

ELECTRICAL SPECIFICATIONS

1. **GENERAL:**
 - A. ALL WORK SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF THE NEC/NEC, NFPA, CGC, TITL 24 AND LOCAL CODES. ALL WORK TO BE INSPECTED FOR CONFORMITY OF THE 2019 CALIFORNIA BUILDING CODE.
 - B. OBTAIN ALL PERMITS AND APPROVAL FROM AUTHORITIES HAVING JURISDICTION AND PAYING ALL FEES REQUIRED.
 - C. SUBMIT SIX(6) SETS OF SHOP DRAWINGS FOR APPROVAL OF THE FOLLOWING:
 1. WIRE
 2. DEVICES
 3. PANELS
 4. SHORT CIRCUIT STUDY
 5. SELECTIVE COORD'N STUDY - PER NEC
 6. CONDUIT
 7. LIGHT FIXTURES
 8. COORDINATED, DIMENSIONED, MEP FLOOR PLANS.
 9. ARC-FLASH STUDY/LABELS WHERE GEAR MAY BE MAINTAINED WHILE ENERGIZED PER CODE.
 - D. PROVIDE TEMPORARY POWER AS REQUIRED FOR THE PROJECT.
 - E. ALL WORK SHALL BE DONE UNDER NORMAL WORKING HOURS, UNLESS OTHERWISE NOTED.
 - F. TELEPHONE/DATA WIRING TO BE FURNISHED AND INSTALLED BY E.C.. U.O.N.
 - G. PROVIDE ANY/ALL PROPERLY SIZED THERMAL ELEMENTS IN STARTERS AS REQUIRED.
 - H. SECURITY DEVICES AND WIRING TO BE FURNISHED AND INSTALLED BY OTHERS. E.C. TO PROVIDE AND INSTALL J-BOX AND EMPTY CONDUIT WITH PULL STRING WHERE REQUIRED FOR ACCESSIBLE RACEWAY TO HEAD-END EQUIPMENT. ALL POWER TO DEVICES AND EQUIPMENT IS BY E.C. COORDINATE WITH SECURITY VENDOR AND/OR OWNER.
 - I. SOUND SYSTEM BY OTHERS.
2. **GROUNDING:**
 - A. GROUNDING SYSTEM: PERMANENTLY AND EFFECTIVELY GROUND ALL METALLIC CONDUITS, SUPPORTS, CABINETS, PANELBOARDS AND SYSTEM GROUNDING NEUTRAL IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC. MAINTAIN CONTINUITY OF EQUIPMENT GROUND THROUGHOUT THE SYSTEM. GROUND CLAMPS SHALL BE APPROVED TYPE, SPECIFICALLY DESIGNED FOR GROUNDING. WHERE GROUNDING CONDUCTOR IS ENCLOSED IN CONDUIT, GROUND CLAMPS SHALL BE OF A TYPE WHICH GROUNDS BOTH CONDUCTOR AND CONDUIT. ALL CIRCUITS IN FLEXIBLE CONDUIT OR PLASTIC CONDUIT SHALL INCLUDE A GROUND WIRE SIZED IN ACCORDANCE WITH "NEC" TABLE 250-122.
 - B. EQUIPMENT GROUNDING CONDUCTORS SHALL BE PROVIDED FOR ALL FEEDERS AND BRANCH CIRCUITS. USE GREEN GROUND.
3. **IDENTIFICATION:**
 - A. MODIFY DIRECTORIES OF EXISTING PANELS WHERE CHANGES AND/OR ADDITIONS HAVE BEEN MADE. PROVIDE ID AT ALL AS REQUIRED IN NEC 408.4(A).
 - B. WIRE AND CABLE COLOR CODING.
 1. POWER WIRING: CONSISTENT PHASE IDENTIFICATION OF ALL WIRES SHALL BE MAINTAINED AS FOLLOWS:

| | |
|------------------------|--------------------------|
| 208/120 VOLT, 3Ø 60 HZ | 277/480V 3Ø |
| PHASE A | BROWN |
| PHASE B | ORANGE |
| PHASE C | YELLOW |
| NEUTRAL WIRE | WHITE |
| GROUND WIRE | GREEN |
| ISOLATED GROUND WIRE | GREEN WITH YELLOW STRIPE |
 2. CONTROL WIRES: WIRES OF CONTROL CIRCUITS SHALL BE CONSISTENTLY COLOR CODED TO PERMIT EASY IDENTIFICATION OF CONDUCTORS.
 - C. PROVIDE IDENTIFICATION OF ALL BRANCH CIRCUIT WIRES IN PULL BOXES AND AT TERMINATIONS WITH PANEL AND CIRCUIT NUMBER.
 - D. PROVIDE PLASTIC ENGRAVED LABELS ON PANELS, DISCONNECT SWITCHES AND TRANSFORMERS TO INDICATE POWER SOURCE AND VOLTAGE.
4. **WIRING METHODS:**
 - A. BRANCH CIRCUIT AND FEEDER WIRING RUN WITHIN THE BUILDING SHALL BE INSTALLED IN ELECTRO-METALLIC TUBING WITH COMPRESSION FITTINGS AND RUN CONCEALED WHERE POSSIBLE, BUT EXPOSED ON EXISTING SURFACES WHERE CONDUITS CANNOT BE CONCEALED. ARMORED CABLE(TYPE MC OR HCF-90) SHALL BE PERMITTED IN CONCEALED (FROM VIEW) AREAS ONLY AND TO THE EXTENT PERMITTED BY CODE. U.O.N. WHERE CONDUCTORS ARE RUN IN A PLENUM, ALL CONSTRUCTION SHALL BE PLENUM RATED. ANY/ALL HEALTHCARE AREAS WHERE NEW WIRING IS RUN AND/OR EXISTING CIRCUITS ARE RE-USED, WIRING METHODS SHALL MEET, BE UPGRADED OR REPLACED TO COMPLY WITH NEC 517.13(A) AND (B). EMERGENCY CIRCUITS SHALL BE RUN IN EMT PER NEC 517.30(C)(5). ALL EMERGENCY CIRCUIT WIRING SHALL BE IN DESIGNATED RACEWAY(S) PER NEC 700.10(B).
 - B. WIRING FOR CONTROLS, COMMUNICATIONS AND OTHER SYSTEMS SHALL BE IN RACEWAY SPECIFIED FOR BRANCH CIRCUITS UNLESS SPECIFICALLY NOTED OTHERWISE.
 - C. PROVIDE SEALS FOR RACEWAYS PASSING THROUGH FLOORS, ROOFS AND WALLS.
 - D. CONDUCTORS SHALL BE 600 VOLT INSULATION, COPPER, TYPE THHN OR THWN. U.O.N.
 - E. FURNISH AND INSTALL ALL POWER WIRING AND LOCAL DISCONNECTS AS REQUIRED FOR EQUIPMENT FURNISHED UNDER H.V.A.C., PLUMBING AND GENERAL TRADE SECTIONS. UON.
 - F. LIQUID TIGHT FLEXIBLE METAL CONDUIT IN LENGTHS OF 3' OR LESS WITH APPROVED TYPE FITTINGS SHALL BE USED FOR CONNECTIONS TO VIBRATING EQUIPMENT, MOTORS, AND OTHER OUTLETS WHERE WIRING WILL BE EXPOSED TO WEATHER, MOISTURE OR VIBRATIONS.
 - G. INSTALL RACEWAYS FROM BOX TO BOX OR TERMINATIONS AS SHOWN ON THE DRAWINGS OR AS REQUIRED TO EFFECT CIRCUITING DESCRIBED WITH CIRCUIT NUMBERS ADJACENT TO EQUIPMENT. GROUPING HOME RUNS OR COMBINING WIRES IN COMMON RACEWAYS WILL BE ALLOWED WITH A MAXIMUM OF THREE SINGLE POLE BRANCH CIRCUITS IN A RACEWAY. INCREASE WIRE SIZES AND RACEWAYS WHERE REQUIRED TO AVOID LOSS OF AMPACITY AS REQUIRED BY NATIONAL ELECTRIC CODE.
 - H. FLEXIBLE METAL CONDUIT WITH APPROVED TYPE FITTING MAY BE USED IN LIMITED LENGTHS FOR CONNECTIONS TO RECESSED FIXTURES WHERE IT IS NECESSARY TO PROVIDE FLEXIBLE CONNECTIONS. IT MAY ALSO BE USED WHERE STRUCTURAL MEMBERS PRECLUDE THE USE OF ELECTRICAL METALLIC TUBING OR CONDUITS.
 - I. INSTALL CONDUIT CONTINUOUS BETWEEN BOXES AND CABINETS WITH NO MORE THAN FOUR(4) 90 DEGREE BENDS. SECURELY FASTEN IN PLACE WITH STRAPS, HANGERS AND STEEL SUPPORTS AS REQUIRED. DO NOT SUPPORT CONDUIT FROM SUSPENDED CEILING GRID OR SUSPENSION WIRES. REAM CONDUIT ENDS BEFORE INSTALLATION AND THOROUGHLY CLEAN BEFORE INSTALLATION. OPENINGS SHALL BE PLUGGED OR COVERED TO KEEP CONDUIT CLEAN. TERMINALS ON SWITCHES AND RECEPTACLES SHALL NOT BE USED TO "FEED THRU" TO THE NEXT SWITCH OR RECEPTACLE. THE DISCONNECTIONS OR REMOVAL OF A DEVICE FROM A BOX SHALL NOT INTERFERE WITH OR INTERRUPT THE CONDUCTOR CONTINUITY.
 - J. CONDUCTORS SHALL BE CONTINUOUS FROM ORIGIN TO PANEL OR EQUIPMENT WITHOUT SPLICES. WHERE TAP SPLICES ARE NECESSARY AND APPROVED, THEY SHALL BE MADE WITH SUITABLE CONNECTORS IN JUNCTION BOXES.

