STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

ENGINEER'S DAILY REPORT

LAN Engineering Consultant

GL 3/18/2009

REPORT NO. 819 {7-day}{ + 210 Project Work Day}

DATE: March 11, 2009

M T W T F S S (DAY)

NORMAL WORK HOUR: START: 6:00AM STOP: 3:30PM

WEATHER: 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
Senior Bridge Engineer

Office Work:

- **SAS Opportunity Partnering Schedule (OPS) Meeting (Caltrans – Contractor – Subcontractors).**
  March 11, 2009 1:00 PM – 4:00 PM
  - The following issues were discussed at the meeting:
    - Cable Erections Sequence and how it would impact other installations on the cable. Back Span first then Main Span idea for MEP installation.

      NOTE: Stanchions are removed for wrapping of cable. So MEP Equipment cannot be installed until stanchions are installed. Messenger cables cannot be installed and final tensioned until load transfer so MEO conduit and wiring cannot be installed until load transfer. Tower top does not get installed till close to the **END**.
    - Load Transfer and how it will affect the MEP Installation.
    - W2 construction conflicts with MEP installation (False Work, Temporary Towers, tiebacks, etc.). The Cover Slab from retaining wall to columns Key.
    - Temporary tower structures and how they would impact installation of MEP items. (T1-ET removal and conflicts with MEP installation.
    - Load Transfer and how it will affect the MEP Installation.
    - Staging of materials on job site.
    - Use of scaffolding and boom lifts.
    - Work on Service Platforms.
    - Barrier Rail installation (Conduit installation, wiring, piping adjacent to the railing, accessibility, etc.)
    - LED Lighting within the OBG / Tower structures ? (Anna Lee – Bleyco Electric).
    - Tower Skirt installation and how it impacts the MEP installations at T1 pier.
    - De-Humidifiers will probably be staged in installation at the different locations.
    - Attached is a copy of the agenda and some comments I put down during the meeting. See attachment #3. A copy of the attendance sign in sheet is also included in the attachment.
    - Had to leave the meeting @ 4:30 to attend the Teleconference Meeting with team China.

RECD '09 MAR 19 #009127

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

ENGINEER'S DAILY REPORT

LAN Engineering Consultant

REPORT NO.	DATE	
819 {7-day}{ +210 Project Work Day}	March 11, 2009	M T W T F S S (DAY)

- **Shop Drawing advance copies for Lift 14 (ABF ATP Site)**
  - Drown loaded five packages of shop drawings that ABF has uploaded to the ATP site. I am reviewing them for sheets that would have MEP penetrations or redlines to be incorporated.
  - Gave Abdi Sanei an electronic copy of the five packages so he can get all the sheets that will need to be addressed by PB.

- **Teleconference with Team China. (Team Oakland / Team China) 4:30 PM.**
  - Sent out an agenda for this evenings Teleconference to all parties concerned. See attachment #1.
  - Teleconference Call took place @ 4:30 PM Oakland Time with discussion about the status of the fabrication in China. A copy of the minutes of the meeting was developed and sent out to the listed people on the agenda. See attachment #2.

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

0545-1800 @ Office / Time sheet total 10 hours regular

Attachments:

1. March 11, 2009 Teleconference Agenda.
2. March 11, 2009 Teleconference Minutes.
3. SAS Opportunity Partnering Schedule (OPS) Meeting Agenda/Comments/Attendance.

SIGNATURE

Name	TITLE
Michael F. Travis	Electrical Engineer – LAN Engineering

TELECONFERENCE – TEAM CHINA / TEAM OAKLAND - Agenda

March 11, 2009

Project Description: SAS SFOBB Project **EA #: 04-0120F4**

Attendees:

Team Oakland: ☐ Michael Travis ☐ Bill Shedd ☐ Sandy Michelotti
☐ Grady Hart ☐ Tom Ho ☐ Martin Chandrawinata
☐ Saeed Shahmirzai ☐ Nick King ☐ Don Ross

Team China: ☐ Gina Rizzardo (011-86-136-1187-1856)

