

Metropolitan Transit Authority of Harris County, TEXAS

Comments to Notice of Proposed Rule Making Docket 02-55

May 3, 2002

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The Federal Communications Commission (FCC) believes that there is a serious interference problem with Public Safety Agencies in the 800 MHz band that requires resolution, and that restructuring of the 800 MHz band to stem such interference to Public Safety systems is imminent. Therefore, the FCC has solicited proposals that will provide Public Safety sufficient spectrum with minimum disruption to the existing licensing structure.

In accordance to FCC Rules, 47 C.F.R. Sections 1.415 and 1.419, comments may be filed 30 days after publication in the *Federal Register*. There are three proposals in the NPRM for which the Commission is soliciting comments:

- **Proposal from Nextel**
 - Re-allocate the 700 MHz and 800 MHz spectrum to provide contiguous space for Public Safety, SMR, and Cellular users.
 - Relocate Business and Industrial/Land Transportation users to 700 MHz or 900 MHz at their own expense.
 - Relocate incumbent stations licensed to Nextel, which are currently occupying the proposed Public Safety block, at Nextel's expense.
 - They will commit up to \$500 million in Nextel resources toward the cost of relocating 800 MHz band Public Safety systems to the proposed Public Safety Block.

- **Proposal From National Association of Manufacturers (NAM)**
 - Re-allocate the 700 MHz and 800 MHz spectrum to provide contiguous space for Public Safety, Business Industrial/Land Transportation conventional SMR, and Cellular users.
 - Retention of their existing location in the current spectrum (between Public Safety and Nextel) for Business and Industrial/Land Transportation.
 - Relocate Public Safety users, at Nextel's expense, to their allocated location at the lower end of the 800 MHz spectrum.

- **Proposal From Personal Communications Industry Association (PCIA)**
 - Merge 800 MHz and 900 MHz Business and Industrial/Land Transportation pools into single pool accessible to both services.
 - Lift freeze on inter-category sharing.

The Commission has indicated that it wants input regarding the equipment and ultimately the financial impact on users classified as Business and Industrial/Land Transportation (B/ILT) and/or "Critical Infrastructure" that would result from the implementation of the above proposals.

Current Configuration Background

The Metropolitan Transit Authority of Harris County, Texas is a regional transit system that not only serves the urban Houston area, but also its surrounding municipalities. The Authority is a political subdivision of the State of Texas. It is considered “critical infrastructure” and provides integral service during times of disaster (see Attachment A).

The Authority's current fleet is comprised of 1,478 buses, 117 para-transit vehicles, 140 privately owned taxis, 136 emergency vehicles, and 30 specialty vehicles. A rail component will be in service by year 2004. All of these vehicles are equipped with mobile radios. METRO also utilizes 492 hand-held radios to accommodate various support functions. With the addition of rail, communication requirements will expand as staff and specialty vehicles increase to support this new function. The Authority incorporates system redundancy using fixed primary and secondary base station radio sites. The primary site is located in the downtown Houston area. The secondary site is 12 miles west in the Houston Galleria area. The control point is the Houston TranStar building located between the two sites on 6922 Old Katy Road. The coverage area is omnidirectional with approximately 40 miles of usable signal.

Houston TranStar is the regional communications and emergency management center operated jointly by Harris County, the Texas Department of Transportation, the City of Houston and METRO. In the event of natural or manmade disaster activities, regional response and the coordination of life saving measures is accomplished at TranStar. . This Authority is a key integral player in transporting medical personnel, supporting transportation requirements to relief centers, and performing critical mass evacuations for the City of Houston and surrounding areas.

The Authority’s Advanced Radio Communications System ("ARCS") was fully activated in 1999. ARCS was installed by Orbital TMS at a cost of \$23 million. The acquisition was partially funded by a Federal Transit Administration Section 5307 grant. ARCS is an 800 MHz conventional SMR and is currently classified as “Land Transportation”. ARCS uses an E. F. Johnson Company Multinet radio network which transmits analog voice and data.

