

TITLE PAGE

SLOT NUMBER: BX#E1254

JOB NUMBER: 2018-633

TITLE: Silverdale Fieldstone Assisted Living

CITY: Silverdale

STATE: WA

BID DATE: 9/12/18

TIME: 4:00 PM

PLACE OF BID:

CD Smith Construction  
8989 East Johnson Street  
PO Box 1006  
Fond du Lac, WI 54936-1006  
Contact: Patty Guldan

PHONE: 920-907-6463

E-Mail: phuldan@csmith.com

PRIOR APPROVAL:

COST ESTIMATE:

COMPLETION DATE:

LIQUID DAMAGES:

BUY AMERICAN:

PREVAILING WAGE:

DATE RECEIVED:

8/20/18

ARCHITECT:

Carletti Architects  
116 E. Fir Street, Suite A  
Mount Vernon, WA 98273  
Contact: David Wilson

PHONE: 360-424-0394

E-Mail: david@carlettiarchitects.com

MECHANICAL ENGINEER:

Hultz BHU Engineers  
1111 Fawcett Avenue, Suite 100  
Tacoma, WA 98402  
Contact: Rick Hultz

PHONE: 253-383-3257

E-Mail: rickh@hultzbhu.com

ELECTRICAL ENGINEER:

Hultz BHU Engineers  
1111 Fawcett Avenue, Suite 100  
Tacoma, WA 98402  
Contact: Tatyana Mikeladze

PHONE: 253-383-3257

E-Mail: tatyana@hultzbhu.com

REMARK: New construction of a 155,238 SF five story assisted living facility with 137 units.

*\*\*\*TAKE-OFF IS BASED ON MATERIAL AVAILABLE FROM DESIGN AND SPECIFICATIONS PROVIDED BY THE ARCHITECTS AND ENGINEERS. WE ARE UNABLE TO ACCEPT ANY LIABILITY OR RESPONSIBILITY AS TO THE ACCURACY, COUNT, OR COMPATIBILITY, OF THE MATERIALS SHOWN FOR THE ABOVE PROJECTS.*

CUSTOM SURVEYS INC. 31811 PACIFIC HIGHWAY SOUTH, #B304, FEDERAL WAY, WA 98003  
PHONE; 206-768-27700 E-MAIL: CARPENTER@CUSTOMSURVEYSINC.COM

## ELECTRICAL SPECIFICATIONS

### 1. REGULATORY REQUIREMENTS

A. NATIONAL ELECTRICAL CODE, STATE AND LOCAL ELECTRICAL AND BUILDING CODES, LOCAL UTILITY COMPANY REQUIREMENTS, OBTAIN REQUIRED PERMITS AND INSPECTIONS.

B. LISTING AND LABELING: FURNISH AND INSTALL ONLY PRODUCTS THAT ARE LISTED AND LABELED BY ONE OR MORE OF THE FOLLOWING TESTING LABORATORIES AS APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ):  
UNDERWRITER'S LABORATORIES, INC. (UL)  
ETL TESTING LABORATORIES, INC. (ETL)  
FACTORY MUTUAL (FM)

### 2. SUBMITTALS

A. OBTAIN WRITTEN APPROVAL FROM OWNER PRIOR TO ORDERING MATERIALS AND COMMENCING WORK.

B. LIGHTING SYSTEMS: PROVIDE PRODUCT SUBMITTALS ON LIGHT FIXTURES, LAMPS, AUTOMATIC CONTROLS, LOW VOLTAGE SWITCHING CONTROLS. INCLUDE SHOP DRAWINGS FOR LOW VOLTAGE SWITCHING CONTROL.

C. POWER SYSTEMS: PROVIDE PRODUCT SUBMITTALS ON CONDUIT, WIRE, CABLE, WIRING DEVICES AND COVER PLATES. PROVIDE PRODUCT SUBMITTALS AND SHOP DRAWINGS ON DISTRIBUTION EQUIPMENT, TO INCLUDE SWITCHBOARDS AND PANELBOARDS. PROVIDE PRODUCT SUBMITTALS AND SHOP DRAWINGS ON GENERATOR SYSTEMS AND TRANSFER SWITCHES.

D. LOW VOLTAGE SYSTEMS: PROVIDE PRODUCT SUBMITTALS ON ALL WIRE AND CABLE, EQUIPMENT, COMPONENTS, AND DEVICES BEING FURNISHED FOR EACH SYSTEM. INCLUDE SHOP DRAWINGS FOR FIRE ALARM, EMERGENCY CALL, MEMORY CARE CONTROLLED EGRESS, AND TELEPHONE.

E. SUBMIT PRODUCT DATA AND SHOP DRAWINGS FOR SERVICE EQUIPMENT TO SERVING UTILITY FOR REVIEW AND APPROVAL IN ADDITION TO OWNER SUBMITTAL REQUIREMENTS.

F. OPERATION AND MAINTENANCE MANUALS: SUBMIT OPERATION AND MAINTENANCE MANUALS IN APPROVED ELECTRONIC FORMAT FOR THE FOLLOWING: LIGHT FIXTURES, AUTOMATIC LIGHTING CONTROLS, LOW VOLTAGE SWITCHING CONTROLS, POWER DISTRIBUTION EQUIPMENT, ALL LOW VOLTAGE SYSTEMS, GENERATOR SYSTEMS AND TRANSFER SWITCHES, AND OTHER ELECTRICAL SYSTEMS REQUESTED BY OWNER.

