# **NEWBERRY COUNTY** PO BOX 156 NEWBERRY, SC 29108

# TOWN OF POMARIA RECREATION CENTER RENOVATIONS

138 FOLK STREET, POMARIA, SC 29126

# **GENERAL NOTES**

**GENERAL NOTES:** 

IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO INSURE THE PROCUREMENT OF ALL REQUIRED AND NECESSARY PERMITS. ALL CONTRACTORS SHALL OBTAIN NECESSARY AND APPLICABLE, CITY/COUNTY PERMITS, INSPECTIONS AND APPROVAL PRIOR TO THE COMMENCEMENT OF ANY WORK AND CERTIFICATE OF OCCUPANCY UPON COMPLETION OF PROJECT. CONTRACTOR SHALL FURNISH COPIES OF PERMITS, INSPECTIONS AND CERTIFICATES TO OWNER UPON REQUEST.

CONTRACTOR SHALL BE REQUIRED TO COORDINATE WORK SCHEDULE TO MINIMIZE DISRUPTION OF NORMAL ACTIVITIES AND TO AVOID INTERFERENCE WITH ADJACENT OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ADEQUATE PRECAUTIONS TO PROTECT SURROUNDINGS, MATERIALS AND EXISTING FINISHES THROUGHOUT ALL PHASES OF CONSTRUCTION AREAS AND OCCUPIED OR PUBLIC AREAS TO BE MAINTAINED BY CONTRACTOR. DAMAGE TO EXISTING-TO-REMAIN CONSTRUCTION, MATERIALS OR EQUIPMENT TO BE RESTORED TO ORIGINAL CONDITION.

CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF TRASH AND DEBRIS FROM JOB SITE ON A DAILY BASIS. FINAL CLEAN-UP WITHIN SCOPE OF WORK:

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL RELATED TRADES AND VENDORS NECESSARY TO THE COMPLETION OF THE JOB ON A

**DO NOT SCALE DRAWINGS.** USE WRITTEN DIMENSIONS ONLY. SUBMIT TO ARCHITECT ANY

ALL WORK SHALL BE IN COMPLIANCE WITH THE INTERNATIONAL BUILDING CODE, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CURRENT EDITION OF NATIONAL ELECTRIC CODE, INTERNATIONAL PLUMBING, AND MECHANICAL CODE, RECOGNIZED INDUSTRY STANDARDS, CRAFTSMANSHIP STANDARDS IN THE AREA, ALL MANUFACTURERS RECOMMENDATIONS, AND ALL OTHER APPLICABLE CODES.

THE DESIGN PROFESSIONAL DOES NOT GUARANTEE THE PERFORMANCE OF THE PROJECT IN ANY RESPECT OTHER THAN THAT OUR PROFESSIONAL WORK AND JUDGEMENT RENDERED MEET THE STANDARDS OF CARE OF OUR PROFESSION.

THE LOCATION OF THE EXISTING UTILITIES AND STRUCTURES SHOWN HEREON ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND ACTUAL LOCATION OF SUCH, WHETHER SHOW HEREON OR NOT, PRIOR TO ANY EXCAVATION ANY DAMAGES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

THE FLOOR ON BOTH SIDES OF A DOOR SHALL BE LEVEL AND SHALL HAVE THE SAME ELEVATION ON BOTH SIDES OF THE DOOR, FOR A DISTANCE ON EACH SIDE EQUAL TO THE WIDTH OF THE WIDEST SINGLE DOOR.

FIRE EXTINGUISHERS SHALL BE LOCATED PER THE REQUIREMENTS OF NFPA 10. THE SIZE SHALL BE A MINIMUM OF 2 A 10 BC 1 AND SHALL BE INSTALLED AT A MAXIMUM OF 48" A.F.F. TO THE TOP OF THE HANDLE.

PROVIDE CONT. SOLID BLOCKING, AS REQUIRED, IN WALLS TO RECEIVE ACCESSORY ITEMS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

TOILET ROOM ACCESSORIES GRAB BARS

FIRE EXTINGUISHER CABINETS & BRACKETS CABINETS AND SHELVES

CLEAN WALLS, DOORS, DOOR FRAMES, HANDRAILS. GUARDRAILS. ETC. PER

MANUFACTURERS RECOMMENDATIONS PRIOR TO SEALING AND PAINTING.

REFER TO THE STRUCTURAL DRAWINGS FOR INFORMATION ON CONSTRUCTION AND CONTROL JOINTS IN CONCRETE SLABS AND CONCRETE AND MASONRY WALLS. SLAB JOINTS ARE SPECIFIED AND LOCATED ON THE STRUCTURAL DRAWINGS.

TEMPORARY SIGNS: PROVIDE OTHER SIGNS AS REQUIRED TO INFORM PUBLIC AND INDIVIDUALS SEEKING ENTRANCE TO PROJECT. PROVIDE TEMPORARY, DIRECTIONAL SIGNS FOR CONSTRUCTION PERSONNEL AND VISITORS. MAINTAIN AND TOUCHUP SIGNS SO THEY ARE LEGIBLE AT ALL TIMES.

PROJECT LOCATION MAP

# PROJECT TEAM

# STRUCTURAL ENGINEER

PHONE: xxx-xxx-xxxx EMAIL: pomariasc@gmail.com

DARRYL HENTZ, MAYOR

# **OWNER'S REP**

138 FOLK STREET

POMARIA, SC 29126

**OWNER** 

**CUMMING CORPORATION BARRY EVANS, VICE PRESIDENT** 

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INDEX OF DRAWINGS

# DRAWING INDEX

DOOR SCHEDULE, DOOR TYPES, WALL TYPES & DETAILS

PLUMBING P-001 PLUMBIING GENERAL NOTES AND LEGEND P-101 LEVEL 1 PLUMBING PLANS P-201 PLUMBING SCHEDULES AND DETAILS MECHANICAI

M-001 HVAC GENERAL NOTES AND LEGEND M-101 LEVEL 1 HVAC PLANS M-102 BASEMENT HVAC PLAN M-201 **HVAC SCHEDULES** M-202 **HVAC DETAILS** 

ELECTRICAL E-001 ELECTRICAL NOTES AND SYMBOLS E-101 LIGHTING PLAN E-102 **BASEMENT LIGHTING PLAN** 

E-201 POWER AND SIGNAL PLAN BASEMENT POWER AND SIGNAL PLAN E-202 ELECTIRCAL SHEDULES AND DETAILS

## **ALTERNATE #1**

-SAND BLAST EXISTING BREEZEWAY COVERING & FRONT

## **ALTERNATE #2**

## CONCRETE SLAB.

-DEHUMIDIFICATION OF BASEMENT. SEE MECHANICAL

# ALTERNATES

# **FACADE OF CAFETERIA BUILDING & REPAINT**

-HVAC TO BE BARD UNITS (6). SEE MECHANICAL DRAWINGS FOR DETAILS.

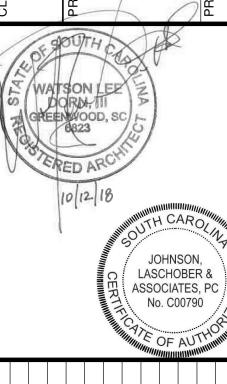
#### **ALTERNATE #3** -REMOVE EXISTING WOOD FLOORING, SUBFLOOR SLEEPERS AND BASEBOARDS IN BASEMENT LEVEL TO EXPOSE

# **ALTERNATE #4**

# DRAWINGS FOR DETAILS.

-ADDITION OF NEW CONNECTOR SIDEWALK FROM AUDITORIUM TO THE ROAD AND BREEZEWAY. SEE A-302 FOR DETAILS.

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PROJECT NO. 3606.1705

DRAWN BY CBW WLD CHECKED BY: 02/14/17

SHEET TITLE: **COVER SHEET** 

AS NOTED

CENTERLINE

× PĽÁN

DETAIL/PLAN KEY

ENLARGED DETAIL INDICATOR

**COLUMN GRID REFERENCE** 

DRAWING NAME

DRAWING SCALE

DRAWING NAME

DRAWING SCALE

REFERENCED

DRAWING LOCATION ON SHEET GRID

DRAWING LOCATION ON SHEET GRID

SHEET NUMBER WHERE DETAIL IS DRAWN

SHEET NUMBER WHERE DETAIL IS

DETAIL LOCATION ON SHEET GRID

- DETAIL LOCATION ON SHEET GRID

TERMINATION OF SECTION —

SHEET IDENTIFIER FOR

LOCATION OF DETAIL

A-201

SHEET IDENTIFIER FOR

LOCATION OF DETAIL

**ELEVATION KEY** 

**A**-201<sup>★</sup>

JOB SITE SIGN

CUMMING

GRAPHIC SYMBOLS

1 1/2" HIGH ARIAL TEXT (BLACK)

-JLA IMAGE w/ BORDER

-1 1/2" HIGH ARIAL TEXT (BLACK)

CONTRACTOR NAME AND LOGO-

-4x4 SUPPORT POST TO EXTEND

STYLE AND COLORS AS REQUIRED

TYPICAL DIMENSION INDICATOR

FLOOR ELEVATION

01\_FLOOR

12'-0"

ROOM NAME AND AREA

-CUMMING IMAGE

2'-0" BELOW GRADE

REVISION NUMBER

WALL TYPE

DIRECTION OF

ON SHEET GRID

SHEET IDENTIFIER FOR

LOCATION OF SECTION

**DIRECTION OF SECTION** 

TERMINATION OF SECTION

SHEET IDENTIFIER FOR

LOCATION OF SECTION

SHEET IDENTIFIER FOR

LOCATION OF ELEVATION

DIRECTION OF ELEVATION

WALL SECTION LOCATION ON SHEET GRID

**ELEVATION LOCATION ON SHEET GRID** 

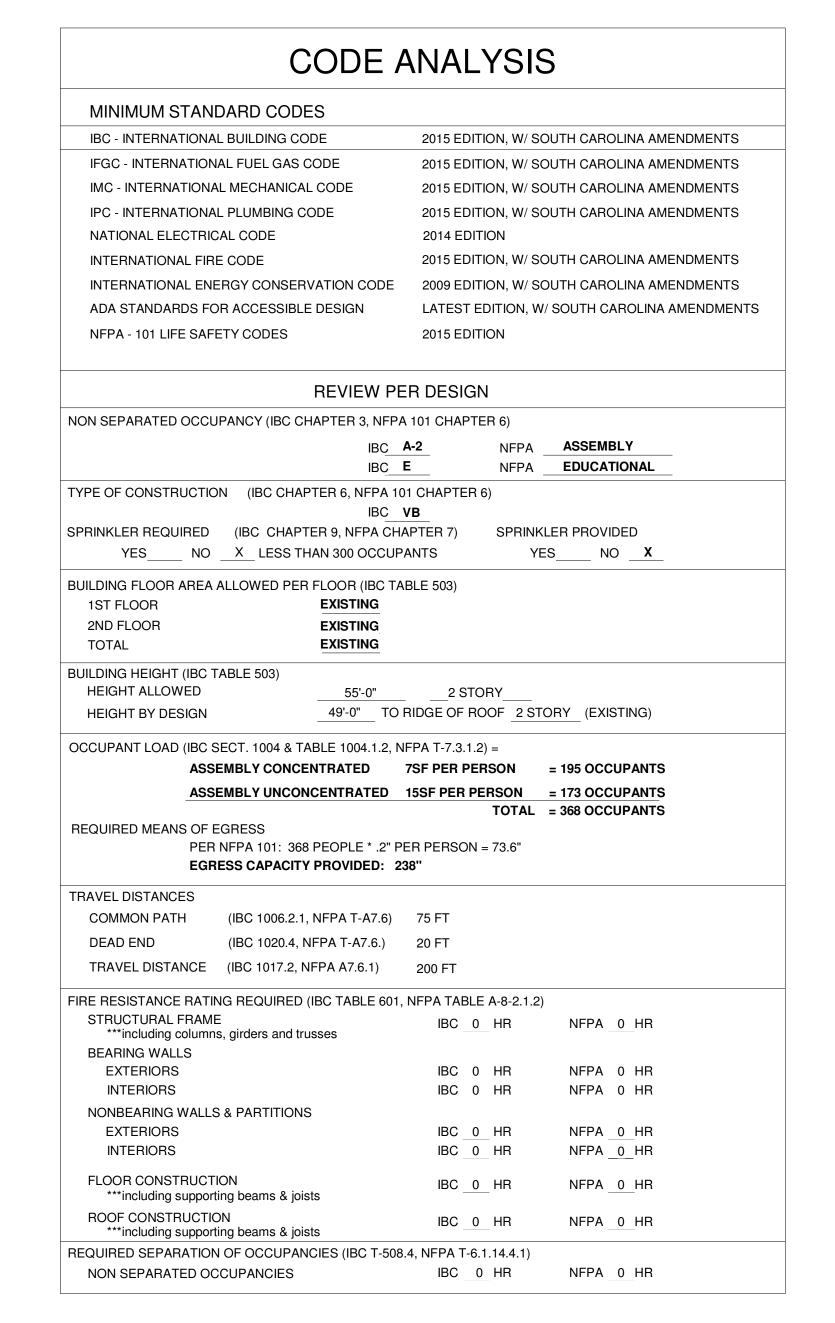
SECTION BUILDING SECTION LOCATION

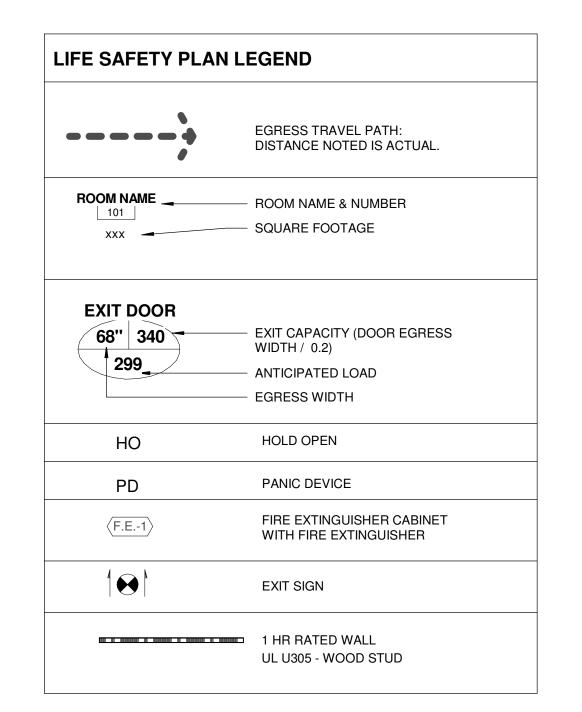
REVISION INDICATION

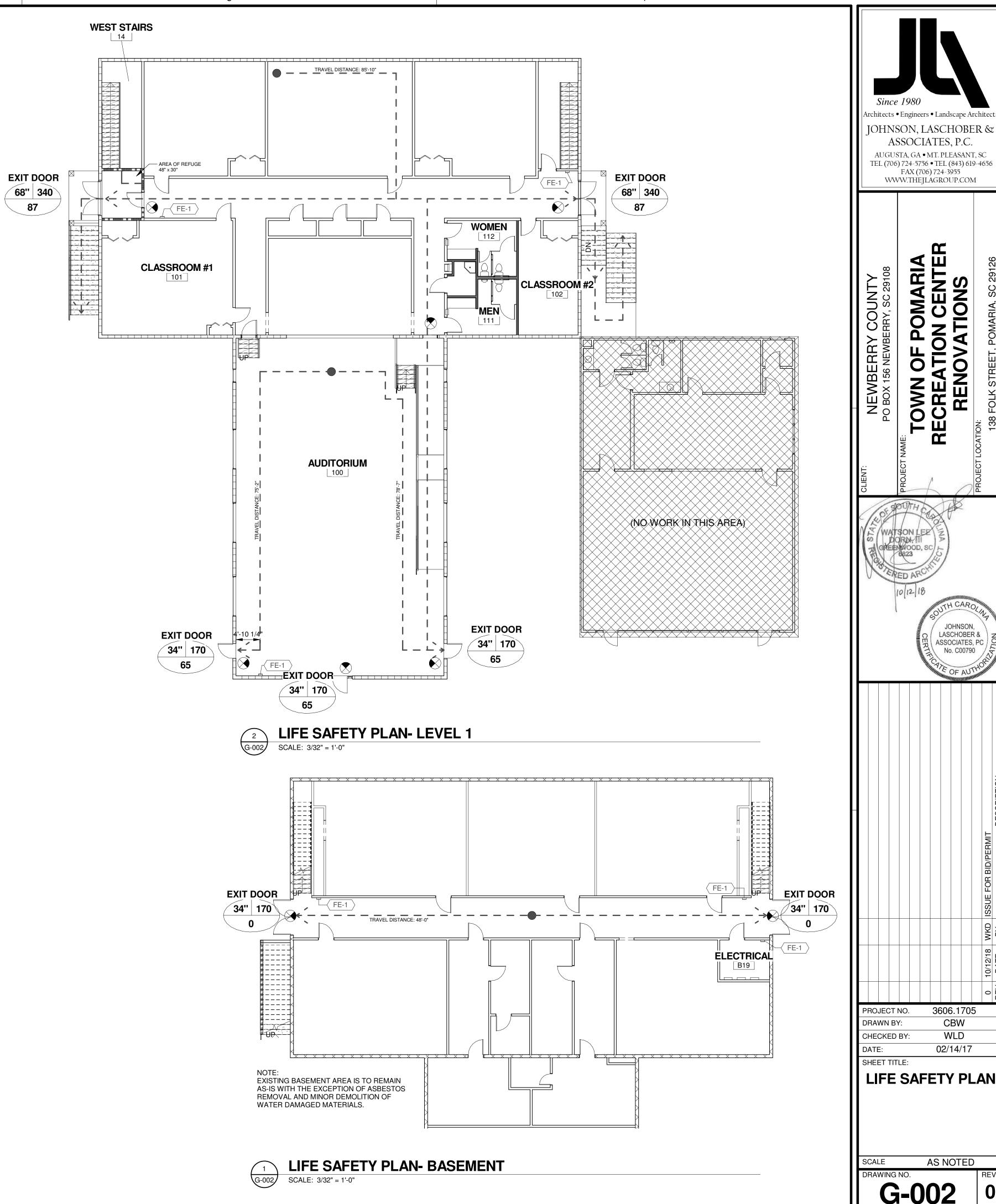
AREA REVISED

DOOR NUMBER

GLASS TYPE







ASSOCIATES, P.C.

