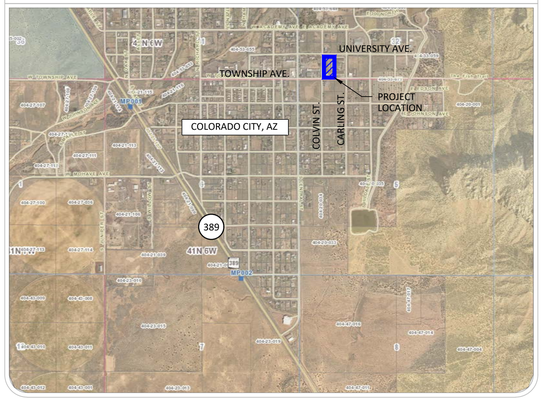
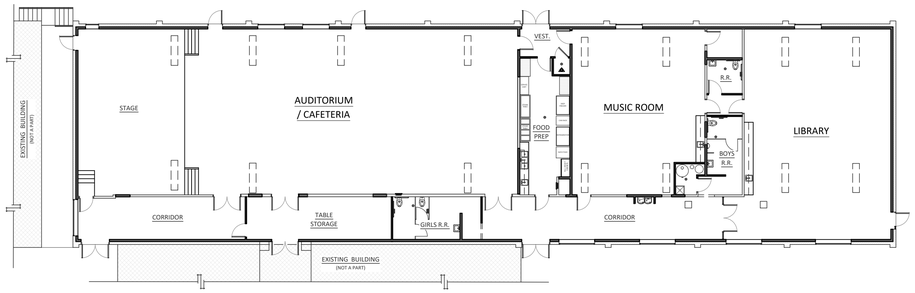
VICINITY MAP





FLOOR PLAN

NORTH AUDITORIUM REMODEL

COLORADO CITY UNIFIED SCHOOL DISTRICT #14

GENERAL NOTES

GENERAL PROJECT NOTES

1. ALL EXTERIOR AND INTERIOR DIMENSIONS ARE TO FACE OF STUD.
2. ALL DIAGONAL WALLS ARE AT A 45° ANGLE UNLESS NOTED OTHERWISE.
3. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL GENERAL NOTES AND REQUIREMENTS. ANY NOTES AND/OR REQUIREMENTS FROM STRUCTURAL ENGINEER SHALL GOVERN EXCEPT WHEN REQUIREMENTS SET FORTH IN THIS SPECIFICATION EXCEED ENGINEER'S REQUIREMENTS.

GENERAL SITE NOTES

1. ALL FINISH GRADING TO SLOPE AWAY FROM BUILDING. SEE CIVIL DRAWINGS.

GENERAL CONCRETE NOTES

1. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE ADOPTED BUILDING CODE, AS WELL AS LOCAL ORDINANCES.
2. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO POURING CONCRETE.
3. CONTRACTOR SHALL COORDINATE WITH MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS PRIOR TO POURING CONCRETE. PROVIDE SLEEVES, BLOCK-OUTS, ETC. AS REQUIRED.
4. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
5. ALL EXTERIOR FOOTINGS SHALL BEAR 18" (MIN.) BELOW FINISH GRADE, UNLESS NOTED OTHERWISE.
6. TOP OF FOUNDATION WALL TO BE 8" (MIN.) ABOVE FINISH GRADE TYPICAL.
7. FOOTINGS, FOUNDATION, AND SLABS SHALL BE CONSTRUCTED ON PROPERLY PREPARED MATERIAL. SUB-BASE TO BE UNDISTURBED NATURAL SOILS OR ENGINEERED FILL.
8. PROVIDE 6" GRANULAR FILL UNDER ALL SLABS.
9. PROVIDE ISOLATION JOINTS AROUND COLUMNS, SPREAD FOOTINGS, CONTROL JOINTS, ETC. AS REQUIRED.
10. HOLD DOWNS SHALL BE POSITIONED AS INDICATED BY STRUCTURAL ENGINEER.
11. CONTRACTOR IS RESPONSIBLE FOR PROPER LOCATING AND PLACING OF ALL ANCHOR BOLTS, HOLD DOWNS, ANCHORS, STRAPS, ETC. INSTALL AS PER MANUFACTURERS RECOMMENDATIONS.

GENERAL MASONRY NOTES

1. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE ADOPTED BUILDING CODE, AS WELL AS LOCAL ORDINANCES.
2. SEE EXTERIOR FINISHES FOR FINISH TYPE AND COLOR OF ALL C.M.U.
3. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL GENERAL MASONRY NOTES.

GENERAL METAL BUILDING NOTES

1. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE ADOPTED BUILDING CODE, AS WELL AS LOCAL ORDINANCES.
2. SEE EXTERIOR FINISHES FOR FINISH TYPE AND COLOR OF METAL BUILDING.
3. SEE METAL BUILDING PLANS FOR ADDITIONAL NOTES.
4. THE RIGID STRUCTURAL FRAME FOR THE BUILDING INDICATED SHALL BE A PRE-ENGINEERED METAL BUILDING. THE PRE-ENGINEERED STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE MBMA METAL BUILDING SYSTEM MANUAL AND THE 2018 IBC. THE CONTRACTOR SHALL FURNISH AND INSTALL A SINGLE STORY, PRE-ENGINEERED METAL BUILDING OF THE LENGTH, WIDTH, EAVE HEIGHT, AND ROOF PITCH INDICATED IN THESE DRAWINGS, WITH COLOR OF SKIN AND TRIM PER OWNER, CAPABLE OF WITHSTANDING SPECIFIED STRUCTURAL LOADS AND EXPOSURE TO WEATHER WITHOUT EXCESSIVE DEFLECTION, FAILURE, OR WATER INFILTRATION. THE WORK SHALL INCLUDE:
   A. EXTERIOR WALLS COVERED WITH FIELD-ASSEMBLED WALL PANELS ATTACHED TO FRAMING MEMBERS USING EXPOSED FASTENERS.
   B. ROOF SYSTEM WITH STANDING-SEAM ROOFING, FIBERGLASS INSULATION, AND VAPOR RETARDER.
   C. FRAMING AROUND OVERHEAD DOORS, MAN DOORS, WINDOWS, AND LOUVERS.
   D. EAVE GUTTERS AND DOWNSPOUTS.
   E. ALL TRIM, FLASHING, AND PANEL CLOSURES.

THE CONTRACTOR SHALL SUBMIT COMPLETE ERECTION DRAWINGS SHOWING ANCHOR BOLT SETTINGS, SIDEWALL, ENDWALL, AND ROOF FRAMING, TRANSVERSE CROSS SECTIONS, COVERING AND TRIM DETAILS, AND ACCESSORY INSTALLATION DETAILS TO CLEARLY INDICATE PROPER ASSEMBLY OF BUILDING COMPONENTS. THE FABRICATOR OF THE BUILDING SHALL SUBMIT A CERTIFICATE OF COMPLIANCE THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS TO THE ENGINEER AND BUILDING OFFICIAL.

GENERAL FRAMING NOTES

1. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE ADOPTED BUILDING CODE, AS WELL AS LOCAL ORDINANCES.
2. COORDINATE ALL FLOOR FRAMING WITH FLOOR PLANS TO VERIFY STEPS AND / OR OPENINGS IN FLOOR FRAMING.
3. CONTRACTOR TO CONSULT STRUCTURAL CALCULATIONS TO VERIFY ALL FRAMING MEMBER SIZES, LOCATIONS, LOAD PATHS, AND ADDITIONAL STRUCTURAL MEMBER REQUIREMENTS.
4. ALL DIMENSIONS AND CONDITIONS TO BE VERIFIED BY BUILDER PRIOR TO ANY WORK.
5. FRAMING SHALL BE AS INDICATED IN STRUCTURAL DRAWINGS.
6. ALL INTERIOR BEARING WALLS TO BE WOOD STUDS AT 16" O.C. AS SHOWN, U.N.O. ALL INTERIOR NON-BEARING WALLS TO BE LIGHT GAUGE METAL STUDS @ 16" O.C. AS SHOWN. SEE STRUCTURAL DRAWINGS FOR SHEAR WALL REQUIREMENTS.
7. ALL LUMBER IN CONTACT WITH CONCRETE OR WITHIN 6" OF EARTH SHALL BE EITHER FOUNDATION REDWOOD MARKED BY THE REDWOOD INSPECTION SERVICE OR PRESSURE TREATED LUMBER.
8. ALL CORNERS, INTERSECTIONS, AND BEAMS MUST HAVE ONE OF THE DOUBLE TOP PLATES CONTINUOUS, LAPPED AS PER CODE, OR STRAPPED WITH SIMPSON ST22.
9. COORDINATE SHEATHING REQUIREMENTS WITH SHEAR WALL SCHEDULES AND STRUCTURAL DRAWINGS.
10. ALL ROOF PITCHES TO BE AS NOTED ON ELEVATIONS AND SECTIONS.
11. ALL EAVES AS NOTED ON ELEVATIONS, SECTIONS, AND DETAILS. ALL FASCIA ELEVATIONS SHALL BE AS INDICATED ON ELEVATION DRAWINGS.
12. PREFABRICATED AND ENGINEERED TRUSSES ARE TO BE USED FOR THE ROOF UNLESS NOTED OTHERWISE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS. TRUSS MANUFACTURER SHALL DESIGN TRUSSES FOR ALL LOADS PER CURRENT I.B.C. INCLUDING UNBALANCED SNOW LOADS, SNOW DRIFTING, SNOW BUILD-UPS IN VALLEYS AND ON EAVES, ETC. TRUSSES TO BE DESIGNED TO CARRY POINT LOADS INDICATED IN FRAMING PLANS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE TRUSSES AS PER TRUSS MANUFACTURER'S RECOMMENDATIONS. NO PREFABRICATED TRUSS SHALL BE MODIFIED IN THE FIELD.
14. COMPLETELY SHEATH ROOF UNDER OVER-BUILD AREAS PRIOR TO FRAMING OVER-BUILD. FRAME OVER-BUILD AREAS SO AS TO AVOID POINT-LOADS ON ROOF.
15. TRUSS MANUFACTURER SHALL FIELD VERIFY ALL TRUSS REQUIREMENTS AND DIMENSIONS PRIOR TO FABRICATION.

GENERAL ENERGY EFFICIENCY NOTES

1. PROVIDE CONTINUOUS SILL SEALER UNDERNEATH BASE PLATE OF ALL EXTERIOR WALLS
2. SEAL AROUND ALL ELECTRICAL, PLUMBING, OR MECHANICAL PENETRATIONS AT EXTERIOR WALL AND IN CEILING / FLOOR OR CEILING / ROOF ASSEMBLIES.
3. CAULK AROUND ALL EXTERIOR DOOR AND WINDOW PENETRATIONS.
4. SEAL AND INSULATE AROUND ALL MECHANICAL DUCTS.

THERMAL & MOISTURE PROTECTION NOTES

1. ATTIC ACCESS TO BE INSULATED AND INCLUDE WEATHER STRIPPING FOR AIRTIGHT SEAL.
2. IN FRAMED WALLS, CORNERS AND HEADERS TO BE INSULATED. RIM JOISTS TO BE INSULATED AND INCLUDE AN AIR BARRIER.
3. SEAL BETWEEN WINDOW / DOOR JAMBS AND FRAMING.
4. DUCT SHAFTS, UTILITY PENETRATIONS, KNEE WALLS AND FLUE SHAFTS OPENING TO EXTERIOR OR UNCONDITIONED SPACE TO BE SEALED.
5. NARROW CAVITIES TO BE FILLED WITH SPRAYED / BLOWN INSULATION. SPRAYED / BLOWN INSULATION TO EXTEND BEHIND PIPING AND WIRING
6. SHOWERS AND TUBS ON EXTERIOR WALLS HAVE INSULATION AND AN AIR BARRIER SEPARATING THEM FROM THE EXTERIOR WALL..
7. ALL EXTERIOR WALLS TO BE INSULATED WITH R-19 INSULATION, MINIMUM.
8. PROVIDE VENTILATION OF ATTIC SPACES AS PER I.B.C. SEE ROOF PLAN FOR LOCATION AND TYPE OF ATTIC VENTING.
9. ALL ATTIC AREAS TO BE INSULATED WITH R-38 BATTS INSULATION, MINIMUM.
10. PROVIDE 30# ASPHALT SATURATED FELT OVER ALL ROOF SHEATHING, WHERE APPLICABLE.
11. PROVIDE CORROSION RESISTANT CONTINUOUS METAL DRIP-EDGE AT ROOF PERIMETER.

GENERAL WINDOW AND DOOR NOTES

1. SEE ELEVATIONS FOR ALL WINDOW HEADER HEIGHTS.
2. WINDOWS ARE 'JELD-WEN' BUILDER'S VINYL WITH HIGH-PERFORMANCE LOW-E INSULATED GLASS, OR AS SELECTED BY OWNER.
3. SEE EXTERIOR FINISHES FOR WINDOW AND DOOR FINISH AND TRIM COLORS.
4. OPENING FORCE REQUIRED FOR ALL DOORS ON THE ACCESSIBLE ROUTE OR CIRCULATION PATH SHALL BE LIMITED TO 5 LB.

GENERAL FINISH NOTES

1. COORDINATE CABINET DESIGN, CONSTRUCTION AND INSTALLATION WITH MECHANICAL AND ELECTRICAL CONTRACTORS. OWNER TO SELECT CABINET MANUFACTURER, STYLES, FINISHES, AND COLORS.
2. INTERIOR WALLS TO BE WRAPPED WITH 5/8" GYPSUM WALL BOARD, TAPED, FILLED, AND FINISHED AS PER OWNER. USE QUARTER-ROUND (BULLNOSE) CORNERS. SEE NOTES ON PLAN AND SECTIONS FOR LOCATION OF 5/8" TYPE 'X' GYPSUM BOARD FOR FIRE PARTITIONS.
3. OWNER TO SELECT ALL FINISH MATERIALS, COLORS, HARDWARE, FIXTURES, APPLIANCES, ETC. CONTRACTOR TO INSTALL AS PER OWNER.
4. OWNER TO SELECT CLOSET ORGANIZER SYSTEMS. COORDINATE CLOSET DESIGN WITH ELECTRICAL AS REQUIRED. CONTRACTOR TO INSTALL.
5. WALL-MOUNTED SWITCHES, OUTLETS, OTHER LIGHTING CONTROLS, ENVIRONMENTAL CONTROLS AND OTHER APPLIANCE AND FIXTURE CONTROLS SHALL BE MOUNTED NO LESS THAN 15" AND NO MORE THAN 48" ABOVE FINISH FLOOR. RECEPTACLE OUTLETS SERVING A DEDICATED USE ARE EXCEPTED.

STANDARD ABREVIATIONS

&	And
@	At
℄	Centerline
Ø	Diameter of Round
#	Pound or Number
(E)	Existing
(R)	Relocated
(N)	New
ADJ.	Adjustable
APPROX.	Approximate
ARCH.	Architectural
BD.	Board
BLDG.	Building
BLKG.	Blocking
BM.	Beam
BOT.	Bottom
CAB.	Cabinet
CEM.	Cement
CLG.	Ceiling
CLR.	Clear
COL.	Column
CONC.	Concrete
CONST.	Construction
CONT.	Continuous
CTR.	Center
DBL.	Double
DEPT.	Department
DET.	Detail
DIA.	Diameter
DIM.	Dimension
DWG.	Drawing
E.	East
EA.	Each
E.J.	Expansion Joint
EL.	Elevation
ELEC.	Electrical
EQ.	Equal
EQUIP.	Equipment
EXST.	Existing
EXP.	Expansion
EXT.	Exterior
FDN.	Foundation
FIN.	Finish
FL.	Floor
FLUOR.	Fluorescent
F.O.C.	Face of Concrete
F.O.S.	Face of Studs
F.R.P.	Fiberglass Reinforced Plastic
FTG.	Footing
FUT.	Future
GALV.	Galvanized
GSM.	Galvanized Sheet Metal
GYP.	Gypsum
GYP. BD.	Gypsum Board
H.B.	Hose Bibb
HDWD.	Hardwood
HDWE.	Hardware
HORIZ.	Horizontal
HR.	Hour
HGT.	Height
I.D.	Inside Diameter
INSUL.	Insulation
INT.	Interior
JT.	Joint
KIT.	Kitchen
LAM.	Laminate
LAV.	Lavatory
LT.	Light
MAX.	Maximum
MECH.	Mechanical
MEMB.	Membrane
MET.	Metal
MFR.	Manufacturer
MIN.	Minimum
MISC.	Miscellaneous
N.	North
NO. OR #	Number
NOM.	Nominal
N.T.S.	Not to Scale
O.C.	On Center
O.D.	Outside Diameter
OFF.	Office
OPNG.	Opening
OPP.	Opposite
PL.	Plate
PLAS.	Plaster
PLYWD.	Plywood
PR.	Pair
PT.	Point
Q.T.	Quarry Tile
R or RAD.	Radius
R.D.	Roof Drain
REF.	Reference
REFR.	Refrigerator
REINF.	Reinforced
REQ.	Required
RESIL.	Resilient
RM.	Room
R.O.	Rough Opening
RWD.	Redwood
SCHED.	Schedule
SCHEM.	Schematic
S.D.	Soap Dispenser
SECT.	Section
SHT.	Sheet
SIM.	Similar
SPEC.	Specification
SQ.	Square
S.S.	Stainless Steel
STD.	Standard
STOR.	Storage
STRL.	Structural
SYM.	Symmetrical
T.B.S.	To Be Specified
TEL.	Telephone
T.& G.	Tongue & Groove
THK.	Thick
T.P.D.	Toilet Paper Dispenser
T.V.	Television
T.W.	Top of Wall
TYP.	Typical
UNF.	Unfinished
U.N.O.	Unless Noted Otherwise
VERT.	Vertical
V.T.R.	Vent Thru Roof
W.	West
W/	With
W.C.	Water Closet
WD.	Wood
W/O	Without
WP.	Waterproof
WSCT.	Wainscot
WT.	Weight

SHEET INDEX

COORDINATION SET
FOR REVIEW ONLY
NOT FOR CONSTRUCTION

DEFERRED SUBMITTALS:

THE CONTRACTOR SHALL SUBMIT THE FOLLOWING DOCUMENTS TO THE ARCHITECT AND ENGINEER OF RECORD FOR REVIEW AND APPROVAL AFTER THEY HAVE BEEN ENGINEERED BY OTHERS. WHEN ALLOWED BY THE BUILDING DEPARTMENT, THE DOCUMENTS MAY BE SUBMITTED AFTER THE BUILDING PERMIT IS ISSUED. THE DOCUMENTS MUST BE SUBMITTED AND RECEIVED BACK AS APPROVED PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION OF THE COMPONENTS.

1. FIRE SPRINKLER SYSTEM
2. FIRE ALARM SYSTEM
3. PRE-FABRICATED WINDOW AND DOOR PRODUCTS

OTHER NON-STRUCTURAL ELEMENTS NOT LISTED HERE BUT DEEMED NECESSARY BY THE BUILDING OFFICIAL SHALL BE SUBMITTED.

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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

PROJECT NO: 22-003-16
CAD DWG. FILE: 22-003-16 1 COVER Arch.dwg
DRAWN BY: TCT
DESIGNED BY: TCT
FIELD CREW:
CHECKED BY:
DATE: 6-13-22

SHEET TITLE:
COVER SHEET

A1.0

CAMPUS VICINITY MAP

SCALE: 1" = 30'

30 0 30

SCALE IN FEET

N

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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

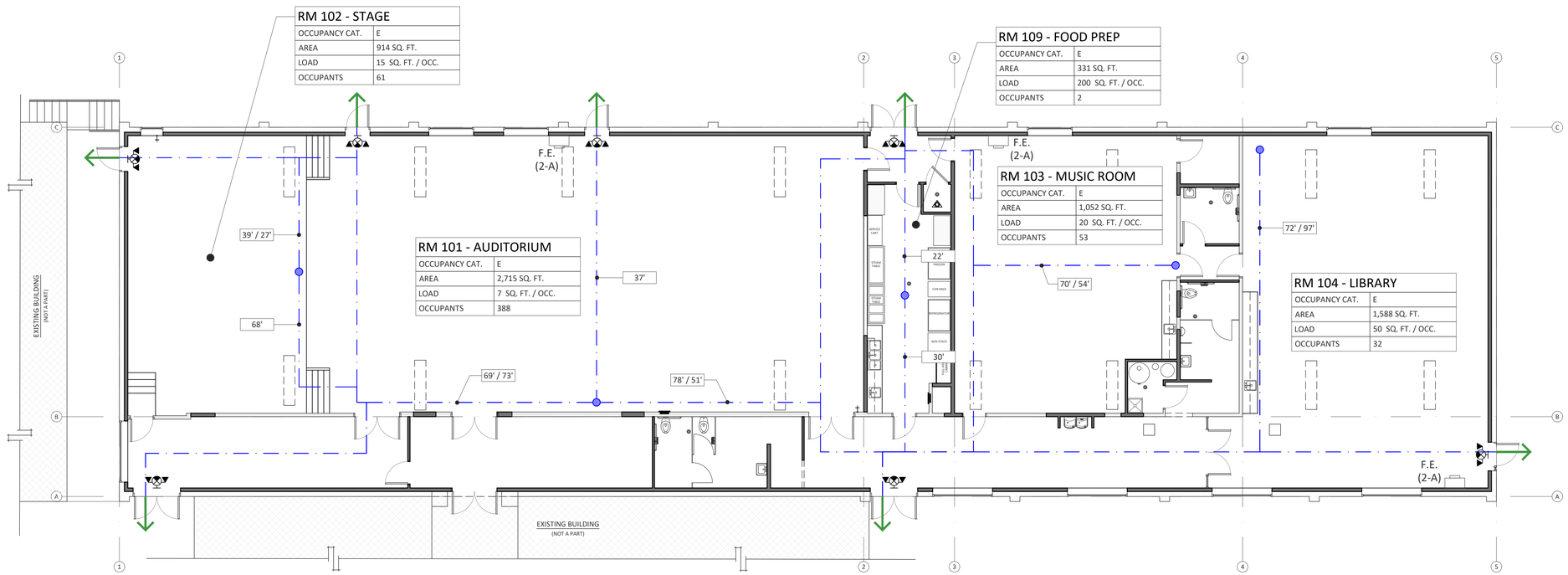
REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO: 19-003-16
CAD DWG. FILE: 21-003-16.4_Campus Map.dwg
DRAWN BY: TCT
DESIGNED BY: TCT
FIELD CREW:
CHECKED BY:
DATE: 4-26-22

SHEET TITLE:
CAMPUS VICINITY MAP

A1.1
SHEET: 1 OF 1



EXITING PLAN

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

CODE SUMMARY

1. BUILDING OVERVIEW:

   THIS BUILDING IS EXISTING WITH A PROPOSED REMODEL WITH THE INTENT TO BE USED FOR EDUCATIONAL PURPOSES. THE BUILDING LAYOUT CONSISTS OF AN AUDITORIUM / CAFETERIA, A MUSIC ROOM, AND A LIBRARY, ALONG WITH RESTROOMS, CORRIDORS, FOOD PREP, AND ACCESSORY STORAGE AND CUSTODIAN AREAS. THE EXISTING BUILDING CONSTRUCTION IS MASONRY EXTERIOR BEARING WALLS WITH A WOOD ATTIC TRUSS ROOF SYSTEM. IT IS PROPOSED TO INSTALL WOOD FRAME BEARING WALLS / SHEAR WALLS AS A STRUCTURAL RETROFIT. THE REMODEL INCORPORATES NEW CONVENTIONAL LIGHT-FRAME WOOD WALLS, GYPSUM BOARD, NEW DOORS, AND NEW VINYL WINDOWS.

2. BUILDING CODES & REGULATIONS:

   2018 INTERNATIONAL BUILDING CODE (IBC)
   2018 INTERNATIONAL PLUMBING (IPC)
   2018 INTERNATIONAL FIRE CODE (IFC)
   2018 INTERNATIONAL MECHANICAL CODE
   2017 NATIONAL ELECTRICAL CODE (NEC)

3. BUILDING DATA:

   TYPE OF CONSTRUCTION: V-B

   NUMBER OF STORIES 1 STORY

4. OCCUPANCY CLASSIFICATION:
   EDUCATIONAL GROUP OCCUPANCY: E

5. ALLOWABLE AREA & HEIGHT:
   ALLOWABLE INCREASE FOR FRONTAGE: 25%
   EDUCATIONAL (E) ALLOWABLE AREA PER FLOOR: 38,000 SQ. FT.
   ALLOWABLE BUILDING HEIGHT: 60 FT.
   ALLOWABLE NO. OF STORIES: 2 STORY

6. ACTUAL AREA & HEIGHT:

   EDUCATIONAL (E): 9,091 SQ. FT.

   TOTAL: 9,091 SQ. FT. / (1.25*38,000 SQ. FT.) = 0.19 < 1.0

   BUILDING HEIGHT: ~21'-6"

7. OCCUPANT LOAD:

   EDUCATIONAL (E): 536 OCCUPANTS

8. FIRE PROTECTION REQUIREMENTS:

   AN AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED THROUGHOUT ALL BUILDINGS CONTAINING A GROUP E OCCUPANCY WHERE A GROUP E FIRE AREA HAS AN OCCUPANT LOAD OF 300 OR MORE. (903.2.3); AUTOMATIC FIRE SPRINKLER SYSTEM BY OTHERS.

9. FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS:

   NO RATING REQUIRED FOR TYPE V-B CONSTRUCTION

10. FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE:
    GROUP E, V-B
    < 5' 1 HOUR
    >= 5', < 10' 1 HOUR
    >= 10', < 30' NO RATING
    >= 30' NO RATING
    NO RATING IS REQUIRED;

11. OCCUPANCY SEPARATIONS:
    BUILDING IS CONSIDERED AS NONSEPARATED OCCUPANCIES (508.3).

12. EXIT ACCESS TRAVEL DISTANCE:
    MAXIMUM ALLOWED: 250'

13. RESTROOM FACILITIES:
    RESTROOM FACILITIES IN OTHER BUILDINGS ON CAMPUS ARE AVAILABLE FOR USE BY OCCUPANTS OF THE NORTH AUDITORIUM;

LINE & SYMBOLS LEGEND

- F.E. — PORTABLE FIRE EXTINGUISHER (RATING) 75' MAXIMUM DISTANCE OF TRAVEL TO EXTINGUISHER
- EXIT / DIRECTION OF EXIT
- EXIT SIGN W/ BATTERY POWERED EMERGENCY LIGHTING
- FIRE WALL / OCCUPANCY SEPARATION
- EXIT ACCESS TRAVEL PATH

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FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION

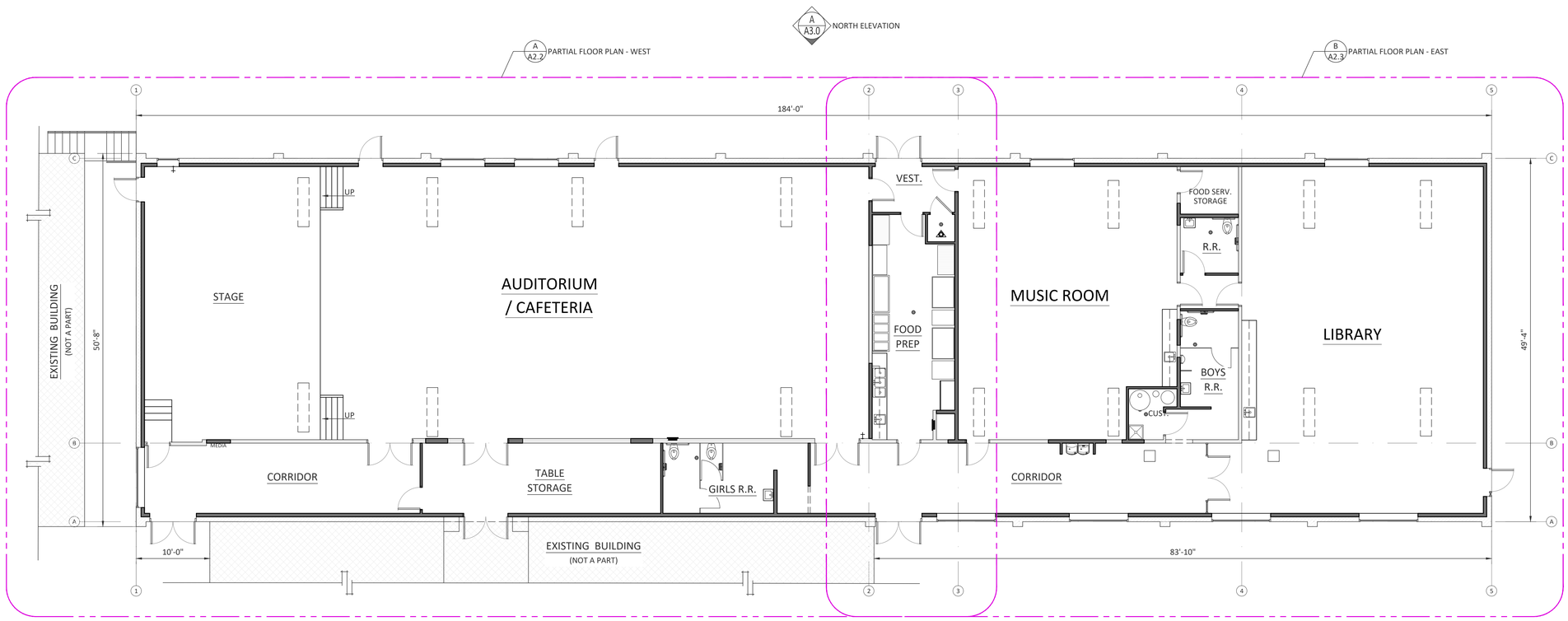
PROJECT NO: 22-003-16
CAD DWG. FILE: 22-003-16 [CO.SD] N Aud_Arch.dwg
DRAWN BY: TCT
DESIGNED BY: TCT
FIELD CREW:
CHECKED BY:
DATE: 6-13-22

SHEET TITLE:
EXITING PLAN & CODE ANALYSIS

A1.2

GENERAL NOTES

1. ALL DIMENSION ARE TO FACE OF STUD OR CONCRETE, OUTSIDE OF GIRT, OR TO JAMB OF WINDOW & DOOR OPENINGS, U.N.O.
2. ALL INSULATION USED IN EXTERIOR WALLS TO BE BATTS, UNLESS NOTED OTHERWISE. SEE CROSS SECTIONS FOR INSULATION RATINGS.
3. COLOR OF ALL FINISH MATERIALS TO BE SELECTED BY OWNER, U.N.O.
4. SEE SHEET A2.9 FOR WALL TYPE LEGEND
5. SEE SHEET A2.8 FOR DOOR & WINDOW SCHEDULE.



FLOOR PLAN - OVERALL

SCALE: 1/8" = 1'

COORDINATION SET
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LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO:	22-003-16
CAD DWG. FILE:	22-003-16 1_CCUSD N Aud_Arch.dwg
DRAWN BY:	TCT
DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
DATE:	6-13-22

SHEET TITLE:
FLOOR PLAN OVERALL

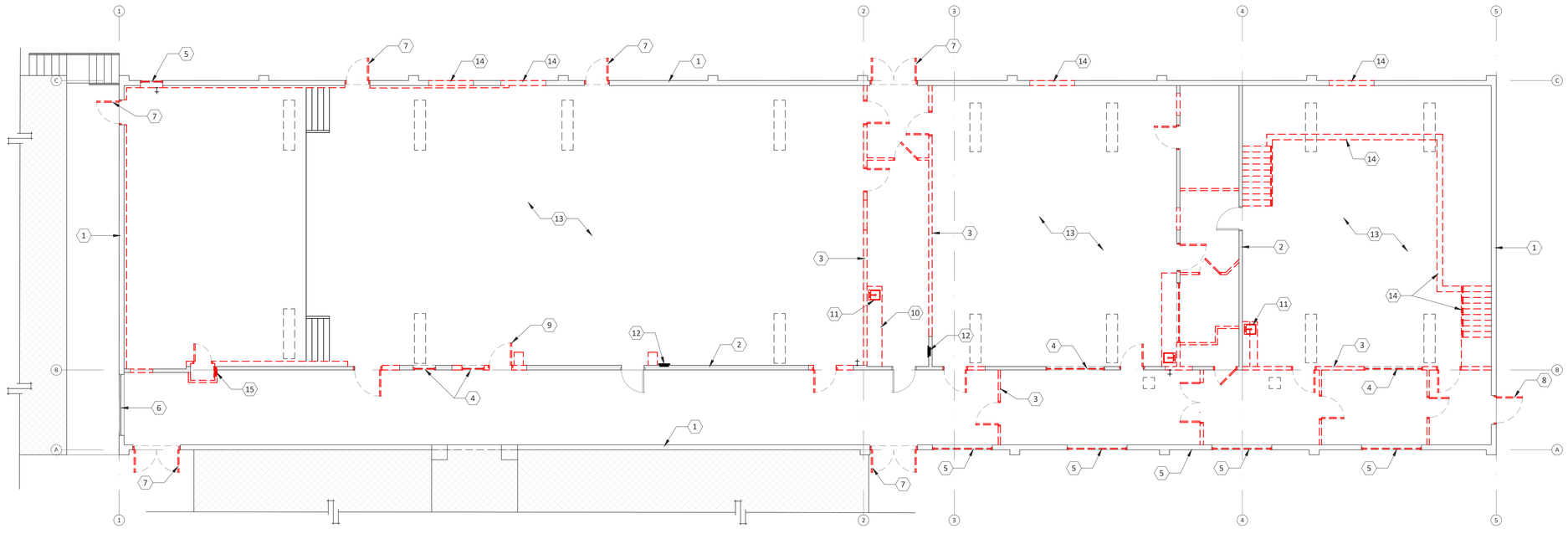
A2.0

DEMOLITION FLOOR PLAN KEY NOTE LEGEND

1. EXISTING CMU WALL, TO REMAIN
2. EXISTING FRAME WALL, TO REMAIN
3. EXISTING FRAME WALL TO BE REMOVED; CONTRACTOR TO VERIFY EXISTING WALL IS NOT BEARING;
4. EXISTING WINDOW TO BE REMOVED;
5. EXISTING WINDOW TO BE REMOVED & REPLACED, PER PLAN
6. EXISTING WINDOW TO REMAIN (PROTECT)
7. EXISTING DOOR PANEL TO BE REMOVED & REPLACED PER PLAN; PROTECT EXISTING FRAME;
8. EXISTING DOOR & FRAME TO BE REMOVED & REPLACED, PER PLAN;
9. EXISTING DOOR & FRAME TO BE REMOVED, TYP.
10. EXISTING CABINETRY TO BE REMOVED, TYP.
11. EXISTING SINK TO BE REMOVED; TERMINATE / REMOVE PLUMBING PER CODE;
12. EXISTING ELECTRICAL PANEL; REPLACE PER ELECTRICAL PLAN.
13. EXISTING CONCRETE SLAB. SAW-CUT & REMOVE EXISTING CONCRETE SLAB WHERE INDICATED ON STRUCTURAL DRAWINGS AND AS REQUIRED TO INSTALL NEW PLUMBING FACILITIES.
14. SAW-CUT THROUGH EXISTING C.M.U. WALL; SEE STRUCTURAL; SEE WINDOW SCHEDULE; DO NOT CUT THROUGH EXISTING GROUTED CMU CELLS; TYP.
15. EXISTING ELECTRICAL SUB-PANEL TO BE RELOCATED PER ELECTRICAL PLAN.

DEMOLITION NOTES

1. DEMOLITION INCLUDES THE REMOVAL OF BUILDING NON-STRUCTURAL AND UTILITY ITEMS AND OFF-SITE DISPOSAL.
2. ALL DEMOLITION ITEMS MAY NOT BE SPECIFIED ON PLAN. IT IS THE CONTRACTORS RESPONSIBILITY TO IDENTIFY AND REMOVE ALL INFRASTRUCTURE REQUIRED TO COMPLETE THE BUILDING PROJECT.
3. COORDINATE AND REVIEW ALL DEMOLITION ITEMS WITH OWNER / ENGINEER, AND WITH ANY REPRESENTATIVES OF ANY UTILITY IN THE WORK ZONE.
4. CONTRACTOR SHALL BACKFILL ALL DEPRESSIONS REMAINING DUE TO DEMOLITION WORK.
5. LOCATE AND PRESERVE ALL ACTIVE UTILITIES WHICH ARE TO REMAIN IN SERVICE.
6. SALVAGE DESIGNATED EQUIPMENT AND MATERIALS FOR OWNER. ALL OTHER MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS SUCH MATERIAL IS NOT OWNED BY OWNER.



DEMOLITION FLOOR PLAN

SCALE: 1/8" = 1'

COORDINATION SET
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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO:	22-003-16
CAD DWG. FILE:	22-003-16 [ ] COLSD N Aud_Arch.dwg
DRAWN BY:	TCT
DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
DATE:	6-13-22

SHEET TITLE:
DEMOLITION FLOOR PLAN

A2.1

WALL TYPE LEGEND

W- — EXISTING WALL, PER SCHEDULE (FIELD VERIFY)

W- — PROPOSED WALL, PER SCHEDULE

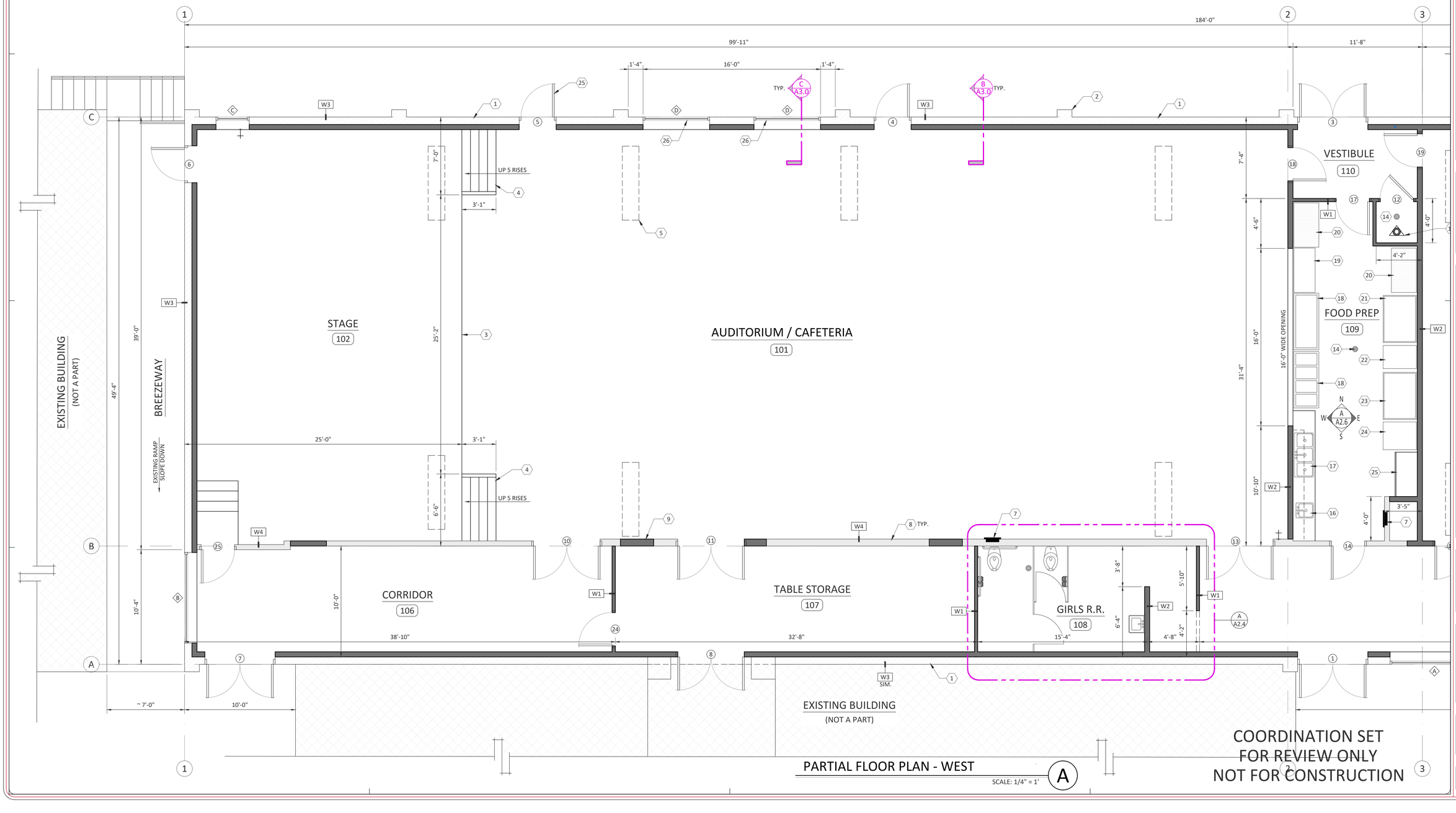
NOTE: SEE WALL TYPE SCHEDULE ON SHEET A2.9 FOR WALL CONSTRUCTION DETAILS

FLOOR PLAN KEY NOTE LEGEND

1. EXISTING 8" C.M.U. WALL
2. EXISTING 16" X 16" C.M.U. PILASTER
3. EXISTING STAGE FRONT - 29" ABOVE FINISH FLOOR
4. EXISTING STAIRS
5. EXISTING SKYLIGHT - REPAIR / REPLACE PER OWNER AND REPAIR AREAS DAMAGED BY WATER.
6. EXISTING ATTIC ACCESS - VERIFY MINIMUM 30" X 22"
7. EXISTING ELECTRICAL PANEL
8. EXISTING WALL, TYPICAL
9. FILL-IN WALL FRAMING W/ STUDS @ 16" O.C.; MATCH EX. STUDY SIZE, TYP.
10. FIRE RISER; PER PLUMBING PLAN
11. EXISTING WINDOW TO BE REPLACED, PER SCHEDULE
12. MOP SINK WITH MOP HOLDER
13. WATER HEATER, PER PLUMBING PLAN
14. FLOOR DRAIN, PER PLUMBING PLAN
15. HIGH AND LOW WALL-MOUNTED DRINKING FOUNTAINS COMPLIANT WITH ADA ACCESSIBILITY GUIDELINES.
16. SINGLE-COMPARTMENT DECK MOUNTED RECESSED SINK.
17. TRIPLE-COMPARTMENT DECK MOUNTED RECESSED SINK.
18. STEAM TABLE, PER OWNER
19. SERVICE CART, PER OWNER
20. METAL WIRE STORAGE RACK, PER OWNER
21. DEEP FREEZER, PER OWNER
22. CAN RACK, PER OWNER
23. REFRIGERATOR, PER OWNER
24. W/D STACK, PER OWNER
25. EXISTING DOOR; REPLACE DOOR PANEL PER SCHEDULE, TYP.
26. NEW WINDOW; SAW-CUT THROUGH EXISTING C.M.U. WALL; SEE STRUCTURAL; SEE WINDOW SCHEDULE; DO NOT CUT THROUGH EXISTING GROUTED CMU CELLS; TYP.
27. NEW ALUM. STOREFRONT DOOR SYSTEM, PER SCHEDULE
28. WATER SOFTENER & BRINE TANK PER PLUMBING PLAN

GENERAL NOTES

1. ALL DIMENSION ARE TO FACE OF STUD OR CONCRETE, OUTSIDE OF GIRT, OR TO JAMB OF WINDOW & DOOR OPENINGS, U.N.O.
2. ALL INSULATION USED IN EXTERIOR WALLS TO BE BATTS, UNLESS NOTED OTHERWISE. SEE CROSS SECTIONS FOR INSULATION RATINGS.
3. COLOR OF ALL FINISH MATERIALS TO BE SELECTED BY OWNER, U.N.O.
4. SEE SHEET A2.9 FOR WALL TYPE LEGEND
5. SEE SHEET A2.8 FOR DOOR & WINDOW SCHEDULE.



PARTIAL FLOOR PLAN - WEST

SCALE: 1/4" = 1'

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CAD DWG. FILE:	22-003-16 1 CO-003 N Aud_Arch.dwg
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DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
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SHEET TITLE:
PARTIAL FLOOR PLAN WEST

A2.2

WALL TYPE LEGEND

W-

EXISTING WALL, PER SCHEDULE (FIELD VERIFY)

W-

PROPOSED WALL, PER SCHEDULE

NOTE: SEE WALL TYPE SCHEDULE ON SHEET A2.9 FOR WALL CONSTRUCTION DETAILS

FLOOR PLAN KEY NOTE LEGEND

1. EXISTING 8" C.M.U. WALL
2. EXISTING 16" X 16" C.M.U. PILASTER
3. EXISTING STAGE FRONT - 29" ABOVE FINISH FLOOR
4. EXISTING STAIRS
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6. EXISTING ATTIC ACCESS - VERIFY MINIMUM 30" X 22"
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8. EXISTING WALL, TYPICAL
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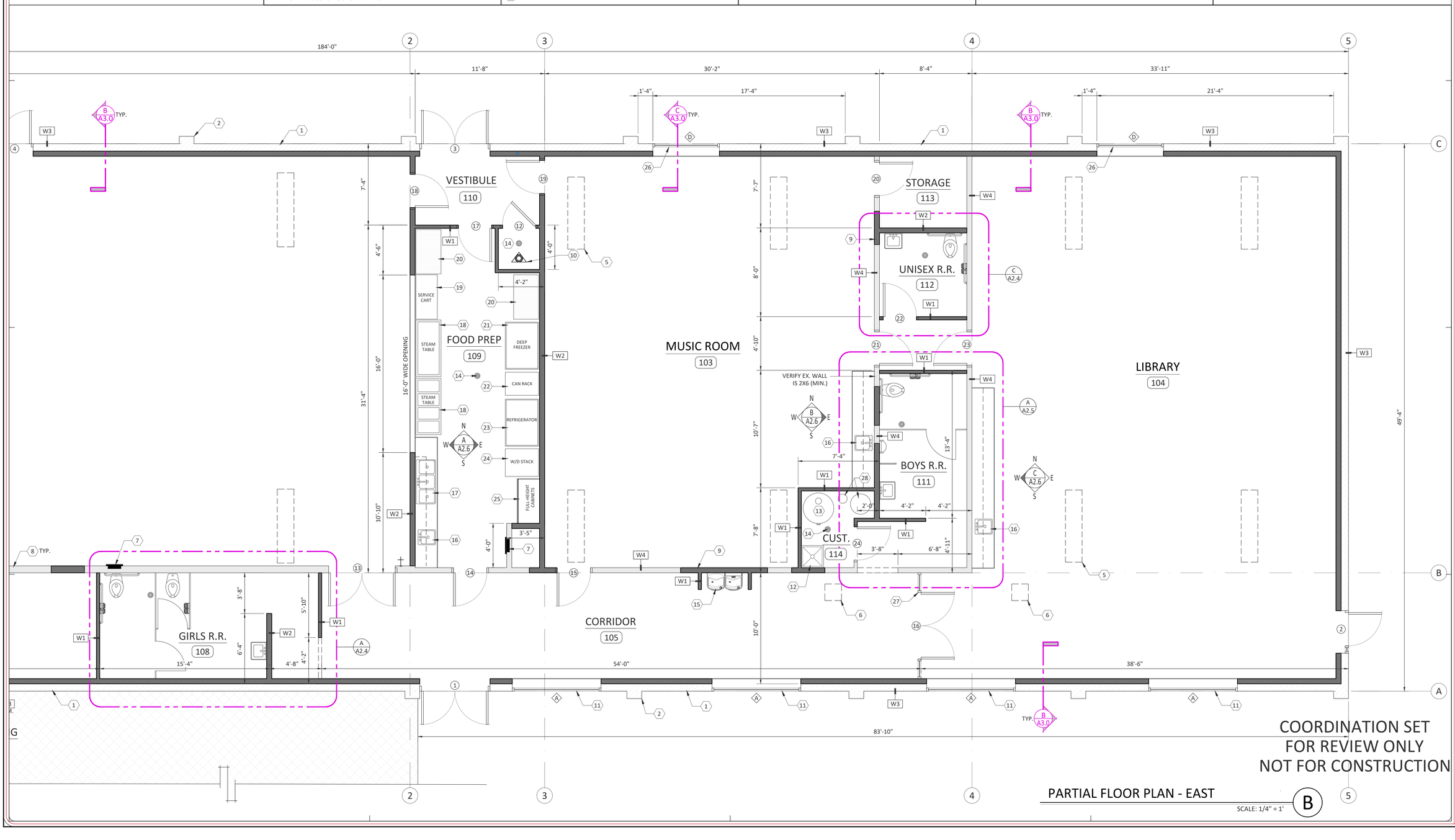
21. DEEP FREEZER, PER OWNER
22. CAN RACK, PER OWNER
23. REFRIGERATOR, PER OWNER
24. W/D STACK, PER OWNER
25. EXISTING DOOR; REPLACE DOOR PANEL PER SCHEDULE, TYP.
26. NEW WINDOW; SAW-CUT THROUGH EXISTING C.M.U. WALL; SEE STRUCTURAL; SEE WINDOW SCHEDULE; DO NOT CUT THROUGH EXISTING GROUTED CMU CELLS; TYP.
27. NEW ALUM. STOREFRONT DOOR SYSTEM, PER SCHEDULE
28. WATER SOFTENER & BRINE TANK PER PLUMBING PLAN

GENERAL NOTES

1. ALL DIMENSION ARE TO FACE OF STUD OR CONCRETE, OUTSIDE OF GIRT, OR TO JAMB OF WINDOW & DOOR OPENINGS, U.N.O.
2. ALL INSULATION USED IN EXTERIOR WALLS TO BE BATTS, UNLESS NOTED OTHERWISE. SEE CROSS SECTIONS FOR INSULATION RATINGS.
3. COLOR OF ALL FINISH MATERIALS TO BE SELECTED BY OWNER, U.N.O.
4. SEE SHEET A2.9 FOR WALL TYPE SCHEDULE
5. SEE SHEET A2.8 FOR DOOR & WINDOW SCHEDULE.



