



Welcome

WORKSHOP ON RE-SURVEY

Dt.10.08.2020

“ YSR Jagananna Shaswata Bhu Hakku mariyu
Bhu Raksha Pathakam ”

MUNICIPAL ADMINISTRATION AND URBAN DEVELOPMENT



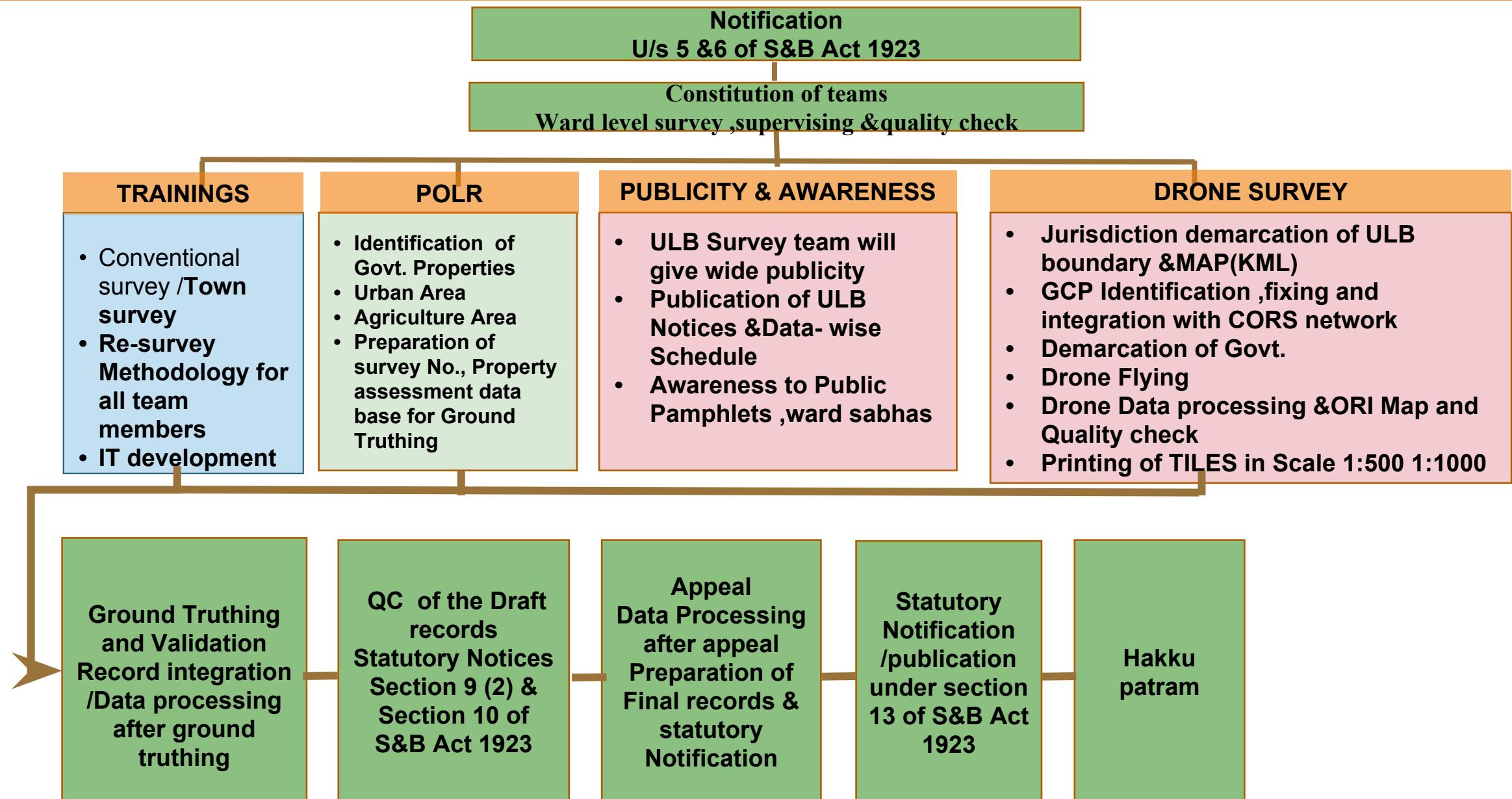
- Government of Andhra Pradesh has taken a decision to conduct a comprehensive Resurvey of Lands; assumes significance as the last such exercise dates back to almost a century.
- This prestigious flagship programme is named as '**YSR Jagananna Shaswata Bhu Hakku mariyu Bhu Raksha Pathakam**' under "**Suparipalana**" and decided to conduct the resurvey of the entire State by using latest technologies available.
- The resurvey project includes properties in urban areas apart from Rural Areas. The ultimate goal of the resurvey is to create a database of all immovable properties that servers as a conclusive record of titles as per S&B act 1923.

- ◆ Total Local Bodies in the state :123
- ◆ Urban Area Covered in :5548.90 Sq.Kms.
- ◆ Population as per 2011 census :152.51 Lakhs Approx.
- ◆ No. of Assessments (Structures) :30 Lack Approx.
- ◆ No. of Assessments (Open Plots) :07 Lakhs Approx.
- ◆ Total No. of Assessments :37 Lakhs Approx.

Activity

S.No	Description	S. No.	Description
1	Notification under Section 5 & Section 6 of S&B Act, 1923	13	Record integration/Data Processing after ground truthing
2	Constitution of teams for Ward level survey, supervising & quality check	14	Quality check by supervisory team of ground truthing done by Ward level Survey teams
3	Trainings	15	Ground Validation
4	Publicity/Publication/Awareness	16	Data updation after ground validation
5	Demarcation of Boundary /Jurisdiction (ULB/Ward) & Map in KML formats	17	Quality check of draft records
6	GCP identification, fixing & Integration with CORS Network.	18	Statutory Notices Section 9 (2) & Section 10 of S&B Act 1923
7	Identification/Demarcation of Government/ULB Land's/Properties	19	Appeal ACTIVITY
8	Purification of Land Records (PoLR)	20	Data processing after appeal
9	Drone flying	21	Preparation of final records & Notification
10	Drone Data Processing & ORI map	22	Statutory Notification/Publication under Section 13 of S&B Act, 1923
11	Quality check of ORI map	23	Hakku patram
12	Ground Truthing		

