FIRST AMERICAN TITLE TI

1077 CEDAR STREET, SUITE B

BENNETT, CO 80102

FOR CONSTRUCTION 05.16.2024

MASTERBUILD
ARCHITECTS, INC.
Architecture | Construction Management | Development Services

ALLOWABLE AREA MIXED USE OCCUPANCY

TABLE 506.2

SPACE	USE	OCCUPANCY CLASSIFICATION	ALLOWABLE SF	ACTUAL SF	RATIO *
BANK	BUSINESS	BUSINESS	69000	11991	0.173783
CIRCULATION	HALLWAYS & RRs	BUSINESS	69000	998	0.014464
TENANT A	BAR	A-2 ASSEMBLY	28500	2776	0.097404
TENANT B	REPUBLIC TITLE	BUSINESS	69000	519	0.007522
TENANT C	VACANT	BUSINESS ASSUMED	69000	1709	0.024768
TOTAL				17993	0.221
SPRINKLED, MULTI STORY, TYPE IIB BUILDING					
* 508.4.2 ALLOWABLE BUILDING AREA - SUM OF RATIOS...SHALL NOT EXCEED 1					

OCCUPANT LOAD ANALYSIS

TABLE 1004.5 (2018 IBC)

SPACE	OCCUPANCY CLASSIFICATION	SQUARE FOOTAGE	OLF	# OCCUPANTS	EXITS RQ'D	EXITS PROVIDED
OFFICE	BUSINESS	519	150 GROSS	4	1	
TOTAL		519		4	1	1

PLUMBING FIXTURE ANALYSIS, TENANT SUITES A-C

TABLE 2902.1

SPACE					WATER CLOSETS				LAVATORIES				DF RATIO	DF RQ'D **	SERVICE SINKS
					MALE		FEMALE		MALE		FEMALE				
ROOM	CLASSIFICATION	OCCUPANCY	DESCRIPTION	OCC LOAD MEN/WOMEN	RATIO	RQ'D	RATIO	RQ'D	RATIO	RQ'D	RATIO	RQ'D			
TENANT SUITE A (BAR)	ASSEMBLY	A-2	BAR	73/ 73	1/ 40	1.825000	1/ 40	1.825000	1/ 75	0.973333	1/ 75	0.973333	NA	NA	
TENANT SUITE B (TITLE)	BUSINESS	B	OFFICE	2/ 2	1/ 25	0.0800	1/ 25	0.080000	1/ 40	0.05000 0	1/ 40	0.05000 0	1/ 100	0.040000	
TENANT SUITE C (VACANT)	BUSINESS	B	ASSUMED	6/ 6	1/ 25	0.240000	1/ 25	0.240000	1/ 40	0.15000 0	1/ 40	0.15000 0	1/ 100	0.120000	
TOTAL REQUIRED				81/ 81		2.1450		2.1450		1.1733		1.1733		1	1
TOTAL PROVIDED *						3		3		2		3		1	1
* 2902.2 TOTAL PROVIDED RRs @ ALL TENANT SPACES INCLUDES NEW UNISEX SINGLE OCCUPANT RR @ BREWERY (BREWERY IS UNDER SEPARATE PERMIT)															
** TENANTS A-C UTILIZE COMMON AREA RRs, DFs, MOP SINK & BREAK RM															

PROJECT TEAM

BUILDING OWNER:

FNB BANK
1077 CEDAR STREET
BENNETT, CO 80102
IVY CRAIG,
ICRAIG@FMBCOLORADO.COM

ARCHITECT/CONTRACTOR:

MASTERBUILD ARCHITECTS, INC
JIM SCHNECK
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DENVER, CO 80211
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MPE:

EWAS CONSULTING
10019 ELM STREET
FEDERAL HEIGHTS, CO 80260
PHONE - 702.933.5885
EWAS-CONSULTING@COMCAST.NET

CONTRACTOR:

HIVE CONSTRUCTION
44 INVERNESS DRIVE E, BLDG B
ENGLEWOOD CO, 80112

TENANT:

FIRST AMERICAN TITLE COMPANY
C/O IVY CRAIG @ FMB BANK

SCOPE OF WORK

OVERVIEW:

THIS TENANT IMPROVEMENT IS FOR AN INITIAL OCCUPANY AND USE AT A NEW MULTI-TENANT BUILDING.

NEW INTERIOR WORK INCLUDES BUILDOUT FOR A TYPICAL BUSINESS USE SMALL OFFICE CONFIGURATION. TENANT WILL HAVE ACCESS TO COMMON AREA RESTROOMS, DRINKING FOUNTAINS, MOP SINKS & BREAK ROOMS.

THERE IS NO NEW SQUARE FOOTAGE, THERE IS NO EXTERIOR WORK.

LEGAL DESCRIPTION

NA - TENANT IMPROVEMENT

GOVERNING AGENCIES

CITY OF BENNETT
207 MUEGGE WAY
BENNETT, CO 80102
303.644.3249

BENNETT WATKINS FIRE DISTRICT
355 4TH STREET
BENNETT CO 80102
TELEPHONE (303) 644-3572

ADAMS COUNTY HEALTH DEPARTMENT
4430 SOUTH ADAMS COUNTY PARKWAY
BRIGHTON, COLORADO
PH: 303.220.9200

REGULATIONS

APPLICABLE CODES:

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL ENERGY CONSERVATION COCE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL FIRE CODE
2023 NATIONAL ELECTRIC CODE

2009 ICC/ANSI A117.1 ACCESSIBLE USABLE BUILDINGS AND FACILITIES
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

DRAWING INDEX

BUILDING CODE ANALYSIS

2018

BUILDING TYPE: STAND-ALONE COMMERCIAL BUILDING
YEAR OF CONSTRUCTION: 2024
EXIST CONSTRUCTION TYPE: IIB IBC (UNPROTECTED STEEL FRAME, INTERIOR BEARING WALLS & COLUMNS, UNPROTECTED METAL ROOF DECKING)

EXIST OCCUPANCY & USE @ TENANT SUITE B: NONE (NEW CONSTRUCTION)
PROPOSED OCC & USE @ TENANT SUITE B: BUSINESS (TITLE COMPANY)

508
MIXED USE AND OCCUPANCY
SEE TABLE

INTERIOR FINISHES:
TABLE 803.13 ROOM FINISHES @ SPRINKLED ASSEMBLY OR BUSINESS OCCUPANCIES SHALL MEET OR EXCEED ASTM E 84 OR UL 723 CLASS C FLAME SPREAD RATINGS.

SPRINKLERS & FIRE PROTECTION:
903.2 FULLY SPRINKLED

FIRE ALARM SYSTEM:
907.2 MONITORED FIRE ALARM PROVIDED

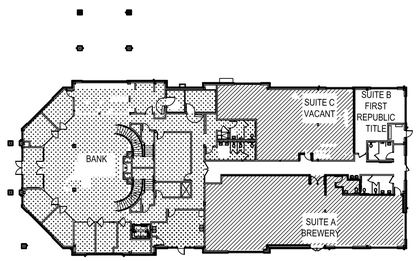
ACCESSIBILITY:
1009.1 ACCESSIBLE MEANS OF EGRESS
ACCESSIBLE SPACES REQUIRING ONE MEANS OF EGRESS SHALL BE PROVIDED WITH NOT LESS THAN ONE ACCESSIBLE MEANS OF EGRESS. WHEN TWO ARE REQUIRED, TWO SHALL BE ACCESSIBLE.
1102.1 BUILDINGS...SHALL BE ACCESSIBLE...WITH...ICC A117.1

MEANS OF EGRESS:
EXITING:
1006.2.1 2 EXITS REQUIRED @ A&B OCCUPANCIES >49
1020.4 DEAD END TRAVEL CORRIDOR: 20'
1017.2 MAX TRAVEL DISTANCE: 300' WHEN SPRINKLED
MAX COMMON PATH OF EGRESS TRAVEL: 75' (SPRINKLED)(DISTANCE TO DOOR)

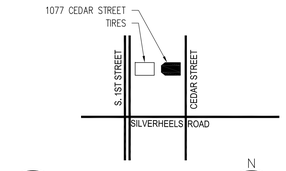
LOCKS & HARDWARE:
1010.1.9.4 B OCCS & A OCCS <300 MAY HAVE KEY-OPERATED LOCKING DEVICES AT ITS MAIN DOOR IF (1) IT IS READILY DISTINGUISHABLE AS LOCKED, (2) HAS SIGNAGE STATING "THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED"...
AND (3) IS REVOCABLE BY THE BUILDING OFFICIAL

ENERGY CODE ANALYSIS

IECC PRESCRIPTIVE APPROACH TABLES R402.1.1 & C402.1.3)
CLIMATE ZONE: 5
CLNGS: R30 EXIST ABOVE THE DECK
WALLS: R20 EXIST
GLAZING: U .32 EXIST



2 G.0 KEYPLAN
SCALE: 1/32"=1'-0"



1 G.0 VICINITY PLAN
SCALE: NTS

MASTERBUILD ARCHITECTS, INC.
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STATE OF COLORADO
JAMES R SCHNECK
05.16.2024
208535
LICENCED ARCHITECT

NOT VALID WITHOUT SIGNATURE & DATE

FIRST AMERICAN TITLE

TENANT IMPROVEMENT
1077 CEDAR STREET, SUITE B
BENNETT, CO 80102

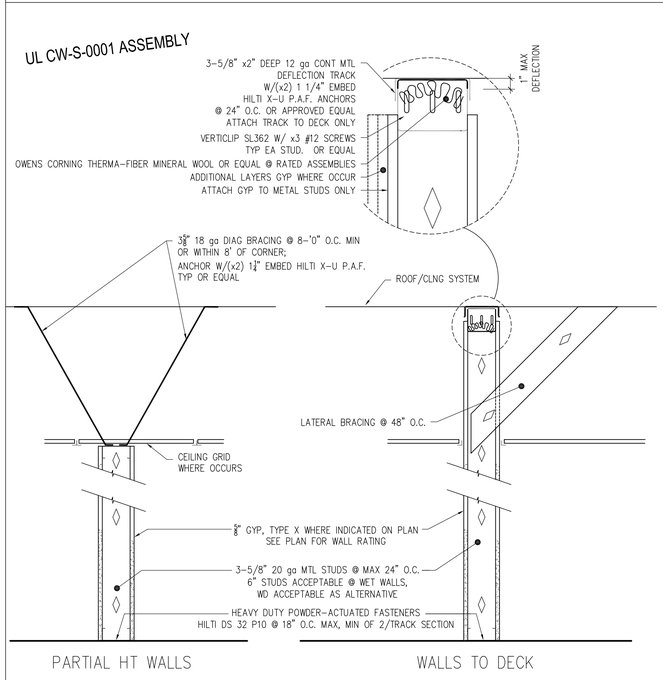
FOR CONSTRUCTION	DRAWN BY
05.16.2024	JRS
REVISIONS	

PROJECT NO: 2024.20

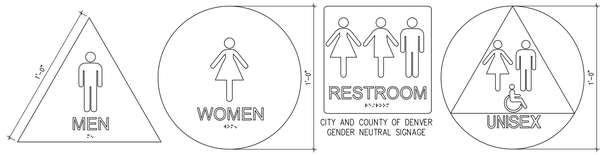
ORIGINAL SHEET SIZE 24"X36"

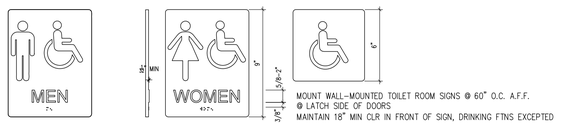
CODE ANALYSIS
G.0

Typical Wall Sections



ADA Signage





Abbreviations

℄	CENTERLINE
AFF	ABOVE FINISHED FLOOR
BL	BRICK LEDGE
BRG	BEARING
BLDG	BUILDING
BOMA	BUILDING OWNERS & MANAGEMENT ASSOCIATION
CLNG	CEILING
CONT	CONTINUOUS
DN	DOWN
DF	DRINKING FOUNTAIN
ELECT	ELECTRICAL
EQ	EQUAL
FOS	FACE OF STUD
FOW	FACE OF WALL
G.C.	GENERAL CONTRACTOR
GFA	GROSS FLOOR AREA
GLA	GROSS LEASABLE AREA
HC	HOLLOW CORE
INSUL	INSULATION
LAV	LAVATORY
MFR	MANUFACTURER
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O.H.	OPPOSITE HAND
PLUMB	PLUMBING
ℙ	PROPERTY LINE
PT	PRESSURE TREATED
RO	ROUGH OPENING
SC	SOLID CORE
SIM	SIMILAR
STD	STANDARD
TOF	TOP OF FOOTER
TOS	TOP OF SLAB
TOW	TOP OF WALL
TME	TO MATCH EXISTING
T&G	TONGUE & GROOVE
UNO	UNLESS NOTED OTHERWISE

General Construction Notes

1. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO THOROUGHLY REVIEW AND BECOME FAMILIAR WITH ALL PERTINENT DOCUMENTS AVAILABLE REGARDING THE CONSTRUCTION OF THIS PROJECT. ANY AMBIGUITY OR DISCREPANCY DISCOVERED IN THE DOCUMENTS SHALL BE IMMEDIATELY REPORTED TO THE OWNER WHO SHALL MAKE CLARIFICATIONS AND INTERPRETATIONS IN A TIMELY MANNER. THE CONTRACTOR'S FAILURE TO DISCOVER AND NOTIFY THE OWNER OF SAID AMBIGUITY OR DISCREPANCY PRIOR TO THE START OF CONSTRUCTION SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY RELATING TO THE MATTER.

