



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ENGINEER'S DAILY REPORT
 LAN Engineering Consultant

REPORT NO.	245 (7-day)	DATE	August 15, 2007	M T W T F S S (DAY)
NORMAL WORK HOUR:	START: 7:00AM	STOP: 3:30PM	WEATHER: OVERCAST/SUNNY	
LOCATION :	Construction Field Office : 333 Burma Road, Oakland 94607		Working Drawing Campus Office : 375 Burma Road, Oakland 94607	

04-SF-80-13.2/13.9
 Contract No. 04-0120F4
 {SAS Superstructure}

Caltrans Supervisor:
 Gary Lai *GL*
 Senior Bridge Engineer

Office Work:

❖ **Submittal NO. ABF-SUB-000235 Rev: 0**

Subject: Elevator Layouts, Electrical Schematics, and Hoist Calculations.

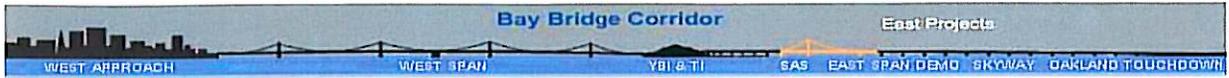
- Emailed a copy of the Electrical Schematic package with my proposed comments on selected sheets to T.Y. Lin, PB, Caltrans personnel. See attachment #1 (Only sheets with my comments are shown in the attachment).
- Submitted my review comments in the PMIV "team discussion – Engineer's research" section. See attachment #2 for a copy of my comments submitted.

❖ **Aviation Warning Lighting – MAP Marker Light issue**

- Email from PB Designer commenting on the MAP lights, Aviation Lights and FAA requirements for the project. See attachment #3 for copy of this email.
- Asked T.Y. Lin to research the MAP lighting requirements and to try to get as much information on the lights from the consulting design group that added the lights to the contract.
- Try to get as much information as possible before contacting FAA and discussing the plans and any conflicts that may be present in the plans.

❖ **Reviewed Emergency Operations and Response Plan. Signed off signature sheet August 15, 2007.**

- Part I District 4- Division of construction.
- Part II SFOBB SAS Project Offices



❖ Reviewed State of California Division of Toll Bridge Construction – Code of Safe Practices. Signed off signature sheet August 15, 2007.

Contracts:

- 04-0120F4 – Self-Anchored Suspension Span (SAS).
- 04-0120E4 - T1 & E2 Foundations and Columns.
- 04-0120J4 – Storm Water Treatment System.

Any questions or comments you can reach me at (916) 919-7158. My E-Mail address is Mike.Travis@LANEngineering.com or Michael_Travis@dot.ca.gov

END OF REPORT



ATTACHMENTS :

1. Elevator Submittal Electrical Schematic Package plan sheets with notations.
2. Elevator Submittal Review Comments submitted PMIV.
3. Email from Jens Erlingsson (PB) discussing the MAP, Aviation Lights and the FAA issue.

