

REPLACED ONE COPPER HOSE DUE TO LEAKY FITTING. (RV,AU)

7) THEN THROUGHT CAR-8 PRC NO DAMAGE TO THE MOUNT STUD AT THIS TIME ALSO
WENT AND TORQUED THE STUD NUTS TO 10-LBF/FT.(DA)

8) WIND STOPPED AT C-SAT; TURNED STATION DOORS BACK ON. (RF)

9) BEGAN WORK ON P.M. 60 ON THE WEST TRAIN COMPLETED ALL OF CAR 4 EXCEPT
DOOR FORCES. (TA,RF,PT,AU,RV)

03848

DATE	DUTIES	ENTERED BY
05-12-08	1ST DUTY TECHS: TS, DMK-M1, IC. HANDBACK STATUS: NONE	D M KARPA
1) CALLED BIGTOWN FOR WORK ON A.C UNITS ON CAR 9 AND A.C. UNIT ON CAR 8. THEY WILL BE IN ON TUES/WED NITE @ 12:15. (TA)		
2) RECEIVED SUPPLIES: (5) PSEUDO-LEATHERMANS; (2) CORDLESS LED SHOP LIGHTS; AND, (1) INFARED THERMOMETER. (TS)		
3) DAILIES COMPLETED: NOTHING NEW TO REPORT. (DMK,TS)		
4) AVAILABILITY FOR WEEK ENDING 5/11/08 WAS: 100% (JCM)		
5) REBUILT AN AR2 - NEEDS TESTING. PREPPED SPRING BRAKE CHAMBER FOR REBUILDING. (IC) <<<< F6 >>>>		
6) WORKED ON SKILLS DEMO RE-WRITES. (TS)		
7 @1840, CC REPORTED A FIRE EXTINGUISHER REMOVAL VEH 8 ALARM WHILE SOUTH WAS ENROUTE TO TERMINAL. UPON ARRIVAL, NOTED CIGARETTE SMOKE RAPIDLY DISSIPATING. CYCLED ELB. CLEARED ALARM. RECEIVED NO DEPARTURE ALARM. DEPRESSED EMERGENCY TRAINLINE RESET. TRAIN DEPARTED ATO. NO FURTHER PROBLEMS. (TS,RV,IC)		

3RD P M THOMAS
DUTY TECHS: PT,RV(M1),DR,RK
HANDBACK STATUS: NONE

- 1) CHANGED CAR-7 #5 TIRE DUE TO FLAT SPOTS. UPDATED DATABASE AND DEFECTIVE TIRES LIST. (PT,RV)
- 2) REPLACED TWO RESILIENT MOUNTS ON C5 AIR COMPRESSOR FOR TEARING. CLOSED OPEN ITEM. (DR)
- 3) REPLACED PINION SEAL AND INSTALLED NEW YOKE ON CAR-7 NO.1 END DUE TO OIL LEAK. (RDK)
- 4) REPLACED CRACKED PINION SHROUD ON CAR-6 NO.1 END. (RDK)
- 5) INSTALLED RUBBER MATERIAL ON A/C EQUIPMENT C-5 #2 END. (RK,RV)

05-13-08 1ST D M KARPA
DUTY TECHS: TS(M1),DMK,IC
HANDBACK STATUS: NONE

- 1) CONTINUED WORKING ON SKILLS DEMOS. (TS)
- 2) COMPLETED DAILIES: NOTHING NEW FOUND. (DMK,IC)
- 3) COMPLETED NORTH 7-DAY: SEE LOG FOR ITEMS CHANGED. (CREW)
- 4) RECEIVED FOUR ALARMS ON NORTH AND SOUTH TRAINS BETWEEN 1728 AND 1830.

DATE	DUTIES	ENTERED BY
DID NOT GET ANY NOTIFICATION FROM CENTRAL. (TS)		

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3RD P M THOMAS
DUTY TECHS: PT,RV,DR(M1),RK
HANDBACK STATUS: NONE

- 1) COMPLETED BOGIE INSPECTION ON WEST FOR PM 62. LOCATED MINOR LEAK ON INSIDE HUB/BRAKE ASSEMBLY ON C4 TIRES 7/8, CREATED OPEN ITEM. (DR)
- 2) REPLACED TWO RESILIENT MOUNTS ON C9 AND TWO MORE ON C10 FOR WEAR. CLOSED OPEN ITEMS. (RDK,DR)
- 3) ASSISTED BIG TOWN IN REPAIRING/RECHARGING AIR CONDITIONING UNITS ON C8 AND C9. LOCATED BURNT/BROKEN WIRE ON #1 END OF C9 RCMC A-PHASE (REPAIRED W/GOOD FIX), LEAK FOUND ON PIPE #2 END OF C9, WAS REPAIRED & CHARGED, ADDITIONALLY SWAPPED OUT PC BOARD. CAR-8 CHECKED OK; CHARGED UP. (RDK,DR,TA)
- 4) PERFORMED COMPLETE BRAKE JOB ON CAR-4 1/2. FOUND INSIDE TIRE WITH...F6>
4) MASSIVE SIDEWALL SPLIT ALL THE WAY AROUND. INSTALLED TWO NEW TIRES. ONE OF THE OLD TIRES WAS MARKED AS GOOD SPARE. (PT,RV)
- 5) EARLIER IN EVENING, NOTED ABNORMAL SOUND COMING FROM CAR-8 AIR COMPRESSOR. DURING MAINTENANCE, FOUND SHROUD ON THE COMPRESSOR WITH BROKEN EAR (LOWER RIGHT); REPLACED. WILL HAVE TO REPAIR THE OLD ONE SO WE HAVE A GOOD SPARE READY TO GO. (RDK)
- 6) REPLACED BURNT OUT POWER INDICATOR LAMP (RED) AT SOUTH MANITENANCE PLATFORM. (RDK)
- 7) RETORQUED CAR-7 5/6 TIRESET. (PT,TA)

05-14-08 1ST A J SCHNEIDER
DUTY TECHS: DMK, TS, MM, MDM (M1), NB, IC
HANDBACK STATUS: NONE.

- 1) DAILIES COMPLETE. NOTHING NEW TO REPORT. (CREW)
- 2) COMPLETED HEAT STRESS TRAINING. (DMK)
- 3) REMOVED RECYCLE PAPER. 22 LBS. (DMK)
- 4) STARTED PM1203, COMPLETED THE TEST EQUIPMENT PART. (DMK)
- 5) LOOKED FOR HORTON DOOR HEADERS IN THE TUNNELS. NOTED REPLACEMENT POWER AND SIGNAL RAIL, EXTRUDED ALUMINUM THRESHHOLD MATERIAL AND ALUMINUM SPACERS FOR FILLER STRIPS. ALSO, RELOCATED A NEW FILLER STRIP TO THE D-ATC ROOM. NO HORTON DOOR HEADERS LOCATED. (MDM,TS) <<< F6 >>>
- 6) REBUILT (3) HUB/DRUM ASSEMBLIES. USED LAST (2) NEW DRUM ASSEMBLIES AND REUSED DRUM PULLED FROM C8. PLEASE, NOTE WHICH ONE TO USE FOR THE NEXT C-TRAIN BRAKE JOB. (NB,MM,IC)
- 7) REBUILT (2) SERVICE BRAKE CHAMBERS. (IC)

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DATE DUTIES ENTERED BY

- 8) UPDATED A COUPLE PROCEDURES AND SKILLS DEMONSTRATIONS. (TS)
- 9) DISASSEMBLED VAPOR DOOR MOTOR TAGGED FOR RMR AND FOUND LEAD-LIKE MATERIAL JAMMED WITHIN. CLEANED OUT AND WILL TEST UNDER LOAD LATER. (MDM)

3RD P M THOMAS

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9) HAD TO RECOVER WEST TRAIN TWICE, ONCE FOR STOPPING SHORT ON AN A-FLAG AT SAT AND ONCE MORE FOR STOPPING SHORT AT MAIN. EACH TIME, RODE FOR SEVERAL TRIPS TO ENSURE PROPER BERTH ALIGNMENT UNTIL IT EVENTUALLY SETTLED. INCLUDED IN TIMES AS OPM B/C THEY BOTH OCCURED DURING THE MAINTENANCE WINDOW (DR)

10) EARLY THIS MORNING BEGAN TO RECEIVE BATTER CHARGER FAIL ALARMS ON THE WEST TRAIN CAR 4. WENT TO TRAIN & MONITORED BATTERY VOLTAGE ON CAR 4. ALL APPEARS TO BE NORMAL. HAD TO FLIP UP "3'S" SO CENTRAL WOULDN'T CONTINUE TO GET ALARMS. WILL INVESTIGATE FURTHER TONIGHT. (TA,KD,DR)

11) IN REFERENCE TO ITEM 9. WE MAY NEED TO "ADJUST" THE AR-1'S ON THE WEST TRAIN IF THIS PROBLEM OF ALIGNMENT CONTINUES TO OCCUR. STOPPING SHORT/LONG. JUST AN IDEA. (TA)

06-09-08 1ST D M KARPA
DUTY TECHS: TS(M1),DMK,AG
HANDBACK STATUS: C3

1) @1128, POWERED DOWN WEST TO REMOVE LONG CARDBOARD STRIPS WRAPPED AROUND THE 100' AND 300' MARK UNISTRUT AND FLAGS. MADE TWO ATO RUNS WITHOUT PAX TO ALLOW TRAIN TO LINE UP AT BOTH STATIONS (STOPPING SHORT - REQUIRED DRIVING IN TO ALIGN IN STATION). IN REVENUE @1147. (TS)

2) PM-1000 COMPLETED. (DMK)

3) DAILIES COMPLETED: N/M BUFFER END CLOSE AND LOCK LIGHT OUT. (DMK,TS)

4) NIGHTS, PLEASE CHECK THE DOOR SWITCHES AT BERTH 1 DRS 7/8 S-SAT. LAPTOP STILL SHOWS 3F SOMETIMES ON THE A/S B1, RX-D DR CODE. CODE SHOULD SHOW 0. MAY STILL HAVE MORE BAD SWITCHES. TRAIN APPEARS TO BE RUNNING BETTER. (DMK)

5) WATCHED STORMWATER AND POLLUTION TRAINING. TOOK TESTS. (AG)

6) MADE NEW STICKERS FOR RADIOS. IN MIDDLE TECH DESK BASKET. (AG)

7) CONTINUED INVENTORING PARTS. (AG,TS)

8) @1421, CC REPORTED A WEST AS BOARDING DR MALFUNCT. BY THE TIME WE GOT DOWN THERE, THE ALARM CLEARED - NO ACTION NEEDED. (TS,AG)

3RD P M THOMAS
DUTY TECHS: PT,RV(M1),DR,RK
HANDBACK STATUS: CAR-3

1) COMPLETE BRAKE JOB ON CAR-3 5/6. ALSO CHANGED 5/6 AIR BAG THAT NEEDED TO BE REPLACED. CLOSED OPEN ITEM. (PT,RV)

2) COMPLETED PM-311 (LS/BS INSPECTION) ON SOUTH TRAIN. (RK,DR)

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DATE DUTIES ENTERED BY

3) INSTALLED DIODE ON CAR-5 TO TROUBLESHOOT THE BYPASS LIGHT ON THE MANUAL CONTROLLER NOT OPERATING. THE REPLACED PART SEEMS TO HAVE CORRECTED THE FUNCTION OF PLACING THE VEHICLE DOORS IN BYPASS (I.E. THE TRAINLINE NOW LIGHTS AND THE CORRECT INDICATIONS OCCUR). THE LIGHT ON THE MANUL CONTROLLER STILL DOES NOT WORK THOUGH; WILL HAVE TO CHASE AT A LATER DATE. (RK,DR,TA)

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DATE	DUTIES	ENTERED BY
07-22-08	3RD	P M THOMAS
DUTY TECHS: PT(M-1),RV,DR,RK		
HANDBACK STATUS: CAR-3		
1) AT 1900, CC CALLED WITH A REPORT OF A LARGE CRACK ON ONE OF THE WEST WINDOWS. LOCATED CRACK ON THE WINDSHIELD OF CAR-3 #2 END. ADDED TAPE TO AFFECTED AREA TO PREVENT ANY GLASS FROM FALLING AND CORDONED OFF IMMEDIATE AREA UNTIL MAINTENANCE TIME. SKJ AND JCM NOTIFIED. (PT,TS) 2) HAD SEVERAL NO DEPARTS ALARMS W/S. INVESTIGATED AND FOUND BERTH 1 DOORS 5/6 NOT CLOSING COMPLETELY AND RECYCLING. TURNED OFF DOOR SET 5/6 AND ALARMS WENT AWAY. NOT SURE IF DOOR PROBLEM IS CAUSED BY THE WIND. WILL NEED TO LOOK AT DOOR TO SEE IF PROBLEM IS BIGGER. (RV) 3) IN REFERENCE TO ITEM 1, REPLACED CAR-3 #2 END FRONT WINDSHIELD. THERE ARE TWO SMALL CRACKS THAT WERE MADE DURING INSTALLATION. WILL >>>F6>>> MONITOR. (ALL) 4) TOOK C7 OUT OF HANDBACK AND LET RUN DURING THE NIGHT. PRIOR TO OPENING TRAIN FOR SERVICE DISCOVERED MPB TRIPPED ON C7, RESET AND TRAIN RAN WITHOUT ANY FURTHER PROBLEMS. (DR) 5) COMPLETED NIGHTSHIFT AND DAYSHIFT DAILIES. (ALL) 6) TURNED ON STATION DOOR 5/6 POS.1 WEST SAT. (RK)		

DATE	DUTIES	ENTERED BY
07-22-08	1ST	A J SCHNEIDER
DUTY TECHS: TS(M1),KDP		
HANDBACK STATUS: C3		
1) THE CPU BOARD ON THE SOUTH ATO PC THAT WAS REMOVED SATURDAY WAS BAD. I INSTALLED A NEW CPU BOARD TESTED THE PC AND PUT IT BACK IN SPARES (D ATO ROOM TEST STAND). FOR NOW THERE IS ONLY THE WHOLE SPARE PC FOR THE SOUTH ATO. I WILL GET AN EXTRA S-RAM BAORD LOADED WITH THE CORRECT SOFTWARE, TESTED AND PUT IN SPARES IN A FEW DAYS. (JCM) 2) WHILE GETTING A/C TEMPS, NOTED W/S, B1, 5/6 NOT CLOSING ALL OF THE WAY, CAUSING NUMEROUS RECYCLES. AT ONE POINT 7/8 FAILED TO CLOSE DUE TO A TRIPPED BREAKER ON THE DOOR POWER SUPPLY - RESET. TURNED OFF 5/6 AND POSTED SIGN. (TS) 3) COMPLETED TRAINING PROGRAM TEST. (TS) <<<<< F6 >>>>> 4) COMPLETED REMAINDER OF DAILIES (A/C TEMPS): NOTED THAT C10, #2 END A/C BLOWING WARM - CYCLED LCB AND IT BEGAN BLOWING COOL. ALSO NOTED C9, #1 END BLOWING WARM - CYCLED LCB AND IT BEGAN BLOWING COOL, BUT, AIR FLOW SEEMS RESTRICTED (ICED UP?). (TS) 5) STARTED NORTH 7-DAY: C7, #1 END A/C COMPRESSOR MOUNTS SHOT; C5, TIRESET 1/2 ALMOST DOWN TO THE WEAR BAR - NIGHTS, SECOND OPINION, PLEASE; AND,		

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DATE	DUTIES	ENTERED BY
ONLY THE COLLECTOR TREE PORTION IS LEFT - WILL COMPLETE TOMORROW IF NOT COMPLETED BEFORE THEN. (TS,KDP)		

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3) ATTENDED PDS TRAINING COURSE. (ALL)

4) VACUUMED OUT ALL STATION DOOR THRESHOLDS AT NORTH TERMINAL AND SATELLITE. (CR,TA)

F6>

5) GENERATED FDR FOR TRACTION MOTOR PULLED LAST NIGHT. (RK)

07-24-08 1ST M D MCCULLOUGH
DUTY TECHS: MDM (M1), NB, MM
HANDBACK STATUS: C3

1) DAILIES COMPLETE. NOTHING NEW TO REPORT. (CREW)

2) REBUILT TWO COLLECTOR TREES. TESTED GOOD AND PUT IN SPARES. (MDM)

3) HAPPENED TO BE ON CAR 3 WHEN WE HAD A WEST TRAIN STOP. WEST WAS IN STATION WHEN ALIGHTING DOORS CLOSED AND THE VEHICLE BOARDING DOORS ON CAR 3 CLOSED ABOUT A FOOT BEFORE THEY JUST DIED. AFTER 10 SECONDS THEY OPENED BACK UP. THEN ALL THE DOORS OPENED. THE TRAIN WENT THROUGH ANOTHER DWELL CYCLE BEFORE THE DOORS CLOSED AND IT GOT STATION CLOSE AND LOCK BUT SAT IN THE BERTHS FOR 10 SEC BEFORE IT LEFT. (NB)

4) COMPLETED FIRST AID INVENTORY. (MDM)

3RD C D AYERS
DUTY TECHS: DA, RF-M1, CR, ED
HANDBACK STATUS: C3

1) ESCORTED COUNTY HVAC INTO D-SAT UPS ROOM FOR FILTER CHANGE OUT. (DA)

2) GROUND COMMUTATOR ON TRACTION MOTOR W08165D8-1 INSTALLED ON C6 #1 END. PROFILED AND GAVE PRINTOUTS TO ENGINEERS. (CREW)

3) TURNED OFF W/S B1 5/6 FOR RECYCLING DUE TO WIND. (ED,CR)

07-25-08 1ST M D MCCULLOUGH
DUTY TECHS: NB (M1), MM, MDM
HANDBACK STATUS: C3

1) DAILIES COMPLETE. NOTHING NEW TO REPORT. (CREW)

2) REBUILT A HUB/BRAKE ASSY. FOR THE C SYS. (MM,NB)

3) REORGANIZED VEHICLE AND WAYSIDE BOARDS IN INVENTORY

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DATE	DUTIES	ENTERED BY
03-15-13	3RD C D AYERS DUTY TECHS: DA, RF, CR-M1, ED HANDBACK STATUS: C-3	
	1) DID THE NORTH GUIDEWAY INSP. FOR UP COMING WORK, POSTED WORK SHEETS. (DA)	
	2) COMPLETED BRAKE JOB ON CAR-3 1/2. (CREW)	
	3) AFTER COMPLETING ITEM-2, CRAIG M-23 FOUND THAT CAR-3 5/6 HUB SEAL WAS LEAKING, TO LATE TO REPLACE SO WE CHECKED OIL LEVEL AND ADDED MORE TO MAKE IT TILL TONIGHT, SORRY { DAY'S } BUT WE NEED YOU TO REPLACE THE SEAL TODAY IF YOU CAN PLEASE. (DA)	
	4) TURNED OFF DOORSET B-3 3/4 NORTH MAIN DUE TO MALFUNCTIONS. WILL LOOK AT	

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3) WHEN TRYING TO CLOSE THE WEST FEEDER BREAKER REMOTELY AND WAS UNABLE TO DO SO, DA TOOK AARON & CRAIG DOWN TO THE PDS TO SHOW THEM HOW TO CLOSE THE BREAKER. WHEN I SEE THAT THE REMOTE SWITCH WAS OFF PLACED BACK TO REMOTE AND HAD CONTROL TRY TO CLOSE THE BREAKER AGAIN THIS TIME WORKED. (DA, AU, CR)

F6>

5) HAD TO TURN OFF STATION DOORSET 3/4 BERTH-3 SOUTH MAIN DUE TO MALFUNCTIONS AND AUTO-LOCK NOT DROPPING CORRECTLY. CYCLED DOORS TWICE W/NO FIX. CAUSED 3 MIN. DELAY IN DEPARTURE OF TRAIN BUT WE JUST HAPPENED TO BE THERE TO WIGGLE DOORSET, GET CLOSED AND LOCKED AND TRAIN LEFT. PLACED DOORSET IN CUTOUT AND POSTED SIGN. WILL HAVE TO GET IT TOMORROW. (RV,RK,PT)

7) AT 23:20 HAD NO DEPARTURE AND DOORS FAIL TO CLOSE ON CAR-10 SOUTH SAT. CYCLED DOORS SEVERAL TIMES W/NO FIX. WENT TO RECOVER AND UPON ARRIVAL, REMOVED DOOR COMMAND AND TRAIN LEFT AT 23:28. RODE TRAIN WITH NO REPEAT OF

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ISSUE. (AU,CR)

- 1) WENT OUT TO TOWN TO CHECK OUT A MATERIAL LIFT. (MDM, RK, TA)
- 2) DAILIES COMP: C3, TIRE 3/4 DOWN TO 105 PSI. AIRED TO 120. C5, TIRE 2 HAS A SIDEWALL SPLIT BUT HOLDS AIR. (CREW)
- 3) DISASSEMBLED A COLLECTOR TREE FOR CLEANING. (MDM)
- 4) COMPLETED MONTHLY TRAINING. (CREW)
- 5) TIM WILL NOT BE IN FRIDAY MORNING HE IS TAKING A V-DAY. (JCM)

8) FOUND C5, TIRE 1/2 CROSSFIRE ALL BLACK. DISCONNECTED CROSSFIRE AND
AIRED TIRE 1 TO 120PSI. (CREW)

1) HAD TO PULL THE NORTH DOWN TO REPLACE CAR-5 TIRES-1&2, DUE TO SIDEWALL SPLIT ON TIRE-2, WHICH HAD CAUSED IT TO SLIP AROUND ON THE RIM, DID NOT WANT TO TAKE A CHANCE ON IT COMING OFF THE RIM, CALLED JOEL & CONTROL TO INFORM THEM AS TO WHAT WE WERE DOING. (DA, CREW)

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5)

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TO REBOOT C-9 ATC1 BY CYCLING BCB-1 & 2. ALARMS CLEARED AFTER ATC REBOOT.
PUSHED THE TRAINLINE RESET AND THE TRAIN DEPARTED AT 1739. (CREW) F6>>
4) DAILIES COMPLETED: OPEN ITEM MADE. (CREW)

6) REMOVED FROM SPINDLES, CLEANED AND INSPECTED 14 GUIDE TIRES. HAD 1 BAD TIRE AND 1 BAD RIM. (KD)

8) PLACED 12 USED AND 24 NEW GUIDE TIRES ON THE TIRE RACK. 3 OF THE USED TIRES WERE INNACUSH. (KD)

Page***

>>>>>>>>>>>>>F6<<<<<<<<<<<<<<

10) PLACED AIR COMPRESSOR PARTS IN INVENTORY. (KD)

1) AT 1956 CENTRAL CALLED WITH REQUEST TO TALK COMING FROM C-7. ASKED WHERE THE TRAIN WAS AND WHAT OTHER ALARMS THEY HAD BUT THEIR BATTERY STARTED TO DIE AND THEY DIDN'T ANSWER. WE ISSUED AN OPEN/CLOSE DOOR FROM THE ATC ROOM AND THE NORTH TRAIN DEPARTED SAT AT 1956. FOUND OUT WE HAD A TDAS AND DFTC ALARMS AT 1949. PUT INTO SIMS AS 7 MINUTES OPE. (CREW)

2) (COUNTINUE) WE TEST RAN DOOR SET, THIS TIME WITH NO PROBLEMS. PLEASE
KEEP AN EYE ON THIS DOOR SET. (CREW)

3) OPEN ITEM: C2 LEAF 8 SQUEELS. INSPECTED DOOR AND VERIFIED SQUEEL. OILED ROLLERS AND TESTED DOOR. VEHICLE DOOR LEAF 8 IS OK NOW AND NO LONGER SQUEELS. CLOSED OPEN ITEM. (AF)

4) LOOKED AT C-9 LEAF 6 FOR NO RECYCLE. REPLACED THE PRESSURE WAVE SWITCH. DOOR LEAF NOW RECYCLES PROPERLY. CLOSED OPEN ITEM. (CR)

5) LOOKED AT C-10 LEAF 2 FOR SQUEALING. OILED CONTACT EDGE ROLLER. CLOSED
OPEN ITEM. (CR)

6) CONTINUED WORKING ON THE NORTH PM-602. COMPLETED C-5. (CREW)

7) ESCORTED CLEANERS TO WASH WINDOWS ON THE SOUTH TRAIN. (CR)

8) HELPED CONTRACTORS FINISH UP THE SIGN WORK AT SOUTH SAT. (CR)

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5) SD MAC ALL 4 TRAINS 1600-1630 ALSO ASSISTED METRO WITH TRANSIT TO D
GATES WITH THE SOUTH TRAIN (NO PAX). (CREW)

7) 19:12 TO 19:18 WEST SAT, E5 CODE ON BOTH BERTH 2 1/2 AND 3/4. (MDM)

1) COMPLETED PM-513 ON THE WEST. C-3 #2 END UNIT NOT COMING ON, MIGHT JUST NEED TO BE CHARGED. OTHER 3 UNITS BLOWING COLD. ALL SET TO AUTO AND 70 DEGREES. (PT.AU)

3) CONTRACTORS IN TO WORK @ NORTH SAT. STATION DOOR STICKER INSTALL. (DE)

5) E/M TDAS INACCURATE STATION STOP, TRAIN FAILED TO ARRIVE, HAD TO MANUALLY RECOVER TRAIN, 22:57 TO 23:01 WROTE UP AS LVA.(MJ)

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 DATE DUTIES ENTERED BY

2) GROUND TRACTION MOTOR LVPH009. PROFILE WAS ATROCIOUS AND NOW LOOKS GOOD. (CREW)

4) 13:20 TO 13:25 WEST STUCK AT SAT FOR E5 CODE ON BERTH 1 5/6

5) 14:49 TO 14:54 WEST STUCK AT SAT FOR E5 CODE ON BERTH 2 3/4

1) TDAS E/S AT 22:23 DFCT NO CALL FROM CC UNTIL 22:29. TRAIN LEFT ATO.
WROTE UP AS OPE 6 MIN. (MJ)

2) SWEPT TRASH FROM WORK PLATFORMS. (MJ)

3) STARTED PM-602 ON THE NORTH. (PT)

4) DAILIES COMPLETED. (CREW)

5) COMPLETED PM-510 ON THE NORTH. MADE OPEN ITEM FOR PRESSURE WASHING AND A BROKEN CLAM SHELL BOLT @ 1960 FT. MARKER. (CREW)

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- 7) PALLETED UP TRACTION MOTOR FOR T3. (MDM, WS)
 - 8) MADE TRASH RUN. (KD, WS)
 - 9) COMPLETED PM1005 C-WAYSIDE. (KD)
 - 10) COMPLETED 7 DAY ON NORTH. C5 #2 TRACTION MOTOR (LVAD009) IS BURNING THROUGH BRUSHES. CHANGED ALL THE BRUSHES, NIGHTS PLEASE CHANGE OR TURN THE MOTOR TONIGHT (PER TS). (MM, NB, MDM)
 - 11) COMPLETED PM 200. (KD)
 - 12) INSPECTED AND TESTED 4 LRS RELAYS: 3 FAIL AND 1 PASS. F6>>>>>>>>>
 - 13) ATTEMPTED TO DOWNLOAD VIDEO FROM THE HARD DRIVE REMOVED FROM THE WEST TRAIN W/ NO SUCCESS. THE HARD DRIVE IS STILL IN THE DVR WHICH IS INSIDE THE RECEPTION AREA. (VM)
 - 14) MADE WHITE PAPER RECYCLE RUN. (KD)
 - 15) @ 1813 W/S TDAS, DR RECYCLES NO HELP, FOUND B2 3/4 MALF OPEN, MANUALLY CLOSED, TRAIN DEPARTED @ 1818, RESET DRS. (CREW)
 - 16) COMPLETED PM 1006 C-WAYSIDE. (KD)
 - 17) H/P HEAD UNDER TEST PASSED. (KD)
 - 18) DAILIES COMPLETE. (CREW)

3RD A N URBINA

DUTY TECHS: AU,MJ,DE.AF
HANDBACK STATUS: NONE

- 1) CR CALLED OFF SICK FOR THE NIGHT. (MDM)
- 2) REPLACED MOTOR ON C5 # 2 END PER TS. REMOVED LVAD009 AND INSTALLED

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DATE	DUTIES	ENTERED BY

LVPH014. (CREW)		
3) COMPLETED PM 203. RATO/RATP REBOOT FROM 03:27-03:37. (CREW)		
4) DAILIES COMPLETED.		
5) UNABLE TO HAVE CONTRACTORS WORK ON N/S STATION DOOR SIGNS DUE TO MOTOR REPLACEMENT. SPOKE WITH CONTRACTORS AND THEY WILL BE TONIGHT TO WORK ON N/S STATION DOORS. (AU)		

03-15-12 1ST M W MCGHEE

TECHS ON DUTY: MDM, NB, MM(M1)
HANDBACK STATUS: NONE

- 1) DAILIES COMPLETE. (CREW)
- 2) TDAS E/S, RECYCLE DIDNT WORK WENT TO SAT FOUND 5/6 B 2 STUNTED E/5 CODE CLOSED DOOR TRAIN LEFT ATO.
- 3) AVAILABILITY FOR THE WEEK ENDING 11 MAR: 0.9924. (TS)
- (4) REBUILT 6 AUTOLOCKS. (CREW)

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4) COMPLETED WEEKLY REBOOTS OF THE SERVERS. APPROX. 0300-0400. (CREW)

03-29-12 1ST M D MCCULLOUGH
DUTY TECHS: NB (M1), MM, MDM
HANDBACK STATUS: NONE

- 1) DAILIES COMPLETE. ADJUSTED DWELLS ON NORTH AND SOUTH. (CREW)
- 2) REC'D 12 CANS OF CONTACT CLEANER. GAVE BOX TO TS. (MDM)
- 3) ACCEPTED TRACTION MOTOR LVPH016. CHECKED OUT GOOD, GREEN TAGGED AND PUT IN SPARES. (CREW)
- 4) TDAS 16:40 AT WEST MAIN. B1 1/2 WAS MALF WITH AN E5 CODE. RESET AND TRAM LEFT ATO AT 1643. (MDM)

3RD P M THOMAS
DUTY TECHS: PT,AU,MJ
HANDBACK STATUS: NONE

- 1) REPLACED C-6 #2 END PINION SEAL DUE TO LEAK. CLOSED OPEN ITEM. (AU,MJ)
- 2) STARTED PM-1200 AT THE WEST MAIN. (PT)
- 3) DAILIES COMPLETED. (CREW)
- 4) PRINTED OUT PM'S. (PT)
- 5) 0636 CC REPORTED TDAS, DFTC W/S. ISSUED SEVERAL DOOR COMMANDS WITH NO FIX. NOTED B1 5/6 MALF. OPEN WITH E5 CODE. RESET MALF. AND TRAIN DEPARTED ATO AT 0641. (AU,MJ)

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DATE	DUTIES	ENTERED BY
03-30-12	1ST	M D MCCULLOUGH
DUTY TECHS: MDM (M1), MM, NB		
HANDBACK STATUS: NONE		
1) NIGHTS, AIRPORT PERSONNEL REPORTED BANGING NOISES WHEN THE NORTH TRAIN IS TRAVELING ON THE GUIDEWAY. DAY CREW HAVE IDENTIFIED A MISALIGNED I-BEAM @3030' MARK. IT ALSO APPEARS THAT THE CONCRETE SLAB HAS SHIFTED ABOUT 1". PLEASE CHECK I-BEAM FOOTING BOLTS FOR SECURITY. IF POSSIBLE, TAKE PICTURES OF THE MISALIGNMENT. (TS)		
2) DAILIES COMPLETE. SEE ITEM ABOVE. (CREW)		
3) TESTED ONE STANLEY DOOR MOTOR, TWO CONTROLLERS, AND ONE LOCK. ALL TESTED GOOD. (MDM)		
	3RD	P M THOMAS
DUTY TECHS: PT,AU,MJ,DE		
HANDBACK STATUS: NONE		
1) AT 2007, CC REPORTED TDAS AND DFTC W/S. TRIED DOOR COMMANDS, NO HELP. TOOK EAST DOWN, FOUND B2 3/4 MALF. RESET DOORSET, TRAIN DEPARTED ATO AT 2012. (PT,AU)		
2) AT 2138, CC REPORTED TDAS AND DFTC N/S. TRIED DOOR COMMANDS NO HELP. TOOK SOUTH DOWN. FOUND B3 5/6 MALF. RESET DOORSET, TRAIN DEPARTED ATO AT 2147. (PT,AU)		

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CONFIDENTIAL

Bombardier 03859

ER3859

1) DAILIES COMPLETED WITH THE FOLLOWING ISSUES NOTED: HAD TO CLEAN AND REINSTALL GRAPHICS PANEL SIGNAGE IN C6 IN THE AREA ABOVE LEAF 7. N & S TRAINS NEED TO BE RESET. NO RESPONSE TO POLL IN C7 WHICH LATER CLEARED ON ITS OWN. C3. LEAF 2 SQUEALS. (CREW)

3) RESET THE RADIO 2 TIMES ON C1 DUE TO NRP. (KD, WS)

- 1) WASHED WINDOWS ON WEST AND SOUTH TRAIN (AF)
- 2) COMPLETED 7 DAY ON WEST ,PA NORTH (CR)
- 3) RESET GRAPHICS ON NORTH AND SOUTH (CREW)
- 4) CHECK C3 L2 AND OILED EDGE ROLLER DOOR QUITE NOW(CR)
- 5) DAILIES COMPLETED (CREW)
- 6) LINDA CALLED IN USING A VDAY.

- 1) RC'D 9 EA. DOOR WHEEL ASSY AND 2 EA. RPC POWER ADAPTERS PLACED IN STOCK. (WS)
- 2) DAILIES COMPLETED: NRP C1 & C7. (CREW)
- 3) ATTEMPTED TO LOCATED VIDEO OF PAX INJURY ONBOARD A TRAIN THAT WAS REPORTED TO DOA ON FEB 11, 2012. INJURED PAX CALLED TODAY REQUESTING TO SPEAK W/ BOMBARDIER REPRESENTATIVE REGARDING POSSIBLE COMPENSATION. VM
- 4) RESET RCB ON C'S 1 & 7 DUE TO NRP. C1 CLEARED BUT C7 WOULD NOT. (KD)

1) AT 0322 HAD TRAIN FAILED TO ARRIVE AND VEHICLE UNSCHEDULED DOOR OPENING

DATE	DUTIES	ENTERED BY
11/1/78	1000-1000	1000-1000
11/2/78	1000-1000	1000-1000
11/3/78	1000-1000	1000-1000
11/4/78	1000-1000	1000-1000
11/5/78	1000-1000	1000-1000
11/6/78	1000-1000	1000-1000
11/7/78	1000-1000	1000-1000
11/8/78	1000-1000	1000-1000
11/9/78	1000-1000	1000-1000
11/10/78	1000-1000	1000-1000
11/11/78	1000-1000	1000-1000
11/12/78	1000-1000	1000-1000
11/13/78	1000-1000	1000-1000
11/14/78	1000-1000	1000-1000
11/15/78	1000-1000	1000-1000
11/16/78	1000-1000	1000-1000
11/17/78	1000-1000	1000-1000
11/18/78	1000-1000	1000-1000
11/19/78	1000-1000	1000-1000
11/20/78	1000-1000	1000-1000
11/21/78	1000-1000	1000-1000
11/22/78	1000-1000	1000-1000
11/23/78	1000-1000	1000-1000
11/24/78	1000-1000	1000-1000
11/25/78	1000-1000	1000-1000
11/26/78	1000-1000	1000-1000
11/27/78	1000-1000	1000-1000
11/28/78	1000-1000	1000-1000
11/29/78	1000-1000	1000-1000
11/30/78	1000-1000	1000-1000

ALARMS ON THE SOUTH TRAIN. HAD CENTRAL PA THE TRAIN AND DROVE THE TRUCK TO SAT TO RECOVER THE SOUTH. FOUND C8 LEAF 2 OPERATOR ARM STUCK IN THE CHANNEL SEVERAL INCHES FROM CLOSED. HAD TO SHAKE LOOSE TO GET CLOSED. TRAIN WAS ATO AT 0330. RODE FOR SEVERAL TRIPS WITH NO MORE PROBLEMS. (CREW)

2) COMPLETED PM-62 ON THE WEST TRAIN. (CREW)

(3) REPLACED LEAKY PINION SEAL ON C-6 #1 END. CLOSED OPEN ITEM. (RV)

Bombardier **03860**

ER3860

McCRACKEN, STEMERMAN, & HOLSBERRY

1630 South Commerce Street, Suite A
Las Vegas, Nevada 89102
Telephone: (702) 386-5107, (800-622-0641)
Fax: (702) 384-0845
April 11, 2013

NEVADA STATE LABOR COMMISSIONER

EXHIBIT

WITNESS

DATE

Vx 27

N. Stanley

9/9/13

File Number
uoe

TO: Labor Commissioner T. Towler 702-486-2660
Deputy Commissioner K. Sakelhide
Lee Thomson, Esq. 702-921-2461
Paul Trimmer, Esq.

FROM: Andrew Kahn, Attorney for Int'l Union Elevator Constructors (IUEC)

RE: Bombardier: attached please find supplemental declaration

To support our opposition to Bombardier's MSJ please find attached a supplemental declaration containing info uncovered too late to include in the overnight package you will be receiving tomorrow with the rest of our opposition papers due tomorrow. Those papers explain the significance of the type of evidence presented by this supplemental declaration. Thank you for your consideration.

Total number of pages including this page: //

**IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL BACK
AS SOON AS POSSIBLE. TELEPHONE: (800) 622-0641**

03861

Vx 27

ER3861

SUPPLEMENT TO DECLARATION OF WILLIAM STANLEY IN OPPOSITION TO
MOTION FOR SUMMARY JUDGMENT

I, William Henry Stanley, declare:

I requested from the Labor Commissioner's office a copy of any document containing a summary description of the work done under contracts submitted for assignment of Public Works Project numbers. I was supplied a spreadsheet by the Commissioner's office on Thursday, April 11, 2013. I went through that spreadsheet and created a shorter list of only those projects with "maintenance" in the summary description and those likely indicating a long-term requirements contract for repairs. That list of 42 different projects is attached hereto.

I have also attached a page from Clark County records further describing the project for the annual streetlight maintenance work on the 215 Freeway.

I declare under penalty of perjury of the laws of Nevada that the foregoing is true and correct.

Executed this 11th day of April 2013.


WILLIAM HENRY STANLEY

03862

ER3862

A	B	C	D	E	F	G
PROJECT #	AWARDING BODY	CONTRACTOR	PROJECT	CONTRACTS	BID OPEN DATE	AWARD DATE
1		AMERICAN ASPHALT	5504-04 Approach slab repair @ pollock	\$125,365.42	3/25/2004	04/20/04
2	CCPC		2004-12/2003-2004 Misc Flood Control Maintenance Project	\$300,000.00	7/1/2004	
3	Henderson		2004-12/2003-2004 Misc Flood Control Maintenance Project	\$300,000.00	7/1/2004	
4	Henderson		2004-12/2003-2004 Misc Flood Control Maintenance Project	\$300,000.00	7/1/2004	
5	Henderson		2004-12/2003-2004 Misc Flood Control Maintenance Project	\$300,000.00	6/15/2004	
6	Henderson		2004-12/2003-2004 Misc Flood Control Maintenance Project	\$300,000.00	6/15/2004	
7	CCWRD	LAS VEGAS PAVING CORP	548/Emergency Repair Contract Services	\$2,810,000.00	8-28-04	10-5-04
8	Aviation	LAS VEGAS PAVING CORP	2232/Airport Roadways Maintenance McCarran Airport	\$1,684,020.00	7-22-04	8-17-04
9	CCPC	LAS VEGAS PAVING CORP	5404-03/Flood Control Maintenance Repairs	\$500,000.00	12-18-03	1-6-04
10	CCPC	LAS VEGAS PAVING CORP	5404-03/Flood Control Maintenance Repairs	\$500,000.00	12-18-03	1-6-04
11	LVVWD	CAPRIATI CONSTRUCTION COMPANY	C1159 Miscellaneous Vaults Reconstruction & Repair Phase V	\$385,807.49	3/1/2005	04/05/05
12	LVVWD	JNJ ENGINEERING CONSTRUCTION, INC.	C1161/Misc Vaults Reconstruction & Repair Phase VII	\$810,032.00	4/18/2006	05/16/06
13	Henderson	SOUTHWEST IRON WORKS	Pittman Park Detention Basin Maintenance Project - Phase II	\$427,527.00	5/3/2005	05/03/05
14	LVVWD	TAND, INC.	Miscellaneous Vault, Reconstruction and Repair, Phase VI	\$536,600.00	5/31/2006	06/20/06
15	LVVWD	TARGET CONSTRUCTION INC	C1127/Misc Vaults Reconstruction & Repair Phase II	\$398,972.84	2/2/2005	01/01/05
16	LVVWD	TAND INC	C1155/Miscellaneous Vault Reconstruction & Repair Phase IV	\$374,881.00	3/31/2005	04/19/05

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ER3863

	H	I	J	K
1	AWARD RECEIVED	CLOSED DATE	CLOSED RECEIVED	COMMENTS
2		7/8/2004		
3				
4				
5				
6				
7				
8	8/23/2004	7/28/2008	7/28/2008	Closed
9		5/17/2010	5/17/2012	Completed
10		5/17/2010	5/17/2012	Completed
11	4/11/2005	4/2/2006	6/12/2006	COMPLETED
12	5/25/2006	2/5/2008	12/29/2008	Completed
13	5/12/2005	1/1/2006	5/18/2006	Completed
14	6/23/2006	8/7/2007	8/10/2007	Completed
15	3/1/2005	6/20/2006	6/23/2006	COMPLETED
16		2/8/2006	2/24/2006	CLOSED

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ER3864

	A	B	C	D	E	F	G
			CAPRIATI CONSTRUCTION CORPORATION INC				
17	CL-2005-64	LVWMD	J & J ENTERPRISES	C1128/Miscellaneous Vaults Reconstruction & Repair Phase III	\$1,163,537.00	9/22/2005	10/18/05
18	CL-2006-288	UNLV		Parking Lot Maintenance Services	\$371,129.85	6/9/2006	06/12/06
19	CL-2006-68	LVWMD	CAPRIATI CONST	C1188; Miscellaneous Vault, Reconstruction and Repair Phase VIII	\$910,283.00	8/24/2006	09/19/06
20	CL-2006-76	LVWMD	Capriati Construction Corporation, Inc.	C1199; Miscellaneous Vault, Reconstruction and Repair, Phase X	\$1,062,938.75	3/15/2007	06/05/07
21	CL-2007-192	CCPC	Fast Trac Electric	TBD High Mast Street Light Repair	\$349,853.50	2/27/2007	04/03/07
22	CL-2007-22	LVWMD	Spiess Construction Company, Inc.	C1189 Miscellaneous Vaults, Reconstruction and Repair, Phase IX	\$540,517.00	7/7/2007	06/22/07
23	CL-2007-312	COH	Spiess Construction Company, Inc.	2007-86-0027 Greenway Channel Maintenance Ramps	\$206,127.55	6/1/2007	07/03/07
24	CL-2007-366	UNLV	J & J Enterprises	Clark County School District Contract #00500 Parking Lot Maintenance for UNLV Fiscal Year 08	\$382,264.00	7/9/2007	07/09/07
25	CL-2007-45	MCC	Longview Construction & Development, Inc.	Virgin River Emergency Flood Repair Project	\$746,390.00	10/11/2006	10/24/06
26	CL-2007-49	CCPC	Capriati Construction Corporation, Inc.	600352 2006 H-1 Zone Concrete Repairs Phase 1	\$735,547.00	10/24/2006	11/21/06
27	CL-2008-292	CC	Wiser Construction LLC	Flood Control Maintenance and Repairs	\$1,000,000.00	4/30/2008	06/03/08
28	CL-2008-298	COH	Intermountain Slurry Seal, Inc.	131-08-ST-146-001 2007 Pavement Maintenance	\$2,068,067.80	4/1/2008	07/16/08
29	CL-2008-385	CC	American Leak Detection	601132 Building Maintenance Repairs	\$200,000.00	6/25/2008	07/08/08
30	CL-2008-446	CC	Granite Construction Company	601218-08 Slope Erosion Repair - I - 215	\$98,888.00	8/28/2008	10/07/08

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ER3865

	H	I	J	K
17	10/24/2005	11/8/2006	11/17/2006	Completed
18	6/12/2008			
19	9/25/2006	9/19/2007	11/19/2007	Completed
20	6/12/2007	12/2/2008	12/8/2008	Completed
21	4/25/2007			
22	7/6/2007	3/18/2008	3/20/2008	Completed
23	9/5/2007	12/31/2007	1/3/2008	Completed
24	8/27/2007			
25	1/25/2007			
26	11/28/2006	10/11/2007	10/16/2007	Completed
27	6/6/2008			
28	11/25/2008	5/3/2010	5/11/2010	Completed
29	7/11/2008	5/17/2010	5/17/2012	Completed
30	10/10/2008			Awarded Under 100,000

03866

ER3866

	A	B	C	D	E	F	G
			Capitall Construction Corporation Inc.	840A 00 A1 Fire Station Weir Bank Protection Maintenance	\$293,119.00	4/16/2009	10/08/09
31	CL-2009-175	SNWA	Las Vegas Paving Corporation	543-PO2 Emergency Repair Contract Services-Phase II	\$2,741,000.00	7/8/2009	08/04/09
32	CL-2009-287	CCWRD	American Asphalt and Grading Company	131-09-FC-054-001 Railroad Channel Maintenance Ramps	\$203,422.67	10/1/2008	02/03/09
33	CL-2009-35	COH	Maximum Enterprises LLC	601265 Building HVAC-R Maintenance Repairs	\$5,013,559.00	12/18/2008	01/02/09
34	CL-2009-41	CC		Traffic Engineering Maintenance Improvements West Services Center CDL Lot	\$350,000.00	3/28/2010	
35	CL-2010-186	CLV	Transcore Its, LLC	Annual Traffic Signal Maintenance	\$801,741.00	7/1/2010	08/17/10
36	CL-2010-368	CCPC	RP Weddell & Sons Company	Flood Control Facilities Annual Maintenance	\$1,043,800.00	11/1/2010	02/23/11
37	CL-2011-53	CLV	Las Vegas Paving Corporation	Emergency Repair Contract Services	\$2,727,500.00	10/1/2011	09/29/11
38	CL-2012-1	CCWRD		Annual Requirements Contract for Roofing Maintenance and Repair Services Countywide	\$150,000.00	5/1/2012	05/16/12
39	CL-2012-211	CCPC	D&L Roofing, LLC	Annual Streetlight Maintenance Contract for CC 215 Bruce Woodbury Beltway	\$779,640.00	7/13/2012	09/04/12
40	CL-2012-285	CCPC	Transcore Its, LLC	Pittman Wash Emergency Repairs	\$1,047,415.23	10/1/2011	
41	CL-2012-41	COH	Las Vegas Paving	Road Repair and Maintenance @ Main Campus	\$300,000.00	4/30/2013	05/30/13
42	CL-2013-181	UNLV					

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	H	I	J	K
31	10/12/2009	4/13/2010	5/3/2010	Completed
32	8/11/2008			
33	1/13/2009	9/23/2009	10/1/2009	Completed
34	1/7/2009		5/17/2012	Completed
35				
36	8/18/2010			
37	3/28/2011			
38	10/19/2011			
39	5/22/2012			
40	9/11/2012			
41		2/29/2012	3/27/2012	Completed
42				

03868

ER3868

CLARK COUNTY BOARD OF COMMISSIONERS AGENDA ITEM

Issue:	Award of Bid	Back-up:
Petitioner:	George W. Stevens, Chief Financial Officer Dennis Cederburg, Director of Public Works	Check Ref. #:
Recommendation:		
<p>That the Board of County Commissioners approve the award of Bid No. 602677-12, Annual Streetlight Maintenance Contract for Clark County 215 Bruce Woodbury Beltway, to the lowest responsive and responsible bidder, contingent upon submission of the required bonds and insurance. Staff recommends award to Transcore ITS, LLC. (For possible action)</p>		

FISCAL IMPACT:

Fund#: 4120.002
Fund Center: 1260110001
Description: Beltway Landscape & Maintenance
Added Comments: None

Fund Name: Master Transportation Plan Capital
Funded Pgm/Grant: PW.H023100
Amount: \$779,640.00

BACKGROUND:

Bid No. 602677-12, Annual Streetlight Maintenance Contract for Clark County 215 Bruce Woodbury Beltway was advertised on June 26, 2012, and eight bids were received:

BIDS RECEIVED:	BID AMOUNTS:	CORRECTION:	CORRECT TOTALS:
American Southwest Electric (NBE)	\$ 404,540.00	+\$150,000.00	\$ 554,540.00* **
Transcore ITS, LLC (LBE)	\$ 779,640.00		\$ 779,640.00
ACME Electric (NBE)	\$ 796,200.00		\$ 796,200.00
Sequoia Electric, LLC (NBE)	\$ 831,361.00		\$ 831,361.00
Asplundh Construction Corp. (LBE)	\$ 888,800.00		\$ 888,800.00
Lam Contracting, LLC (MBE)	\$ 944,750.00		\$ 944,750.00
R. P. Weddell & Sons Co. (MBE)	\$1,013,000.00		\$1,013,000.00
Fast Trac Electric (NBE)	\$1,035,950.00		\$1,035,950.00
* Corrected Total			
** Bid Withdrawn			

The work to be performed under this contract consists of the maintenance of existing lighting infrastructure on Clark County Bruce Woodbury 215 Beltway including the entrance and exit ramps, under bridge lighting, and overhead sign lighting that Clark County maintains. Work involves removal, replacement, and installation of high mast lighting streetlight pole assemblies, overhead sign lighting, ramp lighting, under bridge lighting, pull boxes, wiring, and other related items with mostly County supplied materials. The term of this contract is for the period from date of award through August 31, 2013.

Cleared for Agenda

9/4/2012
03869 Agenda Item #

American Southwest Electric submitted a written request to withdraw its bid due to a substantial error in their bid price. After the bids were opened, American Southwest Electric discovered that the price offered was based on a per lamp (one) replacement cost for high mast lighting as opposed to a per assembly lamp (four to six) replacement cost on the high mast light pole item.

The Instructions to Bidders, Paragraph 9, Withdrawal of Bid, Item B, states that the Owner may allow a Bidder intended for award to withdraw its bid during the firm offer period due to a mistake of fact on the part of the Bidder or its employee(s) in preparing its bid.

The recommendation of award is in accordance with NRS 338.1385, award of contract to the lowest responsive and responsible bidder. Transcore ITS, LLC currently holds a valid Clark County Business License.

Prepared by: Sandy Moody-Upton

Respectfully submitted,

GEORGE W. STEVENS
Chief Financial Officer
B602677-12-Streetlight-SCM.Doc

03870

NEVADA STATE LABOR COMMISSIONER

EXHIBIT

Ux 28

BEFORE THE LABOR COMMISSIONER

WITNESS

W. Stanley

OF THE STATE OF NEVADA

DATE

9/9/13

INTERNATIONAL UNION OF ELEVATOR
CONSTRUCTORS

Claimant/Objector

v.

BOMBARDIER TRANSPORTATION
(HOLDINGS) USA, INC.,

Respondent/Employer

RE: CLARK COUNTY DEPT. OF
AVIATION CONTRACT CBE 552

**DECLARATION OF WILLIAM STANLEY/IN OPPOSITION TO
MOTION FOR SUMMARY JUDGMENT**

Andrew Kahn
McCRACKEN STEMERMAN & HOLSBERY
1630 S. Commerce St., Suite A-1
Las Vegas, Nevada 89102
ajk@dcbsf.com
(702) 386-5107

Attorneys for Claimant IUEC

03871

Ux 28

ER3871

DECLARATION OF WILLIAM STANLEY IN OPPOSITION TO MOTION FOR SUMMARY JUDGMENT

1. I am employed within the IUEC's Organizing Department and competent to testify to the matters set forth here. Attached hereto are true and correct copies of relevant portions of Nevada local government records showing they treated long-term requirements-type contracts for repairs as public works projects covered by prevailing wage law. In my research on how other public bodies in Nevada contracted long-term requirements-type contracts that contained both maintenance and repair provisions, I contacted Mr. Thomas Borland, Sr. Purchasing Analyst, Southern Nevada Water Authority, regarding Bid No. 2235-13, Irrigation Well Maintenance, in White Pine County. I ask Mr. Borland if this Bid was required to be let according to NRS 388 and did NRS 338 require the payment of prevailing wages because of there possibly being a repair component. Mr. Borland responded that the bid was not required to meet the requirements of NRS 338 because the repair work contained in the project scope was not substantial in terms of time or cost so it was not outside normal maintenance. He went on to declare that if the bid contained large repairs such as the replacement of the well casing then it would required to be bid in accordance with the provisions of NRS 338 and payment of the prevailing wage would be required.
2. I have actively participated in the APM industry for over 10 years. APMs are currently being repaired and maintained by IUEC-signatory employer Otis Elevator at the Elevator Constructor pay rate at the Getty Museum in Los Angeles, and the Detroit Airport. The Minneapolis Airport APM is currently being maintained by Schwager-Davis at the Elevator Constructor pay rate, even though another company constructed that APM. These contractors could have provided the APM maintenance and repair service to McCarran Airport. Probably the most common tasks there have to do with the sliding doors which come from Stanley Doors, a manufacturer which also supplies doors and locks used elsewhere in McCarran and at many other facilities, and repaired by IUEC members at numerous locations. Seatac Airport uses its own employees to maintain a system it purchased from Bombardier. I compiled non-confidential data obtained from the County and

03872

ER3872

Bombardier about labor and parts cost and determined that Bombardier was charging 52% for overhead (such as soliciting sales at other locations, corporate executive compensation, and dividends for shareholders). I brought these facts (and the resulting ability of the County to save millions by taking the work in-house) to the attention of Clark County, which eventually took it in-house in 2012. A majority of the County's workforce in this unit is not from Bombardier. I am familiar from my work (both for IUEC and previously as an Otis Elevator manager) with corporate overhead charges to customers and Bombardier's rate is higher than what generally prevails in the elevator industry.