In accordance with FCC Rule 47 C.F.R., Section 90.699, the Authority migrated from its incumbent operating frequencies in the upper 200-channel economic area (816-821 MHz) to the now interleaved channels (809 – 816 MHz) shared by Business and Industrial/Land Transportation and Public Safety users. This migration was actualized during the latter half of calendar year 2001 and was funded by Nextel for approximately \$500 thousand. The Authority is operating under a letter of agreement with Nextel until the filing process with the Federal Communications Commission is completed giving the Authority sole license of its new operating frequencies.

In January 2002, the Authority was informed that Nextel had submitted a white paper to the Commission recommending a ruling to correct the cause of interference between commercial wireless and Public Safety radio communications systems in the 800 MHz band. The white paper proposed the reallocation of spectrum. In NPRM Docket 02-55, the Commission has since included two additional recommendations proposed by the National Association of Manufacturers (NAM) and the Personal Communications

Industry Association. (PCIA). Considering these proposals, this Authority desires to comment on the potential impact to its current configuration.

- **Nextel Proposal Impact**

The Authority's current operating frequencies reside in the spectrum which, in the Nextel proposal, is allocated for Public Safety. METRO would receive "secondary status", making it subject to the needs of Public Safety and vulnerable to their protests. This would institutionalize instability for the Authority in the 800 MHz band.

An option under consideration is for Houston METRO to co-license with the Harris County Regional Communications System. If approved by the Commission, it would give the Authority "Public Safety" classification. However, in order to be compatible with Harris County's Motorola system, an estimated \$14 million would be required to replace the radio component of ARCS. The Authority would seek to retain its current "Computer Aided Dispatch" (CAD) functionality to support ARCS as well as to better realize acceptable depreciation of the original \$23 million acquisition cost. Taking into account inflation, today's replacement cost of ARCS would be nearly \$40 million. In response to FCC Rules, 47 CFR, Sections 90.547 and 90.531, Harris County is converting to digital narrowband transmission. If METRO were to co-license with HCRCS, it would be subject to Harris County's conversion schedule, thus impacting the depreciation requirements placed on it by the Federal Transportation Administration (FTA). The Authority is required to maintain its current system ten (10) years from date of system acceptance or year 2009. Harris County would require the Authority to meet their conversion schedule by 2006.

Nextel recommends voluntary relocation of B\ILT users to the 700 MHz spectrum. Retuning the existing radios is not practical, considering that current radios in use by the Authority have bandpass filters designed for the 800 MHz spectrum. Technology for mobile radios that will operate at 700 MHz is currently not available or in production, although this is anticipated to change in the future. The Authority's equipment and cost impact, assuming product availability, would be the same as above. The narrowband transmission standard would again ensure the need to replace the radio component of ARCS to include fixed stations and combiner systems.

In the Houston metropolitan area, the 900 MHz band is saturated and provides little opportunity for migration. If it were possible, the equipment cost could be possibly more than that shown above, considering the propagation characteristics at these frequencies. Potentially, more sites may be required to maintain coverage of the Authority's service area.

The Nextel proposal would cause considerable impact to the Authority. If it were required to either join with the local Public Safety entity or relocate to the 700 MHz or 900 MHz band, equipment cost could be from \$14 to \$40 million. In addition to the initial cost, the Authority would incur a perpetual cost to operate on the Public Safety system or in the case of 900 MHz, additional site rental costs.

Nextel states that the financial burden would be the Authority's, causing an unanticipated expense and interruption to plans submitted to the FTA. The Nextel proposal assures accommodation for Public Safety and Cellular architecture; however, B\ILT operators are left uncovered. This proposal is not equitable for this Transit Authority, considering that it has been operating in the 800 MHz band since 1980.

- **NAM Proposal Impact**

Under the NAM proposal, the Authority's current operating frequencies would reside in a spectrum that has been allocated for Business and Industrial\Land Transportation users. This is the current interleaved portion of the 800 MHz spectrum allocated by the Commission in 1982. The Authority's current classification would apply and no relocation from the 800 MHz band would be required. In the event that intra-band migration is required, the cost would be approximately \$515,000 for retuning purposes for each migration. The Authority would continue to operate as currently configured and would be able to plan radio component system replacement in a manner more consistent with FTA asset life requirements. The Authority would include in its future plans the conversion to digital transmission.

