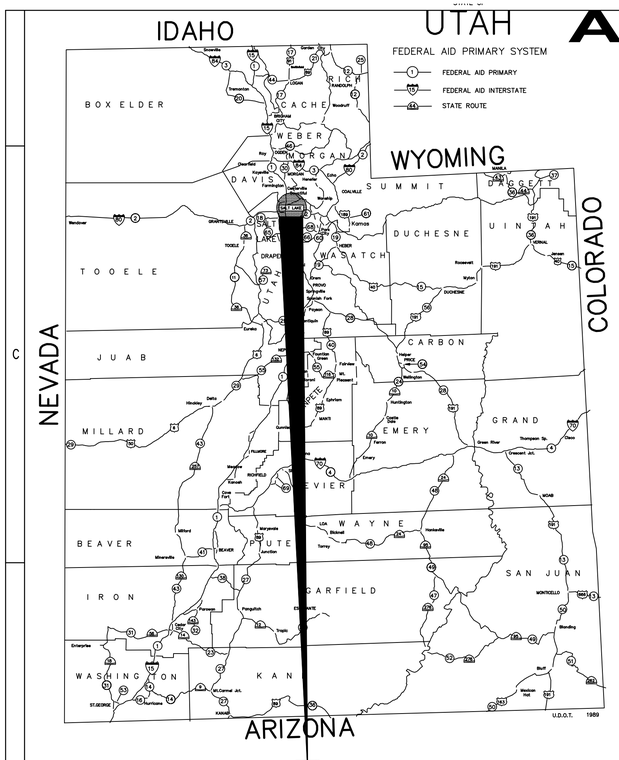
Appendix V - FRPB Final Drawing



LOCATION MAP N.T.S.

UTA

UTAH TRANSIT AUTHORITY
FRONT RUNNER PAINT BOOTH
WARM SPRINGS SERVICE CENTER

SALT LAKE CITY, UTAH

UTA PROJECT #SGR-358

BID / PERMIT SET - DECEMBER 7, 2020

APPROVALS:

_____ Date

_____ Date

APPROVAL DOES NOT RELIEVE A/E OF DESIGN LIABILITY

APPROVALS:

_____ Date

_____ Date

APPROVAL DOES NOT RELIEVE A/E OF DESIGN LIABILITY

APPROVALS:

_____ Date

_____ Date

APPROVAL DOES NOT RELIEVE A/E OF DESIGN LIABILITY

CODE ANALYSIS

APPLICABLE CODES	Year		Year
International Building Code	2018	National Electrical Code	2017
International Mechanical Code	2018	Uniform Code for	
International Plumbing Code	2018	Building Conservation	N.A.
International Fire Code	2018	ADA Accessibility	
International Energy Conservation Code	2018	Guildelines	2010

A. Occupancy and Group: S1

Change in Use: Yes ____ No X Mixed Occupancy: Yes ____ No X
Special Use and Occupancy (e.g. High Rise, Covered Mall): IBC SECT. 416; IFC CH. 15

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (UNCHANGED):

I A | I B | II A | II B | III A | III B | IV HT | V A | V B

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):
North: 0 South: 0 East: 0 West: 0

E. Mixed Occupancies: UNCHANGED Nonseparated Uses: UNCHONGED

F: Sprinklers (Booth Only):
Required: YES Provided: YES Type of Sprinkler System: WET PIPE/DRY CHEM.

G: Number of Stories: 1 Building Height: UNCHANGED

H: Actual Area per Floor (square feet): APPROX. 130,000 SF - UNCHANGED

I: Tabular Area: UNCHANGED

Occupancy and/or Area :	S1	BOOTH	
Occupancy separation required (Hrs.)	0	1	
Sprinklered: Indicate Yes or No	NO	YES	
a. Actual Area (ft):	130,000 +/- UNCHANGED	3,006	

K. Fire Resistance Rating Requirements for Building Elements (hours).

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls	0	N.A.	Floors - Ceiling Floors	0	N.A.
Interior Bearing Walls	0	N.A.	Roofs - Ceiling Roofs	0	N.A.
Exterior Non-Bearing Walls	0	N.A.	Exterior Doors and Windows	0	N.A.
Structural Frame	0	N.A.	Shaft Enclosures	0	N.A.
Partitions - Permanent	0	N.A.	Fire Walls	0	N.A.
Fire Barriers	0	N.A.	Fire Partitions	1	I.B.C. 302.3.2
			Smoke Partitions	0	N.A.

L. Design Occupant Load: UNCHANGED

M. Minimum Number of Required Plumbing Facilities: NOT REQUIRE PER IBC 2902.4
a) Water Closets - Required (m) N.A. (f) N.A. Provided (m) N.A. (f) N.A.
b) Lavatories - Required (m) N.A. (f) N.A. Provided (m) N.A. (f) N.A.
c) Bath Tubs or Showers: N.A.
d) Drinking Fountains: N.A. Service Sinks: N.A.

REV	DATE	Description
0	10/29/20	PERMIT SET

STATE OF UTAH
RALPH M. STANISLAW
85-310818-0301
LICENSED ARCHITECT
7/27/09

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Drawn By: R. CHILDS
Checked By: R. STANISLAW
Approved By: R. STANISLAW

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900 NORTH 500 WEST SALT LAKE CITY, UT 84116

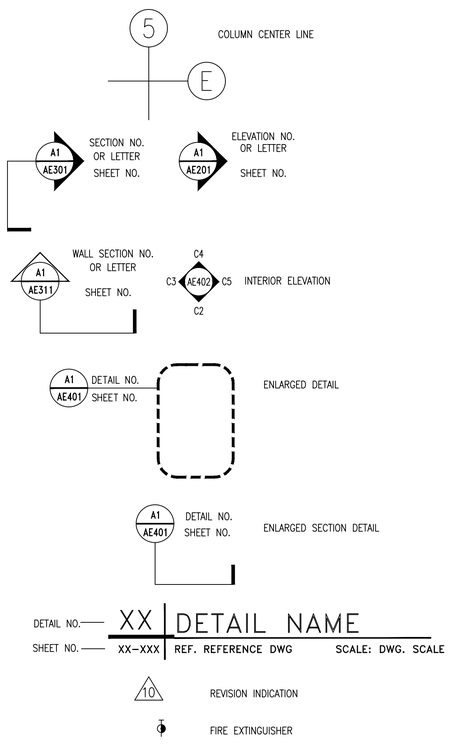
COVER SHEET

Scale: N/A
CADD Filename: FRPB-G000.DWG
Submittal Date: DEC 7, 2020
UTA Project No.: SGR-358
Drawing No.:
Sheet No.: G000

GENERAL NOTES

1. THERE ARE NO ASBESTOS PRODUCTS SPECIFIED AND NONE SHALL BE USED ANYWHERE ON THIS PROJECT. CONTRACTOR SHALL INVESTIGATE THE EXISTENCE OF ANY ASBESTOS ASSOCIATED WITH AREAS OF THE BUILDING TO BE REMODELED. CONTRACTOR IS TO ENSURE ALL ASBESTOS IS REMOVED FROM THESE AREAS.
2. WHENEVER QUESTIONS ARISE OR CONDITIONS ARE ENCOUNTERED WHICH ARE NOT COVERED BY OR ARE IN CONFLICT WITH THE CONTRACT DOCUMENTS, CONSULT WITH THE ARCHITECT PRIOR TO TAKING ANY FURTHER ACTION.
3. CONTRACTOR SHALL PROTECT THE EXISTING BUILDING DURING THE CONSTRUCTION PERIOD AND SHALL REPAIR OR REPLACE ANY AND ALL EXISTING CONSTRUCTION DAMAGED BY NEW CONSTRUCTION. MATCH EXISTING SURFACE FINISH OR MATERIAL.
4. CONTRACTOR SHALL MODIFY OR RELOCATE EXISTING MECHANICAL AND ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND SCHEDULE SHUT DOWNS AS REQUIRED FOR INSTALLATION OF NEW WORK WITH THE OWNER.
5. ALL DEMOLISHED OR REMOVED EXISTING MATERIAL SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR UNLESS CALLED OUT TO BE DELIVERED TO THE OWNER.
6. CONTRACTOR SHALL LEAVE WORK AREAS BROOM CLEAN AND FREE OF TOOLS, EQUIPMENT, ETC., AT THE END OF EACH SHIFT. ALL CONSTRUCTION ACTIVITY SHALL BE CONTAINED WITHIN CONSTRUCTION BARRICADES OR FENCES. CONTRACTOR SHALL PROTECT OWNERS EXISTING CONSTRUCTION AND EQUIPMENT ADJACENT TO NEW CONSTRUCTION. CONTRACTOR SHALL CLEAN ALL SURFACES TO "LIKE NEW" CONDITION AT THE COMPLETION OF WORK.
7. THE INSTALLATION OF NEW MATERIALS AND EQUIPMENT SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE MATERIAL AND EQUIPMENT MANUFACTURER'S SPECIFICATIONS AND REQUIREMENTS.
8. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING GLASS SURFACES, REMOVING TRASH AND DEBRIS, REMOVING TOOLS AND TEMPORARY CONSTRUCTION MATERIALS PRIOR TO PROJECT COMPLETION.
9. ARCHIPLEX RESPONSIBLE FOR ARCHITECTURAL DRAWINGS ONLY.
10. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL CONSTRUCTION PROCEDURES AND JOB SITE SAFETY, AND SHALL ENSURE COMPLIANCE WITH APPLICABLE CODES, RULES AND REGULATIONS OF THE GOVERNING JURISDICTION.
11. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING BUILDING PERMITS AS REQUIRED FOR WORK AND SHALL BE RESPONSIBLE FOR OBTAINING REQUIRED INSPECTIONS DURING THE COURSE OF THE WORK.
12. THE INFORMATION CONTAINED IN THE DRAWINGS IS BASED ON EXISTING DOCUMENTS AND LIMITED FIELD MEASUREMENT. THE WORK DESCRIBED HEREIN MAY REQUIRE ADJUSTMENT OR MODIFICATION TO CONFORM TO THE EXISTING CONDITIONS. THE GENERAL CONTRACTOR SHALL VERIFY CRITICAL DIMENSIONS AND SHALL BE RESPONSIBLE FOR FIELD MEASURING EXISTING CONDITIONS PRIOR TO STARTING THE WORK AND DURING PROGRESS OF THE WORK.
13. THE GENERAL CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK SHOULD DISCREPANCIES BE FOUND IN THE CONTRACT DOCUMENTS. ADDITIONAL WORK OR DEMOLITION REQUIRED, AS A RESULT OF FAILURE TO DO SO SHALL BE AT THE CONTRACTOR'S EXPENSE.
14. THE DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS AND/OR SIZES. THE GENERAL CONTRACTOR SHALL NOT DEVIATE FROM DIMENSIONS INDICATED ON THE DRAWINGS WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF MEASUREMENT AND THE PRECISE FITTING OF THE WORK.
15. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND SECURITY OF DELIVERED MATERIALS.
16. THE GENERAL CONTRACTOR SHALL MAINTAIN A COMPLETE AND UP TO DATE SET OF CONTRACT DOCUMENTS AT THE JOB SITE.
17. THE GENERAL CONTRACTOR SHALL ENSURE THAT THE WORK BE PERFORMED BY COMPETENT MECHANICS SKILLED IN THEIR TRADE. WORKMANSHIP DEEMED SUBSTANDARD OR UNACCEPTABLE BY THE ARCHITECT WILL BE REJECTED AND SHALL BE CORRECTED BY THE CONTRACTOR.
18. THE CONTRACTOR SHALL PROVIDE THE ARCHITECT AND OWNER WITH A MARKED-UP SET OF DRAWINGS WITH THE APPLICATION FOR FINAL PAYMENT. THE SET WILL INCLUDE ANY CHANGES MADE IN THE FIELD DURING CONSTRUCTION AND WILL BE USED AS THE BASIS FOR DEVELOPING RECORD DRAWINGS.
19. THE CONTRACT DOCUMENTS, INCLUDING THE DRAWINGS AND ASSOCIATED DOCUMENTATION, ARE THE SOLE PROPERTY OF ARCHIPLEX GROUP. UNAUTHORIZED OR INCORRECT USE OF THESE DOCUMENTS IS PROHIBITED.
20. ALL DETAILS APPLY WHETHER OR NOT SPECIFICALLY REFERENCED.
21. UNLESS OTHERWISE NOTED, DIMENSIONING ON PLANS IS AS FOLLOWS: TO FACE OF ALL WALLS AND/OR STRUCTURAL GRID.
22. STRUCTURAL, HVAC, PLUMBING AND ELECTRICAL EQUIPMENT OR SYSTEMS SHOWN ON ARCHITECTURAL DRAWINGS ARE INDICATED FOR GENERAL REFERENCE ONLY. COORDINATE AND LOCATE WITH STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
23. UNLESS SPECIFICALLY NOTED AS "NOT IN CONTRACT", SYSTEMS SHOWN IN DWG's. ARE INTENDED TO BE CODE COMPLIANT, FURNISHED, INSTALLED & TURNED OVER TO OWNER IN PROPER FUNCTIONING CODE COMPLIANT CONDITION. ALL WORK REQUIRED TO ACCOMPLISH THIS MUST BE CONSIDERED IN BASE BID (CONTRACT SUM).
24. ALL WORK TO BE CONSTRUCTED PER GOVERNING CODES WHICH ARE HEREIN INCORPORATED INTO THESE DOCUMENTS. CODE REQUIRED WORK, INCLUDING WORK OR ITEMS NOT SHOWN IN THE CONSTRUCTION DOCUMENTS ARE TO BE INCLUDED IN BASE BID (CONTRACT SUM).
25. ADEQUACY OF FIRE PROTECTION AND SAFETY DURING CONSTRUCTION SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY. NFPA STANDARDS NO. 10 AND 241 ARE RECOMMENDED AS WELL AS REQUIREMENTS OF INSURANCE CARRIER & FIRE MARSHAL.
26. PROVIDE BLOCKING IN WALLS AS REQUIRED IN ORDER TO SECURE ALL EQUIPMENT (ACCESSORIES, HANDRAILS, CASEWORK, ETC.) PROVIDE BLOCKING AS REQUIRED FOR WALL OR CEILING SUPPORTED ITEMS. VERIFY REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE.

ARCHITECTURAL SYMBOLS LEGEND



ABBREVIATIONS

ALT.	ALTERNATE
ALUM.	ALUMINUM
A.B.	ANCHOR BOLT
&	AND
ARCH.	ARCHITECTURAL
@	AT OR AT THE
BM.	BEAM
BLK.	BLOCK
BLKG.	BLOCKING
BD.	BOARD
B.O.	BOTTOM OF
BOT.	BOTTOM
BLDG.	BUILDING
CLKG.	CAULKING
C.I.	CAST IRON
CLG.	CEILING
CEM.	CEMENT
CTR.	CENTER
	CENTER LINE
CER.	CERAMIC
C.T.	CERAMIC TILE
CFCI	CONTRACTOR FURNISH, CONTRACTOR INSTALL
CFOI	CONTRACTOR FURNISH, OWNER INSTALLED
CLR.	CLEAR/CLEARANCE
CLO.	CLOSET
COL.	COLUMN
CONC.	CONCRETE
CMU	CONCRETE MASONRY UNIT
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUE/CONTINUOUS
CONTR.	CONTRACTOR
C.J.	CONTROL JOINT
CORR.	CORRIDOR
CNTR.	COUNTER
CTSK.	COUNTERSUNK
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DN.	DOWN
D.S.	DOWNSPOUT
DWG.	DRAWING
D.F.	DRINKING FOUNTAIN
EA.	EACH
ELEC.	ELECTRIC (AL)
ELEV./EL.	ELEVATION
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXP.	EXPANSION
EXT.	EXTERIOR
EW	EACH WAY
FIN.	FINISH
F.A.	FIRE ALARM
F.E.	FIRE EXTINGUISHER
F.E.C.	F.E. CABINET
FLR./FL.	FLOOR
F.D.	FLOOR DRAIN
FTG.	FOOTING
FDN.	FOUNDATION
FV.	FIELD VERIFY
GALV.	GALVANIZED
G.I.	GALVANIZED IRON
GA.	GAUGE
GL.	GLASS/GLAZING
GR.	GRADE
GND.	GROUND
GYP.	GYPSUM
GYP. BD.	GYPSUM BOARD
HDWR.	HARDWARE
HDWD.	HARDWOOD
HT.	HEIGHT
H.P.	HIGH POINT
HORIZ.	HORIZONTAL
H.B.	HOSE BIBB
HM	HOLLOW METAL
HR.	HOURS (FIRE RATING)
I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
JAN.	JANITOR
JT.	JOINT
J-BOX	JUNCTION BOX
KIT.	KITCHEN
LAM.	LAMINATE
LAV.	LAVATORY
LT.	LIGHT
L.P.	LOW POINT
MAINT.	MAINTENANCE
MFR.	MANUFACTURER
M.O.	MASONRY OPENING
MAX.	MAXIMUM
MECH.	MECHANICAL
MEMB.	MEMBRANE
MEN	MEN'S TOILET
MTL./MET.	METAL
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
MTD.	MOUNTED
MUL.	MULLION
NOM.	NOMINAL
N.	NORTH
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO. OR #	NUMBER
OFOI	OWNER FURNISH, OWNER INSTALL
OFCI	OWNER FURNISH, CONTRACTOR INSTALL
OFF.	OFFICE
O.C.	ON CENTER
OPNG.	OPENING
OPP.	OPPOSITE
OPP. H.	OPPOSITE HAND
O.D.	OUTSIDE DIAMETER
PTD.	PAINTED
PR.	PAIR
PART.	PARTITION
PED.	PEDESTRIAN
PLAS.	PLASTER
P. LAM.	PLASTIC LAMINATE
PL	PLATE
PM	PRESSED METAL
PLYWD.	PLYWOOD
PLUMB.	PLUMBING
PT.	POINT
Q.T.	QUARRY TILE
RAD.	RADIUS
R.W.L.	RAIN WATER LEADER
RE:	REFER TO
REFL.	REFLECTED
REINF.	REINFORCING
REQ.	REQUIRED
REV.	REVISED
R.	RISER
R.D.	ROOF DRAIN
RM.	ROOM
R.O.	ROUGH OPENING
SCHED.	SCHEDULE
SEAL.	SEALANT
SECT.	SECTION
S.SK.	SERVICE SINK
SHT.	SHEET
SIM.	SIMILAR
SL./SLP.	SLOPE
S.C.	SOLID CORE
SPEC.	SPECIFICATIONS
SQ.	SQUARE
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL/STRUCTURE
SYM.	SYMMETRICAL
S.STL	STAINLESS STEEL
TEL.	TELEPHONE
TEMP.	TEMPORARY/TEMPERED
THK.	THICK (NESS)
T & G	TONGUE AND GROOVE
T/CONC.	TOP OF CONCRETE
T/CURB	TOP OF CURB
T.O.P.	TOP OF PLATE
T/WALL	TOP OF WALL
T.	TREAD
TYP.	TYPICAL
T.O.	TOP OF
UNF.	UNFINISHED
U.N.O.	UNLESS NOTED OTHERWISE
VAR.	VARY OR VARIES
VERT.	VERTICAL
V.T.R.	VENT THROUGH ROOF
V.I.F.	VERIFY IN FIELD
W/	WITH
WD.	WOOD
WP.	WATERPROOF
WSCT.	WAINSCOT
W/O	WITHOUT
W.P.	WORKING POINT
W.R.	WATER RESISTANT

GRAPHIC SYMBOLS

- EARTH
- CONCRETE
- PLYWOOD
- WOOD (BLOCKING)
- STEEL
- RIGID INSULATION
- GRAVEL
- BACKER ROD AND FILLER
- GYPSUM BOARD
- FENCE
- BATT INSULATION

INDEX OF DRAWINGS

GENERAL

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AE101	FLOOR PLAN, DEMOLITION PLAN AND PARTIAL SITE PLAN
AE201	ELEVATIONS AND SECTIONS
AE401	PAINT KITCHEN ENLARGED FLOOR PLAN, ELEVATIONS AND DETAILS
AE501	PAINT KITCHEN SECTIONS AND DETAILS

STRUCTURAL

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S002	SPECIAL INSPECTIONS
S101	FOOTING & FOUNDATION / FRAMING PLANS
S501	DETAILS
S502	DETAILS
S601	SCHEDULES
S602	SCHEDULES

FIRE PROTECTION

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F101	FIRE SPRINKLER'S SITE PLAN

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ME101	MECHANICAL FLOOR PLANS
ME102	MECHANICAL NATURAL GAS PLANS
ME501	MECHANICAL SCHEDULES AND DETAILS

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EE002	ELECTRICAL DETAILS
EE003	POWER SINGLE LINE DIAGRAM, PANEL AND MECHANICAL SCHEDULES
ED101	DEMOLITION FLOOR PLAN – ELECTRICAL
EE101	NEW FLOOR PLAN – POWER
EE102	NEW FLOOR PLAN – LIGHTING

REV	DATE	Description
0	10/29/20	PERMIT SET

STATE OF UTAH
RALPH M. STANISLAW
95-310818-0301
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7/27/09

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Submitted By: Ralph M. Stanislaw

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Approved By:

Designed By: R. CHILDS
Drawn By: R. CHILDS
Checked By: R. STANISLAW
Approved By: R. STANISLAW

UTAH TRANSIT AUTHORITY

FRONT RUNNER PAINT BOOTH
WARM SPRINGS SERVICE CENTER

900 NORTH 500 WEST SALT LAKE CITY, UT 84116

GENERAL NOTES AND INDEX OF DRAWINGS

Scale: N / A
CADD Filename: FRPB-G001.DWG
Submittal Date: DEC 7, 2020
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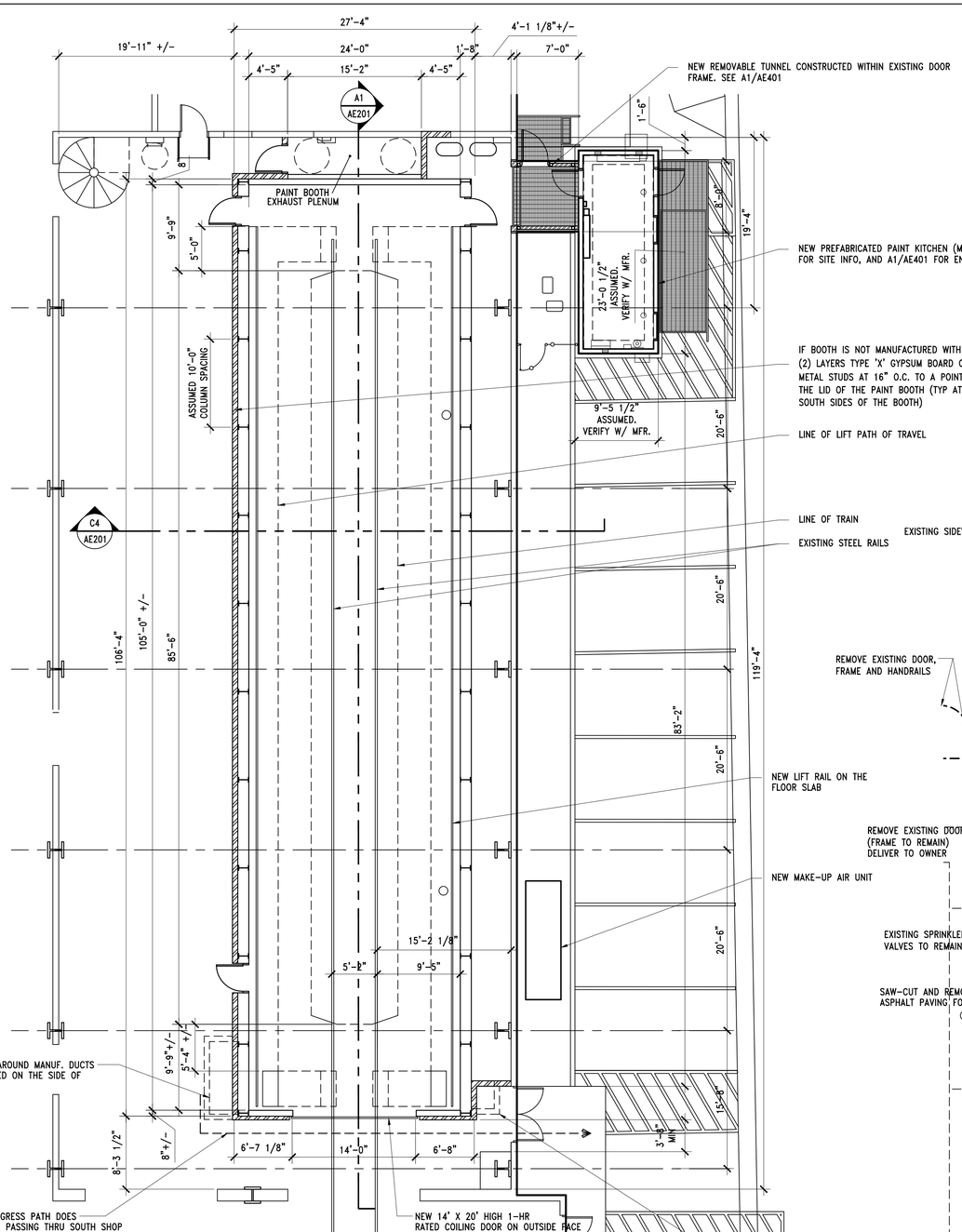
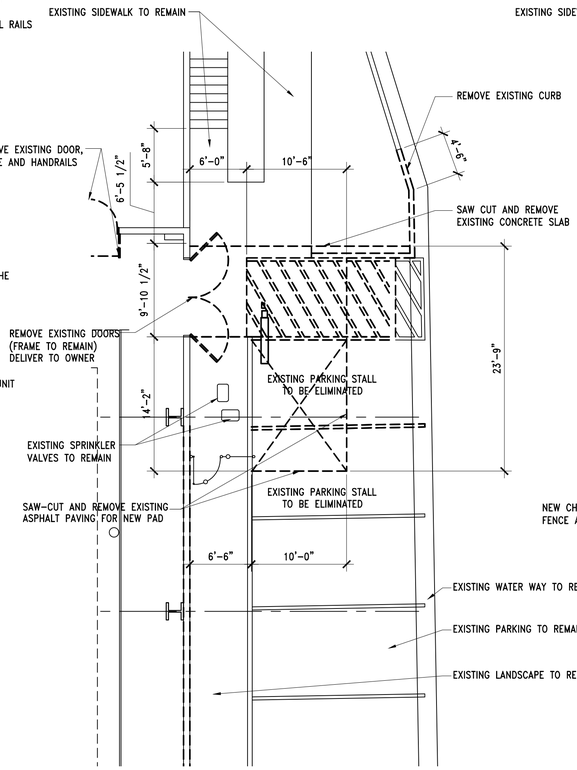
Drawing No.:
Sheet No.: G001



A1 | FLOOR PLAN

AE101 | REF. | SCALE: 1/8" = 1'-0"



A3 | DEMOLITION FLOOR PLAN

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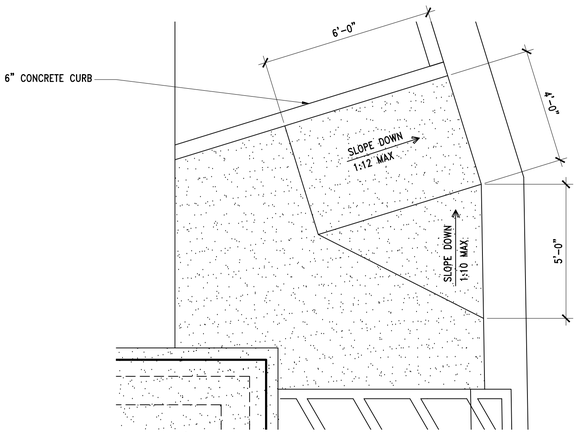

D4 | ADA CURB CUT RAMP DETAIL

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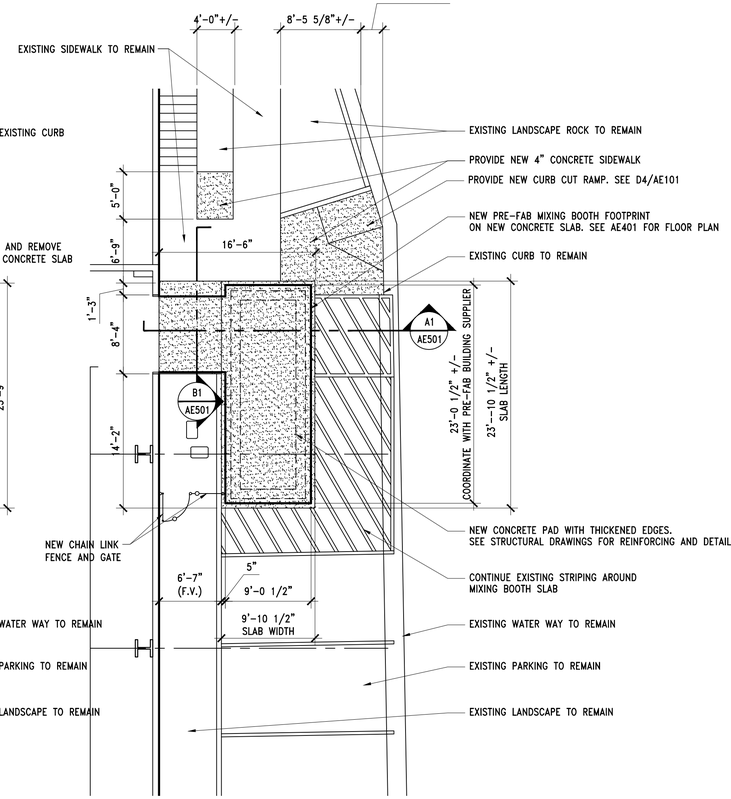

A4 | PARTIAL SITE PLAN

AE101 | REF. | SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. DIMENSIONS OF PAINT BOOTH AND MIXING BOOTH (PAINT KITCHEN) ARE FOR DESCRIPTIVE PURPOSES ONLY AND ARE ASSUMED BASED ON POSSIBLE MANUFACTURER'S REQUIREMENTS. ACTUAL SELECTED MANUFACTURER'S REQUIREMENTS MAY VARY. INTERIOR CLEARANCES SHOWN FOR OWNER'S EQUIPMENT AND PERSONNEL SHALL BE CONSIDERED MINIMUM PERFORMANCE REQUIREMENTS. AND SHALL BE MET BY THE SELECTED MANUFACTURER. OTHER DIMENSIONS SHOWN AS MINIMUM OR MAXIMUM MUST ALSO BE MET.
2. DETAILS OF STRUCTURAL ELEMENTS, MECHANICAL, ELECTRICAL AND OTHER UTILITY CONNECTIONS ARE ESTIMATED LOCATIONS AND DETAIL INFORMATION AND MAY DIFFER FROM MANUFACTURER REQUIREMENTS. FINAL LOCATIONS AND CONNECTION DETAILS SHALL BE BASED ON THE MANUFACTURER'S REQUIREMENTS.