2. PRIOR TO BEGINNING ANY NEW WORK OR INSTALLATION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT PREVIOUSLY INSTALLED WORK AND/OR SUBSTRATE AND VERIFY THAT ALL SUCH WORK IS SATISFACTORY AND COMPLETE TO THE REQUIRED LEVEL OF ACCEPTANCE TO ALLOW FOR THE START OF SUBSEQUENT WORK. THE COMMENCEMENT OF ANY WORK SHALL INDICATE THAT ALL PREVIOUSLY INSTALLED WORK AND/OR SUBSTRATE WAS FOUND TO BE ACCEPTABLE AND INSTALLED ACCORDING TO INDUSTRY STANDARDS. ANY WORK FOUND TO BE IN UNACCEPTABLE CONDITION SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.

3. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL VISIT THE PROJECT SITE PRIOR TO ESTIMATING THE COST OF THE SCOPE OF WORK AND PRIOR TO ORDERING OR FABRICATING MATERIALS OR BEGINNING ANY CONSTRUCTION RELATED ACTIVITIES FOR THE PURPOSE OF BECOMING COMPLETELY FAMILIAR WITH THE SITE AND ALL EXISTING CONDITIONS WHICH MIGHT IMPACT THE COST OF, OR PERFORMANCE OF THE SCOPE OF WORK.

4. ALL CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND THE REQUIREMENTS OF ALL REGULATORY AGENCIES HAVING JURISDICTION OVER THE PROJECT. UNDER NO CONDITION DOES THE OWNER OR HIS REPRESENTATIVE HAVE RESPONSIBILITY FOR THE MEANS OR METHODS USED BY THE CONTRACTOR(S) IN THE PERFORMANCE OF THE WORK OR FOR CONDITIONS OF SAFETY AT THE JOB SITE.

5. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, CODES & REGULATIONS.

6. DIMENSIONS OF AND FROM EXISTING CONDITIONS HAVE BEEN TAKEN FROM FIELD MEASUREMENTS. ALL EXISTING DIMENSIONS ARE TO FINISH FACE UNLESS NOTED OTHERWISE ON DRAWINGS. THE CONTRACTOR(S) SHALL FIELD VERIFY ALL DIMENSIONS PERTAINING TO THE EXISTING CONDITIONS, INCLUDING ALL WORK ALREADY IN PLACE, PRIOR TO ORDERING OR FABRICATING MATERIALS, AND PRIOR TO START OF CONSTRUCTION.

7. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR KEEPING THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS AND DEBRIS.

8. DO NOT SCALE THE DRAWINGS, IF QUESTIONS ARISE AS TO DIMENSIONAL REQUIREMENTS, CONTACT THE OWNERS REPRESENTATIVE FOR CLARIFICATION.

9. THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING ALL FURNITURE, FIXTURES, FITTINGS, EQUIPMENT & APPLIANCES SHOWN AS NIC U.N.O. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NIC WORK.

10. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR OBSERVING THE OWNERS SPECIFIED AVAILABLE CONSTRUCTION HOURS.

11. THE CONTRACTOR(S) SHALL BECOME FAMILIAR WITH AND UTILIZE SUSTAINABLE CONSTRUCTION PRACTICES.

General Door Notes

CONSTRUCTION:
INTERIOR DOORS SHALL BE SOLID CORE 1-3/4" THICK
INTERIOR WOOD FRAMES SHALL BE STAIN GRADE
THREE HINGES MINIMUM PER DOOR
VERIFY HDWR MFR & FINISH W/OWNER
THRESHOLDS SHALL BE ADA-COMPLIANT
EXTERIOR DOORS SHALL INCLUDE WEATHERSEALS
EXTERIOR STOREFRONT DOORS TO HAVE WEATHER SEALS, ADA SILLS & PULL HDWR

HARDWARE:
HDWR @ EXIST DOORS TO REMAIN UNO
BRUSHED CHROME HARDWARE TYPICAL
KNOBS SHALL BE ADA COMPLIANT LEVER
PRIVACY LOCKS SHALL BE ADA COMPLIANT PUSH BUTTON
PROVIDE MATCHING DOOR STOPS AS R'D TO PROTECT WALLS
LOCKING DEVICES @ EXIT DOORS SHALL BE READILY DISTINGUISHABLE
LOCKING DEVICES SHALL HAVE A FIRE DEPARTMENT-APPROVED DOUBLE KEYED STYLE LOCK
PRIVACY LOCKS SHALL HAVE ADA-COMPLIANT PUSH BUTTON MECHANISM
ALL INTERIOR LOCKSETS TO BE KEYED IDENTICAL UNO
ALL EXTERIOR LOCKSETS TO BE KEYED TO MATCH EXIST LOCKS

SIGNAGE:
EXIT SIGNAGE SHALL BE 1" HIGH LETTERS ON CONTRASTING BACKGROUND.
EXIT SIGNAGE SHALL READ "THIS DOOR TO REMAIN UNLOCKED WHILE BUILDING IS OCCUPIED"

GLAZING:
WHERE OCCURS, GLAZING @ EXTERIOR DOORS SHALL BE DOUBLE-PANE, INSULATED & TEMPERED
SEE CODE ANALYSIS FOR EXTERIOR DOOR PERFORMANCE
ALL GLAZING @ INTERIOR DOORS SHALL BE TEMPERED
SEE MPE FOR DOOR UNDERCUTS

SEE CODE ANALYSIS FOR ADDITIONAL DOOR HDWR REQUIREMENTS
SEE DOOR SCHEDULE FOR ADDITIONAL INFORMATION

Guideline Specifications for Green Construction

SITEWORK:
MAXIMIZE USE OF POST-CONSUMER PLASTIC-BASED PRODUCTS FOR FOUNDATION DRAINPIPE AND FILTER FABRICS. MAXIMIZE USE OF ORGANIC PRODUCTS FOR SILT FENCING, EROSION CONTROL & SOIL STABILIZATION.

CONCRETE:
WITHIN THE REQUIREMENTS SET BY THE STRUCTURAL ENGINEER, ADJUST THE CONCRETE MIX BY MINIMIZING CEMENT AND WATER AND MAXIMIZING THE USE OF FLY ASH AND RECYCLED AGGREGATE.

MASONRY:
MAXIMIZE USE OF STONE VENEERS THAT INCORPORATE RECYCLED AGGREGATES AND FLY ASH WITHIN THEIR MIX. SALVAGE OR RECYCLE UNUSED PRODUCT AS FOUNDATION OR UNDERGROUND UTILITY TRENCH BACKFILL.

METALS:
UTILIZE HIGH-RECYCLED-CONTENT OR SALVAGED STEEL STRUCTURAL MEMBERS.

WOOD & PLASTICS:
WHERE TREATED LUMBER IS REQUIRED, USE SODIUM SILICATE TREATED PRODUCTS. DISPOSE OF SCRAP PROPERLY.
MAXIMIZE USE OF FOREST STEWARDSHIP COUNCIL (FSC) CERTIFIED DIMENSION LUMBER AND ENGINEERED MATERIAL FOR ALL DIMENSIONS GREATER THAN 8"
MAXIMIZE USE OF FSC CERTIFIED TRIMWORK, MILLWORK & CABINETRY.

THERMAL & MOISTURE PROTECTION:
MAXIMIZE USE OF FORMALDEHYDE-FREE FIBERGLASS BATTS WITH RECYCLED CONTENT, OR RECYCLED DENIM.

DOORS & WINDOWS:
MAXIMIZE USE OF ENGINEERED WOOD WHERE WOOD IS DESIRED. CLAD ALL EXPOSED WOOD SURFACES FOR LONG LIFE CYCLE, SELECT RECYCLED CONTENT FOR STRUCTURAL CORES.
INCORPORATE LIFE-CYCLE ENERGY COSTS INTO COST COMPARISON.

FINISHES:
MAXIMIZE USE OF SYNTHETIC GYPSUM & ADDITIVE-FREE JOINT COMPOUNDS.
MAXIMIZE USE OF CEMENT-BASED STUCCO W/FLY ASH ADDITIVES.
SELECT RECYCLED-CONTENT TILE & PETROLEUM-FREE MORTARS & GROUTS.
SELECT LOW-VOC CARPET W/HIGH RECYCLED-CONTENT FACE-FIBER & BACKING.
SELECT LOW-VOC LATEX PAINTS & WATER-BASED TRANSPARENT FINISHES.

EQUIPMENT:
INSTITUTE OFFICE RECYCLING PROGRAM FOR PAPER & PLASTICS, COORDINATED WITH LOCAL RECYCLING AGENCIES.
SELECT ENERGY-STAR RATED KITCHEN APPLIANCES.

FURNISHINGS:
SELECT FSC-CERTIFIED MODULAR CASEWORK & CABINETRY, WITH FORMALDEHYDE-FREE PARTICLE BOARD ALTERNATIVES LIKE PRESSED WHEAT STRAW OR BAMBOO.

SPECIAL CONSTRUCTION:
CONSIDER ROOFTOP PHOTO VOLTAIC SOLAR SYSTEM WITH NET METERING.

MECHANICAL:
SELECT ENERGY-STAR RATED HIGH-EFFICIENCY FURNACE WITH AIR-SOURCE HEAT PUMP AND EVAPORATIVE COOLING.
SELECT PROGRAMMABLE THERMOSTATS CONTROLLING MULTIPLE ZONES.
SELECT DUAL-FLUSH LOW-FLO TOILETS & TOUCHLESS FAUCETS.

ELECTRICAL:
INSTALL COMPACT FLUORESCENT & LED LAMPS.

General Demolition Notes

1. GENERAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS
2. PROTECT, PATCH AND REPAIR ALL ADJACENT SURFACES TO REMAIN
3. RELOCATE ALL LIGHT SWITCHES TO ADJACENT WALLS TO REMAIN
4. REMOVE ALL DEBRIS DAILY TO CONTRACTOR-SUPPLIED DUMPSTER
5. MAINTAIN ALL SERVICES TO ADJACENT TENANTS AT ALL TIMES
6. CONTRACTOR SHALL COORDINATE WITH BUILDING OWNER FOR OTHER SALVAGE FIXTURES, FITTINGS & MATERIALS (IF ANY)
7. ACTUAL CONDITIONS MAY DEVIATE FROM THAT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL VERIFY ACTUAL CONDITIONS AND COORDINATE THE DEMOLITION WITH NEW WORK SO THAT DEMOLITION IS COMPLETE. ANY DEVIATION FROM PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CLIENT AND ARCHITECT.

General Plan Notes

1. ALL DIMENSIONS ARE TO FACE OF STUD, UNO
2. CASEWORK/MILLWORK FINAL DIMENSIONS TO BE COORDINATED W/OWNER
3. FITTINGS & EQUIPMENT TO BE INSTALLED BY CONTRACTOR SHALL BE COODINATED W/OWNER
4. GC SHALL COORDINATE AND PROVIDE BLOCKING AS R'D FOR ALL FITTING, FIXTURES & EQUIPMENT
5. GC SHALL COORDINATE ALL FINISHES, MATERIALS, & COLORS W/OWNER PRIOR TO INSTALLATION.
6. WEATHER SEAL ALL EXTERIOR WALL & CLNG JOINTS & ENVELOPE PENETRATIONS, INCLUDING ELECT BOXES, CHASES, SLEEVES, ETC.
7. PROVIDE 32" RENOVATION LOOP AT ALL LIGHTS, SWITCHES & OUTLETS.
8. COORDINATE ALL ACCESSIBILITY REQUIREMENTS WITH LOCAL OFFICIALS PRIOR TO CONSTRUCTION.
9. WHERE NOT OTHERWISE SPECIFIED, CENTER & ALIGN ALL WALL & CLNG MOUNTED FIXTURES & FITTINGS.
10. CAULK & DOUBLE SEAL ALL WNDOW/DOOR OPENINGS
11. THE CONTRACTOR SHALL COORDINATE ALL MECHANICAL, PLUMBING & ELECTRICAL PLANS IN THE FIELD.
12. ALL CLNG GRID, WALLS, BASE, FLOORING, COLORS, LIGHTING & MECHANICAL TO REMAIN AS-IS UNO
13. PATCH AND REPAIR ALL SURFACES TO REMAIN
14. GC SHALL COORDINATE ALL WORK WITH ADJACENT TENANTS
15. GC SHALL UTILIZE SUSTAINABLE PRACTICES WHEREVER POSSIBLE
16. DO NOT SCALE DRAWINGS, CONTACT ARCHITECT WITH QUESTIONS
17. FIRECAULK TOP & BOTTOM PLATES @ ALL RATED WALLS
18. FIRECAULK ALL PENETRATIONS @ RATED ASSEMBLIES

General Finish Notes

ALL NOTES TYPICAL UNLESS NOTED OTHERWISE ON PLANS.
NOT ALL FINISHES MAY APPEAR THESE PLANS.
ALL FINISHES, FIXTURES AND FITTINGS TO BE VERIFIED WITH OWNER/MGR PRIOR TO INSTALLATION.
ALL INTERIOR FINISHES SHALL HAVE CLASS C RATINGS PER ASTM E 84 OR UL 723
ALL FLOORING FINISHES TO TERMINATE AT CENTER OF DOOR
ALL SHEET GOOD FLOORING SEAMS TO BE HEAT WELDED, UNO

WINDOWS:
- DOUBLE SEAL EXT FACE & INSULATE GAPS @ R.O.
- CAULK JAMBS & HEADS
- DO NOT CAULK SILLS OR WEEP HOLES

WALLS & CLNGS:
- 5/8" GYPBD @ NON-RATED AREAS
- MOISTURE-RESISTANT GYP OR CEMENTBOARD TYP @ WET AREAS
- HOLD GYP 1" A.F.F.
- SMOOTH LEVEL IV FINISH TYPICAL
- SQUARE CORNER BEAD TYPICAL
- SEAL ALL NEW GYP READY FOR PRIMER & PAINT
- NEW SAT GRID SHALL BE CENTERED IN SPACE UNO

TOILET FIXTURES:
- WHERE NOT OTHERWISE SPECIFIED, ALL FIXTURES & RESTROOM HDWR SHALL CONFORM IN MANUFACTURE AND INSTALLATION WITH ADA REQUIREMENTS.

