OCP PARCEL J: CONCESSIONS, OFFICE AND RESTROOM BUILDING



720 VASSAR STREET ORLANDO, FL. 32804 (407) 418-1338

CONSULTANTS:

CIVIL ENGINEERS SK CONSORTIUM, INC. 1053 N. ORLANDO AVE #3 MAITLAND, FLORIDA 32751 C. LOUIS STRUCTURAL ENGINEERS STRUCTURAL ENGINEERS 901 DOUGLAS AVENUE ALTAMONTE SPRINGS, FLORIDA 32714 MECHANICAL, PLUMBING & ELECTRICAL ENGINEERS BOBES ASSOCIATES CONSULTING ENGINEERS, INC. 150 CIRCLE DRIVE Maitland, Florida 32751

BOARD OF COUNTY COMMISSIONERS

JERRY L. DEMINGS **COUNTY MAYOR**

BETSY VANDERLEY MARIBEL GOMEZ CORDERO DISTRICT 1 DISTRICT 4

CHRISTINE MOORE EMILY BONILLA DISTRICT 5 DISTRICT 2

MAYRA URIBE VICTORIA P. SIPLIN DISTRICT 3 DISTRICT 6

17-146

ORANGE COUNTY PARKS 400 E. SOUTH STREET, ORLANDO, FLORIDA 32801

100% Construction Documents 06-20-2019

DRAWING INDEX

GENERAL

COVER SHEET & INDEX OF DRAWINGS

STRUCTURAL

TYPICAL CONCRETE DETAILS SECTIONS & DETAILS SECTIONS & DETAILS SECTIONS & DETAILS

ARCHITECTURAL

ARCHITECTURAL GENERAL INFORMATION

ARCHITECTURAL SITE PLAN

WALL SECTIONS

FLOOR PLAN

REFLECTED CEILING PLAN, CEILING AND FINISH LEGEND

EXTERIOR ELEVATIONS EXTERIOR ELEVATIONS BUILDING SECTIONS

WALL SECTIONS

DETAIL AND ACCESSORY MOUNTING HEIGHTS

RESTROOM ELEVATIONS DOOR SCHEDULE AND DETAILS WINDOW SCHEDULE AND DETAILS

MECHANICAL

HVAC GENERAL NOTES SYMBOLS AND SCHEDULES

FLOOR PLAN - HVAC HVAC DETAILS

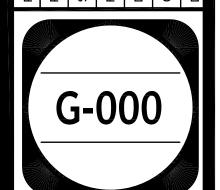
ELECTRICAL

E-001 GENERAL NOTES, SYMBOL LIST AND LIGHTING FIXTURE SCHEDULE

E-101 FLOOR PLAN - LIGHTING

FLOOR PLAN - POWER AND SYSTEMS FLOOR PLAN - POWER AND SYSTEMS

COV



GENERAL NOTES

Coordinate with all drawings for pertinent information related to structural work. Any changes to the building structural system shall be redesigned by a professional engineer registered in the state of Florida. All changes must have prior authorization of the Architect and shall be made at no additional cost to the Owner or Architect. All calculations, drawings and other design information shall be submitted to the Architect as a reference submittal. Do not begin construction until Architect has given written authorization.

Building Code: Florida Building Code 6th Edition (2017).

Design Live Loads:

Roof----- 20 psf

Wind Design ASCE 7—10 Chapter 28 MWFRS Envelope Procedure and Chapter 30 Components and Cladding

Ultimate Design Wind Speed (Vult)------ 139 mph
Nominal Design Wind Speed (Vasd)----- 108 mph
Risk Category----- II

Exposure Category----- C

Internal Pressure Coefficients (Enclosed)---- +0.18 , -0.18

General Contractor shall verify all dimensions and conditions

Construction loads shall not exceed design live loads. Shoring and reshoring is the responsibility of the Contractor.

related to existing construction, existing services and the site.

SHOP DRAWINGS

Shop drawings shall conform to the requirements of the Contract Documents unless the Architect has given written approval for changes.

The General Contractor shall review, check and stamp "Approved" all shop drawings prior to submitting them to the Architect. Shop drawings which have not been stamped "Approved" by the General Contractor or which do not conform to the requirements of the Contract Documents will be rejected.

The General Contractor's approval of the shop drawings represents that he has checked and coordinated the information contained within them with the requirements of the Work and of the Contract Documents

All submittals are to be in electronic PDF Format.

FOUNDATIONS

The Contractor shall become familiar with the survey and the subsurface investigation report before starting construction.

Design Bearing Pressure: 2,000 psf on compacted soil.

Notify the Architect of any unusual soil conditions that

Notify the Architect of any unusual soil conditions that are in variance with test borings, such as spring or seepage water encountered, or when a different bearing material is evident and there is a question of the bearing capacity.

Set foundation at elevations shown, or on firm undisturbed bearing material of design capacity, whichever is lower, as directed by the Architect. The Soils Engineer of Record shall verify that each footing is bearing on design material.

Foundation elevations shown on plan are <u>top</u> elevations, unless otherwise noted.

a maximum vertical step of 2'-0", unless otherwise noted.

Step footings at a ratio of one vertical to two horizontal, with

Backfilling against foundation or pit walls will not be permitted until the supporting floors or walls are in place and able to resist the imposed forces. Proper temporary bracing may be used in lieu thereof with prior approval of the Architect. The design of temporary bracing is the responsibility of the Contractor.

Contractor shall be responsible for the design, installation and final clearance of any required needling, underpinning, shoring or bracing of existing structures.

CAST-IN-PLACE CONCRETE

Cast—in—place concrete work shall conform to ACI 318—14, "Building Code Requirements for Structural Concrete" and to the American Concrete Institute codes and standards listed in the Project Specifications, except as modified therein or on the drawings.

Minimum ultimate compressive strength of concrete at 28 days shall be 3,000 psi for footings, 4,000 psi for all others including concrete columns, beams, walls, and slabs on grade,

Normal Weight Aggregates: ASTM C 33.

Pea rock aggregate is not permitted for floor slabs on grade.

Reinforcing bars: ASTM A 615, Grade 60.

Welded wire fabric: ASTM A185.

Provide a minimum 6x6 — W1.4xW1.4 welded wire fabric in slabs on grade unless noted otherwise.

Place welded wire fabric, in slabs, 1-1/2" down from top of slab, unless otherwise noted.

Provide control joints in all slab on grade. The maximum spacing of control joints shall be 20'-0" o.c., unless otherwise noted.

Openings shall not be provided in framed slabs, beams or columns unless shown on structural drawings, or approved by the Architect in writing prior to placing. Cutting through framed beams and columns will not be permitted.

Reinforcing bar lap splices shall be 48 bar diameters unless noted otherwise. No splices will be permitted except where shown on the drawings.

All horizontal wall bars shall be bent and lapped around all corners, unless otherwise noted.

Provide a minimum of 2-#5 top reinforcing bars in beams where no other bars are available for supporting stirrups.

All horizontal footing, masonry bond and concrete beam bars shall be bent and lapped around all corners unless otherwise noted

All wall footing and thickend slab reinforcing shall extend to intersecting centerline of column foootings.

Concrete beams shall have 8" bearing on masonry walls, unless otherwise noted.

Chamfer exposed edges on concrete 3/4" x 3/4", unless otherwise noted

Refer to architectural drawings for location and extent of finishes or other treatments to exposed concrete.

Determine size and location of mechanical equipment, and make provisions for bolts, sleeves, pads, etc., from manufacturer's certified drawings. This work shall be coordinated with the trades involved.

MASONRY WORK

Masonry work shall conform to ACI 530-13/ASCE5-13 "Building Code Requirements for Masonry Structures and ACI 530.1-13/ASCE6-13 "Specification for Masonry Structures".

Submittals— Submit manufacturer's product data for each type of masonry unit, accessory, wall reinforcement, anchors, or other manufactured product of system used, including certifications that each type or assembly complies with specified requirements. Show all fire resistance ratings and at which locations those apply.

Hollow Concrete Masonry Units: Standard, Regular Weight, conforming to ASTM C90, Grade N-II, average compressive strength of 2,000 PSI.

Mortar shall be ASTM C270 Type S. Minimum compressive strength of 1,800 psi. Grout shall conform to ASTM C476.

Use fine grout when grouting cells of hollow masonry units, with or without vertical reinforcing. Use coarse grout when grouting bond beams. Grout slump to be 8" to 11", f'c28 = 3,000 PSI.

Provide solid masonry, 32" long and 16" high, centered under each wall bearing steel beam, precast concrete beam or cast—in—place concrete beam.

Grout cores behind expansion bolts anchors solid. Do not install anchors in head joints.

Horizontal reinforcement for masonry walls shall be cold drawn steel wire per ASTM A82, hot—dipped galvanized per ASTM A153, Class B2 coating.

All masonry walls shall have hot—dipped galvanized horizontal reinforcing of Ladder type, #9 gage side rods and #9 gage cross rods spaced 16" on—center vertically.

Provide special prefabricated units at corners and intersections.

Conventional reinforcing bars, horizontal and vertical, shall be ASTM A615, Grade 60.

All units shall be laid with full mortar coverage on head, bed

(face shells), webs and collar joints, unless otherwise noted.

Provide #5 vertical in concrete filled cells at 2'-0" on center maximum spacing and #5 horizontal in knock—out block below window sill extending 2'-0" beyond sides of opening, unless

Provide precast concrete "U" lintels of sufficient capacity to support the imposed loads over all openings.

The masonry walls are not designed to withstand temporary construction loads. It is the Contractor's responsibility at all times to maintain wall stability during the construction phase of the project.

Use Low-lift grouting techniques.

otherwise noted.

For low lift grouting lay CMU to maximum pour height. Do not exceed 5' height, or if bond beam occurs below 5' height, stop pour at course below bond beam.

Vertical cores to be filled are to have an unobstructed alignment.

Whenever work is stopped for one hour or longer, a horizontal construction joint shall be made by stopping the grout pour about 1-1/2" below the top of the masonry unit to form a key with the next lift.

During placement, grout is to be rodded or mechanically vibrated to ensure complete filling of the grout space and solid embedment of the reinforcement.

Terminate intermediate grout pours 1-1/2" below top course of pour. Masonry protrusions projecting more than 3/8" into the grout space are to be removed. Care is to be taken that excess mortar does not extrude and fall into the grout space.

Vertical and horizontal reinforcing bars are to be accurately positioned and rigidly secured at intervals by wire ties or spacing devices.

STRUCTURAL METAL

Detail, fabricate and erect structural steel in accordance with the American Institute of Steel Construction Specification for Structural Steel Buildings — Allowable Stress Design.

Structural Steel: ASTM A36 — rolled plates, shapes, bars, and rod except —

ASTM A992 Wide Flange Shapes

ASTM A53, type E or S, Grade B — pipe or

ASTM A501 — pipe

ASTM A500, Grade B — tubing

Bolts: 3/4" diameter minimum, unless noted otherwise.

ASTM A325 bearing type for all beam and column connections.

HILTI Kwik Bolt 3 Expansion Anchors — Metro—Dade County NOA No. #06—0810.13

ASTM F1554 Gr 36 for all anchor bolts.

Welding electrodes shall be E70XX. For welding symbols with no length dimension given, the welding shall be continuous between abrupt changes in direction.

Welding shall be done by certified welders in accordance with the American Welding Society standards.

Do not weld until the part of the structure stiffened thereby has been properly aligned. Sequence the placing of welds to avoid distortion.

STRUCTURAL WOOD

Detail, fabricate and erect structural wood in accordance with The American Institute of Timber Construction Standards and Specifications. Stress—grade lumber for joists, beams, columns, ledger plates,

Stress—grade lumber for structural wall studs shall develop minimum working stresses and a modulus of elasticity as follows:

Miscellaneous steel shall conform to ASTM A36 and bolts shall conform to ASTM A307.

Stud Framing shall be spaced at 16" on center, unless otherwise shown. Double studs at all corners, angles, and openings.

Provide all blocking and fire stops that are required by Building Officials and/or truss manufacturer.

Provide framing and blocking to support all edges of openings in floor and roof decks.

All wood exposed to weather or in contact with ground, concrete or masonry to be pressure treated.

PRE-MANUFACTURED WOOD TRUSSES

The wood and fabrication criteria of all pre—fabricated wood trusses shall meet with "National Design Specifications for Stress—Grade Lumber and its Fastening", by National Forest Products Associations; "Timber Construction Manual" (latest revision); and "Design Specification for Light Metal Plate Connected Wood Trusses", by Truss Plate Institute.

All lumber used for the truss members shall conform to the published stress rating for the species and grades as set out in the official grading rules of the appropriate lumber association or as listed in the reference specifications; except that, wherever this specifications, or notes on the plans or truss engineering design calls for lumber which exceeds the minimum set forth therein, the specification, plans and/or truss engineering designs shall be applicable.

All truss connector plates shall be manufactured from only prime commercial quality galvanized sheet metal of no less than 20 gage thickness which has a minimum yield of 33,000 psi and a minimum ultimate tensile strength of 48,000 psi

The corrosion—resistant coating shall be G-60 commercial class, hotdipped galvanized before stamping.

Structural submittals are to include:

Submit manufacturer's product data and installation instructions.

Submit shop drawings showing design and fabrications data, member, materials, type, location, pitch, spacing, span, size of members, method of attachment to supporting members, and all necessary erection details. Indicate supplemental bracing, strapping, splices, bridging, accesssories and details required for proper installation.

Where field connections of truss sub—assemblies are necessary, the connections shall be in accordance with the details shown on the truss design drawings and approved by a professional licensed engineer and the architect.

Indicate design loadings of trusses and allowable stress increase; camber and permanent bracing required to prevent compression buckling of individual truss members.

Submit detailed truss layout.

All truss designs shall bear the name and seal and/or registered number of a Florida licensed professional engineer.

All truss drawings shall be furnished by the fabricator. All critical dimensions for determining fit and placement shall be approved by the General Contractor and Architect prior to fabrication.

Finish: Provide components with protective zinc coating complying with ASTM A653, minimum G60 coating.

Do not alter, cut, or remove truss members or connection of truss members. Erect trusses with plane of truss webs plumb and parallel to each other, align, and accurately position at spacing indicated.

Install continuous bridging and permanent truss bracing per truss design requirements.

Install necessary roof cross and diagonal bracing per design drawings.

Erection of trusses, including proper handling, safety precautions, temporary bracing and other safeguards or procedures are the responsibility of the Contractor and Contractor's installer.

Exercise care and provide erection bracing required to prevent toppling of trusses during erection.

Provide vapor barrier at all trusses bearing directly on masonry.

PLYWOOD DIAPHRAGMS

Plywood shall be attached according to the following schedule:

USE	PLYWOOD THICKNESS	NAILING @ EDGE	NAILING @ INT. SUPPORTS
Roof Deck	5/8"	8d @ 4"	8d @ 6"
Exterior Walls	5/8"	8d @ 6"	8d @ 12"

Nails to be 8d (0.131 diameter) $\times 2-1/2$ " long.

Wall sheathing — nail spacing shall be 4" on center at corner studs, in all cases.

Block all edges of plywood attached to walls. Galvanized ring shank nails shall be used on the roof deck and galvanized common wire nails at shearwalls.

Install plywood roof deck with a minimum 2'-0" offset in plywood joints.

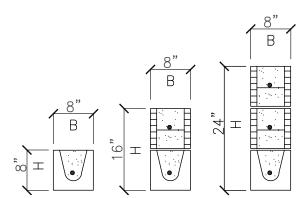
Plyclips shall be used between all unsupported edges of plywood roof deck. Install one (1) in spans from 1'-0" to 2'-0" and two (2) in spans greater than 2'-0".

Plywood roof deck shall be installed with the long dimension perpendicular to roof trusses.

DIN STRUCTURA ENGINEERS 901 Douglas Avenue Suite 203 Altamonte Springs Florida 32714 407/869-5533 FL Certificate of CLOUISINC@AOL.COM ONC

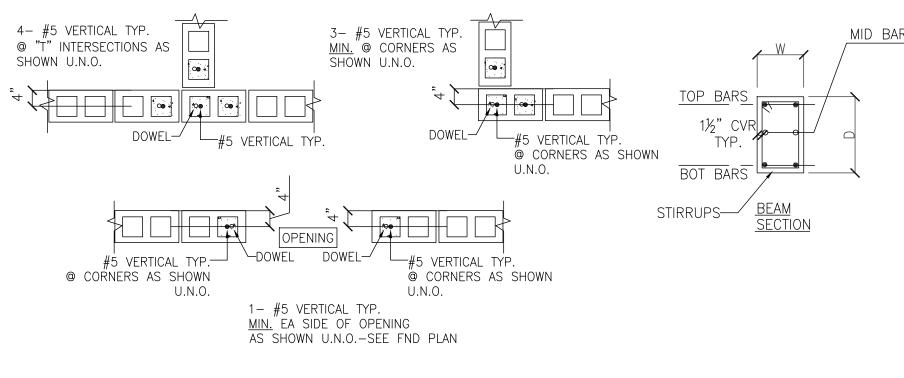
S-100

MAS	ONRY WALL	LINTEL SO	CHEDULE		
TYPE	OPENING WIDTH	LINTEL SIZE B X H	COMPOSITE SAFE LOAD LBS/FT	FIELD REINFORCING	REMARKS
L-1	2'-8"	8" X 16"	6,113	1-#5 EA COURSE	
L-2	3'-4"	8" X 16"	6,113	1-#5 EA COURSE	
L-3	4'-0"	8" X 16"	5,365	1-#5 EA COURSE	
L-4	5'-4"	8" X 16"	3,480	1-#5 EA COURSE	
L-5	5'-4"	8" X 24"	8,360	1-#5 EA COURSE	
L-6	6'-0"	8" X 16"	2,661	1-#5 EA COURSE	
L-7	8'-0"	8" X 16"	1,843	1-#5 EA COURSE	
L-8	10'-0"	8" X 24"	2,423	1-#5 EA COURSE	
L-9	8'-8"	8" X 24"	2,781	1-#5 EA COURSE	
L-10	2'-8"	8" X 24"	8,974	1-#5 EA COURSE	
L-11	4'-0"	8" X 24"	7,342	1-#5 EA COURSE	
L-12	3'-4"	8" X 8"	1,663	1-#5 BOT	
L-13	4'-8"	8" X 24"	8,360	1-#5 EA COURSE	
L-14	8'-0"	8" X 24"	3,486	1-#5 EA COURSE	

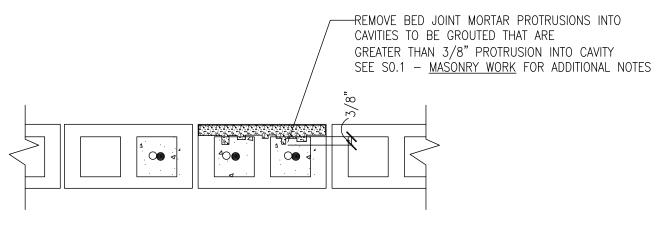


REINF. TO BE AS SHOWN — CONTINUOUS BOND BM REINF. TO BE CONSIDERED AS PART OF LINTEL REINF. GROUT PRECAST LINTELS AT THE SAME TIME AS COMPOSITE BOND BEAMS.

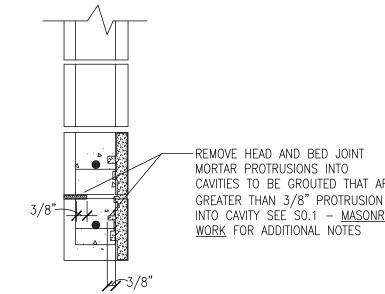
- LINTELS TO BE PRECAST CONCRETE "U" LINTELS AS MANUFACTURED BY CAST-CRETE FLORIDA CERTIFICATE OF PRODUCT APPROVAL NO. FL158.
- SEE MANUFACTURER'S SAFE LOAD TABLES AND DESIGN CROSS SECTIONS FOR EXACT REINFORCING, DIMENSIONS AND SPECIFICATIONS.
- WHERE LINTEL CONSISTS OF 2 OR MORE COURSES GROUT ALL COURSES AT SAME
- LINTELS ARE TO BEAR A MINIMUM OF 8" AT EACH END U.N.O.
- PROVIDE PRECAST LINTEL OVER ALL MECHANICAL MASONRY WALL OPENINGS 2'-0" AND WIDER U.N.O. PROVIDE LINTELS AT MECH DUCTS AND LOUVERS AS REQUIRED -SEE ARCH/MECH DWGS.



TYPICAL MASONRY WALL DETAILS U.N.O. - SEE FOUNDATION PLAN



PLAN SECTION REINFORCED AND GROUTED WALL



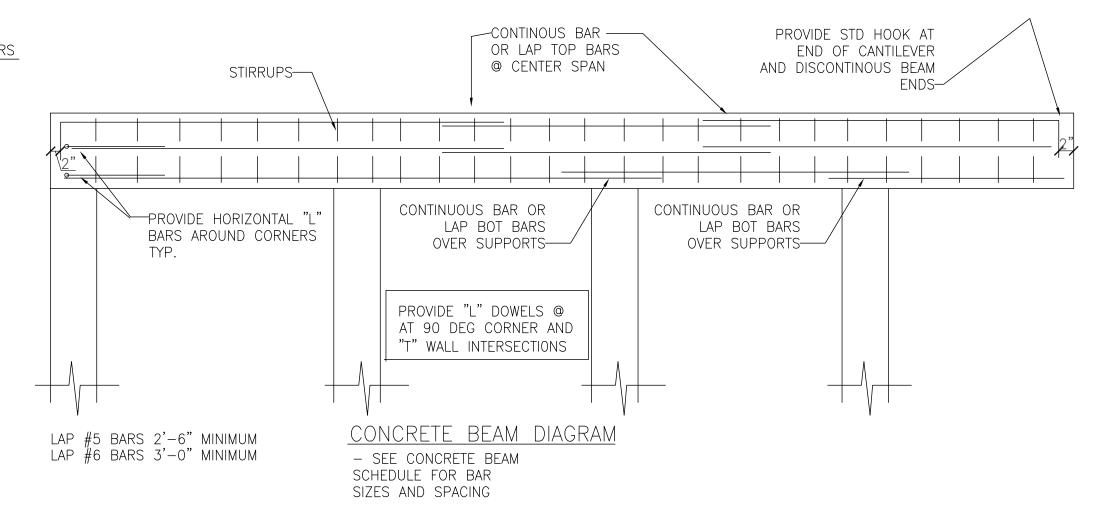
BOND BEAM SECTION

MASONR	Y WALL	REINFORCING S	CHEDULE	
MARK	THICKNESS	VERT WALL REINF IN GROUTED CELL *	REMARKS	
MW4.0	8"	#5 @ 48" OC CENTER IN CELL		GROUT SOLID 48" GROUT SOLID WELL #5 VERTICAL TYP.
MWO.67EF	8"	#5 @ 8" OC EACH FACE		GROUT SOLID TYP. 8" DOWEL #5 VERTICAL TYP.
MW1.33	8"	#5 @ 16" OC CENTER IN CELL		GROUT SOLID GROUT SOLID GROUT SOLID DOWEL #5 VERTICAL TYP.

VERTICAL MASONRY WALL REINFORCING TO HAVE STD HOOKED DOWELS INTO ROOF BEAM AT TOP OF WALL - TYPICAL

LAP #5 VERTICAL BARS 2'-7" U.N.O.

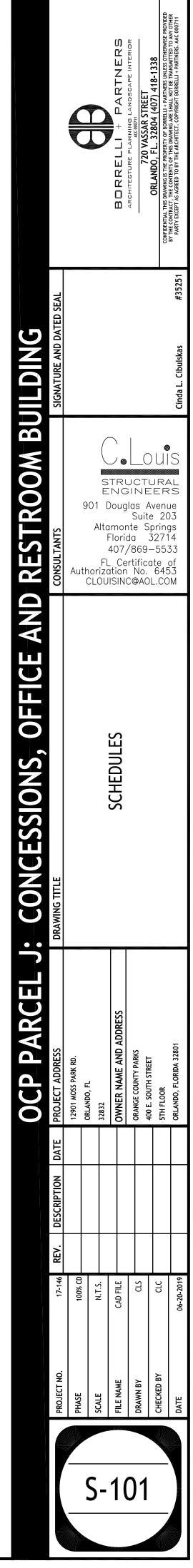
- * PLUS ADDITIONAL REINFORCING AS INDICATED ON PLANS AS WELL AS PLACE VERTICAL WALL REINF AT ALL INTERSECTIONS, CORNERS, ENDS OF WALLS, WALL CONTROL JOINTS AND SIDES OF OPENINGS. PROVIDE FOOTING DOWELS TO MATCH. PROVIDE HOOKED DOWELS AT TOPS OF WALLS INTO UPPERMOST BEAMS. LAP REINFORCING 48 BAR DIAMETERS U.N.O. EXCEPT LAP #5 BARS 2'-7" MIN.
- NOTE GROUT ALL STEM WALLS BELOW GRADE SOLID.

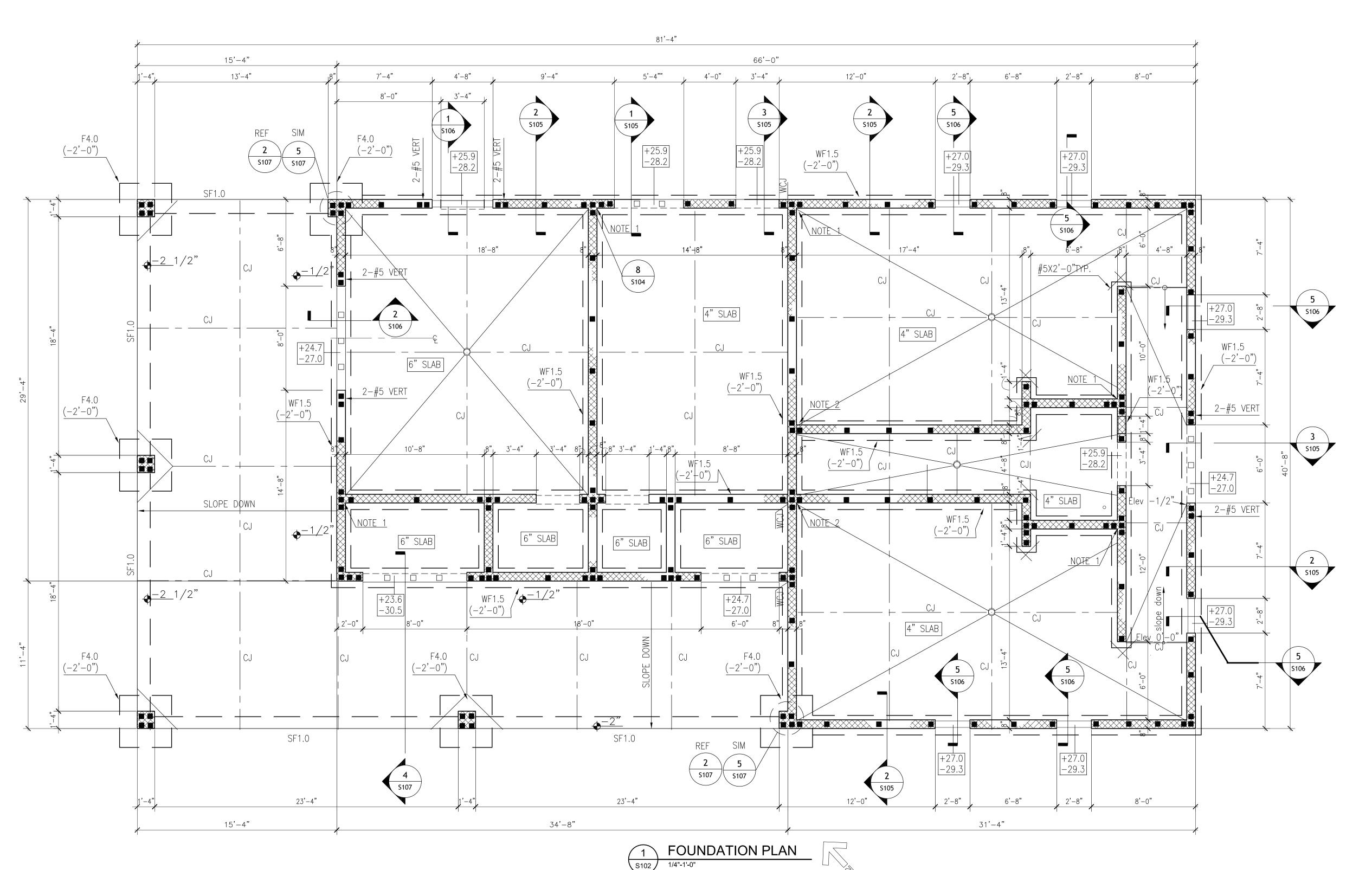


MARK	SIZE		REINFORCING			STIRRUPS		REMARKS
	(W X D)	BOT. BARS	TOP BARS	MID BARS	SIZE	SPACING	SHAPE	
CB-1	8" X 24"	2-#6 CONT.	2-#6 CONT.	2-#5 CONT.	#3	@ 10" OC THRUOUT		
CB-2	8" X 24"	4-#6 CONT.	4-#6 CONT.	2-#5 CONT.	#3	@ 10" OC THRUOUT		
	MAS	SONRY BOND	BEAM SCH	EDULE				
BB-1	8" X 16"	1-#5 CONT.	1-#5 CONT.					TYP. AT TOPS OF MASONRY WALLS & AT ELEV 7'-4" (BM BOT.) U.N.O.

NOTE -	ALL FASTENERS	AND CONNECTORS EX	POSED TO EXTERIOR TO BE GALVANIZED OR STAINLESS STEEL
WOOI	O CONNECTO	R SCHEDULE	
T1	SIMPSON	HETA16 w/ TSS vapor barrier	9 — 10d x 1—1/2" min. 4" embedment & 2" min edge distance
T2	SIMPSON	2 - HETA16 w/ TSS vapor barrier	12 — 16d — half ea strap. Place one strap on each side of 2—ply truss girder min. 4" embedment & 2" min edge distance
			FOOTING SCHEDULE

FOOTIN	G SCHEDULE	
MARK	SIZE WIDTH×LENGTH×DEPTH	REINFORCEMENT
SF1.0	1'-0" X CONT. X 16"	2-#5 CONT. LW BOT 1-#5 CONT. LW TOP
WF1.5	1'-6" X CONT. X 12"	2-#5 CONT. LW BOT #5 @ 18" OC SW BOT
WF3.0	3'-0" X CONT. X 12"	4-#5 CONT. LW BOT #5 @ 12" OC SW BOT
F4.0	4'-0" X 4'-0" X 16"	4-#5 EA WAY BOT.





FLOOR CONSTRUCTION: 4" MINIMUM THICK SLAB ON GRADE WITH W.W.F. 6X6-W2.1XW2.1 ON 15 MIL OLEFIN VAPOR BARRIER WITH 6" OVERLAP ON TERMITE TREATED COMPACTED SOIL EXCEPT PROVIDE 6" MINIMUM THICK SLAB WITH W.W.F. 6X6-W2.9XW2.9 AT CONCESSIONS, VENDING, AHU AND ELECTRIC ROOMS. F'c28 = 4,000 PSI

TOP OF SLAB REFERENCE ELEVATION = 0'-0"

FLAIR SLOPED SLABS AT MAN AND ROLL UP DOORS TO PROVIDE A FLUSH THRESHOLD WITH SLAB AT OTHER SIDE.

TOP OF FOOTING ELEVATION -2'-0" UNLESS OTHERWISE NOTED.

- INDICATES #5 VERTICAL MASONRY WALL REINFORCING—SEE MASONRY WALL REINFORCING SCHEDULE ON S101 FOR REINFORCING IN <u>ADDITION</u> TO THAT SCHEDULED. <u>REINF. WALLS ACCORDING TO MW4.0 U.N.O</u>.
- ☐ INDICATES #5 VERTICAL MASONRY WALL REINFORCING @ 2'-0" OC MAX SPACING BELOW AND ABOVE OPENING.

 MASONRY WALLS ARE 8" NORMAL WT BLOCK TYPICAL
- ALL MASONRY STEM WALLS BELOW GRADE ARE TO BE GROUTED SOLID.

DIMENSIONS SHOWN ON STRUCTURAL FOR REFERENCE ONLY—SEE ARCHITECTURAL DWGS FOR DIMENSIONS—IMMEDIATELY NOTIFY ARCHITECT OF ANY DISCREPANCIES.

SEE S-104 FOR TYPICAL SLAB AND STEP FOOTING DETAILS.

SEE S-101 FOR FOOTING SCHEDULE.

WCJ INDICATES MASONRY WALL CONTROL JOINT - SEE DETAIL 7/S104 - COORDINATE LOCATIONS WITH ARCHITECT.

SEE S103 FOR MASONRY WALL LINTEL (L-X) LOCATIONS. SEE LINTEL SCHEDULE ON S-101.

SEE S103 FOR CONCRETE TIE BEAM (CB-X) LOCATIONS. SEE CONCRETE BM SCHEDULE ON S-101.

SEE ARCHITECTURAL DWGS FOR DIMENSIONS OF DEPRESSED SLAB AREAS TYPICAL.

SEE PLUMBING PLANS FOR FLOOR DRAIN LOCATIONS - SLOPE SLAB TO DRAINS.

LINTELS IN MASONRY STEM WALL AT PIPING AND CONDUIT AS REQUIRED.

CONTRACTOR TO COORDINATE TOP OF FOOTING ELEVATION AND FOOTING STEP LOCATIONS WITH CIVIL, MECHANICAL, ELECTRICAL AND PLUMBING PIPING AND CONDUIT—TO PASS THRU MASONRY STEM WALL ABOVE FOOTING. PROVIDE

PROVIDE HOUSEKEEPING PADS AT EQUIPMENT AS PER MECHANICAL AND PLUMBING DWGS. AND SPECIFICATIONS.

COMPONENT NOMINAL (ASD) WIND LOAD ON OPENINGS

+24.5 INDICATES COMPONENT WIND LOAD ON OPENINGS IN PSF -26.7 + INDICATES PRESSURE; - INDICATES SUCTION

PROVIDE #5 VERTICAL IN CONCRETE FILLED CELLS AT 2'-0" ON CENTER MAXIMUM SPACING BELOW WINDOW OPENINGS U.N.O.

AND PROVIDE #5 KNOCK-OUT BLOCK BOND BEAM BELOW WINDOW OPENINGS EXTENDING BM REINF. 2'-O" BEYOND SIDES OF OPENING, U.N.O.

USE NOTE 1 RIGID TIE AT TYPICAL MASONRY WALL INTERSECTION IF MASONRY NOT INTERLOCKED. EXCEPT USE NOTE 1 ADJUSTABLE MASONRY TIE WHERE INDICATED — SEE DETAIL 8 AND 9 ON S104.