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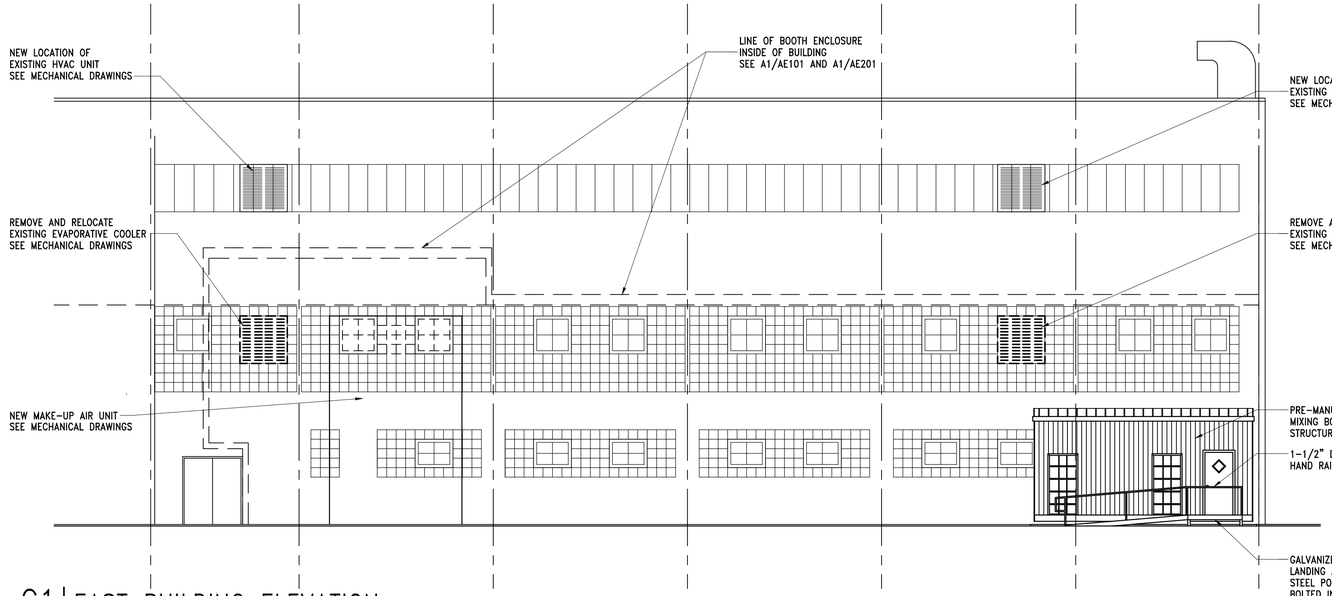
UTAH TRANSIT AUTHORITY

FRONT RUNNER PAINT BOOTH WARM SPRINGS SERVICE CENTER

900 NORTH 500 WEST SALT LAKE CITY, UT 84116

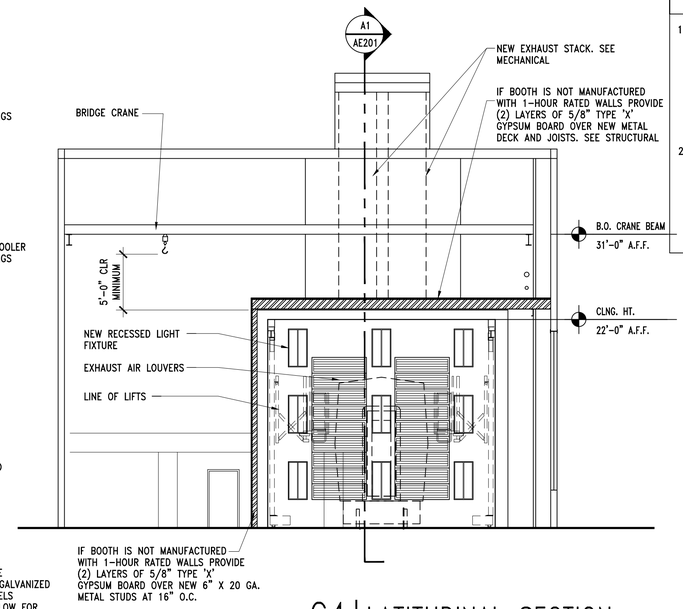
FLOOR PLAN, DEMO PLAN AND PARTIAL SITE PLAN

Scale:	1/8"=1'-0"
CADD Filename:	FRPB-AE101.DWG
Submittal Date	DEC 7, 2020
UTA Project No.:	SGR-358
Drawing No.:	
Sheet No.:	AE101



C1 | EAST BUILDING ELEVATION

AE201 | REF. | SCALE: 1/8" = 1'-0"

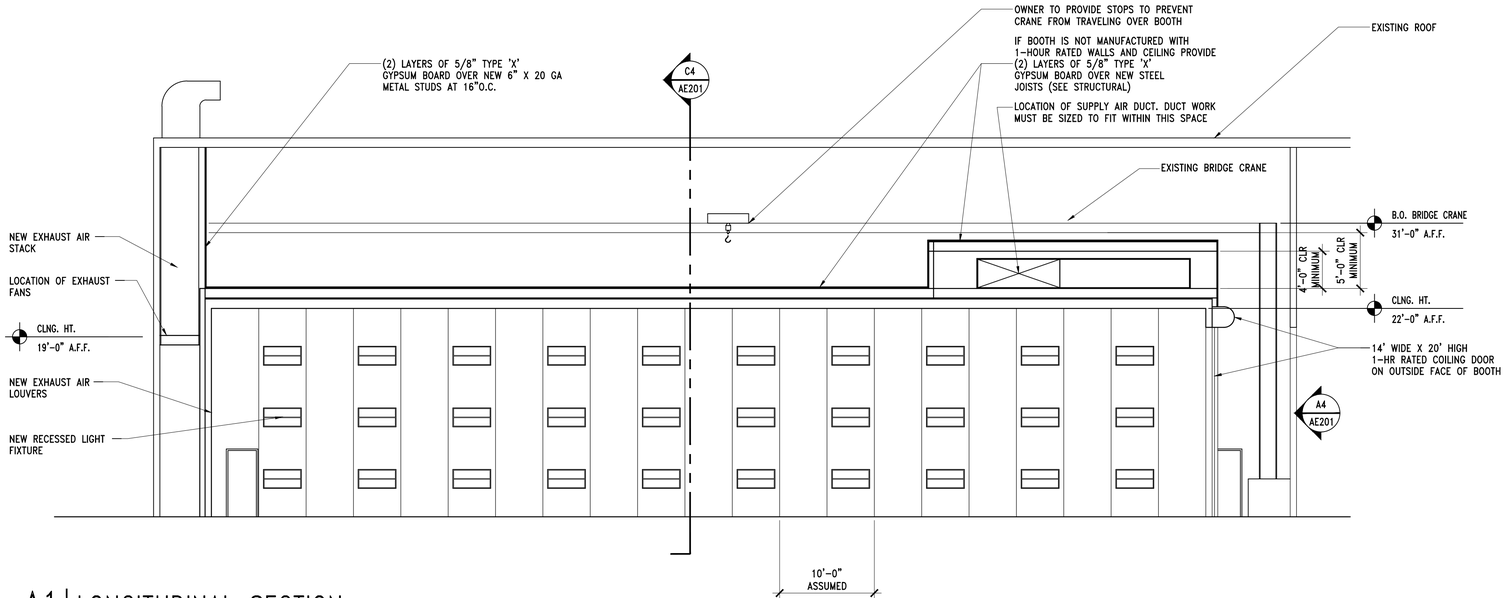


C4 | LATITUDINAL SECTION

AE201 | REF. | SCALE: 1/8" = 1'-0"

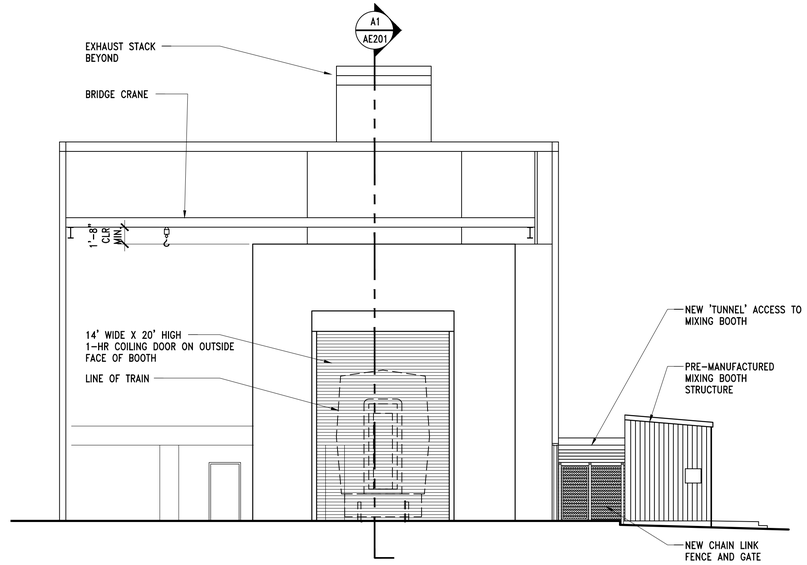
GENERAL NOTES

1. DIMENSIONS OF PAINT BOOTH AND MIXING BOOTH (PAINT KITCHEN) ARE FOR DESCRIPTIVE PURPOSES ONLY AND ARE ASSUMED BASED ON POSSIBLE MANUFACTURER'S REQUIREMENTS. ACTUAL SELECTED MANUFACTURER'S REQUIREMENTS MAY VARY. INTERIOR CLEARANCES SHOWN FOR OWNER'S EQUIPMENT AND PERSONNEL SHALL BE CONSIDERED MINIMUM PERFORMANCE REQUIREMENTS. AND SHALL BE MET BY THE SELECTED MANUFACTURER. OTHER DIMENSIONS SHOWN AS MINIMUM OR MAXIMUM MUST ALSO BE MET.
2. DETAILS OF STRUCTURAL ELEMENTS, MECHANICAL, ELECTRICAL AND OTHER UTILITY CONNECTIONS ARE ESTIMATED LOCATIONS AND DETAIL INFORMATION AND MAY DIFFER FROM MANUFACTURER REQUIREMENTS. FINAL LOCATIONS AND CONNECTION DETAILS SHALL BE BASED ON THE MANUFACTURER'S REQUIREMENTS.



A1 | LONGITUDINAL SECTION

AE201 | REF. | SCALE: 1/8" = 1'-0"



A4 | SOUTH BOOTH ELEVATION

AE201 | REF. | SCALE: 1/8" = 1'-0"

REV	DATE	Description
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STATE OF UTAH — RALPH M. STANISLAW — 95-310818-0301 — LICENSED ARCHITECT — 7/27/09

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Approved By:

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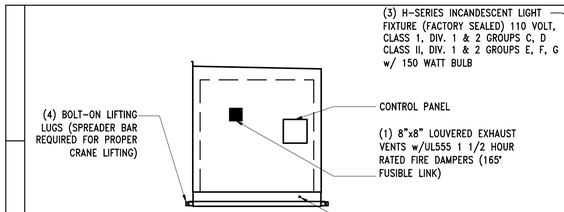
UTAH TRANSIT AUTHORITY

FRONT RUNNER PAINT BOOTH WARM SPRINGS SERVICE CENTER

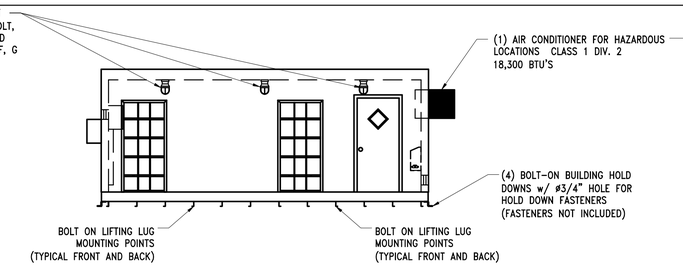
900 NORTH 500 WEST SALT LAKE CITY, UT 84116

ELEVATIONS AND SECTIONS

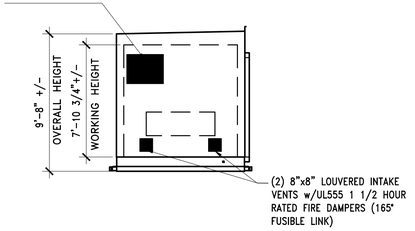
Scale:	1/8"=1'-0"
CADD Filename:	FRPB-AE201.DWG
Submittal Date	DEC 7, 2020
UTA Project No.:	SGR-358
Drawing No.:	
Sheet No.:	AE201



SIDE ELEVATION



FRONT ELEVATION



SIDE ELEVATION

GENERAL NOTES

1. DIMENSIONS OF PAINT BOOTH AND MIXING BOOTH (PAINT KITCHEN) ARE FOR DESCRIPTIVE PURPOSES ONLY AND ARE ASSUMED BASED ON POSSIBLE MANUFACTURER'S REQUIREMENTS. ACTUAL SELECTED MANUFACTURER'S REQUIREMENTS MAY VARY. INTERIOR CLEARANCES SHOWN FOR OWNER'S EQUIPMENT AND PERSONNEL SHALL BE CONSIDERED MINIMUM PERFORMANCE REQUIREMENTS. AND SHALL BE MET BY THE SELECTED MANUFACTURER. OTHER DIMENSIONS SHOWN AS MINIMUM OR MAXIMUM MUST ALSO BE MET.
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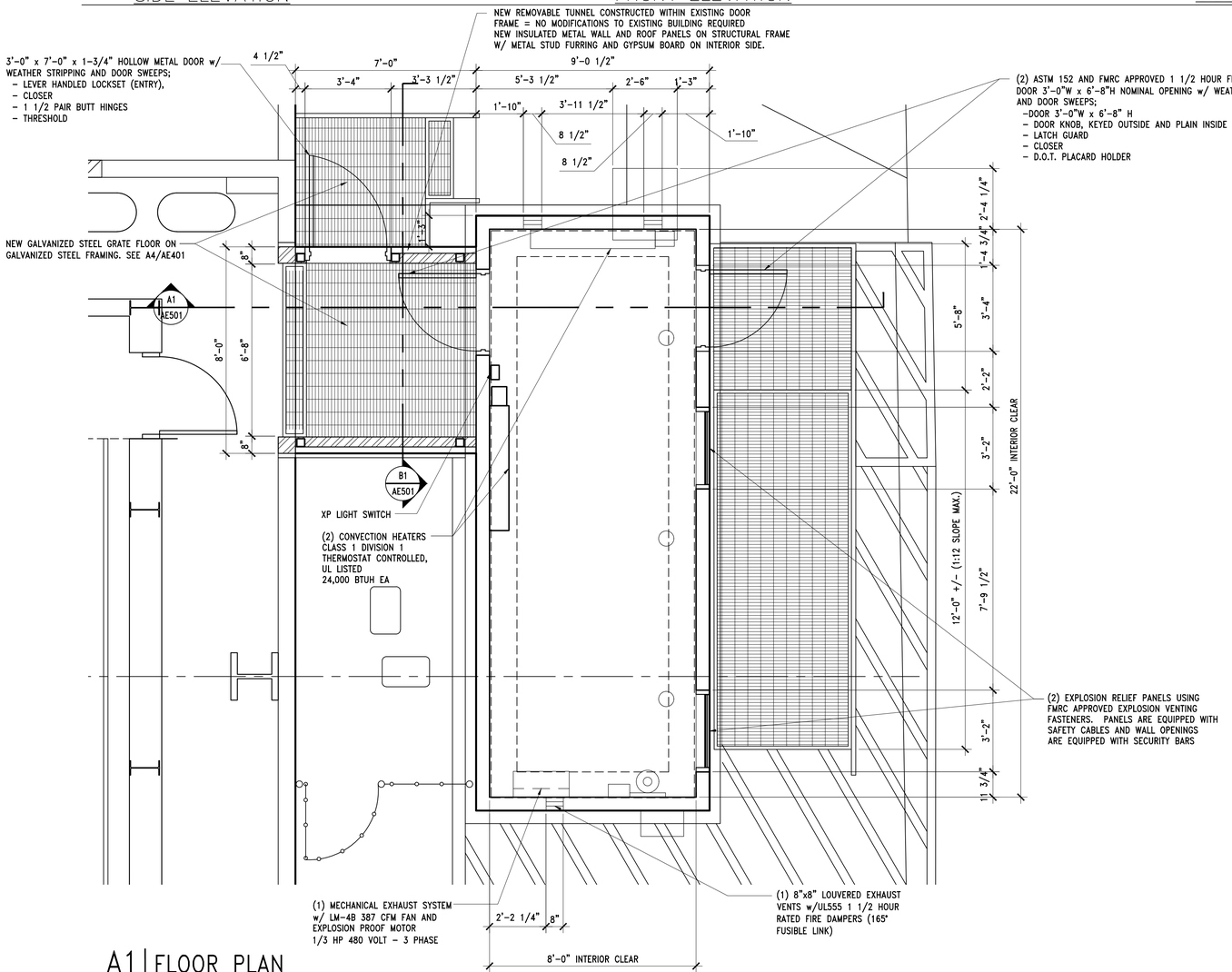
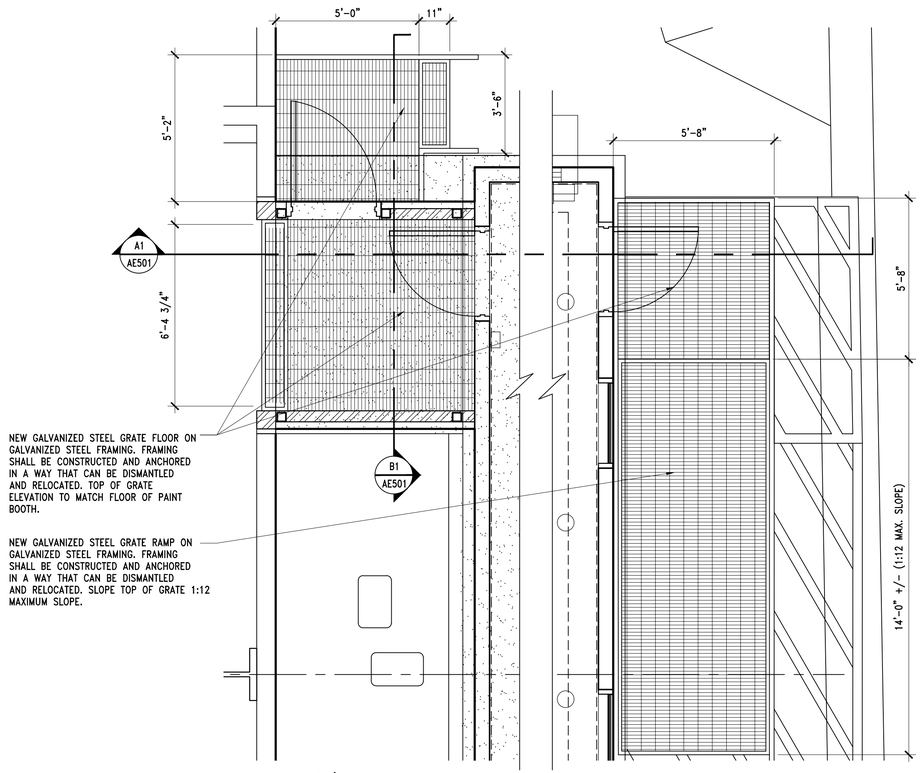


A1 | FLOOR PLAN

AE401 REF. SCALE: 3/8" = 1'-0"



A4 | STEEL GRATE DIMENSION PLANS

AE401 REF. SCALE: 1/8" = 1'-0"

REV	DATE	Description
0	10/29/20	PERMIT SET

STATE OF UTAH — RALPH M. STANISLAW — 95-310818-0301 — LICENSED ARCHITECT — 7/27/09

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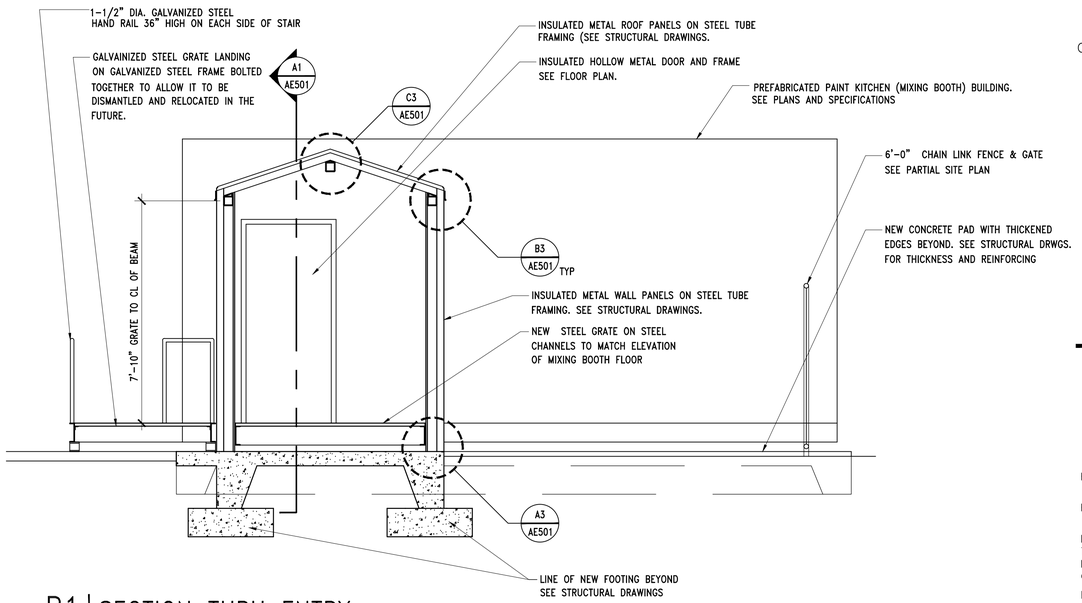
UTAH TRANSIT AUTHORITY

FRONT RUNNER PAINT BOOTH WARM SPRINGS SERVICE CENTER

900 NORTH 500 WEST SALT LAKE CITY, UT 84116

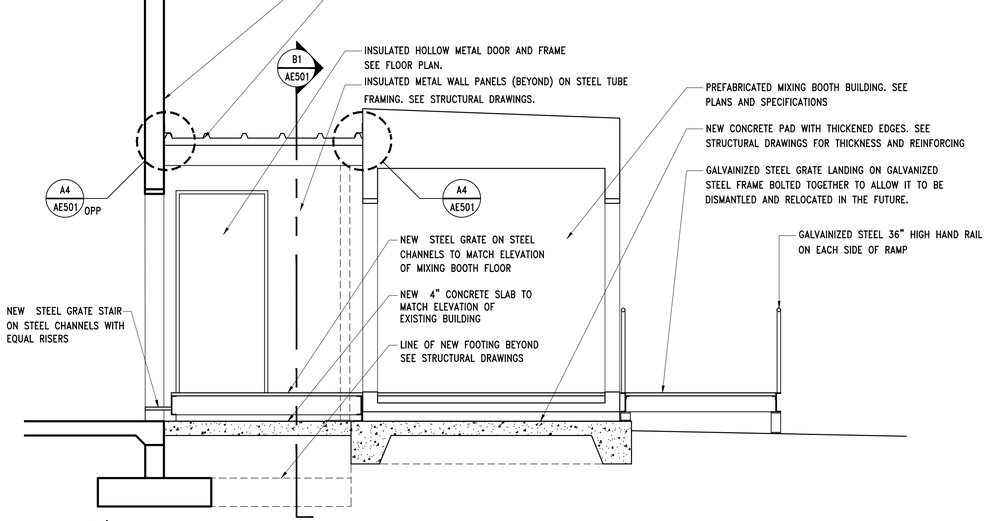
PAINT KITCHEN (MIXING BOOTH) ENLARGED FLOOR PLANS, ELEVATIONS AND DETAILS

Scale: AS SHOWN
CADD Filename: X-AFP01.DWG/LAYOUT3
Submittal Date: DEC 7, 2020
UTA Project No.: SGR-358
Drawing No.:
Sheet No.: AE401



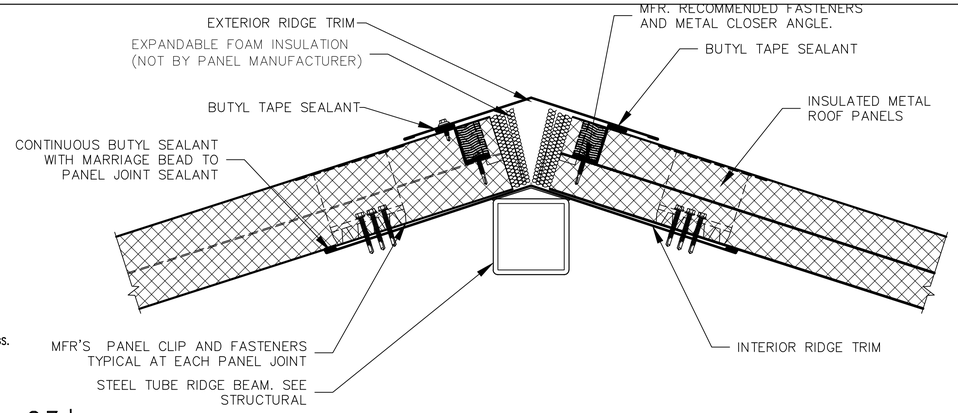
B1 | SECTION THRU ENTRY

AE501 | REF. | SCALE: 3/8" = 1'-0"



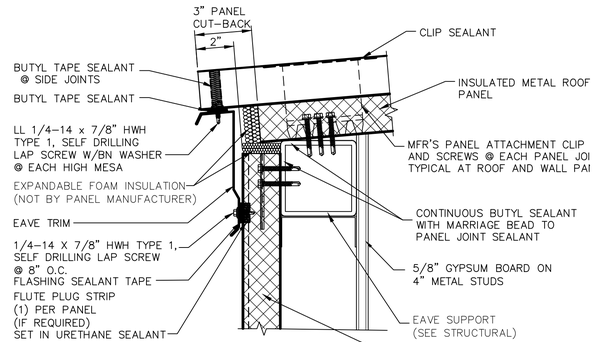
A1 | SECTION THRU ENTRY AND PAINT KITCHEN

AE501 | REF. | SCALE: 3/8" = 1'-0"



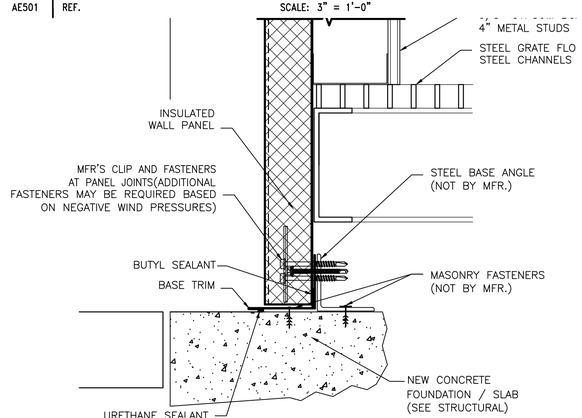
C3 | ROOF RIDGE FLASHING DETAIL

AE501 | REF. | SCALE: 3" = 1'-0"



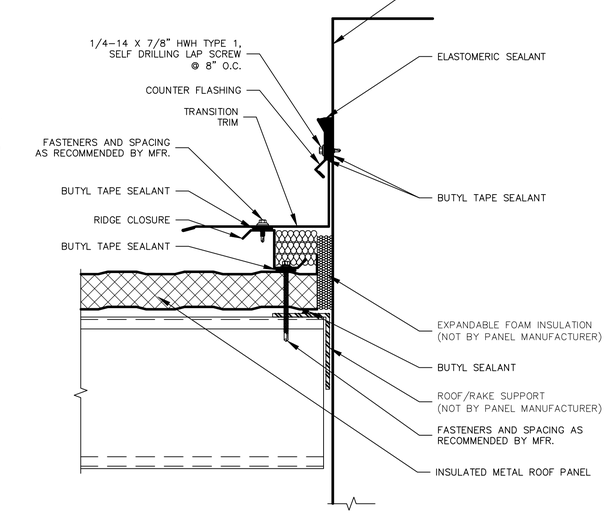
B3 | DETAIL AT TOP OF WALL

AE501 | REF. | SCALE: 3" = 1'-0"



A3 | DETAIL AT BOTTOM OF WALL

AE501 | REF. | SCALE: 3" = 1'-0"



A4 | ROOF TO WALL FLASHING DETAIL

AE501 | REF. | SCALE: 3" = 1'-0"

GENERAL NOTES

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REV	DATE	Description
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STATE OF UTAH — RALPH M. STANISLAW — 95-310818-0301 — LICENSED ARCHITECT — 7/27/09

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UTAH TRANSIT AUTHORITY

FRONT RUNNER PAINT BOOTH WARM SPRINGS SERVICE CENTER

900 NORTH 500 WEST SALT LAKE CITY, UT 84116

CONNECTING TUNNEL AND PAINT KITCHEN (MIXING BOOTH) SECTIONS AND DETAILS

Scale: AS SHOWN
CADD Filename: X-AFP01.DWG/LAYOUT3
Submittal Date: DEC 7, 2020
UTA Project No.: SGR-358
Drawing No.:
Sheet No.: AE501

GENERAL STRUCTURAL NOTES

GENERAL

1. The structural notes are intended to complement the project specifications. Specific notes and details in the drawings shall govern over the structural notes and typical details.
2. Typical details and sections shall apply where specific details are not shown.
3. The structural drawings are not all-inclusive and do not contain all dimensions, elevations, openings, mechanical shafts and penetrations needed to build the structure. The contractor shall coordinate these items with the Architectural, Mechanical and Electrical drawings.
4. Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the architect/engineer at no additional cost to the owner.
5. The contractor shall submit a written request to the architect/engineer before proceeding with any changes, substitutions or modifications. Any work done by the contractor before receiving written approval will be at the contractor's risk.
6. The contractor shall coordinate with all trades any items that are to be integrated into the structural system such as openings, penetrations, mechanical and electrical equipment, etc. Sizes and locations of mechanical and other equipment that differs from those shown on the contract drawings shall be reported to the architect/engineer.
7. The contractor shall provide adequate shoring and bracing as required for the chosen method of erection. Shoring and bracing shall remain in place until final connections for the permanent members are completed. The building shall not be considered stable until all connections are completed. Walls shall not be considered self-supporting and shall be braced until the roof system is completed.
8. Site observations by BHB Consulting Engineers' field representative shall not be construed as approval of construction procedures nor special inspection.
9. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings. The structural drawings shall be used in conjunction with the architectural and other consultant's drawings. Some dimensions and elements such as elevations, depressions, slopes, mechanical housekeeping pads, etc. are not shown in the structural drawings. All dimensions shown on structural drawings shall be verified by contractor with architectural, mechanical and electrical drawings.
10. Contractor shall review shop drawings for compliance with contract documents, and stamp shop drawings with review stamp prior to submission to architect for review. Review of shop drawings by BHB Consulting Engineers is for general compliance only and is not intended for approval. The shop drawing review shall not relieve the contractor from the responsibility of completing the project according to the contract documents. Fabrication shall not begin until shop drawings review process is complete. Shop drawings made from reproductions of the contract drawings will be rejected unless the contractor signs a release agreement prior to the shop drawings being reviewed.
11. Only an authorized representative of BHB Consulting Engineers may make changes to these contract drawings. BHB Consulting Engineers shall not be held responsible or liable for any claims arising directly or indirectly from changes made without written authorization by an authorized representative of BHB Consulting Engineers.

BASIS OF DESIGN

1. Governing Code — International Building Code 2018
   a. Risk Category — II
2. Snow Loads
   a. Ground Snow Load — P_g = 28 psf
   b. Snow Importance Factor — I_s = 1.0
   c. Snow Exposure Coefficient — C_e = 1.0
   d. Thermal Exposure Coefficient — C_t = 1.0
   e. Roof Snow Load — $P_f = 0.7 * C_e * C_t * I_s * P_g$ = 20 psf plus Snow Drift
3. Rain Loads
   a. Rain Intensity — i = 1.5 in/hr
4. Roof Live Load — 20 psf
5. Seismic Loads
   a. Seismic Importance Factor, I_e — 1.0
   b. Seismic Design Category — D
   c. Site Specific Ground Motion Hazard Analysis — Not Required per exceptions in section 11.4.8 of ASCE 7
   d. Mapped Spectral Acceleration — S_s = 1.498g; S_1 = 0.550g
   e. Soil Site Class — D
   f. Soil Site Coefficients — F_a = 1.2; F_v = 1.7
   g. 5% Damped Design Spectral Response Acceleration — $S_{DS} = 2/3 * F_a * S_S = 1.198g$; $S_{D1} = 2/3 * F_v * S_1 = 0.642g$
   h. Seismic-Force-Resisting System — Steel Ordinary Moment Frame
   i. Response Modification Coefficient — R = 3.5
   j. System Over-strength Factor — Ω_o = 3.0
   k. Deflection Amplification Factor — C_d = 3.0
   l. Redundancy Factors — ρ_x = 1.3; ρ_y = 1.3
   m. Fundamental Building Period — T = 0.189 seconds
   n. Seismic Response Coefficient — $Cs = S_{DS} * I_e / R$; $Cs = S_{D1} * I_e / (R*T)$
   o. W — Dead Loads of Structure
   p. Base Shear — $Vx = C_S * W = 0.342 * W$; $Vy = C_S * W = 0.342 * W$
   q. Analysis Procedure — Equivalent Lateral Force (Static)
6. Wind Loads
   a. Basic Wind Velocity (3 Second Gust) — 103 mph
   b. Exposure Type — C
   c. Internal Pressure Coefficient, GCpi — +/-0.18
   d. Topographic Factor, Kzt — 1.0
   e. Ground Elevation Factor, Ke — 1.0

EXISTING CONDITIONS

1. Structural connections and the framing systems shown in the structural drawings are based on a limited site survey. The contractor shall verify the existing conditions. If existing conditions vary from the information in the contract documents, the contractor shall notify the architect/engineer prior to proceeding with the fabrication or construction of any affected elements.
2. Existing framing systems and foundations taking new loads are assumed to be in good condition, unless noted otherwise in the contract documents. The contractor shall immediately notify the architect/engineer of any deficiencies in the existing structure that are observed or revealed during construction (e.g. corrosion of steel members, cracking or crumbling of concrete, checking or splitting of wood members) prior to proceeding with the fabrication or construction of any affected elements.
3. The contractor shall use the foundation systems indicated on the plans for reference only, and shall field verify foundation sizes, locations, and thicknesses during construction. The contractor shall notify the architect/engineer if existing foundations vary from the information in the contract documents prior to proceeding with the fabrication or construction of any affected elements.
4. While performing work adjacent to existing structures, the contractor shall be responsible for adequate shoring and protection of all existing structures, utilities, and services which will be affected by the work in the contract documents.

