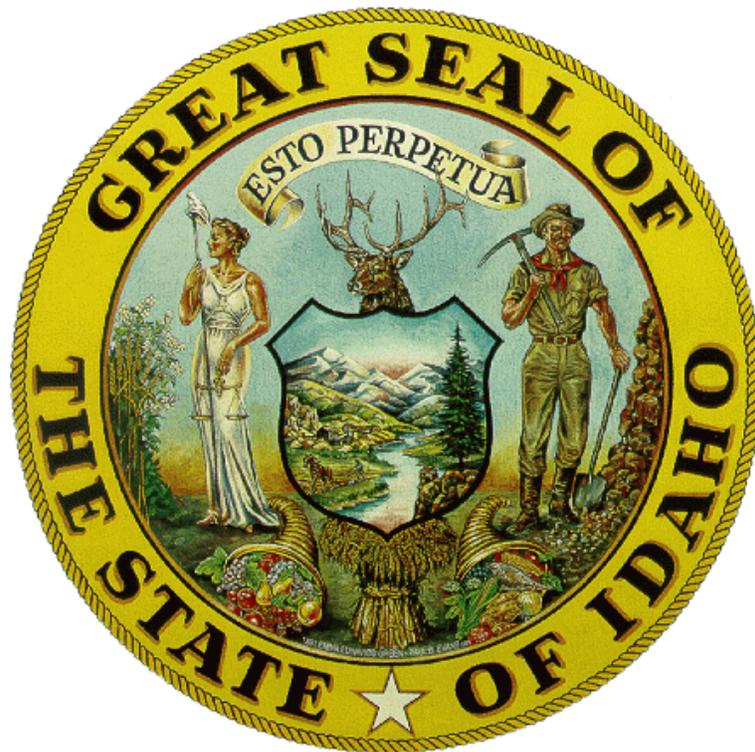


DIVISION OF BUILDING SAFETY

IDAHO ELECTRICAL BOARD
VIDEOCONFERENCE MEETING

JANUARY 21, 2016



IDAHO ELECTRICAL BOARD

Agenda Item No. 01

Agenda

PRESENTER: Bob Scott, Chairman

OBJECTIVE: Approve agenda for the January 21, 2016 Idaho Electrical Board meeting.

ACTION: Consent

BACKGROUND:

**PROCEDURAL
HISTORY:**

ATTACHMENTS: Tentative agenda



TENTATIVE AGENDA

NOTICE OF PUBLIC MEETING

IDAHO ELECTRICAL BOARD VIDEOCONFERENCE MEETING

**Division of Building Safety
1090 E. Watertower St., Ste. 150, Meridian
1250 Ironwood Dr., Ste. 220, Coeur d'Alene
2055 Garrett Wy., Bldg. 1, Ste. 4, Pocatello**

dbz.idaho.gov - (208) 332-7137

***Thursday, January 21, 2016
9:30 a.m. - 1:00 p.m. (MT)***

(Note: North Idaho - Meeting Commences @ 8:30 a.m. PT)

9:30 a.m.

CALL TO ORDER - Bob Scott, Chairman

- Roll Call & Introductions
- Open Forum
 - City and County Concerns

CONSENT AGENDA

1. Approval of the January 21, 2016 Agenda - Bob Scott
2. Approval of the October 22, 2015 Board Meeting Minutes - Bob Scott

INFORMATIONAL AGENDA

3. Challenge/Placement Tests - Mathew Rehl, Professional-Technical Education
4. Appeals - Steve Keys
5. Submersible Pumps - Warren Wing
6. Solar Panel Installations - Warren Wing
7. Program Manager Report - Warren Wing
 - a. Journeyman First Exam Attempt Report
 - b. Electrical NOV Cases Report
 - c. Permit Verification Report
8. Compliance Program Report - Terry Blessing
9. Operational Report - Steve Keys

10. Administrator Report - C. Kelly Pearce
 - a. Financial Report - Fred Sisneros

1:00 p.m. ADJOURN

All times, other than beginning, are approximate and are scheduled according to Mountain Time (MT), unless otherwise noted. Agenda items may shift depending on the Board's preference. 01/07/2015r

IDAHO ELECTRICAL BOARD

Agenda Item No. 02

Minutes

PRESENTER: Bob Scott, Chairman

OBJECTIVE: Approve minutes from the October 22, 2015 Idaho Electrical Board meeting.

ACTION: Consent

BACKGROUND:

**PROCEDURAL
HISTORY:**

ATTACHMENTS: Draft minutes



**IDAHO ELECTRICAL BOARD
VIDEOCONFERENCE MEETING**

Thursday - October 22, 2015 - 9:30 a.m. (MT)

**Division of Building Safety
1090 East Watertower Street, Suite 150, Meridian
1250 Ironwood Drive, Suite 220, Coeur d'Alene
2055 Garrett Way, Building 1, Suite 4, Pocatello**

***DRAFT MINUTES OF THE OCTOBER 22, 2015 MEETING**

**NOTE: The following report is not a verbatim transcript of the discussions at the meeting;
however, is intended to record the significant features of those discussions.**

Chairman Bob Scott called the meeting to order at 9:30 a.m. (MT).

Board Members Present:

Bob Scott, Chairman
Jeff Wheeler, Vice-Chairman
Dale Pippitt
Denis Duman
Mark LaBolle
Greg Eagy
Joe Harbacheck
Allan Perman
Rick Stark

DBS Staff Members Present:

C. Kelly Pearce, Administrator
Steve Keys, Deputy Administrator-Operations
Patrick Grace, Deputy Attorney General
Bill Hatch, Public Information Officer
Fred Sisneros, Financial Manager
Warren Wing, Electrical Program Manager
Larry Jeffres, Regional Manager, Region 1
Chris Jensen, Regional Manager, Region 3
Terry Blessing, Compliance Program Manager
Gary Sonnen, Regional Supervisor, Region 1
Renee Bryant, Administrative Assistant 2/Board Secretary

DBS Staff Members Absent:

Ron Whitney, Deputy Administrator-Administration

◆ **Introduction**

Warren Wing was introduced as the Division's newly appointed Electrical Program Manager.

◆ **Recognition**

Chairman Scott recognized Mick Williams for his service with the Agency and the Board.

◆ **Open Forum**

City and County Concerns - No items or concerns were brought forth.

Solar Panel Installations - Randy Lake, International Brotherhood of Electrical Workers Local 291, brought forth questions with regard to safety and the installation of solar panels.

The Electrical Program Manager suggested Mr. Lake contact him to schedule a meeting with the team providing the service since there is so much information on this topic.

Associated General Contractors (AGC) Website - Hailey Reyes, AGC Representative, demonstrated a new website created by the AGC titled webuildidaho.org. It is the desire of the AGC to attract, as well as encourage, a younger generation into pursuing careers in the construction industry.

◆ **Approval of the October 22, 2015 Agenda**

MOTION: Mark LaBolle made a motion to approve the agenda as presented. Greg Eagy seconded. All in favor, motion carried.

◆ **Approval of the July 23, 2015 Board Meeting Minutes**

MOTION: Jeff Wheeler made a motion to approve the minutes as written. Greg Eagy seconded. All in favor, motion carried.

◆ **Schedule 2016 Board Meetings**

The 2016 Idaho Electrical Board meeting dates are as follows: January 21st, April 21st, July 21st, and October 20th.

MOTION: Denis Duman made a motion to approve the 2016 Idaho Electrical Board meeting dates as presented. Allan Perman seconded. All in favor, motion carried.

ACTION: The 2016 Electrical Board meeting dates will be placed on the Division's board meeting calendar and website.

◆ **Licensing Registration Appeals (as needed)**

There were no appeals.

◆ **Program Manager Report**

International Association of Electrical Inspectors (IAEI) Meeting - In September, the Electrical Program Manager attended the 2015 Western & Northwestern Section IAEI meeting in Jackson Hole, Wyoming.

Facebook - The majority of complaints are about inspections. A Facebook page will be built, strictly for the Electrical Program, as another method of communication with the electrical industry. The page will also have a link to the Electrical Program page on the Division's website.

FAQ Page - A "Frequently Asked Questions" (FAQ) page on commonly asked electrical issues will be added to the Division's website.

Interpretations Online - For consistency throughout the state of Idaho, interpretations on what inspectors should inspect on certain installations will be placed on the Division's website.

Solar Panel Installations (Cont'd) - Board Member LaBolle asked the Electrical Program Manager to bring to the January 21, 2016, a condensed version of the solar panel topic;

specifically, the status of the two projects in the Treasure Valley, rules and laws and who installs the solar panel and conduit to the generation collection.

ACTION: At the January 2016 Board meeting, the Electrical Program Manager will address the safety precautions when installing solar panels.

ACTION: The topic *Solar Panel Installations* will be placed on the January 21, 2016 agenda as an informational item.

Reports - The following reports were discussed: 1) Electrical Journeyman First Exam Attempts, 2) Electrical NOV Cases and 3) “Verification” of Inspections by Inspectors Table.

◆ **Compliance Program Supervisor Report**

Report - The Compliance Program Supervisor has been traveling throughout the state meeting with inspectors and local jurisdictions; ensuring everyone is notified and on-board with the new program.