3. According to the official Management Information Circular filed by Bombardier with the Canadian government (www.sedar.com), Bombardier CEO Beaudoin's annual compensation increased by 19 percent to \$8.17 million in the fiscal year that ended 12/31/11. That included a \$1.29 million salary, \$3.27 million in share-based awards, \$1.48 million in option-based awards, \$1.57 million under an annual incentive plan, \$362,400 in pension contributions and \$193,100 in other compensation such as the personal use of corporate aircraft. The four next-highest paid Bombardier officers received \$4.7, \$4.4, \$2.8 and \$1.9 million that year. In addition they along with other shareholders received dividends that year and the prior years, as Bombardier has consistently paid dividends of 10 cents per share to its stockholders. The Company reported in its annual financial statements having annual profits of \$1.0 billion in the year ending 1/31/10, \$775 million in the year ending 1/31/11, and \$837 million in the calendar year 2011, for return on equity of 39.62%, 18.52% and 17.35%.

I declare under penalty of perjury of the law of Nevada that the foregoing is true and correct.

Executed this 9th day of April 2013.


WILLIAM HENRY STANLEY

03873

ER3873

PROJECT NOTICE

LAS VEGAS VALLEY WATER DISTRICT
CONTRACT NO. C1376
ON-CALL PAVEMENT REPLACEMENT SERVICES, PHASE II, FY 2012/2013

PUBLIC WORKS PROJECT NO. CL-2013-91

PROJECT SCOPE: The Site of the Work will be located at various Sites, as yet to be determined, within Las Vegas Valley Water District easements and Clark County, City of Las Vegas, City of Henderson, and Nevada Department of Transportation rights-of-way. Sites within Clark County are not limited to the Las Vegas service area and may include the following outlying areas: Blue Diamond, Nevada; Jean, Nevada; Kyle Canyon, Nevada; Laughlin, Nevada; and Searchlight, Nevada. The District will develop the Sites for on-call asphalt pavement replacement from individual Work Orders generated by the District's Distribution Division throughout the 365-Day period of the Contract. The Work consists of on-call construction services for the replacement of permanent pavement and concrete appurtenances at locations located within easements or rights-of-way defined by individual Work Orders. This includes providing the necessary equipment, operators and using the recommended and/or specified products and application process to furnish and deliver these services on an as needed basis. The Contractor will be issued individual Work Orders on a weekly basis, which will describe the specific location of the work by address/cross streets, a description of the work to be performed, and estimated quantities associated with the Work.

PRE-BID: Thursday, January 17, 2013, at 10:00 a.m. at the Las Vegas Valley Water District Mead 3 Conference Room, 1001 South Valley View Boulevard, Las Vegas, Nevada.

BID OPENING: Wednesday, January 30, 2013, at 10:16 a.m. at the Las Vegas Valley Water District Mead 2 Conference Room, 1001 South Valley View Boulevard, Las Vegas, Nevada.

PLANS AND SPECIFICATIONS: Copies of the Bidding Documents consisting of the contract documents, specifications, and reduced drawings together with a set of full-size drawings may be obtained at the Purchasing Office of the Las Vegas Valley Water District (District), (702) 258-3200, for the non-refundable cost of \$15.00. Please call to make sure the bid documents are available before visiting the District to purchase them. If documents are to be mailed, bidders may have the mailing expedited by providing with their check the name of the express mail carrier with account number to be charged. If not specified, the documents shall be mailed via United Parcel Service ground with a non-refundable charge of \$20.00. Checks must be received at the above-mentioned office and shall be payable to the "Las Vegas Valley Water District."

Proposals shall be submitted on the sheets bound in the Contract Documents Volume, and the complete Contract Documents Volume shall be submitted to comprise a responsive and responsible bid. Each proposal shall be accompanied by a certified or cashier's check or bid bond in the amount of not less than five percent of the amount named in the proposal.

Hearing impaired individuals may request documents and obtain information by contacting TT/TDD: Relay Nevada toll-free at (800) 326-6868. Information on current project schedules, copies of project notices, plan holders lists and report of bid openings may be viewed by selecting the Engineering & Construction Construction Bid Opportunities link at the following address:

<http://www.lvwwd.com>

Pursuant to Nevada Revised Statute 338.143, the District reserves the right to reject any or all bids, including without limitation the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional bids, and to reject the bid of any bidder if the District believes that it would not be in the best interest of the District to make an award to that bidder. The District also reserves the right to waive informalities. Bids will be evaluated as prescribed in Nevada Revised Statute 338.147.

03874

ER3874

PROJECT NOTICE

**LAS VEGAS VALLEY WATER DISTRICT
CONTRACT NO. C1380
ON-CALL PAVEMENT REPLACEMENT SERVICES, PHASE III, FY 2012/2013**

PUBLIC WORKS PROJECT NO. CL-2013-110

PROJECT SCOPE: The Site of the Work will be located at various Sites, as yet to be determined, within Las Vegas Valley Water District easements and Clark County, City of Las Vegas, City of Henderson, and Nevada Department of Transportation rights-of-way. Sites within Clark County are not limited to the Las Vegas service area and may include the following outlying areas: Blue Diamond, Nevada; Jean, Nevada; Kyle Canyon, Nevada; Laughlin, Nevada; and Searchlight, Nevada. The District will develop the Sites for on-call asphalt pavement replacement from individual Work Orders generated by the District's Distribution Division throughout the 365-Day period of the Contract. The Work consists of on-call construction services for the replacement of permanent pavement and concrete appurtenances at locations located within easements or rights-of-way defined by individual Work Orders. This includes providing the necessary equipment, operators and using the recommended and/or specified products and application process to furnish and deliver these services on an as needed basis. The Contractor will be issued individual Work Orders on a weekly basis, which will describe the specific location of the work by address/cross streets, a description of the work to be performed, and estimated quantities associated with the Work.

PRE-BID: Wednesday, February 20, 2013, at 10:00 a.m. at the Las Vegas Valley Water District Mead 2 Conference Room, 1001 South Valley View Boulevard, Las Vegas, Nevada.

BID OPENING: Wednesday, March 6, 2013, at 10:16 a.m. at the Las Vegas Valley Water District Powell Conference Room, 1001 South Valley View Boulevard, Las Vegas, Nevada.

PLANS AND SPECIFICATIONS: Copies of the Bidding Documents consisting of the contract documents, specifications, and reduced drawings together with a set of full-size drawings may be obtained at the Purchasing Office of the Las Vegas Valley Water District (District), (702) 258-3200, for the non-refundable cost of \$15.00. Please call to make sure the bid documents are available before visiting the District to purchase them. If documents are to be mailed, bidders may have the mailing expedited by providing with their check the name of the express mail carrier with account number to be charged. If not specified, the documents shall be mailed via United Parcel Service ground with a non-refundable charge of \$20.00. Checks must be received at the above-mentioned office and shall be payable to the "Las Vegas Valley Water District."

Proposals shall be submitted on the sheets bound in the Contract Documents Volume, and the complete Contract Documents Volume shall be submitted to comprise a responsive and responsible bid. Each proposal shall be accompanied by a certified or cashier's check or bid bond in the amount of not less than five percent of the amount named in the proposal.

Hearing impaired individuals may request documents and obtain information by contacting TT/TDD: Relay Nevada toll-free at (800) 326-6868. Information on current project schedules, copies of project notices, plan holders lists and report of bid openings may be viewed by selecting the Engineering & Construction Construction Bid Opportunities link at the following address:

<http://www.lvwd.com>

Pursuant to Nevada Revised Statute 338.143, the District reserves the right to reject any or all bids, including without limitation the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional bids, and to reject the bid of any bidder if the District believes that it would not be in the best interest of the District to make an award to that bidder. The District also reserves the right to waive informalities. Bids will be evaluated as prescribed in Nevada Revised Statute 338.147.

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City of Las Vegas

PURCHASING & CONTRACTS
CITY HALL, 1ST FLOOR
400 STEWART AVENUE
LAS VEGAS, NEVADA 89101-2986
(702) 229-6231
FAX (702) 384-9964
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www.lasvegasnevada.gov/bids



KATHLEEN C. RAINEY
MANAGER

LLOYD E. DAVIS
CONTRACTS SPECIALIST

INVITATION TO BID
BID NO. 11.1762.01-TRF (Revised)
2011 ANNUAL CONCRETE REPLACEMENT AND ASPHALT PATCHING

The work will consist of the removal and replacement of asphalt pavement, removal and replacement of concrete sidewalk, curb and gutter, driveways, sidewalk drains and other related work. It also includes adjustment of utility valves, manholes and boxes and installation of electrical conduit. This is an Annual Requirements Contract from date of award to March 31, 2012 with the option to extend four (4) one-year renewal periods.

The estimated monetary range of the project is: \$2,200,000 to \$2,900,000.

Nevada State Labor Commission – PWP # CL-2011-223

PRE-BID CONFERENCE will be held on June 13, 2011, 3:00 PM in the Purchasing and Contracts Division Conference Room, First Floor, City Hall Complex, 400 Stewart Avenue. The purpose of this conference is to discuss the specifications and any prospective bidders questions regarding the bid documents and bid process. If a firm is unfamiliar with the public bidding process and would like to obtain training on the bid submittal process for this bid, please contact **Lloyd E. Davis** at 229-6231, no later than June 9, 2011 and a training session will be provided immediately following the pre-bid meeting.

BID OPENING: All bids must be received in the office of the City Clerk, First Floor, City Hall Complex, 400 Stewart Avenue, Las Vegas, NV 89101- 2986, by June 21, 2011 Bids must be time-stamped by **1:30 p.m.** Any bids time-stamped at 1:31 p.m. or after will not be considered in the award and will be returned to the bidder. Bids will be publicly opened and read aloud immediately after the established closing time and date in the Office of the Purchasing and Contracts Division.

BID DOCUMENTS AND ANY ADDENDA are available on-line at the Demandstar website, www.demandstar.com. Demandstar offers a free single agency subscription which includes free document downloads by registering at www.demandstar.com/register.rsp or by calling (800) 711-1712. For all other City of Las Vegas bid opportunities, please visit our website at www.lasvegasnevada.gov/business and click on the "Bid Opportunities".

Bid Documents obtained from any source other than the Demandstar may not be accurate or complete, and each Bidder and subcontractor assumes all risks by its reliance on such documents. Any Bidder and subcontractor who have not obtained Bid Documents from the City or Demandstar will not be notified of any addenda issued by the Owner, which could contain material changes thereto (such as additions or changes to the technical specifications, extensions of time, etc).

Any questions regarding this solicitation should be referred, in writing, to **Lloyd E. Davis** at the above address or Faxed to (702) 384-9964 no later than June 15, 2011.

City Council: MAYOR OSCAR B. GOODMAN – MAYOR PRO TEM GARY REESE –
STEVE WOLFSON – LOI STARKANIAN – STEVEN D. ROSS – RICKY BARLOW – STAVROSS ANTHONY
City Manager: ELIZABETH N. FRETWELL

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INSTRUCTIONS TO BIDDERS

A. IN GENERAL

ITB 1 CONTACT PERSON

The person to contact for questions pertaining to this Invitation to Bid and Bid Documents is **Lloyd E. Davis**, phone number (702) 229-2487, fax number (702) 384-9964. All questions concerning this Invitation to Bid must be submitted in writing and received no later than June 15, 2011. Do not contact the architects, engineers and other consulting authors of the Bid Documents except through the aforementioned contact person.

ITB 2 DEFINITIONS

The following definitions are applicable to the Bid Documents:

"Addendum" means a written or graphic instrument issued by the Owner via the City of Las Vegas Purchasing and Contracts Office prior to the submission of the Bids which modifies or interprets the Bid Documents by addition, deletion, clarification, correction or other type of modification. All Addenda will become part of the executed Contract.

"Additive Alternate Bid" means the amount stated in the Bid Schedule for completion of additional work that the Owner may elect to add as part of the Project.

"Base Bid" means the total bid amount the Bidder has offered to complete the Work.

"Best Bidder" means the Bidder who has been determined to be responsive and responsible and who has submitted the lowest monetary Bid as a result of being entitled to the bid preference set forth in NRS Chapter 338.

"Bid" means a complete and properly signed offer to do the Work for the amount or amounts set forth in the Bid Proposal that is submitted in accordance with the invitation to Bid.

"Bid Documents" means the Invitation to Bid, Instructions to Bidders, Owner-Contractor Agreement, General Conditions, Plans, Special Provisions, Bid Proposal, Attachments and the Addenda issued prior to the date designated for receipt of the Bids, as applicable.

"Bidder" means the person or entity submitting a Bid Proposal for the Work and the person or entity who has received Bid Documents from Demandstar on behalf of the Owner.

"Bid Proposal" means the written document provided by the Owner to the Bidder for the purpose of submitting a Bid.

"Bid Schedule" is the form attached to the Bid Proposal that is used to submit the Base Bid and, if applicable to the Project, the Additive Alternate Bids of the Bidder.

"Contract" means the entire agreement between the parties as set forth in the Contract Documents and does not come into existence until execution of the Owner-Contractor Agreement by the Owner.

"Contract Amount" means the amount for which the Bidder has offered to complete the Work and is equal to the amount of the Base Bid plus, if applicable, each Additive Alternate Bid selected by the Owner to be included as a part of the Project.

"Contract Documents" means the Owner-Contractor Agreement, General Conditions, Special Provisions, Plans, and, if applicable, each Addendum issued in connection with the Bid Documents.

"Day" means calendar day unless otherwise specifically designated.

"Disabled Veteran-Owned Business Enterprise" means a business that is at least fifty-one percent (51%) disabled veteran-owned, operated and actively controlled by one or more disabled veterans, or in the case of a publicly-owned business, at least fifty-one percent (51%) of the stock must be owned and the business operated

In addition to the above restrictions, the warranty requirements of the Contract shall exist in a direct extension from the manufacturer to the Owner as well as from the Contractor to the Owner if the manufactured product is sold directly to the Contractor.

SECTION 12 DISPUTES BETWEEN THE PARTIES

Section 12.01 In General

Any claim, dispute or other controversy that may arise between the Owner and Contractor concerning any provision of this Contract shall be resolved through the good faith efforts of both parties. In accordance with NRS 338.150, if the claim, dispute or controversy cannot otherwise be settled, the parties shall use an alternate dispute resolution method before initiation of any judicial action. For purposes of this Contract, alternate dispute resolution shall mean non-binding mediation before an independent private mediator agreed to by the parties. If the parties cannot agree upon an independent private mediator within 45 days after notice of the claim is provided pursuant to Section 12.04 below, the party may proceed to file a judicial action with the Eighth Judicial District Court, Clark County, Nevada. The alternate dispute resolution proceedings shall take place in Clark County, Nevada, unless otherwise agreed to by the parties.

Section 12.02 Work to Proceed

While the alternate dispute resolution or judicial action is pending, the Contractor shall proceed with the Work and maintain progress in accordance with the requirements of the Contract, unless otherwise mutually agreed upon in writing.

Section 12.03 Alternate Dispute Resolution Costs and Fees

The fees and expenses of the alternate dispute resolution proceedings shall be equally shared by both parties. Each party is responsible for their own costs, expenses, consultant fees and attorney fees incurred in the presentation or defense of any claim, dispute or controversy that may arise between the parties.

Section 12.04 Notice of Dispute

In the event that a claim, dispute, or controversy arises between the parties which are related to the progress or construction of the Project, the party asserting the claim, dispute or controversy must provide written notice thereof to the other party within thirty (30) days after its occurrence. The written notice shall set forth with specificity the nature of the claim, dispute or controversy, the relief sought, and other matters properly relating thereto. The notification is important to the recipient of the notice so that proper measures can be taken to properly observe and record the progress of the Work, to properly document the impact that the claim, dispute or controversy may have thereon, and to enable that party to properly verify any costs incurred by the party asserting the claim, dispute or controversy in connection therewith. The failure of the party to provide proper notice to the other party as required herein shall forever bar that party from any remedy thereon, including seeking any alternate dispute resolution and/or judicial action. The notice and time requirements set forth herein shall not apply to warranty claims or other construction defect claims that the Owner may have against the Contractor relating to the construction of the Work.

Section 12.05 Right of Judicial Action

Any claim, dispute, or other matter in question between the parties concerning any provisions of this Contract that cannot otherwise be resolved between the parties through the use of the alternate dispute resolution required herein and, in the case of the Contractor, which has not been waived by the acceptance of final payment, may be submitted for judicial action. Prior to the exercise of this right, the party seeking judicial relief shall have provided the other party 30 days prior written notice before filing such judicial action.

SECTION 13 COMPLIANCE WITH THE LAWS

Section 13.01 General

The Contractor shall comply with all federal, state and local laws and regulations applicable to construction of the Work including, but not necessarily limited to, licensing requirements, labor and health laws, and requirements for the payment of sales and use taxes on equipment, materials and supplies provided in connection with the Contract.

Section 13.02 Compliance with Labor Laws

a. Prevailing Wage Rate Law. The Contractor and each Subcontractor shall comply with all federal, state and local labor laws with regard to minimum wages, overtime work, hiring and discrimination including, without limitation, NRS Chapter 338.

1. Prevailing Wage Rates. For public work projects whose cost is \$100,000 or more, the Contractor hereby acknowledges that pursuant to the provisions of NRS 338.040 and 338.050, any person who is employed by the Contractor or Subcontractor at the Work Site, or who performs work on a public work project (regardless of any contractual relationship alleged to exist between the workman and his other employer), is subject to the prevailing wage rate provisions of NRS 338.010 to 338.090, inclusive.

The Contractor is responsible for ensuring that the aforementioned persons are paid in accordance with the current prevailing wage rates approved by the State Labor Commissioner. Any Change Order causing a contract to equal or exceed \$100,000 will subject the Contract to the provisions of Prevailing Wage Rate Law and to audit by the State Labor Commissioner. Any work performed after regular working hours, or on Sunday or a legal holiday, shall be performed without additional expense to the Owner.

In accordance with NRS Chapter 338, the Contractor shall post the current prevailing wage rates and applicable addenda in a place generally visible to the workmen. The prevailing wage rates and applicable addenda are available from the office of the State Labor Commissioner (www.laborcommissioner.com). The Contractor agrees to investigate, or to assist in the investigation of, each claimed violation of the prevailing wage law as may be requested by the Owner or the State Labor Commissioner.

2. Certified Payroll Reports. Pursuant to NRS Chapter 338, any public work contract awarded for \$100,000 or more, the Contractor and each Subcontractor are required to:

- a. Keep an accurate record showing the (1) name of worker, (2) occupation of the worker, (3) if the worker has a driver's license or identification card, an indication of the state or other jurisdiction that issued the license or card and (4) the actual per diem wages and benefits paid to each worker employed by them in connection with the Work. These records are referred to as the "certified payroll reports."
- b. Keep an additional accurate record showing, for each worker employed by the Contractor or Subcontractor who has a driver's license or identification card (1) the name of the worker, (2) the driver's license or identification card number of the worker, and (3) the state or other jurisdiction that issued the license or card.

The Contractor, and each Subcontractor through the Contractor, is required to submit a copy of the certified payroll reports for each calendar month to the Owner no later than fifteen (15) calendar days after the end of the month. The Contractor shall be responsible for coordinating the submittal of all the certified payroll reports for the Project, including the reports of each Subcontractor who is performing Work on the Project.

The Contractor agrees to contact the Nevada State Labor Commissioner with any question concerning the payment of prevailing wage rates.

3. Penalties. In accordance with NRS 338.060, the Contractor shall forfeit the penalty provided herein to the Owner for each calendar day or portion thereof that each workman employed on the Project (i) is paid by the Contractor or Subcontractor less than the designated wage rate for the work on the Project, (ii) the Contractor or Subcontractor willfully included inaccurate or incomplete information in the monthly certified payroll report submitted to the Owner, (iii) the Contractor or Subcontractor did not report to the Owner as required pursuant to NRS 338.070, and/or (iv) if a violation of more than one provision of subsection (i) through (iii) herein involves the same workman, the Contractor shall forfeit the penalty set forth in each violated subsection.

The Contractor hereby stipulates that the Owner may withhold not less than \$20.00, nor more than \$50.00 for each and every violation of subparagraphs (i) through (iii) herein, the actual amount of which is according to a sliding scale based on the size of the Contractor's business which is adopted by the State Labor Commissioner, except that for violation of subparagraph (iii) the maximum penalty is limited to \$1,000 for the first violation and \$5,000 for each subsequent violation occurring during the term of the Contract.

In addition to any penalty imposed by the Labor Commissioner, if the Contractor or Subcontractor is determined by the Owner to have violated the provisions of this Section, the Owner may deduct from any payments due the Contractor, the costs of the proceedings associated with the investigation of each wage complaint including, but not limited to, employee salaries, investigator fees and attorney fees.

In addition to any monetary penalty imposed by the statute, the Contractor, or its Subcontractor, agent or representative, performing Work on the Project who neglects to comply with the prevailing wage rate requirements of NRS Chapter 338 is guilty of a misdemeanor.

4. Copeland Anti-Kickback Law. The Contractor shall comply with the Copeland Anti-Kick Back Act (19 U.S.C. 874) as supplemented in the Department of Labor Regulations (29 CFR Part 3). This Act provides that the Contractor or Subcontractor shall be prohibited from inducing by any means, any person employed in the construction, completion or repair of public work, to give up any part of the compensation to which that person is otherwise entitled.

5. Fair Employment Law. The Contractor shall comply with the fair employment provisions of NRS 338.125. The Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation or age. Such agreement shall include, but is not necessarily limited to, employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. Any violation of this provision by the Contractor shall constitute a material breach of the Contract. If the Contractor or any of its Subcontractors refuse to hire or do business with an individual or company in violation of this provision, the Owner may declare the Contractor in breach of the Contract, and the Owner may terminate the Contract and designate the Contractor as not responsible for purposes of bidding future public work projects.

6. Preferential Employment. The Contractor shall comply with the preferential employment provisions of NRS Chapter 338.130. This law requires, in all cases where persons are employed in the construction of public works, preference must be given, when the qualifications of applicants are equal: First, to persons who have been honorably discharged from the Army, Navy, Air Force, Marine Corps or Coast Guard of the United States, a reserve component thereof or the National Guard, and are citizens of the State of Nevada; Second, to other citizens of the State of Nevada. If these provisions of NRS 338 are not complied with by the Contractor engaged on the public work, the contract shall be void, and any failure or refusal to comply with any of these provisions of this section renders any such contract void.

☐ **6. Federal Wage Rates.** The Contractor shall comply that the Federal Wage Rates attached (*Attachment 16 to the Instruction to Bidders*) and incorporated herein as a part hereof which are applicable to the Contract. The wages paid under the Contract shall conform to the Davis-Bacon Act of March 3, 1931, as amended (46 Stat. 1494, as amended, 40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor Regulations (29-CFR, Part 5). If the State Wage Rates and Federal Wage Rates are not equal, the Contractor shall pay the higher prevailing rate.

☐ **7. Special Requirements.** The Contractor shall comply with the requirements of (*Attachment 17 to the Instruction to Bidders*) incorporated herein as a part hereof which are applicable to the Contract.

Section 13.03 Compliance with Americans with Disabilities Act

The Work shall comply with the (ADA) as amended to date. The Contractor shall construct the Work in compliance with the Americans with Disabilities Act and the rules and regulations promulgated thereunder and shall immediately notify the Owner of any conflicts between the Contract Documents and the Act or the rules and regulations promulgated thereunder.

Section 13.04 Compliance with Immigration Reform Control Act of 1986

In accordance with the Immigration Reform and Control Act of 1986, the Contractor shall not employ unauthorized aliens in the performance of the Contract.

Section 13.05 Air Pollution Control

Prior to commencing the Work, the Contractor shall obtain a permit from the Clark County Department of Air Quality and Environmental Management.

The Contractor shall perform the Work in a manner that does not discharge smoke, dust, or other air contaminants into the atmosphere from any source whatsoever, in violation of the laws, rules, and regulations of federal, state, and local government pertaining to air pollution including, but not necessarily limited to, the following:

- i. Nevada Revised Statute 445: Air Quality Regulations
- ii. Title 40 Code of Federal Regulations (CFR) Part 82 Protection of Stratospheric Ozone – Refrigerant Regulations
- iii. Adhering to all Clark County Department of Air Quality and Environmental Management regulations.

The Contractor shall not be granted any time extensions for delays due to compliance with or violations of the aforementioned laws, rules, or regulations; and shall pay all compliance costs and violation fines and penalties. Such imposed fines and penalties shall not result in an increase in the Contract Amount, and are not subject to reimbursement by the Owner.

Section 13.06 Fire Prevention

The Contractor shall conform to all federal, state, and local laws and regulations pertaining to burning, fire prevention, and control within or adjacent to the Work Site. Necessary precautions to avoid and eliminate fire hazards shall be the responsibility of the Contractor.

All tarpaulins used for any purpose during construction of the Work shall be made of material resistant to fire, water, and weather and shall bear UL labels. Lighting of any fires on the Project Site is strictly forbidden.

The Contractor shall provide portable fire extinguishers compatible with the hazard of each work area and shall instruct its personnel in their location and use. Wherever welding or burning is conducted, inflammable materials shall be protected and a fire watch shall be provided by the Contractor to be present during the burning and welding operation to ensure that protective measures are taken and no fires result from such operation. The fire watch shall have fire extinguisher equipment readily available and know-how for proper use.

Section 13.07 Provisions Required by Law

Each and every provision of Nevada Revised Statutes Chapter 338 and 624 and any other laws required to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or inserted incorrectly, then upon the application of either party, the Contract shall be amended to make such insertion or correction.

Section 13.08 Stormwater Pollution Control

Prior to commencing the Work, the Contractor shall obtain a National Pollutant Discharge Elimination System (NPDES) permit from Nevada Division of Environmental Protection (NDEP) for construction activities.

The Contractor shall perform the Work so as to not discharge stormwater runoff containing pollutants or sediment into the waters of the United States (including municipal separate storm sewer systems [MS4s]) in violation of federal and state laws, rules, and regulations and the City's water pollution requirements.

The Contractor shall:

1. Comply with the provisions of Nevada Revised Statutes, Chapter 445A: Water Pollution Control and City of Las Vegas Municipal Code 14.18; and
2. Adhere to all Federal regulations under 40 CFR 122.26(b)(14).
3. Provide to the City, prior to commencing construction operations, copies of all associated permits or waivers.

All information and forms pertaining to Nevada's Stormwater NPDES Permitting Program can be found on the following website: <http://ndep.nv.gov/bwpc/storm01.htm>.

The City, state, and federal regulations identified above are hereby incorporated by reference as preconditions of this Contract. The Contractor shall familiarize itself with these regulations and practices, and is advised that prior to engaging in any construction activities, the Contractor shall submit a Notice Of Intent (NOI) to the Nevada Division of Environmental Protection. A Storm Water Pollution Prevention Plan (SWPPP) must be completed prior to submission of the NOI and must remain on the project site and be updated as necessary for the duration of the project. As applicant, the Contractor is responsible for insuring that all persons on the project site, including contractor and subcontractor personnel, abide by the conditions of the permit. As the applicant, the Contractor is responsible for supplying complete copies of the NOI and SWPPP to all project subcontractors.

Upon completion of the project, the Contractor must (at no additional cost to the owner) permanently stabilize the construction area and file a Notice Of Termination (NOT) with NDEP to terminate the permit.

The Contractor shall not be granted any time extensions for delays due to compliance with or violations of the aforementioned laws, rules, regulations, and requirements and shall pay all compliance costs and violation fines and penalties. Such imposed fines and penalties shall not result in an increase in the Contract Amount, and are not subject to reimbursement by the Owner.

Section 13.09 Disposal of All Wastes (Hazardous, Toxic, and Non-Hazardous)

Contractor shall be responsible for disposal of all waste materials including non-hazardous, hazardous, or toxic materials. Contractor shall make its own arrangements for disposal or recycle of all waste materials and shall pay all costs associated with the proper disposal of the all waste.

Contractor shall obtain written verification in term of the landfill weight ticket, recycling certificate from the disposal site owner or operator with a written release from the disposal site owner or operator absolving the City of any and all responsibility in connection with the disposal of waste material on said property.

Unless otherwise provided, full compensation for all costs involved in disposing of materials as specified in this section, including all costs of hauling, shall be considered as included in the price paid for the Contract items of work involving such material and no additional compensation will be allowed therefore.

No waste material that is to be disposed shall be stockpiled on the City's property or the project site longer than seven (7) days, unless otherwise approved by the City. Prior to initiating construction, the Contractor shall provide to the City a proposed temporary stockpile location. Construction debris and materials shall not be stockpiled in unapproved locations.

For hazardous or toxic materials waste, Contractor shall comply with all local, State, and federal regulations including but not limited to Resources Conservation and Recovery Act (RCRA), Toxic Substance Control Act (TSCA). Contractor must fill out the Waste Manifest and provide a copy of the Manifest to the City. Contractor (or its subcontractor) shall provide all necessary licenses or permits documentation for handling, transportation and disposal of hazardous or toxic materials as submittal information to the City. Contractor is responsible for identify/classify the hazardous waste, getting an EPA hazardous waste site number by filing the paperwork with NDEP as the hazardous waste generator, retaining certified RCRA hazardous waste transporter subcontractor, properly dispose the RCRA hazardous waste in certified hazardous waste treatment or landfill sites, deactivated the EPA hazardous waste site number when the job is done, and provide safe handling training to contractor employees.

Section 13.10 Compliance with National Environmental Policy Act (NEPA)

If this contract is sponsored in whole or part through Federal funding, Contractor is required to comply with NEPA requirements including but not limited to, compliance with Clean Air Act, Clean Water Act, Endangered Species Act, National Historic Preservation Act, Migratory Bird Treaty Act, Resource Conservation and Recovery Act (RCRA), Toxic Substance Control Act (TSCA).

SECTION 14 CONTRACT INTERPRETATION

Section 14.01 General

The Contract shall be construed and enforced in accordance with the laws of the State of Nevada. Any action for the enforcement of any provision of this Contract shall be instituted in the County of Clark, State of Nevada.

Section 14.02 Intent and Correlation

The Contract is intended to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by one portion or section of the Contract shall be as binding as if required by all. Any work not covered in the Contract will not be required unless it is consistent with the Contract Documents, and it is reasonably inferable or necessary to produce the intended results or provide a complete work. Words and abbreviations, which have well known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

Section 14.03 Governing Order of Contract Documents

The Contract Documents include various divisions, sections, and conditions, which are essential parts for the work to be provided by the Contractor. In case of discrepancy, the lower number document will govern over the higher numbered document according to the following order of precedence, unless to do so would contravene the intent of the Contract Documents as determined by the Owner:

1. Change Orders
2. Addenda - with those of later date having precedence over those of an earlier date
3. Owner-Contractor Agreement
4. General Conditions
5. Permits from other governmental agencies as may be required by Law
6. Special Provisions
7. Plans - detailed drawings shall have precedence over general drawings
8. Uniform Standard Specifications for Public Works Construction Off-Site Improvements, Clark County Area Nevada and Uniform Standard Drawings for Public Works Construction Off-Site Improvements, Clark County Area Nevada

City of Las Vegas

PURCHASING & CONTRACTS
CITY HALL, 1ST FLOOR
400 STEWART AVENUE
LAS VEGAS, NEVADA 89101-2986
(702) 229-6231
FAX (702) 384-9964
TTY (702) 386-9108
www.lasvegasnevada.gov/bids



KATHLEEN C. RAINEY
MANAGER

TRESSA FERNANDEZ
CONTRACTS SPECIALIST

INVITATION TO BID
BID NO. 11.1730.02-TF (REVISED)
FLOOD CONTROL FACILITIES REPAIR/RECONSTRUCTION/MAINTENANCE

Work shall include, the repair/reconstruction/maintenance of Regional Flood Control Facilities located within the limits of the City of Las Vegas as directed by the City of Las Vegas. Specific location and extent of work at each facility shall be designated by the City and shall include, but is not limited to debris removal and reshaping of unlined channels, repair of damaged channels, repair of damaged concrete to restore to original condition, inspection and removal of sediment, repair and/or re-establishment of downed or damaged fences, mechanical removal of brush and weeds, cleaning, inspection and repair of catch basins, excavation and repair of storm sewer lines to eliminate blockages and repair failed pipes, and cleaning/ flushing of culverts and bridges to remove silt and debris.

The estimated *annual* amount of the project is up to \$2,050,000.

Nevada State Labor Commission – PWP # CL-2011-53

PRE-BID CONFERENCE will be held on **January 19, 2011** at **2:00 pm** in the Purchasing and Contracts Division Conference Room, First Floor, City Hall Complex, 400 Stewart Avenue. The purpose of this conference is to discuss the specifications and any prospective bidders questions regarding the bid documents and bid process. If a firm is unfamiliar with the public bidding process and would like to obtain training on the bid submittal process for this bid, please contact **Tressa Fernandez** at 229-6231, no later than **January 18, 2011** and a training session will be provided immediately following the pre-bid meeting.

BID OPENING: All bids must be received in the office of the City Clerk, First Floor, City Hall Complex, 400 Stewart Avenue, Las Vegas, NV 89101- 2986, by **February 1, 2011**. Bids must be time-stamped by 1:30 p.m. Any bids time-stamped at 1:31 p.m. or after will not be considered in the award and will be returned to the bidder. Bids will be publicly opened and read aloud immediately after the established closing time and date in the Office of the Purchasing and Contracts Division.

BID DOCUMENTS AND ANY ADDENDA are available on-line at the Demandstar website, www.demandstar.com. Demandstar offers a free single agency subscription which includes free document downloads by registering at www.demandstar.com/register.rsp or by calling (800) 711-1712. For all other City of Las Vegas bid opportunities, please visit our website at www.lasvegasnevada.gov/business and click on the "Bid Opportunities".

Bid Documents obtained from any source other than the Demandstar may not be accurate or complete, and each Bidder and subcontractor assumes all risks by its reliance on such documents. Any Bidder and subcontractor who have not obtained Bid Documents from the City or Demandstar will not be notified of any addenda issued by the Owner, which could contain material changes thereto (such as additions or changes to the technical specifications, extensions of time, etc).

Any questions regarding this solicitation should be referred, in writing, to **Tressa Fernandez** at the above address or Faxed to (702) 384-9964 no later than **January 24, 2011**.

City Council: MAYOR OSCAR B. GOODMAN – MAYOR PRO TEM GARY REESE –
STEVE WOLFSON – LOIS TARKANIAN – STEVEN D. ROSS – RICKY BARLOW – STAVROS ANTHONY
City Manager: ELIZABETH N. FRETWELL

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2. Certified Payroll Reports. Pursuant to NRS Chapter 338, any public work contract awarded for \$100,000 or more, the Contractor and each Subcontractor are required to keep an accurate record showing the name, occupation and the actual per diem wages and benefits paid to each workman employed by them in connection with the Work. These records are referred to as the "certified payroll reports."

The Contractor, and each Subcontractor through the Contractor, are required to submit a copy of the certified payroll reports for each calendar month to the Owner no later than fifteen (15) calendar days after the end of the month. The Contractor shall be responsible for coordinating the submittal of all the certified payroll reports for the Project, including the reports of each Subcontractor who is performing Work on the Project.

The Contractor agrees to contact the Nevada State Labor Commissioner with any question concerning the payment of prevailing wage rates.

3. Penalties. In accordance with NRS 338.060, the Contractor shall forfeit the penalty provided herein to the Owner for each calendar day or portion thereof that each workman employed on the Project (i) is paid by the Contractor or Subcontractor less than the designated wage rate for the work on the Project, (ii) the Contractor or Subcontractor willfully included inaccurate or incomplete information in the monthly certified payroll report submitted to the Owner, (iii) the Contractor or Subcontractor did not report to the Owner as required pursuant to NRS 338.070, and/or (iv) if a violation of more than one provision of subsection (i) through (iii) herein involves the same workman, the Contractor shall forfeit the penalty set forth in each violated subsection.

The Contractor hereby stipulates that the Owner may withhold not less than \$20.00, nor more than \$50.00 for each and every violation of subparagraphs (i) through (iii) herein, the actual amount of which is according to a sliding scale based on the size of the Contractor's business which is adopted by the State Labor Commissioner, except that for violation of subparagraph (iii) the maximum penalty is limited to \$1,000 for the first violation and \$5,000 for each subsequent violation occurring during the term of the Contract.

In addition to any penalty imposed by the Labor Commissioner, if the Contractor or Subcontractor is determined by the Owner to have violated the provisions of this Section, the Owner may deduct from any payments due the Contractor, the costs of the proceedings associated with the investigation of each wage complaint including, but not limited to, employee salaries, investigator fees and attorney fees.

In addition to any monetary penalty imposed by the statute, the Contractor, or its Subcontractor, agent or representative, performing Work on the Project who neglects to comply with the prevailing wage rate requirements of NRS Chapter 338 is guilty of a misdemeanor.

b. Copeland Anti-Kickback Law. The Contractor shall comply with the Copeland Anti-Kick Back Act (19 U.S.C. 874) as supplemented in the Department of Labor Regulations (29 CFR Part 3). This Act provides that the Contractor or Subcontractor shall be prohibited from inducing by any means, any person employed in the construction, completion or repair of public work, to give up any part of the compensation to which that person is otherwise entitled.

c. Fair Employment Law. The Contractor shall comply with the fair employment provisions of NRS 338.125. The Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation or age. Such agreement shall include, but is not necessarily limited to, employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. Any violation of this provision by the Contractor shall constitute a material breach of the Contract. If the Contractor or any of its Subcontractors refuse to hire or do business with an individual or company in violation of this provision, the Owner may declare the Contractor in breach of the Contract, and the Owner may terminate the Contract and designate the Contractor as not responsible for purposes of bidding future public work projects.

d. Preferential Employment. The Contractor shall comply with the preferential employment provisions of NRS Chapter 338.130. This law requires, in all cases where persons are employed in the construction of public works, preference must be given, when the qualifications of applicants are equal: First, to persons who have been honorably discharged from the Army, Navy, Air Force, Marine Corps or Coast Guard of the United States, a reserve component thereof or the National Guard, and are citizens of the State of Nevada; Second, to other citizens of the State of Nevada. If these provisions of NRS 338 are not complied with by the Contractor engaged on the public work, the contract shall be void, and any failure or refusal to comply with any of these provisions of this section renders any such contract void.

City of Las Vegas

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KATHLEEN C. RAINEY
MANAGER

TRESSA FERNANDEZ
CONTRACTS SPECIALIST

INVITATION TO BID BID NO. 11.1762.02-TRF ANNUAL CRACK SEAL

SCOPE OF WORK: Street Rehabilitation Annual Contract for Crack Seal. As directed by the City of Las Vegas, the work will generally consist of removal of dirt and debris from pavement cracks and the application of herbicide to those containing vegetation. Following surface preparations, rubber asphalt crack sealant shall be applied. Contract term will be award date through October 31, 2012 with four 1 year options to renew.

The estimated monetary range of the project is: \$700,000 to \$1,000,000 annually.

Nevada State Labor Commission – PWP # CL-2012-122

PRE-BID CONFERENCE will be held on **January 4, 2012 at 11:00 a.m.** in the Purchasing and Contracts Division Conference Room, First Floor, City Hall Complex, 400 Stewart Avenue. The purpose of this conference is to discuss the specifications and any prospective bidders questions regarding the bid documents and bid process. If a firm is unfamiliar with the public bidding process and would like to obtain training on the bid submittal process for this bid, please contact **Tressa Fernandez** at 229-6231, no later than **January 3, 2012** and a training session will be provided immediately following the pre-bid meeting.

BID OPENING: All bids must be received in the office of the City Clerk, First Floor, City Hall Complex, 400 Stewart Avenue, Las Vegas, NV 89101- 2986, by **January 19, 2012**. Bids must be time-stamped by **1:30 p.m.** Any bids time-stamped at **1:31 p.m.** or after will not be considered in the award and will be returned to the bidder. Bids will be publicly opened and read aloud immediately after the established closing time and date in the Office of the Purchasing and Contracts Division.

BID DOCUMENTS AND ANY ADDENDA are available on-line at the Demandstar website, www.demandstar.com. Demandstar offers a free single agency subscription which includes free document downloads by registering at www.demandstar.com/register.rsp or by calling (800) 711-1712. For all other City of Las Vegas bid opportunities, please visit our website at www.lasvegasnevada.gov/business and click on the "Bid Opportunities".

Bid Documents obtained from any source other than the Demandstar may not be accurate or complete, and each Bidder and subcontractor assumes all risks by its reliance on such documents. Any Bidder and subcontractor who have not obtained Bid Documents from the City or Demandstar will not be notified of any addenda issued by the Owner, which could contain material changes thereto (such as additions or changes to the technical specifications, extensions of time, etc).

Any questions regarding this solicitation should be referred, in writing, to **Tressa Fernandez** at the above address or Faxed to (702) 384-9964 no later than **January 9, 2012**.

City Council: MAYOR CAROLYN G. GOODMAN – MAYOR PRO TEM STAVROS S. ANTHONY– STEVE WOLFSON
LOIS TARKANIAN – STEVEN D. ROSS – RICKI Y. BARLOW – BOB COFFIN
City Manager: ELIZABETH N. FRETWELL

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- b. Failure to properly complete the Bid Proposal furnished by the Owner and to otherwise comply with the requirements of ITB 5.02;
- c. Failure to attend the mandatory pre-bid conference scheduled by the Owner;
- d. Failure of an authorized representative to sign the Bid Proposal as required by ITB 5.02;
- e. Failure to submit the Bid Security with the Bid Proposal as required pursuant to ITB 5.03;
- f. Failure to complete and submit the Subcontractor Listings as required by ITB 5.04 and ITB 6.01, or circumventing the Subcontractor List requirements by disingenuous issuance of contracts or purchase orders that avoid such listing, whether these acts and omissions are intentional or otherwise;
- g. Failure to provide the Certificate of Eligibility and a fully executed Public Works Bidder's Preference Affidavit as required by ITB 5.05;
- h. Failure to submit the Good Faith Effort Form as required by ITB 7.02;
- i. Failure to provide the names and project resume of the Superintendent and the Project Manager as required by ITB 7.03;
- j. Failure to submit the List of Completed Projects as required by ITB 7.04;
- k. Failure to submit the Supplier Listing as required by ITB 7.05;
- l. Failure to obtain the licensing as required by ITB 10;
- m. Failure to complete the Additive Alternate Bid Section in the Bid Schedule as required by ITB 12.03;
- n. Failure to comply with any other requirement of the Instructions to Bidders.

The failure to comply with the requirements of the Instructions to the Bidders shall result in the automatic rejection of the Bid Proposal submitted by the Bidder if rejection is expressly provided for in the Instructions to Bidders. In the case of such automatic rejection, the requirement has been determined to be a material requirement by the Owner. For those requirements in the Instructions to Bidders for which (i) the consequences have not been expressly provided for, or (ii) the consequences state that the Bid Proposal may be rejected, the Owner shall have the discretion as to whether or not to waive the requirement entirely, or to require compliance with the requirement after the bid opening, whichever is determined to be in its best interests.

ITB 14 SUBSTITUTION OF SUBCONTRACTORS

The Bidder shall not substitute any person for itself, or substitute any Subcontractor listed on the 5% Subcontractor List or the 1% Subcontractor List except as provided pursuant to NRS Section 338.141 and 338.13895, as revised by Senate Bill 268 of the 76th Session of the 2011 Nevada Legislature ("S.B." 268), which became law effective July 1, 2011, and 338.1475. Non-compliance with subcontractor substitution provisions shall be subject to penalty pursuant to NRS 338.141, as revised by S.B. 268, Section 13, including substitution of work identified by the Bidder as work to be self-performed. If the Owner or State Labor Commissioner's Office has determined that a listed Subcontractor failed to pay prevailing wages for any reason, then this failure shall be cause for, but not necessarily the obligation of, the Owner to request a substitution of the Subcontractor.

As a requirement of the Contract executed with the Owner, the Bidder will be responsible for the acts or omissions of its Subcontractors and of the persons directly or indirectly employed by them. The Owner may request a copy of any or all subcontracts entered into by the Bidder which are a part of the Bid Proposal submitted to the Owner if such request is within the provisions of NRS 338.140(1)(d).

In addition to the above restrictions, the warranty requirements of the Contract shall exist in a direct extension from the manufacturer to the Owner as well as from the Contractor to the Owner if the manufactured product is sold directly to the Contractor.

SECTION 12 DISPUTES BETWEEN THE PARTIES

Section 12.01 In General

Any claim, dispute or other controversy that may arise between the Owner and Contractor concerning any provision of this Contract shall be resolved through the good faith efforts of both parties. In accordance with NRS 338.150, if the claim, dispute or controversy cannot otherwise be settled, the parties shall use an alternate dispute resolution method before initiation of any judicial action. For purposes of this Contract, alternate dispute resolution shall mean non-binding mediation before an independent private mediator agreed to by the parties. If the parties cannot agree upon an independent private mediator within 45 days after notice of the claim is provided pursuant to Section 12.04 below, the party may proceed to file a judicial action with the Eighth Judicial District Court, Clark County, Nevada. The alternate dispute resolution proceedings shall take place in Clark County, Nevada, unless otherwise agreed to by the parties.

Section 12.02 Work to Proceed

While the alternate dispute resolution or judicial action is pending, the Contractor shall proceed with the Work and maintain progress in accordance with the requirements of the Contract, unless otherwise mutually agreed upon in writing.

Section 12.03 Alternate Dispute Resolution Costs and Fees

The fees and expenses of the alternate dispute resolution proceedings shall be equally shared by both parties. Each party is responsible for their own costs, expenses, consultant fees and attorney fees incurred in the presentation or defense of any claim, dispute or controversy that may arise between the parties.

Section 12.04 Notice of Dispute

In the event that a claim, dispute, or controversy arises between the parties which are related to the progress or construction of the Project, the party asserting the claim, dispute or controversy must provide written notice thereof to the other party within thirty (30) days after its occurrence. The written notice shall set forth with specificity the nature of the claim, dispute or controversy, the relief sought, and other matters properly relating thereto. The notification is important to the recipient of the notice so that proper measures can be taken to properly observe and record the progress of the Work, to properly document the impact that the claim, dispute or controversy may have thereon, and to enable that party to properly verify any costs incurred by the party asserting the claim, dispute or controversy in connection therewith. The failure of the party to provide proper notice to the other party as required herein shall forever bar that party from any remedy thereon, including seeking any alternate dispute resolution and/or judicial action. The notice and time requirements set forth herein shall not apply to warranty claims or other construction defect claims that the Owner may have against the Contractor relating to the construction of the Work.

Section 12.05 Right of Judicial Action

Any claim, dispute, or other matter in question between the parties concerning any provisions of this Contract that cannot otherwise be resolved between the parties through the use of the alternate dispute resolution required herein and, in the case of the Contractor, which has not been waived by the acceptance of final payment, may be submitted for judicial action. Prior to the exercise of this right, the party seeking judicial relief shall have provided the other party 30 days prior written notice before filing such judicial action.

SECTION 13 COMPLIANCE WITH THE LAWS

Section 13.01 General

The Contractor shall comply with all federal, state and local laws and regulations applicable to construction of the Work including, but not necessarily limited to, licensing requirements, labor and health laws, and requirements for the payment of sales and use taxes on equipment, materials and supplies provided in connection with the Contract.

Section 13.02 Compliance with Labor Laws

a. Prevailing Wage Rate Law. The Contractor and each Subcontractor shall comply with all federal, state and local labor laws with regard to minimum wages, overtime work, hiring and discrimination including, without limitation, NRS Chapter 338.

1. Prevailing Wage Rates. For public work projects whose cost is \$100,000 or more, the Contractor hereby acknowledges that pursuant to the provisions of NRS 338.040 and 338.050, any person who is employed by the Contractor or Subcontractor at the Work Site, or who performs work on a public work project (regardless of any contractual relationship alleged to exist between the workman and his other employer), is subject to the prevailing wage rate provisions of NRS 338.010 to 338.090, inclusive.

The Contractor is responsible for ensuring that the aforementioned persons are paid in accordance with the current prevailing wage rates approved by the State Labor Commissioner. Any Change Order causing a contract to equal or exceed \$100,000 will subject the Contract to the provisions of Prevailing Wage Rate Law and to audit by the State Labor Commissioner. Any work performed after regular working hours, or on Sunday or a legal holiday, shall be performed without additional expense to the Owner.

In accordance with NRS Chapter 338, the Contractor shall post the current prevailing wage rates and applicable addenda in a place generally visible to the workmen. The prevailing wage rates and applicable addenda are available from the office of the State Labor Commissioner (www.laborcommissioner.com). The Contractor agrees to investigate, or to assist in the investigation of, each claimed violation of the prevailing wage law as may be requested by the Owner or the State Labor Commissioner.

2. Certified Payroll Reports. Pursuant to NRS Chapter 338, any public work contract awarded for \$100,000 or more, the Contractor and each Subcontractor are required to:

- a. Keep an accurate record showing the (1) name of worker, (2) occupation of the worker, (3) if the worker has a driver's license or identification card, an indication of the state or other jurisdiction that issued the license or card and (4) the actual per diem wages and benefits paid to each worker employed by them in connection with the Work. These records are referred to as the "certified payroll reports."
- b. Keep an additional accurate record showing, for each worker employed by the Contractor or Subcontractor who has a driver's license or identification card (1) the name of the worker, (2) the driver's license or identification card number of the worker, and (3) the state or other jurisdiction that issued the license or card.

The Contractor, and each Subcontractor through the Contractor, is required to submit a copy of the certified payroll reports for each calendar month to the Owner no later than fifteen (15) calendar days after the end of the month. The Contractor shall be responsible for coordinating the submittal of all the certified payroll reports for the Project, including the reports of each Subcontractor who is performing Work on the Project.

The Contractor agrees to contact the Nevada State Labor Commissioner with any question concerning the payment of prevailing wage rates.

3. Penalties. In accordance with NRS 338.060, the Contractor shall forfeit the penalty provided herein to the Owner for each calendar day or portion thereof that each workman employed on the Project (i) is paid by the Contractor or Subcontractor less than the designated wage rate for the work on the Project, (ii) the Contractor or Subcontractor willfully included inaccurate or incomplete information in the monthly certified payroll report submitted to the Owner, (iii) the Contractor or Subcontractor did not report to the Owner as required pursuant to NRS 338.070, and/or (iv) if a violation of more than one provision of subsection (i) through (iii) herein involves the same workman, the Contractor shall forfeit the penalty set forth in each violated subsection.

The Contractor hereby stipulates that the Owner may withhold not less than \$20.00, nor more than \$50.00 for each and every violation of subparagraphs (i) through (iii) herein, the actual amount of which is according to a sliding scale based on the size of the Contractor's business which is adopted by the State Labor Commissioner, except that for violation of subparagraph (iii) the maximum penalty is limited to \$1,000 for the first violation and \$5,000 for each subsequent violation occurring during the term of the Contract.

In addition to any penalty imposed by the Labor Commissioner, if the Contractor or Subcontractor is determined by the Owner to have violated the provisions of this Section, the Owner may deduct from any payments due the Contractor, the costs of the proceedings associated with the investigation of each wage complaint including, but not limited to, employee salaries, investigator fees and attorney fees.

In addition to any monetary penalty imposed by the statute, the Contractor, or its Subcontractor, agent or representative, performing Work on the Project who neglects to comply with the prevailing wage rate requirements of NRS Chapter 338 is guilty of a misdemeanor.

131-09-ST-146-003

CONTRACT DOCUMENTS AND BID PROPOSAL

2010 PAVEMENT MAINTENANCE PROJECT PHASE I



PWP-CL-2010-244

03897

ER3897

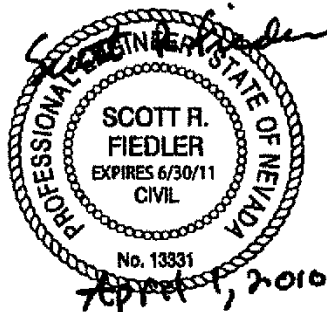
**2010 PAVEMENT MAINTENANCE
PROJECT PHASE I
131-09-ST-146-003
PWP-CL-2010-244**

**PRE-BID CONFERENCE
APRIL 13, 2010 @ 1:00 PM
Tuscany Conference Room**

**BID OPENING
APRIL 22, 2010 @ 3:00 PM
City Clerk's Office**

ENGINEERING STAMPS

**Division I
Sections 100-110**



**Division II
Sections 200-637**



**PREPARED BY PUBLIC WORKS ENGINEERING
2010**

03898

ER3898

BID FORMS

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2010 PAVEMENT MAINTENANCE PROJECT PHASE I
131-09-ST-146-003
PWP-CL-2010-244

Contractor: _____
Contact Person: _____
Email: _____
Address: _____
City, State, Zip: _____
Telephone No. _____ Fax No. _____

OPUF; UI FTF CJE GPSNT BSF FEJBCMF JD BEPCF/ ZPV DBO
EPX OMPBE UP ZPVS DPNQVUFS BOE GMMJD UI F CMVF GFMET-QSJDUI'
TJHO UP TVCNJJ/

BID PROPOSAL

TO THE MAYOR AND CITY COUNCIL
CITY OF HENDERSON
CLARK COUNTY, NEVADA

PROJECT IDENTIFICATION:

2010 PAVEMENT MAINTENANCE PROJECT PHASE I
131-09-ST-146-003
PWP-CL-2010-244

The undersigned certifies that:

1. Bidder has examined and become familiar with the most current editions of the "Uniform Standard Specifications for Public Works Construction, Off-site Improvements, Clark County Area, Nevada," the "Uniform Standard Drawings, Clark County Area," and the "Uniform Building Code," as adopted by the City of Henderson.
2. Bidder has examined and become familiar with the Official Notice to Contractors, Contract Documents and items of work attached hereto, and made a part hereof, which states the location and description of the contemplated construction, the place, the date and time of opening of proposals, the approximate quantities of the various items of work to be performed and materials to be furnished for which unit prices are asked and contain all special provisions, requirements or additions which are not contained in the "Uniform Standard Specifications" cited above.
3. By initialing below, the Bidder affirms their familiarity with the terms, requirements or conditions of each item and that all associated costs with said item are included in the bid price. Initialization of the line below by the Authorized Signing Officer shall be deemed prima facie evidence that the Bidder has thoroughly reviewed the Contract documents and has taken all necessary steps to become satisfied with the nature of the work, and the contract amount is fair and reasonable compensation for all conditions thereto. Failure of the Authorized Signing Officer to initial each and every item shall be grounds for deeming the bid non-responsive.