FOUNDATION

1. Soils Investigation Report: — None
2. Assumed Soil bearing pressure: — 1500 psf -Contractor shall verify at time of construction.
3. Frost Protection: — 30" minimum.
4. Clear excavations of debris and loose soil prior to placing footings. All footings shall bear on undisturbed natural sub-grade or engineered compacted fill as noted in these drawings.

EARTHWORK

1. Prior to construction, the contractor shall verify that the soil conditions are adequate for 1,500 psf allowable soil bearing pressure. If needed, structural fill shall be provided beneath footings.
2. Clearing: Remove all existing structures and associated foundations, slabs, fencing, asphalt, concrete, and incidental structures as necessary for project completion. The building area shall be stripped of all vegetation, topsoil and debris. Following stripping, all fill soils and any remaining loose natural soils shall be excavated to expose competent natural soils.
3. Proof roll the entire building pad area with normal compaction equipment to check for the presence of unsuitable fills, soft spots, or other undesirable materials or conditions. Remove sub-grade materials that are unsuitable and replace with compacted structural fill or 2,000 psi lean concrete.
4. Compacted structural fill: All fill material shall be a well-graded granular material with a maximum size less than 3" and with not more than 15 percent passing a No. 200 sieve. It shall be compacted to at least 95 percent of the maximum laboratory density as determined by ASTM D 1557 for fill beneath footings and 90 percent for fill beneath floor slabs. All fill shall be tested. Compacted structural fill shall be placed in lifts not exceeding 8" in uncompacted thickness.
5. Floor slabs thicknesses shall be required by the plans and underlain by a granular layer at least 4" thick. The granular layer shall have a maximum size less than 1" with not more than 5 percent passing a #200 sieve and shall be compacted to at least 90 percent of the maximum laboratory density as determined by ASTM D 1557.
6. Consult the project specifications for further earthwork requirements.

CONCRETE

1. Materials, unless noted otherwise:
   a. Normal weight aggregates — ASTM C 33
      i. Combined aggregate gradation for slabs on grade and other designated concrete shall be 8% - 18% for large top size aggregates (1.1/2") or 8% - 22% for smaller top size aggregates (1" or 3/4") retained on each sieve below the top size and above the No. 100. The range for the No. 30 and No.50 sieves shall be 8% - 15% retained in each. To avoid gap gradation the following shall occur:
         1. The percent retained on two adjacent sieves shall not fall below 5%.
         2. The percent retained on three adjacent sieves shall not fall below 8%.
         3. When the percent retained on two adjacent sieves is less than 8%, the total retained on either of these sieves and the adjacent outside sieve shall be at least 13%. See ACI 302 Section 5.4.3.3 for more information.
      ii. Maximum Aggregate Size shall not be larger than:
         1. 3.1/2" or 1/5 the narrowest dimension of the forms
         2. 1/3 the depth of the slab
         3. 3/4 the minimum clear spacing between bars
   b. Reinforcing Steel — ASTM 615 Grade 60 (Fy = 60 ksi) Use Grade 40 (Fy = 40 ksi) for field bent dowels with spacings indicated reduced by 1/3.
   c. Anchor Rods
      Typical, uno — ASTM F1554, Grade 36, with ASTM A563 heavy hex nuts and hardened washers Grade A
      Moment Frame Columns — ASTM F1554, Grade 55 (or 105) with ASTM A563 heavy hex nuts and hardened washers Grade A
   d. Admixtures:
      i. Air-entraining admixtures shall comply with ASTM C 260 (when used).
      ii. Calcium chloride shall not be added to the concrete mix.
      iii. Water-reducing admixture shall comply with ASTM C 494/C 494M, Type A (when used)
      iv. Retarding admixture shall comply with ASTM C 494/C 494M, Type B (when used).
      v. Water-reducing and retarding admixture shall comply with ASTM C 494/C 494M, Type D (when used).
      vi. High-range, water-reducing admixture shall comply with ASTM C 494/C 494M, Type F (when used).
      vii. High-range, water-reducing and retarding admixture shall comply with ASTM C 494/C 494M Type G (when used).
      viii. Admixture manufacturer shall have ISO 9001 Quality Certification. To ensure compatibility all admixtures shall be from the same manufacturer.
   e. Type I/II cement complying with ASTM C-150 shall be used for all concrete. Cement source shall remain the same for the entire job.
   f. The water/cementitious materials ratios shall meet the requirements of Table 19.3.2.1 of ACI 318-14.
   g. Fly Ash - ASTM C618, Class F – 25% maximum cementitious content.
   h. Provide air entraining as recommended by Table 19.3.3.1 of ACI 318-14. Concrete that extends above grade and is exposed to freezing and thawing while moist shall be air-entrained. Concrete in unconditioned spaces shall be considered site concrete.
   i. No aluminum conduit or product containing aluminum or any other material injurious to concrete shall be embedded in concrete.
2. Compressive strengths of concrete at 28 days shall meet the follow performance requirements (see ACI-318-14; Chapter 19):
   a. Footings & Interior Foundation Walls
      Strength — 3,000 psi
      Classification — F0, S0, W0, C0
   b. All Site Concrete with Reinforcement
      Strength — 5,000 psi
      Classification — F3, S0, W1, C2
   c. All Site Concrete without Reinforcement
      Strength — 4,500 psi
      Classification — F3, S0, W1, C2
3. Reinforcement for concrete slabs on grade:
   a. 6" thick concrete slab on grade. Reinforce slab with #3 bars at 18" o.c. each way with 2" max cover below the top surface of the concrete.
      i. At contractor's option, macro-synthetic fiber or welded wire fabric may be used in lieu of reinforcing bars with the following requirements:
         1. 3 lbs minimum per cubic yard of macro-synthetic fiber reinforcing (ASTM C 1116 Type 3) with the following requirements:
            a. Length 1.1/2" – 2"
            b. Equivalent diameter of 0.016" to 0.05"
            c. Minimum aspect ratio (length to equivalent diameter) of 50 to 90.
            d. Provide a fiber dosage to achieve a minimum post-crack residual strength (f_{e3}) of 200 psi when tested according to ASTM C1609.
            e. Maximum concrete shrinkage shall be 0.04% when tested according to ASTM C157 or C157 modified.
            f. Fiber manufacturer shall provide the following:
            g. Fiber dosage
            h. Mix design
            i. Finishing practices
         2. 6" x 6" – W4/W4 welded wire fabric (ASTM A185 and A497) minimum, unless noted otherwise. Welded Wire Fabric with 2" of cover below the top surface of the concrete.
4. Only one grade or type of concrete shall be poured on the site at any given time.
5. The contractor shall be responsible for the design, detailing, care, placement and removal of all formwork and shores.
   a. Supporting forms and shoring shall not be removed until structural members have acquired sufficient strength to safely support their own weight and any construction load to which they may be subjected. In no case, however, shall forms and shoring be removed in less than 24 hours after concrete placement.
6. Reinforcement shall have the following concrete cover:

	Clear Cover
a. Cast-in-place Concrete	
i. Cast against and permanently exposed to earth	3"
ii. Formed concrete exposed to earth or weather:	
#6 thru #18 bars	2"
#5 and smaller bars	1.1/2"

7. Detailing:
   a. At joints, provide reinforcing dowels to match the member reinforcing, unless noted otherwise.
   b. At all discontinuous control or construction slab on grade joints, provide 2 - #4 x 48".
   c. Corner Bars: Provide corner bars at intersecting wall corners using the same bar size and spacing as the horizontal wall reinforcing. Corner bars shall lap the horizontal reinforcing with the required lap splice length.
   d. All vertical reinforcing shall be doweled to footings, or to the structure below with the same size and spacing as the vertical reinforcing for the element above. Dowels extending into footings shall terminate with a 90-degree standard hook and shall extend to within 4" of the bottom of the footing. Footing dowels (#8 bars and smaller) with hooks need not extend more than 20" into footings.
8. Construction Joints, Control (Contraction) Joints:
   a. Construction joints in all horizontal and vertical construction joints including between top of footing and foundation walls shall be intentionally roughened to a full amplitude of approximately 1/4". The laitance on the concrete (thin, flaky layer of harden, weakened hydrated cement) shall be mechanically removed from the surface after the concrete has achieved final set. Construction joints in slabs on grade shall not exceed a distance of 125'-0" o.c. in any direction.
   b. Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more than 1.25:1. Control joints shall be completed as soon as final set is achieved and it is okay to operate the cutter on the slab. Final set is typically achieved within the first 4 to 12 hours after the slab has been finished in an area (depending on weather conditions and concrete hydration rate; 4 hours in hot weather to 12 hours in cold weather). For early entry saw cutting, joints should be cut within the first 1 to 4 hours (depending on weather conditions and concrete hydration rate; 1 hour for hot weather and 4 hours for cold weather). Where saw cut joints cannot be cut along the entire projected length of the joint, a 90-degree hand grinder or other tool shall be used to complete the joint. Control joints may be installed by:
      i. Saw cut a depth of 1/4 the thickness of the slab (1.1/4" ± for early entry saws) minimum.
      ii. Tooled joints a depth of 1/4 the thickness of the slab
   c. For interior concrete slabs-on-grade that are to receive **no** floor covering, install construction or control joints in slabs on grade at a spacing not to exceed 24 times the slab thickness in any direction, unless noted otherwise. For interior concrete slabs-on-grade that are to receive floor coverings the contractor has the option to increase the control joint spacing to 36 times the slab thickness in any direction.
9. Construction
   a. Use chairs or other support devices recommended by the CRSI to support and tie reinforcement bars prior to placing concrete. Reinforcing steel for slabs on grade shall be adequately supported. Support reinforcing steel of slabs on grade with precast concrete units. Lifting the reinforcing off the grade during placement of concrete is not permitted.
   b. Concrete to be mechanically consolidated during placement per ACI standards.
   c. Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, inserts and other embedded items prior to concrete placement.
   d. All embeds, anchors and dowels shall be securely tied to formwork or to adjacent reinforcing prior to the placement of concrete.
   e. No pipes, ducts, sleeves, etc shall be placed in structural concrete unless specifically detailed or approved by the structural engineer. Penetrations through walls when approved shall be built into the wall prior to concrete placement. Penetrations will not be allowed in footings or grade beams unless detailed. Piping shall be routed around footings and grade beams and unless detailed. Footings shall be stepped to avoid piping.
   f. Reinforcing Bars shall not be welded. Do not substitute reinforcing bars for DBAs or HSAs.

POST-INSTALLED ANCHORS

1. General Post-Installed Anchor Notes
   a. Do not install adhesive anchors in concrete if less than 21 days old; do not install mechanical anchors, screw anchor or powder actuated anchors in concrete less than 7 days old. Contractor must obtain written approval from the engineer to install prior to these time periods. Do not apply full load to anchors until concrete has reached 28-day compression strength.
   b. Anchors or adhesives specified in details shall be provided; alternative anchors or adhesives may be used if the contractor provides calculations demonstrating that the alternative can achieve the performance values of the specified product. These calculations, along with an ICC-ES ESR or IAPMO-UES ER approval for use in cracked concrete and compliant with the specified codes herein, must be submitted to the structural engineer prior to use.
   c. Follow all the manufacturer's recommendations and certification testing reports for anchor installation. See specific anchors below for more information.
   d. No anchor shall be installed within 1.5 anchor rod diameters of an abandoned hole that has been filled with non-shrink grout; increase distance to 3 anchor rod diameters when the abandoned hole has not been filled.
2. Adhesive Anchors
   a. For anchors in concrete, the adhesives shall be divided into two groups: Standard Adhesives and High Strength Adhesives. Standard adhesives can be used in general applications when details reference the "Standard Adhesive Embedment Schedule" on sheet S601. High Strength adhesive groups will be specified for the particular application in the drawings and details. When a High Strength Adhesive is specified, the contractor has the option to use any of the adhesives in the High Strength group. When a Standard Adhesive is specified, the contractor has the option to use any of the adhesives in either group. See below for the acceptable adhesives in each group.
      i. Standard Adhesive Group for anchors in concrete includes the following adhesives:
         1. SET-XP (ICC-ES ESR-2508) by Simpson Strong-Tie
         2. Pure 50+ (ICC-ES ESR-3576) by Dewalt
         3. AC100+ Gold (ICC-ES ESR-2582) by Dewalt
         4. HIT-RE 100 (ICC-ES ESR-3829) by Hilti, Inc.
      ii. High Strength Adhesive Group for anchors in concrete includes the following adhesives:
         1. SET-3G (ICC-ES ESR-4057) by Simpson Strong-Tie
         2. Pure 110+ (ICC-ES ESR-3298) by Dewalt
         3. AC200+ (ICC-ES ESR-4027) by Dewalt
         4. HIT-RE 500-V3 (ICC-ES ESR-3814) by Hilti Inc.
         5. HIT-HY 200 (ICC-ES ESR-3187) by Hilti Inc.
   b. Adhesive shall be within the manufacturer's recommended life time and prior to expiration date. Do not use adhesive that has not been stored per manufacturer's recommendations or may have experienced freeze thaw cycles or extreme heat.
   c. Do not install adhesive anchor in wet or damp hole unless product is approved for such conditions without strength reduction. Do not install adhesive anchors if concrete temperature is below 50-degree F unless adhesive is approved for lower temperature without strength reduction. Refer to manufacturer's published installation instructions.
   d. Follow all the manufacturer's recommendations and certification testing reports regarding hole cleaning prior to adhesive installation. All holes shall be drilled with ANSI standard bits designed for concrete. Diamond core drilled holes are not allowed unless indicated in specific details or approved by the structural engineer prior to use.
3. Mechanical Anchors
   a. For concrete, the mechanical anchor shall be Kwik Bolt TZ (ICC-ES ESR-1917) by Hilti Inc., Strong-Bolt 2 (ICC-ES ESR-3037) by Simpson Strong-Tie Inc. or Power-Stud+ SD2 (ICC-ES ESR-2502) by Dewalt.
4. Screw Anchors
   a. For concrete, the screw anchors shall be Titen HD (ICC-ES ESR-2713 for concrete only) by Simpson Strong-Tie, or Screw-Bolt + (ICC-ER ESR-3889 for concrete only) by DeWalt, or Kwik HUS-EZ (ICC-ES ESR-3027 for concrete only) by Hilti Inc.
5. Powder Actuated Fasteners
   a. For fasteners driven into steel (except at metal decks), the fastener shall be X-U P8 TH Universal Knurled Shank Fastener (ICC-ES ESR-2269) by Hilti Inc., PDPA (ICC-ES ESR-2138) by Simpson Strong-Tie Inc. or 8mm Head Spiral CSI Drive Pin (ICC-ES ESR-2024) by Dewalt.

STRUCTURAL STEEL

1. Material:
   a. Wide Flanges Section — ASTM A992 (50 ksi)
   b. All Thread Rods, Other Shapes & Plates — ASTM A36 (36 ksi)
   c. Square or Rectangular HSS — ASTM A500 (50 ksi) Grade C or ASTM A1085 (50ksi)
   d. Deformed Bar Anchors (DBA) — ASTM A496
   e. Headed Stud Anchors (HSA) — ASTM A108
   f. Anchor Rods
      Moment Frame Columns — ASTM F1554, Grade 55 (or 105) with ASTM A563 heavy hex nuts and ASTM F436 hardened washers Grade A
   g. Bolted Connections: — ASTM F3125 Grade A325 with ASTM A563 nuts and ASTM F436 hardened washers.
   h. All structural steel shapes and plates listed on these structural plans as a Seismic Resisting Element (SRE) shall be tested in accordance with ASTM A6, Supplementary Requirement S30, *Charpy V-Notch Impact Test for Structural Shapes – Alternate Core Location*. The impact test shall meet a minimum average value of 20 ft-lbs or greater absorbed energy at 70 degrees Fahrenheit.
      i. Shapes: with flanges 1.1/2" or thicker
      ii. Plates: 2" and thicker
      iii. Test Frequency: Each heat.
2. Fabrication and construction shall comply with the latest edition of the following Codes and Standards:
   a. American Institute of Steel Construction (AISC), "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings," with "Commentary".
   b. AISC "Code of Standard Practice" excluding the following: Section 3.2, Section 4.4, Section 4.4.1,
   c. AISC "Specification for Structural Joints Using High-Strength Bolts"
   d. American Welding Society (AWS), Structural Welding Code (specific items do not apply when they conflict with the AISC requirements).
   e. AISC "Seismic Provision for Structural Steel Buildings"- ANSI/AISC 341
   f. All exterior steel elements, including anchor rods and bolts shall be hot-dip galvanized in accordance with ASTM A123 and A153 where applicable.
3. Welding
   a. Field weld flags that have been put in these documents are for suggestion only. The contractor has the option to substitute shop welding for field welding or vice versa. The steel fabrication and steel erection drawings must clearly distinguish between shop welds and field welds prior to any work being performed.
   b. Steel fabricators shall indicate the shop welds that are excluded from their bids. Steel erectors shall indicate the field welds that are excluded from their bids. It is the responsibility of the contractor to coordinate shop welding and field welding with the appropriate subcontractors.
   c. All welding and cutting shall be performed by AWS certified welders.
   d. Use E-70 XX (58 ksi yield, 70 ksi tensile) unless noted otherwise. E60 XX may be used for welding steel roof decks.
   e. All intersecting steel shapes which are not bolted shall be connected by a fillet weld all around, unless noted otherwise. Where fillet weld sizes are not shown they shall be 1/16" less than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates less than 1/4" shall be of the same size as the thinnest of the connected part.
   f. Reinforcing Bars: Do not weld rebar except as specifically detailed in the drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for deformed bar anchors (DBAs), machine bolts, or headed stud anchors (HSAs).
   g. Do not weld anchor bolts, including "tack" welds.
   h. Headed Stud Anchors (HSAs) welding and deformed bar anchor welding shall conform to the manufacturer's specifications.
   i. Protected zones for braced frames and moment frames shall clearly marked at the job site.
   j. Welds indicated for elements designated as SRE (Seismic resisting elements) shall be made with a filler metal capable of providing 22% minimum elongation and a minimum Charpy V-Notch (CVN) toughness of 20 ft-lb (27 J) at 0 degrees Fahrenheit. In addition to meeting this requirement, welds indicated as Demand Critical shall be made with a filler metal also capable of providing a minimum Charpy V-Notch (CVN) toughness of 40 ft-lb (54 J) at 70 degrees Fahrenheit. Acceptable electrodes include E70TG-K2, E71T-8 and E71T-1.
   k. Special Provisions for full penetration welds used in moment frames. Welding methods, procedures and quality control shall comply with ANSI/AWS D1.1 (Latest Edition) and the following:
      i. Tack weld quality comply with Section 5.18
      ii. Arc Strikes, gouges and other imperfections within or adjacent to the joint, shall be repaired or removed.
      iii. Preheat, and interpass requirements as outlined in Section 5.6 or per the electrode manufacturer's guidelines.

LICENSED PROFESSIONAL STRUCTURAL ENGINEER — DALLIN BURNETT JORGENSEN — No. 7991173-2202 — STATE OF UTAH

12/7/2020

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0	12/7/20	PERMIT SET

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GENERAL STRUCTURAL NOTES

Scale:
Project Status: PERMIT SET
Submittal Date: DECEMBER 7, 2020
UTA Project No.: SGR–358
BHB Project No.: 200717
Sheet No.: S001

GENERAL STRUCTURAL NOTES

iv. Use weld tabs at beam flange connections; after welding, remove the weld tabs and finish to a smooth contour per Section 5.31.
v. Backing bars shall be removed from the beam bottom flange connections to columns. The root of the weld shall be back gouged to sound metal to remove all slag and cracks. Weld the back gouged region and finish welding using a reinforcing fillet weld, according to Section 5.10.4.
vi. Backing bars need not be removed from the beam top flange connections to columns provided that the backing bars are 1/4" thick or less and are welded to the column flange with a continuous fillet weld for the entire length of the backing bar.
vii. Unrepaired cracks, gouges, grooves and notches will not be permitted in the joint area.

4. Bolted Connections:
   a. Use bolts for steel to steel connections, as noted herein or as noted on the drawings. Bolts shall be used in connections for simple span framing and beam (or girder) to bearing plate connections. Tighten bolts to a snug tight condition.
   b. Use hardened washers beneath the turned element of all bolts or nuts. Use hardened beveled washers, to compensate for the lack of parallelism, where the outer face of the bolted parts has a slope greater than one in twenty with respect to the plane normal to the bolt axis. At oversized holes hardened washers or plates shall conform with ASTM F-436 and shall completely cover the slot after installation.
   c. Where a steel to steel beam connection is not shown, provide a standard AISC framed connection for one half the total uniform load capacity of the beam for the span and steel specified.
   d. Bolts, nuts and washers shall not be reused.

5. Provide baseplate anchor rod connections to concrete elements that correlate with ACI 117. Circular or square washers are acceptable:

ANCHOR ROD DIAMETER	HOLE DIAMETER	WASHER SIZE	WASHER THICKENESS (MIN)
3/4"	1.5/16"	2"	1/4"

METAL DECKING

1. Steel deck shall comply with the latest requirements of the Steel Deck Institute.

2. All deck shall be 3-span continuous minimum. In areas where 3-span conditions are not possible, the contractor shall provide heavier gage deck as required to provide the equivalent loading of the deck under a three span condition.

3. Steel roof deck shall not be used to support loads from plumbing, HVAC ducts, light fixtures, architectural elements or equipment of any kind, unless specifically noted. Light weight suspended acoustical ceilings with a total weight of 50 lbs per attachment may be hung from roof deck. The hangers shall be staggered to distribute the loads over multiple deck flutes.

4. All deck supporting members shall be dry before welding.

5. Clinch seams before welding interlocking seams.

Steel Roof Deck

a. Steel roof deck shall be 9/16" deep X 26 gage minimum painted, shallow deck with interlocking side seams with the following properties:

	26 Gage
Minimum S (in^3/ft) =	0.041
Minimum I (in^4/ft) =	0.013

b. Minimum allowable deck diaphragm shear values shall be 386 lbs/ft for a 2'-0" deck span.
c. Fasten deck to supporting framing members with powder-driven fasteners. Powder-driven fasteners shall be as indicated below based on the steel framing thicknesses:

Steel Framing Thickness	Fastener	ICC-ESR or IAPMO report number
0.125" to 0.375"	Hilti X-HSN-24	ICC-ESR 2776
0.25" and up	Hilti X-ENP-19 L15	ICC-ESR 2776
0.113"to 0.155"	Pneutek SDK61075	ICC-ESR 2941
0.155" to 0.250"	Pneutek SDK63075	ICC-ESR 2941
0.188" to 0.312"	Pneutek K64062	ICC-ESR 2941
0.281" and up	Pneutek K66062	ICC-ESR 2941

d. Fasteners shall be placed at the following spacings (Closer spacings may be used to develop minimum shear requirements):
   i. 6" o.c. to all supports perpendicular to deck corrugations (7 fasteners per 36" sheet).
   ii. 6" o.c. to all supports parallel to deck corrugations.
e. Provide a 2" minimum bearing and a 4" lap at the splice points.

COLD-FORMED STEEL

1. All cold-formed steel shall meet the requirements of "Specifications for the Design of Cold-Formed Steel Structural Members" by American Iron and Steel Institute (AISI).

2. All cold-formed steel connectors shall be provided by The Steel Network. If the contractor elects to substitute for another manufacturer, the contractor shall submit a revised connector list, prior to construction, that includes the following information:
   a. Specified connector indicated on these plans
   b. Requested substitution connector
   c. Allowable capacity of the requested substitution connector

3. Light Gauge Steel Framing:
   a. Galvanized steel shall meet the minimum requirements of ASTM A653 (Fy = 50 ksi) for 97 mil (12 gauge), 68 mil (14 gauge) and 54 mil (16 gauge). For 43 mil (18 gauge) and lighter galvanized steel shall meet and ASTM A653 (Fy = 33 ksi). Galvanized coatings must meet the ASTM A924.
   b. Follow all manufacturers' recommendations for the use of these products.
   c. Unless noted otherwise, all welded connections shall be done according to AWS standards.
   d. All interior non-bearing steel-stud walls that extend above the ceiling but do not attach to the structure above shall be brace with diagonal metal-stud braces (45 degrees). The klr/r ratio of the brace shall not exceed 200 and shall not be spaced further apart than 10'-0" o.c. Connect diagonal braces to the top of the steel stud walls and to the top flange of the steel beams with two #10 tek screws minimum. Where a concrete deck occurs above, use two powder-driven fasteners per diagonal brace. Other approved methods may be used.

LEGEND OF MARKS AND ABBREVIATIONS

AB	ANCHOR BOLT(S)	k	KIP(S) = 1000 POUNDS
ABV	ABOVE	KLF	KIPS PER LINEAL FOOT
ALT	ALTERNATE	KSF	KIPS PER SQUARE FOOT
APPROX	APPROXIMATE		
ARCH	ARCHITECT(URAL)	LBS	POUNDS
		LF	LINEAL FOOT
BLDG	BUILDING		
BLW	BELOW	MAX	MAXIMUM
BM	BEAM	MECH	MECHANICAL
BOT	BOTTOM	MF-X	MOMENT FRAME
BRG	BEARING	MFR	MANUFACTURER
BTWN	BETWEEN	MIN	MINIMUM
		MISC	MISCELLANEOUS
CC.	CENTER-TO CENTER	MSW	METAL STUD WALL
C.J.	CONST/CONTROL JOINT		
CJP	COMPLETE JOINT PENETRATION	NIC	NOT IN CONTRACT
	GROOVE WELD (FULL PEN WELD)	NTS	NOT TO SCALE
COL	COLUMN		
CONC	CONCRETE	O.C.	ON CENTER
CONST	CONSTRUCTION	O.F.	OUTSIDE FACE
CTR	CENTER	OPNG	OPENING
CW-x	CONCRETE WALL	OPP	OPPOSITE
DB	DECK BEARING	PAF	POWDER-ACTUATED FASTENER
DBA	DEFORMED BAR ANCHOR	PCF	POUNDS PER CUBIC FOOT
DBE	DECK BEARING ELEVATION	PL	PLATE
DBL	DOUBLE	PLF	POUNDS PER LINEAL FOOT
DET	DETAIL	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DIM	DIMENSION	PT	POINT
DN	DOWN	P-T	POST-TENSION
DWG	DRAWING		
DWL	DOWEL	REINF	REINFORCING
		REQD	REQUIRED
(E)	EXISTING	R.D.	ROOF DRAIN
EA	EACH	RTU	ROOF TOP UNITS
E.F.	EACH FACE		
E.J.	EXPANSION JOINT	SBP-x	STEEL BASE PLATE MARK
ELEC	ELECTRICAL	SCW	SEISMIC CRITICAL WELD
ELEV	ELEVATION	SC-x	STEEL COLUMN MARK
EQUIP	EQUIPMENT	SCP-x	STEEL CAP PLATE MARK
EQ	EQUAL	SHT	SHEET
E.W.	EACH WAY	SI	SPECIAL INSPECTION
EXT	EXTERIOR	SIM	SIMILAR
		SMU	SUSPENDED MECHANICAL UNITS
FC-x	CONTINUOUS FOOTING MARK	SOG	SLAB-ON-GRADE
F.D.	FLOOR DRAIN	SQ	SQUARE
FDN	FOUNDATION	SRE	SEISMIC RESISTING ELEMENT
F.F.	FINISHED FLOOR	STAG	STAGGERED
FR-x	RECTANGULAR FOOTING	STD	STANDARD
FS-x	SQUARE FOOTING MARK	STL	STEEL
FT	FOOT	STR	STRUCTURAL
FTG	FOOTING	STS	SELF TAPPING SCREWS
FTS-x	THICKENED SLAB MARK		
		T&B	TOP AND BOTTOM
GA	GAUGE	TEMP	TEMPERATURE
GALV	GALVANIZED	THDS	THREADS
GSN	GENERAL STRUCTURAL NOTES	T.O.	TOP OF
		TOC	TOP OF CONCRETE
HORIZ	HORIZONTAL	TOD	TOP OF DECK
HSA	HEADED STUD ANCHOR	TOF	TOP OF FOOTING
HT	HEIGHT	TOS	TOP OF STEEL
		TOW	TOP OF WALL
		TYP	TYPICAL
ICC	INTERNATIONAL CODE COUNCIL		
IBC	INTERNATIONAL BUILDING CODE	UNO	UNLESS NOTED OTHERWISE
I.F.	INSIDE FACE		
IN.	INCH	VERT	VERTICAL
INT	INTERIOR		
		W/	WITH
JT	JOINT	WT	WALL THICKNESS
JST	JOIST	WWF	WELDED WIRE FABRIC
		WWM	WELDED WIRE MESH

REQUIREMENTS FOR SPECIAL INSPECTION, MATERIAL TESTING, AND STRUCTURAL OBSERVATION

STATEMENT OF SPECIAL INSPECTION AND QUALITY ASSURANCE

Special inspection and quality assurance (including structural testing), as required by section 1704 and 1705 of the 2018 IBC, shall be provided by an independent agency employed by the owner for the items in this section and other areas of the approved construction documents, unless waived by the building official.

The names and credentials of the Special Inspectors to be used shall be submitted to the Building Official for approval.

Responsibilities of the Special Inspector
Special Inspector shall review all work listed in the special inspection schedules herein for conformance with the approved construction plans, specifications and 2018 IBC.
Testing and inspection reports shall be sent on a weekly basis to the architect, engineer, building official and contractor for review. All items not in compliance shall be brought to the immediate attention of the contractor for correction, and if uncorrected, to the architect, engineer and building official.
Once corrections have been made by the contractor, the special inspector shall submit a final signed report to the building official stating that the work requiring special inspection was, to the best of the special inspector's knowledge, in conformance with the approved construction plans, specifications and 2018 IBC.
Responsibilities of the Contractor
The contractor shall submit a written statement of responsibility to the owner and the building official prior to the commencement of work in accordance with 2018 IBC section 1704.4. This statement shall indicate that the contractor will coordinate and cooperate with the required inspections contained herein.
The contractor shall notify the designated special inspector that work is ready for inspection at least 24 hours before said inspection is required.
All work requiring special inspection shall remain open and accessible until it has been observed by the special inspector and deemed acceptable through inspection report.
Special inspection during fabrication is not required if the fabricator is registered and approved by the authority having jurisdiction to perform such work without special inspection. Upon completion of fabrication, the approved fabricator shall submit a certificate of compliance for submittal to the building official.
The contractor shall be responsible for their own quality control including materials, fabrication, erection, etc.

