TENANT UPFIT FOR

PROSPERITY[SM]

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

PROJECT INFORMATION

PROJECT DESCRIPTION AND ADDRESS:
TENANT UPFIT AT 419 OFFICE CENTER
PROSPERITY LIFE OPERATIONS CENTER
3825 ELECTRIC ROAD
ROANOKE, VA 24018

SITE INFORMATION:
TAX MAP NO.: 087.07-03-11.00-0000
ZONING: C-2C
FLOOD ZONE: N/A

BUILDING OWNER:
3825 ELECTRIC ROAD SW LLC
AGENT: JB GORIA PROPERTIES LLC
CONTACT: JOSEPH GORIA
C. (540) 682-0596
EMAIL: JBGORIA@GMAIL.COM

CONTRACTOR:
LIONBERGER CONSTRUCTION COMPANY
5903 STARKEY ROAD
ROANOKE, VA 24018
P. (540) 989-5301
CONTACT: BARBARA DOOLEY, P.M.
EMAIL: BDOOLEY@LIONBERGER.COM

TENANT:
PROSPERITY LIFE INSURANCE

PROJECT CONSULTANTS

PLUMBING/MECHANICAL ENGINEER:
MDR ENGINEERING, LLC
P.O. BOX 20812
ROANOKE, VA 24018

P. (540) 915-1576

CONTACT: MELINDA RUBLE, PE
E-MAIL: MELINDA@MDRENGINEERING.COM

CIVIL ENGINEER:
NOT APPLICABLE

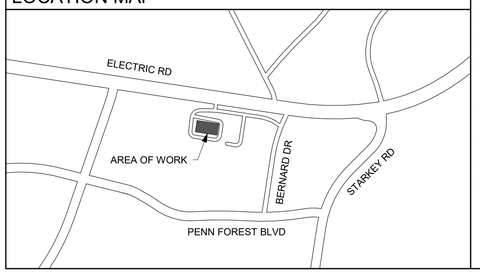
ELECTRICAL ENGINEER:
GIBSON ENGINEERING, LLC
2100 LUBNA DRIVE
CHRISTIANSBURG, VA 24073

P. (540) 998-6069

CONTACT: DANIEL GIBSON, PE, LEED AP
E-MAIL: GIBSONENGINEERINGLLC@GMAIL.COM

STRUCTURAL ENGINEER:
NOT APPLICABLE

LOCATION MAP



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BUILDING CODE DATA

APPLICABLE CODES: 2015 VIRGINIA CONSTRUCTION CODE (VCC), 2015 INTERNATIONAL BUILDING CODE, WHICH INCLUDES ALL CODES REFERENCED IN CHAPTER 1 - SECTION 101.2 AND ICC/ANSI 117.1

SMALL ASSEMBLY SPACES (SECTION 303.1.2): THE FOLLOWING ROOMS AND SPACES SHALL NOT BE CLASSIFIED AS ASSEMBLY OCCUPANCIES:
1. A ROOM OR SPACE USED FOR ASSEMBLY PURPOSES WITH AN OCCUPANT LOAD OF LESS THAN 50 PERSONS AND ACCESSORY TO ANOTHER OCCUPANCY SHALL BE CLASSIFIED AS A GROUP B OCCUPANCY OR AS PART OF THAT OCCUPANCY.
2. A ROOM OR SPACE USED FOR ASSEMBLY PURPOSES THAT IS LESS THAN 750 SQUARE FEET (70 M2) IN AREA AND ACCESSORY TO ANOTHER OCCUPANCY SHALL BE CLASSIFIED AS A GROUP B OCCUPANCY OR AS PART OF THAT OCCUPANCY.

USE GROUP CLASSIFICATION: B, BUSINESS (SECTION 304), WITH ACCESSORY USE A-3, ASSEMBLY (SECTION 303.4)

ALLOWABLE HEIGHT, STORIES AND AREAS (TABLES 504.3, 504.4, 506.2):
B, BUSINESS (NOT SPRINKLERED): 55', 3 STORIES, 23,000 SQ. FT.
ACTUAL HEIGHT, STORIES, AND AREAS: 15', 1 STORY, 11,626 SQ. FT.

FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (TABLE 601):
PRIMARY STRUCTURAL FRAME: 0 HOUR
BEARING WALLS - EXTERIOR: 0 HOUR
BEARING WALLS - INTERIOR: 0 HOUR
NONBEARING WALLS AND PARTITIONS - INTERIOR: 0 HOUR
FLOOR CONSTRUCTION & SECONDARY MEMBERS: 0 HOUR
ROOF CONSTRUCTION AND SECONDARY MEMBERS: 0 HOUR

FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE (TABLE 602): X ≥ 30 FT. = 0 HR. (NORTH, WEST, AND SOUTH FACADES); 10 ≤ X < 30 (TYPE II B) = 0 HR. (EAST FACADE)

TYPE OF CONSTRUCTION (SECTION 602.2): TYPE II B

AUTOMATIC SPRINKLER SYSTEMS (SECTION 903): BUILDING IS NOT EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM

NOTE: TENANT TO ADD FM-200 FIRE SUPPRESSION SYSTEM IN ROOMS 'INSERTER 104' AND 'DATA / IT 108'

FIRE ALARM AND DETECTION SYSTEMS (SECTION 907):
GROUP B (SECTION 907.2.2): BUILDING IS NOT EQUIPPED WITH A FIRE ALARM SYSTEM; NO QUALIFYING CONDITIONS EXIST

OCCUPANT LOAD - MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT (TABLE 1004.1.2):
A-3 - ASSEMBLY - UNCONCENTRATED: 1,150 SQ. FT. - SEE LIFE SAFETY PLAN = 78 OCC.
(15 SQ. FT. PER OCC. - CALCULATED PER ASSEMBLY SPACE)
B - BUSINESS: 10,476 SQ. FT. - SEE LIFE SAFETY PLAN = 110 OCC.
TOTAL OCCUPANT LOAD: 188 OCCUPANTS (SEE LIFE SAFETY PLAN)

COMMON PATH OF EGRESS TRAVEL DISTANCE (TABLE 1006.2.1):
USE GROUP B (WITHOUT SPRINKLER SYSTEM): 75 FT. MAX.
ACTUAL MAXIMUM COMMON PATH OF EGRESS TRAVEL: 62 FT.

MINIMUM NUMBER OF EXITS OR ACCESS EXITS PER STORY (TABLE 1006.3.1): 2, EXITS PROVIDED: 5

SIZE OF DOORS (SECTION 1010.1.1): ALL EGRESS DOORS ARE 36" WIDE WITH 32" MINIMUM CLEAR OPENING WIDTH

EXIT ACCESS TRAVEL DISTANCE (TABLE 1017.2):
USE GROUPS B (WITHOUT SPRINKLER SYSTEM): 200 FT. MAX.
ACTUAL MAXIMUM EXIT ACCESS TRAVEL DISTANCE: 96 FT.

REQUIRED CORRIDOR WIDTH (TABLE 1020.2): 44 INCHES MIN.
ACTUAL CORRIDOR WIDTH: 48" MINIMUM

ACCESSIBLE ROUTE (SECTION 1104.1): AT LEAST ONE ACCESSIBLE ROUTE IS REQUIRED

ACCESSIBLE ENTRANCES (SECTION 1105.1): AT LEAST 60% OF ALL PUBLIC ENTRANCES SHALL BE ACCESSIBLE

PARKING AND PASSENGER LOADING FACILITIES (SECTION 1106): ACCESSIBLE PARKING SPACES ARE PROVIDED AT EXISTING PARKING LOT

MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES (TABLE 2902.1): SEE MINIMUM PLUMBING FACILITIES CALCULATIONS BELOW:

MINIMUM PLUMBING FACILITIES (TABLE 2902.1) CALCULATIONS

OCCUPANCY		WATER CLOSETS (MALE, FEMALE)					LAVATORIES (MALE, FEMALE)				DRINKING FOUNTAIN		SRVC SINK
USE	LOAD	RATIO	M	RATIO	F		RATIO	M	RATIO	F	RATIO	DF	
A-3 ASSEMBLY	78	1 : 125	0.26	1 : 65	0.52		1 : 200	0.20	1 : 200	0.20	1 : 500	0.08	1 PER BLDG
OFFICES (BUSINESS)	110	1 : 25 ≤ 50 1 : 50 > 50	2.10	1 : 25 ≤ 50 1 : 50 > 50	2.10		1 : 40 ≤ 80 1 : 80 > 80	1.38	1 : 40 ≤ 80 1 : 80 > 80	1.38	1 : 100	1.10	
SUBTOTAL			2.36		2.62			1.57		1.57		1.18	1
REQUIRED			3		3			2		2		2	1
PROVIDED			3		3			2		2		2	00

SHEET INDEX

NOTE: DEMOLITION DRAWINGS WERE PREVIOUSLY SUBMITTED AND APPROVED, SEPARATELY.

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
WILLIAM H. HUME
No. 010127
DECEMBER . 31 . 2020
ARCHITECT

NO.	REVISIONS	DATE
1	STRUCTURAL	03.12.2021

TENANT UPFIT FOR

PROSPERITY[SM]

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	JLZ
CHECKED	DTS
JOB	20-058

COVER SHEET

SHEET
G-001

LIST OF ABBREVIATIONS

AB	ANCHOR BOLT	NIC	NOT IN CONTRACT
AC	AIR CONDITIONING	NO	NUMBER
ACT	ACOUSTICAL CEILING TILE	NOM	NOMINAL
AFF	ABOVE FINISH FLOOR	NTS	NOT TO SCALE
ALUM	ALUMINUM		
ANOD	ANODIZED	OA	OVERALL
APPROX	APPROXIMATE	OC	ON CENTER
ARCH	ARCHITECT	OD	OUTSIDE DIAMETER
AUTO	AUTOMATIC	OF	OUTSIDE FACE
		OH	OPPOSITE HAND
BD	BOARD	OPNG	OPENING
BIT	BITUMINOUS	OPP	OPPOSITE
BLDG	BUILDING	OSB	ORIENTED STRAND BOARD
BM	BEAM		
BRG	BEARING	PL	PLATE
BSMT	BASEMENT	PLAM	PLASTIC LAMINATE
BTM	BOTTOM	PLAS	PLASTER
		PNL	PANEL
CAB	CABINET	PREF	PREFINISHED
CI	CAST IRON	PROP	PROPERTY
CJ	CONTROL JOINT	PSF	POUNDS PER SQUARE FOOT
CL	CENTER LINE	PSI	POUNDS PER SQUARE INCH
CLG	CEILING	PT	PRESSURE TREATED
CLR	CLEAR	PTD	PAINTED
CMU	CONCRETE MASONRY UNIT	PVC	POLY VINYL CHLORIDE
CO	CASED OPENING	PVMT	PAVEMENT
COL	COLUMN	PWD	PLYWOOD
CONC	CONCRETE		
CONST	CONSTRUCTION	QT	QUARRY TILE
CONT	CONTINUOUS		
CONTR	CONTRACTOR	R	RISER
CPT	CARPET	RA	RETURN AIR
CR	CHAIR RAIL	RAD	RADIUS
CS	CONTINUOUS SHEATHING	RD	ROOF DRAIN
CSMT	CASEMENT	REC	RECEPTACLE
CT	CERAMIC TILE	REF	REFERENCE
CTR	COUNTER	REFR	REFRIGERATOR
		REG	REGISTER
DEM	DEMOLITION	REINF	REINFORCED
DEPT	DEPARTMENT	REM	REMOVE
DET	DETAIL	REQD	REQUIRED
DIA	DIAMETER	RES	RESILIENT
DIAG	DIAGONAL	RET	RETURN
DIM	DIMENSION	REV	REVISION
DISP	DISPENSER	RH	RIGHT HAND
DIV	DIVISION	RM	ROOM
DL	DEAD LOAD	RO	ROUGH OPENING
DN	DOWN	ROW	RIGHT OF WAY
DR	DOOR		
DS	DOWNSPOUT	SC	SOLID CORE
		SCH	SCHEDULE
EA	EACH	SEC	SECTION
EIFS	EXTERIOR INSULATION & FINISH SYSTEM	SHT	SHEET
		SHWR	SHOWER
EJ	EXPANSION JOINT	SIM	SIMILAR
ELEC	ELECTRIC	SL DR	SLIDING DOOR
ELEV	ELEVATOR	SPEC	SPECIFICATIONS
EMER	EMERGENCY	SPF	SPRUCE PINE FIR
ENCL	ENCLOSURE	SPR	SPRINKLER
ENG	ENGINEER	SQ FT	SQUARE FOOT
ENT	ENTRANCE	SS	STAINLESS STEEL
EQ	EQUAL	STO	STORAGE
EQUIP	EQUIPMENT	STRUC	STRUCTURAL
EST	ESTIMATE	SUSP	SUSPENDED
EW	EACH WAY	SYP	SOUTHERN YELLOW PINE
EWC	ELECTRIC WATER COOLER	SYS	SYSTEM
EX	EXISTING		
EXH	EXHAUST	T	TREAD
EXO	EXPOSED	T & G	TONGUE & GROOVE
EXT	EXTERIOR	TCP	THIN COAT PLASTER
EXST	EXISTING	TEL	TELEPHONE
		THK	THICK
FD	FLOOR DRAIN	THRU	THROUGH
FDN	FOUNDATION	TOIL	TOILET
FEC	FIRE EXTINGUISHER CABINET	TOS	TOP OF STEEL
FHC	FIRE HOSE CABINET	TOW	TOP OF WALL
FIN	FINISH	TV	TELEVISION
FIN FLR	FINISH FLOOR	TYP	TYPICAL
FLR	FLOOR		
FLUOR	FLUORESCENT	UNF	UNFINISHED
FRT	FIRE RETARDANT TREATED	UNO	UNLESS NOTED OTHERWISE
FT	FOOT, FEET		
FTG	FOOTING	VB	VAPOR BARRIER
		VCT	VINYL COMPOSITION TILE
GA	GAGE OR GAUGE	VERT	VERTICAL
GALV	GALVANIZED	VIF	VERIFY IN FIELD
GC	GENERAL CONTRACTOR	VTR	VENT TO ROOF
GL	GLASS	VWC	VINYL WALL COVERING
GWB	GYPSUM WALL BOARD		
GYP BD	GYPSUM BOARD	W	WIDE, WIDTH
		W/	WITH
HC	HOLLOW CORE	W/O	WITHOUT
HDCP	HANDICAP	WB	WOOD BASE
HDR	HEADER	WC	WATER CLOSET
HDWE	HARDWARE	WD	WOOD
HM	HOLLOW METAL	WG	WIRE GLASS
HOR	HORIZONTAL	WH	WALL HUNG
HTG	HEATING	WIN	WINDOW
HT	HEIGHT	WP	WEATHERPROOF
HVAC	HEATING / VENTILATION / AIR CONDITIONING	WSCT	WAINSCOTING
		WSP	WOOD STRUCTURAL PANEL
HWD	HARDWOOD	WWF	WELDED WIRE FABRIC
HWH	HOT WATER HEATER		
ID	INSIDE DIAMETER		
INCL	INCLUDING, INCLUDED		
INSUL	INSULATE, INSULATION		
INTER	INTERIOR		
JAN	JANITOR		
KD	KILN DRIED		
KIT	KITCHEN		
LAM	LAMINATE		
LAV	LAVATORY		
LB	POUND		
LBL	LABEL		
LG	LONG, LENGTH		
LH	LEFT HAND		
LL	LIVE LOAD		
LTL	LINTEL		
LVR	LOUVER		
LW	LIGHTWEIGHT		
MAS	MASONRY		
MAT	MATERIAL		
MAX	MAXIMUM		
MECH	MECHANICAL		
MFR	MANUFACTURER		
MH	MANHOLE		
MIN	MINIMUM		
MISC	MISCELLANEOUS		
MLD	MOLDING		
MO	MASONRY OPENING		
MTG	MOUNTING		
MTL	METAL		

SYMBOLS

ROOM NAME
101 — ROOM REFERENCE

1 / A101 SIM — SECTION REFERENCE

1 / A101 / 1 / 1 — ELEVATION REFERENCE

1 / A101 SIM — CALLOUT REFERENCE

101 — DOOR REFERENCE

NEW DOOR - 90 DEG. SWING

EXISTING DOOR - 45 DEG. SWING

01 — STOREFRONT REFERENCE

2 — WINDOW REFERENCE

3 — GLAZING REFERENCE

4 — KEYNOTE REFERENCE

5 — REVISION REFERENCE

6 — DEMOLITION REFERENCE

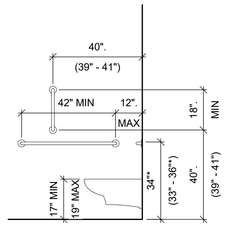
WALL REFERENCE

7 — COLUMN REFERENCE

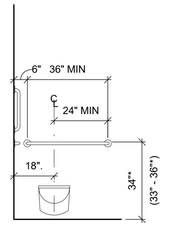
ACCESSORY & FIXTURE MOUNTING DIMENSIONS

NOTES:

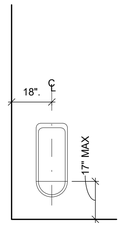
1. ACCESSORIES AND/OR FIXTURES SHOWN BELOW MAY OR MAY NOT BE UTILIZED IN THIS PROJECT.
2. ACCESSORIES AND/OR FIXTURES SHOWN BELOW MAY OR MAY NOT BE REPRESENTATIVE OF THE ACCESSORIES AND/OR FIXTURES SPECIFIED FOR THIS PROJECT.
3. ALL MOUNTING DIMENSIONS ARE TYPICAL UNLESS NOTED OTHERWISE.
4. SEE TOILET ACCESSORY SCHEDULE FOR TOILET ACCESSORY INFORMATION, IF APPLICABLE.



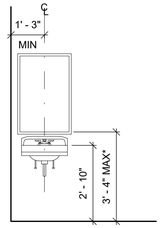
GRAB BARS & TOILET - SIDE WALL
* TO TOP OF GRIPPING SURFACE



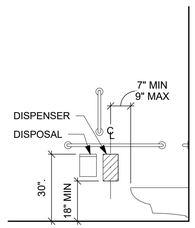
GRAB BARS & TOILET - FRONT WALL
* TO TOP OF GRIPPING SURFACE



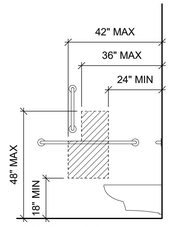
URINAL - WALL HUNG



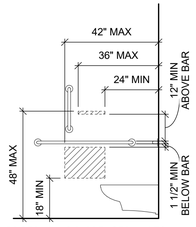
WALL HUNG SINK & MIRROR
*TO BOTTOM OF REFLECTIVE SURFACE



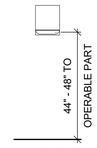
TOILET TISSUE DISPENSER & SANITARY NAPKIN DISPOSAL



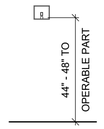
RECESSED DISPENSER LIMITS
OUTLET OF DISPENSER TO BE WITHIN SHADED AREA



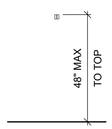
PROTRUDING DISPENSER LIMITS
OUTLET OF DISPENSER TO BE WITHIN SHADED AREA



PAPER TOWEL DISPENSER

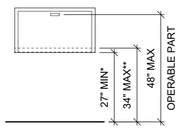


SOAP DISPENSER

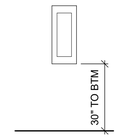


UTILITY/COAT HOOK

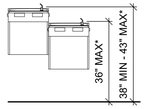
MOP HOLDER



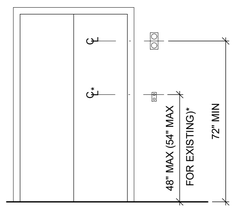
BABY CHANGING STATION
* TO BOTTOM OF WORK SURFACE
** TO HIGHEST PART OF WORK SURFACE



FIRE EXTINGUISHER CABINET



HI/LO DRINKING FOUNTAIN
*SPOUT OUTLET HEIGHT



ELEVATOR CALL BUTTONS AND SIGNALS
*CL OF HIGHEST OPERABLE PART

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION MATERIAL, WORKMANSHIP, AND DESIGN SHALL CONFORM TO THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, 2015 EDITION, AND OTHER LOCAL CODES PREVAILING AT TIME OF CONSTRUCTION.

2. THE GENERAL CONTRACTOR SHALL COORDINATE ALL TRADES (ARCHITECTURAL, MECHANICAL, ELECTRICAL, STRUCTURAL) WITH THESE DOCUMENTS. THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED OF ANY OMISSIONS.

3. ALL REFERENCES TO THE STANDARD SPECIFICATIONS OF ANY TECHNICAL SOCIETY, ORGANIZATION, OR ASSOCIATION, OR TO CODES OF LOCAL OR STATE AUTHORITIES SHALL MEAN THE LATEST STANDARD, CODE, SPECIFICATION, OR TENTATIVE SPECIFICATIONS ADOPTED AND PUBLISHED AT THE DATE OF TAKING BIDS, UNLESS OTHERWISE NOTED.

4. ALL DIMENSIONS SHOWN ARE TO OUTSIDE FACE OF FRAMING / MASONRY UNLESS NOTED OTHERWISE.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, AND PROCEDURES OF CONSTRUCTION.

6. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY ANY EXISTING FIELD CONDITIONS, MEASUREMENTS, AND LOCATIONS AFFECTING THEIR WORK.

7. NOTIFY ARCHITECT OF ANY DISCREPANCIES AND EXISTING CONDITIONS NOT COMPLYING WITH DOCUMENTS.

8. DO NOT SCALE OFF OF DRAWINGS. ALWAYS REFER TO DIMENSIONS.

GENERAL DEMOLITION NOTES

1. BEFORE WORK HAS BEGUN, CONTRACTORS SHALL MAKE A THOROUGH SURVEY OF THE BUILDING AND NOTIFY THE OWNER, IN WRITING, OF ALL DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN ON THE DRAWINGS. FAILURE BY THE CONTRACTOR TO HAVE ACQUAINTED HIMSELF WITH AVAILABLE INFORMATION CONCERNING EXISTING CONDITIONS SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITIES OF PERFORMANCE OF WORK IN ACCORDANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS.

2. THESE DRAWINGS HAVE BEEN DEVELOPED FROM EXISTING DRAWINGS AND PHOTOS AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS AND NOTIFY THE ARCHITECT, IN WRITING, OF ANY WORK DESCRIBED IN THE CONTRACT DOCUMENTS WHICH CANNOT BE PERFORMED DUE TO EXISTING CONDITIONS.

3. REMOVE OR MODIFY EXISTING CONSTRUCTION AS SHOWN. TYPICAL WALL REMOVAL INCLUDES FINISHES, BASES, DOORS AND FRAMES, MECHANICAL, PLUMBING AND ELECTRICAL SYSTEMS CONTAINED THERE IN UNLESS NOTED OTHERWISE.

4. EXISTING EXIT DOORS, ACCESS TO EXITS AND FIRE PROTECTION SHALL BE MAINTAINED DURING DEMOLITION. ALL FIRE PROTECTION, ACCESS, AND EXITS SHALL BE OPERATIONAL AFTER COMPLETION OF DEMOLITION WORK.

5. VERIFY WITH OWNER FINAL DISPOSITION OF ALL MILLWORK, SHELVING, DOORS, ACCESSORIES AND EQUIPMENT REMOVED.

6. PROTECT FROM DAMAGE ALL MATERIALS TO REMAIN.

7. AREAS OF EXISTING SURFACES NOT SCHEDULED FOR DEMOLITION WHICH BECOME DAMAGED, SHALL BE PATCHED OR REPAIRED TO MATCH ADJACENT SURFACES THICKNESS, FINISH, AND TEXTURE. NEW WORK SHALL BE PRIMED PRIOR TO RECEIVING FINISH COATS.

8. REFERENCE PLANS AND DETAILS TO DETERMINE THE EXTENT OF DEMOLITION WORK.

*** NOTE: DEMOLITION DRAWINGS PERMITTED SEPARATELY. SEE DEMOLITION DRAWINGS SET FOR MORE INFORMATION ***

INTERACTIVE DESIGN

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
WILLIAM H. HUME
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DATE	DECEMBER . 31 . 2020
DRAWN	JLZ
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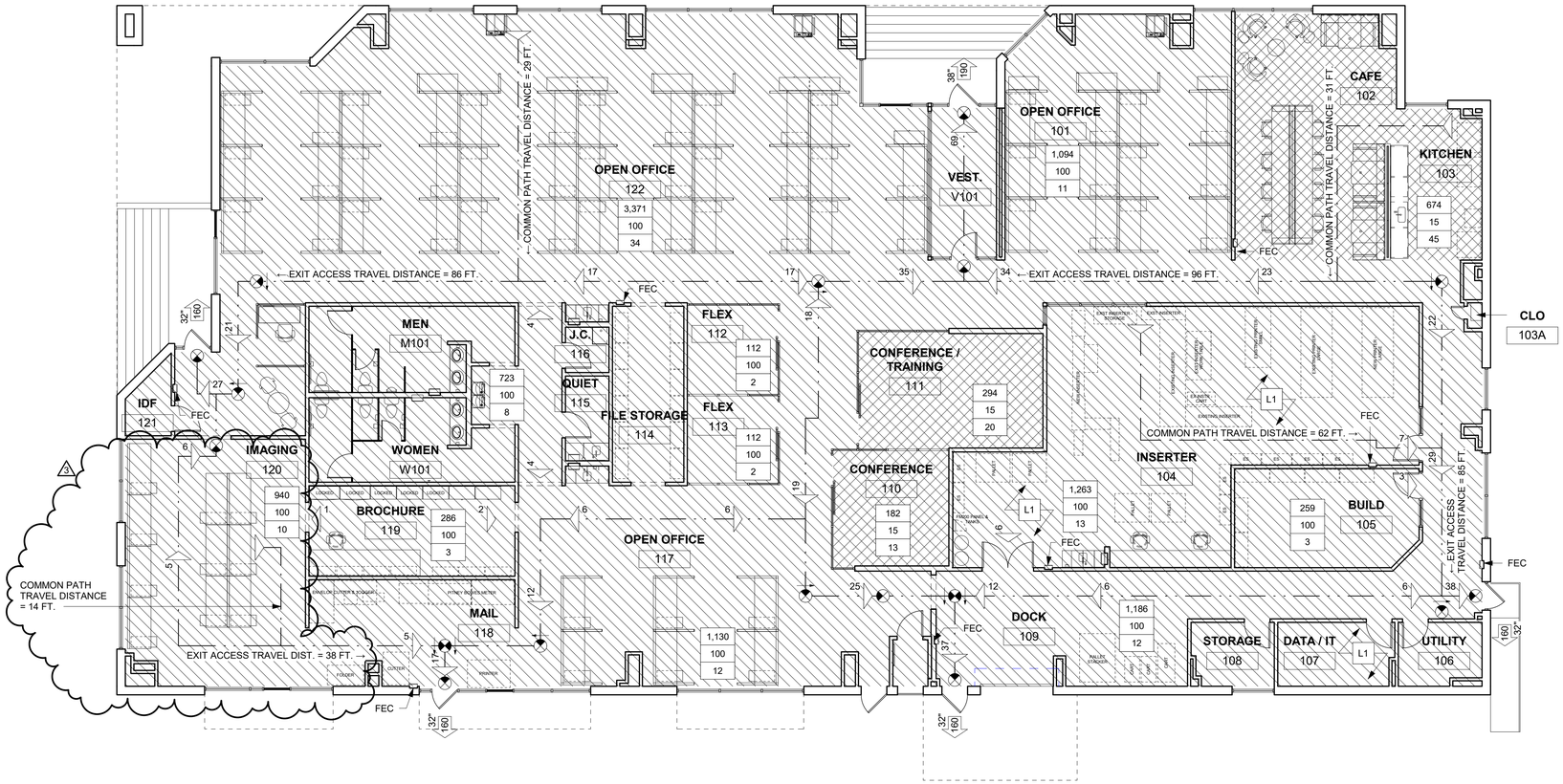
GENERAL NOTES AND INFORMATION

SHEET
G-002

1/3/2021 5:51:57 PM



1 G-003 LIFE SAFETY PLAN

1/8" = 1'-0"

GENERAL LIFE SAFETY NOTES

1. FIRE-RESISTANCE ASSEMBLY MARKING AND IDENTIFICATION (VCC SECTION 703.7): WHERE THERE IS CONCEALED FLOOR, FLOOR-CEILING, OR ATTIC SPACE, THE FIRE WALLS, FIRE BARRIERS, FIRE PARTITION, SMOKE BARRIERS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE DESIGNATED ABOVE CEILINGS AND ON THE INSIDE OF ALL CEILING ACCESS DOORS THAT PROVIDE ACCESS TO SUCH FIRE RATED ASSEMBLIES BY SIGNAGE HAVING LETTERS NO SMALLER THAN 1" IN HEIGHT. SUCH SIGNAGE SHALL INDICATE THE FIRE-RESISTANCE RATING OF THE ASSEMBLY AND THE TYPE OF ASSEMBLY AND BE PROVIDED AT HORIZONTAL INTERVALS OF NO MORE THEN EIGHT FEET. AS EXAMPLE OF SUGGESTED FORMATTING FOR THE SIGNAGE WOULD BE "ONE HOUR FIRE PARTITION"

2. SEE ELECTRICAL DRAWINGS FOR EMERGENCY EGRESS LIGHTING.

NOTES LEGEND

A - MISCELLANEOUS	G - DOORS / GLAZINGS	P - PLUMBING
C - CIVIL	K - FURNITURE / FINISHES	R- ROOF
E - ELECTRICAL	L - LIFE SAFETY	S - STRUCTURAL
F - FLOORS / CEILINGS	M - MECHANICAL	W - WALLS

LIFE SAFETY PLAN NOTES

L1. FM-200 FIRE SUPPRESSION SYSTEM, DESIGNED AND PROVIDED BY CONTRACTOR, IN ROOMS 'INSERTER 104' AND 'DATA/IT 107'

LIFE SAFETY OCCUPANCY LEGEND

ASSEMBLY - UNCONCENTRATED = 1,150 SQ. FT. / 78 OCCUPANTS

BUSINESS AREAS = 10,476 SQ. FT. / 110 OCCUPANT

TOTAL OCCUPANT LOAD = 188 OCCUPANTS

LIFE SAFETY PLAN LEGEND

OCCUPANT LOAD CALCULATIONS

----- FLOOR AREA IN S.F.
----- ALLOWABLE S.F. PER OCCUPANT
----- OCCUPANT LOAD

MEANS OF EGRESS

NUMBER OF OCCUPANTS ALONG EGRESS PATH (000)
EXIT ACCESS PATH OF EGRESS
COMMON PATH OF TRAVEL

EGRESS CAPACITY OF EXITS

32" WIDTH OF EGRESS COMPONENT
001 CAPACITY OF EGRESS COMPONENT

FEC FIRE EXTINGUISHER CABINET TO BE MODEL 2409-R3, ROLLED EDGE, SEMI-RECESSED 2 1/2" BY LARSEN'S MANUFACTURING CO. CABINET TO BE STEEL WITH WHITE BAKED ENAMEL FINISH WITH VERTICAL DUO DOOR AND CLEAR ACRYLIC GLAZING. PROVIDE MP5, 2A-10B:C FIRE EXTINGUISHER IN CABINET. MOUNT BOTTOM OF CABINET 30" AFF.

EXIT LIGHT WITH BATTERY BACKUP - ARROW INDICATES DIRECTION OF EGRESS

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

0 8' 16' 24' 32'

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
WILLIAM H. HUME
No. 010127
DECEMBER . 31 . 2020
ARCHITECT

NO.	REVISIONS	DATE
3	DESIGN CHANGES	06.11.2021

TENANT UPFIT FOR

PROSPERITY™

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
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JOB	20-058

LIFE SAFETY PLAN

SHEET G-003

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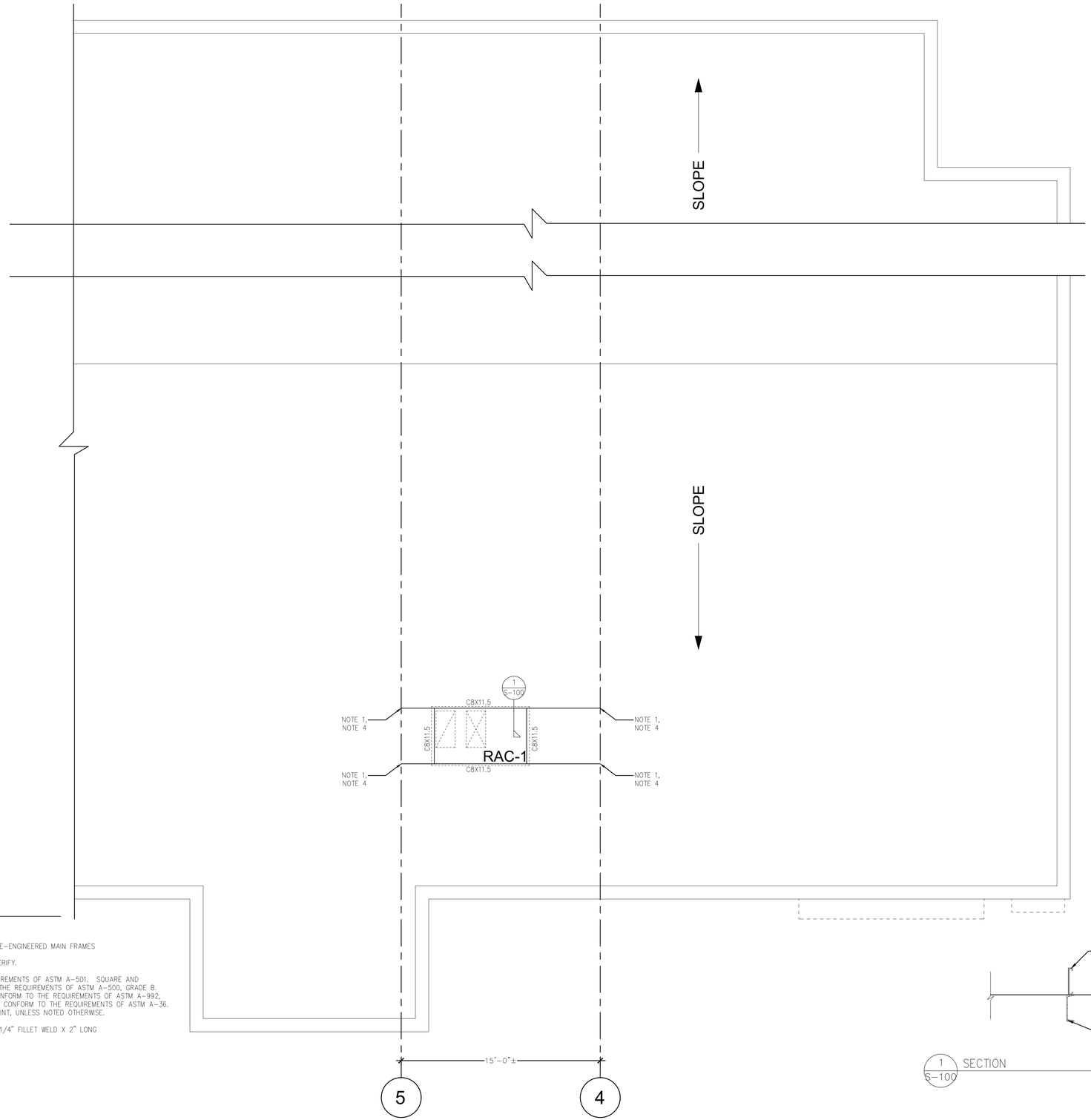

PARTIAL ROOF FRAMING PLAN

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

1. NOTCH C8X11.5 AS REQUIRED FOR BEARING ON PRE-ENGINEERED MAIN FRAMES
2. RAC-1 UNIT WEIGHT = 1225.00 POUNDS - G.C. VERIFY.
3. ROUND STEEL PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-501. SQUARE AND RECTANGULAR STEEL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500, GRADE B. ALL WIDE FLANGE BEAMS AND COLUMNS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-992, GRADE 50. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-36. ALL STEEL SHALL RECEIVE ONE COAT OF SHOP PAINT, UNLESS NOTED OTHERWISE.
4. PROVIDE A MINIMUM OF 2 1/2" OF BEARING WITH 1/4" FILLET WELD X 2" LONG TO WELD C8X11.5 TO MAIN FRAME.
5. G.C. SHALL FIELD VERIFY ALL DIMENSIONS.

1/S-100 SECTION

SCALE: N.T.S.