PROJECT NO. 17-146 REV. DESCRIPTION DATE
PHASE 100% CD
SCALE 1/4"=1-0"
FILE NAME CAD FILE
DRAWN BY CLS
CHECKED BY CLS
DATE 06-20-2019

BUILDING

RESTROOM

CONC

STRUCTURAL ENGINEERS

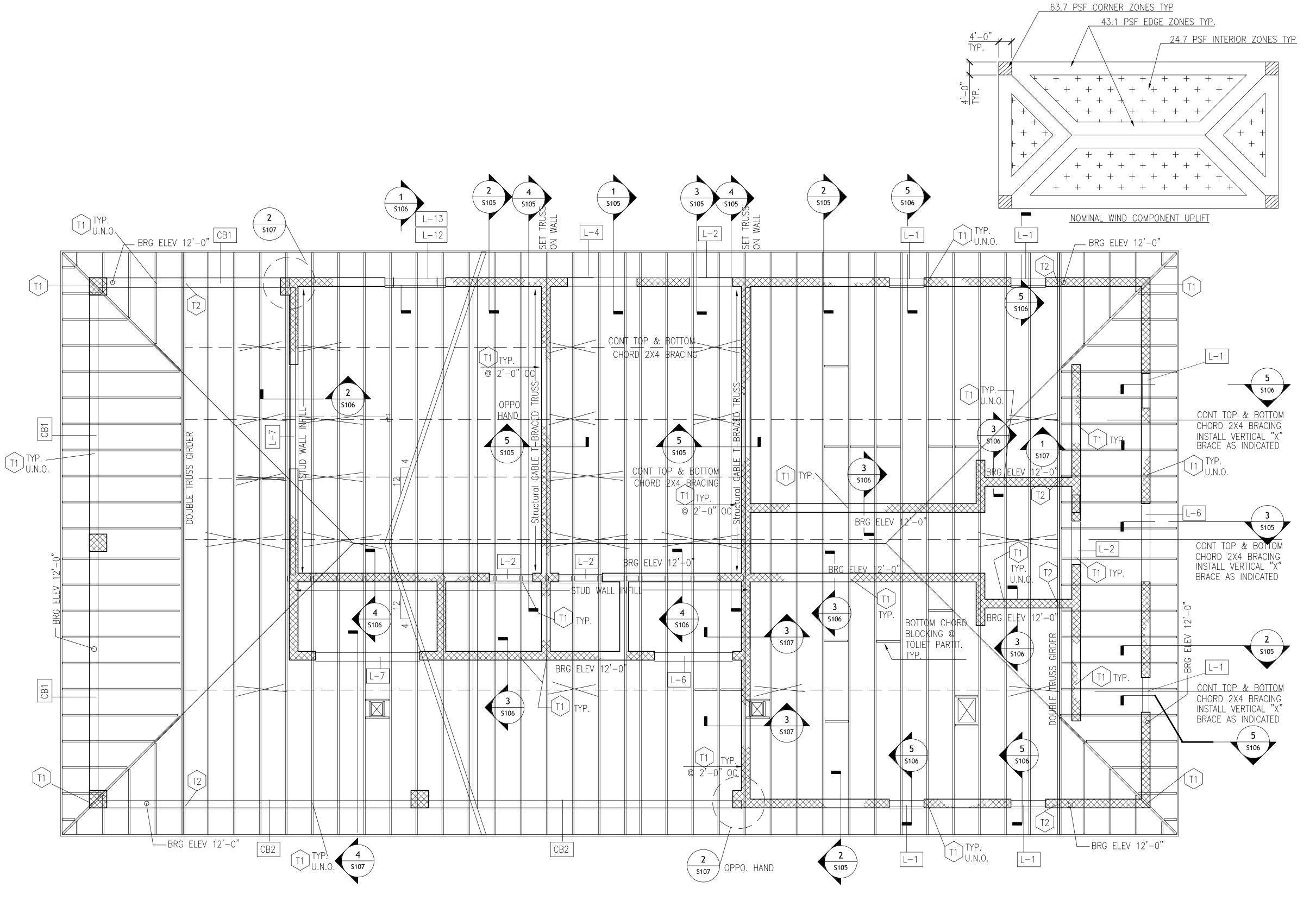
Florida 32714

407/869-5533

Suite 203 Altamonte Springs

901 Douglas Avenue

FL Certificate of horization No. 6453 CLOUISINC@AOL.COM



ROOF CONSTRUCTION: %" THICK CDX EXTERIOR PLYWOOD SHEATHING ON PREMANUFACTURED WOOD TRUSSES SPACED AT 2'-0" ON CENTER MAXIMUM. ATTACH SHEATHING WITH 8d GALV RING-SHANKED NAILS SPACED AT 4" ON CENTER AT EDGES AND 6" ON CENTER AT INTERMEDIATE SUPPORTS.

NSTALL 2X4 TRUSS BOTTOM CHORD BLOCKING TO BRACE TOILET PARTITIONS.

PROVIDE VAPOR BARRIER AT TRUSS BEARING ON MASONRY — TYPICAL.

PRE-MANUFACTURED WOOD TRUSS DESIGN LOADS: TOP CHORD:

DL: 11 PSF LL: <u>20 PSF</u>

BOTTOM CHORD:
DL: 19 PSF

19 PSF 50 PSF TOTAL DESIGN LOAD

DL FOR TRUSS WIND UPLIFT CALCULATIONS TO BE 10 PSF (NOT INCLUDING 3/4 SAFETY FACTOR)

1 ROOF FRAMING PLAN
| S103 | 1/4"-1'-0"

INSTALL PLYWOOD WITH A MINIMUM 2'-0" OFFSET IN PLYWOOD JOINTS.

PLYCLIPS SHALL BE USED BETWEEN ALL UNSUPPORTED EDGES OF PLYWOOD ROOF DECK. INSTALL ONE (1) PER SPAN.

PLYWOOD ROOF DECK SHALL BE INSTALLED WITH THE LONG DIMENSION PERPENDICULAR TO ROOF TRUSSES.

SEE ARCHITECTURAL DRAWINGS FOR OPENING DIMENSIONS AND LOCATIONS.

ALL ROOF FASTENERS AND CONNECTORS TO BE GALVANIZED OR STAINLESS STEEL.

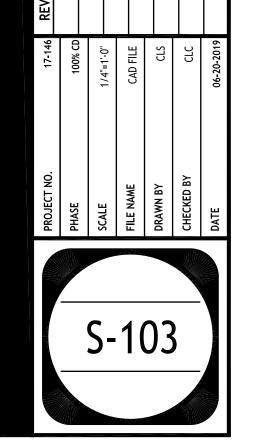
T1) TYPICAL ROOF TRUSS ANCHOR EXCEPT AS NOTED SEE SCHEDULE ON SHEET S101. PROVIDE ANCHORS AT INTERIOR MASONRY WALLS AS INDICATED.

ADD 2X TOP CHORD FRAMING TO BLOCK OUT ROOF OPENINGS AS REQUIRED.

L-X INDICATES PRECAST CONCRETE LINTEL; CBX INDICATES CAST-IN-PLACE CONCRETE BEAM PRECAST LINTELS ARE TO BE POURED COMPOSITE WITH CONTINUOUS BOND BEAMS. SEE SCHEDULES ON SHEET \$101.

PROVIDE CONTINUOUS 8X16 MASONRY BOND BEAM WITH 1-#5 TOP AND BOTTOM AT TOPS OF ALL WALLS & CONTINUOUS 8X16 BOND BEAM WITH #5 CONTINUOUS TOP AND BOTTOM, WITH BOTTOM OF BOND BEAM AT ELEV 7'-4" UNLESS INDICATED OTHERWISE. PROVIDE HOOKED DOWELS AT ALL CORNERS AND "T" SECTIONS.

PROVIDE 90 DEGREE HOOKED DOWELS AT FILL CELLS AT TOP OF MASONRY WALLS TYPICAL.



BUILDING

RESTROOM

AND

ONS

CONC

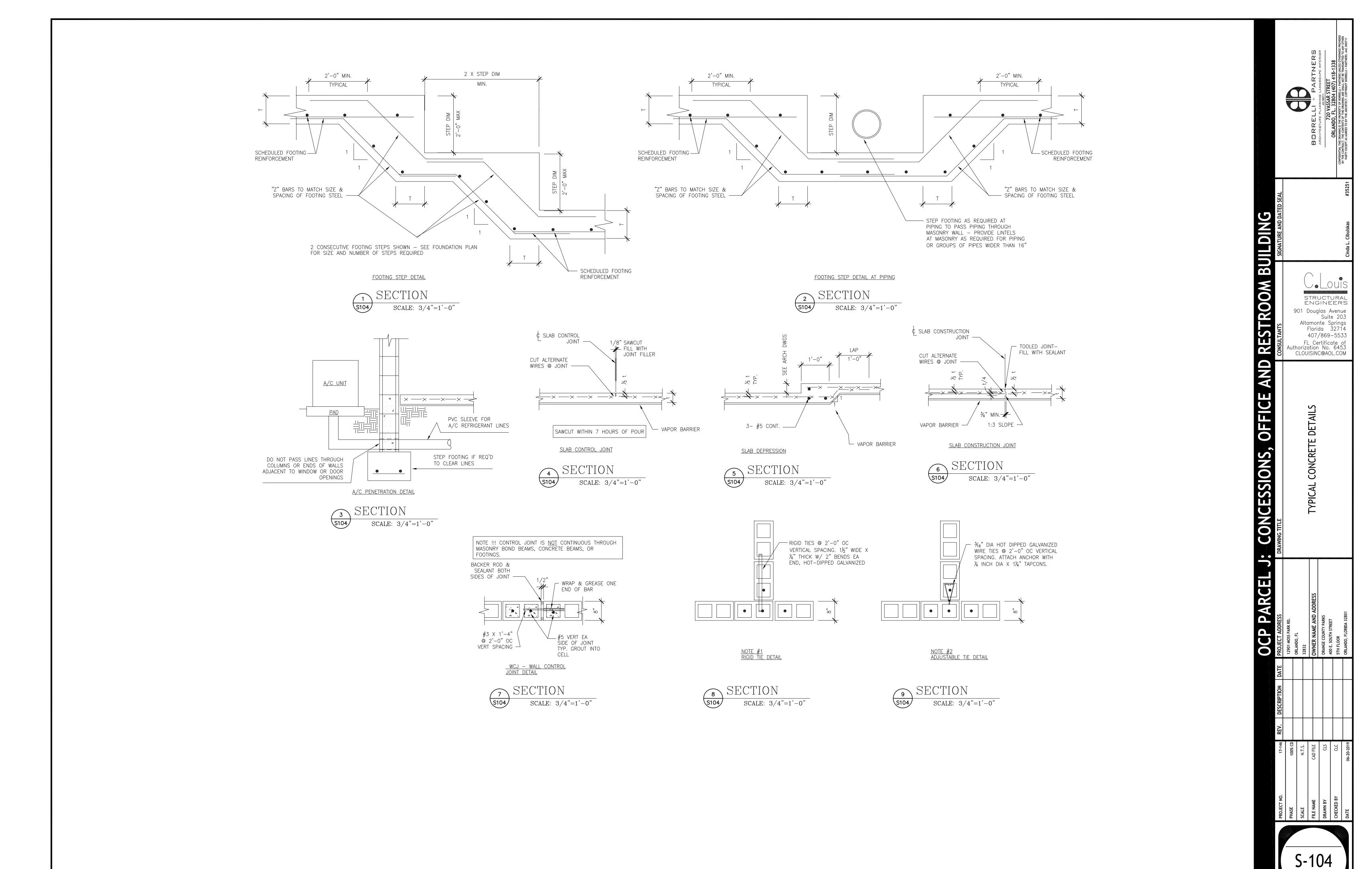
STRUCTURAL ENGINEERS

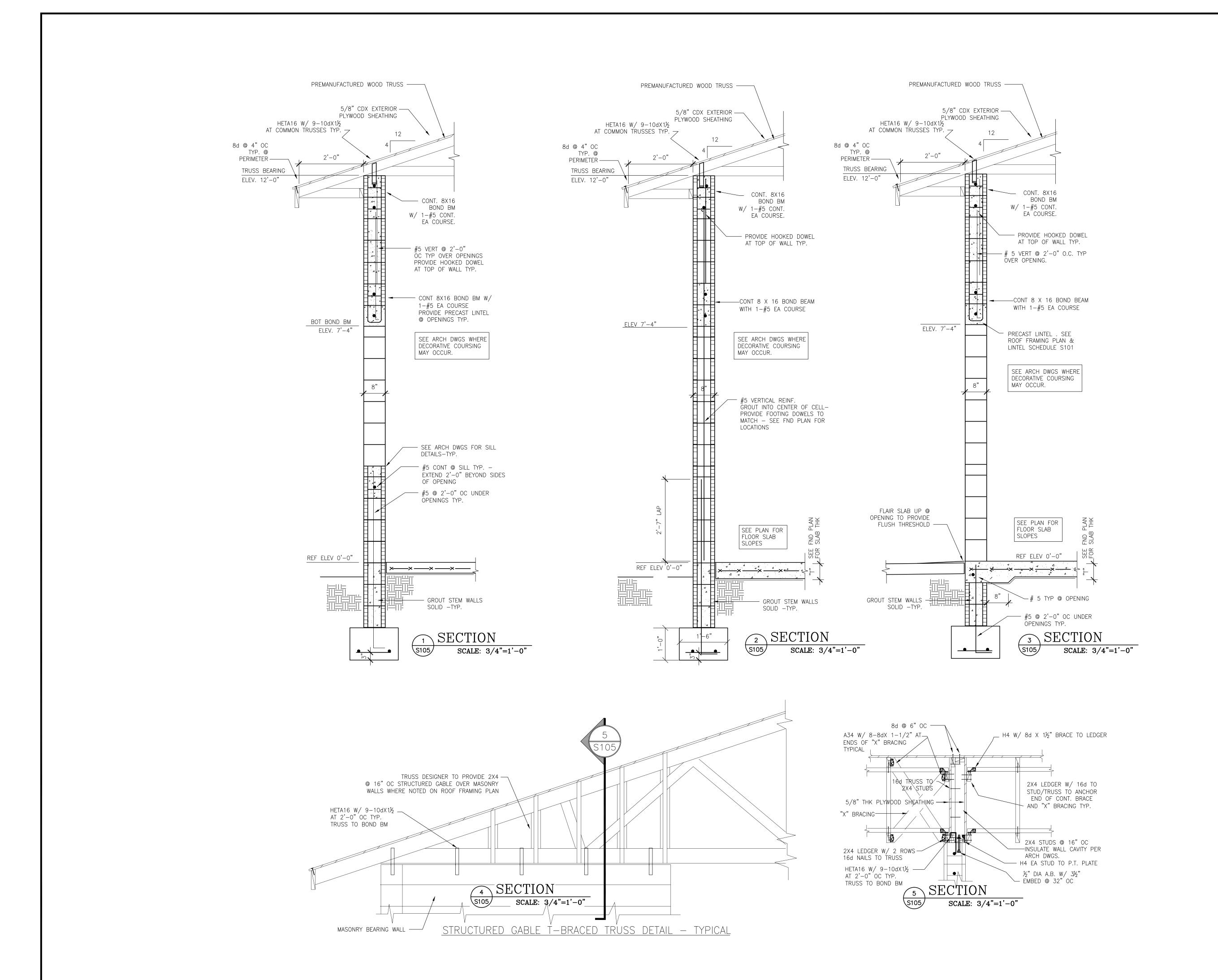
901 Douglas Avenue Suite 203

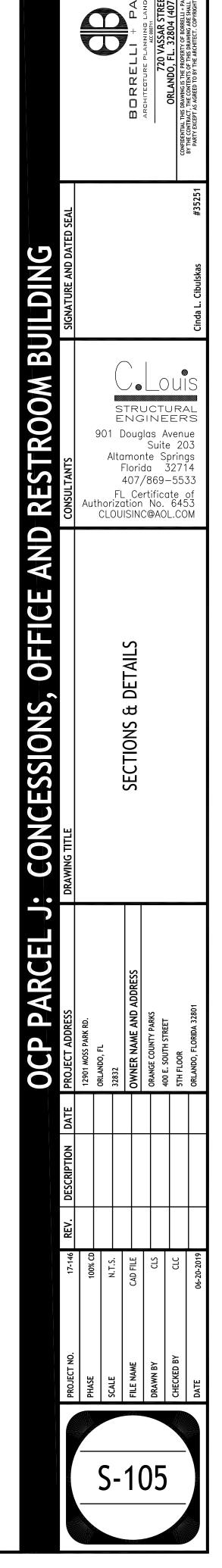
FL Certificate of uthorization No. 6453

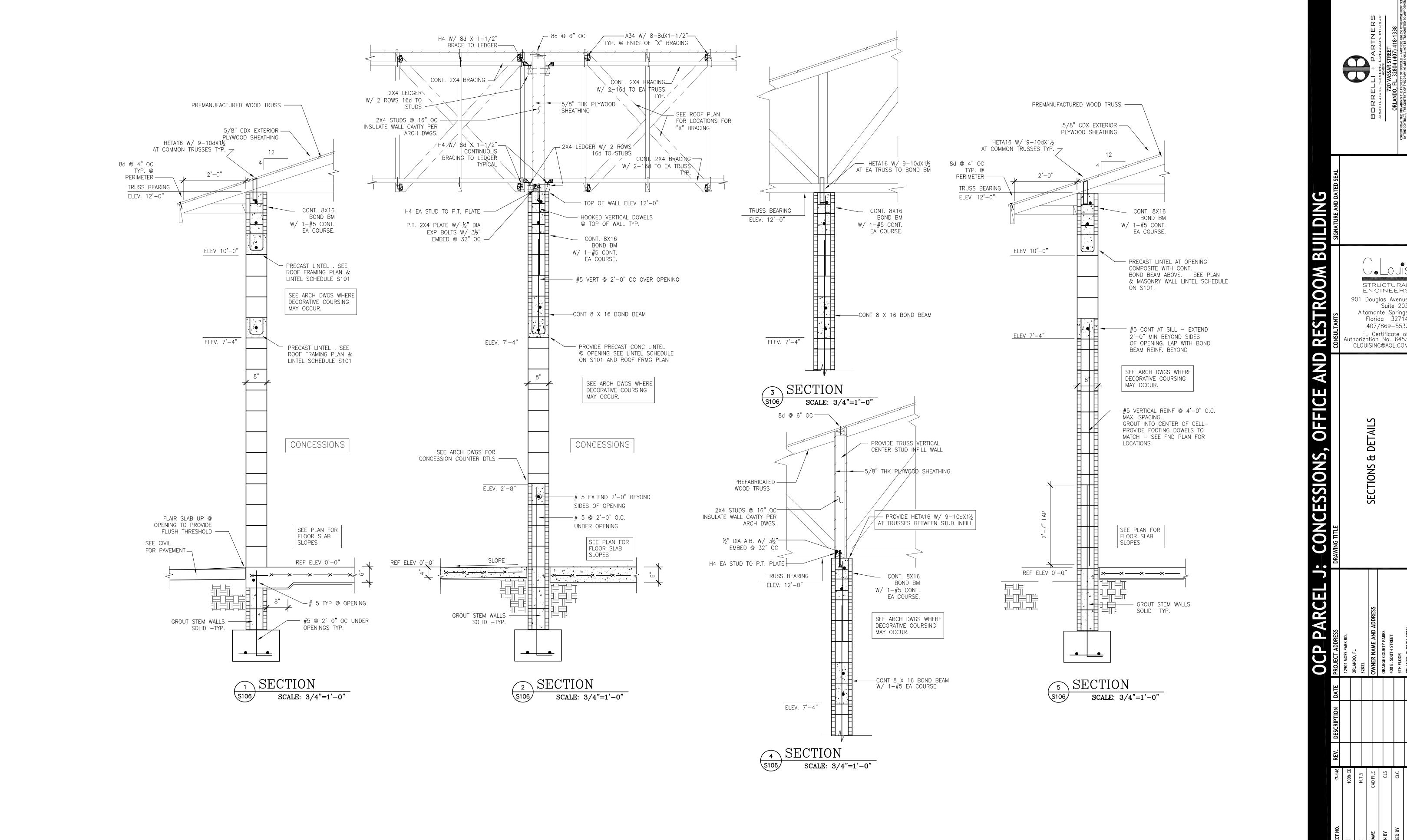
CLOUISINC@AOL.COM

Altamonte Springs Florida 32714 407/869-5533



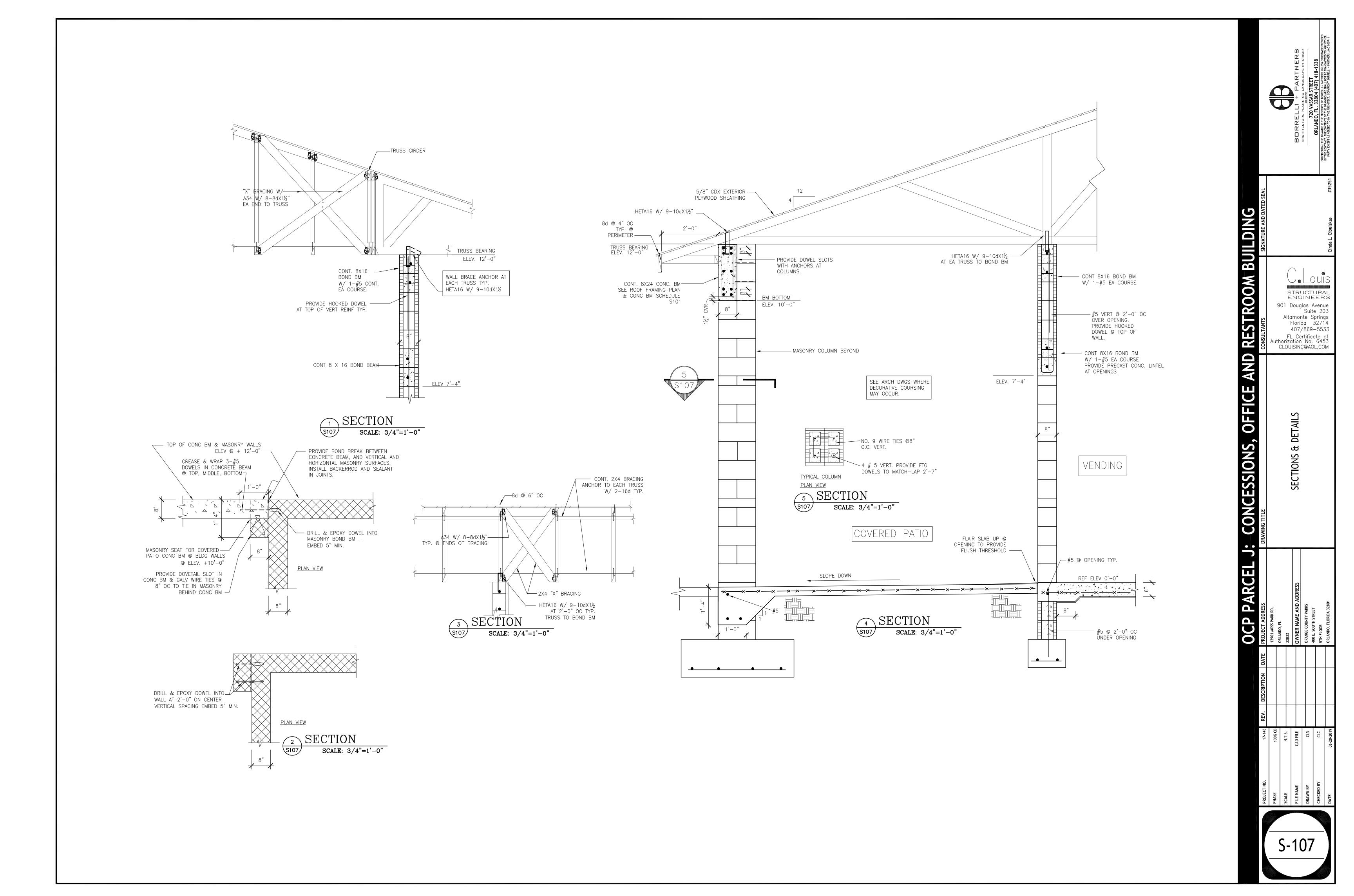


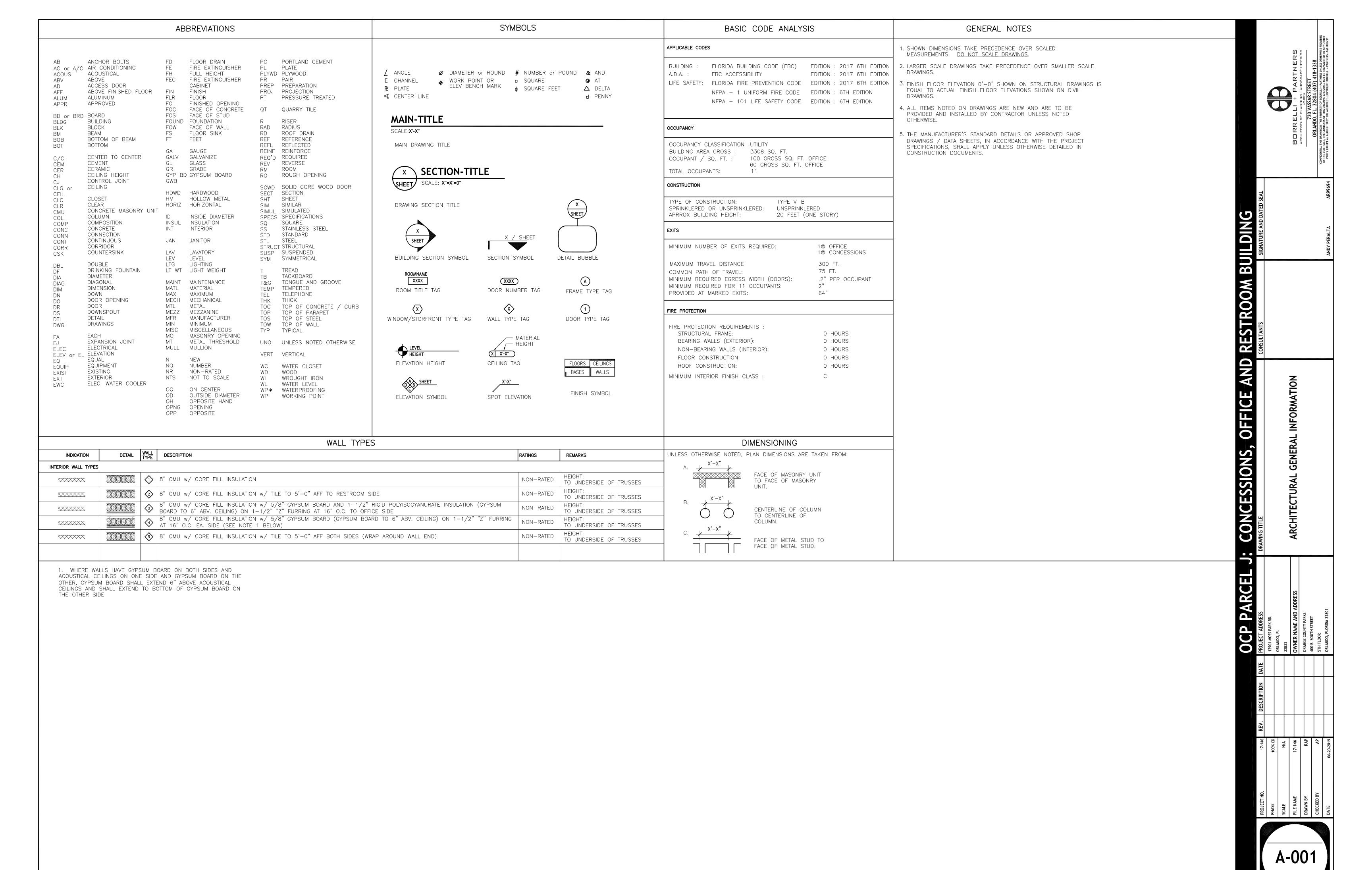


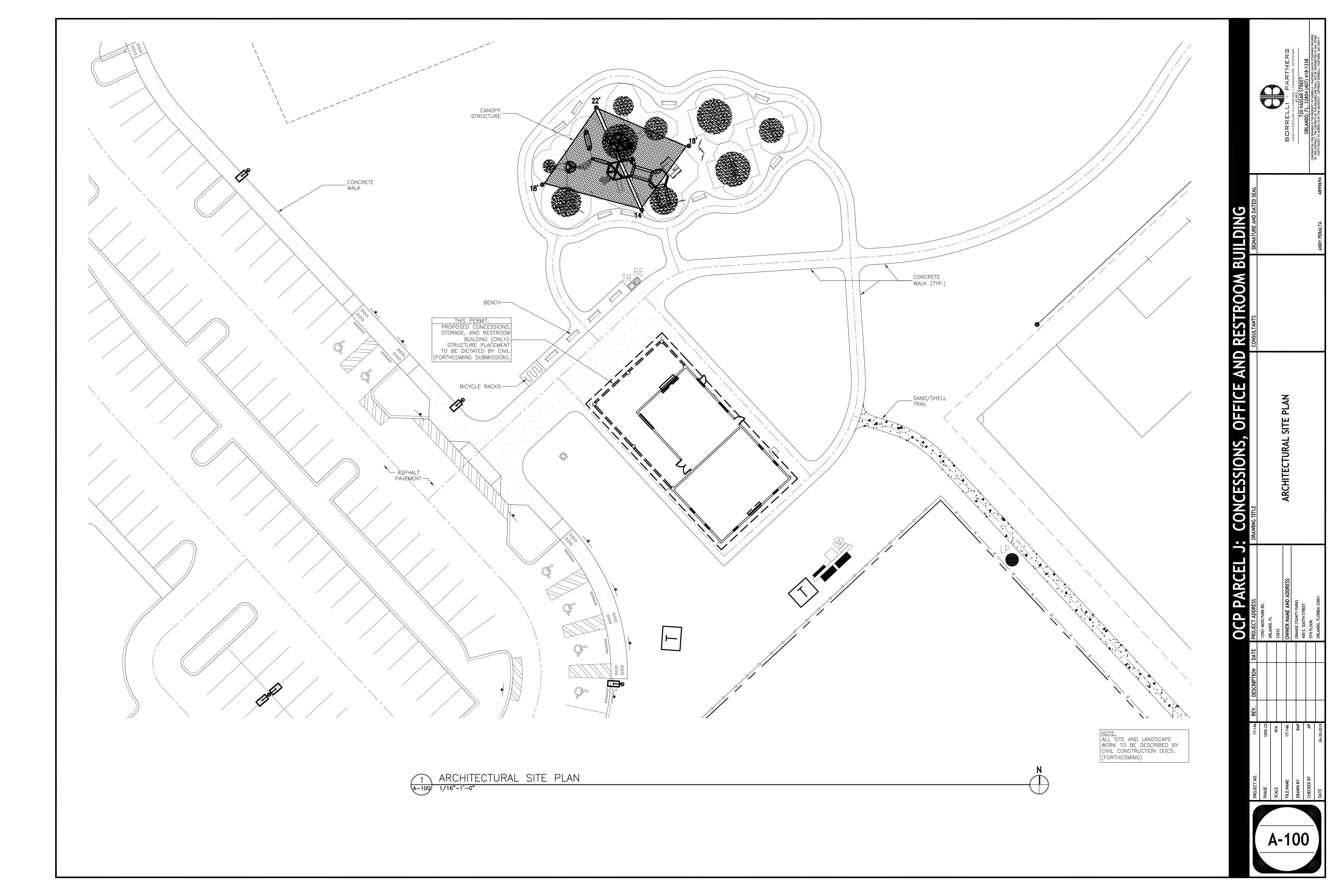


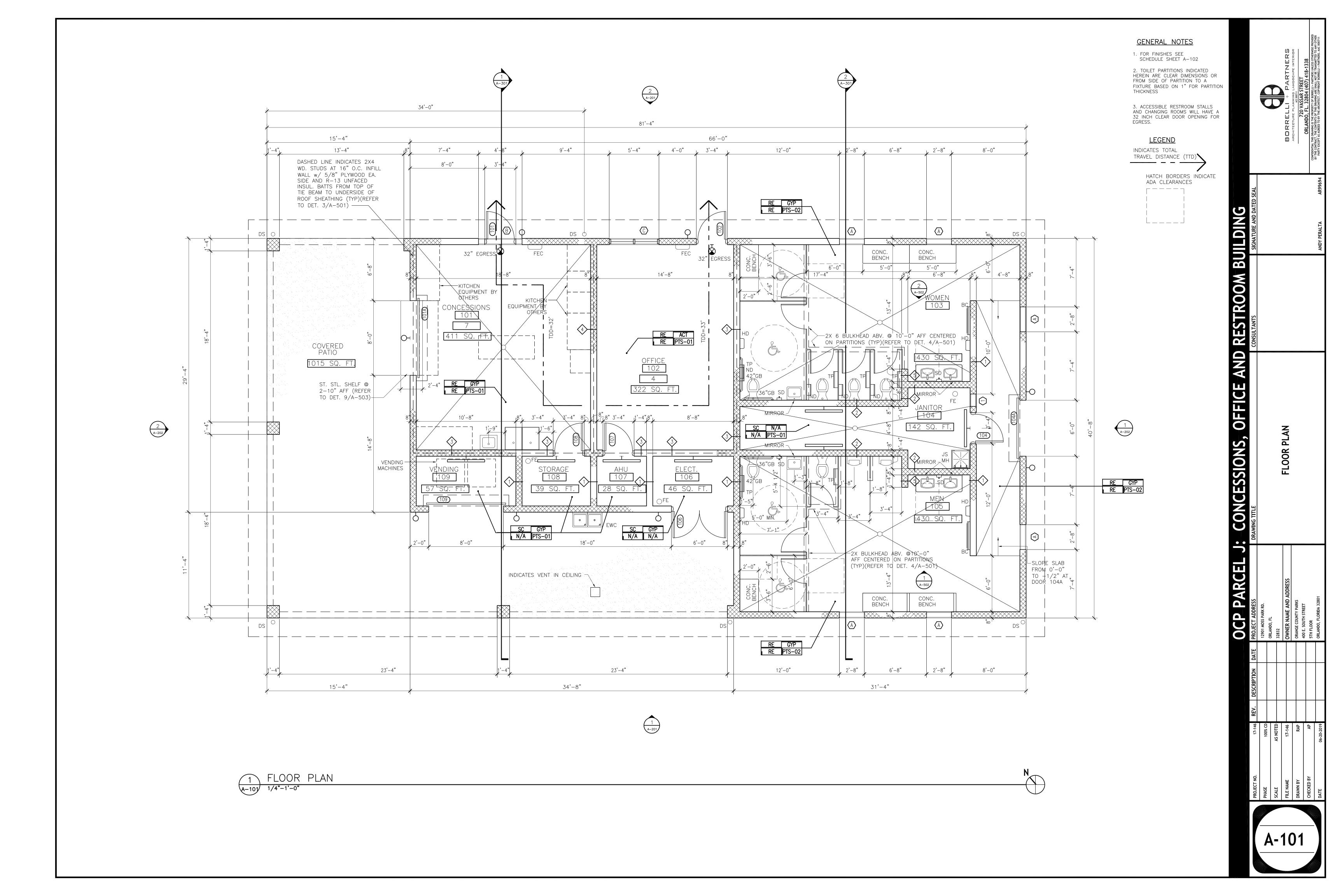


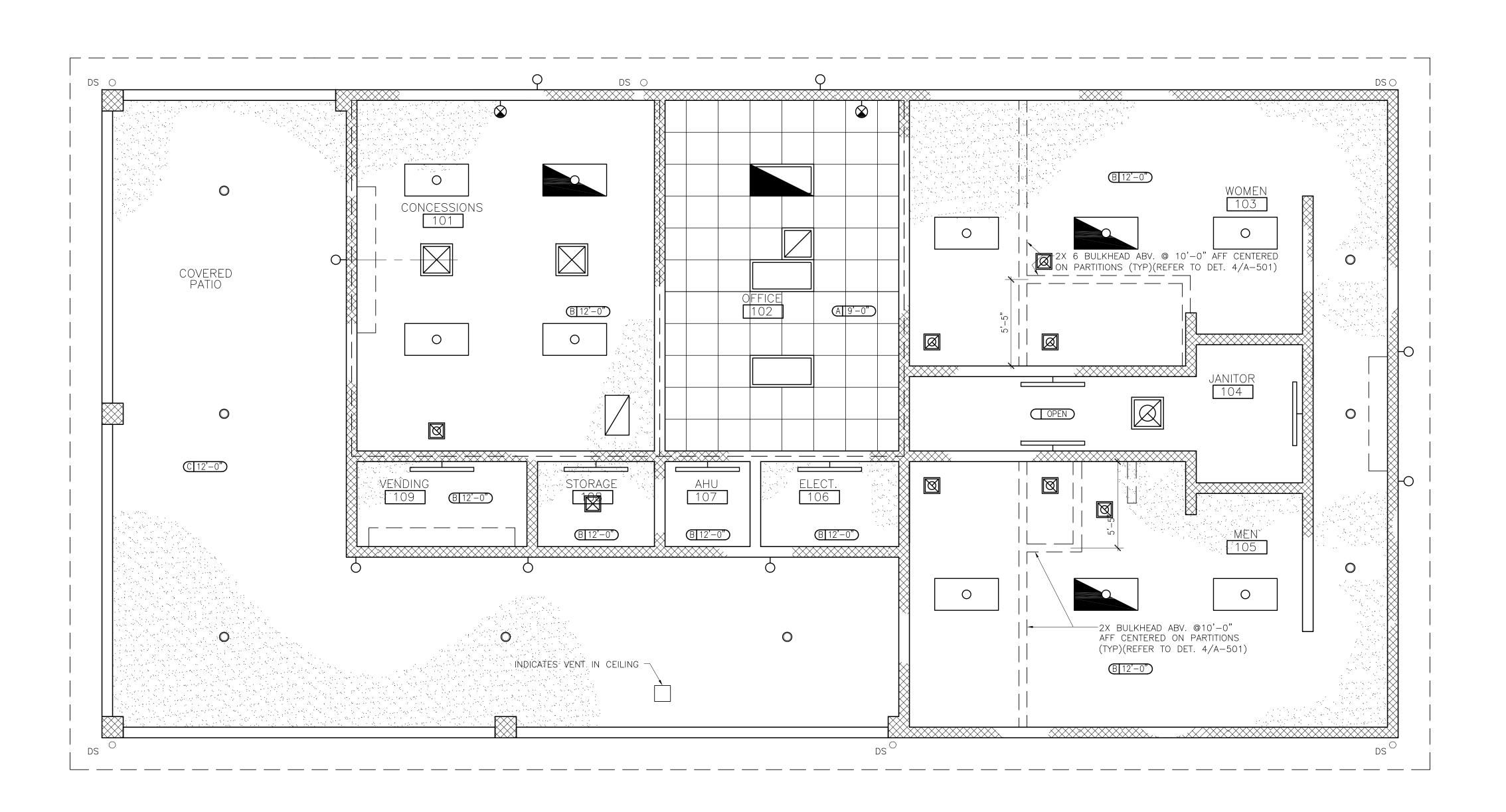
S-106











REFLECTED CEILING PLAN 1/4"-1'-0"

