



# **Project Management:** **A case study of Hyderabad Metro Rail**

**VC @MCRHRD, Hyderabad**



**Apr 15 , 2020**

**NVS Reddy, IRAS**  
**Managing Director**  
**Hyderabad Metro Rail Ltd.**



Ideas pursued with passion  
and courage of conviction  
make 'impossible' **possible...**



# Hyderabad Metro – a saga of Grit, Guts & Gumption

- To follow the **rut** is easy & comfortable
- A **path breaker** needs guts, courage of conviction, perseverance & struggle
- **Failure** management & **peak** performance
- **World's largest** Metro project in **PPP** mode
- Highly ambitious – first of its kind in the world
- 250 Metro Rail systems : < half-a-dozen in PPP
- Nobody has done it any where in the world  
∴ can't be done



Dt. 24.09.2008

## Metro Rail: future actions to be subject to court order on petition

### High Court adjourns case to October 30

Legal Correspondent

**HYDERABAD:** All future actions with regard to the implementation of the Hyderabad Metro Rail Project will be subject to further orders in the miscellaneous petition filed in the main writ petition filed regarding the Hyderabad Metro Rail Project.

A Division Bench of the High Court comprising Justice G.Raghuram and Justice P.V.Sanjay Kumar gave this clarification while adjourning the case to October 30.

The Bench was dealing with a miscellaneous interlocutory petition seeking a stay on all further actions to implement

the Hyderabad Metro Rail Project.

### Objections

It may be recalled that C. Ramachandriah and O.M.Dibara filed the writ petition complaining that the public was not informed about the project and the environmental clearance not obtained by the authorities. They complained about the security angle vis-a-vis Legislative Assembly and the danger to the Hussainsagar. Another Division Bench admitted a writ petition in August and asked the authorities to file a counter affidavit. In the present miscellaneous petition, the petitioners said

that the quarters at Malakpet were being vacated and land acquisition proceedings initiated in Chikkadpally and all this in violation of the A.P. Tramways Ordinance.

### Request for time

The Advocate-General requested time to file a counter affidavit. The Bench observed that the case would be listed on October 30 and before that the counter affidavits are to be filed and pleading completed.

The Bench said that the actions, if any, taken by the government of Andhra Pradesh or Metro Rail Corporation will be subject to orders in the petition.

Dt. 08.01.2009

## Is it goodbye Metro Rail?

TIMES NEWS NETWORK

**Hyderabad:** B Ramalinga Raju's Rs 5,000 crore fraud has rung the death knell for the Hyderabad Metro Rail project. While Delhi metro chief may have sniffed a 'political scam' months ago, the government was batting for Raju until Wednesday. The government is now "weighing options" whether or not to continue with Maytas Infra as the project's developer.

Senior state officials confirmed to TOI that the government was looking into this "serious issue" (Raju's fraud confession) and that it would take a "decision" soon. Industry sources indicated the government may now terminate Maytas Infra's contract and go for a fresh bid. Only this time, there wouldn't be many interested parties to take up the project given the market condition, industry sources say.

Eroding Maytas's chances to continue with the metro project is the fact that the developers are nowhere close to making a financial closure. In fact, Satyam's aborted bid to acquire Maytas was largely viewed as an exercise to show strong collaterals to raise money from the market as debt for the metro rail project. Industry sources had then said that Satyam's balance sheet would come in handy to raise funds for the Rs 12,000 crore project. "As against a land bank (Maytas Infra owns land along the three corridors of the project), a Satyam balance sheet is a stronger collateral, much more secure and more valid," an industry source had then said. The same Satyam balance sheet has now wiped out Maytas's chances to continue.

Besides, the state could also be running out of time. "As per the bid agreement, the financial closure should have been done within 180 days (of winning the bid). However, the bid was won by Maytas on July 22 and six months hence there is no sign of the closure," says a senior industry source.

Metro rail, the three corridor and 71 km project, is estimated to cost Rs 12,000 crore and industry experts say that the Maytas Infra led consortium would have to raise at least Rs 10,000 crore as debt from the market including loans from banks and financial institutions. Maytas Infra is not claiming a single penny under the 'viability gap funding' and will, on the contrary, be paying the government for building the project. In return, it has got 296 acres of prime land from the government for commercial exploitation.

However, given the plummeting real estate valuations, this asset will serve as a poor collateral. "The project will not happen. The entire guarantee (to raise money) was coming from Satyam. But how will they do their debt structuring now," questioned an industry senior, adding that either Maytas will withdraw from the project itself or the government would terminate its contract.

But the project has now hit a road block since no other industrial house would be in the mood to take it up. "Any big industrial house will think twice since the entire project was banking on real estate. We have to revisit the entire financial modelling, the financial presentation and projection and then take a call," said an official of an infrastructure firm. He said that if the government were to approach other firms, they would consider it but keeping in mind the totally changed market which is a far cry from how comfortable it was six months ago, it would be difficult to find a willing party. "The ambiguity in the concession agreement too needs to be revisited and the planning commission should also understand they must view (the projects' viability) from the lender's perspective and not just the government perspective," the official said.

Maytas Infra is now scheduled to pay the government Rs 50 crore in March 2009.



Dt. 06.03.2009

## Hyderabad Metro Rail project in limbo

### May miss financial closure deadline

Our Bureau

Hyderabad, March 5

With the six-month deadline of March 18 for achieving financial closure for the Rs 12,132-crore Hyderabad Metro Rail Ltd, ticking by, there are indications that the consortium led by Maytas Infra Ltd is now certain to miss the deadline.

According to sources in the Andhra Pradesh Government, which is a co-developer of the project, in all certainty, the company and its consortium members are unlikely to achieve financial closure.

The consortium led by Maytas Infra, includes Nava Bharat Ventures Ltd, IL&FS and Ital Thai. IL&FS was leading the loan syndication for the project.

Asked about the implications of the delay, the source said they will have to fall back on the agreement and necessary legal counsel. As things stand today, the very execution of the project is now uncertain. With the general elections slated for April-May, no decision is likely on the follow-up action.

According to the agreement, Maytas Infra has to pay Rs 50 crore on the date of financial closure and also furnish the Government guarantee of Rs 240 crore.

Sources said the matter of funding has become much more difficult for Maytas Infra and its partners given the turmoil the company is facing after the attempt by Mr B. Ramalinga Raju, founder of Satyam Computer and Maytas, to acquire the latter.

#### RESULT DELAY

The third quarter financial results of the company, earlier slated for the last week of January, have not yet been announced as the company sought extension of time. This move coincided with some of the Board members, including Mr R.C. Sinha, Chairman of the board, exiting the company.

The company shares, which ruled at peak of over Rs 750 crore in first half of 2008, continued their downward slide to double digits after some of the large contracts fell through. The scrip closed the day at Rs 34.45 (previous close Rs 35.90).

Dt. 07.07.2009

## Uncertainty continues over metro rail

### Centre to fund projects up to Rs. 1 lakh cr.

M. Rajeev

**HYDERABAD:** The State government is in a poignant situation over Hyderabad's metro rail project following the Centre's decision to finance infrastructure projects up to Rs. 1 lakh crore through the India Infrastructure Finance Company Limited (IIFFCL).

The Centre had announced that the India Infrastructure Finance Company Limited would refinance 60 per cent of bank loans obtained for projects in critical sectors taken up in public-private partnership mode over the next 15 to 18 months.

#### Financial closure

The move is aimed at enabling the private sector meet requirements like achieving financial closure and putting the projects on the fast track.

Though the officials concerned are keen on taking advantage of the move to secure funds for the metro rail project, there could be no forward movement until a final decision is taken on retaining the Maytas Infra-led consortium as the contractors.

#### Dim prospects

The project could be put on the fast track if Maytas achieves financial closure which, officials claim, is unlikely.

In the alternative, the government should consider other options like calling fresh bids from pre-qualified bidders.

- Officials keen to cash in on move to secure funds

- Whether to retain Maytas-led group or not holds key

Uncertainty looms over the project as Maytas could not achieve financial closure in spite of the extension of more than three months given by the government. "How can Maytas, which opted for corporate debt restructuring to service its previous loans, achieve financial closure for such a massive project?" a senior official asked.

#### No serious effort

Officials are also puzzled that Chief Minister Y.S. Rajasekhara Reddy was yet to take a decision on the prestigious project.

There was no serious effort to resolve the uncertainty surrounding the timeframe for commencement of work on the metro rail project.

#### Time-frame

Given the 18-18 month time-frame announced by the Centre for obtaining 60 per cent refinance on bank loans, it was imperative for the government to act fast for securing the assistance before other States forward their bids. "Time is ripe for taking a decision on the project or else the State will lose the advantage," the official said.

Dt. 08.07.2009

## Andhra cancels Maytas metro deal

FROM

### Andhra cancels Maytas metro deal

BS REPORTERS  
Hyderabad, 7 July

The Andhra Pradesh government has cancelled the concessionaire agreement for the Rs 12,132-crore Hyderabad Metro Rail Project, a showpiece awarded to Maytas Infra Limited, the listed company run by Teja Raju, older son of Limited Computer Services Limited founder B Ramalinga Raju.

Announcing this today Municipal Administration and Urban Development Minister Anam Rammaryana Reddy said the deal was cancelled because the company failed to achieve financial closure although three months had lapsed from the March deadline.

Reddy clarified that the government will still take up the project and will announce a detailed plan on July 13.

Maytas Infra Chairman K Ramalingam met Chief Minister Y S Rajasekhara Reddy recently but failed to give an assurance on the financial closure or performance guarantee.

Maytas had paid the state government Rs 11 crore as an initial amount and provided Rs 60 crore as a bank guarantee after signing the concessionaire agreement in September last year. Under the agreement, the company forfeits this money if the project failed to achieve financial closure by March 17, 2009.

Maytas Director Ved Jain told *Business Standard* he was not aware of the development. "Let the official communica-

The Hyderabad metro project attracted national attention when the Maytas-led consortium bagged it by offering the government royalty of Rs 30,311 crore over a contract period of 35 years. The consortium comprising Maytas, Nava Bharat Ventures Limited, Italian-Thai Development Plc and IL&FS also rejected Rs 4,800 crore offered as viability gap funding (government compensation for the difference between cost and revenues)

This meant that the state government would not only get the 71-km metro free of cost but would also receive Rs 1,240 crore (calculated at present value at 13.5 per cent a year) by simply giving the concession to a private consortium.

Although the build, operate and transfer (BOT) project was considered a model for other metro projects Delhi Metro Rail Corporation Limited Managing Director E Sreedharan criticised the deal, saying it depended on 296 acres of prime land being made available to Maytas for commercial exploitation. "This is like selling family silver," he said in a letter to Planning Commission Deputy Chairman Montek Singh Ahluwalia.

Maytas Infra's troubles began on December 15 last year when Ramalinga Raju announced that Satyam would acquire 51 per cent of the company along with 100 per cent in unlisted Maytas Properties for about Rs 8,000 crore. Though the proposal was withdrawn following strong shareholder protest, the circumstances led to Raju making a sensational confession to long-term fraud in Satyam Com-



**Hindu,**  
**Dt. 29.12.2011**

**Indian Express,**  
**Dt.16.03.2012**

# Chikkadpally traders down shutters

Demand better compensation package for loss of their land in the Metro Rail project

Staff Reporter

**HYDERABAD:** The busy commercial hub of Chikkadpally wore a deserted look on Wednesday as the traders downed their shutters supporting the one-day 'dharna' and 'vasta vaarp' programme organised by the BJP and Chikkadpally Federation of Commerce (CFC) at Chikkadpally. The traders were demanding better compensation package for the loss of their land in the Metro Rail project.

While government maintains that there are only about 300 shops that would be affected by the Metro Rail II phase project at Chikkadpally, the BJP National secretary K. Laxman says that about 500 shops would be affected during the construction. "Though the Metro Rail will reduce the traffic congestion and provide efficient public transport system, the

• BJP and Chikkadpally Federation of Commerce organise a one-day 'dharna' and 'vasta vaarp'

• Traders operating on rented premises are being evacuated without being offered alternatives'

traders should not be victimised in the process," he said.

