE DISPLAY MONITOR BY OWNER. PROVIDE 2" RADIUS AT ALL INSIDE CORNERS. EXISTING SUPPORTS AND METAL BRACKETS MAY BE RE-USED. THE MONITOR OPENINGS ON THE COUNTERTOP MAY REQUIRE EXISTING BRACKETS TO BE MOVED OR ADJUSTED. PROVIDE BACKING IN THE WALL FOR INSTALLATION OF THE OWNER PROVIDED MONITOR. FIELD VERIFY EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK.
- 18. SIEMENS EQUIPMENT BASE PLATES TO BE ANCHORED TO THE EXISTING CONCRETE FLOOR. SEE SHEET A 100 FOR REMOVAL OF CEILING AT LOWER LEVEL FOR INSTALLATION OF THE METAL PLATES. SEE STRUCTURAL & SIEMENS DRAWINGS FOR MORE INFORMATION.
- 19. NEW DATA RACK PROVIDED AND INSTALLED BY THE OWNER'S VENDOR. PROVIDE REQUIRED ELECTRICAL & DATA CONNECTION AS SHOWN IN THE ELECTRICAL DRAWINGS. COORDINATE WORK & EXACT LOCATION WITH THE OWNER AND ALL VENDORS INVOLVED BEFORE PROCEEDING.
- 20. RE-USE EXISTING 4" DIA. HOLE AND CONDUIT AS REQUIRED. THIS IS IDENTIFIED AS HOLE "B10" IN SIEMENS DRAWINGS.
- 21. SEE SIEMENS DRAWING FOR SIEMENS RECOMMENDED STACKED COOLING UNITS ON RACK. FIELD VERIFY AND COORDINATE WORK WITH ELECTRICAL AND ALL VENDORS.
- 22. NEW ISOLATION DISTRIBUTION PANEL INSTALLED IN THE BOXED STUD FRAMED WALL. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- 23. SIEMENS CATH LAB EQUIPMENT INSTALLED UNDER COUNTER.
 ADJUST LOCATION OF THE COUNTERTOP BRACKET AS REQUIRED TO
 MAKE ROOM FOR THE EQUIPMENT. COORDINATE WORK WITH
 LARGE DISPLAY PROVIDED BY OWNER.
- 24. 3-5/8" THICK METAL STUD FRAMED BOXED WALL WITH 5/8" THICK TYPE-X PAINTED GYPSUM BOARD SHEATHING ON ONE SIDE FROM FLOOR TO CEILING ABOVE TO HOUSE NEW ISOLATION PANELS. COORDINATE DEPTH OF BOXED WALL WITH PANELS.

GENERAL NOTES

- 1. COORDINATE WITH SIEMENS REPRESENTATIVE TO ENSURE REQUIRED CEILING HEIGHT OF 8'-11" IS ACHIEVED FROM FINISHED FLOOR TO THE FACE OF THE UNISTRUT INSTALLED AT THE CEILING. SEE SIEMENS EQUIPMENT DRAWINGS FOR ACCEPTABLE FLOOR SLOPE TOLERANCES AND FOR MORE INFORMATION. FIELD VERIFY AND COORDINATE WORK BEFORE PROCEEDING.
- 2. ALL EXPOSED STEEL IN THE WALLS, ABOVE CEILING ETC. ARE REQUIRED TO BE SPRAY APPLIED FIRE PROOFED. SEE CODE COMPLIANCE PLANS FOR FIRE RATINGS THAT IS REQUIRED TO BE MAINTAINED THROUGHOUT THE PROJECT. ANY DAMAGE TO THE EXISTING FIRE PROOFING IS REQUIRED TO BE PATCHED AND REPAIRED WITH COMPATIBLE FIRE PROOFING PRODUCT.
- ALL EXISTING MAGNETIC AND LEAD SHIELDING IN THE EXISTING WALLS, FLOOR AND ROOF DECK IS REQUIRED TO BE RETAINED. REPLACE TO MAINTAIN SHIELDING WITH EQUIVALENT SHIELDING TO MATCH ORIGINAL CONDITIONS. IF DAMAGED DURING CONSTRUCTION.



NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com



Intermountain Healthcare | MC- Cath Lab 6 Remodel Project

New Floor Plan-Level 1

Construction Documents March 27, 2019

18226.00

Reflected Ceiling Plan

SCALE: 1/2" = 1'-0"

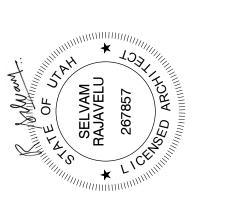
KEY NOTES - FLOOR PLAN

- LOCATION OF THE CATH LAB EQUIPMENT ISO-CENTER. COORDINATE WITH THE OWNER'S VENDOR SIEMENS FOR MORE INFORMATION.
- NEW SKYTRON ANESTHESIA BOOM MOUNTED TO STRUCTURE ABOVE. REMOVE EXISTING MED GAS COLUMN AND RELOCATE ALL MED GAS CONNECTIONS FROM COLUMN TO THE BOOM. SEE OWNERS VENDOR SKYTRON FOR MORE INFORMATION & EXACT LOCATION. SEE STRUCTURAL & MECHANICAL DRAWINGS.
- NEW SKYTRON BOOM FOR RADIATION SHIELD. SEE STRUCTURAL & ELECTRICAL DRAWINGS FOR ALL REQUIREMENTS.
- 4. NEW SKYTRON TANDEM BOOM FOR SKYTRON LIGHT & DISPLAY MONITOR. SEE STRUCTURAL DRAWINGS FOR STRUCTURAL REQUIREMENTS.
- PROVIDE MEDICAL GAS AT THE CEILING (1 OXYGEN, 2 VACUUM & 1 AIR). ALSO PROVIDE EMERGENCY ELECTRICAL POWER OUTLET. SEE ELECTRICAL & MECHANICAL DRAWINGS FOR MORE INFORMATION.
- EXISTING UNISTRUT SUPPORT FOR SIEMENS CATHLAB EQUIPMENT AT THE CEILING ANCHORED TO THE STRUCTURE ABOVE TO REMAIN U.N.O, TYP. REMOVE PORTION OF UNISTRUT WHERE INDICATED WITH KEYNOTE #15. SEE SIEMENS DRAWINGS & STRUCTURAL DRAWINGS FOR DETAILS AND REQUIREMENTS. ALSO REFER TO DETAIL C5/A-501.
- REMOVE & REINSTALL EXISTING GYPSUM BOARD CEILING WHERE REQUIRED TO COMPLETE STRUCTURAL, MECHANICAL, ELECTRICAL AND WORK ASSOCIATED WITH THE NEW SIEMENS AND SKYTRON EQUIPMENT AS INDICATED IN THE CONSTRUCTION DOCUMENTS. PATCH, REPAIR AND PAINT GYPSUM BOARD CEILING AFTER WORK IS COMPLETED. SEE FINISH FLOOR PLAN FOR PAINT COLOR. ALSO REFER TO CEILING DETAIL **E3/A-501**. CEILING HEIGHT FROM FLOOR TO THE FACE OF THE CEILING MOUNTED UNISTRUT SUPPORT IS REQUIRED TO BE 8'-11". FIELD VERIFY EXISTING AND SEE SIEMENS DRAWINGS FOR ACCEPTABLE TOLERANCES.
- 8. NEW OR RE-USED MECHANICAL DIFFUSER. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION, TYPICAL.
- 9. NEW OR RE-USED CEILING LIGHTS. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION, TYPICAL.
- 10. REMOVE & RE-INSTALL EXISTING ACOUSTICAL PANEL CEILING, GRID SYSTEM, CEILING DIFFUSER & LIGHTS AS REQUIRED IN ORDER TO INSTALL NEW HVAC DUCT ABOVE CEILING.
- 11. EXISTING GYPSUM BOARD CEILING ALONG WITH LIGHTING, DIFFUSER ETC. TO REMAIN IN THIS AREA. PROTECT DURING CONSTRUCTION. PATCH, REPAIR & REPAINT CEILING AS REQUIRED AFTER WORK IS COMPLETED. SEE FINISH FLOOR PLANS.
- 12. EXISTING GYPSUM BOARD SOFFIT ALONG WITH LIGHTING DIFFUSER ETC. TO REMAIN. PROTECT DURING CONSTRUCTION. REPAINT SOFFIT AND CEILING AFTER WORK IS COMPLETED. SEE FINISH FLOOR PLANS.
- 13. 18" x 18" CEILING MOUNTED FINISHED & PAINTED GFRG ACCESS PANELS TO MATCH HOSPITAL STANDARD. COORDINATE WITH VENDORS, MECHANICAL DRAWINGS FOR EXACT LOCATION & QUANTITY AS REQUIRED BEFORE INSTALLATION.
- 14. REMOVE AND RE-INSTALL GYPSUM BOARD CEILING/ SOFFIT PARTIALLY AT THIS LOCATION WHERE REQUIRED IN ORDER TO INSTALL NEW MECHANICAL DUCT/ EQUIPMENT ABOVE. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION. PATCH REPAIR, PAINT AND FINISH CEILING TO MATCH WITH ADJACENT EXISTING AFTER ALL WORK IS COMPLETED.
- 15. CUT EXISTING CEILING UNISTRUT HERE AND REMOVE THE PORTION EXTENDING OUT ALONG WITH ASSOCIATED ACCESSORIES & STRUCTURAL SUPPORT IN ORDER TO CLEAR THE AREA FOR INSTALLATION OF NEW CEILING BOOMS FROM SKYTRON. CONTRACTOR SHALL REMOVE & DISMANTLE STRUCTURAL SUPPORT OF THE REMOVED UNISTRUT AND MAINTAIN STRUCTURAL INTEGRITY OF THE REMAINING UNISTRUT SYSTEM TO BE RE-USED FOR THE NEW SIEMENS EQUIPMENT. NOTIFY STRUCTURAL ENGINEER AS SOON AS CEILING IS REMOVED IN THIS AREA FOR AN EXAMINATION OF THE EXISTING UNISTRUT SYSTEM. PATCH, REPAIR AND PAINT GYPSUM CEILING TO ORIGINAL CONDITION AFTER WORK IS COMPLETED.
- 16. REMOVE & REINSTALL EXISTING SKYTRON SURGICAL LIGHTS AS REQUIRED. SEE ELECTRICAL DRAWINGS AND MANUFACTURERS MANUAL FOR MORE INFORMATION.
- 17. EXISTING WALL SCONCE TO REMAIN. PROTECT DURING CONSTRUCTION.



NJRA Architects, Inc. 5272 S. College Drive, Suite 104 Murray, Utah 84123 801.364.9259

www.njraarchitects.com



NJRA Project # Construction Documents March 27, 2019

GENERAL NOTES

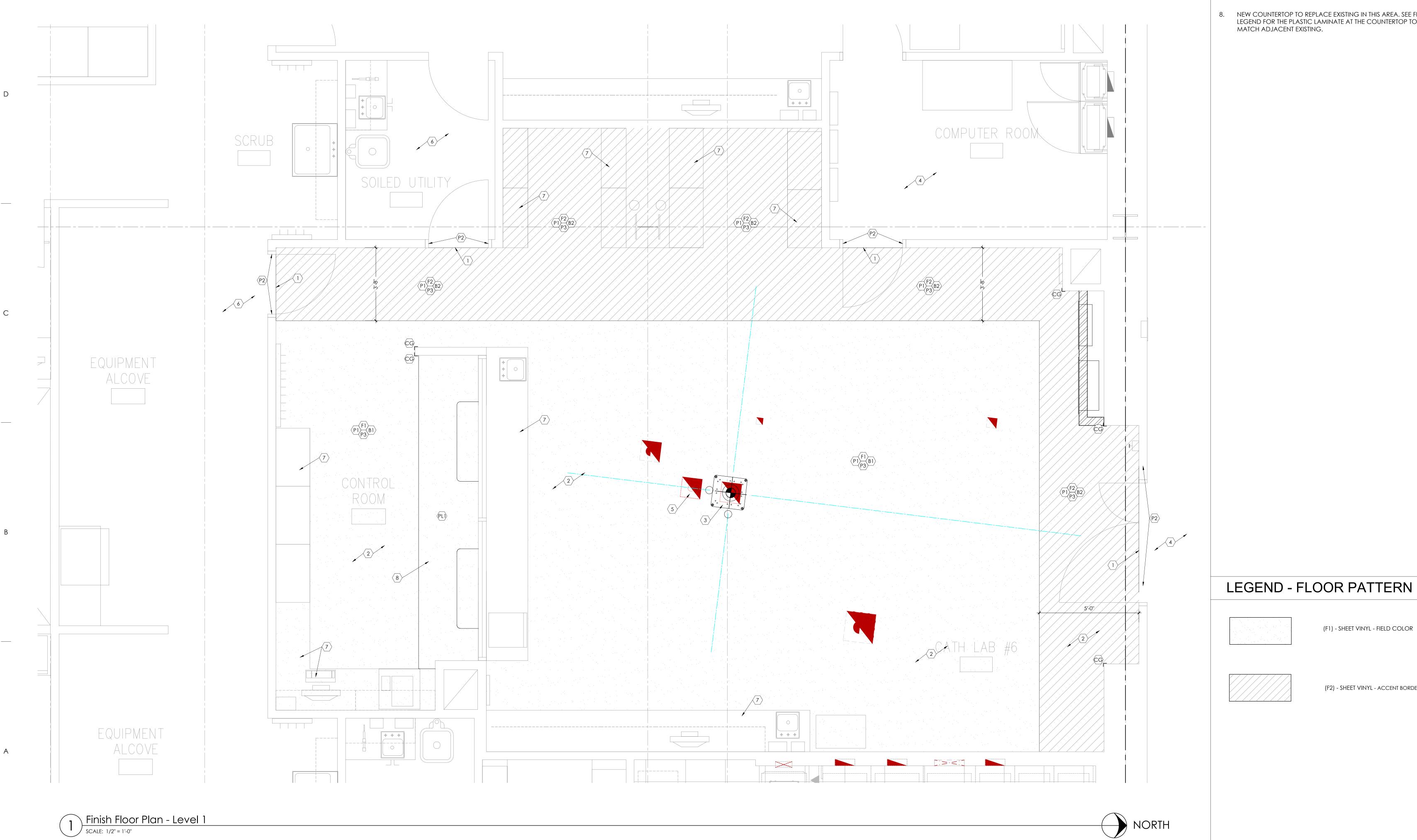
NORTH I

- 1. COORDINATE WITH SIEMENS REPRESENTATIVE TO ENSURE REQUIRED CEILING HEIGHT OF 8'-11" IS ACHIEVED FROM FINISHED FLOOR TO THE FACE OF THE UNISTRUT INSTALLED AT THE CEILING. SEE SIEMENS EQUIPMENT DRAWINGS FOR ACCEPTABLE FLOOR SLOPE TOLERANCES AND FOR MORE INFORMATION. FIELD VERIFY AND COORDINATE WORK BEFORE PROCEEDING.
- ALL EXPOSED STEEL IN THE WALLS, ABOVE CEILING ETC. ARE REQUIRED TO BE SPRAY APPLIED FIRE PROOFED. SEE CODE COMPLIANCE PLANS FOR FIRE RATINGS THAT IS REQUIRED TO BE MAINTAINED THROUGHOUT THE PROJECT. ANY DAMAGE TO THE EXISTING FIRE PROOFING IS REQUIRED TO BE PATCHED AND REPAIRED WITH COMPATIBLE FIRE PROOFING PRODUCT.
- ALL EXISTING MAGNETIC AND LEAD SHIELDING IN THE EXISTING WALLS, FLOOR AND ROOF DECK IS REQUIRED TO BE RETAINED. REPLACE TO MAINTAIN SHIELDING WITH EQUIVALENT SHIELDING TO MATCH ORIGINAL CONDITIONS. IF DAMAGED DURING CONSTRUCTION.

Reflected Ceiling Plan-Level 1

18226.00

| | IND | | | | | T |
|------------------------|-------------------------------|------------------|--------------|----------|---------------------|---|
| LEGEND | DESCRIPTION | MANUFACTURER | STYLE | MODEL # | COLOR | REMARKS |
| F1 - FLOOR FINISH | SHEET VINYL - FIELD | MANNINGTON | BIOSPEC MD | 15361 | FLAX | |
| F2 - FLOOR FINISH | SHEET VINYL - ACCENT BORDER | MANNINGTON | BIOSPEC MD | 15369 | BEDROCK | |
| F3 - FLOOR FINISH | EXISTING | EXISTING | EXISTING | existing | existing | EXISTING FLOORING TO REMAIN- PROTECT DURING CONSTRUCTION |
| B1 - WALL BASE | SHEET VINYL- COVED BASE | MANNINGTON | BIOSPEC MD | 15361 | FLAX | PROVIDE ALUMINUM TOP TRIM |
| B2 - WALL BASE | SHEET VINYL- COVED BASE | MANNINGTON | BIOSPEC MD | 15369 | BEDROCK | PROVIDE ALUMINUM TOP TRIM |
| B3 - WALL BASE | EXISTING | EXISTING | EXISTING | EXISTING | EXISTING | EXISTING WALL BASE TO REMAIN- PROTECT DURING CONSTRUCTION |
| | | | | | | |
| P1 - PAINT | WALL PAINT | SHERWIN WILLIAMS | EGGSHELL | SW 7043 | WORLDLY GRAY | |
| P2 - PAINT | DOOR FRAME PAINT | SHERWIN WILLIAMS | SEMI-GLOSS | SW 6115 | TOTALLY TAN | TYPICAL ALL ALL DOOR FRAMES- FIELD VERIFY TO MATCH EXISTING |
| P3 - PAINT | GYPSUM CEILING PAINT | SHERWIN WILLIAMS | EGG\$HELL | SW 7005 | PURE WHITE | |
| CG - CORNER GUARD | CORNER GUARD 2' X 2" X 4'-0"H | C/S ACROVYN | 4000 | SSM-20AN | 262 DRIFTWOOD | WITH CONTINUOUS ALUMINUM RETAINER |
| PL1 - PLASTIC LAMINATE | PLASTIC LAMINATE COUNTERTOP | FORMICA | MATTE FINISH | 303-58 | ANTIQUE WHITE OXIDE | FIELD VERIFY LAMINATE STYLE AND COLOR - MATCH ADJACENT EXISTING |



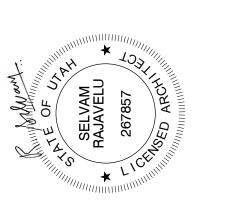
KEY NOTES - FLOOR PLAN

- 1. LINE OF TRANSITION BETWEEN NEW AND EXISTING FLOOR FINISHES.
- 2. EXISTING SHEET VINYL FLOORING TO BE REPLACED WITH NEW SHEET VINYL FLOORING. SEE NEW FLOOR PLAN, DEMOLITION PLAN AND FINISH LEGEND FOR MORE INFORMATION. EXISTING MAGNETIC SHIELDING IF ANY ON THE FLOOR IS REQUIRED TO BE PROTECTED DURING INSTALLATION. SEE FLOOR PLANS AND SIEMENS DRAWINGS FOR ACCEPTABLE FLOOR SLOPE TOLERANCES. FLOOR MAY NEED TO PREPARED TO MEET THE REQUIREMENTS OF THE NEW CATH LAB EQUIPMENT. FIELD VERIFY EXISTING CONDITIONS.
- 3. NEW CATH LAB EQUIPMENT BASE PLATE ANCHORED TO EXISTING CONCRETE FLOOR. SEE SIEMENS AND STRUCTURAL DRAWINGS FOR MORE INFORMATION.
- 4. EXISTING VCT FLOORING & RESILIENT WALL BASE TO REMAIN IN THIS AREA. PROTECT DURING CONSTRUCTION.
- 5. EXISTING MEDGAS PEDESTAL FLOOR BOX TO REMAIN. PROTECT DURING CONSTRUCTION.
- 6. EXISTING SHEET VINYL FLOORING AND COVED WALL BASE TO REMAIN. PROTECT DURING CONSTRUCTION.
- 7. EXISTING CABINET COUNTERTOP MILLWORK & PLASTIC LAMINATE FINISHES TO REMAIN. PROTECT DURING CONSTRUCTION.
- 8. NEW COUNTERTOP TO REPLACE EXISTING IN THIS AREA. SEE FINISH LEGEND FOR THE PLASTIC LAMINATE AT THE COUNTERTOP TO MATCH ADJACENT EXISTING.



NJRA Architects, Inc.

5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



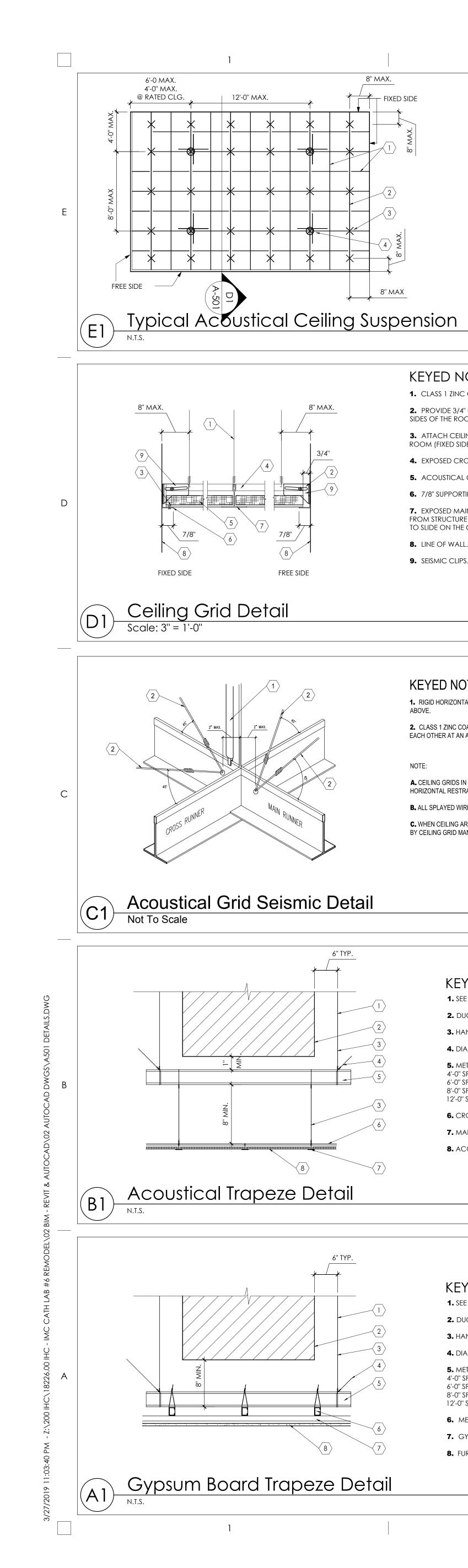
NJRA Project #

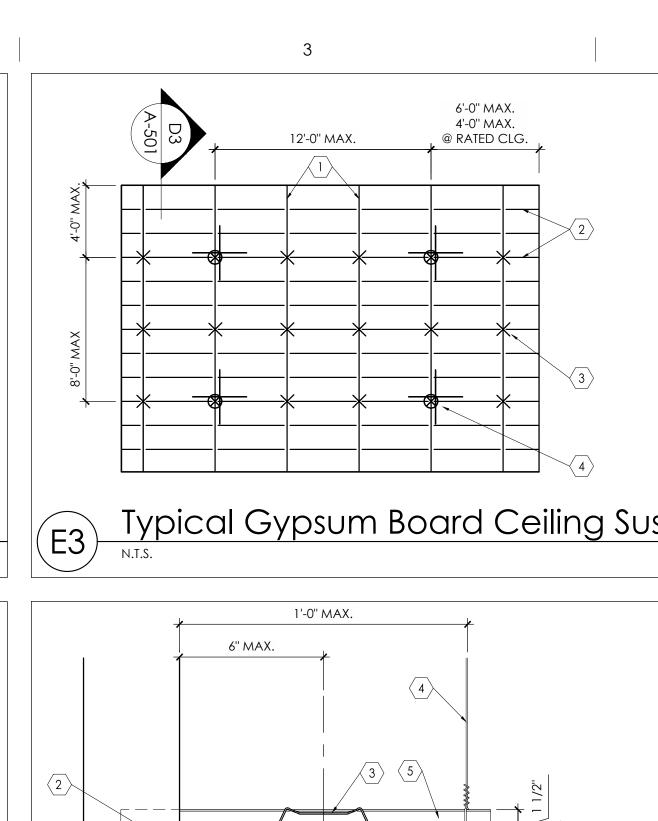
Construction Documents March 27, 2019

(F1) - SHEET VINYL - FIELD COLOR

(F2) - SHEET VINYL - ACCENT BORDER

Finish Floor Plan-Level 1





KEYED NOTES

1. EXPOSED CROSS GRID MEMBER @ 2'-0" O.C.

3. HANGER WIRE 12GA MIN. @ 4'-0" O.C. MAX EACH WAY.

2. EXPOSED MAIN GRID MEMBER @ 4'-0".

4. SEISMIC RESTRAINT. SEE DETAIL C1/A-501.

KEYED NOTES

TO SLIDE ON THE CLOSURE ANGLE.

KEYED NOTES

BY CEILING GRID MANUFACTURER AND ARCHITECT.

KEYED NOTES

2. DUCT OR OTHER OBSTRUCTION.

5. METAL CHANNELS AT 4'-0" O.C.

4'-0" SPAN= 1-1/2" x 16GA

6'-0" SPAN= 2-1/2" x 16GA

6. CROSS RUNNER BEYOND

KEYED NOTES

2. DUCT OR OTHER OBSTRUCTION.

5. METAL CHANNELS AT 4'-0" O.C.

4. DIAGONAL HANGER WIRE 12 GA MIN..

6. METAL RUNNER CHANNELS, 1 1/2" THICK.

8. FURRING CHANNEL, 7/8" THICK, @ 1'-4" O.C. MAXIMUM

7. GYPSUM BOARD, 5/8" THICK, ATTACHED TO METAL FURRING CHANNEL.

3. HANGER WIRE 8 GA MIN.

4'-0" SPAN= 1-1/2" x 16GA

6'-0" SPAN= 2-1/2" x 16GA

8'-0" SPAN= 4" x 16GA 12'-0" SPAN= 6" x 16GA

1. SEE DETAIL C1 FOR HANGER WIRE ATTACHMENT.

8'-0" SPAN= 4" x 16GA

7. MAIN RUNNER

12'-0" SPAN= 6" x 16GA

4. DIAGONAL HANGER WIRE 12 GA MIN..

3. HANGER WIRE 8 GA MIN.

1. SEE DETAIL C1 FOR HANGER WIRE ATTACHMENT.

8. ACOUSTICAL CEILING PANEL. SEE DRAWINGS AND SPECS FOR DETAILS

ROOM (FIXED SIDES).

8. LINE OF WALL.

1. CLASS 1 ZINC COATED, SOFT TEMPERED WIRES, 12 GAUGE MIN.

4. EXPOSED CROSS RUNNER ATTACHED TO MAIN RUNNERS.

9. SEISMIC CLIPS. BASIS OF DESIGN ARMSTRONG BERC 2 CLIPS.

5. ACOUSTICAL CEILING TILES. SEE CEILING PLANS.

2. PROVIDE 3/4" GAP BETWEEN CEILING GRID AND ANGLE ON TWO ADJACENT

3. ATTACH CEILING GRID TO WALL ANGLE ON TWO ADJACENT SIDES OF THE

SIDES OF THE ROOM (FREE SIDES). DO NOT ATTACH CEILING GRID TO WALL ANGLE.

6. 7/8" SUPPORTING CLOSURE ANGLE AT CEILING PERIMETER ATTACHED TO WALL.

7. EXPOSED MAIN RUNNER SHALL BE HEAVY DUTY T-BAR GRID SYSTEM SUSPENDED FROM STRUCTURE ABOVE. THIS END OF THE GRID SHALL REST UPON AND BE FREE

1. RIGID HORIZONTAL RESTRAINT/ COMPRESSION POST FROM CEILING GRID TO STRUCTURE

A. CEILING GRIDS IN ROOMS OR AREAS GREATER THAN 1,000 SQ. FT. SHALL HAVE A RIGID

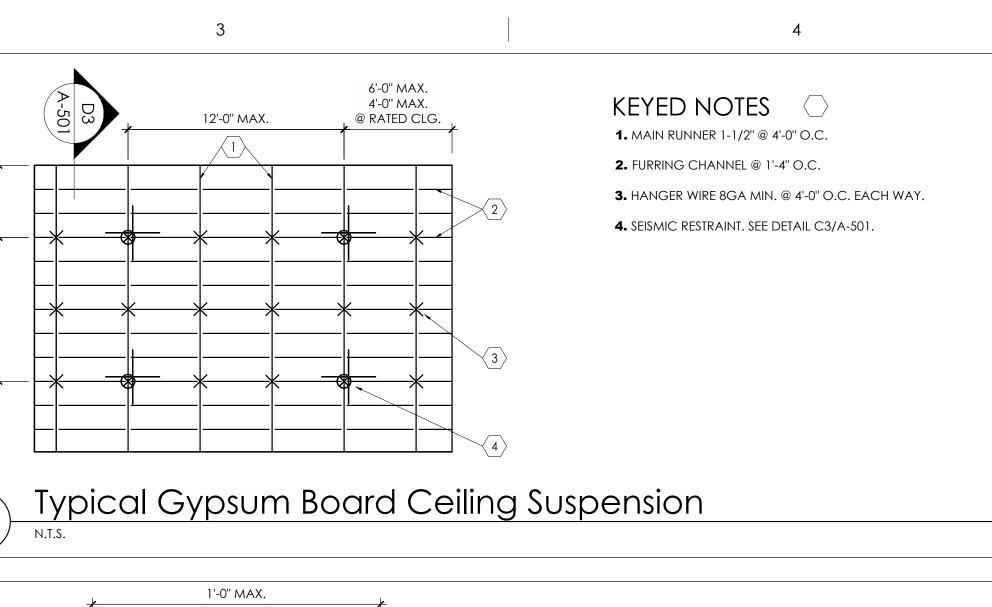
B. ALL SPLAYED WIRES SHALL BE AT MAXIMUM ANGLE OF 45°, 12 GAUGE AND GALVANIZED.

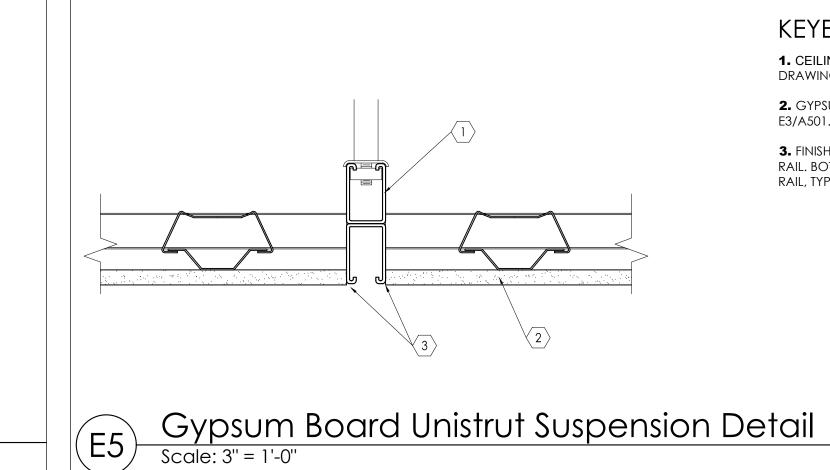
C. WHEN CEILING AREA EXCEEDS 2,500 SQ. FT. PROVIDE SEISMIC SEPARATION JOINT APPROVED

HORIZONTAL RESTRAINT FROM CEILING TO STRUCTURE ABOVE AT EVERY 96 SQ. FT.

EACH OTHER AT AN ANGLE NOT EXCEEDING 45° FROM THE PLANE OF THE CEILING.

2. CLASS 1 ZINC COATED, SOFT TEMPERED WIRES, 12 GAUGE MIN. WIRES ARRANGED AT 90° FROM





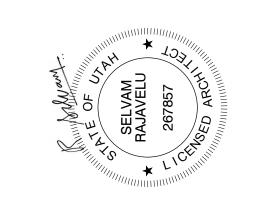
KEYED NOTES 1. CEILING MOUNTED UNISTRUT SYSTEM. SEE STRUCTURAL

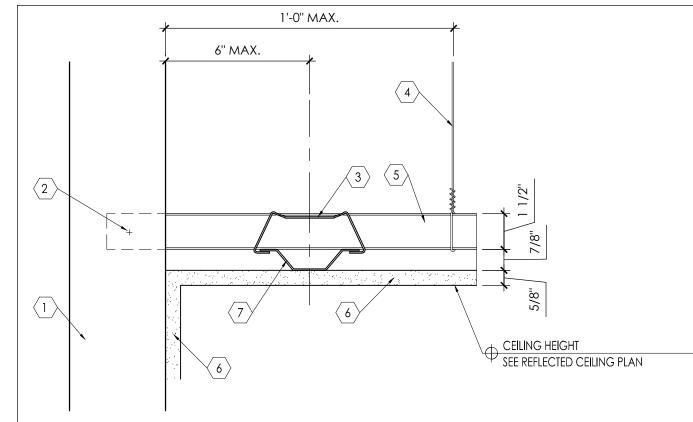
2. GYPSUM BOARD CEILING AS SCHEDULED. SEE DETAIL E3/A501. 3. FINISH GYPSUM BOARD ON EITHER SIDE OF THE EQUIPMENT

RAIL. BOTTOM OF GYPSUM BOARD TO ALIGN WITH BOTTOM OF



www.njraarchitects.com





Gypsum Board Ceiling Detail

Scale: 3" = 1'-0"

2" MAX.