Public Safety would be removed from the interleaved portion of the spectrum and would relocate to lower 800 MHz or 700 MHz bands. Nextel has already committed to financing the relocation needs of Public Safety. Cellular would be required to relocate from the interleaved spectrum to the upper 200 channels in 800 MHz.

The NAM proposal has minimal impact to the Authority in equipment and cost, and it allows system depreciation to be best realized. It addresses the needs of Public Safety considering the "refarming" of channels via the narrowband standard, and it allows B\ILT users to continue to operate in their designated band. It also provides increased spectrum for Cellular architecture.

- **PCIA Proposal Impact**

Once frequency reallocation has been accomplished, the interleaved portion of the spectrum would be less susceptible to Cellular architecture, as all user classifications would have their own bands of operation in 800 MHz. In the Nextel plan, there would be no interleaved spectrum. In the NAM plan, the interleaved spectrum would be reduced to 10 MHz in width and would only apply to B\ILT user for which it was originally intended.

A ruling on this proposal poses no immediate major equipment or cost impact on this Authority.

CONCLUSION

The Metropolitan Transit Authority of Harris County, Texas (Houston Metro) views the NAM proposal as the most favorable solution of the problem. This proposal minimizes the impact to critical infrastructure while providing the relief required by

Public Safety. The Authority recommends that the Commission consider this proposal, as it takes into account the importance of Public Safety's need for interoperability and responsibly addresses the first phase of the undertaking to stem interference from Cellular architecture.

Although the Nexal proposal addresses the need for Public Safety to have contiguous spectrum, as well as reduce interference for their channels, it would have considerable impact in equipment and cost on B\ILT users. It does not make adequate provisions for incumbent B\ILT users.

We believe the Nextel proposal to be unacceptable, given its cost and disruption of our role of serving and supporting the fourth largest city in the nation.

ATTACHMENT A

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November 16, 2001, Friday 3 STAR EDITION

HEADLINE: Metro takes aim at anthrax jokers ;
Transit authority, Crime Stoppers offering rewards

SOURCE: Staff

BYLINE: RAD SALLEE

BODY:

After a spate of anthrax scares on its buses and other facilities, the Metropolitan Transit Authority has joined Crime Stoppers of Houston in a reward program to catch the culprits and make would-be copycats think twice.

The agency's police chief, Tom Lambert, said Thursday that Metro officers have investigated 27 cases since mid-October in which powdery substances - resembling anthrax spores - have been found on buses and at Metro transit centers and Park & Ride lots.

Lambert said the materials have proved harmless, but their presence is disruptive, costly and unnerving to passengers and Metro employees.

Metro President and Chief Executive Shirley DeLibero said that under the joint effort with Crime Stoppers, all Metro buses and facilities will have posters urging those who know of such acts to call the confidential hot line 713-222-TIPS.

"Nothing is more important to us than the safety of our patrons and the confidence they have in Metro," DeLibero said. "With the help of the community and our own riders, Metro and Crime Stoppers are confident that these terrorist acts can be stopped and properly prosecuted."

Crime Stoppers Executive Director Kim Ogg said the rewards start at a guaranteed \$ 2,500 if the tip leads to arrest and felony charges of making a terroristic threat. Ogg said that includes leaving harmless powder with the intent to cause disruption. Rewards can reach \$ 5,000 if the act causes injury or death, she said.

None of the money comes from Metro or taxes, Ogg said. Crime Stoppers gets about half of its funding from donations and about half from \$ 50 fees that state and county judges may impose on convicted defendants.

Ogg said violators could be prosecuted most severely in federal court, where

the maximum penalty is 20 years in prison under the Patriot Act passed by Congress Oct. 12. The law was enacted in response to the Sept. 11 terrorist attacks on New York City and Washington, D.C.

Although the new law does not specifically mention hoaxes, Assistant U.S. Attorney Michael Wynne said he thinks it would apply to these incidents.

"It hasn't been determined by the courts yet, but we are reading it very broadly," he said.

Ogg said a state law against making a "terroristic threat" does apply in such cases, and when the action disrupts public transportation, communication or other public service, it becomes a felony, punishable by two to 10 years in prison.