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

DAY & KINDER CONSULTING ENGINEERS, PLLC

3959 ELECTRIC ROAD
SUITE 348
ROANOKE, VIRGINIA 24018
PHONE: 540 774-5706
COMM. NO. 21-059

COMMONWEALTH OF VIRGINIA
JAMES F. KINDER, JR.
Lic. No. 015761
3-12-2021
PROFESSIONAL ENGINEER

NO.	REVISIONS	DATE
1	STRUCTURAL	3-12-2021

TENANT UPFIT FOR

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ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	MARCH 12, 2021
DRAWN	BMB
CHECKED	JFK
JOB	20-058

PARTIAL ROOF FRAMING PLAN

SHEET

S-100

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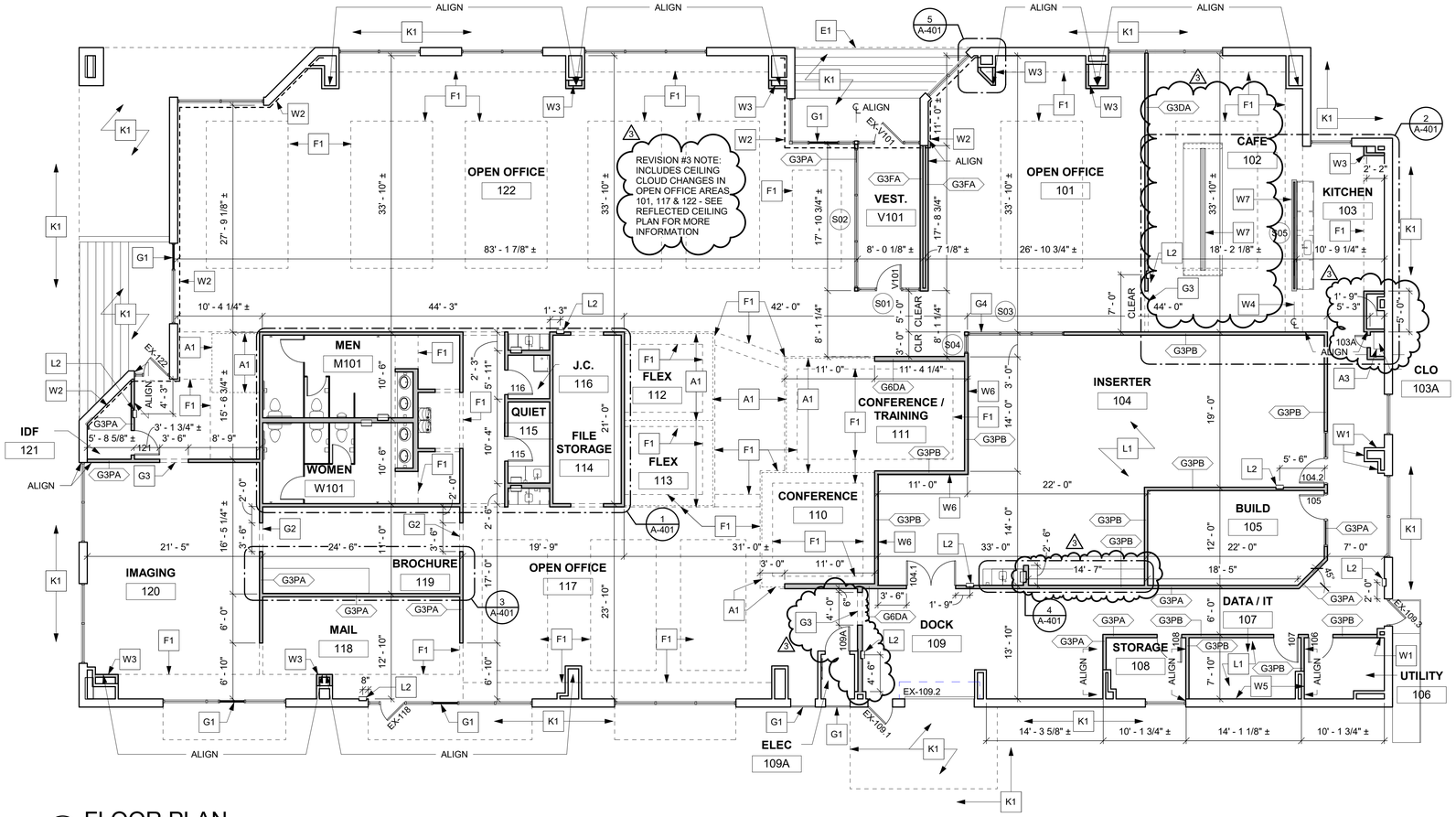

1 A-101 FLOOR PLAN
1/8" = 1'-0"

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GENERAL CONSTRUCTION NOTES

1. SEE G-002 FOR GENERAL CONSTRUCTION NOTES.

2. PROVIDE BLOCKING FOR ALL WALL- AND CEILING-MOUNTED FURNITURE, EQUIPMENT, CASEWORK, AND DEVICES, AS REQUIRED. SEE A-103 FOR MORE INFORMATION; NOTE, THIS INFORMATION IS NOT COMPREHENSIVE; CONSULT WITH TENANT FOR OTHER REQUIREMENTS.

3. SEE ENLARGED PLANS (A-401) FOR TAGS & NOTES NOT SHOWN ON THIS SHEET.

4. DIMENSIONS AT EXISTING EXTERIOR WALLS ARE SHOWN TO FINISH GWB FACE OF EXISTING EXTERIOR WALL.

NOTES LEGEND

A - MISCELLANEOUS	G - DOORS / GLAZINGS	P - PLUMBING
C - CIVIL	K - FURNITURE / FINISHES	R- ROOF
E - ELECTRICAL	L - LIFE SAFETY	S - STRUCTURAL
F - FLOORS / CEILINGS	M - MECHANICAL	W - WALLS

FLOOR PLAN NOTES

A1. MOVEABLE WALL SYSTEM, PROVIDED AND INSTALLED BY OWNER, TO ENCLOSE ROOM - PROVIDE BLOCKING AS REQUIRED - SEE FURNITURE & EQUIPMENT PLAN FOR MORE INFORMATION (TYP)

A2. TOILET PARTITIONS AND DOORS - PROVIDE ADA COMPLIANT DOORS AT ADA STALLS - SEE FINISH KEY FOR MORE INFORMATION (TYP)

A3. PROVIDE ADJUSTABLE WHITE LAMINATE, OR THERMOSET DECORATIVE FINISH (MELAMINE), SHELVING, (5) @ 2' - 0" W X 1' - 3" D - PROVIDE 6' - 0" H STANDARDS WITH BRACKETS SUITABLE FOR DEPTH OF SHELVES, BOTTOM OF STANDARDS @ 1' - 6" AFF - PROVIDE BLOCKING FOR STANDARDS (TYP)

E1. PROVIDE ELECTRICAL CIRCUIT FOR FUTURE WALL-MOUNTED SIGNAGE AT EXISTING EIFS BAND - CONSULT WITH TENANT FOR PREFERRED LOCATION - SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION

E2. OUTLET SHOWN FOR LOCATION REFERENCE ONLY - SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION (TYP)

F1. GWB BULKHEAD, OR ACT CLOUD, ABOVE - SEE REFLECTED CEILING PLAN FOR MORE INFORMATION (TYP)

G1. EXISTING DOOR TO BE INACTIVE - REMOVE AND/OR PROVIDE HARDWARE AS REQUIRED TO RENDER INACTIVE (TYP)

G2. OPENING WITH DRYWALL RETURNS - 7' - 0" H, SEE FLOOR PLAN, OR ENLARGED PLAN, FOR WIDTH - PAINT TO MATCH ADJACENT WALL - PROVIDE (4) 48" H CORNER GUARDS, SEE FINISH SCHEDULE FOR MORE INFORMATION (TYP)

G3. OPENING WITH DRYWALL RETURNS - 8' - 0" H, SEE FLOOR PLAN, OR ENLARGED PLAN, FOR WIDTH - PAINT TO MATCH ADJACENT WALL - PROVIDE (4) 48" H CORNER GUARDS, SEE FINISH SCHEDULE FOR MORE INFORMATION (TYP)

G4. CAULK ALL SEAMS OF WINDOW FRAME TO PROVIDE AIR-TIGHT SEALS DUE TO FM-200 SYSTEM FIRE SUPPRESSION SYSTEM HOUSED WITHIN ROOM (TYP)

K1. THOROUGHLY CLEAN EXISTING EIFS BAND AND SOFFIT & INFILL / PATCH / REPAIR AND ANY EXISTING HOLES AND DAMAGE AT ALL EXTERIOR SURFACES - PREPARE FOR NEW PAINT - SEE FINISH KEY FOR MORE INFORMATION (TYP)

L1. PROVIDE FM-200 FIRE SUPPRESSION SYSTEM IN ROOMS 'INSERTER 104' & 'DATA/IT 107' - DESIGNED AND PROVIDED BY CONTRACTOR - SEE A-103 FOR CONTROL PANEL AND TANK LOCATIONS - ANY AND ALL PENETRATIONS TO BE CAULKED AND SEALED (TYP)

L2. FIRE EXTINGUISHER AND CABINET - SEE LIFE SAFETY PLAN FOR MORE INFORMATION (TYP)

P1. PLUMBING FIXTURE - SEE PLUMBING DRAWINGS FOR MORE INFORMATION (TYP)

P2. PROVIDE DIRECT WATER SUPPLY FOR APPLIANCE - SEE PLUMBING DRAWINGS FOR MORE INFORMATION (TYP)

R1. REPAIR, PATCH, AND REPLACE AS NEEDED ROOF INSULATION AT EAVES OF METAL BUILDING AT AREAS OF DAMAGE, SEPARATION, ETC. - IF REPLACED, MATCH EXISTING (TYP)

W1. AFTER DEMOLITION, CONTRACTOR TO VERIFY IF THIS FURRING IS REQUIRED TO REMAIN FOR THE PURPOSES OF COVERING EXISTING INFRASTRUCTURE - CONSULT WITH ARCHITECT REGARDING POSSIBLE REMOVAL OF FURRING

W2. PROVIDE RIGID INSULATION AND GWB AT ALL EXPOSED AREAS, OF ALL WALLS, THAT BORDER EIFS SOFFIT (SHOWN WITH DASHES LINE) (TYP)

W3. PROVIDE FURRING TYPE 'G3F' TO EXTEND EXISTING COLUMN WRAP AS SHOWN - IN AREAS OF EXISTING SLOPED COLUMN WRAP, PROVIDE WALL TYPE 'G3F' AS REQUIRED TO INFILL SLOPE TO FINISH FLOOR (TYP)

W4. CENTERLINE OF HALF WALL AND GLAZING TO ALIGN WITH CENTERLINE OF BULKHEAD ABOVE

W5. ALTER EXISTING WALL AS REQUIRED TO PROVIDE PLYWOOD CAP AS SHOWN IN WALL TYPE 'G3PB' (TYP)

W6. PROVIDE ADDITIONAL LAYER OF 5/8" GWB AT FULL LENGTH OF WALL - HEIGHT TO EXTEND TO NEW CEILING JOISTS ABOVE (TYP)

W7. 4' - 6" H WALL @ KITCHEN, OR, 5' - 6" H WALL @ CAFE - 6" METAL STUDS (20 GA.) @ 16" O.C. WITH 5/8" GWB, BOTH SIDES - PROVIDE 3" ACOUSTIC INSULATION AND HARDWOOD CAP - SEE CASEWORK DETAIL, A-403, FOR MORE INFORMATION (TYP)

FLOOR PLAN LEGEND

INDICATES EXISTING WALL CONSTRUCTION

INDICATES NEW WALL CONSTRUCTION

90 DEG. SWING INDICATES NEW DOOR

45 DEG. SWING INDICATES EXISTING DOOR

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

0 8' 16' 24' 32'

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
WILLIAM H. HUME
No. 010127
DECEMBER . 31 . 2020
ARCHITECT

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TENANT UPFIT FOR

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ELECTRIC ROAD

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ROANOKE, VA 24018

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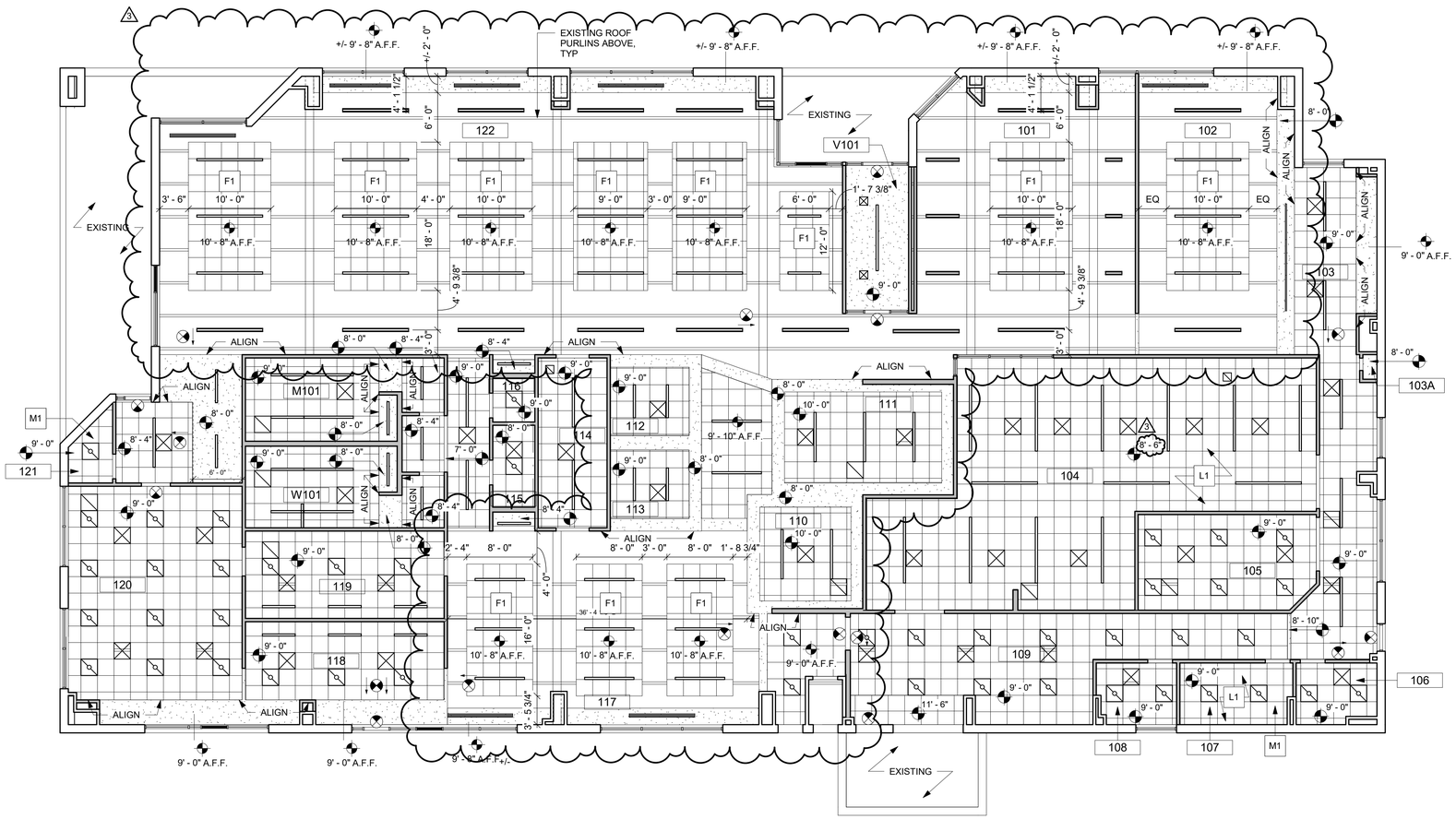
FLOOR PLAN

SHEET
A-101



1 A-102 REFLECTED CEILING PLAN
1/8" = 1'-0"

GENERAL CEILING NOTES

1. SEE ELECTRICAL DRAWINGS FOR EMERGENCY EGRESS LIGHTING, EXTERIOR LIGHT FIXTURES, AND OTHER DEVICES NOT SHOWN ON THESE DRAWINGS.

2. ALL CEILING GRIDS TO BE CENTERED IN SPACE AS SHOWN, UNLESS NOTED OTHERWISE. (SEE NOTE F3 BELOW)

3. PROVIDE BLOCKING ABOVE SCHEDULED CEILING, AS REQUIRED, FOR WINDOW SHADES. SEE A-602 FOR MORE INFORMATION.

4. DIMENSIONS SHOWN AT BULKHEADS TO FACE OF STUD.

5. ALL MECHANICAL DEVICES LOCATED ON GWB CEILINGS AND COLOR ACT CEILINGS (SEE ACT-2 ON FINISH KEY AND SCHEDULE) TO BE PAINTED TO MATCH CEILING.

6. ALIGN SLOT FIXTURE WITH CEILING GRID AS SHOWN ON REFLECTED CEILING PLAN.

NOTES LEGEND

A - MISCELLANEOUS	G - DOORS / GLAZINGS	P - PLUMBING
C - CIVIL	K - FURNITURE / FINISHES	R- ROOF
E - ELECTRICAL	L - LIFE SAFETY	S - STRUCTURAL
F - FLOORS / CEILINGS	M - MECHANICAL	W - WALLS

REFLECTED CEILING PLAN NOTES

3

F1. ACOUSTIC CEILING TILE & GRID CLOUD - PROVIDE 6" H PERIMETER TRIM (TYP)

F2. NOT USED

F3. NOT USED

L1. FM-200 FIRE SUPPRESSION SYSTEM TO BE INSTALLED IN ROOMS 'INSERTER 104' AND 'DATA/IT 107' - PROVIDE HOLD-DOWN CLIPS AT ALL CEILING TILES HOUSING AN FM-200 SYSTEM NOZZLE - CLIPS TO ALSO BE INSTALLED AT ALL TILES AROUND THE PERIMETER OF A NOZZLE-HOUSING TILE FOR THE DISTANCE OF TWO TILES, IN ALL DIRECTIONS (TYP)

M1. NO MECHANICAL DEVICES SHOWN - SEE MECHANICAL DRAWINGS FOR MORE INFORMATION (TYP)

REFLECTED CEILING PLAN LEGEND

- ACOUSTICAL CEILING TILE *SEE FINISH KEY AND SCHEDULE FOR VARIATIONS IN ACT TYPES & COLORS*
- GWB CEILING
- EXPOSED STRUCTURE AT CEILING
- CEILING HEIGHT (ABOVE FINISH FLOOR)
- EXIT SIGN - CEILING MOUNTED
- EXIT SIGN - WALL MOUNTED
- EXIT SIGN WITH INTEGRAL EMERGENCY EGRESS LIGHTS
- EMERGENCY EGRESS LIGHT
- CAN LIGHT
- PENDANT LIGHT
- 2' X 2' RECESSED LIGHT FIXTURE
- SLOT LIGHT FIXTURE - VARIOUS LENGTHS
- 2' X 2' SUPPLY DIFFUSER
- 2' X 2' RETURN GRILLE

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

0 8' 16' 24' 32'

INTERACTIVE DESIGN

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
WILLIAM H. HUME V
No. 010127
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ROANOKE, VA 24018

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REFLECTED CEILING PLAN

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A-102

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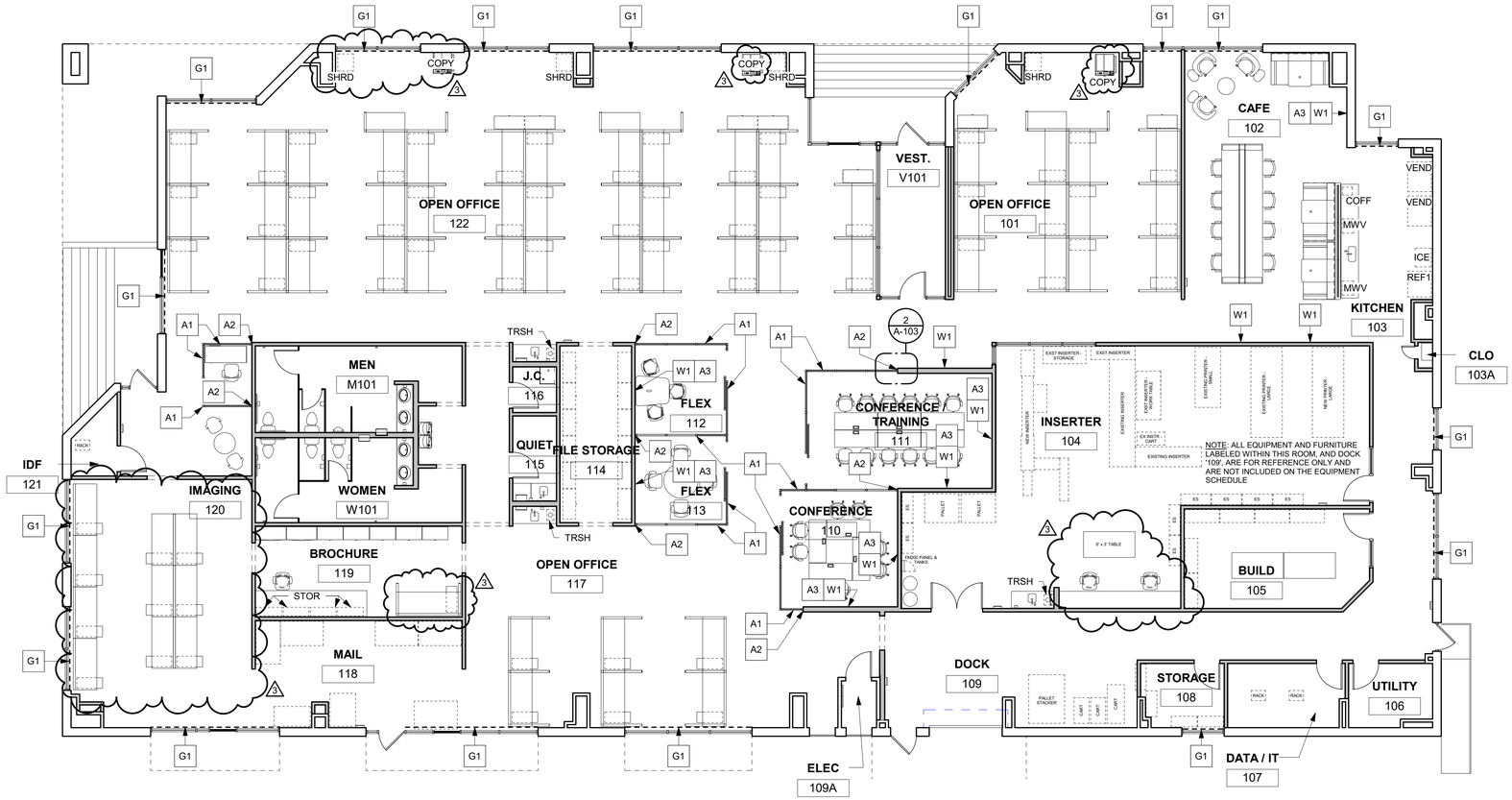
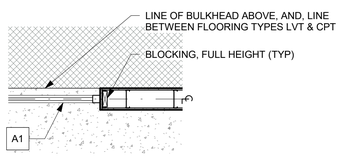


1 A-103 FURNITURE & EQUIPMENT PLAN

1/8" = 1'-0"



2 A-103 TYPICAL DETAIL - NOTE A2

1/2" = 1'-0"

EQUIPMENT SCHEDULE

KEY	DESCRIPTION	MANUF / MODEL / COLOR	PROVIDED	INSTALLED	NOTES
COFF	COFFEE MAKER - SINGLE SERVE	TBD	TENANT	TENANT	PROVIDE DIRECT WATER SUPPLY
COPY	COPIER	VARIES	TENANT	TENANT	SEE ELECTRICAL DRAWINGS FOR POWER/DATA
ICE	ICE MAKER & WATER DISPENSER	HOSHIZAKI / DCM-300BAH / STAINLESS STEEL	CONTRACTOR	CONTRACTOR	PROVIDE DIRECT WATER SUPPLY AND DRAIN - SEE MANUFACTURER'S INFORMATION
MWV	MICROWAVE	LG / LCRT2010ST / STAINLESS STEEL	CONTRACTOR	CONTRACTOR	PROVIDE UNDERCOUNTER POWER OUTLET WHERE REQUIRED
RACK	SERVER RACK	TBD	TENANT	TENANT	-
REF1	REFRIGERATOR	SAMSUNG - RF28T5101SR	CONTRACTOR	CONTRACTOR	FRENCH DOORS WITH BOTTOM FREEZER - STAINLESS STEEL
REF2	REFRIGERATOR, UNDER-COUNTER	TBD	CONTRACTOR	CONTRACTOR	-
SHRD	SHRED BIN	VARIES	TENANT	TENANT	-
STOR	STORAGE FURNITURE	TBD	TENANT	TENANT	-
TRSH	TRASH RECEPTACLE	HARDWARE RESOURCES - 50 QT. - GREY	CONTRACTOR	CONTRACTOR	22.25" H X 15" W X 10.25" D
VEND	VENDING MACHINES	VARIES	TENANT	TENANT	SEE ELECTRICAL DRAWINGS FOR POWER/DATA

GENERAL FURNITURE & EQUIPMENT NOTES

1. ALL FURNITURE SHOWN OWNER PROVIDED AND OWNER INSTALLED, UNLESS NOTED OTHERWISE.

2. ALL EQUIPMENT SHOWN OWNER PROVIDED AND OWNER INSTALLED, UNLESS NOTED OTHERWISE. SEE EQUIPMENT SCHEDULE.

3. ALL APPLIANCES SHOWN CONTRACTOR PROVIDED AND CONTRACTOR INSTALLED, UNLESS NOTED OTHERWISE. SEE EQUIPMENT SCHEDULE.

4. ELEMENTS ON THIS PLAN, THAT ARE NOT LABELED, ARE SHOWN FOR TENANT'S REFERENCE AND USE.

NOTES LEGEND

A - MISCELLANEOUS	G - DOORS / GLAZINGS	P - PLUMBING
C - CIVIL	K - FURNITURE / FINISHES	R- ROOF
E - ELECTRICAL	L - LIFE SAFETY	S - STRUCTURAL
F - FLOORS / CEILINGS	M - MECHANICAL	W - WALLS

FURNITURE AND EQUIPMENT PLAN NOTES

A1. MOVEABLE WALL SYSTEM, PROVIDED AND INSTALLED BY OWNER, TO ENCLOSE ROOM (TYP)

A2. PROVIDE BLOCKING AT ALL MOVEABLE WALL JAMB LOCATIONS, FULL HEIGHT - CENTERLINE OF SYSTEM TO ALIGN WITH CENTERLINE OF WALL - SEE DETAIL, THIS SHEET (TYP)

A3. MOUNTING BRACKET FOR TV / DISPLAY - CONSULT WITH TENANT FOR BRACKET MANUFACTURER, TYPE, COLOR, ETC. (TYP)

G1. PROVIDE BLOCKING FOR CEILING-MOUNTED WINDOW SHADES - SEE A-602 FOR MORE SPECIFICATION (TYP)

W1. PROVIDE BLOCKING AT WALL-MOUNTED TVS, SIGNAGE, ETC. - CONSULT WITH TENANT FOR MORE INFORMATION AND FINAL LOCATIONS (TYP)

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

0 8' 16' 24' 32'

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
WILLIAM H. HUME
No. 010127
DECEMBER . 31 . 2020
ARCHITECT

NO.	REVISIONS	DATE
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ELECTRIC ROAD

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ROANOKE, VA 24018

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FURNITURE & EQUIPMENT PLAN

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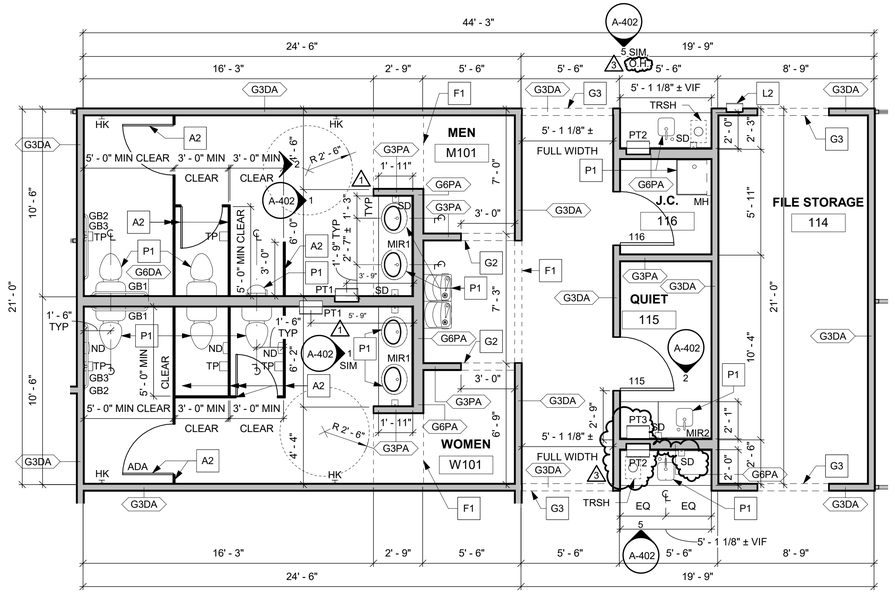


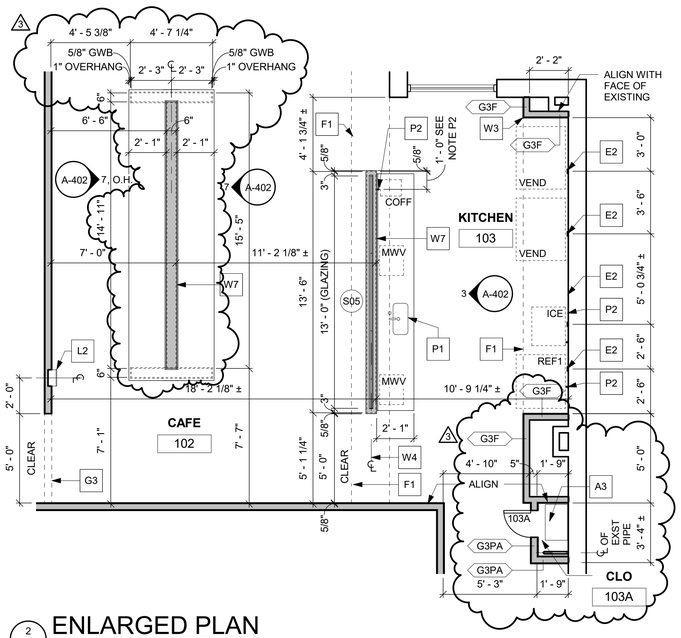
1 A-401 **ENLARGED PLAN**

1/4" = 1'-0"

TOILET ACCESSORY SCHEDULE

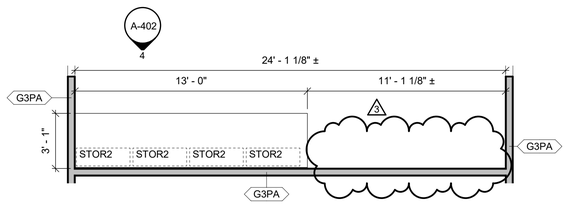
MARK	ITEM	MANUFACTURER	MODEL #	MOUNTING HEIGHT
GB1	36" GRAB BAR	BOBRICK	B-5806.99 X 36"	SEE SHEET G-002
GB2	42" GRAB BAR	BOBRICK	B-5806.99 X 42"	SEE SHEET G-002
GB3	18" GRAB BAR	BOBRICK	B-5806.99 X 18"	SEE SHEET G-002
MH	MOP HOLDER	BOBRICK	B-223 X 24"	SEE SHEET G-002
MIR1	MIRROR	TBD BY G.C.	5'-6" W X 3'-0" H	SEE SHEET G-002
MIR2	MIRROR	BOBRICK	B-169 2436	SEE SHEET G-002
ND	SANITARY NAPKIN DISPOSAL	BOBRICK	B-270	SEE SHEET G-002
PT1	PAPER TOWEL DISPENSER AND WASTE RECEPTACLE*	BOBRICK	B-39747	SEE SHEET G-002
PT2	PAPER TOWEL DISPENSER*	BOBRICK	B-29744	SEE SHEET G-002
PT3	PAPER TOWEL DISPENSER*	BOBRICK	B-2974	SEE SHEET G-002
SD	SOAP DISPENSER	BOBRICK	B-2013	SEE SHEET G-002
TP	TOILET TISSUE DISPENSER	BOBRICK	B-4288	SEE SHEET G-002

*NOTE: AUTOMATIC DISPENSER TO HAVE DIRECT POWER SUPPLY - PROVIDE ADAPTER KIT



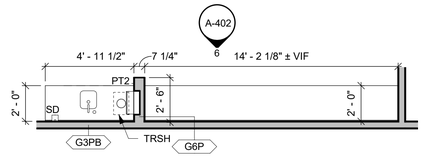
2 A-401 **ENLARGED PLAN**

1/4" = 1'-0"



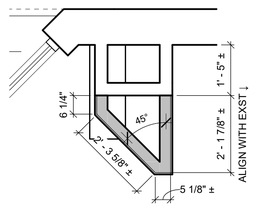
3 A-401 **ENLARGED PLAN**

1/4" = 1'-0"



4 A-401 **ENLARGED PLAN**

1/4" = 1'-0"



5 A-401 **ENLARGED PLAN**

1/2" = 1'-0"

GENERAL CONSTRUCTION NOTES

1. SEE G-002 FOR GENERAL CONSTRUCTION NOTES.

2. PROVIDE BLOCKING FOR ALL WALL- AND CEILING-MOUNTED FURNITURE, EQUIPMENT, CASEWORK, AND DEVICES, AS REQUIRED. SEE A-103 FOR MORE INFORMATION; NOTE, THIS INFORMATION IS NOT COMPREHENSIVE; CONSULT WITH TENANT FOR OTHER REQUIREMENTS.