G. RECORD DRAWINGS: MAINTAIN AT THE PROJECT SITE ONE SET OF CLEAN, DRY, AND LEGIBLE RED-LINED RECORD DRAWINGS. INDICATE ELECTRICAL CHANGES, ELECTRICAL WORK ADDED, CIRCUITING, ONE LINE DIAGRAMS, SCHEDULES, CONSTRUCTION NOTES, AND DETAILS FOR A COMPLETE AS BUILT ELECTRICAL PLAN DOCUMENT. CREATE AND SUBMIT FINAL AS BUILT ELECTRICAL PLAN DOCUMENT IN AUTOCAD AND PDF FORMATS AT CONTRACT CLOSEOUT.

### 3. DEFINITIONS

A. FURNISH: OBTAIN AND/OR PREPARE AND DELIVER TO THE PROJECT.

B. INDICATED: SHOWN, SCHEDULED, NOTED, OR OTHERWISE CALLED OUT ON THE DRAWINGS.

C. INSTALL: ENTER PERMANENTLY INTO THE PROJECT COMPLETE AND READY FOR SERVICE.

D. PROVIDE: FURNISH AND INSTALL COMPLETE AND READY FOR SERVICE.

E. EQUIPMENT CONNECTION: MAKE BRANCH CIRCUIT CONNECTION, MOUNT AND CONNECT CONTROL DEVICES AS REQUIRED, PROVIDE DISCONNECT AND OVERCURRENT PROTECTION WHEN REQUIRED BY NEC AND IMC, IF NOT OTHERWISE INDICATED OR FURNISHED WITH EQUIPMENT.

F. WIRING: CONDUCTORS IN RACEWAY OR AN APPROVED CABLE ASSEMBLY.

G. PANEL: DISTRIBUTION PANELBOARD, LIGHTING & APPLIANCE PANELBOARD, LOADCENTER.

### 4. ELECTRICAL SERVICE

A. OBTAIN, PREPARE, AND FILE APPLICATION FORMS REQUIRED BY THE SERVING UTILITY FOR OBTAINING TEMPORARY AND PERMANENT SERVICES.

B. UTILITY COMPANY CHARGES FOR INSTALLING POWER SERVICE SHALL BE PAID BY THE OWNER AND ARE NOT INCLUDED IN THE CONTRACT.

C. MAKE ARRANGEMENTS WITH UTILITY COMPANY TO OBTAIN PERMANENT AND TEMPORARY ELECTRICAL SERVICE TO THE PROJECT. COORDINATE AND ARRANGE FOR SCHEDULING OF UTILITY WORK.

D. PROVIDE PICK-UP AND DELIVERY OF UTILITY COMPANY FURNISHED PRODUCTS AND MATERIALS TO PROJECT SITE.

E. PROVIDE TEMPORARY LIGHTING AND POWER DISTRIBUTION REQUIRED FOR THE PROJECT.

F. PROVIDE LABOR AND MATERIALS FOR ELECTRICAL SERVICE PER UTILITY COMPANY REQUIREMENTS. WORK INCLUDES PRIMARY AND SECONDARY CONDUITS, SECONDARY WIRE, VAULTS, AND TRANSFORMER PADS. OBTAIN PRODUCT AND INSTALLATION SPECIFICATIONS FROM THE UTILITY.

G. THE FOLLOWING SHALL BE FURNISHED AND INSTALLED BY THE UTILITY COMPANY: PRIMARY CABLE, PAD MOUNT TRANSFORMERS, CURRENT TRANSFORMERS FOR METERING, AND CONDUCTORS BETWEEN CURRENT TRANSFORMERS AND METER SOCKETS.

H. THE FOLLOWING SHALL BE FURNISHED BY THE UTILITY COMPANY AND INSTALLED BY THE CONTRACTOR: METER SOCKETS.

### 5. RACEWAYS

EMT FOR DRY AND DAMP LOCATIONS; RIGID GALVANIZED STEEL FOR WET LOCATIONS ABOVE GRADE; SCHEDULE 40 PVC FOR WET LOCATIONS BELOW GRADE; FLEXIBLE CONDUIT FOR FINAL CONNECTIONS TO RECESSED LIGHT FIXTURES AND EQUIPMENT SUBJECT TO VIBRATION OR MOVEMENT. FLEXIBLE CONDUIT MAY BE USED WHERE CONCEALED IN WALLS. MINIMUM CONDUIT SIZE FOR HOMERUNS & FOR CONDUIT INSTALLED BELOW GRADE AND UNDER CONCRETE SLAB SHALL BE 3/4".

### 6. CONDUIT FOR OUTDOOR ELECTRICAL WORK

INSTALL 1/2 INCH MINIMUM BELOW GRADE FOR 600 VOLTS AND BELOW. PROVIDE 6" WIDE METALLIC CORE YELLOW WARNING TAPE 12 INCHES BELOW FINAL GRADE. MINIMUM CONDUIT SIZE FOR ELECTRICAL BELOW 600 VOLTS SHALL BE 3/4 INCH. PRODUCTS AND INSTALLATION FOR ELECTRICAL SERVICE CONDUITS SHALL COMPLY WITH UTILITY COMPANY REQUIREMENTS.

### 7. CONDUCTORS

A. 600 VOLTS AND BELOW:

COPPER BUILDING WIRE, TYPE THWN-2 OR XHHW-2 (90 DEGREE) UNLESS OTHERWISE INDICATED. MINIMUM CONDUCTOR SIZE #12 AWG EXCEPT MINIMUM CONDUCTOR SIZE FOR EXTERIOR BUILDING, AREA & SIGN LIGHTING & HOMERUNS GREATER THAN 100-FEET SHALL BE #10 AWG.

