AMARAVATI
THE PEOPLE’S CAPITAL
INNOVATIVE & INCLUSIVE LAND POOLING SCHEME
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LAND POOLING SCHEME

PEOPLE. PUBLIC. PARTNERSHIP.
Message from

Hon’ble Chief Minister
I am immensely happy to bring out the handbook of Land Pooling Scheme on the occasion of Amaravati Happy City Summit-2018.

The People’s Capital- Amaravati will be a role model for other upcoming cities around the world. The Land Pooling Scheme of this scale is first of its kind in the country or any democratic nation. It gives me great pleasure to know that this scheme enabled approx. 24000 farmers to be the ultimate gainers and became partners in the development process of this World Class city. Continuous participation of farmers at every stage of the planning and development process is truly commendable. I am forever grateful for the sacrifices made by the farmers in this process.

**Nara Chandrababu Naidu**  
Chief Minister of Andhra Pradesh
The vision of Honourable Chief Minister is being achieved through the new and innovative Land Pooling Scheme Process. The efforts of all the people’s representatives such as Ministers, MP’s, MLA’s, ZPP’s, MPP’s, ZPTC’s, MPTC’s and Sarpanches are praiseworthy in conducting consultations and guiding the farmers about the financial and social benefits they are going to receive and convincing them in voluntary contribution of their lands for the formation of the Capital city.

The citizens of Amaravati, GOAP and APCRDA will together strive to realise the aspirations of people of Andhra Pradesh in building Amaravati as the new state capital. The capital city is one of the fastest pre-planned cities in the world mainly due to support and voluntary contribution by the farmers within two months and formulation of Master plan within six months.

I wish all the success for the Amaravati Happy Cities Summit.

Dr. P. Narayana
Minister, MAUD
After the bifurcation of combined Andhra Pradesh and on deciding the location of Capital City for new Andhra Pradesh State, the question raised in every body’s mind was- how to procure land to meet the requirements of Comprehensive city that not only serves as Administrative Capital but also triggers the socio economic growth? Hence, the land procurement for the new capital was done through a more humane mechanism of Land Pooling Scheme, where the landowners are not displaced and become part of the economic growth and benefit from the city development both socially and economically. The city is envisioned to be a benchmark for inclusive and sustainable model of growth for all the cities all over the world.

APCRDA will continue its efforts to provide the city with world class infrastructure and smart technologies to be on par with the world best cities. I congratulate the entire team of APCRDA for the successful contribution towards the Land Pooling Scheme and wish all the success for the Amaravati Happy Cities Summit.

Ajay Jain, IAS
Principal Secretary, APCRDA
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"The People’s Capital” of Andhra Pradesh, Amaravati is envisioned to be global center for citizen centric governance, economic opportunities, quality living, world-class infrastructure, healthy environment and efficient resource management and the core objective of Amaravati City development will always remain the holistic development of its citizens. The city is projected to reach a population of 3.5 million and employment of 1.5 million by 2050.

The Government of Andhra Pradesh enacted the ‘AP Capital Region Development Act 2014’ and has formed AP Capital Region Development Authority [APCRDA] for the purposes of planning, coordination, execution, supervision, financing, funding and for promoting and securing the planned development of the capital region development area. The GoAP undertook one of the largest and ambitious tasks for developing the state’s Greenfield capital city of 217 sq.km through Land Pooling Scheme [APCRDA Act 2014and acquired under LA &RR Act, 2013]. The Land Pooling Scheme is a voluntary land procurement mechanism where the landowners become direct beneficiaries and partners in the development process of Amaravati. The overwhelming support of 24,000 farmers who came together in India’s largest-ever consensus-based land pooling of 33,000 acres in a very short span of under 60 days is a clear vindication of people’s trust on the State Government. The Government of Andhra Pradesh makes a conscious effort to involve land owners in this inclusive process making Amaravati Capital City a true “People’s Capital”.

The land pooling Scheme provided the residents of Amaravati with benefits where approx. 586 cr. are spent on Social development schemes etc. and Economic benefits through returnable plot options for every cent of land pooled. The farmers were provided with approx. 4000 plot options and more than 30% of land in capital city is returned to landowners in the form of developable plots. The Land Pooling Process is done through public consultations and the inputs provided by the citizens played a key role in shaping the Capital City Master plan and Neighbourhood layouts. The Masteplan was developed incorporating access to public spaces/greens/facilities within five minute walking distance; accessibility to public transit within ten minute walking distance; safe streets; world class sub surface infrastructure; heterogeneous mix of densities and existing village integration etc.

Continuous bottom up engagement process with landowners and citizens of Amaravati in day-to-day interactions through public consultation, participation and knowledge sharing workshop with respect to selection of the project site, land allocation through land pooling system, identifying the critical issues at the village level and thereby integrating them at the local level planning as well as the overall city level planning to achieve a sustainable ecology in the city development process.

Amaravati Land Pooling Scheme has been a very successful model and can be employed across multiple places in India where a large amount of land procurement is required for socio-economic activity for the nation. Given the democratic style of functioning of our Government, the Land Pooling scheme presents an efficient partnership-based model in line with our values and social systems. To honour the sacrifice and belief entrusted by the people of Andhra Pradesh AP CRDA is leaving no stone unturned in providing cutting-edge infrastructure, comfortable livelihood and immense prosperity for the People of Amaravati.

APCRDA would like to thank everyone for their continued efforts in shaping our world class capital city and hope this book will provide as an insightful guide.

Dr. Sreedhar Cherukuri, IAS
Commissioner, APCRDA
Acknowledgement

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1

Introduction
1.1 Executive Summary

The erstwhile unified state of Andhra Pradesh was bifurcated as per the AP Re-organization Act 2014, dated 1st March 2014. Consequently, the new state of Telangana was formed with Hyderabad as its Capital City, and the residual state of Andhra Pradesh was left with no Capital City. Thus, it was decided to take up the planning and development of a new Capital City.

After much deliberations, owing to strategic location, it was decided to have the Capital Region in Krishna and Guntur districts. An area of 217.23 sq.km (53,748 acres) was identified West of Prakasam Barrage on the Southern bank of Krishna River in Guntur district, between Vijayawada and Guntur, as the capital city area. The new Capital Region was officially identified vide GO No 253 (30th Dec ‘14) of MA & UD Department, Government of Andhra Pradesh (GoAP). Also, the Capital City was identified within the Capital Region vide GO No 254 (30th Dec ‘14) of MA & UD Department, GoAP.

Amaravati will be the India’s first planned “World Class Greenfield peoples Capital City” in the recent decades. The core of Amaravati is being built on Approx. 34,058 acres of land owned by individual farmers. The Andhra Pradesh government has followed the land pooling scheme to collect the land exercising option, as an alternative to land acquisition. So far more than Approx. 34,000 acres of land is procured under the pooling system, including assigned land. Land pooling of this scale is an ambitious experiment by Government of Andhra Pradesh, which could become a model for India’s smart cities. The Andhra Pradesh Capital Region Development Authority (AP CRDA) is the planning Authority for the Amaravati Capital City formed by the State Government of Andhra Pradesh for the purposes of planning, coordination, execution, supervision, financing, funding and for promoting and securing the planned development of the Capital region development area. As the land owners contribute their land voluntary, through land pooling scheme, the land owners are made stakeholders in the process of Capital City development. The Government of Andhra Pradesh makes a conscious effort to involve land owners in this inclusive process making Amaravati Capital City a true “People’s Capital”. To honour the sacrifice and belief entrusted by the people of Andhra Pradesh AP CRDA is leaving no stone unturned in providing cutting-edge infrastructure, comfortable livelihood and immense prosperity for the People of Amaravati. The Land Pooling scheme adopted by Amaravati is the largest and the most successful of its kind in India, and is a manifestation of the people’s desire for a world-class capital.

The following compilation intends to document the land pooling process and its most important design & planning features implemented to achieve a livable city.
1.1.1 Brief Note on Consultations and other developments regarding Land Pooling

Announcement of Location of Capital City

Andhra Pradesh Reorganization Act came into force on June 2nd, 2014 which provided for reorganization of the existing state of Andhra Pradesh. Section 5 of the Act mandates that Hyderabad shall be the common capital for such period not exceeding 10 years and compelled the state of Andhra Pradesh to identify a suitable location for building the capital at the earliest. An expert committee was constituted under Section 6 of the Act under the Chairmanship of Shri. K. C. Sivaramakrishnan to conduct studies and make recommendations regarding the new capital of Andhra Pradesh. In addition to largely relying on secondary data such as reports and studies already available, the Committee had also invited opinion from the general public. Out of the 4728 responses received by the Committee, majority of the people voted in favour of Vijayawada – Guntur area (1156, with Vijayawada coming second (663) and Guntur third (372). Taking into account the various criteria that facilitate developing a vibrant capital, and the recommendations and suggestions from the report, including the public opinion, the Government decided to locate the capital in Vijayawada – Guntur area. The decision of the government is a reflection of the popular sentiment as well, as majority views expressed in the representations received by the Committee favoured Vijayawada – Guntur region as the best location for the capital city.

Decision on Land Pooling Scheme and consultations with farmers

Pursuant to identification of the location of the capital city area, the government announced in its address to the state legislature in the first week of September 2014, that the government is deeply committed to ensuring that the process of building the new capital involves the participation of people. And in this context the Cabinet has suggested the use of Land Pooling Schemes to consolidate the land required for the capital. The land pooling scheme will create a win-win situation for the landholders, citizens and government, and as a result the new capital city of the state of Andhra Pradesh can proudly call itself a people’s capital.