Gypsum Board Ceiling Seismic Restraint Detail

Scale: 3" = 1'-0"

KEYED NOTES

1. METAL STUD WALL AS OCCURS. SEE PARTITION SCHEDULE. 2. SHEET METAL SCREW.

3. WIRE CLIP OR TIE.

4. HANGER WIRE, 8 GAUGE, @ 4'-0" O.C. EACH WAY MAXIMUM AND WITHIN 12" OF THE WALL TYPICAL.

5. METAL RUNNER CHANNELS, 1 1/2" THICK X 18 GA, @ 48"

6. GYPSUM BOARD, 5/8" THICK, ATTACHED TO METAL FURRING **7.** FURRING CHANNEL, 7/8" THICK X 18 GA, @ 1'-4" O.C.

KEYED NOTES 1. LINE OF STRUCTURE ABOVE

2. LINE OF WALL.

3. METAL STUD FRAMING (6" THICK, 18 GAUGE, METAL STUDS AT 16" O.C.-

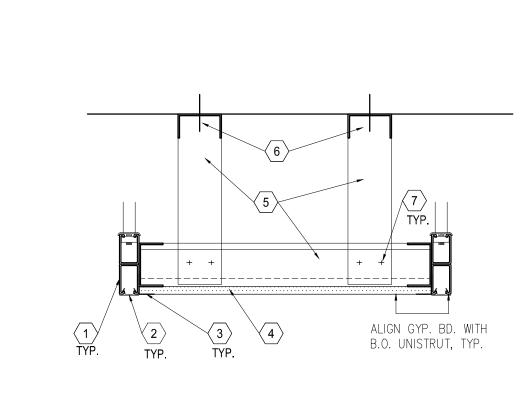
4. METAL STUD FRAMING (6" THICK, 18 GAUGE, METAL STUDS AT 32" O.C.-VERTICAL- BOTH WAYS- PERPENDICULAR AND PARALLEL TO HORIZONTAL FRAMING). CROSS BRACE FRAMING AS REQUIRED FOR STRUCTURAL

5. 5/8" THICK TYPE 'X' GYP. BD. ATTACH TO METAL STUD FRAMING. 6. SEE DETAIL C3/A-501 FOR ATTACHMENT TO STRUCTURE ABOVE.

7. SHEET METAL SCREWS (2) # 10 AT EA. STUD.

Gypsum Board Ceiling Suspension Detail

Scale: 1-1/2" = 1'-0"



KEYED NOTES

1. P5501 UNISTRUT GRID. SEE STRUCTURAL DRAWINGS.

2. P1184P WHITE PVC UNISTRUT CAP. INSTALL AT EXPOSED TO VIEW UNISTRUTS AFTER SIEMENS EQUIPMENT RAILS INSTALLATION.

3. 'L' TRIM LOULDING. BASIS OF DESIGN FRY REGLET DRML-625. MUD OVER

L-MOULDING TO PRIDE A SMOOTH FINISH.

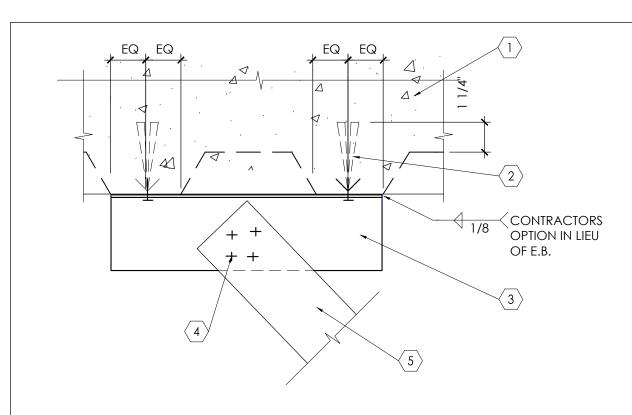
4. ATTACH 5/8" THICK, TYPE 'X' GYPSUM BOARD TO METAL STUD FRAMING. 5. METAL STUD FRAMING (6" THICK, 18 GAUGE, METAL STUDS AT 16" O.C.-HORIZONTALLY AND VERTICALLY). CROSS BRACE FRAMING AS REQUIRED FOR

STRUCTURAL RIGIDITY. 6. SEE DETAIL C3/A-501 FOR ATTACHMENT TO STRUCTURE ABOVE.

7. SHEET METAL SCREWS (2) # 10 AT EA. STUD.

Gypsum Board Ceiling Suspension Detail at Unistruts

Scale: 1-1/2" = 1'-0"



PARALLEL TO DECK

Gypsum Board Bracing Suspension Detail

3"= 1'-0"

Typical Suspended Stud Attachment

OPTION IN LIEU

OF E.B.

CONTRACTORS OPTION IN LIEU OF E.B. WHEN STUD IS BELOW DECK PLATE

KEYED NOTES 1. EXISTING CONCRETE OVER METAL DECK.

2. 1/4" Ø EXP. BOLTS, TYP.

3. METAL CLIP 12 GA, 3" x 3" x 1'-6" LONG MIN.

KEYED NOTES

2. METAL CLIP 12 GA MIN x 3/4"W

3. MACHINE BOLT 1/2" DIA. MIN.

4. ANGLE STRUT OR CHANNEL.

6. METAL CLIP 1"W X 2" X 12 GA MIN.

7. DIAGONAL HANGER WIRES 12GA MIN.- 4 SIDES

8. FURRING CHANNEL, 7/8" THICK, @ 1'-4" O.C. MAXIMUM.

9. METAL RUNNER CHANNELS, 1 1/2" THICK, @ 48" O.C.

10. GYPSUM BOARD, 5/8" THICK, ATTACHED TO METAL

5. EXP. BOLT 5/16" MIN.

FURRING CHANNEL.

1. EXP BOLT 3/16" MIN.

4. 4 # 10 SHEET METAL SCREWS.

CONTRACTORS > 1/8

OF E.B.

5. METAL STUD, 18 GA MIN, 3-5/8" @ 4'-0" O.C.

1. PLASTIC LAMINATE OVER PREMIUM GRADE MULTICORE, WITH RADIUS AS SHOWN. SEE SPECIFICATIONS. PROVIDE MARINE GRADE PLYWOOD WHERE SINK OCCURS AT COUNTERTOP. 2. LAMINATE SHALL RUN CONTINUOUSLY FROM COUNTERTOP TO BACKSPLASH. BACKSPLASH TO HAVE A $\frac{3}{4}$ " RADIUS EDGE. 3. PLASTIC LAMINATE BULLNOSE. FIELD VERIFY TO MATCH WITH ADJACENT EXISTING. SEE FLOOR PLAN Side View

Plastic Laminate Countertop

Countertop Detail

KEYED NOTES

1. LINE OF FLOOR.

2. WALL BASE. SEE FINISH SCHEDULE.

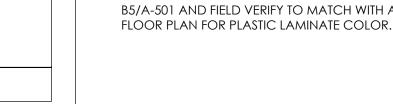
3. EXISTING METAL STUD FRAMED LEAD SHIELDED PARTITION WALL.

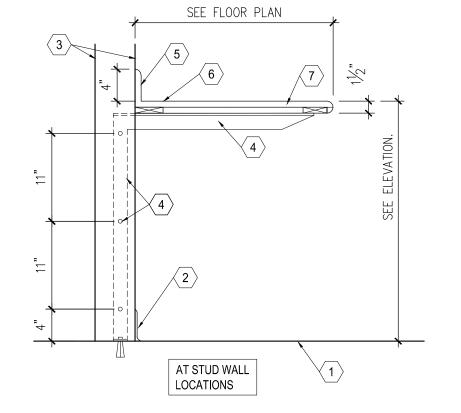
4. COUNTERTOP SUPPORT, PAINTED. SUPPORT SHALL BE STEEL ANGLE, 2" X 2" X 1/4" PIECES MITERED AND WELDED @ 90° ANGLE AS INDICATED. CHAMFER EXPOSED EDGE (BELOW COUNTERTOP EDGE) AND GRIND ALL EXPOSED EDGES SMOOTH. ATTACH SUPPORT TO METAL STUDS INSIDE WALL WITH 1/4" BOLTS, AS SHOWN. A FLOOR, PROVIDE 3" WIDE X 6" LONG X 1/4" THICK, BASE STEEL PLATE WELDED TO VERTICAL STEEL ANGLE. ATTACH BASE PLATE TO FLOOR WITH TWO 1/2" DIAMETER ANCHOR BOLTS (ON EITHER SIDE OF VERTICAL ANGLE) WITH 3" MINIMUM EMBED IN CONCRETE FLOOR, CONTRACTOR SHALL REVIEW INTERIOR ELEVATIONS AND LOCATE SUPPORTS DURING WALL CONSTRUCTION. SUPPORT SPACING SHALL NOT EXCEED 2'-8" O.C. MAXIMUM. (RE-USE OF EXISTING SUPPORT AND BRACKET IS

ACCEPTABLE IF FEASIBLE, COORDINATE WITH THE OWNER). 5. BACKSPLASH WITH 3/4" RADIUS EDGE.

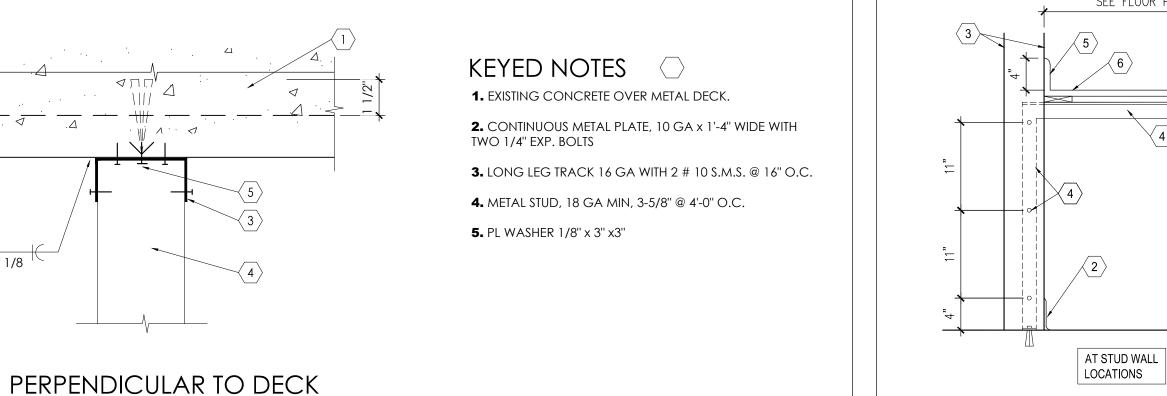
6. PROVIDE OPENING AT THE COUNTERTOP AS SHOWN IN THE FLOOR PLAN. PROVIDE GROMMETS AS REQUIRED FOR THE EQUIPMENT CONNECTIONS.

7. PLASTIC LAMINATE FACED COUNTERTOP WITH BULLNOSE EDGE. SEE DETAIL B5/A-501 AND FIELD VERIFY TO MATCH WITH ADJACENT EXISTING. SEE FINISH FLOOR PLAN FOR PLASTIC LAMINATE COLOR.





KEYED NOTES



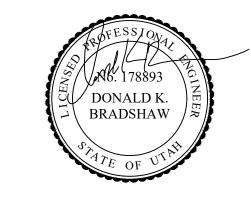
Countertop / Kneespace

NJRA Project # Construction Documents March 27, 2019

18226.00

Details

NJRA Architects, 5272 S. College DNG, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



VAN BOERUM
& FRANK ASSOCIATES, INC.
CONSULTING ENGINEERS Salt Lake City · Logan · St. George · Tempe
330 South 300 East 801.530.3148 T
Salt Lake City, UT 84111 801.530.3150 F
VBFA Project Number: 18583

NJRA Project #

Construction Documents

Feb 28, 2019

MECHANICAL SYMBOLS AND

LEGEND

| | | | LEGENI |
|--|---|--|------------------|
| SINGLE LINE | DOUBLE LINE | 1 | |
| | | POSITIVE PRESSURE DUCT — RISE | |
| | | POSITIVE PRESSURE DUCT — DROP | |
| | | NEGATIVE PRESSURE DUCT — RISE | |
| | | NEGATIVE PRESSURE DUCT — DROP | |
| | | ROUND DUCT — RISE | |
| | | ROUND DUCT — DROP | |
| | 88 | UNDER FLOOR DUCT | |
| | | TURNING VANES | |
| | A | FRESH AIR LOUVER | |
| | \\ | RELIEF AIR OR EXHAUST AIR LOUVER | |
| | 12X12 200 | CEILING SUPPLY DIFFUSER | |
| | 20X20 200 | CEILING RETURN REGISTER | |
| | 12X12 200 | CEILING EXHAUST REGISTER, (BALANCE TO MATCH SUPPLY IF RETURN CFM IS NOT SHOWN) | |
| ─ | √24X10 200 | SIDEWALL SUPPLY REGISTER TOP FIGURES INDICATE NECK SIZE. BOTTOM FIGURE INDICATES CFM. | |
| —————————————————————————————————————— | 24X10 200 | SIDEWALL EXHAUST OR RETURN REGISTER | |
| ~~~~\ | 12X12 200 | CEILING SUPPLY DIFFUSER WITH FLEXIBLE DUCT | |
| | 24/24 | CEILING RETURN AIR GRILE W/ SOUND BOOT | |
| | 3-1" SLOTS @ 48" 400 | LINEAR DIFFUSER WITH PLENUM AND FLEXIBLE DUCT CONNECTION. NO. OF SLOTS ON TOP, ACTIVE LENGTH AND CFM ON BOTTOM | |
| | | FLEXIBLE DUCT CONNECTION | |
| ~~~~~ | <u></u> | FLEXIBLE DUCT | |
| | | FAN | |
| 12/8 FO | 12/8 F0 | FLAT OVAL DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES. | |
| 12/8 | 12/8 | RECTANGULAR DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES. | |
| 12"ø | \[12"\phi \] | ROUND DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES. | |
| UP | UP | INCLINED RISE WITH RESPECT TO AIR FLOW 15° NOMINAL INCLINE WITH | |
| DN | DN | INCLINED DROP RADIUS TURNS=DEPTH OF DUCT. | - × × |
| | WR | R/W=1. ROUND DUCT SIMILAR TO RECTANGULAR RECTANGULAR TO RECTANGULAR OR ROUND TO ROUND | |
| 12/12 8/8 | 12/12 | DUCT TRANSFORMATION MAXIMUM 15° INCLUDED ANGLE EXCEPT WHERE SHOWN OTHERWISE. | |
| 9/9 > 9"ø | 9/9 9"ø 8 | RECTANGULAR TO ROUND DUCT TRANSFORMATION BRANCH DUCT SPLIT WITH 6" WIDTH AND MIN. | |
| RECT. TO Ø | 6 | R=WIDTH OF BRANCH DUCT DOWNSTREAM. ELBOW TURNING VANE OPTIONAL. | |
| RECT ROUND ALL | 1.50 +1.250 + | TAP ENTRY AREA EQUALS 150% OF BRANCH AREA | |
| | | HIGH EFFICIENCY FITTING | |
| <u> </u> | FD , | MANUAL VOLUME DAMPER | |
| IFD I | FSD | FIRE DAMPER IN DUCT, W/ ACCESS PANEL REQD. | |
| IFSD | SD | COMBINATION FIRE/SMOKE DAMPER W/ ACCESS PANEL | |
| ISD PATC | ATC | SMOKE DAMPER W/ ACCESS PANEL | - |
| OR | OR - | ATC DAMPER | |
| AD | AD | ACCESS PANEL IN DUCT OR PLENUM | |
| | | HEATING OR COOLING COIL IN DUCT SINGLE DUCT AIR TERMINAL BOX VARIABLE | |
| | <u> </u> | OR CONSTANT VOLUME. MIN. 1-1/2 TERMINAL INLET. | |

| | 4-WAY BLOW PATTERN |
|--|-----------------------------------|
| | 3-WAY BLOW PATTERN |
| | 2-WAY BLOW PATTERN |
| | 2-WAY BLOW PATTERN |
| | 1-WAY BLOW PATTERN |
| —————————————————————————————————————— | LOW PRESSURE CONDENSATE |
| ——— MPC ——— | MEDIUM PRESSURE CONDENSATE |
| —————————————————————————————————————— | HIGH PRESSURE CONDENSATE |
| —————————————————————————————————————— | LOW PRESSURE STEAM |
| ——— MPS ——— | MEDIUM PRESSURE STEAM |
| —————————————————————————————————————— | HIGH PRESSURE STEAM |
| —————————————————————————————————————— | BOILER BLOW DOWN |
| —————————————————————————————————————— | BOILER FEED WATER |
| v | VACUUM |
| | PUMPED CONDENSATE |
| MUW | MAKE UP WATER |
| ———— G ———— | NATURAL GAS |
| —— (E)name —— | EXISTING PIPING |
| —————————————————————————————————————— | CHILLED WATER SUPPLY |
| CHWR | CHILLED WATER RETURN |
| cs | CONDENSER WATER SUPPLY |
| CR | CONDENSER WATER RETURN |
| —————————————————————————————————————— | HEATING HOT WATER SUPPLY |
| —————————————————————————————————————— | HEATING HOT WATER RETURN |
| GHR | GLYCOL HEAT RECOVERY PIPING |
| G(NAME) | |
| | GLYCOL PIPING SOLUTION |
| —————————————————————————————————————— | LIQUIFIED PETROLEUM GAS |
| -× × (NAME) -× × | EXISTING PIPING TO BE REMOVED |
| —————————————————————————————————————— | REFRIGERANT LIQUID |
| | REFRIGERANT SUCTION |
| —————————————————————————————————————— | HOT GAS |
| FOS—— | FUEL OIL SUPPLY |
| FOR | FUEL OIL RETURN |
| —————————————————————————————————————— | HELICOPTER FUEL SUPPLY |
| —————————————————————————————————————— | HELICOPTER FUEL RETURN |
| CF | CHEMICAL FEED |
| | SOLENOID VALVE |
| | EXPANSION JOINT |
| | ALIGNMENT GUIDE |
| \rightarrow \times \times | DEMOLITION |
| | AHCHOR |
| | PRESSURE GAUGE WITH SHUT-OFF COCK |
| * | PRESSURE GAUGE WITH PIGTAIL |
| | |

| — - | UNION |
|---|--|
| GPM LB∕HR. | FLOW METER ORIFICE |
| | AIR VENT-MANUAL |
| | AIR VENT—AUTO |
| | FLOW SWITCH |
| — <u>t</u> — | TEMPERATURE AND PRESSURE TEST PORT |
| | PRESSURE SWITCH |
| | REDUCED PRESSURE BACKFLOW PREVENTOR |
| | W/ DRAIN PAN PRESSURE REDUCING, SELF CONTAINED VALVE |
| | PRESSURE REDUCING, EXTERNAL PRESSURE VALVE |
| —————————————————————————————————————— | BALL VALVE (PIPE SIZES 2" AND SMALLER) BUTTERFLY VALVE (PIPE SIZES 2—1/2" AND LARGER) |
| Ψ ———————————————————————————————————— | CHECK VALVE (PIPE SIZES 2-1/2 AND LANGER) |
| | MOTOR OPERATED BUTTERFLY VALVE |
| | GAS COCK |
| | RELIEF VALVE |
| | GATE VALVE |
| - | ATC VALVE — 2 WAY |
| C | ATC VALVE — 3 WAY |
| | GLOBE VALVE |
| | FLOW CONTROL VALVE |
| | CALIBRATED BALANCING VALVE |
| | SHUT-OFF COCK FOR USE WITH PRESSURE GAUGE |
| | PUMP |
| | FLEXIBLE CONNECTION |
| KXXXXI | FLOW METER |
| | 90° ELBOW |
| | 45° ELBOW |
| | REDUCER |
| | CONCENTRIC REDUCER |
| | ECCENTRIC REDUCER |
| | LATERAL STRAINER WITH BLOW—OFF VALVE, PROVIDE HOSE END WITH CAP |
| ■ 1001-0 | WHERE DISCHARGE IS NOT PIPED TO DRAIN THERMOMETER 0-100°F |
| (T) | THERMOSTAT |
| Ŭ N | NIGHT THERMOSTAT |
| (S) | SENSOR |
| F&T | STEAM TRAP, F&T=FLOAT & THERMOSTATIC |
| SD | B=BUCKET, T=THERMOSTATIC DUCT SMOKE DETECTOR |
| _ → | ARROW INDICATES DIRECTION OF FLOW IN PIPE |
| | LEADER INDICATES DOWNWARD SLOPE |
| G | PIPE INTO PLANE |
| O | PIPE OUT OF PLANE |
| | PIPE BRANCH — IN TO PLANE |
| | PIPE BRANCH — OUT OF PLANE |

PIPE BRANCH - OUT OF PLANE

PIPE BRANCH - IN PLANE

| H 55 | FLOW SWITCH |
|--|---|
| K+O | HOSE VALVE |
| ——— RD ——— | ROOF DRAIN |
| ——— RDO ——— | ROOF DRAIN OVERFLOW |
| ——II | CLEAN-OUT |
| Ф | FLOOR CLEAN—OUT OR CLEAN—OUT TO GRADE |
| o VTR | VENT THRU ROOF |
| | DOMESTIC COLD WATER (DCW) |
| | DOMESTIC HOT WATER (DHW) |
| | DOMESTIC HOT WATER RETURN (DHWR) |
| | SEWER (BELOW GRADE) |
| | SEWER (ABOVE GRADE) |
| | VENT (SEWER) |
| <u>P-1</u> | PLUMBING FIXTURES |
| | POINT OF CONNECTION |
| A M1-1 | SECTION TAG — TOP FIGURE IS SECTION NO. BOTTOM FIGURE IS SHEET NO. |
| 1 M1-1 | DETAIL TAG — TOP FIGURE IS DETAIL NO. BOTTOM FIGURE IS SHEET NO. |
| EF 1 | EQUIPMENT IDENTIFICATION |
| (1) | KEYED NOTE IDENTIFICATION |
| ——— SW ——— | SOFT DOMESTIC WATER (SW) |
| ———— AW ———— | ACID WASTE |
| AV | ACID VENT |
| —————————————————————————————————————— | HIGH PRESSURE DOMESTIC WATER |
| ——— RO ——— | REVERSE OSMOSIS WATER SUPPLY |
| ROR | REVERSE OSMOSIS WATER RETURN |
| —— ox—— | MEDICAL OXYGEN |
| ——— OX 120 —— | MEDICAL OXYGEN AT PRESSURE INDICATED |
| —— МА ——— | MEDICAL AIR |
| ——— MA 120—— | MEDICAL AIR AT PRESSURE INDICATED |
| ——— MV ——— | MEDICAL VACUUM |
| —— N —— | NITROGEN |
| ——— N20 ——— | NITROUS OXIDE |
| ——— CO2 ——— | CARBON DIOXIDE |
| —————————————————————————————————————— | INSTRUMENT AIR |
| ——— IA 120——— | INSTRUMENT AIR AT PRESSURE INDICATED |
| ——— CA ——— | COMPRESSED AIR |
| —————————————————————————————————————— | LAB AIR |
| LV | LAB VACUUM |
| —— В —— | BRINE |
| S ₀ | FIXTURE FROM LEVEL ABOVE |

₹5 **∑**

NRS GATE VALVE WITH SUPERVISION

FLOW SWITCH

2. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.

3. SLEEVE PIPING THRU WALLS/FOUNDATIONS WHERE REQUIRED.

MEDICAL GAS PIPING IS SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.

5. NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S, AND MCC'S.

MOUNT ALL SERVICE VALVES NEAR CEILING HEIGHT FOR ACCESSIBILITY.

7. PIPING BEING DISCONNECTED AND REMOVED SHALL BE REMOVED BACK TO AN ACTIVE MAIN. NO DEAD LEGS SHALL BE ALLOWED.

FIRE PROTECTION GENERAL NOTES

- CONTRACTOR SHALL REMOVE AND REROUTE ALL FIRE SUPPRESSION PIPING AS NECESSARY TO ACCOMODATE ROUTING OF MECHANICAL DUCTWORK AND PIPE, PLUMBING LINES, ESPECIALLY WASTE AND VENT PIPING, AND OTHER DISCIPLINES AS NECESSARY TO COMPLETE THE
- 2. NO FIRE PROTECTION LINE SHALL BE DESIGNED OR INSTALLED PRIOR TO CLOSE COORDINATION WITH ALL OTHER DISCIPLINES. DUCTWORK, MECHANICAL PIPING AND PLUMBING TAKE SPACE PRECEDENCE OVER FIRE PROTECTION PIPING. FAILURE TO COMPLY WILL RESULT IN THE FIRE PROTECTION REMOVAL AND REINSTALLATION AT THE FIRE PROTECTION CONTRACTORS EXPENSE.
- 3. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING SURROUNDING AREA.
- 4. COORDINATE EXACT LOCATION OF PIPING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND PLUMBING PIPING, AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS.
- 5. ALL NEW SPRINKLERS ARE TO BE QUICK RESPONSE, FLAT PLATE CONCEALED WITH A WHITE COVER PLATE. CLEAN ROOM SPRINKLERS ARE TO BE LISTED FOR USE IN CLEAN ROOMS.

PLUMBING GENERAL NOTES

- 1. UNLESS OTHERWISE NOTED, SLOPE PIPE AS FOLLOWS: WASTE BRANCHES: 1/4" PER FOOT: WASTE MAINS: 1/4" PER FOOT: ROOF DRAIN/ROOF DRAIN OVERFLOW: 1/8" PER FOOT.
- 2. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING AREAS ON FLOORS BELOW.
- 3. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.
- 4. ALL PIPING IN PLUMBING CHASES SHALL BE ARRANGED TO ALLOW MAINTENANCE ACCESS.
- 5. NO PIPING TO RUN OVER ELECTRICAL PANELS. VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S.
- 6. COORDINATE FAN ROOM FLOOR DRAIN AND FLOOR SINK LOCATIONS WITH COOLING COIL, EVAPORATIVE SECTION, AND HEATING COIL LOCATIONS.
- 7. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.
- 8. PIPING AND ROUTING SHOWN, INCLUDING ALL BELOW FLOOR DECK PIPING, IS APPROXIMATE. IT IS UP TO THE CONTRACTOR TO FIELD VERIFY
- THE EXACT LOCATION AND SIZE OF ALL PIPING.
- 9. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING
- HEIGHTS, DIMENSIONS, AND OTHER REQUIREMENTS. 10. CONTRACTOR TO VERIFY CONNECTION SIDE OF ADA FIXTURES AND
- ADJUST ACCORDINGLY. INSTALL FLUSH VALVES HANDLES ON WIDE SIDE OF ALL FIXTURES.
- 11. LOCATE ALL VENTS MINIMUM 25' AWAY FROM AIR INTAKES.
- INSTALL ALL DOMESTIC WATER LINES BELOW DUCTWORK.
- 13. INSTALL A 24" X 24" ACCESS DOOR BELOW ALL ISOLATION VALVES, BALANCING VALVES AND WATER HAMMER ARRESTORS WHERE MOUNTED ABOVE HARD CEILINGS.
- 14. MOUNT ALL ISOLATION VALVES, CONTROL VALVES, BALANCING VALVES, ETC. NEAR CEILING HEIGHT FOR ACCESSIBILITY.
- 15. INSTALL ALL EQUIPMENT WITH SUFFICIENT CLEARANCE FOR MAINTENANCE PER MANUFACTURERS RECOMMENDATION.
- 16. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL AND PROVIDE SLEEVES AS NECESSARY.
- 17. COORDINATE EXACT LOCATION OF PLUMBING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING, CABLE TRAY, DUCTWORK, MECHANICAL PIPING, MEDICAL GASES, FIRE PROTECTION AND OTHER
- 18. COORDINATE THE LOCATION OF THE FLOOR DRAIN, SHOWER DRAIN, OR FLOOR SINK WITH ARCHITECTURAL AND STRUCTURAL, TYPICAL.
- 19. ACCESS DOORS SHALL BE PROVIDED TO ALL WATER HAMMER ARRESTORS IN WALLS OR ABOVE CEILINGS.

TRADES, TYPICAL.

- 20. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES OF WASTE, VENT AND DOMESTIC WATER TO/FROM SINGLE FIXTURE.
- 21. HOSE BIBBS SHOWN AT LAVATORIES ARE TO BE MOUNTED AT AN ACCESSIBLE LOCATION UNDER THE LAVATORY.
- 22. COORDINATE EXACT LOCATION OF PLUMBING PIPING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND FIRE PROTECTION PIPING, AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS.
- 23. LOCATE CIRCUIT SETTERS, VALVES, WATER HAMMER ARRESTORS, ETC. IN ACCESSIBLE LOCATIONS. PROVIDE 24"X24" ACCESS PANEL WHERE ITEM IS LOCATED ABOVE A HARD CEILING.
- 24. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.
- 25. INSTALL CLEANOUTS IN DRAIN PIPING AS INDICATED, AND WHERE NOT INDICATED, ACCORDING TO THE FOLLOWING.
- a) SIZE SAME AS DRAINAGE PIPING UP TO 4" NPS. USE 4" NPS FOR LARGER. DRAINAGE PIPING UNLESS LARGER CLEANOUT IS INDICATED.
- b) LOCATE AT MINIMUM INTERVALS OF 50 FT FOR PIPING 4" NPS AND SMALLER AND 100 FT FOR LARGER PIPING.
- c) LOCATE AT THE BASE OF EACH VERTICAL STACK.

BACK TO AN ACTIVE MAIN. NO DEAD LEGS SHALL BE ALLOWED.

26. PIPING BEING DISCONNECTED AND REMOVED SHALL BE REMOVED

MECHANICAL PIPING GENERAL NOTES

- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PIPING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
- 2. UNLESS OTHERWISE NOTED: ALL MECHANICAL PIPING IS OVERHEAD TO RUN ABOVE DUCTWORK AND TIGHT TO UNDERSIDE OF STRUCTURE.
- 3. WHERE VALVING OR EQUIPMENT IS LOCATED ABOVE HARD CEILINGS PROVIDE AN ACCESS DOOR IN CEILING. MINIMUM ACCESS DOOR SIZE OF
- 4. NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S, AND MCC'S.
- SLEEVE PIPING THRU WALLS/FOUNDATIONS WHERE REQUIRED.
- INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
- 7. ALL VALVES SHALL BE INSTALLED SO THAT VALVE REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.
- 8. PROVIDE AN AIR VENT AT THE HIGH POINT OF EACH DROP IN THE HEATING AND CHILLED WATER PIPING SYSTEM.
- 9. INSTALL ALL PIPING WITHOUT FORCING OR SPRINGING.
- 10. ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION. 11. PROVIDE ISOLATION VALVES AT EACH EXIT/ENTRANCE INTO SHAFT WHETHER OR NOT SHOWN.
- 12. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.
- 13. COORDINATE LOCATION OF THERMOSTAT WITH ARCHITECTURAL FURNISHING PLANS. MOUNT THERMOSTAT AT HEIGHT AS SPECIFIED ON ARCHITECTURAL.
- 14. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.
- 15. PIPING BEING DISCONNECTED AND REMOVED SHALL BE REMOVED BACK TO AN ACTIVE MAIN. NO DEAD LEGS SHALL BE ALLOWED.

MECHANICAL GENERAL NOTES

- REGISTERS WITH ARCHITECTURAL REFLECTED CEILING PLAN, TYPICAL.
- OF THE DIFFUSERS, REGISTER OR GRILLE IT SERVES UNLESS NOTED OTHERWISE, TYPICAL.
- COORDINATE EXACT MOUNTING LOCATION OF ALL THERMOSTATS WITH LATEST REVISION OF ARCHITECTURAL ELEVATION AND FURNISHINGS PLANS, TYPICAL.
- 5. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CAULKING AND SEALING ALL PENETRATIONS IN FIRE AND SMOKE RATED
- 6. THE MECHANICAL CONTRACTOR SHALL PROVIDE FIRE, SMOKE OR COMBINATION FIRE/SMOKE DAMPERS AT ALL LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS AND AS REQUIRED TO MEET THE INTEGRITY OF ALL SMOKE AND FIRE PARTITIONS. THE CONTRACTOR SHALL REFER TO THE LATEST ARCHITECTURAL LIFE SAFETY PLANS FOR ALL FIRE AND SMOKE PARTITION LOCATIONS. DAMPERS ARE TO BE PROVIDED WITH SHUTOFF/TEST
- PROVIDE AND INSTALL TURNING VANES IN ALL SQUARE LOW
- 8. INSTALL ALL TERMINAL BOXES IN EASILY ACCESSIBLE AND
- 9. CONTRACTOR SHALL OFF-SET, TRANSITION AND PROVIDE CHANGES
- 11. PROVIDE AND INSTALL REMOTE DAMPER OPERATORS FOR ALL DAMPERS INSTALLED ABOVE INACCESSIBLE CEILINGS, SEE MECHANICAL
- 12. PROVIDE AND INSTALL HIGH EFFICIENCY TAKE-OFF FITTINGS AND BALANCING DAMPER AT ALL BRANCH CONNECTIONS TO LOW PRESSURE
- 13. PROVIDE AND INSTALL HIGH EFFICIENCY OR CONICAL TAKE-OFFS AT
- 14. WHERE DUCTWORK CROSSES, SUPPLY DUCTWORK IS USUALLY
- 16. THE MECHANICAL CONTRACTOR SHALL PROVIDE CEILING MOUNTED ACCESS DOORS FOR ALL FIRE, SMOKE AND COMBINATION FIRE/SMOKE DAMPERS INSTALLED ABOVE INACCESSIBLE CEILING. FIELD VERIFY EXACT INSTALLATION LOCATIONS PRIOR TO COMMENCING WORK AND COORDINATE INSTALLATIONS WITH LATEST ARCHITECTURAL REFLECTED CEILING PLANS.
- 21. ALL DUCTWORK ABOVE HARD CEILINGS SHALL BE EXTENDED ALL THE WAY TO THE SUPPLY DIFFUSERS, RETURN GRILLS OR EXHAUST GRILLS WHETHER OR NOT HARD DUCT OR FLEX DUCT IS SHOWN ON PLANS. FLEX DUCT WILL NOT BE ALLOWED TO DIFFUSERS OR GRILLS ABOVE HARD CEILINGS. FLEX DUCT WILL BE REQUIRED IN AREAS ABOVE T-BAR CEILINGS.
- 22. NEW DUCTWORK, PIPING AND EQUIPMENT SHALL BE COORDINATED WITH STRUCTURE, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUIT, PLUMBING, MECHANICAL AND FIRE PROTECTION PIPING, MEDICAL GASES, ALL OTHER TRADES AND ALL OTHER EXISTING CONDITIONS.
- 23. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED
- 24. PROVIDE ACCESS TO ALL TEMPERATURE CONTROLS ABOVE CEILING. LOCATE IN ACCESSIBLE LOCATION. WHERE THERE ARE HARD CEILINGS THE
- 25. UNLESS NOTED OTHERWISE, SUPPLY DIFFUSERS SHALL BE OF THE CD-1 TYPE, RETURN GRILLS SHALL BE OF THE RG-1 TYPE AND EXHAUST GRILLS SHALL BE OF THE EG-1 TYPE. REFER TO DIFFUSER SCHEDULE.