- K. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL CONTROL WIRING.
 - L. ALL WIRE AND CABLE AMPACITIES INDICATED ON DRAWINGS ARE BASED ON 75°C TEMPERATURE RATING. ALL LUGS, BREAKERS, SWITCHES AND OTHER TERMINATIONS SHALL HAVE 75°C RATINGS AS A MINIMUM.
 - M. BALANCE ALL LOADS BETWEEN PHASES.
 - N. SEPARATE NEUTRALS SHALL BE RUN FOR ALL CIRCUITS UTILIZING SWITCH MODE POWER SUPPLIES(EG. COMPUTERS, FLUORESCENT LIGHTING, ETC.).
 - O. NOT USED
 - P. NOT USED
5. **TRANSFORMERS:**
 - A. TRANSFORMERS SHALL BE DRY TYPE "ENERGY SAVER" WITH AVERAGE TEMPERATURE RISE NOT TO EXCEED 150°C AND MEET D.O.E. 2016 FEDERAL REGISTRY CLASS "3".
 - B. ALL DRY TYPE TRANSFORMERS TO MEET DOE FEDERAL REGISTRY CLASS 3, POWERSMITHS (E-SAVER DOE 2016 OR T1000-C3) BASIS OF DESIGN. (CONTACT ANDY TOPINKA AT 1-862-210-8126 OR andy@tgs-inc.com)
 6. **PANELBOARDS:**
 - A. PANELBOARDS SHALL BE FACTORY ASSEMBLED AS MANUFACTURED BY SQUARE "D", GENERAL ELECTRIC, OR SIEMENS I.T.E.; MEETING U.L. STANDARDS 30 AND 87, WITH U.L. LABEL. ALL CONDUCTOR TERMINALS TO BE U.L. FOR MINIMUM 75°C. SYSTEMS SHALL BE FULLY RATED.
 - B. BRACING SHALL BE EQUIVALENT TO, OR COMPARABLE WITH, THE RATED INTERRUPTING CAPACITY OF SMALLEST OVERCURRENT DEVICE IN THAT PANEL.
 - C. BREAKERS TO BE THERMAL MAGNETIC TYPE, BOLT-IN, QUICK-MAKE, QUICK-BREAK TYPE, SINGLE UNIT CONSTRUCTION WITH TRIP SETTINGS AND NUMBER OF POLES AS INDICATED ON DRAWINGS. TWO AND THREE POLE BREAKERS SHALL BE SINGLE UNIT COMMON TRIP TYPE. ALL BREAKERS CONNECTED TO LIGHTING BRANCH CIRCUITS SHALL BE APPROVED FOR THAT USE AND MARKED "SWD". MINIMUM 10KVA.
 - D. PANELBOARD CABINETS SHALL BE ONE PIECE CODE GAGE GALVANIZED STEEL WITH MOUNTING STUDS. WIRING GUTTER OF AMPLE SIZE AND KNOCKOUTS FOR CONDUIT CONNECTIONS AS REQUIRED. BUS BARS SHALL BE 98% CONDUCTIVE COPPER, ARRANGED FOR SEQUENCE PHASING AND ALL CONNECTIONS SHALL BE SILVER PLATED. FRONTS SHALL BE ONE PIECE CODE GAGE STEEL WITH ADJUSTABLE FASTENERS, SINGLE DOOR LOCK AND KEY. PROVIDE FLUSH MOUNT UNITS UNLESS OTHERWISE INDICATED. PROVIDE A PLASTIC COVERED TYPEWRITTEN SCHEDULE IDENTIFYING ALL BRANCH CIRCUITS INSIDE EACH CABINET.
 - E. ALL PANELS SHALL HAVE TYPEWRITTEN DIRECTORIES.
 - F. DISCONNECT SWITCHES SHALL BE HEAVY-DUTY, QUICK-MAKE, QUICK-BREAK TYPE NEMA 1 ENCLOSURE (NEMA 3R FOR OUTDOOR). SWITCHES SHALL BE AS MANUFACTURED BY SQUARE "D", GENERAL ELECTRIC, OR SIEMENS I.T.E. FURNISH AND INSTALL ALL FUSES AS MANUFACTURED BY BUSSMAN, GOULD-SHAMMUT OR LIT-FUSE. ALL CONDUCTOR TERMINALS TO BE U.L. FOR MINIMUM 75°C. NON FUSED RATINGS SHALL MATCH CONDUCTOR RATINGS. U.O.N.
 7. **WIRING DEVICES - PLATES:**
 - A. DEVICES SHALL BE "SPEC GRADE" MANUFACTURED BY LEVITON OR EQUAL U.O.N. ALL DEVICE COVER PLATES SHALL BE STAINLESS STEEL U.O.N. STANDARD DUPLEX RECEPTACLES SHALL BE GROUNDING TYPE, 20 AMP, NEMA 5-20R, BACK AND SIDE WIRED U.O.N. OTHER DEVICES SHALL BE AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE EQUIPMENT ITEM INTENDED TO BE SERVED. WHERE SWITCHES ARE GROUPED, PROVIDE GANGED PLATES.
 - B. DEVICES IN CHILD CARE FACILITIES, DWELLING UNITS, GUEST ROOMS AND SUITES SHALL BE TAMPER-RESISTANT PER NEC 406.2, 406.12, 406.13 AND 406.14.
 - C. STAND ALONE DIMMERS SHALL BE LUTRON "MAESTRO", COLOR AS SELECTED BY ARCHITECT U.O.N.
 8. **LIGHTING FIXTURES AND LAMPS:**
 - A. LIGHTING FIXTURES SHALL BE FURNISHED AND COMPLETE WITH NECESSARY MOUNTING OR HANGING HARDWARE AND WITH PLASTER FRAMES WHERE REQUIRED. REFER TO LIGHTING FIXTURE SCHEDULE FOR FIXTURE TYPE.
 - B. COORDINATE LED DRIVERS WITH CONTROLS FOR ADDITIONAL WIRING (TYPICAL).
 - C. THE ELECTRICAL CONTRACTOR IS TO VERIFY CEILING TYPE AND SPACE LIMITATIONS PRIOR TO ORDERING FIXTURES.
 9. **EQUIPMENT SUPPORTS:**
 - A. THE CONTRACTOR SHALL PROVIDE ALL STRUCTURAL SUPPORTS AND MOUNTING DEVICES FOR THE PROPER ATTACHMENTS OF EQUIPMENT SUPPLIED BY THIS TRADE. THIS SHALL ALSO INCLUDE STARTERS, DISCONNECTS, CONTROLLERS, ETC. FURNISHED BY THE MECHANICAL TRADE.
 - B. CONDUIT SUPPORTS SHALL BE PLACED AT A MAXIMUM DISTANCE OF TEN (10) FEET APART.
 - C. SUPPORT CEILING MOUNTED LIGHT FIXTURES FROM STRUCTURE ABOVE WITH METAL TIE WIRES.
 - D. PROVIDE ALL SEISMIC RESTRAINTS AND CERTIFICATIONS AS REQUIRED BY CBC & OSHPD.
 10. **SPECIAL REQUIREMENTS:**
 - A. REMOVAL ALTERATIONS, RELOCATIONS AND CONNECTIONS TO EXISTING SYSTEMS:
 1. CERTAIN REMOVALS AND RELOCATIONS OF EXISTING WORK WILL BE NECESSARY TO THE SATISFACTORY PERFORMANCE OF THE GENERAL WORK. ALL CHANGES CANNOT BE DETAILED ON THE DRAWINGS, BUT SHALL BE TAKEN INTO CONSIDERATION IN MAKING UP THE WORK PROPOSAL. THE SCOPE OF REMOVALS SHALL BE BASED ON ACTUAL FIELD INSPECTIONS.
 2. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN CONTINUITY OF EXISTING CIRCUITS AFFECTED BY THIS WORK.
 3. IN THE EVENT ANY WIRING OR EQUIPMENT TO BE REMOVED IS IN ACTIVE USE AS DETERMINED BY THE OWNER, THIS CONTRACTOR SHALL PROVIDE TEMPORARY WIRING AS MAY BE REQUIRED TO MAINTAIN SUCH USE UNTIL THE PERMANENT RELOCATED WIRING IS INSTALLED.
 4. ALL WORK REQUIRING AN OUTAGE OR AN INTERRUPTION OF SERVICE (POWER, TELEPHONE, ETC.) SHALL BE DONE ONLY AT SUCH TIME AS PERMITTED BY THE OWNER. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE OWNER FOR SUCH SHUTDOWNS.
 11. **FIRE ALARM SYSTEM:**
 - A. NOT USED

- B. NOT USED
 - C. NOT USED
 - D. NOT USED
 - E. NOT USED
 - F. NOT USED
 - G. NOT USED
 - H. NOT USED
 - I. NOT USED
 - J. NOT USED
 - K. NOT USED
 - L. NOT USED
 - M. NOT USED
 - N. NOT USED
 - O. NOT USED
 - P. NOT USED
 - Q. NOT USED
 - R. NOT USED
12. **CLOSE OUT:**
 - A. ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED AND TESTED FOR PROPER OPERATION. AFTER WIRES ARE IN PLACE AND CONNECTED TO DEVICES AND EQUIPMENT. THE SYSTEM SHALL BE TESTED FOR SHORTS AND GROUNDS. ALL HOT AND NEUTRAL CONDUCTORS, IF SHORTED OR GROUNDED, SHALL BE REMOVED AND REPLACED. ALL METERS, INSTRUMENTS, CABLE CONNECTIONS, EQUIPMENT OR APPARATUS NECESSARY FOR MAKING ALL TESTS, SHALL BE FURNISHED BY THIS CONTRACTOR AT HIS OWN EXPENSE.
 - B. TOUCH-UP OR REFINISH DAMAGED SURFACES OF FIXTURES AND EQUIPMENT, EXPOSED TO VIEW.
 - C. FURNISH WRITTEN ONE YEAR GUARANTEE FOR ALL ELECTRICAL WORK AND EQUIPMENT.
 - D. SPECIAL INSPECTIONS SHALL BE PAID FOR BY CONTRACTOR VIA APPROVED PARTY.

ELECTRICAL DEMOLITION NOTES

1. CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING CONDITIONS PRIOR TO SUBMISSION OF BID. NO ADDITIONAL COMPENSATION SHALL BE CONSIDERED FOR FAILURE TO OBSERVE THIS REQUIREMENT.
2. THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL WIRING AND EQUIPMENT AS REQUIRED WITHIN ALL AREAS TO BE RENOVATED. THIS SHALL INCLUDE BUT NOT BE LIMITED TO FIXTURES, DEVICES, OUTLETS, SWITCHES, RECEPTACLES, STARTERS, DISCONNECTS, PANELS, FEEDERS, ETC.
3. THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING CIRCUITS TO MECHANICAL EQUIPMENT BEING REMOVED. REFER TO ALL MECHANICAL DEMOLITION DRAWINGS OR NOTES FOR LOCATIONS.
4. WHERE ELECTRICAL ITEMS ARE REMOVED, ALL BRANCH DEVICE'S WIRING SHALL BE REMOVED BACK TO PANEL SERVICING THE EQUIPMENT. WHERE CIRCUITS SERVE ADDITIONAL DEVICES OR EQUIPMENT REMAINING, WIRING SHALL BE REMOVED BACK TO THE NEAREST ACTIVE JUNCTION BOX.
5. THE CONTRACTOR SHALL MAINTAIN CONTINUITY OF EXISTING CIRCUITS THAT ARE TO REMAIN IN OPERATION AND SCHEDULE FOR RE-FEEDING FROM NEW PANELS. FORWARD FINDINGS TO ENGINEER FOR REVIEW AND COORDINATION.
6. ALL UNUSED CIRCUITS REMAINING AFTER REMOVALS SHALL BECOME SPARE IN PANELS AND LABELED AS SPARE.
7. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DEMOLITION DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF DEMOLITION.
8. ALL MATERIALS AND EQUIPMENT REMOVALS SHALL BE DISPOSED OF AS DIRECTED BY THE OWNER OR THE ARCHITECT.
9. NOT ALL AREAS MAY HAVE BEEN ACCESSIBLE DURING SURVEY. EQUIPMENT SHOWN IS TO THE BEST OF THE SURVEYOR'S ABILITY DUE TO SITE CONSTRAINTS. CONTRACTOR IS RESPONSIBLE FOR FINAL SURVEY OF ALL AREAS IN SCOPE FOR DEMOLITION AS SHOWN.