Inspections - To ensure work is done according to code, the Chairman questioned whether the required individuals are procuring permits and requesting inspections.

Approximately 15% of electrical permits purchased from the DBS do not get inspected. At a future meeting, the Deputy Administrator-Operations will bring a proposed rule change that will require electrical contractors to request pre-cover and final inspections in order to obtain a permit.

◆ **Operational Report**

Legislation - The proposed legislation, shifting the disciplinary responsibility from the Administrator to the Board, has been approved by the Division of Financial Management and Governor’s office. The proposal will be presented at the 2016 legislative session.

Consistency Among the Trades - With regard to automation, the Division has begun to develop as much commonality as possible in the licensing and fee requirements among the electrical, HVAC and plumbing trade programs. Over the course of next year, the DBS will develop/tweak its rules or statutes in preparation of submitting a proposal to the 2017 legislature.

Plan Reviews - To avoid the discovery of problems after installations have been made; the Division is contemplating a new requirement where plans would need to be submitted for review on solar photovoltaic and/or commercial/industrial projects that are \$250,000 or more in value. No additional fees would be imposed.

Appeals - The question arose as to the verbiage used on the first and second Notice of Violation (NOV) letters sent to homeowners. Also, when corrections are required, are there instructions on how to rectify the situation, contact information, etc. in the letters.

The Deputy Administrator-Operations offered to provide both NOV letters at the January 2016 Board Meeting.

ACTION: At the January 2016 Board meeting, the Deputy Administrator-Operations will provide the standard first and second NOV letters.

ACTION: The topic *Appeals* will be placed on the January 21, 2016 agenda as an informational item.

◆ **Administrator Report**

Anti-Trust Law - The Deputy Attorney General provided an update on the recent decision made by the U.S. Supreme Court to uphold the Federal Trades Commission's complaint against a private board.

Recognition - The Administrator further acknowledged Mick Williams and his multiple roles within the Agency.

City of Meridian - On October 1, 2015, the Division signed a contract with the city of Meridian; expanding its services to include building inspections and plan reviews.

Commercial Construction - Following are proposed new and/or existing construction projects throughout the state of Idaho: Two major hotels, Ketchum; airport, Hailey; second Chobani yogurt plant, Twin Falls; casino addition, Fort Hall; Magnida fertilizer plant, American Falls and solar plant, Kuna.

Financial Report - The Electrical Board Fund, FY 2016 financial statement as of September 30, 2015, was reviewed.

◆ **Adjournment**

MOTION: Dale Pippitt made a motion to adjourn the meeting. Allan Perman seconded. All in favor, motion carried.

The meeting adjourned at 11:34 a.m. (MT).

BOB SCOTT, CHAIRMAN
IDAHO ELECTRICAL BOARD

C. KELLY PEARCE, ADMINISTRATOR
DIVISION OF BUILDING SAFETY

DATE

DATE

*These DRAFT minutes are subject to possible corrections and final approval by the Idaho Electrical Board. 12/01/2015rb

IDAHO ELECTRICAL BOARD

Agenda Item No. 03

Challenge/Placement Tests

PRESENTER: Matt Rehl, Professional-Technical Education

OBJECTIVE: To create an End of Course (EOC) exam for the didactic training in Electrical Apprenticeship Programs (Years 1-3). This exam will be used consistently throughout the State of Idaho by institutions offering related electrical apprenticeship training. This exam may be used as a challenge exam for individuals wishing to enter the Idaho Electrical Apprenticeship related training programs.

ACTION: We are requesting the Idaho Electrical Board's approval of the technical industry standards for Electrical Apprenticeship year one and year two. (See Electrical Apprenticeship Standards and Assessment Development handout.)

BACKGROUND: Standards identification, approval and adoption are necessary in order to create valid and reliable assessments. Standards identification, adoption and approval were last done in 2010. Assessments will be created utilizing a third part vendor to maintain validity, reliability and security.

PROCEDURAL HISTORY: Standards identification, approval and adoption are necessary in order to create valid and reliable assessments. Standards identification, adoption and approval were last completed in 2010.

ATTACHMENTS: Electrical Apprenticeship Standards and Assessment Development



Renee Bryant

From: Matt Rehl <mrehl@pte.idaho.gov>
Sent: Tuesday, January 12, 2016 2:34 PM
To: Renee Bryant
Cc: Susan Johnson; Wendi Secrist
Subject: DBS Electrical Meeting
Attachments: Electrical Apprenticeship Program Standards Year 1.docx; Electrical Apprenticeship Program Standards Year 2.docx

Renee- I am attaching the Year One and Year Two Standards for the Electrical Apprenticeship related training that we are asking the Electrical Board to approve in order to move forward with creation of the end of course assessments. Please share these standards with the Electrical Board members to review prior to the January Electrical Board meeting. Please let the Electrical Board members know that we will walk them through a review of the work that has taken place so far in this project including outlining updates to the standards.

Thank you for your assistance in this matter.

Please feel free to contact me with any questions or concerns.

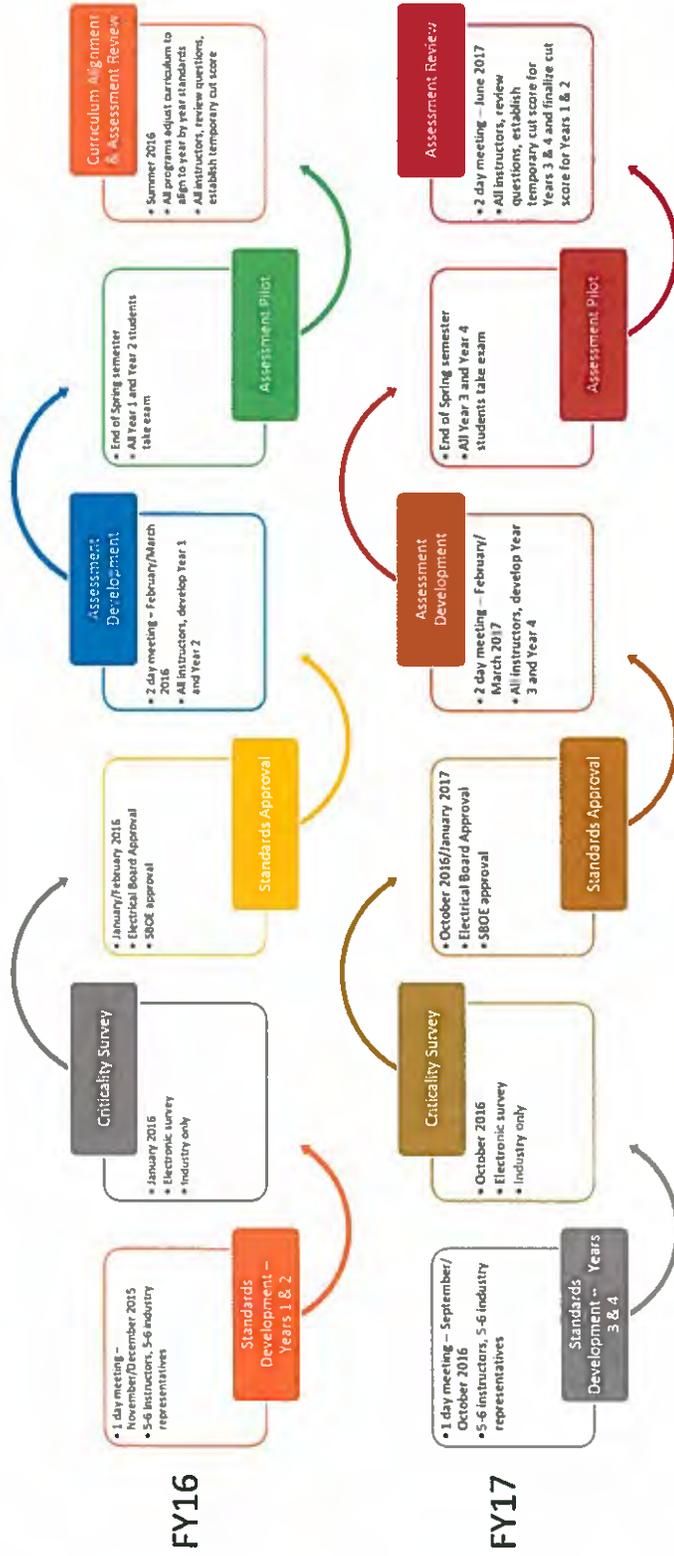
Respectfully,

Matt



Matthew Rehl, Ed. S.
Program Manager, Skilled & Technical Sciences (STS), Executive Director SkillsUSA Idaho
P: 208.429.5523

Electrical Apprenticeship Standards and Assessment Development



IDAHO ELECTRICAL APPRENTICESHIP YEAR 1 PROGRAM STANDARDS

2016

CONTENT STANDARD 1.0: INTRODUCTION TO ELECTRICAL WORK SAFETY

Performance Standard 1.1: General Safety

- 1.1.1 Explain what a material safety data sheet (MSDS/SDS) is and its requirements.
- 1.1.2 Explain safety procedures for trenches.
- 1.1.3 Explain safety for confined space.
- 1.1.4 Explain lockout and tagout.
- 1.1.5 Explain protective clothing to include eye and hearing protection.
- 1.1.6 Explain the use of a safety harness.
- 1.1.7 Explain safety for ladders and scaffolds.
- 1.1.8 State the purpose of arc-fault and ground-fault circuit interrupters.
- 1.1.9 Identify safety handling and use of hand and power tools.