SOILS CONSTRUCTION INSPECTIONS

Soils (2018 IBC Section 1705.6)

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Site Preparation	-	X	Verify that the site has been prepared in accordance with the Earthwork section of the General Structural Notes and per recommendations by a geotechnical engineer (if required) prior to placement of prepared fill.
Fill Material	X	-	Verify that the material being used, the maximum lift thickness and the in-place dry density of the compacted fill material comply with the Earthwork section of the General Structural Notes and per recommendations by a geotechnical engineer (if required) during placement and compaction.
Continuous Footing Backfill: at least one test for each 40 linear feet or less of wall length, but no fewer than 2 tests.	-	X	At each compacted backfill layer.
Spot Footing Backfill: Minimum of one compaction test for each lift for each spot footing.	-	X	At each compacted backfill layer.
See specifications for further requirements.	-	-	

CONCRETE CONSTRUCTION INSPECTIONS

Concrete (2018 IBC Section 1705.3, Table 1705.3, and Section 1705.12) The following concrete elements require special inspection:

All concrete footings, All concrete walls, including foundation walls, Interior concrete slab-on-grade

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Protection of concrete during cold and hot weather	-	X	
Verify materials used including use of the required mix design	-	X	Verify mix design meets strength and exposure requirements listed on General Structural Notes
Formwork	-	X	Verify shape, location and member dimensions
Bolts installed in concrete	X	-	Inspection of anchors or embeds cast in concrete is required when allowable loads have been increased or where strength design is used. Prior to and during concrete placement.
Embeds and Inserts installed in concrete	X	-	Prior to and during concrete placement.
Concrete reinforcing steel placement	-	X	Verify that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
Concrete placement and samples	X	-	Cylinders, slump, temperature and air-entrainment shall be done for every 150 cubic yards or each day's production if the day's production is less than 150 cubic yards nor less than once for each 5000 sq. ft of surface area for slabs and walls.
See specifications for further concrete testing requirements.	-	-	

STEEL BOLTED CONSTRUCTION INSPECTIONS

Where special inspections are listed under "Random Basis", special inspection of elements and items shall be performed on a random basis. Operations need not be delayed pending these inspections. Where special inspection items are listed under "Every Element", special inspection shall be performed for each element, joint, or member, as applicable based on the task listed below.

High Strength bolted connections (2018 IBC section 1705.2.1, section 1705.12.1 and section 1705.13.1 and AISC 360-16 Chapter N and AISC 341-16 Chapter J)

ITEM FOR VERIFICATION & INSPECTION	INSPECTION PLAN		COMMENTS
	Every Element	Random Basis	
Inspection Tasks Prior to Bolting			
Manufacturer's certifications available for fastener materials	X	-	
Fasteners	-	X	Marked in accordance with ASTM requirements
Proper fasteners selected for the joint detail	-	X	Including grade, type, bolt length if threads are to be excluded from shear plane.
Proper bolting procedure selected for joint detail	-	X	
Connecting elements	-	X	Including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	-	X*	Not required if only snug-tight joints are specified per [Section N5.6(1) of AISC 360-16)] Special Inspector shall document the work has been performed in accordance with the contract documents, either in the shop or field, including noncompliant work and whether that work has been satisfactorily repaired.
Proper storage	-	X	Storage provided for bolts, nuts, washers and other fastener components
Inspection Tasks During Bolting			
Fastener assemblies, of suitable condition	-	X	Verify that fasteners placed in all holes and washers (if required) are positioned as required.
Joint	-	X	Verify that joint brought to the snug-tight condition (min) unless noted otherwise.
Fastener component	-	X	Verify that fastener component not turned by the wrench prevented from rotating
Pretensioned Fasteners	-	X	Verify that pretensioned fasteners are pretensioned in accordance with the RCSC *Specification*, progressing systematically from the most rigid point toward the free edges (Not required if only snug-tight joints are specified per [Section N5.6(1) of AISC 360-16]; Not required for pretensioned joints using turn-of-the-nut method with match-marking, direct-tension-indicators or twist-off type tension control bolt methods)
Inspection Tasks After Bolting			
Document acceptance or rejection of each bolted connection	X*	-	Special Inspector shall document the work has been performed in accordance with the contract documents, either in the shop or field, including noncompliant work and whether that work has been satisfactorily repaired.

*Required for elements designated in these structural drawings as "Seismic Resisting Elements – SRE".

POST-INSTALLED ANCHOR INSPECTIONS

ITEM FOR VERIFICATION & INSPECTION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
Post-Installed Anchors and Reinforcing Bars (2018 IBC Section 1705.1.1)			
Adhesive Anchors and Reinforcing Bars	X	-	Special inspection shall be performed per manufacturer's requirements and approved ICC-ES reports noted in POST-INSTALLED ANCHOR section of the General Structural Notes prior to installation of epoxy and anchor rod. If the anchor is not installed in a horizontal, upwardly inclined or overhead orientation meant to resist sustained tension loads, special inspection may be reduced to a periodic frequency.
Mechanical Anchors and Screw Anchors	-	X	Special inspection shall be provided per manufacturer's requirements and approved ICC-ES reports noted in POST-INSTALLED ANCHOR section of the General Structural Notes prior to installation of mechanical or screw anchor.

STRUCTURAL OBSERVATION PROGRAM

If structural observations are required, they shall be done by the Engineer of Record or an approved subordinate at the stages of construction listed in the Construction Notification Phases section of these notes. At the conclusion of the project, the designated structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that to the best of the structural observer's knowledge have not been resolved (See IBC 2018 1704.6).

STRUCTURAL OBSERVATION PROGRAM REQUIRED BY CODE:	YES	NO
		X

CONSTRUCTION MILESTONE SCHEDULE

CONTRACTOR TO NOTIFY ENGINEER AT THE FOLLOWING CONSTRUCTION PHASES:	
CONCRETE	
Footings, stem walls and piers	Prior to pouring concrete
STEEL	
Roof framing	After substantial portion of framing is erected

DEFERRED SUBMITTALS

For the purposes of this section, deferred submittals are defined as per section 107.3.4.1 of the IBC 2018. Submittal documents for deferred submittal items shall be submitted to the engineer, architect and building official for their review for general conformance with the design of the building.

DEFERRED STRUCTURAL SUBMITTALS FOR THIS PROJECT ARE

None

STEEL WELDED CONSTRUCTION INSPECTIONS

Definition of Terms

Where special inspections are listed under "Random Basis", special inspection of elements and items shall be performed on a random basis. Operations need not be delayed pending these inspections. Where special inspection items are listed under "Every Element", special inspection shall be performed for each element, joint, or member, as applicable based on the task listed below.

Structural Welding (2018 IBC section 1705.2 and section 1705.12.1 and section 1705.13.1 and AISC 360-16 Chapter N and AISC 341-16 Chapter J)

ITEM FOR VERIFICATION & INSPECTION	INSPECTION PLAN		COMMENTS
	Every Element	Random Basis	
Inspection Tasks Prior to Welding			
Welding procedures specifications and manufacturer certifications for welding consumables shall be available	X	-	Welding procedures shall be submitted to the Engineer of Record for review.
Material identification (type/grade)	-	X	
Welder identification system	-	X	Verify there is a system in place to identify the welder who has welded a joint or member.
Fit-up of groove welds	X*	X	Including joint geometry, joint preparation, dimensions, cleanliness, tacking and backing type and fit.
Configuration and finish of access holes	-	X	
Fit-up of fillet welds	X*	X	Including alignment, gaps at root, dimensions, cleanliness and tacking.
Check welding equipment	-	X	
SRE Welds and Demand Critical Welds	X	-	Provide manufacturer's certifications that the filler metal meets the supplemental notch toughness requirements, as indicated in these documents. When the filler metal manufacturer does not supply such supplemental certifications, the fabricator or erector, shall have the necessary testing performed and provide the applicable test reports to the Engineer of Record for review.
*Required for elements designated in these structural drawings as "Seismic Resisting Elements – SRE". May be reduced from 'Every Element' to 'Random Basis' after ten satisfactory welds have been completed. Subsequently, the inspector may change the requirements from 'Random Basis' to 'Every Element' and vice versa at their discretion.			
Inspection Tasks During Welding			
Use of qualified welders	-	X	
Control and handling of welding consumables	-	X	Including packaging and exposure control
Cracked tack welds	-	X	Verify no welding over cracked tack welds.
Environmental conditions	-	X	Including wind speed within limits and precipitation and temperature
WPS followed	-	X	Including settings on welding equipment, travel speed, selected welding materials, shielding gas type/flow rate, preheat applied, interpass temperature (min./max.) maintained, proper position (F, V, H, OH)
Welding techniques	-	X	Including interpass and final cleaning, each pass within profile limitations, each pass meets quality requirements
Inspection Tasks After Welding			
Welds cleaned	-	X	
Size, length and location of welds	X	-	
Welds meet visual acceptance criteria	X**	-	Including crack prohibition, weld/base-metal fusion, crater cross section, weld profiles, weld size, undercut and porosity.
Arc strikes, k-area, weld access holes for flanges greater than 2", backing removed and weld tabs removed (if required), repair activities	X**	-	When welding of doubler plates, continuity plates, or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3" of the weld.
Ultrasonic testing (UT) for complete-joint-penetration (CJP) groove welds, partial penetration groove welds when used in column splices, and welds subject to fatigue	-	X	Perform UT on 10% of welds subject to transversely applied tension loading in butt, T- and corner joints, in material 5/16" thick or greater. For materials less than 5/16" thick, ultrasonic testing is not required. The UT rate must be increased to 100% if the rejection rate exceeds 5% of the welds tested. See Sections N5.5d and N5.5f for more information.
Placement of reinforcing or contouring fillet welds	X**	-	
Ultrasonic testing (UT) for base metal thicker than 1.1/2", loaded in tension in the through-thickness direction in T- and corner-joints where the connected material is greater than 3/4" and contains CJP groove welds	X**	-	Provide UT for discontinuities found within t/ 4 of the steel surface shall be accepted or rejected based on criteria of A.W.S. D1.1/D1.1M Table 6.2 where 't' is the thickness of the part subjected to tension load. All deficient welds shall be corrected and tested at no additional cost to the owner.
Document acceptance or rejection of each welded joint or member	X**	-	

** Required for elements designated in these structural drawings as "Seismic Resisting Elements – SRE". All welding inspections and nondestructive testing shall satisfy the requirements above and AWS D1.8/D1.8M. The Inspector shall document the work has been performed in accordance with the contract documents, either in the shop or field, including noncompliant work and whether that work has been satisfactorily repaired.

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FRONT RUNNER PAINT BOOTH
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SPECIAL INSPECTIONS

Scale:
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Submittal Date: DECEMBER 7, 2020
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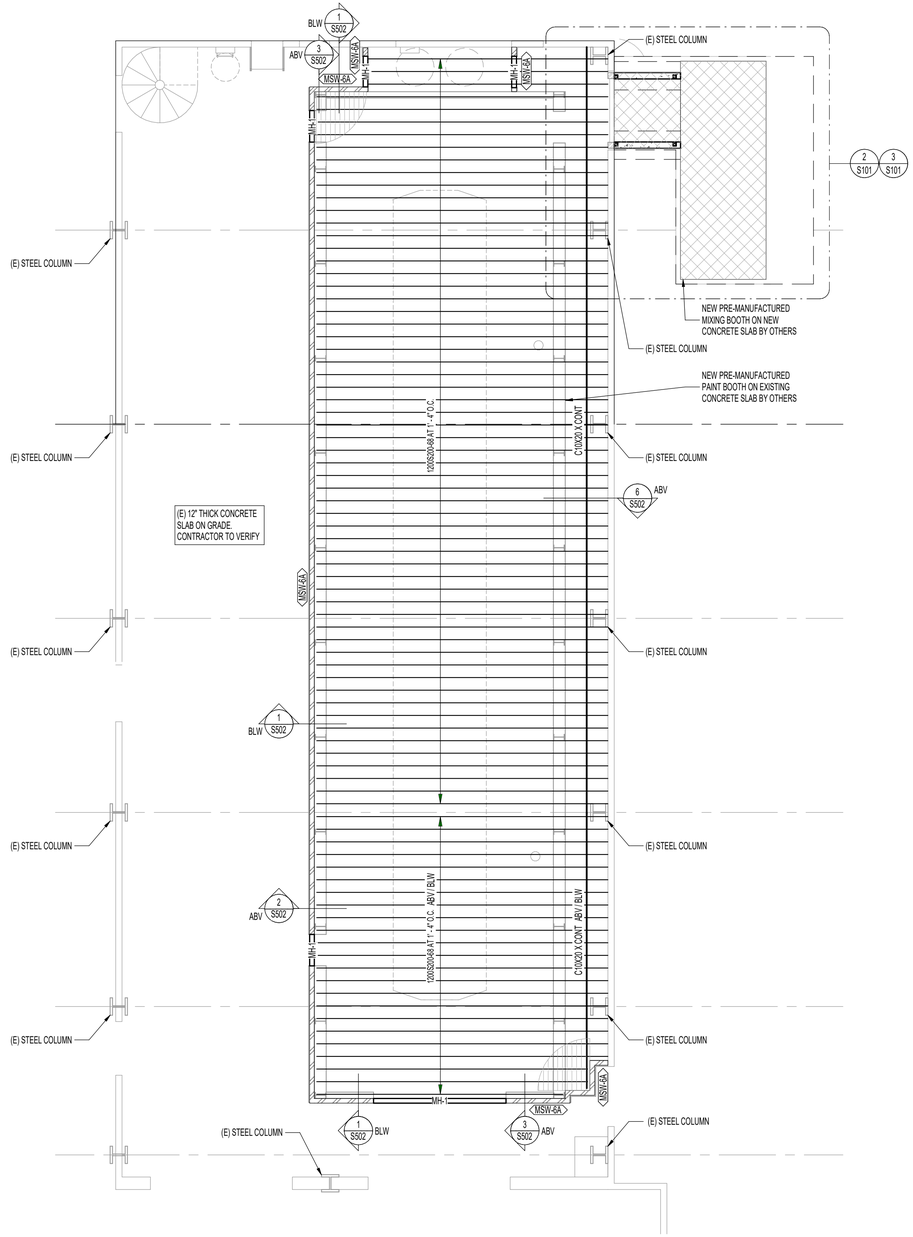
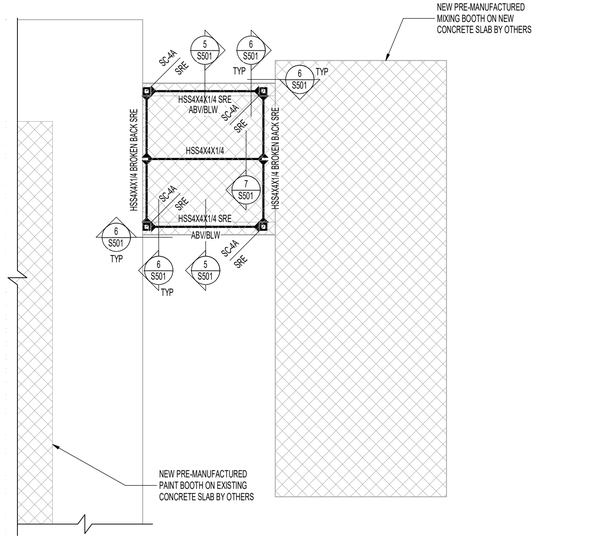
Sheet No.: S002



1 METAL STUD FRAMING PLAN

1/8" = 1'-0" [1/S101]

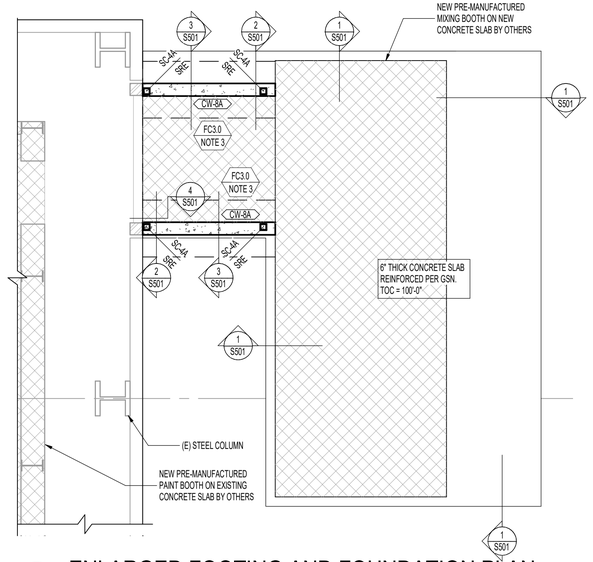
0" 4'-0" 8'-0" 16'-0"



3 ENLARGED TUNNEL FRAMING PLAN

1/4" = 1'-0" [1/S101]

0" 2'-0" 4'-0" 8'-0"



2 ENLARGED FOOTING AND FOUNDATION PLAN

1/4" = 1'-0" [1/S101]

0" 2'-0" 4'-0" 8'-0"

MARKS AND SYMBOLS LEGEND

- FOOTING DESIGNATION
- TOP OF FOOTING ELEVATION
- SECTION MARK
- SHEET NUMBER
- INDICATES CONCRETE WALL. DASHED WALLS STOP AT DECK
- INDICATES EXISTING WALL.
- INDICATES METAL STUD WALL. DASHED WALLS STOP AT DECK
- CW-x — INDICATES CONCRETE FOUNDATION WALL TYPE, SEE SCHEDULE ON SHEET S601
- MSW-x — INDICATES METAL STUD TYPE, SEE SCHEDULE ON SHEET S602
- FCx.x — INDICATES CONTINUOUS FOOTING. SEE SCHEDULE ON SHEET S601
- SC-x — INDICATES STEEL COLUMN, SEE SCHEDULE ON SHEET S601
- MH-x — INDICATES METAL STUD HEADER, SEE SCHEDULE ON SHEET S602
- INDICATES METAL ROOF DECK. SEE GENERAL STRUCTURAL NOTES ON SHEET S002
- INDICATES MOMENT CONNECTION, SEE DETAILS
- (SRE) — INDICATES SEISMIC RESISTING ELEMENT, SEE ELEVATIONS AND DETAILS AND FOLLOW ADDITIONAL SPECIAL INSPECTIONS.

FOOTING AND FOUNDATION PLAN NOTES

1. COORDINATE LOCATION OF DEPRESSED SLABS, SLOPED SLABS, AND FLOOR DRAINS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. SEE ARCHITECTURAL AND CIVIL DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO ALL STEEL COLUMNS.
3. LOCATE TOP OF FOOTING A MINIMUM OF 2'-0" BELOW TOP OF GRADE. CONTRACTOR TO VERIFY AND COORDINATE WITH EXISTING FOOTING.
4. SEE DETAIL 4/SS02 FOR BOTTOM TRACK FASTENER DETAIL.

ROOF FRAMING PLAN NOTES

5. SEE DETAIL 5/SS02 FOR METAL TOP TRACK SPLICE DETAIL.
6. VERIFY ALL ROOF OPENINGS FOR MECHANICAL SHAFTS, DRAINS, ETC. WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
7. ALL ROOF OPENINGS GREATER THAN, OR EQUAL TO, 12" x 12" SHALL BE FRAMED AS INDICATED IN DETAIL 8/SS01.

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FOOTING AND FOUNDATION / FRAMING PLANS

Scale:
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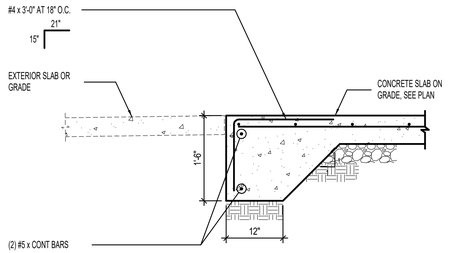
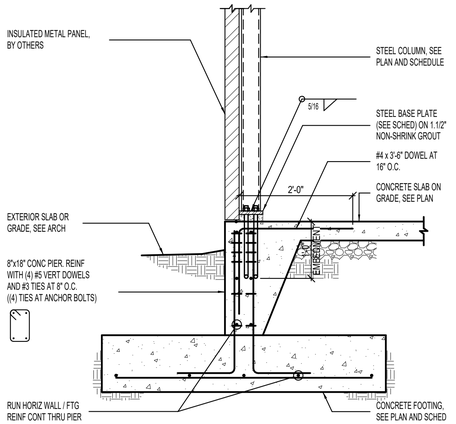


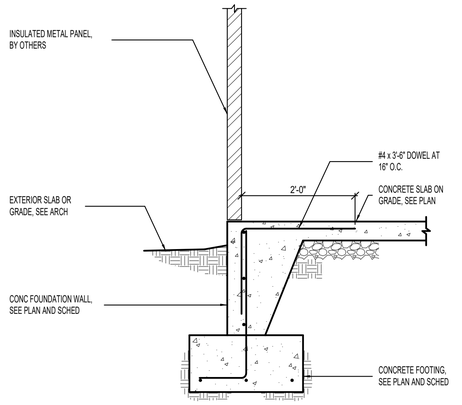
1 CONCRETE FOUNDATION WALL DETAIL

NO SCALE



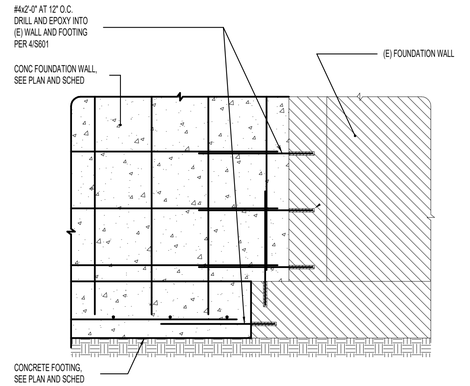
2 STEEL COLUMN BEARING AT CONCRETE PIER IN CONCRETE FOUNDATION WALL

NO SCALE



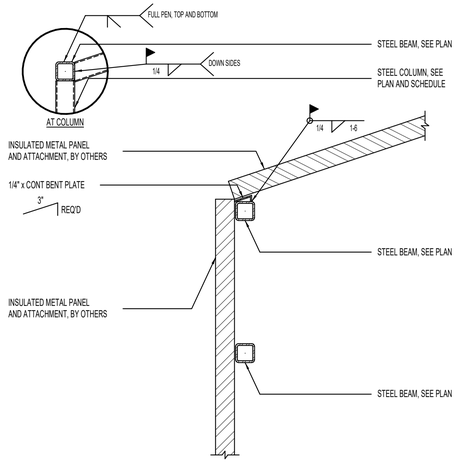
3 TYPICAL FOUNDATION WALL DETAIL AT CONCRETE FOOTING

NO SCALE



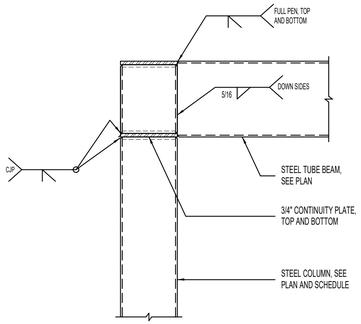
4 NEW FOOTING AT EXISTING FOUNDATION WALL

NO SCALE



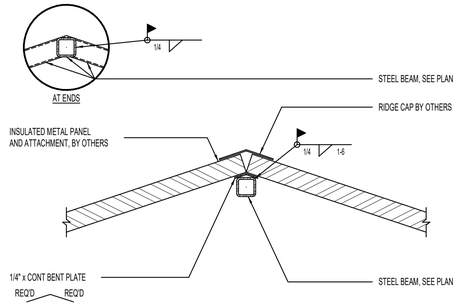
5 STEEL BEAM EDGE DETAIL

NO SCALE



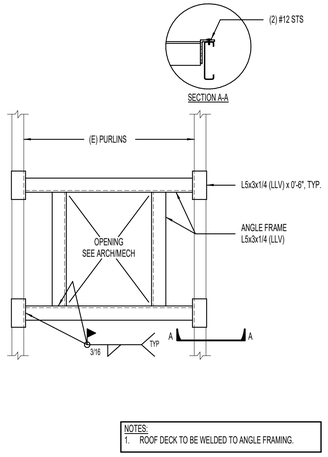
6 CANOPY FRAMING DETAIL

NO SCALE



7 STEEL BEAM DETAIL AT RIDGE

NO SCALE



NOTES:
1. ROOF DECK TO BE WELDED TO ANGLE FRAMING.

8 TYPICAL ROOF OPENING IN EXISTING ROOF [PLAN VIEW]

NO SCALE

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DETAILS

Scale:
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UTA Project No.: SGR-358
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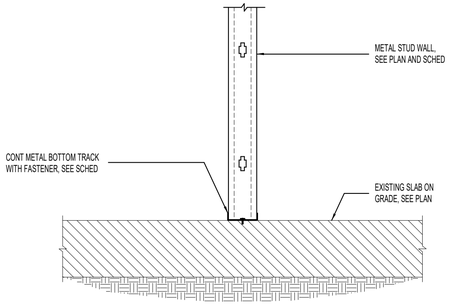
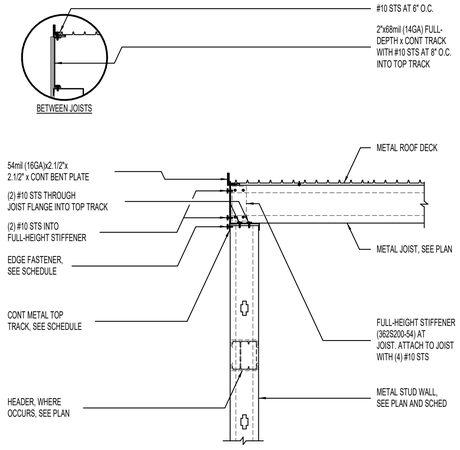
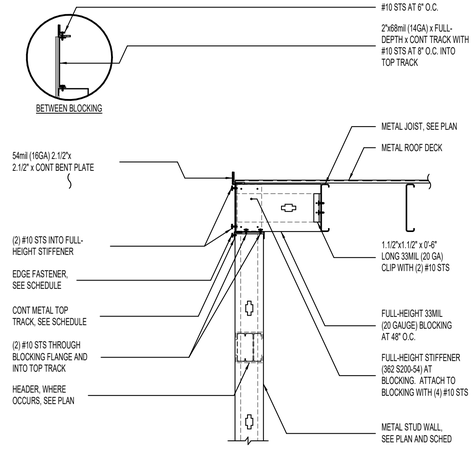
Sheet No.: S501



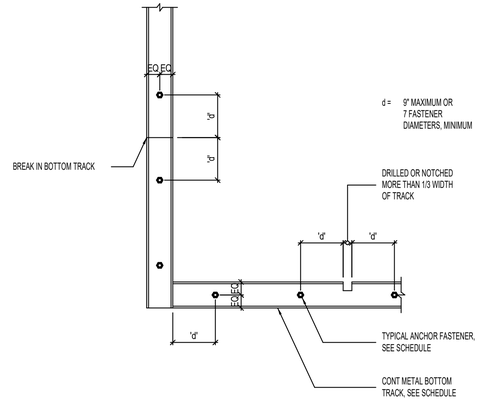
1 METAL STUD WALL ON EXISTING SLAB
NO SCALE



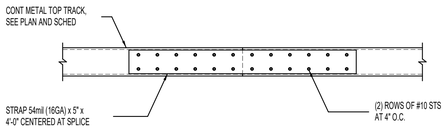
2 JOIST BEARING AT METAL STUD WALL
NO SCALE



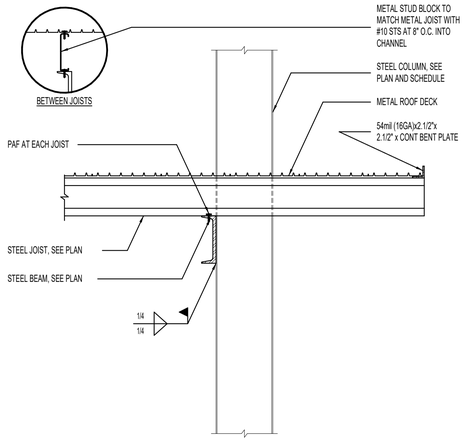
3 JOIST BEARING AT METAL STUD WALL
NO SCALE



4 BOTTOM TRACK FASTENER DETAIL
[PLAN VIEW]
NO SCALE



5 METAL TOP TRACK SPLICE DETAIL
[PLAN VIEW]
NO SCALE



6 STEEL JOIST BEARING AT EXISTING STEEL COLUMN
NO SCALE

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CONCRETE FOOTING SCHEDULE

MARK	WIDTH	LENGTH	DEPTH	REINFORCING CROSSWISE				REINFORCING LENGTHWISE				COMMENTS
				No.	SIZE	LENGTH	SPACING	No.	SIZE	LENGTH	SPACING	
FC3.0	3'-0"	CONT	12"	-	#5	2'-6"	14"	3	#5	CONT	EQ	THICKENED SLAB

CONCRETE FOOTING NOTES:
1. PLACE ALL FOOTING REINFORCING IN THE BOTTOM OF THE FOOTING WITH 3" CLEAR CONCRETE COVER (UNO).
2. TOP REINFORCING, WHERE OCCURS, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" MINIMUM CONCRETE COVER.
3. IF FOOTINGS ARE EARTH-FORMED, FOOTINGS SHALL BE 6" LONGER AND WIDER THAN SCHEDULED.
4. RUN CONTINUOUS FOOTING REINFORCEMENT THROUGH SPOT FOOTINGS.
5. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
6. SOME SCHEDULED FOOTINGS MAY NOT BE USED, SEE FOOTING AND FOUNDATION PLAN FOR FOOTING MARKS.

1 CONCRETE FOOTING SCHEDULE

NO SCALE

CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE

BAR SIZE	f'c = 3000psi & fc = 3500 psi				f'c = 4000psi & f'c = 4500 psi				f'c = 5000psi				f'c = 6000psi			
	REGULAR CLASS		TOP CLASS		REGULAR CLASS		TOP CLASS		REGULAR CLASS		TOP CLASS		REGULAR CLASS		TOP CLASS	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
#3	17"	22"	22"	28"	15"	19"	19"	24"	13"	17"	17"	22"	12"	16"	15"	20"
#4	22"	29"	29"	37"	19"	25"	25"	32"	17"	22"	22"	29"	16"	20"	20"	27"
#5	28"	36"	36"	47"	24"	31"	31"	40"	22"	28"	28"	36"	20"	26"	26"	33"
#6	33"	43"	43"	56"	29"	37"	37"	48"	26"	33"	33"	43"	24"	31"	31"	40"
#7	48"	63"	63"	81"	42"	54"	54"	70"	37"	49"	49"	63"	34"	44"	44"	58"
#8	55"	72"	72"	93"	48"	62"	62"	80"	43"	56"	55"	72"	39"	51"	51"	66"
#9	62"	81"	81"	105"	54"	70"	70"	91"	48"	63"	63"	81"	44"	57"	57"	74"
#10	70"	91"	91"	118"	61"	79"	79"	102"	54"	70"	70"	91"	50"	64"	64"	83"
#11	78"	101"	101"	131"	67"	87"	87"	113"	60"	78"	78"	101"	55"	71"	71"	93"

TABULATED VALUES ARE FOR CASE 1 REINFORCEMENT, WHERE THE REQUIREMENTS OF TABLE BELOW ARE MET. WHERE THESE CONDITIONS ARE NOT MET, MULTIPLY THE LAP LENGTHS (f_d) BY 1.5.

REQUIREMENT FOR CASE 1 LAP LENGTHS

BAR CLEAR SPACING	CLEAR COVER	STIRRUPS OR TIES
>=d_b	>=d_b	>=CODE FOR MINIMUM THROUGHOUT f_d
>=2d_b	>=d_b	NO REQUIREMENT

d_b = BAR DIAMETER

CONCRETE REINFORCING BAR LAP SPLICE NOTES:
1. THIS SCHEDULE SHALL BE USED FOR ALL BAR SPLICES IN CONCRETE WALLS, UNLESS NOTED OTHERWISE.
2. CLASS 'A' SPLICES MAY BE USED ONLY IN CASES WHERE 50% OR LESS OF THE BARS ARE SPLICED WITHIN THE LAP SPLICE LENGTH.
3. CLASS 'B' SPLICES SHALL BE USED FOR ALL SPLICES UNLESS THE REQUIREMENTS OF NOTE No. 2 ABOVE ARE MET.
4. TIES AND STIRRUPS SHALL NOT BE SPLICED.
5. DO NOT SPLICE VERTICAL BARS IN RETAINING WALLS UNLESS SPECIFICALLY SHOWN.
6. THE VALUES TABULATED IN SCHEDULE ARE FOR GRADE 60 REINFORCING BARS. FOR GRADE 75, MULTIPLY LAP LENGTHS BY 1.25 AND FOR GRADE 80, MULTIPLY BY 1.33.
7. THE VALUES TABULATED IN SCHEDULE ARE MINIMUM REQUIREMENTS. LONGER LENGTHS MAY BE USED FOR CONSTRUCTIBILITY.
8. TOP BARS ARE CLASSIFIED AS HORIZONTAL BARS WHERE 12", OR MORE, OF FRESH CONCRETE IS CAST BELOW THE REINFORCING BAR.
9. FOR EPOXY-COATED OR ZINC AND EPOXY DUAL-COATED BARS WITH CLEAR COVER < 3d_b OR CLEAR SPACING <6d_b, MULTIPLY LAP LENGTHS BY 1.5. FOR ALL OTHER CASES MULTIPLY BY 1.2
10. FOR LIGHT WEIGHT CONCRETE, MULTIPLY LAP LENGTHS BY 1.33 UNLESS THE AVERAGE SPLITTING TENSILE STRENGTH (f_{ct}) IS SPECIFIED. FOR LIGHT WEIGHT CONCRETE WHERE F_{ct} IS SPECIFIED, REFER TO ACI318-14 SECTION 19.2.4.3
11. SPLICES FOR BUNDLED BARS:
    a. FOR BUNDLED BARS OF THREE OR LESS, LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 1.2.
    b. FOR BUNDLED BARS OF FOUR OR MORE, LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 1.33.
    c. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT OVERLAP.
    d. ENTIRE BUNDLES SHALL NOT BE LAP SPLICED.
12. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

2 CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE

NO SCALE

CONCRETE WALL SCHEDULE

MARK	THICKNESS	REINFORCING			WALL TYPE	COMMENTS
		VERTICAL	HORIZONTAL	TOP AND BOTTOM		
CW-8A	8"	#4 AT 18" O.C.	#4 AT 12" O.C.	(1) #4	A	-

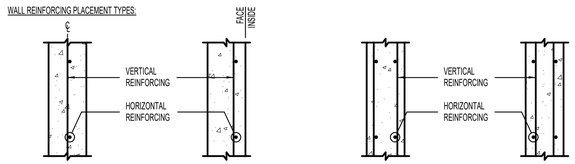
ABBREVIATIONS:
E.F. EACH FACE
I.F. INSIDE FACE
O.F. OUTSIDE FACE

WALLS NOT DESIGNATED IN PLAN

THICKNESS	REINFORCING	
	VERTICAL	HORIZONTAL
6"	#4 AT 18" O.C.	#4 AT 16" O.C.
8"	#4 AT 18" O.C.	#4 AT 12" O.C.
10"	#4 AT 16" O.C.	#5 AT 15" O.C.
12"	#4 AT 18" O.C. E.F.	#4 AT 16" O.C. E.F.

