• Parks and Recreation •
JoEllen Grandy • Parks Planner
Telephone: (801) 336-3926
Fax: (801) 336-3909

ADDENDUM #2

Project : Layton City Welker Trailhead Improvements, Project 22-02
(2700 N. 2125 E. – Layton, UT 84041)

From: JoEllen Grandy, Parks Planner
Layton City Parks & Recreation
465 N. Wasatch Dr.
Layton, UT 84041
801.336.3926
jgrandy@laytoncity.org

Date: June 1, 2023

Re: Request for Information

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1. **The Parking Lot Lights are to be changed to the following model:**

   Lithonia DSX1 LED P3 40K T4M MVOLT SPA DBLXD 25 FT. SQUARE ALUMINUM HINGE BASE POLE DBLXD 100MPH + GUSTS WIND RATING. Mounting: Pole, Pole Base. Lamps LED (102W)

2. **Where is existing City power located? RMP generally requires 2- 4" conduits for a 400 AMP service, and are they providing the wire?**

   See the attached pdf for clarifications on Sheets ES101, ES601 and ES602. (Service is to be single phase.)

   RMP will provide the wire from the transformer to the secondary box. Contractor is to install the 3" conduit from the transformer to the secondary box. Contractor is also responsible for installing the 2" conduit and wire from the secondary box to the meter.

DEFERRED SUBMITTALS

Delegated Deferred Design Submittals to be provided by Contractor

OVERCURRENT PROTECTIVE DEVICE STUDY AND ARC-FLASH STUDY REPORT & LABELING.

Provide the following items listed below and comply with additional requirements as provided. See specifications.

1. Coordination-study input data, including completed computer program input data sheets.
2. Study and equipment evaluation reports.
3. Overcurrent protective device coordination study report; signed, dated, and sealed by a qualified professional engineer. Overcurrent protection shall coordinate to 0.3 seconds on normal power and to 0.1 seconds on emergency power.
4. Arc-flash study input data, including completed computer program input data sheets.
5. Arc-flash study report; signed, dated, and sealed by a qualified professional engineer.
   a. Submit study report for action prior to receiving final approval of the distribution equipment submittals. If formal completion of studies will cause delay in equipment manufacturing, obtain approval from Architect for preliminary submittal of sufficient study data to ensure that the selection of devices and associated characteristics is satisfactory.

SEISMIC CONTROL FOR ELECTRICAL SYSTEMS

Provide the following items listed below and comply with additional requirements as provided. See specifications.

A. Product Data: For each type of product.
1. Illustrate and indicate style, material, strength, fastening provision, and finish for each type and size of seismic-restraint component used.
   a. Tabulate types and sizes of seismic restraints, complete with report numbers and rated strength in tension and shear as evaluated by an agency acceptable to authorities having jurisdiction.
   b. Annotate to indicate application of each product submitted and compliance with requirements.

B. Delegated-Design Submittal: For each seismic-restraint device.
1. Include design calculations and details for selecting seismic restraints complying with performance requirements, design criteria, and analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
2. Design Calculations: Calculate static and dynamic loading caused by equipment weight, operation, and seismic and wind forces required to select seismic and wind restraints and for designing vibration isolation bases.
   a. Coordinate design calculations with wind load calculations required for equipment mounted outdoors. Comply with requirements in other Sections for equipment mounted outdoors.
3. Seismic-Restraint Details:
   a. Design Analysis: To support selection and arrangement of seismic restraints. Include calculations of combined tensile and shear loads.
   b. Details: Indicate fabrication and arrangement. Detail attachments of restraints to the restrained items and to the structure. Show attachment locations, methods, and spacings. Identify components, list their strengths, and indicate directions and values of forces transmitted to the structure during seismic events. Indicate association with vibration isolation devices.
   c. Coordinate seismic-restraint and vibration isolation details with wind-restraint details required for equipment mounted outdoors. Comply with requirements in other Sections for equipment mounted outdoors.
   d. Preapproval and Evaluation Documentation: By an agency acceptable to authorities having jurisdiction, showing maximum ratings of restraint items and the basis for approval (tests or calculations).

C. Deferred Submittals for the Authority Having Jurisdiction (AHJ) shall be as required by IBC 106.3.4.2.

1. Deferred submittals of seismic restraint of nonstructural components must be submitted to the AHJ a minimum of two weeks prior to the planned installation in order to allow for plan review and forwarding to inspectors. In the event that the submittal is deficient additional time may become necessary.

2. No deferred submittal element shall be installed until AHJ approval has been received.

3. If seismic restraints of nonstructural components are installed prior to receiving AHJ approval they shall not be covered or concealed until plan review and inspection approval. Further, installers are proceeding at their own risk until plan review and inspection approval occurs.

4. Deferred Submittals are required for:
   a. Electrical distribution equipment (switchboards, panelboards, transformers, ATS, MCC's etc.).
   b. Generators, batteries, UPS.
   c. Conduit racks.
   d. Cable trays.
   e. Lighting fixtures.
   f. Control Panels

GENERAL LABELING SCHEME

FIRST DIGIT - BUILDING LEVEL (1 OR 2)

SECOND DIGIT - PANEL TYPE

- M - MECHANICAL (120/208/277/380/480V)
- L or LCP - LIGHTING (120/208/277/480V)
- P - PLUG LOADS (120/208V)
- G - GENERAL LOADS (120/280V)
- E - EMERGENCY (277/480V)
- S - STANDBY (SPECIFIED ON PANEL)
- U - UPS (SPECIFIED ON PANEL)

THIRD DIGIT - BUILDING AREA (A, B, C, D, ECT.)

FOURTH DIGIT - SEQUENCE # (1,2,3...)

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

1P	SINGLE POLE
1PH	SINGLE-PHASE
1WAY	ONE-WAY
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3WAY	THREE-WAY
4OUT	QUADRUPLE RECEPTACLE OUTLET
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
A	ABOVE COUNTER
AC	ARMORED CABLE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AMP	AMPERE
ANN	ANNUNCIATOR
AP	ACCESS POINT (WIRELESS DATA)
AR	AS REQUIRED
ASC	AMPS SHORT CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAGE
BB XFMR	BUCK-BOOST TRANSFORMER
C	CEILING MOUNTED
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CND	CONDUIT
CO	CONVENIENCE OUTLET
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
dBA	UNIT OF SOUND LEVEL
DPDT	DOUBLE POLE, DOUBLE THROW
DS	DISCONNECT SWITCH
EA	EACH
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRIC NONMETALLIC TUBING
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
EX	EXISTING
F	FURNITURE MOUNTED
FA	FIRE ALARM
FCP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FOB	FREIGHT ON BOARD
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G	GROUND
GEN	GENERATOR
GFCI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HD	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HZ	HERTZ
I/O	INPUT/ OUTPUT
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IN/IS	INSULATED/ ISOLATED
IR	INFRARED
J-BOX	JUNCTION BOX
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWh	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIOANL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OCP	OVER CURRENT PROTECTION
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFP	OBTAIN FROM PLANS
OH DR	OVERHEAD (COILING) DOOR
OL	OVERLOAD
PB	PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PTZ	PAN/TILT/ZOOM
QTY	QUANTITY
R	REMOVE
RCP	REFLECTED CEILING PLAN
RMC	RIGID METAL CONDUIT
RNC	RIGID NONMETAL CONDUIT
RPM	REVOLUTIONS PER MINUTE
RR	REMOVE AND RELOCATE
S/S	START/STOP
SCA	SHORT CIRCUIT AMPS
SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
SF	SQUARE FOOT (FEET)
SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
ST	SINGLE THROW
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TL	TWIST LOCK
TP	TELEPHONE POLE
TP	TWISTED PAIR
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UF	UNDERFLOOR
UGND	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
VFC/VFD	VARIABLE FREQUENCY MOTOR CONTROLLER
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

GENERAL ELECTRICAL NOTES

1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.

2. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.
   A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.
   B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.
   C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE.THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.

3. EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.

4. SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.

5. REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

6. ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

7 TAKE OFF QUANTITIES SHOWN IN SCHEDULE(S) ARE FOR REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OF THE DEVICES, FIXTURES, EQUIPMENT, RACEWAYS, CONDUCTORS, CABLING, ETC. SHOWN AND SPECIFIED IN THE CONTRACT DOCUMENTS INCLUDING THE EXTRA MATERIAL SPECIFIED.