_____ Identification of all necessary materials

_____ Bidder has performed take-offs for all material quantities associated with performance of the work.

_____ All materials or articles designated to be furnished by the City of Henderson are of sufficient quantity and/or quality for use in the work.

_____ Subsurface geology, and nature or quantity of surface and subsurface materials to be encountered.

_____ Testing requirements

_____ Project can be completed within the specified time limits.

SECTION 110

WAGES, HOURS AND CONDITIONS OF EMPLOYMENT

110.01 WAGES, HOURS AND EMPLOYMENT PRACTICES: The CONTRACTOR and his subcontractors shall conform in all respects to the Federal Fair Labor Standards Act, as amended, and to Chapter 338 of Nevada Revised Statutes pertaining to wages, hours, and employment on public works projects and shall forfeit amounts and be subject to fines set forth therein for noncompliance with the provisions of the statute.

For this Contract, no work shall be done on weekends, holidays, or any other time that necessitates overtime being paid to CITY employees. CITY Administration working days are 7:30 A.M. to 5:30 P.M. Monday through Thursday, CITY Inspection working days are 6:00 A.M. to 4:00 P.M. Monday through Friday, and CITY Survey working days are 6:00 A.M. to 4:00 P.M. Monday through Thursday. CONTRACTOR hours are 6:00 A.M. to 6:00 p.m. Monday through Sunday (see Section 108.04). The CITY legal holidays are designated in section 101.28 "Holidays".

If the CONTRACTOR requires that work be performed on weekends, holidays, or any other time that necessitates overtime being paid to CITY employees, the CONTRACTOR will be responsible to reimburse the time spent by the CITY. The CONTRACTOR will be billed at the base overtime rate, including fringe benefits, equipment costs, and administrative costs. Listings of hourly compensation for work done beyond regular working hours and holiday for CITY employees can be furnished upon request. The CONTRACTOR shall not be required to pay for the overtime of the agents and employees of the CITY for work performed beyond the normal working hours if such hours are required by the Contract.

Failure on the part of the CONTRACTOR to reimburse the CITY for these overtime costs, as described in this section, will result in retention monies being held until such time as full reimbursement is made.

In no way shall the reimbursement of overtime costs of the CITY, as a result of the CONTRACTOR'S operation, be intended to give authorization to the CONTRACTOR to perform normal work beyond the normal hours of the established working day hours as stated herein.

110.01.01 PREVAILING WAGES: This is a prevailing wage project and the CONTRACTOR and Subcontractors shall be bound by and comply with all federal, state and local laws with regard to minimum wages, overtime work, hiring and discrimination. The CONTRACTOR shall conform to the provisions of Nevada Revised Statutes Chapter (NRS) 338 relative to workmen employed on Public Works projects, *except that the* CONTRACTOR shall pay prevailing wage rates established by the Nevada State Labor Commissioner to workmen engaged in the performance of this project.

The CONTRACTOR is responsible to identify and use the correct prevailing wage rates, including any addenda, as well as all the forms needed to comply, as specified on the State of Nevada Labor Commissioner's web site: www.laborcommissioner.com or by calling (702) 486-2795. A copy of NRS Chapter 338 is also on file in the office of the Public Works Director, City of Henderson. Per NRS 338.020(1), a copy of prevailing wage rates is included as part of this Contract. Per NAC 338.040, after a Contract has been awarded, the prevailing rates of wages in effect at the time of the opening of bids remains in effect for the duration of the project.

In accordance with NRS 338.013.3, the CONTRACTOR shall report to the Labor Commissioner and the CITY, the name and address of each Subcontractor performing work on the project within ten (10) days after the Subcontractor commences work on the project and the identifying number for the public work. Form is included following this section.

NRS 338.060 Forfeitures when workmen paid less than designated rates or willfully reported in inaccurate or incomplete manner or not reported to public body; forfeiture clause in contracts; regulation establishing sliding scale for penalties; recovery of investigative costs and attorney's fees; waiver or reduction of penalty.

1. Except as otherwise provided in subsection 8, a contractor engaged on a public work shall forfeit, as a penalty to the public body on behalf of which the contract has been made and awarded to the contractor, not less than \$20 nor more than \$50 for each calendar day or portion thereof that each workman employed on the public work is paid less than the designated rate for any work done under the contract, by the contractor or any subcontractor engaged on the public work.
2. Except as otherwise provided in subsection 8, a contractor engaged on a public work shall forfeit, as a penalty to the public body on behalf of which the contract has been made and awarded to the contractor, not less than \$20 nor more than \$50 for each calendar day or portion thereof for each workman employed on the public work for which the contractor or subcontractor willfully included inaccurate or incomplete information in the monthly record required to be submitted to the public body pursuant to subsection 5 of NRS 338.070.
3. Except as otherwise provided in subsection 8, a contractor engaged on a public work shall forfeit, as a penalty to the public body on behalf of which the contract has been made and awarded to the contractor, not less than \$20 nor more than \$50 for each calendar day or portion thereof that each workman employed on the public work is not reported to the public body awarding the contract by the contractor or any subcontractor engaged on the public work as required pursuant to subsection 5 of NRS 338.070, up to a maximum of:
 - For the first failure to comply during the term of the contract for the public work, \$1,000; and
 - For each subsequent failure to comply during the term of the contract for the public work, \$5,000.
4. Except as otherwise provided in subsection 8, if a violation of more than one provision of subsections 1, 2 and 3 involves the same workman, the contractor shall forfeit the penalty set forth in each subsection that was violated.
5. A public body awarding a contract for a public work shall cause a stipulation setting forth the penalties specified in subsections 1 to 4, inclusive, to be inserted in the contract.
6. The Labor Commissioner shall, by regulation, establish a sliding scale based on the size of the business of a contractor engaged on a public work to determine the amount of the penalty to be imposed pursuant to subsections 1 and 2.
7. If a penalty is imposed pursuant to this section, the costs of the proceeding, including investigative costs and attorney's fees, may be recovered by the Labor Commissioner and the public body.
8. The Labor Commissioner may, for good cause shown, waive or reduce any penalty imposed pursuant to this section. [6:139:1937; A 1941, 389; 1931 NCL § 6179.56]—(NRS A 1993, 896; 1997, 3355; 2001, 1148; 2003, 1862, 2415) NAC 338.120 Sliding scale of penalties. (NRS 338.012, 338.060)
 1. If the state contractors' board has established a monetary limit on the license of a contractor pursuant to NRS 624.220, the amount of any penalty imposed against the contractor pursuant to NRS 338.060 must be:
 - (a) If the monetary limit is less than \$250,000, \$20 for each calendar day or portion thereof.
 - (b) If the monetary limit is \$250,000 or more but less than \$500,000, \$30 for each calendar day or portion thereof.

- (c) If the monetary limit is \$500,000 or more but less than \$750,000, \$40 for each calendar day or portion thereof.
- (d) If the monetary limit is \$750,000 or more, \$50 for each calendar day or portion thereof.

- 2. If the state contractors' board has not established a monetary limit on the license of a contractor or has removed a monetary limit established on his license, the amount of the penalty imposed against the contractor pursuant to NRS 338.060 must be \$50 for each calendar day or portion thereof. (Added to NAC by Labor Comm'r by R096-97, eff. 5-3-99; A by R115-01, 4-5-2002)—(Substituted in revision for NAC 338.080)

Any Contractor or Subcontractor, or agent or representative thereof, performing work on the project, who neglects to comply with the prevailing wage provisions is guilty of a misdemeanor. If a penalty is imposed, in addition to any penalties allowed by NRS 338.060, the prime Contractor shall reimburse the CITY for all costs associated with wage complaint investigations for the project, including but not limited to, actual staff time, materials used and attorneys fees.

The CONTRACTOR shall comply with the requirements of NRS 338.020 and post in a generally visible place to the workmen, the Nevada Prevailing Wage Rates and all addenda.

Certified Payroll Reports: The CONTRACTOR and each Subcontractor are required to keep an accurate record showing the name, the occupation and the actual per diem, wages and benefits paid to each workman employed by it in connection with the public work. Payroll records of the CONTRACTOR shall be open to examination by representatives of the CITY at all reasonable hours. The CONTRACTOR and each Subcontractor are required to submit a copy of the record for each calendar month to the CITY no later than fifteen (15) calendar days after the end of the month for the purposes of public inspection in accordance with NRS 239.010. The CONTRACTOR, Subcontractor, or agent or representative thereof, doing work on the project that neglects to comply with the provisions of this section is guilty of a misdemeanor. The CONTRACTOR shall be responsible for coordinating the submittal of all the certified payroll reports for the project, including its reports and the reports of all the Subcontractors who are performing work on the project.

110.01.02 EMPLOYMENT PRACTICES

Discrimination: The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, gender, ethnicity, disability, sexual preference, national origin, age, religion or any other protected status. The CONTRACTOR will take action to insure that applicants are considered for employment and that employees are treated during employment without regard to their race, color, gender, ethnicity, disability, sexual preference, national origin, age, religion or any other protected status. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, color, gender, ethnicity, disability, sexual preference, national origin, age, religion or any other protected status.

The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

The CITY is committed to promoting full and equal business opportunity for all persons doing business in the CITY.

The CONTRACTOR acknowledges that the CITY has an obligation to ensure that public funds are not used to subsidize private discrimination.

The CONTRACTOR recognizes that if it or its Subcontractors refuse to hire or do business with an individual or company due to reasons of race, color, gender, ethnicity, disability, sexual preference, national origin, age, religion or any other protected status, the CITY may declare the CONTRACTOR in breach of the Contract, terminate the Contract and designate the CONTRACTOR as non-responsive.

Fair Employment Practices: In connection with the performance of work under this Contract, the CONTRACTOR agrees not to discriminate against any employee or applicant for employment because of race, creed, color, gender, ethnicity, disability, sexual preference, national origin or age. Such agreement shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The CONTRACTOR further agrees to inset this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. Any violation of such provision by the CONTRACTOR shall constitute a material breach of this Contract.

Preferential Employment: All Contractors shall comply with the preferential employment provisions of NRS 338.130 for Contracts over \$20,000. This law requires that, when the qualifications of applicants are equal, that preference must be given: First, to honorably discharged soldiers, sailors, and marines of the United States who are citizens of the State of Nevada; Second, to other citizens of the State of Nevada. If the provisions of NRS 338.130 are not complied with by the CONTRACTOR, this Contract is void, and any failure or refusal to comply with any of the provisions of NRS 338.130 renders this Contract void.

Employment of Unauthorized Aliens: In accordance with the Immigration Reform and Control Act of 1986, the successful bidder agrees that it will not employ unauthorized aliens in the performance of this Contract.

Reporting of Alleged Violations of the Law: The CONTRACTOR should have written policy that protects employees from retaliation for reporting alleged violations of the law.

Labor Strife: The CONTRACTOR shall not cause or condone labor strife that may jeopardize the timely and efficient completion of public construction projects.

110.02 SAFETY REQUIREMENTS: The CONTRACTOR'S construction materials, equipment, methods and workmanship shall be in accordance with applicable local ordinances, State laws including the Industrial Safety, Nevada Occupational Safety Hazard and Act, Nevada Industrial Commission, and federal requirements.

General: Neither the CITY nor its employees or agents shall be responsible for safety on the project site. It is the CONTRACTOR'S obligation to provide and assure for a safe place for the performance of construction and the methods of construction employed. The CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work.

The CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.

Safety Plans, Programs and Permits: By the Notice to Proceed date, the CONTRACTOR shall demonstrate compliance action with the stipulations of Nevada Occupational Safety and Health Administration (OSHA), and other applicable local, state, and federal safety requirements by submitting to the CITY a copy of all safety plans, programs, and permits.

The CITY'S receipt of any safety plans or programs will not relieve the CONTRACTOR in any way from the full and complete responsibility for safety and training of CONTRACTOR'S personnel, the onsite personnel of the CITY, and other visitors to areas of active construction activity. On a daily basis the CONTRACTOR shall inform the CITY of any changes to the boundaries of the active construction area and of any construction activities underway that could pose a potential hazard.

Safety Training: The CONTRACTOR shall be responsible for safety training all personnel who will have access to the active construction areas to meet all state, federal, local and Contractor safety requirements. Training sessions in mutually accessible facilities shall be scheduled, operated, and maintained by the CONTRACTOR throughout the course of the Contract's execution.

Contractor's Safety Representative Requirements: The CONTRACTOR shall assign a full-time Safety Representative to take charge of hazard recognition, accident prevention, new employee orientation (including Subcontractors), implementation of safety precautions, and the supervision of the safety program. The Safety Representative or a qualified and approved deputy shall be onsite at all times while work is ongoing.

Qualifications of the Safety representative and assigned deputies shall be submitted to the CITY for review. Acceptance of their qualifications by the CITY is required prior to the start of any activity on the project. The CONTRACTOR'S Safety Representative shall, as a minimum, meet the requirements of regulations for the Nevada Occupational Safety & Health Enforcement Program, Nevada Administrative Code Section 618-496, as defined in the following paragraph:

- A Designated Safety Officer [Safety Representative for the purpose of this Contract] means anyone who is capable of identifying the existing and predictable hazards in the areas surrounding a construction project or those working conditions at a construction project that are unsanitary or dangerous to employees. A designated Safety Officer has the authority to make prompt corrective measure to eliminate those hazards.

Responsibility for Work Security: The CONTRACTOR shall at all times conduct all operations under the Contract in a manner to avoid the risk of loss, theft, or damage by vandalism, sabotage or damage of other means to any property. The CONTRACTOR shall promptly take all reasonable precautions which are necessary and adequate against any conditions which involve a risk of loss, theft or damage to its property, the CITY'S property and the work site.

The Contractor shall continuously inspect all its work, materials, equipment, and facilities to discover and determine any such conditions and shall be solely responsible for discovery, determination and correction of any such conditions.

The CONTRACTOR shall comply with all applicable laws and regulations. The CONTRACTOR shall cooperate with the CITY on all security matters and shall promptly comply with any project security requirements established by the CITY.

Such compliance with these security requirements shall not relieve the CONTRACTOR of its responsibility for maintaining proper security for the above-noted items, nor shall it be construed as limiting in any manner the CONTRACTOR'S obligation to undertake reasonable action as required to establish and maintain secure conditions at the site.

The CONTRACTOR shall prepare and maintain accurate reports of incidents of loss, theft or vandalism and shall furnish these reports to the CITY in a timely manner.

Hazardous Material: The CONTRACTOR shall provide the CITY with a list of all hazardous substances the CONTRACTOR anticipates he will bring onsite.

The CONTRACTOR shall have Material Safety Data Sheets (MSDS) on site, prior to the arrival of any hazardous substances on the project.

The CONTRACTOR shall use storage area(s) as outlined in the CONTRACTOR'S spill control plan.

Except as otherwise stated in the Contract Documents, if on the project site the CONTRACTOR encounters material reasonably believed to be asbestos, lead, or polychlorinated biphenyl (PCB), then the CONTRACTOR shall immediately stop work in the area affected and give notice to the CITY and any other appropriate entity of the condition.

Reports: The CONTRACTOR shall conduct weekly safety inspections. Corrective actions shall be taken by the CONTRACTOR within twenty-four (24) hours to address all deficiencies identified during inspections. Deficiency reports shall be prepared by the CONTRACTOR and submitted to the CITY within forty-eight (48) hours and shall indicate the corrective action taken. Any failure by the CONTRACTOR to comply with the required corrective measures identified in the safety inspection will result in the delayed signing of the monthly application for progress payment by the CITY.

The CONTRACTOR shall provide the CITY a report of any periodic audit of the CONTRACTOR'S safety performance and/or records.

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All tarpaulins used for any purpose during construction of any work shall be made of material resistant to fire, water and weather and shall bear UL labels. Lighting of any fires on premises is strictly forbidden.

The CONTRACTOR shall provide portable fire extinguishers compatible with the hazard of each work area and shall instruct its personnel in their location and use. Wherever welding and burning are conducted, inflammable materials shall be protected and the CONTRACTOR shall provide a fire watch. The Safety Representative shall be present during the burning and welding operation to ensure that protective measures are taken and no fire result from such operation. The fire watch shall have fire extinguisher equipment readily available and must be knowledgeable regarding proper use.

Flood Protection: During the construction period, the CONTRACTOR shall be responsible for any damage (including any earthwork re-excavation or replacement) which may result from flooding. The CONTRACTOR shall submit to the CITY a flood control plan for trenching operations associated with the work.

The flood control plan shall describe the CONTRACTOR'S plan for control and diversion of surface runoff and flood flows around trench and structure excavations.

In addition, the flood control plan should detail the CONTRACTOR'S action plan for protection of the work and the CONTRACTOR'S site and equipment during flood events.

110.03 STATE MUSEUMS: The CONTRACTOR will be required to comply with all provisions of Nevada Revised Statutes, Chapter 381, "State Museums," Section 17, as follows:

- a) All departments, commissions, boards and other agencies of the State and its political subdivisions shall cooperate with the survey in order to salvage or preserve historic, pre-historic or paleoenvironmental evidence located on property owned or controlled by the United States, the State of Nevada or its political subdivisions.
- b) When any agency of the State or its political subdivisions is preparing or has contracted to excavate or perform work of any kind on property owned or controlled by the United States, the State of Nevada or its political subdivisions which may endanger historic, pre-historic or paleoenvironmental evidence found by the survey to be on the property or when any artifact, site, or other historic or pre-historic evidence is discovered in the course of such excavation or work, the agency or the CONTRACTOR hired by the Agency shall notify the survey and cooperate with the survey to the fullest extent practicable to preserve or permit study of such evidence before its destruction, displacement or removal.
- c) The provisions of this Section shall be made known to all private CONTRACTORS performing such excavation or work for any agency of the State or its political subdivisions.
- d) The CONTRACTOR shall also, immediately, report any historic, pre-historic or paleoenvironmental evidence found on the site to the owner or owner's representative.

END OF SECTION 110

STATE OF NEVADA
Department of Business & Industry



Office of the Labor Commissioner

CARSON CITY OFFICE
675 Fairview Drive Suite 226
Carson City, Nevada 89701
PH 775-687-4850 FAX 775-687-6409

LAS VEGAS OFFICE
555 Washington Avenue Suite 4100
Las Vegas, Nevada 89101
PH 702-486-2650 FAX 702-486-2660

SUBCONTRACTOR LIST FOR PUBLIC WORKS PROJECTS

NRS 338.013(3): A Each contractor engaged on a public work shall report to the labor commissioner and the public body that awarded the contract the name and address of each subcontractor whom he engages for work on the project within 10 days after the subcontractor commences work on the contract. Please supply the following information to the Office of Labor Commissioner by fax or mail:

PWP Number:	Bid/Contract Number:
Project Title:	
Awarding Body:	
Contractor:	Contact Person:
Address:	Telephone:
City, State, Zip:	Fax:

- We will not be using any subcontractors on this project.
- We will use the following subcontractors on this project. (Do not list suppliers.) **PLEASE INCLUDE FAX NUMBER**

Name/Address: Telephone: Fax:	License #: Scope of Work:
Name/Address: Telephone: Fax:	License #: Scope of Work:
Name/Address: Telephone: Fax:	License #: Scope of Work:

Page _____ of _____

131-12-SL-025-001

CONTRACT DOCUMENTS AND BID PROPOSAL

2012 STREETLIGHT KNOCKDOWN AND REPLACEMENT PROGRAM



PWP-CL-2012-193

03909

ER3909

2012 STREETLIGHT KNOCKDOWN AND REPLACEMENT PROGRAM

131-12-SL-025-001

PWP-CL-2012-193

PRE-BID CONFERENCE

March 19, 2012 @ 1:30 PM

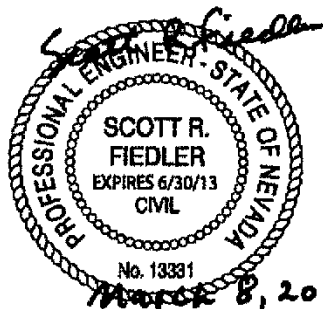
Tuscany Conference Room

BID OPENING

March 28, 2012 @ 3:00 PM

City Clerk's Office

ENGINEERING STAMPS



Division I
Sections 100-110

Division II
Sections 200-637



PREPARED BY PUBLIC WORKS ENGINEERING 2012 03910

BID FORMS

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**2012 Streetlight Knockdown and Replacement Program
Contract No. 131-12-SL-025-001
PWP-CL-2012-193**

Contractor: _____
Contact Person: _____
Email: _____
Address: _____
City, State, Zip: _____
Telephone No. _____ **Fax No.** _____

BID PROPOSAL

TO THE MAYOR AND CITY COUNCIL
CITY OF HENDERSON
CLARK COUNTY, NEVADA

PROJECT IDENTIFICATION:

2012 Streetlight Knockdown and Replacement Program
Contract No. 131-12-SL-025-001
PWP-CL-2012-193

The undersigned certifies that:

1. Bidder has examined and become familiar with the most current editions of the "Uniform Standard Specifications for Public Works Construction, Off-site Improvements, Clark County Area, Nevada," the "Uniform Standard Drawings, Clark County Area," and the "Uniform Building Code," as adopted by the City of Henderson.
2. Bidder has examined and become familiar with the Official Notice to Contractors, Contract Documents and items of work attached hereto, and made a part hereof, which states the location and description of the contemplated construction, the place, the date and time of opening of proposals, the approximate quantities of the various items of work to be performed and materials to be furnished for which unit prices are asked and contain all special provisions, requirements or additions which are not contained in the "Uniform Standard Specifications" cited above.
3. By initialing below, the Bidder affirms their familiarity with the terms, requirements or conditions of each item and that all associated costs with said item are included in the bid price. Initialization of the line below by the Authorized Signing Officer shall be deemed prima facie evidence that the Bidder has thoroughly reviewed the Contract documents and has taken all necessary steps to become satisfied with the nature of the work, and the contract amount is fair and reasonable compensation for all conditions thereto. Failure of the Authorized Signing Officer to initial each and every item shall be grounds for deeming the bid non-responsive.

_____ Identification of all necessary materials

_____ Bidder has performed take-offs for all material quantities associated with performance of the work.

_____ All materials or articles designated to be furnished by the City of Henderson are of sufficient quantity and/or quality for use in the work.

_____ Subsurface geology, and nature or quantity of surface and subsurface materials to be encountered.

_____ Testing requirements

SECTION 110

WAGES, HOURS AND CONDITIONS OF EMPLOYMENT

110.01 WAGES, HOURS AND EMPLOYMENT PRACTICES: The CONTRACTOR and his subcontractors shall conform in all respects to the Federal Fair Labor Standards Act, as amended, and to Chapter 338 of Nevada Revised Statutes pertaining to wages, hours, and employment on public works projects and shall forfeit amounts and be subject to fines set forth therein for noncompliance with the provisions of the statute.

For this Contract, no work shall be done on weekends, holidays, or any other time that necessitates overtime being paid to CITY employees. CITY Administration working days are 7:30 A.M. to 5:30 P.M. Monday through Thursday, CITY Inspection working days are 6:00 A.M. to 4:00 P.M. Monday through Friday, and CITY Survey working days are 6:00 A.M. to 4:00 P.M. Monday through Thursday. CONTRACTOR hours are 6:00 A.M. to 6:00 p.m. Monday through Sunday (see Section 108.04). The CITY legal holidays are designated in section 101.28 "Holidays".

If the CONTRACTOR requires that work be performed on weekends, holidays, or any other time that necessitates overtime being paid to CITY employees, the CONTRACTOR will be responsible to reimburse the time spent by the CITY. The CONTRACTOR will be billed at the base overtime rate, including fringe benefits, equipment costs, and administrative costs. Listings of hourly compensation for work done beyond regular working hours and holiday for CITY employees can be furnished upon request. The CONTRACTOR shall not be required to pay for the overtime of the agents and employees of the CITY for work performed beyond the normal working hours if such hours are required by the Contract.

Failure on the part of the CONTRACTOR to reimburse the CITY for these overtime costs, as described in this section, will result in retention monies being held until such time as full reimbursement is made.

In no way shall the reimbursement of overtime costs of the CITY, as a result of the CONTRACTOR'S operation, be intended to give authorization to the CONTRACTOR to perform normal work beyond the normal hours of the established working day hours as stated herein.

110.01.01 PREVAILING WAGES: This is a prevailing wage project and the CONTRACTOR and Subcontractors shall be bound by and comply with all federal, state and local laws with regard to minimum wages, overtime work, hiring and discrimination. The CONTRACTOR shall conform to the provisions of Nevada Revised Statutes Chapter (NRS) 338 relative to workmen employed on Public Works projects, *except that the* CONTRACTOR shall pay prevailing wage rates established by the Nevada State Labor Commissioner to workmen engaged in the performance of this project.

The CONTRACTOR is responsible to identify and use the correct prevailing wage rates, including any addenda, as well as all the forms needed to comply, as specified on the State of Nevada Labor Commissioner's web site: www.laborcommissioner.com or by calling (702) 486-2795. A copy of NRS Chapter 338 is also on file in the office of the Public Works Director, City of Henderson. Per NRS 338.020(1), a copy of prevailing wage rates is included as part of this Contract. Per NAC 338.040, after a Contract has been awarded, the prevailing rates of wages in effect at the time of the opening of bids remains in effect for the duration of the project.

In accordance with NRS 338.013.3, the CONTRACTOR shall report to the Labor Commissioner and the CITY, the name and address of each Subcontractor performing work on the project within ten (10) days after the Subcontractor commences work on the project and the identifying number for the public work. Form is included following this section.

NRS 338.060 Forfeitures when workmen paid less than designated rates or willfully reported in inaccurate or incomplete manner or not reported to public body; forfeiture clause in contracts; regulation establishing sliding scale for penalties; recovery of investigative costs and attorney's fees; waiver or reduction of penalty.

1. Except as otherwise provided in subsection 8, a contractor engaged on a public work shall forfeit, as a penalty to the public body on behalf of which the contract has been made and awarded to the contractor, not less than \$20 nor more than \$50 for each calendar day or portion thereof that each workman employed on the public work is paid less than the designated rate for any work done under the contract, by the contractor or any subcontractor engaged on the public work.
2. Except as otherwise provided in subsection 8, a contractor engaged on a public work shall forfeit, as a penalty to the public body on behalf of which the contract has been made and awarded to the contractor, not less than \$20 nor more than \$50 for each calendar day or portion thereof for each workman employed on the public work for which the contractor or subcontractor willfully included inaccurate or incomplete information in the monthly record required to be submitted to the public body pursuant to subsection 5 of NRS 338.070.
3. Except as otherwise provided in subsection 8, a contractor engaged on a public work shall forfeit, as a penalty to the public body on behalf of which the contract has been made and awarded to the contractor, not less than \$20 nor more than \$50 for each calendar day or portion thereof that each workman employed on the public work is not reported to the public body awarding the contract by the contractor or any subcontractor engaged on the public work as required pursuant to subsection 5 of NRS 338.070, up to a maximum of:
 - For the first failure to comply during the term of the contract for the public work, \$1,000; and
 - For each subsequent failure to comply during the term of the contract for the public work, \$5,000.
4. Except as otherwise provided in subsection 8, if a violation of more than one provision of subsections 1, 2 and 3 involves the same workman, the contractor shall forfeit the penalty set forth in each subsection that was violated.
5. A public body awarding a contract for a public work shall cause a stipulation setting forth the penalties specified in subsections 1 to 4, inclusive, to be inserted in the contract.
6. The Labor Commissioner shall, by regulation, establish a sliding scale based on the size of the business of a contractor engaged on a public work to determine the amount of the penalty to be imposed pursuant to subsections 1 and 2.
7. If a penalty is imposed pursuant to this section, the costs of the proceeding, including investigative costs and attorney's fees, may be recovered by the Labor Commissioner and the public body.
8. The Labor Commissioner may, for good cause shown, waive or reduce any penalty imposed pursuant to this section. [6:139:1937; A 1941, 389; 1931 NCL § 6179.56]—(NRS A 1993, 896; 1997, 3355; 2001, 1148; 2003, 1862, 2415) NAC 338.120 Sliding scale of penalties. (NRS 338.012, 338.060)
 1. If the state contractors' board has established a monetary limit on the license of a contractor pursuant to NRS 624.220, the amount of any penalty imposed against the contractor pursuant to NRS 338.060 must be:
 - (a) If the monetary limit is less than \$250,000, \$20 for each calendar day or portion thereof.

- (b) If the monetary limit is \$250,000 or more but less than \$500,000, \$30 for each calendar day or portion thereof.
 - (c) If the monetary limit is \$500,000 or more but less than \$750,000, \$40 for each calendar day or portion thereof.
 - (d) If the monetary limit is \$750,000 or more, \$50 for each calendar day or portion thereof.
2. If the state contractors' board has not established a monetary limit on the license of a contractor or has removed a monetary limit established on his license, the amount of the penalty imposed against the contractor pursuant to NRS 338.060 must be \$50 for each calendar day or portion thereof. (Added to NAC by Labor Comm'r by R096-97, eff. 5-3-99; A by R115-01, 4-5-2002)—(Substituted in revision for NAC 338.080)

Any Contractor or Subcontractor, or agent or representative thereof, performing work on the project, who neglects to comply with the prevailing wage provisions is guilty of a misdemeanor. If a penalty is imposed, in addition to any penalties allowed by NRS 338.060, the prime Contractor shall reimburse the CITY for all costs associated with wage complaint investigations for the project, including but not limited to, actual staff time, materials used and attorneys fees.

The CONTRACTOR shall comply with the requirements of NRS 338.020 and post in a generally visible place to the workmen, the Nevada Prevailing Wage Rates and all addenda.

Certified Payroll Reports: The CONTRACTOR and each Subcontractor are required to keep an accurate record showing the name, the occupation, if the worker has a driver's license or identification card, an indication of the state or other jurisdiction that issued the license or card; and the actual per diem, wages and benefits paid to the worker; and an additional accurate record showing, for each worker employed by the CONTRACTOR or Subcontractor in connection with this PROJECT who has a driver's license or identification card: the name of the worker, the driver's license number or identification card number of the worker; and the state or other jurisdiction that issued the license or the card. Form and instructions follow this section.

Payroll records of the CONTRACTOR shall be open to examination by representatives of the CITY at all reasonable hours. The CONTRACTOR and each Subcontractor are required to submit a copy of the record for each calendar month to the CITY no later than fifteen (15) calendar days after the end of the month for the purposes of public inspection in accordance with NRS 239.010, except that the copy of the record showing the name, driver's license number or identification card number and state of issue of the license or card is confidential and not open to public inspection. The CONTRACTOR, Subcontractor, or agent or representative thereof, doing work on the project that neglects to comply with the provisions of this section is guilty of a misdemeanor. The CONTRACTOR shall be responsible for coordinating the submittal of all the certified payroll reports for the project, including its reports and the reports of all the Subcontractors who are performing work on the project.

If the CONTRACTOR submitted the Affidavit for preference, they shall be responsible for submitting any additional reporting requirements pursuant to the requirements of AB 144.

110.01.02 EMPLOYMENT PRACTICES

Discrimination: The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, gender, ethnicity, disability, sexual preference, national origin, age, religion or any other protected status. The CONTRACTOR will take action to insure that applicants are considered for employment and that employees are treated during employment without regard to their race, color, gender, ethnicity, disability, sexual preference, national origin, age, religion or any other protected status. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and

selection for training, including apprenticeship. The CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, color, gender, ethnicity, disability, sexual preference, national origin, age, religion or any other protected status.

The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

The CITY is committed to promoting full and equal business opportunity for all persons doing business in the CITY.

The CONTRACTOR acknowledges that the CITY has an obligation to ensure that public funds are not used to subsidize private discrimination.

The CONTRACTOR recognizes that if it or its Subcontractors refuse to hire or do business with an individual or company due to reasons of race, color, gender, ethnicity, disability, sexual preference, national origin, age, religion or any other protected status, the CITY may declare the CONTRACTOR in breach of the Contract, terminate the Contract and designate the CONTRACTOR as non-responsive.

Fair Employment Practices: In connection with the performance of work under this Contract, the CONTRACTOR agrees not to discriminate against any employee or applicant for employment because of race, creed, color, gender, ethnicity, disability, sexual preference, national origin or age. Such agreement shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The CONTRACTOR further agrees to inset this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. Any violation of such provision by the CONTRACTOR shall constitute a material breach of this Contract.

Preferential Employment: All Contractors shall comply with the preferential employment provisions of NRS 338.130 for Contracts over \$20,000. This law requires that, when the qualifications of applicants are equal, that preference must be given: First, to honorably discharged soldiers, sailors, and marines of the United States who are citizens of the State of Nevada; Second, to other citizens of the State of Nevada. If the provisions of NRS 338.130 are not complied with by the CONTRACTOR, this Contract is void, and any failure or refusal to comply with any of the provisions of NRS 338.130 renders this Contract void.

Employment of Unauthorized Aliens: In accordance with the Immigration Reform and Control Act of 1986, the successful bidder agrees that it will not employ unauthorized aliens in the performance of this Contract.

Reporting of Alleged Violations of the Law: The CONTRACTOR should have written policy that protects employees from retaliation for reporting alleged violations of the law.

Labor Strife: The CONTRACTOR shall not cause or condone labor strife that may jeopardize the timely and efficient completion of public construction projects.

110.02 SAFETY REQUIREMENTS: The CONTRACTOR'S construction materials, equipment, methods and workmanship shall be in accordance with applicable local ordinances, State laws including the Industrial Safety, Nevada Occupational Safety Hazard and Act, Nevada Industrial Commission, and federal requirements.

General: Neither the CITY nor its employees or agents shall be responsible for safety on the project site. It is the CONTRACTOR'S obligation to provide and assure for a safe place for the performance of construction and the methods of construction employed. The CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work.

The CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.

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The CITY'S receipt of any safety plans or programs will not relieve the CONTRACTOR in any way from the full and complete responsibility for safety and training of CONTRACTOR'S personnel, the onsite personnel of the CITY, and other visitors to areas of active construction activity. On a daily basis the CONTRACTOR shall inform the CITY of any changes to the boundaries of the active construction area and of any construction activities underway that could pose a potential hazard.

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The Contractor shall continuously inspect all its work, materials, equipment, and facilities to discover and determine any such conditions and shall be solely responsible for discovery, determination and correction of any such conditions.

The CONTRACTOR shall comply with all applicable laws and regulations. The CONTRACTOR shall cooperate with the CITY on all security matters and shall promptly comply with any project security requirements established by the CITY.

Such compliance with these security requirements shall not relieve the CONTRACTOR of its responsibility for maintaining proper security for the above-noted items, nor shall it be construed as limiting in any manner the CONTRACTOR'S obligation to undertake reasonable action as required to establish and maintain secure conditions at the site.

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The CONTRACTOR shall use storage area(s) as outlined in the CONTRACTOR'S spill control plan.

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All tarpaulins used for any purpose during construction of any work shall be made of material resistant to fire, water and weather and shall bear UL labels. Lighting of any fires on premises is strictly forbidden.

The CONTRACTOR shall provide portable fire extinguishers compatible with the hazard of each work area and shall instruct its personnel in their location and use. Wherever welding and burning are conducted, inflammable materials shall be protected and the CONTRACTOR shall provide a fire watch. The Safety Representative shall be present during the burning and welding operation to ensure that protective measures are taken and no fire result from such operation. The fire watch shall have fire extinguisher equipment readily available and must be knowledgeable regarding proper use.

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The flood control plan shall describe the CONTRACTOR'S plan for control and diversion of surface runoff and flood flows around trench and structure excavations.

In addition, the flood control plan should detail the CONTRACTOR'S action plan for protection of the work and the CONTRACTOR'S site and equipment during flood events.

110.03 STATE MUSEUMS: The CONTRACTOR will be required to comply with all provisions of Nevada Revised Statutes, Chapter 381, "State Museums," Section 17, as follows:

- a) All departments, commissions, boards and other agencies of the State and its political subdivisions shall cooperate with the survey in order to salvage or preserve historic, pre-historic or paleoenvironmental evidence located on property owned or controlled by the United States, the State of Nevada or its political subdivisions.
- b) When any agency of the State or its political subdivisions is preparing or has contracted to excavate or perform work of any kind on property owned or controlled by the United States, the State of Nevada or its political subdivisions which may endanger historic, pre-historic or paleoenvironmental evidence found by the survey to be on the property or when any artifact, site, or other historic or pre-historic evidence is discovered in the course of such excavation or work, the agency or the CONTRACTOR hired by the Agency shall notify the survey and cooperate with the survey to the fullest extent practicable to preserve or permit study of such evidence before its destruction, displacement or removal.
- c) The provisions of this Section shall be made known to all private CONTRACTORS performing such excavation or work for any agency of the State or its political subdivisions.
- d) The CONTRACTOR shall also, immediately, report any historic, pre-historic or paleoenvironmental evidence found on the site to the owner or owner's representative.

END OF SECTION 110



Department of Finance Purchasing and Contracts

500 S Grand Central Pky 4th Fl • Box 551217 • Las Vegas NV 89155-1217
(702) 455-2897 • Fax (702) 386-4914

George W. Stevens, Chief Financial Officer • Yolanda T. King, Director of Budget & Financial Planning
Adleen B. Stidham, Acting Purchasing Administrator

CLARK COUNTY, NEVADA

INVITATION TO BID

BID NO. 602869-13 GOVERNMENT CENTER: ELEVATOR MODERNIZATION

NEVADA STATE LABOR COMMISSION PWP NUMBER: CL-2013-85

SCOPE OF WORK: Modernize existing traction elevators scope consist of but not limited to the following: selectors, motor drive units, car and hall signals and fixtures, cab interior upgrades, closed loop door operator, door operating equipment, infra-red door protection, entrance frames doors, geared machines, rails seismic requirements, car frame, isolation, hoistway wiring, and recondition other equipment as specified, renovation of interior area, electrical work including new lighting at lobbies, lighting upgrades at elevator machine rooms and pits, upgrade conduit and wiring, and low voltage.

ESTIMATED COST: \$2,100,000 - \$2,200,000.

A Pre-bid Conference will be held on **JANUARY 25, 2013** at **9:00 a.m.**, in the Gold Conference Room on the Fourth Floor of the Clark County Government Center, at the address shown below. If your firm is unfamiliar with the County Bid Submittal procedures and would like to obtain training on the submittal process for this Bid, please contact Royal Alexander, Purchasing Analyst, at (702) 455-4258 no later than **THURSDAY, JANUARY 24, 2013**, and a training session will be provided immediately following the pre-bid conference referenced above.

Bids will be accepted at the Clark County Government Center, 500 South Grand Central Parkway, Purchasing and Contracts Division, Fourth Floor, Las Vegas, Nevada 89106, on or before **FEBRUARY 7, 2013** at **2:15:00 p.m.**, based on the time clock at the Clark County Purchasing and Contracts front desk, and will be opened immediately thereafter. Bidders and other interested parties are invited to attend the Bid opening.

Specifications and drawings will be available on **JANUARY 11, 2013**, at the above address. Specifications and drawings will be available on Compact Disc (CD) only. **The CD will be provided at no charge.** If the CD is to be mailed, there is an additional non-refundable charge of **\$5.00**. **All checks are to be made payable to the Clark County Treasurer.** Hearing impaired customers may obtain information by calling TT/TDD: Relay Nevada toll free (800) 326-6868.

PUBLISHED:
Las Vegas Review-Journal
JANUARY 11, 2013

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HELPFUL BID INFORMATION

DID YOU KNOW THAT IMPORTANT INFORMATION RELATED TO THE PURCHASING PROCESS AT CLARK COUNTY IS AVAILABLE 24-HOURS A DAY, 7 DAYS A WEEK? HERE IS WHERE YOU CAN FIND THIS VALUABLE INFORMATION:

INTERNET



All Clark County solicitations are now posted on the Internet at <http://www.ClarkCountyNV.gov/Purchasing>, as well as other important and useful Purchasing related information. The solicitations are listed under "Current Opportunities." To locate a specific solicitation browse the list by **Number and/or Title**. You can then click on the selected solicitation **Number**, which will take you to a **Details Page**. This page contains project information and links to all project related documents, with the exception of Construction Specifications and Drawings, which must be obtained directly from the Purchasing and Contracts front desk.

PREBID CONFERENCE ATTENDANCE

WE WANT YOU!



You have received this "Invitation to Bid" with the anticipation of doing business with Clark County. You are encouraged to attend the Pre-bid conference, if one is offered; because it gives you the opportunity to ask questions you may have regarding the Bid document, the Bid requirements, and the Bid process. At the Pre-bid conference, the entire Bid document is reviewed and questions from the attendees are answered.

The date and time of the Pre-bid conference (if applicable) is provided for you on the cover page of the Bid document. SEE YOU THERE!

LOCAL SMALL BUSINESS DEVELOPMENT PROGRAM



The Clark County Purchasing and Finance Division established a Business Development Program to assist local minority, women, and other small and disadvantaged business enterprises (M/W/SBE) to understand how to do business with Clark County. This program is based on the current laws and County purchasing policies and is dedicated to providing information in the effort to expand the economic prospects in the local M/W/SBE business community, while promoting full and open competition in all purchasing activities. If you have questions concerning how to prepare a bid, research information that is available to you, or you would like to discuss business opportunities within Clark County, please contact Adleen Stidum at telephone number (702) 455-7155 or via email at abs@ClarkCountyNV.gov.

DISCLAIMER



The prospective Bidder is responsible for obtaining all addenda, correspondence, CD data, and any other documentation issued by Clark County. Clark County is not responsible for the accuracy or completeness of any documentation the Bidder receives from any source other than Clark County Purchasing and Contracts Division.



Department of Finance Purchasing and Contracts

500 S Grand Central Pky 4th Fl • Box 551217 • Las Vegas NV 89155-1217
(702) 455-2897 • Fax (702) 388-4914

George W. Stevens, Chief Financial Officer • Yolanda T. King, Director of Budget & Financial Planning
Yolanda C. Jones, C.P.M., CPPO, Purchasing Manager

CLARK COUNTY, NEVADA

INVITATION TO BID

BID NO. 602677-12

ANNUAL STREETLIGHT MAINTENANCE CONTRACT FOR CLARK COUNTY 215 BRUCE WOODBURY BELTWAY

NEVADA STATE LABOR COMMISSION PWP NUMBER: CL-2012-295

SCOPE OF WORK: The work to be performed under this contract consists of the maintenance of existing lighting infrastructure on Clark County Bruce Woodbury 215 Beltway including the entrance and exit ramps, under bridge lighting, and overhead sign lighting that Clark County maintains. Work involves removal, replacement, and installation of high mast lighting streetlight pole assemblies, overhead sign lighting, ramp lighting, under bridge lighting, pull boxes, wiring, and other related items with mostly County supplied materials.

The Owner will issue Work Order(s) for any items listed in the bid schedule. Each Work Order will be issued for work within a one-mile section of the 215 beltway with one or multiple items of work as listed in the bid schedule. Time allowed on each work order will vary from work orders to work orders. All work shall be performed during the hours of 9:00 p.m. to 6:00 a.m., seven days a week, unless otherwise specified in the work order.

ESTIMATED COST: \$1,020,656 - \$1,071,688.80

A Pre-bid Conference will be held on **JULY 11, 2012 at 9:00 a.m.**, in the Gold Conference Room on the Fourth Floor of the Clark County Government Center, at the address shown below. If your firm is unfamiliar with the County Bid Submittal procedures and would like to obtain training on the submittal process for this Bid, please contact Sandy Moody-Upton, Purchasing Analyst II, at (702) 455-4424 no later than **TUESDAY, JULY 10, 2012**, and a training session will be provided immediately following the pre-bid conference referenced above.

Bids will be accepted at the Clark County Government Center, 500 South Grand Central Parkway, Purchasing and Contracts Division, Fourth Floor, Las Vegas, Nevada 89106, on or before **JULY 26, 2012 at 2:15:00 p.m.**, based on the time clock at the Clark County Purchasing and Contracts front desk, and will be opened immediately thereafter. Bidders and other interested parties are invited to attend the Bid opening.

Specifications and drawings will be available on **JUNE 26, 2012**, at the above address. Specifications and drawings will be available on Compact Disc (CD) only. The CD will be provided at a charge of \$5.00. If the CD is to be mailed, there is an additional non-refundable charge of \$5.00. All checks are to be made payable to the Clark County Treasurer. Hearing impaired customers may obtain information by calling TT/TDD: Relay Nevada toll free (800) 326-6868.

PUBLISHED:
Las Vegas Review-Journal
JUNE 26, 2012

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Department of Finance Purchasing and Contracts

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Yolanda C. Jones, C.P.M., CPPO, Purchasing Manager

CLARK COUNTY, NEVADA

BID NO. 602677-12

ANNUAL STREETLIGHT MAINTENANCE CONTRACT FOR CLARK COUNTY 215
BRUCE WOODBURY BELTWAY

July 16, 2012

ADDENDUM NO. 1

INVITATION TO BID

1. The Bid Opening date of July 25, 2012 at 2:15:00 p.m., **remains unchanged.**

GENERAL CONDITIONS

2. Page 2-2 **Change** Section 1.6 INITIAL TERM to read as follows: The initial term of this contract shall be from date of award through **August 31, 2013.**
3. Page 2-2 **Delete** Section 1.7, CONTRACT RENEWAL in its entirety.

BID FORM

4. **Replace** the existing Bid Form Pages 3-1 thru 3-5 with the attached Revised Bid Form, Revised Pages 3-1 through 3-5.

EXHIBIT A BONDS AND INSURANCE REQUIREMENTS

5. Page A-1, **Change** Paragraph B to read as follows:

Not later than **seven business days** after Notification of Award, the Contractor shall furnish contract bonds to the Purchasing and Contracts Division as follows:

1. Labor and Material Payment Bond in the amount of **\$50,000.**
2. Performance Bond in the amount of **\$50,000.**
3. Guaranty Bond in the amount of **\$50,000.** The Guaranty Bond will go into effect from the date of Notice of Substantial Completion.

Award will become final after the Governing Body has authorized the award and the Contractor has submitted its required bonds utilizing the Owner's Bond forms.

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03923

ER3923

SPECIAL PROVISIONS

SECTION 623 -TRAFFIC SIGNALS AND STREET LIGHTING

6. Subsection 623.04.01, MEASUREMENT (page 623-2),

Add the following:

The quantity of Remove and Replace Foundation (Ramp Lighting) shall be measured for payment for each foundation installed, complete and in place.

The quantity of Install Wire shall be measured for payment per linear foot of wire installed, complete and in place.

The quantity of Bury Pull Box shall be measured for payment for each pull box buried, complete and in place.

The quantity of Weld Handhole Cover shall be measured for payment for each handhole cover welded, complete and in place.

7. Subsection 623.05.01, PAYMENT (page 623-3 thru 623-4),

Add the following:

The contract unit bid price for Remove and Replace Foundation (Ramp Lighting) shall be full compensation for removing the foundation in its entirety at location indicated in a Work Order, disposing of the foundation, and installing a foundation (Std Dwg No. 321) at the same location. Payment for this work shall also include furnishing all materials, including but not limited to, concrete, reinforcing steel, forming, all incidentals, and providing all labor, tools and equipment necessary to complete the work. Items that are not specified that are required to complete the work shall be the responsibility of the contractor.

No separate payment shall be made for the connections from the existing conduits and wiring to the new foundation. The cost thereof shall be considered as included in the bid price for the removal and replacement of the foundation and no additional compensation will be made.

The contract unit bid price for Install Wire shall be full compensation for installing new wire for the existing lighting systems, which may be underground in conduit, above ground in pole, and/or overhead in bridge structure or sign structure. Location and limits of installation shall be as indicated in a Work Order. Payment for this work shall also include furnishing all materials except for the County supplied wire, providing all labor, tools and equipment necessary to complete the work. Items that are not specified that are required to complete the work shall be the responsibility of the contractor.

Bury Pull Box will be performed with the Install Wire bid item on the same lighting circuit. The contract unit bid price for Bury Pull Box shall be full compensation for burying a pull box assembly (box and lid) at a minimum depth such that the top of pull box is at least six inches below grade, at location indicated in a Work Order or as directed by the Engineer. Payment for this work shall also include excavating in dirt or landscape area, removing and re-installing and/or lowering the existing pull box assembly, trimming existing conduits to fit, placing a County supplied locator ball inside the pull box, and backfilling a minimum depth of six inches of materials to cover the pull box completely, furnishing all materials except for the County supplied locator ball, providing all labor, tools, and equipment necessary to complete the work. Items that are not specified that are required to complete the work shall be the responsibility of the contractor.

Contractor is to exercise care to avoid any damage to the existing pull box assembly. Contractor shall replace the damaged pull box and/or pull box lid if damaged by the Contractor while performing the work, at the sole expense of the contractor.

No separate payment shall be made for restoring the area of excavation to original or better condition and that the site shall conform to the overall theme of the existing landscape area for the site. The cost thereof shall be considered as included in the bid price for Bury Pull Box and no additional compensation will be made.

Weld Handhole Cover will be performed with the Install Wire bid item on the same lighting circuit. The contract unit bid price for Weld Handhole Cover shall be full compensation for welding the handhole cover shut on a light pole at location indicated in a Work Order or as directed by the Engineer. Payment for this work shall also include furnishing all materials, providing all labor, tools and equipment necessary to complete the work. Items that are not specified that are required to complete the work shall be the responsibility of the contractor.

Payment will be made under:

PAY ITEM	PAY UNIT
Remove and Replace Foundation (Ramp Lighting)	Each
Install Wire	Each
Bury Pull Box	Each
Weld Handhole Cover	Each

Except as modified herein, all other bid specifications, terms, conditions and special provisions shall remain the same.

ISSUED BY:


SANDY MOODY-UPTON
Purchasing Analyst

Attachment(s): Revised Bid Form, Revised Pages 3-1 through 3-5
Uniform Standard Drawing 321, Lighting Standard Foundation

cc: Yolanda Jones, Purchasing Manager
Kaizad Yazdani, Public Works Traffic
Irene Lam, Public Works Traffic

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ER3925

CLARK COUNTY, NEVADA

BID FORM

BID NO. 602677-12

ANNUAL STREETLIGHT MAINTENANCE CONTRACT FOR CLARK COUNTY 215 BRUCE WOODBURY BELTWAY

PWP NUMBER: CL-2012-295

REVISED PER ADDENDUM NO. 1

(NAME)

(ADDRESS)

I, THE UNDERSIGNED BIDDER:

1. Agree, if awarded this Contract, I will complete all work for which a Contract may be awarded and to furnish any and all labor, equipment, materials, transportation, and other facilities required for the services as set forth in the Bidding and Contract Documents.
2. Have examined the Contract Documents and the site(s) for the proposed work and satisfied themselves as to the character, quality of work to be performed, materials to be furnished and as to the requirements of the specifications.
3. Have completed all information in the blanks provided and have submitted the following within this Bid:
 - a) Have listed the name of each Subcontractor which will be paid an amount exceeding five percent (5%) of the Total Base Bid amount.
 - b) Attached a bid security (in the form of, at my option, a Cashiers Check, Certified Check, Money Order, or Bid Bond in favor of the Owner in the amount of five percent (5%) of the Total Base Bid amount.
 - c) If claiming the preference eligibility, have completed and signed the Affidavit.
4. I acknowledge that if I am one of the three apparent low bidders at the bid opening, and if I have listed Subcontractor(s) pursuant to NRS 338.141, I must submit Bid Attachment 2 within two-hours after completion of the bid opening pursuant to the Instructions to Bidders, and I understand that hand delivery is recommended, and Owner shall not be responsible for lists received after the two hour time limit, regardless of the reason. This Attachment will be time stamped by the Purchasing and Contracts Division. I understand that submission after the two-hour time limit is not allowed and will be returned to me and the bid may be deemed non-responsive. I acknowledge that for:
 - a) Projects UNDER \$5,000,000
I need to list only those Subcontractors that will provide labor/improvements exceeding \$50,000.00.
5. I acknowledge that if notified that I am the low bidder, I must submit the Disclosure of Ownership/Principals form within 24-hours of request.
6. I acknowledge that my bid is based on the current State of Nevada prevailing wages.
7. I acknowledge that I have not breached a public work contract for which the cost exceeds \$25,000,000, within the preceding year, for failing to comply with NRS 338.147 and the requirements of a contract in which I have submitted an Affidavit pertaining to preference eligibility.
8. Upon faxed or mailed receipt of a Notice of Intent to Award the Contract, I will provide the following submittals within seven business days from receipt of the Notice:
 - a) Performance Bond, Labor and Material Payment Bond and a Guaranty Bond, for 100% of the Contract amount as required.
 - b) Certificates of insurance for Commercial General Liability in the amount of \$1,000,000, Automobile Liability in the amount of \$1,000,000, Explosion, Collapse and Underground in the amount of \$1,000,000, Installation Floater, and Workers' Compensation insurance issued by an insurer qualified to underwrite Workers' Compensation insurance in the State of Nevada, as required by law.
2. I acknowledge that if I do not provide the above submittals on or before the seventh business day after receipt of the Notice of Intent to Award; or do not keep the bonds or insurance policies in effect, or allow them to lapse during the performance of the Contract; I will pay over to the Owner the amount of \$100 per day as liquidated damages.