Lambert said that in all but one of the cases to date no actual threat was made. Metro officials determined criminal intent because a substance was found "at a place where it shouldn't have been. If it's outside the norm, then somebody took an intentional action to leave it there."

In the other case, Lambert said, a passenger stepped off the bus and told the driver he had left a surprise. The driver stopped, walked to the rear of the bus and found the powder on nine seats.

Investigators are working on a composite drawing of the man, Lambert said, but he doubted that all the incidents were the work of one person.

Lambert said that particular incident, which occurred downtown, took the bus out of service for three hours.

It was marked off with crime-scene tape as police, the Houston Fire Department's hazardous materials team and Houston Health Department personnel investigated the incident.

The Crime Stoppers program was announced after the Metro board's monthly meeting. Earlier, the board voted to buy 49 new buses for a planned expansion of the fast-growing Park & Ride commuter service. The 45-foot buses will cost \$ 18 million, or about \$ 370,000 each.

The board also authorized Metro to spend up to \$ 5.5 million, if needed, on contracts with 28 private bus companies to provide shuttles to special events, such as the Houston Livestock Show and Rodeo. Metro would call on the contractors when demand for the service exceeds the agency's own capacity.

September 11, 2001, Tuesday EXTRA EDITION

HEADLINE: ASSAULT ON AMERICA;
Government facilities put on high alert;
Security sweeps conducted on all public buildings

SOURCE: Staff

BYLINE: MATT SCHWARTZ, S.K. BARDWELL, MIKE SNYDER, LISA TEACHEY, SUSAN
KREIMER

BODY:

Local authorities were on high alert today, stepping up security efforts across Houston, scouring government buildings for suspicious activity and objects following the attacks in New York and Washington, D.C.

Mayor Lee Brown said the city's emergency agencies had conducted security sweeps of all public buildings and had found nothing to indicate there was any potential threat.

He urged Houstonians to remain calm in this time of national emergency. "Our thoughts and prayers go out to the victims and their families," Brown said.

He also urged Houstonians to consider contacting the American Red Cross and donating blood.

Bush Intercontinental and Hobby airports remained officially open today, although all departures were on hold indefinitely, and people were being asked to stay away from the airports.

Local and federal officials were searching both airports with bomb-sniffing dogs.

Representatives of Channel Area Mutual Aid, a cooperative agency for security and emergency assistance at area petrochemical plants, were meeting to discuss security and could not be reached for comment.

Security at the federal courthouse in downtown Houston, was the tightest that most workers had seen in recent memory.

However, the U.S. Marshals Service, charged with security for the courthouse, was saying little.

"We are keeping track of everything that is going on around the country right now and we are acting appropriately," Marshals Service spokesman Eric Wallenius

said.

"But we can't go into any particulars right now. When it comes to security, we try to be as tight-lipped as we can. We don't want to give out what we're doing because we don't want to compromise the security of the building."

It was obvious that security had been beefed up.

At least six deputy marshals in plain clothes patrolled the perimeter of the building this morning. Three uniformed deputy marshals, with holstered semiautomatic pistols plainly visible, stood guard at the entrance. Another uniformed deputy marshal was stationed at the rear of the building.

The Marshals Service also called a towing company to tow cars parked around the building.

While the courthouse remained open, people who work in the building were clearly nervous.

Many said they wanted to go home.

"I'm scared right now. This is just like something out of one of those scary movies," said Johnnie Lytton, who works in the courthouse coffee shop.

"It's just like the world is standing still," she said.

Deputy court clerk Laurie Filmore said she was nervous.

"We feel jittery. This is getting too close to home," she said.

"Even if we walk out of this building today, we've got tomorrow and the next day and the next day. You never know what's being planned by terrorists."

Others said they were not intimidated.

"I think it could happen anywhere. We can't let people intimidate us. We've got to move forward with the business of the day," said deputy court clerk Vickie Creek.

As of late morning, the federal courthouse remained open for business.

The federal General Services Administration, which oversees maintenance of federal buildings, said some agencies were sending employees home early. But no federal building were reported to be closed.