CONTENT STANDARD 2: ELECTRICAL THEORY

Performance Standard 2.1: Electrical Qualities and Ohm's Law

- 2.1.1 Explain the structure of the atom.
- 2.1.2 Explain electron flow.
- 2.1.3 State the difference between insulators and conductors.
- 2.1.4 Explain the basic methods of producing electricity.
- 2.1.5 Describe electrical effects such as magnetism, light, and heat.
- 2.1.6 Define a coulomb.
- 2.1.7 Define an ampere.
- 2.1.8 Define an ohm.
- 2.1.9 Define a watt.
- 2.1.10 Determine the resistance of a resistor using the color code or an ohmmeter.
- 2.1.11 Determine whether a resistor is operating within its power rating.
- 2.1.12 Calculate different electrical values using Ohm's law.
- 2.1.13 Select the proper Ohm's law formula from a chart.

Performance Standard 2.2: Static Electricity and Magnetism

- 2.2.1 Discuss the nature of static electricity.
- 2.2.2 Discuss lightning protection.
- 2.2.3 Give examples of both nuisance and useful static charges.
- 2.2.4 Discuss the properties of permanent magnets.
- 2.2.5 Discuss the operation of electromagnets.
- 2.2.6 Determine the polarity of an electromagnet when the direction of the current is known.

CONTENT STANDARD 3: ELECTRICAL OUTLETS

Performance Standard 3.1: Series

- 3.1.1 Discuss the properties of series circuits.
- 3.1.2 List three rules for solving electrical values of series circuits.
- 3.1.3 Calculate values of voltage, current, resistance, and power for series circuits.

IDAHO ELECTRICAL APPRENTICESHIP YEAR 1 PROGRAM STANDARDS

2016

Performance Standard 3.2: Parallel

- 3.2.1. Discuss the characteristics of parallel circuits.
- 3.2.2. State three rules for solving electrical values of parallel circuits.
- 3.2.3. Solve the missing values in a parallel circuit using the three rules and Ohm's law.
- 3.2.4. Calculate current values using the current divider formula.

Performance Standard 3.3: Combination

- 3.3.1. Define a combination circuit.
- 3.3.2. List the rules for parallel circuits.
- 3.3.3. List the rules for series circuits.
- 3.3.4. Solve combination circuits using the rules for parallel circuits, rules for series circuits, and Ohm's law.

CONTENT STANDARD 4: TOOLS

Performance Standard 4.1: Electrical Testing Equipment

- 4.1.1. Identify the use of Category I through Category IV meters.
- 4.1.2. Use an ohmmeter and measure any resistance in electrical equipment or conductor.
- 4.1.3. Measure voltage between phases and phase to ground.
- 4.1.4. Take an ampere reading of any load.
- 4.1.5. Diagram the proper connection of a watt meter.
- 4.1.6. State the operation characteristics of analog and digital meters.
- 4.1.7. Recognize the wave form on an oscilloscope.

Performance Standard 4.2: Bending Conduit

- 4.2.1. Identify the parts of tools used for bending.
- 4.2.2. Identify the methods and tools used in bending raceways.
- 4.2.3. Define and identify saddle, offset, concentric, and 90-degree bends.

CONTENT STANDARD 5: INTRODUCTION TO THE NATIONAL ELECTRICAL CODE (NEC)

Performance Standard 5.1: NEC Articles 90, 100, and 110

- 5.1.1. Understand how the NEC began and its purpose.
- 5.1.2. Understand how changes to the code evolve.
- 5.1.3. Understand the terminology, and format of the NEC.
- 5.1.4. State the roles of nationally recognized testing laboratories, the National Electrical Manufacturers Association, and the National Fire Protection Association.
- 5.1.5. Accurately evaluate a location as accessible, readily accessible, or not readily accessible.
- 5.1.6. Identify equipment classified as appliances.
- 5.1.7. State the four categories of branch circuits.
- 5.1.8. State the difference between a continuous load and a non-continuous load.
- 5.1.9. Determine minimum vertical clearances for each installation using the NEC.
- 5.1.10. Apply dedicated space requirements to electrical equipment to include the area that is to be clear of foreign systems unless protection is provided.
- 5.1.11. Determine the working clearances of any installation using the NEC.

IDAHO ELECTRICAL APPRENTICESHIP YEAR 1 PROGRAM STANDARDS

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- 5.1.12. State the difference between a branch circuit and a feeder.
- 5.1.13. State the difference between “grounded” and “grounding” as it applies to a conductor.
- 5.1.14. Define what “in sight” means in the NEC.
- 5.1.15. Give examples of damp, wet, and dry locations using the code book.
- 5.1.16. Determine which conductors are the neutral conductors.
- 5.1.1.7. Define a separately derived system using the NEC.

Performance Standard 5.2: Boxes and Enclosures--NEC Articles 312, 314, and other Appropriate NEC Sections

- 5.2.1. Determine the cubic inch capacity of boxes when installing conductors # 6 AWG and smaller.
- 5.2.2. State which items use volume allowances of conductor fill when calculating box fill.
- 5.2.3. State how identical switches or receptacles can be mounted side by side in a two gang box can have different cubic inch volume allowances.
- 5.2.4. Determine the box size when the number of conductors is known.
- 5.2.5. Know the minimum conductor length to be left inside a box.
- 5.2.6. Explain what must be accessible after installation.
- 5.2.7. State the mounting and supporting provisions for boxes and conduit bodies using the NEC.
- 5.2.8. Determine the type of box needed for various applications using the NEC.
- 5.2.9. Calculate for junction box sizing containing #4 AWG and larger conductors using the NEC

Performance Standard 5.3: Cables--NEC Articles 320 through 340, and other appropriate NEC sections

- 5.3.1. State the distance from the edge of the wood framing member a cable can be installed unless a steel plate is installed.
- 5.3.2. State the requirements for protection of cable in metal framing using the NEC.
- 5.3.3. State the sealing requirements in fire-resistant-rated construction when electrical penetrations are made.
- 5.3.4. Identify what cables are permitted in spaces used for environmental air.
- 5.3.5. Determine the support requirements for MC, AC, and nonmetallic-sheathed cable using the NEC.
- 5.3.6. Identify the conductors in a cable and use the NEC to state how certain conductors can be re-identified.
- 5.3.7. Determine underground installation provisions per the NEC.
- 5.3.8. Identify special application cables using the NEC (This is not to be for installation requirements as this is for first year students).

Performance Standard 5.4: Raceways and Conductors--NEC Sections 11.14, 240.4, 300.19; NEC Articles 310, 342 through 378; Chapter 9 Tables; Annex C, and other appropriate NEC Sections

- 5.4.1. Determine the general provisions for any raceway installation using the NEC.

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- 5.4.2. Determine the type of raceways suited for individual installations.
- 5.4.3. Determine the support requirements for various raceways using the NEC.
- 5.4.4. Determine the provisions for nonmetallic and metallic flexible conduit using the NEC.
- 5.4.5. Calculate the electrical trade size conduit required for any circuit or feeder.
- 5.4.6. Determine basic conductor properties using the NEC.
- 5.4.7. Show conductor temperature limitations.
- 5.4.8. Determine the provisions for conductors connected in parallel.
- 5.4.9. Apply conductor ampacity correction factors to include continuous loads.

Performance Standard 5.5: General Provisions for One-Family Dwellings--NEC Articles 210, 220, 240, 250, 315, 402, 404, 406, 410, 422, and other appropriate NEC Sections

- 5.5.1. Calculate the minimum number of 15 and 20 amp branch circuits in a one-family dwelling.
- 5.5.2. Determine the requirements for single receptacles on individual branch circuits.
- 5.5.3. Determine the branch-circuit ratings allowed for general-purpose receptacles.
- 5.5.4. Demonstrate the layout of general-purpose receptacles in a dwelling.
- 5.5.5. Determine the receptacle rating allowed on various size branch circuits using the NEC.
- 5.5.6. Determine the requirements for receptacles around sink areas using the NEC.
- 5.5.7. Determine the requirements for lighting and switching using the NEC.
- 5.5.8. Determine how and when to use the white conductor as an ungrounded conductor.
- 5.5.9. Determine any general requirement for boxes using the NEC.
- 5.5.10. Determine any illumination requirement for entrances and exits.
- 5.5.11. Determine the allowable use of vegetation such as trees for the mounting of outlets.

Performance Standard 5.6: Specific Provisions for One-Family Dwellings--NEC Articles 210, 410, 422, and other appropriate NEC sections

- 5.6.1. Determine the required ampere rating for any receptacle or branch circuit in kitchens, pantries, dining rooms, breakfast rooms, and similar locations.
- 5.6.2. Determine the requirements for countertop receptacle placement using the NEC.
- 5.6.3. State the minimum number of small appliance branch circuits required and their application.
- 5.6.4. Determine the requirements for appliances both cord and plug and permanently connected.
- 5.6.5. Calculate the load requirements for appliance branch circuits.
- 5.6.6. State the specific provisions for GFCI placement.
- 5.6.7. Identify luminaries permitted in closets and its placement.
- 5.6.8. Define a bathroom by the NEC and discuss the circuit requirements for receptacles, lights and fans.
- 5.6.9. Determine the requirements for receptacles and lighting in attached garages, detached garages, and basements.