03926

Bid Form
 Bid No. 602677-12
 Annual Streetlight Maintenance Contract for Clark County 215 Bruce Woodbury Beltway
 Revised per Addendum No. 1

9. I acknowledge that if I do not provide the above submittals on or before the seventh business day after receipt of the Notice of Intent to Award; or do not keep the bonds or insurance policies in effect, or allow them to lapse during the performance of the Contract; I will pay over to the Owner the amount of \$100 per day as liquidated damages.
10. I confirm this bid is genuine and is not a sham or collusive, or made in the interest of, or on behalf of any person not herein named, nor that the Bidder in any manner sought to secure for themselves an advantage over any bidders.
11. I further propose and agree that if my bid is accepted, I will commence to perform the work called for by the contract documents on the date specified in the Notice to Proceed and I will complete all work within the calendar days specified in the General Conditions.
12. I further propose and agree that I will accept as full compensation for the work to be performed the price written in the Bid Schedule below.
13. I have carefully checked the figures below and the Owner will not be responsible for any error or omissions in the preparation or submission of this Bid.
14. I agree no verbal agreement or conversation with an officer, agent or employee of the owner, either before or after the execution of the contract, shall affect or modify any of the terms or obligations of this Bid.
15. I am responsible to ascertain the number of addenda issued, and I hereby acknowledge receipt of the following addenda:

Addendum No. _____ dated, _____	Addendum No. _____ dated, _____
Addendum No. _____ dated, _____	Addendum No. _____ dated, _____
Addendum No. _____ dated, _____	Addendum No. _____ dated, _____
Addendum No. _____ dated, _____	Addendum No. _____ dated, _____
Addendum No. _____ dated, _____	Addendum No. _____ dated, _____

16. I agree to perform all work described in the drawings, specifications, and other documents for the amounts quoted below:

BID SCHEDULE				
ITEM NUMBER	ITEM DESCRIPTION	APPROX. QUANTITY	UNIT	TOTAL
109.01	CONSTRUCTION CONFLICTS AND ADDITIONAL WORK	1		\$ 150,000
623.01	REMOVE AND REPLACE ALL LAMPS IN FIXTURE (HIGH MAST)	300	EA	\$
623.02	REMOVE AND REPLACE BALLAST (HIGH MAST)	150	EA	\$
623.03	REMOVE AND REPLACE IGNITER (HIGH MAST)	150	EA	\$
623.04	REMOVE AND REPLACE CAPACITOR (HIGH MAST)	100	EA	\$
623.05	REMOVE AND REPLACE FIXTURE (HIGH MAST)	100	EA	\$
623.06	REMOVE AND REPLACE SHIELD (HIGH MAST)	5	EA	\$
623.07	REMOVE AND REPLACE PLUG (HIGH MAST)	100	EA	\$
623.08	REMOVE AND REPLACE ALL LAMPS IN SIGN STRUCTURE (OVERHEAD SIGN LIGHTING)	20	EA	\$
623.09	REMOVE AND REPLACE BALLAST (OVERHEAD SIGN LIGHTING)	20	EA	\$
623.10	REMOVE AND REPLACE IGNITER (OVERHEAD SIGN LIGHTING)	20	EA	\$
623.11	REMOVE AND REPLACE CAPACITOR (OVERHEAD SIGN LIGHTING)	20	EA	\$
623.12	REMOVE AND REPLACE FIXTURE (OVERHEAD SIGN LIGHTING)	20	EA	\$
623.13	REMOVE AND REPLACE LAMP (RAMP LIGHTING)	50	EA	\$
623.14	REMOVE AND REPLACE FIXTURE (RAMP LIGHTING)	50	EA	\$
623.15	REMOVE AND REPLACE LAMP (UNDER BRIDGE LIGHTING)	40	EA	\$

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Bid Form
 Bid No. 602677-12
 Annual Streetlight Maintenance Contract for Clark County 215 Bruce Woodbury Beltway
 Revised per Addendum No. 1

BID SCHEDULE				
ITEM NUMBER	ITEM DESCRIPTION	APPROX. QUANTITY	UNIT	TOTAL
623.16	REMOVE AND REPLACE FIXTURE (UNDER BRIDGE LIGHTING)	20	EA	\$
623.17	REMOVE AND REPLACE FOUNDATION (RAMP LIGHTING)	10	EA	\$
623.18	INSTALL WIRE	8,000	LF	\$
623.19	BURY PULL BOX	40	EA	\$
623.20	WELD HANDHOLE COVER	50	EA	\$
TOTAL BASE BID				\$

03928

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PRIME CONTRACTOR MUST INCLUDE ITS NAME ON THIS LIST IF HE OR SHE INTENDS TO PERFORM ANY OF THE LABOR OR PORTIONS OF THE PUBLIC WORK.
THE CONTRACTOR SHALL NOT SUBSTITUTE A SUBCONTRACTOR WHO IS NAMED IN THIS BID, PURSUANT TO NEVADA REVISED STATUTE 338.141. THE FOLLOWING SUBCONTRACTORS SHALL BE UTILIZED. A BIDDER, WHICH FAILS TO LIST A SUBCONTRACTOR (S), REPRESENTS THAT NO SUBCONTRACTOR(S) MEET THE STATUTORY REQUIREMENTS.

Legal Name of Firm as it Would Appear in Contract

Today's Date

03929

17. BUSINESS ENTERPRISE INFORMATION:

The Prime Contractor submitting this Bid is a ☐ MBE ☐ WBE ☐ PBE ☐ SBE ☐ NBE ☐ LBE as defined in the Instructions to Bidders.

18. BUSINESS ETHNICITY INFORMATION:

The Prime Contractor submitting the Bid Ethnicity is ☐ Caucasian (CX) ☐ African American (AA) ☐ Hispanic American (HA) ☐ Asian Pacific American (AX) ☐ Native American (NA) ☐ Other as defined in the Instructions to Bidders.

19. BIDDERS' PREFERENCE Is the Bidder claiming Bidders' Preference?

☐ Yes If yes, the Bidder acknowledges that he/she is required to follow the requirements set forth in the Affidavit (Bid Attachment 3) regardless of whether the Bidders' Preference was considered in determining the lowest responsive and responsible bidder on the Project.

☐ No I do not have, or I am not claiming, a Certificate of Eligibility to receive preference in bidding.

LEGAL NAME OF FIRM AS IT WOULD APPEAR IN CONTRACT

ADDRESS OF FIRM

CITY, STATE, ZIP CODE

TELEPHONE NUMBER

FAX NUMBER

NEVADA STATE CONTRACTORS' BOARD LICENSE INFORMATION:

I certify that the license(s) listed below will be the license(s) used to perform the majority of the work on this project.

LICENSE NUMBER: _____

LICENSE CLASS: _____

LICENSE LIMIT: _____

ONE TIME LICENSE LIMIT INCREASE \$ _____ IF YES, DATE REQUESTED _____

DUN & BRADSTREET NUMBER _____

CLARK COUNTY BUSINESS LICENSE NO. _____

STATE OF NEVADA BUSINESS LICENSE NO. _____

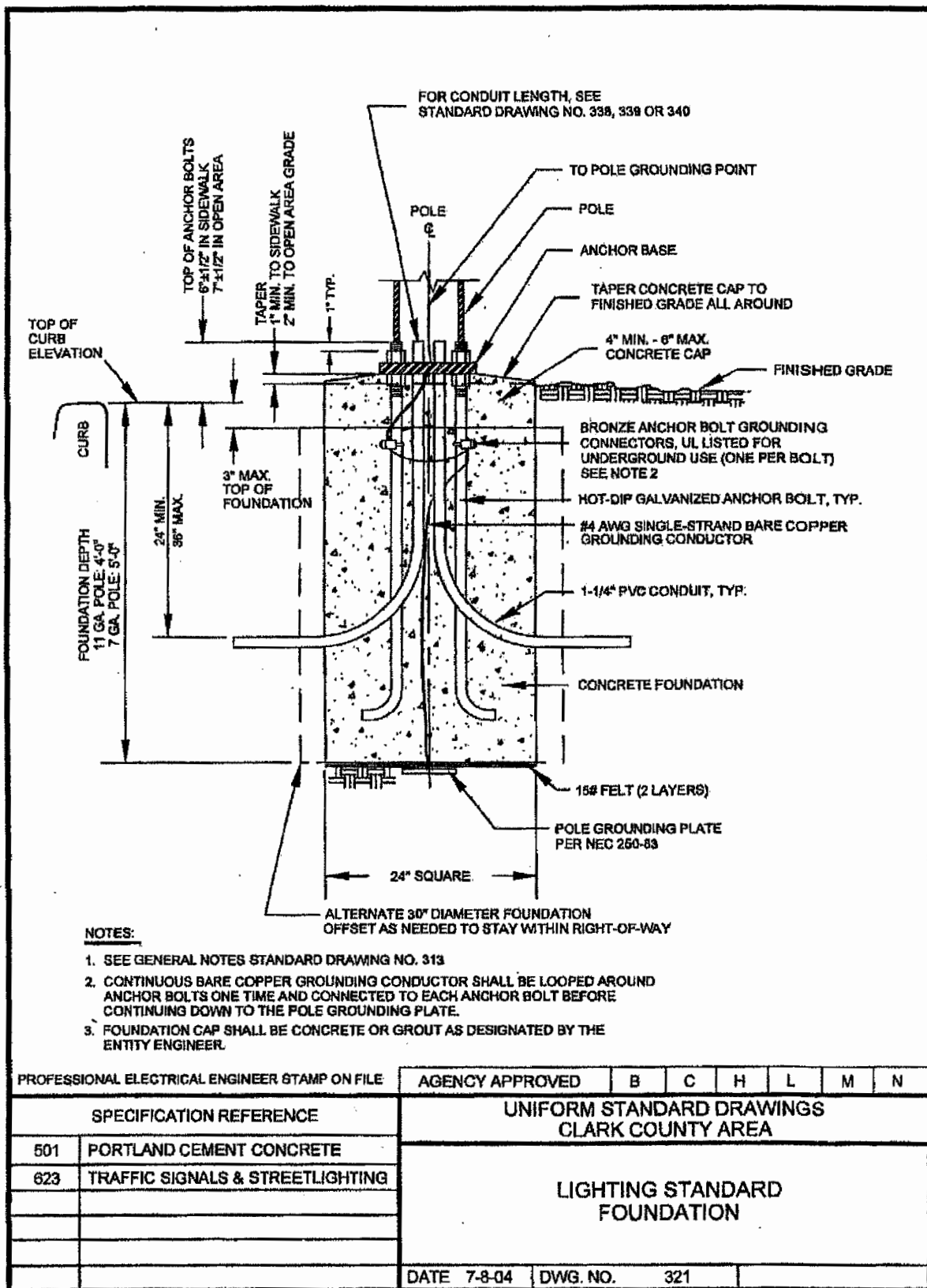
AUTHORIZED REPRESENTATIVE
(PRINT OR TYPE)

E-MAIL ADDRESS

SIGNATURE OF AUTHORIZED REPRESENTATIVE

TODAY'S DATE

03930



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ER3931



Department of Finance Purchasing and Contracts

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(702) 455-2897 • Fax (702) 386-4914

George W. Stevens, Chief Financial Officer • Yolanda T. King, Director of Budget & Financial Planning
Yolanda C. Jones, C.P.M., CPPO, Purchasing Manager

CLARK COUNTY, NEVADA BID NO. 602677-12

ANNUAL STREETLIGHT MAINTENANCE CONTRACT FOR CLARK COUNTY 215 BRUCE WOODBURY BELTWAY

July 19, 2012

ADDENDUM NO. 2

INVITATION TO BID

1. The Bid Opening date of July 25, 2012 at 2:15:00 p.m., remains unchanged.

BID FORM

2. Add Bid Attachment 3, Affidavit Pertaining to Preference Eligibility attached to this Addendum No. 2.

DRAWINGS

3. Add NDOT Safety Base, T-30.1.9 attached to this Addendum No. 2.
4. Add NDOT Type 7 & 14 Pole Lighting & Signal Light Poles, T-30.1.10 attached to this Addendum No. 2.
5. Add NDOT Pole Foundation, Pole Grounding Detail, Conductor Splice Methods, T-30.1.16 attached to this Addendum No. 2.

Except as modified herein, all other bid specifications, terms, conditions and special provisions shall remain the same.

ISSUED BY:



SANDY MOODY-UPTON
Purchasing Analyst

Attachment(s): Bid Attachment 3, Affidavit Pertaining to Preference Eligibility
Drawing T-30.1.9
Drawing T-30.1.10
Drawing T-30.1.16

cc: Yolanda Jones, Purchasing Manager
Kaizad Yazdani, Public Works Traffic
Irene Lam, Public Works Traffic

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**BID ATTACHMENT 3
AFFIDAVIT PERTAINING TO PREFERENCE ELIGIBILITY**

I, _____ ("Affiant"), on behalf of the _____ ("Contractor"), swear and affirm that in order to be in compliance with NRS 338,147, as revised by Assembly Bill 144 of the 76th Session of the 2011 Nevada Legislature, effective April 27, 2011, and be eligible to receive a preference in bidding for Project No.602677-12, Project Name Annual Streetlight Maintenance Contract for Clark County 216 Bruce Woodbury Beltway ("Project"); certify that for the duration of the Project:

- (a) At least 50 percent of all workers employed on the Project including, without limitation, any employees of the Bidder, and of any Subcontractor engaged on the Project, will hold a valid driver's license or identification card issued by the State Department of Motor Vehicles (DMV);
- (b) All vehicles used primarily for the Project will be:
 - (1) Registered and partially apportioned to Nevada pursuant to the International Registration Plan, as adopted by the Department of Motor Vehicles pursuant to NRS 707.826; or
 - (2) Registered in the State of Nevada;
- (c) At least 50 percent of the Design Professionals working on the Project including, without limitation, any employees of the Contractor, and of any Subcontractor engaged on the Project, will have a valid driver's license or identification card issued by the DMV;
- (d) At least 25 percent of the suppliers of the materials used for the Project will be located in the State of Nevada; unless the public body requires the acquisition of materials or equipment that cannot be obtained from a supplier located in the State of Nevada; and
- (e) The Contractor and any Subcontractor engaged on the Project will maintain and make available for the inspection within the State of Nevada his or her records concerning payroll relating to the Project.

Upon submission of the State Contractors' Board certificate of eligibility to receive a preference in bidding on public works and this Affidavit, Contractor recognizes and accepts that failure to comply with the requirements herein, including all record keeping obligations detailed in the General Conditions, 1) is a material breach of the Contract; 2) may result in the loss of a preference in bidding public works for five (5) years and/or the ability to bid on any contracts for public works within the State of Nevada for one (1) year; and 3) entitles Clark County civil damages in the amount of one percent (1%) of the Contract price. The Contractor acknowledges that he/she is required to follow the requirements regardless of whether the bidder's preference was considered in determining the lowest responsive and responsible bidder on the Project.

BID ATTACHMENT 3
AFFIDAVIT PERTAINING TO PREFERENCE ELIGIBILITY
Page 2 of 2

Proof of Authorization to Sign Affidavit

The person must establish his/her actual authority to act on behalf of the business organization. The individual must be the person indicated in the table below and provide written documentation clearly indicating the person's position within that business organization. If the individual signing the Affidavit is an employee of the business organization, written documentation on organization letterhead must be provided; clearly indicating the person's authority to act on behalf of the business organization. The authorized person identified in the table must sign the written documentation.

If the individual making application for the business organization is not one of the persons identified in the table or an authorized employee, a valid power of attorney executed by an authorized person on behalf of the business organization must be provided. The power of attorney must be made not more than 90 calendar days before the Affidavit is signed.

BUSINESS ENTITY	PERSON WHO HAS AUTHORITY TO COMPLETE AFFIDAVIT
Sole Proprietorship	Name of Sole Proprietor
Partnership	Name of Partner
Corporation	1. Director, if Authorized 2. Executive Officer (as indicated in the Article of Incorporation)
Limited Liability Company	1. Member, if Member-Managed LLC 2. Manager, if Manager-Managed LLC

By: _____ Title: _____
Printed Name of Affiant

Signature of Affiant: _____ Date: _____

Signed and sworn to (or affirmed) before me on this _____ day of _____, 20____

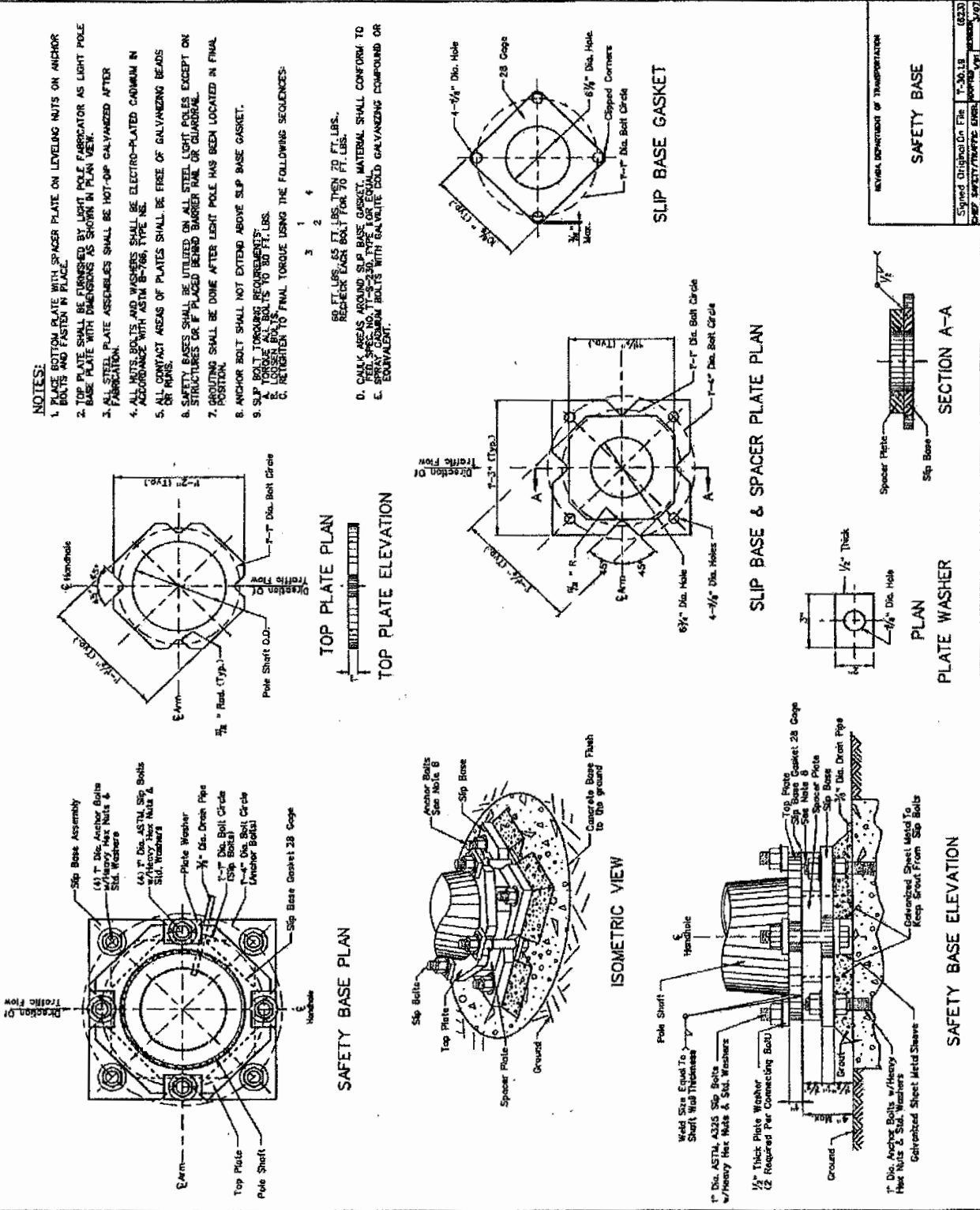
by _____ (name of Affiant)

State of _____)
ss)

Notary Signature

County of: _____)

STAMP AND SEAL



- NOTES:**
1. BOTTOM PLATE WITH SPACER PLATE ON LEVELING NUTS ON ANCHOR BOLTS AND FASTEN IN PLACE.
 2. TOP PLATE SHALL BE FLANGED BY LIGHT POLE FABRICATOR AS LIGHT POLE BASE PLATE WITH DIMENSIONS AS SHOWN IN PLAN VIEW.
 3. FASTENED PLATE ASSEMBLY SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
 4. ALL NUTS, BOLTS AND WASHERS SHALL BE ELECTRO-PLATED CADMIUM IN ACCORDANCE WITH ASTM B-786, TYPE III.
 5. ALL CONTACT AREAS OF PLATES SHALL BE FREE OF GALVANIZING BEADS OR HIPS.
 6. SAFETY BASES SHALL BE UTILIZED ON ALL STEEL LIGHT POLES EXCEPT ON STRUCTURES OR IF PLACED BEHIND BARRIER RAIL OR GUARDRAIL.
 7. GROUTING SHALL BE DONE AFTER LIGHT POLE HAS BEEN LOCATED IN FINAL POSITION.
 8. ANCHOR BOLT SHALL NOT EXTEND ABOVE SLIP BASE GASKET.
 9. SLIP BOLT TORQUE REQUIREMENTS:
 A. TORQUE ALL BOLTS TO 100 FT. LBS.
 B. LOOSEN BOLTS.
 C. RETIGHTEN TO FINAL TORQUE USING THE FOLLOWING SEQUENCES:
 1 2 3 4
 1. 100 FT. LBS. AS IT IS, THEN 20 FT. LBS.
 2. 100 FT. LBS. FOR 10 FT. LBS.
 3. 100 FT. LBS. FOR 10 FT. LBS.
 4. 100 FT. LBS. FOR 10 FT. LBS.
 10. ALL AREAS AROUND SLIP BASE GASKET, MATERIAL SHALL CONFORM TO ASTM A-232, TYPE III.
 11. SPRAY CADMIUM BOLTS WITH GALVANIC COLD GALVANIZING COMPOUND OR EQUIVALENT.

REVIEW DEPARTMENT OF TRANSPORTATION	
SAFETY BASE	
Signed Original On File	T-30.19 (623)
DATE 04/27/2015	REVISED 04/15/15

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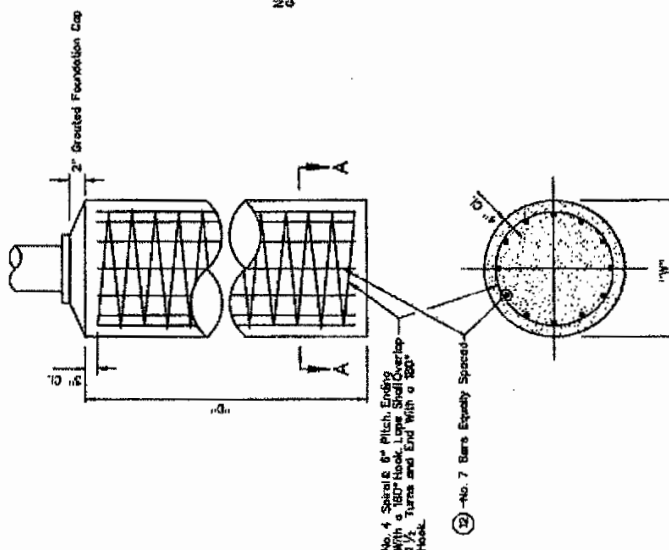
SAFETY BASES
1. TYPE 7 AND TYPE 14 POLES SHALL REQUIRE SAFETY
BASE ASSEMBLIES UNLESS MOUNTED ON STRUCTURE
BEHIND BARRIER RAIL OR NOTED OTHERWISE ON THE

POLE POSITION IN THE MARKET

TYPE 7 & 14 POLE
LIGHTING & SIGNAL
LIGHT POLES

Signed Original On File	T-30.1.10	66237
SAFETY/CRIME INDEX	1000110	1000110





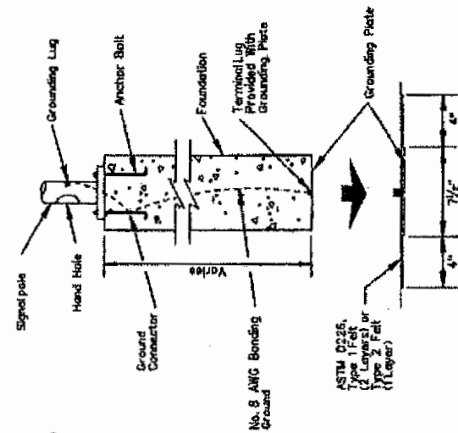
Note: Concrete Shall Be Class A or A1.

SECTION A-A PILE FOUNDATION

PILE FOUNDATION TABLE

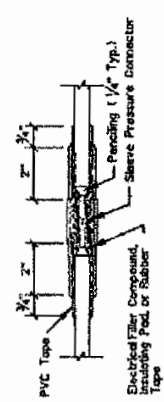
PILE TYPE	MAST ARM LENGTH	#BARS	#ANCHOR BOLTS	ANCHOR BOLT SIZES
1A	7	7	2	1/2" x 36" x 4"
1B	14	14	4	1/2" x 48" x 4"
2A	28	28	8	1/2" x 60" x 6"
2B	42	42	12	1/2" x 60" x 6"
3A	56	56	16	1/2" x 60" x 6"
3B	70	70	20	1/2" x 60" x 6"

* Unless otherwise shown on plans.
 * Not applicable when mounted on structures.
 ① - When "m" = 2'-0" use 4-No.5 bars equally spaced.
 When "m" = 2'-6" use 8-No.5 bars equally spaced.



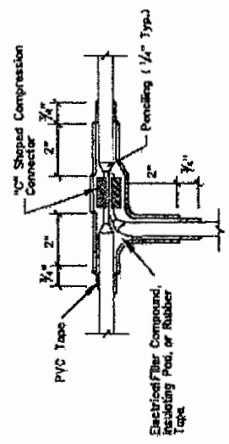
1. Connect Bonding Wire to the Reinforcing Steel Cage Near the Midpoint of the Foundation or Anchor Bolt.
2. Ground Pile Shell Be Made of Nonferrous Material (Typically Brass or Copper). Install This Grounding Pin of Equivalent.

POLE GROUNDING DETAIL



TYPE A SPLICE METHOD (TWO FREE ENDS)

1. Completely Cover the Splice Area With An Electrical Insulating Danting and Allow to Dry.
2. Apply Electrical Filler Compound With Minimum Thickness of 1/8".
3. Apply 3 Layers of Half Lapped PVC Tape.



TYPE B SPLICE METHOD (THREE FREE ENDS OR ONE FREE END AND ONE THROUGH CONDUCTOR)

1. Completely Cover the Splice Area With An Electrical Insulating Danting and Allow to Dry.
2. Apply 2 Layers of Electrical Insulating Putty With Minimum Thickness of 1/8". Each Layer of Putty Must Be Lapped. Synthetic or Non-synthetic, Soft Taping Rubber Tape.
3. Apply 3 Layers of Half Lapped PVC Tape.

CONDUCTOR SPLICING METHODS

- NOTES:
1. ALL DIMENSIONS ARE MINIMAL.
 2. RUBBER TAPES SHALL BE ROLLED AFTER APPLICATION.
 3. WHEN PVC TAPE IS USED AS A FINAL LAYER, PAINT FINISHED SPLICE WITH ELECTRICAL INSULATING COATING.

REVIEWED BY TRANSPORTATION
 PILE FOUNDATION,
 POLE GROUNDING DETAIL,
 CONDUCTOR SPLICING METHODS

Signed Original On File
 T-30.118
 08/20
 0007 SAFETY/TRAFFIC ENGINEER

CERTIFICATE OF SERVICE VIA UPS OVERNIGHT MAIL


I hereby certify that on April 11, 2013 the undersigned, an employee of McCracken, Stemerman & Holsberry enclosed a copy of **DECLARATION OF WILLIAM STANLEY IN OPPOSITION TO MOTION FOR SUMMARY JUDGMENT** in an envelope or package provided by an overnight delivery carrier. I placed the envelope or package for collection and overnight delivery at an office or a regularly utilized drop box of the overnight delivery carrier. It was addressed as follows:

Keith Sakelhide, Deputy Labor Commissioner
Office of the Labor Commissioner
555 E. Washington Ave. Suite 4100
Las Vegas, NV 89101

Gary C. Moss
Paul T. Trimmer
JACKSON LEWIS
3800 Howard Hughes Parkway
Suite 600
Las Vegas, NV 89169

Eldon Lee Thompson
Clark County District Attorney's Office
500 S. Grand Central Parkway, Suite 5075
Las Vegas, NV 89106

I declare under penalty of perjury under the laws of the State of Nevada and United States of America that the foregoing is true and correct. Executed on this 11th day of April, 2013.


Dinh Luong

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ER3938

1 **BEFORE THE NEVADA STATE LABOR COMMISSIONER**

2 **CARSON CITY, NEVADA**

FILED

MAR 06 2014

NEVADA
LABOR COMMISSIONER - CC

3 INTERNATIONAL UNION OF ELEVATOR)
4 CONSTRUCTORS,)

5 Complainant,)

6 v.)

ORDER

7 BOMBARDIER TRANSPORTATION)
8 (HOLDINGS) USA, INC.,)

9 Respondent.)

10 Contract CBE-552)

11 Bombardier Transportation (Holdings) USA, Inc. ("Bombardier") installed the original
12 Automated Transit System ("ATS") at McCarran International Airport in 1985. With the growth of
13 McCarran Airport, the ATS and its progeny became important to ensuring the efficient movement of
14 travelers to and from their destinations. In June 2008, Bombardier and Clark County entered into a
15 contract (CBE-552) for the preventative and corrective maintenance of the ATS at McCarran Airport.
16 Work under the contract began on July 1, 2008 and was to continue for a period of 5 years, ending
17 June 30, 2013.

18 On October 9, 2009, the International Union of Elevator Constructors ("IUEC") filed a prevailing
19 wage complaint against Bombardier. IUEC alleged that workers hired under Bombardier's contract
20 with the Clark County Department of Aviation ("DOA") to perform repair work on the ATS at McCarran
21 International Airport were not paid the prevailing wage in accordance with NRS 338. The Office of the
22 Labor Commissioner sent the complaint to the DOA for investigation on October 13, 2009.

23 The DOA issued its Determination on November 24, 2009 finding that CBE-552 was a contract
24 for maintenance entered into pursuant to NRS 332 and was not subject to the prevailing wage
25 requirements of NRS 338. IUEC filed an objection to the DOA Determination on December 17, 2009.
26 Deputy Labor Commissioner Keith Sakelhide sent IUEC's objection to the DOA on December 31,
27 2009 with a recommendation that a more thorough investigation be done to determine what work was
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1 actually performed under the CBE-552 contract. On March 30, 2010, the DOA issued its first revised
2 Determination. After a review of the work performed under CBE-552, the DOA affirmed its prior
3 Determination.

4 Former Labor Commissioner Michael Tanchek issued an Interim Order on June 7, 2011 finding
5 that work on the "fixed works" (guide ways, stations, automatic train control systems, etc.) was subject
6 to NRS 338, but the work on the ATS cars was not.¹ Additionally, the former Labor Commissioner
7 stated that, according to how his office interprets NRS 338, any work done under a maintenance
8 contract that exceeds \$100,000 would be considered a repair and subject to prevailing wage law. The
9 Interim Order advised the DOA to assess the work done on the contract in a manner consistent with
10 the order.

11 On July 25, 2011, the DOA issued a second revised Determination asking again that the
12 complaint be dismissed because all work done under CBE-552 was minor, never amounting to more
13 than \$100,000, and therefore, exempt from prevailing wage under NRS 338. Bombardier and IUEC
14 filed objections to the second revised Determination. The matter was set for hearing beginning June
15 25, 2013.

16 FINDINGS OF FACT

17 An administrative hearing in the above-entitled matter was held over six days in June and
18 September 2013. Based on testimony and evidence submitted at that hearing, the Labor
19 Commissioner finds that CBE-552 is a public work subject to payment of prevailing wage and not
20 exempt pursuant to NRS 338.011 as "directly related to normal operation or normal maintenance of a
21 public body or its property" or pursuant to NRS 338.080, the "railroad company" exemption. The Labor
22 Commissioner further finds that the ATS Technicians who worked on the McCarran ATS pursuant to
23 CBE-552 were not properly compensated; the ATS Technicians should have been paid as Elevator
24 Constructors for all work that would rightfully be classified as repair, regardless of the label used by
25 Bombardier and the Clark County Department of Aviation.
26

27
28 ¹ For that reason, the former Labor Commissioner reasoned that some of the work under the contract would be
subject to prevailing wage, some of it would not.

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1 **A. Contact CBE-552 concerns a public work pursuant to NRS 338.010 and therefore subject**
2 **to the payment of prevailing wage.**

3 Payment of prevailing wage is required for all public works contracts not otherwise exempt. A
4 "public work" is defined, in relevant part, as "any project for the new construction, repair or
5 reconstruction of ... a project financed in whole or in part from public money for ... public buildings ...
6 and all other publicly owned works or property." NRS 338.010(16). Not every publicly financed work
7 will fit this definition. Only publicly financed "projects" require the payment of prevailing wage.

8 NRS 338 does not define "project" for purposes of interpreting its provisions. Therefore, the
9 Labor Commissioner must look to other sources to establish its meaning. Dictionaries provide differing
10 definitions for "project," but generally provide a framework for understanding its meaning. Merriam-
11 Webster defines "project" as "a planned piece of work that have a specific purpose ... and that usually
12 requires a lot of time." MERRIAM-WEBSTER DICTIONARY, available online at [http://www.merriam-](http://www.merriam-webster.com/dictionary/project)
13 [webster.com/dictionary/project](http://www.merriam-webster.com/dictionary/project) (accessed January 6, 2014). Bombardier Post-Hearing Brief at 15.
14 Further, the Cambridge University Dictionary defines "project" as "a piece of planned work or activity
15 that is completed over a period of time and intended to achieve a particular aim." CAMBRIDGE
16 UNIVERSITY ACADEMIC CONTENT DICTIONARY, available online at
17 http://dictionary.cambridge.org/us/dictionary/american-english/project_1 (accessed January 6, 2014).
18 Id. CBE-552 is a "project" within the meaning of either of these definitions.

19 CBE-552 called for routine preventative and corrective maintenance of the ATS to ensure no
20 less than 99.65% reliability in service to McCarran Airport for the duration of the contract, a period of
21 five years. Much of the work under the contract was performed outside of McCarran Airport's normal
22 operating hours during the night or PM shift.² Service on the McCarran ATS was done pursuant to a
23 defined and comprehensive schedule outlined in the contract. All of which was done to ensure minimal
24 to no interruption in service as was the purpose of the contract. Based on these facts, there is no
25 question that CBE-552 is a "project" under the given dictionary definitions. Therefore, CBE-552 is a
26 "public work" pursuant to NRS 338.010(16) requiring the payment of prevailing wage.

27 ² There were occasions when work had to be performed on the ATS outside of the schedule delineated in the
28 contract for unexpected or unplanned events. However, those few occasions do not remove CBE-552 from being
29 a "project" subject to prevailing wage under NRS 338.010.

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1 **B. CBE-552 is not exempt from prevailing wage pursuant to NRS 338.011 because it is not**
2 **directly related to the normal operation or normal maintenance of a public body or its**
3 **property.**

4 The requirement to pay prevailing wage does not apply, pursuant to NRS 338.011(1), to a
5 contract "awarded in compliance with [NRS 332 or 333] which is directly related to the normal
6 operation of the public body or the normal maintenance of its property." The test is disjunctive; a
7 contract need only be directly related to normal operation or normal maintenance to be exempt from
8 prevailing wage, not both.

9 **1. Directly Related to Normal Operations**

10 All parties agree that McCarran Airport is property owned and operated by Clark County, a
11 public body. Further, no one disputes that the ATS is important to McCarran Airport, and in certain
12 circumstances, makes transporting passengers around the airport property more efficient. However,
13 just because something is important or efficient does not translate to it being a part of normal
14 operations. Certainly, McCarran Airport could, and has, operated as an airport without a fully
15 functioning ATS. The ATS is not dispositive as to whether McCarran is operating as an airport.

16 McCarran Airport would still be engaged in normal operations of an airport if the ATS did not
17 exist or was out of service for a period of time. Planes would take off and land; passengers would
18 make it to their destinations. While the ATS may be the primary method of transporting passengers
19 around the airport property, it is not the only method. There are alternatives for transporting
20 passengers to and from the gate areas; for example, passengers could walk or be bused. In some
21 instances these alternative methods would be more efficient than taking the ATS.³ These alternative
22 methods may require more personnel and may result in additional costs, but would by no stretch of the
23 imagination prevent McCarran Airport from operating as an airport.

24 **2. Directly Related to Normal Maintenance**

25 The exemption provided by NRS 338.011(1) for contracts directly related to normal
26 maintenance is intended to allow local governments the freedom to enter into certain contracts without
27

28 ³ As IUEC points out, with the change in the security gates for Terminal C, use of the ATS is actually less efficient
than simply walking to the gate area. IUEC's Post-Hearing Brief at 15.

1 the usual requirements of NRS 338. However, the exemption is not a tool to be used to avoid paying
2 prevailing wage for work that rightfully falls within the purview of NRS 338.

3 CBE-552 called for preventative and corrective maintenance to be performed on the ATS at
4 McCarran Airport for a term of five years. While CBE-552 certainly does contain maintenance work, it
5 is clear that some of the heavy or corrective maintenance tasks go beyond the normal maintenance
6 that would be exempt under NRS 338.011.⁴ Those tasks cross over into the realm of repair. Repair
7 work requires the payment of prevailing wage.

8 The presence of maintenance tasks does not cause repairs to disappear, a fact Bombardier
9 acknowledges.⁵ If that were the case it would be easy to avoid paying prevailing wage simply by
10 including maintenance tasks in a contract or by calling it a maintenance contract. The Labor
11 Commissioner sees nothing to suggest that the legislature intended the exemption to be used in that
12 way. Therefore, those tasks properly classified as maintenance are exempt and those tasks properly
13 classified as repair would be subject to the payment of prevailing wage.

14 3. Awarded in Compliance with NRS 332 or NRS 333

15 The issue of compliance with NRS 332 or NRS 333 is not relevant here because the Labor
16 Commissioner does not find that CBE-552 is directly related to the normal operation or normal
17 maintenance of a public body or its property. The issue of compliance would only be relevant if one or
18 both or the remaining prongs were met.⁶

19 **C. CBE-552 is not exempt from prevailing wage pursuant to NRS 338.080 because**
20 **Bombardier is not a railroad company within the meaning of the statute.**

21 The requirements of NRS 338 do not apply to "any work, construction, alteration, repair or
22 other employment performed, undertaken or carried out, by or for any railroad company or any person

23 _____
24 ⁴ "Normal maintenance" generally means work that does not require a lot of skill or training (i.e. janitorial
services), not work that requires training and technical skills.

25 ⁵ Bombardier argues in its post-hearing brief: "Just like the presence of chocolate in Neapolitan ice cream does
not make the other two flavors – vanilla and strawberry – disappear, the fact that CBE-552 may from time to time
26 call for the performance of corrective maintenance and/or repair, does not transform the Contract into a contract
for the purpose of repair." at 37. The same is true for maintenance. Calling something a maintenance contract or
having maintenance tasks in the contract does not make repair tasks disappear.

27 ⁶ However, the Labor Commissioner is not persuaded by the argument that "the County and other public agencies
have consistently interpreted NRS 338.011 the same way for years, with no dire consequences." Clark County's
28 Post-Hearing Brief at 34. Being in violation of the law for years without incident is not an excuse to be in violation
of the law.

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1 operating the same, whether such work, construction, alteration or repair is incident to or in
2 conjunction with a contract to which a public body is a party, or otherwise." NRS 338.080(1). Like with
3 project, NRS 338 does not define "railroad company" for purposes of interpreting its provisions.

4 Clearly McCarran Airport's ATS is not a traditional railroad. It is not "a road laid with parallel
5 steel rails upon which cars, carrying passengers or freight, and equipped with wheels adapted to run
6 upon the rails, are drawn by locomotive." *Westinghouse Electric Corp. v. Williams*, 173 Ga. App. 118,
7 121 (Ga. Ct. App. 1984).⁷ The DOA acknowledges that the ATS is more akin to driverless buses given
8 that the ATS is made up of large rubber-tired passenger vehicles.⁸ Therefore, there is nothing about
9 the ATS itself that would allow Bombardier to avail itself of the exemption provided by NRS 338.080.

10 Nevertheless, a portion of Bombardier's revenues come from the design, operation,
11 manufacture and sale of traditional railroad equipment as well as other ATS systems throughout the
12 country. However, none of Bombardier's "traditional railroad revenues" appear to come out of
13 Nevada.⁹ Additionally, there is no evidence that Bombardier claims to be a railroad company in any
14 other context or to any other entity in Nevada. It is unreasonable for Bombardier to call itself a railroad
15 company when in no other circumstances it is acting as a railroad company within the state.
16 Bombardier cannot be a railroad company only when it is most convenient.

17 The exemption provided by NRS 338.080 is intended to exempt a company acting in the
18 capacity of a railroad company in the state of Nevada, not a company that has railroad holdings
19 somewhere outside of the state. To read this exemption otherwise would allow companies to acquire
20 railroad subsidiaries elsewhere and call themselves railroad companies to avoid Nevada's prevailing
21 wage law. The Labor Commissioner sees nothing to suggest that the legislature intended such a
22 result.

23 ///

24
25 ⁷ Bombardier is bound by this definition as it is a successor to Westinghouse, the proponent of this definition.

26 ⁸ Further, the DOA does not join Bombardier in the characterization of the ATS as a railroad or any of the work on
the railroad as railroad work. Clark County's Post-Hearing Brief at 40.

27 ⁹ While the Las Vegas Monorail is a Bombardier project, monorails cannot be classified as traditional railroads for
many of the same reasons that the McCarran Airport ATS cannot be classified as a traditional railroad.

28 Additionally, monorails are distinct from the McCarran Airport ATS as monorails do not include "a system to
transport passengers between two end points with no intermediate stops." NRS 705.650(2). **03944**

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1 It is apparent that being an Elevator Constructor encompasses more than just work on
2 traditional elevators. It includes working on other automated modes of transportation—including
3 "Automated People Movers." This is clear from the inclusion of the wording "includes but it not limited
4 to" in the job descriptions used by both the State of Nevada Labor Commissioner and the U.S.
5 Department of Labor. By the plain meaning of that phrase, Elevator Constructor isn't limited to the
6 tasks and tools specifically delineated in the job description. The job description is intended to give
7 guidance to the types of tasks and tools of that job classification. The job description should never be
8 read to limit a job classification to just those tasks and tools.¹¹ It would be nearly impossible to create
9 an exhaustive list of tasks performed and tools used for each job classification on a public works
10 project. Moreover, there is no requirement to do so.

11 There is no question that the McCarran ATS is an "Automated People Mover." Any one of the
12 approximately 40 million travelers that utilize McCarran Airport and the McCarran Airport ATS each
13 year would be able to discern that fact. Therefore, the McCarran ATS would be the type of equipment
14 that Elevator Repairers under the Department of Labor definition and Elevator Constructors under the
15 State of Nevada definition work on. Further, many of the same technical skills utilized by the ATS
16 Technicians on the McCarran ATS are the skills used by Elevator Constructors. For example, ATS
17 Technicians hired to work on the McCarran ATS under CBE-552 were expected to have knowledge of
18 and perform electrical, mechanical, electro-mechanical and pneumatic work. IUEC Exhibit 14. Many of
19 the tools used by Elevator Constructors are also tools used by ATS Technicians on the McCarran
20 ATS. Bombardier Exhibit 17; IUEC Exhibit 13.

21 While much has been argued regarding the difference between Elevator Constructors and ATS
22 Technicians, it is a distinction without a difference. Therefore, the proper classification for repair work
23 under CBE-552 is Elevator Constructor.

24 ///

25 ///

27 _____
28 ¹¹ As IUEC points out, the Carpenter job description does not include "hammer," but no one would argue that a
hammer is not a tool of the carpentry trade. IUEC's Post-Hearing Brief at 29.

1 2. Work identified as "corrective maintenance," "major maintenance," "heavy maintenance
2 and overhaul," "repair," or "replacement" must be paid at the prevailing wage for
3 Elevator Constructor

4 As previously noted, CBE-552 called for preventative and corrective maintenance to be
5 performed on the ATS at McCarran Airport for a term of five years. However, the maintenance label is
6 a misnomer as many of the tasks could more accurately be described as repairs. Those repair tasks
7 must be paid the prevailing wage rate for Elevator Constructor, which pursuant to the rates in effect at
8 the time of the contract is \$56.15 per hour.

9 A review of CBE-552 makes it clear what tasks are more properly classified as repairs and
10 should be paid at the Elevator Constructor rate. Under paragraph 2.2.1.2 Scheduled Vehicle
11 Maintenance – Major Maintenance, the following tasks are listed: Replacing major repairable units;
12 Performing major repairs; Rebuilding and overhauling major components; and Repairing spare
13 equipment. Bombardier Exhibit 1. Under paragraph 2.2.3.2 Scheduled Station Equipment
14 Maintenance – Minor Maintenance, repairs of station doors, graphics, and occupancy detectors are
15 provided for. *Id.* Under paragraph 2.2.4.2 Scheduled Power Distribution Maintenance – Minor
16 Maintenance calls for the repair and replacement of contactors and isolation switches. *Id.* Under the
17 same paragraph, Major Maintenance includes the repair or replacement of failed equipment or
18 components. *Id.* The same is true for paragraph 2.2.5.2 Scheduled Maintenance of Automatic Train
19 Control Equipment – Major Maintenance. *Id.*

20 Further, work performed under CBE-552 was intended to be at a ratio of 80% preventative
21 maintenance, 20% corrective maintenance. Hearing Transcript, 60:12-21; 61:2-6; 67:4-8; 130:6-8.
22 However, Bombardier contends that in reality performance exceeded that ratio with 90% of the tasks
23 being preventative maintenance and 10% corrective maintenance.¹² IUEC maintains that a much more
24 considerable percentage (40%) of the maintenance tasks were repairs subject to NRS 338. IUEC
25 Post-Hearing Brief at 10. Testimony at the hearing established a range of 10% to 40% repair work
26 versus maintenance work. Hearing Transcript, 61:6; 177:6-7,14-15; 589:12; 619:5,12; 670:2,8-9,22;
27 719:6,10; 757:19; 796:19; 797:17; 1099:3,11-12; 1100:1-2,9. Nevertheless, it is apparent that some

28 ¹² Bombardier makes this contention with the understanding that "corrective maintenance" under CBE-552 might
 be categorized as repair. Bombardier Post-Hearing Brief at 12.

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percentage of the maintenance tasks that ATS Technicians were required to perform pursuant to CBE-552 involved repair, replacement, rebuilding or modifying of McCarran ATS components. Bombardier Exhibits 15 & 16. Therefore, those tasks must be paid at the appropriate prevailing wage.

3. Based on a just and reasonable inference from testimony and evidence submitted, 20% of the "maintenance" performed by ATS Technicians under CBE-552 were repairs subject to payment of prevailing wage

Both Bombardier and IUEC provided evidence of what tasks and hours they believed might be rightfully classified as repairs.¹³ However, it is readily apparent that the information is incomplete and overly cumbersome at best. The United States Supreme Court makes it clear that in such situations the employees, who have performed work for which they have not been properly compensated, should not be penalized for the employer's failure to keep accurate records as required by law. See *Anderson v. Mt. Clemens Pottery Co.*, 328 U.S. 680, 687-88 (1946):

where the employer's records are inaccurate or inadequate and the employee cannot offer convincing substitutes, a more difficult problem arises. The solution, however, is not to penalize the employee by denying him any recovery on the ground that he is unable to prove the precise extent of uncompensated work. Such a result would place a premium on an employer's failure to keep proper records in conformity with his statutory duty; it would allow the employer to keep the benefits of an employee's labors without paying due compensation [...]. In such a situation we hold that *an employee has carried out his burden if he proves that he has in fact performed work for which he was improperly compensated and if he produces sufficient evidence to show the amount and extent of that work as a matter of just and reasonable inference*. The burden then shifts to the employer to come forward with evidence of the precise amount of work performed or with evidence to negative the reasonableness of the inference to be drawn from the employee's evidence. If the employer fails to produce such evidence, the court may then award damages to the employee, even though the result be only approximate. (omitted citation)

The employer cannot be heard to complain that the damages lack the exactness and precision of measurement that would be possible had he kept records in accordance with the [law]. And even where the lack of accurate records grows out of a bona fide mistake as to whether certain activities or non-activities constitute work, the employer, having received the benefits of such work, cannot object to the payment for the work on the most accurate basis possible under the circumstances.

Bombardier argues that the ATS Technicians should be denied any recovery because IUEC has been unable to prove what work and how much of that work actually constituted repair with a degree of certainty. Bombardier Post-Hearing Brief at 44. However, it is clear that any uncertainty in the number

¹³ IUEC Exhibit 1; Bombardier Exhibit 131. Clark County DOA did not offer any evidence regarding classification, appropriate compensation, or what tasks may be properly classified as repairs. Instead, it maintained its position that CBE-552 is not subject to NRS 338 and all workers were properly compensated.

1 of hours or in the type of work was the fault of the employer, not the employees. While ATS
2 Technicians were mandated to ensure that every hour of work was accounted for, they were not
3 encouraged to do so accurately. Hearing Transcript, 753:17-757:22; 1128:4-1129:8. Furthermore,
4 many times, the hours and tasks were entered or adjusted by someone other than the worker; by
5 someone who had no personal knowledge of what work the ATS Technician actually performed. *Id.*
6 Therefore, Bombardier cannot now complain of any inaccuracy in determining what hours and tasks
7 were rightfully classified as repairs subject to payment of prevailing wage.

8 Based on the testimony and evidence presented, the amount of repair work performed by ATS
9 Technicians on CBE-552 was between 10% and 40%. Hearing Transcript, 61:6; 177:6-7,14-15;
10 589:12; 619:5,12; 670:2,8-9,22; 719:6,10; 757:19; 796:19; 797:17; 1099:3,11-12; 1100:1-2,9; IUEC
11 Post-Hearing Brief at 10; Bombardier Post-Hearing Brief at 12. While the Labor Commissioner
12 understands the parties arguments in favor of their respective positions on this issue, it is apparent
13 that 10% understates and 40% overstates the amount of repair work performed on CBE-552.
14 However, it is not unreasonable to find that the amount of repair work actually performed by ATS
15 Technicians is within that range. CBE-552 called for a ratio of 80% preventative maintenance, 20%
16 corrective maintenance to be performed on the ATS at McCarran Airport.¹⁴ By all accounts,
17 Bombardier met this ratio. There is nothing in the record to indicate that the DOA complained that ATS
18 Technicians were performing more than 20% corrective maintenance or were otherwise spending a
19 significant amount of time working on the ATS to lower availability below the 99.65% threshold
20 outlined in CBE-552.

21 Based on testimony at the hearing and evidence presented by all parties, the Labor
22 Commissioner finds sufficient evidence for a just and reasonable inference that 20% of the work
23 performed by the ATS Technicians on CBE-552 was corrective maintenance, major maintenance,
24 heavy maintenance and overhaul, repair, or replacement subject to the payment of prevailing wage
25 pursuant to NRS 338. Bombardier, having to use the same inaccurate records, was not able to prove
26

27 ¹⁴ As previously noted, the "corrective maintenance" label is misleading. Testimony at the hearing made it clear
28 that work performed as corrective maintenance would be more properly classified as repairs subject to the
payment of prevailing wage.

03949

1 the precise amount of work the ATS Technicians performed or submit evidence that would negate the
2 reasonableness of this inference. Therefore, even though the amount is only approximate, the Labor
3 Commissioner finds that 20% of the work performed by ATS Technicians on CBE-552 is subject to
4 payment of prevailing wage.

5 CONCLUSIONS OF LAW

6 Based upon the foregoing, it is apparent that CBE-552 is a public works project not otherwise
7 exempt due to being awarded pursuant to NRS 332 as directly related to normal operation or normal
8 maintenance of a public body or its property or under the railroad company exception. Therefore, the
9 ATS Technicians who performed work under CBE-552 were not properly compensated at the then-
10 prevailing rate of pay for work done on the project. The ATS Technicians should have been paid at the
11 Elevator Constructor rate then prevailing in Clark County for all repair tasks performed pursuant to
12 CBE-552. Further, based on the evidence presented, 20% of work performed under CBE-552 was
13 repair work subject to the payment of prevailing wage at the Elevator Constructor rate.

14 IT IS HEREBY ORDERED that:

- 15 1. CBE-552 is a public works project pursuant to NRS 338.010 and subject to payment of
16 prevailing wage.
- 17 2. CBE-552 is not exempt pursuant to NRS 338.011 as a contract awarded pursuant to NRS
18 332 or 332 as directly related to the normal operation or normal maintenance of a public
19 body or its property.
- 20 3. CBE-552 is not exempt pursuant to NRS 338.080 as Bombardier is not a recognized
21 railroad company under Nevada law.
- 22 4. ATS Technicians who performed work on the McCarran ATS pursuant to CBE-552 were
23 not properly compensated. ATS Technicians should have been paid the 2007-2008
24 prevailing wage rate for Elevator Constructors, which is \$56.15 per hour.
- 25 5. Based on just and reasonable inference, 20% of the work performed by ATS Technicians
26 on the McCarran ATS pursuant to CBE-552 must be paid at the 2007-2008 prevailing wage
27 rate for Elevator Constructor.
- 28

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- 1 6. Clark County Department of Aviation shall, in a manner consistent with this Order, calculate
2 the 20% due to the ATS Technicians who performed work on CBE-552 and provide that
3 calculation no later than 30 days from the date of this Order.