3. SEE ENLARGED PLANS (A-401) FOR TAGS & NOTES NOT SHOWN ON THIS SHEET.

4. DIMENSIONS AT EXISTING EXTERIOR WALLS ARE SHOWN TO FINISH GWB FACE OF EXISTING EXTERIOR WALL.

NOTES LEGEND

A - MISCELLANEOUS	G - DOORS / GLAZINGS	P - PLUMBING
C - CIVIL	K - FURNITURE / FINISHES	R- ROOF
E - ELECTRICAL	L - LIFE SAFETY	S - STRUCTURAL
F - FLOORS / CEILINGS	M - MECHANICAL	W - WALLS

FLOOR PLAN NOTES

A1. MOVEABLE WALL SYSTEM, PROVIDED AND INSTALLED BY OWNER, TO ENCLOSE ROOM - PROVIDE BLOCKING AS REQUIRED - SEE FURNITURE & EQUIPMENT PLAN FOR MORE INFORMATION (TYP)

A2. TOILET PARTITIONS AND DOORS - PROVIDE ADA COMPLIANT DOORS AT ADA STALLS - SEE FINISH KEY FOR MORE INFORMATION (TYP)

A3. PROVIDE ADJUSTABLE WHITE LAMINATE, OR THERMOSET DECORATIVE FINISH (MELAMINE), SHELVING, (5) @ 2' - 0" W X 1' - 3" D - PROVIDE 6' - 0" H STANDARDS WITH BRACKETS SUITABLE FOR DEPTH OF SHELVES, BOTTOM OF STANDARDS @ 1' - 6" AFF - PROVIDE BLOCKING FOR STANDARDS (TYP)

E1. PROVIDE ELECTRICAL CIRCUIT FOR FUTURE WALL-MOUNTED SIGNAGE AT EXISTING EIFS BAND - CONSULT WITH TENANT FOR PREFERRED LOCATION - SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION

E2. OUTLET SHOWN FOR LOCATION REFERENCE ONLY - SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION (TYP)

F1. GWB BULKHEAD, OR ACT CLOUD, ABOVE - SEE REFLECTED CEILING PLAN FOR MORE INFORMATION (TYP)

G1. EXISTING DOOR TO BE INACTIVE - REMOVE AND/OR PROVIDE HARDWARE AS REQUIRED TO RENDER INACTIVE (TYP)

G2. OPENING WITH DRYWALL RETURNS - 7' - 0" H, SEE FLOOR PLAN, OR ENLARGED PLAN, FOR WIDTH - PAINT TO MATCH ADJACENT WALL - PROVIDE (4) 48" H CORNER GUARDS, SEE FINISH SCHEDULE FOR MORE INFORMATION (TYP)

G3. OPENING WITH DRYWALL RETURNS - 8' - 0" H, SEE FLOOR PLAN, OR ENLARGED PLAN, FOR WIDTH - PAINT TO MATCH ADJACENT WALL - PROVIDE (4) 48" H CORNER GUARDS, SEE FINISH SCHEDULE FOR MORE INFORMATION (TYP)

G4. CAULK ALL SEAMS OF WINDOW FRAME TO PROVIDE AIR-TIGHT SEALS DUE TO FM-200 SYSTEM FIRE SUPPRESSION SYSTEM HOUSED WITHIN ROOM (TYP)

K1. THOROUGHLY CLEAN EXISTING EIFS BAND AND SOFFIT & INFILL / PATCH / REPAIR AND ANY EXISTING HOLES AND DAMAGE AT ALL EXTERIOR SURFACES - PREPARE FOR NEW PAINT - SEE FINISH KEY FOR MORE INFORMATION (TYP)

L1. PROVIDE FM-200 FIRE SUPPRESSION SYSTEM IN ROOMS 'INSERTER 104' & 'DATA/IT 107' - DESIGNED AND PROVIDED BY CONTRACTOR - SEE A-103 FOR CONTROL PANEL AND TANK LOCATIONS - ANY AND ALL PENETRATIONS TO BE CAULKED AND SEALED (TYP)

L2. FIRE EXTINGUISHER AND CABINET - SEE LIFE SAFETY PLAN FOR MORE INFORMATION (TYP)

P1. PLUMBING FIXTURE - SEE PLUMBING DRAWINGS FOR MORE INFORMATION (TYP)

P2. PROVIDE DIRECT WATER SUPPLY FOR APPLIANCE - SEE PLUMBING DRAWINGS FOR MORE INFORMATION (TYP)

R1. REPAIR, PATCH, AND REPLACE AS NEEDED ROOF INSULATION AT EAVES OF METAL BUILDING AT AREAS OF DAMAGE, SEPARATION, ETC. - IF REPLACED, MATCH EXISTING (TYP)

W1. AFTER DEMOLITION, CONTRACTOR TO VERIFY IF THIS FURRING IS REQUIRED TO REMAIN FOR THE PURPOSES OF COVERING EXISTING INFRASTRUCTURE - CONSULT WITH ARCHITECT REGARDING POSSIBLE REMOVAL OF FURRING

W2. PROVIDE RIGID INSULATION AND GWB AT ALL EXPOSED AREAS, OF ALL WALLS, THAT BORDER EIFS SOFFIT (SHOWN WITH DASHES LINE) (TYP)

W3. PROVIDE FURRING TYPE 'G3F' TO EXTEND EXISTING COLUMN WRAP AS SHOWN - IN AREAS OF EXISTING SLOPED COLUMN WRAP, PROVIDE WALL TYPE 'G3F' AS REQUIRED TO INFILL SLOPE TO FINISH FLOOR (TYP)

W4. CENTERLINE OF HALF WALL AND GLAZING TO ALIGN WITH CENTERLINE OF BULKHEAD ABOVE

W5. ALTER EXISTING WALL AS REQUIRED TO PROVIDE PLYWOOD CAP AS SHOWN IN WALL TYPE 'G3PB' (TYP)

W6. PROVIDE ADDITIONAL LAYER OF 5/8" GWB AT FULL LENGTH OF WALL - HEIGHT TO EXTEND TO NEW CEILING JOISTS ABOVE (TYP)

W7. 4' - 6" H WALL @ KITCHEN, OR, 5' - 6" H WALL @ CAFE - 6" METAL STUDS (20 GA.) @ 16" O.C. WITH 5/8" GWB, BOTH SIDES - PROVIDE 3" ACOUSTIC INSULATION AND HARDWOOD CAP - SEE CASEWORK DETAIL, A-403, FOR MORE INFORMATION (TYP)

FLOOR PLAN LEGEND

INDICATES EXISTING WALL CONSTRUCTION

INDICATES NEW WALL CONSTRUCTION

90 DEG. SWING INDICATES NEW DOOR

45 DEG. SWING INDICATES EXISTING DOOR

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

0 4' 8' 12' 16'

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

0 2' 4' 6' 8'

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
WILLIAM H. HUME IV
No. 010127
DECEMBER . 31 . 2020
ARCHITECT

NO.	REVISIONS	DATE
1	STRUCTURAL	03.12.2021
3	DESIGN CHANGES	06.11.2021

TENANT UPFIT FOR

PROSPERITY

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	JLZ
CHECKED	DTS
JOB	20-058

ENLARGED PLANS

SHEET
A-401

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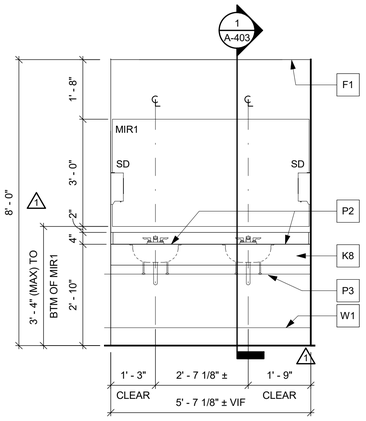

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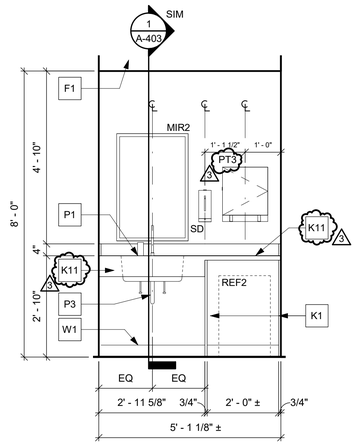

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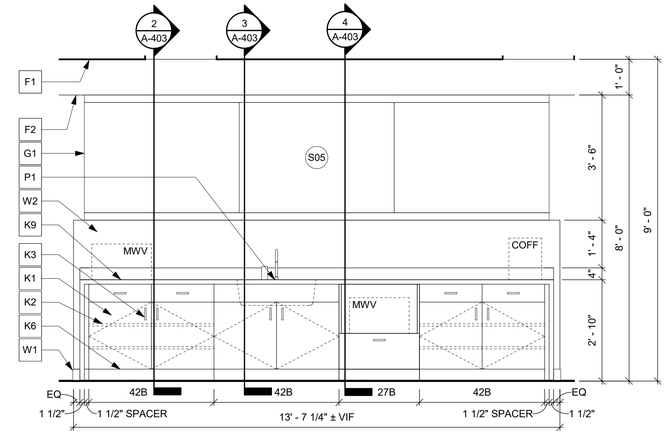

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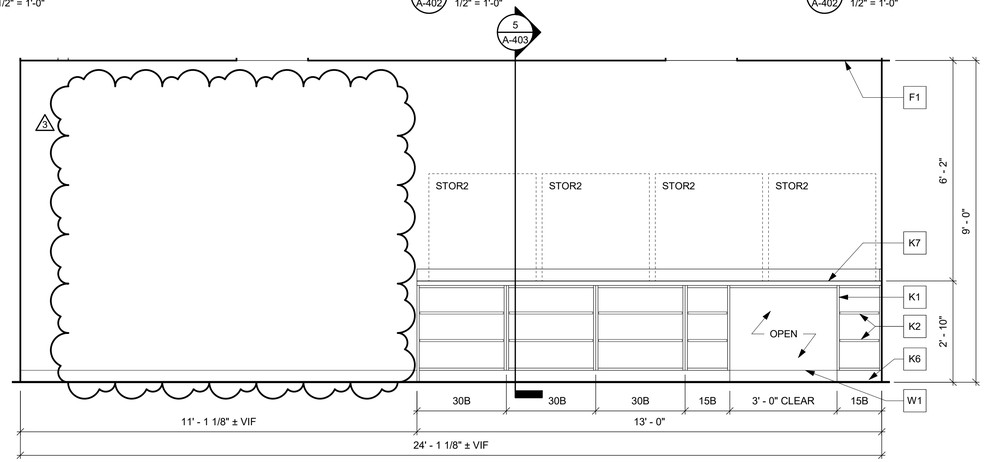

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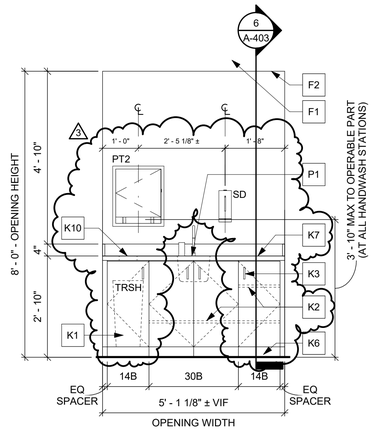

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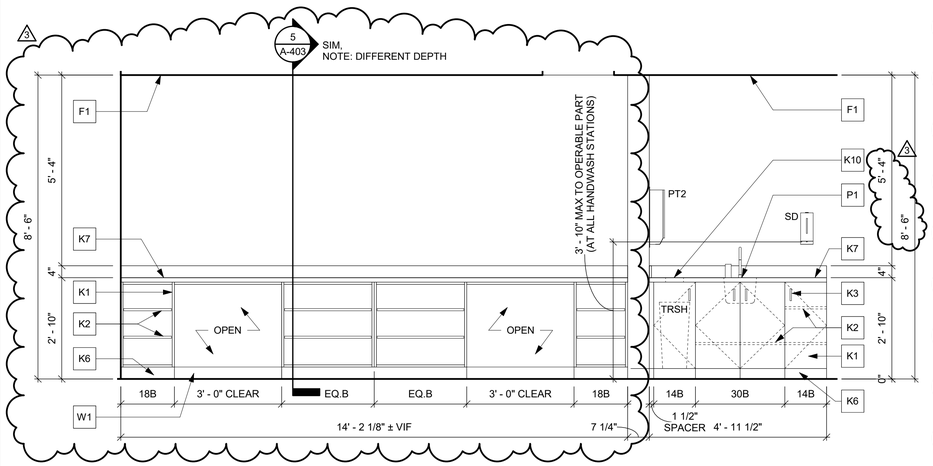
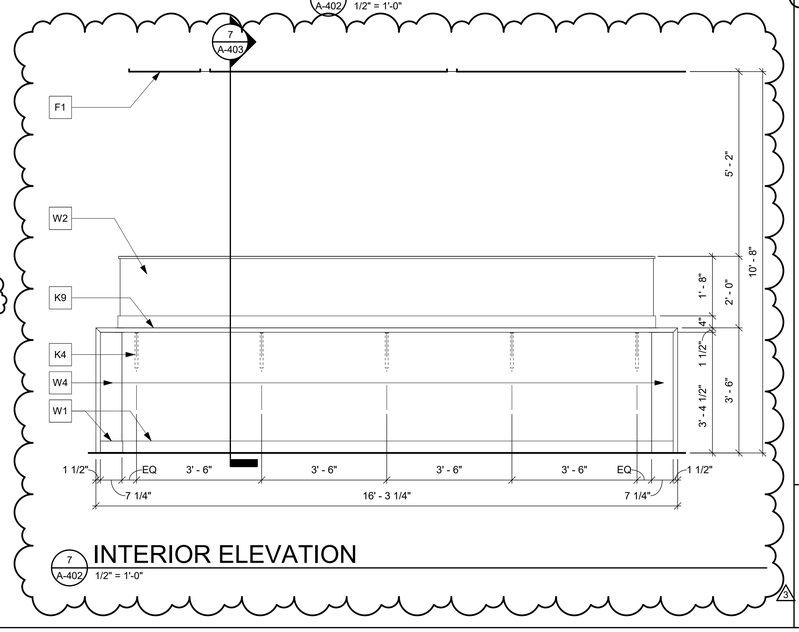


6 A-402 INTERIOR ELEVATION
1/2" = 1'-0"



7 A-402 INTERIOR ELEVATION
1/2" = 1'-0"

GENERAL INT. ELEV & CASEWORK NOTES

1. CASEWORK TO MEET A.W.I. STANDARD FOR CUSTOM AND COMMERCIAL CASEWORK.

NOTES LEGEND

A - MISCELLANEOUS	G - DOORS / GLAZINGS	P - PLUMBING
C - CIVIL	K - FURNITURE / FINISHES	R- ROOF
E - ELECTRICAL	L - LIFE SAFETY	S - STRUCTURAL
F - FLOORS / CEILINGS	M - MECHANICAL	W - WALLS

INTERIOR ELEV. & CASEWORK NOTES

F1. CEILING AS SCHEDULED (TYP)

F2. BULKHEAD - SEE REFLECTED CEILING PLAN FOR MORE INFORMATION (TYP)

G1. BUTT JOINT GLAZING - SEE STOREFRONT ELEVATIONS FOR MORE INFORMATION - PROVIDE BLOCKING AT HEAD AN SILL AS NEEDED - PROVIDE HARDWOOD CAP AT SILL, FINISH TO MATCH WOOD LAMINATE (TYP)

K1. PLASTIC LAMINATE CASEWORK (PLAM-1) (TYP)

K2. ADJUSTABLE SHELF (TYP)

K3. HARDWARE PULL - LIBERTY, WIDE PLAZA, PN6504-AL-C (TYP)

K4. HIDDEN IN-WALL COUNTERTOP BRACKET - BLACK (TYP)

K5. DRAWER (TYP)

K6. TOE KICK - PROVIDE WALL BASE AS SCHEDULED (TYP)

3 K7. SOLID SURFACE COUNTERTOP (SOL-1), BACKSPLASH, AND SIDESPLASHES (TYP)

3 K8. SOLID SURFACE (SOL-2) COUNTERTOP, BACKSPLASH, SIDESPLASHES, AND APRON - BRACE IN CENTER AS REQUIRED (TYP)

3 K9. SOLID SURFACE COUNTERTOP (SOL-1), BACKSPLASH, AND WATERFALL EDGE - FINISH ALL EXPOSED SURFACES (TYP)

K10. TRASH RECEPTACLE OPENING - 6" DIA - FINISH ALL EXPOSED EDGES - CENTER ON WIDTH OF CASE CABINET BELOW, AND CENTER ON DEPTH OF COUNTERTOP (TYP)

3 K11. SOLID SURFACE (SOL-1) COUNTERTOP, BACKSPLASH, SIDESPLASHES, AND APRON - BRACE IN CENTER AS REQUIRED (TYP)

P1. ADA APPROVED FAUCET AND SINK - SEE PLUMBING DRAWINGS (TYP)

P2. ADA APPROVED UNDERMOUNT LAVATORY SINK AND ADA APPROVED FAUCET - SEE PLUMBING DRAWINGS (TYP)

P3. INSULATE SUPPLY & DRAIN PIPES (TYP)

W1. BASE AS SCHEDULED (TYP)

W2. GWB - PAINT AS SCHEDULED (TYP)

W3. GWB WALL BELOW COUNTERTOP

3 W4. 3' - 4 1/2" H WALL BELOW COUNTERTOP - 6" METAL STUDS (20 GA.) @ 16" O.C. WITH 5/8" GWB, BOTH SIDES - PROVIDE 3" ACOUSTIC INSULATION AND HARDWOOD CAP, FINISH TO MATCH WOOD LAMINATE(TYP)

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0 2' 4' 6' 8'

GRAPHIC SCALE: 3/4" = 1' - 0"

0 1' 2' 3' 4' 5'

INTERACTIVE • DESIGN

INTERACTIVE DESIGN GROUP
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PROSPERITY™

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	JLZ
CHECKED	DTS
JOB	20-058

INTERIOR ELEVATIONS

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A-402

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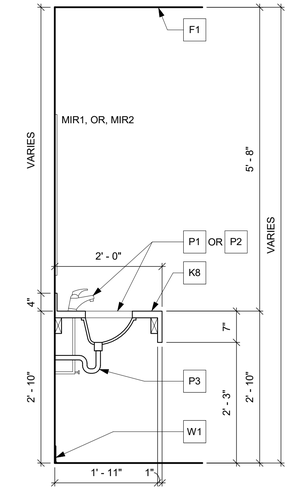
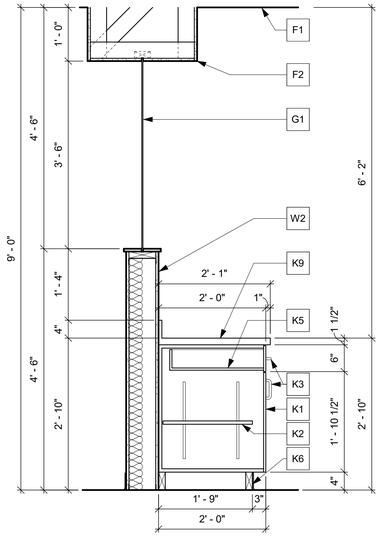


1 A-403 CASEWORK DETAIL
3/4" = 1'-0"



2 A-403 CASEWORK DETAIL
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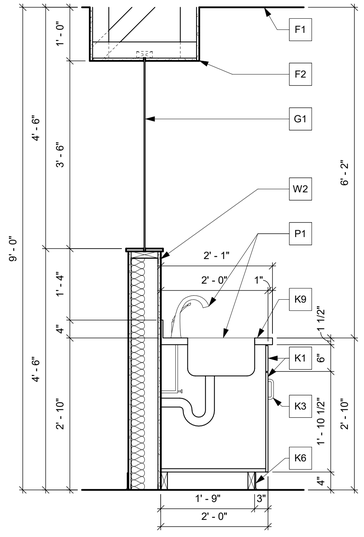

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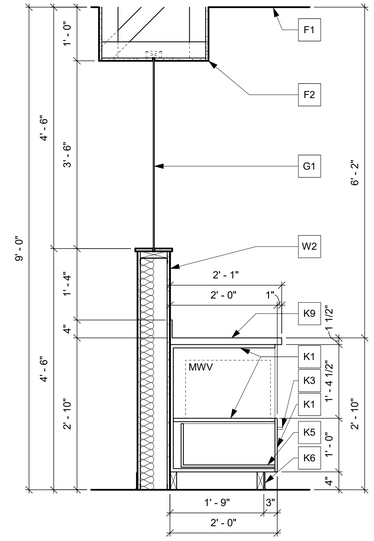

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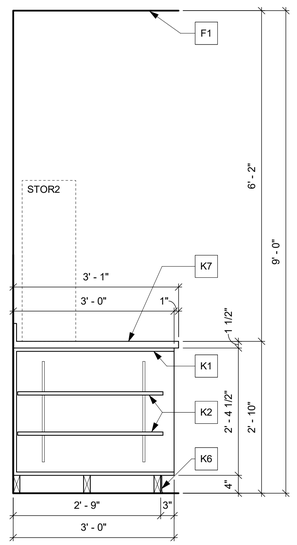

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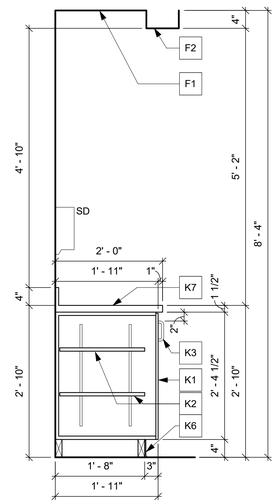

6 A-403 CASEWORK DETAIL
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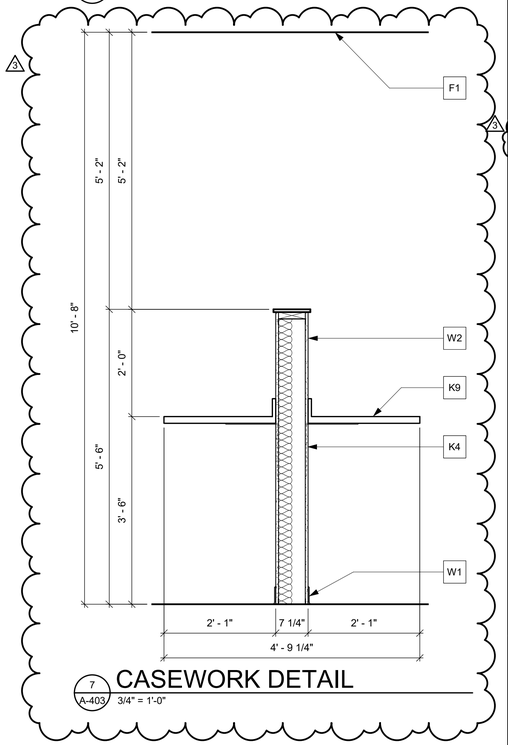

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3/4" = 1'-0"

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INTERIOR ELEV. & CASEWORK NOTES

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K6. TOE KICK - PROVIDE WALL BASE AS SCHEDULED (TYP)

3 K7. SOLID SURFACE COUNTERTOP (SOL-1) BACKSPLASH, AND SIDESPLASHES (TYP)

3 K8. SOLID SURFACE (SOL-2) COUNTERTOP, BACKSPLASH, SIDESPLASHES, AND APRON - BRACE IN CENTER AS REQUIRED (TYP)

3 K9. SOLID SURFACE COUNTERTOP (SOL-1) BACKSPLASH, AND WATERFALL EDGE - FINISH ALL EXPOSED SURFACES (TYP)

K10. TRASH RECEPTACLE OPENING - 6" DIA - FINISH ALL EXPOSED EDGES - CENTER ON WIDTH OF CASE CABINET BELOW, AND CENTER ON DEPTH OF COUNTERTOP (TYP)

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P1. ADA APPROVED FAUCET AND SINK - SEE PLUMBING DRAWINGS (TYP)

P2. ADA APPROVED UNDERMOUNT LAVATORY SINK AND ADA APPROVED FAUCET - SEE PLUMBING DRAWINGS (TYP)

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W1. BASE AS SCHEDULED (TYP)

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3 W4. 3' - 4 1/2" H WALL BELOW COUNTERTOP - 6" METAL STUDS (20 GA.) @ 16" O.C. WITH 5/8" GWB, BOTH SIDES - PROVIDE 3" ACOUSTIC INSULATION AND HARDWOOD CAP, FINISH TO MATCH WOOD LAMINATE(TYP)

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

0 2' 4' 6' 8'

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0 1' 2' 3' 4' 5'

INTERACTIVE DESIGN GROUP

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3825 ELECTRIC ROAD
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CASEWORK DETAILS

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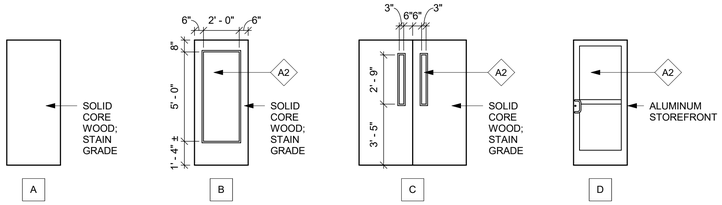
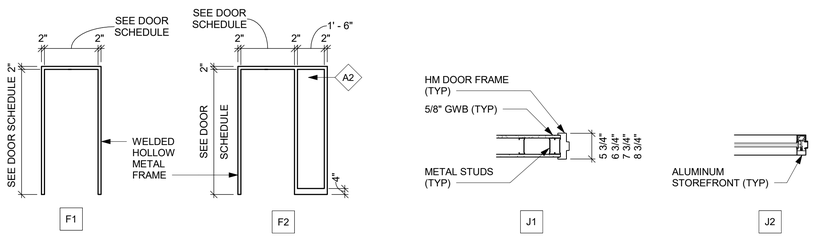


DOOR TYPES

1/4" = 1'-0"

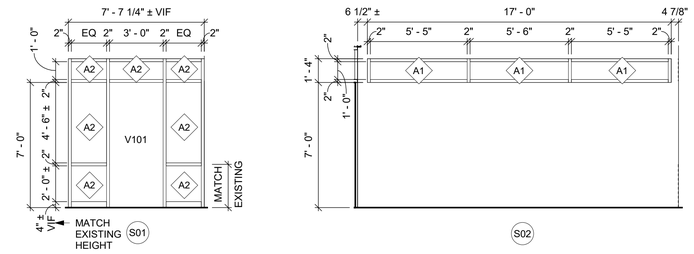


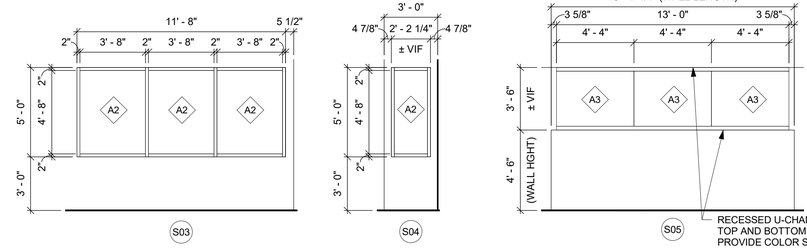
FRAME TYPES

1/4" = 1'-0"

JAMB TYPES

3/4" = 1'-0"



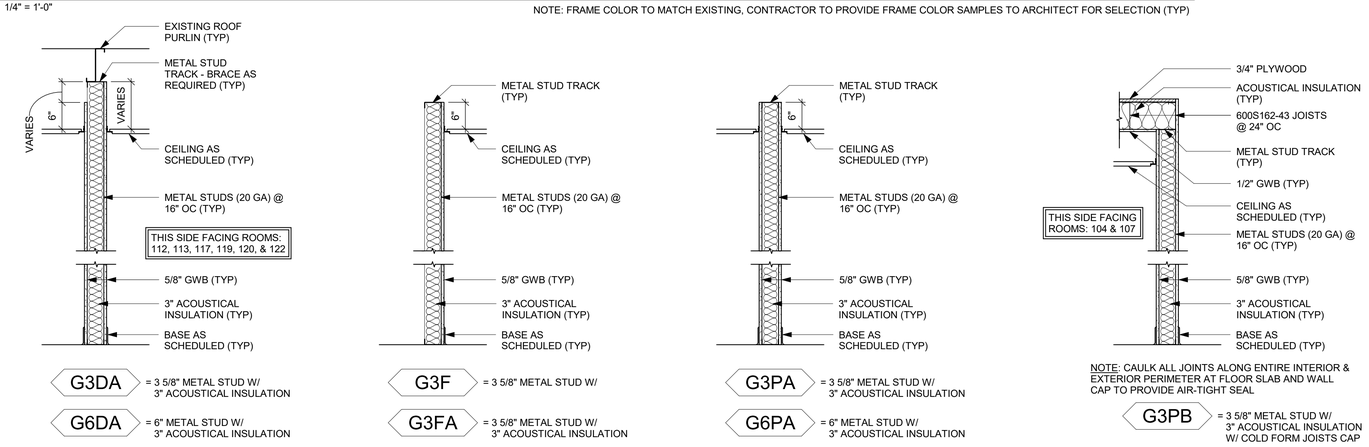


3

STOREFRONT ELEVATIONS

1/4" = 1'-0"

NOTE: FRAME COLOR TO MATCH EXISTING, CONTRACTOR TO PROVIDE FRAME COLOR SAMPLES TO ARCHITECT FOR SELECTION (TYP)



WALL TYPES

3/4" = 1'-0"

DOOR SCHEDULE

DOOR NO.	TYPE	W	H	T	MAT'L	GLAZING	FRAME TYPE	FRAME MAT'L	FRAME DETAIL JAMB	FRAME DETAIL HEAD	FIRE RATING LABEL	HDWRE SET NO.	REMARKS
103A	A	1' - 6"	7' - 0"	1 3/4"	WOOD	-----	F1	HM	J1	J1 SIM	-----	4	-----
104.1	C	6' - 0"	7' - 0"	1 3/4"	WOOD	TEMP	F1	HM	J1	J1 SIM	-----	1	NOTE DS1, DS2
104.2	B	3' - 0"	7' - 0"	1 3/4"	WOOD	TEMP	F2	HM	J1	J1 SIM	-----	1	NOTE DS1, DS2
105	B	3' - 0"	7' - 0"	1 3/4"	WOOD	TEMP	F2	HM	J1	J1 SIM	-----	2	NOTE DS2
106	A	3' - 0"	7' - 0"	1 3/4"	WOOD	-----	F1	HM	J1	J1 SIM	-----	2	NOTE DS2
107	A	3' - 0"	7' - 0"	1 3/4"	WOOD	-----	F1	HM	J1	J1 SIM	-----	1	NOTE DS1, DS2
108	A	3' - 0"	7' - 0"	1 3/4"	WOOD	-----	F1	HM	J1	J1 SIM	-----	2	-----
109A	A	3' - 0"	7' - 0"	1 3/4"	WOOD	-----	F1	HM	J1	J1 SIM	-----	1	NOTE DS1, DS2
115	A	3' - 0"	7' - 0"	1 3/4"	WOOD	-----	F1	HM	J1	J1 SIM	-----	3	-----
116	A	3' - 0"	7' - 0"	1 3/4"	WOOD	-----	F1	HM	J1	J1 SIM	-----	4	-----
121	A	3' - 0"	7' - 0"	1 3/4"	WOOD	-----	F1	HM	J1	J1 SIM	-----	5	NOTE DS2, DS3
EX-109.1	EXST	3' - 0"	6' - 8"	1 3/4"	-----	-----	-----	-----	-----	-----	-----	7	NOTE DS2
EX-109.2	EXST	8' - 6"	10' - 6"	3"	-----	-----	-----	-----	-----	-----	-----	-----	NOTE DS4
EX-109.3	EXST	3' - 0"	7' - 0"	1 3/4"	-----	-----	-----	-----	-----	-----	-----	8	NOTE DS2, DS5
EX-118	EXST	3' - 0"	7' - 0"	1 3/4"	-----	-----	-----	-----	-----	-----	-----	8	NOTE DS2, DS5
EX-122	EXST	3' - 0"	7' - 0"	1 3/4"	-----	-----	-----	-----	-----	-----	-----	8	NOTE DS2, DS5
EX-V101	EXST	3' - 6"	7' - 0"	1 3/4"	-----	-----	-----	-----	-----	-----	-----	8	NOTE DS2, DS5
V101	D	3' - 0"	7' - 0"	1 3/4"	ALUM	TEMP	S01	ALUM	J2	J2 SIM	-----	6	NOTE DS2

DOOR HARDWARE TYPES

HARDWARE	SET #1	SET #2	SET #3	SET #4	SET #5
HANGING DEVICE	• 3 HINGES	• 3 HINGES	• 3 HINGES	• 3 HINGES	• 3 HINGES
LOCKSET	• STOREROOM	• STOREROOM	• PRIVACY SET WITH OCCUPANCY INDICATOR	• STOREROOM	• STOREROOM
CONTROLLING DEVICE	• CLOSER	• CLOSER	• CLOSER	• -----	• CLOSER
PROTECTION	• DOOR STOP • KICK PLATES • SILENCERS • WEATHERSTRIPPING	• KICK PLATES • SILENCERS • WALL STOP	• HINGE PIN STOP • SILENCERS	• SILENCERS • WALL STOP	• SILENCERS • WALL STOP
FINISH	• SATIN NICKEL (15)	• SATIN NICKEL (15)	• SATIN NICKEL (15)	• SATIN NICKEL (15)	• SATIN NICKEL (15)

HARDWARE	SET #6	SET #7	SET #8	SET #9	SET #10
HANGING DEVICE	• 3 HINGES	• 3 HINGES	• 3 HINGES	• 3 HINGES	• 3 HINGES
LOCKSET	• PULL HANDLE • PUSH HANDLE	• STOREROOM (REPLACE EXISTING)	• PULL HNDL (REPLACE) • PUSH HANDLE (REPLACE EXISTING)	• -	• -
CONTROLLING DEVICE	• CLOSER	• CLOSER (REPLACE EXISTING)	• CLOSER (REPLACE EXISTING)	• -	• -
PROTECTION	• FLOOR STOP • SILENCERS	• DOOR STOP • KICK PLATES • WEATHERSTRIPPING (REPLACE EXISTING)	• DOOR SWEEP • WEATHERSTRIPPING (REPLACE EXISTING)	• -	• -
FINISH	• SATIN NICKEL (15)	• SATIN CHROME (26)	• MATCH EXISTING	• -	• -

GENERAL DOOR NOTES

NOTES:
1. NEW WOOD DOORS TO BE CUSTOM GRADE, 5-PLY PARTICLEBOARD OR STRUCTURAL COMPOSITE LUMBER CORES. FACES: GRADE A VENEER, SPECIES AND GRAINING TO BE SELECTED BY ARCHITECT. COLOR AND FINISH: TO BE SELECTED BY ARCHITECT. PROVIDE SAMPLES FOR SELECTION.

2. LOCKSETS TO HAVE LEVER TYPE HARDWARE (ADA APPROVED). PROVIDE INTERCHANGEABLE CORE TO MATCH OWNERS MASTER KEY SYSTEM.

3. CONTRACTOR TO COORDINATE WITH TENANT ON DOORS WITH ACCESS CONTROL, COORDINATE WITH TENANT'S SECURITY CONTRACTOR FOR ACCESS CONTROL HARDWARE REQUIREMENTS PRIOR TO ORDERING, MODIFYING OR INSTALLING DOORS AND HARDWARE. NEW DOORS AND FRAMES TO BE FACTORY PREPPED FOR ACCESS CONTROL HARDWARE.

4. ALL DOOR CLOSERS TO BE MOUNTED ON INTERIOR (ROOM SIDE) OF DOOR OPENING. PROVIDE REGULAR-ARM, PARALLEL-ARM OR TOP JAMB MOUNTED CLOSERS AS NECESSARY. COORDINATE CLOSER SIZE WITH STOREFRONT STILE WIDTH SO CLOSER COVER DOES NOT HANG BELOW STILE OR BELOW 6'-8" A.F.F. COORDINATE ARM OF CLOSER WHERE DOOR OPENS AGAINST STOREFRONT WALL.

