AGENDA FOR THE
ENGLEWOOD CITY COUNCIL
STUDY SESSION
MONDAY, APRIL 5, 2010
COMMUNITY ROOM
6:00 P.M.

I. **Golf Course Fleet Study**
Parks and Recreation Director Jerrell Black and Golf Course Operations Manager Bob Spada will discuss the Golf Course Fleet Study.

II. **July 4th Update – 6:30 p.m.**
Police Commander Gary Condreay and Deputy Fire Chief Kraig Stovall will provide a July 4th Update.

III. **Naming of the Post Office – 6:45 p.m.**
City Council will discuss the naming of the South Broadway Post Office.

IV. **Council Chambers Timer – 7:00 p.m.**
Financial and Administrative Services Director Frank Gryglewicz and City Clerk Lou Ellis will discuss the timer for Council Chambers.

V. **City Manager's Choice**

VI. **City Attorney's Choice.**

Please Note: If you have a disability and need auxiliary aids or services, please notify the City of Englewood, 303-762-2407, at least 48 hours in advance of when services are needed. Thank you.

MEMORANDUM

TO: Gary Sears, City Manager

THROUGH: Jerrell Black, Parks & Recreation Director

FROM: Bob Spada, Manager of Golf Operations

DATE: April 1, 2010

RE: Electric Golf Carts

As the City moves in the direction of becoming more ecologically friendly or "Going Green", it becomes increasingly important for golf staff to look at our current gasoline golf cart fleet. On February 12, 2009 this issue was discussed with the Parks and Recreation Commission, which in turn recommended staff to pursue a study in regards to electric golf carts. On March 10, 2009 City Council approved the recommendation from the Parks & Recreation Commission and the initiation of a feasibility study of transitioning to electric golf carts. This analysis was completed, called The Golf Car Analysis and is attached with this memo.

The following are key recommendations/elements from the Golf Car Analysis:

- Convert the current gas powered golf cart fleet to an all electric fleet:
  We concur with the recommendation and will begin a six (6) year phased conversion program starting immediately. Phasing the conversion process will allow for annual budget appropriations for cart replacement (which is currently in place for our existing gas carts). Funding as part of the Miller Weingarten Golf Course Lease Agreement will allow us to purchase 18 electric carts immediately.

- Facility Modifications:
  Our current golf fleet is comprised of 70 golf carts. Storage for the existing golf carts is located in the basement area under the existing golf clubhouse. The conversion to electric carts will require additional electrical panels, replacement of the current ventilation system and repairs to the building. The City of Englewood Public Works Department will coordinate the facility modifications. They will begin immediately and will be complete by June 1, 2010. This will prevent any negative impacts to our prime golf season.
  The total cost estimate for the facility modification will be $116,540. Staff will bring forward in the next couple of weeks a supplemental appropriation to use funds from the Golf Course Unappropriated Fund Balance for the facility improvements.

- Additional Cart Storage Facility:
  The electric carts require additional space requirements per cart, therefore, the overall storage capacity will be diminished by 10 carts. The Golf Fleet Analysis recommends that an additional storage facility be constructed to house the remaining carts. We believe we need to investigate other storage opportunities prior to construction of a separate storage facility. Additional storage will not be needed for another 5 years through the phasing process.

- Multi Year Purchase Contract:
  Another recommendation from the golf study suggests that we continue with a multi year purchase contract. City Council approved a 5 year contract with additional multi year options for our existing gas cart fleet. This allowed for a consistency of the fleet, reduced our maintenance and inventory cost and provided substantial savings over a number of years. We are currently seeking bids for a multi year contract for the electric carts and hope to bring forward a bid award for formal approval in the next few weeks.

Comments:

- We believe stronger regulations for golf carts regarding air quality control will be forth coming. The electric carts will greatly reduce our carbon footprint.
- Working with the Public Works Department, we are researching possible grant and/or stimulus funding opportunities that may be available for future cart purchases.
- Phasing the purchase of the electric golf carts will eliminate an up front cost of $287,000 for a complete fleet replacement.
- The actual savings of converting from gas powered carts to electric carts at this time is minimal. If we are fortunate enough to secure state or federal grants for emissions reduction, the savings in our capital outlay could be significant. Also, if mandates that require reduced emissions related to air quality are put in place over the next few years, our conversion expenditure costs could escalate as well as the costs for the purchase of electric carts.
- The greening of the City and the Community is one of City Council's Goals.

Staff will be present at the City Council Study Session on Monday, April 5, 2010 to update Council on this project and answer any questions that you or City Council may have regarding the fleet analysis.

Please let me know if you have any questions prior to the study session.

Attachment – Golf Car Analysis

Cc Michael Flaherty, Deputy City Manager
Dan Brotzman, City Attorney
Rick Kahm, Director of Public Works
Dave Lee, Manager of Open Space
Wayne Niles, Golf Course Supervisor
Pat White, Fleet Manager

Report

To

City of Englewood

Golf Car Analysis

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Project Approach

FCS teamed with Avenue Architects to perform on-site facility inspections and staff interviews. This approach, coupled with a detailed benchmark analysis of nine other government agency golf courses, has resulted in our recommendations contained below.

Executive Summary

FCS is recommending that the City of Englewood change the type of technology used at the Broken Tee Golf Course to electric. The cost to implement the program is estimated to be $325,540 including most facility modifications. The purchase price for electric or gasoline cars is estimated to be the same. Therefore, the actual cost to use electric cars, less facility cost, is the same as using gas powered cars. FCS is recommending that this program be implemented over the next three to five year period.

FCS found that all nine of the agencies contacted are planning to or have implemented electric car programs. The reasons for changing range from emissions issues, complaints from the customers (about emissions), noise, customer perception, and reduced annual maintenance and energy cost. Within the industry, electric cars are perceived to be more up scale. Of the remaining gasoline powered cars in the agencies interviewed 49% are planned for replacement within the next few years. That will leave only a small percentage of gas powered golf cars in the Denver area.

Facility modifications include the installation of additional electrical panels and charging stations. The majority of the existing facility can be used. However, additional storage is highly recommended due to the manufacturer's parking requirements. There is a possibility that expansion of the existing storage facility could be performed. However, this option would require additional structural analysis. Additional or replacement ventilation equipment will also be required.

The results of the benchmarking analysis clearly indicate an industry trend to change the type of technology used on the courses today. While some agencies have postponed their implementation of the change to electric cars due to economic hardship, they still have plans to implement the program as soon as financially possible.

FCS also suggests that a multi-phased approach be implemented during the next three years. This will lessen the financial cash requirements. However, the facility improvement should be completed as soon as the decision is made to change to an electric fleet.

The Local Government Golf Car Inventory

Of the nine agencies interviewed, FCS found the [1]following:

- Total number of gas powered cars in inventory 2009 = 1,007
- Total number of electric powered cars in inventory in 2009 = 776

[1] The total number of cars for 2009 and the future do not equal the same amounts as some agencies are planning a decrease and some agencies are increasing fleet size.

However, the percentage of local, government-owned gas powered cars that will be changed to electric during the next 1 to 3 years is 49%. After the planned change, the new local government inventories will report as follows:

- Total number of gas powered cars in inventory (planned) = 512
- Total number of electric powered cars in inventory (planned) = 1,288

Financial Recap

The total investment to change the current fleet of gas-powered cars to an all-electric fleet is $325,540, which is the cost to complete facility improvements. The purchase price of an all electric car fleet is estimated to be $287,000 that is the same cost for gas powered cars. There are some offsetting savings that can be documented to repay this investment. Most all agencies interviewed said there is a notable reduction in maintenance. FCS findings support small saving to offset the increased cost for facility conversion to electric.

- The cost of electricity required to power an electric car for one round of golf is $.34.
- The cost to power a gas car is $.546 per round, (actual city cost).
- Fuel, or cost of energy, may save $10,480 / Yr. based on total rounds of [2]52,622.

The maintenance cost could be reduced by as much as 60% (current cost is $73.35 / YR.). Items such as oil filters, are cleaners, oil and spark plugs will not be required. This may account for a savings of $44.00 per car / YR. or approximately $3,000 per year total. The total cost savings could reach $13,840.24 per year. This would place the payback to convert to an electric facility at almost [3]24 years.
Additionally, some agencies said that they felt there was an increase in customer base after changing to electric.

Emissions Impact

Should the city elect to change to an all electric, (70 cars), fleet the positive impact to local clean air efforts would be considerable. It would be the equivalent to reducing the city's fleet by 180 full size sedans.

Basics About Electric Golf Cars

FCS has assembled some basic facts about industry electric golf cars. The information listed below was provided by one manufacture and other manufactures data may vary.

- Electric golf cars consume about .34 cents of electricity per round of golf.
- It requires 8.1 kilowatts to recharge a golf car after 2.5 rounds of golf.
- Some agencies interviewed use golf cars for 4 years and trade in for new cars prior to replacing the first set of batteries.
- There are approximately 4 to 6 batteries per car.
- The life of a battery is 4 to 6 years depending on usage.
- The cost to replacement a set of batteries is about $510.00 per car.
- Most batteries are a lead acid design very similar to what is used in a family car.

[2] Combination of par 3 and long course. Par 3 course was divided by 50% to equal a full round.
[3] This is based on 2009 dollars.

In general the parts used to build an electric car are the same parts used to build a gas powered car. The price to purchase an electric car is the same as a gas car.

Other Considerations

The operating weight should not be an issue as a gas powered car weighs 630 LBS and the electric car weighs 815 LBS. The existing turf maintenance equipment is considerably heaver than either of these vehicles.

The City of Denver recently completed a cost analysis for the option of using gas or electric. The analysis basically indicated that the life cycle cost of the electric car was slightly less expensive if gas prices remained high. Their facility change costs were not included.