B. METAL CLAD (MC CABLE): UL 1569; COPPER CONDUCTORS, 600 VOLT 90 DEGREE C RATED CONDUCTOR INSULATION, PHASE IDENTIFIED, WITH GREEN INSULATED COPPER GROUNDING CONDUCTOR AND STEEL OUTER COVERING. INCLUDE NEUTRAL CONDUCTOR FOR SWITCH LEGS PER NEC 404.2(C). PROVIDE PVC JACKETED MC CABLE LISTED FOR THE PURPOSE WHERE USED IN DAMP OR WET LOCATIONS.

C. NON METALLIC SHEATHED CABLE: TYPE NM AND SE, COPPER CONDUCTORS, 600 VOLT INSULATION RATED 90 DEGREES C, WITH INTEGRAL EQUIPMENT GROUND CONDUCTOR. INCLUDE NEUTRAL CONDUCTOR FOR SWITCH LEGS PER NEC 404.2(C).

### 8. DISTRIBUTION EQUIPMENT 600 VOLTS AND BELOW

COMMERCIAL EQUIPMENT MANUFACTURED BY SQUARE D, SIEMENS, OR EATON. FULL SIZE (17POLE) AND MULTIPOLE COMMON TRIP CIRCUIT BREAKERS ONLY. DISCONNECT/SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE WHERE INDICATED ON DRAWINGS, AIC RATING IS THE RMS SYMMETRICAL INTEGRATED EQUIPMENT SHORT CIRCUIT RATING OF THE COMPLETE ASSEMBLY.

### 9. FUSING

UL CLASS J EXCEPT CLASS RK5 MAY BE USED FOR MOTOR LOADS.

### 10. GROUNDING

A. GROUND NEW ELECTRICAL SERVICES AND SEPARATELY DERIVED SYSTEMS PER CODE.

B. PROVIDE EQUIPMENT GROUNDING PER CODE EXCEPT INCLUDE A SEPARATE INSULATED GREEN EQUIPMENT GROUNDING CONDUCTOR IN FEEDERS AND IN BRANCH CIRCUITS TO PLUG-IN OUTLETS.

C. GROUNDING CONNECTIONS AND TERMINATIONS WHICH ARE BURIED OR OTHERWISE INACCESSIBLE SHALL BE MADE USING EXOTHERMIC WELDS.

### 11. DEVICES

A. GENERAL: PROVIDE COMMERCIAL SPECIFICATION GRADE WITH MATCHING COVER PLATE. RECEPTACLE OUTLETS SHALL BE DUPLEX NEMA 5-20R UNLESS OTHERWISE INDICATED, EXCEPT NEMA 5-15R MAY BE SUBSTITUTED FOR MULTI-OUTLET GENERAL PURPOSE CIRCUITS IN OFFICE. DEVICE AND PLATE COLOR AS SELECTED BY ARCHITECT/OWNER.

B. DUPLEX RECEPTACLES, DWELLING UNITS, GUEST ROOMS & SUITES, AREAS ACCESSIBLE TO MEMORY CARE RESIDENTS, SAME MANUFACTURE, RATING, AND COLOR AS DUPLEX AND GFCI RECEPTACLES EXCEPT DEVICES SHALL BE UL LISTED AS TAMPER RESISTANT AND PERMANENT SPECIAL PURPOSE IDENTIFICATION SHALL BE VISIBLE ON THE DEVICE.

C. GFCI: PROVIDE GFCI PROTECTION FOR OUTLETS LOCATED IN KITCHENS, WITHIN 6 FEET OF SINKS, AT COUNTERS AND WORK SURFACES WHERE FOOD AND/OR BEVERAGES ARE PREPARED, AND AS OTHERWISE INDICATED.

D. DUPLEX RECEPTACLES, CONTROLLED: SAME MANUFACTURER, RATING, AND STYLE AS SPECIFIED FOR DUPLEX RECEPTACLES EXCEPT DEVICES SHALL HAVE SPECIAL PURPOSE IDENTIFICATION SYMBOL VISIBLE ON FACE OF EACH RECEPTACLE CONTROLLED. COLOR: AS SELECTED. PROVIDE UL LISTED LOW VOLTAGE LOCAL NETWORK STANDALONE 20 AMPERE PLUG LOAD RATED CONTROLLER.

E. OUTDOOR CONVENIENCE OUTLETS: PROVIDE GFCI PROTECTED NEMA 5-20R DUPLEX RECEPTACLE WITH WEATHERPROOF METAL DEVICE PLATE WITH HINGED DEVICE COVER.

F. OUTDOOR HVAC EQUIPMENT: PROVIDE OUTDOOR CONVENIENCE OUTLETS WITHIN 25 FEET OF EQUIPMENT PER CODE.

G. CONCEALED SERVICE FLOOR BOXES: HUBBELL HBLCFB SERIES FOR CONCRETE FLOORS, WITH STEEL FLUSH COVER/CARPET FLANGE ASSEMBLY AND REQUIRED DEVICE PLATES. PROVIDE 301 BASE FOR MAXIMUM 4-GANG DEVICE APPLICATIONS.

### 12. LIGHTING FIXTURES

PROVIDE FIXTURES COMPLETE WITH LAMPS AND MOUNTING HARDWARE. PROVIDE HANGARS, BRACKETS, PLATES, ANCHORS, AUXILIARY SUPPORTS AND OTHER MOUNTING ACCESSORIES REQUIRED BY BUILDING CONSTRUCTION AND CEILING CONDITIONS. PROVIDE CONCRETE BASE FOR OUTDOOR POLE LIGHTS AND SIGN LIGHTS.