5. SEE A-101 FOR EXISTING DOORS TO REMAIN, OR BE MADE, INACTIVE. PROVIDE HARDWARE AS REQUIRED TO RENDER INACTIVE.

DOOR SCHEDULE NOTES

DS1. PROVIDE AUTOMATIC NEOPRENE DROP SEAL, ALUMINUM THRESHOLD, WEATHERSTRIPPING AT HEAD AND JAMBS, AND CAULK ALL SEAMS OF DOOR FRAME TO PROVIDE AIR-TIGHT SEALS AT DOORS 104.1, 104.2, AND 107, DUE TO FM-200 SYSTEM FIRE SUPPRESSION SYSTEM HOUSED WITHIN (TYP)

DS2. DOOR TO HAVE CARD READER, BY OTHERS - HARDWARE PROVIDER TO COORDINATE WITH TENANT'S SECURITY CONTRACTOR - ALL DOORS AND FRAMES TO ARRIVE AT SITE PREPARED FOR SECURITY HARDWARE - CONTRACTOR TO COORDINATE WITH TENANT AS TO WHO WILL PROVIDE ELECTRIC STRIKE (TYP)

DS3. DOOR TO HAVE VENT GRILLE - SEE MECHANICAL DRAWINGS FOR MORE INFORMATION (TYP)

DS4. THOROUGHLY CLEAN INTERIOR AND EXTERIOR FACES OF EXISTING ROLL-UP DOOR (TYP)

DS5. REMOVE EXISTING HARDWARE AS NEEDED FOR REPLACEMENT HARDWARE AND SECURITY HARDWARE - PATCH AND REFINISH, TO MATCH EXISTING, AS REQUIRED, IN AREAS OF REMOVAL (TYP)

GLAZING TYPES

- A1 — 1/4" FLOAT
- A2 — 1/4" TEMPERED FLOAT
- A3 — 1/4" TEMPERED FLOAT - BUTT JOINTS WITH CLEAR SILICONE SEALANT - FINISH ALL EDGES - CONSULT WITH ARCHITECT IF A THICKNESS CHANGE IS REQUIRED PER RECESSED U-CHANNELS

WALL TYPES LEGEND & KEY

LEGEND

1G3DA
- ACOUSTICAL INSULATION
- WALL HEIGHT TERMINATION
- WALL STRUCTURE SIZE (NOMINAL)
- WALL FINISH / MAKEUP
- FIRE RATING (HOURS)

KEY

A = WALL CONTAINS ACOUSTICAL INSULATION

C = WALL TERMINATES AT BOTTOM OF CEILING

D = WALL TERMINATES AT BOTTOM OF EXISTING ROOF PURLINS

F = GWB + METAL FURRING

G = GWB + METAL STUD

M = MASONRY

P = WALL PENETRATES CEILING

W = GWB + WOOD STUDS

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
WILLIAM H. HUME IV
No. 010127
DECEMBER . 31 . 2020
ARCHITECT

NO.	REVISIONS	DATE
3	DESIGN CHANGES	06.11.2021

TENANT UPFIT FOR

PROSPERITY™

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	JLZ
CHECKED	DTS
JOB	20-058

DOOR SCHEDULE AND WALL TYPES

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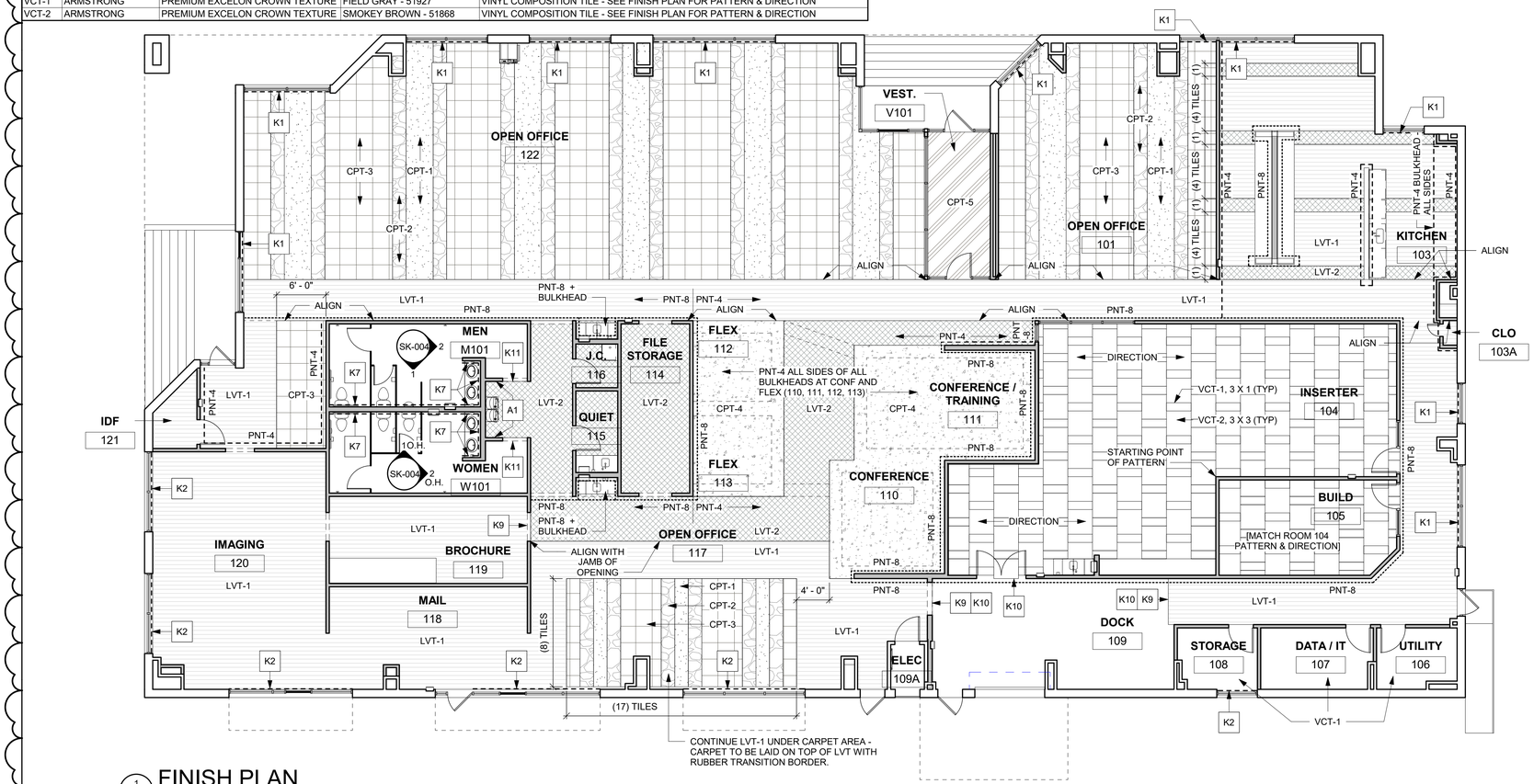
FINISH KEY

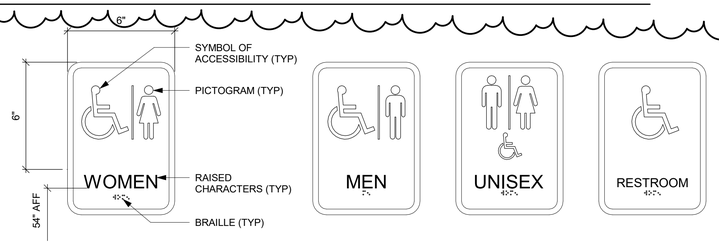
KEY	MANUFACTURER	PRODUCT #	COLOR #	REMARKS
ACT-1	USG	MARS HIGH-NRC/SLT (0.85) 88315	WHITE	TILES: 2' X 2' X 7/8", SLT EDGE / GRID: DX/DXL, WHITE - 6" EDGE TRIM AT CLOUDS
CONC-1	----	-----	----	SEALED CONCRETE
CPT-1	INTERFACE	NET EFFECT B601	DRIFTWOOD 102911	CARPET TILE - SEE FINISH PLAN FOR INSTALLATION
CPT-2	INTERFACE	NET EFFECT B602	DRIFTWOOD 102919	CARPET TILE - SEE FINISH PLAN FOR INSTALLATION
CPT-3	INTERFACE	NET EFFECT B603	DRIFTWOOD 102927	CARPET TILE - SEE FINISH PLAN FOR INSTALLATION
CPT-4	INTERFACE	OPEN AIR 421	GRANITE 107072	CARPET TILE - SEE FINISH PLAN FOR INSTALLATION_ - NON DIRECTIONAL INSTALL
CPT-5	INTERFACE	STEP REPEAT SR899	SABLE 104920	CARPET TILE - WALK OFF CARPET
CTB-1	BEST TILE	ATLANTIC STONE	ANTRACITE	CERAMIC WALL BASE - 6" X 24" - MATTE FINISH - SEE SKETCH SK-001 FOR PATTERN - GROUT: MAPEI, 19 - PEARL GRAYTERMINATE WITH SCHLUTER STRIP WHERE REQUIRED
CTF-1	BEST TILE	ATLANTIC STONE	ANTRACITE	CERAMIC FLOOR TILE - 6" X 24" - MATTE FINISH - HERRINGBONE PATTERN - GROUT: MAPEI, 19 - PEARL GRAY - TERMINATE WITH SCHLUTER STRIP WHERE REQUIRED
CTW-1	BEST TILE (VOGUEBAY)	VINTAGE (WHITE WALL TILE - GLOSSY)	----	CERAMIC WALL TILE - 12" X 24" & 6" X 24" - GLOSSY FINISH - SEE SKETCH SK-001 FOR PATTERN - GROUT: MAPEI, 38 - AVALANCHE
LVT-1	INTERFACE	TEXTURED STONES	POLISHED CEMENT A00301	GENERAL LVT - MONOLITHIC INSTALL
LVT-2	INTERFACE	NATURAL STONES	MARONE DARK MARBLE A00120	ACCENT LVT - MONOLITHIC INSTALL
PLAM-1	WILSONART	PLASTIC LAMINATE	ACORN VELVET ELM - 15602	GENERAL CASEWORK - FINISH: 31 TRACELESS
PNT-1	SHERWIN WILLIAMS	PROMAR 200 ZERO VOC	AGREEABLE GRAY - 7029	GENERAL WALL PAINT - INTERIOR LATEX, EGGSHELL
PNT-2	SHERWIN WILLIAMS	PRO INDUSTRIAL ZERO VOC	ELEPHANT EAR - 9168	DOOR FRAME PAINT - METAL - ACRYLIC, SEMIGLOSS
PNT-3	SHERWIN WILLIAMS	PRO INDUSTRIAL ZERO VOC	AGREEABLE GRAY - 7029	WET AREA GENERAL WALL PAINT - WATER BASED EPOXY, EGGSHELL
PNT-4	SHERWIN WILLIAMS	PROMAR 200 ZERO VOC	CHARCOAL BLUE - 2739	ACCENT WALL PAINT/ACCENT BULKHEADS - INTERIOR LATEX, EGGSHELL
PNT-5	SHERWIN WILLIAMS	PROMAR 200 ZERO VOC	AGREEABLE GRAY - 7029	GWB CEILING / BULKHEAD PAINT - INTERIOR LATEX, FLAT
PNT-6	NOT USED	-----	----	----
PNT-7	SHERWIN WILLIAMS	PRO INDUSTRIAL WATERBORNE ACRYLIC DRYFALL	BLACK	OPEN CEILINGS AND OPEN CEILING DEVICES
PNT-8	SHERWIN WILLIAMS	PROMAR 200 ZERO VOC	ELEPHANT EAR - 9168	ACCENT WALL PAINT - INTERIOR LATEX, EGGSHELL
PNT-9	SHERWIN WILLIAMS	A-100	TBD	EXISTING EIFS FACADE AND SOFFIT - EXTERIOR LATEX, SATIN
RB-1	TARKETT	WALL BASE	PEBBLE 32	4" COVE WALL BASE - GENERAL
SOL-1	WILSONART	SOLID SURFACE	LUNA WEATHER 782	COUNTERTOPS - ALL EXCEPT BATHROOMS
SOL-2	FORMICA	SOLID SURFACE	KIMBERLITE 9215 CE	COUNTERTOP - BATHROOMS
TLT-1	PSISC	BLACK CORE PHENOLIC	PECAN WOODLINE	TOILET PARTITIONS - FLOOR ANCHORED/OVERHEAD BRACED - ZERO-SIGHTLINE AND CONTINUOUS BRACKETS
VCT-1	ARMSTRONG	PREMIUM EXCELON CROWN TEXTURE	FIELD GRAY - 51927	VINYL COMPOSITION TILE - SEE FINISH PLAN FOR PATTERN & DIRECTION
VCT-2	ARMSTRONG	PREMIUM EXCELON CROWN TEXTURE	SMOKEY BROWN - 51868	VINYL COMPOSITION TILE - SEE FINISH PLAN FOR PATTERN & DIRECTION

FINISH SCHEDULE

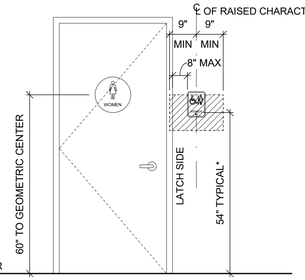
ROOM NO.	ROOM NAME	FLOOR FINISH	BASE MAT'L	WALL		CEILING		REMARKS
				MAT'L	FINISH	MAT'L	FINISH	
101	OPEN OFFICE	CPT-1,2,3 / LVT-1	RB-1	EXST GWB & GWB	PNT-1, 8	ACT-1 / GWB /OPEN	GWB = PNT-5	
102	CAFE	LVT-1, 2	RB-1	EXST GWB & GWB	PNT-1, 4, 8	ACT-1 / GWB /OPEN	GWB = PNT-5	
103	KITCHEN	LVT-1, 2	RB-1	EXST GWB & GWB	PNT-1, 4, 8	ACT-1 / GWB	GWB = PNT-5, 4	
103A	CLO	LVT-1	RB-1	EXST GWB & GWB	PNT-1	GWB	PNT-5	
104	INSERTER	VCT-1, 2	RB-1	GWB	PNT-1	ACT-1	----	
105	BUILD	VCT-1, 2	RB-1	GWB	PNT-1	ACT-1	----	
106	UTILITY	VCT-1	RB-1	EXST GWB & GWB	PNT-1	ACT-1	----	
107	DATA / IT	VCT-1	RB-1	EXST GWB & GWB	PNT-1	ACT-1	----	
108	STORAGE	VCT-1	RB-1	EXST GWB & GWB	PNT-1	ACT-1	----	
109	DOCK	CONC-1	RB-1	EXST GWB & GWB	PNT-1	ACT-1	----	
109A	ELEC	-----	----	EXST GWB & GWB	----	----	----	INTERIOR SURFACES NOT FINISHED
110	CONFERENCE	CPT-4	RB-1	GWB	PNT-8	ACT-1 / GWB	GWB = PNT-4	
111	CONFERENCE / TRAINING	CPT-4	RB-1	GWB	PNT-8	ACT-1 / GWB	GWB = PNT-4	
112	FLEX	CPT-4	RB-1	GWB	PNT-8	ACT-1 / GWB	GWB = PNT-4	
113	FLEX	CPT-4	RB-1	GWB	PNT-8	ACT-1 / GWB	GWB = PNT-4	
114	FILE STORAGE	LVT-2	RB-1	GWB	PNT-1	ACT-1	----	
115	QUIET	LVT-2	RB-1	GWB	PNT-1	ACT-1	----	
116	J.C.	LVT-2	RB-1	GWB	PNT-3	ACT-1	----	
117	OPEN OFFICE	CPT-1,2,3 / LVT-,1,2	RB-1	EXST GWB & GWB	PNT-1, 8	ACT-1 / GWB /OPEN	GWB = PNT-5	
118	MAIL	LVT-1	RB-1	EXST GWB & GWB	PNT-1	ACT-1 / GWB	GWB = PNT-5	
119	BROCHURE	LVT-1	RB-1	GWB	PNT-1	ACT-1	----	
120	IMAGING	LVT-1	RB-1	EXST GWB & GWB	PNT-1	ACT-1 / GWB	GWB = PNT-5	
121	IDF	LVT-1	RB-1	EXST GWB & GWB	PNT-1	ACT-1	----	
122	OPEN OFFICE	CPT-1,2,3 / LVT-,1	RB-1	EXST GWB & GWB	PNT-1, 8	ACT-1 / GWB /OPEN	GWB = PNT-5	
M101	MEN	CTF-1	CTB-1	GWB	PNT-3 / CTW-1	ACT-1 / GWB	GWB = PNT-3	
V101	VEST.	CPT-5	RB-1	EXST GWB & GWB	PNT-1	GWB	PNT-5	
W101	WOMEN	CTF-1	CTB-1	GWB	PNT-3 / CTW-1	ACT-1 / GWB	GWB = PNT-3	



1 A-602 FINISH PLAN
1/8" = 1'-0"



SIGN TYPE "A" - TOILET ROOM WALL
3" = 1'-0"



* ALL CHARACTERS TO BE BETWEEN 48" AND 60" AFF - CALCULATED MOUNTING HEIGHT TO BE TYPICAL

SIGNAGE MOUNTING LOCATION
1/2" = 1'-0"

GENERAL FINISH & SIGNAGE NOTES

1. ALL SIGNAGE CORNERS TO BE 1/4" RADIUS.
2. ALL VISUAL CHARACTERS, RAISED CHARACTERS, BRAILLE, PICTOGRAMS, SYMBOLS OF ACCESSIBILITY, ETC. TO COMPLY WITH ICC A117.1-2009.
3. SEE BELOW FOR SIGNAGE SPECIFICATION.
4. PROVIDE SIGNAGE COLOR SAMPLES TO ARCHITECT FOR COLOR SELECTION.
5. ALL EXPOSED CEILINGS TO BE PNT-7 (BLACK DRYFALL)
6. ALL DOOR FRAMES TO BE PNT-2

NOTES LEGEND

A - MISCELLANEOUS	G - DOORS / GLAZINGS	P - PLUMBING
C - CIVIL	K - FURNITURE / FINISHES	R- ROOF
E - ELECTRICAL	L - LIFE SAFETY	S - STRUCTURAL
F - FLOORS / CEILINGS	M - MECHANICAL	W - WALLS

FINISH & SIGNAGE PLAN NOTES

A1. PROVIDE SIGN TYPE 'A' (TYP)

K1. PROVIDE MANUAL ROLL-UP WINDOW SHADE, FULL HEIGHT - HUNTER DOUGLAS, ARCHITECTURAL, MODEL: FR, OPENNESS 3% - 5% - PROVIDE FASCIA AND END CAPS - PROVIDE BLOCKING ABOVE CEILING AS REQUIRED - PROVIDE FABRIC AND FASCIA SAMPLES TO ARCHITECT FOR COLOR SELECTION (TYP)

K2. PROVIDE MANUAL ROLL-UP WINDOW SHADE, FULL HEIGHT - HUNTER DOUGLAS, ARCHITECTURAL, MODEL: FR, OPENNESS 1% - 2% - PROVIDE FASCIA AND END CAPS - PROVIDE BLOCKING ABOVE CEILING AS REQUIRED - PROVIDE FABRIC AND FASCIA SAMPLES TO ARCHITECT FOR COLOR SELECTION (TYP)

K3. NOT USED

K4. NOT USED

K5. NOT USED

K6. NOT USED

K7. PROVIDE CERAMIC TILE AT WALL, FULL HEIGHT, CTW-1 - TERMINATE WITH SCHLUTER STRIP WHERE REQUIRED (TYP)

K8. NOT USED

K9. LVT-1 WITHIN DRYWALL OPENING, PARALLEL WITH OPENING WIDTH (TYP)

K10. PROVIDE ADA COMPLIANT METAL LVT OR VCT REDUCER RAMP AT TRANSITION TO SEALED CONCRETE - COMMERCIAL GRADE FOR HEAVY USE TO WITHSTAND VARIOUS ROLLING CARTS (TYP)

K11. PROVIDE ADA COMPLIANT METAL SCHULTER TRANSITION STRIP, AS REQUIRED, WHERE CERAMIC TILE MEETS LVT (TYP)

SIGNAGE SPECIFICATION

SECTION 101400 - SIGNAGE

A. SUBMITTALS: PRODUCT DATA, SHOP DRAWINGS, AND COLOR SAMPLES.
B. REGULATORY REQUIREMENTS: COMPLY WITH APPLICABLE PROVISIONS IN THE U.S. ARCHITECTURAL & TRANSPORTATION BARRIERS COMPLIANCE BOARD'S ADA-ABA ACCESSIBILITY GUIDELINES AND ICC A117.1.
C. INTERIOR PANEL SIGNS: MATTE-FINISHED OPAQUE ACRYLIC WITH LASER-ENGRAVED OR ADHESIVELY APPLIED GRAPHICS ROUNDED CORNERS.
   1. FINISHES AND COLORS: AS SELECTED FROM MANUFACTURER'S FULL RANGE.
   2. TACTILE CHARACTERS: WALL SIGNS: ADA ACRYLIC – 1/16" SUBSTRATE, 1/32" TACTILE GRADE 2 BRAILLE. DOOR SIGNS: ADA ACRYLIC – ¼" ACRYLIC, 1/32" TACTILE.
D. LOCATE SIGNS WHERE INDICATED OR DIRECTED BY ARCHITECT. INSTALL SIGNS LEVEL, PLUMB, AND AT HEIGHTS INDICATED, WITH SIGN SURFACES FREE FROM DISTORTION AND OTHER DEFECTS IN APPEARANCE.
E. WALL-MOUNTED SIGNS:
   1. TWO-FACE TAPE: MOUNT SIGNS TO SMOOTH, NONPOROUS SURFACES, OTHER THAN VINYL.

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
WILLIAM H. HUME
No. 010127
DECEMBER . 31 . 2020
ARCHITECT

NO.	REVISIONS	DATE
3	DESIGN CHANGES	06.11.2021

TENANT UPFIT FOR
PROSPERITY™

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	JLZ
CHECKED	DTS
JOB	20-058

FINISH AND SIGNAGE SCHEDULES & PLAN

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PLUMBING SPECIFICATIONS

1. GENERAL PROVISIONS

   A. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE 2012 INTERNATIONAL PLUMBING CODE INCLUDING REFERENCED CODES AND STANDARDS AND IN ACCORDANCE WITH MANDATES OF THE LOCAL BUILDING OFFICIALS.

   B. THE GENERAL ARRANGEMENT AND LOCATIONS OF PIPING, FIXTURES, ETC. ARE INDICATED BY THE DRAWINGS AND SHALL BE INSTALLED IN ACCORDANCE THEREWITH; WITH THE EXCEPTION OF SUCH CHANGES AS MAY BE REQUIRED ON ACCOUNT OF OTHER TRADES. CONTRACTOR SHALL COORDINATE WORK WITH INSTALLATION OF OTHER SUBCONTRACTORS.

   C. PLUMBING WORK SHALL BE COORDINATED WITH THE CONTRACTOR AS TO SCHEDULING, DIMENSIONING AND LOCATION OF EQUIPMENT.

   D. MAJOR ITEMS ARE SHOWN ON THE PROJECT PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INCIDENTAL ITEMS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.

   E. ALL PIPING SYSTEMS SHALL TERMINATE 5 FEET BEYOND THE BUILDING LINE UNLESS INDICATED OTHERWISE. EXTENSION OF THESE LINES SHALL BE PROVIDED BY THE SITE CONTRACTOR.

   F. SIMILAR ITEMS SHALL BE PROVIDED BY A SINGLE MANUFACTURER.

   G. ALL REQUIRED WALL OR FLOOR OPENINGS SHALL BE COORDINATED WITH THE CONTRACTOR.

   H. ALL PIPING SHALL BE ABOVE CEILING UNLESS INDICATED OTHERWISE.

   I. DO NOT INSTALL PVC PIPING OR ANY COMBUSTIBLE MATERIAL IN ANY AIR PLENUM.

   J. ALL EQUIPMENT SHALL BE WIPED CLEAN, REMOVING ALL TRACES OF OIL, DIRT, OR PAINT SPOTS.

   K. PROVIDE SUPPORTS TO RIGIDLY ATTACH ALL EQUIPMENT, APPURTENANCES AND PIPE AS REQUIRED FOR SUPPORT. PRIOR TO INSTALLATION OF HANGERS AND INSERTS, THE CONTRACTOR SHALL COORDINATE LOCATIONS AND REQUIREMENTS TO MINIMIZE CONFLICTS WITH OTHER BUILDING SYSTEMS. INSTALLATION OF PIPE HANGERS AND SUPPORTS SHALL BE IN STRICT ACCORDANCE WITH MSS SP-58, 69 AND 89.

   L. CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL EQUIPMENT INDICATED TO BE FURNISHED BY OTHERS.

   M. THE CONTRACTOR SHALL INVESTIGATE THE CONSTRUCTION CONDITIONS AFFECTING THE WORK, ADJUST THE LOCATION OF EQUIPMENT, PIPING AND DUCTWORK AND PROVIDE FITTINGS AND ACCESSORIES AS REQUIRED TO MEET ACTUAL CONDITIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR UNANTICIPATED WORK ERUPTING FROM THE INSTALLATION OF THE NEW WORK.

   N. PENETRATIONS THROUGH FIRE RATED PARTITIONS, WALLS AND FLOORS SHALL BE SEALED IN ACCORDANCE WITH THE TERMS OF UL LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS XHEZ AS PUBLISHED IN THE UL FIRE RESISTANCE DIRECTORY. PENETRATIONS SHALL EXACTLY CONFORM TO DETAILS OF THE FIRESTOP SYSTEM INDICATED FOR THE TYPE OF PARTITION, WALL AND FLOOR CONSTRUCTION ENCOUNTERED.

2. SUBMISSION OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND PROJECT INFORMATION

   A. SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING ITEMS:
      (1) STRAINERS
      (2) INSULATION
      (3) GATE VALVES
      (4) CHECK VALVES

   B. IDENTIFY ALL PLUMBING SHOP DRAWINGS, PRODUCT DATA AND SAMPLES WITH THE NAME OF THE PROJECT. CLEARLY MARK THE SPECIFIC ITEMS INTENDED FOR USE. SUBMIT ALL RELATED ITEMS AT ONE TIME.

   C. PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT, SUBMIT THE FOLLOWING INFORMATION FOR REVIEW AND APPROVAL.

      (1) OPERATING AND MAINTENANCE INSTRUCTIONS.
      (2) "AS BUILT" DRAWINGS.

3. GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE AND CONTRACTOR SHALL MAKE GOOD, WITHOUT ADDITIONAL COST TO THE OWNER, ANY DEFECTS WHICH MAY APPEAR WITHIN THAT PERIOD. MANUFACTURER'S WARRANTIES EXTENDING BEYOND ONE YEAR SHALL BE PROCESSED AND TURNED OVER TO THE OWNER.

4. "AS BUILT" DRAWINGS: CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF THE LOCATION OF ALL CONCEALED PIPING, VALVES, CONTROLS, ETC., BOTH INTERIOR AND EXTERIOR. ON COMPLETION OF THE WORK, ONE PRINT EACH OF THE CONTRACT DRAWINGS WHICH ARE APPLICABLE SHALL BE NEATLY AND CLEARLY MARKED IN COLOR TO SHOW ALL VARIATIONS BETWEEN THE WORK ACTUALLY PROVIDED AND THAT INDICATED ON THE CONTRACT DRAWINGS.

5. OPERATING AND MAINTENANCE MANUALS

   A. GENERAL: PRIOR TO COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL PROVIDE THREE HARDBACKED LOOSELEAF RING TYPE BINDERS, IDENTIFIED WITH THE NAME OF THE PROJECT. CONTRACTOR SHALL DELIVER THESE BINDERS TO THE ENGINEER FOR REVIEW AND TRANSMITTAL TO THE OWNER.

   B. THE FOLLOWING ITEMS AND OTHER ADDITIONAL PERTINENT DATA FOR EACH ITEM OF EQUIPMENT SHALL BE INCLUDED:

   C. THE OPERATING AND MAINTENANCE MANUALS SHALL BE CONSIDERED A PART OF THE FINAL INSPECTION AND THEY SHALL BE SUBMITTED FOR APPROVAL AT LEAST THIRTY (30) DAYS PRIOR TO REQUEST FOR FINAL INSPECTION.

6. ACCESS DOORS: ACCESS DOORS SHALL BE PROVIDED FOR ALL CONCEALED VALVES, CONTROLS, AND ANY OTHER EQUIPMENT OR MATERIALS REQUIRING INSPECTION OR MAINTENANCE. ACCESS DOORS SHALL BE FURNISHED FOR FLOORS, WALLS AND CEILINGS, OF ADEQUATE SIZE SO THAT CONCEALED ITEMS WILL BE READILY ACCESSIBLE FOR SERVICING OR FOR REMOVAL AND REPLACEMENT IF NECESSARY. DOORS SHALL BE 16 GAGE STEEL, FLUSH TO FRAME WITH ONE PIECE OUTER FLANGE AND CAM LATCH. DOOR SHALL BE SUITABLE FOR PAINTING, COLOR AS SELECTED BY ARCHITECT.

7. IDENTIFICATION

   A. SUBMITTALS
      (1) SUBMIT LIST OF WORDING, SYMBOLS, LETTER SIZE, AND COLOR CODING FOR MECHANICAL IDENTIFICATION.
      (2) SUBMIT VALVE CHART AND SCHEDULE, INCLUDING VALVE TAG NUMBER, LOCATION, FUNCTION, AND VALVE MANUFACTURER'S NAME AND MODEL NUMBER.
      (3) PRODUCT DATA: PROVIDE MANUFACTURERS CATALOG LITERATURE FOR EACH PRODUCT REQUIRED.

   B. NAMEPLATES
      (1) DESCRIPTION: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED LETTERS ON LIGHT CONTRASTING BACKGROUND COLOR.

   C. TAGS
      (1) METAL TAGS: BRASS WITH STAMPED LETTERS; TAG SIZE MINIMUM 1-1/2 INCHES (40 MM) DIAMETER.
      (2) CHART: TYPEWRITTEN LETTER SIZE LIST IN ANODIZED ALUMINUM FRAME.

   D. INSTALLATION
      (1) DEGREASE AND CLEAN SURFACES TO RECEIVE ADHESIVE FOR IDENTIFICATION MATERIALS.
      (2) INSTALL PLASTIC NAMEPLATES WITH CORROSIVE-RESISTANT MECHANICAL FASTENERS, OR ADHESIVE. APPLY WITH SUFFICIENT ADHESIVE TO ENSURE PERMANENT ADHESION AND SEAL WITH CLEAR LACQUER.
      (3) INSTALL TAGS WITH CORROSION RESISTANT CHAIN.
      (4) INSTALL PLASTIC PIPE MARKERS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
      (5) IDENTIFY CONTROL PANELS AND MAJOR CONTROL COMPONENTS OUTSIDE PANELS WITH PLASTIC NAMEPLATES.
      (6) IDENTIFY VALVES IN MAIN AND BRANCH PIPING WITH TAGS.
      (7) IDENTIFY PIPING, CONCEALED OR EXPOSED, WITH PLASTIC PIPE MARKERS OR STENCILLED PAINTING. IDENTIFY SERVICE, FLOW DIRECTION, AND PRESSURE. INSTALL IN CLEAR VIEW AND ALIGN WITH AXIS OF PIPING. LOCATE IDENTIFICATION NOT TO EXCEED 20 FEET (6 M) ON STRAIGHT RUNS INCLUDING RISERS AND DROPS, ADJACENT TO EACH VALVE AND TEE, AT EACH SIDE OF PENETRATION OF STRUCTURE OR ENCLOSURE, AND AT EACH OBSTRUCTION.
      (8) PROVIDE CEILING TACKS TO LOCATE VALVES ABOVE T-BAR TYPE PANEL CEILINGS. LOCATE IN CORNER OF PANEL CLOSEST TO EQUIPMENT.

8. PIPING SPECIALTIES

   A. PIPE ESCUTCHEONS: INSTALL PIPE ESCUTCHEONS ON EACH PIPE PENETRATION THRU FLOORS, WALLS PARTITIONS, AND CEILINGS WHERE PENETRATION IS EXPOSED TO VIEW AND ON EXTERIOR OF BUILDING. SECURE ESCUTCHEON TO PIPE OR INSULATION SO ESCUTCHEON COVERS PENETRATION HOLE, AND IS FLUSH WITH ADJOINING SURFACE. PROVIDE SHEET STEEL ESCUTCHEONS, SOLID OR SPLIT HINGED. FOR AREAS WHERE WATER AND CONDENSATION CAN BE EXPECTED TO ACCUMULATE, PROVIDE CAST BRASS OR SHEET BRASS ESCUTCHEONS, SOLID OR SPLIT HINGED.

   B. PIPE SLEEVES: INSTALL PIPE SLEEVES WHERE PIPING PASSES THROUGH WALLS, FLOORS, CEILINGS, AND ROOFS. DO NOT INSTALL SLEEVES THROUGH STRUCTURAL MEMBERS OF WORK, EXCEPT AS DETAILED ON DRAWINGS, OR AS REVIEWED BY ARCHITECT/ENGINEER. SIZE SLEEVES SO THAT PIPING AND INSULATION (IF ANY) WILL HAVE FREE MOVEMENT IN SLEEVE, INCLUDING ALLOWANCE FOR THERMAL EXPANSION.

9. INSULATION

   A. FLAME/SMOKE RATINGS: PROVIDE COMPOSITE PLUMBING INSULATION (INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES) WITH FLAME-SPREAD RATING OF 25 OR LESS, AND SMOKE-DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ANSI/ASTM E84 (NFPA 255) METHOD. INSULATION SHALL BE LABELED BY THE MANUFACTURER. THE LABEL SHALL INDICATE THE INSULATING VALUE, FLAME SPREAD AND SMOKE-DEVELOPED RATING.

   B. SUBMITTALS: SUBMIT MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR EACH TYPE OF PLUMBING INSULATION. SUBMIT SCHEDULE SHOWING MANUFACTURER'S PRODUCT NUMBER, THICKNESS, AND FURNISHED ACCESSORIES FOR EACH PLUMBING SYSTEM REQUIRING INSULATION.

   C. INSTALLATION: INSULATION SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS USING ONLY ADHESIVES, MASTICS AND PLUMBING FASTENERS APPROVED BY THE INSULATION MANUFACTURER. INSULATION SHALL NOT BE APPLIED UNTIL AFTER THE EQUIPMENT HAS BEEN TESTED WITH RESULTS ACCEPTABLE TO THE ARCHITECT/ENGINEER.

   D. MATERIALS:
      (1) CELLULAR FOAM PIPE INSULATION: TUBULAR, FLEXIBLE, FIRE RESISTANT INSULATION WITH OPERATING TEMPERATURE RANGE OF -40 DEGREES F TO 220 DEGREES F, THERMAL CONDUCTIVITY "K"=0.27 BTU-IN/HOUR-SF-DEG F AT 75 DEGREES F. NO JACKET REQUIRED. EQUAL TO ARMSTRONG ARMAFLEX AP.

   E. PIPE INSULATION
      (1) INSULATION OMITTED: OMIT INSULATION ON EXPOSED PLUMBING FIXTURE RUNOUTS FROM FACES OF WALL OR FLOOR TO FIXTURE; ON UNIONS, FLANGES, STRAINERS, FLEXIBLE CONNECTIONS, AND EXPANSION JOINTS.
      (2) COVER VALVES, FITTINGS AND SIMILAR ITEMS IN EACH PIPING SYSTEM WITH EQUIVALENT THICKNESS AND COMPOSITION OF INSULATION AS APPLIED TO ADJOINING PIPE RUN.
      (3) EXTEND PIPING INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS AND SIMILAR PIPING PENETRATIONS, EXCEPT WHERE OTHERWISE INDICATED.
      (4) INSTALL PROTECTIVE METAL SHIELDS AND INSULATED INSERTS WHEREVER NEEDED TO PREVENT COMPRESSION OF INSULATION.
      (5) DOMESTIC COLD WATER PIPING, ABOVE GROUND: PIPING SHALL BE INSULATED WITH 1/2 INCH THICK GLASS FIBER, CELLULAR FOAM, OR POLYETHYLENE PIPE INSULATION.
      (6) DOMESTIC HOT WATER PIPING (INCLUDING HOT WATER RECIRCULATING): PIPING SHALL BE INSULATED WITH 1/2 INCH THICK GLASS FIBER, CELLULAR FOAM, OR POLYETHYLENE PIPE INSULATION. VAPOR SEAL IS NOT REQUIRED.

10. PLUMBING PIPING

   A. DOMESTIC WATER PIPING ABOVE GROUND

      PIPE: TYPE L HARD DRAWN COPPER IN ACCORDANCE WITH ASTM B75
      FITTINGS: CAST BRONZE OR WROUGHT COPPER ASTM B16.15
      JOINTS: SOLDERED USING TIN-ANTIMONY (95-5) SOLDER

   B. DOMESTIC WATER PIPING UNDERGROUND

      PIPE: TYPE K SEAMLESS ROLL STOCK IN ACCORDANCE WITH ASTM B88
      FITTINGS: CAST BRONZE OR WROUGHT COPPER ASTM B16.15
      JOINTS: SOLDERED USING TIN-ANTIMONY (95-5) SOLDER

   C. SOIL, WASTE AND VENT PIPING BELOW GRADE AND STORM SEWER BELOW GRADE
      SIZE: 4 INCHES AND SMALLER
      PIPE: SERVICE WEIGHT CAST IRON ASTM A-74
      FITTINGS: SERVICE WEIGHT, BELL AND SPIGOT CAST IRON
      JOINTS: BELL AND SPIGOT FOR CAST IRON

   D. SOIL, WASTE AND VENT PIPING ABOVE GRADE AND STORM DRAINS & ROOF LEADERS

      SIZE: 3 INCHES AND LARGER
      PIPE: SERVICE WEIGHT CAST IRON ASTM A-74 OR HUBLESS ASTM C-564
      FITTINGS: SERVICE WEIGHT OR HUBLESS CAST IRON
      JOINTS: HUB & SPIGOT CAULKED, COMPRESSION GASKETS OR NEOPRENE SLEEVES AND STAINLESS STEEL BANDS FOR CAST IRON

      SIZE: 2-1/2 INCHES AND SMALLER: SAME AS 3 INCHES AND LARGER EXCEPT VENTS MAY BE SCH. 40 GALVANIZED STEEL ASTM A120/A53 WITH GALVANIZED CAST IRON OR MALLEABLE IRON FITTINGS.

   E. ALL PIPE OF THE SAME SIZE SHALL BE THE SAME MATERIAL.

   F. SLOPE ALL DRAIN LINES 1/4 INCH PER FOOT MINIMUM FOR SIZES LESS THAN 4 INCHES; SLOPE 1/8 INCH PER FOOT FOR SIZES 4 INCHES AND LARGER.

   G. SOIL, WASTE AND VENT PIPING LOCATED BELOW GRADE SHALL BE MINIMUM 2 INCHES SIZE.

   H. VENTS SHALL EXTEND 12 INCHES ABOVE THE ROOF. ROOF FLASHING SHALL BE COORDINATED WITH BY THE CONTRACTOR.

   I. DOMESTIC HOT AND COLD WATER PIPING SHALL BE 1/2 INCHES SIZE UNLESS INDICATED OTHERWISE.

11. PLUMBING VALVES

   A. PROVIDE THREADED SHUT-OFF VALVE AND UNION OR EQUIVALENT AT EACH HOT AND COLD WATER EQUIPMENT CONNECTION. PROVIDE THREADED SHUT-OFF VALVE ON EACH BRANCH OR RISER THAT SERVES TWO OR MORE PLUMBING FIXTURES.

   B. GATE VALVES 2-1/2 INCHES AND SMALLER: ALL BRONZE, RISING STEM, SOLID WEDGE DISC. STOCKHAM B-100 OR B-108.

   C. CHECK VALVES IN HORIZONTAL PIPES:
      (1) 2 INCHES AND SMALLER: ALL BRONZE, REGRINDING BRONZE DISC, HORIZONTAL SWING, Y-PATTERN. STOCKHAM B-319OR B-309.

   D. BALL VALVES MAY BE USED IN LIEU OF GATE VALVES 2 INCHES AND SMALLER. BALL VALVES SHALL HAVE BRONZE BODY, BRONZE BALL AND TFE SEATS AND SEALS. STOCKHAM S-216BRRT OR S-216BRRS.

12. PLUMBING FIXTURES

   A. CODES AND STANDARDS: COMPLY WITH APPLICABLE PORTIONS OF NATIONAL STANDARD PLUMBING CODE PERTAINING TO MATERIALS AND INSTALLATION OF PLUMBING FIXTURES.
      (1) ANSI STANDARDS: COMPLY WITH APPLICABLE ANSI STANDARDS PERTAINING TO PLUMBING FIXTURES AND SYSTEMS.
      (2) PDI COMPLIANCE: COMPLY WITH STANDARDS ESTABLISHED BY PDI PERTAINING TO PLUMBING FIXTURE SUPPORTS.
      (3) UL COMPLIANCE: CONSTRUCT WATER COOLERS IN ACCORDANCE WITH UL STANDARD 399 "DRINKING-WATER COOLERS", AND PROVIDE UL-LISTING AND LABEL.
      (4) ANSI COMPLIANCE: CONSTRUCT AND INSTALL BARRIER FREE PLUMBING FIXTURES IN ACCORDANCE WITH ANSI STANDARD A117.1 "SPECIFICATIONS FOR MAKING BUILDINGS AND FACILITIES ACCESSIBLE TO AND USABLE BY PHYSICALLY HANDICAPPED PEOPLE".