CONCRETE FOUNDATION WALL NOTES:
1. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

WALL REINFORCING PLACEMENT TYPES:



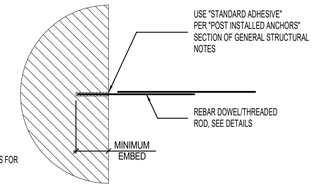
3 CONCRETE WALL SCHEDULE

NO SCALE

STANDARD ADHESIVE EMBEDMENT SCHEDULE

REBAR DOWEL (THREADED ROD SIZE)	MINIMUM EMBEDMENT INTO CONCRETE OR GROUTED MASONRY
#3 (3/8")	3.3/8"
#4 (1/2")	4.1/2"
#5 (5/8")	5.5/8"
#6 (3/4")	6.3/4"

STANDARD ADHESIVE EMBEDMENT NOTES:
1. SPECIFIC EMBEDMENTS, NOTES AND DETAILS IN DRAWINGS SHALL GOVERN OVER THIS SCHEDULE.
2. HOLE DIAMETER SHALL BE DOWEL/ROD DIAMETER PLUS 1/8". FOLLOW MANUFACTURER'S INSTRUCTIONS FOR HOLE PREPARATION.
3. PROVIDE A 3" MINIMUM EDGE DISTANCE TO CENTER OF HOLE.
4. CONTACT STRUCTURAL ENGINEER IF MINIMUM EMBEDMENTS INDICATED ABOVE ARE NOT ACHIEVABLE.
5. SEE "POST INSTALLED ANCHORS" SECTION OF GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.



4 STANDARD ADHESIVE EMBEDMENT SCHEDULE

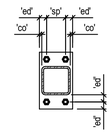
NO SCALE

STEEL COLUMN SCHEDULE

MARK	SIZE	STEEL BASE PLATE	STEEL CAP PLATE	COMMENTS
SC-4A	HSS4x4x1/4	3/4" (SBP-1)	1/2" (SCP-1)	-

STEEL COLUMN NOTES:
1. UNLESS NOTED OTHERWISE, ALL COLUMNS SHALL BE INSTALLED WITH (4) 3/4"DIA ANCHOR RODS. PROJECT ANCHOR RODS 3" MINIMUM ABOVE THE TOP OF THE BASE PLATE. EMBEDMENT SHALL BE 12" MINIMUM. ALL RODS SHALL BE INSTALLED WITH HARDENED WASHERS BENEATH THE NUT. ANY BOLT HOLES LARGER THAN THE ROD DIAMETER PLUS 5/16" SHALL HAVE 5/16" PLATE WASHERS INSTALLED BENEATH THE HARDENED WASHERS.
2. ANCHOR RODS SHALL NOT BE WELDED (INCLUDING TACK WELDS).
3. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

STEEL BASE PLATE TYPES:



BASE PLATE SBP-1

PLATE LEGEND
co = 1/2" MINIMUM
ed = 1 1/2" MINIMUM
sp = 3" MINIMUM
bc = BEAM OR GIRDER GAGE
w = BEAM OR GIRDER GAGE + 3"
OR
BEAM OR GIRDER WIDTH + 1"
OR
COLUMN WIDTH + 1"
WHICHEVER IS GREATER

STEEL CAP PLATE TYPES:

CAP PLATE SCP-1

5 STEEL COLUMN SCHEDULE

NO SCALE

12/7/2020

BHB STRUCTURAL
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Salt Lake City, Utah 84115
801-355-5656
bhb@bhbengineers.com

REV	DATE	Description
0	12/7/20	PERMIT SET

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Submitted By:

UTA
UTAH TRANSIT AUTHORITY
Approved By:

Designed By:	
Drawn By:	LM
Checked By:	JP
Approved By:	

UTAH TRANSIT AUTHORITY

FRONT RUNNER PAINT BOOTH
WARM SPRINGS SERVICE CENTER

900 NORTH 500 WEST SALT LAKE CITY, UT 84116

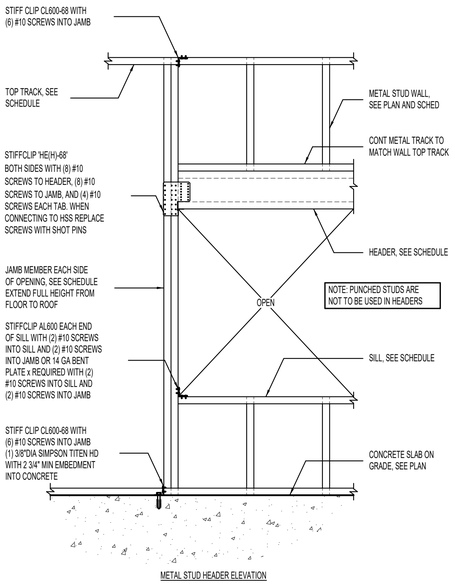
SCHEDULES

Scale:	
Project Status:	PERMIT SET
Submittal Date	DECEMBER 7, 2020
UTA Project No.:	SGR-358
BHB Project No.:	200717
Sheet No.:	S601

HEADER/JAMB SCHEDULE

MARK	CONDITION	JAMB TYPE	HEADER TYPE	SILL	COMMENTS
MH-1	METAL STUD	J1	H1	-	

HEADER/JAMB NOTES:
1. ATTACH ALL COMPONENTS TOGETHER WITH #10 SCREWS AT 6" O.C. OR ATTACH COMPONENTS 18 GA OR HIGHER WITH 1/8" x 1" FILLET WELDS AT 12" O.C.
2. SCREWS SHALL PENETRATE THROUGH FRAMING MEMBER WITH AT LEAST THREE THREADS.
3. STUDS SHALL BE A MINIMUM OF 1.5/8" WIDE WITH A 3/8" MINIMUM RETURN LIP. JAMB STUD TO MATCH WALL STUD.
4. TRACKS SHALL BE A MINIMUM OF 1.1/4" WIDE. TRACK GAUGE AND DEPTH TO MATCH WALL STUD.
5. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

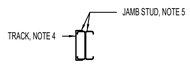


METAL STUD HEADER ELEVATION

1 STEEL HEADER/JAMB SCHEDULE

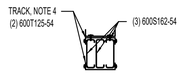
NO SCALE

JAMB TYPES



JAMB TYPE 'J1'

HEADER TYPES



HEADER TYPE 'H1'

METAL STUD WALL SCHEDULE

WALL MARK	WALL FRAMING				COMMENTS
	METAL STUDS	TOP TRACK	BOTTOM TRACK	BOTTOM TRACK FASTENERS	
MSW-6A	600S162-54 AT 16" O.C.	600T125-54	600T125-54	HILTI 'X-U' x 1.1/2" POWER ACTIVATED FASTENERS AT 24" O.C.	.

METAL STUD WALL NOTES:
1. SCREWS SHALL PENETRATE THROUGH FRAMING MEMBER WITH AT LEAST THREE THREADS.
2. STUDS SHALL BE A MINIMUM OF 1.5/8" WIDE WITH A 3/8" MINIMUM RETURN LIP.
3. TRACKS SHALL BE A MINIMUM OF 1.1/4" WIDE.
4. HORIZONTAL BLOCKING SHALL BE PROVIDED AT 4'-0" O.C. MAX.
5. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

2 METAL STUD WALL SCHEDULE

NO SCALE

12/7/2020

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REV	DATE	Description
0	12/7/20	PERMIT SET

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Submitted By:

UTA
UTAH TRANSIT AUTHORITY

Approved By:

Designed By: Designer
Drawn By: LM
Checked By: JP
Approved By:

UTAH TRANSIT AUTHORITY

FRONT RUNNER PAINT BOOTH
WARM SPRINGS SERVICE CENTER

900 NORTH 500 WEST SALT LAKE CITY, UT 84116

SCHEDULES

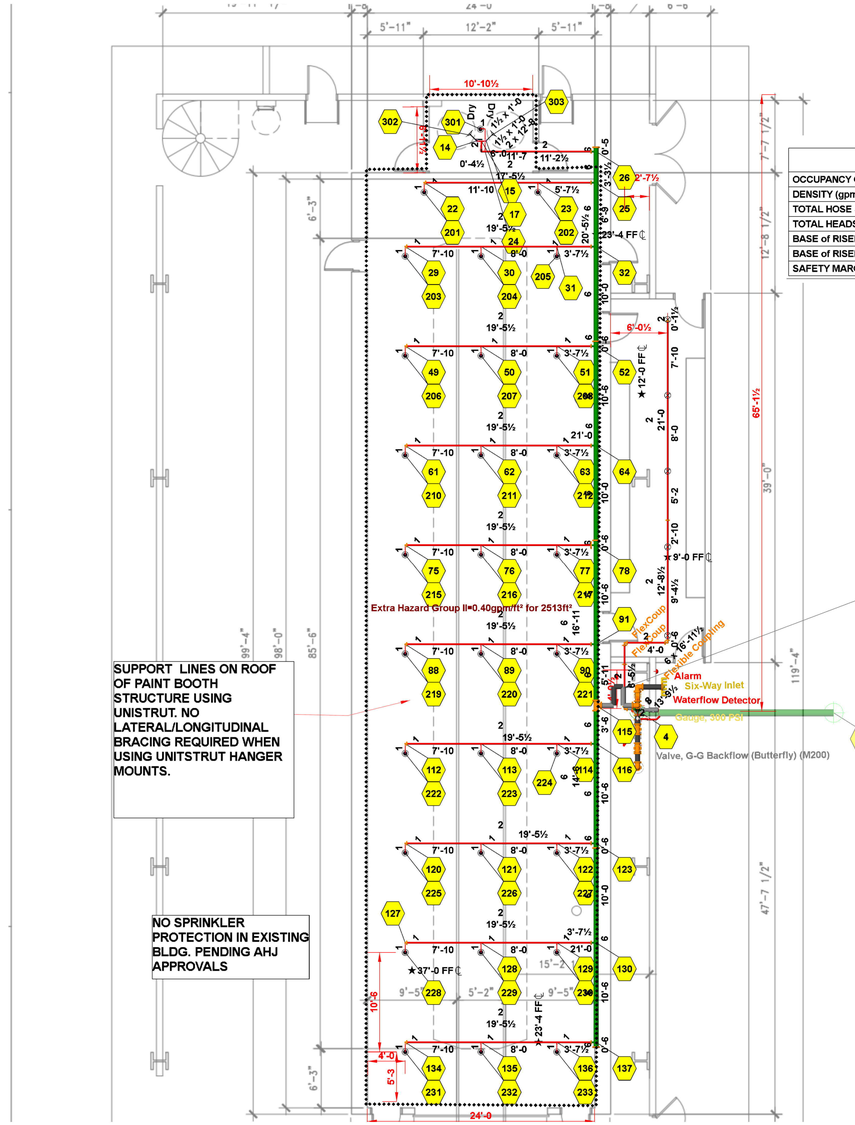
Scale:
Project Status: PERMIT SET
Submittal Date: DECEMBER 7, 2020
UTA Project No.: SGR-358
BHB Project No.: 200717
Sheet No.: S602

Sprinkler Legend

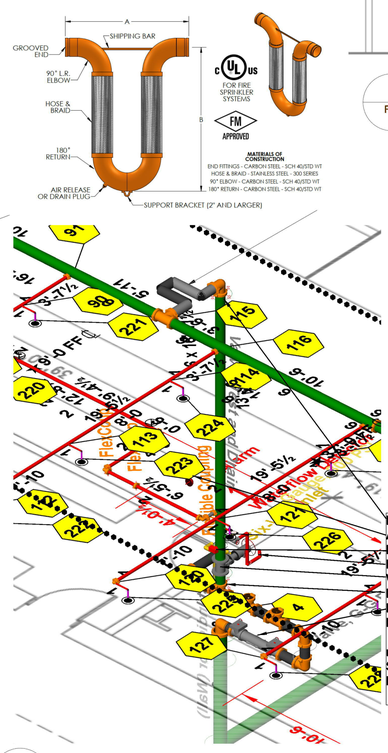
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
◉	Generic	TY5211	Tyco ELO-231	30	11.2	Pendent	¾	Standard	Chrome	286°F	401esc & BAGS FOR EACH
⊗	Generic	TY5111	Tyco ELO-231	5	11.2	Upright	¾	Standard	Chrome	155°F	
⊤	Generic	TY3355	Tyco DS-1	2	5.6	Sidewall	½	Standard	Chrome	155°F	Dry HSW
				Total = 37							

Hydraulic Information

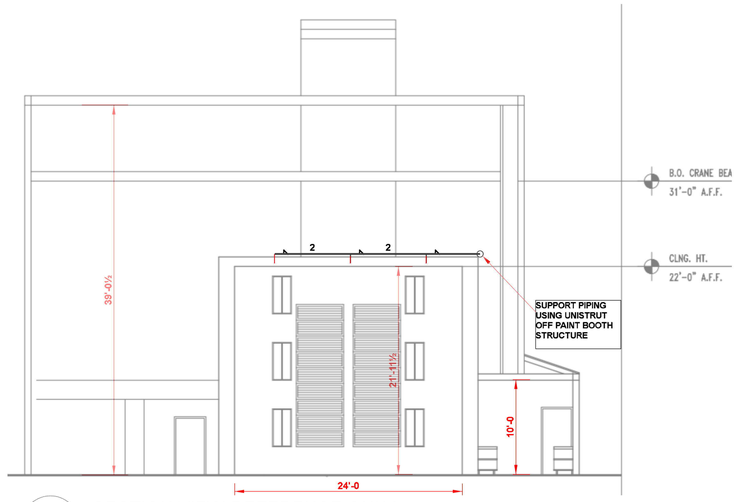
OCCUPANCY CLASSIFICATION	Extra Hazard Group II
DENSITY (gpm/ft²)	0.40 for 2500ft² (Actual 2513ft²)
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	32
BASE of RISER (gpm)	1606.12
BASE of RISER (psi)	34.966
SAFETY MARGIN (psi)	+10.298 (22.8%)



1 F1.0 — PAINT BOOTH- FIRE SPRINKLER PLAN — SHEET REFERENCE 22X34
1/8"= 1'-0"
1/8"=1'-0"



2 F1.0 — SYSTEM RISER PLAN- ISO VIEW
1/8"= 1'-0"



4 F1.0 — SECTION VIEW-REFERENCE ONLY
1/8"= 1'-0"

3 F1.0 — EXISTING FIRE ALARM PANEL FOR REFERENCE
1/8"= 1'-0"

1. SCOPE OF WORK: PROVIDE A WET FIRE SPRINKLERS SYTSEM PER NFPA #13 2016. CONTRACT STARTING POINT AT EXISTING UNDERGROUND MAIN.

2. AUTOMATIC FIRE SPRINKLER SYSTEM HAS BEEN HYDRAULICALLY CALCULATED IN ACCORDANCE WITH NFPA #13.

3. AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA#13, 2016 ED., INSTALLATION OF SPRINKLER SYSTEMS.

4. ALL PIPING SHALL BE SCHEDULE 10/40, STEEL PIPING.

5. FITTINGS SHALL BE THREADED, WELDED AND GROOVED IN ACCORDANCE WITH LISTING AND NFPA #13 REQUIREMENTS.

6. PROVIDE HANGERS AS REQUIRED PER NFPA #13. METHOD OF HANGING MAY DEVIATE FROM DETAILS SHOWN FOR REFERENCE.

7. SYSTEM SHALL USE THREADED FITTINGS FOR REDUCED PIPE LENGTHS.

8. THE SPRINKLER CONTRACTOR SHALL COORDINATE WITH OTHER EXISTING TRADES, EQUIPMENT, STRUCTURE AND PROVIDE ADDITIONAL OFFSETS AS REQUIRED FOR INSTALLATION. SPRINKLER PIPING SHALL BE REROUTED AS REQUIRED WHERE CONFLICTS OCCUR. SPRINKLER CONTRACTOR'S PRICING SHALL INCLUDE ANY PIPING OFFSETS, OR REVISED CUT LENGTHS.

9. PIPE ROUTING, ELEVATIONS, SPRINKLER LOCATIONS, & DIMENSIONS ARE SCHEMATIC, AND SHALL BE USED AS REFERENCE ONLY. INSTALLER SHALL FIELD VERIFY CONDITIONS, AND PROVIDE OFFSETS AS REQUIRED FOR INSTALLATION.

10. PIPE CUTS ARE NOTED AT CUT LENGTH FOR THREADED FITTINGS AND CENTER TO CENTER FOR WELDED OUTLETS AND GROOVED ENDS LENGTHS.

11. SUBSTITUTION OF SPRINKLERS AND OTHER DEVICES SHALL BE OF EQUAL. SPRINKLERS, VALVES, FITTINGS, PIPE, HANGERS AND OTHER MISC. DEVICES SHALL BE UL LISTED.

12. FINAL REDLINE AS-BUILT DRAWINGS SHALL BE PROVIDED BY THE SPRINKLER CONTRACTOR. ELECTRONIC AS-BUILT DRAWINGS SHALL BE MODIFIED BY THE DESIGNER.

13. CONTRACTOR SHALL PROVIDE AUXILIARY DRAINS AS NEEDED FOR TRAPPED PIPE. ASBUILT DRAWINGS SHALL NOTE LOCATION OF ALL DRAIN VALVES.

14. PROVIDE ADDITIONAL UNIONS AS NEEDED BASE ON DIRECTION OF SYSTEM INSTALLATION.

15. BUILDING IS CONSIDERED A HEATED BUILDING. IT SHALL BE THE OWNERS RESPONSIBILITY TO PROVIDE AND MAINTAIN A MINIMUM 40°F IN BUILDING AT ALL TIMES. TEMPERATURES LESS THAN THE MINIMUM NOTED MAY CAUSE SYSTEM FAILURE. ALL DOORS SHALL SEAL AND OPERATE PROPERLY TO ELIMINATE POTENTIAL FREEZING DUE TO EXCESSIVE INFILTRATION.

16. OCCUPANCY CLASSIFICATION IS CONSIDERED AS FOLLOWS: PAINT BOOTH AND MIXING ROOMS- EXTRA HAZARD GROUP 2

17. ALL STANDARD SPRINKLERS SHALL BE SUPPLIED WITH 1" FEEDS/DROPS/BUSHINGS OR FLEX DROPS WHEN PREFERRED BY SPRINKLER CONTRACTOR.

18. SPRINKLERS SHALL BE OFFSET FROM SURFACE MOUNTED LIGHTS AS REQUIRED PER NFPA #13 OBSTRUCTION RULES.

19. NOT USED

20. THIS SYSTEM SHALL TRANSMIT ALARM, TAMPER AND SUPERVISORY SIGNAL TO AN APPROVED REMOTE STATION. A SUPERVISORY SIGNAL WILL INDICATE WHEN CONTROL VALVES ARE MOVED TO A POSITION OTHER THAN NORMAL OPERATION. SUPERVISORY SIGNAL WILL INDICATE WHEN THE ELECTRICAL CIRCUIT IS SHORTED, FAULTED, OR DISCONNECTED.

21. THE FIRE PREVENTION BUREAU SHALL BE NOTIFIED THREE DAYS IN ADVANCE TO CONDUCT THE FOLLOWING:
INSPECTION OF PIPE, HANGER AND SWAY BRACING.
WITNESS OF THE HYDRO INSPECTION.
FLOW AND MAIN DRAIN TEST OF THE SYSTEM.
INTERCONNECTION WITH THE REMOTE STATION.

22. FIRE SPRINKLER SYSTEM DESIGN USES AUTOSPRINK FOR LAYOUT. ELECTRONIC FILES SHALL BE MADE AVAILABLE FOR LISTING BY CONTRACTOR. DROPS ARE CUT LONG FOR HARD CUT PIPING TYPICALLY. ENGINEER IS NOT RESPONSIBLE FOR FAB LISTINGS.

REV	DATE	Description
2	11/15/20	SUBMITTAL PLAN
0	10/29/20	PERMIT SET

REGISTERED PROFESSIONAL ENGINEER — CRAIG BLUE — 5155304-2202 — 11/15/20 — STATE OF UTAH

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Submitted By:

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Approved By:

Designed By: CBPE
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Checked By: CBPE
Approved By: CBPE

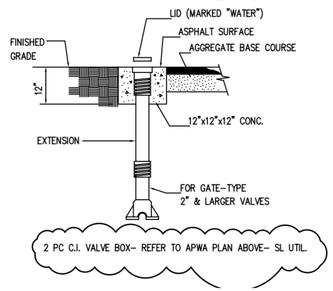
UTAH TRANSIT AUTHORITY

FRONT RUNNER PAINT BOOTH
WARM SPRINGS SERVICE CENTER

900 NORTH 500 WEST SALT LAKE CITY, UT 84116

FIRE SPRINKLER PLAN - PAINTBOOTH

Scale: 1/8"=1'-0"
CADD Filename: 1012 UTA Warm Springs Paint Booth.cad
Submittal Date: NOV 15, 2020
UTA Project No.: SGR-358
Drawing No.: CBPE#1012
Sheet No.: F100



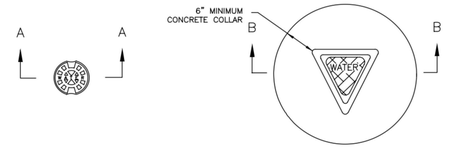
3 F2.0 **ROAD BOX**
NTS

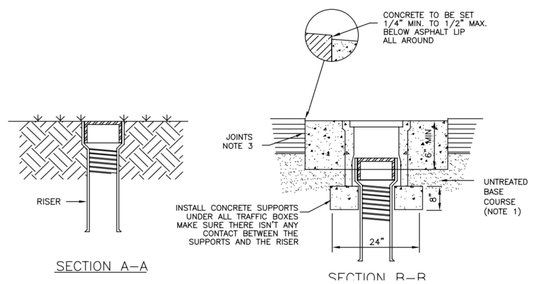
ROAD BOX DETAIL

1. UNTREATED BASE COURSE: Provide material specified in APWA Section 32 11 23. Do not use pea gravel or sewer rock. Place per APWA Section 32 05 10. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness is 8 inches before compaction.

2. CONCRETE: Class 4000 per APWA Section 03 30 04. Place concrete per APWA Section 03 30 10. Cure per APWA Section 03 39 00.

3. JOINTS: Provide a neat straight joint between existing and new asphalt concrete surfaces. Provide concentric circle cut. Clean edges of all dirt, oil and loose debris.

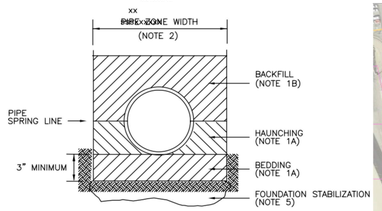




5 F2.0 **ROAD BOX DETAILS**
NOT TO SCALE

1. BACKFILL: Do not use sewer rock or recycled RAP aggregate in the pipe zone without ENGINEER's written approval.
   A. Granular Fill Below Pipe Spring Line.
      1) Furnish 3/4 inch crushed aggregate base material, unless specified otherwise by pipe manufacturer. When using concrete, provide at least Class 2,000 per APWA Section 03 30 04.
      2) Install and compact backfill material per pipe manufacturer' recommendations.
      3) Water jetting is not allowed in backfilling operation.
      4) Submission of quality control compaction test result data developed for haunching areas may be requested by ENGINEER at any time. CONTRACTOR is to provide results of tests immediately upon request.
   B. Granular Fill Above Pipe Spring Line.
      2) Furnish 3/4 inch crushed aggregate base material, unless specified otherwise by pipe manufacturer. Place in lifts not exceeding 8 inches before compaction.
      3) Water jetting is not allowed in backfilling operation.
      4) Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater unless pipe manufacturer requires more stringent installation.
   C. Flowable Fill. 1) Provide and place controlled low strength material per APWA Section 31 05 15 if allowed by pipe manufacturer. 2) Prevent pipe flotation by installing in lifts and providing pipe restraints as required by pipe manufacturer.
      3) Reset pipe to line and grade if pipe "floats" out of position.
2. PIPE ZONE WIDTH: Provide width recommended by pipe manufacturer. Width of pipe zone is measured at the pipe spring line and includes any necessary sheathing. In trench box applications, follow manufacturer's recommendations.
3. PIPE LOCATION: Install pipe in center of trench or no closer than 6 inches from wall of pipe to wall of trench.
4. PEA GRAVEL: Pea gravel is not allowed in any part of the pipe zone.
5. FOUNDATION STABILIZATION: Use sewer rock of APWA Section 31 05 13. Installation of stabilization—separation geotextile per APWA Section 31 05 19 will be required to separate backfill material and native subgrade materials if sewer rock cannot provide a working surface or to prevent soils migration.

xfdferer



INSTALLATION

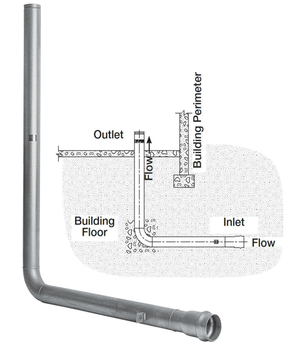
CONCRETE PIPE: FOLLOW ASTM C 1479
"STANDARD PRACTICE FOR INSTALLATION OF PRECAST CONCRETE SEWER, STORM DRAIN, AND CULVERT PIPE USING STANDARD INSTALLATIONS.

PVC AND HDPE PIPE: FOLLOW ASTM D 2321
"STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS"

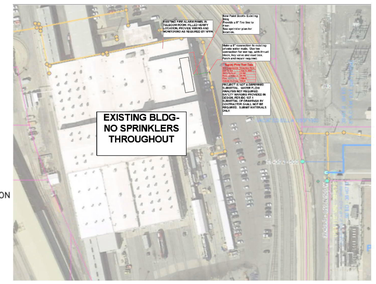
CORRUGATED METAL PIPE: FOLLOW ASTM A 798
"STANDARD PRACTICE FOR INSTALLING FACOTRY-MADE CORRUGATED STEEL PIPE FOR SEWERS AND OTHER APPLICATIONS.

VITRIFIED CLAY PIPE: FOLLOW ASTM C 12.
"STANDARD RECOMMENDED PRACTICE FOR INSTALLING VITRIFIED CLAY PIPE LINES.

6 F2.0 **FILL DETAIL**
NOT TO SCALE



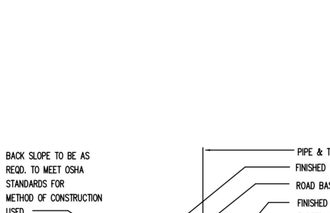
9 F2.0 **INBUILDING RISER**
NOT TO SCALE



8 F2.0 **SITE PLAN**
NOT TO SCALE

GENERAL NOTES

1. ROADS SHALL BE ASPHALT, CONCRETE OR OTHER APPROVED DRIVING SURFACE MATCHING EXISTING SURFACE AND GRADE.
2. FIRE LINE SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA #24, INSTALLATION OF PRIVATE SERVICE FIRE LINES.
3. FIRE LINE SHALL BE BURIED GREATER THAN 5'-6" BELOW GRADE. REFER TO DETAILS FOR INSTALLATION REQUIREMENTS AND CLARIFICATION.
4. ALL CONSTRUCTION IN STREET SHALL FOLLOW CITY & WATER DEPARTMENT SPECIFICATIONS AND REQUIREMENTS.
5. THE EXISTING WATER DISTRIBUTION SYSTEM SHALL REMAIN IN SERVICE DURING CONSTRUCTION.
6. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO LOCATE AND AVOID ANY/ALL UTILITIES.
7. ALL WATER LINE CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, REPLACEMENT OF CURB, SIDEWALK, TO BE IN ACCORDANCE WITH A.P.W.A. STANDARDS, PLANS AND SPECIFICATIONS (LATEST EDITION).
8. REFER TO O.S.H.A., AND A.P.W.A., REQUIREMENTS AND SPECIFICATIONS FOR TRENCH DETAIL.
9. CONTRACTOR SHALL SAWCUT ALL TRENCHES AND PROVIDE A SMOOTH CLEAN EDGE FOR PAVING.
10. SELECT BEDDING AND BACK FILL IS REQUIRED 6" UNDER, 12" OVER PIPING & SERVICES.
11. BEDDING AND BACK FILL: WATERLINE CONSTRUCTED IN DRY GROUND - SELECT SAND SHALL BE USED. WATERLINE CONSTRUCTED IN WET GROUND - ¾" MINUS SHALL BE USED BEDDING SHALL BE COMPACTED TO 95% MINIMUM ASTM D-1557.
12. MINIMUM TRENCH WIDTH SHALL BE EQUAL TO OUTSIDE PIPE DIAMETER PLUS 1 FT. EACH SIDE OF PIPE.
13. IF DAMAGE IS CAUSED TO WATER OR SERVER MAIN, CONTRACTOR WILL BE HELD RESPONSIBLE FOR REPAIRS.
14. GREASE AND WRAP ALL EXTERNAL FITTINGS AND BOLTS WITH GREASE AND 8 MIL PLASTIC, DUCT TAPE 8 MILL PLASTIC TIGHT.
15. ALL BLOCKING MUST BE REINFORCED BY SECURE GROUND.