It is proposed by the government that the modalities of land pooling system would be worked out by a cabinet sub-committee consisting of 4 Ministers after undertaking extensive visits to the villages of the proposed capital city area and conducting consultations with the farmers. Accordingly, the cabinet sub-committee extensively toured the villages and interacted with farmers, farmer representative groups, village elders and sought their inputs for devising the land pooling policy with majority acceptance.

Workshop on Alternative approaches to land procurement and value capture for the capital city of Andhra Pradesh at ASCI

On 27th September, 2014, a workshop which was attended by over 30 senior officials across the country, was organized on “Alternative approaches to Land Procurement and Value Capture for the Capital City of Andhra Pradesh” at ASCI, Hyderabad with a view to discussing and sharing relevant approaches and good practices from Indian cities on land pooling to draw lessons for devising the land pooling scheme for the proposed new capital city of Andhra Pradesh at Vijayawada. The experiences pertaining to town planning schemes in Gujarat, land procurement in Chattisgarh for its new capital city, land pooling scheme of Greater Mohali Area Development Authority, land pooling experiences of Mumbai and MMRDA were extensively deliberated. This was followed by detailed discussions on fast tracking land procurement for the new capital city with a focus on land pooling scheme.
Announcement of Land Pooling Package and Enactment of Rules

With inputs from the cabinet sub-committee, representations from individual farmers, groups of farmers, village elders, learnings and recommendations from the above referred workshop, on December 7, 2014 the government has announced the Land Pooling Policy consisting of a package which will take care of long term interests of farmers and other stakeholders. The details of the package are outlined in the subsequent sections.

On 30th December 2014, the APCRDA Act was enacted and the Land Pooling Scheme (Formulation & Implementation) Rules were notified. The land pooling scheme came into existence from January 01, 2015 and in a span of 60 days, agreements covering an extent of over 30000 acres were received from over 25000 farmers which has never been accomplished anywhere in the world.

Enhancement of Package for Jareebu Lands

On February 26, 2015, taking into consideration, the representations given by the farmers from the Riverfront villages (Jareebu lands) and after multiple discussions with capital city farmers, the government has enhanced the package for the land pooling scheme. The enhanced scheme would enable the farmers of Jareebu lands to receive 450 sq. yds. of commercial plot instead of an earlier offer of 300 sq.yds.

Enhancement of Package for Dry Lands

On April 25, 2016, the government has announced an additional 50 sq.yds. of land towards compensation to LPS farmers covered under the dryland package. This enhancement was carried out after having consulted the farmers taking into account various representations made by them.

Summary

Consultations and interactions with the farmers, therefore, predominantly influenced the announcement of the LPS package in December 2014, enhancements to package during February 2015 and April 2016.

As outlined in the following sections, a strong implementation framework, grievance Redressal mechanism, timely disbursal of benefits have all contributed in ensuring LPS a major success. The returnable plots as per the plot allotment policy, a transparent plot allotment process through lottery, over 5000 options to opt for returnable plot, a well-conceived LPS returnable layout have further contributed to the confidence of the LPS farmers and enabled obtaining consent of the farmers at every stage LPS process.

APCRDA constituted under APCRDA Act 2014 which came into existence on 1st January 2015 was in its infancy during the massive exercise of land pooling schemes’ crucial stage of obtaining consent. All the functionaries mobilized for the LPS have focused on building awareness, conduct consultation workshops, and undertake various statutory processes. During these initial days, implementation took centre stage over documentation of the process, because of which, very little process documentation could be made. The above referred developments and process during initial days has been compiled from various media articles, government orders of that time.

Process of consultations, grievances, objections and suggestions:

A strong consultations, grievances, objections and suggestions process is put in place to ensure that the LPS farmers are continuously attended to for resolving various issues around LPS. Over 17,000 objections on 9.2 of LPS were received from farmers out of which 7,859 were resolved by the Competent Authority, i.e., the Commissioner, APCRDA and 9,237 objections were rejected on merits. On these rejections, 1052
appeals have been received which are under process by a team comprising of village committee, Competent Authority for resolution. An abstract of village-wise objections received is accessible in the project files.

STATEMENT SHOWING THE 9.2 OBJECTIONS RECEIVED, DISPOSED AND APPEALS RECEIVED

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Representation of Amaravati Capital city Vision

- World class infrastructure
- Jobs and homes for all
- Green and clean
- Quality living
- Efficient resource management
- Identity and heritage
The planning intention of the zoning plan is to promote the development within Amaravati Capital city by designating land parcels into different zones in order to provide worldclass facilities within Amaravati Capital city. The land uses have been classified broadly in ten categories namely: Residential, Commercial, Industry, Recreational, Regional Park, Transportation, Utility, Government, Public and Semi Public Facilities and Green and Blue. The development in these land use zones would be carried out in accordance with the zoning regulations as on the Development Code. R3 (Medium to High Density Zone) and C2 (General Commercial Zone) are the zones reserved for Land Pooling returnable layouts.
The nine theme cities within the Capital city are proposed to accommodate complimentary functions and thematics. These cities will act as important socioeconomic anchors for the Capital city. Nine cities include - Government city, Justice city, Finance city, Knowledge city, Health city, Sports city, Cultural city, Electronics city and Tourism city and are strategically planned across the Capital city. Each of these cities will be a hub for activities serving an unique function and role within the Capital city.
2 Land Pooling Scheme
Land Pooling Scheme is intended for Land Owners volunteering to offer their land against a guaranteed return of developed and reconstituted plot and other benefits. Under land pooling scheme, landowners voluntarily sign ownership rights over to a single agency or government body. This agency develops the land by developing public infrastructure like roads, sewage lines, ICT etc.

Andhra Pradesh Capital Region Development Authority (APCRDA), a government body was constituted under the APCRDA Act 2014 (vide GO No 255) on 30th Dec 2014 of MA&UD Department, GoAP. The Government vide G.O.Ms.No.257 M.A.& U.D.(M2) Department, dated 30.12.2014 have issued authorization orders to APCRDA to undertake development scheme as provided in Chapter IX of Andhra Pradesh Capital Region Development Authority Act,2014, through voluntary Land Pooling Scheme in the Capital City area.

Pursuant to the authorisation to APCRDA under section 43(5), development scheme notification were issued under rule 6(2) declaring the intention to undertake Land Pooling Scheme in the Capital City area, villages, inviting participation of landowners in the land pooling scheme by receiving consent applications in Form 9.3. The Authority guaranteed return of reconstituted residential / commercial plots to the landowners for the original lands surrendered under Land Pooling Scheme and other benefits as per rule 5(2)(A) as amended from time to time.

The factor of allotting returnable land to existing land owners was a major determinant in shaping the Master plan of the City. Also, the request of landowners in the existing villages, to be allotted developable land close to their villages, was kept in mind in preparation of the City Master plan.

The final Master plan of the Capital City was notified on 22nd February 2016 after due consideration of objections and suggestions made. The broad structure for the LPS layouts was prescribed in the Master plan with the distribution of Town Centres, Neighbourhood Centres and Community Centres. With this framework, the preparation of LPS Layouts was initiated.

A multi department team within CRDA has evaluated every possible scope for refinement of the process at every stage from concept to lottery, all of which made this exercise a thumping success and the best possible alternative for new large scale developments in the country.
2.1 Land Pooling Scheme Social Benefits

LPOC Certificate with alienable rights in exemption registration fee / capital gains.

Demarcating village sites / extended habitations making residents part of capital city.

To provide Rs. 2,500 /- per month for a period of 10 years to all the landless families.

One time agricultural loan waiver upto Rs. 1,50,000 per family to farmers who are surrendering their lands under LPS.

Providing NREGA up to 365 days a year per family. Providing housing to houseless as well as those losing houses in the course of development. Skill development trainings with sty-fund to cultivating tenants, agricultural labour and other needy persons to have alternative livelihoods.

To provide interest free loan up to 25 Lakhs to all the poor families for self employment. Free Education Policy announced in G.O.Ms.No. 125, MA & UD (CRDA-2) Department, dt. 16-05-2016.


