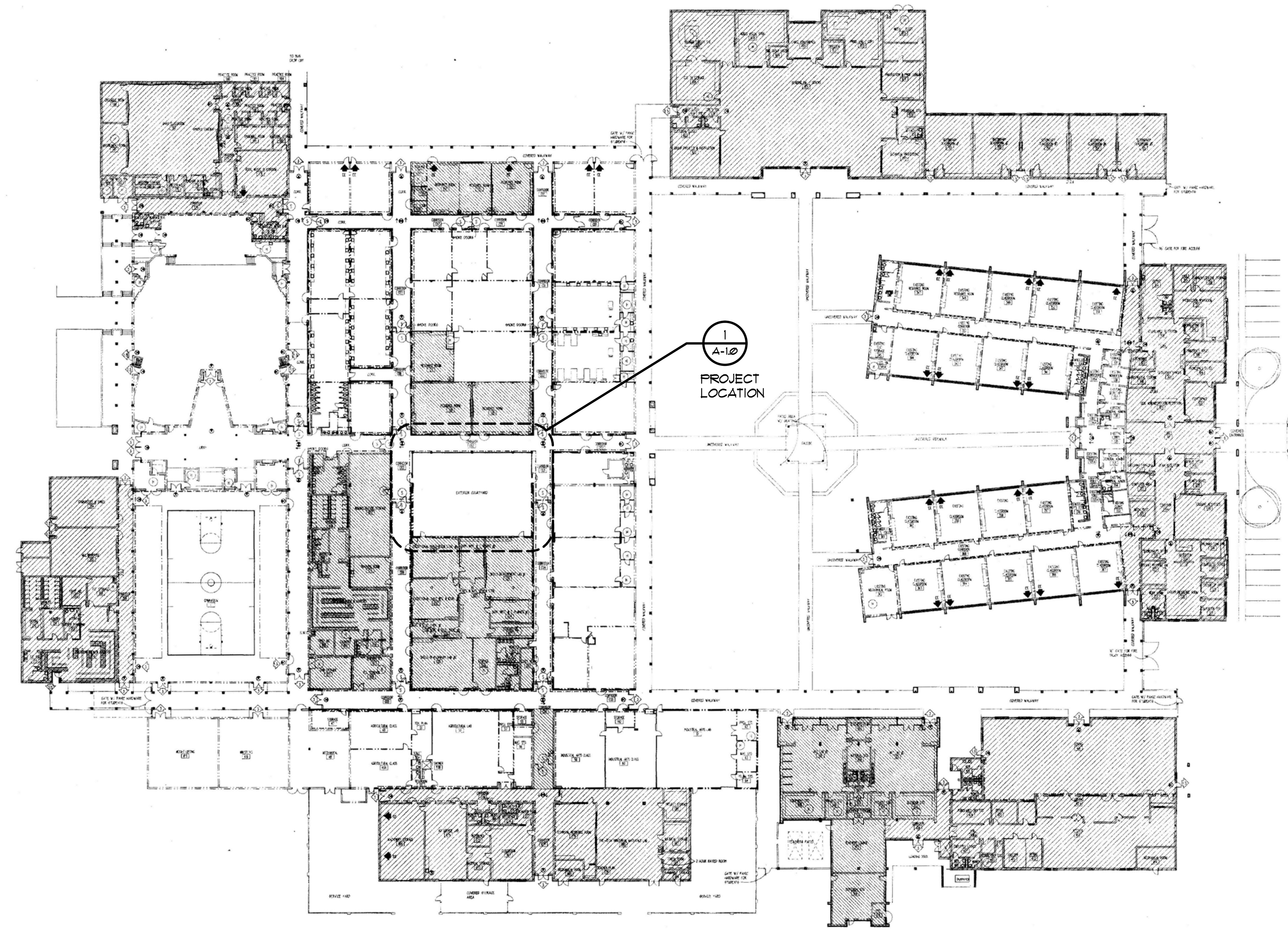
SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL
COURTYARD RENOVATION

1314 PINE AVENUE, SW   LIVE OAK, FLORIDA

100% CONSTRUCTION DOCUMENTS FOR BID



PROJECT NORTH

CAMPUS SITE PLAN

SCALE:N.T.S.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
A/C	AIR CONDITIONING
ALT	ALTERNATE
AL, ALUM	ALUMINUM
AB	ANCHOR BOLT
∠	ANGLE
BD	BOARD
BOT	BOTTOM
BRG	BEARING
BLDG	BUILDING
BUR	BUILT UP ROOFING
CLG	CEILING
CT	CERAMIC TILE
CCTV	CLOSED CIRCUIT TELEVISION
CLO	CLOSET
COL	COLUMN
CMU	CONCRETE MASONRY UNIT
CJ	CONTROL JOINT
DEMO	DEMOLISH, DEMOLITION
DIA.	DIAMETER
DIM	DIMENSION
DR	DOOR
DBL	DOUBLE
DN	DOWN
DS	DOWNSPOUT
DF	DRINKING FOUNTAIN
DW	DISHWASHER
DWG	DRAWING
(E)	EXISTING
EA	EACH
ELEC	ELECTRIC (AL)
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
ELEV	ELEVATION
EQ	EQUAL
EJ	EXPANSION JOINT
FFE	FINISH FLOOR ELEVATION
FA	FIRE ALARM
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FH	FIRE HYDRANT
FL	FLOOR (ING)
FD	FLOOR DRAIN
GA	GAGE, GAUGE
GALV	GALVANIZED
GL	GLASS, GLAZING
GB	GRAB BAR
GWB	GYPSUM WALLBOARD
HVAC	HEATING / VENTILATING / AIR COND.
HT	HEIGHT
HC	HOLLOW CORE
HM	HOLLOW METAL
HB	HOSE BIBB
HR	HOUR
IN	INCH
ID	INSIDE DIAMETER
INV	INVERT
JT	JOINT
LAV	LAVATORY
LLV	LONG LEG VERTICAL
LLH	LONG LEG HORIZONTAL
MH	MANHOLE
MFR	MANUFACTURE (ER)
MO	MASONRY OPENING
MAX	MAXIMUM
MECH	MECHANIC (AL)
MTL	METAL
MIN	MINIMUM
MISC	MISCELLANEOUS
NRC	NOISE REDUCTION COEFFICIENT
NOM	NOMINAL
N	NORTH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO.	NUMBER
O.C.	ON CENTER (S)
OD	OUTSIDE DIAMETER
PTD	PAPER TOWEL DISPENSER
PL	PLATE
PVC	POLYVINYL CHLORIDE
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PL	PROPERTY LINE
QT	QUARRY TILE
R	RADIUS
REF	REFERENCE
REF	REFRIGERATOR
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RA	RETURN AIR
REV	REVISION (S), REVISED
RD	ROOF DRAIN
RM	ROOM
RO	ROUGH OPENING
SHT	SHEET
SIM	SIMILAR
SC	SOLID CORE
STC	SOUND TRANSMITTANCE COEFFICIENT
SPEC	SPECIFICATION (S)
SPKR	SPRINKLER
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STO	STORAGE
THR	THRESHOLD
TPD	TOILET PAPER DISPENSER
TB	TOWEL BAR
TYP	TYPICAL
UC	UNDERCUT
UL	UNDERWRITER'S LABORATORY
UR	URINAL
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VCT	VINYL COMPOSITION TILE
VOL	VOLUME
WC	WATER CLOSET
WH	WATER HEATER
WWF	WELDED WIRE FABRIC
W/	WITH
W/O	WITHOUT
WD	WOOD
YD	YARD

DRAWING LIST

REVISIONS △	ARCHITECTURAL	
	COV	COVER SHEET
	LS-1(E)	EXISTING LIFE SAFETY PLAN
	LS-1	LIFE SAFETY PLAN
	A-0.1	DEMOLITION PLAN
	A-1.0	NEW FLOOR PLAN
	A-2.0	REFLECTED CEILING PLAN
	A-3.0	ROOF PLAN AND DETAILS
	A-4.0	BUILDING SECTIONS
	A-5.0	WALL SECTIONS
	A-5.1	VERTICAL DETAILS
	PLUMBING	
	S-1.1	STRUCTURAL SYMBOLS AND LEGEND
	S-1.2	STRUCTURAL NOTES
	S-1.3	STRUCTURAL NOTES AND WIND LOAD DIAGRAM
	S-2.1	FOUNDATION PLAN
	S-2.2	ROOF FRAMING PLAN
	S-3.1	STRUCTURAL SECTIONS AND DETAILS
	S-3.2	STRUCTURAL SECTIONS AND DETAILS
	S-3.3	STRUCTURAL SECTIONS AND DETAILS
	S-3.4	STRUCTURAL SECTIONS AND DETAILS
	PLUMBING	
	P-1.0	PLUMBING FLOOR PLAN
	MECHANICAL	
	M-0.0	MECHANICAL SYMBOLS, LEGEND AND NOTES
	M-1.0	MECHANICAL FLOOR PLAN
	M-2.0	MECHANICAL DETAILS AND SCHEDULES
	ELECTRICAL	
	E-0.1	ELECTRICAL SYMBOLS AND NOTES
	E-0.2	ELECTRICAL GENERAL AND DEMOLITION NOTES
	E-1.0	DEMOLITION AND POWER PLANS
	E-2.0	LIGHTING PLAN
	E-3.0	ELECTRICAL RISER DIAGRAM
	E-4.0	ELECTRICAL SCHEDULES
	E-5.0	ELECTRICAL DETAILS

VICINITY MAP

REVISIONS AND UPDATES

04/01/13		100% CONSTRUCTION DOCUMENTS

GENERAL NOTES

1. ALL GRAPHIC SCALES INDICATED ON THE DRAWINGS ARE FOR 24"X36" PAGE SIZE ONLY.
2. TO THE BEST OF OUR KNOWLEDGE THESE DOCUMENTS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE SAFETY STANDARDS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND 633 FLORIDA STATUTES.
3. DETAILS SHALL APPLY TO ALL SIMILAR CONDITIONS UNLESS A DIFFERENT DETAIL IS SHOWN.

SYMBOLS LIST

1 / A-1 — DETAIL DESIGNATION / SHEET NUMBER
WALL SECTION

1 / A-1 — DETAIL DESIGNATION / SHEET NUMBER
PLAN DETAIL

A, B, C, D — 1 / A-1 — DETAIL DESIGNATION / SHEET NUMBER
INTERIOR ELEVATION

SPECIFICATION NUMBER
06 24 00
SPEC. DETAIL

DOOR MARK (SEE DOOR SCH.)
WINDOW MARK (SEE WIN. SCH.)
WALL TYPE MARK (SEE WALL TYPES)
TOILET ACCESSORIES (SEE ACCESSORY LEGEND)

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW   LIVE OAK, FLORIDA

COVER SHEET

drawn 04/02/13 CNK | checked | approved

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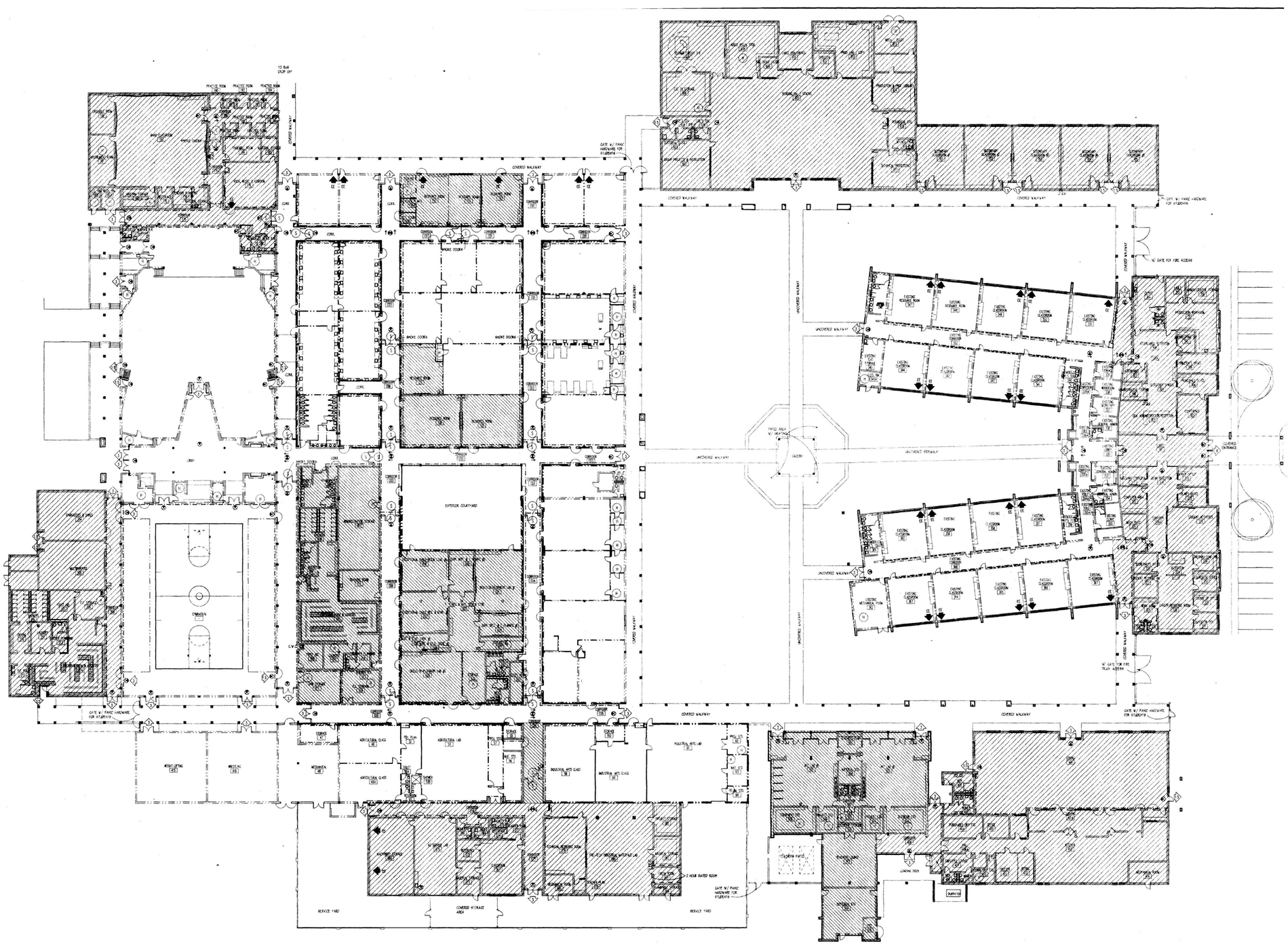
COV



PROJECT NORTH

1 EXISTING LIFE SAFETY

SCALE: N.T.S.

NOTE:

THIS PLAN IS A COPY OF THAT DATED 06/03/93 WHEN A MAJOR REMODEL WAS COMPLETED AND IT IS PROVIDED FOR REFERENCE ONLY.

REVISIONS AND UPDATES

04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD

SUWANNEE HIGH SCHOOL COURTYARD RENOVATION

1314 PINE AVE., SW **LIVE OAK, FLORIDA**

EXISTING LIFE SAFETY PLAN

drawn 04/02/13 CNK	checked	approved

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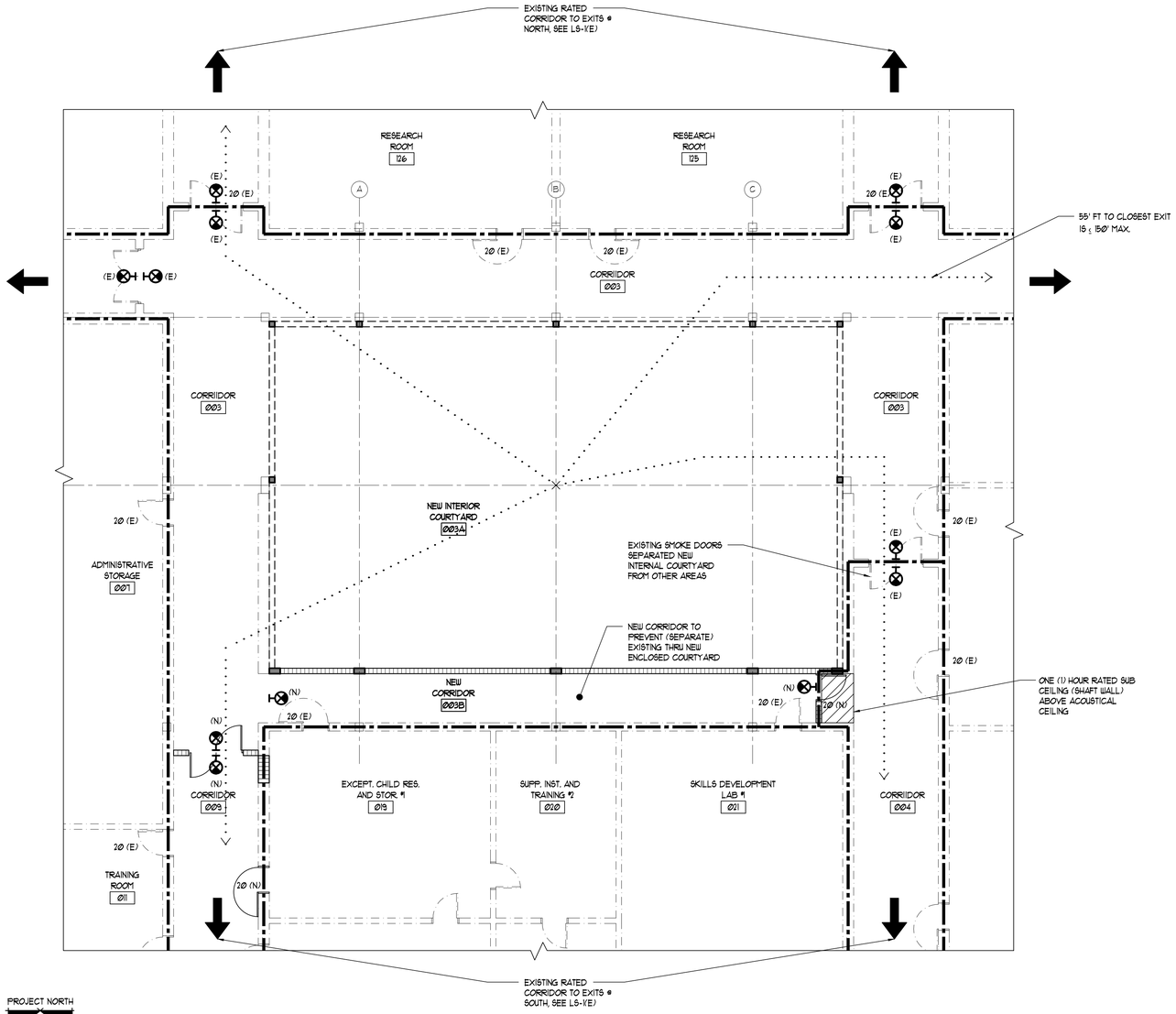
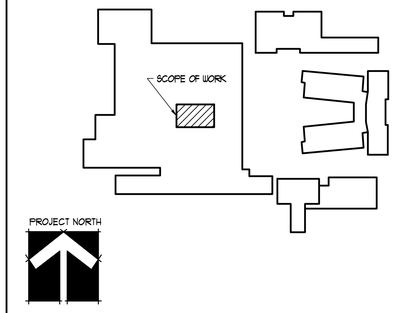


PROJECT NORTH

1 LIFE SAFETY AND EGRESS PLAN

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

KEY PLAN



LIFE SAFETY / CODE COMPLIANCE NOTES

APPLICABLE CODES

FLORIDA BUILDING CODE - 2010
FBC MECHANICAL CODE 2010
FBC PLUMBING CODE 2010
FLORIDA FIRE PREVENTION CODE 2010

OCCUPANCY CLASSIFICATION

FLORIDA BUILDING CODE - EDUCATIONAL
FLORIDA FIRE PREVENTION CODE - EDUCATIONAL (EXISTING)

CONSTRUCTION SEPARATION

SEE PLAN

CONSTRUCTION TYPE

FLORIDA BUILDING CODE: EXISTING = TYPE IIB EQUIVALANT
FIRE SPRINKLER SYSTEM: NONE

BUILDING HEIGHT AND ALLOWABLE AREA

HEIGHT (FBC TABLE 503) - MAX. HEIGHT IS 55 FT
AREA (FBC TABLE 503) -

EXITING / EGRESS

MIN. NUMBER OF EXITS - EXISTING (SEE PLAN)

TRAVEL DISTANCES (SEE PLAN FOR PATHS)
- MAXIMUM COMMON PATH: 75' (PER FBC 1014.3) BUSINESS:

- MAXIMUM TRAVEL DISTANCE: (PER FBC TABLE 1016.1) EDUCATIONAL: 150 FT.

- DEAD END CORRIDOR: (PER FBC 1018.4) 20 FT.

EXIT WIDTHS: (SEE PLANS FOR WIDTHS) (PER FBC 1005.1)
- DOORS: 0.2 INCHES / PERSON (MIN. WIDTH TO BE 36 INCHES)

CORRIDOR:
- 0.2 INCHES / PERSON = X 0.2" = INCHES (MIN. WIDTH SHALL BE 44 INCHES PER FBC 1018.2 AND FFPC 38.2.3.2)

LIFE SAFETY SYMBOL LEGEND

- INDICATES PRIMARY EXIT OR EXIT ACCESS
- INDICATES SECONDARY EXIT ACCESS
- INDICATES PRIMARY COMMON PATH OF TRAVEL (DISTANCE FEET)
- INDICATES PRIMARY PATH OF TRAVEL (DISTANCE FEET)
- INDICATES SECONDARY PATH OF TRAVEL (DISTANCE FEET)
- 60 / 20 — INDICATES DOOR WITH FIRE RATING LABEL (IE: 90, 60, 45, OR 20 MINUTE), (E)=EXISTING, (N)=NEW
- INDICATES MAXIMUM DOOR EXIT CAPACITY (PERSONS)
- INDICATES SMOKE TIGHT WALL/PARTITION
- INDICATES 1 HR FIRE RATED WALL/PARTITION (SMOKE RESISTANT)
- XXX — INDICATES OCCUPANT LOAD PER FBC FOR SPECIFIC ROOMS W/ ASSEMBLY OCCUPANCY
- XX — INDICATES MAX. OCCUPANCY SIGN.
- FEB. FEC. — INDICATES FIRE EXTINGUISHER ON BRACKET OR IN CABINET
- INDICATES EMERGENCY LIGHTS (SEE ELEC. DRAWINGS)
- F — INDICATES FIRE ALARM STROBE AND HORN (SEE ELEC. DRAWINGS)
- F — INDICATES FIRE BELL (SEE ELEC. DRAWINGS)
- F — FIRE ALARM PULL STATION (SEE ELEC. DRAWINGS)
- INDICATES EXIT SIGN - (SEE ELEC. DWGS. FOR ADDITIONAL DEVICES)
- XX' CLR. — CLEAR WIDTH AND MAXIMUM EGRESS CAPACITY (PERSONS)

REVISIONS AND UPDATES

04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW — LIVE OAK, FLORIDA

LIFE SAFETY PLAN

drawn 04/02.13 CNK | checked | approved

GRAPHIC SCALE
4' 0 4' 8' 12' 16'
1/8" = 1'-0"

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LS-1

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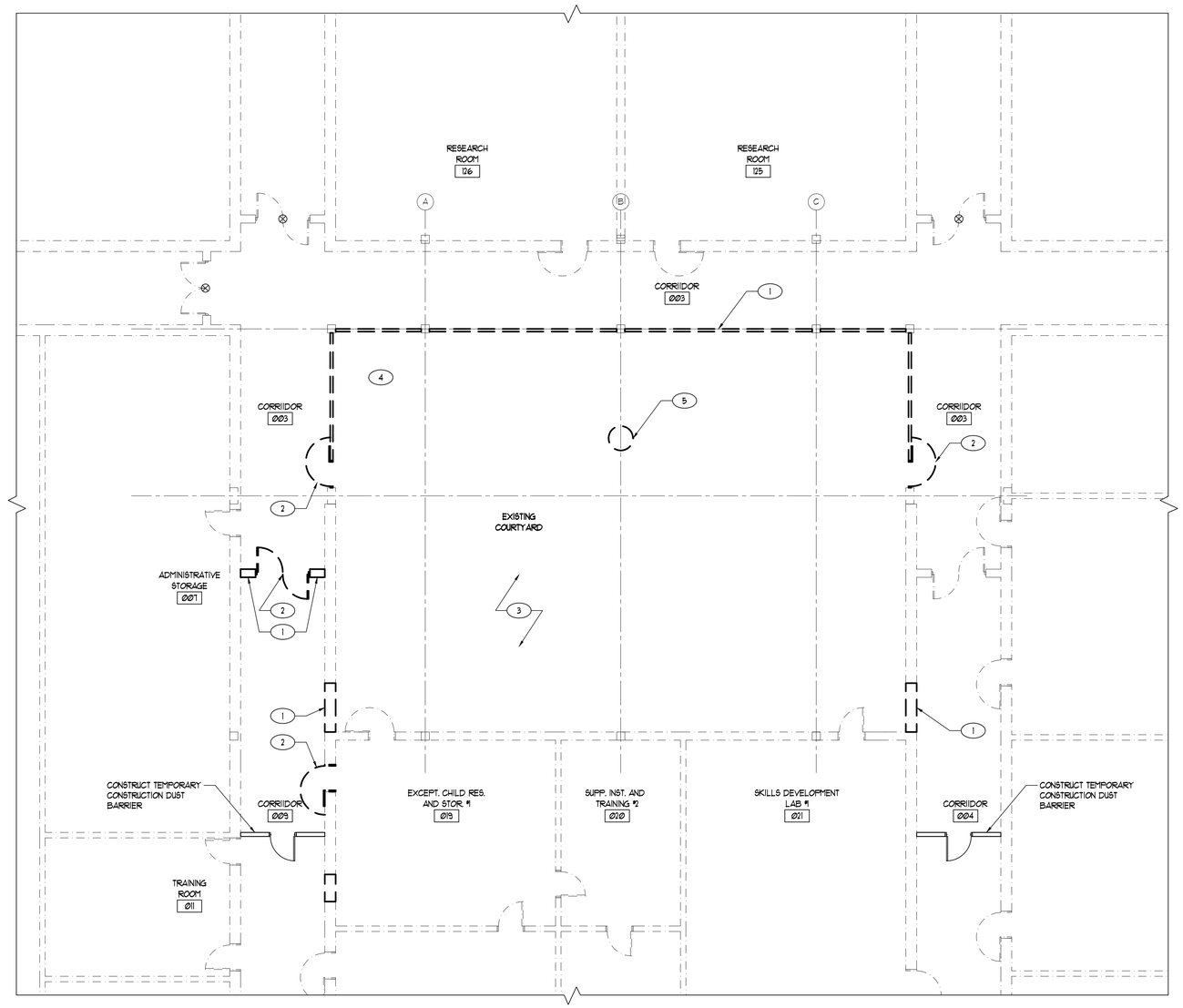

1 DEMOLITION FLOOR PLAN

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

GENERAL DEMOLITION NOTES

1. CONTRACTOR TO COORDINATE WITH SCSB FACILITIES AND ARCHITECT PRIOR TO CONSTRUCTION AS TO SYSTEMS (FIRE, ELECT, AND MECH.) THAT WILL BE AFFECTED AND ENSURE THAT DATA INTEGRITY AND POWER WILL BE MAINTAINED CONTINUOUSLY THROUGHOUT DEMOLITION AND CONSTRUCTION.
2. ALL CONSTRUCTION REQUIRING THE DISRUPTION OF THE NORMAL WORKING ENVIRONMENT WILL BE SUBJECT TO APPROVAL AND COORDINATION WITH SCSB FACILITIES.
3. TEMPORARY CONSTRUCTION BARRIERS OF PLYWOOD OR DRYWALL BE SET UP PRIOR TO CONSTRUCTION TO PROVIDE A DUST FREE ENVIRONMENT OUTSIDE THE WORKING ENVIRONMENT.
4. REPLACE ANY MISSING, DAMAGED, OR DIRTY CEILING TILES. MATCH EXISTING COLOR OR REPLACE ENTIRE CEILING IN ROOM.
5. REPAINT ALL WALLS IN RENOVATED AREAS.
6. PATCH, REPAIR & PAINT ALL ADJACENT AREAS DAMAGED BY DEMOLITION (TYPICAL).
7. SEE ENGINEERING DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.

SPECIFIC DEMOLITION AND LEGEND NOTES

- DENOTES EXISTING ITEMS TO REMAIN.
- DENOTES EXISTING ITEMS TO BE DEMOLISHED OR RELOCATED.
- ⊗ DENOTES TO CLOSE EXISTING CROSS CORRIDOR DOORS AND SEAL AS CONSTRUCTION DUST BARRIER.

1. REMOVE GLASS BLOCK WALLS OR OTHER WALLS WHERE NOTED.
2. REMOVE DOORS, DOOR HARDWARE AND DOOR FRAMES.
3. REMOVE GRAVEL AND SOIL AS REQUIRED FOR NEW SLAB.
4. REMOVE BULLDOG STATUE.
5. REMOVE GRATE, INLET BOX AND CAP EXISTING STORM DRAIN.

KEY PLAN

REVISIONS AND UPDATES

04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD

SUWANNEE HIGH SCHOOL COURTYARD RENOVATION

1314 PINE AVE., SW — **LIVE OAK, FLORIDA**

DEMOLITION FLOOR PLAN

drawn 04/02/13 CNK	checked	approved

GRAPHIC SCALE
4' 0 4' 8' 12' 16'
1/8"=1'-0"

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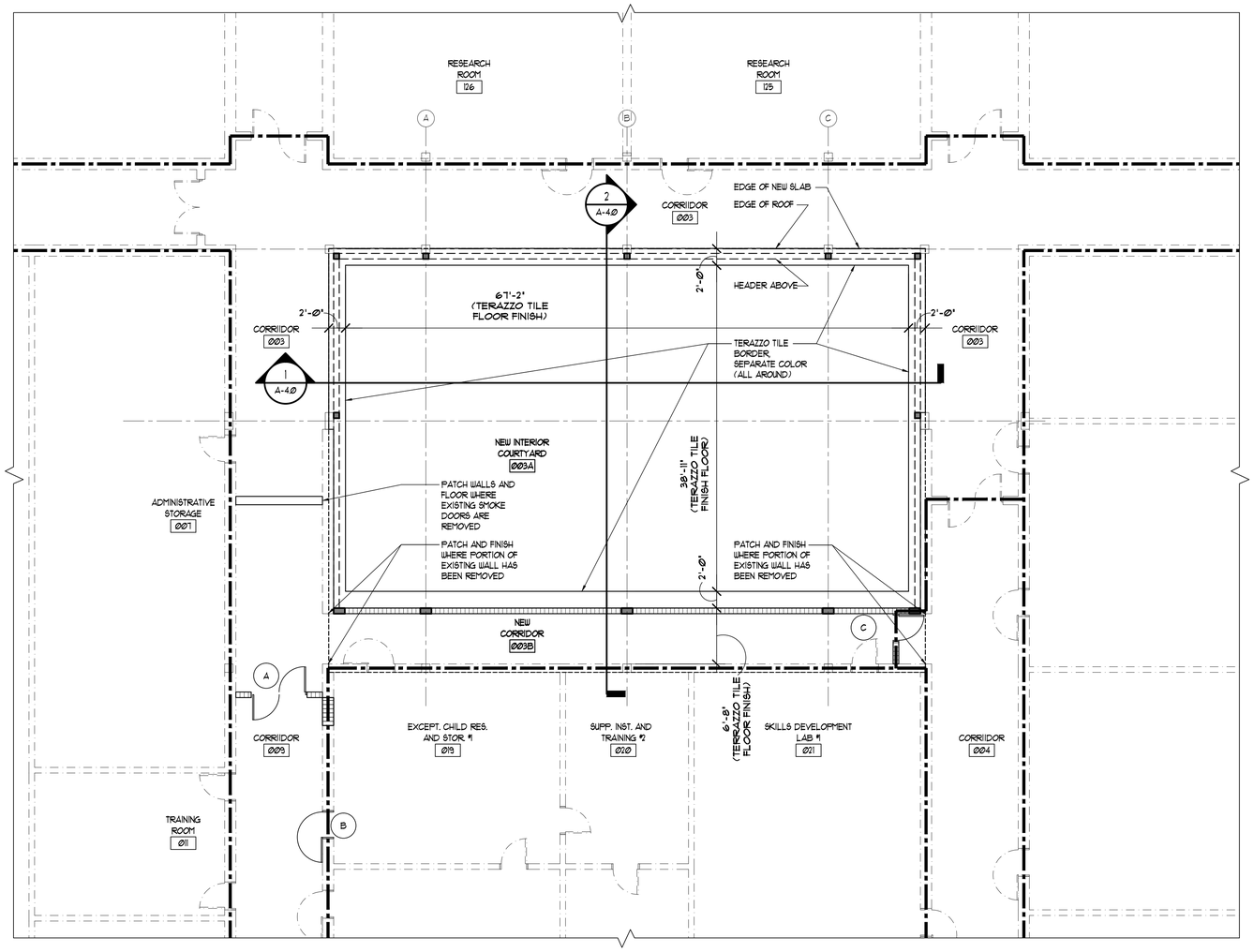
A-0.0



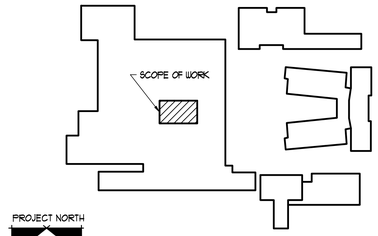
1 NEW COURTYARD FLOOR PLAN

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

GENERAL NOTES

1. ALL DIMENSIONS TO EXISTING WALL ARE TO THE FINISH.
2. ROOM NUMBERS ARE FOR GENERAL ROOM LOCATION AND SCHEDULING FOR CONSTRUCTION. FMC IS TO DETERMINE ROOM NAMES AND NUMBERS OWNER SUPPLIED ROOM SIGNAGE.
3. 'X' IN FRONT OF A DOOR NUMBER DENOTES AN EXISTING TO BE RELOCATED. SEE FINISHSED SCHEDULE FOR ADDITIONAL INFORMATION.
4. SEE DETAIL 2/-A1.0 FOR DOOR CLEARANCE REQUIREMENTS.
5. PAINT ALL NEW FINISHES AND PATCH ALL SURFACES EXCEPT THOSE WITH A FACTORY FINISH.

KEY PLAN



PROJECT NORTH

GRAPHIC SCALE
4' 0 4' 8' 12' 16'
1/8" = 1'-0"

REVISIONS AND UPDATES

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SUWANNEE COUNTY SCHOOL BOARD

SUWANNEE HIGH SCHOOL COURTYARD RENOVATION

1314 PINE AVE., SW — LIVE OAK, FLORIDA

NEW COURTYARD FLOOR PLAN

drawn	checked	approved
04/02/13 CNK		

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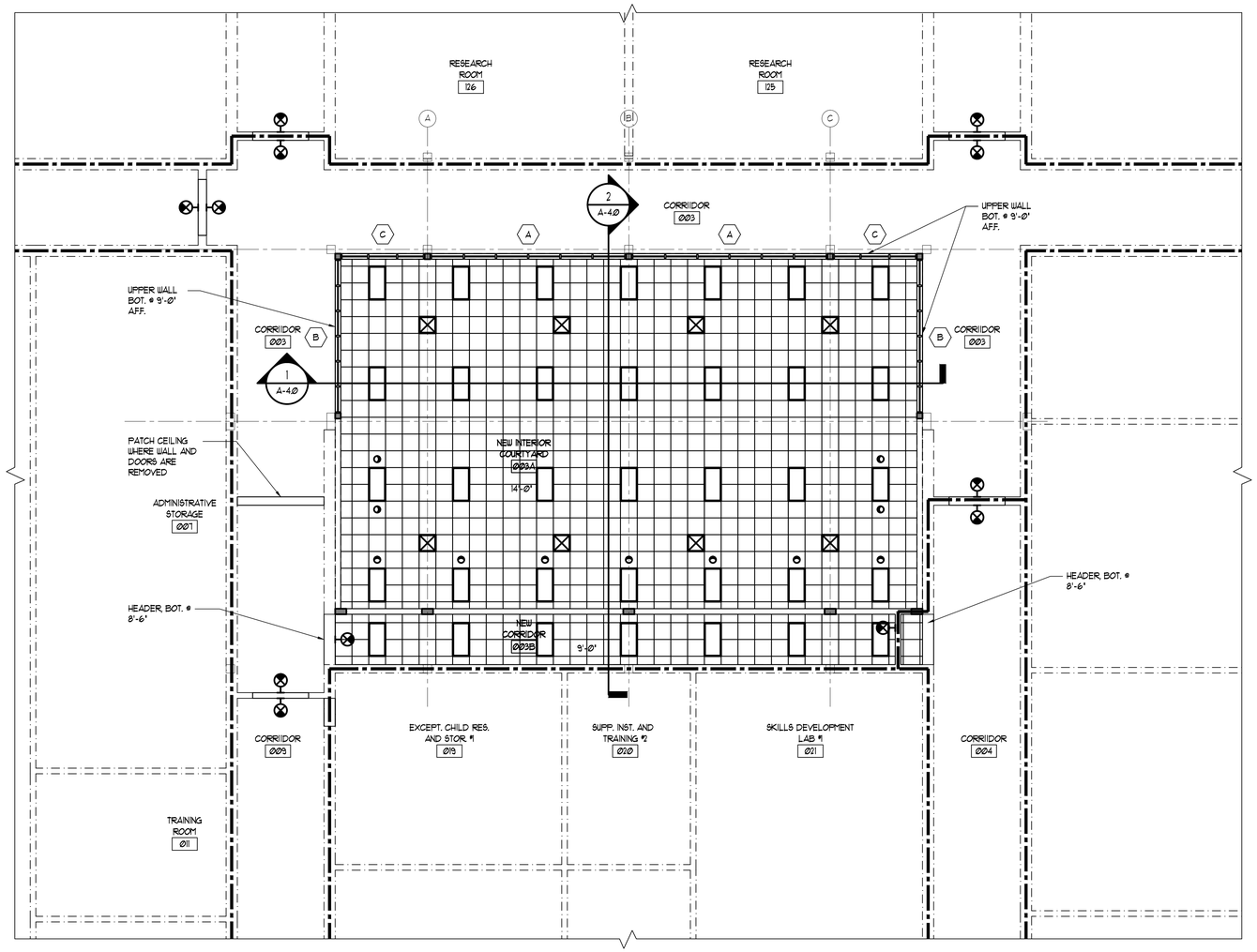


PROJECT NORTH

1 **NEW COURTYARD REFLECTED CEILING PLAN**

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

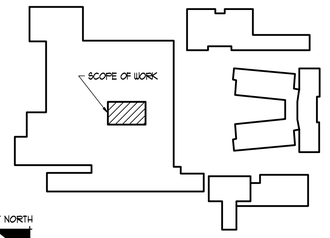
REFLECTED CEILING PLAN NOTES

1. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN. REFER TO FLOOR PLANS, ELEVATIONS, SECTIONS, AND SPEC. BOOK FOR ADDITIONAL DETAIL REFERENCES.
2. ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER MECHANICAL AND ELECTRICAL FOR LOCATION OF LIGHTS, GRILLES, DIFFUSERS, CEILING GRIDS , AND SIMILAR ITEMS. IF A DISCREPANCY EXISTING WITH QUANTITIES, NOTIFY ARCHITECT IMMEDIATELY. FOLLOW ARCHITECTURAL PLANS FOR LOCATION OF MECHANICAL DIFFUSERS AND RETURN AIR GRILLES. GRILLES AND DIFFUSERS INDICATED ON MECHANICAL DRAWINGS BUT NOT SHOWN ON ARCHITECTURAL ARE TO BE COORDINATED BETWEEN ARCHITECTURAL AND MECHANICAL DRAWINGS BY ARCHITECT DURING CONSTRUCTION.
3. REFER TO LIFE SAFETY PLAN FOR FIRE RATED WALL LOCATIONS.
4. ALL GRILLES, DIFFUSERS, GRIDS, LIGHT FIXTURES, ETC. LOCATED IN THE CEILING ARE TO BE PAINTED TO MATCH (OFF WHITE) UNLESS OTHERWISE NOTED.
5. EVERY EFFORT MUST BE MADE TO GIVE CEILING A CLEAN AND WELL ORGANIZED APPREARENCE.
6. ANY VARIATION FROM THIS PLAN MUST BE APPROVED BY ARCHITECT PRIOR TO WORK.

REFLECTED CEILING LEGEND

- SUPPLY AIR
- RETURN AIR
- EXHAUST FAN
- DIAGONAL SHADING DENOTES EMERGENCY LIGHT FIXTURE
- 2X4 FLUORESCENT RECESSED LIGHT FIXTURE
- BARE FLUORESCENT LIGHT FIXTURE FIXTURE
- EYE BALL WALL WASH LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- EXIT LIGHT FIXTURE: CEILING MOUNTED / WALL MOUNTED
- WALL MOUNT LIGHT FIXTURE
- 2X2 SUSPENDED ACOUSTICAL CEILING
- OCCUPANCY SENSOR
- SMOKE DETECTOR

KEY PLAN



PROJECT NORTH

REVISIONS AND UPDATES

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GRAPHIC SCALE
4' 0 4' 8' 12' 16'
1/8" = 1'-0"

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW LIVE OAK, FLORIDA
NEW REFLECTED CEILING PLANS

drawn 04/02/13 CNK | checked | approved

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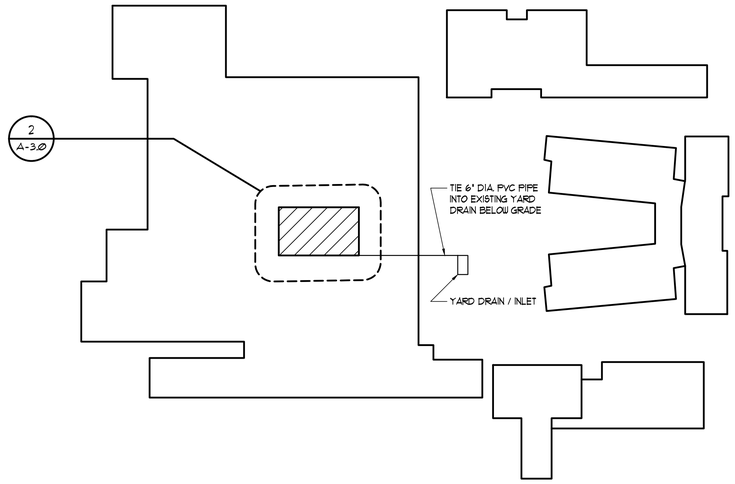
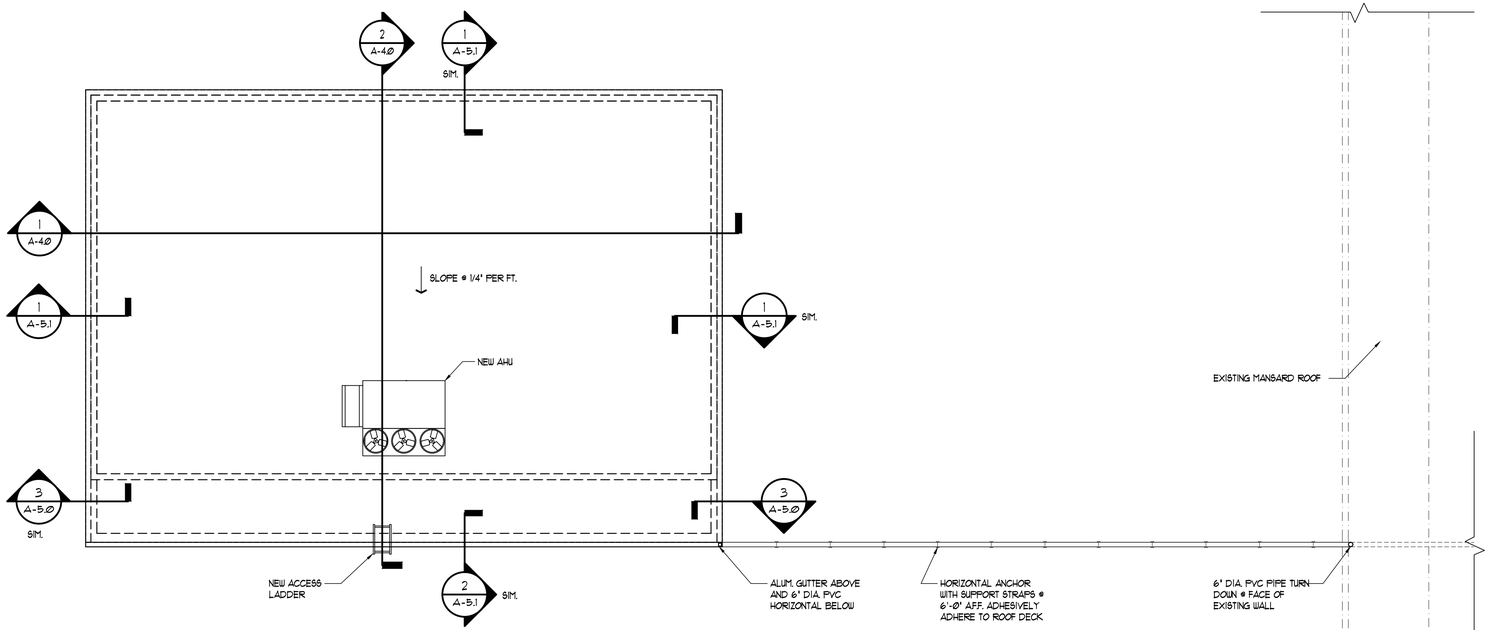


PROJECT NORTH

1 OVERALL ROOF KEY PLAN

SCALE: N.T.S.