ELECTRICAL GENERAL NOTES

1. ELECTRICAL DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONAL REQUIREMENTS, COORDINATE WITH CIVIL DRAWINGS AND/OR ELEMENTS IN THE FIELD.
2. THE CONTRACTOR MUST HAVE THE H.V.A.C., FIRE PROTECTION AND PLUMBING DRAWINGS FOR LOCATIONS OF EQUIPMENT AND CONTROL WIRING REQUIREMENTS. THIS IS A STRICT REQUIREMENT FROM REVIEWING AGENCIES TO CREATE AN ALL INCLUSIVE ELECTRICAL CONSTRUCTION SET. ONLY POWER FEEDERS TO MECHANICAL EQUIPMENT ARE SCHEDULED ON THE ELECTRICAL DRAWINGS. FURNISH AND INSTALL ALL CODE REQUIRED DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT UNLESS SPECIFIED ON MECHANICAL DRAWINGS TO BE SUPPLIED BY MANUFACTURER. PROVIDE FUSED SWITCHES WHEREVER MANUFACTURER REQUIRES THEM. THIS TRADE SHALL INSTALL ALL LOOSE EQUIPMENT PROVIDED BY OTHERS.
3. THE ELECTRICAL CONTRACTOR SHALL TRACE AFFECTED POWER PANEL BRANCH CIRCUITS IN CONTRACT AREAS TO DETERMINE WIRING CONFIGURATION OF AFFECTED AND SURROUNDING AREAS. ELECTRICAL CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS TO AID IN REWIRING CONTRACT AREAS IN COMPLIANCE WITH ENGINEERING DOCUMENTS, LOCAL CODES, AND ORDINANCES. PROVIDE FINDINGS IN REPORT FORM WITH MARKED UP DRAWINGS, TO THE ENGINEER AS SOON AS COMPLETED. NO REWIRING SHALL BEGIN UNTIL THIS STEP IS COMPLETED.
4. THE ELECTRICAL CONTRACTOR SHALL MEASURE THE STEADY STATE LOAD CURRENT AT EACH AFFECTED PANELBOARD FEEDER AND DOCUMENT PRE-CONSTRUCTION VALUES FOR EXISTING LIGHTING, POWER AND MECHANICAL LOADS TO UNDERSTAND AVAILABILITY OF ADDITIONAL PANELBOARD LOADING WITHIN THE CONSTRAINTS OF THE STATE BUILDING AND ELECTRICAL CODES. PROVIDE FINDINGS IN REPORT FORM WITH MARKED UP DRAWINGS, TO THE ENGINEER AS SOON AS COMPLETED. NO REWIRING SHALL BEGIN UNTIL THIS STEP IS COMPLETED.
5. AT COMPLETION OF ALL BRANCH WIRING DESCRIBED ON CONTRACT DOCUMENTS, ELECTRICAL CONTRACTOR SHALL COMPILE A LIST OF EXISTING AND NEW CIRCUITS TO PROVIDE A FULL PANEL SCHEDULE DIRECTORY WITH DEVICE NAME (LIGHTING, RECEPTACLES, EQUIPMENT, ETC.) AND ROOM NUMBERS BEING SERVED. LABEL ALL CIRCUIT BREAKERS NOT BEING USED AS SPARE AND REMOVE CONDUCTORS FROM PANELBOARD AND CONDUITS.
6. CONDUCTOR SIZES(PHASE AND BOND) SHALL BE INCREASED DUE TO DERATING AND VOLTAGE DROP REQUIREMENTS AS NECESSARY. USE A MINIMUM #10 AWG FOR 20 AMPERE CIRCUITS AS FOLLOWS: 120V. - OVER 120', 208V. - OVER 210', 277V. - OVER 279', 480V. - OVER 484'(BASED ON LOAD AT MIDPOINT OF BRANCH CIRCUIT RUN @ 60% OF RATED LOAD). USE #8 FOR 20A. CIRCUITS @ 277V. FROM 211' TO 334', AND 20A CKTS @ 120V. FROM 191' TO 301'.(FOR #8 PROVIDE AND INSTALL SPLICE/TAP J-BOX BEFORE CONNECTION TO LOAD AND TRANSFER TO #12AWG FOR CONNECTION TO DEVICE TERMINALS).
7. ALL NEW ELECTRICAL SYSTEMS, INCLUDING LIGHTING, CONDUIT, PANELS, ETC., SHALL BE SEISMICALLY BRACED IN ACCORDANCE WITH CALIFORNIA BUILDING CODE.
8. E.C. SHALL REVIEW ARCHITECTURAL AND MECHANICAL DRAWINGS TO UNDERSTAND THE EXTENT OF LIGHTING FIXTURE REMOVAL AND REPLACEMENT TO ACCOMMODATE OUT OF CONTRACT AREAS THAT ARE AFFECTED IN SYSTEMS CONSTRUCTION.
9. ALL PANELBOARDS AND ASSOCIATED ELECTRICAL SYSTEMS SHALL BE FULLY RATED (NOT SERIES) U.O.N. PANELBOARD LOCKS SHALL BE KEYS IN ACCORDANCE TO OWNER REQUIREMENTS.
10. RELOCATE EXISTING JUNCTION BOXES, PULL/SPLICE BOXES, ETC. WHICH REQUIRE ACCESS THAT WILL BE BLOCKED BY NEW CONSTRUCTION (MECHANICAL AND ELECTRICAL). CONTRACTOR SHALL COORDINATE WITH FIELD CONDITIONS AND OTHER TRADES FOR NEW OR EXISTING ELECTRICAL ITEMS REQUIRING ACCESS LOCATED OVER G.W.B. OR OTHER INACCESSIBLE CEILINGS. PROVIDE ACCESS PANELS TO BE LOCATED IN COORDINATION WITH ARCHITECT AND INSTALLED BY G.C.
11. DEVICE AND EQUIPMENT MOUNTING HEIGHTS ARE AS LISTED ON DRAWING AND/OR DESCRIBED IN SPECIFICATIONS UNLESS ITEMIZED BY CIVIL DOCUMENTS.
12. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO SUBMIT MEP COORDINATION DRAWINGS AS EARLY AS POSSIBLE IN THE CONSTRUCTION PERIOD.
13. NOT USED
14. NOT USED
15. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL, STORAGE AND REPLACEMENT OF EXISTING CEILING TILES FOR EXTENSION OF UTILITIES IN "OUT OF SCOPE" AREAS REQUIRED TO FEED SCOPE AREAS.
16. APPLY U.L. APPROVED FIRESTOPPING("3M" FIRE STOP SEALANT 2000 AND/OR "3M" FIRE BARRIER CP25 WB) TO ALL PENETRATIONS OF FIRE RATED FLOORS, WALL AND CEILING ASSEMBLIES. RATINGS MUST RE-ESTABLISH THE ORIGINAL FIRE RESISTANCES.
17. NOT USED
18. PER NEC 200.6(D) WHERE GROUNDED CONDUCTORS OF DIFFERENT SYSTEMS ARE INSTALLED IN SAME RACEWAY, EACH CONDUCTOR SHALL BE IDENTIFIED PER SYSTEM AND SIGNAGE SHALL BE POSTED VIA "MICRATA" LABEL AT PANELBOARD.
19. NOT USED
20. NOT USED
21. ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND THE RELATED HVAC, ELECTRICAL, PLUMBING, FIRE PROTECTION, ARCHITECTURAL INTERIOR DECOR AND SITE ENGINEERING DRAWINGS, OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND/OR ENGINEER PRIOR TO BID SUBMISSION. (THE MORE STRINGENT REQUIREMENT SHALL PREVAIL).

| DWG No. | | DESCRIPTION | ISSUED FOR REVIEW - 2/7/2020 | | |
|---------|--|---|------------------------------|--|--|
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| REVISIONS | | |
|-----------|----------|-------------------|
| NO | DATE | DESCRIPTION |
| 1 | 2/7/2020 | COUNTY SUBMISSION |
| 2 | 3/1/2020 | REVIEW |
| | | |
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PROPOSED PROJECT FOR:

HONEYDEW RANCH, LLC
665 OLD HINDLEY RANCH ROAD
HONEYDEW, CA 95545

ELECTRICAL SPECIFICATIONS AND GENERAL NOTES

| | |
|----------|------------|
| DATE | JOB NO |
| 3/1/2020 | 20-0001 |
| SCALE | DWG. NO |
| AS NOTED | E-1 |
| DWN. BY | JFL |
| CHECKED | JFL |
| | 1 OF 6 |

ELECTRICAL SYMBOL LEGEND (DEVICE AND EQUIPMENT MOUNTING HEIGHTS ARE AS LISTED ON DRAWING AND/OR DESCRIBED IN SPECIFICATIONS UNLESS ITEMIZED BY CIVIL DOCUMENTS)(NOT ALL SYMBOLS ARE REPRESENTED ON DRAWINGS)

| SYMBOL | DESCRIPTION |
|---|--|
|  | CEILING OR PENDANT MOUNTED FLUORESCENT FIXTURE AND OUTLET. α = SWITCH CONTROL. 3 = CIRCUIT NUMBER - TYPICAL FOR ALL FIXTURES. |
|  | FIXTURE WIRED TO EMERGENCY CIRCUIT WHERE EMERGENCY GENERATOR IS PRESENT (BB = BATTERY BALLAST IN ADDITION TO GEN CKT) OR WITH BUILT IN BATTERY WHERE NO GENERATOR IS PRESENT. U.O.N. |
|  | LINEAR WALL WASH(UNSHADED SIDE DESIGNATES DIRECTION OF WASH) |
|  | INDUSTRIAL OR STRIP FLUORESCENT FIXTURE. |
|  | LIGHTING FIXTURE WIRED TO EMERGENCY CIRCUIT OR WITH BUILT IN BATTERY. |
|  | TRACK LIGHTING FIXTURE(S) |
|  | SURFACE OR RECESSED LIGHT FIXTURE, EMERG. CIRCUIT OR BATTERY BACK-UP. |
|  | PENDANT LIGHT FIXTURE |
|  | WALL MOUNTED LIGHT FIXTURE, EMERGENCY CIRCUIT OR BATTERY BACK-UP. |
|  | WALL WASH, EMERGENCY CIRCUIT OR BATTERY BACK-UP.(UNSHADED SIDE DESIGNATES DIRECTION OF WASH) |
|  | POLE MOUNTED LIGHT FIXTURE |
|  | CEILING MOUNTED EXIT SIGN, WALL MOUNTED EXIT SIGN. 90° TO BOTTOM OF SIGN OR CENTERED ON WALL AREA BETWEEN TOP OF DOOR AND CEILING. ARROWS AS INDICATED, SHADED AREA INDICATES FACE(S). U.O.N. |
|  | LED EXIT SIGN WITH BATTERY PAK AND LOCAL EMERGENCY HEADS - TYPE "E1" TYPICAL. WIRE TO LOCAL CIRCUIT AHEAD OF SWITCHING U.O.N. |
|  | EMERGENCY BATTERY PACK ABOVE CEILING (WHERE APPLICABLE) ISOLITE #E3-30-LC-V2-WB(FOR 277V) & #E3-50-LC-V1-WB(FOR 120V). (90 MINUTE MINIMUM CAPACITY) WIRE TO LOCAL CIRCUIT AHEAD OF SWITCHING WITH (2) #12 + (1) #12G.(U.O.N.) (IN NEMA 1 ENCLOSURE). |
|  | BATTERY OPERATED EMERGENCY LIGHTING. 90° TO BOTTOM OF FIXTURE OR CENTERED ON WALL AREA BETWEEN TOP OF DOOR AND CEILING. (90 MINUTE MINIMUM CAPACITY) WIRE TO LOCAL CIRCUIT AHEAD OF SWITCHING U.O.N. LITHONIA # ELM2LESD |
|  | (2)WEATHERPROOF EMERGENCY FLOOD LIGHTS(DUAL MOUNTED) LITHONIA #ERE-B-T-WP (8'-0"AFG U.O.N.).WIRE TO LOCAL CIRCUIT AHEAD OF SWITCHING U.O.N. |
|  | FLOOD LIGHT. WIRE TO LOCAL CIRCUIT AHEAD OF SWITCHING U.O.N. |
|  | REMOTE TEST SWITCH WITH LED MOUNTED IN SINGLE GANG STAINLESS STEEL FACE PLATE ON CEILING(U.O.N.). |
|  | LIGHT FIXTURE, A=LIGHTING FIXTURE TYPE, B=FOOTCANDLES AND X=CIRCUIT NUMBER |
|  | SINGLE POLE 20A. TOGGLE TYPE SWITCH MOUNTED 4'-0" AFF TO TOP. SUBLETTER "α" DENOTES FIXTURE CONTROLLED. U.O.N. (LOW VOLTAGE WHERE APPLICABLE). |
|  | THREE WAY SWITCH |
|  | FOUR WAY SWITCH |
|  | KEYED SWITCH |
|  | DIMMER SWITCH-LUTRON MAESTRO SMART DIMMER. TYPE TO MATCH LAMP, VOLTAGE AND SINGLE OR MULTIPLE LOCATIONS. U.O.N. |
|  | MANUAL MOTOR STARTER(THERMAL ELEMENT) |
|  | SWITCH W/PILOT LIGHT |
|  | SINGLE RECEPTACLE 125V.,20A.,2P.,3W.,5-20R U.O.N.(SPECIALTY TYPE AS NOTED-A,B,C SEE SPECIALTY SCHEDULE)(MOUNTED AT SAME HEIGHT AS DUPLEX, U.O.N.) |
|  | DUPLEX CONVENIENCE RECEPTACLE 20A. 125V. MOUNTED 1'-4" A.F.F. TO CENTER. U.O.N. 3-CIRCUIT NUMBER. CH=ABOVE COUNTER HEIGHT AT 44" MAX TO ABOVE COUNTERS WHICH ARE 20"-25" DEEP. U.O.N. CP=CHILD PROOF. |
|  | DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER HEIGHT. |
|  | ISOLATED GROUND RECEPTACLE |
|  | GROUND FAULT RECEPTACLE |
| | DOUBLE DUPLEX RECEPTACLE (QUAD) |
| | DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER HEIGHT WITH GROUND. (GF) |
| | DUPLEX RECEPTACLE MOUNTED ABOVE CEILING FOR PROJECTOR OR OTHER DEVICE(S), "C" = CEILING MOUNTED. |
| | CONTINUOUS SURFACE MOUNTED RACEWAY(TYPE AS NOTED). MOUNTED AT 44" MAX TO ABOVE COUNTERS WHICH ARE 20"-25" DEEP. U.O.N. WIREMOLD NON-METALLIC 2 CHANNEL SERIES 5000 SYSTEM SURFACE RACEWAY WITH TRIM COVERS AT BASEBOARD LEVEL WITH DEVICES AS SHOWN ON PLAN AND ALL CONNECTING HARDWARE. (BLACK DASHED REPRESENTS DUPLEX RECEPTACLE(S)U.O.N. DATA AS NOTED OR SHOWN ON PLANS). |
| | COMBINATION TELE/COMM OUTLET W/ 1"CDT. RUN TO ABOVE ACCESSIBLE CEILING SPACE 1'-4"AFF TO CENTER LINE OF DEVICE. PROVIDE PULL STRING AND END BUSHINGS(NUMBER REPRESENTS # OF KEYSTONES, IF NOT TYPICAL). (X/X = NUMBER OF VOICE DROPS/NUMBER OF DATA DROPS) CH=ABOVE COUNTER HEIGHT. COORDINATE WITH ARCHITECT FOR FINAL FURNITURE COORDINATION. DATA OUTLET MOUNTED ABOVE CEILING FOR PROJECTOR OR OTHER DEVICE(S). FOLLOW BASIC TELE/COMM PROVISIONS. "C" = CEILING MOUNTED. (AT DECK IF NO CEILING). |
| | WIRELESS APPLICATION PROTOCOL CONNECTION - CAT 6E CONNECTION BY E.C. UNLESS OTHERWISE NOTED. |
| | RECESSED IN FLOOR POKE-THROUGH FITTING FOR POWER/TELE/DATA. WALKER #RCATCBK(BS-WHERE SHOWN ON PLANS)(COM-75) SERIES. DATA KEYSTONES AND TELE/DATA WIRING BY OTHERS. FOLLOW CONDUIT REQUIREMENT FOR TYPICAL DEVICE. (4" CORE) |
| | RECESSED IN FLOOR BOX-WALKER OMNIBOX #880S2 WITH FLANGE #827PCC-BLK, RECEPTACLE COVER PLATE #828PR-BLK, TELE/DATA COVERPLATE #829PS-BLK AND DUPLEX RECEPTACLE TELE/DATA JACKS BY OTHERS. FOLLOW CDT REQUIREMENT FOR TYPICAL DEVICE. U.O.N. EM=EMERGENCY PHONE. |
| | RECESSED IN FLOOR BOX-WALKER OMNIBOX #880S3 WITH FLANGE #837PCC-BLK, RECEPTACLE COVER PLATES #828PR-BLK, TELE/DATA COVERPLATE #829PS-BLK AND DUPLEX RECEPTACLE TELE/DATA JACKS BY OTHERS. FOLLOW CDT REQUIREMENT FOR TYPICAL DEVICE. U.O.N. EM=EMERGENCY PHONE. |
| | RAISED FLOOR POWER/DATA ACTIVATION BOX |
| | WALL MOUNTED TELEPHONE OUTLET 1'-4", PS = PAYSTATION AT 48" AFF TO TOP OF DEVICE. 3/4" CDT TO ABOVE ACCESS CEILING SPACE WITH PULLSTRING AND END BUSHINGS. (FF = FIREFIGHTERS TELEPHONE JACK MTD. AT 48" AFF). (TD = TEXT TELEPHONE DEVICE PER A.D.A.). |