JOHNSON,

ASSOCIATES, PC

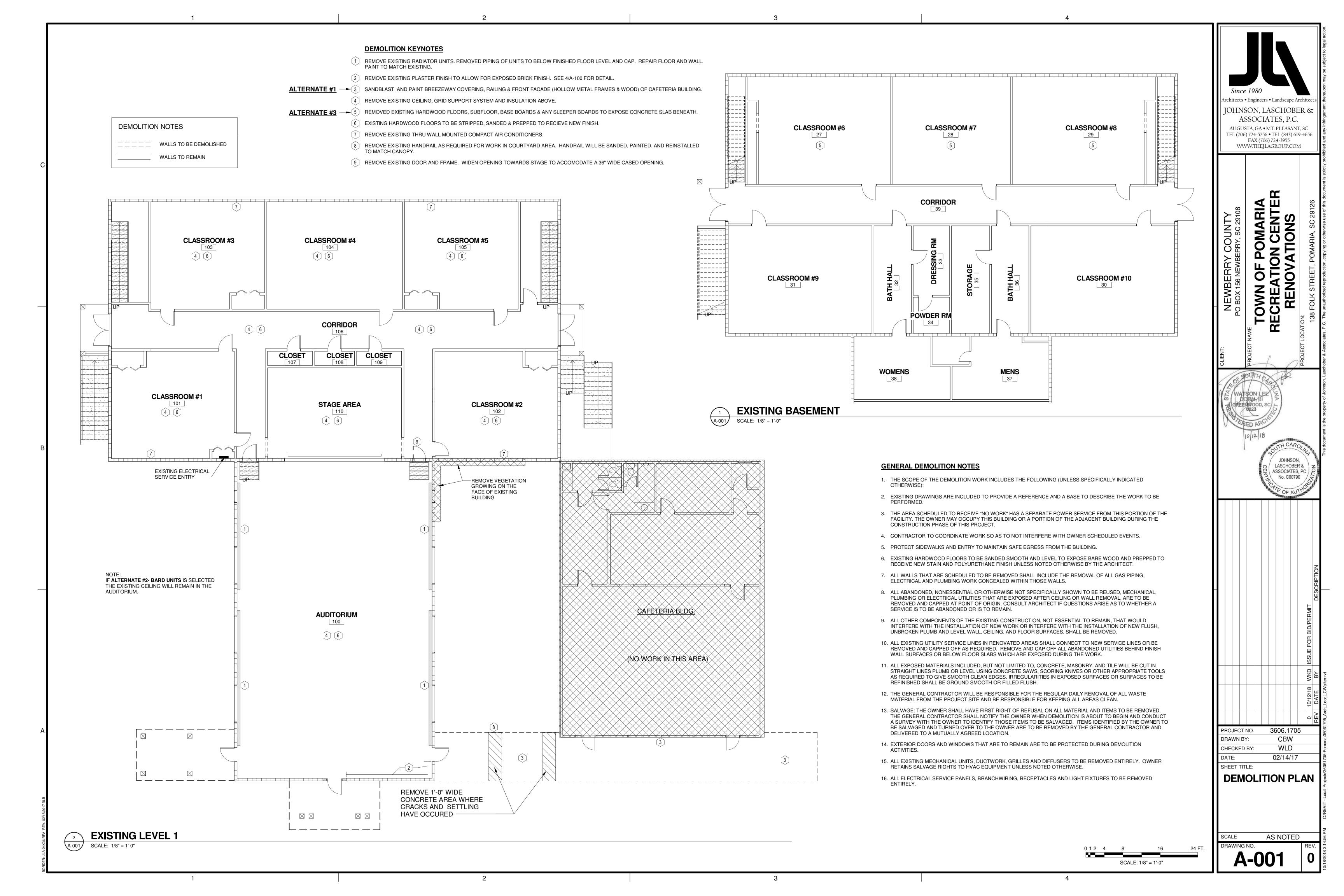
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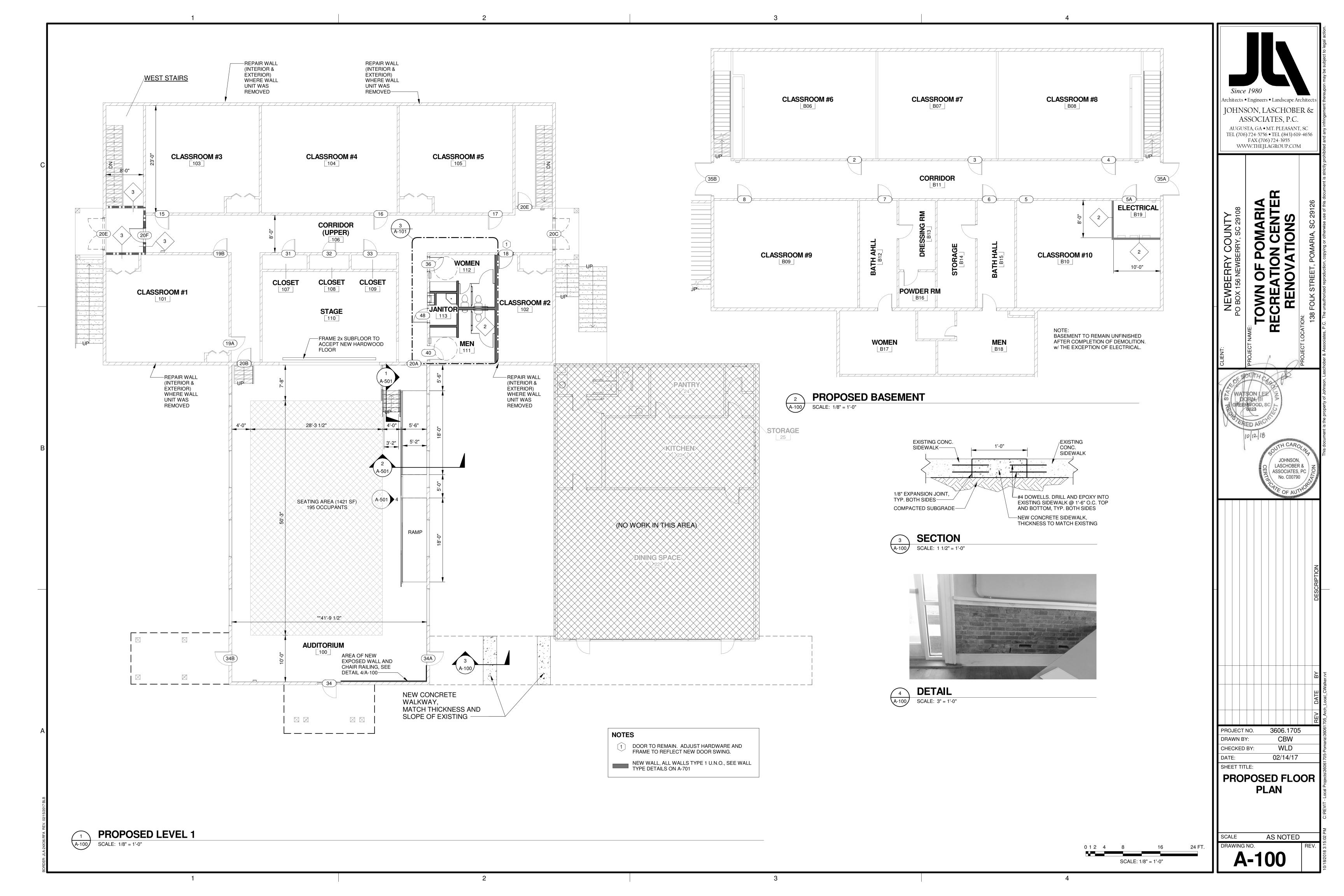
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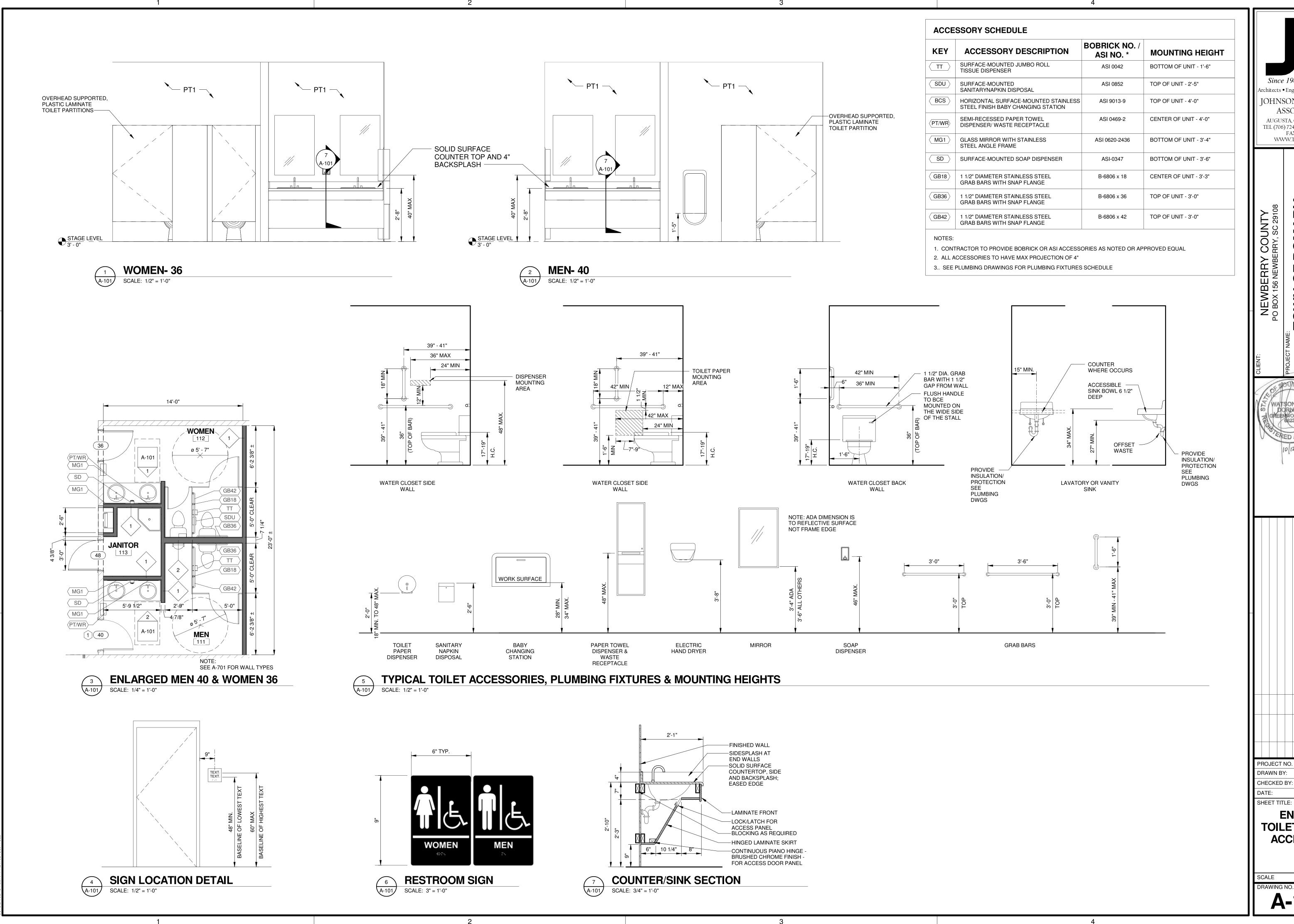
CBW WLD

02/14/17

AS NOTED







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RECREATION CENTER
RENOVATIONS

JOHNSON, LASCHOBER & ASSOCIATES, PC No. C00790

PROJECT NO. 3606.1705 CBW

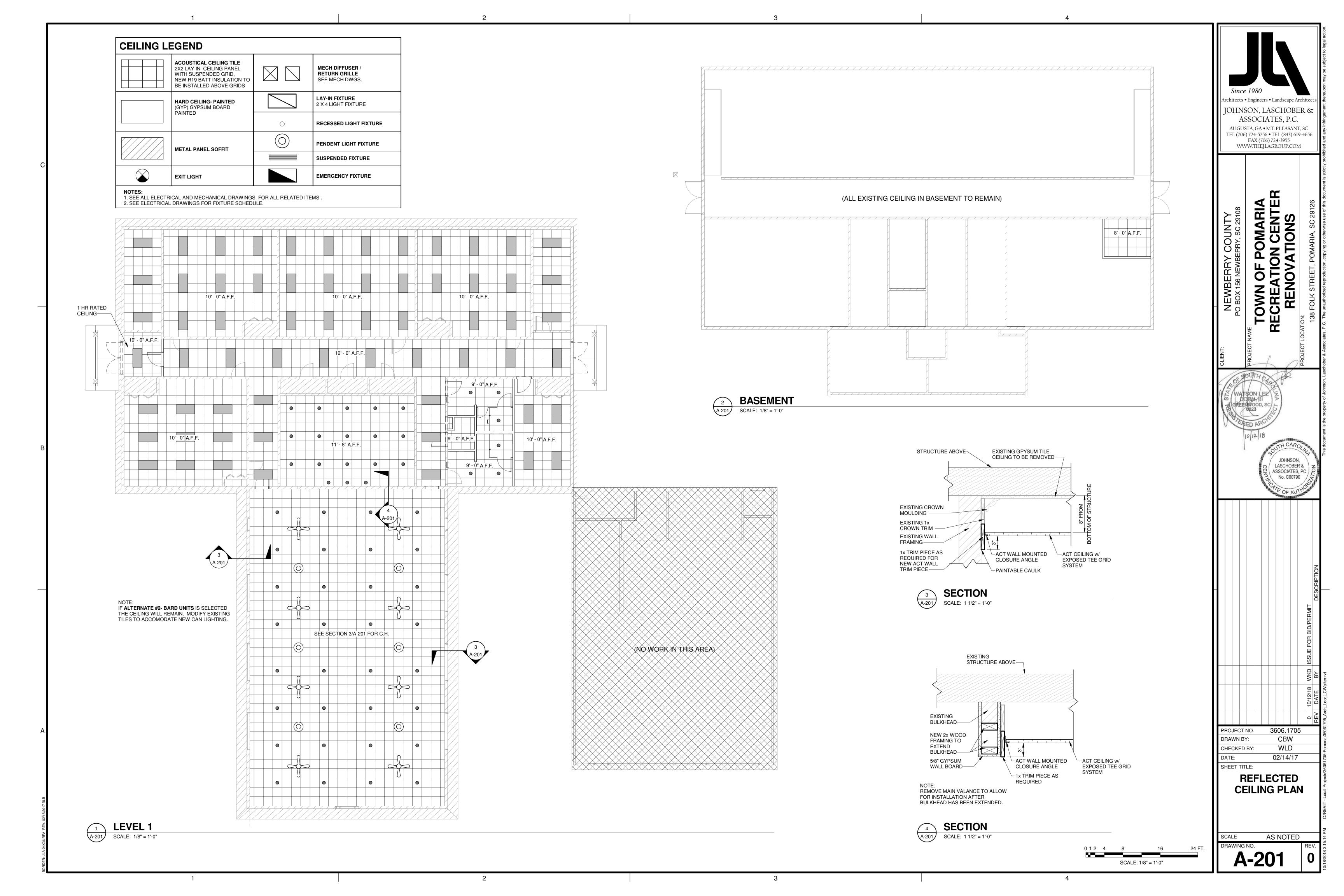
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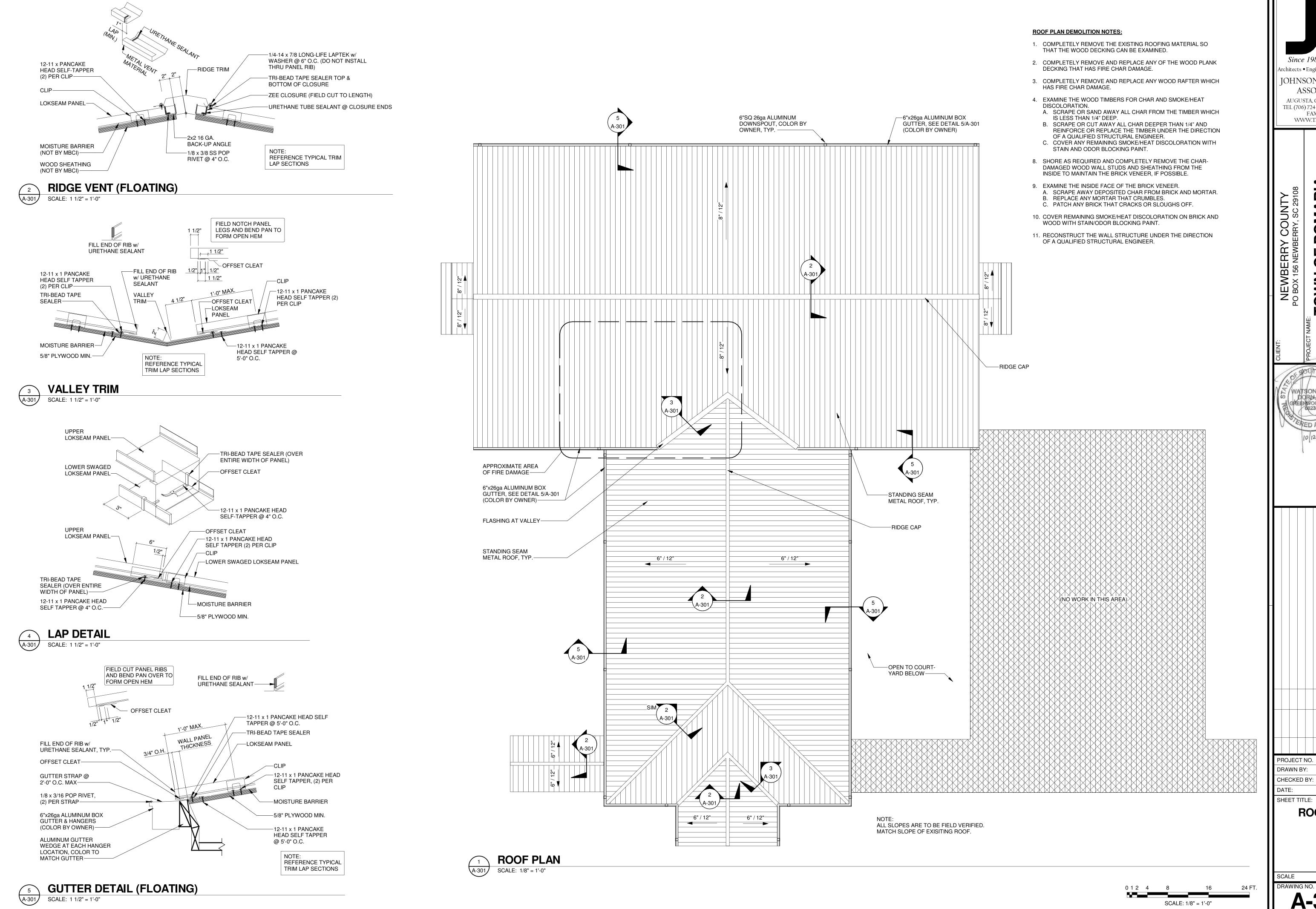
**ENLARGED** 

**TOILETS & TOILET ACCESSORIES** 

AS NOTED

**A-101** 





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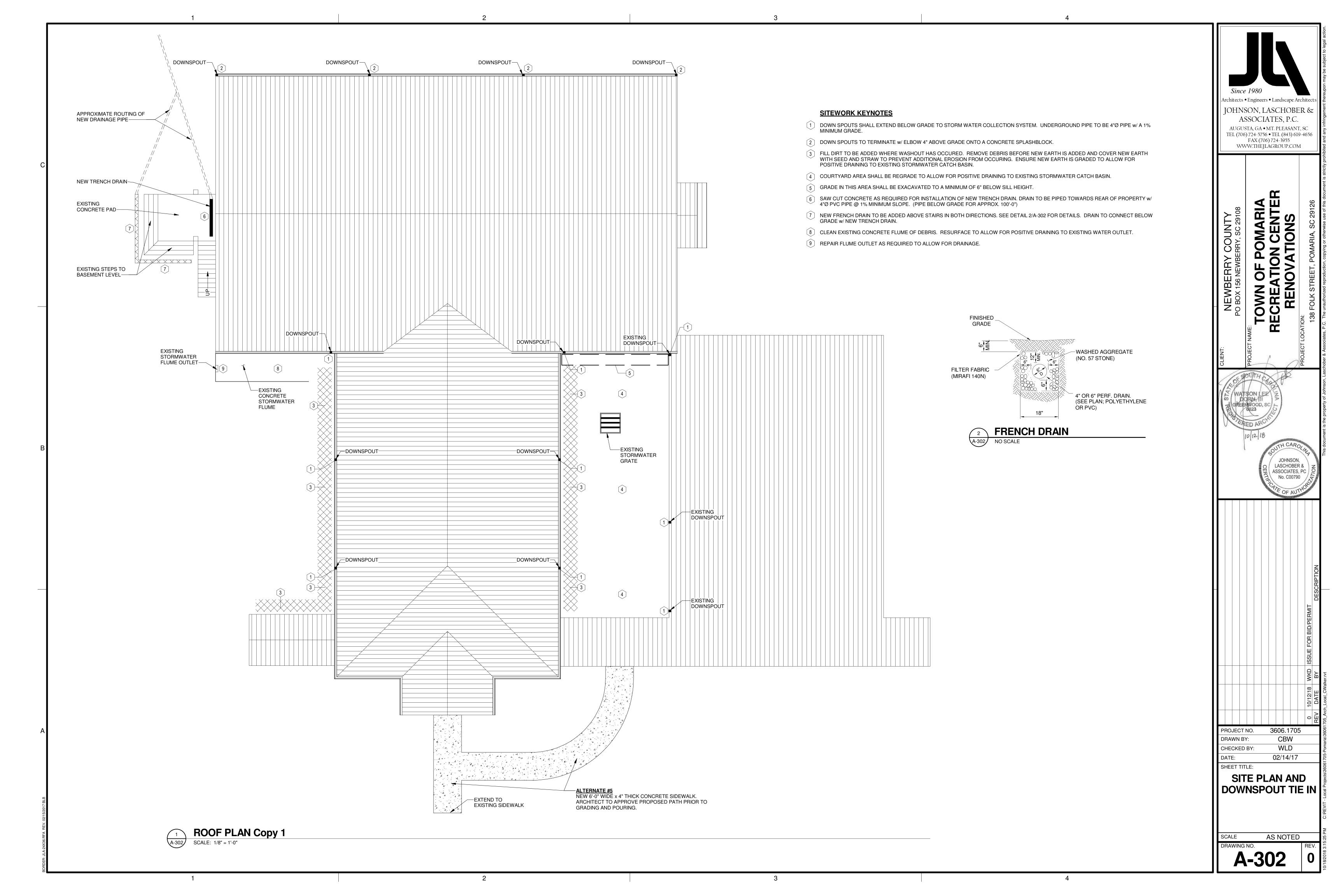
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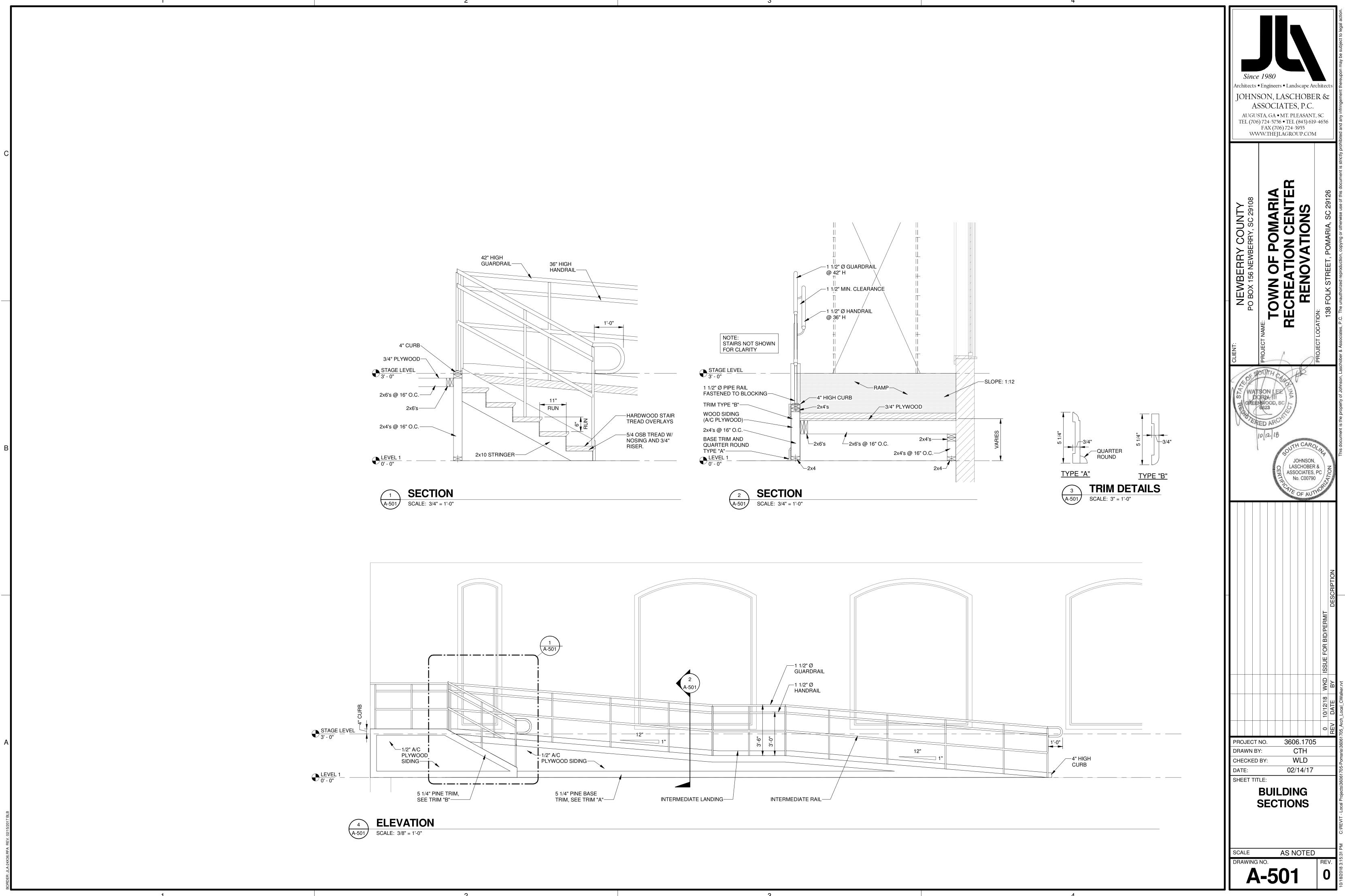
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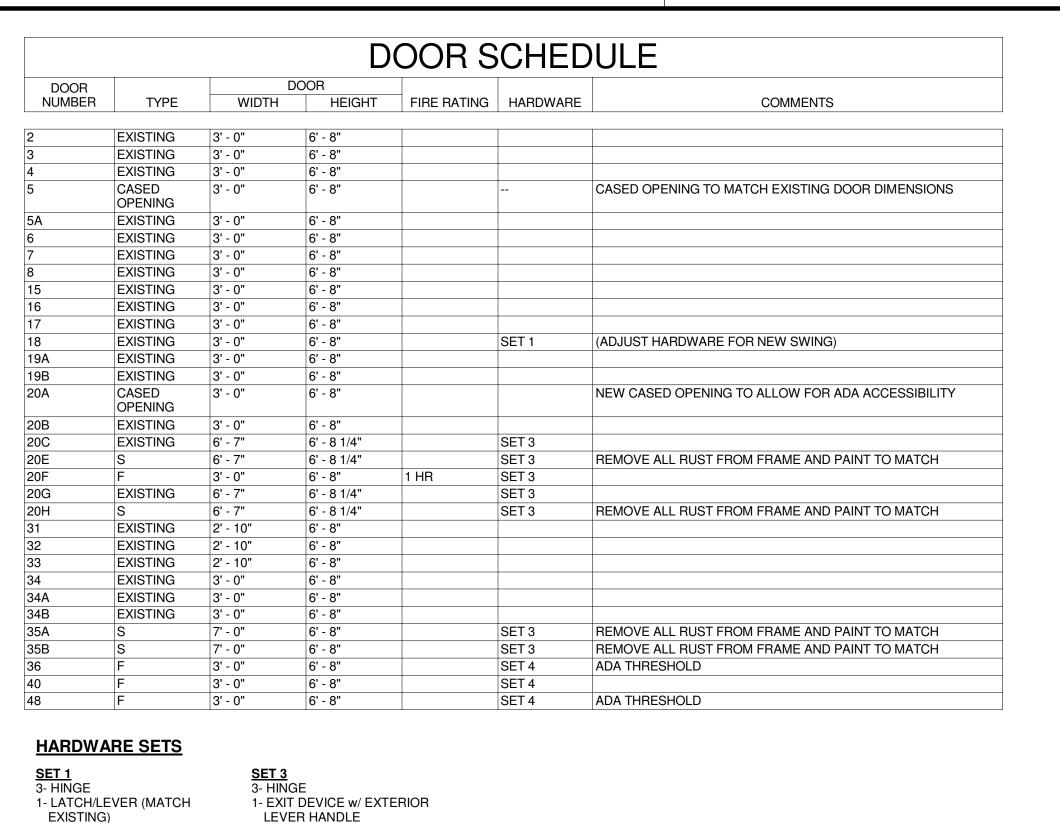
**ROOF PLAN** 