- COORDINATE EXACT PLACEMENT OF DIFFUSERS, GRILLES, AND
- SEE DETAIL FOR DIFFUSER CONNECTIONS TO DUCTWORK, TYPICAL.
- BRANCH DUCTWORK SHALL BE SIZED TO MATCH THE NECK INLET SIZE
- PARTITIONS TO MAINTAIN RATINGS. SEE SPECIFICATION, TYPICAL.
- SWITCH AT EACH LOCATION.
- PRESSURE DUCTWORK AT ELBOWS OR TEES, TYPICAL.
- SERVICEABLE LOCATIONS, MEETING ALL MANUFACTURERS REQUIRED CLEARANCES ON EACH SIDE, SEE DETAILS, TYPICAL.
- AS REQUIRED FOR COORDINATION WITH OTHER TRADES, TYPICAL.
- 10. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. REFER TO MECHANICAL SPECIFICATIONS FOR EXTENT OF DUCT INSULATION AND LINER.
- SPECIFICATIONS FOR EQUIPMENT REQUIREMENTS, TYPICAL.
- DUCTWORK.
- ALL BRANCH CONNECTIONS TO MEDIUM PRESSURE DUCTWORK.
- BELOW RETURN AND EXHAUST DUCT. RETURN DUCTWORK IS USUALLY BELOW EXHAUST DUCTS.
- 15. AT LOCATIONS WHERE DIFFUSERS OR GRILLES ARE UNDER DUCTWORK, CONTRACTOR TO FABRICATE TRANSITION BOOT FROM FLEX CONNECTION TO DIFFUSER OR GRILLE WITH BALANCING DAMPER, TYPICAL
- 17. MECHANICAL CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT IS PROVIDED AND INSTALLED WITH CLEARANCES PER MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL MAINTAIN PROPER SERVICE SPACE FOR COIL PULLS, BAS DEVICES, MAINTENANCE ACCESS, ETC.
- ALL VAV BOXES TO HAVE REHEAT COILS, EXCEPT AS NOTED, PROVIDE A MINIMUM OF TWO DUCT DIAMETERS OF STRAIGHT ROUND DUCT TO INLET OF VAV BOX. BOX SHALL BE HARD CONNECTED (CONICAL) TO MEDIUM PRESSURE DUCT, TYPICAL.
- 19. PROVIDE ACCESS DOORS TO ACCESS VAV BOX CONTROLS ABOVE HARD CEILINGS. PROVIDE MIN. 24" X 24".
- 20. ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE SHOWN, IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.
- DEVIATIONS FROM THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL PROVIDE 24"X24" ACCESS DOOR.

ARCHITECTS

NJRA Architects

5272 S. College Drive

www.njraarchitects.com

/ DONALD K.

BRADSHAW

AN BOERUM

Salt Lake City · Logan · St. George · Tempe

330 South 300 East

Salt Lake City, UT 84111

VBFA Project Number: 18583

FRANK ASSOCIATES, INC

801.530.3148 T 801.530.3150 F

Murray, Utah 84123

801.364.9259

NJRA Project # Construction Documents

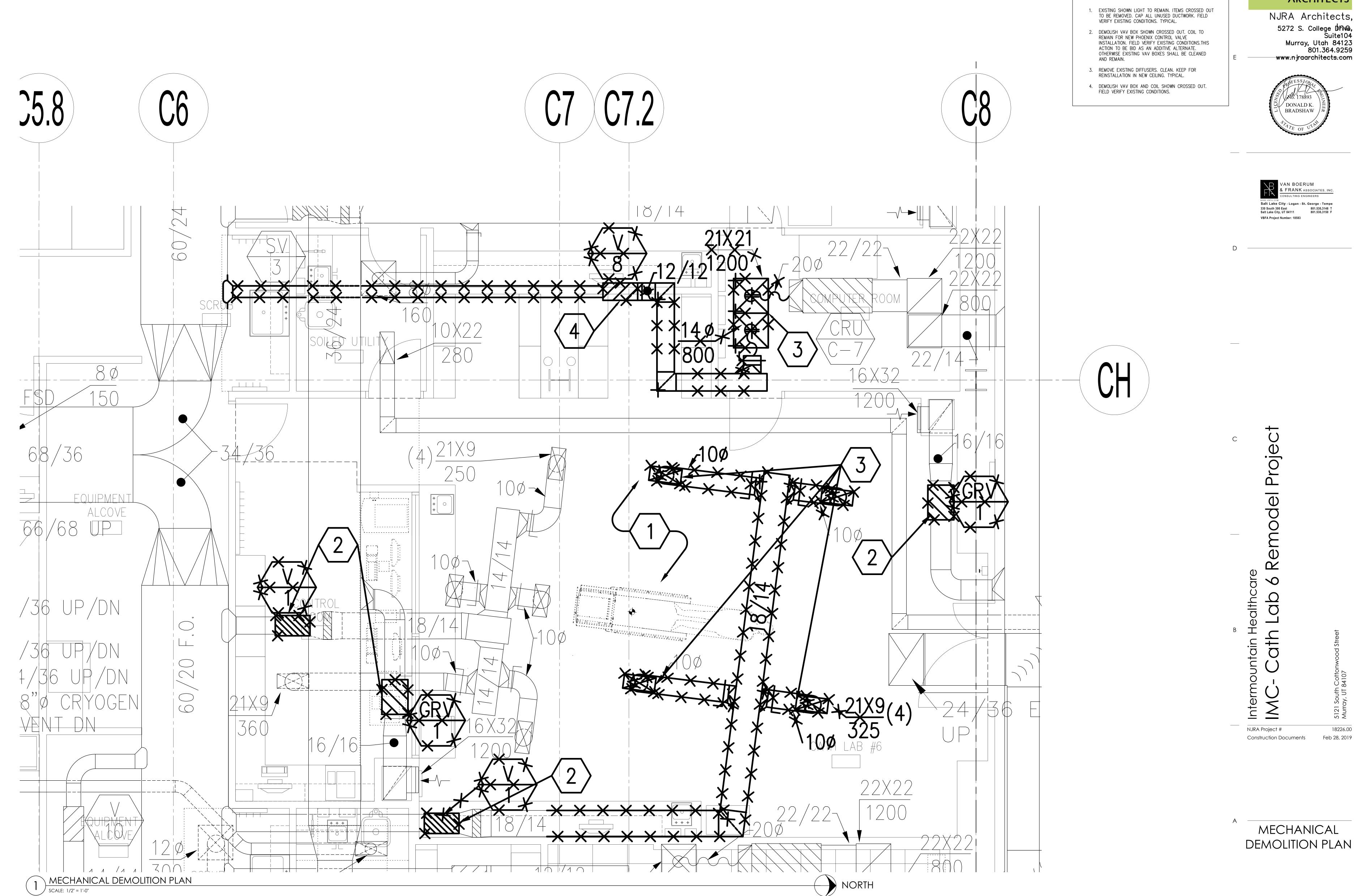
18226.00 Feb 28, 2019

MECHANICAL

SYMBOLS AND

LEGEND

M00



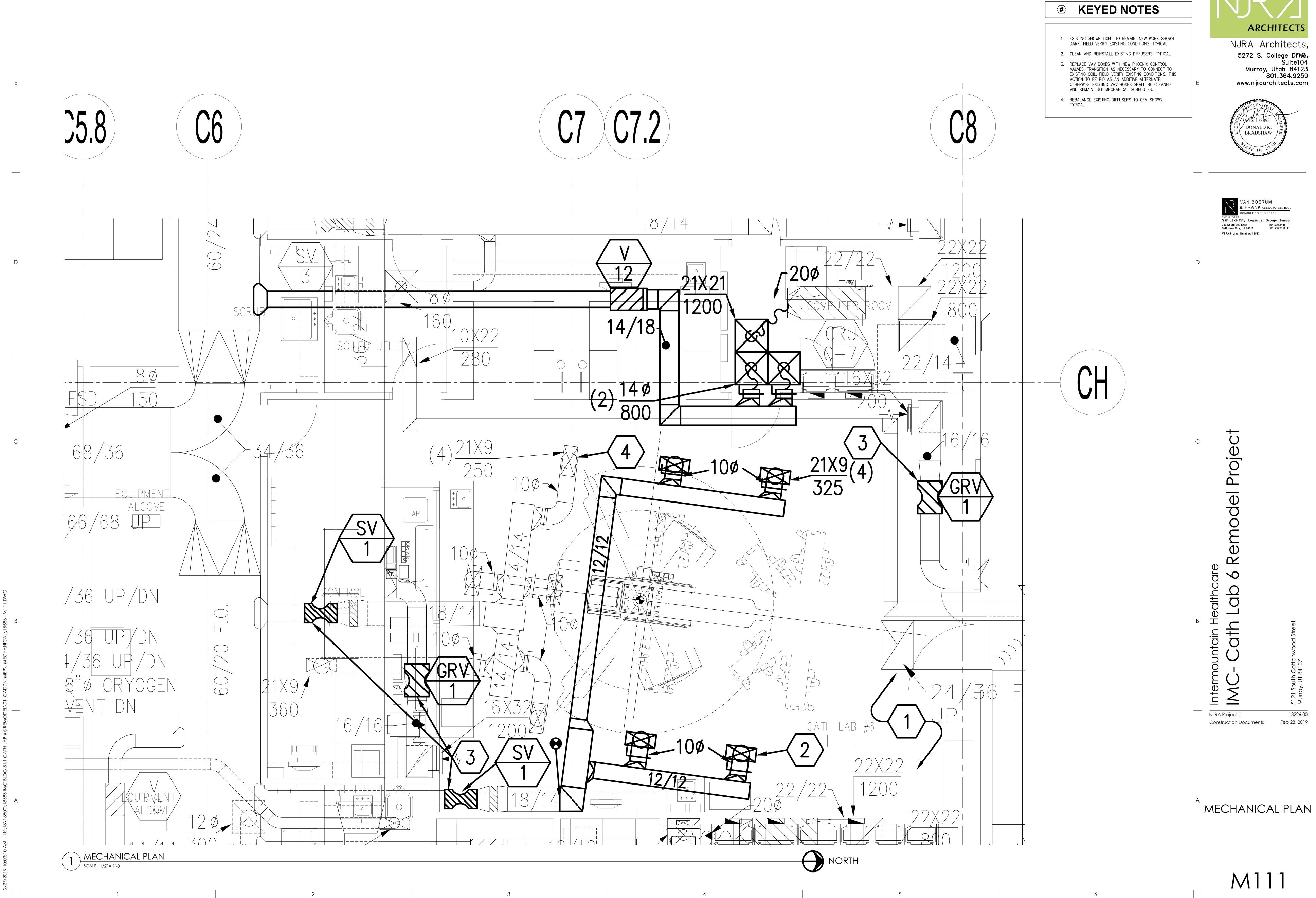
KEYED NOTES

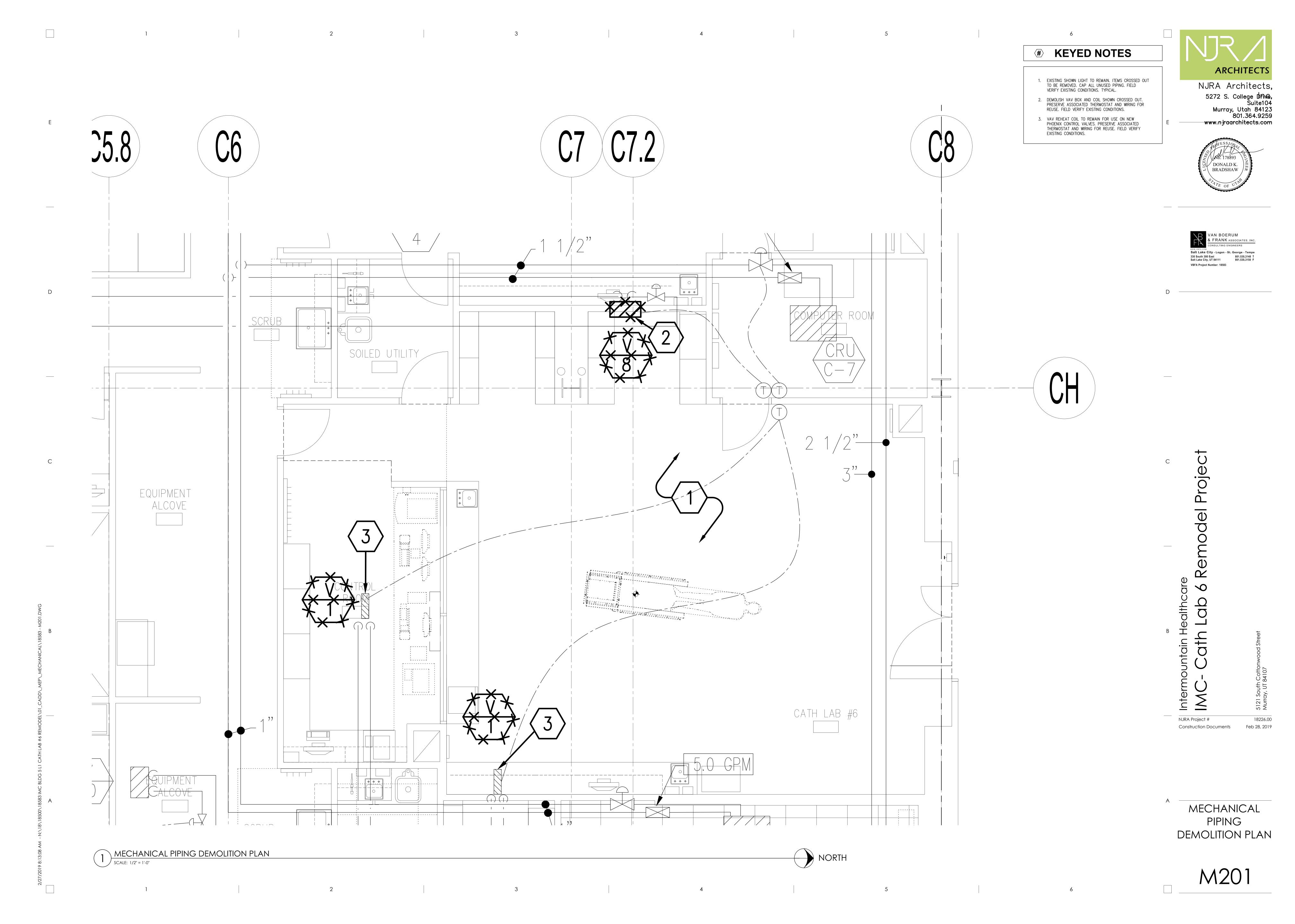


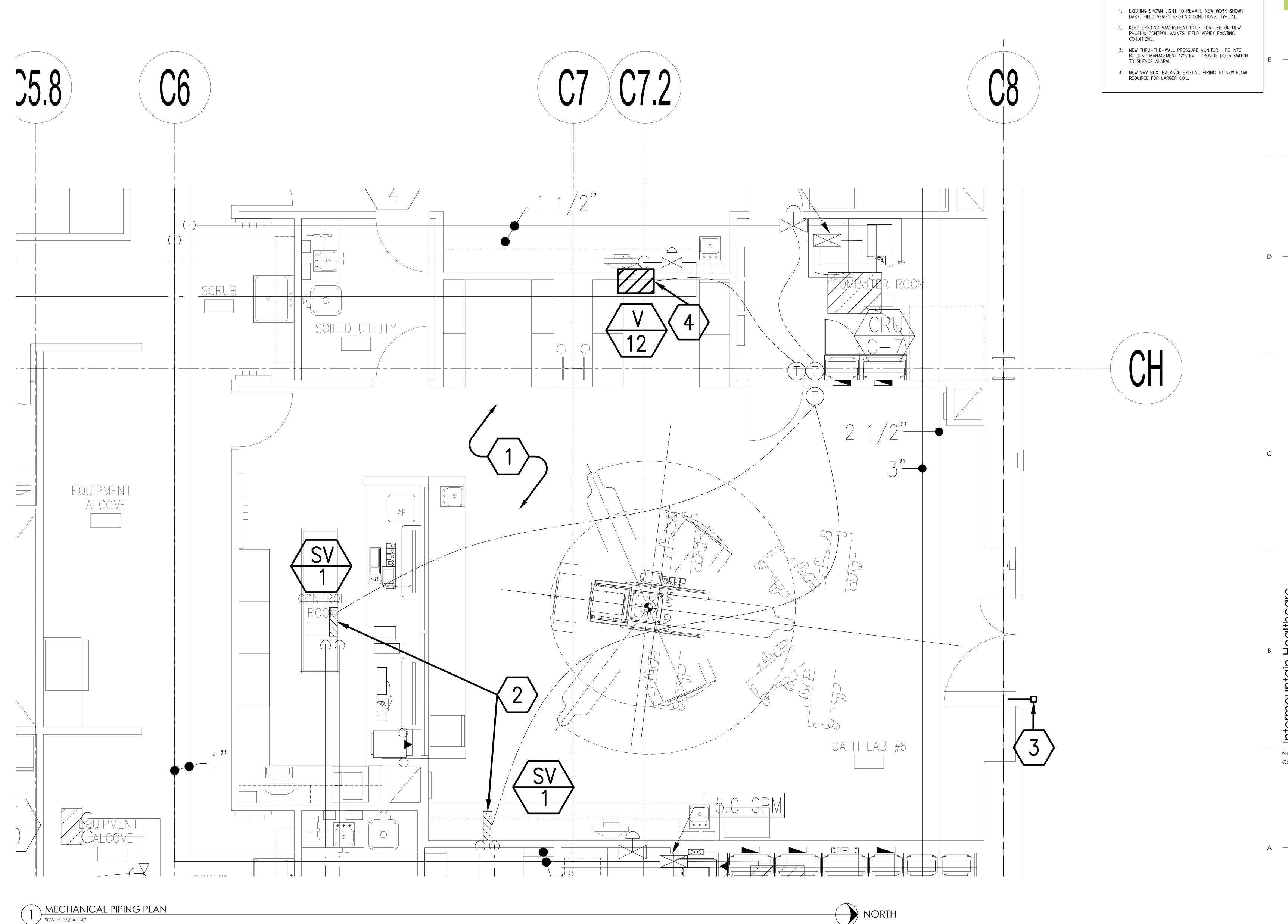
5272 S. College Dnve, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



M101

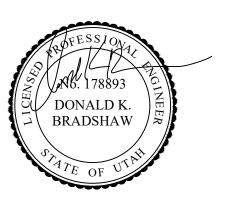






KEYED NOTES





VAN BOERUM

& FRANK ASSOCIATES, INC.

CONSULTING ENGINEERS

Salt Lake City · Logan · St. George · Tempe

330 South 300 East 801.530.3148 T

Salt Lake City, UT 84111 801.530.3150 F

VBFA Project Number: 18583

Intermountain Healthcare

Intermountain Healthcare

IMC- Cath Lab 6 Remodel Project

S121 South Cottonwood Street

Construction Documents

Leb 58, 2

MECHANICAL PIPING PLAN

M211

| | | | | | | | | | AIR CO | ONTRO | L VALV | E SCH | EDULE | = | | | | | | | | | | | | | |
|-------------|-------|--------------------|--------|---------|---------|---------|------------|---------|-----------|-----------|-----------|-------|-------|-------------|---------|------------|------|-------|------|------------|------|-----------|---------|---------|------------|-----------|-----------------|
| | | | SUPPLY | | | | | | | | | | | | | | | | | | | GENERAL E | EXHAUST | | | | |
| | | | | AIR | | | | | | | | FLUID | | | | | COIL | | | | | | | | | | [|
| | | | | COOLING | HEATING | | UNOCCUPIED | | ENTERING | MINIMUM | S.P. LOSS | | TOTAL | ENTERING/ | | MAX. FLUID | | | COIL | AIR | | | | | UNOCCUPIED | S.P. LOSS | 1 |
| | | MANUFACTURER | INLET | MAXIMUM | MAXIMUM | MINIMUM | MINIMUM | AIRFLOW | AIR TEMP. | LEAVING | AT MAX | HEAT | FLUID | LEAVING | | PRESSURE | MIN. | MIN. | SIZE | PRESSURE | PIPE | INLET | MAXIMUM | MINIMUM | MINIMUM | AT MAX | 1 |
| AREA | | AND | DIA. | AIRFLOW | AIRFLOW | AIRFLOW | AIRFLOW | DRIVING | DB | AIR TEMP. | CFM | LOAD | FLOW | FLUID TEMP. | WORKING | DROP | COIL | FINS | HxW | DROP | SIZE | DIA. | AIRFLOW | AIRFLOW | AIRFLOW | CFM | 1 |
| SERVED | ID | MODEL NUMBER | (IN) | (CFM) | (CFM) | (CFM) | (CFM) | FACTOR | (DEG. F) | (DEG. F) | (IN H20) | (MBH) | (GPM) | (DEG. F) | FLUID | (FT) | ROWS | (FPI) | (IN) | (IN. W.G.) | (IN) | (IN) | (CFM) | (CFM) | (CFM) | (IN H20) | NOTES |
| CATH LAB #6 | SV-1 | PHOENIX HSVA 114LA | 14 | 1360 | 865 | 865 | 865 | | 52 | 72 | 0.3 | 15.9 | 1.06 | 180/150 | WATER | 3 | 2 | 10 | 9x8 | 0.06 | 3/4 | | | | | | (1)(2)(3)(4)(5) |
| CATH LAB #6 | GRV-1 | PHOENIX HEVA 114LA | | | | | | | | | | | | | | | | | | | | 14 | 1200 | 740 | 740 | 0.3 | (1)(2)(4)(5) |

ARCHITECTS

NJRA Architects,

5272 S. College Ding,

Suite104

Murray, Utah 84123

801.364.9259

www.njraarchitects.com

ROFESSIONALI ROEESSIONALI RO

VAN BOERUM

& FRANK ASSOCIATES, INC.

CONSULTING ENGINEERS

Salt Lake City · Logan · St. George · Tempe

330 South 300 East 801.530.3148 T

Salt Lake City, UT 84111 801.530.3150 F

VBFA Project Number: 18583

(1) ALL CAPACITIES AT 4,305 FT ELEVATION.

(2) PRESSURE INDEPENDENT CONTROL VALVE. VALVE SHALL BE EQUIPPED WITH PRESSURE SWITCH.

(3) COIL AIR PRESSURE DROP RATED AT HEATING AIRFLOW. SUBMITTAL SHALL INCLUDE AIR PRESSURE DROP AT MAXIMUM SPECIFIED AIRFLOW. AIR PRESSURE DROP NOT TO EXCEED 0.4" W.G.; WATER PRESSURE DROP NOT TO EXCEED 5 FT HD (EXCEPT WHERE NOTED OTHERWISE).

(4) REPLACEMENT OF VAV BOX WITH PHEONIX VALVE TO BE BIDDED AS AN ALTERNATE.

(5) AIR CONTROL VALVES TO BE OF THE LOW PRESSURE DESIGN AND ABLE TO AUTOMATICALLY COMPENSATE FOR PRESSURE FLUCTUATIONS WITHOUT MOTOR MOVEMENT DOWN TO 0.3" OF STATIC PRESSURE.

| | | | | | | | , | VAV BC | X SCI | HEDULE | = | | | | | | | |
|------|--------------|---------|---------|---------|---------|-----------|-----------|-----------|--------|-----------|----------|----------|----------|------------|------|------|-----------|-------------|
| | | | AIR | | | | | | | FLUID (2) | | | | | COIL | | | |
| | | | COOLING | HEATING | | ENTERING | LEAVING | S.P. LOSS | NC AT | | TOTAL | ENT. | | MAX. FLUID | | | BALANCING | |
| | MANUFACTURE | R INLET | MAXIMUM | MAXIMUM | MINIMUM | AIR TEMP. | AIR TEMP. | AT MAX | 1" H2O | HEAT | FLUID | FLUID | | PRESSURE | MIN. | PIPE | VALVE | |
| | AND | SIZE | AIR (5) | AIR | AIR (3) | DB | DB | CFM (4) | (1) | LOAD | FLOW | TEMP | WORKING | DROP | COIL | SIZE | SIZE | |
| ID | MODEL NUMBER | R (IN) | (CFM) | (CFM) | (CFM) | (DEG. F) | (DEG. F) | (IN H20) | S.P. | (MB) | (GPM) | (DEG. F) | FLUID | (FT) | ROWS | (IN) | (IN) | REMARKS |
| V-12 | TITUS-ESV-3 | 12 | 1600 | 960 | 325 | 52 | 100 | 0.65 | 26 | 39.7 | 2.5 | 180 | H. WATER | 1 | 2 | 3/4 | 3/4 | 1,2,3,4,5,6 |
| | | | | | | | | | | | | | | | | | | |

1. MAXIMUM DISCHARGE NC AT BOX DIFFENTIAL PRESSURE BASED ON ARI STANDARD 880-89

2. COIL HEATING CAPACITY BASED ON HEATING MAIXIMUM AIR FLOW (60% OF MAXIMUM COOLING CFM).

3. MINIMUM CFM IS LOWEST CONTROLLABLE CFM SETTING (BASED ON 400 FPM INLET VELOCITY).

4. MAXIMUM STATIC PRSSURE DROP PERMISSABLE ACROSS BOX AND COIL AT MAXIMUM COOLING CFM.

5. BOX COOLING MAXIMUM IS THE SUM OF DIFFUSERS CFM VALUES AS SHOWN IN THE DRAWINGS. BOX MINIMUM CFM TO BE SET AT 30% OF THIS MAXIMUM.

BOX HEATING CFM TO BE SET AT 60% OF THIS SAME MAXIMUM. TYPICAL UNLESS OTHERWISE NOTED.