| SYMBOL | DESCRIPTION |
|---|---|
|  | WIRELESS APPLICATION PROTOCOL CONNECTION - CAT 6E CONNECTION BY E.C. UNLESS OTHERWISE NOTED. |
|  | JUNCTION BOX, CEILING "C" OR WALL MOUNTED, ELECTRICAL CONTRACTOR TO MAKE ALL REQUIRED CONNECTIONS TO DESIGNATED EQUIPMENT. |
|  | RECESSED TV MONITOR, WALL MOUNTED TV MONITOR OUTLET & RECEPTACLE - 3/4"CDT TO ABOVE ACCESSIBLE CEILING SPACE WITH COMPLETE RACEWAY ACCESS BACK TO CATV HEAD END. U.O.N. COORDINATE HEIGHT W/ARCHITECT. |
|  | PUSH-BUTTON, UP/DN/STOP |
|  | DOORBELL BUZZER, DOOR BELL BUZZER WITH FLASHING LIGHT.(COMPLETE SYSTEM) |
|  | RECESSED CEILING SPEAKER, WALL MOUNTED SPEAKER(BACKBOX WHERE REQUIRED) WITH 3/4"CONDUIT TO NEAREST ACCESSIBLE CEILING, CREATING A COMPLETE PATH TO THE LOCAL HEAD END EQUIPMENT WITH PULLSTRING.(COORD. WITH A/V DWGS), MICROPHONE OUTLET FLOOR MOUNTED; WALL MOUNTED MICROPHONE J-BOX WITH 3/4"CONDUIT TO NEAREST ACCESSIBLE CEILING, CREATING A COMPLETE PATH TO THE LOCAL HEAD END EQUIPMENT WITH PULLSTRING.(COORD. WITH A/V DWGS). |
|  | LOUD SPEAKER WALL MOUNTED, CEILING MOUNTED J-BOX WITH 3/4"CONDUIT TO NEAREST ACCESSIBLE CEILING, CREATING A COMPLETE PATH TO THE LOCAL HEAD END EQUIPMENT WITH PULLSTRING.(COORD. WITH A/V DWGS). |
|  | PHOTOCELL |
|  | FLOOR BOX CONNECTION, 3-GANG BOX WITH (2)1-1/4" CONDUITS AND PULL-WIRE TO EQUIPMENT RACK. |
|  | WALL MOUNT CONNECTION, 3-GANG BOX WITH (2)1-1/4" CONDUITS AND PULL-WIRE TO EQUIPMENT RACK. |
|  | CEILING MOUNT CONNECTION, 3-GANG BOX WITH (2)1-1/4" CONDUITS AND PULL-WIRE TO EQUIPMENT RACK. |
|  | LIGHTING CONTROLLER |
|  | PANEL BOARD (LIGHTING OR RECEPTACLE) SURFACE MOUNTED |
|  | PANEL BOARD (LIGHTING OR RECEPTACLE) RECESSED |
|  | GROUND ROD OR AS NOTED ON DRAWING OR DETAIL |
|  | TRANSFORMER |
|  | ELECTRIC METER |
|  | FIRE ALARM MANUAL PULL STATION - 48"A.F.F. TO TOP OF DEVICE. |
|  | COMBINATION FIRE ALARM HORN OR SPEAKER/STROBE (ADA) AS PER SPECIFICATIONS - 80" A.F.F. TO BOTTOM OF DEVICE 15/75 CD MINIMUM. U.O.N.(TYPICAL). |
|  | FIRE ALARM SPEAKER (ADA) - 80" AFF TO BOTTOM OF DEVICE (TYPICAL). |
|  | FIRE ALARM STROBE (ADA) - 80" AFF TO BOTTOM OF DEVICE 15/75 CD MINIMUM. U.O.N.(TYPICAL). |
|  | FIRE ALARM SMOKE DETECTOR (PHOTOELECTRIC UNLESS OTHERWISE NOTED), (I= IONIZATION) (ADDRESSABLE) CEILING MOUNTED. |
|  | FIRE ALARM HEAT DETECTOR - FIXED TEMP/RATE OF RISE. U.O.N. |
|  | FIRE ALARM DUCT SMOKE DETECTOR(ADDRESSABLE) |
|  | UNDER FLOOR SMOKE DETECTOR |
|  | SPRINKLER WATER FLOW SWITCH |
|  | SPRINKLER TAMPER SWITCH |
|  | REMOTE ANNUNCIATOR PANEL |
|  | GRAPHIC ANNUNCIATOR PANEL |
|  | EMERGENCY POWER OFF(COVER) - LIFT COVER, PUSH BUTTON. |
|  | MONITOR |
|  | DOOR STATUS SWITCH |
|  | CARD READER-PROXIMITY SENSORS - 3/4" CONDUIT WITH PULL-WIRE FROM ACCESSIBLE CEILING TO DOOR BUCK. |
|  | DOOR CONTACT |
|  | MAGNETIC DOOR LOCK |
|  | PALM READER |
|  | INTERCOM |
|  | REQUEST TO EXIT PUSHBUTTON |
|  | CAMERA WALL MTD., CEILING MTD. - 4"x4" J-BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING SPACE WITH PULL-WIRE. |
|  | EMERGENCY SHUT DOWN PUSH BUTTON (BG = BREAK GLASS) ("SQUARE D" #9001KR9RH13) MOUNT AT 48"AFF. U.O.N. |
|  | INTERCOM MASTER |
|  | WATER DETECTOR |
|  | PATIENT MONITOR DATA OUTLET AND RECEPTACLE-3/4"CONDUIT TO 6" ABOVE ACCESSIBLE CEILING SPACE WITH COMPLETE RACEWAY ACCESS BACK TO NETWORK CLOSET. |
|  | NURSE CALL PANIC BUTTON (CODE BLUE) |
|  | ONE BED NURSE CALL WALL STATION. "2" INDICATES TWO BED STATION. MOUNT 4'-0"AFF TO TOP. U.O.N. "α" = CONTROL STATION WIRED TO. |
|  | NURSES CALL WALL STATION PSYCHIATRIC TYPE. MOUNT 4'-0"AFF TO TOP. U.O.N. |
|  | NURSES CALL DOME LIGHT MOUNTED 6" ABOVE DOOR. "C" = CEILING MOUNTED. |
|  | NURSES CALL AUXILIARY INTERSECTIONAL DOME LIGHT. |
|  | NURSES CALL DUTY STATION. MOUNT 5'-0"AFF. |
|  | NURSES CALL EMERGENCY STATION. MOUNT AS FOLLOWS: 6'-0" AFF AT SHOWER LOCATIONS - WP } WITH PULL CORD. 4'-0" AFF AT TUB LOCATIONS - WP } 3'-0" AFF AT TOILET LOCATIONS |
|  | NURSE CALL STAFF STATION. MOUNT 5'-0"AFF. |
|  | MOTION SENSOR - SENSOR SWITCH #WSX-PDT-120/277(800W @ 120V., 1200W @ 277V.)(180° COVERAGE) U.O.N. |

| SYMBOL | DESCRIPTION |
|---|---|
|  | NURSES CONTROL STATION ON DESK. "α" DENOTES DEVICE CONTROLLER. |
|  | NURSES TERMINAL CABINET ON WALL. |
|  | EMERGENCY STATION. MOUNT AS FOLLOWS: 6'-0" AFF AT SHOWER LOCATIONS - WP } WITH PULL CORD. 4'-0" AFF AT TUB LOCATIONS - WP } 3'-0" AFF AT TOILET LOCATIONS |
|  | EMERGENCY ASSISTANCE DOME LIGHT MOUNTED 6" ABOVE DOOR. "C" = CEILING MOUNTED. |
|  | MOTOR |
|  | SYSTEMS FURNITURE J-BOX WALL FEED FOR POWER. WHIPS TO FURNITURE AND FINAL TERMINATION BY E.C. (LIQUIDTIGHT LFNL FROM WALL TO FURNITURE)(TYPICAL) |
|  | SYSTEMS FURNITURE J-BOX WALL FEED FOR TELE/ DATA, 1-1/4"CDT RUN TO 6" ABOVE CONCEALED CEILING SPACE WITH PULL STRING. (LIQUIDTIGHT LFNL FROM WALL TO FURNITURE)(TYPICAL) |
|  | SYSTEMS FURNITURE POKE-THROUGH FLOOR FEED FOR POWER. WALKER #RC7AFFTC. WIRES FROM BELOW. PROVIDE AND INSTALL SEAL-TITE WHIP TO FURNITURE. |
|  | SYSTEMS FURNITURE POKE-THROUGH FLOOR FEED FOR TELE/DATA. WALKER #RC7AFFTC WITH COM75 ADAPTER. WIRES FROM BELOW. PROVIDE AND INSTALL SEAL-TITE WHIP TO FURNITURE, WITH 2-1/2" & 1-3/4" |
|  | SYSTEMS FURNITURE POKE-THROUGH FLOOR FEED FOR TELE/DATA.(LARGE CAPACITY) WALKER #RC3AM2TC WITH CONDUIT CONNECTOR AND 2" ADAPTER FOR CONNECTION TO FURNITURE SYSTEM. U.O.N. |
|  | RECESSED IN FLOOR BOX-WALKER OMNIBOX #880S1 WITH FLANGE #817PCC-BLK, COVER PLATE #829CK-1, AND DUPLEX RECEPTACLE WITH FURNITURE FEEDS. WHIPS TO FURNITURE AND FINAL TERMINATION BY E.C. |
|  | RECESSED IN FLOOR BOX-WALKER OMNIBOX #880S1 WITH FLANGE #817PCC-BLK, COVERPLATE #829CK-1, WITH FURNITURE FEEDS. TELE/DATA JACKS BY OTHERS. 1"CDT RUN TO 6" ABOVE CONCEALED CEILING SPACE WITH PULL STRING. |
|  | WALL MOUNTED RECESSED CLOCK OUTLET RECEPTACLE @ 90"AFF, WITH CLOCK HANGER HOOK. (COORDINATE WITH ARCHITECT). (U.O.N.) |
|  | COAX JUNCTION BOX WITH 3/4" CONDUIT AND PULLWIRE ABOVE ACCESSIBLE CEILING |
|  | DOOR HOLD OPEN DEVICE(MAGNETIC, WITH RELEASE UPON LOSS OF 120V POWER OR SIGNAL FROM F.A.C.P.) ELECTRICAL CONTRACTOR TO WIRE TO BOTH. |
|  | PERIMETER PEDESTAL GROUNDING CONNECTION |
|  | INTERNAL PEDESTAL GROUNDING CONNECTION TELE-POWER POLE BY WIREMOLD CAT.#ALTP-2S, 10'-5"H X 2"D, WITH FOUR RECEPTACLES FOR POWER AND 1/2" KNOCKOUTS FOR TELE/DATA WHIPS. WHIPS SHALL BE LIQUID-TITE FLEX TO SYSTEMS FURNITURE FOR EQUIPMENT FEED SEE PLANS FOR NUMBER OF DEVICES AND CIRCUITS. L= ALUMINUM ARCHITECTURAL COLUMN #VS62345FFP, 10'-6"H X 9"W X 4"D, 3 COMPARTMENTS. FURNITURE OR EQUIPMENT FEED PLATE FOUND AT BOTTOM OF COLUMN OR DEVICES AS SHOWN ON PLAN. |
|  | EXPOSED CONDUIT OR CABLE |
|  | CONCEALED CONDUIT OR CABLE |
|  | NON-FUSIBLE DISCONNECT SWITCH |
|  | FUSIBLE DISCONNECT SWITCH W/ FUSE RATING. |
|  | ALARM PANEL - RADIONICS |
|  | RELAY |
|  | SOUND SYSTEM VOLUME CONTROL |
|  | ITEMS TO BE DEMOLISHED AND REMOVED. (THIS INCLUDES ALL EQUIPMENT IN SPACE COVERED WHETHER ITEMIZED OR NOT). |

