Exhibit A

A TENANT IMPROVEMENT REMODEL

MISSOULA COUNTY SHERIFF'S DEPT

2415 MULLAN ROAD
MISSOULA, MT 59808

encompass
design + architecture
inc
1535 liberty lane
suite 110b
missoula, montana
59808
phone: 406.540.4437

REMODEL FOR:
MISSOULA COUNTY
SHERIFF'S DEPT.
2415 MULLAN ROAD, MISSOULA MT 59808

PLAN REVIEW: 08.20.2024
BID SET: 08.20.2024

COVER SHEET

edinc Job #: 24.110

THIS SHEET IS INTENDED TO BE PRINTED IN COLOR TO FULLY UNDERSTAND THE INFORMATION BEING PRESENTED.

A0.0

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A TENANT IMPROVEMENT REMODEL
MISSOULA COUNTY SHERIFF'S DEPT

2415 MULLAN ROAD
MISSOULA, MT 59808

DIRECTORY

ARCHITECT: ENCOMPASS DESIGN INC.
CONTACT: TODD SCHAPER, PRINCIPAL ARCHITECT
PHONE: 406.540.4437
1535 LIBERTY LANE, SUITE 110B MISSOULA, MT 59808

ELECTRICAL ENGINEER: DC ENGINEERING
CONTACT: RYAN EWING
PHONE: 208.493.0088
123 W SPRUCE ST, MISSOULA, MT 59802

MECH/PLUMB ENGINEER: WESTERN MONTANA ENGINEERING
CONTACT: JULIE ALDEGARIE
PHONE: 406.721.5776
1527 SOUTH RUSSELL, MISSOULA MT 59801

GOVERNING CODES

ALL CONSTRUCTION IN ASSOCIATION WITH THIS PROJECT SHALL COMPLY WITH THE CITY & STATE ADOPTED CODES LISTED BELOW:

- 2021 INTERNATIONAL BUILDING CODE
- 2021 INTERNATIONAL ENERGY CONSERVATION CODE
- 2021 UNIFORM PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2020 NATIONAL ELECTRICAL CODE
- 2021 INTERNATIONAL FUEL GAS CODE
- ARM MODIFICATIONS TO THE ADOPTED BUILDING CODES
- ICC A117.1 - ACCESSIBILITY, 2017 EDITION

PROJECT INFORMATION

LEGAL ADDRESS:
MULLAN WAY ADDITION #2, S17, T13N, R19W, LOT 7, ACRES 0.69
GEOCODE: 04-2200-17-2-15-08-0000

MULLAN WAY ADDITION, S17, T13N, R19W, LOT B5, ACRES 0.46
GEOCODE: 04-2200-17-2-15-09-0000

SITE INFO:
- SITE AREA: ~1.5 ACRES
- SITE ZONING: MISSOULA , MONTANA : C2-4
- MAX BUILDING HEIGHT: 125'
- ACTUAL BUILDING HEIGHT: 20'-0" +/-
- PARKING PROVIDED 38
  2 ACCESSIBLE
  40 TOTAL
- BICYCLE PARKING 2 (E) RACKS FOR (4) BICYCLES.
- SETBACKS
  - FRONT SETBACK: NONE
  - REAR SETBACK: NONE
  - SIDE SETBACK: NONE
  - INTERIOR SIDE SETBACK: NONE
- BUILDING : NO CHANGE TO BUILDING ENVELOPE.
- LANDSCAPE : NO CHANGE TO LANDSCAPE AREA.

PROJECT SCOPE:
ADDING DEMISING WALL AT FRONT ENTRY. ADDING NON-STRUCTURAL WALLS IN (E) CLASSROOMS TO CREATE NEW OFFICES AND INTERVIEW ROOMS.
ADD A NEW CHAIN LINK FENCE ON THE WEST SIDE OF PROPERTY.
MISCELLANEOUS CONCRETE REPAIR AT SIDEWALKS.
SEAL EXISTING PAVING AND INSTALL PARKING LOT STRIPING.
NO PROPOSED DEVELOPMENT IN THE RIPARIAN AREA.

BUILDING CODE INFORMATION

BUILDING OCCUPANCY GROUP: B - BUSINESS

CONSTRUCTION TYPE: TYPE V-B

FIRE SPRINKLER: NON SPRINKLERED

NUMBER OF STORIES: 2 MAX **(1 ACTUAL)**

BUILDING HEIGHT: 40' MAX **(20-0" +/- ACTUAL)**

BUILDING AREA:
MAX: 9,000 SF
ACTUAL: FIRST FLOOR **8,190 SF**

OCCUPANT LOAD:
BUSINESS (150 SF / OCC.): 8,190 SF / 150 = 54.6
TOTAL: **55 OCCUPANTS**

PLUMBING FIXTURE COUNTS CHAP 2902.1.1 IBC:
B OFFICE: 1:25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50.

NO CHANGE IN FIXTURE COUNTS.

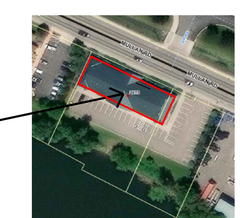
ADDING DRINKING FOUTAIN.

SEE CHANGE OF USE LETTER.

GENERAL PROJECT NOTES:

A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND JOB SITE CONDITIONS BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO ENCOMPASS. USE WRITTEN DIMENSIONS. DO NOT SCALE DRAWINGS. WHERE NO DIMENSION IS PROVIDED, CONSULT ENCOMPASS FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
B. PLANS AND SPECIFICATIONS ARE TO BE TAKEN AS ONE DOCUMENT. ITEMS INCLUDED IN ONE AND NOT IN THE OTHER SHALL BE CONSIDERED AS IF IN BOTH. WHERE A CONFLICT EXISTS BETWEEN PLANS AND SPECIFICATION THE MORE STRINGENT REQUIREMENT SHALL PREVAIL.
C. ALL WORK TO BE PERFORMED UNDER THIS CONTRACT SHALL INCLUDE THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, AND SUPERVISION TO PERFORM THE WORK AND CONSTRUCTION FOR THE PROJECT AS INDICATED IN THESE DOCUMENTS AND THE SPECIFICATIONS.
D. THE DESIGN, ADEQUACY AND SAFETY OF ERECTING BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HAS NOT BEEN CONSIDERED BY AN ENGINEER.
E. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO THE COMPLETION OF WALLS AND FINISH MATERIALS. GENERAL CONTRACTOR TO COORDINATE ARCHITECTURAL DRAWINGS WITH ALL TRADES.
F. GENERAL CONTRACTOR TO PROVIDE SECURITY AND PROTECTION FACILITIES THAT INCLUDE, BUT ARE NOT LIMITED TO; BARRICADES, WARNING SIGNS AND LIGHTING PROTECTION DURING ALL PHASES OF THE PROJECT.
G. ALL MATERIALS & FINISHES ARE TO BE AS SPECIFIED, OR APPROVED EQUAL, SEE SPECS.
H. SUBSTITUTIONS SHALL BE BY APPROVAL PRIOR TO THE BID; SEE SUBSTITUTION REQUEST SPECIFICATION. ALL SUBSTITUTIONS MUST BE APPROVED BY THE ARCHITECT/OWNER PRIOR TO COMMENCING WITH ANY FABRICATION AND/OR INSTALLATION.
I. PROVIDE (1) YEAR WARRANTY FOR ALL WORKMANSHIP.
J. PRIOR TO BEGINNING ANY WORK, CONTRACTOR TO OBTAIN ALL PERMITS, INSPECTIONS AND CERTIFICATES NECESSARY FOR OCCUPANCY BY TENANT U.N.O. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE CODE, LAWS, RULES, AND REGULATIONS OF ALL CONSTITUTED AUTHORITIES HAVING JURISDICTION. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF THE APPLICABLE BUILDING CODES IDENTIFIED ON CODE PLANS.
K. CONTRACTOR SHALL FURNISH OWN TRASH DISPOSAL AS WELL AS A CONSTRUCTION WASTE MANAGEMENT PLAN. WASTE DISPOSAL IN LANDFILLS SHALL BE MINIMIZED AND AS MANY OF THE MATERIALS AS ECONOMICALLY FEASIBLE SHALL BE REUSED, SALVAGED, OR RECYCLED. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION WASTE MANAGEMENT PLAN FOR THIS CONTRACT. WHICH INCLUDES BUT IS NOT LIMITED TO, CONCRETE, ASPHALT AND WOOD.
L. CONTRACTOR SHALL BE HELD LIABLE FOR ALL DAMAGE TO THE PROPERTY, BUILDING AND ALL "EXISTING" ELEMENTS BY HIS/HER PERSONNEL OR SUBCONTRACTORS. ANY DAMAGE SHALL BE REPORTED TO ENCOMPASS IMMEDIATELY. CONTRACTOR SHALL BE RESPONSIBLE FOR RETURNING ITEMS TO ITS ORIGINAL CONDITION.
M. THE CONTRACTOR SHALL FOLLOW SIZES AS INDICATED IN THE CONSTRUCTION DOCUMENTS AND SHALL FOLLOW DETAIL DRAWINGS IN PREFERENCE TO GENERAL DRAWINGS. DO NOT SCALE THE DRAWINGS.
N. WHERE IT IS OBVIOUS THAT A DRAWING ILLUSTRATES ONLY A PART OF A GIVEN WORK OR OF A NUMBER OF ITEMS, THE REMAINDER SHALL BE DEEMED REPETITIVE AND SO CONSTRUCTED.
O. THE USE OF THESE DOCUMENTS SHALL BE RESTRICTED TO THE ORIGINAL PROJECT SITE FOR WHICH THEY WERE PREPARED. PUBLICATION THEREOF IS EXPRESSLY LIMITED TO SUCH USE. ANY PUBLICATION, REUSE OR REPRODUCTION BY ANY METHOD IN WHOLE OR IN PART IS PROHIBITED. OWNERSHIP AND TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF ENCOMPASS DESIGN INC.. VISUAL CONTACT WITH THESE PLANS SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.
P. ANY OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS WITHIN THESE DOCUMENTS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH ANY AFFECTED WORK.
Q. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION OF OTHER TRADES, INCLUDING BUT NOT LIMITED TO MECHANICAL, ELECTRICAL, LANDSCAPE, ACOUSTIC, PLUMBING, LOW VOLTAGE (SECURITY, CONTROLS, ETC) AND STRUCTURAL COMPONENTS AS WELL AS THOSE ITEMS SUPPLIED BY THE OWNER. GENERAL CONTRACTORS AND SUBCONTRACTORS TO BRING ANY OMISSIONS OR CONFLICTS TO THE ATTENTION OF ENCOMPASS PRIOR TO BID FOR APPROPRIATE RESOLUTION.
R. THESE DOCUMENTS ARE THE PROPERTY OF ENCOMPASS AND ARE NOT TO BE REPRODUCED OR COPIED. THESE DRAWINGS ARE TO BE USED FOR THIS PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND ARE NOT TO BE USED ON ANY OTHER PROJECT.
S. THESE DOCUMENTS REPRESENT THE DESIRED RESULT OF CONSTRUCTION. THE METHODS OF SUCH CONSTRUCTION AND THE ASSOCIATED RISKS INVOLVED SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
T. DRAWINGS CONTAINED WITHIN THESE DOCUMENTS ARE ABBREVIATED IN NATURE. THE CONSTRUCTION DOCUMENTS SHOW THE DESIGN INTENT OF THE PROJECT AND MAY NOT SHOW MINOR DETAILS OF PROPOSED INSTALLATION OR MFR INSTALLATION INSTRUCTIONS. THE INCLUSION OF THESE MINOR DETAILS IS IMPLIED TO PROVIDE A COMPLETE DESIGN FOR THE PROJECT AND ARE TO BE INCLUDED AS PART OF A BID. THE CONTRACTOR IS EXPECTED TO USE QUALITY & ACCEPTABLE INDUSTRY STANDARDS OF CONSTRUCTION, PRACTICES AND TECHNIQUES.
U. CONTRACTOR RESPONSIBLE FOR CALLING LOCATES PRIOR TO COMMENCEMENT OF WORK, ALL SHOWN GRAPHICALLY.
V. PROVIDE ALL NECESSARY SETBACKS AND SAFETY MEASURES FOR CONSTRUCTION.

VICINITY MAP:



SHEET LIST

(#) KEYED NOTES - THIS SHEET

1. BUILDING LOCATION & PROPERTY LINES ARE APPROXIMATE. FIELD VERIFY CONDITIONS.
2. SEE FLOOR PLAN FOR GUTTERS AND DOWNSPOUTS, ALL REQUIRED TO DISCHARGE INTO LANDSCAPING.
3. FIELD COORDINATE ADA PARKING & PROVIDE POST MOUNTED ADA SIGNAGE PER CITY OF MISSOULA STANDARDS.
4. PROVIDE 4" WHITE PAVEMENT PAINTED STRIPING IN THE PARKING AREA.
5. VAN ACCESSIBLE ZONE.
6. INTERNATIONAL ADA SYMBOL IN PARKING STALL PER LOCAL AHJ STANDARDS.
7. TWO (E) BICYCLE RACKS FOR (4) BIKES. SECURED TO CONCRETE.
8. 6'-0" HIGH GALVANIZED CHAIN LINK MESH (2" X 9 GA) WITH 2.5" DIA CORNER/END POSTS & 2" DIA. X 16 GA LINE POSTS SET IN 24" X 6" DIA. CONCRETE. LINE POSTS AT 10'-0" O.C. PROVIDE 1-5/8" DIA. TOP RAIL AND BOTTOM TENSION WIRE. PROVIDE ALL ACCESSORIES, CAPS, TENSION BANDS, CONNECTORS FOR A COMPLETE INSTALLATION. INSTALL FENCE ON SUBJECT PROPERTY AND MAINTAIN APPROPRIATE CLEARANCE FROM UTILITIES. REMOVE (E) VEGETATION/LANDSCAPING AS NECESSARY FOR INSTALLATION OF FENCE. EXTEND FENCE TO EXTENT OF PARKING LOT. REPLACE MATERIALS BACK TO ORIGINAL CONDITION.FIELD VERIFY CONDITIONS.
9. REMOVE APPROX 15' L.F. OF CONCRETE SIDEWALK AND SUBGRADE TO NEAREST JOINT WHERE CONCRETE HAS HEAVED OR CRACKED AS NECESSARY FOR NEW CONCRETE WALK. CONCRETE SIDEWALK INSTALLED PER CITY OF MISSOULA STANDARDS.
10. CLEAN AND PREP ASPHALT PAVING FOR A HEAVY DUTY AGGREGATE REINFORCED EMULSION SEALER. PROVIDE APPROPRIATE PRODUCT AND APPLICATION RATES FOR HIGH TRAFFIC AREA. FIELD VERIFY LOCATION OR AREAS OF FAILURE AND PROVIDE NECESSARY REPAIR PRIOR TO INSTALLATION OF SEALER.
11. REMOVE DAMAGED ASPHALT AND SUBGRADE AROUND DAMAGED PAVEMENT NECESSARY FOR NEW SUBGRADE AND PATCH BACK OF ASPHALT. AREA AND LOCATION IS APPROXIMATE FIELD VERIFY CONDITION.
12. EXISTING CONCRETE SIDEWALK TO REMAIN UNLESS NOTED OTHERWISE.
13. EXISTING CURB/GUTTER TO REMAIN UNLESS NOTED OTHERWISE.
14. EXISTING LANDSCAPE TO REMAIN.
15. REMOVE APPROX 20 L.F. OF L-CURB WHERE FAILED. REMOVE (E) ASPHALT PAVING AND SUBGRADE AS NECESSARY TO INSTALL NEW CONCRETE L-CURB TO ORIGINAL CONDITION AND PROVIDE POSITIVE DRAINAGE TO APPROPRIATE AREA DRAIN.
16. SIGN PROVIDED BY OWNER. SIGN TO BE PERMITTED SEPARATELY.
17. INSTALL UNDERGROUND ELECTRICAL CONDUIT WITH PULL STRING FROM EDGE OF BUILDING TO SIGN LOCATION. SEE ELECTRICAL.
18. PREP EXISTING WOOD GABLE TRUSS AND REAPPLY A STAIN CLEAR WOOD STAIN. CLEAN AND PREP METAL BRACKETS ON THE WOOD TRUSS AND APPLY EXTERIOR METAL PAINT PRODUCT (BLACK). PROTECT ADJACENT WORK.

BIDDING ALTERNATE

THE FOLLOWING SHALL BE CONSIDERED AS ALTERNATES IN THE BID FOR THIS PROJECT:

BID ALTERNATE #1.
ADD ALTERNATE TO PROVIDE A COAT OF NEW PAINT ON ALL INTERIOR WALLS (P-1) EXPOSED TO VIEW AND REPAINT ALL INTERIOR HOLLOW METAL FRAMES (P-2).

BID ALTERNATE #2
ADD FIRE ALARM SYSTEM AND MONITORING THROUGHOUT THE BUILDING PER 2021 IBC. INDUSTRY LEADING MANUFACTURERS LIKE SILENT KNIGHT, POTTER AND HONEYWELL ARE ACCEPTABLE. SEE ELECTRICAL DRAWINGS.

N

1 ARCHITECTURAL SITE PLAN

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

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PROJECT INFO & SITE PLAN

edinc Job #: 24.110

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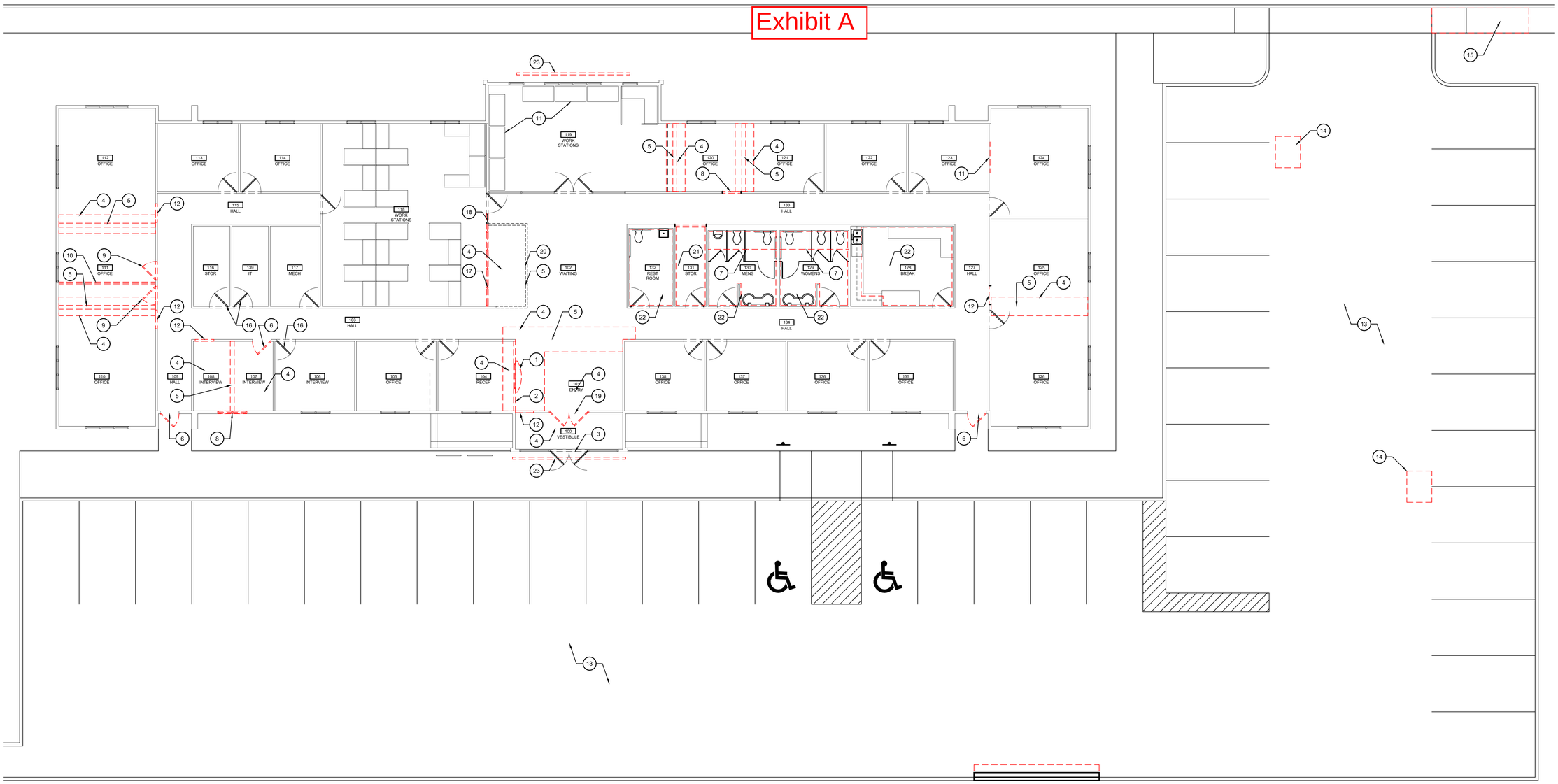
Exhibit A



1 MAIN FLOOR DEMO PLAN

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

1 KEYED DEMO NOTES - THIS SHEET

1. REMOVE EXISTING WALL & PLAM TRANSACTION TOP.
2. REMOVE GYP BOARD IN THIS AREA TO ALLOW FOR ADDITIONAL WALL FRAMING AND SUPPORT FOR TRANSACTION TOP AND STEEL PLATE INSTALLATION.
3. MODIFY (E) DOORS AS NECESSARY FOR HARDWARE INSTALLATION. ROUTE CONDUIT INTO EXISTING FRAME FOR ACCESS CONTROL AND DOOR OPERATOR INSTALLATION.
4. REMOVE PORTION OF EXISTING ACOUSTICAL CEILING FOR WALL INSTALLATION. RETAIN CEILINGS TILES TO BE REINSTALLED. ADJUST GRID AS NECESSARY. G.C. TO COORDINATE FINAL WALL LOCATION TO MINIMIZE IMPACT TO LIGHTS AND GRID.
5. REMOVE FLOORING NECESSARY FOR WALL DEMO OR NEW WALL FRAMING.
6. REMOVE AND REPLACE DOOR AND DOOR HARDWARE. RETAIN DOOR FRAME. SEE DOOR SCHEDULE.
7. REMOVE SUSPENDED CEILING GRID AND ACOUSTICAL TILE THIS AREA.
8. (E) WINDOW TO BE REMOVED. REMOVE WOOD TRIM AND WINDOW HARDWARE TO ALLOW FOR NEW WORK.
9. REMOVE (E) DOOR, FRAME AND TRIM. RETAIN DOOR AND FRAME TO BE RE-USED, SEE DOOR SCHEDULE.
10. REMOVE (E) ACCORDION PARTITION HARDWARE AND WALL FRAMING. REMOVE ACOUSTICAL CEILING AND GRID AS NECESSARY FOR REMOVAL. REPLACE CEILING GRID AND ACOUSTICAL TILES. DELIVER ACCORDION DOOR AND ALL HARDWARE TO OWNER.
11. REMOVE (E) MIRRORED WINDOW UNIT, FRAME AND TRIM.
12. REMOVE PORTION OF (E) WALL AND FRAMING FOR NEW OPENING. G.C. TO VERIFY EXTENT OF DEMOLITION TO PROVIDE FOR NECESSARY WALL FRAMING FOR NEW WORK.
13. CLEAN AND PREP ASPHALT PAVING FOR A HEAVY DUTY AGGREGATE REINFORCED EMULSION SEALER. PROVIDE APPROPRIATE PRODUCT AND APPLICATION RATES FOR HIGH TRAFFIC AREA. FILED VERIFY.
14. REMOVE DAMAGED ASPHALT AND SUBGRADE NECESSARY FOR NEW SUBGRADE AND PATCH BACK OF ASPHALT. FIELD VERIFY CONDITION.
15. REMOVE APPROX 15' L.F. OF CONCRETE SIDEWALK AND SUBGRADE TO NEAREST JOINT WHERE CONCRETE HAS HEAVED OR CRACKED AS NECESSARY FOR NEW CONCRETE WALK. CONCRETE SIDEWALK INSTALLED PER CITY OF MISSOULA STANDARDS.
16. REMOVE AND/OR REPLACE DOOR HARDWARE. SEE DOOR SCHEDULE.
17. REMOVE AND RETAIN (E) STOREFRONT FRAME AND GLAZING FOR REINSTALL. REMOVE (E) FRAMED WALL ABOVE CEILING.
18. REMOVE STOREFRONT AND GLAZING.
19. REMOVE (E) ALUM DOOR AND FRAME. PREP OPENING FOR NEW DOOR, FRAME AND HARDWARE.
20. EXISTING SOFFIT TO REMAIN.
21. REMOVE EXISTING CARPET TILE & BASE. RETAIN TILE FOR REINSTALL IN OTHER AREAS OF THE PROJECT. PREP FLOOR FOR SHEET VINYL FLOORING.
22. REMOVE EXISTING SHEET VINYL FLOORING & BASE. PREP FLOOR FOR SHEET VINYL FLOORING. REMOVE AND REINSTALL THE TOILET PARTITIONS.
23. SAND, PREP ALL SURFACES OF WOOD TRUSS FOR WATER PROOFING STAIN. PAINT METAL BRACKETS.

GENERAL NOTES - BUILDING PLANS

A. USE WRITTEN DIMENSIONS. DO NOT SCALE DRAWINGS. WHERE NO DIMENSION IS PROVIDED, CONSULT ENCOMPASS FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
B. DIMENSIONS ARE FROM FACE CONCRETE AND FACE OF STUD AT NEW WALLS. SEE WALL TYPES FOR ADDITIONAL WALL ASSEMBLY INFORMATION.
C. COORDINATE ALL STRUCTURAL MEMBERS AND COLUMN LOCATIONS, SIZES WITH EXISTING CONDITIONS.
D. USE PAPERLESS OR WATER RESISTANT GWB IN ALL WET ROOMS.
E. SEE DOOR AND WINDOW SCHEDULES.
F. COORDINATE ALL FINAL PLUMBING FIXTURE LOCATIONS WITH PLUMBING DRAWINGS.
G. COORDINATE ALL FINAL POWER, ELECTRICAL FIXTURE LOCATIONS AND DATA LOCATIONS WITH BUILDING DRAWINGS.