6. PRESSURE INDEPENDENT TYPE BOX.

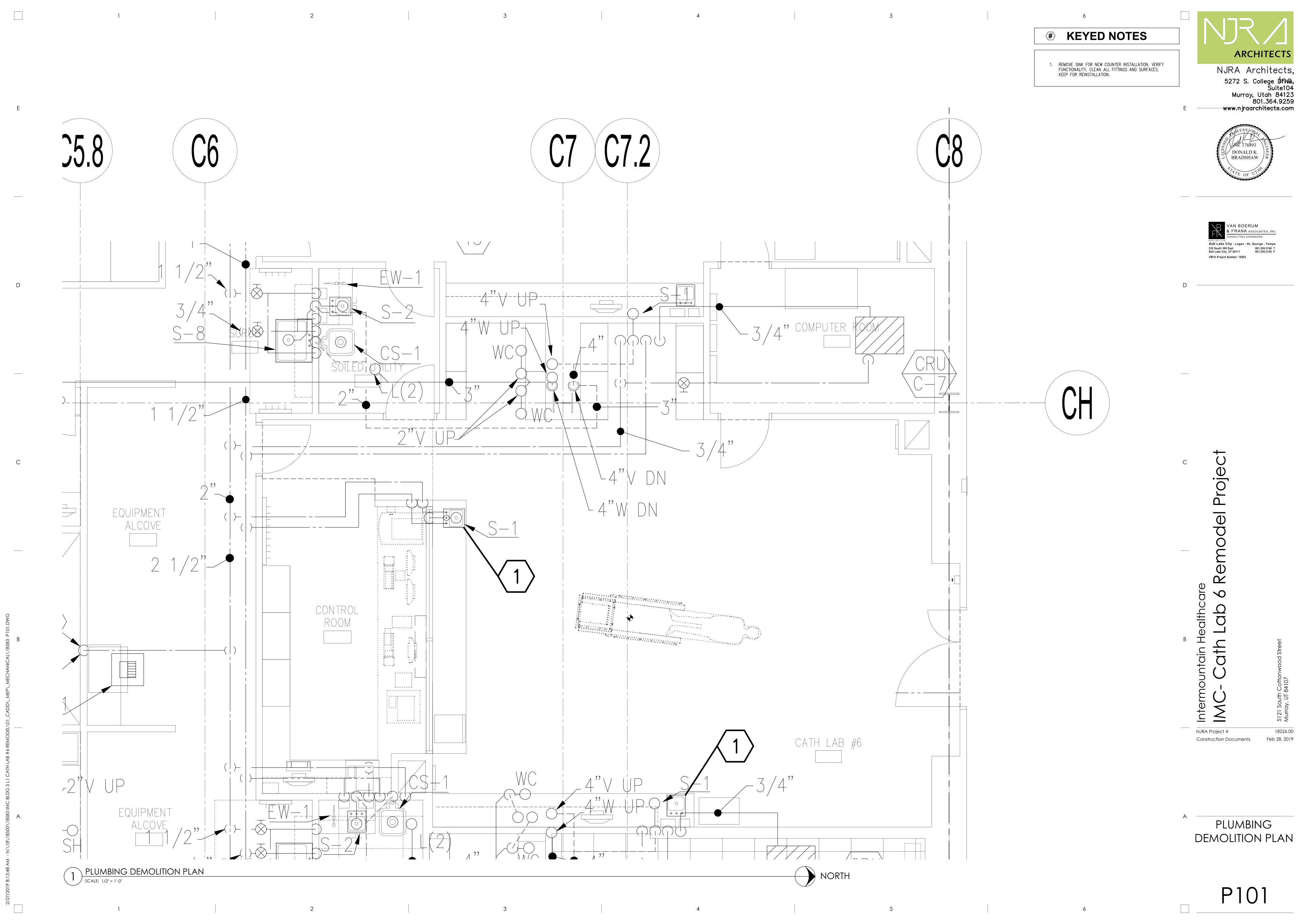
rain Healthcare ath Lab 6 Remode

NJRA Project #
Construction Documents

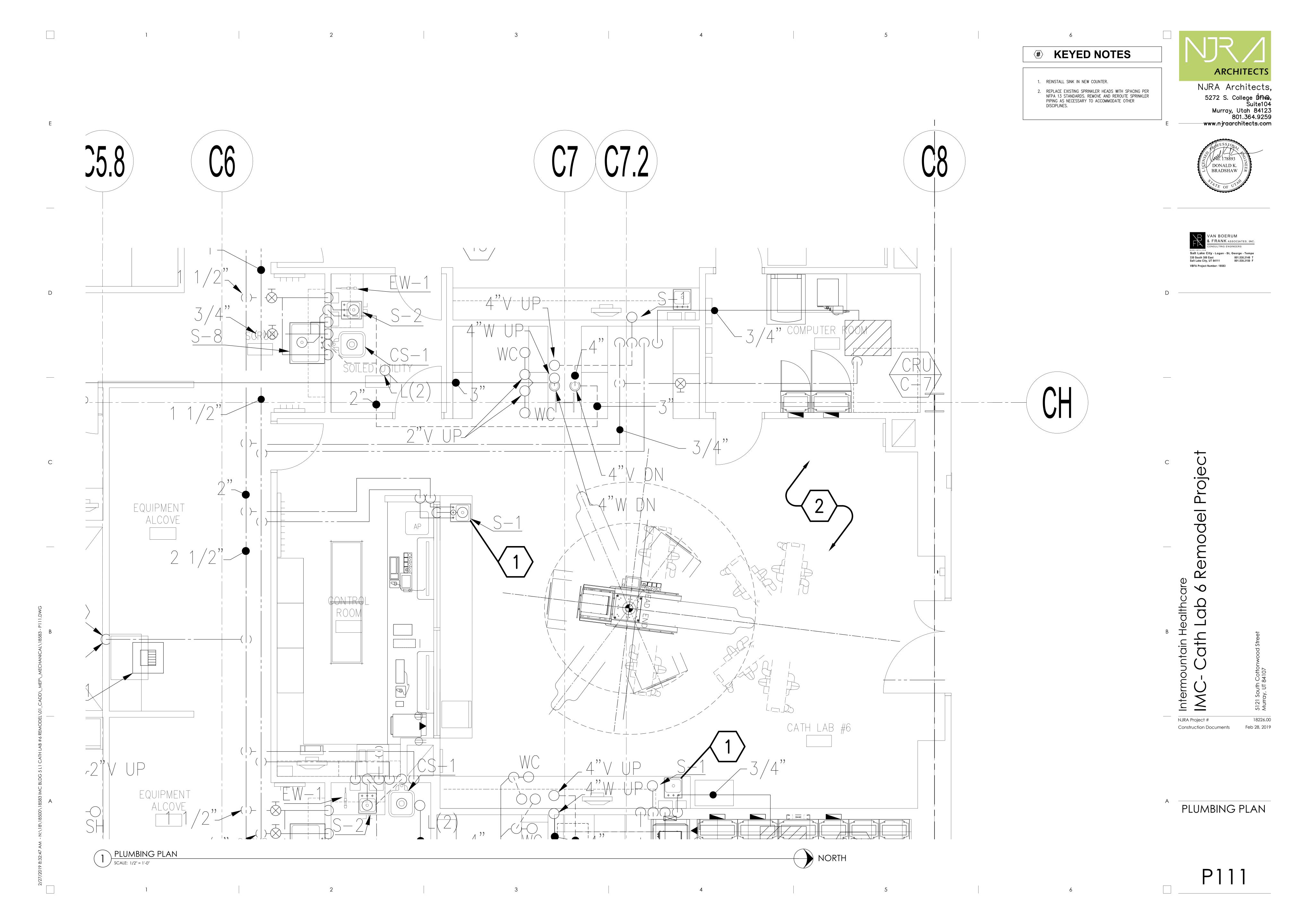
MECHANICAL SCHEDULES

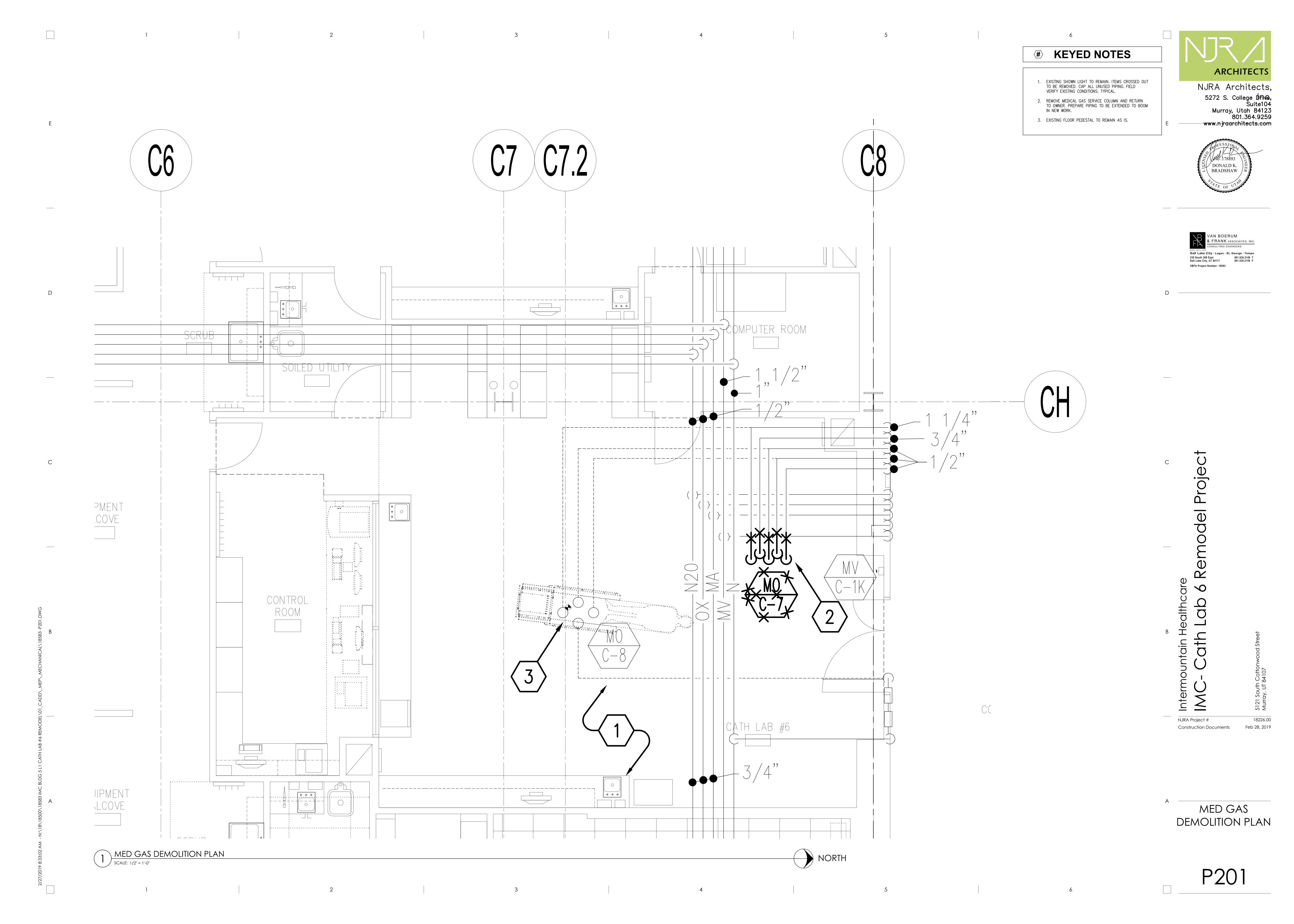
M501

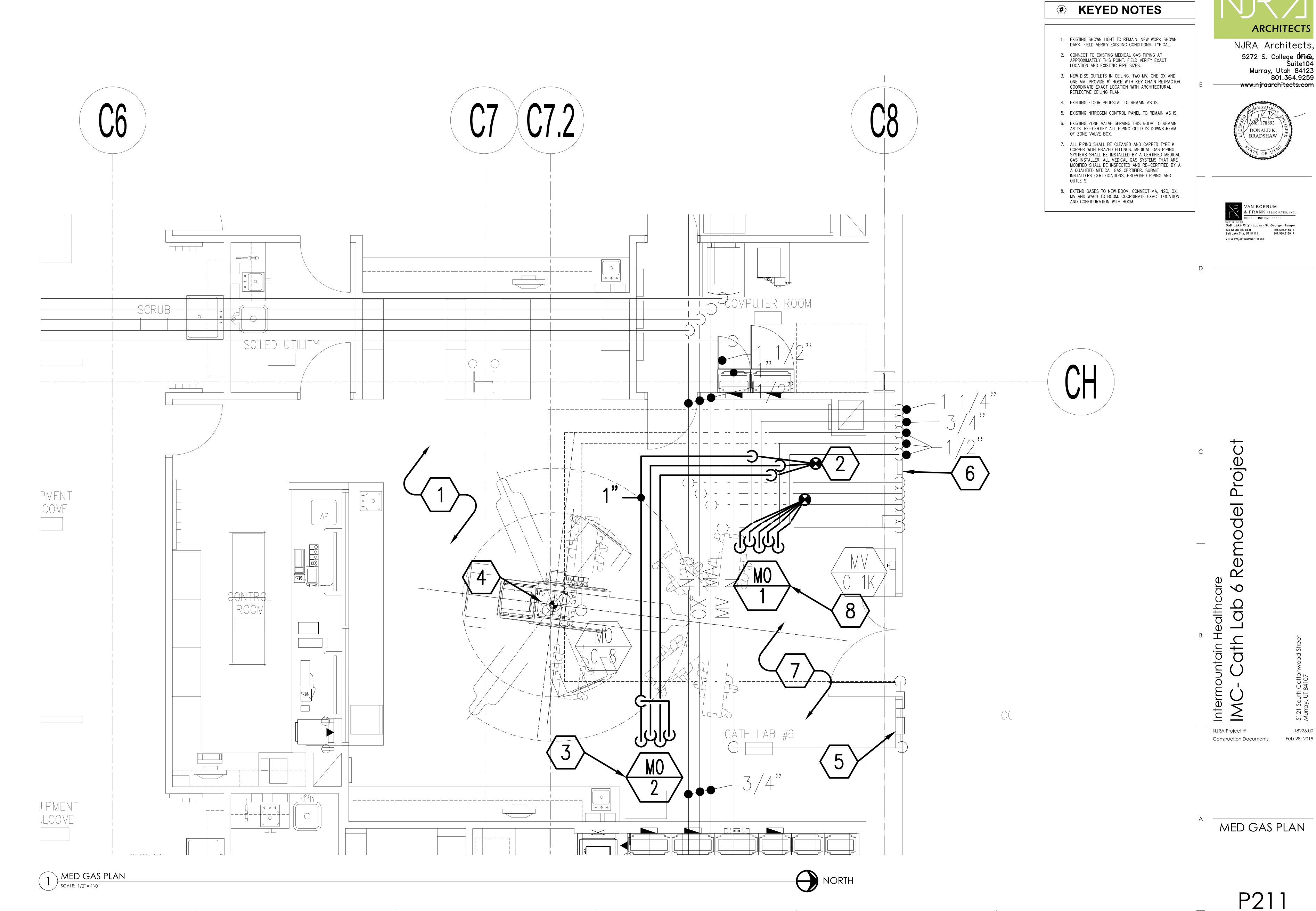
/28/2019 8:02:27 AM - N:\18\18500\185831MC BLDG 5 L1 CATH LAB #6 REMODEL\01_CADD_MEP_MECHANICAL\18583 - M50 B



ARCHITECTS NJRA Architects,







ARCHITECTS

NJRA Architects, 5272 S. College **Drive,** Suite104 Murray, Utah 84123 801.364.9259

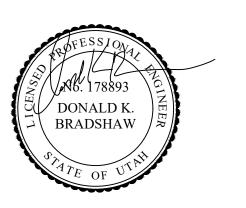
| _ | | | | | | | | MED | ICAL G | AS OU | TLETS | SCHED | ULE | | | | | | | | | |
|--------|------------------|-------------|----|----|---|-----|-----|-------|--------|-------|-------|-------------|--------------|-------|---|------|-----|-------|-------|-------|------|---------|
| | | # OF OUTLET | TS | | | _ | | | | | | PIPE DROP S | SIZE TO OUTL | ET(S) | | _ | | | | | | |
| SYMBOL | ROOM TYPE | OX | MA | MV | N | N20 | CO2 | MA100 | OX120 | MA120 | WAGD | OX | MA | MV | N | N20 | CO2 | MA100 | OX120 | MA120 | WAGD | REMARKS |
| MO-1 | CATH LAB BOOM | 2 | 2 | 2 | | 1 | | | | | 1 | 1/2" | 1/2" | 3/4" | | 1/2" | | | | | 3/4" | 2,3 |
| MO-2 | CATH LAB CEILING | 1 | 1 | 2 | | | | | | | | 1/2" | 1/2" | 3/4" | | | | | | | | 1,2 |

^{1.} CEILING MOUNTED OUTLETS

1 5



NJRA Architects,
5272 S. College DAVe,
Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com



VAN BOERUM

& FRANK ASSOCIATES, INC.

CONSULTING ENGINEERS

Salt Lake City · Logan · St. George · Tempe

330 South 300 East 801.530.3148 T

Salt Lake City, UT 84111 801.530.3150 F

VBFA Project Number: 18583

Intain Healthcare Cath Lab 6 Remodel Projec

NJRA Project # 18226.00

Construction Documents Feb 28, 2019

PLUMBING SCHEDULES

P501

^{2.} DISS OUTLETS WITH KEYCHAIN RETRACTORS AND 6-FOOT HOSES

^{3.} BOOM MOUNTED OUTLETS

| YMBOL | DESCRIPTION |
|----------------------------|---|
| FERENC | CE AND LINE SYMBOLS |
| A5 | DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 |
| E-501 | INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN. |
| A5 | ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES |
| E-201 | ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN. |
| | |
| A5 E-201 | ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN. |
| OM NAME | ROOM IDENTIFIER WITH ROOM NAME AND NUMBER. |
| 100 | KEYNOTE INDICATOR. |
| ${\bigwedge}$ | REVISION INDICATOR. |
| CU-1 > | EQUIPMENT INDICATOR. |
| | BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING |
| \sim | BREAK, ROUND |
| _ | NEW LINE: MEDIUM LINE. |
| | HIDDEN FEATURES LINE: HIDDEN, THIN LINE |
| | EXISTING TO REMAIN LINE: THIN LINE. |
| | DEMOLITION LINE: DASHED, MEDIUM LINE |
| RING ME | ETHODS |
| A-1,3,5 | BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE |
| | BRANCH CIRCUIT HOME BUIN TO BANELBOARD: NUMBER OF |
| → | BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. |
| A-1,3,5 | NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE. FOR BRANCH WIRING USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES |
| | EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS. |
| $\overline{\mathcal{M}}$ | FLEXIBLE WIRING. |
| | WIRING AND/OR RACEWAY: THIN LINE. WHERE "X" = : |
| | CATV = CABLE TELEVISION NC = NURSE CALL CCTV = CLOSED CIRCUIT P = POWER |
| - x — | TELEVISION RC = RIGID CONDUIT FA = FIRE ALARM S = SOUND FO = FIBER OPTICS T = TELEPHONE |
| | I = INTERCOM TV = TELEVISION |
| | OTHERS AS NOTED IN OTHER SCHEDULES. RACEWAYS AND WIRING SHALL BE SIZED AS SHOWN AND/OR SPECIFIED. |
| | LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE. |
| <u>+</u> | CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK. CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER |
| 1 | TO ONE-LINE DIAGRAM. |
| <u>(нс)</u> Ф | ADA ACCESS PUSH PLATE JUNCTION BOX. |
| Φ _{SC} | JUNCTION BOX, SYSTEMS FURNITURE COMMUNICATION |
| TCI | CONNECTION. CABLE TRAY ABOVE ACCESSIBLE CEILING. |
| <u> </u> | EARTH GROUND (ONE-LINE DIAGRAM). |
| <u>=</u> ∅ _C | JUNCTION BOX, CEILING. |
| | LADDER RACK. |
| • | MECHANICAL EQUIPMENT CONNECTION. REFER TO EQUIPMENT SCHEDULE FOR REQUIREMENTS. |
| HTING (| (REFER TO FIXTURE SCHEDULE FOR SYMBOLS) |
| (W-3) | FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS |
| | SCHEDULED. |
| (W-3) | FIXTURE IDENTIFICATION, EMERGENCY WITH BATTERY PACK, CONNECTED TO GENERATOR AS INDICATED: (W-3) INDICATES |
| | FIXTURE TYPE AS SCHEDULED. |
| EM | EMERGENCY. |
| NL | NIGHT LIGHT: DO NOT SWITCH. |
| <u>↑</u> | EGRESS DIRECTION ARROW (EXIT SIGNS). |
| $\frac{\otimes}{\otimes}$ | EXIT SIGN: SINGLE FACE: WALL MOUNTED |
| <u> </u> | EXIT SIGN: SINGLE FACE; WALL MOUNTED |
| | EXIT SIGN: DOUBLE FACE; CEILING MOUNTED EXIT SIGN: DOUBLE FACE; WALL MOUNTED |
| • | LATI GION. DOUBLE FACE, WALL MOUNTED |
| ATING A | CONTROL |
| | OCCUPANCY SENSOR, DUAL TECHNOLOGY, |
| * | T |
| * * | OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING. OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. VACANCY SENSOR, DUAL TECHNOLOGY, |
| * * * | OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING. OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. VACANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING. |
| * * | OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING. OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. VACANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING. VACANCY SENSOR, DUAL TECHNOLOGY, WALL. LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH: LETTER |
| * * a,b | OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING. OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. VACANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING. VACANCY SENSOR, DUAL TECHNOLOGY, WALL. LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH: LETTER "a,b" INDICATES ZONING WHERE SHOWN (REFER TO PLANS, SCHEDULES, AND DETAILS FOR EXACT BUTTON CONFIGURATION AND PROGRAMMING REQUIREMENTS) |
| * | OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING. OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL. VACANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING. VACANCY SENSOR, DUAL TECHNOLOGY, WALL. LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH: LETTER "a,b" INDICATES ZONING WHERE SHOWN (REFER TO PLANS, SCHEDULES, AND DETAILS FOR EXACT BUTTON CONFIGURATION |

| | SYMBOLS LEGEND | | SY |
|----------------------------|--|--|-----------------------|
| SYMBOL | DESCRIPTION | SYMBOL | DESC |
| WIRING DE | EVICES | 00 ELECTRICA | L POW |
|)2 | RECEPTACLE, DUPLEX: NEMA 5-20R. | 01 | FUSE W |
|)3 | RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R. | 02 | DISCON |
| Фс | RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R. | | |
| 06 ∯ DF | RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, DRINKING FOUNTAIN: CONCEAL WATER COOLER RECEPTACLE BEHIND WATER COOLER. SEE MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION | 03 | DISCON |
|)8 | REQUIREMENTS. RECEPTACLE, DUPLEX, SWITCHED: NEMA 5-20R. | | |
| Ψ ³ 12 | RECEPTACLE, DUPLEX, HOSPITAL GRADE: NEMA 5-20R. | - 보 | |
| 13 | | | DISCON (ONE-LI |
| 14 1 | RECEPTACLE, DUPLEX ON EMERGENCY POWER: NEMA 5-20R. RECEPTACLE, DUPLEX, HOSPITAL GRADE ON EMERGENCY | | |
| 16 11 | POWER: NEMA 5-20R. RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT | | |
| 17 II | INTERRUPTER: NEMA 5-20R. RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT | 05 | |
| | INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R. | 06 | OVERLO |
| # | RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R. | | STARTE |
| 19 WP | RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R. | 07 | CIRCUI |
| <u></u> → | RECEPTACLE, QUADRAPLEX: NEMA 5-20R. | 08 | |
| <u>+</u> | RECEPTACLE, QUADRAPLEX ON EMERGENCY POWER: NEMA 5-20R. | | CIRCUIT (ONE-LI |
| 25 | RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE: NEMA 5-20R. | 10 | (ONE E |
| 27 | RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R. | | CIRCUIT |
| 28 1 | RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R. | | |
| Φ | RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG. | _ | CIRCUIT |
| 29 | RECEPTACLE, SPECIAL PURPOSE ON EMERGENCY POWER. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG. | GFP GFP | PROTE |
| 33 () | MULTI-OUTLET ASSEMBLY: NEMA 5-20R. | 12 | MOTOR |
| 36 FB# | FLUSH FLOOR BOX. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL | 16 | TRANSF |
| | SPECIFICATIONS FOR CONFIGURATION AND DEVICES. | | 110-(140) |
| PP# | POWER POLE. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR | 17→3 ← | TRANSF |
| [| CONFIGURATION AND DEVICES. | 18 -+ - | BATTER |
| B8 PT# | FLUSH FIRE RATED POKE THRU. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL | | CAPACI |
| [F1#] | SPECIFICATIONS FOR CONFIGURATION AND DEVICES. | 20 | DELTA (|
| В9 Ф | SWITCH, DIMMER. | 21 | WYE CO |
| 10 X \$ | SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED). | _ + | WIL CO |
| 11 X \$2 | SWITCH, DOUBLE POLE ("x" INDICATES FIXTURES CONTROLLED). | 23 | |
| 12 X \$3 | SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED). | "1H" | PANELE SHOWN |
| 13 X \$4 | SWITCH, FOUR-WAY ("x" INDICATES FIXTURES CONTROLLED). | | |
| 51 \$WP | SWITCH, WEATHERPROOF. | 24 225/3 | |
| 52 | RECEPTACLE, DUPLEX, TAMPER RESISTANT: NEMA 5-20R. | "1H" | PANELE AS SHOWN |
| ⁵³ ⊕ 54 | RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R. | 25 | |
| # | RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R. |)225/3 "1H" | PANELE |
| 56 | RECEPTACLE, SINGLE PLEX, WITH USB OUTLET | | (ONE-LI |
| STRUCTUF | RED CABLING IHC | 60/3 | |
| ⁾¹ ∇ | IHC COMMUNICATIONS DEVICE (1 DATA). | 26 | |
|)2 V | IHC COMMUNICATIONS DEVICE (1 DATA / 1 ANALOG). | "1H" | PANELE WITH C |
|)3 ▼ | IHC COMMUNICATIONS DEVICE (1 DATA WALL PHONE). | 25/3 | |
|)4 V | IHC COMMUNICATIONS DEVICE (2 DATA). | 30 | |
| ⁰⁵ ▼ 3 | IHC COMMUNICATIONS DEVICE (3 DATA). | │ | CT CAB |
| √4 | IHC COMMUNICATIONS DEVICE (4 DATA). | | |
| ⁰⁷ ▼ 6 | IHC COMMUNICATIONS DEVICE (6 DATA). | 31 | |
| ⁰⁸ ∇M | IHC COMMUNICATIONS DEVICE PHYSIOLOGICAL MONITOR (1 DATA). | | TRANSF |
| ⁾⁹ ▼ WAP | IHC COMMUNICATIONS DEVICE WIRELESS ACCESS POINT (2 DATA). | 32 | |
| TV DISTRIE | 1 ' | DMM | DIGITAL |
|)1T | TV DISTRIBUTION CABLE, INDIVIDUAL DROPS. | 33 | SERVIC |
|)2—TR | TV DISTRIBUTION CABLE, TRUNK. | 35 G | GENER |
| CMB | COMBINER. | 36 (M) | METER. |
|)4 DC | DIRECTIONAL COUPLER. | 38 VFC VFD | VARIAB DIAGRA |
|)5 | | 41 | DISCON |
| DA | DISTRIBUTION AMPLIFIER (ONE-LINE DIAGRAM). | 42 | DISCON |
|)6 | | 43 × h | STARTE |
| SPL | SPLITTER (ONE-LINE DIAGRAM). | 44 | STARTE |
|)7 | TV OUTLET. | 45 | PUSHBU |
|)8 📆 | SATELLITE ANTENNA. | 46 | PUSHBI |
| 9 | TV ANTENNA (ONE-LINE DIAGRAM). | 47 | PANELE |
| | TERMINATOR, 75 OHM (TV DISTRIBUTION). | 48 | PANELE |
| | | 49 | PANELE |

| SYMBOL | DESCRIPTION |
|-------------------|---|
| | AL POWER AND DISTRIBUTION |
| 01 ——— | FUSE WITH RATING (ONE-LINE DIAGRAM). |
| 02 | |
| | DISCONNECT, FUSED (ONE-LINE DIAGRAM). |
| 03 | DISCONNECT, NONFUSED (ONE-LINE DIAGRAM). |
|)4 \ | |
| À | |
| <u> </u> | DISCONNECT WITH FUSE AND MOTOR STARTER COMBINATION |
| \$ | (ONE-LINE DIAGRAM). |
| | |
| | |
| 5 | OVERLOAD RELAY (ONE-LINE DIAGRAM). |
|)6 <u> </u> | STARTER (ONE LINE DIACRAM) |
| 5 | STARTER (ONE-LINE DIAGRAM). |
|)7 | OUDQUIT DDEAKED MOLDED OAGE (ONE LINE DIAGDAM) |
| 1 | CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM). |
| 08 | CIRCUIT BREAKER, MOLDED CASE WITH SHUNT TRIP |
| † † | (ONE-LINE DIAGRAM). |
| 10 L | CIRCUIT BREAKER, SOLID STATE (ONE-LINE DIAGRAM). |
| | S. COLL DIALITY, SOLID STATE (ONE-LINE DIAGRAM). |
| 11 L | CIRCUIT BREAKER, SOLID STATE WITH GROUND FAULT |
| GFP | PROTECTION (ONE-LINE DIAGRAM). |
| 12 | MOTOR. |
| 16 | TRANSFORMER (ONE-LINE DIAGRAM). |
| | |
| ¹⁷ → 는 | TRANSFORMER, CURRENT (ONE-LINE DIAGRAM). |
| 18 + - | BATTERY (ONE-LINE DIAGRAM). |
| 19 —)— 20 —— | CAPACITOR (ONE-LINE DIAGRAM). |
| 21 | DELTA CONNECTION (ONE-LINE DIAGRAM). |
| | WYE CONNECTION (ONE-LINE DIAGRAM). |
| 23 | |
| 225/3 | PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS |
| "1H" | SHOWN (ONE-LINE DIAGRAM). |
| 24 | |
| 225/3 "1H" | PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE |
| | AS SHOWN (ONE-LINE DIAGRAM). |
| 25 | |
| 225/3 "1H" | |
| | PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM). |
| 60/3 | |
| 26 | |
| 225/3 "1H" | PANELBOARD WITH MAIN LUGS ONLY AND SURGE PROTECTION |
| 25/3 | WITH CIRCUIT BREAKER (ONE-LINE DIAGRAM). |
| 30 | |
| | CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM). |
| | |
| 31 [-] | |
| | TRANSFER SWITCH (ONE-LINE DIAGRAM). |
| 32 | |
| DMM | DIGITAL MULTIMETER (ONE-LINE DIAGRAM). |
| 33 - ↓ | SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM). |
| 35 G | GENERATOR, POWER (ONE-LINE DIAGRAM). |
| 36 M | METER. |
| VFC VFD | VARIABLE FREQUENCY MOTOR CONTROLLER (ONE-LINE DIAGRAM). |
| 41 Z - | DISCONNECT SWITCH, FUSED. |
| ¹² □¬ | DISCONNECT SWITCH, UNFUSED. |
| 13 X 1 | STARTER, COMBINATION WITH DISCONNECT SWITCH. |
| 14 | STARTER OR MOTOR CONTROLLER. |
| 1 5 | PUSHBUTTON. |
| 46 | PUSHBUTTONS, MOTOR CONTROL. |
| 47 | PANELBOARD CABINET, FLUSH MOUNTED. |
| 18 | PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION. |
| 19 | PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION. |
| | 1 |

SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD

LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE

DISTRIBUTION PANEL OR SWITCHBOARD.

TRANSFORMER: NUMBER INDICATES kVA.

LIGHTING CONTROL STATION.

PROTECTION.

SYMBOLS LEGEND SYMBOL DESCRIPTION **NURSE CALL** JUNCTION BOX. \bigcap CORRIDOR LIGHT DUTY STATION. EMERGENCY ASSISTANCE CALL STATION. EMERGENCY ASSISTANCE CODE BLUE CALL STATION. PATIENT STATION. STAFF STATION. TOUCH SCREEN NURSE CALL MASTER STATION. NURSE CALL AREA CONTROL UNIT & POWER SUPPLIES. CCTV CABLE, POWER. CCTV CABLE, VIDEO SIGNAL. CCTV HEADEND EQUIPMENT. CCTV MONITOR. CCTV CAMERA/ENCLOSURE WITH LENS, TYPICAL. SEE SCHEDULE. CCTV CAMERA WITH PAN, TILT AND ZOOM. 360° PANNING CAMERA TRANSVERSE ANGLE. SECURITY SECURITY CABLE. SEE EQUIPMENT SCHEDULE FOR CABLE ACCESS CONTROL HEADEND EQUIPMENT. CARD ACCESS DOOR TYPE #1 OR AS NOTED. SEE SCHEDULE. CR CARD READER. KEYPAD/CARD READER COMBINATION. TECHNOLOGY SYSTEMS SPEAKER, CEILING MOUNTED. SPEAKER, WALL MOUNTED. **EQUIPMENT CABINET** FIRE ALARM FIRE ALARM CONTROL PANEL, SEMI-RECESSED. FIRE ALARM NOTIFICATION POWER SUPPLY. CONTROL MODULE. MONITOR MODULE. FIRE ALARM MANUAL PULL STATION. MAGNETIC DOOR HOLDER. DETECTOR, SMOKE. DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE. DETECTOR, HEAT. STROBE WP ALARM, HORN/SPEAKER, WEATHERPROOF. ALARM, HORN/STROBE, ONE ASSEMBLY. SMOKE DAMPER. FIRE AND SMOKE DAMPER. DETECTOR, CARBON MONOXIDE.

ABBREVIATIONS

SINGLE POLE KILOVOLT KILOVOLT AMPERE 1PH SINGLE-PHASE kVA 1WAY ONE-WAY TWO-CONDUCTOR KILOWATT 2WAY TWO-WAY kWh KILOWATT HOUR LED LIGHT EMITTING DIODE THREE-CONDUCTOR 3WAY THREE-WAY 4OUT QUADRUPLE RECEPTACLE CONDUIT LFNC LIQUID TIGHT FLEXIBLE OUTLET NONMETALLIC CONDUIT 4PDT FOUR-POLE DOUBLE THROW LPS LOW PRESSURE SODIUM 4PST FOUR-POLE SINGLE THROW LRA LOCKED ROTOR AMPS FOUR-WIRE LTG LIGHTING 4WAY FOUR-WAY LV LOW VOLTAGE ABOVE COUNTER MATV ARMORED CABLE SYSTEM ADA AMERICANS WITH DISABILITIES MAX MAXIMUM METAL CLAD ADJ ADJACENT MCA MINIMUM CIRCUIT AMPS AFF ABOVE FINISHED FLOOR MCB MAIN CIRCUIT BREAKER AFG ABOVE FINISHED GRADE MCC AMPERE INTERRUPTING

ALUM ALUMINUM AMPERE ANN ANNUNCIATOR ACCESS POINT (WIRELESS AS REQUIRED ASC AMPS SHORT CIRCUIT ATS AUTOMATIC TRANSFER SWITCH AUDIO VISUAL AWG AMERICAN WIRE GAGE BUCK-BOOST TRANSFORMER XFMR CEILING MOUNTED

CATV COMMUNITY ANTENNA TELEVISION CIRCUIT BREAKER CCBA CUSTOM COLOR AS SELECTED BY ARCHITECT CCTV CLOSED CIRCUIT TELEVISION NTS CF/CI CONTRACTOR FURNISHED/ OC CONTRACTOR INSTALLED OCP CF/OI CONTRACTOR FURNISHED/ OWNER INSTALLED CFBA CUSTOM FINISH AS SELECTED BY ARCHITECT CKT CIRCUIT СМ CONSTRUCTION MANAGER CONDUIT

CND co COR CTV CU EA EACH

75 ALARM, HUKN/STROBE, ONE ASSEMBLY, SUBSCRIPT INDICATES CANDELA RATING. ALARM, HORN/STROBE, ONE ASSEMBLY, CEILING MOUNTED. ALARM, HORN, CEILING MOUNTED. SUBSCRIPT INDICATES

ALARM, STROBE, CEILING MOUNTED. SUBSCRIPT

CANDELA RATING.

| INDICATES CANDELA RATING.

"SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE

J-BOX JUNCTION BOX

NOTE: ALL ABBREVIATIONS MAY NOT BE USED. kVAR KILOVOLT AMPERE REACTIVE LFMC LIQUID TIGHT FLEXIBLE METAL MASTER ANTENNA TELEVISION MOTOR CONTROL CENTER MOTOR CIRCUIT PROTECTION MDP MAIN DISTRIBUTION PANEL MG MOTOR GENERATOR MANHOLE MINIMUM MIN MLO MAIN LUGS ONLY MOCP MAXIMUM OVERCURRENT PROTECTION NOT APPLICABLE NORMALLY CLOSED NEC NATIONAL ELECTRICAL CODE NEMA NATIOANL ELECTRICAL MANUFACTURERS ASSOCIATION NFC NATIONAL FIRE CODE NFPA NATIONAL FIRE PROTECTION ASSOCIATION NOT IN CONTRACT NIGHT LIGHT NORMALLY OPEN

NOT TO SCALE ON CENTER OVER CURRENT PROTECTION OF/CI OWNER FURNISHED/ CONTRACTOR INSTALLED OWNER FURNISHED/ OWNER INSTALLED OBTAIN FROM PLANS OH DR OVERHEAD (COILING) DOOR OVERLOAD CONVENIENCE OUTLET PUSHBUTTON CONTRACTING OFFICER'S POWER FACTOR REPRESENTATIVE PHASE CONTROL PANEL PANEL CURRENT TRANSFORMER POTENTIAL TRANSFORMER CABLE TELEVISION PTZ PAN/TILT/ZOOM COPPER QTY QUANTITY

UNIT OF SOUND LEVEL REMOVE DOUBLE POLE, DOUBLE REFLECTED CEILING PLAN RCP RIGID METAL CONDUIT DISCONNECT SWITCH RIGID NONMETAL CONDUIT RPM REVOLUTIONS PER MINUTE **EMERGENCY** REMOVE AND RELOCATE ELECTRICAL METALLIC TUBING START/STOP ELECTRIC NONMETALLIC SHORT CIRCUIT AMPS SCBA STANDARD COLOR AS EPO EMERGENCY POWER OFF SELECTED BY ARCHITECT EQUIP EQUIPMENT SQUARE FOOT (FEET) EX EXISTING SFBA STANDARD FINISH AS FURNITURE MOUNTED SELECTED BY ARCHITECT FIRE ALARM SPD SURGE PROTECTIVE DEVICE FCP FIRE ALARM CONTROL PANEL SPDT SINGLE POLE, DOUBLE THROW FULL LOAD AMPS SPEC SPECIFICATION

FLEXIBLE METAL CONDUIT SPST SINGLE POLE, SINGLE THROW FOB FREIGHT ON BOARD ST SINGLE THROW FVNR FULL VOLTAGE SWBD SWITCHBOARD NON-REVERSING SWGR SWITCHGEAR FULL VOLTAGE REVERSING TWIST LOCK GROUND TELEPHONE POLE GENERATOR TWISTED PAIR GROUND FAULT INTERRUPTER TTB TELEPHONE TERMINAL BOARD GROUND FAULT PROTECTION TELEVISION **HEAVY DUTY** TVSS TRANSIENT VOLTAGE SURGE HIGH INTENSITY DISCHARGE SUPPRESSER HOA HAND-OFF-AUTOMATIC TYPICAL HORSE POWER UNDERFLOOR HIGH POWER FACTOR

UGND UNDERGROUND HPS HIGH PRESSURE SODIUM UPS UNINTERRUPTIBLE POWER HIGH VOLTAGE SUPPLY HERTZ VOLTS INPUT/ OUTPUT VA VOLT AMPERE ISOLATED GROUND VFC/VF VARIABLE FREQUENCY MOTOR INTERMEDIATE METAL CONTROLLER CONDUIT WITH INSULATED/ ISOLATED W/O WITHOUT INFRARED WP WEATHERPROOF

DEFINITIONS NOTE: ALL DEFINITIONS MAY NOT BE USED. INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED",

THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED. DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

XFMR TRANSFORMER

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS. FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO

INSTALLATION, AND SIMILAR OPERATIONS." INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY,

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE." INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY

THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

GENERAL ELECTRICAL NOTES

CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS. MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE

INTENT OF THE DOCUMENTS SHALL BE ENFORCED.

OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.

A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.

B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.

THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE. THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.

EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.

SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND. BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.

REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

ELECTRICAL SHEET INDEX

EE001 SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES

EE501 ELECTRICAL DETAILS

EP100 OVERALL POWER PLAN

EP101 ELECTRICAL PLANS

EP601 ONE-LINE DIAGRAM

EP701 SKYTRON DRAWINGS

EP702 SIEMENS DRAWINGS EP703 SIEMENS DRAWINGS

EP704 SIEMENS DRAWINGS

ET601 TELECOMM DETAILS

EE701 TYPICAL MOUNTING HEIGHT DETAILS

ARCHITECTS

NJRA Architects, Inc 5272 S. College Drive, Suite 104 Murray, Utah 84123

801.364.9259

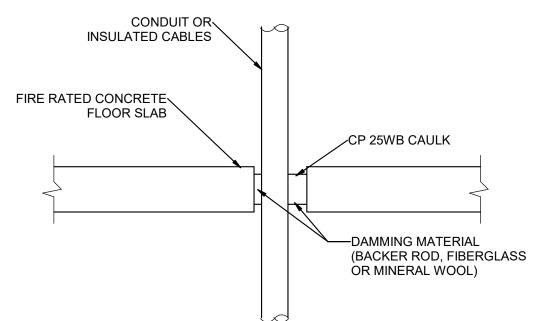
www.njraarchitects.com

NJRA Project #

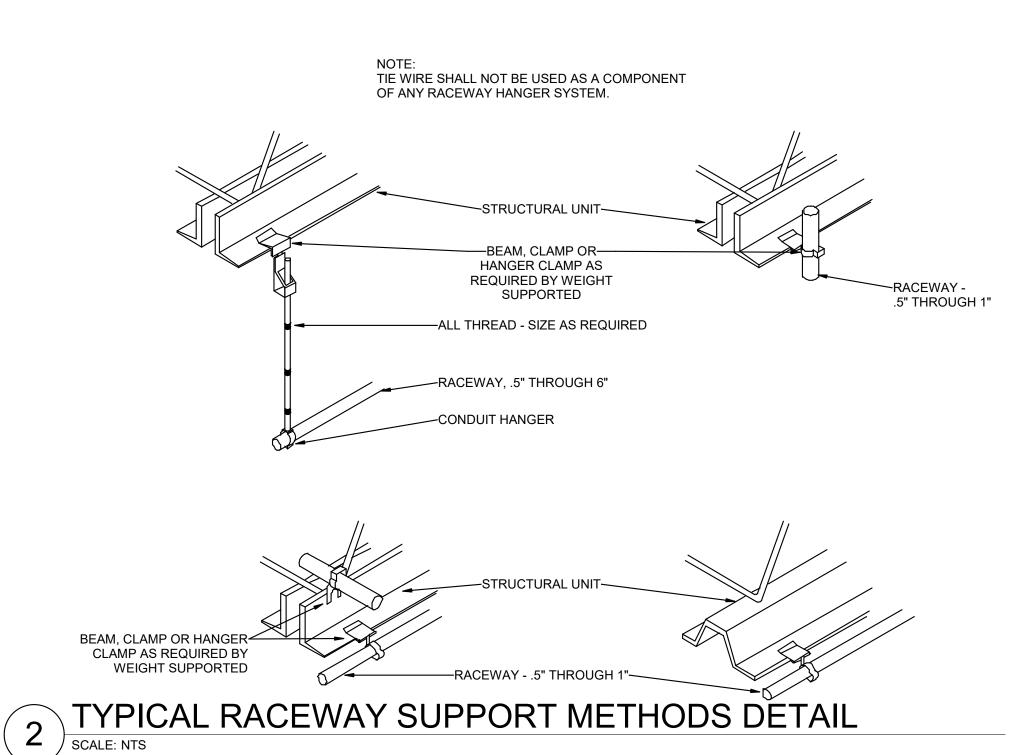
O Construction Documents Mar. 27, 2019

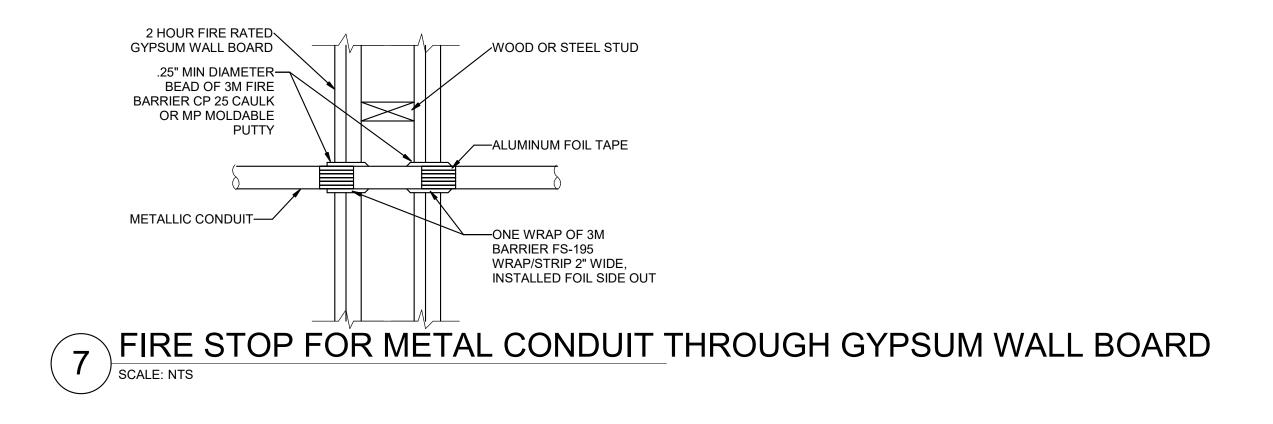
18226.00

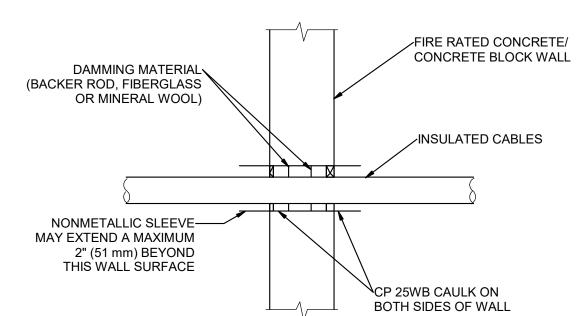
SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES



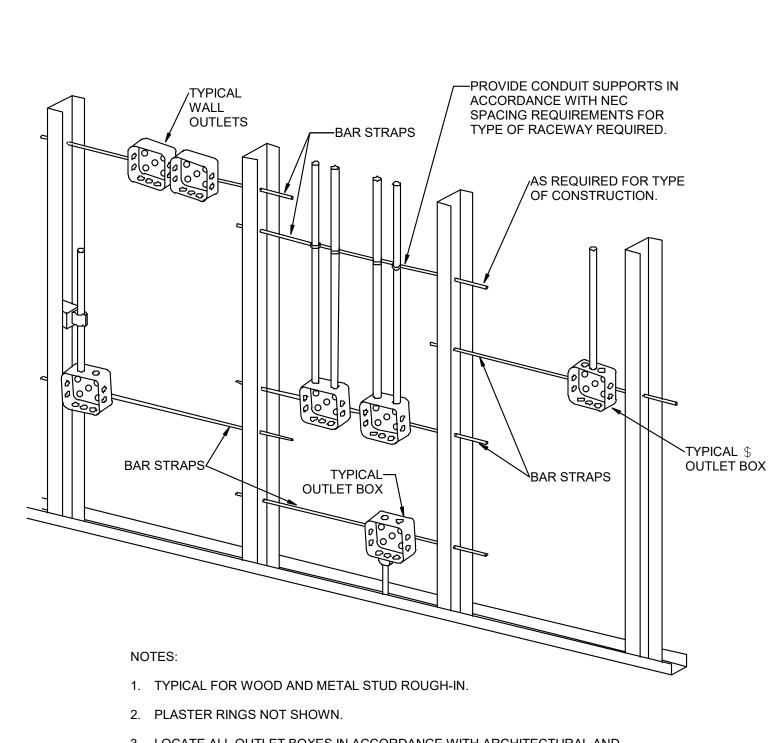
TYPICAL FIRE STOP FOR CABLES/CONDUIT THROUGH CONCRETE FLOORING SCALE: NTS

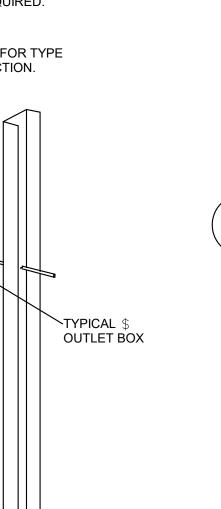


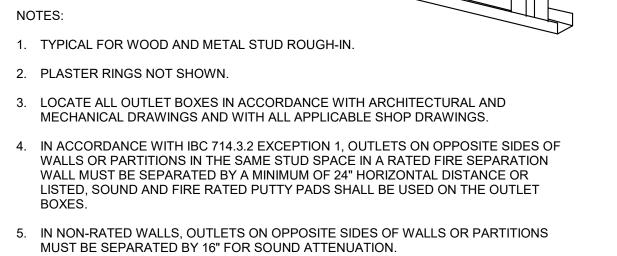




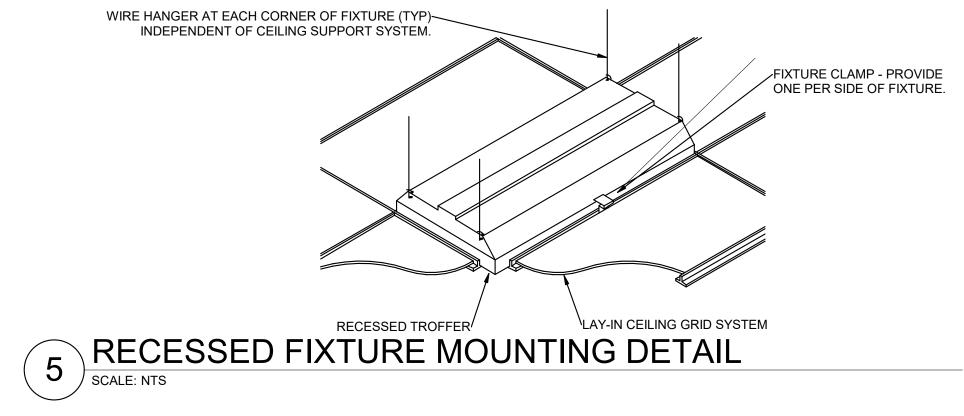
TYPICAL FIRE STOP FOR CABLES/CONDUIT THROUGH CONCRETE WALLS

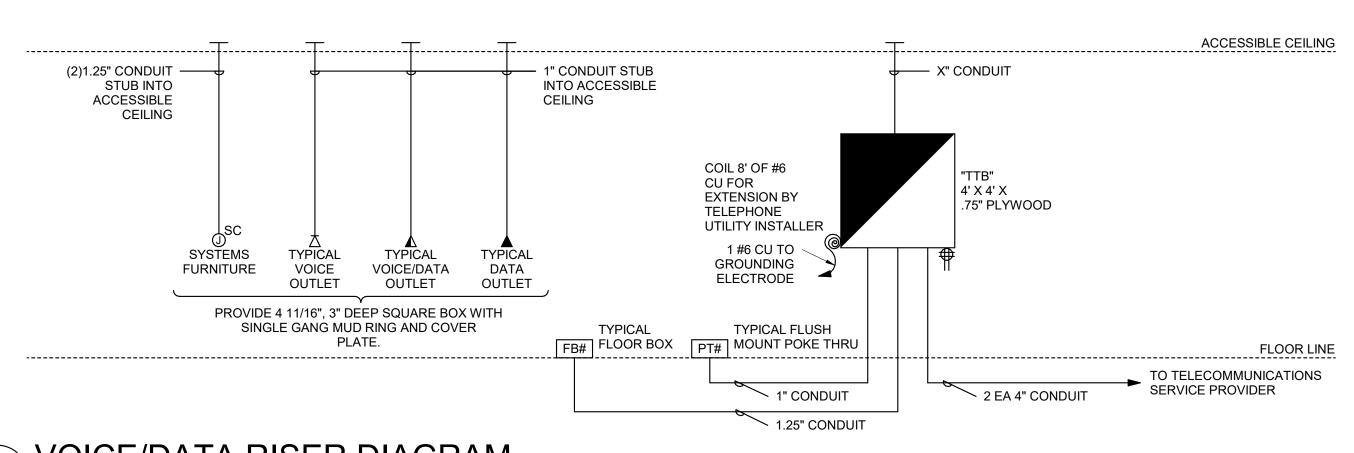












4 VOICE/DATA RISER DIAGRAM
SCALE: NTS



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com

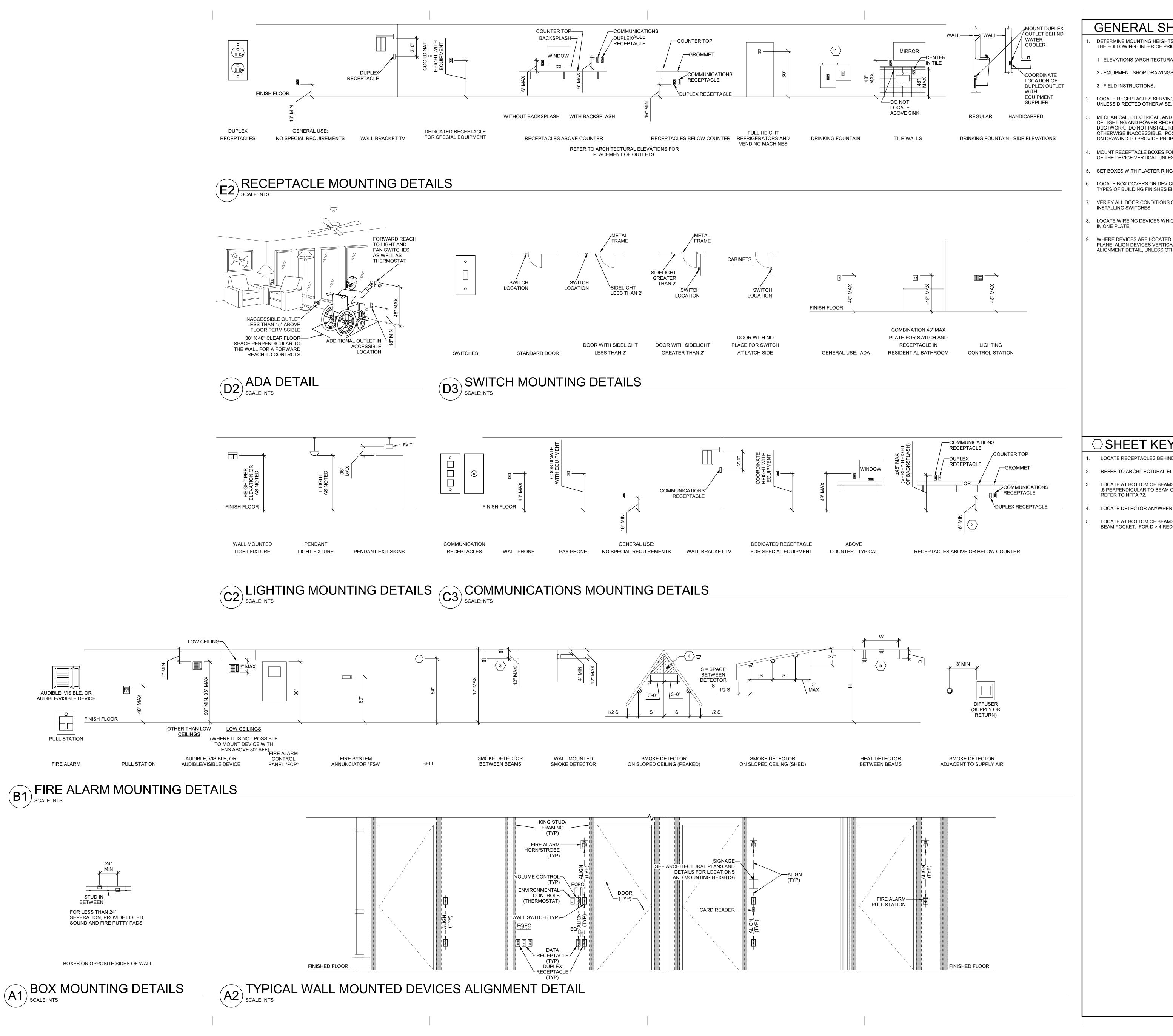


NJRA Project #

ELECTRICAL DETAILS

O Construction Documents Mar. 27, 2019

18226.00



GENERAL SHEET NOTES

- DETERMINE MOUNTING HEIGHTS OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE FOLLOWING ORDER OF PRIORITY:
- 1 ELEVATIONS (ARCHITECTURAL, ELECTRICAL, MECHANICAL, ETC).
- 2 EQUIPMENT SHOP DRAWINGS.
- 3 FIELD INSTRUCTIONS.
- LOCATE RECEPTACLES SERVING THE SAME TYPE OF USE AT A UNIFORM HEIGHT
- MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS: COORDINATE LOCATION OF LIGHTING AND POWER RECEPTACLES WITH EQUIPMENT, PIPING, AND DUCTWORK. DO NOT INSTALL RECEPTACLES BEHIND EQUIPMENT OR WHERE OTHERWISE INACCESSIBLE. POSITION LIGHTING REGARDLESS OF WHERE SHOWN ON DRAWING TO PROVIDE PROPER ILLUMINATION.

MOUNT RECEPTACLE BOXES FOR SWITCHES AND RECEPTACLES WITH LONG AXIS OF THE DEVICE VERTICAL UNLESS OTHERWISE INDICATED.

- SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.
- LOCATE BOX COVERS OR DEVICE PLATES SO THEY WILL NOT SPAN DIFFERENT TYPES OF BUILDING FINISHES EITHER VERTICALLY OR HORIZONTALLY.
- VERIFY ALL DOOR CONDITIONS ON ARCHITECTURAL DRAWINGS PRIOR TO INSTALLING SWITCHES.
- LOCATE WIREING DEVICES WHICH ARE ADJACENT AND ARE COMPATIBLE VOLTAGES IN ONE PLATE.
- WHERE DEVICES ARE LOCATED IN CLOSE PROXIMITY OF THE SAME VERTICAL PLANE, ALIGN DEVICES VERTICALLY PER THE TYPICAL WALL MOUNTED DEVICES ALIGNMENT DETAIL, UNLESS OTHERWISE INDICATED.

SHEET KEYNOTES

- LOCATE RECEPTACLES BEHIND DRINKING FOUNTAINS.
- REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS. LOCATE AT BOTTOM OF BEAMS (OR JOISTS) OR AT CEILING. (REDUCE SPACING BY
- .5 PERPENDICULAR TO BEAM OR JOIST DIRECTION.) FOR OTHER CONDITIONS, REFER TO NFPA 72.
- LOCATE DETECTOR ANYWHERE IN SHADED AREA BUT NOT IN TOP 4" OF PEAK.
- LOCATE AT BOTTOM OF BEAMS IF D/H < .1 OR W/H < .4; OTHERWISE, LOCATE IN BEAM POCKET. FOR D > 4 REDUCE SPACING .33 PERPENDICULAR TO BEAMS.

Proje <u>Q</u> Remo ntain •

ARCHITECTS

Murray, Utah 84123

www.njraarchitects.com

801.364.9259

NJRA Architects, Inc.

5272 S. College Drive, Suite 104

18226.00 NJRA Project # 0 Construction Documents Mar. 27, 2019

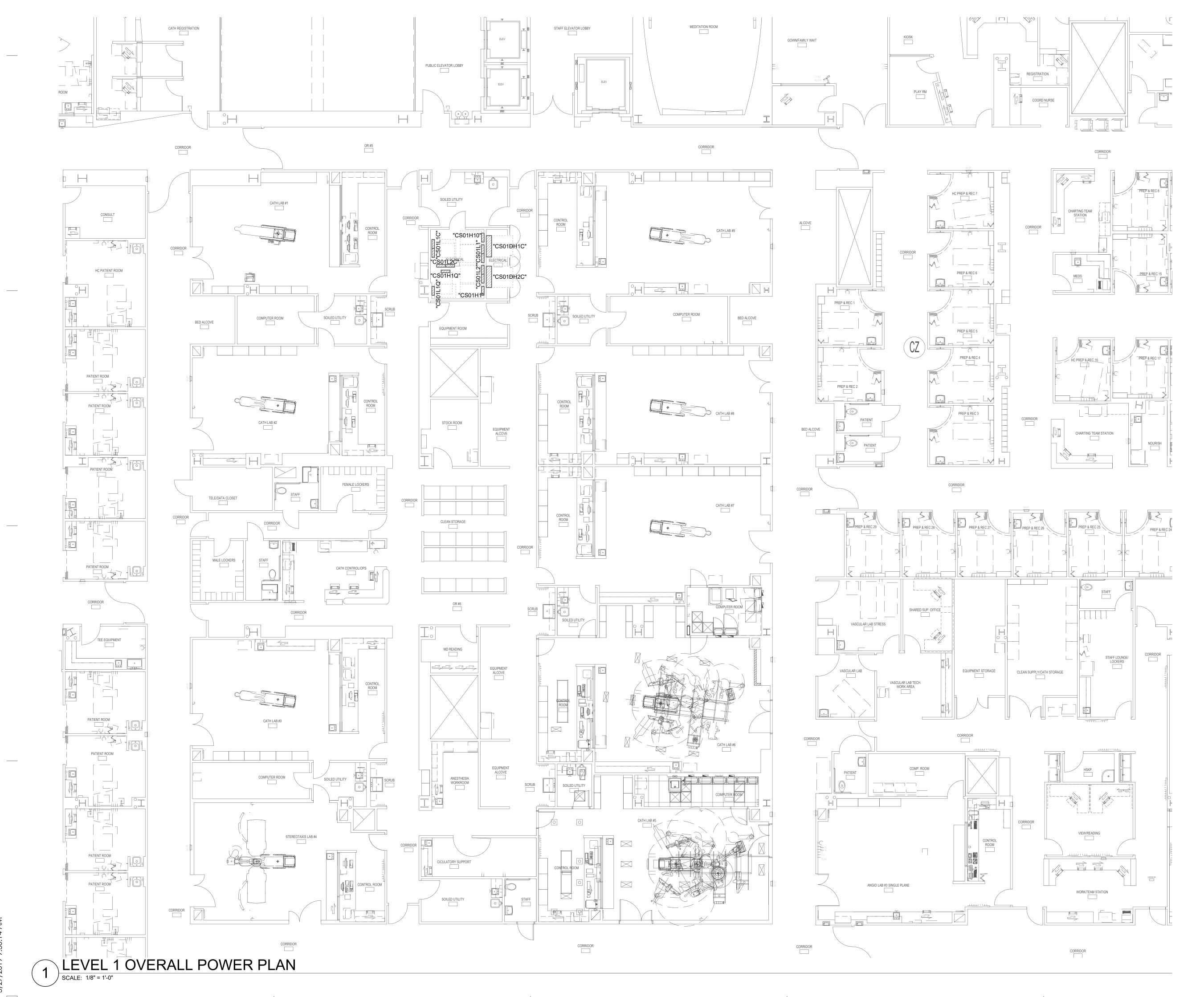
> TYPICAL MOUNTING HEIGHT **DETAILS**

EE701



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



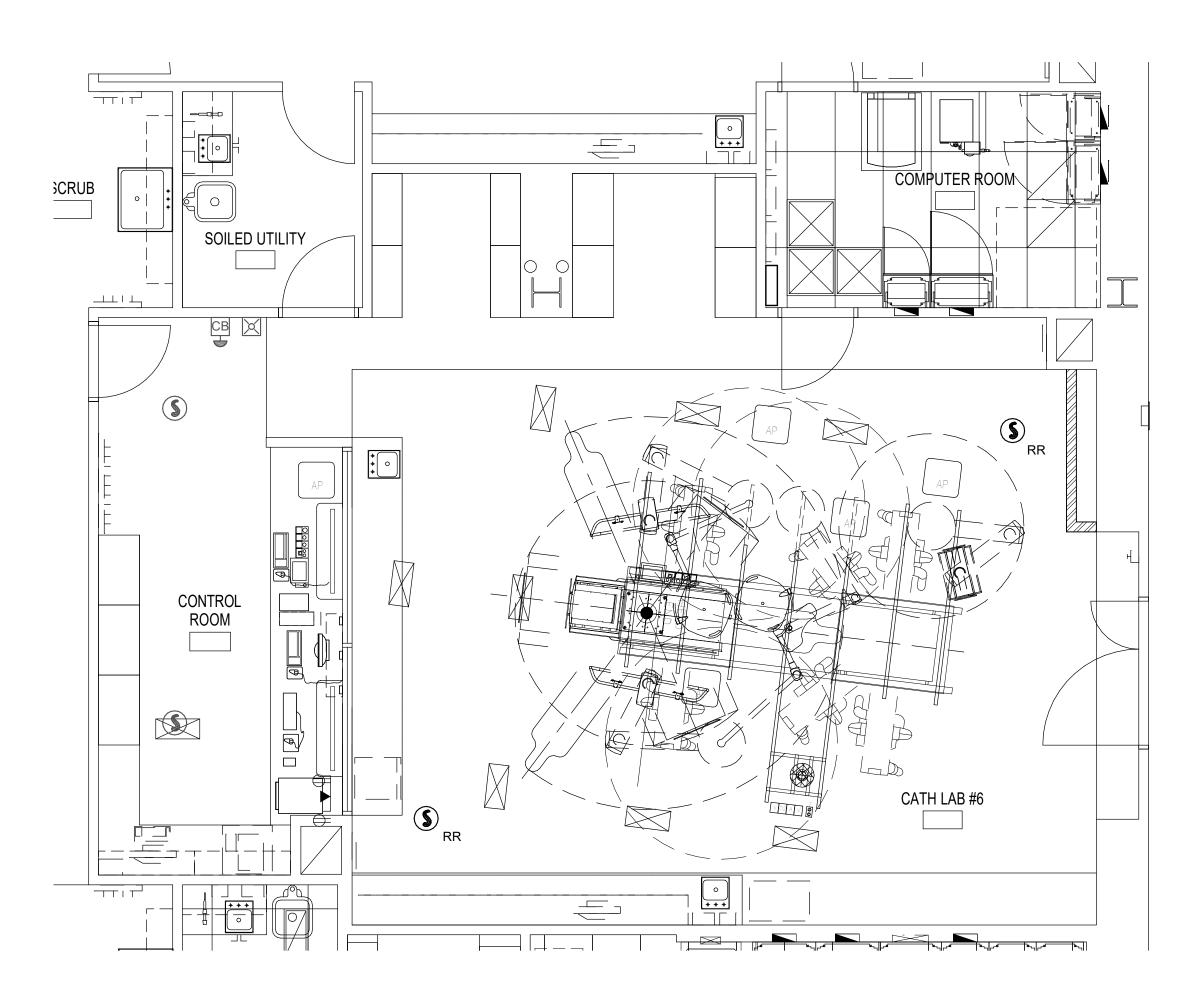


Intermountain Healthcare

| MC - Cath Lab 6 Remodel Project

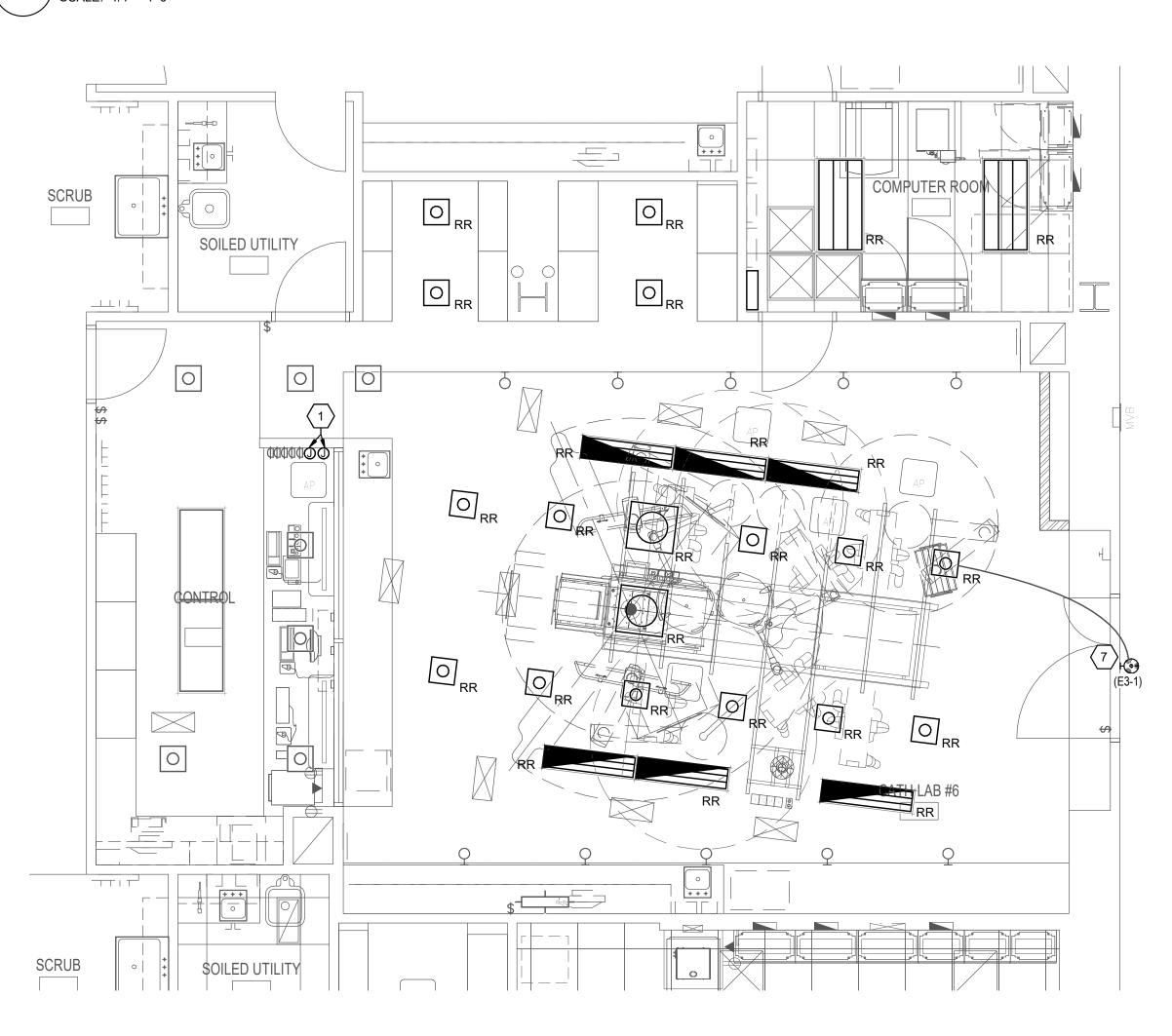
OVERALL POWER PLAN

0 Construction Documents Mar. 27, 2019



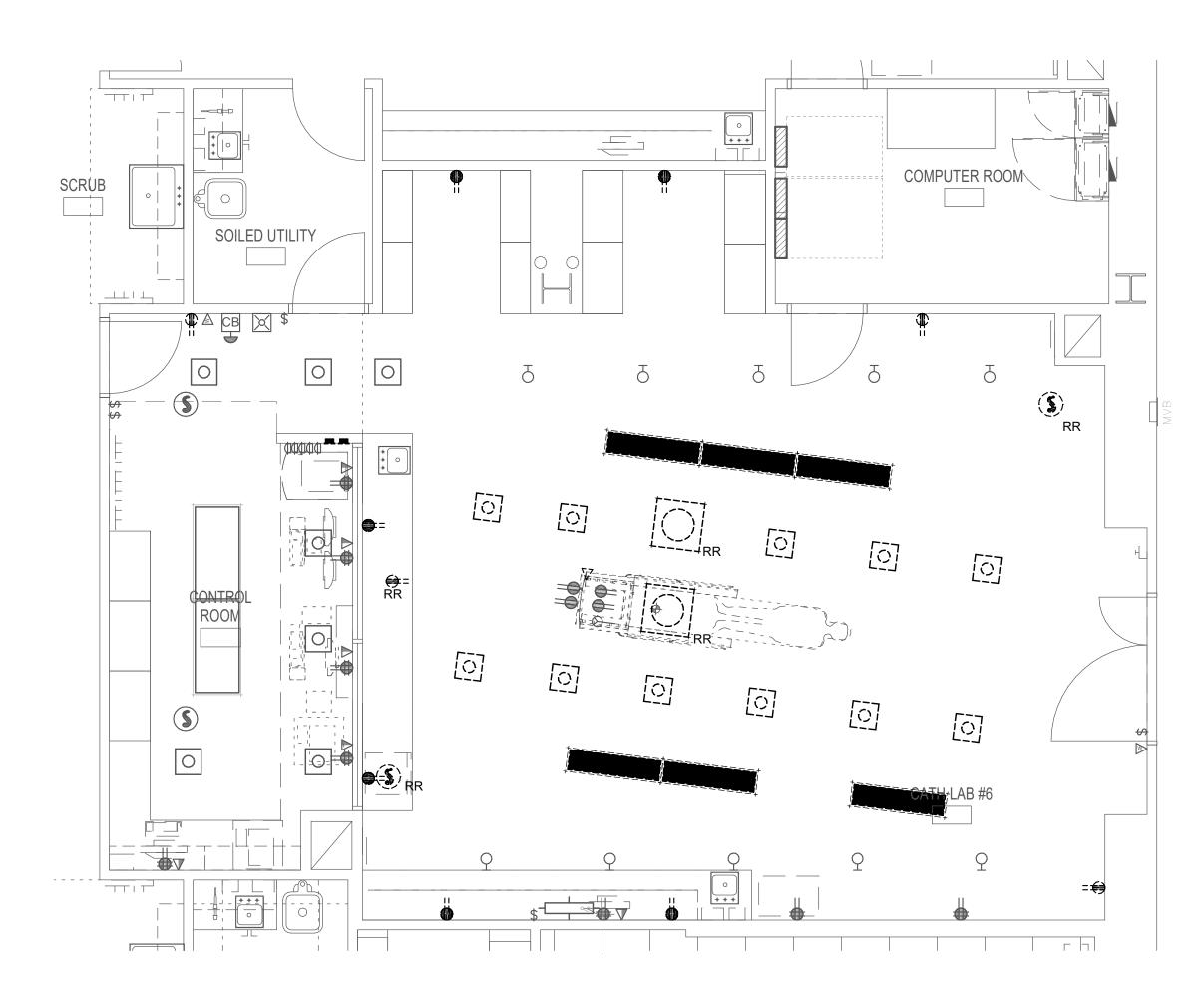
4 LEVEL 1 AUXILIARY PLAN

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



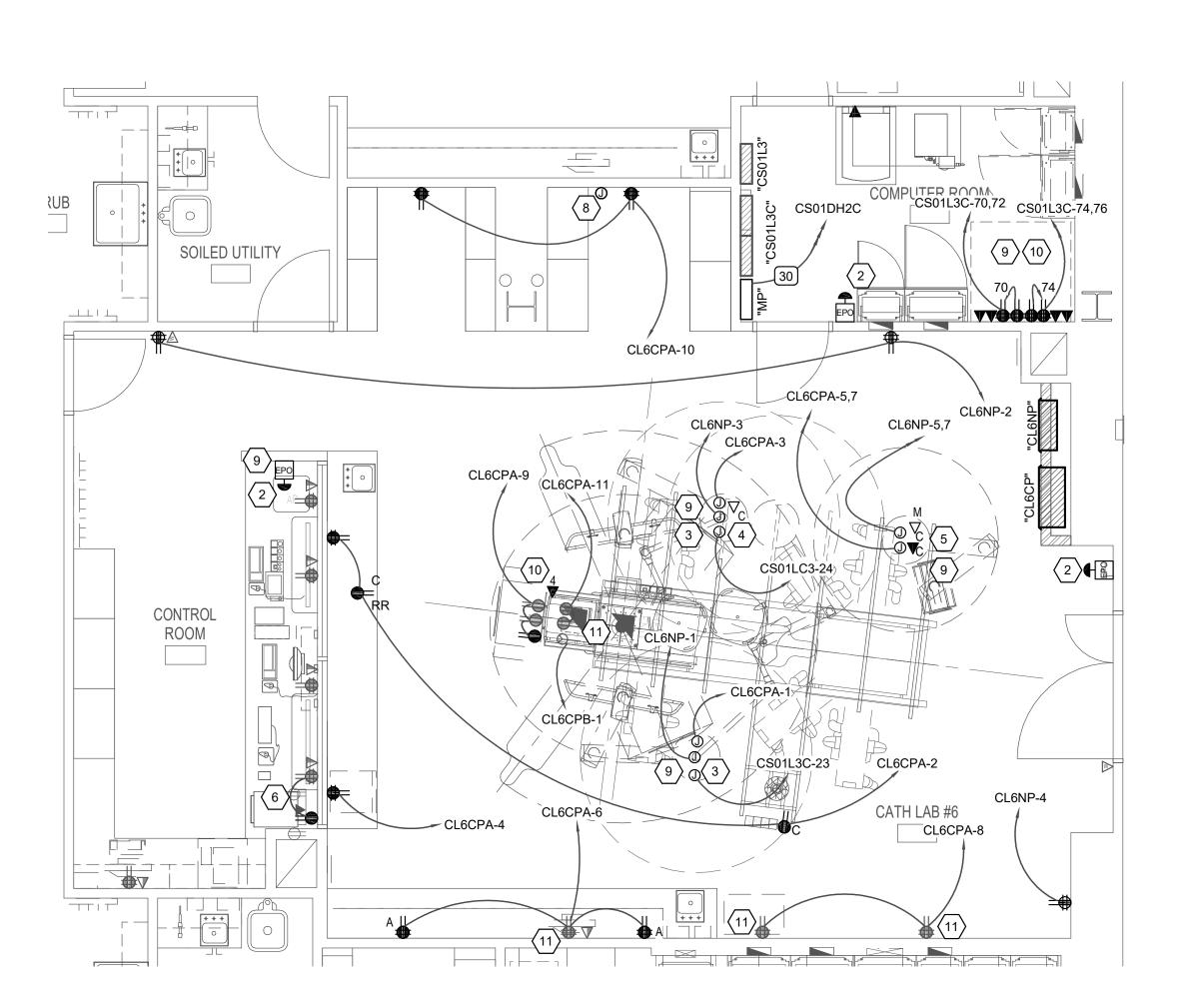
2 LEVEL 1 LIGHTING PLAN

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



3 LEVEL 1 ELECTRICAL DEMOLITION PLAN

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



1 LEVEL 1 POWER PLAN

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

DEMOLITION NOTES

1 UNLESS OTHERWISE INDICATED, REMOVE ALL LIGHTING FIXTURES, OUTLETS, DEVICES AND EQUIPMENT IN HATCHED AREAS. REMOVE ASSOCIATED CONDUIT AND WIRING BACK TO THE PANEL BOARD OF ORGIN. SYSTEMATICALLY CHECK EACH BRANCH PANEL BOARD CIRCUIT TO VERIFY THAT EACH CIRCUIT BREAKER NO LONGER HAS ANY ACTIVE LOAD, DISCONNECT THE WIRING AND TURN THE CIRCUIT BREAKER OFF. ANY REMAINING ACTIVE LOADS SHALL BE LABELED AND THE PANEL BOARD AS TO WHAT LOAD IS SERVED.

