

Steve Sisolak, Governor Bradley Crowell, Director Rebecca L. Palmer, SHPO

### Stewart Facility

#### 5500 Snyder Avenue, Carson City, NV 89701

#### **Request for Permission to Undertake Structural or Visual Alterations**

In accord with the requirements set forth in existing covenants, <u>State Public Works Department</u> (name of agency) is requesting written permission to undertake visual or structural alterations as described below:

#### Building Number and Name: Various Stewart Site Locations (Refer to attached drawings)

#### Building's Date of Construction: Various, dates of building are listed below.

#### Supplementary Information:

Please indicate if you have submitted the following-

- Written description of proposed work (*required; see second page*)
- igee Photographs of existing conditions ( $\emph{required}$ )
- $\boxtimes$  Sketches, plans, or architectural drawings depicting the proposed work
- igtiesize Sketch or site plan of project location
  - ] Specs of materials to be used
  - ] Historic photographs depicting past condition or design
- Other

#### **Request Submitted by:**

Jason Aviles, P.E.	Jason aviles	
Print name	Signature	

Agency – State of Nevada Public Works Department Title – Project Manager II - Electrical Engineer Email address – javiles@admin.nv.gov Phone number – (775) 684-1814

#### Date of Request: 5/12/2022

Please allow up to 14 business days for this form to be processed. Proposed work must not begin until this form has been reviewed and approved by both the State Historic Preservation Office and the Nevada Indian Commission. In some cases, coordination with State Lands is also necessary. Per NRS 321.003, a state agency must also submit a Certification Request to the Nevada Division of State Lands before constructing a building or making other permanent improvements to state lands. This includes ground disturbance for site work and utilities. If your project requires a State

Lands Certification, you will find the instructions on the Division of State Lands website under "Forms."

http://www.lands.nv.gov/

To expedite your project, the SHPO recommends coordinating with SHPO and State Lands concurrently.

*Please submit request form and supplementary materials to the State Historic Preservation Office, 901 S. Stewart St., Ste. 5004, Carson City, NV 89701-5248 or by email to rlpalmer@shpo.nv.gov.* 

REQUEST APPROVED BY:		
SHPO		
Print and sign name		Date
Nevada Indian Commission		
	Print and sign name	Date
* Nevada Division of State Lands		
	Print and sign name	Date
* (If required)		

#### **Description of Proposed Work:**

Please provide a thorough written description of the proposed work, including-

- Location on building
- Approximate size of area affected
- Existing conditions
- Materials to be used
- Proposed methods (must follow the Secretary of the Interior's Standards)

(Use as many pages as needed)

#### Building Number, Name, Date of Construction

Building 45, Band Room, 1931 Parking lot, free standing, no date Building 89, Administration (NDOC), 1931 Parking lot near Building 89 Administration (NDOC), 1931 Building 92, Central Heat Plant, 1924 Building 160, Gymnasium, 1973 Parking lot near Building 93 State Fire Marshal Office, 1963 Building 23, Dormitory, 1937

Proposed work is located throughout the Stewart Indian School Complex and limited to areas previously disturbed in Capital Improvement Project (CIP) 17-M23 and 17-M36. This work occurs away from or adjacent to the buildings, but items of this project are not affixed to any buildings. Detailed locations can be found on drawing sheet E2.

Square footage size of affected areas is limited to the 6" diameter bollard and 12" diameter concrete footing. The bollard stands 48" tall located around the previously installed electrical equipment. This equipment sits away from front face of the buildings and often behind the buildings that limit visual impact.

Current site conditions are consistent with prior requests submitted to SHPO, Nevada Indian Commission, and State Lands for 17-M23, March 22, 2021, and 17-M36, March 29, 2021. Electrical equipment installed as part of those projects are vulnerable to vehicle impacts.

Materials are described on Detail A of sheet E3. The proposed bollards are consistent with those found elsewhere in the Complex protecting other utilities such as phone risers and fire hydrants.

Like the previously reviewed electrical projects, the proposed bollards are situated to minimize visual impact and are located within previously disturbed and inspected soils. During construction, the buildings are protected by the significant distance to the bollard installations. Materials shall match other existing protective bollards on the site.