Process of Re-Survey

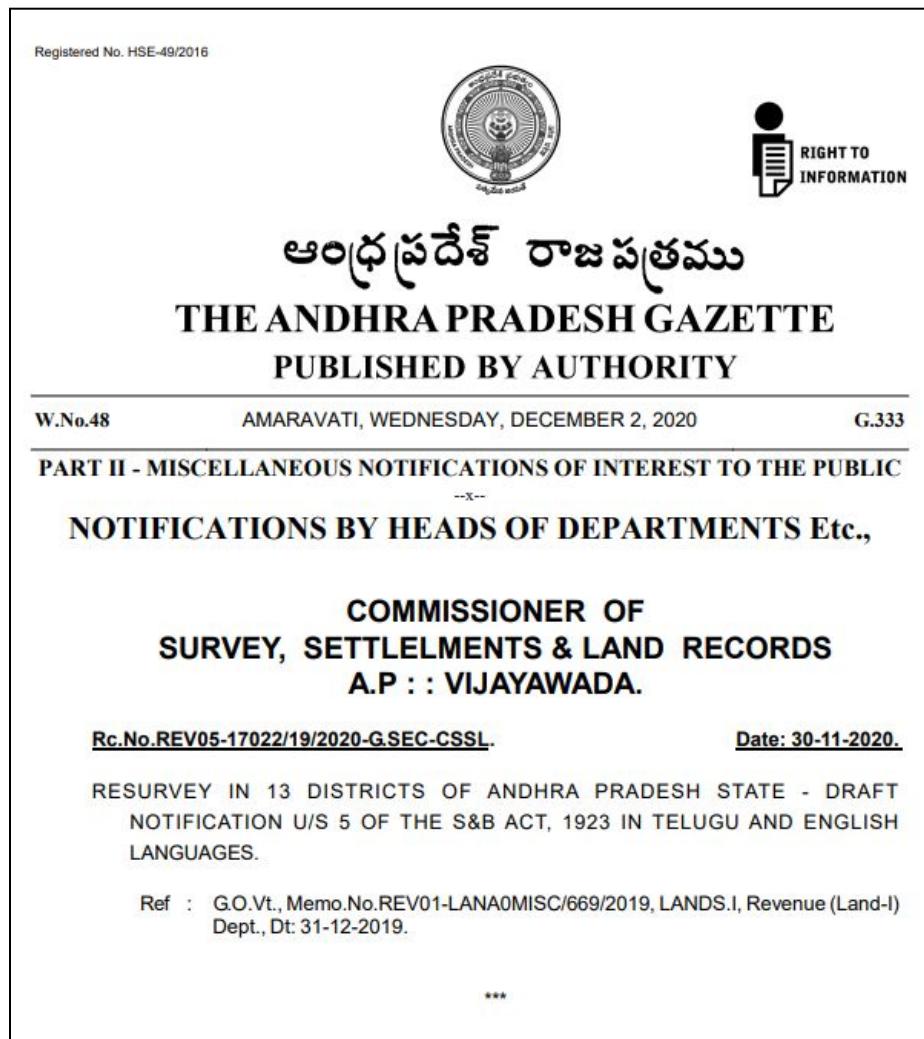


- Draft Amendments are proposed to AP Municipal Corporation Act(AP MC), 1955 and AP Municipalities Act(APM), 1965 on par with Amendments made in AP Panchayat Raj Act, 1994

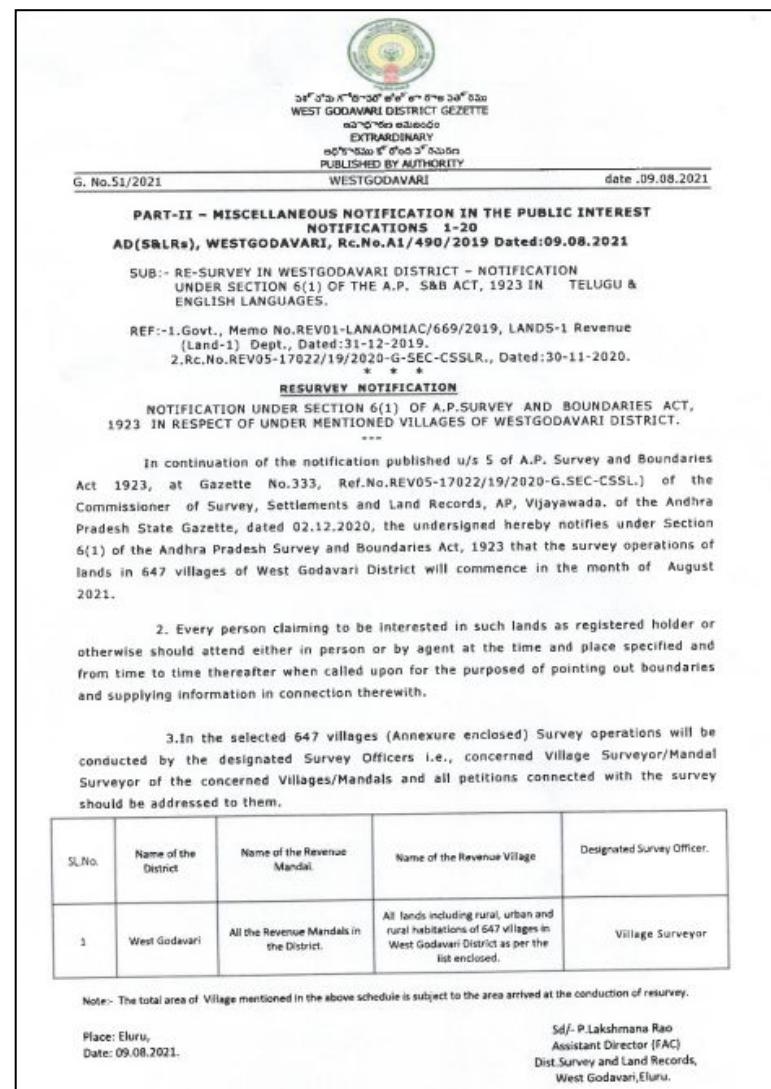
Amendments proposed to APM Act, 1965 and Section 145 –A of APMC Act 1955 - Insertion of new Section 37-A

- (1) Government shall cause to survey and prepare a Map of all the Government Lands, Grama Kantam Lands, Abadi, Poramboke, Donka, Kunta etc., including the Non-Agricultural Lands situated within the Urban Area, in the manner prescribed in the A.P. Survey and Boundaries Act, 1923 (Act No.VIII of 1923) as amended from time to time.
- (2) Government shall also cause to prepare a Record of Rights and issue Certificate of Ownership for the Owners of all the above lands, situated within the Urban Area, in the manner prescribed in the A.P. Rights in Land and Pattadar Pass Books Act, 1971 as amended from time to time.

1. CSSLR published notification u/s 5 of A.P. S&B Act, 1923 in the State and District Gazettes



2. AD (S&LR) of respective Districts published notification u/s 6 (1) of A.P. S&B Act, 1923.



1. Special Meeting with public representatives

2. Notify Schedule of following activities in line with progress:

- i. Identification of **ULB boundary**;
- ii. Identification and fixation of **Boundaries of Govt., lands**, Grama Kantam Lands, Abadi, Poramboke, Donka, Kunta etc.,.
- iii. Likely **dates of drone flying** in the ULB limits
- iv. Purification of Land records (**PoLR**)
- v. Identification of **Agricultural lands / Habitations** and planting of stones if required.
- vi. **Ground Truthing and validation** after Drone flying

PMU Level Team

- A. Additional Commissioner/ Assistant Commissioner/Town Planning Head **(Team Coordinator)**
- B. Two/Three active office staff members
- C. Planning Secretary
- D. Revenue Officer/Revenue Inspector
- E. Ward Revenue secretary (Revenue Dept.,)
- F. Amenities Secretary

Ward Level/ Field Level Survey Team

- A. Ward Revenue Secretary – WRS **(Team Coordinator)**
- A. Ward Administrative Secretary- WAS
- B. Ward Planning and Regulatory Secretary – WPRS
- C. Ward Amenities Secretary – WAmS
- D. Ward Education and Data Processing Secretary / Digital Assistant.