ELECTRICAL SHEET INDEX

NOTE TO CONTRACTORS:
THIS SHEET SET IS CONTRACTUALLY REQUIRED TO BE PRINTED IN COLOR. THERE ARE DIFFERENTIATING FEATURES THAT ARE DESIGNATED THROUGHOUT BY THEIR COLOR. FAILURE TO PRINT THIS SHEET SET IN COLOR MAY RESULT IN A MISINTERPRETATION OF THE DRAWINGS.

BID SET

blu line designs
planning | landscape architecture | design
8719 S. Sandy Parkway
Sandy, UT 84070
p 801.878.3157

OWNER:
LAYTON CITY
437 N WASATCH DR.
LAYTON, UT 84041

CONTACT:
JOELLEN GRANDY
PH: 801-336-3926

WELKER TRAILHEAD IMPROVEMENTS
2700 NORTH 2125 EAST
LAYTON, UT 84041

REVISIONS

NO.	APPROVAL	DESCRIPTION

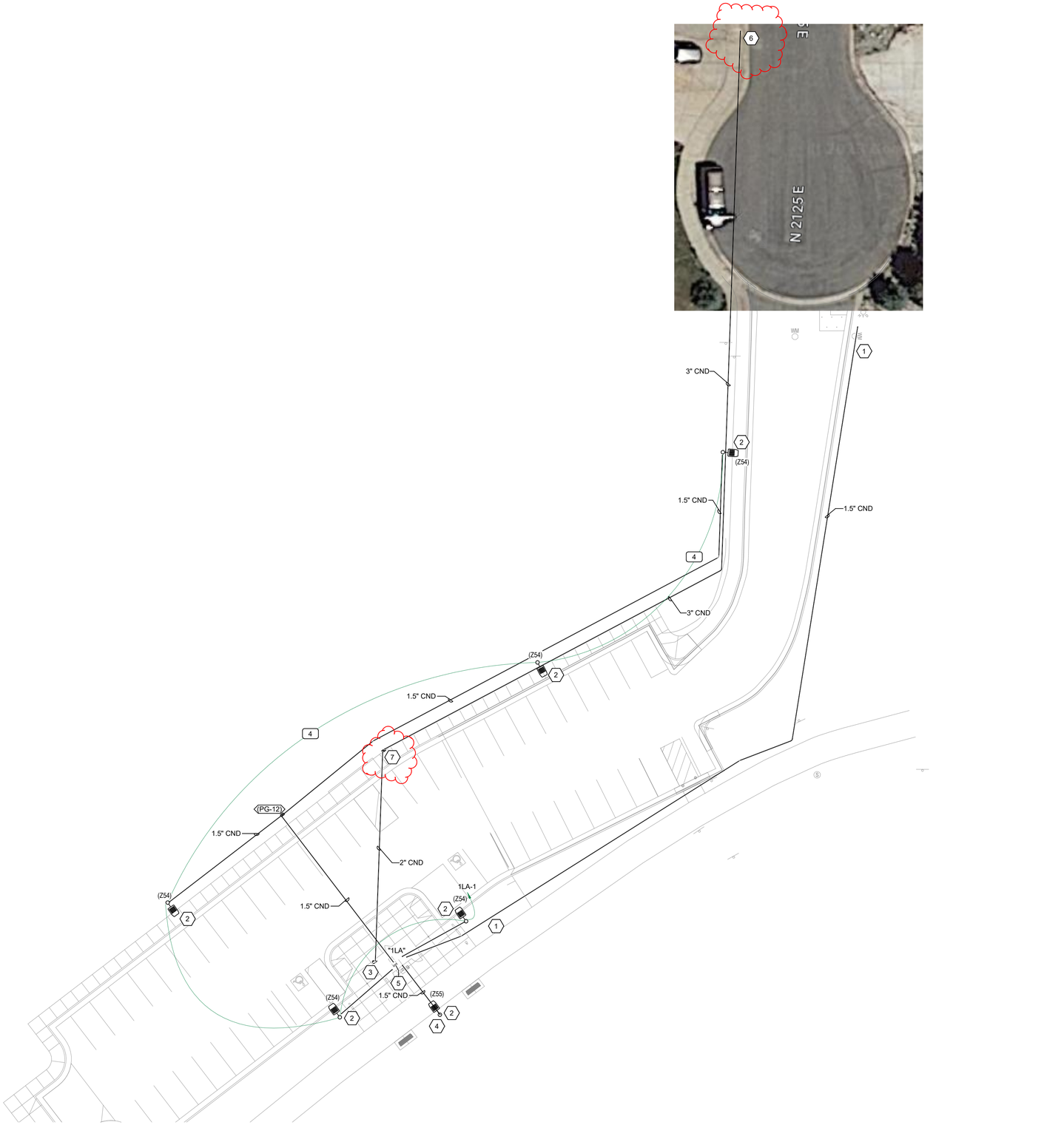
Stamp

LICENSED PROFESSIONAL ENGINEER
No. 7258080
SPENCER C. LITTLE
05-04-2023
STATE OF UTAH

Designed By:	JJN
Drawn By:	JJN
Date:	04/26/2023
Checked By:	SCL
Project No:	230019

Drawing Title
ELEC COVER SHEET

Drawing number
EE001



1 ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

GENERAL SHEET NOTES

1 THE ELECTRICAL CONTRACTOR SHALL MEET WITH AND COORDINATE WITH ALL SERVICE PROVIDERS (POWER, COMMUNICATION, CABLE/SATELLITE, ETC.)TO THE FACILITY ON SITE PRIOR TO ANY WORK BEING PREFORMED. CONFIRM WITH EACH SERVICE PROVIDER EXACT LOCATIONS EQUIPMENT AND ROUTING. COMPLY WITH ALL SERVICE PROVIDER'S CURRENT STANDARDS AND REQUIREMENTS. PROVIDE THE REQUIRED EQUIPMENT, RACEWAYS, BOXES, CABLE, ETC. AS REQUIRED BY THE SERVICE PROVIDER WEATHER SHOWN ON THE DRAWINGS OR NOT.

2 FOR ALL LIGHT FIXTURES, POLE LIGHTS, AND ALL OTHER ELECTRICAL DEVICES THE CONTRACTOR SHALL COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS WITH ARCHITECT, OWNER, ENGINEER, AND ALL OF THE CONTRACT DOCUMENTS PRIOR TO ROUGH IN AND TRENCHING.

3 CONTRACTOR IS RESPONSIBLE FOR ALL TRENCHING, BACKFILL, AND COMPACTION ASSOCIATED TO ALL ELECTRICAL UNDERGROUND RACEWAYS AND CABLES. COORDINATE WITH ARCHITECTURAL AND CIVIL DRAWINGS. SEE UNDERGROUND RACEWAY DETAILS FOR REQUIREMENTS FOR EACH TRENCH.

4 CONTRACTOR SHALL INSTALL POLE MOUNTED LIGHTS IN STRAIGHT LINES, SQUARE, AND PLUMB. COORDINATE WITH ARCHITECT AND CIVIL DRAWINGS.

5 THE ELECTRICAL CONTRACTOR SHALL HAVE ANY AND ALL CONCRETE POLE BASES AND SLABS REVIEWED BY A STRUCTURAL ENGINEER AND SHALL MODIFY DESIGN PER STRUCTURAL ENGINEER'S AND OR AHJ'S RECOMMENDATIONS.

6 THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CONCRETE/ASPHALT CUTTING AND REPLACEMENT OF CONCRETE/ASPHALT TO MATCH EXISTING ASSOCIATED WITH UNDERGROUND RACEWAYS PROVIDED AS PART OF THIS PROJECT.

7 REFER TO PLANS FOR CONSTRAINTS ON PHYSICAL DIMENSIONS AND CLEARANCE REQUIREMENTS OF EQUIPMENT. PROVIDE EQUIPMENT DIMENSIONS THAT FALL WITHIN THE CONSTRAINTS OF EACH SPECIFIC LOCATION.