Department of Public Safety troopers also were put on alert this morning, although DPS spokeswoman Tela Mange said she could not provide specifics on what steps were being taken.

Local and state agencies went on alert in the wake of the 1993 World Trade Center bombing. Steps taken then included frequent patrols of bridges, buildings, petrochemical complexes and the like, as officers checked for abandoned vehicles or other potentially dangerous situations.

The Houston Fire Department was put on alert soon after the New York City attacks this morning, said Assistant Chief Rick Flanagan.

A spokesman for the Department of Public Works and Engineering said security personnel were checking the city's 141 water and wastewater treatment plants for suspicious objects and boosting overall security efforts. Security also was stepped up at the Lake Houston Dam, spokesman Gary Norman said.

Brown said the city was leaving the question of evacuating of private buildings up to the employers and owners of the buildings.

He also said the city department directors are being given the discretion of allowing their non-essential employees to go home early.

To facilitate the departure of downtown workers, the mayor said the Metropolitan Transit Agency had reversed the traffic flow in the HOV lanes. In addition, the Metro buses had switched to their afternoon schedule for people going home.

The Port of Houston remained fully operational, said Rosie Barrera, director of public affairs. Officials have informed its employees, tenants and stevedores - the people who hire laborers to unload ships - of security measures as the workday continues.

Post offices in the Houston-area continued to operate normal hours and routes today but were on heightened security alert.

All retail post office lobbies were remaining open.

HEADLINE: THE GREAT FLOOD OF 2001;
No turning back;
Flood won't alter transportation projects in works

SOURCE: Staff

BYLINE: RAD SALLEE

BODY:

Despite causing 22 deaths and more than \$ 4 billion in damage, Tropical Storm Allison did not dampen the confidence of local transportation officials that two of their biggest-ticket projects remain sensible and safe.

The Metropolitan Transit Authority still plans to build its 7.5-mile light rail line at street level through two flood-prone areas. And a state project to widen the Southwest Freeway still calls for a half-mile-long stretch, below ground level with sheer vertical walls, that is subject to flooding.

"It would not make sense economically" to redesign the rail project, said Metro spokeswoman Julie Gilbert. "The cost is prohibitive." And in an extreme flood, she said, vehicle access to the train stations would be cut off as well.

Gary Trietsch, Houston district engineer for the Texas Department of Transportation, said the Southwest Freeway design is "safe and appropriate."

"To assert that event gives us marching orders to place gates and warning devices to close the roadway is wrong," he said.

Top officials of both agencies recently discussed the implications of future extreme flooding for the two projects.

Metrorail

Metro does not plan to risk any of its rail cars, which cost \$ 2.5 million each, by running them through more than about 3 inches of water. But at the height of Allison's flooding, water stood 4 1/2 feet deep in the middle of Fannin Street where the tracks will run through the Texas Medical Center.

In 1976, the same location flooded to a depth of 2 1/2 feet. No records are kept of the many occasions when area streets have flooded to the curbs from brief but intense thunderstorms.

The only part of the rail project design that Metro plans to change in light of the flooding is to raise the tracks by 4 inches between Blodgett Street and

Hermann Park, said John Sedlak, Metro vice president of planning, engineering and construction.

For most of the route from downtown to Reliant Park, the northbound and southbound tracks run a few feet apart in the center, or crown, of the street, normally its highest and driest point. But in this stretch, the trains will run south on Fannin and north on San Jacinto a block away, hugging the east curb of each street.

That put the tracks slightly lower than the crown of the street. Raising them will reduce the frequency of shutdowns because of street flooding, Sedlak said.

Metro President and CEO Shirley DeLibero said that when part of the route does go under water, buses will be sent to carry passengers around the flooded area, and trains will be switched to the opposing track, reversing their direction. In effect, the system would operate briefly as two separate loops linked by a "bus bridge."

Two places on the route lie within the 100-year flood plain, defined as an area having a 1 percent probability of flooding in a given year.

One of these sites is a 1 1/2-block downtown segment of Main Street from Buffalo Bayou to a point between Commerce and Franklin streets. Even before the Allison flooding, Metro planned to elevate the intersection of Main and Commerce out of the flood plain, and that work is in progress.