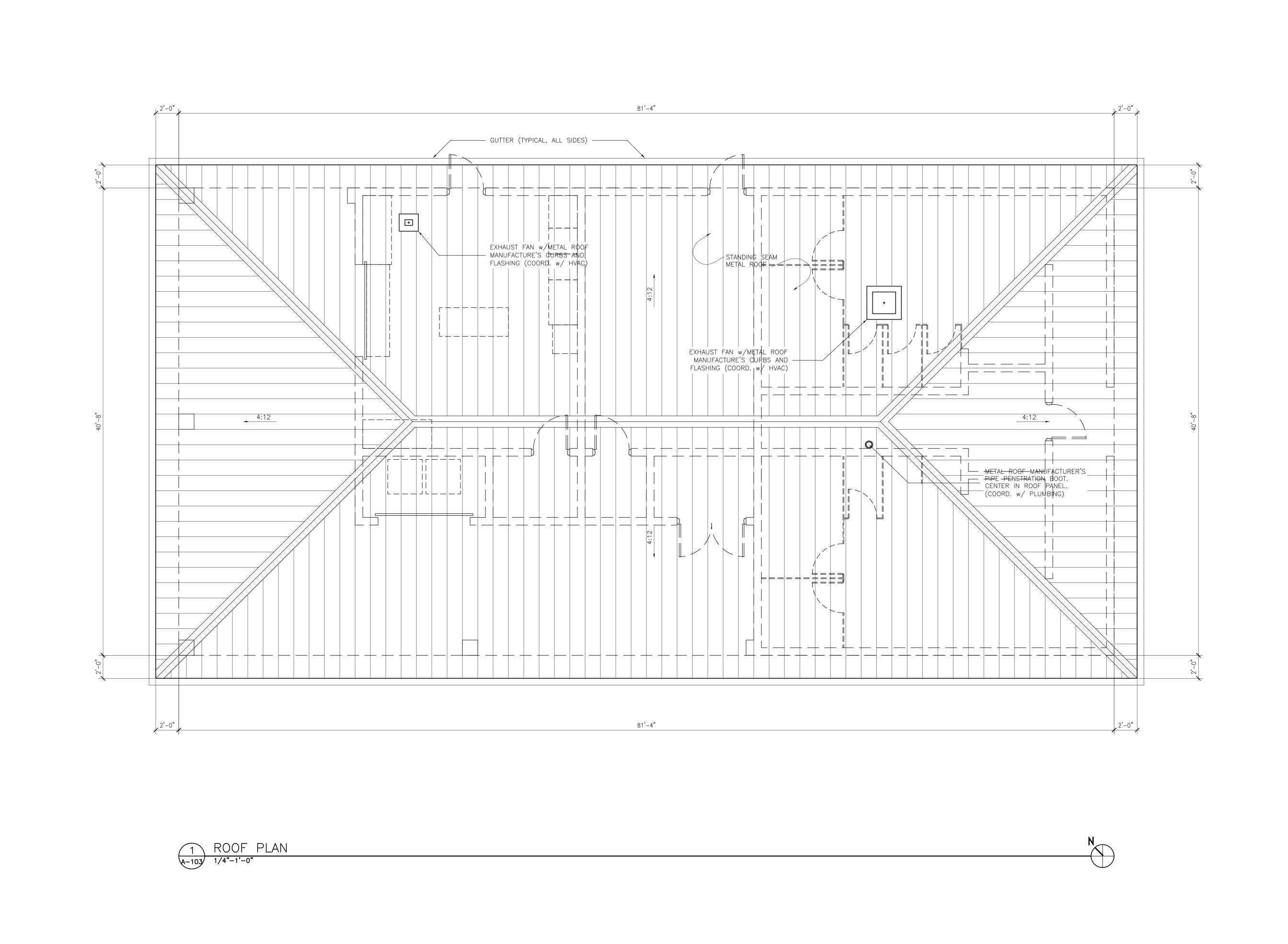
CEILING LEGEND

0	DOWN LIGHT	2'X4' LAY—IN LIGHT FIXTURE		2'X2' ACOUSTIC CEILING TILE	EXHAUST FAN
9	WALL MOUNTED LIGHT FIXTURE	EXHAUST FAN		MOISTURE RESISTANT GYPSUM BOARD	2'X4' SURFACE MOUNTED EMERGENCY LIGHT FIXTURE
\$	WALL MOUNTED EXIT LIGHT FIXTURE	SUPPLY AIR GRILLE	(A] 9'-0")	ACOUSTIC CEILING TILE	2'X4' LAY—IN LIGHT FIXTURE
I	WALL MOUNTED LIGHT FIXTURE	2'X2' CEILING CASSETTE CARTRIDGE	(B 12'-0")	GYPSUM BOARD	RETURN AIR GRILLE
0	2'X4' SURFACE MOUNTED LIGHT FIXTURE	SUPPLY AIR GRILLE	C 12'-0")	FIBER CEMENT	

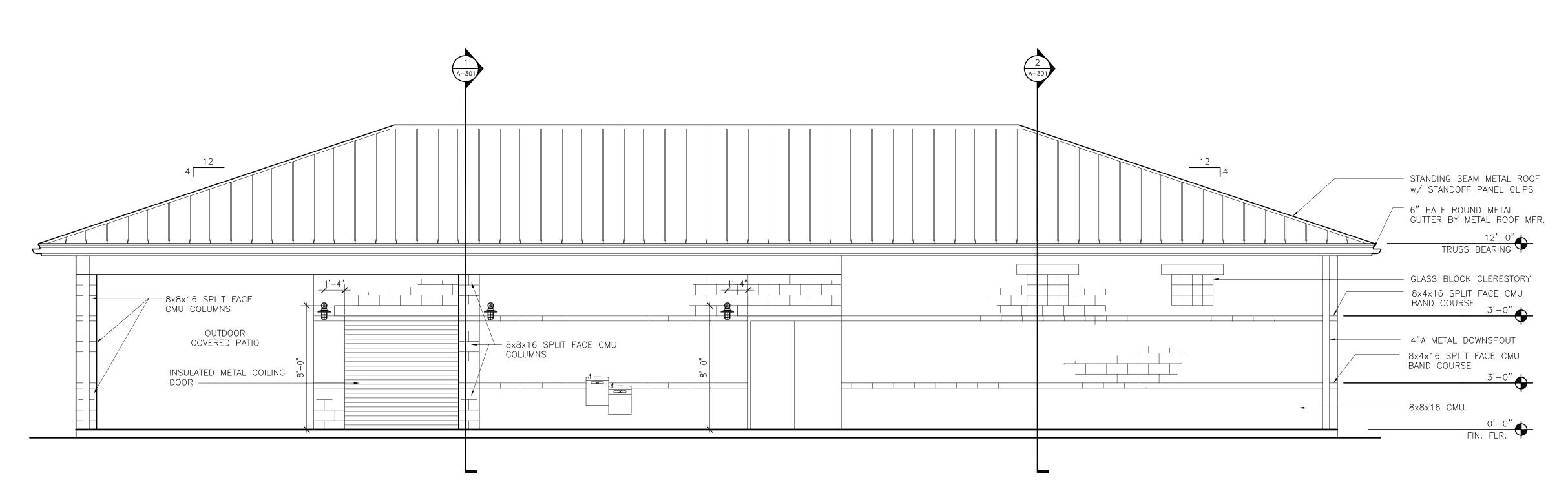
FINISH PLAN LEGEND

KEY NOTE	DESCRIPTION
FLOORS	
RE	RESINOUS FLOOR -
SC	SEALED CONCRETE -
BASE RE	RESINOUS FLOORING BASE — 6" RESINOUS BASE
CEILING ACT	2'X2' ACOUSTICAL CEILING —
GYP	5/8" GYPSUM BOARD — FOR CEILING: WATER RESISTANT GYPSUM COVERED WITH EPOXY PAINT.
WALLS PTS-01	PAINT: ONE (1) COAT PRIMER AS RECOMMENDED BY MANUFACTURER. TWO (2) COATS OF VINYL ACRYLIC LATEX WITH AN EGGSHELL FINISH. COLOR: TBD BY OWNER
PTS-02 WET WALL	TILE: TILE TO 5'-0" AND PTS-01 ABOVE (ONLY ON WET WALL, OTHER WALLS REMAIN PTS-01). PAINT: ONE (1) COAT PRIMER AS RECOMMENDED BY MANUFACTURER. TWO (2) COATS OF VINYL ACRYLIC LATEX WITH AN EGGSHELL FINISH. COLOR: TBD BY OWNER

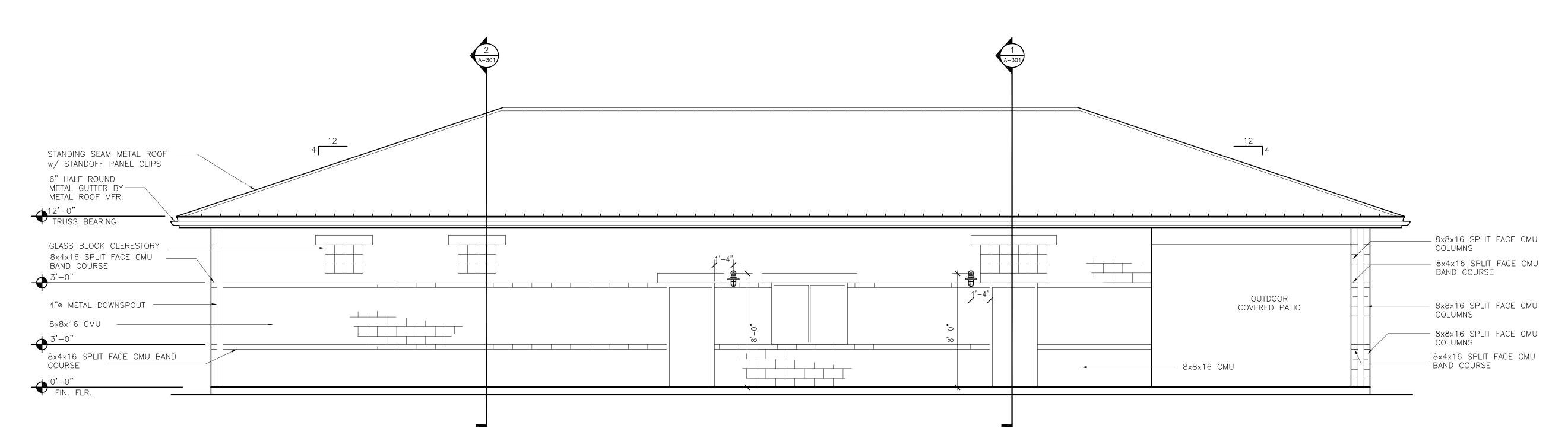




BUILDING AND RESTROOM ONS, OFFICE



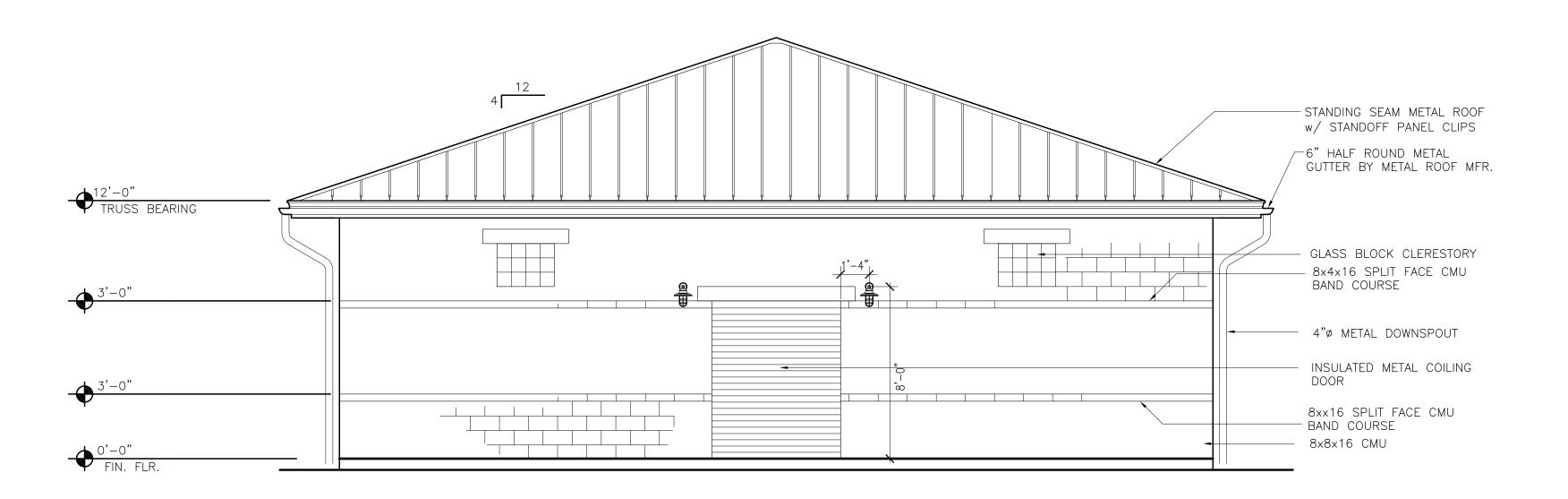
1 SOUTH WEST ELEVATION
A-201 1/4"-1'-0"



NORTH EAST ELEVATION

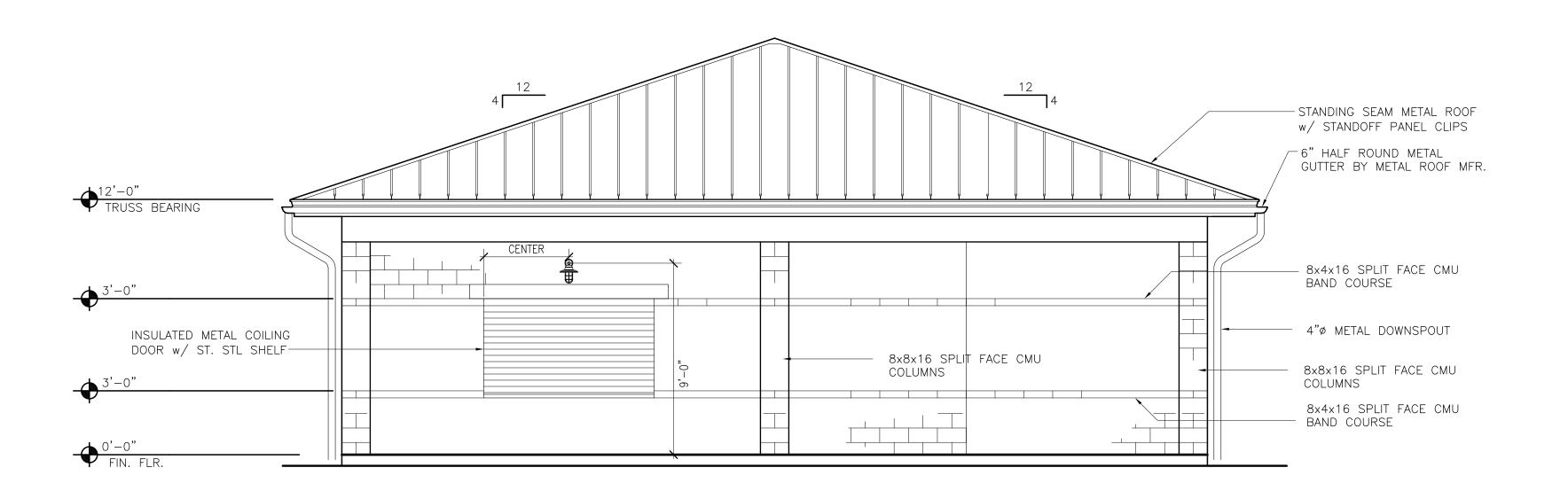
A-201 1/4"-1'-0"

					0	CP PARCEL J	: CONCESSIONS, OFFICE AND	ID RESTROOM BU	JILDING	
	PROJECT NO.	17-146 REV.	V. DESCRIPT	DESCRIPTION DATE	ATE PRO.	PROJECT ADDRESS	DRAWING TITLE	CONSULTANTS	SIGNATURE AND DATED SEAL	
		100% CD			1290	12901 MOSS PARK RD.				
_ 		3			١	OBLANDO FI				
\		AS MOTED				, , ,				
		101ED			32832	2				
	FILE NAME	13-112s			OWN	OWNER NAME AND ADDRESS	EXTERIOR ELEVATIONS			BORRELLI + PAF
2	NW BO	Val			ORAN	ORANGE COUNTY PARKS				ARCHITEGTURE PLANNING LANDS
		בח			400 E	400 E. SOUTH STREET				720 VASSAR STREET
	CHECKED BY	АР			STH F	5TH FLOOR				OKLANDO, FL. 32804 (407) CONFIDENTIAL THIS DRAWING IS THE PROPERTY OF BORRELLI + PART
										BY THE CONTRACT. THE CONTENTS OF THIS DRAWING ARE SHALL



SOUTH EAST ELEVATION

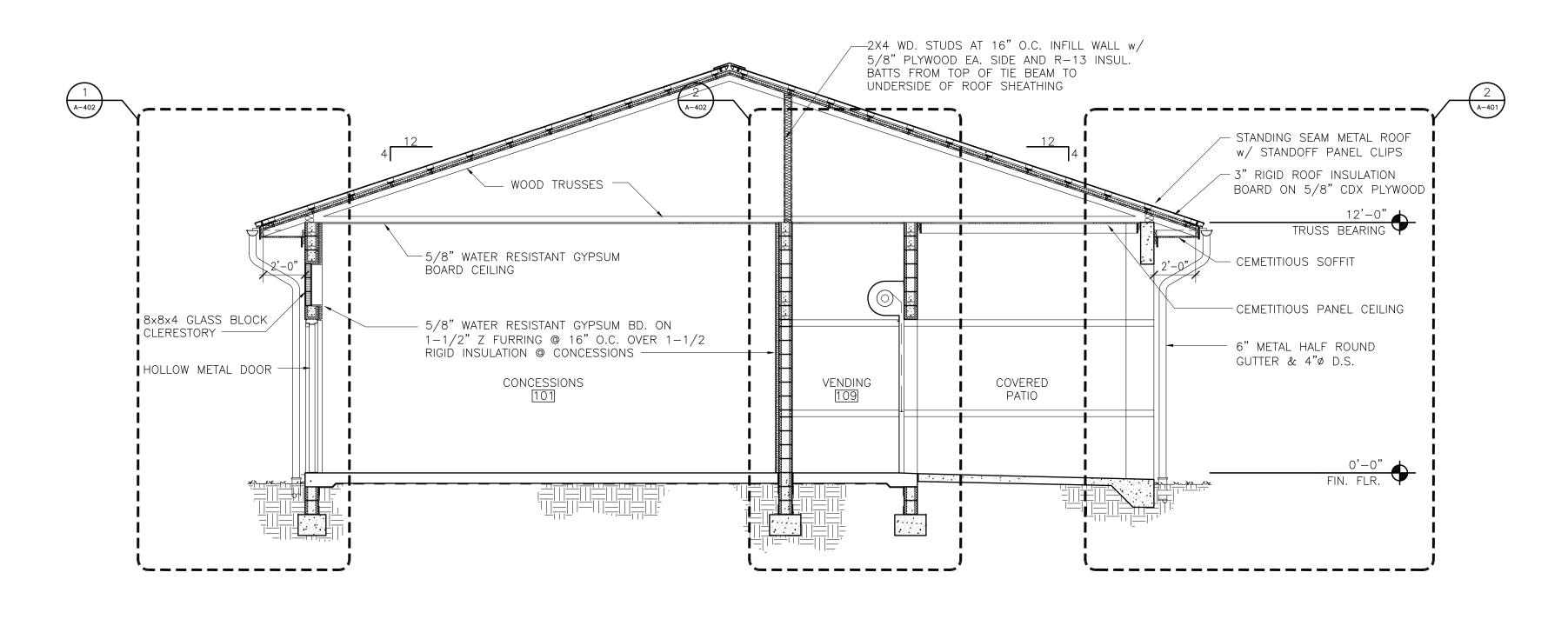
A-202 1/4"-1'-0"



NORTH WEST ELEVATION

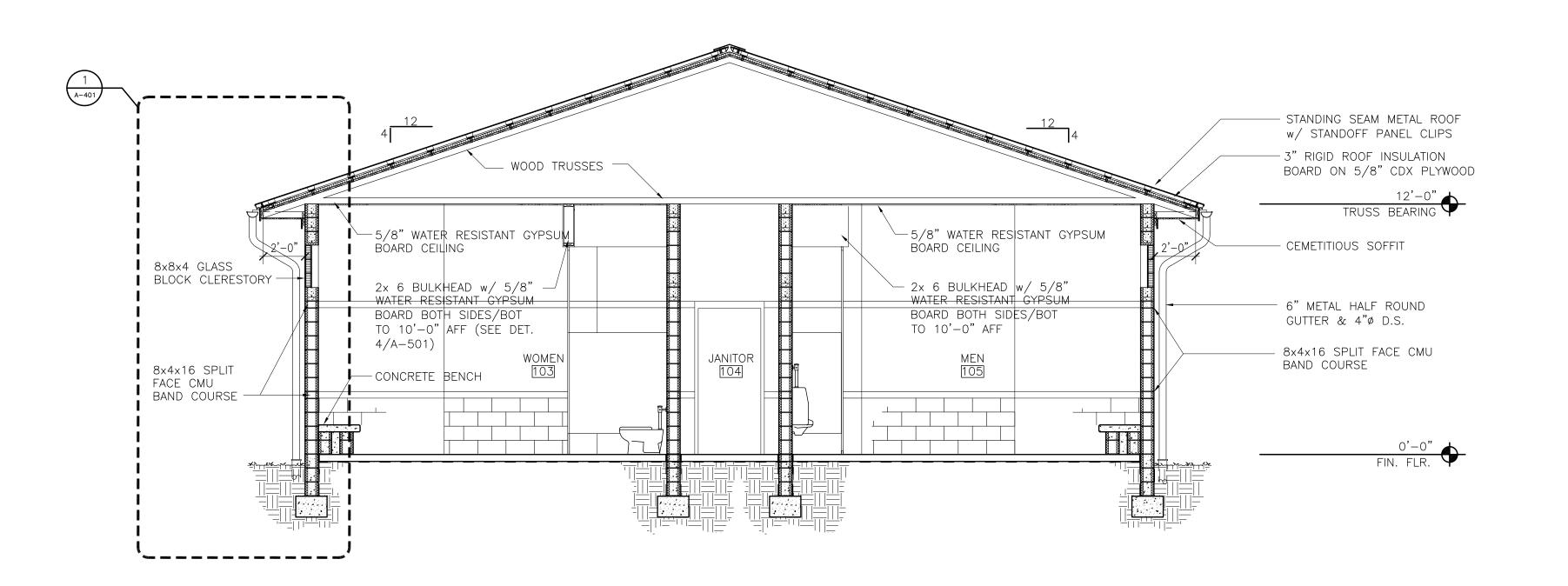
1/4"-1'-0"

				OCP PARCEL J	CONCESSIONS, OFFICE AND	RESTROOM BU	ILDING	
PROJECT NO.	46 REV.	DESCRIPTION	DATE	PROJECT ADDRESS	DRAWING TITLE	CONSULTANTS	SIGNATURE AND DATED SEAL	
PHASE 100% CD	F			12901 MOSS PARK RD.				<u> </u>
				ORLANDO, FL				
SCALE								
	, T			32832				
FILE NAME 17-146	9			OWNER NAME AND ADDRESS	EXTERIOR ELEVATIONS			BORRELLI + PARTNE
	 			ORANGE COUNTY PARKS				ARCHITEGTURE PLANNING LANDSCAPE INTE
DRAWN BT KAP	<u>,</u> I			400 F SOUTH STREET				720 VASSAR STREET
CHECKED BY AF	AP			5TH FLOOR				ORLANDO, FL. 32804 (407) 418-1338 confidental this drawing is the property of borrell + partners unless o
DATE 06-20-2019	19			ORLANDO, FLORIDA 32801			ANDY PERALTA AR99694	BY THE CONTRACT, THE CONTENTS OF THIS DRAWING ARE SHALL NOT BE TRANSMIT PARTY EXCEPT AS AGREED TO BY THE ARCHITECT. COPYRIGHT BORRELLI + PART



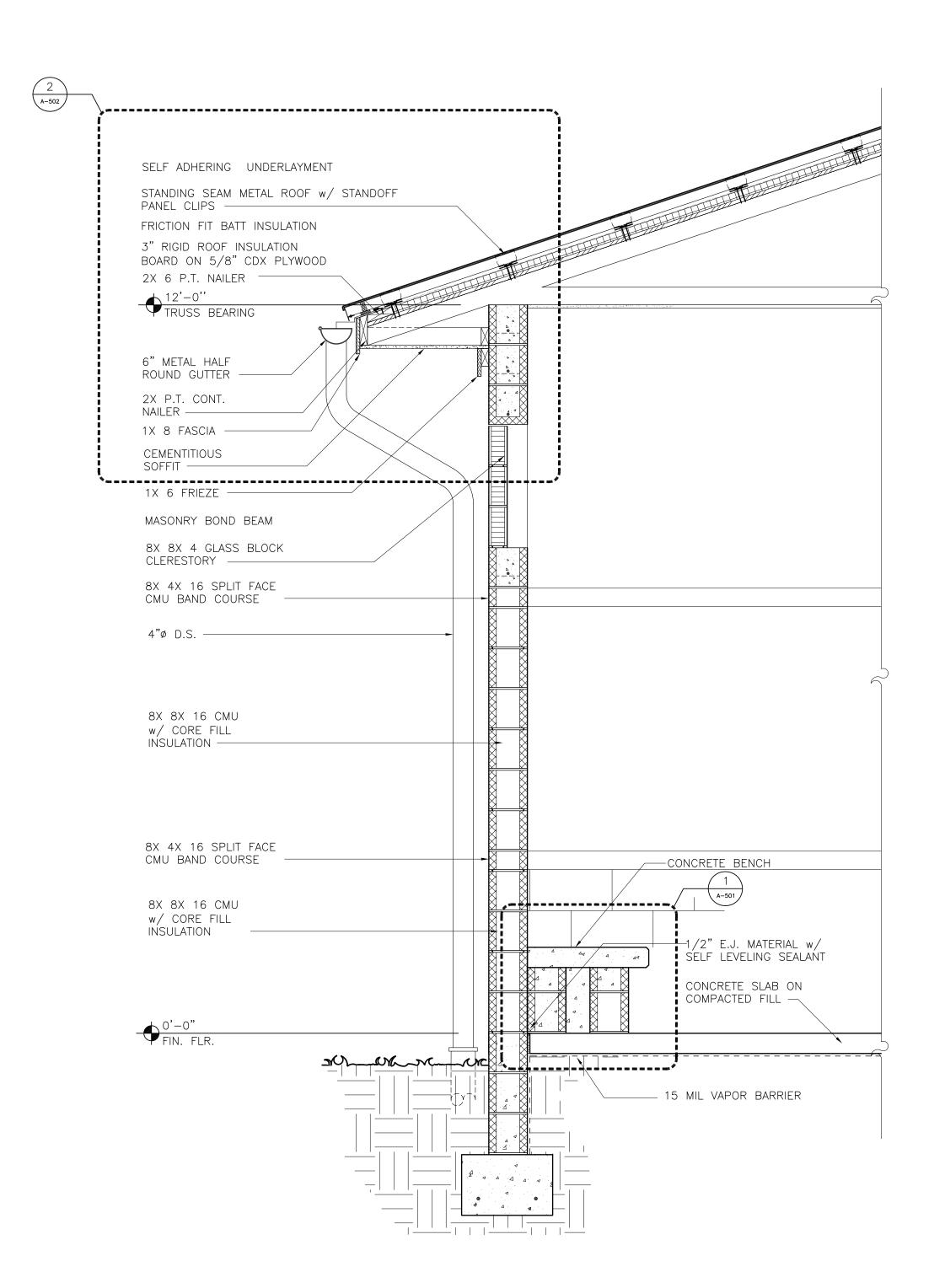
BUILDING SECTION

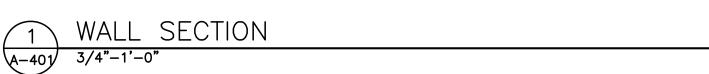
A-301 1/4"-1'-0"

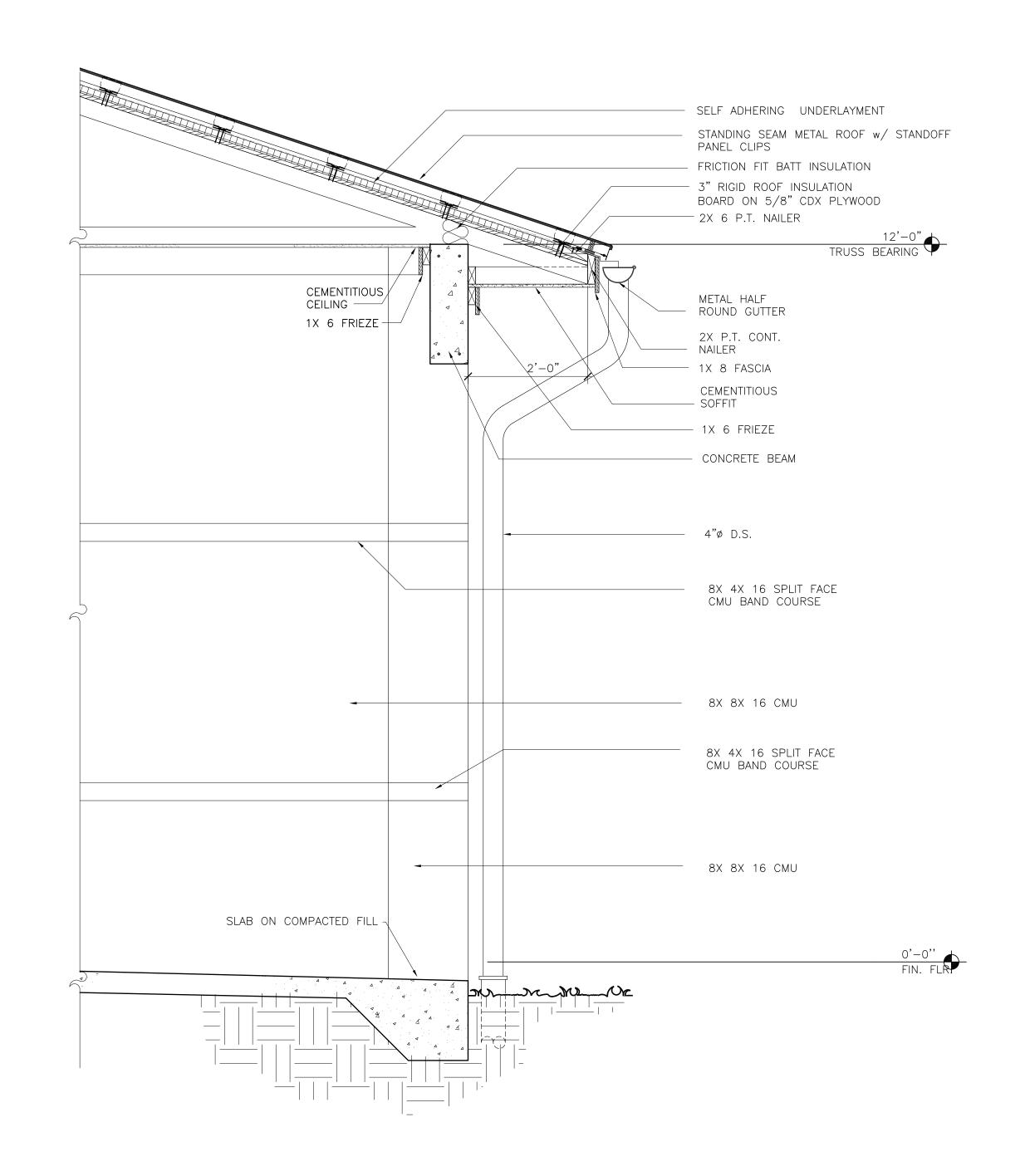


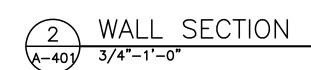


						JCP PARCEL J	: CONCESSIONS, OFFICE AND	RESTROOM BU	ILDING		
	PROJECT NO.	17-146	6 REV.	DESCRIPTION DATE		PROJECT ADDRESS	DRAWING TITLE	CONSULTANTS	SIGNATURE AND DATED SEAL	T	
	PHASE	100% CD	ΤΛ		+	12901 MOSS PARK RD.					
<u> </u>					•	ORLANDO, FL					
\-	SCALE	AS NOTED			T	32832					
3	FILE NAME	17-146	1 :-			OWNER NAME AND ADDRESS	BUILDING SECTIONS				808
0	DRAWN BV	DAD	1		Ī	ORANGE COUNTY PARKS					ARCHIT
1	I A MANUAL I	E			4	400 E. SOUTH STREET					
	CHECKED BY	AP			2:	5TH FLOOR				CONFIDE	OKI ENTIAL THIS DRAWII
	DATE	06-20-2019	9		•	ORLANDO, FLORIDA 32801			ANDY PERALTA A	AR99694 BY THE PART	BY THE CONTRACT, THE CO PARTY EXCEPT AS AGRE