8 PROVIDE SERVICE RATED EQUIPMENT AT EACH SERVICE ENTRANCE.

9 SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. VERIFY OR RE-CALCULATE THE AVAILABLE FAULT CURRENT AT THE SERVICE WHERE MODIFICATIONS TO THE ELECTRICAL INSTALLATION OCCUR. PLEASE INCLUDE NOTES IN THE ELECTRICAL DRAWINGS OR SUPPLY CALCULATIONS WHERE APPLICABLE. SEE NEC 110.24. (B)

SHEET KEYNOTES

1 PROVIDE 1.5" CONDUIT FOR TELECOMMUNICATION LINES TO FUTURE SECURITY CAMERAS. RUN CONDUIT TO NEW RESTROOM AND STUB UP INTO CHASE OF RESTROOM.

2 PROVIDE 1.5" CND FOR UTOPIA SECURITY CAMERA FROM CHASE IN NEW RESTROOM. CONDUIT TO STUB UP INTO LIGHT POLE. COORDINATE EXACT REQUIREMENTS FOR STUB UP LOCATION AND ACCESS PANEL AVAILABILITY PRIOR TO ROUGH-IN.

3 METER TO BE INSTALLED ON OUTSIDE WALL OF NEW RESTROOM. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

4 LIGHT FIXTURE TO BE NEW EXPERIMENTAL SOLAR OPTION. PRODUCT TO BE FONROCHE AUTONOMOUS LIGHTING FIXTURES. LIGHT FIXTURE TO BE MOUNTED ON 20' LIGHT POLE, AND TO BE PROGRAMMED TO OPERATE AT FULL LIGHT FOR (5) HOURS AFTER SUNSET, THEN DIMMING FOR THE REMAINDER OF THE NIGHT. THEN AT FULL LIGHT FOR AN HOUR BEFORE SUNRISE. COORDINATE EXACT LIGHTING REQUIREMENTS WITH THE LIGHTING PROVIDER PRIOR TO ROUGH-IN.

5 PANEL TO BE INSTALLED IN NEW RESTROOM CHASE. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

6 APPROXIMATE LOCATION OF EXISTING UTILITY TRANSFORMER. CONDUIT TO STUB UP INTO TRANSFORMER WHERE FEEDER IS TO CONNECT. CONTRACTOR TO FIELD VERIFY EXACT LOCATION, CONNECTION MEANS, AND ALL INSTALLATION REQUIREMENTS OF CONDUIT WITH UTILITY PROVIDER PRIOR TO ROUGH-IN.

7 SECONDARY BOX BY UTILITY PROVIDER. CONTRACTOR TO COORDINATE EXACT LOCATION, CONNECTION, AND INSTALLATION SCOPE WITH UTILITY PROVIDER PRIOR TO ROUGH-IN.

WIRING LEGEND

———	12AWG WIRE SIZE TYPICAL
———	14AWG WIRE SIZE TYPICAL
- - - -	SWITCHED LEG FOR LTG CKT WIRE SIZE BY BRANCH CIRCUIT
- - - -	VOICE/DATA CABLE CAT6 TYPICAL
———	WIRE SIZE SPECIFIED BY CALLOUT TAG
EQ	CONDUCTOR & CONDUIT INDICATOR REFER TO EQUIPMENT SCHEUDLE OF ASSOCIATED EQUIPMENT/DEVICE

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Designed By:	JJN
Drawn By:	JJN
Date:	04/26/2023
Checked By:	SCL
Project No:	230019

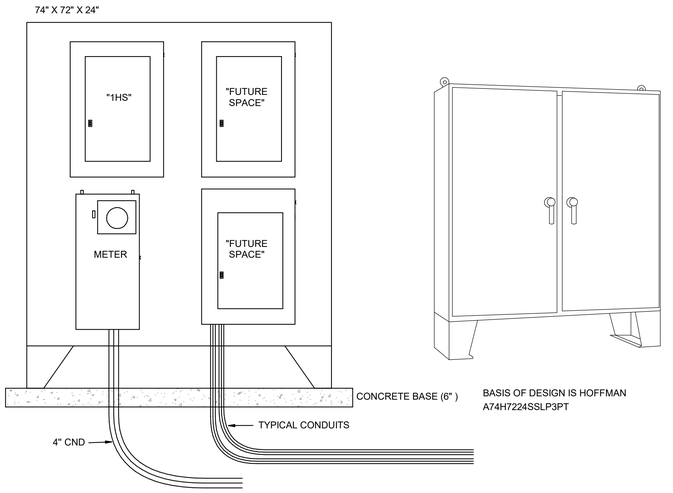
Drawing Title

ELECTRICAL SITE PLAN

Drawing number

ES101

Not applicable to plan set. Panels are to be installed inside the chase of the restroom. Meter to be installed on the outside of the restroom.



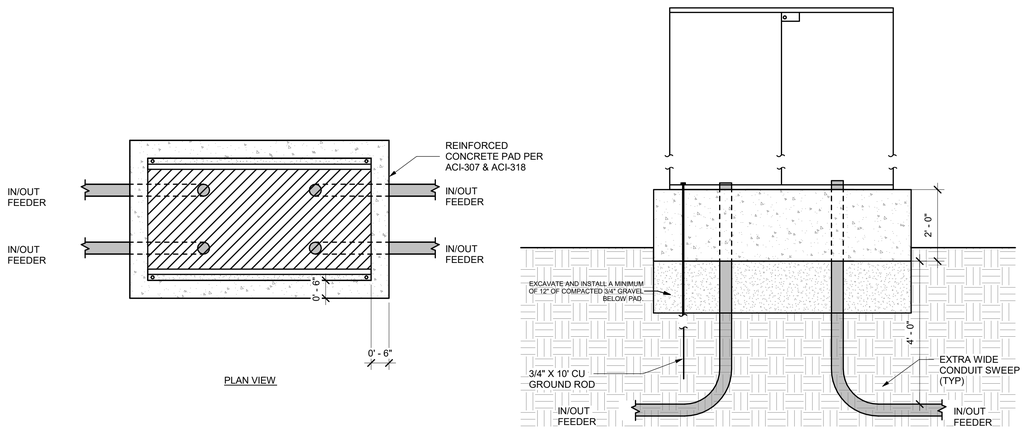
BASIS OF DESIGN IS HOFFMAN A74H7224SSLP3PT

GENERAL NOTES:

1. PROVIDE NEMA 4X STAINLESS STEEL ENCLOSURE.
2. ELECTRICAL CONTRACTOR MUST CONFIRM ENCLOSURE WITH ELECTRICAL ENGINEER BEFORE INSTALLATION.

B3 FREESTANDING STRONG BOX WITH PANEL AND GEAR DETAIL

SCALE: NTS



A3 TYPICAL CONCRETE BASE FOR MOUNTED STRONG BOX DETAIL

SCALE: NTS

BID SET

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planning | landscape architecture |design

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Drawing Title

SITE ELECTRICAL DETAILS

Drawing number

ES502

APPLICATION TIERS	TYPE	DESCRIPTION
LIGHT DUTY	VERTICAL	PEDESTRIAN TRAFFIC ONLY.
TIER 5	VERTICAL	SIDEWALK APPLICATIONS WITH A SAFTEY FACTOR FOR OCCCASIONAL ACCIDENTAL VEHICULAR TRAFFIC.
	LATERAL	
TIER 8	VERTICAL	SIDEWALK APPLICATIONS WITH A SAFTEY FACTOR FOR OCCCASIONAL ACCIDENTAL VEHICULAR TRAFFIC.
	LATERAL	
TIER 15	VERTICAL	DRIEVEWAY, PARKING LOT, AND OFF ROAD APPLICATIONS SUBJECT TO OCCASIONAL NON-DELIBERATE VEHICULAR TRAFFIC.
	LATERAL	
TIER 22	VERTICAL	DRIVEWAY, PARKING LOT, AND OFF ROAD APPLICATIONS SUBJECT TO NON-DELIBERATE HEAVY VEHICULAR TRAFFIC.
	LATERAL	