#### **EXISTING SITE CONDITIONS**

#### ELECTRICAL EQUIPMENT BOLLARD INSTALLATION STEWART FACILITY 5500 SNYDER AVENUE, CARSON CITY, NV SPWD PROJECT NO. 17-M23(A)

PROJECT MANAGER STATE OF NEVADA PUBLIC WORKS DEPARTMENT 515 EAST MUSSER STREET CARSON CITY, NV (775) 684-1814

> DESIGN CONSULTANT JENSEN ENGINEERING INC. 9655 GATEWAY DRIVE, SUITE A RENO, NEVADA, 89521 (775) 852-2288

#### DATE: MAY 12, 2022

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#### **BUILDING 89**

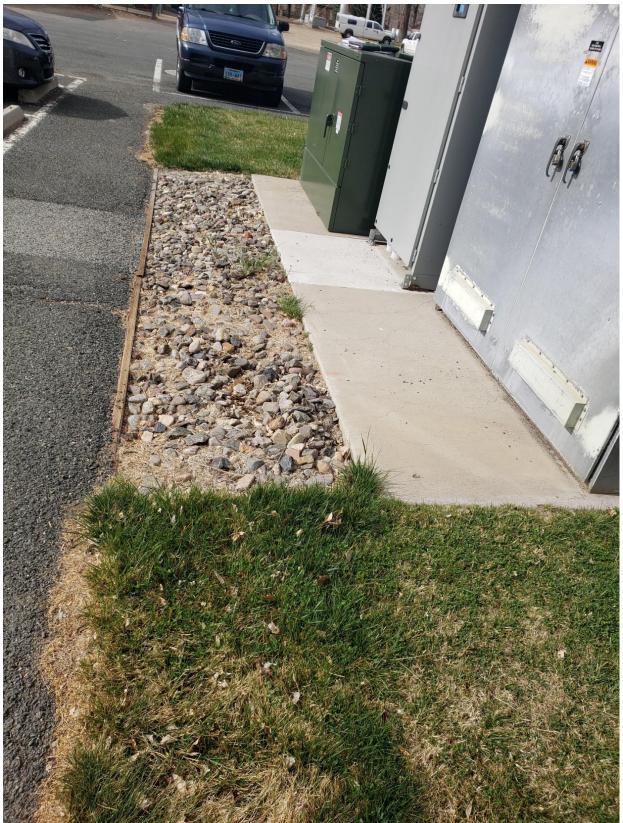
#### PADMOUNT TRANSFORMER PMT-J

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#### **FACING WEST**



**FACING SOUTH** 



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#### BUILDING 92 & 84

#### PADMOUNT TRANSFORMER PMT-G

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#### **FACING WEST**



#### **FACING SOUTH**



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#### **BUILDING 160**

#### PAD MOUNT SWITCH-H

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#### **FACING SOUTHWEST**



#### **FACING SOUTH**



#### FACING SOUTHEAST



#### **FACING WEST**



#### PADMOUNT SWITCH-3

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#### **FACING NORTHWEST**



#### **FACING NORTHWEST**



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#### **FACING NORTHEAST**

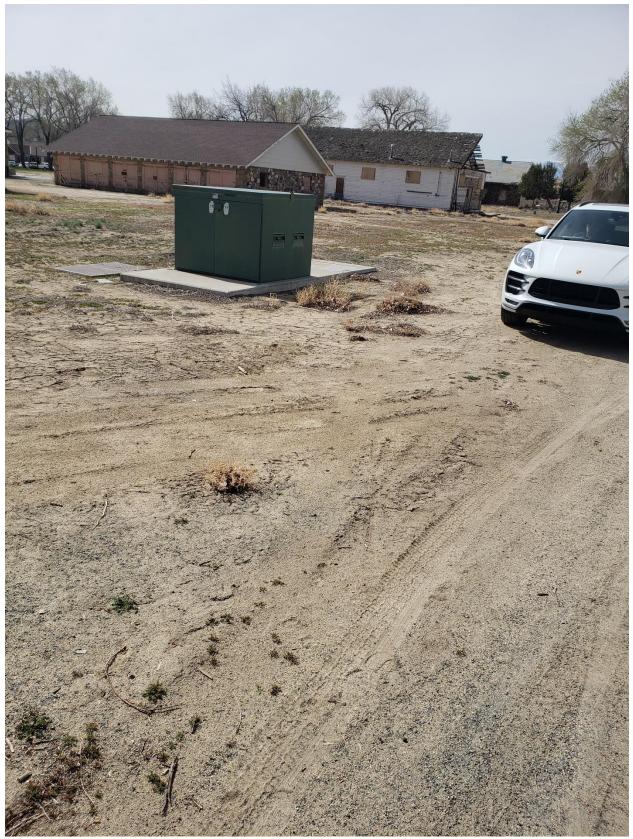


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#### PADMOUNT SWITCH-2

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#### FACING SOUTH



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#### PADMOUNT SWITCH-1

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#### **FACING NORTH**



#### **FACING NORTHEAST**



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# ELECTRICAL EQUIPMENT BOLLARD INSTALLATION AT STEWART FACILITY SPWD PROJECT NUMBER - 17-M23(A) FCA SITE #9971