MOP SINKS:
- UNO, MOP SINKS/SERVICE SINKS SHALL INCLUDE 8" FAUCET, VACUUM BREAKER & HOSE CONNECTION
- UNO, MOP SINKS/SERVICE SINKS SHALL INCLUDE NON-POROUS WASHABLE SURFACES TO +48" A.F.F.

TRIM:
- RUBBER/VINYL BASE SHALL BE CONTINUOUS
- PT GRADE (MDF) TO RECEIVE PRIMER & 2 FINISH COATS ALKYD, MIN
- STAIN GRADE (WOOD) TO RECEIVE 2 COATS SEALER, MIN

WALL & FLOOR TILE:
- ALL GROUT JOINTS TO RECEIVE 2 COATS SEALER MIN
- ALL FLOOR MATERIAL TRANSITIONS TO BE ADA LOW-RISE TYPICAL

FLOORING:
- LEVEL & PREP EXIST FLOOR SURFACE PER FLOOR FINISH MFR SPECS
- ORIENTED CARPET TILES SHALL BE CONFIRMED W/TENANT

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FIRST AMERICAN TITLE

TENANT IMPROVEMENT
1077 CEDAR STREET, SUITE B
BENNETT, CO 80102

FOR CONSTRUCTION DRAWN BY
05.16.2024 JRS

REVISIONS

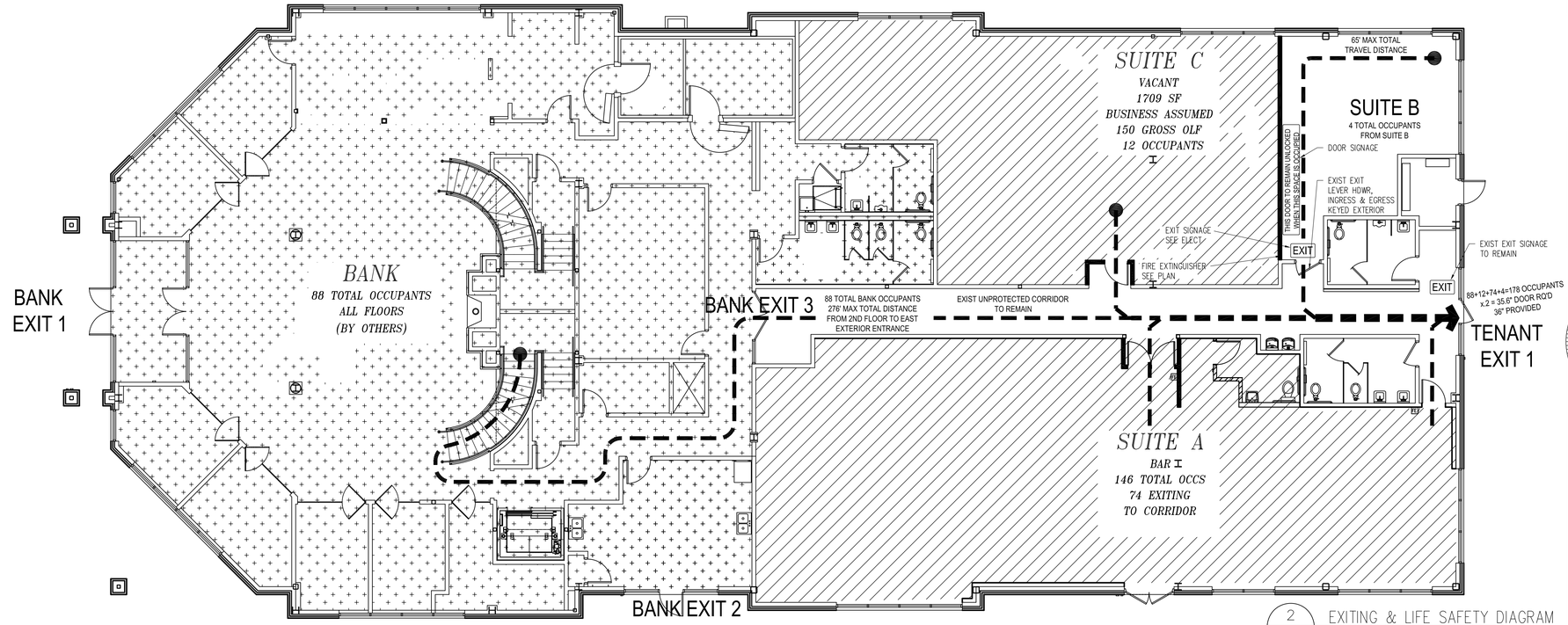
PROJECT NO: 2024.20

ORIGINAL SHEET SIZE 24"X36"

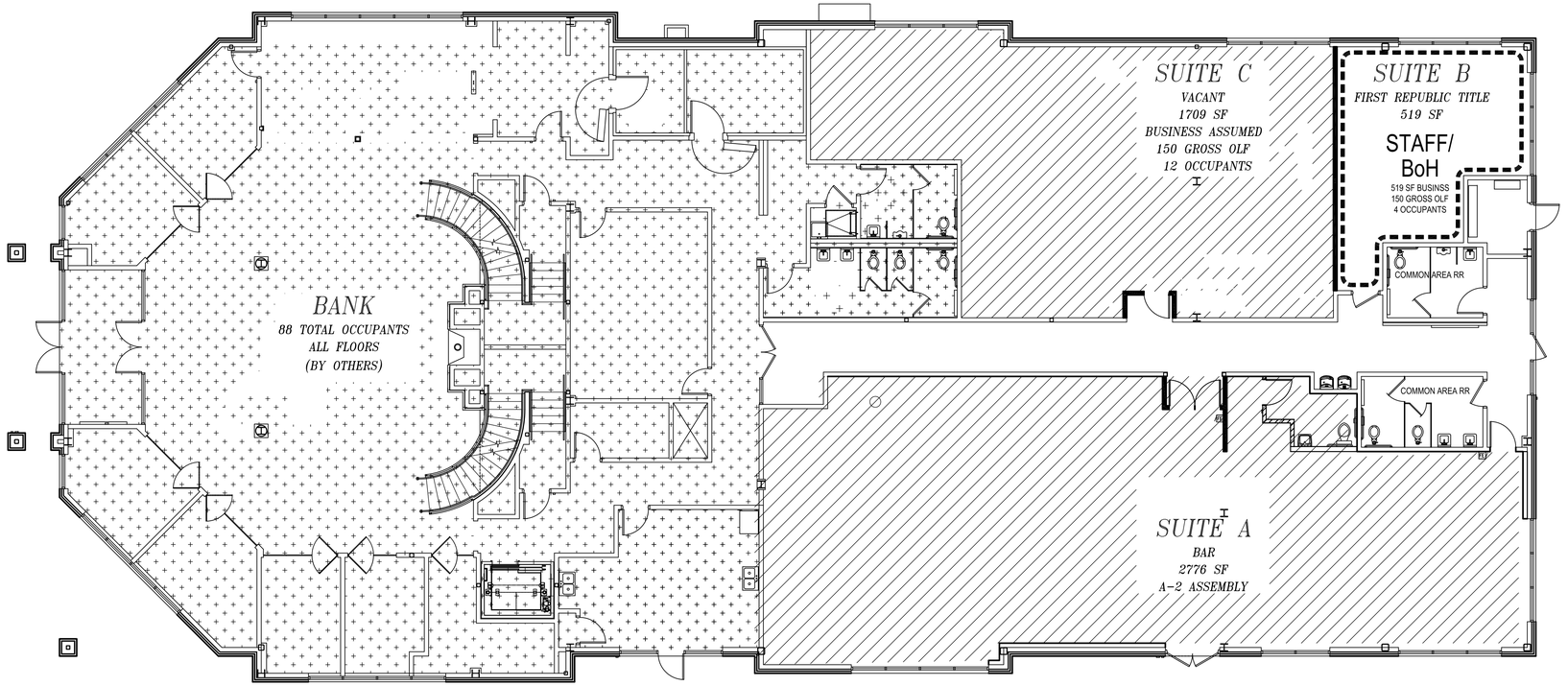
GENERAL NOTES & STANDARD DETAILS
A0.1

PLANS EXAMINER:
PLEASE SEE ELECT
FOR EMERGENCY
BACKUP LIGHTING

BANK OCCUPANCY DRAWN
FROM CORE & SHELL
CONSTRUCTION DOCS



2 G2 EXITING & LIFE SAFETY DIAGRAM



1 G2 OCCUPANCY DIAGRAM
SCALE: 0 1 2 3 5 10

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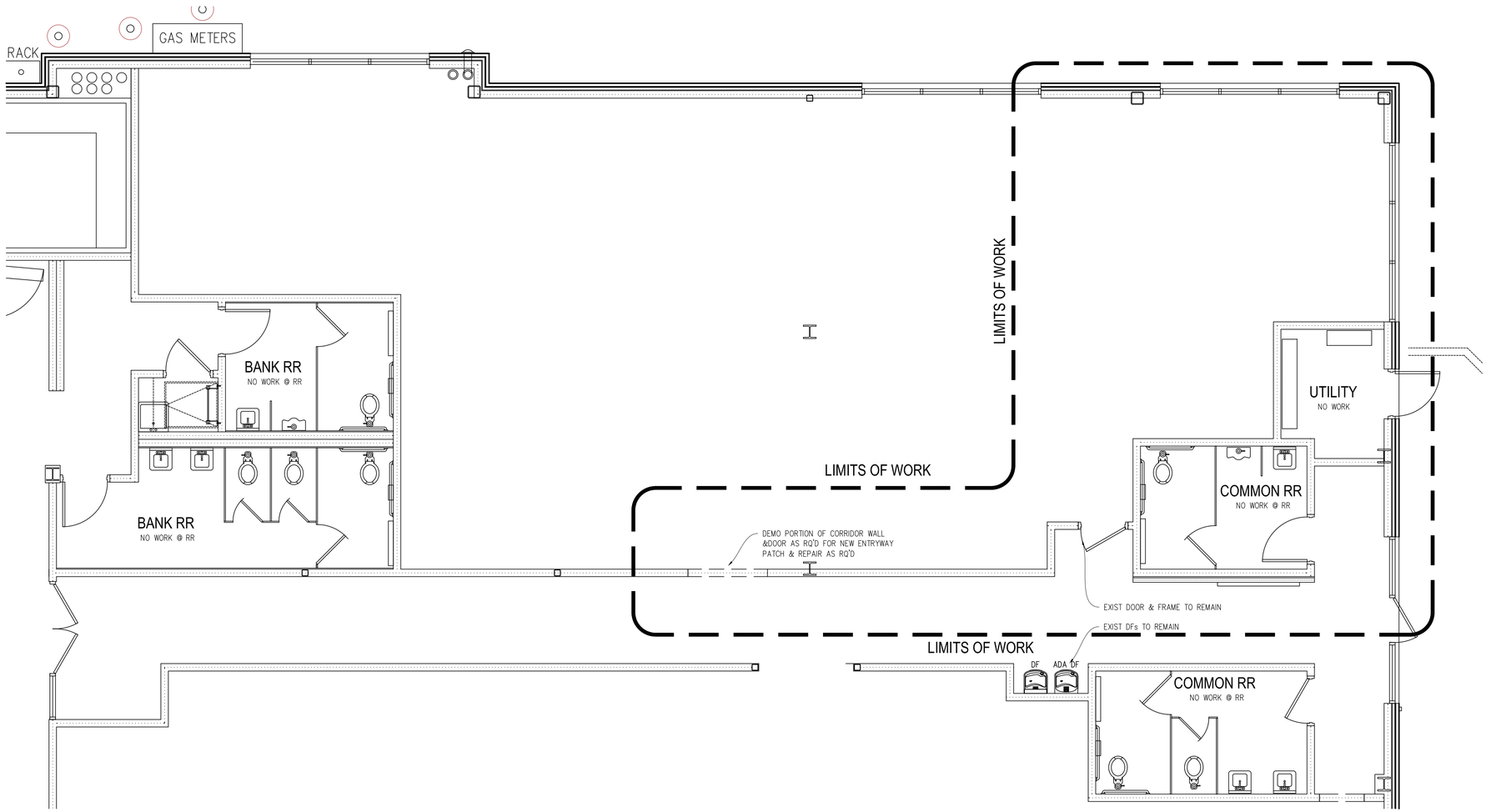
ORIGINAL SHEET SIZE 24"X36"

OCCUPANCY, EXITING &
LIFE SAFETY DIAGRAMS
G2

ARCHITECTURAL SYMBOLS SCHEDULE

- EXIST CORE & SHELL TO REMAIN
- DEMOLITION WALL
- NEW WALL
- PARTIAL HT WALL SEE INT ELEVS
- NEW OR RELOCATED DOOR
- EXISTING DOOR TO REMAIN
- EXIST STOREFRONT WINDOW



1 A1.0 DEMOLITION PLAN
SCALE: 0 1 2 4 8

N

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STATE OF COLORADO
JAMES R SCHNECK
05.16.2024
208535
LICENCED ARCHITECT

NOT VALID WITHOUT SIGNATURE & DATE

FIRST AMERICAN TITLE

TENANT IMPROVEMENT
1077 CEDAR STREET, SUITE B
BENNETT, CO 80102

FOR CONSTRUCTION DRAWN BY
05.16.2024 JRS

REVISIONS

PROJECT NO: 2024.20

ORIGINAL SHEET SIZE 24"X36"