PROJECT NORTH

2 ROOF PLAN

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

ROOF PLAN NOTES

1. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.
2. REFER TO PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF VENTS, EQUIPT. OR OTHER ROOF PENETRATIONS.
3. THE GENERAL CONTRACTOR AND ROOFING SUB-CONTRACTOR MUST HAVE A COMPLETE UNDERSTANDING OF ALL APPLICABLE CODES, FM - LOSS PREVENTION DATA, 1995 FMRC APPROVAL GUIDE AND MANUFACTURERS RECOMMENDATIONS.
4. PAINT ALL FLASHING, COPING, ETC. TO MATCH ADJACENT WALL COLOR.
5. THE "ON SITE" ROOFING FOREMAN MUST ATTEND THE PRE-ROOFING CONFERENCE.
6. SEE STRUCTURAL DRAWINGS FOR WIND LOAD AND UPLIFT DIAGRAMS.
7. ROOF TOP EQUIPMENT REQUIRING SERVICE SHALL NOT BE LOCATED WITHIN 10'-0" OF EDGE OF ROOF.

ROOF LEGEND

RD	ROOF DRAIN
→	SLOPE OF ROOF
OFD	OVERFLOW DRAIN
OFS	OVERFLOW SCUPPER
DS	DOWNSPOUT
VTR	VENT THRU ROOF
▭	BUILT UP ROOFING

GRAPHIC SCALE
4' 0 4' 8' 12' 16'
1/8"=1'-0"

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SUWANNEE COUNTY SCHOOL BOARD
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ROOF PLAN AND DETAILS

drawn	checked	approved
04/02/13 CNK		

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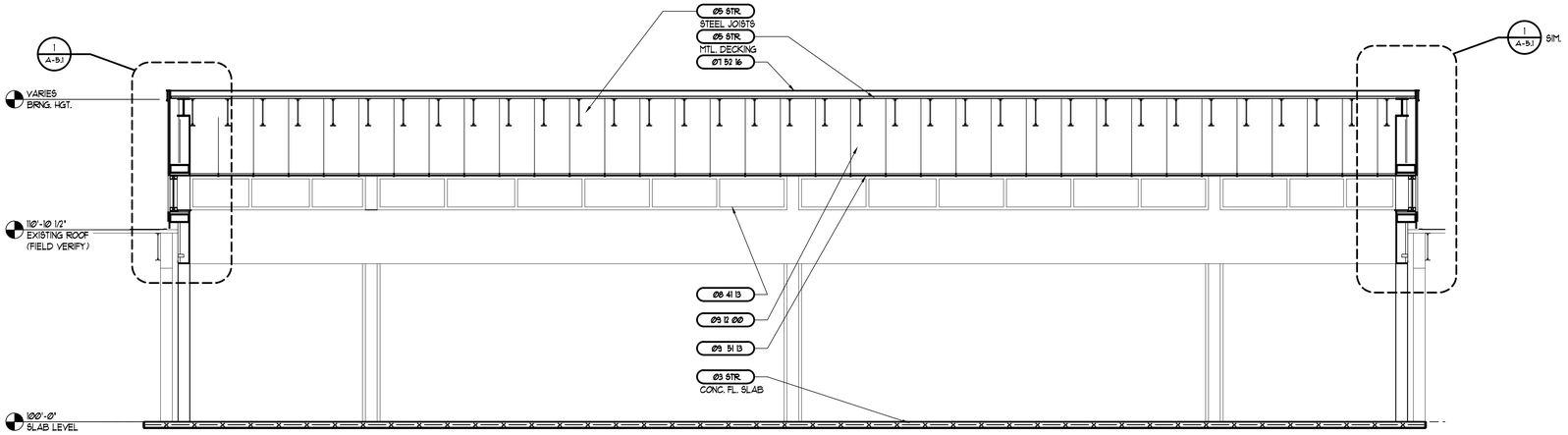
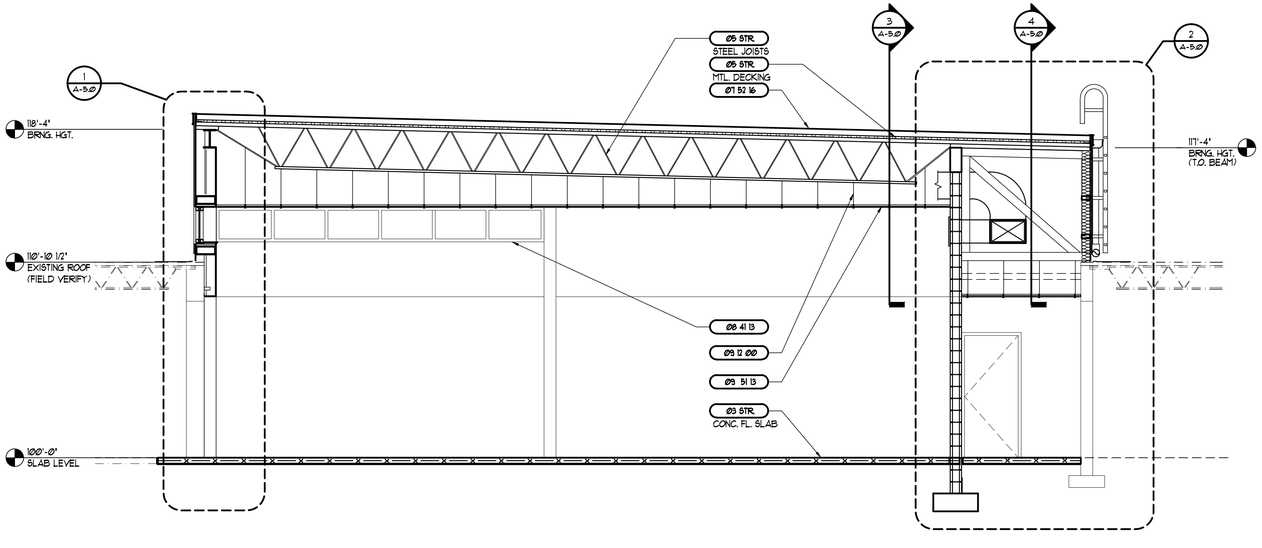
A-3.0



1 BUILDING SECTION

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



3 BUILDING SECTION

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

MATERIALS LIST

02 10 00	SOILS PREPARATIONS (SEE REPORT)
02 28 00	TERMITE CONTROL
02 41 00	DEMOLITION
03 STR.	CONCRETE - SEE STRUCTURAL DRAWINGS FOR DIV. 3 SPECIFICATIONS
04 STR.	MASONSRY - SEE STRUCTURAL DRAWINGS FOR DIV. 4 SPECIFICATIONS
05 STR.	STEEL - SEE STRUCTURAL DRAWINGS FOR DIV. 5 SPECIFICATIONS
05 51 60	FIXED LADDERS
06 10 53	ROUGH CARPENTRY, BLOCKING AND GROUNDS
06 11 00	ROUGH HARDWARE
07 21 13	BATT WALL INSULATION
07 24 00	SUBSTRATE SHEATHING
07 52 16	MODIFIED BITUMINOUS ROOF "SYSTEM"
07 62 00	METAL FLASHING, TRIM AND FEATURES
07 84 10	FIRE RATED PENETRATIONS AND JOINTS
07 90 00	JOINT SEALANTS AND CAULKING
08 10 00	HOLLOW METAL DOOR FRAMES
08 20 00	WOOD DOORS
08 41 13	ALUM. ENTRANCE AND STOREFRONT WINDOWS
08 71 00	FINISH HARDWARE
08 80 00	GLASS AND GLAZING
09 10 00	SUSPENDED SYSTEM FOR FINISH CEILING MATERIAL
09 12 50	NON-STRUCT. STEEL FRAMING/FURRING, 22 GA. INT. (SIZE NOTED)
09 24 00	STUCCO AND ACCESSORIES
09 29 00	GYPSUM DRYWALL
09 31 00	CULTURED MARBLE
09 51 13	ACOUSTICAL CEILING PANELS
09 65 60	VINYL FLOORING (SEE SPECIFICATIONS)
23 MECH	SEE MECHANICAL SPECIFICATIONS
26 ELECT	SEE ELECTRICAL SPECIFICATIONS

GRAPHIC SCALE
2' 0 2' 4' 6' 8'
1/4" = 1'-0"

REVISIONS AND UPDATES

04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW LIVE OAK, FLORIDA
INTERIOR ELEVATIONS AND BUILDING SECTION

drawn	checked	approved
04/02/13 CNK		

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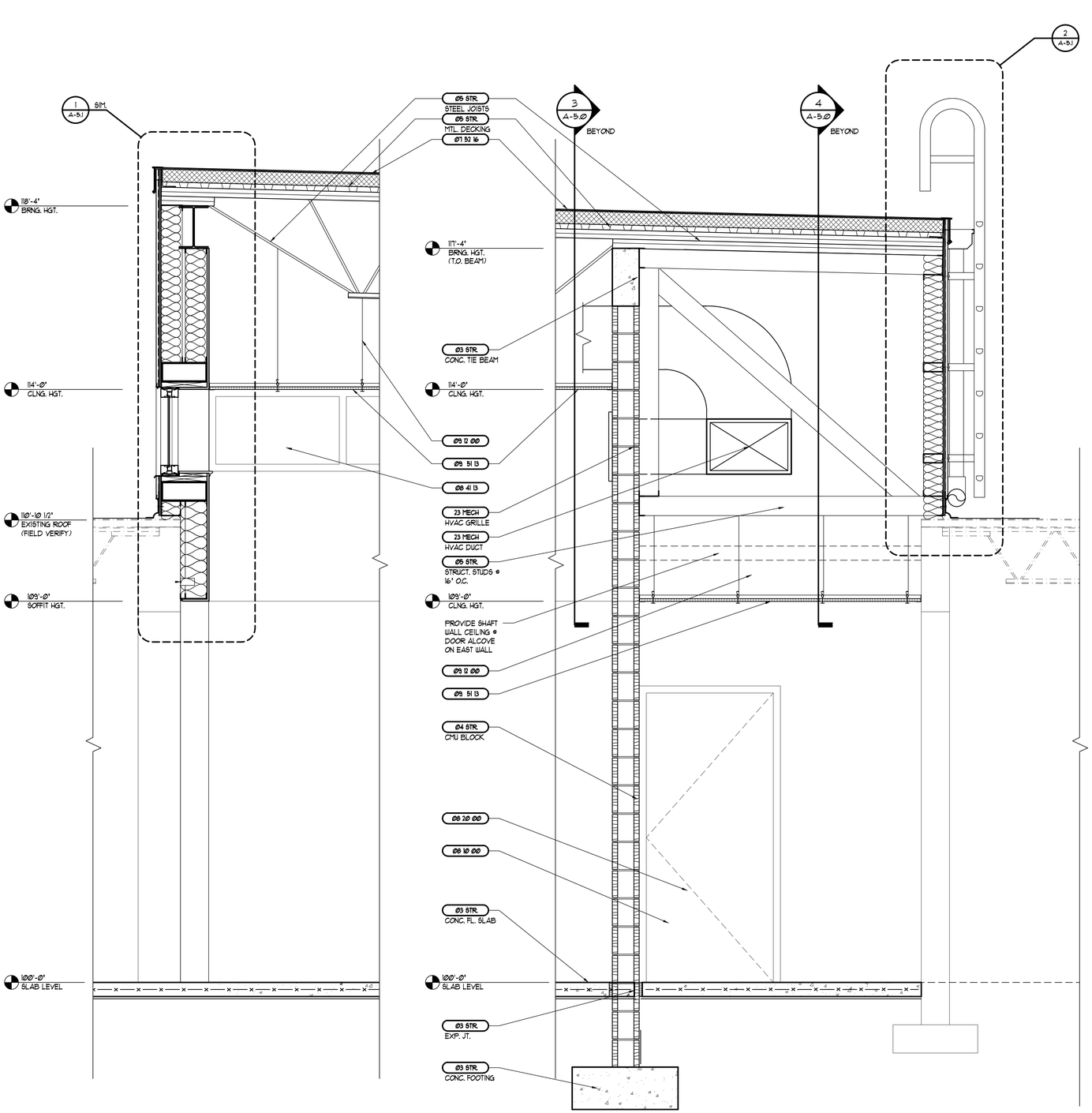
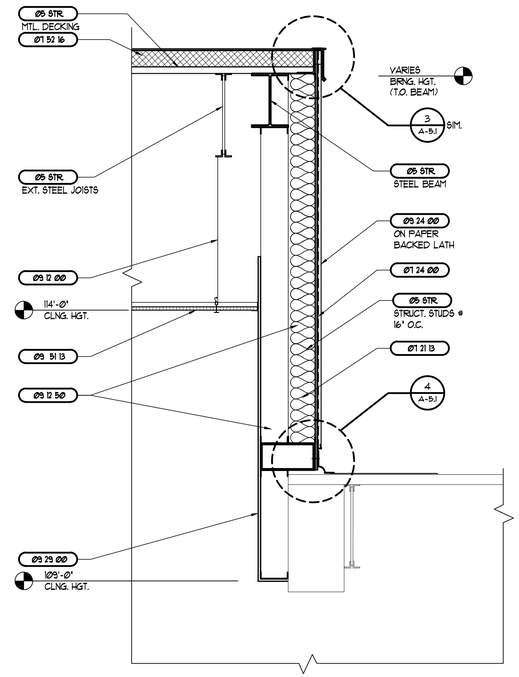


1 BUILDING SECTION

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

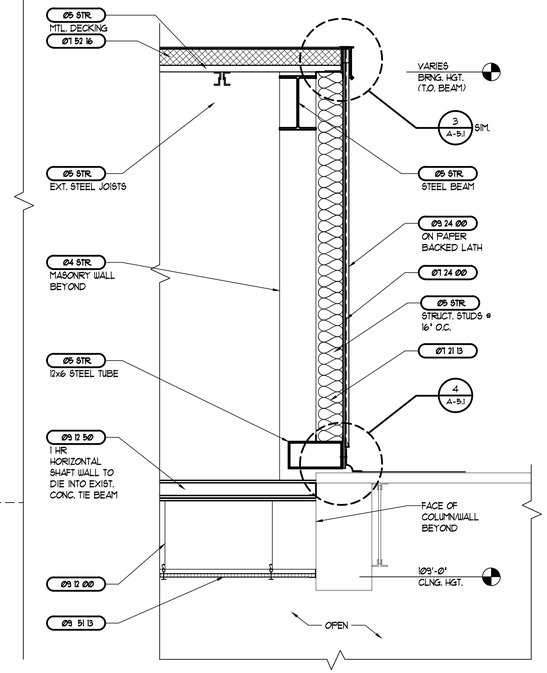
1 BUILDING SECTION

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



3 WALL SECTION

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



4 WALL SECTION

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

GRAPHIC SCALE

4' 0' 1' 2' 3'

3/4"=1'-0"

MATERIALS LIST

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02 41 00	DEMOLITION
03 STR.	CONCRETE - SEE STRUCTURAL DRAWINGS FOR DIV. 3 SPECIFICATIONS
04 STR.	MASONRY - SEE STRUCTURAL DRAWINGS FOR DIV. 4 SPECIFICATIONS
05 STR.	STEEL - SEE STRUCTURAL DRAWINGS FOR DIV. 5 SPECIFICATIONS
05 51 60	FIXED LADDERS
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REVISIONS AND UPDATES

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SUWANNEE COUNTY SCHOOL BOARD

SUWANNEE HIGH SCHOOL COURTYARD RENOVATION

1314 PINE AVE., SW — LIVE OAK, FLORIDA

WALL SECTIONS

drawn	checked	approved
04/02/13 CNK		

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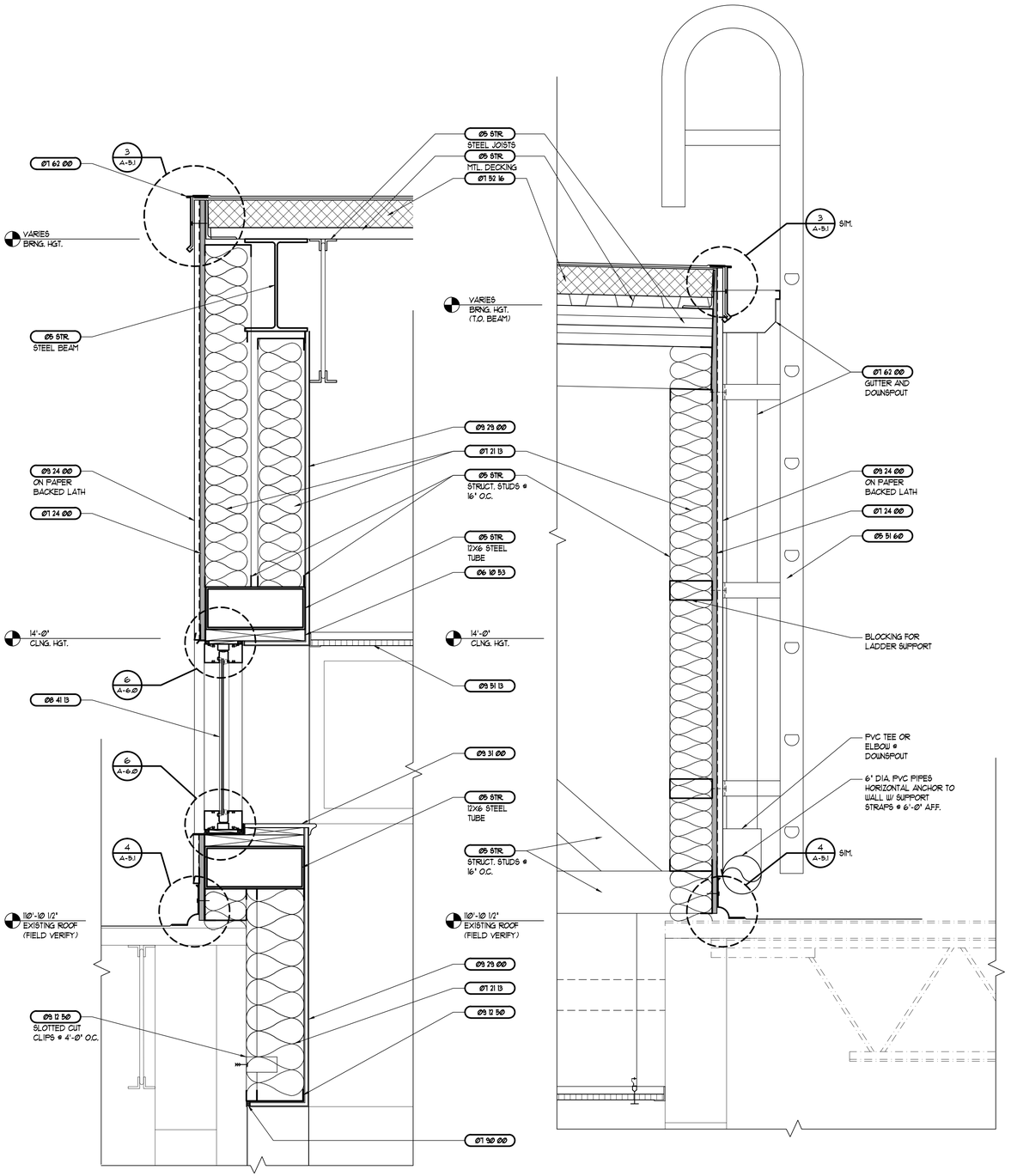
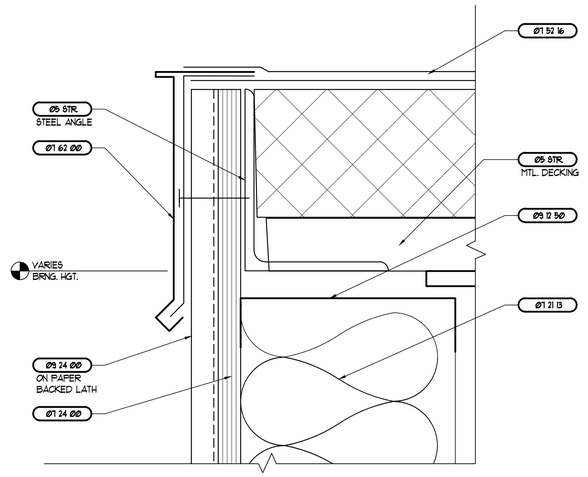
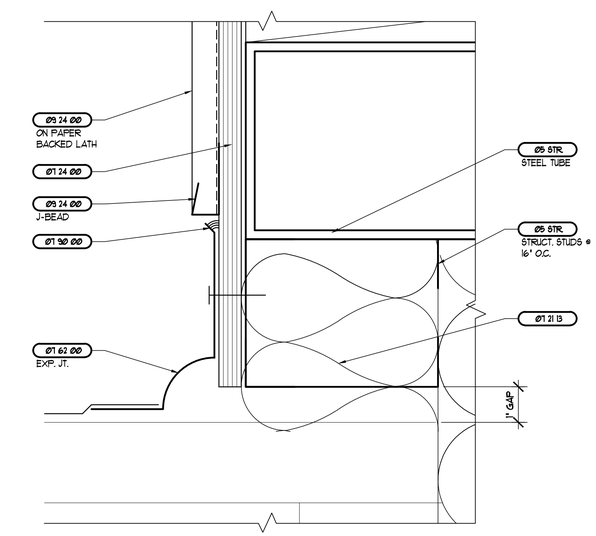


1 **DETAIL**
SCALE: 1-1/2"=1'-0"

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



3 **DETAIL**
SCALE: 6"=1'-0"



4 **DETAIL**
SCALE: 6"=1'-0"

MATERIALS LIST

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Ø2 28 00	TERMITE CONTROL
Ø2 41 00	DEMOLITION
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Ø4 STR.	MASONRY - SEE STRUCTURAL DRAWINGS FOR DIV. 4 SPECIFICATIONS
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REVISIONS AND UPDATES

Ø4/10/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW **LIVE OAK, FLORIDA**

VERTICAL DETAILS

drawn Ø4/02/13 CNK | checked | approved

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DOOR SCHEDULE

MARK	ROOM	DOOR TYPE	MAT. CODE	SIZE WIDTH	SIZE HEIGHT	SIZE THICKNESS	HARDWARE HINGES	HARDWARE LOCKSET(S)	HARDWARE PANIC DEVICE	HARDWARE CLOSER(S)	HARDWARE KICKPLATE(S)	HARDWARE WEATHER STRIP.	HARDWARE DOOR STOP	FRAME MATERIAL	FRAME TYPE	DETAIL HEAD	DETAIL JAMB	DETAIL THRESHOLD	ASSEMBLY LABEL	REMARKS
A	CORRIDOR	2	W	2'3"-4"	7'-Ø"	1-3/4"	A		A	A	A	A	A	H	B	4/A-4Ø	4/A-4Ø	4/A-4Ø	2Ø	
B	EXCEPT. CHILD RES. AND STOR ¶	1	W	3'-Ø"	7'-Ø"	1-3/4"	A	A		A	A	A	A	H	A	4/A-4Ø	4/A-4Ø	4/A-4Ø	2Ø	180 DEGREE SWING
C	NEW CORRIDOR	1	W	3'-Ø"	7'-Ø"	1-3/4"	A	A		A	A	A	A	H	A	4/A-4Ø	4/A-4Ø	4/A-4Ø	2Ø	

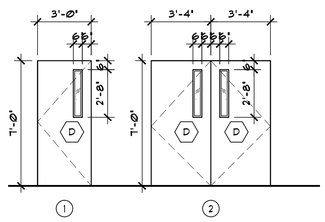
WINDOW SCHEDULE

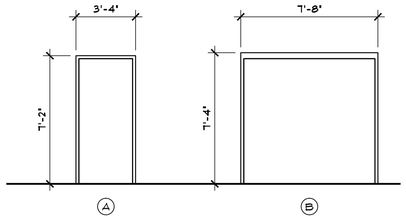
MARK	APPROXIMATE SIZE (W X H)	F.R. TYPE	GLASS	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	DETAILS MULLION	LOCATION	REMARKS
A	23'-4" X 2'-Ø"	ALUMINUM	LAM/INSULATED	6/A-4Ø	6/A-4Ø	6/A-4Ø	-	COURTYARD	
B	18'-4" X 2'-Ø"	ALUMINUM	LAM/INSULATED	6/A-4Ø	6/A-4Ø	6/A-4Ø	-	COURTYARD	
C	1Ø'-8" X 2'-Ø"	ALUMINUM	LAM/INSULATED	6/A-4Ø	6/A-4Ø	6/A-4Ø	-	COURTYARD	
D	6" X 2'-8"	STEEL	RATED					DOOR LITES	SEE NOTE ¶1

NOTE:
1. ALL GLAZING TO BE CLEAR AND FIRE RATED.

DOOR SCHEDULE LEGEND

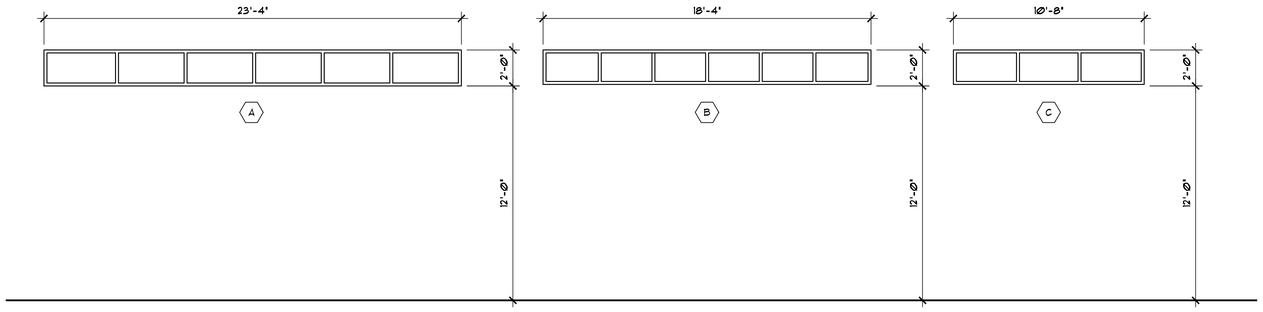
DOOR MATERIAL	
W	WOOD (BIRCH FACED)
H	HOLLOW METAL (INSULATED)
HARDWARE LEGEND	
HINGES	A = BB STEEL
LOCKSETS	A = CLASSROOM FUNCTION (SCHLAGE RHODES 'D' - SERIES)
CLOSERS	A = LCN 4Ø4Ø SERIES (PARALLEL ARM, ADA)
KICKPLATE	A = IVES 4Ø4Ø SERIES (10"D)
DOOR STOPS	A = IVES WS SERIES (W/ ADEQUATE BACK BLOCKING)
WEATHERSTRIP	A = PEMKO
PANIC DEVICE	A = VON DUPRIN 98/99 SERIES W/ SURFACE RODS AND NO HARDWARE ON OPPOSITE SIDE



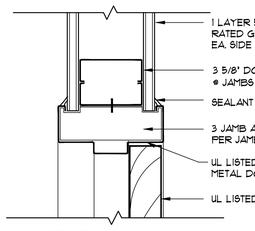


1 DOOR TYPES
SCALE: 1/4"=1'-Ø"

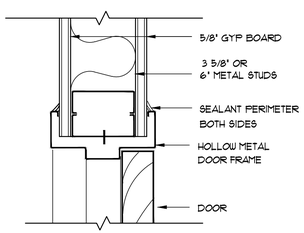
2 FRAME TYPE
SCALE: 1/4"=1'-Ø"



3 WINDOW TYPES
SCALE: 1/4"=1'-Ø"



HEAD
UL# U465



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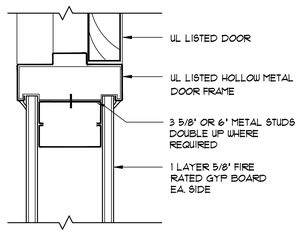
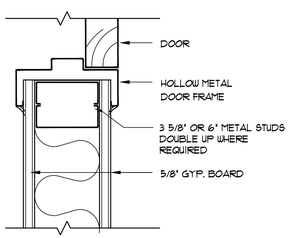
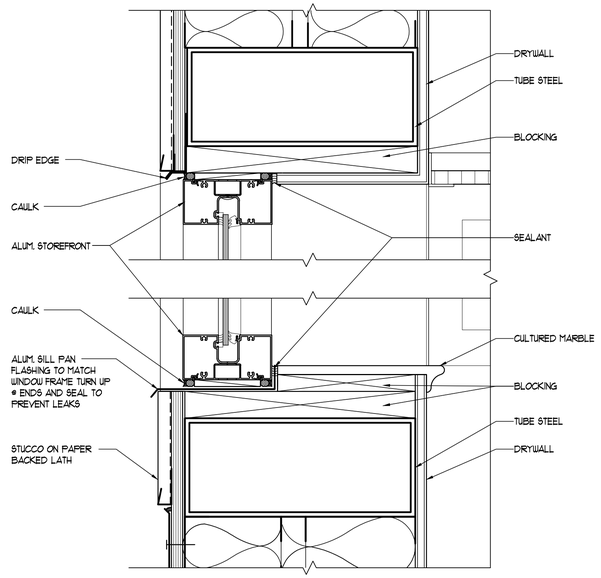


JAMB
UL# U465



JAMB



4 1 HR. INT. DOOR DETAILS
SCALE: 3"=1'-Ø"

5 INTERIOR DOOR DETAILS
SCALE: 3"=1'-Ø"

6 EXT. WINDOW DETAILS
SCALE: 3"=1'-Ø"

REVISIONS AND UPDATES

Ø4/Ø1/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW — LIVE OAK, FLORIDA
DOOR AND SCH., TYPES AND DETAILS

drawn Ø4/Ø2/13 CNK | checked | approved

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ENGINEERING FOR ARCHITECTURE www.tlc-engineers.com

COA #15 TLC NO: 513004

PLUMBING SPECIFICATIONS

1. GENERAL
   - A. PROVIDE LABOR AND MATERIALS TO PROVIDE A COMPLETE AND OPERATIONAL PLUMBING SYSTEM AS INDICATED. DRAWING PACKAGE BY MECHANICAL AND ELECTRICAL ENGINEERS SHALL BE CONSIDERED PART OF THESE PROJECT DOCUMENTS.
   - B. ALL WORK SHALL COMPLY WITH THE RULES AND REGULATIONS AS STATED BELOW:
     FLORIDA BUILDING CODE PLUMBING - 2010 EDITION
     LOCAL AUTHORITY HAVING JURISDICTION
   - C. VISIT THE SITE PRIOR TO START OF WORK TO BECOME FAMILIAR WITH PROJECT CONDITIONS AND EXISTING SERVICES.
2. BASIS OF THE DRAWINGS
   - A. INFORMATION ON EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE BASED ON FIELD OBSERVATION AND AVAILABLE EXISTING DOCUMENTS. CONTRACTOR TO VERIFY EXACT FIELD CONDITIONS BEFORE COMMENCING WORK. BEFORE ORDERING OR PLACING NEW COMPONENTS, FIELD MEASURE AND VERIFY REQUIREMENTS FOR EXACT DIMENSIONS. ITEMS REQUIRING MODIFICATION TO THOSE SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN A TIMELY FASHION.
   - B. PROVIDE AND INSTALL A NEW PLUMBING SYSTEM FOR NEW SPACE. PROVIDE ALL PIPING, FIXTURES, EQUIPMENT AND APPURTENANCES TO COMPLETE PLUMBING WORK. COORDINATE PLUMBING UTILITIES WITH EXISTING DRAWINGS.
   - C. DEVIATIONS FROM FIXTURE AND EQUIPMENT BASIS OF DESIGN IS ACCEPTABLE IF EQUAL AND WITH APPROVAL OF OWNER/ENGINEER.
3. DIRT AND DUST CONTROL
   - A. SCREEN OFF ALL AREAS WHERE CONSTRUCTION IS TO TAKE PLACE FROM THE AREAS TO REMAIN INHABITED. INHABITED AREAS SHALL REMAIN DUST AND DEBRIS FREE DURING CONSTRUCTION. CLEAN ANY AREAS OUTSIDE DESIGNATED CONSTRUCTION AREA WHICH MAY HAVE BECOME SOILED DUE TO CONSTRUCTION.
4. USE OF THE SPACE
   - A. DISRUPTION OF SERVICES FOR NECESSARY WORK FOR TIE-INS TO WATER SERVICE, ELECTRICAL POWER, SANITARY LINES, ETC., SHALL BE KEPT TO A MINIMUM WITH ADVANCED SCHEDULES ESTABLISHED AND SATISFACTORY TO THE OWNER.
5. INSTALLATION NOTES
   - A. PENETRATIONS, CUTTING AND PATCHING. SEAL ALL PIPING AND CONDUIT PENETRATIONS OF WALLS AND FLOORS. PIPING PENETRATIONS OF RATED WALLS AND FLOORS SHALL BE SEALED WITH FIRESTOPPING MATERIAL.
6. HANGERS AND SUPPORTS
   - A. INSTALL HANGERS, SUPPORTS, CLAMPS, AND ATTACHMENTS AS REQUIRED TO PROPERLY SUPPORT PIPING AND DUCTWORK TO BUILDING STRUCTURE.
   - B. INSTALL SUPPORTS IN COMPLIANCE WITH MSS SP-69 AND FACTORY FABRICATED IN ACCORDANCE WITH MSS SP-58. ALL COMPONENTS SHALL INCLUDE GALVANIZED COATINGS WHERE INSTALLED FOR PIPING AND EQUIPMENT THAT WILL NOT HAVE A FIELD APPLIED FINISH.
7. THERMAL INSULATION
   - A. ALL INSULATION AND ADHESIVES SHALL HAVE A COMPOSITE FIRE AND SMOKE HAZARD RATING AS TESTED BY PROCEDURE ASTM E84, NFPA 255, AND UL 723 NOT EXCEEDING A FLAME SPREAD RATING OF 25 AND A SMOKE DEVELOPED RATING OF 50.
   - B. INSULATE ALL ABOVE GROUND HORIZONTAL CONDENSATE DRAIN LINES WITH A MINIMUM OF 3/4" THICK FLEXIBLE FOAMED PLASTIC UNICELLULAR TUBE INSULATION. INSULATION SHALL BE SLIPPED ONTO THE PIPE BEFORE FINAL JOINING.
   - C. ALL PIPE INSULATION SHALL BE APPLIED TO PIPING WITH ALL JOINTS TIGHTLY FITTED TO ELIMINATE VOIDS. ALL JOINTS MUST BE SEALED WITH THE MANUFACTURER'S RECOMMENDED SEALANT.
8. PLUMBING EQUIPMENT
   - A. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. INSTALL UNITS LEVEL AND PLUMB, FIRMLY ANCHORED IN LOCATIONS INDICATED, MAINTAIN MANUFACTURER'S CLEARANCES.
9. PLUMBING PIPES AND VALVES
   DOMESTIC WATER
   COPPER PIPING
   - A. PROVIDE COPPER TYPE "K" PIPING AND FITTINGS BELOW SLAB. "LEAD FREE SOLDERED JOINTS"
     PROVIDE COPPER TYPE "L" PIPING AND FITTINGS ABOVE SLAB. "LEAD FREE SOLDERED JOINTS"

   VALVES
   - A. PROVIDE BALL VALVES NIBCO SERIES 585-70.
   - B. PROVIDE BALANCING VALVES GRISWOLD F-2989.
   - C. CHECK VALVES, ROUGH BRASS, REGRINDING BRONZE DISC - STOCKHAM B-345; B-309 OR EQUAL.

   SANITARY SEWER AND VENTS
   - A. PROVIDE POLYVINYL CHLORIDE (PVC) SCHEDULE 40 PLASTIC PIPE (TYPE DWV) IN CONFORMANCE WITH STANDARD ASTM D2665.
   - B. PROVIDE COPPER DWV TUBING FOR ALL EXPOSED WASTE PIPING PER STANDARD ASTM B75. PAINT SILVER.
   - C. PROVIDE HUBLESS CAST IRON SOIL PIPE AND FITTINGS, HUBLESS PIPING COUPLING AND COUPLED JOINTS.
10. TESTING, ADJUSTING, AND BALANCING
    - A. PROVIDE TESTING OF THE PLUMBING SYSTEM IN ACCORDANCE, WITH THE FLORIDA BUILDING CODE PLUMBING.
    - B. BALANCE DOMESTIC HOTWATER SYSTEM.
11. STERILIZATION
    - A. DOMESTIC WATER PIPING SHALL BE THOROUGHLY FLUSHED OUT AND STERILIZED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE PLUMBING.

CODE INFORMATION

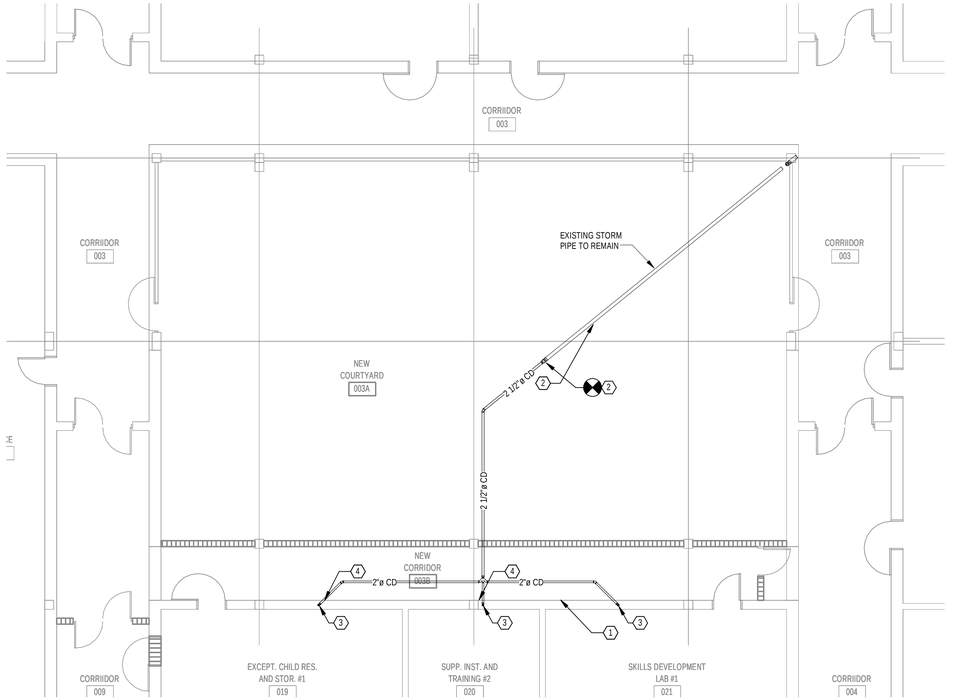
ALL WORK SHALL COMPLY WITH 2010 FLORIDA BUILDING CODE ORDINANCES AND OTHER STATE, COUNTY, CITY AND LOCAL CODES AND ORDINANCES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. THIS CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH HEALTH CODES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. THIS CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. THIS CONTRACTOR SHALL INCLUDE IN THE BID ANY CHANGES REQUIRED BY CODES AND IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE QUALIFIED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS ISSUED, NO ADDITIONAL COST DUE TO CODE ISSUES SHALL BE REIMBURSED TO THE CONTRACTOR.

