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November/December 1995



The New "Look"

Updated Uniforms for MTA Drivers

M TA bus and rail operators are looking pretty snazzy these days. In October they began wearing their new uniforms, which feature smoky blue cotton and wool shirts with military-style epaulets and two nicely functional pencil slots in the breast pocket. The outfits are complete with navy-blue trousers, and operators have a choice between Eisenhower jackets or double-breasted blazers. There's even jaunty berets or Velcro-equipped ascots for the women.

The old dull-brown MTA uniforms were visibly outdated — 1970s vintage — and most operators are pleased with their new look.

"I would say this uniform is more of a dressier look," said driver Herb Orange, proudly grasping his new lapels. "Myself, when I'm off, I'm what you might call a spiffy dresser. I like to look good."

Eloisa Diaz agrees. With her new beret continued on page 2

President Approves \$85 Million for Metro Red Line

News coincides with positive report from tunneling experts

President Bill Clinton signed the Department of Transportation spending bill on Nov. 14, which includes \$85 million in federal funds for Segment 3 of the Metro Red Line.

The House-Senate Conference Committee had recommended this amount to the President on Oct. 19. The \$85 million is a compromise reached by the committee, which initially received recommendations of \$125 million from the House and \$45 million from the Senate.

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MTA Board Members

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Mel Wilson

Realtor Jackie Goldberg, Alt.

Zev Yaroslavsky

Supervisor, Los Angeles County Robert Abernethy, Alt.

Dean Dunphy

Ex-Officio Member, California Secretary of Business Transportation and Housing Ken Steele, Alt.

Joseph E. Drew

MTA Deputy Chief Executive Officer

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In agreeing to provide the funds, the conference committee reiterated its safety concerns and the need for quality assurances on the Metro Rail project.

"The MTA has made significant progress in the areas of concern as expressed by the Senate," the bill noted. "The MTA has hired a new head of Metro construction to whom quality assurance and safety personnel now must report. In addition, the MTA has submitted the updated Metro Rail Red Line Project Management Plan, which demonstrates the commitment to safety and quality assurance."

The MTA received a letter from the Federal Transportation Administration signed by Administrator Gordon Linton approving a management plan. "We acknowledge that staffing efforts in support of the quality and safety functions have progressed to a point where all key positions have been filled," Linton said. "Given the dynamics of the process involved in defining your organization, and the fact that key components of the

recovery plan have been accomplished, we consider the recovery plan complete.

"We remain committed to safety and quality assurances in all facets of our rail construction project," said Stanley Phernambucq, the MTA's new head of construction. "We hope our working relationship with Congress continues well into the future."

Experts OK Subway Construction

On another positive note, a panel of three geotechnical and tunneling experts has concluded that geological conditions in Los Angeles are "clearly compatible with safe and economical underground construction," that this is true despite seismic hazards, and that most of the Red Line's construction is satisfactory so far, but noted the need to continue improving management of the project.

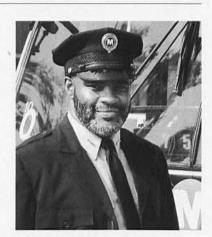
For the complete story about the report, and what it means for the Metro Red Line project, turn to Page 11.

The New Look, continued from page 1

slightly cocked back on her head and set off with her black designer sunglasses, she said, "We got a lot of compliments from the passengers."

The new uniforms were customdesigned for the MTA and a lot of attention was given to fabric selection to make sure they keep their color and maintain a standard look. The uniforms also bear the MTA's Metro "M" logo.

The professional look of the uniform is enhanced with bars displayed on the left sleeve of the shirt indicating the years of service of each employee.



"Each bar represents 5 years of MTA service," said Franklin White, MTA Chief Executive Officer. "Operators are proud to wear a uniform that recognizes their seniority and professionalism."





Board Orders Engineer's Removal in Wake of Sinkhole Report

A t its October meeting, the MTA board ordered its design engineering consulting firm to remove the Red Line construction engineer and any other staff members involved in approving a deficient remining design plan that led to the June 22 sinkhole on Hollywood Boulevard.

The board based its decision on report by the forensics engineering firm of Wiss, Janney, Elstner Assoc., Inc. of Northbrook, Ill., which concluded that the subway remining plan was "deficient." The plan was prepared by a design engineer retained by the tunnel contractor Shea-Kiewit-Kenny (SKK). The MTA discharged SKK from the tunnel contract in July.

The Wiss, Janney report said the design engineering consortium, Engineering Management Consultants (EMC), reviewed the SKK remining plan for the MTA and approved it despite faulty calculations concerning the strength of critical components of the plan.

"The findings in the Wiss, Janney report confirm the correctness of our decision to terminate SKK," said Larry Zarian, MTA board chairman and a Glendale city councilman. "With respect to the EMC, that consortium consists of some of the world's premier engineering design firms, but we are disappointed that some EMC staff members failed us in this critical matter.