BOX OPTIONS	DESCRIPTION
BA	BOX WITH OPEN BOTTOM
BB	BOX WITH MOUSE HOLES
BC	DIVIDED BOX
BG	GASKETED BOX WITH OPEN BOTTOM
DA	BOX WITH SOLID BOTTOM
DG	GASKETED BOX WITH SOLID BOTTOM
JA	FOOTED BOX
EA	EXTENSION
RA	SOLID BASE EXTENSION

COVER OPTIONS	DESCRIPTION
CA	BOLT DOWN COVER
WA	STANDARD WITH NO BOLTS
LR	CAST IRON 6 4-1/2" X 7-1/2" LID
LP	CAST IRON 6"X12" LID
LQ	CAST IRON 9"X12" LID
LK	POLYMER CONCRETE 6"X9" DROP-IN LID
LL	POLYMER CONCRETE 7" X 13" DROP-IN LID
LS	THROUGH SLOT (NO METER LID)
O2	OPENS UNDER 90^{O}
OO	USED WITH DROP-IN LID

SYMBOLS LEGEND

PG-34 PG-22 PG-23 PG-22 PG-12

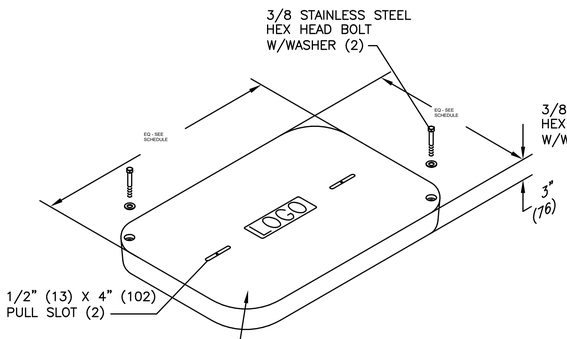
NOTES:
1. CONTRACTOR SHALL PROVIDE A SUBMITTAL ON ALL UNDERGROUND ENCLOSURES FOR THIS PROJECT.
2. ALL ENCLOSURES SHALL BE UL LISTED
3. CONTRACTOR SHALL COORDINATE THE TIER RATING WITH CIVIL ENGINEER AND ARCHITECT IN THE SUBMITTAL PROCESS.
4. CONTRACTOR SHALL ADJUST THE SIZE OF THE ENCLOSURE AS REQUIRED FOR INSTALLATION. SUBMIT AN RFI OR PROVIDE SOME OTHER DOCUMENTATION SO THAT THE DESIGN TEAM AND OWNER UNDERSTAND THIS MODIFICATION PRIOR TO MOVING FORWARD WITH ADJUSTED SIZE OF ENCLOSURE.
5. PROVIDE BASIS OF DESIGN (BOD) ENCLOSURE OR PRE-APPROVED EQUAL.

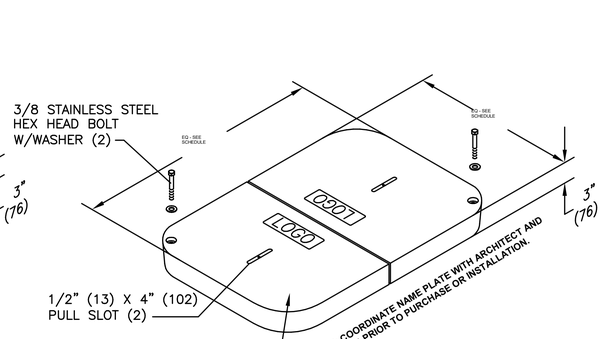
FIXTURE STYLES

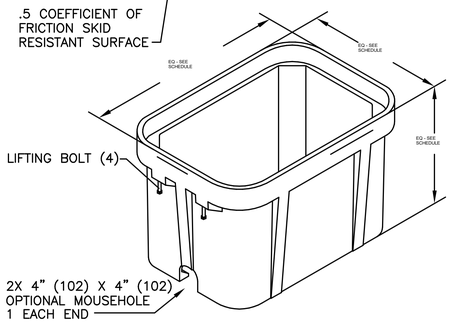
STYLE NAME	DESCRIPTION	IMAGES
PG	STRAIGHT SIDES ALLOW FOR EASY ASJUSTMENT OF BOX SHOULD THE GRADE LEVEL CHANGE. USED FOR A VARIETY OF PURPOSES, SUCH AS A SPLICE BOX, PULL BOX, EQUIPMENT ENCLOSURE, OR FOR ANY APPLICATION REQUIRING EASY ACCESS TO AN UNDERGROUND SERVICE. PG BOXES ARE STACKABLE FOR INCREASED DEPTH.	
PC	STRAIGHT SIDES ALLOW FOR EASY ASJUSTMENT OF BOX SHOULD THE GRADE LEVEL CHANGE. ALL PC BOXES ARE STACKABLE AND ARE AVAILABLE WITH GASKETING.	
PX	PX STYLES ARE EXCELLENT FOR SERVICE BOX ASSEMBLIES AND OFFER FLARED DESIGN TO PREVENT FROST HEAVE. PX BOXES ARE ALSO NESTABLE FOR COMPACT STORAGE.	
PT	THE FLARED DESIGN PREVENTS FROST HEAVE AND COVERS ARE INTERCHANGABLE WITH MANY PRECAST CONCRETE PARTS. PT BOXES ARE ALSO NESTABLE FOR COMPACT STORAGE.	
PD	THESE ENCLOSURES FEATURE A 1 DEGREE FLARE FOR MAXIMUM STRENGTH. FLARED DESIGN OPTIMIZES INTERNAL VOLUME AND MINIMIZES FROST HEAVE.	

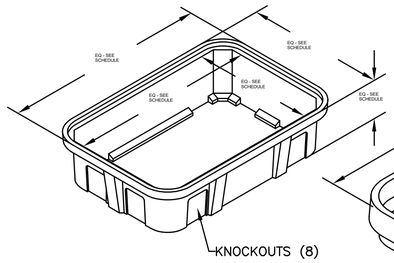
UNDER GROUND ENCLOSURE SCHEDULE

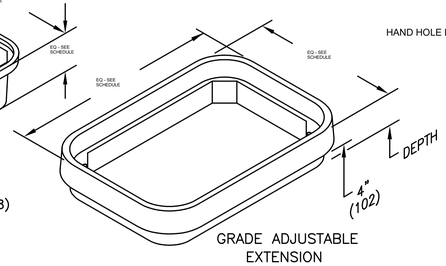
ID	IMAGE	BOX DESCRIPTION	LENGTH	WIDTH	DEPTH	ABOVE GRADE HEIGHT	BASIS OF DESIGN MANUFACTURE PART NO.	BOX OPTIONS	COVER LOGO	COVER OPTIONS	STYLE	TRAFFIC TIER NO.
(PG-12)		UNDERGROUND ENCLOSURE; PRECAST POLYMER CONCRETE WITH REINFORCED WITH FIBER GLASS. PROVIDE WITH BOLT ON COVER.	0' - 11"	1' - 6"	1' - 6"	INSTALL FLUSH WITH GRADE	QUAZITE (PG1324-18)	BA - BOX WITH OPEN BOTTOM	"ELECTRICAL"	WITH TWO BOLTS AND A SINGLE LOGO	PG	TIER 15