GENERAL NOTES

1. THE PLUMBING INSTALLATION SHALL COMPLY WITH ALL STATE AND LOCAL CODES.
2. UTILITIES AND SERVICES INDICATED ARE TAKEN FROM LIMITED AS-BUILT RECORDS AND FIELD INVESTIGATIONS. UNFORSEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON DRAWINGS. COOPERATION WITH OTHER TRADES IN ROUTING AND BURIAL DEPTHS, AS DETERMINED DURING CONSTRUCTION, WILL BE NECESSARY.
3. FIELD VERIFY EXISTING INSTALLATIONS. MODIFY EXISTING PLUMBING SYSTEMS, WHICH ARE TO REMAIN ACTIVE, TO FACILITATE RECONNECTION AND EXTENSION OF THE NEW WORK.
4. NOTIFY OWNER AT LEAST 24 HOURS PRIOR TO INTERRUPTING EXISTING SERVICE. SCHEDULE DISCONNECTION AND TIE-INS TO MINIMIZE DISRUPTION OF SERVICES. SERVICES ARE NOT TO BE LEFT DISRUPTED DURING NON-NORMAL CONTRACTOR WORKING HOURS.
5. PLANS ARE NOT COMPLETELY TO SCALE. PIPE ROUTING SHOWN IS SCHEMATIC AND IS NOT INTENDED TO INDICATE EXACT ROUTING. CONTRACTOR SHALL PROVIDE ANY CLEARANCES, VERIFY STRUCTURAL, MECHANICAL AND ELECTRICAL INSTALLATIONS AND OTHER POTENTIAL OBSTRUCTIONS AND ROUTE PIPING TO AVOID INTERFERENCES.
6. CONCEAL PIPING ABOVE CEILINGS, WITHIN WALLS OR CHASES EXCEPT IN MECHANICAL ROOMS OR AS SPECIFICALLY NOTED.
7. PROVIDE ACCESS PANELS FOR ALL VALVES CONCEALED IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS.
8. SLEEVE AND/OR FIRESTOP ALL PENETRATIONS THROUGH RATED WALLS, CEILINGS, AND FLOORS WITH UL LISTED ASSEMBLIES. FIRESTOP ASSEMBLIES SHALL BE EQUAL TO OR EXCEED THE RATING OF THE WALL, CEILING OR FLOOR. SEE ARCHITECTURAL DRAWINGS FOR FINAL FINISHES.
9. FLASH AND COUNTER-FLASH ROOF PENETRATIONS.
10. PROVIDE FOUNDATION PAD PENETRATION SLEEVES. ALLOW 1" MINIMUM CLEARANCE BETWEEN SLEEVE INSIDE SURFACE AND PIPE EXTERIOR.
11. PROVIDE AN AIR GAP, WHEN REQUIRED BY CODE, SERVING INDIVIDUAL FIXTURES, DEVICES, APPLIANCES AND APPARATUS.
12. MOUNT WALL HYDRANTS 24" ABOVE FINISHED GRADE.
13. PROVIDE CLEANOUTS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES. INSTALL CLEANOUT WITH COVER FLUSH TO FINISH SURFACE. PROVIDE WALL CLEANOUTS AT BASE OF EACH SANITARY AND STORM RISER. MOUNT CLEANOUT 24" AFF.
14. COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES. ANY PIPING RUN OVER PANELS SHALL BE RE-ROUTED AT NO ADDITIONAL COST.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING UTILITIES BELOW GRADE PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO RELOCATE ANY EXISTING UTILITIES THAT MAY INTERFERE WITH THE PROPOSED CONSTRUCTION. CONTRACTOR SHALL CALL "FLORIDA ONE CALL" AT 1-800-SUN-SHINE 48 HOURS BEFORE DIGGING.
16. PROVIDE SCHEDULED MATERIALS OR FIXTURE TYPE OR APPROVED EQUAL.

EXISTING HOSE BIBB REFERENCE IMAGE
1 1/2" = 1'-0"

EXISTING DRAIN AND CLEANOUT IMAGE
3/8" = 1'-0"



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

REFERENCE NOTES

1. REMOVE EXISTING HOSE BIBB AND CW PIPING BACK TO POINT ABOVE ADJACENT CEILING. PATCH WALL AS REQUIRED.
2. REMOVE EXISTING YARD DRAIN AND ELBOW. CLEAN PIPE AND PREPARE FOR NEW CONNECTION.
3. NEW 2" CONDENSATE DRAIN PIPE UP 7'-0" A.F.F. IN EXISTING BLOCK WALL. EXISTING CONDENSATE DRAINS FROM UNITS TO SET BACK INTO WALL AND TERMINATE INDIRECTLY TO NEW DRAIN CONDENSATE PIPE.

REVISIONS AND UPDATES		
04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENO
1314 PINE AVE., SW LIVE OAK, FLORIDA
PLUMBING FLOOR PLAN

drawn MP | checked JPM | approved JPM

job no. P-1.0
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HVAC SYMBOL LEGEND

SYMBOL	DESCRIPTION
	-CEILING DIFFUSER, ROUND NECK (CEILING DIFFUSERS ARE 4-WAY THROW UNO)
	-ROUND DIFFUSER
	-CEILING RETURN
	-CEILING EXHAUST
	-CEILING DIFFUSER, RECTANGULAR OR SQUARE NECK (CEILING DIFFUSERS ARE 4-WAY THROW UNO)
	-SUPPLY REGISTER OR GRILLE (VERTICAL MOUNT, SIDEWALL)
	-RETURN/EXHAUST REGISTER OR GRILLE (VERTICAL MOUNT, SIDEWALL)
1	-REVISION REFERENCE
1 / M-1	-DETAIL REFERENCE: TOP-DETAIL#, BOTTOM-DRAWING# SHOWN ON
T	-THERMOSTAT/TEMPERATURE SENSOR
H	-HUMIDISTAT/HUMIDITY SENSOR
	-DUCT SMOKE DETECTOR
	-CONNECT TO EXISTING
	-DEMOLISH TO POINT INDICATED
M	-MOTORIZED CONTROL DAMPER
TS	-TEMPERATURE SENSOR
P	-PRESSURE SENSOR
BD	-BACKDRAFT DAMPER
N	-NEUTRAL RELATIVE PRESSURE
+	-POSITIVE RELATIVE PRESSURE
-	-NEGATIVE RELATIVE PRESSURE
1	-SHEET NOTE CALLOUT
1	-SHEET NOTE CALLOUT
1	-SHEET NOTE CALLOUT
	-CEILING MOUNTED ACCESS DOOR
	-SQUARE THROAT ELBOW W/TURNING VANES
	-RADIUS ELBOW
	-RECTANGULAR/ROUND BRANCH TAKE-OFF OR ROUND/ROUND BRANCH TAKE-OFF
	-EXHAUST DUCT UP THROUGH SLAB W/ FAN ON ROOF ABOVE
	-EXHAUST FAN ON ROOF W/ DUCT DOWN THROUGH ROOF

SYMBOL	DESCRIPTION
	-FIRE DAMPER (WITH ACCESS PANEL)
	-FIRE & SMOKE DAMPER (WITH ACCESS PANEL)
	-EXISTING FIRE DAMPER TO REMAIN
	-EXISTING FIRE & SMOKE DAMPER TO REMAIN
SA-1	-SOUND ATTENUATOR
M	-MOTOR OPERATED CONTROL DAMPER (MOD)
FM	-AIR FLOW MEASURING STATION
	-MANUAL BALANCING DAMPER
	-DOOR GRILLE
1" CG	-UNDERCUT DOOR
	-ACCESS DOORS, VERTICAL OR HORIZONTAL
	-STAINLESS STEEL DUCTWORK
	-FLEXIBLE CONNECTION
12x8Ø	-FLAT OVAL DUCT
24x12	-NEW DUCTWORK, FIRST DIMENSION IS SIDE SHOWN
24x12	-EXISTING DUCTWORK TO REMAIN
24x12	-EXISTING DUCTWORK TO BE REMOVED
24x12 DOWN / UP WITH FLOOR	-DUCT ELBOW, POSITIVE PRESSURE (SUPPLY), FIRST DIMENSION INDICATES SIDE TO WHICH ARROW IS POINTING
	-DUCT ELBOW, EXHAUST
	-DUCT ELBOW, NEGATIVE PRESSURE, RETURN
	-DUCT ELBOW UP THROUGH ROOF OR SLAB ABOVE
	-RECTANGULAR DUCT SECTION UP, POSITIVE PRESSURE, SUPPLY OR OUTSIDE AIR
	-RECTANGULAR DUCT SECTION UP, NEGATIVE PRESSURE, RETURN
	-RECTANGULAR DUCT SECTION UP, EXHAUST
	-ROUND DUCT SECTION UP
	-FLAT OVAL DUCT SECTION UP

SYMBOL	DESCRIPTION
	-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT
	-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME WITH ELECTRIC HEAT
	-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME, FAN POWERED
	-TERMINAL UNIT, VARIABLE/CONSTANT AIR VOLUME, FAN POWERED, WITH ELECTRIC HEAT
	-ELECTRIC DUCT HEATER (W/ PANEL CLEARANCE)
	-HYDRONIC REHEAT COIL
	-INLINE CENTRIFUGAL FAN
	-PACKAGED TERMINAL AIR CONDITIONER (PTAC)
UP DN	-CHANGE OF ELEVATION
	-FLEXIBLE DUCT
	-TRANSITION, CONCENTRIC
	-TRANSITION, ECCENTRIC
10x8 8Ø	-TRANSITION, SQUARE TO ROUND
	-SQUARE THROAT TEE
12x8	-RADIUS TEE
	-RECTANGLE-TO-ROUND TAKE-OFF
	-STANDARD BRANCH TAKE-OFF
	-SPIN-IN TAKE-OFF

HVAC PIPING SYMBOL LEGEND

SYMBOL	DESCRIPTION
CWS	-CONDENSER WATER SUPPLY
CWR	-CONDENSER WATER RETURN
CHWS	-CHILLED WATER SUPPLY
CHWR	-CHILLED WATER RETURN
CD	-CONDENSATE
CR	-CONDENSATE RETURN
PC	-PUMPED CONDENSATE
HWR	-HOT WATER RETURN
HWS	-HOT WATER SUPPLY
HPS	-HIGH PRESSURE STEAM SUPPLY
MPS	-MEDIUM PRESSURE STEAM SUPPLY
LPS	-LOW PRESSURE STEAM SUPPLY
HPR	-HIGH PRESSURE STEAM RETURN
MPR	-MEDIUM PRESSURE STEAM RETURN
LPR	-LOW PRESSURE STEAM RETURN
RL	-REFRIGERANT LIQUID
RS	-REFRIGERANT SUCTION
	-TEE, OUTLET DOWN
	-TEE, OUTLET UP
D / D	-45° PIPE RISE (R) / DROP (D)
	-PIPE ANCHORS
	-CONCENTRIC REDUCER
	-ECCENTRIC REDUCER

SYMBOL	DESCRIPTION
	-FLOW DIRECTION
	-GATE VALVE
	-BALL VALVE
	-CALIBRATING BALANCING VALVE
	-BUTTERFLY VALVE
	-GAS COCK
	-UNION
	-STRAINER
	-CONTROL VALVE
	-SOLENOID VALVE
	-PSI REG.
	-CHECK VALVE
	-FLOW SWITCH
	-SLOPE DIRECTION (DOWN)
	-FLEX CONNECTION
	-O.S.&Y. GATE VALVE
	-STEAM TRAP
	-THREE-WAY CONTROL VALVE
	-THERMOMETER

SYMBOL	DESCRIPTION
EQUIP.	- P-TRAP
	-TWO-WAY CHECK VALVE
MV	-MANUAL VENT
	-PRESSURE GAUGE
	-RELIEF VALVE
FM	-FLOW METER
M	-WATER METER
	-INLINE PUMP
G	-INLINE PUMP
	-VALVE ON RISER
E	-CAP
	-CONNECTION, BOTTOM
	-CONNECTION, TOP
	-COUPLING
	-ELBOW, 90°
	-ELBOW, 45°
	-ELBOW, TURNED DOWN
	-ELBOW, TURNED UP

NOTE: SOME SYMBOLS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT

HVAC ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AFD	-ADJUSTABLE FREQUENCY DRIVE	LD	-LINEAR DIFFUSER
AFF	-ABOVE FINISHED FLOOR	MBH	-THOUSAND BTUs PER HOUR
AFR	-ABOVE FINISHED ROOF	MCA	-MINIMUM CIRCUIT AMPS
AHU	-AIR HANDLING UNIT	MOCP	-MAXIMUM OVER CURRENT PROTECTION
AP	-ACCESS PANEL	MOD	-MOTOR OPERATED CONTROL DAMPER (MOD)
BOP	-BOTTOM OF PIPE	NC	-NORMALLY CLOSED
BHP	-BRAKE HORSEPOWER	NO	-NORMALLY OPEN
BTU	-BRITISH THERMAL UNIT	NTS	-NOT TO SCALE
h	-CENTER LINE	OA	-OUTSIDE AIR
℄	-CFM (CUBIC FEET PER MINUTE)	OAL	-OUTSIDE AIR LOUVER
CD	-CEILING DIFFUSER	PRV	-PRESSURE REDUCING VALVE
CT	-COOLING TOWER	PRS	-PRESSURE REDUCING STATION
CV	-CONSTANT AIR VOLUME	PSI	-POUNDS PER SQUARE INCH
ΔP	-CHANGE IN PRESSURE	PSIG	-PSI GAUGE
ΔT	-CHANGE IN TEMPERATURE	PTAC	-PACKAGED TERMINAL AIR CONDITIONER
CFM	-CUBIC FEET PER MINUTE	PVC	-POLYVINYL CHLORIDE PIPE
CU	-CONDENSING UNIT	RA	-RETURN AIR
DDC	-DIRECT DIGITAL CONTROLS	RHC	-REHEAT COIL
DN	-DOWN	RHP	-ROOFTOP HEAT PUMP
EAT	-ENTERING AIR TEMPERATURE	RPM	-REVOLUTIONS PER MINUTE
ESP	-EXTERNAL STATIC PRESSURE	RS/L	-REFRIGERANT SUCTION & LIQUID LINES
EWT	-ENTERING WATER TEMPERATURE	RTU	-ROOFTOP AIR HANDLING UNIT
FCU	-FAN COIL UNIT	SA	-SUPPLY AIR
FD	-FIRE DAMPER	SP	-STATIC PRESSURE
FF	-FINAL FILTERS	TSP	-TOTAL STATIC PRESSURE
FLA	-FULL LOAD AMPS	UNO	-UNLESS NOTED OTHERWISE
FPM	-FEET PER MINUTE	V/PH	-VOLTS/PHASE
GPM	-GALLONS PER MINUTE	VAV	-VARIABLE AIR VOLUME
KW	-KILOWATT	VFD	-VARIABLE FREQUENCY DRIVE
LAT	-LEAVING AIR TEMPERATURE		
LWT	-LEAVING WATER TEMPERATURE		

HVAC EQUIPMENT TAGS

TAG / A / 200 / CFM — -AIR DISTRIBUTION DEVICE

AHU NUMBER / AHU-1 — -AIR HANDLING UNIT

AHU NUMBER / COIL NUMBER / RHC-1-1 — -REHEAT COIL

VARIABLE/CONSTANT AIR VOLUME TERMINAL UNITS

TERMINAL UNIT TYPE
- VTU - VARIABLE TERMINAL UNIT
- CTU - CONSTANT TERMINAL UNIT
- PTU - PARALLEL TERMINAL UNIT
- STU - SERIES TERMINAL UNIT

AHU NUMBER / TERMINAL NUMBER / VTU-1-1

HVAC GENERAL NOTES

1. CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.
2. DIMENSIONS SHALL BE FIELD-VERIFIED AND COORDINATED PRIOR TO PROCUREMENT OR FABRICATION. COORDINATE THE WORK WITH OTHER TRADES INVOLVED. FIELD MODIFICATIONS SUCH AS OFFSETS IN PIPING OR DUCTWORK (INCLUDING DIVIDED DUCTWORK) NEEDED DUE TO OBSTRUCTIONS OR INTERFERENCES SHALL BE PROVIDED AT NO ADDITIONAL COST. FOR PROJECTS INVOLVING RENOVATION, COORDINATE NEW WORK WITH EXISTING ELEMENTS SUCH AS THE BUILDING STRUCTURE AND ARCHITECTURAL FEATURES, SPRINKLER PIPING, LIGHTS, PLUMBING, AND ELECTRICAL CONDUIT.
3. DUCT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA HVAC DUCT CONSTRUCTION STANDARD.
4. SEE SPECIFICATIONS FOR GAUGES, THICKNESS, BRACING, REQUIREMENTS, ETC., OF DUCTWORK.
5. PROVIDE AIR TURNING VANES IN ALL 90 DEGREE RECTANGULAR DUCT ELBOWS.
6. DUCT SIZES AND ALL OPENINGS THROUGH BUILDING CONSTRUCTION SHALL SUIT EQUIPMENT FURNISHED.
7. COORDINATE DIFFUSER, GRILLE AND REGISTER LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND EQUIPMENT OF ALL TRADES.
8. LOCATE THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, AND HUMIDITY SENSORS AT 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. COORDINATE LOCATIONS WITH OTHER EQUIPMENT, FURNITURE, AND DOOR SWINGS.
9. ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED AND/OR SPECIFIED. PROVIDE ADDITIONAL SUPPORTS AS REQUIRED TO PROVIDE A VIBRATION-FREE, RIGID INSTALLATION.
10. ALL DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.
11. DAMPERS AND INSIDES OF DUCTS VISIBLE THROUGH GRILLES, REGISTERS AND DIFFUSERS SHALL BE PAINTED FLAT BLACK.
12. REFER TO TYPICAL DETAILS FOR PIPING AND INSTALLATION OF EQUIPMENT.
13. TRAPPED CONDENSATE DRAINS FROM ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED FOR PROPER DRAINAGE TO SUIT EQUIPMENT FURNISHED.
14. ACCESS PANELS IN DUCTWORK AND CEILINGS SHALL BE PROVIDED WHERE REQUIRED FOR OPERATION, BALANCING OR MAINTENANCE OF ALL MECHANICAL EQUIPMENT.
15. ALL DUCTWORK AND PIPING IS SHOWN SCHEMATICALLY. PROVIDE ALL TRANSITIONS, TURNING VANES, ELBOWS, FITTINGS, ETC., TO ALLOW SMOOTH FLOWS. ALL SPLIT DUCT FITTINGS SHALL TRANSITION TO FULL SIZE OF THE SUM OF BOTH BRANCHES, UPSTREAM OF SPLIT.
16. PROVIDE CONCRETE HOUSEKEEPING PAD UNDER ALL FLOOR-MOUNTED EQUIPMENT. REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS.
17. VERIFY FINISH WITH ARCHITECT PRIOR TO PURCHASING GRILLES, REGISTERS, DIFFUSERS, LOUVERS AND OTHER AIR DISTRIBUTION DEVICES.
18. PROVIDE FLEXIBLE DUCT CONNECTIONS ON ALL DUCTWORK CONNECTING TO EACH FAN, AIR HANDLING UNITS, AND FAN COIL UNITS.
19. PROVIDE TRANSITIONS AT DIFFUSER NECKS AS REQUIRED TO MATCH SIZES OF FLEX DUCTS TO BE CONNECTED.
20. INTERRUPTIONS TO EXISTING SERVICES SHALL BE SCHEDULED FOR TIMES OTHER THAN NORMAL OPERATING HOURS (SUCH AS NIGHTS AND WEEKENDS). SUCH INTERRUPTIONS TO SERVICES SHALL NOT BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER'S REPRESENTATIVE AND PROPER COORDINATION WITH OTHER TRADES. PRE-WORK SHALL BE PERFORMED TO MAKE THE SHUTDOWN PERIOD AS BRIEF AS POSSIBLE.
21. ALL EQUIPMENT, DUCTWORK, ETC., TO BE REMOVED SHALL REMAIN PROPERTY OF THE OWNER OR DISPOSED OF LEGALLY, AS DIRECTED BY OWNER.
22. MAINTAIN CLEARANCE OF A MINIMUM OF 6" BETWEEN DUCTWORK, PIPING, EQUIPMENT, ETC., AND ALL FIRE RATED AND FIRE/SMOKE RATED PARTITIONS, TO ALLOW FOR INSPECTIONS OF RATED WALLS.
23. LOCATE ALL OUTSIDE AIR INTAKES A MINIMUM OF 10' CLEAR FROM ALL PLUMBING VENTS AND EXHAUST AIR DISCHARGE LOCATIONS.
24. DUCT RUNOUTS TO DIFFUSERS SHALL MATCH THE SIZE OF THE DIFFUSER NECK.
25. WATER PRESSURE DROPS THROUGH COIL CONTROL VALVES SHALL NOT EXCEED 5 PSI.
26. UNLESS OTHERWISE NOTED, ALL EQUIPMENT AND VALVE DRAINS SHALL BE INDEPENDENTLY PIPED FULL SIZE TO THE NEAREST PLUMBING DRAIN.
27. SLEEVE AND SEAL ALL PIPING PENETRATIONS THROUGH BUILDING PARTITIONS. PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS IN CHILLED WATER AND HOT WATER PIPING.
28. PIPING, DUCTWORK, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO ELECTRICAL SWITCHBOARDS, PANELBOARDS, DISTRIBUTION BOARDS, OR MOTOR CONTROL CENTERS SHALL NOT BE INSTALLED WITHIN THE REQUIRED SPACE FOR WORKING CLEARANCES OR DEDICATED SPACES OF THE ELECTRICAL EQUIPMENT, EXTENDING IN FRONT OF AND FROM FLOOR TO STRUCTURAL CEILING WITH A WIDTH AND DEPTH OF THE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC-110.26.

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REVISIONS AND UPDATES		
04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD

SUWANNEE HIGH SCHOOL COURTYARD RENO

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MECHANICAL SYMBOLS LEGEND AND NOTES

drawn JPM | checked JHM | approved JPM

job no. M-0.0 sheet of

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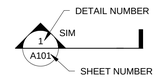
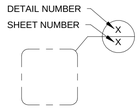
STRUCTURAL SYMBOLS AND LEGEND



SECTION / DETAIL MARK



PLAN / DETAIL MARK

ELEVATION MARK

RECESS OR STEP IN SLAB

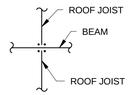
SLOPED SURFACE

PITCHED ROOF

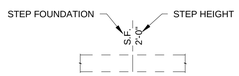
PLAN NOTE


MOMENT CONNECTION

JOIST BEARING ELEVATION



BOLTED JOIST CONNECTION



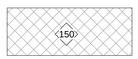
STEPPED FOUNDATION

COLUMN AND FOUNDATION TYPE MARKS

SPOT ELEVATION, TYPICALLY TOP OF ITEM TAGGED (T/WALL, T/FOUNDATION, ETC)

PANEL TYPE SEE SCHEDULE

12M
WALL TYPE DESIGNATION TAG



INCREASED FLOOR LOAD AREA IN PSF

WALL TYPES

LOAD BEARING MASONRY WALL

NON-LOAD BEARING MASONRY WALL

TILT-UP/PRECAST CONCRETE WALL

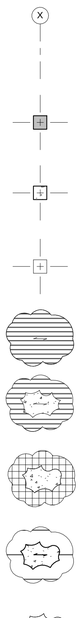
CIP CONCRETE WALL

STUD WALL

NOTE: SYMBOLS AND LEGEND SHOWN ARE GENERIC AND DO NOT NECESSARILY INDICATE ACTUAL OCCURRENCES IN THESE DRAWINGS.

SPAN DIRECTION


NORTH ARROW



COLUMN GRID LINE

CIP CONCRETE COLUMN ABOVE

TILT-UP/PRECAST CONCRETE COLUMN ABOVE

CONCRETE COLUMN BELOW

METAL DECK

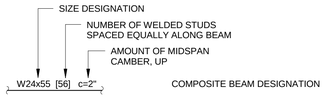
CONCRETE SLAB ON METAL DECK

ELEVATED CAST-IN-PLACE CONCRETE SLAB

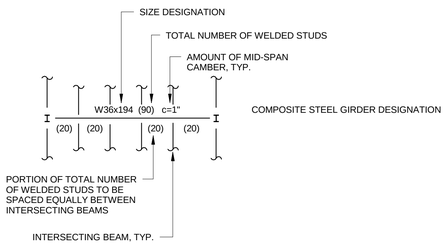
PRECAST CONCRETE PLANK


ELEVATED CAST-IN-PLACE CONCRETE SLAB


WOOD SHEATHING



COMPOSITE BEAM DESIGNATION



COMPOSITE STEEL GIRDER DESIGNATION

STRUCTURAL ABBREVIATIONS

ABBREV	ABBREVIATION
ACI	AMERICAN CONCRETE INSTITUTE
ADD	ADDITIVE
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT	ALTERNATE/ALTERNATIVE
ALUM	ALUMINUM
ARCH	ARCHITECTURE/ARCHITECTURAL
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
BCX	BOTTOM CHORD EXTENSION
BLDG	BUILDING
BLK	BLOCK
BM	BEAM
BOT	BOTTOM
BP	BASE PLATE/BEARING PLATE
BRG	BEARING
BTWN	BETWEEN
C	CHANNEL
CB	CONCRETE BEAM
CC	CONCRETE COLUMN
CF	CUBIC FEET (FOOT)
CIP	CAST IN PLACE
CJ	CONTRACTION JOINT
CL	CENTERLINE
CLR	CLEAR/CLEARANCE
CM	CONCRETE MASONRY
CMU	CONCRETE MASONRY UNIT
CO	COMPANY
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CONN	CONNECTION
CONST	CONSTRUCTION
COORD	COORDINATE
CSJ	CONSTRUCTION JOINT
CTR	CENTER
CTRD	CENTERED
CY	CUBIC YARD
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIST	DISTANCE
DL	DEAD LOAD
DN	DOWN
DWG	DRAWING
EA	EACH
EE	EACH END
EF	EACH FACE
EHPA	EMERGENCY HURRICANE PROTECTION AREA
EJ	EXPANSION JOINT
ELEC	ELECTRIC/ELECTRICAL
EL. ELEV	ELEVATION
ENGR	ENGINEER
EOD	EDGE OF DECK
EOR	ENGINEER OF RECORD
EQ SP	EQUAL SPACED
ES	EACH SIDE
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F	FOUNDATION
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FINISHED FLOOR
FIN	FINISH
FIN GR	FINISH GRADE
FLR	FLOOR
FS	FAR SIDE
FT	FEET/FOOT
FTG	FOOTING
GA	GAGE/GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GEN	GENERAL
GL	GRID LINE
GS	GALVANIZED STEEL
HD	HOT DIPPED
HDG	HOT DIPPED GALVANIZED
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHOR
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
I	MOMENT OF INERTIA
ID	INSIDE DIAMETER
I.F.	INSIDE FACE
IN.	INCH
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP (1000 LB)
KLF	KIPS PER LINEAL FOOT
KSI	KIPS PER SQUARE INCH
KWY	KEYWAY

ABBREV	ABBREVIATION
LB	POUND
LGTH	LENGTH
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG.	LONGITUDINAL
LSL	LAMINATED STRAND LUMBER
LT WT	LIGHT WEIGHT
LVL	LAMINATED VENEER LUMBER
MATL	MATERIAL
MAX	MAXIMUM
MB	MASONRY BEAM
MC	MISCELLANEOUS CHANNEL/MASONRY COLUMN
MECH	MECHANICAL
MET	METAL
MFR	MANUFACTURE/MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MPH	MILES PER HOUR
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NIC	NOT IN CONTRACT
NO.	NUMBER
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTERS
OD	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
P/C	PRECAST CONCRETE/PILE CAP
P/T	POST TENSIONED
PAR	PARALLEL
PCB	PRECAST CONCRETE BEAM
PCC	PRECAST CONCRETE COLUMN
PCF	POUNDS PER CUBIC FEET
PEMB	PRE-ENGINEERED METAL BUILDING
PEN	PENETRATION
P.J.	PANEL JOINT CENTERLINE
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PLMG	PLUMBING
PLY.	PLYWOOD
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREATED
R/W	REINFORCED WITH
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
REV	REVISION
RTU	ROOF TOP UNIT
SB	SOFFIT BEAM
SCHED	SCHEDULE
S.F.	SQUARE FEET
SF	STRIP FOUNDATION
SIM	SIMILAR
SPC	SPACE/SPACES
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
T/	TOP OF
TB	TIE BEAM
T&B	TOP AND BOTTOM
TCX	TOP CHORD EXTENSION
TDS	TURN DOWN SLAB
TE	THICKENED EDGE
TEMP	TEMPERATURE
TENS	TENSION
THD	THREAD/THREADED
THK	THICK
TOL	TOLERANCE
TRANS	TRANSVERSE
TS	TUBE STEEL
T.S.	THICKENED SLAB
TWF	THICKENED WALL FOUNDATION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VOL	VOLUME
W	WIDE FLANGE SECTION
W/	WITH
W/O	WITHOUT
WD	WOOD
WF	WALL FOOTING
WP	WATERPROOF
W.P.	WORKING POINT
WS	WELDED STUD
WT	WEIGHT/STRUCTURAL TEE SECTION
WWF	WELDED WIRE FABRIC
@	AT DESIGNATION
#	POUNDS / REBAR SIZE NUMBER
+/-	PLUS OR MINUS
L	ANGLE
C.L.	CENTER LINE
&	AND
Sx	SECTION MODULUS
Ix	MOMENT OF INERTIA

STRUCTURAL SHEET INDEX	
SHEET #	SHEET TITLE
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S-1.2	STRUCTURAL NOTES
S-1.3	STRUCTURAL NOTES & WIND LOAD DIAGRAM
S-2.1	FOUNDATION PLAN
S-2.2	ROOF FRAMING PLAN
S-3.1	SECTIONS AND DETAILS
S-3.2	SECTIONS AND DETAILS
S-3.3	SECTIONS AND DETAILS
S-3.4	SECTIONS AND DETAILS

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REVISIONS AND UPDATES		
04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW LIVE OAK, FLORIDA
STRUCTURAL SYMBOLS AND LEGEND

drawn MFS | checked GCK | approved GCK

job no. S-1.1
sheet of

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AA-C001560

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STRUCTURAL NOTES

1000 GENERAL NOTES:

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH PROJECT SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR OPENINGS, DEPRESSIONS, EQUIPMENT WEIGHTS AND LOCATIONS, EMBEDDED ITEMS AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
2. DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
3. NO STRUCTURAL MEMBER OR COMPONENT SHALL BE CUT, NOTCHED, OR OTHERWISE ALTERED UNLESS APPROVED IN WRITING BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS INCURRED BY THE ENGINEER OF RECORD FOR REVIEW OF ANY SUCH DEVIATIONS.
4. DO NOT SCALE DRAWINGS.
5. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS.
6. DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. THE APPLICABILITY OF THE DETAIL TO ITS LOCATION ON THE DRAWINGS CAN BE DETERMINED BY THE TITLE OF DETAIL. SUCH DETAILS SHALL APPLY WHETHER OR NOT THEY ARE REFERENCED AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE DETERMINED BY THE ENGINEER OF RECORD.
7. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCIES BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
8. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCE AND SAFETY. THE ENGINEER DOES NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
9. THE STRUCTURAL ENGINEER'S OBLIGATIONS TO REVIEW SHOP DRAWINGS AND OTHER SUBMITTALS AND TO RETURN THEM IN A TIMELY MANNER ARE CONDITIONED UPON THE PRIOR REVIEW AND APPROVAL OF THE SHOP DRAWINGS OR SUBMITTALS BY THE CONTRACTOR AS REQUIRED IN THE CONSTRUCTION CONTRACT AND THE CONTRACTOR'S SUBMITTAL OF THE SHOP DRAWINGS AND OTHER SUBMITTALS IN ACCORDANCE WITH A WRITTEN SCHEDULE DISTRIBUTED IN ADVANCE TO THE ENGINEER IDENTIFYING THE DATES FOR THE SUBMITTAL OF THE VARIOUS SHOP DRAWINGS AND SUBMITTALS.
10. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF TLC ENGINEERING FOR ARCHITECTURE IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHALL NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK.
11. ALL STRUCTURES REQUIRE PERIODIC MAINTENANCE TO EXCEED LIFE SPAN AND TO ENSURE STRUCTURAL INTEGRITY FROM EXPOSURE TO THE ENVIRONMENT. A PLANNED PROGRAM OF MAINTENANCE SHALL BE ESTABLISHED BY THE OWNER. THIS PROGRAM SHALL INCLUDE ITEMS SUCH AS, BUT NOT LIMITED TO, PAINTING OF STRUCTURAL STEEL, PROTECTIVE COATINGS FOR CONCRETE, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS EXPOSED TO SALT ENVIRONMENT OR OTHER HARSH CHEMICALS.
12. STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE DESIGN OF STEEL STAIRS, HANDRAILS, CURTAIN WALL/WINDOW WALL SYSTEMS, COLD-FORMED STEEL FRAMING, OR OTHER SYSTEMS NOT SHOWN IN THE STRUCTURAL DOCUMENTS. SUCH SYSTEMS SHALL BE DESIGNED, FURNISHED, AND INSTALLED AS REQUIRED BY OTHER PORTIONS OF THE CONTRACT DOCUMENTS.
13. IN THE PROFESSIONAL OPINION OF TLC ENGINEERING FOR ARCHITECTURE, INC. THE STRUCTURAL CONTRACT DOCUMENTS FOR THIS PROJECT HAVE BEEN PREPARED IN ACCORDANCE WITH THE DESIGN CRITERIA AS SET FORTH IN THE FLORIDA BUILDING CODE, 2010 EDITION.
14. NO PROVISIONS HAVE BEEN MADE FOR VERTICAL OR HORIZONTAL EXPANSION EXCEPT AS SHOWN ON CONTRACT DOCUMENTS.
15. FINISH FLOOR ELEVATION (FIRST FLOOR) OF 100'-0" IS USED AS A REFERENCE ELEVATION. SEE CIVIL DRAWINGS FOR ACTUAL ELEVATION.
16. THE USE OF REPRODUCTIONS OF THESE CONTRACT DOCUMENTS AND USE OF CAD FILES BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFY HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.
17. IN THE EVENT THAT THE STRUCTURAL CONTRACTS DRAWINGS AND SPECIFICATIONS CONFLICT ON INFORMATION, THE STRUCTURAL CONTRACT DRAWINGS SHALL SUPERSEDE THE SPECIFICATIONS.

1060 DESIGN LOADS:

1. THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 2010 EDITION, AND AS SUPPLEMENTED BY LOCAL AMENDMENTS.
2. THE FOLLOWING SUPERIMPOSED LOADINGS HAVE BEEN UTILIZED:

2.1.	DEAD LOADS	
	ROOF STRUCTURE	15 PSF
	ROOF STRUCTURE W/ LT. WT. CONC. INSULATION	25 PSF
	M/E/P LOADS	5 PSF
	CEILINGS	5 PSF
	STEEL STUDS W/ GYP. BOARD PARTITIONS	10 PSF
2.2.	LIVE LOADS	
	ROOF	20 PSF
	FLOOR (CLASSROOM)	40 PSF

2.3. WIND LOADS: PER FLORIDA BUILDING CODE, SECTION 1609.
SEE WIND PRESSURE DIAGRAM FOR COMPONENTS AND CLADDING PRESSURES
ULTIMATE DESIGN WIND SPEED, Vult = 130 MPH (3 SEC. GUST)
NOMINAL DESIGN WIND SPEED, Vasd = 101 MPH (3 SEC. GUST)
RISK CATEGORY III
EXPOSURE C
IMPACT RESISTANT GLASS OR FBC APPROVED ALTERNATIVE IS NOT REQUIRED.

1330 SHOP DRAWING REVIEW:

1. SHOP DRAWINGS SHALL ADEQUATELY DEPICT THE STRUCTURAL ELEMENTS AND CONNECTIONS SHOWN ON THE CONTRACT DOCUMENTS. SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC. REVIEW OF SUBMITTALS AND SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THE SHOP DRAWINGS.
2. SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR AND MARKED "APPROVED" PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. NON-CONFORMING DRAWING SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. SHOP DRAWING SUBMITTALS SHALL INCLUDE, AT A MINIMUM, ONE GOOD QUALITY REPRODUCIBLE AND THREE SETS OF BLUEPRINTS. ONE SET OF PRINTS WILL BE RETAINED BY THE ENGINEER OF RECORD, ONE BY THE ARCHITECT, ONE BY THE LOCAL BUILDING DEPARTMENT (WHERE REQUIRED) AND THE CONTRACTOR SHALL MAKE PRINTS FROM THE REPRODUCIBLE AS REQUIRED FOR DISTRIBUTION.
4. THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER OF RECORD.
5. CHANGES AND ADDITIONS MADE ON RE-SUBMITTALS SHALL BE CLEARLY FLAGGED AND NOTED. THE PURPOSE OF THE RE-SUBMITTALS SHALL BE CLEARLY NOTED ON THE LETTER OF TRANSMITTAL. ARCHITECT/ENGINEER OF RECORD REVIEW WILL BE LIMITED TO THOSE ITEMS CAUSING THE RE-SUBMITTAL. CONTRACTOR IS RESPONSIBLE FOR COSTS CAUSED BY MULTIPLE RE-SUBMITTALS (MORE THAN ONE) AT ARCHITECT/ENGINEERS' CURRENT HOURLY RATES.

1331 SHOP DRAWINGS FOR SPECIALTY ENGINEERED PRODUCTS:

1. THE FOLLOWING SYSTEMS AND COMPONENTS AS A MINIMUM REQUIRE FABRICATION AND ERECTION DRAWINGS PREPARED BY A DELEGATED ENGINEER:
A. LIGHT GAGE STEEL TRUSSES
B. OPEN WEB STEEL JOISTS
2. SUBMITTALS SHALL CLEARLY IDENTIFY THE SPECIFIC PROJECT AND APPLICABLE CODES, LIST THE DESIGN CRITERIA, AND SHOW ALL DETAILS AND DRAWINGS NECESSARY FOR PROPER FABRICATION AND INSTALLATION. CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCT UTILIZED. GENERIC PRODUCTS WILL NOT BE ACCEPTED.
3. SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED UNDER THE DIRECT SUPERVISION AND CONTROL OF THE DELEGATED ENGINEER.
4. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA. COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL COMPUTATIONS PROVIDED THEY ARE ACCOMPANIED BY SUFFICIENT DESCRIPTIVE INFORMATION TO PERMIT THEIR PROPER EVALUATION. SUCH DESCRIPTIVE INFORMATION SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA AS AN INDICATION THAT HE/SHE HAS ACCEPTED RESPONSIBILITY FOR THE RESULTS. THE STRUCTURAL ENGINEER WILL RETAIN ONE SIGNED AND SEALED SET FOR THEIR RECORDS.
5. DRAWINGS PREPARED SOLELY TO SERVE AS A GUIDE FOR FABRICATION AND INSTALLATION (SUCH AS REINFORCING STEEL SHOP DRAWINGS OR STRUCTURAL STEEL ERECTION DRAWINGS) AND REQUIRING NO ENGINEERING, DO NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.
6. CATALOG INFORMATION ON STANDARD PRODUCTS DOES NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.
7. REVIEW BY THE STRUCTURAL ENGINEER OF RECORD OF SUBMITTALS IS LIMITED TO VERIFYING THE FOLLOWING:
A. THAT THE SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.
B. THAT THE STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE DELEGATED ENGINEER.
C. THAT THE DELEGATED ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS USED THE SPECIFIED STRUCTURAL CRITERIA. NO DETAILED CHECK OF CALCULATIONS WILL BE MADE.
D. THAT THE CONFIGURATION SET FORTH IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS. NO DETAILED CHECK OF DIMENSIONS OR QUANTITIES WILL BE MADE.
8. SUBMITTALS NOT MEETING THE ABOVE CRITERIA WILL NOT BE REVIEWED AND WILL BE RETURNED.

1333 SUBMITTALS

1. ALL SHOP DRAWINGS MUST BE REVIEWED AND STAMPED APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL.
2. THE GENERAL CONTRACTOR SHALL SUBMIT FOR ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:
A. STRUCTURAL STEEL
B. REINFORCING STEEL
C. METAL ROOF DECK
D. LIGHT GAGE STEEL TRUSSES (*)
E. LIGHT GAGESTEEL FRAMING
F. CONCRETE MIX DESIGNS
ITEMS MARKED (*) SHALL HAVE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
ITEMS MARKED (#) SHALL BE SUBMITTED FOR ENGINEERS RECORD ONLY.
3. MANUFACTURER'S LITERATURE. SUBMIT TWO COPIES OF MANUFACTURER'S LITERATURE FOR ALL MATERIALS AND PRODUCTS USED IN CONSTRUCTION ON THE PROJECT.

1334 REQUEST FOR INTERPRETATION (RFI)

1. RFI SHALL ORIGINATE WITH CONTRACTOR AND SHALL BE SUBMITTED IN THE FORM SPECIFIED WITHIN CONTRACT DOCUMENTS. RFI SHALL BE SUBMITTED IN A PROMPT MANNER AS TO AVOID DELAYS IN CONTRACTORS WORK.
2. RFI SHALL BE SUBMITTED AS SPECIFIED WITHIN THE CONTRACT DOCUMENTS AND SHALL BE FORWARDED TO THE ENGINEER VIA THE ARCHITECT OR DIRECTLY TO THE ENGINEER BY THE CONTRACTOR WHEN APPROVED BY THE ARCHITECT.
3. ENGINEER SHALL TAKE UP TO 5 BUSINESS DAYS TO REVIEW AND RETURN RFI'S. HOWEVER, THE ENGINEER WILL ATTEMPT TO EXPEDITE THE REVIEW OF ALL RFI'S WITHIN A REASONABLE TIME FRAME.
4. RFI RESPONSES ARE NOT INTENDED TO AUTHORIZE ANY INCREASE IN CONSTRUCTION COST, SCHEDULE OR TIME EXTENSIONS, OR CONSTRUCTION IN CONFLICT WITH ANY APPLICABLE CODES OR SPECIFIED DESIGN STANDARDS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE DESIGN TEAM IMMEDIATELY OF ANY PERCEIVED SCOPE, SCHEDULE, OR COST IMPACTS OR ADJUSTMENTS. IF CONTRACTOR REQUESTS ANY ADDITIONAL COST, INCREASE IN SCHEDULE OR ADJUSTMENT IN SCOPE, THE CONTRACTOR SHALL NOT PROCEED WITH ADDITIONAL WORK UNTIL APPROVED IN WRITING BY THE CONSTRUCTION ADMINISTRATOR.

2210 DEMOLITION NOTES:

1. THE CONTRACTOR IS REQUIRED TO PROVIDE ALL TEMPORARY SCAFFOLDING, PLATFORMS, BARRICADES, RAILINGS, SCREENING, ETC. NECESSARY TO PROTECT EXISTING FACILITIES, STRUCTURES AND THE PUBLIC DURING DEMOLITION AND ERECTION OF THE NEW CONSTRUCTION, AS WELL AS FOR JOB SAFETY. JOB SAFETY, CONSTRUCTION AND DEMOLITION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONS TO MINIMIZE VIBRATION, NOISE, DUST AND DEBRIS IN ALL AREAS ADJACENT TO AREAS OF DEMOLITION.
2. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE OWNER FOR THE TEMPORARY SUSPENSION OF USE OF ANY FACILITY OR PORTION THEREOF, AND THE ASSOCIATED BARRICADING REQUIREMENTS WITHIN A MINIMUM OF 7 DAYS PRIOR TO COMMENCING WORK.
3. THE CONTRACTOR IS REQUIRED TO PERFORM HIS WORK IN A MANNER, WHICH WILL NOT CONFLICT WITH ANY OPERATION, WHICH IS TO REMAIN FUNCTIONAL DURING THE COURSE OF THE PROJECT, UNTIL SUCH OPERATION IS SCHEDULED TO BE SHUT DOWN.
4. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH OWNER FOR THE TEMPORARY SUSPENSION OF USE OF ANY UTILITY SYSTEM, A MINIMUM OF 3 DAYS PRIOR TO COMMENCING WORK.
5. AT ALL LOCATIONS WHERE NEW CONSTRUCTION WILL INTERFACE WITH EXISTING ELEMENTS, CUT THROUGH EXISTING STRUCTURE IN STRAIGHT AND TRUE LINES TO INSURE A NEAT INTERFACE.
6. AT ALL LOCATIONS WHERE THE DEMOLITION OF A CONCRETE MEMBER LEAVES THE ENDS OF REINFORCING STEEL EXPOSED, PROVIDE THE FOLLOWING:
A. CHIP CONCRETE FROM AROUND THE STEEL TO A DEPTH OF 1".
B. CUT OFF REINFORCING STEEL NOT LESS THAN 3/4" BELOW THE CONCRETE SURFACE.
C. FILL THE CAVITY FLUSH WITH A HIGH MODULUS GEL EPOXY. SEE SPECIFICATION FOR ACCEPTED MANUFACTURERS.
7. BEFORE DEMOLISHING ANY STRUCTURAL ELEMENT, INSTALL ALL REQUIRED TEMPORARY AND/OR PERMANENT BRACING AND SUPPORTS.
8. PROVIDE TEMPORARY CLOSURE OF ALL ROOF FASCIA, WALL AND OTHER OPENINGS TO PROTECT BUILDING FROM EXPOSURE TO UNDESIRABLE ELEMENTS UNTIL NEW CONSTRUCTION IS WEATHERPROOFED, AT WHICH TIME SUCH TEMPORARY CONSTRUCTION SHALL BE REMOVED. ALL TEMPORARY EXTERIOR WALLS THAT ARE SUBJECT TO WIND LOADS ARE TO BE DESIGNED BY A DELEGATED ENGINEER.
9. UPON COMPLETION OF NEW CONSTRUCTION UNDER EACH PHASE, ALL DEMOLISHED AREAS SHALL BE RESTORED TO ACCEPTABLE USAGE ACCORDING TO THE CONTRACT DOCUMENTS AS DETERMINED BY THE A/E.
10. REMOVE COMPLETELY FROM THE SITE AND LEGALLY DISPOSE ALL DEBRIS GENERATED BY THE DEMOLITION WORK AS THE WORK PROGRESSES. STOCKPILING OF DEBRIS AND BURNING OF DEBRIS ON THE PREMISES IS STRICTLY PROHIBITED.