LEGEND - THIS SHEET

SYMBOL DESIGNATION

- # — GRID LINE
- # / XXX — SECTION CUT
- RM# / ROOM1 / ROOM2 — ROOM NUMBER / ROOM NAME
- D-100 — DOOR TAG - SEE SCHEDULE
- # — WINDOW TAG - SEE SCHEDULE & ELEVATIONS
- # — WALL TYPES - SEE A2.1
- # — KEYED NOTE
- DEMOLITION

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DEMO FLOOR PLAN & NOTES

edinc Job #: 24.110

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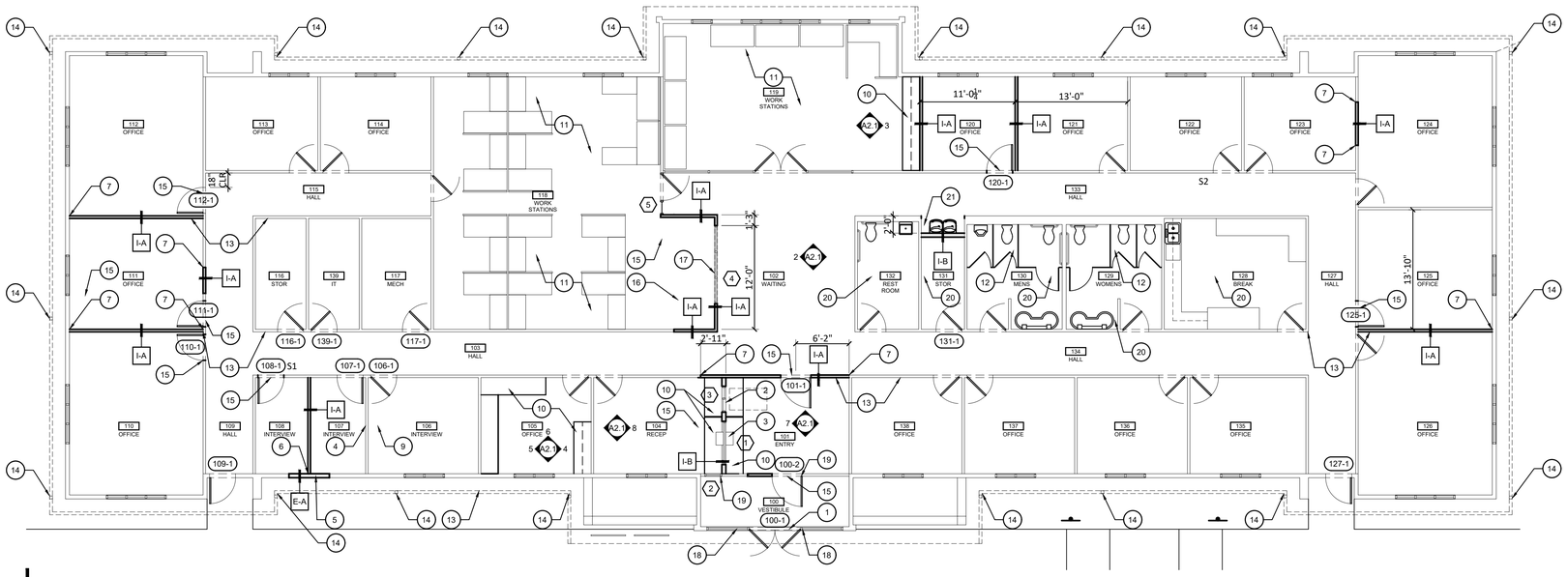
D2.1

Exhibit A



1 MAIN FLOOR PLAN

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

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1 KEYED NOTES - THIS SHEET

1. (E) DOOR AND HARDWARE TO BE REVISED TO ACCOMMODATE ACCESS CONTROL AND DOOR HARDWARE. SEE SPECS.
2. SECURE 1/4" THICK X 41" H ABRASION RESISTANT STEEL (AR500) PLATE TO WALL FRAMING UNDER COUNTERTOP. PROVIDE ¾" PLYWOOD BACKER AND BLOCKING AT TOP AND CENTER OF PLATE. STEEL PLATE TO EXTEND ENTIRE WIDTH OF ROOM. SECURE STEEL PLATE TO STUDS WITH COUNTERSUNK ¼"X3" SCREWS AND TOP AND BOTTOM BLOCKING @ 16" O.C.. NOTCH AROUND WINDOW.
3. INSET DROP-IN DEAL TRAY AS PART OF WINDOW ASSEMBLY INTO COUNTERTOP.
4. INSTALL 1.5 LB/SF MASS LOADED VINYL (MLV) THIS SIDE OF WALL. COVER MLV WITH ⅝" DRYWALL. MUD, TAPE, TEXTURE AND PAINT WALL AND INSTALL RUBBER BASE.
5. INFILL FRAMING AT (E) WINDOW. FINISH AND PAINT INTERIOR OF INFILL WALL. PROVIDE TRIM AND SEALANT @ INFILL METAL PANEL FOR WEATHERTIGHT SEAL.
6. SECURE NEW WALL TO INFILL AT EXISTING WINDOW OPENING.
7. PROVIDE MUDDABLE J-BEAD @ TRANSITION FROM (E) WALL TO NEW WALL EACH SIDE.
8. (E) RUBBER BASE TO NEW RUBBER BASE AT WALL JOINT.
9. INSTALL R-19 BATT INSULATION 4' OUT FROM WALL FULL LENGTH OF WALL. LOOSE LAY BATT INSULATION ON CEILING GRID. DO NOT COVER EXISTING LIGHT FIXTURES.
10. PLASTIC LAMINATE CASEWORK SEE INTERIOR ELEVATIONS.
11. OFFICE FURNITURE PROVIDED AND INSTALLED BY OWNER, COORDINATE NECESSARY POWER CONNECTIONS.
12. INSTALL CEILING GRID AND ACOUSTICAL CEILING TILE, PATCH BACK INTO EXISTING CEILING GRID.
13. ALIGN NEW WALL WITH EXISTING WALL.
14. ROOF OUTLINE. PROVIDE AND INSTALL PREFINISHED 4" K-STYLE GUTTER AND 3"X4" DOWNSPOUTS AROUND ROOF PERIMETER. G.C. TO FIELD VERIFY (E) CONDITIONS AND DOWNSPOUT LOCATIONS APPROPRIATE FOR RUN OFF. COLOR TO MATCH (E) ROOF/FLAHING COLOR 'GREEN'. EXTEND DOWNSPOUTS 24" AWAY FROM BUILDING OR PROVIDE SPLASH BLOCK @ EACH DOWNSPOUT. INSTALL GUTTER AND BRACKETS TO NOT COMPROMISE EXISTING FLASHING CONDITIONS.
15. REPAIR/PATCH BACK CARPET TILE FROM OWNER STOCK WHERE CARPET TILES WERE REMOVED.
16. INSTALL CEILING GRID AND TILE AT NEW ALCOVE TO MATCH (E) CEILING GRID AND TILE IN THIS AREA.
17. REINSTALL (E) STOREFRONT SYSTEM AND GLAZING TO THE (E) SOFFIT FRAMING. ADJUST STOREFRONT SYSTEM TO NEW ROUGH OPENING. PROVIDE A CONT 1"X1" ALUM TRIM SURROUND TO MATCH STOREFRONT FINISH. SEE WINDOW TYPES.
18. INSTALL 3M PR 70 TRANSLUCENT FILM ON INTERIOR OF (E) GLASS. INSTALL (3)24" W HORIZONTAL BANDS CLEAR BETWEEN BANDS.
19. WINDOW HAS INTERCOM COORDINATE POWER AND BOX LOCATION WITH CASEWORK AND FRAMING. SEE SPECS.
20. PREP CONCRETE FLOOR FOR NEW FLOORING. SEAL NEW FLOORING AROUND FLOOR DRAIN.

LEGEND - THIS SHEET

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- D-100 — DOOR TAG - SEE SCHEDULE
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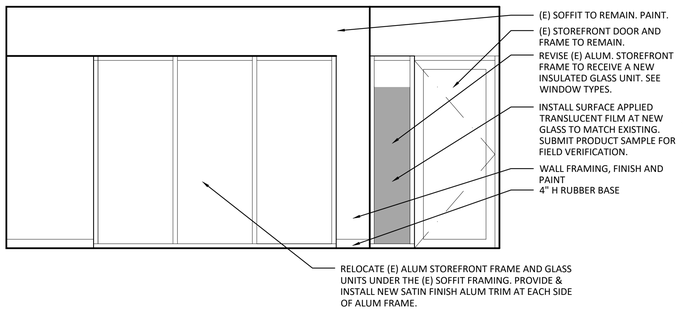
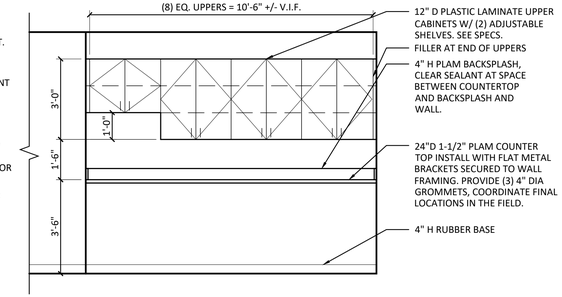
- # — WALL TYPES - SEE A2.1
- # — KEYED NOTE
- DEMOLITION



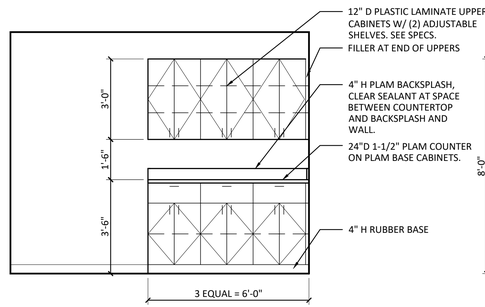
2 INTERIOR ELEVATION

SCALE : 3/8" = 1'-0"



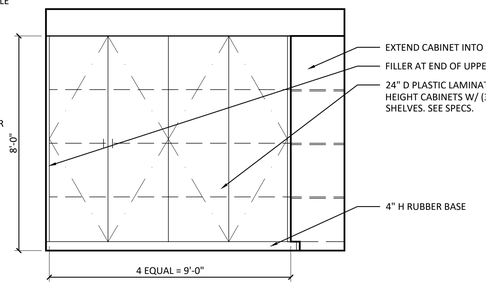
3 INTERIOR ELEVATION

SCALE : 3/8" = 1'-0"



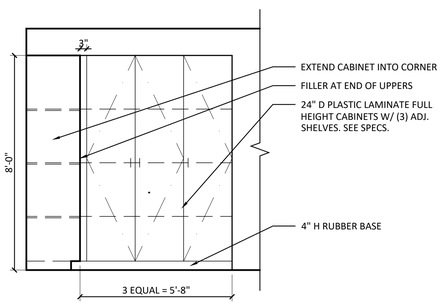
4 INTERIOR ELEVATION

SCALE : 3/8" = 1'-0"



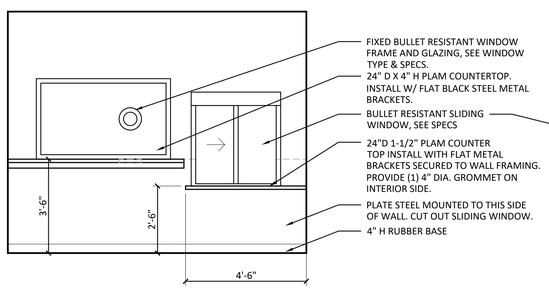
5 INTERIOR ELEVATION

SCALE : 3/8" = 1'-0"



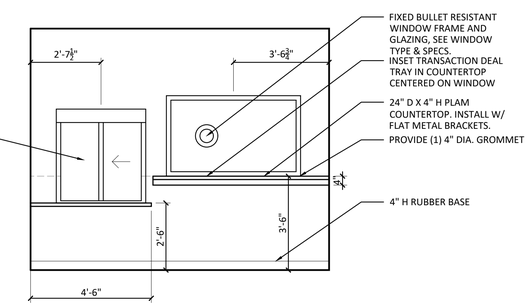
6 INTERIOR ELEVATION

SCALE : 3/8" = 1'-0"



7 INTERIOR ELEVATION

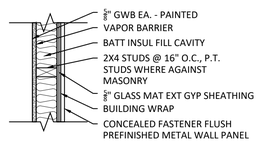
SCALE : 3/8" = 1'-0"



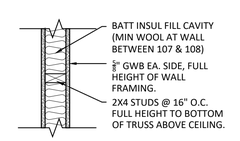
8 INTERIOR ELEVATION

SCALE : 3/8" = 1'-0"

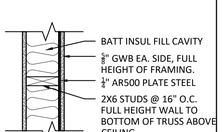
WALL ASSEMBLIES



E-A **EXTERIOR NON-RATED INFILL**



I-A **INTERIOR NON-RATED PARTITION**



I-B **INTERIOR NON-RATED PARTITION**

LICENSED ARCHITECT
TODD E. SCHAPER
MISSOULA, MT
STATE OF MONTANA

encompass design + architecture

1535 liberty lane
suite 110b
missoula, montana
59808
phone: 406.540.4437

REMODEL FOR:
MISSOULA COUNTY
SHERIFF'S DEPT.
2415 MULLAN ROAD, MISSOULA MT 59808

PLAN REVIEW: 08.20.2024
BID SET: 08.20.2024

FLOOR PLAN
INT ELEV
WALL TYPES

edinc Job #: 24.110

THIS SHEET IS INTENDED TO BE PRINTED IN COLOR TO FULLY UNDERSTAND THE INFORMATION BEING PRESENTED.

A2.1

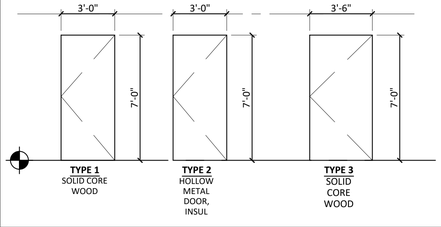


Exhibit A

FINISH SCHEDULE

ROOM#	SPACE	FLOORING	WALL BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CABINETS	COUNTERTOPS	CEILING	DOORS	NOTES
100	VESTIBULE	E-WM	E-RB 1	P-1	NA	P-1	P-1	NA	NA	ACT 1	ALUM	2, 3, 6, 7
101	ENTRY	E-WM	E-RB 1	P-1	NA	P-1	P-1	PL 1	NA	ACT 1	PAINT HM FRAMED (P-2)	1, 2, 3, 7
102	WAITING	E- CPT 1	E-RB 1/RB 1	NA	NA	P-1	P-1	NA	NA	ACT 1	PAINT HM FRAMES (P-2), WOOD DOORS (FF) SATIN, ALUM	1, 3, 4, 6, 7
103	HALL	E- CPT 1	E-RB 1	P-1	NA	P-1	NA	NA	NA	(E)	PAINT HM FRAMED (P-2)	4, 6
104	RECEPTION	E- CPT 1	E-RB 1/RB 1	P-1	P-1	P-1	NA	PL 1	NA	ACT 1	PAINT HM FRAMED (P-2)	1, 3, 4, 6, 7
107	INTERVIEW	E- CPT 1	E-RB 1/RB 1	P-1	P-1	P-1	P-1	NA	NA	ACT 1	PAINT HM FRAMED (P-2)	4, 6, 7
108	INTERVIEW	E- CPT 1	E-RB 1/RB 1	P-1	P-1	P-1	P-1	NA	NA	ACT 1	PAINT HM FRAME (P-2), WOOD DOORS (FF) SATIN	2, 4, 6, 7
109	HALL	E- CPT 1	E-RB 1/RB 1	NA	NA	NA	P-1	NA	NA	(E)	PAINT HM FRAME & DOOR (P-2)	4, 5, 6
110	OFFICE	E- CPT 1	E-RB 1/RB 1	P-1	P-1	P-1	P-1	NA	NA	ACT 1	PAINT HM FRAME (P-2), WOOD DOORS (FF) SATIN	2, 4, 6, 7
111	OFFICE	E- CPT 1	E-RB 1/RB 1	P-1	P-1	P-1	NA	NA	NA	ACT 1	PAINT HM FRAME (P-2), WOOD DOORS (FF) SATIN	2, 3, 4, 6, 7
112	OFFICE	E- CPT 1	E-RB 1/RB 1	NA	P-1	P-1	NA	NA	NA	ACT 1	PAINT HM FRAME (P-2), WOOD DOORS (FF) SATIN	2, 3, 4, 6, 7
118	WORK STATIONS	E- CPT 1	E-RB 1/RB 1	P-1	P-1	P-1	P-1	NA	NA	ACT 1	NA	3, 4, 6, 7
119	WORK STATIONS	E- CPT 1	E-RB 1/RB 1	NA	P-1	P-1	P-1	PL 1	PL 2	ACT 1	NA	1, 3, 4, 6, 7
120	OFFICE	E- CPT 1	E-RB 1/RB 1	NA	P-1	P-1	P-1	NA	NA	ACT 1	PAINT HM DOOR & FRAME (P-2), WOOD DOORS (FF) SATIN	2, 3, 4, 6, 7
121	OFFICE	E- CPT 1	E-RB 1/RB 1	NA	NA	NA	P-1	NA	NA	ACT 1	PAINT HM FRAMED (P-2)	4, 6, 7
123	OFFICE	E- CPT 1	E-RB 1/RB 1	NA	NA	P-1	P-1	NA	NA	(E)	PAINT HM FRAMED (P-2)	4
124	OFFICE	E- CPT 1	E-RB 1/RB 1	P-1	P-1	P-1	P-1	NA	NA	(E)	PAINT HM FRAMED (P-2)	4
125	OFFICE	E- CPT 1	E-RB 1/RB 1	P-1	P-1	P-1	P-1	NA	NA	ACT 1	PAINT HM DOOR & FRAME (P-2), WOOD DOORS (FF) SATIN	2, 3, 4, 6, 7
126	OFFICE	E- CPT 1	E-RB 1/RB 1	P-1	P-1	P-1	P-1	NA	NA	ACT 1	PAINT HM FRAMED (P-2)	4, 6, 7
127	HALL	E- CPT 1	E-RB 1/RB 1	NA	P-1	NA	NA	NA	NA	(E)	PAINT HM FRAMED (P-2)	4, 6
128	BREAK ROOM	SV 1	RB 1	NA	NA	NA	NA	NA	NA	(E)	PAINT HM FRAMED (P-2)	4, 6, 7
129	WOMEN REST RM	SV 1	RB 1	P-1	NA	NA	NA	NA	NA	(E)	PAINT HM FRAMED (P-2)	4, 6, 7
130	MENS RESTROOM	SV 1	RB 1	P-1	NA	NA	NA	NA	NA	(E)	PAINT HM FRAMED (P-2)	4, 6, 7
131	STORAGE	SV 1	RB 1	P-1	P-1	P-1	P-1	NA	NA	(E)	PAINT HM FRAMED (P-2)	4, 6, 7
132	REST ROOM	SV 1	RB 1	NA	NA	NA	NA	NA	NA	(E)	PAINT HM FRAMED (P-2)	4, 6, 7
133	HALL	E - CPT 1 / SV 1	E - RB 1	P-1	NA	P-1	NA	NA	NA	(E)	PAINT HM FRAMED (P-2)	4, 6

FINISH LIST:

ACT1	ACOUSTICAL CEILING (2X4) MATCH EXISTING
CP-1	CARPET TILE MATCH EXISTING
NA	NOT APPLICABLE
P-1	PAINT GYP BD (MATCH EXISTING PAINT COLOR)
P-2	PAINT: HM DOOR & FRAMES
PL 1	PLASTIC LAMINATE WILSONSART, COLOR: RALEIGH WALNUT, 17015

FINISH LIST:

PL 2	PLASTIC LAMINATE WILSONART, COLOR: PEWTER MESH, 4878-38, FINE VELVET FINISH
RB 1	RUBBER BASE (MATCH EXISTING) TARKETT COMMERCIAL, 4" DURACOVE TP
SV 1	SHEET VINYL, SEE SPEC
WM	WALK OFF MAT (EXISTING)
E- / (E)	EXISTING

GENERAL FINISH NOTES:
A. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
B. PROVIDE SATIN FINISH PAINT AT NEW PAINTED WALLS.
C. PAINT ALL INTERIOR AND EXTERIOR HOLLOW METAL DOORS & FRAMES (P2) GLOSS PAINT.
D. INSTALL CONT. COLORED SEALANT AT ALL GAPS 1/4" OR GREATER.
E. SEE ALTERNATE #1 TO PAINT ALL WALLS IN THE FACILITY EXPOSED TO VIEW (P-1), PATCH HOLES, MATCH (E) TEXTURE. AND PAINT ALL HOLLOW METAL FRAMES (P-2).

FINISH SCHEDULE KEYED NOTES:
1. SEE INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
2. PATCH BACK CARPET TILE FROM RETAIN TILE OR OWNER STOCK AT NEW DOOR LOCATION.
3. USE OWNER STOCK OF CARPET TILE TO PATCH BACK AREAS OF CARPET REMOVED FOR CONSTRUCTION. PATCH BACK WITH CUT STRIPS OF OWNER STOCK CARPET TILE.
4. PAINT DOOR FRAME TO MATCH (E) COLOR (P-2).
5. PAINT HOLLOW METAL DOOR TO MATCH (E) COLOR OF DOOR FRAME.
6. MATCH RUBBER BASE TO (E). JOIN RUBBER BASE PROVIDE CLEAN SMOOTH TRANSITIONS. RUBBER BASE AT NEW WALLS.
7. (E) CEILING GRID AND RETAINED CEILING TILES ARE ACCEPTABLE TO BE RE-INSTALLED WHERE THEY ARE IN GOOD CONDITION. PROVIDE AND INSTALL NEW ACT 1 AND CEILING GRID IN AREAS OF NEW WORK AS NECESSARY.

DOOR SCHEDULE

MARK	TYPE	DESCRIPTION	DOOR		FRAME		WIDTH	HEIGHT	FUNCTION	HARDWARE GROUP	FIRE RATING	KEYED NOTES
			MTL	FIN	MTL	FIN						
100-1	(E)-PR	VESTIBULE - (E)	(E) AL	FF	(E) AL	FF	6'-0"	7'-0"	EXIT	1	-	1, 4, 5
100-2	3	VESTIBULE	SC-WD	FF	HM	PT	3'-6"	7'-0"	EXIT	2	-	2, 5
101-1	3	ENTRY	SC-WD	FF	HM	PT	3'-6"	7'-0"	EXIT	2	-	2, 5
106-1	(E) 1	INTERVIEW	(E) SC-WD	FF	(E) HM	PT	3'-0"	7'-0"	OFFICE	3	-	1, 3
107-1	(E) 1	INTERVIEW	(E) SC-WD	FF	(E) HM	PT	3'-0"	7'-0"	OFFICE	3	-	1, 3, 4
108-1	1	INTERVIEW	SC-WD	FF	HM	PT	3'-0"	7'-0"	OFFICE	4	-	3
109-1	2	EXIT	HM - INS	FF	(E) HM	PT	3'-0"	7'-0"	EXIT	5	-	4, 5
110-1	(E) 1	OFFICE	(E) SC-WD	FF	(E) HM	PT	3'-0"	7'-0"	OFFICE	4	-	6
111-1	(E) 1	OFFICE	(E) SC-WD	FF	(E) HM	PT	3'-0"	7'-0"	OFFICE	4	-	6
112-1	1	OFFICE	SC-WD	FF	HM	PT	3'-0"	7'-0"	OFFICE	4	-	
116-1	(E) 1	STORAGE	(E) SC-WD	FF	HM	PT	3'-0"	7'-0"	OFFICE	6	-	4, 5
117-1	(E) 1	MECHANICAL	(E) SC-WD	FF	HM	PT	3'-0"	7'-0"	OFFICE	6	-	4, 5
120-1	1	OFFICE	SC-WD	FF	HM	PT	3'-0"	7'-0"	OFFICE	4	-	
125-1	1	OFFICE	SC-WD	FF	HM	PT	3'-0"	7'-0"	OFFICE	4	-	
127-1	2	EXIT	HM-INS	FF	(E) HM	PT	3'-0"	7'-0"	EXIT	5	-	4, 5
139-1	(E) 1	IT	(E) SC-WD	FF	(E) HM	PT	3'-0"	7'-0"	OFFICE	6	-	4, 5

ABBREVIATIONS:

(E)EXIST	EXISTING
AL	ALUMINUM STOREFRONT
FF	FACTORY FINISH
HM	HOLLOW METAL
INS	INSULATED
PR	PAIR
PT	PAINT
SC-WD	SOLID CORE WOOD, PREFINISHED
T	TEMPERED GLASS
VIF	VERIFY IN FIELD

GENERAL NOTES:
A. CONTRACTOR TO VERIFY ALL EXISTING AND NEW ROUGH OPENING SIZES.
B. ROUGH OPENING TO BE 6" FROM FRAMED WALL UNLESS NOTED OTHERWISE.
C. PROVIDE BLOCKING & NECESSARY MOUNTING REQUIREMENTS FOR DOOR AND DOOR HARDWARE.
D. LEVER HANDLES REQUIRED AT ALL PASSAGE DOORS.
E. SEE FLOOR PLANS FOR DOOR SWING.
F. GC TO PROVIDE KEYING FOR DOORS. GC TO COORDINATE WITH OWNER.
G. DOOR, HARDWARE AND POWER CONNECTIONS TO BE COORDINATED BY GC.
H. PAINT HM DOOR FRAMES THAT ARE BEING WORKED ON.

KEYED NOTES:
1. HARDWARE TO BE INSTALLED ON (E) DOORS. PREP AND REVISE DOOR, HARDWARE AND FRAMES AS NECESSARY FOR OPERATION.
2. DOOR TO BE INTERLOCKED TO ALLOW ACCESS PUSH BUTTON AT RECEPTION AREA. INTERLOCK WILL OVERRIDE ADA OPERATOR.
3. REVERSE HARDWARE SO PRIVACY BUTTON IS ON THE OUTSIDE (HALL) OF ROOM.
4. DOOR FRAME TO REMAIN, REPLACE DOOR AND AND/OR HARDWARE.
5. CARD KEY ACCESS CONTROL DEVICE INTERLOCKED WITH DOOR HARDWARE.
6. REUSE DOOR AND FRAME FROM DEMOLITION OF THIS AREA.

DOOR TYPES

TYPE 1
SOLID CORE WOOD

TYPE 2
HOLLOW METAL DOOR, INSUL

TYPE 3
SOLID CORE WOOD

HARDWARE GROUPS

HW 01

1	EA	REMOVABLE MULLION W/ STRIKES, RETAINERS,VON 5654 W/ 20-061 613 MORTISE CYLINDER
2	EA	VON DUPRIN QEL 35A-L-CON-626-3'-CYL, NARROW STILE, POWER SUPPLY (74) FOR PAIR OF ALUM DOORS.
2	EA	POWER TRANSFER DEVICE
2	EA	5BB1 4.5X4.5 NRP, TW8 652 IVE
2	EA	RIM CYLINDER 20-021 626 SCH
1	EA	AUTO DOOR OPERATOR, SINGLE LEAF, LCN 9540, SURFACE MOUNT
1	EA	ACTUATOR (WALL MOUNT), LCN 8310-852WP INT AND EXTERIOR MODIFY (E) FRAME AS NECESSARY. W/ WIRELESS RECEIVER 8310-865.
2	EA	MC-7 MAG SWITCH (MODIFY DOOR AND FRAME TO RECEIVE SWITCH)
1	EA	REPLACE DOOR SEAL ON EACH LEAF.
1	EA	CARD READER BY DOOR ACCESS CONTROL PROVIDER. EXTERIOR DOOR ACTUATOR TO BE CONFIGURED SO THAT IT IS DISABLED WHEN DOOR IS ELECTRONICALLY LOCKED.

HW 02

4	EA	HINGE 5BB1 4.5X4.5 NRP 652 IVE. ONE HINGE TO BE POWER TRANSFER HINGE 5BB1 4.5X4.5 NRP, TW8 652 IVE.
1	EA	PANIC HARDWARE W/ QEL, LX, 98NL-CON-626-3'6 VON
1	EA	RIM CYLINDER 20-021 626 SCH
1	EA	ELEC STRIKE 7000 C 630
1	EA	MC-7 MAG SWITCH
1	EA	SURFACE CLOSER 4111.SCUSH 689 LCN
1	SET	DOOR SEAL S88D DKB PEM
1	EA	POWER SUPPLY DEVICE
1	EA	AUTO DOOR OPERATOR, SINGLE LEAF LCN 9540, SURFACE MOUNT
1	EA	ACTUATOR (WALL MOUNT), LCN 8310-852WP, W/ WIRELESS RECEIVER 8310-865
1	EA	CARD READER BY DOOR ACCESS CONTROL PROVIDER. LOCK OVERRIDE BUTTON AT RECEPTION. EXTERIOR DOOR ACTUATOR TO BE CONFIGURED SO THAT IT IS DISABLED WHEN DOOR IS ELECTRONICALLY LOCKED.

HW 03

3	EA	HINGE 5BB1 4.5X4.5 NRP 652 IVE
1	EA	OFFICE ND50PD RHO
1	EA	SURFACE CLOSER 4040XP W/ HOLD OPEN, 626 LCN
1	EA	DOOR SEAL S88D DKB PEM
1	EA	WALL STOP WS406 / 407CCV 630 IVE REVERSE OFFICE HARDWARE SO PUSH-BUTTON IS ON HALL SIDE OF DOOR.

HW 04

3	EA	HINGE 5BB1 4.5X4.5 NRP 652 IVE
1	EA	OFFICE ND50PD RHO
1	EA	SURFACE CLOSER 4040XP W/ HOLD OPEN 626 LCN
1	EA	SILENCER SR64 GRAY IVE
1	EA	WALL STOP WS406 / 407CCV 630 IVE

HW 05

3	EA	HINGE 5BB1 4.5X4.5 NRP 652 IVE
1	EA	EXIT LOCK ND80PD RHO 626
1	EA	ELEC STRIKE 7000 C 630
1	EA	MC-7 MAG SWITCH MODIFY DOOR AND FRAME TO RECEIVE SWITCH.
1	EA	SURFACE CLOSER 4040XP W/ HOLD OPEN, 626 LCN
1	EA	DOOR SEAL S88D DKB PEM
1	EA	BOTTOM BRUSH SWEEP 315CN 36"
1	EA	CARD READER BY DOOR ACCESS CONTROL PROVIDER.

HW 06

3	EA	HINGE 5BB1 4.5X4.5 NRP 652 IVE
1	EA	EXIT LOCK ND80PD RHO 626
1	EA	ELEC STRIKE 7000 C 630
1	EA	MC-7 MAG SWITCH MODIFY DOOR AND FRAME TO RECEIVE SWITCH.
1	EA	SURFACE CLOSER 4040XP W/ HOLD OPEN, 626 LCN
1	EA	CARD READER BY DOOR ACCESS CONTROL PROVIDER.

GENERAL SPECIFICATIONS

THERMAL MOISTURE PROTECTION

INSULATION

MINERAL-WOOL BLANKETS, UNFACED ASTM C 665, TYPE I, CLASS A, DENSITY: 4.0 PCF

PREFORMED, UNFACED FIBERGLASS BLANKET INSULATION FOR FRICTION FIT OR PIN IN PLACE AS NECESSARY FOR HEIGHT OF CAVITY. THICKNESS TO ACHIEVE R-VALUE AS INDICATED IN THE DRAWINGS.

SHEET METAL FLASHING AND TRIM

PREFINISHED METAL 26 GA, SP200 FINISH.
PROVIDE FLASHING AND TRIM FORMED FORM SIMILAR METAL. PROVIDE FINISHED APPEARANCE.
LOCATIONS AS INDICATED AND APPLICATIONS NOT LIMITED TO DRIP FLASHING, BASE FLASHING, J-METAL AT OPENINGS.
FABRICATION: FORM ACCURATELY TO DETAILS OR CONDITIONS. PROFILES, BENDS, AND INTERSECTION SHALL BE EVEN AND TRUE. FOLD EXPOSED EDGES ½" TO PROVIDE THICKNESS.
GUTTERS AND DOWNSPOUTS PER SMACNA , GUTTER SUPPORT BRACKETS AT 30" O.C.

OPENINGS

HOLLOW METAL FRAMES

HOLLOW METAL FRAMES, 16 GA, COLD ROLLED, MITER WELDED 2" WIDE FRAMES. PROVIDE ANCHORING FOR APPLICATION. PROVIDE SPREADERS.

SHOPPED PRIMED FOR PAINTED. PROVIDE REINFORCEMENT FOR HARDWARE.

HOLLOW METAL DOORS

HOLLOW METAL FLUSH PANEL DOORS, 1-3/4" THICK, 16 GA COLD ROLLED HEAVY DUTY, LEVEL 2/MODEL 2 FOR EXTERIOR APPLICATION. FLUSH WELDED DOORS. EXTERIOR DOORS TO BE INSULATED WITH RIGID INSULATION.

SHOPPED PRIMED FOR FINAL PAINTING.

PROVIDE FINISHED PAINTED, INTEGRAL LIGHT KIT IN DOOR WHERE NOTED. SIZE: 4" W X 10"H.

FLUSH WOOD DOORS

INTERIOR SOLID-CORE DOORS: 1-3/4" PARTICLE BOARD-CORE DOORS W/ VENEERED-FACE FOR TRANSPARENT FINISH. GRADE: PREMIUM, GRADE A FACES.

SPECIES: MATCH EXISTING

EXPOSED VERTICAL EDGES: SAME SPECIES AS FACES OR A COMPATIBLE SPECIES.