   B. ALL EXPOSED FIXTURE SUPPLIES AND WASTE LINES SHALL BE CHROME PLATED.

   C. PLUMBING FIXTURES SHALL BE POSITIVELY VENTED AND TRAPPED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE. WET VENTING IS ALLOWED IF WASTE PIPING IS OVERSIZED AND IN ACCORDANCE WITH CODE PROVISIONS. LOCATION OF VENT SHALL NOT EXCEED MAXIMUM DISTANCES TO THE TRAP AS ESTABLISHED WITHIN THE INTERNATIONAL PLUMBING CODE.

13. NATURAL GAS SYSTEMS

   A. GAS SERVICE PIPING:
      (1) ALL SIZES: SCHEDULE 40 BLACK STEEL PIPE, ASTM A120/A53-CW OR ASTM/A53 GRADE B (WELDED OR SEAMLESS); WROUGHT STEEL BUTTWELDING FITTINGS.
      (2) WRAPPING FOR EXPOSED PIPING: MACHINE WRAP PIPE USING 50% OVERLAP WRAP, WITH POLYVINYL CHLORIDE TAPE. HAND WRAP FITTINGS USING 100% OVERLAP WRAP EXTENDING 6 INCHES BEYOND FITTING ONTO WRAPPED PIPE. COMPLY WITH TAPE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

   B. BUILDING DISTRIBUTION PIPING AND VENT PIPING:
      (1) ALL SIZES: SCHEDULE 40 BLACK STEEL PIPE, ASTM A120/A53-CW OR ASTM/A53 GRADE B (WELDED OR SEAMLESS); MALLEABLE IRON THREADED FITTINGS (EXPOSED PIPING ONLY); WROUGHT STEEL BUTTWELDING FITTINGS (CONCEALED AND EXPOSED PIPING).

   C. GAS COCKS:
      (1) GAS COCKS 2 INCHES AND SMALLER: 150 PSI NON-SHOCK WOG, BRONZE STRAIGHTWAY COCK, FLAT OR SQUARE HEAD, THREADED ENDS.
      (2) GAS COCKS 2-1/2 INCHES AND LARGER: 125 PSI NON-SHOCK WOG, IRON BODY BRONZE MOUNTED, STRAIGHTWAY COCK, SQUARE HEAD, FLANGED ENDS.

   D. ALL GAS PIPING EQUIPMENT CONNECTIONS SHALL BE PROVIDED WITH A 6 INCHES DIRT TRAP, UNION AND GAS COCK SHUT OFF.

   E. ALL JOINTS SHALL BE SEALED WITH CHEMICALLY RESISTANT SEALER APPLIED TO MALE THREADS OF PIPE CONNECTION.

   F. GAS PIPING SHALL BE INSTALLED WITH A 1/64 INCH PER FOOT DOWNWARD SLOPE IN DIRECTION OF FLOW.

14. CLEANING AND TESTING

   A. ALL WATER PIPING, VALVES, ETC. SHALL BE THOROUGHLY FLUSHED OF FOREIGN MATTER AND TESTED FOR LEAKS FOR A PERIOD OF TWO HOURS AT NOT LESS THAN 25 PSIG. ANY LEAKAGE SHALL BE REPAIRED. DISINFECT DOMESTIC WATER PIPING INCLUDING WATER SERVICE PIPING IN ACCORDANCE WITH AWWA C601.

   B. ALL DRAIN, WASTE AND VENT PIPING SHALL BE TESTED FOR LEAKS BY FILLING PIPING SYSTEM TO OVERFLOW AND ALLOWING TO STAND FOR 24 HOURS. NO VISIBLE DROP IN WATER LEVEL WILL BE ACCEPTABLE.

END OF SPECIFICATIONS

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
MELINDA D. RUBLE
No. 028163
12.31.2020
PROFESSIONAL ENGINEER

NO.	REVISIONS	DATE

TENANT UPFIT FOR

PROSPERITY℠

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

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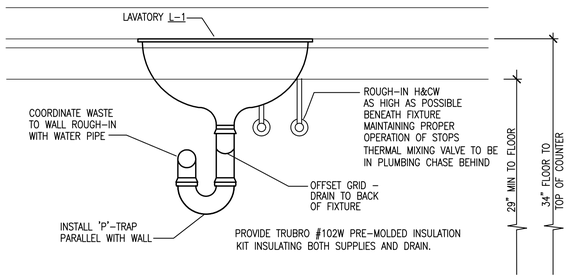
JOB	20-058

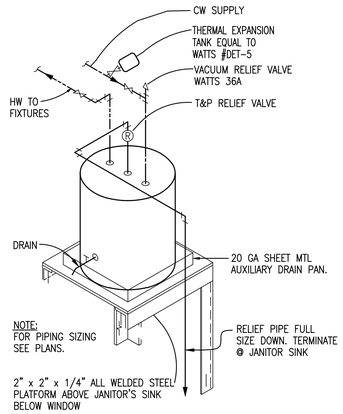
PLUMBING SPECIFICATIONS

SHEET
P-101



DETAIL – LAV FIXTURE L-2

NO SCALE



DETAIL – WATER HEATER

NO SCALE

PLUMBING EQUIPMENT SCHEDULE

WC-1 AMERICAN STANDARD CADET AS-215AA.709 TOUCHLESS ELONGATED VITREOUS CHINA WATER CLOSET (HANDICAPPED, TANK TYPE, FLOOR MTD., 1.28GAL/FLUSH CLASS FIVE FLUSHING TECHNOLOGY; AMERICAN STANDARD 5503A.00B ELONGATED SEAT; BOLT CAPS.

L-1 AMERICAN STANDARD 0496.300, VITREOUS CHINA; MOEN 8553 FAUCET, SENSOR TO BE MOUNTED UNDER LAV AS HIGH AS POSSIBLE. PROVIDE WITH WHEELCHAIR OFFSET GRID DRAIN STRAINER, AND ANGLE SUPPLIES WITH LOOSE KEY STOPS. PROVIDE TRUBRO #102W PRE-MOLDED INSULATION KIT INSULATING BOTH SUPPLIES AND DRAIN. PROVIDE THERMOSTATIC MIXING VALVE, WILKINS MODEL ZW1070, ASSE 1070 COMPLIANT.

U-1 AMERICAN STANDARD #6541.132 ALLBROOK VITREOUS CHINA URINAL (HANDICAP FLUSH VALVE-3/4" TOP SPUD, WALL MTD., 1.0 GAL./FLUSH) SIPHON JET; SLOAN G2-8186 CHROME SENSOR FLUSH VALVE, WALL HANGER OR JOSAM #17800 SERIES CARRIER.

S-1 ELKAY #ELUHAD141855 STAINLESS STEEL SINGLE BOWL SINK, 18 GAUGE, TYPE 304 UNDERMOUNT, 5.5" DEEP; LKB721C ELKAY FAUCET WITH 12" SPOUT, TOUCHLESS, P-TRAP AND SUPPLIES, #LK35 STRAINER.

S-2 ELKAY #DCFU2416 STAINLESS STEEL SINGLE BOWL SINK, 18 GAUGE, 300 SERIES UNDERMOUNT, 8" DEEP; KOHLER K-72218 PULL DOWN KITCHEN FAUCET, TOUCHLESS, P-TRAP AND SUPPLIES, #LK35 STRAINER.

EWC-1 ELKAY #EZSTL8WSLK BI-LEVEL ELECTRIC WATER COOLER WITH BOTTLE FILLER, CABINET FINISH SELECTION BY ARCHITECT, FRONT AND SIDE PRESS BARS, LEAD FREE WORKING COMPONENTS; 8.0 GPH CAPACITY AND 3.7 AMPS.

FD-1 JOSAM #30000-5A-2-17 FLOOR DRAIN, SATIN FINISH BRONZE TOP, NON-CLOG STRAINER, SECURED GRATE; 4"DEEP SEAL TRAP. SET RIM FLUSH WITH FINISH FLOOR.

JS-1 FIAT #MSB-2424 MOLDED STONE MOP SERVICE BASIN, 24"x24"x10"; #830-AA WALL MTD FAUCET W/VACUUM BREAKER & BUCKET HOOK; #832-AA HOSE & BRACKET, #E-77-AA VINYL BUMPER GUARD. #889-CC MOP HANGER & #ODC-3-2 QUICK DRAIN CONNECTOR, #MSG2424 STAINLESS STEEL WALL GUARDS.

HWH-1 STATE PCE-40-20LSA-45 ELECTRIC WATER HEATER, SINGLE ELEMENT, 40 GAL. CAPACITY TANK, 19 GAL/HR RECOVERY AT 40 DEG. F. AND 100 DEG.F. RISE, 4500 W; 230/1; T&P RELIEF VALVE.

HWRP-1 BELL & GOSSET #100 CIRCULATING PUMP, 1/12 HP., 120 VOLT, 15 GPM AT 7 FT. HEAD, BRONZE TOP.

PLUMBING FIXTURE INSTALLATION SCHEDULE

FIXTURE	MARK	MH	CW	HW	VENT	WASTE
WATER CLOSET(HC)	WC-1	17"	1"	--	2"	4"
LAVATORY	L-1	COUNTER	1/2"	1/2"	1-1/2"	2"
SINK	S-1	COUNTER	1/2"	1/2"	1-1/2"	2"
SINK	S-2	COUNTER	1/2"	1/2"	1-1/2"	2"
ELECTRIC WATER COOLER	EWC-1	36"(A)	1/2"	--	1-1/2"	2"
URINAL (HC)	U-1	17"	3/4"	--	1-1/2"	2"
JANITOR SINK	JS-1	FLOOR	1/2"	1/2"	1-1/2"	2"

NOTES
1. SIZE GIVEN ARE FOR FIXTURE ONLY. EXCEPTIONS, IF ANY, ARE SHOWN ON PLANS.
2. MOUNTING HEIGHT DIMENSIONS ARE TO FLOOD LEVEL RIM OF FIXTURE, UNLESS NOTED OTHERWISE.
   (A) MOUNTING HEIGHT TO LOWER SPOUT OUTLET.
3. THERMOSTATIC MIXING VALVE TO BE MOUNTED HIGH UNDER LAVATORY TO CONCEAL FROM VIEW.

LEGEND

- BRANCH CONNECTION – BOTTOM OF MAIN
- BRANCH CONNECTION – SIDE OF MAIN
- BRANCH CONNECTION – TOP OF MAIN
- PIPE DOWN OR PIPE FROM BELOW
- PIPE UP OR PIPE FROM ABOVE
- DIRECTION OF FLOW
- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- SPRINKLER HEAD
- SANITARY SEWER OR DRAIN
- SANITARY VENT
- RL — RAIN LEADER ABOVE LOWEST FLOOR
- SD — STORM SEWER OR DRAIN
- CO — CLEANOUT FLUSH WITH FLOOR
- CO — CLEANOUT BELOW FLOOR
- HOSE BIBBS (PLAN & ELEVATION)
- GATE VALVE
- BALL VALVE
- THERMOMETER
- PRESSURE REDUCING VALVE (PRV)
- R — RELIEF VALVE
- BACKFLOW PREVENTER (BFP)

ABBREVIATIONS

ABV	ABOVE
BTU	BRITISH THERMAL UNIT
BEL	BELOW
BET	BETWEEN
CLG	CEILING
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECT, CONNECTION
CW	COLD WATER
CONT	CONTINUED
DN	DOWN
EA	EACH
EWC	ELECTRIC WATER COOLER
F	DEGREES FARENHEIT
FD	FLOOR DRAIN
FL	FLOOR
FR	FROM
FT	FEET
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HB	HOSE BIBB
HW	HOT WATER
IN	INCH, INCHES
MAX	MAXIMUM
MIN	MINUMUM
RD	ROOF DRAIN
REQD	REQUIRED
RL	ROOF LEADER
SH	SHEET
TEMP	TEMPERATURE
TYP	TYPICAL
V	SANITARY VENT
VTR	VENT THRU ROOF
W	SANITARY WASTE
WH	WALL HYDRANT

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

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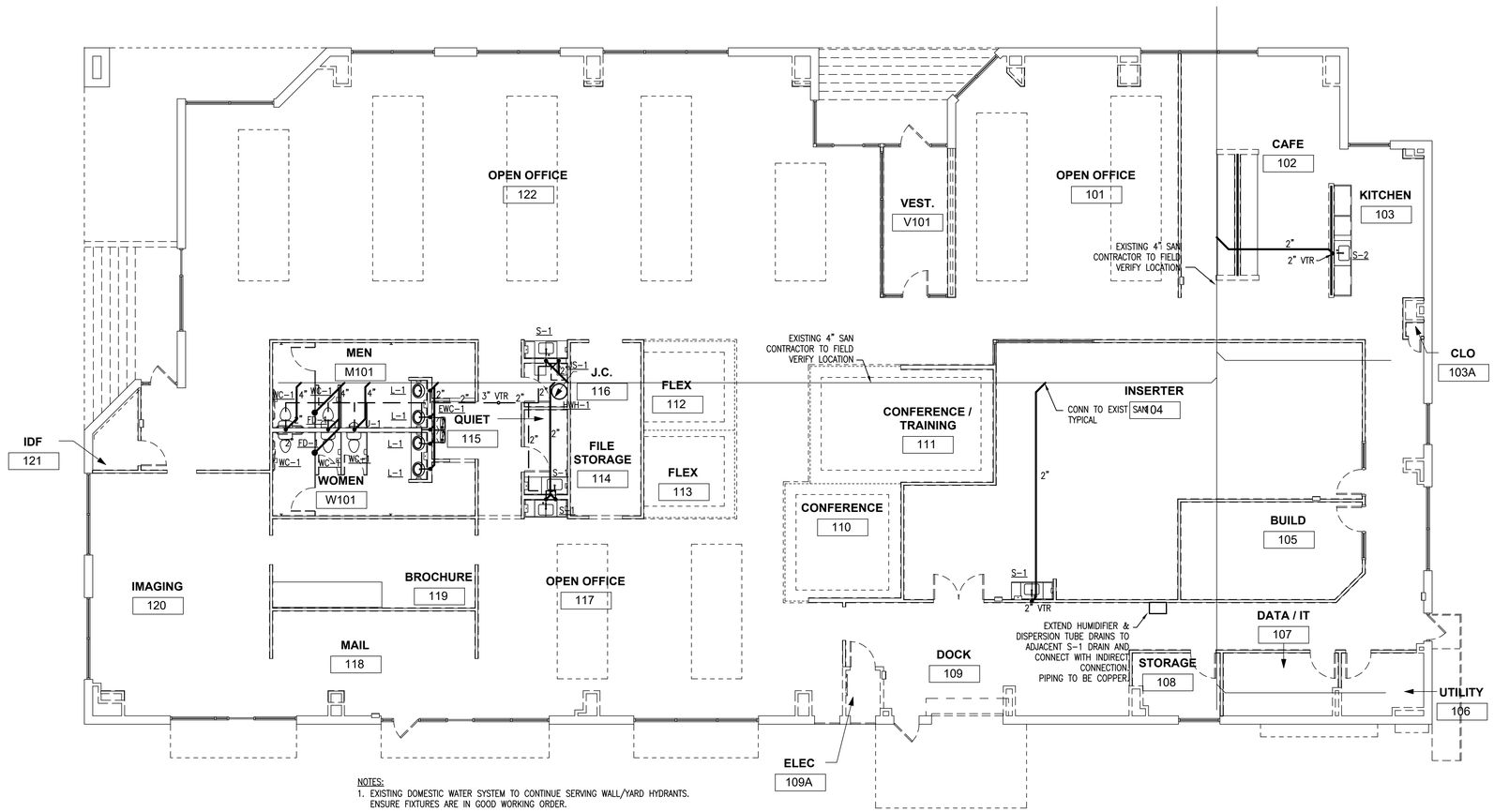
PLUMBING LEGEND, SCHEDULES & DETAILS

SHEET
P-201



NEW WORK PLAN - PLUMBING SANITARY AND VENT

1/8" = 1'-0"

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
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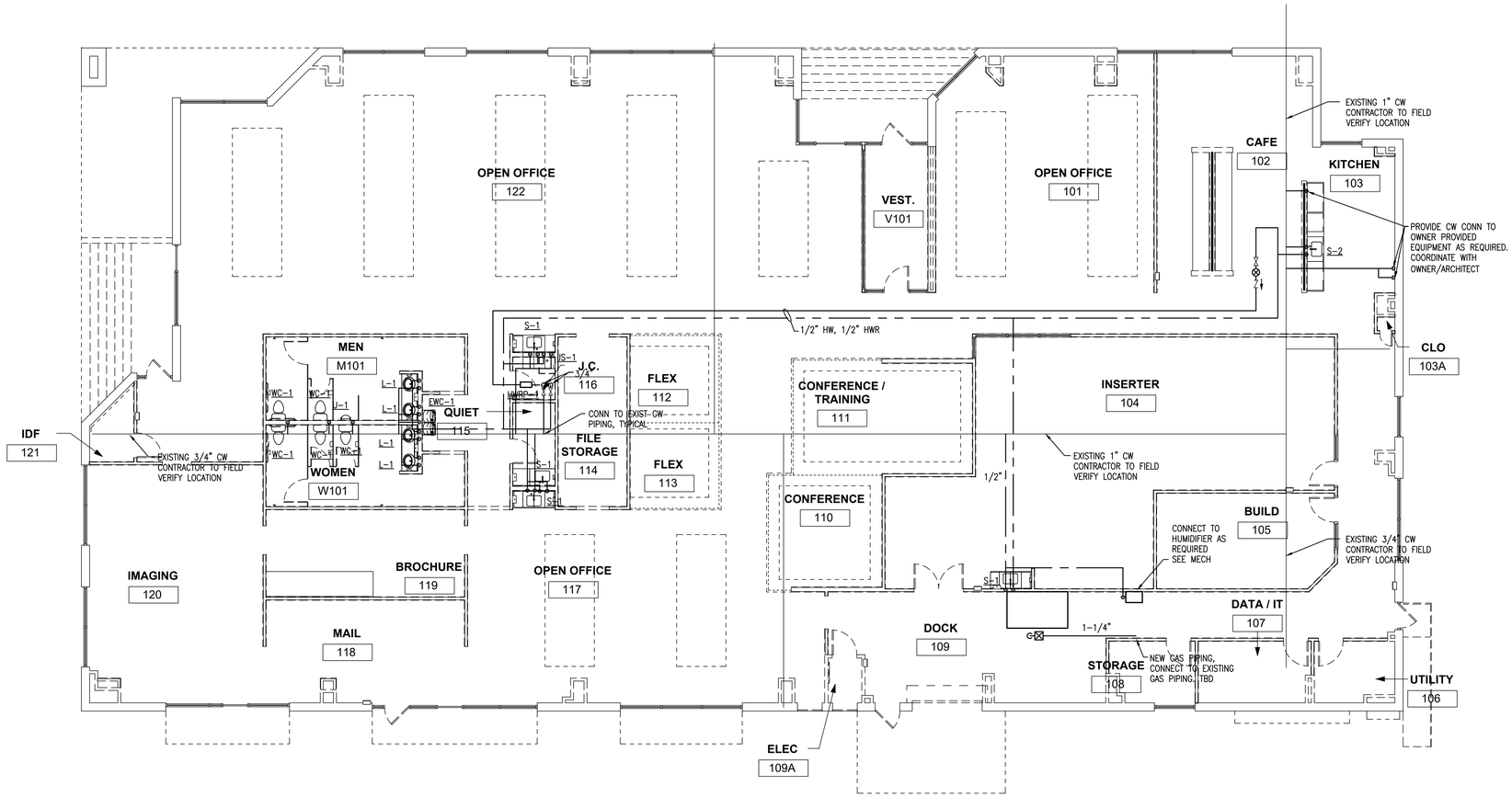
NEW WORK PLAN PLUMBING SANITARY & VENT

SHEET

P-301



NEW WORK PLAN - PLUMBING DOMESTIC WATER, GAS PIPING

1/8" = 1'-0"

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

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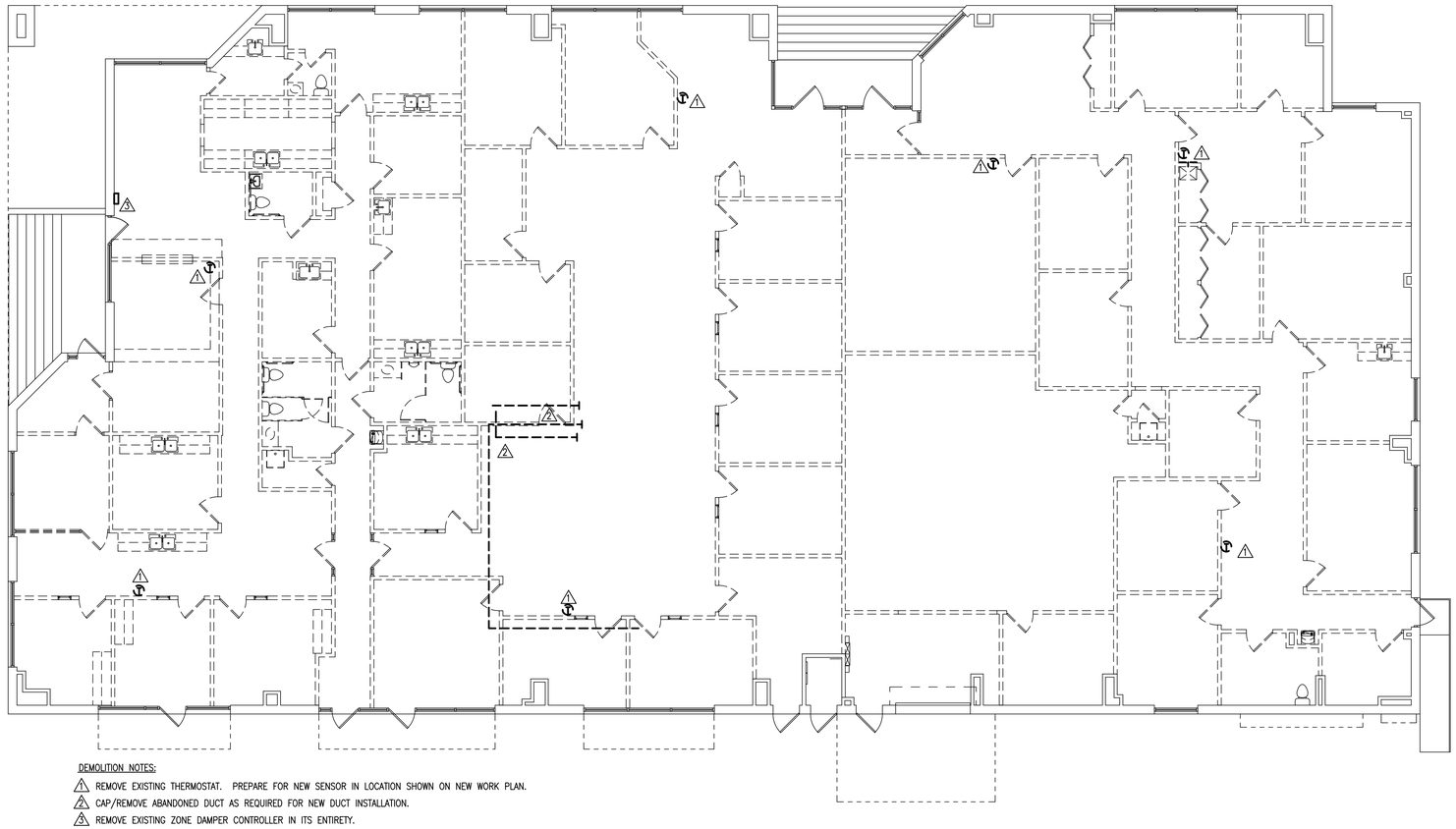
NEW WORK PLAN PLUMBING DOMESTIC WATER, GAS PIPING

SHEET

P-302



DEMOLITION NOTES:

1. REMOVE EXISTING THERMOSTAT. PREPARE FOR NEW SENSOR IN LOCATION SHOWN ON NEW WORK PLAN.
2. CAP/REMOVE ABANDONED DUCT AS REQUIRED FOR NEW DUCT INSTALLATION.
3. REMOVE EXISTING ZONE DAMPER CONTROLLER IN ITS ENTIRETY.

DEMOLITION PLAN - MECHANICAL

1/8" = 1'-0"

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

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ELECTRIC ROAD - DEMOLITION

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DEMOLITION PLAN MECHANICAL

SHEET

MD-102

1. GENERAL PROVISIONS

A. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE INCLUDING REFERENCED CODES AND STANDARDS AND IN ACCORDANCE WITH MANDATES OF THE LOCAL BUILDING OFFICIALS.

B. THE GENERAL ARRANGEMENT AND LOCATIONS OF DUCTWORK, PIPING, FIXTURES, ETC. ARE INDICATED BY THE DRAWINGS AND SHALL BE INSTALLED IN ACCORDANCE THEREWITH; WITH THE EXCEPTION OF SUCH CHANGES AS MAY BE REQUIRED ON ACCOUNT OF OTHER TRADES. CONTRACTOR SHALL COORDINATE WORK WITH INSTALLATION OF OTHER SUBCONTRACTORS.

C. MECHANICAL WORK SHALL BE COORDINATED WITH THE CONTRACTOR AS TO SCHEDULING, DIMENSIONING AND LOCATION OF EQUIPMENT.

D. MAJOR ITEMS ARE SHOWN ON THE PROJECT PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INCIDENTAL ITEMS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.

E. TRADE NAMES AND CATALOG NUMBERS SHALL BE INTERPRETED AS ESTABLISHING A GENERAL DESIGN AND STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. UNLESS STATED OTHERWISE, THE CONTRACTOR MAY USE ANY ARTICLE WHICH, IN HIS JUDGEMENT, AND WITH WRITTEN COMMENT FROM THE ARCHITECT/ENGINEER INDICATING NO OBJECTION, IS EQUAL OR SUPERIOR TO THAT SPECIFIED. DRAWINGS SHOWING CHANGES OR REVISIONS REQUIRED BY THE SUBSTITUTION FOR SPECIFIED ITEMS SHALL BE SUBMITTED WITH THE SHOP DRAWING DATA, AND THE COSTS OF ALL SUCH CHANGES SHALL BE BORNE BY THE CONTRACTOR.

F. SIMILAR ITEMS SHALL BE PROVIDED BY A SINGLE MANUFACTURER.

G. ALL REQUIRED WALL OR FLOOR OPENINGS SHALL BE COORDINATED WITH THE CONTRACTOR.

H. ALL PIPING SHALL BE ABOVE CEILING UNLESS INDICATED OTHERWISE.

I. DO NOT INSTALL PVC PIPING OR ANY COMBUSTIBLE MATERIAL IN ANY AIR PLENUM.

J. ALL EQUIPMENT SHALL BE WIPED CLEAN, REMOVING ALL TRACES OF OIL, DIRT, OR PAINT SPOTS.

K. PROVIDE SUPPORTS TO RIGIDLY ATTACH ALL EQUIPMENT, APPURTENANCES AND PIPE AS REQUIRED FOR SUPPORT. PRIOR TO INSTALLATION OF HANGERS AND INSERTS, THE CONTRACTOR SHALL COORDINATE LOCATIONS AND REQUIREMENTS TO MINIMIZE CONFLICTS WITH OTHER BUILDING SYSTEMS. INSTALLATION OF PIPE HANGERS AND SUPPORTS SHALL BE IN STRICT ACCORDANCE WITH MSS SP-58, 69 AND 89.

L. CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL EQUIPMENT INDICATED TO BE FURNISHED BY OTHERS.

M. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE AND CONTRACTOR SHALL MAKE GOOD, WITHOUT ADDITIONAL COST TO THE OWNER, ANY DEFECT WHICH MAY APPEAR WITHIN THAT PERIOD. MANUFACTURER'S WARRANTIES EXTENDING BEYOND ONE YEAR SHALL BE PROCESSED AND TURNED OVER TO THE OWNER.

2. SUBMISSION OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND PROJECT INFORMATION

A. SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING ITEMS:
(1) MECHANICAL SLEEVE SEALS
(2) FIRE BARRIER PENETRATION SEALS
(3) INSULATION
(4) ALL MECHANICAL EQUIPMENT

B. IDENTIFY ALL MECHANICAL SHOP DRAWINGS, PRODUCT DATA AND SAMPLES WITH THE NAME OF THE PROJECT. CLEARLY MARK THE SPECIFIC ITEMS INTENDED FOR USE. SUBMIT ALL RELATED ITEMS AT ONE TIME.

C. PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT, SUBMIT THE FOLLOWING INFORMATION FOR REVIEW AND APPROVAL.
(1) OPERATING AND MAINTENANCE INSTRUCTIONS.
(2) "AS BUILT" DRAWINGS.

3. GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE AND CONTRACTOR SHALL MAKE GOOD, WITHOUT ADDITIONAL COST TO THE OWNER, ANY DEFECTS WHICH MAY APPEAR WITHIN THAT PERIOD. MANUFACTURER'S WARRANTIES EXTENDING BEYOND ONE YEAR SHALL BE PROCESSED AND TURNED OVER TO THE OWNER.

4. "AS BUILT" DRAWINGS: CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF THE LOCATION OF ALL CONCEALED DUCTWORK, PIPING, VALVES, CONTROLS, ETC., BOTH INTERIOR AND EXTERIOR. ON COMPLETION OF THE WORK, ONE PRINT EACH OF THE CONTRACT DRAWINGS WHICH ARE APPLICABLE SHALL BE NEATLY AND CLEARLY MARKED IN COLOR TO SHOW ALL VARIATIONS BETWEEN THE WORK ACTUALLY PROVIDED AND THAT INDICATED ON THE CONTRACT DRAWINGS.

5. OPERATING AND MAINTENANCE MANUALS

A. GENERAL: PRIOR TO COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL PROVIDE TWO HARDBACKED LOOSELEAF RING TYPE BINDERS, IDENTIFIED WITH THE NAME OF THE PROJECT. CONTRACTOR SHALL DELIVER THESE BINDERS TO THE ENGINEER FOR REVIEW AND TRANSMITTAL TO THE OWNER.

B. THE FOLLOWING ITEMS AND OTHER ADDITIONAL PERTINENT DATA FOR EACH ITEM OF EQUIPMENT SHALL BE INCLUDED:

(1) NAME OF MANUFACTURER.
(2) NAME, ADDRESS AND TELEPHONE NUMBER OF NEAREST MANUFACTURER'S REPRESENTATIVE.
(3) COPY OF LATEST APPROVED SHOP DRAWING.
(4) MANUFACTURER'S OPERATING AND MAINTENANCE MANUAL INCLUDING LUBRICATION DATA.
(5) PARTS NUMBERS FOR ALL REPLACEABLE ITEMS.
(6) SERIAL NUMBERS OF ALL PRINCIPAL ITEMS OF EQUIPMENT.
(7) CONTROL DIAGRAMS AND SEQUENCE OF OPERATION.
(8) MANUFACTURER'S WRITTEN GUARANTEES THAT EXTEND BEYOND THE CONTRACTOR'S ONE YEAR GUARANTEE.

C. THE OPERATING AND MAINTENANCE MANUALS SHALL BE CONSIDERED A PART OF THE FINAL INSPECTION AND THEY SHALL BE SUBMITTED FOR APPROVAL AT LEAST THIRTY (30) DAYS PRIOR TO REQUEST FOR FINAL INSPECTION.

6. ACCESS DOORS: ACCESS DOORS SHALL BE PROVIDED FOR ALL CONCEALED VALVES, CONTROLS, AND ANY OTHER EQUIPMENT OR MATERIALS REQUIRING INSPECTION OR MAINTENANCE. ACCESS DOORS SHALL BE FURNISHED FOR FLOORS, WALLS AND CEILINGS, OF ADEQUATE SIZE SO THAT CONCEALED ITEMS WILL BE READILY ACCESSIBLE FOR SERVICING OR FOR REMOVAL AND REPLACEMENT IF NECESSARY.

7. PAINTING

A. SCOPE OF WORK: MECHANICAL EQUIPMENT, MATERIALS, AND RELATED PIPING DO NOT REQUIRE PAINTING EXCEPT AS INDICATED BELOW.

B. EQUIPMENT WITH A FACTORY APPLIED FINISH WILL NOT REQUIRE ADDITIONAL PAINTING EXCEPT TOUCH-UP WITH MATCHING FINISH WHERE IT IS DAMAGED.

C. PIPING, FABRICATED SUPPORTS, OR OTHER UNFINISHED AND UNPROTECTED MATERIALS LOCATED OUTDOORS SHALL BE PAINTED WITH A SUITABLE PRIMER AND COMPATIBLE FINISH PAINT. COLOR SHALL BE AS DIRECTED BY ENGINEER.

D. PAINT INSIDE OF DUCTWORK WITH MATTE BLACK PAINT WHERE VISIBLE BEHIND AIR INLETS AND OUTLETS.

E. PROTECTION OF WORK: PAINTING SHALL BE DONE WITH ALL POSSIBLE CARE TO PROTECT THIS WORK AND WORK OF OTHER TRADES. ALL DAMAGE TO THIS AND OTHER WORK CAUSED BY THE PAINTING OPERATIONS SHALL BE CORRECTED, CLEANED OR REPAIRED AS REQUIRED. HARDWARE, SPECIAL CONTROL ITEMS, GAUGES, THERMOMETERS, NAMEPLATES, INSTRUMENT GLASS AND OTHER SIMILAR ITEMS SHALL BE REMOVED OR PROPERLY PROTECTED DURING THE PAINTING OPERATIONS TO INSURE THAT THESE ITEMS ARE NOT COVERED OR SPLATTERED WITH PAINT.

8. IDENTIFICATION

A. SUBMITTALS
(1) SUBMIT LIST OF WORDING, SYMBOLS, LETTER SIZE, AND COLOR CODING FOR MECHANICAL IDENTIFICATION.
(2) SUBMIT VALVE CHART AND SCHEDULE, INCLUDING VALVE TAG NUMBER, LOCATION, FUNCTION, AND VALVE MANUFACTURER'S NAME AND MODEL NUMBER.
(3) PRODUCT DATA: PROVIDE MANUFACTURERS CATALOG LITERATURE FOR EACH PRODUCT REQUIRED.

B. NAMEPLATES
(1) DESCRIPTION: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED LETTERS ON LIGHT CONTRASTING BACKGROUND COLOR.

C. TAGS
(1) METAL TAGS: BRASS WITH STAMPED LETTERS; TAG SIZE MINIMUM 1-1/2 INCHES (40 MM) DIAMETER.
(2) CHART: TYPEWRITTEN LETTER SIZE LIST IN ANODIZED ALUMINUM FRAME.

D. STENCILS
(1) STENCILS: WITH CLEAN CUT SYMBOLS AND LETTERS OF FOLLOWING SIZE:
(A) 3/4 TO 1-1/4 INCHES (20-30 MM) OUTSIDE DIAMETER OF INSULATION OR PIPE: 8 INCHES (200 MM) LONG COLOR FIELD, 1/2 INCHES (15 MM) HIGH LETTERS.
(B) 1-1/2 TO 2 INCHES (40-50 MM) OUTSIDE DIAMETER OF INSULATION OR PIPE: 8 INCHES (200 MM) LONG COLOR FIELD, 3/4 INCH (20 MM) HIGH LETTERS.
(C) 2-1/2 TO 6 INCHES (65-150 MM) OUTSIDE DIAMETER OF INSULATION OR PIPE: 12 INCHES (300 MM) LONG COLOR FIELD, 1-1/4 INCHES (30 MM) HIGH LETTERS.
(D) 8 TO 10 INCHES (200-250 MM) OUTSIDE DIAMETER OF INSULATION OR PIPE: 24 INCHES (600 MM) LONG COLOR FIELD, 2-1/2 INCHES (65 MM) HIGH LETTERS.
(E) OVER 10 INCHES (250 MM) OUTSIDE DIAMETER OF INSULATION OR PIPE: 32 INCHES (800 MM) LONG COLOR FIELD, 3-1/2 INCHES (90 MM) HIGH LETTERS.
(F) DUCTWORK AND EQUIPMENT: 2-1/2 INCHES (65 MM) HIGH LETTERS.
(2) STENCIL PAINT: AS SPECIFIED IN SECTION 09900, SEMI-GLOSS ENAMEL, COLORS CONFORMING TO ASME A13.1.

E. PIPE MARKERS
(1) COLOR: CONFORM TO ASME A13.1.
(2) PLASTIC PIPE MARKERS: FACTORY FABRICATED, FLEXIBLE, SEMI- RIGID PLASTIC, PREFORMED TO FIT AROUND PIPE OR PIPE COVERING; MINIMUM INFORMATION INDICATING FLOW DIRECTION ARROW AND IDENTIFICATION OF FLUID BEING CONVEYED.