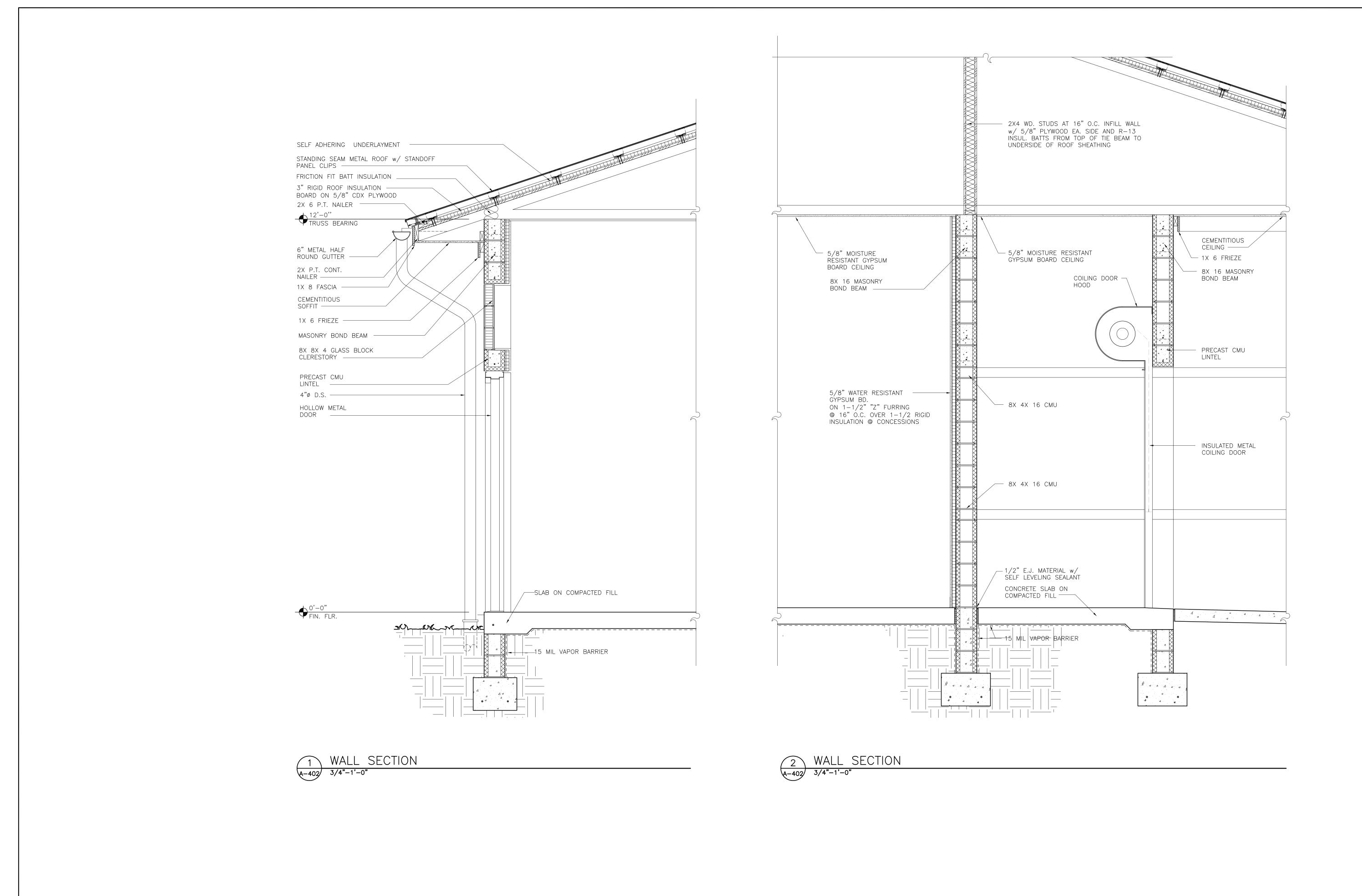




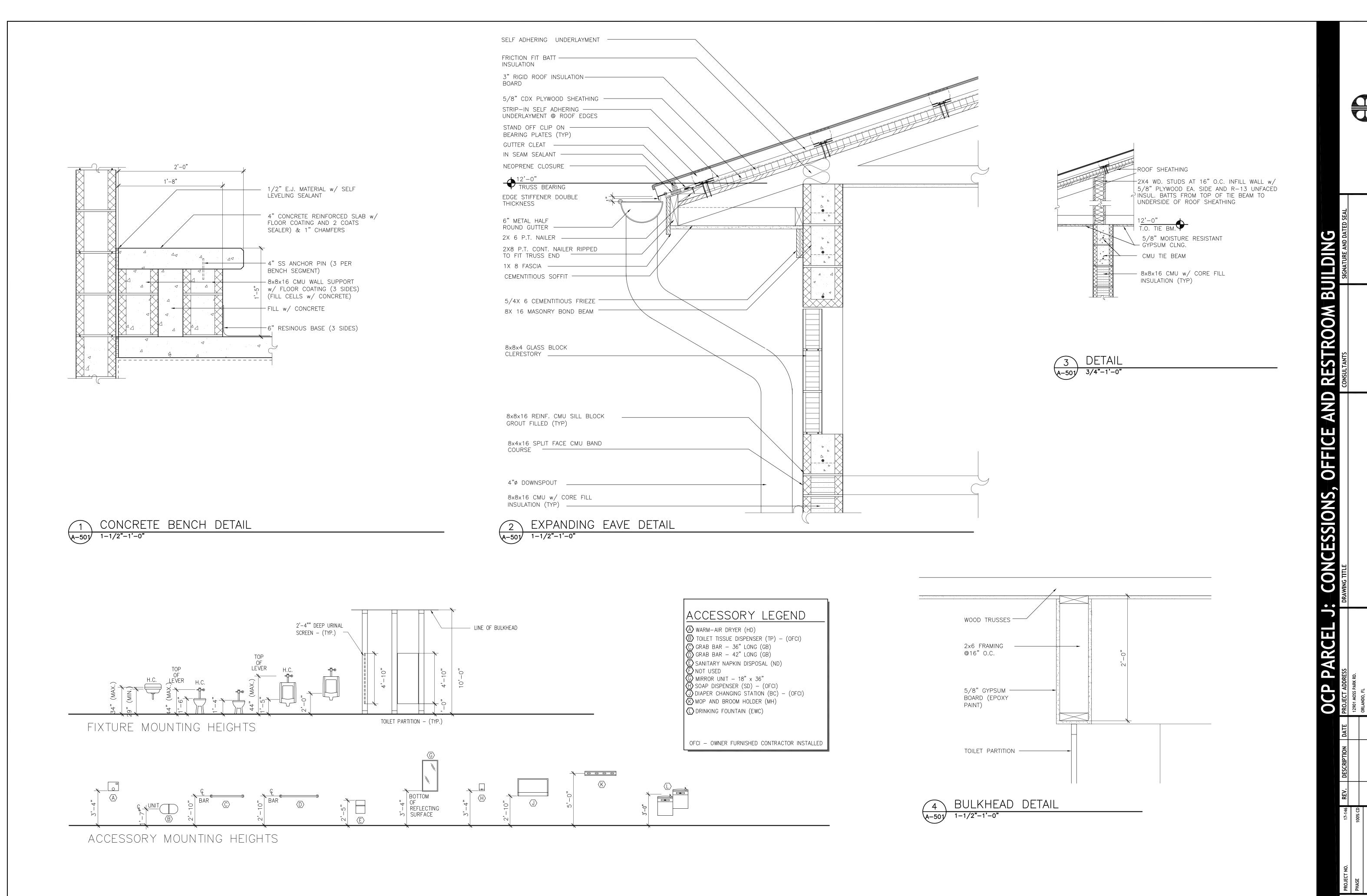




CONCESSIONS, OFFICE A	TITLE						SNO			
	DRAWING TITLE						WALL SECTIONS			
OCP PARCEL J	DESCRIPTION DATE PROJECT ADDRESS	12901 MOSS PARK RD.	ORI ANDO FI		32832	OWNER NAME AND ADDRESS	ORANGE COUNTY PARKS	400 E. SOUTH STREET	5TH FLOOR	ORLANDO, FLORIDA 32801
	DATE									
	DESCRIPTION									
	REV.									
			5000	DE NOTED	AS NOTEL	17-146	RAP	4	AF.	06-20-2019
	PROJECT NO.	HASE		E 140.	SCALE	FILE NAME	DRAWN BY	LECKED BY	CHECKED BY	DATE
				H-400	SCALE AS NOTED	FILE NAME 17-146		VI CHECKED BY	CHECKED BY AP	

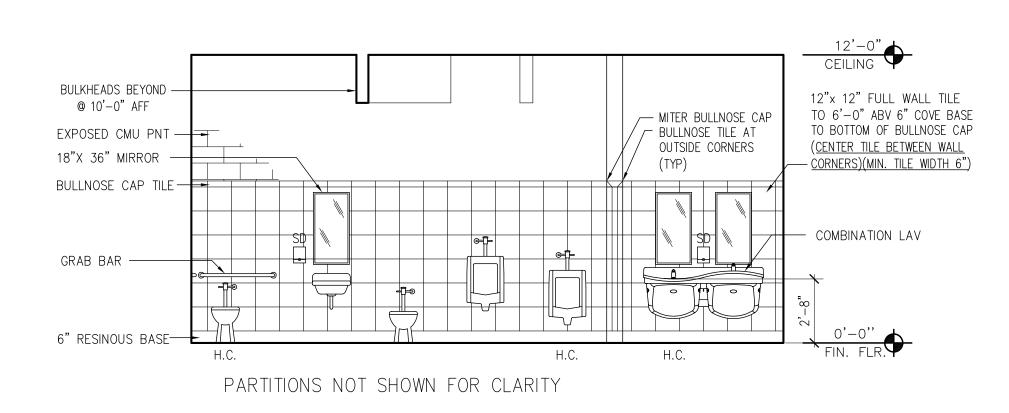


ONCESSION A-402

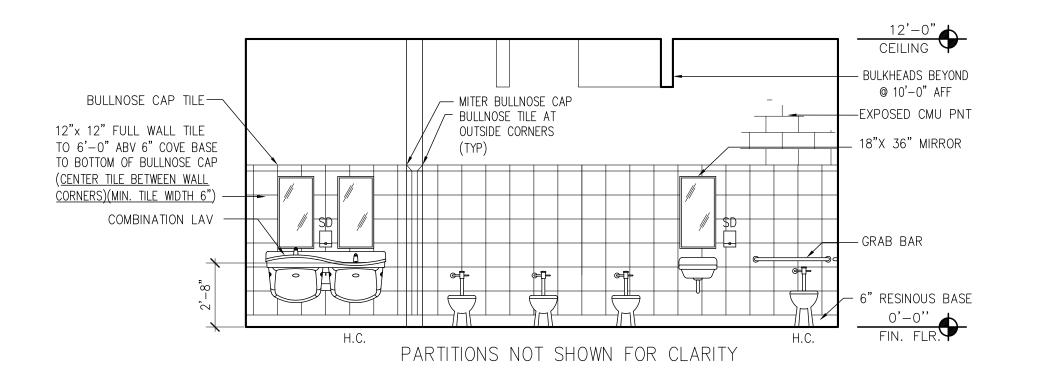


A-501

DI ACCESS





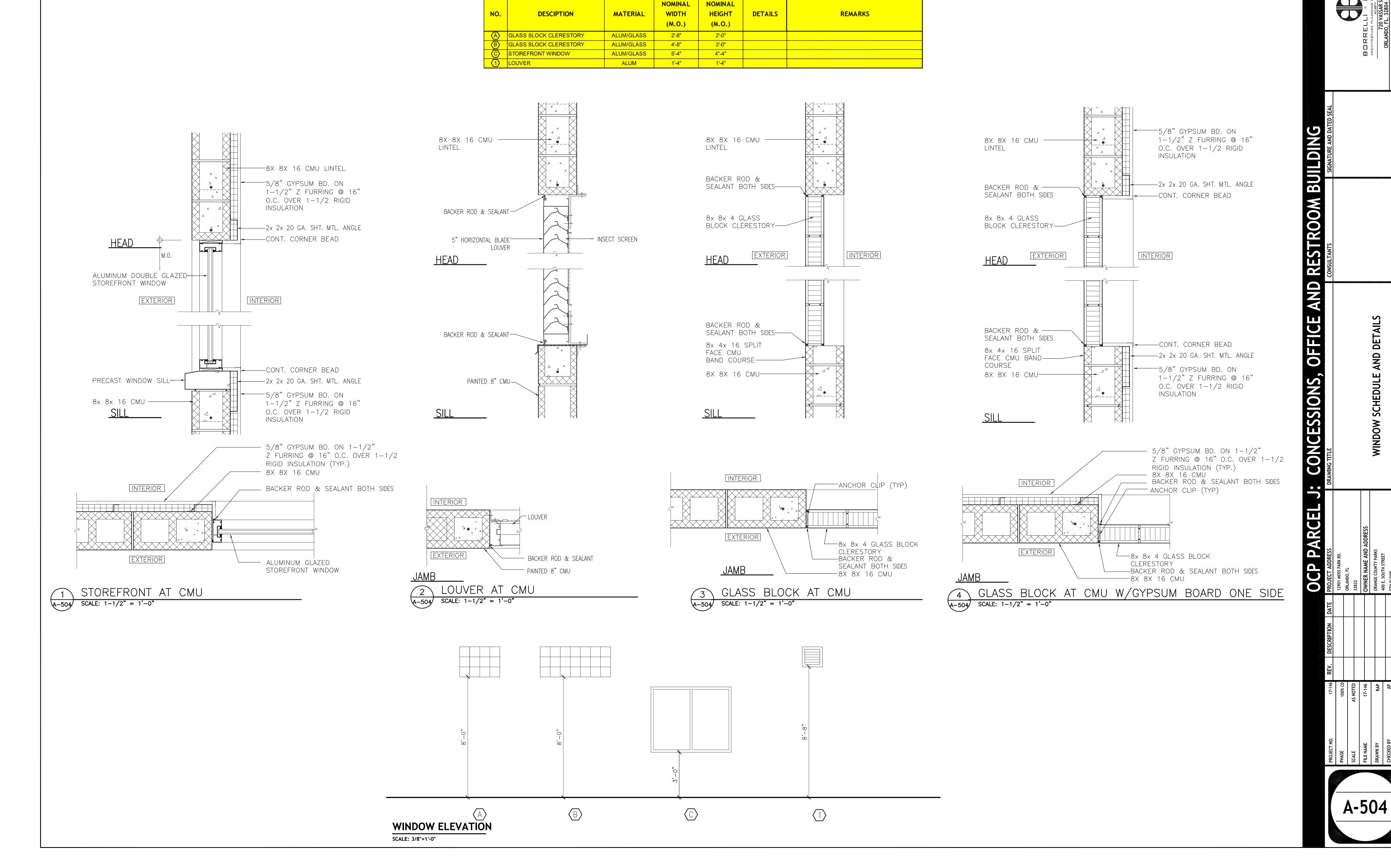




				OCD DARCEL I.	CONCECCIONS OFFICE AND	PECTPOON RI	
				OCL LANCEL J.	CONCESSIONS, OF LICE AND	NESTINOOM BO	
17-146	17-146 REV.	DESCRIPTION DAT	DATE	PROJECT ADDRESS	DRAWING TITLE	CONSULTANTS	SIGNATURE AND DATED SEAL
100% CD				12901 MOSS PARK RD.			
				I ONN II			
AC MOTED							
AS NOTED				37837			

RESTROOM ELEVATIONS

PROTOTYPE RESTROOM, CONCESSION, OFFICE BLDG (SIDING) - DOOR SCHEDULE	GENERAL DOOR NOTES:	DOOR ACCESSIBILITY NOTES:	PROVIDED
ROOM # DESCRIPTION DOOR # Size (feet - inclus) Door Base Finish Mat'l Mat'l	SHALL COMPLY WITH THE FLORIDA ACCESSIBILITY CODE, A.D.A. FEDERAL REGULATION CODES, UTILIZING A LEVER LATCH OR LOCKSET AND OC STANDARDS. B. FOR DOOR HARDWARE SPECIFICATIONS SEE SECTION 087100 C. FOR HOLLOW METAL DOORS AND FRAMES SPECIFICATIONS SEE SECTION 081113 D. ALL HOLLOW METAL DOORS & FRAMES TO RECEIVE ENAMEL PAINT FINISH. COLOR TO BE SELECTED BY ARCHITECT E. ALL DOORS UNDERCUT 3/4" FROM STRUCTURAL SLAB UNLESS OTHERWISE NOTED F. PERIMETER ANCHORING FOR ALL EXTERIOR DOORS AND WINDOW FRAMING SYSTEMS TO BE HURRICANE HARDENED TO COMPLY WITH MIAMI—DADE COUNTY PROTOCOLS. REFER TO MANUFACTURER'S PRODUCT APPROVAL DRAWINGS AND SPECIFICATIONS FOR REQUIRED ANCHORING AND CONNECTIONS. 5 L LASS WRI DOS FRO FRO FOR FOR TO	NDLES, PULLS, LATCHES, LOCKS & OTHER OPERATING DEVICES MUST HAVE A SHAPE THAT IS SY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT PINCHING OR TWISTING OF THE SIST TO OPERATE. LEVER OPERATED MECHANISM & U-SHAPED HANDLES ARE ACCEPTABLE SIGNS. HARDWARE REQUIRED FOR PASSAGE MUST BE MOUNTED NO HIGHER THAN 48" A.F.F. OR CLOSURES: A DOOR HAS A CLOSER THEN THE SWEEP PERIOD OF THE CLOSER MUST BE ADJUSTED SO THAT OM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE A POINT 3" FROM THE LATCH. MEASURE FROM THE LEADING EDGE OF THE DOOR. OR OPENING: RCE THE MAXIMUM FORCE FOR PUSHING OR PULLING OPEN A DOOR MUST BE AS FOLLOWS: TERIOR HINGED DOORS: LB.S SLIDING OR FOLDING DOORS: 5 LB.S	BORRELLI + PARTNERS ARCHITEGTURE PLANNING LANDSCAPE INTERIOR ACCOUNTY 720 VASSAR STREET ORLANDO, FL. 32804 (407) 418-1338 COMPIDENTAL THIS DAWNING STREET FOR PRESS OF THE STREET PROPERTY OF DAWNING STREET PROPERTY OF THE ORDER THE STREET PROPERTY OF THE STREET PROPERT
107 AHU 107 3'-0" 7'-0" 13'4" A HOLLOW METAL PAINT HOLLOW METAL PAINT A 3 5.0 108 STORAGE 108 3'-0" 7'-4" A HOLLOW METAL PAINT HOLLOW METAL PAINT A 3 8.8 5.0 109 VENDING 109 8'-0" 7'-4" - E STEEL PAINT 5.68.7 6.0 UNINSULATED O.H. COILING DOOR, MANUAL PUR EXTEROS: M.O. HOLLOW METAL DOOR BACKER ROD & SEALANT BOTH SIDES O.H. DRIP HOLLOW METAL DOOR FRAME W/ GROUT FILL BACKER ROD & SEALANT BOTH SIDES HOLLOW METAL DOOR FRAME W/ GROUT FILL BACKER ROD & SEALANT BOTH SIDES 1. AMERICANS (TYP) 8X 8X 16 CMU EXTERIOR INTERIOR INTERIOR INTERIOR INTERIOR INTERIOR	-5/8" GYPSUM BD. ON 1-1/2" Z FURRING @ 16" O.C. OVER 1-1/2 RIGID INSULATION (TYP.) -8X 8X 16 CMU -JAMB ANCHORS (TYP.) -2X2X20GA. SHT. MTL. ANGLE (TYP.) CONT. CORNER BEAD (TYP.) HOLLOW METAL DOOR	WOOD THE REGION ON 1-1/2" Z FURRING © 16" O.C. OVER 1-1/2 RIGID INSULATION 2X2X2X20GA. SHT. MTL. ANGLE CONT. CORNER BEAD BACKER ROD & SEALANT BOTH SIDES HOLLOW METAL DOOR FRAME W/ GROUT FILL HOLLOW METAL DOOR INTERIOR OR ERIOR INTERIOR	
HOLLOW METAL DOOR THRESHOLD SET IN FULL BED OF SEALANT SWEEP EXPANSION JOINT PAINTED 8" CMU BX 8X 16 CMU	JAMB 2 H.M. DOOR AT CMU W/GYPSUM BOARD ONE SIDE A-503 SCALE: 1-1/2" = 1'-0"	CONCESSIONS, OFFICE A	DOOR SCHEDULE AND DETAILS
3 DOOR SILL DETAIL 7 CONCESSIONS SILL DETAIL COILING DOOR TRACK COILING DOOR TURN FLANGE DOWN 5 O.H. DOOR JAM 4-503 SCALE: 1-1/2" = 1"-0"	DOOR CURTAIN BOTTOM BAR WEATHER STRIPPING INTERIOR	SCAIPTION DATE PROJECT ADDRESS (a) 12801 MOSS PARK RD. ORLANDO, FL. 32832 OWNER NAME AND ADDRESS	OWNEK NAME AND ADDKESS ORANGE COUNTY PARKS 400 E. SOUTH STREET 5TH FLOOR
OVERHEAD COILING DOOR HOUSING ANCHORED TO CMU WALL PER MFR INSULATED METAL COILING DOOR MASONRY LINTEL INTERICR EXTERIOR O.H. DOOR HEAD @ ALTERNATE #1 (SIMILAR @ DOORS 101A & 109) DOOR ELEVATION SCALE: 3/8*=1*-0*	STAINLESS STEEL SHELF	PROJECT NO. 177-146 REV PHASE 100% CD SCALE AS NOTED FILE NAME 177-146	FILE NAME 17 DRAWN BY CHECKED BY



LOUVERS - GLASS BLOCK - CHAIN LINK AND WINDOWS SCHEDULE

	HVAC SYME	SOL LEGI	
24x12	DUCT-FIRST DIM. IS WIDTH DUCT-SECOND DIM. IS HEIGHT	4	DUCT TAKE-OFF W/ VOLUME DAMPER
[x]	DUCT ELBOW DOWN	₩	POINT OF CONNECTION NEW TO EXISTING WORK
\boxtimes	DUCT ELBOW UP	~	POINT OF EXTENT OF REMOVAL OF EXISTING HVAC
R	DUCT RISE	9	THERMOMETER
D	DUCT DOWN	Ø	PRESSURE GAUGE
SA 🔀	DUCT UNDER POSITIVE PRESSURE	<u>———</u>	UNION OR FLANGE
RA OA	DUCT UNDER NEGATIVE PRESSURE	\longrightarrow	BALL OR BUTTERFLY VALVE
五	ELBOW W/TURNING VANES	1	CHECK VALVE
	TAKE-OFF W/EXTRACTOR	X	MODULATING CONTROL VALVE
)	FLEXIBLE DUCT	X	TWO POSITION CONTROL VALVE
	FLEXIBLE CONNECTION		PLUG VALVE W/ MEMORY
	SUPPLY AIR TERMINAL ARROW INDICATES THROW	— ₩—	FLEXIBLE PIPE
□	RETURN OR EXHAUST AIR		STRAINER
	LINEAR DIFFUSERS	A	MANUAL AIR VENT
Zimm.	SIDE MOUNTED EHD	A	AUTOMATIC AIR VENT
	BOTTOM MOUNTED EHD	~~	3/4" HOSE END DRAIN PIPE
FS	FIRE DAMPER	— CHWS —	CHILLED WATER SUPPLY
SD	SMOKE DAMPER	— CHWR —	CHILLED WATER SUPPLY
S/F	SMOKE AND FIRE DAMPER	— нws —	HOT WATER SUPPLY
vo 	VOLUME DAMPER	— HWR —	HOT WATER RETURN
RVD====	REMOTE VOLUME DAMPER	RHG	REFRIGERANT HOT GAS
	MOTORIZED DAMPER	— RL —	REFRIGERANT LIQUID
BDD	BACKDRAFT DAMPER	RS	REFRIGERANT SUCTION
<u>s</u> —	SMOKE DETECTOR (DUCT MOUNTED)	<u> </u>	CONDENSATE DRAIN
[] AD	CEILING ACCESS DOOR		PIPE ELBOW DOWN
[] AD	DUCT ACCESS DOOR	<u> </u>	PIPE ELBOW UP
E	HUMIDITY SENSOR		PIPE ELBOW
<u> </u>	ROOM SENSOR		PIPE TEE DOWN
Ţ	THERMOSTAT	-	PIPE TEE UP
		Ø	ROUND

	HVAC ABB	REVIATIO	ONS
AC	AIR CONDITIONING	HD	HUB DRAIN
AHU	AIR HANDLING UNIT	HOA	HAND/OFF/AUTOMATIC
AFF	ABOVE FINISHED FLOOR	HP	HORSEPOWER
BDD	BACKDRAFT DAMPER	HVAC	HEATING, VENTILATING & AIR CONDITIONING
BHP	BRAKE HORSEPOWER	H20	WATER
BMS	BUILDING MANAGEMENT SYSTEM	INIT	INTITIAL
вти	BRITISH THERMAL UNIT	KSU	KITCHEN AIR SUPPLY UNIT
CF	CHEMICAL FEEDER	LAT	LVG. AIR TEMPERATURE
CFM	CUBIC FEET PER MINUTE	Ф	LINEAR DIFFUSER
CLG	CEILING	LR	LINEAR RETURN
CYC	CYCLES	LVG	LEAVING
COND	CONDENSATE	LWT	LVG. WATER TEMPERATURE
CC	COOLING COIL	MAU	MAKE UP AIR UNIT (KITCHEN HOOD)
CD	CEILING DIFFUSER	MBH	MEGA BTU PER HOUR
CG	CEILING GRILLE	MD	MOTORIZED DAMPER
DIM	DIMENSION	NC	NOISE CRITERIA
DB	DRY BULB	NIC	NOT IN CONTRACT
° F	DEGREES FARENHEIT	OA	OUTSIDE AIR
DWG	DRAWING	OPER	OPERATING
EA	EXHAUST AIR	OV	OUTLET VELOCITY
EAT	ENTERING AIR TEMPERATURE	PCF	PUMP, CHEMICAL FEED
EG	EXHAUST AIR GRILLE	PCH	PUMP, CHILLED WATER
EHC	ELECTRIC HEATING COIL	PD	PRESSURE DROP
EHD	ELECTRIC HEATER, DUCT	PH	PHASE
EHU	ELECTRIC UNIT HEATER	RG	RETURN AIR GRILLE
EHW	ELECTRIC HEATER, WALL	ROT	ROTATION
ENT	ENTERING	RPM	REVOLUTION PER MINUTE
ER	EXHAUST AIR REGISTER	RVD	REMOTE VOLUME DAMPER
EWT	ENT. WATER TEMPERATURE	SA	SUPPLY AIR
F	FILTER	SENS	SENSIBLE
FCU	FAN COIL UNIT	SD	SPLITTER DAMPER
EF	EXHAUST FAN	SP	STATIC PRESSURE
EFG	EXHAUST FAN, GREASE	SR	SUPPLY AIR REGISTER
FF	FLY FAN	TG	TRANSFER AIR GRILLE
FPI	FINS PER INCH	TEMP	TEMPERATURE
FPM	FEET PER MINUTE	UD	UNDERCUT DOOR
FR	FAN, RETURN	VG	VENT, GRAVITY
SF	SUPPLY FAN	w	WATTS
GPM	GALLONS PER MINUTE	WB	WET BULB
		W/	WITH

HVAC GENERAL NOTES

- 1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2017 FLORIDA BUILDING CODE (6TH EDITION), THE 2017 FLORIDA MECHANICAL CODE (6TH EDITION), THE 2017 FLORIDA ENERGY EFFICIENCY CODE (6TH EDITION) AND THE ORANGE COUNTY BUILDING DEPARTMENT REQUIREMENTS AND ALL OTHER APPLICABLE CODES AND STANDARDS.
- 2. REFER TO ARCHITECTURAL DRAWINGS FOR CLEARANCES WITHIN THE CEILING SPACE, MECHANICAL ROOMS, LOCATIONS AND SIZES OF BEAMS AND CEILING AND SOFFIT HEIGHTS.
- 3. DUCTWORK AND EQUIPMENT LOCATIONS AND CLEARANCES SHALL BE COORDINATED WITH GENERAL, PLUMBING AND ELECTRICAL CONTRACTORS. REFER TO ARCHITECTURAL PLANS FOR BUILDING SECTIONS AND DETAILS.
- 4. CONNECTION TO ALL EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURERS CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR ALL
- 5. COORDINATE DIFFUSER, REGISTER AND GRILLE LOCATION WITH LIGHTING LOCATIONS AND ARCHITECTURAL CEILING PLANS. ALSO COORDINATE THE TYPE OF DIFFUSER FRAME WITH THE
- 6. ALL EQUIPMENT SHALL BE PROPERLY SUPPORTED AND ISOLATED TO PREVENT NOISE AND VIBRATION TRANSMISSION. ALL AIR HANDLING EQUIPMENT SHALL BE SUPPORTED OR SUSPENDED WITH SPRING VIBRATION ISOLATORS PADS. ALL CONNECTIONS BETWEEN AIR HANDLING EQUIPMENT AND DUCTWORK SHALL BE CANVAS FLEXIBLE CONNECTORS.
- 7. ALL MECHANICAL EQUIPMENT SHALL BE LOCATED WITH RESPECT TO BUILDING CONSTRUCTION AND OTHER EQUIPMENT SO AS TO PERMIT ACCESS TO THE MECHANICAL EQUIPMENT IN CONFORMITY WITH ANY CLEARANCE WHICH MAY BE RECOMMENDED BY THE MANUFACTURER OF THE EQUIPMENT. SUFFICIENT CLEARANCE SHALL BE MAINTAINED FOR CLEANING COILS, MOTORS, BURNERS, AS WELL AS CHANGING FILTERS, ALL EQUIPMENT SHALL BE LOCATED WITHIN THE MECHANICAL ROOM AND CEILING SPACES WITH ADEQUATE CLEARANCES FOR REPAIR AND MAINTENANCE. ALL PIPING AND DUCTWORK SHALL BE INSTALLED TO PROVIDE ADEQUATE CLEARANCE FOR ACCESS TO ALL EQUIPMENT. INSTALLATION OF ALL MECHANICAL EQUIPMENT SHALL COMPLY WITH THE MANUFACTURERS SPECIFICATION AND CLEARANCE REQUIREMENT.
- 8. ALL DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS.
- 9. THE INSIDE OF ALL DUCTS VISIBLE THRU THE FACE OF DIFFUSERS, REGISTERS, AND GRILLES SHALL BE PAINTED FLAT BLACK WITH NON TOXIC PAINT.
- 10. ALL SUPPLY AIR, RETURN AIR, OUTSIDE AIR AND EXHAUST AIR DUCTWORK SHALL BE GALVANIZED STEEL SHEETS. FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF SMACNA DUCT CONSTRUCTION STANDARDS FOR A 2 INCH PRESSURE CLASSIFICATION.
- 11. FLEXIBLE DUCTWORK SHALL BE INSULATED VINYL TYPE (R-6) WITH WIRE SPIRAL SUPPORT. FLEXIBLE DUCTWORK SHALL BE RUN IN MAXIMUM LENGTHS OF 12'-0". FLEXIBLE DUCTWORK SHALL BE PROPERLY SUPPORTED WITH GALVANIZED STEEL STRAPS 1" WIDE AND SHALL BE RUN AS STRAIGHT AS POSSIBLE WITH NO KINKS OR BENDS TO RESTRICT AIRFLOW.
- ALL DUCTWORK, EXCEPT THE EXHAUST SYSTEM, SHALL BE EXTERNALLY INSULATED WITH 2.2" THICK (R-6) FIBERGLASS BLANKET INSULATION WITH FOIL JACKETING UNLESS OTHERWISE NOTED. INSULATION R VALUE IS WITH 25% COMPRESSION IN ACCORDANCE WITH FBCM 604.7
- 13. ALL DUCT JOINTS SHALL BE SEALED WITH APPROVED MASTIC.
- ALL FIBROUS GLASS INSULATION JOINTS, SEAMS AND CONNECTIONS SHALL BE CONSTRUCTED WITH PRESSURE SENSITIVE TAPE, FAB, STAINLESS STEEL STAPLES AND THEN SEALED WITH MASTIC. HEAT AND PRESSURE SENSITIVE TAPE ARE NOT ACCEPTABLE AS A FINAL CLOSURE.
- 15. PROVIDE HANGER STRAPS FOR ALL DUCTS MADE OF 1" WIDE, 22 GAGE GALVANIZED STEEL-SPACED ACCORDING TO SMACNA STANDARDS AND ALL OTHER APPLICABLE GOVERNING CODES and standards.
- 16. ALL DUCTWORK STORED ON SITE OR ALREADY INSTALLED SHALL HAVE ALL OPEN ENDS SEALED WITH VISQUINE TO PREVENT DUST AND DEBRIS FROM ACCUMULATING INSIDE OF THE DUCTWORK. INTERIORS OF ALL DUCTWORK SHALL BE THOROUGHLY CLEANED PRIOR TO INSTALLATION.
- 17. ALL DAMPERS AND EXTRACTORS SHALL HAVE LOCKING QUADRANTS AND SHALL BE ACCESSIBLE.
- 18. PROVIDE REMOTE VOLUME DAMPER (RVD) OPERATORS IN ALL NON-ACCESSIBLE CEILINGS. EQUAL TO YOUNG REGULATOR COMPANY MODEL 270-896C BOWDEN CABLE CONTROL UNIT OR METROPOLITAN AIR. CONTROL FOR EACH REMOTE VOLUME DAMPER SHALL BE LOCATED WITHIN THE DIFFUSER OR REGISTER BEING SERVED.
- 19. BEVELED TAKE OFFS AND DAMPERS SHALL BE INSTALLED IN ALL BRANCH DUCTWORK LEADING FROM MAIN TRUNK LINES.
- 20. ALL SPLITTER DAMPERS SHALL BE BALANCED AND SET PRIOR TO THE INSTALLATION OF THE
- 21. OUTSIDE AIR WALL LOUVERS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY EXHAUST AIR DISCHARGE, COMBUSTION AIR DISCHARGE OR ANY PLUMBING VENT TERMINATION.
- 22. ALL WALL LOUVERS SHALL HAVE A BIRD SCREEN AND SHALL BE ALUMINUM CONSTRUCTION AND SHALL BE FLORIDA PRODUCT APPROVED.
- 23. PROVIDE ADJUSTABLE PULLEYS WITH CONSTANT VOLUME AIR HANDLING UNITS AND BELT DRIVE