DEMOLITION PLAN
A1.0

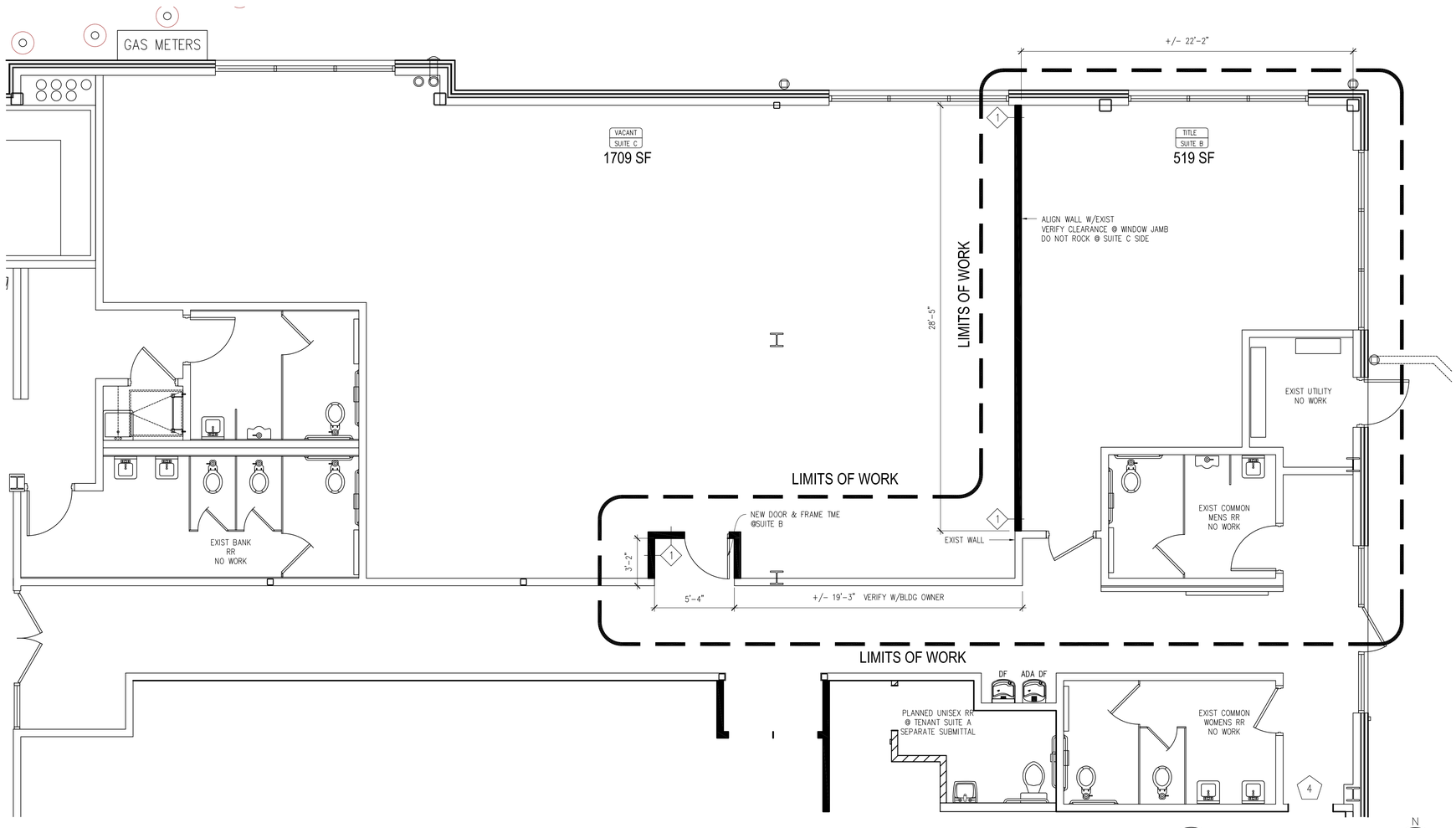
ARCHITECTURAL SYMBOLS SCHEDULE

- EXIST CORE & SHELL TO REMAIN
- DEMOLITION WALL
- NEW WALL
- NEW OR RELOCATED DOOR
- EXISTING DOOR TO REMAIN
- EXIST STOREFRONT WINDOW

WALL LEGEND

◇ UNRATED WALL 2x4 STUDS @ 16" O.C., ⅝" GYP BOTH SIDES UNO
MOISTURE-RESISTANT GYP TYP @ WET AREAS, SOUND BATTS @ RRs &
TENANT DEMISING WALLS

SEE TYPICAL WALL SECTIONS THIS SET



1 A1.1 FLOOR PLAN
SCALE: 0 1 2 4 8

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FOR CONSTRUCTION DRAWN BY
05.16.2024 JRS

REVISIONS

PROJECT NO: 2024.20

ORIGINAL SHEET SIZE 24"X36"

FLOOR PLANS
A1.1

2 A1.2 REFERENCE FURNITURE PLAN
SCALE: 3/16"=1'-0"

1 A1.2 FINISHES PLAN
SCALE: 3/16"=1'-0"

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FOR CONSTRUCTION DRAWN BY
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REVISIONS

PROJECT NO: 2024.20

ORIGINAL SHEET SIZE 24"X36"

FINISHES & REFERENCE FFE PLAN

A1.2

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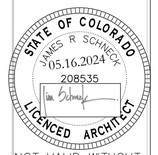

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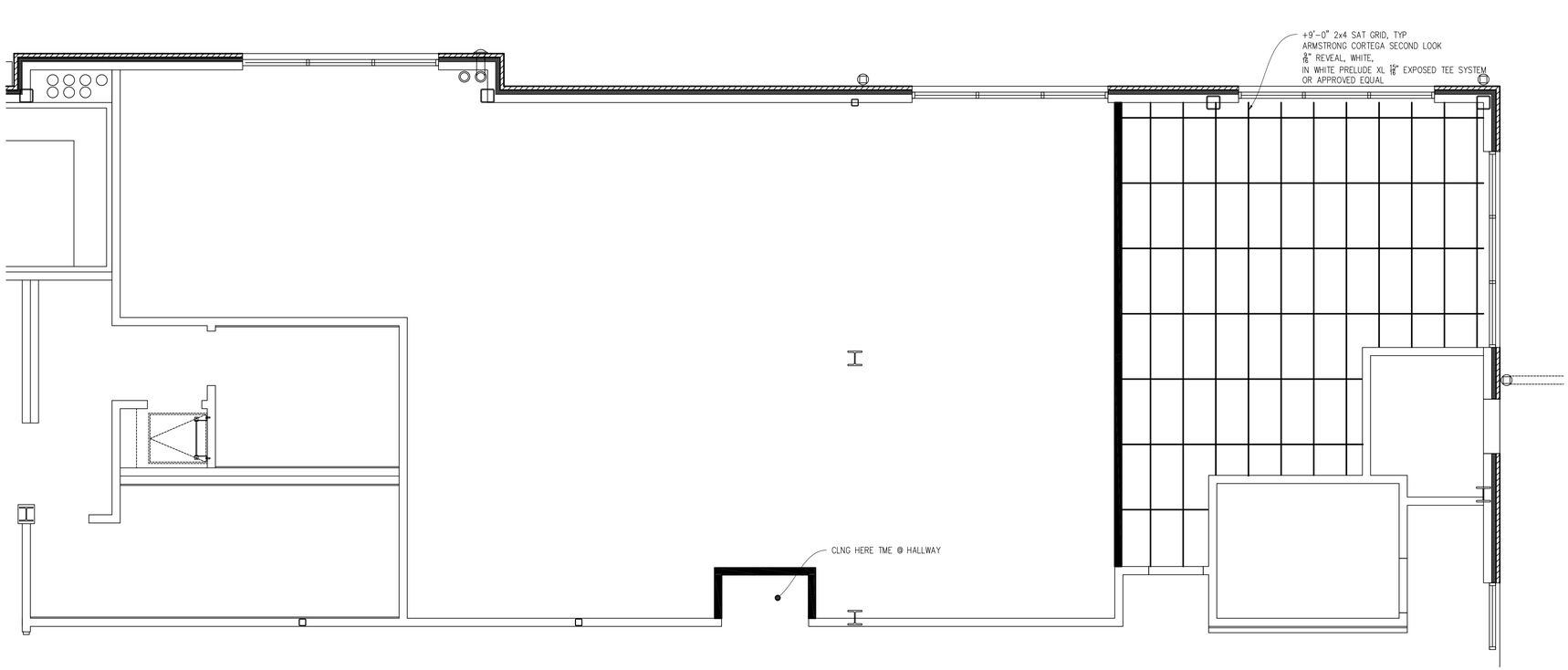


1 A1.3 REFLECTED CLNG PLAN
SCALE: 1/4"=1'-0"

FIRST AMERICAN TITLE

TENANT IMPROVEMENT
1077 CEDAR STREET, SUITE B
BENNETT, CO 80102

FOR CONSTRUCTION DRAWN BY
05.16.2024 JRS

REVISIONS

PROJECT NO: 2024.20

ORIGINAL SHEET SIZE 24"X36"

REFLECTED CLNG PLAN
A1.3

BASIC ELECTRICAL REQUIREMENTS

THE ELECTRICAL WORK SHALL COMPLY WITH ALL LOCAL, STATE AND NATIONAL CODES, LAWS ORDINANCES APPLICABLE TO THE PROJECT. CONTRACTOR TO VERIFY SPACE REQUIREMENTS, COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT VIOLATION OF APPLICABLE CODES, STANDARDS, SPECIFICATION REQUIREMENTS, OR EXTRA CHARGES TO THE OWNER.

ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK.

THE CONTRACTOR SHALL VISIT THE OB SITE AND VERIFY EXISTING CONDITION PRIOR TO BIDDING.

COORDINATE EXACT ELECTRICAL REQUIREMENTS (VOLTAGE, PHASE, AMPS, AND ETC.) OF EQUIPMENT FURNISHED BY OTHERS BEFORE PERFORMING WORK.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS HARDWARE AND MATERIAL NOT SPECIFIED BUT NECESSARY TO PROVIDE A COMPLETE AND WORKING ELECTRICAL SYSTEM. THIS HARDWARE SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL MISCELLANEOUS CONDUIT FITTINGS AND MOUNTING HARDWARE, LIGHT FIXTURE MOUNTING HARDWARE, BRACKETS, CONNECTORS, CORDS AND PLUGS.

MAINTAIN A MINIMUM OF 3'–0" CLEARANCE IN FRONT OF ALL 120/208V EQUIPMENT AND 3'–6" IN FRONT OF ALL 277/480V EQUIPMENT.

CONTRACTOR TO PROVIDE PLASTIC NAMEPLATE LABELS FOR ALL DISCONNECTS AND EQUIPMENT.

CONTRACTOR TO GUARANTEE ALL WORKMANSHIP, MATERIAL AND EQUIPMENT AND REPLACE ANY FOUND DEFECTIVE WORK WITHOUT COST TO THE OWNER, FOR A PERIOD OF ONE YEAR AFTER. FINAL ACCEPTANCE.

ELECTRICAL SPECIFICATIONS

1. GROUNDING AND BONDING.
   - A. GROUNDING CONDUCTORS TO BE INSULATED WITH GREEN COLORED INSTALLATION.
   - B. COMPLY WITH UL 467 FOR ALL GROUNDING AND BONDING.
2. IDENTIFICATION OF EQUIPMENT.
   - A. IDENTIFY ALL ELECTRICAL DISTRIBUTION EQUIPMENT WITH THE SAME PLAN CODE THAT IS ON THE DRAWINGS.
   - B. NAMEPLATES SHALL BE ENGRAVED IN LAMINATED PLASTIC, 3/8" HIGH AND ATTACHED WITH SCREWS.
   - C. ALL PANELS SHALL HAVE TYPEWRITTEN DIRECTORIES INSERTED ON THE INSIDE OF THE PANEL DOOR.
   - D. ALL COMPONENTS OF EMERGENCY CIRCUITS SHALL BE PAINTED RED.
3. CONDUCTORS AND CABLES.
   - A. CONDUCTORS SHALL BE COPPER EXCEPT AS OTHERWISE NOTED.
   - B. MINIMUM WIRE SIZE SHALL BE #12 THWN–THHN AWG EXCEPT AS OTHERWISE NOTED.
   - C. MAXIMUM OF 3 CURRENT CARRYING CONDUCTORS PER CONDUIT BEFORE DERATEING IS REQUIRED.
   - D. E.C. TO FIELD VERIFY THE EXACT ROUTING AND LENGTH REQUIRED BEFORE PERFORMING ANY WORK.
   - E. IN CONCEALED SPACES, TYPE MC OR AC CABLE ALLOWED BY CODE.
4. RACEWAYS AND BOXES.
   - A. INTERIOR CONDUIT TO 1/2" EMT UNLESS OTHERWISE NOTED.
   - B. ALL CONDUIT TO BE SUPPORTED USING COATED STEEL OR MALLEABLE IRON STRAPS, SPLIT HANGERS, OR LAY–IN ADJUSTABLE HANGERS.
   - C. ROUTE CONDUIT PARALLEL OR PERPENDICULAR TO WALLS.
   - D. ABOVE GROUND INTERIOR.
     HOT DIP GALVANIZED AS REQUIRED BY CODE OF EMT, IMC, OR RMC.
   - E. BURIED AND UNDER CONCRETE SLABS.
     SCHEDULE 40 PVC W/ASPHAULT COATED RMC ELBOWS WHERE PENETRATING SURFACE.
   - F. PROVIDE 1 EMPTY 3/4" CONDUIT FOR EVERY 3 UNUSED SPACES IN FLUSH MOUNTED PANELBOARDS OR LOAD CENTERS. TERMINATE EMPTY CONDUIT IN A JUNCTION BOX WHICH IS ACCESSIBLE.
   - G. PROVIDE FLEXIBLE CONDUIT ON CONNECTIONS TO VIBRATING EQUIPMENT. CONDUIT AND GROUNDING MEANS SHALL BE PER NEC.
   - H. INSTALL ELECTRICAL BOXES AS REQUIRED PER NEC FOR ALL SPLICES, TAPS WIRE PULLING AND GENERAL EQUIPMENT CONNECTIONS.
   - I. OUTLET BOXES TO BE GALVANIZED STEEL UNLESS OTHERWISE NOTED.