### 13. OCCUPANCY SENSORS, DIGITAL CONTROLLERS, DAYLIGHT SENSORS

EXCLUDING DWELLING AND RESIDENT SLEEPING UNITS, PROVIDE OCCUPANCY SENSORS, DIGITAL CONTROLLERS, AND DAYLIGHT SENSORS FOR AUTOMATIC CONTROL OF LIGHTING AND DESIGNATED RECEPTACLES PER THE ENERGY CODE. OCCUPANCY SENSORS IN RESTROOMS AND OPEN OFFICE AREAS WITH PARTITIONS SHALL BE DUAL TECHNOLOGY (PIR/ULTRASONIC). PROVIDE ALL REQUIRED SYSTEMS SET UP, PROGRAMMING, AND COMMISSIONING. OCCUPANCY TIME DELAY SHALL BE SET FOR 10 MINUTES UNLESS OTHERWISE DIRECTED. SET OCCUPANCY SENSITIVITY PER MANUFACTURER'S RECOMMENDATION AND ADJUSTMENT INSTRUCTIONS. APPROVED PRODUCT MANUFACTURERS: NOVITAS, WATT STOPPER, SENSOR SWITCH.

### 14. LOW VOLTAGE LIGHTING CONTROL

A. PROVIDE ALL COMPONENTS, WIRING, AND ACCESSORIES FOR AUTOMATIC AND MANUAL REMOTE CONTROL SWITCHING OF LIGHTING BRANCH CIRCUITS USING ENERGY LIMITED CONTROL POWER. INCLUDE NECESSARY CLASS 2 TRANSFORMERS, 20 AMPERES RELAYS RATED FOR THE CONNECTED LOADS, PHOTO TIME SWITCH CONTROLLER, REMOTE ADJUSTABLE PHOTO SENSOR SUITABLE FOR OUTDOOR WEATHERPROOF INSTALLATION, AND RELAY SCANNERS AS REQUIRED FOR INDICATED CONTROL SEQUENCE OF SCHEDULED LIGHTING BRANCH CIRCUITS. MANUAL CONTROL SWITCHES SHALL BE HEAVY DUTY THREE POSITION MOMENTARY TOGGLE OR ROCKER TYPE SWITCH. LOW VOLTAGE CABLE SHALL BE UL TYPE CL2P, NEC CLASS 2P, WITH TEFLON JACKET OVERALL AND LISTED FOR USE IN DUCTS, PLENUMS, AND OTHER AIR HANDLING SPACES. MULTI-CONDUCTOR, STRANDED COPPER CABLE, #20 AWG

MINIMUM, COLOR CODED. APPROVED MANUFACTURERS: GE, DOUGLAS LIGHTING, WATTSTOPPER OR APPROVED EQUAL.

B. PROVIDE SHOP DRAWINGS INDICATING QUANTITY, LAYOUT, AND WIRING OF ALL SYSTEM COMPONENTS AND SEQUENCE OF OPERATION. INSTALL SYSTEM IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS AND APPROVED SHOP DRAWINGS. PROVIDE REQUIRED PROGRAMMING FOR INITIAL SET UP OF SYSTEM AS DIRECTED BY OWNER.

### 15. EQUIPMENT CONNECTIONS

A. PROVIDE POWER CONNECTIONS AND IN-SIGHT DISCONNECTING MEANS FOR ALL APPLIANCES, HVAC, AND MECHANICAL EQUIPMENT BEING FURNISHED OR INSTALLED UNDER THE CONTRACT. PROVIDE PIGTAIL AND PLUG WHERE REQUIRED FOR PLUG-IN CONNECTIONS. FINAL EQUIPMENT SELECTIONS AND APPROVED PRODUCTS MAY BE DIFFERENT THAN INDICATED IN CONTRACT DOCUMENTS. OBTAIN CIRCUIT, CONDUIT TERMINATION, AND VOLTAGE REQUIREMENTS FROM THE GENERAL, HVAC, AND PLUMBING CONTRACTORS AND FROM THE OWNER FOR OWNER FURNISHED EQUIPMENT. ENSURE APPLIANCE AND EQUIPMENT VOLTAGE, PHASE, AND CIRCUIT SIZE MATCH ELECTRICAL CIRCUITS BEING PROVIDED PRIOR TO ROUGH-IN.

### 16. FIRE ALARM SYSTEM

PROVIDE BIDDER DESIGN FIRE ALARM SYSTEM AND CARBON MONOXIDE DETECTORS CONFORMING TO ALL REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ). INCLUDE SHOP DRAWINGS, AHJ PLAN CHECK AND APPROVAL PERMITTING, AND REQUIRED INSPECTORS. BUILDING IS FIRE SPRINKLERED. COORDINATE WITH SPRINKLER CONTRACTOR AND HVAC CONTRACTOR FOR FIRE ALARM INTERFACE REQUIREMENTS.

### 17. TELEPHONE PREWIRE (RESIDENT UNITS)

PROVIDE BIDDER DESIGN TELEPHONE PREWIRE TO EACH DWELLING AND/OR RESIDENT SLEEPING UNIT. ALLOW FOR DEDICATED CAT 5E UTP TELEPHONE CABLE FROM A BUILDING DEMARCATION TELEPHONE BOARD TO EACH BEDROOM AND EACH LIVING ROOM.