The Wiss, Janney report said the deficiencies in the SKK remining plan led to failure of supports for the tunnel's upper section when they were placed on earth that was unable to bear the weight from the soils above. The

plan's deficiency became apparent when water seepage was encountered during remining of some 80 feet of tunnel, the report said.

The report also concluded that damage to the tunnel would have been less severe, and that the creation of a sinkhole might have been avoided, if the Department of Water and Power had promptly shut off a broken water main that gushed water into the area. By the DWP's estimate, between 260,000 and 280,000 gallons of water poured into the hole, located on Hollywood Boulevard between Berendo and Edgemont streets.

Chronology of events

A chronology of events showed that the high-pressure water main ruptured at 5:45 a.m. The sinkhole was reported developing at the surface at 6:15 a.m., but it was 7:30 a.m. before the water main flow stopped, the report said.

SKK's plan had been used without incident during remining operations on Vermont Avenue where the rock was dry, the report said, but failed on Hollywood Boulevard where the rock was less stable. The earth could not support the weight and the temporary support beam began to sink, destabilizing the tunnel crown. This set in motion a sequence of events that resulted in the sinkhole.

Stanley G. Phernambucq, MTA executive officer, rail construction, said, "EMC will continue current design engineering projects, but we will look toward getting more competition



Metro View By Joseph E. Drew, MTA Deputy Chief Executive Officer

The Good News at the MTA

It's time to talk about progress at the MTA. Critics aside — and there will always be those — the MTA has turned a corner and is moving forward in a positive direction. Looking back over the last few months, I see many substantial changes within the organization, and I predict the worst of the merger transition is behind us.

Administrative Reorganization

I'm going to focus here on our progress in the reorganization of the MTA's administrative unit.

Considering that the MTA was only formed two and a half years ago by joining the former RTD and the LACTC into one agency, the job of consolidating two administrative units into one, and making the necessary changes to streamline its functions, came with many challenges.

Although the two prior agencies entered the merger with major differences in their organizational culture, both had always shared a common goal: serving the

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Other Board Actions

MTA Adopts 1995 CMP Update

The MTA Board, in November, adopted the 1995 update to the Congestion Management Program (CMP) for Los Angeles County and determined that 80 of the county's 89 cities, plus the county itself, are in conformance with the CMP.

The CMP is a state-mandated program designed to encourage a partnership between cities, the MTA, and others in addressing regional transportation issues. The first CMP was adopted in 1992, and was updated and expanded in 1993. The program was set up as a mechanism to ensure that transportation improvements in each of the county's cities keep pace with their levels of new development. The MTA is responsible for overseeing the CMP.

Due to the extreme levels of congestion in Los Angeles County, the MTA developed a countywide deficiency plan, recognizing that the causes leading to congestion in any one area are varied, complex and numerous. To alleviate the need for cities to perform costly, time-consuming analyses, the MTA developed a point system to quantify the impacts of new development, which are considered "debits," and the benefits of transportation improvements, which are called "credits."

A "toolbox" of more than 50 strategies has been developed for cities to use to fit their individual situations. These strategies include transportation approaches such as capital, systems management, land use, transit, transportation demand management (TDM), and telecommunications — each with its own criteria and credit values. Cities can also propose their own strategies.

The CMP has caused the county's cities to think differently about their land use and transportation decisions. In many cases, planners and engineers are working together for the first time. The MTA's CMP staff works with each of the county's local jurisdictions to assist them in maintaining CMP compliance. Compliance ensures that the cities will continue receiving state gas tax funds and preserves their eligibility for other state and federal transportation dollars.

The next CMP update will take place in 1997.

Adoption of STIP Priority List

At its October meeting, the MTA Board adopted the \$1.3 billion Los Angeles County 1996 State Transportation Improvement Program (STIP) priority list for submission to the California Transportation Commission (CTC). The 1996 STIP priority list contains the following:

- \$882 million in existing STIP projects. The 78 projects had been previously included in the 1990 and 1992 STIPs. The projects were prioritized based on their previous scheduling in the STIP and the date the projects are anticipated to need funds.
- (2) \$507 million in projects proposed to be traded into the STIP consistent with the MTA's adopted Long Range Plan.

The 1996 STIP Priority List will be further discussed and finalized at the MTA's Dec. 20 board meeting. At that time, pursuant to CTC instructions, the board may vote to defer \$496 million from the San Fernando Valley
East/West Rail Line to accommodate

the above-mentioned \$507 million in projects proposed to be traded.

Further, MTA staff was asked to transmit the 1996 STIP priority list to the CTC by the CTC's Nov. 10 deadline, and staff was directed to work with the CTC to maximize the amount of funding awarded to Los Angeles County through the 1996 STIP process.

For more detailed information, contact Stephen Finnegan, MTA Manager of Transportation Improvement Programs; his phone number at the new MTA headquarters building, effective Dec. 11, is (213) 922 2455.

