

A AFCI AFF AIC AIC AL AWG C CU EMT EXST (F)	AMP(S) ARC FAULT CIRCUIT INTER ABOVE FINISHED FLOOR ABOVE FINISHED GRADE AMPS INTERRUPTING CAPA ALUMINUM AMERICAN WIRE GAUGE CONDUIT COPPER ELECTRICAL METALLIC TUE
EMT	ELECTRICAL METALLIC TUE
EXST,(E) G	EXISTING GROUND

	,, ,, _,	44/13
CTRICAL SYMBOLS	SCOPE OF WORK	BY 6/2.
R DETAIL DESIGNATION SIGNATES SECTION, SIGNATES SECTION, SIGNATES SECTION, SIGNATES DETAIL) CROSSHATCHES WITH BARS INDICATE NUMBER OF AWG #12 WIRES CROSSHATCHES WITH BARS INDICATE NUMBER OF AWG #10 WIRES SUBSCRIPT "G" INDICATES GREEN GROUND WIRE CONDUIT, STUBBED & CAPPED CONDUIT, STUBBED & CAPPED CONDUIT, STUBBED UP & CAPPED CONDUIT, UP CONDUIT, DOWN WH) WATT-HOUR METER TCH T.T SWITCH) CAKER & SIZE, SINGLE-POLE TED OTHERWISE DLE CONDUCTOR SIZE TRANSFORMER TRANSFORMER	THIS SET OF DRAWINGS COVERS POWER DISTRIBUTION AND LIGHTING FOR THE CONSTRUCTION OF WO ADA COMPLIANT RESTROOMS ON THE GROUND FLOOR, AND SIZING A NEW SERVICE ENTRANCE, FOR EXISTING EGYPTIAN THEATER LOCATED IN COOS BAY, OREGON. THE PROJECT INCLUDES THE FOLLOWING: AT THE TIME OF DESIGN COMPLETION, UTILITY COORDINATION REMAINS, AND THIS COORDINATION SHALL BE PERFORMED BY THE CONTRACTOR. ALL SERVICE RELATED ITEMS SHOWN ARE MINIMUM COORDINATE WITH UTILITY FOR ADDITIONAL REQUIREMENTS. NEW SERVICE ENTRANCE. NEW SERVICE ENTRANCE. NEW SERVICE ENTRANCE. BID ALTERNATE FOR NEW DISTRIBUTION PANEL AND FEEDER (PANEL SB REPLACEMENT). BID ALTERNATE FOR NEW DISTRIBUTION PANEL AND FEEDER (PANEL P). POWER DISTRIBUTION AND LIGHTING FOR THE RESTROOMS. DEMOLITION OF EXISTING SERVICE ENTRANCE. SERVICE LATERAL CONDUIT. WILLTY PRIMARY CONDUIT. GENERAL NOTES: 1. SEE ELECTRICAL SPECIFICATIONS. 2. UNLESS NOTED OTHERWISE, MOUNT RECEPTACLES AT 18 INCHES AND SWITCHES AT 48 INCHES AMOUNT RECEPTACLES AT 18 INCHES AND WORK PLANE HEIGHTS. RECEPTACLES SHALL BE SPECIFICATION GRADE. 3. RECEPTACLES AND JUNCTION BOXES FOR DEDICATED USES ARE SHOWN IN APPROXIMATE LOCATIONS. RECEPTACLES SHALL BE SPECIFICATION GRADE. 3. RECEPTACLES AND JUNCTION BOXES FOR DEDICATED USES ARE SHOWN IN APPROXIMATE LOCATIONS. 4. WIRING FOR ELECTRICAL DEVICES IS NOT SHOWN ON THESE PLANS. INSTEAD, ELECTRICAL DEVICES IS NOT SHOWN ON THESE PLANS. INSTEAD, ELECTRICAL DEVICES IN EACH ROOM ARE TAGED WITH THE SOURCE IN THA ROOM	No.
RUPTER GFCI GROUND FAULT CIRCUIT INTERRUPTER (PERSONNEL) NTS NOT TO SCALE GFP GROUND FAULT PROTECTION (EQUIPMENT) OL OVERLOAD GRS GALVANIZED RIGID STEEL CONDUIT PB PULLBOX HP HORSEPOWER PNL PANEL, PANELBOARD HZ HERTZ PVC POLVYNYL CHLORIDE CONDUIT IMC INTERMEDIATE METAL CONDUIT RECEPT RECEPTACLE KCMIL THOUSAND CIRCULAR MILS SP SPARE KW KILOWATT TYP TYPICAL NG MIN MINIMUM V V VOLT(S) N NEUTRAL NG NOT APPLICABLE XFMR TRANSFORMER	 ELECTRICAL BOXES LOCATED IN 1HR FIRE RATED WALLS SHALL NOT EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL AREA. THE CONTRACTOR SHALL VERIFY ALL WORK CONDITIONS PRIOR TO COMMENCING WORK, INCLUDING, BUT NOT LIMITED TO: DIMENSIONS, EQUIPMENT, STRUCTURAL ELEMENTS & MATERIALS INDICATED AS EXISTING. CONTRACTOR SHALL ALSO COORDINATE AMONG DISCIPLINES AND EQUIPMENT SUPPLIERS FOR INSTALLATION OF ALL MATERIALS & EQUIPMENT, ETC. ITEMS SHOWN BOLD ON THESE DRAWINGS REPRESENT WORK THAT IS PART OF THIS CONTRACT. BOLD TEXT ASSOCIATED WITH EQUIPMENT SHOWN AS THIN DESCRIBES WORK TO BE PERFORMED ON THE EQUIPMENT AS PART OF THE CONTRACT. 	CITY OF COOS BAY
	Presented List 1 LIST DA LO CENERAL NOTES 2 SPECIFICATIONS 3 ONE - LINE DIAGRAM Image: Comparison of the presented o	Sydnose surgers of the series