### 18. SIGNAL PATHWAY

A. SINGLE PURPOSE OUTLETS (VOICE, DATA, TV): 4-INCH SQUARE X 2-1/8-INCH DEEP OUTLET BOX WITH SINGLE GANG PLASTER RING. PROVIDE BLANK DEVICE PLATE ON UNUSED OUTLETS.

B. TELECOMMUNICATIONS OUTLETS (COMBINATION VOICE/DATA): 4-INCH SQUARE X 2-1/8-INCH DEEP OUTLET BOX WITH SINGLE GANG PLASTER RING. PROVIDE BLANK DEVICE PLATE ON UNUSED OUTLETS.

C. OUTLET RACEWAY: UNLESS OTHERWISE INDICATED, PROVIDE 3/4 INCH DIAMETER CONDUIT CONCEALED INSIDE WALL OR CASEWORK FROM EACH OUTLET UP TO NEAREST ACCESSIBLE ATTIC SPACE.

### 19. EMERGENCY CALL SYSTEM

PROVIDE BIDDER DESIGN WIRELESS EMERGENCY CALL SYSTEM CONFORMING TO REQUIREMENTS OF UL 2560, WAC 246-316 AND ALL OTHER REQUIREMENTS OF LOCAL AHJ.

### 20. CABLE TV

COORDINATE WITH THE CATV / INTERNET SERVICE PROVIDER TO BE SELECTED BY THE OWNER AS REQUIRED TO SCHEDULE DESIGN AND INSTALLATION OF CABLE SERVICE AND DISTRIBUTION TO EACH DWELLING AND/OR RESIDENT SLEEPING UNIT AND OTHER LOCATIONS INDICATED ON PLANS.

### 21. CONTROLLED ENTRANCE AND EGRESS SYSTEM

PROVIDE BIDDER DESIGN CONTROLLED ENTRANCE AND EGRESS FOR MEMORY CARE AREAS CONFORMING TO REQUIREMENTS OF WAC 51-50-1008, WAC 388-78A-2380 AND ALL OTHER REQUIREMENTS OF LOCAL AHJ. SYSTEM SHALL INCLUDE MAGNETIC DOOR AND GATE LOCKS, KEYPAD STATIONS, CENTRAL POWER SUPPLY(S) WITH BATTERY BACKUP, AND FIRE ALARM RELEASE. SYSTEM SHALL BE CAPABLE OF BEING DE-ENERGIZED AT A DESIGNATED STAFF STATION.

### 22. DIRECTORIES, NAMEPLATES AND LABELS

A. CIRCUIT DIRECTORIES: TYPEWRITTEN INDEX OF CIRCUITS LOCATED ON INSIDE DOOR OF EACH PANEL. IDENTIFY LOAD TYPE AND LOCATION USING FINAL ROOM NAMES OR NUMBERS VERIFIED BY OWNER.

B. NAMEPLATES: ENGRAVED THREE-LAYER LAMINATED PLASTIC, WHITE LETTERS ON BLACK BACKGROUND, AFFIXED WITH STAINLESS STEEL SCREWS, ADHESIVE ACCEPTABLE IN DRY LOCATIONS. USE BLACK LETTERS ON YELLOW BACKGROUND FOR SERIES COMBINATION RATING IDENTIFICATION.

C. LETTER HEIGHT: 1/2 INCH FOR SERIES COMBINATION RATING IDENTIFICATION, 1/4 INCH FOR SWITCHBOARDS, PANELBOARDS, CIRCUIT BREAKERS, AND DISCONNECTING MEANS.

D. FLASH PROTECTION LABELS: SELF ADHESIVE VINYL LABEL, MINIMUM 5 INCHES WIDE X 3.5 INCHES HIGH, WITH ANSI HEADER TO READ WARNING OR DANGER AND INFORMATION TEXT TO INCLUDE:  
ARC FLASH HAZARD  
APPROPRIATE PPE REQUIRED  
FAILURE TO COMPLY CAN RESULT IN DEATH OR INJURY  
REFER TO NFPA 70E

E. SWITCHBOARDS, PANELBOARDS: PROVIDE NAMEPLATE TO IDENTIFY EQUIPMENT DESIGNATION, VOLTAGE, AND SOURCE OF SUPPLY FOR EACH, E.G. PANEL A, 208/120V, FED FROM PANEL M. PROVIDE ARC FLASH PROTECTION LABEL. PROVIDE SERIES COMBINATION RATING NAMEPLATE WHERE SUCH RATING IS APPLICABLE.

F. INDIVIDUAL CIRCUIT BREAKERS AND SWITCHES INSTALLED IN SWITCHBOARDS AND PANELS WITHOUT CIRCUIT INDEX: PROVIDE NAMEPLATE TO IDENTIFY CIRCUIT NUMBER AND LOAD SERVED.

G. INDIVIDUAL ENCLOSED CIRCUIT BREAKERS, SAFETY SWITCHES, AND DISCONNECTING MEANS: PROVIDE NAMEPLATE TO IDENTIFY LOAD SERVED AND CIRCUIT SOURCE CIRCUIT NUMBER.