The other low-lying segment of the rail route is much broader. It runs nearly two miles along Fannin from the south end of Hermann Park to Old Spanish Trail and includes the Texas Medical Center and Brays Bayou.

Sedlak said flooding in that area should be sharply reduced by two projects that attack the problem at both ends. A bayou widening project by the Harris County Flood Control District, designed to increase the stream's carrying capacity, is expected to be completed in about eight years. And Metro is installing a new storm drain that will more than double the flow of runoff from the Medical Center to the bayou.

Steve Fitzgerald, chief engineer for the flood control district, said widening the bayou will shrink its 100-year flood plain so sharply that the number of current structures remaining within its boundaries would fall to about 1,700 from 30,000.

Given sufficient storm sewer capacity, future flooding in the Medical Center from a storm as wet as Allison could be 3 or 4 feet less than what occurred this June, Fitzgerald said.

By far the longest-lasting bottleneck caused by Allison in the area was flooding of the Fannin Street underpass at Holcombe Boulevard. The rail line and

street traffic both will go through this short dip, which remained impassable for three days.

Sedlak said the underpass has flooded three times in the past 20 years, and on two of these a city pump was inoperable. Houston Department of Public Works and Engineering spokesman Wes Johnson said Allison caused a power failure throughout the neighborhood that shut off electricity to the pump.

He and Sedlak said Metro has offered to help improve the pump system there to prevent future shutdowns.

Sedlak said the rail line is protected from power failure in several ways. The tracks are not electrified, and the overhead wire that feeds the motors is not vulnerable to rainy weather.

The nine traction power substations that will supply electricity to the wire have no generators. They receive alternating current from commercial sources and convert it into direct current, so they would be subject to a general power failure. But all the stations have floors at least 2 feet, and some up to 7 feet, above the 100-year flood plain, Sedlak said.

The rail car components most vulnerable to water damage are placed high above the passenger compartment, said Metro consultant Tony Venturato.

"If water got inside a (rail) car," Venturato said, "we'd have damage to the interior amenities, but that's repairable."

The motors are at wheel level and cannot operate under water, but they would not be damaged by it either, Sedlak said.

"It's just a matter of drying out, and we're back in service," he said.

Southwest Freeway

The Texas Department of Transportation defends the vertical-wall design of a segment of the Southwest Freeway being widened near the Museum District. Rainfall from Tropical Storm Allison filled the mile-long canyon from Shepherd Drive to Mandell Street with floodwater, almost reaching the four bridges that cross it.

Also inundated were a sunken 2 1/2-mile stretch of the Katy Freeway from the West Loop to Shepherd Drive, and short sheer-walled segments of the North Freeway between White Oak Bayou and Houston Avenue near downtown.

The Southwest and Katy freeways remained impassable for about 36 hours, and vehicles were stalled and trapped in the three locations.

It was the third extreme flood in this segment of the Katy Freeway since

1992, and the second time that numerous cars and trucks had to be abandoned as fast-rising water enveloped them. The freeway has grassy banks that slope gently up to the frontage roads, providing an escape route by foot.

But motorists caught in future flooding on the rebuilt Southwest Freeway would have no such easy exit.

Engineering and safety experts outside the Texas Department of Transportation would not comment specifically on the safety of the design, saying they lack enough information to second-guess the department's engineers.

But John Durrant, executive director of the Structural Engineering Institute of the American Society of Civil Engineers in Reston, Va., said the transportation department appears convinced that the segment will not be subject to the sudden flooding that has twice trapped vehicles on the Katy Freeway.

Durrant said officials should consider installing gates to shut off access to flood-prone freeways, just as mountain roads are gated shut when blocked by snow.

Dr. Philip Bedient, a hydrologist and Rice University engineering professor who has studied local flooding for years, suggested placing stairs or ladders at intervals along the freeway trench.

But engineer James F. Thompson, of Thompson Professional Group, said this could create a greater hazard by tempting children and others to climb down into traffic. "I don't think any reasonable engineer would say to hang life preservers on the sides of the freeway," he said.