AS NOTED

A-301







#### FINISH SCHEDULE FLOOR FINISH BASE WALLS CEILING FINISH COMMENTS NUMBER WDF AUDITORIUM EXISTING \*EXISTING CEILING TO REMAIN WITH SELECTION OF ALT #2 PT-1 WDF PT-1 CLASSROOM #1 EXISTING CLASSROOM #2 WDF EXISTING PT-1 CLASSROOM #3 WDF EXISTING PT-1 WDF PT-1 CLASSROOM #4 EXISTING CLASSROOM #5 WDF EXISTING PT-1 WDF PT-1 CORRIDOR (UPPER) EXISTING WDF CLOSET EXISTING PT-1 WDF CLOSET EXISTING PT-1 CLOSET WDF EXISTING PT-1 STAGE WDF EXISTING SEE NOTE 3 WOMEN SEE NOTE 3 **JANITOR** PT-1 SEE NOTE 3 ELECTRICAL CONC

# FINISH LEGEND

PT: PAINT

**CONC:** EXPOSED CONCRETE

**RB:** RUBBER / VINYL BASE

**WDF**: WOOD FLOORING

LVT: LUXURY VINYL TILE

1. PRIME AND PAINT ALL EXPOSED STRUCTURE, FRAMING, BRACING, DUCT WORK, CONDUIT.

2. ALL EXISTING WOOD BASE BOARDS TO RECEIVE PT-2. ACT: ACOUSTICAL CEILING TILE

3. TOILET ROOM FLOORS TO RECEIVE 1 LAYER OF 1/4" LAUAN UNDERLAYMENT PRIOR TO INSTALATION OF LVT FLOORING.

4. COLOR SELECTIONS TO BE CONFIRMED BY OWNER AND ARCHITECT.

PT-1 - WALL PAINT	PT-2 - WALL PAINT	PT-3 - WALL PAINT
MANUFACTURER: SHERWIN-WILLIAMS SPEC: INTERIOR, SATIN FINISH COLOR: TBD CONTACT: RUSS HANSEN 980-207-9410	MANUFACTURER: SHERWIN-WILLIAMS SPEC: INTERIOR, SEMI-GLOSS FINISH COLOR: TBD CONTACT: RUSS HANSEN 980-207-9410	MANUFACTURER: SHERWIN-WILLIAMS SPEC: INTERIOR, EPOXY COLOR: TBD CONTACT: RUSS HANSEN 980-207-9410
LVT-1 - LUXURY VINYL TILE	PL-1 - PLASTIC LAMINATE	RB-1 - RUBBER BASE
MANUFACTURER: SHAW CONTRACT SPEC: TBD SIZE: TBD COLOR: TBD CONTACT: JOE WALKER 706-831-3938	MANUFACTURER: WILSONART SPEC: STANDARD LAMINATE COLOR: TBD CONTACT: ANGIE LIBERTO 770-616-3088	MANUFACTURER: ROPPE SPEC: STD COVE BASE COLOR: TBD CONTACT: MICHELE MUSGROVE 404-640-0241
PT-4 - TRIM PAINT	TR-1 - TRANSITION STRIPS	
MANUFACTURER: SHERWIN-WILLIAMS SPEC: INTERIOR, SEMI-GLOSS FINISH COLOR: TBD CONTACT: RUSS HANSEN 980-207-9410	MANUFACTURER: ROPPE SPEC: RUBBER COLOR: TBD CONTACT: MICHELE MUSGROVE 404-640-0241	

#### 1- CYLINDER 1- DOOR CLOSER 2- PULL 1- KICK PLATE 2- CONCEALED CLOSER 1- MOP PLATE 2- DOOR STOP 1- WALL STOP 1- THRESHOLD 1- PUSH PLATE 1- GASKETING 1- PULL PLATE 1- DEAD LOCK SEE SCHEDULE 3- DOOR SILENCERS SEE SCHEDULE -TEMPERED GLASS

TYPE S

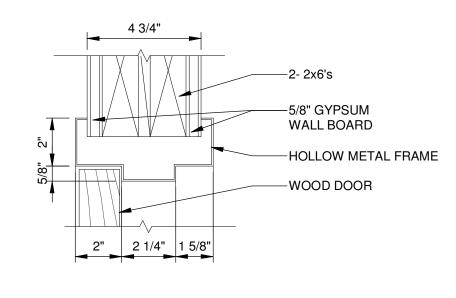
INSULATED

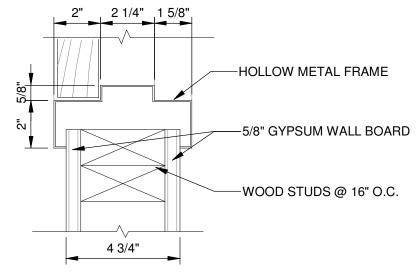
STEEL DOOR WITH ASTRAGAL

1- CYLINDER 1- DOOR CLOSER

1- KICK PLATE 1- ADA THRESHOLD

<u>SET 4</u> 3- HINGE







TYPE F

FLUSH DOOR

1- DOOR STOP

EXIT

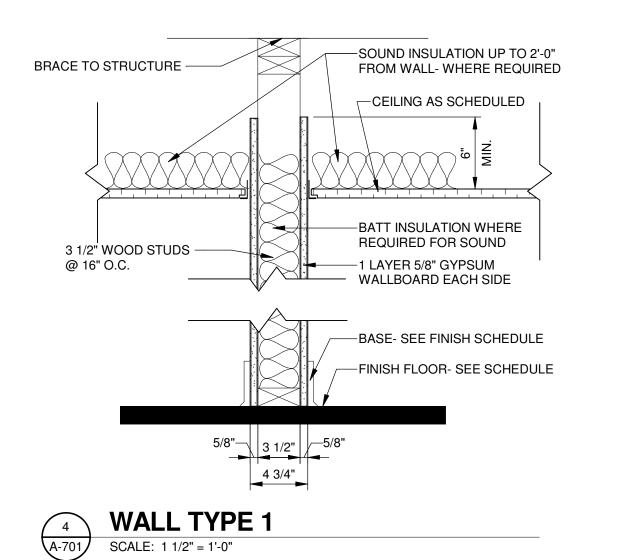
SET 2 (STOREFRONT) 2- PIVOT SET

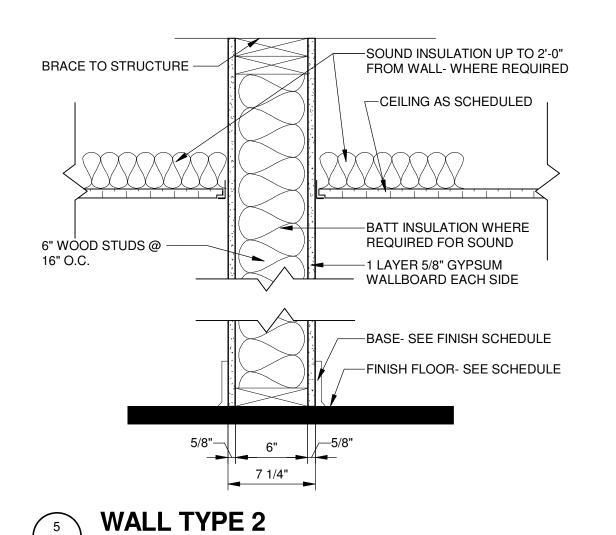
1- INTERMEDIATE PIVOT

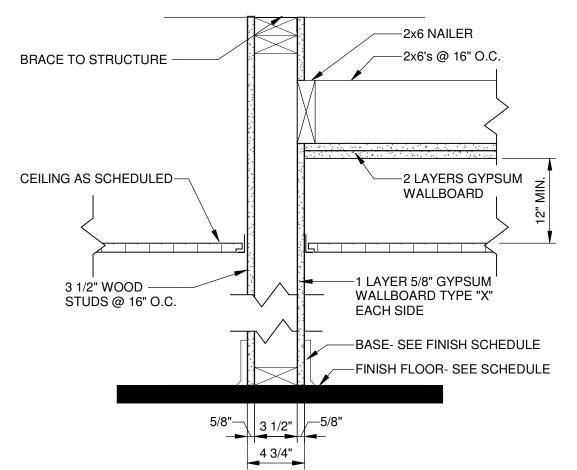
2- CONCEALED VERT ROD











WALL TYPE 3 (1-HR FIRE WALL w/ RATED CEILING) SCALE: 1 1/2" = 1'-0"

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RECREATION CENTER
RENOVATIONS NEWBERRY COUNTY O BOX 156 NEWBERRY, SC 29108 JOHNSON, LASCHOBER & ASSOCIATES, PC No. C00790 PROJECT NO. 3606.1705 DRAWN BY: Author Checker CHECKED BY: 02/14/17 SHEET TITLE: DOOR SCHEDULE DOOR TYPES, **WALL TYPES & DETAILS** 

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

**A-701** 

AS NOTED

#### PLUMBING GENERAL NOTES:

THESE GENERAL NOTES PRESENT AND/OR SUMMARIZE KEY PRODUCT INFORMATION FOR THE PLAN READER'S CONVENIENCE. SEE PLANS AND SPECIFICATIONS FOR FURTHER REQUIREMENTS.

WORK COVERED BY THIS DOCUMENT SHALL INCLUDE ALL LABOR, MATERIAL, PRODUCTS, AND SERVICES FOR, AND INCIDENTAL TO, INSTALLATION OF COMPLETE AND OPERATING PLUMBING SYSTEMS DRAWN OR SPECIFIED.

ALL WORK SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES INCLUDING, BUT NOT LIMITED TO, 2015 INTERNATIONAL PLUMBING CODE w/ AMENDMENTS, 2015 INTERNATIONAL FUEL GAS CODE w/ AMENDMENTS, 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND ALL ADA AMENDMENTS.

ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE

INSTALL ALL PLUMBING FIXTURES PER MANUFACTURER'S INSTRUCTIONS.

EXACT LOCATIONS AND ROUGHING REQUIREMENTS FOR ALL FIXTURES AND EQUIPMENT SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS, LARGE SCALE ARCHITECTURAL DETAILS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS PARTICULAR ATTENTION SHALL BE DIRECTED TO FIXTURES OR EQUIPMENT FURNISHED UNDER OTHER DIVISIONS.

PIPING IS SHOWN IN ITS GENERAL LOCATION (UNLESS DIMENSIONED). EXACT LOCATION SHALL BE DETERMINED BY JOB CONDITIONS. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HIS WORK WITH THAT OF OTHER TRADES AND ARRANGE PIPING TO CLEAR STRUCTURAL MEMBERS AND DUCTWORK. EXACT LOCATIONS SHALL BE PROVIDED ON "AS-BUILT" DRAWINGS.

MINIMUM SIZE WATER LINE FOR THREE OR MORE FIXTURES SHALL BE 3/4". REFER TO PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL RUNOUT SIZES.

ALL PIPING TO BE CONCEALED IN A WALL, CEILING, OR A CHASE UNLESS OTHERWISE NOTED. PIPING SHOWN OUT OF CHASES FOR CLARITY.

PROVIDE SLEEVES FOR PIPES PASSING THRU FLOORS, MASONRY WALLS AND FIRE OR SMOKE PARTITIONS. PACK MINERAL WOOL IN ANNULAR SPACE BETWEEN PIPE SLEEVE

REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE MOUNTING HEIGHTS. ALL ACCESSIBLE FIXTURES SHALL COMPLY WITH STATE BUILDING CODE AND 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.

ARRANGEMENTS OF WORK SHALL BE AS SHOWN. DRAWINGS ARE NOT INTENDED TO INDICATE ALL OFFSETS AND FITTINGS. EXAMINE ALL DRAWINGS, INVESTIGATE CONDITIONS TO BE ENCOUNTERED AND ARRANGE WORK ACCORDINGLY; FURNISH ALL FITTINGS AND OFFSETS.

MEASUREMENT OF DRAWINGS BY SCALE SHALL NOT BE USED AS DIMENSIONS FOR FABRICATION. MEASUREMENTS FOR LOCATING FIXTURES, EQUIPMENT, DUCTWORK, PIPING AND ACCESSORIES SHALL BE MADE ON THE SITE AND SHALL BE BASED ON ACTUAL JOB CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEASUREMENTS WHERE THE CONTRACTOR PREFABRICATES ANY WORK BASED ON THE DRAWINGS WITHOUT VERIFYING ACTUAL JOB CONDITIONS, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COST INVOLVED IN MAKING CHANGES TO PREFABRICATED WORK WHERE CONFLICTS OCCUR.

ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROGRESS OF CONSTRUCTION TO ALLOW FOR INSTALLATIONS.

INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL, PLUMB, PARALLEL, AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS.

COPPER PIPING SHALL NOT BE INSTALLED IN DIRECT CONTACT WITH MASONRY, CEMENT MORTAR, CONCRETE, OR DISSIMILAR METALS. PLUMBING CONTRACTOR TO PROVIDE SLEEVES AND COORDINATE w/ GENERAL CONTRACTOR DURING SLAB INSTALLATION.

CUTTING AND REPAIRING: THE PLUMBING CONTRACTOR SHALL DO ALL CUTTING AND REPAIRING OF WALLS, FLOORS, CEILINGS, ETC. NECESSARY FOR THE INSTALLATION OF THE WORK BUT HE SHALL NOT CUT INTO ANY STRUCTURAL MEMBER WITHOUT THE PERMISSION OF THE ARCHITECT.

PROVIDE SHOCK ABSORBERS AS INDICATED ON PLANS.

AND WASTE/SANITARY PIPING PER INTERNATIONAL PLUMBING CODE.

PLUMBING CONTRACTOR TO PROVIDE PROPER SEPARATION BETWEEN WATER SUPPLY

PLUMBING CONTRACTOR TO PROVIDE PREPRINTED 1/2" HIGH LETTERED LABELS FOR THE FOLLOWING: INTERIOR MAIN SHUT-OFF VALVE, POTABLE WATER SUPPLY PIPING, & HOT WATER PIPING. LABELS SHOULD BE MOUNTED EVERY 20'-0" ON HORIZONTAL RUNS.

GENERAL CONTRACTOR TO PROVIDE ACCESS PANELS FOR ALL INACCESSIBLE, ABOVE CEILING VALVES AND EQUIPMENT. COORDINATE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.

UNDER-BUILDING SLAB, DOMESTIC WATER, BUILDING SERVICE PIPING SHALL BE SOFT COPPER TUBING, ASTM B 88, TYPE K, WITH WROUGHT-COPPER, SOLDER-JOINT FITTINGS. AND BRAZED JOINTS. AVOID JOINTS UNDER BUILDING SLAB WHERE POSSIBLE.

ALL OTHER UNDER-BUILDING SLAB, DOMESTIC WATER PIPING SHALL BE SOFT COPPER TUBING, ASTM B 88, TYPE L, WITH WROUGHT-COPPER, SOLDER-JOINT FITTINGS, AND BRAZED JOINTS. AVOID JOINTS UNDER BUILDING SLAB WHERE POSSIBLE.

ALL ABOVEGROUND DOMESTIC WATER PIPING SHALL BE HARD COPPER TUBING, ASTM B 88, TYPE L, WITH CAST- OR WROUGHT-COPPER, SOLDER-JOINT FITTINGS, AND SOLDERED JOINTS.

ALL INDOOR DOMESTIC COLD, HOT, AND RECIRCULATED HOT WATER PIPING SHALL BE INSULATED WITH 1 INCH THICK FLEXIBLE CLOSED-CELL ELASTOMERIC INSULATION, COMPLYING WITH ASTM C 534, TYPE 1 FOR TUBULAR MATERIALS, EQUAL TO ARMACELL "AP ARMAFLEX".

SANITARY WASTE AND VENT PIPING:

ALL SOIL, DRAIN, WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC-DWV WITH SOLVENT WELD JOINTS, CONFORMING TO ASTM D 2665 AND ASTM D 2564. IN AREAS WITH RETURN AIR PLENUM ABOVE THE CEILING, TRANSITION PIPING BELOW CEILING FROM PVC TO HUBLESS CAST-IRON. EXTEND CAST IRON VENT THROUGH ROOF. PVC PIPING IS NOT ALLOWED IN RETURN AIR PLENUM SPACES.

ALL SOIL, DRAIN, WASTE AND VENT PIPING LOCATED IN RETURN AIR PLENUMS SHALL BE HUBLESS CAST-IRON SOIL PIPE AND FITTINGS, CONFORMING TO ASTM A 888 OR CISPI 301, WITH CISPI HUBLESS PIPING COUPLINGS, CONFORMING TO ASTM C 1277 AND CISPI 310, AND COUPLED JOINTS.

ALL PIPING PASSING THROUGH THE ROOF SHALL BE FLASHED WITH ROOF FLASHING ASSEMBLY COMPATIBLE WITH THE ROOFING SYSTEM.

ALL ROOF DRAINAGE PIPING SHALL BE SCHEDULE 40 PVC-DWV WITH SOLVENT WELD JOINTS, CONFORMING TO ASTM D 2665 AND ASTM D 2564. IN AREAS WITH RETURN AIR PLENUM ABOVE THE CEILING, TRANSITION PIPING BELOW CEILING FROM PVC TO HUBLESS CAST-IRON. PVC PIPING IS NOT ALLOWED IN RETURN AIR PLENUM SPACES.

ALL ROOF DRAINAGE PIPING LOCATED IN RETURN AIR PLENUMS SHALL BE HUBLESS CAST-IRON SOIL PIPE AND FITTINGS, CONFORMING TO ASTM A 888 OR CISPI 301, WITH CISPI HUBLESS PIPING COUPLINGS, CONFORMING TO ASTM C 1277 AND CISPI 310, AND

ALL ROOF DRAIN BODIES AND HORIZONTAL ROOF DRAIN CONDUCTORS (PRIMARY AND OVERFLOW) SHALL BE INSULATED WITH 1 INCH THICK FLEXIBLE CLOSED-CELL ELASTOMERIC INSULATION, COMPLYING WITH ASTM C 534, TYPE 1 FOR TUBULAR MATERIALS AND TYPE II FOR SHEET MATERIALS, EQUAL TO ARMACELL "AP ARMAFLEX". VERTICAL CONDUCTORS NEED NOT BE INSULATED.

REDUCER FROM LARGER HORIZONTAL PIPE TO SMALLER VERTICAL PIPE SHALL BE LOCATED IN VERTICAL PIPE AFTER 1/4 BEND. INCREASER FROM SMALLER VERTICAL PIPE TO LARGER HORIZONTAL PIPE SHALL BE LOCATED IN VERTICAL PIPE BEFORE 1/4 BEND.

ALL OUTDOOR, UNDERGROUND GAS PIPING SHALL BE PE PIPE AND FITTINGS, COMPLYING WITH ASTM D 2513, ASTM D 2683, AND ASTM D 3261, JOINED BY HEAT FUSION, WITH SERVICE-LINE RISERS WITH TRACER WIRE TERMINATED IN AN ACCESSIBLE LOCATION.

ALL OUTDOOR, ABOVEGROUND GAS PIPING SHALL BE SCHEDULE 40, BLACK STEEL PIPE, COMPLYING WITH ASTM A 53, WITH MALLEABLE-IRON FITTINGS AND THREADED JOINTS, COMPLYING WITH ASME B 16.3, OR WROUGHT-STEEL FITTINGS AND WELDED JOINTS, COMPLYING WITH ASTM A 234. JOINT COMPOUND AND TAPE SHALL BE SUITABLE FOR NATURAL GAS.

ALL INDOOR, ABOVEGROUND GAS PIPING SHALL BE SCHEDULE 40, BLACK STEEL PIPE, COMPLYING WITH ASTM A 53, WITH MALLEABLE-IRON FITTINGS AND THREADED JOINTS. COMPLYING WITH ASME B 16.3, OR WROUGHT-STEEL FITTINGS AND WELDED JOINTS, COMPLYING WITH ASTM A 234. JOINT COMPOUND AND TAPE SHALL BE SUITABLE FOR NATURAL GAS.

PRESSURE REGULATORS SHALL BE SINGLE STAGE AND SUITABLE FOR NATURAL GAS. SERVICE PRESSURE REGULATORS SHALL COMPLY WITH ANSI Z21.80. LINE PRESSURE REGULATORS SHALL COMPLY WITH ANSI Z21.80. APPLIANCE PRESSURE REGULATORS SHALL COMPLY WITH ANSI Z21.18.

FIELD QUALITY CONTROL:

ALL DOMESTIC WATER PIPING SHALL BE TESTED FOR LEAKS AND DEFECTS: FILL DOMESTIC WATER PIPING, CAP, AND SUBJECT PIPING TO STATIC WATER PRESSURE OF 50 PSIG ABOVE OPERATING PRESSURE, WITHOUT EXCEEDING PRESSURE RATING OF PIPING SYSTEM MATERIALS. ISOLATE TEST SOURCE AND ALLOW IT TO STAND FOR FOUR HOURS. LEAKS AND LOSS IN TEST PRESSURE CONSTITUTE DEFECTS THAT MUST BE REPAIRED. LEAVE DOMESTIC WATER PIPING UNCOVERED AND UNCONCEALED UNTIL IT HAS BEEN TESTED AND APPROVED.

ALL SANITARY WASTE AND VENT PIPING SHALL BE TESTED FOR LEAKS AND DEFECTS AT COMPLETION OF ROUGH-IN; CLOSE OPENINGS IN PIPING SYSTEM AND FILL WITH WATER TO POINT OF OVERFLOW, BUT NOT LESS THAN 10-FOOT HEAD OF WATER. FROM 15 MINUTES BEFORE INSPECTION STARTS TO COMPLETION OF INSPECTION, WATER LEVEL MUST NOT DROP. INSPECT JOINTS FOR LEAKS. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST PIPING, OR PORTIONS THEREOF, UNTIL SATISFACTORY RESULTS ARE OBTAINED. INSTALL TEST TEES WHEN THE SYSTEM IS TO BE TESTED IN SECTIONS. LEAVE SANITARY WASTE AND VENT PIPING UNCOVERED AND UNCONCEALED UNTIL IT HAS BEEN TESTED AND APPROVED.