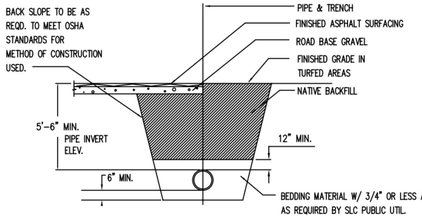


NOTES:

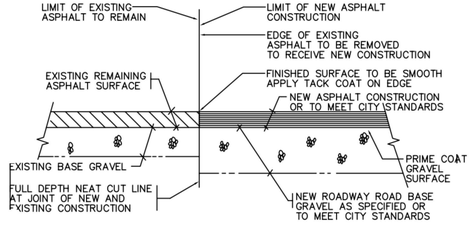
1. ALL WORK MUST BE INSPECTED AND APPROVED PRIOR TO BACKFILL.
2. THRUST BLOCKS OR RESTRAINTS MUST BE POURED AGAINST UNDISTURBED SOIL.
3. CONCRETE MUST HAVE A MINIMUM OF 2,000 P.S.I. COMPRESSIVE STRENGTH IN 28 DAYS.
4. CONCRETE MUST BE ALLOWED TO CURE FOR 5 DAYS PRIOR TO PRESSURIZING WATER LINES OR HAVE ADDITIONAL APPROVED THRUST RESTRAINTS INSTALLED PRIOR TO PRESSURIZATION OF THE WATER LINE.
5. ALL PIPE JOINTS ARE TO BE LEFT ACCESSIBLE.
6. REINFORCING STEEL BARS ARE TO BE EPOXY COATED IN ACCORDANCE WITH AWWA RECOMMENDATIONS. EPOXY IS TO BE A MINIMUM THICKNESS OF 15 MIL.
7. ALL EXPOSED METAL SURFACES ARE TO BE COATED WITH CHEVRON POLY PM-1 GREASE AND WRAPPED WITH 8 MIL MINIMUM THICKNESS OF POLYETHYLENE SHEETING OR TUBING.
8. THRUST DESIGN FOR PIPE SIZES OR CONFIGURATIONS THAT ARE NOT SHOWN REQUIRE A SPECIAL DESIGN.
9. BEARING AREAS, VOLUMES, AND SPECIAL THRUST BLOCKING OR RESTRAINING DETAILS TAKE PRECEDENCE OVER THIS STANDARD.
10. RESTRAIN SIZING ASSUMES A MAXIMUM OPERATING PRESSURE OF 150 P.S.I., TEST PRESSURE OF 200 P.S.I., AND A 2,000 LBS. SOIL BEARING STRESS. OPERATING PRESSURES IN EXCESS OF 150 P.S.I. OR SOILS WITH LESS THAN A MINIMUM OF 2,000 LBS. BEARING STRESS WILL REQUIRE A SPECIAL DESIGN.
11. MINIMUM YIELD STRENGTH OF THE STEEL TIE DOWNS IS TO BE 70,000 P.S.I.
12. INSTALL APPROPRIATELY SIZED THRUST BLOCKING ON ALL BLIND FLANGES, MJ PLUGS AND CAPS.
13. LOCKING RESTRAINT DEVICES MAY BE USED IN CONJUNCTION WITH CONCRETE THRUST BLOCKING. (AT THE OPTION OF THE ENGINEER)
14. SYSTEM INSTALLATION SHALL CONFORM WITH NFPA#24 FOR INSTALLATION OF PRIVATE SERVICE MAINS. PROVIDE FLUSHING AT 10 FEET PER SECOND AND TEST CERTIFICATE AS REQUIRED.

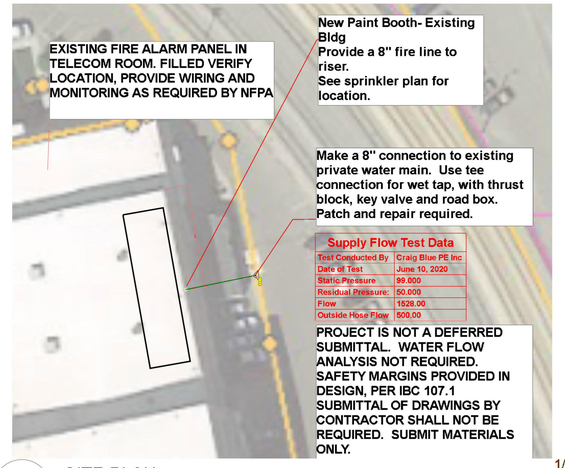
BEARING AREAS EACH DIRECTION OF THRUST IN SQUARE FEET				
PIPE SIZE	TEES & DEADEND	90° ELBOW	45° ELBOW CROSSES IN DIRECTION OF FL.	22-1/2° ELBOW
4"& 6"	4.0	5.5	3.0	2.0
8"	7.0	9.5	5.0	3.0

1 F2.0 **THRUST BLOCK DETAILS**
NTS



4 F2.0 **TRENCH AND SURFACE DETAIL**
NTS





7 F2.0 **SITE PLAN**
NTS

22X34 SHEET REF.

1/8"=1'-0" 8' 6' 4' 2' 0' 8' 16'

REV		Description
2	11/15/20	SUBMITTAL PLAN
1	10/29/20	PERMIT SET

REGISTERED PROFESSIONAL ENGINEER — CRAIG BLUE — 5155304-2202 — 11/15/20 — STATE OF UTAH

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Submitted By:

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Approved By:

Designed By: CBPE
Drawn By: CBPE
Checked By: CBPE
Approved By: CBPE

UTAH TRANSIT AUTHORITY

FRONT RUNNER PAINT BOOTH WARM SPRINGS SERVICE CENTER

900 NORTH 500 WEST SALT LAKE CITY, UT 84116

FIRE SPRINKLER SITE PLAN

Scale: 1/8"=1'-0"
CADD Filename: 1012 UTA Warm Springs Paint Booth.cad
Submittal Date: NOV 15, 2020
UTA Project No.: SGR-358
Drawing No.: CBPE#1012
Sheet No.: F101

MECHANICAL LEGEND

SYMBOL	ABR.	DESCRIPTION
		GENERAL TERMINOLOGY
A2		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION
MA 1		MECHANICAL EQUIPMENT DESIGNATION EQUIPMENT ITEM DESIGNATION
D-1 CFM		REGISTER, GRILL OR DIFFUSER DESIGNATION WITH BALANCING CFM LISTED BELOW
R-1		GRILLE, OR LOUVER DESIGNATION WHERE BALANCING NOT REQUIRE
1		REVISION DESIGNATOR AND NUMBER
1		KEY NOTE DESIGNATOR AND NUMBER
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
GC		GENERAL CONTRACTOR
MC		MECHANICAL CONTRACTOR
ATC		CONTROL CONTRACTOR
EC		ELECTRICAL CONTRACTOR
FPC		FIRE PROTECTION CONTROL
NIC		NOT IN CONTRACT
NTS		NOT TO SCALE
C		COMMON
NC		NORMALLY CLOSED
NO		NORMALLY OPEN

SYMBOL	ABR.	DESCRIPTION
		AIR SIDE
		EXISTING AIR DUCT TO BE REMOVED
		EXISTING AIR DUCT TO REMAIN
		NEW AIR DUCT
		NEW SPIRAL DUCT
		NEW MEDIUM PRESSURE DUCT
		BURIED OR UNDER FLOOR DUCT
		FLEXIBLE AIR DUCT
		LINED DUCT
		VANED ELBOW
		RADIUS ELBOW
		FLEXIBLE AIR DUCT CONNECTION
VD		VOLUME DAMPER
		SUPPLY AIR DIFFUSER
		RETURN AIR, FRESH AIR, AND TRANSFER AIR
		CEILING MOUNTED EXHAUST FAN OR EXHAUST GRILLE
		RETURN OR OUTSIDE AIR DUCT UP
		SUPPLY DUCT UP
		EXHAUST AIR INTAKE UP
		RETURN OR OUTSIDE AIR DUCT DOWN
		SUPPLY DUCT DOWN
		EXHAUST DUCT DOWN
		ROUND DUCT UP
		ROUND DUCT DOWN
	AP	ACCESS PANEL
		EXISTING EQUIPMENT TO BE REMOVED
		EXISTING EQUIPMENT TO REMAIN
		NEW EQUIPMENT
T RTU-1	T-STAT	WALL MOUNTED THERMOSTAT MECHANICAL EQUIPMENT CONTROLLED
SA		SUPPLY AIR
RA		RETURN AIR
EA		EXHAUST AIR
OA		OUTSIDE AIR
MA		MIXED AIR
FA		FRESH AIR
RF		RELIEF AIR

SYMBOL	ABR.	DESCRIPTION
		WET SIDE
		PUMP
		REGULATOR
		UNION
		BUTTERFLY VALVE
		GATE VALVE
	CBV	CIRCUIT BALANCING VALVE
	BV	BALL VALVE
		PRESSURE GAUGE AND GAUGE COCK - WATER
		PRESSURE GAUGE AND GAUGE COCK - STEAM
		THERMOMETER AND THERMOWELL
		DIRECTION OF FLOW
		ELBOW UP
		ELBOW DOWN
		TEE UP
		TEE DOWN
		EXISTING PIPING TO BE REMOVED
		EXISTING PIPING TO REMAIN
		NEW PIPING
		PIPE CAP OR PLUG
		FLEXIBLE CONNECTION
	CW	CULINARY COLD WATER
	HW	CULINARY HOT WATER
		RECIRCULATED CULINARY HOT WATER
HWS		HEATING WATER SUPPLY
HWR		HEATING WATER RETURN
CHWS		CHILLED WATER SUPPLY
CHWR		CHILLED WATER RETURN

GENERAL NOTES:

G-1 MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION OF THE EXISTING BUILDING AND SITE CONDITIONS, EXISTING PIPING, EXISTING ELECTRICAL, AND EXISTING SUPPORTS.

A - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF: EFFICIENCY, QUALITY OR GOVERNING CODE.

B - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.

C - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.

D - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.

E - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.

G-2 ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO CHANGES FOR APPROVAL. CONTRACTOR SHALL NOT START ANY CHANGES UNTIL NOTIFIED IN WRITING. IF CHANGES ARE MADE PRIOR TO APPROVAL CONTRACTOR SHALL TAKE ALL RESPONSIBILITY FOR THE CHANGES MADE AND ALL COSTS RELATING TO FAILURE OR REPLACEMENT OF ALTERATIONS.

G-3 CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.

G-4 THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS. THE CONTRACTOR SHALL PROVIDE OR COORDINATE WITH THE GENERAL CONTRACTOR PROVISIONS FOR BLOCKOUTS OR CORE DRILLS THROUGH STRUCTURE.

G-5 THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.

G-6 MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL SMOKE AND FIRE DAMPERS AS REQUIRED BY LOCAL CODES AND AUTHORITIES.

G-7 SHEET METAL DUCT SIZES SHOWN ON DRAWINGS ARE FREE AREA DIMENSIONS.

G-8 PROVIDE AND INSTALL BALANCING DAMPERS IN ALL SUPPLY AND EXHAUST AIR BRANCH DUCTS. BALANCE TO CFM SHOWN ON PLAN.

G-9 SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF DIFFUSERS AND GRILLES.

G-10 PROVIDE TURNING VANES IN ALL ELBOWS OF RECTANGULAR DUCT.

G-11 THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY IN HANDLING AND DISPOSING OF REFRIGERANTS, OILS, ETC. ALL SUCH MATERIALS SHALL BE HANDLED, DISPOSED, AND USED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.

G-12 THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWING BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.

G-13 C.F.M. LISTED IS ACTUAL AIR.

G-14 SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.

G-15 CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.

G-16 ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2018 EDITION OF THE IMC AND IPC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.

G-17 THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINING DOWN AND RE-FILLING OF ALL SYSTEMS NECESSARY TO COMPLETE THE WORK OUTLINED BY THIS PROJECT. THIS INCLUDES PROVIDING THE REQUIRED CHEMICAL TREATMENT WHEN RE-FILLING THE SYSTEM.

G-18 THIS CONTRACTOR SHALL CONTRACT WITH A DESIGN BUILD ELECTRICAL CONTRACTOR FOR THE DESIGN AND CONSTRUCTION OF THE ELECTRICAL PORTION OF THIS PROJECT. ELECTRICAL INSTALLATION AND DESIGN SHALL BE PER 2017 NEC.

G-19 ALL PIPING, MATERIALS, ETC. SHALL BE NEW AND DOMESTIC MADE UNLESS SPECIFICALLY AUTHORIZED IN WRITING PRIOR TO BID.

G-20 PROVIDE SPRINKLER MODIFICATIONS PER PERFORMANCE SPECIFICATION THROUGH DESIGN BUILD NICET LEVEL 4 CERTIFIED FIRE SPRINKLER CONTRACTOR.

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REV	DATE	Description
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Approved By: _____

Designed By: B. LASH
Drawn By: STAFF
Checked By: B. LASH
Approved By: B. LASH

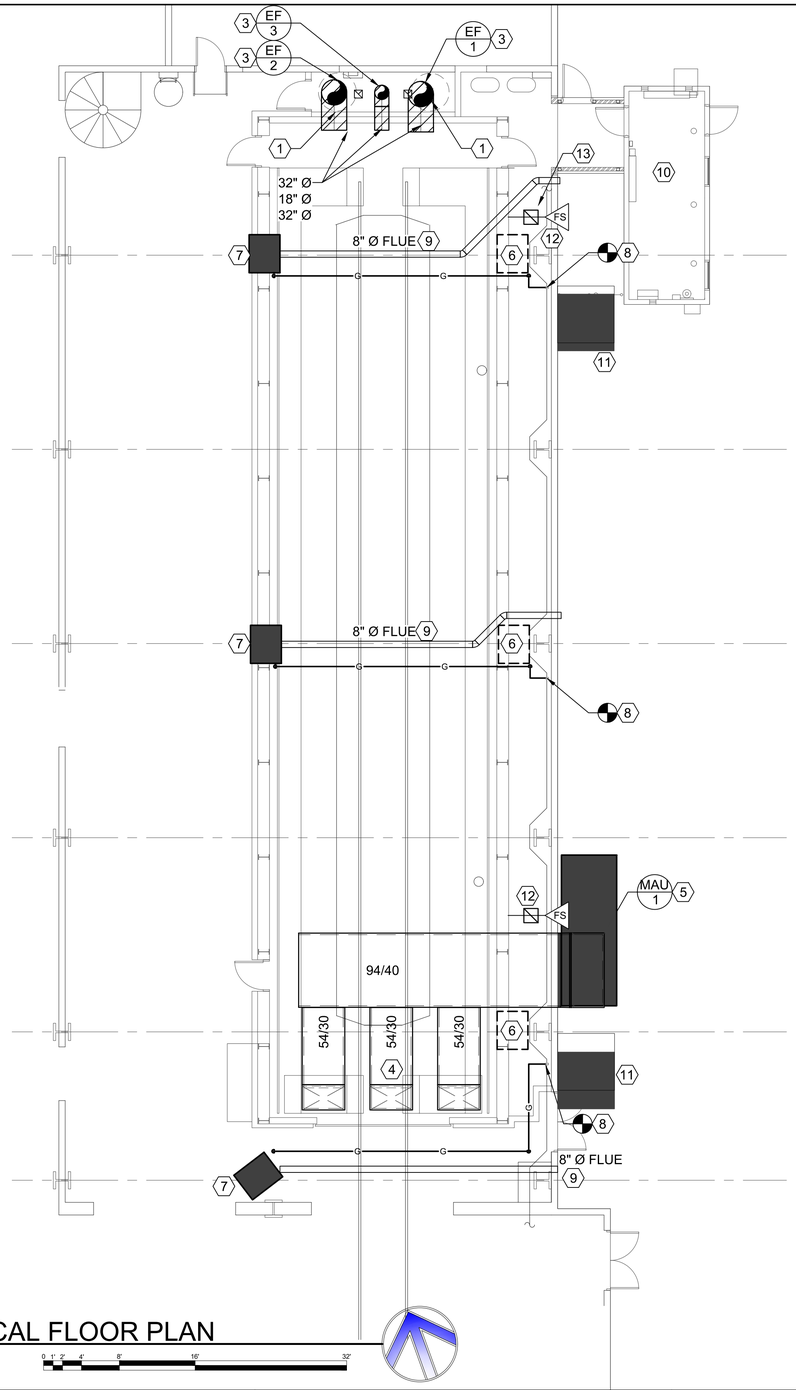
UTAH TRANSIT AUTHORITY

FRONT RUNNER PAINT BOOTH
WARM SPRINGS SERVICE CENTER

900 NORTH 500 WEST SALT LAKE CITY, UT 84116

MECHANICAL LEGEND AND GENERAL NOTES

Scale: 1/8"=1'-0"
CADD Filename: M20091 WARM SPRINGS PAINT BOOTH.DWG
Submittal Date: 12/7/20
UTA Contract No.: SGR-358
Drawing No.:
Sheet No.: MG001



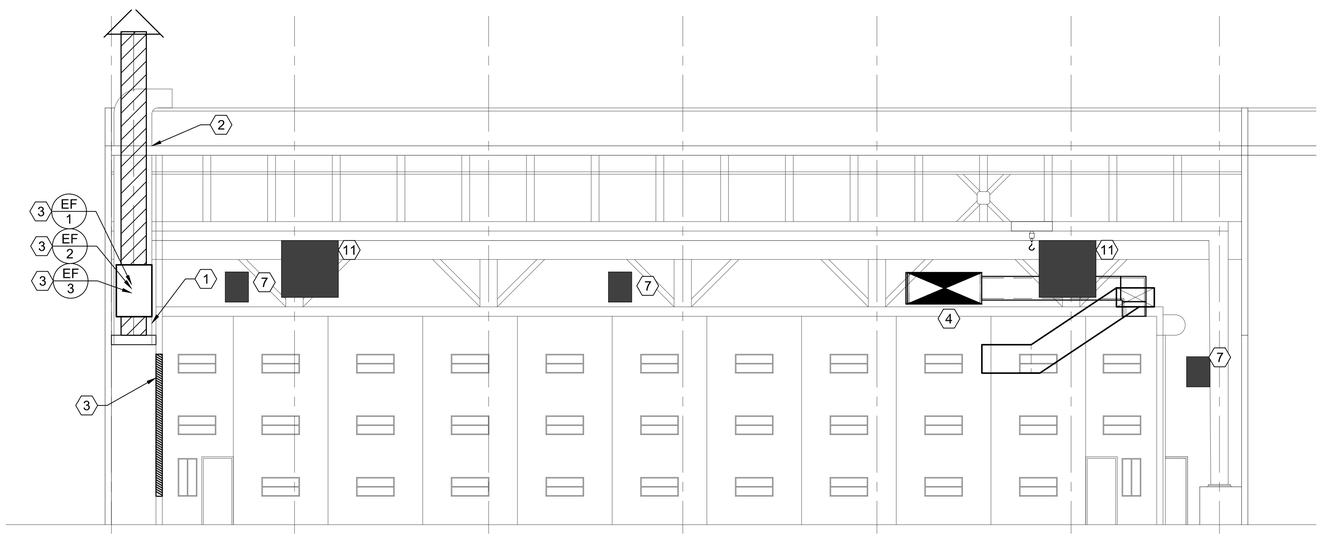
MECHANICAL FLOOR PLAN
1/8" = 1' - 0"

SHEET NOTES:

1. EXHAUST FANS TO BE CONNECTED TO SPIRAL DUCT WITH CLEAN OUT DOOR TOWARDS THE BOTTOM WHERE THEY CAN BE EASILY ACCESSED. ROUTE UP THROUGH THE ROOF AND TERMINATE WITH MANUFACTURE RECOMMENDED WEATHER CAP AND SCREEN. COORDINATE HEIGHT OF THE STACKS WITH PAINT BOOTH MANUFACTURER AND CODE REQUIREMENTS.
2. CAULK JOINT BETWEEN ROOF FLANGE COLLAR AND DUCT.
3. EXHAUST AIR LOUVERS AND FILTERS. SHALL BE LAID OUT AND DESIGNED BY PAINT BOOTH MANUFACTURER USING BEST PRACTICES AND INDUSTRY STANDARDS. FILTERS SHALL BE STANDARD SIZE. EXTEND VENTS ABOVE THE ROOF AND TERMINATE WITH MANUFACTURER APPROVED WEATHER CAP AND SCREEN. PROVIDE GUY WIRES FOR STACK OVER 48" ABOVE THE ROOF.
4. MAKE UP AIR LOUVERS AND FILTERS SHALL COME AS PART OF THE PAINT BOOTH PACKAGE. SHALL BE LAID OUT AND DESIGNED BY PAINT BOOTH MANUFACTURER USING BEST PRACTICES AND INDUSTRY STANDARDS. FILTERS SHALL BE STANDARD SIZE.
5. PROVIDE GROUND MOUNTED VERTICAL MAKEUP AIR UNIT. DUCT LAYOUT AND DESIGN SHALL BE PERFORMED BY THE PAINT BOOTH MANUFACTURER. SHALL BE NATURAL GAS HEAT. ROUTE DUCT INTO THE PAINT BOOTH PER INDUSTRY STANDARDS AND BEST PRACTICES. COORDINATE LOCATION AND HEIGHTS WITH EXISTING CRANE ABOVE THE PAINT BOOTH. COORDINATE WITH ARCHITECT FOR BOLLARDS OR OTHER PROTECTION FOR THE EQUIPMENT. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCES.
6. REMOVE AND RELOCATE EXISTING GAS FIRED UNIT HEATER FROM EXISTING LOCATION TO THIS THIS APPROXIMATE LOCATION. REMOVE ASSOCIATED HANGERS AND FLU PIPING. PATCH EXTERIOR WALL WEATHER TIGHT. REMOVE EXISTING GAS PIPING BACK TO MAIN AND ROUTE NEW PIPING PER PLANS.
7. RELOCATE EXISTING GAS FIRED UNIT HEATER TO THIS THIS APPROXIMATE LOCATION. ROUTE NEW FLUE AND GAS PIPING PER PLANS.
8. PROVIDE NEW NATURAL GAS PIPING FROM EXISTING MAIN TO NEW PLACEMENT OF EXISTING GAS FIRED UNIT HEATER. CONNECT PER DETAIL.
9. PROVIDE FLUE PER MANUFACTURERS RECOMMENDATION IN THIS APPROXIMATE LOCATION. FIELD VERIFY.
10. PROVIDE HEATING AND COOLING FOR THE MIXING BOOTH AS OUTLINED IN THE PAINT BOOTH SPECIFICATION.
11. RELOCATE THE EXISTING SWAMP COOLERS ON THE OUTSIDE OF THE BUILDING TO BE ABOVE THE NEW PAINT BOOTH. EXTEND THE EXISTING WATER LINE UP. FIELD VERIFY. REUSE EXISTING WALL SUPPORTS.
12. PROVIDE 18X18 OPENING IN THE TOP OF THE 1 HOUR RATED ASSEMBLY IN THIS APPROXIMATE LOCATION TO ALLOW AIR CIRCULATION IN THE INTERSTITIAL SPACE BETWEEN WALL AND BOOTH. PROVIDE FIRE/SMOKE DAMPER ON OPENING. FIELD VERIFY.
13. EXISTING EMERGENCY SHOWER AND EYEWASH IN THIS APPROXIMATE LOCATION SHALL REMAIN.

GENERAL NOTES:

1. THE INTENT IS TO HAVE THESE DOCUMENTS PROVIDE ENOUGH INFORMATION SO THAT THE PAINT BOOTH CAN BE COMPETITIVELY BID. THE MAKEUP AIR UNIT, EXHAUST FANS, CONTROL PANEL, ETC SHALL BE SUPPLIED BY THE PAINT BOOTH SUPPLIER AND SHALL INTEGRATE INTO THE SYSTEM AND MEET ALL LOCAL AND NATIONAL CODES. THE BOOTH SHALL MAINTAIN 100 FPM AIRFLOW DOWN THE TUNNEL AND BE CONFIGURED AS A CROSS DRAFT LAYOUT.



WEST SECTION VIEW
1/8" = 1' - 0"

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MECHANICAL FLOOR PLANS

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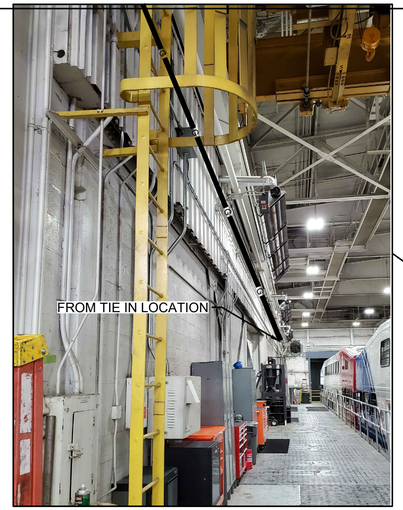

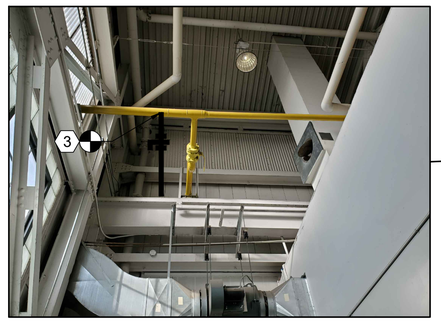

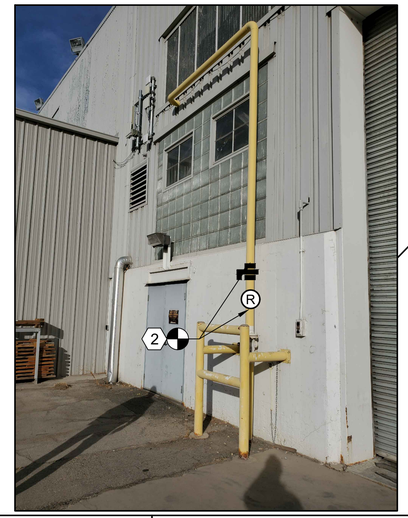

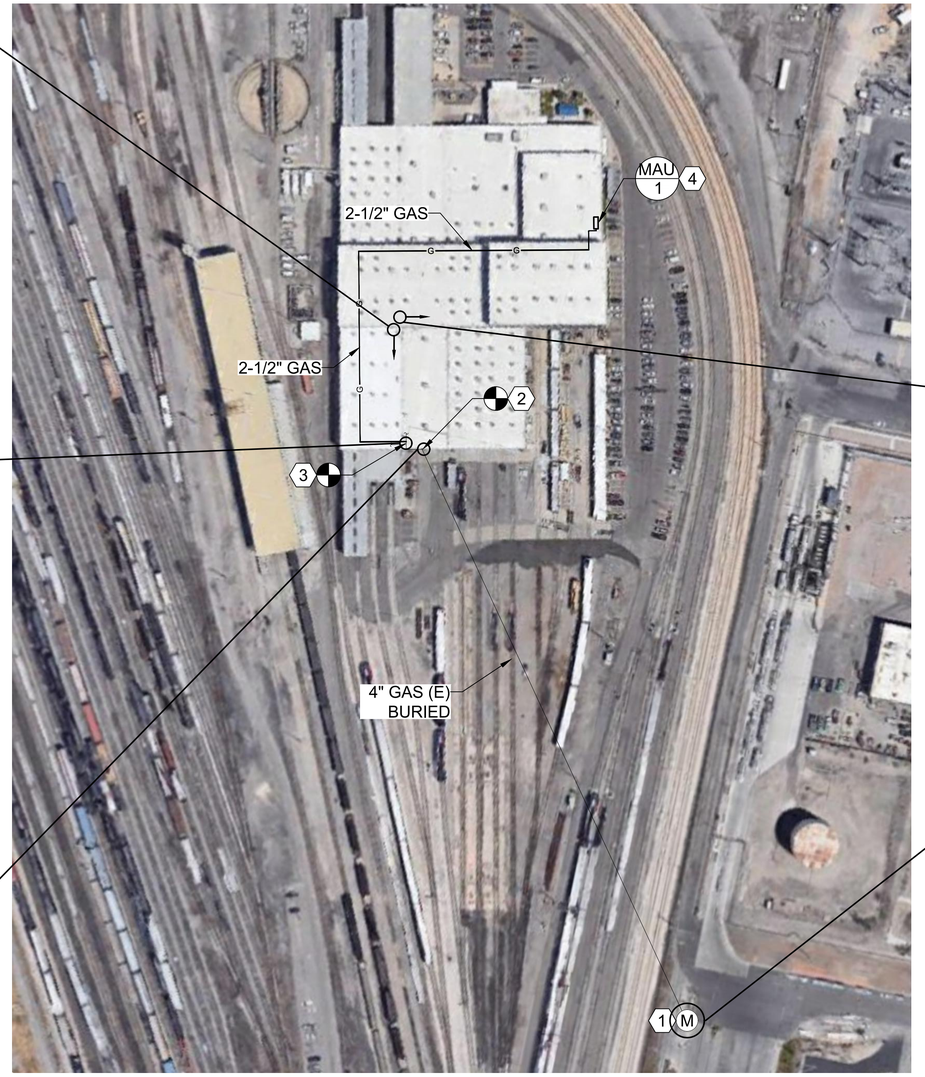

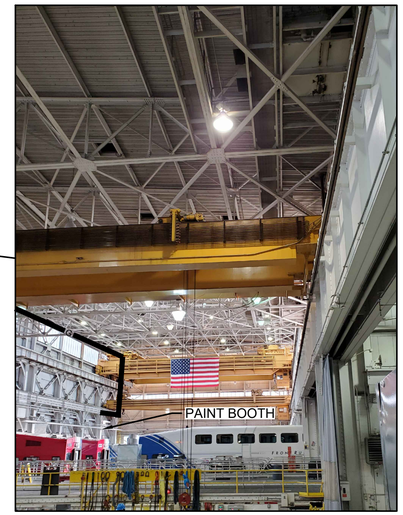

SHEET NOTES:

1. COORDINATE WITH DOMINION ENERGY TO REPLACE EXISTING NATURAL GAS METER IN THIS APPROXIMATE LOCATION WITH A 10 PSIG NATURAL GAS METER. FIELD VERIFY. CONTRACTOR SHALL PICK UP THIS COST TO REPLACE THE METER WITH A WELDED SET. THIS HAS BEEN QUOTED BY DOMINION AS $22,259.
2. PROVIDE 10 PSIG TO 5 PSIG REGULATOR ON EXISTING NATURAL GAS PIPING RISER IN THIS APPROXIMATE LOCATION PER DETAIL. FIELD VERIFY.
3. TIE INTO THE EXISTING 3" GAS LINE INSIDE THE BUILDING IN THIS APPROXIMATE LOCATION.
4. ROUTE NEW 5 PSIG NATURAL GAS LINE HIGH TO THE NEW MAU. TIE INTO NEW MAU IN THIS APPROXIMATE LOCATION. PROVIDE REQUIRED REGULATORS, SHUT OFF VALVES, SEDIMENT TRAPS, ETC.

GENERAL NOTE

1. ROUTE ALL NATURAL GAS PIPING HIGH THROUGH EXISTING BAYS. COORDINATE WITH OWNER AND FIELD VERIFY BEST ROUTING TO AVOID EXISTING STRUCTURE, CRANES, ETC.
2. ALL EXPOSED NATURAL GAS PIPING AND VALVES EXCEPT COMPONENTS, WITH FACTORY-APPLIED PAINT OR PROTECTIVE COATING SHALL BE PAINTED WITH YELLOW UL PROTECTIVE PAINT.

MECHANICAL GAS PLAN

1/128" = 1' - 0"

0 8' 16' 32' 64' 128' 256'

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Checked By:	B. LASH
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MECHANICAL NATURAL GAS PLANS

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CADD Filename:	M20091 WARM SPRINGS PAINT BOOTH.DWG
Submittal Date	12/7/20
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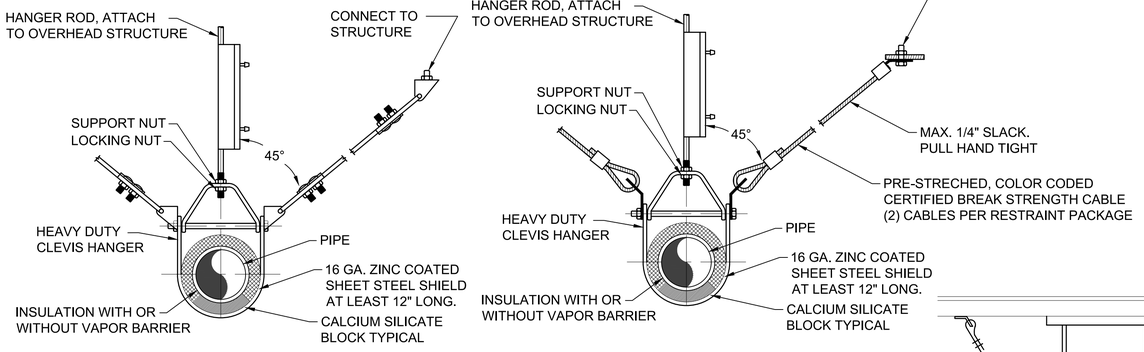
Drawing No.:	
Sheet No.:	ME102



1 SEISMIC SWAY BRACING DETAILS
SCALE: NONE

DIRECT GAS FIRED MAKE-UP AIR UNIT SCHEDULE

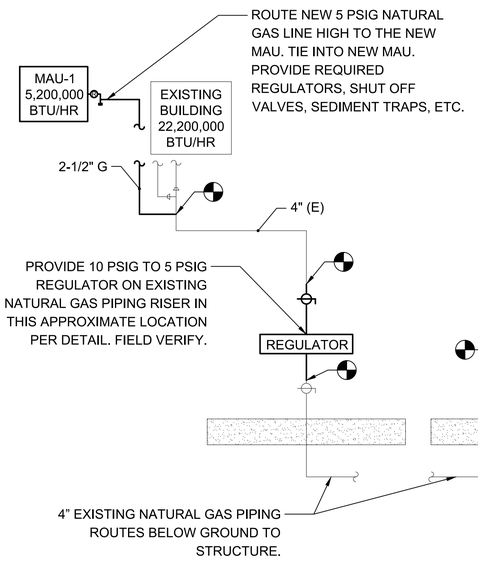
SYMBOL	C.F.M.	EXTERNAL S.P. IN W.C.	HEATING			MOTOR		WEIGHT	SCHEDULE NOTES
			HEAT INPUT	ENT. AIR TEMP	LEAVE AIR TEMP	V - Ø - Hz	HP		
MAU 1	52,800	0.75	5,227,000	5	95	460/3/60	40	7,000 LBS	1,2,3,4

1. INDIRECT BURNER. TIE INTO PAINT BOOTH CONTROLLER.
2. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
3. PROVIDE WITH VFD.
4. GAS PRESSURE 5 PSIG.