ELECTRICAL SPECIFICATIONS

PART 1 – GENERAL

RELATED WORK

- A. All of the work executed under this section shall meet the requirements of related disciplines as if fully stated herein.
- B. See all contract documents for other requirements including as applicable General Conditions, Bidding and Construction Schedule, Safety Requirements, Mobilization Requirements, and other Contract Terms and Conditions.
- C. All Contract Documents, including but not limited to Plans, Specifications, Instructions to Bidders, and other published documents are a part of the Contract.

FIRE PROTECTION

A. See Structural documents for fire-stopping requirements, and comply with State Fire Marshal requirements for approved and listed fire-stopping systems. See Structural Drawings for fire-stop finish details. At a minimum, penetration of fire rated walls, floor-ceilings, and roof-ceilings shall meet UBC Sections 709 and 710.

CODES, PERMITS, AND REGULATIONS

- A. Perform all work, furnish and install all materials and equipment in full accordance with the latest applicable rules, regulations, requirements, and specifications of the following:
 - 1. Local laws and ordinances
 - 2. State and Federal laws
 - 3. National Electrical Code (NEC) 4. Oregon Electrical Specialty Code (OESC)
 - 5. Underwriters Laboratories (UL)
 - 6. Local Utility Company
- B. Wherever the requirements of the specifications or drawings are in conflict with the items above, the more stringent requirement shall prevail.
- C. Obtain all permits and pay all fees required by any governmental agency having jurisdiction of the work. Arrange all inspections required by these agencies. On completion of the work, furnish satisfactory evidence to the Owner that the work is acceptable to the regulatory authorities having jurisdiction.

SUBMITTALS

- A. Before any material is fabricated or shipped, furnish to the Engineer full details, shop drawings, dimensions, catalog cuts, schematic (elementary) diagrams, wiring diagrams, and other descriptive matter as required to fully describe the products specified under this Section.
- B. For service entrance equipment, meter base, and other related materials, obtain written approval of submittals from the serving utility before submitting to the Engineer. Submittals shall include manufacturer UL listed series rated information sheets. All equipment shall be separately labeled per requirements of the NEC.

WARRANTY

A. The work and materials covered in this Section shall be guaranteed for a period of 1 year from the date of acceptance thereof against defective materials, design, and workmanship.

PART 2 – PRODUCTS

GENERAL

- Unless otherwise indicated, provide all first-quality, new materials and equipment, free from any A. defects, in first class condition, with ratings as shown on these drawings, and suitable for the space provided.
- Like items of equipment provided hereunder shall be the end products of one manufacturer in order to B. achieve standardization for appearance, operation, maintenance, spare parts, and manufacturer's service.
- C. Furnish labor, materials, and equipment as necessary to deliver complete and operable systems.