DEVICE MOUNTING HEIGHTS

ALL RECEPTACLES, PHONE JACKS, DATA, JACKS, CABLE T.V PORTS TO BE MOUNTED AT 18" AFF. AT THE CENTERLINE OF THE BOX U.O.N

ALL LIGHTING CONTROL SWITCHES AND PUSH BUTTONS TO BE MOUNTED AT 48" AFF. AT THE CENTERLINE OF THE BOX U.O.N

ALL TEMPERATURE CONTROL TO BE MOUNTED AT 60" AFF AT THE CENTERLINE OF THE BOX U.O.N.

ELECTRICAL PANELS TO BE MOUNTED AT 72" AFF. AT THE TOP OF CABINET U.O.N.

LIGHT FIXTURE LEGEND

- – WALL MOUNTED FIXTURE
- – CEILING MOUNTED
- – PENDANT MOUNTED
- –LINEAR INDIRECT
- – 2' x 4' LAYIN
- – 2' x 2' LAYIN
- – SURFACE WRAP
- – TRACK
- – RECESSED CAN
- – RECESSED WALL WASHER
- – STEP LIGHT
- – STRIP LIGHT
- – EMERGENCY EXIT SIGN
- – EMERGENCY "FROG EYES"

ELECTRICAL DEVICE LEGEND

- $ – WALL SWITCH
- $D – DIMMER SWITCH
- – WALL MOUNTED DUPLEX RECEPTACLE
- – WALL MOUNTED DOUBLEDUPLEX RECEPTACLE
- – CEILING MOUNTED RECEPTACLE
- – FLOOR MOUNTED DUPLEX RECEPTACLE
- – SPECIAL PURPOSE RECEPTACLE
- – TELDATA PORT. 3/4" CONDUIT TO BE STUBBED ABOVE CEILING.
- – TELEPHONE PORT. 3/4" CONDUIT TO BE STUBBED ABOVE CEILING.
- – DATA PORT. 3/4" CONDUIT TO BE STUBBED ABOVE CEILING.
- TV – CABLE TV JACK
- – PANEL
- PANEL CKT – HOMERUN. PANEL AND CIRCUIT DESIGNATION.
- NEW CONDUIT.
- EXISTING CONDUIT.
- UGE – UNDERGROUND ELECTRICAL CONDUIT.
- SMALLER – NONSWITCHED PHASE CONDUCTOR LONGER – GROUNDED CONDUCTOR (NEUTRAL)
- – FUSED SWITCH
- – NONFUSED SWITCH
- – COMBINATION FUSED SWITCH/MOTOR STARTER
- – MOTOR STARTER
- PS – PLUG/FUSE SWITCH
- – MOTOR
- TC – TIME CLOCK.
- PH – PHOTOELECTRIC CELL
- J – JUNCTION BOX.
- OS – OCCUPANCY SENSOR
- – CONDUIT RISER UP
- – CONDUIT RISER DOWN

FIRE ALARM LEGEND

- SD – SMOKE DETECTOR
- C/S – COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
- HD – HEAT DETECTOR
- DD – DUCT DETECTOR
- C/O – CARBON MONOXIDE DETECTOR
- PS – PULL STATION
- – HORN
- – HORN/STROBE
- FIRE ALARM CONTROL PANEL
- RA – REMOTE ANNUNCIATOR
- FS – FLOW SWITCH
- TS – TAMPER SWITCH

CONTRACTOR COORDINATION SCHEDULE

ITEM FURNISHED	FURNISHED BY	MOUNTED BY	WIRED BY
LOCATING EXISTING EXTERIOR UTILITIES	G.C.	–	–
LOCATING EXISTING INTERIOR UTILITIES	P.C./E.C.	–	–
CONCRETE EQUIPMENT PADS	G.C.	G.C./S.C./M.C.	–
EXCAVATION, BACKFILL, AND CONCRETE OR ASPHALT PAVING FOR UTILITIES OR OTHER M/E EQUIPMENT.	G.C.	AHJ/G.C./C.C.	–
FLASHING OVER THE TOP OF PLATFORMS AND CURBS	G.C.	G.C./R.C.	–
ROOFING REPAIR AND/OR SEALING OF ROOFING SYSTEM	G.C.	G.C./R.C.	–
MOTOR STARTERS AND COMBINATION MOTOR STARTERS TO INCLUDE THERMAL OVERLOADS.	M.C./P.C.	E.C.	E.C.
STARTERS IN MOTOR CONTROL CENTERS	E.C.	E.C.	E.C.
MULTISPEED SWITCHES.	M.C.	M.C.	E.C.
DISCONNECT SWITCHES.	E.C.	E.C.	E.C.
CONDUIT FOR ALL WIRING.	E.C.	E.C.	–
CONTROL TRANSFORMERS FOR HVAC EQUIPMENT	M.C.	M.C.	E.C.
HVAC CONTROL WIRING 48 VOLTS AND LESS.	T.C./M.C.	T.C./M.C.	T.C./M.C.
WIRING GREATER THAN 48 VOLTS.	E.C.	E.C.	E.C.
INTERLOCK	M.C./E.C.	E.C.	E.C.
NON–LOAD VOLTAGE CONTROL SYSTEMS	M.C.	M.C.	M.C.
DUCT AND SMOKE DETECTORS INTERFACED WITH BUILDING FIRE ALARM SYSTEM.	F.A.C/E.C.	M.C.	F.A.C/E.C.
FIRE PROTECTION CONTROLS INCLUDING FLOW SWITCHES	M.C.	M.C.	MC./E.C.

ELECTRICAL ONE LINE LEGEND

- – SINGLE PHASE WEATHERHEAD
- – THREE PHASE WEATHERHEAD
- – ELECTRICAL METER
- M – C.T. AND ELECTRICAL METER
- – GROUND
- – FAULT
- – ELECTRICAL PANEL
- – ELECTRICAL PANEL W/ MAIN CIRCUIT BREAKER
- – CIRCUIT BREAKER
- – FUSED SWITCH
- – NONFUSED SWITCH

ISSUE:
PERMIT 5/16/24

E.W.A.S. MEP ENGINEERING
10019 ELM ST.
DENVER, CO
303–404–9459

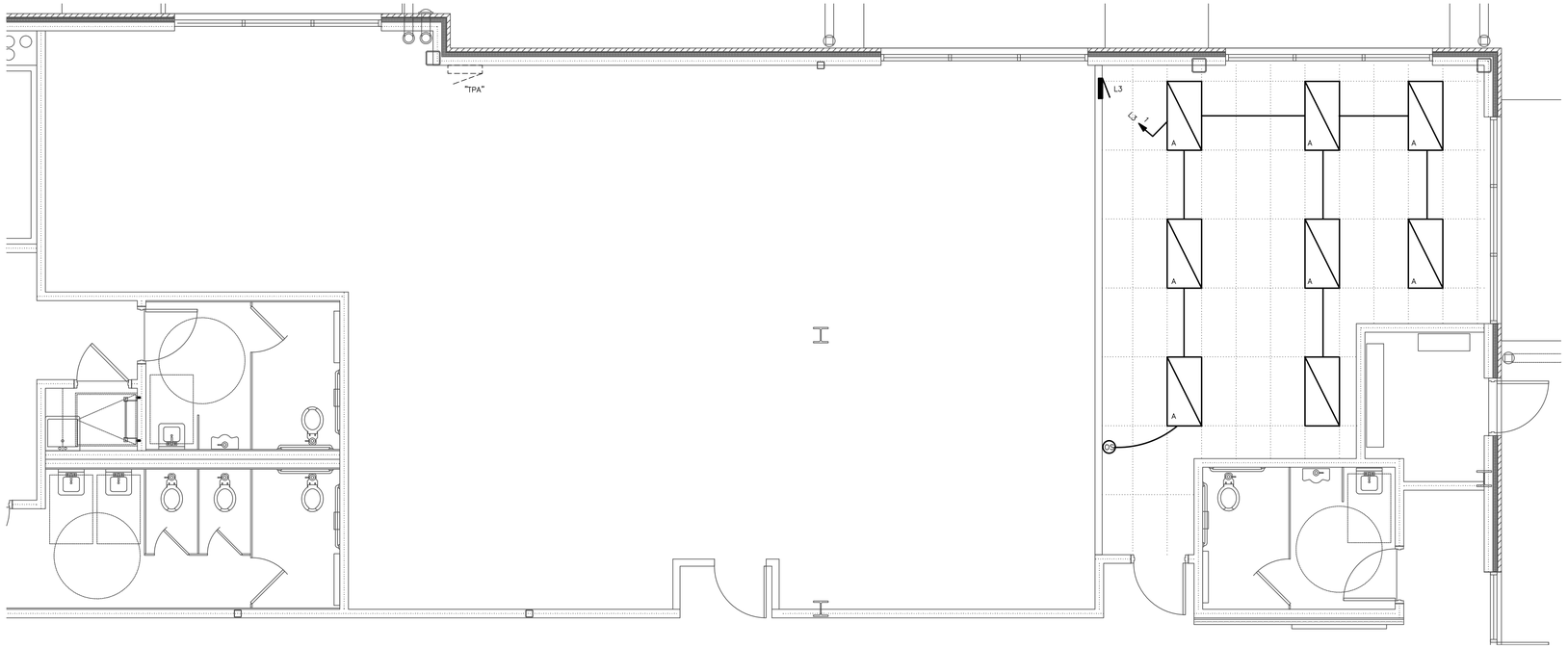
CLIENT: LAUNCH PAD

TITLE COMPANY
1077 CEDAR ST, SUITE B
BENNETT, CO

COLORADO REGISTERED JOHN C. KITRON 37208 PROFESSIONAL ENGINEER
5–16–24

PROJECT: #24017

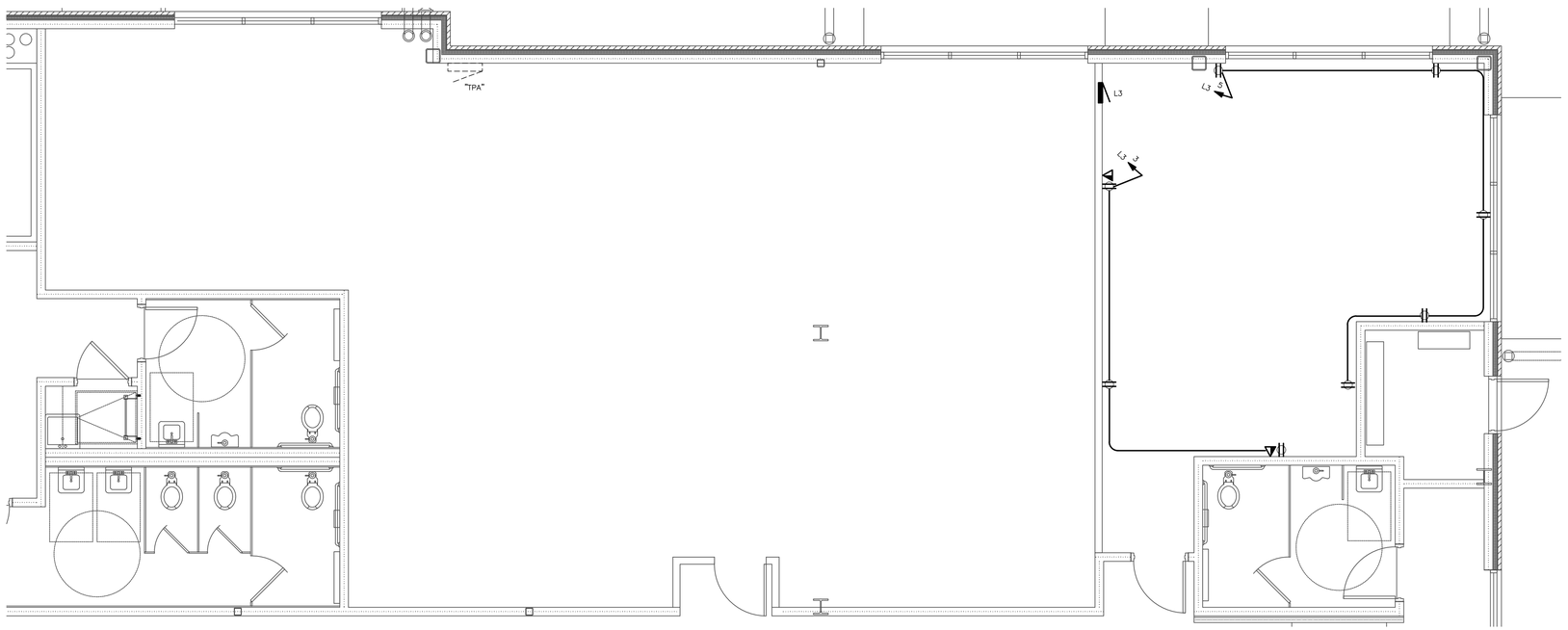
E0



NORTH

LIGHTING PLAN

SCALE 1/4" = 1'-0"



NORTH

POWER PLAN

SCALE 1/4" = 1'-0"

ISSUE:

PERMIT 5/16/24

E.W.A.S. MEP ENGINEERING
10019 ELM ST.
DENVER, CO
303-404-9459

CLIENT:
LAUNCH PAD

TITLE COMPANY
1077 CEDAR ST, SUITE B
BENNETT, CO

COLORADO REGISTERED
JOHN C. KITRUMIS
37208
PROFESSIONAL ENGINEER

5-16-24

PROJECT: #24017

E1

COMcheck Software Version 4.1.5.5

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title:
Project Type: Addition

Construction Site: Owner/Agent: Designer/Contractor:

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Bank:Banking Activity Area	490	0.86	421
		Total Allowed Watts =	421

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Bank:Banking Activity Area				
LED 1: Other:	1	8	49	392
		Total Proposed Watts =		392

Interior Lighting PASSES: Design 7% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COM*check* Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title: Report date: 05/15/24
Data filename: C:\EWAS\Projects\2024\24029 Bennett Bank\2018 IECC.cck Page 1 of 6