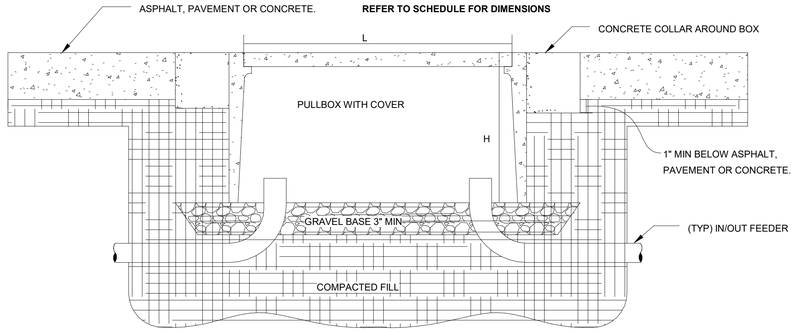




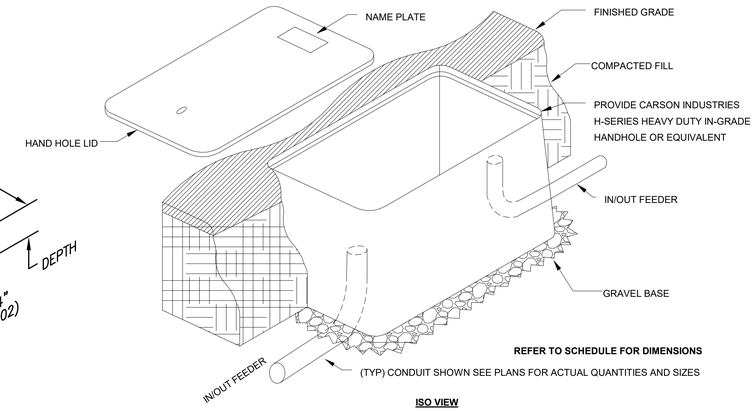








SECTION VIEW



ISO VIEW

A1 TYPICAL UNDERGROUND JUNCTION BOX DETAIL
SCALE: NTS

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8719 S. Sandy Parkway
Sandy, UT 84070
p 801.879.3157

OWNER:
LAYTON CITY
437 N VIASATCH DR.
LAYTON, UT 84041

CONTACT:
JOELLEN GRANDY
PH: 801-336-3926

WELKER TRAILHEAD IMPROVEMENTS
2700 NORTH 2125 EAST
LAYTON, UT 84041

REVISIONS

NO.	APPROVAL	DESCRIPTION

Stamp
LICENSED PROFESSIONAL ENGINEER
No. 7258080
SPENCER C. LITTLE
05-04-2023
STATE OF UTAH

Designed By:	JJN
Drawn By:	JJN
Date:	04/26/2023
Checked By:	SCL
Project No:	230019

Drawing Title
SITE JUNCTION BOX DETAILS

Drawing number
ES505

BID SET

LIGHT POLE PIER FOOTING SCHEDULE[1]

LEGEND
X^x ← SUPERSCRIPT, SEE CORRESPONDING NOTE

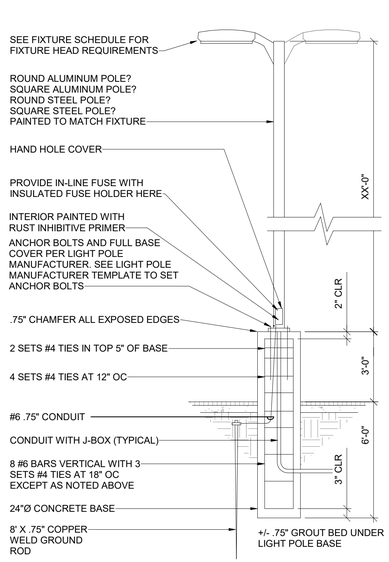
WIND SPEED (mph)	MAX EPA (FT^2)	LIGHT POLE HEIGHT (ft)	LIGHT POLE DIA (in) max	FOOTING DIAMETER,d (in)	h=MIN FOUNDATION[2] EMBED. (ft)	VERTICAL REINF. BAR SIZE	VERTICAL BAR QUANTITY	CIRC.TIE BAR SIZE	CIRC. TIE SPACING (in)
120	2	30	8	24	7'-6"	#5	8	#4	12" O.C.
120	2	25	8	24	6'-6"	#5	8	#4	12" O.C.
120	2	20	8	24	6'-0 "	#5	8	#4	12" O.C.
120	2	15	8	24	5'-0"	#5	8	#4	12" O.C.
120	2	10	8	24	4'-6"	#5	8	#4	12" O.C.
120	2	30[3]	8	18	-	-	-	-	-
120	2	25[3]	8	18	-	-	-	-	-
120	2	20	8	18	6'-0"	#5	5	#4	12" O.C.
120	2	15	8	18	5'-0"	#5	5	#4	12" O.C.
120	2	10	8	18	4'-6"	#5	5	#4	12" O.C.
120	2	30[3]	6	16	-	-	-	-	-
120	2	25[3]	6	16	-	-	-	-	-
120	2	20	6	16	6'-6"	#5	4	#4	12" O.C.
120	2	15	6	16	5'-6"	#5	4	#4	12" O.C.
120	2	10	6	16	4'-6"	#5	4	#4	12" O.C.

NOTE:
1. CONTRACTOR SHALL SUBMIT DEFERRED SUBMITTAL FOR LIGHT POST FOOTING TO ENGINEER OF RECORD. SCHEDULE ABOVE IS FOR BIDDING PURPOSES ONLY.

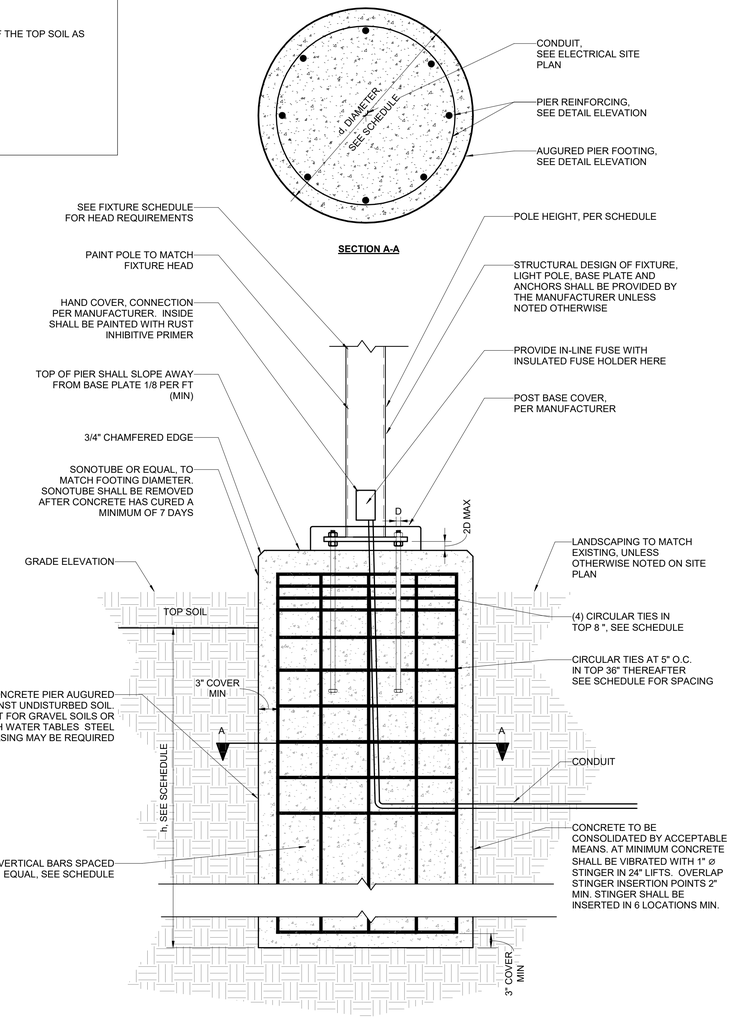
2. SCHEDULE ABOVE ASSUMES CLAY OR SILT SOIL CONDITIONS WITH SEISMIC CLASS D AND DEFAULT SOIL PARAMETERS FROM IBC SECTION 1806.2

3. EXCEEDS THE MAXIMUM BEARING CAPACITY OF 1500 PSF. VERIFY ALLOWABLE SOIL BEARING WITH SOILS REPORT.

4. TOP SOIL SHALL NOT BE USED TO RESIST LATERAL LOAD IN FOOTING. THE EMBED DEPTH IN THE TABLE SHALL BE BEGIN BELOW THE BASE OF THE TOP SOIL AS SHOWN IN THE ELEVATION.
5. SECTION VIEW IS FOR VISUAL REPRESENTATION ONLY. VERIFY BAR QUANTITY WITH SCHEDULE60,000 PSI REBAR YIELD STRENGTH
6. CONCRETE MIX SHALL BE FOR EXTERIOR CONCRETE SUBJECT TO FREEZE THAW CONATIONS WITH THE MINIMUM PROPERTIES.
A. 3000 PSI
B. TYPE II PORTLAND CEMENT
C. WATER TO CEMENT RATIO = 0.5%
D. AIR ENTRAINMENT = 5%
E. MAX AGGREGATE SIZE= 1"
F. CONCRETE EXPOSURE CLASS= F2, S0, C1
G. 4" SLUMP BEFORE ADDITION OF PLASTICIZER