2220 EXISTING STRUCTURE:

1. INFORMATION SHOWN FOR THE EXISTING STRUCTURE ON THESE DRAWINGS WAS TAKEN FROM FIELD OBSERVATIONS BY TLC AND RZK PERSONNEL, AND THE ORIGINAL CONSTRUCTION DRAWINGS:
PREPARED BY: CLEMONS, RUTHERFORD AND ASSOCIATES (ARCHITECT) AND NORMAN, HOUGH, WILKIE AND LANE ENGINEERING, INC (STRUCTURAL ENGINEER)
ENTITLED: SUWANNEE HIGH SCHOOL
DATED: 06/09/93
2. WORK SHOWN ON THESE DRAWINGS ASSUMES THAT THE ORIGINAL CONSTRUCTION WAS PERFORMED IN ACCORDANCE WITH THE ABOVE INDICATED ORIGINAL DRAWINGS INCLUDING (BUT NOT LIMITED TO) DIMENSIONS, ELEVATIONS, MEMBER SIZES, MATERIALS, DETAILS, ETC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE CONDITIONS RELATING TO THE EXISTING STRUCTURE AND TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS.

2300 FOUNDATIONS - W/O SOIL REPORTS:

1. IN THE ABSENCE OF ANY GEOTECHNICAL RECOMMENDATIONS, THE FOUNDATIONS ARE DESIGNED FOR AN ANTICIPATED ALLOWABLE SOIL BEARING PRESSURE OF *,*** PSF ON COMPACTED FILL. FOR PRELIMINARY PRICING PURPOSES ONLY, BEFORE CONSTRUCTION COMMENCES, SOIL BEARING CAPACITY SHALL BE VERIFIED BY A SUBSURFACE INVESTIGATION, AS WELL AS FIELD AND LABORATORY TESTS PERFORMED BY A CERTIFIED TESTING LABORATORY, WHOSE REPORT SHALL INCLUDE ANALYSIS AND RECOMMENDATIONS FOR SITE PREPARATION IN ORDER TO BEAR THE FOUNDATION LOADS. ABOVE REPORT SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW BEFORE FOUNDATION CONSTRUCTION BEGINS.
2. REGARDLESS OF WHETHER OR NOT A GEOTECHNICAL INVESTIGATION IS PERFORMED, NO WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY TLC FOR THE PERFORMANCE OF THE FOUNDATION.
3. AT A MINIMUM, SITE PREPARATION WORK SHALL INCLUDE:
A. STRIPPING AND GRUBBING OF THE BUILDING FOOTPRINT PLUS A MARGIN OF 5 FEET AROUND THE BUILDING, REMOVING ALL ORGANIC MATERIALS.
B. PROOF ROLLING THE BUILDING SITE TO LOCATE ANY UNFORESEEN SOFT AREAS. ANY SOFT AREAS SHALL BE\ EXCAVATED AND REPLACED WITH CLEAN FILL. A DENSITY OF AT LEAST 95% FOR A DEPTH OF 2 FEET IS REQUIRED UNDER THE BUILDING FOOTPRINT.
C. ALL FILL SHALL BE CLEAN SAND AND FREE OF ORGANIC MATERIALS. COMPACT FILL IN 12 INCH (UNCOMPACTED THICKNESS) LIFTS TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY VALUE.
D. EXCAVATIONS FOR FOUNDATIONS SHALL BE COMPACTED TO 95% FOR A DEPTH OF AT LEAST 2 FEET BELOW THE BOTTOM OF THE FOUNDATION.
E. DEWATERING MAY BE REQUIRED TO ACHIEVE THE REQUIRED COMPACTION VALUES, AND IF USED, SHOULD DRAW DOWN THE WATER LEVEL TO AT LEAST 2 FEET BELOW THE BOTTOM OF THE EXCAVATION.
4. SLABS ON GRADE SHALL BE PLACED OVER A 15 MIL, CLASS "A" VAPOR RETARDER. VAPOR RETARDER SHALL BE LAPPED A MINIMUM OF 6", OR AS RECOMMENDED BY THE MANUFACTURER (WHICHEVER IS GREATER) AND TAPED AT ALL JOINTS. ALL PUNCTURES IN THE VAPOR RETARDER SHALL BE REPAIRED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. ALL PENETRATIONS THROUGH THE VAPOR RETARDER (COLUMNS, PLUMBING, CONDUITS, ETC) SHALL BE SEALED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. VAPOR RETARDER SHALL BE CONTINUOUS UNDER WALL FOUNDATIONS OR SEALED TO EXTERIOR WALLS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

3302 CONCRETE:

1. SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX:

LOCATION	COMPRESSIVE STRENGTH	SLUMP	MAX AGGREGATE	MAX W/C RATIO
FOUNDATIONS	3000 PSI	4-6"	1"	0.50
SLABS ON GRADE	4000 PSI	4-6"	3/4"	0.48

CONCRETE MIXES SHALL MEET BOTH THE MINIMUM COMPRESSIVE STRENGTH AND MAXIMUM WATER/CEMENT RATIOS LISTED ABOVE.
2. CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI STANDARDS AND SPECIFICATIONS.
3. SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. MIX SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE AGGREGATE.
4. CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED.
5. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE.
6. SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE 1-CLASS D AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY.
7. CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.
8. CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE.
9. CONDUITS, PIPES AND SLEEVES SHALL BE PLACED AND SPACED IN ACCORDANCE WITH ACI 318, 6.3.
10. CONCRETE DESIGN MIX SUBMITTALS SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER CHAPTER 5 OF ACI 318.
11. ALL COLUMNS AND BEAMS INTEGRATED IN CMU WALLS ARE 8" AND 12" NOMINAL AND 7-5/8" AND 11-5/8" ACTUAL DIMENSIONS.
12. CONCRETE SLABS ON GRADE SHALL BE REINFORCED WITH MACRO-SYNTHETIC FIBERS AT A MINIMUM RATE OF 3.0 LBS/CY, OR AS RECOMMENDED BY THE FIBER MANUFACTURER FOR CONTROL OR TEMPERATURE AND SHRINKAGE/CRACKING, WHICHEVER IS GREATER.
13. WHEN WATER-BASED ADHESIVE ARE BEING USED ON CONCRETE SURFACES, THE CONTRACTOR SHALL VERIFY THAT THE WATER CONTENT OF THE CONCRETE IS WITHIN THE ALLOWABLE RANGE BEFORE INSTALLATION.

3310 REINFORCING STEEL:

1. SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS.
2. PROVIDE CONCRETE COVER OVER PRIMARY REINFORCEMENT, TIES, AND STIRRUPS, AS FOLLOWS, UNLESS OTHERWISE NOTED:

LOCATION AND CONDITION	MINIMUM COVER
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	ALL BARS 3"
B. CONCRETE EXPOSED TO EARTH OR WEATHER	#6 OR GREATER 2" #5 OR SMALLER 1.5"
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
1. SLABS, WALLS, AND JOISTS	#11 OR SMALLER 3/4"
2. BEAMS AND COLUMNS	ALL BARS 1.5"

3. SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION.
4. PROVIDE STANDARD HOOKS AT DISCONTINUOUS ENDS OF ALL TOP BARS.
5. WHERE REINFORCING IS SHOWN CONTINUOUS, SPLICE BOTTOM BARS OVER SUPPORTS AND TOP BARS AT CENTER OF SPAN. ALL OTHER LAP SPLICES SHALL BE IN ACCORDANCE WITH SPLICE TABLES AND DETAILS SHOWN ON DRAWINGS.
6. PROVIDE DOWELS INTO FOOTINGS, PILE CAPS, SUPPORT BEAMS, ETC. TO MATCH VERTICAL BARS WITH CLASS B TENSION LAP SPLICES, U.N.O.
7. LENGTH OF LAP SPLICES AND BAR EMBEDMENT SHALL BE AS SHOWN IN TABLE, UNLESS OTHERWISE NOTED:

	BAR SIZE	3000 PSI	4000 PSI	5000 PSI
T < 12"	#6 OR LESS	57Db	49Db	44Db
	#7 OR MORE	71Db	61Db	55Db
T > 12"	#6 OR LESS	74Db	65Db	57Db
	#7 OR MORE	81Db	79Db	72Db

WHERE "T" IS DEPTH OF CONCRETE UNDER BARS AND "Db" IS BAR DIAMETER.
UTILIZE CLASS "B" SPLICE FOR ALL SPLICES, U.N.O. ON PLANS OR DETAILS.
8. AT CHANGES IN DIRECTION OF CONCRETE WALLS AND TIE BEAMS, PROVIDE CORNER BARS OF SAME SIZE AND SPACING AS HORIZONTAL STEEL.

3400 CONCRETE TESTING:

1. AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST IN PLACE CONCRETE:
A. ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE."
B. ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. REQUIRED CYLINDER(S) QUANTITIES AND TEST AGE AS FOLLOWS:
2 AT 7 DAYS
2 AT 28 DAYS
ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28-DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

3601 CHEMICAL (ADHESIVE) ANCHORS:

1. SHALL BE A TWO PART EPOXY POLYMER INJECTION SYSTEM, SUCH AS HILTI HIT HY150, HILTI RE500, OR SIMPSON SET ADHESIVE SYSTEM, OR ENGINEER APPROVED SUBSTITUTION.
2. EPOXY TYPES AND BRANDS VARY IN THEIR BOND STRENGTH AND SUITABILITY OF USE, DEPENDING ON TYPE OF LOADING, ANCHOR SPACING, ETC. WHEN A PARTICULAR TYPE OF EPOXY IS SPECIFIED IN THESE DRAWINGS, A UNIQUE CALCULATION HAS BEEN MADE BASED ON THE PROPERTIES OF THAT SPECIFIC TYPE OF EPOXY FOR THE SPECIFIC CONDITION SHOWN IN THE DETAIL. SUBSTITUTION OF EPOXY TYPE IS NOT ALLOWED WHERE DETAIL SPECIFIES ONLY ONE TYPE OF EPOXY, WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER OF RECORD. NOT ALL EPOXY BRANDS OR TYPES WILL BE ALLOWED AS SUBSTITUTES.
3. SUBSTITUTION OF EPOXIES IN ONE CONDITION SHALL NOT BE CONSTRUED AS APPROVAL TO MAKE SIMILAR SUBSTITUTION OF EPOXIES IN OTHER DIFFERING CONDITIONS. EACH SUBSTITUTION MUST RECEIVE PRIOR WRITTEN APPROVAL BY THE ENGINEER OF RECORD.
4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. THE MANUFACTURER'S REPRESENTATIVE SHALL TRAIN INSTALLERS.
6. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL HOLE CLEAN-OUT REQUIREMENTS ARE FULLY COMPLETED BY THE INSTALLERS PRIOR TO INJECTING EPOXY INTO THE HOLES.
7. NO LOAD SHALL BE APPLIED TO THE EPOXY ANCHORS UNTIL THE EPOXY HAS FULLY CURED AND HAS ACHIEVED IT'S SPECIFIED STRENGTH.
8. IF DETAIL SHOWS EPOXY ANCHORS IN SLOTTED HOLES, IT IS IMPERATIVE THAT ANY EXCESS EPOXY IS CLEANED UP FROM AROUND THE ANCHOR ROD, SO THAT IT DOES NOT INTERFERE WITH ADJUSTABILITY OF ANCHOR ROD IN SLOTTED HOLE.

3602 MECHANICAL ANCHORS:

1. SHALL BE EITHER HEAVY DUTY CONCRETE SCREW ANCHOR (SUCH AS POWERS WEDGE-BOLT, SIMPSON TITEN HD, OR HILTI HUS-H) OR WEDGE TYPE EXPANSION ANCHOR (SUCH AS POWERS POWER-STUD, SIMPSON WEDGE-ALL, OR HILTI KWIK BOLT 3).
2. TYPE OF ANCHOR SHALL BE AS SPECIFIED ON THE DRAWINGS, WHILE BRAND AND MODEL OF ANCHOR MAY BE SELECTED FROM THE ABOVE LISTED ANCHORS. SUBSTITUTION ANCHORS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVED IN WRITING BY THE ENGINEER OF RECORD PRIOR TO USE.
3. IN SOME CASES OF CRITICAL LOADING OR GEOMETRIC CONDITIONS, ONLY SPECIFIC ANCHORS WILL BE ALLOWED, AS NOTED ON THE DRAWINGS. IN THESE CASES, THE SPECIFIED BRAND AND MODEL OF ANCHOR MUST BE USED.
4. INSTALL IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
5. THE MANUFACTURER'S REPRESENTATIVE SHALL TRAIN INSTALLERS.

4810 MASONRY WALLS:

1. ALL MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530/ASCE 5/TMS 402 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND ACI 530.1/ASCE 6/TMS 602 "SPECIFICATION FOR MASONRY STRUCTURES", LATEST EDITION.
2. MASONRY UNITS SHALL MEET ASTM C-90 FOR HOLLOW LOAD BEARING TYPE MASONRY WITH UNIT STRENGTH OF 1900 PSI ON THE NET AREA (f'm = 1500 PSI). MORTAR SHALL BE TYPE "M" OR "S" AND MEET ASTM C-270.
3. GROUT SHALL BE 3000 PSI MINIMUM COMPRESSIVE STRENGTH AND MEET ASTM C-476 AND HAVE A SLUMP BETWEEN 8" AND 11" WITH WATER CM RATIO OF 0.55 MAXIMUM AND WITH 3/8" MAXIMUM AGGREGATE.
4. PROVIDE HOOKED DOWELS IN FOUNDATIONS FOR VERTICAL REINFORCING ABOVE. LAP SPLICES TO BE 48 BAR DIAMETERS (U.N.O.).
5. BLOCK CELLS SHALL BE GROUT FILLED WITH VERTICAL REINFORCING BARS AT CORNERS, INTERSECTIONS, EACH SIDE OF OPENINGS AND AS SHOWN ON THE DRAWINGS.
6. DOWELS SHALL BE USED TO PROVIDE CONTINUITY INTO THE STRUCTURE ABOVE AND/OR BELOW, UNLESS NOTED OTHERWISE.
7. USE METAL LATH, MORTAR OR SPECIAL UNITS TO CONFINE CONCRETE AND GROUT TO AREA AS REQUIRED.
8. MASONRY SHALL BE LAID IN RUNNING BOND PATTERN UNLESS NOTED OTHERWISE. AT FILLED CELLS LAY UNITS WITH FULL BED JOINTS AROUND CELLS.
9. PROVIDE 9 GAGE GALVANIZED HORIZONTAL JOINT REINFORCING (DUR-O-WALL OR ENGINEER APPROVED SUBSTITUTION) AT ALTERNATE BLOCK COURSES. LADDER TYPE IS RECOMMENDED WITH REINFORCED FILLED CELLS. PROVIDE PREFABRICATED "TEE" OR CORNER SECTIONS AT WALL INTERSECTIONS.
10. CONTROL JOINTS SHALL BE CONSTRUCTED IN CONCRETE MASONRY CONSTRUCTION AT A MAXIMUM HORIZONTAL SPACING BETWEEN JOINTS OF 25'-0" AND NOT MORE THAN 12'6" FROM CORNERS. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS. CONSTRUCT INTERIOR CONTROL JOINTS AT A MAXIMUM HORIZONTAL SPACING OF 32'-0" OR 16'-0" FROM CORNERS. NO JOINTS SHALL BE LOCATED WITHIN 2'-0" OF STEEL BEAM BEARINGS. HORIZONTAL WALL REINFORCING SHALL BE STOPPED EACH SIDE OF CONTROL JOINTS. SEE ARCHITECTURAL DRAWINGS FOR SEALANT REQUIREMENTS AT CONTROL JOINTS.
11. SUBMIT PROPOSED GROUT MIX DESIGNS FOR REVIEW PRIOR TO USE. MIX NUMBER OR OTHER POSITIVE IDENTIFICATION SHALL UNIQUELY IDENTIFY MIX.
12. USE OF SUPERPLASTICIZER IS PROHIBITED.
13. CELLS TO BE GROUT FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED, CONTINUOUS VERTICAL GROUT SPACE.
14. CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF CELLS TO BE GROUT FILLED IN EACH POUR IN EXCESS OF 5 FEET IN HEIGHT. AFTER INSPECTION AND BEFORE GROUTING, THE REBAR SHALL BE TIED AT THE CLEANOUTS AND THE CLEANOUTS SHALL BE SEALED.
15. ANY OVERHANGING MORTAR OR OTHER OBSTRUCTION OR DEBRIS SHALL BE REMOVED FROM THE INSIDES OF SUCH CELL WALLS.
16. VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS.
17. CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLIDLY WITH GROUT. SAMPLE AND TEST GROUT PER ASTM C1019.
18. GROUT SHALL BE POURED IN LIFTS OF 4 FEET MAXIMUM HEIGHT. GROUT SHALL BE CONSOLIDATED AT TIME OF PLACING BY VIBRATING AND RECONSOLIDATED LATER BY VIBRATING BEFORE PLASTICITY IS LOST.
19. WHEN TOTAL GROUT POUR EXCEEDS 5 FEET IN HEIGHT, (HIGH LIFT GROUTING), THE GROUT SHALL BE PLACED IN 4-FOOT LIFTS WITH A MINIMUM OF A 30 MINUTE DELAY BETWEEN LIFTS. MINIMUM CELL DIMENSION SHALL BE IN ACCORDANCE WITH TABLE 5 OF ACI 530.1 (3" X 3" FOR COARSE GROUT, 12 FT. MAXIMUM POUR HEIGHT).
20. WHEN THE GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE MADE BY STOPPING THE POUR OF GROUT NOT LESS THAN 1-1/2 INCH BELOW THE TOP OF THE UPPERMOST UNIT GROUTED.
21. WHERE CONCRETE BEAMS ARE INSTALLED IN CONCRETE MASONRY WALL, SUPPORT CONCRETE WITH 6" SIDE CONTINUOUS STRIPS OF 1/8 SQUARE MESH SOFFIT SCREENING OR PUR-O-STOP OF EQUAL CENTERED OVER BLOCK WORK. USE OF ROOFING FELT STRIPS WILL NOT BE PERMITTED.
22. PROVIDE DOVETAIL ANCHORS AT 16" C/C, UNLESS NOTED OTHERWISE, WHERE MASONRY WALLS ABUT CONCRETE SURFACES.

4814 TIE BEAMS:

1. BEAMS WITH THE PREFIX "TB" SHALL BE OF CONCRETE, POURED AFTER THE MASONRY WALLS BELOW ARE IN PLACE.
2. REINFORCING SHALL BE CONTINUOUS THROUGH TIE BEAMS WITH MINIMUM LAP SPLICES OF 48 BAR DIAMETERS AND BENT BARS AT CORNERS.
3. USE METAL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE TO AREA REQUIRED, IN ACCORDANCE WITH ACI 530.1 (SOLID METAL OR FELT CAVITY CAPS ARE PROHIBITED).

5120 STRUCTURAL STEEL:

1. STEEL WORK SHALL BE NEW AND CONFORM TO THE ANSI/AISC 360-05 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
2. MATERIAL SHALL CONFORM TO THE FOLLOWING, EXCEPT AS NOTED:

WIDE FLANGE SHAPES	ASTM A992 (Fy=50 KSI)
S AND M SHAPES	ASTM A36 (Fy=36 KSI)
HP SHAPES	ASTM A572 (Fy=50 KSI)
ANGLES, CHANNELS AND PLATES	ASTM A36 (Fy=36 KSI)
PIPE	ASTM A53, GRADE B (Fy=35 KSI)
RECTANGULAR HSS	ASTM A500, GRADE B (Fy=46 KSI)
ROUND HSS	ASTM A500, GRADE B (Fy=42 KSI)
HIGH STRENGTH BOLTS	ASTM A325 OR A490
TWIST-OFF TENSION CONTROL BOLTS	ASTM F1852
THREADED RODS	ASTM A36 (Fy=36 KSI)
HEAVY HEX NUTS	ASTM A563
HARDENED STEEL WASHERS	ASTM F436
DIRECT-TENSION-INDICATOR WASHERS	ASTM F959
ANCHOR RODS	ASTM F1554 GR. 36 (Fy=36 KSI)
SHEAR STUD CONNECTORS	ASTM A108 (Fu=65 KSI)

3. CONNECTIONS:
A. BOLTS SHALL BE HIGH-STRENGTH, BEARING TYPE IN SNUG TIGHT CONDITION, U.N.O. TIGHTEN BY AN AISC APPROVED METHOD.
B. WELDING ELECTRODES SHALL BE PER AWS D1.1. RETURN FILLET WELDS FOR FRAMED CONNECTIONS 1/2" AT EACH END.
C. FIELD CONNECTIONS SHALL BE BOLTED, EXCEPT AS NOTED OTHERWISE.
D. DETAIL FLOOR AND ROOF FRAMING CONNECTIONS FOLLOWING THE REQUIREMENTS SHOWN IN THE TYPICAL CONNECTION SCHEDULES SHOWN IN THESE DRAWINGS, BASED ON THE BEAM OR GIRDER SIZE.
E. FOR THE PURPOSE OF CORRECTLY INTERPRETING THE CONNECTION SCHEDULES, GIRDERS SHALL BE CONSIDERED AS ANY FLOOR OR ROOF BEAM WHICH CARRIES OTHER FLOOR OR ROOF BEAMS, OR ANY FLOOR OR ROOF BEAM WHICH CARRIES STEEL COLUMNS.
F. DETAIL DIAGONAL BRACING CONNECTIONS AS SHOWN IN THE DETAILS. IF NO DETAIL IS PROVIDED, DETAIL CONNECTION TO DEVELOP THE FULL TENSION CAPACITY OF THE DIAGONAL BRACING MEMBER.
G. DETAIL MOMENT CONNECTIONS AS SHOWN IN THE DETAILS. IF NO DETAIL IS PROVIDED, DETAIL MOMENT CONNECTION USING FULL PENETRATION WELDS AT BEAM FLANGES.
4. HIGH STRENGTH BOLTS IN BEARING CONDITION SUPPORTING SIMPLE SPAN BEAMS NOT SUBJECT TO AXIAL LOADS MAY BE INSTALLED TO "SNUG TIGHT" CONDITION IF NORMAL, OR SHORT SLOTTED HOLES ARE USED. THE ENGINEER OF RECORD WILL BE THE ULTIMATE AUTHORITY IN THE USE OF "SNUG TIGHT" BOLTS. IF LONG SLOTTED OR OVERSIZED HOLES ARE USED, BOLTS MUST BE FULLY PRETENSIONED AND SLIP CRITICAL. PROPER SURFACE PREPARATION IS REQUIRED FOR SLIP CRITICAL BOLTS, INCLUDING OMISSION OF PRIMER OR FIRE PROOFING, AS APPROPRIATE.
5. BOLTS SHARING LOAD WITH WELDS IN A CONNECTION SHALL BE FULLY PRETENSIONED AND SLIP CRITICAL.
6. WHERE FULLY PRETENSIONED OR SLIP CRITICAL BOLTS ARE REQUIRED, TIGHTENING SHALL BE ACHIEVED USING EITHER TWIST-OFF TENSION CONTROL BOLTS OR DIRECT TENSION INDICATING WASHERS.
7. ALL STRUCTURAL STEEL EXPOSED TO EXTERIOR CONDITIONS SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 AND ALL FASTENERS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED PER ASTM A153.
8. GROUT UNDER BEARING PLATES SHALL BE NON-METALLIC, NON-SHRINK TYPE WITH A COMPRESSIVE STRENGTH OF AT LEAST 5,000 PSI IN 28 DAYS.
9. THE CAMBER OF STEEL MEMBERS SHALL BE VERIFIED IN THE SHOP AND THE FIELD. WHEN NO CAMBER IS INDICATED, TURN THE MEMBER NATURAL CAMBER UP.

5122 WELDING:

1. WELDING SHALL BE DONE BY WELDERS WITH CURRENT CERTIFICATION IN ACCORDANCE WITH AWS D1.1.
2. WELDS SHOWN ON STRUCTURAL DRAWINGS ARE MINIMUM DESIGN REQUIREMENTS. THE FABRICATOR'S SHOP DRAWINGS SHALL REFLECT WELDS IN ACCORDANCE WITH AWS REQUIREMENTS.
3. FULL PENETRATION GROOVE WELDS SHALL BE INSPECTED BY ULTRASONIC TESTING. TWENTY-FIVE PERCENT OF THE WELDS SHALL BE INSPECTED AT RANDOM UNLESS NOTED OTHERWISE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
4. UNLESS NOTED OTHERWISE ON THE DRAWINGS, GROOVE WELDS SHALL BE FULL PENETRATION.
5. PROVIDE FILLET WELDS AT CONTACT POINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT UNLESS DETAILED OTHERWISE ON THE DRAWINGS. THE MINIMUM FILLET WELD SIZE IS 3/16" UNLESS OTHERWISE NOTED.

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REVISIONS AND UPDATES

04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW LIVE OAK, FLORIDA

STRUCTURAL NOTES

drawn MFS | checked GCK | approved GCK

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STRUCTURAL NOTES (CONTINUED)

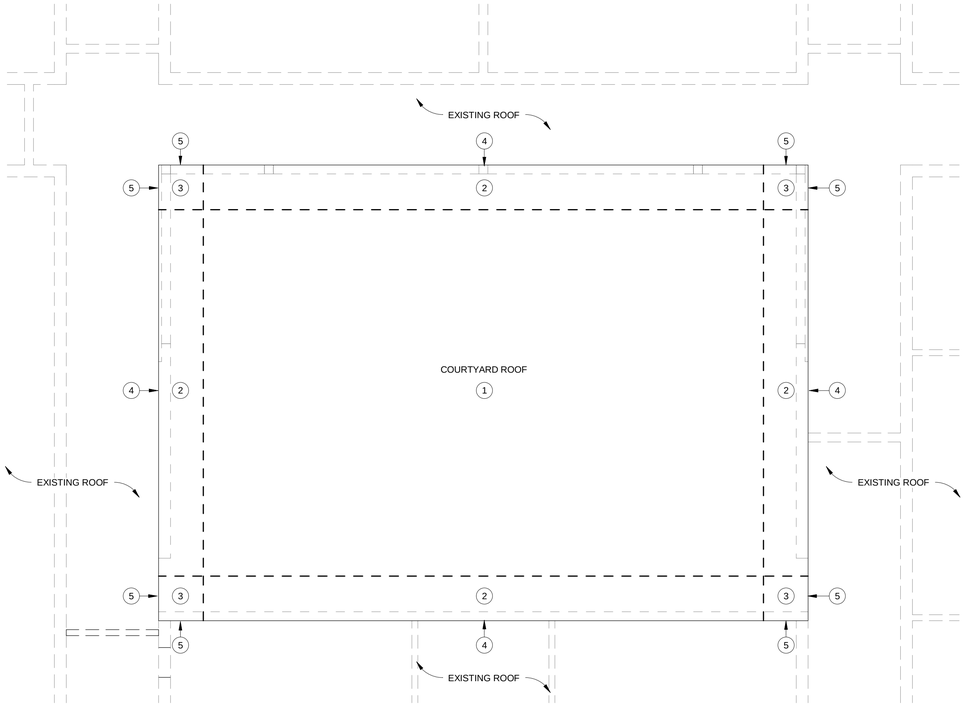
5210 STEEL JOISTS:
1. SHALL BE THE SIZE AND SPACING AS SHOWN ON THE STRUCTURAL DRAWINGS AND SHALL BE DESIGNED, FABRICATED, INSTALLED AND BRIDGED IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE SPECIFICATIONS, LATEST EDITION.
2. ENDS OF BRIDGING LINES TERMINATING AT WALLS OR BEAMS SHALL BE ANCHORED THERETO AT TOP AND BOTTOM CHORDS. MINIMUM JOIST BRIDGING TERMINATION CONNECTIONS TO MASONRY SHALL BE L3x3x1/4x3" LONG WITH (1) 1/2" DIAMETER ANCHOR BOLT OR L4x4x1/4x0'-3" WITH (1) 1/2"x5" ANCHOR BOLT TO CONCRETE.
3. BRIDGING SHALL BE WELDED OR BOLTED AT POINTS OF CONTACT. WELD SHALL NOT DAMAGE THE JOIST. CROSS BRIDGING SHALL BE WELDED OR BOLTED AT ITS CENTER POINT. BRIDGING SHALL BE STRAIGHT FROM JOIST TO JOIST. CHANGES IN SLOPE OR DIRECTION SHALL BE MADE AT A JOIST, NOT BETWEEN JOISTS.
6. LH-SERIES JOISTS SHALL BEAR A MINIMUM OF 4" ON STEEL BEAMS AND 6" ON CONCRETE BEAMS. JOIST BEARING PLATES TO BE MINIMUM 3/8" X 6" X 9" WITH (2) 1/2" DIAMETER X 5" SHEAR STUD CONNECTORS. BEARING PLATES FOR BACK TO BACK SINGLE JOISTS SHALL BE MINIMUM 3/8" X 9" X 11-5/8" WITH (4) 1/2" DIAMETER X 5" SHEAR STUD CONNECTORS. BEARING PLATES SHALL BE CAST INTEGRALLY WITH THE CONCRETE BEAM. WELD JOISTS TO BEARING PLATE WITH A MINIMUM OF (2) 1/4" FILLET WELDS, UNLESS NOTED OTHERWISE. BACK-TO-BACK JOISTS SHALL BE OFFSET IF CONCRETE BEAM IS LESS THAN 12" NOMINAL WIDTH OR STEEL BEAM IS LESS THAN 8" WIDE.
7. HANGERS FOR SUPPORT OF EQUIPMENT, OR MEMBERS SUPPORTING SUCH HANGERS, SHALL BE LOCATED AT PANEL POINTS OF JOISTS, AND SHALL BE HUNG FROM THE TOP CHORD OF THE JOIST.
8. ROOF JOISTS SHALL BE DESIGNED FOR A NET UPLIFT PRESSURE AS SHOWN ON DRAWINGS.
9. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWING SUBMITTAL SHALL INCLUDE LAYOUT, COMPONENT DESIGNATION, BRIDGING, AND PERTINENT SECTIONS AND DETAILS.
10. SUBMITTALS FOR JOISTS, OTHER THAN STANDARD SJI CATALOG SELECTIONS WHICH HAVE BEEN VERIFIED BY SJI, SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.
11. JOISTS SHALL BE DESIGNED TO SUPPORT THE LOADS LISTED IN SECTION 1060, THOSE INDICATED ON PLANS AND AN ADDITIONAL CONCENTRATED DEAD LOAD NOT TO EXCEED 500# TO BE PLACED AT ANY PANEL ALONG THE LENGTH OF THE JOIST. DEAD LOADS SHALL BE IN ACCORDANCE WITH THE MATERIALS SHOWN WITHIN THE CONTRACT DOCUMENTS AND SHALL BE NOTED ON THE SHOP DRAWING SUBMITTAL BY THE JOIST MANUFACTURER.
12. JOIST BOTTOM CHORDS SHALL BE DOUBLE ANGLES.
13. JOISTS ARE TO BE DESIGNED TO ALLOW 1" MAXIMUM DIFFERENCE IN CAMBER BETWEEN ADJACENT PARALLEL JOISTS.
14. WHERE JOIST SPANS EXCEED 30'-0", THE 3 JOISTS CLOSEST TO THE PERIMETER OF THE BAY SHELL BE DESIGNED TO LIMIT LIVE LOAD DEFLECTION TO 1".
15. WHERE JOISTS SUPPORT A MOVEABLE PARTITION, ALL JOISTS SHALL BE SIZED TO PROVIDE A MAXIMUM 1" DEFLECTION AT THE CENTER OF THE SPAN AND AT THE LOCATION OF THE STORED PARTITION.
16. ALL STEEL JOISTS GREATER THAN FORTY FEET IN LENGTH REQUIRE A ROW OR BOLTED BRIDGING TO BE IN PLACE PRIOR TO SLACKENING OF HOIST LINES. (U.N.O.)
17. JOIST MANUFACTURER SHALL COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL LOADS DUE TO EQUIPMENT TO BE SUPPORTED BY ROOF STRUCTURE. ALL ADDITIONAL LOADS SHALL BE CLEARLY INDICATED ON SHOP DRAWINGS SUBMITTALS.
18. WHERE ROOF JOISTS ARE USED TO BRACE STEEL ROOF BEAMS (AS SHOWN ON PLANS AND DETAILS), DESIGN JOISTS TO RESIST A 500 LB AXIAL BRACE LOAD AT EACH BRACE. THIS LOAD SHALL ACT CONCURRENTLY WITH ALL WIND LOAD CASES AND COMBINATIONS.

5212 JOIST BEARING:
1. WHERE STEEL BEAMS SUPPORT JOISTS FRAMING FROM ONE SIDE ONLY, OR WHERE JOISTS FROM ONE SIDE ARE 30% LONGER THAN THE JOISTS ON THE OPPOSITE OF THE BEAM, JOISTS SHALL BEAR FULL WIDTH OF THE STEEL BEAM OR 5-1/2", WHICH EVER IS LESS.
2. CONTRACTOR SHALL COORDINATE JOIST SEAT HEIGHTS AND TOP OF STRUCTURAL STEEL SUPPORTS TO ENSURE PROPER DECK ELEVATIONS.

5312 STEEL ROOF DECK:
1. SHALL BE GALVANIZED (G90), TYPE "B" STEEL ROOF DECK OF GAGE AND DEPTH INDICATED ON DRAWINGS, AND SHALL CONFORM TO THE PROVISIONS OF THE STEEL DECK INSTITUTE (SDI) SPECIFICATIONS FOR STEEL ROOF DECK.
2. DECK SHALL BE VENTED IN AREAS TO RECEIVE LIGHT WEIGHT INSULATING FILL, IF REQUIRED BY THE INSULATION MANUFACTURER. COORDINATE VENTING AREA REQUIREMENTS WITH INSULATION MANUFACTURER.
3. DECK CENTERING SHALL BE PLACED IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SHALL BE CONTINUOUS OVER AT LEAST 3 SPANS.
4. WELD PATTERN SHALL BE AS INDICATED ON ROOF DECK FASTENING DIAGRAM.
5. METAL DECK MANUFACTURER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE AND ALL DESIGN SHALL BE IN ACCORDANCE WITH APPLICABLE STANDARDS.
6. DO NOT HANG MEP SYSTEMS (DUCTWORK, ROOF DRAIN OR FIRE PROTECTION PIPING, ETC) FROM ROOF DECK. ALL EQUIPMENT IS TO BE HUNG FROM ROOF JOISTS. SEE SECTION 5210 FOR ROOF JOIST REQUIREMENTS.

5400 STRUCTURAL COLD-FORMED STEEL (CFS) FRAMING:
1. ALL COLD FORMED STEEL FRAMING SHALL CONFORM TO THE AISI/COFS/NASPEC 2001 NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, THE AISI MANUAL COLD-FORMED STEEL DESIGN (2002 EDITION), AISI CODE OF STANDARD PRACTICE FOR COLD-FORMED STEEL STRUCTURAL FRAMING (2006 EDITION), AISI/COFS/GP-2004 STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS (2004 EDITION) AND COLD-FORMED STEEL ENGINEERS INSTITUTE (CFSEI) PUBLICATIONS, AS MODIFIED OR CLARIFIED HEREIN.
2. STEEL STUDS, JOISTS, LINTELS, AND RUNNER TRACK MEMBERS SHALL BE OF TYPE SHOWN ON THE DRAWINGS AND SPECIFICATIONS CONFORMING TO ASTM A-446 GRADE C WITH HOT DIPPED GALVANIZED COATING CONFORMING TO ASTM A525 (CLASS G90).
3. MINIMUM STEEL GRADES (FY): 12 GA (97 MILS), 14 GA (68 MILS); 16 GA (54 MILS) STUDS AND TRACK: 50 KSI; 18 GA (43 MILS), 20 GA (33 MILS) STUDS AND TRACK: 33 KSI.
4. STRUCTURAL LIGHT GAGE CFS FRAMING AND THEIR CONNECTIONS SHALL BE AS DEPICTED ON THE STRUCTURAL PLANS AND DETAILS.
5. ATTACHMENTS, CLOSURES, HARDWARE, ETC., SHALL BE AS SHOWN AND/OR IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
6. SUBMIT PROPOSED LIGHT GAGE CFS MANUFACTURERS DATA AND LOAD TABLES FOR REVIEW.
7. TOLERANCES TO COMPLY WITH ASTM C955.
8. WELDING TO COMPLY WITH COLD-FORMED STEEL ENGINEERS INSTITUTE TECH NOTE 5606-1 - WELDING COLD-FORMED STEEL.
9. REPAIR DAMAGED OR UNCOATED GALVANIZED COATINGS PER ASTM A780.
10. FRAMING MEMBERS SHALL BE CUT SQUARELY OR AT AN ANGLE AS REQUIRED TO FIT SQUARELY AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD FIRMLY IN PLACE UNTIL PROPERLY JOINED.
11. JOINING OF STRUCTURAL MEMBERS SHALL BE MADE WITH SELF-DRILLING SCREWS OR WELDING.
12. WIRE TYING OF FRAMING MEMBERS IN STRUCTURAL APPLICATIONS SHALL NOT BE PERMITTED.
13. ATTACHMENT OF COLLATERAL MATERIALS TO STEEL MEMBERS SHALL BE MADE WITH SELF-DRILLING SCREWS OR HARDENED SHANK POWER ACTUATED FASTENERS (PAFS).
14. STUDS SHALL SIT SQUARELY IN THE TOP AND BOTTOM RUNNER TRACK WITH FIRM ABUTMENT AGAINST TRACK WEBS. STUDS SHALL BE ALIGNED OR PLUMBED AND SECURELY FASTENED TO THE FLANGES OF BOTH TOP AND BOTTOM RUNNER TRACK.
15. BRIDGING TO BE SUPPLIED AND INSTALLED PER CFS STUD MANUFACTURER RECOMMENDATIONS (5'-0" O.C. MAX AND WITHIN 1'-0" OF DEFLECTION TRACKS).
16. LATERAL BRACING SHALL BE PROVIDED BY USE OF PLYWOOD SHEATHING, GYPSUM SHEATHING, OR BY HORIZONTAL STRAPS OR COLD-ROLLED CHANNELS. BRACING SHALL CONFORM TO SECTION D3 OF THE AISI SPECIFICATIONS.
17. LIGHT GAGE FRAMING CONNECTORS SPECIFIED BY PART NUMBER OR MODEL NAME ARE STANDARD CONNECTORS FABRICATED BY THE STEEL NETWORK (TSN), RALEIGH, N.C., 888-474-4876. CONNECTORS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE LIGHT STEEL FRAMING CONNECTIONS CATALOG (LATEST EDITION) BY THE STEEL NETWORK, USING THE NUMBER/SIZE OF FASTENERS SHOWN IN THESE DRAWINGS. WHERE NUMBER/SIZE IS NOT SHOWN IN THESE DRAWINGS, USE THE FASTENERS SPECIFIED IN THE CATALOG TO OBTAIN THE MAXIMUM CAPACITY OF THE SPECIFIED CONNECTOR. SUBSTITUTION OF GENERIC BENT PLATE LIGHT GAGE CONNECTORS IS NOT ALLOWED WITHOUT DESIGN CALCULATIONS SHOWING EQUAL OR BETTER CAPACITY TO THE SPECIFIED TSN CONNECTOR, PREPARED AND SIGNED AND SEALED BY A FLORIDA REGISTERED ENGINEER EXPERIENCED IN LIGHT GAGE STEEL CONNECTION DESIGN.