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PARTIAL FLOOR PLAN - EAST

SCALE: 1/4" = 1'

B

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DESIGNED BY:	TCT
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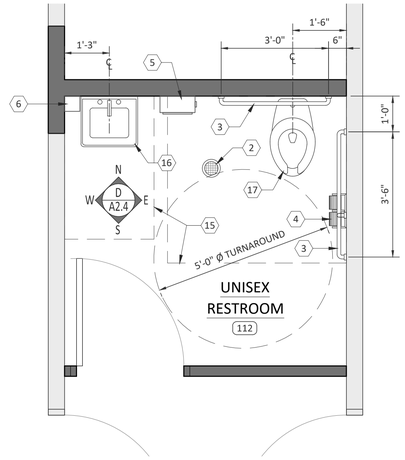
DATE:	6-13-22

SHEET TITLE:
PARTIAL FLOOR PLAN EAST

A2.3

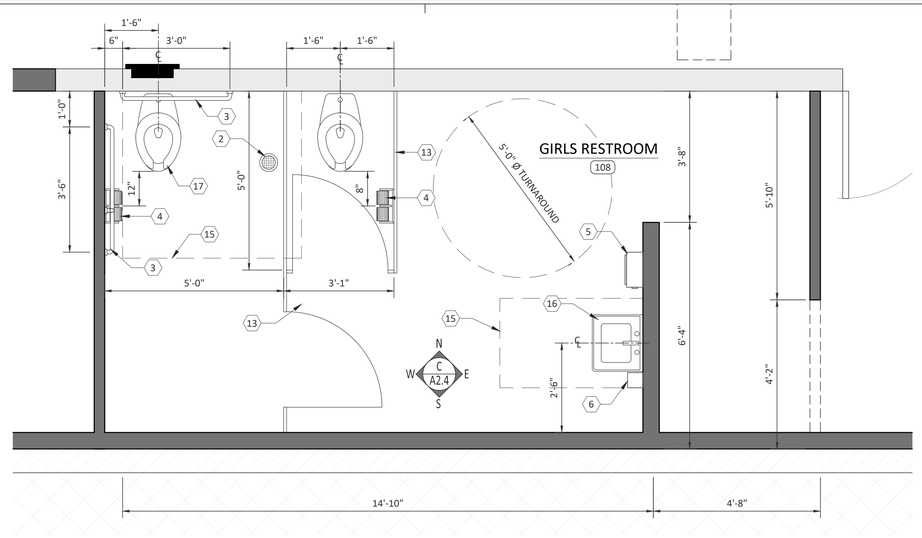
ENLARGED RESTROOM FLOOR PLAN & ELEVATIONS KEY NOTES

1. CERAMIC TILE FLOOR FINISH
2. FLOOR DRAIN, PER PLUMBING DRAWINGS
3. GRAB BAR; PROVIDE BACKING IN FRAME WALL, TYP.
4. TOILET PAPER DISPENSER
5. PAPER TOWEL DISPENSER
6. SOAP DISPENSER
7. 30" X 36" WALL MOUNTED MIRROR
8. PAINTED GYPSUM BOARD CEILING
9. PAINTED GYPSUM BOARD WALL
10. 84" CERAMIC TILE WAINSCOT WALL FINISH W/ CMT BASE
11. DOOR, PER PLAN
12. FRAMED SOFFIT W/ PAINTED GYPSUM BOARD FINISH
13. TOILET COMPARTMENT PARTITION
14. URINAL SCREEN PARTITION
15. CLEAR FLOOR SPACE
16. LAVATORY
17. WATER CLOSET
18. URINAL



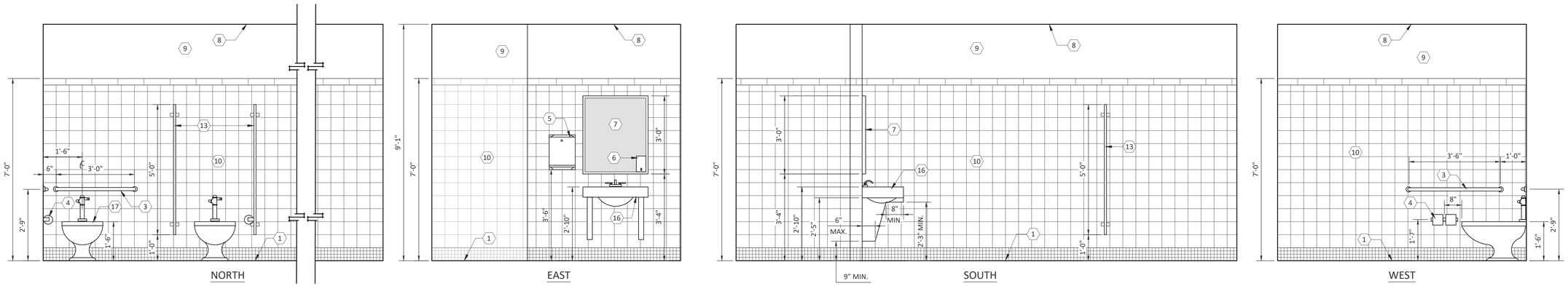
112 - UNISEX RESTROOM ENLARGED PLAN (B)

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



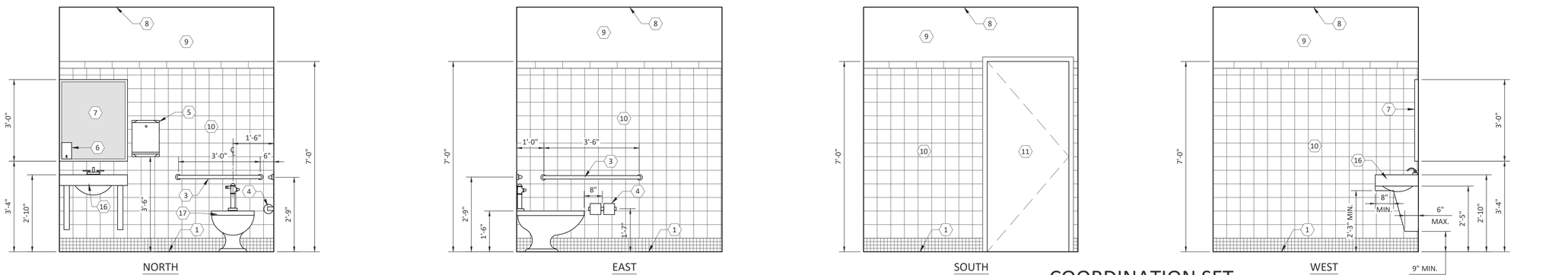
108 - GIRLS RESTROOM ENLARGED PLAN (A)

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



108 - GIRLS RESTROOM ELEVATIONS (C)

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



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112 - RESTROOM ELEVATIONS (D)

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

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CHECKED BY:	
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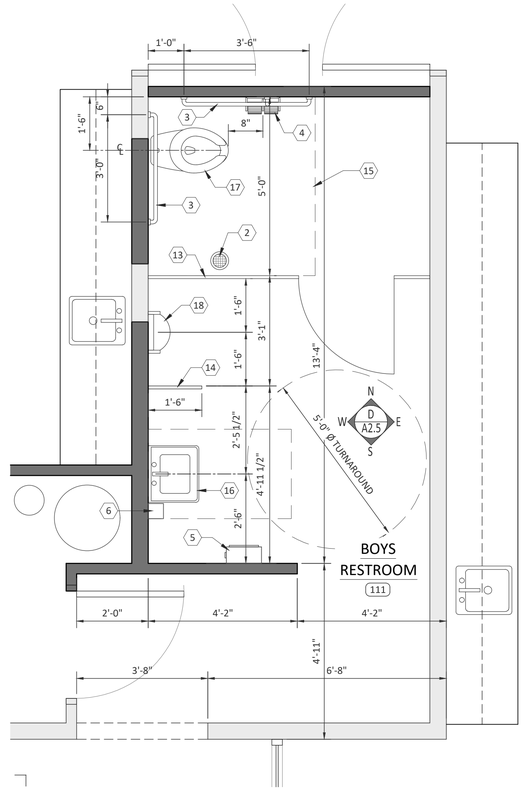
SHEET TITLE:
ENLARGED FLOOR PLANS

A2.4

ENLARGED RESTROOM FLOOR PLAN & ELEVATIONS KEY NOTES

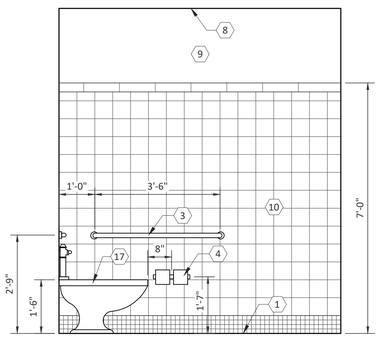
1. CERAMIC TILE FLOOR FINISH
2. FLOOR DRAIN, PER PLUMBING DRAWINGS
3. GRAB BAR; PROVIDE BACKING IN FRAME WALL, TYP.
4. TOILET PAPER DISPENSER
5. PAPER TOWEL DISPENSER
6. SOAP DISPENSER
7. 30" X 36" WALL MOUNTED MIRROR
8. PAINTED GYPSUM BOARD CEILING
9. PAINTED GYPSUM BOARD WALL
10. 84" CERAMIC TILE WAINSCOT WALL FINISH W/ CMT BASE
11. DOOR, PER PLAN
12. FRAMED SOFFIT W/ PAINTED GYPSUM BOARD FINISH
13. TOILET COMPARTMENT PARTITION
14. URINAL SCREEN PARTITION
15. CLEAR FLOOR SPACE
16. LAVATORY
17. WATER CLOSET
18. URINAL



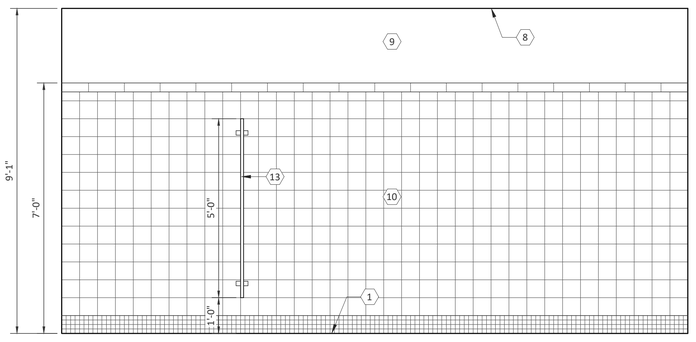
111 - BOYS RESTROOM ENLARGED PLAN

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

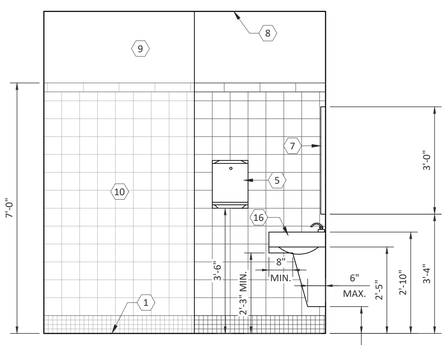
A



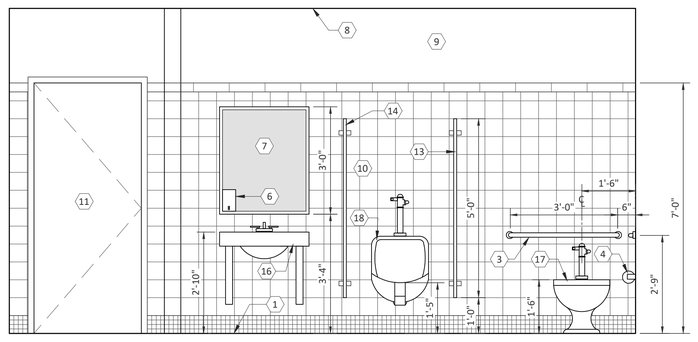
NORTH



EAST



SOUTH



WEST

COORDINATION SET
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111 - BOYS RESTROOM ELEVATIONS

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

D

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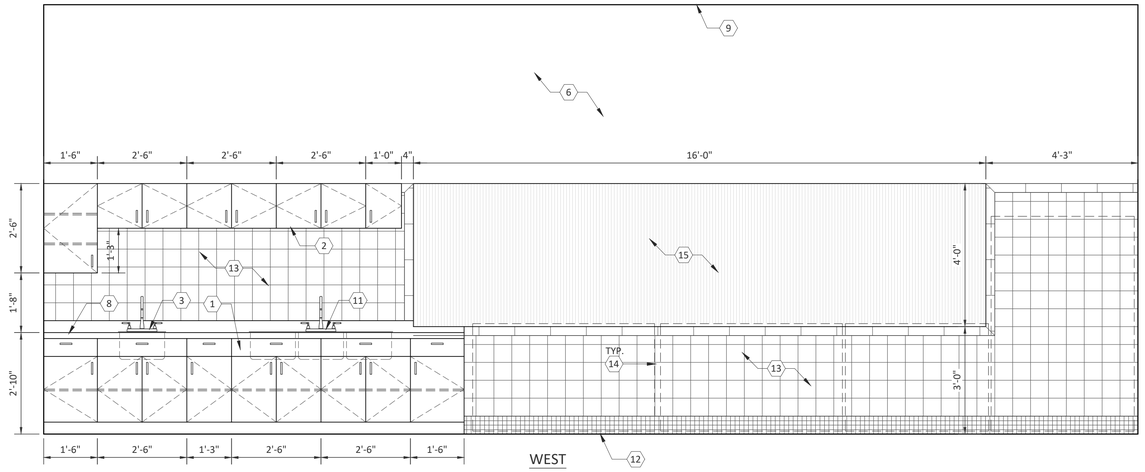
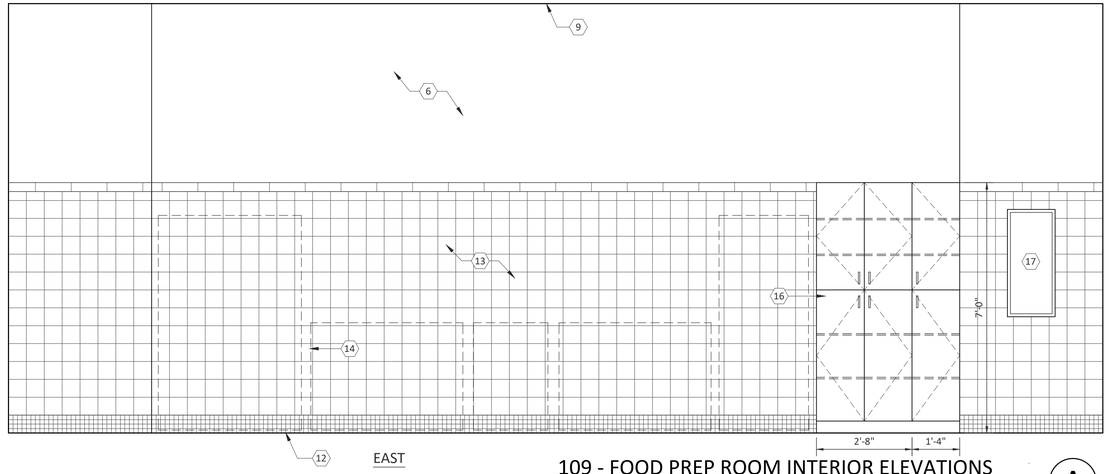
SHEET TITLE:
ENLARGED FLOOR PLANS

A2.5



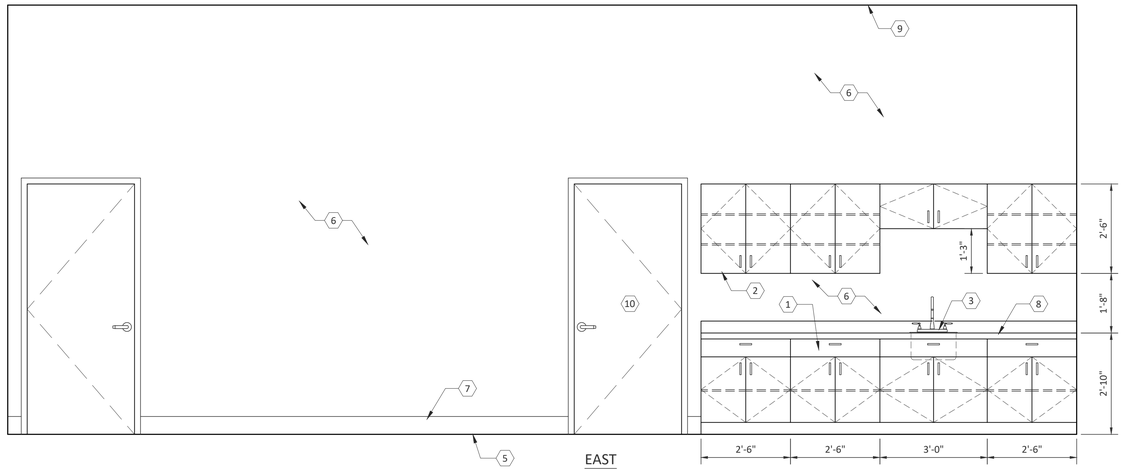
WEST



EAST

109 - FOOD PREP ROOM INTERIOR ELEVATIONS — A

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



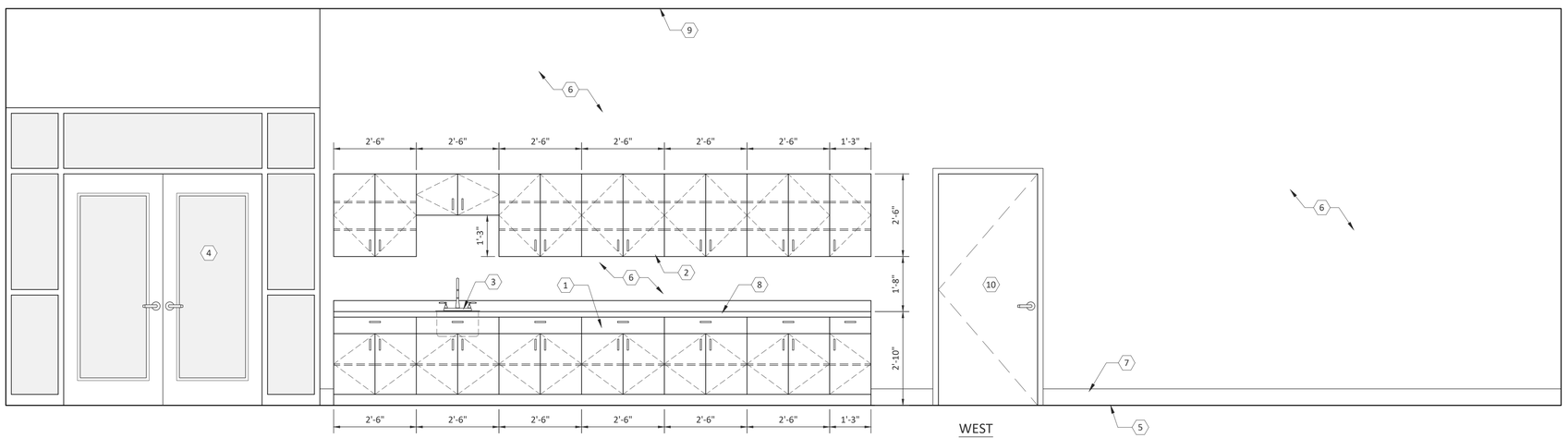
EAST

103 - MUSIC ROOM INTERIOR ELEVATION — B

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

INTERIOR ELEVATIONS KEY NOTES

1. WOOD BASE CABINETS W/ PLASTIC LAMINATE, DOORS, DRAWERS, DOOR PULLS, & ADJUSTABLE SHELVES AS INDICATED
2. WOOD WALL CABINETS W/ PLASTIC LAMINATE, DOORS, DOOR PULLS, & ADJUSTABLE SHELVES AS INDICATED.
3. SINGLE-COMPARTMENT, DECK-MOUNTED, STAINLESS STEEL SINK PER OWNER
4. ALUM. STORE-FRONT DOOR SYSTEM PER DOOR SCHEDULE
5. FLOOR W/ FINISH PER SCHEDULE
6. WALL W/ PAINTED GYPSUM BOARD FINISH
7. 6" CARPET COVED BASE
8. FORMICA COUNTERTOPS W/ 4" BACK-SPLASH & ROUNDED FRONT EDGE
9. CEILING W/ PAINTED GYPSUM BOARD FINISH
10. DOOR, PER PLAN
11. TRIPLE-COMPARTMENT, DECK MOUNTED, STAINLESS STEEL SINK PER OWNER
12. CERAMIC TILE FLOOR FINISH, PER SCHEDULE
13. 84" CERAMIC TILE WAINSCOT WALL FINISH W/ CMT BASE
14. MOVEABLE KITCHEN EQUIPMENT, PER PLAN
15. OPEN TO CAFETERIA, BEYOND
16. FULL-HEIGHT WOOD CABINETS W/ PLASTIC LAMINATE, DOORS, DOOR PULLS, & ADJUSTABLE SHELVES AS INDICATED
17. EXISTING ELECTRICAL SUBPANEL CABINET; PROVIDE FINISH COVER



WEST

104 - LIBRARY INTERIOR ELEVATION — C

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

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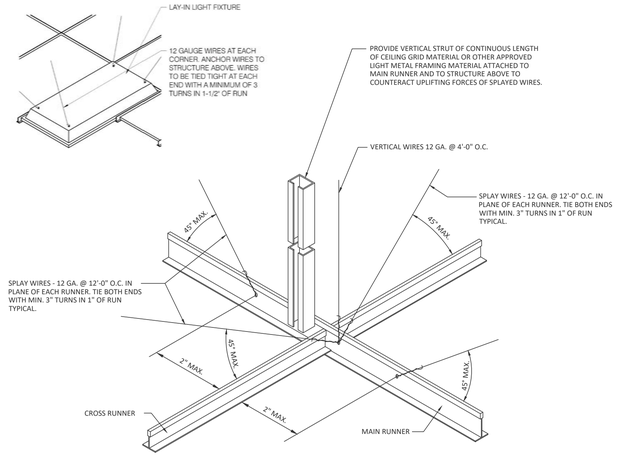
INTERIOR ELEVATIONS

A2.6

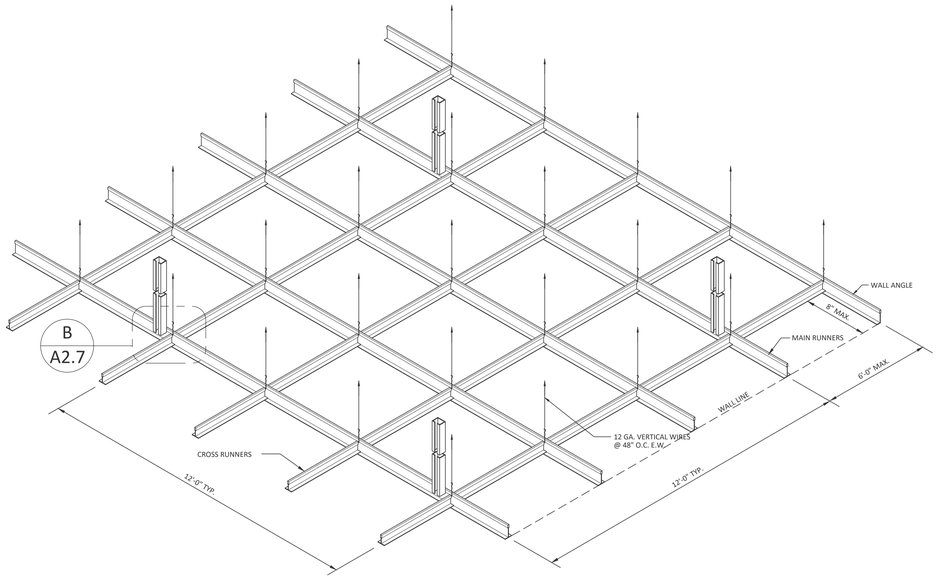


ALL CEILING MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO SUSPENDED CEILING GRID, IN ADDITION 12 GA. HANGER WIRES SHALL BE ATTACHED TO THE GRID WITHIN 3" OF EACH CORNER OF THE FIXTURE. TWO ADDITIONAL WIRES SHALL BE CONNECTED TO THE LIGHT HOUSING AND TO THE STRUCTURE ABOVE (THESE WIRES MAY BE SLACK).

WIRES SHALL NOT ATTACH TO OR BEND AROUND INTERFERING MATERIAL OR EQUIPMENT, NOR SHALL THEY BE CLOSER THAN 5" FROM ANY UN-BRACED HORIZONTAL PIPING OR DUCTWORK. A TRAPEZE OR SIMILAR DEVICE SHALL BE USED WHERE OBSTRUCTIONS OCCUR.

SUSPENDED CEILING NOTES

1. CEILING AREAS OF 144 SQ.FT. OR LESS SURROUNDED BY WALLS WHICH CONNECT DIRECTLY TO THE STRUCTURE ABOVE SHALL NOT REQUIRE THE DIAGONAL BRACING WIRES.
2. FOR CEILING AREAS EXCEEDING 1,000 SQ.FT. HORIZONTAL RESTRAINT OF THE CEILING TO THE STRUCTURE SHALL BE PROVIDED.
3. EACH VERTICAL WIRE SHALL BE ATTACHED EACH END WITH MIN. 3 TURNS.
4. CEILING GRID SHALL BE INSTALLED LEVEL TO WITHIN 1/8" IN 12'-0".
5. LOCAL KINKS OR BENDS SHALL NOT BE MADE IN HANGER WIRES AS A MEANS OF LEVELING MAIN RUNNERS.
6. ALL WIRE LOOPS SHALL BE TIGHTLY WRAPPED AND SHARPLY BENT.
7. CABLE TRAYS AND ELECTRICAL CONDUITS SHALL BE INDEPENDENTLY SUPPORTED AND BRACED INDEPENDENTLY OF THE CEILING.
8. EACH VERTICAL WIRE SHALL BE ATTACHED EACH END WITH MIN. 3 TURNS.
9. A HEAVY DUTY T-BAR SYSTEM SHALL BE USED. THE WIDTH OF THE PERIMETER SUPPORTING CLOSURE ANGLE SHALL NOT BE LESS THAN 2". IN EACH ORTHOGONAL HORIZONTAL DIRECTION, ONE END OF THE CEILING GRID SHALL BE ATTACHED TO THE CLOSURE ANGLE. THE OTHER END IN EACH HORIZONTAL DIRECTION SHALL HAVE A 0.75 INCH CLEARANCE FROM THE WALL AND SHALL REST UPON AND BE FREE TO SLIDE ON THE CLOSURE ANGLE.
10. EXISTING DRYWALL CEILING LIDS ARE TO BE FIRE TAPED TO REPAIR ALL HOLES & CRACKS.



SEISMIC BRACING

SCALE: NTS

B

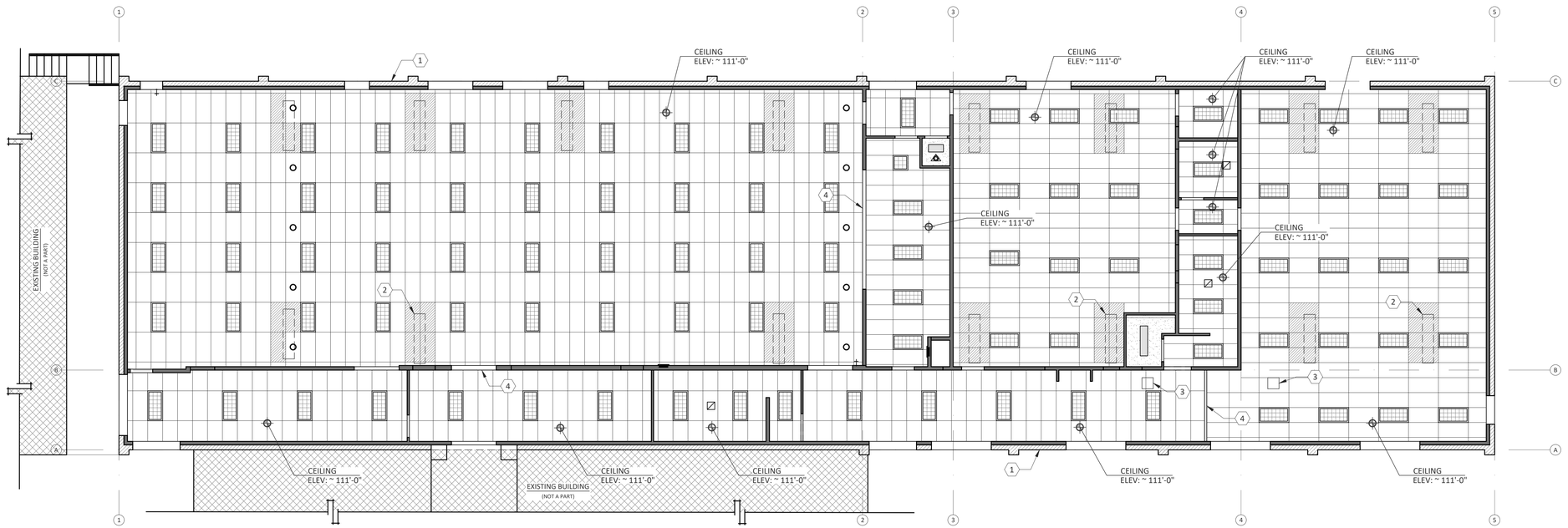
SUSPENDED CEILING

SCALE: NTS

A

REFLECTED CLG. PLAN KEY NOTE LEGEND

1. EXISTING EXTERIOR C.M.U. WALL
2. EXISTING SKYLIGHT, TYP.
3. EXISTING ATTIC ACCESS VERIFY MINIMUM 20" X 30"
4. WALL ABOVE OPENING, TYP.



REFLECTED CEILING PLAN

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

COORDINATION SET
FOR REVIEW ONLY
NOT FOR CONSTRUCTION

LINE & SYMBOLS LEGEND

- 2 X 4 LAY-IN SUSPENDED LIGHT FIXTURE
- 2 X 4 LAY-IN ACOUSTICAL PANEL SUSPENDED CEILING SYSTEM
- SUSPENDED GYPSUM BOARD CEILING OR GYPSUM BOARD ON FRAME CEILING OR SOFFIT
- TRANSLUCENT SUSPENDED CEILING PANEL
- FRAMED CEMENT BOARD SOFFIT W/ CERAMIC TILE FINISH
- METAL PANEL SYSTEM CEILING FINISH
- 1' X 4' SURFACE MOUNTED LIGHT FIXTURE
- 1' X 8' SURFACE MOUNT LIGHT FIXTURE
- 2' X 4' SURFACE MOUNT LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- LAY-IN RECESSED LIGHT FIXTURE
- 24" X 24" LAY-IN SUPPLY AIR REGISTER / DIFFUSER
- 24" X 24" LAY-IN RETURN AIR REGISTER
- EXHAUST FAN
- CEILING FIXTURE SUSPENDED FROM CEILING

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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO:	22-003-16
CAD DWG. FILE:	224003-16 1_CO.SD.N Mod_Arch.dwg
DRAWN BY:	TCT
DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
DATE:	6-13-22

SHEET TITLE:
REFLECTED CEILING PLAN

A2.7

WINDOW SCHEDULE:

- (A) 8'-0" X 4'-0" WINDOW; VINYL FRAME; GLAZING TO BE INSULATED, DOUBLE PANE, LOW-E; DOUBLE SLIDER; REMOVE & REPLACE EXISTING
- (B) EXISTING 8'-2" X 4'-0" GLASS BLOCK WINDOW TO REMAIN (PROTECT)
- (C) 3'-0" X 3'-0" WINDOW; VINYL FRAME; GLAZING TO BE INSULATED, DOUBLE PANE, LOW-E; FIXED; REMOVE & REPLACE EXISTING
- (D) 6'-0" X 4'-0" WINDOW; VINYL FRAME; GLAZING TO BE INSULATED, DOUBLE PANE, LOW-E; FIXED; SEE SHEET A2.10 FOR SILL, HEADER, AND JAMB DETAILS

DOOR HARDWARE TYPES:

DOOR HARDWARE SHALL BE STAINLESS STEEL, COMMERCIAL GRADE (SCHLAGE OR EQUAL); COORDINATE WITH OWNER.

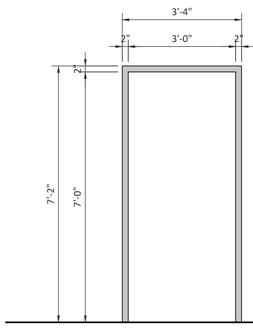
HARDWARE GROUP NO. 1	HINGES, PANIC HARDWARE, PULLS, LOCK, CLOSER, WEATHER STRIPPING, DOOR SWEEP, THRESHOLD;
HARDWARE GROUP NO. 2	HINGES, PANIC HARDWARE, PULLS, LOCK, CLOSER;
HARDWARE GROUP NO. 3	PUSH / PULL, HINGES, DEAD BOLT, CLOSER;
HARDWARE GROUP NO. 4	LEVER KNOB, HINGES, KEY LOCK, CLOSER;
HARDWARE GROUP NO. 5	LEVER KNOB, HINGES, PUSH LOCK; CLOSER;
HARDWARE GROUP NO. 6	LEVER KNOB, HINGES, KEY LOCK;
HARDWARE GROUP NO. 7	LEVER KNOB, HINGES;
HARDWARE GROUP NO. 8	PER MANUFACTURER

DOOR SCHEDULE NOTES:

1. HEAVY DUTY HOLLOW METAL DOORS TO BE FLUSH TYPE OF 2 SHEETS OF GRADE 16 GA. COLD ROLLED STEEL WITH REINFORCING STIFFENER BARS.
2. HOLLOW METAL FRAMES TO BE 16 GA. COLD ROLLED, PICKLED, ANNEALED STEEL, UNIT TYPE WELDED CONSTRUCTION, AND MITRES NEATLY WELDED AND GROUND SMOOTH.
3. HOLLOW METAL FRAMES INSTALLED IN CONCRETE STEM WALL TO HAVE PUNCH & DIMPLE MOUNTING TYPE.
4. DOOR FRAMES ARE TO RECEIVE ONE SHOP COAT OF RUST INHIBITIVE PRIMER. PRIMER SHALL BE SMOOTH SURFACE, READY TO RECEIVE FINISH COATS AT TIME OF DELIVERY; WHEN INSTALLED, NO RUNS, OVER-SPRAY, DUST OR OTHER DEFECTS WILL BE ACCEPTED. PRIMER SHALL BE BONDED TO METAL SUFFICIENTLY THAT UPON AGEING IT WILL NOT CHIP OR FLAKE WHEN SCRAPED. FRAMES TO HAVE TWO FINISH COATS (PER OWNER). ALL JOINTS BETWEEN FRAME AND FINISH WALL MATERIAL TO BE CAULKED.
5. OPENING FORCE REQUIRED FOR ALL DOORS ON THE ACCESSIBLE ROUTE OR CIRCULATION PATH SHALL BE LIMITED TO 5 LB.

DOOR SCHEDULE

DOOR #	DOOR PANEL						DOOR FRAME						GENERAL		REMARKS
	SIZE			MATERIAL	TYPE	FINISH	MATERIAL	FINISH	TYPE	DETAILS			FIRE RATING	HARDWARE GROUP NO.	
	WIDTH	HEIGHT	THICK.							HEAD	JAMB	SILL			
1	(2) 3'-0"	6'-8"	1-3/4" (FV)	H.M.	B	PAINT	H.M. (EX.)	PAINT	EXISTING	--	--	C/A2.10	--	1	REPLACE DOOR PANELS; KEEP FRAME & REFINISH
2	3'-0"	6'-8"	1-3/4"	H.M.	B	PAINT	H.M.	PAINT	HM-4	--	--	C/A2.10	--	1	REPLACE EXISTING DOOR FRAME
3	(2) 3'-0"	6'-8"	1-3/4" (FV)	H.M.	B	PAINT	H.M. (EX.)	PAINT	EXISTING	--	--	C/A2.10	--	1	REPLACE DOOR PANELS; KEEP FRAME & REFINISH
4	3'-0"	6'-8"	1-3/4" (FV)	H.M.	B	PAINT	H.M (EX.)	PAINT	EXISTING	--	--	C/A2.10	--	1	REPLACE DOOR PANEL; KEEP FRAME & REFINISH
5	3'-0"	6'-8"	1-3/4" (FV)	H.M.	B	PAINT	H.M (EX.)	PAINT	EXISTING	--	--	C/A2.10	--	1	REPLACE DOOR PANEL; KEEP FRAME & REFINISH
6	3'-0"	6'-8"	1-3/4" (FV)	H.M.	D	PAINT	H.M (EX.)	PAINT	EXISTING	--	--	C/A2.10	--	1	REPLACE DOOR PANEL; KEEP FRAME & REFINISH
7	(2) 3'-0"	6'-8"	1-3/4" (FV)	H.M.	B	PAINT	H.M. (EX.)	PAINT	EXISTING	--	--	C/A2.10	--	1	REPLACE DOOR PANELS; KEEP FRAME & REFINISH
8	(2) 3'-0"	7'-0"	1-3/4"	H.M.	D	PAINT	H.M.	PAINT	HM-2	B/A2.10	A/A2.10	--	--	4	--
9	--	--	--	--	--	--	--	--	--	--	--	--	--	6	--
10	(2) 3'-0"	7'-0"	1-3/4"	S.C. WOOD	C	STAIN	H.M.	PAINT	HM-2	B/A2.10	A/A2.10	--	--	2	--
11	(2) 3'-0"	7'-0"	1-3/4"	S.C. WOOD	D	STAIN	H.M.	PAINT	HM-3	B/A2.10	A/A2.10	--	--	2	--
12	3'-0"	7'-0"	1-3/4"	S.C. WOOD	D	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	6	--
13	(2) 3'-0"	7'-0"	1-3/4"	S.C. WOOD	C	STAIN	H.M.	PAINT	HM-2	B/A2.10	A/A2.10	--	--	2	--
14	3'-0"	7'-0"	1-3/4"	S.C. WOOD	C	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	4	--
15	3'-0"	7'-0"	1-3/4"	S.C. WOOD	C	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	4	--
16	(2) 3'-0"	7'-0"	1-3/4"	ALUMINUM	A	BRONZE	ALUM.	BRONZE	AL-1	--	--	--	--	3	--
17	3'-0"	7'-0"	1-3/4"	S.C. WOOD	C	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	4	--
18	3'-0"	7'-0"	1-3/4"	S.C. WOOD	C	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	2	--
19	3'-0"	7'-0"	1-3/4"	S.C. WOOD	C	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	2	--
20	3'-0"	7'-0"	1-3/4"	S.C. WOOD	D	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	6	--
21	3'-0"	7'-0"	1-3/4"	S.C. WOOD	D	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	4	--
22	3'-0"	7'-0"	1-3/4"	S.C. WOOD	D	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	5	--
23	3'-0"	7'-0"	1-3/4"	S.C. WOOD	D	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	4	--
24	3'-0"	7'-0"	1-3/4"	S.C. WOOD	D	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	6	--
25	3'-0"	7'-0"	1-3/4"	S.C. WOOD	D	STAIN	H.M.	PAINT	HM-1	B/A2.10	A/A2.10	--	--	4	--



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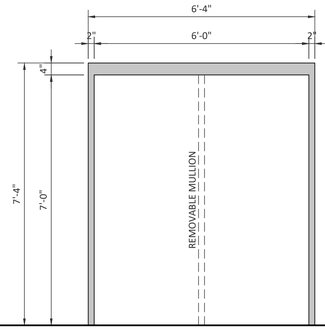

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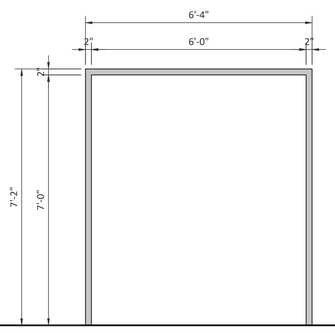

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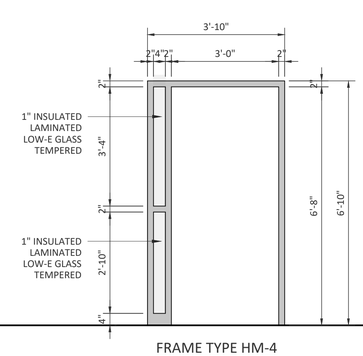

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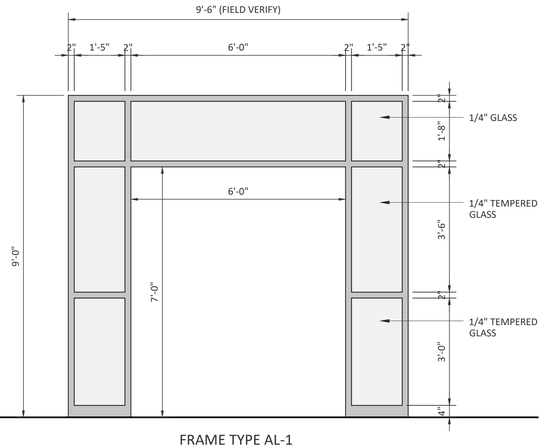

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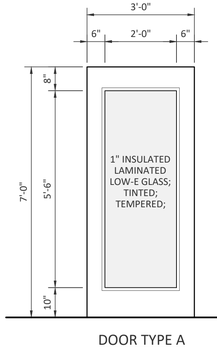

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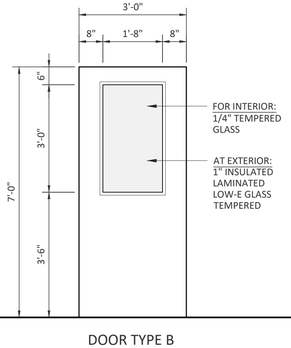

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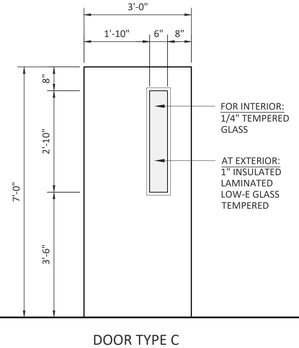

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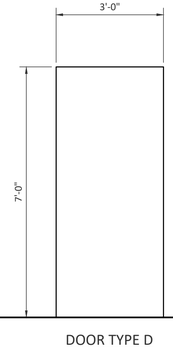

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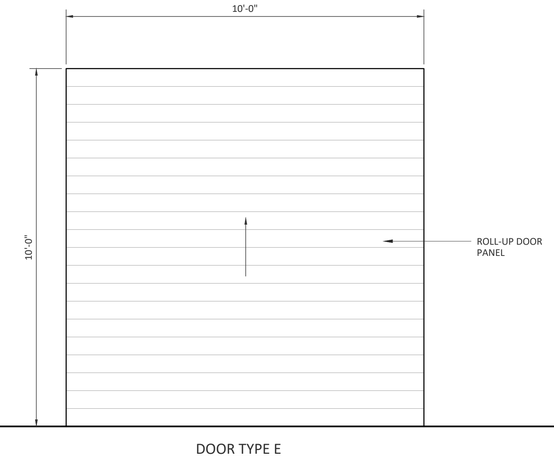

DOOR TYPE E

COORDINATION SET
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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

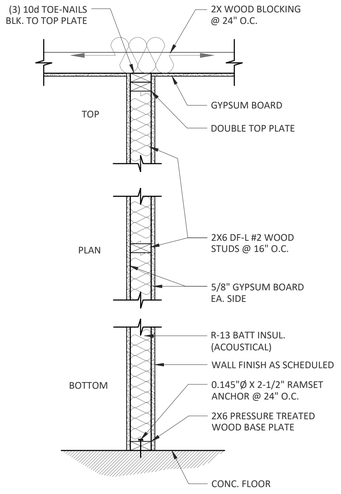
REVISIONS

REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

PROJECT NO:	22-003-16
CAD DWG. FILE:	22-003-16 1_CO USD N Aud_Arch.dwg
DRAWN BY:	TCT
DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
DATE:	6-13-22

SHEET TITLE:
DOOR & WINDOW SCHEDULE

A2.8



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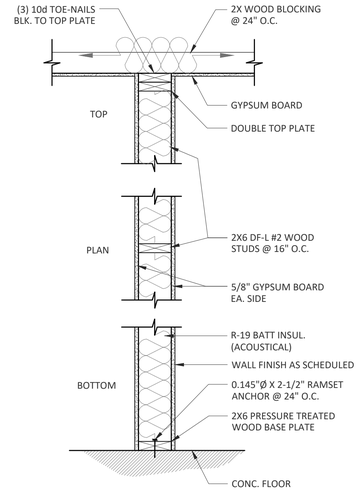

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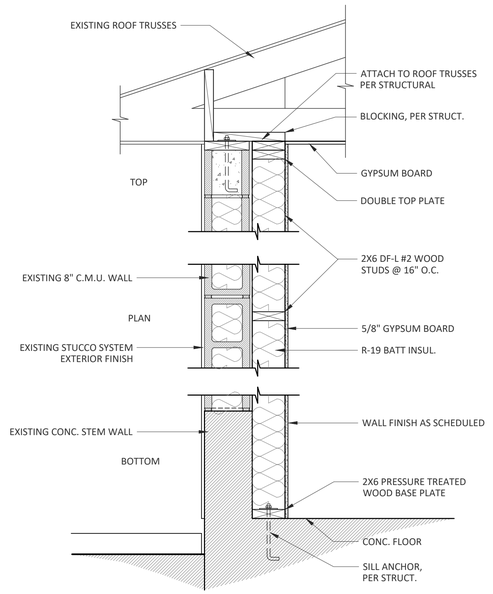

W3

W4 EXISTING 2X FRAME WALL W/ PAINTED GYPSUM BOARD EACH SIDE; FIELD VERIFY EXISTING STUD SIZE;

WALL TYPE SCHEDULE

SCALE: NTS

A

ROOM FINISH SCHEDULE

NOTE: VERIFY ALL ROOM FINISHES WITH OWNER

ROOM #	ROOM NAME	FLOOR MATERIAL	FOOR COVER / FINISH	NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING		WALL BASE	NOTES
				MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH		
101	AUDITORIUM / CAFETERIA	EXISTING CONCRETE	VINYL LAMINATE	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	N/A	N/A	GYPSUM BOARD	TEXTURE; PAINT	6" COVED RUBBER	
102	STAGE	WOOD	VINYL LAMINATE	GYPSUM BOARD	TEXTURE; PAINT	N/A	N/A	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	6" COVED RUBBER	
103	MUSIC ROOM	EXISTING CONCRETE	CARPET	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	6" COVED CARPET	
104	LIBRARY	EXISTING CONCRETE	CARPET	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	6" COVED CARPET	
105	CORRIDOR	EXISTING CONCRETE	CARPET	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	6" COVED CARPET	
106	CORRIDOR	EXISTING CONCRETE	CARPET	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	6" COVED CARPET	
107	TABLE STORAGE	EXISTING CONCRETE	VINYL LAMINATE	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	6" COVED RUBBER	
108	GIRLS RESTROOM	EXISTING CONCRETE	CERAMIC TILE	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYPSUM BOARD	TEXTURE; PAINT	--	
109	FOOD PREP	EXISTING CONCRETE	CERAMIC TILE	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYPSUM BOARD	TEXTURE; PAINT	--	
110	VESTIBULE	EXISTING CONCRETE	VINYL LAMINATE	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	6" COVED RUBBER	
111	BOYS RESTROOM	EXISTING CONCRETE	CERAMIC TILE	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYPSUM BOARD	TEXTURE; PAINT	--	
112	UNISEX RESTROOM	EXISTING CONCRETE	CERAMIC TILE	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYPSUM BOARD	TEXTURE; PAINT	--	
113	STORAGE	EXISTING CONCRETE	CARPET	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	GYPSUM BOARD	TEXTURE; PAINT	6" COVED CARPET	
114	CUSTODIAN	EXISTING CONCRETE	CERAMIC TILE	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYP. BD. W/ C.T. WNSCT.	TEXT; PAINT; FACTORY FIN.	GYPSUM BOARD	TEXTURE; PAINT	--	

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FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

PROJECT NO: 22-003-16
CAD DWG. FILE: 22-003-16 [CCUSD N Aud_Arch.dwg]
DRAWN BY: TCT
DESIGNED BY: TCT
FIELD CREW:
CHECKED BY:
DATE: 6-13-22

SHEET TITLE:
WALL TYPE
ROOM FINISH
SCHEDULES

A2.9

NOT USED

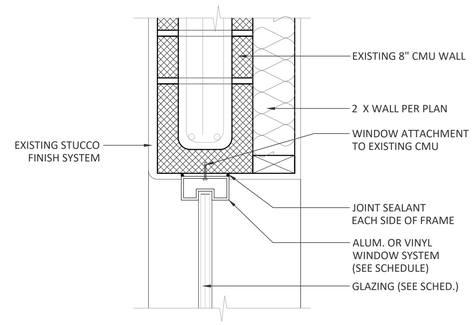
SCALE: NTS

J

NOT USED

SCALE: NTS

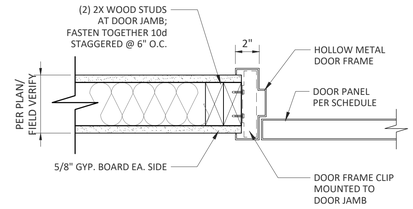
G



WINDOW HEAD @ EXISTING CMU

SCALE: NTS

D



H.M. DOOR JAMB @ GYP. BD. WALL

SCALE: NTS

A

NOT USED

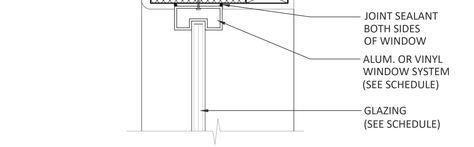
SCALE: NTS

K

NOT USED

SCALE: NTS

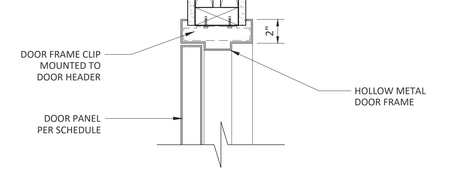
H



WINDOW JAMB @ EXISTING CMU

SCALE: NTS

E



H.M. DOOR HDR. @ GYP. BD. WALL

SCALE: NTS

B

NOT USED

SCALE: NTS

L

COORDINATION SET
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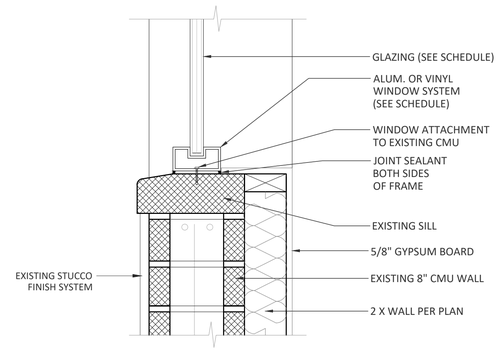
NOT USED

SCALE: NTS

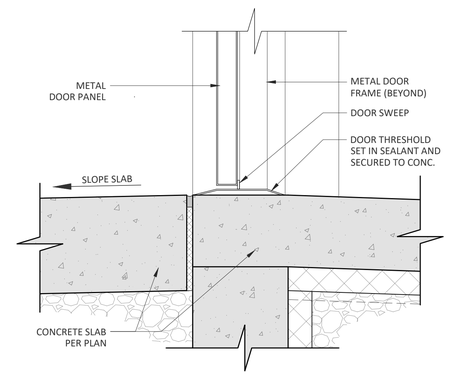
I



WINDOW SILL @ EXISTING CMU

SCALE: NTS

F



H.M. DOOR SILL @ EXT. WALL

SCALE: NTS

C

EXCEL DESIGN ASSOCIATES
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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO: 22-003-16

CAD DWG. FILE: 22-003-16 [ ] CCUSD Al Aud_Arch.dwg

DRAWN BY: TCT

DESIGNED BY: TCT

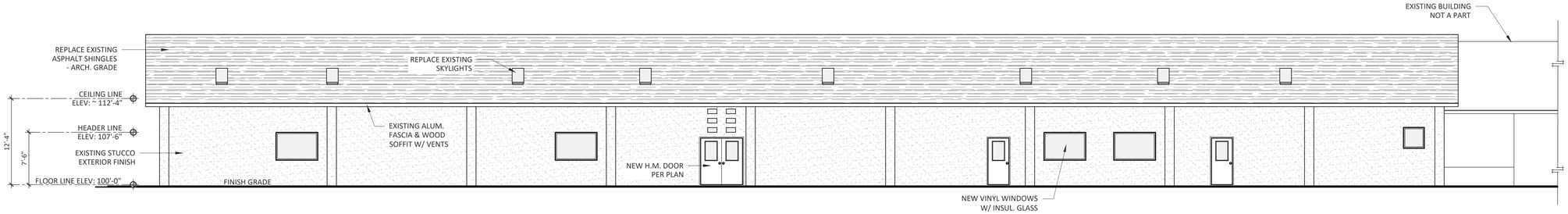
FIELD CREW:

CHECKED BY:

DATE: 6-13-22

SHEET TITLE:
DETAILS

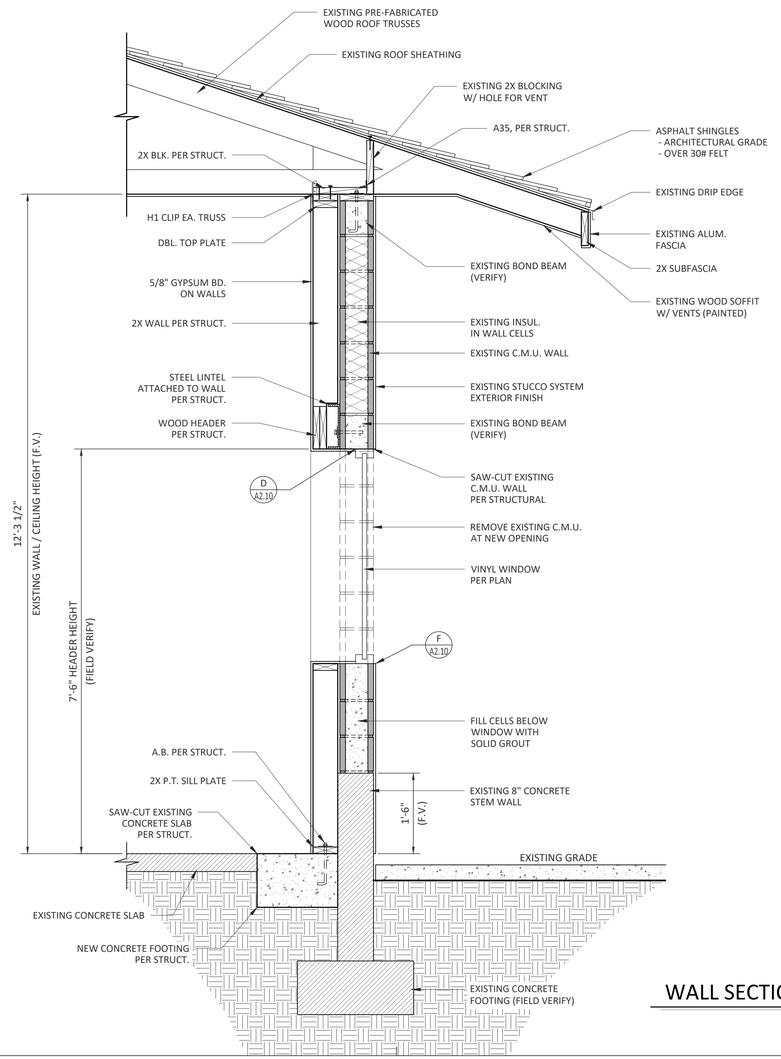
A2.10



NORTH ELEVATION

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

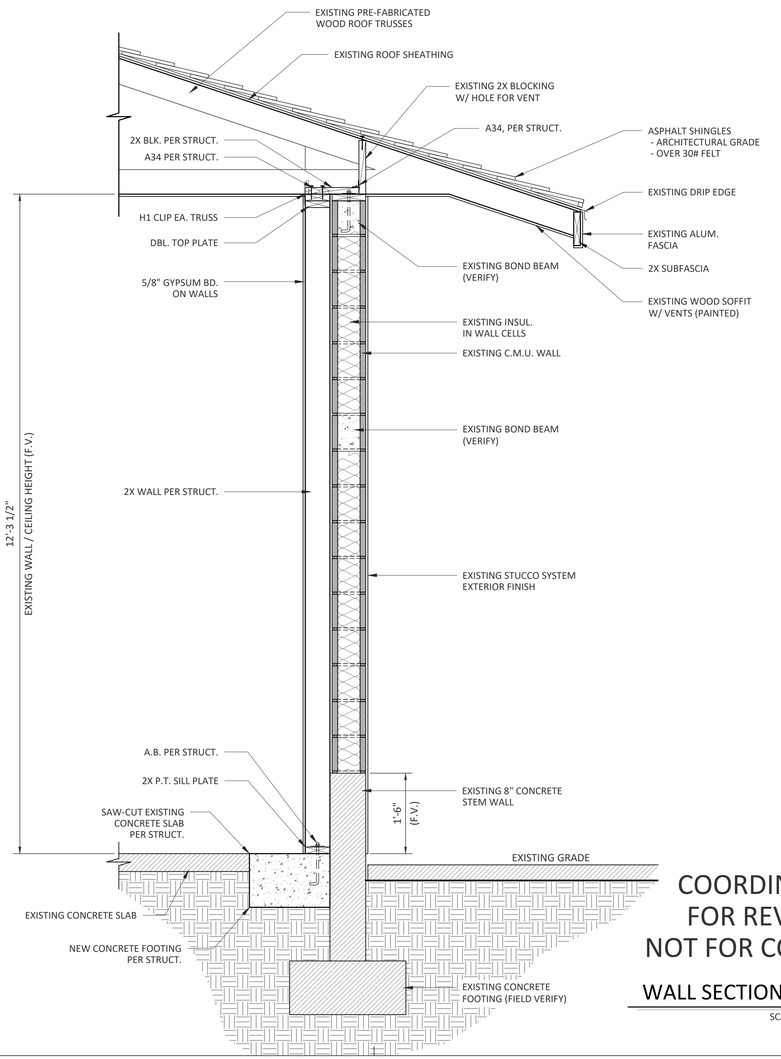
A



WALL SECTION

SCALE: 3/4" = 1'-0

C



COORDINATION SET
FOR REVIEW ONLY
NOT FOR CONSTRUCTION

WALL SECTION

SCALE: 3/4" = 1'-0

B

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PROJECT NO:	22-003-16
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DRAWN BY:	TCT
DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
DATE:	6-13-22

SHEET TITLE:
EXTERIOR
ELEVATIONS

A3.0

SHEAR WALL NOTES

1. WOOD FRAMING SHALL BE IN ACCORDANCE TO IBC CHAPTER 23. ALL FRAMING MEMBERS SHALL BE FASTENED IN ACCORDANCE WITH IBC TABLE 2304.9.1 UNLESS NOTED OTHERWISE ON PLAN.
2. UNLESS NOTED OTHERWISE, ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 7/16" APA RATED 24/16 PLYWOOD OR O.S.B. W/ 8d @ 6" O.C. AT ALL PANEL EDGES & 8d @ 12" O.C. IN FIELD. CONTINUE SHEATHING AND NAIL PATTERN AROUND ALL EXTERIOR WALL OPENINGS.
3. SEE SHEAR WALL AND DIAPHRAGM SCHEDULES FOR THICKNESS AND FASTENER PATTERN OF ROOF, FLOOR, AND WALL SHEATHING.
4. FASTENERS FOR ALL HORIZONTAL DIAPHRAGMS AND VERTICAL SHEAR WALLS SHALL BE COMMON OR GALVANIZED BOX NAILS.
5. STRAPS AND HOLDOWNS SHOWN ARE SIMPSON. HARDWARE PROVEN TO HAVE EQUIVALENT CAPACITY MAY BE SUBSTITUTED FOR THAT SHOWN ON PLAN W/ PRIOR APPROVAL OF ENGINEER OF RECORD.
6. ALL HARDWARE, INCLUDING BUT NOT LIMITED TO STRAPS, TIES, HOLDOWNS, ANGLES, AND HANGERS, SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.
7. STRAPS, TIES AND HOLDOWNS SHALL BE FASTENED TO A (2) 2 X MEMBER MIN., UNLESS NOTED OTHERWISE ON PLAN.
8. PROVIDE BLOCKING AT ALL PANEL EDGES IN SHEAR WALLS; NOMINAL WIDTH OF BLOCKING USED SHALL BE THAT INDICATED IN THE SHEAR WALL SCHEDULE FOR PANEL EDGE FASTENERS.
9. ALL SHEARWALLS SHALL BE ANCHORED TO THE ROOF DIAPHRAGM, FLOOR DIAPHRAGM, AND FOUNDATION PER THE APPLICABLE DETAILS INDICATED ON THE PLAN
10. SHEAR WALL NAIL FASTENERS SHALL BE INSTALLED 3/8" MIN. FROM PANEL EDGES.
11. EXTERIOR WALLS SHALL BE 2 X 6 UNLESS SPECIFIED OTHERWISE. INTERIOR BEARING & SHEAR WALLS SHALL BE PER PLAN.
12. ALL BEARING WALL AND SHEAR WALL STUDS SHALL BE SPACED @ 16" O.C., U.N.O.
13. PROVIDE AT LEAST (1) 2 X TRIMMER & (1) 2 X KING STUD EACH SIDE OF ALL OPENING HEADERS UNLESS SPECIFIED OTHERWISE ON PLAN.
14. PROVIDE BUILT-UP WALL COLUMNS AS SHOWN ON PLAN. ALL COLUMNS SHALL BE CONTINUOUS TO FOUNDATION SILL PLATE -- PROVIDE EQUIVALENT BLOCKING THROUGH FLOOR SPACE AND AS REQUIRED.
15. EXTERIOR WALLS & INTERIOR BEARING & SHEAR WALLS SHALL BE CAPPED WITH DOUBLE TOP PLATES INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND AT WALL INTERSECTIONS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 48", AND SHALL BE NAILED WITH NOT LESS THAN (12) 16d FACE NAILS ON EACH SIDE OF THE JOINT.
16. EXTERIOR WALLS AND INTERIOR BEARING AND SHEAR WALLS SHALL BE BASED W/ PRESSURE TREATED FIR. SILL PLATE.
17. BUILT-UP WALL COLUMNS, INCLUDING TRIMMER / KING STUD CONNECTIONS, SHALL BE FASTENED W/ 10d NAILS STAGGERED @ 6" O.C.
18. DRAG TRUSSES SHALL BE DESIGNED FOR THE LATERAL LOADS INDICATED ON THE SHEAR WALL PLAN. DRAG TRUSSES SHALL BE ANCHORED TO SHEAR WALLS PER PLAN.
19. IN ADDITION TO THAT SHOWN ON THIS PLAN, PROVIDE TRUSS BLOCKING AND BRACING AS SPECIFIED BY THE TRUSS MANUFACTURER
20. ALL BLOCKING BETWEEN FRAMING MEMBERS SHALL HAVE A SNUG, TIGHT FIT.
21. PROVIDE FULL-DEPTH TRUSS BLOCKING AND FASTENERS AT ALL EAVES PER THE APPLICABLE SHEAR TRANSFER DETAILS.
22. TJI JOISTS SHALL BE NAILED & INSTALLED PER MANUFACTURER SPECIFICATIONS.
23. PROVIDE A35 @ 48" O.C. FROM ROOF / FLOOR BLOCKING TO WALL TOP PLATE U.N.O. ON PLAN (TPA).
24. DRAG STRUT SHALL BE A MIN. (2) 2 x 4 SOLE PLATE, TOP PLATE, HEADER, OR GIRDER TRUSS.
25. DRAG STRUT SHALL BE ANCHORED TO SHEARWALL OR WALL LINE WITH A SIMPSON DSC CONNECTOR OR MSTI STRAP
26. ALL TRUSS BEARING AT END OF TRUSS MUST BE FULL-BLOCKED AND ANCHORED WITH TIES. NAIL ROOF SHEATHING TO BLOCKING.
27. TRUSSES BEARING ON INTERIOR SHEAR PANELS SHALL BE BLOCKED USING MANUF. FRAMING OR BUILT ON-SITE.