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- 5.6.10. Determine the requirements for laundry rooms to include the clothes dryer.
- 5.6.11. Determine the lighting and receptacle requirements for attic, crawl space, and HVAC equipment.

Performance Standard 5.7: Load Calculations for One-Family Dwellings--NEC Articles, 210, 220, 230, 250, 310, and other appropriate NEC sections

- 5.7.1. Calculate the general lighting for a one-family dwelling.
- 5.7.2. Specify the volt-amp requirements for small appliance and laundry branch circuits.
- 5.7.3. Apply demand factors to the general lighting load.
- 5.7.4. Apply demand factors to fastened-in-place appliances.
- 5.7.5. Calculate feeder demand loads for household clothes dryers.
- 5.7.6. Calculate feeder demand loads for household cooking equipment.
- 5.7.7. Calculate feeder demand loads for HVAC equipment.
- 5.7.8. Calculate a one-family dwelling or feeder using the standard method.
- 5.7.9. Calculate a one-family dwelling or feeder using the optional method.
- 5.7.10. Calculate service and feeder conductors.
- 5.7.11. Calculate the minimum size neutral conductor.
- 5.7.12. Select the proper grounding electrode conductor.

Performance Standard 5.8: Services and Electrical Equipment for One-Family Dwellings--NEC Articles 110, 225, 230, 240, 250, 300, 310, and other appropriate NEC sections

- 5.8.1. Determine adequate strength for a mast supporting service-drop conductors.
- 5.8.2. Explain the use of service-entrance cable.
- 5.8.3. Define a service lateral and underground service conductors, and explain their provisions.
- 5.8.4. Determine clearances for service and outside overhead wiring.
- 5.8.5. Determine work space required for electrical equipment, services, and panels.
- 5.8.6. Define a panelboard, an enclosure, and a cutout box.
- 5.8.7. Determine the proper application and use of circuit breakers and fuses using the NEC.
- 5.8.8. Determine the appropriate conductor sizing using 310.15(B)(7) or Table 310.15 (B)(16).
- 5.8.9. Size the grounding electrode conductor, equipment grounding conductor, main bonding jumper, bonding jumpers on the supply side or load side of the main breaker or fuse on any one-family dwelling service.
- 5.8.10. Properly install grounded and grounding conductors in subpanels.
- 5.8.11. Prevent objectionable current flow in grounding conductors and equipment.
- 5.8.12. Properly install a panelboard in a separate building or structure.

Performance Standard 5.9: Comprehensive Provisions for Multi-Family Dwellings--NEC Articles 210, 230, 240, 250, 310, Chapter 9, Tables 8 and 9, and other appropriate NEC sections

- 5.9.1. Determine when more than one service can be installed on a multifamily building.

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- 5.9.2. Determine the proper number of disconnects allowed on a service.
- 5.9.3. Determine proper access to a unit's disconnecting means by any occupant.
- 5.9.4. Properly install the grounding electrode conductors to the grounding electrode.
- 5.9.5. Determine the appropriate service or feeder conductor sizing using 310.15(B)(7) or Table 310.15 (B)(16) Determine outdoor receptacle placement.
- 5.9.6. Calculate voltage-drop.

Performance Standard 5.10: General Provisions for Commercial Locations--NEC Articles 210, 220, 310, 410, 430, 440, 600, and other appropriate NEC sections

- 5.10.1. Compare receptacle placement with that of one-family dwellings to show the difference.
- 5.10.2. Determine the receptacle requirements in a commercial bathroom.
- 5.10.3. Determine the sign outlet requirements in a commercial installation.
- 5.10.4. Determine the branch circuit requirements for motors and HVAC equipment.
- 5.10.5. Determine the volt-amp ratings for receptacles (single, duplex, quad, etc.).
- 5.10.6. Determine the maximum number of receptacles permitted on a 15 amp or 20 amp circuit.
- 5.10.7. Identify the NEC accessibility requirements for receptacles in guest rooms of hotels and motels.
- 5.10.8. Determine NEC requirements for showcase and show window.
- 5.10.9. Calculate general lighting load based on square-foot area.
- 5.10.10. Determine the provisions for fluorescent, HID, recessed, LED, and track lighting provisions.
- 5.10.11. Determine the proper use and restrictions when using luminaires as raceways.
- 5.10.12. Determine handhole access requirements.

Performance Standard 5.11: Provisions for Services, Feeders, and Provisions for Commercial Locations--NEC Articles 110, 215, 230, 250, 368, 408, and other appropriate NEC sections

- 5.11.1. Properly install both grounding and grounded conductors on the line side and load side of the service supply conductors.
- 5.11.2. Determine the conditions that require ground-fault protection of equipment.
- 5.11.3. Recognize separately derived systems.
- 5.11.4. Explain how to properly ground and bond separately derived systems.
- 5.11.5. Recognize and explain the use of busways.

CONTENT STANDARD 6: SPECIAL OCCUPANCIES

Performance Standards 6.1: Hazardous Locations--NEC Articles 500 through 516

- 6.1.1 Explain what a hazardous location is.
- 6.1.2. Determine if a classified location is Class I, II or III and if it is Division 1 or 2 using the NEC.
- 6.1.3. Identify the NEC requirements pertaining to commercial garages and repair and storage facilities.
- 6.1.4. Identify the NEC requirements for buildings in which aircraft are stored and repaired.

**IDAHO ELECTRICAL APPRENTICESHIP YEAR 1
PROGRAM STANDARDS****2016**

6.1.5. Identify the NEC requirements for a motor fuel dispensing facility.

Performance Standards 6.2: Health Care--NEC Articles 500 through 517

6.2.1. Identify basic health care terminology used in NEC.

6.2.2. Determine the grounding and bonding requirements of any health care facility.

6.2.3. Identify patient care areas as general care or critical care and their branch circuit requirements.

6.2.4. Determine the tamper-resistant requirements of pediatric facilities.

6.2.5. Define the types of essential systems.

Performance Standard 6.3: Other Special Occupancies--NEC Articles 518 through 551

6.3.1. Define "places of assembly" according to the NEC.

6.3.2. Determine manufactured building requirements.

6.3.3. Determine agricultural building requirements.

6.3.4. Determine requirements for mobile home parks and recreational vehicle parks.

IDAHO ELECTRICAL APPRENTICESHIP YEAR 2 PROGRAM STANDARDS

2016

CONTENT STANDARD 1.0: ELECTRICAL MATHEMATICS

Performance Standard 1.1: Basic Trigonometry

- 1.1.1. Define a right triangle.
- 1.1.2. Use the Pythagorean theorem to solve problems concerning right triangles.
- 1.1.3. Solve problems using sines, cosines, and tangents.

CONTENT STANDARD 2: ALTERNATING CURRENT

Performance Standard 2.1: Circuits

- 2.1.1. Discuss the difference between AC and DC.
- 2.1.2. Compute instantaneous values of voltage and current for a sine wave.
- 2.1.3. Compute peak, RMS, and average values of voltage and current.
- 2.1.4. Define the phase relationship of voltage and current in a pure resistive circuit.
- 2.1.5. Identify half-wave and full-wave rectifiers.

Performance Standard 2.2: Inductance in AC Circuits

- 2.2.1. Define the properties of inductance in an AC circuit.
- 2.2.2. Define inductive reactance.
- 2.2.3. Calculate the values of inductive reactance and inductance.
- 2.2.4. Define the relationship of voltage and current in a pure inductive circuit.
- 2.2.5. Calculate values for inductors connected in series and parallel.
- 2.2.6. Define reactive power.
- 2.2.7. Define the Q of a coil.

Performance Standard 2.3: Resistive-Inductive Series Circuits

- 2.3.1. Define the relationship of resistance and inductance in an AC circuit.
- 2.3.2. Define power factor.
- 2.3.3. Calculate the values of voltage, current, apparent power, true power, reactive power, impedance, resistance, inductive reactance, and power factor in an RL series circuit.
- 2.3.4. Calculate the phase angle for current and voltage in an RL circuit.

Performance Standard 2.4: Resistive-Inductive Parallel Circuits

- 2.4.1. Define the operation of a parallel circuit containing resistance and inductance.
- 2.4.2. Calculate the values of voltage, current, apparent power, true power, reactive power, impedance, resistance, inductive reactance, and power factor in an RL parallel circuit.
- 2.4.3. Calculate the phase angle for current and voltage in an RL parallel circuit.

Performance Standard 2.5: Capacitors

- 2.5.1. List three factors that determine the capacitance of a capacitor.
- 2.5.2. Discuss the electrostatic charge.
- 2.5.3. State the difference between polarized and non-polarized capacitors.
- 2.5.4. Calculate the values for series and parallel connections of capacitors.

Performance Standard 2.6: Capacitance in AC Circuits

- 2.6.1. Understand how capacitors function in an AC circuit.

IDAHO ELECTRICAL APPRENTICESHIP YEAR 2 PROGRAM STANDARDS

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- 2.6.2. Define capacitive reactance.
- 2.6.3. Calculate the value of capacitive reactance in an AC circuit.
- 2.6.4. Calculate the value of capacitance in an AC circuit.
- 2.6.5. Identify the relationship of voltage and resistance in an AC circuit.
- 2.6.6. Calculate the phase angle for current and voltage in an AC circuit.