Supervisory Team(Revenue ward)

- A. Town Planning Building Overseer/ Town Planning Supervisor/ Town Planning Officer **(Team Coordinator)**
- A. Town Surveyor
- B. Municipal Revenue Inspector/Municipal Revenue Officer
- C. Deputy Tahsildar/ Mandal Revenue Inspector.

Mobile Magistrate Team

- A. Tahsildar / RDO
- B. Dy., Inspector of Survey /ADSLR
- C. Commissioner or his representative

Each Revenue ward will be monitored by Senior Officer

Professional training on legal framework of Re-survey process, methodology related to Re-survey and advanced tools & technology to be imparted as below:

1. Master Trainer (MT) - at Survey Training Academy (STA),
Samalkot by CSSLR
2. Trainer of Trainees (ToT's) - at Survey Training Academy (STA),
Samalkot by CSSLR
3. Training to all teams - at ULB by ToTs

NOTE: Commissioner is responsible to see that all the staff in their respective ULB's is aware of Re-survey process.

Task No. Task Description

A	Publication through Print & Electronic media/ Social media & Notification at Prominent places
B	Distribution of Pamphlets by Ward Volunteers, Tom-tom etc.
C	Ward Sabha meetings

Task No.	Task Description
A	Demarcation of ULB boundary
B	Demarcation of Revenue Ward/Khandam boundary
C	Quality Check of boundaries
D	Stone plantation for fixing boundaries
E	Preparation of map (ULB /Revenue Ward/Khandam boundary) in KML format

A. Demarcation of Revenue Village Boundary within ULB:

- **Revenue Village as a Survey unit for Demarcation and conducting survey.**
- **Survey team identifies & fixes each Revenue Village boundary** within the ULB, **by serving a notice** to the concerned authorities **in Form- 3 and for the display of notice** in the notice board of the ULB/Ward secretariat **in Form- 4.**
- **Demarcation of all Govt. lands, Forest Boundaries, by serving a notice** to Govt. Dept. Authorities **in Form-5** and for the **display in the notice board** of the ULB/ Ward secretariat **in Form- 6.**
- **All the notices are issued by the WPRS** (Survey Officer as per G.O. 378 Revenue) on behalf of the Survey team

Form - 3
NOTICE TO THE MUNICIPAL AUTHORITIES

To:
The ULB Authorities of
W.No & Name
W.No & Name
W.No & Name
W.No & Name

Ref:
1. With reference to the 6(1) notification RC No. _____, Dated _____ under Andhra Pradesh S&B Act,1923 issued by the Assistant Director, Survey & Land Records _____ District, you are hereby informed that the survey of Ward boundary of _____ Ward will commence on date at about AM/PM, be taken note of.
2. You are further informed to attend the above survey to determine and record the Ward boundary, affording any and all such information render such assistance as may be necessary to do so.

Camp: _____ Ward Planning & Regulation Secretary
Date: _____ Ward No

Copy submitted to the Assistant Director of Survey And Land Records, _____.
Copy submitted to the Commissioner of _____.

.....

Form - 3(a)
Acknowledgement

I acknowledge the receipt of the notice dated: _____ issued for demarcation of Ward boundary of _____ ward _____ Municipality in Form- _____.
Place _____ Signature: _____
Date _____ Name _____
Designation _____

Form - 4
PUBLIC NOTICE FOR FIXATION OF ULB/ WARD (REVENUE VILLAGE) BOUNDARY

1. With reference to the 6(1) notification RC No. _____, Dated _____ under Andhra Pradesh S&B Act,1923 issued by the Assistant Director, Survey & Land Records _____ District, it is hereby informed that the survey of Ward boundary of _____ Ward will commence on date _____ at about _____ AM/PM, be taken note of.
2 .It is further informed that any and all the interested party(s) to attend the above survey to determine and record the Ward boundary, affording any and all such information render such assistance as may be necessary to do so.

Camp: _____ Ward Planning & Regulation Secretary
Date: _____ Ward No

Copy submitted to the Assistant Director of Survey And Land Records, _____.
Copy submitted to the Commissioner of _____.

Note: Display in Notice board in the office

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Form-4a
Acknowledgement

I acknowledge the receipt of the notice dated: _____ issued for demarcation of Ward boundary of _____ Ward _____ Municipality in Form- _____.
Place _____ Signature: _____
Date _____ Name _____
Designation _____

FORM - 5
NOTICE TO THE CONCERNED DEPARTMENT

To,
1) The Ward Revenue Officer
..... Ward(Revenue Village)
..... Municipality
..... District

1. With reference to the 6(1) notification RC No., Dated under Andhra Pradesh S&B Act,1923 issued by the Assistant Director, Survey & Land Records District, you are hereby informed that the survey of all the Govt. lands in Ward will commence on date..... at about AM/PM, be taken note of.

2. You are further informed to attend the above survey to determine and record the field boundaries, affording any and all such information render such assistance as may be necessary to do so.

Town Survey Number	Classification	Nature	Nodal officer, Department

3. You should sign and return this notice.

Place : Ward Planning & Regulation Secretary
Date : Name: _____

I acknowledge the receipt of the notice dated for field demarcation as per schedule mentioned.

Place Signature
Date Name
Designation

FORM - 6
PUBLIC NOTICE FOR SURVEY OF GOVERNMENT LANDS
(NOTICE TO BE DISPLAYED IN NOTICE BOARD)

1. With reference to the 6(1) notification RC No., Dated under Andhra Pradesh S&B Act,1923 issued by the Assistant Director, Survey & Land Records District, it is here by informed that the survey of all the Govt. lands in ward will commence on date at about AM/PM, be taken note of.

2. It is further informed that any and all the interested party(s) to attend the above survey to determine and record the field boundaries, affording any and all such information render such assistance as may be necessary to do so.

Town Survey Number	Classification	Nature	Nodal officer, Department

3. You should sign and return this notice.

Place : Ward Planning & Regulation Secretary
Date : Name: _____

Note: Display in Notice board in the office

FORM - 6(a)
Acknowledgement

I acknowledge the receipt of the notice dated: for field demarcation as per schedule mentioned.