HOLDOWN SCHEDULE

- SIMPSON STHD10 HOLDOWN FASTENED TO (2) 2 X STUDS MIN. FOR INTERIOR APPLICATION, USE ALTERNATE HTT4 W/ (18) 16d & 5/8" BOLT EMBEDDED 10" INTO CONCRETE FOOTING W/ EPOXY.
- RJ: SIMPSON STHD10RJ HOLDOWN FASTENED TO (2) 2 X STUDS MIN.
- SIMPSON STHD14 HOLDOWN FASTENED TO (2) 2 X STUDS MIN. FOR INTERIOR APPLICATION, USE ALTERNATE HTT5 W/ (26) 10d & 5/8" BOLT EMBEDDED 12" INTO CONCRETE FOOTING W/ EPOXY.
- RJ: SIMPSON STHD14RJ HOLDOWN FASTENED TO (2) 2 X STUDS MIN.
- SIMPSON HDU8-SDS2.5 HOLDOWN FASTENED TO (3) 2 X STUDS MIN. ANCHOR TO CONCRETE FOUNDATION USING SIMPSON SB7/8" X 24" W/ 18" MIN. EMBEDMENT (PER MANUF. RECOMMENDATIONS). FOR RIM JOIST INSTALLATION, USE CNW7/8 COUPLER NUT W/ 7/8" ROD EXTENTION.
- SIMPSON MST60 W/ (26) 10d FASTENERS (SPAN FLOOR), U.N.O.
- SIMPSON CS14 W/ 18" END LENGTH; W/ (26) 10d FASTENERS;

SHEAR WALL SCHEDULE

SEE DETAILS: 10/D1

SW-ID	SHEATHING	PANEL EDGE FASTENER	FIELD FASTENER	SILL PLATE ANCHORAGE	BOUNDARY MEMBER
SW1	7/16" STRUCTURAL SHEATHING, ONE SIDE	8d NAILS @ 6" O.C. W/ 2" NOM. FRAMING MEMBER @ ADJOINING EDGES	8d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 36" O.C. TO WOOD FLR: 16d @ 6" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN
SW2	7/16" STRUCTURAL SHEATHING, ONE SIDE	8d NAILS @ 4" O.C. W/ 2" NOM. FRAMING MEMBER @ ADJOINING EDGES	8d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 30" O.C. TO WOOD FLR: 16d @ 6" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN
SW3	7/16" STRUCTURAL SHEATHING, ONE SIDE	8d NAILS STAGGERED @ 3" O.C. W/ 3" NOM. FRAMING MEMBER @ ADJOINING EDGES	8d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 18" O.C. TO WOOD FLR: 16d @ 4" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN
SW4	19/32" STRUCTURAL SHEATHING, ONE SIDE	10d NAILS STAGGERED @ 3" O.C. W/ 3" NOM. FRAMING MEMBER @ ADJOINING EDGES	10d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 16" O.C. TO WOOD FLR: 16d @ 3" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN

NOTE: "-P" INDICATES SHEAR WALL NAILING PATTER TO BE CONTINUOUS AROUND OPENINGS.

MINIMUM NAILING SCHEDULE - U.N.O.

CONNECTION	NAILING
JOIST OR TRUSS BEARING ON SILL OR GIRDER, TOENAIL	3 - 8d
BRIDGING TO JOIST , TOENAIL EACH END	2 - 8d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d AT 16" O.C.
TOP PLATE TO STUD, END NAIL TO EACH STUD	2 - 16d
STUD TO SOLE PLATE	4 8d TOENAIL OR 2 16d, END NAIL
DOUBLE STUDS, FACE NAIL	16d NAILS AT 24" O.C.
DOUBLE TOP PLATES, FACE NAIL	16d NAILS AT 16" O.C.
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2 - 16d
CONTINUOUS HEADER, TWO PIECES	16d NAILS AT 16" O.C. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	3 - 8d
CONTINUOUS HEADER TO STUD, TOENAIL	4 - 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3 - 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3 - 16d
RAFTER OR TRUSS TO PLATE, FACE NAIL	3 - 8d
1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2 - 8d
BUILT-UP CORNER STUDS	16d AT 24" O.C.

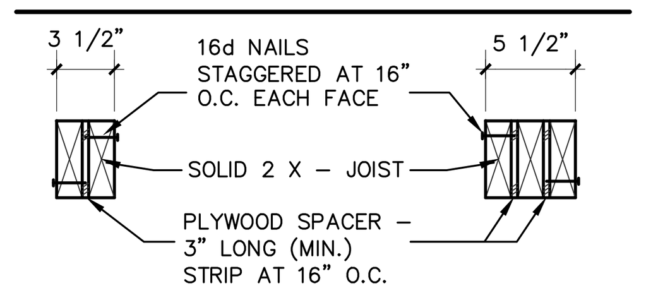
NOTE:
1. MINIMUM NAILING SPECIFIED HEREIN SHALL BE PROVIDED U.N.O. ON PLANS, DETAILS OR STRUCTURAL NOTES.

NON-BRG. HEADER SCHEDULE (Exterior Walls Only)

Size	Max. Span
(2) 2 x 6	Up to 6'-0" Max
(2) 2 x 8	Up to 8'-0" Max
(2) 2 x 10	Up to 10'-0" Max

Note: This schedule may be used only in situations where no other header/lintel has been called out.

BUILT-UP HEADER DETAIL



FRAMING NOTES

1. WOOD FRAMING SHALL BE IN ACCORDANCE TO IBC CHAPTER 23. ALL FRAMING MEMBERS SHALL BE FASTENED IN ACCORDANCE WITH IBC TABLE 2304.9.1 UNLESS NOTED OTHERWISE ON PLAN.
2. SEE SHEAR WALL AND DIAPHRAGM SCHEDULES FOR THICKNESS AND FASTENER PATTERN OF ROOF, FLOOR, AND WALL SHEATHING.
3. STRUCTURAL COMPOSITE MEMBERS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.
4. WOOD TRUSSES ARE TO BE PRE-MANUFACTERED AND ENGINEERED BY MANUFACTURER.
5. DRAG TRUSSES SHOWN ON THE FRAMING PLAN SHALL BE DESIGNED FOR THE LATERAL LOADS INDICATED ON THE SHEAR WALL PLAN. DRAG TRUSSES SHALL BE ANCHORED TO SHEAR WALLS PER PLAN.
6. TRUSSES SHALL BE DESIGNED TO SUPPORT MECHANICAL EQUIPMENT LOCATED IN ATTIC OR ON TOP OF ROOF SURFACE.
7. UNLESS NOTED OTHERWISE, ALL TRUSS TO TRUSS HANGERS ARE TO BE SPECIFIED BY THE TRUSS MANUFACTURER.
8. IN ADDITION TO THAT SHOWN ON THIS PLAN, PROVIDE TRUSS BLOCKING AND BRACING AS SPECIFIED BY THE TRUSS MANUFACTURER
9. CONFIRM TRUSS LAYOUT PROPOSED BY THE TRUSS COMPANY WITH THAT SHOWN ON THESE PLANS. ANY DIFFERENCE BETWEEN THE TWO PLAN SETS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD.
10. ALL BLOCKING BETWEEN FRAMING MEMBERS SHALL HAVE A SNUG, TIGHT FIT.
11. PROVIDE FULL-DEPTH TRUSS BLOCKING AND FASTENERS AT ALL EAVES PER THE APPLICABLE SHEAR TRANSFER DETAILS.
12. TJI JOISTS SHALL BE NAILED & INSTALLED PER MANUFACTURER SPECIFICATIONS.
13. EXTERIOR WALLS SHALL BE 2 X 6 UNLESS SPECIFIED OTHERWISE. INTERIOR BEARING WALLS SHALL BE PER PLAN.
14. ALL BEARING WALL AND SHEAR WALL STUDS SHALL BE SPACED @ 16" O.C., U.N.O.
15. PROVIDE A BUILT-UP COLUMN W/ (3) CRIPPLE STUDS TO SUPPORT BEAMS OR GIRDER TRUSSES LOCATED ABOVE OPENING HEADERS.
16. PROVIDE AT LEAST (1) 2 X TRIMMER & (1) 2 X KING STUD EACH SIDE OF ALL OPENING HEADERS UNLESS SPECIFIED OTHERWISE ON PLAN.
17. PROVIDE (2) 2 X 10 HDR. ABOVE EXTERIOR OPENINGS UNLESS SPECIFIED OTHERWISE.
18. PROVIDE BUILT-UP WALL COLUMNS AS SHOWN ON PLAN. ALL COLUMNS SHALL BE CONTINUOUS TO FOUNDATION SILL PLATE -- PROVIDE EQUIVALENT BLOCKING THROUGH FLOOR SPACE AND AS REQUIRED.
19. EXTERIOR WALLS & INTERIOR BEARING & SHEAR WALLS SHALL BE CAPPED WITH DOUBLE TOP PLATES INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND AT WALL INTERSECTIONS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 48", AND SHALL BE NAILED WITH NOT LESS THAN (12) 16d FACE NAILS ON EACH SIDE OF THE JOINT.
20. EXTERIOR WALLS AND INTERIOR BEARING AND SHEAR WALLS SHALL BE BASED W/ PRESSURE TREATED FIR. SILL PLATE.
21. BUILT-UP WALL COLUMNS, INCLUDING TRIMMER / KING STUD CONNECTIONS, SHALL BE FASTENED W/ 10d NAILS STAGGERED @ 6" O.C.
22. PROVIDE SIMPSON H1 CLIP @ EVERY TRUSS W/ BLOCKING.
23. PROVIDE (2) SIMPSON H2.5T EA. END OF EA. GIRDER TRUSS FROM TRUSS TO TOP PLATE, UNLESS NOTED OTHERWISE.
24. PROVIDE ENERGY HEEL ON TRUSSES PER ARCHITECTURAL DRAWINGS.
25. SEE DETAIL SHEETS FOR CONSTRUCTION DETAILS PERTAINING TO OVER-BUILD FRAMING.

SYMBOLS / LINE LEGEND

- MASONRY WALL
- BEARING WALL
- NON-BEARING WALL
- SHEAR WALL
- ROOF LINE
- OPENING HEADER
- LATERAL STRAP
- MASONRY LINTEL
- L:"Y" SW"X" — SHEAR WALL MARK SHOWING SCHEDULE NUMBER, "X", SHEATHING SIDE, AND SHEAR WALL LENGTH, "Y".

FOOTING SCHEDULE

FTG. ID	DIMENSIONS (IN)			LONGITUDE REINFORCING				TRANSVERSE REINFORCING			
	LENGTH	WIDTH	DEPTH	QTY	SIZE	LENGTH (IN)	SPCNG. (IN)	QTY	SIZE (#)	LENGTH (IN)	SPCNG. (IN)
CF12	CONT.	12	12	2	#4	CONT.	6	--	--	--	--
CF18	CONT.	18	12	2	#4	CONT.	12	--	--	--	--
CF24	CONT.	24	12	3	#4	CONT.	9	--	--	--	--
CF30	CONT.	30	24	4	#4	CNT. T & B	8	--	#4	24	24

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE 2018 IBC AND ALL APPLICABLE STATE AND LOCAL BUILDING CODES. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS STATED IN THESE DOCUMENTS AND ALL DOCUMENTS APPLICABLE TO THIS PROJECT, AND SHALL BE QUALIFIED TO PERFORM THE WORK.
2. THE CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS, EXISTING CONDITIONS, AND NOTED ASSUMPTIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE COORDINATED WITH THE ACTING ENGINEER OF RECORD PRIOR TO PROCEEDING WITH ANY WORK RELATED TO THE DEVIATION.
3. IT IS AGREED THAT THE PROFESSIONAL SERVICES OF THE ENGINEER DO NOT EXTEND TO OR INCLUDE THE REVIEW OR SITE OBSERVATION OF THE CONTRACTORS WORK OR PERFORMANCE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION. PLANS REFLECT A COMPLETED STRUCTURE - CONTRACTOR SHALL PROVIDE SHORING AND BRACING AS REQUIRED TO PROVIDE STRUCTURAL STABILITY AT ALL TIMES DURING CONSTRUCTION.
5. SPECIFIC NOTES AND DETAILS SHALL GOVERN OVER TYPICAL NOTES AND DETAILS. TYPICAL NOTES AND DETAILS SHALL APPLY WHERE SPECIFIC NOTES ARE NOT INDICATED.
6. PRE-FABRICATED TRUSS LAYOUT PLAN AND CALCULATIONS SHALL BE PROVIDED TO ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
7. ALL MATERIALS / PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S REQUIREMENTS.
8. THESE STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS.
9. THE CONTRACTOR SHALL VERIFY ALL CONTRACT DOCUMENTS, SITE ELEVATIONS, DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT / ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.
10. CONSTRUCTION DOCUMENTS ARE VALID FOR A SINGLE USE AT THE PROJECT LOCATION SPECIFIED AND SHALL NOT BE REUSED, COPIED, OR REPRODUCED WITHOUT WRITTEN APPROVAL OF THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.
11. IF MECHANICAL AND ELECTRICAL EQUIPMENT SIZES, WEIGHTS, OR LOCATIONS DO NOT COINCIDE WITH EQUIPMENT SHOWN ON PLANS, COORDINATE ADJUSTMENTS WITH THE STRUCTURAL ENGINEER.
12. SHOP DRAWINGS PREPARED BY SUPPLIERS, SUBCONTRACTORS, ETC., SHALL BE DIMENSIONED, REVIEWED, COORDINATED, AND SIGNED / STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE STRUCTURAL ENGINEER. MANUFACTURED COMPONENTS SUCH AS TRUSSES OR PRECAST CONCRETE SHALL BE ENGINEERED AND STAMPED PRIOR TO SUBMISSION.

FOUNDATION NOTES

1. PROVIDE 1/2" Ø X 10" ANCHOR BOLTS SPACED PER PLAN / SHEAR WALL SCHEDULE. AS A MINIMUM FOR ALL EXTERIOR WALLS & INTERIOR BEARING / SHEAR WALLS, PROVIDE 1/2" Ø X 10" A.B. @ 48" O.C. ANCHOR BOLTS SHALL BE EMBEDDED 7" MIN. INTO CONCRETE. ALL SILL PLATE SHALL BE FASTENED TO THE FOUNDATION USING STANDARD NUTS AND 3" X 3" X 1/4" SLOTTED WASHERS PER IBC 2308.12.8. EACH PIECE OF SILL PLATE SHALL HAVE (2) A.B. MIN., W/ (1) A.B. NOT MORE THAN 12" AND NOT LESS THAN 4" FROM EACH END OF EACH PIECE.
2. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. FOUNDATION HOLDOWNS AND STRAPS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.
4. PROVIDE TEMPORARY BRACING AS REQUIRED TO SUPPORT LOADS IMPOSED UPON THE STRUCTURE DURING THE ERECTION PROCESS.
5. CONCRETE FOOTING SIZES ARE BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF. ALL FOOTINGS SHALL BEAR ON PROPERLY PREPARED SUBGRADE PER THE PROJECT GEOTECHNICAL REPORT
6. CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM COMPRESSIVE STRENGTH, f'_c, OF 4,000 PSI AT 28 DAYS. CONCRETE DESIGN IS BASED ON A COMPRESSIVE STRENGTH, f'_c, OF 2,500 PSI AT 28 DAYS.

STRUCTURAL DRAWING INDEX

DESIGN CRITERIA

1. GENERAL:
   - A. STRUCTURAL DESIGN IS IN ACCORDANCE TO THE "INTERNATIONAL BUILDING CODE" (IBC 2018);
2. DESIGN LOADS:
   - A. DESIGN LOADS ARE IN ACCORDANCE WITH "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" (ASCE 7-16).
   - B. DEAD LOADS
     - a. ROOF:......20 PSF
     - b. EXISTING CMU WALL......45 PSF
   - C. LIVE LOADS
     - a. ROOF:......20 PSF
   - D. SNOW LOAD
     - a. ROOF:......20 PSF
   - E. WIND LOADS
     - a. ULTIMATE WIND SPEED:......105 MPH
     - b. BUILDING TYPE:...... LOW-RISE
     - c. EXPOSURE CATEGORY:...... C
   - F. SEISMIC LOADS
     - a. SEISMIC DESIGN CATEGORY:......D
     - b. SITE CLASS: ......D
     - c. IMPORTANCE FACTOR:......1.25
     - d. OCCUPANCY CATEGORY:......III
3. FOUNDATIONS:
   - A. ALL SOIL / STRUCTURAL FILL SHALL BE PREPARED AND COMPACTED.
   - B. ALL FOOTINGS SHALL BEAR ON PROPERLY PREPARED STRUCTURAL FILL. ALLOWABLE SOIL BEARING PRESSURE FOR PROPERLY PREPARED STRUCTURAL FILL: ......1,500 PSF
4. CONCRETE:
   - A. CONCRETE DESIGN IS IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318).
   - B. ALL REINFORCED CONCRETE SHALL BE NORMAL WEIGHT WITH THE FOLLOWING PROPERTIES:
     - a. TYPE II PORTLAND CEMENT (ASTM C150)
     - b. 28 DAY CONCRETE COMPRESSIVE STRENGTH ......f'c = 4000 PSI
   - C. PROVIDE 3" MIN. CONCRETE COVER FOR REINFORCING IN CONCRETE CAST AGAINST EARTH. PROVIDE 2" COVER TO TOP SURFACE FOR REINFORCING IN SLAB ON GRADE.
   - D. PROVIDE THE FOLLOWING MINIMUM SPLICE LENGTHS FOR REINFORCING:
     - c. #3 REBAR:......24 IN.
     - d. #4 REBAR:......25 IN.
     - e. #5 REBAR:......31 IN.
5. STEEL REINFORCING:
   - A. STEEL REINFORCING SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:
     - a. #3 BAR & SMALLER ......ASTM 615 GRADE 40 (Fy = 40,000 PSI)
     - b. #4 BAR & LARGER......ASTM 615 GRADE 60 (Fy = 60,000 PSI)
     - c. JOINT REINFORCING (GALVANIZED LADDER WIRE)......ASTM A 951
     - d. BENT BAR ANCHOR BOLTS ......ASTM A 36
6. WOOD:
   - A. WOOD DESIGN IS IN ACCORDANCE WITH "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" (NDS) AND "SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC" (SDPWS)
   - B. DIMENSIONAL LUMBER USED FOR WALL CONSTRUCTION SHALL BE STUD GRADE (MIN.). ALL OTHER DIMENSIONAL LUMBER SHALL BE DOUGLAS FIR-LARCH GRADE #2 OR HIGHER WITH THE FOLLOWING MINIMUM PROPERTIES.
     - a. BENDING STRESS...... 900 PSI
     - b. SHEAR STRESS...... 180 PSI
     - c. COMPRESSION PARALLEL TO GRAIN...... 1350 PSI
     - d. COMPRESSION STRESS PERPENDICULAR TO GRAIN...... 625 PSI
     - e. MODULUS OF ELASTICITY...... 1.6E6 PSI
   - C. LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MIN. PROPERTIES:
     - a. BENDING STRESS......2600 PSI
     - b. SHEAR STRESS...... 285 PSI
     - c. MODULUS OF ELASTICITY...... 1.9E6 PSI
   - D. LAMINATED STRAND LUMBER (LSL) SHALL HAVE THE FOLLOWING MIN. PROPERTIES:
     - a. BENDING STRESS...... 2425 PSI
     - b. SHEAR STRESS...... 400 PSI
     - c. MODULUS OF ELASTICITY...... 1.6E6 PSI
   - E. SHEATHING SHALL BE APA RATED, EXPOSURE 1, CDX PLYWOOD OR OSB.
   - F. FRAMING LUMBER SHALL BE DRIED WITH A MAXIMUM MOISTURE CONTENT OF 19%.

COORDINATION SET
FOR REVIEW ONLY
NOT FOR CONSTRUCTION

COMMON ABBREVIATIONS

AB	ANCHOR BOLT	K	KIPS
BLK	BLOCKING	L	LIVE LOAD
CF	CONTINUOUS FOOTING	Lr	ROOF LIVE LOAD
CONC	CONCRETE	MANUF	MANUFACTURER
CONT	CONTINUOUS	MAX	MAXIMUM
D	DEAD LOAD	MIN	MINIMUM
DS	DRAG STRUT	MJ	MOVEMENT JOINT
DT	DRAG TRUSS	PF	PAD FOOTING
E	EARTHQUAKE LOAD	QTY	QUANTITY
EA	EACH	RJ	RIM JOIST
FDTN	FOUNDATION	S	SNOW LOAD
FT	FEET	SIM	SIMILAR
FTG	FOOTING	SW	SHEAR WALL
HDR	HEADER	TPA	TOP PLATE ANCHOR
IN.	INCH	UNO	UNLESS NOTED OTHERWISE
		W	WIND LOAD

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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION
-	-	-

PROJECT NO:	22-003-16
CAD DWG. FILE:	22-003-16.2_CCUSD N. Aud_Struct.dwg
DRAWN BY:	TCT
DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
DATE:	4-20-22

SHEET TITLE:
STRUCTURAL NOTES

S1

Required Special Inspections and Tests of Masonry Construction (IBC Section 1705.4)

Inspection Task (Level B Quality Assurance per TMS 402)	Frequency	
	Continuous	Periodic
Verify compliance with the approved submittals	-	X
As masonry construction begins, verify that the following are in compliance:		
Proportions of site-prepared mortar;	-	X
Construction of mortar joints;	-	X
Grade and size of prestressing tendons and anchorages;	-	X
Location of reinforcement, connectors, and prestressing tendons and anchorages;	-	X
Prestressing technique.	-	X
Prior to grouting, verify that the following are in compliance:		
Grout space	-	X
Grade , type, and size of reinforcement and anchor bolts, and prestressing tendons, and anchorages;	-	X
Placement of reinforcement, connectors, and prestressing tendons and anchorages;	-	X
Proportions of site-prepared grout and prestressing grout for bonded tendons;	-	X
Construction of mortar joints;	-	X
Verify during construction:		
Size and location of structural elements;	-	X
Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction;	-	X
Welding of reinforcement;	X	-
Preparation, construction, and protection of masonry during cold weather (temperature below 40˚F) or hot weather (temperature above 90˚F)	-	X
Application and measurement of prestressing force;	X	-
Placement of grout and prestrssing grout for bonded tendons is in compliance;	X	-
Observe the preparation of grout specimens, mortar specimens, and / or prisms.	-	X
Minimum Tests:		
Verification of slump flow and VSI as delivered to the site in accordance with TMS 402		
Verification of f'm and f'AAC prior to construction, except where specifically exempted by TMS 402		

Required Special Inspections and Tests of Soils (IBC Table 1705.6)

Inspection Task	Frequency	
	Continuous	Periodic
Verify materials below shallow foundations are adquate to achieve the design bearing capacity.	-	X
Verify excavations are extended to proper depth and have reached proper material.	-	X
Perform classification and testing fo compacted fill materials.	-	X
Verify use of proper materials, densities, and lift thicknesses during placement and compaction of compacted fill.	X	-
Prior to palcement of compacted fill, inspect subgrade and verify that the stie has been prepared properly.	-	X

Required Special Inspections and Tests of Structural Wood (IBC Section 1705.5 & Section 1705.12.2)

Inspection Task	Frequency	
	Continuous	Periodic
Special inspection shall be required during field gluing operations of elements of the seismic force-resisting system.	X	-
Special inspections shall be required for nailing, bolting, anchoring, straps, clips, and other fastening of elements of wood shear walls, wood diaphragms, drag struts, braces, shear panels, and hold downs.	-	X
Special inspections of prefabricated wood structural elements and assemblies shall be in accordance with ibc section 1704.2.5.	-	-

Required Special Inspections and Tests of Structural Steel Construction (IBC Section 1705.2)

Inspection Task	Frequency	
	Continuous	Periodic
Steel bolted connections:		
Verify prior to bolting:		
Manufacturer's certifications available for fastener materials;	-	X
Fasteners;	-	X
Proper fasteners selected for the joint detail;	-	X
Proper bolting procedure selected for joint detail;	-	X
Connecting elements;	-	X
Proper storage;	-	X
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used;	X	-
Verify during bolting:		
Fastener assemblies, of suitable condition;	-	X
Joint	-	X
Fastener component;	-	X
Pretensioned fasteners;	-	X
Verify after bolting:		
Document acceptance or rejection of bolted connection;	X	-
Steel welded connections:		
Verify prior to welding:		
Welding procedures specifications and manufacturer certifications for wleding consumables shall be available;	X	
Material identification (type/grade);	-	X
Welder identification system;	-	X
Fit-up of groove welds;	-	X
Configuration and finish of access holes;	-	X
Fit-up of fillet welds;	-	X
Check welding equipment;	-	X
Verify during welding:		
Use of qualified welders;	-	X
Control and handling of welding consumables;	-	X
Cracked tack welds;	-	X
Environmental conditions;	-	X
WPS followed;	-	X
Welding techniques;	-	X
Single-pass fillet welds less than 3/8"	-	X
Single-pass fillet welds equal to or greater than 3/8"	X	-
Multi-pass fillet welds;	X	-
Complete and partial penetration groove welds;	X	-
Verify after welding:		
Welds cleaned;		X
Size, length, and location of welds;	X	-
Welds meet visual acceptance criteria such as: crack prohibition, weld/base-metal fusion, crater cross section, weld profiles, weld size, undercut and porosity;	X	-
Arc strikes, k-area, backing removed and weld tabs removed (if required), repair activities;	X	-
Document acceptance or rejection of welded joint or member;	X	-

STATEMENT OF SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS AND QUALITY ASSURANCE, AS REQUIRED BY SECTION 1704 AND 1705 OF THE 2018 IBC, SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER UNLESS WAIVED BY THE BUILDING OFFICIAL.
2. THE NAMES AND CREDENTIALS OF THE SPECIAL INSPECTORS TO BE USED SHALL BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL.
3. SPECIAL INSPECTOR SHALL REVIEW ALL WORK LISTED IN THE SPECIAL INSPECTION SCHEDULES HEREIN FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS, SPECIFICATIONS, AND 2018 IBC.
4. ALL TESTING AND INSPECTION REPORTS SHALL BE SENT WITHIN 24 HOURS OF THE TEST 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.
5. 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.
6. 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 INSPECTION CONTAINED HEREIN.
7. THE CONTRACTOR SHALL NOTIFY THE DESIGNATED SPECIAL INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST 24 HOURS BEFORE SAID INSPECTION IS REQUIRED.
8. 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.
9. SPECIAL INSPECTION DURING FABRICATION IS NOT REQUIRED IF THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.

Required Special Inspections and Tests of Post-Installed Anchors (IBC Section 1705.1.1)

Inspection Task	Frequency	
	Continuous	Periodic
Expoxy anchors and reinforcing bars:	X	-
Mechanical anchors and screw anchors:	-	X

Required Special Inspections and Tests of Concrete Construction (IBC Table 1705.3)

Inspection Task	Frequency	
	Continuous	Periodic
Inspect reinforcement, including prestressing tendons, and verify placement.	-	X
Reinforcing bar welding:		
Verify weldability of reinforcing bars other than ASTM A706;	-	X
Inspect single-pass fillet welds, maximum 5/16";	-	X
Inspect all other welds;	X	-
Inspect anchors cast in concrete.	-	X
Inspect anchors post-installed in hardened concrete members:		
Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	X	-
Mechanical anchors and adhesive anchors not defined above.	-	X
Verify use of required design mix	-	X
Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	-
Inspect concrete and shotcrete placement for propert application techniques	X	-
Inspect prestressed concrete for:		
Application of prestressing forces; and	X	-
Grouting of bonded prestressing tendons.	X	-
Inspect erection of precast concrete members	-	X
Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	-	X
Inspect formwork for shape, location and dimensions of the concrete member being formed.	-	X

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DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
DATE:	4-20-22

SHEET TITLE:
SPECIAL INSPECTIONS

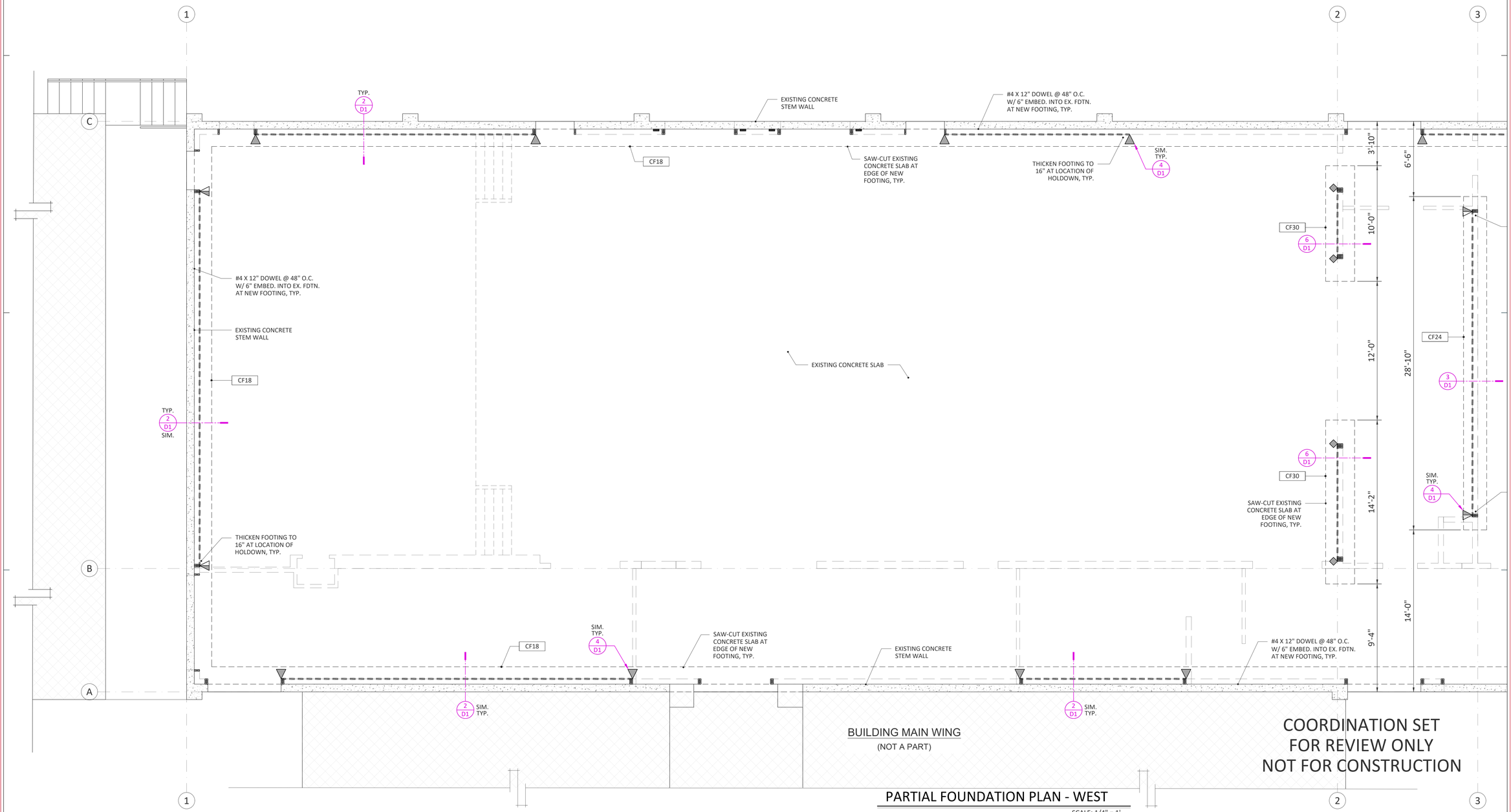
S2

FOUNDATION NOTES

1. PROVIDE 1/2" Ø X 10" ANCHOR BOLTS SPACED PER PLAN / SHEAR WALL SCHEDULE. AS A MINIMUM FOR ALL EXTERIOR WALLS & INTERIOR BEARING / SHEAR WALLS, PROVIDE 1/2" Ø X 10" A.B. @ 48" O.C. ANCHOR BOLTS SHALL BE EMBEDDED 7" MIN. INTO CONCRETE. ALL SILL PLATE SHALL BE FASTENED TO THE FOUNDATION USING STANDARD NUTS AND 3" X 3" X 1/4" SLOTTED WASHERS PER IBC 2308.12.8. EACH PIECE OF SILL PLATE SHALL HAVE (2) A.B. MIN., W/ (1) A.B. NOT MORE THAN 12" AND NOT LESS THAN 4" FROM EACH END OF EACH PIECE.
2. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. FOUNDATION HOLDOWNS AND STRAPS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.
4. PROVIDE TEMPORARY BRACING AS REQUIRED TO SUPPORT LOADS IMPOSED UPON THE STRUCTURE DURING THE ERECTION PROCESS.
5. CONCRETE FOOTING SIZES ARE BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF. ALL FOOTINGS SHALL BEAR ON PROPERLY PREPARED SUBGRADE PER THE PROJECT GEOTECHNICAL REPORT
6. CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM COMPRESSIVE STRENGTH, f'_c, OF 4,000 PSI AT 28 DAYS. CONCRETE DESIGN IS BASED ON A COMPRESSIVE STRENGTH, f'_c, OF 2,500 PSI AT 28 DAYS.

FOOTING SCHEDULE

FTG. ID	DIMENSIONS (IN)			LONGITUDE REINFORCING				TRANSVERSE REINFORCING			
	LENGTH	WIDTH	DEPTH	QTY	SIZE	LENGTH (IN)	SPCNG. (IN)	QTY	SIZE (#)	LENGTH (IN)	SPCNG. (IN)
CF12	CONT.	12	12	2	#4	CONT.	6	--	--	--	--
CF18	CONT.	18	12	2	#4	CONT.	12	--	--	--	--
CF24	CONT.	24	12	3	#4	CONT.	9	--	--	--	--
CF30	CONT.	30	24	4	#4	CNT. T & B	8	--	#4	24	24



PARTIAL FOUNDATION PLAN - WEST

SCALE: 1/4" = 1'

COORDINATION SET
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PROJECT NO: 22-003-16
CAD DWG. FILE: 22-003-16 2_CCUSD N. Aud_Structure
DRAWN BY: TCT
DESIGNED BY: TCT
FIELD CREW:
CHECKED BY:
DATE: 4-20-22

SHEET TITLE:
FOUNDATION PLAN - WEST

S3

HOLDOWN SCHEDULE

- SIMPSON STHD10 HOLDOWN FASTENED TO (2) 2 X STUDS MIN. FOR INTERIOR APPLICATION, USE ALTERNATE HTT4 W/ (18) 16d & 5/8" BOLT EMBEDDED 10" INTO CONCRETE FOOTING W/ EPOXY.
- RJ SIMPSON STHD10RJ HOLDOWN FASTENED TO (2) 2 X STUDS MIN.
- SIMPSON STHD14 HOLDOWN FASTENED TO (2) 2 X STUDS MIN. FOR INTERIOR APPLICATION, USE ALTERNATE HTT5 W/ (26) 10d & 5/8" BOLT EMBEDDED 12" INTO CONCRETE FOOTING W/ EPOXY.
- RJ SIMPSON STHD14RJ HOLDOWN FASTENED TO (2) 2 X STUDS MIN.
- SIMPSON HDU8-SDS2.5 HOLDOWN FASTENED TO (3) 2 X STUDS MIN. ANCHOR TO CONCRETE FOUNDATION USING SIMPSON SB7/8" X 24" W/ 18" MIN. EMBEDMENT (PER MANUF. RECOMMENDATIONS). FOR RIM JOIST INSTALLATION, USE CNW7/8 COUPLER NUT W/ 7/8" ROD EXTENTION.
- SIMPSON MST60 W/ (26) 10d FASTENERS (SPAN FLOOR), U.N.O.
- SIMPSON CS14 W/ 18" END LENGTH; W/ (26) 10d FASTENERS;

FOUNDATION NOTES

1. PROVIDE 1/2" Ø X 10" ANCHOR BOLTS SPACED PER PLAN / SHEAR WALL SCHEDULE. AS A MINIMUM FOR ALL EXTERIOR WALLS & INTERIOR BEARING / SHEAR WALLS, PROVIDE 1/2" Ø X 10" A.B. @ 48" O.C. ANCHOR BOLTS SHALL BE EMBEDDED 7" MIN. INTO CONCRETE. ALL SILL PLATE SHALL BE FASTENED TO THE FOUNDATION USING STANDARD NUTS AND 3" X 3" X 1/4" SLOTTED WASHERS PER IBC 2308.12.8. EACH PIECE OF SILL PLATE SHALL HAVE (2) A.B. MIN., W/ (1) A.B. NOT MORE THAN 12" AND NOT LESS THAN 4" FROM EACH END OF EACH PIECE.
2. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. FOUNDATION HOLDOWNS AND STRAPS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.
4. PROVIDE TEMPORARY BRACING AS REQUIRED TO SUPPORT LOADS IMPOSED UPON THE STRUCTURE DURING THE ERECTION PROCESS.
5. CONCRETE FOOTING SIZES ARE BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF. ALL FOOTINGS SHALL BEAR ON PROPERLY PREPARED SUBGRADE PER THE PROJECT GEOTECHNICAL REPORT
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FOOTING SCHEDULE

FTG. ID	DIMENSIONS (IN)			LONGITUDE REINFORCING				TRANSVERSE REINFORCING			
	LENGTH	WIDTH	DEPTH	QTY	SIZE	LENGTH (IN)	SPCNG. (IN)	QTY	SIZE (#)	LENGTH (IN)	SPCNG. (IN)
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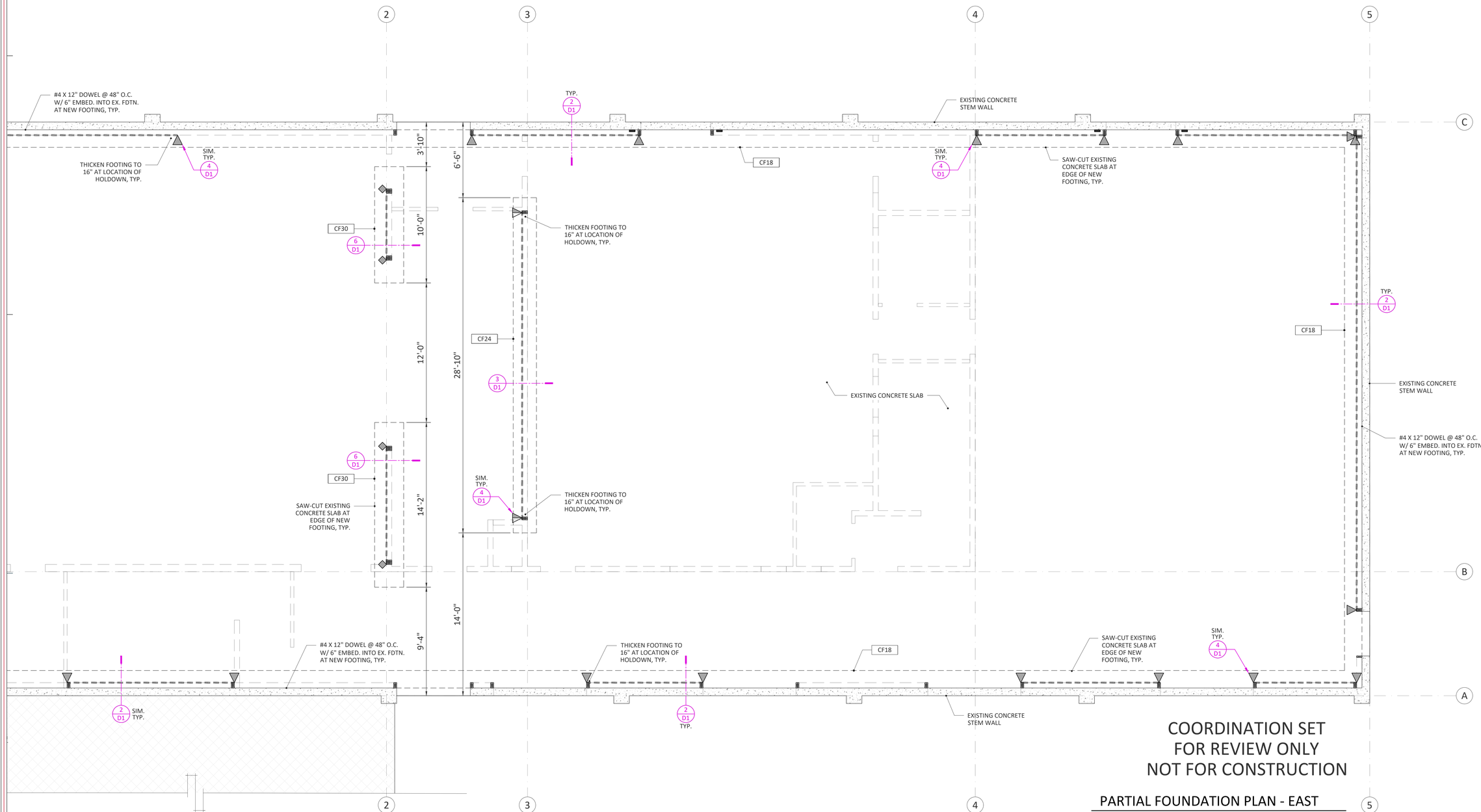
CF30	CONT.	30	24	4	#4	CNT. T & B	8	--	#4	24	24



COORDINATION SET
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PARTIAL FOUNDATION PLAN - EAST

SCALE: 1/4" = 1'

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1	-	-

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DRAWN BY: TCT
DESIGNED BY: TCT
FIELD CREW:
CHECKED BY:
DATE: 4-20-22

SHEET TITLE:
FOUNDATION PLAN - EAST

S4

SHEAR WALL SCHEDULE

SEE DETAILS: 10/D1

SW-ID	SHEATHING	PANEL EDGE FASTENER	FIELD FASTENER	SILL PLATE ANCHORAGE	BOUNDARY MEMBER
SW1	7/16" STRUCTURAL SHEATHING, ONE SIDE	8d NAILS @ 6" O.C. W/ 2" NOM. FRAMING MEMBER @ ADJOINING EDGES	8d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 36" O.C. TO WOOD FLR: 16d @ 6" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN
SW2	7/16" STRUCTURAL SHEATHING, ONE SIDE	8d NAILS @ 4" O.C. W/ 2" NOM. FRAMING MEMBER @ ADJOINING EDGES	8d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 30" O.C. TO WOOD FLR: 16d @ 6" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN
SW3	7/16" STRUCTURAL SHEATHING, ONE SIDE	8d NAILS STAGGERED @ 3" O.C. W/ 3" NOM. FRAMING MEMBER @ ADJOINING EDGES	8d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 18" O.C. TO WOOD FLR: 16d @ 4" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN
SW4	19/32" STRUCTURAL SHEATHING, ONE SIDE	10d NAILS STAGGERED @ 3" O.C. W/ 3" NOM. FRAMING MEMBER @ ADJOINING EDGES	10d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 16" O.C. TO WOOD FLR: 16d @ 3" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN

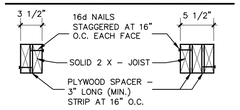
NOTE: "-#" INDICATES SHEAR WALL NAILING PATTER TO BE CONTINUOUS AROUND OPENINGS.

NON-BRG. HEADER SCHEDULE (Exterior Walls Only)

Size	Max. Span
(2) 2 x 6	Up to 6'-0" Max
(2) 2 x 8	Up to 8'-0" Max
(2) 2 x 10	Up to 10'-0" Max

Note: This schedule may be used only in situations where no other header/lintel has been called out.

BUILT-UP HEADER DETAIL



TYPICAL JOIST SCHEDULE FOR SIMPLE FRAMING

SIMPLE ROOF FRAMING OR ROOF OVERBUILD FRAMING		
MAXIMUM HORIZONTAL SPAN	JOIST	RIDGE / VALLEY / HIP FRAMING
4'-0"	2 X 4	2 X 4
9' - 6"	2 X 6	2 X 8
13' - 0"	2 X 8	2 X 10
16' - 0"	2 X 10	2 X 12
18' - 6"	2 X 12	2 - 2 X 12

SIMPLE CEILING FRAMING		
MAXIMUM HORIZONTAL SPAN	CEILING JOIST	
	NON-ACCESSIBLE	ATTIC - ACCESSIBLE
6' - 0"	2 X 4	2 X 4
14' - 0"	2 X 6	2 X 8
20' - 0"	2 X 8	2 X 10

NOTE:
1. CONNECT FRAMING AT OVERBUILD AREAS PER TYPICAL DETAILS
2. FRAMING NOT BEARING ON SUPPORT SHALL BE HUNG USING SIMPSON LU, U, LUP, OR LSSU TYPE HANGERS DESIGNATED FOR THE JOIST SIZE AT SPANS LESS THAN 10'-0" SIMPSON A34 OR (4) 16d NAILS MAY BE USED AT SPANS LESS THAN 5'-6" (3) 16d NAILS MAY BE USED.

HOLDOWN SCHEDULE

- SIMPSON STHD10 HOLDOWN FASTENED TO (2) 2 X STUDS MIN. FOR INTERIOR APPLICATION, USE ALTERNATE HTT4 W/ (18) 16d & 5/8" BOLT EMBEDDED 10" INTO CONCRETE FOOTING W/ EPOXY.
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- SIMPSON MST60 W/ (26) 10d FASTENERS (SPAN FLOOR), U.N.O.
- SIMPSON CS14 W/ 18" END LENGTH; W/ (26) 10d FASTENERS;

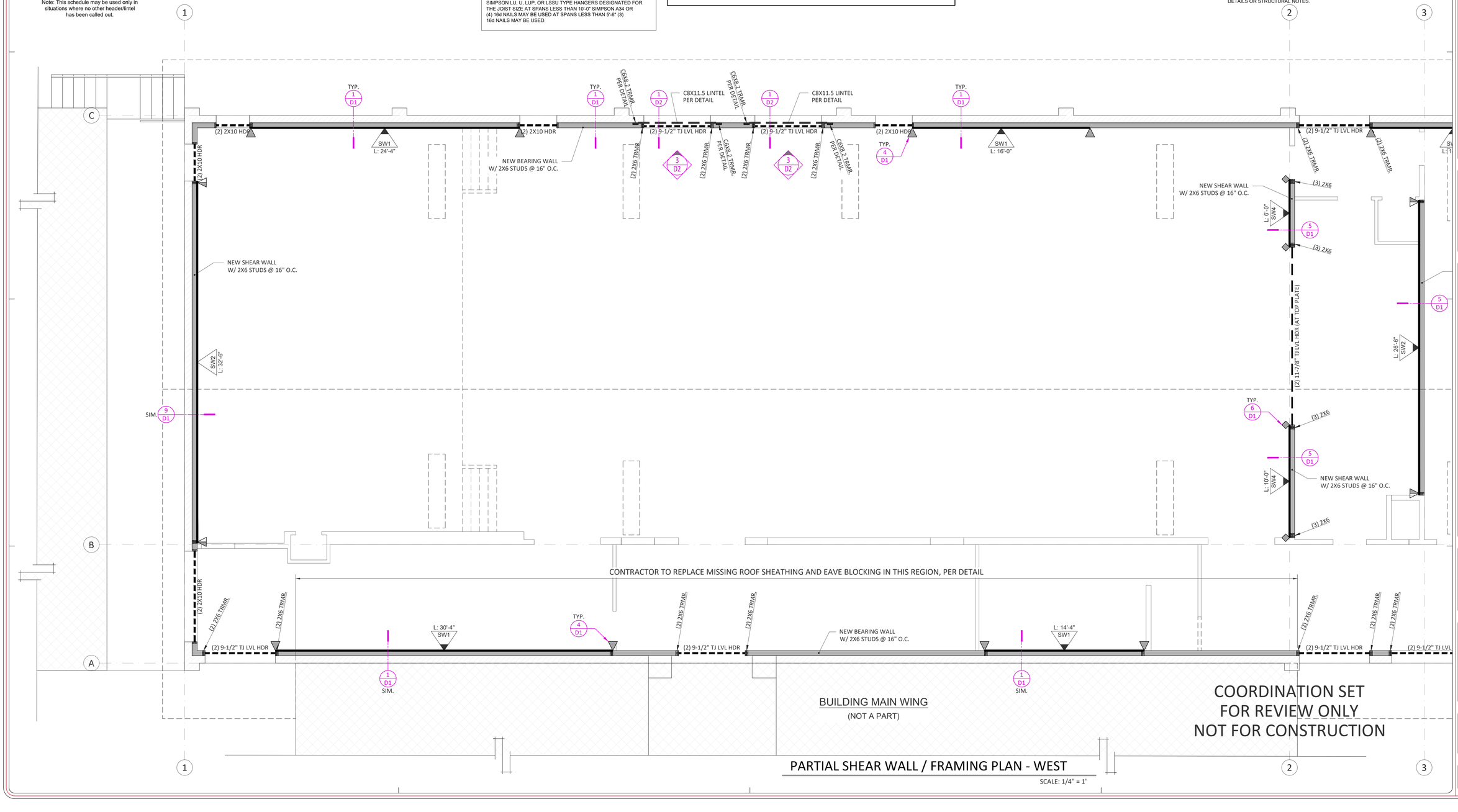
SYMBOLS / LINE LEGEND

- MASONRY WALL
- BEARING WALL
- NON-BEARING WALL
- SHEAR WALL
- ROOF LINE
- OPENING HEADER
- LATERAL STRAP
- MASONRY LINTEL
- L: "Y" SW"X" — SHEAR WALL MARK SHOWING SCHEDULE NUMBER, "X", SHEATHING SIDE, AND SHEAR WALL LENGTH, "Y".