F. CEILING TACKS
(1) DESCRIPTION: STEEL WITH 3/4 INCH (20 MM) DIAMETER COLOR CODED HEAD.
(2) COLOR CODE AS FOLLOWS:
(A) YELLOW - HVAC EQUIPMENT
(B) RED - FIRE DAMPERS/SMOKE DAMPERS
(C) GREEN - PLUMBING VALVES
(D) BLUE - HEATING/COOLING VALVES

G. INSTALLATION
(1) DEGREASE AND CLEAN SURFACES TO RECEIVE ADHESIVE FOR IDENTIFICATION MATERIALS.
(2) INSTALL PLASTIC NAMEPLATES WITH CORROSIVE-RESISTANT MECHANICAL FASTENERS, OR ADHESIVE. APPLY WITH SUFFICIENT ADHESIVE TO ENSURE PERMANENT ADHESION AND SEAL WITH CLEAR LACQUER.
(3) INSTALL TAGS WITH CORROSION RESISTANT CHAIN.
(4) INSTALL PLASTIC PIPE MARKERS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
(5) IDENTIFY AIR CONDITIONING UNITS AND FANS WITH PLASTIC NAMEPLATES OR STENCIL PAINTING.
(6) IDENTIFY CONTROL PANELS AND MAJOR CONTROL COMPONENTS OUTSIDE PANELS WITH PLASTIC NAMEPLATES.
(7) IDENTIFY DUCTWORK WITH PLASTIC NAMEPLATES OR STENCILLED PAINTING. IDENTIFY WITH AIR HANDLING UNIT OR FAN AND AREA BEING SERVED.
(8) TAG AUTOMATIC CONTROLS, INSTRUMENTS, AND RELAYS. KEY TO CONTROL SCHEMATIC.
(9) IDENTIFY PIPING, CONCEALED OR EXPOSED, WITH PLASTIC PIPE MARKERS OR STENCILLED PAINTING. IDENTIFY SERVICE, FLOW DIRECTION, AND PRESSURE. INSTALL IN CLEAR VIEW AND ALIGN WITH AXIS OF PIPING. LOCATE IDENTIFICATION NOT TO EXCEED 20 FEET (6 M) ON STRAIGHT RUNS INCLUDING RISERS AND DROPS, ADJACENT TO EACH VALVE AND TEE, AT EACH SIDE OF PENETRATION OF STRUCTURE OR ENCLOSURE, AND AT EACH OBSTRUCTION.
(10) PROVIDE CEILING TACKS TO LOCATE VALVES ABOVE T-BAR TYPE PANEL CEILINGS. LOCATE IN CORNER OF PANEL CLOSEST TO EQUIPMENT.

9. INSULATION

A. FLAME/SMOKE RATINGS: PROVIDE COMPOSITE PLUMBING INSULATION (INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES) WITH FLAME-SPREAD RATING OF 25 OR LESS, AND SMOKE-DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ANSI/ASTM E84 (NFPA 255) METHOD. INSULATION SHALL BE LABELED BY THE MANUFACTURER. THE LABEL SHALL INDICATE THE INSULATING VALUE, FLAME SPREAD AND SMOKE-DEVELOPED RATING.

B. SUBMITTALS: SUBMIT MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR EACH TYPE OF PLUMBING INSULATION. SUBMIT SCHEDULE SHOWING MANUFACTURER'S PRODUCT NUMBER, THICKNESS, AND FURNISHED ACCESSORIES FOR EACH PLUMBING SYSTEM REQUIRING INSULATION.

C. INSTALLATION: INSULATION SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS USING ONLY ADHESIVES, MASTICS AND PLUMBING FASTENERS APPROVED BY THE INSULATION MANUFACTURER. INSULATION SHALL NOT BE APPLIED UNTIL AFTER THE EQUIPMENT HAS BEEN TESTED WITH RESULTS ACCEPTABLE TO THE ARCHITECT/ENGINEER. INSULATION WITH A VAPOR BARRIER JACKET SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN VAPOR SEAL AND ALL JOINTS SHALL BE SEALED WITH A VAPOR BARRIER ADHESIVE UNLESS OTHERWISE INDICATED. STAPLES, STICK CLIPS AND HANGERS SHALL BE VAPOR SEALED WHERE THEY PUNCTURE VAPOR BARRIER JACKETS.

D. MATERIALS:

(1) RIGID DUCT INSULATION: ASTM C612, RIGID NONCOMBUSTIBLE, WITH MAXIMUM SERVICE TEMPERATURE OF 450°F. THERMAL CONDUCTIVITY "K"=0.23 AT 75°F, DENSITY=3.0 LB/CU. FT. F AT 75 DEGREES F. FACTORY APPLIED JACKET (ASJ) SHALL CONSIST OF WHITE KRAFT PAPER BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBER YARN. EQUAL TO OWENS-CORNING ASJ.

(2) FLEXIBLE DUCT INSULATION: ASTM C1290, MINERAL FIBER BLANKET, WITH OPERATING TEMPERATURE OF 250°F. THERMAL CONDUCTIVITY "K"=0.30 AT 75°F, DENSITY=0.75 LB/CU. FT. F AT 75 DEGREES F. FACTORY APPLIED JACKET (ASJ) SHALL CONSIST OF WHITE KRAFT PAPER BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBER YARN. EQUAL TO OWENS-CORNING ASJ.

(3) FLEXIBLE CERAMIC FIBER INSULATION: BLANKET TYPE INSULATION, MINIMUM 8LB/CU FT DENSITY, HAVING A "K" FACTOR OF 0.24 AT 70°F MEAN TEMPERATURE NON-COMBUSTIBLE WITH FLAME SPREAD, SMOKE DEVELOPED, AND FUEL CONTRIBUTED INDEXES OF 0, ASTM 84/UL 723; MELTING POINT OF 3200°F; NORMAL SERVICE RANGE UP TO 2300°F; INSTALL WITH 3" THICKNESS FOR 2-HOUR FIRE RATING AND ZERO CLEARANCE TO COMBUSTIBLES. INSULATION SHALL BE THERMAL CERAMICS KAOWOOL FIREMASTER BLANKET, FIBERFRAX DURABLANKET, OR APPROVED EQUAL.

(4) ELASTOMERIC CELLULAR FOAM PIPE INSULATION: ASTM C534, TYPE 1 TUBULAR FORM, UNSLIT TUBING OR PRE-SLIT TUBULAR WITH FACTORY APPLIED PRESSURE SENSITIVE ADHESIVE. "K"=0.27 AT 75 DEGREES F, SERVICE TEMPERATURE 0°F TO 200°F. NO JACKET REQUIRED.

E. DUCT INSULATION

(1) DUCT INSULATION: INSULATE ALL SUPPLY AIR, OUTDOOR AIR DUCTS AND RETURN DUCTS IN CRAWL SPACES AND ATTICS.

(2) PROVIDE INSULATION WITH VAPOR RETARDER JACKETS. PIPING SYSTEM WITH EQUIVALENT THICKNESS AND COMPOSITION OF INSULATION AS APPLIED TO ADJOINING PIPE RUN.

(3) EXTEND DUCT INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS AND SIMILAR PIPING PENETRATIONS, EXCEPT WHERE OTHERWISE INDICATED.

(4) INSTALL PROTECTIVE METAL SHIELDS AND INSULATED INSERTS WHEREVER NEEDED TO PREVENT COMPRESSION OF INSULATION.

(5) SUPPLY, RETURN AND OUTSIDE AIR DUCTS: INSULATE WITH 2" THICK FLEXIBLE DUCTWORK INSULATION.

(6) DUCTWORK CONNECTED TO HOOD: INSULATE WITH 3" THICK FLEXIBLE CERAMIC FIBER INSULATION.

F. PIPE INSULATION

(1) REFRIGERANT SUCTION AND HOT GAS PIPING: INSULATE 1-1/2" AND SMALLER PIPES WITH 1-1/2" THICK ELASTOMERIC CELLULAR FOAM INSULATION. INSULATE LARGER THAN 1-1/2" PIPES WITH 2" THICK ELASTOMERIC CELLULAR FOAM.

10. DUCTWORK

A. GALVANIZED STEEL DUCTS: ASTM A653/A653M GALVANIZED STEEL SHEET, LOCK-FORMING QUALITY, HAVING G60 ZINC COATING IN CONFORMANCE WITH ASTM A90/90M.

B. FLEXIBLE DUCTS: UL LABELED, BLACK POLYMER FILM SUPPORTED BY HELICAL WOUND SPRING STEEL WIRE. THE PRESSURE RATING SHALL BE 4" WG POSITIVE AND 0.5" WG NEGATIVE. THE MAXIMUM VELOCITY SHALL BE 4000 FPM AND THE TEMPERATURE RANGE SHALL BE -20°F TO 175°F.

C. FABRICATE AND SUPPORT IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.

D. WHERE RECTANGULAR ELBOWS ARE USED, FURNISH TURNING VANES.

E. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15° DIVERGENCE WHEREVER POSSIBLE; MAXIMUM 30° DIVERGENCE UPSTREAM OF EQUIPMENT AND 45° CEONVERGENCE DOWNSTREAM.

F. FLEXIBLE DUCT CONNECTIONS SHALL BE FABRICATED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.

G. VOLUME CONTROL DAMPERS SHALL BE RUSKIN MODEL MD-35 AND SHALL BE FABRICATED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.

H. FIRE DAMPERS SHALL BE DYNAMIC UNITS OF TYPES AND SIZES SUITABLE FOR THE MOUNTING POSITION AND PRESSURE CLASSIFICATION OF THE DUCTWORK IN WHICH INSTALLED. PROVIDE FIRE DAMPERS BEARING A 1-1/2 HOUR UL LABEL AND IN CONFORMANCE WITH NFPA 90A AND UL555.

11. DIFFUSERS, REGISTERS AND GRILLES

A. DIFFUSERS, REGISTERS AND GRILLES SHALL BE THE TYPE, MATERIAL, AIR PATTERN AND FINISH INDICATED ON THE DRAWINGS.

B. INSTALL AIR OUTLETS AND INLETS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALL DIFFUSERS, REGISTERS AND GRILLES TO DUCTWORK WITH AIRTIGHT CONNECTION.

12. CLEANING AND TESTING

A. CLEAN EQUIPMENT AND FIXTURES TO A SANITARY CONDITION WITH CLEANING MATERIALS APPROPRIATE TO THE SURFACE AND MATERIAL BEING CLEANED. CLEAN ALL DUCT SYSTEMS AND AIR DEVICES THOROUGHLY.

B. REPLACE FILTERS OF OPERATING EQUIPMENT.

C. HEATING AND COOLING SYSTEMS AND EXHAUST SYSTEMS SHALL BE TESTED, ADJUSTED AND BALANCED (TAB). AIR HANDLING SYSTEMS SHALL BE ADJUSTED TO WITHIN +/- 10% OF DESIGN. THE TOTAL OF AIR OUTLETS AND INLETS SHALL BE ADJUSTED TO WITHIN PLUS 10% AND MINUS 5% OF DESIGN TO SPACE. ADJUST OUTLETS AND INLETS IN SPACE TO WITHIN +/- 10% OF DESIGN.

D. THE TAB CONTRACTOR SHALL NOT BE AFFILIATED IN ANY WAY BE WITH THE INSTALLING CONTRACTOR OR EQUIPMENT SUPPLIERS.

END OF SPECIFICATIONS

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
MELINDA D. RUBLE
No. 028163
12.31.2020
PROFESSIONAL ENGINEER

NO.	REVISIONS	DATE

TENANT UPFIT FOR

PROSPERITY™

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	MDR
CHECKED	MDR
JOB	20-058

MECHANICAL SPECIFICATIONS

SHEET
M-101

ROOFTOP AIR CONDITIONING UNIT SCHEDULE

MARK	MANUFACTURER & MODEL NO.	SA CFM	OA CFM	EVAP. FAN HP	VOLTS Φ	S.P. IN WG	COOLING SECTION			HEATING SECTION			MCA	MOCP	WEIGHT (LBS)
						EXT.	TOTAL CAP, MBH	SENS CAP, MBH	EAT	CAP, MBH INPUT	CAP, MBH OUTPUT	EAT			
RAC-1	TRANE YSC072	2400	300	0.75	208/3	0.75	72.5	52.8	77.2/64.6	120	97.2	63.1	35	50	1050

NOTES:
1. UNITS TO HAVE ONE YEAR MANUFACTURER'S WARRANTY INCLUDING PARTS, LABOR AND REFRIGERANT, FIVE YEAR MANUFACTURER'S WARRANTY FOR COMPRESSORS.
2. UNIT TO HAVE HINGED ACCESS DOORS, NON-FUSED DISCONNECT SWITCH, CONDENSER COIL GUARDS, LOW AMBIENT CONTROL, LOW LEAKAGE OUTDOOR AIR DAMPERS, ECONOMIZER AND ECONOMIZER CONTROLS, SMOKE DETECTOR.

ELECTRIC DUCT HEATER SCHEDULE

MARK	MANUFACTURER & MODEL NO.	CFM	MBH	KW	VOLT/PH	CONTROL STEPS	DUCT SIZE W X H
EDH-1	MARKEL	380	8.5	2.5	208/3	SCR	10X8
EDH-2	MARKEL	240	5.1	1.5	208/3	SCR	8X8

NOTES:
- PROVIDE WITH DOOR INTERLOCK DISCONNECT SWITCH.

ELECTRIC TO STEAM HUMIDIFIERS: DRI-STEEM

MARK	CAPACITY PPH	AMPS	VOLT/PHASE	MODEL
H-1	12.0	16.7	208/3	VAPORMIST VM-4

NOTES:
- UNIT TO BE USED WITH POTABLE WATER. UNIT TO BE PROVIDED WITH WALL BRACKET AND RAPID-SORB DISPERSION TUBE, DRANE-KOOLER. PROVIDE ALL CONTROLS TO COORDINATE WITH RAC-1.

FAN SCHEDULE

UNIT	CFM	S.P.	RPM	MOTOR			SELECTION BASED ON GREENHECK	CONTROL	NOTES
				HP	VOLTS	PH			
EF-1	300	0.25	1390	1/6	120	1	GB-081	DURING OCCUPIED TIMES	1
EF-2 (ADD ALTERNATE #2)	100	0.25	880	1/6	120	1	GB-071	THERMOSTAT	1

SCHEDULE NOTES:
1. BELT DRIVE FAN WITH DISCONNECT, ROOF CURB, BACKDRAFT DAMPERS. CONTROL AS INDICATED.

ROOF VENT SCHEDULE

MARK	MANUFACTURER & MODEL NO.	THROAT AREA	VENT HEIGHT INCHES
RV-1	GREENHECK GRSI-10	0.57	7-3/4
RV-2	GREENHECK GRSI-8	0.37	7-1/4

NOTES:
- PROVIDE MOTOR OPERATED DAMPER

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

MARK	MANUFACTURER & MODEL NO.	DESCRIPTION	MATERIAL	FINISH	ACCESSORIES & FEATURES
SUPPLY DIFFUSERS					
CD-1	METALAIRE 5700-6	24"X24" CEILING DIFFUSER WITH 6"ø NECK FOR LAY-IN CEILING	STEEL	WHITE	MODEL BDS DAMPER
CD-2	METALAIRE 5700-6	24"X24" CEILING DIFFUSER WITH 8"ø NECK FOR LAY-IN CEILING	STEEL	WHITE	MODEL BDS DAMPER
CD-3	METALAIRE 5700-6	24"X24" CEILING DIFFUSER WITH 12"ø NECK FOR LAY-IN CEILING	STEEL	WHITE	MODEL BDS DAMPER
CD-4	METALAIRE 5000-1	6"X6" DIRECTIONAL DIFFUSER FOR SURFACE MOUNTING	STEEL	WHITE	OPPOSED BLADE DAMPER
CD-5	METALAIRE 5700-6	24"X24" CEILING DIFFUSER WITH 10"ø NECK FOR LAY-IN CEILING	STEEL	WHITE	MODEL BDS DAMPER
LD-1	METALAIRE 6650-12-6	LINEAR SLOT DIFFUSER, 8'-0" LONG, 1 SLOT @ 1/2" WIDE EACH, 8"ø	ALUMINUM	WHITE	INSULATED BOOT PLENUM
LD-2	METALAIRE 6675-12-6	LINEAR SLOT DIFFUSER, 7'-0" LONG, 1 SLOT @ 3/4" WIDE EACH, 8"ø	ALUMINUM	WHITE	INSULATED BOOT PLENUM
GRILLES & REGISTERS					
CG-1	METALAIRE 7550R-6	24"X24" CEILING GRILLE WITH 8"X8" FOR LAY-IN REGISTER	STEEL	WHITE	--
CG-2	METALAIRE 7550R-6	24"X24" CEILING GRILLE WITH 12"X12" FOR LAY-IN REGISTER	STEEL	WHITE	--
CG-3	METALAIRE 7550R-6	24"X24" CEILING GRILLE WITH 22"X22" FOR LAY-IN REGISTER	STEEL	WHITE	--
CR-1	METALAIRE 7550R-6	24"X24" CEILING GRILLE WITH 6"X6" FOR LAY-IN REGISTER	STEEL	WHITE	OPPOSED BLADE DAMPER
CR-2	METALAIRE SRH-1	6"X6" CEILING EXHAUST REGISTER (ADD ALTERNATE #2)	STEEL	WHITE	OPPOSED BLADE DAMPER
DG-1	METALAIRE DGDF	12"X12" DOOR GRILLE (ADD ALTERNATE #2)	STEEL	WHITE	--
TG-1	METALAIRE SRH-1	24"X18" SIDEWALL RETURN GRILLE	STEEL	WHITE	--
TG-2	METALAIRE SRH-1	24"X10" SIDEWALL RETURN GRILLE	STEEL	WHITE	--
TG-3	METALAIRE SRH-1	8"X6" SIDEWALL RETURN GRILLE	STEEL	WHITE	--

3

DUCTLESS SPLIT-SYSTEM HEAT PUMP

DSS-1: INDOOR WALL MOUNTED UNIT – MITSUBISHI PKA-A36KA7, OUTDOOR CONDENSING UNIT – MITSUBISHI PUZ-HA36NHA5
A. 33,500 BTU/HR COOLING, 40,000 BTU/HR HEATING, 810 CFM, 16.2 SEER, R-410A.
B. 208 VOLTS, SINGLE PHASE, 40A MOCP, FEED TO OUTDOOR UNIT.
C. DC INVERTER COMPRESSOR.
D. WALL MOUNTED, HARD WIRED CONTROLLER.
E. PROVIDE LOW AMBIENT CONTROL TO 0 DEGREES F.
F. AUTO RESTART ON POWER FAILURE.
G. COORDINATE INDOOR UNIT LOCATION WITH OWNER EQUIPMENT.
H. OUTDOOR UNIT WEIGHT: 265 LBS.

DSS-2 (ADD ALTERNATE #1): INDOOR WALL MOUNTED UNIT – MITSUBISHI PKA-A12HA7, OUTDOOR CONDENSING UNIT – MITSUBISHI PUZ-A12NKA7
A. 12,000 BTU/HR COOLING, 18,000 BTU/HR HEATING, 370 CFM, 20.8 SEER, R-410A.
B. 208 VOLTS, SINGLE PHASE, 28A MOCP, FEED TO OUTDOOR UNIT.
C. DC INVERTER COMPRESSOR.
D. WALL MOUNTED, HARD WIRED CONTROLLER.
E. PROVIDE LOW AMBIENT CONTROL TO 0 DEGREES F.
F. AUTO RESTART ON POWER FAILURE.
G. COORDINATE INDOOR UNIT LOCATION WITH OWNER EQUIPMENT.
H. OUTDOOR UNIT WEIGHT: 100 LBS.

LEGEND

R	REFRIGERANT
12 x 6	RECTANGULAR DUCT
	FLEXIBLE CONNECTION
VD	VOLUME DAMPER
D	DROP IN DIRECTION OF AIRFLOW
R	RISE IN DIRECTION OF AIRFLOW
	SUPPLY DUCT UP (OR FROM ABOVE)
	SUPPLY DUCT DOWN (OR FROM BELOW)
	RETURN OR EXHAUST DUCT UP
	RETURN OR EXHAUST DUCT DOWN
	FLEXIBLE DUCT
MOD	MOTOR OPERATED DAMPER
	REDUCER
SDR	SMOKE DETECTOR, DUCT MOUNTED
T	THERMOSTAT OR TEMPERATURE SENSOR

ABBREVIATIONS

BTU	BRITISH THERMAL UNIT
CD	CEILING DIFFUSER
CFD	CEILING FIRE DAMPER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
COP	COEFFICIENT OF PERFORMANCE
CR	CEILING REGISTER
DB	DRY BULB TEMPERATURE
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
EXT	EXTERNAL
F	DEGREES FAHRENHEIT
FPM	FEET PER MINUTE
FT	FEET
HP	HORSEPOWER
IN	INCH, INCHES
LAT	LEAVING AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
VD	VOLUME DAMPER
MH	MOUNTING HEIGHT
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OA	OUTSIDE AIR
PD	PRESSURE DROP
PS	PRESSURE SENSOR
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAGE
RA	RETURN AIR
SP	STATIC PRESSURE
TEMP	TEMPERATURE
TG	TOP GRILLE
TR	TOP REGISTER
TYP	TYPICAL
WB	WET BULB TEMPERATURE
WC, WG	WATER COLUMN
AFF	ABOVE FINISHED FLOOR
ABV	ABOVE
AD	ACCESS DOOR
BEL	BELOW
BET	BETWEEN
CLG	CEILING
CONN	CONNECT, CONNECTION
CONT	CONTINUED
DN	DOWN
EA	EACH
FL	FLOOR
FLEX	FLEXIBLE
FR	FROM
GALV	GALVANIZED
REQD	REQUIRED
SH	SHEET
SDR	DUCT MOUNTED SMOKE DETECTOR

GENERAL MECHANICAL NOTES

1. ALL PIPING AND DUCTWORK SHALL BE ABOVE CEILING UNLESS OTHERWISE INDICATED.
2. INSTALL THERMOSTATS, HUMIDISTATS AND TEMPERATURE AND HUMIDITY SENSORS WITH CENTER AT 4'8" ABOVE FLOOR. WHERE THERMOSTATS AND SNAP SWITCHES (SEE ELECTRICAL DRAWINGS) ARE INDICATED IN CLOSE PROXIMITY ON THE SAME WALL, THE LOCATIONS SHALL BE COORDINATED SO THAT THE THERMOSTAT IS CENTERED DIRECTLY OVER THE SNAP SWITCH OR GROUP OF SNAP SWITCHES.
3. DUCT DIMENSIONS INDICATED ARE SHEET METAL DIMENSIONS.
4. COORDINATE LOCATIONS OF CEILING MOUNTED DIFFUSERS, REGISTERS AND GRILLES WITH LIGHT FIXTURES AND CEILING GRID. REFER TO ELECTRICAL DRAWINGS.
5. FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF SIDE SHOWN OR INDICATED.
6. ACCESS SHALL BE MAINTAINED TO ALL CONTROL DEVICES. ACCESS PANEL SIZES AND LOCATIONS SHALL BE DETERMINED PRIOR TO BIDDING AND SHALL BE INCLUDED IN THE BID PRICE FOR CONTRACT WORK. ACCESS PANELS SHALL BE INSTALLED WHERE REQUIRED AND SHALL BE FIRE RATED WHEN USED IN FIRE RESISTIVE CONSTRUCTION.
7. PIPING AND DUCTWORK SHALL BE SUPPORTED FROM, OR ANCHORED TO, THE BUILDING STRUCTURE; CEILING CONSTRUCTION SHALL NOT BE USED FOR SUPPORT OR ANCHORING OF WORK.
8. TEMPERATURE CONTROL WIRING WIRING LESS THAN 100 VOLTS SHALL BE PROVIDED IN DIVISION 15. WIRING 100 VOLTS AND GREATER SHALL BE PROVIDED IN DIVISION 16.
9. MAINTAIN ACCESS BELOW EQUIPMENT INSTALLED ABOVE CEILINGS. DO NOT OBSTRUCT ACCESS WITH PIPING OR DUCTWORK.
10. DO NOT INSTALL PVC PIPING OR ANY COMBUSTIBLE MATERIAL IN ANY AIR PLENUM.
11. PROVIDE MANUAL VOLUME DAMPERS AS REQUIRED TO PROPERLY BALANCE THE SYSTEM.
12. CONTRACTOR SHALL CLOSELY COORDINATE LOCATIONS OF ALL PANELBOARDS WITH LOCATIONS OF ALL DUCTWORK AND PLUMBING PIPING. DUCTWORK AND PLUMBING PIPING SHALL NOT BE INSTALLED OVER TOP OF ANY PANELBOARD. DUCTWORK AND PLUMBING PIPING SHALL NOT BE INSTALLED OVER ANY OF THE CODE REQUIRED CLEAR SPACES AT ANY PANELBOARD LOCATION.

HVAC CONTROLS

1. PROVIDE DOCUMENTATION AND TRAINING TO OWNER ALONG WITH ONE YEAR WARRANTY. LABEL ALL CONTROLS AND EQUIPMENT THE SAME AS IDENTIFIED ON THE DRAWINGS AND SUBMITTALS. SUBMIT SHOP DRAWINGS AND DETAILED SEQUENCE OF OPERATION OF CONTROL SYSTEM PRIOR TO INSTALLATION.
2. CONTROLS SHALL INCLUDE ALL THERMOSTATS, SENSORS, VALVES, DAMPERS, TRANSFORMERS, STARTERS, RELAYS, WIRING, INTERLOCKS AND OTHER DEVICES TO ENABLE THE SEQUENCE OF OPERATION. CONTROLS SHALL BE COORDINATED WITH THE EQUIPMENT PROVIDED.
3. PROVIDE START-UP AND VERIFICATION OF CONTROL SYSTEM & SEQUENCE OF OPERATION. COORDINATE WITH TEST & BALANCE CONTRACTOR TO OPERATE EQUIPMENT IN ALL MODES AND DEVICE POSITIONS.
4. ROOM SENSOR SHALL HAVE DIGITAL DISPLAY AND TIMED OVERRIDE BUTTON. ALL SENSORS SHALL HAVE THE CAPABILITY TO ADJUST ROOM TEMPERATURE SETPOINT OR TO HAVE THIS FUNCTION LOCKED OUT.
5. ROOFTOP UNIT: IN OCCUPIED MODE, THE SUPPLY FAN SHALL RUN CONTINUOUSLY, THE OUTSIDE AIR DAMPER SHALL OPEN AND THE UNIT CONTROLLER WILL MAINTAIN ROOM SETPOINT BY CYCLING THE COOLING/HEATING. IN UNOCCUPIED MODE, THE UNITS SHALL BE DE-ENERGIZED UNTIL A CALL FOR SETBACK HEATING OR COOLING BY THE UNIT CONTROLLER. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AT ALL TIMES DURING UNOCCUPIED MODE. OVERRIDE BUTTON ON WALL SENSOR SHALL PLACE THE UNIT IN OCCUPIED MODE FOR TWO HOURS (ADJUSTABLE). CONTROLS SHALL INCLUDE REMOTE WALL SENSOR AND CORRESPONDING PROGRAMMABLE THERMOSTAT LOCATED IN UTILITY 106.
6. EXISTING SPLIT SYSTEMS: IN OCCUPIED MODE, THE SUPPLY FAN SHALL RUN CONTINUOUSLY, ASSOCIATED ROOF VENT SHALL OPEN AND THE UNIT CONTROLLER WILL MAINTAIN ROOM SETPOINT BY CYCLING THE COOLING/HEATING. IN UNOCCUPIED MODE, THE UNITS SHALL BE DE-ENERGIZED UNTIL A CALL FOR SETBACK HEATING OR COOLING BY THE UNIT CONTROLLER. ASSOCIATED ROOF VENT SHALL REMAIN CLOSED AT ALL TIMES DURING UNOCCUPIED MODE. OVERRIDE BUTTON ON WALL SENSOR SHALL PLACE THE UNIT IN OCCUPIED MODE FOR TWO HOURS (ADJUSTABLE). CONTROLS SHALL INCLUDE REMOTE WALL SENSOR AND CORRESPONDING PROGRAMMABLE THERMOSTAT LOCATED IN UTILITY 106.

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
MELINDA D. RUBLE
No. 028163
12.31.2020
PROFESSIONAL ENGINEER

NO.	REVISIONS	DATE
3	DESIGN CHANGES	06.11.2021

TENANT UPFIT FOR

PROSPERITY™

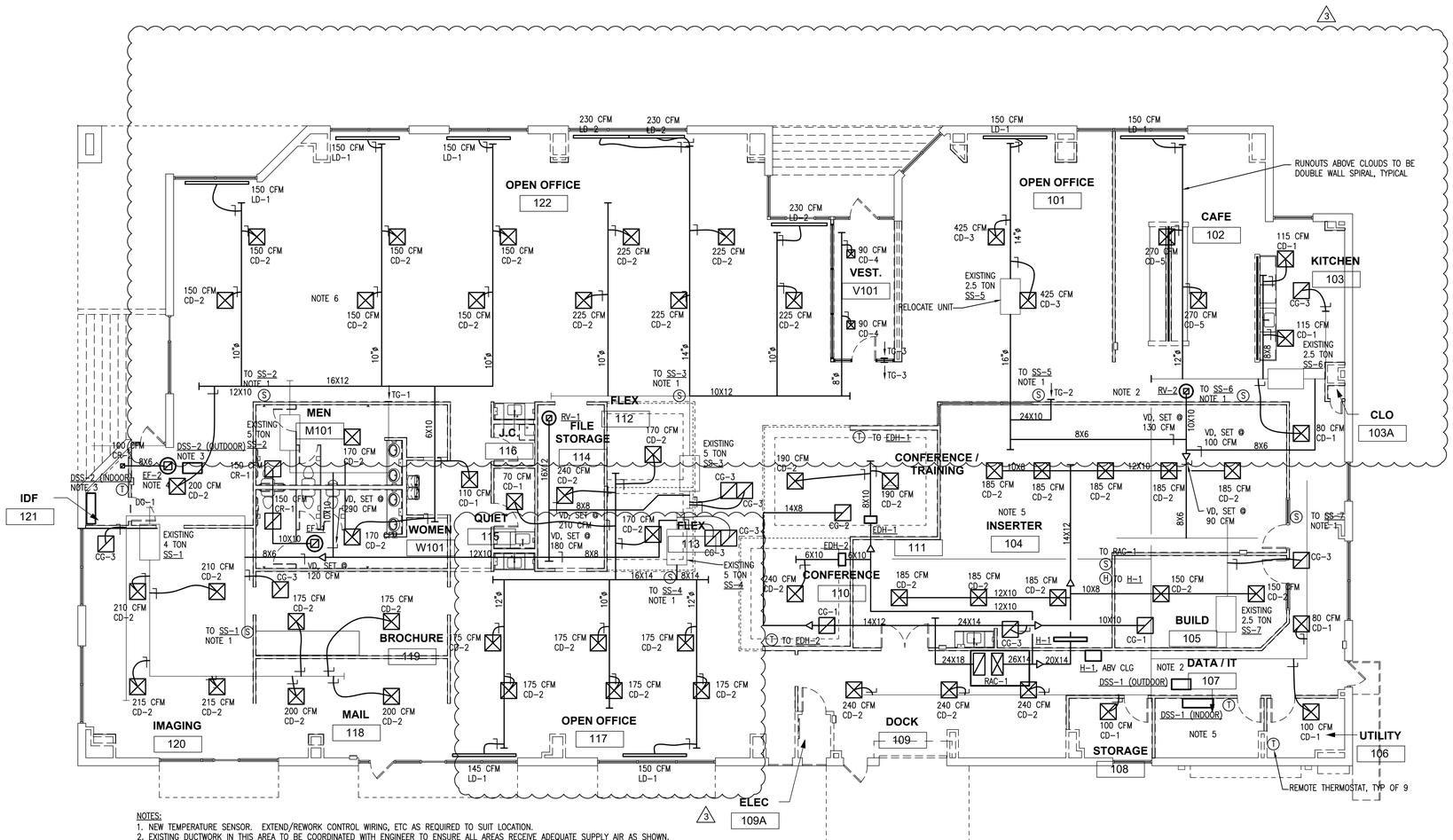
ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	MDR
CHECKED	MDR
JOB	20-058

MECHANICAL LEGEND, SCHEDULES, NOTES & DETAILS

SHEET
M-201



NOTES:
1. NEW TEMPERATURE SENSOR. EXTEND/REWORK CONTROL WIRING, ETC AS REQUIRED TO SUIT LOCATION.
2. EXISTING DUCTWORK IN THIS AREA TO BE COORDINATED WITH ENGINEER TO ENSURE ALL AREAS RECEIVE ADEQUATE SUPPLY AIR AS SHOWN.
3. DSS-2 SYSTEM TO BE ADD ALTERNATE #1. ALL WORK ASSOCIATED WITH THE SYSTEM SHALL BE PRICED SEPARATELY.
4. EF-2 SYSTEM TO BE ADD ALTERNATE #2. ALL WORK ASSOCIATED WITH THE SYSTEM, INCLUDING DG-1, SHALL BE PRICED SEPARATELY.
5. INSERTER 104 AND DATA/IT 107 TO HAVE FM-200 SYSTEM. ALL ROOM OPENINGS SHALL BE WELL SEALED.
6. EXISTING ZONE CONTROL DAMPERS IN THIS AREA TO NO LONGER BE USED. DAMPERS TO BE LOCKED OPEN.

NEW WORK PLAN - MECHANICAL

1/8" = 1'-0"

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

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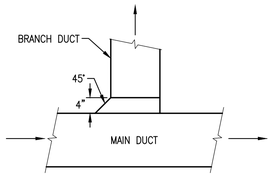
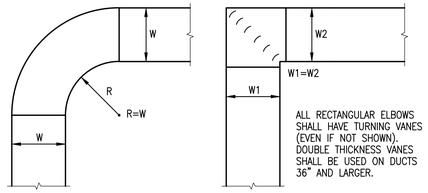
NEW WORK PLAN MECHANICAL

SHEET
M-301



DETAIL – BRANCH DUCT CONNECTION
NO SCALE



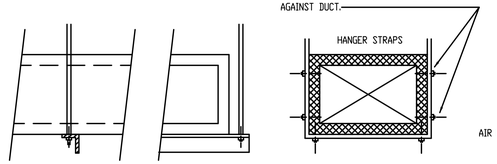
DETAIL – DUCT ELBOWS
NO SCALE

HANGER SIZES FOR RECTANGULAR DUCT			
MAX. SIDE	HANGER	HORIZONTAL SUPPORT ANGLE	MAXIMUM SPACING
30"	1"X18" GAGE STRAP	NONE REQUIRED	10'-0"

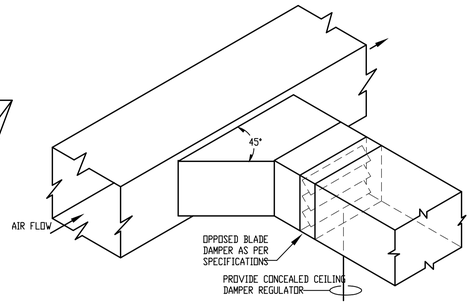
NOTE:
ALL SUPPLY AIR DUCT SHALL BE WRAPPED EXTERNALLY AS PER SPECIFICATIONS

NO POP RIVETS ALLOWED

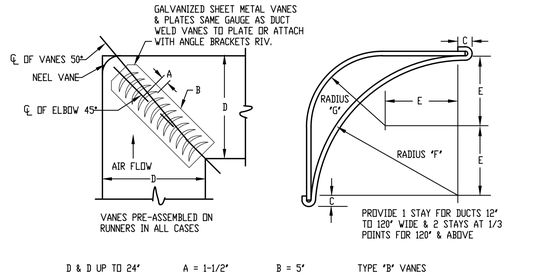
SELF TAPPING CADMIUM PLATED HEX HEAD SHEET METAL SCREW STRAPS TO BE TIGHT AGAINST DUCT.



DUCT STRAP HANGER DETAIL
NOT TO SCALE

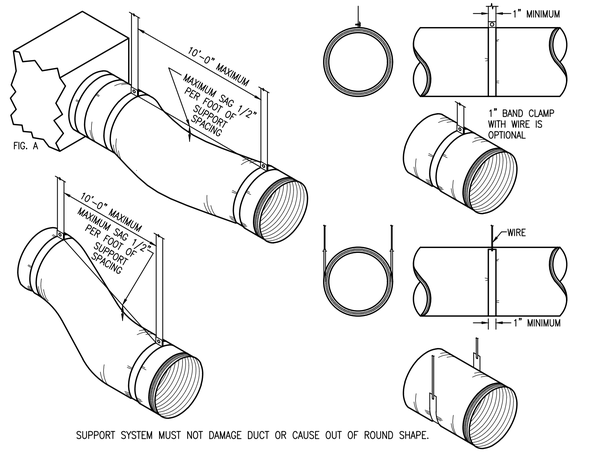


BRANCH DUCT TAKE-OFF @ SUPPLY MAIN
NOT TO SCALE



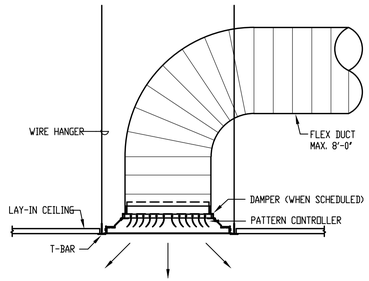
D & D UP TO 24"	A = 1-1/2"	B = 5"	TYPE "B" VANES
D & D OVER 24"	A = 3-1/4"	B = 9"	TYPE "A" VANES
TYPE "A" VANES	C = 1/2"	E = 2-1/4"	RADIUS "F" = 4-1/2" RADIUS "G" = 2-1/4"
TYPE "B" VANES	C = 1/4"	E = 1"	RADIUS "F" = 2" RADIUS "G" = 1"

SQUARE ELBOW DETAIL
NOT TO SCALE

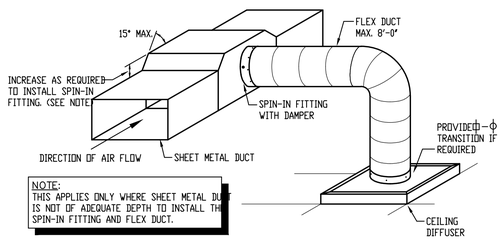


SUPPORT SYSTEM MUST NOT DAMAGE DUCT OR CAUSE OUT OF ROUND SHAPE.