- 24. EXHAUST FAN OUTLETS SHALL BE INSTALLED A MINIMUM OF 10'-0" FROM FRESH AIR INTAKES 46. THE CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE THAT SHALL WARRANT ALL OF MECHANICAL EQUIPMENT AS WELL AS ALL OPERABLE WINDOWS AND DOORS.
- 25. ALL FANS AND AIR HANDLING UNITS SHALL BE PROPERLY SUPPORTED AND ISOLATED TO PREVENT NOISE AND VIBRATION TRANSMISSION. ALL AIR HANDLING EQUIPMENT SHALL BE SUPPORTED OR SUSPENDED WITH SPRING ISOLATORS. ALL CONNECTIONS BETWEEN FANS OR AIR HANDLING UNITS AND DUCTWORK SHALL BE CANVAS FLEXIBLE CONNECTORS.
- 26. ALL EQUIPMENT LOCATED WITHIN THE CEILING SPACES SHALL HAVE ADEQUATE CLEARANCES FOR REPAIR AND MAINTENANCE. ALL PIPING AND DUCTWORK SHALL BE INSTALLED TO PROVIDE ADEQUATE CLEARANCE FOR ACCESS TO ALL EQUIPMENT.
- 27. VERTICAL AIR HANDLING UNIT SHALL BE MOUNTED ON A MINIMUM 20" TALL STEEL SKIDS OR CUSTOM AHU SUPPORT STAND.
- 28. FURNISH AND INSTALL INSULATED PVC CONDENSATE DRAINS WITH TRAPS FOR ALL COOLING COILS. DRAIN LINE SIZE SHALL MATCH THE OPENING OF THE CONDENSATE DRAIN PAN.
- 29. ALL REFRIGERANT PIPING AND CONDENSATE PIPING SHALL BE FULLY SUPPORTED IT'S ENTIRE LENGTH AND SHALL BE ANCHORED TO PREVENT SWAY AND VIBRATION.
- 30. CONTRACTOR SHALL SUPPLY AND WIRE ALL SMOKE DETECTORS IN THE SUPPLY AIR DUCTWORK OF ALL AIR HANDLING UNITS 2000 CFM AND ABOVE TO SHUT DOWN THE FANS IN THE EVENT OF A FIRE. DUCT SMOKE DETECTOR SHALL BE OF PHOTOELECTRIC TYPE AND LOW VOLTAGE. DIVISION 15 CONTRACTOR SHALL INSTALL ALL SMOKE DETECTORS.
- 31. ALL WALL SENSORS, VARIABLE SPEED CONTROL SWITCHES, ON-OFF SWITCHES AND MOTOR STARTERS SHALL BE INDIVIDUALLY LABELED. LABELS SHALL INDICATED THE UNIT CONTROLLED, TYPE OF CONTROL AND AREA SERVED. THE LABELS SHALL BE PLASTIC LAMINATE, PERMANENT TYPE, WHITE WITH BLACK LETTERING, AND SHALL BE MOUNTED INSIDE OF THE COVER PLATE, OF THE CONTROL DEVICE.
- 32. FURNISH ALL DIRECT DRIVE EXHAUST FANS WITH SOLID STATE VARIABLE SPEED CONTROLLER. MOUNT CONTROLLER TO FAN CABINET IN CEILING SPACE.
- 33. FURNISH ALL EXHAUST FANS WITH BACK DRAFT DAMPERS.
- 34. COORDINATE ALL CONTROL DEVICES WITH THE ELECTRICAL CONTRACTOR.
- 35. ALL CONTROL WIRING, CONDUIT AND HARDWARE TO COMPLETE THE HVAC CONTROL SYSTEM SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 15 - MECHANICAL.
- 36. ALL CONTROL WIRING AND INTERLOCK WIRING LOCATED IN MECHANICAL ROOMS AND IN NON ACCESSIBLE CEILINGS SHALL BE IN CONDUIT.
- 37. THERMOSTAT LOCATIONS ARE TENTATIVE. FINAL THERMOSTAT LOCATIONS SHALL BE APPROVED BY THE OWNER PRIOR TO INSTALLATION. THERMOSTATS SHALL BE LOCATED 48"-54" ABOVE THE FINISHED FLOOR IN ACCORDANCE WITH ADA REQUIREMENTS AND THE 2010 FLORIDA
- 38. ALL REFRIGERANT LINES FOR SPLIT SYSTEM DX UNITS SHALL HAVE FILTER DRYERS AND SIGHT GLASSES. ALL PIPING BELOW SLAB SHALL BE WITHOUT JOINTS AND RUN IN A PIPING CHASE OR CONDUIT OF SUFFICIENT SIZE TO ALLOW REPLACEMENT OF THE PIPING IN THE FUTURE. EACH END OF THE CHASE SHALL BE SEALED AIR TIGHT AND WATERTIGHT.
- 39. ALL REFRIGERANT PIPING EXPOSED TO THE EXTERIOR SHALL BE INSULATED WITH 1" THICK CLOSED CELL FOAM INSULATION (ARMAFLEX) AND SHALL BE WRAPPED WITH ALUMINUM
- 40. ALL REFRIGERANT PIPING IN CONCEALED CHASES FOR SPLIT DX UNITS SHALL BE SOFT DRAWN TYPE K COPPER. SERVICE FITTINGS FOR REFRIGERANT LINES SHALL BE LOCATED IN A MANNER TO BE INACCESSIBLE TO THE PUBLIC. INSULATE ALL EXTERIOR EXPOSED REFRIGERANT LINES WITH 1" ARMAFLEX INSULATION AND WRAP WITH ALUMINUM JACKETING.
- 41. ALL HVAC SYSTEM'S AIRFLOW SHALL BE BALANCED BASED ON THE ACTUAL INSTALLED STATIC PRESSURE OF THE SYSTEM. CONTRACTOR SHALL PROVIDE POSITIVE MEANS FOR BALANCING EACH INDIVIDUAL AIR OUTLET AND INLET.
- 42. THE CONTRACTOR SHALL HIRE AN INDEPENDENT TEST AND BALANCE FIRM TO TEST AND BALANCE ALL AIR CONDITIONING SYSTEMS—SEE SPECIFICATIONS. THE TEST & BALANCE CONTRACTOR SHALL BE CERTIFIED BY NEBB OR ABAA.
- 43. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE TEST AND BALANCE FIRM. PRIOR TO TEST AND BALANCE, THE CONTRACTOR SHALL START-UP, PRE-BALANCE THE SYSTEM, AND REPLACE ALL AIR FILTERS FOR EVERY AHU BEING TESTED. ALL DISCREPANCIES, DRIVE CHANGES, ETC. REPORTED BY ENGINEER OR THE TEST AND BALANCE FIRM SHALL BE CORRECTED BY THE CONTRACTOR WITHIN FIVE CALENDAR DAYS AT NO ADDITIONAL COST.
- 44. PROVIDE VANDAL PROOF CAPS ON ALL GROUND MOUNTED CONDENSING UNIT REFRIGERANT SERVICE VALVES TO PREVENT UNAUTHORIZED RELEASE OF REFRIGERANT.
- 45. CONTRACTOR SHALL LABEL ALL EQUIPMENT (FANS, AIR HANDLING UNITS AND CONDENSING UNITS) WITH ENGRAVED TYPE PHENOLIC LABELS PERMANENTLY AFFIXED TO THE EQUIPMENT. CONTRACTOR SHALL AN INSTALL ADDITIONAL PHENOLIC LABEL TO THE CEILING GRID TEE BELOW ANY CEILING MOUNTED EQUIPMENT LOCATED ABOVE ACOUSTICAL LAY-IN CEILINGS. CONTRACTOR SHALL INSTALL AN ADDITIONAL PHENOLIC LABEL TO THE CEILING ACCESS PANEL LOCATED BELOW ANY CEILING MOUNTED EQUIPMENT LOCATED ABOVE GYPSUM BOARD CEILINGS.

- WORKMANSHIP AND MATERIALS FOR ONE (1) YEAR. DURING THE FIRST YEAR ALL SYSTEM MALFUNCTIONS SHALL BE REPAIRED AT NO EXPENSE TO THE OWNER. THE COMPRESSORS SHALL HAVE A 5 YEAR WARRANTY (LABOR & MATERIALS).
- 47. OPERATION AND MAINTENANCE MANUALS SHALL INCLUDE AS A SEPARATE SUBMITTAL ITEM, PREVENTATIVE MAINTENANCE REQUIREMENTS ALONG WITH TIME SCHEDULE(S) FOR EACH ITEM. THE SEQUENCE OF OPERATION SHALL ALSO INCLUDE A DEFINITIVE SEQUENCE OF OPERATION OF THE MECHANICAL SYSTEM AND COMPONENTS AS THEY FUNCTION INTEGRALLY AND INDEPENDENTLY WITH THE SYSTEM.
- 48. THE CONTRACTOR SHALL PREPARE REDLINED AS-BUILT DRAWINGS OF THE HVAC SYSTEMS AT THE COMPLETION OF THE PROJECT CONSTRUCTION AND SHALL INCLUDE THOSE AS-BUILT DRAWINGS AT PROJECT CLOSEOUT ALONG WITH THE O&M MANUAL.
- 49. CONTRACTOR SHALL FURNISH AND INSTALL A SECURITY CAGE FOR EACH OUTDOOR HEAT PUMP UNIT/CONDENSING UNIT. CAGE SHALL BE A BAR TYPE CAGE WITH NO MESH AND SHALL BE HINGED TYPE WITH A PADLOCK - KING FAB (OR EQUAL).
- 50. THE CONTRACTOR SHALL PROVIDE A COMPLETE HVAC SHOP DRAWING SUBMITTAL TO THE ENGINEER FOR REVIEW AND APPROVAL. THE HVAC SUBMITTAL SHALL INCLUDE ALL AIR CONDITIONING EQUIPMENT, FANS, HEATERS, PUMP, PIPING DUCTWORK, INSULATION, DIFFUSERS, REGISTERS & GRILLES, CONTROLS, DAMPERS, HANGERS ETC. CONTRACTOR SHALL NOT ORDER ANY HVAC EQUIPMENT UNTIL THIS SUBMITTAL IS REVIEWED AND ACCEPTED BY THE ENGINEER OF RECORD. CONTRACTOR SHALL SUBMIT THE SHOP DRAWING AS ONE COMPLETE SUBMITTAL AND SHALL NOT PIECE MEAL THE SUBMITTAL SPREAD OUT OVER THE COURSE OF DAYS AND WEEKS. FAILURE TO SUBMIT A COMPLETE HVAC SHOP DRAWING SUBMITTAL SHALL RESULT IN AN IMMEDIATE REJECTION OF THE SHOP DRAWING SUBMITTAL.

SPECIAL O.C. BUILDING DEPARTMENT

- ALL DUCTWORK SHALL BE SUPPORTED PER CODE. PROVIDE HANGER STRAPS FOR ALL DUCTS MADE OF 1" WIDE, 22 GAGE GALVANIZED STEEL, SPACE SUPPORT STRAPS ACCORDING TO SMACNA GUIDELINES AND THE ORANGE COUNTY BUILDING DEPARTMENT REQUIREMENTS.
- 2. ALL SUPPLY AIR, RETURN AIR AND EXHAUST AIR DUCTWORK SHALL BE GALVANIZED STEEL SHEETS. FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA DUCT CONSTRUCTION STANDARDS FOR A 2" PRESSURE CLASSIFICATION. ALL DUCT JOINTS SHALL BE MECHANICALLY FASTENED AND SEALED TO 100% CLOSURE WITH MASTIC. ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH SMACNA GUIDELINES AND THE ORANGE
- 3. ALL REGISTERS, GRILLES AND DIFFUSERS SHALL HAVE A MINIMUM FLAME SPREAD RATING OF NO OVER 25 AND A MINIMUM SMOKE DEVELOPED RATING OF NOT OVER 50 AND SHALL BE IN COMPLIANCE WITH SECTIONS 603.15 AND 603.15.1 OF THE 2010 FLORIDA MECHANICAL CODE LATEST EDITION.
- 4. ALL FLEXIBLE AND RIGID BRANCH DUCTS SERVING INDIVIDUAL REGISTERS, GRILLES AND DIFFUSERS SHALL HAVE BALANCING DAMPERS AT THE CONNECTION TO THE MAIN TRUNK DUCT.
- 5. REFER TO THE FLOOR PLAN AND AIR BALANCE SCHEDULES FOR OVERALL BUILDING AIR BALANCE AND SUPPLY, RETURN, EXHAUST AND MAKE UP AIR TO EACH SPACE.

MECHANICAL EQUIPMENT LIST

- AIR HANDLING UNIT: 1.0 TON, SINGLE ZONE, 2' X 2' CEILING CASSETTE, INTEGRAL THERMOSTAT, 12.0 MBH, 280 CFM-LOW / 390 CFM HIGH, FAN: .28 FLA, 1.0 MCA, 15 AMP FUSE, 115V, 1 PHASE, 60 CYCLE. 19.5 SEER, 36 LBS., UNIT ELECTRICAL IS FED FROM OUTDOOR UNIT, THROUGH FIELD - SUPPLIED INTERCONNECTED WIRING. CARRIER 40MBQB12C OR EQUAL.
- HP-1.2 HEAT PUMP UNIT: 1.0 TON, SINGLE ZONE, AIR COOLED DC INVERTER DRIVEN COMPRESSOR, DIRECT EXPANSION, 12.0 MBH COOLING AND 12.0 MBH HEATING, FAN: .5 FLA, 9.0 MCA, 15 AMP FUSE, 208 VOLT, 1 PHASE, 60 CYCLE, 19.5 SEER, 10.2 HSPF, 91.5 LBS., 7 YEAR COMPRESSOR WARRANTY/5 YEARS PART WARRANTY, CARRIER 38MAQB12R-3 OR EQUAL WITH INVERTER TECHNOLOGY,
 - WALL LOUVER: EXTRUDED ALUMINUM, WEATHERPROOF, WIND DRIVEN RAIN RESISTANT, BIRD SCREEN, BRONZE ANODIZED FINISH, FLORIDA PRODUCT APPROVED. GREENHECK MODEL EHH 501X OR EQUAL.
- AIR CONDITIONING UNIT CONDENSER GUARD/CAGE. VANDAL PROOF. ADJUSTABLE/EXPANDABLE 16 GAUGE STEEL CONSTRUCTION. MAXIMUM 59"H X 50"W X 50"D. MODEL ACGU WITH MODEL ACL U-SHAPED KEYED PADLOCK AS MANUFACTURED BY A/C GUARD OR EQUAL.
- GRAVITY VENT: ROOF MOUNTED, ROOF CURB, EXHAUST, SPUN ALUMINUM, BIRD GV-1 SCREENS AND INSECT SCREENS ON INTAKE, 1300 CFM AT .14" PRESSURE DROP, 14"x14" THROAT, 20"x20" CURB CAP, 28"x27" HOOD, GREENHECK MODEL FGR-14x14 OR EQUAL.

													AIR I	HAN	DLINC	UN	T SC	HEDU	JLE															
				FAN DATA								D	COOLING	COIL DATA						ELECTRIC HE	ATING COI	L		UNIT ELE	ECTRICAL D	DATA	CONTROLS		FILTER D	ATA	EFFICIENCY			
UNIT NUMBER	LOCATION	AREA SERVED	SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	STATIC	EXTERNAL STATIC IN. W.G.	OUTLET	RPM	BHP HP	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	ENT. A	R LVG.	AIR F T WB		NO. ROWS		ENT. AIR *F	LVG. AIR *F	KW. VOL	TS PHA	ASE CYCLE	S HEATER FLA	UNIT MCA		unit Fuse			CLEAN P.D. IN W.C.	SIZE	SEER/EER	MANUFACTURER/MODEL	WEIGHT (lbs)	NOTES
AHU-1.	1 MECH. ROOM	CONCESSIONS	750	110		.50"	1500	HIGH	1/i	2 23.1	17.06	78.9 6	6.1 57.8	56.2	14.5 3.46	3		70	95	8.0 20	8 1	60	28.9	44.7	7	45	STAND ALONE PROGRAMMABLE THERMOSTAT	2" DISP.	10"	21.5" X 2.0"	20.5	CARRIER FE4ANB003 OR EQUAL	150	1-2

1. FURNISH WITH VARIABLE SPEED FAN WITH ECM BLOWER MOTOR.

2. ELECTRIC HEAT IS SELECTED AT 240V. HEATER OUTPUT SHALL DERATE DOWN TO 75% OF LISTED CAPACITY AT 208V.

						FAN S	SCHEE	DUL	<u>E</u>										
	PERFORMA	NCE DAT	Ά			CONSTRUCTION DATA						MOTOR DATA	1	ELE	CTRICAL			WEIGHT	NOTES
CFM	SP	.00	RPM	SONES	BHP	FAN TYPE		CLASS	ROT	DISCH	HP	WATTS	START	VOLTS	PHASE	CYCLES	MANUFACTURER/MODEL	(LBS)	
		(FFM)					_						TYPE						
1300	.375"		1366	6.7	0.22	INLINE CENTRIFUGAL	DIRECT				1/2			120	1	60	GREENHECK SQ-120-VG OR EQUAL	69	1-4
100	.325"		756	2.0		CEILING MOUNTED CENTRIFUGAL	DIRECT					83		120	1	60	GREENHECK SP-A25A OR EQUAL	25	1–3
	CFM 1300	CFM SP 1300 .375"	CFM SP OV (FFM) 1300 .375" -	(FFM) 1300 .375" - 1366	CFM SP OV (FFM) RPM SONES 1300 .375" 1366 6.7	CFM SP OV (FFM) RPM SONES BHP 1300 .375" 1366 6.7 0.22	PERFORMANCE DATA CONSTRUCTION DATA CFM SP OV (FFM) RPM SONES BHP FAN TYPE 1300 .375" 1366 6.7 0.22 INLINE CENTRIFUGAL	PERFORMANCE DATA CONSTRUCTION DATA CFM SP OV (FFM) RPM (FFM) SONES BHP FAN TYPE DRIVE TYPE 1300 .375" 1366 6.7 0.22 INLINE CENTRIFUGAL DIRECT	PERFORMANCE DATA CONSTRUCTION DATA CFM SP OV (FFM) RPM (FFM) SONES BHP FAN TYPE DRIVE TYPE CLASS TYPE 1300 .375" 1366 6.7 0.22 INLINE CENTRIFUGAL DIRECT	CFM SP OV (FFM) RPM (FFM) SONES BHP (FAN TYPE) FAN TYPE (TYPE) DRIVE (TYPE) CLASS (ROT TYPE) 1300 .375" 1366 6.7 0.22 INLINE CENTRIFUGAL DIRECT -	CONSTRUCTION DATA CONSTRUCTION DATA CLASS ROT DISCH TYPE CLASS ROT DISCH TYPE CLASS ROT DISCH CL	CONSTRUCTION DATA CONSTRUCTION DATA CONSTRUCTION DATA CFM SP OV RPM SONES BHP FAN TYPE DRIVE CLASS ROT DISCH HP TYPE CLASS ROT DISCH HP CHASS CONSTRUCTION DATA CLASS ROT DISCH HP CHASS CLASS ROT DISCH C	PERFORMANCE DATA	CONSTRUCTION DATA CONSTRUCTION DATA CONSTRUCTION DATA CFM SP OV RPM SONES BHP FAN TYPE DRIVE TYPE DRIVE TYPE TYPE TYPE TYPE CLASS ROT DISCH HP WATTS START TYPE TYPE CLASS ROT DISCH TYPE TYPE TYPE CLASS ROT DISCH TYPE TYPE TYPE CLASS ROT DISCH TYPE TYPE TYPE TYPE CLASS ROT DISCH TYPE TYPE	PERFORMANCE DATA CONSTRUCTION DATA ELECTION	PERFORMANCE DATA	PERFORMANCE DATA CONSTRUCTION DATA CONST	CONSTRUCTION DATA SP OV RPM SONES BHP FAN TYPE DRIVE TYPE TYPE	CONSTRUCTION DATA SP OV RPM SONES BHP FAN TYPE DRIVE CLASS ROT DISCH HP WATTS START TYPE TYPE

- 3. FURNISH FAN WITH SOLID STATE VARIABLE SPEED CONTROLLER. MOUNT CONTROLLER TO FAN CABINET IN AN ACCESSIBLE LOCATION. 1. FURNISH FAN WITH BACKDRAFT DAMPER.
- 4. FURNISH FAN WITH ISOLATORS & BRACKETS. 2. FURNISH FAN WITH ROOF CAP.

						DIFFUS	ER SCH	IEDULE					
UNIT NUMBER	SERVICE	MOUNT	NECK SIZE	C.F.M. RANGE	N.C. MAX	MAX. P.D. IN. W.G.	PATTERN	DAMPER	FINISH	SURFACE PANEL	CONSTRUCTION	MANUFACTURER/MODEL	NOTES
CD-1	SURFACE	CLG	SEE DWG	SEE DWG	21	0.063	4-WAY	NO	WHITE	18x18	ALUMINUM	METALAIRE 5700 OR EQUAL	1
CD-2	SURFACE	CLG	SEE DWG	SEE DWG	21	0.065	4-WAY	NO	WHITE	12x12	ALUMINUM	METALAIRE 5700 OR EQUAL	1, 2, 3

- 1. ALL GRILLES, REGISTERS AND DIFFUSERS SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50 IN COMPLIANCE WITH SECTIONS 603.15 AND 603.15.1 OF THE FLORIDA BUILDING CODE.
- 2. PROVIDE T-BAR PLASTER FRAME FOR ALL DIFFUSERS LOCATED IN HARD CEILING APPLICATION.
- 3. PROVIDE FACTORY INSTALLED R-6 INSULATION ON BACK OF DIFFUSER IF AVAILABLE.

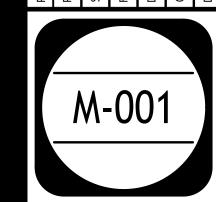
HEAT PUMP UNIT SCHEDULE COOLING HEATING COP/ **ELECTRICAL** MANUFACTURER/MODEL NOTES SEER CAPACITY WEIGHT **NUMBER** CAPACITY HSPF BTU/HR AT ARI BTU/HR AT ARI COMPRESSOR FLA FUSE PHASE CONDITIONS MCA VOLTS CYCLE CONDITIONS 60 CARRIER 25VNA-024 OR EQUAL 25,200

1. HEAT PUMP UNIT SHALL UTILIZE R-410A REFRIGERANT.

- 2. PROVIDE FACTORY FABRICATED HAIL GUARD ON CONDENSING UNIT COIL.
- PROVIDE VANDAL PROOF CAPS ON ALL REFRIGERANT SERVICE VALVES TO PREVENT UNAUTHORIZED RELEASE OF REFRIGERANT. 4. CONTRACTOR SHALL SECURE CONDENSING UNIT TO CONCRETE SERVICE PAD IN ACCORDANCE WITH WIND LOAD REQUIREMENTS
- AS SET FORTH IN THE 2014 FLORIDA BUILDING CODE. 5. FURNISH WITH VARIABLE SPEED COMPRESSOR WITH CAPACITY RANGE OF 40% - 100%.

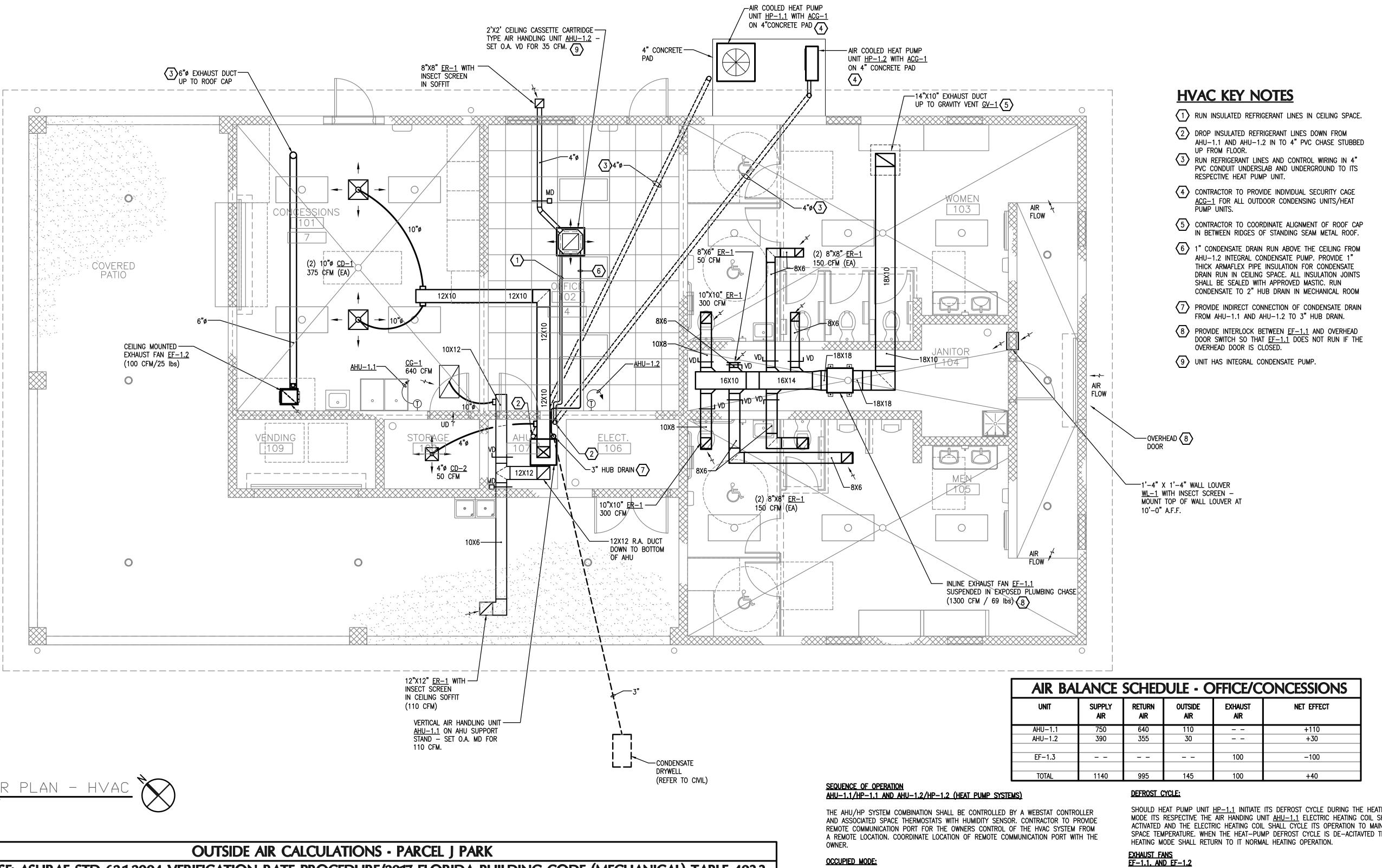
				4	AIR C	GRILLE +	REGISTE	R SCHEE	DULE					
UNIT NUMBER	SERVICE	MOUNT	C.F.M. RANGE	SIZE L"xH"	N.C. MAX	FRAME	MAX. P.D. IN. W.G.	PATTERN	DAMPER	GRID	CONSTRUCTION	FINISH	MANUFACTURER/MODEL	NOTES
CG-1	RETURN	CLG	0-1100	30x18	24	LAY-IN	0.054	EGG CRATE	NO	1/2"	ALUMINUM	WHITE	METALAIRE 450Z OR EQUAL	1–3
ER-1	EXHAUST	CLG	SEE DWG	SEE DWG	20	SURFACE	0.073	EGG CRATE	NO	1/2"	ALUMINUM	WHITE	METALAIRE CC5 OR EQUAL	1,2

- 1. ALL GRILLES, REGISTERS AND DIFFUSERS SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE
- DEVELOPED RATING OF 50 IN COMPLIANCE WITH SECTIONS 603.15 AND 603.15.1 OF THE FLORIDA BUILDING CODE. 2. PAINT FLAT BLACK INSIDE OF DUCTS BEHIND GRILLES.
- 3. PROVIDE T-BAR PLASTER FRAME FOR ALL CEILING GRILLES LOCATED IN HARD CEILING APPLICATION.



AL NOTI

9



		OUTSIE	DE AIR	CALC	ULATIC	DNS - F	PARCEL	J PA	RK				
STANDARD CASE: A	SHRAE STD 62.1-2004 VE	ERIFICATION	ON RA	ATE PR	CEDI	JRE/20	17 FLOR	RIDA	BUILD	ING C	ODE	(MECI	HANICAL) TABLE 403.3
ZONE	OCCUPANCY CATEGORY	Az ZONE FLOOR AREA (SF)		Ra AREA OUTDOOR AIR RATE (CFM/ SF)	Pz Zone Population		Table 6–2 Zone Air Distribution Effectiveness Ez	ZONE OUTDOOR	VENTILATION	OUTDOOR AIR INTAKE	OUTDOOR		UNIT TAG
CONCESSIONS - 101	CAFETERIA/FAST FOOD	410	7.5	.18	2	88	1.0	89	1.0	89	110	YES	AHU-1.1 VENTILATION - 110 CFM
OFFICE - 102 OUTSIDE AIR REQUIREMENTS FOR EACH SPACE	OFFICE ARE MET BY THE OUTSIDE AIR QUANTITIES PROVI	325 DED TO EACH AIR	5.0 HANDLING UI	.06 NIT.	2	30	1.0	30	1.0	30	30	YES	AHU-1.2 VENTILATION - 30 CFM

THE WEBSTAT CONTROLLER SHALL ACTIVATE EACH AIR HANDLING UNIT FAN AHU-1.1 OR AHU-1.2 AT A PRE-SET TIME (ADJUSTABLE) AND THE FAN SHALL RUN CONTINUOUSLY. ITS ASSOCIATED HEAT PUMP UNIT $\underline{HP-1.1}$ OR $\underline{HP-1.2}$ SHALL CYCLE ITS OPERATION TO MAINTAIN SPACE COOLING OR HEATING SPACE TEMPERATURE. AIR HANDLING UNIT AHU-1.1 AND AHU-1.2 OUTDOOR AIR DAMPER SHALL BE OPEN WHENEVER ITS RESPECTIVE AIR HANDLING UNIT FAN IS IN OPERATION. **COOLING MODE:**

WHEN SPACE TEMPERATURE IS 3 *F ABOVE THE COOLING SET-POINT TEMPERATURE OF 75 °F (ADJUSTABLE) THE HEAT PUMP UNIT $\underline{HP-1.1}$ OR $\underline{HP-1.2}$ SHALL BE ACTIVATED. THE HEAT PUMP UNIT SHALL CYCLE ITS OPERATION TO MAINTAIN SPACE TEMPERATURE. WHEN SPACE TEMPERATURE IS AT OR BELOW COOLING SET-POINT TEMPERATURE THE

DE-HUMIDIFICATION MODE:

HEAT PUMP UNIT SHALL SHUT-OFF.

FOR AHU-1.1 AND HEAT-PUMP HP-1.1 WHEN SPACE HUMIDITY IS 5% RH ABOVE THE HUMIDITY SET-POINT OF 55% RH (ADJUSTABLE) THE HEAT PUMP UNIT HP-1.1 SHALL BE ACTIVATED OR MAINTAIN OPERATION SHOULD IT ALREADY BE RUNNING. THE HEAT PUMP UNIT CYCLE ITS OPERATION TO MAINTAIN SPACE HUMIDITY. AIR HANDLING UNIT FAN SHALL SLOW DOWN TO ITS DEHUMIDIFICATION SPEED DURING THIS OPERATION. AFTER SPACE HUMIDITY HAS DROPPED TO HUMIDITY SET-POINT OR BELOW THE COOLING SYSTEM SHALL RETURN TO NORMAL COOLING OPERATION.

<u>HEATING MODE:</u>

WHEN SPACE TEMPERATURE IS 3 °F BELOW THE HEATING SET-POINT TEMPERATURE OF 70 °F (ADJUSTABLE) THE HEAT PUMP UNIT $\underline{HP-1.1}$ OR $\underline{HP-1.2}$ SHALL BE ACTIVATED. THE HEAT PUMP UNIT SHALL CYCLE ITS OPERATION TO MAINTAIN SPACE TEMPERATURE. WHEN SPACE TEMPERATURE IS AT OR ABOVE HEATING SET-POINT TEMPERATURE THE HEAT PUMP UNIT SHALL SHUT-OFF.

SHOULD HEAT PUMP UNIT $\underline{HP-1.1}$ INITIATE ITS DEFROST CYCLE DURING THE HEATING MODE ITS RESPECTIVE THE AIR HANDING UNIT $\underline{AHU}-1.1$ ELECTRIC HEATING COIL SHALL BE ACTIVATED AND THE ELECTRIC HEATING COIL SHALL CYCLE ITS OPERATION TO MAINTAIN SPACE TEMPERATURE. WHEN THE HEAT-PUMP DEFROST CYCLE IS DE-ACITAVTED THE THE

EXHAUST FAN EF-1.1 SHALL BE CONTROLLED BY A TIME CLOCK AND SHALL OPERATE DURING BUILDING OCCUPIED HOURS.

EXHAUST FAN EF-1.1 SHALL BE MONITORED (ON/OFF STATUS) AND CONTROLLED BY THE BAS SYSTEM.

EXHAUST FAN EF-1.1 SHALL BE OFF DURING BUILDING UNOCCUPIED

 $\underline{\mathsf{EF-1.1}}$ Shall be interlocked with the opening of the overhead door. If the OVERHEAD DOOR IS CLOSED THEN EF-1.1 SHALL NOT OPERATE.