### Market rate

Outlining their demands, CPC president C. Sund Kumar said that the compensation for the land should be given at prevailing market rates. Their demands also include providing compensation to all the affected traders without discrimination, and providing alternate accommodation to the traders and tenants who are set to lose more than 80 per cent of their property because of the project.

"The proposed compensation of Rs 45,000 per sq ft is far below the actual market

price," Mr. Kumar said. "Besides, the officials claim that about 70 establishments are located on government lands and are offering a very low compensation package to them," he said adding that these shops have been functioning for more than seven decades and have proper registration papers.

"How can the officials claim these properties as government land while they were collecting taxes all the while?" Mr. Kumar questioned.

Dr. Laxman complained that while the owners receive compensation, the problems of traders occupying rented premises are not addressed.

"There are many traders operating on rented premises at Chikkadpally and they are being evacuated without offering any alternatives," he said.

He urged the officials to construct a complex at the municipal market, Chikkadpally and offer those shops on rent to the traders who would lose more than 80 per cent of their land. "The sub-way located at RTC Cross roads is being unused for a long time and has turned into a den for anti-social elements. It can also be converted into a market on the lines of New Delhi's 'Pahli Bazar,'" he suggested.

"GEMC Commissioner has accepted our demands but there is no written commitment from the government till now. We will continue this struggle and I will go on indefinite fast from rail-jammy if these demands are not met by them," Dr. Laxman said.



**DESOLATE:** Shops remain closed as traders support the protest by BJP and Chikkadpally Federation of Commerce on Wednesday. - PHOTO: K. RAMESH BABU

## THE COURTS

# HC Stays Works on Metro Rail Stretch

Express News Service

**Hyderabad:** The High Court on Thursday issued interim orders, staying the execution of work on the Greenlands-Shilparamam segment of Corridor-3 of the Hyderabad Metro Rail project.

"It appears that the state government granted the rights for metro rail on an earlier occasion in favour of an agency, in a similar clandestine manner, keeping the entire project away from public scrutiny. At least when its decision turned out to be a blunder, it ought to have been careful and followed the procedure prescribed under the relevant provisions of law," justice L Narasimha Reddy remarked on Thursday.

Pronouncing the judgement, the judge said acceptance of the contention of the HMRL managing director and the state government would lead to disastrous consequences.

"A scheme which involves transfer of vast extents of government land, acquisition of large number of private properties, dislocation of road transport system for a considerable time and conferring of the largesse of a high magnitude upon a private agency cannot take

place without reference to any public opinion. In the counter-affidavit, the respondents impliedly stated that the provisions of the Metro Railways Act were not



### JUDGE'S CAUSTIC REMARKS

- Acceptance of the contention of HMRL and state govt will lead to disastrous consequences
- The state, in its eagerness to spread a red carpet for a private agency, has chosen to break the law enacted by itself
- Not only a vast number and extents of pvt properties but also public institutions such as Durgabai Deshmukh Government Women's Technical Training Institute and a govt school will be wiped out
- A project involving transfer of vast extents of govt land, acquisition of many pvt properties, dislocation of road transport system and giving huge largesse to a pvt agency cannot be executed without taking public opinion

followed.

The respondents have chosen to bring about and establish a metro railway under the AP Tramways Act."

The judge remarked that the managing director appears to shield or immunise HMR from any plausible objections, and unfortunately

the state, in its eagerness to spread a red carpet for a private agency, has chosen to violate and break the law enacted by itself. It is not out of place to mention that the very purpose of enacting the AP Tramways Act was, keeping in view the present 'Metro Railway Project'. So much of urgency was felt that an ordinance was issued and, later on, it became an Act.

"After perusal of the counter-affidavit of HMRL, it is

evident that not only vast number and extents of private properties but also important public institutions such as Durgabai Deshmukh Government women's Technical Training Institute and a government primary school at Krishnanagar are going to be virtually wiped out or made dysfunctional.



**The Times of India,  
Dt.19.03.2012**

## HC stay on metro works: Hope for others affected?

Pritha Chakrabarti | 7/4

**Hyderabad:** The high court's stay order on Hyderabad Metro Rail (HMR) works between Greenland and Shilparamam has given hopes to the poor living on the stretch from Jubilee Hills Station to Falaknuma that their plight too will be taken up by the court suo moto.

The high court stayed the works on Thursday on Corridor-B based on a writ petition filed by a group of affected people who formed a Joint Action Committee. The slum dwellers living on Corridor-B, that lies between JBS and Falaknuma, who so far believed that no influential political party or organization will ever take up their cause, unlike in Sultan Bazaar, now seems to find a ray of hope.

P. Sunitha, member of the Hyderabad Metro Rail, a grass-root organisation working in the Old City, says that the trade unions and political parties have successfully opposed the HMR works taken up in the Sultan Bazaar area. But if HMR materialises, there are also thousands of slum dwellers and daily wagers who will be thrown out of businesses and their houses but haven't found any support thus far. Also added will be three government schools that cater to the people in that area.

She says quoting a recent survey conducted by Chhatra, 100 houses, 400 shops and three government schools will be affected by the HMR project in the Dhotighat (old Chaderghat) Kamman stretch alone. Ninety-five percent of the people who would be affected are either Muslims or SCs and STs. Most of them are daily wagers, motor repairer, push cart vendors or domestic labourers. "May be that is the reason why no one is bothered to stand up for their rights,"

she wonders.

K. Raju, a bamboo worker who stays and works out of the Kall Khabar slum, says, "We have been selling bamboo huts on this footpath for years. Now the authorities have asked us to move out." The slums, some of which are snatching the footpath also face the danger of being razed down. Although the people there pay Rs 100 to the land owner every month, they are scared of bringing the issue up being migrant workers in the city without any ration card. Also affected would be the washer men from the Dhotighat behind the CBS. Says Venkatesh, a dhobi from the area, "Metro people are threatening us every now and then and asking for the 'patta' (legal papers).

"They are ignoring the fact that we have been occupying this land since the Nizam's era. Our original 11-acre land was cut down to three when the RTC bus stand came up. Now they want us to give up this too."

The City Model School, Azampura Government School and Chaderghat Girls' High School mainly teach children from the slums. All of them will get demolished to facilitate the HMR project. Relocation of the schools will not help the cause as it is already a big deal for children from these families to go to schools in the first place even though they are near their slums. "With all the three schools razed down, these children will no longer get any opportunity to study," says Md Ashfaq from People's Initiative Network.

Says Devi, a grass-root worker from Moosanager, "No compensation package or rehabilitation programme has been offered to these people yet. There is nobody to speak on their behalf."

**Indian Express,  
Dt. 07.05.2012**

## Metro rail works hit expected roadblock

Locals oppose felling or translocation of trees attached to temples at Erragadda and Moosapet. So far, 340 trees cut down in city

Express News Service

**Hyderabad:** With the Hyderabad Metro Rail project picking up momentum, environmental activists and concerned citizens are raising their voice against the destruction of trees in the city. About 3,000 trees need to be removed or translocated in the three metro rail corridors. Of these, the HMR corporation has already felled 240 and translocated 104, but it is finding it difficult to approve 3 others on the 1.8 Nagar-Moosapet stretch where the initial works are in progress. In the outer stretch, around 1,400 trees are going to be cut down and their stumps, they are not "to be translocated," according to the HMR officials.

The HMR has already felled two species like **Rauzi and Marri** are being translocated to the Outer Ring Road and saplings are being planted at metro rail casting yard in many areas.

The authorities have announced that they would remove the trees and move it to a place near Erragadda Rhyth House, which is quite

far away. The locals are attached to the tree and we cannot let their sentiments be hurt. We are still waiting for the official response, said Sarvesh, president of the 70-year-old Rangana

as approved by the Forest Department, the HMR has translocated 104 trees, most by Rangana (Tree translocation) and Marri (Tree transplantation) and cut 240 trees which are not fit for translocation, with compensatory plantation in the natural site. Not all trees could be translocated as they are not fit for such a process. In some cases, the appropriate of the translocation in the future also may be decided by the government.

Native tree species like Rauzi and Marri are being translocated to the Outer Ring Road and saplings are being planted at the metro rail project and the need to translocate the trees adjacent to the temples and around the temples, said a HMR official.



The Rangana House area near Erragadda Crossroads, which will soon be approved by proposed with the construction of the Hyderabad Metro Rail. Residents have been vehemently protesting against it. (S. Sankar)

**Times of India,  
Dt. 23.12.2012**

## Save govt schools: Medha

Calls Demolition Drive For Metro 'Govt Gunda Gardi'

TIMES NEWS NETWORK

**Hyderabad:** Social activist Medha Patkar on Saturday lent her support to civil society members struggling to save government schools in Chaderghat from being demolished to make way for the Hyderabad Metro Rail project.

On Saturday morning, Patkar visited the schools facing demolition - Government City Model Primary School, Government City Model High School, Government Girls Primary School, Kattalaguda, and Government Girls' High School, Chaderghat (old) - and interacted with the students. While assessing the situation, she termed the demolition move as 'gov-



Social activist Medha Patkar with civil society members in Chaderghat on Saturday

ernment gunda gardi'. "It is shocking that the administration in Hyderabad has grown hawkish in the name of building urban infrastructure that it has to erase even government school buildings for the

metro rail. On the one hand, the government is struggling to improve children's education through schemes such as Sarva Shiksha Abhiyan, and on the other, it is demolishing school buildings even without making

alternative arrangements," Medha said.

She said she was with the civil society members fighting to save government schools, and warned that she would lead an agitation in Hyderabad on the lines of the ongoing struggle against displacement of slums in Mumbai for the metro rail project there. With the parents of the schoolchildren protesting the government's decision and the SHRC issuing notices to the district collector (DC) of Hyderabad based on a petition filed by Human Rights Forum (HRF), the government agreed to give time to the schools till April next year so that the current academic year is not disturbed.





Chief Minister N. Kiran Kumar Reddy inaugurating Hyderabad Metro Rail Work (above) on Sunday. Also seen are Ministers Damara Nagender, Bantva Satyanarayana (PLC chief) and J Geetha Reddy. Photos: SNAFS INDIA



**ON THE TRACK:** The first girder of Hyderabad Metro Rail Project on overpass, 2, between Uppal-Habsiguda was launched by Chief Minister N. Kiran Kumar Reddy on Sunday. - PHOTOS: G. KRISHNASWAMY

Special Correspondent  
**HYDERABAD:** Chief Minister N. Kiran Kumar Reddy on Sunday strongly warned trouble-makers against breaking law and order in the city and said that peace would be maintained at any cost.  
 "While democratic means

- Kiran unveils plaque for launching the first girder as part of metro rail works
- "We are going about the project in a methodical and transparent manner"

anyone, I have a responsibility to take care of the common people in the city. I have a responsibility to make use of my position to develop the city into a world class one with the best of infrastructure," he said.  
**ORR**  
 "The Outer Ring Road (ORR) will be completed in all respects by next year end," he said.  
 The National Institute of Design (NID) and the IIT Madras are setting up their respective campuses while several other global universities are keen to come here," he said.  
 Hyderabad Metro Rail Managing Director N.V.S. Reddy said the actual lifting of the

**PHASE I WILL BE DEDICATED TO THE NATION BY DEC 2014: CM**

## Metro project on schedule

OUR BUREAU

**Hyderabad:** Chief Minister N. Kiran Kumar Reddy on Sunday said the first phase of the prestigious Hyderabad metro rail project would be dedicated to the nation by December 2014. Three corridors of the project were scheduled to be made operational as part of the first phase.  
 The metro rail first phase work entered crucial stage when the chief minister inaugurated the works installing launching girders on to the metro rail pillars at Uppal.  
 At the function to coincide with the completion of two years by the chief minister, Kiran Kumar Reddy said the government was making all efforts to complete the project on schedule.