Tutor-Saliba-Perini Awarded \$57 Million Universal City Station Contract

A contract to build the Red Line's Universal City Station was awarded to the joint venture team Tutor-Saliba-Perini by the MTA Board at its October meeting. The Tutor team was the lowest responsive and responsible bidder, and has committed to subcontract out 34.8% of its work to DBE companies.

Jacobs Construction Management Contract Approved

The construction management contract on the North Hollywood Red Line extension was given final approval by the MTA Board in the form of a \$40-million contract amendment.

Although the amendment with Jacobs Engineering/Mott MacDonald, Inc./Hatch & Associates and ACG Environments (JMA) increases the total contract value to \$55 million, MTA staff was successful in trimming about



Gateway Opens to the Public



Larry Zarian, MTA
Chair, addresses the
media and the
audience of several
bundred dignitaries
and guests gathered
for Gateway's grand
opening celebration
on Oct. 24.

Buses officially began servicing the newest MTA passenger transit facility at the Gateway Plaza on Oct. 22. The new transit center, which is adjacent to the MTA's new headquarters' building, adjoins Union Station and provides convenient access to the Metro Red Line subway, Metrolink commuter rail services, and Amtrak.

This facility also will be a major transfer point for buses operated by other transit agencies. For starters, buses from Gardena Transit, LADOT, Metrorail (bus feeder service) and Torrance Transit are already assigned bus berths.

"This is truly a momentous day for the citizens of this region," stated CEO Franklin White at the Gateway Plaza's grand opening ceremony on Oct. 24.

The public ceremony gave both the MTA and Catellus Development

Corporation, the developer/builder of the Gateway Transit Center and the MTA's new headquarters, a chance to celebrate this history-making grand opening. Members of the MTA Board of Directors, MTA executive staff, officers from Catellus, and elected officials from the county and various cities attended the opening ceremony.

"The magnitude of this site as a major regional facility will become more apparent in the near future when other transit properties, such as Foothill Transit, begin operations into Gateway, and when our rail projects, such as the Pasadena Blue Line, come on line," said White.

"There has been a renaissance of train service in Southern California in recent years," said Larry Zarian, MTA's chairman and a Glendale city councilman. "In addition to serving as Los Angeles County's new transportation hub, the Gateway Transit Center is also an excellent investment for Los Angeles County taxpayers. No longer will MTA have to pay rent on three separate buildings to house its administrative offices. By relocating its headquarters to the Gateway Transit Center, MTA will save millions of dollars in rent payments in the coming years."

Funded by the federal government as part of a demonstration project, the facility consists of four levels of parking garages, bus drop off and pick up points, on 2.25 acres of land just east of Union Station.

A 68-foot tall hemispherical glass dome portal provides the entrance to the Metro Red Line, Metrolink, Amtrak, and future Pasadena Blue Line along the western



Special Feature, continued from page 5

edge of the facility. Shops and eateries will be added soon for passengers transferring from buses to trains.

The new 26-floor headquarters for MTA administrators, planners, engineers, and office workers is located on the northern border of the facility. It is only the first of what will be several office buildings that will surround the transportation facility. The MTA's Transit Police Department will operate from the facility, where minute-to-minute control of the bus system will be maintained from a new radio dispatch center.

The new office building also will be home to the MTA Board of Directors and some 1,900 employees who oversee daily operation of the MTA's 1,800 bus fleet, 45 miles of Blue, Red and Green Line trains, and the country's largest public works construction effort that will see completion of some 95 miles of rail lines in coming decades.

The headquarters is directly across the street from the MTA's 40-acre Regional Rebuild Center, where mechanics can literally rebuild a bus from the ground up. About a mile southeast of the facility, the MTA's Red Line rail operations yard covers more than 40 acres. The initial 30-car Red Line fleet is cleaned and readied for daily service for some 19,000 commuters, many of them transferring from Metrolink trains as they make their way from homes and businesses throughout the Southern California region.

Connecting with the Red Line at 7th and Figueroa streets is the Metro Blue Line, which links Los Angeles' central business district with Long Beach while serving the southern communities of Vernon, Huntington Park, Florence, Walnut Park, South Gate, Watts, Lynwood, Willowbrook, Compton, Rancho Dominguez and Carson.

At the Imperial/Wilmington station, the Blue Line connects with the recently-opened Metro Green Line, which serves a 20-mile east-west route in southern Los Angeles County from Norwalk to the Los Angeles International Airport.

The Gateway Transit Center is, indeed, a sign that the future of transportation in Los Angeles is already here.

Metro View, continued from page 3

transportation needs of the residents and workers of Los Angeles County. I want to assure you that the MTA has not lost sight of that goal.

Mission to serve

In fact, the following mission statement was written to succinctly set forth just what the MTA is here to do:

MTA's mission is to develop, build and operate a safe and reliable transportation system in Los Angeles County that will better the quality of life of our citizens through increased mobility, reduced congestion and improved air quality.