EXHAUST FAN SCHEDULE

SYMBOL	C.F.M.	STATIC PRESSURE IN. WG.	MOTOR		SCHEDULE NOTES
			V - Ø - Hz	HP	
EF 1	26,400	0.75	460/3/60	10	1,2
EF 2	26,400	0.75	460/3/60	10	1,2
EF 3	5,280	0.5	460/3/60	2	1,2

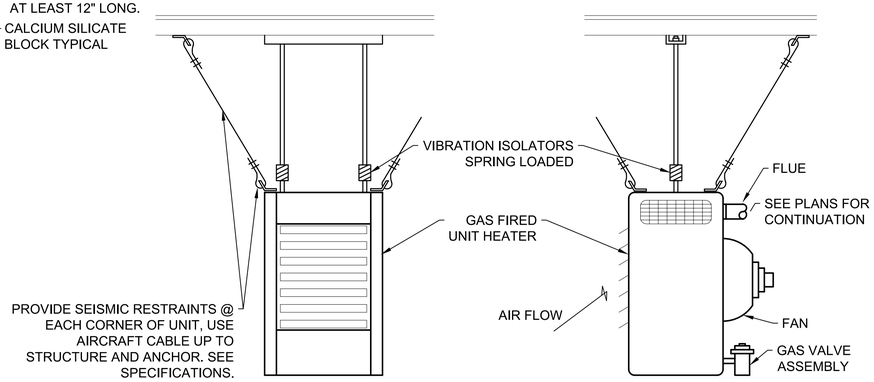
1. INTERLOCK WITH PAINT BOOTH CONTROL SYSTEM.
2. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.



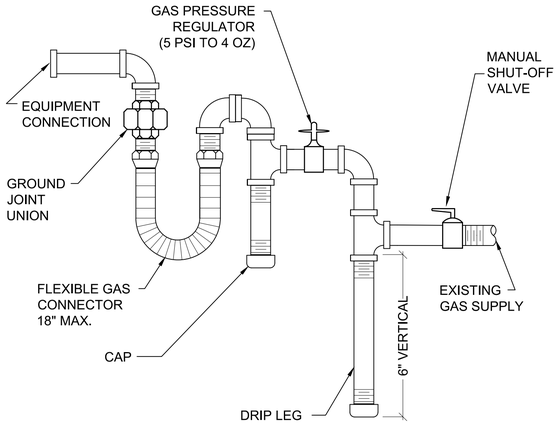
GAS METER:
DESIGN CAPACITY: EXISTING BUILDING = 22,200,000 BTU/HR
MAU = 5,200,000 BTU/HR

NEW TOTAL = 27,400,000 BTU/HR (30,787 CFH)
DESIGN PRESSURE: 5 LB
REGULATORS: 5LBS TO 4OZ

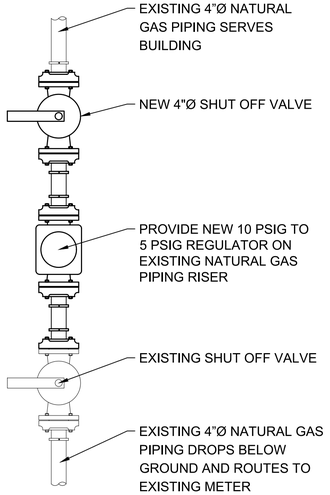
3 GAS PIPING DIAGRAM
SCALE: NONE



2 UNIT HEATER DETAIL
SCALE: NONE



4 GAS LINE CONNECTION DETAIL
SCALE: NONE



5 NATURAL GAS REGULATOR DETAIL
SCALE: NONE

HANGER SIZES FOR DOUBLE HUNG RECTANGULAR DUCTS

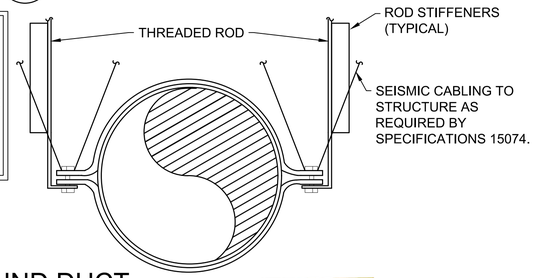
MAXIMUM HALF OF DUCT PERIMETER P/2 =	PAIR AT 10 FT. SPACING		PAIR AT 8 FT. SPACING		PAIR AT 4 FT. SPACING	
	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
30"	1" x 22 ga.	10 ga.	1" x 22 ga.	10 ga.	1" x 22 ga.	12 ga.
72"	1" x 18 ga.	3/8"	1" x 20 ga.	1/4"	1" x 22 ga.	1/4"
96"	1" x 16 ga.	3/8"	1" x 18 ga.	3/8"	1" x 22 ga.	1/4"
120"	1-1/2" x 16 ga.	1/2"	1" x 16 ga.	3/8"	1" x 20 ga.	1/4"
168"	1-1/2" x 16 ga.	1/2"	1-1/2" x 16 ga.	1/2"	1" x 18 ga.	3/8"
192"	---	1/2"	1-1/2" x 16 ga.	1/2"	1" x 16 ga.	3/8"

193" AND UP REQUIRE SPECIAL ANALYSIS

3 DUCT HANGER SIZING
SCALE: NONE

NOTES:
1. HANGERS MUST NOT DEFORM DUCT SHAPE.

2. SIZING AND SPACING OF ROD STIFFENERS AND SEISMIC CABLING SHALL BE PROVIDED BY APPROVED SEISMIC VENDOR IN SPECIFICATION SECTION 15074.



6 ROUND DUCT SUPPORT DETAIL
DUCTS > 32"Ø
SCALE: NONE

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900 NORTH 500 WEST SALT LAKE CITY, UT 84116

MECHANICAL DETAILS AND SCHEDULES

Scale: 1/8"=1'-0"
CADD Filename: M20091 WARM SPRINGS PAINT BOOTH.DWG
Submittal Date: 12/7/20
UTA Contract No.: SGR-358
Drawing No.:
Sheet No.: ME501

RECEPTACLES SYMBOL LIST

SYMBOL	DESCRIPTION
	DUPLEX CONVENIENCE OUTLET - 20 AMP
	DUPLEX CONVENIENCE OUTLET - 20 AMP GROUND FAULT INTERRUPTER
	4-PLEX CONVENIENCE OUTLET - 20 AMP
	4-PLEX CONVENIENCE OUTLET - 20 AMP GROUND FAULT INTERRUPTER
	DROP CORD OUTLET
	SPECIAL PURPOSE SINGLE PHASE OUTLET
	SPECIAL PURPOSE THREE PHASE OUTLET
J	JUNCTION BOX - SIZE AND FUNCTION AS REQUIRED

CALLOUT SYMBOL LIST

SYMBOL	DESCRIPTION
T-X X	LIGHTING FIXTURE CALLOUT NUMBER INDICATES A SUGGESTED QUANTITY- TO BE VERIFIED
XX-X	MECHANICAL EQUIPMENT CALLOUT
X E-XXX	DETAIL REFERENCE CALLOUT
X	REVISION NUMBER CALLOUT
	EQUIPMENT CALLOUT
X X	REFERENCE NOTE CALLOUT

LIGHTING SYSTEMS SYMBOL LIST

SYMBOL	DESCRIPTION
J	SURFACE MOUNTED FIXTURE
E	EMERGENCY LIGHTING
J	STRIP LIGHT FIXTURE
	EXIT LIGHT. ARROWS SHOW EXIT DIRECTION
	WALL MOUNTED LIGHT FIXTURE
	EMERGENCY BATTERY OPERATED LIGHT-SINGLE OR TWIN BEAM

LIGHTING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	LAMP/FIXTURE INFORMATION		APPROVED MANUFACTURERS	CATALOG NUMBER
T-1	LED EXTERIOR WALL MOUNTED LIGHT FIXTURE WITH BATTERY PACK. HOUSING COLOR TO MATCH EXISTING.	LAMP	INCLUDED	LUMARK	WPLLED-100-GL-UNV
		VOLTAGE	UNV	ILP	WPMO-45W-UNIV-40
		MOUNT	WALL	SIGNIFY	WP-LED-72L-530-NW-UNV
		LUMENS	3200		
T-1	6" LED RECESSED CAN LIGHT FIXTURE WITH WHITE CONE.	LAMP	INCLUDED	HALO	HC6-10-D010-HM6-12-840-61-MD-W
		VOLTAGE	UNV	LITON	CH410--CR4L17-WW-T40-UE-D10
		MOUNT	RECESSED	LIGHTOLIER	6RN Z6RDL-10-840-W-O-WH-Z1O-U
		LUMENS	1000		
EX-1	LED EXIT SIGN / EMERGENCY LIGHT COMBO WITH GREEN LETTERING.	LAMP	INCLUDED	SURE-LITE	APCH-7-UNV-G
		VOLTAGE	UNV	COMPASS	CCG
		MOUNT	WALL	EMERGENSEE	SEECTXTEU-G-W
		LUMENS	--		

NOTES:

1. ALL LIGHTS SHALL HAVE ELECTRONIC DIMMING DRIVERS. UNIVERSAL, ADVANCE AND SYLVANIA ARE APPROVED MANUFACTURERS.
2. ALL LAMPS SHALL HAVE 4000° COLOR TEMPERATURE.
3. FIELD VERIFY ALL LIGHTING VOLTAGES PRIOR TO PLACING ANY ORDER.
4. THE WRITTEN CRITERIA OF THE FIXTURE DESCRIPTION TAKES PRECEDENCE OVER THE CATALOG NUMBER.
5. AL LED LIGHTS FIXTURES SHALL HAVE 5 YEAR WARRANTY.
6. PROVIDE FACTORY INSTALLED FUSES, SLOW BLOW TYPE RATED BETWEEN 2.65 AND 3.0 TIMES THE LINE CURRENT.

ABBREVIATIONS SYMBOL LIST

SYMBOL	DESCRIPTION
W.P.	INDICATES WEATHER PROOF EQUIPMENT
A	INDICATES DEVICE IS ABOVE COUNTER TOP
AL	ALUMINUM
A.F.F.	ABOVE FINISHED FLOOR
CLG.	INDICATES CEILING MOUNTED DEVICE
C.O.	CONVIENCE OUTLET
CU	COPPER
E	INDICATES DEVICE IS ON EMERGENCY CIRCUIT
F.L.A.	FULL LOAD AMPERAGE
H.P.	HORSE POWER
I.G.	ISOLATED GROUND
K.V.A.	KILO VOLT AMPERAGE
K.W.	KILOWATT
M.C.B.	MAIN CIRCUIT BREAKER
M.L.O.	MAIN LUG ONLY
S	INDICATES DEVICE IS SURFACE MOUNTED
SPD	SURGE PROTECTOR DEVICE
TYP	TYPICAL
U.P.S.	UNINTERRUPTIBLE POWER SUPPLY
XFMR	TRANSFORMER

FIRE ALARM SYSTEMS SYMBOL LIST

SYMBOL	DESCRIPTION
	ELECTRICAL PANEL LOCATION
	FIRE ALARM SYSTEM PHOTOELECTRIC SMOKE DETECTOR
D	FIRE ALARM PHOTOELECTRIC DUCT DETECTOR
CO	FIRE ALARM COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
F	FIRE ALARM MANUAL PULL STATION, +42" A.F.F.
	FIRE ALARM HORN WITH STROBE, HIGH DECIBEL, +96" A.F.F.
	A.D.A. STROBE FOR FIRE ALARM, +96" A.F.F.
FSD	FIRE/SMOKE DAMPER

DISCONNECTS/CIRCUIT BREAKER SYMBOL LIST

SYMBOL	DESCRIPTION
	FUSED DISCONNECT SWITCH - SIZE AS REQUIRED
S	COMBINATION STARTER/FUSED DISCONNECT SWITCH - SIZE AS REQUIRED
VFD	VARIABLE FREQUENCY DRIVE
	MANUAL DISCONNECT WITH THERMAL OVERLOAD PROTECTION
	MOTOR LOCATION
	ELECTRICAL PANEL LOCATION
M	ELECTRICAL METER LOCATION

GENERAL NOTES:

1. ALL CONCEALED CONDUIT THAT CANNOT BE REMOVED SHALL BE CUT FLUSH WITH THE FINISH SURFACES AND CAPPED OFF AFTER THE WIRING HAS BEEN DISCONNECTED AT THE PANEL AND REMOVED FROM THE CONDUIT.
2. IN AREAS WHERE CIRCUIT CONTINUITY IS INTERRUPTED, BUT MUST BE MAINTAINED TO THE DEVICES WHICH ARE TO REMAIN, MAKE ALL THE NECESSARY MODIFICATIONS TO THE CIRCUITS IN ORDER TO MAINTAIN THE CIRCUIT INTEGRITY.
3. THE CONTRACTOR SHALL PATCH THE WALLS AND CEILINGS WHERE THE DEVICES ARE REMOVED TO MATCH THE EXISTING WALLS AND CEILINGS. COORDINATE WITH GENERAL CONTRACTOR.
4. PRIOR TO SUBMITTING A BID THE ELECTRICAL CONTRACTOR SHALL INSPECT THE SITE AND INCLUDE IN HIS BID PACKAGE ALL CHARGES DUE TO EXISTING CONDITIONS. SHOP DRAWINGS ARE REQUIRED. ALL LABOR, MATERIAL AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF 1 YEAR FROM THE DATE OF ACCEPTANCE BY THE TENANT. REPLACE OR REPAIR ALL DEFECTS DURING THE GUARANTEED PERIOD.
5. THE CONTRACTOR SHALL INFORM THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES FOUND BETWEEN THE INTENDED FUNCTION OF EQUIPMENT AND EQUIPMENT SPECIFIED IN THE CONTRACT DOCUMENTS A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO ISSUANCE OF THE FINAL BID. FAILURE TO REPORT ANY DISCREPANCY (CATALOG NUMBERS, DISCONTINUED ITEMS, ETC.) DOES NOT RELIEVE THE CONTRACTOR FROM PROVIDING EQUIPMENT WHICH SHALL CONFORM TO AND FULFILL THE INTENT OF THE CONTRACT DOCUMENTS. NOR SHALL IT BE USED AS A CONDITION TO OBTAIN ADDITIONAL FUNDS FROM THE OWNER AFTER THE CONTRACT IS AWARDED. THE CONTRACTOR SHALL REQUEST ALL CLARIFICATIONS OF CONTRACT DOCUMENT REQUIREMENTS IN WRITING TO THE ARCHITECT/ENGINEER A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO ISSUANCE OF THE FINAL ADDENDUM.
6. REFER TO THE MECHANICAL SHEETS FOR THE EXACT LOCATION OF THE MECHANICAL EQUIPMENT.
7. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE MECHANICAL CONTRACTOR SO THAT NO PIPING, DUCTS, OR OTHER EQUIPMENT SHALL BE INSTALLED IN ENTRY OR PASS THROUGH ELECTRICAL ROOM OR SPACES ABOVE OR BELOW ELECTRICAL PANELS.
8. ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENT, ETC.) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH-IN.
9. MINIMUM SIZE OF CONDUIT TO BE 3/4". ALUMINUM CONDUITS SHALL NOT BE USED.
10. USE RIGID STEEL SET SCREW TYPE FITTINGS ONLY. DIE CAST FITTINGS SHALL NOT BE USED.
11. RUN A NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR (EACH CIRCUIT) IN A CONDUIT. NOT MORE THAN THREE (3) CIRCUITS IN A CONDUIT. THREE (3) PHASE CONDUCTORS, THREE (3) NEUTRAL CONDUCTORS (ONE FOR EACH PHASE) AND ONE (1) GROUND CONDUCTOR FOR A TOTAL OF SEVEN (7) CONDUCTORS.
12. THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THHN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
13. ALL J-BOXES SHALL HAVE MINIMUM DEPTH OF 2-1/8" UNLESS OTHERWISE SPECIFIED. SECURE ALL J-BOXES AS SHOWN IN THE DETAILS. FURNISH AND INSTALL PROPER MUD RINGS.
14. ALL NEW EXPOSED CONDUIT MUST RUN AGAINST THE WALLS OR CEILINGS. DO NOT PENDANT MOUNT ANY CONDUIT FROM THE CEILINGS. CONDUITS SHALL BE BELOW ROOF DECK A MINIMUM OF 1-1/2" PER NEC 300.4.E.
15. SEAL AROUND ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS WITH FIRE RATED MATERIAL. 3M IS AN APPROVED MANUFACTURER.
16. ALL ELECTRICAL WIRING MUST BE IN CONDUIT (ROMEX AND MC CABLE NOT PERMITTED).
17. FLEXIBLE CONDUITS CAN ONLY BE USED FOR SHORT RUNS (6' MAXIMUM).
18. THE ELECTRICAL CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.
19. USE NO. 10 THHN CONDUCTORS FOR CONDUCTOR LENGTH OVER 100 FEET, NO. 8 THHN OVER 200 FEET, NO. 6 THHN OVER 300 FEET AND NO. 4 THHN OVER 400 FEET LENGTH.
20. ALL CONDUITS, BOXES, ETC., EXPOSED TO THE WEATHER SHALL BE GALVANIZED RIGID STEEL, UNLESS OTHERWISE NOTED.
21. THE FIRST 10' LENGTH OF ALL BURIED CONDUIT OVER 1" SHALL BE RIGID GALVANIZED STEEL WHERE THEY ARE LEAVING OR ENTERING THE BUILDING, MANHOLE, VAULT, ETC.
22. ALL METALLIC CONDUITS, JOINTS, FITTINGS, ETC., IN CONTACT WITH THE GROUND SHALL BE SPIRALLY WRAPPED WITH 3M SCOTCHRAP-51, 20 MIL TAPE (OR APPROVED EQUAL). 1/2" OVERLAP IS REQUIRED.
23. PANELBOARDS SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT. (NEC 110-16)
24. PROVIDE UPDATED, TYPED WRITTEN, PANEL SCHEDULES FOR NEW AND EXISTING PANELBOARDS SHOWING CIRCUIT CHANGES MADE DURING THIS PROJECT.
25. PROVIDE TYPED LABEL FOR ALL DUPLEX OUTLETS, DISCONNECTS, AND LIGHT SWITCHES TO INDICATE WHICH CIRCUIT THEY ARE TIED TO.
26. ALL DISCONNECTS, J-BOXES AND CONDUITS EXPOSED TO THE OUTSIDE WEATHER SHALL BE NON-CORROSIVE, WEATHER PROOF TYPE.
27. ALL DISCONNECTS SHALL BE HEAVY DUTY TYPE.
28. ALL NEW WORK MUST MEET THE CURRENT ADOPTED NATIONAL ELECTRICAL CODE. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED AND NEW.
29. CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE OVER SHOP DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.
30. PAINT ALL THE J-BOXES FOR FIRE ALARM SYSTEM WITH RED PAINT. ALL THE CONDUIT FOR FIRE ALARM SYSTEM SHALL BE RED.

E.C.E. LLC
Electrical Consulting Engineers
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Salt Lake City, Utah 84101
Telephone (801) 521-8007
Email: Admin@eceonline.com
ECE Project No. 5618

REV	DATE	Description
0	12/07/20	BID SET

LICENSED PROFESSIONAL ENGINEER — AKBAR — #172577 12/7/20 — STATE OF UTAH

ARCHIPLEX GROUP
architecture • planning • design services
255 Crossroad Square
Salt Lake City, UT 84115
P:(801) 961-7070
F:(801) 961-7373

Submitted By: _____

UTA UTAH TRANSIT AUTHORITY

Approved By: _____

Designed By:	B. LEWIS
Drawn By:	B. LEWIS
Checked By:	A. MATINKHAH
Approved By:	A. MATINKHAH

UTAH TRANSIT AUTHORITY

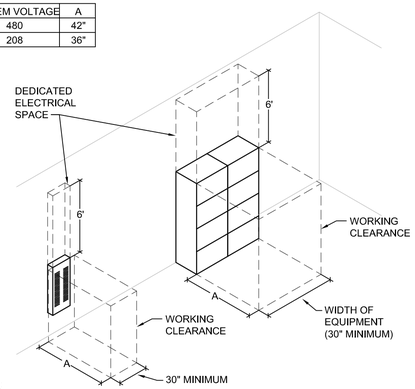
NEW PAINT BOOTH AT WARM SPRINGS SERVICE CENTER

ADDRESS SALT LAKE CITY UT 84116

GENERAL NOTES, SYMBOLS, LIGHT FIXTURE SCHEDULE

Scale:	
CADD Filename:	EE001.DWG
Submittal Date	OCTOBER 5, 2020
UTA Contract No.:	SGR-358
Drawing No.:	Sheet No.: EE001

SYSTEM VOLTAGE	A
480	42"
208	36"

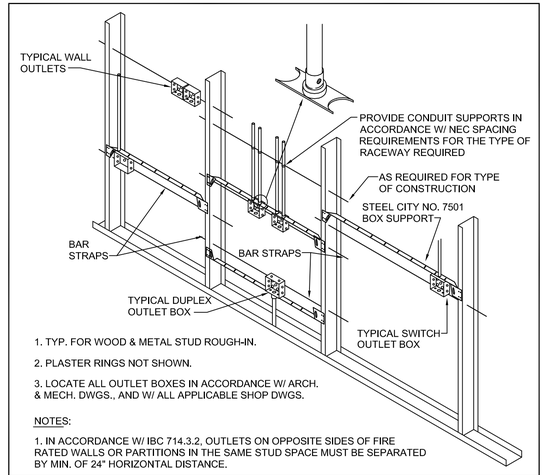


NOTE:

1. IF THE CEILING DECK IS LESS THAN 6'-0" ABOVE ELECTRICAL EQUIPMENT THEN AREA FROM EQUIPMENT TO CEILING DECK SHALL BE DEDICATED ELECTRICAL SPACE (LAY-IN DROP CEILING ARE NOT CONSIDERED AS CEILING DECK.)
2. IF THERE ARE EXPOSED LIVE PARTS ON BOTH SIDES OF WORKING SPACE, THE MINIMUM CLEAR DISTANCES FOR 151-600V TO GROUND SHALL INCREASE FROM 42" TO 48".

SCALE: N.T.S.

TYPICAL PANELBOARD CLEARANCE REQUIREMENTS



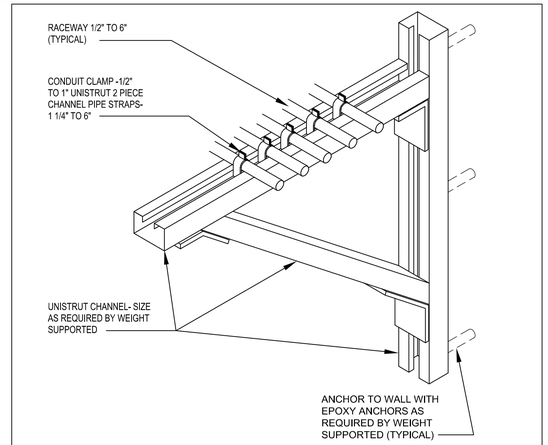
1. TYP. FOR WOOD & METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE W/ ARCH. & MECH. DWGS., AND W/ ALL APPLICABLE SHOP DWGS.

NOTES:

1. IN ACCORDANCE W/ IBC 714.3.2, OUTLETS ON OPPOSITE SIDES OF FIRE RATED WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY MIN. OF 24" HORIZONTAL DISTANCE.

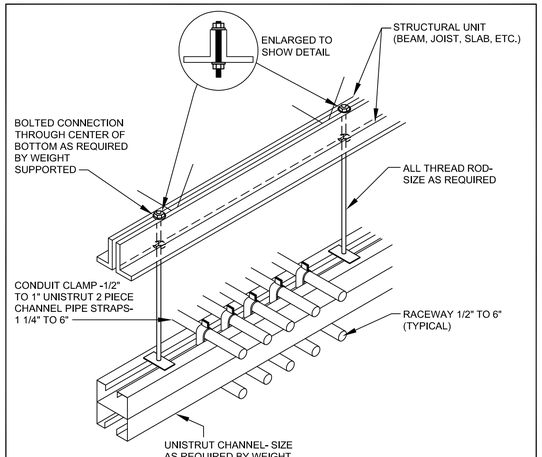
SCALE: N.T.S.

TYPICAL ROUGH-IN REQUIREMENTS DETAIL



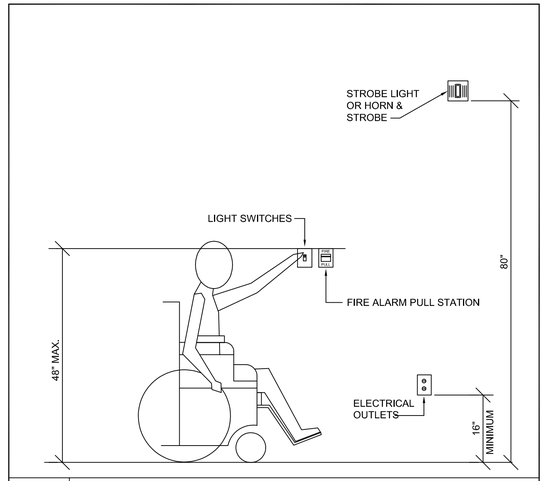
SCALE: N.T.S.

TYPICAL CONDUIT RACK DETAIL (WALL MOUNTED)



SCALE: N.T.S.

TYPICAL CONDUIT RACK DETAIL

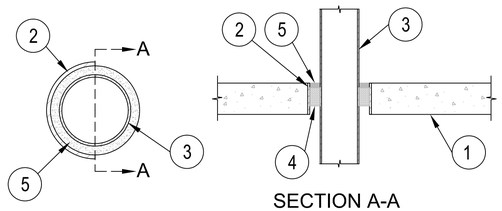


SCALE: N.T.S.

STANDARD HEIGHTS FOR HANDICAPPED ACCESS

UL SYSTEM #C-AJ-1009

MAY 09, 2013
F RATING - 2 HR
T RATING - 0 HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ. FT.
L RATING AT 400 F - LESS THAN 1 CFM/SQ. FT.



SECTION A-A
WALL ASSEMBLY

1. FLOOR OR WALL ASSEMBLY - MIN. 5 IN. (127 mm) THICK REINFORCED NORMAL WEIGHT (100-150 PCF OR 1600-2400 kg/m^3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED BY ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX. DIAMETER OF OPENING IS 6 IN. (152mm).

   SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. METALLIC SLEEVE (OPTIONAL) - NOMINAL 6 IN. (152 mm) DIAMETER (OR SMALLER) ELECTRICAL METALLIC TUBING, STEEL CONDUIT OR CAST IRON PIPE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL SURFACES.
3. THROUGH PENETRATIONS - ONE METALLIC PIPE OR CONDUIT TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. A NOMINAL ANNULAR SPACE OF 3/4 IN. (19 mm) IS REQUIRED WITHIN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR CONDUITS MAY BE USED:

   A. STEEL PIPE - NOMINAL 4 IN. (102 mm) DIAMETER (OR SMALLER) SCHEDULE 5 (OR HEAVIER) STEEL PIPE.

   B. CONDUIT - NOMINAL 4 IN. (102 mm) (OR SMALLER) DIAMETER STEEL ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.
4. PACKING MATERIAL - MIN. 3 IN. (76 mm) THICKNESS OF MIN. 4 PCF (64 kg/m^3) MINERAL WOOL BATTING INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL. PACKING MATERIAL TO BE CENTERED IN WALLS MID DEPTH AND RECESSED TO ALLOW FOR INSTALLATION OF FILL MATERIAL.
5. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN. 1/2 IN. (13 mm) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR. IN WALLS, FILL MATERIAL TO BE APPLIED ON EACH SIDE OF PACKING MATERIAL.

   3M COMPANY - TYPES FB-1000NS, FB-1003SC (FLOORS ONLY), FB-2000 OR FB-2000+ (FLOORS ONLY).
   *BEARING THE UL CLASSIFICATION MARKING

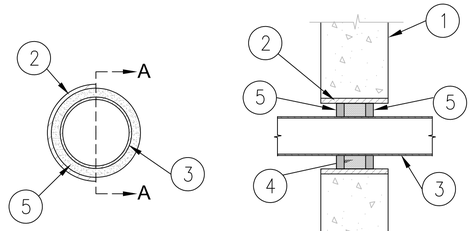
NOTE: LABEL FIRE STOPPING MATERIALS ON BOTH SIDE OF THE PROTECTED PENETRATION TO INDICATE LEVEL OF FIRE STOPPING RATING.

SCALE: N.T.S.

TYPICAL FIRESTOP FOR CABLES/CONDUIT THROUGH CONCRETE FLOORING

UL SYSTEM #C-AJ-1009

MAY 09, 2013
F RATING - 2 HR
T RATING - 0 HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ. FT.
L RATING AT 400 F - LESS THAN 1 CFM/SQ. FT.



SECTION A-A
WALL ASSEMBLY

1. FLOOR OR WALL ASSEMBLY - MIN. 5 IN. (127 mm) THICK REINFORCED NORMAL WEIGHT (100-150 PCF OR 1600-2400 kg/m^3) CONCRETE WALL MAY ALSO BE CONSTRUCTED BY ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX. DIAMETER OF OPENING IS 6 IN. (152mm).

   SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. METALLIC SLEEVE (OPTIONAL) - NOMINAL 6 IN. (152 mm) DIAMETER (OR SMALLER) ELECTRICAL METALLIC TUBING, STEEL CONDUIT OR CAST IRON PIPE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL SURFACES.
3. THROUGH PENETRATIONS - ONE METALLIC PIPE OR CONDUIT TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. A NOMINAL ANNULAR SPACE OF 3/4 IN. (19 mm) IS REQUIRED WITHIN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR CONDUITS MAY BE USED:

   A. STEEL PIPE - NOMINAL 4 IN. (102 mm) DIAMETER (OR SMALLER) SCHEDULE 5 (OR HEAVIER) STEEL PIPE.

   B. CONDUIT - NOMINAL 4 IN. (102 mm) (OR SMALLER) DIAMETER STEEL ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.
4. PACKING MATERIAL - MIN. 3 IN. (76 mm) THICKNESS OF MIN. 4 PCF (64 kg/m^3) MINERAL WOOL BATTING INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL. PACKING MATERIAL TO BE CENTERED IN WALLS MID DEPTH AND RECESSED TO ALLOW FOR INSTALLATION OF FILL MATERIAL.
5. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN. 1/2 IN. (13 mm) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR. IN WALLS, FILL MATERIAL TO BE APPLIED ON EACH SIDE OF PACKING MATERIAL.

   3M COMPANY - TYPES FB-1000NS, FB-1003SC (FLOORS ONLY), FB-2000 OR FB-2000+ (FLOORS ONLY).
   *BEARING THE UL CLASSIFICATION MARKING

NOTE: LABEL FIRE STOPPING MATERIALS ON BOTH SIDE OF THE PROTECTED PENETRATION TO INDICATE LEVEL OF FIRE STOPPING RATING.

SCALE: N.T.S.