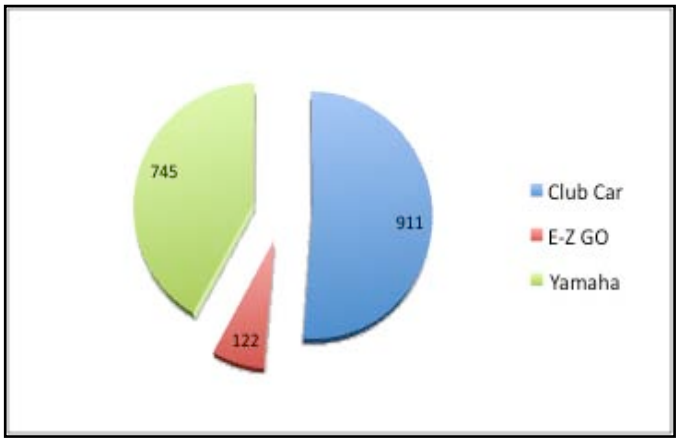
FCS could not find a local government golf fleet that has repair or maintenance records for electric cars. Records for gas powered cars address scheduling of oil changes.

There are some additional cost benefits, regarding inventories, for using electric cars. There would be a reduction in motor parts, oil filters, oil, gasoline and other small parts. However, grounds maintenance equipment will still require an inventory of oil and gasoline.

Detailed Findings and Recommendations

Golf Car Analysis

Manufacturer Analysis
Findings
The majority of the interviews conducted with other Colorado golf agencies revealed that Club Car was the preferred and recommended make. The agencies have no documented cost savings or extended life data to support this finding.
FCS found a wide range for the replacement ages; they appeared to be based strictly on how much maintenance each agency wished to perform on-site during the life of the car and trade in values. Three of the agencies will target a four-year replacement cycle. Three other agencies will target a six to seven year replacement age that also ties directly to the end of the second battery life. The remaining agencies are at ten to 12 years; these *longer life* agencies stressed an aggressive maintenance program.



Ownership by Brand

FCS is recommending a seven to eight year replacement target. Based on our conversation with the other agencies, the major portion of component wear commences just after the third battery replacement cycle; replacement at that time is financially sound because of the recent second battery replacement. We also think that with many other agencies going all electric, the market for used electric cars will be highly competitive. Cars with an average age of six to eight years will be the most desirable due to the remaining battery life of three to five years in private (non golf course) use.

Local Sales and Service Evaluation
Findings and Recommendations
The loyalty to an agency's vendor is very evident. FCS found that most golf agencies support the vendor that they purchased the cars from. FCS recommends developing a close professional relationship with the successful vendor for the purchase of the future replacement cars. In the bid documents, the issues regarding employee training, specialized tools or diagnostic equipment, and repair and operations documentation should all be included.

An extended warranty option should also be required and evaluated. One of the interviewed agencies stated that the vast majority of the maintenance and repair was performed at the storage facility during the normal workday, and they were always able to fill the tee time requirements.

Survey Information

FCS surveyed nine agencies in Colorado. Eight locations are in the Denver area. We included Grand Junction as the ninth location because they built facilities for electric cars in 2006.
Of the nine locations, two use gas cars, four use electric, and three use both. The two locations that use gas cars will start switching to electric in 2009 and 2010. Electric will be phased in as gas cars are replaced.

The reasons for preferring electric cars include the following:

- Ease of maintenance
- No fueling responsibilities or fuel spills
- No oil changes or associated maintenance costs
- No noise pollution
- No or low emissions
- Smaller carbon footprint
- Increased revenue
- Provides an “upscale” appearance

Those that use electric feel that the cars are cheaper to maintain, although we could not obtain documented records for comparison. One of the largest eliminated costs is fuel site maintenance and associated costs to meet federal, state, and local regulations. Additionally, cars will no longer run out of fuel, nor will there be a need to fuel cars when a surge of customers arrives.

Agencies that lease electric cars and turn them in at the end of their lease like the fact that maintenance is minimal. They ensure the lease term includes warranty and turn in the cars before they need batteries. To ensure even battery usage they rotate car usage.

Below is a summary of our questions with each location’s response.

Questions	Aurora	Colorado Springs	Denver	Englewood	Fort Collins	Grand Junction	Littleton	Longmont	Loveland	Westminster
Number of golf cars by manufacturer and fuel type?	Yamaha, 210-Electric/210-Gas	E-Z-GO, 70-Electric/53-Gas	Club Car, average 60-70 per course, Gas	E-Z-GO, 72-Gas	E-Z-GO, 50-Gas Owned, Yamaha, 20-Gas Owned, Yamaha, 75-Gas Leased for Golf Season only	Club Car, 90-Electric. Will increase to 95 due to increased revenue.	Yamaha, 160-Gas/70-Electric	E-Z-GO 120-Electric / Have 10 older gas for backup	Club Car 143-Electric	Club Car 133-Electric
If electric cars, when did you go electric?	2 of the 3 electric courses were built new and included electric carts. Electricity for a fleet of electric carts cost $12K annually. Gas uses 2-3K gallons of fuel.	Electric was there when superintendent started; electric start date unknown.	Converting to electric as gas wears out. First electric carts will arrive late 2009 or early 2010.		Will convert one course to electric next year; continue cart lease during season which should be electric too.	2006; $30,000 for converting 2 locations. Grand River Electric, Jim Fisher, 970-242-3271. Grand Mesa Mechanical did battery fume air exchange.	Electric at one course because it was built for electric. Cost prohibitive to covert other courses.	Converted over starting in 1992. Last course converted in 1997.	Date unknown, electric for a long time.	1994
Why did you go to electric?	Golfers prefer no noise. Third electric course stores carts under clubhouse. Golfers at gas courses have not complained about noise.	Unknown	Electric is easier to work on. Biggest reason is emissions are 66% less for electric.		Golf Division mandated courses to have smaller carbon footprint and be environmentally friendly.	Maintenance, emissions, noise pollution and customer perception. Course revenue increased since conversion. Tiara Rado next to Colorado National Monument and member of Audubon Cooperative Sanctuary.	One course built electric; prefers electric because it brings an upscale feel to the course. Golfers like it better because no noise.	Primarily because of maintenance; do not change oil, or other things associated with gas. Do not have to fuel carts and worry about gas spills. Noise and emissions were other considerations.	Primarily to not have gas to deal with.	Emissions; gas is messy; less maintenance. Both courses are Audubon Certified. Heritage is Audubon Signature Certified; it was designed with a wildlife habitat.
What life expectancy do you expect from electric?	**Golf Mgr:** Electric cost more to operate depending on fuel price, batteries are replaced every 3 years. Replace electric carts after 6 years and 2 battery cycles. Gas replaced around 8 years. **Electric Golf Supt:** Electric carts can last 10 years or more with proper maintenance and battery replacement.	On 4 year lease beginning 2009.	Expect the same life for electric as gas, 5-6 years. Purchased auto fill battery feature. Perform own maintenance at courses. Send repairs to distributor if can't perform in-house.	Gas on 6 year cycle.	Gas is 4 years, anticipates longer for electric with battery maintenance.	4 year cycle with 4 year warranty and no battery replacement. Gas was 5 years. Kept last gas group 7 years; used revenue for conversion. Maintenance 1x month water batteries and daily cleaning. Club Car onsite warranty. Auto battery fill. Conscious effort rotate carts; end with #55, start with #56 tomorrow. Ensure equal wear and tear.	10 years if maintained properly. Replace prior to 2nd battery. Electric is less costly and easier to maintain because no oil to replace and other items associated with gas.	Batteries are replaced around 4 years and kept 2-3 years more. Replacement is primarily due to cosmetic reasons and controllers start failing.	Instituted an aggressive maintenance program to keep carts 12 years. Get 5 year battery life by rotating carts from hilly to flat courses. Support Function group cleans and checks carts daily. Support performs majority of cart maintenance.	Carts on 4 year lease/purchase. Will turn in at end of lease due to brakes and axle maintenance problems when kept 5 years. Westminster performs own maintenance. Purchased EZ fill battery system.
Who are the top 4 manufacturers you prefer?	Yamaha. Aurora feel Yamaha is the best value. Have carts under lease/purchase plan.	E-Z-GO, Club Car	Club Car, Club Car, Club Car, E-Z-GO/Yamaha are tired for 4th.	Club Car, E-Z-GO, Yamaha	Yamaha, Club Car, E-Z-GO	Club Car, E-Z-GO, Yamaha. Battery last 2 rounds.	Club Car, E-Z-GO. Prefer Club Car because E-Z-GO hill brake kicks in automatically; is jerky.	E-Z-GO, Club Car, Feels Yamaha is trying to get back into the picture.	Club Car	Club Car, E-Z-GO
Who are the dealers you work with and their contact information?	Masek Golf Cars, joemasek@yahoo.com, Jason Masek, 303-837-0415	E-Z-GO, Shane Smith, 888-281-3946 / Club Car, Jim Muir, 303-761-3332 / Colorado Golf	Colorado Golf & Turf. Buy carts through the MAPO or National IPS buying plans. Great prices.		Masek Yamaha for lease and parts. E-Z-GO parts and sales, GTI, Barry Bellon, 303-288-1979	Did not ask. City fleet bought carts outright and Golf repays over 4 years.	Masek. Have Yamaha carts due to low bid. Prefer Club Car.	Cart maintenance performed at courses. Parts from Mile Hi or GTI. Cart purchase through Shane Smith, E-Z-GO representative.	Colorado Golf and Turf for parts, major repair and cart purchase.	Colorado Golf & Turf, Littleton, CO / Golf Tournaments, Inc. (GTI), Commerce City, CO / E-Z-GO Shane Smith, 888-281-3946 / Club Car Jim Muir, 303-761-3332
If we have additional questions specific to your program, who can we contact?	John Magnuson, Murphy Creek GC, 303-361-0843; Dennis Lyon, Golf Manager, 303-739-7889	Patty Jewett Course-Pat Gentile, 719-385-6940 / Valley Hi Course-Mike Cooper, 719-385-6921	Scott Rethlake, 303-437-7382	Bob Spada	Logan Derrington, Equipment Manager, Southridge GC, 970-416-2828; Doug Evans, Superintendent, Collindale GC, 970-221-6651	Rob Stong, 970-254-3830	Dave Tooley, 303-435-8233	Larry Mills, 303-651-8593	Scott Johnson, Cell: 970-217-3009 / Office: 970-962-3450	Ken Watson, 303-658-2192
Why do you prefer Club Car over other brands?						Selected Club Car because turning radius is best. All 3 dropped carts off to test. Selected model DS9 with 48 volt battery because of hills. E-Z-GO did not have 48 volt when bid. Yamaha $2.00 less per cart but drive not field tested and CC best turning radius. Also, have always had Club Car and they have always provided good product support.			Have always had Club Car and have provided good service and parts availability.	Selected Club Car because when reviewed E-Z-GO electric it had a new battery system that was not tested. Will review E-Z-GO again in 4 years for next lease.
What is the cost of electric per car per year?						Gas Budget 06-07 $8,142/65 carts=$125.26 Electric Actual 07-08 $7,100 (includes bldg) /70 carts=$101.43				