SIGNATURE

Name

Michael F. Travis

TITLE

Electrical Engineer – LAN Engineering

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONTRACT NO. 04-0120F4

DISTRICT	COUNTY	ROUTE	KILOMETER POST
04	SF	80	13.2/13.9

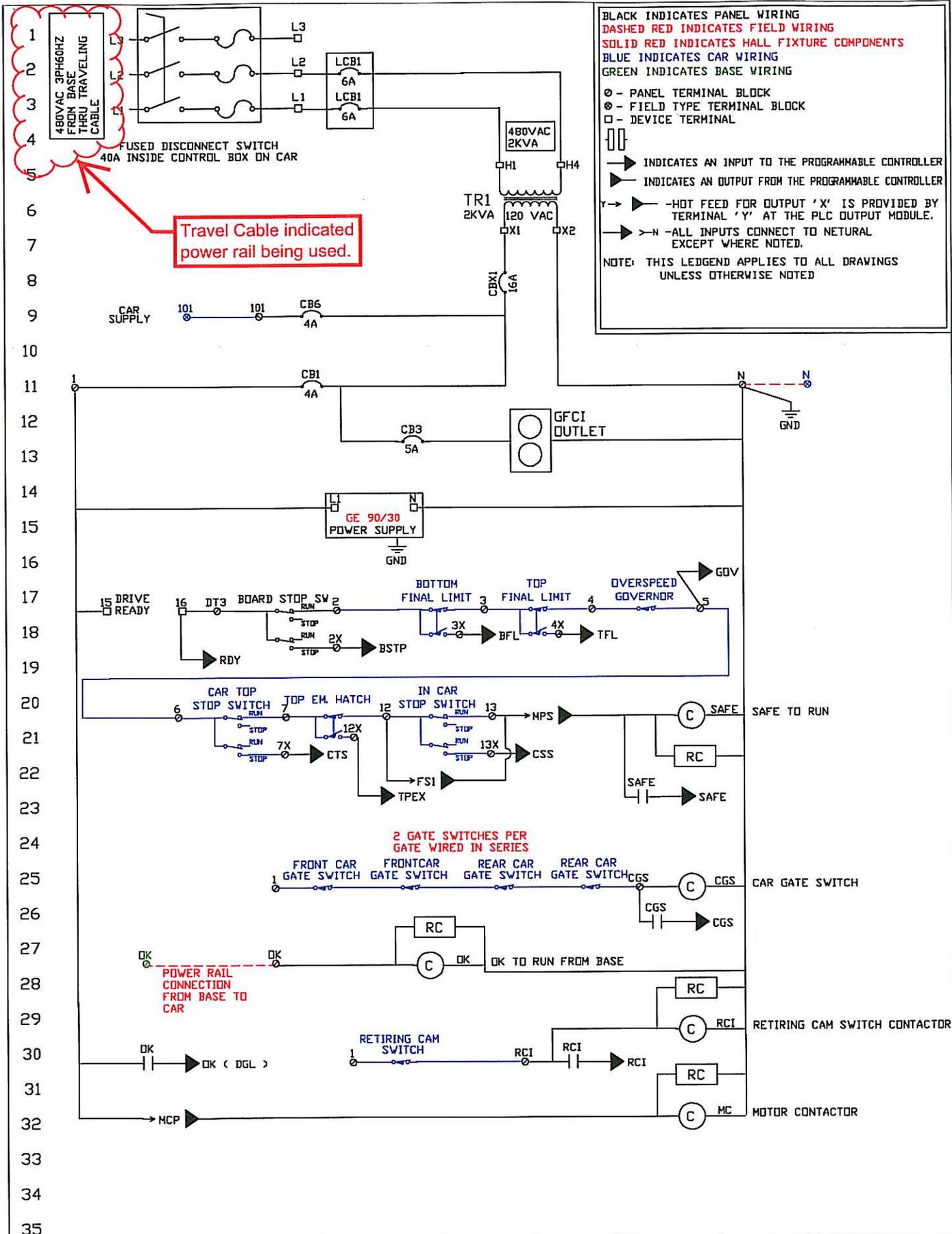
SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE AND TOWER)

**5 STOP .762 M/S
SIMPLEX RACK & PINION
DLD ELEVATOR**

ELECTRICAL SCHEMATIC

Attached are my comments - only sheets with comments are in this package
Michael Travis- Caltrans

MID-AMERICAN ELEVATOR INC.
820 N. WOLCOTT AVE.
CHICAGO, IL. 60622
773-486-6900 FAX 773-486-2438



Travel Cable indicated power rail being used.