Trietsch, in a written response to Chronicle questions, said the segment that filled during Allison had no history of flooding. It was built in the 1960s.

As for the Katy Freeway, he said, any long-term fix would depend in part on the findings of a consultant's study of its drainage problems. These include the periodic overflowing of nearby White Oak Bayou. When that happens, there is nowhere to put the water pumped out of the freeway trench.

Meanwhile, Trietsch said, a system of flood sensors is being tested, and there are plans to make the Katy Freeway frontage roads continuous from the West Loop to downtown, providing an alternate route when main lanes are flooded.

Bedient said the most important safeguard for freeway users during heavy rains is the ability of authorities to close a flood-prone segment on short notice.

"They need to use the flood alert system or something to get that word out," he said. "And not after the fact, not after a bunch of people have driven into it."

Trietsch said that is exactly what the transportation department plans to do, by building "redundancies" into its flood-response system.

The need for a more reliable system was shown when Allison knocked out three key electronic data centers, effectively blinding a number of the video cameras that monitor freeway conditions and pulling the plug on some electronic message signs that warn motorists of trouble ahead.

In all, Trietsch said, Allison caused nearly \$ 3 million in damage to such equipment, which the department and its partner agencies in the Houston TranStar emergency center rely on.

"We plan to spend approximately \$ 8 million over the next couple of years to produce the needed redundancy," he said.

During the buildup to Allison's flooding, Trietsch said, personnel at TranStar kept tabs on rainfall, stream levels and road conditions. As the crisis approached, warnings were broadcast and police were dispatched to close the affected freeways - though not quite in time.

"Preliminary data," Trietsch said, "showed that during this particular weather event, the water rose so rapidly that the window of opportunity to give notice was narrow to nonexistent."

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July 24, 2001, Tuesday 3 STAR EDITION

HEADLINE: Metro resumes its free shuttles;
Flood repairs still being made to underground parking complex

SOURCE: Staff

BYLINE: RAD SALLEE

BODY:

With downtown workers still facing more than a month of parking shortages while repairs are made to flood-damaged underground garages, Metro has resumed its free shuttles from Enron Field.

The Houston Astros will continue to provide free parking for shuttle riders.

The Metropolitan Transit Authority began the service, June 11, after Tropical Storm Allison deluged the three-level, 16-block garage complex on the western edge of downtown.

On July 2, Metro stopped running the full-size shuttle buses and instead detoured one route of its small downtown trolleys to include a stop at Enron Field.

"We thought the trolleys would provide a more frequent service at a comparable cost," said Metro spokeswoman Patti Muck.

But Muck said customer feedback indicated riders preferred the buses.

Three buses will run at roughly 10-minute intervals, Muck said. With the shuttle service resumed, the trolley has returned to its regular route.

Muck and Rob Matwick, Astros spokesman and vice president, said the service will be continued as needed.

The shuttles and extended trolley service have cost Metro about \$ 67,000, Muck said.

Metro officials said that 10 days of areawide free bus service provided after the flooding cost the transit agency an additional \$ 1.3 million.

Muck said Metro is exploring whether some of the money can be recovered from the Federal Emergency Management Agency.

The shuttles run weekdays from 6 to 10 a.m. and from 3:30 to 7:30 p.m., picking up passengers at Enron lots B and C, going north on St. Emanuel to Preston, then south on Hamilton to Capitol, then proceeding to Bagby and the City Hall area.

The shuttles then turn left on Bagby and again on McKinney, go north on Louisiana to Rusk, then return to the parking areas.

To connect to destinations in the Harris County Courthouse complex, Muck said, shuttle riders may transfer to Trolley Route D, which runs north on San Jacinto and south on Caroline.

To reach destinations in the Theater District, she said, they may transfer to Trolley Route A, which runs north on Louisiana and south on Smith.

The underground garage complex, which holds about 3,500 vehicles, is likely to remain closed through August, said Jordy Tollett, director of the city's Department of Convention and Entertainment Facilities.

"It sat in water so long that all the lighting fixtures and all the wiring have to be completely replaced," Tollett said Monday.

He said the Tranquility Park garage, under City Hall, has been cleaned and is undergoing electrical repairs. The connected Convention Center garage, under the Albert Thomas Convention Center (Bayou Place) is still being cleaned, he said.