Social benefits provided to the residents of Amaravati (Source: ASCI Report)

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land owners paid annuity</td>
<td>24,100</td>
</tr>
<tr>
<td>Families Receiving pension</td>
<td>20,605</td>
</tr>
<tr>
<td>Crores Spent on Social development</td>
<td>586</td>
</tr>
</tbody>
</table>
2.1.1 Social Benefits

Skill development programs in progress

Mega health camps being organized in capital city villages
2.1.2 Returnable Land Through Land Pooling Scheme

**PATTA LAND**

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>A) Patta</td>
<td>1000</td>
<td>250</td>
</tr>
<tr>
<td>B) Assigned</td>
<td>1000</td>
<td>250</td>
</tr>
<tr>
<td>i) Ex-Serviceman / Political Sufferer (Except POI Cases)</td>
<td>1000</td>
<td>250</td>
</tr>
<tr>
<td>ii) Assignments before 18-06-1954 (Except POT Cases)</td>
<td>1000</td>
<td>250</td>
</tr>
<tr>
<td>iii) Assignments after 18-06-1954 (Except POT Cases)</td>
<td>800</td>
<td>150</td>
</tr>
<tr>
<td>iv) POT Resumed lands-Eligible Shivoijamadar occupation</td>
<td>500</td>
<td>50</td>
</tr>
<tr>
<td>v) Un-Objectionable Govt. lands- Eligible Shivoijamadar</td>
<td>500</td>
<td>50</td>
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<tr>
<td>vi) Objectionable Govt. lands- Eligible Shivoijamadar</td>
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**ASSIGNED LAND**

<table>
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<tbody>
<tr>
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</tr>
<tr>
<td>vi) Objectionable Govt. lands- Eligible Shivoijamadar</td>
<td>250</td>
<td>0</td>
</tr>
</tbody>
</table>

C) Yearly payment of annuity for crop loss (Rs) expect for B(iv) and (vi) categories above | 30000 | 50000 |

D) Yearly increase (Rs.) | 3000 | 5000 |

E) One time additional payment for gardens like lime/sapota/guava/ amla and jasmine (Malle) (Rs) | 100000 |

### LPS PROGRESS TILL DATE

Notification under Land Pooling Scheme issued for an extent of Ac. 47573.10 cents.

Demarcation of village site / habitation made for an extent of Ac. 3012.00 cents (Approx.).

33036.00 acres acquired under Land Pooling Scheme against a target of Ac. 38581.15 cents.

Annuity payment of Rs. 427.96 crores made. 22/24 Final Land Pooling Schemes notified.

33394 residential plots/24232 commercial plots /1388 villas allotted.
LPS layouts have significant importance in forming the Urban fabric of the new Capital City. Considering that this would be the privately owned land in the Capital City, all the private residential and most of the Commercial developments would be developed through LPS returnable land.
2.3 Extent of Notification

The capital city is spread over an area of 217.23 km² and comprises village settlements (including some hamlets) from three mandals Mangalagiri, Thulluru and Tadepalli. The image below illustrates the denotified villages and the boundaries under their respective mandals, which became a part of the capital city.
2.4 Amaravati Land Pooling Scheme Timeline

[Timeline diagram showing various events and dates related to the Amaravati Land Pooling Scheme, including announcements, lottery dates, and master plan publications.]
2.5 Land Pooling Scheme Process

1. **LPS Notification**

   The Government appointed Competent Authorities in the envisaged Capital City Area.

   An area of 217 sq.km comprising 24 Revenue Villages and part of Tadepalli Municipality was notified for LPS, expressing the Government's intent to begin the development of the New Capital City. This was done by means of LPS notification under AP Capital City Rules ‘6(2)’. The envisaged Capital City Area (217 sq.km) was organized into 26 LPS Units. The Competent Authorities for each LPS Unit include Deputy Collector, Tahsildar, Deputy Tahsildar and Surveyor.

2. **Demarcation of Existing Village Sites / Habitations**

   From initial planning phase, it was decided by GoAP to protect and exempt existing Village Settlements or ‘Gramakantams’ from the Land Pooling process. Further, public consultations or ‘Grama Sabha’ were held in Villages to make people aware about the Capital City Masterplan process, Land Pooling Scheme and Delineation of Grama kantam boundaries. Voluntary Development Agreements were signed between Competent Authorities and Existing Land Owners.

3. **Draft LPS Layout Plan Notification**

   After creating awareness among Existing Land Owners about Land Pooling Scheme and Voluntary signing of Development Agreements, the next step in the Land Pooling Process is to prepare a Draft LPS Development Plan Notification. Draft LPS Development Plan for the respective villages are prepared by APCRDA along with Master planning Consultants. During the preparation of the Draft Plan, following aspects are kept in mind:
   
   1. Consonance with City Master plan;
   2. Overlay with Cadastral Map;
   3. Provision of Infrastructure, Open spaces, Roads, Community facilities as specified in the APCRDA Act.

4. **Consultation with Land Owners over Draft Plan**

   After Draft Notification of LPS Plan, Consultations are held with Land Owners in Villages to gather their objections and suggestions over the Draft Plan. There is a specified period of 30 days for objections and suggestions after ‘Draft Notification’.

5. **Final LPS Development Plan Notification**

   After assimilation of suggestions from Land Owners in Villages, the Final LPS Development Plan is prepared, incorporating these requirements. Then, the Finalized plan is notified. After notification, the finalized layout is relayed on ground, by peg-marking. Then, the Land Owners are allotted their returnable plots by means of a digital lottery. Along with the Lottery allotment, the Land Owners are given their Land Pooling Ownership Certificate (LPOC).

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Deputy Collector  Tasildar  Deputy Tasildar  Surveyor  Computer Operator
Flow chart illustrating LPS preparation process
2.6 Plot Allotment Strategy

The landowners as per their eligibility in their revenue villages/Land pooling development scheme may file applications in Form 9.18 (A) or Form 9.18 (B) within 15 days from the publication of plot allotment policy.

The landowners may opt as per their eligibility different sizes of standard plots. The landowner as per their entitlement may opt largest size plot or different standard sizes of residential/commercial plots. For the balance area may opt for joint share in a standard plot with other landowners or undivided share in the earmarked plots by CRDA or bonds having transferrable development rights (TDR Bonds). The Plot holders who have the undivided share in a standard plot can request the CRDA by giving a written consent of the undivided shareholders to conduct public auction by fixing upset price and the realized amount shall be paid to the owners on prorata basis duly accounting for taxes and charges.

The landowner along with his family members or friends may request for joint allotment of different sizes of plots. For the balance area they may request undivided shares in a earmarked standard plot identified by CRDA or bonds having transferrable development rights (TDR Bonds). The Plot holders who have the undivided share in a standard plot can request the CRDA by giving a written consent of the undivided shareholders to conduct public auction by fixing upset price and the realized amount shall be paid to the owners on prorata basis duly accounting for taxes and charges.

In the case, where the entitlement of residential commercial returnable plots are less than the minimum plot size (100 sq.m for residential and 25 sq.m for commercial) an undivided share in plot sizes of 500 sq.m or more or as per the configured plots in layout or Transfer Developments Rights bonds will be given.
The plot allotments pertaining to the lands in a revenue village shall be within the same revenue village boundary only. The landowner who is having different parcels of lands in different revenue villages the plots would be allotted in the respective revenue villages only.

The allotment of plots would be category wise and by lottery system. The lottery will be conducted taking the revenue village as a unit but not LPS unit offices.

The undivided shares in a standard plot size cannot be divided. The undivided shares can be sold as undivided shares only.

The plots / undivided shares allotted for jareebu category of lands as per the eligibility shall be requested only in jareebu lands. The returnable plots in dry category will not be allotted in Jareebu lands as plots / undivided shares.

If any application [9.18(A) / (B)] is not filed, the eligible big standard size plot will be allotted and undivided share will be allotted for the balance area.

The plots / undivided shares allotted for jareebu category of lands as per the eligibility shall be requested only in jareebu lands. The returnable plots in dry category will not be allotted in Jareebu lands as plots / undivided shares. If any application [9.18 (A) / (B)] is not filed, the eligible big standard size plot will be allotted and undivided share will be allotted for the balance area.

(Application can be downloaded from linkhttps://crda.ap.gov.in)

![Diagram](image-url)

The diagram illustrates the numerous plot options given to the land owners through LPS plot allotment strategy.
3 Planning
In lieu of the lands pooled from the farmers under Land Pooling Scheme it is mandatory for Government of Andhra Pradesh to return residential and commercial returnable plots in the form of development layouts. The Land Pooling Scheme layouts consist of social infrastructure such as community facilities, schools, parks, neighbourhood centers etc. in addition to the physical infrastructure (which includes road networks, underground utilities etc.)

The development layouts are prepared in frequent consultations with the land owners [stakeholders] and the planning officials ensure to meet the requirements and sentiments of the land owners to the maximum extent possible.
3.1 Amaravati Planning Principles

Neighbourhood: Each town is divided into 4 equal parts called neighbourhoods of 1 km x 1 km size (about 250 acres) with about 25,000 population (7000 households). Primary school, local shopping etc. will be at walk able distance.

Community: Each neighbourhood is divided into four equal parts called communities of ½ km x ½ km size (about 62.5 acres) with about 6000 population (1700 households).

Cluster: Each community is further divided into 2 to 4 clusters with each cluster representing a close knit society having its own park and controlled access for vehicles. The size of the cluster varies from 15 acres to 30 acres and the population between 1500 to 3000 (300 to 800 families).
## 3.2 Farmers Requirements for LPS Returnable Layout Preparation Process

<table>
<thead>
<tr>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plot Allotment by Category wise (size) through Lottery.</td>
</tr>
<tr>
<td>The farmer prefers to get his same category (size) of plots adjacent to each other.</td>
</tr>
<tr>
<td>Returnable plots may be allotted within the same village or nearby villages.</td>
</tr>
<tr>
<td>Returnable plots should be Vaastu Compliant. Plots should orient true north to the major extent possible.</td>
</tr>
<tr>
<td>No road hits or T-Junctions (Veedhisula) to the residential plots.</td>
</tr>
<tr>
<td>Jareebu Returnable plots may be provided within jareebu lands to the major possible extent.</td>
</tr>
<tr>
<td>Choice to choose different sizes of plots.</td>
</tr>
<tr>
<td>Allotment bigger plots preferred on larger roads.</td>
</tr>
<tr>
<td>Different parcels of lands in the same village should be given returnable together.</td>
</tr>
</tbody>
</table>
3.3 Planning Concepts for the Preparation of LPS Layouts

Wrapper concept for walkable and livable communities through avoiding unwanted traffic into the neighborhood.