MINIMUM NAILING SCHEDULE - U.N.O.

CONNECTION	NAILING
JOIST OR TRUSS BEARING ON SILL OR GIRDER, TOENAIL	3 - 8d
BRIDGING TO JOIST , TOENAIL EACH END	2 - 8d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d AT 16" O.C.
TOP PLATE TO STUD, END NAIL TO EACH STUD	2 - 16d
STUD TO SOLE PLATE	4 8d TOENAIL OR 2 16d, END NAIL
DOUBLE STUDS, FACE NAIL	16d NAILS AT 24" O.C.
DOUBLE TOP PLATES, FACE NAIL	16d NAILS AT 16" O.C.
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2 - 16d
CONTINUOUS HEADER, TWO PIECES	16d NAILS AT 16" O.C. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	3 - 8d
CONTINUOUS HEADER TO STUD, TOENAIL	4 - 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3 - 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3 - 16d
RAFTER OR TRUSS TO PLATE, FACE NAIL	3 - 8d
1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2 - 8d
BUILT-UP CORNER STUDS	16d AT 24" O.C.

NOTE:
1. MINIMUM NAILING SPECIFIED HEREIN SHALL BE PROVIDED U.N.O. ON PLANS, DETAILS OR STRUCTURAL NOTES.



PARTIAL SHEAR WALL / FRAMING PLAN - WEST

SCALE: 1/4" = 1'

EXCEL DESIGN ASSOCIATES
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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION
1	-	-

PROJECT NO:	22-003-16
CAD DWG. FILE:	22-003-16 2_CCUSD N. Aud_Structural
DRAWN BY:	TCT
DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
DATE:	4-20-22

SHEET TITLE:
SHEAR WALL PLAN - WEST

S5

SHEAR WALL SCHEDULE

SEE DETAILS: 10/D1

SW-ID	SHEATHING	PANEL EDGE FASTENER	FIELD FASTENER	SILL PLATE ANCHORAGE	BOUNDARY MEMBER
SW1	7/16" STRUCTURAL SHEATHING, ONE SIDE	8d NAILS @ 6" O.C. W/ 2" NOM. FRAMING MEMBER @ ADJOINING EDGES	8d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 36" O.C. TO WOOD FLR: 16d @ 6" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN
SW2	7/16" STRUCTURAL SHEATHING, ONE SIDE	8d NAILS @ 4" O.C. W/ 2" NOM. FRAMING MEMBER @ ADJOINING EDGES	8d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 30" O.C. TO WOOD FLR: 16d @ 6" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN
SW3	7/16" STRUCTURAL SHEATHING, ONE SIDE	8d NAILS STAGGERED @ 3" O.C. W/ 3" NOM. FRAMING MEMBER @ ADJOINING EDGES	8d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 18" O.C. TO WOOD FLR: 16d @ 4" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN
SW4	19/32" STRUCTURAL SHEATHING, ONE SIDE	10d NAILS STAGGERED @ 3" O.C. W/ 3" NOM. FRAMING MEMBER @ ADJOINING EDGES	10d NAILS @ 12" O.C.	TO CONC.: 1/2" X 10" A.B. @ 16" O.C. TO WOOD FLR: 16d @ 3" O.C. (STAGGER)	WALL COLUMNS & HOLDOWNS PER PLAN

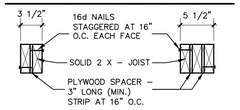
NOTE: "-P" INDICATES SHEAR WALL NAILING PATTER TO BE CONTINUOUS AROUND OPENINGS.

NON-BRG. HEADER SCHEDULE

Size	Max. Span
(2) 2 x 6	Up to 6'-0" Max
(2) 2 x 8	Up to 8'-0" Max
(2) 2 x 10	Up to 10'-0" Max

Note: This schedule may be used only in situations where no other header/lintel has been called out.

BUILT-UP HEADER DETAIL



TYPICAL JOIST SCHEDULE FOR SIMPLE FRAMING

SIMPLE ROOF FRAMING OR ROOF OVERBUILD FRAMING

MAXIMUM HORIZONTAL SPAN	JOIST	RIDGE / VALLEY / HIP FRAMING
4'-0"	2 X 4	2 X 4
9' - 6"	2 X 6	2 X 8
13' - 0"	2 X 8	2 X 10
16' - 0"	2 X 10	2 X 12
18' - 6"	2 X 12	2 - 2 X 12

SIMPLE CEILING FRAMING

MAXIMUM HORIZONTAL SPAN	CEILING JOIST	
	NON-ACCESSIBLE	ATTIC - ACCESSIBLE
6' - 0"	2 X 4	2 X 4
14' - 0"	2 X 6	2 X 8
20' - 0"	2 X 8	2 X 10

NOTE:
1. CONNECT FRAMING AT OVERBUILD AREAS PER TYPICAL DETAILS
2. FRAMING NOT BEARING ON SUPPORT SHALL BE HUNG USING SIMPSON LU, U, LUP, OR LSSU TYPE HANGERS DESIGNATED FOR THE JOIST SIZE AT SPANS LESS THAN 10'-0" SIMPSON A34 OR (4) 16d NAILS MAY BE USED AT SPANS LESS THAN 5'-6" (3) 16d NAILS MAY BE USED.

HOLDOWN SCHEDULE

- SIMPSON STHD10 HOLDOWN FASTENED TO (2) 2 X STUDS MIN. FOR INTERIOR APPLICATION, USE ALTERNATE HTT4 W/ (18) 16d & 5/8" BOLT EMBEDDED 10" INTO CONCRETE FOOTING W/ EPOXY.
- RJ SIMPSON STHD10RJ HOLDOWN FASTENED TO (2) 2 X STUDS MIN.
- SIMPSON STHD14 HOLDOWN FASTENED TO (2) 2 X STUDS MIN. FOR INTERIOR APPLICATION, USE ALTERNATE HTT5 W/ (26) 10d & 5/8" BOLT EMBEDDED 12" INTO CONCRETE FOOTING W/ EPOXY.
- RJ SIMPSON STHD14RJ HOLDOWN FASTENED TO (2) 2 X STUDS MIN.
- SIMPSON HDU8-SDS2.5 HOLDOWN FASTENED TO (3) 2 X STUDS MIN. ANCHOR TO CONCRETE FOUNDATION USING SIMPSON SB7/8" X 24" W/ 18" MIN. EMBEDMENT (PER MANUF. RECOMMENDATIONS). FOR RIM JOIST INSTALLATION, USE CNW7/8 COUPLER NUT W/ 7/8" ROD EXTENTION.
- SIMPSON MST60 W/ (26) 10d FASTENERS (SPAN FLOOR), U.N.O.
- SIMPSON CS14 W/ 18" END LENGTH; W/ (26) 10d FASTENERS;

SYMBOLS / LINE LEGEND

- MASONRY WALL
- BEARING WALL
- NON-BEARING WALL
- SHEAR WALL
- ROOF LINE
- OPENING HEADER
- LATERAL STRAP
- MASONRY LINTEL
- L: "Y" SW"X" — SHEAR WALL MARK SHOWING SCHEDULE NUMBER, "X", SHEATHING SIDE, AND SHEAR WALL LENGTH, "Y".

MINIMUM NAILING SCHEDULE - U.N.O.

CONNECTION	NAILING
JOIST OR TRUSS BEARING ON SILL OR GIRDER, TOENAIL	3 - 8d
BRIDGING TO JOIST , TOENAIL EACH END	2 - 8d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d AT 16" O.C.
TOP PLATE TO STUD, END NAIL TO EACH STUD	2 - 16d
STUD TO SOLE PLATE	4 8d TOENAIL OR 2 16d, END NAIL
DOUBLE STUDS, FACE NAIL	16d NAILS AT 24" O.C.
DOUBLE TOP PLATES, FACE NAIL	16d NAILS AT 16" O.C.
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2 - 16d
CONTINUOUS HEADER, TWO PIECES	16d NAILS AT 16" O.C. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOENAIL	3 - 8d
CONTINUOUS HEADER TO STUD, TOENAIL	4 - 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3 - 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3 - 16d
RAFTER OR TRUSS TO PLATE, FACE NAIL	3 - 8d
1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2 - 8d
BUILT-UP CORNER STUDS	16d AT 24" O.C.

NOTE:
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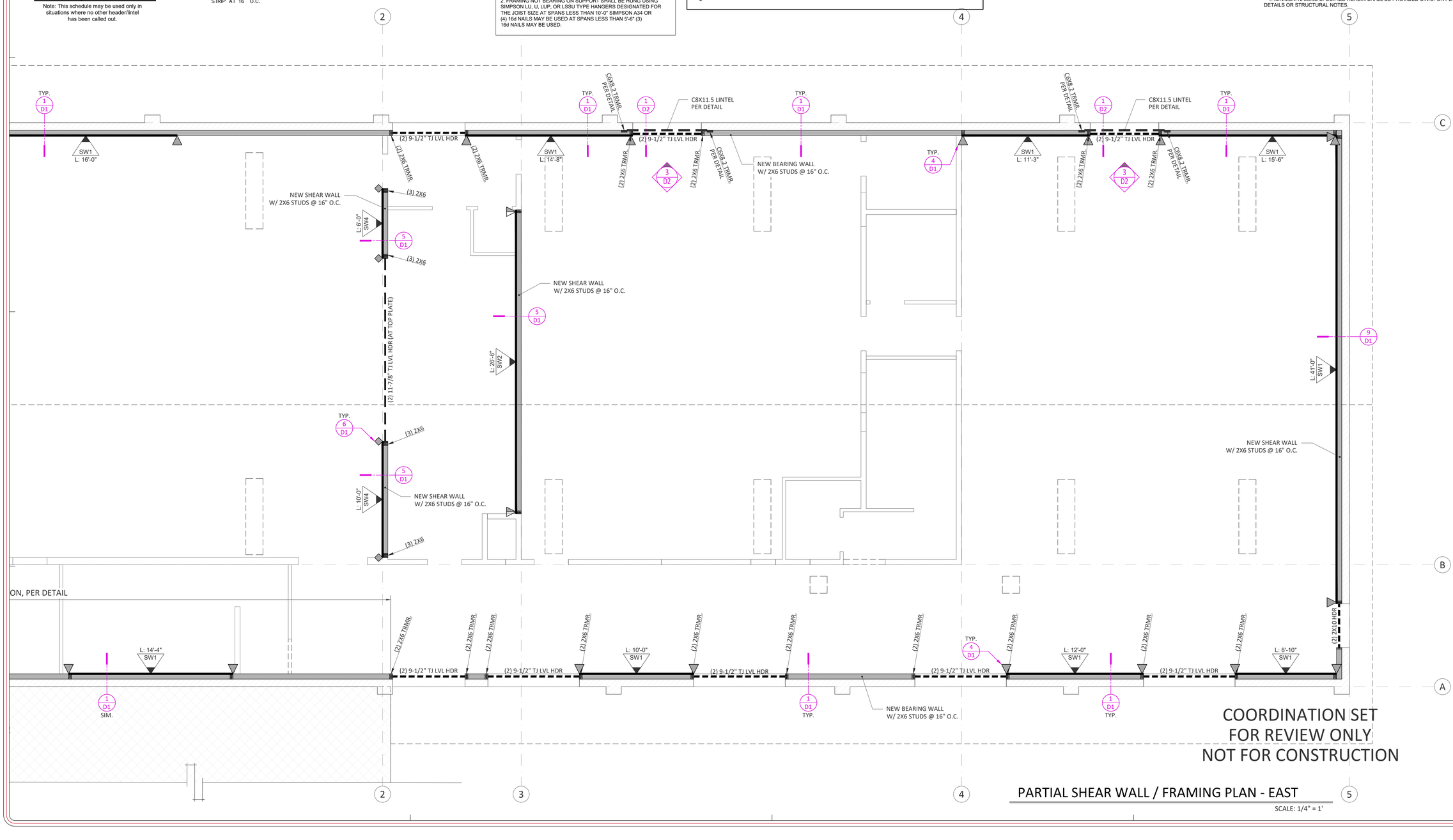

COORDINATION SET
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PARTIAL SHEAR WALL / FRAMING PLAN - EAST

SCALE: 1/4" = 1'

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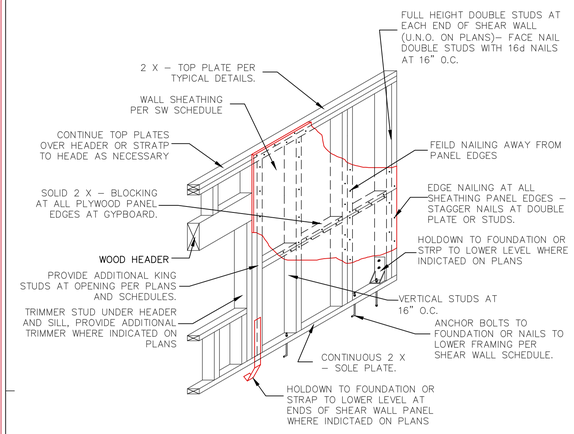
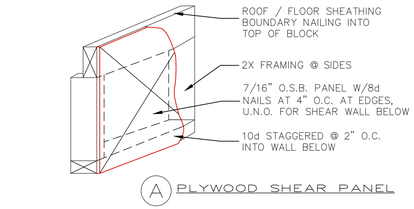
SHEET TITLE:
SHEAR WALL PLAN - EAST

S6



SCALE: N.T.S.

SHEAR WALL FRAMING, TYP. | 10

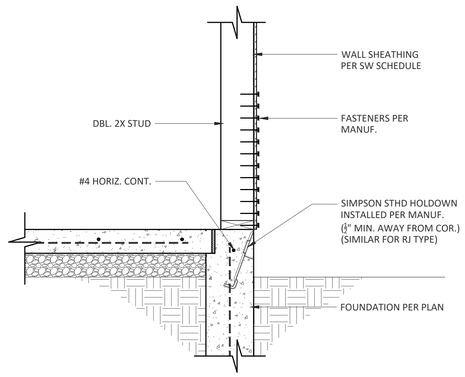


NOTE:

1. SHEAR PANEL USING EITHER PLYWOOD PANEL OR PREFAB TRUSS BLOCKING TO BE INSTALLED PER DETAILS U.N.O.
2. BLOCK'G AT TOP EDGE TO BE VERTICAL ☒ WHERE INSTALLED. UNDER LOAD BEARING WALLS. OTHER–WISE BLOCKING MAY LAY VERTICAL OR HORIZONTAL. ☒
3. TRUSS MANUFACTURER TO DESIGN PREFAB BLOCKING FOR LATERAL FORCE.

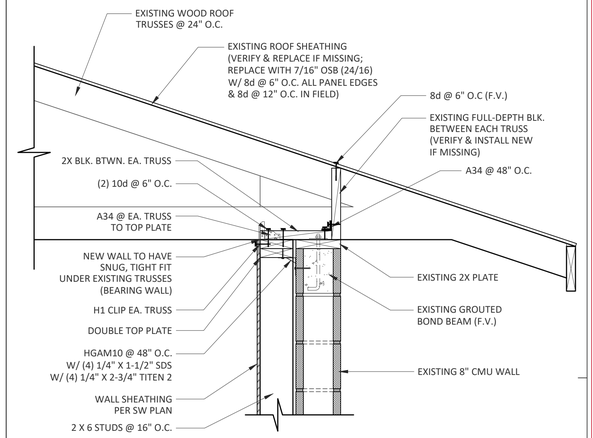
SCALE: N.T.S.

TRUSS BLOCK / SHEAR PANEL, TYP. | 7



SCALE: N.T.S.

STHD INSTALLATION - TYP. (SIM.) | 4



SCALE: N.T.S.

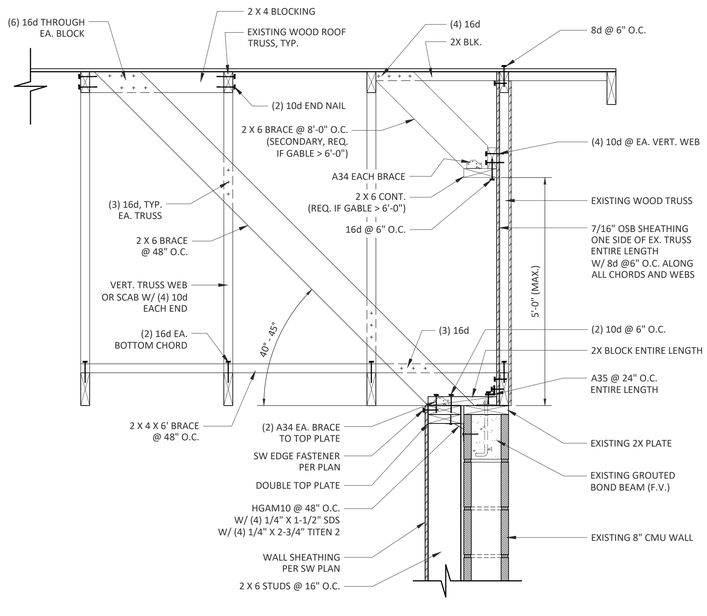
NEW BEARING WALL ROOF / MAS. ANCHOR | 1

SCALE: N.T.S.

NOT USED | 11

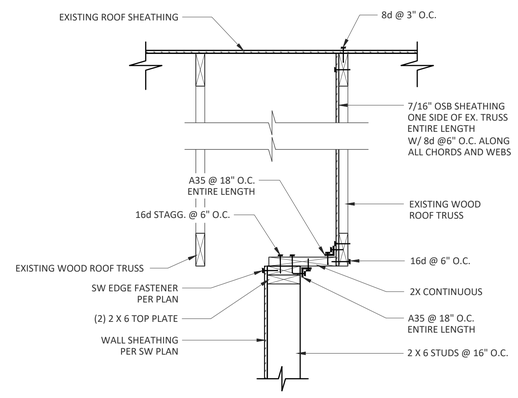
SCALE: N.T.S.

NOT USED | 8



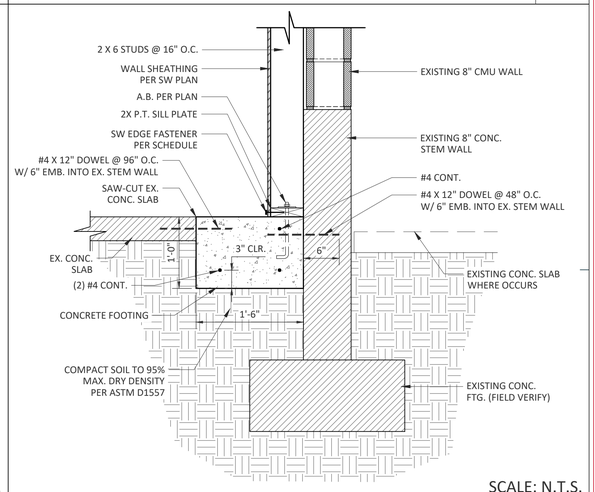
SCALE: N.T.S.

GABLE-END BRACE / NEW WALL & MASONRY ANCHORAGE | 9



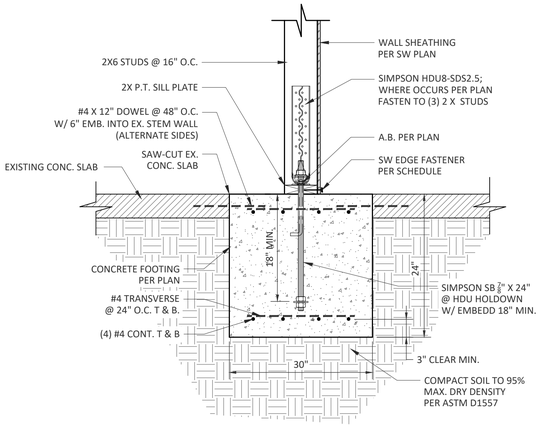
SCALE: N.T.S.

NEW SHEAR WALL / ROOF ATTACHMENT | 5



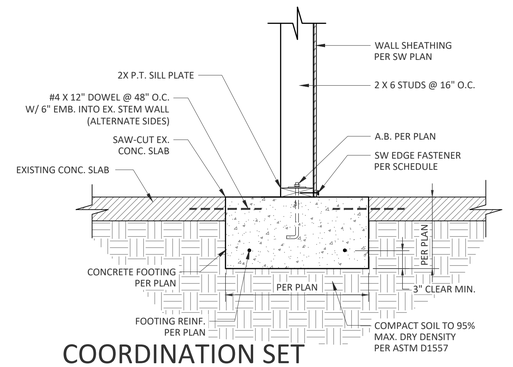
SCALE: N.T.S.

NEW BEARING WALL FOOTING / ANCHOR | 2



SCALE: N.T.S.

NEW SHEAR WALL / FOOTING ANCHOR | 6



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SCALE: N.T.S.

NEW SHEAR WALL / FOOTING ANCHOR | 3

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DRAWN BY:	TCT
DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
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SHEET TITLE:
STRUCTURAL DETAILS

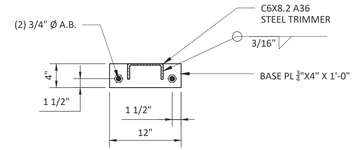
SD1

SCALE: N.T.S.

DETAIL | 10

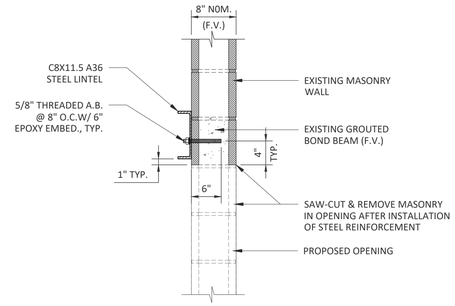
SCALE: N.T.S.

DETAIL | 7



SCALE: N.T.S.

DETAIL | 4



SCALE: N.T.S.

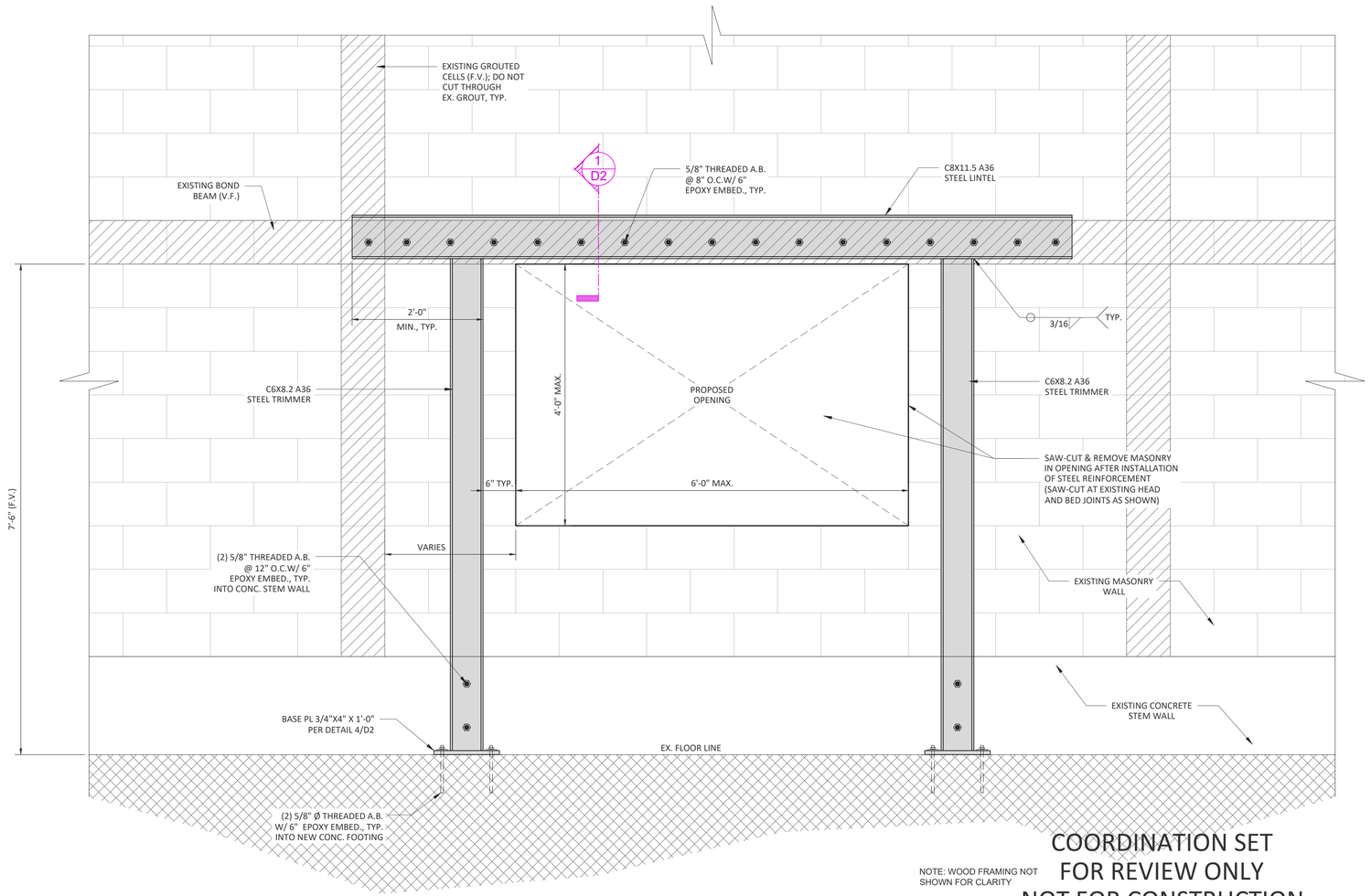
DETAIL | 1

SCALE: N.T.S.

DETAIL | 11

SCALE: N.T.S.

DETAIL | 12



NOTE: WOOD FRAMING NOT
SHOWN FOR CLARITY

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SCALE: N.T.S.

NEW WINDOW IN EXISTING MASONRY WALL - STRUCTURAL RETROFIT | 3

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SHEET TITLE:
STRUCTURAL DETAILS

SD2

PROJECT ELECTRICAL NOTES

GENERAL NOTES:

A. DESCRIPTION

A.1. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND TRANSPORTATION AS REQUIRED TO PROPERLY INSTALL A COMPLETE AND OPERABLE SYSTEM.

B. RULES AND REGULATIONS

B.1. ALL WORK AND MATERIALS SHALL BE INSTALLED AS SHOWN HEREIN SPECIFIED.

B.2. THE LATEST EDITIONS OF THE FOLLOWING SPECIFICATIONS, STANDARDS, AND AMENDMENTS, AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION, SHALL FORM A PART OF THIS SPECIFICATION THE SAME AS IF HEREIN WRITTEN OUT IN FULL. ALL MATERIALS AND INSTALLATIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS THEREOF:

- B.2.a. NFPA (NATIONAL FIRE PROTECTION ASSOCIATION), PUBLICATION NUMBER 70, "NATIONAL ELECTRICAL CODE"; PUB. NO. 72E, "AUTOMATIC FIRE DETECTORS".
- B.2.b. UL (UNDERWRITER LABORATORIES, INC.)
- B.2.c. NEMA (NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION).
- B.2.d. UBC (UNIFORM BUILDING CODE).
- B.2.e. IBC (INTERNATIONAL BUILDING CODE).
- B.2.f. IFC (INTERNATIONAL FIRE CODE).
- B.2.g. IECC (INTERNATIONAL ENERGY CONSERVATION CODE).
- B.2.h. IEC (INTERNATIONAL ELECTRICAL CODE).
- B.2.i. STATE AND LOCAL BUILDING AUTHORITY CODES.

C. PERMITS AND INSPECTIONS

C.1. ELECTRICAL CONTRACTOR SHALL INCLUDE ALL UTILITY COMPANY CHARGES IN BASE BID.

D. WORKMANSHIP AND MATERIAL

D.1. WORKMANSHIP SHALL BE OF THE BEST QUALITY AND NONE BUT THE COMPETENT PERSONNEL SKILLED IN THEIR TRADE SHALL BE EMPLOYED. THE CONTRACTOR SHALL FURNISH THE SERVICES OF AN EXPERIENCED SUPERINTENDENT, WHO WILL BE IN CHARGE OF THE EXECUTION OF WORK, UNTIL COMPLETED AND ACCEPTED.

D.2. UNLESS OTHERWISE HEREIN AFTER SPECIFIED, ALL MATERIALS AND EQUIPMENT UNDER THIS DIVISION OF THE SPECIFICATION SHALL BE NEW, OF BEST GRADE, AND AS LISTED IN PRINTED CATALOGS OF THE MANUFACTURER. EACH ARTICLE OF IT'S KIND SHALL BE THE STANDARD PRODUCT OF A SINGLE MANUFACTURER.

D.3. THE OWNER'S REPRESENTATIVE SHALL HAVE THE RIGHT TO ACCEPT OR REJECT ANY MATERIAL, EQUIPMENT, AND / OR WORKMANSHIP AND DETERMINE WHEN THEY HAVE COMPLIED WITH THE REQUIREMENTS HEREIN SPECIFIED.

D.4. A;; MANUFACTURED MATERIALS SHALL BE CLEARLY MARKED OR STAMPED WITH THE MANUFACTURER'S NAME AND RATING.

D.5. REFERENCE TO STANDARDS ARE INTENDED TO BE THE LATEST REVISION OF THE STANDARD SPECIFIED OR THAT ACCEPTED BY THE AUTHORITY HAVING JURISDICTION.

E. MANUFACTURER'S RECOMMENDATIONS

E.1. EQUIPMENT INSTALLED UNDER THIS DIVISION OF THE SPECIFICATIONS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR HEREIN SPECIFIED.

F. GUARANTEE

F.1. ALL MATERIALS AND EQUIPMENT PROVIDED AND INSTALLED UNDER THIS SECTION SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR. SHOULD ANY TROUBLE OR MALFUNCTIONS DEVELOP DURING THIS PERIOD DUE DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP, THE CONTRACTOR WILL BE HELD LIABLE AND SHALL FURNISH LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO CORRECT THE TROUBLE OR MALFUNCTION WITHOUT ADDITIONAL COST TO THE OWNER. ALL DEFECTIVE MATERIAL OR INFERIOR WORKMANSHIP NOTICED DURING THE TIME OF INSTALLATION SHALL BE CORRECTED IMMEDIATELY TO THE ENTIRE SATISFACTION OF THE ARCHITECT AND OWNER, AT NO ADDITIONAL COST.

G. DEFINITIONS

G.1. FURNISH: TO SUPPLY, DELIVER, UNLOAD, AND INSPECT FOR DAMAGE.

G.2. INSTALL: TO UNPACK, ASSEMBLE, ERECT, APPLY, PLACE, FINISH, CURE, PROTECT, CLEAN, AND MAKE READY FOR USE.

G.3. PROVIDE: TO FURNISH AND INSTALL

H. SUBMITTALS

H.1. PROVIDE SHOP DRAWINGS AND MANUFACTURER'S LITERATURE OR MATERIALS AND EQUIPMENT AS REQUIRED IN THE GENERAL CONDITIONS, AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND AS LISTED BELOW:

H.2. CATALOG CUTS
- H.2.a. CONDUIT AND FITTINGS
  - H.2.a.1. RIGID METAL
  - H.2.a.2. METAL CLAD (MC) CABLE
  - H.2.a.3. INTERMEDIATE METAL
  - H.2.a.4. ELECTRICAL METALLIC TUBING (EMT)
  - H.2.a.5. FLEXIBLE METALLIC
  - H.2.a.6. LIQUID TIGHT FLEXIBLE METALLIC
  - H.2.a.7. FITTINGS (EACH TYPE)
- H.2.b. WIRE AND CABLE
- H.2.c. SWITCHES
  - H.2.c.1. SNAP
  - H.2.c.2. LOCATOR
  - H.2.c.3. PILOT
  - H.2.c.4. DIMMER
- H.2.d. RECEPTACLE OUTLETS
  - H.2.d.1. GENERAL PURPOSE
  - H.2.d.2. GROUND FAULT CIRCUIT INTERRUPTION
- H.2.e. TRIM AND COVER PLATES (EACH TYPE AND STYLE)
- H.2.f. PANEL BOARDS
- H.2.g. CIRCUIT BREAKERS (EACH SIZE AND TYPE)
- H.2.h. SAFETY SWITCHES
- H.2.i. FUSES (EACH SIZE AND TYPE
- H.2.j. LIGHTING FIXTURES
- H.2.k. NAMEPLATES
- H.2.l. PHOTOELLECTRIC SWITCHES

H.3. SHOP DRAWINGS
- H.3.a. PANEL BOARDS
- H.3.b. LIGHTING FIXTURES

THE ABOVE IS A STANDARD SUBMITTAL REQUIREMENT LIST. ELECTRICAL CONTRACTOR SHALL SUBMIT ALL APPLICABLE ITEMS FOR REVIEW. MATERIAL NOT SUBMITTED AND APPROVED BY ARCHITECT OR OWNER'S REPRESENTATIVE SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTORS EXPENSE IF DIRECTED BY THE ARCHITECT OR THE OWNER'S REPRESENTATIVE.

MATERIALS:

A. GENERAL

A.1. MATERIALS AND EQUIPMENT SHALL BE STANDARD CATALOGED PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE MANUFACTURE OF THE PRODUCT UL LISTED, AND SHALL BE THE LATEST STANDARD DESIGN THAT CONFORMS TO SPECIFIED MATERIALS AND EQUIPMENT.

B. RACEWAY

B.1. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (TYPE MC) SHALL BE USED IN INTERIOR DRY LOCATIONS.

B.2. GALVANIZED FLEXIBLE STEEL OR LIQUID TIGHT STEEL CONDUIT SHALL BE USED FOR CONNECTIONS TO MECHANICAL EQUIPMENT AND TRANSFORMERS OR AS INDICATED. LIQUID TIGHT CONDUIT SHALL BE USED IN EXTERIOR OR DAMP LOCATIONS.

B.3. SCHEDULE 40 PVC (WITH PVC COATED OR VINYL TAPE DOUBLE WRAPPED RIGID STEEL ELBOWS AND RISES) SHALL BE USED FOR RUNS THAT ARE IN CONTACT WITH THE EARTH OR CONCRETE.

B.4. 1/2" CONDUIT SHALL BE THE MINIMUM SIZE CONDUIT.

B.5. OUTDOOR AND WET OR DAMP LOCATIONS: PROVIDE RIGID STEEL CONDUIT. PROVIDE CAST METAL OR PVC OUTLET, JUNCTION, AND PULL BOXES.

C. FITTINGS

C.1. ALL FITTINGS SHALL BE STEEL / MALLEABLE IRON WITH INSULATING BUSHINGS.

D. OUTLET AND JUNCTION BOXES

D.1. BOXES IN INTERIOR DRY LOCATION SHALL BE GALVANIZED ONE-PIECE PRESSED STEEL, KNOCKOUT TYPE, NOT LESS THAN 4" SQUARE AND 2-1/8" DEEP; APPLETON, RACO, OR EQUAL.

D.2. BOXES SHALL BE EQUIPPED WITH PLASTER RINGS, EXTENSION RINGS, AND FIXTURE STUDS AS REQUIRED.

D.3. PROVIDE FLUSH MOUNTING OUTLET BOX IN FINISHED AREAS.

D.4. BOXES FOR STRUCTURED CABLING (DATA & PHONE) IN INTERIOR DRY LOCATIONS SHALL BE GALVANIZED ONE-PIECE PRESSED STEEL, KNOCKOUT TYPE 4-11/16" X 2-1/8"; RACO OR EQUAL.

D.5. ALL BOXES IN FINISHED SPACES SHALL BE PROVIDED WITH MUD RINGS AS REQUIRED FOR THE DEVICE AND WALL MATERIAL.

E. CONDUCTORS

E.1. ALL CONDUCTORS SHALL BE SOFT DRAWN, ANNEALED COPPER IN RACEWAY SIZED AS SHOWN ON THE PLANS. ALL CONDUCTORS TO BE MINIMUM #12 AWG U.C.O. #8 AWG AND LARGER SHALL BE STRANDED OR AS INDICATED ON THE DRAWINGS.

E.2. CONDUCTORS SHALL BE COPPER, THHN OR THWN-2 COLOR CODED IN ACCORDANCE WITH 'EXECUTION', SECTION C. 1. OF THESE SPECIFICATIONS.

F. WIRING CONNECTIONS

F.1. MAKE ALL ELECTRICAL CONNECTIONS

F.2. MAKE CONNECTION TO DEVICES USING "PIG-TAILS". DO NOT USE A DEVICE AS A CONNECTION OR A SPLICE UNIT.

F.3. DO NOT PLACE STRANDED CONDUCTORS DIRECTLY UNDER SCREWS. INSTALL CRIMP-ON, INSULATED, FOR TERMINALS FOR CONDUCTOR TERMINATIONS OR INSTALL SOLID CONDUCTORS.

G. IDENTIFICATION

G.1. PROVIDE EACH PANEL BOARD, DISCONNECT SWITCH, AND BREAKER IN SWITCHBOARD WITH A MICARTA PLASTIC NAMEPLATE MADE OF WHITE-FACED BLACK-CORE PLASTIC LAMINATE. NAMEPLATE SHALL BE MINIMUM 3" WIDE BY 3/4" HIGH. FOR PANEL BOARD IDENTIFICATION INCLUDE DESIGNATION, PHASE, AND VOLTAGE. FASTEN WITH EPOXY GLUE. DOUBLE STICK TAPE IS NOT ACCEPTABLE.

H. TELEPHONE SYSTEM

H.1. PROVIDE COMPLETE SYSTEM AS INDICATED ON THE DRAWINGS.

I. WIRING DEVICES

I.1. PLATES - COLOR OF PLATE SHALL MATCH ADJACENT WALL FINISHES. VERIFY COLOR WITH THE ARCHITECT.

I.2. TELEPHONE OUTLETS SHALL BE PROVIDED WITH OUTLET BOX AND PLATE AS INDICATED ON THE DRAWINGS.

I.3. SWITCHES - SHALL BE AS SHOWN ON THE PLANS OR EQUAL OF p&s, LEVITON OR COOPER 20 AMP, SILENT TYPE. COLOR SHALL MATCH ADJACENT WALL FINISHED, VERIFY COLOR WITH ARCHITECT.

I.4. RECEPTACLES - SHALL BE AS SHOWN ON PLANS OR EQUAL OF P&S, LEVITON OR COOPER 20 AMP. COLOR SHALL MATCH ADJACENT WALL FINISHED, VERIFY COLORS WITH ARCHITECT.

I.5. SPECIAL PURPOSE OUTLETS SHALL BE AS INDICATED ON THE DRAWINGS.

J. FRACTIONAL HORSEPOWER MANUAL STARTER

J.1. PROVIDE FRACTIONAL HORSEPOWER MANUEL STARTER WITH THE FOLLOWING FEATURES.
- J.1.a. MELTING ALLOY TYPE THERMAL OVERLOAD RELAY
- J.1.b. RED NEON PILOT LIGHT
- J.1.c. THERMAL ELEMENT SIZED FOR MOTOR LOAD

J.2. PROVIDE A NAMEPLATE ON EACH COMPONENT OF MOTOR CONTROL EQUIPMENT.

K. SAFETY SWITCHES

K.1. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL SAFETY SWITCHES AS INDICATED ON THE DRAWINGS OR AS REQUIRED. ALL SAFETY SHALL BE UL LISTED. THE SWITCHES SHALL BE FUSED SAFETY SWITCHES OR NON-FUSED SAFETY SWITCHES AS SHOWN ON THE DRAWINGS OR REQUIRED AND SHALL BE MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, SIEMENS, OR CUTLER HAMMER.

K.2. SWITCHES SHALL HAVE A QUICK-MAKE AND QUICK-BREAK OPERATING HANDLE AND MECHANISM WHICH SHALL BE AN INTEGRAL PART OF THE BOX. PADLOCKING PROVISIONS SHALL BE PROVIDED FOR PADLOCKING IN THE OFF POSITION WITH AT LEAST THREE PADLOCKS. SWITCHES SHALL BE HORSEPOWER RATED FOR 250 VOLTS AC OR DC OR 600 VOLTS AC AS REQUIRED. LUGS SHALL BE UL LISTED FOR COPPER AND ALUMINUM CABLE AND SHALL HAVE A TEMPERATURE RATING OF AT LEAST 75 DEGREES C.

K.3. SWITCHES SHALL BE FURNISHED IN NEMA 1 GENERAL PURPOSE ENCLOSURES WITH KNOCKOUTS UNLESS OTHERWISE NOTED OR REQUIRED. SWITCHES LOCATED ON THE EXTERIOR OF THE BUILDING OR IN "WET" LOCATIONS SHALL HAVE NEMA 3R ENCLOSURES (WP).

K.4. THE SAFETY SWITCHES SHALL BE SECURELY MOUNTED IN ACCORDANCE WITH THE NEC. THE CONTRACTOR SHALL PROVIDE ALL MOUNTING MATERIALS AND INSTALL FUSES IN THE FUSED SAFETY SWITCHES. THE FUSES SHALL BE DUAL ELEMENT ON MOTOR CIRCUITS.

K.5. PROVIDE FUSES AS SPECIFIED BELOW. FUSES SHALL BE INSTALLED SO THAT THE RATING IS CLEARLY VISIBLE WITHOUT REMOVING FUSE. PROVIDE A SPARE FUSE FOR EACH FUSE INSTALLED.

K.6. PROVIDE A NAMEPLATE ON EACH DISCONNECT SWITCH.

L. FUSES

L.1. FUSES SHALL BE CLASS "RK-1" REJECTION TYPE. FUSES FOR SERVING MOTOR LOADS SHALL BE DUAL ELEMENT WITH A MINIMUM TIME DELAY OF 10 SECONDS AT 500% RATING. FUSES SHALL BE CURRENT LIMITING TIME DELAY TYPE WITH INTERRUPTING CAPACITY OF 200,000 AMPS RMS SYMMETRICAL.

L.2. FUSES SERVING SWITCH OR CIRCUIT BREAKER DISTRIBUTION PANELS, LIGHTING PANEL BOARDS, AND PTHER NON-MOTER LOADS NEED NOT BE TIME DELAY TYPE, BUT SHALL BE CURRENT LIMITING WITH THE INTERRUPTING CAPACITY OF 200,000 AMPS RMS SYMMETRICAL MINIMUM. FUSES SHALL BE BUSSMAN, GOULD, OR LITTLEFUSE.

L.3. PROVIDE FUSES SIZED FOR CONNECTED EQUIPMENT.

M. INTERIOR AND EXTERIOR LUMINARIES

M.1. PROVIDE LIGHTING SYSTEM COMPLETE WITH LAMPS AND ACCESSORIES, AS INDICATED IN THE CONTRACT DOCUMENTS.

M.2. LUMINARIES
- M.2.a. PROVIDE COMPLETE LUMINARIES ASSEMBLIES OF TYPE INDICATED ON THE DRAWINGS WITH FEATURES, OPTIONS, AND ACCESSORIES AS SCHEDULED AND AS NEEDED FOR A COMPLETE ASSEMBLY AND INSTALLATION.
- M.2.b. HID AND FLUORESCENT BALLASTS SHALL BE AS INDICATED ON THE DRAWINGS WITH APPROVED MANUFACTURERS OF ADVANCE, OSRAM SYLVANIA, MAGNETEC, OR COLUMBIA.
- M.2.c. HID, FLUORESCENT, AND INCANDESCENT LAMPS SHALL BE AS INDICATED ON THE DRAWINGS WITH APPROVED MANUFACTURERS OSRAM SYLVANIA, GENERAL ELECTRIC CO., OR PHILLIPS ELECTRONICS NORTH AMERICA.
- M.2.d. PHILLIPS AUTO ENERGY ADVANTAGE ECON-O-WATT LAMPS SHALL NOT BE USED.

N. SMOKE DETECTION SYSTEM

N.1. SMOKE DETECTORS SHALL BE AS SHOWN ON THE PLANS AND OF THE PHOTOELECTRIC TYPE LISTED TO UL-217. EACH DETECTOR SHALL HAVE A SOLID STATE PIEZO ALARM SIGNAL. SMOKE DETECTORS USED, IF DIFFERENT FROM ABOVE, SHALL BE FOR 120 VOLT AC OPERATION LAMP WITH A POWER-ON INDICATOR. THE BUILT-IN AUDIBLE SIGNAL SHALL PRODUCE SOUND OUTPUTS FOR NOT LESS THAN 85DB AT 10 FEET.

N.2. SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING / DWELLING UNIT WIRING, AND SHALL BE EQUIPPED WITH A BATTER BACKUP.

N.3. SMOKE ALARMS IN EACH DWELLING UNIT SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL DWELLING UNIT.

EXECUTION:

A. DESCRIPTION

A.1. ALL MATERIALS SHALL BE INSTALLED IN A PROFESSIONAL MANNER INDICATIVE OF THE TRADE. ALL PENETRATIONS OF THE OUTSIDE WALL OR ROOF SHALL BE SEALED WITH APPROPRIATE SEALANT OR CAULK AND BOOTS AS APPROPRIATE FOR THE PARTICULAR SURFACE INVOLVED.

B. RACEWAYS

B.1. RACEWAYS SHALL RUN CONCEALED UNLESS OTHERWISE INDICATED. EXPOSED RACEWAY RUNS SHALL BE PARALLEL WITH SUPPORTING WALLS, BEAMS, AND CEILINGS AND WITH EACH OTHER AND SHALL NOT RUN CLOSER THAN 6 INCHES TO ANY WATER PIPE OR HEATER FLUME.

B.2. RACEWAYS ENDS SHALL BE REAMED AFTER THREADING AND AFTER CUTTING AND BE MADE TO BUTT IN THE CENTER OF COUPLING. THE USE OF RUNNING THREADS IS PROHIBITED.

B.3. RACEWAYS SHALL BE INSTALLED AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET CABINET, BOX OR FITTINGS, AND SHALL BE MECHANICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY FROM ONE TO ANOTHER IS OBTAINED. CONDUITS SHALL BE SUPPORTED WITH ONE OR TWO HOLE STAMPED STEEL OR MALLEABLE IRON STRAPS (SUCH AS MANUFACTURED BY RACO) DESIGNED FOR SUPPORTING CONDUIT. THE SIZE OF STRAP SHALL MATCH THE SIZE OF THE CONDUIT. NAILS, PERFORATED STRAP, OR PLUMBERS TAPE SHALL NOT BE USED FOR SUPPORT OF RACEWAY.

B.4. PROVIDE 1/8" POLY PULL CORD IN RACEWAYS WITHOUT CONDUCTORS.

B.5. FOUR 90 DEGREE BENDS MAXIMUM BETWEEN TERMINATIONS OR BOXES.

B.6. FIRE ALARM CONDUITS INSTALLED ABOVE DROP CEILINGS AND OTHER CONCEALED SPACES SHALL BE PROVIDED WITH 2" RED BANDS EVERY 10 FEET OR PAINTED RED THROUGHOUT.

C. CONDUCTORS

C.1. ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT AND COLOR CODED AS FOLLOWS:

PHASE	208/120
PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUND	GREEN

C.2. MAKE JOINTS, SPLICES, TAPS, AND CONNECTORS IN CONDUCTORS WITH SOLDERLESS CONNECTORS.

C.3. WIRING FOR FIRE ALARM SHALL BE TWISTED AND / OR SHIELDED SIZE AS RECOMMENDED BY THE MANUFACTURER OF THE EQUIPMENT AND TO ENSURE PROPER VOLTAGE AT THE DEVICE (AVOID VOLTAGE DROP OF MORE THAN 3%).

D. JUNCTION AND PULL BOXES

D.1. PULL BOXES SHALL BE PROVIDED WHERE INDICATED OR WHERE NECESSARY TO FACILITATE THE PULLING OF CONDUCTORS. TELEPHONE RACEWAYS SHALE HAVE A MAXIMUM OF TWO 90 DEGREE BENDS BETWEEN TERMINATIONS OR BOXES.

E. GROUNDING

E.1. INSTALL A CODE SIZED GROUNDING CONDUCTOR IN ALL RACEWAYS. DO NOT USE THE RACEWAY FOR GROUNDING. MAKE GOOD CONTACT AT ALL PANEL BOARDS, OUTLET BOXES, AND JUNCTION OR PULL BOXES TO THE RACEWAY SYSTEM. USE APPROVED BONDING MATERIALS.

F. LUMINAIRE INSTALLATION

F.1. ALL FIXTURES RECESSED AND SURFACE SHALL BE SUPPORTED FROM THE STRUCTURE AND NOT FROM THE CEILING GRID.

F.2. INSTALL RECESSED LUMINAIRES TO PERMIT REMOVAL FROM BELOW.

F.3. LOCATE LUMINAIRES AS INDICATED ON THE DRAWINGS.

F.4. INSTALL ACCESSORIES FURNISHED WITH AND REQUIRED FOR EACH LUMINAIRE.

F.5. INSTALL GRID CEILING CLIPS ON RECESSED LUMINAIRES.

G. BONDING

G.1. BOND ALL PIPING (WATER, ETC.) AS REQUIRED BY THE NEC. CONFIRM SYSTEMS TO BE USED WITH MC.

H. SEISMIC REQUIREMENTS

H.1. IF REQUIRED, RECESSED TYPE LIGHTING FIXTURES, IN ADDITION TO THE STANDARD SEISMIC CLIPS AND SUPPORT ON T-BAR GRID SYSTEM, SHALL HAVE (2) #12 STEEL SAFETY WIRES PER FIXTURE. ONE END OF EACH SAFETY WIRE SHALL BE SECURELY FASTENED TO THE BUILDING STRUCTURE. THE OTHER END (6" LONGER THAN THE T-BAR GRID SUPPORT WIRES) SHALL BE FASTNED TO DIAGONAL CORNERS OF EACH LIGHTING FIXTURE.

I. CUTTING AND PATCHING

I.1. PERFORM DRILLING, CUTTING AND PATCHING OF THE GENERAL CONSTRUCTION WORK WHETHER EXISTING OR NEW AS REQUIRED FOR THE INSTALLATION OF THE ELECTRICAL WORK. PATCH WITH THE SAME MATERIALS, WORKMANSHIP, AND FINISH AS THE ORIGINAL WORK AND ACCURATELY MATCH ALL SURROUNDING WORK. SUCH WORK WILL BE DONE BY A CRAFTSMAN ACCREDITED IN THE APPLICABLE TRADE UNDER THE CONTRACTOR'S SUPERVISION AND BE ACCEPTABLE TO THE OWNER'S REPRESENTATIVE. COORDINATE WITH OTHER TRADES AND GENERAL CONTRACTOR PRIOR TO CUTTING, DRILLING, OR BORING. DO NOT CUT OR DRILL STRUCTURAL MEMBERS.

J. WIRING DEVICES

J.1. MOUNTING HEIGHTS TO THE CENTER OF THE DEVICE AND ORIENTATION SHALL BE AS FOLLOWS:

THERMOSTATS / MECHANICAL SWITCHES	48" AFF
LIGHT SWITCHES	48" AFF
OUTLETS ABOVE COUNTER (PHONE AND CONVENIENCE)	44" AFF
DATA, TELEPHONE, TV & CONVENIENCE OUTLETS (TYP.)	18" AFF

ALL MOUNTING HEIGHTS ARE TYPICAL UNLESS NOTED OTHERWISE ON THE PLANS. ALL SWITCHES AND THERMOSTATS TO BE MOUNTED WITHIN 18" OF DOOR JAMBS WHEN LOCATED NEXT TO A DOOR.COORDINATE ALL DEVICES WITH ARCHITECTURAL PLANS AND DETAILS.

K. TESTING

K.1. DEMONSTRATE THAT ALL COMPONENTS OF THE WORK OF THIS DIVISION HAVE BEEN PROVIDED AND THAT THEY OPERATE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

K.2. TEST WIRING AND CONNECTORS FOR CONTINUITY, SHORT CIRCUITS, AND IMPROPER GROUNDS. TEST EACH LIGHTING AND APPLIANCE PANEL WITH MAINS DISCONNECTED FROM FEEDERS, BRANCHES CONNECTED, WALL SWITCHES CLOSED, AND FIXTURES PERMANENTLY CONNECTED AND COMPLETE WITH LAMPS. TEST EACH INDIVIDUAL POWER CIRCUIT WITH THE POWER EQUIPMENT CONNECTED FOR PROPER ORIENTATION.