- Crucial stage of phase I inaugurated
- All the three corridors will be ready by 2017

"Even if there is a delay of one day on the part of the government, we will have to pay a penalty of Rs 32 lakh and if the I&T delays commissioning of the project by one day, they will have to pay Rs 64 lakh," he said. The chief minister said the project was a part of the government's efforts to make Hyderabad a world-class city.  
 Touted as the world's largest metro project under the public-private partnership,

the 73 km elevated rail project's first phase, at a cost of Rs 16,375 crore, will be completed by June 14. The first phase of the project at a length of approximately 71.16 km has been divided into three corridors. Corridor I will be developed between Miyapur and LB Nagar with 27 stations spanning 28.87 km, while corridor II will be between JBS and Falaknuma with 16 stations spanning 14.78 km and corridor III will be developed between Nagole and Shilpamam with 23 sta-

tions spanning 27.51 km. The entire project with 66 elevated metro stations will be operational by July 2017. The trial run will begin by the end of 2014, with the commissioning of the first stage of the project expected in 2015. NVS Reddy, managing director of Hyderabad Metro Rail Limited, said the box type iron launching girder of about 34 metres and weighing 300 tonnes would be lifted using two hydraulic cranes of up to 150 tonnes each and secured on top of the two pillars. The work would be undertaken during night.  
 He said the entire stretch of metro rail viaduct would be implemented in precast segmental construction method to minimise the inconvenience to road users.

Deccan Chronicle, Dt. 03.12.2012

# 1st Metro station at Uppal next yr

DC CORRESPONDENT  
HYDERABAD, DEC. 2

The first metro rail station in the city will come up at Uppal. The Hyderabad Metro Rail (HMR) officials have finalised the location and launched the works to complete its construction by the end of 2013. Each station, 140 m by 20 m in size and designed to accommodate six-coach trains, would cost around ₹40 crore.

In the first phase, there will be eight metro stations between Nagole and Mettuguda, and in all, 66 stations along the 72-kilometre metro rail project in three corridors. There will be three joint stations at Ameerpet (corridors I & III), Parade Grounds (corridors II & III) and at MGBS (corridors I & II).

Unlike Delhi and Bengaluru metros, the HMR stations will be completely eco-friendly. They will have natural ventilation and no air-conditioning, and will use solar power.

The other unique feature



An artist's impression the Metro rail station at Uppal

will be that stations will be of "spine and wing format" resembling a bird and 70 per cent of it will be pre-fabricated. This is to avoid inconvenience to road traffic during the construction period.

The stations are being designed in four categories, 30 m (100 feet), 36 m (120 feet), 45 m (150 feet) and 60 m (200 feet) to avoid additional land acquisition for their construction.

"The metro rail stations will be built as 'cantilever stations', perched on only one pillar at the centre, with no side pillars, unlike

in Delhi and Bengaluru metros. It's the first time in the country that cantilever elevated stations are being built, a rare engineering feat by L&T's structural engineers. The stations will give the look of a global city to Hyderabad," said N.V.S. Reddy, managing director, HMR.

The stations will be divided into two levels, "concourse" and "platform".

Passengers' entry and exit facilities with staircases, escalators and lifts will begin at concourse level which will be at a height of 8 m (26 feet).

Deccan Chronicle, Dt. 09.12.2012

**NEW YORK SHOWCASE**

## Metro among 100 global projects

L. VENKAT RAM REDDY | DC  
HYDERABAD, DEC. 8



The Hyderabad Metro Rail (HMR) project has been selected as one of the top-100 strategic global infrastructure projects for 2012 that will be showcased at the forthcoming Global Infrastructure Leadership Forum in New York during Feb-March, 2012.

Apart from the ₹14,132-crore (\$2.6 billion) HMR project, two other Indian projects feature in the list: the ₹72,900-crore (\$12.2 billion) GIPT city - Gujarat International Financial Tech City - and the ₹60,000-crore (\$10.89 billion) Mumbai-Ahmedabad High Speed Rail project. The total estimated value of all 100 projects is estimated to be around \$620 billion.

Page 3: HMR MD invited to attend summit in NY



# KIRAN PATS HMRL FOR WINNING GLOBAL AWARD

## OUR BUREAU

Chief Minister N Kiran Kumar Reddy on Friday congratulated Hyderabad Metro Rail for receiving the Best Engineering Project of the Year Award at the Sixth Annual Global Infrastructure Leadership Forum Conference, currently being held in New York. He said that the global recognition won by Hyderabad Metro Rail will boost the competitive advantage of Andhra Pradesh and attract more investments to the State and the country.

The Global Infrastructure Forum on February 28 selected Hyderabad Metro Rail as the Engineering Project of the Year out of 100 top global infrastructure projects. The Chief Minister, while hailing the Hyderabad Metro Rail for winning the coveted award, asked HMRL to work with utmost dedication and clear milestones to complete the project with world class standards right on schedule.

It may be stated here that three projects namely, Trans-Anatolian Gas Pipeline (Rs 37,800 cr) of Azerbaijan, Hyderabad Metro Rail (Rs



Sam Bob and Dr KS Jawahar Reddy receiving the Engineering Project of the Year Award at Global Infrastructure Leadership Forum in New York

14,132 cr) of India and Al Abdaliyah Integrated Solar Combined Cycle Plant of Kuwait were short-listed for the final round and competed for the award. Based on intense evaluation of multiple parameters and a presenta-

tion made by Managing Director of Hyderabad Metro Rail Ltd (HMR) N V S Reddy, the Hyderabad Metro Rail project was finally awarded the coveted top prize.

Four other awards were

Power Producers (Rs 29,160 cr) of South Africa, Finance Project of the Year to Rio de Janeiro Airport Concession (Rs 17,280 cr) of Brazil and Strategic Project of the Year to Etihad Rail (Rs 59,400 cr) of the United Arab Emirates.

The Global Infrastructure Leadership Forum, supported by several top global consultancy and infrastructure firms, had initially selected 100 projects from around the world as the 'strategic hundred' based on several criteria such as business opportunity, productivity creation, competitiveness creation, job creation and carbon efficiency. These top global 100 infrastructure projects had been identified for their ability to create world class infrastructure in their respective sectors and regions and to contribute to the competitiveness and economic development of their respective countries/regions.

N V S Reddy along with Principal Secretary of Municipal Administration and Urban Development B Sam Bob and Secretary to CM K S Jawahar Reddy received the Engineering Project of the Year award from the

Chief Executive Officer of Aconex Leigh Jasper and President and CEO of CG/LA Infrastructure Norman Anderson in New York on Thursday at a function attended by around 400 top public and private sector executives, bankers, financial experts, consultants and industry leaders specialising in infrastructure projects.

While presenting the awards, Leigh Jasper said that the Project of the Year Awards recognise exceptional projects and exceptional leadership. Norman Anderson stated that the winning projects not only represent best practices, but also mobilise this generation's legacy for the next generation and that they are literally our design for the future.

Appreciating the presentation delivered by N V S Reddy on the Hyderabad Metro Rail and its innovative financial and engineering design, head of New York's Metropolitan Transportation Authority (MTA) Nuria Fernandez expressed that the United States of America should follow similar innovative practices.



**Business Line,  
Dt. 24.05.2013**

## World Bank, Hyderabad Metro focus on transit-oriented development

**Our Bureau  
Hyderabad, May 23**

A team from World Bank and Hyderabad Metro Rail Ltd today highlighted the importance of harnessing the potential of land value in transit oriented development of the metro rail project.

Outlining global examples of Hong Kong, Tokyo and many other cities, Hiroaki Suzuki, Lead Urban Specialist of the World Bank said how these cities achieved enormous prosperity and development apart from addressing their traffic problems through TOD approach.

He highlighted the need to integrate town and railway network planning. It is a common approach to cross-subsidise loss-making Metro projects through revenues from property development in and around metro stations.

He said financing and development of multi-billion dollar metro rail projects in Hong Kong, Singa-

pore and Tokyo made them global centres of economic activity.

Barjor E. Mehta, Country Head of World Bank in India, said the Hyderabad model is a very promising and that World Bank will support its plans and activities to transform Hyderabad as an eco-friendly global city.

B. Sam Bob, State Principal Secretary, Urban Development, emphasised the need to finance urban infrastructure projects by capturing enhanced land values in urban areas.

N.V.S. Reddy, Managing Director of Hyderabad Metro Rail project, said the features of "Transit +" model of the project have been designed to decongest the city busy hubs.

The planned densification along metro corridors and development of areas around metro stations through land pooling helps create value, they felt.

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**The Hindu,  
Dt. 24.09.2013**

## Metro Rail project to boost capital's brand equity

Staff Reporter

**HYDERABAD:** The Hyderabad Metro Rail (HMR) project will not just be a launch transport solution. Efforts are on to boost equity portfolio around the project, which will add value to the capital's brand equity and make life easy for pedestrians.

Among many things like bicycle stands for last mile connectivity, sidewalks and shelters, HMR is turning up the landscaping part of the mission as the space under the viaduct of Metro Rail corridors is a big one.

The aim of the HMR office is to come up with an aesthetic city infrastructure across the central business area of the Metro Rail, which will read the last metro rail projects in the world.

### Meeting with architects

In this direction, the HMR officials on Monday held a meeting with architects from across the country to discuss ways to come up with original designs that are innovative, sustainable and adaptable in all kinds of situations in Hyderabad.

"Why can't we produce something unique? The architecture of the public from Metro Rail are sky high, and it is our responsibility to produce a world-class product before coming up with designs. India was the first to have a metro rail project. We will not repeat the mistakes of other metro projects," said HMR Managing Director N.V.S. Reddy, while interacting with the architects from the viaduct of the 72-km Metro Rail will feature sought-after plants, architecturally appealing parks for all seasons, shops that meet consumer needs, green parks that will be at least 5-7 metres below the station of the viaduct to provide a soothing experience to commuters.

### METRO FOR A MODERN WORLD

#### People-friendly projects

- Upgrade stands to last mile connectivity
- Sidewalks
- Landscaping of viaducts or open space around all Metro Rail corridors
- Aesthetically turning corners up with sidewalks, landscaping and aesthetic design

#### Millions of the 72-km Metro Rail will feature

- Sought-after plants
- Architecturally appealing parks for all seasons
- Shops that could counterbalance concrete
- Green that will fit in close to 11 metres below the viaduct or above

### W

are trying our best not to repeat the mistakes that other metro projects have made. The central business area, which is the heart of the city, will be the focus of the project. We are now ready to receive international proposals for the project. The central business area, which is the heart of the city, will be the focus of the project. We are now ready to receive international proposals for the project.



**N.V.S. REDDY**, Managing Director, HMR

HMR will come up with an aesthetically appealing city infrastructure around the Metro Rail project in the world.

"We are trying our best not to repeat the mistakes that other metro projects have committed. The central business area, which is the heart of the city, will be the focus of the project. We are now ready to receive international proposals for the project."

## HMR bags global award for safety measures

Special Correspondent

**HYDERABAD:** Chief Minister N. Kiran Kumar Reddy congratulated the Hyderabad Metro Rail and the L&T Metro Rail Hyderabad teams for bagging the prestigious Royal Society for Prevention of Accidents (RoSPA) Gold Medal for Occupational Health and Safety for accident-free operation of the



Chief Minister N. Kiran Kumar Reddy meeting the Hyderabad Metro Rail delegation in Hyderabad on Wednesday. PHOTO BY ANANDHARAJU

free operation of the

The teams met the Chief Minister at the Secretariat on Wednesday afternoon, where the latter was updated about the project's progress. This is the second prestigious international award won by the Hyderabad Metro Rail project with the first being "The Best Engineering Project of the Year 2012" at New York in February this year.

HMR Managing Director N.V.S. Reddy, representing the A.P. government, and C. Sankaralingam, representing the construction wing of L&T executing the HMR project, received the award last week at Glasgow city in Great Britain. Partic-

ular monitoring/inspections are ensuring prevention of accidents and occupational hazards while executing the works for the past 16 months with 3.5 crore man hours spent without any fatal accident.

RoSPA is an independent body which studies and monitors important construction projects across the world through random checking. Continuous safety and occupational health awareness camp for all the workers on site being regularly organised by a dedicated safety team of senior engineers of L&T led to the award, explained M. N.V.S. Reddy, Minister for Municipal Administration. M. Maheshwari Reddy was also present on the occasion.