- 2 UNLESS NOTED OTHERWISE REMOVE ALL LIGHTING FIXTURES AND EQUIPMENT SHOWN DASHED. REMOVE CONDUIT AND WIRING BACK TO THE PANEL BOARD OF ORGIN OR TO THE FIRST ACTIVE DEVICE THAT REMAINS.
 - SALVALGE ALL LIGHT FIXTURES, TWIST LOCK RECEPTACLES AND WALL PLATES, CEILING SPEAKERS AND SECUIRTY AND FIRE ALARM DEVICES TO OWNER. PROTECT SALVAGED EQUIPMENT FROM DAMAGE.
- PRIOR TO SUBMITTING BID, VISIT THE SITE AND FIELD VERIFY THE EXTENT OF ELECTRICAL DEMOLITION WORK TO MEET THE INTENT OF THE BID DOCUMENTS AND INCLUDE ALL COSTS IN BID.
- PRIOR TO THE REMOVAL OF ANY ELECTRICAL EQUIPMENT OR WIRING, FIELD VERIFY THAT THE EQUIPMENT OR WIRING IS INACTIVE OR NO LONGER IN USE.
- REMOVE ALL DEVICES, RACEWAYS, AND WIRING FROM WALL TO BE REMOVED. WHERE ACTIVE RACEWAY OCCURS IN WALLS TO BE REMOVED, REROUTE THE RACEWAY WITH TEH ASSOCIATED WIRING TO KEEP THE CIRCUIT OPERATIONAL.
- 7 REMOVE ALL FIRE ALARM DEVICES WHERE EXISTING WALLS AND CEILINGS ARE BEING REMOVED, WITH ASSOCIATED CONDUIT AND WIRING. EXISTING FIRE ALARM DEVICES AND SYSTEM NOT INDICATED FOR REMOVAL SHALL REMAIN ACTIVE THROUGHOUT DEMOLITION AND CONSTRUCTION UNTIL THE NEW SYSTEM IS TESTED AND OPERATIONAL. MAINTAIN ALL CLASS A FIRE ALARM INITIATING AND INDICATING LOOPS WHERE EXSTING DEVICES ARE REMOVED.
- 8 REMOVE ALL ABANDONED RACEWAY, CONDUIT, WIRING AND CABLING WHETHER ABANDONED PREVIOUS TO THIS PROJECT OR AS A RESULT OF THIS PROJECT. NOT ALL ABANDONED ITEMS ARE SHOWN ON THESE PLANS AND FIELD VERIFICATION OF DEMOLITION SCOPE EXTENT IS REQUIRED.
- 9 DEVICES MARKED "RR" ARE TO BE REMOVED AND RELOCATED PER NEW PLANS. EXTEND CIRCUITING AS REQUIRED FOR RELOCATION.

GENERAL SHEET NOTES

PROVIDE A DEDICATED NEUTRAL FOR ALL BRANCH CIRCUITS.

- 2 ALL REPETACLES INSTALLED WITHIN 6' OF THE EDGE OF A SINK SHALL BE GFCI PROTECTED.
- PROVIDE NEW TYPED PANEL SCHEDULES FOR ALL PANELS AFFECTED DURING CONSTRUCTION.
- IF GFCI RECEPTACLES WILL NOT BE LOCATED IN AN ACCESSIBLE LOCATION PROVIDE A REMOTE TEST/RESET SWITCH LOCATED IN AN ACCESSIBLE LOCATION AS NEAR THE RECETPACLE AS POSSIBLE.
- 5 REFER TO SIEMENS AND SKYTRON DRAWINGS ON EP700 SHEETS FOR ADDITIONAL CONTRACTOR RESPONSIBILITES.

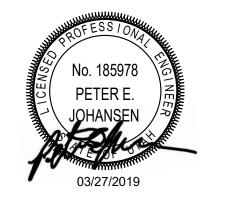
○SHEET KEYNOTES

PROVIDE BACK BOX AS REQUIRED FOR SKYTRON LIGHTING CONTROLS AS INDICATED IN SKYTRON DRAWINGS. PROVIDE (1) .75" CONDUIT FOR THE 120V POWER CIRCUIT AND ONE .75" CONDUIT FROM LIGHTING CONTROL BOX TO THE BOOM. REFER TO SKYTRON DRAWINGS FOR WIRING REQUIREMENTS AND ADITIONAL CONTRACTOR RESPONSIBILITIES.

- 2 PROVIDE EMERGENCY POWER OFF SWITCH CONNECTED TO CATH LAB MAIN SHUT TRIP BREAKER (MP).
- PROVIDE THREE 120V 20A CIRCUITS TO SKYTRON BOOM. ONE CRITICAL BRANCH FOR THE LIGHT AND, ONE CRITICAL ISOLATION CIRCUIT AND ONE NORMAL ISOLATION FOR THE RECEPTACLES. CONNECT LIGHT BACK TO LIGHTING CONTROLS LOCATED IN THE CONTROL ROOM. COORDINATE EXACT LOCATIONS WITH SKYTRON DRAWINGS.
- 4 PROVIDE ONE DATA DROP TO BOOM. STRUCTURED CABLING INSTALLER TO MAKE ALL TERMINATIONS IN BOOMS.
- 5 PROVIDE FOUR 120V 20A CIRCUITS TO SKYTRON BOOM FOR RECEPTACLES (TWO CRITICAL ISOLATION CIRCUITS, AND TWO NORMAL ISOLATION CIRCUITS), THREE STANDARD DATA DROPS AND ONE PATIENT MONITORING DATA DROP. STRUCTURED CABLING INSTALLER TO MAKE ALL FINAL TERMINATIONS IN BOOM.
- 6 CIRCUIT TO EXISTING 120V RECEPTACLE CIRCUIT.
- 7 CONNECT TO EXISTING LIGHTING CIRCUIT IN THE ROOM. DO NOT CONNECT TO ANY ROOM LIGHTING SWITH LEGS. REFER TO SIEMENS DETAIL 1 ON SHEET EP704.
- 8 PROVIDER POWER TO NEW VAV BOX. CONNECT TO EXISTING CIRCUIT FEEDING NEARBY VAV'S.
- 9 PROVIDE (4) 2" CONDUITS FROM STUBBED TO ABOVE THE NEW NETWORK RACK TO THE FOLLOWING LOCATIONS: (1) CONDUIT TO MONITOR BOOM ON PATIENT RIGHT, (1) CONDUIT TO MONITOR BOOM ON PATIENT LEFT, (1) CONDUIT TO MED GAS EQUIPMENT BOOM AND (1) CONDUIT TO UNDER THE CONTROL ROOM DESK VIA THE CHASE ON THE WEST END OF THE CONTROL DESK.
- PROVIDE (1) 2" CONDUIT FROM NEW NETWORK RACK LOCATION TO THE MED GAS PEDASTAL. RUN CONDUIT DOWN TO THE CIELING SPACE OF THE FLOOR BELOW AND BACK UP TO THE PEDASTAL.
- 11 RE-CIRCUIT EXISTING RECEPTACLES TO NEW ISOLATION PANEL.



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



ntermountain Healthcare MC - Cath Lab 6 Remodel Project

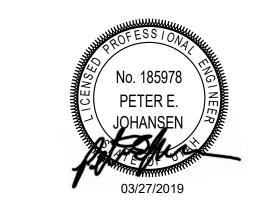
NJRA Project #

O Construction Documents Mar. 27, 2019

18226.00

ELECTRICAL PLANS

NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



CONDUCTOR AND CONDUIT SCHEDULE

SCHEDULE NUMBER (E.G.) 5 IG SYM AMP CONDUIT SIZE CONDUCTOR(NOTE 1)

QTY SIZE GR IG SE NOTES 2 | 12 | 12 | 12 | 8 | 2 3 | 12 | 12 | 12 | 8 | 2,3 4 12 12 12 8 2,3 2 | 10 | 10 | 10 | 8 | 2 3 | 10 | 10 | 10 | 8 | 2 4 | 10 | 10 | 10 | 8 | 2 1 2 8 10 8 6 2 4 8 10 8 6 2 2 6 10 8 4 2 3 6 10 8 4 2 4 6 10 8 4 2 2 4 8 4 2 2 3 | 4 | 8 | 4 | 2 | 2 1.25 4 4 8 4 2 2 2 | 3 | 8 | 3 | 2 | 2 | 4 | 3 | 8 | 3 | 2 | 2 1.25

SHEET KEYNOTES

PROVIDE NEW BREAKER IN EXISTING GE PANEL.

3 2 8 2 2 2 1.50 | 4 | 2 | 8 | 2 | 2 | 2 | (22) | 130 | 1.50 | 4 | 1 | 6 | 2 | 2 | 2 23 150 24 150 2 3 1/0 6 2 1/0 2 2 | 4 | 1/0 | 6 | 2 | 1/0 | 2 3 3/0 6 2 2/0 2 2.50 | 4 | 3/0 | 6 | 2 | 2/0 | 2 3 4/0 4 2 2/0 2 4 4/0 4 2 2/0 2 (31) 255 2.50 | 3 | 250 | 4 | 1 | 2/0 | 2

3 350 3 1/0 3/0 2 4 350 3 1/0 3/0 2 3.50 3 500 3 3/0 3/0 2
 36
 380
 4

 37
 400
 2 EA 2
 4 500 3 3/0 3/0 2 3 3/0 3 3/0 3/0 2 (38) | 400 | 2 EA 2.50 | 4 | 3/0 | 3 | 3/0 | 3/0 | 2
 (39)
 510
 2 EA 2.50
 3
 250
 1
 4/0
 3/0
 2
 (40) 510 2 EA 3 4 250 1 4/0 3/0 2

3 350 1/0 4/0 3/0 2,4 | (42) | 620 | 2 EA 3 | 4 | 350 | 1/0 | 4/0 | 3/0 | 2,4
 42
 620
 2 EA 3
 4
 350
 1/0
 4/0
 3/0
 2,4

 43
 760
 2 EA 3.50
 3
 500
 1/0
 4/0
 3/0
 2,4

 44
 760
 2 EA 4
 4
 500
 1/0
 4/0
 3/0
 2,4

 45
 855
 3 EA 3
 3
 300
 2/0
 4/0
 3/0
 2,4
 4 300 2/0 4/0 3/0 2,4 3 EA 3.50 3 400 2/0 4/0 3/0 4 500 3/0 4/0 3/0 4

4 | 500 | 3/0 | 4/0 | 3/0 | 4 4 EA 3 3 350 3/0 4/0 3/0 4 4 350 3/0 4/0 3/0 4 4 400 4/0 4/0 4/0 4 4 | 400 | 250 | 250 | 250 | 4 7 EA 4 | 4 | 500 | 350 | 350 | 4 11 EA 4 4 | 500 | 500 | 500 | 4

5 10 EA 4 CONDUCTOR AND CONDUIT SCHEDULE NOTES

MODIFICATIONS AS NOTED IN NOTE 4. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED. PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING

CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH

PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING COMPUTERS.

4. SYMBOL SUBSCRIPTS:

GROUNDING CONDUCTOR.

SHOWN IN TABLE.

"2N": INCLUDE TWO NEUTRAL CONDUCTORS, SIZED AS SCHEDULED FOR PHASED AND NEUTRAL CONDUCTORS. "FG": FULL SIZE GROUND, SIZE EQUIPMENT GROUNDING CONDUCTOR TO BE THE SAME SIZE AS THE PHASE CONDUCTORS. "HH": NEUTRAL CURRENTS EXIST DUE TO HIGH HARMONIC "NONLINEAR" LOADS. CURRENT CARRYING CONDUCTORS DERATED

ACCORDINGLY. PROVIDE THE IG/HH SIZE FOR THE EQUIPMENT

"IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR) SCHEDULED ALONG WITH GROUND OF EQUIPMENT GROUND CONDUCTOR.

"SE": SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEM.

| TO CNL2DH2C SHEET C-EP6.Ø5 | | | | |
|---------------------------------------|---|------------------|------------------------------|-----------------|
| DISTRIBUTION PAN 6ØØA MLO, 48Ø/277 | ELBOARD "CSØ1DH2C" 7V, 3 \(\text{, 4W} \) | | | |
| 125/3 | 2 225/3 | 3 125/3 4 | 1ØØ/3 5 1ØØ/3 6 1ØØ/3 SPACE | 7 THRU 18 10 SP |
| (3Ø) IG | 32 FG | 3Ø IG | | |
| 125/3 PO | 225/3 EPO | 125/3 EPO | 8Ø/3 ST EPO | |
| 5Ø/3 (125/3 | CBP 5Ø/3 100/3 | 100/3 5Ø/3 | 25/3 | |
| 12 IG 19 IG | 12 FG (19 FG | 19 FG 12 IG 19 I | RAD11 | |
| SC1 PU1 | SC1 PU1 | PU2 SC1 PU1 | GEN RAD 3 CLL1G37 PEAK | |

CONT

DEMOLITION PLAN SCALE: NTS

CIRCUITS: 32

20 2 2

20 2 4

20 2 6

72"Hx32"Wx12"D

O/C PROT

LTG CO'S PWR AMP POLE #

120 VOLT 1 PHASE 3 WIRE ISOLATION PANEL

DESCRIPTION

WALL OUTLETS

WALL OUTLETS

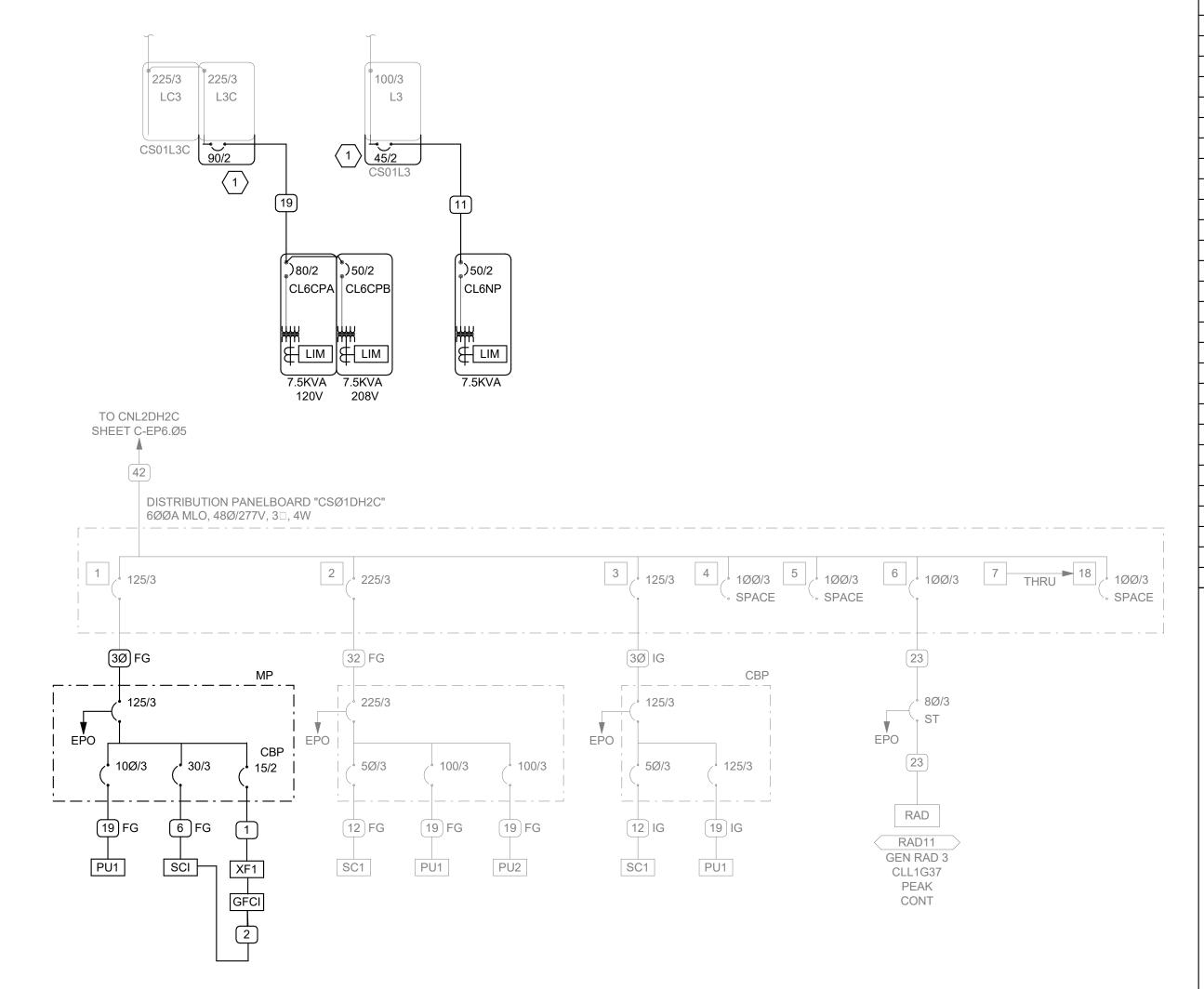
SPARE

SPACE

TOTAL KVA

AVERAGE AMPS

OUTLETS



NEW ONE LINE DIAGRAM

| 7 | 20 | 2 | 2 | EQUIPMENT BOOM | 0.4 | 0.4 | 0 | SPARE | | 20 | 2 | 8 |
|--------|-----------|---------------------|---------------|---|-----------------|-----------------------|-----------|-----------------------------------|----------------------|-------------|----------|----------|
| | | _ | _ | | | | | | | | | |
| 9 | 20 | 2 | 2 | SPARE | 0.4 | 0.4 | 0 | SPARE | | 20 | 2 | 10 |
| 11 | 20 | 2 | 2 | SPARE | 0.4 | 0.4 | 0 | SPARE | | 20 | 2 | 12 |
| 11 | 20 | 2 | 2 | SPARE | 0.4 | 0.4 | 0 | SPARE | | | | 12 |
| 13 | 20 | 2 | 2 | SPARE | 0.4 | 0.4 | 0 | SPARE | | 20 | 2 | 14 |
| | | | | | | | | | | | | |
| 15 | 20 | 2 | | SPARE | 0 | 0 | 0 | SPARE | | 20 | 2 | 16 |
| | | | | | | | | | | | | |
| TOTAL | _S: | | KVA | | | 4 | TOTAL K | | | | 4 | |
| | | | AMPS | | | 33 | AVERAC | GE AMPS | | | 17 | |
| PANFI | ID: CL6 | SNP | MOUNT: | FLUSH | TYPE: BOLT- | ON BOLT-ON | | 120 VOLT 1 PHASE 3 WIRE ISOLATIO | N PANFI | | | |
| 20 | | AMPERE MAIN | WOOTT: | BREAKER | LOCATION: | ON BOLTON | | 120 VOLT TTTMOLO VIIKE 180E KITO | PANEL SIZE: | 72"Hx3: | 2"Wx12"D | , |
| | | | TORY, IDENTIF | FICATION, GROUNDING BAR, LINE ISO | | S, 7.5 KVA, 480-120 V | OLT TRANS | FORMERS, | | | | |
| INDIC | ATOR AL | ARMS, INDICAT | OR LIGHTS, ST | AINLESS STEEL COVER (BOTH PANEI | L SECTIONS UNDE | ER COMMON COVER |) | · | | | | |
| | | | | | | , | | | | | | |
| | - | | | | | | | | | | | |
| CLIEN | T: | | | | JOB: | | | 3/. | 27/2019 | CIRCUI | TS: | 32 |
| PANEL | ID: CL60 | CPA | MOUNT: | FLUSH | TYPE: BOLT- | ON BOLT-ON | | 120 VOLT 1 PHASE 3 WIRE ISOLATIO | N PANEL | | | |
| 80 | | AMPERE MAIN | | BREAKER | LOCATION: | | | | PANEL SIZE: | 72"Hx32 | 2"Wx12"D |) |
| | | | <u> </u> | FICATION, GROUNDING BAR, LINE ISO | | <u> </u> | | ANSFORMERS, | | | | |
| INDICA | | | | AINLESS STEEL COVER (BOTH PANEL | | R COMMON COVER) | | | | | | |
| OID | | RITICAL BRANCH | | SEC | CTION 1 | | 1.01 | | OLUTI ETO | 0/0.00 | | |
| | O/C PRO | OT OUTLE POLE LTG | CO'S PWR | DESCRIPTION | LCL LOAD | | LCL | DESCRIPTION | OUTLETS LTG CO'S PI | O/C PR | POLE | CIR # |
| # 1 | AMP 20 | 2 | 2 | EAST BOOM | 0.4 | 1.2 | 0.8 | CEILING OUTLETS | 11G COS PA | VVR AIVIP | POLE 2 | 2 |
| ı | 20 | 2 | 2 | LAST BOOM | 0.4 | 1.2 | 0.0 | CEILING COTELTS | 4 | | | + - |
| 3 | 20 | 2 | 2 | WEST BOOM | 0.4 | 0.8 | 0.4 | ABOVE COUNTER OUTLET | 2 | 20 | 2 | 4 |
| | | | | | | | | | | | | |
| 5 | 20 | 2 | 2 | EQUIPMENT BOOM | 0.4 | 1.6 | 1.2 | WALL OUTLETS | 6 | 20 | 2 | 6 |
| | | | | | | | | | | | | |
| 7 | 20 | 2 | 2 | EQUIPMENT BOOM | 0.4 | 1.2 | 0.8 | WALL OUTLETS | 4 | 20 | 2 | 8 |
| | 00 | | | DED ATOTAL CUITIETO | | 4.4 | | WALL OUT ETO | | | | 10 |
| 9 | 20 | 2 | 3 | PEDATSTAL OUTLETS | 0.6 | 1.4 | 8.0 | WALL OUTLETS | 4 | 20 | 2 | 10 |
| 11 | 20 | 2 | 2 | PEDASTAL OUTLETS | 0.4 | 0.4 | 0 | SPARE | | 20 | 2 | 12 |
| 11 | 20 | 2 | 2 | FEDASTAL OUTLETS | 0.4 | 0.4 | - 0 | SPARE | | | | 12 |
| 13 | 20 | 2 | | SPARE | 0 | 0 | 0 | SPARE | | 20 | 2 | 14 |
| | | _ | | 3.7 | | | | 5, 7 12 | | | + | + |
| 15 | 20 | 2 | | SPARE | 0 | 0 | 0 | SPARE | | 20 | 2 | 16 |
| | | | | | | | | | | | | |
| TOTAL | S: | | KVA | | | 6.6 | TOTAL P | (VA | | | 6.6 | ; |
| | | | AMPS | | | 55 | AVERAC | GE AMPS | | | 28 | i |
| | | | I | | | | | | | | | |
| | ID: CL60 | | MOUNT: | FLUSH | TYPE: BOLT- | ON BOLT-ON | | 208 VOLT 1 PHASE 3 WIRE ISOLATION | | | | |
| 50 | | AMPERE MAIN | | BREAKER | LOCATION: | 0.7510// 400 400 / | | EODMEDO. | PANEL SIZE: | 72"Hx32 | 2"Wx12"D | · |
| | | | | FICATION, GROUNDING BAR, LINE ISO TAINLESS STEEL COVER (BOTH PANEI | | <u> </u> | | FURIMERS, | | | | |
| INDIC | ATOR AL | ARIVIS, INDICAT | OR LIGHTS, ST | AINLESS STEEL COVER (BOTH PAINE) | L SECTIONS UNDE | ER COMMON COVER |) | | | | | |
| | CRITICA | L AL BRANCH B SE | CTION | | SECTI | ON 2 | | | | | | |
| CIR | O/C PRO | | | | LCLLOAD | · - | LCL | | OUTLETS | O/C PR | .OT | CIR |
| # | AMP | POLE LTG | | DESCRIPTION | KVA | | KVA | DESCRIPTION | | WR AMP | POLE | _ |
| 1 | 30 | 2 | 2 | LASER | 0.4 | 0.4 | 0 | SPACE | | 20 | 2 | 2 |
| | | | | | | | | | | | | |
| 3 | 20 | 2 | 2 | SPACE | 0.4 | 0.4 | 0 | SPACE | | 20 | 2 | 4 |
| | | | | | | | | | | | | |
| 5 | 20 | 2 | 2 | SPACE | 0.4 | 0.4 | 0 | SPACE | | 20 | 2 | 6 |
| | | | | | | | | | | | | |

TYPE: BOLT-ON BOLT-ON

1.2

8.0

0.4

KVA

0.8

LOCATION:

LCL LOAD

0.4

0.4

0.4

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, LINE ISOLATION MONITOR, 7.5 KVA, 208-120 VOLT TRANSFORMER,

INDICATOR ALARMS, INDICATOR LIGHTS, STAINLESS STEEL COVER (BOTH PANEL SECTIONS UNDER COMMON COVER)