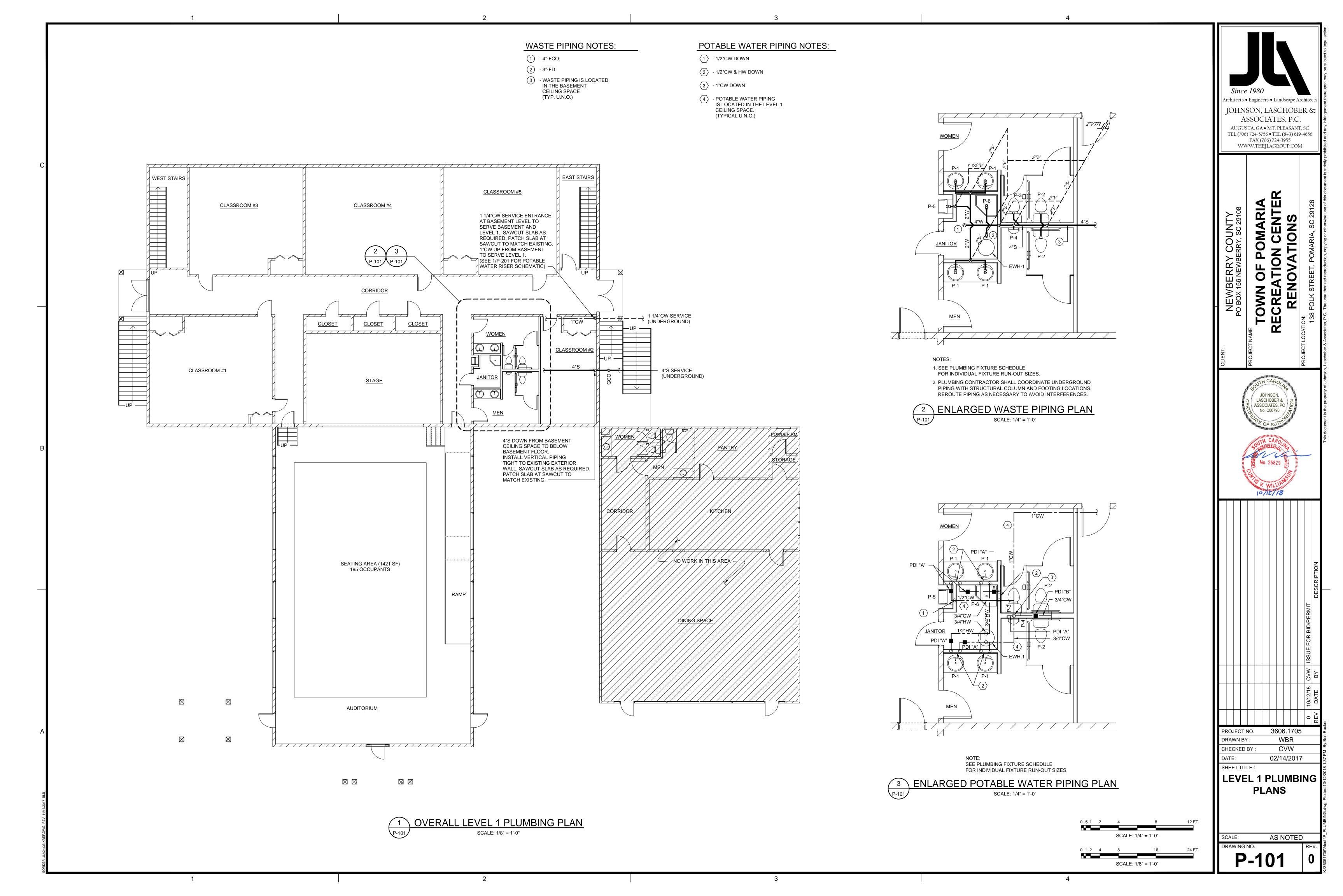
ALL ROOF DRAINAGE PIPING SHALL BE TESTED FOR LEAKS AND DEFECTS AT COMPLETION OF ROUGH-IN; CLOSE OPENINGS IN PIPING SYSTEM AND FILL WITH WATER TO POINT OF OVERFLOW, BUT NOT LESS THAN 10-FOOT HEAD OF WATER. FROM 15 MINUTES BEFORE INSPECTION STARTS TO COMPLETION OF INSPECTION, WATER LEVEL MUST NOT DROP. INSPECT JOINTS FOR LEAKS. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST PIPING, OR PORTIONS THEREOF, UNTIL SATISFACTORY RESULTS ARE OBTAINED. INSTALL TEST TEES WHEN THE SYSTEM IS TO BE TESTED IN SECTIONS. LEAVE ROOF DRAINAGE PIPING UNCOVERED AND UNCONCEALED UNTIL IT HAS BEEN

TEST, INSPECT, AND PURGE NATURAL GAS PIPING SYSTEM IN ACCORDANCE TO THE INTERNATIONAL FUEL GAS CODE AND AUTHORITIES HAVING JURISDICTION.

PLUMBING LEGEND DESCRIPTION SYMBOL UNDERGROUND SOIL & WASTE PIPING FM FORCE MAIN VENT PIPING ----FLOOR DRAIN (SEE SCHEDULE) WALL CLEANOUT (SEE SCHEDULE) wco |----FLOOR CLEANOUT (SEE SCHEDULE) FCO @----GROUND CLEANOUT (SEE SCHEDULE) GCO ⊚ VTR VENT THROUGH ROOF VENT PIPE WASTE PIPING SANITARY PIPING **GAS PIPING EXISTING** COLD WATER PIPING CW HOT WATER PIPING P.R.V. PRESSURE REDUCING VALVE B.F.P. BACKFLOW PREVENTER DWN. DOWN TYP. TYPICAL U.N.O. UNLESS NOTED OTHERWISE RD ROOF DRAIN (SEE SCHEDULE) ERD EMERGENCY ROOF DRAIN (SEE SCHEDULE) GREASE WASTE PIPING POTABLE WATER PIPING POTABLE WATER UNDERGROUND PIPING 140°F HOT WATER PIPING \_\_\_\_\_ 110°F HOT WATER PIPING HOT WATER RECIRCULATION PIPING FLOW ARROW FULL PORT BALL VALVE 3/4"-WH +---WALL HYDRANT (SEE PLUMBING SCHEDULE) HOSE BIBB (SEE PLUMBING SCHEDULE) PIPE DOWN PIPE UP P-TRAP

JOHNSON, LASCHOBER & ASSOCIATES, P.C. AUGUSTA, GA • MT. PLEASANT, SC TEL (706) 724-5756 • TEL (843) 619-4656 FAX (706) 724-3955 WWW.THEJLAGROUP.COM 0 LASCHOBER & ASSOCIATES, PC PROJECT NO. 3606.1705 DRAWN BY WBR CHECKED BY: CVW 02/14/2017 SHEET TITLE: **PLUMBING GENERAL NOTES** AND LEGEND

SCALE: AS NOTED



	PLUMBING FIXTURE SCHEDULE												
MARK	FIXTURE			E, INCHE		DESCRIPTION							
P-1	COUNTERTOP LAVATORY (H.C.)	1/2"	1/2"	2"	1 1/2"	AMERICAN STANDARD 0476.028 ACCESSIBLE LAVATORY, AMERICAN STANDARD 7385.050 FAUCET, GRID DRAIN, ANGLE STOPS, & 3/8" SUPPLIES, PLUMBEREX HANDY-SHIELD MODEL 2003							
P-2	WATER CLOSET (H.C.)	1/2"	-	4"	2"	AMERICAN STANDARD CADET PRO 215AB.104, 1.28 GAL. FLUSH w/ CHURCH 295CT TOILET SEAT. MOUNT FLUSH OPERATOR ON WIDE SIDE OF TOILET.							
P-3	WATER CLOSET	1/2"	-	4"	2"	AMERICAN STANDARD CADET PRO 215CB.104, 1.28 GAL. FLUSH w/ CHURCH 295CT TOILET SEAT.							
P-4	URINAL (H.C.)	3/4"	-	2"	2"	AMERICAN STANDARD MODEL ALLBROOK 0.5 6550.001 w/ SLOAN REGAL 186-0.5 3/4" FLUSH VALVE							
P-5	WATER COOLER	1/2"	-	2"	1 1/2"	OASIS VERSACOOLER II MODEL PG8AC							
P-6	MOP BASIN	1/2"	1/2"	3"	2"	FIAT MODEL MSB-2424, FAUCET 830-AA, HOSE & HOSE BRACKET 832-AA, MOP HANGER 889-CC AND STRAINER							
EWH-1	ELEC. WATER HEATER	3/4"	3/4"	-	-	A.O. SMITH MODEL DEN-30, 30 GALLON CAP. NON-SIMULTANEOUS 4500W, 208/1Ø/60 RECOVERY RATE OF 18 GPH AT A 100° F TEMP. RISE							

NOTES	S: 1. ALL FIXTURES, FITTINGS, AND TRIM TO COMPLY WITH THE LATEST REVISION OF THE AMERICAN DISABILITIES
	ACT; WHERE APPLICABLE.
	2. CURRORT LIBINAL C/JAVALL LIANCERC AND TURLI POLTC

- 2. SUPPORT URINALS w/ WALL HANGERS AND THRU BOLTS.
- 3. RIM HEIGHT SHALL COMPLY w/ ADA REQUIREMENTS AND STANDARD MANUFACTURER RECOMMENDED
- INSTALLATION HEIGHTS FOR NON-ADA FIXTURES.
- 4. PLUMBING CONTRACTOR TO COORDINATE w/ COUNTER TOP CONTRACTOR BEFORE ORDERING SINKS.

	1 1
	1"CW IN LEVEL 1 1"CW IN LEVEL 1 1"CW IN SPACE: 101 CEILING SPACE: (SEE 1 AND 3 / P-10N) (SEE CONTINUATION) FOR CONTINUATION)
NO., I	
WEL	
1"CW IN BASEMENT LEVEL  1"CW IN BASEMENT CAP FOR FUTURE)	
SHUT-OFF VALVE  SHUT-OFF VALVE  BASEMENT LEVEL FLOOR  TER	
BASEMEN!	



F	FLOOR DRAIN & CLEANOUT SCHEDULE										
SYMBOL J.R. SMITH SERIES NO. PROVIDE NOTES											
FD	2010-B	12									
GCO	4237										
FCO	4040										
WCO	4452-U										
FL	FLOOR DRAIN & CLEANOUT ACCESSORIES										

PROSET TRAP

**GUARD INSERT** 

# BASED ON OUTLET SIZE

- 1. PROVIDE PROSET "T-RITE" DRAINS ON ALL FLOOR/SHOWER/HUB DRAINS
- THAT ARE THROUGH PENETRATION OF A FIRE RATED FLOOR.

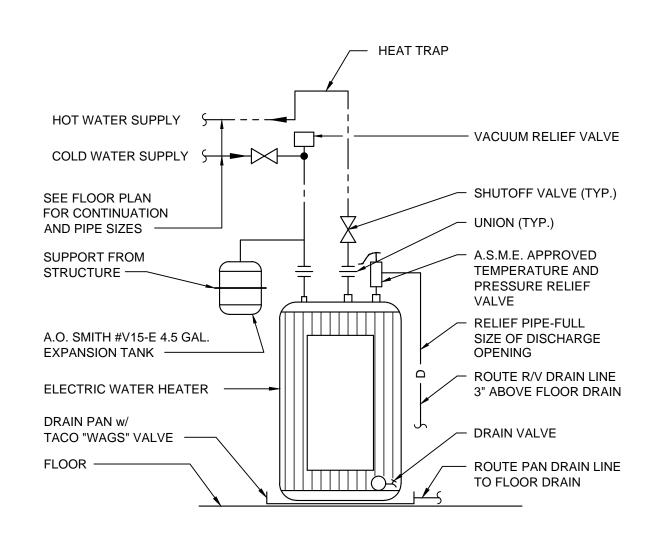
PROVIDE MANUFAC. RECOMMENDED STRAINER SIZE

2. COORDINATE FLOOR FINISHES w/ FLOOR DRAINS AND FLOOR CLEANOUTS. (ADJUST FLOOR DRAIN AND FLOOR CLEANOUT ELEVATIONS AS REQUIRED)

F	HANGERS & SUPPORTS												
SPACING: DO NOT EXCEED THE FOLLOWING SPACING, ON CENTERS													
PIPE SIZE SCH. 40 PVC COPPER STEEL HANGER ROD DIA.													
1/2" - 3/4"	4 FT.	5 FT.	7 FT.	1/4"									
1"	4 FT.	6 FT.	7 FT.	1/4"									
1 1/2"	4 FT.	6 FT.	9 FT.	3/8"									
2"	4 FT.	8 FT.	10 FT.	3/8"									
2 1/2"	4 FT.	9 FT.	11 FT.	3/8"									
3"	4 FT.	10 FT.	12 FT.	3/8"									
4"	4 FT.	10 FT.	12 FT.	1/2"									

WATER HAMMER ARRESTER SCHEDULE										
SYMBOL	FIXTURE UNIT RATING									
PDI "A"	1-11									
PDI "B"	12-32									
PDI "C"	33-60									
PDI "D"	61-113									
PDI "E"	114-154									
PDI "F"	155-330									

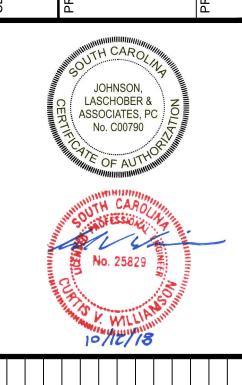
NOTE:
USE METAL-BELLOWS TYPE WITH
PRESSURIZED METAL CUSHIONING
CHAMBER, COMPLYING WITH
STANDARD P.D.I. WH-201.



2 ELECTRIC WATER HEATER SCHEMATIC

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PROJECT NO. 3606.1705 DRAWN BY : WBR CHECKED BY: CVW 02/14/2017

**PLUMBING** SCHEDULES AND **DETAILS** 

AS NOTED

SHEET TITLE :

P-201

#### **HVAC GENERAL NOTES:**

THESE GENERAL NOTES PRESENT AND/OR SUMMARIZE KEY PRODUCT INFORMATION FOR THE PLAN READER'S CONVENIENCE. SEE PLANS AND SPECIFICATIONS FOR FURTHER REQUIREMENTS.

WORK COVERED BY THIS DOCUMENT SHALL INCLUDE ALL LABOR, MATERIAL, PRODUCTS, AND SERVICES FOR, AND INCIDENTAL TO, INSTALLATION OF COMPLETE AND OPERATING HVAC SYSTEMS DRAWN OR SPECIFIED.

ALL WORK SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES

INCLUDING, BUT NOT LIMITED TO, NFPA 13, NFPA 90A, NFPA 90B, NFPA 96, 2017 NATIONAL ELECTRICAL CODE, AND 2015 INTERNATIONAL MECHANICAL CODE w/ AMENDMENTS.

ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ARCHITECT OR ENGINEER.

INSTALL ALL MECHANICAL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS.

ARRANGEMENTS OF MECHANICAL WORK SHALL BE AS SHOWN. DRAWINGS ARE NOT INTENDED TO INDICATE ALL OFFSETS AND FITTINGS. EXAMINE ALL DRAWINGS, INVESTIGATE CONDITIONS TO BE ENCOUNTERED AND ARRANGE WORK ACCORDINGLY; FURNISH AND INSTALL ALL FITTINGS AND OFFSETS.

DRAWINGS ARE NOT INTENDED TO SHOW IN DETAIL EXACT LOCATIONS AND CONNECTIONS FOR EQUIPMENT AND ACCESSORIES. FINAL CONNECTIONS SHALL BE AS SHOWN ON APPROVED SHOP DRAWINGS.

MEASUREMENT OF DRAWINGS BY SCALE SHALL NOT BE USED AS DIMENSIONS FOR FABRICATION. MEASUREMENTS FOR LOCATING EQUIPMENT, DUCTWORK, PIPING AND ACCESSORIES SHALL BE MADE ON THE JOB SITE AND SHALL BE BASED ON ACTUAL JOB CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEASUREMENTS. WHERE THE CONTRACTOR PREFABRICATES ANY WORK BASED ON THE DRAWINGS WITHOUT VERIFYING ACTUAL JOB CONDITIONS, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS INVOLVED IN MAKING CHANGES TO PREFABRICATED WORK WHERE CONFLICTS OCCUR.

THE CONTRACTOR SHALL CHECK CEILING HEIGHTS IN EACH SPACE ON ARCHITECTURAL DRAWINGS AND SHALL ARRANGE ALL MECHANICAL WORK TO FIT IN THE SPACE ABOVE THE CEILING ALLOWING FOR ACCESS TO REMOVE TILE. PARTICULAR ATTENTION SHALL BE DIRECTED TOWARD DUCT SIZES AS SHOWN ON DRAWINGS, TO VERIFY THAT DUCTWORK ALONG WITH ALL OTHER WORK WILL FIT IN THE SPACE ABOVE THE CEILINGS. AFTER VERIFYING DIMENSIONS, IF THE CONTRACTOR DETERMINES THAT THE WORK WILL NOT FIT IN THE SPACE INDICATED, THEN THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF THE CONFLICT AND SHALL NOT INSTALL ANY WORK UNTIL INSTRUCTIONS ARE RECEIVED FROM THE ARCHITECT/ENGINEER. IF THE CONTRACTOR INSTALLS WORK AS SHOWN ON DRAWINGS WITHOUT VERIFYING ADEQUACY OF SPACES, AND THE WORK DOES NOT FIT THE SPACE SHOWN, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR REARRANGING WORK AND CHANGING DUCT SIZES AS REQUIRED TO FIT THE SPACE AND THE CONTRACTOR SHALL PAY ALL COSTS CONNECTED WITH THE CHANGES.

CONTRACTOR SHALL INSTALL DUCTS, PIPING AND EQUIPMENT IN A NEAT AND WORKMANLIKE MANNER AND SHALL AVOID CONFLICT WITH OTHER WORK. EQUIPMENT SHALL BE SO ARRANGED AND FITTED INTO AVAILABLE SPACE SO THAT WORKING PARTS INCLUDING FILTERS AND LUBRICATION POINTS, AND COIL REMOVAL ARE ACCESSIBLE FOR SERVICE WITHOUT DAMAGE TO BUILDING STRUCTURE OR FINISHES OR WITHOUT MOVING OTHER EQUIPMENT. THE CONTRACTOR SHALL NOT INSTALL ANY EQUIPMENT WHERE PARTS ARE INACCESSIBLE FOR SERVICE.

WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO PROVIDE MAXIMUM HEADROOM POSSIBLE.

EXACT LOCATION OF GRILLES & CEILING OUTLETS SHALL BE DETERMINED ON THE JOB. COORDINATE WITH LIGHTS AND ARCHITECTURAL REQUIREMENTS TO PROVIDE A UNIFORM & SYMMETRICAL APPEARANCE. REFER TO ARCHITECTURAL & ELECTRICAL DRAWINGS & DETAILS.

CUTTING AND REPAIRING: THE HVAC CONTRACTOR SHALL DO ALL CUTTING AND REPAIRING OF WALLS, FLOORS, CEILINGS, ETC. NECESSARY FOR THE INSTALLATION OF THE WORK BUT HE SHALL NOT CUT INTO ANY STRUCTURAL MEMBER WITHOUT THE

PERMISSION OF THE ARCHITECT.

PROVIDE UNION OR FLANGE CONNECTIONS IN PIPING AT ALL EQUIPMENT & AS REQUIRED FOR SERVICE.

GENERAL CONTRACTOR TO PROVIDE ACCESS PANELS FOR ALL INACCESSIBLE, ABOVE CEILING DAMPERS AND EQUIPMENT. COORDINATE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.

#### METAL DUCT:

ALL DUCTWORK SHALL BE INSTALLED IN STRICT COMPLIANCE WITH SMACNA. NFPA BULLETIN 90A, AND ASHRAE GUIDES. UNLESS OTHERWISE NOTED, DUCTWORK SHALL BE GALVANIZED SHEET STEEL. FIBERGLASS DUCTWORK IS NOT ACCEPTABLE.

ALL EXPOSED SUPPLY AND RETURN DUCTWORK SHALL BE RECTANGULAR GALVANIZED LINED DUCT WITH PAINT GRIP PRIMER OR DOUBLE WALL INSULATED SPIRAL DUCT WITH PAINT GRIP PRIMER, U.N.O..

MINIMUM DUCTWORK STATIC PRESSURE CLASS SHALL BE 2-INCH W.G. MINIMUM DUCT SEAL CLASS SHALL BE CLASS "A".

ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS. ON RECTANGULAR DUCTS, DIMENSIONS GIVEN FIRST IS DIMENSION SEEN. DUCT DIMENSIONS MAY BE ALTERED AS LONG AS SAME DUCT CROSS SECTIONAL AREA IS MAINTAINED, IN ORDER TO AVOID INTERFERENCES AS NEEDED.

LOW PRESSURE FLEXIBLE DUCT: FACTORY FABRICATED ASSEMBLY, UL-181, CLASS 1 LISTED, HAVING A MINIMUM R-VALUE OF 4.2, EQUAL TO THERMAFLEX "KM". CONNECT DIFFUSERS TO DUCTS WITH MAXIMUM 60-INCH LENGTHS OF FLEXIBLE DUCT CLAMPED OR STRAPPED IN PLACE.

MANUAL VOLUME DAMPERS: DAMPERS SHALL BE SAME MATERIAL AS DUCTWORK, PER SMACNA. PROVIDE AXLES FULL LENGTH OF DAMPER BLADES AND BEARINGS AT BOTH ENDS OF OPERATING SHAFT. PROVIDE MANUAL VOLUME DAMPERS IN ALL BRANCH DUCTS (ONE PER SUPPLY AND RETURN OUTLET).

FLEXIBLE CONNECTIONS: GLASS FABRIC DOUBLE COATED WITH NEOPRENE, 26 OZ. PER SQUARE YARD, COMPLYING WITH UL 181, CLASS 1. PROVIDE FLEXIBLE CONNECTION BETWEEN ALL EQUIPMENT AND RIGID DUCTWORK. FABRIC CONNECTIONS SHALL BE AT LEAST 3.5 INCHES WIDE AND HAVE A METAL-EDGED CONNECTOR AT EACH END. PROVIDE METAL COMPATIBLE WITH CONNECTED DUCTS.

TURNING VANES: GALVANIZED STEEL, COMPLYING WITH SMACNA, VANES SHALL BE SINGLE WALL FOR DUCTS UP TO 48 INCHES WIDE AND DOUBLE WALL FOR LARGER DIMENSIONS. ALL 90 DEGREE SQUARE ELBOWS AND TEES SHALL HAVE TURNING VANES (SUPPLY & RETURN DUCT).

#### **DUCT INSULATION:**

ALL CONCEALED SUPPLY AND RETURN DUCTS SHALL BE INSULATED WITH 2.2 INCH THICK MINERAL-FIBER BLANKET INSULATION, ASTM C533 TYPE II AND ASTM C1290 TYPE III, WITH FACTORY-APPLIED FSK JACKET AND 3/4 LB. NOMINAL DENSITY, EQUAL TO CERTAINTEED "SOFTTOUCH DUCT WRAP".