### Regular monitoring

Metro Rail works are progressing at a brisk pace in highly congested traffic corridors of the city. Scrupulous adherence to well-devised safety measures and reg-

## 'Hyderabad needs expanded metro rail network'

**Our Bureau**

Hyderabad, Dec. 2

A comprehensive study prepared by Hyderabad Metropolitan Development Authority projects a huge demand for public transport with the city requiring a near five fold increase in the metro rail network.

The perspective plan prepared by the authority in league with Greater Hyderabad Municipal Corporation, Hyderabad Metro Rail Limited, in association with consultants LEA Associates South Asia, projects that the current metro would have to go up from 72 km when completed by the year 2017-18 to 360 km

by the year 2041.

The metropolitan city of Hyderabad is projected to have a population of close to two crores (190 lakh) by 2041. Based on such a growth and the requirement for integrated urban transport system, the authority hopes that 60 per cent of the people living and commuting would depend upon urban transport networks.

In tune with such a huge growth in population and also geographical size of the metropolitan city, it is projected that the metro rail will have to be cover a stretch of 360 km up from 72 km now, and the Multi Modal Transport System will have to grow to cover a stretch

of 428 km, up from 42 km now and the metropolis might need a network of a Bus Rapid Transport System covering a distance of 360 km.

The draft comprehensive transportation plan approved by the authority for notification factors the huge growth of the city into a metropolis over the next three decades and seeks to address major issues such as urban transportation and development of industrial hubs outside the Outer Ring road.

Making the draft plan public, the authority has sought objections and suggestions before finalising the plan.

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## Metro Trains, Stns to be Disabled-friendly

HMR, DRF organising Awareness Walk for the Disabled today



Hyderabad Metro Rail managing director NVS Reddy speaking at a press conference in Hyderabad on Monday on the eve of World Disabled Day. HMR is organising Awareness Walk for Disabled Persons on Necklace Road in the city. | A SURESH KUMAR

**Express News Service**

**Hyderabad:** The Disabled Rights Forum, in collaboration with Hyderabad Metro Rail, is organising 'an awareness walk for the disabled persons' on Necklace Road in the city at 7 am on Tuesday on the occasion of World Disabled Day.

HMR, according to its managing director NVS Reddy, is taking special care to cater to the needs of people with mobility, visual, hearing, speech or cognitive im-

pairment.

Speaking at a press conference here on Monday, he said stations were designed to provide a barrier-free environment with ramps, bigger lifts, specially-designed hand rails, height-adjusted operating buttons in lifts, fare gates, ticket vending machines, etc.

The lift operating buttons will have information in Braille, the language of the blind, at all levels of stations, apart from tactile strips to help visually-challenged

persons. Specially-designated wheelchair spaces will be provided in metro trains to lock the wheelchairs to a special 'grab hold'.

Special toilets with provision for physically-challenged persons will be provided at each station. These toilets will be equipped with grab bars and supports to aid them. Pictograms and signages will help disabled and illiterate people to easily access different areas of the stations and trains without others' help.



# Travel in Metro Rail with ATM card

K CHANDRASHEKAR/HYDERABAD

Your Metro Rail smart card can double up as your ATM card as well with the Hyderabad Metro Rail authorities contemplating bringing in a multipurpose 'smart card'. It can be used for metro rail ticketing, petroleum card and also as ATM card.

The Hyderabad Metro Rail (HMR) authorities are integrating certain unique features, which are not there in the other metros like Delhi and Bengaluru. Talking to Metro India on the special features, HMR Managing Director NVS Reddy said they were in talks with some banks for a tie up for multi-purpose smart card.

Reddy said that the Hyderabad Metro would have Communication Based Train Control (CBTC), where trains would talk to each other on their way. It is radio based communication system, where the location of the train would be known at every fraction of a second. Every train will

The multi-purpose smart card can be used for Metro Rail ticketing, petroleum card and also as ATM card

have the information system and the main server would be at Uppal operation control. This service was provided by the Thales, a French company, which would also look after signaling and train control, he said. The operation and maintenance (O&M operator) was Keolis from

France. The automatic fare collection (AFC) was being done by Samsung from South Korea, he added.

"The HMR is designed in such a way that for every 90 seconds a train can be run," said Reddy. Around 60,000 passen-

gers can travel in one corridor in an hour, he said. "There are 200 metros around the world and we have seen the positives and drawbacks in many of the metros and selected the best technologies and facilities," the official said.

"The Detailed Project Report (DPR) for HMR was prepared by the Delhi Metro and it was for medium metro but we wanted it to be a heavy metro as we are planning for the next 60 years. The pillars in Delhi metro rails are round in shape where as we wanted it to be in Y shapes and

also wanted to have aesthetic beauty, which will be very attractive," Reddy said.

The MD said, "We are not just building a metro but a quality way of life for the citizens of Hyderabad. There would be open spaces at stations. It would be a hub of social activity having open air restaurants. There would be sky walks, side-walks, a place for urban rejuvenation."

# HMR to Be India's First to Use CBTC Tech

by S Bachan Jeet Singh

**Hyderabad:** Apprehensions and doubts raised by critics notwithstanding, the Hyderabad Metro Rail is proceeding at a fast pace to become a reality soon.

It is going to be a major achievement for the city of Greater Hyderabad and no body can stop the ongoing project which is going at a brisk pace, HMR managing director NVS Reddy said on the accomplishment made by the HMR in the last one year.

"Apart from Metro gurus discouraging the project, several people including experts criticised about the metro rail project stating it is going to be a failure and should be scrapped. Now we are proving the critics wrong as works on three corridors of metro rail are going at a brisk pace and the 8-km-long stretch from Nagole to Mettuguda is going to be ready in March 2015. Trial runs on this stretch will start in July next and will continue for six to nine months before getting safety certificate from the railways," he said.

So far, about Rs 3,150 crore has been spent by L&T Metro Rail (Hyderabad) Limited and Rs 900 crore by



NVS Reddy

HMR towards land acquisition, road widening, nala improvements, etc.

One of the largest such projects anywhere in the world, HMR will be India's first to

CBTC is almost an automatic train operation where trains are controlled from the central control centre and enhanced safety is provided by applying brakes automatically in case of any mistake by the driver. Delhi Metro, which runs on the conventional system, is trying to upgrade to CBTC technology.

Reddy said a significant progress was made on foundation constructions in the last one year and state-of-art machinery was being used for launching segments from the girders.

**The automated communication-based train control system is just a step away from driverless system**

run on the automated Communication Based Train Control System (CBTC) technology, practically a step below the driverless mode. HMR is also country's first two-track elevated city transit system to be developed under the public-private participation model. The choice of CBTC is for enhanced frequency and safety. Most such technologies can be upgraded to driverless, Reddy said.

More hectic activities would be witnessed during 2014 as new rolling stock (coaches) will arrive from South Korea in May 2014 and will be on the elevated tracks from October, construction depots, metro stations will be speeded up, and 267 of the 269 acres of land has been acquired for the project.

The Hyderabad Metro Rail network will cover a total

distance of around 72 km across three corridors: Corridor-I from Miyapur to LB Nagar, Corridor-II from Jubilee Bus Station to Falaknuma and Corridor-III from Nagole to Shilpansamam.

Out of the total 2,700 foundations to be laid on the three corridors, 1,116 have been laid covering a distance of 29 km in ten stretches. Completion of foundation work is challenging and will help in executing the project in a hassle-free manner.

Reddy said 974 pillars (26.5 km) had been laid, each 31 metres apart, where precast segments will be laid. Each segment weighs about 35 tonnes. For making precast segments, large casting yards have been developed at Uppal and Qutbullapur since in situ arrangements on the three corridors is not possible due to congested roads. The precast segments are carried at night to the work place to avoid traffic problems during daytime. So far 8,700 precast segments have been constructed and 13 launching girders are being used to fit them.

About 86 percent and 68 percent of works have been completed at Uppal and Miyapur depots.



The Hindu,  
Dt. 03.02.2014

The Indian Express,  
Dt. 05.02.2014

# 'HMR will boost older parts of city'

Time to give better connectivity to people residing in all areas: N.V.S. Reddy

Staff Reporter

**HYDERABAD:** The Hyderabad Metro Rail (HMR) project will rejuvenate commercial establishments in older parts of the city, HMR Managing Director N.V.S. Reddy said on Sunday.

As cities expand, the older parts start decaying, as people tend to move away from them. The only way to save older establishments is to bring consumers back by providing them better transportation, he said, adding that Metro Rail was the best way to ensure this connectivity.

Mr. Reddy was addressing traders and members of the Rajathani community at a function organised by Rajathan Graduate Association.

"By providing skyways to commercial complexes and establishments, consumers can be encouraged to patronise shops and establish-

ments that are otherwise not easily accessible," he explained. Mr. Reddy also spoke about various other benefits that the Metro Rail would bring to the city by way of providing avenues for redesigning the city.

Once the main work is completed by the concessionaire, L&T Metro Rail Limited, the HMR will construct skywalks to connect Metro stations with surrounding apartment complexes, commercial establishments and educational institutions in terms of requirement, Mr. Reddy explained.

"We are receiving several representations from people requesting extension of the Metro Rail to their areas, and these requests will be incorporated in the next phase," he said. The requests include extension of the Metro Rail line from L.B. Nagar to Vanasthalipuram, Miyapur to Patancheru and Jubilee Bus Stand to Alwal.

Reiterating that the HMR

## DRIVING DEVELOPMENT

- Metro Rail to provide avenues for redesigning the city
- Parking spaces are currently being constructed at 20 Metro stations

### SKYWALKS TO CONNECT METRO STATIONS WITH

- Apartment complexes
- Commercial establishments
- Educational institutions

### PROPOSALS FROM THE PUBLIC FOR EXTENSION OF METRO RAIL

- L.B. Nagar to Vanasthalipuram
- Miyapur to Patancheru
- Jubilee Bus Stand to Alwal

“There are about 200 metros in the world, of which only half a dozen are making profit. The passenger fare component of the revenue covers hardly 50 per cent of the total cost, so the rest of the burden should be fulfilled by using the available space for commercial purposes and advertisements.”

— N.V.S. REDDY  
Managing Director,  
Hyderabad Metro Rail



available space for commercial use was necessary to strengthen public-private partnership.

"There are about 200 metros in the world, of which only half a dozen are making profit. The passenger fare component of the revenue covers hardly 50 per cent of the total cost, so the rest of the burden should be fulfilled by using the available space for commercial purposes and advertisements," Mr. Reddy explained.

He also said parking spaces were currently being constructed at 20 Metro stations, and that officials were exploring options to create space in the available government land at other Metro stations.

Harikrishna Ojha, Suresh Chandra Kabra, Ramish Kumar Bhattad and other members of the association were present.

eru and Jubilee Bus Stand to Alwal.

will not give extra space to the concessionaire, Mr. Reddy pointed out that utilising the

# 85 percent of Metro Rail Work Being Done at Pre-casting Yards

The works are being done in yards to minimise inconvenience to commuters on the roads

Express News Service

**Hyderabad:** The precast construction activities for making viaduct segments, spine, wing and beam segment at Quthbullapur pre-casting Yard are going at a brisk pace with engineering precision.

Except laying of foundations and erecting of pillars (girders) on site, nearly 85 percent of the metro rail works are done through pre-casting method at the two pre-casting yards.

The Hyderabad Metro Rail (HMR) project, one of the largest infrastructure projects being taken up on Public Private Partnership (PPP) in the world covering 72 km in three corridors under Phase-1 by L&T Metro Rail (Hyderabad) Limited, are going at a fast pace mainly at the two precast yards at Quthbullapur (64 acres) and Uppal (72 acres).

HMR managing director, N.V.S. Reddy along with L&TMRIL managing director, V.R. Gadgil and project director, M.P. Neelhi, for the first time took media persons to Quthbullapur casting yard to show the present works at the site.

Speaking to media persons here, N.V.S. Reddy said that to minimise the inconvenience to road users during the metro rail construction activity, 85 percent of the metro rail works are conducted in pre-casting method. Other than laying of foundations and erecting of pillars (girders) all other activities are done mostly in pre-cast method.