Warranty Analysis

Findings

One of the agencies interviewed recommended purchasing the extended warranty (4 year warranty) and replacing the cars at the end of the warranty period. They stated the maintenance that was required, while under warranty, was performed on site by a trained dealership technician and was very minimal. They also opted for a trade in when replacement units were needed. They stated that having the cars *dealer maintained* added to the trade in value.

Recommendations

FCS recommends that the first purchase of electric cars should have an extended warranty option and a buy back guaranteed amount at the end of the warranty period. In the heavy equipment industry this is called a guaranteed maintenance and buy back option. The one draw back to this type of purchase agreement is that the second round of purchasing is very attractively set for the previous vendor

Car Replacement Program Recommendations

Recommendations

FCS is recommending that a portion of the newly acquired electric cars be considered for an optional extended warranty period of four years and that an additional option be shown on the bid for a trade in at that time. The bid document should not lock the city into a formal agreement, but rather allow the city to see what the cost of ownership would be compared to keeping the cars for the recommended six to eight year life. Additionally, the bid should have an option to extend the bid award for a multi-year period so that the fleet can be standardized, thus reducing repair parts and batteries. The extended bid award would also make the customer interface, (golfers), a more pleasant experience.

Optional Test Period

Should the city be apprehensive regarding the recommendation to change the fleet to an all-electric fleet then a test period should be conducted. FCS would recommend that approximately 4 to 6 electric cars be acquired on an annual lease program with an option to extend the lease to four years. Then the data collected by the city on the electric cars should be compared to data collected to gas powered cars. This comparison must include the following criteria:

1. The daily usage must be the same.
2. Strict records must be kept for all costs.
3. Interviews must be conducted with the golfers after completing their round and using both electric and gas powered cars.
4. The results must be open to review at any time.
5. An emissions impact analysis should be completed by city staff at the end of golf season.

After the test period the city can draw their own conclusions.

Battery Specifications
Recommendations
FCS is recommending that a performance specification for battery options be developed and presented by each vendor as part of the bid process. A desired four-year battery life should be the target. It should be the responsibility of the vendor to meet that performance specification. Should the battery fail prior to the desired or specified time frame, the vendor must replace the battery on a prorated scale that is equivalent to the percentage of life specified in the bid divided by the life realized.

Storage Facilities Analysis

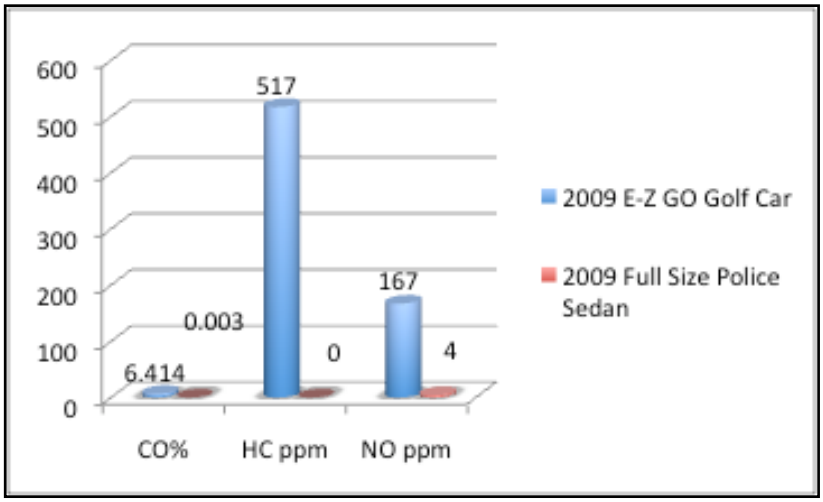
Charging System for Electric Cars
Please refer to Attachment B for specific details regarding facilities and electrical requirements.

The bid specification will require a charging unit to be part of each car. An additional charging unit will be made part of the bid requirement so that one new part will be in stock the first day of operations.

Fire and Safety Requirements
FCS recommends that a fire inspection be performed prior to the starting date should the city convert to electric cars.

Emissions Analysis - Electric Versus Gas

Findings
FCS requested the city's fleet maintenance division to perform a series of tests on city vehicles and golf cars. The results, listed below, are quite startling.



The chart above lists the results of emissions tests performed by the City's Fleet Maintenance Division. This test was performed on a 2009 golf car and a 2009 full size police sedan.

Basically the results show that one new golf car is more polluting, depending on usage, than ten full-size police sedans. When compared to an older golf car, the results are even

more startling. **FCS estimates that the current inventory of gasoline powered golf cars in service during a prime use, (summer day), period could equal the emissions, depending on usage, of 180 full size police sedans daily.** However, this information must be tempered with the fact that golf is not played year around and the use of golf cars during weekdays is less.

The pollution produced by an electric car is very marginal compared to a gas-powered car. The carbon footprint is even smaller for an electric-powered car. Some reasons for this are listed below:

1. The elimination of use of gas, (for golf cars).
2. The delivery vehicle that fills the gas tank at the course uses diesel fuel.
3. The maintenance of a gasoline-powered car generates used oil and engine parts such as spark plugs. These parts and spent fluids must be hauled away, most likely in large trucks, powered by diesel.
4. The vehicle used to deliver and pick up the cars is a delivery truck. This can be addressed in the bid process (all delivery and support vehicles used to service the successful bidder's cars shall be powered by an alternative fuel).
5. When sold, the used gasoline-powered car will continue to operate using gasoline, parts, and spent fluids.

This could be compounded locally if the cars are disposed of by using local auction services.

Recommendations

It would be in the best interest of the City of Englewood to demonstrate its stand on local clean air initiatives and follow the recommendation to convert during the next three to five years to an all-electric golf car fleet. While the start up cost (please refer to cost benefit analysis below) will be more than standard operating cost for a gas powered fleet, the clean air issue cannot be overlooked.

Cost Benefit Analysis

FCS outlines the cost analysis below. As noted the repayment time is considerably longer than would be desired for any business investment; the impact analysis is even harder to determine. Intangible benefits include the following:

1. Customers appreciate the use of an upscale car.
2. Clean air golf players will support your effort.
3. The word will spread in the golfing community.
4. There is an opportunity for marketing for additional golfing.

FCS is confident that the switch to an all-electric golf car fleet will benefit the city, overall, in the long term. However, the cost is considerable.

Investment in Electric Fleet

Facilities = $325,540

Purchase of electric cars = $287,000 ($4,100 each @ 2010 prices)

Other cost = $0.

Total estimated cost = $612,540.

Investment in Gas Fleet

Facilities = $0

Purchase of replacement gasoline cars = $287,000 ($4,100 each @ 2010 prices)

Other cost = $0

Total estimated cost = $287,000.

There is no additional cost projected for electric cars over gasoline cars except facility costs. In fact, there is an annual savings of $13,840.24. There is a reduction in energy cost, however there is an increase in electric service charges. These costs can only be estimated at this time due to the charging time requirements of the cars (depending on daily use), and the peak verses off peak rates in effect at the time of charging.

Basic About Electric Golf Cars

FCS has assembled some basic facts about industry electric golf cars. The information listed below was provided by one manufacture and other manufactures data may vary.

- Electric golf cars consume about .34 cents of electricity per round of golf.
- It requires 8.1 kilowatts to recharge a golf car after 2.5 round of golf.
- Some agencies interviewed use golf cars for 4 years and trade in for new cars prior to replacing the first set of batteries.
- There are approximately 4 to 6 batteries per car.
- The life of a battery is 4 to 6 years depending on usage.
- The cost to replacement a set of batteries is about $510.00 per car.
- Most batteries are a lead acid design very similar to what is used in a family car.
- In general the parts used to build an electric car are the same parts used to build a gas powered car.