CONSTRUCTION: SOLID OR FIVE PLIES. STILES AND RAILS ARE BONDED TO CORE, THEN ENTIRE UNIT ABRASIVE PLANED BEFORE VENEERING. FACES ARE BONDED TO CORE USING A HOT PRESS.

ALUMINUM STOREFRONT

BASIS-OF-DESIGN: ACCEPTABLE STOREFRONT FRAMING SYSTEM: FLUSH GLAZED SYSTEM, CENTER SET, EXTERIOR LOADED SERIES 3000 THERMAL MULTIPLANE - 2" X 4 1/2" MULLION PROFILE; ACCOMMODATES 1" GLAZING BY OLD CASTLE.

BASIS OF DESIGN: OLD CASTLE SERIES 3000 XT (MED STILE), BOTTOM RAIL 10", THERMALLY BROKEN. PROVIDE A CENTER RAIL FOR HARDWARE INSTALLATION. CLEAR ANODIZED FINISH.

CLEAR, INSULATED, 1" LOW E. TEMPERED WHERE REQUIRED. U-FACTOR = 0.31

PROVIDE HARDWARE WITH DOOR (BUTT HINGES, CLOSER, KEYED LEVER, WEATHER STRIPPING, THRESHOLD, ELECTRIC STRIKE, PANIC HARDWARE, REMOVABLE MULLION)

GLAZING

INSULATING-GLASS UNITS, GENERAL: FACTORY-ASSEMBLED UNITS CONSISTING OF SEALED LITES OF GLASS AND COMPLYING WITH ASTM E 2188 / E 2189.

PROVIDE KIND HS (HEAT-STRENGTHENED) FLOAT GLASS IN PLACE OF ANNEALED GLASS WHERE NEEDED TO RESIST THERMAL STRESSES INDUCED BY DIFFERENTIAL SHADING OF INDIVIDUAL GLASS LITES AND TO COMPLY WITH GLASS DESIGN REQUIREMENTS SPECIFIED IN PART 1 "PERFORMANCE REQUIREMENTS" ARTICLE.

PROVIDE KIND FT (FULLY TEMPERED) GLASS LITES WHERE SAFETY GLASS AS REQUIRED.

SEALING SYSTEM: DUAL SEAL, WITH PRIMARY AND SECONDARY SEALANTS OF POLYISOBUTYLENE AND SILICONE.

SPACER MATERIAL: ALUMINUM WITH MILL OR CLEAR ANODIC FINISH.

TYPE I (INTERIOR ONLY): CLEAR INSULATING GLASS - CLEAR, LOW-REFLECTIVE EXTERIOR APPEARANCE.

SOLARBAN 60 (2) CLEAR + CLEAR BY VITRO ARCHITECTURAL GLASS.

FINISHES

INTERIOR GYPSUM BOARD

GYPSUM BOARD: STANDARD PAPER FACED, THICKNESS: 5/8 INCH. LONG EDGES: TAPERED AND FEATURED (ROUNDED OR BEVELED).

GLASS-MAT EXTERIOR GYPSUM BOARD: ASTM C1658/C1658M. WITH FIBERGLASS MAT LAMINATED TO BOTH SIDES. SPECIFICALLY DESIGNED FOR INTERIOR USE. CORE: 5/8 INCH, TYPE X OR AS INDICATED ON DRAWINGS. LONG EDGES: TAPERED.

PROVIDE VERTICAL AND HORIZONTAL CONTROL JOINTS: CONTROL JOINT LOCATIONS RECOMMENDED BY MFR. BASIS-OF-DESIGN PRODUCT: CLARKDIETRICH 093

MUD AND TAPE, PRIME AND PAINT WITH LIGHT ORANGE PEAL (MATCH EXISTING) TEXTURED FINISH. USE MOLD RESISTANT MUD COMPOUND AT WET LOCATIONS.

WHERE PARTITIONS INTERSECT STRUCTURAL MEMBERS PROJECTING BELOW UNDERSIDE OF FLOOR/ROOF SLABS AND DECKS, CUT GYPSUM PANELS TO FIT PROFILE FORMED BY STRUCTURAL MEMBERS; ALLOW 1/4- TO 3/8-INCH- WIDE JOINTS TO INSTALL SEALANT.

HOLD DRYWALL UP MIN. 3/8" AT ALL LOCATIONS, PROVIDE CONT BEAD OF SEALANT BETWEEN EDGE OF DRYWALL AND FLOOR.\GYPSUM BOARD FINISH LEVELS: FINISH PANELS TO LEVELS INDICATED BELOW AND IN ACCORDANCE WITH ASTM C840:

LEVEL 1: CEILING PLENUM AREAS, CONCEALED AREAS, AND WHERE INDICATED.

LEVEL 4: AT PANEL SURFACES THAT WILL BE EXPOSED TO VIEW UNLESS OTHERWISE INDICATED.

SUBCONTRACTOR TO COORDINATE WITH OTHER DISCIPLINES FOR PATCH BACK OF WALL FINISHES.

ACOUSTICAL PANEL CEILINGS

ACOUSTICAL PANELS ACT1: BASIS-OF-DESIGN PRODUCT: PROVIDE ARMSTRONG WORLD INDUSTRIES, INC. CORTEGA, 769. EDGE : SQUARE. THICKNESS: 5/8 INCH. MODULAR SIZE: 24 BY 48 INCHES.

METAL SUSPENSION-SYSTEM STANDARD: PROVIDE MANUFACTURER'S STANDARD DIRECT-HUNG METAL SUSPENSION SYSTEMS OF TYPES, STRUCTURAL CLASSIFICATIONS, AND FINISHES INDICATED THAT COMPLY WITH APPLICABLE REQUIREMENTS IN ASTM C 635/C 635M.

METAL SUSPENSION SYSTEM: BASIS-OF-DESIGN PRODUCT: ARMSTRONG WORLD INDUSTRIES, INC. PRELUDE XL, 15/16", EXPOSED TEE. STRUCTURAL CLASSIFICATION: HEAVY-DUTY SYSTEM. FLAT FLUSH. FINISH: PAINTED WHITE.

RESILIENT SHEET VINYL (SV 1)

RESILIENT TILE SHEET PRODUCT: BASIS OF DESIGN: PATCRAFT PURSUE SHEET, I623V, COLOR: STERLING 00530

WEAR-LAYER : 20 MIL WITH OVERALL THICKNESS: 2.2 MM

INSTALLATION: GLUE DOWN ADHESIVE, USE ADHESIVES APPROVED BY MANUFACTURER.

ACCESSORIES: HORIZONTAL TRANSITION STRIPS USE METAL TRIM. WALL BASE: 4" X 120' 1/8" RUBBER COVE BASE. PROVIDE FROM MANUFACTURER'S STANDARD COLORS FOR ARCHITECT'S APPROVAL.

ADHESIVES: PREP FLOOR, LEVEL AND INSTALL PRODUCT PER MFR RECOMMENDATIONS. BARRIER PRIMER OVER CONCRETE, OLD ADHESIVE, CHEMICALLY ABATED FLOORS AS RECOMMENDED BY MANUFACTURER. FLOOR POLISH PER MANUFACTURER'S RECOMMENDATIONS.

EXISTING CONCRETE SUBFLOORS MUST MEET THE GUIDELINES OF ACI 302 AND ASTM F 710.

TILE CARPETING (CPT 1)

REUSE EXISTING CARPET TILE FROM OWNER STOCK OR RETAINED FROM DEMOLITION, SEE PLANS.

CARPET TILE: MOHAWK STYLE: 2880 TRANSFORMING SPACES COLOR:521 VISUAL EDGE

FOLLOW MFR RECOMMENDED INSTALLATION REQUIREMENTS.

PAINT

EXTERIOR/INTERIOR METAL PAINT (P-2), (1) PRIME COAT AND (2) COATS OF ALKYD ENAMEL, SEMI GLOSS. COLOR: CREAM OR DARK GREEN (MATCH EXISTING). APPLICATION TO EXPOSED STRUCTURAL STEEL, HM DOORS/FRAMES, MISC. UNCOATED STEEL. ALKYD SYSTEMS; WATERBASED: SEMI-GLOSS FINISH. 1ST COAT: S-W PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER, B66-1310 SERIES. 2ND AND 3RD COAT: S-W PRO INDUSTRIAL WATERBASED ALKYD URETHANE ENAMEL SEMI-GLOSS, B53-1150 SERIES.

INTERIOR PAINT (P-1), (1) PRIME COATS AND (2) COATS OF ALKYD ENAMEL, SEMI GLOSS. COLOR: MATCH EXISTING. APPLICATION ALL DRYWALL LOCATIONS.

WOOD STAIN; WATER REDUCIBLE SYSTEMS: SEMI-TRANSPARENT. 1ST AND 2ND COAT: S-W WOODSCAPES EXTERIOR POLYURETHANE SEMI-TRANSPARENT STAIN, A15T00005. CLEAR.

PLASTIC LAMINATE CASEWORK

SUBMIT SHOP DRAWINGS AND PRODUCT DATA.

FIELD MEASUREMENTS: WHERE CASEWORK IS INDICATED TO FIT TO OTHER CONSTRUCTION, VERIFY DIMENSIONS OF OTHER CONSTRUCTION BY FIELD MEASUREMENTS BEFORE FABRICATION AND INDICATE MEASUREMENTS ON SHOP DRAWINGS.

LOCATE CONCEALED FRAMING, BLOCKING, AND REINFORCEMENTS THAT SUPPORT CASEWORK. QUALITY STANDARD: PERFORM WORK TO MEET THE REQUIREMENTS OF CUSTOM GRADE IN ACCORDANCE WITH THE "ARCHITECTURAL WOODWORK STANDARDS (AWS)".

DESIGN STYLE OF FACE CONSTRUCTION FOR BASE, WALL, WITH DRAWER FRONTS, DOORS, AND FIXED PANELS AS FRAMELESS CABINET AND DOOR INTERFACE: FLUSH (FULL) OVERLAY DOORS AND DRAWER FRONTS.

LUMBER SHALL BE IN ACCORDANCE WITH THE AWS GRADE SPECIFIED FOR THE PRODUCT BEING FABRICATED.

THERMOSET DECORATIVE OVERLAY (MELAMINE): MELAMINE IMPREGNATED DECORATIVE PAPER.

PVC EDGEBANDING FOR THERMOSET DECORATIVE OVERLAY (MELAMINE) FINISHED PANELS. COLOR SELECTED BY THE ARCHITECT.

SHOP ASSEMBLE CASEWORK FOR DELIVERY TO SITE IN UNITS EASILY HANDLED.

PROVIDE CUTOUTS FOR PLUMBING FIXTURES, INSERTS, AND FITTINGS.

FABRICATION: FRAMELESS CABINETS. EXPOSED AND SEMI-EXPOSED ENDS; TOP AND BOTTOM RAILS; AND SUB-TOE BOARDS: NOT LESS THAN ¾" THICK, PLASTIC LAMINATE OVER PLYWOOD OR MEDIUM DENSITY FIBERBOARD (MDF), OR ¾" THICK THERMOFUSED MELAMINE FINISH OVER MDF OR INDUSTRIAL HARDBOARD (PARTICLE BOARD).

FINISH EXPOSED ENDS TO MATCH DOORS AND DOORS AND DRAWER FRONTS.

UNEXPOSED ENDS: NOT LESS THAN 3/4-INCH HARDBOARD OR PARTICLE BOARD; FINISHED WITH THERMOSET DECORATIVE OVERLAY (MELAMINE).

BACK PANELS: 1/4-INCH TEMPERED HARDBOARD OR MDF; FINISHED WITH THERMOSET DECORATIVE OVERLAY (MELAMINE).

FLUSH (SLAB) STYLE DOORS: 3/4 INCH THICK, PLYWOOD, PARTICLE BOARD OR MDF CORES. ALL DOORS TO RECEIVED PVC EDGEBAND. PROVIDE STOP SILENCERS AT THE TOP AND BOTTOM OF ALL HINGED DOORS.

SHELVING: NOT LESS THAN 5/8" INDUSTRIAL HARDBOARD OR MDF WITH THERMOSET DECORATIVE OVERLAY (MELAMINE) TO MATCH CABINET INTERIOR, PVC EDGE BANDING; ADJUSTABLE AT LEAST EVERY 1-1/2 INCH; SHELF CLIP PRESSED INTO 5MM HOLES BORED IN CABINET SIDE.

FILLER STRIPS: PROVIDE AS NEEDED TO CLOSE SPACES BETWEEN CABINETS AND WALLS. FABRICATE FROM SAME MATERIAL AND WITH SAME FINISH AS CABINETS.

INTERIOR FACE OF CABINET UNITS THAT HAVE SURFACES THAT ARE EXPOSED SHALL BE THERMOSET DECORATIVE OVERLAY (MELAMINE) IN COLOR TO MATCH DOOR FRONTS.

BASE CABINET CONTINUOUS TOE SPACE & KICK BOARD: SIDE PANELS TO BE NOTCHED FOR INTEGRAL TOE SPACE WITH SIDE PANELS EXTENDED TO FLOOR. PROVIDE TOE BOARD NOT LESS THAN 1/4" TEMPERED HARDBOARD OR MDF WITH THERMOFUSED MELAMINE FACE TO MATCH CABINET DOORS.

DRAWERS: SIDES, FRONT, AND BACK: BOX-TYPE THERMOFUSED MELAMINE CONSTRUCTION ¾" OR HARDWOOD NOT LESS THAN ½". EXPOSED FRONTS FASTENED TO SUB-FRONTS WITH MOUNTING SCREWS FROM INTERIOR OF BODY.

UPPER CABINETS: 12" DEEP, PLAM FACES (SEE DRAWINGS). PROVIDE (2) ADJUSTABLE SHELVES AT EACH UPPER CABINET.

CABINET HARDWARE

CABINET PULLS: STANDARD WIRE PULLS, 4" CENTERS, SATIN. MATCH EXISTING PULLS.

SHELF SUPPORT PINS: HAFELE #2882.04.711

DRAWER SLIDE: KV 6500 HD FULL EXTENSION, SIDE MOUNT, SOFT CLOSE, 125 LB

GROMMETS: MOCKET ZG1 - 4 INCH GROMMET AT LOCATIONS INDICATED.

CONCEALED HINGES: BLUM FULL OVERLAY, SOFT CLOSE, 110 DEGREE.

CABINET BUMPERS: SYNTHETIC RUBBER OR ACRYLIC.

COUNTERTOP BRACKETS: HIDDEN COUNTERTOP FLAT BRACKET, COLOR: PAINT BLACK. PROVIDE SOLID PLYWOOD BLOCKING BETWEEN COUNTERTOP AND BRACKET. 2.5" 2 X .25" THICK. PROVIDE APPROPRIATE QTY AND SIZE FOR LENGTH AND DEPTH OF COUNTERTOP. BASIS OF DESIGN: IRON SUPPORTS STANDARD FRONT MOUNT BRACKET. PROVIDE NECESSARY BLOCKING FOR MOUNTING.

SPECIALTIES

BULLET RESISTANT TRANSACTION WINDOW

PROVIDE PRODUCT SUBMITTAL FOR ACTION.

TYPE 1 PRODUCT: BASIS OF DESIGN:CRL #S1EW3660A, SIZE: 36"H X 60"W. FRAME: ALUMINUM W/ CLEAR ANODIC FINISH. BULLET RESISTING GLAZING MATERIAL COMPLY TO LEVEL 1 (UL 752). THREE SIDED FRAME W/ CHANNEL ON BOTTOM AND DEAL TRAY: RECESSED 16" X 10".

TYPE 2 PRODUCT: BASIS OF DESIGN: CRL #S1EW2436A, SIZE: 36"H X 24"W. FRAME: ALUMINUM W/ CLEAR ANODIC FINISH WITH FLANGE TO SECURE BULLET RESISTING GLAZING MATERIAL COMPLY TO LEVEL 1 (UL 752). PROVIDE OPENING IN GLAZING FOR SPEAK-THRU.

BULLET RESISTANT SPEAK-THRU FOR TYPE 2 WINDOW: CRL NORCON 12 V DC ITEM #TTU1DBX1 TO BE INSTALLED IN BULLET RESISTANT GLASS.

TYPE 3: PRODUCT: BASIS OF DESIGN: MANUAL SLIDING SERVICE WINDOW, CRL #SBRWEXA1

MASS LOADED VINYL

FLEXIBLE, NON-REINFORCED MASS LOADED VINYL (MLV) ACOUSTICAL BARRIER. CLASS A PRODUCT. WEIGHT: 1.5 LB/SF. INSTALL PER MFR RECOMMENDATIONS. TAPE ALL SEAMS WITH SOUND BARRIER MLV TAPE.

SIGNAGE

INTERIOR SIGNAGE

ADA-COMPLIANT INTERIOR SIGNAGE: MATCH (E) WALL MOUNTED SIGNS AT EACH ROOM. PROVIDE A VERTICAL ARC PROFILE WITH REMOVABLE PROFILE FOR INSERTS. SIZE: 6X6B, TACTILE CHARACTERS/SYMBOLS. LETTERING STYLE: STANDARD SANS SERF TYPE FACE, UPPER CASE LETTERS W/ BRAILLE. PROVIDE ACCENT STRIP FOR ROOM NUMBER. DOUBLE STICK TAPE TO SECURE TO SURFACE. GC TO COORDINATE FINAL LOCATION/ROOM NAME/NUMBERS WITH OWNER.

BASIS OF DESIGN: 2 / 90 SIGN SYSTEMS ARC SYSTEM SUPPORT.

SIGN SCHEDULE:
S1 INTERVIEW ROOM
S2 OFFICE

EXTERIOR SIGN

PROVIDE A 48"H X 48"W ALUMINUM BONDED SIGN MOUNTED WITH 4" X 4" ALUM POSTS SET IN CONCRETE (3X POST SIZE X 30" DEEP). MAX SIGN HEIGHT OF 60".

PROVIDE CONTINUOUS OR CORNER DOUBLE EARED BRACKETS TO SECURE SIGN TO POSTS.

PROVIDE ACTION SUBMITTAL FOR REVIEW AND APPROVAL OF PRODUCTS, SUPPORT BRACKETS AND SIGN LAYOUT.

OWNER TO PROVIDE GRAPHICS AND APPROVE SIGN LAYOUT.

CONTRACTOR WILL BE RESPONSIBLE FOR SECURING A SIGN PERMIT FROM CITY OF MISSOULA.

WINDOW TYPES

WINDOW NOTES:
A. BULLET RESISTANT WINDOW UNIT TO MEET LEVEL 1 RESISTANCE. SEE SPECS.
B. ALUMINUM STOREFRONT 2"X4-1/2" NON-THERMAL STOREFRONT W/ 1" INSULATED GLASS.
C. GENERAL CONTRACTOR TO VERIFY ALL ROUGH OPENING SIZES.
D. THE INSTALLATION MUST BE APPROVED BY THE MANUFACTURER OF THE WINDOWS, GC IS REQUIRED TO INSTALL PER MANUF INSTRUCTIONS.
E. TEMPERED (T) GLASS.
F. WINDOW FRAMES TO BE FACTORY FINISHED. VERIFY COLOR AND FINISH W/ OWNER.

1 INTERIOR, BULLET RESISTANT W/ DEAL TRAY, SEE SPECS

2 INTERIOR, BULLET RESISTANT W/ SPEAKER SEE SPECS

3 INTERIOR, BULLET RESISTANT SLIDER SEE SPECS

4 INTERIOR, ALUMINUM STOREFRONT

APPLY TRANSLUCENT FILM TO INTERIOR FACE OF GLASS MATCH (E) FILM OPACITY AND LAYOUT

5 INTERIOR, ALUMINUM STOREFRONT

TODD E. SCHAPER

encompass
design + architecture

1535 liberty lane
suite 110b
missoula, montana
59808
phone: 406.540.4437

REMODEL FOR:
MISSOULA COUNTY
SHERIFF'S DEPT.
2415 MULLAN ROAD, MISSOULA MT 59808

PLAN REVIEW: 08.20.2024
BID SET: 08.20.2024

SPECS / FINISH SCHEDULE / DOOR & WDW SCHEDULE

edinc Job #: 24.110

THIS SHEET IS INTENDED TO BE PRINTED IN COLOR TO FULLY UNDERSTAND THE INFORMATION BEING PRESENTED.

A2.2

Exhibit A

MECHANICAL LEGEND

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	(N)	NEW
AG	ABOVE GRADE	NC	NORMALLY CLOSED
ARCH	ARCHITECT OR ARCHITECTURAL	NO	NORMALLY OPEN
C.O.	CLEANOUT	RA	RETURN AIR
DN	DOWN	SA	SUPPLY AIR
(E)	EXISTING	SS	STAINLESS STEEL
FCO	FLOOR CLEANOUT	TYP	TYPICAL
FA	FRESH AIR	VTR	VENT THROUGH ROOF
MECH.	MECHANICAL	WCO	WALL CLEANOUT

CONVENTIONS

NEW WORK (DARK)
EXISTING (LIGHT)
DEMOLISH

1 / M1.0 — SECTION REFERENCE

SD-# / # CFM — AIR DEVICE MARK: AIR DEVICE NUMBER ON TOP, CFM ON BOTTOM

HVAC

SUPPLY AIR DUCT
RETURN AIR DUCT
RECTANGULAR DUCT
RECTANGULAR TO ROUND DUCT TRANSITION
HEEL TAP BRANCH
ELBOW W/ TURNING VANES
HIGH-EFFICIENCY TAKE-OFF WITH DAMPER
FLEXIBLE DUCT
HATCH INDICATES NEW MECHANICAL EQUIPMENT
HATCH INDICATES EXPOSED DUCTWORK AND AIR DEVICES

M — MOTOR OPERATED DAMPER
VOLUME DAMPER
BD — BACKDRAFT DAMPER
F — FIRE DAMPER
FS — COMBINATION FIRE/SMOKE DAMPER
T — THERMOSTAT
S — TEMPERATURE SENSOR
MS — MANUAL SWITCH
CO — CARBON MONOXIDE SENSOR
CO2 — CARBON DIOXIDE SENSOR
SUPPLY AIR DEVICE WITH AIR FLOW DIRECTIONS INDICATED
RETURN AIR DEVICE

PLUMBING AND HYDRONIC

C	DOMESTIC COLD WATER	CD	CONDENSATE DRAIN
SC	SOFTENED COLD WATER	IRR	IRRIGATION PIPING
H	DOMESTIC HOT WATER	LPS	LOW PRESSURE STEAM
R	HOT WATER RECIRCULATION	MPS	MEDIUM PRESSURE STEAM
	WASTE	GCR	GRAVITY CONDENSATE RETURN
SW	SANITARY WASTE	PCR	PUMPED CONDENSATE RETURN
GW	GREASE WASTE	NG	NATURAL GAS
	VENT	LPG	PROPANE PIPING
HWS	HEATING WATER SUPPLY	CA	COMPRESSED AIR PIPING
HWR	HEATING WATER RETURN	VAC	VACUUM PIPING
CWS	CHILLED WATER SUPPLY	NO	NITROUS OXIDE GAS PIPING
CWR	CHILLED WATER RETURN	RD	ROOF DRAINAGE PIPING
GWS	GROUNDWATER SUPPLY	RDO	ROOF DRAIN OVERFLOW PIPING
GWR	GROUNDWATER RETURN		

TEE UP
TEE DOWN
ELBOW UP
ELBOW DOWN
CLEANOUT
CLEANOUT
FLOOR DRAIN
FLOOR SINK

COLD SUPPLY STOP
HOT SUPPLY STOP
P-TRAP
P-TRAP
HOSE END DRAIN
CAP
UNION

GLOBE VALVE
ISOLATION VALVE
PRESSURE REDUCING VALVE
CHECK VALVE
BACKFLOW PREVENTOR
GAS VALVE
MANUAL BALANCE VALVE
RELIEF VALVE
TWO-WAY CONTROL VALVE
THREE-WAY CONTROL VALVE
CONCENTRIC REDUCER
ECCENTRIC REDUCER

TRAP
TEST PLUG
STRAINER
THERMOMETER
IMMERSION WELL & SENSOR
PUMP
FIRE SPRINKLER HEAD
METER
MANUAL AIR VENT
PIPING ISOLATOR
GAUGE
POINT OF CONNECTION

GENERAL SPECIFICATIONS

PART 1-GENERAL

All work shall be performed in accordance with the governing codes. Comply with the requirements of the local jurisdiction and all supplying utilities. Comply with EPA Safe Water Drinking Act, including all lead-free requirements.

The intent of the drawings is to depict fully functioning new and revised HVAC and plumbing systems. All incidental and necessary items that are normally required for the type of work shown on the plans, but that are not explicitly shown on the plans, shall be included in the work.

All work shall be performed in a neat and professional manner. The appearance of the finished work is important to the owner. All piping shall be run parallel to building structure. All penetrations shall be neat.

All materials shall be new and in good condition.

Contractor shall obtain and pay for all necessary permits.

Contractor shall provide engineer with a complete copy of all comments received from the City or County Building Inspection department, Health Department, and all other reviewing agencies. Comments shall be provided within five days of the contractor receiving them. Engineer shall not be held responsible for delays to the project resulting from untimely receipt of comments from the contractor.

Contractor may substitute fixtures and equipment by alternate manufacturers provided they are of substantially equivalent quality and capacity.

Contractor shall notify Engineer within 24 hours if he is notified, becomes aware of himself, or is of the opinion, that there is an error or omission in the specifications or drawings. Engineer shall have seven calendar days to address any alleged error or omission. If Contractor does not notify Engineer within 24 hours and/or if Contractor continues to work in and around the area of the alleged error or omission prior to a resolution of the alleged error or omission, Engineer shall not be liable for any rework required to correct the alleged error or omission. Rework shall be defined as any additional costs above what the Owner would have incurred if the alleged error were not in the construction drawings and/or any materials or equipment omitted were included in the construction drawings.

PART 2–COORDINATION

Contractor shall recognize that plans are diagrammatic in nature.

Consult all drawings of each contract for the project to predetermine that work and equipment will fit as planned. Check the location of piping, ducts, equipment, etc., to determine that all work clears openings, structural members, cabinets, lights, outlets, and other work or equipment having fixed locations.

Plan all work so that it proceeds with a minimum of interference with other trades. All openings required in the building construction for the installation of mechanical work are the responsibility of the trade providing such work unless otherwise noted or shown. Provisions shall be made for all special frames, openings, and pipe sleeves as required.

Cooperate with other trades in furnishing material and information for correct location, in proper sequence, of all wiring, openings, clearances, access doors, and the like.

If at any time and in any case a change in location of piping, ducts, equipment, etc., becomes necessary due to obstacles or the installation of the work of other trades shown on any of the project drawings, make such required changes at no extra cost for materials or labor.

Cutting and patching shall be the responsibility of the trade requiring cutting and patching.

PART 3–ACCESS TO EQUIPMENT

Locate all motors, valves, control devices, specialties, fire dampers, etc., to provide easy access for operation, repair, and maintenance. If concealed in ductwork, walls, ceilings or other locations, provide and install access doors. Access doors in fire-rated assemblies shall have fire-rating suitable for assembly.

PART 4–SHOP DRAWINGS

Provide Engineer and Architect each with one electronic copy of submittals on all equipment, fixtures, materials and other manufactured items. In general, all submittals and shop drawings must be received and accepted prior to construction. Engineer and Architect will have 10 business days to review submittals.

All submittals shall include the mark of the piece of equipment being submitted on; if a mark was not indicated on the drawings or elsewhere in these specs, a short description of the item may be used instead. The model number of proposed item shall be highlighted on the cut sheets. All proposed options or accessories shall also be highlighted. Submittals that do not contain this identifying information shall be REJECTED.

PART 5–TESTING AND BALANCING

Contractor shall adjust furnaces and air devices to the quantities shown on the drawings, with variances from design as allowed by the current edition of the National Environmental Balancing Bureau (NEBB) Standards. Provide Owner and Engineer each with one electronic copy of final report on NEBB or SMACNA forms.

PART 6–OPERATING TESTS AND ADJUSTMENTS

After substantial completion of the work, but before final payment is made, run a test over a sufficient period of time to prove the proper capacity and performance of all apparatus and of the systems as a whole. Test and adjust alarms for satisfactory operation. Thoroughly check all safety and protection devices to assure proper operation and protection.

PART 7–INSTRUCTIONS IN OPERATION

At the conclusion of the project, Contractor shall give complete operating and maintenance instructions to the operating personnel selected by the Owner.

PART 8–WARRANTY AND SERVICE

Contractor shall provide one year warranty on all work and equipment commencing from the date of substantial completion.

Contractor shall provide all service, maintenance, and trouble shooting on all mechanical work through the date of completion and continuing for a period of 30 days after that date.

PART 9–MAINTENANCE MANUALS

At the conclusion of the project, Contractor shall provide one set of the maintenance manuals to Owner. Manuals shall be either paper or electronic as directed by Owner. Collect literature in like new condition for all pieces of mechanical equipment. If manuals are to be paper, assemble literature in three-ring, loose-leaf binders with appropriately labeled dividers.