It's a well-known fact that historically other public agencies have faced many of the same problems we're facing in Los Angeles: A strapped economy and legislative budget cuts; political controversies and tough administrative decisions; and, of course, the fact that human beings sometimes make mistakes. What I've learned is that mistakes are always the impetus to do things better.

The MTA is well aware of its duty to the taxpayers, and while there has been a plethora of negative press about our problems, in the end money will be saved by the steps we're taking.

The merger itself was instigated as a cost-cutting move for the county, and in the long term it will be. It does, however, cost money to join two important agencies, especially when they're made up of dissimilar employee cultures, duplicate

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The New Look, continued from page 2

To add warmth to the wardrobe, operators can wear unisex cardigan sweaters or a sweater vest. A stylish, navy-blue, thermally insulated jacket is an option for the cool winter days.

The new uniform was selected after nearly three years of research and consultation with the operators and the operator's union, the United Transportation Union. A uniform committee comprised of senior management, union representatives and operators worked on the design and fabric selection. The MTA will provide each driver with one full new uniform and \$175 to \$300 annual allowance to buy replacement clothes.

MTA bus operators drive 1,774 buses during rush hours, serving 200 bus routes in Southern California. Rail operators serve on the Metro Blue, Green and Red lines.

Metro View, continued from page 6

administrative functions and staffs, and separate boards. It takes time and money to work out the kinks and smooth out the edges.

At first, the MTA's administrative unit was devastated by the loss of many valued and knowledgeable employees who chose to leave at the time of the merger. Yet, of the remaining employees, many were performing duplicate functions. These details took time to be resolved, requiring the recruitment of several upper-level managers, and today, administrative functions at the MTA are running more smoothly.

Progress speaks for itself

Various new administrative programs, policies and procedures are now in place, and all the changes instituted so far and those nearing completion are geared to help us do business more efficiently and cost-effectively. To evaluate how far we've come, here are some accomplishments so far:

- A new, uniform ancillary benefits program (eliminating the differences between the prior two agencies), and a completely reshaped and redefined classification and compensation system;
- A unified procurement system;
- A credible administrative budget, allowing managers for the first time to shape their own programs;
- A uniform deferred compensation program;
- A uniform personnel manual;
- A uniform contracts manual;
- A unified MTA home moving from two buildings and separate

- business sites, to new headquarters in the just-completed Gateway Intermodal Transit Center; and
- A uniform retirement and pension program to suit the needs and provide the same benefits or better than the two prior systems. Once the program is finalized, by the end of the year, it will also be a major cost-saving component of the new MTA.

New Revenue Operating System

One possible public misconception that I'd like to address is the recent news reports regarding the MTA's cash management controls over the bus revenue system. Here are the steps the MTA has taken over the last five months to improve fare revenue collection and processing procedures.

In addition to establishing an MTA Department of Revenue and hiring a revenue director to centralize coordination of fare collection and revenue management, the following procedures have been implemented.

- We have discontinued weighing paper currency collected by our rail systems, and are now counting it and depositing it directly into the bank. We have reached a new agreement with our outside currency counting vendors that is saving us up to 30% off the previous contract, and we are evaluating how to bring all currency counting in-house.
- The repair of fare collection equipment has been separated and moved to its own facility, where security and work spaces are being improved.

- Tokens are no longer handled at the central cash counting facility, and have been moved to a private warehouse for handling and packaging. We also are looking into moving this operation strictly in-house.
- MTA Transit Police have established a Revenue Security Team dedicated solely to the security of cash operations.
- Vault truck drivers now must complete an "End of Cycle" procedure at each MTA division before removing safes from the truck.
- We also have revised the cash counting operating manual and procedures, and have distributed them for internal review.

In the next six months, we plan to:

- Improve security and upgrade the equipment and systems in our currency counting operation and the revenue equipment repair facility;
- Install a new camera surveillance system for the interior and exterior of the Central Cash Counting Facility; and
- Have regular meetings and training at the division level to review revenue procedures and equipment repair with operations, transit police, computer operations and maintenance staff.

The work goes on

Though controversy may swirl around us, the disposition inside the MTA, and the demeanor out on our construction sites and along our bus and train routes, is simply that it's business *better than* usual.





Shades of Star Trek at the MTA

When MTA rail operations personnel first visited the soon-to-be-completed Central Control Facility in early 1990 to inspect the computerized rail control system that would eventually be used to track Metro Blue Line trains, they noticed that someone had stuck a neatly engraved sign onto the door of the control room. The sign read "U.S.S. Enterprise." No one seems to know who put it there.

And yet, more than five years later, the sign remains on the door. The creative mind that devised the clever nickname remains a mystery, but "U.S.S. Enterprise" has become the unofficial moniker of the space-age facility that now keeps track of three MTA rail systems.

A cursory glance at the CCF's control room immediately shows the first-time visitor how the nickname was inspired. The circular layout of multi-colored big-screen monitors with banks of various television monitors and telephones in the center is certainly reminiscent of the bridge of the starship "U.S.S. Enterprise" of "Star Trek" fame.