ALL OUTDOOR SUPPLY AND RETURN DUCTS SHALL BE INSULATED WITH 1.5 INCH THICK MINERAL-FIBER BOARD INSULATION, ASTM C612 TYPE IA OR TYPE IB, WITH FACTORY-APPLIED FSK JACKET AND 2 LB. NOMINAL DENSITY, EQUAL TO CERTAINTEED "CERTAPRO COMMERCIAL BOARD". INSTALL FIELD-APPLIED ALUMINUM JACKET, 0.0020

DUCT LINER (NON-ACOUSTIC) SHALL BE 1 INCH THICK FLEXIBLE CLOSED-CELL ELASTOMERIC DUCT LINER, COMPLYING WITH ASTM C534 TYPE II AND NFPA 90A OR NFPA 90B, EQUAL TO ARMACELL "AP ARMAFLEX".

INCH THICK, OVER INSULATION MATERIAL ON ALL OUTDOOR SUPPLY AND RETURN DUCTS.

ACOUSTIC DUCT LINER SHALL BE 1 INCH THICK FLEXIBLE CLOSED-CELL ELASTOMERIC DUCT LINER, COMPLYING WITH ASTM C534 TYPE II AND NFPA 90A OR NFPA 90B, EQUAL TO ARMACELL "AP COILFLEX".

PROVIDE AND INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN SUCH A WAY AS TO BE INCONSPICUOUS AND FREE FROM ANY POSSIBLE CONDENSATION.

REFRIGERANT PIPING SHALL BE COPPER, TYPE ACR, ANNEALED-TEMPER TUBING AND WROUGHT-COPPER FITTINGS WITH SOLDERED JOINTS SUITABLE FOR CONNECTION WITH SILVER SOLDER.

ALL INDOOR REFRIGERANT SUCTION AND HOT GAS PIPING SHALL BE INSULATED WITH 1 INCH THICK FLEXIBLE CLOSED-CELL ELASTOMERIC INSULATION, EQUAL TO ARMACELL "AP ARMAFLEX".

ALL OUTDOOR REFRIGERANT SUCTION AND HOT GAS PIPING SHALL BE INSULATED WITH 2 INCH THICK FLEXIBLE CLOSED-CELL ELASTOMERIC INSULATION, EQUAL TO ARMACELL "AP ARMAFLEX".

## CONDENSATE DRAIN PIPING:

ALL CONDENSATE DRAIN PIPING AND FITTINGS SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELD JOINTS, CONFORMING TO ASTM D 1785, ASTM D 2466, AND ASTM 2564.

PROVIDE AND INSTALL CONTROL WIRING AND 7-DAY PROGRAMMABLE THERMOSTATS AS REQUIRED UNLESS OTHERWISE SPECIFIED. MOUNT THERMOSTATS 4'-0" A.F.F.

ALL EQUIPMENT FURNISHED UNDER THIS DIVISION SHALL COMPLY WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND THE REQUIREMENTS OF DIVISION 26. ALL POWER WIRING AND FINAL POWER CONNECTIONS TO THE SYSTEM SHALL BE PROVIDED UNDER DIVISION 26. CONTROL WIRING (120V AND LESS) SHALL BE PROVIDED UNDER DIVISION 23 AND EXTEND FROM THE INDICATED 120V POWER CIRCUIT INDICATED ON THE ELECTRICAL DRAWINGS. ALL ELECTRICAL CHARACTERISTICS SHALL BE TAKEN FROM THE ELECTRICAL DRAWINGS AND SPECIFICATIONS AND COORDINATED PRIOR TO ORDERING THE EQUIPMENT. ALL WIRING IN THE CEILING PLENUM SHALL BE PLENUM-RATED CABLE OR INSTALLED IN CONDUIT.

#### MOTORS AND STARTERS

PROVIDE MOTORS, STARTERS, VARIABLE FREQUENCY DRIVES, PUSH BUTTONS, THERMAL OVERLOAD SWITCHES, AND CONTACTORS FOR EQUIPMENT COVERED HEREIN UNLESS OTHERWISE SPECIFIED. INSTALLATION OF STARTERS, PUSH BUTTONS, THERMAL OVERLOAD SWITCHES, AND CONTACTORS (NOT FACTORY INSTALLED) IS SPECIFIED UNDER DIVISION 26.

CLEAN ALL GREASE, OIL, PAINT, AND OTHER CONSTRUCTION DEBRIS FROM THE EXTERIOR SURFACES OF ALL MECHANICAL EQUIPMENT, PIPING, AND DUCTS. CLEAN ALL DUCTS, PLENUMS, AND CASINGS OF DEBRIS AND BLOWN FREE OF ALL PARTICLES OF RUBBISH AND DUST PRIOR TO INSTALLATION OF OUTLET FACES.

BEARINGS THAT REQUIRE LUBRICATION SHALL BE LUBRICATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL CONTROL EQUIPMENT SHALL BE ADJUSTED TO THE SETTINGS INDICATED OR REQUIRED FOR PERFORMANCE AS SPECIFIED. REMOVE ALL STICKERS, RUST, STAINS, LABELS, AND TEMPORARY COVERS BEFORE FINAL ACCEPTANCE. REMOVE FOREIGN MATTER FROM EQUIPMENT, PIPING AND DUCTWORK SYSTEMS AND APPURTENANCES. CLEAN AND POLISH IDENTIFICATION

REMOVE ALL TRASH AND DEBRIS FROM THE JOBSITE ON A DAILY BASIS.

#### TESTING, ADJUSTING, AND BALANCING:

ALL WORK SHALL BE TESTED AND BALANCED BY AN INDEPENDANT CERTIFIED TAB SPECIALIST. TAB SPECIALIST SHALL BE CERTIFIED BY AABC, NEBB, OR TABB.

SUBMIT FINAL TEST AND BALANCE REPORT FOR REVIEW AND APPROVAL PRIOR TO TURN-OVER OF FINAL PROJECT.

**DESIGN CONDITIONS** SUMMER WINTER COMMENTS INDOORS 75°Fdb 50%RH 70°Fdb OUTDOORS 94°Fdb / 75°Fwb 21°Fdb

(1) OUTDOOR AIR QUANTITIES BASED ON ASHRAE 62.1-2013

2 VENTILATION RATES BASED ON ASHRAE 62.1-2013 (3) BASED ON SOUTH CAROLINA ENERGY CODE

	HVAC LEGEND
SYMBOL	DESCRIPTION
	SUPPLY DIFFUSER
	RETURN AIR GRILLE
	CEILING MOUNTED EXHAUST FAN
A 100	MARK/CFM (SEE DIFFUSER/GRILLE SCHEDULE)
30/14	DUCT SIZE (WIDTH/HEIGHT)
	MANUAL VOLUME DAMPER
T	THERMOSTAT, WALL MOUNTED
$\bigcirc$	VRF SYSTEM CONTROLLER, WALL MOUNTED
(\$)	DOAS SPACE TEMPERATURE/REL. HUMIDITY SENSOR
(D)	DOAS CONTROLLER, WALL MOUNT
——R——	REFRIGERANT PIPING
ø	ROUND (DIAMETER)
<b>~</b>	AIR FLOW DIRECTION
******	FLEX DUCT (LOW PRESSURE)
	NEW DUCTWORK
SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
ОА	OUTDOOR AIR
U.N.O.	UNLESS NOTED OTHERWISE

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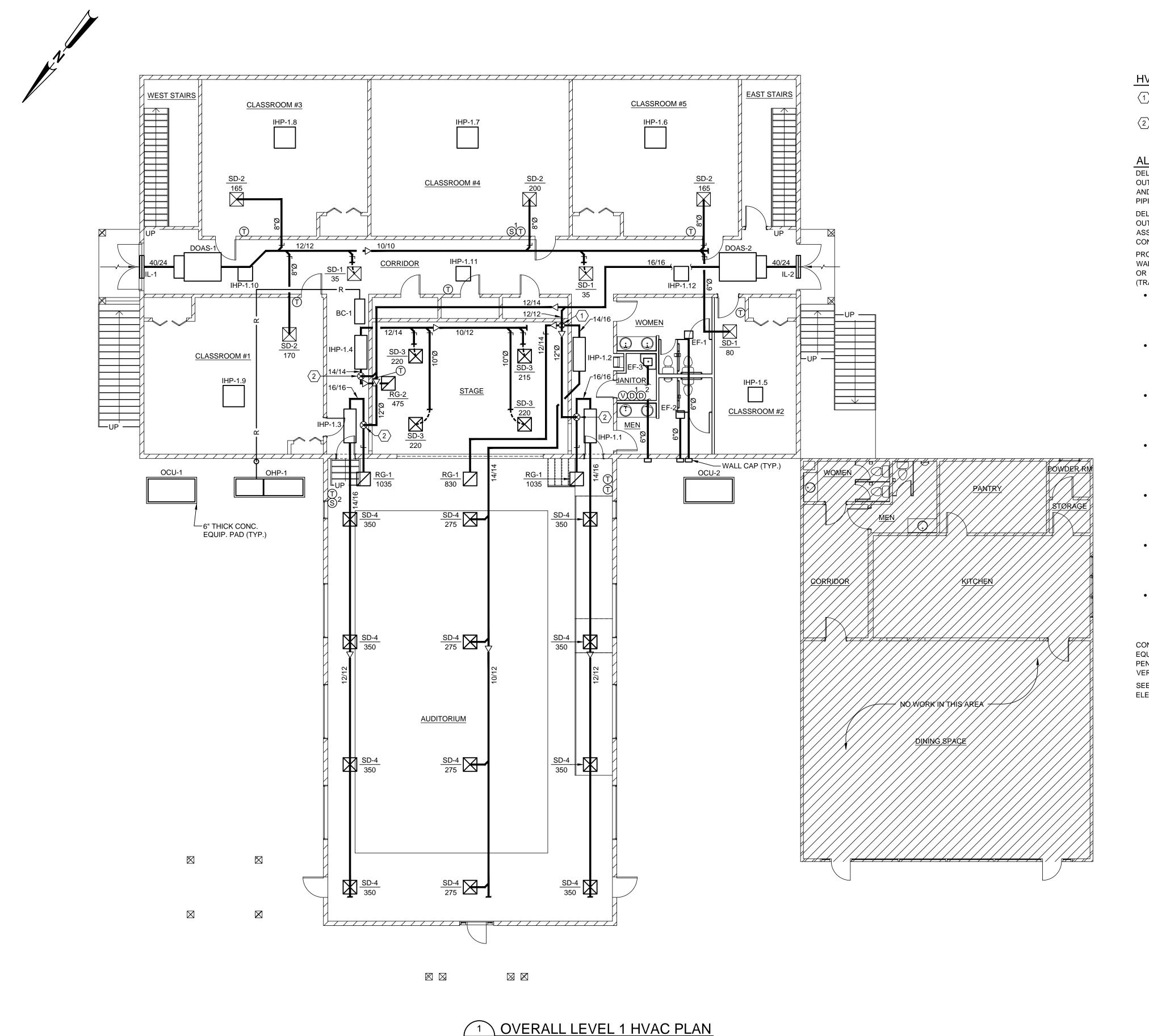
SHEET TITLE:

**HVAC GENERAL NOTES AND** 

AS NOTED

M-001

**LEGEND** 



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

#### **HVAC GENERAL NOTES:**

- 10"Ø OA DUCT WITH MANUAL VOLUME DAMPER DOWN TO RA DUCTWORK.

2 - 12"Ø OA DUCT WITH MANUAL VOLUME DAMPER DOWN TO RA DUCTWORK.

ALTERNATE #2 NOTES:

DELETE VRF SYSTEM IN ITS ENTIRETY, INCLUDING OUTDOOR UNITS, INDOOR UNITS, BC CONTROLLER, AND ALL ASSOCIATED DUCTWORK, DIFFUSERS, PIPING, CONTROLS, AND APPURTENANCES.

DELETE DOAS SYSTEM IN ITS ENTIRETY, INCLUDING OUTDOOR UNITS, INDOOR UNITS, LOUVERS, AND ALL ASSOCIATED DUCTWORK, DIFFUSERS, PIPING, CONTROLS, AND APPURTENANCES.

PROVIDE AND INSTALL NINE (9) EXTERIOR, WALL-MOUNT, SELF-CONTAINED HEAT PUMPS (BARD OR EQUAL) AND ONE (1) SPLIT SYSTEM HEAT PUMP (TRANE OR EQUAL), AS FOLLOWS:

- CLASSROOM #1: ONE (1) WALL-MOUNT, 2-TON NOMINAL COOLING CAPACITY, 800 CFM SA, 160 CFM OA, 6 KW STRIP HEAT, 35 MCA, 40 MOCP, 208/3/60, WITH BI-POLAR IONIZATION GENERATOR (GPS OR EQUAL).
- CLASSROOM #2: ONE (1) WALL-MOUNT, 1.5-TON NOMINAL COOLING CAPACITY, 600 CFM SA, 120 CFM OA, 4 KW STRIP HEAT, 37 MCA, 40 MOCP, 208/1/60, WITH BI-POLAR IONIZATION GENERATOR (GPS OR EQUAL).
- CLASSROOM #3: ONE (1) WALL-MOUNT, 1.5-TON NOMINAL COOLING CAPACITY, 600 CFM SA, 120 CFM OA, 4 KW STRIP HEAT, 37 MCA, 40 MOCP, 208/1/60, WITH BI-POLAR IONIZATION GENERATOR (GPS OR EQUAL).
- CLASSROOM #4: ONE (1) WALL-MOUNT, 2-TON NOMINAL COOLING CAPACITY, 800 CFM SA, 160 CFM OA, 6 KW STRIP HEAT, 35 MCA, 40 MOCP, 208/3/60, WITH BI-POLAR IONIZATION GENERATOR (GPS OR EQUAL).
- CLASSROOM #5: ONE (1) WALL-MOUNT, 1.5-TON NOMINAL COOLING CAPACITY, 600 CFM SA, 120 CFM OA, 4 KW STRIP HEAT, 37 MCA, 40 MOCP, 208/1/60, WITH BI-POLAR IONIZATION GENERATOR (GPS OR EQUAL).
- AUDITORIUM: FOUR (4) WALL-MOUNT, 3-TON NOMINAL COOLING CAPACITY, 1200 CFM SA, 240 CFM OA, 6 KW STRIP HEAT, 41 MCA, 45 MOCP, 208/3/60, WITH BI-POLAR IONIZATION GENERATOR (GPS OR EQUAL).
- CORRIDOR/RESTROOM: ONE (1) SPLIT SYSTEM. 2-TON NOMINAL COOLING CAPACITY, 800 CFM SA, 120 CFM OA, 3.6 KW STRIP HEAT, 25 MCA, 25 MOCP (INDOOR UNIT), 14 MCA, 25 MOCP (OUTDOOR UNIT), 208/1/60.

CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL EQUIPMENT LOCATIONS, EXTERIOR WALL PENETRATIONS AND EQUIPMENT SUPPORTS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID. SEE ELECTRICAL DRAWINGS FOR ALTERNATE #2 ELECTRICAL NOTES.

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

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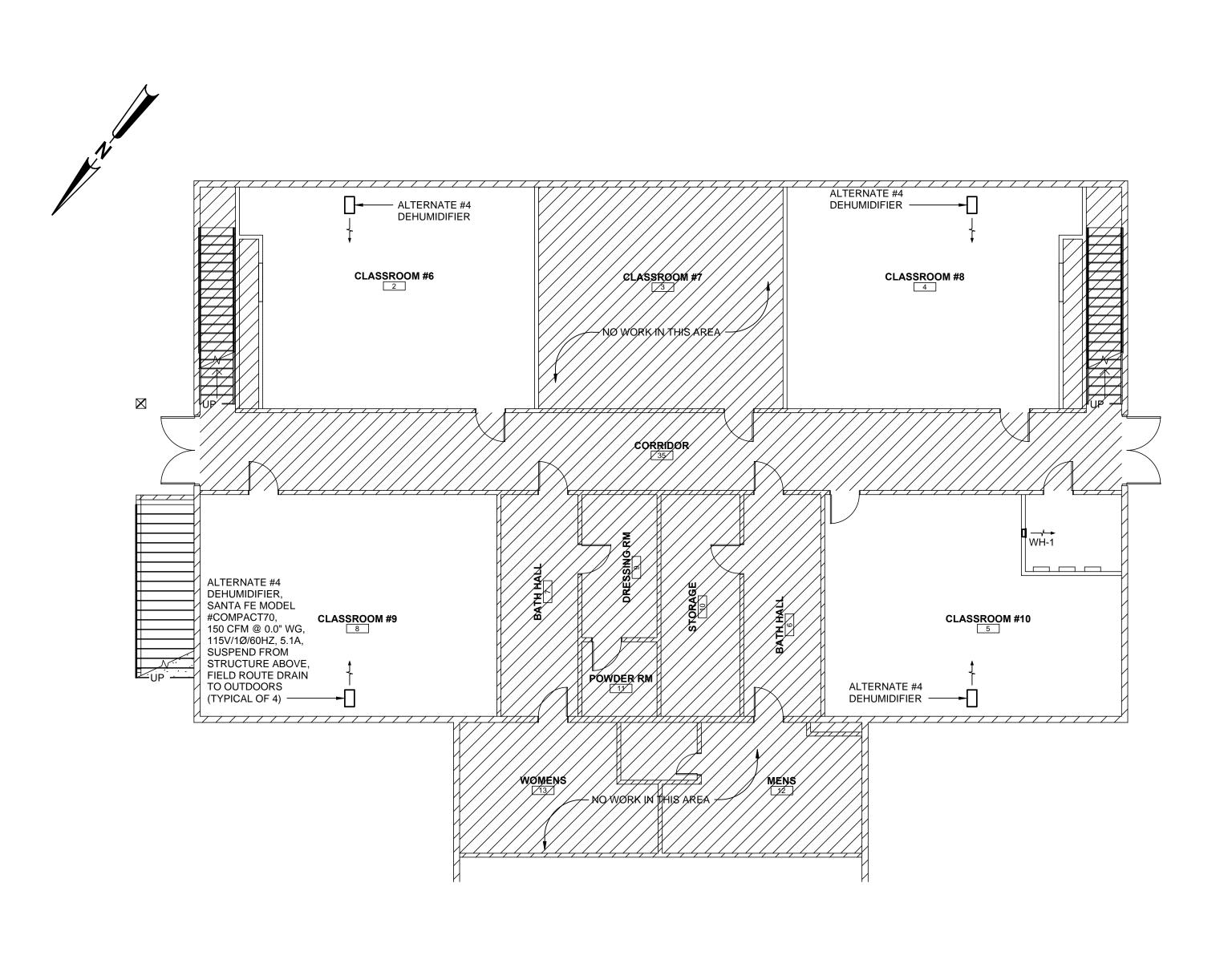
PROJECT NO. DRAWN BY: MNB CHECKED BY: CVW 02/14/2017

SHEET TITLE :

**LEVEL 1 HVAC PLANS** 

AS NOTED

M-101



1 BASEMENT HVAC PLAN

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

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0 1 2 4 8 16 24 FT.

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

M-102

	VRF OUTDOOR HEAT PUMP SCHEDULE														
	BASIS OF DES	COOLING	HEATING	REFRIG. O.D.		MIN.	ELECTRICAL			NOTES					
MARK	MANUFACTURER	MODEL MBH MBH		MBH	LIQUID	SUCTION	EER	MCA	MOCP	V/Ø/Hz					
OHP-1	MITSUBISHI	PURY-P216TSLMU	219.8	239.8	1-1/8	1-1/8	11.7	1	2	208/3/60	3(4)5)				

1 MODULE 1: 42A 2 MODULE 1: 60A MODULE 2: 33A

MODULE 2: 50A

SCHEDULE

③ SEE VRF BC CONTROLLER ④ TWINNING KIT ⑤ PROVIDE SYSTEM REMOTE CONTROLLER

	VRF AIR HANDLING UNIT SCHEDULE																
	BASIS OF DESIGN		BASIS OF DESIGN		BASIS OF DESIGN		BASIS OF DESIGN		NOM	NOM MAY FOR		COOL	ING MBH	LIFATING		ELECTR	
MARK	MANUFACTURER	MODEL	NOM.	MAX. O/A	E.S.P. "W.C.			HEATING MBH		LLLOTI	ICAL	NOTES					
	MANUFACTURER	NO.	Ci ivi	0/4	VV.C.	TOTAL	SENSIBLE	IVIDIT	MCA	MOCP	V/Ø/Hz						
IHP-1.1	MITSUBISHI	PVFY-P48NAMU	1400	365	0.8	48.1	33.9	54.0	5.63	15	208/1/60	1234					
IHP-1.2	MITSUBISHI	PVFY-P36NAMU	1100	270	0.8	36.1	26.0	40.0	4.13	15	208/1/60	1234					
IHP-1.3	MITSUBISHI	PVFY-P48NAMU	1400	365	0.8	48.1	33.9	54.0	5.63	15	208/1/60	1234					
IHP-1.4	MITSUBISHI	PVFY-P30NAMU	875	400	0.5	30.1	21.9	34.0	4.13	15	208/1/60	1234					
IHP-1.5	MITSUBISHI	PLFY-P08NCMU	350	0	-	8.0	6.6	9.0	0.29	15	208/1/60	1234					
IHP-1.6	MITSUBISHI	PLFY-P18NEMU	635	0	-	18.0	13.5	20.0	0.43	15	208/1/60	1234					
IHP-1.7	MITSUBISHI	PLFY-P24NEMU	810	0	-	24.1	16.9	27.0	0.54	15	208/1/60	1234					
IHP-1.8	MITSUBISHI	PLFY-P18NEMU	635	0	-	18.0	13.5	20.0	0.42	15	208/1/60	1234					
IHP-1.9	MITSUBISHI	PLFY-P24NEMU	810	0	-	24.1	16.9	27.0	0.54	15	208/1/60	1234					
IHP-1.10	MITSUBISHI	PLFY-P08NCMU	350	0	-	8.0	6.6	9.0	0.29	15	208/1/60	1234					
IHP-1.11	MITSUBISHI	PLFY-P08NCMU	350	0	-	8.0	6.6	9.0	0.29	15	208/1/60	1234					
IHP-1.12	MITSUBISHI	PLFY-P08NCMU	350	0	-	8.0	6.6	9.0	0.29	15	208/1/60	1234					

PROVIDE WIRED CONTROLLER

② SEE 1/M-201 FOR VRF SCHEMATIC DETAIL

(3) ROUTE CONDENSATE DRAIN PIPING TO MOP SINK IN JANITOR CLOSET

4 MIN. MERV 6 FILTER

	VRF BC CONTROLLER SCHEDULE												
	BASIS OF D	DESIGN	ACCOCIATED		ELECTR	ICAL							
MARK	MANUFACTURER	MODEL	ASSOCIATED VRF OUTDOOR UNIT	ELLETRICAL			NOTES						
IVIAIN	WANDFACTURER	NO.	VICE OUT DOOR OIVE	MCA	MOCP	V/Ø/Hz							
BC-1	MITSUBISHI	CMB-P1016NU-HA	OHP-1	1.65	15	208/1/60							

	AIR DISTRIBUTION DEVICE SCHEDULE														
MARK	SIZE (IN	NCHES)	MC	UNTING		TUDOW	MATE	RIAL	DEVICE CONN.		BASIS OF DESIGN		NOTES		
WARK	FACE	NECK	SIDEWALL	CEILING	DUCT THROW	STEEL	ALUM.	1	2	3	MANUF.	MODEL NO.	NOTES		
SD-1	24/24	6"Ø		×		4	×		X			TITUS	TMS	12	
SD-2	24/24	8"Ø		X		4	X		×			TITUS	TMS	12	
SD-3	24/24	10"Ø		×		4	×		×			TITUS	TMS	12	
SD-4	24/24	10"Ø		X		4	X		×			TITUS	TMS	123	
RG-1	24/24	22/22		×		-	×				×	TITUS	PAR	24	
RG-2	24/24	12/12		X		-	X				×	TITUS	PAR	12	
									·						

1. SYMBOL KEY - FIRST LETTER: S-SUPPLY, R-RETURN, E-EXHAUST, T-TRANSFER AND D-DOOR.

SECOND LETTER: D-DIFFUSER, R-REGISTER AND G-GRILLE.