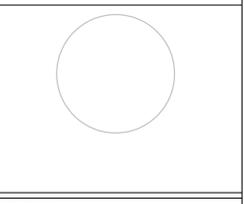
| ELECTRICAL ABBREVIATION LEGEND | |
|--------------------------------|--------------------------------|
| ABBREVIATION | DESCRIPTION |
| A | AMPERE |
| AC | ALTERNATING CURRENT |
| AFC | ABOVE FINISHED CEILING |
| AFF | ABOVE FINISHED FLOOR |
| AHU | AIR HANDLING UNIT |
| ARF | ABOVE RAISED FLOOR |
| AWG | AMERICAN WIRE GAGE |
| BFG | BELOW FINISHED GRADE |
| C | CONDUIT |
| CAHU | COMPUTER AIR HANDLING UNIT |
| CB | CIRCUIT BREAKER |
| CH | ABOVE COUNTER HEIGHT |
| CKT | CIRCUIT |
| COGB | CENTRAL OFFICE GROUND BUS |
| CRAC | COMPUTER ROOM AIR CONDITIONER |
| DC | DIRECT CURRENT |
| DFA | DOWN FROM ABOVE |
| D/S | DISCONNECT SWITCH |
| E | EXISTING |
| EC | ELECTRICAL CONTRACTOR |
| EMT | ELECTRICAL METALLIC TUBING |
| EPO | EMERGENCY POWER OFF PUSHBUTTON |
| ER | EXISTING TO BE RELOCATED |
| FACP | FIRE ALARM CONTROL PANEL |
| FGB | FRAME GROUND BUS |

| ELECTRICAL ABBREVIATION LEGEND | |
|--------------------------------|--|
| ABBREVIATION | DESCRIPTION |
| G | GROUND |
| GF1 | GROUND FAULT CIRCUIT INTERRUPTER |
| GFP | GROUND FAULT PROTECTION |
| HP | HORSE POWER |
| IDF | INTERMEDIATE DISTRIBUTION FRAME |
| IG | ISOLATED GROUND |
| JB | JUNCTION BOX |
| KAIC | THOUSAND AMP INTERRUPTING CAPACITY |
| KCMIL | THOUSAND CIRCULAR MILS |
| KVA | KILOVOLT - AMPERE |
| KW | KILOWATT |
| LP | LIGHTING PANEL |
| MCB | MAIN CIRCUIT BREAKER |
| MCC | MOTOR CONTROL CENTER |
| MDF | MAIN DISTRIBUTION FRAME |
| MDP | MAIN DISTRIBUTION PANEL |
| MDS | MAIN DISTRIBUTION SWITCHGEAR |
| MGB | MAIN GROUND BUS |
| MLO | MAIN LUGS ONLY |
| N | NEW |
| NC | NORMALLY CLOSED |
| NIC | NOT IN CONTRACT |
| N/L | NIGHT LIGHT |
| NO | NORMALLY OPEN |
| OHE | OVER HEAD ELECTRIC |
| OHT | OVER HEAD TELEPHONE |
| OPGP | OFFICE PRINCIPAL GROUND POINT |
| φ | PHASE |
| PC | PHOTOCELL |
| PNL | PANEL |
| PGB | PRINCIPAL GROUND BUS |
| PGP | PRINCIPAL GROUND POINT |
| PP | POWER PANEL |
| PVC | POLY VINYL CHLORIDE CONDUIT |
| R | RELOCATED IN NEW POSITION |
| RFGB | RAISED FLOOR GROUND BUS |
| RGS | RIGID GALVANIZED STEEL CONDUIT |
| RP | RECEPTACLE PANEL |
| SCCR | SHORT CIRCUIT CURRENT RATINGS |
| SW | SWITCH |
| SWBD | SWITCHBOARD |
| SWGR | SWITCHGEAR |
| TBB | TELEPHONE BACKBOARD |
| TVSS | TRANSIENT VOLTAGE SURGE SUPPRESSOR |
| UGCATV | UNDERGROUND CABLE TV |
| UGE | UNDERGROUND ELECTRICAL |
| UGT | UNDERGROUND TELEPHONE |
| UON | UNLESS OTHERWISE NOTED |
| V | VOLT |
| WAP | WIRELESS ACCESS PROTOCOL DEVICE |
| WM | WIREMOLD |
| WP | WEATHER PROOF (NEMA RATED)(WHILE IN USE) |
| XFER | TRANSFER |
| XFMR | TRANSFORMER |
| XP | EXPLOSION PROOF |

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JFL DESIGN L.L.C.
CONSULTING ENGINEERS
7 ROBERT PLACE, OCEAN, NJ 07712
(732) 504-9034



| REVISIONS | | |
|-----------|----------|-------------------|
| NO | DATE | DESCRIPTION |
| 1 | 2/7/2020 | COUNTY SUBMISSION |
| 2 | 3/1/2020 | REVIEW |

PROPOSED PROJECT FOR:

HONEYDEW RANCH, LLC

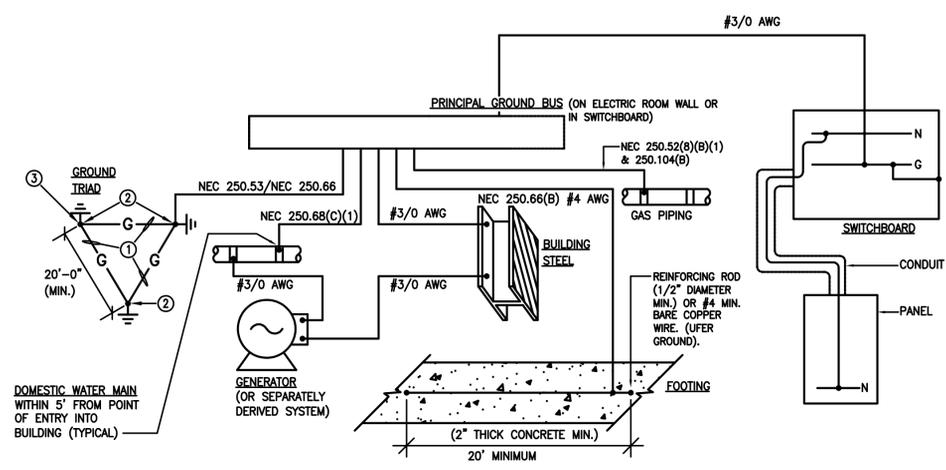
665 OLD HINDLEY RANCH ROAD
HONEYDEW, CA 95545

ELECTRICAL SYMBOLS, ABBREVIATIONS AND DETAIL

| | |
|----------|------------|
| DATE | JOB NO |
| 3/1/2020 | 20-0001 |
| SCALE | DWG. NO |
| AS NOTED | E-2 |
| DWN. BY | JFL |
| CHECKED | JFL |
| | |

SPECIAL PURPOSE RECEPTACLE LEGEND

A= 20A. 250V. 2P,3W. RECP.#5461, NEMA RATING 6-20R
 B= 30A. 125V. 2P,3W. RECP.#5371, NEMA RATING 5-30R
 C= 30A. 250V. 2P,3W. RECP.#5372, NEMA RATING 6-30R
 D= 30A. 125/250V. 3P,3W. RECP.#5207, NEMA RATING 10-30R
 E= 30A. 125/250V. 3P,4W. RECP.#278, NEMA RATING 14-30R
 F= 30A. 250V. 3P,4W. RECP.#8430-A, NEMA RATING 15-30R
 G= 50A. 250V. 2P,3W. RECP.#5374, NEMA RATING 6-50R
 H= 50A. 125/250V. 3P,3W. RECP.#5206, NEMA RATING 10-50R
 I= 50A. 125/250V. 3P,4W. RECP.#279, NEMA RATING 14-50R
 J= 20A. 250V. 2P,3W. RECP.#2320, NEMA RATING L6-20R
 K= 30A. 125V. 2P,3W. RECP.#2610, NEMA RATING L5-30R
 L= 30A. 250V. 2P,3W. RECP.#2610, NEMA RATING L6-30R
 M= 30A. 250V. 3P,4W. RECP.#2720, NEMA RATING L15-30R
 N= 20A. 125V. 2P,3W. RECP.#2310, NEMA RATING L5-20R
 O= NOT USED FOR CLARITY.
 P= 20A. 120/208V. 4P,5W. RECP.#2510, NEMA RATING L21-20R
 (MANUFACTURER NUMBERS BY LEVTON)(SPECIFICATION GRADE)



- GENERAL NOTES:**
1. THE GROUNDING SYSTEM IS DESIGNED FOR A MAXIMUM OF 25 OHMS WHEN MEASURED FROM THE GROUND BUS TO THE SINGLE POINT GROUND LOCATED OUTSIDE OF THE BUILDING ENVELOPE.
 2. GROUNDING SHOWN SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE N.E.C. ARTICLE 250.
 3. BOND ACROSS WATER METERS, HOT AND COLD WATER CONNECTIONS, ETC.
 4. BONDING CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH NEC 250.28(D) WHERE SUPPLY CONDUCTORS ARE GREATER THAN 1100 KCMIL.
- KEY NOTES:**
- 1 3/0 COPPER WIRE.
 - 2 CADWELD CONNECTION.
 - 3 COPPERCLAD GROUND ROD. 3/4"x10" LOCATED 18" MINIMUM BELOW FINISHED GRADE.(TYPICAL) U.O.N. LOCATED IN TEST WELL (U.O.N.)

| LOAD | Kw | RUNNING POWER FACTOR | KVA (Kw/0.95) | DEMAND FACTOR |
|---|--------|----------------------|---------------|---|
| LIGHTING | 96.00 | 0.95 | 101.05 | 100% = 101.05 kVA |
| RECEPTACLES | 57.60 | 0.95 | 60.63 | 1st 10 kVA @100% = 10.00 kVA REMAINDER @ 50% = 25.32 kVA |
| MISC. POWER | 252.00 | 0.95 | 265.26 | 100% = 265.26 kVA |
| FANS | 88.00 | 0.90 | 97.78 | 100% = 97.78 kVA |
| PUMPS | 43.00 | 0.95 | 45.26 | 0% = 0.00 kVA = 499.41 kVA = 1386.22 AMPS |
| TOTALS | | | | |
| STARTUP OF LARGEST MOTOR - (25% OF FULL LOAD AMPERES) | | | | = |
| | | | | TOTAL AMPERES = 1386.22 AMPS |
| | | | | SERVICE SIZE = 2000 AMPS |

2 SPECIAL PURPOSE RECEPTACLE LEGEND

3 TYPICAL GROUNDING SYSTEM FROM SERVICE ENTRANCE

4 LOAD SUMMARY

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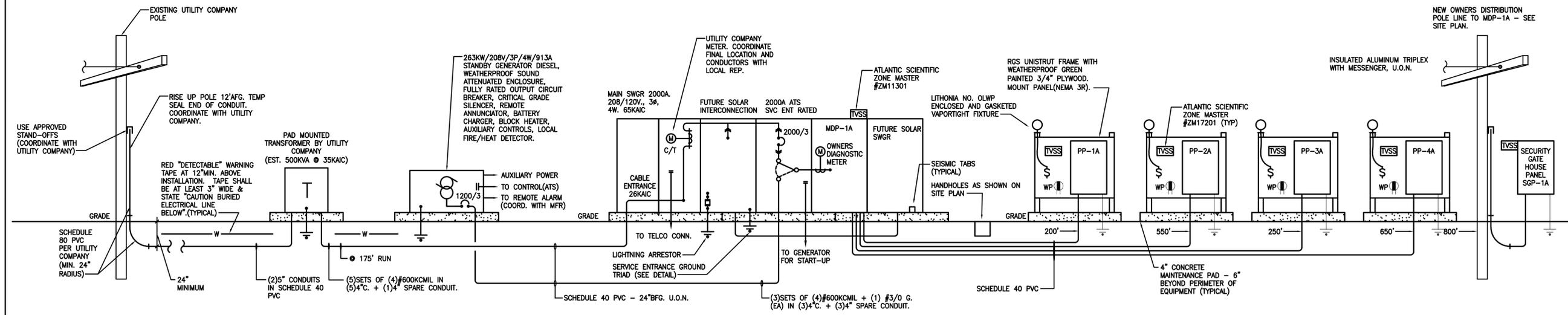
JFL DESIGN L.L.C.
 CONSULTING ENGINEERS
 7 ROBERT PLACE, OCEAN, NJ 07712
 (732) 504-3034

REVISIONS

| NO | DATE | DESCRIPTION |
|----|----------|-------------------|
| 1 | 2/7/2020 | COUNTY SUBMISSION |
| 2 | 3/1/2020 | REVIEW |