The Central Control Facility, however, has much more earthly responsibilities than a fictional starship, and it is equipped to take the responsibility very seriously. Arnold Gainey, a senior MTA train controller, has been working at the CCF since the Blue Line first began operations, and has watched it grow ever since.

"I love trains. I always have," Gainey said. "When this job became available, it was like a dream come true for me. It has been very satisfying to watch the system grow and mature, and ridership increase along with it."

The first team of MTA rail operations personnel consisted of eight people, Gainey said. With the opening of the Red and Green Lines, however, 45 people now oversee MTA rail operations from a single nerve center. They work round the clock, including hours that trains are not in passenger service.

"Those are the hours that trains are maintained at the service garages," noted Gainey. "Trains cannot be moved without our clearance, so we are busy throughout the night."







MTA's rail system's nerve center resembles space sbip bridge.

Danny Creal, a bus driver with 27 years of experience, is the newest of MTA's cadre of senior train controllers. "When I first started, I missed the day-to-day contact with people on the bus, which I really enjoyed all those years," Creal said. "But the more I got involved with controlling the trains, the more I liked it. It wasn't easy learning all the computer commands at first. But once you've learned the system, you become confident that you can handle almost anything that happens."

The formal name for the computer system that monitors MTA's rail lines is the Supervisory Control and Data Acquisition (SCADA) system. Working in tandem with SCADA is the Automatic Train Control (ATC) system, a separate computer system that controls the movement of rail cars. They comprise a sensitive checks-and-balances operation that is capable of pinpointing and issuing a warning about a problem that occurs in virtually any corner of

the entire rail system, including tracks, vehicles and stations.

Among the things SCADA monitors: voltage and current levels on power lines, status of fire detection and suppression systems, temperature and humidity levels, and various kinds of intrusion on tracks and station platforms.

Once the SCADA system alerts the train controller of a problem, the train controller can then tell the system to do a number of things, all by remote control. The system can open and close power circuit breakers, change train signals and switches, open and close water valves and start or stop ventilation fans.

"This system can be likened to the human brain in many ways," Gainey said. "The monitors display visual images of practically every aspect of the system. The cable transmission system that ties everything together electronically is the spinal column, and nerve bundles carry information from the brain to the various nerve endings, which in this case are remote terminal units (RTUs) that provide power to specific parts of the system."

Five years is an eon in the technical world, and each new rail system has various technological improvements, both in the rail vehicles and in the control room. The Green Line, therefore, has the most technologically advanced tracking system; most of the differences, however, are relatively minor.

"Whenever an update of the system is necessary, we order new software and other improvements, just as you would for your home computer," Creal said. "Our main goal is to give our passengers the finest, most up-to-date system available to ensure their safety and comfort."



Operations Overview, continued

Weekend Green Line Ridership Jumps over Thanksgiving Holiday LAX travelers make the difference

The MTA carried a noticeable increase in the number of travelers on the Metro Green Line over the Thanksgiving weekend, Nov. 23-26. Usually about 5,000 people use the Norwalk to Redondo Beach light rail system weekends; however, ridership was estimated to be at least one-third greater over the holiday weekend. Many riders were first-time MTA transit users who used their holiday time to explore L.A.'s newest rail system.

"It appeared as though lots of Southern California folks brought their families and friends along for the ride," said Tom Jasmin, MTA's Light-Rail Operations Manager. "I spent some time at the Redondo Beach station talking to passengers, many of whom were visiting the area from other states."

The LAX Connection

Many Southland travelers found that it was convenient to use the Green Line to accompany family and friends traveling out of the Los Angeles International Airport over the weekend. Airport-bound passengers used the Green Line to the Aviation Station and transferred to the airport shuttle that meets every train between 4 a.m. and 11 p.m.

"It was a great way for people to relax and save money on their way to LAX," said Jasmin. "In fact, I saw many people carrying several pieces of luggage on Friday, an indication that these were long-distance travelers."

A one-way trip from Norwalk to the airport in a private shuttle costs \$30; the same trip on the Metro costs only \$1.35. Estimated travel time from Norwalk to LAX is 36 minutes.



For those who have not yet tried the Green Line connection to LAX, travelers from the San Gabriel Valley, Southeast Los Angeles County and Orange County will find it convenient to park their cars at the Norwalk Metro Green Line Station, located at the intersection of the I-605 and the I-105 freeways. Parking is free and safe, with security guards on hand 24 hours a day to watch the parking area and the station platform.

Even Santa Claus Showed Up

A most distinguished visitor jumped aboard the Green Line the Friday after Thanksgiving. Santa Claus made his traditional post-Thanksgiving South Bay debut by boarding a decorated Green Line train at the Aviation Station and riding to the Douglas/Rosecrans Station where a fire engine waited to carry him to the Manhattan Village Mall in Manhattan Beach. A parade followed throughout the mall, and anyone who had ridden the Green Line that day received a free Christmas ornament during the celebration.