The layout combines or fuses the traditional Grid with at a larger scale with the design of Communities or Clusters without through roads.

Neighborhood facilities and access to public transport with in 10 minutes walking distance.

Higher density and big plots like D and E category plots along the wider and major roads.

Heterogeneous mix of plots in all the communities. 850 types of options in plot sizes to serve the plot requirements of all the farmers.

Examples from Sakhamuru Ananthavaram LPS layout.

Examples from Ananthavaram LPS layout.

Examples from Krishnayyapalem LPS layout.
Communities are centered around primary school, community centers and community parks within 5 minutes walking distance.

Examples from Tulluru and Sakhumuru LPS layouts.

T-Junctions were avoided for returnable plots by providing urban plugin’s.

Examples from Ainavolu and Sakhumuru LPS layouts.

Vastu was one of the major considerations that determined the planning concepts in preparation of the layouts.

Examples from Velagapudi LPS layout.
3.3.1 Vehicular Plot Access

No vehicular access from plots from collector roads.

Plots facing 25m and above roads will have internal roads for car access to the major extent possible. However, pedestrian entries are permitted for plots facing 25m roads.

Examples from Ainavolu LPS layouts.
3.3.2 Schematic Sections Illustrating the Design Intent in the Massing and Zoning of the LPS Layout.

Conscious intent to integrate the existing Village settlement into the proposed new development through public spaces.

Institutions / Schools act as shared spaces for transition between Village and the surrounding new development. There is a gradation in the Massing of the Layout such that there is high-rise and dense development in the periphery towards the public transport corridor and low-rise development towards the Core of the neighbourhood.

Communities are planned around community centres, parks and schools. The gradation of the skyline of the neighbourhood also helps in making the Community park and primary school the focal vibrant space of the Community.
3.4 Summary of LPS Planning Key Principles

**Residential neighborhood**

1. No through straight roads to be encouraged for the local access roads of ROW 17m, 15.6m and 12m.

2. Community Wrapper blocks to consist of larger (D&E) parcels all around the block -the value of land remains higher even if the plot has no access from 50m roads. The wastage due to road hits (Veedhisula) could be avoided by blocking internal roads (creating cul-de-sacs).

3. Access to plots to be restricted to local roads of ROW 17m, 15.6m and 12m roads; access from 25m collector roads to be given only in special rare scenarios for really large parcels - residential layouts are inward looking.

4. Road hierarchy should be strictly followed; a 17m road should not interact with 50m roads unless there is no other alternative.

5. The number of entry exit points to a city block to be standardized at 4 no. for a typical 500m x 500m block and to be proportionately adjusted for larger or smaller blocks.

6. In case the city block is surrounded by arterials on three sides, an additional 25m ROW collector road will be introduced to serve the block.

7. Access to city blocks should be at least 100m away from the city master plan junction.

8. Relocate S2 and other public facilities from City Master plan to enable a better neighbourhood layout.

9. For larger blocks, primary school plots will be provided as 0.5 ha size to accommodate 2 primary schools.

10. No Veedhisulas / road hits.

11. To break the monotony, horizontal blocks will be introduced in few places.

12. Avoid staggered junctions.

13. The land earmarked for CRDA should have enough frontage for access and usable size and proportions for auctioning later.

14. Combining two different categories of depths in the same row of plots should be avoided where possible.

15. Parcels should be laid in ascending order locally in each block.

16. Left over CRDA land in parcel layout should be located towards north or east.

17. The allocation of community green should be centralized within a cluster as much as possible.

18. Ideal plot dimension ratio to be 1:1.3 to 1:1.8.

**Commercial Layouts**

1. Larger plots to be laid out along 25m and 50m roads.

2. The layout should be porous with more entry/exit points.

3. Central green should be introduced within commercial wherever possible.

4. Break long continuous commercial stretch with roads/parks/car parks/open space.

5. Sub-divide large parcels of commercial into smaller blocks.

6. Allow access from 25m roads; Preferably for large size parcels.

7. Car parks to be located at the entry of the commercial layout with a quick exit out from the car parks.

8. To break monotony, horizontal blocks will be introduced in few places.
Stakeholder Consulted Throughout the LPS Returnable Layout Preparation Process
4 Urban Design
Land Pooling Scheme development layouts play a significant role in forming the Urban fabric of the Capital city. There is a need to establish a distinct physical character, unique identity and sense of place for each of these neighborhoods. Urban Design principles and elements in areas such as Streets, Neighbourhood centres, community centres and other key spaces help achieve the vision of developing a world class capital city. Few of Urban Design interventions in Land Pooling Scheme layouts include; Streetscape guidelines and designs, Urban Plugins guidelines and designs, Design framework for Urban centers etc.
4.1 Streetscape Guidelines

Streets play an important role in making a development safe and inclusive and are thus a key component of the public realm. The experience of a development is greatly enhanced with well-designed streets. While the function of streets is often imagined to be carrier of motorized traffic, the design and treatment of streets is a determining factor in encouraging non-motorised transportation modes, thus encouraging a sustainable transit for the development. A well designed street enhances safety, efficiency and ease of movement for pedestrians of all ages and abilities.

4.1.1 Zoning

The key elements of street are Pedestrian Zone (Sidewalk), Non Motorised Zone (Cycle Track), Multi-function zone, Motorised zone (Carriage way and Service lanes), Median (Multi function zone).

Street section illustrating the key street elements

- Pedestrian Zone-side walk
  The minimum width of a walking zone shall be 1.8 m, ensuring that a wheelchair and a walking person can both fit within any section of the zone.

- Non Motorized Transit (NMT)
  The minimum width of a unidirectional, single bicycle lane shall be 2 meters and double bicycle lane shall be 2.5 meters.

- Multi function Zone (MFZ)
  This zone acts as a buffer between motorised transit and non motorised transit. All the utilities and signages are provided in this zone.
4.1.2 Motorised Transit Zone (carriage Way)

Following are the components that need to be included in the carriage way

**Bus layby**

The intent for provision of bus laybys adjacent to bus stops is to provide for a safe and designated area for passengers to board and alight the bus.

**Drop Off**

The intent of a drop off is to provide designated areas to allow for passengers to board and alight vehicles.

**Para – Transit Stop**

To support last mile connectivity, it is imperative to provide for para-transit stops pm the carriageway. These should also be provided near retail and commercial centers.
4.1.3 Street Lighting Guidelines

Street lighting shall be placed at regular intervals along all ROW in the median. Adequate pedestrian lighting shall be provided at regular intervals. This may be within the multifunction zone or the street furniture zone. This shall be fronting the central portion of all plot frontage, or shall be in line with the edge of the plot. The details of street lighting like the height of the pole, the type of light, lux levels and the mounting height shall be decided based on street widths and the amount of traffic for specific streets by the landscape designer. Trees \(\text{fixed}\) Trees shall be provided within the multi-function zone. Trees shall not interfere with the street lighting.
Typical Section with Street lights mounted on median

- Upward light
- Spillover light
- Shadow cast by tree
- Useful light

Between 6 to 8 m

10 to 15 m

Typical Section with Street lights mounted on median

- Upward light
- Spillover light
- Pedestrian light
- Useful light

2.5 m
4.1.4 Plot Access

Image illustrating vehicular plot entry near 17m road with mountable curbs

Vehicular access ramps for all the plots should be taken only from the multifunction zones
4.2 Neighbourhood Centres

Neighborhood centers provide a common, centrally located destination for residents. Centers are a symbolic, coalescing focal point, but they also provide needed services for people, ideally within walking distance. Centers provide a means of connecting people - to one another and to a larger shared, public purpose.

**Design Objective For Neighbourhood Centres.**
1. Pedestrian accessibility and Connectivity through neighborhoods.
2. Transition spaces connecting public transportation.
4. Active spaces / Neighborhood centers to the adjacent neighbourhoods.
6. Inclusion of Neighbourhood centers to the adjacent neighborhoods.
Builtform and primary connectivity

Active building edge inclusive of informal sector, secondary pedestrian connectivity and open spaces

Proposed Sports Facilities
4.3 Urban Plugin

Urban plugin’s are plots reserved with a primary purpose to avoid a T-Junctions for a returnable plots (these plots are not preferred by land owners due to vaastu). They function as small scale public amenities and social spaces catering to the communities and neighbourhoods. The programming and functioning of these spaces will be decided upon stakeholder consultations with the communities. The dimensions of the these plugin’s are directly proportional to their adjacent plots. The typologies and suggested functions for these plugin’s are mentioned in the table below.

Urban Plugin was established to avoid road hits and restrict number of entry exits for colony. These urban plug-in function as activity spaces pertaining to the community needs. Based on the width and location of the adjacent plots and size of the ROW the size of the plug-in is categorized into three typologies i.e. Width of the ROW x 9m, Width of the ROW x 6m, Width of the ROW x 1.5m.