Performance Standard 2.7: Resistive-Capacitive Series Circuits

- 2.7.1. Identify the relationship of resistance and capacitance in an AC series circuit.
- 2.7.2. Calculate the values of voltage, current, apparent power, true power, reactive power, impedance, resistance, inductive reactance, and power factor in an RC series circuit.
- 2.7.3. Calculate the phase angle for current and voltage in an RC series circuit.

Performance Standard 2.8: Resistive-Capacitive Parallel Circuits

- 2.8.1. Define the operation of a parallel circuit containing resistance and capacitance.
- 2.8.2. Calculate the values of voltage, current, apparent power, true power, reactive power, impedance, resistance, inductive reactance, power factor, and phase angle in an RC parallel circuit.

Performance Standard 2.9: Resistive-Inductive-Capacitive Parallel Circuits

- 2.9.1. Identify the characteristics of AC circuits that contain resistance, inductance, and capacitance connected in parallel.
- 2.9.2. Calculate the values of voltage, current, apparent power, true power, reactive power, impedance, resistance, inductive reactance, power factor, and phase angle in an RLC parallel circuit.

Performance Standards 2.10: Three-Phase Circuits

- 2.10.1. Identify the difference between single-phase and three-phase voltages.
- 2.10.2. Identify a three-phase delta or wye connection.
- 2.10.3. Calculate the voltage and current values for wye and delta circuits.

Performance Standards 2.11: Single-Phase Transformers

- 2.11.1. Understand the different types of transformers and how they work.
- 2.11.2. Calculate the values of voltage, current, and turns for a single-phase transformer.
- 2.11.3. Understand the polarity markings.

Performance Standard 2.12: Three-Phase Transformers

- 2.12.1. Identify the proper connections for three single-phase transformers to form a three-phase bank.
- 2.12.2. Calculate voltage and current for three-phase transformer connections.
- 2.12.3. Identify the proper connections for two single phase transformers to form a three-phase open-delta connection.
- 2.12.4. Calculate the values of voltage and current for a three-phase transformer used to supply both three-phase and single-phase loads.
- 2.12.5. Define harmonics.
- 2.12.6. Understand harmonic problems and their solution.

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CONTENT STANDARD 3: MOTORS

Performance Standard 3.1: Three-Phase Motors

- 3.1.1. Understand the basic operating principals of a three-phase motor.
- 3.1.2. Define a rotating magnetic field.
- 3.1.3. Define the operating principals of a squirrel-cage motor.
- 3.1.5. Identify the correct connections for dual voltage motors.
- 3.1.6. Define the procedure for reversing a three-phase motor.

Performance Standard 3.2: Single-Phase Motors

- 3.2.1. Define the operation of various motor types.
- 3.2.2. Define the basic operation of a split-phase motor.
- 3.2.3. Understand the purpose of a start winding and how it works.
- 3.2.4. Understand the purpose of a centrifugal switch.
- 3.2.5. Recognize the types of starting relays.

Performance Standard 3.3: Motor Load Calculations as per NEC

- 3.3.1. Determine the full load current of any motor according to the NEC.
- 3.3.2. Understand the information given on a motor nameplate and its application.
- 3.3.3. Calculate the branch circuit wire size for any motor.
- 3.3.4. Determine the appropriate circuit protection for any motor.
- 3.3.5. Calculate overloads.
- 3.3.6. Understand the difference between overload protection and short-circuit/ground-fault protection.
- 3.3.7. Calculate a feeder for any set of motors.
- 3.3.8. Calculate the feeder overcurrent device.

CONTENT STANDARD 4: NEC COMPLIANCE

Performance Standard 4.1: Box Fill and Junction Box Sizing

- 4.1.1. Calculate box fill for any size wire and combination of devices.
- 4.1.2. Calculate pull and junction boxes.

Performance Standard 4.2: Conductor Ampacity Correction Factors

- 4.2.1. Calculate correction factors for temperature.
- 4.2.2. Calculate correction factors for raceway fill.
- 4.2.3. Calculate correction factors for continuous loads.
- 4.2.4. Calculate correction factors for any combination of the above.
- 4.2.5. Use Table 310.15(B)(16) and similar tables.
- 4.2.6. Apply NEC Chapter 9 notes for derate in nipples.

Performance Standard 4.3: Raceway Fill

- 4.3.1. Use NEC tables to calculate raceway fill using any combination of wire and cable sizes.
- 4.3.2. Use Annex C tables.
- 4.3.3. Calculate conduit nipple fill.

Performance Standard 4.5: Grounding and Bonding

- 4.5.1. Define objectionable current.
- 4.5.2. Identify a main bonding jumper.
- 4.5.3. Calculate the grounding electrode conductor.
- 4.5.4. Identify proper installations of grounding electrode systems.
- 4.5.5. Understand the purpose of bonding.
- 4.5.6. Calculate equipment grounding conductors.
- 4.5.7. Use Article 250 to properly ground and bond any system.
- 4.5.8. Use the NEC to answer any grounding question.

IDAHO ELECTRICAL BOARD

Agenda Item No. 04

Appeals

PRESENTER: Steve Keys, Deputy Administrator, Operations

OBJECTIVE: Review NOV letters issued to homeowners for clarification and/or corrections, if needed.

ACTION: Informational

BACKGROUND: At the October 2015 Board meeting, there was an inquiry about the language in the Notice of Violation (NOV) letters sent to homeowners; i.e., are instructions included on how to rectify a correction, contact information, etc.

The Deputy Administrator-Operations offered to provide the letters in question at the January 2016 meeting.

PROCEDURAL HISTORY:

ATTACHMENTS: No documentation



IDAHO ELECTRICAL BOARD

Agenda Item No. 05

Submersible Pumps

PRESENTER: Warren Wing, Electrical Program Manager

OBJECTIVE:

ACTION:

BACKGROUND: At the time the packet went to print the pertinent information on this topic was unavailable.

Should you have any questions, please contact Electrical Program Manager Warren Wing, at (208) 332-7147 or warren.wing@dbs.idaho.gov.

PROCEDURAL HISTORY:

ATTACHMENTS:



IDAHO ELECTRICAL BOARD

Agenda Item No. 06

Solar Panel Installations

PRESENTER: Warren Wing, Electrical Program Manager

OBJECTIVE: Update the Board on current projects, review rules and laws and address general questions.

ACTION: Informational

BACKGROUND: Questions with regard to safety and the installation of solar panels were addressed at the October 2015 Board meeting.

For the January 2016 meeting, the Electrical Program Manager was asked to briefly discuss this issue; specifically the status of the two current projects in the Treasure Valley, rules and laws, and who is authorized to install the panels and conduit.

PROCEDURAL HISTORY:

ATTACHMENTS: No documentation



IDAHO ELECTRICAL BOARD

Agenda Item No. 07

Program Manager Report

PRESENTER: Warren Wing, Electrical Program Manager

OBJECTIVE: Update the Board on the Electrical program's current activities.

ACTION: Informational

BACKGROUND: This topic is addressed at all regularly scheduled Idaho Electrical Board meetings.

PROCEDURAL HISTORY:

ATTACHMENTS: Reports: 1) Electrical Journeyman First Exam Attempts; 2) Electrical Notice of Violation; and 3) Permit Verification.



JOURNEYMAN FIRST EXAM ATTEMPTS

		JAN '15	FEB '15	MAR '15	APR '15	MAY '15	JUN '15	JUL '15	AUG '15	SEP '15	OCT '15	NOV '15	DEC '15	TTL	%
CSI	T				1	3	2	1	1		1			9	67%
	P				0	2	2	1	0		1			6	
CWI	T	1	3		1	5	2	3	5	3	1	3		27	70%
	P		2		1	5	2	2	4	2	0	1		19	
EITC	T	1	1		2	1	1	1						7	71%
	P	1	1		1	0	1	1						5	
IEC	T	1		1	1		1	1	2		1			8	75%
	P	1		1	1		0	1	1		1			6	
ISU	T			1			2	1						4	100%
	P			1			2	1						4	
JATC EAST	T	1	5	5									1	12	100%
	P	1	5	5									1	12	
JATC SW	T											3	5	8	100%
	P											3	5	8	
LCSC	T					1	1	1	1		2			6	83%
	P					1	1	1	1		1			5	
NIC	T	1	3				5			1			3	13	69%
	P	1	1				4			1			2	9	
PREV HELD/ OOS	T	1	9	9	7	10	6	2	4	2	3	5	9	67	78%
	P	0	9	8	4	8	5	2	3	2	2	2	7	52	
TOTAL	T	6	21	16	12	20	20	10	13	6	8	11	18	161	78%
	P	4	18	15	7	16	17	9	9	5	5	6	15	126	
%		67%	86%	94%	58%	80%	85%	90%	69%	83%	63%	55%	83%	78%	