5404 COLD-FORMED STEEL (CFS) TRUSSES:
1. DESIGN DOCUMENTS INCLUDE A SYSTEM OF CUSTOM ENGINEERED TRUSS COMPONENTS, ASSEMBLIES AND CONNECTIONS IN ACCORDANCE WITH AISI CODE OF STANDARD PRACTICE FOR CFS STRUCTURAL FRAMING (2006 EDITION) AND THE STATE OF FLORIDA DEPARTMENT OF PROFESSIONAL REGULATION GUIDELINES (FLORIDA ADMINISTRATIVE CODE 61G15). THE ENTIRE SYSTEM, INCLUDING ALL TRUSSES, CONNECTIONS, BRIDGING, TEMPORARY AND PERMANENT BRACING SHALL BE DESIGNED BY A DELEGATED SPECIALTY PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
2. THE COLD-FORMED STEEL TRUSSES SHALL BE DESIGNED BY TRUSS SUPPLIER USING COLD-FORMED STEEL SHAPES. CHORD MEMBERS TO COMPLY WITH ASTM A653 WITH MINIMUM STRENGTH OF 50 KSI, AND MINIMUM 22 GAGE (28 MILS). WEB MEMBERS TO COMPLY WITH ASTM A500 WITH MINIMUM STRENGTH OF 45 KSI AND MINIMUM 20 GAGE (33 MILS).
3. ALL CFS TRUSS ELEMENTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN STRICT ACCORDANCE WITH THE LATEST EDITION OF AISI/COFS TRUSS-2004 AND OTHER APPLICABLE CODES AND SPECIFICATIONS.
4. THE CFS TRUSS SUPPLIER SHALL SUBMIT FOR REVIEW AND APPROVAL, DETAILED SHOP DRAWINGS AND DESIGN CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF FLORIDA. FABRICATION OF CFS TRUSSES SHALL NOT BEGIN UNTIL THE SHOP DRAWINGS AND CALCULATIONS HAVE BEEN REVIEWED AND RETURNED APPROVED. REFER TO CONTRACT SPECIFICATIONS FOR APPROVED MANUFACTURERS. MANUFACTURERS NOT PRE-APPROVED, MUST HAVE QUALIFICATIONS MEETING CONTRACT SPECIFICATIONS APPROVED PRIOR TO BIDDING.
5. DELEGATED ENGINEER CALCULATIONS SHALL INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
A. ENGINEERING ANALYSIS SHOWING LOADING, MEMBER STRESSES AND DEFLECTIONS FOR EACH DIFFERENT TRUSS DESIGN BASED ON DESIGN LOADS LISTED ON THE DRAWINGS.
B. ALL TRUSS MEMBERS, PITCH, SPAN, CAMBER, BEARING, CONFIGURATION, TYPE, LOCATION, SPACING AND LAYOUT OF TRUSSES.
C. ALL BRIDGING AND BRACING FOR LOADS INDICATED INCLUDING WIND DIAPHRAGM, CONSTRUCTION, AND ALL OTHERS, TEMPORARY AND PERMANENT LOADS
D. ALL TRUSS TO TRUSS CONNECTIONS, TRUSS TO STEEL BEAM, TRUSS TO CONCRETE BEAM, TRUSS TO MASONRY, JOISTS, TRACK, GUSSET PLATES, FASTENERS, BRIDGING AND RELATED ACCESSORIES TO BE DESIGNED AND DETAILED FOR ALL LOADING CONDITIONS INCLUDING NET WIND UPLIFT AND REACTIONS FROM HORIZONTAL WIND DIAPHRAGM ACTION.
E. ALL TRUSS MEMBER AND BRACING SIZES, PROPERTIES, AND ANY YIELD STRENGTH.
F. SPACING AND LAYOUT OF TRUSSES MEETING REQUIREMENTS INDICTED ON THE DRAWINGS.
G. NOTE ANY PROPOSED TRUSS LAYOUT CHANGES THAT WOULD EFFECT THE LOCATION OF BEARING WALLS OR FOUNDATION DESIGN OR CONSTRUCTION.
H. WIND TRUSSES DESIGNED TO TRANSFER THE HORIZONTAL WIND LOADS A AS NOTED ON THE DRAWINGS.
6. GENERAL CONTRACTOR SHALL COORDINATE TRUSS REQUIREMENTS WITH M/E/P, HVAC AND DUCT WORK REQUIREMENTS, INCLUDING HORIZONTAL AND VERTICAL CHASES, ATTIC/ACCESS SPACE REQUIREMENTS, INCLUDING SIZE AND LOCATION WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DESIGN DOCUMENTS.
7. SUBMIT FULL TRUSS SYSTEM DESIGN AND ERECTION DRAWINGS PREPARED BY DELEGATED SPECIALTY ENGINEER FOR APPROVAL. THESE DRAWINGS SHALL INCLUDE:
A. PLACING DRAWINGS FOR STEEL AND TRUSS SYSTEM SHOWING MEMBERS, PITCH, SPAN, CAMBER, CONFIGURATION, TYPE, LOCATIONS, AND SPACING OF ALL MEMBERS. ALL ATTACHMENTS, BEARINGS, AND ANCHORAGE SHALL BE CLEARLY DETAILED ON DRAWINGS. INDICATE SUPPLEMENTAL STRAPPING, BRACING, CLIPS & OTHER ACCESSORIES REQUIRED FOR PROPER INSTALLATION, MEETING DESIGN CRITERIA OUTLINED.
B. CROSS SECTIONS, DRAWINGS AND ELEVATIONS DEPICTING COMPONENT LOCATIONS.
C. CONNECTION DETAILS SHOWING SCREW TYPES, NUMBER AND LOCATIONS, MAXIMUM VERTICAL AND HORIZONTAL ALLOWABLE LOADS, WELD LENGTHS AND LOCATIONS OR OTHER RELATED FASTENER REQUIREMENTS. ALL CONNECTIONS SHALL MEET OUTLINED DESIGN CRITERIA.
D. DETAILED TRUSS SYSTEM DRAWINGS OUTLINING PROPOSED PERMANENT AND TEMPORARY BRACING, CONNECTIONS, AND PROPOSED REACTIONS TO ADJACENT STRUCTURAL SYSTEMS IF UTILIZED AS BRACING RESTRAINT.
8. THE CFS TRUSSES SHALL BE SHOP FABRICATED BY THE TRUSS SUPPLIER. FIELD FABRICATION OF TRUSSES IS NOT PERMITTED. THE DELEGATED SPECIALTY ENGINEER FOR THE STEEL TRUSSES SHALL INSPECT ALL FABRICATED TRUSSES AND SHALL PROVIDE A SIGNED AND SEALED LETTER CERTIFYING THAT THE TRUSSES ARE FABRICATED IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS AND WILL SUSTAIN THE DESIGN LOADS SPECIFIED IN THE CONTRACT DOCUMENTS.
9. THE TRUSS SUPPLIER SHALL SUBMIT FOR REVIEW DESIGN DATA FOR ALL SHOP OR FIELD SELF-DRILLING FASTENERS USED FOR CONSTRUCTION OF TRUSSES. PROVIDE CONNECTION DETAILS SHOWING SCREW TYPES, NUMBER AND LOCATIONS, AND OTHER RELATED FASTENER REQUIREMENTS, INCLUDING MAXIMUM VERTICAL AND HORIZONTAL ALLOWABLE LOADS.
10. DESIGN LOADS FOR TRUSSES:
A. DESIGN TRUSSES PER FLORIDA BUILDING CODE AS SELF-SUPPORTING CANTILEVERED FROM THE NEW MASONRY WALL, WITHOUT SUPPORTING OR IMPOSING ANY LOADS ON THE CANTILEVER JOIST EXTENSIONS ABOVE, FOR THE FOLLOWING MINMIUM LOADS:
WIND LOADS: SEE WIND LOAD DIAGRAM FOR NOMINAL C&C LOADS
TOP CHORD:
LIVE LOAD = 5 PSF
DEAD LOAD = 5 PSF
BOTTOM CHORD:
LIVE LOAD = 5 PSF
DEAD LOAD = 5 PSF
VERTICAL FACE:
DEAD LOAD = 5 PSF
B. DESIGN TRUSS MEMBERS FOR CONCENTRATED LOADS OF PIPING, EQUIPMENT, AND OTHER COLLATERAL MECHANICAL LOADS. SEE MECHANICAL DRAWINGS.
C. SEE PLANS FOR SPECIAL CONCENTRATED AND UNIFORM.
D. THE ACTUAL IN-SERVICE DEAD LOAD OF SPRINKLER AND MECHANICAL PIPING SHOULD BE USED FOR THE DESIGN OF TRUSSES. THE SPRINKLER AND MECHANICAL CONTRACTOR SHALL SUBMIT ACTUAL SIZE, LOCATION AND WEIGHT OF ALL PIPING TO BE USED. THE GENERAL CONTRACTOR SHALL SUPPLY THIS INFORMATION TO THE TRUSS SUPPLIER TO BE USED FOR FINAL TRUSS DESIGN. MECHANICAL PIPING SUPPORTS SHALL BEAR ON TRUSS BOTTOM CHORDS. THE BOTTOM CHORD MEMBER SHALL BE CAPABLE OF SUPPORTING THIS LOAD.
11. THE BOTTOM CHORD SHALL NOT BE ASSUMED TO BE LATERALLY SUPPORTED BY THE CEILING CONSTRUCTION. BOTTOM CHORD BRACING SHALL BE DESIGNED AND FURNISHED BY THE LIGHT GAGE STEEL TRUSS SUPPLIER.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY BRACING OF THE STRUCTURE DURING ERECTION. THE STRUCTURE IS NOT STABLE UNTIL ALL ELEMENTS ARE CONNECTED IN PLACE. DO NOT PLACE ANY LOAD ON TRUSSES UNTIL ALL BRACING IS INSTALLED AS DETAILED ON APPROVED SHOP DRAWINGS. BRACING AND BRIDGING SHALL BE COORDINATED WITH THE LOCATIONS OF MECHANICAL PIPING AND DUCTWORK IN THE ATTIC SPACE BY THE TRUSS SUPPLIER AND THE CONTRACTOR. DO NOT STORE OR STAGE MATERIALS ON ROOF TRUSSES WITHOUT PRIOR WRITTEN APPROVAL OF TRUSS SYSTEM SPECIALTY ENGINEER. LIFTING AND STAGING OF TRUSSES TO COMPLY WITH SUPPLIERS - FIELD INSTALLATION GUIDE FOR CFS TRUSSES AND CFSEI TECH NOTE 551 d AND e.
13. PERMANENT CFS TRUSS BRACING DESIGN AND CONSTRUCTION TO COMPLY WITH CFSEI TECH NOTE 551e. THE ROOF DECK CAN BE RELIED ON TO SERVE AS TOP CHORD LATERAL BRACING ONCE FULLY INSTALLED PER CONTRACT DOCUMENTS FOR CFSEI TECH NOTE 558 b-1.
14. TEMPORARY CFS TRUSS BRACING DESIGN AND CONSTRUCTION TO COMPLY WITH TECH NOTE 551d. PROVIDE GROUND BRACING AS REQUIRED PER CFSEI TECH NOTE 556 a-6.



2 WIND LOAD DIAGRAM
1/8" = 1'-0"

NOMINAL C&C WIND PRESSURES (ASCE 7-10)

BUILDING	a (FT)	Vult (MPH)	Vasd (MPH)	A (SF)	ZONE 1 (PSF)	ZONE 2 (PSF)	ZONE 3 (PSF)	ZONE 4 (PSF)	ZONE 5 (PSF)
COURTYARD ROOF	5	130	101	<10	+16.0 -23.0	+16.0 -38.5	+16.0 -58.0	+21.0 -22.8	+21.0 -28.0
				20	+16.0 -22.4	+16.0 -34.4	+16.0 -48.0	+20.1 -21.8	+20.1 -26.2
				50	+16.0 -21.6	+16.0 -29.0	+16.0 -34.9	+18.9 -20.6	+18.9 -23.7
				100+	+16.0 -21.0	+16.0 -24.9	+16.0 -24.9	+17.9 -19.7	+17.9 -21.8

NOMINAL C&C WIND PRESSURE PLAN NOTES:

1. PRESSURES SHOWN ABOVE ARE NOMINAL COMPONENTS AND CLADDING PRESSURES, CONVERTED FROM ULTIMATE PRESSURES USING A 0.6 MULTIPLIER FACTOR. NO FURTHER REDUCTION IS ALLOWED.

   A - INDICATES TRIBUTARY AREA IN S.F.
   a - INDICATES END ZONE WIDTH IN FT.
   Vult - INDICATES ULTIMATE DESIGN WIND SPEED IN MPH
   Vasd - INDICATES NOMINAL DESIGN WIND SPEED IN MPH

2. GROSS PRESSURES ARE FOR JOISTS, WINDOWS, DOORS, VENEER, LIGHT GAGE METAL FRAMING, METAL DECK ATTACHMENTS, ROOFING, ROOFING ACCESSORIES AND OTHER BUILDING COMPONENTS AND CLADDING.
3. GROSS PRESSURES SHALL BE LINEARLY INTERPOLATED FOR (A) NOT SHOWN IN TABLE.
4. POSITIVE PRESSURES INDICATE PRESSURES ACTING TOWARD A PROJECTED SURFACE. NEGATIVE PRESSURES INDICATE PRESSURES ACTING AWAY FROM A PROJECTED SURFACE.
5. ROOF AND ZONES (1) THRU (3)
6. WALL ZONES (4) AND (5)
7. NET DESIGN ROOF PRESSURES SHALL BE CALCULATED USING THE SELFWEIGHT (DEAD LOAD) OF THE MATERIALS. HOWEVER, THE MAXIMUM REDUCTION OF WIND UPLIFT PRESSURES SHALL BE LIMITED TO THE SELF WEIGHT OF THE ROOF SYSTEM PLUS 5 PSF FOR SUPERIMPOSED DEAD LOADS.
8. INTERNAL PRESSURE COEFFICIENT FOR ENCLOSED BUILDING EQUALS +0.18 AND -0.18
9. ROOF TOP EQUIPMENT SHALL BE DESIGNED FOR A LATERAL PRESSURE OF XX PSF AND A SIMULTANEOUS UPLIFT PRESSURE OF XX PSF (ROOF TOP EQUIPMENT PER FBC SECTION 1609.8)

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COA #15 TLC NO: 513004

REVISIONS AND UPDATES		
04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW LIVE OAK, FLORIDA
STRUCTURAL NOTES & WIND LOAD DIAGRAM

drawn MFS | checked GCK | approved GCK

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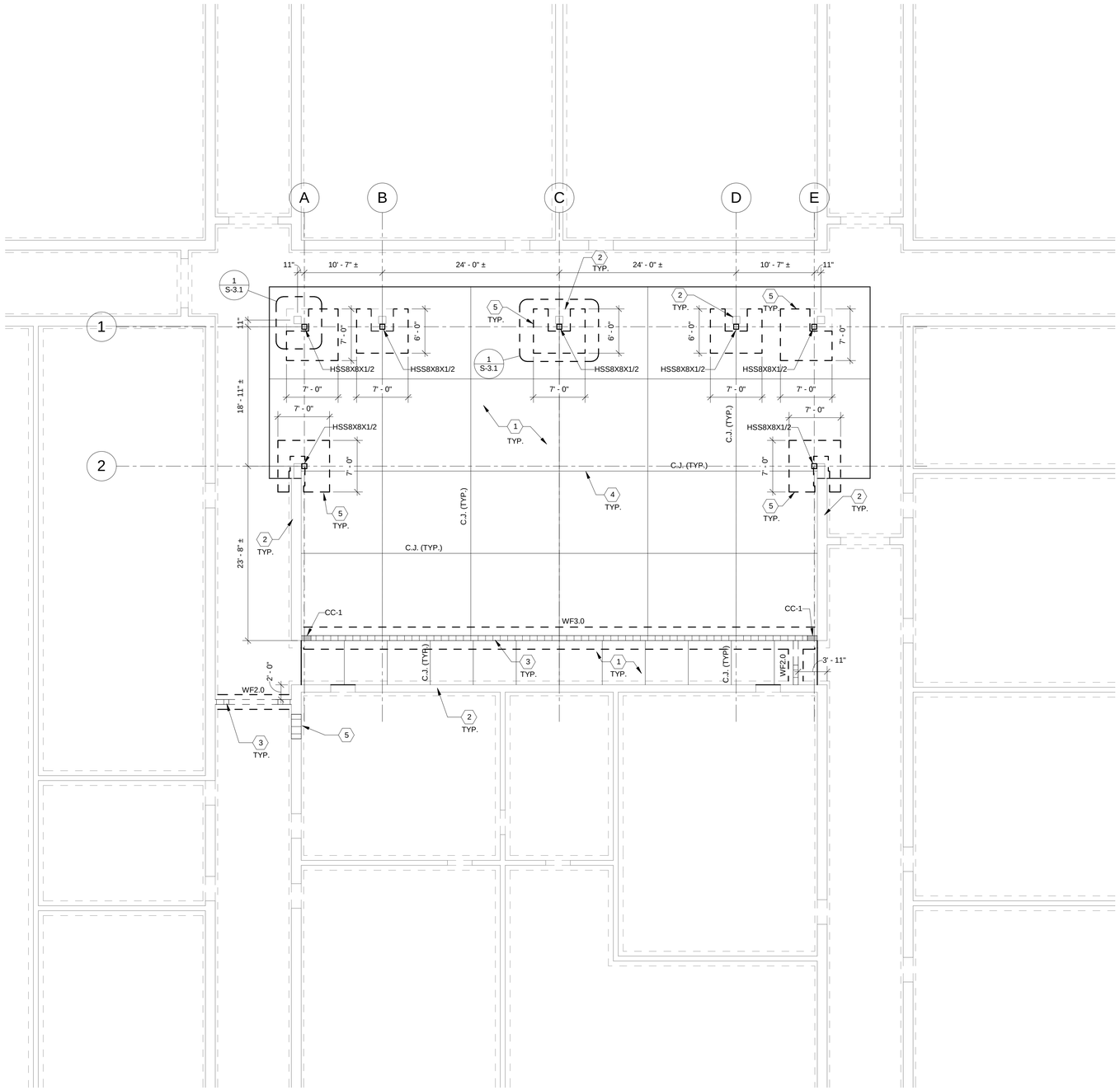

PROJECT NORTH

FOUNDATION PLAN
1/8" = 1'-0"
T/ FOUNDATION EL. 98'-0"± MATCH EXISTING
T/ SLAB EL. 100'-0" (REF) MATCH EXISTING

FOUNDATION PLAN NOTES

1. 4" CONCRETE SLAB R/W MACRO-SYNTHETIC FIBERS ON 15 MIL CLASS A VAPOR BARRIER ON COMPACTED SUBGRADE.
2. EXISTING STRUCTURE, FIELD VERIFY. SEE ARCH DWGS FOR DEMO PLAN.
3. 8" CMU LOAD BEARING WALL REINFORCED WITH #5 @ 32" O.C. AND AT WALL CORNERS, TERMINATIONS, DOOR JAMBS AND INTERSECTIONS IN GROUT FILLED CELLS.
4. PROVIDE SAW CUT CONTROL JOINTS (C.J.) AT LOCATIONS INDICATED ON PLANS THROUGHOUT ENTIRE SLAB ON GRADE, SEE TYPICAL SLAB ON GRADE CONTROL JOINT DETAIL FOR REQUIREMENTS.
5. NEW COLUMN FOUNDATION. POURED UP AGAINST EXISTING FOUNDATION. CLEAN AND ROUGHEN SIDES OF EXISTING FOUNDATIONS, AND BOND TO NEW FOUNDATION USING AN EPOXY BONDING AGENT. DRILL AND EPOXY DOWELS FROM NEW INTO EXISTING FOUNDATION. NEW FOUNDATION SHALL BE AT LEAST 16" THICK, MATCH EXISTING IF THICKER. NEW FOUNDATIONS SHALL BE REINFORCED WITH #6 BARS @ 12" O.C. EACH WAY, TOP AND BOTTOM. SEE DETAILS FOR MORE INFORMATION.

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

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SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW LIVE OAK, FLORIDA

FOUNDATION PLAN

drawn MFS | checked GCK | approved GCK

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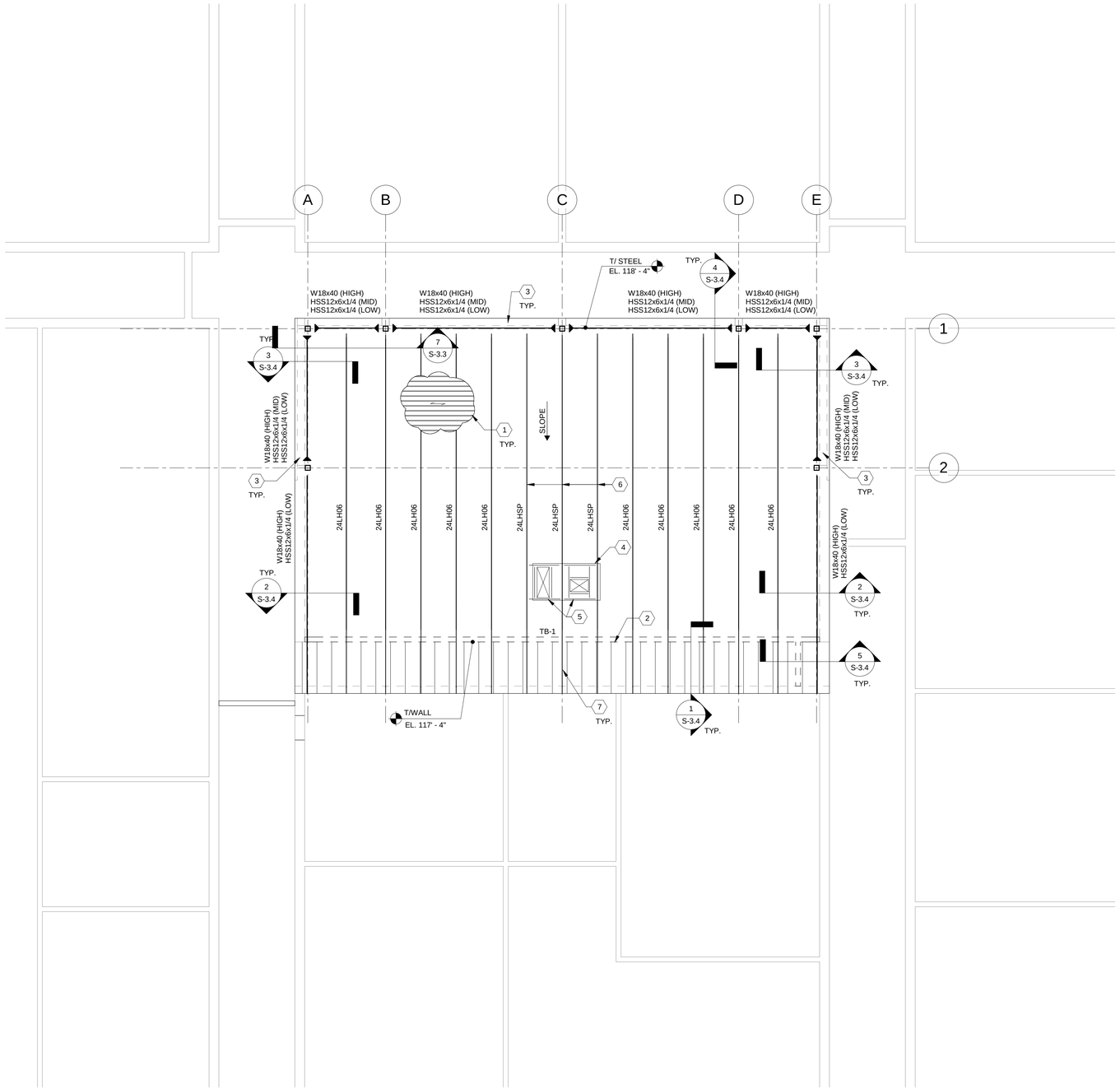

ROOF FRAMING PLAN NOTES

1. 1/2" 20 GA TYPE "B" ROOF DECK FASTENED TO STRUCTURE W/ 5/8" DIA. PUDDLE WELDS IN A 36/4 PATTERN W/ (3)-#10 TEKS AT SIDELAPS.
2. 8" CMU WALL BELOW, SEE FOUNDATION PLAN FOR REINFORCING REQUIREMENTS.
3. EXISTING CONCRETE TIE BEAM
4. ROOF TOP UNIT, SEE MECH'L. ASSUMED WEIGHT OF RTU AND CURB IS 3000 LB. COORDINATE DIMENSIONS AND WEIGHT OF EQUIPMENT SELECTED WITH STEEL FRABRICATOR. ANCHOR CURB TO SUPPORT FRAMING USING 1/2"Ø BOLTS @ 24" O.C. AROUND PERIMETER OF CURB.
5. SUPPLEMENTAL FRAMING UNDER RTU CURB AND AROUND DUCT PENETRATIONS THROUGH ROOF DECK. SEE TYPICAL DETAILS.
6. DESIGN 24" DEEP LH JOIST TO SUPPORT TYPICAL 24LH06 LOADING, PLUS WEIGHT OF RTU.
7. FULL-DEPTH JOIST END EXTENSION, DESIGNED FOR SAME LOADING AS TYPICAL 24LH06

PROJECT NORTH

ROOF FRAMING PLAN
1/8" = 1'-0"

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

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SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW LIVE OAK, FLORIDA
ROOF FRAMING PLAN

drawn	checked	approved
MFS	GCK	GCK

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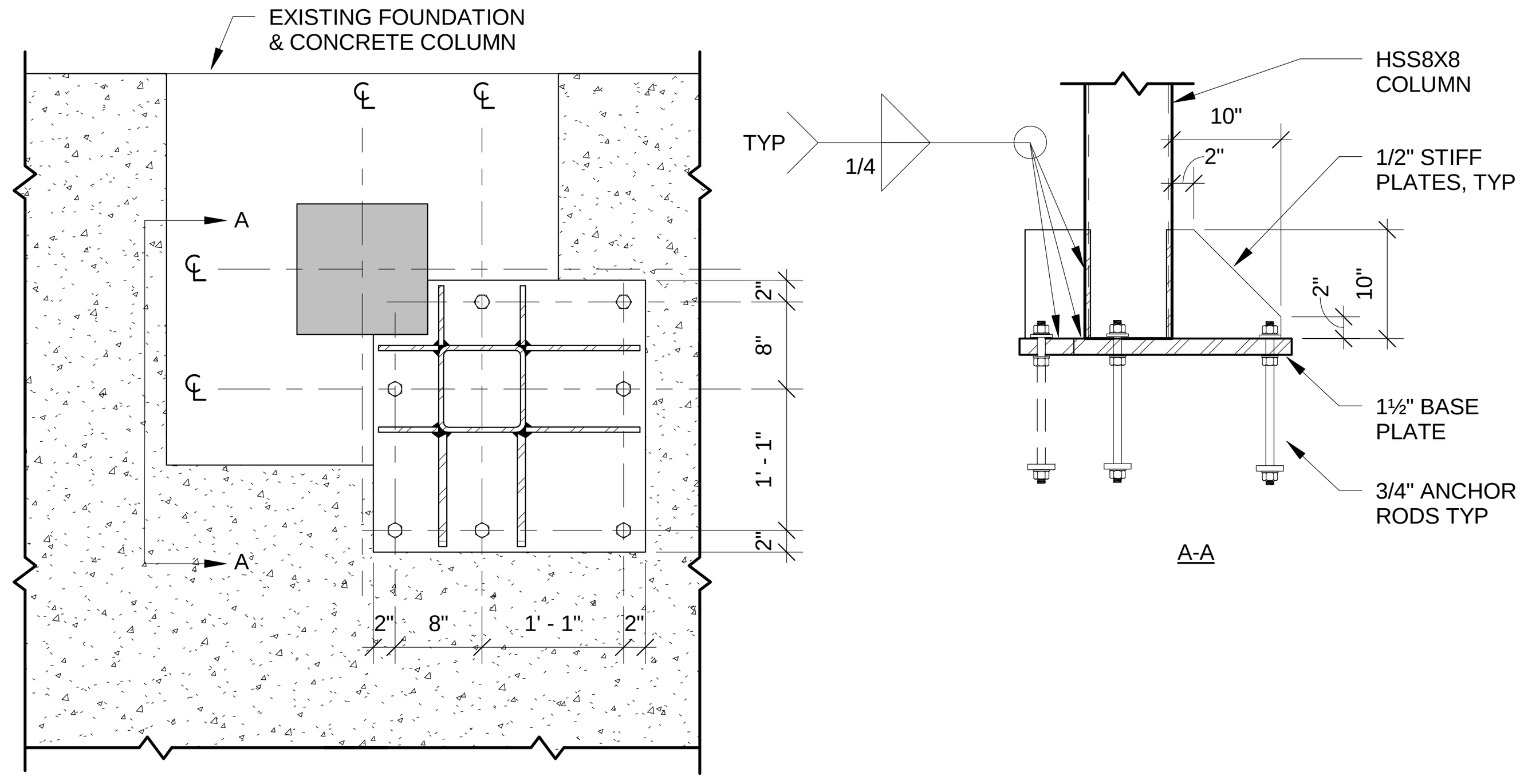
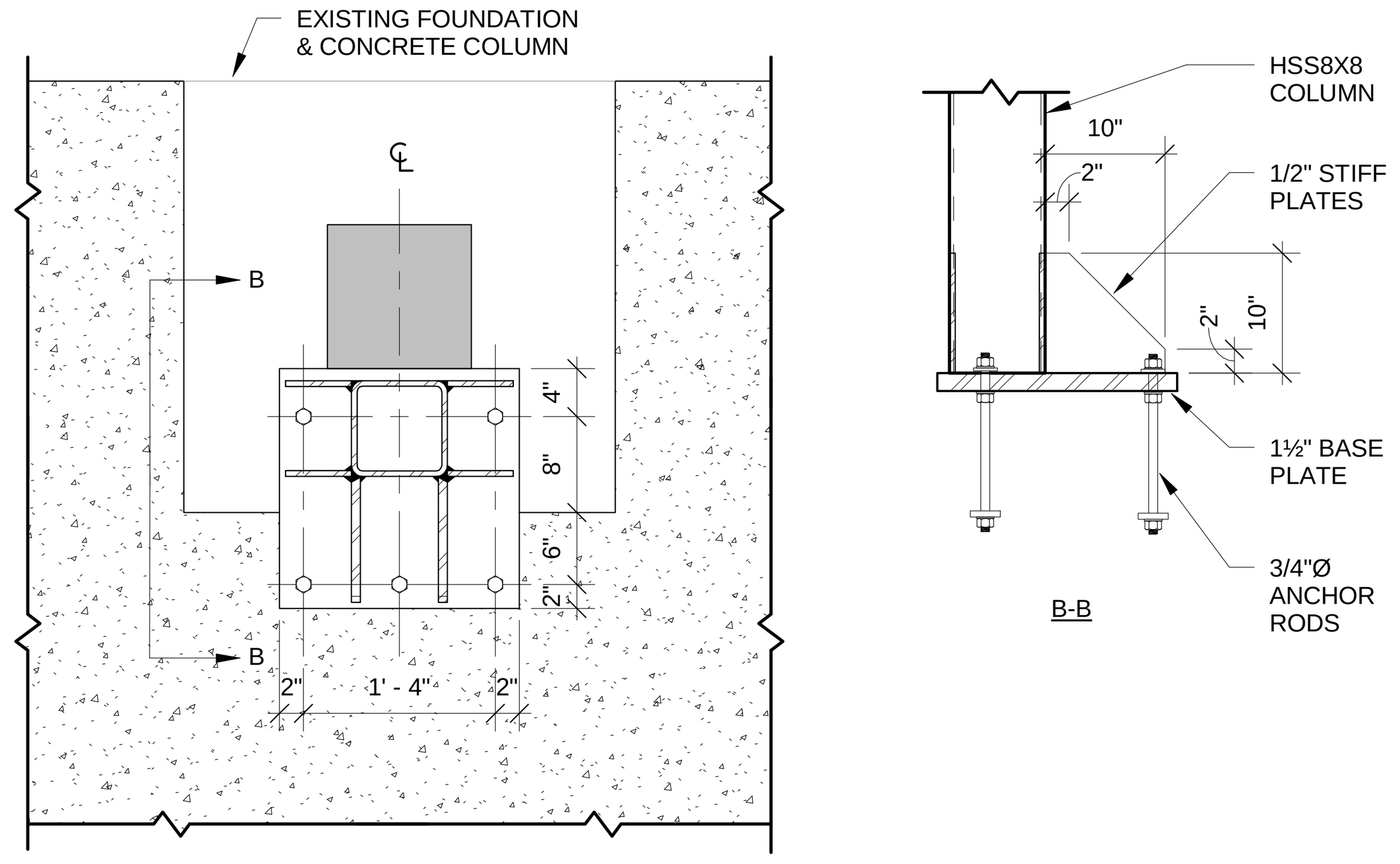
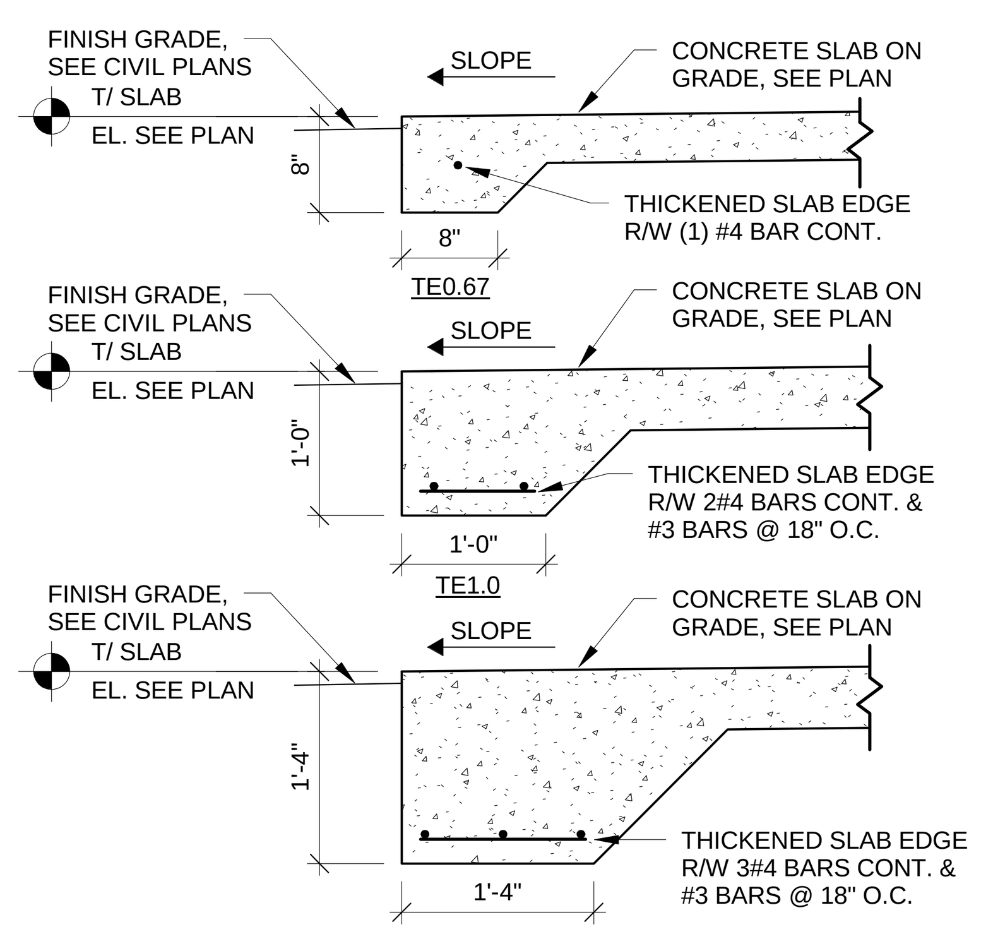


TYPICAL HSS8X8 COLUMN BASE PLATE AT CORNER COLUMNS



TYPICAL HSS8X8 COLUMN BASE PLATE AT INTERMEDIATE COLUMNS

1 TYPICAL BASE PLATE DETAILS
3/4" = 1'-0"



2 THICKENED SLAB EDGE DETAIL (TE0.67 & TE1.0)
3/4" = 1'-0"

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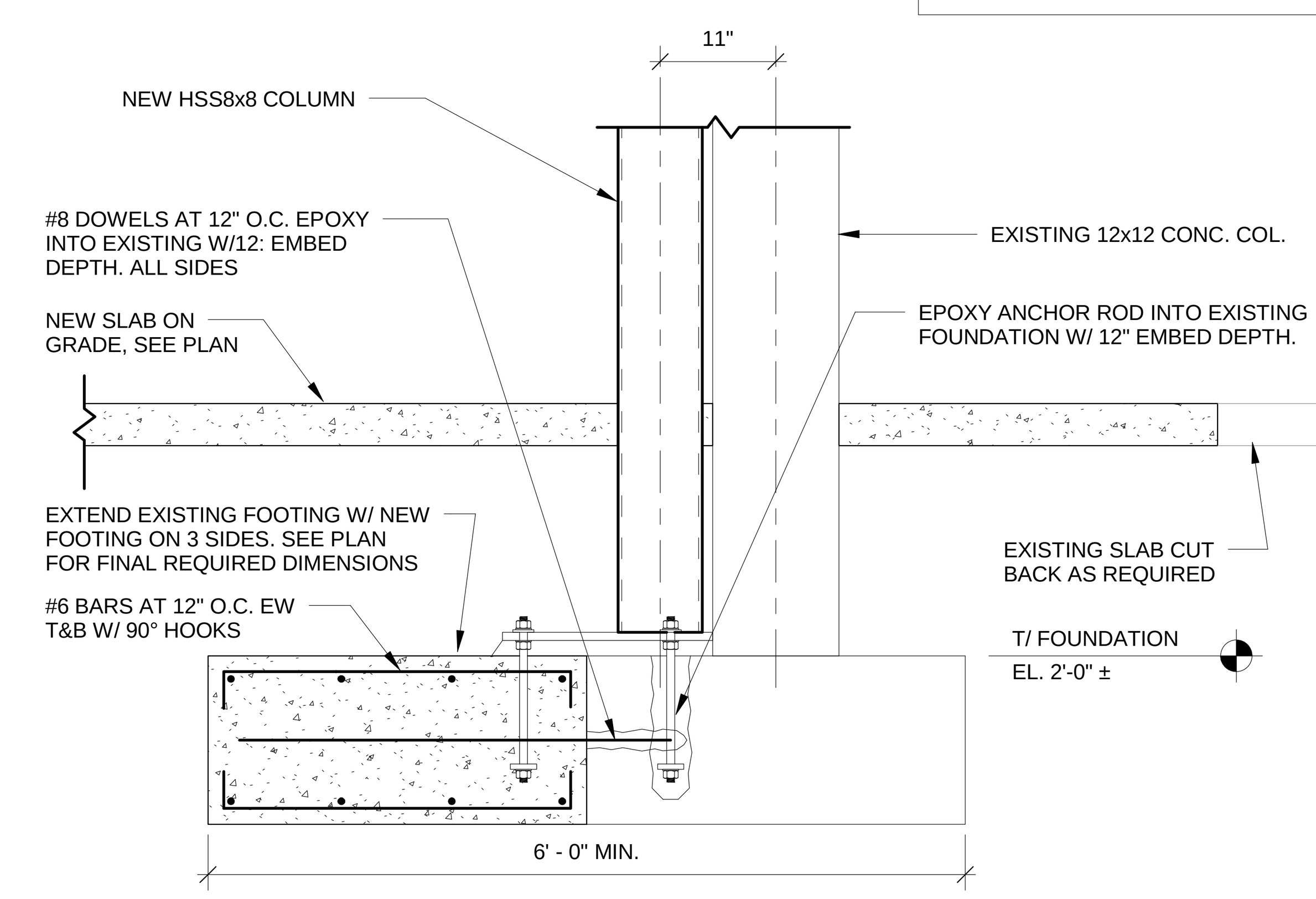
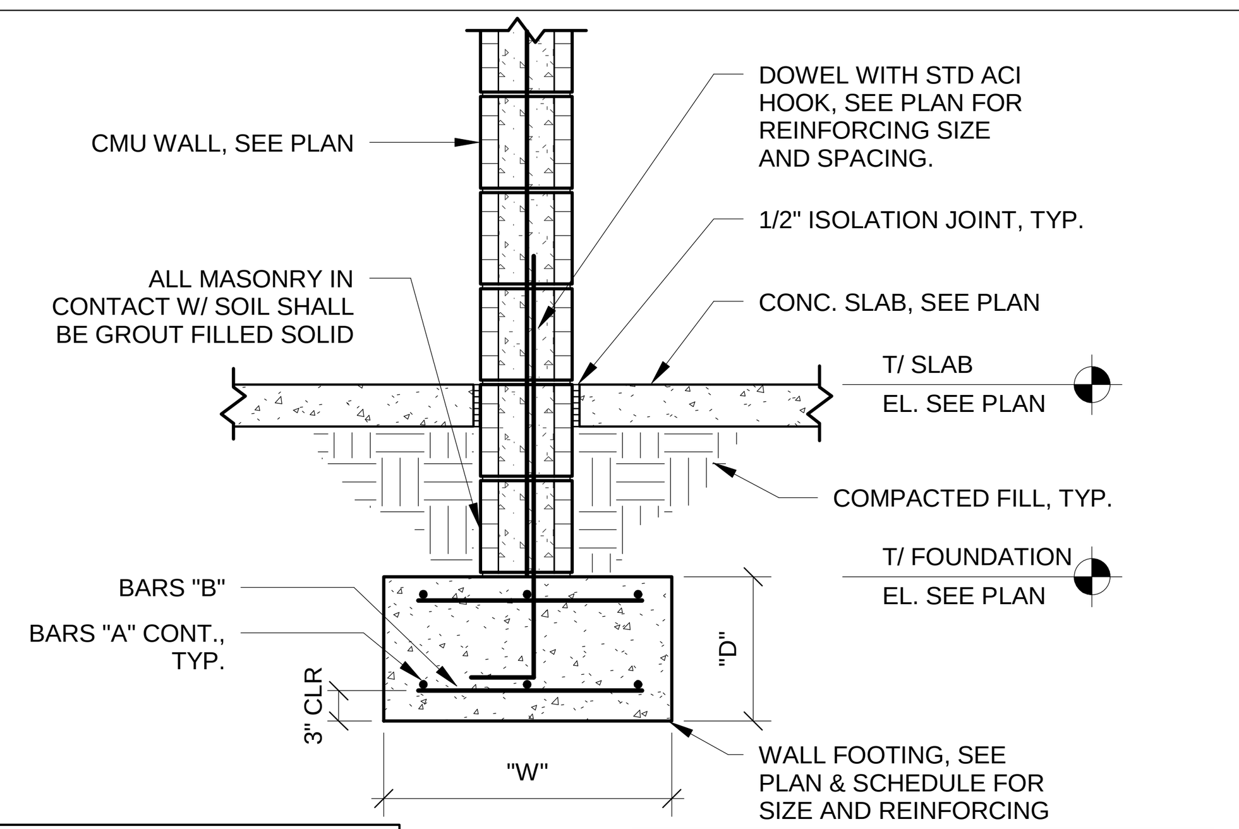


3 SECTION AT COLUMN FOUNDATION
3/4" = 1'-0"



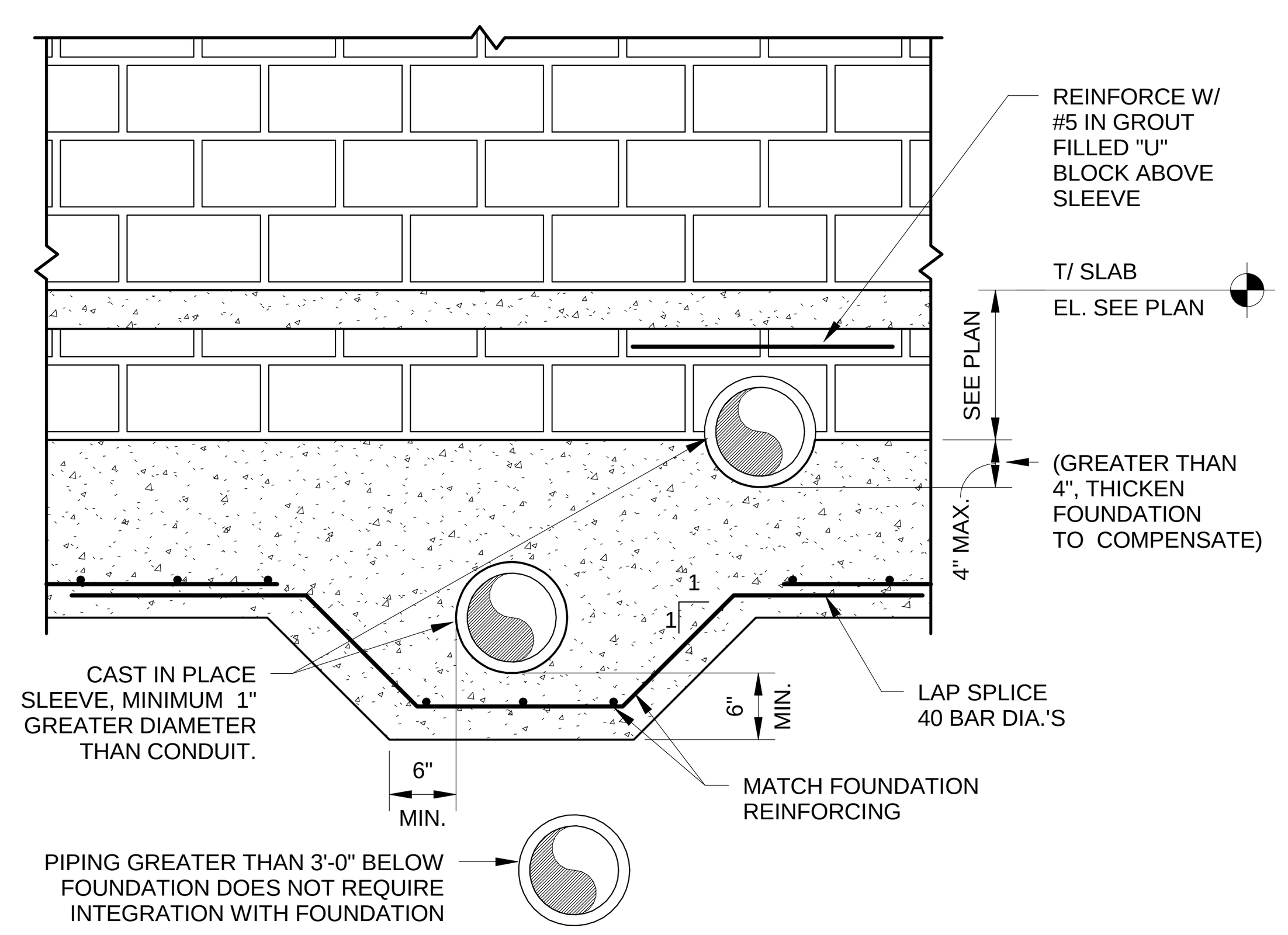
SEE MASONRY WALL DETAIL
FOR ADDITIONAL INFORMATION

NOTE: REFER TO PLAN FOR SIZE AND
SPACING OF VERTICAL WALL REINFORCING.