<table>
<thead>
<tr>
<th>SL. NO</th>
<th>PLOT SIZE [M]</th>
<th>LAND USE</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15.6 X 1.5</td>
<td>Residential</td>
<td>Green Buffer, ATMs, Milk Booth, Seating space, Recycle Material collection Points</td>
</tr>
<tr>
<td>2</td>
<td>15.6 X 1.5</td>
<td>Commercial</td>
<td>Green Buffer, ATMs, Kiosks, Seating Space, Cycle Stand</td>
</tr>
<tr>
<td>3</td>
<td>17.0 X 1.5</td>
<td>Residential</td>
<td>Bus Shelter, Green Buffer, ATMs, Seating Space, Milk Booth, Recycle Material collection Points</td>
</tr>
<tr>
<td>4</td>
<td>17.0 X 1.5</td>
<td>Commercial</td>
<td>Bus Shelter, Kiosks, Green Buffer, ATMs, Seating Space, Amenities, Cycle Stand</td>
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<tr>
<td>5</td>
<td>15.6 x 6.0</td>
<td>Residential</td>
<td>Green Buffer, ATMs, Milk Booth, Seating space, Recycle Material collection Points, Dogs Parks</td>
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<tr>
<td>6</td>
<td>15.6 x 6.0</td>
<td>Commercial</td>
<td>Bus Shelter, Kiosks, Green Buffer, ATMs, Seating Space, Service Amenities, Vehicle Repair Shop, Cycle Stand, Open Air Café</td>
</tr>
<tr>
<td>7</td>
<td>17.0 x 6.0</td>
<td>Residential</td>
<td>Bus Shelter, Green Buffer, ATMs, Seating Space, Milk Booth, Recycle Material collection Points, Service Amenities</td>
</tr>
<tr>
<td>8</td>
<td>17.0 x 6.0</td>
<td>Commercial</td>
<td>Bus Shelter, Kiosks, Green Buffer, ATMs, Seating Space, Cycle Stand, Service Amenities</td>
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<tr>
<td>9</td>
<td>15.6 x 9.0</td>
<td>Residential</td>
<td>Green Buffer, ATMs, Milk Booth, Seating space, Recycle Material collection Points, Dogs Parks, Play Area/Tot Lots, Worship Places, Laundry Booths, Gardens, Farmers Market, Fitness Park, Pocket Park, Sand Box</td>
</tr>
<tr>
<td>10</td>
<td>15.6 x 9.0</td>
<td>Commercial</td>
<td>Bus Shelter, Kiosks, Green Buffer, ATMs, Seating Space, Service Amenities, Vehicle Repair Shop, Cycle Stand, Open Air Café, Food Court, Space for Celebration/ Events, Plazas, Amphitheatres</td>
</tr>
<tr>
<td>11</td>
<td>17.0 x 9.0</td>
<td>Residential</td>
<td>Green Buffer, ATMs, Milk Booth, Seating space, Recycle Material collection Points, Dogs Parks, Play Area/Tot Lots, Worship Places, Laundry Booths, Gardens, Farmers Market, Fitness Park, Pocket Park, Sand Box, Service Amenities</td>
</tr>
<tr>
<td>12</td>
<td>17.0 x 9.0</td>
<td>Commercial</td>
<td>Bus Shelter, Kiosks, Green Buffer, ATMs, Seating Space, Service Amenities, Vehicle Repair Shop, Cycle Stand, Open Air Café, Food Court, Space for Celebration/ Events, Plazas, Amphitheatres</td>
</tr>
</tbody>
</table>
6m Urban Plugin
1. Wall height: The boundary wall height is restricted to 1.5m with 1:00m solid wall and 0.5 m porous surface. There should be at least 30% visibility.

2. Lighting: Task specific lighting, avoid spill over lighting particularly where plugin’s are adjacent to residential areas. Energy efficient lighting preferable. All the spots of the plugin should be well lit for safety and better surveillance.

3. Access: The specified boundary wall design is mandatory to allow only pedestrian movement.

4. Open space: At least 40% open spaces should be provided in all the urban plugin’s.

5. Sheltered seating: Weather protected seating options are to be provided.


7. Ramp: Provide universal accessibility through ramps to ensure the urban plugin is inclusive and caters to everyone.

8. Through access: Provide through pedestrian access to the urban plug-ins from both the access roads through pedestrian walkways.
4.4 Village Integration

Nelapadu Village is located in South Western quarter of Amaravati Capital City. The existing settlement of Nelapadu and many other village settlements have been retained in the new Greenfield development of Amaravati Capital City. The project proposes to strengthen the social and ecological heritage of the village and integrate the social infrastructure with the new developments. The integration process has been addressed through land use planning, densities, shared social and economic infrastructure (neighborhood centers, town centers etc.)
4.4.1 Master Plan for Village Integration

Conservation and restructuring of existing natural system

Recreational opportunities for existing and proposed development

Reinforce the proposed green network

Diverse public space

District Center - Urban Plaza Shaded Walkway

A Bioswale or rain garden is a form of bioretention used to partially treat water quality.

District Center - Urban Plaza Shaded Walkway

Waterfront Experience - Decks/Steps

Legend - Master Plan
1. District Center
2. School
3. Institutional
4. Residential
5. Village
6. Informal market

Legend - Recreational Green
1. Entry
2. Walkway
3. Urban Plaza
4. Play Courts
5. Open Lawn
6. Water Experience Deck
7. Event Space
8. Exercise Station
9. Play Area
10. Leisure Walk
11. Open Air Theater
12. Community Parks
4.4.2 Existing Waterbody restoration and redevelopment

**Planting Strategy**
1. Withstand with dry and wet seasons
2. Low growing ground covers on side slopes
3. Leguminous plants for Biofiltration
4. Ornamental grasses

**Hardscape Strategy**
1. High reflective index
2. Permeable – Semi-permeable paving
3. Antiskid Finishes

**Slope Protection**
1. Surface protection as vegetation cover
2. Surface drainage – Catch pits & surface channels
3. Subsurface drainage – weep holes and subsoil drains

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![Diagram of urban design with road, public realm, bioswale, green embankment, pathway, and lake with suggested native plants and trees, and hardscape palette options.](image-url)
4.4.3 Upgradation of Existing Village Physical infrastructure
5.1 Objectives

The planning objectives for the transportation infrastructure in the Amaravati Capital city include:

1. To develop world class integrated transport infrastructure systems with facilities for seamless travel in line with rapid urbanization.

2. To develop the concept of multi-modal transport network connectivity which could be adopted for all parts of India.

3. To plan, coordinate and implement Travel Demand Management (TDM), Traffic System Management (TSM) techniques.

4. To create institutional framework and resources mobilization mechanism for implementation, operation and maintenance of planned transportation projects.

5. To develop and encourage Transit Oriented Development (TOD) areas, Non-Motorized Transport (NMT) friendly road networks with commuter affordable, safe systems.
5.2 Right of Ways

5.2.1 25M Right of Way (collector road)

Collector roads form the basic linear structural framework that communities are shaped around. Their distribution, location, length, and degree of connection will establish the fundamental design elements that will connect one community to another. The network of Collector Roads also establish the primary transit, cycling, and pedestrian routes for a community.
5.2.2 17M Right of way (local road)

These roads serve adjacent residences on larger lots and occasionally parks, schools and other community serving uses. They are often shorter segments that connect these uses to other Collector Road. Buildings are set well back from the street and they are two-lane roads with pedestrian walkways and a bicycle track.
5.2.3 15.6M Right of way (local road)

These roads are flanked primarily with residential uses of varying sizes and densities together with supporting smaller scale neighborhood uses such as schools, parks, and places of worship. They are often shorter in length and are located close to and oriented towards the street. They are two-intermediate lane roads with an urban cross-section.
5.2.4 12M Right of way (local commercial road)

These roads serve adjacent residences on larger lots and occasionally parks, schools and other community serving uses. They are often shorter segments that connect these uses to other Collector Road. Buildings are set well back from the street and they are two-lane roads with pedestrian walkways and a bicycle track.

View of 12M right of way
5.2.5 Views of Proposed Typical Cross Sections of Transport Corridors

Proposed Typical Cross Sections of Transport Corridors
Utilities
6.1 Utilities Description

1. SEWERAGE

City main Sewer pipe serves the Town. Town Sewer line serves Neighbourhood sewers and connects to the City main sewer. Minor sewers serves each community and clusters connect at points indicated. The city main sewer finally discharges to a central sewage treatment plant for treatment. Pipe layout and connection point maybe subject to change at detail design. Changes may be made by the Smart infrastructure Consultant to allow for any modifications due to the changes in the ground levels, road alignment in plans and township boundary changes. Sewerage network will be available close to the building/ block level. The developer will arrange to connect the building sewerage system to LPS\ City level sewerage network as specified.

2. STORM WATER

Rain falling within the LPS is drained via roadside drains, town outlet drains to the city major drains (which connect to the major natural water courses or Vagus). In addition, the rainfall may be captured in ponds, in green areas or are collected by rainwater harvesting within each building development. The drainage system for the city as a fully built up development needs to be studied by the Smart Infrastructure consultant. The drains indicated here is subject to further study by CRDA as part of the city land-use and system. The entire drainage system should be modeled to determine the water levels for flood events affecting the city when it is fully built up and this will in turn affect the drainage and platform for the city, the towns and the LPS. Recommendation for specifications: British or Eurocode standards as above.
3. POWER
Concept for layout: The city electricity line 132 kV supply power to Town 132\33 kV substation. Town substation supply 33 kV power to neighbourhood substation 33\11kV. Neighbourhood substation supply 11kV to community level with smaller 11kV\0.4 kV at each community or housing cluster. Line configuration and connection point may be subject to change at detail design. The supply of electrical power may be modified and integrated by CRDA Smart infrastructure consultant to include distributed localized renewable sources such as solar energy.