JOURNEYMAN FIRST EXAM ATTEMPTS

		NOV '13	DEC '13	JAN '14	FEB '14	MAR '14	APR '14	MAY '14	JUN '14	JUL '14	AUG '14	SEP '14	OCT '14	NOV '14	DEC '14	TTL	%
CSI	T	1	2	1	2	1	2	1	2	3		1	2			18	56%
	P	0	1	1	0	1	1	1	2	2		0	1			10	
CWI	T				4	3	4	3	5	2	3	7	3	3	4	41	85%
	P				2	3	4	2	5	2	3	7	3	1	3	35	
EITC	T	2	1		1		1	4	3		2	3	1			18	50%
	P	0	0		1		0	3	3		0	2	0			9	
IEC	T					1				1				2	1	5	80%
	P					0				1				2	1	4	
ISU	T				1	1	1	1	1	1			1	1		8	63%
	P				1	1	1	0	1	0			0	1		5	
JATC EAST	T	1	1	2	6	2					1					13	85%
	P	1	1	2	4	2					1					11	
JATC SW	T			3				1	2						7	13	85%
	P			2				1	1						7	11	
LCSC	T				1		2	6	1	1	2	1				14	93%
	P				1		2	6	1	1	1	1				13	
NIC	T	1			2	2	1	1	3	2	4	2		1	2	21	76%
	P	1			2	1	1	1	1	2	4	1		1	1	16	
PREV HELD/ OOS	T	4	7	7	6	5	6	3	6	5	4	3	2	3	11	72	71%
	P	2	5	5	5	3	5	1	6	5	4	3	2	3	2	51	
TOTAL	T	9	11	13	23	15	17	20	23	15	16	17	9	10	25	223	74%
	P	4	7	10	16	11	14	15	20	13	13	14	6	8	14	165	
%		44%	64%	77%	70%	73%	82%	75%	87%	87%	81%	82%	67%	80%	56%	74%	

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ELECTRICAL NOV CODE CASES OPENED
For the Period 10/1/2015 thru 12/31/2015

Case Number	Date	Offender Name	Violation Type	NOV Subtype	Status	Fees Charged	Fees Paid
ELE15-0071							
ELE15-0071	10/01/2015	JOE WITHERSPOON	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0072							
ELE15-0072	10/01/2015	Michael Reeder	ELE Failure to Correct	HOMEOWNER	ACTIVE	100.00	0.00
ELE15-0073							
ELE15-0073	10/02/2015	STROS ELECTRIC INC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0074							
ELE15-0074	10/05/2015	FABIAN MARQUEZ	ELE Failure to Correct	HOMEOWNER	PAID	100.00	100.00
ELE15-0075							
ELE15-0075	10/05/2015	Salvador Ceja	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0076							
ELE15-0076	10/05/2015	Daniel Smith	ELE Failure to Correct	HOMEOWNER	PAID	100.00	100.00
ELE15-0077							
ELE15-0077	10/05/2015	Daniel Smith	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0078							
ELE15-0078	10/05/2015	FRUITLAND ELECTRIC INC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0079							
ELE15-0079	10/08/2015	PRICES RIGHT ELECTRIC	ELE Failure to Correct	CONTRACTOR	ACTIVE	100.00	0.00
ELE15-0080							
ELE15-0080	10/08/2015	EDWARDS ELECTRIC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0081							

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<u>Case Number</u>	<u>Date</u>	<u>Offender Name</u>	<u>Violation Type</u>	<u>NOV Subtype</u>	<u>Status</u>	<u>Fees Charged</u>	<u>Fees Paid</u>
ELE15-0081	10/13/2015	STROS ELECTRIC INC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0082							
ELE15-0082	10/13/2015	STROS ELECTRIC INC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0083							
ELE15-0083	10/13/2015	A & S ELECTRIC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0084							
ELE15-0084	10/14/2015	BURNETT ELECTRIC INC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0085							
ELE15-0085	10/15/2015	A & S ELECTRIC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0086							
ELE15-0086	10/19/2015		ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0087							
ELE15-0087	10/20/2015	BOISE BASIN ELECTRIC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0088							
ELE15-0088	10/20/2015	BOISE BASIN ELECTRIC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0089							
ELE15-0089	10/20/2015	HENRY AMEN IV	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0090							
ELE15-0090	10/20/2015	MELLISA J BIONDO	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0091							
ELE15-0091	10/20/2015	TROY LEISHMAN ELECTRIC INC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00

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Case Number	Date	Offender Name	Violation Type	NOV Subtype	Status	Fees Charged	Fees Paid
ELE15-0092							
ELE15-0092	10/20/2015	JAMES G HOWELL	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0093							
ELE15-0093	10/22/2015	ECO ELECTRIC LLC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0094							
ELE15-0094	10/28/2015		ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0095							
ELE15-0095	10/28/2015	THOR T HOEFER	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0096							
ELE15-0096	10/30/2015	CODE ELECTRIC OF TWIN FALLS	ELE Failure to Correct	CONTRACTOR	ACTIVE	100.00	0.00
ELE15-0097							
ELE15-0097	11/04/2015	HARDLINE ELECTRIC LLC	ELE Failure to Correct	CONTRACTOR	CLOSED	0.00	0.00
ELE15-0098							
ELE15-0098	11/12/2015	RUMMER ELECTRIC INC	ELE Failure to Correct	CONTRACTOR	CLOSED	0.00	0.00
ELE15-0099							
ELE15-0099	11/12/2015	Michelle Byington	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0100							
ELE15-0100	11/16/2015	PRECISION PUMP	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0101							
ELE15-0101	11/16/2015	PRECISION PUMP	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0102							
ELE15-0102	11/16/2015	PRECISION PUMP	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00

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Case Number	Date	Offender Name	Violation Type	NOV Subtype	Status	Fees Charged	Fees Paid
ELE15-0103							
ELE15-0103	11/18/2015	HENRY AMEN IV	ELE Failure to Correct	HOMEOWNER	WARNING	0.00	0.00
ELE15-0104							
ELE15-0104	11/20/2015	AUTOMATION WERX LLC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0105							
ELE15-0105	11/24/2015	CODE ELECTRIC OF TWIN FALLS	ELE Failure to Correct	CONTRACTOR	ACTIVE	100.00	0.00
ELE15-0106							
ELE15-0106	11/24/2015	GALEN ENSZ ELECTRIC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0107							
ELE15-0107	11/25/2015	VELMA L FOOTE	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0108							
ELE15-0108	11/30/2015		ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0109							
ELE15-0109	11/30/2015		ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0110							
ELE15-0110	12/01/2015	MARVIN AND ELLEN MONTAGUE	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0111							
ELE15-0111	12/04/2015	FOGG ELECTRIC INC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0112							
ELE15-0112	12/04/2015	HOT SHOT ELECTRIC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0113							

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Case Number	Date	Offender Name	Violation Type	NOV Subtype	Status	Fees Charged	Fees Paid
ELE15-0113	12/07/2015	Dustin Miller	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0114							
ELE15-0114	12/07/2015	ACTION ELECTRIC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0115							
ELE15-0115	12/08/2015	RUSSEL W BLAIR	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0116							
ELE15-0116	12/08/2015	HOT SHOT ELECTRIC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0117							
ELE15-0117	12/14/2015	MARKELL & MITCH WILSON	ELE Failure to Correct	HOMEOWNER	WARNING	0.00	0.00
ELE15-0118							
ELE15-0118	12/15/2015	Karin Wentz	ELE Failure to Correct	HOMEOWNER	CANCELLED	0.00	0.00
ELE15-0119							
ELE15-0119	12/15/2015	CLAWSON ELECTRIC LLC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE15-0120							
ELE15-0120	12/28/2015	Bethany Graupner	ELE Failure to Correct	HOMEOWNER	ACTIVE	100.00	0.00
ELE15-0121							
ELE15-0121	12/28/2015	Mark Naumann	ELE Failure to Correct	HOMEOWNER	ACTIVE	100.00	0.00
ELE1510-0008							
ELE1510-0008	10/01/2015	THE SPRINKLER SHOP INC	ELE Knowingly Employing Unlicensed Ind	CONTRACTOR	WARNING	0.00	0.00
ELE1510-0008	10/01/2015	THE SPRINKLER SHOP INC	ELE Unlicensed Individual	CONTRACTOR	WARNING	0.00	0.00
ELE1510-0008	10/01/2015	THE SPRINKLER SHOP INC	ELE Warning	CONTRACTOR	WARNING	0.00	0.00