Open House an Example of True "Southern" Hospitality

The Southern Region held its Open House on Saturday, Oct. 21, at Division 18. Several MTA buses were displayed, including a vintage unit, and Metro Rail was represented with the Red Line mock-up. There were also units displayed by MTA Transit Police and the County of Los Angeles Fire Department. Nissan, in addition to providing parking facilities for the day, also displayed a new vehicle.

Don Kott Ford had a new truck on display, and booths were provided by Sears, Great Western Savings & Loan, Centrepointe Medical Group, Long Beach Medical, Boyle Heights Industrial Medical Clinic, MTA Transit Police, and MTA Marketing. Mattel Toys donated toys that will be distributed to the community.

The Open House was attended by many members of the Southern Region community. Children of the guests and employees were entertained by Travis



The Experts' Report Comes in — and it's Good News for L.A.'s Subway

Subway tunnels can be built safely in Los Angeles County despite high seismic hazards, but better coordination and communication among MTA and its consultants and contractors is needed to avoid future construction problems, according to a report prepared by a panel of three geotechnical and tunneling experts.

The panel was appointed by the MTA Board of Directors in August to advise the board on the effects of local geological conditions on Metro Rail construction. Panel members included Dr. Dan Eisenstein, professor of geotechnical engineering at the University of Alberta, Dr. Geoffrey Martin, chairman of the Department of Civil Engineering at USC, and Dr. Harvey W. Parker, senior vice president of Shannon & Wilson Inc. of Seattle.

After an exhaustive study, the panel found that the geological conditions in the Los Angeles area are "clearly compatible with safe and economical underground construction," and further noted that many other cities around the world have built underground transportation systems "in similar or even more difficult ground conditions."

MTA Board Chairman Larry Zarian announced that, following the panel's report, the agency will move immediately to implement one of its key recommendations by forming an experienced technical staff to address and eliminate communications problems identified in the report.

"The panel's report should give the public confidence that tunneling can

be done safely in Los Angeles County, said Stanley Phernambucq, the MTA's executive officer of construction. "It reaffirms where we're going and the fact that we can tunnel safely and with all due caution, of course."

Following is a summary of the panel's key findings:

- Subway tunnels can be built safely in areas of high seismic activity. In fact, the report states, it can be argued that underground rail transportation systems are preferable to those above ground because of their inherent ability to better withstand strong earthquakes than surface systems.
- Los Angeles' geological and geotechnical conditions for tunneling are similar to those in many other cities, and in some cases more favorable.
- Nearly two-thirds of all MTA tunnel contracts experienced no significant problems with ground control. This ratio compares favorably with worldwide performance.
- In cases where ground subsidence is anticipated to occur, the panel recommends for future tunneling contracts that the MTA consider a more sophisticated tunneling machine known as an earth pressure balance (EPB) machine. While more expensive, it is capable of better supporting looser soils than machines that have historically been used on the Metro Rail project, and may thus prevent the need for costly and disruptive grouting programs.

- The cost of digging tunnels in the Los Angeles area is low relative to prices worldwide. However, the report suggests that the low prices could be partly responsible for some of the problems MTA has faced in recent months. "MTA should consider specifying less risky construction methods and methods which minimize construction impact to the public, even if their initial cost may be somewhat more expensive," the report notes.
- All tunneling projects involve risk, which has been successfully managed on many projects. A balance should be established between risk and the cost of risk mitigation measures. The panel stated that there are many cases throughout the industry where tunnel specifications have been relaxed, or were safely excluded.
- Some of the recent problems may not have occurred if the specified tolerances, or at least the intent of the contract's specifications, had been met. As an example, the report cites the thin subway wall linings were the ultimate result of being too far out of alignment. More stringent controls should be required in the future, the panel states, especially in settlement and alignment.
- The only problem identified that is unique to this area is the presence of hydrogen sulfide, especially in the Mid-City Extension. This challenge, however, can possibly be overcome with proper planning. ■



Operations Overview, continued from page 12

the Owl. Several John Muir Junior High students had first-hand opportunities "to be in the driver's seat" as they sat on MTA buses pretending to be operators, or in Transit Police vehicles and on fire engines blasting horns and sirens. It was obvious to the crowd that there were several future operators, firemen and transit police in that group.

The highlight of the day was the Karaoke booth. After the Locke High School Band and Drill Team performed the Star Spangled Banner and other numbers, they entertained the crowd with serenades from the Karaoke booth. Other guests took turns at crooning with the music. Finally, the Southern Region management team got into the act with a rousing rendition of old soul ballads.



MTA Open House visitors check out a vintage bus, which was loaned for the event by the Pacific Bus Museum in the City of Industry. Those interested in viewing more bistoric buses should call the museum for information at (310) 271-4106.