TOD Complete: ☐ Scott Kennedy (011-86-150-2131-3938)
☐ Ken Lee (011-86-158-2142-2546)

Communication Channels:

- Gmail Account (working) : Account ID: mep.china@gmail.com
- FTP site working
- Yahoo Messenger

Agenda:

- **Equipment Requested by Team China:**
  - Ear Plugs, Hart Hats, Safety Glasses (Regular & Tinted) and surveyor's vests. (Bill has been trying to order the surveyors vest and will check again)
- **Paint Shop Status:**
  - Segment 3BE is currently inside the shop?
- **MEP Penetrations / Issues:**
  - OBG – Status of RFI 1670 {Floor beam conflict with Penetration holes @ PP 14.5}?
  - Tower – ?
- **MEP Master Charts:**
  - Mike posted OBG Lifts 1-14, Last posted 2/25/2009
- **Tower fabrication status:**
  - Ongoing.
- **OBG fabrication status:**
  - Ongoing.
- **Other Items:**
  - Don Ross saw a chart/fabrication layout, possibly created by Charles Ho. Asked Gina if she can get a copy and send it to Don Ross.
  - Ken Lee left Shanghai for U.S. today: Scott Kennedy will be back to Shanghai in early April.
  - RFI # 994 May be addressed soon as to the installation of one/two additional permanent access in the tower with elevator stops. Ongoing evaluation being performed.
- **Teleconference schedule:**
  - The next scheduled call will be on March 18, 2009.

TELECONFERENCE – TEAM CHINA / TEAM OAKLAND - Minutes

March 11, 2009

Project Description: SAS SFOBB Project **EA #: 04-0120F4**

Attendees:

Team Oakland:	☑ Michael Travis	☐ Bill Shedd	☐ Sandy Michelotti
	☑ Grady Hart	☐ Tom Ho	☐ Martin Chandrawinata
	☑ Saeed Shahmirzai	☐ Nick King	☐ Don Ross
Team China:	☑ Gina Rizzardo (011-86-136-1187-1856)		
TOD Complete:	☐ Scott Kennedy (011-86-150-2131-3938)		
	☐ Ken Lee (011-86-158-2142-2546)		

Communication Channels:

- Gmail Account (working) : Account ID: mep.china@gmail.com
- FTP site working
- Yahoo Messenger

Agenda:

- **Equipment Requested by Team China:**
  - Ear Plugs, Hart Hats, Safety Glasses (Regular & Tinted) and surveyor's vests.
- **Paint Shop Status:**
  - Segment 3BE out of paint shop, Segment 4BW in Paint shop.
  - Segment 3AE Blasting, Segment 4AE Next.
- **MEP Penetrations / Issues:**
  - OBG – Status of RFI 1670 {Floor beam conflict with Penetration holes @ PP 14.5} ZPMC proceeding with repair per RFI 1670 response.
  - Tower – no problems
- **MEP Master Charts:**
  - Mike posted OBG Lifts 1-14, Last posted 2/25/2009. Will update for RFI 1670.
- **Tower fabrication status:**
  - Ongoing. Lift 1 Plates – Lift 2 diaphragms.
- **OBG fabrication status:**
  - Shop 13: 1BE-2BE, 1BW-2BW; Shop 14: 6AW-7EW, 6AE-7CE; Shop 2: 1AW-!AE, 1AAW-1AAE; Bay 19: Crossbeam 3; Bay 3: Crossbeam 2; Bay 1: Crossbeam 1.
- **Other Items:**
  - Gina requested a copy of the chart/fabrication layout. Bill will send a copy.
  - Gina will send some photos of penetrations soon.
  - RFI # 994 May be addressed soon as to the installation of one/two additional permanent access in the tower with elevator stops. Ongoing evaluation being performed.
- **Teleconference schedule:**
  - The next scheduled call will be on March 18, 2009.

Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

Mike Travis

From: Chris Bausone [cbausone@abfjv.com] **Sent:** Tue 3/10/2009 7:13 PM

To: 'Bill Shedd'; 'Kevin Coyne'; 'Anna Lee'; 'Bob Kick (E-mail)'; kbaltzer@abfjv.com

Cc: 'Michael Stone'; 'Brian Boal'; 'Martin Chandrawinata'; 'Mark Woods'; 'Sharad Patel'; 'Bernard R Feather'; Mike Travis

Subject: meeting reminder - Opportunity Schedule for MEP

Attachments: SAS - MEP OppSched Mtg Agenda 03-11-09.doc(338KB)

All - We're still on for a meeting to discuss (Opportunity) Schedule relating to MEP tomorrow, Wednesday, March 11, 1pm to 4pm. I'm a little late with the meeting agenda but here it is. It's lengthy because I broke things down into distinct areas of work relating to either Bid Items or physical location and I tried to include information that may be common knowledge to some, but not all, participants. My idea is to review work scope, sequence and schedule notes for accuracy, answering questions and adding or deleting information/questions as we go. Then, at the end there is a section for writing any (wildass) suggestions we can brainstorm on to find time saving opportunities. For this exercise, extra cost to perform work is less important than significant time savings. I started it out with a common suggestion and a W.A.S. of my own. - Chris

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This message has been scanned for viruses and dangerous content by **MailScanner**, and is believed to be clean.

Chris Bausone
Bill Shedd
Amy Cha
Anna Lee
Scott Yeager
K Baltzer
Michael Stone
Bill Ferral
Martin Chandrawinata
Mark Woods
Bernard Feather
Michael Travis

American Bridge / FLUOR
A JOINT VENTURE

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC RETROFIT SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE AND TOWER)
PROJECT NUMBER 660110

SAS - MEP OPPORTUNITY SCHEDULE MEETING
Agenda for March 11, 2009, 1:00pm – 4:00pm
WDC Conference Room

- **GOALS**
  - Main: Mitigate delays to meet or exceed project milestones for Phase completion
    - Phase 1 - March 2012 – all work west of Pier W2 centerline
    - Phase 2 – September 2012 – all work to open Westbound lanes to traffic
    - Phase 3 – March 2013 – all remaining work to complete the project
  - Alternative: Open the bridge to traveling public by Phase completion milestones even if substantial project completion has not been attained
    - Some work over traffic may be necessary to complete
    - Temporary lane closures may be necessary to complete

- **REVIEW WORK SCOPE, SEQUENCE, CONSIDERATIONS FOR DISTINCT AREAS REQUIRING MEP ACCESS**
  - **W2 UNDERGROUND**
    - Electrical work: rigid conduit, duct banks, manholes, cables
    - Access after Cap Beam falsework and foundation removal
    - Tower Tie-back piles and anchoring block in vicinity
    - Completion planned with Phase 1

Temporary Foundations
Tower Tie-Backs
Existing Grounding

  - **W2 BELOW RETAINING WALL COVER SLAB**
    - Electrical work: cable trays, supports, cables, Seismic, Grounding
    - W2W retaining wall requires new penetrations for electrical
    - Electrical installations attach mainly to retaining wall
    - Cable tray supports at W2W require drilling and anchoring in concrete
    - Seismic and Grounding installations at top of pier footing
    - Access is required along full height of retaining wall

Date for closure slab to be installed?

  - **W2 ABOVE RETAINING WALL COVER SLAB**
    - Electrical work: pull boxes, supports, flexible conduits
    - Mechanical work: piping, fittings, expansion loops, supports, terminations
    - MEP installations attach to cover slab: require drilling and anchoring in concrete

- **W2 COLUMNS**
  - Electrical work: cable trays, pull boxes, supports, cables
  - Mechanical work: piping, fittings, supports
  - Electrical supports require drilling and anchoring in concrete
  - Access is required along full height of columns
  -

Scuffling / Boom Truck / work platforms - Accessibility?