2. CONNECTIONS - 1. ROUND DUCT TO ROUND NECK.

(DEVICE CONN. 2. ROUND DUCT TO RECTANGULAR NECK. COLUMN) 3. RECTANGULAR DUCT TO RECTANGULAR NECK.

3. FIELD PAINT ALL SUPPLIES AND RETURNS TO MATCH CEILING AND/OR WHITE FINISH OTHERWISE.

4. 1, 2, 3 AND 4-WAY AND DOUBLE DEFLECTION (DD) AIR DEVICES ARE INDICATED IN "THROW" COLUMN.

(1) DUCT RUNOUT SIZE SAME AS NECK (2) PROVIDE WITH R-6 FOIL-CONNECTION SIZE, U.N.O.

BACKED INSULATION

③ INTEGRAL FACE ADJUSTABLE **VOLUME DAMPER** 

(4) SEE DETAIL 11/M-202

	DOAS CONDENSING UNIT SCHEDULE												
BASIS OF DESIGN COOLING MBH ELECTRICAL													
MARK	MANUFACTURER MODEL		COOL			ELECTR	ICAL	NOTES					
IVIAINN	WANUFACTURER	NO.	TOTAL	SENSIBLE	MCA	MOCP	V/Ø/Hz						
OCU-1	UNITED COOL AIR	PBC10G3ASTA	65.8	36.0	6.3	15	208/3/60	1					
OCU-2	UNITED COOL AIR	PBC15G3ATA	109.5	60.3	6.3	15	208/3/60	1					

DISCONNECT SWITCH

	DOAS AIR HANDLING UNIT SCHEDULE												
	BASIS OF D	ESIGN	NOM	L C D	ELECTRIC	HOT GAS		ELECTR					
MARK	MANUFACTURER	MODEL	NOM. CFM	E.S.P. "W.C.	STRIP HEAT	REHEAT COIL	(SINC	GLE POIN	IT CONN.)	NOTES			
	WANDFACTURER	NO.	OI W	77.0.	KW @ 208V	MBH	MCA	MOCP	V/Ø/Hz				
DOAS-1	UNITED COOL AIR	OSAH5G3ASDTA15-F	850	0.5	15	18.4	50.9	55	208/3/60	1234			
DOAS-2	UNITED COOL AIR	OSAH8G3ADFTA25-T	1400	0.5	25	30.2	85.0	90	208/3/60	1234			

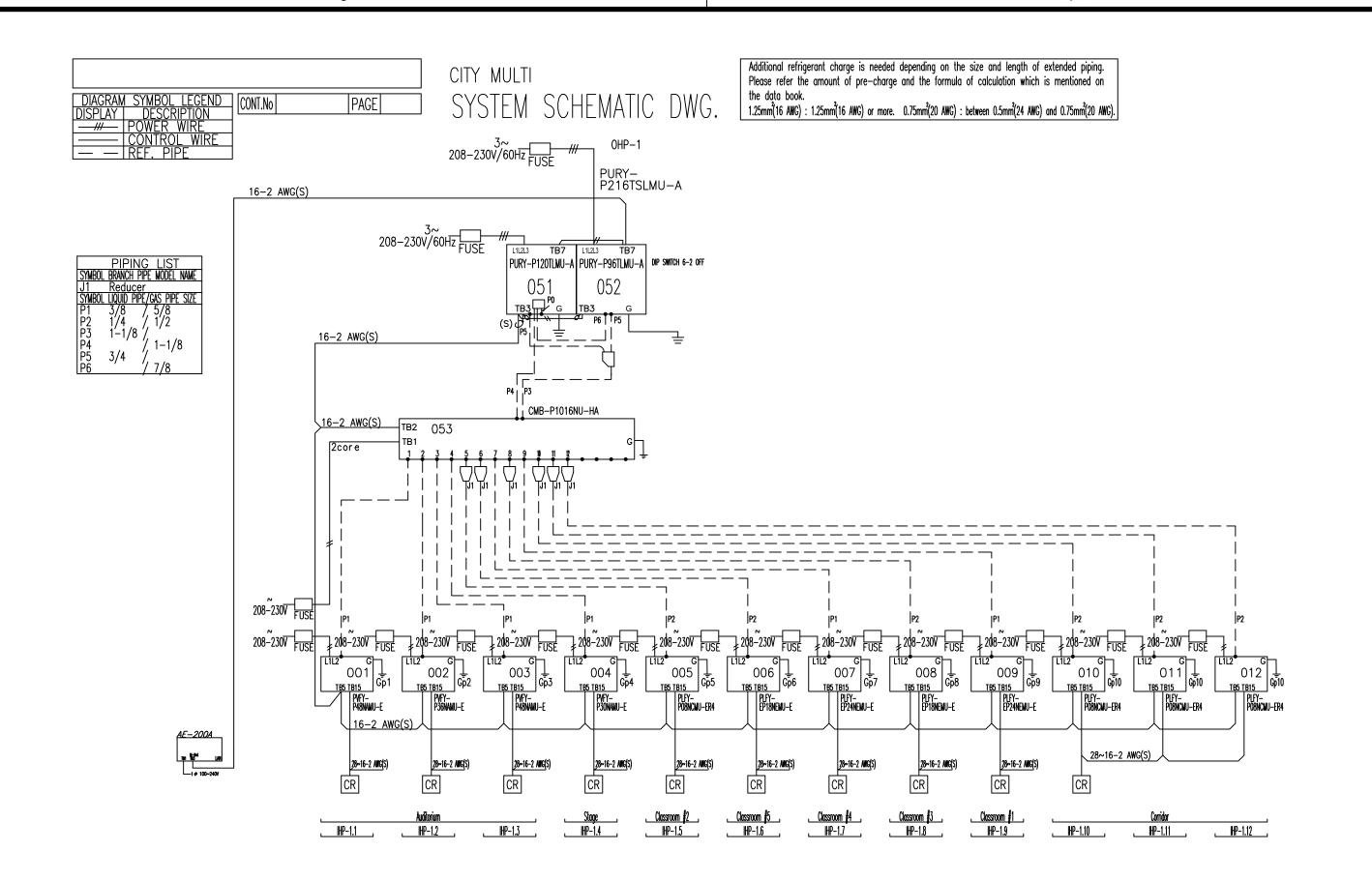
1) FIELD ROUTE CONDENSATE DRAIN PIPING TO MOP SINK IN JANITOR

CLOSET

② FIELD ROUTE REFRIGERANT PIPING TO CORRESPONDING OHP U.N.O.

4 MODULATING HOT GAS REHEAT

3 MIN. MERV 6 FILTER





BASIS OF DESIGN  MODEL TYPE (N. WO) OF A FREM WATTS SONES ELECTRICAL		
MARK MANUFACTURER MODEL TYPE (IN WC) CFM FRPM WATTS SONES V/Ø/Hz	NOTES	
EF-1         GREENHECK         SP-L80         CEILING         0.25         70         850         27         2.7         115/1/60	12	
EF-2         GREENHECK         SP-L80         CEILING         0.25         70         850         27         2.7         115/1/60	12	
EF-3         GREENHECK         SP-L50         CEILING         0.25         40         800         18         2.7         115/1/60	12	

1 INTERLOCK WITH LIGHTS

② BACKDRAFT DAMPER

	LOUVER SCHEDULE										
MARK	ARK BASIS OF DESIGN (GREENHECK P/N)  TYPE CFM LOUVER SIZE MIN. FREE AREA (FT²)  BOT. OF LOUVER NOTES										
IL-1	ESD-635X	INTAKE	850	40"x24"	3.19	18'	12345				
IL-2	ESD-635X	INTAKE	1400	40"x24"	3.19	18'	12345				
1 BIRDS	1) BIRDSCREEN ② WELDED CONSTRUCTION ③ FLANGED FRAME ④ MANUAL BACKDRAFT ⑤ PREFINISH WITH BAKED										

DAMPER

ON "KYNAR" FINISH

	ELECTRIC WALL HEATER SCHEDULE											
MARK	BASIS OF DESIGN (QMARK P/N)	NOTES										
WH-1	CWH1101DSF	3,413	1,000	8.4	115/1/60	123						

RECESSED MOUNTING FRAME

(2) CONTROLLED BY INTEGRAL TAMPER-RESISTANT THERMOSTAT

③ DISCONNECT SWITCH

## DOAS SEQUENCE OF OPERATIONS

IMPLEMENT THE FOLLOWING CONTROL STRATEGIES VIA CONTROLLERS FOR DOAS-1 AND DOAS-2.

## OCCUPIED MODE -

THE SUPPLY FAN SHALL RUN CONTINUOUSLY. THE COOLING COIL, CONDENSER, HOT GAS REHEAT COIL, AND ELECTRIC HEATER WILL CYCLE ON/OFF AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AND RELATIVE HUMIDITY SETPOINTS.

RECOMMENDED SPACE SETPOINTS (ADJUSTABLE) ARE AS FOLLOWS:

COOLING MODE = 75°F HEATING MODE = 70°F

MAX. RELATIVE HUMIDITY = 50%

UNOCCUPIED MODE -

UNIT IS OFF.

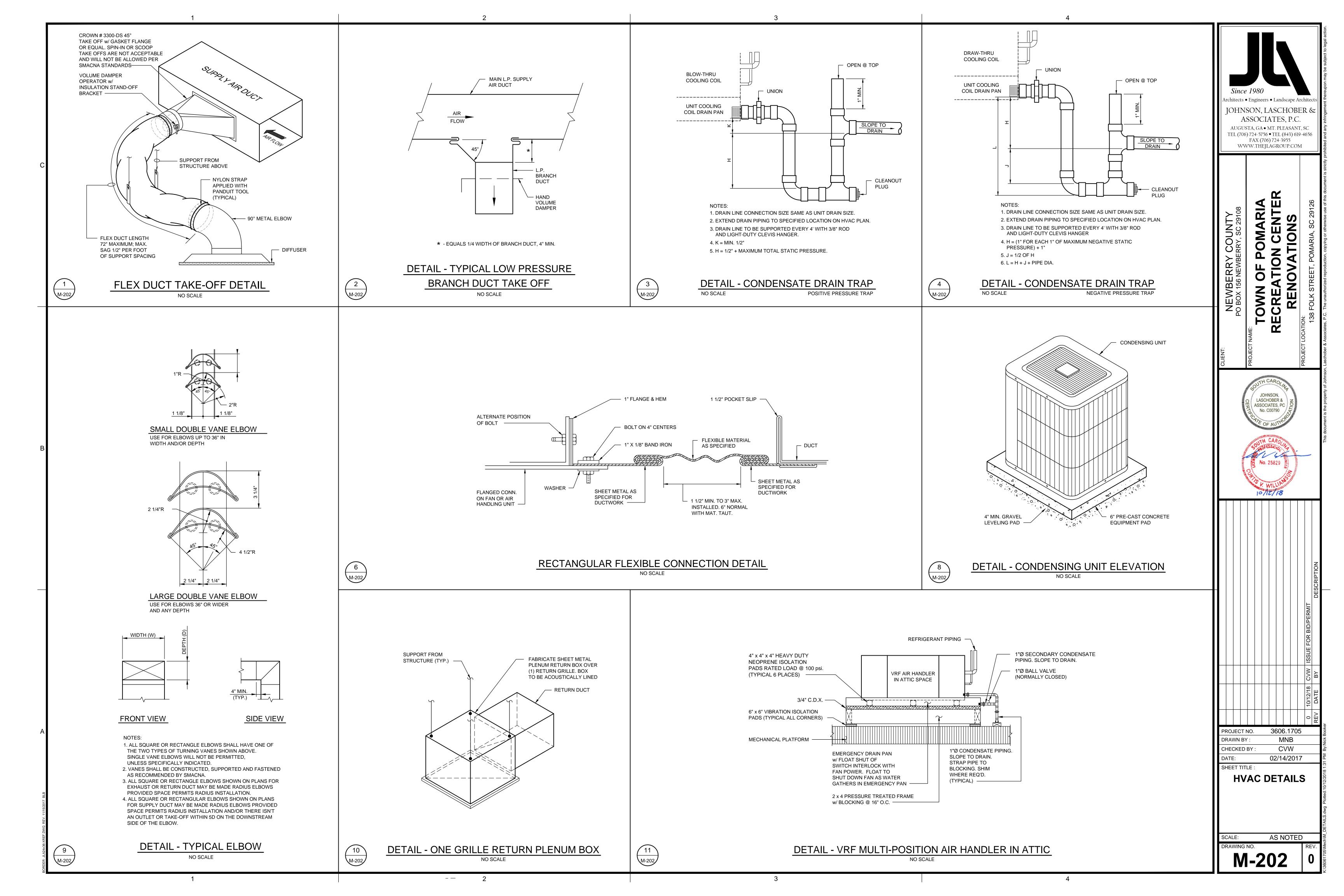
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PROJECT NO. 3606.1705 DRAWN BY: MNB CHECKED BY: CVW

02/14/2017 SHEET TITLE : **HVAC SCHEDULES** 

AS NOTED



## **ELECTRICAL GENERAL NOTES:**

THESE GENERAL NOTES PRESENT AND/OR SUMMARIZE KEY PRODUCT INFORMATION FOR THE PLAN READER'S CONVENIENCE. SEE PLANS AND SPECIFICATIONS FOR FURTHER

WORK COVERED BY THIS DOCUMENT SHALL INCLUDE ALL LABOR, MATERIAL, PRODUCTS, AND SERVICES FOR, AND INCIDENTAL TO, INSTALLATION OF COMPLETE AND OPERATING ELECTRICAL SYSTEMS DRAWN OR SPECIFIED.

ALL WORK SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES INCLUDING, BUT NOT LIMITED TO, THE NATIONAL ELECTRICAL CODE (NFPA 70-2014). ALL MATERIALS SHALL BE NEW AND UL LISTED/LABELED AS APPROPRIATE. FINAL LOCATIONS FOR ROUGH-INS SHALL BE VERIFIED WITH ACTUAL EQUIPMENT BEING CONNECTED. SUPPORT AND ATTACH ELECTRICAL EQUIPMENT IN ACCORDANCE WITH SEISMIC CONDITIONS AS DETERMINED BY THE STRUCTURAL ENGINEER/BUILDING DESIGNER AND THE INTERNATIONAL BUILDING CODE 2015. AFTER COMPLETING INSTALLATION, REMOVE BURRS, DIRT, AND CONSTRUCTION DEBRIS FROM ALL ELECTRICAL WORK.

COORDINATE OUTLET LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS AND

COORDINATE HVAC AND PLUMBING EQUIPMENT LOCATIONS WITH MECHANICAL PLANS, ELEVATIONS AND DETAILS.

COORDINATE SITE LIGHTING AND SITE UTILITIES WITH LANDSCAPING/CIVIL PLANS AND

ALL SIGNAL RACEWAYS SHALL BE 3/4" DIA. MIN. UNLESS OTHERWISE NOTED.

COORDINATE ELECTRICAL SERVICE AND METERING REQUIREMENTS WITH SERVING UTILITY PRIOR TO BID AND INSTALLATION.

COORDINATE SIGNAL SERVICE REQUIREMENTS WITH SERVING UTILITY.

ELECTRICAL INSTALLATION SHALL BE SEISMIC BRACED PER APPLICABLE SECTIONS OF THE STANDARD BUILDING CODE.

CONSULT MANUFACTURERS' SHOP DRAWINGS FOR REQUIREMENTS AND EXACT LOCATION OF ELECTRICAL CONNECTIONS FOR EQUIPMENT FURNISHED BY OTHERS. BRANCH-CIRCUIT WIRING SHALL MEET ALL REQUIREMENTS OF THE EQUIPMENT

SIZE DISCONNECT SWITCHES AND OVERCURRENT PROTECTION IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURERS' RECOMMENDATIONS AND THE N.E.C.

SIZE FUSES IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURERS' RECOMMENDATIONS AND THE N.E.C.

INSTALL JUNCTION BOXES, CONDUIT BODIES, AND HANDHOLE ENCLOSURES SUCH THAT WIRING WITHIN IS ACCESSIBLE IN ACCORDANCE WITH NEC 314.29.

MOUNTING HEIGHT DIMENSIONS FOR WIRING DEVICES ARE FROM THE FINISHED FLOOR UP TO THE CENTER OF THE OUTLET BOX.

CENTER OUTLETS HORIZONTALLY IN ARCHITECTURAL FEATURES.

DO NOT SCALE DRAWINGS. DEVICE LOCATIONS ARE APPROXIMATE UNLESS DIMENSIONED. ACTUAL DEVICE LOCATIONS SHALL BE FIELD COORDINATED WITH ALL OTHER TRADES AND APPLICABLE CODES.

INSTALL PHOTO CELL(S) ABOVE ROOF. ORIENT TO NORTHERN EXPOSURE AND SHIELD FROM EXTRANEOUS LIGHT. PROVIDE FLASHING AND SEAL ROOF PENETRATION(S).

INSTALL ADDITIONAL BRANCH-CIRCUIT CONDUCTORS TO PROVIDE UN-SWITCHED CONNECTION TO EACH EMERGENCY FIXTURE BATTERY.

DO NOT USE COMMON NEUTRALS FOR MULTI-WIRE CIRCUITS. INSTALL A NEUTRAL FOR EACH PHASE.

ALL CONDUCTORS SHALL BE NO SMALLER THAN #12.

GENERAL CONTRACTOR TO PROVIDE ACCESS PANELS FOR ALL INACCESSIBLE, ABOVE-CEILING ELECTRICAL EQUIPMENT AND JUNCTION BOXES PER 2014 NEC SECTION

314.29. COORDINATE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.

INSULATION SHALL COMPLY WITH NEMA WC 5. CONDUCTORS #8 AWG AND LARGER SHALL BE CONCENTRIC STRANDED. CONDUCTORS #10 AND SMALLER SHALL BE SOLID.

TYPE AND INSULATION (SERVICE): COPPER, TYPE THWN TYPE AND INSULATION (FEEDER): COPPER, TYPE THHN/THWN TYPE AND INSULATION (BRANCH): COPPER, TYPE THHN/THWN COPPER, TYPE MC

COLOR CODING (208/120 V, 3Ø): A-BLACK, B-RED, C-BLUE, N-WHITE, G-GREEN

CONDUIT BODIES AND FITTINGS FOR RIGID METAL CONDUIT SHALL BE CAST THREADED TYPE. CONDUIT FITTINGS FOR ELECTRICAL METALLIC TUBING SHALL BE COMPRESSION TYPE. INSTALL 200 Ib NYLON PULL CORD IN ALL EMPTY RACEWAYS FOR FUTURE USE. APPLY FIRESTOPPING TO ELECTRICAL PENETRATIONS OF FIRE-RATED FLOOR AND WALL ASSEMBLIES TO RESTORE ORIGINAL FIRE-RESISTANCE RATING OF ASSEMBLY.

OUTDOORS EXPOSED: RIGID GALVANIZED STEEL CONFORMING TO ANSI C80.5 OUTDOORS UNDERGROUND: RIGID NONMETALLIC CONDUIT (SCHEDULE 40 PVC) CONFORMING TO NEMA TC 2 OUTDOORS CONNECTED TO VIBRATING OR MOTORIZED EQUIPMENT: LIQUIDTIGHT

FLEXIBLE METAL CONDUIT CONFORMING TO UL 360 INDOORS CONCEALED: ELECTRICAL METALLIC TUBING CONFORMING TO ANSI C80.3 INDOORS EXPOSED: ELECTRICAL METALLIC TUBING CONFORMING TO ANSI C80.3 INDOORS CONNECTED TO VIBRATING OR MOTORIZED EQUIPMENT: FLEXIBLE METALLIC CONDUIT CONFORMING TO UL 1

BOXES SHALL COMPLY WITH NEMA OS 1 AND SHALL BE SHEET METAL TYPE WITH PLASTER RING IN DRY LOCATIONS. BOXES SHALL COMPLY WITH NEMA FB 1 AND SHALL BE CAST METAL TYPE FD WITH GASKETED COVER IN DAMP OR WET LOCATIONS.

BOXES SHALL BE HOT-DIPPED GALVANIZED STEEL. BOX COVERS SHALL BE GASKETED TYPE WITH SCREWED OR BOLTED FASTENERS.

DEVICES SHALL COMPLY WITH NEMA WD 1 AND WD 6. DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE OR BETTER. ALL DEVICES SHALL BE OF THE GROUNDING TYPE. DEVICES SHALL BE MOUNTED FLUSH WITH THE LONG DIMENSION VERTICAL AND GROUNDING TERMINAL OF RECEPTACLES ON TOP. SWITCHES SHALL BE QUIET TYPE, RATED 20 AMPERES AT 120/277 VOLTS. GROUND FAULT CIRCUIT INTERRUPTERS SHALL BE FEED-THROUGH TYPE. WEATHERPROOF COVERS SHALL BE PROVIDED IN DAMP OR WET LOCATIONS. PROGRAM OCCUPANCY SENSORS FOR FIFTEEN MINUTES WITH MEDIUM SENSITIVITY. TRAIN OWNER TO ADJUST TIME AND SENSITIVITY.

DEVICE COLOR: SELECTED BY ARCHITECT.

DEVICE COVER: SMOOTH PLASTIC WITH COLOR TO MATCH DEVICE COLOR

IN ADDITION TO CODE-REQUIRED LABELING, ALL PANELBOARDS, ELECTRICAL ENCLOSURES, TRANSFORMERS, AND DISCONNECT SWITCHES SHALL BE IDENTIFIED WITH AN ENGRAVED PLASTIC LAMINATED NAMEPLATE. LETTERING SHALL BE 1/2" INCHES HIGH AND SHALL BE WHITE ON A BLACK BACKGROUND. NAMEPLATES SHALL BE ATTACHED TO EQUIPMENT WITH STAINLESS STEEL SELF-TAPPING SCREWS. CONTRACTOR TO COORDINATE WITH THE UTILITY COMPANY TO DETERMINE THE AVAILABLE FAULT CURRENT AT THE PANEL LOCATION SHOWN ON THE DRAWINGS. CONTRACTOR TO PROVIDE ELECTRICAL EQUIPMENT WITH AIC RATING OVER THE CALCULATED FAULT CURRENT. CALCULATED FAULT CURRENT SHALL BE LISTED ON EACH PIECE OF ELECTRICAL EQUIPMENT. CONTRACTOR TO PROVIDE AND AFFIX ARC FLASH WARNING LABELS ON ALL ELECTRICAL SWITCHBOARDS, PANELBOARDS, MOTOR CONTROL CENTERS, LOAD CENTERS, DISCONNECTS AND ENCLOSED CIRCUIT BREAKERS PER 2014 NEC ARTICLE 110.16.