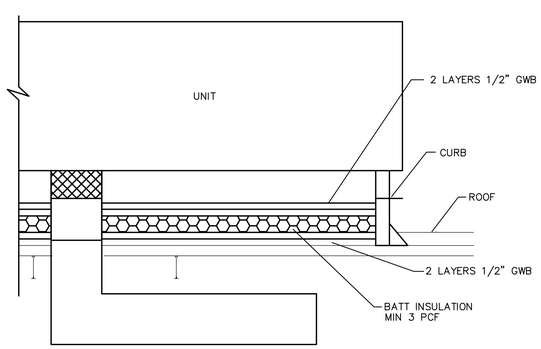
DETAIL – FLEXIBLE DUCT SUPPORTS
NO SCALE



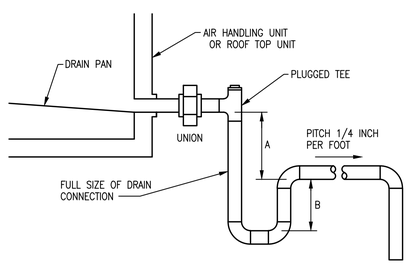
LAY-IN CEILING DIFFUSER DETAIL
NOT TO SCALE



FLEX DUCT TAKE-OFF @ SHEET METAL DUCT DETAIL
NOT TO SCALE



ROOFTOP AIR CONDITIONING UNIT DETAIL
SCHEMATIC



DRAW THROUGH UNITS (NEGATIVE CASING PRESSURE)	BLOW THROUGH UNITS (POSITIVE CASING PRESSURE)
A = 1 INCH PLUS MAXIMUM CASING STATIC PRESSURE	A = 1 INCH MINIMUM
B = A/2	B = 1 INCH PLUS MAXIMUM CASING STATIC PRESSURE

DETAIL – CONDENSATE DRAIN
NO SCALE

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

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TENANT UPFIT FOR

PROSPERITY™

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	MDR
CHECKED	MDR
JOB	20-058

MECHANICAL DETAILS

SHEET
M-401

GENERAL NOTES

1. MECHANICAL EQUIPMENT IS SHOWN IN APPROXIMATE LOCATIONS. FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND PIPING, SEE MECHANICAL DRAWINGS. SOME MECHANICAL EQUIPMENT IS LOCATED ON THE ROOF. VERIFY LOCATION WITH MECHANICAL AND PROVIDE ALL CONDUIT AND WIRING TO OUTDOOR EQUIPMENT.
2. WHERE LIGHT SWITCHES ARE INDICATED TO BE MOUNTED BEHIND DOOR, MOUNT SUCH SWITCHES A MINIMUM OF 3'–9" FROM HINGED SIDE.
3. REVISE PANELBOARD SCHEDULES ON PANEL DIRECTORIES TO REFLECT FINAL INSTALLATION CONDITIONS.
4. LOCATE ALL RACEWAYS TO AVOID INTERFERENCE WITH DUCTS, PIPES, MECHANICAL EQUIPMENT, WITH REMOVAL OF CEILING TILES, OR WITH ACCESS TO EQUIPMENT WHICH REQUIRES PERIODIC ADJUSTMENT OR MAINTENANCE.
5. PROVIDE NAMEPLATES ON THE EXTERIOR OF ALL ELECTRICAL PANELS AND ENCLOSURES WITH THE DEVICE ID, RATING, POWER SOURCE AND INSTALLATION DATE AND BY WHICH SWITCH OR STARTER.
6. COUNTER AND TOILET RECEPTACLES TO BE GFI AND COUNTER HEIGHT EXCEPT WHERE NOTED. REFRIGERATOR RECEPTACLE TO BE 36" AFF.
7. LIGHT FIXTURE TYPE IS SHOWN ONLY ONCE AS TYPICAL FOR THE ENTIRE ROOM UNLESS SPECIFICALLY INDICATED OTHERWISE.
8. UNLESS INDICATED OTHERWISE, SIZE CONDUITS IN ACCORDANCE WITH NFPA 70.
9. COORDINATE WITH THE MECHANICAL CONTRACTOR TO ENSURE ALL WORKING CLEARANCE AND DEDICATED WORKING SPACE OF PANELBOARDS.
10. COORDINATE ELECTRICAL INSTALLATION WITH ALL CASEWORK TO BE INSTALLED. PROVIDE THE NECESSARY JUNCTION BOXES FOR ALL POWER AND DATA CONNECTIONS INDICATED.
11. GROUNDING CONDUCTORS ARE NOT INDICATED IN BRANCH CIRCUIT RACEWAYS. PROVIDE GROUND CONDUCTORS AS REQUIRED BY NEC.
12. OCCUPANCY SENSORS SHOULD CONTROL ALL LIGHTING IN ROOMS, BOTH INBOARD AND OUTBOARD SWITCHING WHERE APPLICABLE, UNLESS INDICATED OTHERWISE.
13. PROVIDE PLASTIC BUSHING ON THE END OF ALL CONDUIT.
14. PROVIDE LABELS ON ALL RECEPTACLE INDICATING PANEL AND CIRCUIT FEEDING EACH DEVICE.
15. COORDINATE WITH OWNER TO PROVIDE DATA DROPS AS REQUIRED AND TO LOCATION EXACT LOCATION OF DESIRED DROPS. PROVIDE PULL CORDS WITH ALL DATA BOXES. ALL WORK STATIONS REQUIRE DATA DROP.

ELECTRICAL LEGEND

EM	LED LIGHTING FIXTURE, RECESSED, SURFACE OR PENDANT CEILING MOUNTED, ALL LIGHTING INDICATED ARE CONNECTED TO EMERGENCY GENERATOR CIRCUIT. N INDICATES NIGHT LIGHT (TYP). COORDINATE WITH OWNER FOR DESIRED NIGHT LIGHT LOCATIONS.
	EXIT LIGHTING FIXTURE, SURFACE CEILING MOUNTED, DIRECTIONAL ARROWS AS INDICATED. VR SUBSCRIPT INDICATES VANDAL RESISTANT.
	EXIT LIGHTING FIXTURE, SURFACE WALL MOUNTED, DIRECTIONAL ARROWS AS INDICATED.
J	FURNITURE WHIPS UNLESS INDICATED OTHERWISE, FOR FURNITURE WHIPS PROVIDE DATA AND POWER
BR	BADGE READER DOOR WIRING
TX	RINGDOWN PHONE
WA	CEILING WIRING FOR WIRELESS ANTENNAS
CW	CEILING CAMERA WIRING FOR VIDEO SYSTEM
	QUAD–PLEX WALL RECEPTACLE
	DUPLEX WALL RECEPTACLE, MOUNTING HEIGHT = 1'–6", EXCEPT 'C' SUBSCRIPT INDICATES MOUNTING IN CASEWORK(TYP). 'GF' SUBSCRIPT INDICATES GROUND FAULT, 'WP' SUBSCRIPT INDICATES WEATHERPROOF, 'EWC' SUBSCRIPT INDICATES GROUND FAULT BEHIND ELECTRIC WATER COOLER. '*' INDICATES MOUNTED HEIGHT = 8" ABOVE COUNTER(TYP). 'TV' INDICATES COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL PLANS FOR TV LOCATIONS.
OS	OCCUPANCY SENSOR, DUAL TECHNOLOGY
K M	EXISTING SECURITY SYSTEM COMPONENT
B	BUZZER FOR AUTO OPENER
J	FURNITURE WHIPS INCLUDING DATA AND POWER
J	FLOOR BOX
J	POWER POLE

	CONDUCTORS IN CONDUIT CONCEALED IN CEILING OR WALL.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD. NOTATION INDICATES PANELBOARD & BRANCH CIRCUIT CONNECTION.
	CONDUCTORS IN CONDUIT CONCEALED IN SLAB OR BELOW GRADE.
	CONDUCTORS IN CONDUIT TURNED UP.
	CONDUCTORS IN CONDUIT TURNED DOWN.
S	SINGLE–POLE SWITCH, MOUNTING HEIGHT = 4'–0" TO TOP. LOWER CASE SUBSCRIPT WHEN USED, INDICATES FIXTURES CONTROLLED (TYP).
S_3	THREE–WAY SWITCH, MOUNTING HEIGHT = 4'–0" TO TOP.
S_{MC}	INTEGRAL OCCUPANCY SENSOR SWITCH, MOUNTING HEIGHT = 4'–0" TO TOP.
7	COMBINATION PHONE OUTLET AND DATA OUTLET. DATA SYSTEM OUTLET, MOUNTING HEIGHT = 1'–6" UNLESS INDICATED OTHERWISE. PROVIDE 1" CONDUIT FROM BOX TO ABOVE ACCESSIBLE CEILING. WHERE MOUNTED BESIDE COUNTER RECEPTACLE: MOUNT SAME HEIGHT AS RECEPTACLE, PROVIDE 2 CAT 6 CABLES BACK TO NEAREST IDF OR MDF # INDICATES QUANTITY OF DROPS WHEN DIFFERENT THAN 2.
	DUAL DATA DROP
	ANALOG FAX LINE
S_D	DIMMER SWITCH, MOUNTING HEIGHT = 4'–0" TO TOP, SUBSCRIPT INDICATES FIXTURES CONTROLLED WITH THIS SWITCH
	PANELBOARD, 208Y/120–VOLT, 3–PHASE, 4–WIRE, MOUNTING HEIGHT=6'–0" TO TOP. SEE PANELBOARD SCHEDULES.
	DISCONNECT SWITCH, EXTERNALLY OPERATED, 240V, 3 ø UNLESS OTHERWISE NOTED. NOTATION INDICATES NUMBER OF POLES AND AMPERAGE CAPACITY. 'NF' SUBSCRIPT INDICATES NON FUSED.

LEGEND NOTES:

1. ALL MOUNTING HEIGHTS ARE TO TOP OF DEVICE UNLESS INDICATED OTHERWISE.

INTERACTIVE DESIGN

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
DANIEL W. GIBSON
Lic. No. 44271
12-31-20
PROFESSIONAL ENGINEER

GIBSON ENGINEERING
2100 LUBNA DR
CHRISTIANSBURG VA 24073
P. 540.998.6069

REVISIONS

TENANT UPFIT FOR

PROSPERITY™

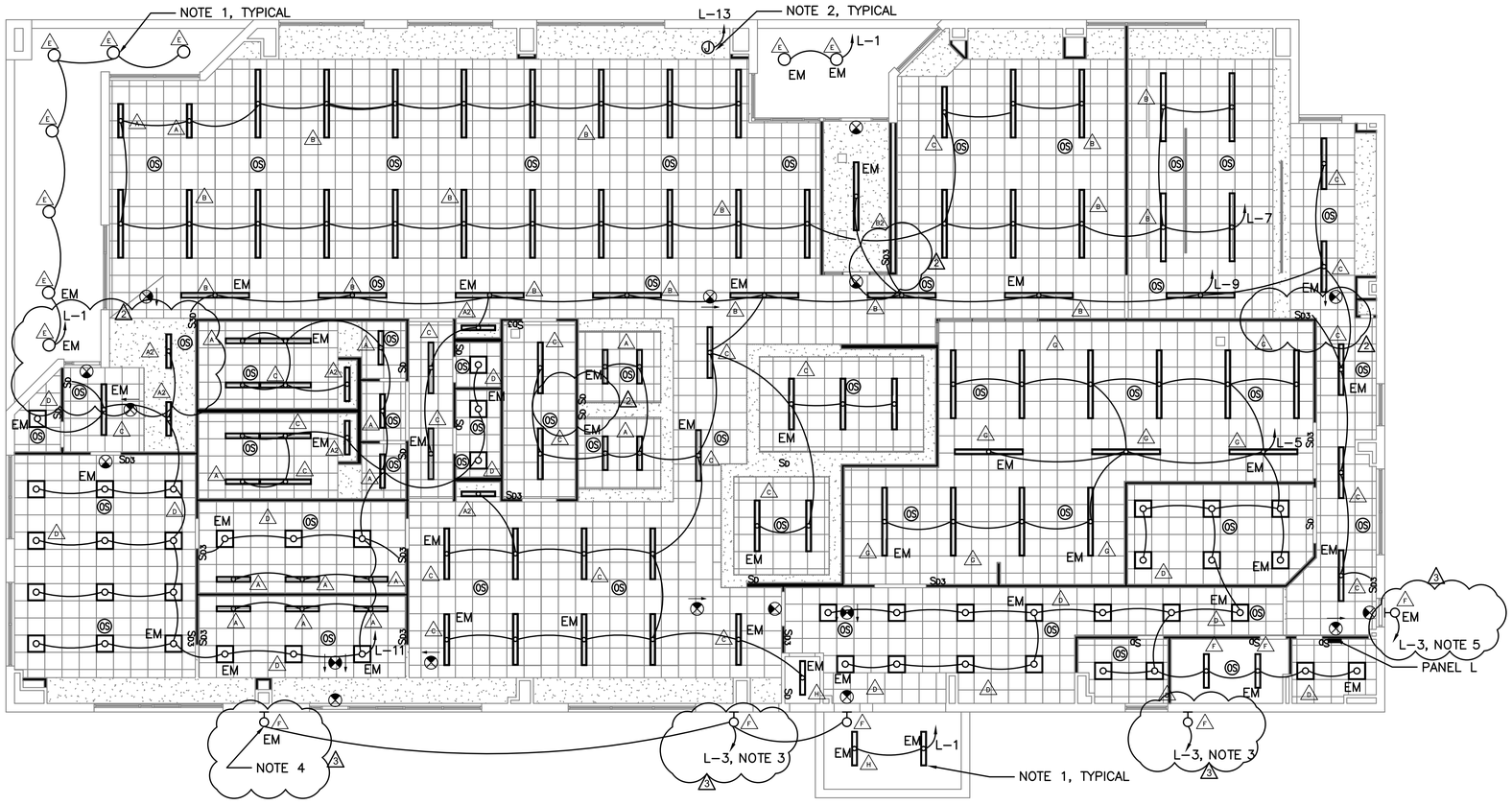
ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	DWG
CHECKED	DWG
JOB	20-058

ELECTRICAL LEGEND AND GENERAL NOTES

SHEET
E-101



LIGHTING PLAN

1/8" = 1'-0"

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	INPUT VOLTAGE	LAMPS		REMARKS
				WATTS	TYPE	
A	LAMAR LIGHTING	44L 48 G/SG L FA 35 D (EM WHERE INDICATED)	MVOLT	24	LED	4', 4" SLOT FIXTURE, DIMMING CONTROLLED
A2	LAMAR LIGHTING	44L 48 F L FA 35 D (EM WHERE INDICATED)	MVOLT	24	LED	4', 4" SLOT FIXTURE, DIMMING CONTROLLED, TRIMLESS IN SHEETROCK
B	LAMAR LIGHTING	44L 96 G/SG L FA 35 D (EM WHERE INDICATED)	MVOLT	48	LED	8', 4" SLOT FIXTURE, DIMMING CONTROLLED
C	LAMAR LIGHTING	44L 72 G/SG L FA 35 D (EM WHERE INDICATED)	MVOLT	36	LED	6', 4" SLOT FIXTURE, DIMMING CONTROLLED
C2	LAMAR LIGHTING	44L 72 F L FA 35 D (EM WHERE INDICATED)	MVOLT	36	LED	6', 4" SLOT FIXTURE, DIMMING CONTROLLED, TRIMLESS IN SHEETROCK
D	LITHONIA	2BLT2 RB 40L ADP 120 EZ1 LP835	MVOLT	31.73	LED	2'X2', DIMMING CONTROLLED
E	LITHONIA	LDN6 35K 25L L06 WR LSS 120	MVOLT	28.3	LED	DAMP LOCATION, DOWN LIGHT, REPLACE EXISTING
F	LITHONIA	DSX0 LED P2 30K T4M 120 WBA DDBXD	MVOLT	49	LED	FULL CUT OFF WALLS SCONCE, EXTERIOR, REPLACE EXISTING
G	LAMAR LIGHTING	44L 96 G/SG M FA 35 D (EM WHERE INDICATED)	MVOLT	66	LED	8', 4" SLOT FIXTURE, DIMMING CONTROLLED
H	LITHONIA	WL4 40L EZ1 LP835	MVOLT	30	LED	SURFACE/PENDANT MOUNTED, DAMP LOCATION LISTED, REPLACE EXISTING, USE EXISTING BOX
⊗	LITHONIA	EDG-EDGR (1,2) (R) EL	MVOLT	30	LED	EXIT SIGN

NOTES THIS SHEET:

1. REPLACE EXISTING EXTERIOR LIGHTS WITH NEW LIGHTS INDICATED. PROVIDE PHOTOCELL AND TIME CLOCK TO TURN FIXTURES ON AND OFF.
2. PROVIDE A JUNCTION BOX ABOVE THE CEILING TO PROVIDE POWER TO ELECTRIC SIGN ON EXTERIOR OF THE BUILDING. COORDINATE EXACT LOCATION WITH OWNER DURING INSTALLATION. PROVIDE ALL PENETRATIONS OF EXTERIOR CEILING AND CONNECTION TO SIGN.
3. REPLACE EXISTING WALL PACK WITH NEW AT SAME ELEVATION.
4. REMOVE EXISTING WALL PACK; RELOCATE CIRCUIT TO BE CENTERED ON GAP IN BLACK SUNSHADE AWNINGS AT SAME ELEVATION AND PROVIDE NEW WALL PACK.
5. REMOVE EXISTING WALL PACK; RELOCATE CIRCUIT TO ABOVE DOOR AND PROVIDE NEW WALL PACK.

GENERAL NOTES

1. COORDINATE EXACT LOCATION OF LIGHTING CONTROLS FOR COMMON AREAS.

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
DANIEL W. GIBSON
Lic. No. 44271
12-31-20
PROFESSIONAL ENGINEER

GIBSON ENGINEERING

2100 LUBNA DR
CHRISTIANSBURG VA 24073
P. 540.998.6069

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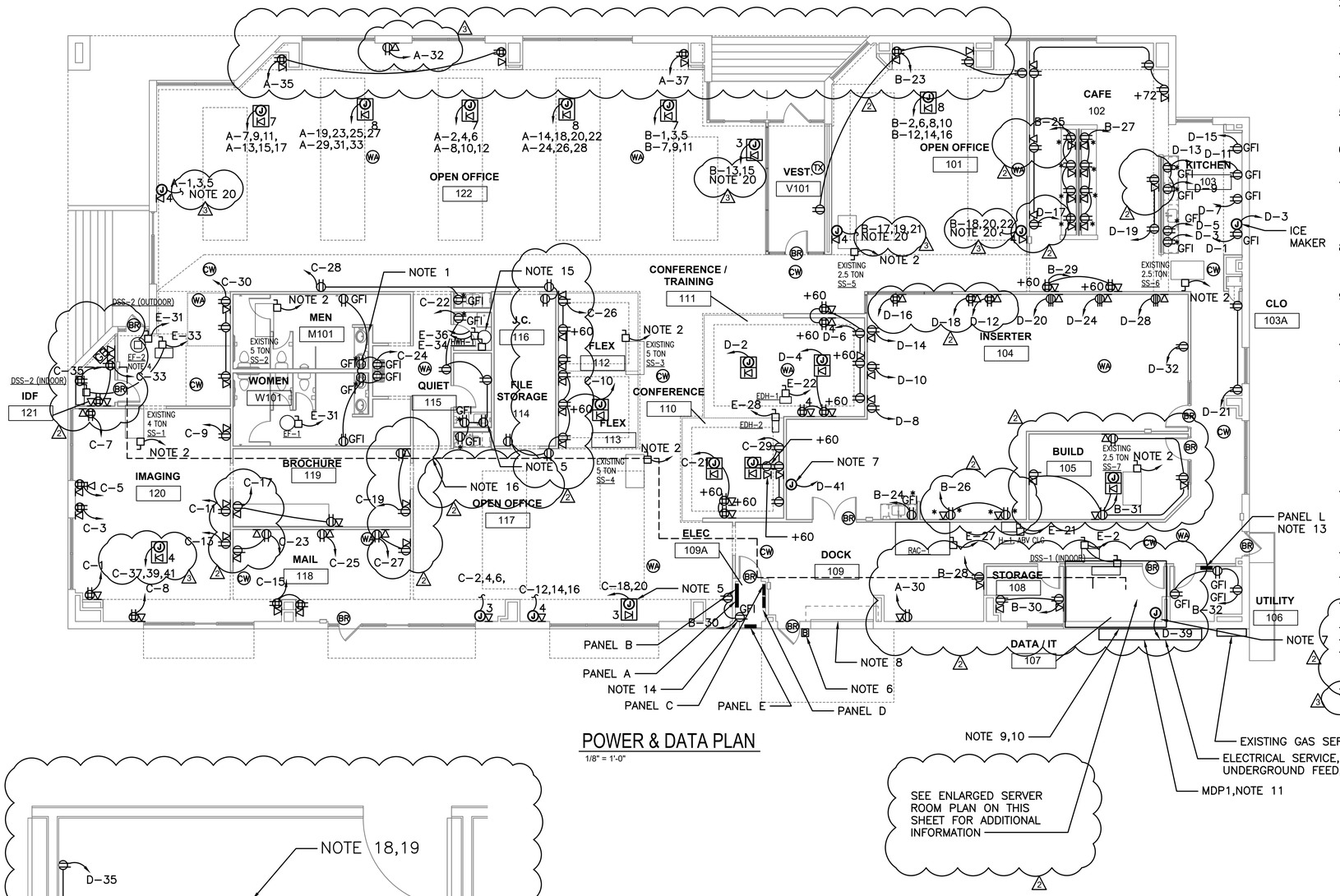
LIGHTING PLAN

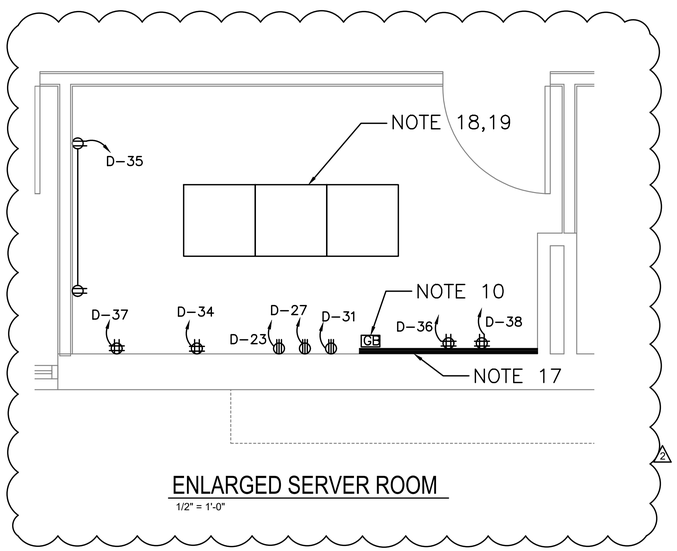
SHEET

E-201



POWER & DATA PLAN

1/8" = 1'-0"



ENLARGED SERVER ROOM

1/2" = 1'-0"

NOTES THIS SHEET:

1. PROVIDE POWER TO EACH PAPER TOWEL DISPENSER. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. PROVIDE ALL CONDUIT AND WIRING REQUIRED FOR CONNECTION OF SYSTEM. TYPICAL FOR ALL LOCATIONS.
2. RECONNECT EXISTING MECHANICAL UNIT TO NEW PANEL E. PROVIDE NEW BREAKERS TO MATCH EXISTING BREAKER SIZES. EXTEND EXISTING WIRING TO NEW LOCATION.
3. PROVIDE FURNITURE WHIPS TO FURNITURE FROM WALL LOCATION.
4. PROVIDE FURNITURE WHIPS TO FURNITURE FROM POWER POLE. PROVIDE POWER POLES AS REQUIRED.
5. PROVIDE POWER FOR LIGHTED MIRROR. COORDINATE MOUNTING HEIGHT AND EXACT LOCATION WITH MIRROR INSTALLATION DRAWINGS.
6. PROVIDE A DOORBELL SYSTEM FOR NOTIFICATION AT LOADING DOCK. PROVIDE SOUNDER FOR DOOR BELL AT OWNER DESIGNATED LOCATION.
7. PROVIDE POWER FOR FM-200 SYSTEM IN THIS AREA. COORDINATE. COORDINATE EXACT LOCATION WITH INSTALLER. PROVIDE A MONITORING SYSTEM TO MONITOR FM-200 SYSTEM. PROVIDE PHONE LINES TO EACH CONTROL PANEL TO DIAL OUT.
8. PROVIDE POWER FOR ROLL UP DOOR. CONNECT TO PANEL E, CIRCUIT 41. VERIFY EXITING BREAKER SIZE AND PROVIDE NEW BREAKER IN NEW PANEL E.
9. PROVIDE 3, 208 VOLT, 30 AMP RECEPTACLES FOR UPS EQUIPMENT MOUNTED IN RACK. COORDINATE EXACT MOUNTING LOCATION WITH OWNER.
10. PROVIDE A GROUND BAR IN SERVER ROOM WITH WITH #1/0 GROUND FROM SERVER ROOM BACK TO MAIN SERVICE GROUNDING.
11. PROVIDE A NEW NEMA 3R PANEL MDP1 MOUNTED ON EXTERIOR OF BUILDING NEAR SERVICE ENTRANCE. SEE PANELBOARD SCHEDULE FOR ADDITIONAL INFORMATION.
12. REUSE EXISTING UNDERGROUND FEED FROM UTILITY TRANSFORMER TO BUILDING SERVICE DISCONNECT. SERVICE DISCONNECT IS TO BE MAIN BREAKER IN PANEL MDP1. COORDINATE UTILITY CONNECTIONS AND UPGRADES WITH UTILITY COMPANY.
13. PROVIDE NEW LIGHTING CONTROL PANEL L. COORDINATE WITH OWNER FOR CONTROL SYSTEM REQUIREMENTS. PROVIDE LIGHTING CONTROLS LOCAL TO EACH SPACE. COORDINATE LOCATION OF CONTROLS WITH OWNER FOR COMMON AREA LIGHTING.
14. PROVIDE POWER FOR RECEPTACLES FROM CIRCUIT C-32.
15. PROVIDE POWER FOR WATER HEATER AND WATER RE-CIRC PUMP.
16. PROVIDE AN 8" WIDE BY 4" DEEP BASKET STYLE CABLE TRAY. FROM ROOM 121 TO ROOM 107.
17. PROVIDE A FIRE TREATED BACKBOARD FOR VERIZON CONNECTION.
18. PROVIDE OVERHEAD CABLE MANAGEMENT BETWEEN RACKS.
19. PROVIDE 3-25U, 2 POST, OPEN FRAME ALUMINUM SERVER RACKS BOLTED TO FLOOR WITH #6 GROUND WIRE CONNECTED TO GROUND BAR IN THIS ROOM.
20. CONSULT WITH ARCHITECT FOR HEIGHT A.F.F. PROVIDE COLOR SAMPLES FOR SELECTION BY ARCHITECT.

GENERAL NOTES

1. PROVIDE NEW ELECTRICAL DEVICES AND COVER ON EXTERIOR WALLS THAT ARE EXISTING. CONNECT TO LOCAL CIRCUITS. EXISTING RECEPTACLES NOT INDICATED.

INTERACTIVE DESIGN

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
DANIEL W. GIBSON
Lic. No. 44271
12-31-20
PROFESSIONAL ENGINEER

GIBSON ENGINEERING
2100 LUBNA DR
CHRISTIANSBURG VA 24073
P. 540.998.6069

REVISIONS

2	ELECTRICAL CHANGES	06.11.2021
3	DESIGN CHANGES	06.11.2021

TENANT UPFIT FOR

PROSPERITY™

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	DWG
CHECKED	DWG
JOB	20-058

POWER AND DATA PLAN

SHEET

E-301

NEW PANEL C

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 100A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		IMAG 120 RCPT	0.4			
3	1	20	2	12		IMAG 120 RCPT		0.4		
5	1	20	2	12		IMAG 120 RCPT			0.4	
7	1	20	2	12		IMAG 120 RCPT	0.4			
9	1	20	2	12		IMAG 120 RCPT		0.4		
11	1	20	2	12		IMAG 120 RCPT			0.4	
13	1	20	2	12		IMAG 120 RCPT	0.4			
15	1	20	2	12		MAIL 118 RCPT		0.4		
17	1	20	2	12		BROCR 119 RCPT			0.4	
19	1	20	2	12		BROCR 119 RCPT	0.4			
21	1	20	2	12		CONF 110 RCPT		0.4		
23	1	20	2	12		BROCR 119 RCPT			0.4	
25	1	20	2	12		BROCR 119 RCPT	0.4			
27	1	20	2	12		BROCR 119 RCPT		0.4		
29	1	20	2	12		CONF 110 RCPT			0.5	
31	1	20	2	12		BUILD 105 RCPT	0.7			
33	1	20	2	12		IDF 121 RCPT		1.0		
35	1	20	2	12		IDF 121 RCPT			1.0	
37	1	20	2	12		IMAG 120 RCPT	0.4			
39	1	20	2	12		IMAG 120 RCPT		0.4		
41	1	20	2	12		IMAG 120 RCPT			0.4	
2	1	20	2	12		OPN OFFC 117 RCPT	0.4			
4	1	20	2	12		OPN OFFC 117 RCPT		0.4		
6	1	20	2	12		OPN OFFC 117 RCPT			0.4	
8	1	20	2	12		OPN OFFC 117 RCPT	0.4			
10	1	20	2	12		OPN OFFC 117 RCPT		0.4		
12	1	20	2	12		OPN OFFC 117 RCPT			0.4	
14	1	20	2	12		OPN OFFC 117 RCPT	0.4			
16	1	20	2	12		OPN OFFC 117 RCPT		0.4		
18	1	20	2	12		OPN OFFC 117 RCPT			0.4	
20	1	20	2	12		OPN OFFC 117 RCPT	0.4			
22	1	20	2	12		QUIET RCPT 115		0.4		
24	1	20	2	12		EWC			1.0	
26	1	20	2	12		FLEX RCPT 112	0.5			
28	1	20	2	12		CORR RCPT		0.5		
30	1	20	2	12		LOBBY RCPT			0.7	
32	1	20	2	12		ELEC RM RCPT				
34	1	20				SPARE				
36	1	20				SPARE				
38	1	20				SPARE				
40	1	20				SPARE				
42	1	20				SPARE				
						TOTAL LEFT SIDE	2.9	3.2	3.3	0.0
						TOTAL RIGHT SIDE	2.0	2.0	2.8	0.0
						TOTAL	4.9	5.1	6.1	0.0
						TOTAL CONNECTED LOAD				16.1

* NOTES

NEW PANEL E

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 400A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 35000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
3	3	30	4	10	1	EXISTING HVAC				8.5
9	3	60	4	6	1	EXISTING HVAC				17.0
15	3	40	4	8	1	EXISTING HVAC				11.0
21	3	30	4	10	2	H-1				6.0
27	3	50	4	8	2	RAC-1				12.4
31	1	20	2	12	1	EF-1, EF-2	0.5			
33	2	30	2	10	1	DSS-2/SS-2		3.0		
									3.0	
37	2	40	2	8	1	EXISTING HVAC	3.3			
39								3.3		
41	1	20	2	12	1	ROLL UP DOOR			1.2	
2	2	40	2	8		DSS-1/SS1	3.3			
						EXISTING HVAC		3.3		
6	1	20	2	12		ROOF TOP RCPT			0.9	
10	3	20	4	12	1	EXISTING HVAC				3.3
16	3	20	4	12	1	EXISTING HVAC				3.3
22	3	20	4	12	2	EDH-1				2.5
28	3	20	4	12	2	EDH-2				1.5
32	1	20								
34	1	20	2	12	2	HWRP-1		1.0		
36	2	30	2	10	2	HWH-1			2.5	
									2.5	
40	2	30	2	10		BACK UP HEAT		2.0		
									2.0	
						TOTAL LEFT SIDE	3.8	6.3	4.2	54.9
						TOTAL RIGHT SIDE	5.8	6.3	5.4	10.6
						TOTAL	9.6	12.6	9.6	65.5
						TOTAL CONNECTED LOAD				97.3

* NOTES
1. EXISTING HVAC/ARCH EQUIPMENT BREAKERS ARE IDENTIFIED FROM EXISTING PANELBOARD SCHEDULES. VERIFY EQUIPMENT AND RECONNECT TO NEW PANEL.
2. PROVIDE NEW BREAKERS AND WIRING FOR NEW EQUIPMENT INDICATED.

NEW PANEL A

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 100A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		OPN OFFC 122 RCPT	0.4			
3	1	20	2	12		OPN OFFC 122 RCPT		0.4		
5	1	20	2	12		OPN OFFC 122 RCPT			0.4	
7	1	20	2	12		OPN OFFC 122 RCPT	0.4			
9	1	20	2	12		OPN OFFC 122 RCPT		0.4		
11	1	20	2	12		OPN OFFC 122 RCPT			0.4	
13	1	20	2	12		OPN OFFC 122 RCPT	0.4			
15	1	20	2	12		OPN OFFC 122 RCPT		0.4		
17	1	20	2	12		OPN OFFC 122 RCPT			0.4	
19	1	20	2	12		OPN OFFC 122 RCPT	0.4			
21	1	20	2	12		OPN OFFC 122 RCPT		0.4		
23	1	20	2	12		OPN OFFC 122 RCPT			0.4	
25	1	20	2	12		OPN OFFC 122 RCPT	0.4			
27	1	20	2	12		OPN OFFC 122 RCPT		0.4		
29	1	20	2	12		OPN OFFC 122 RCPT			0.4	
31	1	20	2	12		OPN OFFC 122 RCPT	0.4			
33	1	20	2	12		OPN OFFC 122 RCPT		0.4		
35	1	20	2	12		SHREDDER			0.4	
37	1	20	2	12		SHREDDER	0.4			
39	1	20				SPARE				
41	1	20				SPARE				
2	1	20	2	12		OPN OFFC 122 RCPT	0.4			
4	1	20	2	12		OPN OFFC 122 RCPT		0.4		
6	1	20	2	12		OPN OFFC 122 RCPT			0.4	
8	1	20	2	12		OPN OFFC 122 RCPT	0.4			
10	1	20	2	12		OPN OFFC 122 RCPT		0.4		
12	1	20	2	12		OPN OFFC 122 RCPT			0.4	
14	1	20	2	12		OPN OFFC 122 RCPT	0.4			
16	1	20	2	12		OPN OFFC 122 RCPT		0.4		
18	1	20	2	12		OPN OFFC 122 RCPT			0.4	
20	1	20	2	12		OPN OFFC 122 RCPT	0.4			
22	1	20	2	12		OPN OFFC 122 RCPT		0.4		
24	1	20	2	12		OPN OFFC 122 RCPT			0.4	
26	1	20	2	12		OPN OFFC 122 RCPT	0.4			
28	1	20	2	12		OPN OFFC 122 RCPT		0.4		
30	1	20	2	12		PALLET SPAKER			1.0	
32	1	20	2	12		COPIER	1.0			
34	1	20				SPARE				
36	1	20				SPARE				
38	1	20				SPARE				
40	1	20				SPARE				
42	1	20				SPARE				
						TOTAL LEFT SIDE	2.5	2.2	2.2	0.0
						TOTAL RIGHT SIDE	2.8	1.8	2.4	0.0
						TOTAL	5.3	4.0	4.6	0.0
						TOTAL CONNECTED LOAD				13.9

* NOTES

NEW PANEL B

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 100A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		OPN OFFC 122 RCPT	0.4			
3	1	20	2	12		OPN OFFC 122 RCPT		0.4		
5	1	20	2	12		OPN OFFC 122 RCPT			0.4	
7	1	20	2	12		OPN OFFC 122 RCPT	0.4			
9	1	20	2	12		OPN OFFC 122 RCPT		0.4		
11	1	20	2	12		OPN OFFC 122 RCPT			0.4	
13	1	20	2	12		OPN OFFC 122 RCPT	0.4			
15	1	20	2	12		OPN OFFC 122 RCPT		0.4		
17	1	20	2	12		OPN OFFC 122 RCPT			0.4	
19	1	20	2	12		OPN OFFC 122 RCPT	0.4			
21	1	20	2	12		OPN OFFC 122 RCPT		0.4		
23	1	20	2	12		SHREDER			0.7	
25	1	20	2	12		CAFE RCPT	0.7			
27	1	20	2	12		CAFE RCPT		0.7		
29	1	20	2	12		CAFE TV RCPT			0.7	
31	1	20				SPARE				
33	1	20				SPARE				
35	1	20				SPARE				
37	1	20				SPARE				
39	1	20				SPARE				
41	1	20				SPARE				
2	1	20	2	12		OPN OFFC 101 RCPT	0.4			
4	1	20	2	12		OPN OFFC 101 RCPT		0.4		
6	1	20	2	12		OPN OFFC 101 RCPT			0.4	
8	1	20	2	12		OPN OFFC 101 RCPT	0.4			
10	1	20	2	12		OPN OFFC 101 RCPT		0.4		
12	1	20	2	12		OPN OFFC 101 RCPT			0.4	
14	1	20	2	12		OPN OFFC 101 RCPT	0.4			
16	1	20	2	12		OPN OFFC 101 RCPT		0.4		
18	1	20	2	12		OPN OFFC 101 RCPT			0.4	
20	1	20	2	12		OPN OFFC 101 RCPT	0.4			
22	1	20	2	12		OPN OFFC 101 RCPT		0.4		
24	1	20	2	12		INSRTR SINK RCPT			0.2	
26	1	20	2	12		INSRTR RCPT	0.4			
28	1	20	2	12		DOCK 109		0.4		
30	1	20	2	12		STORAGE 108			0.4	
32	1	20	2	12		ELEC RCPT	0.5			
34	1	20				SPARE				
36	1	20				SPARE				
38	1	20				SPARE				
40	1	20				SPARE				
42	1	20				SPARE				
						TOTAL LEFT SIDE	2.2	2.2	2.5	0.0
						TOTAL RIGHT SIDE	2.3	1.8	1.6	0.0
						TOTAL	4.5	4.0	4.2	0.0
						TOTAL CONNECTED LOAD				12.6

* NOTES

NEW PANEL MDP1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 800A | MAIN BREAKER AMPS: 800A | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 65,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	3	100				PANEL A	5.3			
								4.0		
									4.6	
3	3	100				PANEL B	4.5			
								4.0		
									4.2	
5	3	400				PANEL E	9.6			
								12.6		
									9.6	
7	3	100	4	3		EXISTING HVAC				28.0
2	3	100				PANEL C	4.9			
								5.1		
									6.1	
4	3	200				PANEL D	14.1			
								13.3		
									13.3	
6	3	100				PANEL L	3.0			
								2.1		
									3.2	
8	3	200				SPARE				
						TOTAL LEFT SIDE	19.4	20.5	18.4	93.5
						TOTAL RIGHT SIDE	21.9	20.6	22.7	0.0
						TOTAL	41.3	41.1	41.0	93.5
						TOTAL RIGHT SIDE	21.9	20.6	22.7	0.0
						TOTAL CONNECTED LOAD				217.0

* NOTES
1. PROVIDE NEW FEED TO EXISTING HVAC EQUIPMENT FROM NEW LOCATION.