H. NAMEPLATE AND LABEL LOCATION: SECURE TO EQUIPMENT FRONTS, EXCEPT RECESSED.

### 23. SEISMIC RESTRAINT FOR LIGHT FIXTURES

RECESSED AND SURFACE MOUNTED LIGHTING FIXTURES WEIGHING LESS THAN 56 LBS (25.4 KG) MAY BE SUPPORTED FROM METAL CEILING SUSPENSION SYSTEMS WITH AUXILIARY SUPPORT FROM STRUCTURAL MEMBERS USING TWO #12 AWG WIRE HANGARS AT DIAGONAL CORNERS (HANGARS MAY BE SLACK). FIXTURES WEIGHING

56LBS OR MORE MUST BE SUPPORTED DIRECTLY FROM THE STRUCTURE BY APPROVED HANGARS. SECURELY FASTEN RECESSED AND SURFACE FIXTURES IN PLACE, PROVIDE SEISMIC CLIPS (ONE EACH CORNER) FOR LAY-IN FIXTURES; ATTACH SURFACE FIXTURES TIGHT TO CEILINGS AND WALLS, AND SECURE FLUORESCENT FIXTURES WITHIN 12 INCHES OF EACH END.

### 24. SEISMIC RESTRAINT FOR EQUIPMENT

COMPLY WITH REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC). OBTAIN REQUIRED ANCHORING PLANS FROM EQUIPMENT MANUFACTURER INDICATING SIZE AND LOCATION OF ANCHORS SUITABLE FOR SEISMIC ZONE 3. PROVIDE SEISMIC BRACING FOR TRAPEZE MOUNTED EQUIPMENT. SECURE FLOOR MOUNTED EQUIPMENT TO CONCRETE FLOOR OR PAD WITH CORROSION PROOF ANCHORS HAVING A MINIMUM EMBEDDED LENGTH EQUAL TO 12 TIMES THE NOMINAL BOLT DIAMETER. SHALL BE REQUIRED FOR THE FOLLOWING:

OUTDOOR SWITCHGEAR  
SWITCHBOARDS  
GENERATOR  
TRANSFER SWITCH  
OTHER EQUIPMENT REQUIRED BY CODE

### 25. GENERAL INSTALLATION REQUIREMENTS

A. SUPPORT WIRING, CONDUIT, RACEWAYS, BOXES, EQUIPMENT, AND FIXTURES FROM BUILDING STRUCTURE. PROVIDE ADDITIONAL FRAMING, CHANNEL, OR LISTED SUPPORT ATTACHMENTS AS REQUIRED TO SPAN OR SUPPORT BETWEEN STRUCTURAL MEMBERS AND TO AVOID INTERFERENCE FROM PIPES, DUCTS, AND OTHER EQUIPMENT.

B. DO NOT INSTALL SUPPORT ANCHORS TO PENETRATE THRU ROOF DECK.

C. DO NOT VIOLATE THE INTEGRITY OR EXCEED THE CAPACITY OF THE BUILDING STRUCTURE USED FOR SUPPORT. PROVIDE OR FABRICATE ADDITIONAL SUPPORT ELEMENTS TO TRANSMIT LOADS TO THE FLOOR OR OTHER PARTS OF THE BUILDING STRUCTURE THAN CAN CARRY THE LOAD AS APPROVED BY THE STRUCTURAL ENGINEER.

D. INSTALL BOXES, ROUGH-IN CANS, AND CONDUIT PENETRATIONS TO MAINTAIN FIRE RATING OF WALLS AND CEILINGS PER CODE. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR LOCATION OF FIRE RATED CONSTRUCTION.

### 26. EMERGENCY AND STAND-BY POWER

A. GENERATOR: 60KW KOHLER NATURAL GAS OR APPROVED EQUAL.

B. STAND-BY TRANSFER SWITCH: 200A/3PH 208V

C. COORDINATE WITH GENERAL CONTRACTOR TO PROVIDE HOUSE KEEPING PAD FOR THE GENERATOR. PAD TO BE 6 INCHES HIGH AND EXTEND 12 INCHES MINIMUM ALL SIDES. COORDINATE WITH MECHANICAL CONTRACTOR FOR INSTALLATION OF REMOTE FUEL TANK, FUEL LINES, EXHAUST SYSTEM AND VENTILATION.

### 27. DEMONSTRATION AND INSTRUCTIONS

PROVIDE DEMONSTRATION AND INSTRUCTION OF OPERATION, MAINTENANCE AND PROGRAMMING OF LIGHTING CONTROLS, GENERATOR SYSTEM, AND EACH LOW VOLTAGE SYSTEM TO OWNER'S PERSONNEL PRIOR TO CONTRACT CLOSEOUT. SCHEDULE SESSIONS AT CONVENIENCE OF OWNER. USE OPERATION AND MAINTENANCE MANUALS AS BASIS OF INSTRUCTION. REVIEW CONTENTS OF MANUAL WITH PERSONNEL IN DETAIL TO EXPLAIN ALL ASPECTS OF OPERATION AND MAINTENANCE. DEMONSTRATE OPERATION, CONTROL, TROUBLE SHOOTING, MAINTENANCE, AND TESTING OF SYSTEM.