4. GAS
Concept for layout: Gas is supplied from City high pressure gas line supply gas. A Town gas distribution regulator station taps the gas from the city high pressure pipeline. From the station, the gas is supplied to the town via a medium pressure gas pipe network. The gas is further distributed at each neighbourhood and community level via low pressure pipelines. Pipe layout and connection point maybe subject to change at detail design.

5. TELECOM
Telecoms feeder cables are routed from a Central Office along the roads to each neighbourhood and community. The telecoms cable will connect to a main distribution frame in an office or commercial building or apartment building and from there connect to each floor and apartment. Cluster housing will have an outdoor cabinet or manhole from where it will branch to serve each individual house. Layout and tapping points maybe subject to change at detail design. Telecommunication services up to the individual block \ office \ unit \ home level may be arranged as per the requirement of the occupiers \ services.

6. WATER SUPPLYA
Water distribution centre (WDC) serves each Town, and Village taps from the town WDC. Town Distribution pipes connect to all the neighbourhoods of the town. Pipe network connects to individual building in each community in ring network following the road network. Sizes and location of connection of pipe are subject to detail design. Water Supply Specifications: Treated water from the Water Treatment Plant (WTP) may be supplied at a specified location near the building. Provide treated water for all purposes as per IS 10500 - 1991.

7. SOLID WASTE
Solid municipal waste are collected at bin centres located at the centre of the community or cluster with a serving radius of about 100 to 300 m and next to a local access road. Bin centres are also located within each shopping mall, commercial or office development or a private residential condominium. The numbers and location maybe subject to change at detail design.
Lottery Process
7.1 Description of overall Lottery Process

Lottery is the most important milestone in the entire LPS process as the farmer will get the returnable residential/commercial plot allotted through this process. To make the process of distribution of developed plots completely transparent and unbiased, Govt. decided to adopt dynamic allocation of plot through a lottery system. To meet this objective, AP Online developed an online solution which will enable this dynamic allocation of plots.

Process of Lottery:
Just before the commencement of lottery, the Farmer’s Master and Plot Master is given to APOnline. APOnline ports the masters into the database maintained for lottery system.

Data Validation
The online system designed for lottery validates the matching of number of farmers vs number of plots mentioned in the masters provided by APCRDA. In case of any difference, it is informed either to Planning Department or Competent Authority depending upon whether the difference is in the number of plots or in list of farmers.

Marking of Single opted Plot and Multiple (1 opted, 2 opted, 3 opted ...) After Data validation, Data will be arranged in ascending order of Plot Sub category, Township, Sector, Colony, Block, and Plot Number. Once the masters are ready, online system prepares list of Sub category Farmers. Next it identifies the minimum number of plots opted by a single farmer under that sub category. Then it marks the same number of plots opted by a single farmer side by side to the extent possible. For example if H5 sub category of commercial, total 30 farmers have shown interest and one farmer has opted 4 such plots while others have shown less than 4 plots. Online system will first mark 1 H5 plots and then followed by sequence of opted plots (1, 2, 3...). After identification of these plots lottery starts.

Lottery progress till date

- **Total Plots**: 56,606
- **Residential plots awarded**: 22,314
- **Commercial plots awarded**: 32,956
- **Number of farmers/ land owners allocated land**: 22,314
- **(of 24) Vilages**: 22
- **Lotteries**: 27 (22 First time and 5 second time)
Lottery Process

During lottery, system will pick the first set of Minimum number of opted plot under each sub category \([A1 – 1]\). Then it will pick the list of farmers who have opted for same category \([A1 – 1]\) of plots and allocates. Whosoever allocates the plot is removed from the lottery. The same process repeats till all the identified sets are allocated to farmers opting for such set \([A1 – 1]\).

**Note:** \([A1 – 1]\) means A1 is subcategory and 1 plot opted by farmers.

\([A1 – 2]\) means A1 is subcategory and 2 plots opted by farmers.

Next, the same process is repeated for next number of plots opted together for each sub category. This whole process of allocation of plots may be conducted as Trial or Final as per the majority choice. There should be at least one trial run before a final run. At each run a list of allotments is created which is displayed APCRDA website after completion of allotment process during the lottery. The allotment is made based on the list generated after the Final run. No allotment is allowed after final run. A provisional certificate containing a QR code is immediately issued to each allocates based on the outcome of final run.

**Example in A1 Sub Category**

[For Example, In A1 Subcategory if there are 70 farmers in which 50 farmers had opted for single plots, 20 farmers opted for 2 plots in the same subcategory i.e. A1. The lottery process starts as this, application picks the single marked plot and selects a random farmer who opted for single plot and allocates that plot and the allocated farmer will be removed from the loop, like this application allocates all the 50 farmers who opted for single plots. Then the loop continues for two marked plots and application picks the two marked plot and selects a random farmer who opted for two plots and allocates that plot and the farmer then will be removed from the loop like this all the 20 farmers will be allocated]

Technical Process used in Lottery, “New ID” Concept of SQL Server Data Base software is used to pick a farmer from the list, which creates a unique row number of each run.

Security Features Implemented, QR Code (With parameters like Allocated plot code, Aadhaar Number, farmer name, village). The final list of allocation is digitally signed through a 64Bit Secured Encryption Key (Digital Key).

Additional Functionality Used, Immediately after
final allotment, a SMS with the details of individual allotment is sent to each farmer and a List of final allocation is immediately uploaded on APCRDA website. The respective villagers are notified about the lottery date, venue and the time of lottery to all the villagers participated in the LPS thru SMS, Local dandora and other means. The public representatives are invited to conduct and witness the lottery like Hon’ble MLA, ZPTC, MPTC, Sarpanch and other important personal of the village. The following committee has been constituted to conduct the lottery in transparent process. Joint Collector – Guntur Chairman, Director Lands, Director IT, Director Planning, Competent authority.

The Final LPS Layout of size 12’ x 12’ containing the lottery code and plot locations are displayed at the respective panchayat office and at the lottery venue apart from placing it in the web.

Farmers were also given handouts containing the maps of layouts and plot codes.

The lottery process and the planning process is explained to the farmers.

It is mandatory to conduct at least one trial run both in residential and commercial lotteries in the presence of the public representatives and before the public.

The results are printed and kept for public viewing. The time of trial run and the water mark as “TRIAL” is printed on the sheets.

The public can demand for any number of trial runs till all the public are satisfied about the lottery process and such trial runs are printed and signed by the committee for any reference and for public viewing.

On complete satisfaction and on public demand FINAL lottery will be done by the public representatives OR the public are called onto the dias to key the final lottery both in respect of Residential and commercial plots allotment.

The results are printed and kept for public viewing. The time of trial run and the water mark as “TRIAL” is printed on the sheets.

On completion of the lottery the allotment, the lottery results are displayed in the web site of the APCRDA and individual allotment letters are generated and handed over the farmers then and there itself.

The results are also uploaded to the web for viewing and downloading the allotment letters by the farmers.

All the results including the trial runs are available with the respective CAs for viewing.
Peg Marking
The reconstituted/returnable plots to the land owners are marked on land by using a DGPS machine (Differential Global Positioning System) and pegs are marked on the boundaries. DGPS (Differential Global Positioning Service) is a navigational system using the GPS system of satellites that circle the earth plus ground stations with limited signal range. The combination provides greater accuracy than GPS alone. DGPS requires receivers for both GPS and DGPS signals.

The Survey Of India has marked 6 Master Control Points (benchmarks) - Bethapudi, Uddandarayunipalem, Inavolu, Dondapadu, Undavalli and Nekkallu in the Amaravati Capital area. These benchmarks are taken as reference for the DGPS Survey. The base station with these master Control Points and road and plots peg marking is done with Rover, Controller.

First the respective DGPS co-ordinates of the plots are fed with Control units. The points of the plot are demarcated on the ground with the help of a Rover using the STAKEOUT method.

Accordingly the four corner points of a plot are demarcated with the help of a DGPS machine on ground. After marking the points, a 7” wide, 1’6” deep pit is dug, and 4”X4”, 3’0” deep pre-cast concrete posts are planted in the marked corner points. The concrete posts are planted 1’6” deep in the ground.

On these concrete posts, CRDA Letters Should be Engraved on the left side of the stone and the Block Number should be enamel painted on the right side of the stone (above GL) with black colour. Corresponding plot numbers should be enamel painted with black colour on the front side of the stones at the top with arrow mark indication. Road code should be enamel painted with black colour. Residential plots are painted in yellow and blue is used for commercial plots. Similarly road details are also shown, for e.g. CLR –Collector road (25m), IS-1 - Internal Street-1 (17 m), IS-2 - Internal Street-2(15.6 m), IS-3 - Internal Street-3 (12 m) etc., During registration, the returnable plots are numbered and a Plot code is given in the registered document accordingly to the Plot Owners[For e.g. 8-453-1017-C2 i.e. 8-Plot number, 453- Colony number, 1017- Block number, C2- Plot code], the Boundary plot numbers, related Survey numbers, Plot dimensions and extent, etc., are contained in the Registration Document.