Mid-American Elevator Inc.
 820 N. Wolcott Ave.
 Chicago, IL 60622
 773.486.6900 fax 773.486.2438

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BAY BRIDGE TOWER
 5 STOP .762 M/S
 SIMPLEX RACK & PINION DL
 ELEVATOR

Copyright © 2000 Mid-American Elevator Equipment Company, Inc., All Rights Reserved

DRAWING NUMBER:	L941301A
DRAWING DATE:	JULY 2, 2007
DRAWN/ENGINEER:	PP/PP
CONTRACT NUMBER(S):	L9413

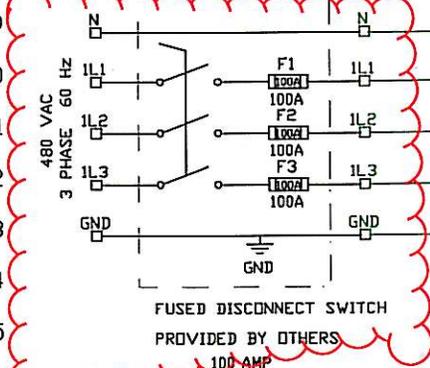
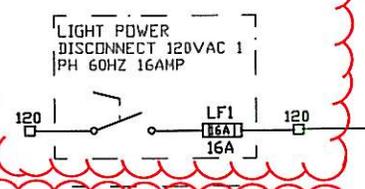
BLACK INDICATES PANEL WIRING
 RED INDICATES FIELD WIRING
 GREEN INDICATES BASE WIRING
 BLUE INDICATES BY OTHERS

Base Platform Enclosure

* 20A circuit breaker provided

*Drawing error

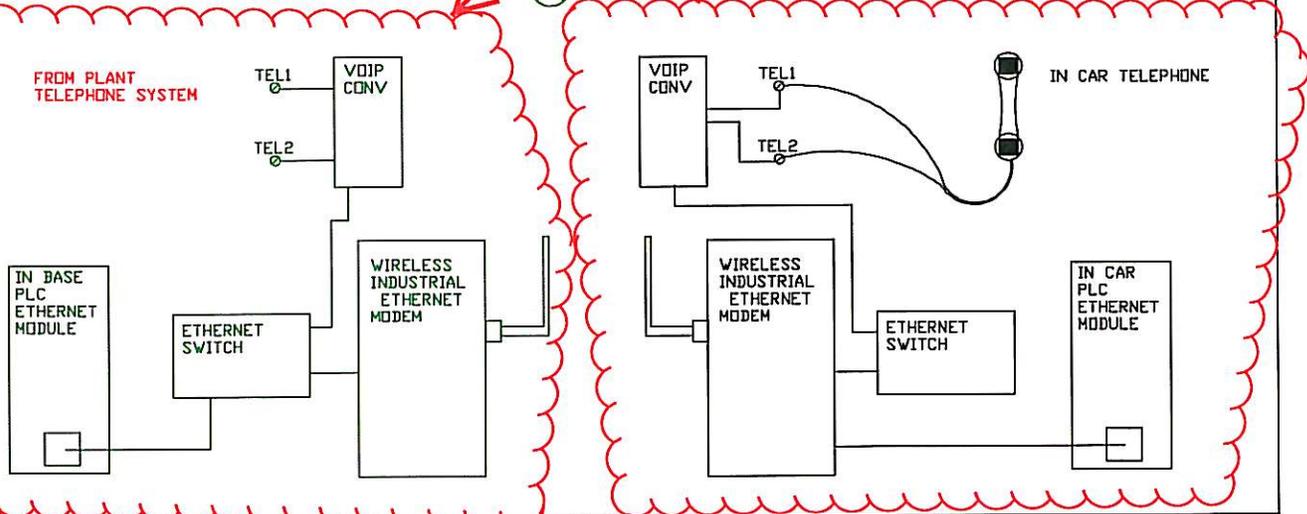
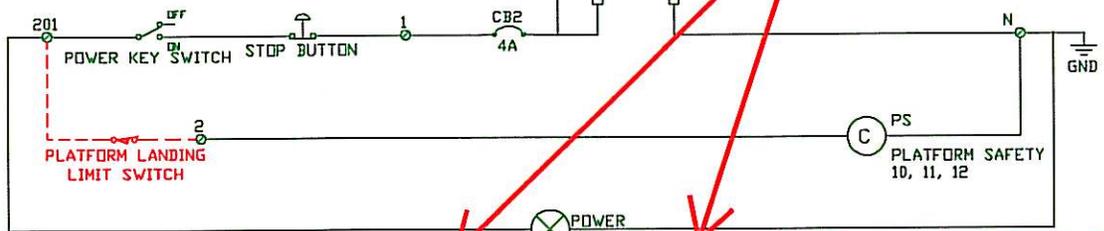
POWER RAIL PICK-UP SHOES ARE DOUBLED, ONE MOUNTED ON THE CAR TOP AND ONE MOUNTED ON THE BOTTOM OF THE CAR TO AVOID CONNECTION INTERRUPTIONS.