4
5 DATED this 6th day of March, 2014

6 
7 Thoran Towler
8 Labor Commissioner
9 State of Nevada
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03951

CERTIFICATE OF MAILING

I HEREBY CERTIFY that on this date, I deposited into the U.S. Mail, postage prepaid thereon,
a copy of the foregoing ORDER to the persons listed below at their last known addresses:

Andrew J. Kahn, Esq.
McCracken, Stemerman & Holsberry
1630 South Commerce Street, Suite A-1
Las Vegas NV 89102

Counsel for Claimant
International Union of Elevator Constructors

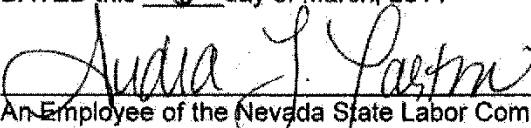
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Las Vegas NV 89155

Counsel for Awarding Body
Clark County Department of Aviation

DATED this 10 day of March, 2014


An Employee of the Nevada State Labor Commissioner

03952

IN THE SUPREME COURT OF THE STATE OF NEVADA

**BOMBARDIER TRANSPORTATION
(HOLDINGS) USA INC.,**

Appellant,

v.

**NEVADA LABOR COMMISSIONER;
THE INTERNATIONAL UNION OF
ELEVATOR CONSTRUCTORS; and
CLARK COUNTY,**

Respondents.

Case No. 71101 Electronically Filed
Nov 06 2017 03:51 p.m.
Elizabeth A. Brown
Clerk of Supreme Court

**APPELLANT BOMBARDIER TRANSPORTATION
(HOLDINGS) USA INC.'S APPENDIX**

VOLUME 16

ER3739-ER3952

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Attorneys for Appellant

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NewsRoom

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November 12, 1985

Section: LOCAL

ROAD WORK PAVES WAY FOR FUTURE
Marilyn Weeks, Staff Writer

Fred Basnett admits he has a rather biased view of the road.

He gets in line on the crowded strip at Stirling Road shortly after 6 o'clock each morning on the first leg of his journey to work. Despite his pre-rush hour entry on the road, Basnett calls the 10-mile trip "dangerous and horrendous."

And timing is crucial for the high school science teacher's trip back home in the afternoon. Traffic is on the brink of bumper-to-bumper between 3 and 3:30, but 30 minutes later, it's gridlock, he says.

Basnett's nemesis is Flamingo Road. The badly outdated north-south route in southwest Broward County is creating problems for transportation officials, too. The area is one of the fastest-growing in the county, and development has raced ahead of the transportation system, leaving thousands of families like the Basnetts behind in a continual traffic jam.

Basnett, who moved to this "isolated area" of county land nearly two decades ago, remembers when one stretch of the two-lane route had "primitive paving" and another was a dirt road people bounced down to go fishing. He says he's paid "an awful lot of taxes" in 17 years, but "I've still got a lot of dust.

"I know it will be widened sooner than they planned . . . but I'm not too optimistic. I see everything east of us building up. Century Village is coming. . . . It seems the farther we go, the farther behind we get."

Weary Broward motorists like Basnett will begin to reap the benefits of major highway improvement efforts by the end of the decade, but until then, increased construction will bring detours and new levels of traffic congestion throughout the county.

Between now and 1990, while completion of expansion projects like Flamingo Road will be an ongoing challenge to residents in specific areas, the new Sawgrass Expressway, Interstate 595 and Interstate 75 will be fin-

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interest in a twice-vetoed **people mover** that would speed commuters from parking lots along I-95 into downtown Fort Lauderdale.

At least one company talking with both city officials and members of the Downtown Development Authority has offered to build it "free" with money from private investors.

George Scelzo, with Titan PRT of Chicago, describes the **people mover** as an elevated, inexpensive system that utilizes existing right-of-way and connects travelers with other transit elements. The **people mover**, or "horizontal elevator," is a familiar conveyance in airports and theme parks.

The system could be designed to tie into the proposed tri-county rail proposal. Officials are now trying to utilize detour funds available in connection with the widening of I-95 to create a rail system running through Dade, Broward and Palm Beach counties.

"We are going to have to have this by the year 2000," said Broward Commissioner Ed Kennedy, a member of both the **people mover** and tri-county rail committees. "It's an expensive experiment, but I-595 is (costing) \$1.2 billion. We've got the tracks and the right-of-way."

One of the financing plans under discussion calls for private interests to construct the stations in connection with commercial complexes they would be permitted to build on adjoining property. A similar concept has been suggested for building the **people-mover** stations.

Southwest Broward resident Basnett is skeptical about **people movers** and rail systems. Looking at the amount of money invested in Dade County's Metrorail, and the limited use the system has attracted, he said, "I can't see it now."

But he concedes that "the faster they build the roads, they fill them up with cars."

Transportation planner Wilson said he is encouraged by the discussions among various government agencies on proposals for mass-transit systems.

"Sometimes you get kind of a hopeless feeling in Broward and joining forces raises the spirits and increases the chances (of a solution)," he said. "Mass transit, adjacent-road improvements and grade separations -- we're down to those to solve the problems."

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--- INDEX REFERENCES ---

INDUSTRY: (Transportation (1TR48); Traffic (1TR52); Passenger Transportation (1PA35))

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HORIZONTAL ELEVATORS

by Lawrence Fabian

EcoPLAN SEEKS BOLD "ACCESS" PARTNERS

Tackling head-on the growing nightmare of urban and suburban congestion and pollution, EcoPlan of Paris has launched a high-level public/private research effort with six pioneering projects under way and several publications in hand. "Public policy should not maximize movement or mobility," states EcoPlan's Eric Britton. "It should maximize individuals' access to needed services. And this has vastly different implications for urban transport policy." Access is a multi-client study to explore and implement these implications.

Two Access pilot projects have started in California (a walk-oriented new town concept and a new city master plan). Two are in Spain (a phased metro program and a detailed implementation plan), one in the Virgin Islands and the sixth in Adelaide, Australia.

EcoPlan seeks progressive, innovative partners who want to take a long view, focus on the needs of citizens in their daily lives and appreciate the systemic complexity of contemporary cities. For more information, contact Trans21, P.O. Box 249, Fields Corner Station, Boston, MA 02122.

OTIS' MULTI-GENERATIONAL PROGRAM

Spurred by strong Japanese interest in automated people movers (APMs) with linear induction-powered vehicles such as built for Duke University, Otis engineers are broadening their horizontal commitments. Their previous focus on back-and-forth shuttles arose from cable's inherent limitations. A new Shuttle Systems Division has been given new resources as an autonomous unit now headed by David Perl. Kris Balch, who oversaw Shuttle activities for many years, will stay within the Engineering Division and work closely with the APM program.

Japanese executives are emboldened by successful opening of two Otis shuttles at Narita Airport and anticipate growing interest in short-range APMs by their government. Several last May visited the Duke system, operating at a private hospital since 1980, and participated in a three-day workshop with high-level U.S. Otis staff to take a long-term view that defines developmental stages and the evolution of APM hardware, software and service capabilities. A linear induction motor (LIM) testing program outside Tokyo is envisioned.

Cable-drawn APMs can be very economical for small installations not requiring high speeds and many stations. Self-propelled vehicles enhance speed and system size. Unique among APM concepts is Otis' lateral docking capability. This is not feasible in cable versions. With air flotation, the Otis APM can move at 90-degree angles, right or left. With side-loading bays off a station guideway, station capacities increase dramatically.

David Perl brings experience with the customer side of Otis' elevator operations in North America to the APM division. He now reports to Otis' President Jean-Pierre van Rooy. Unlike previously reported, Bruno Gotsch is head of European and Transcontinental Operations.

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LAS COLINAS RESOLVES AVAILABLE

An Automated People Mover (APM) Task Force to publicize transportation and development advantages of electronically smart transit was formed at the "APM Prospects in the 1990s" panel discussion and forum organized after the American Society of Civil Engineers (ASCE) Conference in Texas last March by Trans21 and supported by Parsons-Brinckerhoff. A four-page summary of recommendations has been prepared and is available free from Trans21. It can be used to promote hardware-neutral APM interest to public and private officials and the general public.

Also available is a full transcript of the 90-minute discussion. The panel consisted of Ingmar Andreasson of Gothenburg, Sweden; Lawrence Fabian of Boston, Massachusetts; Bernard Scherrer of Paris, France; Lee Rogers of Washington, D.C.; and George Swede of Los Angeles, California.

About 90 people attended the event and many joined the lively, thought-provoking discussion. To obtain the "APM Prospects in the 1990s" transcript, send US \$15 to Trans21, PO Box 249, Fields Corner Station, Boston, MA 02122.

THE FIRST THREE YEARS OF LAON'S POMA 2000

A report by local officials in the medieval town of Laon two hours north of Paris describes the debugging process that its Pomagalski-supplied automated people mover (APM) has undergone. Opened in 1989, it has become an integral part of daily life. It carries almost 900,000 passengers each year between the lower part of town and the attractive historic city high on a plateau.

Laon's bus ridership has increased 17%. Most bus routes feed the APM. Counting APM ridership separately gives Laon the highest per capita figure in its class size in all of France. Vandalism has been negligible, although fare evasion is somewhat of a problem.

The lower terminus of the three-station shuttle station was integrated with a new underground parking garage. Usage has failed to develop. Paris consultants had predicted almost 700 daily parkers, but it has never exceeded 20. Car traffic up to the plateau has increased 5% from 1987 to 1991, just a hair under the national average. Parking and traffic problems continue in the historic district, but more people have access to it via the "Poma 2000."

The APM provides about 200,000 vehicle-kms of service each year at a cost of US \$1.2 million — about US \$6/veh-km. There is some uncertainty about future costs because of aging of the hardware. Local officials have created a committee to encourage other cities to consider a Poma installation.

CHICAGO LAUNCHES \$40-MILLION RAYTHEON PRT

With a quiver in his voice and a chill up and down his spine, Chicago Regional Transit Authority (RTA) Chairman Gayle Franzen counted the 10-1 vote to move forward on its personal rapid transit (PRT) program with Raytheon/Taxi 2000. Calling it "pivotal" for public transport, Franzen fully recognized the risk in his experiment. Yet, in the void of Washington attention to transit R&D, Chicago feels obliged to explore new technologies.

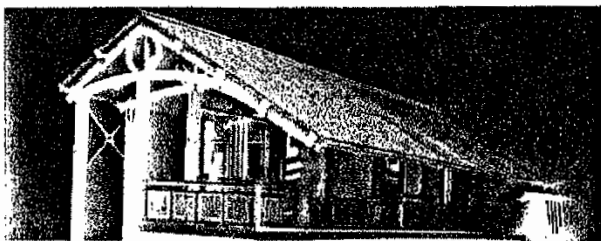
The RTA selected Raytheon over Intermid, committed in principal US \$18 million, with Raytheon saying it will add

Continued overleaf

HORIZONTAL ELEVATORS

Continued from overleaf

US \$20 million of its own to build and manage a 1-km (.6-mile), one-station PRT track outside Boston. This will assess an engineering concept aimed at personalized, direct-to-station, taxi-like service over a lightweight network. Raytheon and Swiss-owned Intamin performed cost engineering studies of PRT concepts for the RTA for US \$1.5 million each.



In 1995 or 1996 a decision will be made whether to build a 4-km (2.5-mile), eight-station, 50-vehicle PRT for Rosemont, estimated to cost US \$42.3 million. Rosemont lies at the gateway to O'Hare Airport and is home to more hotel rooms and meeting facilities than residences. The impact of this program will extend far beyond Chicago and Rosemont. It made the front page of the *Boston Globe* and is being closely watched by PRT enthusiasts and skeptics around the world.

Swedish PRT Study Enters New Phase

The Swedish Transport Research Board (TRB) is funding studies of the socio-economic and visual effects of a PRT already analyzed for the small city of Gävle (population 76,000). This US \$60,000 effort will include planning models and architectural studies as well as analysis of time saving and reduced pollution. Ingmar Andreasson, whose initial analysis concluded that capacity was not a problem with

assumed 1.6-second headways, will now define a workable first phase from the 93-station, 120-km (75-mile) network.

Andreasson is pioneering new concepts for high-speed sections and "point-synchronous" controls to overcome problems of synchronous and asynchronous concepts. He is also involved in a US \$2-million study for Gothenburg; a 700-km (435-mile), 674-station network is envisioned. Officials are leaning away from a proposed heavier APM ring toward enhancing the city's extensive light rail lines with PRT.

And Elsewhere

Environmental and engineering studies of the SeaTac PRT have been delayed. Local and Seattle regional officials had applied for federal air quality management funds through the Federal Highway Administration. The Federal Transit Administration (FTA) recognized this as a transit project and demanded they restart the process with Seattle's transit agency. A nearby Boeing plant is also exploring a PRT connector to a planned commuter rail station.

Cobb County in Georgia, and Fresno and Irvine in California, are considering PRT as possible modes in their futures. There is a pocket of PRT planning outside Amsterdam Airport, but no known interest at present exists in England, France, Germany or Japan.

AND MORE THEME PARKS

Despite EuroDisney's financial problems, new theme parks continue to be proposed around the U.S. and elsewhere in the world. Many will include automated people movers (APMs) for viewing, fun and logistics, such as to serve remote parking. Plans may not be detailed enough or public enough to reveal.

Outside Atlanta, Georgia: "Gone with the Wind" will be the theme of a 250-ha (620-acre) park in one of three counties vying for this project proposed by Georgia Holding Inc.

Cape Cod's Dreamworld: "Virtual reality" attractions would dominate New England's largest theme park, if proponents talking with investors and local officials in the towns of Plymouth and Bourne on the edge of Cape Cod succeed.

Las Vegas, Nevada: MGM and Bally's have announced a US \$15-million, 1.6-km (1-mile) "monorail" that AEG-Von Roll might supply. Is it real or is it publicity? Developers hope it could be extended from the airport all the way downtown as public transport.

New Jersey: Controversial developer Donald Trump and others are proposing a US \$50-million amusement complex and US \$18-million "monorail" ride away from the Meadowlands sports complex.

Reno, Nevada: Circus-Circus has launched a US \$230-million themed casino resort in downtown Reno. An APM element is not likely.

Tokyo, Japan: Video game maker Namco last year opened Wonder Eggs park devoted to their games. A string of such parks is planned across Asia: Osaka next year, Singapore the next.

Universal Studios: MCA expects to build a sequel to its Hollywood and Florida parks in Europe or Japan, perhaps Osaka. A US \$80-million "entertainment zone" is also being built at a marine complex near that city. □

Lawrence Fabian is an internationally-known expert in advanced transit technologies, particularly automated people movers (APMs). He chairs the sub-committee on Activity Center Circulation of the Transportation Research Board and is vice-chairman of the APM Committee of the ASCE. Fabian also publishes a bimonthly newsletter, a biweekly faxed advisory service, the *APM Industry Guide* and other APM-oriented material. Contact: Trans21, 100/Box 149, Fields Corner Station, Boston, MA 02122; tel: (617) 825-2318, fax: 617-482-7417.

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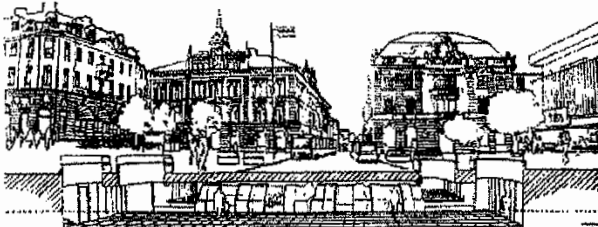


HORIZONTAL ELEVATORS

by Lawrence Fabian

AFFORDABLE TRANSIT SERVICE

The regional bus operator of Uppsala, Sweden, a university city, has completed an 800-m stretch of track; preliminary APM testing has begun. It is working with local companies to develop its own controls which have PRT-like capabilities. A 30-passenger vehicle is being run. So far, a budget of almost US \$2 million for a 30-month program is in place. Their main focus is to create premium transit service at an affordable price.



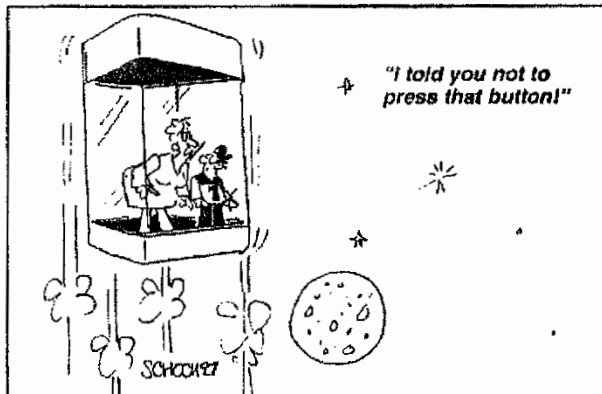
An early APM vision for Uppsala included a slightly subterranean station in the central area of this Swedish university city. Sketch courtesy of AB Uppsalabuss

TORONTO SEARCHES FOR AN APM-LAND VALUE FORMULA

In 1991, a "royal" commission was formed to study potential improvements to the waterfront of Toronto, Ontario. Chaired by a former mayor, it published an exciting vision that disappeared during an economic recession. A trust, however, was formed. With Bombardier input, it managed to examine the feasibility of a 5-km "monorail" connection.

To the east of downtown Toronto, a streetcar has been put into service. The commission also has been looking to the west. One possibility is to extend the trolley. What are the other options? What are the best funding strategies? Consultants IBI were hired to sort out these issues. Preliminary cost estimates have been obtained from Bombardier and Adtranz.

With strong private support, this vision may go forward. Can an acceptable formula for sharing the costs and benefits of an APM be devised? The next step for the Toronto Waterfront would be a more detailed cost/benefit study.



DIVERSIFYING US \$6 BILLION PIPELINE

Trans21's annual compilation of APM projects shows signs of heightened levels of activity, especially for smaller installations. In 1996, the number of active projects jumped to 44, up from 36 at the end of 1995. The dollar total rose only slightly from US \$5.9 billion to US \$6 billion (systems cost only).

Even more remarkable is the spread to countries without previous APM experience. Today, APM implementations can be found in China, Malaysia, Italy, Switzerland, Finland and Portugal. It can truly be said that APMs have become a global phenomenon.

The greatest growth comes from those projects categorized as institutional — APMs being built to serve more than a single property, but not by the mass-transit operator of that area. There are now 16 institutional projects (plus three test tracks) compared to 10 (plus two test tracks) in 1995.

New Institutional Arrangements

Institutional APMs are found in resort areas, theme parks, casino complexes, universities and special development districts. Many new financing and public-private arrangements that take advantage of high levels of APM service are to be found in such settings. This is the forefront of APM development.

The tiny Mystic Center project outside Boston, where a US \$3 million shuttle is a linchpin to an innovative Park + Ride scheme, is a very promising example. A public-sector promise to lease parking spaces allows a private entity to build a garage. The government needn't front the money or float bonds, and the private owner gains better transit access for office development.

Other large-scale examples are the Copenhagen Orestad line and the JFK International Airport access projects, considered institutional because they are not being implemented by mass-transit agencies. If they are excluded, the average cost of an institutional APM is US \$22 million.

Architectural and Transit Projects

The average cost of an APM of architectural scale — one wholly within a single property — is US \$33 million. Almost all are in airports. Requirements to carry substantial flows of passengers, often around the clock, with high reliability increase the costs.

As might be expected, even higher costs are to be found in fully automated mass-transit projects. The average transit-scaled APM is almost US \$350 million. Especially when these are built underground, the addition of civil engineering work raises total costs to the billion-dollar project level, which is not uncommon in the world of mass transit.

TRANSIT-ORIENTED DEVELOPMENT

Coordinating land-use development with transportation is not new; it is at the heart of traditional city-planning theory and practice. In the U.S., accommodating the sprawling effects of freeways and cars and the isolation of U.S. mass-transit planning have worked against transit-oriented development. Most of our cities are pedestrian and transit unfriendly.

In reaction, there is growing interest in the more compact, sidewalk-oriented neighborhoods of the past — a movement which has been dubbed neotraditionalism. One of the best known proponents is California-based Peter Calthorpe.

Searching for What We Had

Last fall, two separate, but related, mini-conferences were held in Boston, Massachusetts on this topic. The first was organized by the Conservation Law Foundation and entitled "Building Livable Communities Through Transportation." The conference drew an overflow crowd.

In mid-November, Boston's Metropolitan Area Planning Council (MAPC) held a workshop on "Transit-Oriented Development

Continued ▶

HORIZONTAL Continued

(TOD)." It, too, was oversubscribed. Boston already knows what TOD is. Experts and advocates across the country use slides of Boston as examples; however, much is gone. The real question is how to overcome forces against TOD and regain what was lost.

MAPC invited Peter Calthorpe as keynote speaker. While not delving into the quantitative issues of densities and parking de-

mand, he argued convincingly for packing density around light-rail stations. He is open to APMs, saying, "There are possibilities for new technologies."

Resource Guidebook Available

California's Local Government Commission (LGC) has produced a guidebook on TOD. It is full of examples, background information and reference material with contact numbers. The 77-page document can be purchased for US \$20. For ordering information, contact LGC at phone: (916) 448-1198, or fax: (916) 448-8246. □

Mystic Center Progress Report #1

In ELEVATOR WORLD's December 1990 issue, in the "Horizontal Elevators" column, it was reported that Otis Elevator Company signed a US \$3 million contract to develop an extension on the Massachusetts Bay Transportation Authority's (MBTA) Orange Line. As reported, the project provides a new, lighter line of APMs—the Otis Shuttle—linking a newly constructed parking garage and office complex with Wellington Station. The goal of the Mystic Center is to provide an effective alternative to driving into downtown Boston during Central Artery construction. The center will assist in alleviating some of the commuter congestion on Interstate 95's northern corridor. Our Boston correspondent, Larry Fabian, was present at the groundbreaking ceremony, and some photos from his visit accompany this update. Fabian will monitor the construction of this APM project, furnishing photos and descriptions of the developments. ELEVATOR WORLD will periodically publish these updates, as they come in from Fabian.



Photo One: Mystic Center is named after the Mystic River, which passes north of Boston and Cambridge. It is a scene of sprawl in the suburb of Medford. Photo Two: The parking garage can be seen in the background, with the MBTA terminus skeleton rising in the foreground. Photo Three: In May of 1990, ground was broken. Massachu-

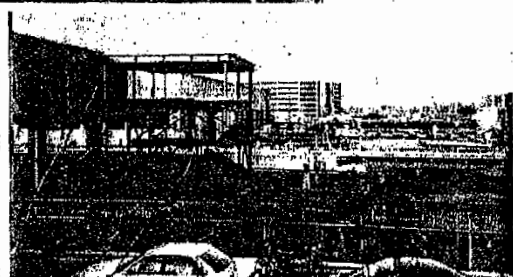


Photo Five: Footings for the APM columns have to be carefully spaced between rail tracks, on their way to the shuttle terminus at the MBTA rail station.

Lawrence Fabian is an internationally known expert in advanced transit technologies, particularly automated people movers (APMs). He chairs the subcommittee on Activity Center Circulation of the Transportation Research Board and is a member of both the APM Committee and the APM Transportation Planning Division. Fabian also publishes a bimonthly newsletter, a biweekly faxed advisory service, the APM Industry Guide and other APM-oriented material. Contact Trans21, P.O. Box 249, Fields Corner Station, Boston, MA 02122; phone: (617) 825-2318, fax: 617-482-7417.

APMs COME OF AGE

by Lawrence J. Fain

Sometimes we move up; sometimes we move over. Today's building complexes extend beyond tolerable walking distances and can benefit from an interesting new menu of people-moving options. Include parking and transit access, and the possibilities of using automated people movers (APMs) become even more interesting.

As the power of microchips, logic controls and computers has crept into almost every facet of modern-day life, it is not surprising that elevators have become more intelligent. It doesn't take a rocket scientist to flip an elevator over on its side to expedite horizontal movements.

Horizontal elevators, horizontalators, shuttles, people movers, automated people movers — APMs; call them what you may. Several brands of driverless APM systems exist that run spiffy vehicles inside buildings and out over guideways between. Such guideways are light and quiet compared to the Chicago El. They may dramatically change the way "Edge City" inhabitants around the world go about their business.

Heavier, more expensive APMs cost \$30-70 million per kilometer, putting them out of range of all but flamboyant Dallas developers and capacity-constrained world airports having good cash-flow situations.

Lighter versions of APMs carry fewer people. Even lighter versions have been designed specifically to link distances of only a few kilometers, even less. A three-kilometer (two-mile) loop with three or four stations is not uncommon. In fact, French

transport researchers have created a new term for them — *hectometrique*. The term "hectometric" means of, or pertaining to, one-hundred meters (325 feet) or so, perhaps three, or even five hundred. In such settings, it makes economic sense to have vehicles as passive as possible. System costs can be as low as \$5-10 million per kilometer. Some inventors claim that \$1-2 million should be enough.

Where Does an APM Make Sense?

Where, beyond downtown, high-rise buildings, do elevators exist? Where twenty or so elevator groups are in close proximity but beyond reasonable walking distance, an APM makes sense. Imagine a large medical or educational complex. It needs to expand and has no adjacent space. The only nearby sites are badly needed parking lots and garages. Displacing them would be poking into a hornet's nest of institutional politics. This is not an uncommon dilemma for institutional planners.

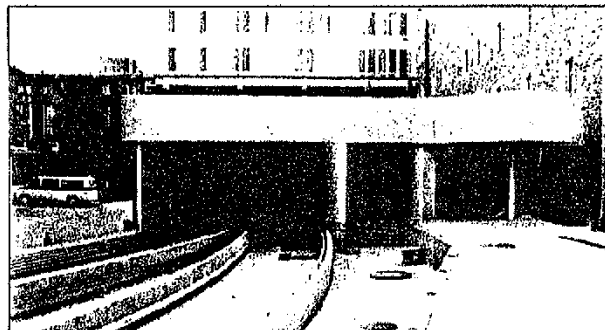
About 20 years ago, planners at Duke University Hospital in Durham, North Carolina devised a remote expansion with a horizontal elevator integrating the new with the old facility. This avoided the need to duplicate many services in the new facility, and also created a link with a remote parking garage. The APM at Duke, supplied by a division of Otis Elevator Co., has been carrying staff, patients, visitors and hospital supplies since 1980.

Large universities may have an even greater need for horizontal mobility. For example, Ohio State University (OSU) in

Number of Operating APMs by Setting Fall 1994

URBAN MASS TRANSIT	18
Line-haul in major corridor	8
Feeder to line-haul	8
Local circulation	2
AIRPORTS	20
Terminal-to-terminal	15
Terminal-to-parking, transit, hotel, etc.	5
LEISURE SETTINGS	22
Private theme parks	7
Zoos	5
Fairgrounds	1
Casino complexes	6
Other	2
INSTITUTIONAL	18
Special public/private entities	6
Universities	2
Shopping malls	3
Hospitals	2
Other	5

Source: Trans21



Gentle curves grace the APM guideway as it approaches the Duke University Hospital in Durham, North Carolina. It carries patients, staff, visitors and supplies to a new facility and remote parking.

Columbus, Ohio has over 50,000 students, a staff of over 10,000 and a massive parking nightmare. OSU has vast acreage on one side of a river, while on the other side along High Street, a congested, parking-starved concentration of academic facilities at its main precinct suffocates. How can it make

Continued ►

APMs: COME OF AGE Continued

expansion sites on the far side more desirable to jealous academics and grumbling students? Planners are looking at a "monorail-type" solution to integrate the two river banks and link to a light rail line that the city of Columbus has proposed.

APMs have found a solid and growing niche in the world of airports, with 15 systems already operational. The APMs connect sprawled airport terminals and allow space for huge aircraft to maneuver on runways. Several more airport projects are underway, with dozens more in the planning stages.

Air travel grows about 6% a year worldwide, creating pressure to enlarge existing airports. Some areas must create new facilities, such as the recently opened airport (with an APM) outside Denver (see ELEVATOR WORLD's July 1994 issue). It is no exaggeration to say APMs have revolutionized the manner in which airport planners work. Attention is now turning to adjacent, off-airport development and regional ground access.

Expansion is often a problem in office complexes and retail malls. Compaq Computer's world headquarters for administration, manufacturing and distribution are located at a huge corporate campus outside Houston, Texas. The corporate philosophy places great value on its high-tech employees, facilitating the cross-fertilization of their creative intellects. With major expansion imminent, it is considering a sophisticated APM.

"Edge Cities" are growing on the periphery of our metropolitan areas. These are the brave, new worlds of urban life. Typically, a few major office and retail developments emerge around a major intersection of interstate highways, often near an airport. Then, more office centers are added, and perhaps, an apartment complex or two. Soon, this interstate interchange has all the makings of a city: a high population density, traffic congestion and parking problems. But it doesn't look like what is traditionally recognized as a city. There is no urban culture and no way to travel from A to B without jumping in a car and weaving through ramps and intersections, ultimately walking through a large parking lot.

"Edge City" Expert Joel Garreaux feels the challenge of the 1990s is to diversify the mix of activities in these suburban nodes, facilitating the way people move around, bumping into

old friends and making new ones along the way. APMs can enliven the sometimes sterile plains of the "Edge City," making life in the 21st century a bit more meaningful. To say this will translate into high real-estate values for the trailblazers would not be misleading.

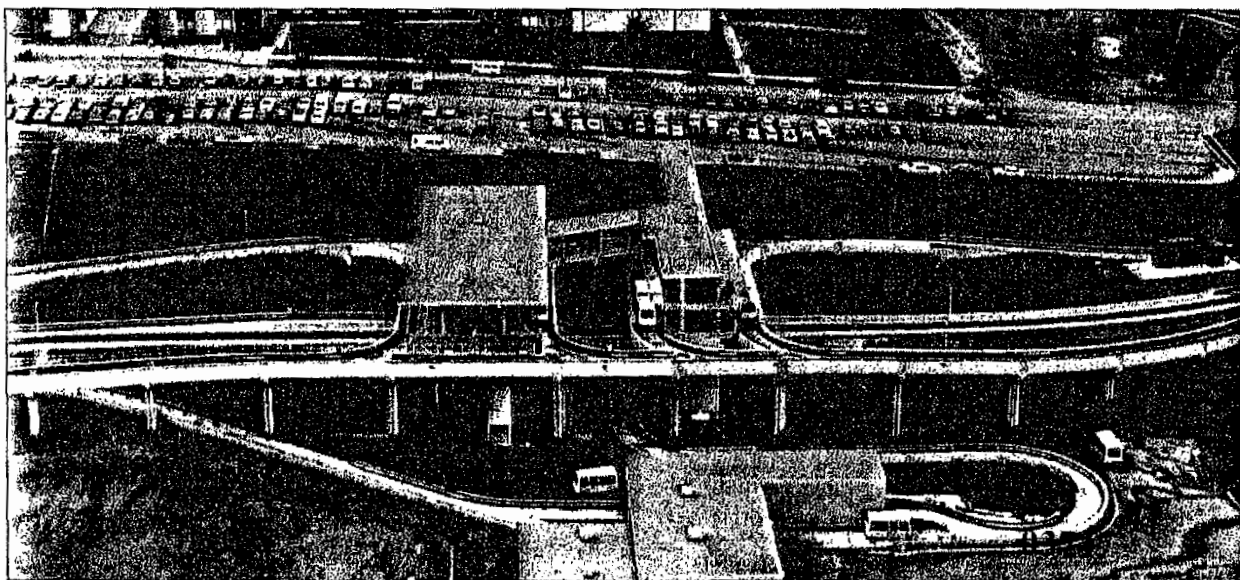
The other place where APMs can fit in is where an owner or developer seeks to combine transportation with an experience. Does a commercial complex have interesting vistas that would draw extra visitors? Are there narrative messages, such as the history of the areas, which can be conveyed to visitors? Is a special identity for a mall or office park desired? An APM might satisfy enough of these desires to make its installation worthwhile. APMs have already found niches in zoos, world expos and flower shows.

Are people looking to be entertained or thrilled as they ride along in an APM? A recent spate of projects has emerged in casinos. Las Vegas, alone, hosts five systems, plus another two at the airport and at Whiskey Pete's on the California state line. In addition to transportation, can passengers be sold telephone or computer time? Want to advertise what's available at the next station? This may attract more passengers and help pay the cost of the APM.

When a Moving Walk? When an APM?

The desire to provide a means of transportation over short distances is not new. Public and private organizations have been operating shuttle buses in thousands of locations for decades. The problem: operating costs are fairly high, and the level of service fairly low. Light-duty vans can cost upward of US \$50,000. Heavy-duty buses are closer to US \$200,000 each. The ride is often uncomfortable, and buses contribute to air pollution. Battery-powered vans are even more expensive, and recharging is awkward and time-consuming.

Bus or van shuttle services are limited by the availability and cost of drivers. To passengers, waiting five minutes can seem like fifteen, especially when they only seek to go a kilometer or so. The layout and congestion of the roadways to be traversed also have a major impact on the quality of service. If a thousand people want to travel over the course of an hour, at least 30



In some ways, the old Morganstown People Mover at West Virginia University shown here is a model for planners at Ohio State University in Columbus to connect their congested main campus to remote expansion and parking sites.

"runs" have to be made. This increases operating costs dramatically. Service is also slowed as individuals climb in and out of vehicles. Vans get in each other's way. Higher volumes require for another kind of people-moving solution.

In some cases, high passenger volumes over fairly short distances may be better served by moving walkways. These continuous people-conveyors are horizontal versions of escalators, and generally, walkways move at not more than five kilometers



Even at its best, bus shuttles offer a modest level of service. When demand surpasses 1,000 passenger/hour, an APM may be a cost-effective alternative.

per hour (three mph) — about the speed at which most people walk. Individuals walking on moving walks can double their travel speed. Practically, a moving walkway should not extend more than one hundred meters. Longer distances can be served by stringing units together along a corridor.

Some moving walks use rubber belts. More expensive units (about 50% higher) use metal "pallets". The unit's cost depends on length. A pallet-version of about 50 m (165 ft) comes out to about US \$6,000/m (US \$1,800/ft). A larger installation of about 150 m (500 ft) would cost about US \$4000/m (US \$1200/ft).

Technology is not the major barrier to higher speeds, rather, the safety of individuals stepping on and off the moving walkway. Several attempts have been made to create walkways that accelerate. None has yielded a system that shows promise at



Moving walks assist pedestrians but are limited in length and speed.

reasonable cost. Some work in this area continues, but it is unrealistic to expect that moving walks could ever go much beyond 15 km/hr (10 mph), at any cost. Heavy maintenance for an accelerating-type would be a factor.

When neither shuttle buses nor moving walks satisfy the need to move thousands of persons per hour over a distance of a few hundred meters, an APM should be considered. The formal definition of an APM is a passenger transport system in



The German H-Bahn uses vehicles suspended from the guideway rather than running atop. A similar system has operated at Dortmund University for years.

which relatively small vehicles run over exclusive guideways with enough electronic intelligence that neither the vehicles nor the stations require attendants. Some mistakenly use the term "monorail" interchangeably with APM. However, the emphasis should be on the electronic smarts rather than aspects of the vehicle/guideway interface.

Various technologies are used for propulsion and suspension. In some systems, vehicles run atop guideways, while in others, cabins are suspended from guideways. Although guideways can be built underground, or — in special circumstances — at grade, they are generally designed to be elevated. Guideways and stations can be integrated into buildings. Vehicle sizes and configurations vary by system, and can be further tailored to specific needs.

There are three basic types of APMs: hectometrics, light guideway and personal rapid transit. The already-described "hecto" is a short-distance back-and-forth shuttle, or perhaps, a slightly longer line with three or four stations. A hecto is really best applied, though, as a modest back-and-forth shuttle with moderate curvature. Often, a single lane enhanced by a short, two-way section in the middle is sufficient and less costly.

With such reduced demands for operations, a hecto can use greatly simplified technology. Major economies can be gained by removing the motor (and its weight) from the vehicles, putting it at one end of the installation and driving a cable attached to vehicles, similar to elevator and gondola technology. Wayside propulsion also removes the need to furnish electric power over the length of the guideway. Power for lighting and HVAC can be supplied by batteries that recharge during station stops.

Light APMs are capable of serving longer distances with multiple stations. A string of stations along a corridor with generous curves and gradients of a dozen kilometers, or even longer (5-15 miles), is possible. Double-guideways for two-way operation are common, but variations exist. One four-station APM with only one lane operates in Austria. One-way loops are preferable and more economical.

Essentially, light guideway systems are an electronically smarter and down-scaled version of trolleys and subways, which public transport specialists call "light" and "heavy-rail"

Continued ►

APMs COME OF AGE *Continued*

transit. Several destination areas are linked into a line-haul corridor. Thousands of passengers are transported (some would say herded) to their station of choice. Of course, they have to stop at every station along the way and rub elbows with scores of strangers.

The slow and non-private service of guideway systems can be avoided with the third type of APM. Personal rapid transit – or PRT for short – aims at taxi-like service over an entire network of guideways. The key is in arranging stations off the main guideway so that stopped vehicles do not block traffic flow. To passengers, this means their vehicle needn't stop at stations along the way to their destination, or be confined to a single corridor in the network. PRT vehicles can be programmed directly to any station in the entire system. Planners can link any number of destinations without concern to string them into a linear corridor.

What Are Your Transportation Needs?

Needs depend upon the circulation patterns in and around the building complex being dealt with. What distances can employees and visitors be expected to walk comfortably? What are their travel needs? What centers definitely need to be served, and where are the best access locations? How to estimate the numbers to use an APM, or one of its alternatives, if a decision is made to install one?

In discussions with APM suppliers, it is easy to move too quickly into design decisions based upon their hardware characteristics. A trend among APM planning consultants is to shift specification writing to performance characteristics. The single, most important performance variable is capacity. What is the maximum number of people to be transported in a peak hour past a certain point? If it is only 250, an APM is unlikely to be justifiable. Is it 1,000 or 4,000? The number will make a tremendous difference as to whether or not a given supplier can satisfy the needs.

How steady or bunched will the passenger flow be? Surges of several hundred people are common, as when jumbo jets unload at airports, or trains at stations. In such cases, it makes sense to specify capacity in smaller time intervals. For example, a specification might read, "Capable of carrying 1,200 people in 12 minutes," instead of merely providing an hourly figure. In other applications, there will be steadier passenger flows, and specifying an hourly capacity will be sufficient.

Travel needs should be specified in detail. Average wait and travel times address the desired frequency and speed of service. Comfort is covered by specifying maximum allowable acceleration, deceleration, jerk and sway rates. Other items deal with the degree of heating, air conditioning and lighting desired in the vehicles. How much passenger seating should be available?

Measures of service quality should be clearly defined. What levels of service degradation and failure are tolerable? Marathon theoretical debates (and tough legal battles) have been fought over how to calculate "system availability". Alternative measures of "dependability" and "reliability" exist. Measures of "Mean Time Between Failures" and "Mean Time to Restore Service" add to the confusion!

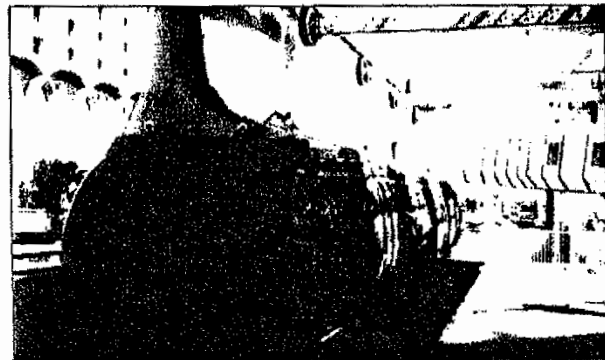
APMs have been quite successful at attaining extremely high levels of service. They are quietly and regularly available for service. Specifications typically call for 99% availability. There may be more problems in defining than in attaining the specified measurement.

What Standards and Information Apply?

New technology and the APM industry are still evolving. Few standards are written specifically for APMs. The National Fire Protection Association (NFPA) ruffled many feathers in the APM community a few years ago by extending standards for rail transit to APMs. Major design complications arose with the requirements of a three-hour fire safety wall between station areas and adjacent buildings. NFPA 130 also requires a constantly present, dedicated person at the APM's control post. Most APM professionals believe this excessive for smaller, simpler systems.

To investigate the feasibility and desirability of setting APM standards, a group of APM professionals launched a study in 1988, are now a formally functioning part of the American Society of Civil Engineers (ASCE) and have published draft standards for APM controls. Others dealing with guideways, stations, vehicles, propulsion and braking, measures of reliability and operating environments will follow, and they have reviewed Australian standards that were published in 1991. It is fair to say that this book is far from closed, and some suppliers and other professionals worry that a premature rush to standardization will stifle innovation.

Las Vegas's Clark County has what seems to be the most developed APM safety codes. These carefully define the procedures that operators must follow in the event of system failure or an accident, which officials should be notified and how soon, and what must be done before the "amusement-and-transportation ride" can re-open to the public.



This APM was one of three quickly installed and now operating in Las Vegas. Visitors glide between two of the casino/entertainment complexes, requiring local officials to enact standards for reporting accidents and safe re-opening.

Many questions must be answered before an APM can economically and safely become part of any building complex's future. Several sources of information on APM planning exist:

- *Characteristics of Urban Transportation Systems*, published by the U.S. Department of Transportation, Federal Transit Administration, Report DOT-T-93-07, revised September 1992.
- *American Society of Civil Engineers*, proceedings of a series of conferences: APMs-I (1985), APMs-II (1989), APMs-III (1991) and APMs-IV (1993). Available from ASCE, New York.
- *Proceedings of the International Symposium on Technological Innovation in Guided Transports*, 1993. Available from INRETS in Lille, France.
- *A Planner's Guide to APMs*, 1994. Available from Trans21, P.O. Box 249, Fields Corner Station, Boston MA 02122.; phone (617) 825-2318; fax: 617-482-7417.

Lawrence J. Fabian is director of Trans21, an information clearinghouse on international APM developments, located in Boston, Massachusetts. He has over 25 years of urban planning experience and publishes a newsletter on APM developments.

Author Lawrence J. Fabian will be on hand in one of the "Meet the Author" rooms at the National Association of Elevator Contractors' World Elevator Expo '95 on October 6-11, 1995 in Boston. He will make a few short remarks concerning his paper, updating if appropriate. Thereafter, for 20 minutes – he will answer questions from the attendees, or guide discussion of the subject. Copies of this paper will be available prior to the gathering.

... Editor



**CITY COUNCIL
ATLANTA, GEORGIA**

A SUBSTITUTE RESOLUTION

04-R-1017

BY TRANSPORTATION COMMITTEE

A RESOLUTION AUTHORIZING THE CITY OF ATLANTA TO WAIVE SECTIONS 2-1189 AND 2-1193 OF ARTICLE X, PROCUREMENT AND REAL ESTATE CODE, OF THE CITY OF ATLANTA CODE OF ORDINANCES ON A MONTH-TO-MONTH BASIS OR AS SPECIFIED OTHERWISE TO OBTAIN SERVICES FOR THE DEPARTMENT OF AVIATION UNDER THE CONTRACT WITH BOMBARDIER, INC., FOR THE OPERATION AND MAINTENANCE OF THE AUTOMATED GUIDEWAY TRANSIT SYSTEM AT THE HARTSFIELD-JACKSON ATLANTA INTERNATIONAL AIRPORT FOR AN AMOUNT NOT TO EXCEED \$5,000,000.00 TO BE PAID FROM 2H01 523001 R49001; FOR A TERM ENDING ON DECEMBER 31, 2004.

WHEREAS, the Automated Guideway Transit System ("AGTS") at the Hartsfield-Jackson Atlanta International Airport is a proprietary system originally designed, fabricated, installed, operated and maintained within the Central Passenger Terminal Complex ("CPTC") under a contract between the City of Atlanta (the "City") and the Westinghouse Electric Corporation ("Westinghouse"), dated April 26, 1977 and for a five year term commencing September 1, 1980 and ending August 31, 1985; and

WHEREAS, because the AGTS is a proprietary system and is critical to the efficient, effective and continuous transportation of passengers within the CPTC, the City subsequently entered into successive contracts with Westinghouse and/or its affiliates and successor companies for the continuing operation and maintenance of the AGTS, leading to the contract currently in place and the subject of this legislation; and

WHEREAS, Bombardier, Inc., as the successor to ADTRANZ, now performs the operation and maintenance of the Atlanta AGTS under the subject Contract; and

WHEREAS, the City now desires to extend the Contract on a month-to-month basis commencing July 1, 2004 and for a period not to exceed six months ending December 31, 2004, so as to permit the continuing negotiations for a replacement contract; and

WHEREAS, Bombardier, Inc. is willing to perform the maintenance and operation of the Atlanta AGTS under the extended Contract on the same terms and conditions; and

WHEREAS, the Airport General Manager and the Chief Procurement Officer has recommended that the City extend the Contract with Bombardier, Inc. for operation and maintenance of the AGTS at the Hartsfield-Jackson Atlanta International Airport, on a month-to-month basis until December 31, 2004, for the purpose of negotiating a replacement contract.

03750

ER3750



THE CITY COUNCIL OF THE CITY OF ATLANTA, GEORGIA hereby ordains as follows:

SECTION 1: The Mayor is authorized to continue the Operation and Maintenance Contract with Bombardier, Inc., covering operation and maintenance of the Automated Guideway Transit System at Hartsfield-Jackson Atlanta International Airport for a term on a month-to-month basis for an amount not to exceed \$5,000,000.00 to be paid from 2H01 523001 R49001 for the period of July 1, 2004 through December 31, 2004 under the same terms and conditions, until a new contract becomes effective.

SECTION 2: All other terms and conditions of the expired contract for the goods and services identified in Section One of this ordinance shall continue in full force and effect.

SECTION 3: The Chief Financial Officer is authorized to remit or accept payment, as appropriate, for the goods and services identified in Section One of this ordinance.

SECTION 4: The Mayor is authorized, on behalf of the City, to take any other and further action and to execute, acknowledge, accept and/or deliver any other and further instruments, documents and assurances as deemed desirable and appropriate to consummate the temporary transactions authorized by this ordinance and to effectuate the terms, purposes and intent of this ordinance.

SECTION 5: All resolutions in conflict herewith are waived for this instance only.

A true copy,

Rhonda Daughin Johnson
Municipal Clerk, CMC

ADOPTED by the Council
APPROVED by the Mayor

JUN 07, 2004
JUN 14, 2004

03751

ER3751

From: Tony
To: William H. Stanley
Subject: APM Compatibility
Date: Tuesday, June 14, 2011 10:15:44 PM
Attachments: APM.xls

Exhibit No. 115
Witness A. Schneider
Date 6/29/13

KWD CCR# 711

Mr. Stanley,

In reply to being able to lift our vehicles off and "plop" them into another system, the short answer is **"No"**.

The long answer is supported by an attached chart (referencing sales brochures) to help compare the Las Vegas site to other APM sites to show why Las Vegas Vehicle are not compatible without major modifications to the vehicles.

Car Type

Three systems in the chart: Dallas/Fort Worth; London, Heathrow, UK; and, Phoenix, are APM200's and are not physically compatible with the guideway/wayside equipment.

Other than cosmetics, there are a whole lot of other mechanical, electrical, electronic and programmable items that would need to be changed.

- Las Vegas Vehicles can physically fit on any APM 100 system.

Train Control

Solid State and Fixed block - are one of the older "analog" systems. The brains are with a wayside control cabinet. Train control is accomplished by sending track signal information (frequency shift/phase shift) down an ATO rail. Each vehicle picks up and decodes the signal.

In addition, the automated train protection (ATP) system for the trains are separate from the automated train control (ATC) system which requires additional wayside equipment - overshoot flags and/or trip-stops.

Las Vegas does not use this.

The CityFlo systems use a Networking Radio System. There is a "brain" on each vehicle and "brains" on the wayside. These brains constantly talking to each other - along with naming point reader tags - keep each other informed about train location and provide automated train protection.

Each vehicle has a "map" on the circuit cards that are **specific** for that site.

There are different variations of the CityFlo program (550, 650, fixed block, moving block).

Depending on what the customer wants, dictates what Bombardier sells them. Our site uses **CityFlo 650**. To my knowledge, this package helps link up the station announcements and dynamic graphic signs with train location.

The fact we are a shuttle site means we do not need a moving block system.

- Las Vegas Vehicle train control systems are not compatible on any other system. It is tailored to this location only.

Power Supply

Most of the APM 100 systems use 600Vac, 3-phase power.

- Las Vegas Vehicle main power supply needs are similar to most other APM 100 systems.

Communications

These systems are developed and tailored for each specific site. While there may be some

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similarities between systems, there would be a lot of work to change hardware (radios, antennas, cabling, wires, mounting, etc), frequencies and configurations to make a vehicle compatible with another system's wayside equipment.

- Las Vegas Vehicle communications are not directly compatible to other APM systems. Hardware and software modifications to existing equipment would be required to work in another system. Also, some systems may require additional hardware and software installed to meet customer requirements.

System Description

Las Vegas uses a shuttle system. The train goes back and forth on the same guideway during normal operations. Our maintenance is conducted ***on-line***. The train does not/can not be exchanged between guideways. Maintenance is conducted in station, under the train on a maintenance platform.

Loop systems utilize switches. Trains that cross switches required a type of (power) collector shoe that would be able to cross switch gaps – our vehicle's collector shoes do not leave the rails and are not mechanically proper to cross switches. Each vehicle would have to have equipment modifications to make it work on a system that has switches.

Some shuttle systems and all loop systems have ***off-line*** maintenance, in which a vehicle can be brought into a maintenance facility (these are designated with "o" in the chart). In order to get a vehicle into a maintenance facility, vehicles would have to cross switches.

Additionally, off-line maintenance facilities utilize couplers to effect maintenance and/or reposition individual cars in a train – our vehicles use semi-permanent draw bars (no couplers).

- Las Vegas Vehicles are not equipped to travel through switches. Also, Las Vegas Vehicles cannot be readily separated or reconfigured into different trains.

I hope this helps.

I have almost 30 PDF site fact handouts I can send you, if you like. Please, let me know.

Respectfully,

Tony

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ER3753

EXHIBIT

WITNESS

DATE

CLARK COUNTY BOARD OF COMMISSIONERS
AGENDA ITEM

Issue:	Approve Contract	Back-up:
Petitioner:	Randall H. Walker, Director of Aviation	Clerk Ref. #
Recommendation:		
That the Board of County Commissioners approve and authorize the Director of Aviation to sign a contract (2289X-1) between Clark County and John Bean Technologies Corporation, dba JBT AeroTech, Jetway Systems (Charles H. Cannon, President) for the C-Gates Passenger Loading Bridge Relocation at McCarran International Airport.		

FISCAL IMPACT:

Funds in the amount of \$1,028,059.00 are available from Airport Fund (5210.043).

BACKGROUND:

The scope of this contract is for temporary relocation of the C Concourse passenger loading bridges at McCarran International Airport. The existing C-Gates passenger loading bridges must be temporarily removed, staged and reinstalled in three (3) phases to coincide with the Satellite C-Paradise Pad Ramp and Apron Reconstruction project (2289X) schedule. The 2289X project is a separate contract that will replace the deteriorated asphalt and concrete ramp pavement surrounding the C Concourse.

Award of Federal Aviation Administration Airport Improvement Project grant funds are anticipated for 75% of the contract costs.

John Bean Technologies Corporation, dba JBT AeroTech, Jetway Systems originally manufactured and installed the passenger loading bridges at the C-Gates. They have the proven expertise and experience required to properly remove, store, reinstall and re-commission all bridge specialty components and safety systems. John Bean Technologies Corporation, dba JBT AeroTech, Jetway Systems currently holds a Clark County business license.

In accordance with NRS 332.115.1 (c)*, this contract can be excluded from competitive bidding requirements.

* (c) Additions to and repairs and maintenance of equipment which may be more efficiently added to, repaired or maintained by a certain person.

This contract has been reviewed and approved as to form by the District Attorney.

Respectfully submitted,

Cleared for Agenda

RANDALL H. WALKER
Director of Aviation

Agenda Item #

7/6/2014

**CONTRACT NO. 2289X-1
PWP NO. CL-2010-367**

CONTRACT DOCUMENT

VOLUME ONE OF ONE

McCARRAN 2000 - PHASE SIX

**C-GATES PASSENGER LOADING BRIDGE
RELOCATION**

AT

McCARRAN INTERNATIONAL AIRPORT

JULY 6, 2010

**DEPARTMENT OF AVIATION
McCARRAN INTERNATIONAL AIRPORT
CLARK COUNTY, NEVADA**

03755

ER3755

Road between Kelly Lane and Spencer Street and shall be used for equipment staging, material storage, and employee parking. CONTRACTOR shall submit a plan for the area to OWNER for review prior to mobilization. The staging area shall be enclosed in a 8 foot high (min) chain link fence with gates as required. CONTRACTOR shall cover and maintain the entire staging area with dust retardant material for dust control. When not in use, gates to the staging area shall be closed and padlocked. CONTRACTOR shall provide keys to the padlocks for OWNER for use in the event of an emergency. OWNER is not responsible for safety or security of materials, facilities or equipment within CONTRACTOR'S staging area.

- D. Employee Parking – No employee parking will be provided during this contract. No employee parking will be allowed on the AOA except for properly insured and placarded CONTRACTOR work vehicles under escort from designated security gates to the work site. CONTRACTOR is responsible for all transportation and travel time costs of all labor engaged in the Contract required to travel to the work site.
- E. Removal of Temporary Improvements - Within ten (10) calendar days after Substantial Completion, CONTRACTOR shall have removed all temporary improvements in all CONTRACTOR Work, storage or staging areas, as applicable, returning same to their original condition

45.0 LABOR

If required by the OWNER, CONTRACTOR shall perform a minimum of 15% of the value of the Contract Work with its own direct hire forces.

CONTRACTOR shall employ only competent and skilled personnel to perform the Work. CONTRACTOR shall, if requested to do so by OWNER, remove from the job site any personnel of CONTRACTOR whom OWNER determines unfit or acting or working in violation of any provision of this Contract.

Work assignments and the settlement of jurisdictional disputes shall conform with either the Rules, Regulations and Procedures of the Plan for Settlement of Jurisdictional Disputes in the Construction Industry, and any successor agreement thereto, or any other mutually established method of determining work assignments and settling jurisdictional disputes.