MATERIALS

- Provide a meter base(s), main service panel(s), main breaker(s) with copper bussing, and other A. materials and work that will provide service to the facility. Short circuit rating of equipment shown on the drawings may be met using UL listed series-rated components. Materials and work shall be UL listed and shall meet the requirements of EUSERC and the utility company.
- Lighting and power distribution panel boards: Provide circuit breaker panel boards meeting standards B. established by UL, NEMA PB1, and the NEC. Where used as service entrance equipment, provide panels having UL approval for that use. Provide panels rated for the available short circuit current of the electric system. Panelboards shall include bolt on breakers.
- C. Conductor sizes indicated are based on copper conductors. Do not provide conductors smaller than those indicated. Conductors shall be stranded THWN (wet) or THHN (dry), except solid conductors may be used for 15-, 20-, and 30-amp branch circuits.

PART 3 – EXECUTION

GENERAL Work shall be performed in a workman like manner by craftsmen skilled in the particular trade. Work A. shall be performed in accordance with the drawings, specifications, manufacturer's recommendations, and the best practice of the trade. Completed work shall present a neat and finished appearance. B. Field verify dimensions, equipment, structural elements, and materials indicated as existing. **INSTALLATION** A. Locations of electrical equipment, and other electrical system components shown on drawings are approximate unless dimensioned. Check for and resolve conflicts with openings, structural members, and equipment having fixed locations. Do not cut or notch any structural member or building surface without specific approval of the B. Engineer. Carefully carry out any cutting, channeling, chasing, or drilling of floors, walls, partitions, ceilings, paving, or other surfaces required for the installation, support, or anchorage of conduit, raceways, or other electrical materials and equipment. Following such work, restore surfaces neatly to new condition using skilled craftsmen of the trades involved, at no additional cost to the Owner. Any penetrations to fire rated materials shall be restored to equal rating as required by the state Fire Marshall Follow manufacturer's installation instructions explicitly, unless otherwise indicated. C. Thoroughly document all electric circuits. Provide a typewritten circuit directory on all branch panels. D. Provide engraved nameplates for all pieces of equipment. Plates shall be screw on 3 ply, black face, E. white 1/4-inch-high Gothic lettering. When equipment or instrument is not suitable for a screw on nameplate, use a 16 gauge, 304 stainless steel tag, 1/4" high lettering affixed to equipment with stainless steel wire. F. Coordinate equipment seismic bracing requirements with the local authorities and manufacturer of equipment. G. Completed work shall present a neat and finished appearance. Furnish and install incidental items not specifically shown or required by good practice to provide a complete electrical system. RACEWAYS Install conductors in raceways. Α. Minimum size conduit shall be 1/2 inch, except 3/4 inch for underground and embedded conduit. Use B. the following types of conduit for the locations listed unless indicated otherwise: 1. Use galvanized rigid steel conduit (GRS) outdoors and in wet locations. 2. Use electrical metallic tubing (EMT) in concealed locations and exposed, interior, dry locations, and where dropping from above the electrical equipment more than 6 feet above the floor. 3. Use rigid polyvinyl chloride (PVC) conduit for buried and embedded locations, except use galvanized rigid steel (GRS) at least 5 feet on both sides of penetrations through footings and outside walls, under equipment mounting pads, where embedded in exterior light pole foundations, and where conduit changes from underground to exposed or from embedded to exposed. 4. Use liquid-tight flexible conduit for final connection to mechanical equipment. All empty conduits shall be provided with a flat pull tape (mule tape or equal). C. For steel conduit installed underground, wrap the entire length with tape using 1/2-inch overlap. Use D. PVC-based pressure-sensitive all-weather tape, 20-mil minimum thickness, as recommended by the manufacturer for corrosion protection of underground conduits. Tape shall be Scotchwrap 51 or equal. GROUNDING A. Complete electrical system shall be grounded in accordance with the presently adopted edition of the NEC Article #250, and as shown on the drawings. Ground the neutral of all wiring systems in strict accordance with the NEC, State, and other applicable B. laws and regulations. Ground all exposed non-current-carrying metallic parts of electrical equipment and raceway systems. C. Ground metal sheathing and any exposed metal vertical structural elements of buildings. Bond any D. metal equipment platforms, which support electrical equipment to that equipment. At the request of, and in the presence of the authorized inspector, the contractor shall provide system E. resistance readings. STARTUP AND TESTING After the electrical system installation is completed, conduct an operation test for approval. А. Demonstrate to the Owner that the equipment operates in accordance with the requirements of these specifications and drawings.

PROJECT CLOSEOUT

A. At the completion of the project, the Contractor shall:

1. Submit operation and maintenance manuals, with tab dividers separating specific systems or items of equipment. Equipment warranties shall be included.

2. Submit a list of recommended spare parts.

3. Submit marked up "As-Built" drawings with final installed arrangements, including equipment model numbers and performance data.