FUSED DISCONNECT SWITCH PROVIDED BY OTHERS
 100 AMP
 FUSED DISCONNECT SWITCH USE COPPER WIRE ONLY RATED AT 60° C AS PER NEC CODE
 WARNING! DISCONNECT POWER BEFORE SERVICING!

* 100A circuit breaker provided.
 * neutral required ?

*Emergency power back-up provided for unit?
 *Unit approved by governing Authority?
 * Unit compatibly to communication system?
 * Location of equipment?



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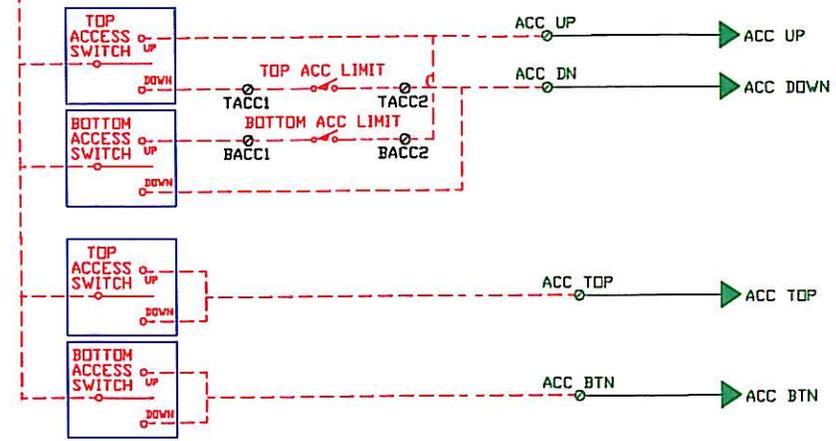
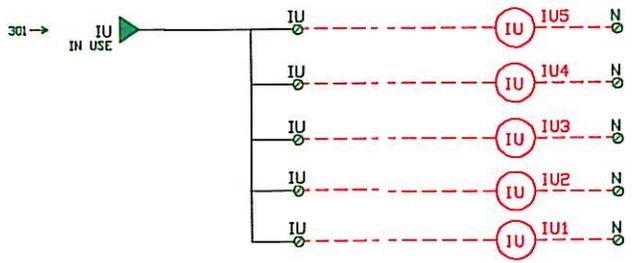
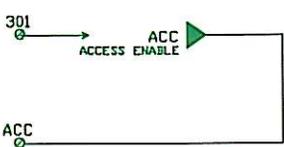
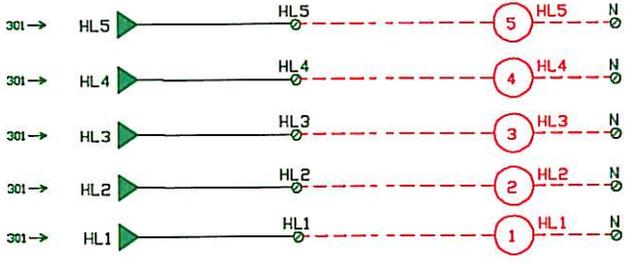
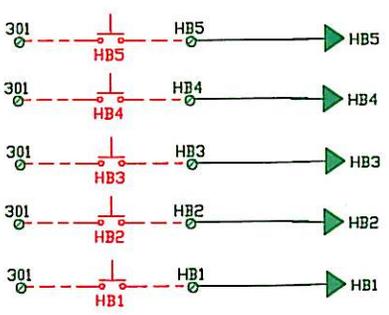
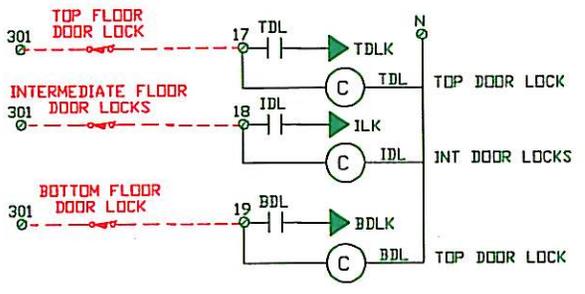
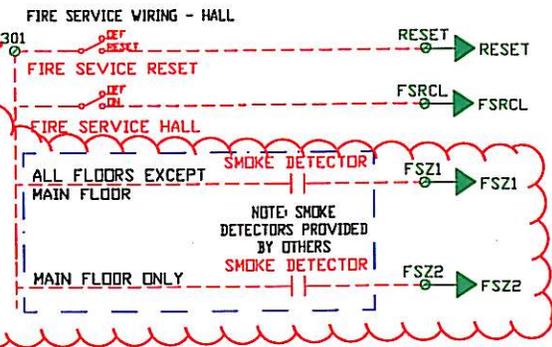
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BASE CONTROLLER