DESCRIPTION

EAST BOOM

WEST BOOM

EQUIPMENT BOOM

SPACE

PANEL SCHEDULE IS TYPICAL FOR OR ROOMS #1, #2, #3, #4, #5 , #6 & #7

0.4

0.4

NORMAL BRANCH

AMP POLE LTG CO'S PWR

CIR O/C PROT OUTLETS

3 20 2

| 1 | ONE LINE DIAGRAM | |
|------------|------------------|--|
| \ | SCALE: NTS | |

ONE-LINE

DIAGRAM

18226.00

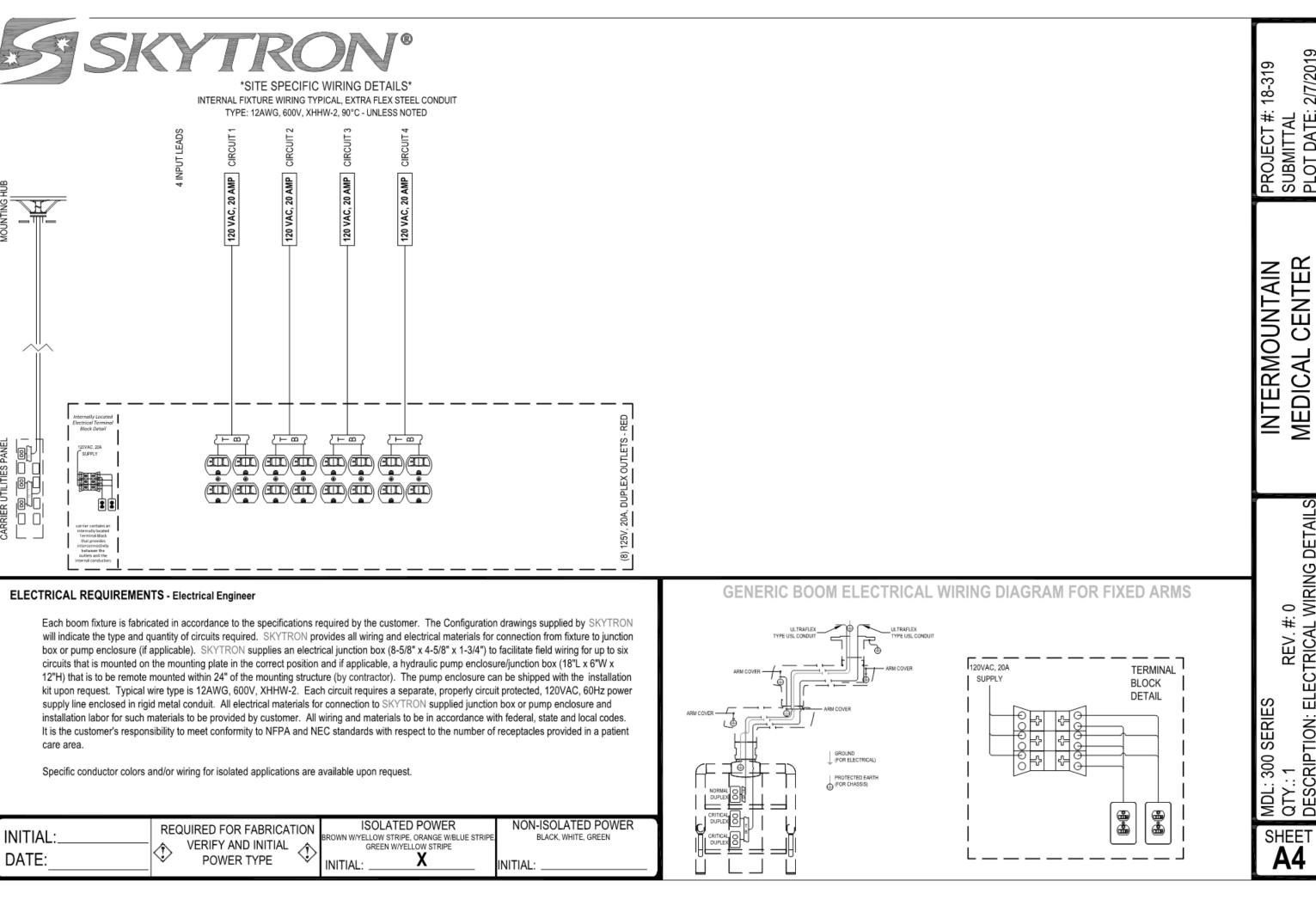
 Δ

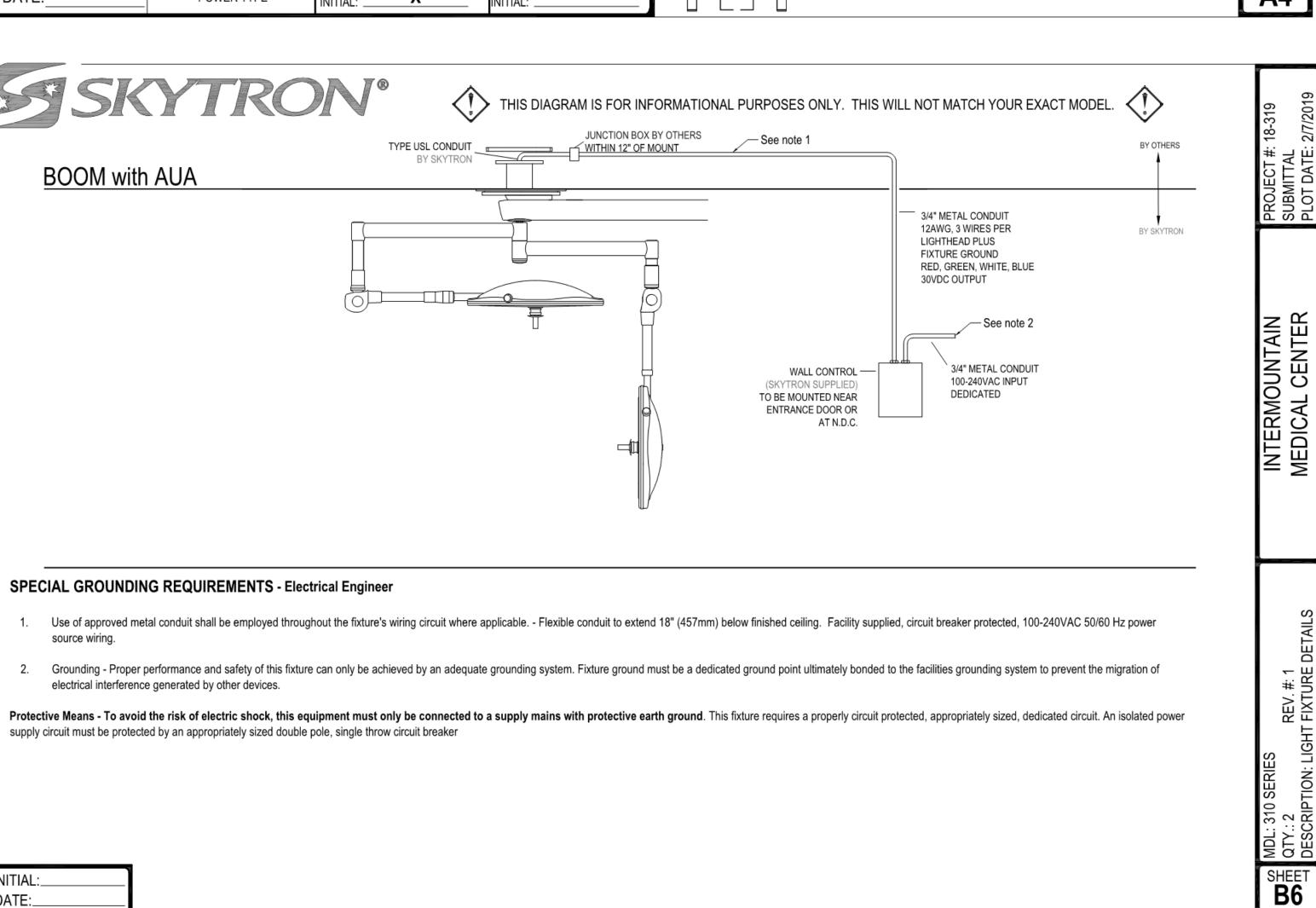
NJRA Project #

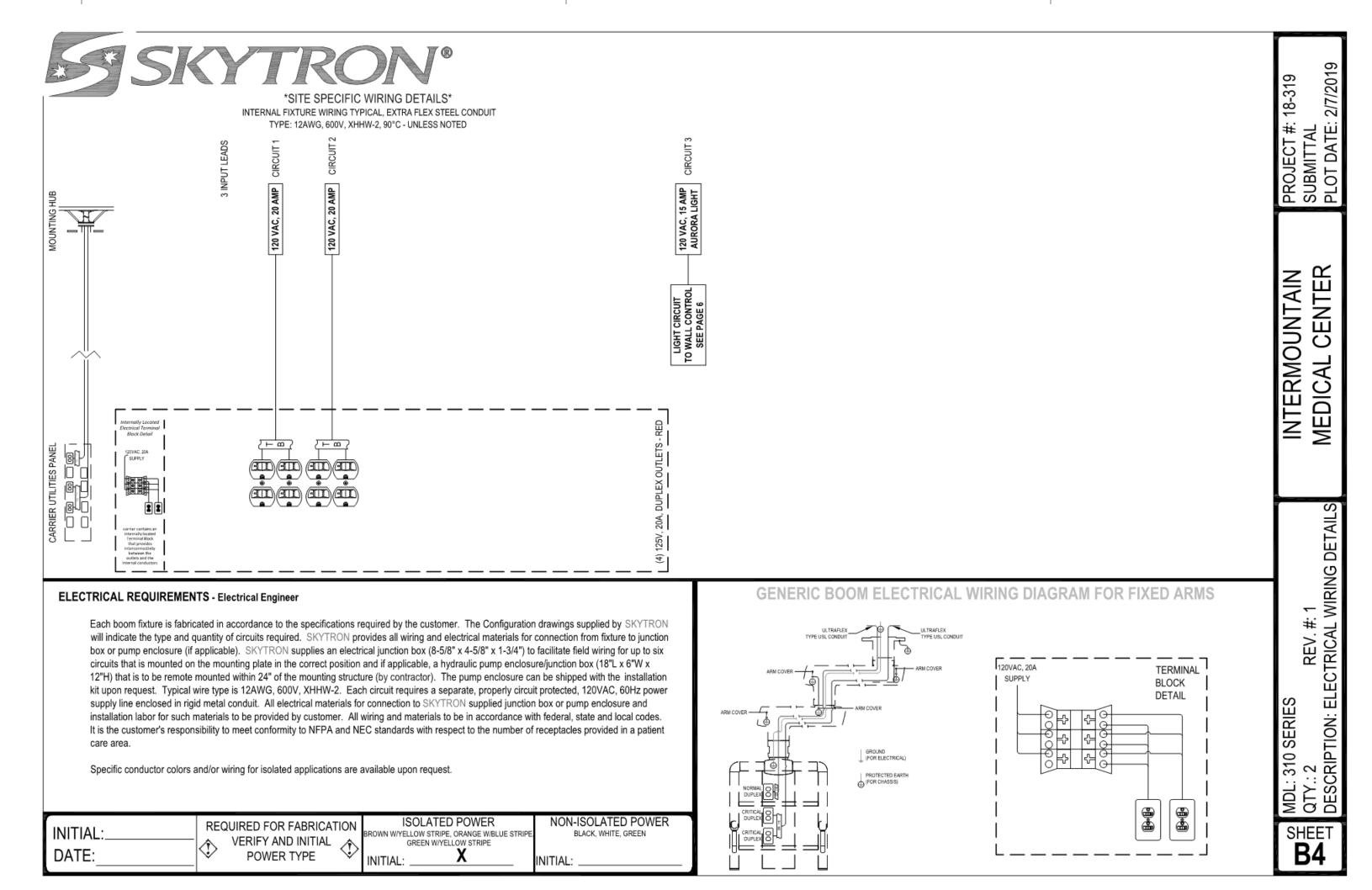
O Construction Documents Mar. 27, 2019

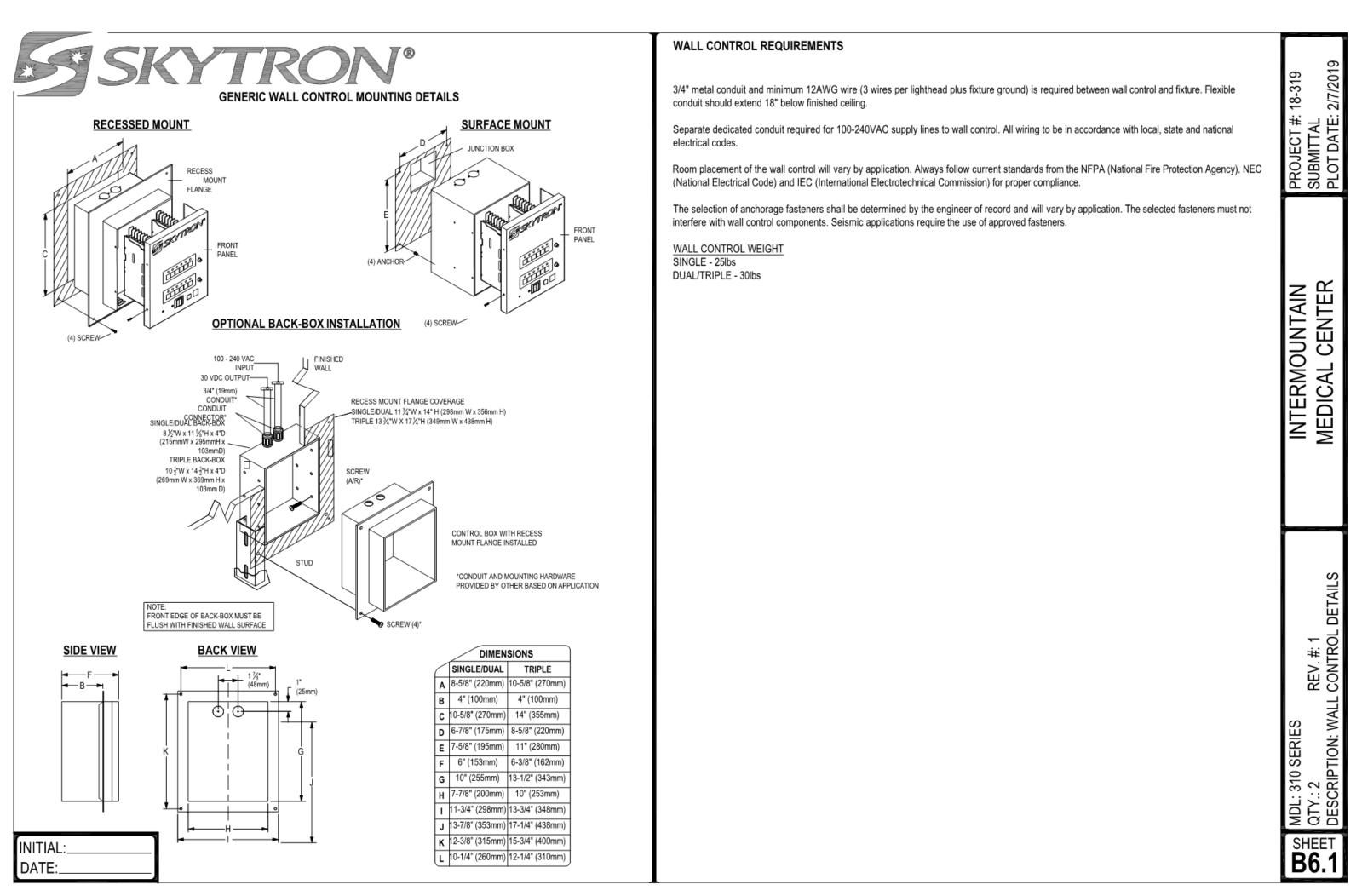
/ SCALE: NTS

WIRING:











NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



Intermountain Healthcare

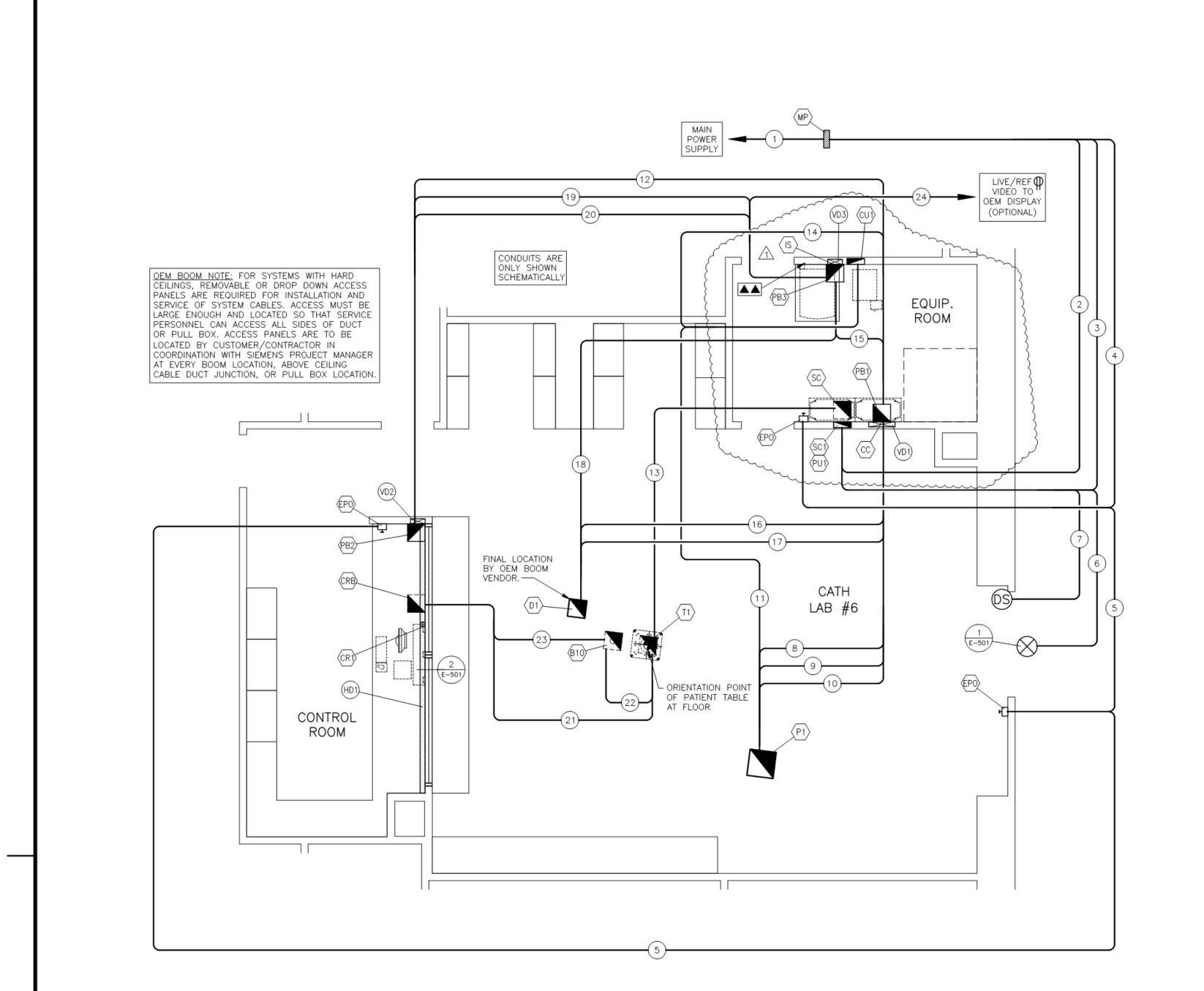
IMC - Cath Lab 6 Remodel Project

Construction Documents

SKYTRON DRAWINGS

18226.00

Mar. 27, 2019



ELECTRICAL LEGEND REMARKS SIZE DESCRIPTION SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR (EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. TABLE ACCESSORIES ROVIDE 4"Ø CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR. PROVIDE STAINLESS STEEL WATERPROOF PLATE ON TOP OF CORED OPENING IN FLOOR. (EXISTING) BUSHED OPENING IN VERTICAL DUCT "VD1" COVER AT FLOOR LINE. CABLE CABINET 18" X 8" (EXISTING) BUSHED OPENING IN TOP OF HORIZONTAL DUCT "HD1". CONTROL ROOM DISTRIBUTOR 3"ø (EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. FOR CONTROL ROOM UNDER-FLOOR BOX SINGLE CONDUIT CONNECTION TO THIS BOX, PROVIDE A 3" CONDUIT THRU FLOOR. FOR MULTIPLE CONDUIT CONNECTIONS, PROVIDE (2) 4" CONDUITS THRU FLOOR. E.C. TO DESIGN RANSITION TO SURFACE FLOOR DUCT AS REQUIRED. AS REQUIRED (EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED WALL AT 48" AFF. PROVIDE BOX WITH COOLING UNIT REMOVABLE FRONT COVER AND (1) 4"Ø BUSHING IN CENTER OF REMOVABLE COVER FOR CABLE EXIT. SEE PLAN FOR LOCATION. (NEW) PULL BOX MOUNTED ABOVE FINISHED CEILING WITH REMOVABLE BOTTOM COVER WITH BOOM DVI 2xBWD-19D AS REQUIRED 3"Ø BUSHED OPENING, NOTE: IF LOCAL CODES REQUIRE COMPLETE CABLE CONTAINMENT IN (live+ref) RACEWAY, THIS BOX MUST BE SIZED SUCH THAT A 8" X 6" X 3" SIEMENS POWER DISTRIBUTION BOX CAN BE INSTALLED INSIDE THIS PULL BOX. (VERIFY) EMERGENCY OFF BUTTONS FOR CIRCUIT BREAKERS. EPO'S MUST PREVENT RESETTING | EMERGENCY POWER OFF F CIRCUIT BREAKERS WHEN IN OFF POSITION. EPO'S MUST BE RECESSED OR SHIELDED. FINAL OCATION DETERMINED BY CUSTOMER (EXISTING) BUSHED OPENING IN VERTICAL DUCT "VD3" COVER AT HEIGHT NEEDED FOR IMAGER. IMAGE SYSTEM VERIFY) MAIN PANEL WITH MAIN BREAKER. LOCATION DETERMINED BY CUSTOMER/CONTRACTOR. EE "POWER SCHEDULE" EXISTING) ABOVE FINISHED CEILING PULL BOXES FOR CONDUIT TERMINATION INTO VERTICAL UCTS. SEE PLAN FOR LOCATION. (EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED CEILING WITH REMOVABLE BOTTOM COVER | C-ARM WITH 6"Ø BUSHED OPENING. (EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED WALL AT FLOOR LINE. PROVIDE BOX WITH GENERATOR REMOVABLE FRONT COVER WITH 4"Ø BUSHED OPENING AT BOTTOM OF COVER. (EXISTING) PULL BOX MOUNTED FLUSH IN FINISHED WALL AT FLOOR LINE. PROVIDE BOX WITH SYSTEM CABINET REMOVABLE FRONT COVER WITH 4"Ø BUSHED OPENING AT BOTTOM OF COVER. AS REQUIRED (EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. SYSTEM CABINET ROVIDE 6"Ø CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR WITH BUSHING AT FLOOR (EXISTING) PULL BOX MOUNTED BELOW FINISHED FLOOR WITH REMOVABLE BOTTOM COVER. ROVIDE 4"Ø CONDUIT FROM BOX TO FLUSH WITH FINISHED FLOOR WITH BUSHING AT FLOOR 3 1/2" X 10" (EXISTING) HORIZONTAL DUCT MOUNTED ON FINISHED WALL AT FLOOR LINE. PROVIDE DUCT WITH HORIZONTAL WALL DUCT REMOVABLE FRONT COVER. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS. CONNECT TO VERTICAL DUCT "VD2" AS SHOWN. 3 1/2" X 18" (EXISTING) VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND VERTICAL DUCT XTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX "PB2" (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) SECTIONS WITH METAL DIVIDERS. 3 1/2" X 10" (EXISTING) VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND VERTICAL DUCT XTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX "PB2" (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) (EXISTING) VERTICAL DUCT MOUNTED FLUSH IN FINISHED WALL. BEGIN DUCT AT FLOOR LINE AND VERTICAL DUCT XTEND UP WALL ABOVE FINISHED CEILING. PROVIDE JUNCTION BOX "PB3" (SIZED BY E.C.) AT TOP OF DUCT FOR CONDUIT TRANSITIONS. IF REQUIRED BY LOCAL CODE, DIVIDE DUCT INTO (3) EC TO SIZE (VERIFY) CONDUIT FROM PANEL TO "MP" SEE "POWER SCHEDULE" (VERIFY) CONDUIT FROM "MP" TO "PU1" EC TO SIZE SEE "POWER SCHEDULE" EC TO SIZE (VERIFY) CONDUIT FROM "MP" TO "SC1" SEE "POWER SCHEDULE" EC TO SIZE (VERIFY) CONDUIT FROM "MP" TO "EPO" SEE "POWER SCHEDULE" (VERIFY) CONDUIT FROM "EPO" TO "EPO" EC TO SIZE EC TO SIZE (VERIFY) CONDUIT FROM "SC1" TO "WL" (VERIFY) CONDUIT FROM "SC1" TO "DS" EC TO SIZE (EXISTING) CONDUIT FROM "P1" TO "PB1" (PU1) MAX. CONDUIT LENGTH 26' (EXISTING) CONDUITS FROM "P1" TO "PB1" (PU1) MAX. CONDUIT LENGTH 26' (EXISTING) CONDUIT FROM "P1" TO "PB1" (SC1) MAX. CONDUIT LENGTH 22 (EXISTING) CONDUIT FROM "P1" TO "CU1" FOR LIQUID COOLING HOSES MAX. CONDUIT LENGTH 67 (2) 3"ø (EXISTING) CONDUITS FROM "PB1" (SC1) TO "PB2" (CR1) MAX. CONDUIT LENGTH 32 (EXISTING) CONDUIT FROM "SC" (SC1) TO "T1" UNDER FLOOR MAX. CONDUIT LENGTH 35 (EXISTING) CONDUIT FROM "PB1" (SC1) TO "CU1" MAX. CONDUIT LENGTH 78' 2"ø 3"ø (EXISTING) CONDUIT FROM 'PB1" (SC1) TO "PB3" (IS) MAX. CONDUIT LENGTH 32 (NEW) CONDUIT FROM "PB1" (SC1) TO "D1" MAX. CONDUIT LENGTH 68' 1"ø (NEW) CONDUIT FROM "PB1" (SC1) TO "D1" MAX. CONDUIT LENGTH 42' 2 1/2"ø (NEW) CONDUIT FROM "PB3" (IS) TO "D1" MAX. CONDUIT LENGTH 55' 2"ø 3"ø (EXISTING) CONDUIT FROM "PB3" (IS) TO "PB2" (CR1) MAX. CONDUIT LENGTH 31 (EXISTING) CONDUIT FROM "PB3" (IS) TO "PB2" (CR1) MAX. CONDUIT LENGTH 31 2"ø (NEW) CONDUIT FROM "CRB" TO "T1" UNDER FLOOR (VOLCANO S51 CABLE SET) MAX. CONDUIT LENGTH 68' (EXISTING) CONDUIT FROM "T1" TO "B10" UNDER FLOOR 3"ø (EXISTING) CONDUIT FROM "CRB" TO "B10" UNDER FLOOR (CUSTOMER PATIENT MONITORING) (NEW) CONDUIT FROM "PB3" (IS) TO "CUSTOMER MONITOR" (LIVE+REF VIDEO TO OEM OPTION) | MAX. CONDUIT LENGTH 86' 2"ø

ELECTRICAL NOTES

) COMPLIANCE: ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA-70), O.S.H.A. REGULATIONS, AS WELL AS APPLICABLE REGULATIONS OF CITY, COUNTY, STATE AND FEDERAL AGENCIES. PROVIDE MATERIALS AND EQUIPMENT THAT COMPLY WITH ANSI, IEEE AND NEMA STANDARDS AND ARE U.L. LISTED AND LABELED. THE CUSTOMER'S/CONTRACTOR'S WORK AND ALL EQUIPMENT INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE ADOPTED/ENFORCED BY THE AUTHORITY HAVING JURISDICTION. QUALITY ASSURANCE: THE CONTRACTOR SHALL VERIFY EXISTING ONDITIONS IN THE FIELD TO INSURE THAT THE NEW WORK WILL FIT INTO THE EXISTING STRUCTURE AS SHOWN ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST OR BE DISCOVERED THAT PREVENT THE INSTALLATION OF WORK AS SHOWN, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO FABRICATION OF EQUIPMENT, OR THE PERFORMANCE OF ANY WORK THAT MAY BE AFFECTED. DO NOT ALTER DRAWINGS, DIMENSIONS, OR SPECIFICATIONS IN ANY WAY WITHOUT CONTACTING AND RECEIVING WRITTEN CONFIRMATION FROM SIEMENS PROJECT MANAGER. ALL DIMENSIONS ARE FROM FINISHED SURFACES. CONDUIT AND PULL BOXES TO BE INSTALLED BY THE CUSTOMER/CONTRACTOR WITH OCATIONS BEING FIELD VERIFIED BY THE SIEMENS PROJECT MANAGER. POWER SUPPLY SOURCE: POWER SUPPLIES FOR SIEMENS HEALTHCARE

EQUIPMENT SHALL BE FROM A MEDICAL IMAGING PANEL OR BUILDING

SERVICE EQUIPMENT THAT IS A GROUNDED 3 OR 4-WIRE 'WYE' SOURCE PER HE SPECIFIC EQUIPMENT OPERATION REQUIREMENTS. A DEDICATED CIRCUIT SHALL BE PROVIDED THAT IS KEPT ENTIRELY FREE AND INDEPENDENT OF ALL OTHER BUILDING WIRING. NO ELEVATORS, GENERATORS, PUMPS, HVAC OF SIMILAR EQUIPMENT SHALL BE CONNECTED TO THE SAME CIRCUIT OR MEDICAL IMAGING PANEL THAT SERVES THE SIEMENS HEALTHCARE EQUIPMENT. F THE POWER SUPPLY SOURCE DOES NOT MEET THE SPECIFIC SIEMENS EQUIPMENT POWER REQUIREMENTS, THE CONTRACTOR SHALL PROVIDE THE NECESSARY EQUIPMENT REQUIRED TO ESTABLISH THE POWER SUPPLY IN ACCORDANCE WITH THE REQUIRED POWER SUPPLY PARAMETERS OF THE SIEMENS EQUIPMENT. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CUSTOMER AND/OR UTILITY COMPANY FIELD REPRESENTATIVE.) WORK FURNISHED BY CUSTOMER/CONTRACTOR: WORK NOT PROVIDED BY SÍEMENS HEALTHCARE BUT SHOWN ON DRAWINGS TO BE FURNISHED AND INSTALLED BY CUSTOMER/CONTRACTOR INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING, UNLESS NOTED OTHERWISE: ELECTRICAL RACEWAYS AND DUCTS, WIRING TROUGHS, PULL BOXES, CONDUITS, CIRCUIT BREAKERS, ACCESS PANELS, EMERGENCY OFF BUTTONS, DOOR SWITCHES, WARNING LIGHTS, WIRING, WIRING DEVICES, CONNECTORS, LIGHTING EQUIPMENT AND RACEWAY AND CONDUIT NOTES: ALL CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT ENFORCED EDITION OF THE NATIONAL ELECTRICAL CODE CONDUIT BODIES SHALL NOT BE USED. WHERE A CONDUIT ENTERS A BOX, FITTING, OR OTHER ENCLOSURE, AN INSULATED THROAT CONNECTOR

SHALL BE PROVIDED TO PROTECT THE WIRE FROM ABRASION. ALI CONNECTORS FOR EMT SHALL BE COMPRESSION OR DOUBLE SET SCREW KEEP RACEWAYS AT LEAST 6 INCHES AWAY FROM PARALLEL RUNS OF FLUES OR STEAM AND HOT WATER PIPES. INSTALL RACEWAY RUNS ABOVE WATER AND STEAM PIPES PROVIDED THAT CABLE RUN DISTANCES ARE MAINTAINED. USE TEMPORARY CLOSURES TO PREVENT FOREIGN MATTER FROM ENTERING RACEWAY CONDUIT RUNS ARE SHOWN SCHEMATICALLY. INSTALL CONDUIT WITH A MINIMUM OF BENDS IN THE SHORTEST PRACTICAL DISTANCE CONSIDERING

THE BUILDING CONSTRUCTION AND OBSTRUCTIONS, EXCEPT AS OTHERWISE

INDICATED. THE CONTRACTOR SHALL MAKE CERTAIN THAT ANY CONDUIT/RACEWAY RUNS CONTAINING SIEMENS HEALTHCARE CABLES DO NOT EXCEED THE SPECIFIED MAXIMUM DISTANCES AS SHOWN ON THE ELECTRICAL DETAILS. LISTED CONDUIT SIZES FOR SIEMENS-SUPPLIED CABLES MUST BE MAINTAINED IN ORDER TO ENABLE THE TOTAL CABLE BUNDLE INCLUDING CONNECTORS TO BE PULLED THROUGH WITHOUT DAMAGE. PROVIDE ENCLOSED METAL WIRE DUCT RACEWAY SYSTEM WHERE SHOWN IN DRAWINGS WITH DIVIDERS TO SEPARATE THE DUCT INTO TWO OR THREE SEPARATE COMPARTMENTS AS SHOWN ON THE SIEMENS PLANS (FOR POWER AND SIEMENS HEALTHCARE CABLING). DIVIDERS AND CROSSOVER PIECES TO E PROVIDED AS NECESSARY, THE CABLE TO CABLE AS WELL AS THE IRCUIT TO CIRCUIT SEPARATION REQUIREMENT WAS EVALUATED DURING THE . SYSTEM CERTIFICATION OF THE EQUIPMENT. ADDITIONAL SEPARATION OF HE SYSTEM CABLE ASSEMBLIES INTO SEPARATE OR PARTITIONED RACEWAYS JNLESS OTHERWISE NOTED, IS NOT NECESSARY TO INSURE SEPARATION OF PROVIDE WIRE DUCT/RACEWAY WITH ACCESSIBLE REMOVABLE COVERS.

LOCATIONS OF BUILDING MATERIAL OPENINGS (I.E. ACCESS PANELS) TO BE

BUT IN FIFLD ARE TO BE COORDINATED WITH THE DRAWING REQUIRMENTS

AND BUILDING STRCTURE. THOSE THAT ARE NOT INDICATED OR INTERFER WITH BUILDING ELEMENTS SHALL BE COORDINATED WITH SIEMENS PROJECT MANAGER. ELECTRICAL PULL BOXES AND RACEWAY COVERS SHALL BE INSTALLED IN A MANNER TO ALLOW ACCESSIBILITY FOR INSTALLATION AND MAINTENANCE. CONTRACTORS MUST PROVIDE PULL STRINGS FOR ALL CONDUIT AND WIRE DUCT/RACEWAY, IN-FLOOR TRENCH DUCT AND FLUSH FLOOR BOXES SHALL BE PROVIDED WITH FULLY GASKETED REMOVABLE COVERS. WHEN JUNCTION BOXES AND WIRE DUCT/RACEWAY ARE MOUNTED HIGHER THAN 14 FEET ABOVE FINISHED FLOOR, THE ELECTRICAL CONTRACTOR SHALL PROVIDE TWO ELECTRICIANS TO HELP THE SIEMENS INSTALLERS PULL SIEMENS SUPPLIED CABLES AT CUSTOMER'S EXPENSE. WHEN JUNCTION BOXES AND WIRE DUCT/RACEWAY ARE MOUNTED ABOVE A HARD CEILING (I.E SHEET ROCK), A 24" x 24" ACCESS PANEL IS REQUIRED AT EACH JUNCTION BOX AND WITHIN 2 FEET OF EACH RACEWAY TRANSITION (SUCH AS A 90 DEGREE ELBOW OR TEE) IN DUCT/RACEWAY. THERE MUST BE FREE AND CLEAR ACCESS TO JUNCTION BOXES AND WIRE DUCT/RACEWAY. WHEN CCESS PANELS ARE LOCATED MORE THAN 3 FEET FROM JUNCTION BOXES AND WIRE DUCT/RACEWAY THE ELECTRICAL CONTRACTOR SHALL PROVIDE TWO ELECTRICIANS TO HELP SIEMENS INSTALLERS PULL SIEMENS SUPPLIED CABLES AT CUSTOMER'S EXPENSE. WIRING: ALL WIRING INSTALLED SHALL BE 600 VOLT CLASS, STRANDED TYPE THHN/THWN-2, SINGLE CONDUCTOR ANNEALED COPPER FOR A MAXIMUM OPERATING TEMPERATURE OF 90°C (194°F), SIZED AS INDICATED, INSTALLED IN METAL RACEWAYS. THE CUSTOMER/CONTRACTOR SHALL LEAVE A MINIMUM 10 FEET OF WIRE TAILS AT ALL OUTLÉT POINTS WITH WIRE

DENTIFICATION TAGGED AT BOTH ENDS FOR FINAL CONNECTION BY THE CUSTOMER/ELECTRICAL CONTRACTOR.) SHORT CIRCUIT REQUIREMENTS: ALL CIRCUIT BREAKERS SUPPLIED FOR HE SIEMENS EQUIPMENT REQUIREMENTS SHALL BE RATED HIGHER THAN THE SHORT CIRCUIT AVAILABLE AT THE TERMINALS OF THE ELECTRICAL EQUIPMENT S DETERMINED BY THE ENGINEER OF RECORD, BUT NOT LESS THAN 5,000A RMS SYMMETRICAL AT 480V, 3-PHASE, 60 HERTZ. THE CONTRACTOR SHALL OBTAIN THE CORRECT SHORT CIRCUIT CURRENT RATING OF ALL THE NEW EQUIPMENT FOR INSTALLATION FROM THE ENGINEER OF RECORD.