EXHAUST FAN EF-1.2 ON/OFF OPERATION SHALL BE CONTROLLED BY A WALL SWITCH.

UNOCCUPIED MODE:

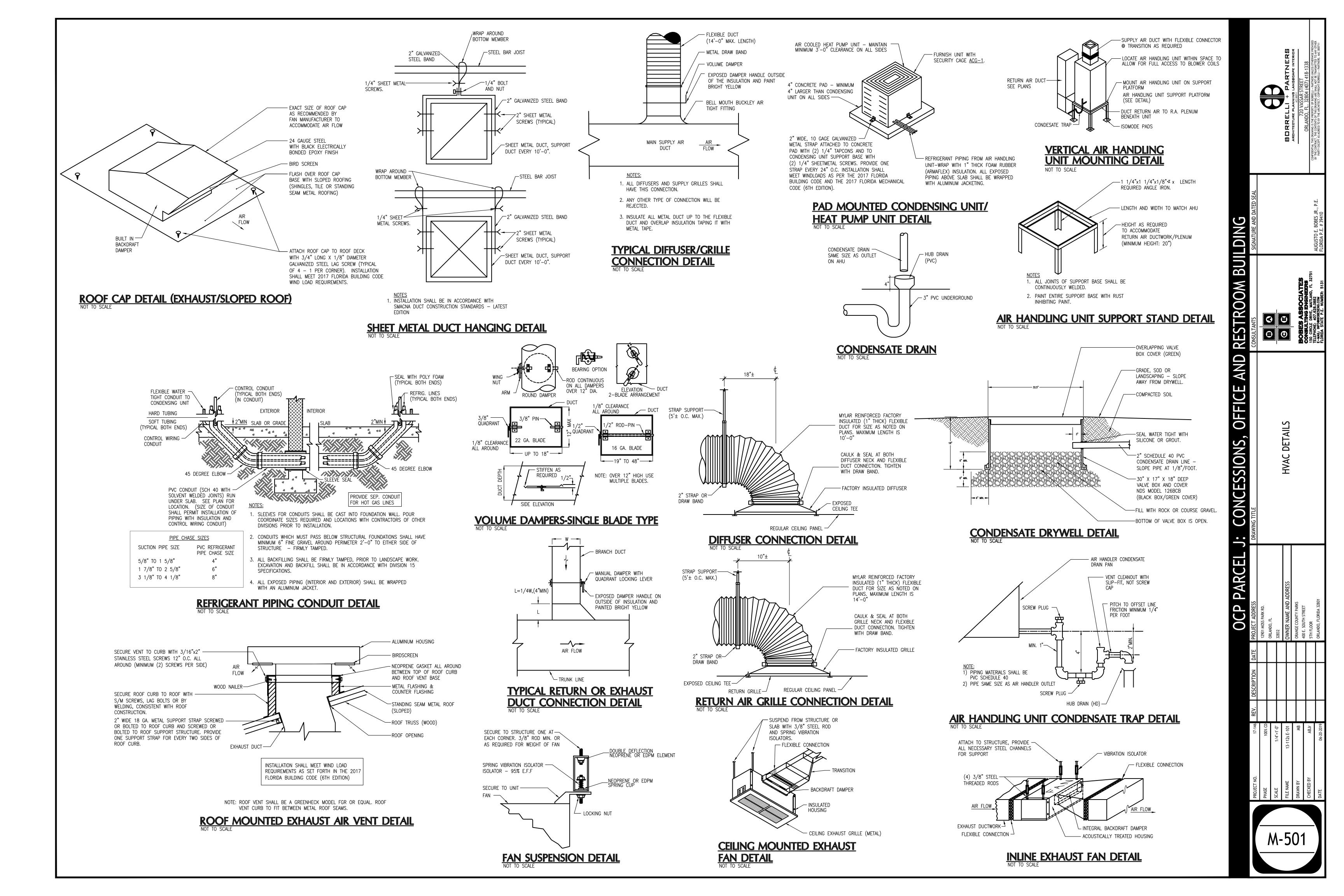
THE WEBSTAT CONTROLLER SHALL RESET THE COOLING SET-POINT TEMPERATURE OF AHU-1.1 AND AHU-1.2 SPACE THERMOSTATS TO 80°F (ADJUSTABLE) AND HEATING SET-POINT TEMPERATURE FOR AHU-1.1 TO 65 °F AT A PRESET TIME (ADJUSTABLE).

AIR HANDLING UNIT AHU-1.1 AND AHU-1.2 OUTDOOR AIR DAMPER SHALL REMAIN CLOSED DURING UN-OCCUPIED HOURS. CONTRACTOR TO PROVIDE A ADDITIONAL RELAY AS

THE SPACE THERMOSTAT SHALL CYCLE ITS RESPECTIVE AIR HANDLING UNIT AND HEAT PUMP OPERATION TO MAINTAIN UN-OCCUPIED COOLING SET-POINT TEMPERATURE. EXHAUST FAN $\underline{\mathsf{EF}} = 1.1$ AND $\underline{\mathsf{EF}} = 1.2$ SHALL BE OFF DURING UN-OCCUPIED MODE.

FLY FAN FF-1 SHALL BE OFF DURING THE UN-OCCUPIED MODE.

DIN



	PLUMBIN	NG S	YMBOL
	SANITARY WASTE LINE- BELOW FLOOR	<u> </u>	PIPE ELBOW UP
	SANITARY WASTE LINE— ABOVE FLOOR	<u> </u>	PIPE ELBOW DOWN
	SANITARY VENT LINE	WCO ⋅II	WALL CLEANOUT
	DOMESTIC COLD WATER	FC0 O= = =	FLOOR CLEANOUT
	DOM. HOT WATER 140° F	GCO O	GROUND CLEANOUT
	DOMESTIC HOT WATER RECIRCULATED	VTR O-	VENT THRU ROOF
— — — T—	TEMPERED WATER 110° F	RL O	ROOF LEADER
——F-	FILTERED WATER	RD 🔘	ROOF DRAIN
s-	SOFT WATER	FD 🖸	FLOOR DRAIN
ST	STORM DRAIN — BELOW FLOOR	HD O	HUB DRAIN
— st —	STORM DRAIN — ABOVE FLOOR	8-	POINT OF CONNECTION NEW TO EXISTING
GR	GREASE WASTE LINE- BELOW FLOOR	@	LIMIT OF DEMOLITION
— c—	CONDENSATE DRAIN	нв 🕁	HOSE BIBB
— c —	GAS LINE	wc [D \(\sigma \)	WATER CLOSET
— A —	AIR LINE	4	URINAL
	PLUMBI	NG A	BBREV
AAV	AIR ADMITTANCE VALVE	ESE	EMERGENCY SHOWER/ EYEWASH
AD	AREA DRAIN	EWH	ELECTRIC WATER HEATE
ADR	AIR DRIER (COMPRESSED AIR)	EWC	ELECTRIC WATER COOLE
AF	AIR FILTER (COMPRESSED AIR)	FD	FLOOR DRAIN
AFF	ABOVE FINISHED FLOOR	FL	FLOOR
AR	AIR RISER DIAGRAM	FS	FLOOR SINK
BF	BARRIER FREE	GPH	GALLON PER HOUR
BTU	BRITISH THERMAL UNIT	GR	GAS RISER DIAGRAM
B/S	BELOW SLAB	GWH	GAS WATER HEATER
CA	COMPRESSOR (COMPRESSED AIR)	НВ	HOSE BIBB
CLG	CEILING	HD	HUB DRAIN
CHDW	CHILLER, DRINKING WATER	HW	HOT WATER
CP	CONDENSATE PUMP	HWR	HOT WATER RECIRCULATI
CS	COUNTER SINK	IEWH	INSTANTANEOUS ELECTR WATER HEATER
CW	COLD WATER	IM	ICE MAKER
۴	DEGREES FARENHEIT	KS	KITCHEN SINK
C.O.	CLEAN OUT	KW	KILOWATT
DISP	DISPOSER	LAV, L	LAVATORY
DN	DOWN	МВН	MEGA BTU PER HOUR
DF	DRINKING FOUNTAIN	MS	MOP SINK
Ø	TEMP. DIFFERENCE IN *F	NIC	NOT IN CONTRACT
DWG	DRAWING	OD	OVER FLOW DRAIN
EDF	ELECTRIC DRINKING FOUNTAIN	PC	PUMP, CIRCULATING (DOMESTIC HOT WATER)
1			I

	PLUMBING	FIXTU	JRE CO	ONNE	CTION	SCHED	ULE
SYMBOL	DESCRIPTION	CW	TW	HW	WASTE	VENT	REMARKS
WC-1	WATER CLOSET	1"			3"	2"	
WC-2	WATER CLOSET	1"			3"	2"	HANDICAP
UR-1	URINAL	3/4"			2"	1 1/2"	
UR-2	URINAL	3/4"			2"	1 1/2"	HANDICAP
L-1H/L-1L	LAVATORY	1/2"	1/2"		1 1/2"	1 1/4"	WALL
L-2	LAVATORY	1/2"	1/2"		1 1/2"	1 1/4"	HANDICAP
KS-1	KITCHEN SINK	1/2"		1/2"	1 1/2"	1 1/4"	
HS-1	HAND SINK	1/2"	1/2"		1 1/2"	1 1/4"	
EWC-1	ELECTRIC WATER COOLER	1/2"			1 1/4"	1 1/4"	HANDICAP
MS-1	MOP SINK	1/2"		1/2"	3"	1 1/2"	
HB-1	HOSE BIBB	3/4"					RECESSED
HB-2	HOSE BIBB	3/4"					

					ELEC	TRIC	WATE	R HEATI	ER S	CHE	DULE				
UNIT	KW	STORAGE	RECOVERY GPH	MINIMUM	DIAMETER	HEIGHT	INLET WATER	OUTLET WATER	POW	ER REQU	JIRED	FUSE	MANUFACTURER/MODEL	OPERATING	NOTE
NUMBER		(GAL)	AT 70° RISE	EFFICIENCY			CONNECTION	CONNECTION	VOLTS	PHASE	CYCLES			WEIGHT (lbs)	
EWH-1.1	(2) 4.5	55	27	0.93	24"	56.5"	3/4"	3/4"	208	1	60		A.O. SMITH PNT-55 OR EQUAL	607	1 - 10
															L
															1

EFFICIENCY

GREASE TRAP SIZING CALCULATION

HAND SINK: 1 BASIN WITH AN INTERIOR VOLUME OF (16" X 12" X 6")

MOP SINK: 1 BASIN WITH AN INTERIOR VOLUME OF (24" X 24" X 10")

CUBIC INCHES = 11,016 CUBIC INCHES.

THE SINK VOLUME = 11,016 CUBIC INCHES.

THE SINK VOLUME = 1,152 CUBIC INCHES.

THE SINK VOLUME = 5,760 CUBIC INCHES.

= 58.3 GPM

LOCAL BUILDING DEPARTMENT.

DIAGRAMS.

TOTAL FLOW TOTAL FLOW = 2 COMP SINK + HAND SINK + MOP SINK

TO BE USED BY THE FOOD SERVICE EMPLOYEES.

= 35.8 GPM + 3.75 GPM + 18.75 GPM

2 COMPARTMENT SINK: 2 BASINS WITH A COMBINED INTERIOR VOLUME OF 2 X (18" X 24" X 12.75") = 2 X 5508

11,016 CUBIC INCHES X (1 CUBIC FOOT/1728 CUBIC INCHES) X (7.48 GALLONS/1 CUBIC FOOT) = 47.7 GALLONS.

SIZE THE DEVICE AS FOLLOWS: 47.7 GALLONS X 0.75 = 35.8 GALLONS PER MINUTE AT 1 MINUTE DRAIN DECANT

1,152 CUBIC INCHES X (1 CUBIC FOOT/1728 CUBIC INCHES) X (7.48 GALLONS/1 CUBIC FOOT) = 4.98 GALLONS.

SIZE THE DEVICE AS FOLLOWS: 4.98 GALLONS X 0.75 = 3.75 GALLONS PER MINUTE AT 1 MINUTE DRAIN DECANT

5,760 CUBIC INCHES X (1 CUBIC FOOT/1728 CUBIC INCHES) X (7.48 GALLONS/1 CUBIC FOOT) = 25.0 GALLONS.

SIZE THE DEVICE AS FOLLOWS: 25.0 GALLONS X 0.75 = 18.75 GALLONS PER MINUTE AT 1 MINUTE DRAIN DECANT

DUE TO THE FLUID TURBULENCE THAT WILL OCCUR IF 58.3 GPM IS FLOWING THROUGH A 3" PIPE AND THROUGH THE GREASE INTERCEPTOR WHICH WILL RESULT IN **FOG** BYPASSING THE GREASE INTERCEPTOR WE WILL PROVIDE A FLOW

RECOMMENDATIONS OF THE AMERICAN SOCIETY OF PLUMBING ENGINEERS (ASPE) AND THE RECOMMENDATIONS OF THE

HEALTH DEPARTMENT SPECIAL NOTES

THE CONCESSIONS AREA HAS BEEN ASSIGNED LAVATORIES WITH HOT/TEMPERED WATER (105°F) AT ADJACENT RESTROOM

LAVATORIES (ONE MEN'S AND ONE WOMEN'S) FOR HAND WASHING BY FOOD SERVICE/CONCESSIONS WORKERS UTILIZING

2. EACH DESIGNATED HAND WASHING LAVATORY SHALL BE LABELED AND IDENTIFIED WITH SIGNAGE INDICATING THAT IT IS

3. SEE PLUMBING FLOOR PLANS P—102 FOR DESIGNATED LAVATORIES (KEY NOTE 1) AS WELL AS THE PLUMBING RISER

RESTRICTING DEVICE THAT WILL KEEP THE FLOW DOWN TO 10.0 GPM. THIS IS IN ACCORDANCE WITH THE

RECOMMENDATIONS OF THE PLUMBING AND DRAINAGE INSTITUTE (PDI), STANDARD "PDI-G101". THE

1. WATER HEATER SHALL MEET THE ENERGY EFFECIENCY REQUIREM 6. FURNISH WITH GLASS LINED STEEL TANK.

AS SET FORTH IN THE 2017 FLORIDA ENERGY CODE (6TH EDITION). 7. FURNISH WITH ADJUSTABLE THERMOSTAT CONTROL 2. WATER HEATER SHALL BE U.L. LISTED 8. FURNISH WITH DUAL NON-SIMULTANEOUS UPPER & LOWER ELEMENTS.

9. FURNISH WITH EXPANSION TANK. 3. FURNISH WITH 10 YEAR LIMITED WARRANTY.

4. FURNISH WITH R-16 INSULATION (NON CFC FOAM). 5. FURNISH WITH BRASS DRAIN VALVE

10. FURNISH WITH WATER HEATER SUPPORT STAND (SEE DETAIL).

	PLUMBI	NG S	YMBOL	LEG	END
	SANITARY WASTE LINE— BELOW FLOOR	<u> </u>	PIPE ELBOW UP		WALL MOUNTED LAVATORY
	SANITARY WASTE LINE— ABOVE FLOOR	<u> </u>	PIPE ELBOW DOWN	٦ 0	COUNTER TOP LAVATORY
	SANITARY VENT LINE	WCO ·II—	WALL CLEANOUT	─ ₩	BALL VALVE
	DOMESTIC COLD WATER	FC0 O	FLOOR CLEANOUT	$ \!$	BALL/BUTTERFLY VALVE
	DOM. HOT WATER 140° F	GCO O	GROUND CLEANOUT	<u> </u>	BACKWATER VALVE
	DOMESTIC HOT WATER RECIRCULATED	VTR O-	VENT THRU ROOF	- Ф-	INLINE PUMP
— — — T—	TEMPERED WATER 110° F	RL O	ROOF LEADER	<u> </u>	UNION
— — F —	FILTERED WATER	RD 🔾	ROOF DRAIN	ZP	TEMP. & PRESSURE RELIEF VALVE
<u>s-</u>	SOFT WATER	FD 🖸	FLOOR DRAIN	— ŏ—	соск
ST	STORM DRAIN — BELOW FLOOR	HD O	HUB DRAIN	—₹₩-	GAS COCK
— st —	STORM DRAIN — ABOVE FLOOR	₩	POINT OF CONNECTION NEW TO EXISTING		WATER ARRESTOR
GR	GREASE WASTE LINE— BELOW FLOOR	•	LIMIT OF DEMOLITION	₹	BALANCING VALVE
— c —	CONDENSATE DRAIN	нв 🔶	HOSE BIBB	1	DRAWING HEX NOTE
— G —	GAS LINE	wc □ ○ ⇔	WATER CLOSET	\triangle	revision delta and Number
— A —	AIR LINE	ય	URINAL		
	PLUMBI	NG A	ABBREVI	ATIC	O N S
AAV	AIR ADMITTANCE VALVE	ESE	EMERGENCY SHOWER/ EYEWASH	PW	POWER WASH
AD	AREA DRAIN	EWH	ELECTRIC WATER HEATER	RP	RECIRCULATING PUMP
ADR	AIR DRIER (COMPRESSED AIR)	EWC	ELECTRIC WATER COOLER	RWL	RAIN WATER LEADER
AF	AIR FILTER (COMPRESSED AIR)	FD	FLOOR DRAIN	SAN	SANITARY
AFF	ABOVE FINISHED FLOOR	FL	FLOOR	S	SINK
AR	AIR RISER DIAGRAM	FS	FLOOR SINK	SR	SANITARY RISER DIAGRAM
BF	BARRIER FREE	GPH	GALLON PER HOUR	SD	STORM DRAIN
BTU	BRITISH THERMAL UNIT	GR	GAS RISER DIAGRAM	SE	SEWAGE EJECTOR
B/S	BELOW SLAB	GWH	GAS WATER HEATER	SH	SHOWER
CA	COMPRESSOR (COMPRESSED AIR)	НВ	HOSE BIBB	SS	SERVICE SINK
CLG	CEILING	HD	HUB DRAIN	ST	STORM
CHDW	CHILLER, DRINKING WATER	HW	HOT WATER	TEMP	TEMPERATURE
СР	CONDENSATE PUMP	HWR	HOT WATER RECIRCULATING	TW	TEMPERED WATER
CS	COUNTER SINK	IEWH	INSTANTANEOUS ELECTRIC WATER HEATER	TMW	TEMPERING/MIXING VALVE
CW	COLD WATER	IM	ICE MAKER	UR	URINAL
° F	DEGREES FARENHEIT	KS	KITCHEN SINK	UG	UNDERGROUND
C.O.	CLEAN OUT	KW	KILOWATT	VTR	VENT THRU ROOF
DISP	DISPOSER	LAV, L	LAVATORY	WC	WATER CLOSET
DN	DOWN	МВН	MEGA BTU PER HOUR	W/	WITH
DF	DRINKING FOUNTAIN	MS	MOP SINK	WH	WATER HEATER

	PLUMBING	I LIX I C	JKE CC	JININE	CHON		OLE
SYMBOL	DESCRIPTION	CW	TW	HW	WASTE	VENT	REMARKS
WC-1	WATER CLOSET	1"			3"	2"	
WC-2	WATER CLOSET	1"			3"	2"	HANDICAP
UR-1	URINAL	3/4"			2"	1 1/2"	
UR-2	URINAL	3/4"			2"	1 1/2"	HANDICAP
L-1H/L-1L	LAVATORY	1/2"	1/2"		1 1/2"	1 1/4"	WALL
L-2	LAVATORY	1/2"	1/2"		1 1/2"	1 1/4"	HANDICAP
KS-1	KITCHEN SINK	1/2"		1/2"	1 1/2"	1 1/4"	
HS-1	HAND SINK	1/2"	1/2"		1 1/2"	1 1/4"	
EWC-1	ELECTRIC WATER COOLER	1/2"			1 1/4"	1 1/4"	HANDICAP
MS-1	MOP SINK	1/2"		1/2"	3"	1 1/2"	
HB-1	HOSE BIBB	3/4"					RECESSED
HB-2	HOSE BIBB	3/4"					

PLANTER DRAIN

PUMP, SUMP

WATER HAMMER ARRESTOR

WATER RISER DIAGRAM

WATER SOFTENER

VACUUM

WATER FILTER

PLUMBING FIXTURE SCHEDULE

- WATER CLOSET: FLOOR MOUNTED, MANUAL FLUSH VALVE, TOP SPUD, SIPHON JET, ELONGATED. WATER SAVER 1.28 GPF. WHITE VITREOUS CHINA. WHITE OPEN FRONT SEAT. ZURN Z-5655-BWL TOILET SYSTEM. FURNISH WITH 5 YEAR WARRANTY ON FIXTURE/FLUSH VALVE COMBINATION. OR EQUAL.
- HANDICAP WATER CLOSET: FLOOR MOUNTED, MANUAL FLUSH VALVE, TOP SPUD, SIPHON JET, ELONGATED, WATER SAVER 1.28 GPF, WHITE VITREOUS CHINA, WHITE OPEN FRONT SEAT. ZURN Z-5665-BWL TOILET SYSTEM. ADA APPROVED FOR HANDICAP ACCESSIBILITY. MOUNT AT ADA APPROVED HANDICAP ACCESSIBLE HEIGHT. FURNISH WITH 5 YEAR WARRANTY ON FIXTURE/FLUSH VALVE COMBINATION. OR EQUAL.
- URINAL: WALL HUNG, TOP SPUD, WATER CONSERVING 1/8 GPM, MANUAL FLUSH VALVE, WASHOUT, WHITE VITREOUS CHINA, FLOOR MOUNTED CARRIER. ZURN "THE PINT" Z5798.207.00 URINAL SYSTEM. FURNISH WITH 5 YEAR WARRANTY ON FIXTURE/FLUSH VALVE COMBINATION. OR EQUAL.
- HANDICAP URINAL: WALL HUNG, TOP SPUD, WATER CONSERVING 1/8 GPM MANUAL FLUSH VALVE, WASHOUT, WHITE VITREOUS CHINA, FLOOR MOUNTED CARRIER. ZURN "THE PINT" Z5798.207.00 URINAL SYSTEM. ADA APPROVED FIXTURE FOR HANDICAP ACCESSIBILITY, MOUNT AT ADA APPROVED HANDICAP ACCESSIBLE HEIGHT. FURNISH WITH 5 YEAR WARRANTY ON FIXTURE/FLUSH VALVE COMBINATION. OR EQUAL.
- L-1H LAVATORY SYSTEM: MULTI-LEVEL MOLDED ONE-PIECE TERREON DECK WITH INTEGRAL BOWLS (HIGH ON LEFT) LESS FAUCETS, CENTERSHANK FAUCET DRILLING OPTION, PUSH BUTTON SLOW CLOSING METERING FAUCET WITH FLAT GRID STRAINER, TRAP AND TRANSITION COVER ENCLOSURE, HEAVY GAUGE STAINLESS STEEL MOUNTING BRACKETS. BRADLEY FREQUENCY LAVATORY SYSTEM FL-2H (OR EQUAL), T&S BRASS B-0805 FAUCET. OR EQUAL.
- L-1L LAVATORY SYSTEM: MULTI-LEVEL MOLDED ONE-PIECE TERREON DECK WITH INTEGRAL BOWLS (LOW ON LEFT) LESS FAUCETS. CENTERSHANK FAUCET DRILLING OPTION, PUSH BUTTON SLOW CLOSING METERING FAUCET WITH FLAT GRID STRAINER, TRAP AND TRANSITION COVER ENCLOSURE, HEAVY GAUGE STAINLESS STEEL MOUNTING BRACKETS. BRADLEY FREQUENCY LAVATORY SYSTEM FL-2L (OR EQUAL), T&S BRASS B-0805 FAUCET. OR EQUAL.
- HANDICAP LAVATORY: 20" X 18" WALL HUNG, WHITE VITREOUS CHINA, FLOOR MOUNTED CARRIER. PUSH BUTTON SLOW CLOSING METERING FAUCET WITH FLAT GRID STRAINER, BRASS P-TRAP, SUPPLIES WITH STOP. INSULATE WATER AND WASTE PIPING BELOW LAVATORY. AMERICAN STANDARD "LUCERNE" 0355.012, T&S BRASS B-0807 FAUCET. OR EQUAL.
- HANDICAP HAND SINK: 22"X19" 18 GAUGE, TYPE 304 STAINLESS STEEL CONSTRUCTION, WALL HUNG, 1 3/4" COVED CORNERS, 4" CENTERSET FAUCET WITH 8" GOOSENECK AND COLOR CODED 4" WRISTBLADE HANDLES, 2 1/2" TALL BACKSPLASH. OVERFLOW. WALL HANGER AND STAINLESS STEEL SUPPORT BRACKETS, FLAT GRID STRAINER, CHROME PLATED BRASS P-TRAP, SUPPLIES WITH STOP. NSF CERTIFIED. ELKAY MODEL #ELVW022193 SINK WITH LK406GN08T4 FAUCET. OR EQUAL.
- KITCHEN SINK: LIGHT COMMERCIAL DOUBLE COMPARTMENT SCULLERY TYPE SINK, 47.25"X29.75", 16 GAUGE TYPE 304 STAINLESS STEEL, SATIN FINISH, (2) 18" WIDE X 24" DEEP X 12.75" TALL COMPARTMENTS, 1-5/8 O.D. ROUND ADJUSTABLE S.S. TUBULAR LEGS, 8" HIGH FULL LENGTH BACKSPLASH, UNDER COATED FOR SOUND DEADENING, SEAMLESS 1-3/4" RADIUS COVED CORNERS. 8" GOOSENECK BACKSPLASH MOUNTED FAUCET WITH COLOR CODED 6" WRIST BLADE HANDLES. ELKAY RIGIDBILT RNSF 82362 SINK WITH ELKAY LK940GN08T6H FAUCET. OR EQUAL.
- EWC-1 ELECTRIC WATER COOLER: WALL HUNG, HI-LOW, HANDICAP ACCESSIBLE, STAINLESS STEEL FINISH, FRONT AND SIDE PUSH BARS, SUPPLY WITH STOP, BRASS P-TRAP, 8.0 GPH OF 50 DEGREE WATER, 1/5 HP COMPRESSOR, 4.5 FLA 115V, 1 PHASE, 60 CYCLE. FURNISH WITH INTEGRAL NSF42 WATER FILTER INSIDE OF CABINET. HALSEY TAYLOR HAC8BLPV-WF ADA OR EQUAL.
- FLOOR DRAIN: 6" STRAINER DIAMETER, CAST IRON BODY WITH BOTTOM OUTLET. COMBINATION INVERTIBLE MEMBRANE CLAMP, ADJUSTABLE TYPE B NICKEL BRONZE STRAINER, SEEPAGE SLOTS, TRAP PRIMER CONNECTION, ZURN Z415B-P OR WATTS FD-100P-A5-7. OR EQUAL.
- FLOOR SINK: 12" X 12" CAST IRON WITH ACID RESISTING WHITE ENAMEL BODY INTERIOR, NICKEL BRONZE SQUARE FRAME WITH FULL, SQUARE HOLE LOOSE SET GRATE, ALUMINUM ANTI-SPLASH INTERIOR DOME STRAINER, SEEPAGE SLOTS, TRAP PRIMER CONNECTION. ZURN Z- 1900, ZN1900-P OR EQUAL..
- MS-1 MOP SINK: 24" X 24" X 10" MOLDED STONE, FLOOR MOUNTED, WITH WALL MOUNTED FAUCET WITH 3/4" HOSE THREAD SPOUT, INTEGRAL STOPS, WALL BRACKET, FAUCET WITH PAIL HOOK AND VACUUM BREAKER, HOSE AND HOSE BRACKET, MOP HANGER, STAINLESS STEEL FLAT GRID STRAINER, WALL GUARD AND EDGE GUARD. FIAT MSB-2424, 830-AA SERVICE, T&S B665-BSTR, T&S B653 OR T&S B654 FAUCET, 832-AA HOSE AND BRACKET, 889-CC MOP HANGER, 1453-BB STRAINER, MSG 2424 WALL GUARD, E-88-AA EDGE GUARD. OR
- HOSE BIBB: RECESSED, WALL MOUNTED IN BRASS BOX WITH LOCKING COVER, BRASS, CHROME PLATED, VACUUM BREAKER, 3/4" HOSE THREAD SPOUT, REMOVABLE KEY. ZURN Z1335 OR EQUAL.
- HB-2 HOSE BIBB: WALL MOUNTED. BRASS, CHROME PLATED, VACUUM BREAKER, 3/4" HOSE THREAD SPOUT, POLYCARBONATE WHEEL HANDLE AND LOOSE TEE KEY. WOODFORD MODEL 24 OR EQUAL.
- BP-1 BACKFLOW PREVENTER: REDUCED PRESSURE, BRONZE BODY, THREADED INLET AND OUTLET. SIZE AS PER SUPPLY LINE. WILKINS 975XLMS OR EQUAL.
- STRAINER: BRONZE BODY, Y-TYPE DOMESTICALLY MANUFACTURED, 125 PSI RATED, 100 MESH STAINLESS STEEL SCREEN. SIZE TO MATCH WATER LINE IT IS SERVING. WILKINS YB-100 OR EQUAL.
- TMV-1 TEMPERING MIXING VALVE: INDIVIDUAL FIXTURE MIXING VALVE WITH INTEGRAL FILTER, TWO BACK CHECKS AND 3/8" COMPRESSION FITTING INLETS AND OUTLETS. ZURN P6900-MV-XL OR EQUAL.
- WF-1 WATER FILTER: CARBON FILTER MEDIA, 1 YEAR, 10,000 GALLON FILTRATION CAPACITY, .5 MICRON CARBON BLOCK FILTER, 3/8" INLET AND OUTLET, 25 PSI TO 125 PSI OPERATION, 40°F - 100°F, 1.6 GPM FLOW RATE, 5"W X 14.25"H X 3.5"D, NSF STANDARD 42. WATTS MODEL PWDWHCUC1 OR EQUAL.
- WATER ARRESTOR EQUAL TO ZURN SHOCKTROL MODEL Z1700 OR WATTS SG (COPPER WATER HAMMER ARRESTOR), 65 PSI MAX. RATING MAX. PIPING L'ENGTH COVERED BY ONE ARRESTOR SHALL BE 20 LINEAR FT.

TYPE "A" = 11 FU MAX, TYPE "B" = 30 FU MAX, TYPE C'' = 60 FU MAX.

ALL WATER ARRESTERS SHALL BE TYPE "A" UNLESS OTHERWISE

WCO WALL CLEANOUTS: ZURN, ZS-1469-VP-7" OR EQUAL. FINISHED AREAS ZURN, ZAB-1469-VP-7" OR EQUAL. UNFINISHED AREAS

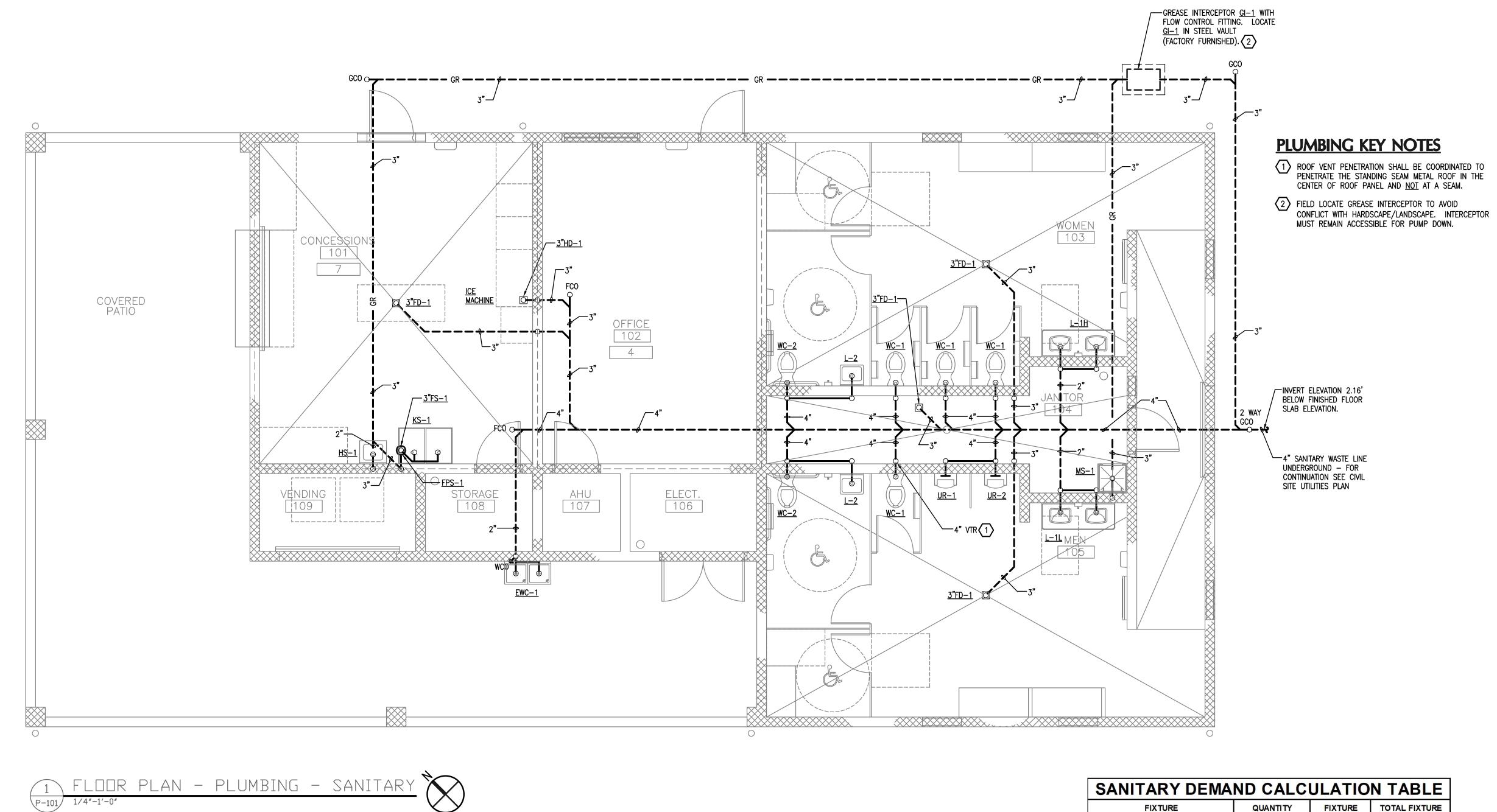
> FLOOR CLEANOUTS: ZURN, ZN-24000-2, ZN-1400 OR WATTS CO-200P-R OR EQUAL. FINISHED AREAS ZURN, ZN-14000-14, ZN-1400 OR WATTS CO-200P-RC OR EQUAL CARPETED AREAS ZURN, ZN-1420-27, Z-1400 OR WATTS CO-200P-RX-4 OR EQUAL. UNFINISHED AREAS HEAVY DUTY HIGH ZURN, Z-1400-DC OR EQUAL. TRAFFIC AREAS

RECIRCULATING PUMP: INLINE, BRASS, CENTRIFUGAL, 3 GPM AT 15' HEAD, 1750 RPM, 1/25 HP, 115V, 1ø, 60 CYCLE, GROUNDFOS MODEL UP15-42B5 OR EQUAL.