NEW PANEL D

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		VEND 103 RCPT	1.0			
3	1	20	2	12		MICRO WV RCPT		1.0		
5	1	20	2	12		CNTR TOP RCPT			1.0	
7	1	20	2	12		VEND 103 RCPT	1.0			
9	1	20	2	12		MICRO WV RCPT		1.0		
11	1	20	2	12		VEND 103 RCPT			1.0	
13	1	20	2	12		COFF RCPT	1.0			
15	1	20	2	12		VEND 103 RCPT		1.0		
17	1	20	2	12		CAFE 102 RCPT			0.4	
19	1	20	2	12		CAFE 102 RCPT	0.7			
21	1	20	2	12		CORRIDOR RCPT		0.4		
23	2	30	2	10		IT UPS			2.5	
25							2.5			
27	2	30	2	10		IT UPS		2.5		
29									2.5	
31	2	30	2	10		IT UPS	2.5			
33								2.5		
35	1	20	2	12		DAT AIT 107 RCPT			1.0	
37	1	20	2	12		DAT AIT 107 RCPT	1.0			
39	1	20	2	12		FM200 CONTROL		1.0		
41	1	20	2	12		FM200 CONTROL			1.0	
2	1	20	2	12		CONF 111 RCPT	0.4			
4	1	20	2	12		CONF 111 RCPT		0.4		
6	1	20	2	12		INSRT 104 RCPT			0.4	
8	1	20	2	12		INSRT 104 RCPT	0.4			
10	1	20	2	12		INSRT 104 RCPT		0.4		
12	1	20	2	12		INSRT 104 RCPT			0.4	
14	1	20	2	12		INSRT 104 RCPT	0.4			
16	1	20	2	12		INSRT 104 RCPT		0.4		
18	1	20	2	12		INSRT 104 RCPT			0.4	
20	2	30	2	10		INSRT 104 RCPT	1.0			
22								1.0		
24	2	20	2	10		INSRT 104 RCPT			1.0	
26							1.0			
28	2	20	2	10		INSRT 104 RCPT		1.0		
30									1.0	
32	1	20	2	12		INSRT 104 RCPT	0.4			
34	1	20	2	12		IT QUAD RCPT		0.9		
36	1	20	2	12		IT QUAD RCPT			0.9	
38	1	20	2	12		IT QUAD RCPT	0.9			
40	1	20				SPARE				
42	1	20				SPARE				
						TOTAL LEFT SIDE	9.7	9.4	9.4	0.0
						TOTAL RIGHT SIDE	4.3	4.0	4.0	0.0
						TOTAL	14.1	13.3	13.3	0.0
						TOTAL RIGHT SIDE	4.3	4.0	4.0	0.0
						TOTAL CONNECTED LOAD				40.7

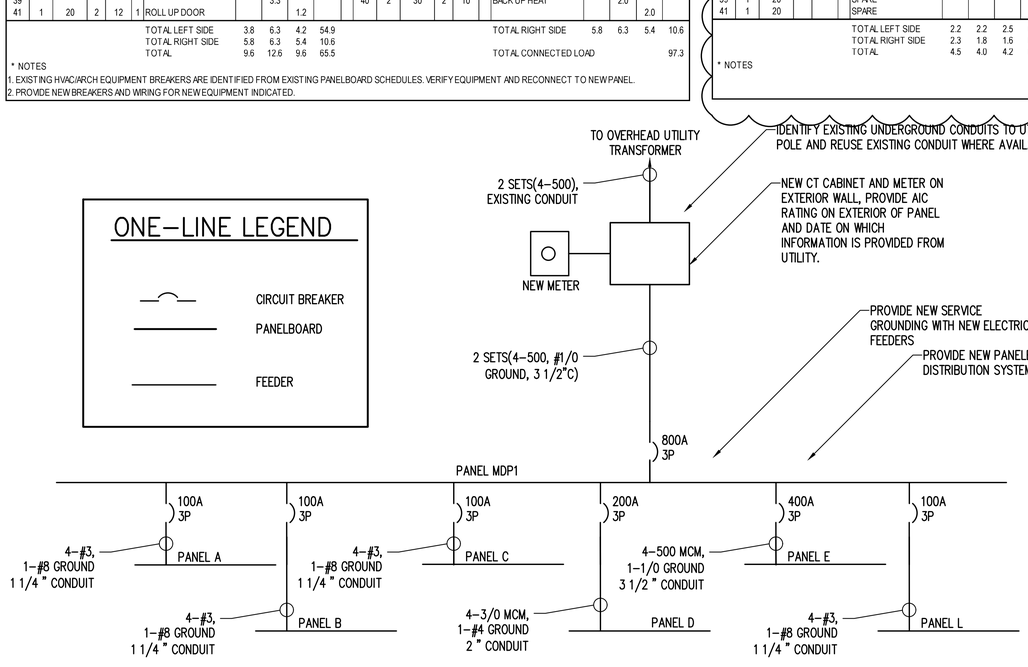
* NOTES

NEW PANEL L (LIGHTING CONTROL PANEL)

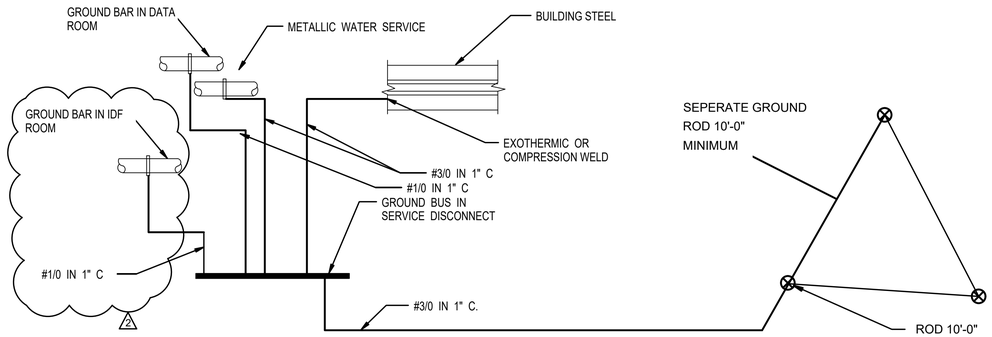
VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 100A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	10	1	EXT CONPY LTG	0.5			
3	1	20	2	10	1	EXT BLDG MNT LTG		0.5		
5	1	20	2	10		LTG 104-109			1.8	
7	1	20	2	10		LTG 101,102,122	1.5			
9	1	20	2	10		LTG CORR,112-114,117		1.6		
11	1	20	2	10		LTG 115-121,LOBBY			1.4	
13	1	20	2	10		SIGN	1.0			
15	1	20				SPARE				
17	1	20				SPARE				
19	1	20								
21	1	20				SPARE				
23	1	20				SPARE				
2	1	20				SPARE				
4	1	20				SPARE				
6	1	20				SPARE				
8	1	20				SPARE				
10	1	20				SPARE				
12	1	20				SPARE				
14	1	20				SPARE				
16	1	20				SPARE				
18	1	20				SPARE				
20	1	20				SPARE				
22	1	20				SPARE				
24	1	20				SPARE				
						TOTAL LEFT SIDE	3.0	2.1	3.2	0.0
						TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0
						TOTAL	3.0	2.1	3.2	0.0
						TOTAL RIGHT SIDE				0.0
						TOTAL CONNECTED LOAD				8.3

* NOTES
1. PROVIDE A PHOTOCELL AND TIME CLOCK TO CONTROL EXTERIOR MOUNTED LIGHTS LIGHTS. ALL EXTERIOR LIGHTS ARE REPLACING EXISTING.



ONE-LINE DIAGRAM



GROUNDING DETAIL

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

DANIEL W. GIBSON
Lic. No. 44271
12-31-20

GIBSON ENGINEERING
2100 LUBNA DR
CHRISTIANSBURG VA 24073
P. 540.998.6069

REVISIONS

2	ELECTRICAL CHANGES	06.11.2021
3	DESIGN CHANGES	06.11.2021

TENANT UPFIT FOR

PROSPERITY™

ELECTRIC ROAD

3825 ELECTRIC ROAD
ROANOKE, VA 24018

DATE	DECEMBER . 31 . 2020
DRAWN	DWG
CHECKED	DWG
JOB	20-058

PANELBOARD SCHEDULES AND ONE LINE DIAGRAM

SHEET
E-401

SECTION 16000

ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Provide new lighting and power as required for new circuits as necessary. Reuse existing circuits where available. Provide power from panelboards indicated. Verify existing circuits are spare circuits prior to installation.

1.2 QUALITY ASSURANCE

A. General

a. Comply with IEEE C2, "National Electrical Safety Code".

b. IEEE Compliance: Comply with applicable Institute of Electrical and Electronics Engineers, Inc. standards pertaining to generator construction.

c. NEC Compliance: Comply with NFPA 70, "National Electrical Code" as applicable to construction and installation of products required in this specification.

d. UL and NEMA Compliance and Labeling: Provide products which have been labeled by Underwriters Laboratories and have been certified to comply with UL requirements.

e. IEEE Compliance: Comply with STD 241, "IEEE Recommended Practice for Electrical Power Systems in Commercial Buildings" pertaining to communication systems.

B. MOTOR CONTROLLERS

a. UL and NEMA Compliance and Labeling: Provide products which have been labeled by Underwriters' Laboratories and have been certified to comply with UL and NEMA.

C. LIGHTING

a. NEMA Compliance: Comply with applicable requirements of NEMA Stds. Pub/No.'s LE 1 and LE 2 pertaining to lighting equipment.

b. UL Compliance: Comply with UL standards, including UL 486A and B, pertaining to lighting fixtures. Provide lighting fixtures and components which are UL_listed and labeled. Provide exterior fixtures with "Suitable for Wet Location" label.

c. CBM Labels: Provide fluorescent lamp ballasts which comply with Certified Ballast Manufacturers Association standards and carry the CBM label.

1.3 COORDINATION OF ELECTRICAL WORK

A. General: Refer to the division sections for general coordination requirements applicable to the entire work. It is recognized that the contract documents are diagrammatic in showing certain physical relationships which must be established within the electrical work and in its interface with other work including utilities and mechanical work and that such establishment is the exclusive responsibility of the Contractor.

a. Arrange electrical work in a neat, well organized manner with conduit and similar services running parallel with primary lines of the building construction and with the maximum headroom possible, but a minimum 7'_0" overhead clearance.

b. Locate operating and control equipment properly to provide easy access and arrange entire electrical work with adequate access for operation and maintenance.

c. Advise other trades of openings required in their work for the subsequent move_in of large units of electrical equipment.

d. Coordinate all work, including power outages, with Owner's Schedule of Operation.

B. Product Handling: Space at the project for storage of materials and products is limited. Coordinate the deliveries of electrical materials and products with the scheduling and sequencing of the work so that storage requirements at the project are minimized. In general, do not deliver individual items of electrical equipment to the project substantially ahead of the time of installation.

1.3 ELECTRICAL SYSTEM IDENTIFICATION

A. Conduit Systems: Provide adequate marking of primary conduits which are exposed or concealed in accessible spaces. to distinguish each run as either a power or signal/communication conduit. Except as otherwise indicated, use orange banding with black lettering. Provide self_adhesive or snap_on type plastic markers. Indicate voltage ratings of conductors where above 240 V. Locate markers at ends of conduit runs, near switches and other control devices and near items of equipment served by the conductors. Switch_leg conduit and short branches for power connections need not be marked, except where conduit is larger than 1 inch. Label all junction boxes with branch circuit numbers terminated within.

B. Identification Labels and Warning Signs: Provide engraved plastic_laminate or baked enamel labels on major units of electrical equipment including switchboards, panelboards, motor controllers, disconnect switches, signal and similar systems. Label shall include equipment identification mark and voltage characteristics and shall be melamine plastic, 0.125_inch thick, white with black center core. Provide warning signs where there is hazardous exposure or danger associated with access to or operation of electrical facilities. Provide text of sufficient clarity and lettering of sufficient size, minimum 0.25 inch nominal block style, to convey adequate information at each location; mount permanently in an appropriate and effective location.

1.4 PAINTING ELECTRICAL WORK

A. General: Except as otherwise indicated, comply with the applicable provisions of Division 9 for electrical_work painting. Electrical equipment shall have factory_applied painting systems which shall meet the requirements of NEMA ICS6. The work of this article shall include general field painting of electrical work.
a. Coordinate the painting with the painting of other work of a similar nature and comply with indicated color and color matching requirements. Except as otherwise indicated, paint surfaces of electrical work which would normally be painted in the application and exposure indicated.

B. Do not paint over nameplates on equipment, sliding/rotating shaft surfaces, non_ferrous hardware/accessories/trim and similar items where painting would normally be omitted.

1.5 ELECTRICAL SYSTEM PERFORMANCE

A. General: The overall system performances of electrical work are of even greater importance than the specified individual unit_of_work performances. Each unit of electrical work has been designed and specified to perform at minimum levels of output and efficiency and is intended to contribute to and be compatible with the entire system. Compatibility of actual performances by electrical system performances is the Contractor's responsibility.

B. Adjustments: Where it has been determined that electrical systems do not or will not perform in compliance with the specified performances, adjustments or corrections shall be made to the work as necessary to achieve required performances.

1.6 ELECTRICAL WORK CLOSEOUT

A. Additional Service: Perform services within the above 12-month period not classified as routine maintenance or as warranty work as described in Division 1 Section "Warranties and Bonds" when authorized in writing. Compensation for additional services must be agreed upon in writing prior to performing services.

B. Closeout Coordination: Coordinate closeout operations with closeout of mechanical systems and other power consuming equipment.

C. Record Drawings: Maintain a blue_line set of electrical contract drawings and/or shop drawings in clean, undamaged condition, for indication of major electrical equipment or concealed lines located in position other than that shown on the contract drawings. Mark_up whatever drawings are most capable of showing installed conditions accurately. In general, record every substantive installation of electrical work which previously is either not shown or shown inaccurately, specifically record the following:
a. Work concealed behind or within other work, in a nonaccessible location.
b. Main feeders with switchgear, panelboards, and control devices located, identified and numbered. This information shall be displayed in a glazed, hardwood frame, minimum two (2) feet square, near the main service disconnect.
c. Maintenance procedures and schedules.
d. Testing procedures and acceptable parameters.

G. Cleaning and Lubrication: After final testing of each electrical system, clean system both externally and internally. Comply with manufacturer's instructions for lubrication of both power and hand operated equipment. Touch_up minor damage to factory_painted finishes and provide one pint of touch-up paint for each color of major equipment installed.

1.10 SUBMITTALS

A. LIGHTING

1. Product Data: Submit manufacturer's product data and installation instructions on each type building lighting fixture photocell, contactor and component.

2. Shop Drawings: Submit fixture shop drawings where specifically indicated in booklet form with separate sheet for each fixture, assembled in "luminare type" alphabetical or numerical order, with proposed fixture and accessories clearly indicated on each sheet.

3. Maintenance Data: Submit maintenance data and parts list for each lighting fixture and accessory; including "trouble_shooting" maintenance guide. Include that data, product data, and shop drawings in a maintenance manual.

PART 2 - PRODUCTS

2.1 CABLE AND WIRE

A. Provide factory-fabricated wire or cable of the size, rating, material and type as indicated for each service in compliance with NECA - Standard of Installation. Where not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards. Conductors shall be rated 600 volt of insulation type THW, THWN, THHN, or USE installed in compliance with National Electrical Code requirements.

B. Provide bonding conductors for sizes No. 8 AWG and smaller of solid bare copper per ASTM B 1, and for sizes No. 6 AWG and larger stranded bare copper per ASTM B 8.

C. No. 10 AWG and smaller diameter shall be solid copper; No. 8 AWG and larger diameter shall be stranded copper.

D. Provide color coding for service, feeder, branch, control, and signaling circuit conductors. Color shall be green for grounding conductors and white for neutrals; except where neutrals of more than one system are installed in same raceway or box, other neutral shall be white with colored (not green) stripe. Color of ungrounded conductors in different voltage systems shall be as follows:
a. 120/208 volt, 3-phase:
i. Phase A - black.
ii. Phase B - red.
iii. Phase C - blue.

E. Provide the following types of cables in NEC approved locations and applications where indicated. Provide cable UL listed for its intended use.
a. Metal clad cable: Type MC.

F. Provide UL 486A, factory-fabricated, solderless, metal connectors of the size, ampacity, rating, material, type and class as indicated for each service. Where not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards. Provide insulating tape in compliance with UL 510.

2.2 ELECTRICAL RACEWAYS

A. Metal Conduit, Tubing and Fittings: Provide metal conduit, tubing and fittings of type, grade, size and weight indicated for each service. Where type and grade are not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards for wiring requirements.

a. Rigid Steel Conduit: ANSI C80.1, UL 6.
b. Intermediate Steel Conduit (Zinc Coated Steel): UL 1242.
c. Rigid Metal Conduit Fittings: UL 514B, cadmium- or zinc- coated threaded type.
d. Electrical Metal Tubing (EMT): ANSI C80.3, UL 797.
e. EMT Fittings: UL 514B, compression or set-screw type
f. Flexible Metal Conduit: Cadmium- or zinc-coated steel.
g. Flexible Metal Conduit Fittings: UL 514B, cadmium- or zinc-coated.
h. Liquid-Tight Flexible Metal Conduit: UL 360, provide liquid-tight flexible metal conduit comprised of single strip, continuous, flexible, interlocked, double-wrapped steel, galvanized inside and outside; forming smooth internal wiring channel; with liquid-tight jacket of flexible polyvinyl chloride.
i. Liquid-Tight Flexible Metal Conduit Fittings: FS W-F-406.

B. Wireways: Electrical wireways shall be of types, sizes, and number of channels as indicated. Fittings and accessories including but not limited to couplings, offsets, elbows, expansion joints, adapters, hold-down straps, and end caps shall match and mate with wireway as required for complete system. Where features are not indicated, select to fulfill wiring requirements and comply with applicable provisions of NEC. Wireway covers shall be hinged type.

C. Surface Metal Raceways and Fittings: UL 5, two-piece steel, totally enclosed. Snap cover type with wiring devices, sizes and channels as indicated. Wiremold, or approved equal.
a. Type a: Two section, steel, approximately 7/8 inch x 1 1/4 inch wide, with 20 amp, 125V, specification grade grounding surge protection receptacles 2'-6" on centers, alternating circuits. Provide with ivory paintable finish.

2.3 ELECTRICAL OUTLET BOXES AND FITTINGS

A. Interior Outlet Boxes: UL 514A, provide galvanized flat rolled sheet steel interior outlet wiring boxes, flush mounted of type, shapes and sizes, including box depths, to suit each respective location and installation; construct with stamped knockouts in back and sides, and with threaded screw holes with corrosion-resistant screws for securing box covers and wiring devices. Provide feraloy cast outlet boxes where surface mounted with threaded conduit hubs to suit each respective location and installation.

B. Weatherproof Outlet Boxes: Provide corrosion-resistant cast metal weatherproof outlet wiring boxes, of types, shapes and sizes, with threaded conduit ends, cast metal face plates with spring-hinged waterproof caps suitably configured for each application, including faceplate gaskets and corrosion-resistant fasteners. Weatherproof while in operation.

C. Cast-Iron Floor Boxes: Fully adjustable, waterproof, with threaded raceway entrances, adjusting rings, gaskets, and brass floor plates. Provide multi-section boxes with individual screw type brass section covers, barrier between compartments and provide for a duplex receptacle under one or more of the covers. Telephone outlets shall have provisions to accommodate 10-wire telephone terminal block. Provide gaskets where required to ensure watertight installation. Provide trim suitable for floor conditions.

2.4 WIRING DEVICES

A. General: Provide factory-fabricated wiring devices, in types, colors and electrical ratings for applications indicated and complying with NEMA Standards Publication No. WD 1. Where types and grades are not indicated, provide proper selection as determined by installer to fulfill wiring requirements, and comply with NEC and NEMA standards for wiring devices. Provide receptacles with isolated ground and/or surge protection where indicated.

B. Receptacles:
a. Heavy Duty Duplex: UL 498, provide duplex heavy duty type receptacles, 2-pole, 3-wire grounding, with green hexagonal equipment ground screw, ground terminals and poles internally connected to mounting yoke, 20-amperes, 125 volt, almond nylon face with metal plaster ears, side wiring, NEMA Configuration 5-20R, unless otherwise indicated.
b. Ground Fault Receptacle: Provide ground fault protected duplex receptacle
i. Provide with cast aluminum weatherproof cover where indicated to be WP while in operation.
c. Surge Protection Receptacle: Provide duplex heavy duty type receptacles 20-amperes, 125 volt, almond face with electrical surge and noise protection.

C. Switches:
a. Snap: UL 20, provide general duty flush single-pole toggle switches, 20-amperes, 120-277 volts AC only, with mounting yoke insulated from mechanism, equip with plaster ears, almond switch handle and side wired screw terminals. Single pole, Three-way and Four-way as indicated on drawings.
b. Motion Sensing, Ceiling Mounted: Provide dual technology ultrasonic and passive infrared or microphonic and passive infrared motion detector, manual off switch, 0 to 4800 watt fluorescent switching capacity, 277 volts AC, 360 sensing coverage, six to 15 minute off time delay, LED walk test indicator, bypass switch, suitable for use in classrooms, 5_year warranty, UL listed, Universal Energy Control (UNENCO) Switchomatic Coordinate with connected wattage and type of room light fixtures.

D. Wiring Device Accessories:
a. Wall Plates: Provide color samples for architect selection. Provide UL listed, one-piece device plates for outlets and fittings to fit the device installed. For flush-mounted outlets on finished walls, provide 0.04-inch thick, type 302 satin finished stainless steel switch and outlet plates of types, sizes and with ganging and cutouts as indicated. Install with metal screws for securing plates to devices; screw heads colored to match finish of plate.
b. For surface mounted boxes, provide feraloy cast outlet plates on all outlet boxes, type suitable for wiring device installed in box.
c. Provide plate with engraved legend where indicated.

2.5 SAFETY AND DISCONNECT SWITCHES

A. General: UL 98, NEMA KS1, provide surface-mounted, sheet-steel enclosed switches, of types, sizes and electrical characteristics indicated; 3-blades, 4-wire with amperage rating as required, 60 hertz and visible blades with door in open position. Provide with safety handle which is easily recognizable and is capable of being padlocked in the open position and operating mechanism for quick-make and quick-break. Current carrying parts of high-conductivity copper, with silver-tungsten type switch contacts. Provide NEMA 1 type enclosures indoors and NEMA 3R type enclosures with raintight hubs outdoors.

B. Provide General Duty Type: 240 volts AC, Type GD. Heavy Duty Type: 600 volts AC.

C. Switches used as motor disconnect means shall be horsepower rated. Fused switches shall utilize Class R fuseholder and fuses unless indicated otherwise or recommended by equipment manufacturer.

2.6 ELECTRICAL GROUNDING AND BONDING EQUIPMENT

A. General: UL 467. Provide grounding products of types indicated and of sizes and ratings as required by NEC. Provide all material required including but not necessarily limited to, cable/wire, connectors, terminals (solderless lugs), grounding rods/electrodes, bonding jumper braid and other items and accessories needed for a complete installation. Where more than one type meets indicated requirements, selection is installer's option. Where materials or components are not otherwise indicated, provide products complying with NEC, and established industry standards.

A. Electrical Grounding Conductors: Unless otherwise indicated, provide electrical grounding conductors for grounding connections matching power supply wiring materials except bare or green insulation and sized according to NEC. Equipment grounding conductors shall have green insulation. Solid conductors shall comply with ASTM B-3, stranded conductors with ASTM B-8.

B. Grounding Connectors: Provide listed and labeled grounding connectors for the required materials. Provide high-conductivity plated pressure connector units or exothermic welded connections.

2.7 THROUGH PENETRATION FIRE STOPS

A. General: UL 1479, ASTM E814, materials and assemblies shall be UL listed and labeled and FM approved for fire ratings consistent with penetrated barriers.

B. Provide putty one part composition sealant composed of synthetic elastomeric organic/inorganic intumescent materials which expand when exposed to heat. Provide additional sealing systems, sheet steel, foil or retaining wire as required.

2.8 ACCESS PANELS AND DOORS

A. General: Provide factory-fabricated and assembled units, complete with attachment devices and fasteners ready for installation. Joints and seams shall be continuously welded steel, with welds ground smooth and flush with adjacent surfaces.

B. Frames: 16-gage steel, with a 1-inch-wide exposed perimeter flange for units installed in unit masonry, pre-cast, or cast-in-place concrete, ceramic tile, or wood paneling. Provide with 1-inch wide exposed perimeter flange and adjustable metal masonry anchors. For installation in masonry, concrete, ceramic tile, or wood.

C. Flush Panel Doors: Provide 14-gage sheet steel, with concealed spring hinges or concealed continuous piano hinge set to open 175 degrees; factory-applied prime paint.

D. Fire-Rated Units: Insulated flush panel doors, with continuous piano hinge and self-closing mechanism.

E. Locking Devices: Flush, screwdriver-operated cam locks.

2.9 COMBINATION MOTOR CONTROLLERS

A. General: Motor circuit protector; molded-case circuit-type breaker type with magnetic-only trip element calibrated to coordinate with the actual locked-rotor current of the connected motor and the controller overload relays. Provide breakers that are factory assembled with the controller, interlocked with unit cover or door, and arranged to disconnect the controller. Provide motor circuit-protectors with field-adjustable trip elements.

2.10 LIGHTING FIXTURES

A. Provide lighting fixtures of sizes, types, and ratings indicated in lighting fixture schedule

B. Wiring: Provide electrical wiring within fixture suitable for connecting to branch circuit.
a. NEC Type AF for 120 volt, minimum No. 18 AWG.

2.11 MOTION DETECTORS

A. Indoor Motion Detectors: Provide passive infrared motion sensor to operate lights on detection of occupancy, 120/277 volts, field adjustable.

B. Outdoor Motion Detectors: Passive infrared motion sensor in weatherproof enclosure with adjustable digital sensitivity and time delay and isolated SPDT relay contact. Provide unit suitable for operation at temperatures as low as -40F. Provide adjustable mounting bracket.

INTERACTIVE DESIGN

INTERACTIVE DESIGN GROUP
301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

COMMONWEALTH OF VIRGINIA
DANIEL W. GIBSON
Lic. No. 44271
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PROFESSIONAL ENGINEER

GIBSON ENGINEERING
2100 LUBNA DR
CHRISTIANSBURG VA 24073
P. 540.998.6069

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SPECIFICATIONS

SHEET
E-501

INSTALLATION
PART 3 - INSTALLATION

3.1 General

A. Verify final locations for rough_in with field measurements and with the requirements of the actual equipment to be connected.

B. Rough_in for owner furnished equipment to make equipment operate as intended, including providing miscellaneous wiring items.

C. Adjust operating mechanisms for free mechanical movement. Clean interior and exterior using manufacturer's approved methods and materials.

D. Touch-up scratched or marred surfaces to match original finish.

E. In general, perform cutting and patching as necessary. Exercise care where cutting, channeling, chasing or drilling floors, walls, partitions, ceilings or other surfaces for installation of electrical work.

F. Patch finished surfaces and building components using new materials specified for the original installation and experienced installers. Installers' qualifications refer to the materials and methods required for the surface and building components being patched.

3.2 CABLE, WIRE AND CONNECTORS

A. Provide insulated conductors installed in conduit, except where specifically indicated or specified otherwise or required by NEC to be installed otherwise. Provide insulated equipment grounding conductor in feeder and branch circuits, including lighting circuits. Grounding conductor shall be separate from electrical system neutral conductor.

B. Coordinate cable and wire installation with electrical raceway and equipment installation. Conductor sizes indicated are copper. Pull conductors together where more than one is being installed. Use pulling means and lubricant that will not damage conductor or raceway. Use splice and tap connectors which are compatible with conductor material, and only in accessible junction, pull or outlet boxes.

C. Tighten electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL 486A.

3.2 ELECTRICAL RACEWAYS

A. Provide with complete electrical raceway system before installing conductors within raceways. Provide support as required by NEC but within 1 foot of a change in direction or connection to an enclosure, cover ends of empty conduit to prevent entry of debris during rough-in, provide bonding type locknuts at boxes. Conceal conduit, unless indicated otherwise within finished walls, ceilings and floors. Run exposed conduits parallel or perpendicular to the building structure, close to the ceiling or beams. Keep raceways at least 6 inches away from parallel runs of flues, steam, and hot water pipes.

B. Use the following wiring methods:
   a. Outdoors:
   i. Intermediate metal conduit
   ii. Rigid metal conduit
   iii. Liquid-tight flexible metal conduit
   b. Indoors:
   i. Electrical metallic tubing
   ii. Flexible metal conduit
   iii. Rigid metal conduit (where exposed and subject to damage)

C. Use raceway fittings that are of types compatible with the associated raceway and suitable for the use and location. For intermediate steel conduit, use threaded rigid steel conduit fittings except as otherwise indicated.

D. Run exposed, parallel, or banked raceways together. Make bends in parallel or banked runs from the same center line so that the bends are parallel. Factory elbows may be used in banked runs only where they can be installed parallel. This requires that there be a change in the plane of the run such as from wall to ceiling and that the raceways be of the same size. In other cases provide field bends for parallel raceways.

E. Install pull wires in empty raceways. Use No. 14 AWG zinc-coated steel or monofilament plastic line having not less than 200-lb. tensile strength. Leave not less than 12 inches of slack at each end of the pull wire.

F. Flexible Connections: Use short length (maximum of 6 ft.) of flexible conduit for recessed and semirecessed lighting fixtures, for equipment subject to vibration, noise transmission, or movement; and for all motors. Use liquid-tight flexible conduit in wet locations. Install separate ground conductor across flexible connections.

G. Surface Metal Raceway: Install to walls, cabinets, and ceilings as recommended by equipment manufacturer with fasteners suitable for the material to which the surface metal raceway is being attached. Install a separate green ground conductor in raceway from the junction box supplying the raceway to receptacle or fixture ground terminals. Provide as an integral part or install wiring devices as indicated. Make cuts and other modifications with factory cuts and other modifications with factory furnished tools specifically designed for the purpose.

3.3 ELECTRICAL BOXES AND FITTINGS

A. Provide weatherproof outlet boxes for interior and exterior locations exposed to moisture, flush mounted boxes for connection to concealed conduit and pull boxes as required for installation of conductors. Sizes shall be adequate to meet NEC volume requirements, but not smaller than sizes indicated. Remove knockouts only as required and plug unused openings.

B. Fasten boxes rigidly to substrate or structural surfaces to which they are to be mounted, or solidly embed electrical boxes in concrete or masonry.

3.4 WIRING DEVICES

A. Install wiring devices in clean outlets after wiring has been installed. Do not install plates and cover installed wiring devices until painting is complete.

B. Ground all wiring devices unless indicated otherwise. Test wiring devices for correct polarity, proper ground and electrical continuity.

C. Install covers and device plates with edges in continuous contact with finished wall surfaces without use of mats or similar devices. Plaster or caulking used as a filling to repair openings around outlets shall not be applied without removing the cover or device plate. Plates installed in wet areas shall be gasketed.

3.5 SAFETY AND DISCONNECT SWITCHES

A. Install disconnect switches used for motor-driven equipment within sight of the controller and motor and not more than 50 feet from the controller and motor unless indicated otherwise.

B. Provide an electrical ground for all disconnect switches.
C. Test all switches for proper operation by operating them energized, but without load for six opening/closing cycles. Inspect switch and correct deficiencies, then retest to demonstrate compliance.

3.6 ELECTRICAL GROUNDING EQUIPMENT

A. Install electrical grounding systems where shown, in accordance with applicable portions of National Electrical Code, **NECA 331-2014 "Standard for Building and Service Entrance Grounding and Bonding,"** and in accordance with recognized industry practices to ensure that products comply with requirements and serve intended functions.

B. Provide separate grounding conductor with wiring in all raceways.

C. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing where indicated.

D. Install clamp-on connectors only on thoroughly cleaned metal contact surfaces, to ensure electrical conductivity and circuit integrity.

3.7 LIGHTING FIXTURES

A. General: Install lighting fixtures of types indicated, where shown and at indicated heights, in accordance with lighting fixture manufacturer's written instructions and with recognized industry practices. Comply with NEMA standards and requirements of National Electrical Code pertaining to installation of lighting fixtures and with applicable portions of NECA's "Standards of Installation".

B. Fasten surfaced fluorescent fixtures to suspended ceiling system near corner of each unit. Bolt fixture to main ceiling supports with stud_clips minimum 1/2_20. Support fixtures weighing in excess of 56 pounds directly from the building structure. Recessed and semi_recessed fixtures may be supported from suspended ceiling support system ceiling tees if the ceiling system support wires are provided at a minimum of four wires per fixture and located not more than 6 inches from each corner of each fixture. In addition, provide support clips securely fastened to ceiling grid members at or near corner of each recessed fixture.

C. Secure pendant mounted fluorescent fixtures via outlet box directly to building structure with approved bolting and clamps. Provide each stem or hanger with an approved swivel joint to ensure a continued plumb installation.

D. Mounting heights indicated are to bottom of ceiling_mounted fixtures and to center of wall mounted fixtures.

E. Install all exit lights lighting units plumb, square and level with walls and ceilings and secure in accordance with manufacturer's written instructions Mounting heights shall be to bottom of unit.

F. Clean lighting fixtures of dirt and debris upon completion of installation. Protect installed fixtures from damage during remainder of construction period.

G. Do not install interior fixture lens until construction is complete or protect lens from accumulation of dust and debris.

H. Adjust all fixtures with adjustable aiming to meet the Architect/Engineer's approval.

I. Test all lighting fixtures for compliance with intended purpose. Correct malfunctioning or noisy units, then retest to demonstrate compliance.

J. At date of substantial completion, replace all lamps which are observed to be noticeably dimmed as judged by the Architect/Engineer.

K. Provide tight equipment grounding connections to comply with tightening torques specified in UL 486A for each lighting fixture.

INTERACTIVE DESIGN

INTERACTIVE DESIGN GROUP

301 6TH STREET SW
ROANOKE, VA 24016
P. 540.342.7534 F. 540.342.7536

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ELECTRIC ROAD

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SPECIFICATIONS

SHEET
E-502