Quthbullapur precast yard has a production capacity of 400 segments per month and up to 1,400 segments (equivalent to the requirement of a 1 km viaduct) can be stacked in the yard. Nor-



Viaduct segments for Hyderabad Metro Rail project being manufactured at Quthbullapur casting yard in Hyderabad on Tuesday | [enr.in](#)

mally between two pillars, there will be an segmenta, each segment weighing about 40 tons.

For the three corridors, Miyapur to L.B. Nagar, 288 to Palakurthi and Nagole to Shilpagramam, as many as 28,000 viaduct segments are required. Half of them (14,000) are being precast at Quthbullapur and other half (14,000) at Uppal yard.

Similarly, about 13,000 spine segments, wing segments and beam segments are also precast at these two casting yards. Nearly 2,900 segments and 5,400 seg-

## STATUS QUO

As on date, about 1,145 piles, 866 foundations and 560 spans have been constructed for the viaduct. About 88 percent of works in Uppal depot and 72 percent of work in Miyapur depot have been completed, about 7 km (80 percent) of track work is completed in Uppal depot and about 27 percent of road erection for traction is completed between Nagaw and Methuguda.

ments have been completed at Quthbullapur and Uppal casting yards.

About 1,200 spine segments have been completed at Quthbullapur yard and 1,375 at Uppal yard so far. They said that massive

curing compound for curing the cement concrete instead of water while avoids spillage of water on the roads and road users.

Highly accredited Quality Assurance and Quality Control (QA/QC) labs to ensure top quality construction and checks used are in par with international standards.

Gadgil said that Hyderabad will see the second transformation thanks to the metro rail, the first transformation was in 1993 when I was developed around Hitech city.

The Indian Express,  
Dt. 14.08.2014

## CM Wants Metro Rail Corridor Extended to 200 km

Express News Service

**Hyderabad:** L&T Metro Rail (Hyderabad) Limited Chairman YM Deosthalee called on Chief Minister K Chandrasekhar Rao on Wednesday and requested him to facilitate more work fronts for Metro Rail construction so that the project can be completed as per schedule. The meeting assumed significance at a time when the State government had decided to change the alignment of Metro Rail to protect the heritage structures.

The Chief Minister made

his intentions and plans clearly to Deosthalee and others from L&T. The Chief Minister told them that the Metro Rail plans were prepared for just 72 km, which lacked vision to serve the future needs of Hyderabad.

The Chief Minister said that the State government had decided to extend the Hyderabad Metro Rail for 200 km from the present 72 km. The Chief Minister informed L&T senior management that Metro Rail would be an important component of the Master Plan for the city and that Metro Rail would be extended by an-

other 200 Kms in phases, Chief Minister Rao made it clear that top priority will be accorded to Metro Rail construction activities and he instructed GHMC Commissioner Somesh Kumar to speed up road widening in Metro Rail corridors.

The Chief Minister also instructed Hyderabad Police Commissioner M Mahender Reddy and HMR MD NVS Reddy to jointly work out traffic management plans and alternate routes and advised traffic police to create temporary one ways or even closure of some stretches of roads if required for a short

period to speed up Metro Rail works.

The Chief Minister advised the Deputy Chief Minister Mahmood Ali, Home Minister Nayani Narsimha Reddy and Excise Minister T Padma Rao who hail from Hyderabad to coordinate Metro Rail construction activities.

The Chief Minister directed the Ministers to convince the local residents for road-widening, one-ways, temporary road closures etc so that Hyderabad Metro Rail can create a world record in terms of speed and safety in construction.

## KCR suggests making Metro pedestrian-friendly

### Asks HMR officials to extend skywalks below the elevated viaducts

Special Correspondent

**HYDERABAD:** Chief Minister K Chandrasekhar Rao directed the Hyderabad Metro Rail (HMR) authorities to extensively plan for extending skywalks below the elevated viaducts with landing facilities to nearby schools, colleges, offices and residential buildings, hospitals and other public utility buildings.

These can be extended to even big private complexes so as to reduce congestion on roads. Similarly, skywalk crossings at all important junctions in the metro rail corridors would help citizens safely cross the junctions without any fear or problem, he pointed out.

The Chief Minister was interacting with the HMR officials at their pavilion after inaugurating the CREDAI property show. Looking at the miniature model of the project put up for citizens to get an idea of the same, he advised multi-level mechanised parking complexes at impor-



**REALITY CHECK:** Chief Minister K, Chandrasekhar Rao interacting with HMR officials at the CREDAI property show. - PHOTO: BY ARRANGEMENT

tant metro stations across the three corridors to increase ridership and reduce parking problems, a press release said. Better pedestrian facilities and feeder bus services for commuters to get the benefit of 'seamless' travel facility, special needs for senior citizens, women and disabled at the overhead stations and trains were also discussed.

HMR MD N.V.S. Reddy briefed Mr. Rao about the unique features of the Metro Rail project, including stations, coaches, corridor connectivity with residential colonies, business areas and several add-on features. Hyderabad Metro pavilion will be open till tomorrow at the CREDAI exhibition, HICC, Madhapur.



Deccan Chronicle,  
Dt. 12.10.2014

Metro India, Dt. 14.04.2015



Delegates of the Metropolis World Congress visited the Hyderabad Metro Station at Uppal on the concluding day of the convention on Friday.

## Skywalks to connect HMR, rly platforms

HYDERABAD

Metro Rail MD NVS Reddy on Monday said that metro stations would be connected to all railway stations and important bus stops in the city through sky-walks for the benefit of commuters.

The HMR MD was speaking at the A Ramakrishna Second Endowment Lecture on 'Hyderabad Metro Rail as an Engineering Innovation and Urban Re-design Opportunity' at the Institute of Engineers (India).

"There are two metro stations near Secunderabad station -- one on the east and second on the west side. The Secunderabad railway station has 10 platforms and all the platforms will be connected to Metro stations through sky-walks. Similarly, connectivity will be given to MMTS stations and also important bus stations like Miyapur and MGBS," said NVS Reddy.

N V S Reddy said that Hyderabad Metro Rail was not being built as a simple mass transit system but was being viewed as an urban redesign opportunity to transform an Indian city into a people friendly and green global city.

He said, "Merry-go-round dedicated feeder bus services, bicycles and other



non-polluting last mile connectivity facilities at Metro stations, pedestrian facilities, aesthetic metro station surroundings with lots of greenery, street furniture, public art will be our contribution to the efforts to make Hyderabad a truly global city or 'Vishwanagar' as being envisioned by the Chief Minister."

Stating that there had been many challenges for the metro right from its inception, Reddy said issues regarding procurement of religious structures at 16 places in the city had been quietly dealt with. He said best practices were followed in the Hyderabad Metro Rail as the best aspects of existing metros in the world were adopted.

He said that Hyderabad Metro was the first to use CBTC (Communication Based Train Control) technology and added that the Delhi Metro would too have this system in the next phase.



**STRUCTURES TO BE RAISED OVER THE ELEVATED VIADUCT ON PUNJAGUTTA FLYOVER, ONE OF THE BUSIEST JUNCTIONS IN CITY**

V. Geethaiah

# Metro rail engineers have their TASK CUT OUT

HYDERABAD

Not only is it an engineering challenge but the fact that the junction is the busiest in the city and work has to be done without disrupting the traffic flow adds to the task to not cut the metro rail engineers.

Construction of the lengthy viaduct of about 100 ft without a pier support including a single span of 48 metres will be done on the site itself. It will take about three to four months to get the viaduct to cross over. Traffic will continue to move underneath and on the flyover as the span will be at least six metres high or 14 ft from the flyover," explained HMR managing director NVS Reddy from the road level below, it will be little more than six ft high. The entire work will be done in three stages for the steel girders and concrete pouring to be set in place. Similar construction of 100 ft length are going to be taken up at Secunderabad, Khanavada and M.J. Market.

Traffic will continue to move underneath and on the flyover as the span will be at least six metres high or 14 ft from the flyover. Metro engineers' view

Associates has suggested going for big viaductary spans at junctions to take care of future traffic flows as the metro rail will have to cross over 40 such junctions. About 24 junctions will have this kind of construction and among them the biggest single span crossovers are at Parade Grounds (100 ft), 35-The City (51 ft) and Uppal, Madhapur, Libran, Karam junctions, Tatyasaheb, Madhapur, JNTU, S.R. Nagar and Lakshipati (148 ft).

**Miyapur depot ready**

H&L&T's second depot at Miyapur spread over a 100-acre site is also complete in all respects. The 48 cover-coach trains received from ThyssenKrupp are stationed in the first major depot at Miyapur (about 100 acres) and are undergoing trial runs on the completed viaduct between Nagole and Mettuguda on stage one of the construction schedule where all the eight stations mentioned have been completed.

At Miyapur, which will be the maintenance depot for the corridor one - Miyapur to L.R. Nagar, there are currently 10 coaches of three coaches each. Although that track is proposed inside the depot has been laid, according to metro rail officials, the trains are not to be tested. The 30 stations between Miyapur - S.R. Nagar (stage two of the construction schedule) are awaiting completion.

**FOUNDATIONS Laid**  
1824 of 48 km  
Piers 1718 of 45 km  
viaduct 36 km

**Demolitions at Secunderabad railway station**

**While there are 200-odd properties to be acquired across the 75 km route in the three corridors where the metro project is under construction, the authorities are chipping away slowly. A significant achievement has been to take over the properties near the Jubilee Check Post after more than five years of political and legal wrangling, especially the corridor one.**

Demolitions are under way at Secunderabad railway station, Thyatiguda, Madhapur and other sites.

# HMR can boast of a young brigade of train operators

## METRO RAIL TO RUN ON WOMEN POWER

PHOTOS: S. RAMAKRISHNA

The Nagole depot of Hyderabad Metro Rail. (Right) Union Minister Bandaru Dattatreya inspecting Nagole overhead station. (Bottom) Nampally Radha, one of the seven women train operators.

**Kohit PS**

Nampally Radha lives life in the fast lane. Employed with the Hyderabad Metro Rail, this 23-year-old is among the seven women holding fort as a train operator in a male-dominated profession.

"This is a job that very few have. It was my dream to be a metro train operator," she matter-of-factly said when asked by several surprised journalists why she chose a profession that is seen as a man's job.

Her choice of profession is not accidental. Armed with a diploma in electrical engineering, she took the six-month training to become a train operator.

Since her deployment last year, Radha has clocked several hours of train operation, zooming from Uppal to Mettuguda twice everyday at 80 to 90 kilometres per hour.

In contrast, the South Central Railway deployed its first woman loco pilot for MMTS in 2012, who continues to be the only one in the profession.

Like Radha, six other young women are among the 52 train operators HMR has hired. Minister of State for Labour and Employment, Bandaru Dattatreya, who praised Radha for her career choice on Saturday,

was keen on knowing how many other operators are women. A senior technical staff member said they were keen on hiring more women. HMR can boast of a young brigade of train operators as most of them are no older than 30 and have sound technical education.

The official also explained that though trains are sophisticated enough for automated operation, an operator's role is crucial, mainly in coordinating stops and operation of the sliding doors.

While the doors open automatically, they will be closed by the operator.

"These are fresh campus recruits, either technical graduates or diploma holders. And, they are being tested for sharp reflexes," said senior metro rail officers, unwilling to be quoted.

Currently, I&T Metro Rail Hyderabad (I&TMRID) is running five or more trial runs on the Nagole-Mettuguda stretch on stage one of the construction schedule of the concessionaire building the project.

**ON FAST TRACKS**  
48 km of foundations piers are laid through completed  
45 km of viaduct through completed  
36 km of viaduct through completed

**EXPENDITURE SO FAR ON THE PROJECT**  
I&TMRID Rs. 7,000 crore  
HMR/TS Govt Rs. 1,700 crore

**Mettuguda-Secunderabad service only next year**

Metro rail works between Mettuguda and Secunderabad will be completed early next year, HMR Managing Director NVS Reddy said on Saturday.