PANEL
TPA
(EXISTING)

MAINS: 200 AMPS — MAIN BREAKER: NONE
VOLT: 120/208 — MOUNTING: SURFACE
A.I.C.: 22,000 A.I.C. — OPTIONS: NONE

CKT	TYPE	LOAD VA	DESCRIPTION	P	CB	PHASING A B C	CB	P	DESCRIPTION	LOAD VA	TYPE	CKT
1						-						2
3						- -						4
5						- -						6
7						- -						8
9						- -						10
11						- -						12
13						- -						14
15						- -						16
17						- -						18
19						- -						20
21						- -						22
23						- -						24
25						- -						26
27						- -						28
29						- -						30
31						- -	100	3	PANEL L3			32
33						- -	-	-	-			34
35						- -	-	-	-			36
37	M	22000		3	90	-						38
39	-	-		-	-							40
41	-	-		-	-	-	20	1	ROOF TOP RECP	180	R	42

PANEL PHASE A= 7,333 VA
TOTAL (VA) B= 7,333 VA
C= 7,513 VA

LOAD TYPE	CONNECTED LOAD (VA)	DEMAND FACTOR	DEMAND LOAD (VA)
LIGHTING		1.25	
REC < 10 KVA	180	1.00	180
REC > 10 KVA		0.50	
LARGEST MOTORS	22000	1.25	27500
REMAINING MOTORS		1.00	
EQUIPMENT		1.00	
HEATING		1.00	
KITCHEN			
TOTAL CONNECTED LOAD	22180 VA	DEMAND =	27680 VA

SUBFED PANEL "L3" DEMAND = 1930 VA
TOTAL PANEL FEEDER DEMAND = 29610 VA

TOTAL PANEL FEEDER DEMAND AMPS = 82 A

PANEL
L3

MAINS: 100 AMPS — MAIN BREAKER: NONE
VOLT: 120/208 — MOUNTING: SURFACE
A.I.C.: 10,000 A.I.C. — OPTIONS: FLUSH

CKT	TYPE	LOAD VA	DESCRIPTION	P	CB	PHASING A B C	CB	P	DESCRIPTION	LOAD VA	TYPE	CKT
1	L	392	LIGHTS	1	20	-						2
3	R	540	PLUGS	1	20	-						4
5	R	900	PLUGS	1	20	-						6
7						- -						8
9						- -						10
11						- -						12
13						- -						14
15						- -						16
17						- -						18
19						- -						20
21						- -						22
23						- -						24
25						- -						26
27						- -						28
29						- -						30
31						- -						32
33						- -						34
35						- -						36
37						- -						38
39						-						40
41						- -						42

PANEL PHASE A= 392 VA
TOTAL (VA) B= 540 VA
C= 900 VA

LOAD TYPE	CONNECTED LOAD (VA)	DEMAND FACTOR	DEMAND LOAD (VA)
LIGHTING	392	1.25	490
REC < 10 KVA	1440	1.00	1440
REC > 10 KVA		0.50	
LARGEST MOTORS		1.25	
REMAINING MOTORS		1.00	
EQUIPMENT		1.00	
HEATING		1.00	
KITCHEN			
TOTAL CONNECTED LOAD	1832 VA	DEMAND =	1930 VA

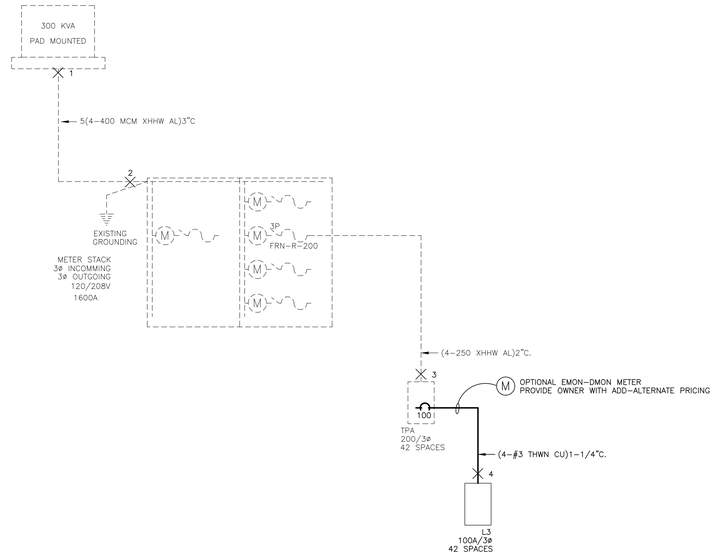
TOTAL PANEL FEEDER DEMAND AMPS = 5 A

ONE LINE DIAGRAM

NO SCALE

BEFORE PERFORMING ANY WORK E.C. TO VERIFY THE EXISTING CONDITIONS, SIZES, LOCATION, AND DISTRIBUTION. NOTIFY ENGINEER OF ANY CHANGES.

NEW WORK
EXISTING WORK TO REMAIN



FAULT CURRENT TABLE		
FAULT	CURRENT SOURCE, CONDUCTOR IMDEDANCE	AVALIABLE SYM. FAULT CURRENT
1.	300 KVA XFMR	55,515 ISCA
2.	70' 5-400 MCM AL	41,131 ISCA
3.	50' 3/0 AL	17,049 ISCA
4.	50' #3 CU	6,855 ISCA

LIGHTING FIXTURE SCHEDULE

PLAN CODE	DESCRIPTION	VOLTS	MANUFACTURE	CATALOG #	LAMP TYPE	TOTAL WATTS
A	2'x4' TROFFER	120	LITHONIA	2GLTG-60L	LED	49

E.C. TO VERIFY FIXTURE TYPES, SWITCHING, AND LOCATIONS WITH OWNER.