MECHANICAL SHEET INDEX

GOVERNING CODES

2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 UNIFORM PLUMBING CODE
2021 INTERNATIONAL FUEL GAS CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE
2020 NATIONAL ELECTRIC CODE

COMcheck Software Version COMcheckWeb
Mechanical Compliance Certificate

Project Information

Energy Code:	2021 IECC
Project Title:	Remodel For Missoula County Sheriff's Department
Location:	Missoula, Montana
Climate Zone:	6b
Project Type:	Alteration

Construction Site:
2415 Mullan Road
Missoula, Montana 59808

Owner/Agent:

Designer/Contractor:
Julie Aldegarie
Western Montana Engineering, Inc.
1527 South Russell
Missoula, Montana 59801
406-721-5776
julie@westernmtengineering.com

Mechanical Systems List

Quantity System Type & Description

1 F-1 E-1 CU-1 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 88 kBtu/h
Proposed Efficiency = 96.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Split System, Capacity = 48 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: None
Proposed Efficiency = 13.40 SEER2, Required Efficiency = 13.40 SEER2
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
Fan System: FAN SYSTEM 1 | West Side -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Constant Volume, 1600 CFM, 1.0 motor nameplate hp, 0.00 fan energy index , fan exception: Part of code listed equipment

1 F-2 E-2 CU-2 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 44 kBtu/h
Proposed Efficiency = 96.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Split System, Capacity = 30 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: None
Proposed Efficiency = 13.40 SEER2, Required Efficiency = 13.40 SEER2
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
Fan System: FAN SYSTEM 2 | Center -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 2 Supply, Constant Volume, 1000 CFM, 0.5 motor nameplate hp, 0.00 fan energy index , fan exception: Part of code listed equipment

1 F-3 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 88 kBtu/h
Proposed Efficiency = 96.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Fan System: FAN SYSTEM 3 | East Side -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 3 Supply, Constant Volume, 1800 CFM, 1.0 motor nameplate hp, 0.00 fan energy index , fan exception: Part of code listed equipment

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Julie Aldegarie, P.E.
Name - Title

Julie Aldegarie
Signature

7-30-24
Date

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REMODEL FOR:
MISSOULA COUNTY
SHERIFF'S DEPT.
2415 MULLAN ROAD, MISSOULA MT 59808

PERMIT SET: 08.20.2024

LEGEND AND GENERAL SPECIFICATIONS

edinc Job #: 24.110

MP0.1

Exhibit A

HVAC SPECIFICATIONS

PART 1—DUCTWORK

Quality Assurance:
- All ductwork shall be fabricated and installed in accordance with the following manuals, standards and guides:
  - HVAC Duct Construction Standards, most current edition, by SMACNA.
  - NFPA 90A: "Standard for the Installation of Air Conditioning and Ventilating Systems of Other than Residence Type," most current edition, by NFPA.
- All ductwork shall be braced and supported for Seismic Hazard Level B, as shown in the "Seismic Restraint Manual Guideline for Mechanical Systems," most recent edition, published by SMACNA.

Galvanized Steel Ductwork:
- New supply, return, exhaust, and outdoor air ductwork shall be galvanized steel. All ductwork shall be reinforced for 1” positive or negative pressure, as appropriate.
- Construct ducts of galvanized steel in the gauges and with reinforcement as specified in Chapter 2 of the HVAC Duct Construction Standards.

Flexible Duct:
- Insulated low pressure flexible duct shall be a factory fabricated assembly consisting of a corrosion resistant spring steel helix, non-perforated inner liner, nominal one (1) inch thick fiberglass insulation with a minimum "C" value of 0.23, and vapor barrier jacket. Duct shall be tested and classified by UL as Class 1 Air Duct and be so labeled. Provide Genflex SLR-181, Thermaflex Type M-KC/M-KE, or equivalent.

High Efficiency Branch Take-Offs:
- Rectangular to rigid round branch takeoffs shall be high efficiency takeoffs, with dampers, as manufactured by Sheet Metal Connectors, Inc, or equivalent. Do not use spin-in fittings

Installation:
- All sizes shown on the plans are clear inside dimensions.
- Seal new interior ductwork in accordance with requirements for Seal Class B.
- Ducts shall be free from sag, sway, deformation, collapse, or vibration.
- Adhere to drawings as closely as possible. If approved by Engineer prior to installation, the contractor may vary run and scope of ducts and make offsets during the progress of work required to meet structural or other interferences. If approved by Engineer prior to installation, Contractor may also run ducts in sizes larger than those shown to standardize or eliminate custom-made fittings.
- Provide single thickness turning vanes at all rectangular elbows.

PART 2—DUCT INSULATION

Quality Assurance:
- Insulation assemblies consisting of insulation, jacket and facing, and adhesives for jacket and facing shall have a composite smoke and fire rating as tested by procedure ASTM E-84, NFPA 255, and UL 723 which does not exceed a rating of 25 for flame spread or 50 for smoke developed. This specification shall apply to all insulation other than elastomeric type.
- Accessories such as adhesives, mastics, cements, tapes, and cloth for fittings shall have the same component rating as listed above.

Acoustical Duct Liner:
- Acoustical duct liner shall be flexible type using long fiberglass with a smooth firmly bonded fire-resistant surface to prevent erosion of the insulation.
- Thermal conductivity shall not exceed 0.24 at 50% mean temperature. Noise reduction coefficient (NRC) shall not be less than 0.70 based on acoustical materials test, Mounting No. 6.
- Lining shall meet NFPA standards for internal duct application, have a minimum density of 12 lbs. per cubic foot and be manufactured by Owens-Corning Fiberglass, Johns-Manville, or Gustin-Bacon.
- Lining shall be impregnated with a biostatic coating or chemical to prevent growth of micro-organisms.

Fiberglass Duct Exterior Insulation:
- Provide blanket-type fibrous glass specifically designed for installation on heating, ventilating, and cooling ductwork. Insulation shall be suitable for ductwork supplying conditioned air from 35 F to 250 F. Thermal conductivity shall not exceed 0.17 at 75 F mean temperature.
- Provide Owens-Corning duct wrap, Type 75, 0.75 lbs/cu. ft. density, thickness as noted below, with all-service facing, or equivalent by another manufacturer as listed above.

Insulation Schedule:

System	Insulation and Thickness	Jacket
Rectangular supply and return ductwork in conditioned spaces – first 8’ of ductwork	1" Acoustical liner	n/a
New rigid round and rectangular supply and return ductwork in attic (above insulation)	R-12 exterior duct insulation	FRK

PART 3—AIR DISTRIBUTION SPECIALTIES

Volume Dampers:
- Provide unit complete with damper, end bearing, and locking regulator. Provide damper with 16 gauge galvanized steel frame, blades and end channels suitable for duct mounting.
- Provide single or multiple blade dampers as required. Blades shall not exceed six inches in width.
- For rectangular dampers, provide Cesco MDS, Ruskin MD35 or equivalent by Greenheck, United McGill, Nailor, or others.
- For round dampers, provide Ruskin MDRS25 or equivalent by Cesco, Greenheck, United McGill, Nailor, or others.

Filters:
- Provide two sets of filters for furnaces. Filters shall be American Air Filter MEGApleat M9 filters, or equivalent. Filters shall be MERV 9 pleated style with a maximum pressure drop of 0.18” at design total supply air flow.
- Filters for F-1 and F-3 shall be 4” thick. Filters for F-2 shall be 2” thick. See Furnace Schedule on drawing for sizes.
- Install one set of filters in filter rack during construction and vacuumed immediately prior to testing and balancing. Install second set after acceptance of the test and balance report and immediately prior to turning building over to owner.

PART 4—MECHANICAL PIPING SYSTEMS

Seismic Bracing
- All new piping in excess of 1" size shall be braced and supported for Seismic Design Category D as shown in Mason Industries "Seismic Restraint Guidelines,” 2005 edition. In addition to seismic load, pipe expansion loads must also be considered
- Pipe supports and anchors must conform to the 2018 International Building Code.
- Any system of pipe supporting and anchoring shall have supporting engineering data bearing the seal of the licensed professional engineer in the employ of the company furnishing the support and anchor systems.
- Whenever possible, pipes may be located on sufficiently short hangars as to not require seismic treatment if allowed by the suspension system.

Condensate and Equipment Drainage Piping:
- Low temperature (fluids under 140 F) drains from mechanical equipment such as cooling coils and make-up air units shall be Schedule 40 PVC with solvent weld fittings.
- High temperature (fluids over 140 F) drains from mechanical equipment such as furnaces, boilers, and water heaters shall be Schedule 40 CPVC with solvent weld fittings or PEX piping.

Natural Gas Piping:
- Shall be Schedule 40 Black Steel with screwed malleable iron fittings in pipe sizes two inches and smaller and welded fittings in pipe sizes 2-1/2" and larger. Do not use close nipples.
- All gas piping shall be pressure tested in accordance with the IFGC and the supplying utility.

Field-Fabricated Refrigerant Piping:
- Field-fabricated refrigerant piping shall be Type L Copper with brazed fittings.
- Insulate refrigerant piping with closed cell foam insulation. See Part 5 below.

PART 5—MECHANICAL PIPING INSULATION

Quality Assurance:
- Insulation assemblies consisting of insulation, jacket and facing, and adhesives for jacket and facing shall have a composite smoke and fire rating as tested by procedure ASTM E-84, NFPA 255, and UL 723 which does not exceed a rating of 25 for flame spread or 50 for smoke developed. This specification shall apply to all insulation other than elastomeric type.
- Accessories such as adhesives, mastics, cements, tapes, and cloth for fittings shall have the same component rating as listed above.

Foam Pipe Insulation:
- Insulation shall be a flexible, closed-cell elastomeric pipe insulation: AP Armaflex, AC Accoflex, or equivalent by alternate manufacturer. Adhesive shall be Armaflex 520, 520 Black or 520 BLV Adhesive, or equivalent manufacturer. The insulation must conform to ASTM C534 Grade 1, Type I.
- Insulation materials shall have a closed cell structure to prevent moisture from wicking.
- Insulation materials shall be manufactured without the use of CFC’s, HFC’s or HCFC’s. It shall also be formaldehyde free, low VOCs, fiber free, dust free and resists mold and mildew.
- Insulation materials shall have a flame-spread index of less than 25 and a smoke-developed index of less than 50 as tested in accordance with ASTM E 84. In addition, the products, when tested, shall not melt or drip flaming particles, and the flame shall not be progressive.
- Insulation materials shall have a maximum thermal conductivity of 0.27 Btu-in./h-ft 2 -°F at a 75°F mean temperature as tested in accordance with ASTM C 177 or ASTM C 518.
- Insulation materials shall have a maximum water vapor transmission of 0.08 perm-inches when tested in accordance with ASTM E 96, Procedure A.

Requirements for Refrigerant Pipe Insulation
- All liquid and suction lines shall be insulated continuously from the evaporator coil to the service valves at the compressor. Install insulation in strict accordance with manufacturer’s instructions.
- All low temperature lines (+10°F and below) shall be insulated with a minimum of 1" wall thickness.
- All medium and high temperature lines (above +10°F) shall be insulated with a minimum of 3/4" wall thickness.
- All insulation exposed to sunlight or installed outdoors shall be protected with two coats of WB Armaflex Finish or weather resistant coating.

PART 6—MECHANICAL EQUIPMENT

Furnaces:
- Provide horizontal or multi-position, gas-fired, high efficiency condensing furnace as scheduled by Lennox, or equivalent by alternate manufacturer.
- Install furnace where shown on the drawings. Maintain all required clearances.
- Install flexible connections at inlet and outlet.
- Pipe condensate from furnace to adjacent condensate pump in Type L copper or Schedule 40 PVC. Comply with manufacturer’s requirements for slope and trapping.
- If any vent or intake piping runs through unconditioned spaces, provide insulation on piping in accordance with manufacturer’s installation instructions.

Evaporators:
- Provide horizontal evaporator coil as scheduled by Lennox, or equivalent by alternate manufacturer.
- Install evaporator at furnace discharge as shown on the drawings. Pipe drain pan to adjacent condensate pump in Type L copper or Schedule 40 PVC; pipe in accordance with manufacturer’s instructions.

Condensing Units:
- Provide 14 SEER condensing unit as scheduled by Lennox, or equivalent by alternate manufacturer.
- Mount condensing units on support feet on concrete pads as shown.
- Refrigerant piping shall be run neatly and parallel to building structure. Insulate piping in accordance with manufacturer’s instructions. Insulation shall be suitable for exterior usage; provide UV coating. Seal all building penetrations water tight.

PART 7—CONTROLS

General:
- Existing thermostats and sensors shall be removed, and a new building automation system will be installed.
- New building automation system shall be Delta Tridium, Metasys, or equivalent.
- The sequence described herein describes the design intent. The final sequence and implementation shall be by temperature control contractor.
- All points, trends, alarms, and applicable data from the control system in the building shall be integrated into the County’s web supervisor. Graphics pages shall be created for the systems in this building.

Single-Zone Furnace Systems – Sequence of Control:
- Provide new thermostats where indicated on the drawings, not temperature sensors. Provide Honeywell Vision Pro commercial series programmable thermostat or equivalent. Thermostat shall have minimum 1 stages of heating, 1 stage of cooling, 5° deadband, 7-day clock, 10-hour (min) battery back-up, and 2-hour (min) override button.
- Install motorized outdoor air dampers. Damper actuators to have end switch.
- Occupied mode: Fan shall operate continuously, and the outdoor air damper shall be fully open. Heating and cooling shall operate as required.
- Unoccupied mode: Fan shall cycle on a call for heating or cooling with outdoor air damper closed. Heating and cooling shall operate as required.
- Provide Waterbug or equivalent moisture detector in drain pan under furnaces and evaporators. If moisture is detected in drain pain, heating and cooling shall cease operation and an alarm shall be sent to a location as designated by the County.
- Coordinate with County for schedules, set points, and alarms.

Single-Zone Furnace Systems – Points and Monitoring:
- The following points, at a minimum, shall be displayed and monitored:
  - Fan enable.
  - Fan status.
  - Gas heat enable.
  - DX cool enable.
  - Discharge air temperature.
  - OA damper open/close call.
  - OA damper position open (via an end switch on damper actuator).
  - Moisture detector.

Server/IT Room:
- Install temperature sensor in this room.
- Room temperature shall be displayed on graphics page, and an alarm shall initiate if the room temperature exceeds 95 F.

Training:
- The temperature controls contractor shall include eight hours of training for personnel selected by the County. Training may include multiple sessions.

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PERMIT SET: 08.20.2024

HVAC SPECIFICATIONS

edinc Job #: 24.110

M0.1

Exhibit A

AIR DEVICE SCHEDULE

MARK	MANUFACTURER AND NUMBER	FACE SIZE	NECK SIZE	THROW	FINISH	MOUNTING/FRAME	OBD
SD-1	SHOEMAKER 700MA	6 X 6	6 X 6	2 WAY	WHITE	24 X 24 LAY-IN PANEL	NO
SD-2	SHOEMAKER 700MA	6 X 6	6 X 6	3 WAY	WHITE	24 X 24 LAY-IN PANEL	NO
SD-3	SHOEMAKER 700MA	6 X 6	6 X 6	4 WAY	WHITE	24 X 24 LAY-IN PANEL	NO
TG-1	SHOEMAKER 905	10 X 6	10 X 6	-	WHITE	SURFACE MOUNT	NO
TG-2	SHOEMAKER 905	14 X 6	14 X 6	-	WHITE	SURFACE MOUNT	NO
TG-3	SHOEMAKER 905	14 X 8	14 X 8	-	WHITE	SURFACE MOUNT	NO
TG-4	SHOEMAKER 905	12 X 12	12 X 12	-	WHITE	SURFACE MOUNT	NO
TG-5	SHOEMAKER 905	14 X 14	14 X 14	-	WHITE	SURFACE MOUNT	NO

1. SIMILAR AIR DEVICES BY KRUEGER, CARNES, PRICE, AND TITUS ARE ALSO ACCEPTABLE.
2. CONTRACTOR SHALL VERIFY ALL MOUNTING CONDITIONS AND AIR DEVICE COLORS.

ELECTRIC HEATER SCHEDULE

MARK	MANUFACTURER AND MODEL	CAPACITY	CFM	VOLT/PHASE	AMPERAGE	COMMENTS
EH-1	CADET CSC101TW	1000 WATTS	45	120V / 1Ø	8.3	1, 2, 3, 4

1. ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE BERKO, KING, MARKEL, MARLEY, AND QMARK.
2. PROVIDE UNIT COMPLETE WITH HEATER, FAN, BACK BOX AND WHITE GRILLE.
3. PROVIDE WITH UNIT-MOUNTED THERMOSTAT.
4. PROVIDE WITH SURFACE-MOUNTING FRAME.

FURNACE SCHEDULE

MARK	MANUFACTURER AND NUMBER	TOTAL CFM	MINIMUM OA CFM	E. S. P. (IN W. C.)	HEATING, BTU/HR		HP	VOLT/ PHASE	FLA	COMMENTS
					INPUT	OUTPUT				
F-1	LENNOX ML196UH090XE60C	1600	270	0.80"	88,000	86,000	1	115/1	10.9	1, 2, 3
F-2	LENNOX ML196UH045XE36B	1000	130	0.60"	44,000	43,000	1/2	115/1	6.8	1, 2, 4
F-3	LENNOX ML196UH090XE60C	1800	215	0.70"	88,000	86,000	1	115/1	10.9	1, 2, 5

1. HEATING IS SEA LEVEL INPUT. CFM AND STATIC PRESSURE ARE AT 3200 FEET MSL.
2. PROVIDE WITH HORIZONTAL SUSPENSION KIT AND ROOF CONCENTRIC TERMINATION KIT.
3. PROVIDE WITH FILTER CABINET SUITABLE FOR 24X20X4 FILTER.
4. PROVIDE WITH FILTER CABINET SUITABLE FOR 24X16X2 FILTER.
5. PROVIDE WITH FIELD-FABRICATED FILTER RACK SUITABLE FOR 24X24X4 FILTER.

COOLING EQUIPMENT SCHEDULE

EVAPORATER				CONDENSER					CAPACITY	COMMENTS
MARK	MANUFACTURER AND NUMBER	CFM	MAX. A. P. D.	MARK	MANUFACTURER AND NUMBER	VOLT AND PHASE	MCA	MOCP	BTU/HR (NOMINAL)	
E-1	LENNOX CHX35-48C-6F	1600	0.27"	CU-1	LENNOX ML14XC1-048	208V -230V / 1Ø	24.8	40	48,000	1, 2
E-2	LENNOX CHX35-30B-6F	1000	0.14"	CU-2	LENNOX ML14XC1S030	208V -230V / 1Ø	17.0	25	30,000	1, 2

1. AIR FLOW AND STATIC PRESSURE ARE AT 3200' MSL. SENSIBLE COOLING CAPACITY IS NOMINAL CAPACITY WITH 80 F EAT AND 95 F OAT.
2. PROVIDE WITH COMPRESSOR HARD START KIT, REFRIGERANT LINE SETS, TIMED OFF CONTROL, BLOWER OFF DELAY RELAY, EVAPORATOR FREEZE THERMOSTAT, SUPPORT FEET, AND TXV.

GENERAL NOTES - ALL SHEETS

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. DO NOT SCALE FROM DRAWINGS.
2. COORDINATE MECHANICAL EQUIPMENT, DUCTWORK, PIPING, AIR DEVICE, ETC. INSTALLATION AND LOCATION WITH OTHER ITEMS AND TRADES, SUCH AS ELECTRICAL, LIGHTING, FIRE SPRINKLER, ETC.
3. DO NOT RUN DUCTWORK OR PIPING OVER OR WITHIN NEC REQUIRED SERVICE CLEARANCE OF ELECTRICAL PANELS AND LOAD CENTERS.
4. UNLESS OTHERWISE NOTED ON THE DRAWINGS, AIR DEVICE LOCATIONS MAY BE ADJUSTED TO MISS LIGHTING, STRUCTURE OR OTHER OBSTACLES.
5. PROVIDE DUCT-MOUNTED BALANCE DAMPERS IN THE BRANCH TO EACH SUPPLY AND RETURN AIR DEVICE WHETHER EXPLICITLY SHOWN OR NOT.
6. MAINTAIN MINIMUM OF 10' SEPARATION BETWEEN ALL VENTS - FURNACE VENTS, EXHAUST FAN DISCHARGES, PLUMBING VENTS, ETC. - AND ALL FRESH AIR INTAKES. MAINTAIN MIN. OF 3' DISTANCE BETWEEN EXHAUST WALL CAPS AND OPERABLE DOORS AND WINDOWS.
7. MOUNT THERMOSTATS WITH TOP AT 48" AFF.
8. MOUNT ELECTRIC WALL HEATERS WITH BOTTOM OF UNIT AT 12" AFF.
9. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL EQUIPMENT REQUIRING MAINTENANCE SHALL BE INSTALLED A MINIMUM OF 10' FROM EDGE OF ROOF. WHERE EQUIPMENT MUST BE LOCATED CLOSER THAN 10' TO THE EDGE OF THE ROOF, FALL PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 304.11 OF THE INTERNATIONAL MECHANICAL CODE.

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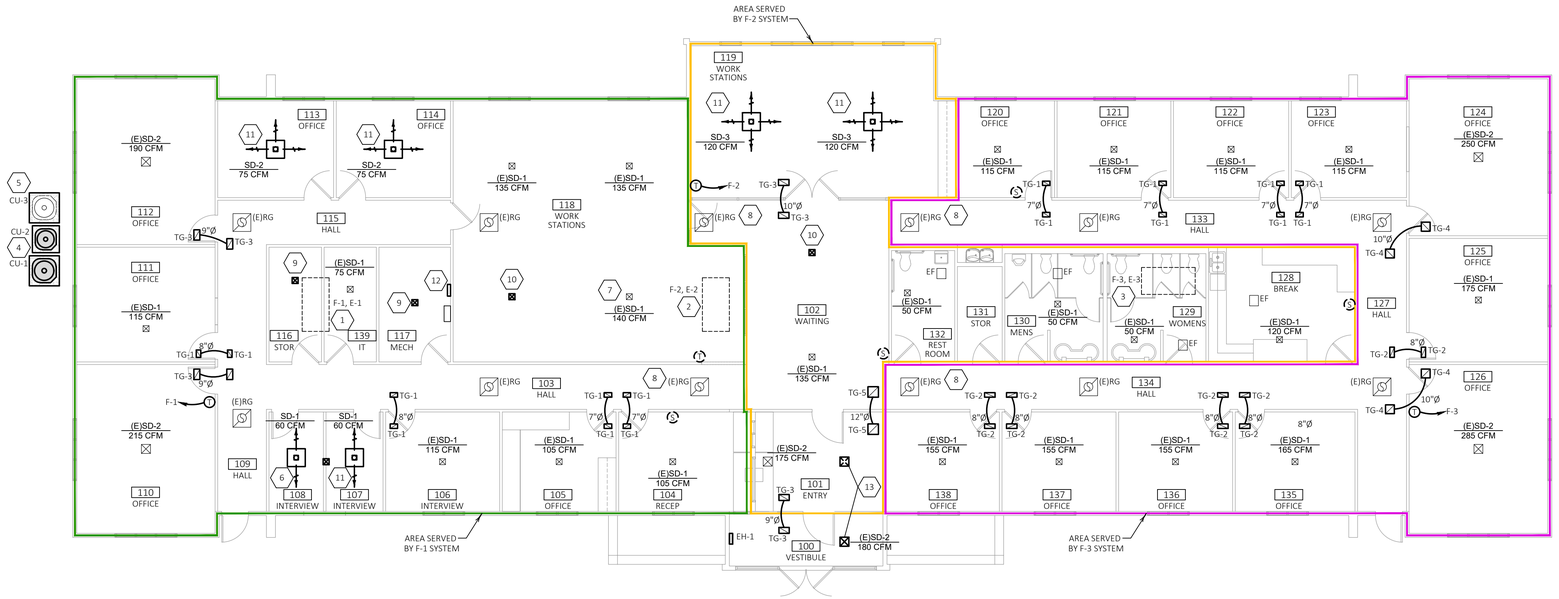
PERMIT SET: 08.20.2024

HVAC
SCHEDULES

edinc Job #: 24.110

M0.2

Exhibit A



1 / M1.1 HVAC PLAN

1/8" = 1'-0"

GENERAL NOTES

1. THE GENERAL SCOPE OF WORK INCLUDES REPLACING THREE FURNACES AND TWO SPLIT SYSTEMS AND ADDING AND RELOCATING AIR DEVICES AS REQUIRED FOR THE NEW SPACE LAYOUT. NEW DDC CONTROLS WILL ALSO BE INSTALLED.
2. REMOVE EXISTING FURNACES, E-1, E-2, CU-1, CU-2, AND ASSOCIATED REFRIGERANT PIPING. REMOVE EXISTING THERMOSTATS AND REMOTE SENSORS.
3. INSTALL NEW FURNACES, E-1, E-2, CU-1, CU-2 IN SAME LOCATION AS EXISTING. FURNACES AND EVAPORATOR COILS ARE LOCATED ABOVE T-BAR CEILINGS AND BELOW ATTIC INSULATION.
4. REUSE EXISTING SECONDARY DRAIN PANS AND CONDENSATE PUMPS.
5. RECONNECT NEW FURNACES TO EXISTING DUCTWORK. PROVIDE TRANSITIONS AS REQUIRED.
6. RECONNECT FURNACES TO EXISTING GAS PIPING. NEW FURNACES ALL HAVE LOWER INPUTS THAN EXISTING, SO NO CHANGE IN PIPE SIZES IS REQUIRED.
7. EXISTING PVC OR CPVC VENT AND INTAKE PIPING FOR FURNACES MAY BE REUSED IF IT IS THE CORRECT SIZE.
8. DUCTWORK MORE THAN APPROXIMATELY 4' FROM FURNACES IS RUN ABOVE THE INSULATION IN A COLD ATTIC.
9. NEW TRANSFER DUCTWORK SHALL BE ABOVE SUSPENDED CEILING AND BELOW ATTIC INSULATION.
10. EXISTING CONCRETE HOUSEKEEPING PADS UNDER CU-1 AND CU-2 MAY BE RE-USED IF THEY ARE IN GOOD CONDITION AND THE CORRECT SIZE. THE EXISTING PAD UNDER CU-1 IS 36X36. THE EXISTING PAD UNDER CU-2 IS 24X24.

CONSTRUCTION NOTES

1. EXISTING F-1, E-1 IN THIS GENERAL AREA, TO BE REPLACED IN PLACE WITH NEW F-1, E-1.
2. EXISTING F-2, E-2 IN THIS GENERAL AREA, TO BE REPLACED IN PLACE WITH NEW F-2, E-2.
3. EXISTING F-3 IN THIS GENERAL AREA, TO BE REPLACED IN PLACE WITH NEW F-3. EXISTING EVAPORATER E-3 TO REMAIN.
4. EXISTING CU-1 AND CU-2 TO BE REPLACED IN PLACE WITH NEW CU-1 AND CU-2.
5. EXISTING CU-3 TO REMAIN.
6. CONNECT NEW AIR DEVICE TO MAIN WITH 5"Ø FLEX DUCT.
7. DISCONNECT AIR DEVICE FROM FURNACE F-2 SYSTEM AND CAP BRANCH DUCT. CONNECT AIR DEVICE TO FURNACE F-1 SYSTEM MAIN WITH FLEX DUCT.
8. THIS RETURN GRILLE IS PART OF FURNACE SYSTEM F-2.
9. THIS AIR DEVICE WILL BE DEMOLISHED AND THE BRANCH DUCT CAPPED. THERE WILL NOT BE AIR PUT BACK INTO THIS ROOM. THIS AIR DEVICE IS PART OF FURNACE SYSTEM F-2.
10. THIS AIR DEVICE WILL BE DEMOLISHED AND THE BRANCH DUCT CAPPED.
11. THIS AIR DEVICE WILL BE DEMOLISHED AND REPLACED WITH THE AIR DEVICE INDICATED. RECONNECT TO EXISTING FLEX DUCT.
12. APPROXIMATE LOCATION OF NEW TEMPERATURE CONTROL PANEL.
13. RELOCATE AIR DEVICE TO NEW LOCATION INDICATED. INSTALL ADDITIONAL FLEX DUCT AS REQUIRED.

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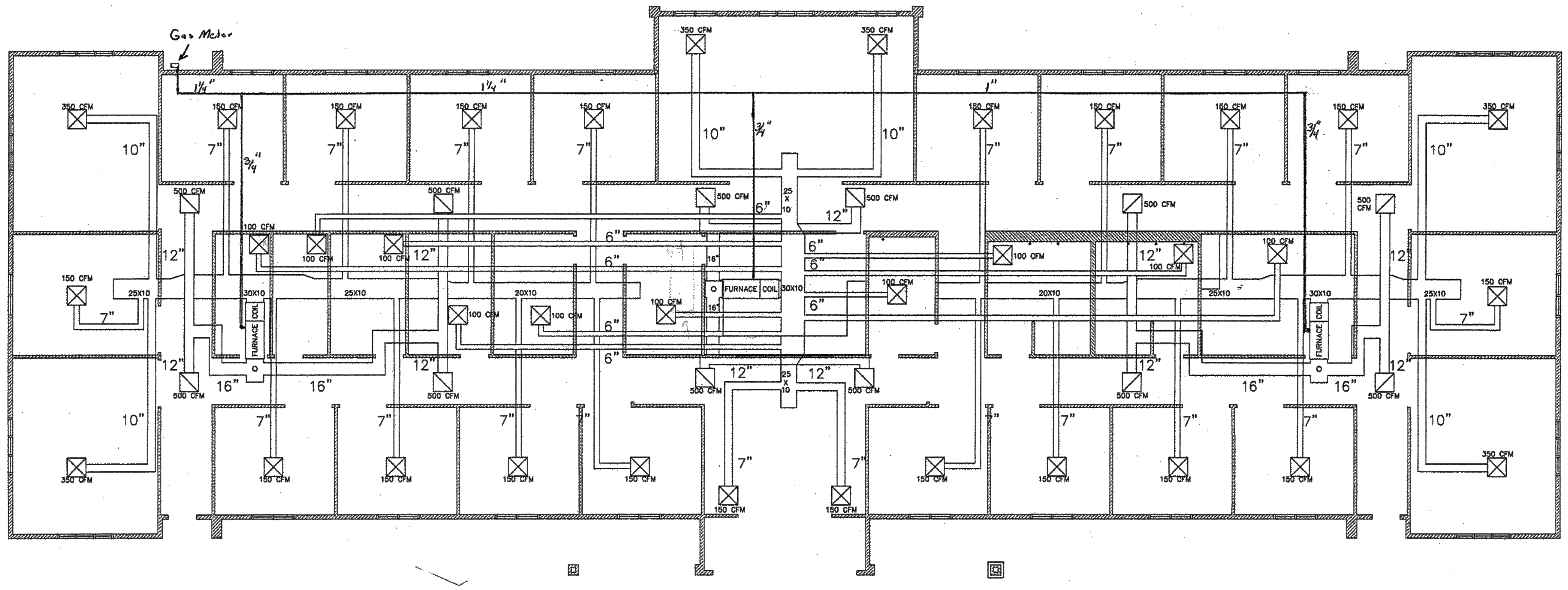
HVAC PLAN

edinc Job #: 24.110

M1.1

Exhibit A



120 CFM FOR OCCUPANCY AIR WILL BE TIED INTO EACH RETURN PLENUM ON THE FURNACES

SERVICE ACCESS TO THE FURNACES WILL BE THROUGH THE T-BAR CEILING

DRAIN PANS WILL BE INSTALLED UNDER EACH FURNACE LOCATED ABOVE THE CIELING

1
M1.2
ORIGINAL BUILDING HVAC PLANS
1/8" = 1'-0"

THESE PLANS ARE PROVIDED FOR THE CONTRACTOR'S INFORMATION. THEY SHOW THE ORIGINAL BUILDING CONSTRUCTION AND DO NOT COMPLETELY REFLECT CURRENT CONDITIONS.