PROPOSED PROJECT FOR:
 HONEYDEW RANCH, LLC
 665 OLD HINDLEY RANCH ROAD
 HONEYDEW, CA 95545

SINGLE LINE RISER DIAGRAM AND DETAILS



1 SINGLE LINE RISER DIAGRAM

SCALE NONE

| | |
|----------|---------|
| DATE | JOB NO |
| 3/1/2020 | 20-0001 |
| SCALE | DWG. NO |
| AS NOTED | E-3 |
| DWN. BY | |
| JFL | |
| CHECKED | |
| JFL | 3 OF 6 |

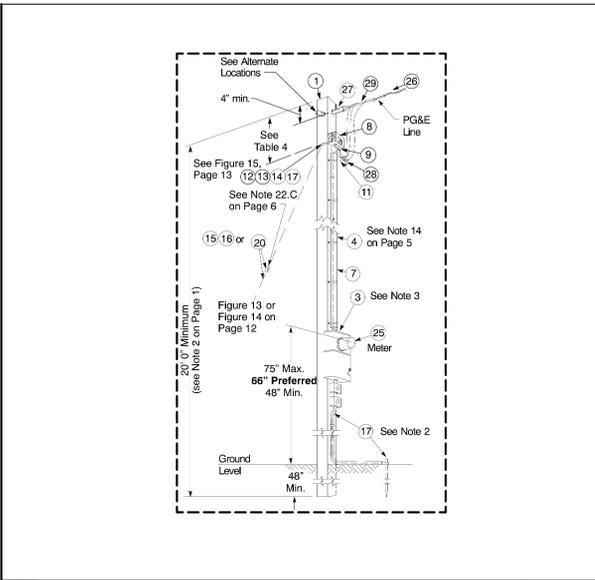
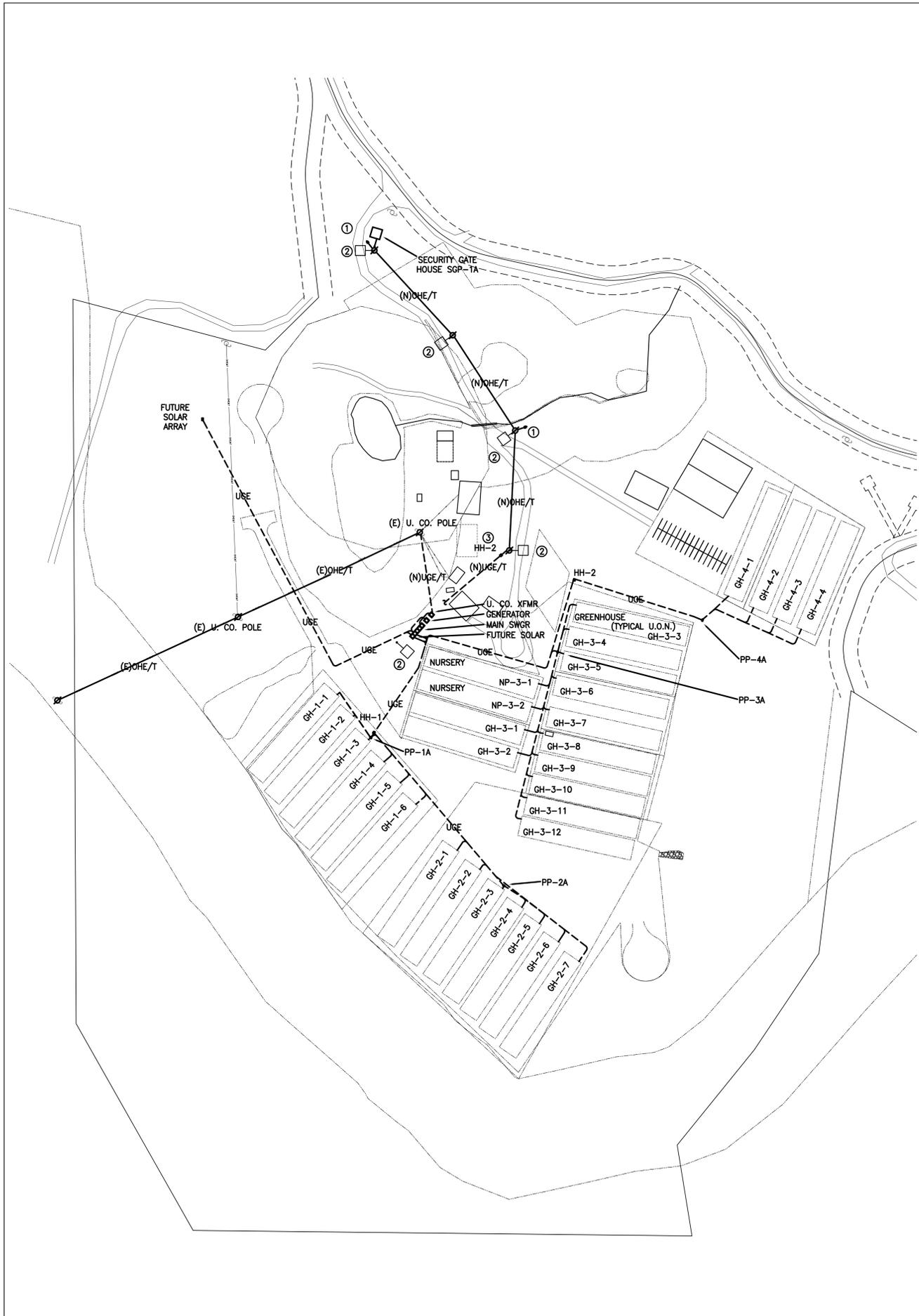
| PANEL | | GHP-XX | | SCHEDULE | | COMMENTS | | NEW GREENHOUSE PANEL | | 60A MAIN CIRCUIT BREAKER | | | | |
|----------------|--------------|-------------------------|------------------|------------------------|-------------|---------------|---------|----------------------|-------------|-------------------------------------|------------------|---------------------------------|----------------|---------------|
| PANEL LOCATION | | CORRIDOR NEXT TO RM 187 | | VOLTS, 3 PHASE, 4 WIRE | | 100A BUS SIZE | | NP PANEL SAME | | NUMBER OF POLES: 42 | | | | |
| 208/120 | | | | | | | | | | PANEL SHORT CIRCUIT RATING: 10 KAIC | | | | |
| C.B. POLE NO. | C.B. TRIP VA | C.B. LOAD VA | LOAD DESCRIPTION | CIR NO | FDR.DATA | PHASE A | PHASE B | PHASE C | FDR.DATA | CIR NO | LOAD DESCRIPTION | C.B. LOAD VA | C.B. TRIP AMPS | C.B. POLE NO. |
| 1 | 20 | 1,890 | LIGHTING | 1 | 2 12 12 3/4 | 2690 | | | 2 12 12 3/4 | 2 | CEILING FANS | 800 | 20 | 1 |
| 1 | 20 | 1,890 | LIGHTING | 3 | 2 12 12 3/4 | | 2690 | | 2 12 12 3/4 | 4 | CEILING FANS | 800 | 20 | 1 |
| 1 | 20 | 1,890 | LIGHTING | 5 | 2 12 12 3/4 | | | 2690 | 2 12 12 3/4 | 6 | RECEPTACLES/FANS | 800 | 20 | 1 |
| 1 | 20 | 1,500 | WALL FAN | 7 | 2 12 12 3/4 | 2300 | | | 2 12 12 3/4 | 8 | RECEPTACLES/FANS | 800 | 20 | 1 |
| 1 | 20 | 1,500 | WALL FAN | 9 | 2 12 12 3/4 | | 1860 | | 2 12 12 3/4 | 10 | SCP | 360 | 20 | 1 |
| 1 | 20 | 60 | NIGHT LIGHT | 11 | 2 12 12 3/4 | | | 70 | 2 12 12 3/4 | 12 | EXIT LIGHTS | 10 | 20 | 1 |
| | | | SPACE | 13 | | 0 | | | | 14 | SPACE | | | |
| | | | SPACE | 15 | | | 0 | | | 16 | SPACE | | | |
| | | | SPACE | 17 | | | | | | 18 | SPACE | | | |
| | | | SPACE | 19 | | | | | | 20 | SPACE | | | |
| | | | SPACE | 21 | | | | | | 22 | SPACE | | | |
| | | | SPACE | 23 | | | 0 | | | 24 | SPACE | | | |
| | | | SPACE | 25 | | | | 0 | | 26 | SPACE | | | |
| | | | SPACE | 27 | | | | | | 28 | SPACE | | | |
| | | | SPACE | 29 | | | | 0 | | 30 | SPACE | | | |
| | | | SPACE | 31 | | | | | | 32 | SPACE | | | |
| | | | SPACE | 33 | | | | 0 | | 34 | SPACE | | | |
| | | | SPACE | 35 | | | | | | 36 | SPACE | | | |
| | | | SPACE | 37 | | | | 0 | | 38 | SPACE | | | |
| | | | SPACE | 39 | | | | | | 40 | SPACE | | | |
| | | | SPACE | 41 | | | | | | 42 | SPACE | | | |
| MOUNTING: | | RECESSED | | PH-LOAD | | 4990 | | 4550 2760 VA | | PANEL TYPE : NEMA 1, WITH | | | | |
| FED FROM: | | RP-XX-X | | CONNECTED LOAD | | | | 12 KVA | | 34 AMPS | | GROUNDING TERMINAL 100% NEUTRAL | | |

| PANEL | | PP-1A | | SCHEDULE | | COMMENTS | | NEW PANEL | | 400A MAIN CIRCUIT BREAKER | | | | |
|----------------|--------------|--------------|--------------------|----------------|--------------|------------------------|---------|----------------|----------|-------------------------------------|------------------|---------------------------------|----------------|---------------|
| PANEL LOCATION | | 208/120 | | SITE | | VOLTS, 3 PHASE, 4 WIRE | | 400A BUS SIZE | | NUMBER OF POLES: 42 | | | | |
| | | | | | | | | | | PANEL SHORT CIRCUIT RATING: 10 KAIC | | | | |
| C.B. POLE NO. | C.B. TRIP VA | C.B. LOAD VA | LOAD DESCRIPTION | CIR NO | FDR.DATA | PHASE A | PHASE B | PHASE C | FDR.DATA | CIR NO | LOAD DESCRIPTION | C.B. LOAD VA | C.B. TRIP AMPS | C.B. POLE NO. |
| 3 | 60 | 4,990 | GH-1-1 | 1 | 4 6 10 1-1/2 | 9980 | | | 9100 | 4 | GH-1-2 | 4,990 | 60 | 3 |
| | | 4,550 | | 3 | | | | | 5380 | 6 | | 2,690 | | |
| | | 2,690 | | 5 | | | | | | 8 | | 4,990 | | |
| 3 | 60 | 4,550 | GH-1-3 | 9 | 4 6 10 1-1/2 | 9980 | | | 9100 | 10 | GH-1-4 | 4,550 | 60 | 3 |
| | | 2,690 | | 11 | | | | | 5380 | 12 | | 2,690 | | |
| | | 4,990 | | 13 | | | | | | 14 | | 4,990 | | |
| 3 | 60 | 4,550 | GH-1-5 | 15 | 4 6 10 1-1/2 | 9980 | | | 9100 | 16 | GH-1-6 | 4,550 | 60 | 3 |
| | | 2,690 | | 17 | | | | | 5380 | 18 | | 2,690 | | |
| 1 | 20 | | SPARE | 19 | | | | | | 20 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 21 | | | | | | 22 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 23 | | | | | | 24 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 25 | | | | | | 26 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 27 | | | | | | 28 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 29 | | | | | | 30 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 31 | | | | | | 32 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 33 | | | | | | 34 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 35 | | | | | | 36 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 37 | | | | | | 38 | SPARE | | 20 | 1 |
| 1 | 20 | 200 | LIGHT & RECEPTACLE | 41 | 2 12 12 3/4 | | | | 200 | 42 | TVSS | | 60 | 3 |
| MOUNTING: | | PAD | | PH-LOAD | | 29940 | | 27300 16340 VA | | PANEL TYPE : NEMA 1, WITH | | | | |
| FED FROM: | | MDP-1A | | CONNECTED LOAD | | | | 74 KVA | | 204 AMPS | | GROUNDING TERMINAL 100% NEUTRAL | | |