TYPICAL FIRESTOP FOR CABLES/CONDUIT THROUGH CONCRETE WALLS

E.C.E. LLC
Electrical Consulting Engineers
939 So. West Temple
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Telephone (801) 521-8007
Email: Admin@eceonline.com
ECE Project No. 5618

REV	DATE	Description
0	12/07/20	BID SET

LICENSED PROFESSIONAL ENGINEER — AKBAR — #172577 12/7/20 — STATE OF UTAH

ARCHIPLEX GROUP
architecture • planning • design services
255 Crossroad Square
Salt Lake City, UT 84115
P:(801) 961-7070
F:(801) 961-7373

Submitted By: _____

UTA UTAH TRANSIT AUTHORITY

Approved By: _____

Designed By:	B. LEWIS
Drawn By:	B. LEWIS
Checked By:	A. MATINKHAH
Approved By:	A. MATINKHAH

UTAH TRANSIT AUTHORITY

NEW PAINT BOOTH AT WARM SPRINGS SERVICE CENTER

ADDRESS SALT LAKE CITY UT 84116

ELECTRICAL DETAILS

Scale:	
CADD Filename:	EE002.DWG
Submittal Date	OCTOBER 5, 2020
UTA Contract No.:	SGR-358
Drawing No.:	Sheet No.: EE002

Existing Panel: P-14

Location: Electrical
Mounting: Surface
Enclosure: Type1
Volts: 277 480
Phase: 3
Wires: 4
A.I.C. 22K
Mains Type: MLO
Mains Rating: 400A

CKT	Circuit Description	Load	Class.	Poles	Trip	Phase	Trip	Poles	Class.	Load	Circuit Description	CKT
1	(N) PAINT MIXING PANEL	3500	SF	3	50	A	50	3	AC	3500	(E) HVAC RTU-1	2
3	--	3500	SF	--	--	B	--	--	AC	3500	--	4
5	--	3500	SF	--	--	C	--	--	AC	3500	--	6
7	(E) PANEL A	5500	SM	3	90	A	70	3	O	5000	(E) PANEL A	8
9	--	5500	SM	--	--	B	--	--	O	5000	--	10
11	--	5500	SM	--	--	C	--	--	O	5000	--	12
13	(E) PANEL A TRACK 6W	5500	SM	3	90	A	90	3	O	5500	(E) WELDING RECEPTS	14
15	--	5500	SM	--	--	B	--	--	O	5500	--	16
17	--	5500	SM	--	--	C	--	--	O	5500	--	18
19	(E) PANEL G	5500	SM	3	90	A	90	3	O	5500	(E) WELDING RECEPTS	20
21	--	5500	SM	--	--	B	--	--	O	5500	--	22
23	--	5500	SM	--	--	C	--	--	O	5500	--	24
25	(E) CRANE TRACK 7,8	6000	SM	3	100	A	100	3	SM	5500	(E) CRANE TRACK 5,6	26
27	--	6000	SM	--	--	B	--	--	SM	5500	--	28
29	--	6000	SM	--	--	C	--	--	SM	5500	--	30
31	(E) WELDING RECEPTS	5000	SF	3	70	A	100	3	SM	5500	(E) MACTON JACK	32
33	--	5000	SF	--	--	B	--	--	SM	5500	--	34
35	--	5000	SF	--	--	C	--	--	SM	5500	--	36
		VA			AMPS		KVA			VA		
		31000		A	222.0	A	61.5	A		30500		
		31000		B	222.0	B	61.5	B		30500		
		31000		C	222.0	C	61.5	C		30500		
		93000			221.9	TOTAL	184.5			91500		

Load Class.	Conctd. Load	Dmnd. Factor	Dmnd. Load
HVAC Cool (AC)	10500	100%	10500
HVAC Heat (HH)	0	100%	0
Electric Heat(EH)	0	100%	0
Exhaust Fans (EF)	0	100%	0
Water Heating (WH)	0	100%	0
Lighting (L)	0	125%	0
Lighting Dwelling Unit (LD)	0	0%	0
Lighting Hospital (LH)	0	0%	0
Lighting Motel (LM)	0	0%	0
Lighting Warehouse (LW)	0	0%	0
Outlets (O)	48000	60%	29000

Load Class.	Conctd. Load	Dmnd. Factor	Dmnd. Load
Kitchen (K)	0	0%	0
E. Range<3.5 kW (R1)	0	0%	0
E. Range>3.5kW (R2)	0	0%	0
Electric Dryer (ED)	0	0%	0
Appliance (A)	0	0%	0
Elevator (E)	0	100%	0
Boiler (B)	0	100%	0
Small Motor (SM)	1E+05	100%	100500
Snow Melt (SN)	0	100%	0
Miscellaneous (M)	0	100%	0
Sub Panel Loads (SF)	25500	100%	25500

Panel Totals	
Total Conn. Demand KVA	184.5
Total Est. Demand KVA	165.5
Total Conn. AMPS	222
Total Est. Demand AMPS	199

Notes:

Existing Panel: MDP

Location: Electrical
Mounting: Wall
Enclosure: Type 1
Volts: 277/ 480
Phases: 3
Wires: 4
A.I.C. 45K FULLY RATED
Main Lug: --
Main Breaker: 3000A

CKT	Circuit Description	Load	Poles	Trip
1	(E) COMPRESSOR	160.0	3	200
2	*(N) PAINT BOOTH PANEL	100,0	3	125
3	(E) PANEL LD	56,0	3	70
4	(E) CONTROL ROOM POWER	56.0	3	70
5	(E) TURN TABLE	120.0	3	150
6	(E) SHORE POWER	120.0	3	150
7	(E) WAYSIDE POWER TRACK #16	240.0	3	300
8	(E) WAYSIDE POWER TRACK #17	240.0	3	300
9	(E) BASEMENT TRANSFORMER	240.0	3	400
10	(E) PANEL WB1	240.0	3	400
11	SPACE	0.0		
12	SPACE	0.0		
13	(E) WAYSIDE POWER TRACK #15	240.0	3	300
14	SPACE	0.0		
15	SPACE	0.0		
16	(E) BASEMENT DISCONNECTS	400.0	3	800

NEUTRAL BUS	FULL SIZE
GROUND BUS	HALF SIZE
STYLE (SQUARE-D)	ILINE TYPE HCP
BRANCH CIRCUIT MTG. SPACE	63"

Notes:
*PROVIDE NEW CIRCUIT BREAKER SIZED AS INDICATED, SAME BRAND & A.I.C. RATING AS EXISTING CIRCUIT BREAKERS

Total Conn. Load VA:	1839018
Total Est. Demand VA:	1839018
Total Conn. AMPS:	2212
Total Est. Demand AMPS:	2212

Existing Panel: I-T5

Location: Electrical
Mounting: Surface
Enclosure: Type1
Volts: 120 208
Phase: 3
Wires: 4
A.I.C. 10K
Main Lug: --
Main Breaker: 90A

CKT	Circuit Description	Load	Class.	Poles	Trip	Phase	Trip	Poles	Class.	Load	Circuit Description	CKT
1	(E) EXHAUST FAN CTRL	200	EF	1	20	A	20	1	O	720	(E) EAST WALL OUTLET	2
3	(E) EAST WALL OUTLET	720	O	1	20	B	20	1	O	200	(E) CRANE CONTROL	4
5	(E) EAST WALL OUTLET	720	O	1	20	C	20	1	O	540	(E) EAST WALL OUTLET	6
7	(E) UNIT HEATER NORTH	1000	EH	1	20	A	45	2	O	2200	(E) DRILL PRESS	8
9	(E) UNIT HEATER CENTER	1000	EH	1	20	B	--	--	O	2200	--	10
11	(E) UNIT HEATER SOUTH	1000	EH	1	20	C	20	1	O	1200	(N) NORTH WALL/ROOF	12
		VA			AMPS		KVA			VA		
		1200		A	34.3	A	4.1	A		2920		
		1720		B	34.3	B	4.1	B		2400		
		1720		C	28.8	C	3.5	C		1740		
		4640			32.5	TOTAL	11.7			7060		

Load Class.	Conctd. Load	Dmnd. Factor	Dmnd. Load
HVAC Cool (AC)	0	100%	0
HVAC Heat (HH)	0	100%	0
Electric Heat(EH)	3000	100%	3000
Exhaust Fans (EF)	200	100%	200
Water Heating (WH)	0	100%	0
Lighting (L)	0	125%	0
Lighting Dwelling Unit (LD)	0	0%	0
Lighting Hospital (LH)	0	0%	0
Lighting Motel (LM)	0	0%	0
Lighting Warehouse (LW)	0	0%	0
Outlets (O)	8500	100%	8500

Load Class.	Conctd. Load	Dmnd. Factor	Dmnd. Load
Kitchen (K)	0	0%	0
E. Range<3.5 kW (R1)	0	0%	0
E. Range>3.5kW (R2)	0	0%	0
Electric Dryer (ED)	0	0%	0
Appliance (A)	0	0%	0
Elevator (E)	0	100%	0
Boiler (B)	0	100%	0
Small Motor (SM)	0	100%	0
Snow Melt (SN)	0	100%	0
Miscellaneous (M)	0	100%	0
Sub Panel Loads (SF)	0	100%	0

Panel Totals	
Total Conn. Demand KVA	11.7
Total Est. Demand KVA	11.7
Total Conn. AMPS	32
Total Est. Demand AMPS	32

Notes:

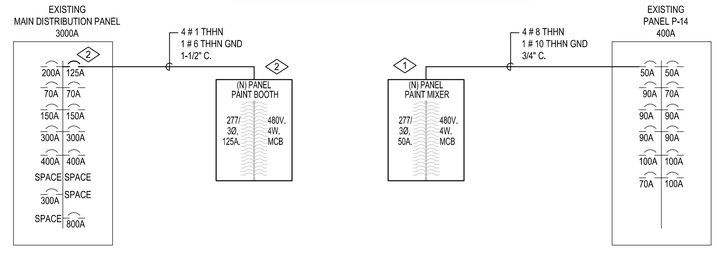
MECHANICAL EQUIPMENT SCHEDULE

	NAME OF MECHANICAL EQUIPMENT	MAKE-UP AIR UNIT	EXHAUST FAN	EXHAUST FAN
MOTOR DATA	EQUIPMENT NO.	MAU-1	EF-1,2	EF-3
	RATING/WATTS	40 HP	10 HP	2 HP
	VOLTAGE	480	480	480
	PHASE	3	3	3
	AMPS	49.8	13.4	3.3
	WIRE SIZE	3 #6	3 #12	3 #12
	GROUND WIRE	1 #10	1 #12	1 #12
	CONDUIT SIZE	3/4"	3/4"	3/4"
	FUSE DISC. SW.	100	30	30
	TYPE RKI FUSES	80	25	8
	NON-FUSE SW.	--	--	--
	NOTES	2,3	1,3	1,3

NOTES:
1. STARTER IS FURNISHED WITH THE UNIT. PROVIDE SITE DISCONNECT.
2. UNIT FURNISHED WITH VFD. PROVIDE SITE FUSED DISCONNECT WITH ELECTRICAL INTERLOCK (FACTORY INSTALLED),
3. TIE-INTO PAINT BOOTH CONTROL PANEL.

REFERENCE NOTES:

1. NEW PAINT MIXING ROOM PANEL PROVIDED BY PAINT MIXING MANUFACTURER. TIE NEW PANEL TO EXISTING 50A CIRCUIT BREAKER IN EXISTING PANEL P-14. SEE PANEL SCHEDULE FOR MORE INFORMATION.
2. NEW PAINT BOOTH PANEL PROVIDED BY PAINT BOOTH MANUFACTURER. TIE NEW PANEL TO NEW 125A, 3-POLE CIRCUIT BREAKER IN EXISTING MDP. SEE PANEL SCHEDULE FOR MORE INFORMATION.



POWER SINGLE LINE DIAGRAM
SCALE: NTS

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Telephone (801) 521-8007
Email: Admin@eceonline.com
ECE Project No. 5618

REV	DATE	Description
0	12/07/20	BID SET

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AKBAR MATINKHAH
#172577
12/7/20
STATE OF UTAH

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Submitted By: _____

UTA
UTAH TRANSIT AUTHORITY

Approved By: _____

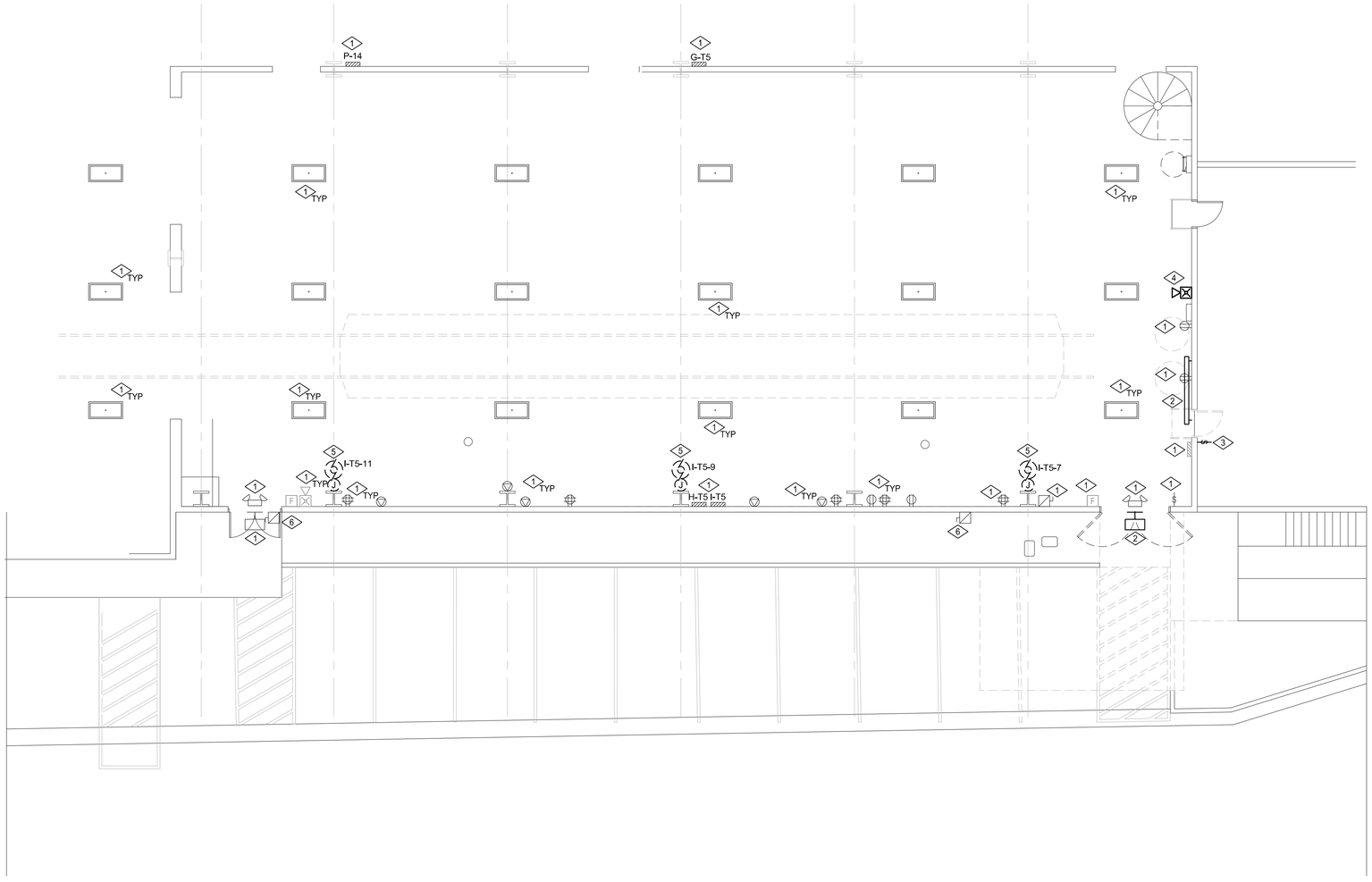
Designed By: B. LEWIS
Drawn By: B. LEWIS
Checked By: A. MATINKHAH
Approved By: A. MATINKHAH

UTAH TRANSIT AUTHORITY
NEW PAINT BOOTH AT
WARM SPRINGS SERVICE CENTER
ADDRESS SALT LAKE CITY UT 84116
POWER SINGLE LINE DIAGRAM
PANEL & MECH. SCHEDULES

Scale:
CADD Filename: EE003.DWG
Submittal Date: OCTOBER 5, 2020
UTA Contract No.: SGR-358
Drawing No.:
Sheet No.: EE003

REFERENCE NOTES:

1. EXISTING PANEL, OUTLET, FIRE ALARM DEVICE, ETC, SHALL REMAIN. MAINTAIN CIRCUIT INTEGRITY.
2. EXISTING WALL MOUNTED LIGHT FIXTURE TO BE RELOCATED TO THE APPROXIMATE NEW LOCATION SHOWN ON EE102. EXTEND ASSOCIATED CONDUIT AND CONDUCTORS TO THE NEW LOCATION.
3. REMOVE EXISTING LIGHT SWITCH. MAINTAIN CIRCUIT INTEGRITY TO EXISTING LIGHTS TO REMAIN IN ROOM.
4. EXISTING FIRE ALARM DEVICE TO BE RELOCATED TO THE APPROXIMATE NEW LOCATION SHOWN ON EE101. EXTEND EXISTING CONDUIT AND CONDUCTORS IN CLASS "A" LOOP TO NEW LOCATION.
5. EXISTING GAS FIRED UNIT HEATER TO BE RELOCATED. EXTEND EXISTING CONDUIT, CONDUCTORS, ETC. TO NEW LOCATION SHOWN ON SHEET EE101.
6. REFER TO SHEET EE101 FOR MORE INFORMATION FOR THE POWER TO RELOCATED SWAMP COOLERS.



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DEMOLITION FLOOR PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"

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Telephone (801) 521-8007
Email: Admin@eceonline.com
ECE Project No. 5618

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F:(801) 961-7373

Submitted By: _____

UTAH TRANSIT AUTHORITY

Approved By: _____

Designed By:	B. LEWIS
Drawn By:	B. LEWIS
Checked By:	A. MATINKHAH
Approved By:	A. MATINKHAH

UTAH TRANSIT AUTHORITY

NEW PAINT BOOTH AT WARM SPRINGS SERVICE CENTER

ADDRESS SALT LAKE CITY UT 84116

DEMOLITION FLOOR PLAN – ELECTRICAL

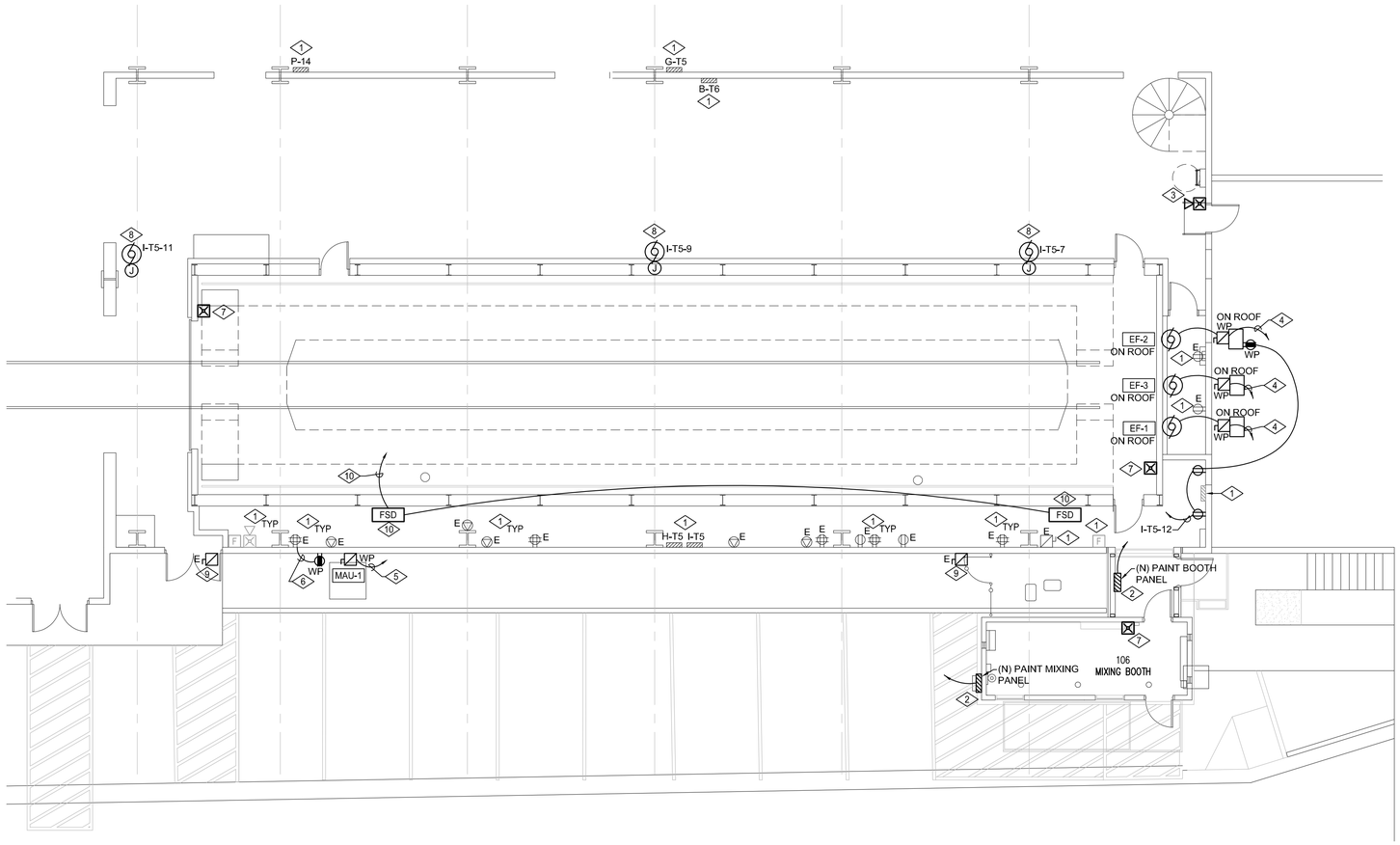
Scale:	1/8" = 1'-0"
CADD Filename:	ED101.DWG
Submittal Date	OCTOBER 5, 2020
UTA Contract No.:	SGR-358
Drawing No.:	
Sheet No.:	ED101

REFERENCE NOTES:

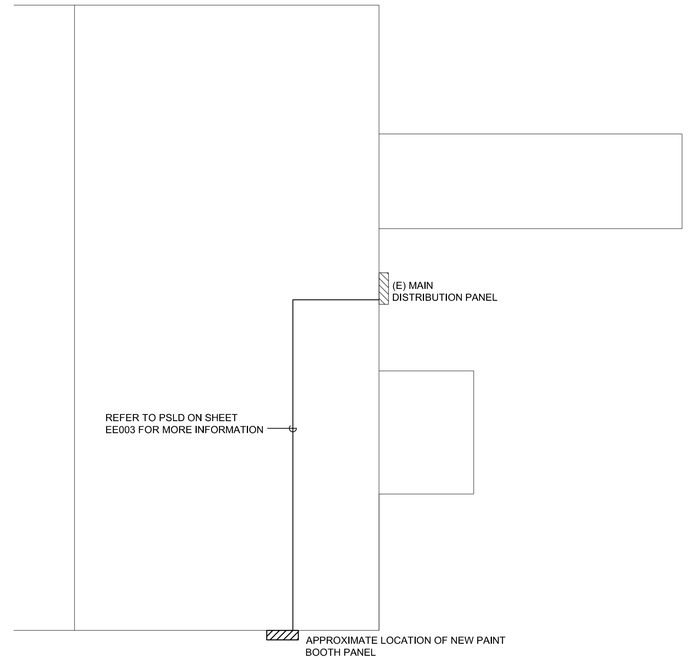
1. EXISTING PANEL, OUTLET, FIRE ALARM DEVICE, ETC, SHALL REMAIN. MAINTAIN CIRCUIT INTEGRITY.
2. NEW PAINT BOOTH PANEL BY OTHERS. REFER TO PSLD ON SHEET EE003 FOR MORE INFORMATION.
3. RELOCATE EXISTING FIRE ALARM DEVICE TO APPROXIMATE NEW LOCATION SHOWN. EXTEND CONDUIT AND CONDUCTORS TO NEW LOCATION.
4. TIE DISCONNECT TO STARTER IN PAINT BOOTH CONTROL PANEL. COORDINATE WORK WITH MECHANICAL.
5. ELECTRIC INTERLOCK CABLE TO RUN IN A SEPARATE CONDUIT TO VFD.
6. TIE NEW WEATHER PROOF OUTLET TO EXISTING OUTLET.
7. FURNISH AND INSTALL A NEW EXPLOSION PROOF FIRE ALARM DEVICE. TIE THE NEW DEVICES TO EXISTING CLASS "A" LOOP. IN AND OUT CABLES TO DEVICES MUST RUN IN SEPARATE CONDUIT. NEW DEVICES MUST BE COMPATIBLE WITH EXISTING SILENT KNIGHT FIRE ALARM CONTROL PANEL.
8. APPROXIMATE NEW LOCATION FOR GAS FIRED UNIT HEATERS. EXTEND EXISTING ASSOCIATED CONDUIT, CONDUCTORS, J-BOXES, ETC., TO NEW LOCATION. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT HEIGHT AND LOCATION.
9. EXISTING SWAMP COOLERS TO BE RELOCATED APPROXIMATELY 10 FEET ABOVE CURRENT LOCATION. DISCONNECT CAN REMAIN AT CURRENT LOCATION, EXTEND CONDUIT, CONDUCTORS, J-BOXES, ETC. TO NEW LOCATION. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT HEIGHT AND LOCATION.
10. TIE THE FIRE SMOKE DAMPERS TO THE NEAREST 120V EMERGENCY POWER CIRCUIT WITH AVAILABLE CAPACITY. TIE CIRCUIT THROUGH FIRE ALARM CONTROL PANEL. DAMPERS ARE TO CLOSE WHEN FIRE ALARM SYSTEM IN ON ALARM. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION.

SPECIAL NOTES:

1. ELECTRICAL EQUIPMENT SIZES AND LOCATIONS BASED ON MANUFACTURER RECOMMENDATIONS. VERIFY WORK WITH MANUFACTURER FOR EXACT REQUIREMENTS.
2. ALL NEW CONDUIT TO BE INSTALLED AGAINST THE DECK. DO NOT PENDANT HANG CONDUIT FROM DECK.



N FLOOR PLAN - POWER
SCALE: 1/8" = 1'-0"



N SITE PLAN - POWER
SCALE: 1" = 40'

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Submitted By: _____

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Approved By: _____

Designed By: B. LEWIS
Drawn By: B. LEWIS
Checked By: A. MATINKHAH
Approved By: A. MATINKHAH

UTAH TRANSIT AUTHORITY

NEW PAINT BOOTH AT WARM SPRINGS SERVICE CENTER

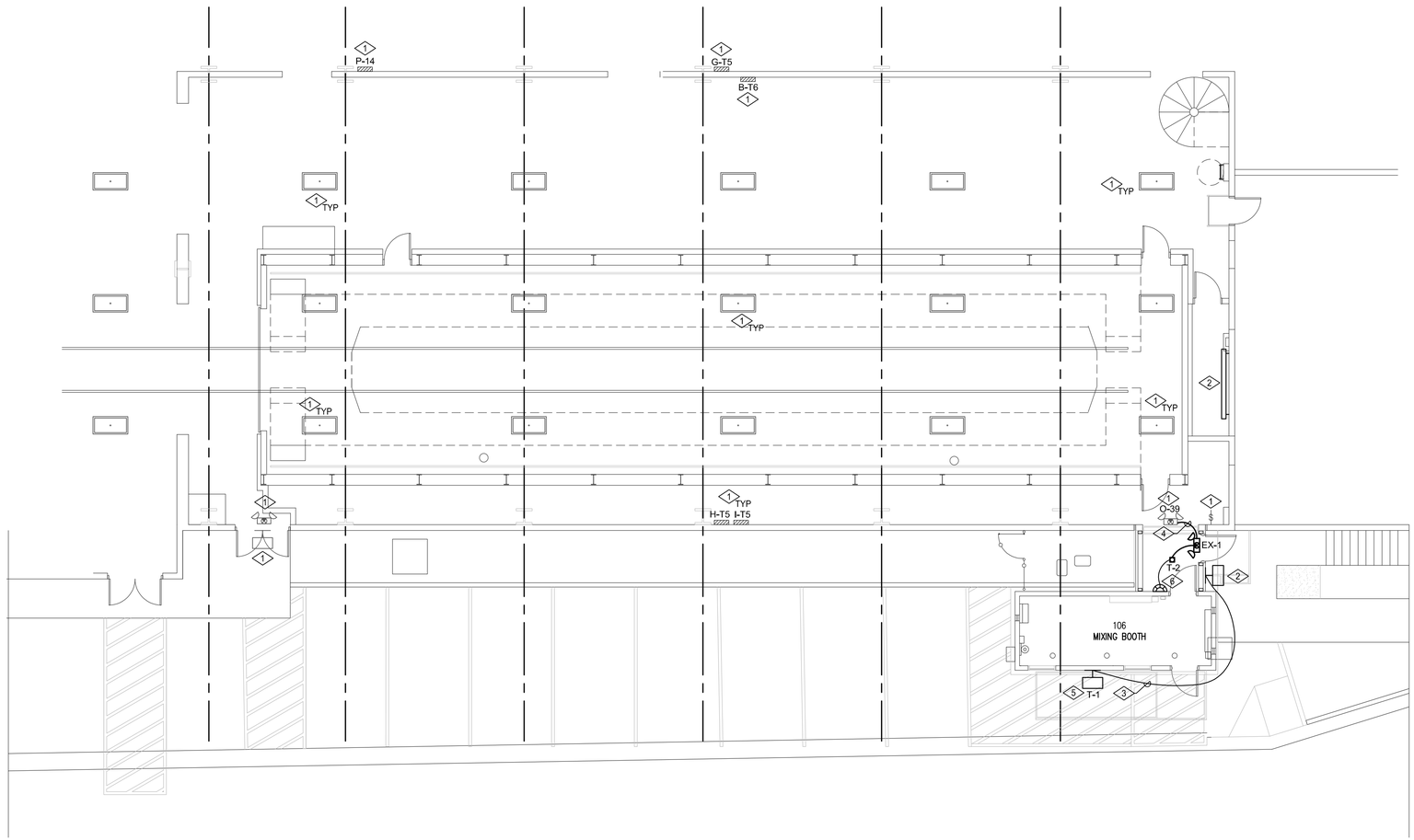
ADDRESS SALT LAKE CITY UT 84116

NEW FLOOR PLAN – POWER

Scale: AS SHOWN
CADD Filename: EE101.DWG
Submittal Date: OCTOBER 5, 2020
UTA Contract No.: SGR-358
Drawing No.:
Sheet No.: EE101

REFERENCE NOTES:

1. EXISTING PANELS, LIGHT FIXTURES, ETC, ARE TO REMAIN. MAINTAIN CIRCUIT INTEGRITY.
2. RELOCATE EXISTING WALL MOUNTED FIXTURE TO APPROXIMATE NEW LOCATION SHOW. EXTEND ASSOCIATED CONDUIT AND CONDUCTORS TO NEW LOCATION. COORDINATE WITH ARCHITECT FOR EXACT LOCATION AND HEIGHT.
3. TIE NEW T-1 LIGHT FIXTURE TO EXISTING LIGHTING CIRCUIT ASSOCIATED WITH THE RELOCATED LIGHT.
4. TIE NEW EXIT SIGN / EMERGENCY LIGHT TO EXISTING EMERGENCY LIGHTING CIRCUIT AS SHOWN.
5. COORDINATE EXACT HEIGHT AND LOCATION OF EXTERIOR LIGHT FIXTURE WITH ARCHITECT.
6. FURNISH AND INSTALL A WALL MOUNTED DUAL TECHNOLOGY MOTION SENSOR WITH AUTO-OFF SWITCH IN APPROXIMATE LOCATION SHOWN, TO CONTROL CAN LIGHT FIXTURE. WATTSTOPPER TYPE DW-100 OR APPROVED EQUAL.



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FLOOR PLAN - LIGHTING
SCALE: 1/8" = 1'-0"

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ECE Project No. 5618

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Submitted By: _____

UTA UTAH TRANSIT AUTHORITY

Approved By: _____

Designed By:	B. LEWIS
Drawn By:	B. LEWIS
Checked By:	A. MATINKHAH
Approved By:	A. MATINKHAH

UTAH TRANSIT AUTHORITY

NEW PAINT BOOTH AT WARM SPRINGS SERVICE CENTER

ADDRESS SALT LAKE CITY UT 84116

NEW FLOOR PLAN – LIGHTING

Scale:	1/8" = 1'-0"
CADD Filename:	EE102.DWG
Submittal Date	OCTOBER 5, 2020
UTA Contract No.:	SGR–358
Drawing No.:	
Sheet No.:	EE102