MTA Customer Service Centers

The following is an updated directory of the MTA's customer service centers serving the transit riding public with route information and sales of tokens and monthly passes. The MTA's new headquarters building at Union Station Gateway Plaza replaces the former customer service outlet at 425 So. Main Street.









Arco Plaza

515 So. Flower St., Level C Los Angeles M-F, 7:30 a.m—3:30 p.m.

East Los Angeles

4501-B Whittier Blvd. Tues.—Sat. 10 a.m.—6 p.m.

Hollywood

6249 Hollywood Blvd. M-F, 10 a.m.—6 p.m.

Wilshire

5301 Wilshire Blvd. Los Angeles M-F, 9 a.m. —5 p.m.

Baldwin Hills

Baldwin Hills Crenshaw Plaza Los Angeles Tues.—Sat. 10 a.m.—6 p.m. 3650 W. M.L. King Blvd.

Headquarters

One Gateway Plaza, East Portal M-F, 6 a.m.—6:30 p.m.

San Fernando Valley

14435 Sherman Way Van Nuys M-F, 10 a.m.—6 p.m.



New Metro Red Line Information Office Opens

A new Metro Red Line Information
Office has been opened in
Hollywood for residents and
merchants in the area to obtain
information about the
Vermont/Hollywood branch of the
Red Line, which is currently
scheduled to become operational in
1999. The new office is located at
4657 Hollywood Boulevard (at
Vermont Avenue), and the phone
number is (213) 922-9036.

The Planning Perspective

REVIEW

Good News for ATTBs

Fuel Cell Buyers Consortium Wins Grant

Advance Technology Transit Buses
may be closer to reality than ever
before. The Mobile Source Air Pollution
Reduction Review Committee has
recommended that the South Coast Air
Quality Management District (SCAQMD)
Governing Board grant \$300,000 to the
Fuel Cell Buyers Consortium (FCBC).
The SCAQMD Governing Board is
scheduled to approved the
recommendation on Dec. 7.

The FCBC is a coalition of 30 local and state government entities, public utilities and transit agencies working together to achieve efficient transportation, job creation, environmental quality, and clear energy markets through commercialization of fuel cells.

First phase includes ATTBs

The first phase of the program is to install, test and evaluate the fuel cell power system in the Advanced Technology Transit Bus (ATTB). Funding for this program will come from FCBC member organizations, made up of the following:

The MTA, SCAQMD, Los Angeles County, City of Los Angeles, Jet Propulsion Laboratory, National Aeronautics and Space Administration, University of California-Davis, Northrop Grumman, and Economic Roundtable.

A fuel cell is an electrochemical engine that captures the electrical energy released when hydrogen and oxygen atoms combine to form water. Fuel cells are a zero-emission energy source.



Northrop Grumman workers chat during a test drive of one of the Advance Technology Transit Buses being developed by Northrop Grumman, the MTA, and Caltrans.

USC Students Envision L.A.'s Rail Future

Architectural students at USC are busy planning for the future of transportation. As part of an innovative program between the MTA and the school, students have been creating designs and models for future transportation stations.

The USC studio class was started five years ago by Associate Professor of Architecture Graeme Morland. His students work on actual sites, such as Pico-San Vicente, where the MTA is considering future rail stations along the city's fixed-rail transit system.

"The work we're doing with the students is in many instances the first indication of what's possible," said Morland. Because the students are unencumbered by politics or economic restraints, they've been free to devise creative solutions to such challenges as merging three transit systems (light rail, heavy rail and bus) while meeting community needs and generating opportunities for economic development.

At the Pico-San Vicente site, the students proposed replacing burnedout businesses with commercial redevelopment, a movie theater, a community learning and recreation

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The public had a chance to see USC students' no-holds barred vision of twelve proposed Metro Rail Station sites when their design models were showcased at the California Afro American Museum. At the reception on Nov. 2. the students line up for recognition; standing at the podium at the far right are USC Associate Professor of Architecture Graeme Morland (1) and the MTA's Dale Royal (r).



Community News and Events

Metro Rail Joins Fun at Wilshire Centennial

Community residents created their own masterpieces at the MTA Art Festival workshops.



The Metro Rail Art Festival on Oct. 14, hosted by the MTA's public affairs unit, was part of a larger celebration to honor Wilshire Boulevard's 100th birthday.

The centennial street fair was held adjacent to the future Metro Red Line Wilshire/Western station and featured live entertainment, a children's petting zoo, and a wide variety of delicious foods.

As a major participant of the street fair, MTA got the opportunity to show off its nearly completed station and to involve the community in the celebration. Dozens of MTA volunteers conducted station tours, displayed artwork by Metro Rail artists, and hosted a handson art workshop for adults and children. More than 5000 people attended the street festival; nearly 750 of those took an underground tour of the station scheduled to open next summer.

"The Wilshire Centennial Celebration and the Metro Rail Art Festival were as much about commemorating the past as they were about eagerly anticipating the future," said Carlos Rodriguez, MTA public affairs officer for the Wilshire Corridor. When the three Wilshire stations open in just a few months, the Wilshire community will be connected by rail to downtown Los Angeles and beyond.