N

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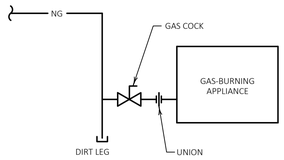
ORIGINAL
BUILDING
HVAC PLANS

edinc Job #: 24.110

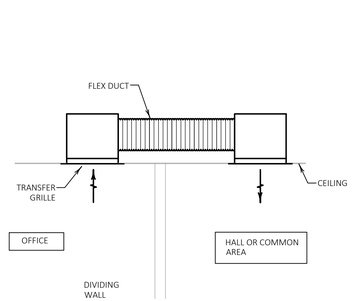
M1.2

Exhibit A



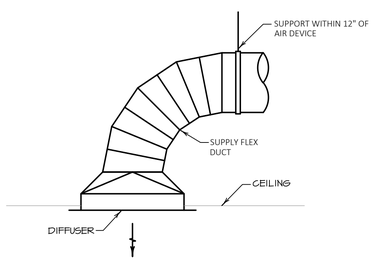
1 M2.1 NG DIRT LEG DETAIL

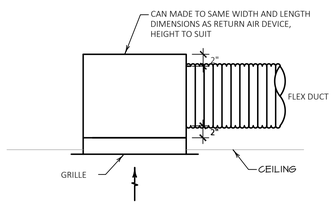
N.T.S.



2 M2.1 TRANSFER GRILLE/DUCT DETAILS

NO SCALE





3 M2.1 DUCT CONNECTION DETAILS

NO SCALE

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M2.1

Exhibit A

PLUMBING SPECIFICATIONS

PART 1—PIPING MATERIALS

Quality Assurance:
- Comply with all requirements of the 2021 Uniform Plumbing Code as officially amended for local conditions

Seismic Bracing
- All new piping in excess of 1" size shall be braced and supported for Seismic Design Category D as shown in Mason Industries "Seismic Restraint Guidelines," 2005 edition. In addition to seismic load, pipe expansion loads must also be considered
- Pipe supports and anchors must conform to the 2021 International Building Code.
- Any system of pipe supporting and anchoring shall have supporting engineering data bearing the seal of the licensed professional engineer in the employ of the company furnishing the support and anchor systems.
- Whenever possible, pipes may be located on sufficiently short hangars as to not require seismic treatment if allowed by the suspension system.

Material Generally
- Copper Pipe and Fittings:
  - Copper Pipe: Seamless ASTM B88 Type L or K, annealed or hard drawn, as specified.
  - Copper Tubing: ASTM B280, Type ACR hard drawn.
  - Fittings for Copper Pipe: Wrought Copper Fittings: ANSI B16.22, or Cast Bronze Fittings: ANSI B16.18.
- PEX Piping
  - PEX-a and PEX-b piping produced in compliance with ASTM F876 are allowed.
  - Joints shall be F1960 style
  - PEX pipe and fittings used in potable water systems shall be certified by NSF International for use in potable water systems.
- PVC Plastic Pipe and Fittings:
  - Schedule 40 DWV conforming to ASTM D2672-80 or D1785-76 with ASTM D2466-78 solvent weld socket fittings.
  - Joints shall be made with primer and cement in accordance with manufacturer's recommendations and conforming to ASTM D2564-80.

Mechanical Joints in Metallic Piping
- The contractor may substitute mechanical joint fittings in pipe sizes 2" and larger. Mechanical joints shall consist of a grooved pipe end, milled or rolled, a jointing clamp, appropriate gaskets for the type of fluid and likely temperatures, and hardware for assembly. Do not use permanent swedged fittings of any size. Fittings by Gruv-lock and Victaulic are acceptable; others by prior approval. The contractor may also use flanged fittings.

Domestic Water Piping
- Piping exposed in mechanical rooms shall be Copper.
- Piping concealed in walls and above ceilings may be either PEX or Copper.

Drainage Waste and Vent Piping
- All above and below ground drainage and vent piping within five feet of the building shall be Schedule 40 PVC with solvent weld sanitary fittings, except as follows:
  - Where indicated on the drawings to be a different material,
  - The first 20 feet downstream of any floor drain or floor sink receiving discharge from a commercial dishwasher, glasswasher, or other appliance that uses rinse water in excess of 160 F.
  - All exposed sanitary piping in finished rooms used in connection with the plumbing fixtures shall be chromium plated brass with plated cast brass fittings.
- Low temperature (fluids under 140 F) drains from mechanical equipment such as cooling coils and make-up air units shall be Schedule 40 PVC with solvent weld fittings.
- High temperature (fluids over 140 F) drains from mechanical equipment such as furnaces, boilers, and water heaters shall be Schedule 40 CPVC with solvent weld fittings or PEX piping.

PART 2—PIPE INSULATION

Quality Assurance:
- Insulation assemblies consisting of insulation, jacket and facing, and adhesives for jacket and facing shall have a composite smoke and fire rating as tested by procedure ASTM E-84, NFPA 255, and UL 723 which does not exceed a rating of 25 for flame spread or 50 for smoke developed. This specification shall apply to all insulation other than elastomeric type.
- Accessories such as adhesives, mastics, cements, tapes, and cloth for fittings shall have the same component rating as listed above.

Fiberglass Pipe Insulation:
- Pipe insulation shall be fibrous glass accurately molded to conform to the outside diameter of the pipe. Insulation shall be one piece snap-on type with white paper all-service jacket.
- Insulation shall be suitable for use on either hot or cold water pipes with temperature range of 35 degrees F to 400 degrees F. Thermal conductivity shall not exceed 0.26 at 100 degrees F mean temperature.

Foam Pipe Insulation:
- Insulation shall be a flexible, closed-cell elastomeric pipe insulation: AP Armaflex, AC Accoflex, or equivalent by alternate manufacturer. Adhesive shall be Armaflex 520, 520 Black or 520 BLV Adhesive, or equivalent manufacturer. The insulation must conform to ASTM C534 Grade 1, Type I.
- Insulation materials shall have a closed cell structure to prevent moisture from wicking.
- Insulation materials shall be manufactured without the use of CFC's, HFC's or HCFC's. It shall also be formaldehyde free, low VOCs, fiber free, dust free and resists mold and mildew.
- Insulation materials shall have a flame-spread index of less than 25 and a smoke-developed index of less than 50 as tested in accordance with ASTM E 84. In addition, the products, when tested, shall not melt or drip flaming particles, and the flame shall not be progressive.
- Insulation materials shall have a maximum thermal conductivity of 0.27 Btu-in./h-ft 2 -°F at a 75°F mean temperature as tested in accordance with ASTM C 177 or ASTM C 518.
- Insulation materials shall have a maximum water vapor transmission of 0.08 perm-inches when tested in accordance with ASTM E 96, Procedure A.

Insulation Schedule:

System	Insulation and Thickness	Jacket
Domestic cold water	½" Fiberglass on copper pipe; ½" foam on PEX piping	ASJ on fiberglass
Domestic hot water and hot water recirc piping	1" Fiberglass on copper pipe; 1" foam on PEX piping	ASJ on fiberglass

PART 3—PIPING SPECIALTIES

Quality Assurance:
- Unless otherwise specifically mentioned, all valves of all types installed in connection with mechanical piping shall comply with the following requirements.
- Provide one make throughout the project, except valves in pipes 2-1/2" in diameter and larger may be Victaulic or equivalent.
- Valves two inches and smaller shall be threaded and have bronze bodies. Valves 2-1/2" and larger shall be iron body bronze mounted (IBBM) type and shall be flanged or suitable for Victaulic mechanical couplings.
- All valves shall bear NSF or other suitable approval for potable water service.

Unions: All unions shall be 150 psig rated malleable iron, screwed, with brass to iron ground joints. Provide dielectric unions at dissimilar metal connections in cold water systems. For copper pipe, provide copper sweat unions or disassemble-able mechanical joints.

Ball Valves: Provide for isolation duty in piping systems 2-1/2" inches and smaller. Provide full ported 90 degree bronze ball valves with teflon seats, brass packing gland, and TFE impregnated adjustable packing, rated for 600 psi WOG (non-shock). Valves for potable water service must be lead-free.

Water Hammer Arrestors: Provide and install water hammer arrestors where shown on the drawings and in accordance with the Uniform Plumbing Code. Shock arrestors shall be lead free and shall have a piston, o-ring, and inert gas for shock absorption. Size shock arrestors per manufacturer's instructions except as otherwise noted on the plans. Provide Zurn 1260XL series or equivalent.

Cleanouts: Cleanouts on bare pipe shall be Zurn Z-1445 for cleanouts in straight runs. Cleanouts at end of pipe run may be generic plug. Cleanouts in walls shall be Zurn No. Z-1443. Cleanouts in floors shall be Zurn No. Z-1400 combination cleanout with nickel bronze frame and adjustable scoriated cover. Provide concealed cleanouts with round stainless steel covers. Equivalent products of J.R. Smith and Watts are acceptable.

PART 4—PIPING AND SPECIALTY INSTALLATION

General:
- Ream all pipe to full inside diameter after cutting and thoroughly clean before installation. Run all piping as directly as possible, avoiding unnecessary offsets. Conceal piping in finished rooms unless noted or specified otherwise. Arrange pipelines to give ample room for the pipe insulation specified.
- Thoroughly flush all piping after installation.
- Provide the appropriate sizes of insulating couplings between piping systems of dissimilar materials and at all equipment where piping and equipment are of dissimilar materials.
- Verify local government and utility company's inspection requirements and abide by their rights of inspection before covering or otherwise concealing any piping.
- Pipe support style and interval shall be as required by applicable code and as detailed on the drawings.
- All openings in pipes shall be kept closed during the progress of the work with tape, caps, or test plugs. Rags and paper wads shall not be used.
- Allowance for expansion shall be made in the installation of all piping so that usual variation in temperature will not cause undue stress at any point. Pipe shall be securely anchored where necessary to properly distribute expansion stresses.
- Escutcheons shall be provided at all pipe penetrations in occupied spaces or visible locations.
- All lines and risers shall be blocked as may be necessary to prevent noise or vibration when water is turned on or off.
- Water hammer air chambers, 18 inches long and of the same size as the branches shall be placed vertically on the end of all supply branches to each fixture.
- Locate all specialties for easy access.
- Run all horizontal drainage and vent piping at a uniform grade of ¼" per foot in the direction of flow unless otherwise indicated on the drawings.
- Support above-grade sanitary piping to ceiling, underside of floor, or within walls as required, and at the maximum elevation possible.
- Vents shall be installed using a neoprene boot with galvanized plate as manufactured by Oatey's; equivalent products by other manufacturers are acceptable. Paint all vents in color similar to roof.
- Provide cleanouts as shown on the plans and as required by applicable codes. Cleanouts shall be the same size as the pipe, up to 4".
- Provide cleanouts to grade outside building as shown. Cleanouts and/or cleanout covers, where provided, shall be installed flush with surrounding surfaces.
- Pressure test all new piping in accordance with governing codes.

Sleeves:
- Provide sleeves large enough for pipe and insulation, if insulated, for all pipes penetrating floors or walls. Cut openings only as large as required for the installation. Holes for sleeves in concrete or masonry shall be core drilled.
- Non-Fire Rated Walls and Floors: Caulk between pipe and all sleeves. Provide chromed plates for pipe penetrations of walls and floors where exposed to view. Install sleeves flush with finished surfaces of walls and ceilings and grout in place. Surfaces around openings shall be left smooth and finished to match surrounding surface. Sleeves in floors shall extend 1/4 inch above finished floor and be caulked to floor with silicone.
- Fire-Rated Walls and Floors: For protection of penetrations of fire-rated walls, see notes on drawings.

PART 5—DOMESTIC WATER DISINFECTION

Disinfecting Agent:
- Free chlorine in liquid, powder, tablet or gas form.

Procedure:
- Treatment will occur after the work is completed but before system is placed into service.
- Disinfection shall comply with requirements listed in 2021 Uniform Plumbing Code (UPC). If there is a conflict between this section and the UPC, the UPC shall take precedence.
- Prior to starting work, verify that system is complete, flushed, and clean. Ensure that PH of water supply is between 7.4 and 7.6 by adding alkali in the form of caustic soda or soda ash if PH is too high, or hydrochloric acid if PH is too low, to adjust PH.
- Inject disinfectant and bleed water from outlets to ensure distribution; test for disinfectant residual. Maintain disinfectant in new portions of system for 24 hours. Cooperate with test and balance agency to perform tests. Repeat disinfectant residual tests. If less than 25 mg/L, repeat treatment.
- Flush disinfectant from system until residual equal to that of incoming water, or, if domestic water supply is not treated, 1.0 mg/L. Take samples no sooner than 24 hours after flushing; analyze in accordance with AWWA C651. Make written reports of disinfectant agents and test results for placement into Operation and Maintenance manuals.

PART 6—PLUMBING FIXTURES AND EQUIPMENT

Quality Assurance:
- Plumbing fixtures specified hereinafter shall be provided free of flaws and defects of any sort in material and workmanship and shall operate perfectly when installed in accordance with manufacturer's directions.
- Chrome plated plastic is not an acceptable material for fixtures or trim.
- Chrome plated brass escutcheons shall be provided at each point a pipe or other fitting enters the wall or floor at a fixture or enters a finished space.
- Provide all vitreous china and enameled cast iron fixtures in standard white finish. Provide showers in standard white.

Plumbing Fixtures and Trim
- Acceptable Manufacturers:
  - Drinking Fountains: Elkay, Halsey Taylor, Haws, or equivalent.
  - Floor Drains and Floor Sinks: Josam, Sioux Chief, MIFAB, Smith, Wade, Watts, Zurn.
- All stops shall be quarter-turn ball valve style.
- Installation:
  - Plumbing fixtures shall be installed where shown on the drawings in a neat and workmanlike manner with proper connections to supply and drainage piping.
  - Protect the plumbing fixtures and accessories and cover fixtures with building paper and wooden crates during construction. Replace at no cost to the Owner any fixture or accessory that is marred, scratched, defaced, or broken.
  - Water shall be turned on to all supply lines and all fixtures shall be demonstrated to operate properly.
  - All fixtures and trim shall be cleaned thoroughly.

Requirements for Handicapped Accessible Plumbing Fixtures
- Refer to details on architectural drawings. The architectural drawings and specifications shall take precedence over any handicapped accessibility requirements listed in this paragraph or on the Plumbing Fixture Schedule.

PLUMBING FIXTURE SCHEDULE

MARK	MANUFACTURER AND NUMBER	FAUCET OR VALVE	ACCESSORIES	MOUNT HEIGHT	SUPPLY	WASTE	VENT	COMMENTS
DF-1	ELKAY LZSTLDDWSLK	---	STOP, IN-WALL CARRIER	LOWER RIM HEIGHT AT 31-5/16" AFF	3/8" C.	1-1/2"	1-1/2"	NOTE 1
HB-1	WOODFORD B65 HOSE BIBB	---	---	18" ABOVE GRADE	3/4" C.	---	---	
FD-1	SMITH 2005-NB FLOOR DRAIN	---	ROUND STRAINER	FLOOR	---	2"	1-1/2"	NOTE 2

GENERAL: ARCHITECTURAL PLANS AND DETAILS TAKE PRECEDENCE FOR LOCATION, MOUNTING HEIGHTS, CLEARANCES, ETC. ALL STOPS SHALL BE QUARTER-TURN BALL-VALVE STYLE.

1. PROVIDE LEFT-HAND HIGH SIDE MODEL.
2. PROVIDE WITH RECTORSEAL SURESEAL, OR EQUIVALENT, WATERLESS TRAP SEAL.

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MISSOULA COUNTY
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2415 MULLAN ROAD, MISSOULA MT 59808

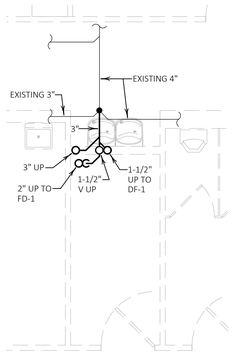
PERMIT SET: 08.20.2024

PLUMBING SCHEDULE AND SPECIFICATIONS

edinc Job #: 24.110

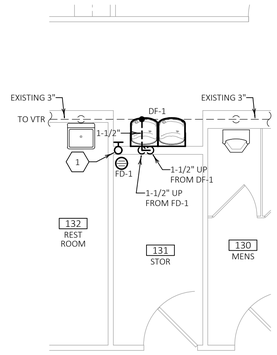
P0.1

Exhibit A



1 P1.1 PARTIAL UNDERSLAB WASTE AND VENT PLAN

1/4" = 1'-0"



2 P1.1 PARTIAL MAIN FLOOR WASTE AND VENT PLAN

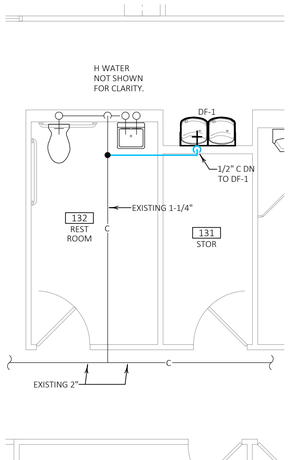
1/4" = 1'-0"

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. DO NOT SCALE FROM DRAWINGS.
2. COORDINATE PIPING INSTALLATION AND LOCATION WITH OTHER ITEMS AND TRADES, SUCH AS DUCTWORK, ELECTRICAL, LIGHTING, FIRE SPRINKLER, ETC.
3. DO NOT RUN PIPING OVER OR WITHIN NEC REQUIRED SERVICE CLEARANCE OF ELECTRICAL PANELS AND LOAD CENTERS.
4. PROVIDE CLEANOUTS WHERE SHOWN ON THE PLANS AND WHERE REQUIRED BY THE GOVERNING CODE AND AUTHORITY HAVING JURISDICTION.
5. CONTRACTOR SHALL VERIFY SEWER INVERT PRIOR TO BEGINNING ANY CONSTRUCTION WORK OR PIPE LAYOUT. NOTIFY ENGINEER IMMEDIATELY IF SEWER IS SHALLOWER THAN EXPECTED AND/OR IF PROBLEMS CONNECTING TO IT ARE ANTICIPATED.

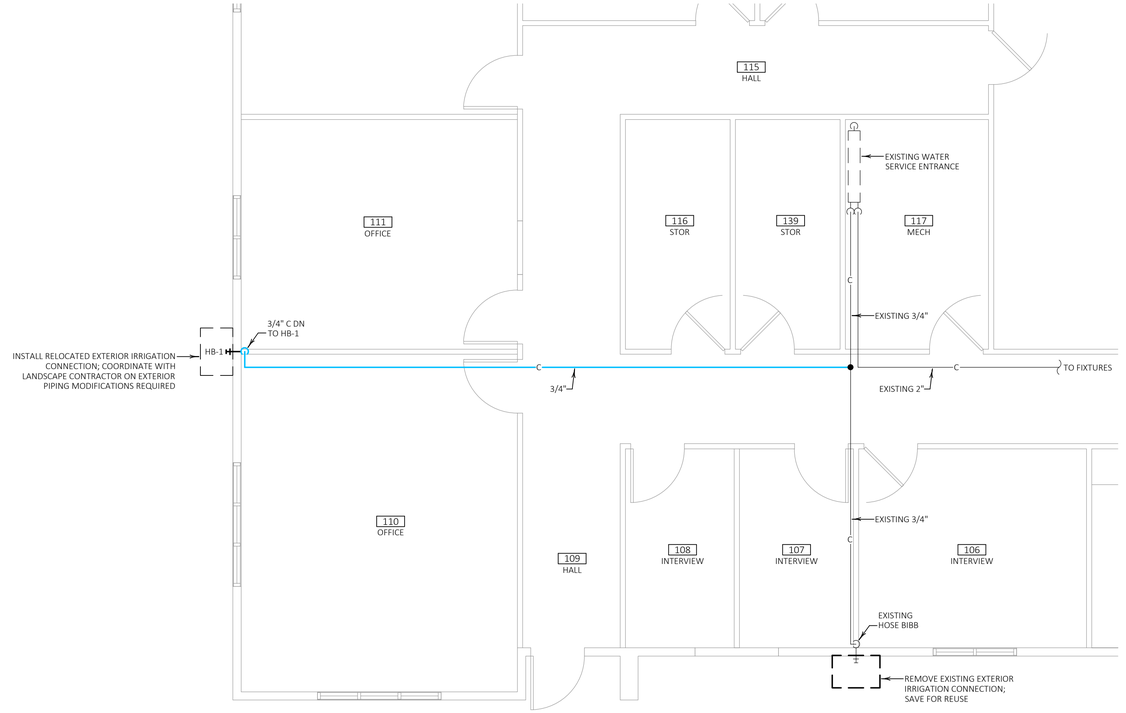
CONSTRUCTION NOTES

1. INSTALL VERTICAL 3" WASTE UP TO ABOVE CEILING AND CAP. (FOR WASTE FROM FUTURE RESTROOM SEWAGE EJECTOR PUMP.) INSTALL CLEANOUT IN VERTICAL NEAR FLOOR.



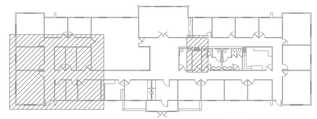
3 P1.1 PARTIAL MAIN FLOOR SUPPLY PIPING PLAN

1/4" = 1'-0"



4 P1.1 PARTIAL MAIN FLOOR SUPPLY PIPING PLAN

1/8" = 1'-0"



KEY PLAN

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PLUMBING PLANS

edinc Job #: 24.110

P1.1

Exhibit A

ELECTRICAL LEGEND

(LEGEND IS GENERAL IN NATURE. NOT ALL OF THE SYMBOLS SHOWN ARE USED IN THIS PROJECT.)

POWER

- DUPLEX AFCI OUTLET. +18" AFF UNO.
- DUPLEX AFCI OUTLET. ABOVE COUNTER.
- SIMPLEX OUTLET. +18" AFF UNO.
- DUPLEX OUTLET. +18" AFF UNO.
- DUPLEX OUTLET. MOUNTED ABOVE COUNTER UNO.
- DUPLEX OUTLET. +18" AFF UNO WITH GROUND FAULT INTERRUPTION PROTECTION.
- DUPLEX OUTLET. MOUNTED ABOVE COUNTER UNO WITH GROUND FAULT INTERRUPTION PROTECTION.
- SWITCHED DUPLEX OUTLET. +18" AFF UNO.
- DUPLEX OUTLET WITH INTEGRATED USB CHARGING OUTLETS. +18" AFF UNO.
- DUPLEX ISOLATED GROUND OUTLET. +18" AFF UNO.
- DUPLEX ISOLATED GROUND OUTLET. MOUNTED ABOVE COUNTER UNO.
- DUPLEX 20A OUTLET. +18" AFF UNO.
- DUPLEX 20A OUTLET. MOUNTED ABOVE COUNTER UNO.
- SINGLE 20A OUTLET. +18" AFF UNO.
- FOURPLEX OUTLET. +18" AFF UNO.
- FOURPLEX OUTLET. MOUNTED ABOVE COUNTER UNO.
- FOURPLEX ISOLATED GROUND OUTLET. +18" AFF UNO.
- FOURPLEX ISOLATED GROUND OUTLET. MOUNTED ABOVE COUNTER UNO.
- FOURPLEX CONVENIENCE OUTLET, +18"AFF UNO. (1)RECEPTACLE IS TO BE CONTROLLED BY A LOCAL OCCUPANCY SENSOR. THE CONTROLLED RECEPTACLE SHALL BE GRAY IN COLOR. THE OTHER RECEPTACLE SHALL BE UNCONTROLLED (UNSWITCHED) AND WHITE IN COLOR.
- SPECIAL PURPOSE OUTLET. VERIFY SIZE AND TYPE WITH EQUIPMENT SUPPLIER.
- CONNECTION POINT TO EQUIPMENT SPECIFIED, FURNISHED AND INSTALLED UNDER OTHER SECTIONS. ELECTRICAL CONTRACTOR TO SUPPLY RACEWAY, CONDUCTORS AND MAKE FINAL CONNECTION TO EQUIPMENT UNDER THIS SECTION, UNO.
- DUPLEX OUTLET. FLUSH, FLOOR MOUNTED.
- DUPLEX SWITCHED OUTLET. FLUSH, FLOOR MOUNTED.
- DUPLEX ISOLATED GROUND OUTLET. FLUSH, FLOOR MOUNTED.
- FOURPLEX OUTLET. FLUSH, FLOOR MOUNTED.
- SPECIAL PURPOSE OUTLET. FLUSH, FLOOR MOUNTED.
- WM — WIREMOLD OUTLET.
- MOTOR CONNECTION. RE: MECHANCIAL EQUIPMENT SCHEDULE
- POWERPOLE – DUAL CHANNEL.
- PAD MOUNT TRANSFORMER.

COMMUNICATIONS

- TELEPHONE OUTLET, FOUR-SQUARE DEEP TYPE BOX WITH SINGLE GANG MUDRING. LOCATED AT 18" AFF UNO.
- TELEPHONE OUTLET, FOUR-SQUARE DEEP TYPE BOX WITH SINGLE GANG MUDRING. LOCATED ABOVE COUNTER UNO.
- TELEPHONE/DATA OUTLET, FOUR-SQUARE DEEP TYPE BOX WITH SINGLE GANG MUDRING. LOCATED AT +18" AFF UNO. PROVIDE AND INSTALL CAT 6 CABLING TO UNIT COMMUNICATION PANEL OR TTB, REFER TO PLAN FOR SHEET LOCATION, AS REQUIRED.
- DATA OUTLET, FOUR-SQUARE DEEP TYPE BOX WITH SINGLE GANG MUDRING. LOCATED AT 18" AFF UNO. PROVIDE AND INSTALL CAT 6 CABLING TO UNIT COMMUNICATION PANEL OR TTB, REFER TO PLAN FOR SHEET LOCATION, AS REQUIRED.
- DATA OUTLET, FOUR-SQUARE DEEP TYPE BOX WITH SINGLE GANG MUDRING. LOCATED ABOVE COUNTER UNO. PROVIDE AND INSTALL CAT 6 CABLING TO UNIT COMMUNICATION PANEL OR TTB, REFER TO PLAN FOR SHEET LOCATION, AS REQUIRED.
- TELEPHONE OUTLET. FLUSH, FLOOR MOUNTED.
- TELEPHONE/DATA OUTLET. FLUSH, FLOOR MOUNTED.
- DATA OUTLET. FLUSH, FLOOR MOUNTED.
- S — SPEAKER. CEILING MOUNTED WITH BACKBOX.
- S — SPEAKER. WALL MOUNTED WITH BACKBOX +80" UNO.
- TV — TELEVISION OUTLET, SINGLE-GANG BOX WITH MUDRING. +18" AFF UNO.
- WALL MOUNTED CAMERA.
- WAP — WIRELESS ACCESS POINT, CEILING MOUNTED. COORDINATE REQUIREMENTS WITH LOW VOLTAGE CONTRACTOR.

MISCELLANEOUS

- J — JUNCTION BOX.
- J — JUNCTION BOX, WALL MOUNTED.
- T X — THERMOSTAT. +56" AFF UNO. UNIT CONTROLLED INDICATED.
- H X — HUMIDISTAT. +56" AFF UNO. UNIT CONTROLLED INDICATED.
- SURFACE MOUNTED PANELBOARD/ENCLOSURE. SEE SCHEDULE FOR TYPE.
- FLUSH MOUNTED PANELBOARD/ENCLOSURE. SEE SCHEDULE FOR TYPE.
- NAME # — MECHANICAL EQUIPMENT SYMBOL (RE: MECHANICAL DRAWINGS FOR EXACT LOCATION OF UNITS).
- ### — INDICATES FIXTURE TYPE. REFER TO LUMINARE SCHEDULE.
- SD — 120V SMOKE DETECTOR

LIGHTING (SEE LUMINAIRE SCHEDULE FOR EXACT REQUIREMENTS)

- SINGLE FACE EXIT SIGN. CEILING MOUNTED.
- DOUBLE FACE EXIT SIGN. CEILING MOUNTED.
- SINGLE FACE EXIT SIGN. WALL MOUNTED.
- DOUBLE FACE EXIT SIGN. WALL MOUNTED.
- SINGLE FACE COMBO EXIT SIGN/EMERGENCY LUMINAIRE. WALL MOUNTED.
- ARROW INDICATES DIRECTION TO BE SHOWN ON SIGN.
- LIGHT FIXTURE.
- LIGHT FIXTURE.
- LIGHT FIXTURE.
- SUSPENDED LIGHT FIXTURE.
- WALL MOUNTED FIXTURE.
- WALL SCONCE FIXTURE.
- WALL PACK FIXTURE.
- UNDERCABINET MOUNTED FIXTURE.
- TRACKLIGHT.
- PENDANT LIGHT FIXTURE.
- ROUND DECORATIVE LIGHT FIXTURE. SURFACE MOUNT
- RECESSED LIGHT FIXTURE.
- RECESSED WALL WASH LIGHT FIXTURE.
- PORCELAIN LAMP HOLDER.
- WALL MOUNTED PORCELAIN LAMP HOLDER.
- CEILING FAN.
- CEILING FAN WITH LIGHT KIT.
- POLE LIGHT 1 HEAD ROUND WITH POLE.
- POLE LIGHT 2 HEAD ROUND WITH POLE.
- POLE LIGHT 1 HEAD SQUARE WITH POLE.
- POLE LIGHT 2 HEAD SQUARE WITH POLE.
- BOLLARD LIGHT.
- DECORATIVE POST-TOP LIGHT.
- SPOT/FLOOD LIGHT.
- EMERGENCY EGRESS LIGHT. WALL MOUNTED.
- EMERGENCY EGRESS LIGHT. CEILING MOUNTED.