## BASIS OF DESIGN

NEC 2017 IBC 2018

### SPECIAL CONSIDERATIONS

 THE STEWART COMPLEX HAS UNDERGONE MANY UNDERGROUND INFRASTRUCTURE IMPROVEMENTS OVER ITS 120 YEAR HISTORY. CONTRACTOR SHALL GIVE CAREFUL CONSIDERATION TO, AND SHALL ALLOW FOR IN HIS BID, EXISTING UNMAPPED UNDERGROUND INFRASTRUCTURE WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THIS PROJECT. NO EXTRA PAYMENT WILL BE MADE FOR REPAIR OF EXISTING UNDERGROUND INFRASTRUCTURE THAT WAS NOT CONSIDERED, DISCOVERED, AND/OR DAMAGED DURING THE COURSE OF CONSTRUCTION.

### HISTORICAL CONSIDERATIONS

- THE STEWART INDIAN SCHOOL COMPLEX IS LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES. IT IS CONSIDERED A HISTORIC DISTRICT.
- ANY WORK COMPLETED WITHIN THIS HISTORIC DISTRICT IS SUBJECT TO WRITTEN APPROVAL FROM THE STATE HISTORIC PRESERVATION OFFICE PER THE 1982 PRESERVATION COVENANT THAT WAS ATTACHED TO THE DEED TRANSFERRING THE LAND OUT OF FEDERAL TO STATE OWNERSHIP.
- ALL WORK MUST COMPLY WITH THE SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES.

### 5500 SNYDER AVENUE CARSON CITY, NEVADA

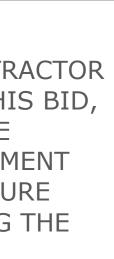
ELECTRICAL: JENSEN ENGINEERING, INC.

GERALD JENSEN, P.E.

RENO, NEVADA 89521



9655 GATEWAY DR., SUITE A





## DRAWING INDEX

ELECTRICAL SPECIFICATIONS

**OVERALL SITE PLAN & SITE MODIFICATIONS** 

ENLARGED PLAN DETAILS

E1 -

E2 -

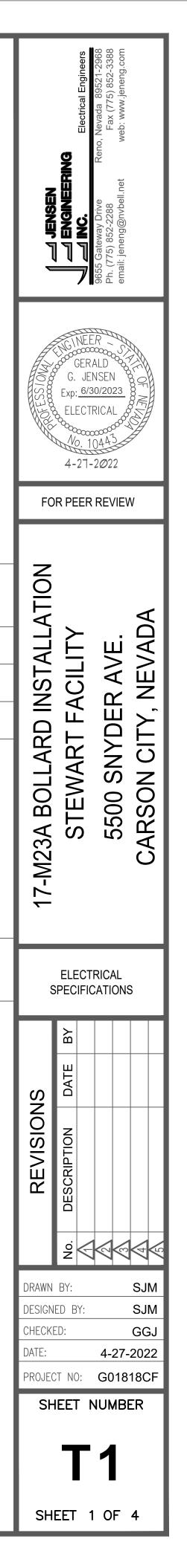
E3 -

## ADDITIONAL CONSIDERATIONS

 CONSTRUCTION ACTIVITIES SHALL ONLY OCCUR BETWEEN THE HOURS OF 6AM AND 5PM (SEVEN DAYS PER WEEK).

CONTRACTOR SHALL PLAN CONSTRUCTION ACTIVITIES TO MINIMIZE POWER DISRUPTIONS BY MANAGEMENT OF SECTIONALIZING LOCATION. POWER OUTAGES SHALL BE COORDINATED WITH SPWD AND B&G PERSONNEL AT LEAST FOUR WEEKS IN ADVANCE. TEMPORARY POWER GENERATORS ARE NOT REQUIRED, BUT ALL OUTAGES SHALL BE MINIMIZED.

 CONTRACTOR SHALL SUBMIT A DETAILED PLAN, AND SHALL OBTAIN OWNER APPROVAL OF, THE MEANS AND METHODS PROPOSED FOR POWER CHANGE-OVER WHERE NEW EQUIPMENT IS TO BE PUT INTO SERVICE.



### ELECTRICAL SPECIFICATIONS

10 GENERAL PROVISIONS CONSIDER THE GENERAL AND SPECIFIC CONDITIONS OF THE CONTRACT AND THE COMPLETE SET OF DRAWINGS AS PART OF THIS DIVISION OF THE SPECIFICATIONS. WHERE REQUIREMENTS OF THIS DIVISION DO NOT COINCIDE WITH GENERAL AND SPECIAL CONDITIONS, THE STRICTER REQUIREMENTS WILL GOVERN.