DRAWING NUMBER:	L941310A
DRAWING DATE:	JULY 3, 2007
DRAFTER/ENGINEER:	PP/PP
CONTRACT NUMBER(S):	L9413

GE 30 BASE PLC
POWER SUPPLY

* Smoke detectors required for this type of elevator?

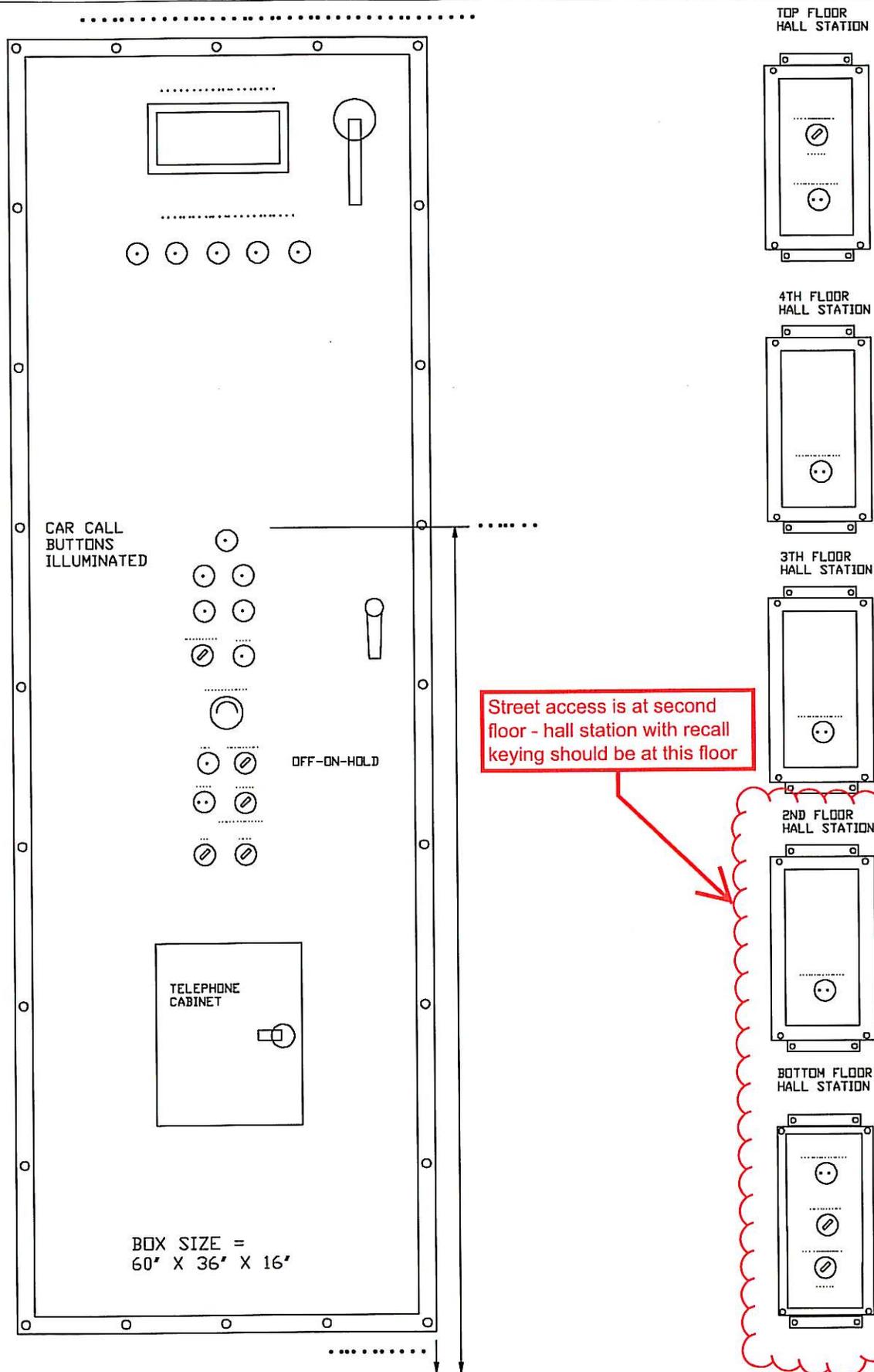


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BAY BRIDGE TOWER
 5 STOP .762 M/S
 SIMPLEX RACK & PINION DL
 ELEVATOR

DRAWING NUMBER:	L941311A
DRAWING DATE:	JULY 2, 2007
DRAWN BY/ENGINEER:	PP/PP
CONTRACT NUMBER(S):	L9413



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CONTROL DOOR
 CAR FIXTURES
 HALL FIXTURES

DRAWING NUMBER:	L941313A
DRAWING DATE:	JULY 3, 2007
DRAFTER/ENGINEER:	PP/PP
CONTRACT NUMBER(S):	L9413

August 15, 2007

SUBMITTAL NO. ABF-SUB-000235 Rev. 0
Elevator Layouts
Electrical Schematics
Hoist Calculations

Received: July 30, 2007 – Due: August 19

Review Comments by Michael Travis

Attachment #2 (1 of 3)

- Drawing No. L7804141 – General Arrangement Rev. E
 - Machine Data information:
 - Motor HP: (2) 20 HP / 14.9 KW
 - Power Supply: 480 Volt / 100 Amps. / 3 Ph 60 Cycle
 - Drawing items:
 - Electrical Bus Bar (Control): Section B-B Detail 2
 - Electrical Bus Bar (Power): Section B-B Detail 2
 - Comments:
 - Verify power source supply to the elevator.
 - Verify control bus operation/Communication.

- Drawing No. L7804142 – General Arrangement Rev. C
 - Drawing items:
 - Elevator Disconnect: Panel 5 (Location Changed in an addendum)
 - Electrical Bus Bar (Power): Section B-B Detail 2
 - Comments:
 - Verify Locate within 10'-0" of base enclosure.
 - Verify 480V- 100A Disconnect (by others).

- Drawing No. L7804142 – General Arrangement D (Addendum Sheet)
 - Drawing items:
 - Elevator Disconnect: Panel 5 (Location Changed in an addendum)
 - Electrical Bus Bar (Power): Section B-B Detail 2

- Comments:
 - Verify Locate within 10'-0" of base enclosure. Need to check the enclosure type, location and mounting on contract plans.
 - Verify 480V- 100A Disconnect (by others). Due to feeder conductor size the 100A disconnect to be upsized to accommodate the larger conductors.
 - Communication interface junction box not shown on plans. Need to verify location and connection to elevator phone system.