SWITCHES

- $S^a_\#$ — SWITCH. TYPE AS INDICATED. +46"AFF, UNO.
  - 2 DOUBLE POLE
  - 3 3-WAY
  - 4 4-WAY
  - D DIMMER
  - HP HORSEPOWER RATED
  - K KEYED
  - LV LOW VOLTAGE
  - M MOMENTARY CONTACT
  - MM MANUAL MOTOR STARTER
  - OS OCCUPANCY SENSOR
  - P PILOT LIGHT
  - T TIMER
  - TO THERMAL OVERLOAD
  - V VOLUME CONTROL
  - VS VACANCY SENSOR
  - a SUPERSCRIPT INDICATES LIGHTS TO BE SWITCHED TOGETHER
- SS — MULTI-LEVEL SWITCHING, TO MEET LIGHT REDUCTION LEVELS PER ENERGY CODE AS SHOWN. PROVIDE ADDITIONAL OR STEP-DIMMING BALLASTS WHERE REQUIRED.
- OS — OCCUPANCY SENSOR. CEILING MOUNTED.
- P — PHOTOCELL. WALL MOUNTED.
- P — PHOTOCELL. CEILING MOUNTED.
- T — TIMECLOCK. WALL MOUNTED.
- SINGLE BUTTON, WALL MOUNTED PUSHBUTTON. MOUNT AT SWITCH HEIGHT UNO.
- THREE BUTTON, WALL MOUNTED PUSHBUTTON. MOUNT AT SWITCH HEIGHT UNO.
- MOTOR STARTER/CONTACTOR.
- COMBINATION STARTER AND DISCONNECT.
- X — NON-FUSED DISCONNECT SWITCH. SIZE AS INDICATED, NEMA 1 UNO, 3 POLE UNO.
- F X — FUSED DISCONNECT SWITCH. SIZE AS INDICATED, NEMA 1 UNO, 3 POLE UNO.

CIRCUITING SYMBOLS

- CONDUIT STUBBED, CAPPED, AND MARKED WITH PULL CORD.
- CONDUIT UP.
- CONDUIT DOWN.
- X-# — HOMERUN. PANEL AND CIRCUIT AS INDICATED.
- CIRCUIT CONCEALED IN CEILING OR WALL. 3/4"-2#12,1#12G UNO.
- CIRCUIT CONCEALED IN FLOOR OR UNDERGROUND. 3/4"-2#12,1#12G UNO.

X"-X#X,X#XG — RACEWAY SIZE; CONDUCTOR QUANTITY; CONDUCTOR SIZE; GROUNDING CONDUCTOR SIZE

ONE LINE

- BRANCH PANEL ****** — BRANCH PANEL.
- A — CIRCUIT BREAKER. SIZE AND TYPE AS SPECIFIED.
- 30AF/30AT — CIRCUIT BREAKER. FRAME SIZE (AF) AND TRIP PLUG/RATING (AT), 3 POLE, UNO.
- 15A — FUSE. SIZE AND TYPE AS SPECIFIED, PROVIDE FUSE FOR EACH POLE, 3 POLE, UNO.
- 30A — INTERRUPTER SWITCH. SIZE AS INDICATED, 3 POLE, UNO.
- 30AS/30AF — FUSED SWITCH. SWITCH SIZE (AS) & FUSE SIZE (AF) AS INDICATED, 3 POLE, UNO.
- DRAW OUT CIRCUIT BREAKER FRAME (AF) SIZE AND TRIP PLUG RATING (AT), 3 POLE, UNO.
- INDIVIDUAL BREAKER FRAME (AF) SIZE AND TRIP PLUG RATING (AT), NEMA 1 UNO, 3 POLE UNO.
- M — METER.
- AM — AMMETER.
- VM — VOLTMETER.
- K — KIRK KEY LOCK.
- GFP — GROUND FAULT PROTECTION.
- SPD — SURGE PROTECTION DEVICE.
- AFM — ARC FLASH MITIGATION.
- VFD — VARIABLE FREQUENCY DRIVE.
- TVSS — TRANSIENT VOLTAGE SURGE SUPRESSION.
- ST — SHUNT TRIP COIL.
- KWH — KILOWATT HOUR METER.
- KVAR — KILOVAR DEMAND METER.
- TEST — TEST BLOCK.
- OVERHEAD SERVICE DROP.
- GENERATOR SET. MAIN BREAKER SIZE INDICATED.
- TRANSFER SWITCH.
- GUTTER.
- M — METER AND BASE.
- NEUTRAL — NEUTRAL.
- TRANSFORMER
- 1 — STARTER AND OVERLOAD, NEMA SIZE AS INDICATED.
- GROUND

ABBREVIATIONS & DESCRIPTIONS

A	AMPERES	KW	KILOWATT
AC	ABOVE COUNTER; REFER TO ARCHITECTURAL ELEVATIONS FOR REQUIRED HEIGHT.	KWH	KILOWATT HOUR
AFF	ABOVE FINISHED FLOOR	M	MAGNETIC CONTACTOR COIL
AFG	ABOVE FINISHED GRADE	MB	MAIN BREAKER
AF	AMPERE FRAME	MCC	MOTOR CONTROL CENTER
AFCI	ARC FAULT CIRCUIT INTERRUPT	MLO	MAIN LUGS ONLY
AHF	ACTIVE HARMONIC FILTER	MS	MOTOR STARTER
AHJ	AUTHORITY HAVING JURISDICTION	MTS	MANUAL TRANSFER SWITCH
AT	AMP TRIP	MH	MANHOLE
ATS	AUTOMATIC TRANSFER SWITCH	MW	MICROWAVE
AWG	AMERICAN WIRE GAUGE	N	NEUTRAL
BW	BLANKET WARMER	NC	NORMALLY CLOSED
C	CONDUIT	NCL	NON CRITICAL LOAD
CB	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE
CC	CRASH CART	NIC	NOT IN CONTRACT
CKT	CIRCUIT	NO	NORMALLY OPEN
CL	CRITICAL LOAD	NTS	NOT TO SCALE
CM	CEILING MOUNTED	OL	OVERLOAD
CO	CONDUIT ONLY, PROVIDE PULL-LINE	OS	OCCUPANCY SENSOR
D	MECHANICAL DUCT-MOUNTED DEVICE	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
DC	DIRECT CURRENT	P	PHOTO
DET	DETAIL	PC	PHOTOCELL
E	EMERGENCY/CRITICAL CARE	PVC	POLYVINYL CHLORIDE
(E)	EXISTING	RCPT	RECEPTACLE
EF	EXHAUST FAN	(R)	RELOCATED
EL	EMERGENCY LIGHT	(RE)	REPLACED
EWC	ELECTRIC WATER COOLER	REF	REFRIGERATOR
EWH	ELECTRIC WATER HEATER	RVSS	REDUCED VOLTAGE SOFT START
F	FUSE	SER	SERVICE ENTRANCE RATED
FACP	FIRE ALARM CONTROL PANEL	SPST	SINGLE POLE SINGLE THROW
FVNR	FULL VOLTAGE NON-REVERSING	TC	TIME CLOCK
G/GND	GROUND	TDR	TIME DELAY RELAY
GFI	GROUND FAULT INTERRUPTION	TJB	TERMINAL JUNCTION BOX
GFP	GROUND FAULT PROTECTION	TSP	TWISTED SHIELDED PAIR
H	HEAT	TTB	TELEPHONE TERMINAL BOARD
HH	HANDHOLE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
HID	HIGH INTENSITY DISCHARGE	TYP	TYPICAL
HOA	HAND OFF AUTO	UH	UNIT HEATER
HP	HOUSE PHONE	UNO	UNLESS NOTED OTHERWISE
HVAC	HEATING, VENTILATING, & AIR CONDITIONING	UPS	UNINTERRUPTIBLE POWER SUPPLY
I	IONIZATION	V	VOLT
ID	IN-DUCT	VA	VOLT AMPERE
IC	INTERRUPTING CAPACITY	VFD	VARIABLE FREQUENCY DRIVE
IG	ISOLATED GROUND	WG	PROVIDE PROTECTIVE WIRE GUARD
INT	INTERCOM	WP	WEATHER PROOF/NEMA 3R
J/JB	JUNCTION BOX	XFMR	TRANSFORMER

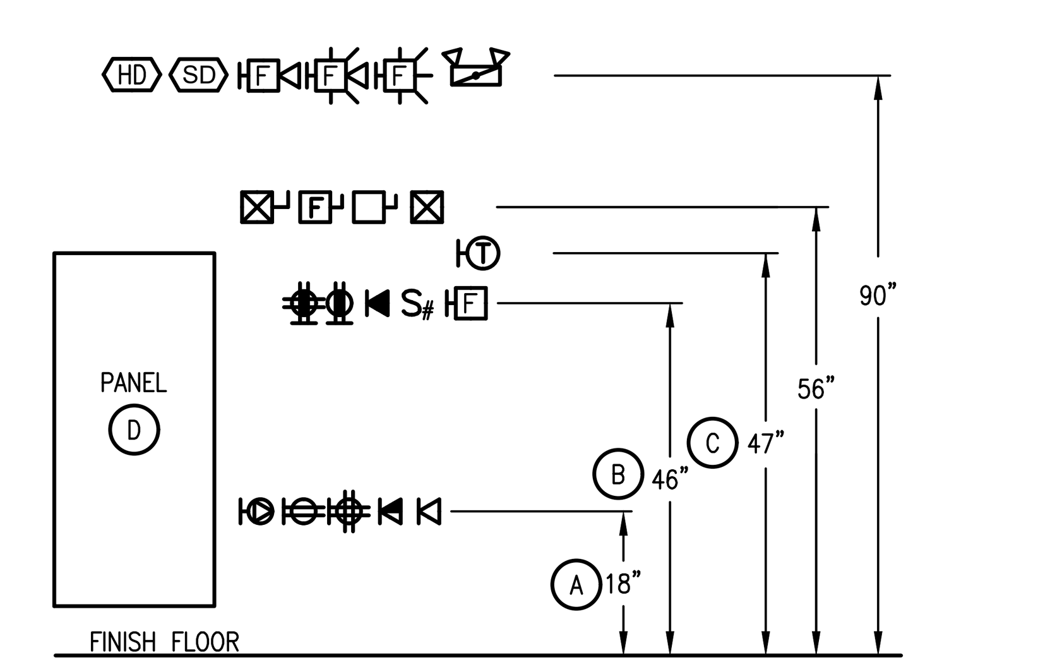
SHEET INDEX

GENERAL ELECTRICAL NOTES

(RE: ALL ELECTRICAL SHEETS)

1. ALL ELECTRICAL EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, INTERNATIONAL FIRE CODE, AND ALL OTHER STATE AND LOCAL CODES. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER IN WRITING IF PORTIONS OF THE DESIGN SET OR FIELD CONDITIONS DO NOT MEET REQUIRED CODES.
2. PROVIDE FIRESTOPPING FOR ALL FLOOR, CEILING AND FIREWALL PENETRATIONS FROM ELECTRICAL FIXTURE, DEVICE, RACEWAY, AND CABLE PENETRATIONS. SEE ARCHITECTURAL DRAWINGS FOR FIREWALL ASSEMBLY LOCATIONS.
3. FIRE ALARM SYSTEM: THIS BUILDING IS A 'B' OCCUPANCY PER ARCHITECTS CODE EVALUATION. PER THE 2021 IBC 902.2.2 NO FIRE ALARM IS REQUIRED AS THERE IS LESS THAN 500 TOTAL OCCUPANTS AND NOT MORE THAN 100 OCCUPANTS BELOW OR ABOVE THE LOWEST LEVEL OF EXIT DISCHARGE. FIRE ALARM MONITORING SYSTEM TO BE PRICED AS AN BID ALTERNATE. INDUSTRY LEADING MANUFACTURES LIKE SILENT KNIGHT, POTTER, AND HONEYWELL ARE ACCEPTABLE.
4. PROVIDE AND INSTALL 3/4"CO TO ACCESSIBLE LOCATION ABOVE SUSPENDED CEILING, UNLESS NOTED OTHERWISE FOR DATA, AND TELEPHONE DEVICES. DATA, AND TELEPHONE CABLING ARE TO BE PROVIDE FOR THIS CONTRACT. INCLUDE A BUSHING FOR CONDUIT TERMINATING IN ACCESSIBLE CEILING SPACE. LOW VOLTAGE WIRING IS ACCEPTABLE TO RUN IN FREE AIR RACEWAY ABOVE DROP CEILING. ROUTES TO BE CONSOLIDATED WHERE POSSIBLE USING ANSI/TIA APPROVED HANGING METHODS, SPACING NOT TO EXCEED 4 FT BETWEEN HANGERS. EACH NETWORK DROP INDICATED REPRESENTS TWO POINTS OF CONNECTION. ALL LOW VOLTAGE SHOWN TO BE NEWLY INSTALLED. LOW VOLTAGE IS TO INCLUDE THE FOLLOWING: DOOR ACCESS CONTROL, NETWORK/DATA CABLING, CAMERA, BUILDING MANAGEMENT, FIRE ALARM (BID ALTERNATE), AND LOCAL SPEAKER SYSTEM FOR PANIC ALARM.
5. EMERGENCY LIGHTING SYMBOLS ARE SHADED ON THE LIGHTING PLANS. EMERGENCY SOURCE SHALL BE BATTERY BACKED BALLAST WITH MINIMUM 1400 LUMEN OUTPUT FOR A 90 MINUTE PERIOD, UNLESS NOTED OTHERWISE. PROVIDE UNSWITCHED CONDUCTORS FOR CHARGING CIRCUIT AS REQUIRED.
6. DESIGN OF ELECTRICAL REQUIREMENTS, FOR MECHANICAL EQUIPMENT, IS BASED ON MECHANICAL EQUIPMENT SPECIFIED. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR IF EQUIPMENT PURCHASED IS DIFFERENT FROM THAT SPECIFIED STILL MEETS DESIGN INTENT, INCLUDING BUT NOT LIMITED TO OVERCURRENT PROTECTION, LOCAL DISCONNECTING MEANS, WIRE SIZING AND DESIGN COSTS.
7. MISSOULA COUNTY HAS SOLE SOURCE AGREEMENT WITH ELECTRO CONTROLS FOR PROVIDING DELTA/ENTELI WEB DOOR ACCESS CONTROLS.

MOUNTING HEIGHTS DETAIL



SEE ARCHITECTURAL PLANS FOR ADDITIONAL MOUNTING HEIGHT REQUIREMENTS INFORMATION

- (A) STANDARD OUTLETS TO BE 17" AFF MINIMUM TO CENTERLINE OF LOWEST OUTLET (NOT CENTERLINE OF BOX)
- (B) KITCHEN AND BATHROOM COUNTERTOP OUTLETS/SWITCHES TO BE A MAXIMUM OF 45" AFF TO CENTERLINE OF HIGHEST OUTLET OF CONTROL.
- (C) WALL SWITCHES/THERMOSTATS TO BE A MAXIMUM OF 47" AFF TO THE HIGHEST CONTROL.
- (D) CONFIRM PANEL HEIGHTS. IF APARTMENT IS ADA OR BEING INSPECTED UNDER THE FAIR HOUSING ACT THEN MAX PANEL MOUNTING HEIGHT IS 48" AFF TO CENTERLINE OF TOP BREAKER OR OPERABLE DEVICE.

COMcheck Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Missoula County Sheriff's Dept.
Project Type: Alteration

Construction Site:
2415 Mullan Road
Missoula, Montana 59808

Owner/Agent:
Encompass Architecture
1535 Liberty Lane Suite 110b
Missoula, Montana 59808

Designer/Contractor:
Jaime Rodriguez
DC Engineering
123 W Spruce St.
Missoula, Montana 59802

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Police	8200	0.66	5412
		Total Allowed Watts =	5412

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Police (8200 sq.ft.)				
LED: (E): LED Other Fixture Unit 46W:	1	80	45	3600
LED: R1: LED Other Fixture Unit 13W:	1	6	12	72
			Total Proposed Watts =	3672

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jaime Rodriguez — Name - Title
Jaime Rodriguez — Signature
08-19-2024 — Date

Project Title: Missoula County Sheriff's Dept. Report date: 08/19/24
Data filename: Page 1 of 5

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REMODEL FOR:
MISSOULA COUNTY
SHERIFF'S DEPT.
2415 MULLAN ROAD, MISSOULA MT 59808

PLAN REVIEW: 08.20.2024
BID SET: XX.XX.2024

ELECTRICAL COVER SHEET

edinc Job #: 24.110

THIS SHEET IS INTENDED TO BE PRINTED IN COLOR TO FULLY UNDERSTAND THE INFORMATION BEING PRESENTED.

E0.0

Exhibit A

ELECTRICAL SPECIFICATIONS

PART 1 – GENERAL

1.1 SCOPE OF WORK

FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT AND PROVIDE ALL LABOR REQUIRED AND NECESSARY TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND ALL OTHER WORK AND MISCELLANEOUS ITEMS, NOT SPECIFICALLY MENTIONED, BUT REASONABLY INFERRED FOR A COMPLETE INSTALLATION, INCLUDING ALL ACCESSORIES AND APPURTENANCES REQUIRED FOR TESTING THE SYSTEM. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS THAT ALL SYSTEMS BE COMPLETE AND READY FOR OPERATION. THIS PROJECT INCLUDES GENERAL POWER, LIGHTING, AND COMMUNICATIONS SYSTEM RACEWAY. FIRE ALARM SYSTEM IS TO BE DESIGN/BUILD BY ELECTRICAL CONTRACTOR. COMMUNICATIONS SYSTEM CABLING AND HEAD-END EQUIPMENT IS BY ELECTRICAL CONTRACTOR.

1.2 CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL COMPLY WITH LATEST RULES, CODES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO OSHA, THE NATIONAL ELECTRICAL CODE, INTERNATIONAL BUILDING AND FIRE CODES, NFPA, AND OTHER APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS. CODE COMPLIANCE IS MANDATORY. NOTHING IN THESE DRAWINGS AND SPECIFICATIONS PERMITS WORK NOT CONFORMING TO THESE CODES. WHERE WORK IS SHOWN TO EXCEED MINIMUM CODE REQUIREMENTS, COMPLY WITH DRAWINGS AND SPECIFICATIONS.

1.3 LICENSE, FEES AND PERMITS

ARRANGE FOR REQUIRED INSPECTIONS AND PAY ALL LICENSE, PERMIT AND INSPECTION FEES.

1.4 CONDITIONS AT SITE

VISIT TO SITE IS REQUIRED OF ALL BIDDERS PRIOR TO SUBMISSION OF BID. ALL WILL BE HELD TO HAVE FAMILIARIZED THEMSELVES WITH ALL DISCERNIBLE CONDITIONS AND NO EXTRA PAYMENT WILL BE ALLOWED FOR WORK REQUIRED BECAUSE OF THESE CONDITIONS, WHETHER SPECIFICALLY MENTIONED OR NOT. LINES OF OTHER SERVICES THAT ARE DAMAGED AS A RESULT OF THIS WORK SHALL PROMPTLY BE REPAIRED AT NO EXPENSE TO THE OWNER TO COMPLETE SATISFACTION OF THE OWNER.

1.5 SAFETY

THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK.

1.6 GUARANTEE

GUARANTEE THE INSTALLATION FREE FROM DEFECTS OF WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER DATE OF CERTIFICATE OF FINAL PAYMENT AND PROMPTLY REMEDY ANY DEFECTS DEVELOPING DURING THIS PERIOD, WITHOUT CHARGE.

1.7 SUBSTITUTIONS

WHEREVER POSSIBLE, MORE THAN ONE MANUFACTURER HAS BEEN LISTED FOR VARIOUS ITEMS OF EQUIPMENT, ANY ONE OF WHICH WILL BE ACCEPTABLE. BASE THE BID ON USE OF MATERIALS SPECIFIED. IF, AFTER AWARD OF THE CONTRACT, A SUBSTITUTE IS PROPOSED, THE REQUEST FOR PERMISSION TO SUBSTITUTE SHALL BE ACCOMPANIED WITH A STATEMENT OF THE AMOUNT OF MONEY TO BE RETURNED TO THE CONTRACT IF THE SUBSTITUTION IS PERMITTED. IF A SUBSTITUTE ITEM IS PERMITTED, AND ANY REDESIGN EFFORT IS THEREBY NECESSITATED, THE REQUIRED REDESIGN SHALL BE AT THE CONTRACTOR'S EXPENSE.

1.8 SHOP DRAWINGS AND MATERIALS LISTS

SUBMIT TO THE ENGINEER, DIGITAL COPIES OF COMPLETE SHOP DRAWINGS AND MATERIALS LIST (SUBMITTAL PACKAGES) FOR REVIEW AFTER AWARD OF CONTRACT. EACH SECTION WITHIN A SUBMITTAL PACKAGE MUST BE CLEARLY IDENTIFIED AND ANY DEVIATIONS FROM SPECIFICATIONS MUST BE CLEARLY IDENTIFIED WITHIN THE SECTION UNDER A PROMINENT HEADING MARKED "DEVIATIONS".

1.9 WORKMANSHIP

ONLY QUALITY WORKMANSHIP WILL BE ACCEPTED. HAPHAZARD OR POOR INSTALLATION PRACTICE WILL BE CAUSE FOR REJECTION OF WORK.

1.10 COORDINATION

COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICT AND TO PROVIDE CORRECT ROUGH-IN AND CONNECTION FOR EQUIPMENT FURNISHED UNDER OTHER TRADES THAT REQUIRE ELECTRICAL CONNECTIONS. VERIFY EQUIPMENT DIMENSIONS AND REQUIREMENTS WITH PROVISIONS SPECIFIED UNDER THIS SECTION. CHECK ACTUAL JOB CONDITIONS BEFORE FABRICATING WORK. REPORT NECESSARY CHANGES IN TIME TO PREVENT NEEDLESS WORK.

1.11 CUTTING AND PATCHING

ALL CUTTING AND PATCHING REQUIRED FOR WORK OF THIS DIVISION IS INCLUDED HEREIN. COORDINATION WITH GENERAL CONTRACTOR AND OTHER TRADES IS IMPERATIVE.

1.12 SITE CLEANUP

A. AFTER ALL OTHER WORK HAS BEEN ACCOMPLISHED, CLEAN ALL EXPOSED CONDUIT, FIXTURES, EQUIPMENT AND SUPPORTS. TOUCH UP PAINT ON ANY EQUIPMENT SCRAPED, SCRATCHED OR DAMAGED DURING CONSTRUCTION.

B. LEAVE ALL AREAS INVOLVING ELECTRICAL WORK IN A CONDITION SATISFACTORY TO THE OWNER. REMOVE ALL CRATES, CARDBOARD, PACKING MATERIAL, WASTE MATERIAL, AND OTHER DEBRIS LEFT OVER FROM CONSTRUCTION.

END OF SECTION

PART 2 – PRODUCTS

2.1 MATERIAL APPROVAL

ALL MATERIALS MUST BE NEW AND BEAR U.L. LABEL. MATERIALS THAT ARE NOT COVERED BY UL TESTING STANDARDS SHALL BE TESTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY OF A GOVERNMENTAL AGENCY APPROVED BY THE AUTHORITY HAVING JURISDICTION.

2.2 WIRES AND CABLES

A. CONDUCTORS FOR 600V SYSTEMS AND BELOW SHALL BE: SOLID COPPER FOR CONDUCTORS #10AWG AND SMALLER, CONDUCTORS LARGER THAN #10AWG SHALL BE STRANDED COPPER, ALUMINUM CONDUCTORS WITH EQUIVALENT AMPACITY AS COPPER CONDUCTORS INDICATED ON DESIGN DRAWINGS ARE ACCEPTABLE.

B. INSULATION SHALL BE THWN FOR WET LOCATIONS AND THHN FOR DRY LOCATIONS.

2.3 OUTLET BOXES, JUNCTION AND PULL BOXES

A. OUTLET BOXES: HOT-DIPPED, GALVANIZED OR SHERADIZED. SIZE AS REQUIRED WITH 4" SQUARE MINIMUM, FOR FLUSH MOUNTED DEVICES AND LIGHTING FIXTURES.

B. JUNCTION AND PULL BOXES: HOT DIPPED, GALVANIZED OR SHERADIZIED, SIZED ACCORDING TO CODE. LARGER JUNCTION AND PULL BOXES SHALL BE FABRICATED FROM SHEET STEEL, SIZED ACCORDING TO CODE, WITH SCREW-ON COVERS, FINISHED GRAY BAKED ENAMEL.

C. INSTALL WHERE SHOWN AND/OR NECESSARY TO TERMINATE, TAP-OFF OR REDIRECT MULTIPLE CONDUIT RUNS.

D. INSTALL PULL BOXES WHERE NECESSARY IN RACEWAY SYSTEM TO FACILITATE CONDUCTOR INSTALLATION.

E. INSTALL IN CONDUIT RUNS AT LEAST EVERY 150 FEET OR AFTER THE EQUIVALENT OF THREE RIGHT-ANGLE BENDS.

F. USE OUTLET BOXES AS JUNCTION AND PULL BOXES WHEREVER POSSIBLE AND ALLOWED BY APPLICABLE CODES.

G. INSTALLED BOXES SHALL BE ACCESSIBLE.

PLASTIC OUTLET BOXES MAY BE UTILIZED WHERE NM CABLE IS APPROVED PER SECTION 2.8(B) BELOW.

2.4 WIRING DEVICES

A. ALL WIRING DEVICES OF ANY ONE GENERAL TYPE SHALL BE OF THE SAME MANUFACTURER AND SHALL MATCH THROUGHOUT.

B. WIRING DEVICES SHALL BE AS MANUFACTURED BY HUBBELL, GE, LEVITON, P & S, OR BRYANT. NO SUBSTITUTIONS.

C. COVER PLATES SHALL BE AS MANUFACTURED BY ARROW HART, SIERRA, LEVITON OR MULLBURRY.

D. WHERE INDICATED, PROVIDE GENERAL-DUTY, DUPLEX RECEPTACLES, GROUND-FAULT CIRCUIT INTERRRUPTERS: GROUNDING TYPE UL-RATED CLASS A, GROUP 1, 20 AMPERES RATING, 120 VOLTS, 60Hz: WITH SOLID-STATE GROUND-FAULT SENSING AND SIGNALING: WITH 5 MILLIAMPERES GROUND-FAULT TRIP LEVEL:

E. SWITCHES SHALL BE FLUSH WALL TYPE, COLOR SELECTION BY ARCHITECT/OWNER.

F. CONVENIENCE RECEPTACLES SHALL BE, FLUSH WALL TYPE, COLOR SELECTION BY ARCHITECT/OWNER.

2.5 GROUNDING

GROUND AND BOND AS PER NEC ARTICLE 250. PROVIDE INSULATED GREEN GROUND WIRE IN ALL RACEWAYS.

2.6 WIRE CONNECTORS

A. FOR WIRE SIZES #8 AWG AND SMALLER: INSULATED PRESSURE TYPE (WITH LIVE SPRING) RATED 105°C, 600V, FOR BUILDING WIRING AND 1000V IN FIXTURES, SCOTCHLOK OR IDEAL.

B. FOR WIRE SIZES #6 AWG AND LARGER: T&B OR EQUIVALENT COMPRESSION TYPE WITH 3M #33+ OR PLYMOUTH "SLIPKNOT GREY" TAPE INSULATION.

2.7 PANELBOARD

PANELBOARDS SHALL BE AS MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, SIEMENS, OR CUTLER HAMMER. PROVIDE PANELBOARDS AS INDICATED ON SCHEDULES, WITH THE FOLLOWING FEATURES: HARD-DRAWN COPPER BUS (98 PERCENT CONDUCTIVITY)OR UPON APPROVAL ALUMINUM BUS, MECHANICAL-TYPE MAIN AND NEUTRAL LUGS, NEUTRAL BUS RATED 100 PERCENT OF PHASE BUS, GROUND BUS BONDED TO ENCLOSURE, BOLT-ON MOLDED-CASE THERMAL-MAGNETIC BREAKERS.