Magic of Vermont Event Unites Community

Another MTA public affairs event took place a few weeks after the centennial with similar community-unifying results. The Nov. 4 event, "The Magic of Vermont," brought together public, private, and community-based organizations to make graffiti disappear along Vermont Avenue. Over 300 volunteers worked to beautify the area by painting buildings and walls, sweeping streets and parking lots, and removing weeds between Hollywood and Wilshire boulevards.

"The Vermont Corridor is indeed alive and well," said Andre Parvenu, MTA public affairs officer and the event's coordinator. "Everyone was willing to pitch in and do whatever was necessary to clean-up the community." This is the first of several community projects planned for the Vermont Corridor as it prepares for the arrival of the Metro Red Line in 1998.



At "The Magic of Vermont" event, volunteers of all ages pitched in to help clean up their community.

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center and even a farmer's market to serve the largely Hispanic area.

A win-win for everyone

These ideas have helped MTA planners and engineers to "think outside the box," said Dale Royal, MTA project manager in charge of a proposed Crenshaw-Prairie rail line.

The work has a practical side, too. Because the MTA can't finance models or design drawings for stations until each project receives funding, the students' plans allow the agency to illustrate a possible system when approaching the communities it would serve.

With the Crenshaw-Prairie line, for example, the line would provide a fixed-rail, elevated and surface train from a Pico-San Vicente station — where it would connect with the underground Red Line — south to either Hawthorne or LAX.

Although construction of the Crenshaw-Prairie line is at least five to 10 years away, and funding remains uncertain, the MTA continues to meet with community residents and officials to drum up support. The Crenshaw-Prairie corridor is a priority route because it travels through riot-torn neighborhoods in need of economic growth and public transportation.

"What it means for our students is a tremendous challenge — looking at sites that are virtually undeveloped and abandoned and trying to foresee what wonderful opportunities are there," said Morland.

Morland's studio class also has given architectural students a chance to show their designs to professional MTA planners, which provides them praise as well as experience in making formal client presentations.

We Get Letters...

The MTA is always happy when a member of the transit-riding public takes the time to write a letter about our services. From time to time, MTA Review will print a letter — just to let folks know how much it means to us. The following letter was received in August:

Dear MTA Passenger Relations:

I would like to express my great appreciation for Bus Driver #863, who has driven Line 96 for some time now. His promptness, his courtesy, and professionalism has made him an asset to your company and an exemplary figure to all MTA employees. He is knowledgeable of his routes enough to not put pressure on passengers nor rush to get caught up with his schedule. His communication skills in so many languages, including my second language, are par excellence. His smile starts off so many days on the right foot for so many people, in spite of weather conditions, fear of current events, the rude ways of so many unappreciative passengers, and so forth. He is kind, always well groomed, honest and without offending anyone he knows how to tell people that there are rules he must abide by.

In fact, several of his passengers have come together quite often to sum up ways that we might be able to award him with a deserving token of appreciation; however, we do not know how to go about doing so. He is so deserving of recognition that many of his passengers would like the honor of taking part in his being awarded with merits of "Thank Yous!"

Sincerely, N. Kingston, MTA passenger

The MTA salutes Bus Operator Richard Patterson of Division 15 for a job well done. Watch MTA Review for more letters from members of the public about their experiences out on our bus and rail lines.

MTA Review c/o Mailing List P. O. Box 194 Los Angeles, CA		ter		
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MTA Review

A monthly publication produced by the MTA.

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Other Board Actions. continued from page 4

\$30 million from JMA's original \$85 million proposal.

The Jacobs team will share responsibility for the work currently in progress with Parsons-Dillingham, the construction manager who originally started the work on the North Hollywood Station and the alignment up to the Universal City Station.

Construction Contract Approved for Transit Police Facilities at RRC

The MTA Board in October approved the award of a contract to Lynn Perfect Construction of Chatsworth covering the construction of a planned MTA Transit Police satellite station at the

MTA's Regional Rebuild Center, for a fixed price of \$262,500.

The planned substation, which will be built in an area previously occupied by MTA procurement staff, will accommodate about 200 police officers. The improvements to the facility consist of converting office spaces into locker rooms and restrooms.

Lynn Perfect Construction was the fifth lowest responsible and responsive bidder. The four other lowest bidders were non-responsive. A 35% DBE participation goal was established for the work, which was met by the successful bidder.

The Board Report. continued from page 3

for our future design needs where practical. This will ensure that we get top performance from all our design consultants. It may no longer be in our best interest for EMC to be the MTA's exclusive design engineering firm."

Meanwhile, the MTA has divided the former SKK tunnel construction job into eight work packages and has been evaluating bids from other contractors to complete the contract. Work packages are expected to be awarded later this month.

EA-686 12/95 JS

(213) 855-6000

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