- Drawing No. L7804143 – General Arrangement E
 - Drawing items:
Tower Elevation: No Electrical Shown

 - Comments:
 - No Comments.

- Electrical Schematic Package
 - Drawing L941301A:
 - Comments:
 - Travel Cable indicated – Power Buss being used? Conflict in plans.

 - Drawing L941310A:
 - Comments:
 - 20A Circuit Breaker being provided per contract plans (16A Fusible indicated in submittal).
 - 100A Circuit Breaker being provided per contact plans (100A Fusible indicated in submittal).
 - Submittal indicates a Neutral being required (Need to provide neutral conductor in contract).
 - Drawing error identifying a neutral for a 120volt circuit.
 - Information missing on the Phone System in the submittal.
 - Emergency power back-up system not indicated.
 - Unit shall be approved by Governing Authority.
 - Unit shall be compatible with the communication system in the contract.
 - Location of equipment is not shown on the plans.

August 15, 2007

- Drawing L941311A:
 - Comments:
 - Smoke detectors are shown on the submittal but are they required for this type of elevator? The elevator is located outside in open air.
- Drawing L941311A:
 - Comments:
 - Smoke detectors are shown on the submittal but are they required for this type of elevator? The elevator is located outside in open air.

- Drawing L941313A:
 - Comments:
 - The submittal shows the hall station with the recall keying and emergency items at the bottom floor. The bottom floor is not the street access (Lobby) level for the elevator. The second floor is at elevation of the roadway access. I believe the hall station for access to emergency personnel would be at the second floor.

Concluding Comments:

The following items need to be addressed by the electrical design group to make sure compatibility to the elevator operation:

- ❖ Voltage drop at elevator should be within 5% for proper operation of VFD and Motors per elevator manufacturer.
- ❖ Neutral conductor needs to be provided for the connection to the VFD unit in the elevator controller.

Mike Travis

From: Takaki, Maxwell [Takaki@pbworld.com]
To: Mike Travis
Cc:
Subject: FW:SFOBB Scan - Obstruction Lights
Attachments:

Sent: Wed 8/15/2007 8:56 AM

-----Original Message-----

From: Erlingsson, Jens
Sent: Wednesday, August 15, 2007 8:52 AM
To: 'Bill Shedd'
Cc: Behzad Golemohammadi; Bob_Zandipour@dot.ca.gov; Birdy, Jal; Lucas, Ellery; Nadell, Brady; Parviz Boozarpour; steven_hulsebus@dot.ca.gov; Sugiyama, Eric; Takaki, Maxwell
Subject: RE: FW: SFOBB Scan

Bill,

After having reviewed the plan sheets including the conduit and circuit schedules for the SAS Air Navigational lighting design I can now inform you that I was basically wrong on all counts. Our electrical design does indeed provide for the two Marker Lights on top of the tower, and I apologize to all of the recipients of my e-mail to Bob Zandipour yesterday. In addition, the Moffat & Nichol plan sheet do not specify the marker lights to be red and I am therefore assuming that they are meant to be white like the other marker lights on the bridge. However, there may be two potential problems with the navigational lighting design:

- 1) The two marker lights are specified with a solid state flasher. Since they are located adjacent to the red flashing navigational light on top of the tower, the FAA may object.
- 2) As pointed out by you, the panel location of the steady state red navigational lights on plan sheet E-291 do not match the location on plan sheet T007 which was approved by the FAA.

To resolve the two items, and since the FAA approval letter specifically states that the lighting configuration shall be in accordance with drawing T000 and T007, I recommend that plan sheet E-291 be marked up to show the two flashing marker lights and forwarded to the FAA for approval. I do not believe that the bridge safety and aesthetic lighting design, with the two marker lights, was forwarded to the FAA for review seven years ago, nor do I know if it's required. Please let me know if further action is required by us.

Regards,
Jens Erlingsson
PB Power Inc.
303 Second St., Suite 700 North
San Francisco, CA 94107
(415) 243-4775
(415) 281-8707
erlingsson@pbworld.com

Attachment #3 (1 of 1)