- **W2 CAP**
  - Electrical work: cable trays, supports, cables, rigid conduit (to dehumid unit)
  - Mechanical work: piping, fittings, supports
  - Electrical supports require drilling and anchoring in concrete
  - Access is required to bottom and east side surfaces of cap concrete
  -

- **W2-OBG TRANSITION**
  - Electrical work underneath: cable trays, supports, flex conduit, cables, grounding
  - Mechanical work around sides: piping, fittings, supports
  - Catwalk for main Cable installation may impede mechanical work
  - Cradles for OBG may impede electrical work
  - Access is required below girders for structural supports installation and electrical installations
  - Access is required inside girders for heavy concentration of electrical work including a large splice box for 15kV
  - Access is required at girder sides for mechanical work
  - Closure pour must be cured prior to installation of some pipe supports
  -

Staging of Materials ?

- **OBG-WB GIRDER**
  - Electrical work: cable trays, rigid conduits, pull boxes, cables, lighting, switches, receptacles, Seismic, Navigation, Fiber Optic, 15kV
  - Access/Egress in/out of girder is limited to small access holes near field splices
  - Cable trays are intended to be loaded from open end of lift segment
    - Will electricians have access to OBG segments prior to their erection, for staging materials and/or installing longitudinal cable trays on supports?
  -

LED Lighting in OBG / Tower ?

- **OBG-WB ROADWAY**
  - Electrical work: rigid conduits, flex conduits, pull boxes, cables, lighting, 20m light poles, receptacles, Call Box, TOS cameras, MVDS
  - Mechanical work: piping, fittings, supports, utility stations, expansion loops
  - Access is mainly required in and around roadway barrier
  - Access holes in deck plate must be repaired prior to some pipe installation
  - Completion is planned with Phase 2
  -

Conduits in Barrier Railing? Staging?

- **OBG-EB GIRDER**
  - Electrical work: cable trays, rigid conduits, pull boxes, cables, lighting, switches, receptacles, Seismic, Navigation, Fiber Optic, 15kV
  - Access/Egress in/out of girder is limited to small access holes near field splices
  - Cable trays are intended to be loaded from open end of lift segment
    - Will electricians have access to OBG segments prior to their erection, for staging materials and/or installing longitudinal cable trays on supports?
  -

Working on Service Platforms. Accessibility ?

- **OBG-EB ROADWAY**
  - Electrical work: rigid conduits, flex conduits, pull boxes, cables, lighting, 20m light poles, receptacles, Call Box, TOS cameras, MVDS
  - Mechanical work: piping, fittings, supports, utility stations, expansion loops
  - Access is mainly required in and around roadway barrier
  - Access holes in deck plate must be repaired prior to some pipe installation

Same issues as Westbound OBG

- **OBG-CROSSBEAM AT SERVICE PLATFORMS**
  - Electrical work: cable trays, rigid conduits, lighting, switches, receptacles
  - Access to crossbeam interior is from outside at service platforms or from inside of girders
  - Cable trays are intended to be loaded prior to erection of crossbeams

- **OBG-SERVICE PLATFORMS**
  - Electrical work: equipment racks, wireways, lighting panels, utility panels, transformers, breakers, panel enclosures, SCADA, Seismic, TOS/COM, 15kV
  - Access to service platforms is from crossbeams

- **OBG-EB BIKE PATH**
  - Electrical work: rigid conduit, flex conduit, lighting, 3.5m poles, Call Box
  - Mechanical work: piping, fittings, supports, utility stations, expansion loops
  - Access is required along edges of bike path and underneath bike path

- **OBG-TOWER TRANSITION**
  - Electrical work: rigid conduit, splice boxes, messenger cables, flex conduit, cables, lighting, grounding, Seismic
  - Mechanical work: piping, fittings, supports, expansion loops, Booster Pump
  - Access to electrical equipment platform at OBG-EB may be delayed due to presence of temporary crane tower

Issues with T1-ET - Needs to be addressed and resolved. CP

- **TOWER SHAFTS AND PLATFORMS INSIDE**
  - Electrical work: cable trays, cables, lighting, receptacles, switches, utility panels, transformers, breakers, Seismic
  - Access will be through permanent means of access/egress
  - What is predecessor to MEP access?

- **TOWER SHAFTS AND PLATFORMS OUTSIDE**
  - Electrical work: conduits, cables, pull boxes, lighting, receptacles, switches, Nav/Av Warnings, Seismic
  - Mechanical work: Elevator
  - What is predecessor to MEP access?