#### 20 WORK INCLUDED

- PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, APPARATUS, ETC. INCLUDING: THOSE REAGONABLY INFERRED, AS REQUIRED FOR A COMPLETE INSTALLATION OF ANY ELECTRICAL WORK SHOWN WITHIN THESE ELECTRICAL CONSTRUCTION DOCUMENTS, OR DETAILED IN THE ELECTRICAL SPECIFICATIONS. ALL ELECTRICAL WORK SHALL BE PERFORMED BY LICENSED ELECTRICIANS AND TECHNICIANS. REPAIRS AND REPLACEMENTS FOR DEFECTIVE EQUIPMENT OR MATERIALS AS COVERED BY WARRANTEE/GUARANTEE SHALL BE CONSIDERED WITHIN THE SCOPE OF WORK AND SHALL BE PERFORMED AT NO ADDITIONAL COST (EXCEPTION: LIGHTING LAMPS).
- 30 RELATED WORK SPECIFIED ELSEWHERE ELECTRICAL CONSTRUCTION DOCUMENTS AND ELECTRICAL SPECIFICATION SECTION SHALL BE CONSIDERED AS A WHOLE. ALL ELECTRICAL WORK SHALL ACCOMODATE THE REQUIREMENTS OF THIS DIVISION TO ENSURE PROPER PERFORMANCE OF ELECTRICAL WORK REQUIRED BY OTHER DIVISIONS.

#### 40 SITE INVESTIGATION

ELECTRICAL CONTRACTOR SHALL THOROUGHLY INVESTIGATE ALL EXISTING CONDITIONS AT THE PROJECT SITE PRIOR TO SUBMITTING A BID.

#### 50 REGULATIONS AND STANDARDS

- NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION AGENCY (NFPA) STANDARDS, INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL FIRE CODE (IFC), INTERNATIONAL ENERGY CONSERVATION CODE (IECC), NECA 1-2015 STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION, AMERICANS WITH DISABILITIES ACT (ADA), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), THE REQUIREMENTS OF THE FIRE MARSHALL, AND ANY UTILITY COMPANY STANDARDS AS DETAILED IN UTILITY WORK ORDER DRAWINGS. ADDITIONALLY, ALL STATE AND LOCAL CODES AND ORDINANCES SHALL BE UPHELD. CONTRACTOR SHALL NOT OMIT ANY COMPONENT OR PORTION OF THESE ELECTRICAL CONSTRUCTION DOCUMENTS WHICH MAY EXCEED THE LISTED STANDARDS. NO ELECTRICAL WORK DETAILED IN THE ELECTRICAL CONSTRUCTION DOCUMENTS OR ELECTRICAL SPECIFICATION SECTION SHALL BE INTERPRETED TO PERMIT WORK WHICH FAILS TO CONFORM TO THESE REQUIREMENTS. WHERE CONFLICTS OCCUR. HIGHER STANDARDS SHALL GOVERN. RULINGS AND INTERPRETATIONS BY GOVERNING AGENCIES SHALL BE CONSIDERED A PART OF THIS DIVISION IF COMMONLY IMPOSED UPON THE TRADE PRIOR TO SUBMISSION OF BID.
- 5.2 ALL PROJECTS OF TYPE 'R' (RESIDENTIAL) OCCUPANCY SHALL COMPLY WITH IRC (INTERNATIONAL RESIDENTIAL CODE (IRC) REQUIREMENTS.
- 60 FEES ELECTRICAL CONTRACTOR SHALL INCLUDE ALL FEES AND ROYALTIES FOR PERMITS, TESTS AND INSPECTIONS. UTILITY COMPANY CHARGES FOR PERMANENT CONNECTION TO ELECTRICAL SERVICE ARE NOT THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR

#### 10 DRAWINGS AND SPECIFICATIONS

- 1.1 ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS, AND INSTALLATION REQUIREMENTS OF ALL ELECTRICAL EQUIPMENT PRIOR TO "ROUGH-IN" (INCLUDING RECEPTACLES, SWITCHES, CONDUITS, SWITCHBOARDS, PANELBOARD, ETC.). LOCATIONS SHALL BE VERIFIED FOR APPROPRIATE SPACE (LENGTH, WIDTH, AND HEIGHT) AND CLEARANCE PRIOR TO FABRICATING OR ORDERING ANY EQUIPMENT OR MATERIALS. ALL DISCREPANCIES SHALL BE REPORTED TO THIS ENGINEER IMMEDIATELY. FINAL CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS.
- 12 ELECTRICAL CONTRACTOR SHALL SUBMIT WRITTEN REQUEST-FOR-INFORMATION (RFI) DOCUMENTS TO THIS ENGINEER PRIOR TO PERFORMING ANY WORK WHERE AMBIGUITY ARISES. ELECTRICAL CONTRACTOR SHALL NOT PERFORM ANY FIELD MODIFCATIONS OR DEVIATIONS FROM THE ELECTRICAL CONSTRUCTION DOCUMENTS AND/OR SPECIFICATIONS WITHOUT APPROVED WRITTEN RESPONSE FROM THIS ENGINEER THROUGH AN APPRORPIATELY SUBMITTED RFI.
- 13 ELECTRICAL CONTRACTOR SHALL PERFORM ELECTRICAL WORK PER MANUFACTURER'S DIRECTIONS WHERE SAID DETAILS ARE NOT SPECIFICALLY COVERED OR INDICATED BY THESE ELECTRICAL CONSTRUCTION DOCUMENTS AND ELECTRICAL SPECIFICATIONS. WHEN CONFLICT ARISES, SECTION 1.2 OF THIS SPECIFICATION SHALL DICTATE PERFORMANCE
- 1.4 ALL SERVICES RENDERED BY THIS ENGINEER ARE PROFESSIONAL OPINIONS AND RECOMMENDATIONS, ONLY. UNDER NO CIRCUMSTANCE IS IT THE INTENT OF THIS ENGINEER TO DIRECTLY CONTROL THE PHYSICAL ACTIVITIES OF THE CONTRACTOR OR HIS EMPLOYEES.

#### 80 MATERIALS 3.1 APPEARANCE AND FINISH OF MATERIALS SHALL BE OF THE HIGHEST STANDARDS. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, OPERATING NORMALLY, AND OF HIGHEST AVAILABLE QUALITY. ANY DEFECTIVE MATERIALS SHALL

BE IDENTIFIED AND REMOVED FROM SITE, IMMEDIATELY.

- 82 PROVIDE UNDERWRITERS LABORATORY (UL) LISTED MATERIALS AND EQUIPMENT WHEREVER STANDARDS FOR SAID ITEMS HAVE BEEN ESTABLISHED. UNLISTED DEVICES SHALL BE INSTALLED IN EQUIPMENT NORMALLY LISTED OR LABELED, AND SHALL CONFORM TO UL STANDARDS AS FAR AS POSSIBLE.
- 8.3 ALL CATALOG NUMBERS ARE GIVEN TO ASSIST IN IDENTIFYING THE BASIC REQUIREMENTS OF THIS PROJECT AND INDICATE THE MINIMUM LEVEL OF QUALITY. CATALOG NUMBERS WILL, GENERALLY, NOT SPECIFY COLOR AND ACCESSORIES. CONSULT OWNER AND ARCHITECT FOR COLOR AND ACCESSORY DETAILS.

5.1 ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF: THE

90 CLEAN WORK REGULARLY REMOVE DEBRIS FROM THE PROJECT SITE, AS REQUIRED, DURING CONSTRUCTION, CLEAN ALL RACEWAYS, FIXTURES, AND OTHER EQUIPMENT PRIOR TO FINAL ACCEPTANCE BY OWNER.

#### 100 CLOSING IN OF UNINGPECTED WORK ELECTRICAL CONTRACTOR SHALL NOT CLOSE IN OR CONCEAL ANY ELECTRICAL WORK PERFORMED PRIOR TO INSPECTION AND APPROVAL.

10 IDENTIFICATION ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL PRINTED WEATHERPROOF LABELS FOR ALL ELECTRICAL SWITCHGEAR EQUIPMENT INCLUDING SWITCHBOARDS, TRANSFORMERS, MOTOR CONTROL CENTERS, PANELBOARDS, SAFETY SWITCHES, ETC. NAMEPLATES SHALL INDICATE DEVICE DESIGNATION, EQUIPMENT SERVED, VOLTS/PHASE/WIRE, AND SOURCE FEEDING THE EQUIPMENT. PROVIDE ALL PANELBOARDS WITH NEW AND ACCURATE TYPED DIRECTORIES, INSTALLED UNDER CLEAR PLASTIC COVER. PROVIDE DIRECTORY INFORMATION TO OWNER FOR APPROVAL PRIOR TO FINALIZATI*O*N.