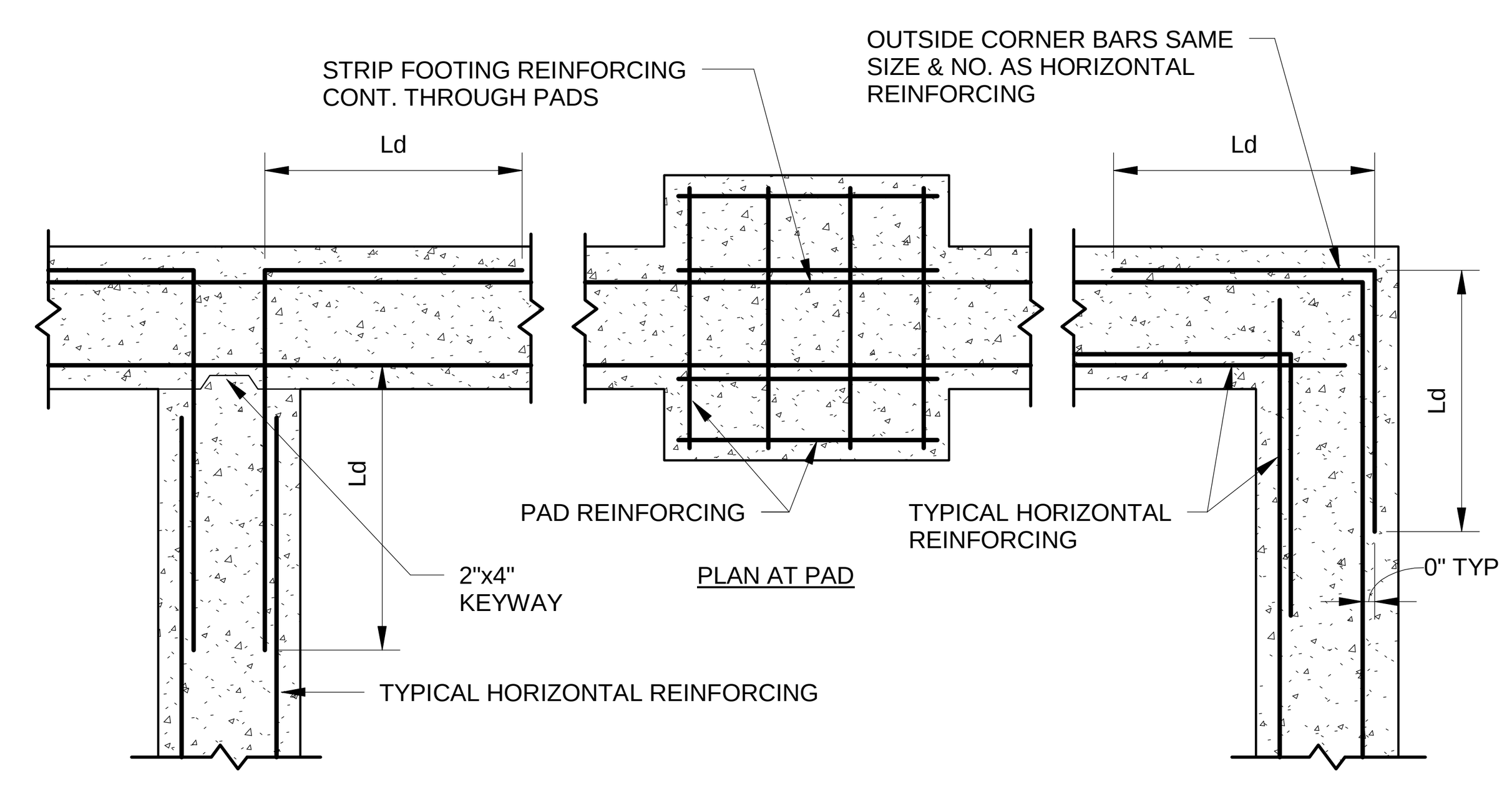
WALL FOUNDATION SCHEDULE

FOUNDATION DESIGNATION	DIMENSIONS "W"	DIMENSIONS "D"	REBAR "A"	REBAR "B"	REMARKS
WF2.0	2'-0"	1'-0"	3#5	#5 @ 12" O.C.	
WF3.0	3'-0"	1'-4"	4#5	#5 @ 12" O.C.	BARS T&B

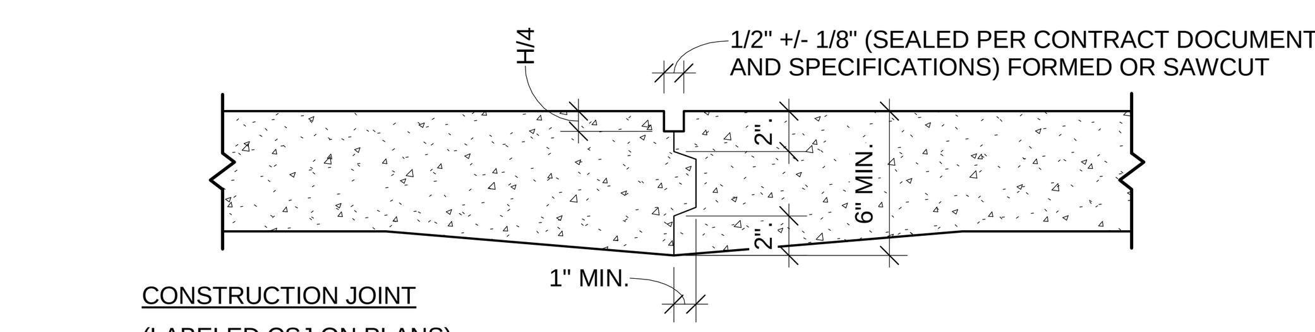
4 TYPICAL SECTION AT INTERIOR CMU WALL FOUNDATION
3/4" = 1'-0"



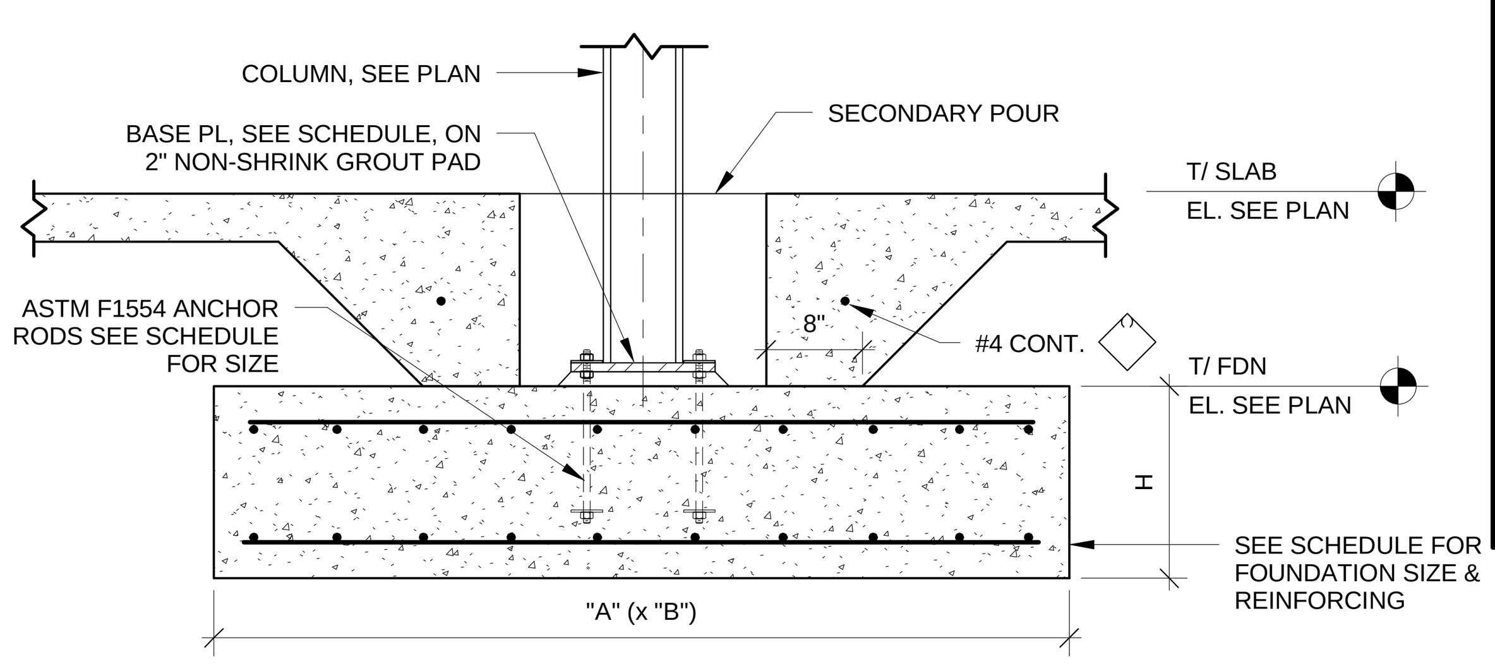
5 TYPICAL FOUNDATION CONDUIT SLEEVE
3/4" = 1'-0"



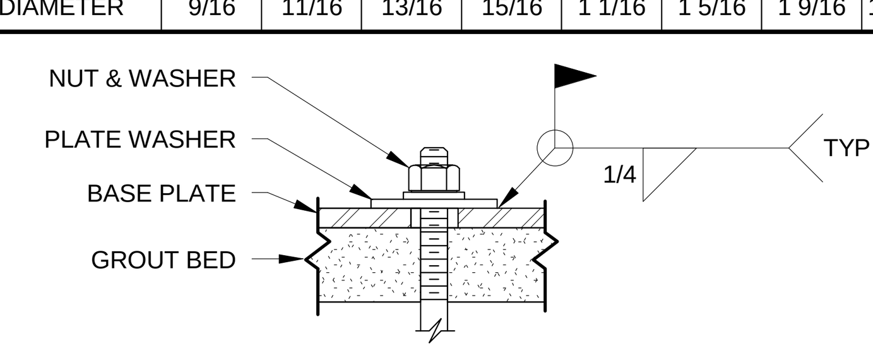
6 TYPICAL HORIZ. REINF. - CONC. BEAMS AND FOUNDATIONS
3/4" = 1'-0"



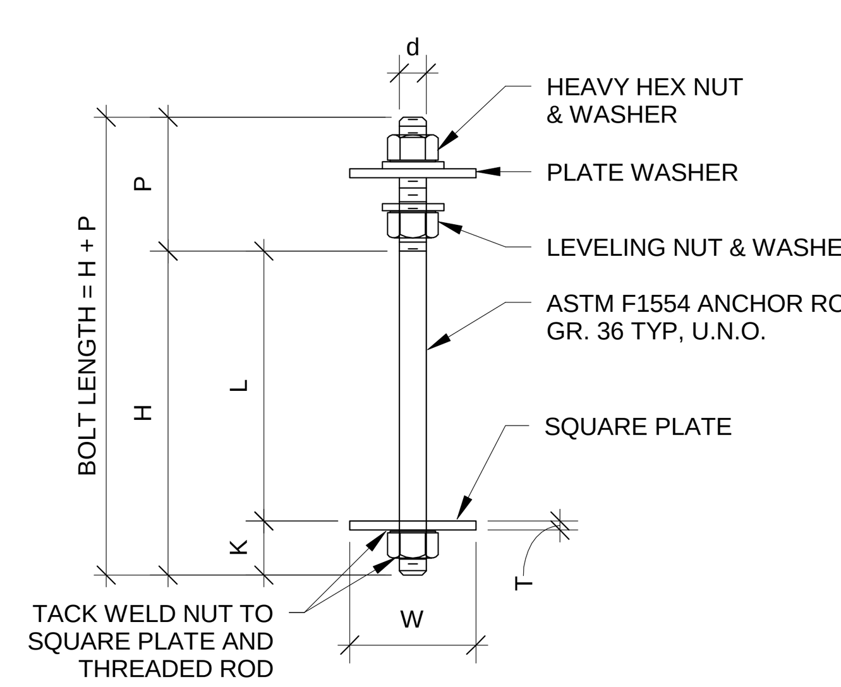
7 TYPICAL SLAB ON GRADE CONTROL JOINTS
3/4" = 1'-0"



LETTERED DIMENSIONS		ANCHOR ROD DIAMETER (F1554 GR. 36)							
		1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4
BASE PL HOLE DIA.		1	1 1/8	1 5/16	1 9/16	1 13/16	2 1/16	2 5/16	2 3/4
SQUARE PLATE	W	2	2	2 1/2	2 3/4	3	4 1/4	4 1/2	5 1/2
	T	1/2	1/2	1/2	3/4	3/4	1	1	1
	HOLE DIA.	5/8	3/4	7/8	1	1 1/8	1 3/8	1 5/8	1 7/8
L		5 1/2	7 1/2	12	14	15	16	16	16
H		7	9	14	16	17	18 1/2	19	19 1/2
K		1 1/2	1 1/2	2	2	2	2 1/2	3	3 1/2
P (MIN)		5		6			8		
PLATE WASHER		1/4"x2"x2"			1/4"x3"x3"			1/4"x4"x4"	
HOLE DIAMETER		9/16	11/16	13/16	15/16	1 1/16	1 5/16	1 9/16	1 13/16



BOLT PROJECTION



ALL ANCHOR RODS, NUTS, WASHERS AND PLATES SHALL
BE HOT DIP GALVANIZED AND SHIPPED AS COMPLETE
ASSEMBLIES BY THE FABRICATOR.

8 TYPICAL STEEL COLUMN SPREAD FOUNDATION
3/4" = 1'-0"

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SUWANNEE HIGH SCHOOL COURTYARD RENOVATION
1314 PINE AVE., SW LIVE OAK, FLORIDA

SECTIONS AND DETAILS

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job no.
S-3.1
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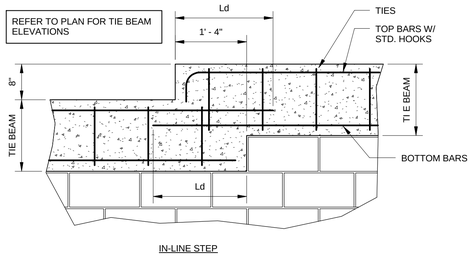
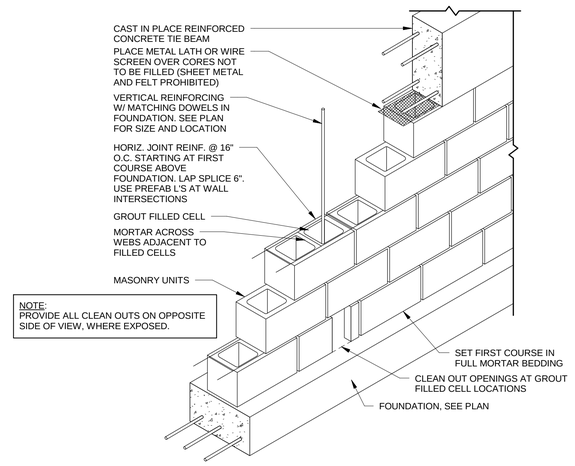
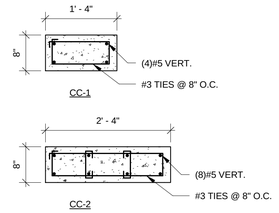


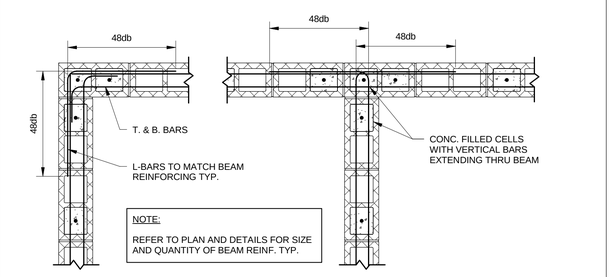
1 TYPICAL STEPPED TIE BEAM DETAIL
3/4" = 1'-0"



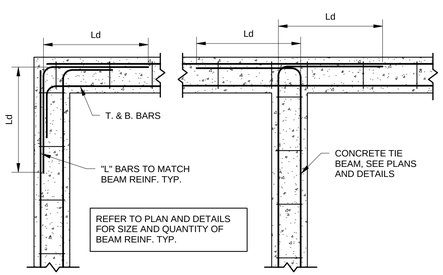
2 TYPICAL MASONRY WALL CONSTRUCTION
3/4" = 1'-0"



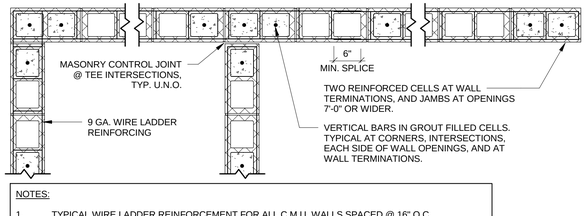
22 CONCRETE COLUMN DETAIL
3/4" = 1'-0"



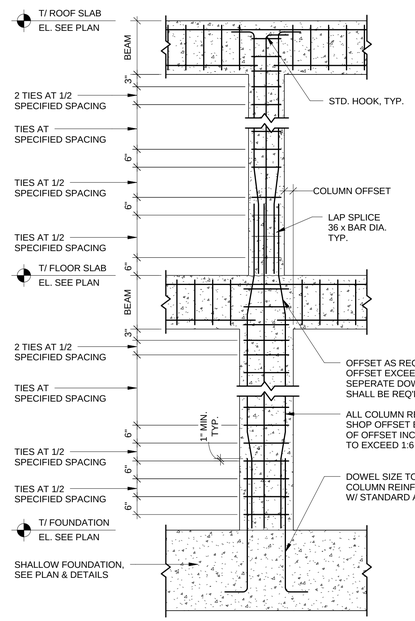
4 TYPICAL BOND BEAM AND CORNER REINFORCING
3/4" = 1'-0"



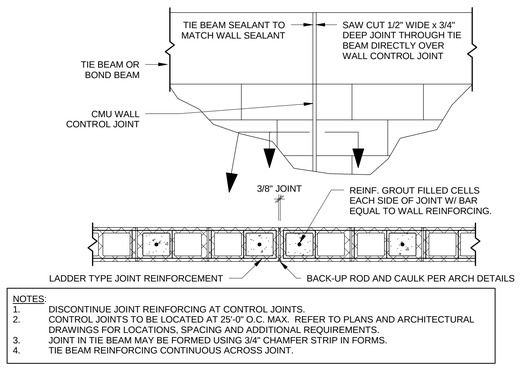
5 TYPICAL CONC. TIE BEAM CORNER REINF.
3/4" = 1'-0"



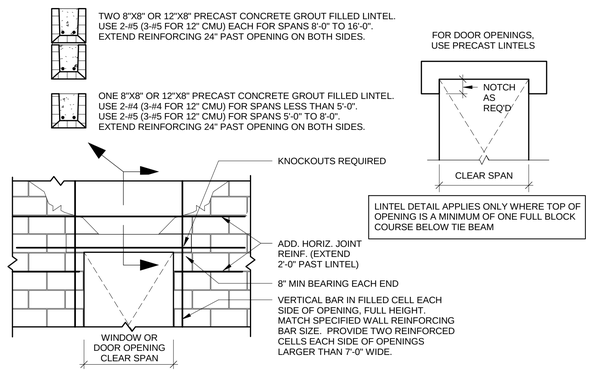
6 TYPICAL HORIZONTAL WALL REINFORCING / VERTICAL CORNER REINFORCING
3/4" = 1'-0"



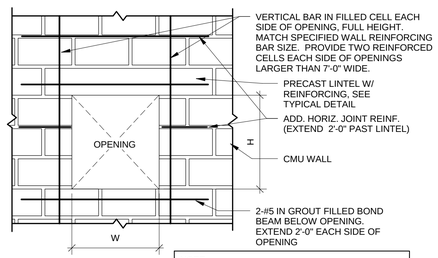
7 TYPICAL 2 STORY CONCRETE COLUMN
3/4" = 1'-0"



8 TYPICAL MASONRY CONTROL JOINT
3/4" = 1'-0"



9 TYPICAL MASONRY WALL OPENING LINTEL DETAIL
3/4" = 1'-0"



10 TYPICAL MASONRY WALL OPENING REINFORCING
3/4" = 1'-0"

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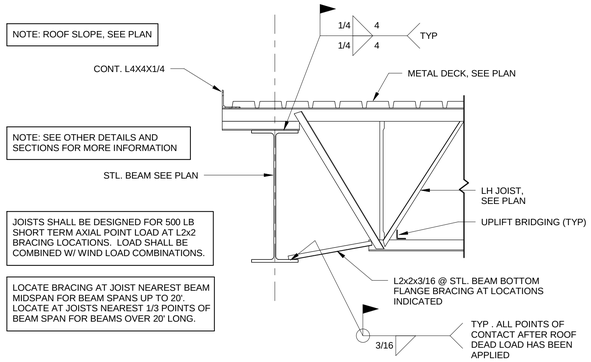
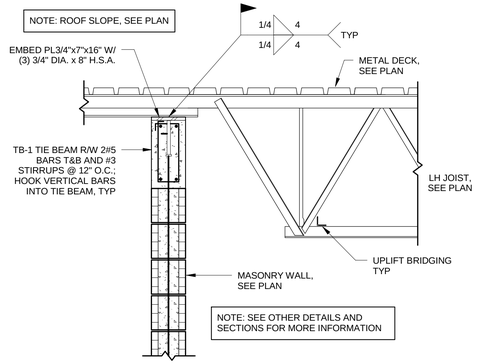
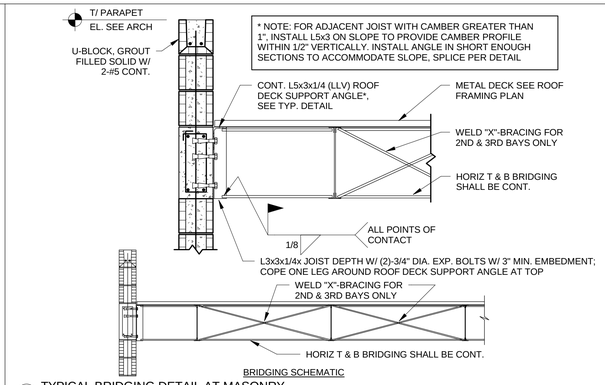


1 TYPICAL "LH" JOIST SUPPORT CONNECTION AT ROOF GIRDER
3/4" = 1'-0"



2 TYPICAL "LH" JOIST SUPPORT CONNECTION AT WALL
3/4" = 1'-0"



3 TYPICAL BRIDGING DETAIL AT MASONRY
3/4" = 1'-0"

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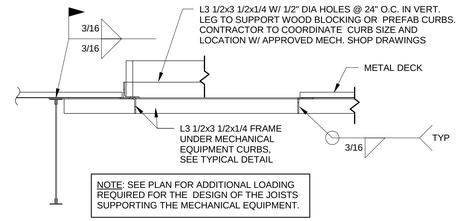
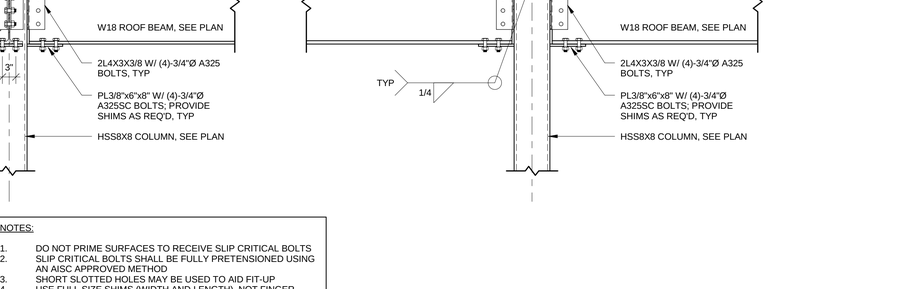


4 TYPICAL MECH. EQUIPMENT SUPPORT / ROOF HATCH
3/4" = 1'-0"



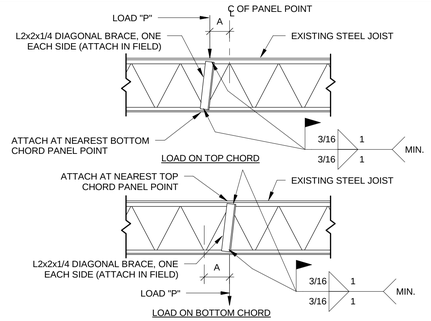
SMALL OPENING

OPENING SMALLER THAN 12" SQ. LARGER THAN 6" SQ.

LARGE OPENING

LARGER THAN 12" SQ. OR ROUND

5 TYPICAL ROOF OPENING DETAIL
3/4" = 1'-0"



NOTES:

1. DIAGONAL BRACE IS NOT REQUIRED FOR "A" LESS THAN TWO INCHES.
2. PROVIDE DIAGONAL BRACE AT LOCATION OF CONCENTRATED LOADS SUCH ASPARTITIONS, HEAVY PIPES, MECHANICAL UNITS, HEAVY LIGHTS AND ANY OTHER CONCENTRATED LOADS AS DIRECTED BY ENGINEER.
3. P = CONCENTRATED LOAD GREATER THAN 100 LBS.

6 TYPICAL JOIST REINFORCING
3/4" = 1'-0"

NOTES:

1. DO NOT PRIME SURFACES TO RECEIVE SLIP CRITICAL BOLTS
2. SLIP CRITICAL BOLTS SHALL BE FULLY PRETENSIONED USING AN AISC APPROVED METHOD
3. SHORT SLOTTED HOLES MAY BE USED TO AID FIT-UP
4. USE FULL SIZE SHIMS (WIDTH AND LENGTH), NOT FINGER SHIMS, UNDER SLIP CRITICAL BOLTS

7 TYPICAL ROOF AND INTERMEDIATE BEAM TO COLUMN CONNECTIONS
3/4" = 1'-0"

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SECTIONS AND DETAILS

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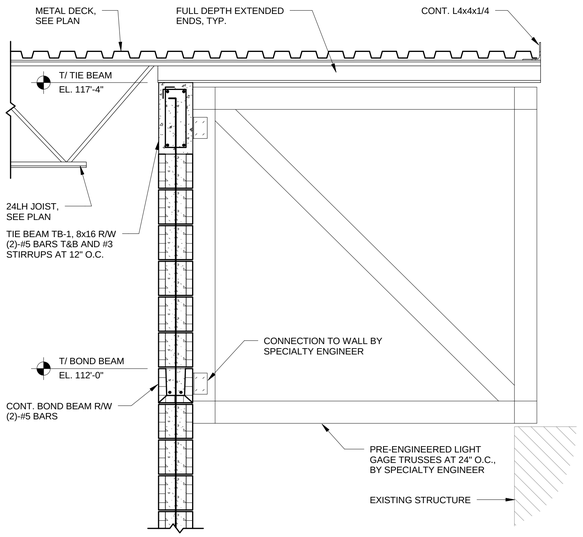
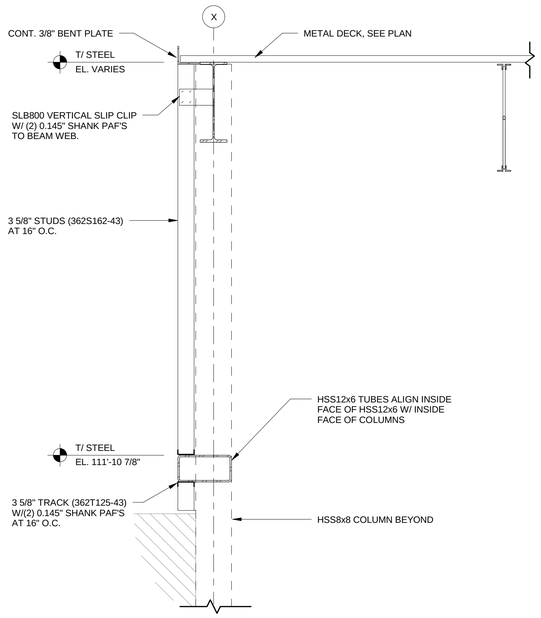
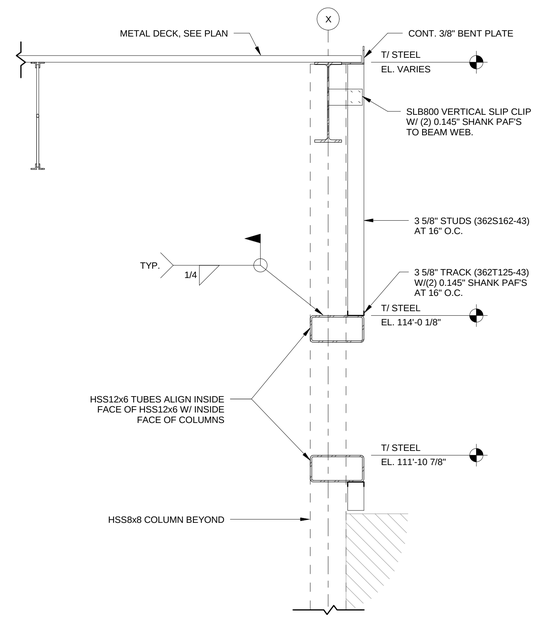


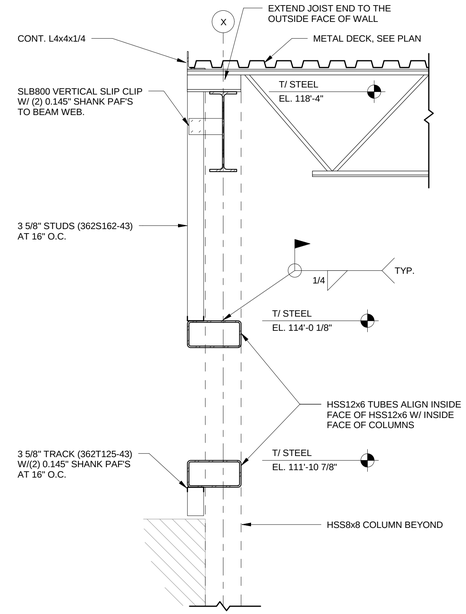
1 SECTION AT LIGHT GAGE TRUSS
3/4" = 1'-0"



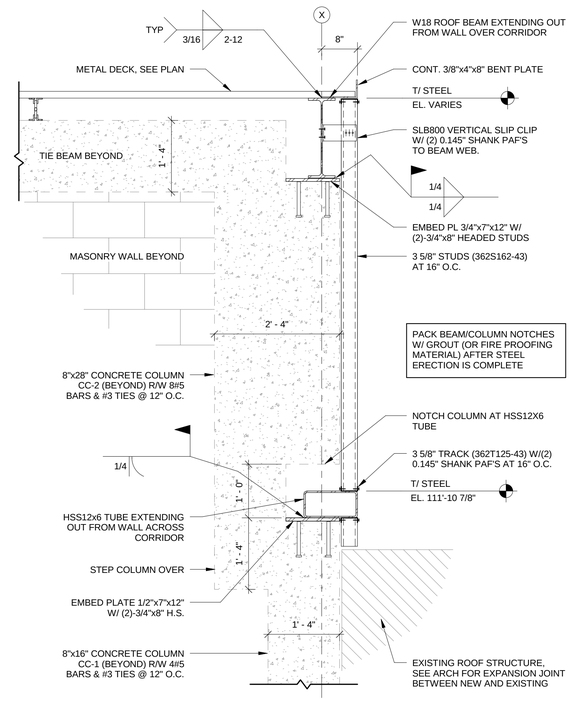
2 SECTION AT SOUTH ROOF FRAMING
3/4" = 1'-0"



3 SECTION AT NORTH FRAMING
3/4" = 1'-0"



4 SECTION AT JOIST BEARING
3/4" = 1'-0"



5 SECTION AT NEW WALL PENETRATION
3/4" = 1'-0"

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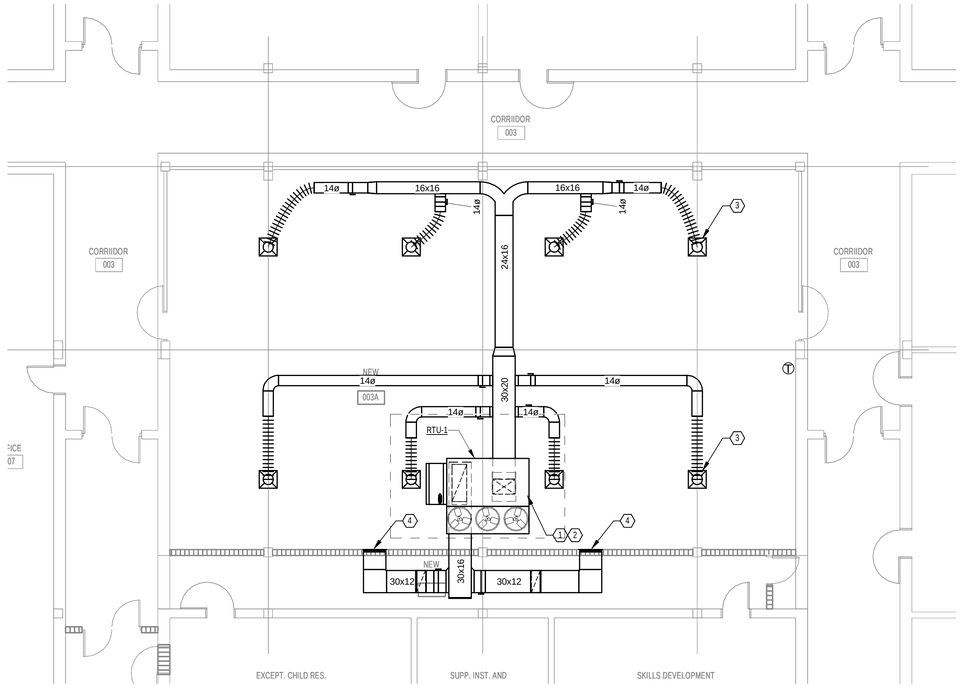
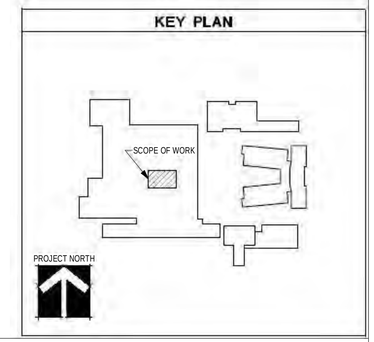


MECHANICAL NEW WORK PLAN
1/8" = 1'-0"

REFERENCE NOTES

1. RTU-1 TO BE MOUNTED ON ROOF. EXACT LOCATION OF UNIT TO BE DETERMINED BY JOIST SPACE. CENTER DISCHARGE AND INTAKE OF UNIT BETWEEN JOISTS.
2. ROUTE 1-1/2" CONDENSATE PIPING TO NEAREST ROOF DRAIN. SLOPE PIPING IN ACCORDANCE WITH 2010 FLORIDA PLUMBING CODE. PROVIDE PIPE SUPPORT EQUAL TO COPPER B-LINE DURA-BLOK DB SERIES. INSTALL PER MANUFACTUERERS RECOMMENDATIONS.
3. TITUS MODEL TMSA SUPPLY DIFFUSER OR APPROVED EQUAL WITH 14" NECK. BALANCE DIFFUSER TO 655 CFM. TYPICAL OF 8.
4. TITUS MODEL 301FL 30x12 WALL MOUNTED RETURN GRILLE OR APPROVED EQUAL. BALANCE TO 1380 CFM.



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MECHANICAL FLOOR PLAN

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JPM	JHM	JPM

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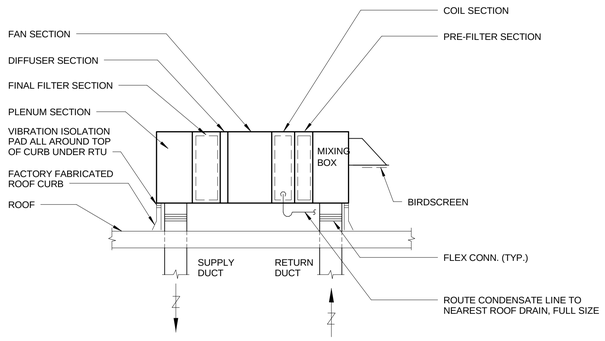
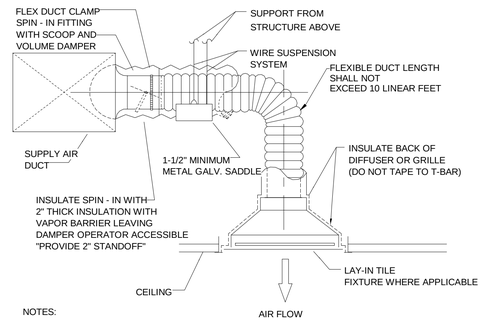


NOTE: ALL ROOF MOUNTED EQUIPMENT MUST ADHERE TO CURRENT HURRICANE CODES REGARDING ROOF TIE-IN AND WIND RESISTANCE.

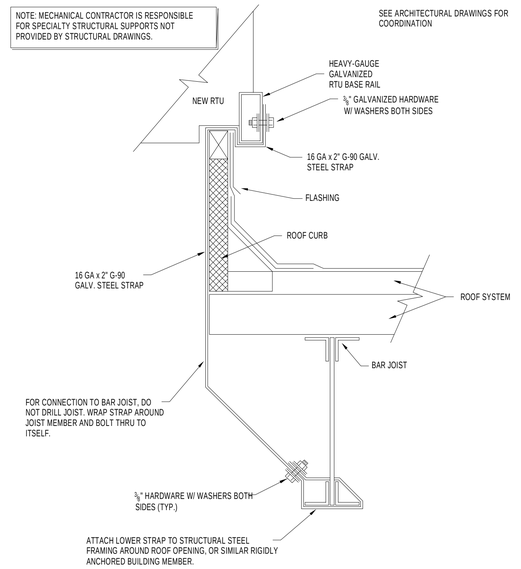
ROOFTOP UNIT
12" = 1'-0"



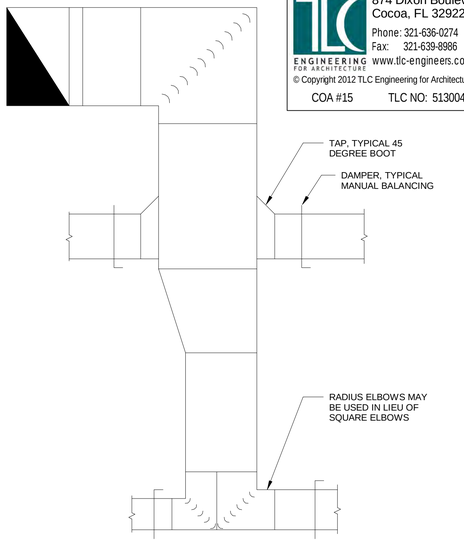
NOTES:

1. IF DUCT DOES NOT SUPPORT THE SPIN IN FITTING SIZE, IF SPACE ALLOWS FOR FLEX TO BE KINK FREE TAKE OFF FROM THE BOTTOM OF DUCT, IF NOT TAKE OFF FROM DUCT WITH BEVELED TAP WITH VOLUME DAMPER IN DUCT AND TRANSITION TO FLEX DUCT.
2. SEAL ALL NECK CONNECTIONS AT THE DIFFUSER.

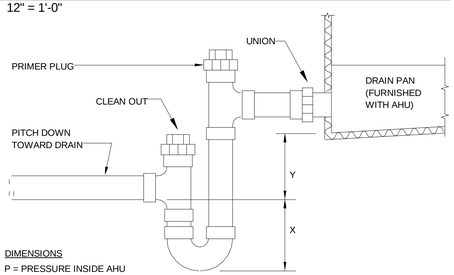
TYPICAL DIFFUSER CONNECTION DETAIL
12" = 1'-0"



RTU TIE DOWN
12" = 1'-0"



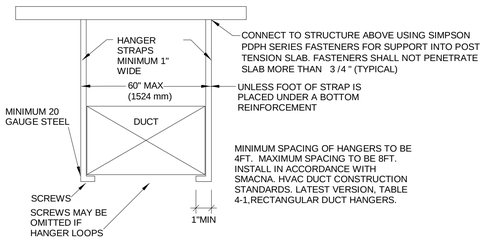
TYPICAL PRESSURE DUCTWORK
12" = 1'-0"



DIMENSIONS

P = PRESSURE INSIDE AHU CASING (IN. WG)
Y = P + 2"
X = Y

CONDENSATE DRAIN TRAP DETAIL
12" = 1'-0"



TYPICAL DUCT SUPPORT DETAIL
12" = 1'-0"

ROOF TOP UNIT SCHEDULE

Mark	MANUFACTURER	MODEL	NOM. TONS	OA CFM	SUPPLY FAN				COOLING DATA						HEATING DATA					ELECTRICAL DATA				WEIGHT (LBS)
					TOTAL CFM	Drive Type	ESP (IN WG)	BHP	TOT. MBH	SENS MBH	EAT DB	EAT WB	LAT DB	LAT WB	CFM	KW	EAT DB	LAT DB	STEPS	VOLT / PHASE	MCA	MOCP	EER	
RTU-1	AAON	RN-025-3-0-EB0A-16A	25	2480	5240	BELT	0.75 in-wg	2.23	302.52	167.5	83.5	71.4	52.1	51.9	2620	60	22.4	90	6	460 / 3	78	90	11.7	2750

NOTES:

1. RTU SHALL BE OWNER PROVIDED CONTRACTOR INSTALLED. RTU WILL BE PROVIDED WITH VFD AND ROOF CURB. CONTRACTOR WILL COORDINATE PURCHASE OF ASSOCIATED CONTROLS PACKAGE WITH OWNER.
2. RTU CAPABLE OF 50% TURN DOWN ON SUPPLY FAN.
3. 2-POSITION (OPEN/CLOSED) OUTSIDE AIR DAMPER SHALL BE BALANCED TO SCHEDULED CFM.
4. RETURN AIR DAMPER SHALL BE FULLY MODULATING TO MAINTAIN CONSTANT OUTSIDE AIR FLOW.