2.8 RACEWAYS

A. OUTDOORS:
EXPOSED: RIGID STEEL OR INTERMEDIATE METAL CONDUIT
CONCEALED: RIGID STEEL OR INTERMEDIATE METAL CONDUIT
UNDERGROUND: RIGID NON-METALLIC CONDUIT
TO VIBRATING EQUIPMENT: LIQUID-TIGHT FLEXIBLE METAL CONDUIT

B. INDOORS:
EXPOSED: ELECTRICAL METALLIC TUBING, RIGID STEEL CONDUIT, PVC-COATED RIGID STEEL CONDUIT
CONCEALED: ELECTRIC METALLIC TUBING, METAL CLAD, NM CABLE
DAMP OR WET LOCATIONS: RIGID STEEL CONDUIT
TO VIBRATING EQUIPMENT: FLEXIBLE METAL CONDUIT

2.9 COMMUNICATIONS AND DATA

CONTRACTOR/INSTALLER IS REQUIRED TO DO A SITE SURVEY/ASSESSMENT/WALK THOUGH WITH I.T. STAFF. CONTRACTOR/INSTALLER IS REQUIRED TO INCORPORATE TIA-568C.0-TIA-568.4 STANDARDS FOR INSTALLATION AND CERTIFICATION. CONTRACTOR MUST USE SUPERIOR ESSEX CABLE CAT 6 CABLE. INSTALLATION REQUIRES USE OF METAL J HOOKS OR BRIDAL RINGS SECURELY FASTENED TO THE BUILDING EVERY 4-6 FEET DEPENDING ON BUILDING CONSTRUCTION AND CABLE LADDER TRAY (WERE APPLICABLE). INSTALLATION IS TO FOLLOW STANDARDS WITH T568B TERMINATION. CONDUIT, PLASTIC WIRE MOLD, ENT ARE TO BE USED/INSTALLED WHERE NEEDED BASED ON SITE SURVEY AND PROJECT. CONTRACTOR/INSTALLER IS TO PROVIDE 15 YEAR WARRANTY ON CERTIFIED STRUCTURED CABLING INSTALLATION. MINIMUM OF 6 FOOT SERVICE LOOP AT EACH PATCH PANEL TERMINATION POINT AND 18 INCHES AT REMOTE/CUSTOMER TERMINATING POINT. HOOK AND LOOP CABLE TIES REQUIRED.

2.10 MODULAR CONNECTORS (2 WIRE INSTALLATION)

A. ICC:
ICC CATEGORY 6 EZ MODULAR CONNECTOR FIELD END TERMINATION POINT (FACE PLATE AT END USER WORK AREA).
ICC CATEGORY 6 EZ OR HD JACKS FOR BLANK PATCH PANEL IN RACK.

B. ICC PATCH PANEL CAT6:
48 PORT PATCH PANEL – 110 IDC TERMINATION
24 PORT PATCH PANEL – 110 IDC TERMINATION

C. OR BLANK PATCH PANEL WITH 24 PORTS FOR ABOVE ICC EZ/HD JACKS

2.11 COMMUNICATIONS AND DATA WIRE

A. SUPERIOR ESSEX WIRE PART NUMBER: 77-246-2A (CMR – STANDARD RISER).

B. SUPERIOR ESSEX WIRE PART NUMBER: 77-246-2B (CMP-FEP FOR LOW SMOKE PLENUM).

C. SUPERIOR ESSEX WIRE PART NUMBER: 77-246-21 OUTDOOR APPLICATIONS (CMR/CMX NOT RATED FOR OUTDOOR/WET CONDUIT OR DIRECT BURIAL INSTALLATIONS)

2.12 COMMUNICATIONS AND DATA TESTING PROCEDURES

TESTING PROCEDURES REQUIRED FROM THE CONTRACTOR/INSTALLER ARE A PERMANENT LINK TEST USING CERTIFIED, CALIBRATED NETWORK SCANNING/TESTING EQUIPMENT. THE PERMANENT LINK TEST IS FOR THE CABLE FROM THE PATCH PANEL TO THE RJ-45 JACK IN THE FACEPLATE FOR A MAXIMUM OF 90 METERS/295 FT. TESTING PARAMETERS INCLUDE: WIRE MAP, RESISTANCE, LENGTH, CAPACITANCE, NEXT, INSERTION/ATTENUATION LOSS, ACR, ACRF, RETURN LOSS, IMPEDANCE DELAY AND SKEW, FEXT, PSNEXT, PS ACR-N, HEADROOM, POWER SUM ACR-F (ELFEXT), PROPAGATION DELAY, ACR, AND PSACR. A DIGITAL COPY OF TEST RESULTS TO BE SUBMITTED TO MISSOULA COUNTY. A COMPLETED NETWORK NETWORK DIAGRAM IS REQUIRED. A DRAWING WILL BE MADE AVAILABLE PRIOR TO INSTALLATION AND A COMPLETED DRAWING SHOULD BE MADE AVAILABLE AT THE COMPLETION OF THE JOB INDICATING LOCATION AND JACK/PATCH PANEL NUMBERS.

END OF SECTION

PART 3 – EXECUTION

3.1 – GENERAL

A. ELECTRIC SYSTEM LAYOUTS INDICATED ON THE DRAWINGS ARE GENERALLY DIAGRAMMATIC, BUT SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT.

B. CONSULT ALL OTHER DRAWINGS. VERIFY SCALES AND REPORT ANY DIMENSIONAL DISCREPANCIES OR OTHER CONFLICTS TO ARCHITECT BEFORE SUBMITTING BID.

C. ALL HOME RUNS ARE INDICATED AS STARTING FROM THE DEVICE NEAREST THE PANEL AND CONTINUING IN THE GENERAL DIRECTION OF THAT PANEL. CONTINUE SUCH CIRCUITS TO THE PANEL AS THOUGH THE ROUTES WERE COMPLETELY INDICATED.

D. AVOID CUTTING AND BORING HOLES THROUGH STRUCTURE OR STRUCTURAL MEMBERS WHEREVER POSSIBLE. OBTAIN PRIOR APPROVAL OF ARCHITECT AND CONFORM TO ALL STRUCTURAL REQUIREMENTS WHEN CUTTING OR BORING THE STRUCTURE IS NECESSARY AND PERMITTED.

3.2 – ELECTRICAL GROUNDING

GROUND ALL ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC. IN ADDITION PROVIDE A SEPARATE GROUND WIRE FOR ALL FEEDERS AND BRANCH CIRCUITS.

3.3 – ELECTRICAL EQUIPMENT INSTALLATION

A. HEAD ROOM MAINTENANCE: IF MOUNTING HEIGHTS OR OTHER LOCATION CRITERIA ARE NOT INDICATED, ARRANGE AND INSTALL COMPONENTS AND EQUIPMENT TO PROVIDE THE MAXIMUM POSSIBLE HEADROOM.

B. MATERIALS AND COMPONENTS: INSTALL LEVEL, PLUMB, AND PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, UNLESS OTHERWISE INDICATED.

C. EQUIPMENT: INSTALL TO FACILITATE SERVICE, MAINTENANCE, AND REPAIR OR REPLACEMENT OF COMPONENTS. CONNECT FOR EASE OF DISCONNECTING, WITH MINIMUM INTERFERENCE WITH OTHER INSTALLATIONS.

D. RIGHT OF WAY: COORDINATE INSTALLATION OF ELECTRICAL DEVICES WITH OTHER TRADES.

3.4 – RACEWAY AND CABLE INSTALLATION

A. ABOVE GRADE: RIGID STEEL OR IMC IN WET LOCATIONS, WHERE SUBJECT TO MECHANICAL DAMAGE AND IN CONCRETE OR BLOCK WALLS, EMT IN OTHER LOCATIONS WHERE PERMITTED BY CODE. METAL CLAD ONLY WHERE ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.

B. CONCEAL RACEWAYS AND CABLES WITHIN FINISHED WALLS, CEILINGS, AND FLOORS, UNLESS OTHERWISE INDICATED.

C. INSTALL RACEWAYS AND CABLES AT LEAST SIX (6) INCHES AWAY FROM PARALLEL RUNS OF FLUES AND STEAM OR HOT-WATER PIPES. LOCATE HORIZONTAL RACEWAY RUNS ABOVE WATER AND STEAM PIPING.

D. USE TEMPORARY RACEWAY CAPS TO PREVENT FOREIGN MATTER FROM ENTERING.

E. MAKE CONDUIT BENDS AND OFFSETS SO INSIDE DIAMETER IS NOT REDUCED. KEEP LEGS OF BENDS IN THE SAME PLANE AND STRAIGHT LEGS OFFSETS PARALLEL, UNLESS OTHERWISE INDICATED.

F. USE RACEWAY FITTINGS AND CABLE FITTINGS COMPATIBLE WITH RACEWAYS AND CABLES AND SUITABLE FOR THIS APPLICATION AND LOCATION.

G. INSTALL RACEWAYS EMBEDDED IN SLABS IN MIDDLE THIRD OF SLAB THICKNESS WHERE PRACTICAL, AND LEAVE AT LEAST 1-INCH OF CONCRETE COVER.

1. SECURE RACEWAYS TO REINFORCING RODS TO PREVENT SAGGING OR SHIFTING DURING CONCRETE PLACEMENT.
2. SPACE RACEWAYS LATERALLY TO PREVENT VOIDS IN CONCRETE.
3. INSTALL CONDUIT LARGER THAN 1-INCH TRADE SIZE PARALLEL TO OR AT RIGHT ANGLES TO MAIN REINFORCEMENT. WHERE CONDUIT IS AT RIGHT ANGLES TO REINFORCEMENT, PLACE CONDUIT CLOSE TO SLAB SUPPORT.
4. TRANSITION FROM NONMETALLIC TUBING TO RIGID STEEL CONDUIT, OR IMC BEFORE RISING ABOVE FLOOR.

H. MAKE EXPOSED BENDS IOR BANKED RUNS FROM SAME CENTERLINE IN ORDER THAT BENDS ARE PARALLEL. USE FACTORY ELBOWS ONLY WHERE ELBOWS CAN BE INSTALLED PARALLEL; OTHERWISE, PROVIDE FIELD BENDS FOR EXPOSED PARALLEL RACEWAYS.

I. INSTALL PULL WIRES IN EMPTY RACEWAYS. USE NO. 14 AWG ZINC-COATED STEEL OR MONOFILAMENT PLASTIC LINE WITH NOT LESS THAN 200-LB TENSILE STRENGTH. LEAVE AT LEAST 12-INCHES OF SLACK AT EACH END OF PULL WIRE.

J. INSTALL TELEPHONE AND SIGNAL SYSTEM RACEWAYS, 2-INCH TRADE SIZE AND SMALLER, IN MAXIMUM LENGTHS OF 150 FEET (45 M) AND WITH A MAXIMUM OF TWO 90-DEGREE BENDS OR EQUIVALENT. SEPARATE LENGTHS WITH PULL OR JUNCTION BOXES WHERE NECESSARY TO COMPLY WITH THESE REQUIREMENTS, IN ADDITION TO REQUIREMENTS ABOVE.

K. CONNECT MOTORS AND EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT WITH A MAXIMUM OF 72-INCH FLEXIBLE CONDUIT. INSTALL LFMC IN WET OR DAMP LOCATIONS. INSTALL A SEPARATE GROUND CONDUCTOR ACROSS FLEXIBLE CONNECTIONS.

L. SET FLOOR BOXES LEVEL AND TRIM AFTER INSTALLATION TO FIT FLUSH TO FINISHED FLOOR SURFACE.

M. CONDUCTORS: TYPE THHN/THWN INSULATED CONDUCTORS IN RACEWAY.

N. INSTALL SPLICES AND TAPS THAT ARE COMPATIBLE WITH CONDUCTOR MATERIAL AND THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN UNSPLICED CONDUCTORS.

O. INSTALL WIRING AT OUTLETS WITH AT LEAST 12 INCHES OF SLACK CONDUCTOR AT EACH OUTLET.

P. CONNECT OUTLET AND COMPONENT CONNECTIONS TO WIRING SYSTEMS AND TO GROUND. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS, ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A.

3.5 IDENTIFICATION

A. PROVIDE ENGRAVED 3 LAYER LAMINATE PLASTIC NAMEPLATES FOR PANELBOARDS, DISCONNECT SWITCHES AND ALL SIMILAR DEVICES.

B. COLOR-CODE 240/120-VOLT SYSTEM SECONDARY SERVICE, FEEDER, AND BRANCH-CIRCUIT CONDUCTORS THROUGHOUT THE SECONDARY ELECTRICAL SYSTEM AS FOLLOWS:

1. PHASE A: BLACK
2. PHASE B: RED
3. NEUTRAL: WHITE
4. GROUND: GREEN

3.6 STARTUP SERVICES

CONTRACTOR SHALL ALLOT A MINIMUM OF 2 HOURS FOR STARTUP SERVICES. START AND OPERATE ALL SYSTEMS AS REQUIRED BY THE OWNER. INSTRUCT OWNER'S REPRESENTATIVE ON THE PROPER OPERATION AND MAINTENANCE OF THE SYSTEMS AND EQUIPMENT.

3.7 OPERATING AND MAINTENANCE INSTRUCTIONS (O+M MANUAL)

PREPARE THREE (3) COPIES FOR ALL EQUIPMENT.

3.8 RECORD AS-BUILTS

PROVIDE (1) CLEAN, LEGIBLE COPY OF DRAWINGS TO ENGINEER INDICATING ALL DEVIATIONS FROM INITIAL DESIGN (AS-BUILT CONDITIONS).

END OF SECTION

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REMODEL FOR:
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SHERIFF'S DEPT.
2415 MULLAN ROAD, MISSOULA MT 59808

PLAN REVIEW: 08.20.2024
BID SET: XX.XX.2024

ELECTRICAL SPECIFICATIONS

edinc Job #: 24.110

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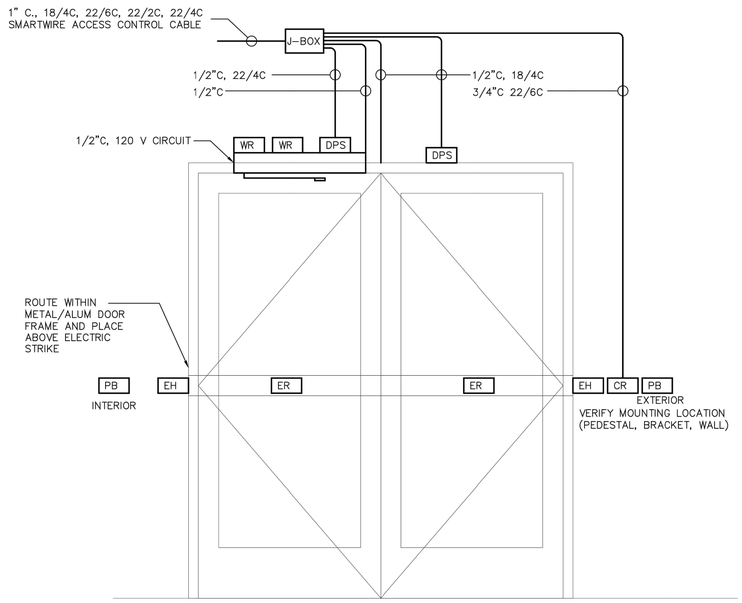
E0.1

Exhibit A



DPS DOOR POSITION SWITCH

CR CARD READER

EH ELECTRIFIED HINGE OR POWER TRANSFER TO THE DOOR

ER ELECTRIFIED RIM DEVICE, PANIC BAR W/ LATCH POSITION CONTACT

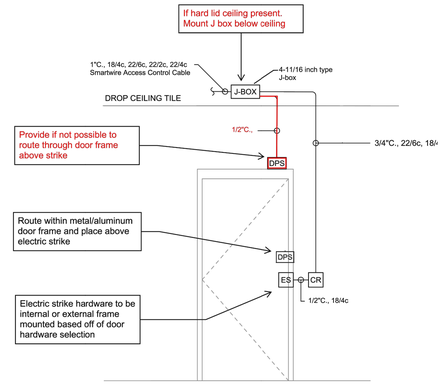
PB WIRELESS ACTUACTOR

WR WIRELESS RECEIVER

ROUGH IN SUITABLE FOR EXTERIOR DOUBLE DOOR TYPES THAT ARE EQUIPPED WITH A HANDICAP DOOR OPERATOR, TO INCLUDE THOSE WITH PANIC HARDWARE AND REMOVABLE MULLION TYPE HARDWARE. EXTERIOR DOOR ACTUATOR TO BE CONFIGURED SO THAT IT IS DISABLED WHEN DOOR IS ELECTRONICALLY LOCKED. HOME RUM ENCLOSED RACEWAYS NOT NECESSARY. 1" C FEEDING J-BOX CAN END IN ACCESSIBLE SPACE AND A FREE AIR RACEWAY CAN THEN BE USED.

1 EXTERIOR DOUBLE DOOR WITH HANDICAP OPERATOR

SCALE: NTS



DPS Door position switch.

CR Card reader.

ES Electric strike.

2 INTERIOR / EXTERIOR SINGLE DOOR WITH PANIC OPERATOR

SCALE: NTS

DPS Door position switch.

CR Card reader.

ES Electric strike.

Wireless receiver.

PB Wireless actuator.

3 EXTERIOR SINGLE DOOR WITH HANDICAP OPERATOR

SCALE: NTS

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REMODEL FOR:
MISSOULA COUNTY
SHERIFF'S DEPT.
2415 MULLAN ROAD, MISSOULA MT 59808

PLAN REVIEW: 08.20.2024
BID SET: XX.XX.2024

DOOR HARDWARE DETAILS

edinc Job #: 24.110

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E0.2

Exhibit A

GENERAL NOTES:

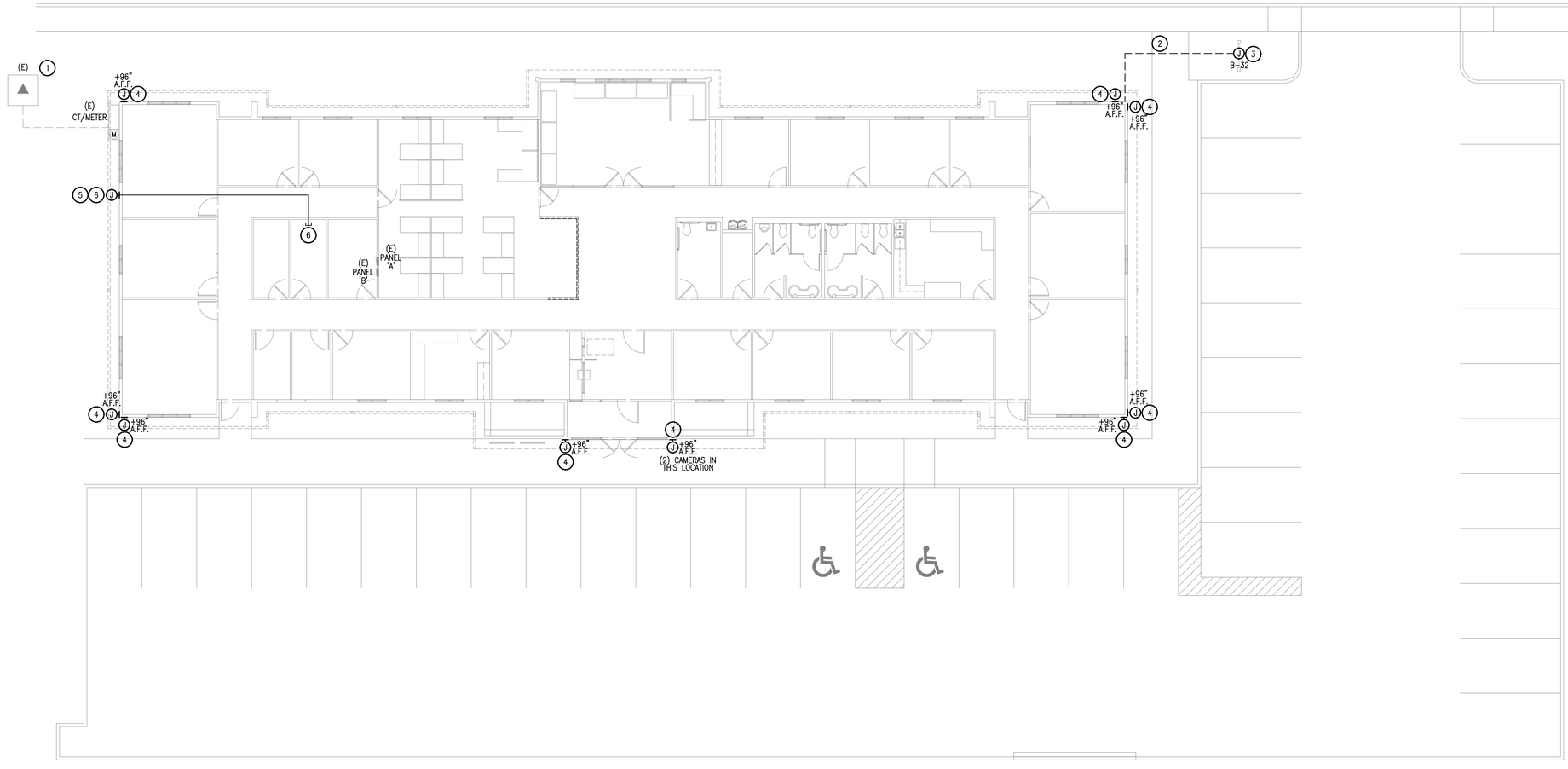
A. CONTRACTOR SHALL CONTACT UNDERGROUND UTILITY LOCATING SERVICE PRIOR TO EXCAVATION FOR ELECTRICAL WORK.

B. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL OTHER SITE DISCIPLINES INCLUDING BUT NOT LIMITED TO TRADES ASSOCIATED WITH WATER, SEWER, AND GAS INSTALLATIONS.

C. ELECTRICAL CONTRACTOR SHALL COORDINATE UTILITY WORK REQUIRED BY LOCAL ELECTRIC UTILITY AND SHALL FORWARD TO LOCAL ELECTRIC UTILITY WORK ORDER INVOICE TO OWNER FOR PAYMENT BY OTHERS.

KEYED NOTES:

1. APPROXIMATE EXISTING UTILITY TRANSFORMER LOCATION. VERIFY EXACT LOCATION WITH JOINT TRENCH DRAWINGS AND/ OR UTILITY SERVICE PLANS.
2. REFER TO DETAIL 2 ON THIS SHEET FOR TYPICAL UNDERGROUND CONDUIT DETAIL.
3. PROVIDE AND INSTALL 1"CO FROM PANEL 'B' TO EXTERIOR SIGN. JUNCTION BOX FOR FUTURE EXTERIOR SIGN. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER.
4. PROVIDE AND INSTALL CONDUIT, J-BOX, AND PULL-STRING FOR CAMERAS. CAT6 PULLED BY CONTRACTOR. CONTRACTOR TO TERMINATE AND TEST CAT6 CABLE. MISSOULA COUNTY TO PROVIDE CAMERAS. ALL CAT6 RUNS TO COMPLY WITH PROVIDED MISSOULA COUNTY SPECIFICATIONS. COORDINATE ALL REQUIREMENTS WITH CAMERA SUPPLIER PRIOR TO ROUGH-IN.
5. PROVIDE AND INSTALL 16"X20"X4" NEMA 3R JUNCTION BOX LOCATED NEAR EXISTING CT/METER FOR FUTURE FIBER CABLE.
6. PROVIDE AND INSTALL 1"CO FROM NEW JUNCTION BOX TO I.T. ROOM.



1 ELECTRICAL SITE PLAN
SCALE: 1" = 10'-0"

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2415 MULLAN ROAD, MISSOULA MT 59808

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ELECTRICAL SITE PLAN

edinc Job #: 24.110

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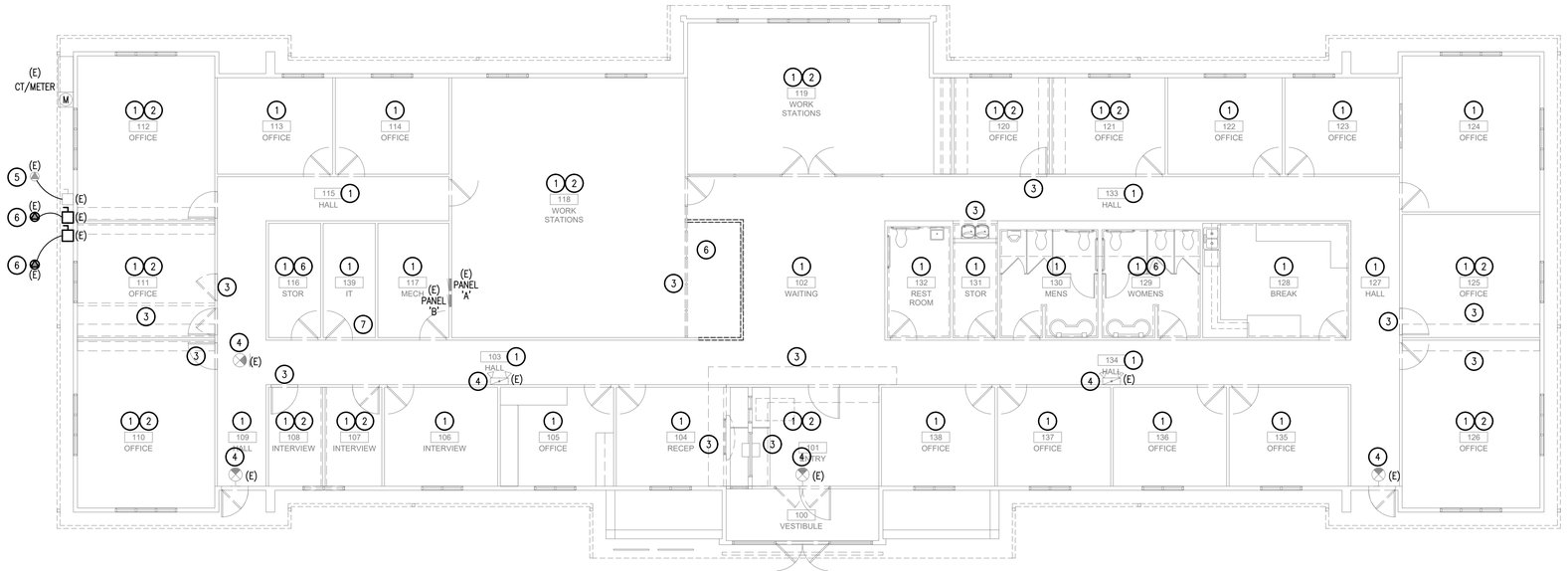
E1.0

Exhibit A



1 ELECTRICAL DEMOLITION PLAN

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

GENERAL NOTES:

A. COORDINATE DEMOLITION REQUIREMENTS WITH GENERAL CONTRACTOR.

B. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL ELECTRICAL EQUIPMENT DEMOLISHED WITH THIS PROJECT UNLESS OTHERWISE NOTED TO BE RETURNED TO OWNER.

C. PROVIDE UPDATED TYPED PANEL SCHEDULING INDICATING "SPARES" FOR REMOVED CIRCUITS.

D. REMOVE ALL ELECTRICAL ITEMS SHOWN DASHED. UNLESS OTHERWISED INDICATED REMOVE WIRE BACK TO OVERCURRENT PROTECTIVE DEVICE OR TO UPSTREAM DEVICE REMAINING. MAINTAIN CIRCUITING/ CONTINUITY TO EXISTING DEVICES NOT AFFECTED BY DEMOLITION. CONCEALED CONDUIT MAY ABANDON IN PLACE. SURFACE CONDUIT NO LONGER USED SHALL BE REMOVED.

E. SEE ARCHITECTURAL PLANS FOR AREAS OF GENERAL DEMOLITION. REMOVE ELECTRICAL EQUIPMENT, OUTLETS, LIGHTING FIXTURES, ETC. IN AREAS OF GENERAL DEMOLITION EXTEND AND RECONNECT CIRCUITS AS NECESSARY TO MAINTAIN POWER TO AREAS ADJACENT TO GENERAL DEMOLITION CONNECT NEW LIGHTING AND POWER TO EXISTING CIRCUITS WHERE INDICATED ON THE PLANS.

F. SEE MECHANICAL PLANS FOR MECHANICAL EQUIPMENT DEMOLITION. REMOVE CONDUIT, WIRING, CONTROLS, ETC. ASSOCIATED WITH MECHANICAL EQUIPMENT BEING DEMOLISHED. REMOVE EXPOSED CONDUIT. REMOVE WIRING BACK TO PANELBOARD(S) CAP UNUSED CONCEALED CONDUIT.

G. PROVIDE EXTENSION RING, COVER PLATES OR ACCESS DOORS AS NECESSARY TO MAINTAIN ACCESS TO EXISTING WIRING, WHERE REQUIRED BY NEW CONSTRUCTION.

H. FIELD VERIFY LOCATIONS OF EXISTING OUTLETS WHERE NEW CONSTRUCTION CONFLICTS WITH EXISTING CIRCUITS. REMOVE WIRING DEVICES OR RELOCATE DEVICES AS REQUIRED. WHETHER OR NOT SPECIFICALLY INDICATED.

I. PROVIDE BLANK COVER PLATES ON JUNCTION BOXES WHICH ARE NOT REUSED.

J. PROVIDE CUTTING AND PATCHING AS REQUIRED. WHETHER OR NOT SPECIFICALLY INDICATED.

K. FIELD VERIFY EXISTING CIRCUITING AND MAKE ADJUSTMENTS AS NECESSARY TO CIRCUITING SHOWN ON THE PLANS, AS REQUIRED BY FIELD CONDITIONS.

L. IF AN ITEM IS TO BE REPLACED. THE CONTRACTORS SHALL RECONNECT ALL EXISTING CONNECTIONS.

M. SOME EXISTING MECHANICAL EQUIPMENT WILL BE REUSED REMOVE/ REUSE EXISTING CIRCUITS AS REQUIRED. RE: POWER PLANS FOR EXISTING MECHANICAL EQUIPMENT TO BE REUSED.

KEYED NOTES:

1. EXISTING LIGHTING FIXTURES IN THIS AREA ARE TO REMAIN.
2. EXISTING LIGHT FIXTURES IN THIS SPACE TO BE REMOVED. PROTECT AND RETAIN FOR RE-INSTALLATION. INTERCEPT AND EXTEND EXISTING LIGHTING CIRCUIT FOR EXISTING AND NEW PORTION IN OFFICES. REFER TO SHEET E2.1L.
3. DEMO ALL POWER AND DATA IN WALLS TO BE REMOVED.
4. EXISTING EGRESS LIGHT FIXTURE IS TO REMAIN. FIELD VERIFY EXISTING EGRESS LIGHT FIXTURE IS OPERABLE. IF NOT OPERABLE REPLACE IN PLACE WITH SIMILAR FIXTURE.
5. EXISTING MECHANICAL EQUIPMENT IS TO REMAIN.
6. EXISTING MECHANICAL EQUIPMENT ARE BEING REPLACE IN PLACE. INTERCEPT AND EXTEND EXISTING CIRCUITS AND CONNECT TO NEW MECHANICAL EQUIPMENT. REFER TO SHEET E2.1P.
7. DEMO EXISTING ALARM INTRUSION SYSTEM. DEMO EXISTING CONTROLLER, EXISTING FIELD DEVICES AND EXISTING ACCESSIBLE FIELD WIRING.