He also clarified that no date had been fixed for operation between Mettuguda and Nagole, the five eight kilometre stretch ready for operations.

Mr. Reddy, who accompanied Union Minister & Labour Bandaru Dattatreya during an inspection tour of the Nagole and Uppal overhead stations in corridor time (Nagole, Thyatiguda, Madhapur, JNTU, S.R. Nagar and Lakshipati) said that 80 per cent of the works were completed, physically and financially, as 96 km of viaduct had been installed.

The Union Minister on his part assured that all cooperation was being extended by the Central government to the metro rail project.

He also promised support to farmers of Uppal area who had represented to him about delay in obtaining compensation for land they had given up for the metro rail development. The Minister was accompanied by Malkajgiri parliamentarian Ch. Mallu Reddy and Uppal legislator NVSS Prabhakar. The metro rail project is being built in three corridors with the other two being - Jubilee Bus Station to Falakurua (Corridor two) and Miyapur to L.R. Nagar (Corridor one)



The Hindu, Dt. 03.04.2016

Metro India, Dt. 06.06.2016

## Another breakthrough in road-widening for Metro Rail

V. GEETANATH

**HYDERABAD:** Another long-pending road widening stretch for the Hyderabad Metro Rail project got resolved here on Saturday. Following three years of painstaking negotiations, the Metro Rail authorities have been successful in persuading the Wakf Board and the Imadul Trust to shift the compound wall of the graveyard by 15 feet inside at the Srinagar Colony junction to pave way for works on Ameerpet-Punjabgutta stretch.

For the 214 sq yards of open land of a family grave located at the junction under the control of Imadul Trust, the Metro Rail authorities have paid a compensation of Rs. 2.56 crore for getting the right of way for the 50-foot narrow stretch. HMR Managing Director N.V.S. Reddy said that



**WAY CLEAR:** The compound wall of the graveyard at Srinagar Colony junction being shifted to facilitate Metro Rail works between Ameerpet and Punjabgutta. — PHOTO: BY ARRANGEMENT

the small stretch had been a severe bottleneck on NH 65 (earlier NH No.9) for decades. With the road widening and removal of electrical transformers, electric poles and other paraphernalia, the entire Metro Rail Corridor - I (Miyapur - SR Nagar; 29 km) would be now free from any obstacles for facilitating speedy construction on the corridor, he said.

The road at the junction was being widened by another 16 ft so as to take up cones. With the road widening of five piers/pillars by diverting some of the vehicular traffic through the old Goldspot building or Big Bazar building road. "We have explored several technical solutions with the L&T Metro Rail Hyderabad officials and the GHMC including constructing a cantilever flyover

to take the viaduct above the graveyard but had to give up once it was realised that foundations have to be put inside the site," recalled Mr. Reddy.

Since the L&TMRH engineers have completed the viaduct and the piers from both Ameerpet and Punjabgutta sides, the small stretch remained as a 'gap' for the corridor work to be completed as the traffic police feared that the alternate roads may not be able to take the highway traffic load once the work starts without road widening, he said.

Now that the new compound wall has been built inside, road would be laid on the site acquired in about a fortnight before the piers work begin.

Another 50 sq yards site belonging to a private owner was also being acquired, he said.

## Decks cleared for 'toughest' Metro Oliphanta RoB



**METRO NEWS  
HYDERABAD**

South Central Railway has handed over one acre of railway land at Chikhalgola on temporary lease for a few months to HMRL for assembling and launching the massive steel Metro Rail bridge over the existing Oliphanta railway bridge near Secunderabad station. With this, L&T MRH will soon bring the pre-fabricated steel bridge structures from Chikhalgola (near Delhi) to Secunderabad for commencing Oliphanta Metro RoB works, said Managing Director of HMRL, N V S Reddy on Sunday.

Out of the entire eight metro rail over bridges being constructed in the twin cities, Oliphanta bridge construction is the toughest and an engineering challenge. Stiff conditions were imposed by the railways that no Metro pillar is permitted in between the railway tracks of Secunderabad yard or in the railway

**OUT OF THE** entire eight Metro Rail over bridges being constructed in the twin cities, Oliphanta bridge construction is the toughest and an engineering challenge

land for future railway tracks and that a minimum of 28 ft height above the Oliphanta bridge tracks shall be maintained by Metro Rail for accommodating future double-decker trains. The Metro Rail main obligatory span had to be accordingly designed for a length of 275 ft without any support and with a height of 60 ft (6th floor level) from road level. Complicating further is the presence

of a very sharp 125 mtr radius road curvature. To take care of these technical needs, specially pre-fabricated high strength steel truss structure with special steel plates and steel bolts and high quality welds is being used for this bridge construction.

The entire steel bridge weighing about 1,100 tons was fabricated and assembled at an engineering factory in Chikhalgola with high precision. To withstand the high stresses of different types that will be induced by such a large span and height, the high strength steel plates are joined by HSGC (High Strength Friction Grip) bolts which will provide necessary strength for the bridge. The assembled bridge will be disassembled piece by piece and brought to Secunderabad by July. Meanwhile, a temporary multi-pillar support structure called 'truss structure' for a length of about 500 ft would be assembled on the leased railway land

The entire steel bridge weighing about 1,100 tons was fabricated and assembled at an engineering factory in Chikhalgola with high precision. To withstand the high stresses of different types that will be induced by such a large span and height, the high strength steel plates are joined by HSGC bolts which will provide necessary strength for the bridge

to support the launching of the bridge. Originally L&T planned to launch the steel bridge girders from Leikha Bhanam / Gopalanaram Police station side. This would have been possible only after the completion of "Secunderabad East" Metro station (of Corridor-11) in front of Leikha Bhanam and it would have delayed the bridge construction and the Metro project by the year. To avoid this delay, N.V.S Reddy suggested launching of the bridge girders from Chikhalgola side with parallel construction of the Metro station and persuaded L&T to rework their launching scheme. Now with the railway authorities handing over the land to HMRL, preparatory activities for the bridge construction have commenced. Reddy has thanked GM, SC Railway Ravi Shankar Gupta for sparing the railway land and for giving approval for the Metro RoB construction. The bridge construction will be completed by January next year, he added.



The Hindu, Dt. 18.09.2016

# Metro 2nd construction stage gets safety clearance

Miyapur to S.R. Nagar comes under this stage

SPECIAL CORRESPONDENT

**HYDERABAD:** While there is no official word yet when the Hyderabad Metro Rail will begin its commercial operations, it has now come to light that the second construction stage of the project, from Miyapur to S.R. Nagar has also been given safety certification from the Commissioner of Metro Rail Safety (CMRS) recently. Last year, the first construction stage from Nagole to Mettuguda got safety certification from the designated authority which can now allow the L&T Metro Rail Hyderabad to throw it open for the general public.

This aspect came to light during the detailed presentation made by HMR managing director N.V.S. Reddy in the Committee of Public Undertakings of the Telangana Legislature under the chairmanship of N. Devanar Rao when it reviewed the project progress here on Saturday.

Explaining the challenges faced by the project including some 200 court cases, permissions, issues pertaining to sensitive structures etc., and as to how they were tackled, he indicated that 68 per cent of the project was completed. Out of the total 72 kms, foundations in 39 kms, pillars in 36 kms and viaduct in 47 kms were completed so far, he told the



**CRUISING AHEAD:** Out of the total 72 km, foundations on 39 km, pillars on 36 km and viaduct on 47 km have been completed so far. (A. Srinivas)

committee.

Over the last few months, trial runs have been going on day and night on the second construction stage of 12-km stretch falling under Corridor One - Miyapur to L.R. Nagar. Similarly, trial runs including public announcements and other drills are continuing in the first corridor Corridor three - Nagole to Shilparamam-Raidurg which stretches up to eight kilometres.

Altogether, the metro rail authorities are ready to start operations for 26 km, provided the government

and L&TMRH sort out some 'issues' causing serious concern among both sides. There are security issues, last mile connectivity, compensation for delay in providing right of way and so on even if different dates are being bandied about on when the services will be starting.

Meanwhile, the Legislature Committee appreciating the progress, quality of works, safety standards and advanced features of the Hyderabad Metro Rail system, also made various suggestions regarding speedy completion of Phase I,

selection of routes for Phase II extension, creation of parking and other facilities at important metro stations, etc. The panel also noted that the project has already won about 20 national and international awards during the construction stage itself.

MLCs Karim Pabbala, V. Bhopala Reddy and Pooja Ravindra, MLC, Chitra Pabbala, MLA, Special chief secretary, MARUD M.G. Gopel, Secretary, Legislature Raja Sadarom and other senior officers of MARUD Department and HMR, participated in the meeting.

The Hans India, Dt. 01.12.2016



Chief Minister N Chandrababu Naidu holding a high-level meeting with officials of HMR and L&T in Hyderabad on Wednesday

# Speed up Metro rail works, KCR directs officials

In a meeting with L&T Chairman S N Subrahmanyam and others, the Chief Minister set November 2017 deadline to complete Miyapur-L.R. Nagar main section and August 2018 for remaining works

OUR BUREAU

**Hyderabad:** Chief Minister N Chandrababu Naidu on Wednesday stressed the need to speed up the Hyderabad Metro Rail project.

KCR, who held a meeting with L&T Metro Chairman S N Subrahmanyam and other officials here, said the State government was ready to extend all cooperation to the firm in the execution of the

project, a release from his office said. He favoured early completion of works as the Metro rail project would resolve traffic woes in Hyderabad to some extent. It was decided at the meeting that the Miyapur-L.R. Nagar main section of the project be completed by November, 2017 and that the remaining work wrapped up by August, 2018, the release said.

The Hyderabad Metro Rail

project is the world's largest Public Private Partnership (PPP) in the metro sector. The metro network would cover a distance of around 75 kms across three corridors in the city. Overall, 67 per cent of the total work was completed till September 30, 2016. L&T Metro said in October. The project, being built at a cost of Rs 16,375 crore, was initially scheduled to be completed by July,



Travis Kalanick, founder and CEO, Uber, and Minister K.T. Rama Rao ride the Uber Moto cab launched on Tuesday. — DC

## Metro, Uber tie up to help commuters

DC CORRESPONDENT, HYDERABAD, DEC. 13

Bike-sharing Uber Moto will provide last mile connectivity to Hyderabad Metro Rail for citizens who opt for affordable transportation for short distances. The UberMoto service will start from January 2017. It will cost ₹20 for the first three kilometers and ₹5 per kilometer thereafter. These feeder services have been designed for short distances that people have to travel.

The bike taxi which comprises Scooty and motorbikes will have a uniformed driver which can be booked via the smartphone Uber app. Details of the drivers will be available in a few minutes and the driver has to wear a convenient and reliable ride for the people. Presently, there are only male drivers in the bike taxi but Uber states that they are open to recruiting female drivers also.

The product was flagged off by Chief Minister N Chandrababu Naidu and IT Minister K. T. Rama Rao along with Founder and Chief Executive Officer of Uber, Travis Kalanick

### TRANSPORT ON TWO WHEELS

- Uber app will work both on IOS as well as Android mobile phones.
- Both the rider and the driver will have to wear a helmet as per the law.
- Payment for the trip can be made in cash or through credit/debit card or mobile wallet. An electronic receipt will be provided via Uber app.

who rode the bike for a first-hand experience. Mr K T Rama Rao stated that UberMoto will help solve transportation and congestion problems. The last mile connectivity of the metro rail will also be established via these bike taxis. The standard safety features of starting the GPS system during and after the bike ride, will be followed. A two-way feedback and ability to share trip details with family and friends will be encouraged.

T LALITH SINGH HYDERABAD

After a prolonged slow down, the real estate sector in the city is starting to gain momentum with the Hyderabad Metro Rail is all set to start chugging in the coming months. The project, not just another transport mode but an urban rejuvenation initiative, is expected to provide an impetus to the property sector in the city and its suburbs.

With untold stocks that piled up during the slow-down starting to clear and potential buyers entering the market, the realty sector appears poised to stage a comeback.