PLUMBING GENERAL NOTES

- 1. ALL WORK SHALL CONFORM WITH THE 2017 FLORIDA PLUMBING CODE (6TH EDITION), THE 2017 FLORIDA BUILDING CODE (6TH EDITION), THE 2017 FLORIDA ACCESSIBILITY CODE (6TH EDITION), THE ORANGE COUNTY BUILDING DEPARTMENT AND ALL OTHER APPLICABLE CODES AND STANDARDS.
- 2. ALL HANDICAP FIXTURES SHALL BE MOUNTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND THE 2017 FLORIDA ACCESSIBILITY CODE (6TH EDITION) CHAPTER 11 - FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION.
- 3. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL UTILITIES IN THE FIELD.
- 4. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING CONDITIONS.
- 5. COORDINATE WORK WITH ALL OTHER TRADES TO AVOID INTERFERENCES.
- INSTALL ALL WATER, WASTE AND VENT PIPING IN ACCORDANCE WITH ALL APPLICABLE CODES.
- 7. SOIL, WASTE AND VENT PIPING SHALL BE SCHEDULE SOLID WALL 40 PVC DWV IN ACCORDANCE WITH ASTM D 2665. FITTINGS SHALL BE SCHEDULE 40 PVC DWV FITTINGS AND SHALL BE IN ACCORDANCE WITH ASTM D 3311. JOINTS SHALL BE SOLVENT CEMENTED IN ACCORDANCE WITH ASTM D 2855 USING SOLVENT CEMENT IN COMPLIANCE WITH ASTM D 2564.
- 8. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL
- 9. ALL PIPING SHALL BE CONCEALED WITHIN THE CEILING SPACE, WALLS AND CHASES AS SHOWN ON
- 10. ALL EXPOSED PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED BRASS WITH ESCUTCHEON PLATES AT THE WALL, FLOOR OR CEILING PENETRATIONS.
- 11. ALL ABOVE SLAB COLD WATER, HOT WATER AND TEMPERED WATER PIPING SHALL BE TYPE "L" COPPER TUBING IN ACCORDANCE WITH ASTM B 88. PIPE FITTINGS SHALL BE COPPER OR COPPER ALLOY IN ACCORDANCE WITH ASME 16.22.. JOINTS SHALL BE SOLDER ACCORDANCE WITH ASTM B 828 USING "LEAD FREE" SOLDER IN COMPLIANCE WITH ASTM B 32.
- ALL COPPER WATER LINE PENETRATIONS THROUGH WALLS AND FOOTERS SHALL BE SLEEVED.
- 13. INSULATE ALL HOT WATER, TEMPERED WATER AND HOT WATER RECIRCULATION PIPING WITH 1" THICK FIBERGLASS INSULATION WITH SELF SEALING VAPOR RETARDANT AND FOIL JACKET (R-4.35/INCH).
- 14. INSULATE ALL EXPOSED PIPES AND SURFACES UNDER ACCESSIBLE LAVATORIES PER ADA 4.19.4 AND ANSI-A117.1. PROVIDE ONE PIECE PROTECTOR WITH FULL ROTATION OPTION CONSISTING OF INTERNAL GROOVE LOCKING RING FOR NON SEPARATION AND EXTERNAL LOCKING RING WITH STAINLESS STEEL SECURITY SCREW TO INSURE EXTRA LONG TERM TAMPER RESISTANCE ANTIMICROBIAL U.V. INHIBITED UNIVERSAL FIT, 3-M DUAL LOCK (TM) FASTENERS SECURED WITH SELF LOCKING APPROVED NYLON STRAPS. FURNISH ONE PIECE VALVE/ANGLE STEP PROTECTOR. ONE PIECE OFFSET PROTECTOR AND ONE PIECE P-TRAP PROTECTOR. PRO-XTREME BY PLUMBEREX.
- 15. ALL PIPING SHALL BE FIRMLY ANCHORED AND SUPPORTED IT'S ENTIRE LENGTH TO PREVENT SWAY AND VIBRATION.
- 16. CONTRACTOR SHALL FURNISH AND INSTALL WATER SHOCK ARRESTERS EQUAL TO ZURN SHOKTROL AS SHOWN ON PLANS AND AS PER MANUFACTURER'S RECOMMENDATIONS. AIR CHAMBERS SHALL NOT BE SUBSTITUTED FOR FACTORY FABRICATED WATER SHOCK ARRESTORS.
- 17. ALL FLOOR DRAINS SHALL HAVE TRAP PRIMER. TRAP PRIMER SHALL BE OF THE WATER SAVER TYPE EQUAL TO ZURN Z 1021 MOUNTED TO THE 1 1/4" SINK OUTLET AND CONNECTED VIA FLEXIBLE COPPER TO THE TRAP PRIMER CONNECTION AT THE FLOOR DRAIN.
- 18. FURNISH SUPPLIES WITH STOP VALVES FOR ALL PLUMBING FIXTURES.
- 19. ALL SHUT-OFF VALVES SHALL BE BALL VALVES.
- 20. ALL PLUMBING ROOF VENTS SHALL HAVE TAMPER PROOF VENT CAPS.
- 21. ALL PLUMBING ROOF VENTS SHALL BE COORDINATED TO PENETRATE THE STANDING SEAM METAL ROOF IN THE CENTER OF ROOF PANEL, NOT AT THE SEAM.
- 22. ALL WATER PIPING SHALL BE SLOPED TO DRAIN.
- 23. ALL SOIL, WASTE, AND VENT PIPING SHALL BE SLOPED 1/4" PER FOOT (2%) FOR PIPES 2 1/2" AND SMALLER AND 1/8" PER FOOT (1%) FOR PIPES 3" AND LARGER.
- 24. PROVIDE DIELECTRIC UNIONS AT ALL CONNECTIONS OF DISSIMILAR METALS.
- 25. FURNISH AND INSTALL A TIME CLOCK FOR THE WATER HEATER.
- 26. FURNISH AND INSTALL A TIME CLOCK FOR THE HOT WATER RECIRCULATION PUMP.
- 27. SET WATER HEATER THERMOSTAT TO PREVENT PROMOTION OF LEGIONELLA (140° F). FURNISH TEMPERING MIXING VALVE TO PROVIDE 110°F WATER AT THE PLUMBING FIXTURES.
- 28. FURNISH AN EXPANSION TANK WITH EVERY STORAGE TYPE WATER HEATER. CONTRACTOR SHALL CHARGE EACH EXPANSION TANK TO EQUAL THE STREET WATER PRESSURE.
- 29. FURNISH ALL HOSE BIBBS WITH VACUUM BREAKER, WATER SHOCK ARRESTOR AND ISOLATION/SHUT OFF VALVE.
- 30. PIPE ALL P&T VALVES FROM WATER HEATERS TO OUTSIDE OF BUILDING USING FULL SIZE COPPER
- 31. PROVIDE 12"x12" ACCESS DOORS ON ALL NON-ACCESSIBLE CEILINGS AND WALLS FOR ALL VALVES.
- 32. PLUMBING PIPING SHALL NOT BE RUN THROUGH OR INTO ELECTRICAL ROOMS, COMPUTER ROOMS, IT ROOMS, IDF OR MDF ROOMS OR ABOVE ELECTRICAL PANELS OR TRANSFORMERS. PLUMBING PIPING SHALL NOT BE RUN ABOVE ELECTRICAL PANELS.
- 33. ALL EXTERIOR WALL CLEAN OUTS SHALL BE FURNISHED WITH A COATED CAST IRON SQUARE HINGED ACCESS PANEL WITH VANDAL PROOF SCREWS EQUAL TO ZURN MODEL Z-1461-VP. SIZE SHALL BE 10"X10" OR LARGER AS NEEDED.
- 34. ALL INTERIOR WALL CLEAN OUTS SHALL BE FURNISHED WITH TYPE 304 STAINLESS STEEL ROUND ACCESS COVER EQUAL TO ZURN ZS-1469-VP WITH A VANDAL PROOF SCREW.
- 35. ALL DOMESTIC WATER SHUT OFF VALVES LOCATED IN THE CEILING SPACE SHALL BE ACCESSIBLE AND SHALL BE LOCATED WITHIN 18" OF THE CEILING.
- 36. THE CONTRACTOR SHALL PROVIDE ACCURATE RED-LINE (OR BETTER) AS-BUILT PLUMBING DRAWINGS TO ARCHITECT/OWNER AT PROJECT COMPLETION WITH PROJECT CLOSEOUT DOCUMENTS.
- 37. PROVIDE ASSE 1022 COMPLIANT BACKFLOW PREVENTER ON ALL DIRECT WATER CONNECTIONS TO FOOD SERVICE/KITCHEN EQUIPMENT.
- 38. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED PERMITS.
- 39. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE THAT THE PLUMBING WORK IS FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF
- 40. PROVIDE BACKFLOW PREVENTER BP-1 ON THE FILTER WATER LINE TO ICE MACHINE.
- 41. THE CONTRACTOR SHALL PROVIDE A COMPLETE PLUMBING SHOP DRAWING SUBMITTAL TO THE ENGINEER FOR REVIEW AND APPROVAL. THE PLUMBING SUBMITTAL SHALL INCLUDE ALL PLUMBING FIXTURES, WATER HEATERS, PIPING, PIPING INSULATION, PIPE HANGERS, PUMPS, VALVES, MIXING VALVES, EXPANSION TANKS, INTERCEPTORS ETC. CONTRACTOR SHALL NOT ORDER ANY PLUMBING EQUIPMENT UNTIL THIS SUBMITTAL IS REVIEWED AND ACCEPTED BY THE ENGINEER OF RECORD. CONTRACTOR SHALL SUBMIT THE SHOP DRAWING AS ONE COMPLETE SUBMITTAL AND SHALL NOT PIECE MEAL THE SUBMITTAL SPREAD OUT OVER THE COURSE OF DAYS AND WEEKS. FAILURE TO SUBMIT A COMPLETE PLUMBING SHOP DRAWING SUBMITTAL SHALL RESULT IN AN IMMEDIATE REJECTION OF THE SHOP DRAWING SUBMITTAL.
- GREASE INTERCEPTOR: BELOW SLAB, ACID RESISTANT STEEL CONSTRUCTION, BRONZE CLEANOUT PLUG, DOUBLE WALL TRAP SEAL, SEDIMENT BUCKET, SECURED GASKETED NON-SKID SECURED COVER. 3" INLET AND 3" OUTLET, 20 GPM FLOW RATE, 40 GALLON CAPACITY, 100 lbs GREASE CAPACITY. FURNISH WITH FLOW CONTROL FITTING. 27" LONG X 17" WIDE X 16" TALL. ZURN Z-1170-800. FURNISH WITH ZURN STEEL CONTAINMENT VAULT/RECEIVER. OR EQUAL.
- FPS-1 FINES PARTICLE STRAINER: 99% EFFICIENT, CLEAR LID, FLOOR MOUNTED, 2" INLET AND OUTLET, 13" TALL. DRAIN NET RHINO R2-FPS OR EQUAL.

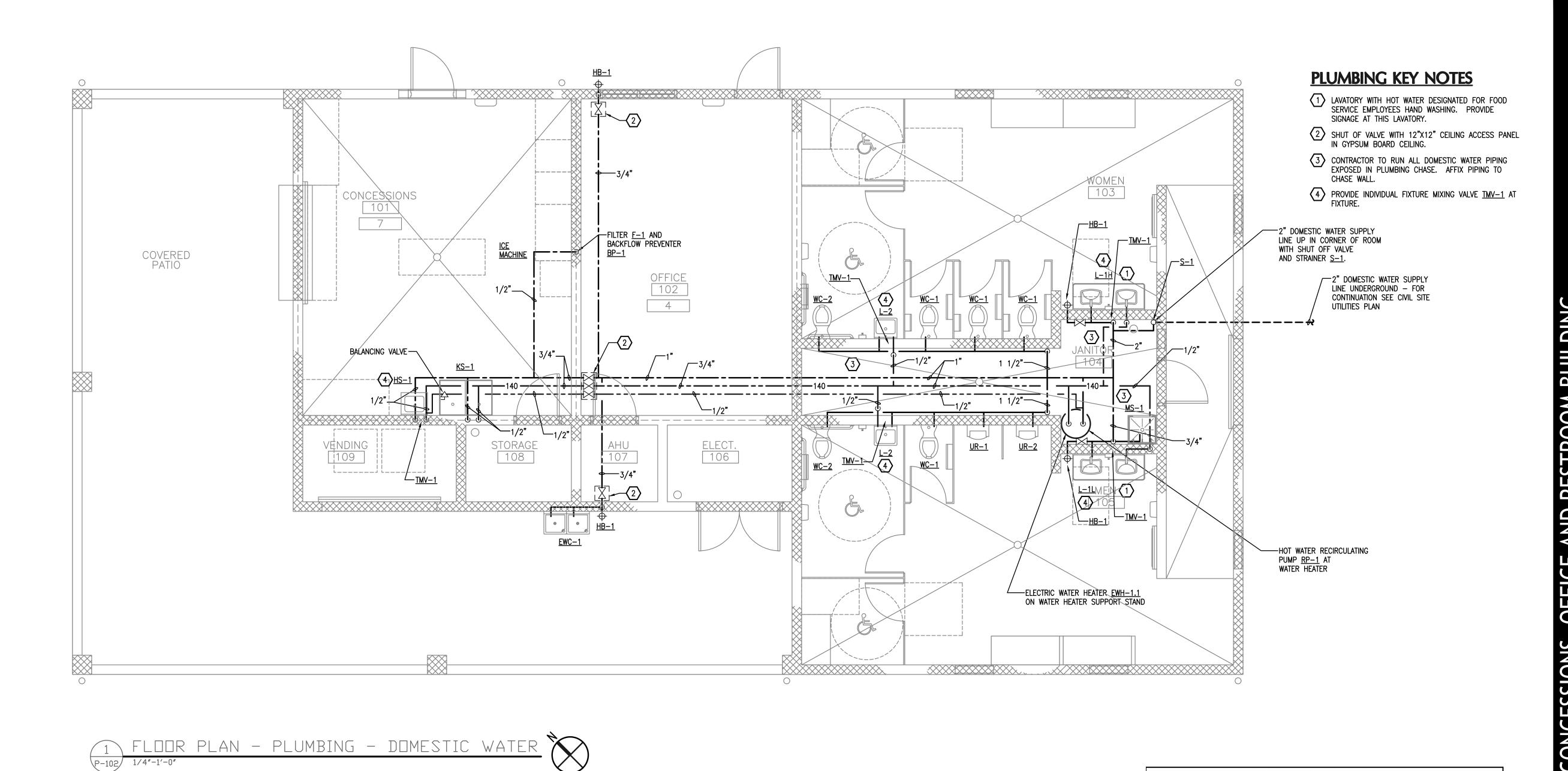
DIN GENERAL | AND SCHE 0 SC NO \triangleleft



FIXTURE	QUANTITY	FIXTURE UNITS	TOTAL FIXTURE UNITS
WATER CLOSET	6	4.0	24.0
URINAL	2	2.0	4.0
LAVATORY	6	1.0	6.0
HAND SINK	1	1.0	1.0
MOP SINK	1	2.0	2.0
FLOOR DRAIN	4	2.0	8.0
ELECTRIC WATER COOLER	1	0.5	0.5
KITCHEN SINK	1	2.0	2.0
HUB DRAIN	1	2.0	2.0

ACCORDING TO TABLE 710.1(1) OF THE 2017 FLORIDA PLUMBING CODE, 49.5 DRAINAGE FIXTURE UNITS WILL REQUIRE A 4" DIAMETER SANITARY DRAIN LINE SLOPED AT 1/8" PER FOOT. THE BUILDING IS SERVED BY A 4" SANITARY MAIN AT 1/8" PER FOOT SLOPE.

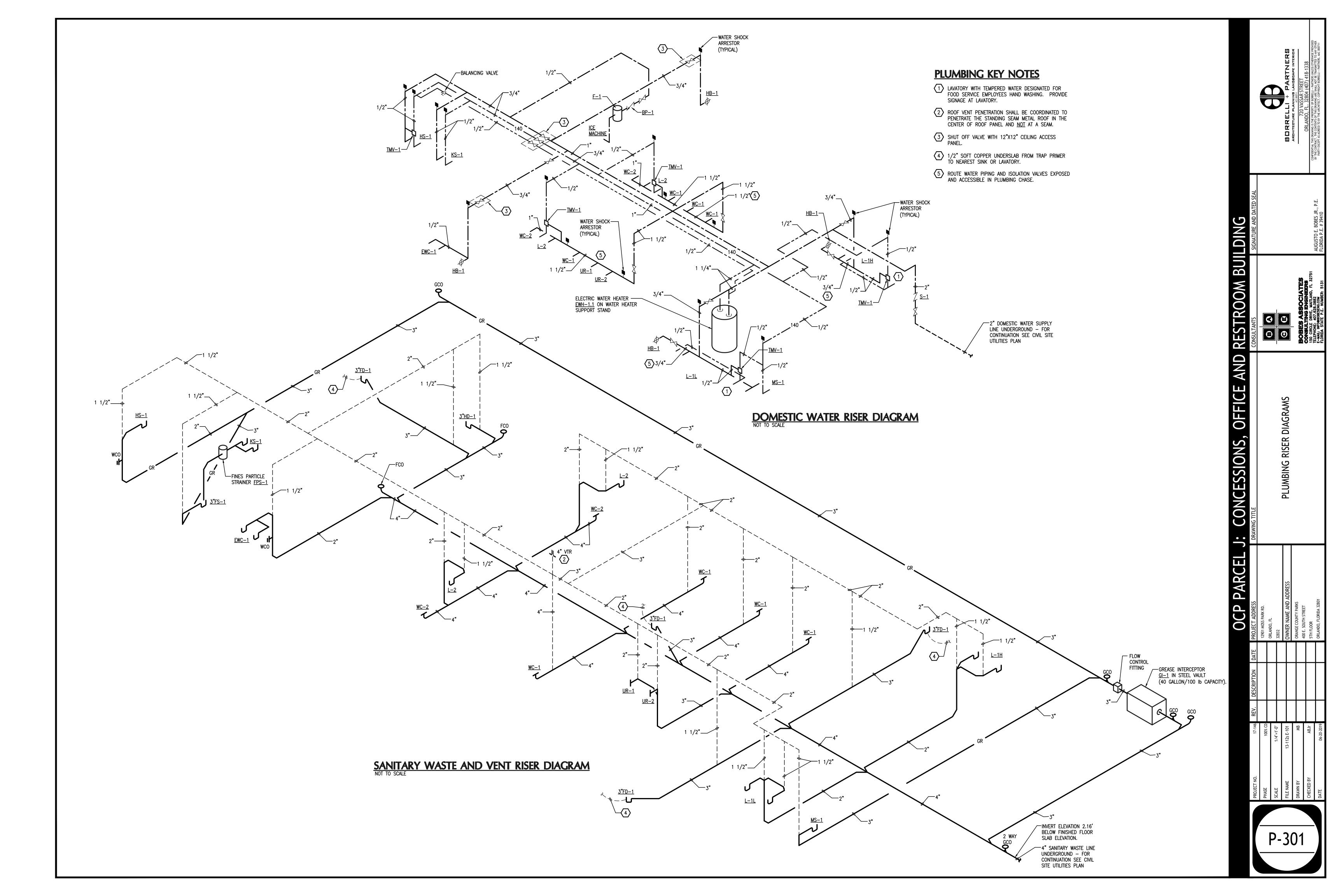
₹												CONFIDENTI	BY THE CON PARTY E
	LDING	SIGNATURE AND DATED SEAL										L 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	AUGUSTO E. BUBES JR., P.E. FLORIDA P.E. # 39410
	RESTROOM BUI	CONSULTANTS		8			1 11 3 1			BOBES ASSOCIATES	CONSULTING ENGINEERS	150 CIRCLE DRIVE, MAITLAND, FL 32751 TELEPHONE: 407 628 0882	E-MAIL: INFOGEOBESENG.COM FLORIDA STATE P.E. NUMBER: 5131
	J: CONCESSIONS, OFFICE AND	DRAWING TITLE							>0 + H=2 + C	SANITARY			
	OCP PARCEL.	PROJECT ADDRESS	12901 MOSS PARK RD.	ORLANDO. FL		32832	טטומממי מואי בווייוס	OWNER NAME AND ADDRESS		OKAINGE COON I PARKS	400 E. 300 ITI 3 I KEE I	5TH FLOOR	ORLANDO, FLORIDA 32801
		DATE											
		DESCRIPTION											
		17-146 REV.											
). 17-146	100% CD		"0 .1-"7/	0-1-+/1	100 H - Chh Ch	13-1125 E-101		MB	100	ADJI	06-20-2019

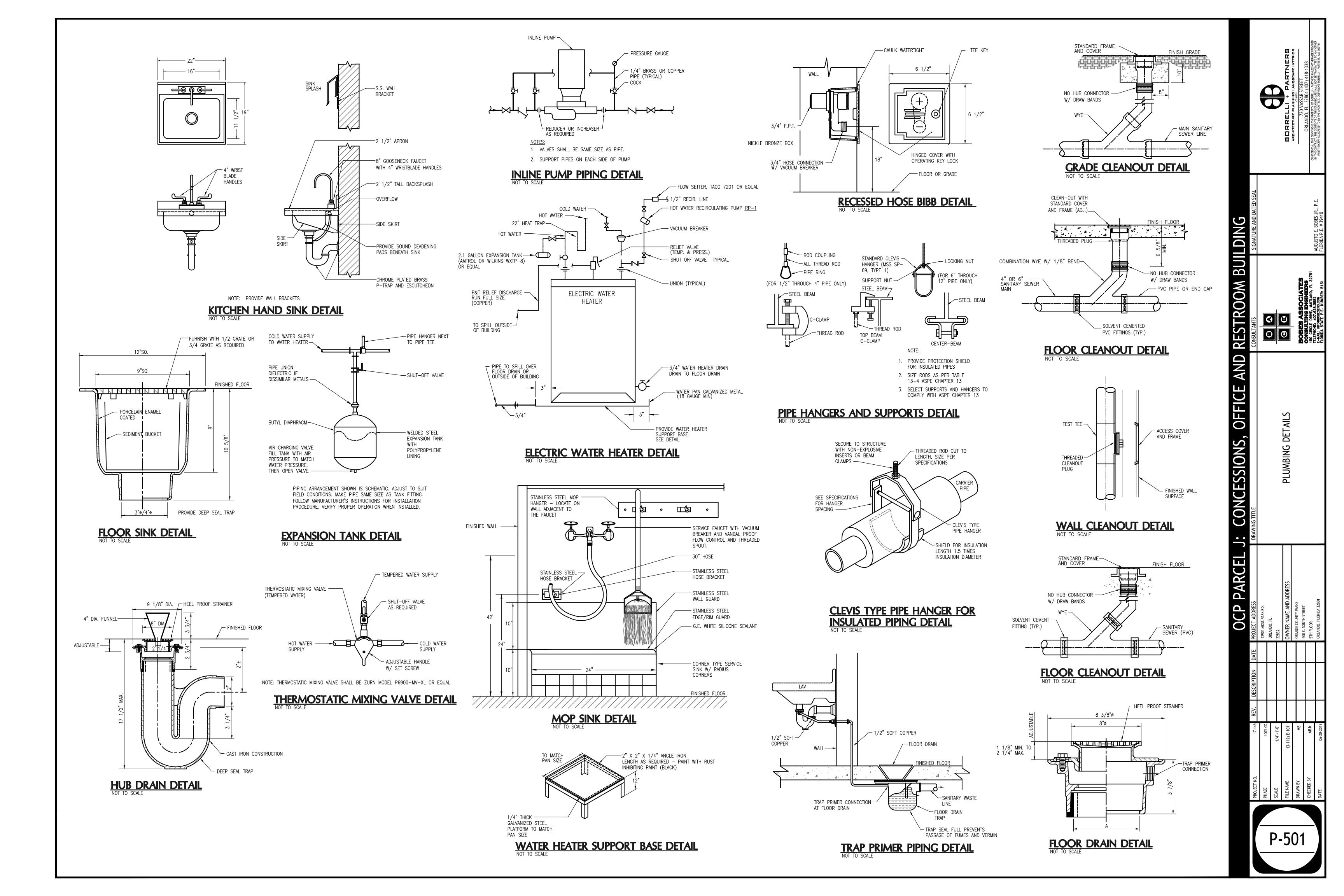


WATER DEN	MAND CAL	CULAT	ION
FIXTURE	QUANTITY	LOAD VALUE FIXTURE UNITS (CW + HW)	TOTAL LOAD VALUE FIXTURE UNITS
WATER CLOSET	6	10.0	60.0
URINAL	2	5.0	10.0
LAVATORY	6	2.0	12.0
HAND SINK	1	3.0	3.0
MOP SINK	1	3.0	3.0
ELECTRIC WATER COOLER	1	0.25	0.3
KITCHEN SINK	1	4.00	4.0
TOTAL			92.25

ACCORDING TO APPENDIX "E", TABLE E103.3 OF THE 2017 FLORIDA PLUMBING CODE, 92.25 FIXTURE UNITS RESULTS IN A DEMAND OF 65.0 GPM AT A MAXIMUM OF 8 FT/SEC VELOCITY IN ACCORDANCE WITH FIGURE E103.3(3). THIS REQUIRES A 2" WATER SUPPLY MAIN. THE BUILDING IS BEING SERVED BY A 2" DOMESTIC WATER MAIN.

							OCI I AINCEL D. COINCEDJIOIND, OI I INE AIND	OF AND MEDINOOM DOLEDING		
	PROJECT NO.	17-146	REV.	17-146 REV. DESCRIPTION	DATE	PROJECT ADDRESS	DRAWING TITLE	CONSULTANTS	SIGNATURE AND DATED SEAL	
	PHASE	100% CD				12901 MOSS PARK RD.				
F						ORLANDO, FL		•		
)_	SCALE	1/4"=1'-0"				32832				
1	FILE NAME 13	13-112s E-101				OWNER NAME AND ADDRESS	FLOOR PLAN - PLUMBING	①		
02	DRAWN BY	WB				ORANGE COUNTY PARKS	DOMESTIC WATER	BOBES ASSOCIATES		
2	СНЕСКЕВ ВУ	ABJr				400 E. SOUTH STREET STH FLOOR		CONSULTING ENGINEERS 150 CIRCLE DRIVE, MATLAND, FL 32751		
	DATE	0,000,000				ORLANDO, FLORIDA 32801		IELEPHONE: 407.628.0882 E-MAIL: INFO®BOBESENG.COM	AUGUSTO E. BOBES JR., P.E.	





		LIGHT	ING FIXT	URE SCHEE	DULE		
FIXTURE			LAMPS	N.	MANUFACTURER	1401.70	DE1118140
TYPE	FIXTURE DESCRIPTION	QTY	TYPE	NAME	CATALOG #	VOLTS	REMARKS
A	4' CEILING MOUNT HIGH PERFORMANCE LED FIXTURE, VANDAL RESISTANT, ALL ALUMINUM CONSTRUCTION, POLYCARBONATE OPAL LENS, WET LISTING, BRONZE FINISH	-	LED 4000K 82 CRI	LUMINAIRE LED	VPF124-80W-4000K-120- OP-BRZ-WET-TX/SD	120	OR EQUAL
AE	SAME AS "A" WITH 2600 LUMEN SELF CONTAINED 90 MINUTE EMERGENCY BATTERY PACK	-	LED 4000K 82 CRI	LUMINAIRE LED	VPF124-80W-4000K-120- OP-BRZ-WET-EMB722-TX/SD	120	OR EQUAL
В	4' SLIMLINE SURFACE MOUNT LED FIXTURE, C.R.S. HOUSING, ROUND FROSTED ACRYLIC SHIELDING, WHITE FINISH	-	LED 4000K 80 CRI	WILLIAMS	LLMS-4-L34/840-S-RD-DRV- UNV	120	OR EQUAL
С	17" DIA. LED FIXTURE, VANDAL RESISTANT, ALUMINUM BASE PLATE, POLYCARBONATE OPAL LENS, WET LISTING, BRONZE FINISH	-	LED 4000K 82 CRI	LUMINAIRE LED	ARV17-40W-4000K-120-0P- BRZ-TX/SD	120	OR EQUAL
CE	SAME AS "C" WITH 800 LUMEN SELF CONTAINED 90 MINUTE EMERGENCY BATTERY PACK	-	LED 4000K 82 CRI	LUMINAIRE LED	ARV17-40W-4000K-120-0P- BRZ-EMB310-TX/SD	120	OR EQUAL
D	2'x4' RECESSED DIRECT/INDIRECT LED FIXTURE, C.R.S. HOUSING, FROSTED RIBBED ACRYLIC SHIELDING, WHITE FINISH	-	LED 3500K 80 CRI	WILLIAMS	DIG-S24-LED*PH74/835-AD- ED*PH-120	120	OR EQUAL
DE	SAME AS "D" WITH 1300 LUMEN SELF CONTAINED 90 MINUTE EMERGENCY BATTERY PACK	-	LED 3500K 80 CRI	WILLIAMS	DIG-S24-LED*PH74/835-AD- EM/BSL310-ED*PH-120	120	OR EQUAL
EM	EMERGENCY FIXTURE, WHITE HOUSING, NICKEL CADMIUM BATTERY	-	LED	BEGHELLI	PEH-1	120	OR EQUAL
F	2'x4' SURFACE MOUNT DIRECT/INDIRECT LED FIXTURE, C.R.S. HOUSING, FROSTED RIBBED ACRYLIC SHIELDING, WHITE FINISH	-	LED 3500K 80 CRI	WILLIAMS	DIS-24-L88/835-AD-DRV-120	120	OR EQUAL
FE	SAME AS "F" WITH 10 WATT SELF CONTAINED 90 MINUTE EMERGENCY BATTERY PACK	-	LED 3500K 80 CRI	WILLIAMS	DIS-24-L88/835-AD-EM/10W- DRV-120	120	OR EQUAL
G	RUSTIC LED WALL SCONCE, HEAVY DUTY CAST GUARD AND FROSTED GLASS GLOBE, OIL RUBBED BRONZE FINISH	-	17W LED 4000K	BARN LIGHT ELECTRIC	BLE-G-TGGWH-G3-PC-615- TGG-FST-LED-4000K	120	OR EQUAL
J	4' SHALLOW WRAP LED FIXTURE, CEILING MOUNT, STEEL HOUSING, PRISMATIC LENS	-	LED 4000K 80 CRI	INDUSTRIAL LIGHTING PRODUCTS	FWS-40WLED-UNIV-4000K	120	OR EQUAL
X	EXIT SIGN, UNIVERSAL, LED LAMPS, BLACK ALUMINUM HOUSING WITH RED LETTERS, NI-CAD BATTERY, VANDAL RESISTANT, WET LISTING	-	FURNISHED	BEGHELLI	FTZ-SA-LR-1-U-BB	120	OR EQUAL

NOTE: APPROVED EQUAL MANUFACTURERS FOR ALL OF THE LIGHTING FIXTURES IN THIS SCHEDULE ARE THE FOLLOWING: DAY-BRITE LITHONIA

LIGHTOLIER

ELECTRICAL GENERAL NOTES

- 1. BRANCH WIRING IS NOT SHOWN GRAPHICALLY ON DRAWINGS AND IS INDICATED BY CIRCUIT NUMBERS BESIDE FIXTURES, DEVICES AND EQUIPMENT. PROVIDE COMPLETE WIRING SYSTEM WHETHER OR NOT INDICATED GRAPHICALLY.
- 2. LIGHTING FIXTURES ARE SHOWN FOR QUANTITY AND CIRCUITING ONLY. FOR EXACT LOCATION OF LIGHTING FIXTURES, REFER TO ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATE WORK WITH CEILING CONTRACTOR. PROVIDE PROPER FIXTURE FRAMES FOR TYPE OF CEILING INDICATED.
- FOR EXACT ARCHITECTURAL LAYOUT AND DIMENSIONS, COORDINATE WITH ARCHITECTURAL DRAWINGS. ELECTRICAL DRAWINGS ARE FOR REFERENCE ONLY.
- 4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH FLORIDA BUILDING CODE 6th EDITION (2017 FBC), THE 2014 NATIONAL ELECTRICAL CODE (NEC), ALL APPLICABLE LOCAL, COUNTY, AND STATE CODES AND STANDARDS, ALL REQUIREMENTS OF THE SERVICING ELECTRIC UTILITY AND THE AMERICANS WITH DISABILITIES ACT (ADA).
- 5. COORDINATE ALL WORK DONE UNDER THIS DIVISION WITH WORK TO BE PERFORMED UNDER DIVISION 15.
- 6. COORDINATE WITH OTHER TRADES FOR EXACT LOCATIONS OF ALL MOTORS AND OTHER EQUIPMENT TO BE INSTALLED AND/OR WIRED UNDER THIS DIVISION BUT FURNISHED UNDER ANOTHER DIVISION OF THE SPECIFICATIONS.
- 7. ALL BRANCH CIRCUITS FOR 120 VOLT, 20 AMP CIRCUITS EXCEEDING EIGHTY FEET IN LENGTH SHALL BE INCREASED IN SIZE AS REQUIRED TO ALLOW FOR VOLTAGE DROP LOSSES.
- 8. PACK ALL SLEEVES FOR CONDUITS PASSING THROUGH FIRE RATED WALLS AND FLOOR SLABS WITH FIRE RESISTANT MATERIALS. ALL PENETRATIONS SHALL BE UL RATED.
- 9. ALL EMPTY CONDUITS (EC) SHALL BE PROVIDED WITH NYLON PULL WIRES.
- 10. TYPE AC CABLE AND ELECTRICAL NON-METALLIC TUBING SHALL NOT BE PERMITTED. TYPE MC CABLE IS PERMITTED AS LONG AS IT IS ACCEPTABLE TO THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ).
- 11. COORDINATE THE REQUIRED SIZE OF ALL CIRCUIT BREAKERS FEEDING EQUIPMENT (I.E. MOTORS, HVAC, KITCHEN EQUIPMENT, SPECIAL PURPOSE OUTLETS, OWNER FURNISHED EQUIPMENT, ETC.) WITH APPROVED EQUIPMENT SHOP DRAWINGS AND OWNER REPRESENTATIVES PRIOR TO ORDERING PANELBOARDS. BREAKERS SHALL BE SIZED PER THE NEC, THE EQUIPMENT NAME PLATE AND MANUFACTURER'S RECOMMENDATIONS.
- 12. THE POWER COMPANY SHALL BE CONTACTED WITHIN 10 DAYS OF THE AWARD OF THE CONTRACT BY THE CONTRACTOR TO VERIFY THE ACTUAL AVAILABLE SHORT CIRCUIT FAULT CURRENT (SCC) AT THE TRANSFORMER SECONDARY BUSHINGS. THE CONTRACTOR SHALL PROVIDE ELECTRICAL DISTRIBUTION AND UTILIZATION EQUIPMENT AND PANELBOARDS WHICH HAVE AIC/WITHSTAND RATINGS GREATER THAN THE AVAILABLE SCC.
- 13. ALL CONDUITS IN OR UNDER SLAB OR UNDERGROUND SHALL BE PVC SCHEDULE 40.
- 14. ALL CONDUITS ABOVE SLAB, WHETHER EXPOSED OR CONCEALED, SHALL BE EMT, IMC, OR RIGID GALVANIZED STEEL.
- 15. FLEXIBLE METAL RACEWAYS SHALL NOT EXCEED 6' IN LENGTH.
- 16. "LIQUID-TIGHT" TYPE FLEXIBLE WEATHERPROOF RACEWAYS SHALL HAVE A METALLIC INTERIOR AND NOT EXCEED 6' IN LENGTH.
- 17. ALL BOXES, PLASTER RINGS, EXTENSION RINGS, AND BOX COVERS SHALL BE
- 18. ALL CONDUITS SHALL BE PARALLEL AND PERPENDICULAR TO STRUCTURAL
- 19. ALL BENDS SHALL BE MADE IN CONDUIT USING PROPER EQUIPMENT AND MEET
- NATIONAL ELECTRICAL CODE (NEC) REQUIREMENTS.