#### 12.0 PENETRATIONS

- 2.1 PROVIDE AND INSTALL APPROVED UL LISTED ASSEMBLY AND EMPLOY ARCHITECTURALLY APPROVED METHODS FOR WATER-TIGHT PENETRATION OF EXTERIOR WALLS. CONSULT ARCHITECT FOR DETERMINATION OF PENETRATION LOCATIONS FOR EXTERIOR WALLS.
- 12.2 PROVIDE AND INSTALL APPROVED UL LISTED MATERIALS AND EMPLOY ARCHITECTURALLY APPROVED METHODS FOR PENETRATION OF FIRE-RATED ASSEMBLIES. ELECTRICAL CONTRACTOR SHALL NOT EXCEED THE MAXIMUM ALLOWABLE SURFACE PENETRATIONS. CONSULT ARCHITECT FOR DETERMINATION OF PENETRATION LOCATIONS INTO FIRE-RATED ASSEMBLIES.

#### 13,0 EXCAVATION AND BACKFILL

- 13.1 PROVIDE ALL EXCAVATION, BACKFILL, TRENCHING, SHORING, PUMPING, COMPACTION, ETC. REQUIRED FOR ALL ELECTRICAL WORK DETAILED IN THE ELECTRICAL CONSTRUCTION DOCUMENTS AND THIS ELECTRICAL SPECIFICATION. CONFORM TO REQUIREMENTS OF EARTHWORK SECTION WHERE THIS SPECIFICATION DOES NOT
- 132 COORDINATE WITH EARTHWORK CONTRACTOR TO INSTALL RACEWAYS AND CONDUIT ROUTES PROMPTLY. ELECTRICAL CONTRACTOR SHALL PERFORM BACKFILL UPON INSPECTION AND APPROVAL.
- 13.3 UNDERGROUND ELECTRICAL WORK SHALL BE PERFORMED WITH CONSIDERATION FOR EXISTING SERVICES. ELECTRICAL CONTRACTOR SHALL PROMPTLY AND COMPLETELY REPAIR OR REPLACE ANY SYSTEMS DISRUPTED DURING ELECTRICAL INSTALLATION AND RETURN TO WORKING ORDER
- 13.4 BACKFILL SHALL CONFORM TO REQUIREMENTS OF EARTHWORK SPECIFICATION SECTION AND SHALL BE FREE OF ROCKS OR OTHER DEBRIS, AND SHALL BE COMPACTED TO FINISHED GRADE.

#### 14.0 SUPPORTS AND FASTENINGS

ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL SUPPORTS AND HANGARS FOR ALL RACEWAYS, CABINETS, BOXES, BACK-BOXES, AND ALL OTHER EQUIPMENT. DESIGN OF SUPPORTS AND FASTENERS SHALL BE MADE USING PRE-ENGINEERED AND MANUFACTURED COMPONENTS DESIGNED FOR THE INTENDED USE. SUPPORTS AND FASTENERS SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS AND IN GENERAL CONFORMANCE WITH THE RECOMMENDATIONS OF NECA STANDARD 1-2015 AND NECA STANDARD 101-2013. ANCHORS, BOLTS, SUPPORT SYSTEMS, HANGERS, ETC. SHALL FEATURE ADEQUATE CORROSION RESISTANCE FOR THE APPLICATION. RACEWAY SUPPORTS SHALL BE TRAPEZE TYPE WITH BEAM CLAMPS, THREADED RODS, AND STRUCTURAL CHANNELS. SELECTION OF SUPPORTS AND FASTENING METHODS SHALL BE BASED ON SIZE AND WEIGHT OF COMPONENTS SUPPORTED, AS WELL AS SAFETY AND ACCESSIBILITY. ALL SUPPORTS AND HANGARS SHALL BE RATED FOR FIVE (5) TIMES THE ACTUAL LOAD.

#### 15.0 TRADE COORDINATION

ELECTRICAL CONTRACTOR SHALL COORDINATE THE ELECTRICAL INSTALLATION WORK WITH ALL OTHER CONTRACTORS. REFER TO PLANS AND SPECIFICATIONS OF OTHER TRADES. ELECTRICAL CONTRACTOR SHALL CONSULT OTHER CONTRACTORS TO ENSURE TIMELY AND APPROPRIATE CONNECTIONS AND INTERFACE WITH PLUMBING, MECHANICAL, FIRE/SMOKE DAMPERS, OR OTHER EQUIPMENT. ALL REQUIRED WIRING AND CONTROL COMPONENTS SHALL BE CONSIDERED PART OF THE SCOPE OF WORK.