2 PARKING LOT LIGHT POLE BASE DETAIL
SCALE: NTS



1 TYPICAL LIGHT POLE FOOTING SCHEDULE
SCALE: NTS

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Sandy, UT 84070
p 801.679.3157

OWNER:
LAYTON CITY
437 N WASATCH DR.
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2700 NORTH 2125 EAST
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REVISIONS

NO.	APPROVED	DESCRIPTION

Stamp
LICENSED PROFESSIONAL ENGINEER
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SPENCER C. LITTLE
05-04-2023
STATE OF UTAH

Designed By:	JJN
Drawn By:	JJN
Date:	04/26/2023
Checked By:	SCL
Project No:	230019

Drawing Title
ELECTRICAL SITE LIGHTING DETAILS AND SCHEDULES

Drawing number
ES508

BID SET

PANEL: "1LA"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	FED FROM:	CABINET:	LOCATION:	NOTES:
120/240 V, 1 PH 3 WIRE	22" W x 6" D, BOLT-ON	125 AMPERE	CT	SURFACE		

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR **AIC RATING:**

CKT	OCP			LOAD (kVA)			PHASE LOAD				LOAD (kVA)			OCP			CKT
NO	AMP	POLE	BKR	LTG	PWR	CO	DESCRIPTION	A		B		DESCRIPTION	CO	PWR	LTG	BKR	POLE	AMP	NO
1	20	1		0.1	0.0	0.0	LIGHTING	0.1	0.0			SPARE	--	--	--		1	20	2
3	20	1		--	--	--	SPARE			0.0	0.0	SPARE	--	--	--		1	20	4
5	20	1		--	--	--	SPARE	0.0	0.0			SPARE	--	--	--		1	20	6
7	20	1		--	--	--	SPARE			0.0	0.0	SPARE	--	--	--		1	20	8
9	20	1		--	--	--	SPARE	0.0	0.0			SPARE	--	--	--		1	20	10
11	20	1		--	--	--	SPARE			0.0	0.0	SPARE	--	--	--		1	20	12
13	20	1		--	--	--	SPARE	0.0	0.0			SPARE	--	--	--		1	20	14
15	20	1		--	--	--	SPARE			0.0	0.0	SPARE	--	--	--		1	20	16
17	20	1		--	--	--	SPARE	0.0	0.0			SPARE	--	--	--		1	20	18
19	20	1		--	--	--	SPARE			0.0	0.0	SPARE	--	--	--		1	20	20
21	20	1		--	--	--	SPARE	0.0	0.0			SPARE	--	--	--		1	20	22
23	20	1		--	--	--	SPARE			0.0	0.0	SPARE	--	--	--		1	20	24
25	20	1		--	--	--	SPARE	0.0	0.0			SPARE	--	--	--		1	20	26
27	20	1		--	--	--	SPARE			0.0	0.0	SPARE	--	--	--		1	20	28
29	20	1		--	--	--	SPARE	0.0	0.0			SPARE	--	--	--		1	20	30
31	20	1		--	--	--	SPARE			0.0	0.0	SPARE	--	--	--		1	20	32
33	20	1		--	--	--	SPARE	0.0	0.0			SPARE	--	--	--		1	20	34
35	20	1		--	--	--	SPARE			0.0	0.0	SPARE	--	--	--		1	20	36
37	20	1		--	--	--	SPARE	0.0	0.0			SPARE	--	--	--		1	20	38
39	20	1		--	--	--	SPARE			0.0	0.0	SPARE	--	--	--		1	20	40
41	20	1		--	--	--	SPARE	0.0	0.0			SPARE	--	--	--		1	20	42
TOTALS:							CONNECTED kVA PER PHASE	**0**		**0**		CONNECTED TOTAL kVA =		**0**					
							CONNECTED AMPS PER PHASE	**1**		**0**		AVERAGE CONNECTED AMPS PER PHASE =		**1**					

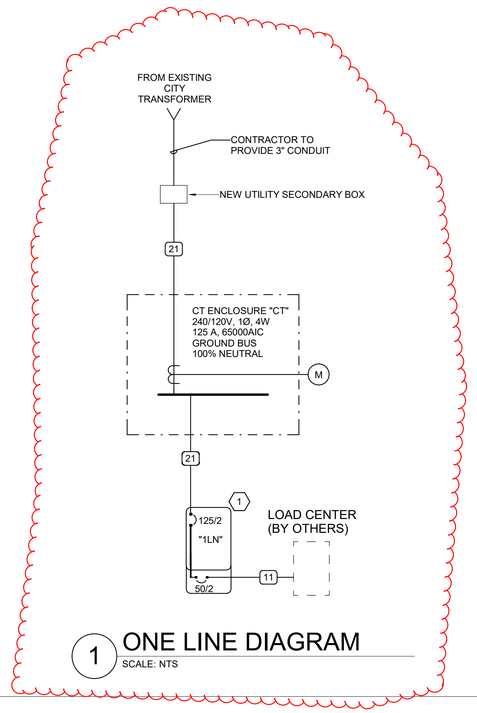
NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS: **0.1 kVA @ 125% = 0.2 kVA** - 100% CONNECTED LOAD PLUS 25% — DIVERSIFIED TOTAL kVA = **0**

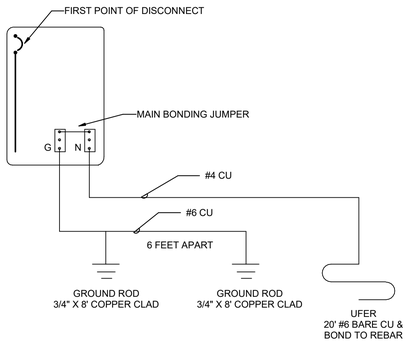
RECEPTACLES: - FIRST 10kVA @ 100%, REMAINDER @ 50% — AVERAGE AMPS PER PHASE = **1**

ALL OTHER LOADS @ 100% : **0.0 kVA** - MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED @ 125% PER NEC

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCAKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI



1 ONE LINE DIAGRAM
SCALE: NTS



2 GROUNDING RISER DIAGRAM
SCALE: NTS

EQUIPMENT NAMEPLATE SCHEDULE

EQUIPMENT ID SCHEME	FIRST DIGIT - BUILDING LEVEL (0, 1, 2, ETC) SECOND DIGIT - PANEL TYPE M - MECHANICAL H - (277/480) L - (120/208) E - EMERGENCY S - STANDBY Q - EQUIPMENT U - UPS K - KITCHEN (120/208) THIRD DIGIT - BUILDING AREA (A, B, C, ETC) FOURTH DIGIT - SEQUENCE # (1,2,3,...)
LABEL FORMAT	[NAME] [SYSTEM] [VOLTAGE] [FED FROM] [SOURSE(S)]
LABEL EXAMPLE	PANEL "4LA1" STANDBY POWER 120/208V FED FROM BUS-A / XFMR 4TA
BUSWAY	LABEL BUSWAY EVERY 6' WHERE EXPOSED TO VIEW AND EVERY 15' WHERE NOT EXPOSED TO VIEW
OTHER	

COLOR SCHEME

SYSTEM	EQUIPMENT	NAMEPLATE COLOR TEXT	NAMEPLATE COLOR BACKGROUND
NORMAL POWER	ALL GEAR NOT INCLUDED BELOW	WHITE	BLACK
STANDBY POWER	MDPS1 AND ALL DOWNSTREAM GEAR, EXCEPT UPS GEAR AS NOTED	WHITE	ORANGE
EMERGENCY POWER	GDP1, GDP2, ATS-E AND ALL DOWNSTREAM GEAR	WHITE	RED
LEGALLY-REQUIRED STANDBY POWER	ATS-S AND ALL DOWNSTREAM GEAR	RED	WHITE
UPS "A" POWER	UPSA AND ALL DOWNSTREAM GEAR	WHITE	BLUE
UPS "B" POWER	UPSB AND ALL DOWNSTREAM GEAR	BLACK	YELLOW