Place Signature
Date Name
Designation

B. Demarcation of Revenue Village boundaries and planting of stones:

- **Survey team demarcates the GramaKantam** including the extended Urban habitation boundary and scattered habitations if any, **jointly with Revenue Department.**

C. Quality Check of Boundaries:

- The ULB **Supervisory Team shall conduct quality check** of the ULB/Revenue Village Boundary demarcation work of the Field level Survey Team **and submit report in Form – 9**

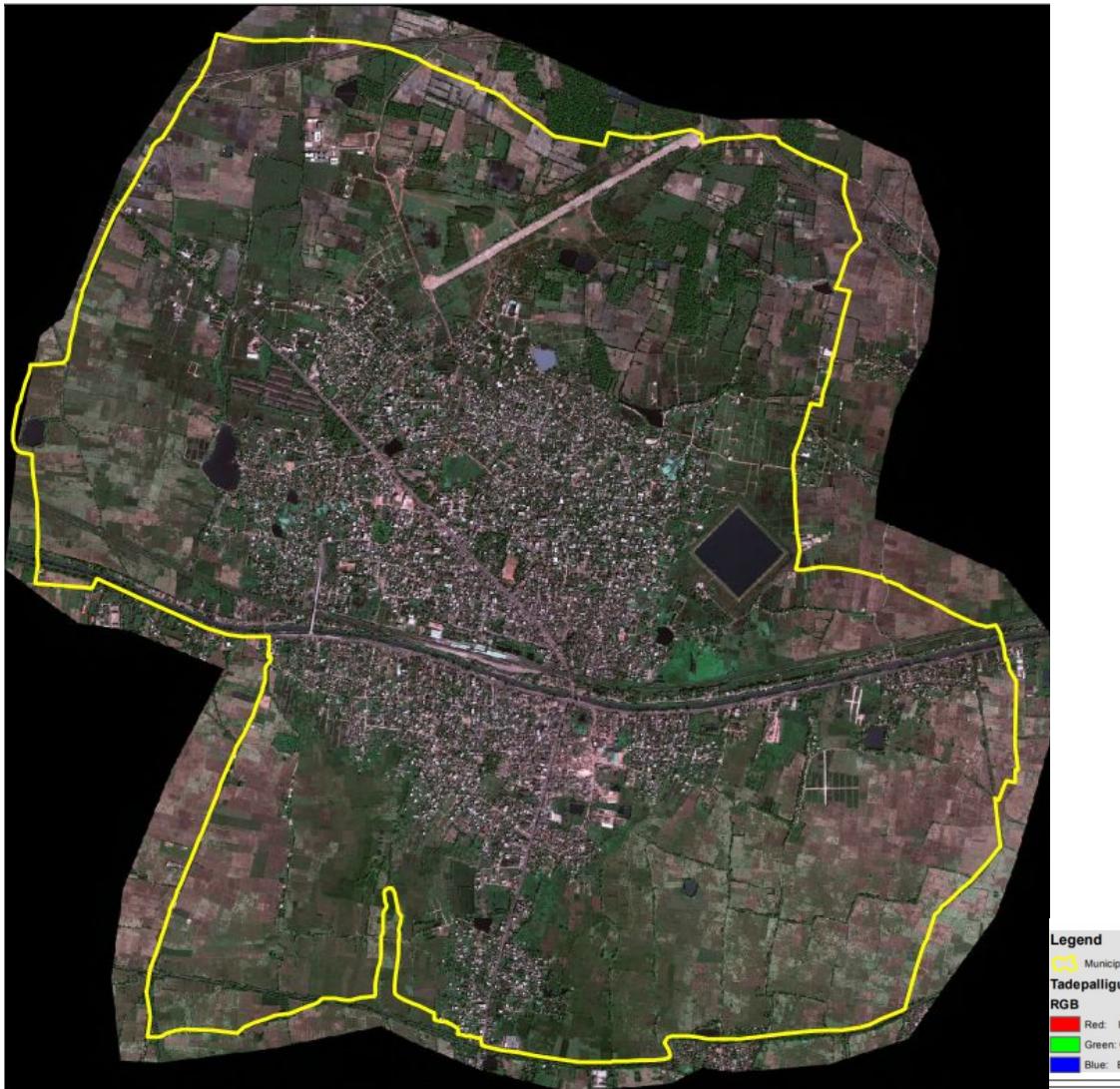
D. Stone plantation for fixing boundaries:

- **Plant the Survey stones initially at the ULB/Ward boundaries**, identified for GCPs at the ULB/Ward boundary points **and mention the details of planted stones in Form – 8.**
- Plantation of stones will be continued for ULB boundaries, Ward boundaries as required.
- Plantation of Survey stones at all Govt., lands in ULB areas will be optional depending upon the Property/ Land condition.
- ‘A’ class stones to be planted at Ward Tri junction points only.
- ‘B’ class stones to be planted at all other points of the ULB/Ward boundary.

E. Preparation of ULB Boundary map in KML format:

- **ULB level team shall ensure to prepare Map showing the ULB Boundary Map in KML format.**

MUNICIPAL BOUNDARY



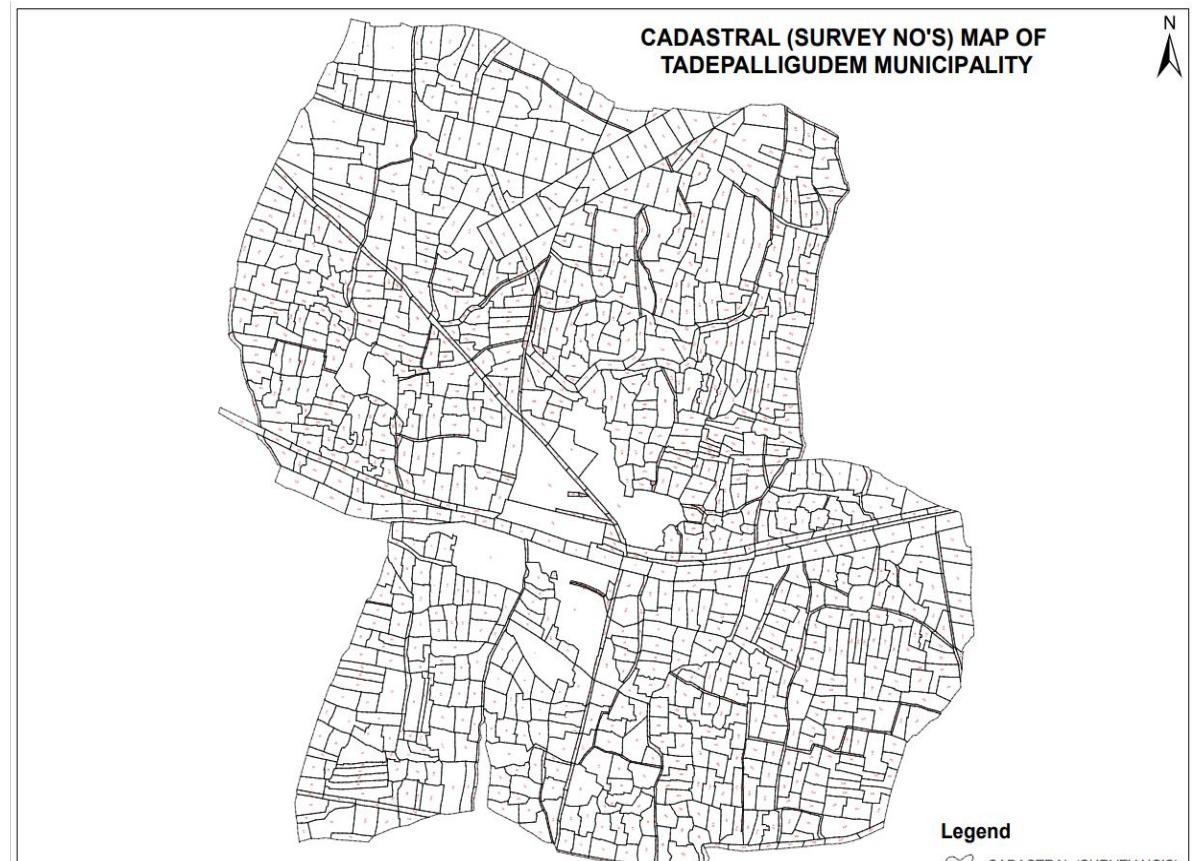
REVENUE WARD BOUNDARY



SECRETARIAT BOUNDARY



CADASTRAL MAP (SURVEY NO'S)