CONTRACTOR shall comply with and shall cooperate with OWNER in enforcing job site conditions and job work rules which directly affect the performance of the Work including but not limited to starting and quitting time, smoking regulations, check-in and check-out procedures, job site safety regulations and security regulations, emergency plans and procedures, and daily clean-up.

CONTRACTOR and Subcontractors shall be bound by and comply with all federal, state and local laws with regard to minimum wages, overtime work, hiring, and discrimination. CONTRACTOR shall ensure that all employees on the Work are paid in accordance with entitled Prevailing Wage Rates as approved by the State Labor Commissioner for Southern Nevada and the current minimum Federal Wage Scale as determined by the Secretary of Labor. All work necessary to be performed after regular working hours, on Sundays or Legal Holidays, shall be performed without additional expense to OWNER.

CONTRACTOR shall comply with the Copeland Anti Kick Back Act (19 U.S.C. 874) as supplemented in the Department of Labor Regulations (29 CFR Part 3). This act provides that each CONTRACTOR or Subcontractor shall be prohibited from inducing by any means, any person employed in the construction, completion or repair of public work, to give up any part of the compensation to which it is otherwise entitled.

OWNER will review the request and approve or reject same in writing. CONTRACTOR may not commence extra work hours or days without written permission.

72.0 CERTIFIED PAYROLLS

For the installation portion of the work, CONTRACTOR shall furnish OWNER with one (1) copy of State of Nevada Weekly Wage and Hour Report of Public Work Contractors, as filed to Office of Labor Commissioner no later than one (1) week after the end of the month.

73.0 NEVADA PREVAILING WAGE RATES

For the installation portion of the work, CONTRACTOR shall use the Prevailing Wage Rates for State of Nevada, as approved by the State of Nevada Labor Commissioner at the date of Contract award.

CONTRACTOR shall ensure that all employees on the installation portion of the work are paid in accordance with the Current Prevailing Wage Rates as approved by the State Labor Commission for Clark County, Nevada.

CONTRACTOR shall be aware of forfeit penalties against CONTRACTOR if any workman is paid less than the designated Wage Rate. The forfeit penalty can be \$20.00 to \$50.00 for each workman employed for each calendar day or portion thereof that the workman is paid less than the designated rate for any work done under this Contract. This includes all Subcontractors.

Attachment "A"
Contract 2289X-1

Schedule of Compensation - **PHASE 1**

A3 80/119 w/ext
Curt

OG38000
A3 80/119

OG35001
A3 80/119

OG39003
A3 80/119

OG35041
A3 58/110

80/119 w/Walk
(407)

OG39009
A3
80/119

ITEM	DESCRIPTION	C1*	C2	C3	C4	C5	C7	C8	Total
GATE SITE									
A	Remove all ancillary equipment, load, store & cover for weather protection - Take Down PBB, load, transport, store & cover open ends for weather protection "Rotunda & Corridor to remain in at Gate"	\$119,382	\$21,388	\$21,388	\$21,388	\$21,388	\$21,791	\$21,388	\$148,073
1	Remove grout & cover foundation anchor bolts		\$913	\$913	\$913	\$913	\$913	\$913	\$5,478
2	Cap (Close) gate opening	\$688	\$688	\$688	\$688	\$688		\$688	\$4,128
B	Load previously stored PBB, components and ancillary equipment, transport & re-install PBB and ALL associated equipment & ancillary equipment (400hrs, PCA, POTW)	\$22,702	\$25,613	\$25,613	\$25,613	\$25,613	\$27,382	See Phase 2	\$152,808
STORAGE SITE									
1	Provide & Install Building Flashing	\$1,090	\$1,090	\$1,090	\$1,090	\$1,090	\$1,261	See Phase 2	\$6,731
2	Pressure wash Exterior & Clean Interior	\$1,988	\$1,988	\$1,988	\$1,988	\$1,988	\$1,988	See Phase 2	\$11,828
3	Properly "Purge", flush & etc. existing POTW system after reconnecting to include chlorination.	\$727	\$727	\$727	\$727	\$727	\$727	See Phase 2	\$4,362
4	Provide & replace Rotunda electrical disconnect cabinet							See Phase 2	
	SUBTOTAL	\$48,667	\$52,405	\$52,405	\$52,405	\$52,405	\$54,032	\$22,987	\$333,308
								Freight Allowance-Billed at Actual Payment & Performance Bonds	\$2,040
									\$2,778
	REMOVE, RESET & RE-COMMISSIONING OF PBB TOTALS							PHASE 1	\$338,122
	REMOVE, RESET & RE-COMMISSIONING OF PBB TOTALS							PHASE 1, PHASE 2 & PHASE 3	\$1,028,059

Contains: PCA, GPU, Bag Chute, POTW, Roof HANDRLS, Ladder/Cage, Tun A vent, Dog leg (RS)

Contains: PCA, GPU, Bag Chute, POTW, Roof HANDRLS, Ladder/Cage, Tun A vent, Dog leg (RS)

Contains: PCA, GPU, Bag Chute, POTW, Roof HANDRLS, Ladder/Cage, Tun A vent, Dog leg (RS)

Contains: PCA, GPU, Bag Chute, POTW, Roof HANDRLS, Ladder/Cage, Tun A vent, Dog leg (RS)

Contains: PCA, GPU, Bag Chute, POTW, Roof HANDRLS, Ladder/Cage, Tun A vent, Dog leg (RS)

Contains: PCA, GPU, Bag Chute, POTW, Roof HANDRLS, Ladder/Cage, Tun A vent, Dog leg (RS)

Contains: PCA, GPU, Bag Chute, POTW, Roof HANDRLS, Ladder/Cage, Tun A vent, Dog leg (RS)

Contains: PCA, GPU, Bag Chute, POTW, Roof HANDRLS, Ladder/Cage, Tun A vent, Dog leg (RS)

Contains: PCA, GPU, Bag Chute, POTW, Roof HANDRLS, Ladder/Cage, Tun A vent, Dog leg (RS)

Contains: PCA, GPU, Bag Chute, POTW, Roof HANDRLS, Ladder/Cage, Tun A vent, Dog leg (RS)

July 6, 2010

Contract No. 2289X-1
Schedule of Compensation

03758

ER3758

Attachment "A"
Contract 2280X-1
Schedule of Compensation - PHASE 2

ITEM	DESCRIPTION	C8	C11	C12	C14	C16	C18	C19	C8	Total
GATE SITE										
A	Remove all ancillary equipment, load, store & cover for weather protection - Take Down PBB, load, transport, store & cover open ends for weather protection	\$22,058	\$22,058	\$22,058	\$22,058	\$22,058	\$23,974	See Phase 3		\$134,264
1	Remove grout & cover foundation anchor	\$913	\$913	\$913	\$913	\$913	\$913	See Phase 3		\$5,478
2	Cap (Close) gate opening	\$688	\$688	\$688	\$688	\$688		See Phase 3		\$3,440
STORAGE SITE										
B	Load previously stored PBB, components and ancillary equipment, transport & re-install PBB and ALL associated equipment & ancillary	\$25,613	\$25,613	\$25,613	\$25,613	\$25,613	\$29,288	See Phase 3	\$25,613	\$182,864
GATE SITE										
1	Provide & install Building Flashing	\$1,090	\$1,090	\$1,090	\$1,090	\$1,090	\$1,090	See Phase 3	\$1,090	\$7,630
2	Pressure wash Exterior & Clean Interior	\$1,988	\$1,988	\$1,988	\$1,988	\$1,988	\$1,988	See Phase 3	\$1,988	\$13,916
3	Property "Purge", flush & etc. existing POTW system after reconnecting to include chlorination.	\$727	\$727	\$727	\$727	\$727	\$727	See Phase 3	\$727	\$5,089
4	Provide & replace Rotunda electrical disconnect cabinet								\$5,382	\$5,382
	SUBTOTAL	\$53,077	\$53,077	\$53,077	\$53,077	\$53,077	\$57,978	See Phase 3	\$34,800	\$358,163
							Freight Allowance-Billed at Actual Payment & Performance Bonds		\$2,040	\$2,839
	REMOVE, RESET & RE-COMMISSIONING OF PBB TOTALS									\$363,042

July 6, 2010
Contract No. 2280X-1
Schedule of Compensation

03759

ER3759

Schedule of Compensation - PHASE 3

Contract No. 2289X-1
Schedule of Compensation

JULY 6, 2010

03760

ER3760

NEVADA STATE LABOR COMMISSIONER

EXHIBIT Ux8

WITNESS W. Stanley

DATE 9/9/13

ASCE STANDARD ANSI/ASCE/T&DI 21.4-08

American Society of Civil Engineers

Automated People Mover Standards—Part 4

This document uses both the International System of Units (SI)
and customary units.

Security

Emergency Preparedness

System Verification and Demonstration

Operations, Maintenance, and Training

Operational Monitoring

ASCE



Published by the American Society of Civil Engineers



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03762

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STANDARDS

In 2003, the Board of Direction approved the revision to the ASCE Rules for Standards Committees to govern the writing and maintenance of standards developed by the Society. All such standards are developed by a consensus standards process managed by the Society's Codes and Standards Committee (CSC). The consensus process includes balloting by a balanced standards committee made up of Society members and nonmembers, balloting by the membership of the Society as a whole, and balloting by the public. All standards are updated or reaffirmed by the same process at intervals not exceeding five years.

The following standards have been issued:

- ANSI/ASCE 1-82 N-725 Guideline for Design and Analysis of Nuclear Safety Related Earth Structures
- ASCE/EWRI 2-06 Measurement of Oxygen Transfer in Clean Water
- ANSI/ASCE 3-91 Standard for the Structural Design of Composite Slabs and ANSI/ASCE 9-91 Standard Practice for the Construction and Inspection of Composite Slabs
- ASCE 4-98 Seismic Analysis of Safety-Related Nuclear Structures
- Building Code Requirements for Masonry Structures (ACI 530-02/ASCE 5-02/TMS 402-02) and Specifications for Masonry Structures (ACI 530.1-02/ASCE 6-02/TMS 602-02)
- ASCE/SEI 7-05 Minimum Design Loads for Buildings and Other Structures
- SEI/ASCE 8-02 Standard Specification for the Design of Cold-Formed Stainless Steel Structural Members
- ANSI/ASCE 9-91 listed with ASCE 3-91
- ASCE 10-97 Design of Latticed Steel Transmission Structures
- SEI/ASCE 11-99 Guideline for Structural Condition Assessment of Existing Buildings
- ASCE/EWRI 12-05 Guideline for the Design of Urban Subsurface Drainage
- ASCE/EWRI 13-05 Standard Guidelines for Installation of Urban Subsurface Drainage
- ASCE/EWRI 14-05 Standard Guidelines for Operation and Maintenance of Urban Subsurface Drainage
- ASCE 15-98 Standard Practice for Direct Design of Buried Precast Concrete Pipe Using Standard Installations (SIDD)
- ASCE 16-95 Standard for Load Resistance Factor Design (LRFD) of Engineered Wood Construction
- ASCE 17-96 Air-Supported Structures
- ASCE 18-96 Standard Guidelines for In-Process Oxygen Transfer Testing
- ASCE 19-96 Structural Applications of Steel Cables for Buildings
- ASCE 20-96 Standard Guidelines for the Design and Installation of Pile Foundations
- ANSI/ASCE/T&DI 21-05 Automated People Mover Standards—Part 1
- ASCE/T&DI 21.2-08 Automated People Mover Standards—Part 2
- ASCE/T&DI 21.3-08 Automated People Mover Standards—Part 3
- ANSI/ASCE/T&DI 21.4-08 Automated People Mover Standards—Part 4
- SEI/ASCE 23-97 Specification for Structural Steel Beams with Web Openings
- ASCE/SEI 24-05 Flood Resistant Design and Construction
- ASCE/SEI 25-06 Earthquake-Actuated Automatic Gas Shutoff Devices
- ASCE 26-97 Standard Practice for Design of Buried Precast Concrete Box Sections
- ASCE 27-00 Standard Practice for Direct Design of Precast Concrete Pipe for Jacking in Trenchless Construction
- ASCE 28-00 Standard Practice for Direct Design of Precast Concrete Box Sections for Jacking in Trenchless Construction
- ASCE/SEI/SFPE 29-05 Standard Calculation Methods for Structural Fire Protection
- SEI/ASCE 30-00 Guideline for Condition Assessment of the Building Envelope
- SEI/ASCE 31-03 Seismic Evaluation of Existing Buildings
- SEI/ASCE 32-01 Design and Construction of Frost-Protected Shallow Foundations
- EWRI/ASCE 33-01 Comprehensive Transboundary International Water Quality Management Agreement
- EWRI/ASCE 34-01 Standard Guidelines for Artificial Recharge of Ground Water
- EWRI/ASCE 35-01 Guidelines for Quality Assurance of Installed Fine-Pore Aeration Equipment
- CI/ASCE 36-01 Standard Construction Guidelines for Microtunneling
- SEI/ASCE 37-02 Design Loads on Structures During Construction
- CI/ASCE 38-02 Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data
- EWRI/ASCE 39-03 Standard Practice for the Design and Operation of Hail Suppression Projects
- ASCE/EWRI 40-03 Regulated Riparian Model Water Code
- ASCE/SEI 41-06 Seismic Rehabilitation of Existing Buildings
- ASCE/EWRI 42-04 Standard Practice for the Design and Operation of Precipitation Enhancement Projects
- ASCE/SEI 43-05 Seismic Design Criteria for Structures, Systems, and Components in Nuclear Facilities
- ASCE/EWRI 44-05 Standard Practice for the Design and Operation of Supercooled Fog Dispersal Projects
- ASCE/EWRI 45-05 Standard Guidelines for the Design of Urban Stormwater Systems
- ASCE/EWRI 46-05 Standard Guidelines for the Installation of Urban Stormwater Systems
- ASCE/EWRI 47-05 Standard Guidelines for the Operation and Maintenance of Urban Stormwater Systems
- ASCE/SEI 48-05 Design of Steel Transmission Pole Structures

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FOREWORD

The Board of Direction approved revisions to the ASCE Rules for Standards Committees to govern the writing and maintenance of standards developed by ASCE. All such standards are developed by a consensus standards process managed by the ASCE Codes and Standards Committee (CSC). The consensus process includes balloting by a balanced standards committee, and reviewing during a public comment period. All standards are updated or reaffirmed by the same process at intervals of between five and ten years.

This standard is Part 4 of the four-part Automated People Mover Standards, which establish the minimum set of requirements necessary to achieve an acceptable level of safety and performance for an Automated People Mover (APM) system. An APM is defined as a guided transit mode with fully automated operation, featuring vehicles that operate on guideways with exclusive right-of-way.

Parts 1, 2, and 3 cover requirements for design of an APM system while Part 4 covers requirements for an APM in passenger operation. Part 4 contains sections covering security; emergency preparedness; system verification and demonstration; operations, maintenance, and training; and operational monitoring. It also includes three informative annexes which are not mandatory parts of the standard. The provisions of these annexes are written in permissive language and, as such, offer to the user a series of options or instructions but do not prescribe a specific course of action. Significant judgment is left to the user of these annexes.

The ASCE Automated People Movers Standards Committee has been developing these standards since 1991. The committee comprises individuals from many backgrounds, including consulting engineering,

research, transit agencies, airports, transit system design and manufacturing, education, government, and private practice.

This standard establishes the minimum set of requirements necessary to achieve an acceptable level of safety and performance for an APM system. As such, it may be used in the safety certification process. The overall goal of this standard is to assist the industry and the public by establishing standards for APM systems.

This standard has no legal authority in its own right but may acquire legal standing in one or more of the following ways:

1. Adoption by an authority having jurisdiction.
2. Reference to compliance with the standard as a contract requirement.
3. Claim by a manufacturer or manufacturer's agent of compliance with the standard.

This standard will be beneficial to transportation engineers, civil engineers, safety engineers, and contractors of APM systems. Anyone who owns, operates, builds or maintains, designs, tests, insures, oversees, or certifies APMs or other innovative technology transit systems such as magnetic levitation, air cushion, and monorail systems will also benefit from the standard.

This standard has been prepared in accordance with recognized engineering principles and should not be used without the user's competent knowledge for a given application. The publication of this standard by ASCE is not intended to warrant that the information contained therein is suitable for any general or specific use, and ASCE takes no position respecting the validity of patent rights. The user is advised that the determination of patent rights or risk of infringement is entirely their own responsibility.

ACKNOWLEDGMENTS

The American Society of Civil Engineers (ASCE) acknowledges the devoted efforts of the Automated People Mover Standards Committee under the Codes and Standards Committee. This group comprises individuals from many backgrounds, including consulting engineering, research, transit agencies, airports, transit system design and manufacturing, education, government, regulatory agencies, and private practice.

Thomas McGean, P.E., *Chair*
Lawrence Smith, P.E., *Secretary*
Tedd Snyder, P.E., *Vice-Chair*
Joseph Abbas
Douglas Baird
Frank Bares
Cheryl Boehm
Murthy Bondada, P.E.
Jon Brackpool
Pierre Brunet
David Campbell, P.E.
John Champ
Yves Clarissou
Redjean Clerc
Frank Culver
Peter DeLeonardis
Paul Didrikson, P.E.
Didier Dupre
Charles Elms, P.E.
Robert Falvey
Jimmy Fletcher, P.E.
Matthias Frenz
Henri Frey, P.E.
Darin Friedmann
Antonio Garcia
Franklin Gates
Robert Gricbenow, P.E.
Greg Hale
Albert Hartkom
William Hathaway
James Hoelscher
Gary Houts, P.E.
Victor Howe
Alex Inserto

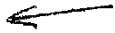
This standard was prepared through the consensus standards process by balloting in compliance with procedures of ASCE's Codes and Standards Activity Council. Those individuals who serve on the Automated People Mover Standards Committee are:

James Johnson
Dieter Jussel
Ronald Kangas
John Kapala
Alexander Klimmer, P.E.
Kyle Kraudy
Jun-Ho Lee
J. Sam Lott, P.E.
Martin Lowson
Stanford Lynch, P.E.
Charles Martin
David Mason
Frank Mauderer
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AUTOMATED PEOPLE MOVER STANDARDS—PART 4

6. Timely options for reacting to short-term disruptions caused by disabled vehicles, including criteria for choosing the appropriate option.
7. Conditions required to provide a clear path for the removal of disabled vehicles, re-entry of vehicles used to recover another vehicle, and introduction of spare vehicles onto the system.
8. Conditions required to enable passenger egress from disabled vehicles in an orderly fashion.

This document shall serve as a primary input to the System Operations Plan and operation and maintenance manuals.

15.5 ALARMS AND MALFUNCTIONS REPORTING

Operational system components shall be automatically monitored for malfunction per ANSI/ASCE/T&DI 21-05, Section 5.3.3.3.

15.6 RECORDKEEPING AND MANAGEMENT REPORTS

Procedures and methodology for evaluating reports of system alarms and acknowledgments of all Central Control Operator (CCO) commands, and other CCO-initiated activities shall be developed, in accordance with ANSI/ASCE/T&DI 21-05, Section 5.3.3.4. Voice communications between the CCO and passengers shall provide for recording of all conversations (see ANSI/ASCE/T&DI 21-05, Section 6.1.5). Recorded media shall be retained for a prescribed period of time, to be agreed upon with the authority having jurisdiction. In the event of an incident/accident or hazardous condition, relevant information shall be retained pending investigation. Procedures shall be provided such that system data associated with failures and/or alarms are maintained and stored as required for system maintenance, troubleshooting, and recovery.

15.7 MAINTENANCE

The Maintenance Program shall be comprehensive and shall be incorporated into all aspects of system design. The Maintenance Program shall include the development of system maintainability data for the full system and subsystems; planning and procedures for preventive maintenance; procedures for corrective maintenance; and the documentation of all processes and parts in maintenance manuals.

15.7.1 System Maintainability

A maintainability program shall be developed and implemented during the design and manufacturing period that will promote ease of maintenance, diagnostics, repair, check-out, and test. The maintainability program shall include the involvement of qualified personnel. (A maintainability program shall not be required if the system is already in operation when this standard is applied.) Maintainability requirements shall be consistent with overall system/equipment requirements.

15.7.2 Maintenance Plan

A comprehensive Maintenance Plan for the system shall be developed consistent with the system dependability requirements. For all subsystems and equipment, the Maintenance Plan shall prescribe preventive maintenance schedules and delineate each task necessary to accomplish inspection and calibration of equipment, servicing, preventive maintenance, corrective maintenance, and overhaul. The plan shall include procedures to prevent equipment that has not fulfilled check-out requirements from being placed into revenue service.

The Maintenance Plan shall include lists of spare equipment, parts, and consumable supplies. It shall also include procedures for maintaining an adequate inventory of spare parts and consumables, and shall estimate necessary storage requirements for these items. The plan shall prescribe the facilities and equipment necessary for each maintenance task, and specialized tools required, together with realistic estimates of the required manpower, skill levels, and task duration.

15.7.3 Maintenance Manuals

Maintenance manuals shall be provided for all elements of the system. These manuals shall detail procedures and reference data for performing all of the required maintenance tasks. The text and detail of these manuals shall be consistent with the required maintenance personnel skill levels, facilities, and equipment. The manuals shall include instructions for assembly and disassembly and expanded assembly diagrams as required. The maintenance manuals shall, as a minimum, contain the following items:

1. Preventive maintenance and overhaul schedules for all system components.
2. Descriptions of maintenance procedures for all system components.
3. Description of system operations, including interactions between major subsystems elements.
4. Detailed technical descriptions of individual subsystems, assemblies, and circuits, including

clearances, tolerances, circuit operations, test point voltages, and waveforms as required for maintenance. These descriptions shall refer to system drawings as needed.

5. Descriptions of components, including drawings and other information as necessary for maintenance.
6. Detailed descriptions of system-specific test equipment operation and procedures for its correct use in equipment maintenance.
7. Troubleshooting guides at the system, subsystem, and subassembly level to aid in diagnosis of common failure modes.
8. Safety warnings as appropriate for equipment and procedures.
9. An illustrated parts breakdown, including a description of replacement parts, and associated part numbers.
10. Special requirements and qualifications for maintenance personnel.

15.8 TRAINING

Training shall be provided for Operation and Maintenance personnel prior to the start of passenger service and as needed thereafter to maintain competency. The training program shall include formal instruction and on-the-job training and shall lead to qualification of employees for their respective tasks.

Training shall include instructional literature and equipment necessary to train personnel. Training on the actual system equipment and/or spare equipment is permitted.

Note 1: Training for Emergency Response personnel is included in 13.2.

Note 2: Training for Security personnel is included in 12.1.

Note 3: The training program is typically designed and provided by the system supplier.

15.8.1 Training Plan

A Training Plan shall be developed which identifies the following elements as a minimum:

1. Training program goals and objectives.
2. A schedule illustrating sequence and duration for training.
3. Methods and materials for conducting classroom and hands-on training.
4. Requirements and methods for determining and documenting training and qualification for each individual.
5. Qualifications for training personnel.

6. Process for updating the training and qualification program to keep it current.
7. Levels of competency associated with job descriptions (from the Staffing Plan per 15.1.3).
8. Tasks associated with each job description.
9. Statement of training objectives for each task.
10. Pass/fail criteria.

15.8.2 Training Instructors

Instructors shall be proficient in oral and written communication, and qualified and knowledgeable in their area of instruction.

15.8.3 Training Materials

Courses shall be defined and developed for training of all personnel identified in 15.1.3. The following training materials shall be provided for each course:

1. Lesson Plan/Instructor Guide
2. Trainee Workbook
3. Training aids, such as visual aids, exercises, or other interactive tools
4. Reference materials

15.8.4 Ongoing Training

The owner/operator training program shall be continued throughout the life of the system.

15.8.5 Training Manuals

Manuals for equipment and subsystems shall be provided for use in training. The manuals shall be updated as required throughout the life of the system to conform to equipment configuration. Manuals shall provide sufficient information and detail to enable personnel to gain a full understanding of the design parameters and criteria, the operation and functioning, and the means of corrective, preventive, and overhaul maintenance for all equipment and subsystems. The following types of manuals shall be provided:

1. Equipment Operating Manuals
2. Spare Parts List per 15.7.2
3. Maintenance Manuals per 15.7.3
4. Software Manuals
5. Equipment Room Plans
6. Special Equipment Manual
7. Any other manuals necessary to effectively operate and maintain the system

Software manuals shall be provided for each user-programmable device or subsystem, and shall include a user's guide, operating instructions, and description of the software and associated hardware. Commercial "off the shelf" software shall be provided with the software manufacturer's documentation and licenses.

Exhibit No. UX 9
Witness K. Murphy
Date 6/27/13

KWD COR# 711

**Analysis of the Airport ATS Technician Job at
McCarran International Airport
Las Vegas, NV**

Expert Report



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August 2, 2012

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Murphy
Ex 1

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Expertise

I am an Affiliate Professor of Psychology and a Consulting Expert at Lamorinda Consulting LLC, with a specialization in Industrial/Organizational (I/O) Psychology, which deals with analyzing behavior and performance in the workplace. I am the Past President of Society for Industrial Psychology and past Editor of *Journal of Applied Psychology*, a leading scientific journal in the field. I have 30 years of experience as an I/O psychologist, and have consulted for organizations throughout the country.

Job analysis is one of the core areas of I/O psychology, and I have experience in job analysis in a number of industries. I have drawn on that experience to conduct an analysis of the job performed by Airport ATS Technicians at McCarran International Airport.

Methods

I used several methods to analyze the job of Airport ATS Technician, and to compare it to the job of Elevator Constructors (this job class is labeled Elevator Installers/Repairers in U.S. Department of Labor documents).

- (1) I visited and observed several of the areas in which Airport ATS Technicians at McCarran International Airport perform their duties, examined tools, equipment, and facilities used in performing this work, and received explanations of the work performed in different areas.
- (2) I interviewed four experienced Airport Technicians (1 ATS-I, 3 ATS-II, with an average of 8 years of experience in this or in similar jobs) to obtain detailed descriptions of the work they performed. I also obtained ratings on job analysis questionnaires from these subject matter experts.
- (3) I consulted numerous publications describing the tasks, maintenance/repair procedures, and tools and equipment used in the Airport ATS Technicians at McCarran International Airport. These included manuals currently used at this Airport as well as publications comparing the technologies and service procedures used in Automated People Mover systems to the technologies and service procedures used in Elevator Installation and Repair.
- (4) I obtained a detailed analysis of the work activities, knowledge, abilities, skills, and experience required in the job of Elevator Installers/Repairers from the U.S. Department of Labor's *O*NET* (*O*NET* is the Department of Labor's computerized database of occupational information for a wide range of jobs).

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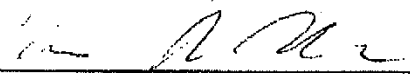
The *O*NET* Occupational Profile for Elevator Installers and Repairers has an occupation code of 47-4021.00.

- (5) I compared the job of Airport ATS Technicians at McCarran International Airport with the description of the job performed by Elevator Installers and Repairers.

Conclusions

On the basis of a comparison of the tasks performed, the skills, knowledge and abilities needed to succeed in the job, and the most important work activities in the job, I concluded:

- (1) The job of Airport ATS Technicians at McCarran International Airport requires virtually all of the knowledge, skills, abilities, and experience required of Elevator Installer/Repairers.
- (2) The work activities performed by Airport ATS Technicians overlap substantially with those performed by Elevator Installer/Repairers.
- (3) The job of Airport ATS Technicians is comparable to, and perhaps more demanding than the job of Elevator Installer/Repairers.
- (4) The job of Airport ATS Technicians at McCarran International Airport is appropriately classified as an Elevator Constructor/Installer/Repairer.



Kevin R. Murphy

8-2-12

Date

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Documents Reviewed

1. O*NET Summary Report for 47-4021.00 - Elevator Installers and Repairers
2. O*NET Summary Report for 49-3043.00 - Rail Car Repairers
3. McCarran Airport APM Tool List
4. Elevator Constructor Tool List
5. ASCE Automated People Mover Standards - Parts 1-4
6. Clark County Airport ATS Technician I/II job description
7. Clark County Airport ATS Supervisor job description
8. Articles by Lawrence Fabian
 - a. Horizontal Elevators – September 1993
 - b. Horizontal Elevators – April 1997
 - c. Market-Ready Horizontal Links – September 1999

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EDITORIAL POSITIONS

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2010 – present	Series co-Editor, <i>Applied Psychology Series</i> , Taylor & Francis
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2007 – 2011	<i>Industrial and Organizational Psychology: Perspectives on Science and Practice</i>
2002 – present	<i>Personnel Psychology</i>
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1998 – present	<i>Journal of Industrial Psychology</i>
1997 – present	<i>Human Resource Management Review</i>
1991 – present	<i>International Journal of Selection and Assessment</i>
1991 – 1993	<i>Journal of Vocational Behavior</i>
1990 – 1996	<i>Personnel Psychology</i>
1989 – 1991	<i>Journal of Applied Psychology</i>
1988 – present	<i>Human Performance</i>

GRANTS, FELLOWSHIPS AND CONTRACTS

- Development of a Deterrence Framework: Social Science Contributions. Defense Threat Reduction Agency, 2008, \$153,000
- Linking UK Content Expertise with Computer-Based Analysis for Prediction of Individual and Group-Related Activities. Office of Naval Research. 2008-2011, co-PI, \$525,000
- Evaluation of Light-based System for Disabling Target Individuals. ARL-Intelligent Optical Systems, Torrence, CA, 2007-2008 - \$13,000
- Evaluation of Methods for Drawing Inferences About Non-State Actors' Perceptions of the Risks and Benefits of Seeking and Acquiring WMD, Defense Threat Reduction Agency, 2007, \$113,000

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Applications of "Psychology of Terrorism" Studies to Combating Nuclear Weapons Acquisition and Use. Defense Threat Reduction Agency, 2007, \$50,000

Anomalous Behavior Detection. Office of Naval Research, 2005-2008, co-PI, \$225,000

Study to Quantify the Benefits and Costs of Simulated versus Live-Fire Training at USMC Ranges, US Marine Corps Systems Command, 2006-2008, \$584,213

Evaluate Recruiting Efficiency, US Marine Corps Recruiting Command, 2001-2003, \$368,750

Validation of FACTOR 1000 for pre-employment applications, Performance Factors, 1995, \$10,664

Assessing Pre-Employment Alcohol Testing, American Trucking Association, Summer, 1994, \$5,000

Assessing the Performance of Surface Warfare Officers, U.S. Army Research Office, TCN 93-453, 1993, \$15,798.

ASEE/U.S. Navy Sabbatical Fellowship, Navy Personnel Research and Development Center, Winter, 1992.

Effects of employee drug testing on work attitudes and behaviors, NIDA Grant 1R01DA005814-011989, \$84,037. Reprinted in Moore, P. (1990). Models for success: A look at grant-winning proposals. Alexandria, VA. Capitol Publications.

Officer Career Model Development, U. S. Army Research Office, DO 1664 1989, \$10,013.

Dimensions of Job Performance. U.S. Army Research Office, TCN 86-145, 1986, \$36,108

ASEE/U.S. Navy Faculty Fellowship, Navy Personnel Research and Development Center, Summer 1985.

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Member, National Academy of Sciences Committee on Drug Use in the Workplace (1991-93)
Chair, Department of Defense Advisory Committee on Military Personnel Testing (member 1991-95, Chair 1995-1998)
Member, National Research Council Roundtable on Work, Learning and Assessment (1997-98)
Member, National Academy of Sciences Committee to Review the Scientific Evidence on the Polygraph (2001-2003)
Program reviewer for National Science Foundation, Economic and Social Research Council, Department of Homeland Security (2008- present)
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Job Analysis and Performance Appraisal,
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Assessment in Organizations,
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Fairness in Personnel Administration,
Counterproductive Behavior in Organizations,
Research Methods

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PUBLISHED PROCEEDINGS

Murphy, K. (1987). Are we doing a good job measuring the wrong thing? Proceedings of DOD/ETS Conference on Job Performance Management Technologies, San Diego.

Murphy, K. (1995). A more realistic view of the validity and utility of selection tests: Multi-attribute utility. Proceedings of Inaugural Australian Industrial and Organisational Psychology Conference. Sydney, Australia.

Murphy, K., Cleveland, J., Henle, C., Morgan, K., Orth, M & Tziner, A. (1996). Effects of proximal and distal context variables on performance appraisal quality: A model and framework for research. Proceedings of Fifteenth Biennial Applied Behavioral Sciences Symposium, US Air Force Academy (USAF-A-TR-96-2). Colorado Springs, CO.

SUPPLEMENTS, SOFTWARE AND MANUALS

Sugar, J., Calabrese, F., Cleveland, J., & Murphy, K. (1987). Student Resource Book for Psychology, Wade and Tarvis. New York: Harper & Row. Second Edition released in 1991. Third Edition 1995.

Murphy, K., & Davidshofer, C. (1988). Student resource manual for Psychological testing: Principles and applications. Englewood Cliffs, NJ: Prentice-Hall. Second Edition, (1991).

Murphy, K. (1991). Software to accompany Psychological testing: Principles and applications (2nd Ed.) Englewood Cliffs, NJ: Prentice-Hall.

CONFERENCE PRESENTATIONS

Murphy, K. (1979). Fooling yourself with cross-validation: Single-sample designs. Presented at American Psychological Association annual meeting. New York.

Murphy, K. (1980). Convergent and discriminant validity of regression, models and subjectively weighted models in decision research. Presented at Midwestern Psychological Association annual meeting. St. Louis.

Murphy, K. (1981). Methodological issues in social judgment theory. Symposium Chair, Southwestern Psychological Association annual meeting. Houston.

Murphy, K. (1981). Task determinants of the discriminant validity of judgmental models. Presented at Southwestern Psychological Association annual meeting. Houston.

Lane, D., Murphy, K., & Marques, T. (1981). Measuring cue importance in policy capturing. Presented at Southwestern Psychological Association annual meeting. Houston.

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- Stramler, C., & Murphy, K. (1981). Stress and coping behaviors in secretaries. Presented at Southwestern Psychological Association annual meeting. Houston.
- Murphy, K., & Balzer, W. (1981). Rater errors and rating accuracy. Presented at American Psychological Association annual meeting. Los Angeles.
- Murphy, K. (1982). Cost-benefit considerations in choosing among cross-validation methods. Presented at American Psychological Association annual meeting. Washington, D.C.
- Murphy, K., & Needham, T. (1983). Using implicit personality theory to predict biases in simulated personnel decisions. Presented at Fifth International Personal Construct Psychology Congress. Boston.
- Cleveland, J., & Murphy, K. (1983). Explaining the influence of personal characteristics on personnel decisions: Signs vs. samples. Presented at Fifth International Personal Construct Psychology Congress. Boston.
- Murphy, K., Balzer, W., Eisenman, E., & Lockhart, M. (1983). Effect of previous performance on evaluation of present performance. Presented at Annual Convention, American Psychological Association. Anaheim.
- Banks, C., & Murphy, K. (1983). Cognitive research on performance appraisal. Co-chairs of symposium presented at Annual Convention, American Psychological Association. Anaheim.
- Murphy, K., & Balzer, W. (1984). Systematic distortions in memory-based ratings: Implications for rating accuracy. Presented at Annual Convention, American Psychological Association. Toronto, Canada.
- Murphy, K., Jones, B., Herr, B., & Chen, J. (1985). Effects of subsequent performance on ratings of present performance. Presented at Annual Convention, American Psychological Association. Los Angeles.
- Banks, C., & Murphy, K. (1983). Cognitive research on performance appraisal. Co-chairs of symposium presented at Annual Convention, American Psychological Association. Anaheim.
- Murphy, K., & Balzer, W. (1984). Systematic distortions in memory-based ratings: Implications for rating accuracy. Presented at Annual Convention, American Psychological Association. Toronto, Canada.
- Murphy, K., Jones, B., Herr, B., & Chen, J. (1985). Effects of subsequent performance on ratings of present performance. Presented at Annual Convention, American Psychological Association. Los Angeles.
- Murphy, K., Herr, B., Lockhart, M., & Maguire, E. (1985). Evaluating the performance of paper people. Presented at Annual Convention, American Psychological Association. Los Angeles.
- Murphy, K., & Cleveland, J. (1985). Enhancing link between research and practice in Industrial/Organizational Psychology. Co-chair of panel at Annual Convention, American Psychological Association. Los Angeles.
- Murphy, K. (1985). Information processing research in performance appraisal: A consideration of the approach, findings, and implications. Symposium discussant. Annual Convention, Academy of Management. San Diego.

- Murphy, K. (1985). Issues in job performance measurement. Symposium discussant. Twenty-seventh Annual Military Testing Association Conference. San Diego.
- Murphy, K. (1986). Empiricism in applied psychology: Inductive vs. deductive research strategies. Program Chair: First Annual Convention of the Society of Industrial and Organizational Psychology. Chicago.
- Murphy, K., Philbin, T. & Adams, S. (1986). Purpose of observation and accuracy of memory-based performance ratings. Presented at Annual Convention, American Psychological Association. Washington, D.C.
- Murphy, K. (1986). Do paper people studies overestimate effect sizes? Presented at Annual Convention, American Psychological Association. Washington, D.C.
- Murphy, K., & Constans, J. (1986). Behavioral anchors as a source of bias in ratings. Information processing in organizations conference. Buffalo.
- Murphy, K. (1987). The utility of utility analysis. Panel discussant, Chair-R. Alexander. Second Annual Conference of Society for Industrial/Organizational Psychology. Atlanta.
- Murphy, K. (1987). Gaining experience in organizations: A graduate student's view. Symposium Co-chair. Second Annual Conference of Society for Industrial and Organizational Psychology. Atlanta.
- Murphy, K. (1987). Performance appraisal: Making progress and making sense. Panel discussant. Second Annual Conference of Society for Industrial/Organizational Psychology. Atlanta.
- Murphy, K. (1987). Cognitive research in I/O Psychology: Challenges to the future. Panel discussant. Second Annual Conference of Society for Industrial/Organizational Psychology. Atlanta.
- Murphy, K. (1987). Are we doing a good job measuring the wrong thing? DOD/ETS Joint Performance Measurement Conference. San Diego.
- Murphy, K. (1987). Cognitive research and Industrial/Organizational Psychology. Panel discussant, Seventh Annual I/O-O/B Graduate Student Conference. Knoxville.
- Murphy, K. (1987). Detecting infrequent deception. Annual Conference of American Psychological Association. New York.
- Murphy, K. (1987). Cognitive research in performance appraisal: Prospects for application. Panel Chair, Annual Conference of American Psychological Association. New York.
- Murphy, K. (1988). Job performance and productivity. Organizational Behavior, Performance and Productivity Conference, Rensselaer Polytechnic Institute. Troy.
- Murphy, K. (1988). What to do about construct validity. Chair, Roundtable discussion Third Annual Conference of Society for Industrial and Organizational Psychology, Dallas.
- Murphy, K. (1988). Do we remember behaviors or impressions? Annual Conference of Academy of Management. Anaheim.

- Murphy, K. (1989). Psychology departments vs. business schools as places of employment. Fourth Annual Conference of SIOP. Boston.
- Murphy, K., Thornton, G. & Prue, K. (1990). The influence of job characteristics on the acceptability of employee drug testing. Fifth Annual Conference of SIOP. Miami.
- Murphy, K. & Anhalt, R. (1991). Is halo error a property of rater, ratees or task. Sixth Annual Conference of SIOP. St. Louis.
- Murphy, K. (1991). Utility issues in employee drug testing. Sixth Annual Conference of SIOP. St. Louis.
- Murphy, K. (1991). Evaluating performance measures. International Academic Symposium Psychological Measurement. Nanjing, China.
- Murphy, K. (1992). Power, politics, and performance appraisal: The role of subjectivity. Annual Conference of SIOP. Montreal, Canada.
- Murphy, K. (1992). Evaluating appraisals in field settings. Annual Conference of SIOP. Montreal, Canada.
- Murphy, K. (1992). Ethical issues in Human resource decisions. Conference on Fairness in Personnel Decisions. South African Industrial Psychology Association. Pretoria, South Africa.
- Murphy, K. (1992). Can culture-fair personnel testing be effective? South African Industrial Psychology Association. Pretoria, South Africa.
- Murphy, K. & Lee, S. (1993). Does conscientiousness explain the relationship between integrity and job performance? Annual Conference of SIOP. San Francisco.
- Murphy, K. (1994). Personality and job performance. Discussant remarks. Annual Conference of SIOP. Nashville.
- Murphy, K. (1994). Modeling sexual harassment. Discussant remarks. Annual Conference of SIOP, Nashville.
- Murphy, K. (1995). Reliability and accuracy of job performance measures. Discussant remarks. Annual Conference of SIOP. Orlando.
- Murphy, K. (1995). A more realistic view of the validity and utility of selection tests: Multi-attribute utility. Inaugural Australian Industrial and Organisational Psychology Conference. Sydney, Australia.
- Murphy, K. & Shiarella, A. (1996). Estimating the validity and utility of selection test batteries in relation to multi-attribute criteria. Annual Conference of SIOP. San Diego.
- Murphy, K., Cleveland, J., Henle, C., Morgan, K., Orth, M & Tziner, A. (1996). Effects of proximal and distal context variables on performance appraisal quality: A model and framework for research. Presented at Applied Behavioral Sciences Symposium, US Air Force Academy.
- Murphy, K. (1997). Confessions of a Statistical Minimalist. Annual Conference of SIOP. St. Louis.

- Murphy, K. (1997). Police selection in Nassau County: Validity and Demographic Diversity: Discussant remarks. Annual Conference of SIOP. St Louis.
- Murphy, K. (1997). Screening for Substance Abuse: Emerging Scientific and Business Issues: Discussant remarks. Annual Conference of SIOP. St Louis.
- Murphy, K. (1997). Personality and mental ability as predictors of task and contextual job performance. Symposium chair. Fifth European Congress of Psychology. Dublin, Ireland.
- Murphy, K. (1997). Performance Appraisal at Work: Issues Related to Contextual Job Performance. Symposium chair. Fifth European Congress of Psychology. Dublin, Ireland.
- Murphy, K. & Shirella (1997). Using Ability and Personality Measures to Predict Multidimensional Performance Criteria. Presented at Fifth European Congress of Psychology. Dublin, Ireland.
- Tziner, A., Murphy, K. & Cleveland, J. (1998). Relationships between attitudes toward organizations and performance appraisal systems and rating behavior: A multi-national study. Presented at 24th International Congress of Applied Psychology. San Francisco.
- Murphy, K. (1998). In search of success: Everyone's criterion problem. Presidential address. Annual conference of SIOP. Dallas.
- Murphy, K. (1998). The controversy over score banding in personnel selection. discussant's remarks. Annual conference of SIOP. Dallas.
- Murphy, K. (1998). Alternative strategies for developing highly predictive, low adverse impact tests. Annual conference of SIOP. Dallas.
- Murphy, K. (1999). New Empirical Research on Social Desirability in Personality Measurement. discussant. Annual Conference of SIOP. Atlanta.
- Cleveland, J., Gunnigle, P., Heraty, N., Morley, M. and Murphy, K. (1999). Human resource management practices of U.S.-owned multinational corporations in Europe: Accommodation or imposition. Presented at Irish Academy of Management Conference. Limerick, Ireland.
- Cleveland, J., Gunnigle, P., Heraty, N., Morley, M. and Murphy, K. (2000). HRM practices of U.S.-owned multinational corporations in Europe. Annual Conference of SIOP. New Orleans.
- Beaty, J.C., Cleveland, J.N. & Murphy, K.R. (2000). The relationship between personality and contextual performance in "strong" versus "weak" situations. Annual Conference of SIOP. New Orleans.
- Murphy, K., Cleveland, J. & Tziner, A. (2000). Influence of Proximal and Distal Attitudes on Performance Rating Behavior: A Multi-National Study. XXVII International Congress of Psychology. Stockholm, Sweden.
- Tziner, A., Murphy, K. & Cleveland, J. (2000). Do Context Factors Relate to Rating Behavior? XXVII International Congress of Psychology. Stockholm, Sweden.
- Murphy, K. (2001). Using large-scale surveys as a research tool. Symposium chair, Annual Conference of SIOP. San Diego.

- Murphy, K. (2001). Institutional Review Boards. Panelist, Annual Conference of SIOP. San Diego.
- Murphy, K., Tziner, A. & Cleveland, J. (2001). Cross-National Consistency in Relationships Between Attitudes Toward Organizations and Performance Appraisal Systems and Rating Behavior. 2001 Global Human Resource Management Conference. Barcelona, Spain.
- Murphy, K. (2002). The unreliability of inter-rater agreement. Annual Conference of SIOP. Toronto, Canada.
- Murphy, K. (2002). Thirty years of research on the criterion problem. Annual Conference of SIOP. Toronto, Canada.
- Tziner, A., Murphy, K. & Cleveland, J. (2002). Conscientiousness moderates the relationship between attitudes and rating behavior. Annual Conference of SIOP. Toronto, Canada.
- Murphy, K., Cleveland, J., Kinney, T., Skattebo, A., Newman, D. & Sin, H. (2002). Unit climate, rater goals, and performance ratings in an instructional setting. Irish Academy of Management Conference. Waterford, Ireland.
- Murphy, K., Cronin, B. & Tam, A. (2003). Cognitive ability testing in organizations: Controversy and consensus. Annual SIOP Conference. Orlando.
- Murphy, K. (2004). Making Meta-Analysis Easier and More Accurate - Discussant. Annual SIOP Conference. Chicago.
- Murphy, K. (2004). The Substantive Nature of Performance Change: New Conceptualizations and Findings - Discussant. Annual SIOP Conference. Chicago.
- Murphy, K. (2004). Won't Get Fooled Again? Editors Discuss Faking in Personality - Panel Discussion. Annual SIOP Conference. Chicago.
- Murphy, K. (2004). Can We Detect Deception? Annual SIOP Conference. Chicago.
- Murphy, K. (2005). Wal-Mart, Costco, and UPS: I-O Psychology and Class-Certification Lawsuits, Panel Discussion. Annual SIOP Conference. Los Angeles.
- Murphy, K. (2005). Personnel Selection With Multiple Predictors: Issues and Frontiers: Discussant. Annual SIOP Conference. Los Angeles.
- Murphy, K. (2005). Panel Discussion: The Future of I-O Psychology. Annual SIOP Conference. Los Angeles.
- Murphy, K. (2006). A frank discussion of Adverse Impact; Symposium discussant. Annual SIOP Conference. Dallas.
- Murphy, K. (2007). Checking in With The Scientist-Practitioner Model: How Are We Doing? Panelist, Annual SIOP Conference. New York.
- Murphy, K. (2007). Evaluating Disaster Scenario Training. In Symposium "Psychological Contributions to Extreme Event Disaster Prediction and Recovery Management", Annual SIOP Conference. New York.

- Murphy, K. (2007). Is the Future of I-O Psychology at Risk? Panelist, Annual SIOP Conference. New York.
- Murphy, K. (2007). Programmatic Adverse Impact Research: Discussing Implications and Future Research, Roundtable Discussion Leader. Annual SIOP Conference. New York.
- Murphy, K. (2008). Measuring Emotional Intelligence: How, and Why? Symposium Discussant. Annual SIOP Conference. San Francisco
- Murphy, K. (2008). Test Validity: A Multiple Stakeholder Approach. Panel Discussion. Annual SIOP Conference. San Francisco.
- Murphy, K. (2008). The Future of I-O Education: Theme Track Integration and Open Forum, Panel Discussion. Annual SIOP Conference. San Francisco.
- Murphy, K. (2009). How much validity is enough? Panel Discussion. Annual SIOP Conference. New Orleans.
- Murphy, K. (2009). OFCCP Then and Now. Panel Discussion. Annual SIOP Conference. New Orleans.
- Murphy, K. (2010). Adverse Impact: Implications for Organizational Staffing and High-Stakes Selection. Panel Discussion, Annual SIOP Conference. Atlanta.
- Murphy, K. (2010). Recruitment and adverse impact: Vocational interests, advertisements and job acceptance. Panel Discussion, Annual SIOP Conference. Atlanta.
- Murphy, K. (2010). Staffing high-stakes jobs: Implications of the Ricci case. Panel Discussion, Annual SIOP Conference. Atlanta.
- Sturman, M. & Murphy, K. (2010). Sources of Error Variance and Their Effects on Supervisor's Job Performance Ratings. Annual Conference of the Academy of Management. Montreal, Canada.
- Murphy, K., Deckert, P, Kinney, T. & Kueng, M. (2011). Content validity is little help when choosing among selection tests. Annual SIOP Conference. Chicago.
- Murphy, K. (2011). Issues, Controversies, and Advancements in Workplace Assessment. Panelist. Annual SIOP Conference. Chicago.
- Murphy, K. (2011). OFCCP/Legal Defensibility Safeguards: Hit 'em With Your Best Shot. Panelist. Annual SIOP Conference. Chicago.

WORKSHOPS AND CONSORTIA

- 2007 Communication Strategies in the Age of Terrorism, Prague Security Studies Institute. Prague, Czech Republic.
- 2006 Interdisciplinary research. SIOP Annual Conference. Dallas.
- 2005 Evaluating the performance of workers and organizations. 6th Australian Industrial and Organizational Psychology Conference. Brisbane, Australia. (Murphy, K & Cleveland, J.)

- 2000 Publishing without perishing. Academy of Management, Human Resource Management Division, Doctoral Student and Junior Faculty Consortium. Toronto, Canada.
- Unraveling the mysteries of the publication process. SIOP Doctoral Consortium. New Orleans.
- 1997 De-mystifying statistics: Getting a handle on recent advances in statistics and data analysis. Personnel Testing Council of Southern California, Los Angeles.
- 1995 Goal-oriented performance appraisal. IOOB Graduate Student Conference. Denver.
- Perils of publishing. SIOP Doctoral Consortium. Orlando.
- Improving performance appraisal: Designing, implementing and evaluating goal-oriented performance appraisal systems. Sydney, Australia. Inaugural Australian Industrial and Organisational Psychology Conference (Murphy, K. & Cleveland, J.)
- 1994 De-mystifying statistics: Getting a handle on recent advances in statistics and data analysis. SIOP workshop. Nashville.
- 1992 De-mystifying statistics: Getting a handle on recent advances in statistics and data analysis. SIOP workshop. St. Louis.
- Goal-directed performance appraisal. Pretoria, South Africa.
- 1992 Statistics update. SIOP workshop. April, Miami.
- 1989 The context of performance appraisal. Academy of Management Doctoral Consortium. August, Washington, D. C. (Murphy, K. & Cleveland, J.)
- Statistics Update. APA workshop. August. New Orleans.
- 1987 Performance appraisal. SIOP Doctoral Consortium. August, Washington, D.C. (Murphy, K. & Cleveland, J.)

INVITED LECTURES AND DEBATES

- 2011 The Seduction of Simplicity: The Downside of Studying Personnel Selection without Applicants or Organizations. Patricia Cain Smith and Robert M. Guion Distinguished Lecture, Bowling Green State University.
- Content validity is not what it appears. Texas A&M University.
- 2007 Getting into the minds of terrorists. Worldwide Universities Network Virtual Seminar Series; National Responses to Terrorism. Webcast 9/10/07.
- 2006 Power analysis for traditional and modern hypothesis tests. Center for the Advancement of Research Methods and Analysis, Richmond Va., Center for Advanced Research Methods and Analysis (CARMA) Webcast, 4/28/06.

- 2005 Distinguished Scientific Contributions Award Address : Performance Appraisal Isn't Performance Measurement: Why Poor Workers Receive Good Ratings. Annual SIOP Conference. Los Angeles.
- Integrity and recruitment. Presented at International Training Centre, International Labor Organization. Turin, Italy.
- Industrial and organizational psychology's biggest hits and biggest misses. Opening Keynote Address. 6th Australian Industrial and Organizational Psychology Conference. Brisbane, Australia.
- 2003 Testing the hypothesis that something important has happened. Distinguished Lecture Series in honor of J.S. Coon Rededication of School of Psychology, Georgia Institute of Technology.
- 2000 Participant in "Millennial Debate on 'g' : An Invited Debate". Annual Conference of SIOP. New Orleans.
- 1999 Honesty in the workplace. SHL South Africa. Pretoria, South Africa.
- Benefits and pitfalls of structured assessment programs in organizations. SHL/UMIST Workshop on Psychological Interventions and Organizational Effectiveness. Manchester, UK.
- 1998 Visiting Professors' Seminar Series, College of Business, University of Limerick, Limerick Ireland.

KEVIN R. MURPHY, PH.D.
Expert Testimony
March, 2012

1. Duane V. Michaels v. Cooley Gravel Co. - 2/86 - 11/86: Wrongful termination, age discrimination alleged. Provided depositions and testimony for defendant
2. Ronald Johns et. al., v. Civil service Commission et. al. 2/90 - 6/90: biased promotion process Alleged (Case 90 CV3591, District Court of City & County of Denver). Provided depositions and testimony for plaintiff
2. Lillard v. Ponds et. al., (File #2783) 4/91 - 8/91: wrongful termination alleged. Provided depositions for defendant.
3. Rodriguez et al. v. Denver Sheriff's Department et al. (Civil Action 92-N-2335): challenge to consent decree. Provided depositions for defendant.
4. Hsu v. Wyoming Department of Transportation (Civil No. 93-CV-134-I): racial and/or gender bias in promotion alleged. Provided depositions for plaintiffs.
5. Anderson et al. v. Ore-Ida Foods and H.J. Heinz Co. (December 1993): age discrimination in reduction-in-force decisions alleged. Provided depositions and testimony for plaintiffs
6. Jiron v. Jacor Broadcasting (Civil Action No. 94-M-1483): racial discrimination in pay and/or promotion alleged. Provided depositions and testimony for plaintiff.
7. Herman, et al., v. Westinghouse Electric Corporation (No. MJG-93-285): age discrimination in reduction-in-force decisions alleged. Provided depositions for defendant
8. United States of America v. City of Torrance et al [No. 93-4142 MRP (GHKx) (C.D. Cal.)]. Racial discrimination in hiring alleged. Provided depositions and testimony for the plaintiff.
9. O'Kelley v. Rice et al., (Pulaski Circuit No. 95-6210): use of improper promotion policies Alleged. Provided depositions and testimony for defendant.
10. Gerald M. Billouin et al., v. Monsanto Company and Chevron Chemical Company (No. 4-94-CV-1152 GFG): Age discrimination in termination decisions alleged. Provided depositions for defendant.
11. Bobbie Lee Wade v. Continental Airlines, Inc. (Civil Action No. 96-WY-1948-WD; U.S. District Court): Age, race, or gender discrimination in hiring decision alleged. Provided depositions for defendant.
12. Moore et al., v. Norfolk Southern Corporation, (Civil Action CV-93-C-0133-S; U.S. District Court), race discrimination in hiring alleged. Provided depositions and testimony for plaintiff.
13. Lopez v. City of Aurora (Civil Action No. 97CV330, District Court, County of Arapahoe, State of Colorado). Wrongful termination alleged. Provided testimony for defendant.