#### 16.0 RECORD DRAWINGS

ELECTRICAL CONTRACTOR SHALL PROVIDE A NEAT AND COMPLETE SET OF 'AS-BUILT' RECORD DRAWINGS TO THE OWNER WITHIN TEN (10) DAYS OF FINAL ACCEPTANCE OF WORK. RECORD DRAWINGS SHALL INDICATE ALL DEVIATIONS FROM THE ELECTRICAL CONSTRUCTION DOCUMENTS, LOCATIONS OF STUB-OUTS AND CONCEALED ITEMS (PER FIELD DIMENSIONS) RECORD DRAWINGS SHALL BE OF EQUAL TO OR HIGHER QUALITY THAN THESE ELECTRICAL CONSTRUCTION DOCUMENTS (INCLUDING SIZE, CLARITY AND MEDIUM). ALL MAINTENANCE AND OPERATING MANUALS AS WELL AS ANY ADDITIONAL INSTRUCTIONS, SHALL BE CONSIDERED A PART OF THE RECORD DRAWINGS.

#### TIO OINERSHIP OF DOCUMENTS

THESE ELECTRICAL CONSTRUCTION DOCUMENTS AND SPECIFICATIONS CONSTITUTE THE INTELLECTUAL PROPERTY OF IENSEN ENGINEERING, INC. AND ALL RIGHTS ARE RESERVED BY JENSEN ENGINEERING, INC., THESE MATERIALS SHALL REMAIN AS THE INTELLECTUAL PROPERTY OF JENSEN ENGINEERING, INC. AND MAY NOT BE REPRODUCED, DISTRIBUTED, OR USED FOR ANY OTHER PURPOSE, EXCEPT FOR THE PROJECT FOR WHICH THEY ARE INTENDED, WITHOUT THE EXPLICIT WRITTEN CONSENT OF JENSEN ENGINEERING, INC.

#### 18.0 ONGOING OPERATIONS

ELECTRICAL CONSTRUCTION WORK SHALL BE PERFORMED WITH ALL DUE CONSIDERATION FOR ONGOING OPERATIONS AT THE PROJECT SITE AND SHALL MINIMIZE DISRUPTIONS IN EVERY RESPECT. PROVIDE AND INSTALL BARRICADES, DUST CONTAINMENT, NOISE ABATEMENT, ETC. TO ENGURE SAFETY AND COMFORT OF NON-CONSTRUCTION PERSONNEL ON THE PROJECT SITE. ANY INTERRUPTIONS TO EXISTING FIRE-ALARM, DATA/COMMUNICATION, OR ELECTRICAL SERVICES SHALL BE COORDINATED WITH THE OWNER AND THIS ENGINEER PRIOR TO ENGAGEMENT. DISRUPTIONS SHALL BE TEMPORARY AND MUST BE SCHEDULED 48 HOURS IN ADVANCE.

#### 19.0 TEMPORARY POWER

ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY POWER SERVICE AND DISTRIBUTION FOR ALL TRADES WHICH REQUIRE SERVICE DURING CONSTRUCTION. TEMPORARY POWER SERVICE SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC, AS WELL AS OSHA. COSTS OF TEMPORARY POWER ARE NOT THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

#### 200 MATCH EXISTING

- SEAMLESS IN APPEARANCE AND FUNCTION.
- 210 VANDAL PROTECTION EQUIPMENT WITH OPERABLE-DOOR ENCLOSURES SHALL BE LOCKING TYPE, OR PAD-LOCKING.

#### 22.0 GROUNDING AND BONDING ARTICLE 250 AND AS SHOWN ON THE CONSTRUCTION DOCUMENTS.

- 230 FINAL OBSERVATION
- 24.0 PRELIMINARY OPERATION

#### 25.0 INDEMNIFICATION

- BY A PARTY INDEMNIFIED HEREUNDER.
- DISABILITY BENEFIT ACTS, OR OTHER EMPLOYEE BENEFIT ACTS.
- TO GIVE IS THE PRIMARY CAUSE OF INJURY OR DAMAGE.

#### 26,0 WARRANTY/GUARANTEE

DURATION OF THIS PROJECT.

OF FINAL ACCEPTANCE. 27.0 EXISTING UTILITY DISCOVERY

ELECTRICAL CONTRACTOR SHALL COMPLETELY IDENTIFY ANY COMPONENTS WHERE DIRECTED TO MATCH EXISTING, AND SHALL PROVIDE AND INSTALL THE ITEM(S) EXACTLY. WHERE EXACT REPLACEMENT IS NOT AVAILABLE, NEW EQUIPMENT SHALL MATCH EXISTING EQUIPMENT IN FUNCTION AND APPEARNCE, AND MUST BE OF EQUAL OR GREATER QUALITY THAN EXISTING EQUIPMENT. WHERE SCOPE OF WORK OCCURS AT AN EXISTING FACILITY, ALL MATERIALS AND WORKMANSHIP SHALL BE OF GREATER QUALITY THAN EXISTING. TRANSITIONS FROM NEW WORK AREAS TO EXISTING AREAS SHALL BE