Given the magnitude of the Metro project and its service crisscrossing the city, coupled with the plans to have feeder services to the expanded suburbs, the project is expected to reinforce the positive real estate sentiments.

"The property prices have already been impacted along the corridors of the project. City builders concede that more activity could be as-

Growth of a city has happened wherever a metro project was taken up. Hyderabad will repeat the success

— NVS REDDY MD, HMR

pected in the real estate dealings as works for Metro Rail reach culmination and the project becomes operational, albeit in phases.

"What starts with Metro corridors will soon permeate and we are sure other areas too will benefit," says a senior builder.

Hyderabad Metro Rail (HMR) Managing Director, NVS Reddy cites the positive results for a city that came with Metro Rail in other countries and is confident the same will happen here too.

"Growth of a city has happened wherever the project was taken up and we can be sure Hyderabad too will re-

peat similar success," he says.

Introduction of Transit Oriented Development (TOD) scripted success for Singapore and Hong Kong.

"Some way, it is not just parts but the whole city that will witness rejuvenation and register substantial gains," he assures.

Apart from the corridor vicinities, the HMR has worked out plans to provide feeder services to areas beyond and the better connectivity to the Metro will ensure a rise in property prices there too, Reddy argues. Brand Hyderabad with rapid developments in the field of IT investments and improved infrastructure, Metro Rail will add to the image building of the city.

The concept of skywalks connecting metro stations with educational institutions, hospitals and government buildings among others is all set to redefine the city, he says. "The skywalks will provide tremendous boost and you will see one city at the road level and another city operating at sky level," Reddy adds.

[Gaining Momentum]

## Realty sector set to stage a comeback

Hyderabad Metro Rail likely to reinforce positive real estate sentiments



GAME CHANGER: City builders expect a turnaround in the real estate sector after the completion of the Metro Rail Project.





# Hyderabad Metro Rail project in PPP mode

World's largest Metro Rail project in PPP mode

3 high density traffic corridors (72 km) taken up in phase I

Miyapur – L.B.Nagar (29 km; 27 Stns)

Jubilee Bus Station – Falaknuma (15 km; 15 Stns )

Nagole – Raidurg (28 km; 23 Stns )

Total no of stns – 64; Interchange stns - 3

Project Cost : Rs.14,132 Cr.

Rs.1,458 Cr. (10%) as “Gap Funding” by GoI and balance by Concessionaire L&T (Rs.12,674 Cr. i.e., 90%)

Additional Rs. 3,000 Cr. by GoTS for land acquisition, shifting of utilities, R&R, pedestrian facilities, urban redesign, etc.

CP: 35 yrs +25 yrs

269 acres for 3 Depots and P&C areas

Property devpt through use of air space – property cannot be sold

Lease rentals during CP to cross subsidize passenger service losses

Revenue model: Avg. 50% from passenger fares; 45% from lease rentals; 5% Misc. (Advt.; parking etc.)

Property + Rail system to revert to GoTS at the end of CP



# Hyderabad Metro Rail Corridors Phase I

3 Traffic corridors (72 km) in phase I. Cost: Rs.14, 132 Cr.

- 1. Miyapur – L.B.Nagar : 29 km; 27 stns
- 2. Jubilee Bus Station – Falaknuma : 15 km; 15 stns
- 3. Nagole – Raidurg : 28 km; 23 stns



- Metro Rail Interchange
- MMTS Integration
- Integration with Rail Terminals
- Integration with Bus Stations



- ✓ Project cost (Rail System): Rs 14,132 Cr  
(Rs 1,458 Cr VGF + Rs 2,768 E + Rs 9,906 D 10% + 20% +70%)
- ✓ RED: Rs 2,243 Cr  
(Rs 671 E + Rs 1,572 D; 30% + 70%)
- ✓ Total Fin closure Amt (in March 2011): Rs 16,375 Cr  
(Rail Sy Rs 14,132 Cr + RED; Rs 2,243 Cr)
- ✓ Expdr so far (Feb 2020):  
LTMRHL on Rail Sy: Rs 17,730Cr (incl:Rs 4,626Cr IDC vs Rs 1,941Cr in FC)  
LTMRHL on RED: Rs 770 Cr  
HMRL (LA; Utilities etc): Rs 2,731 Cr
- ✓ LTMRHL's total spend (Feb 2020):  
Rs 18,639 Cr (Rail sy: Rs 13,243 Cr + RED: Rs 770 Cr + IDC: Rs 4,626 Cr)
- ✓ LTMRHL's Means of Finance:  
E: Rs 3,925 Cr + D: 13,510 Cr + VGF: Rs 1,204 Cr)



# Smart Tech for a Smart City Metro

Intelligent trains – CBTC

OCC at Uppal – sophisticated signalling, train control & communication (Thales, Canada & Portugal)

AFC gates – NFC (Samsung, S.Korea)

Ultra modern coaches – ergonomic design (Hyundai Rotem, S.Korea)

Ballastless tracks – head hardened rails (Tata Corus, France);

Latest fastening systems (Vossloh, Germany); riding comfort and low decibel levels

Regenerative braking – upto 35% energy to be feedback

85% precast method – India's largest urban precast yards (Uppal & Qutubullapur)

Stations on single central piers (spine & wings)

Usage of global coordinates and DGPS for planning of alignment – Refinement to avoid religious/other sensitive structures

Innovative & pragmatic LA





# Smart Tech for a Smart City Metro

Sleek piers with **single pour concrete** – aesthetics

Minimizing pier widths to **2m** at road level – **2** tracks on top = **7** bus lanes/**24** car lanes

Long term solutions for rd jns- **longer** obligatory spans

Usage of **curing compound**

Usage of **Track Master** for laying of Metro tracks

Multi-tasking & elimination of **multi departmental** approach of Rlys – station design & operational efficiency

Easy connect between core of the city & outskirts

Not a simple transport project – **urban redesign & rejuvenation** effort

City will completely change – **pre Metro Hyderabad & post Metro Hyderabad**



# Tackling Challenges

Land Acquisition & Road widening :

Acquisition of 204 Ac pvt. Land & 3000 properties

Setting up of 2 India's largest urban precast yards – Uppal (70 ac) & Qutbullapur (64 ac)

Land pooling at Uppal (800 small farmers ) & prolonged litigation at Miyapur

370 court cases – 360 won so far

Alignment refinement to take care of urban/social sensitivities – avoidance of religious/heritage/other sensitive structures

Fixation of station locations – max traffic catchment, existing road levels, major utilities, etc.

Usage of DGPS; knowledge of city traffic, road conditions & utilities





# Tackling Challenges

Contd...

Coordination among Central & State Govt. Depts/organizns & other stakeholders

Permissions from Rlys; NH; Defence; Airport Authority etc.

Handling agitations; Ring fencing the Concessionaire

Shifting of utilities; traffic facilitation works

Felling of trees (5000) with compensatory plantation/translocation – 3000 trees removed with plantation of 5 lakh saplings & translocation of 2,000 trees

8 Rly Xings (upto 22.6 m/74 ft ht & 83 m/272 ft spans); - 11 Flyovers (parallel/perpendicular); & 80 jns with huge obligatory spans upto max of 58 m (190 ft)



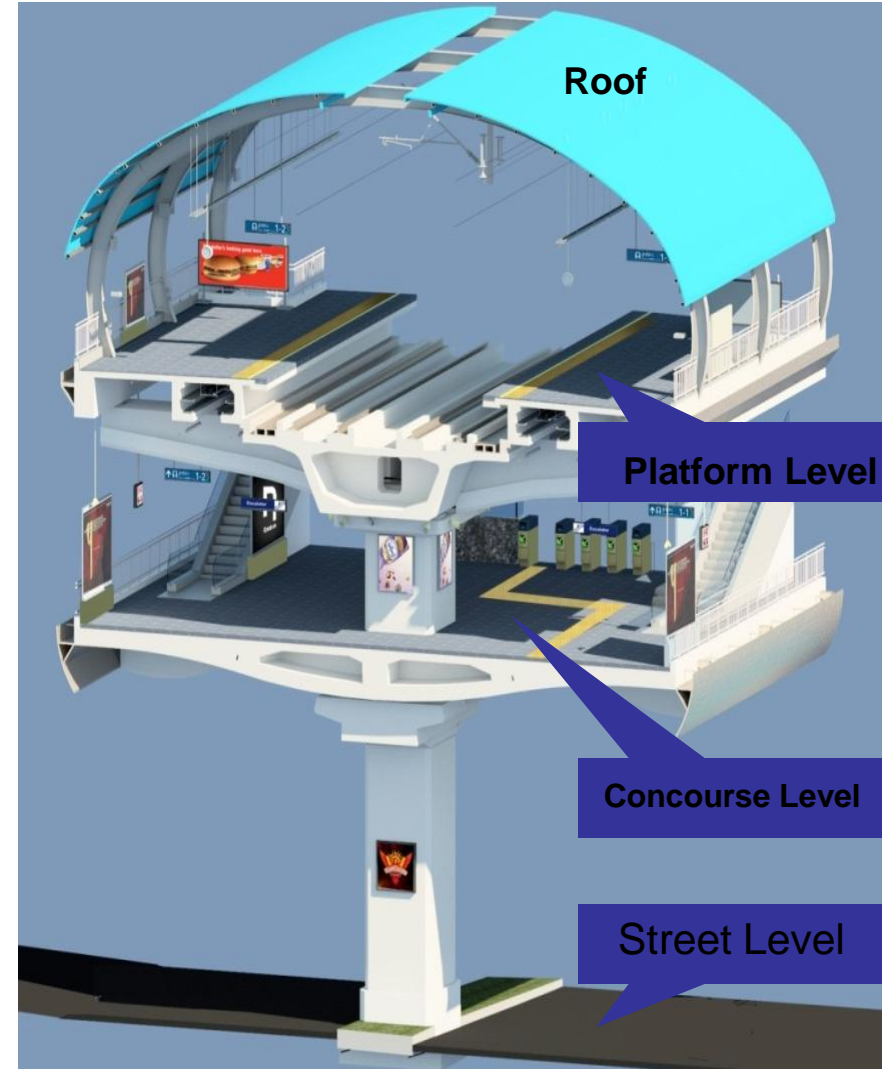
## METRO RAIL – Some technical features

- Noise sensors in each train to detect noise level
- AFC at all Stations; Contact less smart card system
- Integration of AFC with MMTS/Suburban/Bus system
- Entry to Stations with Escalators, Elevators & Stairs
- Users access to real time travel info
- Users access to Intermodal connectivity
- Sufficient parking space on pay per entry basis
- CBTC Signalling System (first time in India) leading to reduced headways



# Stations

- ❑ Cantilever type stations – Spine and Wings Construction
- ❑ Open Stations with 3 levels (G-C-P)
- ❑ Size : 138m \* 20m



# Cantilever type Metro station resting on the central pillars







# Hyderabad Metro Rail project as “Transit+”

- ✓ **Integration/interchange** with existing Rail terminals, MMTS stations & Bus depots
- ✓ “Merry go round” feeder buses between Metro rail stations & catchment areas → “seamless travel” facility – on same ticket
- ✓ Not a simple Metro, but an **urban redesign & rejuvenation** effort to transform Hyderabad into a **people friendly green** city
- ✓ ‘Transit+’ concept: Last mile connectivity with **NMT, pedestrian facilities & street furniture**
- ✓ **Eco-friendly stns** with natural ventilation, ramps, escalators, elevators etc.