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14. Equal Employment Opportunity Commission v. McDonnell Douglas Corporation (No. 95CV01414 SNL; U.S. District Court, Eastern District of Missouri). Age discrimination in layoff alleged. Provided depositions for defendant.
15. Manual Viarrial v. Coors Brewing Company and Betty Beck (U.S. District Court, CV No. 97-Z-1827). Racial discrimination in promotion alleged. Provided reports and deposition testimony for plaintiff.
16. OFCCP v. Ford Motor Company (Case 97-ofc-8: U.S. Department of Labor Office of Administrative Law Judges). Gender discrimination in hiring alleged. Provided depositions and testimony for plaintiff.
17. United States of America v. City of Buffalo (73-CV-414C). assessment of police selection test and validity study. Provided depositions and testimony for defendant.
18. Dukes et al., v. Wal-Mart Stores Inc. (C-01-2252-MJJ) - gender discrimination alleged. Provided deposition testimony for defendant.
19. MOCHA Society et al., v. City of Buffalo et al (98-CV-099C (M)) racial discrimination alleged. Provided deposition testimony and trial for plaintiff.
20. Lemley v. Philips Electronics (Civil Action 00-C-64) gender discrimination alleged. Provided deposition testimony for plaintiff.
21. Hopkins v. First American (Civil No. 08-08CV-669-L) age discrimination alleged. Provided deposition testimony for defendant.
22. Cicairos, et al., v. Summit Logistics, Inc. (Case No. CV014837). Superior Court of the State of California. Wage and hour violations alleged. Provided deposition testimony for plaintiff.
23. Brennen v. QWEST (Civil File No. 07-cv-020204 ADM/JSM). United States District Court, State of Minnesota. Unfair compensation alleged. Provided Deposition Testimony for Defendant.
24. Whitacker et al., v. 3M Company (Court File 62-C4-04-012239). Second Judicial District, State of Minnesota, County of Ramsey. Age discrimination alleged. Provided testimony at deposition and in hearings for Defendant
25. Denise Manzanares Grievance hearing (No. 13-01-10 - FL 8298 AAA # 77 300 00381 10). Denver, Colorado. Validity of a classification test is challenged. Provided testimony for Plaintiff.
26. Anderson, et al., v. Arne Duncan, U.S. Department of Education, Civil Action No. 06-1565 (RMC). United States District Court for the District of Columbia. Age and disability bias alleged in reduction in force. Provided deposition testimony for defendant.

 **MODE SHIFT 2010**
WITNESS N. Stanley

Contact: Larry Fabian

DATE 9/9/13

Case Studies

MODE SHIFT 2010



In 2020 you will belong to your neighborhood Podclub.

You will subscribe to monthly mobility services—such as a \$79/month plan for 200 miles of driverless taxi-like podcar service that is also known as PRT (personal rapid transit). Membership also brings you discounts at shops at local transit station - or mobility portal. This local center is a healthy 5-minute walk from your home. It brims with community life. Retail and local services abound: cart, bike and zipcar rentals and daycare services (infant and senior).

Most neighbors get there by foot or bike to access public transport that has become quite attractive. Last year you sold your car, renting one when you do need it. You live car-free. Extra walking has made you fitter and trimmer.

What enhancements are possible to mass transit - always awkward and not so convenient even at its best? The answer is APM - automated people mover. The key is automation. Computers drive the system more safely and economically. APMs come in three major forms:

1. Driverless metros
2. Shuttles and local circulators
3. PRT - driverless taxi-like networks

This website is your resource to learn how APMs can create better communities. You are one of some seven billion people on this earth. Click on any of the yellow buttons to learn more. Check out our sponsors that helped put this objective information at your disposal.

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APM Suppliers

Your Issue Is...



Planning Consultants

Carbon Emissions

Federal Initiatives

APM Promoters

MODE SHIFT 2010

Contact: Larry Fabian

THE SUPPLY OF APMs

Fully automated trains are not only feasible; they are well proven to be safer and more economic than manually operated transit. The benefits and advantages are many. This section describes the companies that make up this APM Industry -- core system suppliers and their partners.

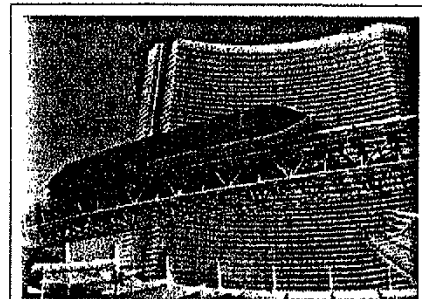
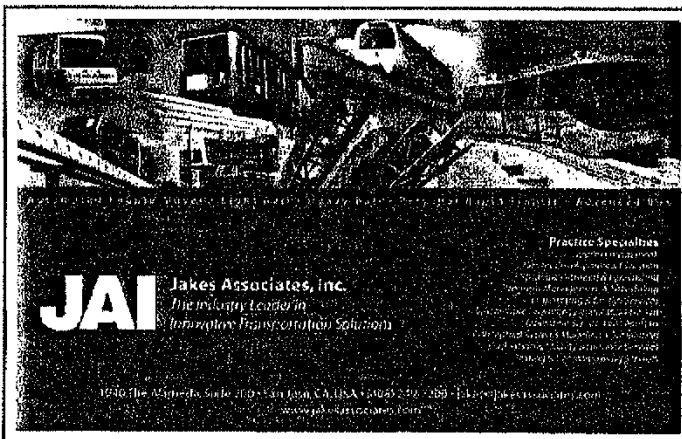
The key to it all is integral automation in which central computers and a small control staff replace on-boards drivers or conductors. It is mobility at the flip of a switch, so to speak. It functions with modern communication and control technologies appropriate to the 21st century. It is mobility 24/7. For more on APM installations, click [Count](#).

There are three broad types of APMs:

- driverless metros
- district circulators
- emergent podcars (PRT).

A fourth group comprises a smattering of electro-mechanical specialists, offering unique but not necessarily automated monorails, maglevs and the like.

APMs are costly investments in the future. As with all infrastructure, APM options should be considered against alternatives in terms of life-cycle costs, environmental impacts and the various benefits they will bring and induce. Professional design, planning and analysis are valuable here. Find an Informed consultant to take concepts through design and engineering to permitting and construction and ultimately into passenger service.



APMs help create "places" where retail flourishes in modern districts.
~ courtesy of DCC-Doppelmayr

For this growing International APM industry, technical safety standards have been published by the American Society of Civil Engineers. There are specialized professional organizations. Most companies are presented below.

Collectively, they are currently working on over \$11-billion worth of APM supply projects. See the detailed listing, which does not include O&M services, by clicking [pipeline](#).

Companies involved in the supply of APMs are presented below in four sections --

Circulators (shuttles and short lines or loops with modest line capacity)

PRT -- well developed technologies that have been demonstrated at full scale

Driverless metros with integral automation performing as mass transit

Others with a focus on unique propulsion or suspension, not automation.

Information on design parameters was supplied for your use and convenience by some, but not all of these companies. Website and contact information is provided for your convenience.

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Driverless
Metros

PRT

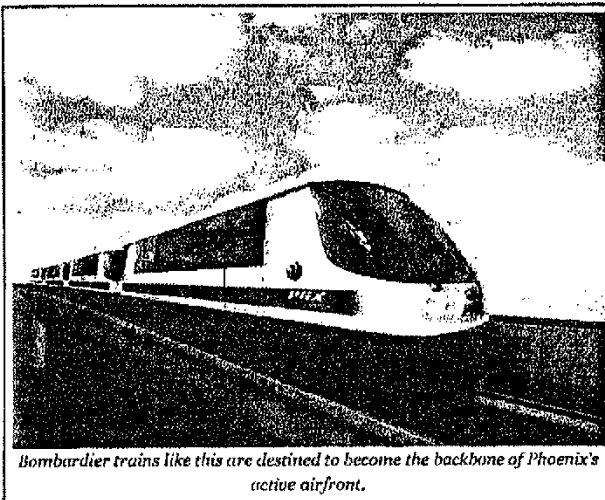
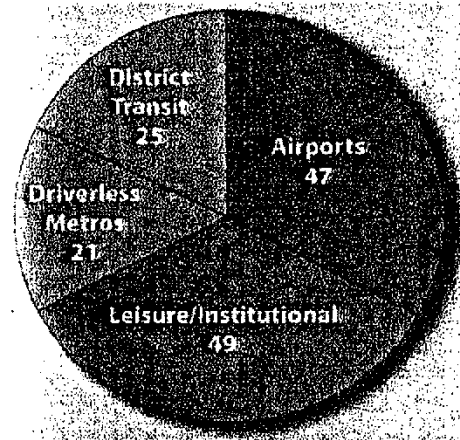
Circulators

Others



At the start of 2010, there were 142 APMs in service around the world, serving millions of passengers every day. [Click Count](#) for the list. Forty-seven are in airports. Forty-nine are in leisure and institutional settings where they serve a variety of roles. These circulators may be designed simply to move people, but they interconnect parking resources, save staff time, or provide utility conduits in the guideways to simplify frequent need to install new wiring, cable and tubes. Four of them entail PRT functionality.

Twenty-one are fully driverless metros operating with high levels of safe service and reliability. Is there a better example than Vancouver – where two Bombardier lines form the backbone of a well evolved transit service? A third line by Thales-Rotem serves the airport and helped handle Olympic crowds last winter. Fully automated metros operate in Ankara and Taipei, Kuala Lumpur and Dubai. This year ten more are scheduled to go into service all over the world (none in the US) – Brescia (Italy), Seoul, Shanghai, Sao Paulo, Budapest, etc. Another twenty-one APMs are local transit more akin to circulators, but owned and operated by transit agencies.



Bombardier trains like this are destined to become the backbone of Phoenix's active airport.

There is an Atlantic Divide at play. US transit pays no significant attention to driverless operation. European professionals consider it standard to be modern. Several metro authorities have begun retrofitting "classic metros". This is the transit scene in Europe and much of Asia. For France and Germany, transit is a major export industry. In sharp contrast, US transit equipment is largely imported. For international suppliers, US markets have no special appeal. The volume of metro sales is neither high nor stability. Witness the wobbling of Honolulu's decades-old metro plans – wasting hundreds of millions of dollars in planning and engineering studies.

The cost of the APM system itself is typically a minor part of a larger project. These are large, complex undertakings. For example, the system is only 17% of the cost of the current 3.5km elevated Phoenix Airport Installation. It was 25% of the largely tunneled driverless metro in Copenhagen. Civil work for guideways, bridges, tunnels, stations and a maintenance and control facility (MCF) is usually much more costly than vehicles, controls and electrification. Beyond that are costs for

site preparation, utility relocation, landscaping, right-of-way purchase, project management and legal entanglements.

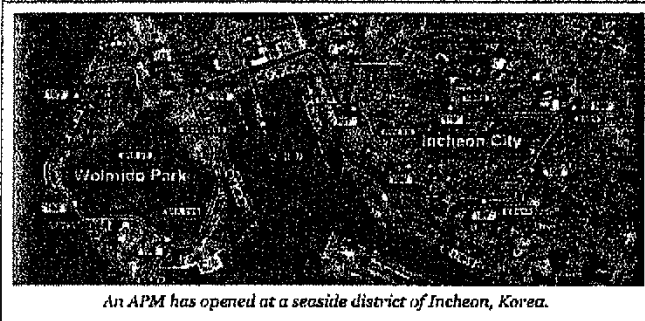
The dominance of civil costs is, of course, also the case for LRT, BRT and other urban infrastructure projects.

Beyond cost and cost-effectiveness, the major question for moving an APM project forward is whether to pursue a turnkey operation or to hire and manage separate companies for system and civil work. Should private investors be part of a public-private partnership? How does one handle technological risk? How quickly will industry experience and confidence with large networks of PRT accumulate?

03805

technology is the most important for your project.

Below are listings of companies with experience in the supply of hardware, software and – most importantly – a creative attitude towards you and your future mobility.



Circulators

- ▼ **Bombardier-Innovia**
- ▼ Coaster, GmbH
- ▼ **DCC: Doppelmayr Cable Car**
- ▼ THI Ltd.
- ▼ Leitner
- ▼ Mitsubishi Heavy Industries, Ltd.
- ▼ **Schwager Davis Inc. (SDI)**
- ▼ Urbanaut



Driverless Metros

Three firms have experience with fully automated and driverless metros. Typically advanced control software is applied to steel-wheeled or rubber-tired cars with fairly conventional electric rotary propulsion, but there are variations. These projects are typically large enough that suppliers can adapt their designs to meet most radial corridor capacity, speed, and comfort requirements. Likewise, rapid transit parameters for slope (less than 5 percent and the less, the better) and curvature (large radius of over 100m, the higher the better although this can be mitigated with banking) can easily be met. Station size depends on capacity requirements (train consist).

03806

▼ [Ansaldo STS](#)

▼ **[Bombardier Transportation - ART](#)**

▼ [Siemens Transportation Systems](#)

In addition to the above, four other firms supply controls or vehicles but generally not both. For example, Thales has projects in which vehicles with advanced electronic intelligence are manufactured by Korea's Rotem and China's CNR.

▼ [Alstom Transport](#)

▼ [Areva TA](#)

▼ [Invensys](#)

▼ [Thales Group](#)



Demonstrated PRT

(including robotic vehicles)

There are now several PRT suppliers with engineered and demonstrated products that can be considered market ready, at least for modest installations that do not require speeds above 50km/hr.

▼ [2getthere](#)

▼ [Robosoft](#)

▼ [Taxi 2000](#)

▼ [Ultra PRT](#)

▼ [Vectus](#)

▼ [WGH, Ltd.](#)



Monorail, Maglev & Others

▼ [Aeromovel Global Corporation](#)

03807

- ▼ [Hitachi](#)
- ▼ [HSSI](#)
- ▼ [Intamin](#)
- ▼ [Otis \(Division of United Technologies\)](#)

(c) 2010 Trans.21

03808

AIRFRONT.21

SERVING SMART URBAN CITIZENS

APMs - Automated People Movers

An Automated People Mover is a passenger transport system with high levels of electronic intelligence so that vehicles are operated by computers over exclusive guideways without need for attendants. Progressive engineers and planners have worked on APMs since the 1960s, and today almost 130 installations operate around the world.

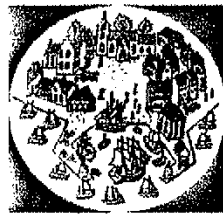


We publish an annually updated listing of all operating APMs around the world, and listing of all APM projects underway.

Some APMs have vehicle or station attendants, but they do not "drive" the vehicle or trains of vehicles. Other APMs are on the scale of mass transit, often referred to as AGT (automated guideway transit) or driverless metros. Lighter scale versions are sometimes called (often incorrectly) "monorails" (and are not necessarily elevated). Short, simple APMs can be labeled shuttles or "hectos" whereas more technologically advanced and attractive concepts go by the acronym of PRT for Personal Rapid Transit.

APM Advantages

APMs can be used to better configure land use patterns and parking, allowing a strong pedestrian focus in a city or business center's core, which can be virtually car-free. Here are four principles planners can use in exploring the possibilities of a new urbanism:



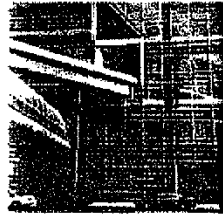
APMs can create more focused, higher density centers. Intercept parking on the periphery can reduce the use of cars in the core, thereby improving the pedestrian environment and allowing higher densities. APMs can also interconnect different parts of a center without the need for extra parking and street capacity.

Guideway and station dimensions are significantly smaller in APMs than what is common with rail transit, even light rail. Alignments can negotiate sharper turns and steeper grades. APM stations are typically spaced much more closely together—every 1500 feet or 500 meters is a comfortable distance. This compares to recommended station spacing of 3300 feet (1 kilometer) for light rail and 1-2 miles (2-3 kilometers) for rapid transit.
(back to top)



Smaller, quieter stations can be integrated directly into buildings. In this manner APMs can be planned and implemented not as stand-alone systems, but instead as district infrastructure. This makes the service they offer much more attractive to the public, raising ridership and financial viability. There are cost and access issues to be explored and analyzed...fire and public safety are two that come to mind.

03809



[\(back to top\)](#)

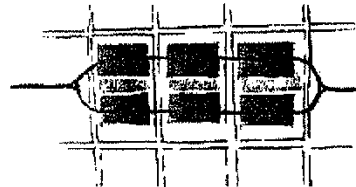
The smaller scale and integration of the station into buildings opens new prospects for better tying the real estate development process into mobility systems. Investment in transit improvements increases property values. Some of this wealth should be used to pay for the transit improvement. Working on a smaller scale within a special development or redevelopment makes this more achievable. The photo on the right shows freestanding guideways along streets in RED (also below on the left) and guideways integrated into buildings in BLUE (below, on the right).



[\(back to top\)](#)



along street



through buildings

[about airfront,21](#) | [about apms](#) | [products and services](#)
[apm guide on-line](#) | [what's new](#) | [complementary sites](#)

Site maintained by Ian Ford Software Corporation

Website upgrade underway by Howard Latimer

03810

Exhibit No. Ux13
Witness D. Sathom
Date 6/27/13

KWD CCR# 711

McCarran Airport APM Tool List

Wrenches (Standard and Metric)

Open-end 1/8" through 2"
Box-end 1/8" through 2"
Combination 1/8" through 2"
Combination 6mm through 21mm

Adjustable Wrenches
8", 10", and 12"

Pipe Wrenches
1" through 6" capacity

Hex Key (Standard and Metric)
1/20" through 1/2"
1.5mm through 12mm

Slug Wrenches various sizes

Drive Tools (Standard and Metric)

1/4" Drive Ratchets
1/4" Sockets 3/16 through 9/16 Regular and Deep depth
1/4" Sockets 4mm through 13mm Regular and Deep depth

3/8" Drive Ratchets
3/8" Sockets 3/8 through 7/8 Regular and Deep depth
3/8" Sockets 6mm through 21mm Regular and Deep depth

1/2" Drive Ratchets and Speed handle
1/2" Sockets 3/8 through 1 1/2" Regular and Deep depth
1/2" Sockets 9mm through 36mm Regular and Deep depth

3/4" Drive Ratchets
3/4" Sockets 7/8 through 2 1/4" Regular and Deep depth
3/4" Sockets 20mm through 40mm Regular and Deep depth

1/2" Impact Sockets
3/4" Impact Sockets

03811

ER3811

Torque Wrenches English and Metric Units 1/4", 3/8", 1/2" and 3/4" Drives

4 to 1 3/4" Drive Torque multiplier

Screwdrivers

Nutdriver Set (Standard and Metric)

3/16" through 1/2"

5mm through 11mm

Slotted and Phillips

Slotted 3/32 through 3/8 various lengths

Phillips 0 through 4 various lengths

Offset screwdrivers

Impact driver

Pliers

Needle Nose

Slip-joint

Long-nose

Linesman

Diagonal

Water-pump

Wire Strippers

End-cutting nippers

Duckbill

Locking jaw

Lock-ring

Aviation Snips

Snap-ring pliers

Ring Spreaders

Safety wire

Hand Saws

Hacksaw

Crosscut wood saw

Miter saw

Punches, Files and Chisels

Metal, Wood

Spring Pin driver

Hammers

03812

ER3812

**Plastic-Tip Hammer
Rubber Mallet
Hand-Drilling Hammer
Ball Pein Hammer
Claw Nail Hammer
3,4,6 Lb Mini-sledge
Dead-blow hammer**

Pry-bars and Crowbars

Various Sizes and Lengths

Drill Bits and Accessories

**1/32" through 1 1/2" Drill Bits Metal and Wood
Screwdriver tips
Torx type drivers
Square type drivers
Spanner type drivers
TP3 type drivers**

Hand Held Power Tools

**3/8" Drill Motor
1/2" Drill Motor
Reciprocating Saw
Angle Grinders
Rotary Grinders
Skill Saws
Belt Sanders
Disc Sanders
Portable Band Saws
Hammer Drills
Metal Chop Saws**

Pneumatic Tools

**1/4" Air Drill
3/8" Air Drill
Mini-Die Grinder
Air-hammer
Rotary Sander
Air Chuck
1/2" Impact
3/4" Impact**

03813

ER3813

Hydraulic tools

- Various Bottle Jacks**
- Transmission Jack**
- Portapower Jacks**

Measuring Tools

- Feeler Gauges**
- Torpedo Level**
- 48" Level**
- Carpenters Square**
- Tape Rule 25'**
- Tape Measure 200'**
- Dial Test Indicator**
- Micrometers**
- Dial Calipers**
- Machinists Square**
- Thickness Gauge**
- Spring Tension Gauge**
- Torque Pressure Gauges**
- Magnetic Base Holders**
- Digital Force Gauge**

Thread Tools

- Taps and Dies**

Pullers

- Bearing, Sprockets, U-Joints, etc.**

Misc. Tools

- Grease Gun**
- Two Wheel Dollies**
- Four Wheel Dollies**
- Rivet Gun**
- Cotter Pin Puller**
- Glass Cup Suction Tools**
- Staple Guns**
- "C" Clamps**
- Electric Soldering Gun**
- Bearing Packer**
- Various Bearing and Seal Drivers**

03814

**Brake spoons
Ring Compressor
Traction motor lifting Device
Lift Tables**

Wiring Tools

**Various Wire crimpers
Wire Stripper
Wire Labeler
Pin extractors/pushers**

Electrical and Electronic Testing Equipment

**Auto Ranging Multimeter
AC/DC Amp Probes and Clamps
Chart Recorders
RF Spectrum Analyzer
Temperature probe
Oscilloscope
Misc. equipment for burning E-PROM Chips
Megger
Computers for Diagnostics
Graphical Multimeter
Multi-waveform generator
Motor Commutator Profiler
0-50v DC 0-30amp Variable Power supply**

03815

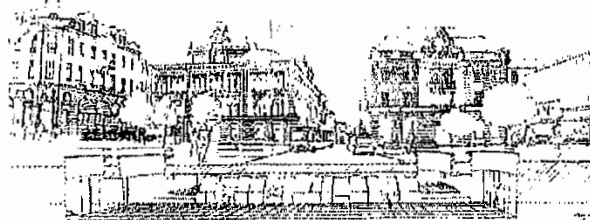
ER3815

HORIZONTAL ELEVATORS

by Lawrence Fabian

AFFORDABLE TRANSIT SERVICE

The regional bus operator of Uppsala, Sweden, a university city, has completed an 800-m stretch of track; preliminary APM testing has begun. It is working with local companies to develop its own controls which have PRT-like capabilities. A 30-passenger vehicle is being run. So far, a budget of almost US \$2 million for a 30-month program is in place. Their main focus is to create premium transit service at an affordable price.



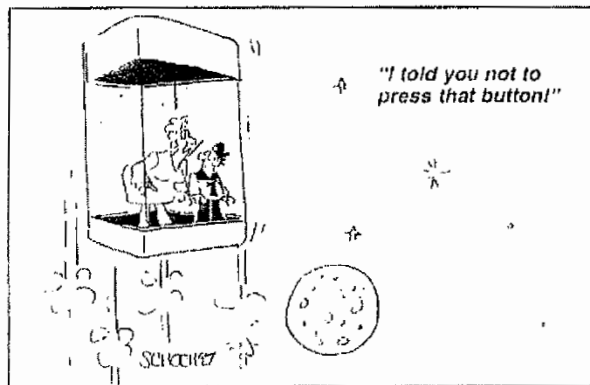
An early APM vision for Uppsala included a slightly subterranean station in the central area of this Swedish university city. Sketch courtesy of AB Uppsalabuss

TORONTO SEARCHES FOR AN APM-LAND VALUE FORMULA

In 1991, a "royal" commission was formed to study potential improvements to the waterfront of Toronto, Ontario. Chaired by a former mayor, it published an exciting vision that disappeared during an economic recession. A trust, however, was formed. With Bombardier input, it managed to examine the feasibility of a 5-km "monorail" connection.

To the east of downtown Toronto, a streetcar has been put into service. The commission also has been looking to the west. One possibility is to extend the trolley. What are the other options? What are the best funding strategies? Consultants IBI were hired to sort out these issues. Preliminary cost estimates have been obtained from Bombardier and Adtranz.

With strong private support, this vision may go forward. Can an acceptable formula for sharing the costs and benefits of an APM be devised? The next step for the Toronto Waterfront would be a more detailed cost/benefit study.



DIVERSIFYING US \$6 BILLION PIPELINE

Trans21's annual compilation of APM projects shows signs of heightened levels of activity, especially for smaller installations. In 1996, the number of active projects jumped to 44, up from 36 at the end of 1995. The dollar total rose only slightly from US \$5.9 billion to US \$6 billion (systems cost only).

Even more remarkable is the spread to countries without previous APM experience. Today, APM implementations can be found in China, Malaysia, Italy, Switzerland, Finland and Portugal. It can truly be said that APMs have become a global phenomenon.

The greatest growth comes from those projects categorized as institutional — APMs being built to serve more than a single property, but not by the mass-transit operator of that area. There are now 16 institutional projects (plus three test tracks) compared to 10 (plus two test tracks) in 1995.

New Institutional Arrangements

Institutional APMs are found in resort areas, theme parks, casino complexes, universities and special development districts. Many new financing and public-private arrangements that take advantage of high levels of APM service are to be found in such settings. This is the forefront of APM development.

The tiny Mystic Center project outside Boston, where a US \$3 million shuttle is a linchpin to an innovative Park + Ride scheme, is a very promising example. A public-sector promise to lease parking spaces allows a private entity to build a garage. The government needn't front the money or float bonds, and the private owner gains better transit access for office development.

Other large-scale examples are the Copenhagen Orestad line and the JFK International Airport access projects, considered institutional because they are not being implemented by mass-transit agencies. If they are excluded, the average cost of an institutional APM is US \$22 million.

Architectural and Transit Projects

The average cost of an APM of architectural scale — one wholly within a single property — is US \$33 million. Almost all are in airports. Requirements to carry substantial flows of passengers, often around the clock, with high reliability increase the costs.

As might be expected, even higher costs are to be found in fully automated mass-transit projects. The average transit-scaled APM is almost US \$350 million. Especially when these are built underground, the addition of civil engineering work raises total costs to the billion-dollar project level, which is not uncommon in the world of mass transit.

TRANSIT-ORIENTED DEVELOPMENT

Coordinating land-use development with transportation is not new; it is at the heart of traditional city-planning theory and practice. In the U.S., accommodating the sprawling effects of freeways and cars and the isolation of U.S. mass-transit planning have worked against transit-oriented development. Most of our cities are pedestrian and transit unfriendly.

In reaction, there is growing interest in the more compact, sidewalk-oriented neighborhoods of the past — a movement which has been dubbed neotraditionalism. One of the best known proponents is California-based Peter Calthorpe.

Searching for What We Had

Last fall, two separate, but related, mini-conferences were held in Boston, Massachusetts on this topic. The first was organized by the Conservation Law Foundation and entitled "Building Livable Communities Through Transportation." The conference drew an overflow crowd.

In mid-November, Boston's Metropolitan Area Planning Council (MAPC) held a workshop on "Transit-Oriented Development

03816 Continued ▶

HORIZONTAL Continued

(TOD)." It, too, was oversubscribed. Boston already knows what TOD is. Experts and advocates across the country use slides of Boston as examples; however, much is gone. The real question is how to overcome forces against TOD and regain what was lost.

MAPC invited Peter Calthorpe as keynote speaker. While not delving into the quantitative issues of densities and parking de-

mand, he argued convincingly for packing density around light-rail stations. He is open to APMs, saying, "There are possibilities for new technologies."

Resource Guidebook Available

California's Local Government Commission (LGC) has produced a guidebook on TOD. It is full of examples, background information and reference material with contact numbers. The 77-page document can be purchased for US \$20. For ordering information, contact LGC at phone: (916) 448-1198, or fax: (916) 448-8246.

Mystic Center Progress Report

In ELEVATOR WORLD's December 1996 issue, in the "Horizontal Elevators" column, it was reported that Otis Elevator Company signed a US \$3 million contract to develop an extension on the Massachusetts Bay Transportation Authority's (MBTA) Orange Line. As reported, the project provides a new, lighter line of APMs — the Otis Shuttle I — linking a newly constructed parking garage and office complex with Wellington Station. The goal of the Mystic Center is to provide an effective alternative to driving into downtown Boston during Central Artery construction. The center will assist in alleviating some of the commuter congestion on Interstate 95's northern corridor. Our Boston correspondent, Larry Fabian, was present at the groundbreaking ceremony, and some photos from his visit accompany this update. Fabian will monitor the construction of this APM project, furnishing photos and descriptions of the developments. ELEVATOR WORLD will periodically publish these updates, as they come in from Fabian.



2

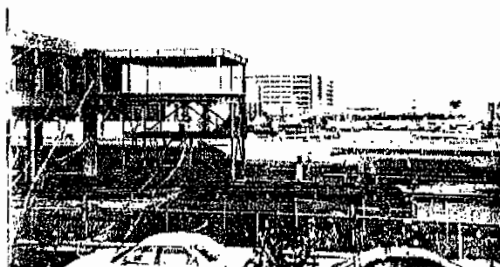


Photo One — Mystic Center is named after the Mystic River, which passes north of Boston and Cambridge. It is a scene of sprawl in the suburb of Medford. Photo Two — The parking garage can be seen in the background, with the MBTA terminus skeleton kissing the rapid transit station in the foreground. Photo Three — In May of 1996, ground was broken. Massa-



5



1

achusetts Governor Weld (at left), the mayor of Medford (at right) and developer (middle) discuss the synergy to be created. Photo Four — Otis Project Manager Frank Bares stands before the parking garage, 900 feet from the MBTA station, that the APM will link to. The station will be at the third level of parking, served by two elevators, with room for a third. Photo Five — Footings for the APM columns have to be carefully spaced between rail track, on their way to the shuttle terminus at the MBTA rail station.

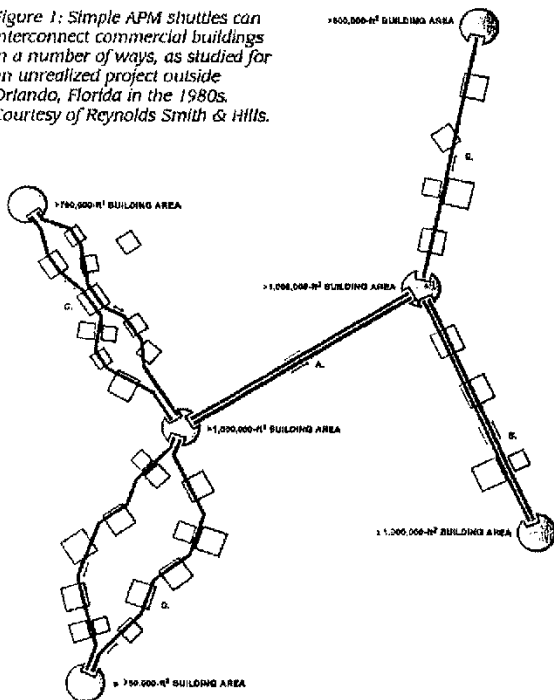
Lawrence Fabian is an internationally known expert in advanced transit technologies, particularly automated people movers (APMs). He chairs the subcommittee on Activity Center Circulation of the Transportation Research Board and is a member of both the APM Committee of the ASCE and the APA Transportation Planning Division. Fabian also publishes a bimonthly newsletter, a biweekly faxed advisory service, the APM Insider, and other APM-oriented material. Contact Trans21, P.O. Box 249, Fields Corner Station, Boston, MA 02122; phone: (617) 825-2318, fax: 617-482-7417.

by Lawrence J. Fabian, Trans21

For decades, we've been hearing about revolutionary new ways to interconnect buildings, to move people efficiently horizontally. What has become of them? These devices carry a confusing array of names - horizontal elevators, people movers, hecto shuttles, monorails, automated guideway transit, etc. How many are there? Where are they? What is their future? Some 300 professionals from around the world gathered in May in Copenhagen, Denmark to assess - and collectively to reflect - the state-of-the-art of this long-germinating industry. What they found was a solid sense of confidence based for the most part on real experience, not theory. Automated people movers (APMs) are market ready.

The simple answers are that there are about 90 APMs operating in the world - a quarter in airports, a quarter as mass transit, a quarter in leisure settings and another quarter in a mishmash of institutional settings. Predicting the future is not so easy. It depends on whether institutional and community planners see that enough benefits are derived to justify the substantial costs of APMs.

Figure 1: Simple APM shuttles can interconnect commercial buildings in a number of ways, as studied for an unrealized project outside Orlando, Florida in the 1980s. Courtesy of Reynolds Smith & Hills.



Over the last two or three decades, most architects and facility managers quickly lost interest when they heard the price tags for APMs. Costs of US \$25 million-100 million were simply in the wrong ballpark for large construction projects that rarely go over US \$200 million themselves. One significant bit of news is that, for simple APMs, the prices are falling. This was made clear during APM '99 - the 7th APM conference of the series organized by the American Society of Civil Engineers (ASCE). It took place May 5-8th in Copenhagen, sponsored by the Danish Society of Engineers (IDA).

The two days of deliberation and a third day of technical visits were both lively and well organized. Those who attended received a concentrated dose of the world expertise that now offers a maturing menu of APM options to the planners and managers of countless urban districts choking with traffic. There is a continuity and momentum in these APM conferences. The next one will take place in San Francisco, California in the spring of 2001.

These APM technologies encompass simple "hecto" shuttles and continue up the technological scale to modestly dimensioned circulators of various kinds, now commonly found in large airports, world expos and a few office and residential districts. APMs can be designed for different levels of traffic and different degrees of robustness. For short distances, there are accelerating walkways. For very light requirements, there are low-speed guided vehicles.

At larger scales, APMs become driverless metros. These have emerged in France and Japan and are now spreading throughout Europe and parts of Asia. APM '99 also included presentations and one exhibit on high-level systems known as PRT (personal rapid transit, with taxi-like vehicles operated non-stop over entire networks).



Figure 2: Driverless metros in France have station platform walls and doors that resemble elevator lobbies. Shown here is an opening on the new Meteor line in Paris. Courtesy of Matra Transport International.

03818

To implement APM projects, construction contractors will need to become familiar with APMs' structural, electrical and communications requirements. Planning officials will need to know what to look for in environmental assessments and construction documents. Building and safety inspectors will need expertise in new kinds of civil work and exotic APM hardware and software. New rules will be needed for handling and reporting accidents. New services to help operate, maintain and otherwise service APMs will come into demand. The next decade will stimulate the emergence of a family of new kinds of service companies and consultant skills.

In that both APMs and elevators deal with public safety and convenience in the movement of people, the emerging APM industry has much to learn from the multitude of operating procedures, standards and institutions that have evolved in the much older world of the elevator industry.

Copenhagen's APM Metro

Much of the Danish interest in hosting APM '99 was closely tied to Copenhagen's first "metro" now being cut through the grounds beneath the historic city. Copenhagen's driverless metro is light by mass transit standards. It will resemble an automated version of "light" rail (trolleys or trams that are given an exclusive or semi-exclusive right-of-way). They provide capacities of about 10,000 passengers per hour per direction (pphp) – instead of 25,000-50,000 pphpd as is common in line-haul rapid transit corridors (subways, elevateds, etc.).

The Copenhagen metro emerges to open air on a large island adjacent to the city center, where the airport and a new bridge to Sweden are located. This makes the area ripe for internationally oriented commercial and cultural activities. A whole new urban district planned to Euro-standards is being developed. When the metro opens with full automation but train attendants next year, it will serve this new mixed-use Orestad district. Sun-lit stations will have ample elevators and escalators to ease vertical passenger movements. The 14-km metro's first phase is to cost US \$1.2 billion.

On May 7th, an APM '99 luncheon took place at the half-finished maintenance facility out on the island and its green field development district. It was hard to envision what kind of urban life might exist along the line in

10 or 20 years. Instead, presentations by Ansaldo officials and their Union Switch and Signal colleagues were the focus of the APM '99 visit. Accompanied by robust tenor music, real Italian food was provided with elegance by the Italian system supplier AnsaldoBreda.

APM Confidence and Agility

Apart from news of the half-achieved plans of Copenhagen developers and AnsaldoBreda designers, the overall message coming out of APM '99 is that APMs are now clearly a market-ready product. They come internationally in many forms, able to serve with ease and economy a variety of urban corridors and local mobility needs. Many presentations dealt with progress in APM standards, safety procedures and procurement, and implementation issues. Suppliers of smaller-scaled hectometric (designed for several hundred meters) systems – Doppelmayr, Leitner, Poma-Otis and Yantrak – were also present.

The continuing boom in Nevada tourism, including its famous casinos, has created a fertile field for APM shuttles. In the last few months, three new APMs have come on line in Nevada, linking singly owned casino properties. Consultant Andrew Jakes gave an overview of these quickly built projects with APM technology supplied by Doppelmayr, SDI and Yantrak. As cable- or belt-propelled "hectos," they range in length from 490 to 820 meters. All have capacities of less than 4,000 pphpd. The numbers are given in the Table 1.

Continued ►

Recent Hecto Projects				
Site	Cost*	Length (meters)	Capacity (pphp)	Supplier
<i>In Nevada:</i>				
Mandalay Bay	16	820	3,500	Doppelmayr
Bellagio	12	800	3,000	Yantrak
Primm Valley	5**	490	1,100	SDI
<i>In Massachusetts:</i>				
Mystic Center	3	235	1,600	Poma-Otis

* Millions of US dollars, excluding station costs

** Excludes pre-existing guideway on half the length

Source: Jakes Associates

Table 1

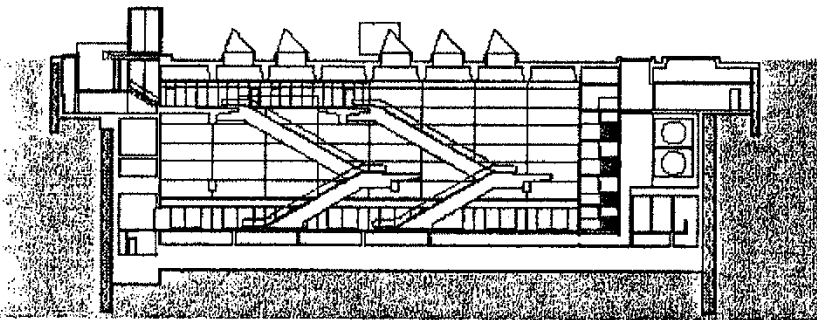
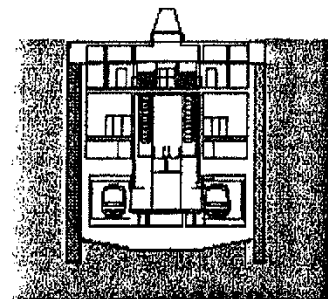


Figure 3: Prototype of a Copenhagen Metro Station



03819

MARKET-READY HORIZONTAL LINKS

Continued

Capital costs range from US \$5 million-16 million. Comparing them for distance and capacity is only part of the economic equation. Operating and maintenance costs, passenger acceptance, reliability and availability are also critical. In time, experience and expenses will accumulate to allow better comparisons of these and other APM technologies.



Figure 4: A Doppelmayr APM runs past the Luxor in Las Vegas, Nevada to Mandalay Bay.

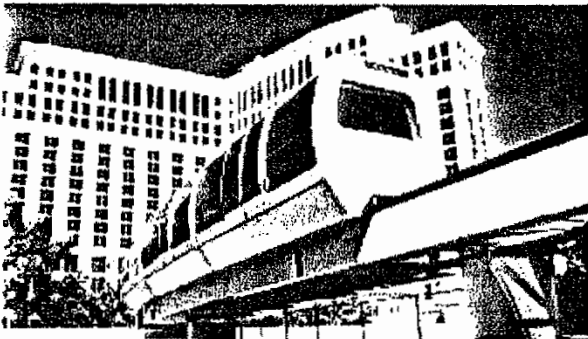


Figure 5: Yantrak



Figure 6: The Mystic intermodal hecto takes a park+ride customer to the Boston, Massachusetts rapid transit service.

Other than casinos, where are hectos useful? Many projects are emerging. One described at APM '99 is the Mystic Intermodal Center north of Boston, Massachusetts. There, a 235-m dual shuttle provides a capacity of about 1,600 pphpd at a total cost of about US \$4 million. It links an office park and parking garage to a regional rail station. Based on its success, it is easy to envision many other projects at arm's length from many rail stations along rapid transit and commuter rail lines around the world. Two have opened recently in Hiroshima, Japan and Milan, Italy. Other hectos, such as at the Getty Museum in Los Angeles, California and Minneapolis-St. Paul, Minnesota airport, link remote parking to a major destination building.

Several small-scaled APM projects have been proposed in the densely settled, land-scarce Netherlands. Officials found, however, that the old rules for planning and applying for government funds did not allow good comparisons between APMs and conventional modes. At APM '99, it was revealed that the Dutch government is revising these rules. The procedures by which locally generated transit proposals are reported and evaluated in the Netherlands have been changed to allow accounting of the unique characteristics of APMs. This may open the way for some of the many APM proposals that have been put forth in that small country to obtain funding. There may well be many APMs sprouting among tulips over the next few years.

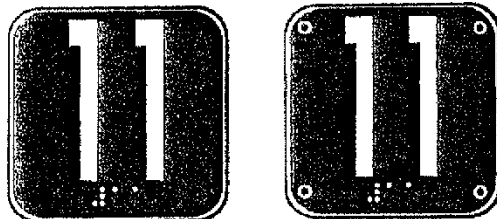
Creating New APM Expertise

The art of planning, simulating, specifying and certifying APMs is advancing on many fronts. How does one measure the vibrations caused by an APM, for example? Older APMs need to be upgraded and refurbished. Considerable experience is accumulating in this area. The crux of an APM is its brains and nervous system – the central controls, communications and closed-circuit television. Responding to the need for competent technical



Figure 7: APM power supply wiring exhibited by Insul-03820

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by Lawrence Fabian

ECOPLAN SEEKS BOLD "ACCESS" PARTNERS

Tackling head-on the growing nightmare of urban and suburban congestion and pollution, EcoPlan of Paris has launched a high-level public/private research effort with six pioneering projects under way and several publications in hand. "Public policy should not maximize movement or mobility," states EcoPlan's Eric Britton. "It should maximize individuals' access to needed services. And this has vastly different implications for urban transport policy." Access is a multi-client study to explore and implement these implications.

Two Access pilot projects have started in California (a walk-oriented new town concept and a new city master plan). Two are in Spain (a phased metro program and a detailed implementation plan), one in the Virgin Islands and the sixth in Adelaide, Australia.

EcoPlan seeks progressive, innovative partners who want to take a long view, focus on the needs of citizens in their daily lives and appreciate the systemic complexity of contemporary cities. For more information, contact Trans21, P.O. Box 249, Fields Corner Station, Boston, MA 02122.

OTIS' MULTI-GENERATIONAL PROGRAM

Spurred by strong Japanese interest in automated people movers (APMs) with linear induction-powered vehicles such as built for Duke University, Otis engineers are broadening their horizontal commitments. Their previous focus on back-and-forth shuttles arose from cable's inherent limitations. A new Shuttle Systems Division has been given new resources as an autonomous unit now headed by David Perl. Kris Balch, who oversaw Shuttle activities for many years, will stay within the Engineering Division and work closely with the APM program.

Japanese executives are emboldened by successful opening of two Otis shuttles at Narita Airport and anticipate growing interest in short-range APMs by their government. Several last May visited the Duke system, operating at a private hospital since 1980, and participated in a three-day workshop with high-level U.S. Otis staff to take a long-term view that defines developmental stages and the evolution of APM hardware, software and service capabilities. A linear induction motor (LIM) testing program outside Tokyo is envisioned.

Cable-drawn APMs can be very economical for small installations not requiring high speeds and many stations. Self-propelled vehicles enhance speed and system size. Unique among APM concepts is Otis' lateral docking capability. This is not feasible in cable versions. With air flotation, the Otis APM can move at 90-degree angles, right or left. With side-loading bays off a station guideway, station capacities increase dramatically.

David Perl brings experience with the customer side of Otis' elevator operations in North America to the APM division. He now reports to Otis' President Jean-Pierre van Rooy. Unlike previously reported, Bruno Grob is head of European and Transcontinental Operations. **03821**

Continued overleaf

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HORIZONTAL ELEVATORS

Continued from overleaf

LAS COLINAS RESOLVES AVAILABLE

An Automated People Mover (APM) Task Force to publicize transportation and development advantages of electronically smart transit was formed at the "APM Prospects in the 1990s" panel discussion and forum organized after the American Society of Civil Engineers (ASCE) Conference in Texas last March by Trans21 and supported by Parsons-Brinckerhoff. A four-page summary of recommendations has been prepared and is available free from Trans21. It can be used to promote hardware-neutral APM interest to public and private officials and the general public.

Also available is a full transcript of the 90-minute discussion. The panel consisted of Ingmar Andreasson of Gothenburg, Sweden; Lawrence Fabian of Boston, Massachusetts; Bernard Scherrer of Paris, France; Lee Rogers of Washington, D.C.; and George Swede of Los Angeles, California.

About 90 people attended the event and many joined the lively, thought-provoking discussion. To obtain the "APM Prospects in the 1990s" transcript, send US \$15 to Trans21, PO Box 249, Fields Corner Station, Boston, MA 02122.

THE FIRST THREE YEARS OF LAON'S POMA 2000

A report by local officials in the medieval town of Laon two hours north of Paris describes the debugging process that its Pomagalski-supplied automated people mover (APM) has undergone. Opened in 1989, it has become an integral part of daily life. It carries almost 900,000 passengers each year between the lower part of town and the attractive historic city high on a plateau.

Laon's bus ridership has increased 17%. Most bus routes feed the APM. Counting APM ridership separately gives Laon the highest per capita figure in its class size in all of France. Vandalism has been negligible, although fare evasion is somewhat of a problem.

The lower terminus of the three-station shuttle station was integrated with a new underground parking garage. Usage has failed to develop. Paris consultants had predicted almost 700 daily parkers, but it has never exceeded 20. Car traffic up to the plateau has increased 5% from 1987 to 1991, just a hair under the national average. Parking and traffic problems continue in the historic district, but more people have access to it via the "Poma 2000."

The APM provides about 200,000 vehicle-kms of service each year at a cost of US \$1.2 million — about US \$6/veh-km. There is some uncertainty about future costs because of aging of the hardware. Local officials have created a committee to encourage other cities to consider a Poma installation.

CHICAGO LAUNCHES \$40-MILLION RAYTHEON PRT

With a quiver in his voice and a chill up and down his spine, Chicago Regional Transit Authority (RTA) Chairman Gayle Franzen counted the 10-1 vote to move forward on its personal rapid transit (PRT) program with Raytheon/Taxi 2000. Calling it "pivotal" for public transport, Franzen fully recognized the risk in his experiment. Yet, in the void of Washington attention to transit R&D, Chicago feels obliged to explore new technologies.

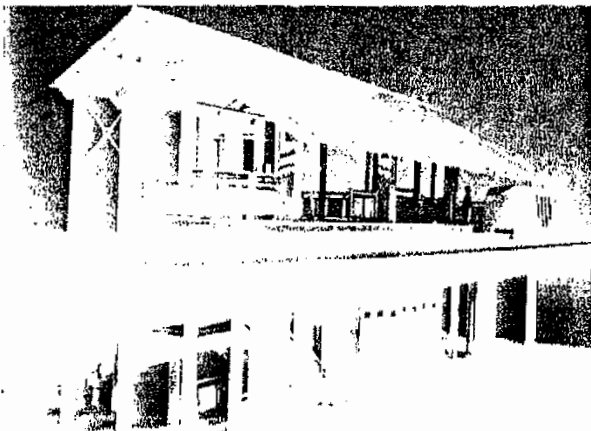
The RTA selected Raytheon over Intamin. It committed in principal US \$18 million, with Raytheon's \$22 million. It will add

Continued overleaf

HORIZONTAL ELEVATORS

Continued from overleaf

US \$20 million of its own to build and manage a 1-km (.6-mile), one-station PRT track outside Boston. This will assess an engineering concept aimed at personalized, direct-to-station, taxi-like service over a lightweight network. Raytheon and Swiss-owned Intamin performed cost engineering studies of PRT concepts for the RTA for US \$1.5 million each.



In 1995 or 1996 a decision will be made whether to build a 4-km (2.5-mile), eight-station, 50-vehicle PRT for Rosemont, estimated to cost US \$42.3 million. Rosemont lies at the gateway to O'Hare Airport and is home to more hotel rooms and meeting facilities than residences. The impact of this program will extend far beyond Chicago and Rosemont. It made the front page of the *Boston Globe* and is being closely watched by PRT enthusiasts and skeptics around the world.

Swedish PRT Study Enters New Phase

The Swedish Transport Research Board (TRB) is funding studies of the socio-economic and visual effects of a PRT already analyzed for the small city of Gavle (population 76,000). This US \$60,000 effort will include planning models and architectural studies as well as analysis of time saving and reduced pollution. Ingmar Andreasson, whose initial analysis concluded that capacity was not a problem with

assumed 1.6-second headways, will now define a workable first phase from the 93-station, 120-km (75-mile) network.

Andreasson is pioneering new concepts for high-speed sections and "point-synchronous" controls to overcome problems of synchronous and asynchronous concepts. He is also involved in a US \$2-million study for Gothenburg; a 700-km (435-mile), 674-station network is envisioned! Officials are leaning away from a proposed heavier APM ring toward enhancing the city's extensive light rail lines with PRT.

And Elsewhere

Environmental and engineering studies of the SeaTac PRT have been delayed. Local and Seattle regional officials had applied for federal air quality management funds through the Federal Highway Administration. The Federal Transit Administration (FTA) recognized this as a transit project and demanded they restart the process with Seattle's transit agency. A nearby Boeing plant is also exploring a PRT connector to a planned commuter rail station.

Cobb County in Georgia, and Fresno and Irvine in California, are considering PRT as possible modes in their futures. There is a pocket of PRT planning outside Amsterdam Airport, but no known interest at present exists in England, France, Germany or Japan.

AND MORE THEME PARKS

Despite EuroDisney's financial problems, new theme parks continue to be proposed around the U.S. and elsewhere in the world. Many will include automated people movers (APMs) for viewing, fun and logistics, such as to serve remote parking. Plans may not be detailed enough or public enough to reveal.

Outside Atlanta, Georgia: "Gone with the Wind" will be the theme of a 250-ha (620-acre) park in one of three counties vying for this project proposed by Georgia Holding Inc.

Cape Cod's Dreamworld: "Virtual reality" attractions would dominate New England's largest theme park, if proponents talking with investors and local officials in the towns of Plymouth and Bourne on the edge of Cape Cod succeed.

Las Vegas, Nevada: MGM and Bally's have announced a US \$15-million, 1.6-km (1-mile) "monorail" that AEG-Von Roll might supply. Is it real or is it publicity? Developers hope it could be extended from the airport all the way downtown as public transport.

New Jersey: Controversial developer Donald Trump and others are proposing a US \$50-million amusement complex and US \$18-million "monorail" ride away from the Meadowlands sports complex.

Reno, Nevada: Circus-Circus has launched a US \$230-million themed casino resort in downtown Reno. An APM element is not likely.

Tokyo, Japan: Video game maker Namco last year opened Wonder Eggs park devoted to their games. A string of such parks is planned across Asia: Osaka next year, Singapore the next.

Universal Studios: MCA expects to build a sequel to its Hollywood and Florida parks in Europe or Japan, perhaps Osaka. A US \$80-million "entertainment zone" is also being built at a marine complex near that city.

Lawrence Fabian is an internationally-known expert in advanced transit technologies, particularly automated people movers (APMs). He chairs the subcommittee on Activity Center Circulation of the Transportation Research Board and is vice-chairman of the APM Committee of the ASCE. Fabian also publishes a bimonthly newsletter, a biweekly faxed advisory service, the APM Industry Guide and other APM-oriented material. Contact Trans21, Box 249, Fields Corner Station, Boston, MA 02122; tel: (617) 625-2318, 1-800-453-7417.

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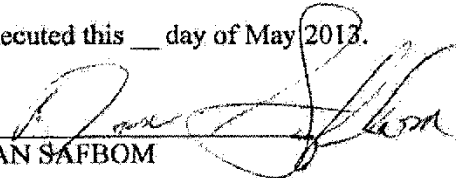
STATEMENT OF DAN SAFBOM

I have been an elevator mechanic for 21 years, and spent my last 6 years doing service and repairs on existing elevators before going to work at McCarran Airport as an ATS tech in April 2012. My fellow elevator repairmen and I have learned the ATS job faster than many of the County's new hires. That is because the jobs are very similar. I have been given sheets about my on-the-job training listing numerous tasks to reach Tech II level and was able to check off most ATS tasks as something I had either done or seen done and felt competent to do. The mechanical components on elevator cars and ATS systems are very similar, the sliding doors in particular. We use mostly the same tools (mostly wrenches, ratchets, and meters). As an elevator repairman we frequently used an electronic service tool for troubleshooting which works similarly to the electronic ATC (train controller) with computer message screens that we use now for the ATS. We have to occasionally work in cramped spaces under the vehicles (bump caps are available). We have some fall risk as ATS techs, both from working at platform level at least 10 feet above the ground, and when working on those guideways which are well off the ground (like for C gates, at least 50 feet up), which happens at least once every 60 days or so.