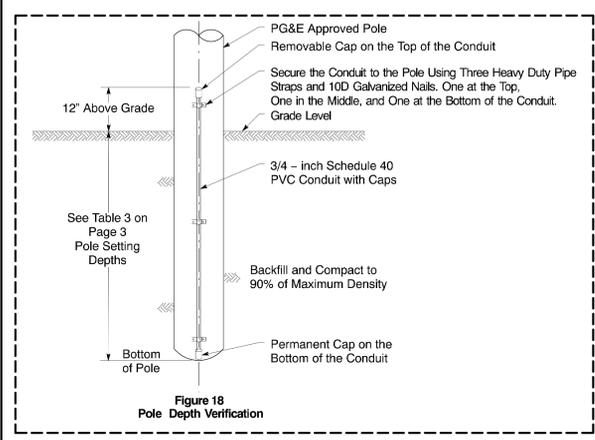
| PANEL | | PP-2A | | SCHEDULE | | COMMENTS | | NEW PANEL | | 400A MAIN CIRCUIT BREAKER | | | | |
|----------------|--------------|--------------|--------------------|----------------|--------------|------------------------|---------|----------------|----------|-------------------------------------|------------------|---------------------------------|----------------|---------------|
| PANEL LOCATION | | 208/120 | | SITE | | VOLTS, 3 PHASE, 4 WIRE | | 400A BUS SIZE | | NUMBER OF POLES: 42 | | | | |
| | | | | | | | | | | PANEL SHORT CIRCUIT RATING: 10 KAIC | | | | |
| C.B. POLE NO. | C.B. TRIP VA | C.B. LOAD VA | LOAD DESCRIPTION | CIR NO | FDR.DATA | PHASE A | PHASE B | PHASE C | FDR.DATA | CIR NO | LOAD DESCRIPTION | C.B. LOAD VA | C.B. TRIP AMPS | C.B. POLE NO. |
| 3 | 60 | 4,990 | GH-2-1 | 1 | 4 6 10 1-1/2 | 9980 | | | 9100 | 4 | GH-2-2 | 4,990 | 60 | 3 |
| | | 4,550 | | 5 | | | | | 5380 | 6 | | 2,690 | | |
| | | 4,990 | | 7 | | | | | | 8 | | 4,990 | | |
| 3 | 60 | 4,550 | GH-2-3 | 9 | 4 6 10 1-1/2 | 9980 | | | 9100 | 10 | GH-2-4 | 4,550 | 60 | 3 |
| | | 2,690 | | 11 | | | | | 5380 | 12 | | 2,690 | | |
| | | 4,990 | | 13 | | | | | | 14 | | 4,990 | | |
| 3 | 60 | 4,550 | GH-2-5 | 15 | 4 6 10 1-1/2 | 9980 | | | 9100 | 16 | GH-2-6 | 4,550 | 60 | 3 |
| | | 2,690 | | 17 | | | | | 5380 | 18 | | 2,690 | | |
| | | 4,990 | | 19 | | | | | | 20 | SPARE | | 20 | 1 |
| 3 | 60 | 4,550 | GH-2-7 | 21 | 4 6 10 1-1/2 | 4990 | | 4550 | | 22 | SPARE | | 20 | 1 |
| | | 2,690 | | 23 | | | | 2690 | | 24 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 25 | | | | | | 26 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 27 | | | | | | 28 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 29 | | | | | | 30 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 31 | | | | | | 32 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 33 | | | | | | 34 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 35 | | | | | | 36 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 37 | | | | | | 38 | SPARE | | 20 | 1 |
| 1 | 20 | 200 | LIGHT & RECEPTACLE | 41 | 2 12 12 3/4 | | | | 200 | 42 | TVSS | | 60 | 3 |
| MOUNTING: | | PAD | | PH-LOAD | | 34930 | | 31850 19030 VA | | PANEL TYPE : NEMA 1, WITH | | | | |
| FED FROM: | | MDP-1A | | CONNECTED LOAD | | | | 86 KVA | | 238 AMPS | | GROUNDING TERMINAL 100% NEUTRAL | | |

| PANEL | | PP-3A | | SCHEDULE | | COMMENTS | | NEW PANEL | | 600A MAIN CIRCUIT BREAKER | | | | |
|----------------|--------------|--------------|--------------------|----------------|--------------|------------------------|---------|----------------|----------|-------------------------------------|------------------|---------------------------------|----------------|---------------|
| PANEL LOCATION | | 208/120 | | SITE | | VOLTS, 3 PHASE, 4 WIRE | | 600A BUS SIZE | | NUMBER OF POLES: 54 | | | | |
| | | | | | | | | | | PANEL SHORT CIRCUIT RATING: 22 KAIC | | | | |
| C.B. POLE NO. | C.B. TRIP VA | C.B. LOAD VA | LOAD DESCRIPTION | CIR NO | FDR.DATA | PHASE A | PHASE B | PHASE C | FDR.DATA | CIR NO | LOAD DESCRIPTION | C.B. LOAD VA | C.B. TRIP AMPS | C.B. POLE NO. |
| 3 | 60 | 4,990 | GH-3-1 | 1 | 4 6 10 1-1/2 | 9980 | | | 9100 | 2 | GH-3-2 | 4,990 | 60 | 3 |
| | | 4,550 | | 3 | | | | | 5380 | 4 | | 4,550 | | |
| | | 2,690 | | 5 | | | | | | 6 | | 2,690 | | |
| | | 4,990 | | 7 | | | | | | 8 | | 4,990 | | |
| 3 | 60 | 4,550 | GH-3-3 | 9 | 4 6 10 1-1/2 | 9980 | | | 9100 | 10 | GH-3-4 | 4,550 | 60 | 3 |
| | | 2,690 | | 11 | | | | | 5380 | 12 | | 2,690 | | |
| | | 4,990 | | 13 | | | | | | 14 | | 4,990 | | |
| 3 | 60 | 4,550 | GH-3-5 | 15 | 4 6 10 1-1/2 | 9980 | | | 9100 | 16 | GH-3-6 | 4,550 | 60 | 3 |
| | | 2,690 | | 17 | | | | | 5380 | 18 | | 2,690 | | |
| | | 4,990 | | 19 | | | | | | 20 | | 4,990 | | |
| 3 | 60 | 4,550 | GH-3-7 | 21 | 4 6 10 1-1/2 | 9980 | | | 9100 | 22 | GH-3-8 | 4,550 | 60 | 3 |
| | | 2,690 | | 23 | | | | | 5380 | 24 | | 2,690 | | |
| | | 4,990 | | 25 | | | | | | 26 | | 4,990 | | |
| 3 | 60 | 4,550 | GH-3-9 | 27 | 4 6 10 1-1/2 | 9980 | | | 9100 | 28 | GH-3-10 | 4,550 | 60 | 3 |
| | | 2,690 | | 29 | | | | | 5380 | 30 | | 2,690 | | |
| | | 4,990 | | 31 | | | | | | 32 | | 4,990 | | |
| 3 | 60 | 4,550 | GH-3-11 | 33 | 4 6 10 1-1/2 | 9980 | | | 9100 | 34 | GH-3-12 | 4,550 | 60 | 3 |
| | | 2,690 | | 35 | | | | | 5380 | 36 | | 2,690 | | |
| | | 4,990 | | 37 | | | | | | 38 | | 4,990 | | |
| 3 | 60 | 4,550 | NP-3-1 | 39 | 4 6 10 1-1/2 | 9980 | | | 9100 | 40 | NP-3-2 | 4,550 | 60 | 3 |
| | | 2,690 | | 41 | | | | | 5380 | 42 | | 2,690 | | |
| 1 | 20 | 200 | LIGHT & RECEPTACLE | 43 | 2 12 12 3/4 | | | | 200 | 44 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 45 | | | | | | 46 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 47 | | | | | | 48 | SPARE | | 20 | 1 |
| 1 | 20 | | SPARE | 49 | | | | | | 50 | | | | |
| 1 | 20 | | SPARE | 51 | | | | | | 52 | TVSS | | 60 | 3 |
| | | | SPACE | 53 | | | | | | 54 | | | | |
| MOUNTING: | | PAD | | PH-LOAD | | 70060 | | 63700 37660 VA | | PANEL TYPE : NEMA 1, WITH | | | | |
| FED FROM: | | MDP-1A | | CONNECTED LOAD | | | | 171 KVA | | 476 AMPS | | GROUNDING TERMINAL 100% NEUTRAL | | |

| PANEL | | PP-4A | | SCHEDULE | | COMMENTS | | NEW PANEL | | 400A MAIN CIRCUIT BREAKER | |
|----------------|--|---------|--|----------|--|----------|--|-----------|--|---------------------------|--|
| PANEL LOCATION | | 208/120 | | SITE | | | | | | | |



4
SH-1 TYPICAL WOODEN POLE DETAIL SCALE: NONE



5
SH-1 POLE DEPTH DETAIL SCALE: NONE

Table 3 Pole Setting Depths

| Pole Length (feet) | Setting Depth (feet) | |
|--------------------|----------------------|-------|
| | Firm Soil | Rock |
| 25 | 4-1/2 | 3 |
| 30 | 5 | 3 |
| 35 | 5 | 3-1/2 |
| 40 | 5-1/2 | 3-1/2 |
| 45 | 6 | 4 |

6
SH-1 SITE LIGHTING CLEARANCE DETAIL (TYPICAL) SCALE: 1" = 100'

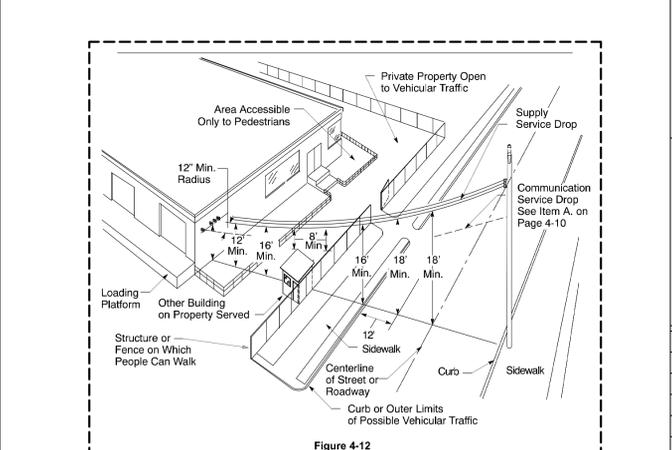
- GENERAL NOTES**
- ALL SITE LIGHTING FIXTURES SHALL BE CIRCUITED TO PANEL "MDP-1A". NUMBERS AS SHOWN ON PLAN.
 - COORDINATE ALL UTILITIES WITH ASSOCIATED UTILITY COMPANIES.
 - SEE RISER DIAGRAM ON DRAWING E-3 FOR ADDITIONAL INFORMATION.
 - ALL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED (U.O.N.).
 - COMMUNICATION CABLE SHALL BE 24" NORMALLY, BUT MAY BE REDUCED TO 12" BEYOND 15' FROM A BUILDING.
 - WIRE SITE LIGHTING TO CIRCUIT SHOWN ON PANEL SCHEDULE. USE INSULATED CONDUCTORS WITH STEEL MESSENGER.
 - REFER TO PG&E GREEN BOOK FOR ADDITIONAL NOTES PLUS REQUIREMENTS FOR CUSTOMER OWNED POLES.
 - ADJUST ALL CONDUCTORS/CONDUIT OVER 100' FOR VOLTAGE DROP.

- KEY NOTES**
- GUY WIRE AND ANCHOR.
 - 25' WOODEN POLE TO FOLLOW STANDARDS ON THIS DRAWING. LIGHT FIXTURE TO BE EQUAL TO GE LIGHTING (275W) # ERS227E130AGRAYAFLR WITH WOOD POLE MOUNTING ADAPTER @ 23' AFG. COORDINATE WITH POWER AND COMMUNICATIONS CLEARANCE DETAILS. ALL WOOD POLES SHALL BE GROUNDED ACCORDING TO UTILITY COMPANY STANDARDS.
 - TRANSITION TO COPPER CONDUCTORS IN HANDHOLE TO RUN UNDERGROUND TO MDP-1A. ALL SPLICES ARE TO BE WEATHERTIGHT.

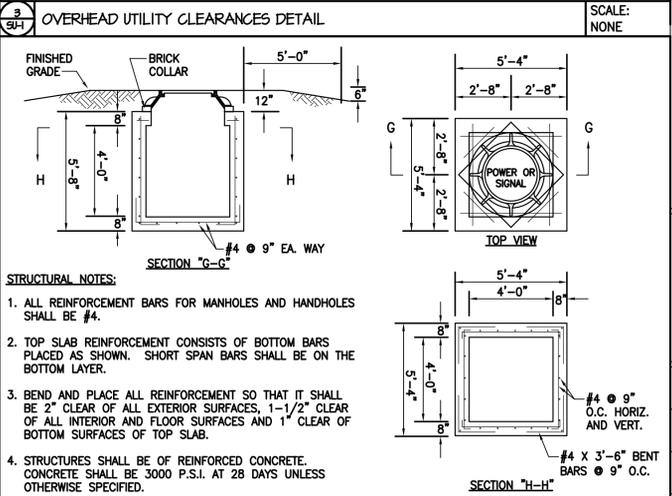
Table 4-3 Vertical Clearance From the Ground on Nonresidential Property¹

| Description | Minimum Vertical Distance (In Feet) |
|---|-------------------------------------|
| Over private driveways, lanes, and other areas (e.g., alleys and parking lots) accessible to vehicles. | 16 |
| Over areas accessible to pedestrians only. | 12 |
| Over buildings and bridges, or over structures (attached or unattached) that do not ordinarily support conductors and on which people can walk. | 8 |

¹ Clearance requirements may be different than local electrical codes.