CARLETTI ARCHITECTS P.S.  
architecture & planning

116 EAST FIR STREET  
Suite A  
Mount Vernon, WA 98273

Phone: (360) 424-0394  
Fax: (360) 424-5726

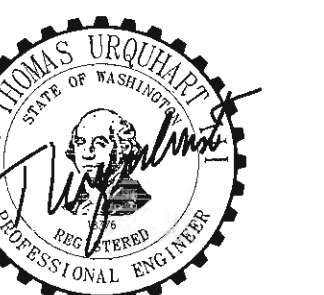
A NEW AL-IL FACILITY FOR:  
SILVERDALE FIELDSTONE  
CASCADIA DEVELOPMENT  
1103 CLEAR CREEK RD NW  
SILVERDALE, WA 98383

CONTACT:

PAUL RASMUSSEN  
(509) 539-0163

HULTZ & BHU  
engineers inc

1111 Forest Ave, Suite 100 Tacoma, WA 98402  
Phone: (253) 383-3257 Fax: (253) 383-3283  
general@hultzbhu.com Job Number: 17-180



SIGNED

06-08-2018

18-203  
PROJECT NUMBER:

REVISIONS:

07/24/2018 BID SET

SHEET TITLE:

ELECTRICAL

SPECIFICATIONS

TATYANA MIKELADZE  
ELECTRICAL PM

ANATOLIY DERLYUK  
DRAWN BY:

TOM URQUHART, PE  
CHECKED BY:

JULY 24, 2018  
DATE

BID SET

E0.3

COPYRIGHT 2018 CARLETTI ARCHITECTS, P.S.





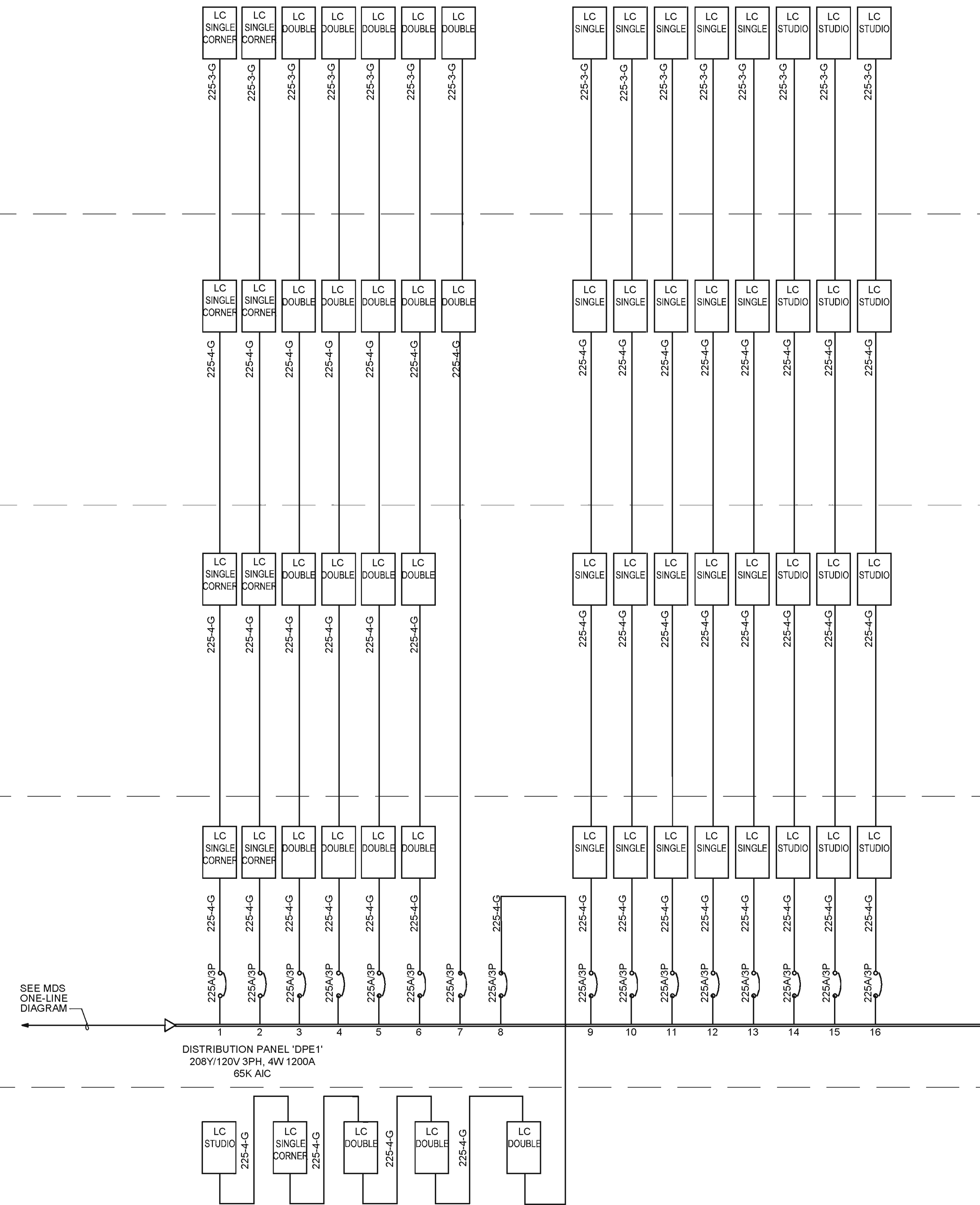
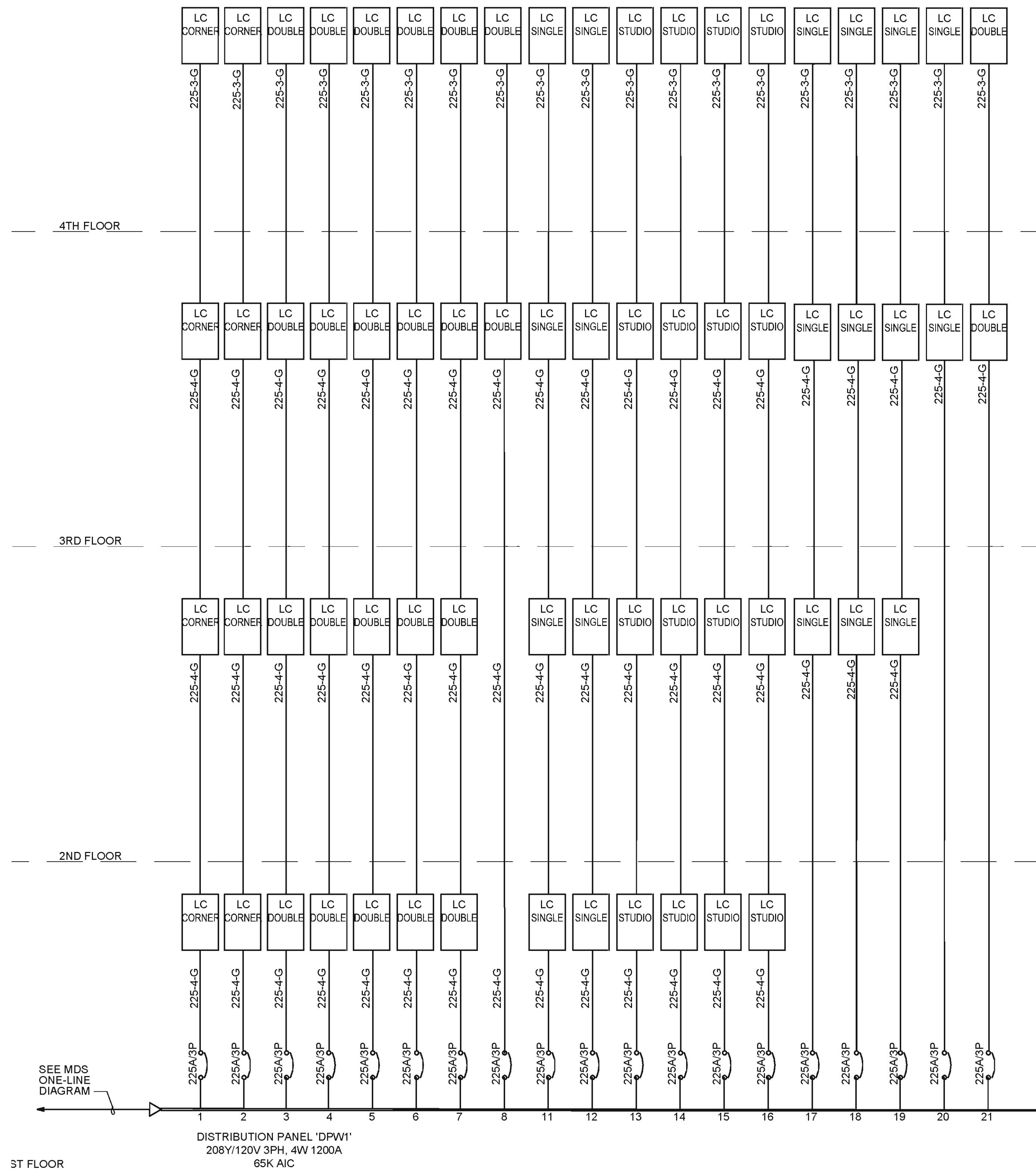
CARLETTI ARCHITECTS P.S.