Attachment A

Specifications

Component or Structure	Minimum specification or performance standard required.	Bidder to respond in this section. If the specification or performance standard can be met the bidder shall write the words "Can Meet all requirements" next to section. If there are exceptions, the bidder shall outline in an attachment the items that they are taking exception to along with any additional cost. List cost for optional equipment.
Statement of intended use	It is the intent of the City of Englewood to purchase and use industry standard driver friendly golf cars at our Broken Tee golf course. The cars that will be acquired shall be of current model year (this year shall be 2010) and shall be designed and engineered to provide daily use as normally expected for a golf course. The car will be electric and capable of providing at least 36 holes of non stop use without recharging. The car will be expected to be fully recharged and ready for daily use after overnight recharging.	
Body	Factory standard body with front and rear bumpers. Fender scuff guards to be located on rear fenders. Frame to be constructed of welded steel and painted to withstand life cycle of eight years of normal usage without rusting. Ground clearance shall be 4.5 inches or greater.	
Tires and Wheels	Factory standard wheels with 4 ply flotation turf tires. Power Rid tread design desired.	
Color	Please specify factory standard colors and list optional colors with price per unit.	
Canopy	Factory standard full size canopy. White or light in color. Canopy must be supported on all four corners. Forward mounted card holder, roof mountings for future GPS and grab handles for both sides are required.	
Steering	Factory standard rack and pinion steering with sealed lubrication points. Please specify turning radius.	
Suspension	Single axle suspension with shock absorbers on front and rear axles.	
Drive Train	Electric motor with a minimum of 3 horse power. Capable of obtaining 14 MPH fully loaded on level ground.	
Console	Four cup holders with large storage area required. Golf ball and tee holders required.	
Golf Bag Well	Bag well must be capable of storing two large golf bags securely.	
Seating Capacity	Factory standard heavy duty vinyl. Light color. Seating for two full size adults.	
Brakes	Self adjustable brakes with park brake controlled by brake peddle. Down hill speed control required.	
Batteries	Battery life must meet a four year replacement cycle. Bidder is to specify which battery set / design is being bid and the benefits of that set. For each five cars a full set of reserve batteries will be included after one year of use. The cost of the reserve batteries shall be included in this bid. Delivery will be scheduled by the city at a later date, approximately 1 to 2 years from award date.	
Battery Charger	Battery charger to be mounted in such a fashion as to allow for cord, (included on car), to be centered in body just behind seat. Side mounting not acceptable. Cord to be 18 feet.	
Speed Control	Multiple speed settings desired. Speed setting method shall not be accessible by customers.	
Gear Selection	Gear selection shall be controlled by a key or toggle switch located within easy reach of the operator.	
Rear Wheel Drive	Car shall have limited slip rear wheel drive.	
Manuals	Parts and service manuals must be delivered with each model year.	
Vehicle Warranty	Please specify standard and optional extended warranty including any additional cost.	
Drive train	Minimum 3 horse power electric motor.	
Options (to be mounted if selected)	**Bidder is to list price.**	
Additional warranty	Please outline additional warranty and cost. Use attached document if required.	$
Sand bucket	Factory standard option. Must be mounted and ready for service upon delivery. Show additional cost for two buckets.	$
Windshield	Factory standard two piece folding, tinted. Must be mounted and ready for service upon delivery.	$
Beverage Cooler	Factory standard option. Must be mounted and ready for service upon delivery.	$
Club and ball washer	Factory standard option. Must be mounted and ready for service upon delivery.	$
Sweater bucket	Factory standard option. Must be mounted and ready for service upon delivery.	$
Tow bars	Two factory standard tow bars are required.	
Battery fill system	Factory standard option. Must be mounted and ready for service upon delivery.	$
Four additional wheels and tires (Mounted)	Factory standard option. Tires must be mounted on wheels and ready for use.	$
Logo	City may wish the supplier to install decals (city logo) on each car prior to delivery.	
Numbering	The city may request each car to be numbered.	
Wheel covers	Factory standard option. Must be mounted and ready for service upon delivery.	$
Hand held testing and diagnostics system	Factory standard option. Must be mounted and ready for service upon delivery.	$
Bid award	It is the intent of the City of Englewood to award this bid for a period of 8 years. That would be consistent with two projected battery life cycles. The City reserves the right to extend this bid award for another 4 years after the eighth year of the contract. Please respond if this approach is not acceptable.	
Additional Information	The bidder should list any additional information that they feel should be addressed or that these specification did not address in sufficient detail.	
Bid Price	Please list bid pricing for each car including additional batteries as a separate cost.	$ Car
		$ Batteries

Attachment B

Architect's Report

Facilities Findings and Recommendations

3457 Ringsby Court Suite 317 Denver, CO 80216 www.avenueLarchitects.com p: (303) 290-9930 f: (303) 290-0274

City of Englewood, Colorado
Broken Tee Golf Course
Clubhouse Golf Car Storage Analysis
November 6, 2009

1. Purpose of the study

The goal of this effort is to provide a preliminary analysis of the impacts of electric golf car storage in the existing clubhouse storage area. Presently, gasoline-fueled golf cars are utilized. The City of Englewood Department of Parks and Recreation owns and operates the Broken Tee Golf Course and its associated clubhouse facility. The City requested this analysis so that it can better understand the facility implications of converting from gas to electric golf cars.

Clubhouse, south side

2. Building Data

The golf course and clubhouse are located at 2101 W. Oxford Avenue, Sheridan, CO 80110. The clubhouse building is wood-framed with painted wood siding on the exterior and a standing seam metal roof in a hip configuration. The main entry faces south to Oxford Avenue, with public parking located to the south of the building. The building is at the south end of the golf course. It is a one-story building plus basement. On the main level there is a restaurant with commercial kitchen, meeting rooms, pro shop and restrooms. Golf cars are stored in the basement, with access on the east and west sides provided by concrete ramps down to the lower level.

Date of construction: March 1981, with major additions to the east and west in 1994.
Building owner: City of Englewood, Colorado

3. Project Participants
The project participants met on September 15, 2009, at the golf course to discuss the project, followed by on-site observation of the clubhouse basement.

Dave Lee, Manager of Open Space
1155 W. Oxford Ave.
Englewood, CO 80110
(303) 762-2687
dlee@englewoodgov.org

Bob Spada, golf course manager
2101 W. Oxford Avenue
Sheridan, CO 80110
(303) 762-2670
bspada@englewoodgov.org

Dave Henderson, Englewood Engineering Services
1000 Englewood Parkway
Englewood, CO 80110
(303) 762-2506
dhenderson@englewoodgov.org

Jim Wright
Fleet Counselor Services
1655 N. Sundial
Mesa, AZ 85205
(480) 396-3636
jwright@doitnow.com

Kathy Lingo, AIA, NCARB, architect
Avenue L Architects
3457 Ringsby Court Suite 317
Denver, CO 80216
(303) 290-9930
kathy@avenueLarchitects.com

Mark Johnson, PE, mechanical and plumbing engineer
McGrath, Incorporated
5353 West Dartmouth Avenue, Suite 506
Denver, CO 80227
(303) 969-0220
mjohnson@mcgrath-inc.com

Jeff Nielsen, PE, electrical engineer
JCN Engineering
3281 Routt Street
Wheat Ridge, CO 80033
(303) 239-0736

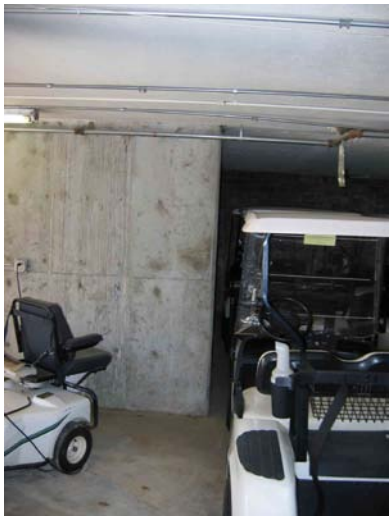
jcneng@comcast.net

4. Storage capacity of existing facility

The existing facility stores 70 gasoline-fueled vehicles, including golf cars, three golfer fun vehicles, two player assistant vehicles, one driving range vehicle and one picker. Other existing storage in the basement will remain. Cars are parked three deep along the north wall and two deep along the central portion of the south wall. There is insufficient vertical clearance for two-deep storage at the west end of the south wall.