Task No.	Task Description
A	Identification and Fixing of Ground Control Points
B	Integration with CORS Network



A. Identification and fixing of GCPs:

- **Identify appropriate ULB boundary Tri-junctions, Bi-junctions, and suitable, distinctly visible Ground control points (GCP) for the ULB.** All the Tri-junctions on ULB Boundary will be made GCPs and if additional points are required, bi-junctions on ULB boundary and Govt. Lands may also be utilized as GCPs as per the requirements of the Agency to create a survey frame.
- **The Field level Survey Team must collect the Geo-cods data for the ULB/Revenue Village Boundary & GramaKantam Boundary in Form-8 and complete information data, regarding GCPs to be noted in the Form-7** and submit the same to the Agency.
- For quality and precise survey work **02 to 07 Ground control points (GCP) shall be marked per sq.km**, based on the Geographic and Topographic conditions of Location.

B. Integration with CORS Network:

- Check and ensure the functioning and connectivity of the CORS Network in the flying area using GNSS Rovers as per the check memo prescribed in Form-2

C. Coding of Ground Control Point ID:

- Four Digits ULB code (same as DPMS code)
- Next Two digits consists of ward/Revenue Village Number

D. Next Two digits consists of type of stone

GL – Govt. Land
 TJ – Tri-Junction
 BJ – Bi-Junction
 OT – Others

FORM - 2 CHECK MEMO ON FUNCTIONING AND CONNECTIVITY OF CORS NETWORK STATION		
District:	Municipality:	Ward(Revenue Village):
1	Base Station Code	
2	Date & time of Reporting	
3	Status of Power supply	
4	Functioning of Solar Panel	
	Status of internet connectivity	
5	i). Broad Band ii). GPRS	
6	No. of satellites available at time of inspection	
7	Floating error recorded	
8	General remarks on Functioning of Base Station:	
Signature of WPRS		
FUNCTIONING OF GNSS ROVER SYNCRONISED TO AP CORS		
District:	Municipality:	Ward(Revenue Village):
1	Date & time of Reporting	
2	GNSS Rover Registration Code	
3	GPRS Service	
4	GPRS Signal strength	
5	No.of satellites available at time of checking	
6	Floating error recorded	
7	General remarks on Functioning of Rover:	
Signature of Operator Designation:		

E. Last digits are serial number of GCP

Ex: **9999-02-GL-55**

(Approximately, there shall be 7 to 10 GCPs to be identified for every thousand acres of land to be surveyed.)

GCP is the reference point with respect to CORS Network base station. For Example: for Tadepalligudem, CORS base station is situated at Nidadavolu



Nidadavolu Base Station

Form-7						
Information of Ground Control Points						
District :						
Municipality :						
Ward :						
Sl. No.	GCP ID	Location	Coordinates			Remarks
			X	Y	Z	
1	2	3	4a	4b	4c	5

Task No.	Task Description
A	Intimation to the concerned departments & its Neighbors for identification of boundary
B	Fixing and demarcation of boundary

A. Notice/ intimation to be issued to the Departments and neighbouring Private Property Owners.

B. All Govt. properties/vacant lands, local body properties in the urban area shall be identified and demarcated in the presence of respective department and neighbouring owners by planting the stones (wherever required) before drone flying. Plant (B- Class) Survey stones at the above demarcated points and get them whitewashed.

C. Procedure on survey of encroachments made on Government lands (or) Private lands:

- Government issued orders vide Circular Memo No.67205/A1/2005, Dt: 10-01-2017.
- **The ULBs to levy Property Tax in respect of Buildings constructed unauthorized in Private lands**, Government Lands and lands covered under Urban Land Ceiling Act, or any category of lands where the holder of the Building does not possess any registered document or Patta from Revenue Department (or) any other document, in support of proof of Title in respect of such land, with a penalty of one hundred percent till such unauthorized construction is demolished or regularized **as per Sec. 85 (5) of A.P. Municipalities Act, 1965 and 220A (1) of Municipal Corporations Act, 1955**, with a saving clause that such levy of property tax, does not confer any Ownership on the assessee over the said land where the building is constructed unauthorized and that **all such Assessments shall be given all types of Notices as “THE HOLDER OF THE PREMISES”**. Also, in **some ULBs, prior to the issue of the above instructions, similar constructions were assessed to Property Tax, flagging such assessments as “Super Structure Tax”**.

In either of the two cases, all such Properties may be treated as “Encroachments” made on Government Land (or) Private Land and no Title shall be given to all such Properties during the course of Re-survey.

ACTIVITY 8 Purification of Land Records (PoLR)/preparation of urban town survey-property assessment data base

- 110 ULBs have cadastral maps , consisting the information like ULBs boundary, survey wards, existing numbers in the wards etc.
- Also there is a mention of structures along with door numbers within a survey numbers.
- Since these cadastral maps prepared in the year 2018, there may be many more structures/buildings which would have come up in last 4 years.
- Another data base is the property tax assessment data base of approx 37 lakhs property assessments. Which gives the information like existing structures, name, Aadhar No., extent of area etc.
- With this two sets of information need to correlate them in such a way that we get a base data of survey numbers and property assessments existing in those survey numbers.

Task No. Task Description

A Purification of Land Records (POLR).

**B Preparation of Urban Town Survey- Property Assessment data base for Ground truthing in
Towns**

In ULBs Two types of Land records exists

A. Agriculture land in peripheral area - predominantly agricultural activities & some scattered structures may be there in land parcels.

- Most importantly there is a revenue webland maintained by the revenue dept.
- For the purification of land records of these areas, to follow the circular instructions/forms/format etc issued by the revenue dept for the resurvey of agriculture land.
- 6 CCLA circular instructions issued by the revenue dept. to be followed for this PoLR exercise.

B. ULBs characterised by high density of buildings/structures/vacant plots.,

- approx 30 lakhs structures and approx 7 lakhs vacant land parcels are in AP.
- In this resurvey project, will resurvey all the survey numbers in urban areas and all approx 37 lakhs property assessments .
- No data base which correlates survey numbers with approx 37 lakhs property assessments like Agricultural Webland .

ACTIVITY 8 Purification of Land Records (PoLR)/preparation of urban town survey-property assessment data base

- Town Survey Register(TSR), Resurvey Register(RSR) etc in different ULBs exists as Revenue Records, also Block Maps, FMBs and similar records in some ULBs are maintained by Town Surveyors/ Mandal Surveyors as custodians.
- First task will be to keep ready all permanent above revenue records.
- To prepare a data base correlating survey numbers with approx 37 lakhs property assessments in ULBs so as to deliver Hakku patram to each property owner which shall have the new survey numbers and property details of the property owners which is very important activity.
- To give such a document after resurvey, we need to have a data base correlating survey numbers and existing property assessments.
- To achieve this correlation, need to understand the available records/data etc.

a. ULB/survey ward wise cadastral map shall be printed and shall be given to survey team.