# Facilitation Works

(How we achieved it)



**Widening with CC pavement at Uppal jn. (towards Nagole)**



**Before**



**After**



**Widening Culvert between Nagole and Uppal**





# Facilitation works – Covering of open drains



**Formation of slip road to skirt Mysamma Temple at Nizampet road**





**Demolition of Jabbar building**



**Demolition of BHEL building**

# Construction of Integrated School complex at Kukatpally



# Construction of MRO & RDO Building at Nampally





CONSTRUCTION OF  
PUTLIBOWLI COMPLEX







## Hyderabad Metro Rail – Green Initiatives (5,20,000 saplings planted)





# Translocation of Trees (2015)



Translocation at ORR



# **Metro Rail for a Global City**

## **(Works in Progress)**



# Foundation and Viaduct



**Utility probing being done to verify presence of any utilities at the site**



**Soil Load Test being done before constructing Metro Rail Pier**



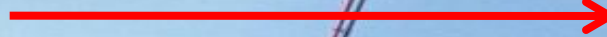
**Laying PCC Bed for Foundation – CLSM (Controlled Low Strength Material)**



**Pier Construction Stage**



**Boom Placer**



**Transit Mixer**



**Pier Construction using Boom Placer for evenly filling the concrete**





**Security Barricade**

**Shuttering**

## **Road Barricading and Pier Shuttering**

# Uppal casting yard

Before



Present





**Before**



**Uppal Depot**



**During**



**After**



Traveller For Lifting and Shifting Segments

Slings for holding Viaduct Segments

Launching Gantry

Segments under-slung for Sticking & Stitching



Erecting Parapet Wall on the Viaduct

- 10 Segments between 2 Piers, weighing about 40 Tons each.
- Viaduct Segments placed with the help of Launching Gantry



Duct in Pre-Cast Segment

Stringing Cables





**Row of well shaped piers (pillars)**



**Aesthetic construction of elevated viaduct**



**Metro viaduct crossing at Malakpet flyover**



**Metro Viaduct crossing flyover**





**Metro Station Construction-Pier & Segment Stage**



**Metro Station Construction-Spine & Wings Stage**



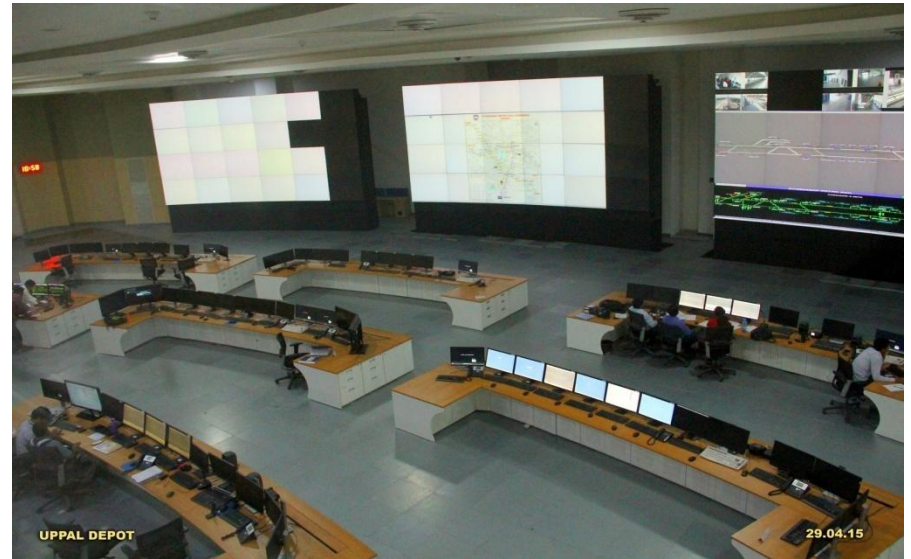
**Metro Station Construction-Roofing Stage**



**Metro Rail station-Lateral View**



## Admin/OCC Building



## Test Tracks



## Annexe Building



## Work Shop

# Aesthetic construction of elevated viaduct





## Launching Girder – construction equipment used to build elevated viaduct



## Over Head Electrification Masts (OHE) viaduct with a parapet wall

# Punjagutta flyover crossing







# Metro Rail Over Bridge (ROB) at Chilkalguda







**Cantilever type Metro station resting on the central pillars**



**Concourse level of Metro Station**



**Staircases and Escalators of Metro station**



**Platform level of Metro Station**





**Ticket Vending Machine**



**A view of concourse level of Metro station**



**Automatic Fare Collection gates**



# Hyderabad Metro Train







# Current Status of Hyderabad Metro

- ✓ **PM** Shri Narendra Modi inaugurated Hyderabad Metro project on Nov 28, 2017
- ✓ Commercial operations of **30km** (Miyapur-Ameerpet 13 km + Ameerpet-Nagole 17 km) opened from Nov 29, 2017
- ✓ Train services extended from **Ameerpet to LB Nagar** (another **16 km**) on Sept 24, 2018.
- ✓ **Ameerpet to Hitec City (10.5 km)** commissioned on March 20, 2019
- ✓ **Hitec City to Raidurg (1.5 km)** was flagged off on November 29, 2019
- ✓ **JBS to MGBS (11 km)** was flagged on February 07, 2020
- ✓ With **69 km** operational length, **2<sup>nd</sup> largest** Metro Rail network, next only to Delhi



# **Transforming station surroundings, street scape & access development**





**Metro station at Concourse level**



**Hyderabad Metro Rail - Typical station**



**Ameerpet Interchange station - Night view**



**Streetscaping, Parking & Pedestrian facilities, etc., at Miyapur Metro station**



**Streetscaping, Parking & Pedestrian facilities, etc., at Miyapur Metro station**



**Streetscaping, Parking & Pedestrian facilities, etc., at Nagole Metro station**





**Streetscaping, Parking & Pedestrian facilities, etc., at  
NGRI Metro station**



**Streetscaping, Parking & Pedestrian facilities, etc., at  
Habsiguda Metro station**



**Designer sidewalk development by HMRL at Jubilee  
Hills Rd.36**



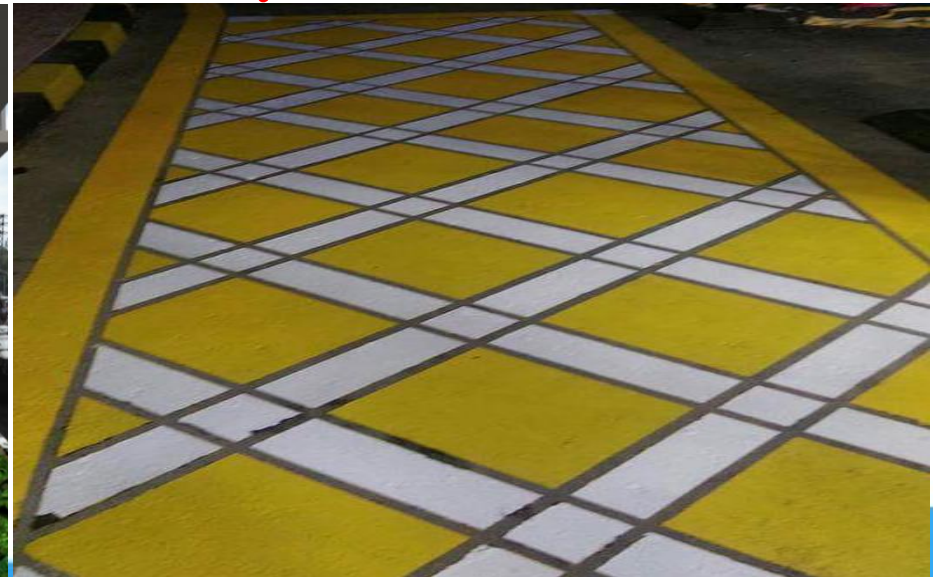
**Designer sidewalk development by HMRL at  
Jubilee Hills Rd.36**





14M WIDE HIGHWAY P.V SOLAR PANELS CITY SERVICE BUS STOP 7M WIDE SERVICE ROAD INTER-CITY BUS STOP

## Integration of Bus, car & Auto bays







**Go-Green initiative by Rotary Club of Cyberabad- Donation of PEDL smart bicycles**



**Bike stn @ Nagole Metro Stations**



**Proposed charging facility @ Metro stn**



**Drivezy Bikes Launch**



**Zoomcar Launch at Miyapur Station**



**Proposed charging facility @ Metro stn**





2-Wheeler Parking @ all stations



Skywalks

Bus Stop





# Urban Rejuvenation works done by HMRL along Metro corridors & Stations

## Uppal

## NGRI



Before

After



Before

After

## ESI

## Erragadda



Before

After



Before

After





# Miyapur







**Rasoolpura**



**Begumpet**



**SR Nagar**



**Moosapet**



## Jubilee Hills Checkpost to Hitec City







# Awards Galore

(Several Global & National Awards in the nascent constn stage itself)

1 “Global Engineering Project of the Year 2013” Award by Global Infrastructure Forum in New York



2,3  
&4

RoSPA (Royal Society for Prevention of Accidents) ‘Gold’ Award for Construction Safety and Occupational Health for the years 2013, 2014 & 2015 at Glasgow (UK)



5,6  
&7

“Best Metro Project” for the years 2013 & 2014 and “Best Upcoming Metro Rail of the Year 2015” by the Construction Week India, Mumbai



8

“American Concrete Institute (ACI) Award” for the year 2013 at Mumbai



American Concrete Institute

9,10  
&11

“International Safety, Quality and Environment Management Awards” for the year 2015 by ISQEM at United Kingdom



12

“Skoch Platinum Award” for the year 2016 at Hyderabad



SKOCH GROUP  
GROWTH | LIVELIHOODS | EQUITY

13

“Best Upcoming Metro Rail” by ITP Publishing Group at the 5<sup>th</sup> Annual Metro Rail Summit 2016, New Delhi





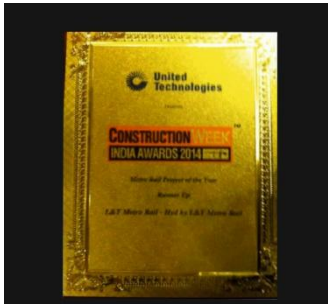
DQ Live - Business Technology Award



DQ Live - Business Technology Award



IBC (Indian Brand Convention) Best Brand Campaign Award



Construction Week - Metro Rail Project of the Year Award



Public Relation Council of India - Chanakya Award Corporate Innovative Leadership (PR)



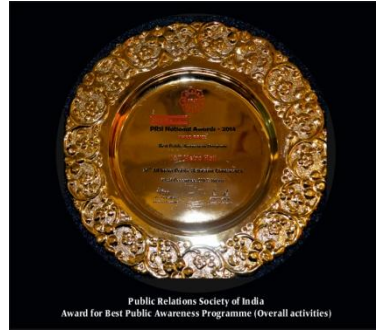
SAP ACE Awards for Strategic HR & Talent Management



Construction Week Upcoming Metro Rail Project of the Year Award



Construction Week - Metro Rail Project of the Year Award



Public Relations Society of India Award for Best Public Awareness Programme (Overall activities)



Public Relations Society of India Award for PR in action HMR Brand Ambassador Campaign



TV-5 - Innovative Public Relations Infrastructure Award



Public Relations Society of India - Award for Video Production



Public Relations Society of India - Award for Corporate Brochure



Public Relations Society of India - Award for Corporate Website



Public Relations Society of India - Award for E-newsletter



International Customs Day Top Exporter/Importer Award







# Ambitious project requires an extraordinary leader

- Manager vs. Leader
- Vision & sharing of vision with the team
- Passion for the Project
- Commitment to Excellence
- Guts & ability to take Calculated Risks
- Courage of conviction
- Determination, dogged perseverance & extraordinary patience
- Be prepared for failure & ridicule
- Develop a capable & committed team – make it a messianic force with killer instinct
- Make each team member a ‘winner’
- Strict personal discipline
- Leadership by example





# Ambitious project requires an extraordinary leader

- Hard work & punishing schedule
- Raise the bar continuously
- Open minded approach & no blinkers
- Inter disciplinary & cross cultural perspective
- Clarity of thought
- Clarity in communication
- Empathy & understanding
- Constant innovation – out of box thinking & solution
- Effective communication – both within & with outside world
- Good public relations & communication strategy
- Encourage trust & be reliable
- Be positive & snatch victory from the jaws of defeat



Passengers overjoyed to travel in a world class system – huge crowds thronging Metro stations





MD, HMR Mr. NVS Reddy receiving “The Global Engineering Project of the year Award” at the Global Infrastructure Leadership Forum in New York (Feb 2013)



Mr. NVS Reddy receiving the “Professional CEO of the year 2019” Award of The CEO Clubs of India from Mr. KT Rama Rao (Feb 2019)



**Thank you**