CONDUIT LENGTH CALCULATIONS

IF SITE-SPECIFIC CONDITIONS EXCEED THE FOLLOWING ASSUMED VALUES, THEN ADDITIONAL LENGTH MUST BE SUBTRACTED BY THE ELECTRICAL CONTRACTOR FROM THE MAXIMUM CONDUIT LENGTHS

IF DUCT LOCATIONS ARE ALTERED FROM THE SHOWN LAYOUT, IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO RECALCULATE THE MAXIMUM CONDUIT LENGTHS. ASSUMED VALUES USED IN CALCULATING STATED MAXIMUM CONDUIT LENGTHS: VERTICAL DUCTS - 12'-0" FLOOR PENETRATIONS - 3'-0"

artis q/q.zen/zee ceili

| CEILING | | |
|-----------------------|----------|-------|
| HEIGHT REQUIREMENT | | |
| | | |
| 8 FT. – 11 IN. | <u>^</u> | 02/21 |
| | Λ | 02/01 |

ROJECT MANAGER: CHRISTOPHER THOMAS **SIEMENS** (801) 209-6582 INTERMOUNTAIN MEDICAL CENTER 5121 COTTONWOOD STREET, MURRAY, UT. 84107 ADDITION OF OEM BOOM PER CUSTOMER REQUES CATH LAB #6 - ARTIS Q.ZEN CEILING PER CUSTOMER REQUES THIS TITLE BLOCK WITHOUT SIEMENS AUTHORIZATION WILL 1803659 101R(A) VERSION DATED 09/24/ RESULT IN PROSECUTION UNDER approvèd by Customer for Fina FULL EXTENT OF THE LAW.

ATTENTION:

ELECTRICAL RACEWAY PLAN

SYMBOLS

ALL MAY NOT APPLY

OPENING IN RACEWAY OR TRENCHDUCT

(EPO) EMERGENCY POWER OFF BUTTON

THERNET CONNECTION TO CUSTOMER'S INFORMATION YSTEMS NETWORK (VERIFY WITH SMS PROJECT MANAGER'

110 VOLT, 20 AMP, HOSPITAL GRADE DUPLEX OUTLET

110 VOLT, 20 AMP, HOSPITAL GRADE QUAD OUTLET

PULLBOX IN (FLOOR/WALL/CEILING)

OPENING IN ACCESS FLOORING

WARNING LIGHT (X-RAY ON)

DOOR SAFETY SWITCH

UNDER FLOOR DUCT

TRENCHDUCT

CEILING DUCT

SURFACE DUCT

VERTICAL DUCT

CIRCUIT BREAKER BY CUSTOMER/CONTRACTOR

- THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED AT THE TIME OF THEIR PREPARATION. SINCE BOTH THESE FACTORS ARE SUBJECT TO DESIGN MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES. - THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.

- IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION DOCUMENTS FOR REFERENCE.

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

- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES. - THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST TO SPECIFY RADIATION PROTECTION.

ALL RIGHTS ARE RESERVED. DATE DESCRIPTION -ISSUE BLOCK-*[#]*30219677 ÄS NOTED

11/02/18

M. GONZALEZ

SIEMENS **DRAWINGS**

EP702

Ö

ARCHITECTS

Murray, Utah 84123

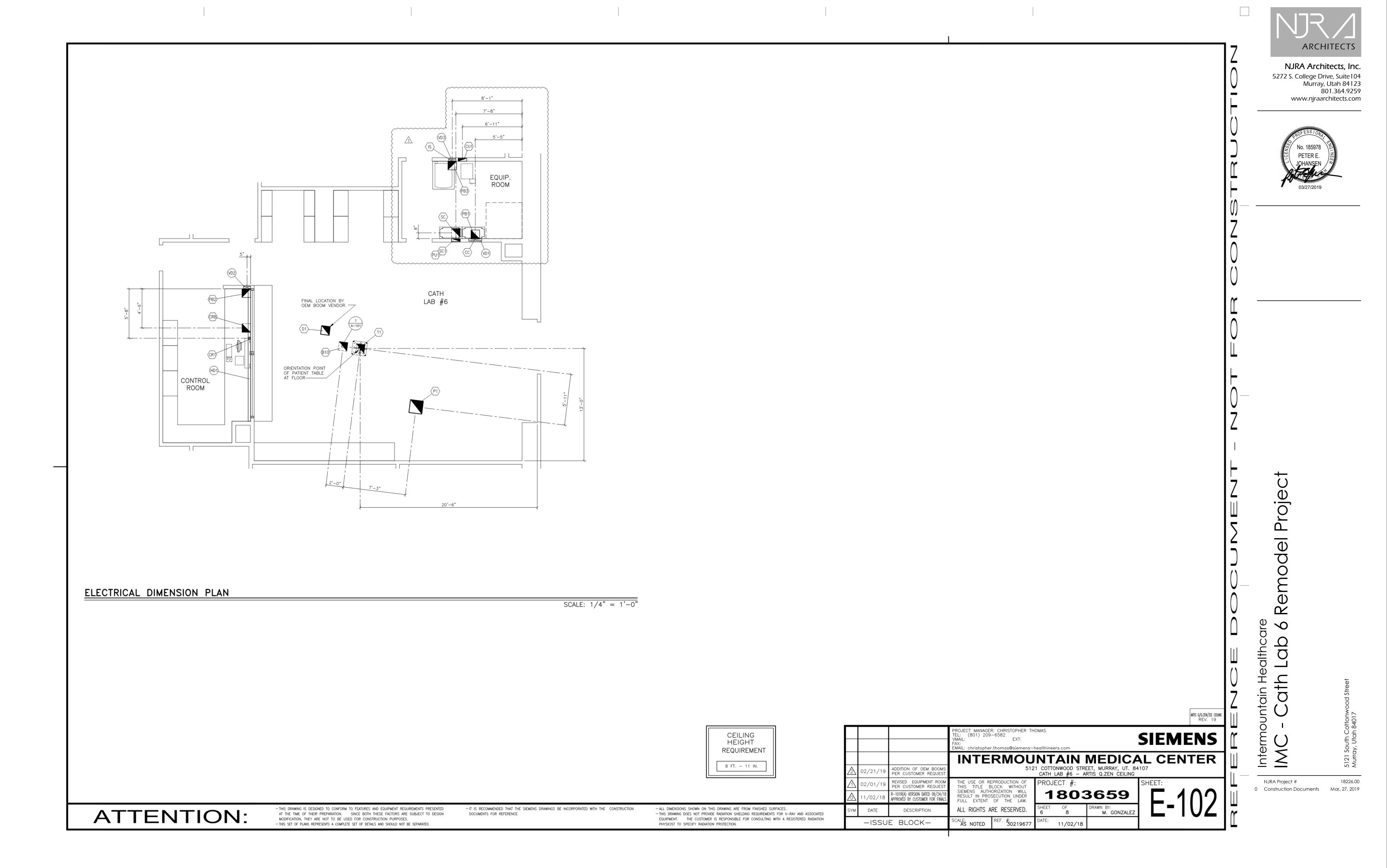
www.njraarchitects.com

801.364.9259

NJRA Architects, Inc.

5272 S. College Drive, Suite 104

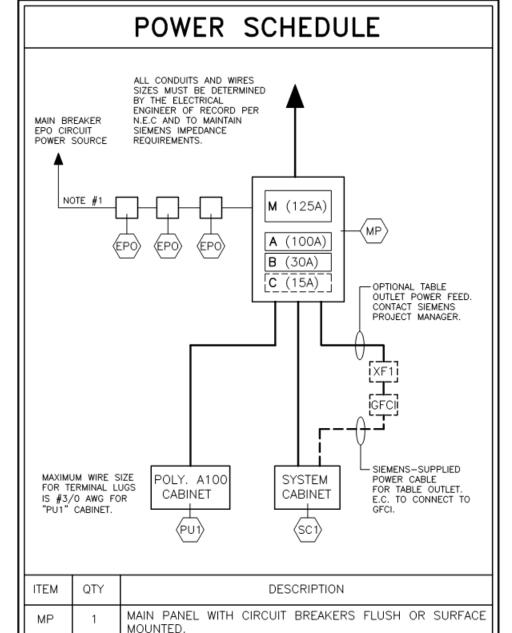
NJRA Project # 18226.00 0 Construction Documents Mar. 27, 2019



SIEMENS DRAWINGS

EP703

3/27/2019 9:30:36 AM



MAIN BREAKER MUST HAVE TRIPPING DEVICE SO WHEN ANY EPO IS PRESSED, THE MAIN BREAKER TRIPS. MAIN BREAKER AMPS: 125 VOLTS PHASES NEUTRAL GROUND TOTAL WIRES 1 5 (NOTE 1 480/277Y 3 BREAKER AMPS: 100 (FOR PU1) VOLTS PHASES NEUTRAL GROUND TOTAL WIRES 4 (NOTE BREAKER AMPS: 30 (FOR SC1) VOLTS PHASES NEUTRAL GROUND TOTAL WIRES BREAKER AMPS: 15 (FOR STEP-DOWN XFMR "XF1") VOLTS PHASES NEUTRAL GROUND TOTAL WIRES 750VA, 480V PRIMARY, 120V GROUNDED SECONDARY TEP-DOWN SINGLE-PHASE TRANSFORMER WITH PRIMARY AND

 ALL WIRES MUST BE SAME SIZE. NOTE: UNLESS OTHERWISE NOTED, ALL BREAKERS WILL BE 80% RATED EPO VARIES NOTE 1 - EPO CIRCUIT #1 MAIN CIRCUIT BREAKER EMERGENCY POWER OFF BUTTON WITH PROTECTIVE COVER THAT PREVENTS ACCIDENTAL ACTIVATION. THE EPO MUST BE OF FAIL-SAFE DESIGN. ALL EPO'S TO HAVE MECHANICAL LATCHING MECHANISM. EPO MUST BE RESET BEFORE MAIN BREAKER CAN RESUME OPERATION. CONTACTS AND WIRING CONFIGURATION TO BE DESIGNED BY ELECTRICAL

ENGINEER OF RECORD. THE EPOS MUST BE INSTALLED BY A QUALIFIED LECTRICAL CONTRACTOR ACCORDING TO NATIONAL ELECTRICAL CODE, STATE AND LOCAL REGULATIONS. MEASURES SHOULD BE TAKEN TO DESIGN THE CIRCUIT IN SUCH A WAY THAT IT WILL ALWAYS WORK WHEN THE MEDICAL EQUIPMENT IS POWERED. THE CUSTOMER IS SOLELY RESPONSIBLE FOR THE IMPLEMENTATION OF THE EPOs AND THEIR ASSOCIATED CIRCUITS AND MUST MAKE HE FINAL DETERMINATION CONSIDERING ALL SITE CONDITIONS AND REGULATORY FACTORS.

SECONDARY FUSE PROTECTION FOR TABLE OUTLET POWER,

CONNECTED TO AN ADJACENT FLUSH WALL-MOUNTED 15A, 25VAC UL 943 GFCI WITH BLANK FACE (NO CONTACT

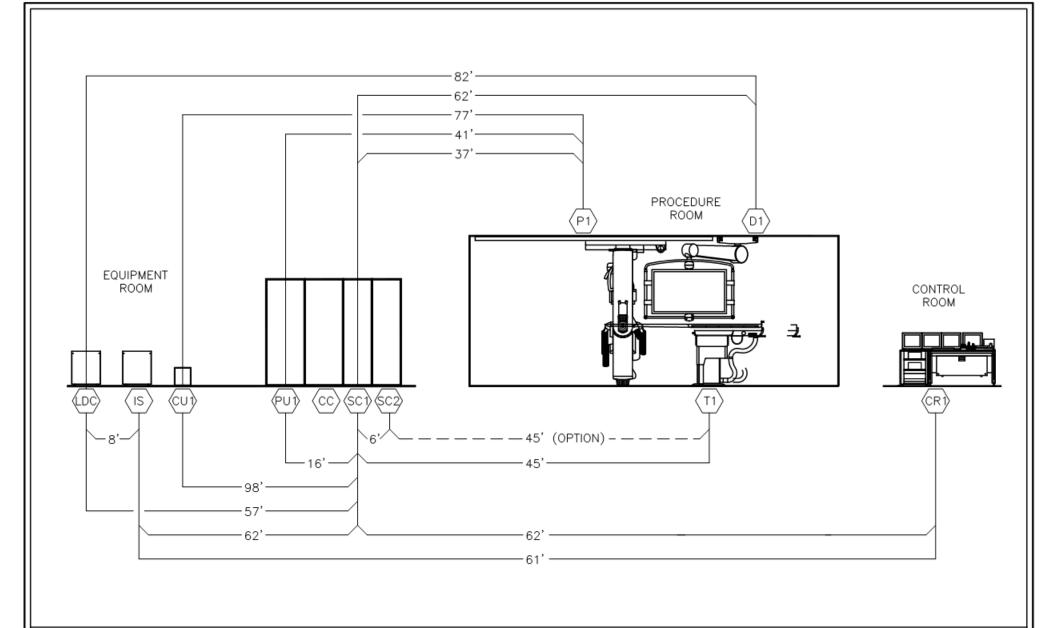
OPENINGS OR NEMA CONFIGURATION) WITH LED INDICATION,

PUSH-TO-TEST AND PUSH-TO-RESÉT BUTTONS, AND A CLEAR LEXAN HINGED COVER TO AVOID INADVERTENT MANUAL TRIP.

ALL ITEMS LISTED IN THIS SCHEDULE SHALL BE SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR.

POWER QUALITY

POOR POWER WILL ALTER EQUIPMENT PERFORMANCE IT IS IN THE CUSTOMER'S INTEREST THAT THE ELECTRICAL CONTRACTOR BE RESPONSIBLE FOR TESTING AND VERIFYING THAT THE EQUIPMENT POWER SUPPLY COMPLIES WITH THE SIEMENS SPECIFICATIONS.



ARTIS Q/Q.ZEN/ZEE CEILING MAXIMUM CABLE LENGTHS (TYPICAL EQUIPMENT)

| POWER | REQU | IREMENTS |
|--|--------------------------|----------------------------|
| WIRING SYSTEM: | 480Y/277\ | /, 3 PHASE, 5-WIRE, 60 HZ. |
| MINIMUM POWER SUPPLY: | | |
| IF AN ON-SITE TRANSFORM VOLTAGE, IT MUST BE OF S CHARACTERISTICS TO MAINT REQUIREMENTS (TRANSFORM | SUFFICIENT AIN SUPPLY | VOLTAGE AND IMPEDANCE |
| X-RAY GENERATOR (PU1) MO RATING: (RADIOGRAPHIC EXPO | | 162 KVA |
| X-RAY GENERATOR (PU1) LOI RATING: (FLUOROSCOPY) | NG-TIME | 8 KVA |
| SYSTEM CABINET (SC1) LON- RATING: | G-TIME | 8.5 KVA |
| LINE IMPEDANCE | | ≤ 120 (mΩ) |
| POWER QU | JALITY PA | RAMETERS |
| MAXIMUM LINE VOLTAGE VAR | RIATION ±10 | % OF SYSTEM VOLTAGE |
| PHASE IMBALANCE: | 2% | |
| FREQUENCY VARIATION: | ± 1 | HZ |

GROUNDING NOTES

POWER SUPPLY NOTES:

THE POWER QUALITY REQUIREMENTS.

EQUIPMENT GROUND CONDUCTOR TO COMPLY WITH THE FOLLOWING:

INCOMING POWER SUPPLIES FOR SIEMENS EQUIPMENT SHOULD

BE DEDICATED (BACK TO SOURCE), ISOLATED AND INSULATED FROM

. SIEMENS HEALTHCARE REQUIRES THAT THE INCOMING POWER MEETS

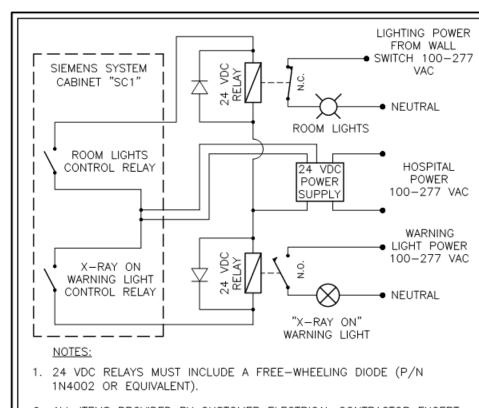
ANY OTHER EQUIPMENT SUCH AS ELEVATORS, GENERATORS, HVAC

1) SIZED EQUIVALENT TO THE PHASE CONDUCTORS (FULL 2) DERIVED FROM THE ELECTRICAL SERVICE, TRANSFORMER OR MAIN DISTRIBUTION PANEL FEEDING THE SIEMENS 3) RUN IN THE SAME CONDUIT, TROUGH OR RACEWAY AS THE

PHASE CONDUCTORS. 4) CONTINUOUS, WITH NO BREAKS OR USE OF CONDUIT, CHASSIS OR EARTH AS THE SOLE GROUNDING PATH. 5) BONDED TO CHASSIS AND/OR CONDUIT IN ACCORDANCE WITH THE NEC REQUIREMENTS. 6) MINIMIZE CONNECTIONS OR TERMINALS TO ENSURE CONTINUITY OVER THE LIFE OF THE INSTALLATION. 7) AS A NORM, THERE SHOULD NOT BE ANY CURRENT PRESENCE ON THE GROUND CONDUCTOR, BUT IT IS ACCEPTABLE TO HAVE <500mA DURING OPERATION OF THE IMAGING EQUIPMENT. 8) THERE MAY BE SOME APPLICATIONS WHICH REQUIRE AN ISOLATED GROUND AS PER NEC 250-96B.

TABLE POWER OUTLET SAFETY NOTE: LIFE-SUSTAINING EQUIPMENT MUST NOT BE CONNECTED TO THE TABLE POWER OUTLET (IF INSTALLED) IN THE SIEMENS PATIENT TABLE. POWER WILL BE DISCONNECTED IF EPO BUTTON IS PRESSED.

TABLE OUTLET IS 120V, FUSED AT 5A.



- ALL ITEMS PROVIDED BY CUSTOMER ELECTRICAL CONTRACTOR EXCEPT CONTACTS INSIDE SIEMENS "SC1" CABINET (ITEMS INSIDE DOTTED
- 3. ALL WIRING THAT CONNECTS TO SIEMENS "SC1" CABINET MUST BE 14-18 AWG STRANDED WIRE. 4. 4 WIRES LABELED "24 VDC", "ROOM LIGHTS" AND "X-RAY ON" SHOULD
- BE SENT TO SIEMENS "SC1" CABINET. 5. 24 VDC RELAYS ARE TO BE SELECTED BY ELECTRICAL CONTRACTOR TO HANDLE THE VOLTAGE AND AMPERAGE OF LIGHTING CURCUIT. 6. IF NEEDED, A SWITCH TO BLOCK RADIATION CAN BE INSTALLED IN
- SERIES WITH THE DOOR CONTACT. * THE SWITCH (24 VDC / 20 MA) MUST BE PROVIDED ON SITE. * CONTROL USING +24 V FROM THE SYSTEM CONTROL CABINET * PLAN THE SWITCH SO THAT UNINTENTIONAL OPERATION IS NOT * THE SWITCH MUST BE PROVIDED WITH AN APPROPRIATE SYMBOL (OR DESIGNATION) FROM WHICH THE FUNCTION CAN BE RECOGNIZED.

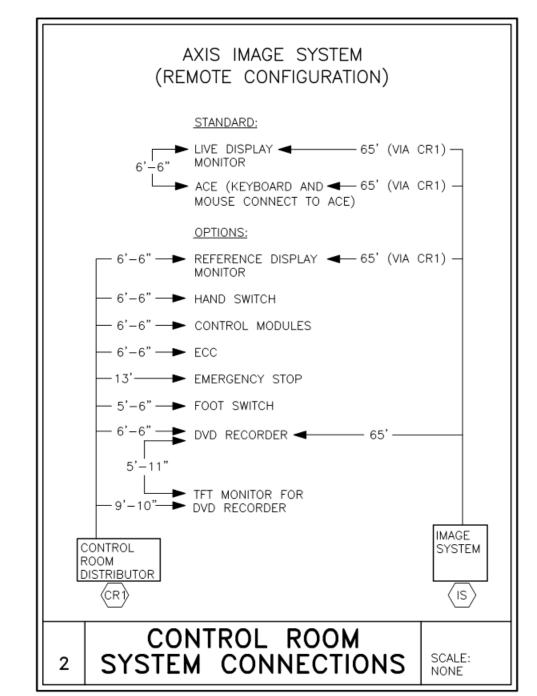
WARNING LIGHT/ROOM LIGHT SCHEMATIC LIGHTING DETAIL

SIEMENS REMOTE SERVICE TO ENSURE THE UPTIME OF YOUR SYSTEM DURING THE WARRANTY PERIOD (AND BEYOND WITH A SERVICE AGREEMENT), SIEMENS REMOTE SERVICES (SRS) REQUIRES REMOTE LOCAL AREA NETWORK ACCESS TO SIEMENS SYSTEMS. THE PREFERRED CONNECTION METHOD IS (VPN) VIRTUAL PRIVATE NETWORK (WHERE THE CUSTOMER HAS AVAILABLE A VPN CAPABLE FIREWALL OR OTHER VPN APPLIANCE). THIS METHOD PROVIDES THE POSSIBILITY FOR REMOTE SYSTEM DIÁGNOSTICS WITHOUT ADDITIONAL HARDWARE. PLEASE CONTACT SIEMENS REMOTE SERVICES (800-888-SIEM) TO DETERMINE IF THIS METHOD IS SUITABLE FOR CUSTOMER DMZ IMAGING DEVICE SINGLE HOST IP OR IP SUBNET LIST SIEMENS REMOTE SRS ACCESS SERVER 📙 ROUTER FIREWALL CUSTOMER VPN SERVER

FROM

NETWORK REQUIREMENT A GIGABIT NETWORK IS REQUIRED FOR ADEQUATE IMAGE DATA TRANSFER SPEED BETWEEN THE IMAGER AND 3D RECONSTRUCTION WORKSTATION. WORKFLOW AND CLINICAL NEEDS DEMAND 3D IMAGES BE AVAILABLE FOR REVIEW BY CLINICAL STAFF IMMEDIATELY UPON

ACQUISITION.



ARCHITECTS

NJRA Architects, Inc. 5272 S. College Drive, Suite 104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



| | SIEMENS SUPPLIED CABLES | | | | | |
|------|--------------------------------|---------------------|---|---------------------|--|--|
| | | | | | | |
| FROM | VIA | то | DESCRIPTION | REMARKS | | |
| P1 | 8, PB1, VD1 | PU1 | P1 LEFT SIDE | MAXIMUM LENGTH 41' | | |
| P1 | 9, PB1, VD1 | PU1 | (2) HIGH VOLTAGE CABLES P1 LEFT SIDE | MAXIMUM LENGTH 41' | | |
| P1 | 10, PB1, VD1 | SC1 | P1 LEFT SIDE | MAXIMUM LENGTH 37' | | |
| P1 | 11 | CU1 | FOR LIQUID COOLING HOSES (P1 LEFT SIDE) | MAXIMUM LENGTH 77' | | |
| SC1 | VD1, PB1, 12, PB2, VD2, HD1 | CR1 | FOR CONTROL ROOM OPTIONS (CONTROL MODULES, FOOT SWITCH, DISPLAY, ECC) | MAXIMUM LENGTH 62' | | |
| SC1 | VD1, PB1, 13 | T1 | NOT WITH OR TABLE | MAXIMUM LENGTH 45' | | |
| SC1 | VD1, PB1, 14 | CU1 | | MAXIMUM LENGTH 98' | | |
| SC1 | BETWEEN CABINETS | PU1 | | MAXIMUM LENGTH 16' | | |
| SC1 | VD1, PB1, 15, PB3, VD3 | IS | 62' CABLES SELECTABLE ON FACTORY CHECKLIST | MAXIMUM LENGTH 28' | | |
| SC1 | VD1, PB1, 16 | D1 | OEM DISPLAY CONNECTION | MAXIMUM LENGTH 98' | | |
| SC1 | VD1, PB1, 17 | D1 | OEM DISPLAY CONNECTION | MAXIMUM LENGTH 62' | | |
| IS | VD3, PB3, 18 | D1 | OEM DISPLAY CONNECTION | MAXIMUM LENGTH 75' | | |
| IS | VD3, PB3, 19, PB2, VD2, HD1 | CR1 | | MAXIMUM LENGTH 61' | | |
| IS | VD3, PB3, 20, PB2, VD2, HD1 | CR1 | | MAXIMUM LENGTH 61' | | |
| CRB | 21 | T1 | VOLCANO IVUS (VOLCANO S51 CABLE SET) | MAXIMUM LENGTH 98' | | |
| T1 | 22 | B10 | | | | |
| CRB | 23 | B10 | CUSTOMER PATIENT MONITORING, ETC. | | | |
| S | VD3, PB3, 24 | CUSTOMER MONITOR | LIVE+REF VIDEO INTERFACE TO OEM (OPTION) | MAXIMUM LENGTH 110' | | |

CONTRACTOR SUPPLIED CABLES

MP ELECTRICAL CONTRACTOR TO SIZE PLUS GROUND

SC1 3#6, 1#6 NEUTRAL, 1#6 GROUND AND CONNECT

PU1 3#2, 1#2 GROUND AND CONNECT

EPO 2#12, PLUS GROUND

EPO 2#12, PLUS GROUND

DS 24V SIGNAL, 2#14-18 AWG

WL 2#14-18 AWG

DESCRIPTION

REMARKS

SEE "POWER SCHEDULE"

SEE "POWER SCHEDULE"

SEE "POWER SCHEDULE"

SEE "POWER SCHEDULE"

SEE "LIGHTING DETAIL" SHEET

EMERGENCY POWER

DOOR SWITCH

SIEMENS

ARTIS Q/Q.ZEN/ZEE CEILING

PROJECT MANAGER: CHRISTOPHER THOMAS TEL: (801) 209-6582 INTERMOUNTAIN MEDICAL CENTER 5121 COTTONWOOD STREET, MURRAY, UT. 84107 02/21/19 ADDITION OF OEM BOOMS CATH LAB #6 - ARTIS Q.ZEN CEILING THE USE OR REPRODUCTION OF THIS TITLE BLOCK WITHOUT REVISED EQUIPMENT ROOM PER CUSTOMER REQUEST SIEMENS AUTHORIZATION WILL 1803659 R-101R(A) VERSION DATED 09/24/18 APPROVED BY CUSTOMER FOR FINALS RESULT IN PROSECUTION UNDER FULL EXTENT OF THE LAW. ALL RIGHTS ARE RESERVED DESCRIPTION M. GONZALEZ REF. #: 30219677 -ISSUE BLOCK-

11/02/18

ATTENTION:

-THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED AT THE TIME OF THEIR PREPARATION. SINCE BOTH THESE FACTORS ARE SUBJECT TO DESIGN MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES. - THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.

- IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION DOCUMENTS FOR REFERENCE.

- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES. - THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST TO SPECIFY RADIATION PROTECTION.

> SIEMENS DRAWINGS

O Construction Documents Mar. 27, 2019

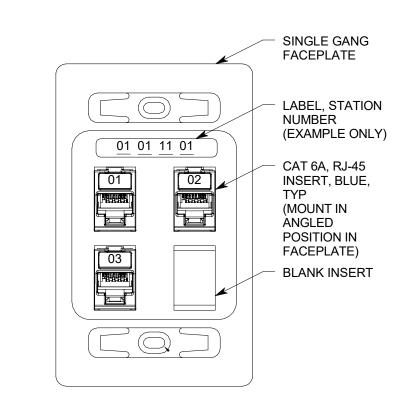
NJRA Project #

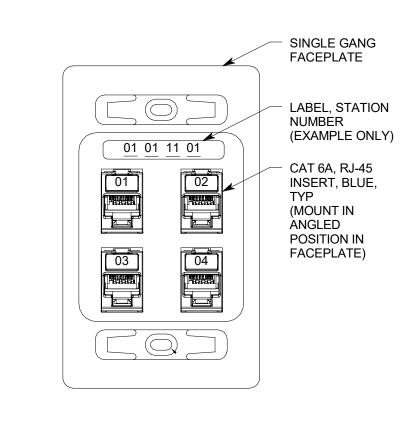
18226.00



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com

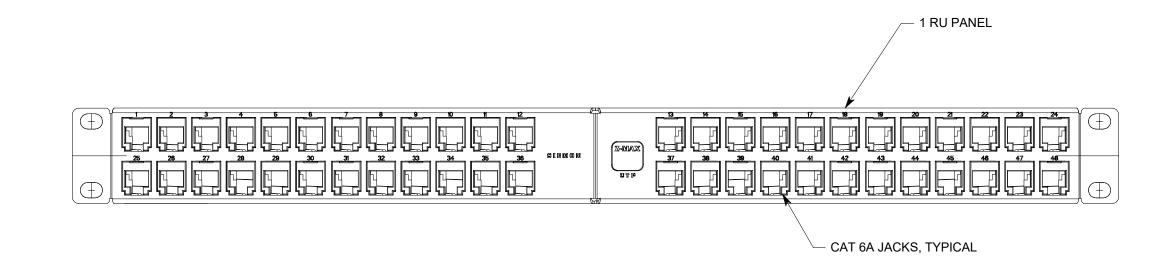




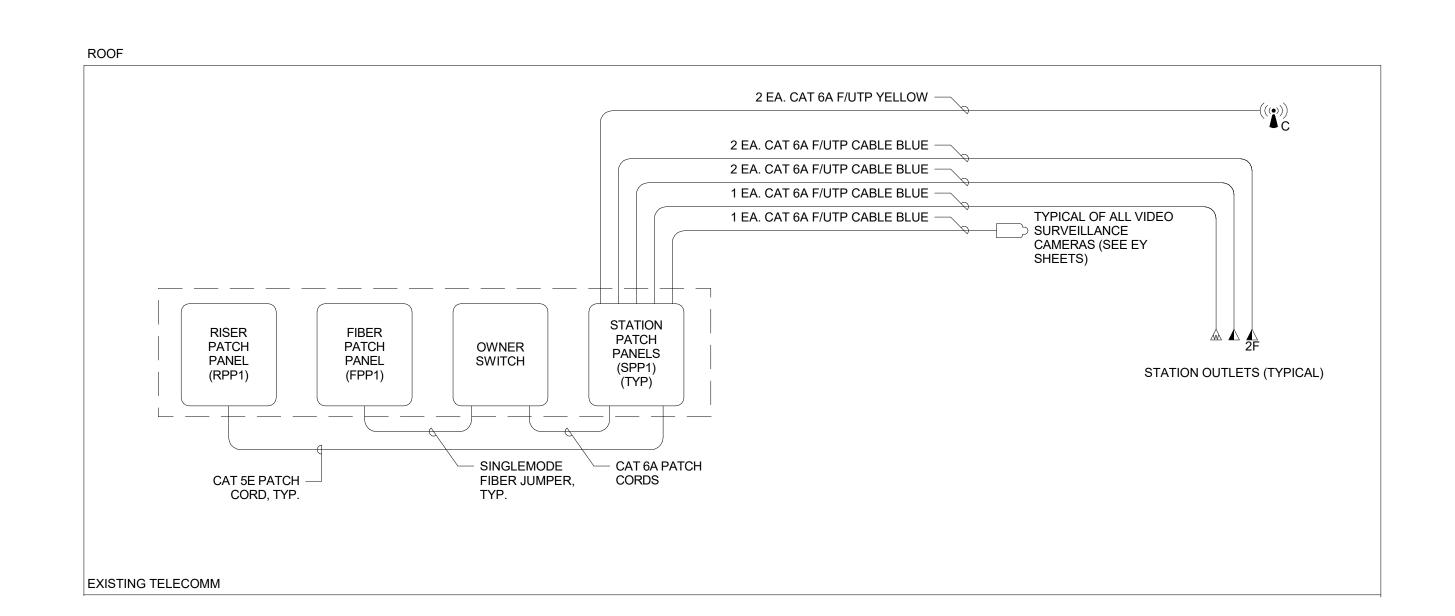




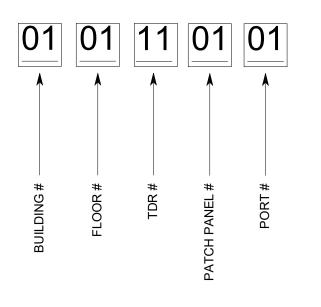




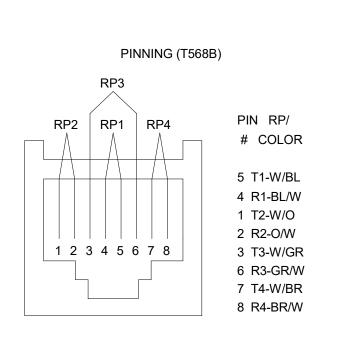
STATION PATCH PANEL, (SPP1), TDR

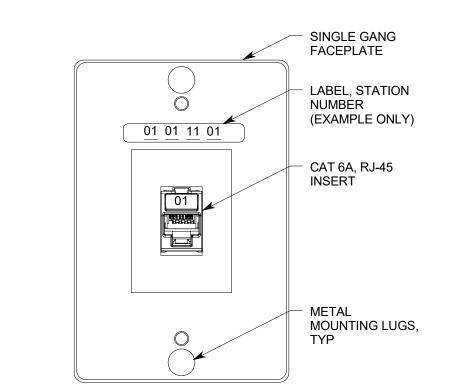


TELECOM CABLE RISER DIAGRAM



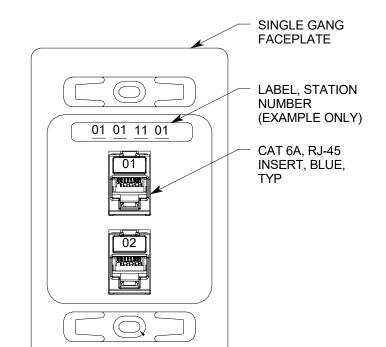
CABLE ID EXAMPLE DETAIL

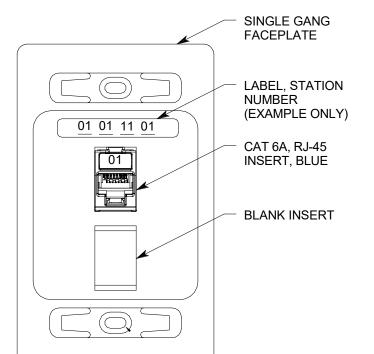




TYPICAL WALL PHONE OUTLET







TYPICAL 1-PORT DATA OUTLET



TELECOMM DETAILS

O Construction Documents Mar. 27, 2019

18226.00

Remodel

NJRA Project #

ET601