K.3. PROVIDE DETAILED DOCUMENTATION OF EACH TEST PERFORMED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, WITH THE DAMES AND SIGNATURES OF QUALIFIED INDIVIDUALS WHO CONDUCTED AND WITNESSED EACH TEST.

ADDITIONAL NOTES:

1. ELECTRICAL CONTRACTOR TO PROVIDE & INSTALL BATHROOM EXHAUST FANS.
2. ELECTRICAL CONTRACTOR TO PROVIDE & INSTALL HEATERS FOR FIRE RISER ROOM & 3RD STORY MECHANICAL ROOMS.
3. ALL KITCHEN RECEPTACLES TO BE GFI.
4. ELECTRICAL CONTRACTOR TO PROVIDE ROUGH-IN FOR DATA / TELEPHONE - INSTALL OUTLETS WITH 1" CONDUIT TO ABOVE CEILING; DATA WIRING BY OTHERS.
5. SEE SHEET E4.0 FOR FIRE ALARM SPECIFICATION AND DETAILS.

SYMBOLS LEGEND

SYMBOLS LEGEND		
SYMBOL	MOUNTING	DESCRIPTION
M		POWER METER
	TOP @ 80"	SURFACE MOUNT PANEL BOARD WITH CABINET
	TOP @ 80"	FLUSH PANEL BOARD WITH CABITNET
	CEILING	CEILING LIGHT FIXTURE
	WALL	SCONCE LIGHT FIXTURE
	CEILING	PENDANT LIGH FIXTURE
	CEILING	RECESSED INCANDESCENT LIGHT FIXTURE
	CEILING	1' X 4' FLOURESCENT LIGHT FIXTURE
	CEILING	SURFACE MOUNT LIGHT FIXTURE
	CEILING	RECESSED TROFFER
	CEILING	EMERGENCY LIGHT
F	AS NOTED	DISCONNECT SWITCH: 'U' INDICATES NON-FUSED DISCONNECT
	CEILING	EXHAUST FAN
	18"	TELEPHONE OUTLET
	18"	DATA OUTLET
	18"	DUAL DATA / TELEPHONE OUTLET; ELECTRICAL CONTRACTOR TO INSTALL 1" CONDUIT TO A.C.
	18"	T.V. OUTPUT
	18"	DUPLEX RECPTACLE OUTLET: NEMA 5-20R
	18"	DUPLEX RECEPTACLE OUTLET, GFCI: NEME 5-20R
	18"	DUPLEX RECEPTACLE OUTLET, SWITCHED: NEMA 5-20R
	18"	FOUR-PLEX RECEPTACLE OUTELT: NEMA 5-20R
	AS NOTED	220v OUTLET
J	AS NOTED	JUNCTION BOX
	48"	SINGLE POLE SWITCH
	48"	THREE WAY SWITCH
	48"	DIMMER SWITCH
	CEILING	CEILING-MOUNT EXIT SIGN WITH EMERGENCY LIGHT (WITH FACES & DIRECTION ARROWS INDICATED)
	90"	WALL-MOUNT EXIT SIGN WITH EMERGENCY LIGHT (WITH FACES & DIRECTION ARROWS INDICATED)
	48"	PUSH BUTTON
CH	CEILING / WALL	DOORBELL CHIME
S	CEILING / WALL	SMOKE DETECTOR
C	CEILING / WALL	CARBON MONOXIDE DETECTOR
S	80" - 96" O.C. AFF	VISUAL ALARM
H	80" - 96" O.C. AFF	COMBINATION AUDIO & VISUAL ALARM
P	48"	FIRE ALARM PULL STATION
		FIRE SPRINKLER RISER

ABBREVIATIONS

A	AMPS	GND	GROUND
AFC	AVAILABLE FAULT CURRENT	IMC	INTER. METAL CONDUIT
AFF	ABOVE FINISH FLOOR	IG	ISOLATED GROUND
AFG	ABOVE FINISH GRADE	KCMIL	1000 CIRCULAR MILS (MCM)
AFI	ARC FAULT INTERRUPT	LFMC	LIQUID-TIGHT FLEX. METAL CONDUIT
AIC	AMPS INTERR. CAPACITY	LFNC	LIQUID-TIGHT FLEX. NON-METAL CONDUIT
AWG	AMERICAN WIRE GAUGE	MCA	MINIMUM CIRCUIT AMPS
BC	BARE COPPER	N1	NEMA 1
BFC	BELOW FINISH CEILING	N3R	NEMA 3R
BFG	BELOW FINISH GRADE	N	NEW
C	CONDUIT	NL	NIGHT LIGHT, BYPASS LOCAL SWITCHING
CND	CONDUIT	POC	POINT OF CONNECTION
CO	CONDUIT ONLY	R	RECEIVER
CT	CURRENT TRANSDUCER	RM	ROOF MOUNTED
CU	COPPER MATERIAL	RMC	RIGID METALLIC CONDUIT
DED	DEDICATED	RNC	RIGID NON-METALLIC CONDUIT
DFA	DROP FROM ABOVE	SBJ	SYSTEM BONDING JUMPER
EF	EXHAUST FAN	SCA	SHORT CIRCUIT AMPRES
EM	EMERGENCY EGRESS BATTERY	T	TRANSMITTER
EMT	ELEC. METALLIC TUBING	TC	TEMP. CONTROL
ENT	ELEC. NON-METAL. TUBING	UG	UNDERGROUND
FMC	FLEXIBLE METAL CONDUIT	UNO	UNLESS NOTED OTHERWISE
FV	FIELD VERIFY	VA	VOT / AMPS
GEC	GRND. ELEC. COND. AT SES	WP	WEATHERPROOF / NEMA 3R
GFI	GROUND FAULT CURRENT INTERRUPT	XP	EXPLOSION PROOF

SHEET INDEX

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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

PROJECT NO:	22-003-16
CAD DWG. FILE:	22-003-16 1_CO.SD.N Mod_Arch.dwg
DRAWN BY:	TCT
DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
DATE:	6-18-22

SHEET TITLE:
ELECTRICAL NOTES & LEGEND

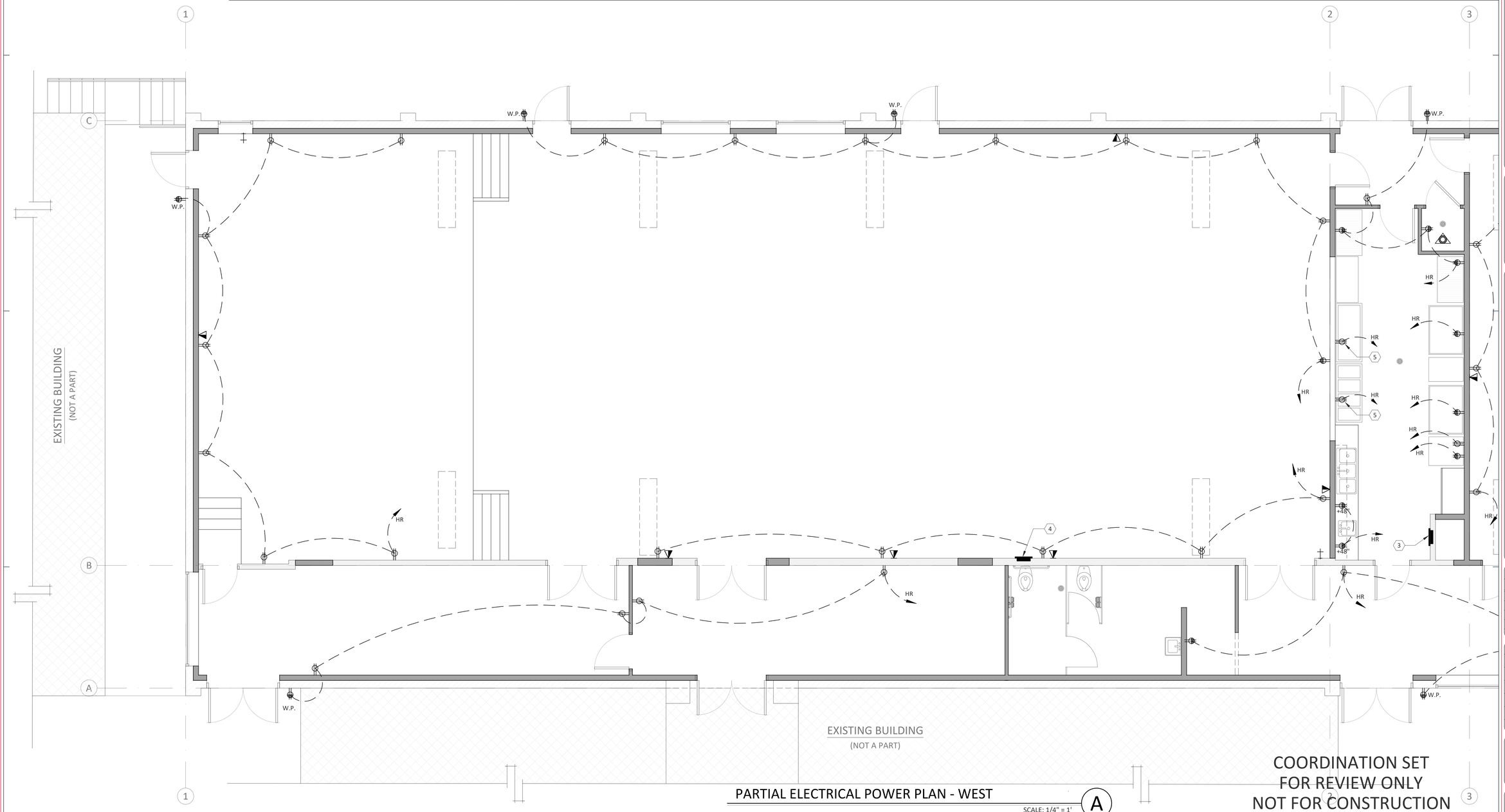
E1.0

KEY NOTES

1. 110V OUTLET AND DUAL DATA PORT LOCATED IN CEILING FOR PROJECTOR. INCLUDE OUTLET WITH ROOM CIRCUIT.
2. PROPOSED FLOOR OUTLETS. VERIFY OUTLETS WITH OWNER PRIOR TO ANY WORK BEING COMPLETED.
3. EXISTING ELECTRICAL SUB-PANEL. REMOVE & REPLACE WITH NEW COMMERCIAL GRADE, 42-SPACE, INDOOR, BOLT-ON LOAD CENTER WITH MAIN BREAKER. ELECTRICAL CONTRACTOR TO ASSESS EXISTING CIRCUITRY AND TO RE-WORK WIRING BASED ON EXISTING AND PROPOSED ELECTRICAL SYSTEM.
4. EXISTING ELECTRICAL SUB-PANEL. REMOVE & REPLACE WITH NEW COMMERCIAL GRADE, 42-SPACE, INDOOR, BOLT-ON LOAD CENTER WITH MAIN BREAKER. ELECTRICAL CONTRACTOR TO ASSESS EXISTING CIRCUITRY AND TO RE-WORK WIRING BASED ON EXISTING AND PROPOSED ELECTRICAL SYSTEM. EVALUATE RELOCATION TO FOOD PREP ROOM - COORDINATE WITH OWNER.
5. VERIFY PROPER ELECTRICAL CONNECTION WITH EQUIPMENT SPECIFICATION PROVIDED BY OWNER.

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL BUILDING CODES AND THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (NEC).
2.
3. ALL ELECTRICAL FIXTURES SHOWN ON PLAN ARE NEW UNLESS DESIGNATED AS EXISTING (EX.). NOT ALL EXISTING FIXTURES / SYSTEMS ARE SHOWN ON PLAN.
2. THESE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND DO NOT NECESSARILY SHOW ALL MATERIALS REQUIRED FOR COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEM. PROVIDE A COMPLETE WORKING SYSTEM THAT OPERATES PROPERLY TO SATISFACTION OF OWNER.
3. EXISTING ELECTRICAL SUB-PANELS ARE SHOWN. ELECTRICAL CONTRACTOR TO ASSESS EXISTING PANELS AND TO RE-WORK PANELS BASED ON EXISTING AND PROPOSED ELECTRICAL SYSTEM.
4. CONTRACTOR TO PROVIDE ELECTRICAL LOAD COUNT BASED ON EXISTING ELECTRICAL TO REMAIN AND PROPOSED NEW ELECTRICAL SYSTEM.
5. VERIFY PROPER ELECTRICAL POWER IS PROVIDED TO EXISTING ROOF-TOP HVAC UNITS.
6. ALL ELECTRICAL FIXTURES SHALL BE ACCORDING TO SPECIFICATION OR APPROVED EQUAL. SPECIFICATION IS DESIGNATED BY F"X", WHERE "X" IS THE FIXTURE NUMBER. SPECIFICATIONS FOR ELECTRICAL FIXTURES ARE FOUND IN LUMINAIRE SCHEDULE AND IN ATTACHED ELECTRICAL SPECIFICATIONS PACKET.
7. JUNCTION BOXES FOR LUMINARIES ARE NOT INDICATED ON PLAN. PROVIDE THE PROPER NUMBER OF J-BOXES TO MEET LOCAL CODE AND NEC.
8. ELECTRICIAN TO PROVIDE AND INSTALL BOXES AND CONDUIT STUBBED TO ATTIC SPACE FOR ALL DATA, VOICE, SECURITY, HDMI, VGA, AND OTHER LOW-VOLTAGE PORTS LOCATED IN WALL SPACE. LOW VOLTAGE SYSTEMS TO BE INSTALLED BY OTHERS.
9. ALL ELECTRICAL RUNS TO BE CONCEALED, U.N.O.
10. VERIFY ALL LOCATIONS WITH ARCH. VERIFY ALL COLORS PER OWNER.
11. PROVIDE SLEEVES FOR ALL CABLING & CONDUIT AS NECESSARY FOR OTHER TRADES & CONTRACTORS; COORDINATE WITH OTHER TRADES AND CONTRACTORS.
12. ALL EXISTING ELECTRICAL FIXTURE ON EXTERIOR OF BUILDING TO REMAIN. ADD NEW EXTERIOR LIGHTING WHERE SHOWN. EXISTING CIRCUITRY FOR EXTERIOR LIGHTS TO REMAIN.
13. REMOVE ALL EXISTING INTERIOR LIGHT FIXTURES AND INSTALL NEW LIGHT FIXTURES PER PLAN, U.N.O.
14. REMOVE ALL EXISTING OUTLETS & SWITCHES, U.N.O. TERMINATE / REMOVE EXISTING CIRCUITRY FOR SWITCHES & OUTLETS, U.N.O. INSTALL NEW COVER PLATES FOR ALL SWITCHES AND OUTLETS. ALL SWITCHES AND RECEPTACLE OUTLETS ARE TO BE 20 AMP RATED. ALL SWITCHES ARE TO BE TOGGLE STYLE.
15. UNUSED ELECTRICAL BOXES IN WALL TO BE TERMINATED AND COVERED W/ BLANK PLATE.
16. ALL NEW BOXES SHOWN ON EXPOSED MASONRY SHALL BE SURFACE MOUNT AND BE SECURELY FASTENED TO FACE OF MASONRY. CONDUIT SHALL BE FASTENED ALONG FACE OF MASONRY TO CEILING OR ATTIC SPACE (U.N.O.)
17. ALL LIGHTS & SWITCHES IN ATTIC TO BE REPAIRED PER OWNER.
18. UNUSED SWITCHES ARE TO BE TERMINATED AND COVERED WITH BLANK PLATE.
19. ALL EXISTING EXIT SIGNS ARE TO BE REMOVED AND REPLACED PER PLAN.
20. ALL NEW WIRE SHALL BE EMT OR MC CABLE.
21. ALL EXISTING FIRE ALARM FIXTURES TO BE REPLACED PER PLAN.



PARTIAL ELECTRICAL POWER PLAN - WEST

SCALE: 1/4" = 1'

A

COORDINATION SET
FOR REVIEW ONLY
NOT FOR CONSTRUCTION

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NORTH AUDITORIUM REMODEL
FOR
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REVISIONS

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CAD DWG. FILE:	22-003-16 1 CO USD N Aud_Arch.dwg
DRAWN BY:	TCT
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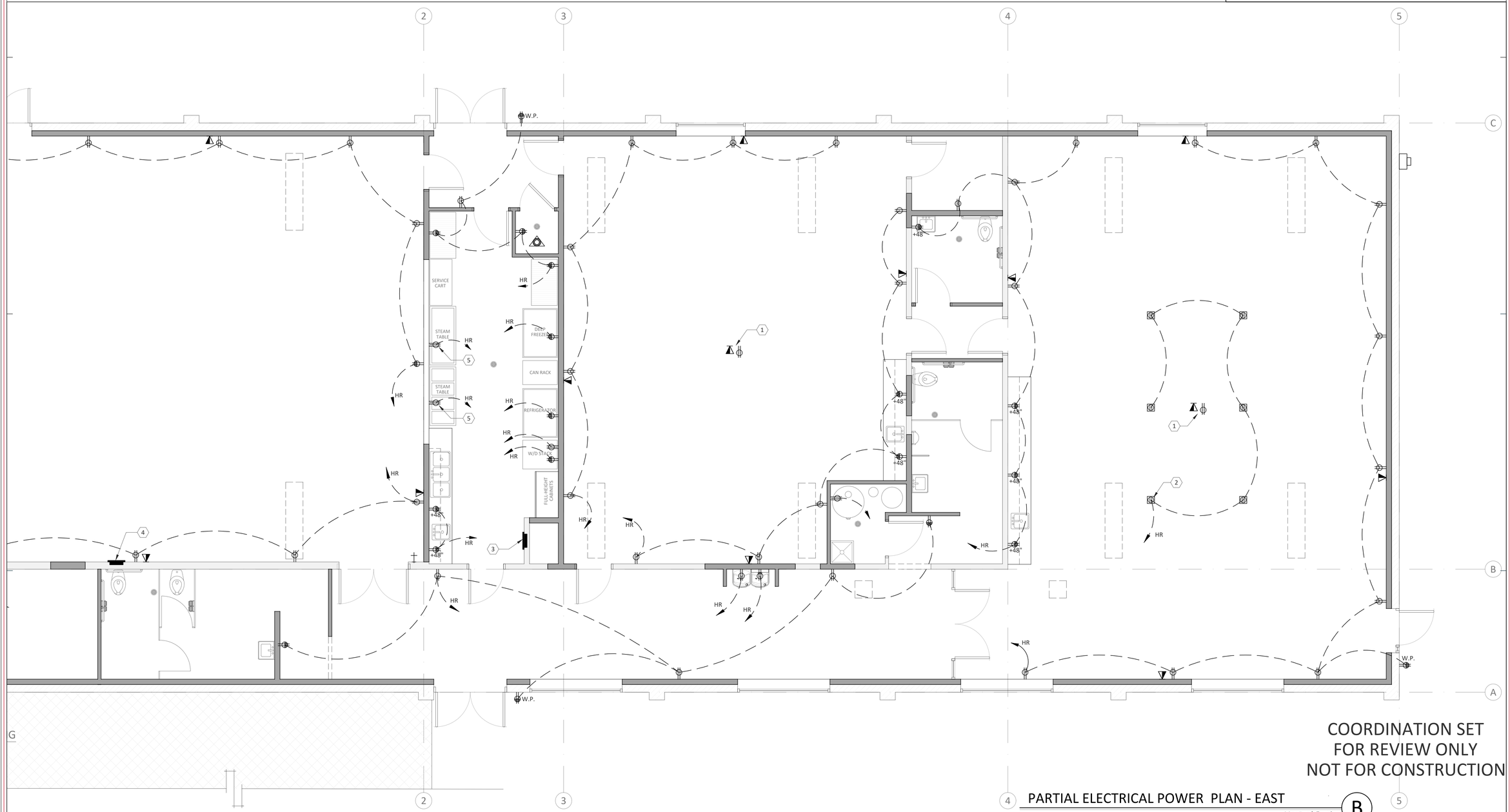
SHEET TITLE:
PARTIAL POWER PLAN WEST

E2.0

KEY NOTES

1. 110V OUTLET AND DUAL DATA PORT LOCATED IN CEILING FOR PROJECTOR. INCLUDE OUTLET WITH ROOM CIRCUIT.
2. PROPOSED FLOOR OUTLETS. VERIFY OUTLETS WITH OWNER PRIOR TO ANY WORK BEING COMPLETED.
3. EXISTING ELECTRICAL SUB-PANEL. REMOVE & REPLACE WITH NEW COMMERCIAL GRADE, 42-SPACE, INDOOR, BOLT-ON LOAD CENTER WITH MAIN BREAKER. ELECTRICAL CONTRACTOR TO ASSESS EXISTING CIRCUITRY AND TO RE-WORK WIRING BASED ON EXISTING AND PROPOSED ELECTRICAL SYSTEM.
4. EXISTING ELECTRICAL SUB-PANEL. REMOVE & REPLACE WITH NEW COMMERCIAL GRADE, 42-SPACE, INDOOR, BOLT-ON LOAD CENTER WITH MAIN BREAKER. ELECTRICAL CONTRACTOR TO ASSESS EXISTING CIRCUITRY AND TO RE-WORK WIRING BASED ON EXISTING AND PROPOSED ELECTRICAL SYSTEM. EVALUATE RELOCATION TO FOOD PREP ROOM - COORDINATE WITH OWNER.
5. VERIFY PROPER ELECTRICAL CONNECTION WITH EQUIPMENT SPECIFICATION PROVIDED BY OWNER.



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PARTIAL ELECTRICAL POWER PLAN - EAST (B)

SCALE: 1/4" = 1'

EXCEL DESIGN ASSOCIATES
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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO:	22-003-16
CAD DWG. FILE:	22-003-16 1 COLSCH Add_Arch.dwg
DRAWN BY:	TCT
DESIGNED BY:	TCT
FIELD CREW:	
CHECKED BY:	
DATE:	6-18-22

SHEET TITLE:
PARTIAL POWER PLAN EAST

E2.1

LUMINAIRE SCHEDULE

ID	MANUFACTURER	MODEL NUMBER	INPUT WATTS	LAMPS	MOUNTING	LOCATION	DESCRIPTION
F1	LITHONIA	CPX 2X4 6000LM 80CRI 40K SWL MVOLT	43	LED	SUSPENDED LAY-IN	CEILING	2-FT X 4-FT LED LAY-IN TROFFER, DIFFUSER SATIN WHITE, 4000K, 6000 LM, SUSPENDED, NON-DIMMING, STANDARD OUTPUT
F2	LITHONIA	CSS L48 4000LM MVOLT 40K 80CRI	36	LED	SURFACE	CEILING	4-FT STRIP LED, DIFFUSE ACRYLIC LENS, 4000K, 2500 LUMENS, CEILING MOUNT, NON-DIMMING, STANDARD OUTPUT
F3	LITHONIA	CLX L24 2500LM SEF FDL WD MVOLT 40K 80CRI	20	LED	SURFACE	CEILING	2-FT LINEAR LED, DIFFUSE ACRYLIC LENS, 4000K, 4000 LUMENS, CEILING MOUNT, NON-DIMMING, STANDARD OUTPUT
F4	BREEZA	BRZ-LG-1-W	3.5	LED	SURFACE	WALL	EMERGENCY / EXIT COMBINATION, SINGLE-FACE, GREEN LETTERING
F5	LITHONIA	CPX 2X2 5000LM 80CRI 40K SWL MVOLT	40	LED	SUSPENDED LAY-IN	CEILING	2-FT X 2-FT LED LAY-IN TROFFER, DIFFUSER SATIN WHITE, 4000K, 6000 LM, SUSPENDED, NON-DIMMING, STANDARD OUTPUT
F6	LITHONIA	LDN6 40/20 LO6AR LSS MVOLT	23	LED	RECESSED	CEILING	6-INCH RECESSED DOWNLIGHT - SEMI-SPECULAR CLEAR REFLECTOR, 2000 LUMENS, DECORATIVE TRIM RING.

PROVIDE OWNER AND ARCHITECT WITH FIXTURE CUT SHEETS FOR VERIFICATION PRIOR TO ORDERING. VERIFY ALL ELECTRICAL.

KEY NOTES

1. MECHANICAL CONTRACTOR TO SUPPLY & INSTALL EXHAUST FAN FIXTURE & DUCT. ELECTRICAL CONTRACTOR TO CONNECT POWER.
2. EXISTING EXTERIOR WALL-MOUNT LIGHT TO REMAIN; CONTRACTOR TO VERIFY PROPER ELECTRICAL SERVICE AND CONNECTION.
3. NEW EXTERIOR WALL-MOUNT FIXTURE TO MATCH EXISTING. TIE INTO EXISTING EXTERIOR LIGHTS CIRCUIT.
4. PROVIDE AND CONNECT TO LIFE SAFETY LIGHTING CIRCUIT, TYP.
5. EXISTING ELECTRICAL SUB-PANEL. REMOVE & REPLACE WITH NEW COMMERCIAL GRADE, 42-SPACE, INDOOR, BOLT-ON LOAD CENTER WITH MAIN BREAKER. ELECTRICAL CONTRACTOR TO ASSESS EXISTING CIRCUITRY AND TO RE-WORK WIRING BASED ON EXISTING AND PROPOSED ELECTRICAL SYSTEM.
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7. PROVIDE DUAL SWITCH FOR ALTERNATE ON/OFF LIGHTING PATTERN.

EXISTING BUILDING (NOT A PART)

EXISTING BUILDING (NOT A PART)

PARTIAL ELECTRICAL LIGHTING PLAN - WEST

SCALE: 1/4" = 1'

COORDINATION SET
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SHEET TITLE:
PARTIAL LIGHTING PLAN WEST

E3.0

KEY NOTES

1. MECHANICAL CONTRACTOR TO SUPPLY & INSTALL EXHAUST FAN FIXTURE & DUCT. ELECTRICAL CONTRACTOR TO CONNECT POWER.
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7. PROVIDE DUAL SWITCH FOR ALTERNATE ON/OFF LIGHTING PATTERN.

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PARTIAL ELECTRICAL LIGHTING PLAN - EAST

SCALE: 1/4" = 1'

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PARTIAL LIGHTING PLAN EAST

E3.1

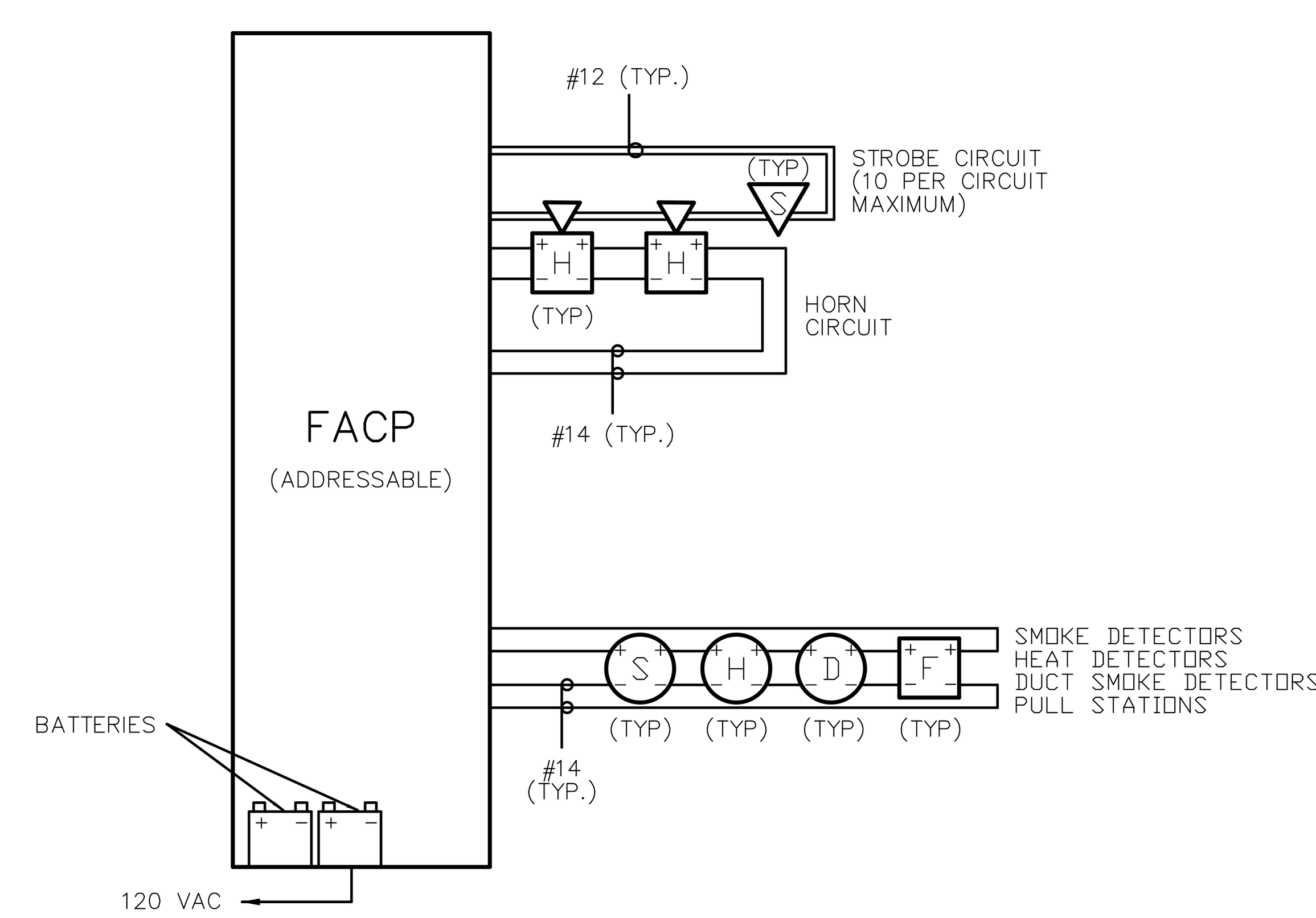
FIRE ALARM SYSTEM

DIGTAL, ADDRESSABLE FIRE ALARM SYSTEM

1. SYSTEM DESCRIPTION: NON-CODED ADDRESSABLE SYSTEM, WITH AUTOMATIC SENSITIVITY CONTROL OF CERTAIN SMOKE DETECTORS AND MULTIPLEXED SIGNAL TRANSMISSION, DEDICATED TO FIRE- ALARM SERVICE ONLY.
2. SUBMITTALS SHALL BE PREPARED BY PERSONS TRAINED AND CERTIFIED BY MANUFACTURER AND LICENSED BY AUTHORITIES HAVING JURISDICTION. PRIOR TO SUBMISSION TO THE ARCHITECT/ENGINEER, THE SUBMITTALS SHALL BE APPROVED BY AUTHORITIES HAVING JURISDICTION. IN ADDITION TO THE REQUIREMENTS OF DIVISION 1 PROVIDE THE FOLLOWING:
   - 2.1. FLOOR PLANS TO INDICATE FINAL DEVICE AND APPLIANCE LOCATIONS SHOWING ADDRESS OF EACH ADDRESSABLE DEVICE.
   - 2.2. INSTALLATION DETAILS, VOLTAGE DROP CALCULATIONS FOR NOTIFICATION APPLIANCE CIRCUITS, BATTERY-SIZE CALCULATIONS,
   - 2.3. DRAWINGS SHOWING THE LOCATION OF EACH DETECTOR AND RATINGS OF EACH. SPACING AND SENSITIVITY CALCULATION SHALL COMPLY WITH NFPA 72.
   - 2.4. COMPLY WITH RECOMMENDATIONS IN THE "DOCUMENTATION" SECTION OF THE "FUNDAMENTALS OF FIRE ALARM SYSTEMS" CHAPTER IN NFPA 72.
   - 2.5. QUALIFICATION DATA FOR INSTALLER.
3. OBTAIN FIRE-ALARM SYSTEM FROM SINGLE SOURCE FROM SINGLE MANUFACTURER.
4. NFPA CERTIFICATION: OBTAIN CERTIFICATION ACCORDING TO NFPA 72 BY ON NRTL.
5. SYSTEMS OPERATIONAL DESCRIPTION
   - 5.1. FIRE-ALARM SIGNAL INITIATION SHALL BE BY ONE OR MORE OF THE FOLLOWING DEVICES AND SYSTEMS:
     - 5.1.1. MANUAL STATIONS.
     - 5.1.2. DUCT SMOKE DETECTORS.
     - 5.1.3. VERIFIED AUTOMATIC ALARM OPERATION OF SMOKE DETECTORS.
     - 5.1.4. AUTOMATIC SPRINKLER SYSTEM WATER FLOW.
     - 5.1.5. HEAT DETECTORS IN ELEVATOR SHAFT AND PIT.
   - 5.2. FIRE-ALARM SIGNAL SHALL INITIATE THE FOLLOWING ACTIONS:
     - 5.2.1. CONTINUOUSLY OPERATE ALARM NOTIFICATION APPLIANCES.
     - 5.2.2. IDENTIFY ALARM AT FIRE-ALARM CONTROL UNIT AND REMOTE ANNUNCIATORS, IF APPLICABLE.
     - 5.2.3. TRANSMIT AN ALARM SIGNAL TO THE REMOTE ALARM RECEIVING STATION.
     - 5.2.4. UNLOCK ELECTRIC DOOR LOCKS IN DESIGNATED EGRESS PATHS.
     - 5.2.5. ACTIVATE VOICE/ALARM COMMUNICATION SYSTEM.
     - 5.2.6. SWITCH HEATING, VENTILATING, AND AIR-CONDITIONING EQUIPMENT CONTROLS TO FIRE-ALARM MODE.
     - 5.2.7. CLOSE SMOKE DAMPERS IN AIR DUCTS OF DESIGNATED AIR-CONDITIONING DUCT SYSTEMS.
     - 5.2.8. ACTIVATE EMERGENCY SHUTOFFS FOR GAS AND FUEL SUPPLIES.
     - 5.2.9. RECORD EVENTS IN THE SYSTEM MEMORY.Y WITH AT LEAST TWO 3/4" METAL CHANNELS SPANNING AND SECURED TO CEILING TEES.
   - 5.3. SUPERVISORY SIGNAL INITIATION SHALL BE BY ONE OR MORE OF THE FOLLOWING DEVICES AND ACTIONS:
     - 5.3.1. VALVE SUPERVISORY SWITCH.
   - 5.4. SYSTEM TROUBLE SIGNAL INITIATION SHALL BE BY ONE OR MORE OF THE FOLLOWING DEVICES AND ACTIONS:
     - 5.4.1. OPEN CIRCUITS, SHORTS, AND GROUNDS IN DESIGNATED CIRCUITS.
     - 5.4.2. OPENING, TAMPERING WITH, OR REMOVING ALARM-INITIATING AND SUPERVISORY SIGNAL-INITIATING DEVICES.
     - 5.4.3. LOSS OF PRIMARY POWER AT FIRE-ALARM CONTROL UNIT.
     - 5.4.4. GROUND OR A SINGLE BREAK IN FIRE-ALARM CONTROL UNIT INTERNAL CIRCUITS.
     - 5.4.5. ABNORMAL AC VOLTAGE AT FIRE-ALARM CONTROL UNIT.
     - 5.4.6. BREAK IN STANDBY BATTERY CIRCUITRY.
     - 5.4.7. FAILURE OF BATTERY CHARGING.
     - 5.4.8. ABNORMAL POSITION OF ANY SWITCH AT FIRE-ALARM CONTROL UNIT OR ANNUNCIATOR.
   - 5.5. SYSTEM TROUBLE AND SUPERVISORY SIGNAL ACTIONS: INITIATE NOTIFICATION APPLIANCE AND ANNUNCIATE AT FIRE-ALARM CONTROL UNIT AND REMOTE ANNUNCIATORS, IF APPLICABLE. RECORD THE EVENT ON SYSTEM PRINTER.
6. FIRE ALARM CONTROL UNIT: FIELD-PROGRAMMABLE, MICROPROCESSOR-BASED, MODULAR, POWER- LIMITED DESIGN WITH ELECTRONIC MODULES, COMPLYING WITH UL 864 AND LISTED AND LABELED BY AN NRTL. ADDRESSABLE INITIATION DEVICES THAT COMMUNICATE DEVICE IDENTITY AND STATUS AND ADDRESSABLE CONTROL CIRCUITS FOR OPERATION OF MECHANICAL EQUIPMENT. THE FOLLOWING ITEMS SHALL BE INCLUDED AS PART OF THE FIRE ALARM CONTROL UNIT:
   - 6.1. ALPHANUMERIC DISPLAY AND SYSTEM CONTROLS: ARRANGED FOR INTERFACE BETWEEN HUMAN OPERATOR AT FIRE-ALARM CONTROL UNIT AND ADDRESSABLE SYSTEM COMPONENTS INCLUDING ANNUNCIATION AND SUPERVISION. DISPLAY ALARM, SUPERVISORY, AND COMPONENT STATUS MESSAGES AND THE PROGRAMMING AND CONTROL MENU.
   - 6.2. INITIATING DEVICE, NOTIFICATION APPLIANCE, AND SIGNALING LINE CIRCUITS: PROVIDE STYLE 6 SIGNALING LINE CIRCUITS. INSTALL NO MORE THAN 50 ADDRESSABLE DEVICES ON EACH SIGNALING LINE CIRCUIT.
   - 6.3. TRANSMISSION TO REMOTE ALARM RECEIVING STATION: DIGITAL ALARM COMMUNICATOR TRANSMITTER AUTOMATICALLY TRANSMITS ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO O REMOTE ALARM STATION. IF SERVICE ON THE LINE IS INTERRUPTED FOR LONGER THAN 45 SECONDS, TRANSMITTER SHALL INITIATE A LOCAL TROUBLE SIGNAL AND TRANSMIT THE SIGNAL INDICATING LOSS OF TELEPHONE LINE TO THE REMOTE ALARM RECEIVING STATION OF THE REMAINING LINE. TRANSMITTER SHALL AUTOMATICALLY REPORT TELEPHONE SERVICE RESTORATION TO THE CENTRAL STATION. THE DIGITAL DATA TRANSMISSION SHALL INCLUDE ADDRESS OF THE ALARM-INITIATING DEVICE, ADDRESS OF THE SUPERVISORY SIGNAL, ADDRESS OF THE TROUBLE-INITIATING DEVICE, LOSS OF AC SUPPLY OR LOSS OF POWER, LOW BATTERY, ABNORMAL TEST SIGNAL, AND COMMUNICATION BUS FAILURE. SECONDARY POWER SHALL BE BY MEANS OF INTEGRAL RECHARGEABLE BATTERY AND AUTOMATIC CHARGER. UNIT SHALL CONDUCT SELF-TEST EVERY 24 HOURS AND TRANSMIT REPORT TO CENTRAL STATION.
   - 6.4. PRIMARY POWER: 24-V DC OBTAINED FROM 120-V AC SERVICE AND A POWER-SUPPLY MODULE. INITIATING DEVICES, NOTIFICATION APPLIANCES, SIGNALING LINES, TROUBLE SIGNALS, SUPERVISORY SIGNALS SHALL BE POWERED BY 24-V DC SOURCE. ALARM CURRENT DRAW OF ENTIRE FIRE-ALARM SYSTEM SHALL NOT EXCEED 80 PERCENT OF THE POWER-SUPPLY MODULE RATING.
   - 6.5. SECONDARY POWER: 24-V DC SUPPLY SYSTEM WITH BATTERIES, AUTOMATIC BATTERY CHARGER, AND AUTOMATIC TRANSFER SWITCH, BATTERIES SHALL BE SEALED LEAD CALCIUM.
7. MANUAL FIRE-ALARM BOXES: COMPLY WITH UL 38. BOXES SHALL BE FINISHED IN RED WITH MOLDED, RAISED-LETTER OPERATING INSTRUCTIONS IN CONTRASTING COLOR; SHALL SHOW VISIBLE INDICATION OF OPERATION; AND SHALL BE MOUNTED ON RECESSED OUTLET BOX. DOUBLE-ACTION MECHANISM REQUIRING TWO ACTIONS TO INITIATE AN ALARM, PULL-LEVER TYPE: WITH INTEGRAL ADDRESSABLE MODULE ARRANGED TO COMMUNICATE MANUAL-STATION STATUS (NORMAL, ALARM, OR TROUBLE) TO FIRE-ALARM CONTROL UNIT. STATION RESET SHALL BE BY KEY OR WRENCH OPERATED SWITCH.
8. VISUAL AND AUDIBLE NOTIFICATION APPLIANCES ARE TO BE CONNECTED TO NOTIFICATION APPLIANCE SIGNAL CIRCUITS, ZONED AS REQUIRED, WITH SCREW TERMINALS FOR SYSTEM CONNECTIONS. WHERE INDICATED PROVIDE FACTORY-INTEGRATED AUDIBLE AND VISIBLE DEVICES IN A SINGLE-MOUNTING ASSEMBLY. UNITS SHALL MATCH THE EXISTING APPLIANCES IN STYLE, FINISH, AND COLOR. FOR UNITS WITH GUARDS TO PREVENT PHYSICAL DAMAGE, LIGHT OUTPUT RATINGS SHALL BE DETERMINED WITH GUARDS IN PLACE.
9. VISIBLE NOTIFICATION APPLIANCES: XENON STROBE LIGHTS COMPLY WITH UL 1971, WITH CLEAR OR NOMINAL WHITE POLYCARBONOTE LENS. THE WORD "FIRE" IS ENGRAVED IN MINIMUM 1" HIGH LETTERS ON THE FACEPLATE. STROBES SHALL BE 15/30/75/110 CD, FIELD SELECTABLE. IF NOT INDICATED OTHERWISE, RATED LIGHT OUTPUT SHOULD BE SET TO 110 CD. FLASHING SHALL BE IN A TEMPORAL PATTERN, SYNCHRONIZED WITH OTHER UNITS. INSTALL ON CEILING OR ON WALL ADJACENT TO EACH ALARM HORN AND AT LEAST 6" BELOW THE CEILING.
10. AUDIBLE HORNS: ELECTRIC-VIBRATING-POLARIZED TYPE, 24V DC; WITH PROVISION FOR HOUSING THE OPERATING MECHANISM BEHIND A GRILLE. COMPLY WITH UL 464. HORNS SHALL PRODUCE A SOUND PRESSURE LEVEL OF 90 DBA, MEASURED 10' FROM THE HORN, USING THE CODED SIGNAL PRESCRIBED IN UL 464 TEST PROTOCOL. INSTALL ON CEILING OR ON WALL NOT LESS THAN 6" BELOW THE CEILING. INSTALL BELLS AND HORNS ON FLUSH-MOUNTED BOCK BOXES WITH THE DEVICE-OPERATING MECHANISM CONCEALED BEHIND A GRILLE.
11. REMOTE ANNUNCIATOR: ANNUNCIATOR FUNCTIONS SHALL MATCH THOSE OF FIRE-ALARM CONTROL UNIT FOR ALARM, SUPERVISORY, AND TROUBLE INDICATIONS. MANUAL SWITCHING FUNCTIONS SHALL MATCH THOSE OF FIRE-ALARM CONTROL UNIT, INCLUDING ACKNOWLEDGING, SILENCING, RESETTING, AND TESTING.
12. ADDRESSABLE INTERFACE DEVICE: MICROELECTRONIC MONITOR MODULE, NRTL LISTED FOR USE IN PROVIDING A SYSTEM ADDRESS FOR ALARM-INITIATING DEVICES FOR WIRED APPLICATIONS WITH NORMALLY OPEN CONTACTS. INTEGRAL RELAY SHALL BE CAPABLE OF PROVIDING A DIRECT SIGNAL TO ELEVATOR CONTROLLER TO INITIATE ELEVATOR RECALL AND/OR TO CIRCUIT-BREAKER SHUNT TRIP FOR POWER SHUTDOWN.
13. WHERE SUBJECT TO DAMAGE OR ABUSE, PROVIDE FACTORY-FABRICATED WELDED WIRE MESH DEVICE GUARDS OF SIZE AND SHAPE FOR THE DEVICE OR APPLIANCE, WITH MATCHING FINISH AND COLOR
14. COMPLY WITH NFPA 72 FOR INSTALLATION OF FIRE-ALARM EQUIPMENT.
15. SURFACE-MOUNT CONTROL UNIT(S) AND ANNUNCIATOR(S) WITH TOPS OF CABINETS NOT MORE THAN 72 INCHES ABOVE FINISHED FLOOR.
16. VERIFY THAT HARDWARE AND DEVICES ARE NRTL LISTED FOR USE WITH FIRE-ALARM SYSTEM IN THIS SECTION BEFORE MAKING CONNECTIONS.
17. GROUND FIRE-ALARM CONTROL UNIT AND ASSOCIATED CIRCUITS; COMPLY WITH IEEE 1100. INSTALL A GROUND WIRE FROM MAIN SERVICE GROUND TO FIRE-ALARM CONTROL UNIT.
18. FIELD TESTS SHALL BE WITNESSED BY AUTHORITIES HAVING JURISDICTION AND OWNER'S REPRESENTATIVE.
19. ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS, AND TO ASSIST IN TESTING.
   - 19.1. CONDUCT VISUAL INSPECTION PRIOR TO TESTING.
   - 19.2. INSPECTION SHALL BE BASED ON COMPLETED RECORD DRAWINGS AND SYSTEM DOCUMENTATION THAT IS REQUIRED BY NFPA 72 IN ITS "COMPLETION DOCUMENTS, PREPARATION" TABLE IN THE "DOCUMENTATION" SECTION OF THE "FUNDAMENTALS OF FIRE ALARM SYSTEMS" CHAPTER.
   - 19.3. COMPLY WITH "VISUAL INSPECTION FREQUENCIES" TABLE IN THE "INSPECTION" SECTION OF THE "INSPECTION, TESTING AND MAINTENANCE" CHAPTER IN NFPA 72; RETAIN THE "INITIAL/REACCEPTANCE" COLUMN AND LIST ONLY THE INSTALLED COMPONENTS.
   - 19.4. SYSTEM TESTING: COMPLY WITH "TEST METHODS" TABLE IN THE "TESTING" SECTION OF THE "INSPECTION, TESTING AND MAINTENANCE" CHAPTER IN NFPA 72.
   - 19.5. TEST VISIBLE APPLIANCES FOR THE PUBLIC OPERATING MODE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
   - 19.6. FIRE-ALARM SYSTEM WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS TESTS AND INSPECTIONS.
   - 19.7. PREPARE TEST AND INSPECTION REPORTS.

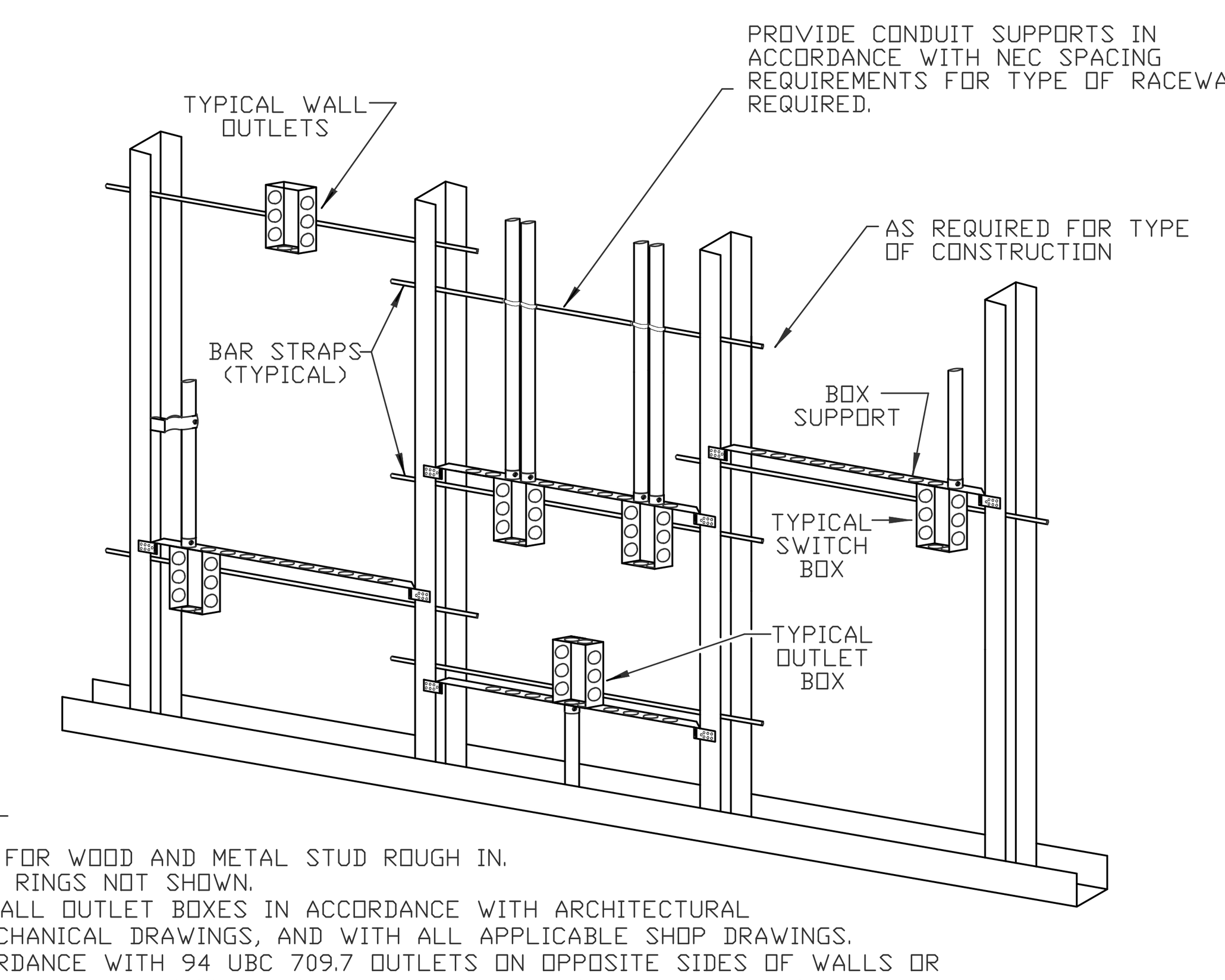
NOTES:

THE INTENT OF THIS RISER IS GENERAL WIRING FOR DESIGN ONLY. VERIFY EXACT REQUIREMENTS AND COMPLY WITH MANUFACTURERS RECOMMENDATIONS FOR ACTUAL EQUIPMENT FURNISHED.



FIRE ALARM RISER DIAGRAM (C)

SCALE: NTS



NOTES:

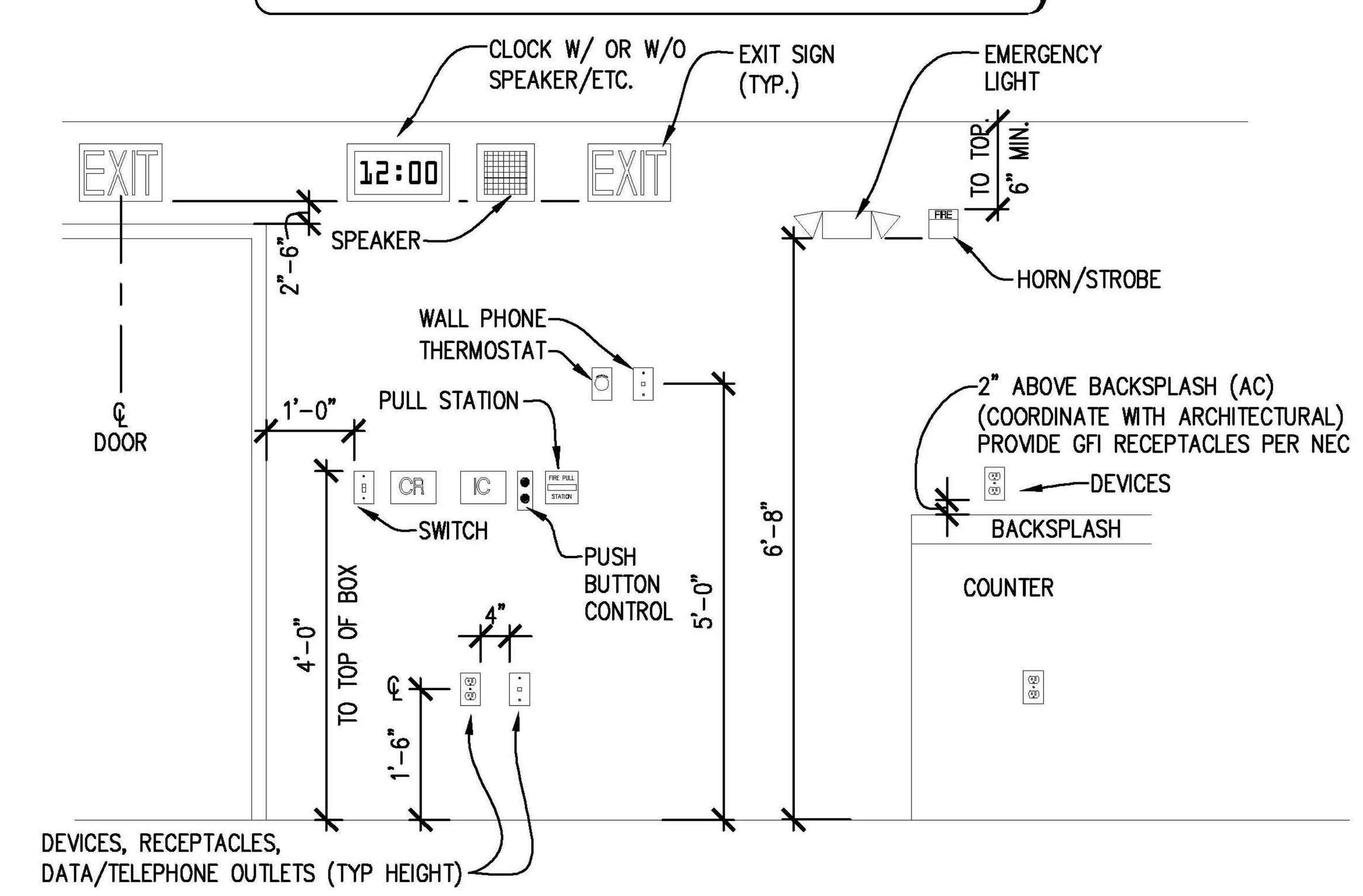
1. TYPICAL FOR WOOD AND METAL STUD ROUGH IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH 94 UBC 709.7 OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPERATED BY A MINIMUM OF 24" HORIZONTAL DISTANCE.