This map will give the ward survey team a clear picture about ward boundaries.

Survey numbers and door numbers in each survey number.

b. Taking cadastral map into consideration, cadastral map information shall be conveyed in an excel format & called as called (**Format -1**) to be prepared and all the vacant columns to be filled as desk work by the ward level team. Format-I for each ward & consolidated format shall be prepared for ULB and to be signed by Ward Team leader & ULB Commissioner.

GIS Based Cadastral Maps information

ULB Name:

Sl. No.	Survey Ward No.	Block No.	Locality Name	Survey No's.	Extent	Classification	Door No's
1	2	3	4	5	6	7	8

c. Another set of available data with ULBs are properly tax assessments of approx 37 lakhs properties.

- **Format 2** to be prepared , based on PT assessments ERP data base.
- Ward wise format 2 shall be given to the ward survey team and corrections to be done based on Property Tax Assessment Register and also as per ground level data ward wise format shall be signed by the team leader of the ward team and a consolidated formats of format 2 shall be signed by ULB commissioners.

Property tax assessment data base in ERP

Property tax assessment data base in ERP														
ULB Name:		Ward Secretariat Code:												
Sl. No.	Revenue Ward No.	WS Code	Block No.	Locality	Assessment No.	Name of the Assessee	Property Type	Usage	Door No.	Mobile No.	Aadhaar No.	Site Area (Sq. Yards)	Plinth Area (Sq.Ft)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	

- Now the task is to correlate information's in format 1 (survey number/door number data) & format (property tax assessments) to prepare a **Format 3**
- Format 3 shall be prepared as desk work exercise by the ward teams duly taking in to the consideration the permanent revenue records, revised assessment register etc. cadastral maps also to be provided to the ward teams for their understandings of the location and number of structures in a particular survey numbers.
- Format 3 shall also consist of all the properties(structures/vacant), Govt lands, Govt buildings etc. Format 3 shall be signed by the ward team at the ward level and shall be consolidated at the ULB level to be signed by the municipal commissioners.

Format-3																	
NAME OF THE DISTRICT :		NAME OF THE NP/MUNICIPALITY/CORPRATION :															
S. NO.	NAME OF THE ULB	GIS Cadastral Data						Assessment Register (ERP Data)									
		Survey WARD NO.	BLOC K NO.	Surve y No.	Extent	Classification	Door No's	Property Type HT / VLT	Door No.	Assessment No.	Name of the Assessee	Extent of Buildin g	Extent of Land	Mobile No.	AADHAR No.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

- Format 3 is a basic format consisting of correlation between survey numbers & existing properties.
- Format 3 is prepared in an office as a desk work exercise. It's prepared based on the in formations available in cadastral maps of the ULBs, TSR/RSR and other review records/maps (format 1) and property assessment data form ERP modules (format 2).
- There is no field visit involved in the preparation of the Format 3.
- Therefore, there may be many missing information's, incorrect or incomplete information's in format 3.
- Format 3 shall be further purified by the ward teams duly making the filed visits along with all the relevant records.
- During the filed visits ward team shall carry cadastral maps, TSR/RSR, FMBs, assessments register, Govt land records already prepared by then.
- Ward team shall confirm the survey number wise existing property assessments, Govt. land survey numbers, any other un-assessed properties.
- During this field visit exercise, ward team shall visit each and every street to identify any missing/incomplete information's.

- As a result of format 3 purification exercise, purified data base in the FORMAT 4 to be prepared , which shall have the ward wise correlation between in survey numbers and existing properties.
- Format 4 shall be done with sincerity by the ward teams under active supervision of the supervisory officers appointed for the ward.
- This exercise shall be monitored by the Town Surveyors and Mandal Surveyors. WP&RSs and Ward Admin Secretary shall lead the team while preparing for format-1, format-2, format-3 while doing desk works and format- 4 while doing field visits.
- ULB wise a consolidated list of format-4 data shall be prepared in format-4 A and shall be signed by the respective ULB Commissioners.
- A complete and corrected format- 4 data at the ward level shall help immensely during Ground Truthing (GT) and Ground Validation (GV) exercises.
- The format 4-A is the consolidated list of all the survey numbers in the ULBs and existing properties (structures/vacant land parcels).
- At the end of this exercise, ULB will have total extent arrived in format 4 A based on the field visits duly capturing correct extents shall tally with the total extend as per TSR/RSR.

Circular No	Objective of the Circular	Description of Activity
Circular I	This circular is mandated to compare manual RSR with Webland RSR of the designated village	<p>Please check overall to see that manual RSR and Webland RSR are same.</p> <p>In case there is change please verify Col no 06 to ascertain whether the reasons assigned for rectification of record is correct or not</p>
Circular II	To compare Survey No., Sub Divn No. & Total extent of Web land RSR with Webland Adangal	<p>To ascertain reasons for the mis-match in Col no 6</p> <p>To check correlation statement for correctness</p>
Circular III	<p>To compare the Nature and Classification of the Survey No. of Webland RSR with Webland Adangal</p>	<p>(1) Very important proform as any mischievous act of changing Government land to patta can be plugged and hence careful verification of data is required</p> <p>(2) To verify each and every Survey Number where changes have taken place and satisfy with the change duly verifying the connected document viz., in case of alienation/assignment relevant Govt Orders, in case of sale/auction relevant conveyance deed, in case patta land acquired for Govt. purpose, relevant award copy etc</p> <p>(3) In case of mismatch of nature or classification of a Survey No, the remarks in Col no 8 should be examined</p>

Circular No	Objective of the Circular	Description of Activity
Circular IV	To create village master data base linked to Khata no, the updating of mobile number and Photograph of the.	<p>(1) Col no 06 i.e., Aadhaar number is invariably mentioned and in every case; the name as in the Aadhaar card should tally with that of Col no 2 and 7</p> <p>(2) verify the remarks Col no 11 and sort out the issue suggesting suitable corrections</p>
Circular V	to update the Pattadar details and to identify the lands where mutations are required to the lands acquired through gift, sadabainama etc.,.	<ul style="list-style-type: none"> Proforma VB is most important that has details of the Government lands Col no 7 is to be verified whether the Khata number is as per the existing guidelines Verify whether the name of a private person as appearing in Col no 8 and 9 is supported by documentary evidence
Circular VI	Quality checking	<p>The quality check at this stage has been envisioned so as to ensure that the purified data is handed over to Resurvey team. Therefore, the concerned authorities to work diligently.</p>

Task No.	Task Description
A	Identify and record Base coordinates with reference to CORS Network.
B	Drone Flying covering whole ULB and ward.
C	Geotagging of data by the Drone team and to be forwarded to the Agency production Centre using NIC net Broadband connection.

A. Identify and record Base coordinates with reference to CORS Network:

- Agency prepares flight planning for the drones to cover the whole ULB/Revenue Village fully with reference to the Geo-referenced ULB/Revenue Village Maps.
- The Agency team and Survey team has to check the total technical preparedness for Drone Flying.
- Total Technical Preparedness shall verified before Drone Flying.
- ULB shall ensure to get necessary **approvals from aviation/ Police departments for Drone Flying.**
- Identify and record iBase coordinates with reference to CORS Network.