BRANCH CIRUIT CONDUCTOR AND CONDUIT SIZING TABLE

CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	CONDUCTOR SIZE (PHASE, NEUTRAL AND GR)	CONDUIT SIZE
20A/120V	0' - 60'	#12 AWG	0.75" Ø
20A/120V	60' - 95'	#10 AWG	0.75" Ø
20A/120V	95' - 150'	#8 AWG	1" Ø
20A/120V	150' - 240'	#6 AWG	1.25" Ø
20A/277V	0' - 140'	#12 AWG	0.75" Ø
20A/277V	140' - 220'	#10 AWG	0.75" Ø
20A/277V	220' - 350'	#8 AWG	1" Ø
20A/277V	350' - 550'	#6 AWG	1.25" Ø

NOTES:

1. WIRE SIZING IS BASED ON COPPER CONDUCTORS SUPPLYING A 20A. 120V CIRCUIT A THE INDICATED VOLATAGE, ASSUMED TO BE 80% LOAD (16A), WITH MAXIMUM VOLTAGE DROP OF 3% AT THE LOAD.
2. DOWN-SIZE WIRE AT DEVICE/LOAD AS REQUIRED AND TERMINATE CONDUCTORS IN A SAFE AND CODE COMPLIANT MANNER.
3. CONDUIT SIZE IS BASED ON A MAXIMUM OF 3 CIRCUITS PER CONDUIT, EACH WITH A SEPARATE NEUTRAL CONDUCTOR.

COPPER CONDUCTOR AND CONDUIT SCHEDULE

SCHEDULE NUMBER
SUBSCRIPT (NOTE 5)
(E.G.) 5 IG

SYM	AMP	HH AMPS	CONDUIT SIZE	CONDUCTOR (NOTE 1) QTY	SIZE	G	IG/HH	SE	NOTES
1	20	-	.75	2	12	12	12	8	2
2	20	-	.75	3	12	12	12	8	2,3
3	20	24	.75	4	12	12	12	8	2,3
4	30	-	.75	2	10	10	10	8	2
5	30	-	.75	3	10	10	10	8	2
6	30	32	.75	4	10	10	10	8	2
7	40	-	1	2	8	10	8	6	2
8	40	-	1	3	8	10	8	6	2
9	40	44	1	4	8	10	8	6	2
10	55	-	1	2	6	10	8	4	2
11	55	-	1	3	6	10	8	4	2
12	55	60	1.25	4	6	10	8	4	2
13	70	-	1	2	4	8	4	2	2
14	70	-	1.25	3	4	8	4	2	2
15	70	76	1.25	4	4	8	4	2	2
16	85	-	1.25	2	3	8	3	2	2
17	85	-	1.25	3	3	8	3	2	2
18	85	92	1.25	4	3	8	3	2	2
19	95	-	1.25	3	2	8	2	2	2
20	95	104	1.50	4	2	8	2	2	2
21	130	-	1.50	3	1	6	2	2	2
22	130	116	1.50	4	1	6	2	2	2
23	150	-	2	3	1/0	6	2	1/0	2
24	150	136	2	4	1/0	6	2	1/0	2
25	175	-	2	3	2/0	6	2	2/0	2
26	175	156	2	4	2/0	6	2	2/0	2
27	200	-	2	3	3/0	6	2	2/0	2
28	200	180	2.50	4	3/0	6	2	2/0	2
29	230	-	2.50	3	4/0	4	2	2/0	2
30	230	208	2.50	4	4/0	4	2	2/0	2
31	255	-	2.50	3	250	4	1	2/0	2
32	255	232	2.50	4	250	4	1	2/0	2
33	310	-	3	3	350	3	1/0	3/0	2
34	310	280	3	4	350	3	1/0	3/0	2
35	380	-	3.50	3	500	3	3/0	3/0	2
36	380	344	4	4	500	3	3/0	3/0	2
37	400	-	2 EA 2	3	3/0	3	3/0	3/0	2
38	400	360	2 EA 2.50	4	3/0	3	3/0	3/0	2
39	510	-	2 EA 2.50	3	250	1	4/0	3/0	2
40	510	464	2 EA 3	4	250	1	4/0	3/0	2
41	620	-	2 EA 3	3	350	1/0	4/0	3/0	2,4
42	620	560	2 EA 3	4	350	1/0	4/0	3/0	2,4
43	760	-	2 EA 3.50	3	500	1/0	4/0	3/0	2,4
44	760	688	2 EA 4	4	500	1/0	4/0	3/0	2,4
45	855	-	3 EA 3	3	300	2/0	4/0	3/0	2,4
46	855	768	3 EA 3	4	300	2/0	4/0	3/0	2,4
47	1000	-	3 EA 3.50	3	400	2/0	4/0	3/0	4
48	1000	912	3 EA 3.50	4	400	2/0	4/0	3/0	4
49	1140	-	3 EA 4	3	500	3/0	4/0	3/0	4
50	1140	1032	3 EA 4	4	500	3/0	4/0	3/0	4
51	1240	-	4 EA 3	3	350	3/0	4/0	3/0	4
52	1240	1120	4 EA 3	4	350	3/0	4/0	3/0	4
53	1675	1520	5 EA 4	4	400	4/0	4/0	4/0	4
54	2010	1824	6 EA 4	4	400	250	250	250	4
55	2660	2408	7 EA 4	4	500	350	350	350	4
56	3040	2752	8 EA 4	4	500	500	500	500	4
57	4180	3784	11 EA 4	4	500	500	500	500	4
58	-	-	5 EA 4	-	-	-	-	-	6
59	-	-	5	-	-	-	-	-	6
60	-	-	10 EA 4	-	-	-	-	-	6

CONDUIT AND CONDUCTOR SCHEDULE NOTES

1. CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 5. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
2. PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
3. PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING COMPUTERS.
4. GROUND (G) CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS.
5. SYMBOL SUBSCRIPTS:
   - "2N": INCLUDE TWO NEUTRAL CONDUCTORS, SIZED AS SCHEDULED FOR PHASED AND NEUTRAL CONDUCTORS.
   - "FG" FULL SIZE GROUND, SIZE EQUIPMENT GROUNDING CONDUCTOR TO BE SAME SIZE AS THE PHASE CONDUCTORS.
   - "HH": NEUTRAL CURRENTS EXIST DUE TO HIGH HARMONIC "NONLINEAR" LOADS. CURRENT CARRYING CONDUCTORS DERATED ACCORDINGLY. PROVIDE THE IG/HH SIZE FOR THE EQUIPMENT GROUNDING CONDUCTOR.
   - "IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR) SCHEDULED ALONG WITH THE GROUND OF EQUIPMENT GROUND CONDUCTOR.
   - "SE": SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEM.
6. RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY.

GENERAL SHEET NOTES

1. CONTRACTOR IS RESPONSIBLE FOR ALL LINE VOLTAGE AS PART OF THIS PROJECT. PROVIDE LINE VOLTAGE REQUIRED TO ALL SYSTEMS PROVIDED AS PART OF THIS PROJECT. COORDINATE WITH ALL OTHER DISCIPLINES AND DRAWINGS.
2. CONTRACTOR IS RESPONSIBLE FOR ALL DEVICES, GEAR, CABLE, CONDUCTORS, TERMINATIONS, OVERCURRENT PROTECTION DEVICES, AND HEAD END EQUIPMENT AS PART OF THIS PROJECT.
3. PROVIDE ELECTRICAL CONNECTION TO MOTORIZED DOORS WITH ALL POWER AND CONTROL WIRING PER MANUFACTURES WRITTEN INSTRUCTIONS. COORDINATE OPERATION OF DOORS WITH SECURITY, FIRE, AND SMOKE CONTROL SEQUENCES OF OPERATION.
4. ELECTRICAL CONDUIT CONNECTIONS MADE TO EXPOSED JUNCTION BOXES ON UNITS SHOULD BE MADE ON THE BOTTOM OF THE BOX. INSTALLATION SHOULD COMPLY WITH LOCAL CODE REQUIREMENTS. THE INSTALLATION SHOULD BE MADE WATERTIGHT.
5. WHERE AN EXTERNAL ELECTRICAL JUNCTION BOX IS NOT USED, WATERTIGHT FITTINGS SHOULD BE USED AT THE PANEL JOINT. IF ELECTRICAL CONDUIT PASSES THROUGH A HOLE IN THE PANEL, THAT JOINT SHOULD BE MADE WATERTIGHT.
6. INSTALLATION SHALL BE IN ACCORDANCE WITH THE NEC "NATIONAL ELECTRICAL CODE."
7. PROVIDE GFCI, HEAVY-DUTY, WEATHER RESISTANT OUTLET WITHIN 25' OF ALL EQUIPMENT. FIELD VERIFY EXISTING CONDITIONS AND PROVIDE ADDITIONAL DEVICE(S) AND CIRCUITING AS REQUIRED.
8. ALL EXTERIOR OUTLETS SHALL BE CONTROLLED WITH RELAY TO TRUN POWER ON AND OFF FOR RESERVED FUNCTIONS.