TYPICAL ROUGH-IN ELECTRICAL (A)

SCALE: NTS

ELECTRICAL MOUNTING HEIGHT NOTES:

- A. HEIGHTS SHOWN ARE TYPICAL TO BOTTOM OF DEVICE UNLESS NOTED OTHERWISE.
- B. MOUNTING HEIGHTS SHOWN ON ARCHITECTURAL ELEVATIONS SHALL GOVERN OVER ALL ELEVATIONS SHOWN OR INDICATED ON ELECTRICAL DRAWINGS.
- C. INSTALL FIRE ALARM NOTIFICATION APPLIANCES AT 80" AFF, OTHERWISE INSTALL AT 6" BELOW CEILING, WHICH EVER IS LOWER.
- D. VERIFY EXIT LIGHT HEIGHTS WITH ARCHITECT.
- E. TYPICAL HEIGHTS SHOWN, HEIGHTS ON PLANS SHALL GOVERN OVER THESE. DEVICES WITH KNOWN OBSTRUCTIONS SUCH AS, BUT NOT LIMITED TO COUNTERTOPS & SHELVING MAY REQUIRE A LOWER HEIGHT, VERIFY WITH ARCHITECT/ENGINEER.
- F. SYMBOLS NOT SHOWN SHALL BE VERIFIED WITH ARCHITECT/ENGINEER.



ELECTRICAL DEVICE MOUNTING HEIGHTS (B)

SCALE: NTS

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SHEET TITLE:
ELECTRICAL DETAILS

E4.0

GENERAL NOTES

1. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK INCLUDING COMPLETE AND OPERABLE SYSTEMS, TESTED AND READY FOR OPERATION. ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON THE DRAWINGS BUT MENTIONED IN THE SPECIFICATIONS OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
2. ALL GENERAL CONDITIONS, SPECIAL AND GENERAL. REQUIREMENTS OF THE GENERAL CONSTRUCTION SPECIFICATION ARE PART OF THIS SPECIFICATION AND HAVE THE SAME FORCE AND EFFECT AS IF PRINTED HERE IN FULL.
3. ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED EDITION. OF THE APPLICABLE INTERNATIONAL BUILDING, MECHANICAL, PLUMBING, FIRE AND ELECTRICAL CODES, AND FEDERAL, STATE, AND LOCAL REGULATIONS AND AUTHORITIES HAVING JURISDICTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING FOR AND OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING: WORKMEN'S IDENTIFICATION AND SAFETY, FIRE PROTECTION, CONTRACTOR'S LIABILITY INSURANCE, SAFETY BARRICADES, WARNING SIGNS, AND TRASH REMOVAL AS REQUIRED.
5. THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL DRAWINGS, PLANS AND SPECIFICATIONS FOR THE BUILDING, AND FOR OTHER TRADES, AND SHALL COORDINATE THE WORK WITH ALL OTHER TRADES, INCLUDING, BUT NOT LIMITED TO, THE CONSTRUCTION DOCUMENTS, SHOP DRAWINGS, SPECIFICATIONS ETC. FOR ALL GENERAL CONSTRUCTION, STRUCTURAL, MECHANICAL, FIRE PROTECTION AND ELECTRICAL AND SPECIALTY CONTRACTOR WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATING AND FITTING OF MATERIAL AND EQUIPMENT INTO THE BUILDING, WITHOUT INTERFERENCE WITH OTHER WORK, AND SHALL MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICTS WITH OTHER TRADES, TO PROVIDE ACCESS, AND CLEARANCES FOR THE PROPER EXECUTION OF THE WORK.
6. DRAWINGS ARE IN GENERAL DIAGRAMMATIC, RELATIVELY SMALL SCALE, AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CERTAIN COMPONENTS, APPURTENANCES,ACCESORIES AND RELATED SPECIALTIES ARE NOT SHOWN, AND SHALL BE PROVIDED. DO NOT SCALE DRAWINGS. ARRANGEMENT OF EQUIPMENT AND ROUTING OF PIPES AND DUCTWORK, ETC. INDICATED ON DRAWINGS MAY REQUIRE MODIFICATION DUE TO UNFORESEEN CONDITIONS AND REQUIRED ON SITE REVISIONS DURING CONSTRUCTION. NO CONSIDERATION OR ALLOWANCE SHALL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE CONTRACT DOCUMENTS AND THE WORK TO BE COMPLETED(ALSO SEE "BIDDING").
7. THE CONTRACTOR SHALL PROVIDE (5) COPIES OF ALL SUBMITTALS, AT ONE TIME, BOUND IN A NEAT & ORDERLY MANNER WITH EQUIPMENT SUBMITTALS NOTING EQUIPMENT CALL OUTS ON THE PLANS FOR REFERENCE. AVAILABLE OPTIONS AND CONFIGURATIONS NOTED. PARTIAL OR UNMARKED SUBMITTALS WILL BE REJECTED. SUBMITTALS SHALL INCLUDE ALL EQUIPMENT, MATERIALS, AND DEVICES FOR REVIEW BY THE ENGINEER. WORK SHALL NOT START UNTIL ALL REVIEWS HAVE BEEN COMPLETED AND THE ITEMS TO BE PROVIDED ARE ACCEPTABLE. ALL MATERIALS AND EQUIPMENT SHALL BE OF INDUSTRY STANDARD, COMMONLY USED ACCEPTABLE GRADES IN THE CONSTRUCTION INDUSTRY FOR THE INTENDED PURPOSE AND SHALL BEAR THE "U.L.", ASME, AMCA, OR OTHER THIRD PARTY LISTINGS AND LABEL WHEN APPLICABLE.
8. THE CONTRACTOR SHALL PROVIDE TO THE ARCHITECT (5) COMPLETE SETS OF FINAL TO SCALE AS-BUILT DOCUMENTS ACCURATELY SHOWING THE MATERIALS AND EQUIPMENT AS INSTALLED.
9. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER. REFRIGERATION COMPRESSORS SHALL BE GUARANTEED FOR A MINIMUM OF FIVE YEARS FROM DATE OF OWNER'S ACCEPTANCE. IN ADDITION, THE CONTRACTOR SHALL GUARANTEE THAT THE INSTALLATION, WHEN OPERATED IN ACCORDANCE WITH THE CONTRACTOR'S INSTRUCTIONS, WILL PROVIDE CAPACITIES AND CHARACTERISTICS INDICATED OR SPECIFIED AND WILL FULFILL EACH AND EVERY REQUIREMENT OF THE DRAWINGS AND SPECIFICATIONS, AND SHOULD THE INSTALLATION IN ANY WAY FAIL TO DO SO, THE CONTRACTOR WILL, WITHOUT DELAY AND WITHOUT COST TO THE OWNER, PROVIDE ANY AND ALL ADDITIONAL EQUIPMENT, MATERIAL, AND LABOR AS NECESSARY TO CORRECT THE FAULT AND COMPLY WITH THE PLANS & SPECIFICATIONS.
10. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND SIZES AND CONDITIONS PRIOR TO BIDDING WORK. ANY CONFLICTS, PROBLEMS OR DEVIATIONS SHALL BE TRANSMITTED TO THE ENGINEER FOR REVIEW.
11. COORDINATE ROOF PENETRATIONS WITH ARCHITECTURAL AND THE ROOFING CONTRACTOR REQUIREMENTS. VERIFY IF A ROOF WARRANTY IS IN AFFECT AND ADHERE TO WARRANTY REQUIREMENTS. PROVIDE BASE AND COUNTER FLASHING FOR ITEMS PENETRATING THE ROOF.
12. CONTRACTOR TO FURNISH AND INSTALL ALL STARTERS, WIRING, 12. CONTROLS, DEVICES AND ALL CONDUIT, FOR A COMPLETE AND OPERABLE SYSTEM. ALL WORK SHOWN IS NEW, UNLESS NOTED OTHERWISE.
13. COORDINATE WITH ARCHITECTURAL REQUIREMENTS AND MAINTAIN OCCUPANCY AND FIREWALL SEPARATION INTEGRITY AS REQUIRED PER LOCAL CODE AND AUTHORITIES HAVING JURISDICTION. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF ALL OCCUPANCY/RATED WALL SEPARATIONS AND SPECIFIC DETAILS FOR CONSTRUCTION. PROVIDE ALL NECESSARY FIRE DAMPERS, FIRE/SMOKE DAMPERS, ACCESS DOORS, AND CAULKING, ETC. FOR APPROVED INSTALLATION. <u>BIDDING</u>

1. THE CONTRACTOR IS EXPECTED TO CONTACT THE ARCHITECT FOR ANY PARTICULAR PROBLEMS AND CLEAR UP ANY POSSIBLE MISUNDERSTANDING BEFORE BID IS SUBMITTED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE CONTRACT DOCUMENTS AND THE WORK TO BE ACCOMPLISHED. SUBMISSION OF A BID FOR THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE, ALL CONSTRUCTION DOCUMENTS AND UNDERSTANDS THE SCOPE OF WORK AND CONDITIONS THAT MAY AFFECT THE PERFORMANCE OF THE WORK AND HAS INCLUDED THIS IN THE ORIGINAL BID. EXECUTION

1. THE CONTRACTOR SHALL PROVIDE ALL RIGGING, HANDLING OF MATERIALS AND EQUIPMENT, AND THE NECESSARY PROTECTION FOR MATERIALS AND EQUIPMENT. TOOLS AND EQUIPMENT WILL BE STORED IN OWNER DESIGNATED AREAS ONLY.
2. THE CONTRACTOR WILL PROTECT THE WORK AND MATERIAL AGAINST DIRT, THEFT, INJURY, OR DAMAGE UNTIL ACCEPTED BY OWNER. ALL WORK SHALL BE TURNED OVER TO OWNER CLEAN AND IN PERFECT CONDITION, READY FOR SATISFACTORY SERVICE.
3. PIPES AND/OR CONDUITS PASSING THROUGH WALL, FLOORS, AND PARTITIONS SHALL BE PROVIDED WITH SLEEVES, EXCEPT AS PROHIBITED BY U.L. LISTING. SLEEVES PASSING THROUGH WATER PROOFING OR DAMP PROOFING SHALL BE WATER TIGHT. PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRE PROOFED WITH MATERIAL APPROVED AND AS DEFINED FOR THE RATING OF THE STRUCTURE AND U.L. LISTED. WHERE PIPES AND CONDUITS PASS THROUGH WALLS, FLOORS OR CEILINGS IN EXPOSED AREAS PROVIDE WITH CHROME PLATED ESCUTCHEON PLATES. PROVIDE ALL SLEEVES, OPENINGS, CUTTING AND PATCHING NECESSARY FOR THE INSTALLATION OF THE WORK. CUTTING AND PATCHING SHALL BE DONE BY WORKERS SKILLED IN THE TRADES REQUIRED.
4. PROVIDE ALL FOUNDATIONS, HANGERS, ACCESS AND SUPPORTS FOR ALL EQUIPMENT SUPPLIED AND/OR INSTALLED. ALL EQUIPMENT WITH ROTATING PARTS SHALL BE PROVIDED WITH VIBRATION ISOLATION.
5. ALL EQUIPMENT SHALL BE PROVIDED WITH FACTORY FINISH FOR THE APPLICATION, ANY REQUIRED ADDITIONAL EQUIPMENT PAINTING IS BY OTHERS UNLESS NOTED OTHERWISE.
6. EACH PIECE OF EQUIPMENT, VALVE, SWITCH, STARTER, CONTROL PANEL, PIPE, ETC., SHALL BE CLEARLY IDENTIFIED INCLUDING IN CONCEALED OR COVERED IN ACCORDANCE WITH OSHA AND ANSI REGULATIONS. IDENTIFY PIPES NEAR EACH VALVE WITH PIPE TAPE, INDICATING FLUID TYPE, DIRECTION OF FLOW, SERVICE ZONE, AND SIZE. TAPE SHALL BE APPLIED TO PIPE OR COVERING. VALVES, CONTROLS, AND DAMPERS SHALL BE IDENTIFIED BY LEGIBLE LACQUERED BRASS TAGS WITH STAMPED LETTERS PERMANATELY FASTENED. EQUIPMENT SHALL BE IDENTIFIED AS TO FUNCTION, PURPOSE AND AREA SERVED, BY MEANS OF PERMANENTLY ATTACHED LEGIBLE NAMEPLATES OF MATERIAL APPLICAPLE FOR THE ENVIRONMENT.
7. AT THE CONCLUSION OF THE WORK, ALL EQUIPMENT AND 7. SYSTEMS SHALL BE CAREFULLY BALANCED, ADJUSTED, AND TESTED TO PROVIDE BALANCED, QUIET-OPERATING, STABLE AND SAFE SYSTEMS.

MECHANICAL SPECIFICATIONS

PART 1 - GENERAL

1. THE NORTH AUDITORIUM BUILDING HAS AN EXISTING MECHANICAL SYSTEM. THE MECHANICAL CONTRACT FOR THIS PROJECT WILL BE DESIGN BUILD, WITH THE CONTRACTOR WORKING IN TANDEM WITH THE ENGINEER IN RESPONSIBLE CHARGE TO ASSESS THE EXISTING MECHANICAL SYSTEM AND TO PROVIDE DESIGN AND INSTALLATION OF SYSTEM IMPROVEMENTS REQUIRED TO PRODUCE AN HVAC SYSTEM IN ACCORDANCE WITH STATE AND LOCAL CODES, OSHA, NFPA, SMACNA AND ASHRAE GUIDELINES.
2. THE MECHANICAL CONTRACTOR SHALL BE AN EXPERIENCED FIRM REGULARLY ENGAGED IN THE INSTALLATION OF COMMERCIAL MECHANICAL SYSTEMS IN ACCORDANCE WITH LOCAL CODES. THE OWNER'S REPRESENTATIVE MAY REJECT ANY PROPOSED CONTRACTOR WHO CANNOT SHOW EVIDENCE OF SUCH QUALIFICATIONS
3. VISIT THE JOBSITE PRIOR TO BIDDING, PRIOR TO MATERIAL FABRICATION AND PRIOR TO EQUIPMENT PROCUREMENT TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS, INTERFERENCES AND ANY DISCREPANCIES.
4. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, EQUIPMENT SUPPORTS, DIFFUSERS AND GRILLES FOR THE HVAC SYSTEMS FINISH AS REQUIRED TO ENSURE A COMPLETE AND OPERABLE HVAC SYSTEM. FURNISH ALL PAINT, LABOR, EQUIPMENT, APPLIANCES AND MATERIALS, AND PERFORM ALL OPERATIONS IN CONNECTION WITH THE INSTALLATION OF THE HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS IN STRICT ACCORDANCE WITH THE DRAWINGS. SUCCESSFUL, TROUBLE-FREE OPERATION OF VIBRATION-FREE SYSTEM IS A PERQUISITE.
5. THE MECHANICAL CONTRACTOR SHALL SCHEDULE ALL WORK SO AS NOT TO INTERFERE AND/OR DISRUPT THE DAILY ACTIVITIES AND/OR OPERATING HOURS OR NEARBY BUILDINGS. COORDINATE AS REQUIRED WITH THE GENERAL CONTRACTOR AND THE OWNER'S REPRESENTATIVE.
6. THE MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL FEES AND PERMITS RELATING TO HIS WORK.
7. THE NEW HVAC SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH STATE AND LOCAL CODES, OSHA, NFPA, SMACNA AND ASHRAE GUIDELINES.

PART 2 - DUCTWORK

1. ALL DUCT SHALL BE FABRICATED FROM GALVANIZED STEEL IN ACCORDANCE WITH SMANCA STANDARDS AND REQUIREMENTS. NONMETALLIC DUCTWORK SHALL NOT BE USED. CONCEALED SUPPLY AND RETURN DUCTWORK SHALL BE GALVANIZED STEEL.
2. PROVIDE FLEXIBLE CONTRACTORS BETWEEN DUCTWORK AND HVAC EQUIPMENT (AIR HANDLING EQUIPMENT).
3. ALL NEW RECTANGULAR SUPPLY AND RETURN AIR DUCTWORK SHALL HAVE 1" THICK ACOUSTIC DUCT LINER INSULATION. DUCT DIMENSIONS SHOWN ON THE DRAWINGS REPRESENT INSIDE DUCT SIZE.
4. MANUAL BALANCING DAMPERS SHALL BE OPPOSED BLADE TYPE, GALVANIZED STEEL, AND SHALL HAVE LOCKING QUADRANT OPERATORS OR EXTENDED CONCEALED CEILING OPERATORS WHERE ACCESS IS LIMITED AND/OR AT GYPSUM BOARD CEILINGS.
5. PROVIDE TURNING VANES IN ALL NEW RECTANGULAR SUPPLY AND RETURN AIR DUCTWORK ELBOWS. PROVED VOLUME DAMPERS WITH LOCKING QUADRANTS AT EACH NEW SUPPLY AIR BRANCH TAKE-OFF, SEAL ALL DUCT JOINTS. WHERE THE VOLUME DAMPER IS NOT ACCESSIBLE, PROVIDE YOUNG NO. 817A OR 617B, CONSISTING OF AN 3/8" SQUARE SHAFT, AND A 3/8" REGULATOR (LENGTH AS REQUIRED) FOR OPERATING THE VOLUME DAMPER FROM SUSPENDED CEILING.
6. THE NEW DUCT LINING SHALL BE ONE INCH THICK FIBERGLASS, 1-1/2 POUNDS PER CUBIC FOOT DENSITY, NOISE ATTENUATION FACTOR OF NRC = 0.70 WITH AIR STREAM SURFACE FACED WITH A BLACK COATED MATTE.
7. THE REQUIRED FIRE HAZARD CLASSIFICATION IS: FLAME SPREAD NOT OVER 25, FUEL CONTRIBUTED NOT OVER 50, SMOKE DEVELOPED NOT OVER 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84

DUCT SIZE:	GAUGE:	SUPPORT:	SPACING:
12" AND UNDER	26 GA.	(2) 1"X 22 GA. STRAPS	EVERY 10 FT.
13" TO 30"	24 GA.	(2) 1"X 18GA. STRAPS	EVERY 10 FT.
31" TO 40"	22 GA.	(2) 1"X 18GA. STRAPS	EVERY 10 FT.
40" AND OVER	20 GA.	(2) 1"X 18GA. STRAPS	EVERY 10 FT.

PART 3- DUCTWORK INSULATION

1. ALL RECTANGULAR SUPPLY AND RETURN DUCTWORK IN THE CEILING SPACE SHALL HAVE ACOUSTIC DUCT LINER INSULATION. ALL ROUND RIGID METAL TAKE-OFF DUCTWORK IN THE CEILING SPACE SHALL HAVE 1" THICK EXTERNAL DUCT-WRAP INSULATION WITH VAPOR BARRIER.
2. THE FINISH DUCT LINING SHALL BE ONE INCH THICK FIBERGLASS, 1-1/2 POUNDS PER CUBIC FOOT DENSITY, NOISE ATTENUATION FACTOR OF NRC = 0.10 WITH THE AIR STREAM SURFACE FACED WITH A BLACK COATED MATTE.
3. THE DUCT-WRAP INSULATION SHALL BE ONE INCH THICK FIBERGLASS 1-1/2 POUNDS PER CUBIC FOOT DENSITY, NOISE ATTENUATION FACTO OF NRC=0.70.
4. THE DUCT-WRAP INSULATION SHALL HAVE A THERMAL CONDUCTANCE OF 0.24 BTUH PER SQUARE FOOT PER DEGREE F. AT A MEAN TEMPERATURE OF 50 DEGREES F.
5. THE REQUIRED FIRE HAZARD CLASSIFICATION IS: FLAME SPREAD NOT OVER 25, FUEL CONTRIBUTED NOT OVER 50, SMOKE DEVELOPED NOT OVER 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84.
6. INSULATED FLEXIBLE DUCTWORK MEETING CLASS 1 REQUIREMENTS OF NFPA 90A AND U.L. LABELED MAY BE USED ONLY AT THE CEILING DIFFUSER CONNECTIONS IN THE CONCEALED CEILING SPACE AREAS AND SHALL BE INSULATED WITH 1" THICK FIBERGLASS INSULATION WITH VAPOR BARRIER WITH A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS WHEN TESTED IN ACCORDANCE WITH ASTM E84, AND SHALL BE LIMITED TO 5-FEET IN LENGTH.
7. APPROVED ACOUSTIC DUCT LINER MANUFACTURERS ARE:
   - a. JOHNS-MANVILLE "LINACOUSTIC"
8. APPROVED EXTERNAL INSULATION MANUFACTURERS ARE:
   - a. MANVILLE MICROLITE FSK
   - b. CSG TYPE IV STANDARD DUCT INSULATION
   - c. OWENS CORNING FRK
   - d. KNAUF (DUCT WRAP FSK)
9. INSTALL INSULATION IN A NEAT AND WORKMANLIKE MANNER WITH NO FISHTAILS. FINISH SHALL BE SMOOTH WITH ALL JOINTS PROPERLY TAPED, INSULATION SHALL BE FULL THICKNESS UNCOMPRESSED EXCEPT WHERE REQUIRED TO PASS STRUCTURAL INTERFERENCES.

PART 4 - LINE VOLTAGE WIRING

1. LINE VOLTAGE WIRING AND CONDUIT IS BY THE ELECTRICAL CONTRACTOR SHALL FURNISH AND DISCONNECT SWITCHES THAT ARE NOT PROVIDED WITH THE MECHANICAL EQUIPMENT AS REQUIRED FOR THE HVAC EQUIPMENT. COORDINATE AS REQUIRED WITH THE ELECTRICAL CONTRACTOR AND THE GENERAL CONTRACTOR.

PART 5 - TEMPERATURE CONTROLS AND WIRING

1. AUTOMATIC TEMPERATURE CONTROLS AND ASSOCIATED CONDUIT AND CONTROL WIRING SHALL BE BY THE MECHANICAL CONTRACTOR PROVIDE ALL DEVICES, COMPONENTS, CONDUIT, CONTROL WIRING AS REQUIRED TO ENSURE COMPLETE OPERABLE AUTOMATIC TEMPERATURE CONTROL SYSTEMS. NEW FURNACE UNIT SHALL HAVE NEW PROGRAMMABLE THERMOSTATS WITH AUTOMATIC CHANGEOVER AND NIGHT SET-BACK CONTROL. NEW UNIT HEATERS SHALL HAVE HEATING THERMOSTATS WITH SUMMER FAN SWITCH CONTROL.
2. VERIFY THERMOSTAT ROUGH-IN LOCATIONS AS SHOWN ON THE MECHANICAL PLAN DRAWING WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROUGH- IN INSTALLATION.
3. ALL TEMPERATURE CONTROLS ARE TO BE TESTED, ADJUSTED AND CALIBRATED FOR PROPER OPERATION
4. REFER TO THE MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL TEMPERATURE CONTROL REQUIREMENTS.

PART 6 - INSTALLATION

1. COORDINATE THE NEW HVAC EQUIPMENT LOCATIONS WITH THE BUILDING STRUCTURE, THE OWNER'S REPRESENTATIVE, ARCHITECT, STRUCTURAL ENGINEER, AND THE GENERAL CONTRACTOR AS REQUIRED PRIOR TO INSTALLATION
2. COORDINATE THE EQUIPMENT, CONTROLS AND CUTWORK INSTALLATIONS WITH THE OTHER TRADES, PLUMBING PIPING, CONDUIT, ETC., COORDINATE THE CEILING DIFFUSER RETURN AIR GRILLES AND EXHAUST GRILLE LOCATIONS, WITH THE ELECTRICAL DRAWINGS AND THE ARCHITECTURAL REFLECTED CEILING PLAN. ROUTE THE DUCTWORK SO AS NOT TO INTERFERE WITH THE STRUCTURE OR THE REMOVING AND SERVICES OF LIGHT FIXTURES. CHANGES REQUIRED AS A RESULT OF NEGLECT TO COORDINATE INTERFERENCES WILL BE MADE AT THE MECHANICAL CONTRACTOR'S EXPENSE.
3. RUN ALL NEW DUCTWORK AS TIGHT AS POSSIBLE TO THE BOTTOM OF THE STRUCTURE IN THE DROPPED CEILING SPACE IN ORDER TO MAINTAIN THE FINISHED CEILING HEIGHTS AS SCHEDULES ON THE ARCHITECTURAL DRAWINGS. VERIFY THE DUCT HEIGHT DIMENSIONS WITH AVAILABLE CEILING SPACE AND MODIFY THE DUCT SIZES IF NECESSARY (KEEPING THE SAME DUCT AREA AS SHOWN ON THE MECHANICAL DRAWINGS - DUCT HEIGHT DIMENSION SHALL NOT BE LESS THAT 8") TO ACCOMMODATE ANY INTERFERENCES. COORDINATE THE NEW DUCTWORK IN THE SPACE WITH CONDUIT AND PIPING. FIELD VERIFY THE ROUTING OF DUCTWORK AND EQUIPMENT AND PIPING.
4. LOCATE ALL EXHAUST AIR OUTLETS AND FLUE VENTS 10'-0' MINIMUM DISTANCE FROM MECHANICAL EQUIPMENT OUTSIDE AIR INTAKES.
5. IT IS UNDERSTOOD THAT WHILE DRAWINGS ARE TO BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES PERMIT. THE MECHANICAL CONTRACTOR WILL BE HELD RESPONSIBLE FOR INSTALLATION OF SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF CONTRACT DOCUMENTS. ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO ARCHITECT. SHOULD CONDITION ARISE WHERE CERTAIN CHANGES WOULD BE ADVISABLE SECURE APPROVAL OF THOSE CHANGES BEFORE PROCEEDING WITH WORK.
6. ARRANGE DUCTS AND EQUIPMENT TO PERMIT READY ACCESS TO VALVES, UNIONS, TRAPS, STARTERS, MOTORS, CONTROL COMPONENTS, AND TO CLEAR OPENING OF DOORS AND ACCESS PANELS.
7. FURNISH AND INSTALL HANGERS AND SUPPORTS REQUIRED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED. FURNISH SLEEVES, SUPPORTS, AND EQUIPMENT THAT ARE INTEGRAL PART OF OTHER CONTRACTOR'S WORK IN SUFFICIENT TIME TO BE BUILT INTO CONSTRUCTION AS THE WORK PROCEEDS. LOCATE THESE ITEMS AND SEE THAT THEY ARE PROPERLY INSTALLED. EXPENSE RESULTING FROM IMPROPER LOCATION OR INSTALLATION OF ITEMS ABOVE SHALL BE BORNE BY THE MECHANICAL CONTRACTOR.
8. ADJUST THE LOCATION OF THE FINISH DUCTS, EQUIPMENT, ETC., TO ELIMINATE INTERFERENCE ANTICIPATED AND ENCOUNTERED. DETERMINE EXACT ROUTE AND LOCATION OF DUCTWORK PRIOR TO FABRICATIONS. MAKE OFFSETS, TRANSITIONS, AND CHANGES IN DIRECTION OF DUCTS AS REQUIRED TO MAINTAIN PROPER CLEARANCES WHETHER OR NOT INDICATED ON THE DRAWINGS. FURNISH AND INSTALL FITTINGS AS REQUIRED TO EFFECT THESE OFFSETS, TRANSITIONS, AND CHANGES IN DIRECTION.
9. ENSURE THE NEW HVAC EQUIPMENT TO BE FURNISHED ALONG WITH THE DUCTWORK FIT IN SPACE AVAILABLE. MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN AND SPACE REQUIREMENTS INCLUDING THOSE FOR CONNECTIONS AND FURNISH AND INSTALL EQUIPMENT OF SIZE AND SHAPE SO THAT FINAL INSTALLATION REFLECTS TRUE INTENT AND MEANING OF CONTRACT DOCUMENTS.
10. FOLLOW MANUFACTURER'S DIRECTION IN DELIVERY, STORAGE, PROTECTION, AND INSTALLATION OF EQUIPMENT AND MATERIALS. PROMPTLY NOTIFY ARCHITECT AND/OR OWNER'S REPRESENTATIVE IN WRITING OF CONFLICTS BETWEEN REQUIREMENTS OF CONTRACT DOCUMENTS AND MANUFACTURER'S DIRECTIONS AND OBTAIN ARCHITECT'S AND/OR OWNER'S REPRESENTATIVE WRITTEN INSTRUCTION BEFORE PROCEEDING WITH WORK. BEAR EXPENSES FOR CORRECTING DEFICIENCIES OF WORK THAT DO NOT COMPLY WITH MANUFACTURER'S DIRECTIONS OR WRITTEN INSTRUCTIONS.
11. DELIVER EQUIPMENT AND MATERIAL TO SITE AND TIGHTLY COVER AND PROTECT AGAINST DIRT, WATER, AND CHEMICAL OR MECHANICAL INJURY. EQUIPMENT AND MATERIAL SHALL BE READILY ACCESSIBLE FOR INSPECTION. STORE ITEMS SUBJECT TO MOISTURE DAMAGE (SUCH AS CONTROLS) IN A DRY HEATED SPACE.
12. ALL MECHANICAL EQUIPMENT SHALL BE ISOLATED FROM THE STRUCTURE WITH EITHER VIBRATION ISOLATION PADS OR SPRING TYPE ISOLATORS AS APPLICABLE TO THE INSTALLATION, WHETHER MOTOR IS INTERNALLY ISOLATED OR NOT.
13. CONTRACTOR TO VERIFY AND PROVIDE MECHANICAL PIPING FOR HEATING AND COOLING SYSTEMS TO BE THERMALLY INSULATED PER IECC C403.2.10. MECHANICAL CONTRACTOR TO VERIFY MAXIMUM AND MINIMUM TEMPERATURES OF THE MECHANICAL PIPING SO MINIMUM INSULATIONS REQUIREMENTS CAN BE MET.

PART 7 - SUBMITTALS

1. BY DESCRIPTION, CATALOG NUMBER AND SPECIFIC DESIGNATION, STANDARDS ARE ESTABLISHED FOR MANUFACTURED ITEMS SUCH AS SPECIALTIES, FIXTURES AND EQUIPMENT WHICH THE CONTRACTOR SHALL FURNISH AS REQUIRED BY THIS SECTION. PRIOR TO APPROVAL IS REQUIRED FOR SUBSTITUTION OF EQUIPMENT AND MATERIALS PRIOR TO BID. SUBSTITUTION OF PRODUCTS SHOWN SHALL BE SUBMITTED TO THE ARCHITECT, THE OWNER'S REPRESENTATIVE OR ENGINEER FOR WRITTEN APPROVAL.
   - a. ACCEPTABLE HVAC EQUIPMENT MANUFACTURERS ARE: YORK, CARRIER, LENNOX AND TRANE.
2. SHOP DRAWINGS AND UP-TO-DATE ENGINEERING DATA SHEETS AND CATALOG INFORMATION SHALL BE FURNISHED ON THE FOLLOWING ITEMS OF EQUIPMENT. PROVIDE (6) COPIES FOR REVIEW.
   - 1) HVAC EQUIPMENT
   - 2) AUTOMATIC TEMPERATURE CONTROLS.
   - 3) ALL DIFFUSERS, GRILLES, ETC.
   - 4) DUCTWORK FABRICATION METHODS.
   - 5) EXHAUST FANS.

PART 8 - FILTERS

1. INSTALL THROW-AWAY FILTERS AT THE NEW FURNACE HEATING AND COOLING UNIT AFTER SYSTEM START-UP. INSTALL 30% EFFICIENT 2-INCH THICK PLEATED FILTERS - SIZE AND QUALITY SHALL BE IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTIONS.

PART 9 - CUTTING AND PATCHING

1. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED CUTTING, AND PATCHING INCIDENT TO WORK FOR THIS DIVISION THE COST OF WHICH SHALL BE PAID FOR BY THE MECHANICAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL MAKE REQUIRED REPAIRS AFTERWARDS TO SATISFACTION OF ARCHITECT AND/OR OWNER'S REPRESENTATIVE. CUT CAREFULLY TO MINIMIZE NECESSITY FOR REPAIRS TO EXISTING WORK. DO NO CUT BEAMS, COLUMNS OR TRUSSES. PATCH AND REPAIR WALLS, FLOORS, CEILING, AND ROOFS WITH MATERIALS OF SAME QUALITY AND APPEARANCE AS ADJACENT SURFACES UNLESS OTHERWISE SHOWN. SURFACE FINISHES SHALL EXACTLY MATCH EXISTING FINISHES OF SAME MATERIALS.
2. THE MECHANICAL CONTRACTOR SHALL BEAR EXPENSE OF CUTTING, PATCHING, REPAIRING, AND REPLACING OF WORK OF OTHER CONTRACTORS REQUIRED BECAUSE OF ITS FAULT, ERROR, TARDINESS, OR BECAUSE OF DAMAGE DONE BY MECHANICAL CONTRACTOR.

PART 10 - FIRE ASSEMBLY PENETRATIONS

1. COORDINATE REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR, GENERAL CONTRACTOR, ARCHITECT, THE OWNER'S REPRESENTATIVE AND THE LOCAL AUTHORITIES HAVING JURISDICTION.
2. PROVIDE U.L. FIRE PENETRATION SYSTEM NUMBER WL1002, FC1002, FC2008, FC3001 OR FC1001 FOR COMBUSTIBLE CONSTRUCTION OR SYSTEM NUMBER WL1002, WL2002, FA5001, OR FA8001 FOR NON-COMBUSTIBLE CONSTRUCTION OF THE U.L. BUILDING MATERIALS DIRECTORY AND AS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
3. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL COMPLY WITH U.L. FIRE RESISTANCE DIRECTORY, LATEST ADOPTED EDITION.
4. PROVIDE U.L. LISTED FIRE DAMPERS WITH FUSIBLE LINKS CONSTRUCTED TO U.L. STANDARD 33 AND U.L. LISTED FIRE/SMOKE DAMPERS WITH SMOKE DETECTORS CONFORMING TO NFPA 90A AND MEETING UL555 REQUIREMENTS AS REQUIRED Y STATE AND LOCAL CODES, INCLUDING ANY ADDITIONAL FIRE DAMPERS AND/OR FIRE/SMOKE DAMPERS WITH SMOKE DETECTORS THAT MAY BE REQUIRED, EVEN IF NOT SHOWN ON THE MECHANICAL DRAWINGS. PROVIDE FIRESTOP SYSTEM AS REQUIRED BY LOCAL CODES AND ORDINANCES.
5. PROVIDE SMOKE DETECTORS AND WIRING CONTROL AS REQUIRED FOR OPERATION OF FIRE/SMOKE DAMPERS.

PART 11 - SEISMIC BRACING

1. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL REQUIRED SEISMIC BRACING, RESTRAINTS, EQUIPMENT ISOLATORS, ETC. FOR HIS INSTALLED EQUIPMENT. ALL OF WHICH SHALL COMPLY WITH PPIC AND SMACNA GUIDELINES FOR THE LOCAL SEISMIC ZONE REQUIREMENTS AND IN ACCORDANCE WITH THE AUTHORITIES HAVING JURISDICTION.

PART 12 - AS-BUILT DRAWINGS

1. THE MECHANICAL CONTRACTOR SHALL KEEP A RECORD SET OF DRAWINGS NEATLY MARKED WITH ALL CHANGES FROM THE ORIGINAL DESIGN AND DRAWINGS. THESE DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE AT THE COMPLETION OF THE PROJECT AND PRIOR TO RECEIVING FINAL PAYMENT.

PART 13 - CHECK, TEST AND START-UP

1. THE MECHANICAL CONTRACTOR SHALL PROVIDE MATERIAL AND LABOR REQUIRED TO PERFORM START-UP OF EACH RESPECTIVE ITEM OF EQUIPMENT AND SYSTEM PRIOR TO THE BEGINNING OF TEST, ADJUST AND BALANCE PROCEDURES. SUBMIT START-UP REPORT TO THE ARCHITECT AND/OR OWNER'SREPRESENTATIVE.

PART 14 - TESTING, ADJUSTING AND BALANCING.

1. THE MECHANICAL CONTRACTORS SHALL PAY FOR THE SERVICES OF AN INDEPENDENT AIR BALANCING CONTRACTOR WHO IS CERTIFIED AND APPROVED BY THE ARCHITECT AND/OR THE OWNER'S REPRESENTATIVE PRIOR TO BIDDING TO PERFORM TESTING ADJUSTING AND BALANCING OF NEW HVAC SYSTEMS SUBMIT AIR BALANCE REPORT AND AABC STANDARDS FOR FIELD MEASUREMENT & INSTRUCTION, LATEST ADOPTED EDITION.
2. THE MECHANICAL CONTRACTOR SHALL MAKE CHANGES TO PULLEYS, BELTS AND DAMPERS AS RECOMMENDED BY THE BALANCING CONTACTOR.

PART 15 - EQUIPMENT IDENTIFICATION

1. EQUIPMENT IDENTIFICATION: SIGNS MADE OF LAMINATED PLASTIC WITH 1/8" OR LARGER ENGRAVED LETTERS. SIGNS SHALL E SECURELY ATTACHED BY RUST PROOF SCREWS OR SOME OTHER PERMANENT MEANS.
2. ALL HVAC EQUIPMENT SHALL HAVE EQUIPMENT IDENTIFICATION. INFORMATION ON THE SIGNS SHALL INCLUDE: MECHANICAL EQUIPMENT SCHEDULE SYMBOL, NAME OF EQUIPMENT, RATING, ELECTRICAL CHARACTERISTICS AND ANY OTHER IMPORTANT DATA.

PART 16 - OPERATION AND MAINTENANCE MANUALS

1. PROVIDE THREE (3) SETS OF BOUND OPERATION AND MAINTENANCE MANUALS COVERING ALL NEW HVAC EQUIPMENT FOR THE OWNER'S USE. O&M MANUALS SHALL HAVE THE FOLLOWING FORMAT:
   - a. SIZE: 8-1/2"X 11"
   - b. PAPER: MANUFACTURER'S PRINTED DATA, OR NEATLY TYPE WRITTEN.
   - c. PROVIDE REINFORCED PUNCHED BINDER TAB, BIND IN WITH TEXT.
   - d. PROVIDE FLY-LEAF FOR EACH SEPARATE PRODUCT, OR EACH PIECE OF OPERATING EQUIPMENT. PROVIDE TYPED DESCRIPTION OF PRODUCT, AND MAJOR COMPONENT PARTS OF EQUIPMENT, PROVIDE INDEXED TABS.
   - e. COVER: IDENTIFY EACH VOLUME WITH TYPED OR PRINTED TITLE: "OPERATION AND MAINTENANCE INSTRUCTION". LIST TITLE OF PROJECT, IDENTITY OF GENERAL SUBJECT MATTER COVERED IN THE MANUAL.
   - f. BINDERS: COMMERCIAL QUALITY THREE-RING BINDERS WITH DURABLE AND CLEANABLE PLASTIC COVERS.
   - g. PROVIDE NEATLY TYPEWRITTEN TABLE OF CONTENTS, LIST CONTRACTOR NAME, ADDRESS AND PHONE NUMBER. LIST EACH PRODUCT BY PRODUCT NAME AND OTHER IDENTIFYING SYMBOLS AS SET FORTH IN CONTRACT DOCUMENTS.
   - h. INCLUDE COPY OF EACH WARRANTY, BOND AND SERVICE CHART WITH MAINTENANCE SCHEDULE, TEMPERATURE CONTROL DIAGRAMS, SEQUENCE OF OPERATION AND PROVIDE LOGICAL SEQUENCE OF INSTRUCTION FOR EACH PROCEDURE.

PART 17 - INSTRUCTIONS

1. PRIOR TO FINAL INSPECTION OR ACCEPTANCE, FULLY INSTRUCT THE OWNER'S DESIGNATED OPERATION AND MAINTENANCE PERSONNEL IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF PRODUCTS, EQUIPMENT AND SYSTEMS. (MINIMUM 2-HOURS INSTRUCTION REQUIRED OR MORE IF REQUESTED BY THE OWNER'S REPRESENTATIVE).

PART 18 - WARRANTY AND GUARANTEE

1. THE MECHANICAL CONTRACTOR SHALL PROVIDE ONE (1) YEAR PARTS AND LABOR WARRANTY FOR HIS INSTALLED WORK AND HVAC EQUIPMENT AFTER EQUIPMENT START-UP AND THE OWNER'S REPRESENTATIVES ACCEPTANCE. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR AND MATERIALS TO CORRECT THE TROUBLE WITHOUT ANY ADDITIONAL COST. ANY MATERIALS FOUND TO BE DEFECTIVE DURING THE GUARANTEE PERIOD SHALL BE CORRECTED IMMEDIATELY TO THE ENTIRE SATISFACTION OF THE OWNER.

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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION
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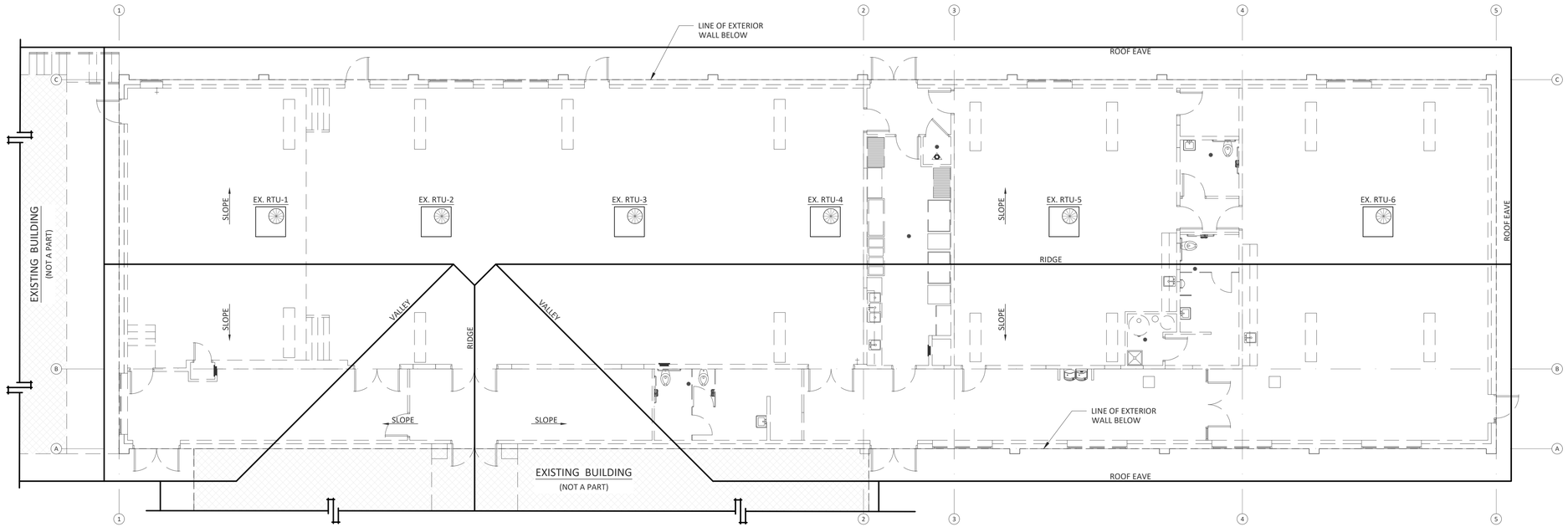
PROJECT NO: 22-003-16
CAD DWG. FILE: 22-003-16.1_CCUSD N Aud_Arch.dwg
DRAWN BY: TCT
DESIGNED BY: TCT
FIELD CREW:
CHECKED BY:
DATE: 4-20-22

SHEET TITLE:
MECHANICAL NOTES

M1.0

ROOF-TOP UNIT SCHEDULE

ID	DESCRIPTION
EX. RTU-1	EXISTING ROOF-TOP UNIT
EX. RTU-2	EXISTING ROOF-TOP UNIT
EX. RTU-3	EXISTING ROOF-TOP UNIT
EX. RTU-4	EXISTING ROOF-TOP UNIT
EX. RTU-5	EXISTING ROOF-TOP UNIT
EX. RTU-6	EXISTING ROOF-TOP UNIT



ROOF MECHANICAL PLAN

SCALE: 1/8" = 1'

GENERAL NOTES

1. THE NORTH AUDITORIUM BUILDING HAS AN EXISTING MECHANICAL SYSTEM. THE MECHANICAL CONTRACT FOR THIS PROJECT WILL BE DESIGN BUILD, WITH THE CONTRACTOR WORKING IN TANDEM WITH THE ENGINEER IN RESPONSIBLE CHARGE TO ASSESS THE EXISTING MECHANICAL SYSTEM AND TO PROVIDE DESIGN AND INSTALLATION OF SYSTEM IMPROVEMENTS REQUIRED TO PRODUCE AN HVAC SYSTEM IN ACCORDANCE WITH STATE AND LOCAL CODES, OSHA, NFPA, SMACNA AND ASHRAE GUIDELINES.
2. ALL DRAWINGS SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL ASPECTS OF THE CONTRACT DOCUMENTS PRIOR TO SUBMITTING PRICING. ANY AND ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO AN INSTALLATION SUCH THAT CLARIFICATIONS CAN BE ISSUED.
3. ANY WORK PERFORMED OR MATERIAL USED WHICH IS SHOWN TO BE IN CONFLICT WITH THE CONTRACT DRAWINGS, SPECIFICATIONS OR ANY APPLICABLE CODE OR GOVERNING REGULATION SHALL BE REMOVED AND REPLACED OR CORRECTED AT THE CONTRACTOR'S EXPENSE.
4. ALL SYMBOLS AND ABBREVIATIONS USED ON THE CONTRACT DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH ANY WORK.
5. DO NO SCALE THE DRAWINGS: ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO FABRICATION OF MATERIALS OR ERECTION OF ASSEMBLIES. IF DISCREPANCIES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION.
6. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR AND EQUIPMENT, TRANSPORTATION AND SERVICES REQUIRED FOR COMPLETION OF THE WORK. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE DONE IN STRICT COMPLIANCE WITH ALL LOCAL CODES AND GOVERNING REGULATIONS.
7. ALL PERMITS AND FEES WHICH ARE REQUIRED FOR THIS WORK SHALL BE SECURED AND PAID FOR BY THE MECHANICAL CONTRACTOR.
8. ALL PLUMBING AND MECHANICAL INSTALLATIONS SHALL ADHERE TO THE 2015 IECC.
9. PROVIDE OPERATION AND MAINTENANCE MANUALS TO OWNER OR ALL NEWLY INSTALLED EQUIPMENT PER 2015 IECC. O&M MANUALS SHALL BE BOUND IN THREE RING BINDER UTILIZING LABELED TABS TO SEPARATE EQUIPMENT SECTIONS.
10. UNLESS NOTED OTHERWISE, ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AND MECHANICAL ACCESSORIES SHALL REMAIN. NO CHANGES UNLESS NOTED.
11. CONTRACTOR SHALL BE RESPONSIBLE TO CLEAN THE SURFACE OF ALL SUPPLY, RETURN, EXHAUST, AND TRANSFER DIFFUSERS/GRILLES AT COMPLETION OF PROJECT.
12. DUCTWORK SHALL BE FABRICATED TO NFPA 90A STANDARDS. TYPICAL LOW PRESSURE DUCTWORK SHALL BE ASTM A653M GALVANIZED STEEL SHEET, LOCK FORMING QUALITY, HAVING ZINC COATING OF 1.25 OUNCES/SF FOR EACH SIDE PER ASTM A90.
13. FABRICATE AND SUPPORT DUCTWORK IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS AND ASHRAE HANDBOOKS.
14. ALL BRANCH DUCTWORK SHALL MATCH CONNECTION SIZE OF DIFFUSERS UNLESS NOTED OTHERWISE.
15. ROUTE EXPOSED SPIRAL DUCTWORK AS HIGH AS POSSIBLE TO BOTTOM OF STRUCTURE.
16. ALL FIRE RATED PENETRATIONS TO BE PROVIDED WITH SMOKE/FIRE DAMPERS. PLEASE SEE ARCHITECTURAL PLANS DETAILING THE 1HR RATED SHAFT ASSEMBLY.
17. WITHIN 90 DAYS OWNER SHALL RECEIVE: AS-BUILT DRAWINGS, OPERTATING MANUALS,SYSTEM BALANCING REPORTS, & FINAL COMMISSIONING REPORTS.
18. SMOKE DETECTORS TO BE PROVIDED IN RETURN AIR DUCTS WITH 2000 CFM OR GREATER. AS PER IMC606.2.1
19. PROVIDE FIRE/SMOKE DAMPERS AT ALL RATED SHAFT PENETRATIONS AS PER 717.6.3

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SHEET TITLE:
ROOF MECHANICAL PLAN

M2.0

GENERAL NOTES

1. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK INCLUDING COMPLETE AND OPERABLE SYSTEMS, TESTED AND READY FOR OPERATION. ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON THE DRAWINGS BUT MENTIONED IN THE SPECIFICATIONS OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
2. ALL GENERAL CONDITIONS, SPECIAL AND GENERAL. REQUIREMENTS OF THE GENERAL CONSTRUCTION SPECIFICATION ARE PART OF THIS SPECIFICATION AND HAVE THE SAME FORCE AND EFFECT AS IF PRINTED HERE IN FULL.
3. ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED EDITION. OF THE APPLICABLE INTERNATIONAL BUILDING, MECHANICAL, PLUMBING, FIRE AND ELECTRICAL CODES, AND FEDERAL, STATE, AND LOCAL REGULATIONS AND AUTHORITIES HAVING JURISDICTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING FOR AND OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING: WORKMEN'S IDENTIFICATION AND SAFETY, FIRE PROTECTION, CONTRACTOR'S LIABILITY INSURANCE, SAFETY BARRICADES, WARNING SIGNS, AND TRASH REMOVAL AS REQUIRED.
5. THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL DRAWINGS, PLANS AND SPECIFICATIONS FOR THE BUILDING, AND FOR OTHER TRADES, AND SHALL COORDINATE THE WORK WITH ALL OTHER TRADES, INCLUDING, BUT NOT LIMITED TO, THE CONSTRUCTION DOCUMENTS, SHOP DRAWINGS, SPECIFICATIONS ETC. FOR ALL GENERAL CONSTRUCTION, STRUCTURAL, MECHANICAL, FIRE PROTECTION AND ELECTRICAL AND SPECIALTY CONTRACTOR WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATING AND FITTING OF MATERIAL AND EQUIPMENT INTO THE BUILDING, WITHOUT INTERFERENCE WITH OTHER WORK, AND SHALL MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICTS WITH OTHER TRADES, TO PROVIDE ACCESS, AND CLEARANCES FOR THE PROPER EXECUTION OF THE WORK.
6. DRAWINGS ARE IN GENERAL DIAGRAMMATIC, RELATIVELY SMALL SCALE, AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CERTAIN COMPONENTS, APPURTENANCES,ACCESORIES AND RELATED SPECIALTIES ARE NOT SHOWN, AND SHALL BE PROVIDED. DO NOT SCALE DRAWINGS. ARRANGEMENT OF EQUIPMENT AND ROUTING OF PIPES AND DUCTWORK, ETC. INDICATED ON DRAWINGS MAY REQUIRE MODIFICATION DUE TO UNFORESEEN CONDITIONS AND REQUIRED ON SITE REVISIONS DURING CONSTRUCTION. NO CONSIDERATION OR ALLOWANCE SHALL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE CONTRACT DOCUMENTS AND THE WORK TO BE COMPLETED(ALSO SEE "BIDDING").
7. THE CONTRACTOR SHALL PROVIDE (5) COPIES OF ALL SUBMITTALS, AT ONE TIME, BOUND IN A NEAT & ORDERLY MANNER WITH EQUIPMENT SUBMITTALS NOTING EQUIPMENT CALL OUTS ON THE PLANS FOR REFERENCE. AVAILABLE OPTIONS AND CONFIGURATIONS NOTED. PARTIAL OR UNMARKED SUBMITTALS WILL BE REJECTED. SUBMITTALS SHALL INCLUDE ALL EQUIPMENT, MATERIALS, AND DEVICES FOR REVIEW BY THE ENGINEER. WORK SHALL NOT START UNTIL ALL REVIEWS HAVE BEEN COMPLETED AND THE ITEMS TO BE PROVIDED ARE ACCEPTABLE. ALL MATERIALS AND EQUIPMENT SHALL BE OF INDUSTRY STANDARD, COMMONLY USED ACCEPTABLE GRADES IN THE CONSTRUCTION INDUSTRY FOR THE INTENDED PURPOSE AND SHALL BEAR THE "U.L.", ASME, AMCA, OR OTHER THIRD PARTY LISTINGS AND LABEL WHEN APPLICABLE.
8. THE CONTRACTOR SHALL PROVIDE TO THE ARCHITECT (5) COMPLETE SETS OF FINAL TO SCALE AS-BUILT DOCUMENTS ACCURATELY SHOWING THE MATERIALS AND EQUIPMENT AS INSTALLED.
9. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER. REFRIGERATION COMPRESSORS SHALL BE GUARANTEED FOR A MINIMUM OF FIVE YEARS FROM DATE OF OWNER'S ACCEPTANCE. IN ADDITION, THE CONTRACTOR SHALL GUARANTEE THAT THE INSTALLATION, WHEN OPERATED IN ACCORDANCE WITH THE CONTRACTOR'S INSTRUCTIONS, WILL PROVIDE CAPACITIES AND CHARACTERISTICS INDICATED OR SPECIFIED AND WILL FULFILL EACH AND EVERY REQUIREMENT OF THE DRAWINGS AND SPECIFICATIONS, AND SHOULD THE INSTALLATION IN ANY WAY FAIL TO DO SO, THE CONTRACTOR WILL, WITHOUT DELAY AND WITHOUT COST TO THE OWNER, PROVIDE ANY AND ALL ADDITIONAL EQUIPMENT, MATERIAL, AND LABOR AS NECESSARY TO CORRECT THE FAULT AND COMPLY WITH THE PLANS & SPECIFICATIONS.
10. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND SIZES AND CONDITIONS PRIOR TO BIDDING WORK. ANY CONFLICTS, PROBLEMS OR DEVIATIONS SHALL BE TRANSMITTED TO THE ENGINEER FOR REVIEW.
11. COORDINATE ROOF PENETRATIONS WITH ARCHITECTURAL AND THE ROOFING CONTRACTOR REQUIREMENTS. VERIFY IF A ROOF WARRANTY IS IN AFFECT AND ADHERE TO WARRANTY REQUIREMENTS. PROVIDE BASE AND COUNTER FLASHING FOR ITEMS PENETRATING THE ROOF.
12. CONTRACTOR TO FURNISH AND INSTALL ALL STARTERS, WIRING, 12. CONTROLS, DEVICES AND ALL CONDUIT, FOR A COMPLETE AND OPERABLE SYSTEM. ALL WORK SHOWN IS NEW, UNLESS NOTED OTHERWISE.
13. COORDINATE WITH ARCHITECTURAL REQUIREMENTS AND MAINTAIN OCCUPANCY AND FIREWALL SEPARATION INTEGRITY AS REQUIRED PER LOCAL CODE AND AUTHORITIES HAVING JURISDICTION. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF ALL OCCUPANCY/RATED WALL SEPARATIONS AND SPECIFIC DETAILS FOR CONSTRUCTION. PROVIDE ALL NECESSARY FIRE DAMPERS, FIRE/SMOKE DAMPERS, ACCESS DOORS, AND CAULKING, ETC. FOR APPROVED INSTALLATION. <u>BIDDING</u>

1. THE CONTRACTOR IS EXPECTED TO CONTACT THE ARCHITECT FOR ANY PARTICULAR PROBLEMS AND CLEAR UP ANY POSSIBLE MISUNDERSTANDING BEFORE BID IS SUBMITTED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE CONTRACT DOCUMENTS AND THE WORK TO BE ACCOMPLISHED. SUBMISSION OF A BID FOR THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE, ALL CONSTRUCTION DOCUMENTS AND UNDERSTANDS THE SCOPE OF WORK AND CONDITIONS THAT MAY AFFECT THE PERFORMANCE OF THE WORK AND HAS INCLUDED THIS IN THE ORIGINAL BID. EXECUTION

1. THE CONTRACTOR SHALL PROVIDE ALL RIGGING, HANDLING OF MATERIALS AND EQUIPMENT, AND THE NECESSARY PROTECTION FOR MATERIALS AND EQUIPMENT. TOOLS AND EQUIPMENT WILL BE STORED IN OWNER DESIGNATED AREAS ONLY.
2. THE CONTRACTOR WILL PROTECT THE WORK AND MATERIAL AGAINST DIRT, THEFT, INJURY, OR DAMAGE UNTIL ACCEPTED BY OWNER. ALL WORK SHALL BE TURNED OVER TO OWNER CLEAN AND IN PERFECT CONDITION, READY FOR SATISFACTORY SERVICE.
3. PIPES AND/OR CONDUITS PASSING THROUGH WALL, FLOORS, AND PARTITIONS SHALL BE PROVIDED WITH SLEEVES, EXCEPT AS PROHIBITED BY U.L. LISTING. SLEEVES PASSING THROUGH WATER PROOFING OR DAMP PROOFING SHALL BE WATER TIGHT. PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRE PROOFED WITH MATERIAL APPROVED AND AS DEFINED FOR THE RATING OF THE STRUCTURE AND U.L. LISTED. WHERE PIPES AND CONDUITS PASS THROUGH WALLS, FLOORS OR CEILINGS IN EXPOSED AREAS PROVIDE WITH CHROME PLATED ESCUTCHEON PLATES. PROVIDE ALL SLEEVES, OPENINGS, CUTTING AND PATCHING NECESSARY FOR THE INSTALLATION OF THE WORK. CUTTING AND PATCHING SHALL BE DONE BY WORKERS SKILLED IN THE TRADES REQUIRED.
4. PROVIDE ALL FOUNDATIONS, HANGERS, ACCESS AND SUPPORTS FOR ALL EQUIPMENT SUPPLIED AND/OR INSTALLED. ALL EQUIPMENT WITH ROTATING PARTS SHALL BE PROVIDED WITH VIBRATION ISOLATION.
5. ALL EQUIPMENT SHALL BE PROVIDED WITH FACTORY FINISH FOR THE APPLICATION, ANY REQUIRED ADDITIONAL EQUIPMENT PAINTING IS BY OTHERS UNLESS NOTED OTHERWISE.
6. EACH PIECE OF EQUIPMENT, VALVE, SWITCH, STARTER, CONTROL PANEL, PIPE, ETC., SHALL BE CLEARLY IDENTIFIED INCLUDING IN CONCEALED OR COVERED IN ACCORDANCE WITH OSHA AND ANSI REGULATIONS. IDENTIFY PIPES NEAR EACH VALVE WITH PIPE TAPE, INDICATING FLUID TYPE, DIRECTION OF FLOW, SERVICE ZONE, AND SIZE. TAPE SHALL BE APPLIED TO PIPE OR COVERING. VALVES, CONTROLS, AND DAMPERS SHALL BE IDENTIFIED BY LEGIBLE LACQUERED BRASS TAGS WITH STAMPED LETTERS PERMANATELY FASTENED. EQUIPMENT SHALL BE IDENTIFIED AS TO FUNCTION, PURPOSE AND AREA SERVED, BY MEANS OF PERMANENTLY ATTACHED LEGIBLE NAMEPLATES OF MATERIAL APPLICAPLE FOR THE ENVIRONMENT.
7. AT THE CONCLUSION OF THE WORK, ALL EQUIPMENT AND 7. SYSTEMS SHALL BE CAREFULLY BALANCED, ADJUSTED, AND TESTED TO PROVIDE BALANCED, QUIET-OPERATING, STABLE AND SAFE SYSTEMS.