Ramp to basement, east side

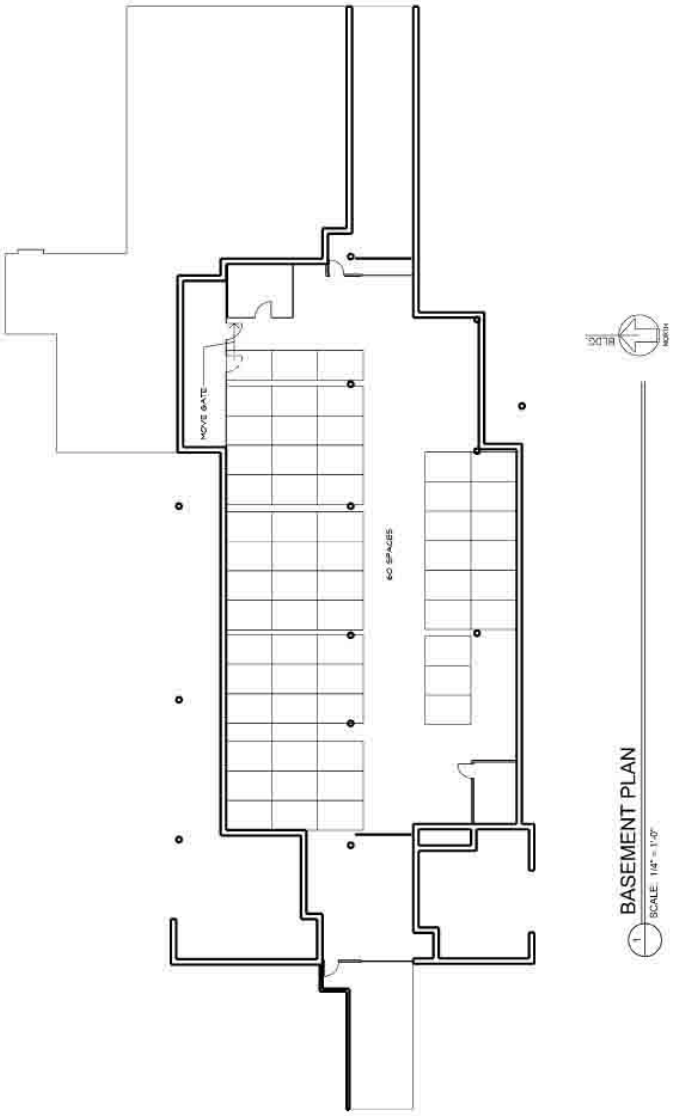
Ramp to basement, west side



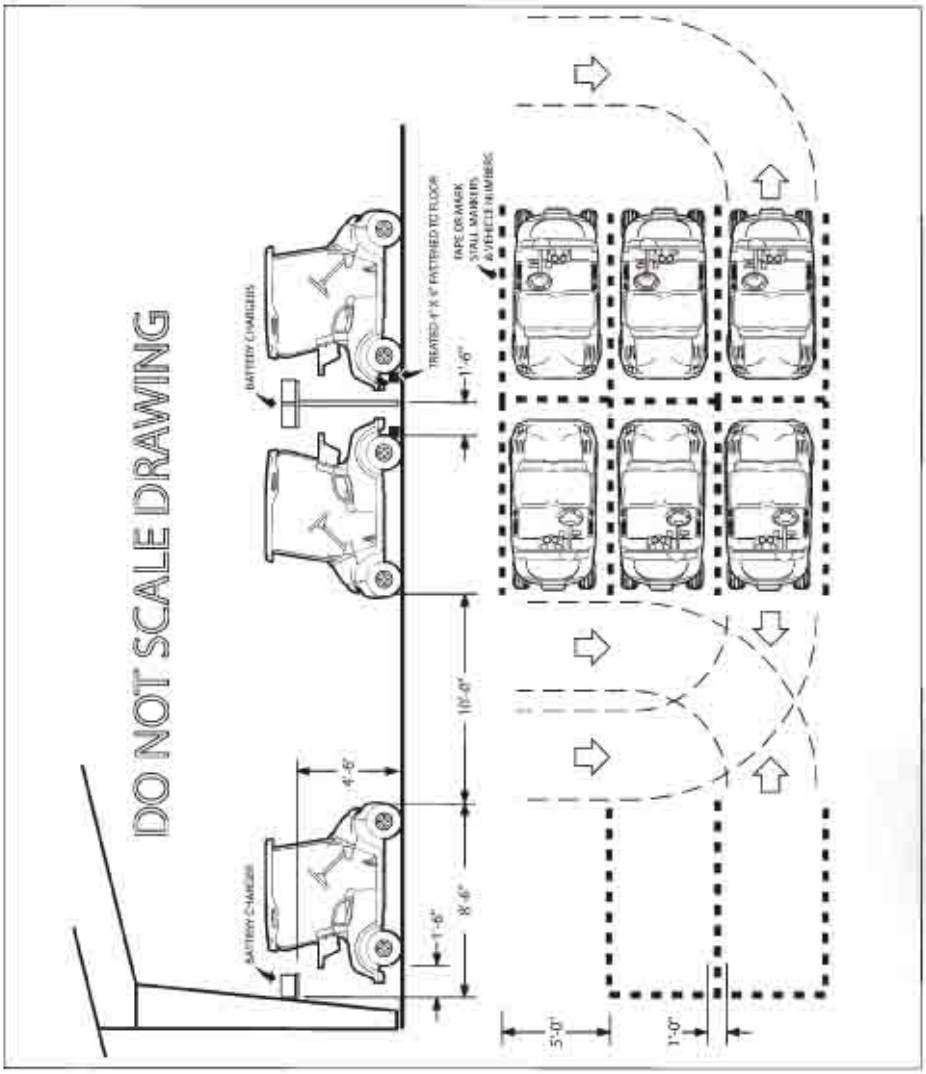
The existing basement has unpainted cast-in-place concrete walls and a concrete floor slab. The ceiling is gypsum wallboard with surface-mounted fluorescent light fixtures, surface-mounted exposed conduit, and exposed sprinkler piping.

Existing Basement

Conversion to electric vehicles will result in fewer vehicles being stored in the clubhouse basement. Electric vehicles are about the same size as gasoline-fueled vehicles, but they require more clearance between them when parked. This is because a person needs to be able to walk between the vehicles to access the ceiling-mounted battery chargers and plug-ins. E-Z-Go, a leading manufacturer of electric golf cars, recommends parking stalls 8’-6” deep by 5’-0” wide, with no double-stacking; in other words, all vehicles would be immediately adjacent to a drive aisle (see diagram p. 5). Since the Broken Tee clubhouse storage configuration will only work with double and triple stacking, additional clearance is needed between parked vehicles for access to the chargers and plug-ins.



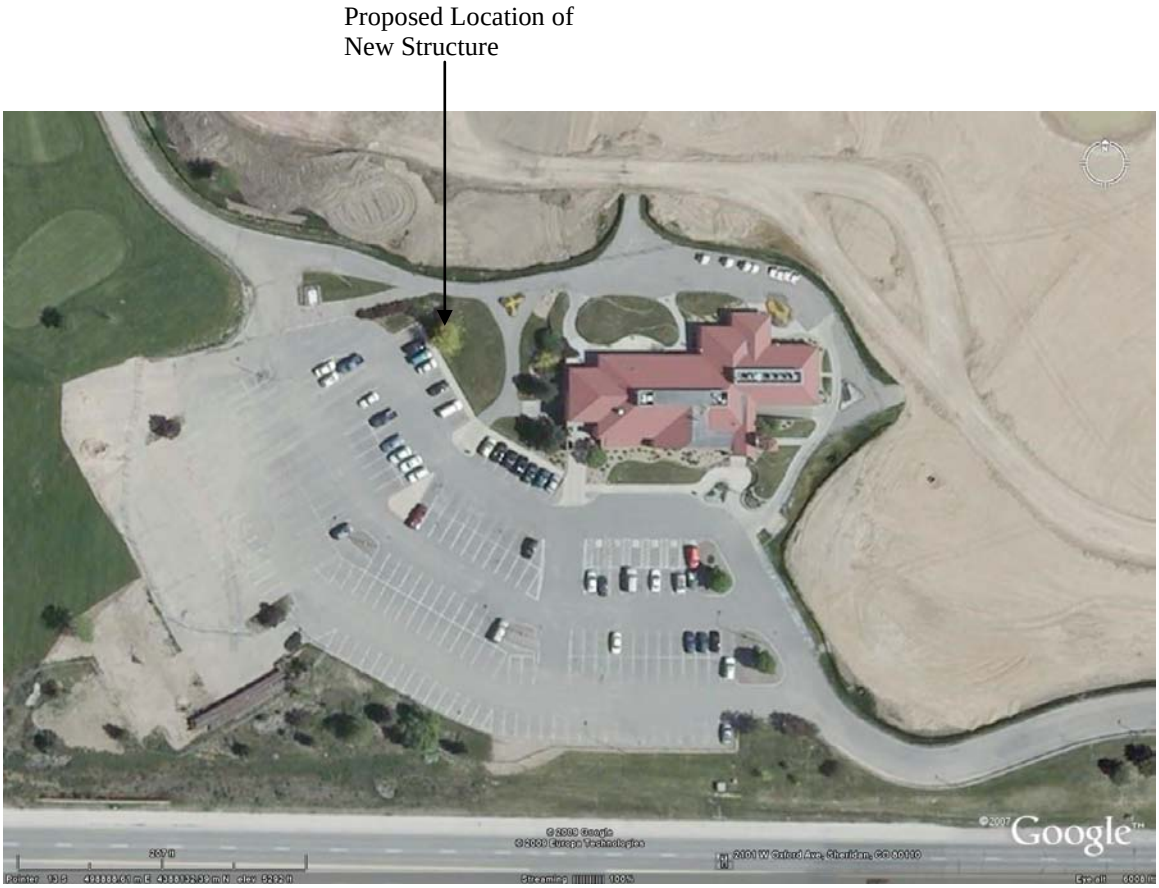
Broken Tee Clubhouse Basement, Proposed New Car Storage Layout
(note: drawing not to scale)



E-Z GO Recommended Layout

A stall layout of 8’6” deep and 5’6” wide will provide about 18” of clearance between vehicles. With this layout, the existing facility will accommodate storage of 60 electric cars. One gate to the existing chain-link fence enclosure on the north side will need to be relocated in order for this layout to work (see Basement Plan p. 4).

This results in a deficit of ten vehicles that will need to be stored elsewhere on the site in a new freestanding structure. Using E-Z-Go’s recommended layout, this would be a building of about 27 feet by 35 feet, or 945 square feet. The preferred location is just west of the building, where paved car circulation already exists. The new building would require electrical service sufficient to support the battery chargers for ten vehicles, and a ventilation system to exhaust the hydrogen gas resulting from batteries out-gassing (see mechanical description below). Thus it is more sophisticated than a simple garage. The building does not require sprinklers and does not need to be fire-rated construction. The City may wish to consider a larger building to accommodate other storage needs.



5. Electrical

Electrical Service and Distribution: The existing underground electrical service for the building is located in the basement and is a 400-amp, 120/208 volt, 3 phase service. The service entrance conductors consist of two sets of 4 #4/0 copper conductors in conduit from a 75 kva pad mounted transformer located on the southwest side of the building. Located in the basement at the service entrance location is a meter, CT enclosure, a 400-amp panel B, and a 200 fused disconnect tapped ahead of panel B. The existing electric

demand meter #44324T has a recorded peak load of 76 kw in August of 2008. This converts to approximately 211 amps of peak load on our existing 400-amp service.