GROUNDING AND BONDING COMPONENTS SHALL COMPLY WITH UL 467. AN INSULATED EQUIPMENT-GROUNDING CONDUCTOR SHALL BE INSTALLED WITH CIRCUIT CONDUCTORS FOR ALL FEEDER AND BRANCH CIRCUITS. EXOTHERMIC-WELDED CONNECTIONS SHALL BE USED FOR ATTACHMENT TO STRUCTURAL STEEL AND UNDERGROUND CONNECTIONS. GROUNDING ELECTRODES SHALL BE 3/4" x 10' COPPERWELD TYPE.

PANELBOARDS SHALL COMPLY WITH NEMA PB 1. SHOP DRAWINGS FOR EACH PANELBOARD SHALL BE SUBMITTED AND SHALL INCLUDE BUS CONFIGURATION AND CURRENT RATINGS, OVERCURRENT DEVICE ARRANGEMENT AND SETTINGS, AND PANELBOARD SHORT CIRCUIT RATING. PHASE AND NEUTRAL BUSSES SHALL BE COPPER. AN EQUIPMENT GROUND BUS SHALL BE PROVIDED AND SHALL BE BONDED TO THE PANEL BOX. PANELBOARDS WITH A MAIN SERVICE DISCONNECT SHALL BE LISTED FOR USE AS SERVICE EQUIPMENT. PANELBOARD TRIM SHALL BE BOLT-ON TYPE. CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE. CIRCUIT BREAKERS SHALL BE LISTED FOR SWD, HID OR HACR USE AS APPROPRIATE. MULTI-POLE CIRCUIT BREAKERS SHALL HAVE A COMMON TRIP. TANDEM CIRCUIT BREAKERS SHALL NOT BE USED. FILLER PLATES SHALL BE INSTALLED IN UNUSED SPACES. A TYPED CIRCUIT DIRECTORY SHALL BE INSTALLED ON THE INSIDE OF THE PANELBOARD DOOR.

FUSES SHALL BE NEMA FU 1 CARTRIDGE TYPE. VOLTAGE RATING SHALL BE CONSISTENT WITH CIRCUIT VOLTAGE. ARRANGE FUSES IN FUSIBLE DEVICES SO FUSE RATINGS ARE READABLE WITHOUT REMOVING FUSE. INSTALL TYPEWRITTEN LABELS ON INSIDE DOOR OF EACH FUSIBLE DEVICE TO INDICATE FUSE REPLACEMENT INFORMATION.

MOTOR FEEDER AND BRANCH CIRCUITS: UL CLASS RK5, TIME DELAY OTHER FEEDER AND BRANCH CIRCUITS: UL CLASS RK1, NON-TIME DELAY

SWITCHES SHALL BE FUSED OR NONFUSED NEMA KS 1 TYPE HD. SWITCHES SHALL BE HANDLE LOCKABLE AND INTERLOCKED WITH COVER IN CLOSED POSITION. ENCLOSURES SHALL BE NEMA TYPE 1 IN INDOOR LOCATIONS AND NEMA TYPE 3R IN OUTDOOR LOCATIONS, HVAC EQUIPMENT DISCONNECTS ARE TO BE CONSIDERED ELECTRICAL EQUIPMENT AND SHALL BE INSTALLED TO MAINTAIN WORKING SPACE PER 2014 NEC ARTICLE 110.26.

FIXTURE MOUNTING HARDWARE AND TRIM SHALL BE COORDINATED WITH THE CEILING SYSTEM. RECESSED FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURAL SYSTEM. FLUORESCENT FIXTURE BALLASTS SHALL BE CBM LABELED, CLASS P, SOUND RATING "A", ELECTRONIC, HIGH POWER FACTOR TYPE.

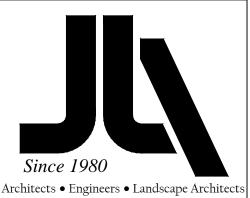
SYSTEM COMPONENTS AND INSTALLATION SHALL CONFORM TO THE NATIONAL FIRE ALARM CODE (NFPA 72-2014). ALL EXPOSED WIRING SHALL BE INSTALLED IN METALLIC RACEWAY. ALL CONCEALED WIRING SHALL BE INSTALLED IN METALLIC RACEWAY STUBBED ABOVE ACCESSIBLE CEILING.

VOICE AND DATA SYSTEMS

PROVIDE EMPTY INFRASTRUCTURE ONLY. INSTALL BLANK FACEPLATES FOR OUTLETS. USE A CONDUIT BUSHING OR INSULATED FITTING TO TERMINATE STUB-UPS. PROVIDE PULL STRING IN EACH CONDUIT.

## **ELECTRICAL SYMBOLS**

⊗	CEILING-MOUNTED EXIT SIGN - SHADING INDICATES FACE(S)
Ю	WALL-MOUNTED EXIT LIGHT FIXTURE SHADING INDICATES FACE(S); ARROW(S) INDICATE PATH OF EGRESS
0	DOWNLIGHT
•	DOWNLIGHT W/ EMERGENCY BATTERY PACK
	2'X4' FIXTURE
	2'X4' FIXTURE W/ EMERGENCY BATTERY PACK
	4' STRIP FIXTURE
	4' STRIP FIXTURE WITH EMERGENCY BATTERY BACK PACK
H	WALL-MOUNTED LIGHT FIXTURE WITH EMERGECNY BATTERY PACK
	UNDER CABINET LIGHT
	GROUND MOUNTED LIGHT FIXTURE
	POLE MOUNTED LIGHT FIXTURE
S	SPST TOGGLE SWITCH 48" AFF TOP OF BOX
s <sub>3</sub>	THREE WAY TOGGLE SWITCH 48" AFF TOP OF BOX
s <sub>4</sub>	FOUR WAY TOGGLE SWITCH 48" AFF TOP OF BOX
s <sub>D</sub>	WALL MOUNTED DIMMER SWITCH 48" AFF TOP OF BOX. LUTRON C-L
S <sub>D3, D4</sub>	DIMMER OR APPROVED EQUAL  THREE WAY / FOUR WAY WALL MOUNTED DIMMER SWITCH 48" AFF  TOP OF BOX. LUTRON MAESTRO DIMMER OR APPROVED EQUAL
⊭	DUPLEX CONVENIENCE OUTLET 18" AFF
₩ <sup>C</sup>	DUPLEX CONVENIENCE OUTLET 6" ABOVE COUNTER/BACKSPLASH, 48" AFF MAX TO TOP OF BOX COORDINATE MOUNTING HEIGHTS WITH MILLWORK
₽ <sub>G</sub>	DUPLEX CONVENIENCE OUTLET 18" AFF GROUND FAULT INTERRUPTER TYPE
⊭ <sub>cg</sub>	DUPLEX CONVENIENCE OUTLET6" ABOVE COUNTER/BACKSPLASH, 48" AFF MAX TO TOP OF BOX.COORDINATE MOUNTING HEIGHTS WITH MILLWORK. GROUND FAULT INTERRUPTER TYPE
$oldsymbol{arphi}_{ ext{WP}}$	DUPLEX CONVENIENCE OUTLET 18" AFF WEATHERPROOF GROUND FAULT INTERRUPTER TYPE
₩ <sub>EWC</sub>	DUPLEX RECEPTACLE - CONCEAL BEHIND OR WITHIN ENCLOSURE OF ELECTRIC WATER COOLER.
<b>⊕</b>	QUADRUPLEX CONVENIENCE OUTLET 18" AFF
TB WWW.	TELEPHONE BOARD 48" x 96" x 3/4" PLYWOOD
∢	COMBINATION DATA/VOICE OUTLET 18" AFF
FACP	FIRE ALARM CONTROL PANEL (FACP)
FAA	FIRE ALARM ANNUNCIATOR
F	FIRE ALARM MANUAL PULL STATION 48" AFF TOP OF BOX
EX	FIRE ALARM AUDIO/VISUAL DEVICE 80" AFF
ф	FIRE ALARM WALL MOUNTED VISUAL DEVICE 80" AFF
<b>-</b> \$	FIRE ALARM CEILING MOUNTED VISUAL DEVICE
EQ	FIRE ALARM CEILING MOUNTED AUDIO/VISUAL DEVICE
<b>S</b>	FIRE ALARM CEILING MOUNTED SMOKE DETECTOR
$\Theta$	FIRE ALARM CEILING MOUNTED HEAT DETECTOR
TS	FIRE ALARM TAMPER SWITCH
FS	FIRE ALARM FLOW SWITCH
	ELECTRICAL PANEL
<u></u>	MOTOR - SEE SCHEDULE
<b>4</b> 1	SPECIAL OUTLET - SEE SCHEDULE
<b>©</b>	CEILING-MOUNTED OCCUPANCY SENSOR - WATTSTOPPER DT-300 OR APPROVED EQUAL
OS	WALL-SWITCH OCCUPANCY SENSOR 48" AFF WATTSTOPPER DW-100 OR APPROVED EQUAL
OS	WALL MOUNTED OCCUPANCY SENSOR 48" AFF WATTSTOPPER DT-200 OR APPROVED EQUAL



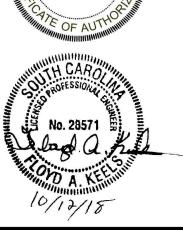
JOHNSON, LASCHOBER &

ASSOCIATES, P.C. AUGUSTA, GA • MT. PLEASANT, SC TEL (706) 724-5756 • TEL (843) 619-4656 FAX (706) 724-3955 WWW.THEJLAGROUP.COM

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PROJECT NO. 3606.1705 DRAWN BY JAP/JFP CHECKED BY: FAK

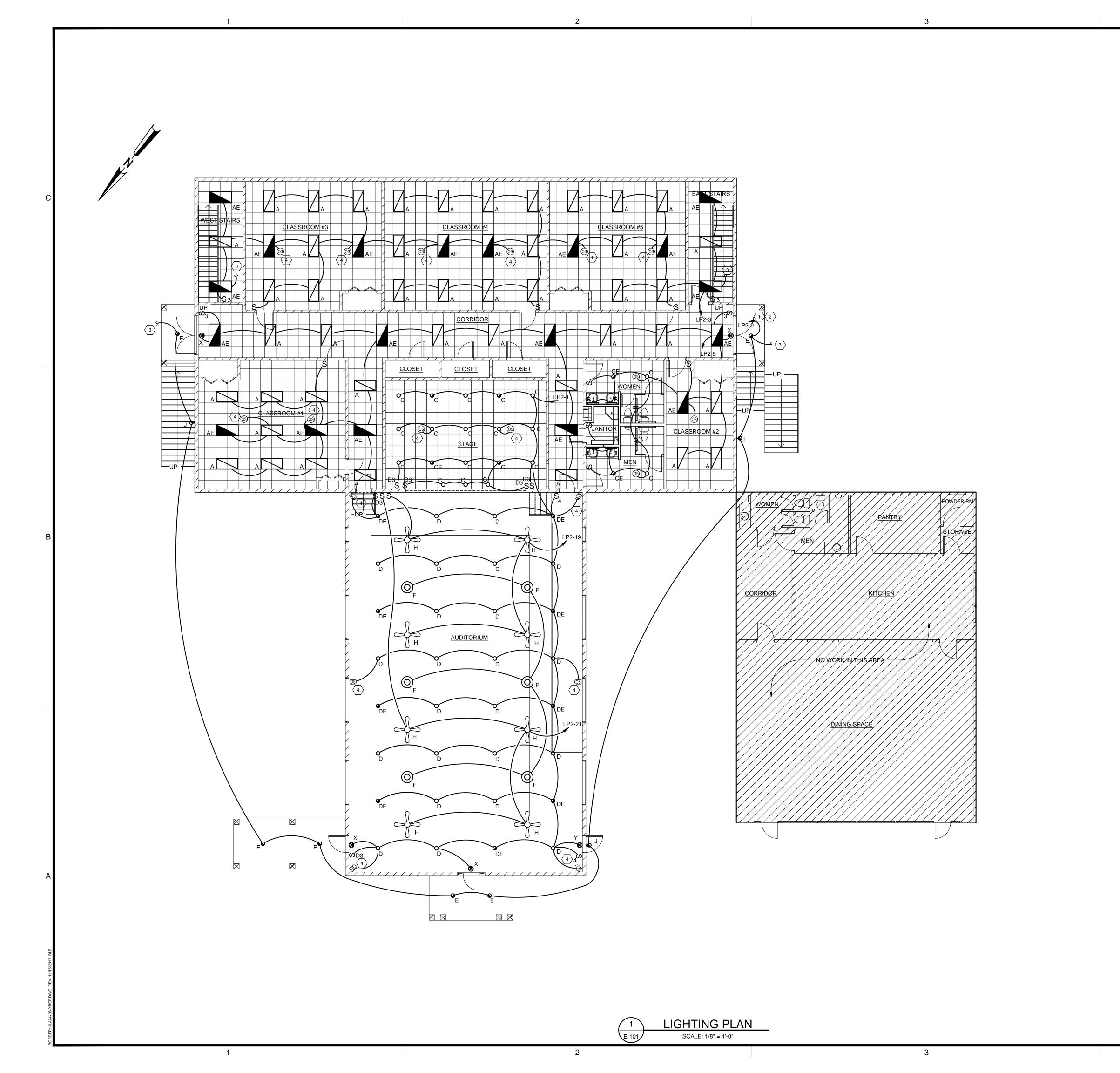
02/14/2017

SHEET TITLE:

ELECTRICAL NOTES AND SYMBOLS

AS NOTED

E-001



## POWER AND SIGNAL PLAN KEYED NOTES:

- 1 #10AWG ENTIRE CIRCUIT
- $\begin{picture}(2)\line \line \lin$
- (3) CONTINUE TO FLOOR BELOW.
- $\overline{\langle}_4\rangle$  PARALLEL OCCUPANCY SENSORS IN THIS SPACE.

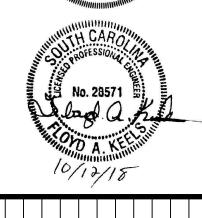


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							ISSUE FOR BID/PERMIT	DESCRIPTION
							FAK	ВУ
							10/12/18	DATE
							0	REV
JECT NO	).	306	3.1	70	5			
WN BY :		J	AF	<b>P</b> /J	FF	<u> </u>		
CKED BY	/ :		F	AŁ	<u> </u>			

**LIGHTING PLAN** 

02/14/2017

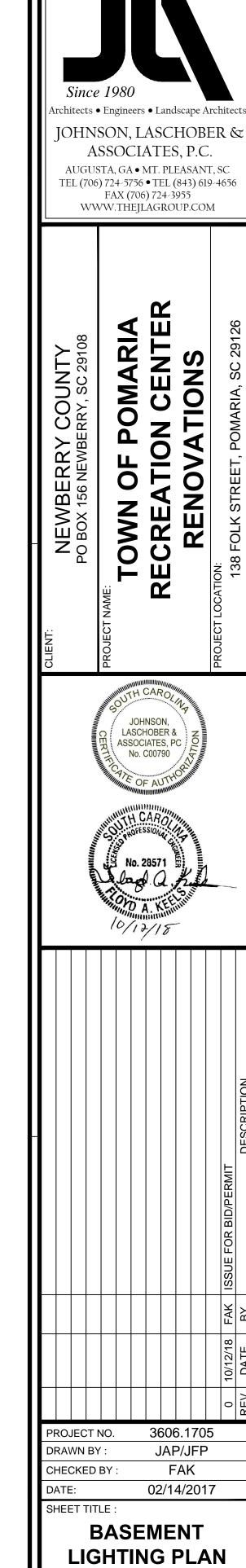
1/8" = 1'-0"

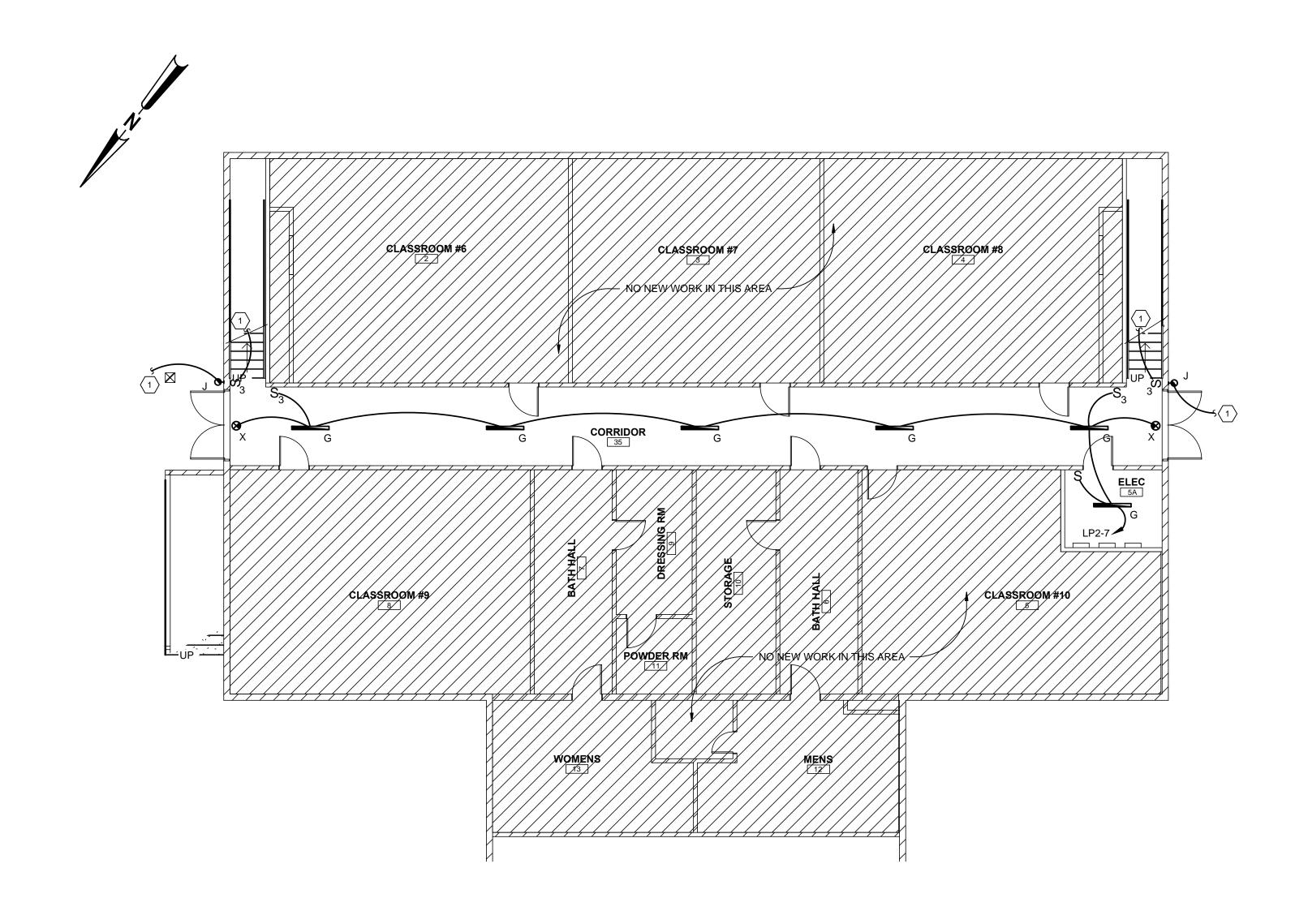
E-101

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



1 CONTINUE TO FLOOR ABOVE.



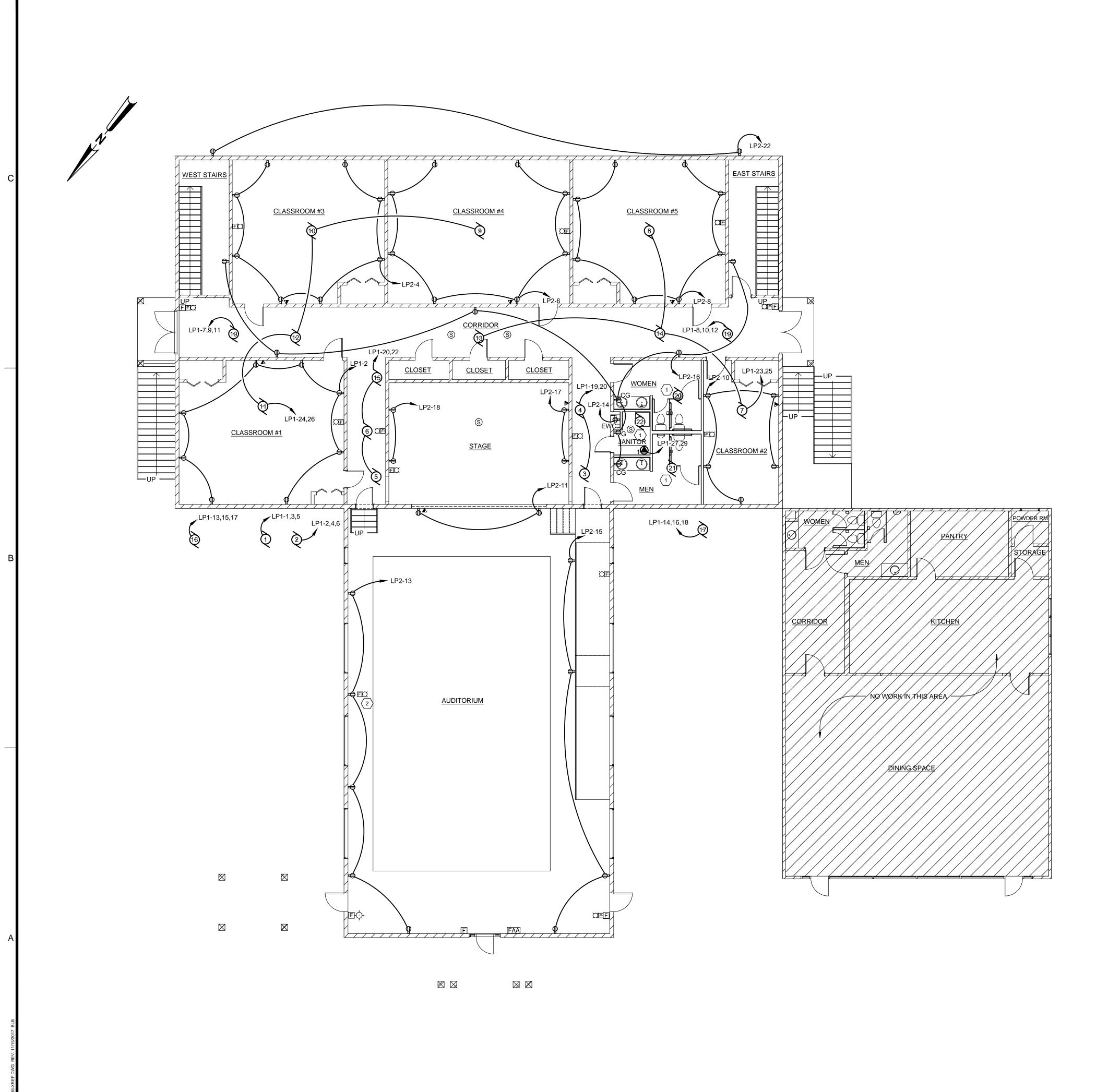


1 BASEMENT LIGHTING PLAN SCALE: 1/8" = 1'-0"

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

E-102

1/8" = 1'-0"



## POWER AND SIGNAL PLAN KEYED NOTES:

1 INTERLOCK FAN WITH LIGHTS.

 $\langle 2 \rangle$  CENTER ON WALL, INSTALL 80" A.F.F.