PLUMBING SPECIFICATIONS

PART 1 - GENERAL

1. THE PLUMBING SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH LOCAL, STATE, AND REGIONAL PLUMBING CODES, STATE AND LOCAL HEALTH DEPARTMENT REGULATIONS, AND OSHA REGULATIONS.
2. IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO PAY FOR ALL FEES AND PERMITS RELATING TO HIS WORK.
   A. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE LOCAL GAS COMPANY AND SHALL ARRANGE FOR THE INSTALLATION OF THE NEW GAS METERS. THE NEW GAS PIPING SUPPLYING THE GAS-FIRED HVAC EQUIPMENT IS SIZED FOR 4 OUNCE GAS PRESSURE.
3. THE PLUMBING CONTRACTOR SHALL BE AN EXPERIENCED FIRM REGULARLY ENGAGED IN THE INSTALLATION OF COMMERCIAL PLUMBING SYSTEMS IN ACCORDANCE WITH LOCAL CODES. THE OWNER'S REPRESENTATIVE MAY REJECT ANY PROPOSED CONTRACTOR WHO CANNOT SHOW EVIDENCE OF SUCH QUALIFICATIONS
4. VISIT THE JOBSITE PRIOR TO BIDDING THE PROJECT TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND ANY INTERFERENCE. SHOULD A CONDITION ARISE WHERE A CHANGE WOULD BE ADVISABLE, SECURE APPROVAL OF CHANGE BEFORE PROCEEDING WITH WORK.

PART 2 - PIPING MATERIALS AND VALVES

1. PIPING MATERIALS AND FITTINGS SHALL BE AS FOLLOWS:
   A. NEW DOMESTIC WATER PIPING SHALL BE ASTM B88 TYPE L HARD DRAWN COPPER WITH ANSI B16.22 WROUGHT COPPER FITTINGS AND 95-5 SOLDER ABOVEGROUND, AND TYPE K SOFT COPPER BELOWGROUND.
   B. ALTERNATE WASTE AND VENT PIPING SHALL BE EITHER ASTM D2661 OR ASTM D2665 PVC PIPING OR FITTING. THE INSTALLATION SHALL COMPLY WITH IAPMO IS9. UNDERGROUND ABS OR PVC PIPING SHALL BE LAID IN 6-INCH DEEP BED OF SAND.
   C. NEW GAS PIPING SHALL BE ASTM A53 SCHEDULE 40 BLACK STEEL PIPE WITH ANSI 16 .3 150 LB. MALLEABLE IRON FITTINGS ABOVEGROUND AND POLYETHYLENE AS APPROVED BY THE LOCAL GAS UTILITY COMPANY FOR BELOW GROUND INSTALLATION.
2. VALVES:

ALL VALVES MUST BE ACCESSIBLE. VALVES LOCATED ABOVE A HARD CEILING OR IN A WALL SHALL HAVE AND APPROVED ACCESS DOOR. VALVE STEMS SHALL BE INSTALLED HORIZONTAL OR HIGHER THAN THE VALVE. ALL VALVES SHALL BE OF THE SAME MANUFACTURER.

   A. BALL VALVES: 2" AND SMALLER SHALL BE RATED FOR 125 PSIG WOG AT 220 DEGREE F., BRONZE CONSTRUCTION CONFORMING TO ASTM B62, SOLDER ENDS, BUBBLE TIGHT TEFLON SEAT (AT 100 PSIG UNDER WATER), WITH A HARD CHROME PLATED BRASS OR STAINLESS STEEL BALL. THE VALVE SHALL OPERATE WITH FLOW IN EITHER DIRECTION AND SHALL BE SUITABLE FOR THROTTLING AND TIGHT SHUT OFF. PROVIDE WATTS B-6001.

PART 3 - FIXTURES, EQUIPMENT, DRAINS AND TRIM

1. APPROVED MANUFACTURERS FOR FIXTURES AND TRIM:
   A. FIXTURES: AMERICAN STANDARD, KOHLER, ELJER, AND ELKAY
   B. CARRIERS, ETC,: J.R. SMITH, JOSAM, WADE, AND ZURN.
   C. TRIM: AMERICAN STANDARD, CHICAGO FAUCETS, ELKAY, KOHLER AND T&S BRASS
   D. FLUSH VALVES: SLOAN, DELANEY, AND ZURN Z6000 SERIES.
2. ALL WATER FAUCETS SHALL MEET N.S.F STANDARD SECTION 9 FOR DRINKING WATER FAUCETS AND SHALLBE CERTIFIED BY UNDERWRITERS LABORATORY. THE PRODUCT SHALL BE MANUFACTURED FROM BRASS CONSTRUCTION, BRASS COMPONENTS WHICH CONTACT WITHIN THE FAUCET SHALL BE FROM BRASS WHICH CONTAINS NO MORE THAN 3% LEAD BY DRY WEIGHT.
3. WATER HEATERS SHALL BE SHOWN ON THE PLUMBING DRAWINGS.

PART 4 - PIPING INSULATION

1. PIPING INSULATION SHALL CONFORM TO THE CURRENT ENERGY CODE AS ADOPTED BY THE STATE. NO INSULATION SHALL BE APPLIED UNTIL ALL PRESSURE TESTS ARE COMPLETE, LEAKS REPAIRED, AND THE SYSTEM IS SUCCESSFULLY RETESTED. INSULATION SHALL BE ASTM C547, CLASS 1 FIBERGLASS ONE-PIECE PREFORMED PIPE INSULATION WITH AN ASTM C921 ALL PURPOSE (FASJ) FIRE RETARDANT JACKET. IN LIEU OF FIBERGLASS INSULATION, ASTM 3552, TYPE II, CLASS 2 FOAM GLASS OR ASTM C534, TYPE 1 THERMACELL OR EXPANDED POLYURETHANE MAY BE USED. FIRE AND SMOKE HAZARD FOR THE COMPLETE INSULATION SYSTEM SHALL NOT EXCEED: FLAME SPREAD - 25, FUEL CONTRIBUTION - 50, SMOKE DEVELOPMENT - 450 IN ACCORDANCE WITH ASTM E84 TEST METHODS.
2. PIPING INSULATION THICKNESS FOR NEW PIPING SHALL BE AS FOLLOWS:

PIPE SIZES

PIPE TYPEBRANCHUP TO 2"2-1/2" & UPDOM. HOT--1.0"1.5"DOM. COLD--0.5"0.5"

3. INSULATION PROTECTION SHIELDS EQUAL TO GRINNELL FIGURE 167 SHALL BE INSTALLED ON ALL INSULATED PIPE 1" AND LARGER. HANGERS SHALL NOT CONTACT THE PIPE WHERE INSULATION IS SPECIFIED. INSERT INSULATION SHALL BE THE SAME THICKNESS AS THE ADJOINING PIPE INSULATION.

PART 5 - INSTALLATION

1. NEW HORIZONTAL WASTE PIPE SHALL BE GIVEN A GRADE OF ¼" PER FOOT. 1/8" PER FOOT SLOPE MUST BE APPROVED BY THE AUTHORITY HAVING JURISDICTION. ROOF DRAIN PIPING SHALL BE GIVEN A GRADE OF 1/8" PER FOOT.
2. VENT INLETS ON THE FLOOR DRAINS AND FLOOR SINKS SHALL BE ABOVE THE WEIR OF THE TRAPS THEY SERVE.
3. ALL PLUMBING FIXTURE SUPPLIES WITH STOPS, P-TRAPS, AND TRAP ARMS SHALL BE CHROME PLATED.
4. VERIFY THE LOCATIONS AND SIZES OF THE EXISTING DOMESTIC WATER, GAS, AND WASTE AND MAKE NECESSARY NEW CONNECTIONS AS REQUIRED. REFER TO THE CIVIL ENGINEERING DRAWINGS AND COORDINATE WITH THE GENERAL CONTRACTOR THE OWNER'S REPRESENTATIVE.
5. THE PLUMBING CONTRACTOR SHALL PERIODICALLY REMOVE ALL DEBRIS AND WASTE RELATED TO HIS WORK IN ORDER TO MAINTAIN SAFE WORKING AND OPERATING CONDITIONS, AND SHALL DISPOSE OF THE SAME IN A APPROVED MANNER AT THE COMPLETION OF WORK, HE SHALL REMOVE ALL HIS RUBBISH, TOOLS, AND SURPLUS MATERIAL FROM AND ABOUT THE SITE, LEAVING HIS WORK CLEAN AND THE AREA READY FOR OCCUPANCY.
6. CLEANOUTS SHALL BE THE SAME SIZE AS THE PIPE. WHERE CLEANOUTS IN CONNECTION WITH THREADED PIPE ARE ACCESSIBLE, THEY SHALL BE CAST IRON DRAINAGE T-PATTER 90 DEGREE BRANCH FITTING WITH EXTRA HEAVY BRASS SCREW PLUGS OF THE SAME SIZE AS THE PIPE (4" CLEANOUT MAXIMUM).
7. ALL CLEANOUTS SHALL BE FLUSH WITH WALL OR COLOR COMPLETE WITH STAINLESS STEEL COVER PLATE FOR WALL CLEANOUTS AND NICKEL BRONZE FOR FLOOR CLEANOUTS.
8. ARRANGE NEW PIPING TO PERMIT READY ACCESS TO VALVES, UNIONS, TRAPS, AND TO CLEAR OPENING OF DOORS AND ACCESS PANELS.
9. ADJUST LOCATION OF PIPES, ETC., TO ACCOMMODATE WORK FROM INTERFERENCE ANTICIPATED AND ENCOUNTERED. DETERMINE EXACT ROUTE AND LOCATION OF EACH PIPE PRIOR TO FABRICATION. MAKE OFFSETS, TRANSITION, AND CHANGES IN DIRECTION OF PIPES AS REQUIRED TO MAINTAIN PROPER HEAD ROOM AND PITCH OF SLOPING LINES WHETHER OR NOT INDICATED ON DRAWINGS.
10. INSURE THAT ITEMS TO BE FURNISHED FIT IN SPACE AVAILABLE. MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS INCLUDING THOSE FOR CONNECTIONS AND FURNISH AND INSTALL EQUIPMENT OF SIZE AND SHAPE SO FINAL INSTALLATION SHALL SUIT TRUE INTENT AND MEANING OF CONTRACT DOCUMENTS.
11. FOLLOW MANUFACTURER'S DIRECTIONS IN DELIVERY, STORAGE, PROTECTION, AND INSTALLATION OF MATERIALS. PROMPTLY NOTIFY ARCHITECT IN WRITING OF CONFLICTS BETWEEN REQUIREMENTS OF CONTRACT DOCUMENTS AND MANUFACTURER'S DIRECTIONS AND OBTAIN ARCHITECTS WRITTEN INSTRUCTION BEFORE PROCEEDING WITH WORK. BEAR EXPENSES ARISING FROM CORRECTING DEFICIENCIES OF WORK THAT TO DO NOT COMPLY WITH MANUFACTURER'S DIRECTION OR SUCH WRITTEN INSTRUCTION FROM ARCHITECT AND/OR OWNER'S REPRESENTATIVE.
12. DELIVER MATERIAL TO SITE AND TIGHTLY COVER AND PROTECT AGAINST DIRT, WATER, AND CHEMICAL OR MECHANICAL INJURY BUT HAVE READILY ACCESSIBLE FOR INSPECTION. STORE ITEMS SUBJECT TO MOISTURE DAMAGE IN A DRY HEATED SPACE.
13. VERTICAL PIPING SHALL BE SECURED AT SUFFICIENTLY CLOSE INTERVALS TO KEEP PIPE ALIGNMENT AND CARRY THE WEIGHT OF THE PIPE AND CONTENTS. STACKS SHALL BE SUPPORTED AT THEIR BASES WITH APPROVED METAL CLAMPS OR HANGERS.
14. SUPPORT HORIZONTAL PIPING AT SUFFICIENTLY CLOSE INTERVALS TO MAINTAIN ALIGNMENT AND PREVENT SAGGING OR GRADE REVERSALS IN ACCORDANCE WITH LOCAL PLUMBING CODE. SUPPORT EACH LENGTH OF PIPE BY AN APPROVED HANGER LOCATED NOT MORE THAN 18" FROM THE JOINT. APPROVED MANUFACTURERS ARE ITT GRINNELL FEE & MASON MFG. CO., B-LINE, OR KIN-LINE, INC.
15. SUPPORT TERMINAL ENDS OF ALL HORIZONTAL RUNS OR BRANCHES AND EACH CHANGE OF DIRECTION OR ALIGNMENT BY AN APPROVED HANGER.
16. ALL EXTERIOR GAS PIPING EXPOSED TO WEATHER SHALL BE PAINTED WITH A GRAY COLOR ENAMEL PAINT WITH RUST INHIBITOR.
17. CHANGES IN DIRECTION OF HORIZONTAL WASTE AND VENT SHALL BE MADE WITH THE APPROPRIATE USE 45 DEGREE WYES, HALF WYES, LONG SWEEP 1/4/ BENDS, 1/6, 1/8, OR 1/16 BENDS, EXCEPT THAT SANITARY TEES MAY BE USED ON WASTE LINES WHERE CHANGE IN DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
18. COMPLETE THE INSTALLATION OF EACH PLUMBING FIXTURE INCLUDING CHROME-PLATED TRAP AND ACCESSORIES WITH ACCESSIBLE CHROME-PLATE TRAP AND ACCESSORIES WITH ACCESSIBLE CHROME- PLATED STOP OR CONTROL VALVE IN EACH HOT AND A COLD WATER BRANCH SUPPLY LINE. MAKE JOINT BETWEEN WATER CLOSET AND FLOOR FLANGE TIGHT WITH APPROVED FIXTURE SETTING COMPOUND OR GASKET. INTERIOR EXPOSED PIPE, VALVES, AND COMPLETION OF PROJECT. CAULK BETWEEN FIXTURES AND WALL AND COMPOUND, POINT ALL EDGES. INSTALL FIXTURE AS PER LOCAL CODES AND MANUFACTURER'S INSTRUCTIONS. DO NOT USE FLEXIBLE WATER PIPING.
19. ACCESS PANELS SHALL BE PROVIDED IN WALLS OR GWB CEILINGS WHERE REQUIRED TO ACCESS VALVES OR CONCEALED EQUIPMENT ACCESS DOORS SHALL BE HINGED AND CONSTRUCTED OF METAL WITH A SCREWDRIVER LATCH. ALL ACCESS PANELS SHALL BE 18" X 18", UNLESS OTHERWISE NOTED ON THE DRAWINGS. FIRE-RATED ACCESS PANELS SHALL BE INSTALLED IN FIRE-RATED ASSEMBLIES. INSTALLATION SHALL BE IN NEAT IN FINAL APPEARANCE.

PART 6 - SUBMITTALS

1. BY DESCRIPTION, CATALOG NUMBER AND SPECIFIC DESIGNATION, STANDARDS ARE ESTABLISHED FOR MANUFACTURED ITEMS WHICH THE CONTRACTOR SHALL FURNISH AS REQUIRED BY THIS SECTION. SUBSTITUTIONS MUST BE SUBMITTED AND APPROVED BY THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE OF PRODUCTS PRIOR TO BID FOR CONSIDERATION. SUBSTITUTIONS OF PRODUCTS SHOWN SHALL BE SUBMITTED TO THE ARCHITECT, THE OWNER'S REPRESENTATIVE OR ENGINEER FOR WRITTEN APPROVAL.
2. SHOP DRAWINGS AND UP-TO-DATE ENGINEERING DATA SHEETS AND CATALOG INFORMATION SHALL BE FURNISHED ON THE FOLLOWING ITEMS OF EQUIPMENT. PROVIDE (6) COPIES FOR REVIEW.
   A. FIXTURES AND TRIM
   B. WATER HEATER
   C. PLUMBING EQUIPMENT AND SPECIALTIES
   D. VALVES, STRAINERS, ETC.

PART 7 - CUTTING AND PATCHING

1. CUTTING AND PATCHING OF FLOORS, ROOF AND WALLS TO FACILITATE THE PLUMBING SYSTEM INSTALLATION SHALL BE BY THE GENERAL CONTRACTOR, THE COST OF WHICH SHALL BE PAID FOR BY THE PLUMBING CONTRACTOR THE PLUMBING CONTRACTOR SHALL COORDINATE ALL CUTTING AND PATCHING WITH THE GENERAL CONTRACTOR AND OWNER'S REPRESENTATIVE.
2. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED DIGGING, BACKFILLING AND COMPACTION.
3. THE GENERAL CONTRACTOR SHALL BE PERFORM THE REQUIRED CUTTING, AND PATCHING INCIDENT TO THIS WORK, AND MAKE REQUIRED REPAIRS AFTERWARD TO SATISFACTION OF ARCHITECT AND THE OWNER'S REPRESENTATIVE. CUT CAREFULLY TO MINIMIZE NECESSITY FOR REPAIRS TO EXISTING WORK. DO NOT CUT BEAMS, COLUMNS, OR TRUSSES. PATCH AND REPAIR WALLS, FLOORS, CEILING AND ROOFS WITH MATERIALS OF SAME QUALITY AND APPEARANCE AS ADJACENT SURFACES UNLESS OTHERWISE SHOWN. SURFACE FINISHES SHALL EXACTLY MATCH EXISTING FINISHES OF SAME MATERIALS. THE PLUMBING CONTRACTOR SHALL BEAR EXPENSE OF CUTTING, PATCHING, REPAIRING, AND REPLACING OF WORK OF OTHER CONTRACTORS REQUIRED BECAUSE OF HIS FAULT, ERROR, TARDINESS, OR BECAUSE OF DAMAGE DONE BY THE PLUMBING.
4. SCHEDULE ALL WORK SO AS NOT TO INTERFERE AND/OR DISRUPT THE DAILY ACTIVITIES AND/OR OPERATING HOURS OF NEARBY BUILDINGS OR OPERATIONS. COORDINATE AS REQUIRED WITH GENERAL CONTRACTOR AND THE OWNER'S REPRESENTATIVE.

PART 8 - FIRE ASSEMBLY PENETRATIONS

1. COORDINATE THE REQUIREMENTS WITH OTHER TRADES, GENERAL CONTRACTOR, ARCHITECT, THE OWNER'S REPRESENTATIVE AND THE LOCAL AUTHORITIES HAVING JURISDICTION
2. PROVIDE SLEEVE AT ALL FLOOR PIPING PENETRATIONS. PROVIDE U.L. FIRE PENETRATION SYSTEM NUMBER FC1002, FC2008, FC3007, FC7001, WL002 OR WL2002 FOR COMBUSTIBLE CONSTRUCTION OR SYSTEM NUMBER FA5001, FA8001, WL1002 OR WL2002 FOR NON-COMBUSTIBLE CONSTRUCTION OF THE U.L. BUILDING MATERIALS DIRECTORY AND AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
3. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL COMPLY WITH U.L. FIRE RESISTANCE DIRECTORY, LATEST EDITION.
4. ACCESS PANELS SHALL BE PROVIDED IN WALLS OR GWB CEILINGS WHERE REQUIRED TO ACCESS DAMPERS OR CONCEALED EQUIPMENT. ACCESS DOORS SHALL BE HINGED AND CONSTRUCTED OF METAL WITH A SCREWDRIVER LATCH. ALL ACCESS PANELS SHALL BE MINIMUM OF 18" X 18" UNLESS OTHERWISE NOTED ON DRAWINGS, OR LARGER IF REQUIRED FOR THE REMOVAL OF EQUIPMENT. FIRE-RATED ACCESS PANELS SHALL BE INSTALLED IN FIRE-RATED ASSEMBLIES. INSTALLATION SHALL BE NEAT IN FINAL APPEARANCE.

PART 9 - SEISMIC BRACING

1. THE PLUMBING CONTRACTORS SHALL FURNISH AND INSTALL REQUIRED SEISMIC BRACING, RESTRAINTS, EQUIPMENT ISOLATORS, ETC. FOR HIS INSTALLED EQUIPMENT, PIPING, ETC. ALL OF WHICH SHALL COMPLY WITH PPIC AND SMACNA GUIDELINES FOR THE LOCAL SEISMIC ZONE REQUIREMENTS AND IN ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION.

PART 10 - AS-BUILT DRAWINGS

1. THE PLUMBING CONTRACTOR SHALL KEEP A RECORD SET OF DRAWINGS NEATLY MARKED WITH CHANGES FROM THE ORIGINAL DESIGN AND DRAWINGS. THESE DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE AT THE COMPLETION OF THE PROJECT AND PRIOR TO RECEIVING FINAL PAYMENT.

PART 11 - CHECK, TEST AND START-UP

1. ALL NEW, ALTERED, EXTENDED OR REPLACED PLUMBING SHALL BE LEFT UNCOVERED AND UNCONCEALED UNTIL IT HAS BEEN TESTED OR APPROVED. WHERE SUCH WORK HAS BEEN COVERED OR CONCEALED BEFORE IT IS TESTED AND APPROVED, IT SHALL BE EXPOSED AT THE PLUMBING CONTRACTOR'S EXPENSE FOR TESTING AND APPROVAL.
2. EACH SYSTEM SHALL BE ADJUSTED TO INSURE PROPER FUNCTIONING AND SHALL BE LEFT IN FIRST CLASS OPERATING CONDITION. CONTRACTOR SHALL PERFORM ALL TESTS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
   A. HYDROSTATICALLY TEST THE NEW WASTE AND VENT SYSTEM INDOORS TO HOLD NOT LESS THAN 5 PSIG OR 10 FEET OF HEAD PRESSURE FOR 2 HOURS WITH NO DECREASE IN PRESSURE.
   B. TEST THE NEW DOMESTIC WATER SYSTEMS TO HOLD NOT LESS THAN 100 PSIG (OR 1-1/2 TIMES THE WORKING PRESSURE IN THE PIPE, WHICHEVER IS GREATER) AIR PRESSURE (OR HYDROSTATIC) FOR 4 HOURS WITH NO DECREASE IN PRESSURE.
   C. GAS PIPING SHALL BE TEST AT 60 PSIG FOR NO LESS THAN 30 MINUTES IN ACCORDANCE WITH THE LOCAL GAS COMPANY'S GOOD PRACTICES. ALL TESTS SHALL BE MAINTAINED WITHOUT LEAKS OR PRESSURE LOSS FOR THE SPECIFIED TIME, WITH ALLOWANCE FOR THE TEMPERATURE CHANGES. REPAIR ALL LEAKS AND REPEAT TESTS WHERE REQUIRED.
3. THE PLUMBING CONTRACTOR SHALL PROVIDE MATERIAL AND LABOR REQUIRED TO PERFORM START-UP OF EACH RESPECTIVE ITEM OF EQUIPMENT, FIXTURES AND SYSTEMS. SUBMIT TEST AND START-UP REPORT TO THE ARCHITECT AND/OR THE OWNER'S REPRESENTATIVE AS APPLICABLE.
4. CLEAN ALL PIPING, EQUIPMENT, ETC. REMOVE ALL GREASE, DIRT AND STAINS THAT HAVE ACCUMULATED DURING THE CONSTRUCTION PERIOD.

PART 12 - STERILIZATION

1. STERILIZE DOMESTIC WATER SYSTEM WITH SOLUTION CONTAINING 250 PARTS PER MILLION MINIMUM OF AVAILABLE CHLORINE. INTRODUCE CHLORINATING MATERIAL INTO SYSTEM A MANNER APPROVED BY THE ARCHITECT AND LOCAL DEPARTMENT OF HEALTH. ALLOW STERILIZATION SOLUTION TO REMAIN FOR 24 HOURS AND OPEN AND CLOSE VALVES AND FAUCETS SEVERAL TIMES DURING THAT TIME. AFTER STERILIZATION, FLUSH SOLUTION FROM SYSTEM WITH CLEAN WATER UNTIL RESIDUAL CHLORINE CONTENT IS LESS THAN 0.2 PARTS PER MILLION. WATER SYSTEM WILL NOT BE ACCEPTED UNTIL NEGATIVE BACTERIOLOGICAL TEST IS MADE ON WATER TAKEN FROM SYSTEM. REPEAT DOSING AS NECESSARY UNTIL SUCH NEGATIVE TEST IS ACCOMPLISHED AND IS ACCEPTABLE TO THE LOCAL DEPARTMENT OF HEALTH. PROVIDE REPORT TO OWNER'S REPRESENTATIVE FOR APPROVAL.

PART 13 - OPERATION AND MAINTENANCE MANUALS

1. PROVIDE THREE (3) SETS OF O& M MANUALS COVERING ALL NEW VALVES, EQUIPMENT AND APPURTENANCES FOR THE OWNER'S USE AS APPLICABLE. THE FORMAT SHALL BE AS FOLLOWS:
   A. SIZE: 8 1/2X11 INCHES
   B. PAPER: MANUFACTURER'S PRINTED DATA, OR NEATLY TYPE-WRITTEN
   C. PROVIDE REINFORCED PUNCHED BINDER TABS, BOUND IN WITH TEXT.
   D. PROVIDE FLY-LEAF FOR EACH SEPARATE PRODUCT, OR EACH PIECE OF OPERATING EQUIPMENT. PROVIDE TYPED DESCRIPTION OF PRODUCT, AND MAJOR COMPONENT PARTS OF EQUIPMENT. PROVIDE INDEXED TABS.
   E. COVER: IDENTIFY EACH VOLUME WITH TYPED OR PRINTED TITLE: "OPERATION AND MAINTENANCE INSTRUCTION". LIST TITLE OF PROJECT, IDENTITY OF GENERAL SUBJECT MATTER COVER IN THE MANUAL.
   F. BINDERS: COMMERCIAL QUALITY THREE-RING BINDERS WITH DURABLE AND CLEANABLE PLASTIC COVERS
   G. PROVIDE NEATLY TYPE WRITTEN TABLE OF CONTENTS. LIST PRODUCT BY PRODUCT NAME AND OTHER INDENTIFYING SYMBOLS AS SET FOR IN CONTRACT DOCUMENTS.
   H. INCLUDE COPY OF EACH WARRANTY, BOND AND SERVICE CONTRACT ISSUED. INCLUDE PARTS LISTS, LUBRICATION CHART WITH MAINTENANCE SCHEDULE.

PART 14 - INSTRUCTIONS

1. PRIOR TO FINAL INSPECTION OR ACCEPTANCE, FULLY INSTRUCT THE OWNER'S DESIGNATED OPERATION AND MAINTENANCE PERSONNEL IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF PRODUCTS, EQUIPMENT AND SYSTEMS. (MINIMUM 2-HOURS INSTRUCTION PERIOD REQUIRED OR MORE IF REQUESTED BY THE OWNER'S REPRESENTATIVE).

PART 15 - WARRANTY AND GUARANTEE

1. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE NEW PLUMBING SYSTEMS INSTALLATION AND SHALL PROVIDE A ONE (1) YEAR PARTS AND LABOR WARRANTY FOR HIS PERFORMED WORK AFTER EQUIPMENT START-UP AND THE OWNER'S REPRESENTATIVE'S ACCEPTANCE. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP, THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR AND MATERIALS TO CORRECT THE TROUBLE WITHOUT ANY COST TO THE OWNER. ANY MATERIALS FOUND TO BE DEFECTIVE DURING THE GUARANTEE PERIOD SHALL BE CORRECTED IMMEDIATELY TO THE ENTIRE SATISFACTION OF THE OWNER.
2. THE CONTRACT SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ANY PART OF THE PREMISES CAUSE BY LEAK OR BREAKS IN PIPE OR EQUIPMENT FURNISHED AND/OR INSTALLED BY THIS CONTRACTOR FOR A PERIOD OF (1) YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR SHALL MAKE ALL NECESSARY REPAIRS TO THE OWNER'S REPRESENTATIVE'S SATISFACTION AND AT NO ADDITIONAL COST.

19. <u>MATERIAL SPECIFICATIONS</u>

SANITARY WASTE AND VENT	
PIPE	PVC Schedule 40 Pipe, Solid Core, Cell Class 12454
FITTINGS	Injection molded PVC Schedule 40 fittings according to ASTM D 2466. Purple primer for underground lines AG tape joints shall be used.
FLANGES	NA
BOLTING	NA
UNIONS	NA
GASKET COUPLING	Mission Rubber Products.
NOTES	Manufacturers: Spears, Charlotte Pipe or approved equal.

AG DOMESTIC WATER (HOT AND COLD)	
PIPE	Copper Type "L" Tubing, ASTM B88, hard drawn
FITTINGS	Presssure fittings (Pro-press type)
FLANGES	ASTM B75 Alloy C12200, ASTM A515 GR70 (Steel Flange), Third-party certified to NSF/ANSI 61 and 372
BOLTING	Heavy hex head carbon steel machine bolts, ASTM A307 Grade B with ASTM A563 Grade A heavy hex nut
UNIONS	ASTM B75 Alloy C12200, certified to NSF/ANSI 61 and 372, material and workmanship per ASME B16.22. Material, workmanship and dimensions per MSS SP-104
GASKET COUPLING	Gylon 3500, 1/16", 150 pound full face, PTFE / Silcon Reinforced.
BALL VALVE	NIBCO PC-FP600A-D-LF or equivalent. Conforms to MSS SP-145, Third party certified to NSF/ANSI 61 & 372, Not intended for gas use, IAPMO/ANSI Z1157 (IGC 157)
CHECK	NIBCO PC-413-Y-LF. Dimensions and workmanship conform to MSS SP-80, NSF/ANSI 61 and NSF/ANSI 372.
DRAIN CAP	ASTM B584 Alloy C84400, Material and workmanship per ASME B16.18
VENT	STM B584 Alloy C84400, Material and workmanship per ASME B16.18
NOTES	NIBCO or equivalent. 2" or smaller. Hot water shall be instulated with armaflex.

UG DOMESTIC WATER	
PIPE	High density polyethylene, PPI listed, extra high molecular weight, PE3408 Material. The standard dimension ratio (SDR) shall be 17. Pipe shall be in complience with ASTM F714 and ASTM F1986.
FITTINGS	High -density polyethylene in compliance with ASTM D2683. All joints shall be made using thermal fusion procedures recommended by the manufacturer.
FLANGES	NA
BOLTING	Na
GASKET COUPLING	Mission Rubber Products.
NOTES	Joints shall be formed using only manufacturer approved appurtenances and installation

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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION
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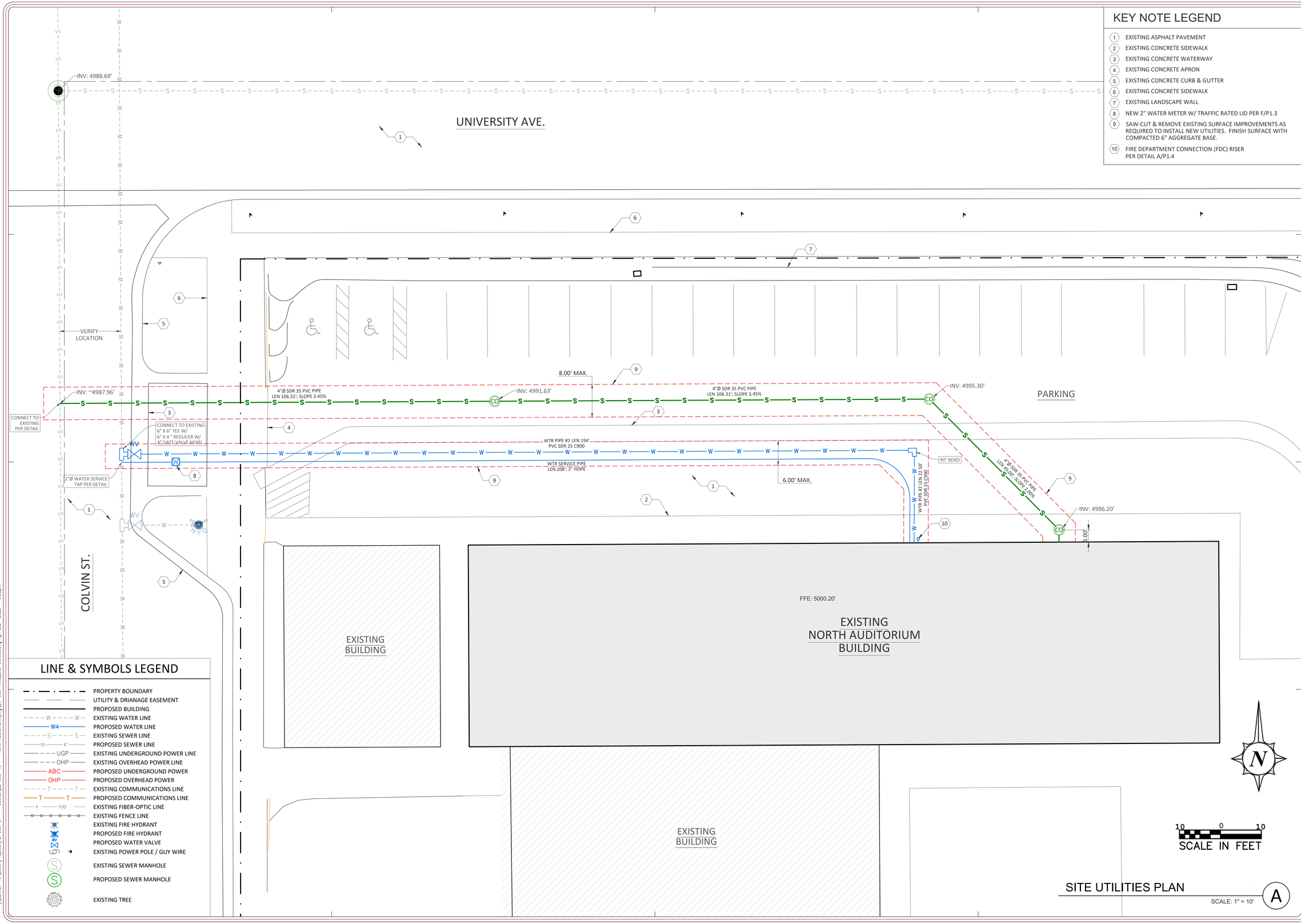
PROJECT NO: 22-003-16
CAD DWG. FILE: 22-003-16.3_CCUSD N Aud_P.dwg
DRAWN BY: TCT
DESIGNED BY: KBD
FIELD CREW:
CHECKED BY:
DATE: 4-20-22

SHEET TITLE:
NOTES
PLUMBING

P1.0



KEY NOTE LEGEND

1. EXISTING ASPHALT PAVEMENT
2. EXISTING CONCRETE SIDEWALK
3. EXISTING CONCRETE WATERWAY
4. EXISTING CONCRETE APRON
5. EXISTING CONCRETE CURB & GUTTER
6. EXISTING CONCRETE SIDEWALK
7. EXISTING LANDSCAPE WALL
8. NEW 2" WATER METER W/ TRAFFIC RATED LID PER F/P1.3
9. SAW-CUT & REMOVE EXISTING SURFACE IMPROVEMENTS AS REQUIRED TO INSTALL NEW UTILITIES. FINISH SURFACE WITH COMPACTED 6" AGGREGATE BASE.
10. FIRE DEPARTMENT CONNECTION (FDC) RISER PER DETAIL A/P1.4

LINE & SYMBOLS LEGEND

- PROPERTY BOUNDARY
- UTILITY & DRIANAGE EASEMENT
- PROPOSED BUILDING
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SEWER LINE
- PROPOSED SEWER LINE
- EXISTING UNDERGROUND POWER LINE
- EXISTING OVERHEAD POWER LINE
- PROPOSED UNDERGROUND POWER
- PROPOSED OVERHEAD POWER
- EXISTING COMMUNICATIONS LINE
- PROPOSED COMMUNICATIONS LINE
- EXISTING FIBER-OPTIC LINE
- EXISTING FENCE LINE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- EXISTING POWER POLE / GUY WIRE
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- EXISTING TREE

SITE UTILITIES PLAN

SCALE: 1" = 10'

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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

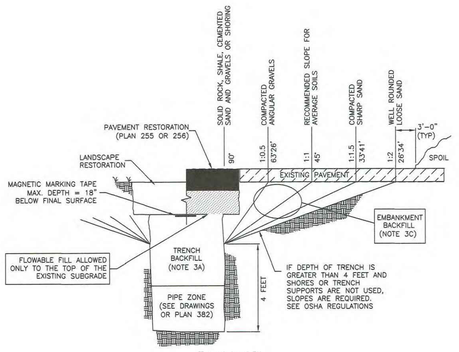
REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO: 19-003-16
CAD DWG. FILE: 21-003-16.3_Site Utilities.dwg
DRAWN BY: TCT
DESIGNED BY: TCT
FIELD CREW:
CHECKED BY:
DATE: 4-26-22

SHEET TITLE: SITE UTILITIES PLAN

P1.1
SHEET: 1 OF 1



Trench backfill

1. **GENERAL**
   A. The drawing applies to backfilling a trench (and embankment) above the pipe zone.

2. **PRODUCTS**
   A. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 3-inches.
   B. Flowable Fill: APWA Section 31 05 15. Target is 60 psi in 28 days with 90 psi maximum in 28 days, It must flow easily requiring no vibration for consolidation.

3. **EXECUTION**
   A. Trench Backfill Above the Pipe Zone: Follow requirement indicated in APWA Section 33 05 20 and the following provisions. See Standard Plan 382 for backfilling the pipe zone.
      1) DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate as trench backfill.
      2) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.
      3) Water jetting is NOT allowed.
   B. Flowable Fill: If controlled low strength material is placed in the trench. Cure the material before placing surface restorations.
   C. Embankment Backfill: When trench sides are sloped proceed as follows.
      1) Maximum lift thickness is 8-inches before compaction.
      2) Compact per APWA Section 31 23 26 to 95 percent or greater relative to a standard proctor density.
      3) Submission of quality control compaction test result data may be requested by ENGINEER at any time. Provide results of tests immediately upon request.
   D. Surface Restoration:
      1) Landscaped Surface: Follow APWA Section 32 92 00 (turf or grass) or APWA Section 32 93 13 (ground cover) requirements. Rake to match existing grade. Replace vegetation to match pre-construction conditions.
      2) Paved Surface: Follow APWA Section 33 05 25 (bituminous pavement surfacing), or APWA Section 33 05 25 (concrete pavement surfacing) Do not install surfacing until compaction density is acceptable to ENGINEER. .

TRENCH BACKFILL - APWA 381

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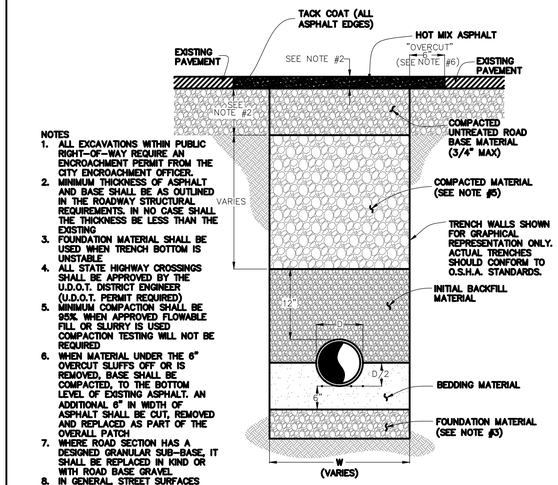

NOTES
1. ALL EXCAVATIONS WITHIN PUBLIC RIGHT-OF-WAY REQUIRE AN ENCROACHMENT PERMIT FROM THE CITY ENCROACHMENT OFFICER.
2. MINIMUM THICKNESS OF ASPHALT AND BASE SHALL BE AS OUTLINED IN THE ROADWAY STRUCTURAL REQUIREMENTS. IN NO CASE SHALL THE THICKNESS BE LESS THAN THE EXISTING
3. FOUNDATION MATERIAL SHALL BE USED WHEN TRENCH BOTTOM IS UNSTABLE
4. ALL STATE HIGHWAY CROSSINGS SHALL BE APPROVED BY THE U.D.O.T. DISTRICT ENGINEER (U.D.O.T. PERMIT REQUIRED)
5. MINIMUM COMPACTION SHALL BE 95% WHEN APPROVED FLOWABLE FILL OR SLURRY IS USED COMPACTION TESTING WILL NOT BE REQUIRED
6. WHEN MATERIAL UNDER THE 6" OVERCUT SLUFFS OFF OR IS REMOVED, BASE SHALL BE COMPACTED, TO THE BOTTOM LEVEL OF EXISTING ASPHALT. AN ADDITIONAL 6" IN WIDTH OF ASPHALT SHALL BE CUT, REMOVED AND REPLACED AS PART OF THE OVERALL PATCH
7. WHERE ROAD SECTION HAS A DESIGNED GRANULAR SUB-BASE, IT SHALL BE REPLACED IN KIND OR WITH ROAD BASE GRAVEL
8. IN GENERAL, STREET SURFACES LESS THAN 24 MONTHS OLD WILL NOT BE CUT. IF A CUT MUST BE MADE,ADDITIONAL, STRICTER REQUIREMENTS MAY BE INVOKED, SEE ENCROACHMENT OFFICER
9. 24 HOUR NOTICE REQUIRED ON ALL INSPECTIONS
10. ALL TRENCH BACKFILL SHALL MEET MINIMUM COMPACTION REQUIREMENTS
11. EXCLUDING EMERGENCY CLOSURES ALL ROAD CLOSURES AND DETOURS REQUIRE 48 HOURS PRIOR NOTICE

TRENCH BACKFILL AND REPAIR

N.T.S.

TRENCH DETAIL

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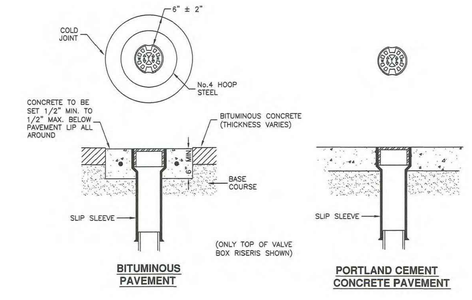

Cover collar for water valve box

1. **GENERAL**
   A. In a pavement surface, fill an annular space around a frame and cover casting with concrete. The concrete will support the casting under traffic loadings.

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Concrete: Class 4000, APWA Section 03 30 04.
   C. Concrete Curing Agent: Type ID Class A (clear with fugitive dye), membrane forming compound, APWA Section 03 39 00.

3. **EXECUTION**
   A. Base Course: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Pavement Preparation: Provide a neat vertical and concentric joint between concrete collar and existing bituminous concrete surface. Clean edges of all dirt, oil, and loose debris.

WATER VALVE BOX COVER COLLAR - APWA 574

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UTILITY PLAN NOTES

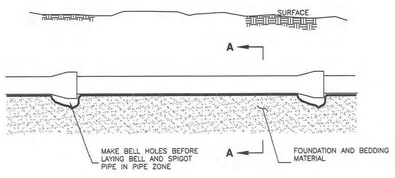
1. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION, AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF ALL UTILITIES, WHETHER SHOWN ON THE PLAN OR NOT, OR AS INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE FAILURE OF THE CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT.
2. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE LOCAL MUNICIPALITY CODES, STANDARDS, AND SPECIFICATIONS. INSTALLATION OF UTILITIES SHALL CONFORM TO HILDALE CITY STANDARDS AND SPECIFICATIONS.
3. COORDINATE ALL UTILITY SERVICES WITH APPROPRIATE PROVIDER. EASEMENTS AND PERMITS TO BE OBTAINED BY DEVELOPER PRIOR TO CONSTRUCTION.
4. INSTALLATION OF ELECTRIC POWER AND COMMUNICATION FACILITIES SHALL BE COORDINATED WITH UTILITY PROVIDER AND CONFORM TO THE MOST CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE.
5. NEW WATER LINES SHALL CONFORM TO THE AMERICAN WATER WORKS ASSOCIATION (AWWA) SPECIFICATIONS C200-86, AND ANY LOCAL RESTRICTIONS. WATER LINES SHALL BE INSTALLED 4' (MIN.) BELOW FINISH GRADE FOR FROST PROTECTION.
6. ALL EXCAVATIONS AND BACKFILL SHALL CONFORM TO HILDALE CITY STANDARDS AND SPECIFICATIONS.
7. 14 GAUGE WIRE SHALL BE TAPED TO THE BOTTOM OF ALL WATER LINES FOR LOCATING PURPOSES. THE WIRE SHALL ALSO BE BROUGHT UP AT EACH VALVE BOX AND HYDRANT.
8. INSTALL CONCRETE THRUST BLOCKS AND JOINT RESTRAINTS ON THE NEW PIPELINE. USE MEGA-LUG ON THE FITTINGS AND FIELD LOCK GASKETS ON THE REQUIRED LENGTH OF RESTRAINED PIPE. SEE DETAILS.
9. ALL MANHOLES, VALVE BOXES, AND OTHER SIMILAR ITEMS SHALL HAVE CONCRETE COLLAR PER HILDALE CITY STANDRADS / DETAILS.
10. ALL SEWER STUBS SHALL BE END CAPPED AND INCLUDE A STAND PIPE INDICATOR.
11. A VERTICAL DUAL CHECK VALVE IS REQUIRED ON THE SERVICE SIDE OF THE WATER METER.
12. FIRE HYDRANTS SHALL BE KENNEDY MODEL K81D OR APPROVED EQUAL.
13. MARKING TAPE SHALL BE INSTALLED IN THE TRENCH ALONG ALL UTILITY PIPELINES, CABLES, AND CONDUITS.
14. NO COPPER PIPE, FITTINGS, OR METER SETTER YOKES AND NO PVC PIPE AND FITTINGS SHALL BE ALLLOWED FOR USE IN WATER SERVICE LINES 2" OR SMALLER.
15. 3/4" & 1" Ø WATER SERVICE LINES SHALL BE BLUE HDPE 200 PSI PRESSURE RATED, IPS-ID PIPE MEETING AWWA C901 AND ASTM D2239. 1-1/2" & 2" Ø WATER SERVICE LINES SHALL BE BLUE HDPE, 200 PSI PRESSURE RATED, CTS-OD TUBING MEETING AWWA C901 AND ASTM D2737. FITTINGS SHALL BE COMPRESSION TYPE WITH STAINLESS STEEL INSERTS.
16. WATER SERVICE LINES SHALL BE CONTINUOUS TO THE WATER METER WITHOUT A METER YOKE.
17. ALL METER BOXES SHALL HAVE A WHITE INTERIOR. RINGS & COVERS FOR METER BOXES SHALL BE CAST IRON.
18. MAIN SANITARY AND STORM SEWER LINE TESTING AND ACCEPTANCE, SHALL REQUIRE VIDEO INSPECTION.
19. ALL GAS PIPE MATERIAL SHALL BE PLASTIC PIPE AND FITTINGS MEETING THE REQUIREMENTS OF ASTM D2513, HAVING A TEMPERATURE / HDB RATING OF CD, CE, CF, OR CG. THE PIPE SHALL BE EITHER UAC 2000 AS MANUFACTURED BY USPOLY CORPORATION, OR DRISCOPLEX 6500 AS MANUFACTURED BY PERFORMANCE PIPE.

Pipe zone backfill

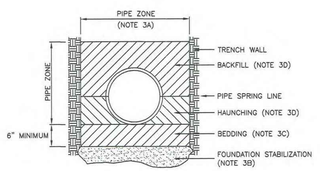
1. **GENERAL**
   A. Install the pipe in the center of the trench or no closer than 6-inches from the wall of the pipe to the wall of the trench.

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Concrete: APWA Section 03 30 04.
   D. Flowable Fill: Target is 60 psi in 28 days with 90 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
   E. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19.