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ELECTRICAL DEMOLITION PLAN

edinc Job #: 24.110

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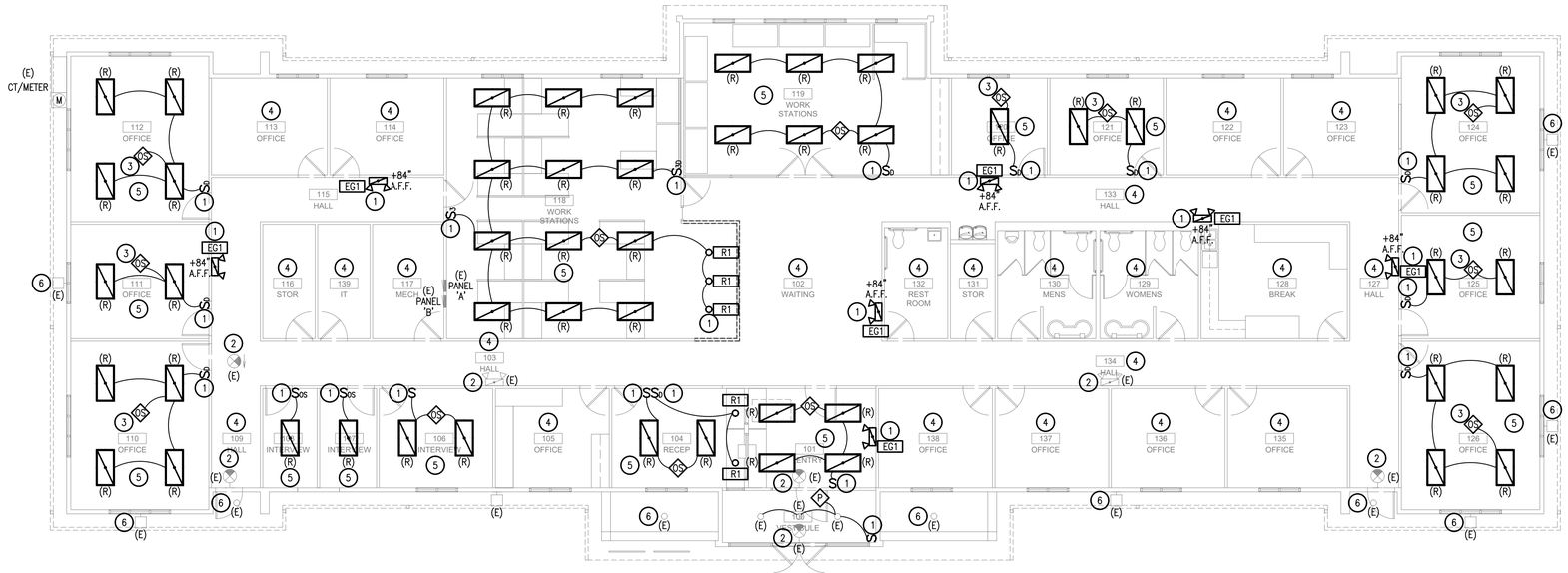
E2.1D

Exhibit A



1 ELECTRICAL LIGHTING PLAN

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

GENERAL NOTES:

A. NUMBER ADJACENT TO HOME RUN OR DEVICE INDICATES POLE POSITION WITHIN PANEL TO WHICH DEVICES SHALL BE CIRCUITED.

B. CONTRACTOR SHALL COORDINATE ELECTRICAL SYSTEMS INSTALLATION TO AVOID INTERFERENCE WITH DUCTWORK/PIPING AND OTHER TRADES. CONTRACTOR SHALL COORDINATE PLACEMENT OF FIXTURES WITH ARCHITECTURAL REFLECTED CEILING PLAN. LOCATION OF FIXTURES SHALL GOVERN WITH CONFLICTS WITH SUPPLY/EXHAUST DIFFUSERS.

C. ALL FIXTURES WITHIN A GIVEN ROOM/AREA ARE THE SAME TYPE AS THE SINGLE FIXTURE CALLED OUT WITHIN THAT ROOM/AREA, UNLESS OTHERWISE NOTED.

D. PROVIDE LOCAL UNSWITCHED LIGHTING CIRCUIT TO ALL EXIT SIGNS AND EMERGENCY LIGHTING UNITS WHETHER OR NOT A CIRCUIT NUMBER OR CONNECTION IS SHOWN.

E. FURNISH/INSTALL FIRE RATED ASSEMBLIES OVER ALL RECESSED CAN LIGHTS IN RATED CEILINGS. ASSEMBLY IS TO MATCH THE RATING OF THE CEILING SERVED.

F. ALL KEYED NOTES MAY NOT APPEAR ON ALL SHEETS.

G. ALL VERTICAL DIMENSIONS ARE ABOVE FINISH FLOOR, A.F.F., UNLESS OTHERWISE NOTED.

H. ROUTE ALL EXTERIOR LIGHTING THROUGH A LIGHTING CONTACTOR, TIMECLOCK, AND PHOTOCELL.

I. REFER TO SHEET E3.0 FOR LUMINAIRE AND PANEL SCHEDULES.

KEYED NOTES:

1. INTERCEPT AND EXTEND EXISTING LIGHTING CIRCUIT IN NEW ROOM PORTIONS. CONTRACTOR TO PROVIDE NEW DEVICES AND NEW FACEPLATE COVERS FOR ALL EXISTING DEVICES, LIGHT FIXTURES, AND FACEPLATES BEING REPLACE IN PLACE.
2. EXISTING EGRESS LIGHT FIXTURE IS TO REMAIN. FIELD VERIFY EXISTING EGRESS LIGHT FIXTURE IS OPERABLE. IF NOT OPERABLE REPLACE IN PLACE WITH SIMILAR FIXTURE.
3. PROVIDE 2-POLE OCCUPANCY SENSOR TO COMBINE LIGHTING AND RECEPTACLES INTO ONE DEVICE. OCCUPANCY SENSOR TO CONTROL 50% OF ALL NEW 15/20 AMP RECEPTACLES PER IECC 405.11, 405.11.1.
4. EXISTING LIGHT FIXTURES IN THIS AREA ARE TO REMAIN.
5. REUSE AND RECONNECT EXISTING LIGHT FIXTURES. NO NEW FIXTURES.
6. EXISTING EXTERIOR LIGHT FIXTURE IS TO REMAIN. FIELD VERIFY EXISTING EXTERIOR LIGHT FIXTURE IS OPERABLE. IF NOT OPERABLE REPLACE IN PLACE WITH SIMILAR FIXTURE.

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ELECTRICAL LIGHTING PLAN

edinc Job #: 24.110

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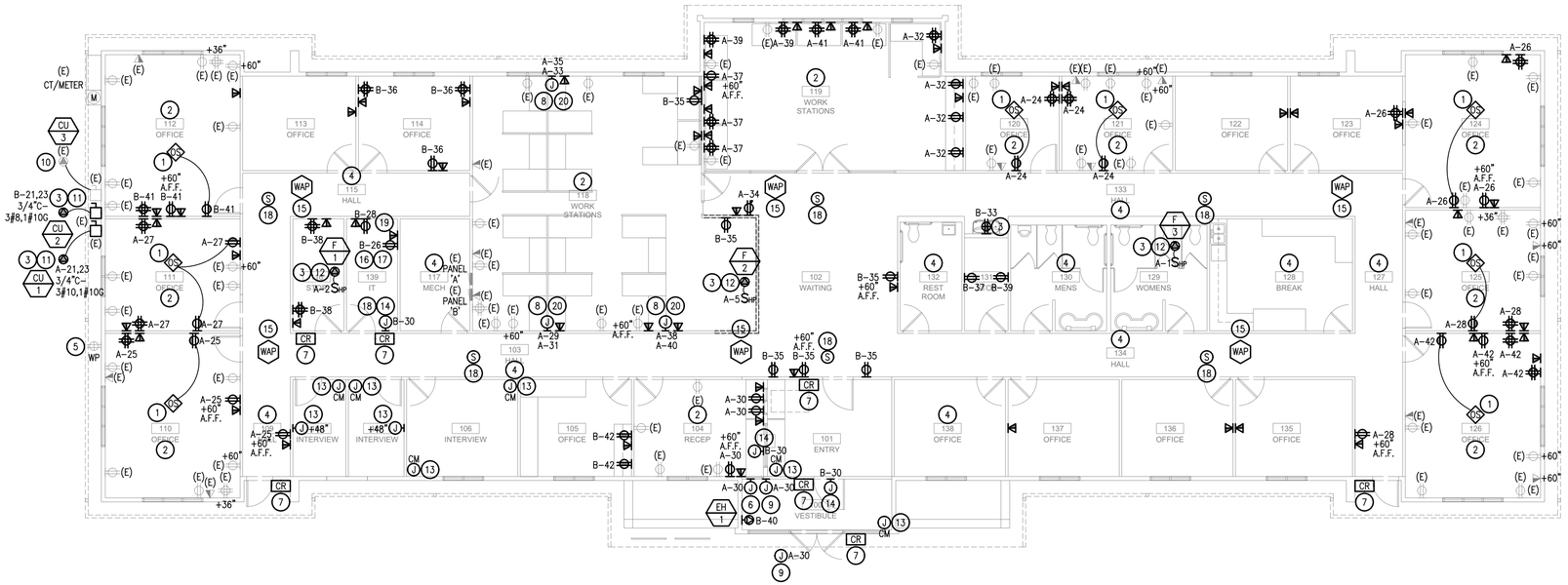
E2.1L

Exhibit A



1 ELECTRICAL POWER PLAN

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

GENERAL NOTES:

A. NUMBER ADJACENT TO HOME RUN OR DEVICE INDICATES POLE POSITION WITHIN PANEL TO WHICH DEVICES SHALL BE CIRCUITED.

B. MECHANICAL UNIT SHOWN IN APPROXIMATE LOCATION. VERIFY EXACT LOCATION WITH MECHANICAL CONTRACTOR AND MECHANICAL PLANS. MECHANICAL UNITS TO BE LOCATED TO AVOID BLOCKAGE OF EGRESS WINDOWS. COORDINATE WITH MECHANICAL AND ARCHITECTURAL CONTRACTORS AND PLANS.

C. CONTRACTOR SHALL COORDINATE ELECTRICAL SYSTEMS INSTALLATION TO AVOID INTERFERENCE WITH DUCTWORK/PIPING AND OTHER TRADES. CONTRACTOR SHALL COORDINATE PLACEMENT OF FIXTURES WITH ARCHITECTURAL REFLECTED CEILING PLAN. LOCATION OF FIXTURES SHALL GOVERN WHEN CONFLICTS WITH SUPPLY EXHAUST DIFFUSERS OCCUR.

D. CONTRACTOR SHALL PROVIDE #10AWG CONDUCTORS FOR ALL CIRCUITS OF 100'-0" OR MORE UNLESS SHOWN LARGER.

E. ALL KEYED NOTES MAY NOT APPEAR ON ALL SHEETS.

F. REFER TO SHEET E3.0 FOR PANEL SCHEDULES.

KEYED NOTES: (#)

1. PROVIDE 2-POLE OCCUPANCY SENSOR TO COMBINE LIGHTING AND RECEPTACLES INTO ONE DEVICE.
2. APPROXIMATE LOCATION OF EXISTING POWER AND DATA ON WALL IS TO REMAIN. FIELD VERIFY EXACT LOCATION ON SITE.
3. ELECTRICAL CONTRACTOR TO COORDINATE LOCATION OF MECHANICAL EQUIPMENT AND VERIFY ALL INSTALLATION REQUIREMENTS OF MECHANICAL EQUIPMENT PRIOR TO ROUGH IN.
4. AREA IS EXISTING TO REMAIN.
5. EXISTING WEATHERPROOF ENCLOSURE IS BROKEN. PROVIDE WEATHERPROOF ENCLOSURE AND NEW GFCI RECEPTACLE FOR EXISTING EXTERIOR RECEPTACLE.
6. JUNCTION BOX FOR WINDOW MICROPHONE SPEAKER. PROVIDE JUNCTION BOX AND 3/4" CO TO ABOVE ACCESSIBLE CEILING. COORDINATE WITH CONTRACTOR PRIOR TO ROUGH-IN FOR COMPLETE SYSTEM INSTALLATION.
7. DOOR ACCESS CONTROL BY LOW VOLTAGE SYSTEM INSTALLER. PROVIDE JUNCTION BOX AND 3/4" CO TO ABOVE ACCESSIBLE CEILING. REFER TO SHEET E0.2 FOR TYPICAL REQUIREMENTS FOR CARD READER. COORDINATE WITH CONTRACTOR PRIOR TO ROUGH-IN FOR COMPLETE SYSTEM INSTALLATION. REFER TO SHEET E0.2.
8. PROVIDE (2) CIRCUITS TO POWER PANELS. COORDINATE REQUIREMENTS AND EXACT LOCATION OF WORKSTATIONS WITH OWNER.
9. PROVIDE AND INSTALL J-BOX FOR ADA DOOR CONTROLS. COORDINATE LOCATION AND ALL REQUIREMENTS ON SITE WITH ADA DOOR CONTROLS SUPPLIER PRIOR TO ROUGH-IN.
10. EXISTING CU-3 TO REMAIN.
11. EXISTING CU-1 AND CU-2 TO BE REPLACED IN PLACE WITH NEW CONDENSING UNITS. INTERCEPT AND EXTEND EXISTING CU-1 AND CU-2 CIRCUIT FOR NEW CU-1 AND CU-2 BEING REPLACE IN PLACE. REUSE EXISTING DISCONNECTS.
12. EXISTING F-1, F-2, AND F-3 TO BE REPLACE IN PLACE WITH NEW FURNACES. INTERCEPT AND EXTEND EXISTING F-1, F-2, AND F-3 CIRCUITS FOR NEW F-1, F-2, AND F-3 BEING REPLACE IN PLACE.
13. PROVIDE AND INSTALL CONDUIT, J-BOX, AND PULL-STRING FOR CAMERAS. CAT6 PULLED BY CONTRACTOR. CONTRACTOR TO TERMINATE, AND TEST CAT6 CABLE. MISSOULA COUNTY TO PROVIDE CAMERAS. ALL CAT6 RUNS TO COMPLY WITH PROVIDED MISSOULA COUNTY SPECIFICATIONS. COORDINATE ALL REQUIREMENTS WITH CAMERA SUPPLIER PRIOR TO ROUGH-IN.
14. PROVIDE AND INSTALL CONDUIT, J-BOX, AND PULL-STRING FOR DOOR ALARM SYSTEM. J-BOX IN RECEPTION TO BE INSTALLED BELOW COUNTER-TOP, PROVIDE RACEWAY FOR DOOR ACCESS REMOTE SWITCHES AND A TRIGGER FOR LOCAL SPEAKER SYSTEM(PANIC ALARM). RACEWAY RETURNS TO I.T. ROOM ABOVE ACCESS CONTROL AND PANIC ALARM CABINET. REFER TO SHEET E0.2 FOR TYPICAL REQUIREMENTS FOR DOOR ALARM SYSTEM. COORDINATE ALL REQUIREMENTS WITH DOOR ALARM SYSTEM SUPPLIER AND OWNER PRIOR TO ROUGH-IN.
15. APPROXIMATE LOCATION OF EXISTING WAP. EXISTING WAP DROP LOCATIONS TO REMAIN. COUNTY TO PROVIDE NEW WAP DEVICES. COORDINATE ALL REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
16. PROVIDE AND INSTALL (1) 1" CO FROM I.T. ROOM TO ROOF PENETRATION FOR POLICE SCANNER. COORDINATE ALL REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
17. PROVIDE AND INSTALL (3) 3" CO FROM I.T. ROOM TO HALL 103. COORDINATE ALL REQUIREMENTS WITH MISSOULA COUNTY PRIOR TO ROUGH-IN.
18. CONTRACTOR TO PROVIDE 2 WIRE SPEAKER CABLE FOR OWNER PROVIDED SPEAKERS. OWNER TO PROVIDE CONTROL CABINET FOR THIS LOCAL SPEAKER SYSTEM (PANIC ALARM) IS LOCATED IN I.T. ROOM. COORDINATE LOCATION AND REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
19. FIRE ALARM (BID ALTERNATE), DOOR ACCESS, AND BMS CONTROL CABINET TO BE LOCATED IN I.T. ROOM. LOCAL PANIC ALARM CONTROLLER WILL ALSO BE IN THIS ROOM. COORDINATE ALL REQUIREMENTS WITH MISSOULA COUNTY PRIOR TO ROUGH-IN.
20. PROVIDE (1) DATA DROP PER WORKSTATION. COORDINATE REQUIREMENTS AND EXACT LOCATION OF WORKSTATIONS WITH OWNER.

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2415 MULLAN ROAD, MISSOULA MT 59808

PLAN REVIEW: 08.20.2024
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ELECTRICAL POWER PLAN

edinc Job #: 24.110

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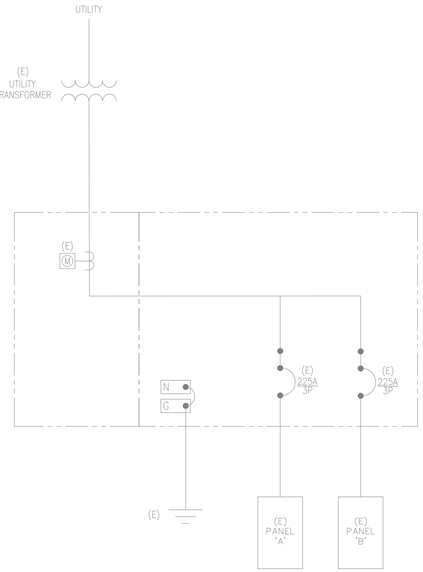
E2.1P

Exhibit A



1 ONE LINE DIAGRAM (FOR REFERENCE ONLY)
SCALE: NTS

PANELBOARD SCHEDULE

(E)PANEL: A | PROJECT: MISSOULA SHERRIFF'S OFFICE REMODEL
VOLTAGE: 240/120V | PHASE: 1 | WIRE: 3 | AMPERE RATING: 200A | SC RATING: 42 KAIC | MCB 200A
ENTRY: | MOUNTING: RECESSED | NEMA 1 | ISOLATED GROUND BUS: NO

LOADS: Amps VA
PHASE A: 172 20652
PHASE B: 122 14640
TOTAL: 35292

LOAD TYPES:
1 = LIGHTING | 5 = KITCHEN
2 = RECEPTACLES | 6 = EVCS
3 = MISC | 7 = SUBFEED/XFMR
4 = MOTOR

REMARKS:
EACH BREAKER IS TO BE UNIQUELY IDENTIFIED IN A MANNER THAT DISTINGUISHES IT FROM ALL OTHER BREAKERS

LOAD (VA)	LOAD SERVED	NOTE	LOAD TYPE	AMPS/ POLES	CKT NO	PHASE	CKT NO	AMPS/ POLES	LOAD TYPE	NOTE	LOAD SERVED	LOAD (VA)
1308	FURNACE # 3	E	3	20 1	1	A	2	20 1	3	E	FURNACE # 1	1308
	PHONE BOARD	E	2	20 1	3	B	4	20 1	1	E	HALL EMERGENCY LIGHTS	
816	FURNACE # 2	E	3	20 1	5	A	6	20 1	1	E	LIGHTS 125-126-127-128	
	LIGHTS 110-111-112-124	E	1	20 1	7	B	8	20 1	1	E	LIGHTS 105-106-107-108-109	
	EXTERIOR LIGHTS	E	1	20 1	9	A	10	20 1	2	E	RECEPT 117	
	TIME CLOCK	E	1	20 1	11	B	12	20 1	1	E	LIGHTS WEST HALL	
	117 LIGHTS	E	1	20 1	13	A	14	20 1	2	E	RECEPTS 110-111-112	
	RECEPT 124	E	2	20 1	15	B	16	20 1	2	E	RECEPTS 110-111-112	
	RECEPTS 113-114-115-116	E	2	20 1	17	A	18	20 1	2	E	RECEPTS 106-107-108-109	
	RECEPTS 113-114-115-116	E	2	20 1	19	B	20	50 2	3	E	CU # 3	4500
2040	CU # 1	N	3	25 2	21	A	22	** *	3	E	***	4500
2040	***	N	3	** *	23	B	24	20 1	2	N	RECEPT 120-121 OFFICE	1080
1080	RECEPT 110 OFFICE	N	2	20 1	25	A	26	20 1	2	N	RECEPT 123-124 OFFICE	1080
1080	RECEPT 111 OFFICE	N	2	20 1	27	B	28	20 1	2	N	RECEPT 125 OFFICE	720
1200	POWER PANEL 118 WORKSTATION	N	3	20 1	29	A	30	20 1	2	N	RECEPT 104 RECEPTION	900
1200	POWER PANEL 118 WORKSTATION	N	3	20 1	31	B	32	20 1	2	N	RECEPT 119 WORKSTATION	900
1200	POWER PANEL 118 WORKSTATION	N	3	20 1	33	A	34	20 1	2	N	PRINTER 102 WAITING	1500
1200	POWER PANEL 118 WORKSTATION	N	3	20 1	35	B	36	20 1		N	SPARE	
900	RECEPT 119 WORKSTATION	N	2	20 1	37	A	38	20 1	3	N	POWER PANEL 118 WORKSTATION	1200
720	RECEPT 119 WORKSTATION	N	2	20 1	39	B	40	20 1	3	N	POWER PANEL 118 WORKSTATION	1200
720	RECEPT 119 WORKSTATION	N	2	20 1	41	A	42	20 1	2	N	RECEPT 126 OFFICE	900

LOADING BY TYPE		CONNECTED	NEC CODE	DEMAND FACTOR	DEMAND
GUEST ROOM LIGHTING		0 VA	220-42	SEE LOAD SUMMARY	0 VA
LIGHTING		0 VA	210-19	125%	0 VA
RECEPTACLES		11580 VA	220-44	10kVA @ 100%, ELSE @ 50%	10790 VA
MISC.		23712 VA	220-60	100%	23712 VA
MOTOR	LARGEST MOT.:	0 VA	220-50	100% + LARGEST x 25%	0 VA
KITCHEN	# OF KIT. UNITS:	0 VA	220-56	TABLE 220.20	0 VA
EVCS		0 VA	625-41	125%	0 VA
TOTAL		147 A			144 A

NOTES:
E - DENOTES EXISTING BREAKER TO REMAIN.
N - DENOTES NEW BREAKER REQUIRED.
R - DENOTES TO REUSE EXISTING BREAKER.

PANELBOARD SCHEDULE

(E)PANEL: B | PROJECT: MISSOULA SHERRIFF'S OFFICE REMODEL
VOLTAGE: 240/120V | PHASE: 1 | WIRE: 3 | AMPERE RATING: 200A | SC RATING: 42 KAIC | MAIN: MLO
ENTRY: | MOUNTING: RECESSED | NEMA 1 | ISOLATED GROUND BUS: NO

LOADS: Amps VA
PHASE A: 64 7726
PHASE B: 74 8856
TOTAL: 16582

LOAD TYPES:
1 = LIGHTING | 5 = KITCHEN
2 = RECEPTACLES | 6 = EVCS
3 = MISC | 7 = SUBFEED/XFMR
4 = MOTOR

REMARKS:
EACH BREAKER IS TO BE UNIQUELY IDENTIFIED IN A MANNER THAT DISTINGUISHES IT FROM ALL OTHER BREAKERS

LOAD (VA)	LOAD SERVED	NOTE	LOAD TYPE	AMPS/ POLES	CKT NO	PHASE	CKT NO	AMPS/ POLES	LOAD TYPE	NOTE	LOAD SERVED	LOAD (VA)
	EMERGENCY EXIT LIGHTS	E	1	20 1	1	A	2	20 1	1	E	LIGHTS 113-114-115-116	
	RECEPTS 118-119-120	E	2	20 1	3	B	4	20 1	1	E	LIGHTS 131-132-133-114	
	RECEPTS 101-102-103-104	E	2	20 1	5	A	6	20 1	2	E	RECEPTS 100-122-123	
	RECEPT 120	E	2	20 1	7	B	8	20 1	2	E	RECEPTS 118-119-120-121	
	RECEPTS 101-102-103-104	E	2	20 1	9	A	10	20 1	2	E	RECEPT 129	
	RECEPT 105	E	2	20 1	11	B	12	20 1	2	E	RECEPTS 100-122-123	
	RECEPT 130	E	2	20 1	13	A	14	20 1	2	E	RECEPTS 106-107-108-109	
	RECEPT 128	E	2	20 1	15	B	16	20 1	2	E	RECEPT 124	
	LIGHT 100-101-102-103-124	E	1	20 1	17	A	18	20 1	1	E	LIGHT 118-119-120-121-123	
	RECEPT 128	E	2	20 1	19	B	20	20 1	2	E	RECEPT 128	
2976	CU # 2	N	3	40 2	21	A	22	20 1	1	E	LIGHT EAST HALL	
2976	***	N	3	** *	23	B	24	20 1	2	E	RECEPT	
	RECEPT	E	3	20 1	25	A	26	20 1	3	R	ACCESS CONTROL IT ROOM 139	500
	RECEPT REFRIGERATOR	E	5	20 1	27	B	28	20 1	2	R	RECEPT ROOM 139	1200
	RECEPT REFRIGERATOR	E	5	20 1	29	A	30	20 1	3	R	DOOR ALARM SYSTEM	500
	EXTERIOR SIGN	R	3	20 1	31	B	32	20 1	3	R	EXTERIOR SIGN	500
750	WATER FOUNTAIN HALL 133	R	3	20 1	33	A	34	20 1			SPARE	
1080	RECEPT WAITING 102	N	2	20 1	35	B	36	20 1	2	N	RECEPT OFFICE 114	900
1200	RECEPT STORAGE 131	N	2	20 1	37	A	38	20 1	2	N	RECEPT STORAGE 116	720
1200	RECEPT STORAGE 131	N	2	20 1	39	B	40	20 1	3	N	EH-1 VESTIBULE	1000
720	RECEPT 112 OFFICE	N	2	20 1	41	A	42	20 1	2	N	RECEPT OFFICE 105	360

LOADING BY TYPE		CONNECTED	NEC CODE	DEMAND FACTOR	DEMAND
GUEST ROOM LIGHTING		0 VA	220-42	SEE LOAD SUMMARY	0 VA
LIGHTING		0 VA	210-19	125%	0 VA
RECEPTACLES		7380 VA	220-44	10kVA @ 100%, ELSE @ 50%	7380 VA
MISC.		9202 VA	220-60	100%	9202 VA
MOTOR	LARGEST MOT.:	0 VA	220-50	100% + LARGEST x 25%	0 VA
KITCHEN	# OF KIT. UNITS:	0 VA	220-56	TABLE 220.20	0 VA
EVCS		0 VA	625-41	125%	0 VA
TOTAL		69 A			69 A

NOTES:
E - DENOTES EXISTING BREAKER TO REMAIN.
N - DENOTES NEW BREAKER REQUIRED.
R - DENOTES TO REUSE EXISTING BREAKER.

BLDG DEMAND LOAD CALCULATION

Non dwelling space calculated demand load)=

LIGHTING	**5034**
RECEPTACLE	**18960**
MISC.	**32914**
MECHANICAL/MOTOR	**0**
KITCHEN	**0**
EVCS	**0**

Non Dwelling Calculated Demand Load is arrived upon by summing the following:

Lighting Load @ 125%	6293 VA
1ST 10kVA of Rec. @ 100% remainder @ 50%	14480 VA
Miscellaneous Loads @ 100%	32914 VA
Largest Motor @ 125%	0
Remainder of Motor Load @ 100%	VA
Kitchen @ 100%	VA
EVCS Load @ 125%	VA
SUM of non living space calculated demand load	53687 VA
Load kVA	54
AMP	224
TOTAL DEMAND LOAD AT 120/240V 1-PHASE KVA	54
AMPS	224

LUMINAIRE SCHEDULE - MISSOULA SHERRIFF'S OFFICE REMODEL

LUMINAIRE	MANUFACTURER	CATALOG NUMBER	LAMPS	INPUT WATTS	VOLTAGE	MOUNTING	COMMENTS
EG1	LITHONIA	EU2C M6	LED	2	120	WALL	Note # 3
R1	LITHONIA	LDN6 AL02 SWW1 L06AR LSS MVOLT UGZ	LED	12	120	RECESSED	

Notes:
General Note: Contractor shall provide and coordinate all fixture mounting accessories. Point of contact for submittals and prior approvals reach out to Jaime Rodriguez 406-218-2189 or email jrodriguez@dcengineering.net

1. Design is based upon named ,manufacturers are acceptacle, subject to compliance with the specified requirements.
2. Provide compatible dimmer switch.
3. Provide an unswitched circuit for the battery charger.
4. Provide with one programmer for the owner.
5. Provide appropriate power supply and dimming capability equipment.

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08-20-2024

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Project:2AMIC01

REMODEL FOR:
MISSOULA COUNTY
SHERIFF'S DEPT.
2415 MULLAN ROAD, MISSOULA MT 59808

PLAN REVIEW: 08.20.2024
BID SET: XX.XX.2024

ELECTRICAL DETAILS

edinc Job #: 24.110

THIS SHEET IS INTENDED TO BE PRINTED IN COLOR TO FULLY UNDERSTAND THE INFORMATION BEING PRESENTED.

E3.0