Based on a design for 60 cars and the suggested calculation by Club Car, our new cars will require 200 amps of 120/208 volt, three-phase power. A new 20-amp simplex receptacle in a cast weatherproof box will be required above each car located on the ceiling. Each car requires a dedicated 20-amp circuit and neutral conductor. This assumes the cars purchased include a built-in battery charger and cord. All of the new boxes and conduit will be surface mounted on the ceiling and will be watertight to avoid water contamination from leaks in the building above.

With a new total load of approximately 411 amps (200 amps for cars and 211 amps existing load) we recommend replacing and upgrading the existing 400-amp service to a 600-amp service. This will require a larger transformer by Xcel Energy (150 kva), new service entrance conductors and conduit from the transformer to the basement (2 sets of 4#350 kcmil in 3" conduit), a new transient voltage surge suppression device and a new 600-amp rated, main circuit breaker panel to replace the existing 400-amp panel and 200-amp fused disconnect.

The new 600-amp panel would include a 200-amp breaker to feed the existing 200-amp fused switch feeder, a 225-amp breaker to feed existing panel B, and one new 20-amp single pole breaker to feed each car-charging receptacle (a total of 60). This panel would also include three breakers for new make up air unit and two exhaust fans, which will all be three-phase loads.

It is recommended that a professional engineer be contracted to produce the construction documents for a contractor to install this system.

Lighting: The existing fluorescent lights in the golf car storage area would be removed to allow for the installation of the new surface mounted conduit and then reinstalled.

6. Mechanical

The existing car storage area is located in a basement area beneath the clubhouse. There are roll up doors at each end of the garage area with ramps up to grade.

The existing mechanical system consists of an exhaust fan located on the south side of the garage area, which is ducted to a louver on the south side of the building at grade. There are motorized dampers at each end garage near the roll up doors. The exhaust fan is controlled by a carbon dioxide detector located on one of the columns in the garage. The exhaust fan is not operational and appears to have not been operated in a long time. The existing ventilation system is not tempered, and there is no heat in the garage area.

Exhaust Fan

Motorized Damper

The existing mechanical systems are beyond their useful life and require replacement.

New mechanical systems will be required to prevent the accumulation of hydrogen gas from the batteries out gassing. The level of hydrogen gas must be kept at a concentration of one percent by volume of the room.

We have reviewed the Club Car and the E-Z-Go vehicle storage facility ventilation requirements. Both manufacturers recommend a minimum of five air changes per hour (ACH) of ventilation air. The existing parking facility is 5,850 square feet with an eight-foot ceiling height. For the 5 ACH, 3900 CFM of outside air would be required.

Section 608.6.1 of the 2006 International Fire Code (IFC) requires a ventilation rate of one CFM per square foot of floor area. This would require 5850 CFM of outside air. Since the IFC requires a higher ventilation rate, this will be utilized in lieu of the golf car manufacturer's guidelines.

The batteries in the golf cars will outgas year round. As such, the new ventilation system needs to be a tempered system. A new natural gas, indirect fired make-up air unit would be located at grade on the south side of the building and a screen wall or shrubbery used to hide the unit.

Proposed Make-up Air Unit Location

Ductwork would be routed from the make-up air unit through the existing exterior louver and into the garage area. The make-up air unit would be sized for 5,850 CFM with a 60-degree temperature rise on the heating section. The unit would have a 600,000 BTUH furnace section and a two horsepower supply fan at 208V/3p. New gas piping would be routed from the existing gas meter located at the southwest corner of the building.

New exhaust fans would be mounted at the existing louvers at each end of the building and ductwork routed in between the fan and the louver. The exhaust fans would be interlocked with the make-up air unit. The ventilation system will be controlled from a hydrogen detector mounted in the space. The system will control to maintain the hydrogen level at less than one percent by volume. The heating section on the make-up air unit will control to maintain a discharge air of 50 degrees F.

These improvements should be designed by a professional engineer.

7. Building Code

The facility is located in the City of Sheridan, which currently uses the 2003 International Building Code (IBC).

Building data (per 1994 addition drawings by Ohlson Lavoie Corporation):

Occupancy A3 Assembly, with B1 Golf Car Storage
Type of Construction VN (which would be called VB in the IBC)
Area: First floor 8485 SF, Basement 5980 SF
Partially sprinklered on lower level
Two-hour separation between the two floors was specified on the 1994 drawings with a floor/ceiling construction meeting UL G503: concrete slab on steel bar joists with Type X gypsum board ceiling on metal furring strips.

Battery storage as required by the new electric golf cars is allowable in a B occupancy under current codes. The required separation to the A3 occupancy above is sufficient, but the two-hour separation has been breached in some locations as holes have been cut in the gypsum board ceiling. The breached areas should be repaired with Type X gypsum wallboard to re-establish the required fire separation between the two floors.

8. Water leaks

The existing basement ceiling shows signs of water leaks. This is a safety hazard that would become even worse when electrical upgrades are installed, and it needs to be addressed as part of the conversion to electric golf cars.

The first step is to identify the source of the water, which is outside the scope of this preliminary study. The commercial kitchen directly above has an old, worn-out floor and lacks a wrapped cove base on the walls. In some locations, it appears that leaks can occur around existing kitchen equipment floor drains. We recommend that the City contact a commercial kitchen contractor to walk through the kitchen and prepare a cost estimate to replace the flooring and base, and any other repairs required to stop water leakage from the kitchen into the space below.

Another potential source of water leaking into the basement may come from water piping that runs in the ceiling cavity above the basement. This needs to be directly observed by cutting some new access panels in the ceiling. Since the original building was built in the 1980s, there may be asbestos in the ceiling materials and/or on plumbing wraps. Thus we recommend a hazardous materials study first, so that adequate precautions can be taken if needed. Once these conditions are known, then access panels should be cut in order to observe whether or not piping above the ceiling is leaking into the basement. Any leaking pipes should be replaced. Holes cut in the ceiling should be repaired to maintain the existing fire separation. At a few locations, the holes should be replaced with fire-rated access panels to allow access to the ceiling cavity for future repairs.

Another source of hazardous water leakage in the basement is an existing ice machine. This machine, currently stored in the basement, is leaking onto the floor. It should be repaired or replaced before these electrical improvements are constructed.

9. Summary of Recommendations

A. Existing facility will park 60 vehicles. New facility of 945 SF minimum needed to store ten additional vehicles.

B. Identify and repair sources of water leaks.
   1) Obtain hazardous materials study of ceiling and piping above ceiling.
   2) Repair piping leaks found above ceiling.
   3) Replace kitchen floor and base and make other repairs as needed to stop leakage from kitchen.
   4) Repair or replace leaking ice machine in basement.

C. Repair existing ceiling to maintain required fire separation. Add fire-rated access panels.

D. Replace existing 400 amp electrical service with new 600-amp service. New Xcel transformer, panel, service conductors, surge suppression, disconnect, and new 20-amp ceiling-mounted receptacle on dedicated circuit for each of the 60 golf cars.

E. New exhaust fans and tempered make-up air unit.

F. New landscaping to screen make-up air unit.

G. New building to store ten additional vehicles, including similar power, exhaust and make-up air requirements. A minimum of 945 square feet is needed.

10. Cost Estimate

This estimate does not include costs associated with investigation and repair of water leaks through the existing basement ceiling. It does not include the cost of a hazardous

materials investigation, kitchen flooring replacement, kitchen floor drain repairs, piping repairs above ceiling if required.

Modifications to existing building:

Architectural:			
Re-stripe floor to new car layout	300.00		
Repair existing ceiling, allow	3,000.00		
New fire-rated ceiling access panels (4)	1,500.00		
Relocate gate in fenced storage area	425.00		
New concrete equipment pad	500.00		
for make-up air unit			
Landscaping to screen make-up air unit	600.00		
Mechanical:			
Mechanical demolition	1,040.00		
Make-up air unit	11,060.00		
Exhaust fans (2)	4,370.00		
New ductwork	500.00		
Controls	4,500.00		
Mechanical sub overhead & profit 15%	3,221.00		
Electrical			
Service entrance conductors and			
Conduit from xfmr	6,600.00		
New Cuts installed in existing CT can	1,000.00		
New 600 amp MCB panel with branch			
Breakers	5,100.00		
Connect existing feeders & circuits			
To new panel	1,000.00		
New receptacles & conduit for			
Each car plug (60)	15,000.00		
Remove & reinstall light fixtures	500.00		
New TVSS device on new 600A panel	2,950.00		
Mech equipment connections (3)	1,950.00		
Electrical sub overhead & profit 15%	5,100.00		
Subtotal		$70,216.00	
15% contingency		10,533.00	
GC General conditions 15%		12,112.00	
GC overhead & profit 15%		13,929.00	
Mechanical Engineering fees		3,250.00	
Electrical Engineering fees		4,500.00	
Architect fees		2,000.00	
Total Existing Building Modification cost			**$116,540**

New Building:

945 SF @ $200/SF =	189,000.00	
Architect & engineering fees	20,000.00	
Total New Building cost		**$209,000**
Grand Total		**$325,540**

CITY OF ENGLEWOOD
POLICE DEPARTMENT

MEMORANDUM

TO: Mayor Jim Woodward and Members of the Englewood City Council
City Manager Gary Sears

THROUGH: Police Chief Tom Vandermee

FROM: Commander Gary Condreay

DATE: March 24, 2010

SUBJECT: 2010 Fourth of July Planning

Event Objectives:
Safety: The primary objective of the planning committee is to continue to provide an event that is safe for members of the surrounding communities to attend and enjoy. Thanks in a large part to the efforts of everyone involved this objective has been met each year.