				EP 6/24/13 BY DATE
3		NEL		
3	LOADS (17,000 SF) LIGHTING (CONTINUOUS) @ 2 VA / SF C	34000 VA		
}	RECEPTACLES, 1 VA / SF MARQUEE (EUTURE) C	17000 VA		
	SOUND EQUIPMENT (FUTURE)	36000 VA		
<u> </u>	THEATRICAL LIGHTING (FUTURE)	96000 VA		
	PROJECTOR	12600 VA		
	SPOT LIGHTS (TWO)	3400 VA		SNOISI
) j-	HVAC (FUTURE)	1200 VA 167000 VA		REV
l ž	WATER HEATER	12000 VA		
	TOTAL CONNECTED LOAD	451800 VA		NO NO
	TOTAL DEMAND LOAD (CONTINUOUS LOADS @ 125%)	465700 A		INAT
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ž	NOTES:			G St526
Ş	1. SEE LEGEND AND GENERAL NOTES ON SHEET $E-1$.			s, OR 1479-38
}	2. PROVIDE TWO BID ALTERNATES LISTED BELOW:			A S(
	A. INSTALL PANEL P CONDUIT WITH PULL ROPE FROM SE-1 TO PANEL P LOCATION.			C, Grar
	B. INSTALL PANEL P CONDUIT, FEEDER AND PANEL P.			Sulfe A
	3. EXISTING PANEL SB SHALL BE DEMOLISHED. INSTALL A NEW PANEL SB PANELBOARD FIELD			Street - 1479-38
	IDENTIFY ALL EXISTING BRANCH CIRCUITS, INSTALL A			
	EXISTING BRANCH CIRCUITS TO PANEL SB.			€ N 550 SV
	 FIELD IDENTIFY EXISTING BRANCH CIRCUITS, RE-FEED FROM PANEL SB AND UPDATE PANEL SCHEDULE. 		PROJECT NO DRAWN: NF	1325 2 1325-E-3.dwg
	5. METAL GAS PIPING SHALL BE BONDED TO THE GROUNDING ELECTRODE SYSTEM BUT IS NOT PART OF THE GROUNDING ELECTRODE SYSTEM, PER NEC		CHECKED: D DATE: 6-17-	2013
	6. RE-ESTABLISH ALL NEUTRAL CONNECTIONS IN THE		Le Co	NG I NEEP 001
	1 NOTED JUNCTION BOXES.	<u>)</u>	D	Mataney
	7. PACIFIC CORP HAS IDENTIFIED THE FAULT CURRENT	\mathbf{i}		
		لم	Joigi,	4S C. MCHANK
			EXPIRATIO	ON DATE: 12/31/14
	AnoSino		ONE-LI	INE DIAGRAM
	AIUSIIIE engi	ring company		
	950 Executive Way Redding, CA 9600 1236 Disk Drive Medford, OR 97501 563 North Main Ashland, OR 97520	02 (530)222-7204 (541)842-4188 (541)482-7204		E-3

563 North Main Ashland, OR 97520 (541)482-7204 www.arc-sine.com







EXISTING SERVICE - DEMOLITION NOT TO SCALE



NOT TO SCALE

PACIFIC POWER 262085

SE-1 LOCATION

EXISTING SERVICE - DEMOLITION



www.arc-sine.com





	EP 6/24/13			
CITY OF COOS BAY	CITY OF COOS BAY EGYPTIAN THEATRE RESTROOMS			
PROJECT NO: PROJECT NO: DRAWN: NP 1325-E-6.dwg CHECKED: D. McHANEY DATE: 6-25-2013 DRAWN: NP 1325-E-6.dwg CHECKED: D. McHANEY DATE: 6-25-2013 CHECKED: D. McHANEY DATE: 6-25-2013				
DREGON N OREGON N OREGON N POLICIAS C. MCHANE EXPIRATION DATE: 12/31/14 DETAILS - 2 E-6				

1. SEE LEGEND AND GENERAL NOTES ON SHEET E-1. 2. COORDINATE WITH PACIFIC CORP REGARDING TOP REQUIREMENTS FOR THE VAULT WHICH SHALL BE INSTALLED FLUSH WITH THE EXISTING 11 FOOT WIDE SIDEWALK. FIELD COORDINATE VAULT PLACEMENT TO MAINTAIN FIVE FEET CLEARANCE IN FRONT OF THE TRANSFORMER.



 \sim ENTIRE SHEET ······