B. Flying of drone covering on whole ULB/Revenue Village as Scheduled.

C. The GCPs/ land marks data geo-tagged by the Agency drone team to be forwarded to the Agency production Centre using NIC net Broadband connection.

Task No. Task Description

A	Processing of drone data. in AGI Soft Meta shape application software by Agency at production center.
B	Preliminary Quality check at the Agency production center with the collected field data which has to be certified by both SoI/Agency.
C	Feature extraction for major Topo details.
D	Quality check of Feature extraction by Agency team at Production Centre.
E	Agency will super impose the ULB Geo-referenced map *.kml over the ORI.
F	Vectorization of ULB boundary with the data provided by Field Survey Team. (in red colour)
G	Agency will provide ORI hard copy after it meets all the required accuracy standards. Both Index and Tile sheets (part maps) shall be provided.
H	Agency will provide the ORI hard copy dividing into les as work sheet.
I	The record of the ORI delivery & receipt shall be maintained by both Agency and S&LR Dept. with proper acknowledgements.

A. Processing of drone data is to be done in AGISOFT METASHAPE application software by the Agency at the production center.

B. Preliminary Quality check:

- Preliminary quality check **at the Agency production center is carried out by comparing the data of ORI with the collected field data in Form – 10** and has to be certified by both Agency and Survey/supervising teams.
- The **variation in point position** and the distance between two points should be **within prescribed accuracy (± 5 cm)**. If the variation exceeds this, the Agency has to intensify GCPs for further rectification. **To be carried out for 10% of total ULB data.**

C. Ortho Rectified Image (ORI): is the drone **image which satisfies the preliminary quality check**

- D. **Feature extraction** of major Topographical details as per data model structure.
- E. **Quality Check of feature extraction** by Agency at production centre.
- F. **Agency will superimpose the ULB Geo-referenced map *.kml over the ORI.**
- G. **Vectorization of ULB boundary, Revenue Survey boundary** (i.e. plot boundary), and all buildings/structures within the ULB habitation are to be carried out by Agency from the ORI Map (in red colour).
- H. **Agency will submit the ORI hard copy** in Appendix-2 only after it meets all the required accuracy standards.

I. Agency will provide the ORI hard copy dividing into tiles as work sheet, depending upon the area of the ULB and density of land holdings, covering 40 Hect. (Ac.100) for larger extent holdings, 20Hect. (Ac.50) for smaller extent holdings in each tile of A2 size paper. The tiles for ULB properties shall be relatively in the larger scale (1:50/1:100 for Habitation area and 1:500 for open lands based on the intensity of records) to demarcate the property boundaries clearly. Each tile shall be numbered as

9999-T1, 9999-T2 etc., wherein

Four Digits ULB code (same as DPMS code)

Next two for tile number which is numbered sequentially starting from 1, 2,3, etc.

Tiles shall be numbered clockwise from the North of the ULB.

A key showing the relative position of the particular tile shall be appended on each tile.

J. An index map covering entire Revenue Village (1:500/1000) /ULB in 1:5000 scale and it into suitable paper size like A0, A1, A2, A3, shall also be provided.

K. The record of the ORI delivery & receipt shall be maintained by both the Agency and respective ULB with proper acknowledgements as per Form-11 & Form-12.

Form-11
Acknowledgement of ORI
(SSLR)

District: _____			Municipality: _____		Ward: _____
Sl. No.	Submitted by Sol/Agency		Received by District HQ Name, signature,	Remarks	
	Index Map	No. of Tiles			
1	2a	2b	3	4	

Form-12
Acknowledgement by Sol/AGENCY

District: _____			Municipality: _____		Ward(Revenue Village): _____
Sl. No.	Submitted by District HQ		Received by Sol/Agency, Name & Signature	Remarks	
	Marked copie of Index Map	No.of marked tile			
1	2a	2b	3	4	

J. An index map covering entire Revenue Village (1:500/1000) /ULB in 1:5000 scale and it into suitable paper size like A0, A1, A2, A3, shall also be provided.

K. The record of the ORI delivery & receipt shall be maintained by both the Agency and respective ULB with proper acknowledgements as per Form-11 & Form-12.



ACTIVITY 10 Deliverables from Drone Agency

Urban Local Bodies

The scope of work includes generation and supply of ORI.

The ORI with **5 cm GSD** or better and horizontal accuracy of **(±) 10cm** vertical accuracy of **(±) 20cm**

The following features should be clearly visible in the ORI:

- Buildings and other Structures
- Boundary walls of buildings
- Major Roads like NH, State Highways, District Roads, R&B and PR Roads
- Minor Roads within ULB/(s)
- Water bodies like Rivers, Canals, Tanks etc.,
- Electrical lines, HT lines
- Telecom lines
- Street lights
- Open drains
- Overhead Water Tanks
- Communication Towers
- Plantations & Trees of historical importance
- Parks
- open spaces

ACTIVITY 10 Deliverables from Drone Agency

- List of I-base, Ground Control Points and check points with Geo-codes
- Raw data and other data-products generated during Drone Photography
- Documentation of data processing, internal lab reports and QA/QC reports.
- Report on survey equipment/sensor on Drone before undertaking Drone Photography surveys.
- Post Processed data (DEM/DSM, DTM & Point cloud)
- Delivery of the soft copy of Ortho Rectified Image (ORI) ULB/(s) wise in. ecw/Geotiff and .pdf Format
 - *Printing and delivery of Hard copy of ORI (in color) on A0 size*
 - *1km x 1km in 1:100 to 1:500 scale depend upon extent of the ULB/(s)*
 - *Printing & delivery of Hard copy of ORI Tiles in A2 size covering an area of 100m x100m in 1:100 to 1:500 scale by splitting the ULB/(s) into tiles and entire AOI in soft copy at 1 m GSD*

Deliverables, after reprocessing and rectification, if any:

Delivery of the soft copy of Ortho Rectified Image .

Form-11
Acknowledgement of ORI
(SSLR)

District: _____ Municipality: _____ Ward: _____

Sl. No.	Submitted by Sol/Agency		Received by District HQ Name, signature,	Remarks
	Index Map	No. of Tiles		
1	2a	2b	3	4

Form-12
Acknowledgement by Sol/AGENCY

District: _____ Municipality: _____ Ward(Revenue Village): _____

Sl. No.	Submitted by District HQ		Received by Sol/Agency, Name & Signature	Remarks
	Marked copie of Index Map	No.of marked tile		
1	2a	2b	3	4

Task No.	Task Description
A	Verification of ORI map by Supervisory team at ground level
B	Verification of ORI map by Supervisory team at Lab (Software)

A.Verification of ORI map by Supervisory (ULB/Ward Level) team on Ground level:

- **To gain the credibility of the stakeholders, the survey team shall test check the ORI given by Agency.**
- Agency, Survey Team, Supervisory Team and the ULB Level **team shall jointly measure 6 or 8 prominent features per Sq. KM.**, like inner-to-inner culvert edges, width of C.C road, bridges width, etc., of those features whose edges can be clearly identified on ORI and ground.
- Therefore, **few points on the ground at random shall be selected and measured using Rover. The same points shall be measured on ORI and compare both the data in Form – 13.**
- These prominent features shall be selected at random and uniformly distributed covering entire ULB to test the ORI of the ULB as a single entity.
- **These features will be measured with measuring tape / rover / ETS etc., on ground and to be noted in Form –10.**
- The variation in point position and the distance between two points should be within the prescribed accuracy (± 10 cm). If the variation exceeds, return the ORI to Agency for further processing.