**Benefits of DGPS Survey:**

A DGPS machine can simultaneously work with more than 20 satellites. This is one of the most technically efficient Survey system in the world. DGPS is more efficient than Chain survey(chain, cross staff), ETS machine survey. Every point of the plot is Geo Referenced in this system. In Chain Survey(chain, cross staff), ETS Survey any error or difference is cumulatively shown in the other points, but in DGPS machine the error is localized on the respective points only and does not have impact on other points. The accuracy of DGPS machine is also very high and is most widely used in many developed and developing countries in the world. In India DGPS is used in defence, Navy and Air Force.
APCRDA Planning Department gives the DGPS co-ordinates of the dimensions of the reconstituted plot (length, width) selected by the owner/farmer as per his/her eligibility and area of extent.

But during Co-ordinates demarcation on site and peg marking, certain manual and machine errors are bound to happen. If a farmer measures the distance between pegs with a tape, small errors may occur because,

1. The tape may not be held straightly.
2. Use of worn out or stretched tapes.
3. Sagging of tape.
4. The centre to centre of a plummet hole may not be measured properly.
5. The post might not have been planted properly.
6. The effect of air/breeze on tape.
7. Undulating form of ground.

APCRDA Planning Department, Survey Department and Peg Marking executing agency carry out the whole process with utmost precision, but during peg marking certain errors are bound to happen, hence through DGPS co-ordinates these errors can be minimized. Henceforth the four corners of a plot determined by DGPS coordinates i.e., length, breadth, extent/area of plot are contained in the Registration document. Similarly, the dimensions obtained through DGPS Co-ordinates must be followed by APCRDA and Plot Owners.
Plot Registration
AMARAVATI LAND POOLING SCHEME

PLOT REGISTRATION

1. Government of Andhra Pradesh bears all the costs incurred for registration of farmer’s land to CRDA as well as registration of returnable plots to farmers by CRDA.

2. In addition, government also bears the cost of registration if the allotted one time registers the plot to his own family member (i.e. spouse or children).

3. A code is generated by Department of Registration to link the registration document to all the returnable plots. For e.g. If a farmer availed 4 plots during the plot allotment the registration document clearly indicates all the returnable plots available to him/her and mentions the plot which is getting registered.

4. A Land Pooling Ownership (LPOC) Certificate is provided with the registration document for additional proof and no scope for ambiguity. This certificate is a conclusive proof of evidence of the title and the owner shall have alienable rights of the property as per the provisions of Registration Act and Transfer of Property Act.

5. Registration is done using Differential Global Positioning System (DGPS) Coordinates and the same are used to peg mark on ground- to attain maximum accuracy and avoid property encroachments.

6. CRDA has opened help desk / facilitation center in the Sub Registrar’s office to ease the registration process for the farmer/landowner.

7. Registration documents are prepared by Competent authorities to reduce the burden on farmers/landowners and fasten the registration process.

8. Farmers were given the flexibility to choose Joint allotment during the plot allotment and registrations are done accordingly.

9.1 Salient Features

Example of the key maps from the registration document
Each registration document is provided with three key maps for clear understanding.

1. Site plan with surrounding features like roads (with dimensions), adjacent plots etc.

2. Plot dimensions derived from DGPS measurements.

3. Block plan includes plot location, road access and all the plots in the block. Colony Map with blocks, plots and public facilities (if any) within the colony.
Nelapadu: Case Study
NELAPADU: CASE STUDY

10.1 Introduction

Nelapadu is located in the South Western quarter of the Capital City. Nelapadu village being the first village to participate in the LPS and being well responsive to the Land Pooling process, was taken up as the first village for preparation of layout of returnable plots under the Land Pooling Scheme.

Following the official allotment of returnable plots on 25th June 2016, Nelapadu has become the point of reference for preparation of Land Pooling layouts for all the other villages in the Capital City.

| 981 Land Owners | 1300 acres Land pooled |

Location of Nelapadu in the context of Capital City area.
10.2 Township Level Planning Concepts Applied In Nelapadu Layout

Nelapadu LPS allocation was planned considering existing village boundary and Master Plan zoning.

Township structure was planned based on the road hierarchy and adjacent developments (i.e. town centers). High density plots were planned along the major roads.

Nelapadu LPS allocation was planned considering existing village boundary and Master Plan zoning.

Neighbourhood, community and education facilities are planned within a 10-5min walking distance.
10.3 Neighbourhood and Community Level Planning Concepts Applied In Nelapadu

Heterogeneous mix of plots in a typical neighbourhood

Avoiding allotment of returnable plots at T-Junctions or Road hits

Defining Communities, Clusters and Community facilities

Walkability to Community Centers & Public Transport Network
10.4 Nelapadu Plot Allotment

A Total Number of 981 Land Owners participated in land pooling scheme from Nelapdu and extent of Land Pooled land is 1300.9225 acres. The Total Residential plots sub categories available for selection were 494 and the Nelapadu land owners opted for 118 sub categories. The Total Commercial plots sub categories available for selection were 497 and the Nelapadu land owners opted for 64 sub categories.

The Total Residential plotted area is 12,93,495 sq.y or 267.25 Acres . The Total Commercial plotted area is 3,14,720 sq.y or 65.03 Acres. The broad plot types in Nelapadu are Residential, Commercial and Villa plots. In the conceptualization of the layout, one of the considerations was to create a heterogeneous community with various categories and sizes of plots clustered together.

Higher plot depths i.e. 100m and 50m depth plots (large plots which will have higher density developments) are allotted near around public transport corridors. The idea is to have gradation of density with larger plots close to public transit network at the periphery and then transition towards the centre with medium (25m depth) and then low density parcels.

Institutions are distributed around the periphery of the existing Village Settlement to serve as shared Transition space between the Village and New Development, so as to facilitate the integration of the Village settlement.

<table>
<thead>
<tr>
<th>Residential plot code</th>
<th>Standard plot depth (10 m)</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>12</td>
</tr>
<tr>
<td>B</td>
<td>18</td>
</tr>
<tr>
<td>C</td>
<td>25</td>
</tr>
<tr>
<td>D</td>
<td>50</td>
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<tr>
<td>E</td>
<td>100</td>
</tr>
<tr>
<td>G</td>
<td>6</td>
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</table>

<table>
<thead>
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<th>Residential plot code</th>
<th>Standard plot depth (10 m)</th>
</tr>
</thead>
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<tr>
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<tr>
<td>L</td>
<td>50</td>
</tr>
<tr>
<td>M</td>
<td>100</td>
</tr>
</tbody>
</table>
Nelapadu Planning Frame Work
Nelapadu D raft Layout
10.5 Evolution from Draft to Final Layout

10.5.1 Major Concerns Addressed in Draft Layout

1. As requested by Land Owners, returnable plots are allotted as close to the existing Village Settlement as possible.
2. The Draft Layout tries to emphasize on Transit Oriented Development. Large High Density Plots are thus concentrated in one pocket close to Transit hub.
3. It tries to connect the Existing Village well with the new layout. A Road loop is proposed around the existing village which in-turn is linked to the proposed new Road structure.
4. As a principle, Cluster development is proposed with big plots as a wrap for the community and smaller plots inside, such that no residential plots open on to 25m roads and above. Residential Plots are meant to open onto 17m and 15.6m Roads.
5. Schools and Green spaces are envisioned as the nucleus of the Community, and are thus placed as Central focus of each Community.
6. Utilities and institutions are accommodated in the layout, in addition to the basic requirements.
7. Conservation and channelization of the existing water bodies is kept in mind in the 10.5 Evolution From Draft To Final Layout preparation of the layout.
8. Layout is based on assumptions of returnable plot sizes, based on original land parcel sizes of Land Owners. Later, through form 9.18, land owners choose the categories of returnable plots to suit them.
9. Concentration of Commercial development is near town centre, and proposed MRT junction.

10.5.2 Changes From Draft To Final

1. As excessive pressure on Infrastructure was foreseen, mix of different plot sizes for every Community was brought in.
2. Plot choices opted by Land Owners by means of Form 9.18, was incorporated into the layout.
3. Vastu considerations were incorporated with regard to avoiding of T-junctions.
4. Plot - depth proportions of plots were improved with an average Plot - Depth ratio of 1:1.5.
5. A new category of plots i.e. ‘Villa plots’ was introduced, as this was requested by some of the land owners.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the Village</th>
<th>Date of Lottery Conducted</th>
<th>No. of Farmers</th>
<th>Plots Allotted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Residential</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dry</td>
</tr>
<tr>
<td>1</td>
<td>Nelapadu</td>
<td>25-Jun-16</td>
<td>768</td>
<td>1083</td>
</tr>
<tr>
<td>2</td>
<td>Nelapadu (2nd lottery)</td>
<td>27-Aug-16</td>
<td>100</td>
<td>75</td>
</tr>
</tbody>
</table>
10.5.3 Nelapadu Final Layout Areas

- **327.43 acres**: Residential (Existing Village – MP: 32.19 acres; Residential: 267.49 acres; Residential Vacant: 27.75 acres)
- **65.16 acres**: Commercial (C3-MP: 8.39 acres; C4-MP: 1.28 acres; Commercial: 65.16 acres; Commercial Vacant: 7.16 acres)
- **94.15 acres**: Open Spaces (Blue: 12.57 acres; P1: 20.20 acres; P1-MP: 43.99 acres; P2: 17.39 acres)
- **40.51 acres**: Facilities (Institutional: 6.29 acres; S2: 3.78 acres; S2-MP: 27.95 acres; S3-MP: 2.49 acres)
- **303.29 acres**: Utilities (Parking: 1.77 acres; U: 5.57 acres; Road: 140.06 acres; MP Road: 155.89 acres)
- **1.04 acres**: Salable Letter Of Intent (SLOI)

Total area: 848.42 acres

Layout efficiency: 75.97%

MP - Master Plan C - Commercial P - Open Spaces
S - Facilities U - Utilities
10.6 Stakeholder Consultations

From the initial planning process the farmers are informed and educated about various regulations and planning principles.