- **TOWER HEAD**
  - Electrical work: conduits, cables, lighting, switches, receptacles, Aviation Warning, Dehumid unit hookup
  - Mechanical work: Dehumid unit, dehumid ductwork, supports
  - Access will be through permanent means of access/egress
  - Ductwork installation can't be completed until after saddle housing is installed
  - What is predecessor to MEP access?

Issues - Tower Head installation after Load Transfer so MEP Installation will be close to CP.

- **TOWER ANCHORAGE**
  - Electrical work: Conduits, pull boxes, cables, lighting, switches, receptacles, Seismic, Dehumid unit hookup, Elevator hookup, Sump Pump hookup
  - Mechanical work: Dehumid unit, dehumid ductwork, supports, Sump Pump, and piping, Elevator
  - Access will be through permanent means of access/egress
  - What is predecessor to MEP access?

Issues on Skirt Installation and MEP Installation.

- **T1 PILE CAP**
  - Electrical work: conduits, cables, lighting, Navigation Warning
  - Do temp structures affect access?

Issues on Skirt Installation and MEP Installation.

- **TOWER-CABLE TRANSITION**
  - Electrical work: conduits, supports, cables
  - Mechanical work: dehumid system ductwork
  - Access for MEP must follow cable shroud installation

Issues - Tower Head installation after Load Transfer so MEP Installation will be close to CP.

- **SAS-SKYWAY TRANSITION**
  - Electrical work: cable trays or conduits, supports, cables, splices
  - Mechanical work: piping, fittings, expansion loop, supports, tie-in
  - Access is required for mech work below bike path
  - Hinge A pipe beams carry conduits and electrical circuits, so they must be set prior to completion of electrical work

- **CABLE MAIN SPANS AND BACK SPANS**
  - Electrical work: messenger cable, flexible conduits, pull boxes, cables, lighting, Seismic, Aviation Warning
  - What is predecessor to MEP access?
  - Will catwalk impede any electrical installations?
  - At what sequence will catwalk be removed?
  - How many cable wrapping machines will be used?
  - Can electrical components be installed shortly behind cable wrapping progress?
  - Is painting a predecessor for electrical work?
  - What is cable wrapping and paint sequence for main span and back spans, north side and south sides?

Wrapping with no stanchions on - Messenger cable after wrap. Possible start back span then main span. MEP Backspan/ mainspan.

- **CABLE ANCHORAGES AND SADDLES**
  - Electrical work: dehumid unit hookups near West jacking saddle, East anchorages, Tower saddle (same as Tower Head)
  - Mechanical work: dehumid unit near west jacking saddle, East anchorages, and Tower saddle; dehumid ductwork at west saddle housings and shrouds, Tower saddle housing and shrouds, OBG anchorage and saddles
  - East anchorage dehumidification system installation is affected by cable installation and anchoring operations
  - Ductwork installation must follow cable shroud and saddle housing installations at Tower Head and West Saddles
  - What is predecessor to duct installation at East Anchorages?
  - How/When can dehumid units be loaded into East anchorages?

Staging of work and materials for accessibility and installation.

- **E2 COLUMNS CAP**
  - Electrical work: pull boxes, conduits, cables
  - Access is required at side of cap
  - Will temporary work for bearings or shear keys limit MEP access to east side?
  -

Accessibility and using temporary structures.

- **E2 COLUMNS**
  - Electrical work: conduits, cables, supports
  - Access is required along full height of columns
  - Do temp structures affect access?
  -

Accessibility and using temporary structures.