 20. ALL WIRE, INCLUDING BUT NOT LIMITED TO FEEDERS AND BRANCH CIRCUIT WIRING, SHALL BE COPPER #12 AWG THWN MINIMUM EXCEPT FOR LOW—

VOLTAGE WIRING FOR COMMUNICATIONS SYSTEMS, WHICH MAY BE SMALLER.

- 21. ALL BREAKERS SHALL BE "FULL SIZE". NO TANDEM, PIGGY BACK, TWIN, OR HALF SIZE BREAKERS WILL BE ACCEPTED.
- 22. ALL DEVICES SHALL BE COMMERCIAL OR SPECIFICATION GRADE.
- 23. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY POWER AND TEMPORARY LIGHTING DURING CONSTRUCTION. TEMPORARY POWER SHALL PROVIDE ADEQUATE POWER FOR NORMAL CONSTRUCTION USE. TEMPORARY LIGHTING SHALL PROVIDE ADEQUATE LIGHT SO THAT THE INDIVIDUAL TRADES WORK CAN BE COMPLETED.
- 24. ALL ELECTRICAL EQUIPMENT SHALL BE UL LISTED.
- 25. A GREEN INSULATED COPPER GROUND CONDUCTOR SHALL BE INSTALLED IN ALL RACEWAYS.
- 26. GROUNDING SYSTEM SHALL BE IN ACCORDANCE WITH NEC ARTICLE 250 AND APPLICABLE REQUIREMENTS OF IEEE STANDARDS 142 AND 241.
- 27. TEST RESISTANCE TO GROUND (EARTHING CONNECTION) WITH RESISTANCE TESTER SUBSEQUENT TO FINAL INSTALLATION. WHERE TEST INDICATES RESISTANCE TO GROUND IS OVER 5 OHMS, TAKE APPROPRIATE ACTION TO REDUCE RESISTANCE TO 5 OHMS OR LESS BY DRIVING ADDITIONAL PROPERLY SPACED GROUND RODS AND TREATING SOIL IN PROXIMITY OF GROUND RODS WITH COMMON SALT, COPPER SULFATE OR MAGNESIUM SULFATE. RETEST TO DEMONSTRATE COMPLIANCE.
- 28. CONDUCTORS ARE SIZED FOR VOLTAGE DROP PER N.E.C. ARTICLES 210.19(A) NOTE 4, 215.2(A)(1)NOTE 2 AND THE 2017 F.B.C. ENERGY CONSERVATION CODE C405.6.3. ELECTRICAL CONTRACTOR SHALL PERFORM VOLTAGE DROP CALCULATIONS IN ACCORDANCE WITH N.E.C. ARTICLES 210.19(A)(1)NOTE 4, 215.2(A)NOTE 2 AND THE 2017 F.B.C. ENERGY CONSERVATION CODE C405.6.3 ON ANY CIRCUITS THAT ARE INSTALLED THAT DIFFER FROM THE DESIGN SHOWN IN THESE PLANS. FEEDER CONDUCTORS AND BRANCH CIRCUIT CONDUCTORS SHALL EACH BE SIZED FOR A MAXIMUM VOLTAGE DROP OF 3% AND A COMBINED MAXIMUM VOLTAGE DROP OF 5% TOTAL.
- 29. LIGHT FIXTURES SUPPORTED BY CEILING GRID SHALL BE SUPPORTED AS PER FIELD TECHNICAL INFORMATION NO. 40. LIGHT FIXTURES WEIGHING LESS THAN 10 POUNDS SHALL HAVE ONE 12 GAGE HANGER WIRE CONNECTED FROM THE FIXTURE TO THE STRUCTURE ABOVE. LIGHT FIXTURES WEIGHING MORE THAN 10 POUNDS SHALL HAVE TWO 12 GAGE WIRES ATTACHED AT OPPOSING CORNERS OF EACH LIGHT FIXTURE.
- 30. ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERABLE FIRE ALARM SYSTEM INCLUDING ALL REQUIRED EQUIPMENT, DEVICES, COMPONENTS, PERMITS, INSPECTIONS AND CERTIFICATIONS AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
- 31. PROVIDE A COMPLETE LIGHTNING PROTECTION SYSTEM FOR THE BUILDING TO COMPLY WITH THE REQUIREMENTS OF NFPA 70, NFPA 780, LPI STANDARDS 175, 176, AND 177. PROVIDE COMPONENTS WHICH ARE UL-LISTED AND MASTER LABELED.
- 32. THE CONTRACTOR SHALL PROVIDE A COMPLETE ELECTRICAL SHOP DRAWING SUBMITTAL TO THE ENGINEER FOR REVIEW AND APPROVAL. THE ELECTRICAL SUBMITTAL SHALL INCLUDE ALL ELECTRICAL PANELS, MDP'S, BREAKERS, DISCONNECTS, DEVICES, RECEPTACLES, CONDUIT, RACEWAYS, LIGHT FIXTURES, POLES, SWITCHES, OCCUPANCY SENSORS, PULL BOXES, WIRING, ETC. CONTRACTOR SHALL NOT ORDER ANY ELECTRICAL EQUIPMENT UNTIL THIS SUBMITTAL IS REVIEWED AND ACCEPTED BY THE ENGINEER OF RECORD. CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS AS ONE COMPLETE SUBMITTAL AND SHALL NOT PIECE—MEAL THE SUBMITTAL SPREAD OUT OVER THE COURSE OF DAYS AND WEEKS. FAILURE TO SUBMIT A COMPLETE ELECTRICAL SHOP DRAWING SUBMITTAL SHALL RESULT IN AN IMMEDIATE REJECTION OF THE SHOP DRAWING SUBMITTAL.

	ELECTRICAL SYMBOL LIST OME SYMBOLS MAY NOT BE USED ON THIS PROJECT.)	
`	RECESSED LED FIXTURE	
	SURFACE MOUNTED LED FIXTURE	
	WALL MOUNTED LED FIXTURE	
o O	DOWNLIGHT OR PENDANT LED FIXTURE	
О О	WALL MOUNTED LED FIXTURE	
I⊗	CEILING MOUNTED EXIT LIGHT. ARROW INDICATES DIRECTIONAL ARROW ON FIXTURE, SHADED AREA INDICATES FACE OF FIXTURE.	
⊗ ⊣	WALL OR END MOUNTED EXIT LIGHT	
	EMERGENCY FIXTURE	
₩	PHOTOCELL	
\$ a	SINGLE POLE SWITCH, SUBSCRIPT LETTER INDICATES FIXTURE CONTROLLED. $(3 = 3 \text{ WAY}, 4 = 4 \text{ WAY}, K = \text{KEY OPERATED})$ MOUNTED 48" AFF	
ф	DIMMER SWITCH, TYPE AND WATTAGE TO CONTROL FIXTURE	
⊕ -	QUAD RECEPTACLE	
€G	20A, 2 POLE, 125V GROUNDED DUPLEX RECEPTACLE. 18" AFF UNLESS OTHERWISE NOTED. G = GROUND FAULT INTERRUPTER	NG
⊖ =	20A, 2 POLE, 125V GROUNDED DUPLEX RECEPTACLE. MOUNTED ABOVE COUNTERTOP UNLESS OTHERWISE NOTED.	
•	TELEPHONE WALL OUTLET 18" AFF UNLESS OTHERWISE NOTED. PROVIDE 1" EC TO CEILING SPACE.	
4	TELEPHONE AND DATA DUPLEX OUTLET, LEVITON CAT. #41688-1 OR EQUAL. 18" AFF UNLESS OTHERWISE NOTED. PROVIDE 1" EC TO CEILING SPACE.	ROOM BUI
↦	TELEVISION OUTLET WITH 1" EC TO TTB. 18" AFF UNLESS OTHERWISE NOTED.	
0	CEILING MOUNTED JUNCTION BOX	
Ф	WALL MOUNTED JUNCTION BOX	
C	CONNECTION TO EQUIPMENT	
•	PUSHBUTTON	3
\$ _M	MOTOR HORSEPOWER RATED TOGGLE SWITCH BY DIVISION 15	<u>~</u>
	NONFUSED DISCONNECT SWITCH. NUMBERS INDICATE SWITCH SIZE.	
2P/60A/NF F	FUSED DISCONNECT SWITCH. FUSES SIZED AS SHOWN ON DRAWINGS.	OFFICE AND
	MOTOR	\forall
	PANELBOARD	
FACP	FIRE ALARM/SECURITY CONTROL PANEL	
FAAP	FIRE ALARM ANNUNCIATOR PANEL	
	INTERCOM	0
S	CEILING SPEAKER	· C
	TELEPHONE TERMINAL BOARD (TTB)	IONS, (
Á	FIRE ALARM STROBE LIGHT, MOUNTED 80" AFF	0
Ē	FIRE ALARM MANUAL PULL STATION, MOUNTED 48" AFF	5
▶F	FIRE ALARM HORN WITH STROBE LIGHT, MOUNTED 80" AFF	H
FS	SPRINKLER FLOW SWITCH	2
TS	SPRINKLER TAMPER SWITCH	CONCE
LB	KEY LOCK BOX	
\oplus	HEAT DETECTOR	
SD	DUCT SMOKE DETECTOR	J
<u></u>	SMOKE DETECTOR	
Р	HOOD FIRE SUPPRESSION SYSTEM PULL STATION	
R	AHU FIRE ALARM SHUTDOWN RELAY	R
©	SECURITY SYSTEM DOOR CONTACT	AC
呂	SECURITY SYSTEM ALARM HORN	P PARCEI
AFF	ABOVE FINISHED FLOOR	5

FINISHED FLOOR

EMPTY CONDUIT

EXHAUST FAN

AIR HANDLING UNIT

ELECTRIC WATER COOLER

ELECTRIC WATER HEATER

CONDENSING UNIT

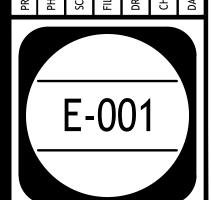
ISOLATED GROUND

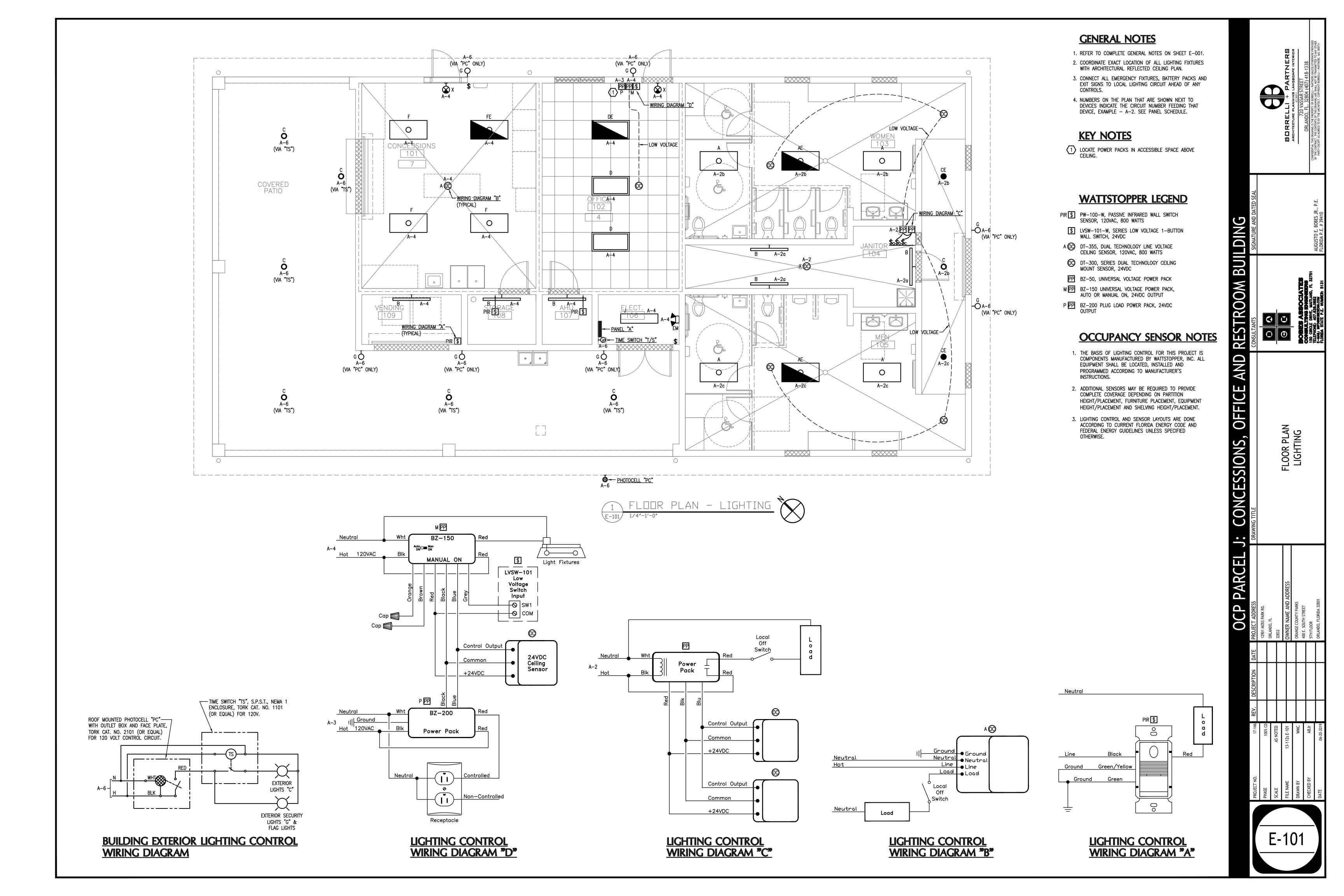
NIGHT LIGHT

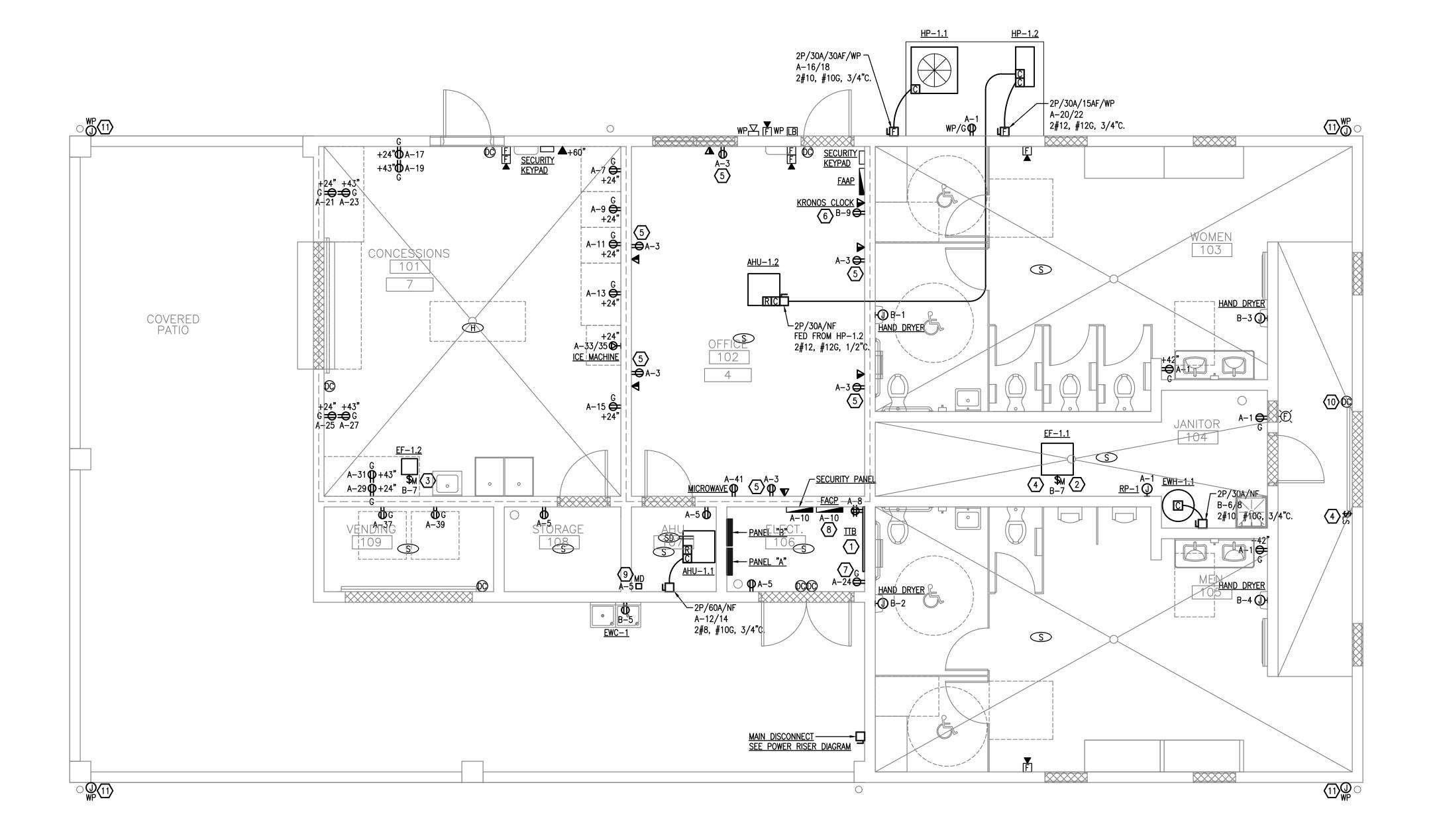
SHUNT TRIP

GROUND FAULT INTERRUPTER

WEATHERPROOF (NEMA-3R)









GENERAL NOTES

- 1. REFER TO COMPLETE GENERAL NOTES ON SHEET E-001.
- 2. NUMBERS ON THE PLAN THAT ARE SHOWN NEXT TO DEVICES INDICATE THE CIRCUIT NUMBER FEEDING THAT DEVICE, EXAMPLE A—1. SEE PANEL SCHEDULE.
- 3. FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND EQUIPMENT POINT OF CONNECTION, REFER TO MECHANICAL DRAWINGS AND MANUFACTURER'S SHOP DRAWINGS.
- 4. ALL CIRCUIT FEEDERS AND DISCONNECTS SHALL BE SIZED AND LOCATED PER REQUIREMENTS OF NATIONAL ELECTRICAL CODE. CONTRACTOR IS TO VERIFY DISCONNECT SWITCH AND FUSE SIZES WITH SELECTED EQUIPMENT MANUFACTURER'S SHOP DRAWING PRIOR TO PLACING ORDER AND PROVIDE EVERYTHING AS REQUIRED. CONTRACTOR IS TO COORDINATE ALL ELECTRICAL REQUIREMENTS WITH MANUFACTURER/OWNER'S PURCHASING AGENT/COMMISSIONING AGENT/ELECTRICAL ENGINEER PRIOR TO ORDERING EQUIPMENT AND INSTALLING ELECTRICAL OUTLETS FOR EQUIPMENT FURNISHED BY OTHERS TO ASSURE CORRECT ELECTRICAL REQUIREMENTS AND CONNECTIONS ARE PROVIDED.
- 5. ALL COMMUNICATIONS AND DATA CABLING TO BE PROVIDED AND INSTALLED BY VENDOR.

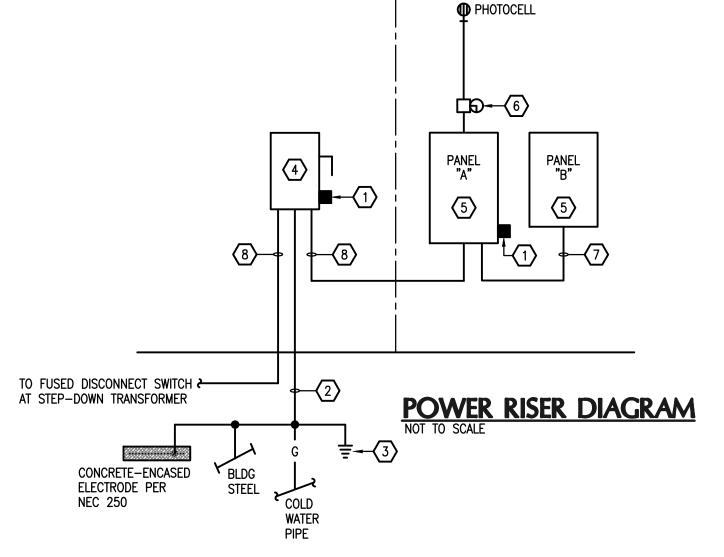
KEY NOTES

- PROVIDE AND INSTALL A 4' WIDE X 4' HIGH X 3/4" THICK PLYWOOD BACKBOARD AND PAINT WITH (2) COATS OF FIRE RETARDANT GRAY PAINT TO MEET THE REQUIREMENTS OF TELEPHONE SERVICE PROVIDER, WITH A #6 AWG COPPER GROUNDING CONDUCTOR IN 3/4" PVC CONDUIT FROM BACKBOARD TO SERVICE ENTRANCE GROUND. INSTALL THE QUAD RECEPTACLE AT THE BOTTOM CORNER OF THE BACKBOARD. INSTALL A 4" EMPTY CONDUIT WITH PULL WIRE FROM BACKBOARD TO TELEPHONE POINT OF SERVICE. THE CONTRACTOR SHALL COORDINATE WITH ORANGE COUNTY ISS PRIOR TO INSTALLING DEMARK AND SHALL LOCATE THE BACKBOARD 5'-0" AFF.
- 2 EXHAUST FAN TO BE CONTROLLED BY TIME CLOCK.
- EXHAUST FAN TO BE INTERLOCKED WITH AHU-1.1.
- PROVIDE AND INSTALL A LIMIT SWITCH, VEE INDUSTRIES
 #AZ-8108, MOUNTED AS HIGH AS PRACTICABLE ON THE
 COILING DOOR TRACK. CONNECT LIMIT SWITCH AS REQUIRED
 TO EXHAUST FAN EF-1.1 SO THAT THE FAN IS SHUT OFF
 AS THE DOOR IS BEING PULLED DOWN.
- PROVIDE AUTOMATIC RECEPTACLE CONTROL IN THE OFFICE TO COMPLY WITH THE FLORIDA ENERGY CODE AND ASHRAE 90.1. RECEPTACLES ARE CONTROLLED THRU LIGHTING OCCUPANCY SENSOR AND PLUG LOAD CONTROLLER. SEE DETAIL ON LIGHTING PLAN. SPLIT—WIRE RECEPTACLE SO THAT TOP HALF IS CONTROLLED AND PROVIDE CONTROLLED RECEPTACLES WITH THE APPROPRIATE MARKING.
- PROVIDE POWER AND DATA AT APPROX. 54" AFF FOR KRONOS CLOCK TO BE FURNISHED BY OWNER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH CLOCK INSTALLATION INSTRUCTIONS.
- PROVIDE AND INSTALL GFCI DUPLEX RECEPTACLE FOR IRRIGATION CONTROLLER. COORDINATE EXACT LOCATION WITH OWNER AND IRRIGATION CONTRACTOR.
- FIRE ALARM CONTROL PANEL TO BE FURNISHED WITH DMP WIRELESS CELLULAR COMMUNICATOR.
- PROVIDE POWER FOR MOTORIZED DAMPER CONTROL. COORDINATE WITH MECHANICAL CONTRACTOR.
- 10 INSTALL DOOR CONTACT SO THAT IT WILL NOT BE A TRIPPING HAZARD.
- PROVIDE AND INSTALL JUNCTION BOX UNDER ROOF
 OVERHANG WITH 1" EMPTY CONDUIT AND PULL WIRE TO
 SECURITY PANEL FOR FUTURE SECURITY CAMERA. VERIFY
 EXACT LOCATION AND REQUIREMENTS WITH OWNER AND
 SECURITY SYSTEM CONTRACTOR.

BUILDING 0 ONS

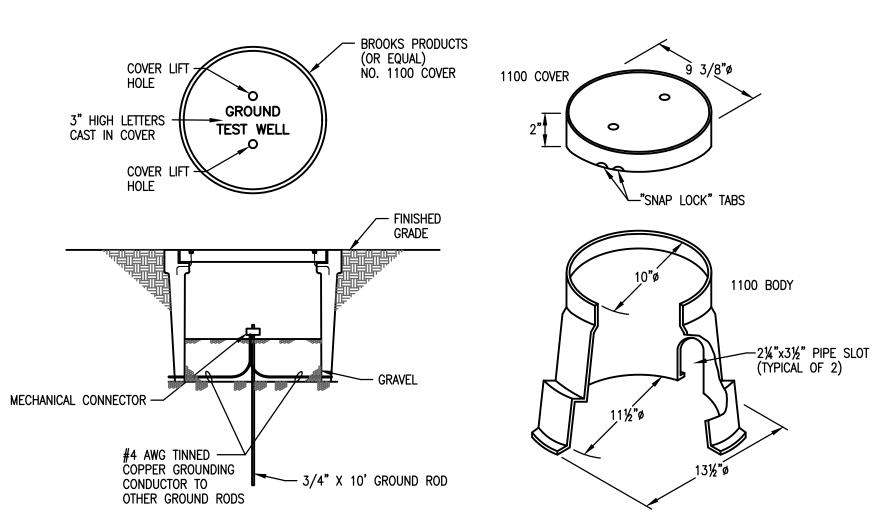
PANEL LOCATION: ELECT. ROOM	106		PANEL D	ESIGN	IATION:	Α			VOL	TAGE: 20	8Y/120V.	3ø,4W	AIC RATING: 22K
PANEL FED FROM: TRANSFORMER	 }		PANELBO	ARD	RATING	: 22	<u>5A</u>				ER: SQUA		MOUNTING: SURFACE
-			MAINS: N						STY	<u>LE: NQ</u>			NEMA TYPE: 1
	WATT	S PER P	HASE		Ī	l l		I		WATT	S PER PH	IASF	
LOAD DESCRIPTION	PH A	PH B	PH C	BKR	POLE	CKT	CKT	POLE	BKR	PH A	PH B	PH C	LOAD DESCRIPTION
RECEPTACLES - 103-105	900			20	1	1	2	1	20	680			LIGHTS - 103-105
RECEPTACLES - 102		1080		20	1	3	4	1	20		734		LIGHTS - 101,102,106-109
RECEPTACLES - 106-108			720	20	1	5	6	1	20			414	LIGHTS - EXTERIOR, FLAG
CONCESSION EQUIPMENT	744			20	1	7	8	1	20	360			ΠΒ
CONCESSION EQUIPMENT		912		20	1	9	10	1	20		480		FACP, SECURITY PANEL (NOTE 1)
CONCESSION EQUIPMENT			864	20	1	11	12	2	45			4649	AHU-1.1
CONCESSION EQUIPMENT	912			20	1	13	14	_	_	4649			_
CONCESSION EQUIPMENT		912		20	1	15	16	2	30		2444		HP-1.1
CONCESSION RECEPTACLES			840	20	1	17	18	ı	-			2444	_
CONCESSION RECEPTACLES	840			20	1	19	20	2	15	936			HP-1.2/AHU-1.2
CONCESSION RECEPTACLES		840		20	1	21	22	-	_		936		_
CONCESSION RECEPTACLES			840	20	1	23	24	1	20			240	IRRIGATION CONTROLLER
CONCESSION RECEPTACLES	840			20	1	25	26	1	20	X			SPARE
CONCESSION RECEPTACLES		840		20	1	27	28	1	20		Х		SPARE
CONCESSION RECEPTACLES			840	20	1	29	30	1	20			Х	SPARE
CONCESSION RECEPTACLES	840			20	1	31	32	3	100	6045			PANEL "B"
ICE MACHINE		1440		20	2	33	34	_	_		3240		_
_			1440	-	_	35	36	_	_			2910	_
VENDING MACHINE	1440			20	1	37	38	3	30	Χ			SURGE PROTECTION DEVICE
VENDING MACHINE		1440		20	1	39	40	_	_		Х		_
MICROWAVE			1200	20	1	41	42	_	_			Х	_
PANELBOARD SUB-TOTALS	6516	7464	6744							12670	7834	10589	PANELBOARD SUB-TOTALS
LOAD CALCULATIONS:	CONNECT	ED LOAD	(WATTS)	DEN	MAND I	-ACT(OR	EST	IMATE	DEMAND	LOAD (V	VATTS)	NOTES:
LIGHTING		1760	<u>, </u>		1.2	5				2200		•	1. PROVIDE CIRCUIT BREAKER
RECEPTACLES (FIRST 10KW)		9420			1.0					9420			WITH HANDLE LOCK.
RECEPTACLES (REMAINDER)		X			0.5					X			
HVAC		16853			1.0					16853	3		
WATER HEATING		4500			1.0					4500			
KITCHEN		8424			0.6					5476			
MISCELLANEOUS		10860			1.0					10860			
PANELBOARD TOTALS:	518	17W (14	4A)						4	9309W (
		(11	·· '					1	•		· - · · · · <u>/</u>		

PANEL LOCATION: ELECT. ROOM	106	PANEL D)ESIGN	ATION:	В			VOL	TAGE: 20)8Y/120)V,3ø,4W	AIC RATING: 22K		
PANEL FED FROM: PANEL "A"		PANELBO	ARD F	RATING	: 10	OA		MAI	NUFACTUR	ER: SC	UARE D	MOUNTING: SURFACE		
		MAINS: N	MAIN L	UGS C	<u>ONLY</u>			STY	<u>'LE: NQ</u>			NEMA TYPE: 1		
LOAD DESCRIPTION	WATTS PER PH PH A PH B	HASE PH C	BKR	POLE	СКТ	СКТ	POLE	BKR	WATT PH A	S PER Ph e		LOAD DESCRIPTION		
HAND DRYER (NOTE 2)	1500		20	1	1	2	1	20	1500			HAND DRYER (NOTE 2)		
HAND DRYER (NOTE 2)	1500		20	1	3	4	1	20		1500		HAND DRYER (NOTE 2)		
EWC-1 (NOTE 1)		660	20	1	5	6	2	25			2250	EWH-1.1		
EF-1.1, EF-1.2	795		20	1	7	8	-	-	2250			_		
KRONOS CLOCK	240		20	1	9	10	Χ	Χ		Х		SPACE		
SPACE		Χ	Х	Χ	11	12	Χ	Χ			X	SPACE		
SPACE	X ///////		Х	Χ	13	14	Χ	Х	Х			SPACE		
SPACE	/////////////////////////X		Х	Χ	15	16	Χ	Х		X		SPACE		
SPACE		Χ	Х	Χ	17	18	Χ	Χ			X	SPACE		
PANELBOARD SUB-TOTALS	2295 1740	660							3750	1500	2250	PANELBOARD SUB-TOTALS		
LOAD CALCULATIONS:	CONNECTED LOAD	(WATTS)	DEM	AND F	-ACT(OR	EST	MATE) DEMANI	LOAD	(WATTS)	NOTES:		
LIGHTING	Х			1.2	5				Χ			1. PROVIDE GFCI CIRCUIT		
RECEPTACLES (FIRST 10KW)	Х			1.00	0				Х			BREAKER.		
RECEPTACLES (REMAINDER)	Х			0.5	0				Χ			2. PROVIDE CIRCUIT BREAKER		
HVAC	795			1.00	0		795					WITH PERMANENT HANDLE		
WATER HEATING			4500				LOCKING DEVICE.							
KITCHEN	Х			0.6	5				Х					
MISCELLANEOUS	6900			1.00	0				690	0				
PANELBOARD TOTALS:	12195W (34/	4)							12195W	(34A)				



POWER RISER DIAGRAM KEY NOTES

- PROVIDE AND INSTALL LISTED LIGHTNING ARRESTER ON THE SERVICE FEEDERS AND TRANSIENT VOLTAGE SURGE SUPPRESSOR ON THE PANEL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- #4 INSULATED COPPER GROUNDING ELECTRODE CONDUCTOR, INSTALL IN 1/2"C.
- (3) -3/4" x 10'-0" COPPERCLAD GROUND RODS. INSTALL 10'-0" APART IN A TRIANGLE AND CONNECT GROUND SYSTEM PER NEC ARTICLE 250. PROVIDE GROUND TEST WELL AT EACH GROUND ROD. REFER TO DETAIL.
- PROVIDE AND INSTALL A HEAVY DUTY DISCONNECT SWITCH, 3P, 200A, NEMA 3R, SERVICE ENTRANCE RATED.
- 5 FOR PANELBOARD INFORMATION SEE PANEL SCHEDULE.
- 6 PROVIDE AND INSTALL TIME SWITCH AS SHOWN ON PLANS.
- 7 1 1/4"C. 4#3, 1#8 GND.
- (8) 2°C. 4#3/0, 1#6 GND.



GROUND TEST WELL DETAIL

NOT TO SCALE

						OCP PARCEL J:	J: CONCESSIONS, OFFICE AND	RESTROOM BUI	LDING
	PROJECT NO.	17-146	17-146 REV.	DESCRIPTION DATE	DATE	PROJECT ADDRESS	DRAWING TITLE	CONSULTANTS	SIGNATURE AND DATED SEAL
	PHASE	100% CD	1 6			12901 MOSS PARK RD.			
_		3000				I CUNA INC.		<u> </u>	
E	SCALE	HINON					PANEL SCHEDULES AND		
	JUARE	INOIN				32832			
3	FII F NAMF	13-117c F-301				OWNED NAME AND ADDRESS	DOWFR RISFR DIAGRAM	① ②	
3(וור ואלאור	13-1123 E-301				OWINER INDIANDARYS			
	VQ WW VQ	JWW				ORANGE COUNTY PARKS		_	
1	DRAWIN DI	WINC	-			HERE TO BOOK		BOBES ASSOCIATES	
	70 0170110					400 E. 3001 31 KEE 1		CONSCITING ENGINEERS	
	CHECKED BY	ABJr				5TH FLOOR		150 CIRCLE DRIVE, MAITLAND, FL 32751	
								1 ELET MONE: 407:020:002	A CALLS I CARRA IR PE