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Case Number	Date	Offender Name	Violation Type	NOV Subtype	Status	Fees Charged	Fees Paid
ELE1510-0031							
ELE1510-0031	10/05/2015	A1 Heating and Air Conditioning	ELE Unlicensed Contractor	HOMEOWNER	WARNING	0.00	0.00
ELE1510-0129							
ELE1510-0129	10/22/2015	Larry Lansford	ELE Failure to Permit	HOMEOWNER	CANCELLED	0.00	0.00
ELE1510-0136							
ELE1510-0136	10/26/2015	DAN RIKER	ELE Failure to Permit	HOMEOWNER	CANCELLED	0.00	0.00
ELE1510-0136	10/26/2015	DAN RIKER	ELE Unlicensed Contractor	HOMEOWNER	CANCELLED	0.00	0.00
ELE1510-0136	10/26/2015	DAN RIKER	ELE Unlicensed Individual	HOMEOWNER	CANCELLED	0.00	0.00
ELE1510-0137							
ELE1510-0137	10/26/2015	Larry Lansford	ELE Knowingly Employing Unlicensed Ind	HOMEOWNER	CANCELLED	0.00	0.00
ELE1510-0138							
ELE1510-0138	10/26/2015	Devon Yoder	ELE Knowingly Employing Unlicensed Ind	HOMEOWNER	ACTIVE	100.00	0.00
ELE1510-0139							
ELE1510-0139	10/26/2015	THAYNE AMOTH	ELE Unlicensed Contractor	HOMEOWNER	PAID	200.00	200.00
ELE1510-0143							
ELE1510-0143	10/26/2015	BRITTON GOODWIN	ELE Unlicensed Individual	HOMEOWNER	ACTIVE	100.00	0.00
ELE1510-0144							
ELE1510-0144	10/26/2015	MG ELECTRIC CO LLC	ELE Knowingly Employing Unlicensed Ind	CONTRACTOR	ACTIVE	100.00	0.00
ELE1510-0146							
ELE1510-0146	10/26/2015	ADVANCED DATA	ELE Failure to Permit	CONTRACTOR	WARNING	0.00	0.00
ELE1510-0152							
ELE1510-0152	10/27/2015	Cody Powell	ELE Unlicensed Contractor	HOMEOWNER	ACTIVE	300.00	0.00

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<u>Case Number</u>	<u>Date</u>	<u>Offender Name</u>	<u>Violation Type</u>	<u>NOV Subtype</u>	<u>Status</u>	<u>Fees Charged</u>	<u>Fees Paid</u>
ELE1510-0152	10/27/2015	Cody Powell	ELE Unlicensed Individual	HOMEOWNER	ACTIVE	300.00	0.00
ELE1510-0171							
ELE1510-0171	10/29/2015	Precision Well Drill & Pump	ELE Failure to Permit	CONTRACTOR	ACTIVE	300.00	0.00
ELE1510-0171	10/29/2015	Precision Well Drill & Pump	ELE Failure to Post Permit	CONTRACTOR	ACTIVE	300.00	0.00
ELE1510-0171	10/29/2015	Precision Well Drill & Pump	ELE Outside Scope of Specialty Lic	CONTRACTOR	ACTIVE	300.00	0.00
ELE1510-0172							
ELE1510-0172	10/29/2015	Precision Well Drill & Pump	ELE Failure to Permit	CONTRACTOR	PENDING	300.00	0.00
ELE1510-0172	10/29/2015	Precision Well Drill & Pump	ELE Failure to Post Permit	CONTRACTOR	PENDING	300.00	0.00
ELE1510-0172	10/29/2015	Precision Well Drill & Pump	ELE Outside Scope of Specialty Lic	CONTRACTOR	PENDING	300.00	0.00
ELE1511-0009							
ELE1511-0009	11/02/2015	Rodney Beus	ELE Failure to Permit	CONTRACTOR	WARNING	0.00	0.00
ELE1511-0010							
ELE1511-0010	11/02/2015	Doug Unger	ELE Unlicensed Contractor	CONTRACTOR	APPEAL	200.00	200.00
ELE1511-0044							
ELE1511-0044	11/06/2015	HOT SHOT ELECTRIC	ELE Failure to Correct	CONTRACTOR	ACTIVE	1,000.00	0.00
ELE1511-0130							
ELE1511-0130	11/25/2015	AUTOMATION WERX LLC	ELE Failure to Correct	CONTRACTOR	CANCELLED	0.00	0.00
ELE1511-0136							
ELE1511-0136	11/30/2015	Grant Longley	ELE Other	HOMEOWNER	PENDING	300.00	0.00
ELE1511-0136	11/30/2015	Grant Longley	ELE Warning	HOMEOWNER	PENDING	300.00	0.00
ELE1511-0136	11/30/2015	Grant Longley	ELE Unlicensed Contractor	HOMEOWNER	PENDING	300.00	0.00

01/11/2016
3:11 pm

State of Idaho
ELECTRICAL NOV CODE CASES OPENED
For the Period 10/1/2015 thru 12/31/2015

<u>Case Number</u>	<u>Date</u>	<u>Offender Name</u>	<u>Violation Type</u>	<u>NOV Subtype</u>	<u>Status</u>	<u>Fees Charged</u>	<u>Fees Paid</u>
ELE1511-0136	11/30/2015	Grant Longley	ELE Unlicensed Individual	HOMEOWNER	PENDING	300.00	0.00
ELE1511-0137							
ELE1511-0137	11/30/2015	Larry Rupp	ELE Other	HOMEOWNER	PENDING	300.00	0.00
ELE1511-0137	11/30/2015	Larry Rupp	ELE Unlicensed Contractor	HOMEOWNER	PENDING	300.00	0.00
ELE1511-0137	11/30/2015	Larry Rupp	ELE Unlicensed Individual	HOMEOWNER	PENDING	300.00	0.00
ELE1511-0137	11/30/2015	Larry Rupp	ELE Warning	HOMEOWNER	PENDING	300.00	0.00
ELE1511-0138							
ELE1511-0138	11/30/2015	Bill Werber	ELE Other	HOMEOWNER	PENDING	300.00	0.00
ELE1511-0138	11/30/2015	Bill Werber	ELE Unlicensed Individual	HOMEOWNER	PENDING	300.00	0.00
ELE1511-0138	11/30/2015	Bill Werber	ELE Warning	HOMEOWNER	PENDING	300.00	0.00
ELE1511-0138	11/30/2015	Bill Werber	ELE Unlicensed Contractor	HOMEOWNER	PENDING	300.00	0.00
ELE1512-0057							
ELE1512-0057	12/09/2015	Joseph E.Gish	ELE Unlicensed Individual	HOMEOWNER	PENDING	100.00	0.00
ELE1512-0071							
ELE1512-0071	12/10/2015	The Shed Center	ELE Knowingly Employing Unlicensed Ind	CONTRACTOR	PENDING	300.00	0.00
ELE1512-0071	12/10/2015	The Shed Center	ELE Unlicensed Contractor	CONTRACTOR	PENDING	300.00	0.00
ELE1512-0074							
ELE1512-0074	12/10/2015	ULTIMATE ELECTRIC LLC	ELE Knowingly Employing Unlicensed Ind	CONTRACTOR	ACTIVE	0.00	0.00
ELE1512-0094							
ELE1512-0094	12/16/2015	Wanye Wellock	ELE Unlicensed Individual	HOMEOWNER	PENDING	100.00	0.00
ELE1512-0129							

01/11/2016
3:11 pm

State of Idaho
ELECTRICAL NOV CODE CASES OPENED
For the Period 10/1/2015 thru 12/31/2015

<u>Case Number</u>	<u>Date</u>	<u>Offender Name</u>	<u>Violation Type</u>	<u>NOV Subtype</u>	<u>Status</u>	<u>Fees Charged</u>	<u>Fees Paid</u>
ELE1512-0129	12/23/2015	B & J ELECTRIC	ELE Failure to Supervise	CONTRACTOR	PENDING	200.00	0.00
ELE1512-0129	12/23/2015	B & J ELECTRIC	ELE Knowingly Employing Unlicensed Ind	CONTRACTOR	PENDING	200.00	0.00
ELE1512-0131							
ELE1512-0131	12/23/2015	Eric Thornley	ELE Unlicensed Individual	CONTRACTOR	PENDING	100.00	0.00
ELE1512-0132							
ELE1512-0132	12/23/2015	FARRON MAYER	ELE Failure to Supervise	CONTRACTOR	PENDING	100.00	0.00
ELE1512-0132	12/23/2015	FARRON MAYER	ELE Other	CONTRACTOR	PENDING	100.00	0.00
Total # of Code Cases:						Fees Charged:	Fees Paid:
99						\$10,000.00	\$600.00

State of Idaho
 “Verification” Inspections by Inspectors
 For the Period 10/1/2015 thru 12/31/2015

Inspector	Compliance	Admin Time	Pass	Fail	Red Tag Issued
Brad Myers	2	2			
Bruce Holland			1		
Craig Hammond		2			
Dan LaChapelle	14	3			
Dan Strouse	17	6			
David Sheridan	6	1			
Dick Sivey	2		5		
Don Geiger	1	2			
Gary Sonnen	16	1			
Gary Williams	7	4			
Geret Robinson	3	3			
Jason Guerber	4	19			
Jeff Anderson	8	16			
Jeff Oakes	3	3			
Jimmie Stansell	28				
John Kraack	3				
Josh Nyman	1	5			
Kevin Hubble		4	1		
Larry Wharton		3	2		
Mark Boren	6	5			
Mitch Day	6	1			
Rick Young	2	8			
Robert Crispin		32			
Sam Kasper	3	1			
Shelly Farris	1	1			
Tim Ducommun		9			
Tim Grove			1		
Todd Wilding	1	5			
Travis Wright	1	5			

For the Period 10/1/2015 thru 12/31/2015
(ELECTRICAL ONLY)

Inspector	Compliance	Admin Time	Pass	Fail	Red Tag Issued
Brad Myers	2	2			
Dan Strouse	17	16			
David Sheridan	2	1			
Dick Sivey	6	1			
Don Geiger	1	2			
Gary Sonnen	16	1			
Geret Robinson	3	3			
Jeff Anderson	8	16			
Jeff Oakes	3	3			
Jimmie Stansell	28				
John Kraack	3				
Kevin Hubble		4	1		
Larry Wharton		3	2		
Mitch Day	6	1			
Sam Kasper	3	1			
Shelly Farris	1	1			
Tim Ducommun		9			
Todd Wilding	1	5			

IDAHO ELECTRICAL BOARD

Agenda Item No. 08

Compliance Program Report

PRESENTER: Terry Blessing, Compliance Program Supervisor

OBJECTIVE: Provide an update on the statewide compliance program.