architecture & planning

116 EAST FIR STREET  
Suite A  
Mount Vernon, WA 98273

Phone: (360) 424-0394  
Fax: (360) 424-5726

ALL CIRCUIT BREAKERS IN MAIN  
DISTRIBUTION SWITCHBOARD SHALL BE  
RATED 65,000 AIC. CIRCUIT BREAKERS  
SHALL BE SERIES RATED WITH LOAD SIDE  
EQUIPMENT AS REQUIRED TO MEET OR  
EXCEED INDICATED AVAILABLE SHORT  
CIRCUIT AMPERES (SCA).



**ONE-LINE DISTRIBUTION DIAGRAM - DISTRIBUTION PANLE 'DPW1'**  
SCALE: NTS

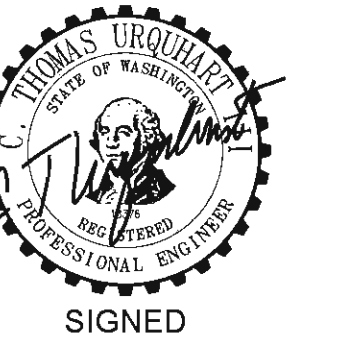
**ONE-LINE DISTRIBUTION DIAGRAM - DISTRIBUTION PANEL 'DPE1'**  
SCALE: NTS

A NEW AL-IL FACILITY FOR:  
SILVERDALE FIELDSTONE  
CASCADIA DEVELOPMENT  
11313 CLEAR CREEK RD NW  
SILVERDALE, WA 98383

CONTACT:  
PAUL RASMUSSEN  
(509) 539-0163

**HULTZ + BHU**  
engineers inc

1111 Fawcett Ave, Suite 100 Tacoma, WA 98402  
Phone: (253) 383-3257 Fax: (253) 383-3283  
general@hultzbhui.com Job Number: 17-180



SIGNED  
06-08-2018

18-203  
PROJECT NUMBER.

REVISIONS:  
07/24/2018 BID SET

SHEET TITLE.

ONE-LINE  
DISTRIBUTION DIAGRAM

TATYANA MIKELADZE  
ELECTRICAL PM

ANATOLIY DERLYUK  
DRAWN BY.

TOM URQUHART, PE  
CHECKED BY.

JULY 24, 2018  
DATE

BID SET

E5.2