I have received no compensation for making this statement nor been promised any.

I declare under penalty of perjury of the laws of Nevada that the foregoing is true and correct.

Executed this ___ day of May 2013.


DAN SAFBOM

5-30-13

03824

ER3824

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NEVADA STATE LABOR COMMISSIONER

EXHIBIT Ux18
WITNESS W. Stanley
DATE 9/9/13

March 10, 2009

Mr. William Stanley
IUEC Organizing Director
5340 Campbell Road
Las Vegas, NV 89149

Dear Mr Stanley,

This is in response to your letter dated February 13, 2009. The following responses coincide with the information requests by the numbering in your letter :

- Item 1. A copy of all bargaining unit employees' hourly rates of pay -- Refer to the employees list.
- Item 2. A copy of all employees' current work schedules -- Refer to documents 2 and 3.
- Item 3. An explanation regarding each bargaining unit employee's employment status -- Refer to the employees list.
- Item 4. A list of all Bombardier employment current classifications -- Refer to the employees list.
- Item 5. A copy of all Bombardier employment policies and procedures -- Refer to the Bombardier Transportation Employee Handbook (currently under review) also include the Attendance Policy, Substance abuse Policy.
- Item 6. A list of all current paid Holidays -- Refer to the Employee Handbook and the Bombardier Transportation highlights of the U.S. Benefit Program --Systems Division.
- Item 7. A list of all current unpaid Holidays -- None
- Item 8. A current accounting of all used and unused vacation -- Refer to documents 2 and 3.
- Item 9. A copy of any jury duty policy -- Refer to the Jury Duty policy--- enclosed.
- Item 10. A copy of any witness policy regarding testifying for the company -- None
- Item 11. A copy of all bargaining unit employees' disciplinary records -- None
- Item 12. A copy of Bombardier's current Summary Plan Description ,...Medical Plan(s) -- Refer to the Bombardier Transportation Highlights of the U.S. Benefit Program -- Systems Division.
- Item 13. A copy of Bombardier's Current Summary Plan Description,...Pension Plan(s) -- Refer to the Bombardier Transportation Highlights of the U.S. Benefit Program -- Systems Division.

03825

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Item 14. A copy of all Bombardier employment handbook – Refer to the Bombardier Transportation Employee Handbook (which is as we mentioned previously under review).

Item 15. A list of all sub-contractors utilized by Bombardier at the McCarran International Airport APM Site – there are no subcontractors doing the work of bargaining unit employees.

Sincerely,



Sushil Jaitly
Site Manager

03826

ER3826

Pers no.	Last name	First name	Organizational Unit	Employee Group	Position	Location	Lv	Annual salary	Crcy
117167	Keeran	Robert	Las Vegas 1	Active /regular	B Transit Technician	Las Vegas-Airport (NV), US	3	54 990.00 USD	
17003	Ayers	Charles	Las Vegas 1	Active /regular	A Transit Technician	Las Vegas-Airport (NV), US	4	62 033.00 USD	
16940	Karpa	David	Las Vegas 1	Active /regular	C Transit Technician	Las Vegas-Airport (NV), US	2	52 876.00 USD	
17375	McGhee	Mark	Las Vegas 1	Active /regular	C Transit Technician	Las Vegas-Airport (NV), US	2	48 379.00 USD	
17194	Estrada	Daniel	LV APM Systems Installation & Commiss	Active /regular	A Transit Technician	Las Vegas-Airport (NV), US	4	57 654.00 USD	
17540	DePiero	Kenneth	Las Vegas SDC	Active /regular	Technical Administrator	Las Vegas-Airport (NV), US	3	50 924.00 USD	
17539	Schneider	Anthony	Las Vegas 1	Active /regular	B Transit Technician	Las Vegas-Airport (NV), US	3	50 924.00 USD	
143645	McCullough	Matthew	Las Vegas 1	Active /regular	C Transit Technician	Las Vegas-Airport (NV), US	2	45 833.00 USD	
152881	McClain	Vernon	LV APM Systems Installation & Commiss	Active /regular	Technical Coordinator	Las Vegas-Airport (NV), US	2	44 192.00 USD	
155339	Valentine	Ricky	Las Vegas 1	Active /regular	C Transit Technician	Las Vegas-Airport (NV), US	2	41 184.00 USD	
156669	Thomas	Peter	Las Vegas 1	Active /regular	C Transit Technician	Las Vegas-Airport (NV), US	2	41 184.00 USD	
166429	Perkins	Eric	Las Vegas 1	Active /regular	C Transit Technician	Las Vegas-Airport (NV), US	2	41 184.00 USD	
160419	Urbina	Aaron	Las Vegas 1	Active /regular	C Transit Technician	Las Vegas-Airport (NV), US	2	38 859.00 USD	
158908	Banas	Nicholas	Las Vegas 1	Active /regular	C Transit Technician	Las Vegas-Airport (NV), US	2	38 859.00 USD	
166718	Rasmussen	Craig	Las Vegas 1	Active /regular	C Transit Technician	Las Vegas-Airport (NV), US	2	38 400.00 USD	
166874	Custodio	Ivan	Las Vegas SDC	Active /regular	C Transit Technician	Las Vegas-Airport (NV), US	2	38 400.00 USD	
171307	Rodriguez	Dennis	Las Vegas SDC	External employee	Technician	Las Vegas-Airport (NV), US	2	37 439.00 USD	
172999	Garrett	Smith	Las Vegas SDC	External employee	Technician	Las Vegas-Airport (NV), US	2	37 439.00 USD	
173011	Corwin	Andrew	Las Vegas SDC	External employee	Technician	Las Vegas-Airport (NV), US	2	37 439.00 USD	

03827

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Contractor: Bombardier Transportation (Holdings) USA Inc
Clark County Public Works Contract CBE-552
Nevada Public Works Project # (PWP#):

2008 Nevada Prevailing Wage Rates Clark County

Elevator Constructor
Elevator Constructor - Journeyman Mechanic \$ 56.15
Elevator Constructor - Mechanic In Charge \$ 56.15

June 2008 through September 2009										
Name	Start Date	Current or Date of Termination	Months Covered	Position	Bombardier Wage Rate	Actual Fringe Allowance	Estimated Fringe Allowance	Total Package Wages and Estimated Fringes	Nevada Prevailing Wage Rate	Wage Rate Delta
Alvarez, Timothy	Sep-06	Sep-09	15	Journeyman	\$ 22.50		\$ 2.92	\$ 25.42	\$ 56.15	\$ 30.73
Ayers, Charles D.	Sep-06	Sep-09	15	MIC	\$ 29.82		\$ 2.92	\$ 32.74	\$ 56.15	\$ 23.41
Banas, Nicholas	Feb-07	Sep-09	15	Journeyman	\$ 18.68		\$ 2.92	\$ 21.60	\$ 56.15	\$ 34.55
Boykin, Michael S	Sep-06	Sep-09	15	Engineer	\$ 30.00		\$ 2.92	\$ 32.92	\$ 56.15	\$ 23.23
Corwin, Andrew	Dec-08	Jun-09	6	Journeyman	\$ 18.68		\$ 2.92	\$ 21.60	\$ 56.15	\$ 34.55
Custodio, Ivan	Apr-08	Sep-09	15	Journeyman	\$ 20.84	\$ 2.38	\$ 2.38	\$ 23.22	\$ 56.15	\$ 32.93
Dahlin, Eric	Jan-07	Sep-09	15	Journeyman	\$ 22.50		\$ 2.92	\$ 25.42	\$ 56.15	\$ 30.73
DePiero, Kenneth	Sep-06	Sep-09	15	Journeyman	\$ 39.88	\$ 3.16	\$ 3.16	\$ 43.04	\$ 56.15	\$ 13.11
Estrada, Jr., Daniel	Sep-06	Sep-09	15	MIC	\$ 31.30	\$ 3.58	\$ 3.58	\$ 34.88	\$ 56.15	\$ 21.27
Fischer, Daniel	Apr-08	Apr-08	0	Journeyman	\$ 18.68		\$ 2.92	\$ 21.60	\$ 56.15	\$ 34.55
Gausen, Jesse	Oct-06	Feb-07	0	Journeyman	\$ 18.68		\$ 2.92	\$ 21.60	\$ 56.15	\$ 34.55
Gardner, Amber	May-08	Jul-08	14	Journeyman	\$ 18.68		\$ 2.92	\$ 21.60	\$ 56.15	\$ 34.55
Karpa, David M.	Sep-06	Sep-09	15	Journeyman	\$ 25.42		\$ 2.92	\$ 28.34	\$ 56.15	\$ 27.81
Keeran, Robert D.	Sep-06	Sep-09	15	Journeyman	\$ 43.07	\$ 3.41	\$ 3.41	\$ 46.48	\$ 56.15	\$ 9.67
Levin, Matthew	Sep-06	Dec-06	0	Journeyman	\$ 18.68		\$ 2.92	\$ 21.60	\$ 56.15	\$ 34.55
Lumpkin, Roy	Sep-06	Nov-06	0	Journeyman	\$ 18.68		\$ 2.92	\$ 21.60	\$ 56.15	\$ 34.55
McCaughy, Vernon	Sep-06	Sep-09	15	Journeyman	\$ 23.99	\$ 2.74	\$ 2.74	\$ 26.73	\$ 56.15	\$ 29.42
McCaughy, Matthew	Sep-06	Sep-09	15	Journeyman	\$ 23.80		\$ 2.92	\$ 26.72	\$ 56.15	\$ 29.43
McGhee, Mark	Sep-06	Sep-09	15	Journeyman	\$ 23.26		\$ 2.92	\$ 26.18	\$ 56.15	\$ 29.97

Middleton, Joel	Sep-06	Sep-09	15	Engineer	\$	30.00			\$	2.92	\$	32.92	\$	56.15	\$	23.23
Morrow, Masami	Sep-06	Oct-06	0	Journeyman	\$	18.68			\$	2.92	\$	21.60	\$	56.15	\$	34.55
Paul, David	Oct-07	May-08	0	Journeyman	\$	18.68			\$	2.92	\$	21.60	\$	56.15	\$	34.55
Rasmussen, Craig	Mar-08	Sep-09	15	Journeyman	\$	18.46			\$	2.92	\$	21.38	\$	56.15	\$	34.77
Reichert, Peter	Sep-06	Oct-06	0	Journeyman	\$	18.68			\$	2.92	\$	21.60	\$	56.15	\$	34.55
Risavi, Justin	Aug-08	Sep-08	1	Journeyman	\$	18.68			\$	2.92	\$	21.60	\$	56.15	\$	34.55
Rodriguez, Dennis	Oct-08	Jun-09	9	Journeyman	\$	18.68			\$	2.92	\$	21.60	\$	56.15	\$	34.55
Rowell, Daina	Nov-06	Nov-08	10	Journeyman	\$	22.50			\$	2.92	\$	25.42	\$	56.15	\$	30.73
Sandoval, Ernesto	Feb-07	Mar-07	0	Journeyman	\$	18.68			\$	2.92	\$	21.60	\$	56.15	\$	34.55
Schneider, Anthony	Sep-06	Sep-09	15	MIC	\$	26.44			\$	2.92	\$	29.36	\$	56.15	\$	26.79
Smith, Deon	Jun-08	Nov-08	6	Journeyman	\$	18.00			\$	2.92	\$	20.92	\$	56.15	\$	35.23
Smith, Garrett	Dec-08	Jun-09	6	Journeyman	\$	18.00			\$	2.92	\$	20.92	\$	56.15	\$	35.23
Thomas, Peter	Sep-06	Sep-09	15	Journeyman	\$	19.80			\$	2.92	\$	22.72	\$	56.15	\$	33.43
Urbina, Aaron	May-07	Sep-09	15	Journeyman	\$	30.43	\$	2.41	\$	2.41	\$	32.84	\$	56.15	\$	23.31
Valentine, Ricky	Sep-06	Sep-09	15	Journeyman	\$	34.88	\$	2.79	\$	2.79	\$	37.67	\$	56.15	\$	18.48
Velasquez, Robert	Nov-08	Dec-08	1	Journeyman	\$	18.68			\$	2.92	\$	21.60	\$	56.15	\$	34.55
Wagner, Michael	Sep-06	Oct-07	0	Journeyman	\$	22.50			\$	2.92	\$	25.42	\$	56.15	\$	30.73
				Average	\$	23.30	\$	2.92	\$	2.92	\$	26.23	\$	56.15	\$	29.92

03829

NEVADA STATE LABOR COMMISSION

E-Bidding Portal

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NAME

W. Stanley

DATE

9/9/13

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Contract No: 3150, 6/26/2003, \$96,207,046.48, on Las Vegas Southern Beltway (I-215) from I-515 to Stephanie Street, Clark County, Nevada. Opened: 6/26/2003 Awarded: 7/21/2003

Return to previous page

Contract Details

Contract Documents

Bidder's List

Award Info

Contract Q & A

Contract #: 3150

Award Info

Date: 07/21/2003

Type: Highway

Contractor: WASHINGTON GROUP INTERNATIONAL INC

Advertised Date: 05/01/2003

Bid Opening: 06/26/2003 02:30 PM

Opening Office: Las Vegas

Project No(s): DPM-NH-0017(003)

County(s):

DBE Goal: 0 %

Location:

Work Description: on Las Vegas Southern Beltway (I-215) from I-515 to Stephanie Street, Clark County, Nevada.

Status: Active

1263 South Stewart Street, Carson City Nevada 89712

Telephone:

Fax:

Email:

- Governor

- Director



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Contract No: **3150, 6/26/2003, \$86,207,046.46**, on Las Vegas Southern Beltway (I-215) from I-515 to Stephanie Street, Clark County, Nevada. **Opened: 6/26/2003 Awarded: 7/21/2003**

[Return to previous page](#)[Contract Details](#)[Contract Documents](#)[Bidder's List](#)[Award Info](#)[Contract Q & A](#)**Documents**[View](#) [Expand All](#) [Collapse All](#)[Refresh](#)[Bid Items](#)[Plans-Specifications-Supplementals](#)[Prevailing Wages and Qualified Product List \(QPL\)](#)[Post Bid Opening Documents](#)[tab3150](#)

1263 South Stewart Street, Carson City Nevada 89712

Telephone:
Email:

Fax:

- Governor
- Director



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Dulles International Reagan National Airport

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MWAA iSupplier Portal

Materials Management Division

Tenant Information

Building Codes Dept

Current Opportunities - Dulles Corridor Metrorail Project**Project Overview - Dulles Corridor Metrorail Project**

Phase One of the Dulles Corridor Metrorail Project will construct the new Metrorail Silver Line from the East Falls Church station on the Orange Line, through Tysons Corner and on to Wiehle Avenue in Reston. Phase Two will continue the line to Dulles International Airport and into Loudoun County.

Dulles Corridor Metrorail Project - Phase One

Dulles Transit Partners, LLC (DTP), a joint venture of Bechtel Infrastructure, Inc. and Washington Group International, is the Metropolitan Washington Airports Authority's design-build contractor for Phase One of the Dulles Corridor Metrorail Project, which will build 11 miles of track, four new stations in Tysons Corner and one in Reston. Construction of Phase One began in March, 2009.

The following link will take you to the DTP Bid Opportunities website where you can learn about subcontracting opportunities for Phase One of the Dulles Corridor Metrorail Project:

» **DTP Subcontracting Information**

Dulles Corridor Metrorail Project - Phase Two

The Metropolitan Washington Airports Authority has issued Solicitation 8-13-C001 for the design-build contract for Phase Two of the Dulles Corridor Metrorail Project. Current status of the solicitation is as follows:

RFP 8-13-C001: Dulles Corridor Metrorail Project, Phase 2, Package A, Design/Build *UPDATED!*

NOTICE OF AWARD**MAY 14, 2013**

In accordance with the terms of the Metropolitan Washington Airports Authority Final Request for Proposals, Solicitation No. 8-13-C001, dated February 6, 2013, and in accordance with the Price Proposals submitted April 19, 2013, the Airports Authority has executed a Design-Build Contract with Capital Rail Constructors, a Joint Venture (located in Bethesda, Maryland), in the amount of \$1,177,777,000.00. The Price Proposal submitted by Capital Rail Constructors, a Joint Venture, met all responsiveness criteria and this Joint Venture has been determined to be a responsible Offeror.

The executed contract, with limited redactions, in accordance with Airports Authority policy, will be posted on the Airports Authority website in the near future.

- » **Press Release - Airports Authority Awards Contract for Phase 2 of the Silver Line**
- » **Press Release - Airports Authority Intends to Award Phase 2 Construction Contract to Capital Rail Constructors**
- » **Press Release - Airports Authority Opens Contractor Price Proposals for Phase 2 of the Dulles Corridor Metrorail Project**

Additional Dulles Corridor Metrorail Project Contracting Opportunities

The Metropolitan Washington Airports Authority has issued the following additional contracting opportunities for the Dulles Corridor Metrorail Project:

RFP 8-13-C017: Real Estate Acquisition Consulting for Dulles Corridor Metrorail Project, Phase 2 *NEW!*

» **Description:** The Contractor shall furnish all necessary labor, materials, tools, equipment, and supervision to provide professional real estate acquisition and related services for the completion of real estate acquisition for Phase 2 of the Dulles Corridor Metrorail Project.

» **Issue Date:** May 23, 2013

» **Due Date for Proposals:** June 21, 2013

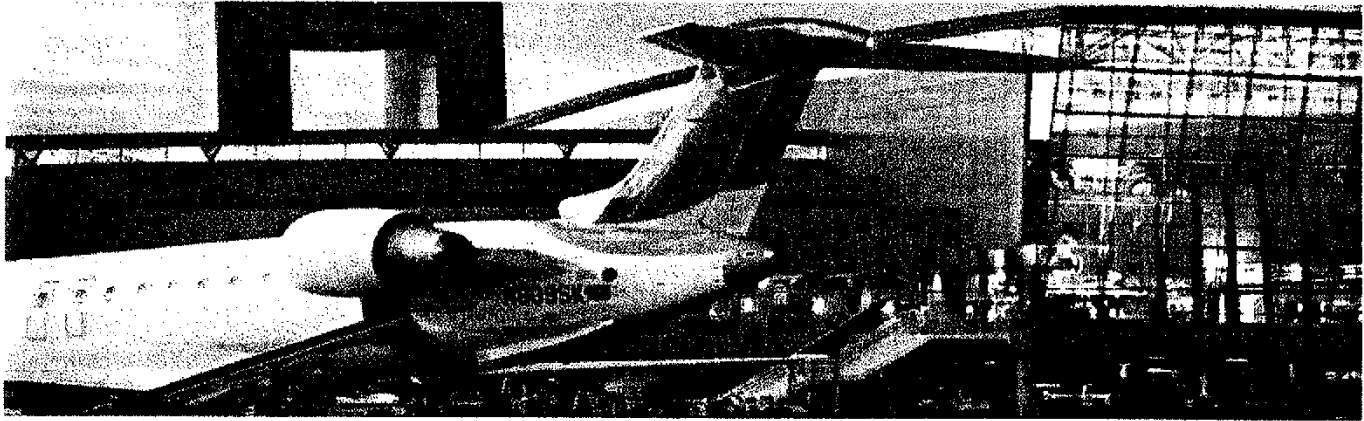
03832

- » **Amendments Issued:** None
- » **DBE Goal:** 25%
- » **Project Overview**
- » **Download Documents**

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MCCARRAN INTERNATIONAL AIRPORT

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From an airplane window, Las Vegas' pastel mirage shimmers on a clear night for 250 miles before one's flight aligns with a runway at the city's McCarran International Airport. On final descent and landing, most passengers' gazes move eagerly to the distinctive hotel silhouettes of the Strip and, inevitably, to the anachronistic Luxor sphinx peering over the airfield fence. It's only when taxiing is complete and the Strip out of sight that McCarran's new Terminal 3 begins to impress. But that's as it should be. After all, the terminal was not designed to turn heads, but to speed travelers into and out of the world's most famous entertainment destination.

Nothing small ever happens in Vegas, and McCarran's growth is no exception. Over the past 30 years, it's tripled in size, on pace with the city itself. Bechtel has managed all six phases of the expansion and modernization since 1981, in partnership with the Clark County Department of Aviation. During this time, the company has performed a near-magical transformation, building and replacing runways, expanding terminals and airport parking, and constructing two new remote satellite concourses, among many other improvements. The \$2.4 billion Terminal 3, which opened in June 2012, is the latest of these expansion and improvement projects.

With a striking, angular exterior that echoes the jagged Spring Mountains landscape, and an interior more like the Strip's mirrored and neon finish, the terminal covers 2 million square feet. The new Terminal 3 has added 14 new gates, six of them designated for international flights, as well as an eight-level

PROJECT INFORMATION

Project: McCarran International Airport Expansion

Location: Las Vegas, Nevada

Customer: Clark County Department of Aviation

Description: Thirty-year multi-phased expansion of an international airport, including construction of a new standalone terminal

Schedule: 1981 to 2012

PHOTO GALLERY

Three decades of McCarran International Airport


[VIDEO](#)

parking garage for 6,000 cars. There's a central utility plant, a roadway system, and aircraft apron and fueling systems, taxi and limousine staging facilities, and an automated transit system. New power duct banks direct electricity to the terminal from two local substations, including a duct bank tunneled under Nevada's busiest intersection, where Las Vegas Boulevard—the Strip—meets Tropicana Avenue.

In its peak year, McCarran Airport served nearly 48 million travelers. Terminal 3 is projected to increase capacity to 53 million. The number of passengers will increase as the self-appointed Entertainment Capital of the World lives up to its name, drawing more visitors from abroad.

No stranger to crowds, McCarran has long managed congestion in creative ways, such as adopting a flexible "common-use" system that reduces flight delays by allowing airlines to access any open gate, and pioneering software to direct the flow of incoming baggage to carousels.

Logistics was both the biggest challenge and the biggest achievement for Bechtel. The team had to complete the vast complex over the past 30 years minimizing interference with passengers and daily operations at one of the world's busiest airports. They juggled construction equipment, materials, and up to 2,000 workers to avoid interference with the constant stream of baggage tractors, passengers, and airline employees, and, of course half a million takeoffs and landings each year.

To help simplify the process, Bechtel's airtight scheduling plan might have taken its cue from Vegas itself—or perhaps from the impressive facsimile of the City that Never Sleeps: New York, New York casino, in the shadow of that sphinx. Shifting some of the construction activities to the wee hours, when flights have tapered off, crews avoided disruptions while keeping the project on schedule.



McCarran International Airport in Las Vegas, Nevada, reaches new heights as construction of Terminal 3 nears completion. To see, watch this video.

IN THE NEWS

Bechtel Aviation Leader Discusses Airport Upgrades

The challenges facing airport design and the importance of technology are discussed by Bechtel's aviation practice leader, Steve Riano, in *Airport World* magazine. Bechtel just completed the project management of Terminal 3 at McCarran International Airport, Las Vegas, on schedule and within budget.

June- July 2012

Bechtel Completes Terminal 3 at McCarran Airport on Schedule and Within Budget

Bechtel has completed the new state-of-the-art Terminal 3 building at McCarran International Airport in Las Vegas, NV on schedule and within budget.

June 25, 2012

McCarran Airport Runway Upgrade Finishes Ahead of Schedule

Read the Department of Aviation press release and the *Las Vegas Review-Journal* article.

April 2009

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DULLES METRORAIL EXTENSION

Linking Washington, D.C., to Dulles International Airport

A Bechtel joint venture is designing and building Phase 1 of a 23-mile extension of the Metrorail Line for the Metropolitan Washington Airports Authority. The extension—one of the largest construction projects in the United States—will bring rail service to fast-growing areas of Northern Virginia and provide a one-seat ride from Dulles International Airport to downtown Washington, D.C.

In the summer of 2010, work began on one of the key elements of the 11.7-mile first phase—a 6-mile section of elevated track that will carry Metrorail trains above the Capital Beltway and over Tysons Corner at heights up to 65 feet. Construction will require an enormous overhead crane that has been custom-built to lift elevated segments into place between huge piers along the line. The yellow crane, weighing 366 tons, will stretch across 12 lanes of traffic and move by remote control from one segment to the next.

In addition to the elevated track, the project features a 2,400-foot underground tunnel that will connect two Metro stations in Tysons Corner. Tunnel construction began in October 2009, marking the project's first major milestone.

Work also is beginning on new stations for the line. There will be of 11 them—five in the first phase of construction, and six in the second. All the stations will have pedestrian bridges, escalators, and elevators.

The project will extend service from the existing Orange Line at

VIDEO



Watch what's been happening on the Dulles Metrorail project

SPOTLIGHT ON SAFETY



The Dulles project team took an innovative approach to promoting safety among local residents and drivers, creating a series of personalized safety radio ads in cooperation with a local radio station.

the East Falls Church station in Fairfax County, Virginia, to Route 772 in Loudoun County. The corridor encompasses Tysons Corner and the Reston Herndon area, the state's top employment regions. The new line also will offer direct access to the existing Metro system, enabling passengers to ride into downtown Washington without changing trains.

Listen to the radio ads.

PROJECT DETAILS

LOCATION

Northern Virginia

CUSTOMER

Metropolitan Washington Airports Authority

PARTICIPANTS

Dulles Transit Partners, LLC, a joint venture of Bechtel and URS

DESCRIPTION

23-mile (37-kilometer) extension of Washington, D.C.'s rail transit system to Dulles International Airport in Virginia, and beyond into Loudoun County

SCOPE OF WORK

Development, engineering, and construction on Phase 1, including 11.7 miles of rail line and five new stations

SCHEDULE

2004 – 2015

ADDITIONAL INFORMATION

WEBSITES

www.dullesmetro.com
www.dullestransitpartners.com

IN THE NEWS

Boost for Small Businesses
Washington Business Journal
August 2011

Innovative Approach to Dulles Rail
USA Today
January 2011

Tysons Metro Tunnel Breaks Through
Washington Post
October 2010

**Significant Progress on Dulles
Metrorail**

October 2010

**Dulles rail bridge project looms on
horizon at Tysons Corner**

Washington Post

May 2010

18 Feet Done, Many More to Go

Washington Post

October 2009

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Exhibit No. UX21
 Witness K. DePiero
 Date 10/21/13

KWD OCR# 711

SUMMARY OF THE SIMS TIMES FROM "Time reporting sorted"		
CODE DESCRIPTION	MAJOR DESCRIPTION	HOURS
A200Y WAYSIDE CORRECTIVE MAINT TASKS	WAYSIDE CORRECTIVE MAINT TASKS	686 Corrective
A200Z WAYSIDE HEAVY MAINT / OVERHAUL TASKS	WAYSIDE HEAVY MAINT / OVERHAUL TASKS	571 Code utilized for wayside component rebuild
A300Y VEHICLE CORRECTIVE MAINT TASKS	VEHICLE CORRECTIVE MAINT TASKS	1835 Corrective
A300Z VEHICLE HEAVY MAINT / OVERHAUL TASKS	VEHICLE HEAVY MAINT / OVERHAUL TASKS	2356 Code utilized for vehicle component rebuild
A400Y COMMS CORRECTIVE MAINT TASK	COMMS CORRECTIVE MAINT TASK	11 Corrective
A400Z COMMS HEAVY MAINT / OVERHAUL TASK	COMMS HEAVY MAINT / OVERHAUL TASK	8 Code utilized for Communications equipment modification and repair
A600Y FARE COLL CORRECTIVE MAINT TASKS	FARE COLL CORRECTIVE MAINT TASKS	1 Corrective
A600Z FARE COLL CORRECTIVE MAINT TASKS	FARE COLL CORRECTIVE MAINT TASKS	23 Corrective
A700Z CIVIL HEAVY MAINT / OVERHAUL TASKS	CIVIL HEAVY MAINT / OVERHAUL TASKS	505 Code utilized for heavy guide way repairs
A800Y PLATF DOORS CORRECTIVE MAINT TASKS	PLATF DOORS CORRECTIVE MAINT TASKS	505 Corrective
A800Z PLATF DOORS HEAVY MAINT / OVERHAUL TASKS	PLATF DOORS HEAVY MAINT / OVERHAUL TASKS	80 Code utilized for station door component rebuild
A900Y TRACK CORRECTIVE MAINT TASKS	TRACK CORRECTIVE MAINT TASKS	31 Corrective
25221 RECOVERY TECHNICIAN TASKS	RECOVERY TECHNICIAN TASKS	428 Code utilized for recovery and repair while system in revenue service
25229 GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	Code utilized by technicians while performing rebuilds, recoveries and general shop activities (30% chargeable as corrective)
25411 REPAIR ACTIVITIES VEHICLE - DOORS	REPAIR HOURS	11855
25412 REPAIR ACTIVITIES VEHICLE - ATO	REPAIR HOURS	534 Corrective
25413 REPAIR ACTIVITIES VEHICLE - SUSPENSION/GUIDANCE (BOGIES/TRUCKS)	REPAIR HOURS	533 Corrective
25414 REPAIR ACTIVITIES VEHICLE - DRIVE TRAIN (MOTOR/SHAFT/AXLE/TIRE)	REPAIR HOURS	375 Corrective
25415 REPAIR ACTIVITIES VEHICLE - COLLECTOR ASSEMBLY/PANTOGRAPH	REPAIR HOURS	869 Corrective
25416 REPAIR ACTIVITIES VEHICLE - AIR SYSTEM	REPAIR HOURS	58 Corrective
25417 REPAIR ACTIVITIES VEHICLE - BREAK SYSTEM	REPAIR HOURS	328 Corrective
25418 REPAIR ACTIVITIES VEHICLE - AIR CONDITIONING SYSTEM	REPAIR HOURS	180 Corrective
25419 REPAIR ACTIVITIES VEHICLE - GENERAL	REPAIR HOURS	127 Corrective
25421 REPAIR ACTIVITIES STATION - LOBBY DOORS	REPAIR HOURS	890 Corrective
25422 REPAIR ACTIVITIES STATION - EMERGENCY DOORS	REPAIR HOURS	1111 Corrective
25423 REPAIR ACTIVITIES STATION - GRAPHIC/AUDIO VISUAL MESSAGES	REPAIR HOURS	4 Corrective
25428 REPAIR ACTIVITIES STATION - LIGHTING	REPAIR HOURS	5 Corrective
25429 REPAIR ACTIVITIES STATION - GENERAL	REPAIR HOURS	9 Corrective
25431 REPAIR ACTIVITIES WAYSIDE - RUNNING SURFACE/GUIDEBEAM	REPAIR HOURS	94 Corrective
25432 REPAIR ACTIVITIES WAYSIDE - POWER RAIL/TREES	REPAIR HOURS	54 Corrective
25433 REPAIR ACTIVITIES WAYSIDE - RUNNING RAIL	REPAIR HOURS	8 Corrective
25434 REPAIR ACTIVITIES WAYSIDE - SWITCHES (CABINETS/VITAL RELAYS/HPL)	REPAIR HOURS	11 Corrective
25435 REPAIR ACTIVITIES WAYSIDE - PROGRAM STOP TAPE/DOOR ANTENNAS	REPAIR HOURS	19 Corrective
25436 REPAIR ACTIVITIES WAYSIDE - TRAIN SIGNALING EQUIPMENT	REPAIR HOURS	13 Corrective
25437 REPAIR ACTIVITIES WAYSIDE - COMMUNICATIONS EQUIPMENT	REPAIR HOURS	15 Corrective
25438 REPAIR ACTIVITIES WAYSIDE - SIGNAL LIGHTS/TRIP STOPS	REPAIR HOURS	56 Corrective
25439 REPAIR ACTIVITIES WAYSIDE - GENERAL	REPAIR HOURS	8 Corrective
25441 REPAIR ACTIVITIES POSUPS - UPS	REPAIR HOURS	130 Corrective
25442 REPAIR ACTIVITIES POSUPS - BREAKERS (MAIN/INTERMEDIATE/TIES)	REPAIR HOURS	8 Corrective
25449 REPAIR ACTIVITIES POSUPS - GENERAL	REPAIR HOURS	2 Corrective
25451 REPAIR ACTIVITIES CENTRAL - COMMUNICATIONS EQUIPMENT	REPAIR HOURS	24 Corrective
25451 REPAIR ACTIVITIES CENTRAL - COMMUNICATIONS EQUIPMENT	REPAIR HOURS	4 Corrective

03839

ER3839

UX 21

SUMMARY OF THE SIMS TIMES FROM "Time reporting sorted"			
CODE DESCRIPTION	MAJOR DESCRIPTION	HOURS	
25452 REPAIR ACTIVITIES CENTRAL - COMPUTER	REPAIR HOURS	52	Corrective
25459 REPAIR ACTIVITIES CENTRAL - GENERAL	REPAIR HOURS	2	Corrective
25655 WARRANTY	WARRANTY	55	Code utilized for repairs made during warranty period
		23713	Total hours for corrective maintenance
		\$1,371,322.78	Total cost of labor only for corrective maintenance (conservatively calculated 4%)
		\$1,463,566.38	Total cost of labor only for corrective maintenance (conservatively calculated 4%)
		\$651,063.78	Parts cost
		\$2,023,186.55	Total cost (42%)
		\$2,115,430.12	Total cost (51.89%)

03840

ER3840

Exhibit No. Ux 22
 Witness R. DeLeon
 Date 02/13

KWD COR# 711

SUMMARY OF THE SIMS TIMES FROM "Time reporting sorted"				
Total hours of labor for Wayside repairs, rebuild, corrective maintenance and recoveries				
CODE	DESCRIPTION	MAJOR DESCRIPTION	HOURS	Code Was used to identify:
A200Y	WAYSIDE CORRECTIVE MAINT. TASKS	WAYSIDE CORRECTIVE MAINT. TASKS	686	Corrective
A200Z	WAYSIDE HEAVY MAINT./OVERHAUL TASKS	WAYSIDE HEAVY MAINT./OVERHAUL TASKS	571	Wayside component rebuild
A500Y	FARE COLL. CORRECTIVE MAINT. TASKS	FARE COLL. CORRECTIVE MAINT. TASKS	1	Corrective
A600Y	PS&D CORRECTIVE MAINT. TASKS	PS&D CORRECTIVE MAINT. TASKS	23	Corrective
A700Z	CIVIL HEAVY MAINT./OVERHAUL TASKS	CIVIL HEAVY MAINT./OVERHAUL TASKS	6	Heavy guide way repairs
A800Y	PLATF. DOORS CORRECTIVE MAINT. TASKS	PLATF. DOORS CORRECTIVE MAINT. TASKS	505	Corrective
A800Z	PLATF. DOORS HEAVY MAINT./OVERHAUL TASKS	PLATF. DOORS HEAVY MAINT./OVERHAUL TASKS	80	Station door component rebuild
A900Y	TRACK CORRECTIVE MAINT. TASKS	TRACK CORRECTIVE MAINT. TASKS	31	Corrective
Z5421	REPAIR ACTIVITIES STATION - LOBBY DOORS	REPAIR HOURS	1111	Corrective
Z5422	REPAIR ACTIVITIES STATION - EMERGENCY DOORS	REPAIR HOURS	4	Corrective
Z5423	REPAIR ACTIVITIES STATION - GRAPHICS/AUDIO VISUAL MESSAGES	REPAIR HOURS	5	Corrective
Z5428	REPAIR ACTIVITIES STATION - LIGHTING	REPAIR HOURS	9	Corrective
Z5429	REPAIR ACTIVITIES STATION - GENERAL	REPAIR HOURS	84	Corrective
Z5431	REPAIR ACTIVITIES WAYSIDE - RUNNING SURFACE/GUIDEBEAM	REPAIR HOURS	54	Corrective
Z5432	REPAIR ACTIVITIES WAYSIDE - POWER RAIL/TREES	REPAIR HOURS	8	Corrective
Z5433	REPAIR ACTIVITIES WAYSIDE - RUNNING RAIL	REPAIR HOURS	11	Corrective
Z5434	REPAIR ACTIVITIES WAYSIDE - SWITCHES (CABINETS/VITAL RELAYS/HPU)	REPAIR HOURS	19	Corrective
Z5435	REPAIR ACTIVITIES WAYSIDE - PROGRAM STOP TAPE/DOOR ANTENNAS	REPAIR HOURS	15	Corrective
Z5436	REPAIR ACTIVITIES WAYSIDE - TRAIN SIGNALING EQUIPMENT	REPAIR HOURS	15	Corrective
Z5437	REPAIR ACTIVITIES WAYSIDE - COMMUNICATIONS EQUIPMENT	REPAIR HOURS	56	Corrective

	REPAIR ACTIVITIES WAYSIDE - SIGNAL	REPAIR HOURS	8	Corrective
Z5438	LIGHTS/TRIP STOPS	REPAIR HOURS	130	Corrective
Z5439	REPAIR ACTIVITIES WAYSIDE - GENERAL	REPAIR HOURS	3	Corrective
Z5441	REPAIR ACTIVITIES PDS/UPS - UPS	REPAIR HOURS	2	Corrective
Z5442	REPAIR ACTIVITIES PDS/UPS - BREAKERS	REPAIR HOURS	24	Corrective
Z5449	(MAIN/INTERMEDIATE/TIES)	REPAIR HOURS	4	Corrective
Z5451	REPAIR ACTIVITIES PDS/UPS - GENERAL	REPAIR HOURS	52	Corrective
Z5452	REPAIR ACTIVITIES CENTRAL -	REPAIR HOURS	2	Corrective
Z5459	COMMUNICATIONS EQUIPMENT	REPAIR HOURS	133,536	service
Z5221	REPAIR ACTIVITIES CENTRAL - COMPUTER	RECOVERY TECHNICIAN TASKS	31.2% of total Code utilized for recovery and repair while system in revenue	
Z5229	REPAIR ACTIVITIES CENTRAL - GENERAL	GENERAL RECOVERY	31.2% Of the 30% Code utilized by technicians while performing rebuilds, recoveries and general shop activities (30% chargeable as corrective)	
Z5699	WARRANTY	WARRANTY	31.2% of total Code utilized for repairs made during warranty period	
			7399,656	Total hours for wayside/station corrective maintenance
			\$427,922.11	Total cost of labor only for corrective maintenance (conservatively calculated 42%)
			\$456,706.77	Total cost of labor only for corrective maintenance (calculated @51.83%)
			\$96,765.66	Parts cost
			\$524,687.77	Total cost (42%)
			\$553,472.43	Total cost (51.83%)

Total hours of labor for vehicle repairs, rebuild, corrective maintenance and recoveries				
CODE	DESCRIPTION	MAJOR DESCRIPTION	HOURS	
Z5411	REPAIR ACTIVITIES VEHICLE - DOORS	REPAIR HOURS	534	Corrective
Z5412	REPAIR ACTIVITIES VEHICLE - ATO	REPAIR HOURS	533	Corrective
Z5413	REPAIR ACTIVITIES VEHICLE -	REPAIR HOURS	375	Corrective
Z5414	SUSPENSION/GUIDANCE (BOGIES/TRUCKS)	REPAIR HOURS	869	Corrective
Z5415	REPAIR ACTIVITIES VEHICLE - DRIVE TRAIN (MOTOR/SHAFT/AXLE/TIRE)	REPAIR HOURS	99	Corrective
Z5416	REPAIR ACTIVITIES VEHICLE - COLLECTOR ASSEMBLY/PANTOGRAPH	REPAIR HOURS	329	Corrective
Z5417	REPAIR ACTIVITIES VEHICLE - AIR SYSTEM	REPAIR HOURS	190	Corrective
Z5418	REPAIR ACTIVITIES VEHICLE - BREAK SYSTEM	REPAIR HOURS	127	Corrective
Z5419	CONDITIONING SYSTEM	REPAIR HOURS	690	Corrective
Z5420	REPAIR ACTIVITIES VEHICLE - GENERAL	VEHICLE CORRECTIVE	1635	Corrective
A300Y	VEHICLE CORRECTIVE MAINT. TASKS	MAINT. TASKS		
A300Z	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	2356	Vehicle component rebuild

A400Y	COMMS CORRECTIVE MAINT. TASK	COMMS CORRECTIVE MAINT. TASK	11	Corrective
A400Z	COMMS HEAVY MAINT/ OVERHAUL TASK	COMMS HEAVY MAINT/ OVERHAUL TASK	8	Code utilized for Communications equipment modification and repair
Z5221	RECOVERY TECHNICIAN TASKS	RECOVERY TECHNICIAN TASKS	294.464	68.8% of total Code utilized for recovery and repair while system in revenue service
Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	8225.04	68.8% of the 30% Code utilized by technicians while performing rebuilds, recoveries and general shop activities (30% chargeable as corrective)
Z9699	WARRANTY	WARRANTY	37.84	68.8% of total Code utilized for repairs made during warranty period
			16313.344	Total hours for vehicle corrective maintenance
			\$943,400.68	Total cost of labor only for corrective maintenance (conservatively calculated 42%)
			\$1,006,859.59	Total cost of labor only for corrective maintenance (calculated @51.83%)
			\$555,098.10	Parts cost
			\$1,498,498.78	Total cost (42%)
			\$1,561,957.69	Total cost (51.83%)

These 3 codes were divided between Wayside and Vehicle @ 31.2% for wayside & 68.8% for vehicle				
Z5221	RECOVERY TECHNICIAN TASKS	TASKS	428	Code utilized for recovery and repair while system in revenue service
Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	11955	general shop activities (30% chargeable as corrective)
Z9699	WARRANTY	WARRANTY	55	Code utilized for repairs made during warranty period

Grand Total of Hours and Cost for Repairs				
23713	Total hours for corrective maintenance			
\$1,371,322.79	calculated 42%			
\$1,463,566.36	Total cost of labor only for corrective maintenance (calculated @51.83%)			
\$651,863.76	Parts cost			
\$2,023,186.55	Total cost (42%)			
\$2,115,430.12	Total cost (51.83%)			

03843

Las Vegas Airport O&M		G4 Contract Number:	24460		
		Site Number:	247		
Do not use items highlighted in RED UNLESS AUTHORIZED					
WBS	WBS Description				
	034/252446000/A1330	01.03.00.30. QA / Health & Safety Tasks		Safety walk through or anything	
	247/252446000/A1330	01.03.00.30. QA / Health & Safety Tasks		safety related	
	034/252446000/A1340	01.03.00.40 Training		Training classes or new hire	
	247/252446000/A1340	01.03.00.40 Training		training	
	034/252446000/A1370	01.03.00.70. Material Management Tasks			
	247/252446000/A1370	01.03.00.70. Material Management Tasks		Cycle counting	
	247/252446000/200X	02.00.00.09 Wayside Preventive Maint.Tasks			
	247/252446000/200Y	02.00.00.10 Wayside Corrective Maint.Tasks			
	247/252446000/300X	03.00.00.09 Vehicle Preventive Maint. Tasks			
	247/252446000/300Y	03.00.00.10 Vehicle Corrective Maint. Tasks			
	247/252446000/400X	04.00.00.09 Comms Preventive Maint.Tasks			
	247/252446000/400Y	04.00.00.10 Comms Corrective Maint.Task			
	247/252446000/600X	06.00.00.09 PS&D Preventive Maint.Tasks			
	247/252446000/800X	08.00.00.09 Platf.Doors Preventive Maint.Tasks			
	247/252446000/800Y	08.00.00.10 Platf.Doors Corrective Maint. Tasks			
	247/252446000/900X	09.00.00.09 Track Preventive Maint.Tasks		Track walk inspection	
00000740		FMLA US03			
00000750		Holiday US03			
00000763		Vacation US03			
00000765		Illness US03			
00000767		Disciplinary US03			
00000769		Short-term disability US03			
00000771		Other non-productive US03			
00000777		Bereavement / Funeral US03			
00000779		Jury Duty US03			
00000781		Military Duty US03			
00000783					

Exhibit No. UX23
Witness M. Smith
Date 6/25/13

KWD CCR# 711

03844

All the information below was matched from the pass down to SIMs time reporting for the same day.

5/7/2008	RDK	KEERAN	Z5414	REPAIR ACTIVITIES VEHICLE - DRIVE TRAIN (MOTOR/SHAFT/AXLE/TIRE)	REPAIR HOURS	5	Brake job, replaced leaking hub seal and more car 7/8
5/7/2008	EWD	DAHLIN	Z5417	REPAIR ACTIVITIES VEHICLE - BREAK SYSTEM	REPAIR HOURS	5	
5/7/2008	DR	ROWELL	Z5319	MAINTENANCE ACTIVITIES VEHICLE - GENERAL	MAINTENANCE HOURS	7	
5/7/2008	OR	RASMUSSEN	Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	12	
5/7/2008	RVA	VALENTINE	Z5416	REPAIR ACTIVITIES VEHICLE - AIR SYSTEM	REPAIR HOURS	3	Replaced High & low heads on C4 due to popping off and 1 copper pipe.
5/7/2008	AU	URBINA	Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	10	
5/12/2008	RDK	KEERAN	Z5414	REPAIR ACTIVITIES VEHICLE - DRIVE TRAIN (MOTOR/SHAFT/AXLE/TIRE)	REPAIR HOURS	4	Pinion seal replaced due to leaking c7 #1 used new yoke
5/13/2008	PT	THOMAS	Z5417	REPAIR ACTIVITIES VEHICLE - BREAK SYSTEM	REPAIR HOURS	6	Complete brake job car 4 1/2
5/13/2008	RVA	VALENTINE	Z5414	REPAIR ACTIVITIES VEHICLE - DRIVE TRAIN (MOTOR/SHAFT/AXLE/TIRE)	REPAIR HOURS	6	
6/9/2008	RVA	VALENTINE	Z5414	REPAIR ACTIVITIES VEHICLE - DRIVE TRAIN (MOTOR/SHAFT/AXLE/TIRE)	REPAIR HOURS	6	Complete brake job car 3 5/6
6/9/2008	PT	THOMAS	Z5417	REPAIR ACTIVITIES VEHICLE - BREAK SYSTEM	REPAIR HOURS	6	
7/21/2008	RDK	KEERAN	Z5419	REPAIR ACTIVITIES VEHICLE - GENERAL	REPAIR HOURS	5	Replace Car 3 4/2 and replace all tools helped but on 2 tool repair hours 1 car hours from pass down only look & but RVA & RDK are to look for 400 5000
7/21/2008	RVA	VALENTINE	Z5419	REPAIR ACTIVITIES VEHICLE - GENERAL	REPAIR HOURS	8	
7/21/2008	DR	ROWELL	Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	3	
7/21/2008	DR	ROWELL	Z5319	MAINTENANCE ACTIVITIES VEHICLE - GENERAL	MAINTENANCE HOURS	7	
7/21/2008	PT	THOMAS	Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	6	
7/21/2008	PT	THOMAS	Z5311	MAINTENANCE ACTIVITIES VEHICLE - DAILY	MAINTENANCE HOURS	3	
7/21/2008	PT	THOMAS	Z5313	MAINTENANCE ACTIVITIES VEHICLE - MONTHLY	MAINTENANCE HOURS	3	
7/25/2008	MWM	MCGHEE	Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	10	Rebuilt a hub used Z5229 for time reporting
7/25/2008	NB	BANAS	523C	VACATION	OTHER NON-PRODUCTIVE	1	
7/25/2008	NB	BANAS	Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	9	
7/31/2008	DA	AYERS	Z5329	MAINTENANCE ACTIVITIES STATION - GENERAL	MAINTENANCE HOURS	5	Changed car 5 tires 1/2 during revenue service due to side wall splits blowing and tire spinning no Roadman said at torche helmet hit
7/31/2008	DA	AYERS	Z5319	MAINTENANCE ACTIVITIES VEHICLE - GENERAL	MAINTENANCE HOURS	5	
7/31/2008	AU	URBINA	Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	10	
7/31/2008	EWD	DAHLIN	Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	5	

Witness: K. D. H. E. O.
Date: 6/24/13

KWD COR# 711

7/31/2008	EWD	DAHLLN	Z5339	MAINTENANCE ACTIVITIES WAYSIDE - ANNUAL	MAINTENANCE HOURS	5
7/31/2008	CR	RASMUSSEN	Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	10
7/31/2008	RF	FORD	Z5319	MAINTENANCE ACTIVITIES VEHICLE - GENERAL	MAINTENANCE HOURS	8
7/31/2008	RF	FORD	Z5229	GENERAL RECOVERY/STANDBY ACTIVITIES	GENERAL RECOVERY	4
3/25/2012	RVA	VALENTINE	A300Y	VEHICLE CORRECTIVE MAINT. TASKS	VEHICLE CORRECTIVE MAINT. TASKS	4
3/25/2012	ACF	FAME	A1340	TRAINING	TRAINING	10
3/19/2012	KDD	DEPIERO	A300Z	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	4
3/16/2012	MDM	MCCULLOUGH	A300Z	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	4
3/16/2012	MWM	MCGHEE	A300Z	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	8
3/16/2012	NB	BANAS	A1391	VEHICLE OPERATIONS LABOR	VEHICLE OPERATIONS LABOR	10
3/15/2012	MDM	MCCULLOUGH	A200Z	WAYSIDE HEAVY MAINT. / OVERHAUL TASKS	WAYSIDE HEAVY MAINT. / OVERHAUL TASKS	4
3/15/2012	MWM	MCGHEE	A1391	VEHICLE OPERATIONS LABOR	VEHICLE OPERATIONS LABOR	2
3/15/2012	MWM	MCGHEE *	A300Z	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	8
3/15/2012	NB	BANAS	A1391	VEHICLE OPERATIONS LABOR	VEHICLE OPERATIONS LABOR	10
3/29/2012	MJ	JOHNSON	A300Y	VEHICLE CORRECTIVE MAINT. TASKS	VEHICLE CORRECTIVE MAINT. TASKS	3
3/29/2012	AU	URBINA	A1391	VEHICLE OPERATIONS LABOR	VEHICLE OPERATIONS LABOR	4
3/29/2012	AU	URBINA	A300X	VEHICLE PREVENTIVE MAINT. TASKS	MAINTENANCE HOURS	6
2/27/2012	KDD	DEPIERO	A300Z	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	VEHICLE HEAVY MAINT. / OVERHAUL TASKS	4
2/27/2012	WS	WILLIAMS	A1391	VEHICLE OPERATIONS LABOR	VEHICLE OPERATIONS LABOR	10
2/27/2012	RVA	VALENTINE	A300Y	VEHICLE CORRECTIVE MAINT. TASKS	VEHICLE CORRECTIVE MAINT. TASKS	6

03846

ER3846

Exhibit No. Ux25
Witness K. DePiero
Date 6/27/13

KWD CCR# 711

05-07-08 1ST A J SCHNEIDER
DUTY TECHS: DMK,TS,MM(M1),NB,IC
HANDBACK STATUS: NONE

- 1) DAILIES COMPLETED: NOTHING NEW TO REPORT. (DMK,NB,IC,MM)
- 2) RECEIVED PARTS: (4) REVERSER CONTACT SUPPORTS; (10) MAG VALVE COPPER GASKETS; (6) LEAF SPRING STUDS (SHAKLE BOLTS); AND, (10) TYPE-9 BRAKE DIAPHRAGMS. (TS)
- 3) DROPPED OFF RIDE INSPECTION REPORTS TO TONY GARCIA/CLARK COUNTY. (TS)
- 4) WEST SAT BERTH 2 DRS 1/2,BERTH 1 3/4& 5/6 (WINDS) (MM,NB,IC)
- 5) SPRAY PAINTED SPOTS ON THE NORTH AND SOUTH, WHERE DIFFERENTIAL TEMPS ARE TO BE TAKEN. (NB,MM,TS)
- 6) COLLECTED GENERATOR NAMEPLATE DATA FOR SKJ. (TS)
- 7) WORKED ON CALIBRATIONS. (DMK)
- 8) PM 1000 COMPLETED. (DMK)
- 9) WORKED ON SKILLS DEMO WRITE-UP. (TS)
- 10) READ MORE NEW EMPLOYEE INFORMATION. (IC)
- 11) TRASH RUN. (NB,TS)
- 12) ATTENDED ALL EMPLOYEE MEETING. (CREW)

3RD D A ROWELL
DUTY TECHS: DR,RDK(M-1),RV,PT,AU,RF,DA,CR,ED
HANDBACK STATUS: NONE

- 1) ATTENDED ALL EMPLOYEE MEETING. (ALL)
- 2) HAD TO ASSIST C-STATION SATELLITE DOORS IN CLOSING TILL WE TOOK IT OUT FOR MAINTENANCE. (RK,DK,RV,PT)
- 3) CENTRAL CALLED AT 22:41 STATING THAT THE NORTH WAS SITTING AT SATELLITE WITH 255 DWELL AND "DOORS FAIL TO CLOSE V-6". TRIED CYCLING DOORS WITH NO FIX. OBSERVATION IN ATC ROOM REVEALED THAT THE TRAIN HAD BEEN SITTING AT SATELLITE SINCE 22:33 W/RECYCLE BOARDING DOOR BERTH-3. WE HAD TO ASSUME THAT E-HANDLES WERE PULLED ETC. UPON ARRIVAL, FOUND ALL CARS W/E-HANDLES PULLED; RESET AND TRAIN DEPARTED ATO AT 22:48. ENTERED AS OPERATOR ERROR IN LOG TIMES. (RK,RV,ED,AU) F6>

④ COMPLETE BRAKE JOB AND BOTH TIRE REPLACEMENT FOR C8 7/8 DUE TO BROKEN ADJUSTER BOLTS, SEVERE FLAT SPOTS, AND OIL LEAKAGE ON HUB/DRUM ASSEMBLY. (DR,RDK,CR,ED)

5) RETORQUED C8 TIRES 5/6. (DR,PT)

⑥ REPLACED C-4 HP HEAD AND LP HEAD DUE TO AIR COMPRESSOR POPPING OFF. ALSO

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