SHEET KEYNOTES

1 PROVIDE PANEL WITH GROUNDING AND MAIN BONDING JUMPER. REFER TO DETAIL (C1) ON SAME SHEET FOR MORE INFORMATION.

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WELKER TRAILHEAD IMPROVEMENTS
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LAYTON, UT 84041

REVISIONS

NO.	yy/mm/dd	DESCRIPTION

Stamp
LICENSED PROFESSIONAL ENGINEER
No. 7258080
SPENCER C. LITTLE
05-04-2023
STATE OF UTAH

Designed By:	JJN
Drawn By:	JJN
Date:	04/26/2023
Checked By:	SCL
Project No:	230019

Drawing Title
ONE-LINE DIAGRAM

BID SET

Drawing number
ES601

EXTERIOR LIGHTING FIXTURE SCHEDULE

ABBREVIATIONS

LUMINAIRE

ARHR	-	AIR RETURN AND HEAT REJECTION
DL	-	DAMP LOCATION
EQC	-	EARTHQUAKE CLIPS
F	-	FUSING
HLD	-	HINGED AND LATCHED DOOR
HS	-	HOUSE SIDE SHIELD
PS	-	PHOTOCELL SWITCH
QRS	-	QUARTZ RESTRIKE
ST	-	STATIC
WG	-	WIRE GUARD
WL	-	WET LOCATION

EMERGENCY

NE	-	NORMAL AND EMERGENCY CONNECTIONS
EB	-	EMERGENCY BATTERY PACK
ET	-	EMERGENCY TRANSFER DEVICE

BALLAST

IS	-	INSTANT START
RS	-	RAPID START
PS	-	PROGRAM START, PARALLEL LAMP OPERATION
PSMH	-	PULSE START METAL HALLIDE (CWA OR ELECTRONIC)
PPLF	-	PROVIDE POWER LINE FILTER
LVTM	-	LOW VOLTAGE TRANSFORMER (MAGNETIC)
LVTE	-	LOW VOLTAGE TRANSFORMER (ELECTRONIC)

DIMMING BALLAST

02	-	2 WIRE DIMMER
D3	-	3 WIRE DIMMER
D4	-	4 WIRE DIMMER
DD	-	DIGITAL DIMMER
SDP	-	STEP DIMMER BALLAST

FINISH

MW	-	MATTE WHITE
BL	-	BLACK
SL	-	SILVER
GO(NIC)	-	GOLD
CL	-	CLEAR
PW	-	PAINTED WHITE
EA	-	EXTRUDED ALUMINUM
S	-	STEEL
GS	-	GALVANIZED STEEL
C	-	CAST
CBA	-	COLOR BY ARCHITECT
SCBA	-	STANDARD COLOR BY ARCHITECT
CCA	-	CUSTOM COLOR BY ARCHITECT
FS 209D	-	MEETS FEDERAL STANDARD 209D
TP	-	THERMALLY PROTECTED
FL	-	FLUSH
R	-	REGRESS
M	-	MITERED

LENS

#A	-	ACRYLIC #THICK
#OA	-	ACRYLIC #THICK (OPAL)
GC	-	GLASS (CLEAR)
GO	-	GLASS (OPAL)
GF	-	GLASS (FROSTED)
SGL	-	SOFT GLOW LENS
HPL	-	HIGH PERFORMANCE LENS
DO	-	DROP OPAL
CGL	-	CONVEX GLASS LENS
S	-	SATIN LENS

REFLECTOR AND DISTRIBUTION

I	-	TYPE I
II	-	TYPE II
III	-	TYPE III
IV	-	TYPE IV
V	-	TYPE V
VSQ	-	TYPE V SQUARE
SA	-	SPUN ALLUMINUM
SR	-	SEGMENTED REFLECTOR
BW#	-	NEMA BEAM WIDTH 1 THRU 7

CUTOFF CLASSIFICATION

FC	-	FULL CUTOFF
CO	-	CUTTOFF
SC	-	SEMI CUTOFF
NC	-	NONCUTOFF

MOUNTING

B	-	BASE
C	-	CEILING
F	-	FLANGE
G	-	GRID
P	-	PENDANT
PL		POLE
R	-	RECESSED
S	-	SURFACE
W	-	WALL

CONFIGURATION

BA	-	BANNER ARMS
BH	-	BULL HORN
DL	-	2 "L" SHAPE
DS	-	2 @ 180
PT	-	INLINE POST TOP
Q	-	QUAD
SH		SHEPHERDS HOOK
SL	-	SINGLE
T	-	3 "T" SHAPE

POLE

RS	-	ROUND STRAIGHT
RT	-	ROUND TAPERED
SS	-	SQUARE STRAIGHT
ST	-	SQUARE TAPERED

NOTES

1. PROVIDE UNIT PRICES AND FIXTURE BRAND SELECTED FOR ADD/DELETE CHANGES FOR EACH FIXTURE TYPES SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPOWER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER.
2. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED, CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES.

1. VERIFY THE PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS.
2. COMPLY WITH THE "EXTERIOR LIGHTING" SECTION OF THE SPECIFICATIONS.
3. REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, BALLASTS, AND LAMPS.
4. ALL FIXTURES SHALL BE APPROVED BY UL OR ANOTHER ACCEPTABLE TESTING LAB FOR THE PURPOSE INTENDED AND WITH THE LAMP AND BALLAST PROPOSED.

			LUMINAIRE								LAMP			BALLAST		FINISH			DIFFUSER				REFLECTOR			MOUNTING						MANUFACTURER (CATALOG SERIES)			ALLOWANCE
			BUG RATING			SIZE (NOMINAL)																														
ID	IMAGE	TYPE	BACK	UP	GLARE	LENGTH	WIDTH	DEPTH	DIAMETER / APERTURE	OPTIONS	COLOR	TYPE	LUMENAIRE LUMENS	INPUT VOLTS	ANSI WATTS	HOUSING	TRIM	OTHER	TYPE	FINISH	CONFIGURATION	OPTIONS	DISTRIBUTION TYPE	FINISH	EFFICIENCY	TYPE	CONFIGURATION	POLE BASE HEIGHT	POLE HEIGHT	WIND RATING	OPTIONS	OPTION 1	OPTION_2	OPTION 3	
(Z54)		MODERN STYLE, LED POLE LIGHT. 20' POLE						26"	14"		4000K	LED	12000		120	SCBA	SCBA	SCBA					V		0			3' - 0"	20' - 0"			SUPERIOR (SX11365)	ENERGY (HALO150)	ALCON (11410-D)	
(Z55)	NO IMAGE AVAILABLE	MODERN STYLE, LED POLE LIGHT, 20' POLE, DIRECT BURIAL.						26"	14"		4000K	LED	15000	277	120	SCBA	SCBA	SCBA					FTW		0			3' - 0"	20' - 0"			FONROCHE (CK16)	-	-	

Change light to the following:

Lithonia DSX1 LED P3 40K T4M MVOLT SPA DBLXD 25 FT. SQUARE ALUMINUM HINGE BASE POLE DBLXD 100MPH + GUSTS WIND RATING. Mounting: Pole, Pole Base. Lamps LED (102W)

BID SET

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Drawing Title

EXTERIOR LIGHTING FIXTURE SCHEDULE

Drawing number

ES602