ALL ELECTRICAL WORK THAT IS ACCESSIBLE TO THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. ALL

PROVIDE AND INSTALL GROUNDING AND BONDING OF ALL EQUIPMENT AND SYSTEM NEUTRAL AS REQUIRED BY NEC

UPON ACCEPTANCE OF OPERATION AND MAINTENANCE INSTRUCTIONS AND RECORD DRAWINGS, THIS ENGINEER SHALL MAKE A FINAL OBSERVATION OF THE PROJECT AND GENERATE A LIST OF UNACCEPTABLE ITEMS. FINAL PROJECT ACCEPTANCE SHALL NOT BE CONSIDERED COMPLETE UNTIL ALL ITEMS IN THIS LIST HAVE BEEN CORRECTED.

IF THE OWNER DEMANDS THAT ANY PORTION OF THE ELECTRICAL SYSTEM BE OPERATED PRIOR TO FINAL COMPLETION AND ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL CONSENT, AND SUCH OPERATION SHALL BE PERFORMED UNDER SUPERVISION AND DIRECTION OF THE CONTRACTOR ALL OPERATING EXPENSE THEREOF SHALL BE PAID BY THE OWNER PRELIMINARY OPERATION AND PAYMENT THEREOF SHALL NOT BE CONSTRUED AS ACCEPTANCE OF WORK.

25.1 ELECTRICAL CONTRACTOR SHALL INDEMNIFY, AND HOLD HARMLESS, THE OWNER AND THIS ENGINEER, AND THEIR AGENTS AND EMPLOYEES, FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES, ARISING OUT OF, OR RESULTING FROM, THE PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIM, DAMAGE, LOSS OR EXPENSE (a) IS ATTRIBUTED TO BODILY INJURY, SICKNESS, DISEASE OR DEATH, OR INJURY TO, OR DESTRUCTION OF, TANGIBLE PROPERTY (OTHER THAN THE WORK ITSELF) INCLUDING THE LOSS OF USE RESULTING THEREFROM (b) IS CAUSED IN WHOLE OR IN PART BY ANY NEGLIGENT ACT OR OMISSION BY THE CONTRACTOR, ANY SUB-CONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM, OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, REGARDLESS OF WHETHER OR NOT IT IS CAUSED IN PART

25.2 IN ANY AND ALL CLAIMS AGAINST THE OWNER, OR THE ENGINEER, OR ANY OF THEIR AGENTS OR EMPLOYEES, BY ANY EMPLOYEE OF THE CONTRACTOR, ANY SUB-CONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE WHOSE ACTS ANY OF THEM MAY BE LIABLE, THE INDEMNIFCATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGE, COMPENSATION OR BENEFITS PAYABLE BY OR FOR THE CONTRACTOR, OR ANY SUB-CONTRACTOR, UNDER WORKMEN'S COMPENSATION ACTS,

25.3 THE INDEMNIFICATION OBLIGATIONS OF THE CONTRACTOR SHALL NOT EXTEND TO THE LIABILITY OF THE ENGINEER, HIS AGENTS OR EMPLOYEES, ARISING OUT OF (a) THE PREPARATION OR APPROVAL OF MAPS, DRAWINGS, OPINIONS, REPORTS, SURVEYS, CHANGE ORDERS, DESIGNS OR SPECIFICATIONS OR (b) THE GIVING OF OR THE FAILURE TO GIVE DIRECTIONS OR INSTRUCTIONS BY THE ENGINEER, HIS AGENTS OR EMPLOYEES, PROVIDED SUCH GIVING OR FAILURE

ELECTRICAL CONTRACTOR SHALL PROVIDE A GUARANTEE OF THE ELECTRICAL WORK TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. LIGHTING LAMPS ARE EXEMPT FROM THIS REQUIREMENT, HOWEVER, LAMPS SHALL BE NEW AND IN PERFECT OPERATING CONDITION AT THE TIME

ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING THE EXISTING UNDERGROUND UTILITY SYSTEMS PRIOR TO COMMENCEMENT OF ANY WORK. ELECTRICAL CONTRACTOR SHALL RETAIN A THIRD-PARTY CONSULTANT TO PERFORM GROUND PENETRATING SCANNING OF THE UNDERGROUND UTILITY SYSTEM TO AVOID ANY CONFLICT WITH PROJECT SCOPE OF WORK. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE INCURRED DURING THE