Fiscally responsible: Financial resources for this event continue to be a concern although the revenues for this event met the material costs in 2009. The tables detailing revenues and expenditures for the 2009 event are included at the end of this memorandum. In 2008, the planning committee recruited three new sponsors, the cities of Centennial and Sheridan, and Arapahoe County. These three partners contributed a combined total of $7,000.00 to the event in 2008 and 2009 and have committed their support for 2010. The revenues received for 2009 from our sponsors were as follows:

Englewood	$8,000.00
Littleton	$8,000.00
SSPRD	$2,500.00
Arapahoe County	$5,000.00
Centennial	$1,000.00
Sheridan	$1,000.00
Total	$25,500.00

In 2009 we received $2,428.00 in vendor fees.

There were no donations from private sources in 2009. In 2008, we received one donation from Craig Hospital for $500.00.

We have $1,502.67 carried over from last year's event.

If we are able to collect the same contributions and fees as in 2009, we will have $29,430.67 in capital to work with for 2010's event. Our expenses for 2009 were $28,618.57. If we do not receive the same support in revenues as in the past, we will need to reduce expenditures.

While the addition of Arapahoe County, Centennial and Sheridan as sponsors has kept us in the black the past two years, it will remain important to continue to look for additional donations, sponsors, or revenues to mitigate the rising material costs of the event.

Fun: In 2009, we were again able to again offer the fishing derby and duck races. SSPRD continued with free field games at Cornerstone Park. These games were well received and participation was good. We are planning to continue with these activities in 2010. Other free activities will continue to be a part of the event including the watermelon eating contest, Drug-Free Marshalls, face-painting, the Grant Street Playground and the Air-Life helicopter visit. Our for-fee food and activity vendors will be there as well.

The fireworks show will remain the same which consists of approximately a 20 minute show. The going rate for a show of the caliber we present is approximately $1000 per minute. The bid for the fireworks show went out in January. It appears the contractor for the past several years, Western Enterprises, still offers the best value for the money, and has an outstanding reputation for safety and operations. They will provide a discount of $1,000.00 if payment is made by May 1, 2010.

Organized: The staffs of the fire, police and parks departments of the three primary sponsors, Englewood, Littleton and South Suburban Parks and Recreation, each do an amazing job planning for, organizing and supervising this event from year to year. We have established a wonderful partnership that works very well.

The planning committee looks forward to providing our communities with another outstanding event this Fourth of July. Please do not hesitate to contact us with your questions, suggestions and concerns.

Gary Condreay
Commander (Fourth of July Planning Committee Chairman)
Englewood Police Department
3615 S. Elati St.
Englewood, CO 80110
303-762-2434 (cell 303-994-8041)
gcondreay@englewoodgov.org

Financial Detail:

4th of July Revenues and Expenditures for 2009

As of August 31, 2009

Balance Forward

Revenues	$ 2,004.86
Contributions	
Entry Fees	
Interest thru August	25,500.00
Total Revenues	2,428.00
	188.38
Expenditures	28,116.38
	28,618.57
Balance 8/31/09	
	$ 1,502.67

Revenues

Date	Event Type	Description	Amount
01/01/09	Balance Fwd	Balance forward	2,004.86
	Balance Fwd Total		2,004.86
02/19/09	Contributions	City contribution	8,000.00
03/09/09	Contributions	Name: City of Littleton	8,000.00
03/16/09	Contributions	South Suburban 4th July | Name: South Suburban	2,500.00
04/09/09	Contributions	Name: City of Centennial	1,000.00
05/14/09	Contributions	Arapahoe County Contributions	5,000.00
05/18/09	Contributions	City of Sheridan July 4th | Name: City of Sheridan	1,000.00
	Contributions Total		25,500.00
05/22/09	Entry Fee	Holland Concession LLC	200.00
05/22/09	Entry Fee	Lions	100.00
05/22/09	Entry Fee	Snowie Colorado LLC	200.00
05/22/09	Entry Fee	Dog Fathers	200.00
05/22/09	Entry Fee	Glenn Turner	200.00
05/22/09	Entry Fee	Integrity First LLC	75.00
05/22/09	Entry Fee	Funnellicious	200.00
05/22/09	Entry Fee	Poppin Stuff Inc	262.50
05/22/09	Entry Fee	Vertical Amusements	75.00
06/10/09	Entry Fee	Name: Elsie Guzman	75.00
06/15/09	Entry Fee	Name: Organic Ventures	262.50
06/15/09	Entry Fee	Name: Laura Nichols	150.00
07/01/09	Entry Fee	Name: Randy Sorensen	200.00
07/30/09	Entry Fee	Name: Blaster Bouncer Jumping Castles	228.00
	Entry Fee Total		2,428.00
02/13/09	Interest	Interest-Jan	3.69
03/06/09	Interest	Interest-Feb	18.34
04/07/09	Interest	Interest-Mar	46.77
05/06/09	Interest	Interest-Apr	52.80
06/08/09	Interest	Interest-May	43.31
07/08/09	Interest	Interest-Jun	10.33
08/07/09	Interest	Interest-Jul	9.13
09/04/09	Interest	Interest-Aug	4.01
	Interest Total		188.38
	Grand Total		30,121.24

Expenditures and Encumbrances

Employee/Supplier Name	Item Date	Amount	Expenditure Comment	Expenditure Type
Expenditures:				
Tri-County Health Department	05.12.2009	75.00	Tri County Health Dept.	Other Professional Services
Western Enterprises Inc	05.01.2009	19,000.00	Fireworks Production 2009	Other Professional Services
Internal Billing	05.29.2009	16.37	May-09 - Inside Printing - Flyers	Inside Printing (Print Shop)
Internal Billing	05.29.2009	138.75	May-09 - Inside Printing - Flyers	Inside Printing (Print Shop)
LCMA	06.24.2009	1,000.00	Entertainment - Fourth of July 2009	Other Expenses
Wells Fargo Bank	07.03.2009	60.63	TONI GEIER:WAL-MART #2751:Supplies for 4th of July	Miscellaneous Supplies
Wells Fargo Bank	07.06.2009	2,975.00	EDWIN G BARTON JR:LIBERTY WASTE MANAGE: fourth of July	Trash Collecting
Warning Lites Inc of Colo	08.01.2009	4,162.00	July 4th Traffic Control Equip	Rentals-Equipment
Tri-County Health Department	08.17.2009	90.00	Vendor Inspection/4th of July 2009	Inspection
Wells Fargo Bank	08.01.2009	73.71	KRAIG S STOVALL:SAMSCLUB #6632:Ice chest for Fourth of July	Food
Wells Fargo Bank	08.01.2009	30.32	KRAIG S STOVALL:KING SOOPERS #0010:Ice for Fourth of July	Food
Wells Fargo Bank	08.01.2009	203.00	KRAIG S STOVALL:SAMS CLUB: Water Gatorade and food for Fourth of July volunteers and staff	Food
Wells Fargo Bank	08.01.2009	34.75	KRAIG S STOVALL:KING SOOPERS #0065:Soda and sunscreen for Fourth of July volunteers and staff	Food

Wells Fargo Bank	08.01.2009	679.50	KRAIG S STOVALL:A-B & C ENTERPRISES- I:T shirts for Fourth of July volunteers	Operating Supplies
Wells Fargo Bank	08.01.2009	74.95	KRAIG S STOVALL:INNOVATIVE TECH WORKS: Lightning detector	Other Professional Services
Wells Fargo Bank	08.01.2009	4.59	KRAIG S STOVALL:OFFICE DEPOT #2137:Cipboard for Fourth of July	Office Supplies
Total Expenditures		28,618.57		