#### ALTERNATE #2 NOTES:

DELETE ALL ELECTRICAL ASSOCIATED WITH VRF SYSTEM IN ITS ENTIRETY, INCLUDING BREAKERS, DISCONNECTS, WIRING AND CONDUIT.

DELETE ALL ELECTRICAL ASSOCIATED WITH DOAS SYSTEM IN ITS ENTIRETY, INCLUDING BREAKERS, DISCONNECTS, WIRING AND CONDUIT.

PROVIDE AND INSTALL ELECTRICAL COMPONENTS FOR NINE (9) EXTERIOR, WALL-MOUNT, SELF-CONTAINED HEAT PUMPS AND ONE (1) SPLIT SYSTEM HEAT PUMP, AS FOLLOWS:

- CLASSROOM #1: ONE (1) WALL-MOUNT HEAT PUMP. PROVIDE 40A/3 POLE BREAKER IN PANEL LP1 WITH 3#6, #10G, 1"C. PROVIDE LOCAL FUSIBLE DISCONNECT COORDINATED WITH MOTOR MOCP.
- CLASSROOM #2: ONE (1) WALL-MOUNT HEAT PUMP. PROVIDE 40A/2 POLE BREAKER IN PANEL LP1 WITH 2#6, #10G, 1"C. PROVIDE LOCAL FUSIBLE DISCONNECT COORDINATED WITH MOTOR MOCP.
- CLASSROOM #3: ONE (1) WALL-MOUNT HEAT PUMP. PROVIDE 40A/2 POLE BREAKER IN PANEL LP1 WITH 2#6, #10G, 1"C. PROVIDE LOCAL FUSIBLE DISCONNECT COORDINATED WITH MOTOR MOCP.

  CLASSROOM #44 ONE (4) WALL MOUNT HEAT.
- CLASSROOM #4: ONE (1) WALL-MOUNT HEAT PUMP. PROVIDE 40A/3 POLE BREAKER IN PANEL LP1 WITH 3#6, #10G, 1"C. PROVIDE LOCAL FUSIBLE DISCONNECT COORDINATED WITH MOTOR MOCP.
- CLASSROOM #5: ONE (1) WALL-MOUNT HEAT PUMP. PROVIDE 40A/2 POLE BREAKER IN PANEL LP1 WITH 2#6, #10G, 1"C. PROVIDE LOCAL FUSIBLE DISCONNECT COORDINATED WITH MOTOR MOCP.
   AUDITORIUM: FOUR (4) WALL-MOUNT HEAT PUMPS
- AUDITORIUM: FOUR (4) WALL-MOUNT HEAT PUMPS. PROVIDE 45A/3 POLE BREAKER IN PANEL LP1 WITH 3#6, #10G, 1"C. PROVIDE LOCAL FUSIBLE DISCONNECT COORDINATED WITH MOTOR MOCP.
- CORRIDOR/RESTROOM: ONE (1) SPLIT SYSTEM HEAT PUMP. PROVIDE 25A/2 POLE BREAKER IN PANEL LP1 WITH 2#8, #10G, 3/4"C FOR INDOOR UNIT. PROVIDE 25A/2 POLE BREAKER IN PANEL LP1 WITH 2#10, #10G, 3/4"C FOR OUTDOOR UNIT. PROVIDE LOCAL FUSIBLE DISCONNECT COORDINATED WITH MOTOR MOCP.

CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL EQUIPMENT LOCATIONS, EXTERIOR WALL PENETRATIONS AND EQUIPMENT SUPPORTS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.

SEE MECHANICAL DRAWINGS FOR ALTERNATE #2 MECHANICAL.



Architects • Engineers • Landscape Architects

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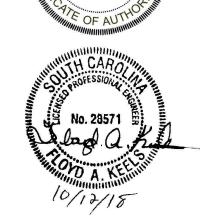
OF POMARIA
TION CENTER
OVATIONS

TOWN OF RECREATION

JOHNSON,
LASCHOBER &
ASSOCIATES, PC
No. C00790

No. C00790

ASSOCIATES, PC
No. C00790



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POWER AND SIGNAL PLAN

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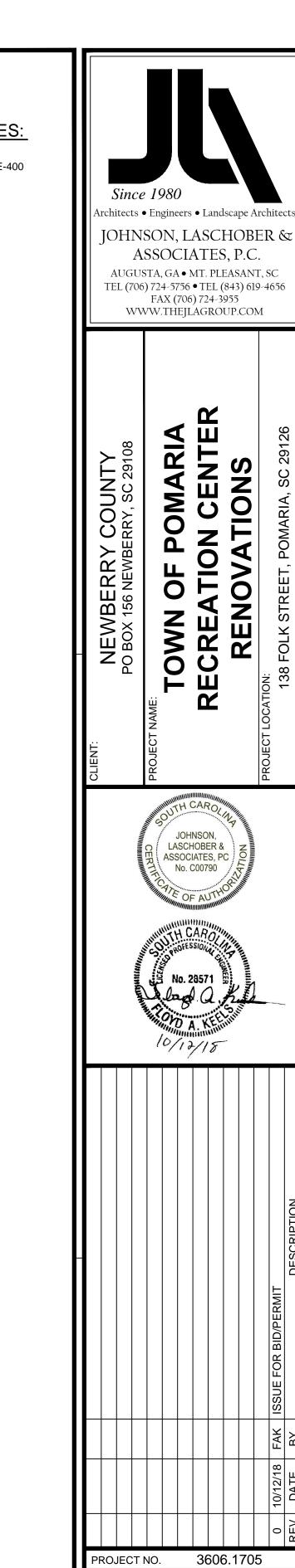
SCALE: 1/8" = 1'-0"

E-201

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

POWER AND SIGNAL PLAN

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



JAP/JFP

FAK

02/14/2017

1/8" = 1'-0"

BASEMENT POWER

E-202

AND SIGNAL PLAN

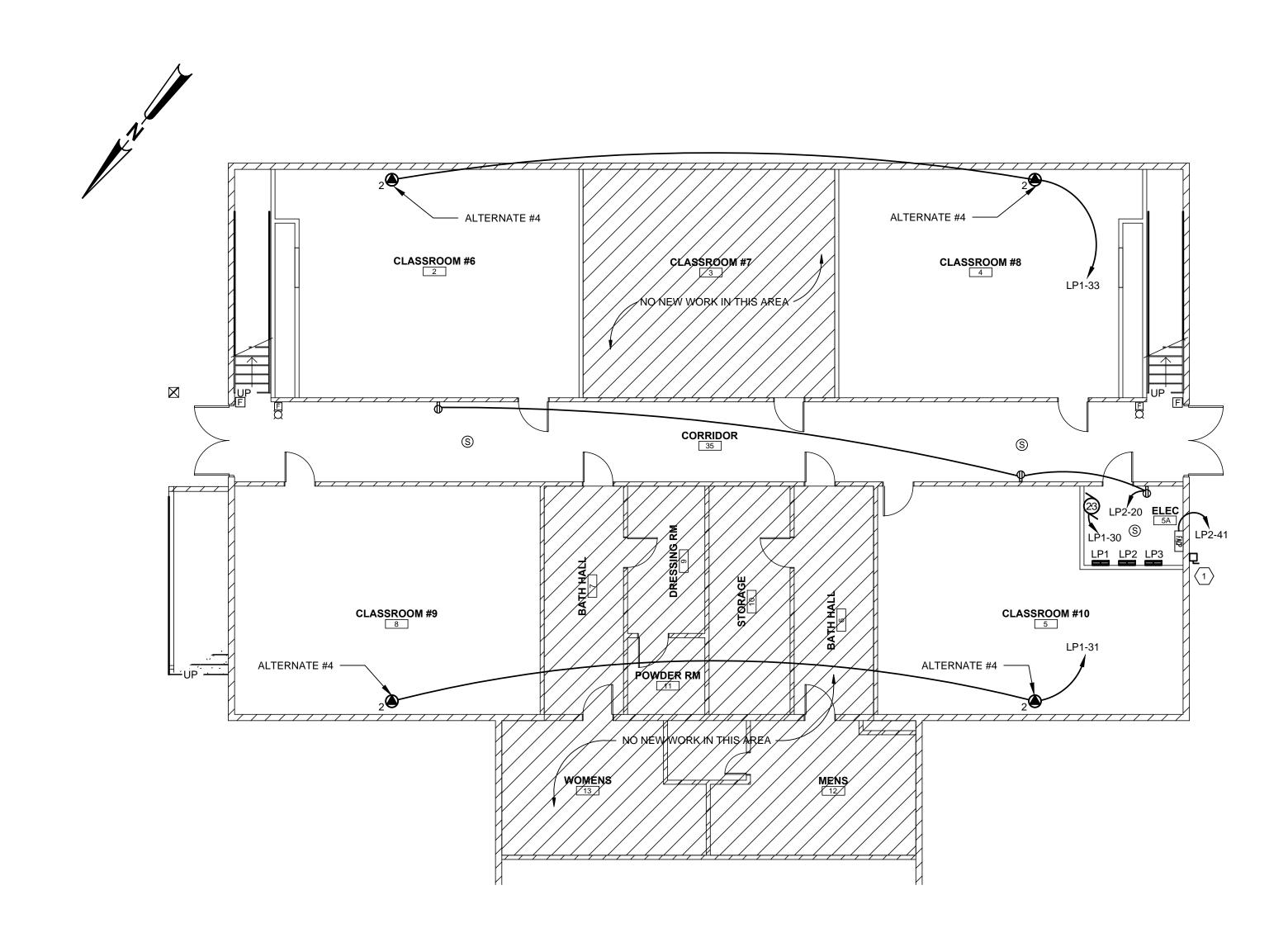
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SHEET TITLE :



1) BUILDING DISCONNECT. SEE RISER DIAGRAM ON SHEET E-400



1 BASEMENT POWER AND SIGNAL PLAN SCALE: 1/8" = 1'-0"

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

VC	DLTAGE_ PHASE	3	) /208V WIRE	4		PAI	IEL	<u>LPT</u>	· M	OCATION OUNTING	SURF			
	s.c.c.		TBD	MIN.	MAI		MAIN	BREA						
CKT	BREAI	KER	VA		SERVING		PHASE		SERVING		VA	BREA		CI
	AMPS	Р	1									AMPS	Р	_
1	60	3	5,044		OHP-1A	Α			OHP-1B		3,963	50	3	
3			5,044				В				3,963			
5			5,044					С			3,963			
7	60	3	6,113		DOAS-1	Α			DOAS-2		10,208	90	3	
9			6,113				В				10,208			1
11			6,113					С			10,208			:
13	15	3	757		OCU-1	Α			OCU-2		757	15	3	1
15			757				В				757			1:
17			757					С			757			<u> </u>
19	15	2	1,040		IHP-1.1,IHP1.2	Α			IHP1.3,IHP1.4,E	3C-1	1,187	15	2	:
21			1,040				В				1,187			1
23	15	2	200		IHP-1.5,IHP1.6			С	IHP-1.9,IHP1.	10,	200	15	2	:
25			200	1	HP-1.11,IHP1.12	Α			IHP1.11,IHP1	.12	200			- 1
27	30	2	2,250		EWH-1		В		SPARE			20	1	:
29			2,250					С	WH-1		1,008	20	1	:
31	20	1	1,224		DEHUMIDIFIER*	Α			SPARE			20	1	13
33	20	1	1,224		DEHUMIDIFIER*		В		SPARE			20	1	
35	20	1			SPARE			С	SPARE			20	1	:
37	225	3	6,592		PANEL LP2	Α			PANEL LP3 (FUT	URE)	0	225	3	3
39			7,040				В				0			4
41			5,092					С			0			4
	· ·		•		VA PER PHASE	37,285	39,583	35,592	TOTAL VA	112,460				
					AMPS PER PHASE		330	297	DIVERSIFIED VA					

LIGHTING FIXTURE SCHEDULE NOTES:

1. COORDINATE ALL FINISH OPTIONS WITH ARCHITECT.

	PHASE	3	- WIKE TBD	<u>4</u>	N AMPS	2.	25	MOUNTING	SURF M.L			
	s.c.c.	'	עפו	MIN. MAI	IN AIVIPS		25	MAIN				
кт	BREAKER VA		\/A	SEDVING	SERVING PHASE			SERVING	VA	BREAKER		СКТ
ZKI	<b>AMPS</b>	AMPS P		SERVING				SERVING	VA	<b>AMPS</b>	P CKI	
1	20	1	1,300	LIGHTS	Α			RECEPTACLES	1,440	20	1	2
3	20	1	1,520	LIGHTS		В		RECEPTACLES	1,440	20	1	4
5	20	1	1,492	LIGHTS			С	RECEPTACLES	1,440	20	1	6
7	20	1	252	LIGHTS	Α			RECEPTACLES	1,440	20	1	8
9	20	1	260	LIGHTS		В		RECEPTACLES	900	20	1	10
11	20	1	360	RECEPTACLES			С	RECEPTACLES	1,080	20	1	12
13	20	1	900	RECEPTACLES	Α			WATER COOLER	500	20	1	14
15	20	1	900	RECEPTACLES		В		RECEPTACLES	1,260	20	1	16
17	20	1	360	RECEPTACLES			С	RECEPTACLES	360	20	1	18
19	20	1	400	FANS	Α			RECEPTACLES	360	20	1	20
21	20	1	400	FANS		В		RECEPTACLES	360	20	1	22
23	20	1		SPARE			С	SPARE		20	1	24
25	20	1		SPARE	Α			SPARE		20	1	26
27	20	1		SPARE		В		SPARE		20	1	28
29	20	1		SPARE			С	SPARE		20	1	30
31		1		SPACE	Α			SPACE			1	32
33		1		SPACE		В		SPACE			1	34
35		1		SPACE			С	SPACE			1	36
37		1		SPACE	Α			SPACE			1	38
39		1		SPACE		В		SPACE			1	40
41		1		SPACE			С	SPACE			1	42
				VA PER PHASE	6,592	7,040	5,092	<b>TOTAL VA</b> 18,724			, and the second	
				AMPS PER PHASE	55	59	42	DIVERSIFIED VA 17,424				

	LIGHTING FIXTURE SCHEDULE									
ID		BASIS OF DESIGN	VOLT.	WATTS	LAMP TYPE	MOUNTING	REMARKS			
טו	MANUF.	MODEL NUMBER	VOL1.	VVATIS	LAWIE ITEL	WOONTING	REWARKS			
Α	COLUMBIA	LCAT24-40MLG-EDU	120	40	4000K LED	RECESSED	ARCHITECTURAL RECESSED LED 2'X4'.			
AE	COLUMBIA	LCAT24-40MLG-EDU-ELL14	120	40	4000K LED	RECESSED	ARCHITECTURAL RECESSED LED 2'X4' WITH EMERGENCY BATTERY PACK.			
В	OXYGEN	3-547-20	120	26	4000K LED	WALL	VANITY LIGHT			
С	ELITE	HH6-LED-2000L-MD-40K-CL-WH	120	26	4000K LED	RECESSED	ARCHITECTURAL DOWNLIGHT			
CE	ELITE	HH6-LED-2000L-MD-40K-CL-WH	120	26	4000K LED	RECESSED	ARCHITECTURAL DOWNLIGHT WITH EMERGENCY BATTERY PACK.			
D	ELITE	HH6-LED-2000L-WD-40K-CL-WH	120	26	4000K LED	RECESSED	ARCHITECTURAL DOWNLIGHT			
DE	ELITE	HH6-LED-2000L-WD-40K-CL-WH	120	26	4000K LED	RECESSED	ARCHITECTURAL DOWNLIGHT WITH EMERGENCY BATTERY PACK.			
Е	ELITE	HH6 LED-6501-2000L-40K UNV 85 INTG-EM-LED-HH6-6501 SHZ	120	25	4000K LED	RECESSED	DOWNLIGHT WITH EMERGENCY BATTERY PACK. WET LOCATION.			
F	G LIGHTING	GL-2021-L64-S-BY ARCH-3-034	120	87	4000K LED	PENDANT	34" PENDANT			
G	COLUMBIA	LCL4 35 ML EDU ELL14	120	42	4000K LED	WALL / SURFACE	GENERAL PURPOSE 4' STRIP FIXTURE WITH EMERGENCY BATTERY			
н	HUNTER	CHRONICLE OUTDOOR	120	100	N/A	CEILING	PROVIDE 36" DOWNRODS. COORDINATE DOWNROD LENGTH WITH PENDANT FIXTURES. COLOR BY ARCHITECT			
J	HUBBELL	TRP-12L-20-4K-2-1-PCU-E	120	20	4000K LED	WALL	WALL PACK. COORDINATE MOUNTING HEIGHT WITH ARCHITECT WITH EMERGENCY BATTERY PACK.			
Х	COMPASS	CER	120	5	LED	WALL / CEILING	EXIT SIGN			

RKS		ID	
		1	
O 2'X4'.	-	2	
2'X4' WITH EMERGENCY		3	
		4	
		5	
		6	
TH EMERGENCY BATTERY		7	
		8	
		9	
TH EMERGENCY BATTERY		10	
BATTERY PACK. WET		11	
		12	
		13	
TURE WITH EMERGENCY	•	14	
		15	
RDINATE DOWNROD LENGTH		16	
		17	
NTING HEIGHT WITH BATTERY PACK.		18	
		19	
		20	
		21	

208 208

208 208

208 208 208

208

120

120

120

120 MOTOR SCHEDULE NOTES:

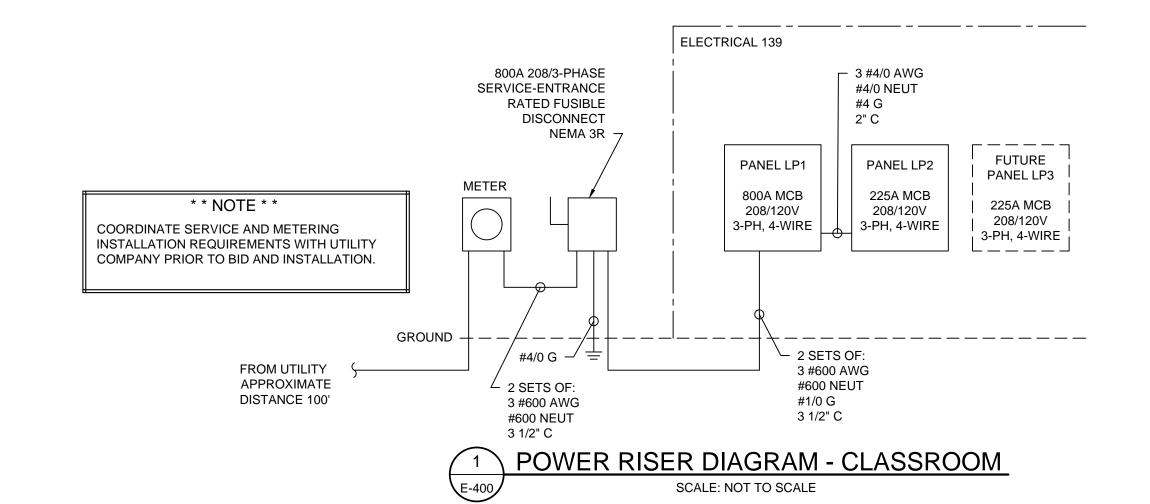
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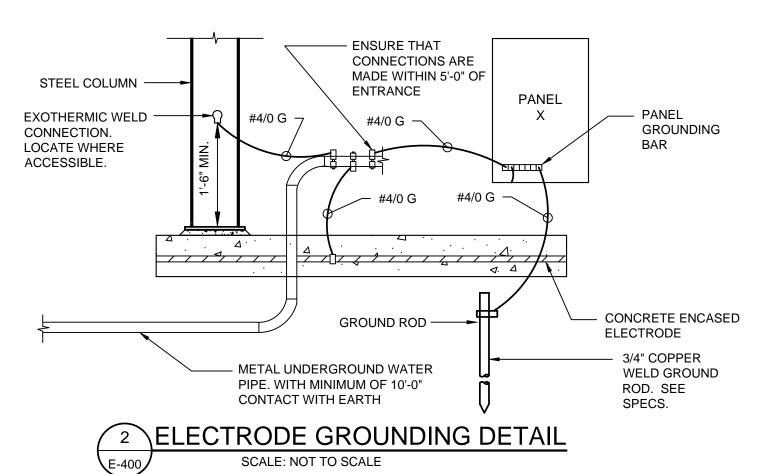
23

	MOTOR SCHEDULE							
0	PHASE	WIRE / COND.	DESCRIPTION					
	3	3#4, #8G, 1-1/4"C.	OHP-1A					
	3	3#6, #10G, 1"C.	OHP-1A					
	1	2#12, #12G, 3/4"C.	IHP-1.1					
	1	2#12, #12G, 3/4"C.	IHP-1.2					
	1	2#12, #12G, 3/4"C.	IHP-1.3					
	1	2#12, #12G, 3/4"C.	IHP-1.4					
	1	2#12, #12G, 3/4"C.	IHP-1.5					
	1	2#12, #12G, 3/4"C.	IHP-1.6					
	1	2#12, #12G, 3/4"C.	IHP-1.7					
	1	2#12, #12G, 3/4"C.	IHP-1.8					
	1	2#12, #12G, 3/4"C.	IHP-1.9					
	1	2#12, #12G, 3/4"C.	IHP-1.10					
	1	2#12, #12G, 3/4"C.	IHP-1.11					
	1	2#12, #12G, 3/4"C.	IHP-1.12					
	1	2#12, #12G, 3/4"C.	BC-1					
	3	3#12, #12G, 3/4"C.	OCU-1					
	3	3#12, #12G, 3/4"C.	OCU-2					
	3	3#4, #10G, 1-1/4"C.	DOAS-1					
	3	3#1, #6G, 1-1/2"C.	DOAS-2					
	1	2#12, #12G, 3/4"C.	EF-1					
	1	2#12, #12G, 3/4"C.	EF-2					
	1	2#12, #12G, 3/4"C.	EF-3					
	1	2#12, #12G, 3/4"C.	WH-1					

PROVIDE LOCAL FUSIBLE DISCONNECTING MEANS FOR EACH MOTOR. COORDINATE WITH MOTOR MOCI

	SPECIAL OUTLET SCHEDULE				
ID	VOLTAGE	PHASE	WIRE / COND.	DESCRIPTION	
1	208	1	2#10, #10G, 3/4"C.	EWH-1	
2	120	1	2#12, #12G, 3/4"C.	DEHUMIDIFIER (ALTERNATE #4)	





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02/14/2017

AS NOTED

**ELECTRICAL** 

SCHEDULES AND

**DETAILS** 

E-400