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ELECTRICAL SYMBOL LEGEND

BASIC MATERIALS

SYMBOL	DESCRIPTION
S_a	SINGLE POLE SWITCH (SUBSCRIPT INDICATES ITEM CONTROLLED)
S_3	THREE-WAY SWITCH
S_4	FOUR-WAY SWITCH
S_P	SINGLE POLE SWITCH WITH PILOT LIGHT
S_{WP}	SINGLE POLE SWITCH WITH WEATHERPROOF COVER
S_{WPL}	SINGLE POLE SWITCH WITH WEATHERPROOF LOCKING COVER
S_K	SINGLE POLE KEY SWITCH
S_{Kov}	SINGLE POLE KEY SWITCH WITH PHOTOCELL OVERRIDE
	WALL MOUNTED OCCUPANCY SENSOR
OS	CEILING MOUNTED OCCUPACY SENSOR
S_L	SINGLE POLE SWITCH WITH SECURITY LOCKING KEY
S_{LV}	LOW VOLTAGE SWITCH
S_F	FAN SWITCH
S_M	MANUAL MOTOR STARTER WITH OVERLOAD HEATERS
S_{MP}	MANUAL MOTOR STARTER WITH OVERLOAD HEATERS AND PILOT LIGHT
S_D	DIMMER SWITCH (1500 WATTS UNLESS OTHERWISE INDICATED)
	DUPLEX RECEPTACLE
T	TWIST LOCK RECEPTACLE
SP	SURGE PROTECTION TYPE (TVSS) DUPLEX RECEPTACLE
	PEDESTAL MOUNTED RECEPTACLE
	FLOOR OUTLET BOX AND DUPLEX RECEPTACLE WITH APPROPRIATE FLANGE.
	FLOOR OUTLET BOX WITH TWO DUPLEX RECEPTACLES AND ONE COMBINATION W/ VOICE/DATA OUTLET
	DUPLEX RECEPTACLE WITH EACH HALF ON SEPARATE CIRCUIT (BREAKER SHALL BE TWO POLE WITH COMMON TRIP)
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER
	DUPLEX SAFETY RECEPTACLE MOUNT COVERPLATES WITH SPANNER HEAD SCREWS
	DUPLEX RECEPTACLE WITH TOP HALF SWITCHED
EWC	SIMPLEX RECEPTACLE (EWC DENOTES ELECTRIC WATER COOLER. COORDINATE WITH EWC INSTALLER FOR MOUNTING HEIGHT)
WP	GFI RECEPTACLE. WP DENOTES WEATHERPROOF COVER.
	GFI RECEPTACLE MOUNTED ABOVE COUNTER
	TWO DUPLEX RECEPTACLES WITH COMMON COVER
	TWO DUPLEX RECEPTACLES WITH COMMON COVER MOUNTED ABOVE COUNTER
IG	ISOLATED GROUND DUPLEX RECEPTACLE, (ORANGE DEVICE)
C	CLOCK RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE, RATING AS NOTED
	LIGHTING CONTROL TIME CLOCK
	PHOTOCELL, MOUNTED ON ROOF FACING NORTH
GND	GROUND BAR
	PLUG-IN STRIP WITH RECEPTACLES, 18" O.C. UNLESS OTHERWISE INDICATED
J	JUNCTION BOX
	CONDUIT SEAL-OFF FITTINGS
SS C3	SURGE SUPRESSOR C3 = SERVICE ENTRANCE DEVICE B3 = DISTRIBUTION BOARD DEVICE A3 = PANELBOARD DEVICE
ST	SHUNT-TRIP BUTTON - FLUSH MOUNTED UNLESS OTHERWISE NOTED NEMA 3R FOR EXTERIOR LOCATIONS
C	POWER CONNECTION TO EQUIPMENT
D	ELECTRIC HAND DRYER

BASIC MATERIALS CONT.

SYMBOL	DESCRIPTION
T	TRANSFORMER
	AUTOMATIC TRANSFER SWITCH
30AR / NF	NON-FUSED DISCONNECT SWITCH, SIZE AS NOTED NF DENOTES NON-FUSED
30AR / 20AF	FUSED DISCONNECT AR DENOTES AMP RATING OF SWITCH AF DENOTES AMP FUSE SIZE
MCP SIZE; # OF POLES; 30/3 / 0 3R; NEMA STARTER SIZE	COMBINATION MAGNETIC MOTOR STARTER, SIZE AS NOTED 3 POLE UNLESS OTHERWISE NOTED ENCLOSURE NEMA 1 UNLESS NOTED
	BRANCH CIRCUIT PANELBOARD, UNDER 250 VOLTS, SURFACE MOUNTED
	BRANCH CIRCUIT PANELBOARD, UNDER 250 VOLTS, FLUSH MOUNTED
	BRANCH CIRCUIT PANELBOARD, OVER 250 VOLTS, SURFACE MOUNTED
	BRANCH CIRCUIT PANELBOARD, OVER 250 VOLTS, FLUSH MOUNTED
	GROUND OR GROUND ROD AS NOTED
UP	CONDUIT TURNING UP
DN	CONDUIT TURNING DOWN
	CONDUIT STUB
	EXISTING TO BE REMOVED
	EXISTING TO REMAIN
	NEW

LIGHTING

SYMBOL	DESCRIPTION
	FLUORESCENT STRIP FIXTURE
A; 2; a	FLUORESCENT FIXTURE FIXTURE DESIGNATION LOWER CASE LETTER INDICATES CONTROL CIRCUIT SWITCH LEG CIRCUIT NUMBER
	FLUORESCENT FIXTURE DIAGONAL SHADING DENOTES TO LIGHT FIXTURE CONNECTED TO EMERGENCY POWER SOURCE.
	FLUORESCENT WALL MOUNTED FIXTURE WITH WALL OUTLET BOX
	DOWNLIGHT FIXTURE
	WALL WASH FIXTURE
	EXIT LIGHT FIXTURE DIRECTION ARROWS AS SHOWN (SHADED QUADRANT INDICATES FACE(S) OF FIXTURE)
	WALL MOUNTED EXIT LIGHT FIXTURE

FIRE ALARM/DETECTION SYSTEM

SYMBOL	DESCRIPTION
F	MANUAL PULL STATION
	CEILING SMOKE DETECTOR, PHOTO-ELECTRIC TYPE UNLESS OTHERWISE NOTED E = ELEVATOR WITH RECALL CONTACTS I = IONIZATION
	DUCT SMOKE DETECTOR R = RETURN S = SUPPLY
R	SUPERVISED CONTROL RELAY
R	DUCT SMOKE REMOTE ALARM INDICATING LAMP, W/ TEST SWITCH, WALL MOUNTED 48" AFF
RT	REMOTE FIRE ALARM WITH TEST SWITCH
F XXCD	COMBINATION AUDIBLE/VISUAL NOTIFICATION DEVICE CHIME/FLASHING "FIRE" LIGHT CD = CANDELA RATING
F XXCD	COMBINATION AUDIBLE/VISUAL NOTIFICATION DEVICE CD = CANDELA RATING
F	FIRE ALARM SPEAKER WITH STROBE CD = CANDELA RATING
F	VISUAL SIGNALING UNIT, WALL MOUNTED (NO AUDIO DEVICE)
P	FIREMAN'S PHONE JACK
TS	SPRINKLER TAMPER SWITCH CONNECTION
FS	SPRINKLER WATERFLOW SWITCH CONNECTION
	ELECTROMAGNETIC DOOR HOLD OPEN DEVICE
H	ELECTROMAGNETIC DOOR HOLD OPEN DEVICE CONNECTION TO CLOSURE/ HOLDER
H	ELECTROMAGNETIC DOOR HOLD OPEN DEVICE CONNECTION TO CLOSURE/ HOLDER INCLUDES DETECTOR
H	CEILING HEAT DETECTOR 135° UNLESS OTHERWISE INDICATED.
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
FAAP	FIRE ALARM ANNUNCIATOR PANEL - FLUSH MOUNTED
F	FIRE ALARM SYSTEM CONDUIT AND WIRING
E	FIREMAN'S ELEVATOR WARNING LIGHT

COMM./TV RACEWAY SYSTEM

SYMBOL	DESCRIPTION
	TELEPHONE OUTLET BACK BOX C = ABOVE THE COUNTER W = WALL MOUNTED
	DATA OUTLET BACK BOX
TV	TELEVISION SIGNAL WALL OUTLET

NOTE: SOME SYMBOLS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT.

ELECTRICAL SHEET LIST		
SHEET NO.	SHEET NAME	ISSUED
E-0.1	ELECTRICAL SYMBOLS LEGEND AND NOTES	Yes
E-0.2	ELECTRICAL GENERAL AND DEMOLITION NOTES	Yes
E-1.0	DEMOLITION & POWER PLANS	Yes
E-2.0	LIGHTING PLAN	Yes
E-3.0	ELECTRICAL RISER DIAGRAM	Yes
E-4.0	ELECTRICAL SCHEDULES	Yes
E-5.0	ELECTRICAL DETAILS	Yes

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COA #15 TLC NO: 513004

REVISIONS AND UPDATES

04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD

SUWANNEE HIGH SCHOOL COURTYARD RENO

1314 PINE AVE., SW LIVE OAK, FLORIDA

ELECTRICAL SYMBOLS LEGEND AND NOTES

drawn Author checked Checker approved Approver

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Seal

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E-0.1

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COA #15 TLC NO: 513004

GENERAL NOTES

1. ALL WORK AND EQUIPMENT UNDER THIS DIVISION SHALL BE IN STRICT COMPLIANCE WITH THE CODES, STANDARDS AND PRACTICES LISTED HEREIN, AND THEIR RESPECTIVE DATES ARE FURNISHED AS THE MINIMUM LATEST REQUIREMENTS.
   1. STATE OF FLORIDA.
   2. LIFE SAFETY CODE - NFPA 101.
   3. UNDERWRITERS LABORATORIES, INC. PUBLICATIONS
   4. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).
   5. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
   6. NATIONAL ELECTRICAL CODE - NFPA 70. (2008)
   7. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE).
   8. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).
   9. REQUIREMENTS OF LOCAL POWER COMPANY.
   10. 2010 FLORIDA BUILDING CODE.
   11. THE AMERICANS WITH DISABILITIES ACT (ADA)
   12. FLORIDA ACCESSIBILITY CODE.
2. REFER TO THE ARCHITECTURAL, MECHANICAL, PLUMBING, AND STRUCTURAL DRAWINGS FOR RELATED INFORMATION AND ADDITIONAL INSTALLATION REQUIREMENTS TO BE PERFORMED AS PART OF THE WORK.
3. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
4. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR THE REQUIREMENTS ASSOCIATED WITH WIRING AND CONNECTION OF INTERLOCKING AND CONTROLS OF MECHANICAL UNITS AND THERMOSTAT LOCATIONS.
5. COORDINATE OUTLET BOX LOCATIONS WITH MASONRY TO AVOID CUTTING ON MORTAR JOINTS.
6. ALL MOUNTING HEIGHTS SHOWN ARE TO THE CENTERLINE OF THE DEVICE UNLESS NOTED OTHERWISE. VERIFY ALL OUTLET LOCATIONS ON THE JOB PRIOR TO ROUGH-IN.
7. EACH DATA, TELEPHONE, VIDEO OR OTHER SYSTEMS OUTLET REQUIRES 1" C. WITH PULL STRING STUBBED TO TB UNLESS OTHERWISE NOTED ON PLANS. PROVIDE INSULATED BUSHINGS ON ALL CONDUITS. LABEL CONDUIT TO IDENTIFY ITS INTENDED USE (IE: TELEPHONE, DATA, ETC.).
8. EACH BRANCH CIRCUIT RACEWAY SHALL HAVE A FULL SIZE EQUIPMENT GROUND CONDUCTOR. WHERE ISOLATED GROUND CIRCUITS ARE SHOWN ON THE PLANS, PROVIDE AN ISOLATED GROUND CONDUCTOR THROUGHOUT THE LENGTH OF THE CIRCUIT IN ADDITION TO THE PHASE, NEUTRAL AND EQUIPMENT GROUND CONDUCTORS.
9. PROVIDE 18" LONG (MIN). CONDUIT SLEEVES THRU ALL WALLS WHERE CABLES ARE INDICATED OR REQUIRED TO PASS THRU WALLS. PROVIDE BUSHINGS ON BOTH ENDS. SIZE CONDUIT FOR CABLES INSTALLED. AT CABLE TRAYS, PROVIDE ONE 4" CONDUIT SLEEVE FOR EACH 4" WIDTH OF CABLE TRAY.
10. ALL BRANCH CIRCUIT HOMERUNS SHALL BE ROUTED IN 3/4"C. MINIMUM. MC CABLE IS NOT ALLOWED.
11. LIGHT SWITCHES SHALL BE MOUNTED 48 INCHES ABOVE FINISHED FLOOR TO CENTER LINE OF DEVICE, UNLESS NOTED OTHERWISE.
12. RECEPTACLES SHALL BE LOCATED 18 INCHES ABOVE FINISHED FLOOR TO CENTER LINE OF DEVICE, UNLESS NOTED OTHERWISE. ABOVE-COUNTER RECEPTACLES SHALL BE MOUNTED 6" ABOVE BACK SPLASH TO CENTERLINE OF DEVICE UNLESS NOTED OTHERWISE.
13. EQUIPMENT SHALL BE OF MATERIALS SUITABLE FOR AND RATED FOR THE ENVIRONMENT IN WHICH THEY ARE TO BE INSTALLED, WITH APPROPRIATE NEMA ENCLOSURE RATING.
    A. WORKING CLEARANCES AND DEDICATED SPACE FOR ELECTRICAL EQUIPMENT SHALL BE IN COMPLIANCE WITH NEC 110. SUBMIT COORDINATION DRAWINGS OF ELECTRICAL ROOMS SHOWING COMPLIANCE.
14. WHEN ELECTRICAL BOXES ARE LOCATED IN VERTICAL FIRE-RESISTIVE ASSEMBLIES, (CLASSIFIED AS FIRE/SMOKE AND SMOKE PARTITIONS), THEY SHALL BE INSTALLED WITHOUT AFFECTING THE FIRE CLASSIFICATION. ALL OF THE FOLLOWING CONDITIONS SHALL BE MET:
    A. ALL ELECTRICAL BOXES SHALL BE METALLIC.
    B. BOX OPENING SHALL OCCUR ONLY ON ONE SIDE OF FRAMING SPACE.
    C. BOX OPENING SHALL NOT EXCEED 16 SQUARE INCHES.
    D. ALL CLEARANCES BETWEEN OUTLET BOX AND GYPSUM BOARD SHALL BE COMPLETELY FILLED WITH JOINT COMPOUND (OR OTHER APPROVED MATERIAL).
    E. PROVIDE A WALL AROUND OUTLETS LARGER THAT 16 SQUARE INCHES. THE INTEGRITY OF THE WALL RATING SHALL BE MAINTAINED.
    F. THE TOTAL AGGREGATE SURFACE AREA OF THE BOXES SHALL NOT EXCEED 100 SQUARE INCHES PER 100 SQUARE FEET.
    G. OUTLET BOXES LOCATED ON OPPOSITE SIDES OF FIRE-RESISTIVE ASSEMBLIES SHALL BE SEPARATED BY A MINIMUM HORIZONTAL DISTANCE OF 24 INCHES.
    H. OUTLET BOXES SHALL BE SECURELY FASTENED TO WALL FRAMING MEMBERS.
    I. THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT NOT TO EXCEED 1/8 INCH BETWEEN THE EDGES OF THE OUTLET BOX AND THE EDGES OF THE OPENING.
15. ALL CONDUCTORS INSTALLED ABOVE THE ROOF SHALL BE DERATED FOR AMBIENT TEMPERATURE INCLUDING AMBIENT TEMPERATURE ADJUSTMENT IN ACCORDANCE WITH ARTICLE 310.15 (B)(2)(c).
16. PROVIDE GFCI PROTECTION FOR ALL RECEPTACLES FOR DRINKING FOUNTAIN, WATER COOLERS, HEAT TRACE, ELEVATOR ROOMS AND SHAFTS, MECHANICAL ROOM, JANITOR CLOSETS, OUTDOORS, KITCHENS AND ALL OTHER LOCATIONS WITHIN 6 FEET OF A SINK OR OTHER WATER SOURCE IN ACCORDANCE WITH THE NEC.
17. PROVIDE SURGE PROTECTION AS REQUIRED FOR NFPA 780 4.18.2 FOR ANY POWER OR LOW VOLTAGE (FIRE ALARM, TELECOMM, ETC.) CIRCUIT EXITING THE BUILDING.
18. ALL CONDUIT IN PUBLIC AREAS SHALL BE CONCEALED UNLESS NOTED OTHERWISE.
19. ALL WIRING DEVICES SHALL BE MOUNTED VERTICALLY, UNLESS NOTED OTHERWISE.
20. ALL RECEPTACLES SHALL BE MOUNTED SUCH THAT THE GROUND PIN IS MOUNTED UP.
21. ALL BRANCH CIRCUIT CONDUITS SHALL CONTAIN A MINIMUM OF (2) #12AWG INSULATED COPPER CONDUCTORS, PLUS A MINIMUM OF (1) #12AWG GROUND WIRE UNLESS NOTED OTHERWISE. ALL BRANCH CIRCUITS AND FEEDERS SHALL HAVE INDIVIDUAL NEUTRAL CONDUCTORS.
22. COORDINATE THE LOCATION OF ALL DEVICES AND BOXES WITH WINDOWS, BUILT-INS, AND CABINETS PRIOR TO INSTALLATION OF CONDUITS OR BOXES. CONTRACTOR SHALL CONSULT ALL CONTRACT DRAWINGS TO ASCERTAIN ANY CONFLICTS PRIOR TO BIDDING. CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ARCHITECT/ENGINEER. CONTRACTOR SHALL NOT BE ENTITLED TO ADDITIONAL COMPENSATION FOR WORK REQUIRED TO RELOCATE OUTLET BOXES THAT ARE/OR BECOME NECESSARY FOR COORDINATION WITH OTHER TRADES WORK.
23. COORDINATE HEIGHTS OF WALL MOUNTED LIGHTING FIXTURES TO CLEAR MIRRORS, CABINETS AND BUILT-INS.
24. PROVIDE A PERMANENT SIGN ON THE MAIN ELECTRICAL ROOM DOOR TO THE BUILDING STATING THAT THE MAIN SERVICE DISCONNECTING MEANS ARE LOCATED INSIDE.
25. COORDINATE INSTALLATION OF ANY DEVICE LOCATED IN MILLWORK WITH ARCHITECTURAL DRAWINGS AND DETAILS PRIOR TO ROUGHING IN BOXES AND ROUTING CONDUIT.
26. LOCATIONS OF EQUIPMENT SPECIFIED BY OTHER TRADES OR PROVIDED BY OWNER ARE APPROXIMATE. COORDINATE EXACT LOCATIONS IN FIELD PRIOR TO ROUGHING IN AND ROUTING CONDUIT.
27. SEE ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF LIGHT FIXTURES IN CEILINGS, AND ON INTERIOR AND EXTERIOR WALLS.
28. RECEPTACLES FOR ELECTRIC WATER COOLERS SHALL BE LOCATED DIRECTLY BEHIND ELECTRIC WATER COOLER, CONCEALED FROM DIRECT VIEW.
29. PROVIDE DIMMABLE BALLASTS FOR ALL DIMMABLE FLUORESCENT LIGHT FIXTURES, AND A DIMMER SWITCH RATED NOT LESS THAN 2000 WATTS.
30. CONTRACTOR SHALL UPSIZE BRANCH CIRCUIT WIRE SIZE AS REQUIRED TO COMPENSATE VOLTAGE DROP FROM LENGTHENING OF CIRCUITS DUE TO FIELD ROUTING. FINAL INSTALLATION SHALL MEET FLORIDA BUILDING CODE REQUIREMENT OF: MAXIMUM BRANCH CIRCUIT VOLTAGE DROP OF 3%:

    REFER TO VOLTAGE DROP CHART BELOW FOR CONDUCTOR SIZES FOR BRANCH CIRCUITS

120 VOLT (BASIS 1500 WATT)	MIN. CONDUCTOR
CIRCUIT LENGTH	UP SIZE FOR VOLTAGE DROP
0 - 70'	#12 AWG
71' - 115'	#10 AWG
116' - 180'	#8 AWG

    181' AND ABOVE TO BE SUBMITTED BY CONTRACTOR AND APPROVED BY ENGINEER.

277 VOLT (BASIS 15 AMPS)	MIN. CONDUCTOR
CIRCUIT LENGTH	UP SIZE FOR VOLTAGE DROP
0' - 140'	#12 AWG
141' - 220'	#10 AWG
221' - 350'	#8 AWG

    351' AND ABOVE TO BE SUBMITTED BY CONTRACTOR AND APPROVED BY ENGINEER.
31. EMERGENCY BALLAST BATTERY PACKS AND EMERGENCY EXIT SIGNS, WHERE USED, SHALL BE CONNECTED TO UNSWITCHED LEG OF CIRCUIT DESIGNATED ON DRAWINGS.
32. PROVIDE HACR RATED CIRCUIT BREAKERS FOR ALL HVAC EQUIPMENT.
33. WITHIN 30 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF THE ACTUAL INSTALLATION INCLUDING: SINGLE LINE DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM, SITE PLANS AND ALL ELECTRICAL FLOOR PLANS.
34. CONTRACTOR SHALL PROVIDE AN OPERATING MANUAL AND MAINTENANCE MANUAL TO OWNER. THE MANUAL SHALL INCLUDE AT A MINIMUM: (1) SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. (2) OPERATION AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED. (3) NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE AGENCY.
35. CONTRACTOR SHALL PROVIDE TEMPORARY ELECTRICAL SERVICE AS REQUIRED FOR USE BY ALL TRADES DURING CONSTRUCTION. REMOVE TEMPORARY POWER AT THE COMPLETION OF THE PROJECT. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS TO OBTAIN
36. TEMPORARY ELECTRICAL SERVICE.

    CONTRACTOR SHALL SUBMIT FOR APPROVAL MAIN AND ALL ADJUSTABLE THE "AS SET" OVERCURRENT PROTECTIVE DEVICE SETTINGS.
37. ALL CONDUCTORS SHALL BE COPPER. ALUMINUM CONDUCTORS ARE NOT PERMITTED.
38. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUITS, BACK BOXES, RACEWAYS, SLEEVES, SITE CONDUIT DUCT BANKS AND MANHOLES FOR THE TELECOMMUNICATIONS SYSTEM. THE STRUCTURED CABLING CONTRACTOR (SCC) SHALL PROVIDE AND INSTALL THE WIRE AND CABLE FOR THE SYSTEMS THEY ARE INSTALLING. THE SCC SHALL SUPERVISE THE CONDUIT INSTALLATION AND VERIFY EXACT BACK BOX LOCATIONS AND CONDUIT STUB-UP LOCATIONS IN THE EQUIPMENT ROOMS.
39. SELECTIVE COORDINATION STUDY: CONTRACTOR SHALL PROVIDE SELECTIVE COORDINATION STUDY PER NEC ARTICLE 620, 700, 701 & 708.
40. LOCATE 20A, 1P, 120V RECEPTACLE WITHIN 6" OF EACH DATA OUTLET. BOTH ELECTRICAL AND DATA OUTLETS SHALL BE LOCATED AT THE SAME HEIGHT.
41. PROVIDE FIRE ALARM DEVICES COMPATIBLE TO THE EXISTING FIRE ALARM SYSTEM PER NFPA AND ALL STATE AND LOCAL CODE REQUIREMENTS. COMPLY WITH NFPA 72 AND ADA REQUIREMENTS. ALL WIRE SHALL BE INSTALLED IN CONDUIT. STATE CERTIFIED AND LICENSED FIRE ALARM SYSTEMS CONTRACTOR SHALL PREPARE AND SUBMIT SIGNED AND SEALED DRAWINGS FOR LOCAL JURISDICTION PERMITTING AUTHORITY.
42. FIELD VERIFY LOCATION OF AREA SMOKE DETECTORS AND HEAT DETECTORS. DO NOT LOCATE WITHIN 36" OF A HVAC DIFFUSER (SUPPLY OR RETURN), IN A DIRECT AIR FLOW PATH OR WITHIN 36" OF A SPRINKLER HEAD. SMOKE DETECTORS FOR DOOR RELEASE SHALL BE LOCATED ON THE CENTER LINE OF THE DOOR AND A MAXIMUM OF 5 FEET FROM THE DOOR. THE MINIMUM DISTANCE FROM THE DOOR IS THE DEPTH OF THE WALL SECTION ABOVE THE DOOR, BUT NOT LESS THAN 12".
43. LABEL REMOTE ALARM INDICATOR FOR DUCT MOUNTED SMOKE DETECTORS (IE: RTU-1 SUPPLY, RTU-2 RETURN, FIRE/SMOKE DAMPER, ETC.). DUCT DETECTORS SHOULD BE LOCATED IN THE AREA BETWEEN 6 AND 10 DUCT EQUIVALENT DIAMETERS OF STRAIGHT, UNINTERRUPTED DUCTWORK. DUCT DETECTORS FOR FIRE/SMOKE DAMPERS SHOULD BE LOCATED BETWEEN THE LAST INLET OR OUTLET UPSTREAM OF THE DAMPER AND THE FIRST INLET OR OUTLET DOWNSTREAM OF THE DAMPER.
44. EQUIPMENT SHUTDOWN RELAY SHALL BE LOCATED WITHIN 3 FEET OF THE EQUIPMENT CONTROLS AND THE WIRING TO THE RELAY SHALL BE MONITORED.
45. FOR EACH FIRE/SMOKE DAMPER: INTERLOCK WITH FIRE ALARM CONTROL PANEL TO CLOSE FIRE/SMOKE DAMPER AND TO CONTROL THE ASSOCIATED MECHANICAL UNIT PER THE MECHANICAL SEQUENCE OF OPERATIONS.
46. ALL FIRE ALARM WIRING SHALL BE IN CONDUIT, 1/2" CONDUIT MINIMUM.
47. ALL COMPONENTS OF THE ELECTRICAL SYSTEM LOCATED OUTDOORS OR INDOORS WHERE EXPOSED TO SIGNIFICANT MOISTURE SHALL BE RAIN PROOF TYPE NEMA 3R (MINIMUM), WHETHER INDICATED ON CONTRACT DOCUMENTS OR NOT.
48. CONTRACTOR SHALL INCLUDE ALL COSTS FOR SAW CUTTING, CORE DRILLING, SURFACE RESTORATION, REPAIR OF FINISHES, ETC. THAT IS REQUIRED IN ORDER TO MEET THE PROJECT REQUIREMENTS.
49. WHERE OPENINGS PENETRATE A FIRE RATED FLOOR, WALL, CEILING, OR ROOF, FIRE STOPPING SHALL BE PROVIDED. MEET ALL REQUIREMENTS FOR THE U.L. ASSEMBLY AND RACEWAYS INVOLVED.
50. CONTRACTOR SHALL PROVIDE ALL PENETRATIONS THROUGH FLOORS, WALLS, CEILINGS AND ROOFS. COORDINATE LOCATIONS AND SIZES WITH THE ARCHITECTURAL AND STRUCTURAL PORTIONS OF THE CONTRACT DOCUMENTS, FIELD CONDITIONS, AND WORK OF ALL OTHER DIVISIONS/TRADES. ALL OPENINGS SHALL BE SEALED WATERTIGHT.
51. THE USE OF ALUMINUM CONDUCTORS, RACEWAYS, BOXES, BUSSING, WINDINGS, ETC. ARE PROHIBITED UNLESS SPECIFICALLY NOTED OTHERWISE, OR UNLESS A/E AND OWNER GRANTS WRITTEN PERMISSION.
52. THE USE OF ELECTRICAL NON-METALLIC TUBING (ENT), AND LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC) ARE PROHIBITED UNLESS SPECIFICALLY NOTED OTHERWISE, OR UNLESS A/E AND OWNER GRANTS WRITTEN PERMISSION.
53. ALL FEEDER AND BRANCH CIRCUIT CONDUCTORS, INCLUDING LOW VOLTAGE SYSTEMS, SHALL BE INSTALLED IN A COMPLETE RACEWAY SYSTEM UNLESS SPECIFICALLY NOTED OTHERWISE.
54. PROVIDE PLASTIC LAMINATE NAME TAGS ON EACH PANELBOARD, SAFETY SWITCH, CONTROL PANEL, CABINET, AND ANY OTHER MAJOR COMPONENT OF THE ELECTRICAL SYSTEM. MULTI-WIRE BRANCH
55. PANEL SCHEDULES INDICATE DEDICATED HOME RUNS FOR EACH BRANCH CIRCUIT. AT HIS DISCRETION, THE CONTRACTOR MAY GROUP BRANCH CIRCUITS INTO A COMMON HOME RUN WHERE THE HOME RUN DOES NOT EXCEED 3 PHASE CONDUCTORS, 3 NEUTRAL CONDUCTORS, 1 EQUIPMENT GROUND AND I ISOLATED GROUND (8 WIRES MAXIMUM). THE CONTRACTOR SHALL INCREASE THE HOME RUN RACEWAY SIZE AS NECESSARY TO COMPLY WITH THE N.E.C. RACEWAY FILL REQUIREMENTS.
56. PROVIDE TYPED PANEL DIRECTORIES FOR ALL PANELBOARDS. DIRECTORIES SHALL REFLECT TRUE PROJECT AS-BUILT CONDITIONS FOR ALL BRANCH CIRCUITS. DIRECTORIES SHALL INCLUDE WHERE EACH PANEL IS FED FROM. ADDITIONALLY, EACH BRANCH CIRCUIT LOAD DESCRIPTION SHALL INCLUDE THE ROOM NUMBERS FOR EACH LOAD SERVED (I.E. "RECEPTACLES -501,503"). ROOM NUMBERS SHALL BE BASED ON ACTUAL ROOM SIGNAGE INSTALLED IN FIELD. COORDINATE EXACT ROOM NUMBERS WITH A/E AND OWNER PRIOR TO COMPLETION OF PANEL DIRECTORIES.
57. FOR ELECTRIC DISTRIBUTION EQUIPMENT THAT DOES NOT HAVE PROVISIONS FOR ATTACHMENT OF A PANEL DIRECTORY, PROVIDE PLASTIC LAMINATE NAME TAGS FOR EACH BRANCH CIRCUIT BREAKER. NAME TAG SHALL INCLUDE LOAD DESCRIPTION AND ROOM NUMBERS FOR EACH LOAD SERVED.
58. ALL DEVICE OUTLET BOXES, JUNCTION BOXES, PULL BOXES, AND RACEWAYS SHALL BE CONCEALED IN CEILINGS, WALLS OR BELOW SLAB UNLESS SPECIFICALLY NOTED OTHERWISE, OR UNLESS A/E AND OWNER GRANTS WRITTEN PERMISSION.
59. MODIFY ALL LIGHTING FIXTURE CATALOG NUMBERS AS REQUIRED TO COORDINATE WITH THE LIGHTING BRANCH CIRCUIT VOLTAGES INDICATED, AND TO COORDINATE THE CATALOG NUMBERS WITH THE EXACT FIXTURE MOUNTING AND TRIM REQUIRED BY THE CEILING IN WHICH EACH FIXTURE IS BEING INSTALLED.
60. ALL LIGHTING FIXTURES SHALL BE PROVIDED COMPLETE WITH LAMPS.

GENERAL DEMOLITION NOTES

REFER TO ARCHITECTURAL DRAWINGS FOR ALL AREAS REQUIRING ELECTRICAL DEMOLITION

1. CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN REMOVING/ RELOCATING WIRING AND EQUIPMENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT OTHER WIRING DEVICES, EQUIPMENT, AND LIGHTING FIXTURES THAT MAY BE CONNECTED ON THE SAME CIRCUIT REMAIN OPERATIONAL AND ACTIVE.
2. INFORMATION SHOWN ON THESE DOCUMENTS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR TO FIELD VERIFY ELECTRICAL CIRCUIT HOME RUNS TO ALL ELECTRICAL ITEMS SCHEDULED FOR DEMOLITION AND PERFORM THE WORK AS INTENDED AND DEPICTED ON THE DRAWINGS.
3. UPDATE ALL ELECTRICAL EQUIPMENT NAMEPLATES AND DIRECTORIES THAT ARE DEMOLITION AND/OR RENOVATIONS.
4. STORE ITEMS INDICATED TO BE RETURNED TO THE OWNER IN A DRY, CLEAN, AND PROTECTED AREA. NOTIFY OWNER WHEN ITEMS ARE READY TO BE REMOVED.
5. COORDINATE ANY ALTERATION AND CHANGES TO THE ELECTRICAL SERVICE WITH THE LOCAL UTILITY COMPANY AND OWNER.
6. RE-SCHEDULE ALL POWER INTERRUPTION WITH OWNER FOR EXACT DATE, TIME, AND ELUTRATION. GIVE OWNER 48 HOURS NOTICE PRIOR TO DISCONNECTING POWER TO ANY PORTION OF THE BUILDING AND MAKE ARRANGEMENT TO MAINTAIN POWER TO ALL CRITICAL EQUIPMENT AS NEED AND REQUESTED BY OWNER.
7. CONTRACTOR IS RESPONSIBLE OF BECOMING FULLY INFORMED AS TO EXISTING CONDITIONS AT THE SITE. NEITHER THE OWNER NOR THE A/E MAKES ANY REPRESENTATION WARRANTY AS TO SITE CONDITIONS.
8. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE NATURE AND EXTEND OF WORK TO BE PERFORMED AND LOCAL CONDITIONS THAT MAY AFFECT THE WORK.
9. ALL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING CODES: NATIONAL ELECTRICAL CODE (NEC) NATIONAL FIRE PROTECTION AGENCY (NFPA) FLORIDA BUILDING CODE BOCA RATON CODE OF ORDINANCES
10. THE CONTRACTOR SHALL GIVE THE OWNER AN OPPORTUNITY TO ACCEPT ANY ELECTRICAL ITEMS THAT WERE REMOVED FOR THEIR USE. SALVAGED MATERIALS, AND EQUIPMENT THE OWNER DOES NOT WISH TO KEEP SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE DISPOSED OF BY THE CONTRACTOR, WITHOUT ADDITIONAL COST TO THE OWNER.
11. CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND LIGHTING WHERE REQUIRED DURING DEMOLITION AND CONSTRUCTION SCOPE OF WORK.
12. THE EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE TAKEN FROM ORIGINAL DRAWINGS PROVIDED BY THE OWNER. THE ACTUAL CONDITIONS MAY VARY, ALL EXISTING CONDITIONS MUST BE VERIFIED PRIOR TO BID. THE CONDITIONS SHOWN ARE INTENDED TO SHOW THE LOCATIONS OF THE EXISTING EQUIPMENT, AND IN NO WAY RELIEVES THE CONTRACTOR FROM PROVIDING ANY AND ALL COORDINATION REQUIRED TO COMPLETE THE NEW WORK. FIELD CONDITIONS SHALL GOVERN.
13. THE DEMOLITION PLAN IS NOT INCLUSIVE OF ALL ELECTRICAL DEVICES WITHIN THE PROJECT AREA. IT IS INTENDED TO PROVIDE THE CONTRACTOR WITH A GENERAL KNOWLEDGE OF THE EXISTING CONDITIONS WITHIN THE PROJECT AREA. ANY DISCREPANCIES OR CONDITIONS NOT SHOWN ON THIS PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED DEMOLITION WHETHER SHOWN ON THE PLANS OR NOT.
14. ALL CONDUITS SERVING OTHER SPACES, THAT RUN THROUGH THE PROJECT AREA SHALL REMAIN ACTIVE DURING CONSTRUCTION, SO AS NOT TO CAUSE ANY DISRUPTION TO THESE OTHER SPACES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL CONDUITS, NEW OR EXISTING WITHIN THE PROJECT AREA ARE PROPERLY SUPPORTED AND PROVIDED W/ BONDING BUSHINGS IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
15. THE CONTRACTOR SHALL PHASE DEMOLITION WORK AS REQUIRED OR DIRECTED BY THE OWNER.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR PATCHING ANY DAMAGE WHICH MAY OCCUR DURING DEMOLITION ACTIVITIES. REPAIRS TO BE DONE TO LOGICAL EDGES OF SURFACES AFFECTED, AND SHALL MATCH IMMEDIATE ADJACENT AREAS IN CONSTRUCTION, MATERIAL, FIRE RATING, FINISH AND COLOR.
17. ALL WORK SHALL BE PERFORMED BY A LICENSED AND INSURED ELECTRICAL CONTRACTOR AND SHALL BE COORDINATED WITH OTHER TRADES.

REVISIONS AND UPDATES

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SUWANNEE COUNTY SCHOOL BOARD

SUWANNEE HIGH SCHOOL COURTYARD RENO

1314 PINE AVE., SW LIVE OAK, FLORIDA

ELECTRICAL GENERAL AND DEMOLITION NOTES

drawn Author | checked Checker | approved Approver

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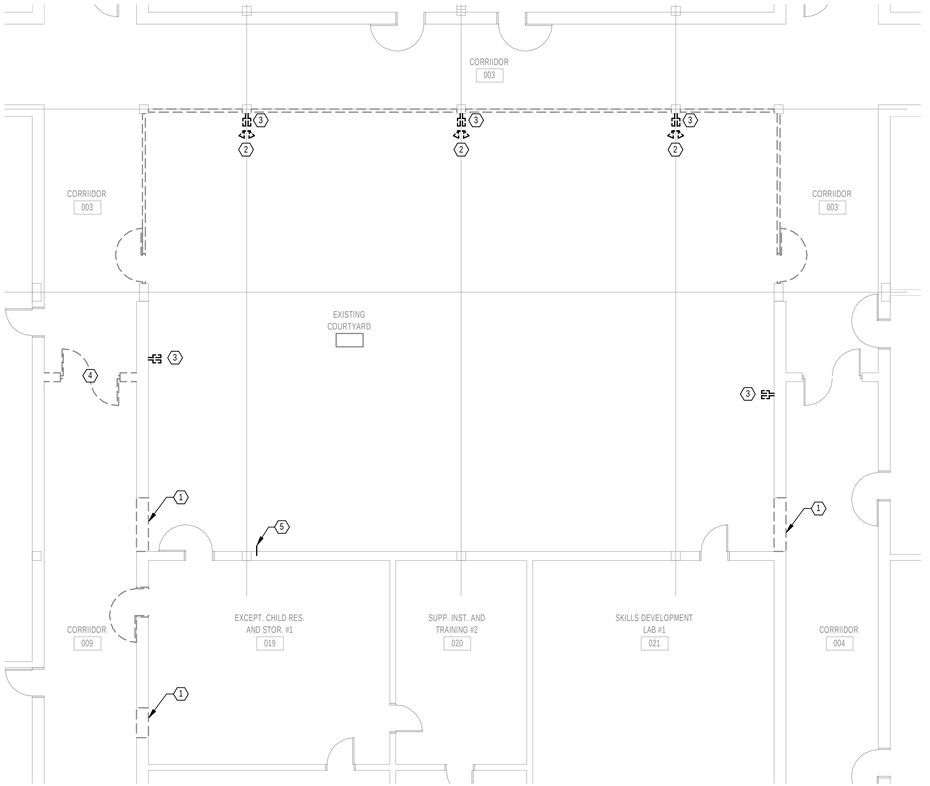
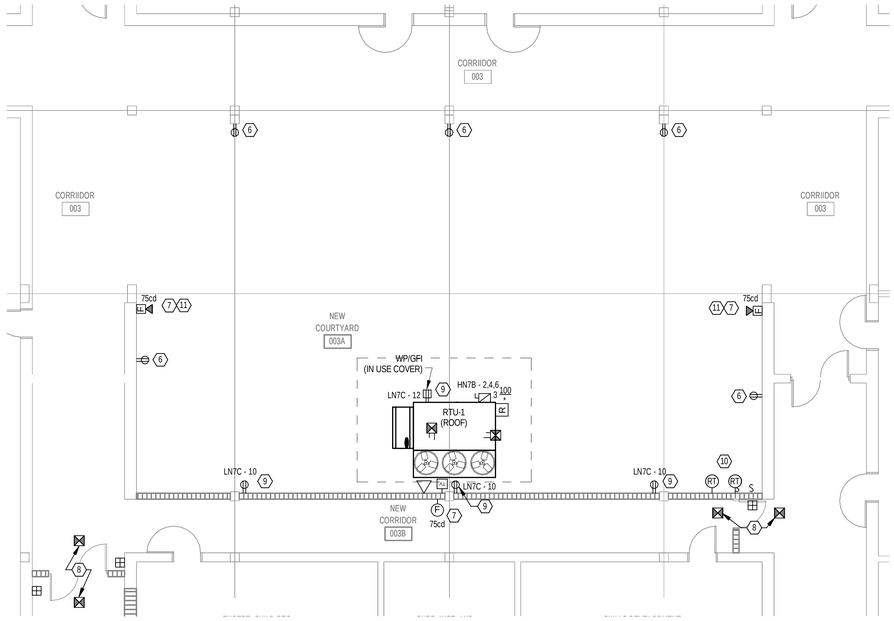


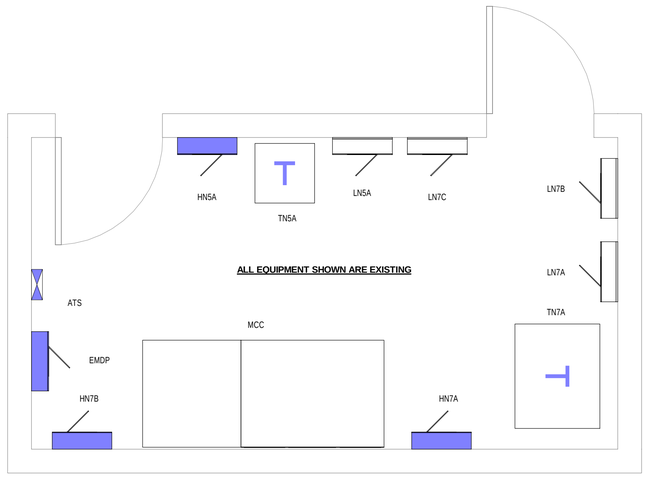
1 POWER DEMOLITION PLAN

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



2 NEW POWER PLAN

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



3 ENLARGED EXISTING ELECTRICAL ROOM

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

GENERAL NOTES:

1. LIGHT WEIGHT LINED ITEMS ARE EXISTING TO REMAIN. HEAVY WEIGHT AND DASHED LINED ITEMS ARE EXISTING TO BE DEMOLISHED OR REMOVED AND RELOCATED. HEAVY WEIGHT LINED ITEMS ARE NEW OR EXISTING RELOCATED.