7
SH-1 OVERHEAD UTILITY CLEARANCES DETAIL SCALE: NONE

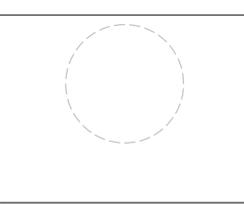


8
SH-1 STRUCTURAL DETAIL FOR HANDHOLES (HH-1, 2) SCALE: NONE

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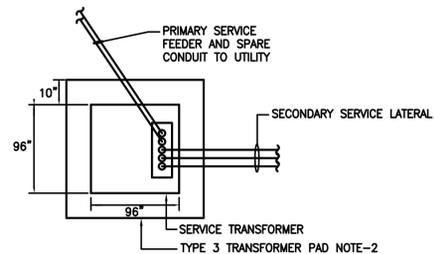
REVISIONS

| NO | DATE | DESCRIPTION |
|----|----------|-------------------|
| 1 | 2/7/2020 | COUNTY SUBMISSION |
| 2 | 3/1/2020 | REVIEW |

PROPOSED PROJECT FOR:
HONEYDEW RANCH, LLC
665 OLD HINDLEY RANCH ROAD
HONEYDEW, CA 95545

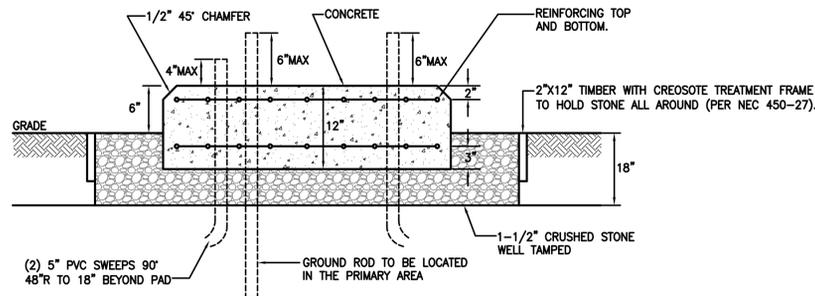
ELECTRICAL SITE UTILITY PLAN

| | |
|----------|---------|
| DATE | JOB NO |
| 3/1/2020 | 20-0001 |
| SCALE | DWG. NO |
| AS NOTED | SU-1 |
| DWN. BY | JFL |
| CHECKED | JFL |
| | 5 OF 6 |



NOTES:

1. TRANSFORMER PAD SHALL BE 12" THICK, 3,000 PSI CONCRETE REINFORCED TOP AND BOTTOM WITH NO. 4 BARS 12" ON CENTER BOTH WAYS. PAD DIMENSIONS SHOWN ARE APPROXIMATE AND SHALL BE CONFIRMED WITH FURNISHED EQUIPMENT SHOP DRAWINGS.
2. #3/0 BARE BOND TRANSFORMER CASE, CONDUIT GROUNDING BUSHINGS, ETC...
3. FOR PRIMARY SERVICE FEEDER CABLE AND CONDUIT REFER TO SPECIFICATIONS. PRIMARY SERVICE FEEDER SHALL BE INSTALLED 36" BELOW GRADE TO UTILITY CONNECTION POINT.
4. COORDINATE PAD AND INSTALLATION WITH UTILITY COMPANY.
5. MINIMUM 20' FROM ANY BUILDING OPENINGS, 10' WHERE BUILDING WALL HAS 2 HOUR FIRE RATING WITH NO OPENINGS. (4" REINFORCED CONCRETE, 8" BRICK, 8" HOLLOW CONCRETE BLOCK).
6. PROTECTIVE BOLLARDS SURROUNDING TRANSFORMER WHERE REQUIRED.

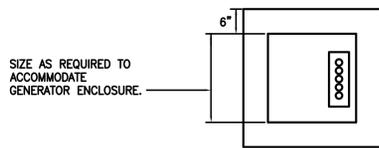


NOTES:

1. TYPICAL TRANSFORMER PAD CONSTRUCTION DETAIL.
2. TRANSFORMER, PRIMARY CABLE AND CONNECTIONS AT TRANSFORMER FOR PRIMARY AND SECONDARY CONDUCTORS BY UTILITY COMPANY, ALL OTHER COMPONENTS AND CONSTRUCTION REQUIRED FOR COMPLETE INSTALLATION BY E.C. U.O.N.

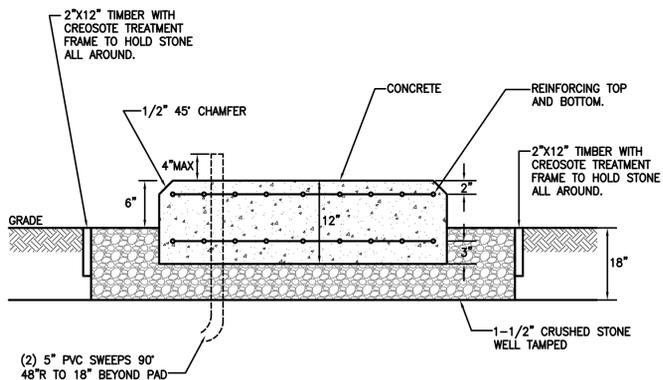
1 E-T TYPICAL TRANSFORMER PLAN VIEW AND PADMOUNT DETAIL

SCALE: NONE



NOTES:

1. PAD SHALL BE 12" THICK, 3,000 PSI CONCRETE REINFORCED TOP AND BOTTOM WITH NO. 4 BARS 12" ON CENTER BOTH WAYS. PAD DIMENSIONS SHOWN ARE APPROXIMATE AND SHALL BE CONFIRMED WITH FURNISHED EQUIPMENT SHOP DRAWINGS.
2. #3/0 BARE BOND CASE, CONDUIT GROUNDING BUSHINGS, ETC...
3. FOR FEEDER CABLE AND CONDUIT REFER TO SPECIFICATIONS. FEEDER SHALL BE INSTALLED 36" BELOW GRADE TO UTILITY POLE.
4. COORDINATE PAD AND INSTALLATION WITH OTHER UTILITIES.
5. MINIMUM 20' FROM ANY BUILDING OPENINGS, 10' WHERE BUILDING WALL HAS 2 HOUR FIRE RATING WITH NO OPENINGS. (4" REINFORCED CONCRETE, 8" BRICK, 8" HOLLOW CONCRETE BLOCK).

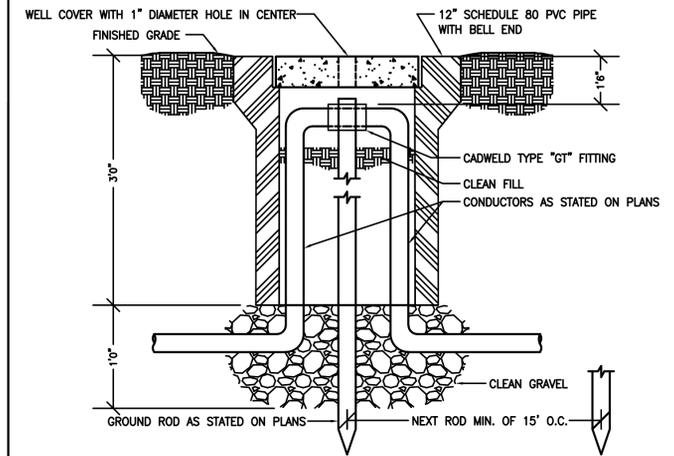


NOTES:

1. TYPICAL PAD CONSTRUCTION DETAIL.

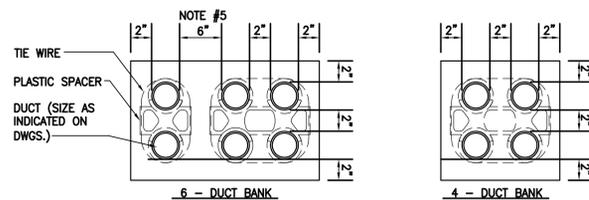
2 E-T GENERATOR PLAN VIEW AND PADMOUNT DETAIL

SCALE: NONE



4 E-T TYPICAL GROUND TEST WELL DETAIL AT SERVICE ENTRANCE

SCALE: NONE



DUCT BANK NOTES:

1. CONCRETE ENCASED FOR ELECTRIC OR TELCO UNDER ROADWAYS. ALL OTHERS SHALL HAVE WARNING TAPE 6" BFG. CONCRETE SHALL BE 3000 P.S.I. @ 28 DAYS, OR AS SPECIFIED.
2. PROVIDE REINFORCING RODS ON TOP OF DUCTS WHEN CROSSING OR PLACED IN ROADWAYS. (#4 AT 9" PARALLEL AND PERPENDICULAR).
3. MINIMUM COVER TO TOP OF ENVELOPE SHALL BE 24".
4. NON-FERROUS TIE WIRES TO BE EMBEDDED IN DUCT BED CONCRETE.
5. PROVIDE MINIMUM 6" SPACE BETWEEN POWER AND SIGNAL DUCTS. INCREASE SIZE AS REQUIRED.

6 E-T TYPICAL DUCT BANK DETAILS(U.O.N)

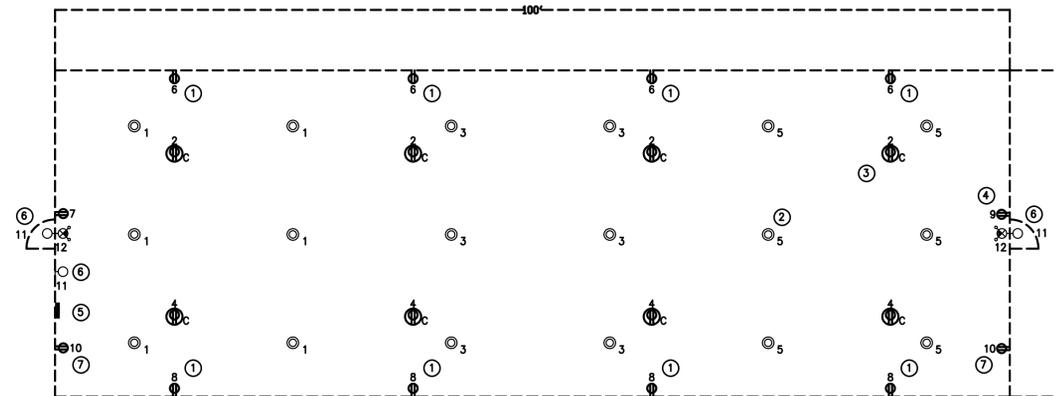
SCALE: NONE

GENERAL NOTES

1. ALL GREENHOUSE AND NURSERY ELECTRICAL PANELS SHALL BE WIRED TO RESPECTIVE "RP" PANELS.
2. SEE RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. GREENHOUSE PANELS ARE NOTED ON RISER AS GHP-XX. NURSEY PANELS ARE NOTED AS NP-XX.
4. ALL EXHAUST FANS PLUG INTO LOCAL RECEPTACLES U.O.N.

KEY NOTES

1. 200W/120V CIRCULATION FANS AT 6' AFF FOR (2) NURSERIES ONLY. RECEPTACLES ALL GREENHOUSES AND NURSERIES AT 36" (TYPICAL).
2. TYPICAL LIGHTING - FLUORESCENT SCREW IN LAMPS, 120V, 6500K, MODEL #BU250W. (TYPICAL FOR 18).
3. CIRCULATING FANS MOUNTED TO FRAMEWORK AT TOP OF STRUCTURE, 120V, 3.8A. (TYPICAL FOR 8).
4. WALL MOUNTED EXHAUST FANS, 120V, 12.5A, 1500W. (TYPICAL FOR 2).
5. GREENHOUSE AND NURSERY ELECTRICAL PANELS. (TYPICAL FOR ALL).
6. NIGHT LIGHT - LITHONIA NO. 0LWP MOUNTED AT 6' AFF.
7. SCPI CIRCUIT OUTLET.



3 E-T TYPICAL GREENHOUSE PLAN

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

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JFL DESIGN L.L.C.
CONSULTING ENGINEERS
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(732) 504-3034

REVISIONS

| NO | DATE | DESCRIPTION |
|----|----------|-------------------|
| 1 | 2/7/2020 | COUNTY SUBMISSION |
| 2 | 3/1/2020 | REVIEW |
| | | |
| | | |
| | | |

PROPOSED PROJECT FOR:

HONEYDEW RANCH, LLC

665 OLD HINDLEY RANCH ROAD
HONEYDEW, CA 95545

ELECTRICAL SITE UTILITY PLAN

| | | | |
|---------|----------|-------------|---------|
| DATE | 3/1/2020 | JOB NO | 20-0001 |
| SCALE | AS NOTED | DWG. NO | |
| DWN. BY | JFL | SU-2 | |
| CHECKED | JFL | | |