3. **EXECUTION**
   A. Excavate the Pipe Zone: Width is measured at the pipe spring line and includes any necessary sheathing. Provide width recommended by pipe manufacturer. Follow manufacturer's recommendations when using trench boxes.
   B. Foundation Stabilization: Get ENGINEER's permission before installing common fill. Vibrate to stabilize. Installation of stabilization-separation geotextile will be required to separate backfill material and native subgrade materials if common fill cannot provide a working surface or prevent soils migration.
   C. Bedding: Follow APWA Section 33 05 20 requirements and the following provisions.
      1) Furnish untreated base course material unless specified otherwise by pipe manufacturer.
      2) Maximum lift thickness is 8-inches.
      3) Bedding immediately under the pipe should not be compacted, but loosely placed.
      4) Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
      5) When using concrete, provide at least Class 2,000, APWA Section 03 30 04.
   D. Pipe Zone: DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate in the pipe zone. Water jetting is NOT allowed.
      1) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26 unless pipe manufacturer requires more stringent installation.
      2) Submission of quality control compaction test result data developed for the haunch zone may be requested by ENGINEER at any time. CONTRACTOR is to provide results of tests immediately upon request.
   E. Flowable Fill (when required and if allowed by pipe manufacturer):
      1) Place the controlled low strength material, APWA Section 31 05 15.
      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.



ELEVATION VIEW



SECTION A-A

INSTALLATION

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

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

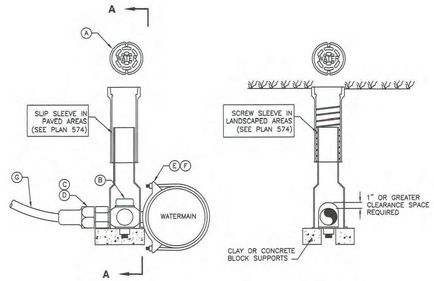
CORRUGATED METAL PIPE: FOLLOW ASTM A 798
"STANDARD PRACTICE FOR INSTALLING FACTORY-MADE CORRUGATED STEEL PIPE FOR SEWERS AND OTHER APPLICATIONS.

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

PIPE ZONE BACKFILL - APWA 382

NTS

D



ELEVATION **SECTION A-A**

LEGEND			
No.	*	ITEM	DESCRIPTION
(A)		VALVE BOX WITH LID	2 PIECE CAST IRON
(B)		CORPORATION STOP	BRASS
(C)		COPPER ADAPTER	
(D)		FLARE OR PACK JOINT COPPER ADAPTER	
(E)		SERVICE SADDLE CLAMP	D.I., A.C., C.I.
(F)		SERVICE SADDLE CLAMP	P.V.C.
(G)		COPPER PIPE (SERVICE LINE)	TYPE K (SOFT)

* FURNISHED BY UTILITY AGENCY

1 1/2" and 2" Service taps

1. **GENERAL**
   A. Before backfilling around taps, secure inspection of installation by ENGINEER.

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Tape: Teflon tape is required on all taps.

3. **EXECUTION**
   A. Tapping: Place taps a minimum of 36-inches apart. Use a tapping tool that is sized corresponding to the size of the service line to be installed. No taps within 36-inches of end of pipe.
   B. PVC or AC Pipe: A service saddle clamp is required on all PVC and AC pipe taps unless specified otherwise.
   C. Backfill: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   D. Blocks: Clay brick or concrete block required under valve box to assure a 1" or greater space between the box and the corporation stop and pipe assembly.

2" WATER SERVICE TAP - APWA 552

NTS

B

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NORTH AUDITORIUM REMODEL FOR COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022 COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

PROJECT NO: 19-003-16
CAD DWG, FILE: 21-003-16.3_Site Utilities.dwg
DRAWN BY: TCT
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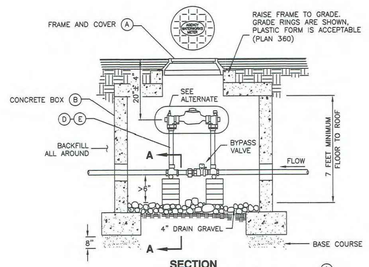
FIELD CREW:
CHECKED BY:
DATE: 4-20-22

SHEET TITLE: SITE UTILITIES DETAILS

P1.2
SHEET: 1 OF 1



LEGEND			
No.	*	ITEM	DESCRIPTION
A		27" FRAME AND COVER	PLAN 502
B		CONCRETE BOX	PLAN 505
C		STAINLESS STEEL METER BOLTS	5/8" x 2 3/4" BRASS
D		1 1/2" CUSTOM SETTER WITH BYPASS	
E		2" CUSTOM SETTER WITH BYPASS	

* FURNISHED BY UTILITY AGENCY

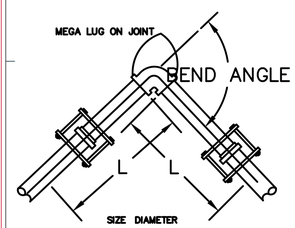
1 1/2" and 2" meter

1. **GENERAL**
   - A. Turbine meters are required on all systems used exclusively for irrigation or fire protection.
   - B. Where domestic use is applicable, use a standard meter.
   - C. Before backfilling, secure inspection of installation by ENGINEER.
2. **PRODUCTS**
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   - C. Castings: Grey iron class 35 minimum per ASTM A48, coated with asphalt based paint or better.
3. **EXECUTION**
   - A. Meter Placement:
     1) All meters are to be installed in the park strip or within 7 feet of the property line (street side).
     2) Do not install meters under driveway approaches, sidewalks, or curb and gutter.
     3) In new construction, install meter at center of lot or per agency requirements.
   - B. Meter Box: Set box so grade of the frame and cover matches the grade of the surrounding surface.
   - C. Bypass Valve: Lock in off position.
   - D. Blocking: Use clay brick or concrete block.
   - E. Concrete Box:
     1) Center frame and cover over water meter.
     2) Allow 1-inch clearance around waterline where water line passes through concrete box wall. Seal opening with compressible seal.
   - F. Pipe Outside of Right-of-Way: Coordinate with utility agency or adjacent property owner for type of pipe to be used outside of right-of-way.
   - G. Base Course and Backfill Placement: Maximum lift thickness before compaction is 8-inches. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

2" WATER METER - APWA 522

NTS

F



HORIZONTAL BEND

1. **ALL JOINTS WITHIN LENGTH "L" MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS WITH PUSH-ON PIPE PER CITY SPECIFICATION.**
2. **FOR TEST PRESSURES AND LAYING CONDITIONS SEE SECTION ON GENERAL NOTES FOR USE OF RESTRAINED JOINT LENGTHS.**

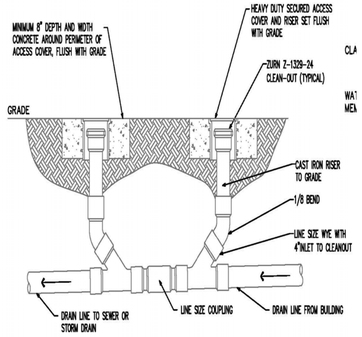
	SIZE DIAMETER								
BEND ANGLE	4	6	8	10	12	14	16	18	20
11.25	2	3	4	5	6	6	7	8	9
22.5	4	6	8	10	12	13	15	16	18
45	9	13	17	20	24	27	31	34	37
90	22	31	41	49	58	66	74	82	90

RESTRAINED LENGTHS, "L" (IN FEET)

JOINT RESTRAINT - HORIZONTAL BEND

NTS

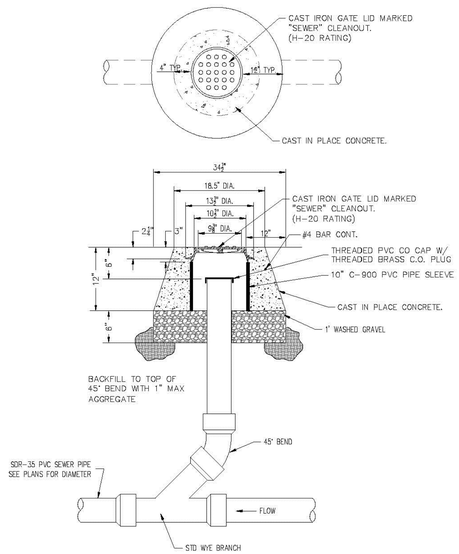
G



DOUBLE SEWER CLEANOUT

NTS

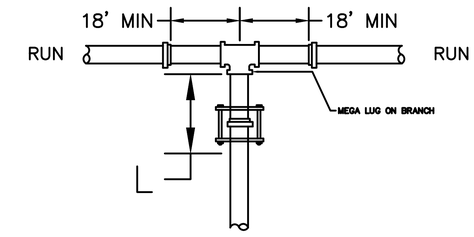
E



SEWER CLEANOUT W/ LID

NTS

C



BRANCH

BRANCH SIZE DIAMETER \ RUN SIZE DIAMETER	4	6	8	10	12	14	16	18	20	24
4	*	*	*	*	*	*	*	*	*	*
6		*	*	*	*	*	*	*	*	*
8			7	*	*	*	*	*	*	*
10				35	5	*	*	*	*	*
12					68	41	15	*	*	*
14						98	76	53	29	*
16							130	109	89	46
18								159	141	103
20									188	154
24										243

* – FOR THIS CONDITION NEED ONLY RESTRAIN THE BRANCH OUTLET OF THE TEE.

RESTRAINED LENGTHS, "L" (IN FEET)

1. RESTRAIN THE TWO MECHANICAL JOINTS ON THE RUN SIDES OF THE TEE. THERE SHOULD BE A FULL 18' LENGTH OF PIPE INSTALLED ON EACH SIDE OF THE RUN.
2. ALL JOINTS WITHIN THE LENGTH "L" ON THE BRANCH MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS ON PUSH-ON PIPE PER CITY SPECIFICATION.
3. FOR TEST PRESSURES AND LAYING CONDITIONS SEE SECTION ON GENERAL NOTES FOR USE OF RESTRAINED JOINT LENGTHS.

JOINT RESTRAINT - BRANCH

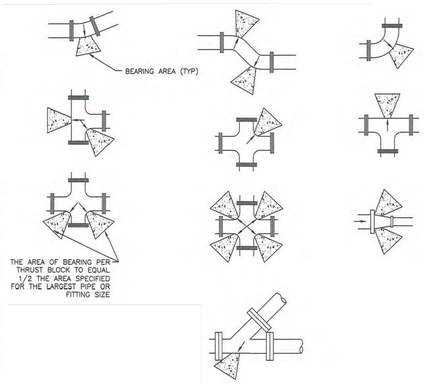
NTS

A

Direct bearing thrust block

1. **GENERAL**
   - A. Thrust design for pipe sizes or configurations not shown require special design.
   - B. Bearing areas, volumes, and special thrust blocking details shown on Drawings take precedence over this plan.
   - C. Restraint sizing is based upon a maximum operating pressure of 150 psi and a test pressure of 200 psi, and a minimum soil bearing strength of 2,000 psf. Operating pressures in excess of 150 psi or soils with less than 2,000 pound bearing strength will require special design.
   - D. Before backfilling around thrust block, secure inspection of installation by ENGINEER.
2. **PRODUCTS**
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   - C. Thrust Bocks: Concrete Class 4000, APWA Section 03 30 04.
   - D. Grease: Non-oxide poly-FM.
3. **EXECUTION**
   - A. Pour concrete against undisturbed soil.
   - B. Pipe Joints: Do not cover with concrete. Leave completely accessible.
   - C. Grease: Apply grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
   - D. Locking restraint devices may be used in conjunction with concrete thrust blocking (at discretion of ENGINEER).
   - E. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

SIZE OF PIPE	MINIMUM BEARING AREA IN SQ. FT.				
	TEES, VALVES DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS	11 1/4° BENDS
4"	2	3	2	2	2
6"	4	5.5	3	2.5	2
8"	6.5	9.5	5	2.75	2.5
12"	14	20	11	5.5	3
14"	19	26.5	14.5	7.5	4
16"	24	34	18.5	9.5	6
20"	27	52	28.5	14.5	9
24"	53	74	41	21	12
30"	81	114	62	32	16

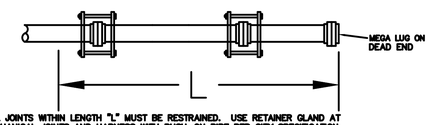


DIRECT BEARING THRUST BLOCK - APWA 561

NTS

D

STANDARD DEAD END FOR DUCTILE IRON



1. **ALL JOINTS WITHIN LENGTH "L" MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS WITH PUSH-ON PIPE PER CITY SPECIFICATION.**
2. **FOR TEST PRESSURES AND LAYING CONDITIONS SEE SECTION ON GENERAL NOTES FOR USE OF RESTRAINED JOINT LENGTHS.**

PIPE SIZE IN INCHES								
4	6	8	10	12	14	16	18	20
84	**119**	**155**	**185**	**218**	**248**	**279**	**308**	**337**

RESTRAINED LENGTHS, "L" (IN FEET)

RESTRAINED JOINT LENGTHS USAGE GENERAL NOTES

RESTRAINED LENGTH CALCULATIONS ARE BASED ON THE FOLLOWING DESIGN TYPICALLY USED WITH BACKFILL IN HURRICANE.

1. **THREE (3) FEET MINIMUM DEPTH OF COVER.**
2. **A SAFTEY FACTOR OF 1.5**
3. **SOIL TYPE SANDY CLAY**
4. **TYPE 3 TRENCH COMPACTION FROM FOUR (4) INCHES MINIMUM UNDER THE PIPE TO THE CENTER LINE OF THE PIPE, AND COMPACTED GRANULAR OR SELECTED MATERIAL FROM THE CENTER LINE OF THE PIPE TO THE TOP OF THE PIPE (90 PERCENT STANDARD PROCTOR DENSITY, AASHTO T-99).**
5. **200 PSI TEST PRESSURES FOR FOUR (4) THROUGH SIXTEEN (16) INCH SIZE PIPES.**
6. **ALL DUCTILE IRON PIPE TO WRAPPED WITH POLY SOCK.**

IF ACTUAL CONDITIONS DIFFER FROM THOSE LISTED ABOVE OR THE REQUIRED RESTRAINED LENGTH CANNOT BE MET, THE RESTRAINED JOINT LENGTH SHALL BE DETERMINED BY THE WATER DEPARTMENT.

PERMIT SET
FOR REVIEW ONLY
NOT FOR CONSTRUCTION

JOINT RESTRAINT - DEAD END

NTS

B

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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

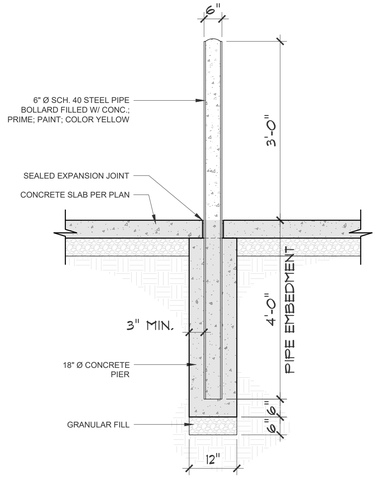
REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO: 19-003-16
CAD DWG. FILE: 21-003-16.3_Site Utilities.dwg
DRAWN BY: TCT
DESIGNED BY: TCT
FIELD CREW:
CHECKED BY:
DATE: 4-20-22

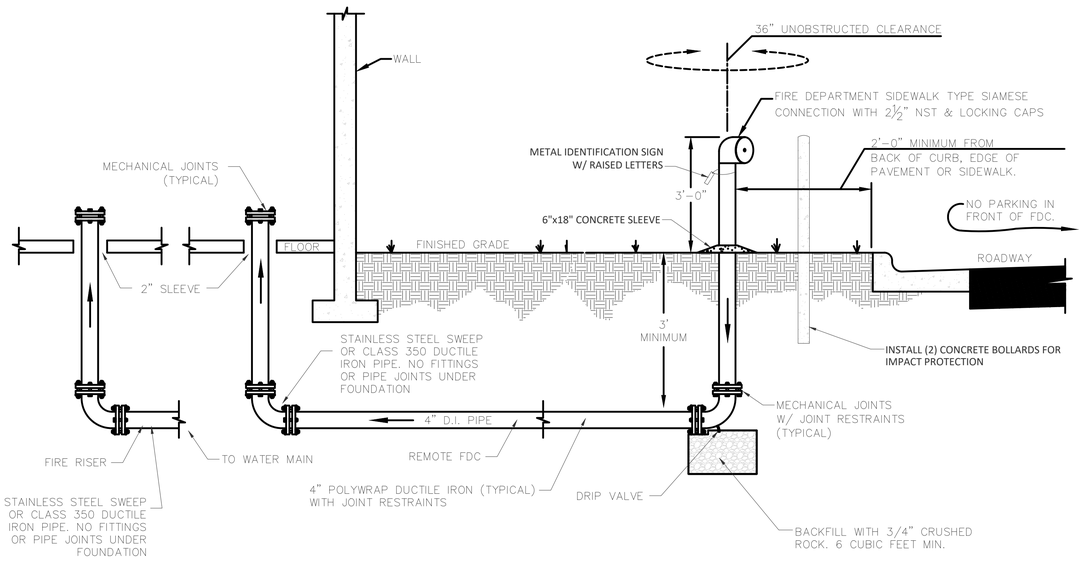
SHEET TITLE:
SITE UTILITIES DETAILS

P1.3
SHEET: 1 OF 1



STEEL BOLLARD (B)

NTS



FIRE SUPPRESSION LINE DETAIL (A)

NTS

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P1.4
SHEET: 1 OF 1

PLUMBING SYMBOL LIST

SYMBOL	DESCRIPTION(NOT ALL SYMBOLS APPLY)	SYMBOL	DISCRIPTION
	SOIL WASTE LINE (W)		SHUT OFF VALVE (BALL)
	VENT LINE (V)		CHECK VALVE
	VENT THRU ROOF (VTR)		GAS S.O.V.
	COLD WATER (CW)		GAS S.O.V.
	HOT WATER (HW)		UNION
	HOT WATER RETURN (HWR)		BALL VALVE
G	GAS LINE		S.C.O. SURFACE CLEANOUT
T	TEMPERED WATER		F.C.O. FLOOR CLEANOUT
D	DRAIN LINE		W.C.O. WALL CLEANOUT
	ROOF DRAIN (R.D)		R.D.L. ROOF DRAIN LEADER
	OVERFLOW DRAIN (O.D.)		O.D.L. OVERFLOW DRAIN LINE
	BRANCH RISE OFF MAIN		FLOOR DRAIN (F.D.)
	BRANCH DOWN OFF MAIN		FLOOR SINK (F.S.)
	PIPING UP		HOSE BIBB (H.B.)
	PIPING DOWN		DIRECTION OF FLOW
S.O.V.	SHUT OFF VALVE	A.F.F	ABOVE FINISHED FLOOR
V.T.R.	VENT THRU ROOF	A.F.G	ABOVE FINISHED GRADE
M	METER (WATER)	WH	WATER HEATER
	S.OV. IN YARD BOX		POINT OF CONNECT/DISC.
TYP	TYPICAL		PIPE TO BE REMOVED TYP
	REDUCED PRESSURE BACKFLOW PREVENTOR (R.P.B.P.)		

NOTE: ONLY THOSE SYMBOLS SHOWN ON THE DRAWINGS APPLY.

KEYED NOTE LEGEND

1. CONNECT TO CITY SEWER PER SITE UTILITY PLAN
2. PROVIDE IN-LINE GREASE TRAP UNDER COUNTER SPACE; DISCHARGE PIPE INTO FLOOR SINK.
3. RISER TO ABOVE CEILING / ATTIC SPACE; PROVIDE SHUT-OFF VALVE;
4. FIRE RISER
5. FIRE WATER SERVICE LINE
6. 2"Ø DOMESTIC WATER SERVICE
7. FIRE DEPARTMENT CONNECTION PER SITE UTILITIES PLAN.
8. SAW-CUT & REMOVE EXISTING CONCRETE SLAB AS NECESSARY FOR INSTALLATION OF UNDERGROUND PLUMBING, TYP.. MINIMIZE AMOUNT OF CONCRETE SAW-CUTTING AND REMOVAL AS MUCH AS PRACTICABLE. REINSTALL CONCRETE SLAB IN AREAS OF CONCRETE REMOVAL; MATCH THICKNESS OF EXISTING SLAB AND PROVIDE #4 E.W. @ 24" O.C. (MIN. (2) #4 CONT.)
9. SEE UNDERGROUND PLUMBING PLAN FOR CONTINUATION OF CW SUPPLY

PLUMBING PLAN GENERAL NOTES

1. ALL PLUMBING SHALL BE INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE (IPC) 2018.
2. THESE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND DO NOT NECESSARILY SHOW ALL MATERIALS FOR COMPLETE INSTALLATION.
3. SEE PLUMBING DETAIL SHEETS, FIXTURE SCHEDULES, MATERIAL SPECIFICATIONS, AND PROJECT NOTES FOR FURTHER INFORMATION
4. ALL PENETRATIONS THROUGH FIRE SEPARATION WALLS SHALL BE SEALED TO MAINTAIN RATING.
7. FLASH & CAULK ALL PENETRATIONS THROUGH ROOF & WALLS.
8. PLUMBING FIXTURES SHALL BE INSTALLED PER MANUFACTURER INSTRUCTIONS.
9. CONTRACTOR SHALL PROVIDE SUBMITTALS TO OWNER FOR ALL PRODUCTS AND MATERIALS USED FOR BUILDING CONSTRUCTION; SUBMITTALS SHALL INCLUDE PRODUCT DATA, SHOP DRAWINGS, & SAMPLES AS APPLICABLE.
10. ALL UNDERGROUND SUPPLY PIPING WITHIN EXTERIOR WALLS SHALL BE BURIED 2' BELOW GRADE.
11. ALL FIXTURES SHALL BE PROPERLY VENTED TO THE ATMOSPHERE; GATHER VENTING TO COMMON VENTS THROUGH ROOF AS FAR AS PRACTICAL TO MINIMIZE ROOF PENETRATIONS.
12. WATER & VENT PIPING SHALL RUN ABOVE CEILING, U.N.O.
13. FIELD VERIFY EXISTING CONDITIONS INCLUDING THAT WASTE LINE INVERT ELEVATIONS CAN BE MET PRIOR TO CONSTRUCTION.
14. LABEL ALL PIPING ABOVE GROUND AS TO DIRECTION OF FLOW AND USE.
15. SEE FIXTURE SCHEDULE FOR ANY UNSIZED PIPING BRANCH LINE RUNOUTS.
16. PROVIDE ISOLATION SHUT OFF VALVES INCLUDING FOR CW, HW RISERS AND MAIN SUPPLY PIPING.
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18. HOT WATER PIPING SHALL BE INSULATED WITH 1 INCH (25 MM) OF INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/H
19. PROVIDE HEAT TRAPS AT WATER HEATER PIPING CONNECTIONS.
20. PLUMBING CONTRACTOR TO PROVIDE SURFACE SEWER CLEAN-OUT KITS. CONCRETE CONTRACTOR TO POUR & SET RING. SEE DETAIL.
21. EXTEND SUPPLY LINE UP IN FIRE RISER ROOM, PROVIDE WITH SHUT OFF VALE AND PRESSURE REDUCING VALVE.
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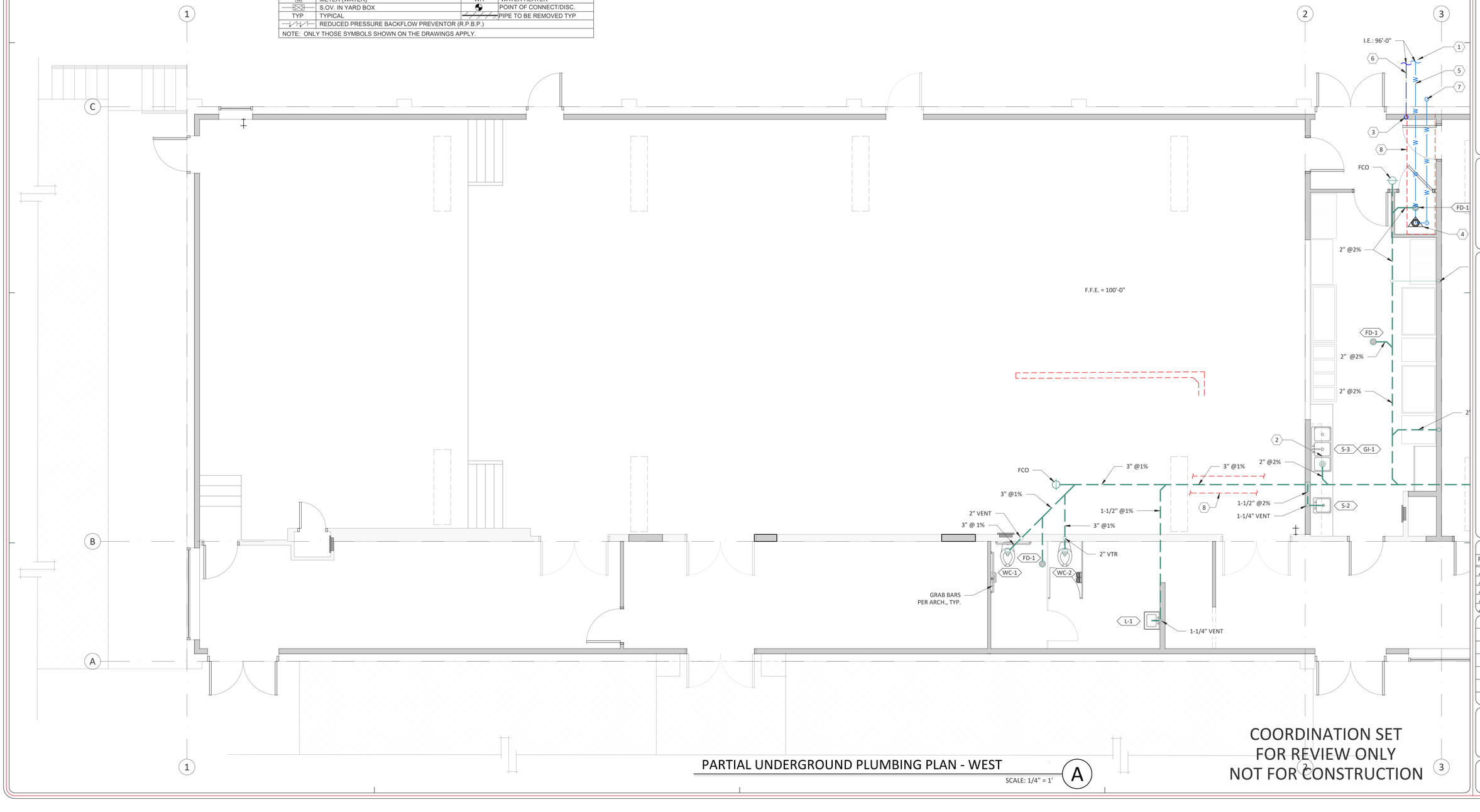

PARTIAL UNDERGROUND PLUMBING PLAN - WEST

SCALE: 1/4" = 1'

A

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NORTH AUDITORIUM REMODEL
FOR
COLORADO CITY UNIFIED SCHOOL DISTRICT

LOCATED ON PARCEL 404-33-022
COLORADO CITY, ARIZONA

REVISIONS

REV.	DATE	DESCRIPTION

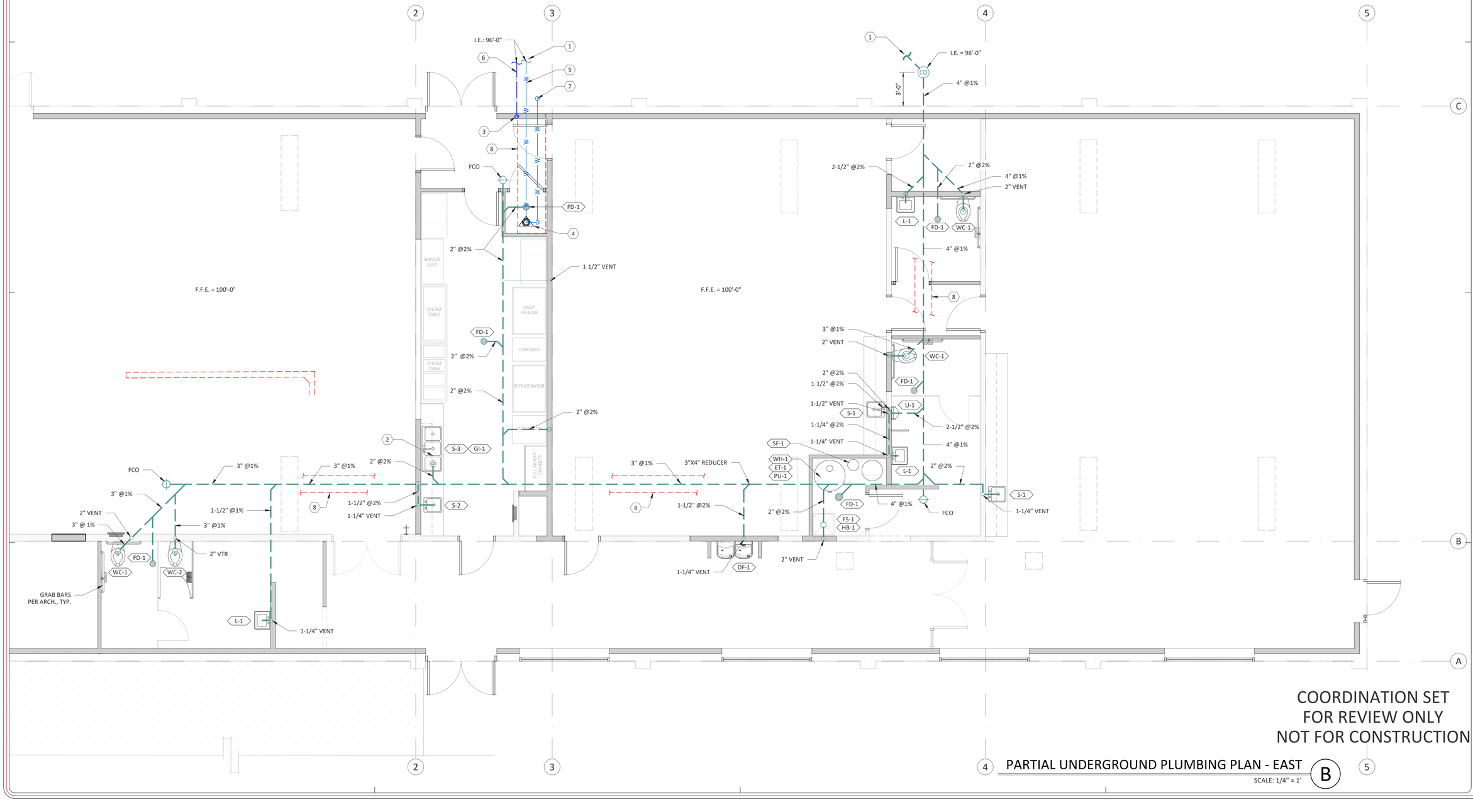
PROJECT NO:	22-003-16
CAD DWG. FILE:	22-003-16 3_COLSD N Aud_P.dwg
DRAWN BY:	TCT
DESIGNED BY:	KBD
FIELD CREW:	
CHECKED BY:	
DATE:	4-20-22

SHEET TITLE:
PARTIAL
U.G. PLUMBING
PLAN - WEST

P2.0

KEYED NOTE LEGEND

1. CONNECT TO CITY SEWER PER SITE UTILITY PLAN
2. PROVIDE IN-LINE GREASE TRAP UNDER COUNTER SPACE; DISCHARGE PIPE INTO FLOOR SINK.
3. RISER TO ABOVE CEILING / ATTIC SPACE; PROVIDE SHUT-OFF VALVE;
4. FIRE RISER
5. FIRE WATER SERVICE LINE
6. 2"Ø DOMESTIC WATER SERVICE
7. FIRE DEPARTMENT CONNECTION PER SITE UTILITIES PLAN.
8. SAW-CUT & REMOVE EXISTING CONCRETE SLAB AS NECESSARY FOR INSTALLATION OF UNDERGROUND PLUMBING, TYP.. MINIMIZE AMOUNT OF CONCRETE SAW-CUTTING AND REMOVAL AS MUCH AS PRACTICABLE. REINSTALL CONCRETE SLAB IN AREAS OF CONCRETE REMOVAL; MATCH THICKNESS OF EXISTING SLAB AND PROVIDE #4 E.W. @ 24" O.C. (MIN. (2) #4 CONT.)
9. SEE UNDERGROUND PLUMBING PLAN FOR CONTINUATION OF CW SUPPLY



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PARTIAL UNDERGROUND PLUMBING PLAN - EAST

SCALE: 1/4" = 1'

B

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1		
2		
3		
4		
5		
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PARTIAL U.G. PLUMBING PLAN - EAST

P2.1

PLUMBING SYMBOL LIST

SYMBOL	DESCRIPTION(NOT ALL SYMBOLS APPLY)	SYMBOL	DISCRIPTION
	SOIL WASTE LINE (W)		SHUT OFF VALVE (BALL)
	VENT LINE (V)		CHECK VALVE
	VENT THRU ROOF (VTR)		GAS S.O.V.
	COLD WATER (CW)		GAS S.O.V.
	HOT WATER (HW)		UNION
	HOT WATER RETURN (HWR)		BALL VALVE
G	GAS LINE		S.C.O. SURFACE CLEANOUT
T	TEMPERED WATER		F.C.O. FLOOR CLEANOUT
D	DRAIN LINE		W.C.O. WALL CLEANOUT
	ROOF DRAIN (R.D)		R.D.L. ROOF DRAIN LEADER
	OVERFLOW DRAIN (O.D.)		O.D.L. OVERFLOW DRAIN LINE
	BRANCH RISE OFF MAIN		FLOOR DRAIN (F.D.)
	BRANCH DOWN OFF MAIN		FLOOR SINK (F.S.)
	PIPING UP		HOSE BIBB (H.B.)
	PIPING DOWN		DIRECTION OF FLOW
S.O.V.	SHUT OFF VALVE	A.F.F	ABOVE FINISHED FLOOR
V.T.R.	VENT THRU ROOF	A.F.G	ABOVE FINISHED GRADE
M	METER (WATER)	WH	WATER HEATER
	S.OV. IN YARD BOX		POINT OF CONNECT/DISC.
TYP	TYPICAL		PIPE TO BE REMOVED TYP
	REDUCED PRESSURE BACKFLOW PREVENTOR (R.P.B.P.)		

NOTE: ONLY THOSE SYMBOLS SHOWN ON THE DRAWINGS APPLY.

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PLUMBING PLAN GENERAL NOTES

1. ALL PLUMBING SHALL BE INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE (IPC) 2018.
2. THESE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND DO NOT NECESSARILY SHOW ALL MATERIALS FOR COMPLETE INSTALLATION.
3. SEE PLUMBING DETAIL SHEETS, FIXTURE SCHEDULES, MATERIAL SPECIFICATIONS, AND PROJECT NOTES FOR FURTHER INFORMATION
4. ALL PENETRATIONS THROUGH FIRE SEPARATION WALLS SHALL BE SEALED TO MAINTAIN RATING.
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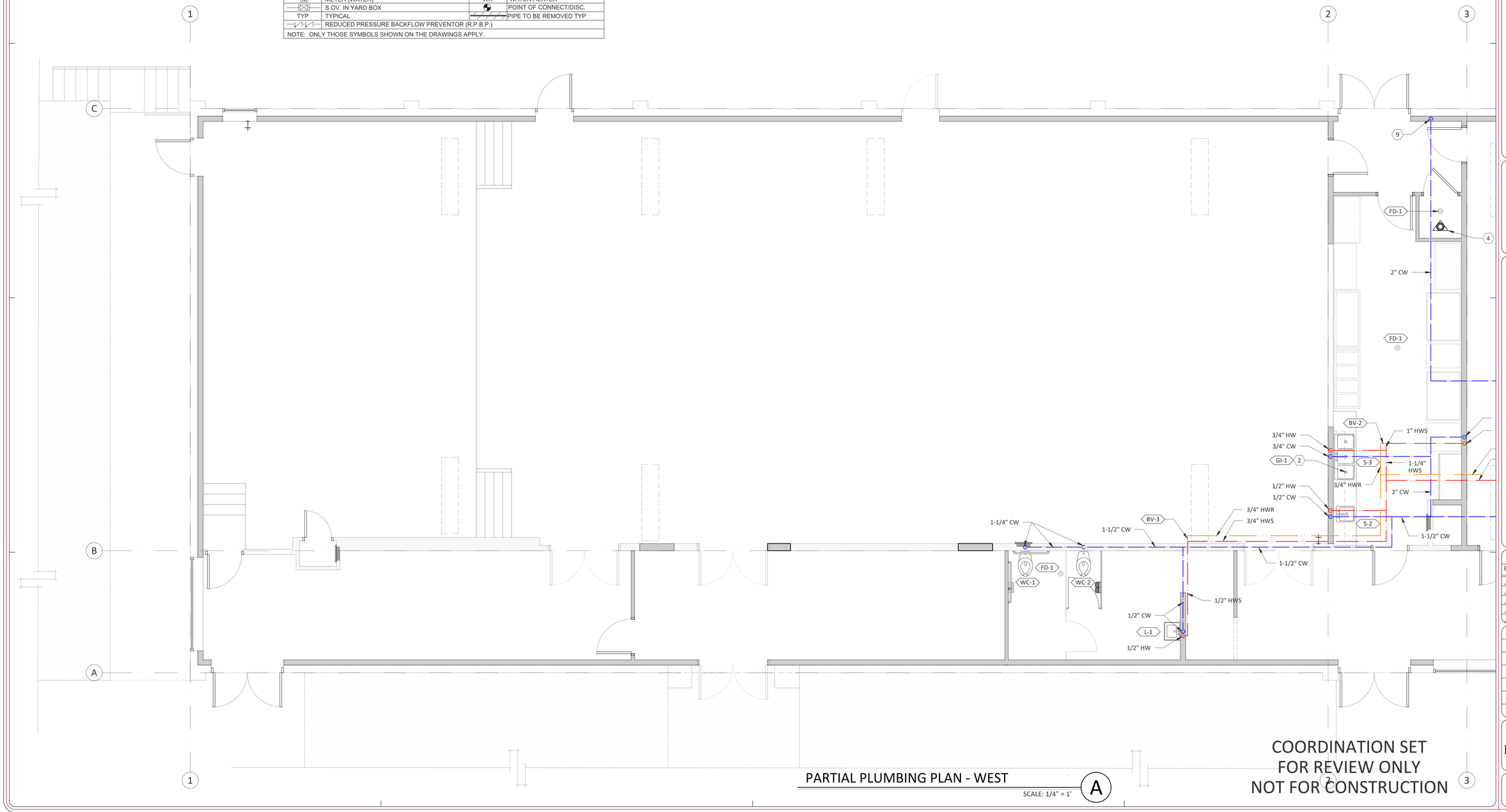

PARTIAL PLUMBING PLAN - WEST

SCALE: 1/4" = 1'

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PARTIAL PLUMBING PLAN WEST

P3.0

KEYED NOTE LEGEND

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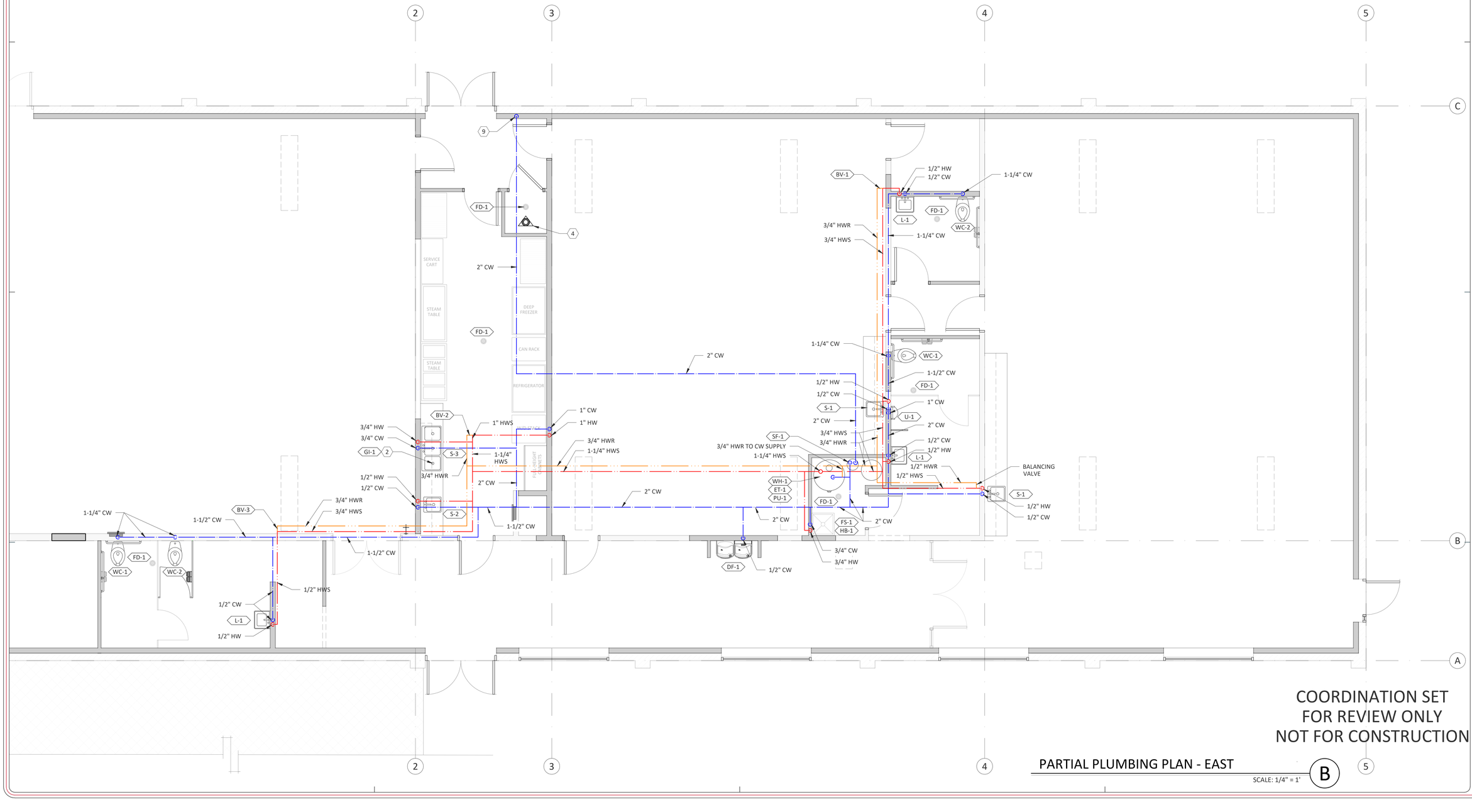

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PARTIAL PLUMBING PLAN - EAST

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PARTIAL PLUMBING PLAN EAST

P3.1

FINISH PLUMBING SCHEDULE

FIXTURE ID	FIXTURE TYPE	MANUFACTURER	MODEL	ELETRIC DATA	DESCRIPTION	COMMENTS
WC-1	ADA Water-closet	Zurn	Z5647-BW	-	Vitreous China, floor mounted back outlet toilet with siphon jet flushing action, antimicrobial ceramic glaze, longated front rim, ADA compliant rim height.	Provide w/ flush valve and sensor activated with manual override button urinal flushometer for either left or right hand. Provide with cover.
WC-2	Water-closet	Zurn	Z5657-BWL-AM	-	Vitreous China, 1.28 gpf [4.8 lpf] or greater high efficiency, floor mounted, bottom outlet toilet with siphon jet flushing action, ZurnSHIELDTM ceramic glaze, and elongated front rim with 1-1/2” back spud. Toilet seat Z5955SS-EL	Provide w/ flush valve and sensor activated with manual override button urinal flushometer for either left or right hand. Provide with cover.
U-1	Urinal	Zurn	Z.UR1.S.TM	-	High efficiency 0.125 gpf sensor actuated, battery powered, wall mounted commercial urinal system with Z5755-U Omni-Flo top spud urinal, ZER6003AV-ULF-TM exposed.	Provide sensor activated with manual override button urinal flushometer for either left or right hand.
L-1	Lavatory	Eagle Group	W1916-FA	-	Eagle Wall Mount Lavatory Sink. All units constructed with type 304 stainless steel, and feature a marine edge. Provide with gooseneck spout faucet, soap dispenser and basket drain.	ADA accessible lavatory
FC-1	Service sink faucet	Zurn	Z1996-SF	-	Chrome plated service faucet, complete with vacuum breaker, integral stops, adjustable wall brace, pail hook, four-arm hot and cold handles and 3/4"hose thread on spout. Water inlets are for 1/2" pipe and are eccentric on an 8" centerline.	-
S-1	Music room & library countertop	Eagle Group	SR10-14-5-1	-	One compartment sink, with heavy gauge 304SS, deep drawn, seamless and all corners coved.	Provide with standard fauced model 302004.
S-2	Single compartment countertop	Eagle Group	SR10-14-5-1	-	One compartment sink, with heavy gauge 304SS, deep drawn, seamless and all corners coved.	Provide with standard fauced model 302004.
S-3	Three compartment countertop	Eagle Group	SR10-14-9.5-3	-	Three compartment sink, with heavy gauge 304SS, with 13-1/2" water level, deep drawn, seamless and all corners coved. Overall dimensions: W 27.5" x L 90" x H 37.5"	Provide with galvanized tubing legs, overflow hole and two drain boards. Install with service sink faucet per schedule.
HD-1	Hand dryer	VERDEdri	Q-974A2	120V/ 60Hz / 950w	High-speed, surface-mounted ADA compliant hand dryer with flexible controls and hygienic features.	Provide with coaese filter.
DF-1	Drinking fountain	HALSEY TAYLOR	HTVZ8BLPV-WF	115V/ 60Hz	Halsey Taylor Versatile Wall Mount Bi-Level ADA Cooler. Shall include filter, and with Double Bubbler. Product shall be Wall Mount (On Wall), for Indoor applications, serving 2 station(s).	Provide with filter.

PLUMBING EQUIPMENT SCHEDULE

FIXTURE ID	FIXTURE TYPE	MANUFACTURER	MODEL	ELETRIC DATA	DIMENSION	DESCRIPTION	COMMENTS
GI-1	Grease Interceptor	Jay R. Smith	8007GT2	-	12" x 10.9" x 19" (HxWxL)	Steel interceptor with gray duco coating inside and outside with steel cone draw-off piping and valve line shut-off valve and flow control fitting.	-
WH-1	Water Heater	Smith	DVE-80-36	208V -60Hz-1PH	25.5"D x 60" H	Heater shall be rated at 36 kW 208V singlephase, 60 cycle AC as listed by Underwriters' Laboratories. Tank(s) shall be 119 gallon capacity with 160PSIG working pressure and equipped with dual extruded high density anodes.	All models meet National Sanitation Foundation NSF-5 requirements. Water heater shall have LCD display with built-in diagnostic and troubleshooting information. Contractor shall set the heater for 140F water.
PU-1	Recirculation pump	Wilo	S5BU	115V-60Hz-1PH	-	Wet rotor circulation pump, with union connections, bronze body, 1/12HP motor.	Run pump continuously.
ET-1	Expansion tank	Amtrol	EX-30000-123	-	-	2 gall expansion tank with air eliminator, factory pre-charged to 12 psig. Maximum working pressure 100 psig, and maximum operating temperature 240ºF.	Pre-charge should be adjusted to equal minimum operating pressure at tank location.
BV-1	Balacing valve	Victaulic	TA 786H	-	-	Balancing valve in Ametal body and bonnet, with EPDM ring and SS spring, 1/2" female NPT threaed end.	Balance it for 0.6 GPM. Use reducers as need to install balancing valves.
BV-2	Balacing valve	Victaulic	TA 786H	-	-	Balancing valve in Ametal body and bonnet, with EPDM ring and SS spring, 1/2" female NPT threaed end.	Balance it for 0.6 GPM. Use reducers as need to install balancing valves.
BV-3	Balacing valve	Victaulic	TA 786H	-	-	Balancing valve in Ametal body and bonnet, with EPDM ring and SS spring, 1/2" female NPT threaed end.	Balance it for 0.6 GPM. Use reducers as need to install balancing valves.
BV-4	Balacing valve	Victaulic	TA 786H	-	-	Balancing valve in Ametal body and bonnet, with EPDM ring and SS spring, 1/2" female NPT threaed end.	Balance it for 0.6 GPM. Use reducers as need to install balancing valves.
SF-1	Softener	WATTS	M4418W	-	16"D x 65" H (Min. Tank) 18"D x 40" H (Brine Tank)	Water softener with electronic controller, fully adjustable for cycle times with cell lithuym baterry. Provide with 1-1/2" SS turbine flow meter	-

DRAINAGE FIXTURES SCHEDULE

FIXTURE ID	FIXTURE TYPE	MANUFACTURER	MODEL	DESCRIPTION
FD-1	Floor drain	Jay R. Smith	2005 - 2009A	Duco cast iron body with wide flange, cast iron flashing collar, adjustable strainer head as indicated by suffix letter selected and secured square hole grate.
FS-1	Floor sink	Jay R. Smith	320-Y02, Grate 320-12	Cast iron receptor (body) with 2" outlet, and white acid resistant enamel interior and anti-splash dome strainer. Floor sinks are available with or less flange.
FCO	Typical cleanout	Jay R. Smith	4026C	Duco cast iron cleanout with round adjustable scoriated secured nickel bronze top.

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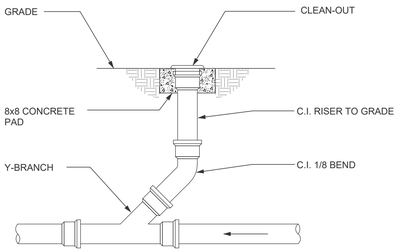
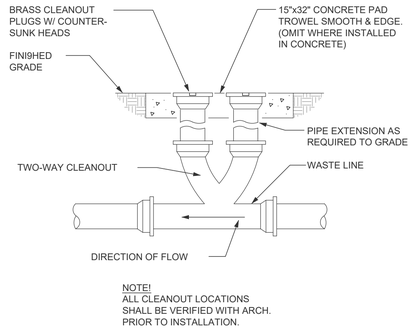
P4.0



SURFACE CLEANOUT DETAIL (I)

NOT TO SCALE



2-WAY SURFACE CLEANOUT (F)

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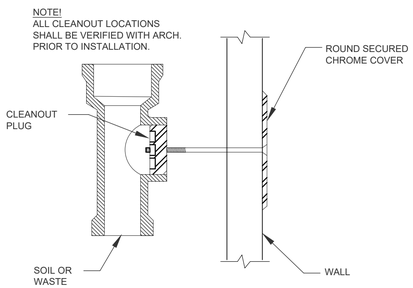
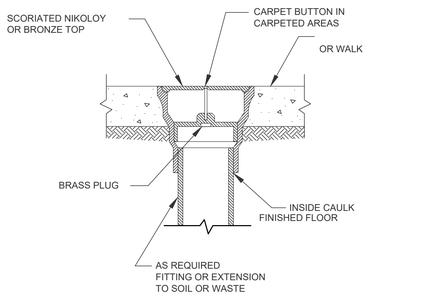


WALL CLEANOUT DETAIL (H)

NOT TO SCALE



FLOOR CLEANOUT DETAIL (E)

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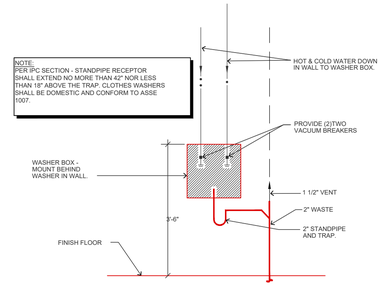
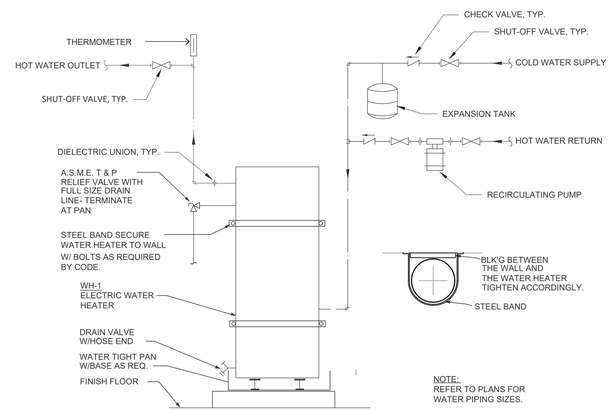


CLOTHES WASHER BOX (C)

NOT TO SCALE



WATER HEATER (A)

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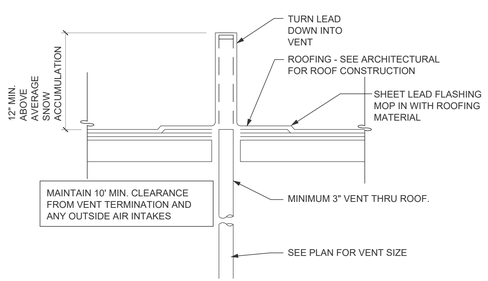

VENT THRU ROOF DETAIL (G)

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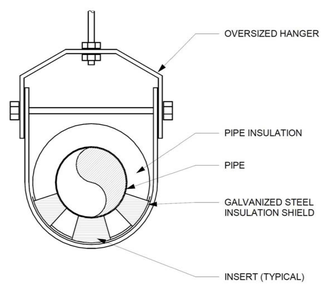

PIPE HANGER DETAIL (D)

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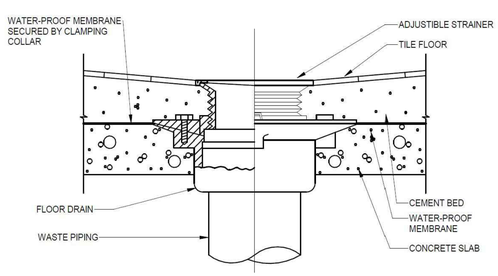

FLOOR DRAIN (B)

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REVISIONS

REV.	DATE	DESCRIPTION

PROJECT NO:	22-003-16
CAD DWG. FILE:	22-003-16 D_CO_SCH N Aud_P.dwg
DRAWN BY:	TCT
DESIGNED BY:	KBD
FIELD CREW:	
CHECKED BY:	
DATE:	4-20-22

SHEET TITLE:
PLUMBING DETAILS

P4.1