ACTION: Informational

BACKGROUND: This topic is addressed at all regularly scheduled Idaho Electrical Board meetings.

**PROCEDURAL
HISTORY:**

ATTACHMENTS: No documentation



IDAHO ELECTRICAL BOARD

Agenda Item No. 09

Operational Report

PRESENTER: Steve Keys, Deputy Administrator-Operations

OBJECTIVE: Provide an update on the daily operations of the Electrical program and division.

ACTION: Informational

BACKGROUND: This topic is addressed at all regularly scheduled Idaho Electrical Board meetings.

PROCEDURAL HISTORY:

ATTACHMENTS: Proposed legislation



IDAPA 07.01.01.012.

03. Required Inspections. The contractor is required to request inspections of the following installations:

a. Ground Work. All underground installations shall be inspected and approved prior to being backfilled or otherwise covered.

b. Rough-In Inspections. For rough-in, prior to covering or concealing shall be inspected and approved prior to being covered or concealed.

c. Final Inspections. The completed electrical installation covered by the permit shall be inspected and approved.

d. Temporary services for construction shall be inspected before being energized.

IDAPA 07.01.11

.011. CIVIL PENALTIES.

The following acts shall subject the violator to penalties based on the following schedule.

07. Fees, ~~and Permits,~~ and Inspections. Any person failing to pay applicable fees, ~~or~~ properly post an electrical permit, or request a required inspection shall be subject to a civil penalty of not more than two hundred dollars (\$200) for the first offense and a civil penalty of not more than one thousand dollars (\$1,000) for each offense thereafter.

IDAHO ELECTRICAL BOARD

Agenda Item No. 10

Administrator Report

PRESENTER: C. Kelly Pearce, Administrator

OBJECTIVE: Provide an overview of the Division's current activities.

ACTION: Informational

BACKGROUND: This topic is addressed at all regularly scheduled Idaho Electrical Board meetings.

**PROCEDURAL
HISTORY:**

ATTACHMENTS: No documentation



IDAHO ELECTRICAL BOARD

Agenda Item No. 10a

Financial Report

PRESENTER: Fred Sisneros, Financial Manager

OBJECTIVE: Review the Idaho Electrical Board's financial report.

ACTION: Informational

BACKGROUND: This topic is addressed at all regularly scheduled Idaho Electrical Board meetings.

PROCEDURAL HISTORY:

ATTACHMENTS: Financial report





Division of Building Safety
 ELECTRICAL BOARD FUND 0229-01
 Fiscal Year 2016 Financial Statements
 As of 12/31/2015

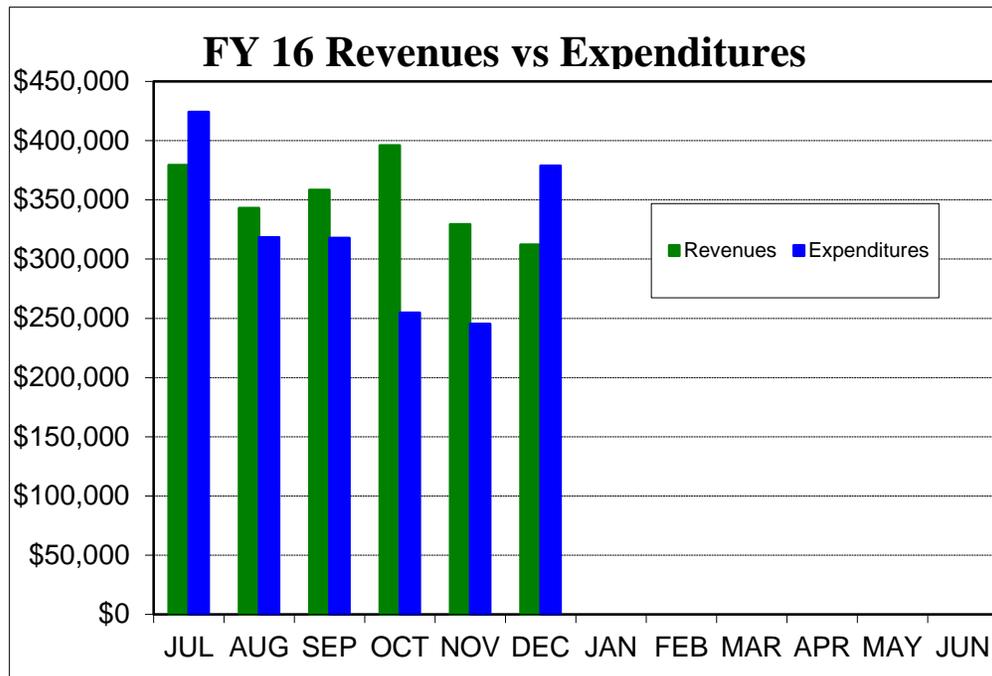
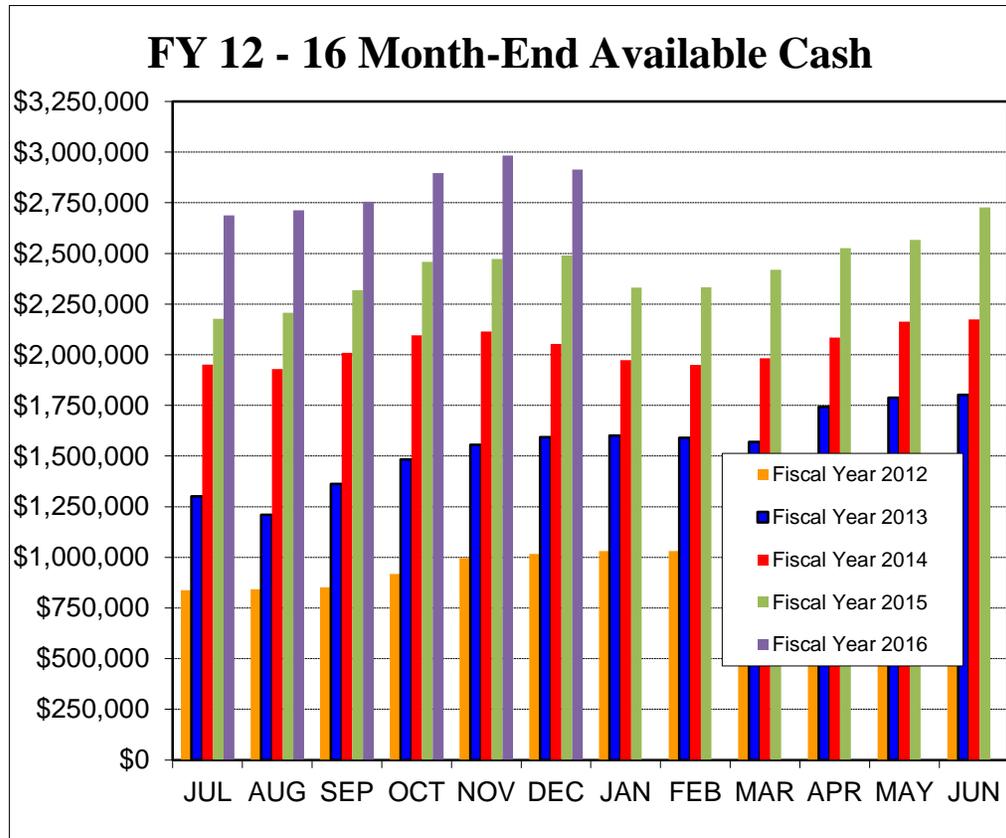
Statement of Revenues and Expenditures

Class	Budget	Fiscal Year To Date	YTD as a % of Budget	Remaining Budget	Projected for Remainder of Year	Projected Year End Totals	Projected Total as a % of Budget
Revenues:	3,870,000	2,118,387	54.7%	1,751,613	1,895,317	4,013,704	103.7%
Expenditures							
Personnel:	2,537,000	1,423,704	56.1%	1,113,297	1,322,010	2,745,714	108.2%
Operating:	656,000	425,962	64.9%	230,038	365,636	791,598	120.7%
Capital:	93,800	89,699	95.6%	4,101	4,101	93,800	100.0%
Total Expenditures	3,286,800	1,939,364	59.0%	1,347,436	1,691,748	3,631,112	110.5%
Net for FY 2015	583,200	179,023			203,569	382,591	

Statement of Cash Balance

July 1, 2015 Beginning Cash Available	Fiscal Year to Date Revenues	Fiscal Year to Date Expenditures and Encumbrances	Other Changes in Cash	Available Cash as of December 31, 2015	Projected Change in Cash for Remainder of Year	Projected Year End Available Cash
2,726,605	2,118,387	(1,939,364)	8,490	2,914,119	203,569	3,117,687

ELECTRICAL BOARD FUND 0229-01



ELECTRICAL BOARD FUND 0229-01