ISSUE:
PERMIT 5/16/24

E.W.A.S. MEP ENGINEERING
10019 ELM ST.
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CLIENT: LAUNCH PAD

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COLORADO REGISTERED JOHN C. KITRUMAS 37208 PROFESSIONAL ENGINEER

5-16-24

PROJECT: #24017

E2

BUILDING OUTLINE MECHANICAL SPECIFICATIONS

1. BASE BUILDING SPECIFICATIONS, DRAWINGS AND LATEST REVISIONS ON CONTRACT DOCUMENTS FOR MECHANICAL WORK SHALL APPLY TO THESE DRAWINGS.
2. ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE TENANT FINISH SPECIFICATIONS (AVAILABLE IN MANAGEMENT OFFICE), DRAWINGS, AND LATEST REVISIONS ON CONTRACT DOCUMENTS FOR MECHANICAL WORK. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT MECHANICAL SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHER. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN OR THE PLANS.
3. ELECTRICAL COORDINATION: CONFIRM VOLTAGE, PHASE, AND AMPACITY WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT. ALL 24 VOLT CONTROLS INCLUDING INTERLOCK WIRING FOR MECHANICAL EQUIPMENT BY DIVISION 15 CONTRACTOR. PROVIDE MAGNETIC STARTERS FOR ALL 3-PHASE MOTORS WITH PROTECTION ON ALL THREE LEADS. CONTROL AND HEATING/COOLING EQUIPMENT TO AUTOMATICALLY RESTART AFTER POWER FAILURE. ALL WIRE TO BE INSTALLED IN CONDUIT PER NEC LATEST EDITION.
4. EXTRA COSTS OR CHANGES ALLOWED ONLY IF APPROVED IN WRITING TO THE ENGINEER WITH DOLLAR AMOUNT PRIOR TO ORDERING.
5. LOCAL AND STATE CODES AND ORDINANCES SHALL BE FOLLOWED.
6. LATEST VERSION OF THE ENERGY CODE SHALL BE FOLLOWED. ALL EQUIPMENT, INSULATION, AND CONTROLS SHALL CONFORM.
7. SUBSTITUTIONS WILL BE PROCESSED AND MUST BE SUBMITTED WITH SUBSTITUTED CUT SHEETS.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS.
9. THERMOSTATS TO BE PROVIDED WITH 7 DIFFERENT DAILY PROGRAMMABLE SCHEDULE, CAPABLE OF BEING PROGRAMMED ON A 7-DAY CYCLE WITH A SEPARATE WEEK-END SETTING, NIGHT SETBACK, TEMPERATURE HOLD SETTINGS, CAPABLE OF 2-HOUR OCCUPANT OVERRIDE, 10-HOUR BACKUP, AND 5 DEGREE F DEADBAND. THERMOSTATIC SET BACK CONTROLS SHALL HAVE THE CAPABILITY TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 85ºF.
10. CONTRACTOR TO PROVIDE AN INITIAL SITE VISIT TO VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR VERIFICATION OF EXISTING JOB CONDITIONS PRIOR TO BID. NO ADDITIONAL COSTS SHALL BE AWARDED TO THE SUCCESSFUL CONTRACTOR OR HIS SUBCONTRACTORS, AFTER BIDS HAVE BEEN SUBMITTED AND CONTRACTS AWARDED, FOR FAILURE TO VERIFY EXISTING JOB CONDITIONS. DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR ALTERNATIVE METHODS OF INSTALLATION THREE (3) DAYS MINIMUM PRIOR TO BIDDING THIS JOB.
11. DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT TO BE SCALED FOR ROUGH-IN MEASUREMENTS OR USED AS SHOP DRAWINGS. WHERE DRAWINGS ARE REQUIRED FOR THESE PURPOSES OR MUST BE MADE FROM FIELD MEASUREMENTS, CONTRACTOR SHALL TAKE THE NECESSARY MEASUREMENTS AND PREPARE THE REQUIRED DRAWINGS.
12. COORDINATE WITH ALL OTHER TRADES FOR INSTALLATION WITH IN THE AVAILABLE SPACE. WHERE CROWDED CONDITIONS EXISTING PREPARE COORDINATION DRAWINGS SHOWING ALL TRADE CONFLICTS AND SUBMIT TO THE ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN OR INSTALLATION. RELOCATION OF INLETS, OUTLETS, AND/OR APPARATUS MADE PRIOR TO ROUGH-IN OR REQUIRED BY FIELD CONDITIONS FOR COORDINATION SHALL BE DONE AT NOT ADDITIONAL COST TO THE OWNER OR HIS AGENTS.
13. THE MECHANICAL DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, VALVE, FITTING, ETC. FIELD VERIFY ALL MEASUREMENTS PRIOR TO ORDERING ANY EQUIPMENT, DUCTWORK, PIPING, ETC.
14. ALL BIDS SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE PURCHASE AND DELIVERY OF NEW EQUIPMENT TO THE JOB SITE IN TIME TO MEET ALL DEADLINES. REPORT, PRIOR TO BID, ANY DELIVERY PROBLEMS WHICH MIGHT PREVENT TIMELY COMPLETION OF THIS PROJECT.
15. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR OBTAINING BUILDING DEPARTMENT PERMIT FOR HIS PORTION OF WORK PRIOR TO THE START OF CONSTRUCTION.
16. SUBMIT CUTS AND BROCHURES ON ANY EQUIPMENT FURNISHED UNDER THIS CONTRACT FOR ENGINEER'S REVIEW. PROVIDE TO THE ENGINEER A MINIMUM OF FOUR (4) HARD COPIES OF THE MECHANICAL SUBMITTALS FOR REVIEW, PRIOR TO ORDERING ANY EQUIPMENT. (EMAIL AND FACSIMILES OF SUBMITTALS WILL NOT BE ACCEPTED.)
17. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES AND STRUCTURE AND SHALL SUBMIT 1/4" SCALE COORDINATION/SHOP DRAWINGS SHOWING ALL DUCTWORK, PIPING, PLUMBING, ETC.
18. MECHANICAL AND PLUMBING CONTRACTORS SHALL FIELD INSPECT ALL EXISTING EQUIPMENT/DEVICES TO ENSURE PROPER FUNCTIONALITY. ANY EQUIPMENT OR DEVICES NOT FUNCTIONING PROPERLY ARE TO BE DOCUMENTED AND BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
19. FIELD ROUTE ALL DUCTWORK AND PIPING, AS REQUIRED, TO AVOID CONFLICTS WITH EXISTING STRUCTURE, DUCTWORK, PIPING, ELECTRICAL CONDUITS, LIGHTS, ETC. RELOCATE ANY ITEMS AS REQUIRED TO ACCOMMODATE INSTALLATION OF NEW DUCTWORK, PIPING AND EQUIPMENT WHILE MAINTAINING ORIGINAL INTEGRITY OF ALL SYSTEMS. RUN ALL DUCTWORK AND PIPING AS HIGH AS POSSIBLE AND SUSPEND FROM STRUCTURE ABOVE.
20. ALL CURBS, SUPPORTS, AND ANCHORS SHALL BE PROVIDED FOR MECHANICAL WORK, NO CHAIN, TAPE, OR WIRE IS ALLOWED.
21. ALL EXISTING DUCTWORK, DIFFUSERS, GRILLES, THERMOSTATS, ETC., IN GOOD CONDITION SHALL BE RE-USED AFTER BEING THOROUGHLY CLEANED AND/OR REFINISHED TO MATCH NEW, UNLESS OTHERWISE NOTED ON DRAWINGS. ANY EQUIPMENT IN DETERIORATED CONDITION SHALL BE REPLACED WITH NEW EQUIPMENT. ENSURE ALL EXISTING EQUIPMENT MEETS THE CURRENT CODE.
22. ANY EXISTING EQUIPMENT, DUCTWORK, PIPING, PLUMBING, CONTROLS, ETC. NOT USED SHALL BE REMOVED AND DISCARDED PER OWNERS REQUEST. PROPERLY CAP AND SEAL ALL DUCTWORK AND PIPING TAPS NOT USED.
23. BASE BUILDING MECHANICAL EQUIPMENT THAT IS SCHEDULED ON THIS SET OF PLANS AND SHOWN ON THE MECHANICAL FLOOR PLAN(S) AND BASE BUILDING MECHANICAL SYSTEMS SHOWN OUTSIDE THE PROJECT AREA ARE EXISTING AND ARE SHOWN FOR REFERENCE PURPOSES ONLY.
24. ANY CONFLICTS DISCOVERED AFTER WORK HAS STARTED, NOT PREVIOUSLY BEING APPARENT AND NECESSITATING REVISIONS TO CONTRACT DOCUMENTS, SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR REVIEW AND APPROVAL OF ALTERNATIVE METHODS OF INSTALLATION.
25. CONTRACTOR SHALL REVIEW ELECTRICAL POWER REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT PRIOR TO ORDERING. SUBMIT ONE COPY OF EQUIPMENT SUBMITTALS TO ELECTRICAL CONTRACTOR FOR COORDINATION.
26. MECHANICAL CONTRACTOR SHALL FURNISH STARTERS FOR ALL THREE-PHASE MECHANICAL EQUIPMENT (EXCEPT FOR STARTERS THAT ARE SHOWN TO BE PROVIDED IN MOTOR CONTROL CENTERS). STARTERS SHALL HAVE THREE-LEG CLASS 10 TRIP-FREE OVERLOAD PROTECTION, WITH MANUAL RESET, AND SHALL BE NEMA RATED. STARTERS SHALL BE INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR EXCEPT WHERE SUPPLIED INTEGRAL WITH MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL PROVIDE SAFETY DISCONNECT SWITCHES FOR ALL MECHANICAL EQUIPMENT WHERE NOT SPECIFICALLY INDICATED ON PLANS TO BE PROVIDED BY ELECTRICAL CONTRACTOR.
27. MECHANICAL CONTRACTOR SHALL EMPLOY THE SERVICES OF A QUALIFIED TEMPERATURE CONTROLS CONTRACTOR FOR INSTALLATION OF ALL CONTROLS WORK. SUBMIT CONTRACTOR'S QUALIFICATIONS TO ENGINEER FOR REVIEW.
28. TEMPERATURE CONTROLS CONTRACTOR SHALL PROVIDE ALL WIRING ASSOCIATED WITH THE AUTOMATIC TEMPERATURE CONTROL SYSTEM, INCLUDING 120V FOR CONTROL PANELS, CONTROL VALVES, AND CONTROL DAMPERS. ELECTRICAL WIRING SHOWN ON ELECTRICAL DRAWINGS SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. SUBMIT CONTROL DIAGRAMS TO ENGINEER FOR REVIEW.
29. ALL NEW AND RELOCATED MATERIALS INSTALLED IN CEILING RETURN AIR PLENUM SHALL BE U.L. 181 CLASS 1 RATED, WITH A MAXIMUM FLAME SPREAD INDEX OF 25 AND A MAXIMUM SMOKE-DEVELOPED INDEX OF 50. REMOVE AND REPLACE, AS NECESSARY, ALL MATERIALS NOT IN COMPLIANCE WITH CURRENT CODE.
30. ALL MOTORIZED EQUIPMENT SHALL BE PROVIDED WITH SUITABLE VIBRATION ISOLATION. FLEXIBLE CONNECTORS SHALL BE PROVIDED AT ALL DUCTWORK AND PIPING CONNECTIONS TO SUCH MOTORIZED EQUIPMENT.
31. PROVIDE SEISMIC RESTRAINTS FOR ALL MECHANICAL SYSTEMS AND EQUIPMENT AS REQUIRED BY THE CURRENT APPLICABLE BUILDING CODE.
32. ALL FIRE DAMPERS, BALANCING DAMPERS, VALVES, EQUIPMENT, FILTERS AND CONTROLS SHALL BE ACCESSIBLE. MECHANICAL CONTRACTOR SHALL PROVIDE ACCESS PANELS AS REQUIRED TO FACILITATE MAINTENANCE, REPAIR AND ADJUSTMENT OF ANY CONCEALED EQUIPMENT, DAMPERS, VALVES, CONTROLS, ETC. COORDINATE LOCATIONS OF REQUIRED ACCESS PANELS WITH ARCHITECT.
33. ALL HVAC UNITS AND OTHER MECHANICAL EQUIPMENT SHALL BE FIELD LABELED WITH UNIT NUMBER AND AREA SERVED. IN ADDITION, ALL PIPING, VALVES AND CONTROL DEVICES SHALL BE IDENTIFIED WITH LABELS. ALL EQUIPMENT SHALL BE IDENTIFIED WITH LETTERS MINIMUM 2" HIGH, AND ADDITIONALLY, ALL PIPING SHALL BE IDENTIFIED WITH 6" LONG FLOW ARROWS. PIPE IDENTIFICATION MARKERS SHALL BE SPACED AT A MAXIMUM OF 20 FEET ON CENTERS ALONG EACH PIPING RUN. IDENTIFICATIONS SHALL MATCH THOSE ON THE EQUIPMENT SCHEDULES.
34. CHECK, VERIFY AND MAKE OPERABLE ALL NEW AND EXISTING EQUIPMENT TO COMPLY WITH MANUFACTURER'S SPECIFICATIONS. PROVIDE SERVICE AND MAINTENANCE ON ALL FAN-POWERED VAV UNITS, ETC. AS REQUIRED TO BRING THEM TO PROPER OPERATING CONDITION, INCLUDING, BUT NOT LIMITED TO, CLEANING OF COILS AND ENCLOSURES, LUBRICATION, AND INSTALLATION OF NEW FILTERS.
35. CHECK, VERIFY AND MAKE OPERABLE ALL CONTROL WORK AND TUBING OR WIRING FOR ALL SYSTEMS ASSOCIATED WITH THE PROJECT AREA.
36. MECHANICAL CONTRACTOR SHALL CONTACT THE ENGINEER 48 HOURS PRIOR TO SUBSTANTIAL COMPLETION OF CONSTRUCTION OR INSTALLATION OF CEILING TILE, TO SCHEDULE A FINAL PUNCH LIST WALK-THROUGH.
37. SUBMIT OPERATING AND MAINTENANCE BROCHURES FOR ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT.
38. SUBMIT COMPLETE AS-BUILT DRAWINGS FOR EACH FLOOR AREA ON REPRODUCIBLE MEDIA OR ELECTRONIC FILES IN AUTOCAD VERSION 2007 OR LATER.
39. ALL DUCTWORK SHALL BE MINIMUM 26 GAUGE SHEET METAL UNLESS OTHERWISE INDICATED. REFER TO SMACNA GUIDE FOR REQUIRED GAUGES AND REINFORCEMENT REQUIREMENTS.
40. ALL ELBOWS OF RECTANGULAR DUCTWORK EXCEEDING 45 DEGREES SHALL HAVE DOUBLE THICKNESS TURNING VANES OR SHALL BE LONG RADIUS TYPE. ALL ELBOWS OF ROUND DUCTWORK SHALL BE LONG RADIUS TYPE.
41. PROVIDE ALL TRANSITIONS REQUIRED FOR INSTALLING DUCTWORK PER DRAWINGS AND AS REQUIRED TO AVOID OBSTRUCTIONS. ALL TRANSITIONS SHALL MAINTAIN MINIMUM OF EQUIVALENT FREE AREA OF DUCTWORK TO WHICH THEY ARE ATTACHED.
42. PROVIDE SPIN-IN FITTINGS WITH BUTTERFLY DAMPERS FOR ALL NEW AND EXISTING ROUND SUPPLY RUN-OUT DUCTS TO DIFFUSERS AND ALL ROUND RETURN/EXHAUST RUN-OUT DUCTS TO RETURN/EXHAUST GRILLES. ANY DIFFUSERS OR GRILLES INSTALLED WHERE SAID BUTTERFLY DAMPERS WOULD BE INACCESSIBLE SHALL BE PROVIDED WITH INTEGRAL BALANCING DAMPERS.
43. ALL DUCTWORK (HIGH PRESSURE AND LOW PRESSURE), NEW AND EXISTING, SHALL BE SEALED AIR TIGHT. SEAL ALL DUCTWORK, JOINTS AND SEAMS WITH MASTIC NON-HARDENING DUCT SEALER. COORDINATE THIS WORK WITH THE BUILDING OPERATING PERSONNEL SO THAT THE MAIN HIGH AND MEDIUM PRESSURE DUCTWORK CAN BE SHUT OFF TO ALLOW MANUFACTURER'S REQUIRED CURE TIME FOR THE DUCT SEALER.
44. ALL SUPPLY AIR DUCTWORK, NEW AND EXISTING, SHALL BE INSULATED. ALL SUPPLY AND OUTSIDE AIR INTAKE DUCTWORK SHALL BE VAPOR TIGHT. NEW RECTANGULAR DUCTWORK SHALL BE GALVANIZED SHEET METAL, INTERNALLY LINED WITH 1" THICK, 2.0 LB/CU FT DENSITY DUCT LINER EQUAL TO MANVILLE "LINACOUSTIC." ALL NEW ROUND DUCTWORK AND ALL EXISTING UNINSULATED ROUND AND RECTANGULAR DUCTWORK SHALL BE WRAPPED WITH 1-1/2" THICK, 1.0 LB/CU FT DENSITY DUCT WRAP EQUAL TO MANVILLE "MICROLITE." ALL WRAP INSULATION SEAMS AND JOINTS SHALL BE SEALED VAPOR-TIGHT WITH FOIL-SCRIM-KRAFT TAPE. ALL SUPPLY AIR AND OUTSIDE AIR DUCTWORK LOCATED WITHIN BUILDING SHALL BE INSULATED WITH A MINIMUM OF R-8 INSULATION. ALL SUPPLY AIR AND RETURN AIR DUCTWORK LOCATED OUTSIDE THE BUILDING ENVELOPE SHALL BE INSULATED WITH A MINIMUM OF R-12 INSULATION AND COVERED WITH 22 GAUGE ALUMINUM JACKET SCREWED IN PLACE WITH ALL JOINTS CAULKED WATER TIGHT. EXCEPTION: ALL EXPOSED ROUND DUCTWORK (WITHIN CONDITIONED SPACE) SHALL BE UNINSULATED METAL SPIRAL TYPE.
45. ALL DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS IN INCHES.
46. USE OF FLEXIBLE INSULATED DUCTWORK SHALL NOT EXCEED 6'-0" IN LENGTH FOR CONNECTING ANY INDIVIDUAL SUPPLY DIFFUSER OR RETURN GRILLE (6" W.G. RATED POSITIVE STATIC PRESSURE AND 0.5" W.G. RATED NEGATIVE STATIC PRESSURE. SUPPORT FLEXIBLE DUCTWORK AT NO GREATER THAN 3 FEET ON CENTERS WITH 1" WIDE 2- GAUGE GALVANIZED STEEL LOOPS. CONNECTIONS TO EXHAUST GRILLES SHALL BE MADE WITH RIGID DUCTWORK ONLY.
47. ALL NEW LOW PRESSURE/LOW VELOCITY (2" W.G. S.P. OR LESS) FLEXIBLE DUCTWORK SHALL BE EQUAL TO FLEXMASTER TYPE 5M WITH 1-1/2" THICK INSULATION AND ALUMINIZED INNER AND OUTER JACKET.
48. ALL NEW HIGH PRESSURE/HIGH VELOCITY (2"-6" W.G. S.P. MAX) FLEXIBLE DUCTWORK, WHERE ALLOWED BY CODE, SHALL BE EQUAL TO FLEXMASTER TYPE TL-M WITH 1-1/2" THICK INSULATION, ALUMINIZED OUTER JACKET AND FLEXIBLE ALUMINUM DUCTWORK CORE ON INSIDE. LENGTH OF CONNECTION SHALL NOT EXCEED 6'-0".
49. EXISTING FLEXIBLE DUCTWORK WHICH REMAINS IN PLACE MAY BE REUSED IF IT IS PROPERLY LABELED WITH U.L. 181 TAG. EXISTING FLEXIBLE DUCTWORK NOT U.L. APPROVED SHALL BE REMOVED AND REPLACED WITH THAT SPECIFIED IN NOTES ABOVE.
50. FINAL CONNECTION OF FLEXIBLE DUCTWORK TO RIGID RUN-OUT DUCTS AND TO CEILING DIFFUSERS SHALL BE MADE WITH 0.5" WIDE, POSITIVE-LOCKING STEEL STRAPS AND ADHESIVE. (APPLIES TO NEW FLEXIBLE DUCTWORK AND EXISTING FLEXIBLE DUCTWORK WHICH REMAINS.)
51. ALL 24" x 24" CEILING SUPPLY AIR DIFFUSERS SHALL BE ADJUSTED OR PROVIDED FOR 4-WAY THROW. EXCEPT AS NOTED OTHERWISE INDICATED BY DIRECTIONAL ARROWS ON DRAWINGS.
52. PROVIDE AND INSTALL U.L. LISTED TYPE 'B' FIRE DAMPERS AT ALL PENETRATIONS IN NEW AND EXISTING FIRE RATED WALLS AS REQUIRED. FIELD VERIFY ALL EXISTING DUCTWORK TO VERIFY FIRE DAMPER LOCATION REQUIREMENTS. PROVIDE COMBINATION FIRE/SMOKE DAMPERS AS SHOWN ON DRAWINGS. CLASS II FOR VELOCITIES UP TO 1,500 FPM. CLASS I FOR VELOCITIES ABOVE 1,500 FPM. FIRE/SMOKE DAMPERS SHALL BE DYNAMIC RATED. PROVIDE INSTALLATION INSTRUCTIONS FOR FIRE/SMOKE DAMPERS TO FIELD INSPECTOR AT TIME OF INSPECTION.
53. FIRE CAULK FIRE RATED WALLS, CEILINGS, AND FLOOR PENETRATION OPENINGS WITH HILTI (OR EQUAL) FIRE RATED CAULKING.
54. MECHANICAL CONTRACTOR SHALL INSTALL DUCT SMOKE DETECTOR IN MAIN AIR DUCT OF ALL MECHANICAL AIR-MOVING SYSTEMS WHERE REQUIRED BY CODE OR LOCAL AUTHORITIES. DETECTORS SHALL BE FURNISHED AND CONNECTED TO THE FIRE ALARM SYSTEM (WHERE APPLICABLE) AND HARDWIRED TO THE FAN UNIT FOR AUTOMATIC SHUTDOWN BY ELECTRICAL/FIRE ALARM CONTRACTOR.
55. TYPE B DOUBLE-WALL FLUE VENTS U.L. LISTED SHALL BE PROVIDED FOR ALL GAS-FIRED EQUIPMENT WITH ATMOSPHERIC BURNERS. DOUBLE-WALL PRESSURIZED SYSTEMS SHALL BE PROVIDED FOR FORCED-DRAFT TYPE BURNERS.
56. UNIT HEATER: FURNISH AND INSTALL HOT WATER PIPED UNIT HEATERS COMPLETE WITH ALL TEMPERATURE AND SAFETY CONTROLS FOR A COMPLETE OPERATIONAL SYSTEM.
57. EXHAUST FANS: FURNISH AND INSTALL UNITS COMPLETE WITH ALL SWITCHING AND SAFETY CONTROLS NECESSARY FOR A COMPLETE OPERATIONAL SYSTEM, INSTALL BACKDRAFT DAMPER IF NOT INTEGRAL TO THE EXHAUST FAN.
58. PROVIDE OPERATING MANUALS TO THE OWNER AND ENGINEER FOR ALL SYSTEMS AND EQUIPMENT INCLUDING MANUFACTURERS MAINTENANCE MANUALS. INCLUDE LUBRICATION, FILTER TYPES, AND SIZES, STARTING AND STOPPING PROCEDURES. LIST CONTRACTORS CONTACT INFORMATION (PHONE NUMBER AND EMAIL).
59. PROVIDE ALL MECHANICAL SYSTEM CONTROLS, CONTROLLERS, CONTROL TRANSFORMERS, DISCONNECTS, STARTERS, CONTROL WIRING, ASSOCIATED CONTROL POWER WIRING, AND ALL WORK NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
60. SLEEVES AND COLLARS SHALL BE PROVIDED FOR ALL DUCTWORK AND PIPES THROUGH WALLS, FLOORS, AND CEILINGS. PROVIDE CHROME PLATED ESCUTCHEONS FOR EXPOSED PIPING PENETRATIONS THROUGH CEILINGS, FLOORS, AND WALLS IN FINISHED AREAS. ALL WATER, SOIL, WASTE, AND VENT AND TRIM INCLUDING FITTINGS TO BE CHROME PLATED WHERE EXPOSED.
61. GUARANTEE ALL LABOR AND NEW EQUIPMENT FOR ONE YEAR FROM THE DATE OF ACCEPTANCE BY OWNER.
62. ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED MECHANICS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF UL AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT. ALL WORK SHALL MEET THE REQUIREMENTS OF LOCAL CODES.
63. CUT AND PATCH TO MATCH ADJACENT AREAS. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED.
64. ALL WORK IN FINISHED AREAS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED AS EXPOSED ON PLANS. PRIOR TO THE INSTALLATION OF ANY EXPOSED WORK THE CONTRACTOR SHALL VERIFY AND OBTAIN ARCHITECTURAL APPROVAL OF THE EXACT LOCATION AND INTENT.
65. RFI'S FROM CONTRACTORS SHALL INCLUDE AT LEAST ONE PROPOSED SOLUTION WHICH COMPLIES WITH THE INTENT OF CONTRACT DOCUMENTS.