2. ROUTE CONDUIT HIGH AGAINST STRUCTURE AND OFFSET UP BETWEEN JOISTS WHERE NECESSARY TO AVOID DUCT WORK AND HVAC SYSTEM.

3. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT.

4. PROVIDE CONDUIT AND WIRING AS REQUIRED TO MEET CIRCUITING SHOWN TO CONFORM TO NEC REQUIREMENTS.

5. PROVIDE EQUIPMENT GROUND CONDUCTOR IN ALL RACEWAYS. REFER TO PANELBOARD SCHEDULES.

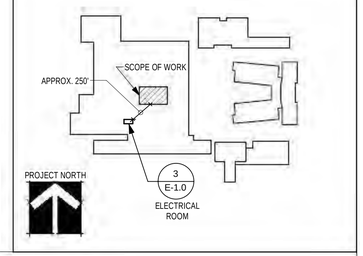
6. SEE TYPICAL MOUNTING HEIGHTS DETAIL ON DRAWING E-5.0 FOR MOUNTING HEIGHTS OF ALL WALL MOUNTED DEVICES.

7. REFER TO EQUIPMENT CONNECTION SCHEDULE ON SHEET E-4.0 FOR ELECTRICAL REQUIREMENTS AND CIRCUIT DESIGNATIONS. (TYPICAL FOR ALL EQUIPMENT INCLUDING HVAC)

KEYED NOTES:

1. FIELD VERIFY AND RELOCATE ANY ELECTRICAL DEVICES AND CIRCUITS ON OR THROUGH WALLS BEING DEMOLISHED TO ADJACENT SPACE.
2. DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES. REMOVE WIRES AND CONDUIT BACK TO SOURCE.
3. DISCONNECT AND REMOVE EXISTING RECEPTACLES. EXISTING CIRCUIT SHALL REMAIN AND BE RE-USED FOR NEW RECEPTACLES.
4. REMOVE EXISTING EXIT SIGN, SMOKE DETECTORS AND OTHER ELECTRICAL DEVICES ASSOCIATED WITH DOOR HARDWARE. DEVICES SHALL BE RE-USED IN NEW LOCATION.
5. CONTRACTOR SHALL TRACE CIRCUIT AND RE-ROUTE CONDUIT CONCEALED IN WALL. EXTEND WIRES AND CONDUIT AS REQUIRED. PROVIDE ACCESS TO CIRCUIT.
6. PROVIDE NEW RECEPTACLE AND COVER PLATE AND CONNECT TO EXISTING CIRCUIT.
7. PROVIDE NEW FIRE ALARM DEVICE AND CONNECT TO EXISTING FIRE ALARM SYSTEM. CONTRACTOR TO VERIFY MAKE AND MODEL OF EXISTING FIRE ALARM CONTROL PANEL.
8. EXISTING RELOCATED. EXTEND WIRING AND CONNECT TO EXISTING FIRE ALARM CIRCUITS.
9. HOME RUNS FOR CIRCUIT 'LN7C-10' AND 'LN7C-12' SHALL BE (2) #8, (1)10GND IN 3/4" CONDUIT.
10. PROVIDE PROTECTIVE COVER.
11. PROVIDE SURFACE MOUNTED METAL RACEWAY IF NECCESSARY.

KEY PLAN



REVISIONS AND UPDATES

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DEMOLITION & POWER PLANS

drawn Author | checked Checker | approved Approver

job no. E-1.0

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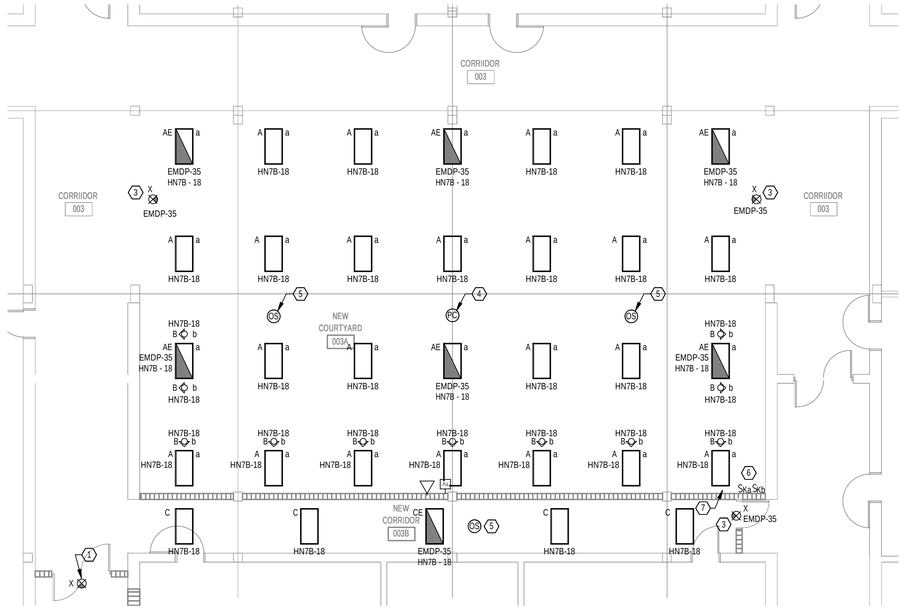


1 NEW LIGHTING PLAN

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

2 NORMAL LIGHTING PHOTOMETRIC PLAN

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

3 EMERGENCY LIGHTING PHOTOMETRIC PLAN

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

GENERAL NOTES:

1. LIGHT WEIGHT LINED ITEMS ARE EXISTING TO REMAIN. HEAVY WEIGHT LINED ITEMS ARE NEW OR EXISTING RELOCATED.
2. ALL EMERGENCY EGRESS ILLUMINATION SHALL BE AVERAGE 1FC AND A MINIMUM OF 0.1FC FOR PATH OF EGRESS.
3. PROVIDE CONDUIT AND WIRING AS REQUIRED TO MEET CIRCUITING SHOWN TO CONFORM TO NEC REQUIREMENTS.
5. PROVIDE EQUIPMENT GROUND CONDUCTOR IN ALL RACEWAYS. REFER TO PANELBOARD SCHEDULES.
6. SEE TYPICAL MOUNTING HEIGHTS DETAIL ON DRAWING E-5.0 FOR MOUNTING HEIGHTS OF ALL WALL MOUNTED DEVICES.

KEYED NOTES:

1. EXISTING RELOCATED. EXTEND WIRING AND CONNECT TO EXISTING LIGHTING CIRCUIT.
2. ALL EMERGENCY LIGHTING DESIGNATED BY HALF SHADED FIXTURES SHALL BE CONNECTED TO LOCAL NORMAL AND EMERGENCY CIRCUITS VIA A DEDICATED BODINE GTD OR EQUAL UL924 LISTED EMERGENCY CIRCUIT TRANSFER DEVICE.
3. PROVIDE NEW EXIT SIGN AND CONNECT TO EMERGENCY LIGHTING CIRCUIT.
4. PROVIDE AND PROGRAM PHOTOCELLL SENSOR TO CONTROL ALL OF THE 2X4 LIGHTING FIXTURES FOR DAYLIGHT DIMMING CONTROL WIRED AFTER LOCAL OCCUPANCY SENSOR CONTROL. PHOTOCELL SHALL BE HUBBELL DLC7 OR EQUAL.
5. REFER TO OCCUPANCY SENSOR TYPICAL WIRING DIAGRAM ON SHEET 5/E-5.0 FOR CONNECTION DETAIL.
6. PROVIDE KEYED SWITCHES TO CONTROL NEW LIGHT FIXTURES.
7. PROVIDE KEYED OVERRIDE SWITCH TO CONTROL PHOTOCELL.

EMERGENCY LIGHTING STATISTICS

DESCRIPTION	Avg	Max	Min	Max/Min	Avg/Min
CORRIDOR	5.2 fc	28.0 fc	0.5 fc	56.0:1	10.4:1
COURTYARD	5.9 fc	12.6 fc	2.0 fc	6.3:1	3.0:1

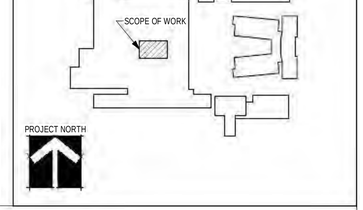
NORMAL LIGHTING STATISTICS

DESCRIPTION	Avg	Max	Min	Max/Min	Avg/Min
CORRIDOR	26.4 fc	36.9 fc	17.7 fc	2.1:1	1.5:1
COURTYARD	30.3 fc	35.3 fc	16.8 fc	2.1:1	1.8:1

LIGHTING POWER DENSITY STATISTICS

DESCRIPTION	# Luminaires	Total Watts	Area	Density
CORRIDOR	6	360.0 W	436.0 ft²	0.8 W/ft²
COURTYARD	39	2340.0 W	3033.3 ft²	0.8 W/ft²

KEY PLAN



REVISIONS AND UPDATES

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SUWANNEE COUNTY SCHOOL BOARD

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LIGHTING PLAN

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job no. E-2.0 sheet of

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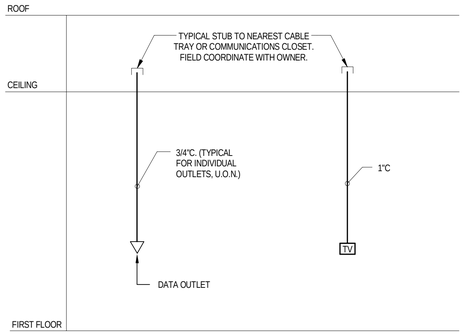
COA #15 TLC NO: 513004

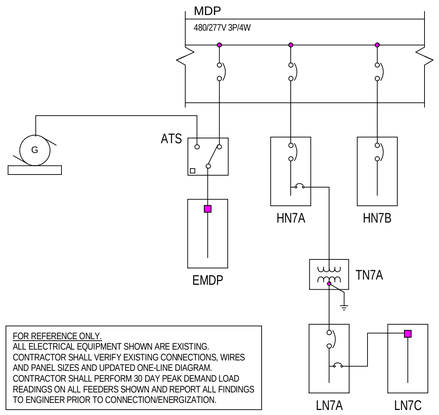
GENERAL NOTES:

1. PROVIDE BONDING BUSHINGS AND #6 SOLID GROUND WIRE ON EACH CONDUIT SLEEVE TO EACH CABLE TRAY AND COPPER BUS BAR IN ROOM.
2. PROVIDE CONDUIT FOR ALL ROUTING TO AND THROUGH INACCESSIBLE CEILING AREAS.
3. CONTRACTOR TO COORDINATE WITH LOCAL PROVIDERS AND PROVIDE FACILITIES AS REQUIRED.



1 COMMUNICATION & CATV SYSTEMS RISER DIAGRAM

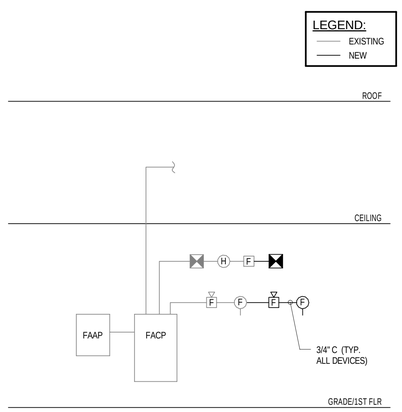
SCALE: 12" = 1'-0"



FOR REFERENCE ONLY.
ALL ELECTRICAL EQUIPMENT SHOWN ARE EXISTING. CONTRACTOR SHALL VERIFY EXISTING CONNECTIONS, WIRES AND PANEL SIZES AND UPDATED ONE-LINE DIAGRAM. CONTRACTOR SHALL PERFORM 30 DAY PEAK DEMAND LOAD READINGS ON ALL FEEDERS SHOWN AND REPORT ALL FINDINGS TO ENGINEER PRIOR TO CONNECTION/ENERGIZATION.

3 PARTIAL ONE-LINE DIAGRAM

SCALE: 12" = 1'-0"



2 EXISTING PARTIAL FIRE ALARM RISER DIAGRAM

SCALE: 12" = 1'-0"

FIRE ALARM NOTES:

1. CONNECT NEW DEVICES TO THE EXISTING FULLY ADDRESSABLE FIRE ALARM SYSTEM.
2. PROVIDE INTEGRAL ANNUNCIATOR WITH INDIVIDUAL LED FOR EACH NEW FIRE ALARM DEVICE ON CORRESPONDING FACILITY PLAN.
3. SEE PLANS FOR PROPOSED QUANTITIES AND LOCATIONS OF IMPACTED NEW AND EXISTING DEVICES.
4. FIRE ALARM CONTRACTOR SHALL PROVIDE COMPLETE DATA TO AUTHORITY HAVING JURISDICTION FOR PERMIT, CERTIFICATE OF OCCUPANCY.
5. MINIMUM SIZE CONDUIT SHALL BE 3/4".
6. UPGRADE ELECTRONICS, POWER SUPPLY, AND BATTERY CAPACITY TO SUIT ADDITION OF FIRE ALARM DEVICE OR EQUIPMENT. PROVIDE SYNCHRONIZATION MODULE FOR STROBE LIGHTS.
7. CONNECT, TEST, MODIFY SOFTWARE, COMMISSION THE FIRE ALARM SYSTEM AFTER MODIFICATIONS ARE COMPLETED.

CONTRACTOR'S CAUTION (FA)

CONTRACTOR/VENDOR SHALL PREPARE FLORIDA LICENSED PE WORKING DRAWINGS INCORPORATING THE FIRE ALARM CRITERIA DESIGN AND CONFORMING TO AHJ REQUIREMENTS. SUBMIT TO DESIGN PROFESSIONAL AS A SHOP DRAWING FOR REVIEW. SUBMIT COMPLETE SIGNED/SEALED DRAWINGS TO AGENCY FOR PERMIT AND C.O.O.

NOTE:

THIS RISER IS FOR DIAGRAMMATIC PURPOSES ONLY AND DOES NOT REPRESENT A COMPLETE WIRING & DEVICE DISPLAY. ALL WIRING & DEVICES SHALL BE IN ACCORDANCE WITH SELECTED VENDORS POINT BY POINT WIRING DIAGRAM REFER TO FLOOR PLAN FOR PROPOSED QUANTITY OF FIRE ALARM SYSTEM COMPONENTS.

REVISIONS AND UPDATES		
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ELECTRICAL RISER DIAGRAM

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COA #15 TLC NO: 513004

Branch Panel: EMDP (EXISTING GE PANEL)

Location: ELECTRICAL ROOM
Supply From:
Mounting: Surface
Enclosure: Type 1
Volts: 480/277 Wye
Phases: 3
Wires: 4
A.I.C. Rating: EXISTING
Mains Type: MLO
Mains Rating: 225 A
MCB Rating:
Neutral Rating: EXISTING

Notes:

CKT	Circuit Description	Not	Trip	Pole	A	B	C	Pole	Trip	Not	Circuit Description	CKT
1					6.9 kVA 2.8 kVA							2
3	30 KVA XFMR	A	50 A	3		6.9 kVA 2.8 kVA		3	20 A	A	GENERATOR	4
5							6.9 kVA 2.8 kVA					6
7					2.8 kVA 4.2 kVA							8
9	XFMR TE2A AGRICUL	A	20 A	3		2.8 kVA 4.2 kVA		3	30 A	A	EMERGENCY LG AR1A	10
11							2.8 kVA 4.2 kVA					12
13	EMERGENCY LG AR2	A	20 A	1	2.8 kVA 2.8 kVA			1	20 A	A	EMERGENCY LG AR6&7	14
15	SPARE	A	20 A	1		0.0 kVA 2.8 kVA		1	20 A	A	EMERGENCY LG AR3	16
17	EMERGENCY LG AR9	A	20 A	1			2.8 kVA 2.8 kVA	1	20 A	A	EMERGENCY LG AR4	18
19	SPARE	A	20 A	1	0.0 kVA 0.0 kVA			1	20 A	A	SPARE	20
21	EMERGENCY LG AR8	A	20 A	1		2.8 kVA 2.8 kVA		1	20 A	A	EMERGENCY LG AR1B	22
23	EMERGENCY LG AR5B	A	20 A	1			2.8 kVA 0.0 kVA	1	20 A	A	SPARE	24
25	SPARE	A	20 A	1	0.0 kVA 0.0 kVA			1	20 A	A	SPARE	26
27	SPARE	A	20 A	1		0.0 kVA 0.0 kVA		1	20 A	A	SPARE	28
29	SPARE	A	20 A	1			0.0 kVA 0.0 kVA	1	20 A	A	SPARE	30
31	SPARE	A	20 A	1	0.0 kVA 0.0 kVA			1	20 A	A	SPARE	32
33	SPARE	A	20 A	1		0.0 kVA 0.0 kVA		1	20 A	A	SPARE	34
35	LIGHTING - COURTYARD & CORRIDOR	B	20 A	1			0.4 kVA					36
37												38
39												40
41												42
	Total Load:				22.1 kVA	24.9 kVA	25.4 kVA					
	Total Amps:				80 A	91 A	93 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	0.4 kVA	125.00%	0.6 kVA		
				Total Conn. Load:	72.4 kVA
				Total Est. Demand:	72.53 kVA
				Total Conn. Current:	87 A
				Total Est. Demand Current:	87 A

Notes: A - EXISTING LOAD TO REMAIN B - NEW LOAD WITH NEW PANELBOARD MATCHING CIRCUIT BREAKER AS REQUIRED
CONTRACTOR SHALL CONDUCT 30 DAY PEAK DEMAND READING ON THIS PANEL, PANELS UP STREAM AND ANY BRANCH CIRCUITS ALTERED BY THESE PLANS AND REPORT FINDING TO ENGINEER PRIOR TO CONNECTION. VERIFY THE CAPACITY OF PANELS TO HANDLE NEW LOADS.

Lighting Fixture Schedule

Type	Description	Manufacturer	Model	Voltage	Required Lamps: Type	Required Lamps: Lamp Quantity	VA	Comments
A	2'x4', 2 LAMP, RECESSED FLUORESCENT TROFFER	COLUMBIA	JT824-232G-FSA12-EPU-FO835	277 V	32W T8	2	60 VA	
AE	2'x4', 2 LAMP, RECESSED FLUORESCENT TROFFER	COLUMBIA	JT824-232G-FSA12-EPU-FO835	277 V	32W T8	2	60 VA	PROVIDE BODINE GTD (OR EQUAL)
B	6" HORIZONTAL, WALL WASH	PRESCOLITE	DBX-SBH/TW61WBF	277 V	60W A-19	1	60 VA	
C	2'x4', 2 LAMP, RECESSED FLUORESCENT TROFFER	COLUMBIA	JT824-232G-FSA12-EU-FO835	277 V	32W T8	2	60 VA	
CE	2'x4', 2 LAMP, RECESSED FLUORESCENT TROFFER	COLUMBIA	JT824-232G-FSA12-EU-FO835	277 V	32W T8	2	60 VA	PROVIDE BODINE GTD (OR EQUAL)
X	RECESSED LED EXIT SIGN, CEILLING MOUNTED, RED LETTERS, SINGLE OR DOUBLE FACE	DUAL LITE	LL-N-U-R-W-SD	277 V	LED	PROVIDED WITH FIXTURE	5 VA	

LIGHTING FIXTURE NOTES:

1. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ACTUAL CEILING CONSTRUCTION TYPE AS DEFINED ON THE ARCHITECTURAL DRAWINGS AND FURNISH ALL LUMINARIES WITH THE CORRECT MOUNTING DEVICES WHETHER OR NOT SUCH VARIATIONS ARE INDICATED BY THE LUMINARIES CATALOG NUMBER. THE CONTRACTOR SHALL VERIFY THE DEPTH OF ALL RECESSED LUMINARIES WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO ORDERING LUMINARIES. ANY DISCREPANCIES THAT WOULD CAUSE RECESSED LUMINARIES NOT TO FIT INTO CEILING SHALL BE REPORTED TO THE ARCHITECT PRIOR TO ORDERING LUMINARIES.
2. LUMINARIES RECESSED IN FIRE RATED CEILINGS SHALL BE PROVIDED WITH APPROVED FIRE RATED ENCLOSURE WITH A FIRE RATING EQUAL TO THAT OF THE CEILING. PROVIDE A MINIMUM OF 3" CLEARANCE FROM SIDES AND TOP OF RECESSED LUMINARIES.
3. VERIFY THE MOUNTING HEIGHT OF ALL WALL MOUNTED LUMINARIES WITH ARCHITECT.
4. FLUORESCENT LUMINARIES SHALL BE PROVIDE WITH SOLID STATE ELECTRONIC BALLAST.
5. CATALOG NUMBER SPECIFIES STYLE, TYPE AND STANDARD OF LIGHT FIXTURE QUALITY.
6. IF THERE IS A DISCREPANCY BETWEEN A FIXTURE DESCRIPTION AND GENERAL NOTES AND THE CATALOG NUMBER LISTED AND THE LAMPS LISTED, THE FIXTURE DESCRIPTION AND GENERAL NOTES SHALL DICTATE.
7. FLUORESCENT LAMP COLOR TEMPERATURE SHALL MATCH THAT OF EXISTING ADJACENT FIXTURE LAMPS.
8. PROVIDE PROGRAM RAPID START BALLASTS FOR FLUORESCENT FIXTURES IN AREAS WITH OCCUPANCY SENSOR CONTROL.
9. ALL LIGHTING FIXTURE WITH ELECTRONIC BALLAST SHALL COMPLY WITH NEC 2008 FOR DISCONNECTING MEANS OF BALLAST LIGHTING FIXTURES.
10. ALL HALF SHADED LIGHT FIXTURES SHALL BE PROVIDED WITH 90 MIN BATTERY BACKUP BALLAST.

EQUIPMENT CONNECTION SCHEDULE

Tag	Identification	HP	Load (kva)	FLA / MCA	Voltage / PH / Load (VA)	Ckt. Bkr. Amps	Panel	Ckt. #	Enclosure	Disc. Amp/Poles	Fuse Amps	Feeder Size (_)=Sets, G=Gnd.	Cond. Size
RTU-1	ROOF TOP UNIT		63.941	77/78	480 V/3-63.9 kVA	100A	HN7B	2,4,6	NEMA 3R	100A/3P	90	(3) #2, (1) #8GND	1-1/2"

EQUIPMENT SCHEDULE NOTES:

1. REFER TO MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR EXACT LOCATION OF EQUIPMENT.
2. E.C. TO VERIFY AND COORDINATE EXACT OCPD AND OVERLOAD RATING WITH RESPECTIVE CONTRACTOR AND EQUIPMENT SUPPLIER. ADJUST CIRCUIT ACCORDINGLY.
3. ALL CONDUIT SERVING ROOF-MOUNTED EQUIPMENT SHALL BE ROUTED CONCEALED.
4. PROVIDE CIRCUITING AND CONNECTIONS FROM ALL FUSED AND NON-FUSED DISCONNECT SWITCHES, COMBINATION STARTERS, MANUAL MOTOR STARTERS, AND CONTROLLERS TO MECHANICAL EQUIPMENT SERVED. CONDUCTOR AND CONDUIT SIZES SHALL MATCH THOSE SERVING THE EQUIPMENT FROM THE PANELBOARD.

BRANCH CIRCUIT WIRING SCHEDULE (Cu)

BREAKER SIZE	THHN CONDUCTOR	GROUND	CONDUIT
20A	12	12	3/4"
30A	10	10	3/4"
35A	8	10	3/4"
40A	8	10	3/4"
45A	8	10	3/4"
50A	8	10	3/4"
60A	6	10	3/4"
70A	4	8	1"

NOTE:
1. PROVIDE A CONDUCTOR PER BREAKER POLE. THESE ARE THE MINIMUM SIZES REQUIRED FOR EACH CIRCUIT. CONTRACTOR TO MAKE ALL THE NECESSARY FIELD ADJUSTMENTS TO COMPENSATE FOR VOLTAGE DROP.
2. ALL 120V, 20A BRANCH CIRCUITS OVER 80' -0" IN LENGTH SHALL BE #10 AWG CU. CONDUCTORS MINIMUM TO ACCOMMODATE VOLTAGE DROP. WHERE A CONFLICT EXISTS BETWEEN THIS REQUIREMENT AND CONDUCTOR SIZES INDICATED ELSEWHERE IN THE CONTRACT DOCUMENTS, THIS REQUIREMENT SHALL TAKE PRECEDENCE.
3. IN GENERAL, VOLTAGE DROP FOR ANY BRANCH CIRCUIT SHALL NOT EXCEED 3%. VOLTAGE DROP FOR ANY FEEDER SHALL NOT EXCEED 2%. WHERE VOLTAGE DROP EXCEEDS THESE REQUIREMENTS, THE CONTRACTOR SHALL INCREASE THE SIZE OF THE CONDUCTORS AND RACEWAY AS REQUIRED.

Branch Panel: HN7B (EXISTING GE PANEL)

Location: ELECTRICAL ROOM
Supply From:
Mounting: Surface
Enclosure: Type 1
Volts: 480/277 Wye
Phases: 3
Wires: 4
A.I.C. Rating: EXISTING
Mains Type: MLO
Mains Rating: 225 A
MCB Rating:
Neutral Rating: EXISTING

Notes:

CKT	Circuit Description	Not	Trip	Pole	A	B	C	Pole	Trip	Not	Circuit Description	CKT
1					6.9 kVA 21.3 kVA							2
3	TRANSFORMER	A	50 A	3		6.9 kVA 21.3 kVA		3	100 A	B	RTU-1	4
5							6.9 kVA 21.3 kVA					6
7	LIGHTING AGRICULTURE	A	20 A	1	2.8 kVA 0.0 kVA			1	20 A	A	SPARE	8
9	LIGHTING AGRICULTURE	A	20 A	1		2.8 kVA 0.0 kVA		1	20 A	A	SPARE	10
11	LIGHTING AGRICULTURE	A	20 A	1			2.8 kVA 0.0 kVA	1	20 A	A	SPARE	12
13	SPARE	A	20 A	1	0.0 kVA 0.0 kVA			1	20 A	A	SPARE	14
15	SPARE	A	20 A	1		0.0 kVA 0.0 kVA		1	20 A	A	SPARE	16
17	SPARE	A	20 A	1			0.0 kVA 2.2 kVA	1	20 A	B	LIGHTING - COURTYARD 003A	18
19	Space	--	--	--	0.0 kVA 0.0 kVA			--	--	--	Space	20
21	Space	--	--	--		0.0 kVA 0.0 kVA		--	--	--	Space	22
23	Space	--	--	--			0.0 kVA 0.0 kVA	--	--	--	Space	24
25	Space	--	--	--	0.0 kVA 0.0 kVA			--	--	--	Space	26
27	Space	--	--	--		0.0 kVA 0.0 kVA		--	--	--	Space	28
29	Space	--	--	--			0.0 kVA 0.0 kVA	--	--	--	Space	30
	Total Load:				31.0 kVA	31.0 kVA	33.2 kVA					
	Total Amps:				112 A	112 A	120 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	63.9 kVA	125.00%	79.9 kVA		
Lighting	2.2 kVA	125.00%	2.8 kVA	Total Conn. Load:	95.2 kVA
				Total Est. Demand:	111.77 kVA
				Total Conn. Current:	115 A
				Total Est. Demand Current:	134 A

Notes: A - EXISTING LOAD TO REMAIN B - NEW LOAD WITH NEW PANELBOARD MATCHING CIRCUIT BREAKER AS REQUIRED
CONTRACTOR SHALL CONDUCT 30 DAY PEAK DEMAND READING ON THIS PANEL, PANELS UP STREAM AND ANY BRANCH CIRCUITS ALTERED BY THESE PLANS AND REPORT FINDING TO ENGINEER PRIOR TO CONNECTION. VERIFY THE CAPACITY OF PANELS TO HANDLE NEW LOADS.

Branch Panel: LN7C (EXISTING GE PANEL)

Location: ELECTRICAL ROOM
Supply From:
Mounting: Surface
Enclosure: Type 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: EXISTING
Mains Type: MLO
Mains Rating: 100 A
MCB Rating:
Neutral Rating: EXISTING

Notes:

CKT	Circuit Description	Not	Trip	Pole	A	B	C	Pole	Trip	Not	Circuit Description	CKT
1	RECEPT RM 080	A	20 A	1	1.2 kVA 0.0 kVA			1	20 A	A	SPARE	2
3	FL RECEPT RM 078	A	20 A	1		1.2 kVA 1.2 kVA		1	20 A	A	RECEPT RM 071	4
5	FL RECEPT RM 078	A	20 A	1			1.2 kVA 1.2 kVA	1	20 A	A	RECEPT RM 072	6
7	SPARE	A	20 A	1	0.0 kVA 1.2 kVA			1	20 A	A	FL RECEPT RM 078	8
9	SPARE	A	20 A	1		0.0 kVA 0.6 kVA		1	20 A	B	RECEPT - COURTYARD 003A	10
11	B/B GOALS	A	20 A	1			1.2 kVA 0.2 kVA	1	20 A	B	RECEPT - ROOF RTU	12
13	B/B GOALS	A	20 A	1	1.2 kVA 1.2 kVA			1	20 A	A	SHUNT TRIP MAIN	14
15	SPARE	A	20 A	1		0.0 kVA 1.2 kVA						16
17	Space	--	--	--			0.0 kVA 1.2 kVA	3	20 A	A	VACUUM FOR WELDING	18
19	Space	--	--	--	0.0 kVA 1.2 kVA							20
21	Space	--	--	--		0.0 kVA 0.0 kVA		--	--	--	Space	22
23	Space	--	--	--			0.0 kVA 0.0 kVA	--	--	--	Space	24
25	Space	--	--	--	0.0 kVA 0.0 kVA			--	--	--	Space	26
27	Space	--	--	--		0.0 kVA 0.0 kVA		--	--	--	Space	28
29	Space	--	--	--			0.0 kVA 0.0 kVA	--	--	--	Space	30
	Total Load:				6.0 kVA	4.2 kVA	5.0 kVA					
	Total Amps:				51 A	35 A	43 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	0.8 kVA	100.00%	0.8 kVA		
				Total Conn. Load:	15.2 kVA
				Total Est. Demand:	15.20 kVA
				Total Conn. Current:	42 A
				Total Est. Demand Current:	42 A

Notes: A - EXISTING LOAD TO REMAIN B - NEW LOAD WITH NEW PANELBOARD MATCHING CIRCUIT BREAKER AS REQUIRED
CONTRACTOR SHALL CONDUCT 30 DAY PEAK DEMAND READING ON THIS PANEL, PANELS UP STREAM AND ANY BRANCH CIRCUITS ALTERED BY THESE PLANS AND REPORT FINDING TO ENGINEER PRIOR TO CONNECTION. VERIFY THE CAPACITY OF PANELS TO HANDLE NEW LOADS.

REVISIONS AND UPDATES

04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENO
1314 PINE AVE., SW LIVE OAK, FLORIDA
ELECTRICAL SCHEDULES

drawn Author | checked Checker | approved Approver

job no. E-4.0
sheet of

M. MONCEF HADIJI, P.E.
Florida License #48022
Seal

AA-C001560

ARCHITECTS IN ASSOCIATION ROOD, ZWICK & KERR
600 FLORIDA AVENUE SUITE 202 COCOA, FLORIDA 32922 TELEPHONE (321) 631-8039

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874 Dixon Boulevard
Cocoa, FL 32922
Phone: 321-636-0274
Fax: 321-639-8986
ENGINEERING FOR ARCHITECTURE www.tlc-engineers.com

COA #15 TLC NO: 513004

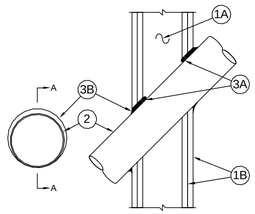
Classified UL System
WL 1158

1 and 2 Hour Fire Rated Through Penetration Firestop for Single Metal Pipe through Gypsum Wall Assemblies using TREMstop IA.

System No. W-L-1158
December 7, 2001
F Ratings - 1 and 2 Hr. (See Item 1)
T Rating - 0 Hr.
L Rating at Ambient - Less Than 1 CFM/sq. ft.

TREMCO®
Tremco Inc., 2628 Pearl Road, Medina, Ohio 44256
www.tremcofirestop.com

(Drawing not to scale)



SECTION A - A

1. **Wall Assembly** The 1 or 2 hour fire-rated gypsum board stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300,U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
A. **Studs** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
B. **Gypsum Board*** One or two layers of nom 1/2 or 5/8 in. (13 or 16 mm) thick gypsum board as specified in the individual Wall and Partition Design. Max diam of opening is 15-1/8 in. (384 mm).
The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
1A. **Steel Sleeve** - (Optional. Not shown.) Cylindrical sleeve fabricated from min 0.013 in. (0.330 mm) thick (No. 30 gauge) to max 0.056 in. (1.42 mm) (No. 16 gauge) galv steel sheet and having a min 1 in. (25 mm) lap along the longitudinal seam. Length of sleeve flush with both walls. Sleeve to be installed by coiling the sheet metal to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular cutouts in the gypsum board layers.
2. **Through Penetrants** One metallic pipe, tubing or conduit to be installed either concentrically or eccentrically within the firestop system. Pipe, tubing or conduit to be rigidly supported on both sides of wall assembly. The pipe, tubing or conduit may be installed at an angle not greater than 45 degrees from the perpendicular. The annular space shall be min 0 (point contact) in. to max 1-7/8 in. (48 mm). The following types and sizes of metallic pipe tubing or conduit may be used:
A. **Steel Pipe** Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
B. **Iron Pipe** Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe.
C. **Conduit** Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or nom 6 in. diam (or smaller) steel conduit.
D. **Copper Tubing** Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
E. **Copper Pipe** Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. **Firestop System** The firestop system shall consist of the following:
A. **Packing Material** (Optional) - Foam backer rod firmly packed into the opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
B. **Fill, Void or Cavity Material* - (Caulk)** Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. When annular space exceeds 1/2 in. (13 mm), the min thickness of fill material is 5/8 in. (16 mm). Additional fill material to be installed such that a min 3/8 in. (10 mm) crown is applied at the pipe/wall interface at the point contact location.
TREMCO INC - TREMstop Intumescent Acrylic
*Bearing the UL Classification Mark

FIRE SAFING DETAIL
No Scale

4

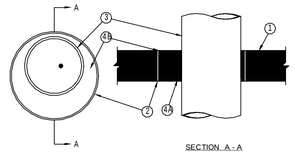
Classified UL System
CAJ 1064

2 and 4 Hour Fire Rated Through Penetration Firestop for Single Metal Pipe through Concrete Floors or Walls using FYRE-SIL.

System No. 1064
March 16, 2004
F Ratings - 2, 3 & 4 (See Item 4)
T Rating - 0 Hr.

TREMCO®
Tremco Inc., 2628 Pearl Road, Medina, Ohio 44256
www.tremcofirestop.com

(Drawing not to scale)



SECTION A - A

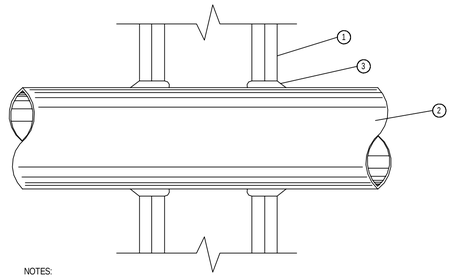
1. **Floor or Wall Assembly** - Reinforced lightweight or normal weight (100-150 pcf (1600-2400 kg/cu meter)) concrete as specified in the Table in Item 4 below. Floor may also be constructed of any UL Classified hollow-core **Precast Concrete Units***. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of sleeved opening is 32 in. (813 mm). Max diam of sleeved opening in floors constructed of hollow-core precast concrete units is 7 in. (178 mm)
See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) categories in the Fire Resistance Directory for names of manufacturers.
2. **Steel Sleeve (Optional) -** Nom 32 in. (813 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe sleeve cast or grouted into floor or wall assembly, flush with both surfaces of floor or wall. **Steel sleeve may be used in 2 and 3 hr F Rated systems only.**
3. **Through Penetrants -** One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. See Table in Item 4 for sizes of penetrants A, B, D and E that may be used. See Item 3C below for size of conduit that may be used. The annular space shall be as specified in Table in Item 4 below. The following types and sizes of metallic pipes, conduits or tubing may be used:
A. **Steel Pipe -** Schedule 10 (or heavier) steel pipe.
B. **Iron Pipe** - Cast or ductile iron pipe.
C. **Conduit -** Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or nom 6 in. (152 mm) diam (or smaller) steel conduit.
D. **Copper Tubing -** Type L (or heavier) copper tubing.
E. **Copper Pipe -** Regular (or heavier) copper pipe.
4. **Firestop System** - The F Rating of the system is dependent upon the type of concrete, thickness of concrete, annular space, fill and packing material thickness, packing material density and penetrant size as shown in the Table below:

F Rating hr	Min Thick Concrete In. (mm)	Annular Space In. (mm)	Min Thick Packing Mtl In. (mm)	Min Density Packing Mtl pcf (kg/cu meter)	Min Thick Fill Mtl In. (mm)	Penetrant Size Diam (or Smaller) In (mm)	
						D, E (Copper)	A, B, C
(Steel, Iron)							
2	4-1/2 (114)	½ to 3-3/8 (13 to 86)	3-1/2 (89)	6 (96)	½ (13)	4 (102)	16 (406)
2	5-1/2 (140)	0 to 1-7/8 (0 to 48)	5 (127)	4 (64)	½ (13)	4 (102)	16 (406)
3	4-1/2 (114)	½ to 3-3/8 (13 to 86)	3-1/2 (89)	6 (96)	½ (13)	4 (102)	8 (203)
3	4-1/2 (114)	0 to 2-1/8 (0 to 54)	4-1/4 (108)	4 (64)	¼ (6)	6 (152)	30 (762)
4	5-1/2 (140)	0 to 1-7/8 (0 to 48)	5 (127)	4 (64)	½ (13)	4 (102)	8 (203)

Packing Material - Min 3-1/2, 4-1/4 or 5 in. (89, 108 or 127 mm) thickness of min 4.0 or 6.0 pcf (64 or 96 kg/cu meter) mineral wool batt insulation firmly packed into opening as a permanent form as specified in the Table above. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
B. **Fill, Void or Cavity Material* - Caulk** - Min ¼ or 1/2 in. (6 or 13 mm) thickness of fill material as specified in the Table above applied within the annulus, flush with top surface of floor or with both surfaces of wall. At the point contact location between pipe and concrete or sleeve, a min 1/2 in. (13 mm) diam bead of fill material shall be applied.
TREMCO INC - Fyre-Sil (floors or walls) and Fyre-Sil S.L. (floors)
*Bearing the UL Classification Mark

FIRE SAFING DETAIL
No Scale

3



NOTES:

1. WALL ASSEMBLY - THE 1, 2, 3, OR 4 HOUR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY.

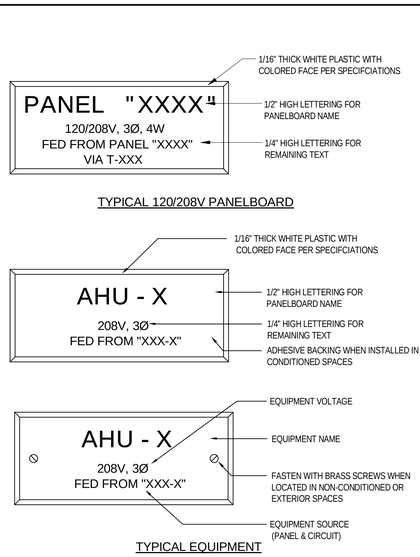
2. CONDUIT - NOM 4" DIA OR SMALLER STEEL ELECTRICAL METALLIC TUBING. A MAX OF ONE CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.

3. FILL VOID OR CAVITY MATERIAL - CAULK FILL MATERIAL BEARING THE UL CLASSIFICATION MARKING INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4" DIAM BEAD OF CAULK APPLIED TO PERIMETER OF CONDUIT AT ITS EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:

MAX CONDUIT DIAM, IN.	ANNULAR SPACE, IN.	F RATING, HR.	T RATING, HR.
1	0 TO 3/16	1 OR 2	0, 1 OR 2
1	1/4 TO 1/2	3 OR 4	3 OR 4
4	0 TO 1-1/2	1 OR 2	0
6	1/4 TO 1/2	3 OR 4	0
12	3/16 TO 3/8	1 OR 2	0

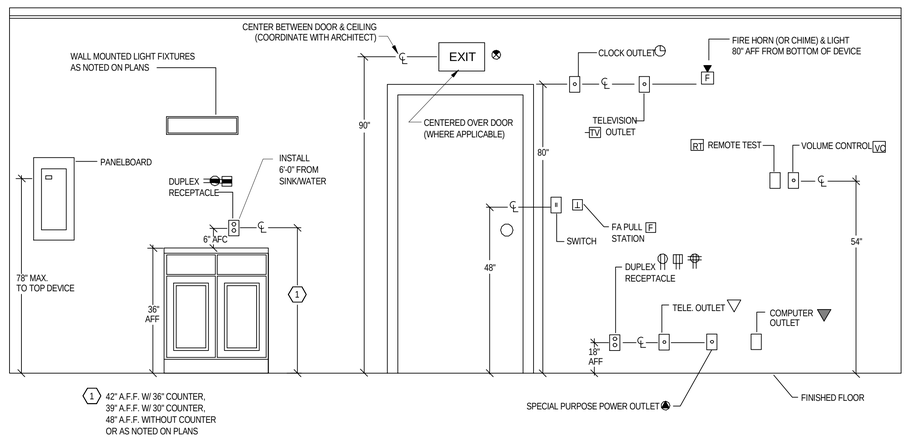
CONDUIT PENETRATION OF FIREWALL
UL SYSTEM NO. W-L-1001

2



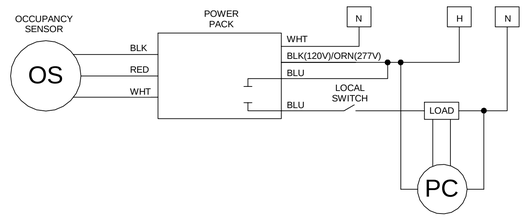
PANELBOARD/EQUIPMENT NAMEPLATE
No Scale

1



MOUNTING HEIGHTS
No Scale

6



CEILING MOUNTED OCCUPANCY SENSOR WIRING DIAGRAM
No Scale

5

REVISIONS AND UPDATES		
04/01/13		100% CONSTRUCTION DOCUMENTS

SUWANNEE COUNTY SCHOOL BOARD
SUWANNEE HIGH SCHOOL COURTYARD RENO
1314 PINE AVE., SW LIVE OAK, FLORIDA
ELECTRICAL DETAILS

drawn Author | checked Checker | approved Approver

job no. E-5.0
sheet of

M. MONCEF HADIJI, P.E.
Florida License #48022
Seal

AA-C001560
ARCHITECTS IN ASSOCIATION ROOD, ZWICK & KERR
600 FLORIDA AVENUE SUITE 202 COCOA, FLORIDA 32922 TELEPHONE (321) 631-8039

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