Stakeholder consultations played a major role in shaping the physical planning of Land Pooling Scheme.

The Planning officials insisted on accommodating the suggestions given by the farmers/landowners during the planning process and are translated in the layout preparation.

Public Consultation Processes
10.6.1 Stakeholder Consultations for Layouts

Commissioner, APCRDA and Planning officials explaining the LPS development layout to the landowners
10.7 Plot Numbering

There are totally 28 townships in the Capital City which are numbered from 1 to 28 from North-West corner of the Capital City to South East.

Further, these townships are broken down into Sectors. The numbering of the Sectors also starts from the North-West Corner of the City and goes from 51 to 195.

In the Nelapadu layout, Colonies are numbered from 451 starting from the Northern end of the layout.

Within each colony, blocks are numbered starting from 1001 at the Northern end of the layout. Within each block, plots are numbered starting from 1.
10.8 Nelapadu Plot Allotment: Lottery Process

Nelapadu was the first village to participate in the land pooling process. Hence it was also selected to be the first village to get returnable plots through dynamic plot allocation in lottery process.

First lottery was conducted on 25th June 2016. Second lottery was conducted on 25th August 2016.
10.8.1 Nelapadu Plot Allotment Information Received Through Sms And Help Desks

Land owner receiving SMS after the lottery process

Land owners checking their allocated plots at help desks after the lottery

10.8.2 Interviews From Nelapadu Land Owners/ Farmers
Fig: News Article mentions Honorable Chief Minister indebted for the sacrifice made by the Capital City farmers during the First Land Pooling Lottery ceremony held at Nelapadu.
10.8.3 Nelapadu P lot Allotment: Lottery News Articles

CM allots first lot of plots in Amaravati

STAFF REPORTER

NELAPADU GUNTUR DECEMBER: The Andhra Pradesh government delivered on its commitment to give developed plots to those who gave their lands for construction of the capital city on Saturday.

Chief Minister N. Chandrababu Naidu made the allotment of first lot of 1,916 plots (1,447 residential and 769 commercial spread in total 318 acres) - through a computerised lottery system - to 847 beneficiaries of the Land Pooling Scheme (LPS) belonging to this village in Thullur mandal.

The Capital Region Development Authority (CRDA) will give physical possession of these plots in three weeks and make the layout roads motorable in as many months.

Addressing the gathering, Mr. Naidu said he was happy that people had given nearly 34,000 acres of land for the capital city and they were reaping the benefits of LPS.

However, the government would take over the lands not given under LPS, through the Land Acquisition (LA) Act before October. The process of LA would start immediately but those willing to give their lands could still come forward to make the gesture.

He said construction of the Interim Secretariat Complex (ISC) at Velagapudi had gained pace and the government would start fully functioning from there in July with the exception of skeletal staff in Hyderabad.

As far as the development of the seed capital (that comprises three villages) is concerned, the Singapore companies which are part of the consortium formed with the Amaravati Development and Management Corporation (ADMC), would market the city around the world.

The Singapore firms would develop the seed capital, mobilise investments and rope in global enterprises to make Amaravati their base while the ADMC would create the ‘front infrastructure.’

This roadmap would be finalised in 45 days. About the access road to seed capital inaugurated by him earlier at Venkatapalaram, Mr. Naidu said it would be connected to NH 5. An 183-km stretch of seed capital access road from Donnapadu to Kondaveeti–Vaddi stretch would be laid first at an estimated cost of Rs. 245 crore.

Plot allotment opens development floodgates in Nelapadu

APPAL REDDYM

VUJAVARADA: It’s festive mood in Nelapadu, the nondescript village in the Amaravati region where the State government has allotted the first tranches of plots to the farmers who contributed farmland for the proposed capital city. The allocation opened the proverbial floodgates of development as most farmers are yielding to the proposed offers by real estate builders.

So far, it was a nostalgic plot and related value but now the farmers have got the exact location which helps them negotiate with the builders, says a villager from Nelapadu.

Article from The Hindu
10.9 Nelapadu Plot Registration

Plot registration begins in capital region Amaravati

THE process of registering the reconstituted plots to farmers of capital region Amaravati commenced at Thullur sub-registrar office on Monday. The Capital Region Development Authority officials handed over the documents of registered plot to K Adilakshmi of Nelapadu village, who first gave her land to the CRDA under the land pooling scheme for capital construction. CRDA Commissioner Ch Sreedhar said 72,000 plots were allotted to 24,000 farmers of 22 villages in the capital region. In the next two months, allotted plots would be registered through GPS and documents would be handed over to the farmers.

Responding to allegation of Y S Jaganmohan Reddy that several irregularities have taken place in the allocation of plots to farmers, Sreedhar said that it was made through a computer lottery system developed by TCS.

Commissioner, APCRDA handing plot registration certificates to the capital city landowners
11 Conclusion
11.1 Mana Amaravati App

Mana Amaravati, an app that allows the owners of allotted plots a chance to reach out to investors in any part of the world and get a better deal for the sale, lease or joint development of land parcels, was launched by Andhra Pradesh chief minister N. Chandrababu Naidu.

The application aims to bridge the gap between the state government and its citizens, as it allows the owners of allotted plots in the new capital region a chance to reach out to investors in any part of the world and get a better deal for the sale, lease or joint development of their plots, Sreedhar Cherukuri, AP Capital Region Development Authority commissioner said in a statement.

Some of the main features which are part of this mobile/web based application are mentioned below:

- Investors from any part of the world also get to weigh multiple options available to them and find value for money on the plots they choose. As of now, there are 20 services integrated into the ‘Mana Amaravati’ application.
- The user can even go to the allotted plot and locate it physically, said the press release. Agrievance redressal system has also been built into the app, with which citizens can address issues with concerned departments at their convenience.
- They can submit their complaints and concerned officials will get back to them in a short period of time, to resolve it within a particular time-frame. The app also has a feedback form through which users can send suggestions on its services.
- “buy/sell”, “development”, “lease” functionalities of CRDA returnable plots in capital city villages through Aadhaar integration, thereby eliminating brokerage and bringing buyer and seller on a single platform in “Buy & Sell” service of “Farmers First” module.
- Checking all their plots with plot maps through single input of Aadhaar number with in “Know Your Plot Code” service of “Farmers First” module.
- Booking appointment for registration of their respective plots allotted by APCRDA.
- Checking the ownership of their plots through GPS service physically by selecting “Location” in “Know Your Plot Code” service of “Farmers First” module.
- Social welfare programs adopted by APCRDA in capital city villages like “Amaravati Free Health”, “Amaravati Free Education”, “Skill Development (Training/Jobs)”, “Annuity”, “Pension” etc.
- Other features like Citizen Services, About CRDA, About Amaravati, Gallery, Grievance, Videos, Social Media links, Master Plans, Layouts, Zonal Regulations, Online EC, Mee Bhoomi etc.
11.2 On Going Process

APCRDA held Public Consultation workshops on the safeguard documents in Thulluru and Ananthavaram on August 29, 2017.

APCRDA officials spoke about the need for land donor’s co-operation for the development of the capital region.
APCRDA held Public Consultation workshops on the safeguard documents in Venkatapalem and Neerukonda on August 30, 2017.
APCRDA held Public Consultation workshops on the safeguard documents in Thulluru and Ananthavaram on August 29, 2017.
Land Pooling to Create Win-win Situation: Naidu

Chandrababu makes it clear that while building the new capital, the government would give every first benefit to local farmers to increase their income.

Express News Service

Hyderabad: Alleging that opposition parties were trying to create apprehensions among people in those villages, which were identified by the government for construction of new capital city, Andhra Pradesh chief minister N Chandrababu Naidu on Saturday called upon farmers belonging to these villages to cooperate with the government to construct a world-class capital city.

“A new capital cannot be built either in a remote place or forest. New city can grow into a world-class one only when it is built at a place where social life and infrastructure is there. Hence, we have chosen the place near Vijayawada/Guntur to develop a riverfront capital on the banks of River Krishna,” he said.

Speaking to newsmen at his residence here, Naidu said the proposed land pooling system is the ideal method for development of capital city.

“Through land pooling, land owners will be given back developed land. It would be a win-win situation for the government and the farmers,” he added.

He made it clear that while building the new capital, the government would give every first benefit to local farmers to increase their income.

Stating that some political parties are trying to make an issue out of the quantum of land earmarked for new capital, Naidu said the quantum of land would be based on future needs.

“If we want to build a world-class capital, vast tracts of land is needed. Otherwise, we can only build another slum with small portion of land,” he remarked.

Meanwhile, Naidu asked the ministerial panel on land pooling, headed by finance minister Yanamala Ramakrishnudu, to tour the villages, identified for land pooling and gather the views of local farmers.

“As per the opinions of the local farmers, the government will finalise the final package for them,” he announced.
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