City of Englewood
Department of Finance and Administrative Services

Memorandum

To: Mayor Woodward and City Council

From: Frank Gryglewicz, Director of Finance and Administrative Services

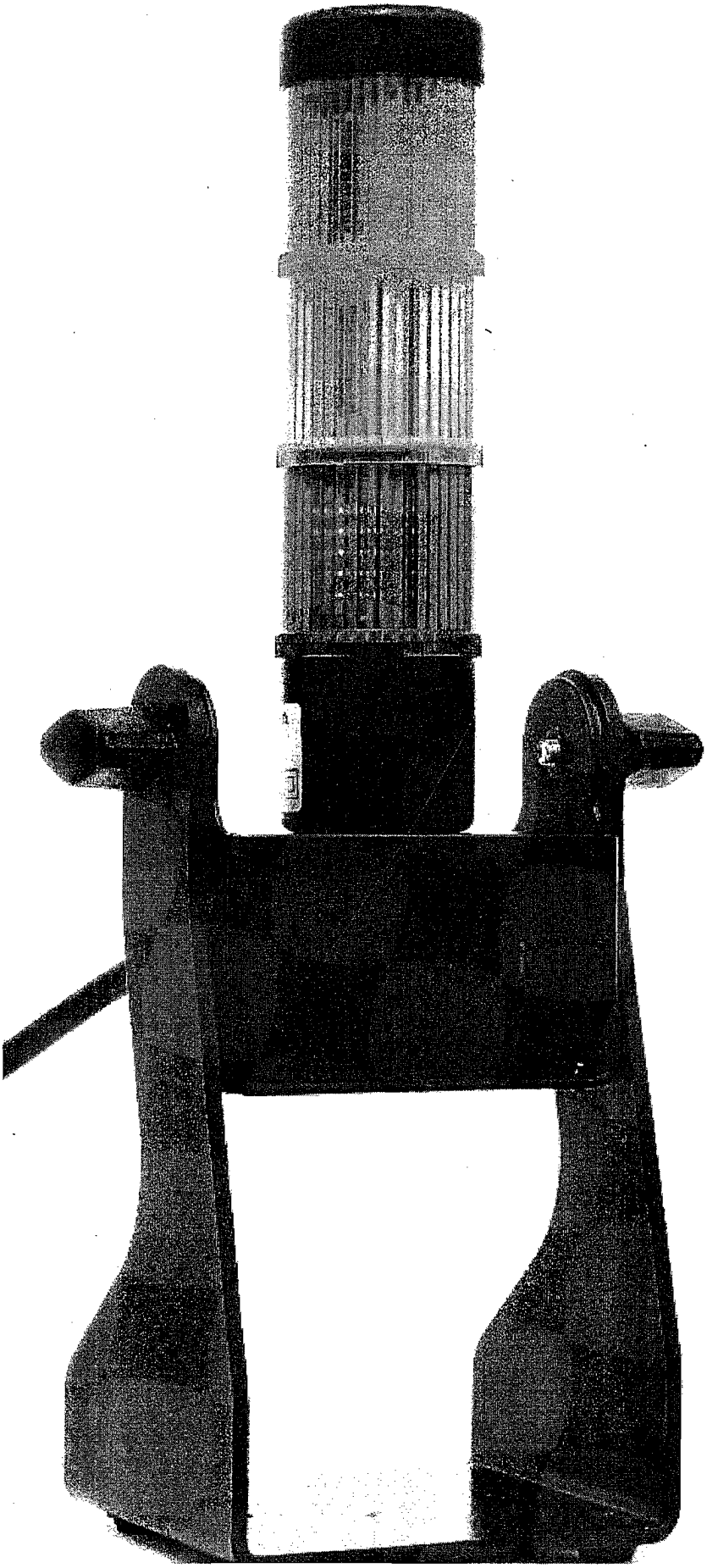
Date: April 1, 2010

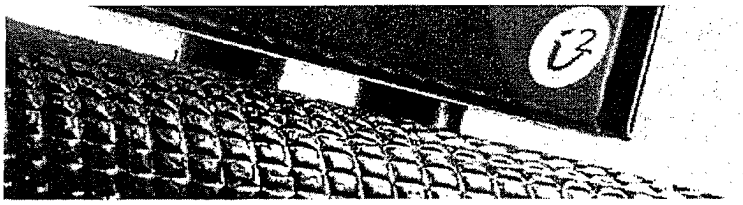
Re: Council Chambers Equipment

City Council has discussed having some means of monitoring the time scheduled and unscheduled speakers are allowed at Council meetings. I have attached information regarding a device that would help speakers and Council monitor their time allotment. The device works similar to a traffic stoplight with green, amber, and red lights to indicate the time the speaker has remaining.

The use and positioning of the equipment will be discussed at the study session on April 5, 2010. I have attached some information regarding the equipment.

Attachments





ClockWatch

ClockWatch combines clear traffic-light type signalling with a simple-to-use timekeeping system. The intuitive control module has been designed especially for non-technical users so they can easily manage formal timekeeping in a wide variety of applications.

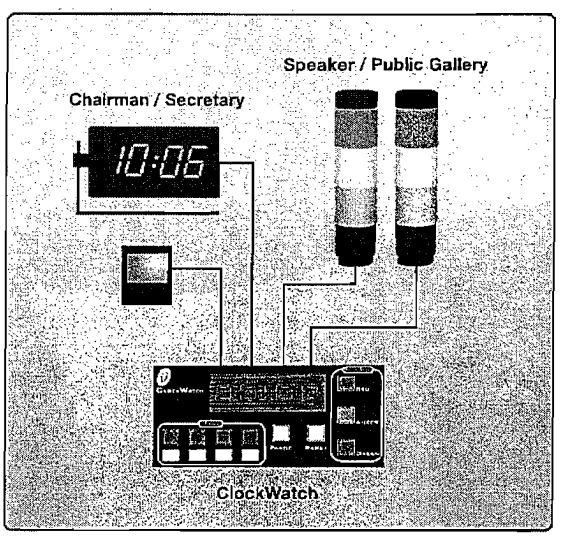
Total flexibility of the system enables timekeepers to either manually operate the LightTower signal(s) at any time by simply pressing the direct control Green, Amber or Red buttons, or use any one of four programmable, preset time profile buttons to initiate their required timed sequence. As time elapses, the optional LightTower(s) change from Green to Amber and finally Red, according to the programmed profile. The numeric display on the control module changes colour also and the sequence can be paused, resumed or reset at any time.

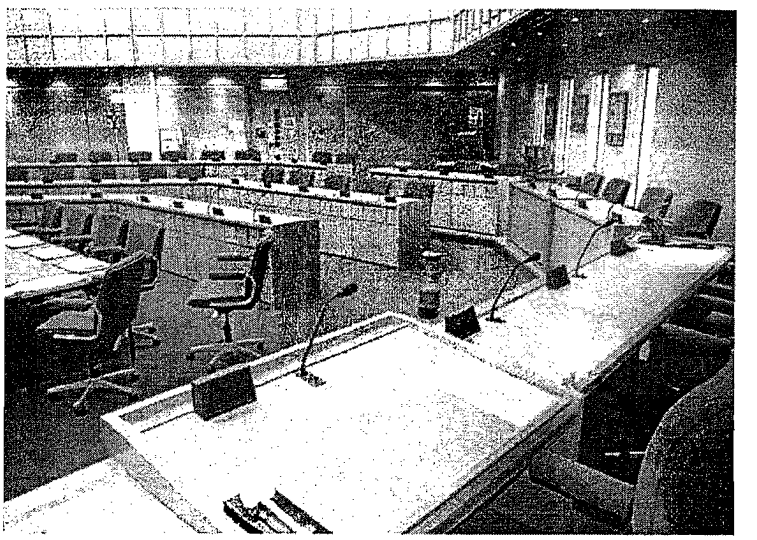
Numerous Interspace Industries display options can be used with ClockWatch including the LightTower, either of the 25mm (1") or 75mm (3") digital displays (depending on whether long or short distance viewing is required) or the discreet tricolour intelligent lamp.

Designed for reliability and versatility, ClockWatch is based on AV-Industry-proven rugged design, uses readily available 3pin XLR (mic) cable connectors and the system can be set up in just 1-2 minutes, or be permanently installed if required.

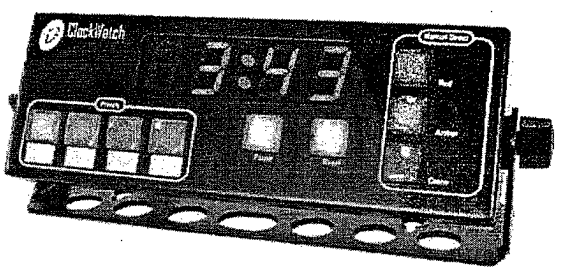
ClockWatch is ideal for public sector organisations where set timings are used to control public speaking entitlements.

3 Year Limited Factory Warranty





Meeting Control Made Easy!



Main Features

- Simple operation - designed for non-technical users
- No knowledge of computers or existing AV systems required
- Up to four programmable preset time sequences with manual control option if required
- Set up in only minutes
- Portability - can be used in all types of venues
- Suitable for permanent installation also
- Multiple visual or numeric display options

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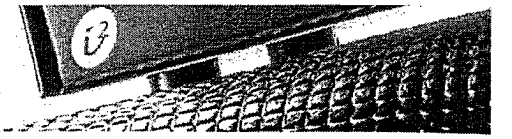
interspace industries



Specifications

Signals

2x outputs for Visual displays 12VDC switched
2x Outputs for Numeric displays 12VDC and 9600 RS232

Connections

4x Male 3pin XLR outputs
1x IEC input

Required User parts

Numeric and visual indicator display options
3pin XLR (mic) cable (2 Metre (6ft) cable included)

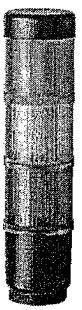
Dimensions

D: 75mm (3"), W: 278mm (10 4/5"), H: 88mm (3 1/2")

Weight

1525g (3.36lb)

Available Accessories

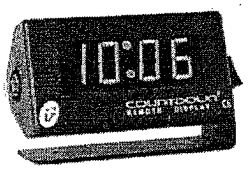


LightTower

- Easy-to-see 'traffic-light' style signal lamp
- Lamps change colour according to the pre-programmed timing sequence
- Ideal for long distance viewing by all meeting attendees

Big 75mm (3") Numeric Display

- Large, easy-to-read numeric display of actual time
- Digits change colour according to the pre-programmed timing sequence
- Ideal for long distance viewing by all meeting attendees

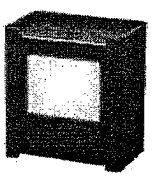


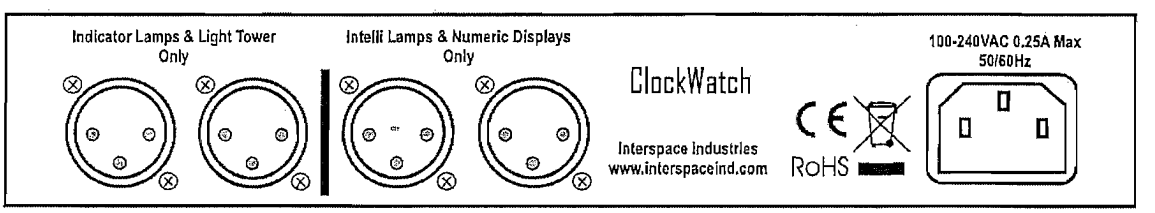
Chairpersons 25mm (1") Numeric Display

- Discreet yet effective numeric display which displays actual time
- Digits change colour according to the pre-programmed timing sequence
- Ideal for Chairpersons table, Meeting Secretary and/or the Speakers position

Tri-colour Indicator lamp

- Discreet yet effective lamp which changes colour according to the pre-programmed timing sequence
- Only (71mm (2 2/5") x 64mm (2 1/2") x 40mm (1 3/5")
- Alternative signal for Chairpersons table, meeting secretary and/or the speakers position





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