"Tranquility may be open in September sometime," Tollett said. "It might be Oct. 1 for the Civic Center garage."

Matwick said he does not expect the shuttle service to interfere with fan parking because the Astros have only one afternoon weekday home game scheduled during the month - on Aug. 30.

June 20, 2001, Wednesday 3 STAR EDITION

HEADLINE: Allison's estimated cost to Metro \$ 2.8 million

SOURCE: Staff

BYLINE: RAD SALLEE

BODY:

Flooding from Tropical Storm Allison cost the Metropolitan Transit Authority about \$ 2.8 million, but Metro expects to recoup \$ 900,000 from flood insurance and federal disaster aid.

When these preliminary estimates were presented Tuesday to the Metro board, there were some pointed comments and questions about future flooding.

A major concern was the likely impact on Metro's 7.5-mile light rail line, under construction and expected to open early in 2004.

Allison struck devastating blows to the Texas Medical Center, which will provide the core ridership for the rail line. The route follows Fannin Street through the heart of the Medical Center, where water was waist-deep or higher.

"If we're not two feet above the 100-year flood plain, we're being foolish," said board member James Cumming, of Metro's plan to situate two power substations above the 100-year line.

"Every 20 years we've had a 2,000-year storm, but we're not designing for that," he said.

Cumming noted the 35 inches of rain that Allison dumped on some parts of the Houston area over several days, was hardly unprecedented. In July 1979, Tropical Storm Claudette dumped a record 43 inches on Alvin in one day.

John Sedlak, Metro vice president of planning, engineering and construction, said Metro engineers will "review the 100-year flood plain decision."

He said the rail line design calls for seven power substations along the route. A power failure in one part of the line will not shut down the rest of the system, he said.

The system depends on outside sources of electricity and has no generator itself.

The route includes several other spots that experienced severe flooding.

Among these are Brays Bayou, source of much Medical Center misery, and the nearby Fannin Street underpass at Holcombe Boulevard, which remained water-filled and impassable for nearly three days.

Sedlak said the rail line is designed so that trains can operate in both directions on each side of a flooded spot, using buses to bridge the gap.

Sedlak said the Harris County Flood Control District plans to widen the section of bayou where Fannin will cross on a new bridge, speeding the flow of water downstream.

He also noted that a 66-inch storm drain is being installed to help carry water from the Medical Center. The current drain is 42 inches.

After the board meeting, Sedlak said Metro would not want to operate its low-floor light trains in more than about three inches of water.

Compared to the Medical Center and several freeways, Metro received a minor slap from Allison. The agency's biggest financial hits were not the estimated \$ 380,000 in damage to buses, \$ 120,000 to bus facilities, or \$ 200,000 to the region's high-occupancy vehicle (HOV) lanes.

Much of the cost came from the \$ 1.3 million in free rides that Metro is providing to flood victims. The free rides began Thursday and will end after Sunday. Metro also will continue its free shuttle service between downtown office buildings and parking lots near Enron Field through Friday.

Another big expenditure, \$ 500,000, will go toward buying back vacation time from Metro employees who need emergency funds for flooding cleanup.

In other business, Sedlak briefed the board on an "Uptown Connector" proposal from the Uptown Association, which represents interests in the Uptown/Galleria area.

The proposal would make the first use in the Houston area of "bus rapid transit" - something of a cross between buses and trains that employs streamlined high-capacity vehicles and "intelligent" traffic signals.

The rubber-tired buses look much like light rail cars and would run on fixed guideways.

The organization estimated the cost at \$ 191 million, excluding vehicles and maintenance facilities. If Metro adopts the idea, Gilbert said, costs would be shared, but details remain to be worked out.

The proposed route would follow the West Loop from the Katy Freeway to Post Oak Boulevard, then run down the median of that elite shopping street to the Southwest Freeway. A Metro transit center lies at each end of the route, which includes four other stops.

Metro rejected the option of bus rapid transit for its light rail line, largely because rail was thought to be a more effective spur to economic development along the route. But the Uptown area does not lack for commercial enterprises.