TEST AND BALANCE REQUIREMENTS

1. ALL SYSTEMS SHALL BE TESTED AND BALANCED BY AN INDEPENDENT, APPROVED, TEST AND BALANCE COMPANY. COMPLY WITH BASE BUILDING SPECIFICATIONS. SUBMIT (2) COMPLETE REPORTS FOR REVIEW BY ENGINEER.
2. VERIFY AND SUBMIT VERIFICATION FOR EACH ZONE FULL COOLING, MINIMUM COOLING AND FULL HEATING CAPACITY AS REQUIRED. SUBMIT AIR QUANTITIES AT MINIMUM DESIGN STATIC PRESSURES AND ENTERING AND LEAVING TEMPERATURES FOR COOLING AND HEATING MODES.
3. ALL SUPPLY AIR DIFFUSERS AND EXHAUST REGISTERS SHALL BE BALANCED TO CFM SHOWN ON PLANS.
4. PROVIDE TEST AND BALANCE AND START-UP REPORT FOR ALL HVAC UNITS, AUX. AIR CONDITIONING SYSTEMS, AND EXHAUST FANS. REPORT SHALL INCLUDE ALL NAMEPLATE DATA, DESIGN DATA, MEASURED MOTOR AMP DRAW, VOLTAGE, CFM, SUCTION AND DISCHARGE STATIC PRESSURES, AND SUCTION AND DISCHARGE DRY BULB AND WET BULB TEMPERATURES.
5. MINIMUM OUTSIDE AIR CFM FOR ROOFTOP HVAC UNITS AND OTHER AIR HANDLING UNITS SHALL BE SET AS SCHEDULED.
6. CHECK AND CALIBRATE ALL THERMOSTATS. PROVIDE NOTIFICATION OF ANY MALFUNCTIONING THERMOSTATS TO THE MECHANICAL SUBCONTRACTOR, WHO SHALL REPAIR OR REPLACE THERMOSTATS AS REQUIRED.

   HEATING MODE - SET AND LOCK AT 72ºF T-R +/- 2ºF.
   COOLING MODE - SET AND LOCK AT 75ºF T-R +/- 2ºF.
7. TEST AND BALANCE REPORTS SHALL BE TYPEWRITTEN OR COMPUTER PRINTER GENERATED.

H.V.A.C. LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY DUCT UP		SIDE CONNECTION OF ROUND DUCT
	SUPPLY DUCT DOWN		TOP (OR BOTTOM) CONN OF ROUND DUCT
	RETURN OR EXHAUST DUCT UP		VOLUME DAMPER
	RETURN OR EXHAUST DUCT DOWN		SIDE CONNECTION OF RECTANGULAR DUCT
	ROUND DUCT SECTION UP		GALV STEEL DUCT
	ROUND DUCT SECTION DOWN		GALV STEEL DUCT ALT
	TRUNK DUCT ELBOW (TURNING VANES REQ'D)		INSUL FLEX ROUND DUCT
	CEILING SUPPLY REGISTER	(N)	NEW DEVICE
	BOOT FOR REGISTER	(E)	EXISTING DEVICE
	CEILING SUPPLY DIFFUSER	(R)	RELOCATED DEVICE
	CEILING RETURN AIR GRILLE	BDD	BACK DRAFT DAMPER
T	THERMOSTAT.	UC 3/4"	DOOR UNDERCUT
	WORK POINT (POINT OF CONNECTION)		

MECHANICAL EQUIPMENT SCHEDULE

(E)RTU-3	EXISTING ROOF TOP UNIT	3250 CFM
CD-1	SQUARE CEILING DIFFUSER	TITUS MODEL #TMS, STEEL, SQUARE, 24"x24" 4-WAY THROW DIFFUSER, WITH OBD, NECK SIZE AS NOTED ON PLANS.
RAG	RETURN AIR GRILLE	TITUS T-BAR RETURN AIR GRILLE, MODEL #PAR, STEEL, WHITE.

DIFFUSER NECK SIZE SCHEDULE

CFM RANGE	DIFFUSER NECK SIZE
0 - 125	6"Ø
126 - 250	8"Ø
251 - 400	10"Ø
401 - 550	12"Ø

1. PROVIDE RIGID RUN-OUT DUCT AND FLEXIBLE DUCT CONNECTION OF SAME SIZE AS DIFFUSER NECK DIAMETER.
2. INCREASE RUN-OUT DUCT SIZE BY ONE FULL SIZE WHEN LENGTH OF RUN-OUT DUCT FROM MAIN SUPPLY DUCT EXCEEDS 20'-0". PROVIDE TRANSITION AT THE DIFFUSER.

OUTDOOR AIR CALCULATION (IMC 403)

RTU-3

	SQUARE FOOTAGE	PEOPLE OUTDOOR AIRFLOW RATE Rp	AREA OUTDOOR AIRFLOW ZONE Ra	OCCUPANTS	O.A. (CFM)	O.A. WITH ZONE AIR DISTRIBUTION EFFECTIVENESS
BACK OF HOUSE/BAR	490	5	0.06	6	60	75

75 CFM O.A. / 750 CFM SUPPLIED = MINIMUM 10% O.A.

SET O.A. DAMPER TO MINIMUM 10% OF 3350 = 335 CFM

EXISTING ROOF TOP UNITS WERE PROVIDED WITH ADVANCED CARBON DIOXIDE (CO2) CONTROLS: CONTROLLER MONITORS CO2 LEVELS, AND MODULATES THE OUTSIDE AIR DAMPERS TO OPEN ON RISING CO2 CONCENTRATIONS, OVERRIDING NORMAL DAMPER SET POINT. SET TO MAINTAIN A CO2 SETPOINT OF 750 PPM.

ISSUE:
PERMIT 5/16/24

E.W.A.S. MEP ENGINEERING
10019 ELM ST.
DENVER, CO
303-404-9459

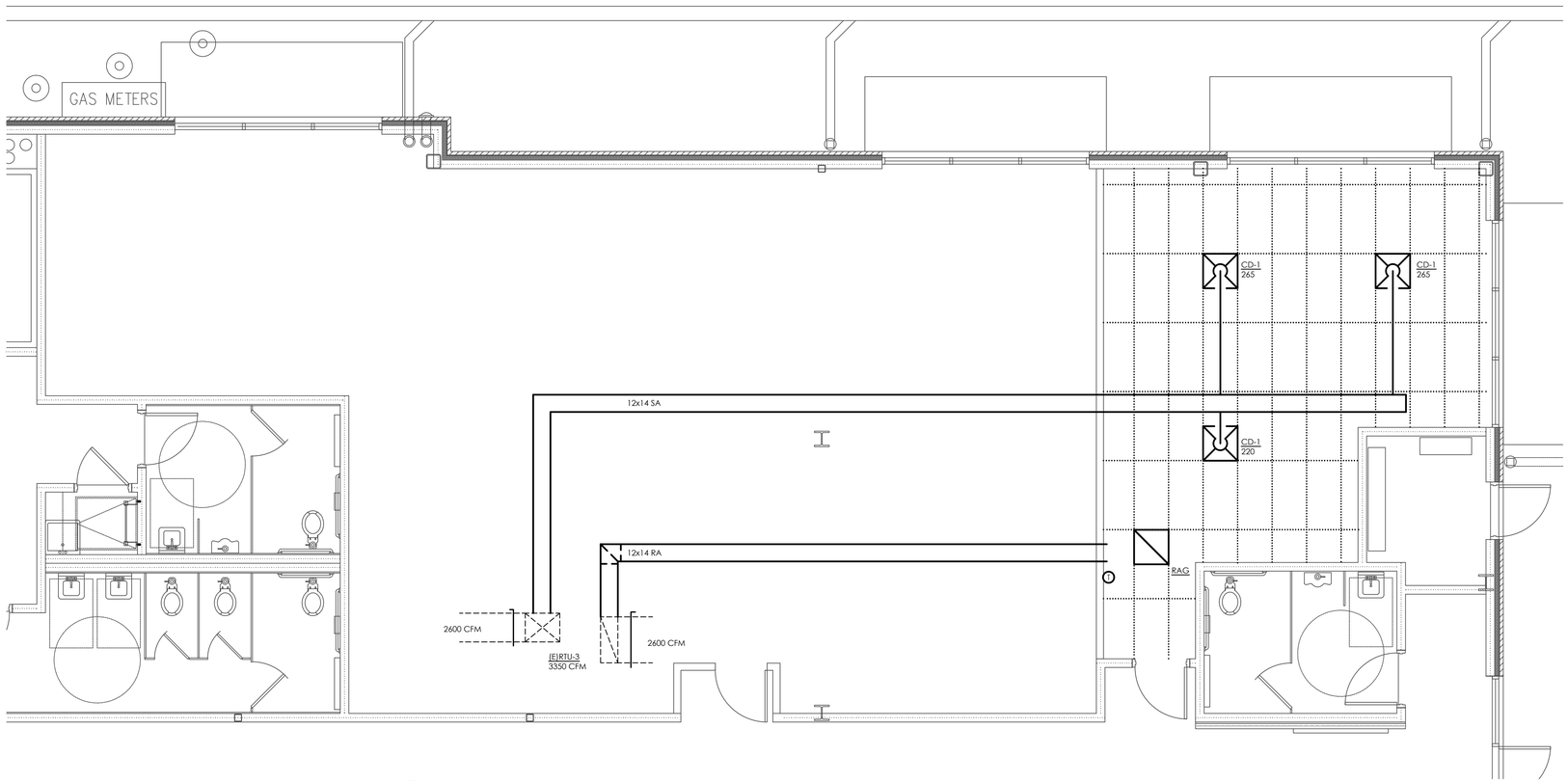
CLIENT: LAUNCH PAD

TITLE COMPANY
1077 CEDAR ST, SUITE B
BENNETT, CO

COLORADO REGISTERED JOHN C. KIRKHAM 37208 PROFESSIONAL ENGINEER
5-16-24

PROJECT: #24017

MO



NORTH

MECHANICAL PLAN

SCALE 1/4" = 1'-0"

ISSUE:

PERMIT 5/16/24

E.W.A.S. MEP ENGINEERING
10019 ELM ST.
DENVER, CO
303-404-9459

CLIENT:
LAUNCH PAD

TITLE COMPANY
1077 CEDAR ST, SUITE B
BENNETT, CO

COLORADO REGISTERED JOHN C. KITRINOS 37208 PROFESSIONAL ENGINEER

5-16-24

PROJECT: #24017

M1