- **E2 PILE CAP**
  - Electrical work: conduits, pull boxes, cables, lighting, Navigation Warning, Seismic
  - Do temp structures affect access?
  -

Accessibility

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- **LOAD TRANSFER CONSIDERATIONS**
  - How much barrier movement or compression is expected relative to deck
    - Can conduit be secured to barrier and pull boxes prior to load transfer?
  - Can conduit be secured to deck prior to load transfer?
  - Will temp tower removal create more OBG movement or compression?
  - Will OBG movement or compression affect MEP installations inside the OBG?
  - Does proper load transfer require weight of MEP materials to be installed in/on OBG?
  - Does proper load transfer require weight of Travelers to be hung from OBG?
  -

- **GENERAL MEP CONSIDERATIONS**
  - Structure transitions are likely to have temporary structures impeding MEP installations prior to removal of temporary structures
    - What effect would this have on system installation?
    - What effect would this have on system testing?
  - Must all work on cables be completed prior to opening roadways to traffic?
  - Must all roadway lighting, MVDS units and call boxes be installed and operational prior to opening roadways to traffic?
  - Must Tower outside work be completed prior to opening roadways to traffic?
  - What areas will ABFJV make available for local storage or staging of materials?
  -

- **MEP CONSIDERATIONS IN AND AROUND BARRIER**
  - Conduits are intended to be loaded from open end of barrier segments.
    - What is Bleyco plan for moving conduits into place and securing them?
  - Schedule currently shows all barrier (through Lift 14) getting set prior to conduit installation
    - Can schedule be condensed to show conduit installation beginning sooner and progressing as barrier erection progresses?
    - Will barrier bolting be impeded by conduit and pull box installation?
    - What is predecessor for securing conduit to barrier and pull boxes?
    - Can pull box installation and conduit fastening progress shortly behind barrier bolting progress?
  - Can piping installations progress shortly behind barrier bolting progress?
    - Must piping installation be preceded by conduit and pull box installation?
    - Must piping installation be preceded by cable pulling?
  - Must electrical testing precede installation of barrier cover plates at pull box locations? At other locations?
  -

- **MECHANICAL SCHEDULE OR SEQUENCE CONSIDERATIONS**
  - Schedule currently shows work for both roadways being performed simultaneously. Considering the Phase 2 completion milestone, should work along Westbound roadway progress ahead of work along Eastbound roadway?
  - Must all pipe installation follow after load transfer?
  - What lengths of steel pipe will be preassembled prior to installation?
  - ABFJV consider painting steel pipes prior to their installation?
  - Schedule currently shows testing activities for each each system by phase, followed by an overall performance test. Is schedule realistic or can some time get reeled in?
  - What is FWS plan for resource loading?
  - What is planned for local storage or staging of materials?
  -
  -
  -

- **ELECTRICAL SCHEDULE OR SEQUENCE CONSIDERATIONS**
  - Schedule currently shows all barrier through Lift 14 getting set prior to conduit installation in barrier
    - Can schedule show
  - Can Bleyco procure and deliver materials and equipment prior to the current schedule completion date of January 2010?
  - What electrical activities have load transfer as a predecessor?
  - What is BLI plan for resource loading?
  - What is planned for local storage or staging of materials?
  - What length of cable tray or conduit should be installed prior to cable pulling?
  -
  -
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- **OUTSIDE AGENCY INVOLVEMENT**
  - Coordination is required for the following systems with the following groups. Can outside agencies be trusted to cooperate with SAS schedule opportunities?
    - Traffic Operation Systems - TOS Specialists (Caltrans non-SAS)
    - Strong Motion Detection & Recording Systems - CDMG
    - Navigation & Aviation Warning Systems - FAA & Coast Guard
    - BASE (Bay Area Security Enhancements) – Caltrans (non-SAS) & Federal Homeland Security
    - Elevator – D.O.S.H.
    -

- **DESIGN CONSIDERATIONS**
  - How does incomplete design work for electrical installations at Tower platform affect schedule opportunities?
  - What other designs are incomplete and have potential to delay the project schedule?
  -

- **OPPORTUNITY SCHEDULE SUGGESTIONS**
  - Sever the Finish-Start schedule ties between load transfer and barrier bolting. Complete barrier bolting as early as possible.
  - Don't change MEP layouts at Tower platform elevation 53.85. Have architect design curtain screens to hide all things they consider to be hideous.
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A more complete review and comment write-up will be provided. This meeting was to establish the key areas of concern and what needs to be evaluated to provide a better schedule of accessibility, Staging, coordinated installation and categorizing of issues that need to be resolved during this period of time.