B. Verification of ORI map by the Agency at Lab:

- The field measured data will be sent to the Agency production center for quality image check of the Ortho Rectified Image (ORI) after processing the Drone image data.



Task No.	Task Description
A	<p>The following documents will be provided to Field Level/Ward Survey Teams :-</p> <ul style="list-style-type: none">i) The Updated PoLR data (hard copies) along with TS/ULB Records.ii) The ORI hardcopies received from Agencyiii) Additional/missing information form to be filled by Field Level/ward Survey Team for missing information in ORI.iv) Land parcel attribute form to be filled by Field Level/ ward Survey Team.
B	Possession of equipment. (GNSS Rovers, ETS System etc.,)
C	Image quality check (on ground in the presence of households using ETS / Rovers.)
D	Formal notice (to all stakeholders will be issued informing about date of survey, Ground Truthing.)

ACTIVITY 12 **Ground Truthing**

A. The following documents will be provided to Field level Survey Teams: -

The **Updated PoLR data (hard copies) in Form – 16** along with the requisite Documents shall be provided to the Field level Survey Team along with the list of all issues pending at various courts i.e. at Government, at CCLA, at District Collector, at Joint Collector, at Tahsildar, at Supreme Court, at High Court and at Civil Courts etc..

B. Possession of equipment: The survey team shall have all necessary survey equipment namely, GNSS Rovers, ETS, Chain, Measuring Tape & Cross staff etc.

C. Image quality check: To gain the credibility of the stakeholders, the survey team shall test check the ORI given by the Agency in the presence of stakeholders.

D. Formal Notice: A formal notice **in Form – 14** shall be issued as per entries in PoLR and served upon every individual landholder and **a general notice shall be issued in Form – 15** duly informing the date of Ground Truthing duly inviting everyone to be present at their Land/Property, by obtaining proper acknowledgement.

E	Ground truthing
E.1	<p>Demarcation & PoLR Data verification:</p> <ul style="list-style-type: none"> a. Demarcation of every land parcel having permanent boundaries. b. Demarcate and collect the Geo-codes data of the land parcels using Rover / ETS, for the following cases as additional information: - <ul style="list-style-type: none"> i. Missing or not visible boundary points on ORI ii. Division of joint fields on request. iii. Division of amalgamated fields with reference to the existing record c. Duly marking Land Parcels on ORI hard copy. d. Any variations observed with reference to the PoLR entries
E.2	<p>Objections u/s 10(1): if any objections raised on existing boundary, the village team shall conduct enquiry u/s 10(1) and pass orders accordingly and the data regarding that boundary shall be collected using Rover / ETS.</p>
E.3	<p>Quality check of Ground Truthing data by ULB Level Team in prescribed percentage.</p> <p>Submission of ORI, additional information data for vectorization</p> <p>Submission of PoLR data for Updation.</p>

FORM-14			
NOTICE TO THE LAND HOLDERS FOR GROUND TRUTHING OF PRIVATE LANDS			
<p>1. With reference to the 6(1) notification RC No. _____, Dated _____ under Andhra Pradesh S&B Act, 1923 issued by the Assistant Director, Survey & Land Records _____ District, you are hereby informed that the survey of all the lands in _____ Ward _____ Municipality will commence on date _____ at about _____ AM/PM, be taken note of.</p> <p>2. You are further informed to attend the above survey to determine and record the field boundaries, affording any and all such information render such assistance as may be necessary to do so.</p>			
Sy. No./ R.S. No./ Town Survey Number	Khata/ Assessment Number	Name of Land Holder	Signature of the Land Holder
<p>3. You should sign and return this notice.</p>			
Place	Signature		
Date	Name		
	Designation		

FORM-15
PUBLIC NOTICE FOR GROUND TRUTHING OF PRIVATE LANDS

1. With reference to the 6(1) notification RC No. _____, Dated _____ under Andhra Pradesh S&B Act, 1923 issued by the Assistant Director, Survey & Land Records District, it is hereby informed that the survey of all the lands in Ward Municipality will commence on date at about AM/PM, be taken note of.

2. It is further informed that any and all the interested party(s) to attend the above survey to determine and record the field boundaries, affording any and all such information render such assistance as may be necessary to do so.

3. You should sign and return this notice.

Note: Display in Notice board in the office

Place

Signature

Date

Name

Designation

E. Ground Truthing Process:

1. Demarcation & PoLR Data verification:

The survey team attends to the ground truthing by involving all Property Owners / Govt. depts. / all stakeholders as per schedule, determines and records undisputed boundaries of individual land parcels on OR in the following steps

- A. Demarcation of every land parcel having permanent boundaries.**
- B. Demarcate and collect the Geo-coordinates data of the land parcels using Rover/ETS, for the following cases as additional information:-**
 - i. Missing or not visible boundary points on ORI

Wherever the Field boundary points are not distinctly visible in the ORI, GNSS Rovers/ETS instruments shall be used to do field measurement exactly (Ex: Orchard, bushes etc.). Geo-cods data of all field boundary points will definitely be collected as additional information. (Form-18)

- ii. **At the time of Ground Truthing, application can be collected for Division of joint Properties on requesting Form-19.**
- iii. In case of **amalgamated properties**, with reference to the existing record or as per the willingness of land holders, **on request in Form-20**, where boundaries does not exist and not possible to construct a ridge on ground (Aqua culture lands, gardens etc.,) .
- iv. **Duly marking Land Parcels on ORI hard copy**, make entry of that land parcel chalta number in the hard copy of the ORI in
- V. **Any variations observed** with reference to the PoLR entries and enjoyments are separately **noted in the supplied PoLR worksheet (Form-16)**. **Additional land attributes** of the respective land parcel **to be noted in Form-17**.
- vi. All individual land/Property holding boundaries as shown by the Owners shall be demarcated on ORI to reflect the true ground position of the individual land parcel. All land holding boundaries must be properly demarcated.

ACTIVITY 12

Ground Truthing

LAND PARCEL ATTRIBUTES								
Temporary Land Parcel No.	Extent Accts	Sy.No./RS/TS No.	Nature of LandUse	Type of use	e-mail	Postal Address	Whether individual received notice or not?	Remarks
1	2	3	4	5	6	7	8	9
								Minimum attributes required are included however, No. of attributes will be finalized as per the data model structure

Form-18						
ADDITIONAL/ MISSING INFORMATION COLLECTED DURING GROUND TRUTHING BY FIELD LEVEL SURVEY TEAM (GEO-CODS OF LAND PARCEL POINTS WHICH ARE NOT VISIBLE IN ORI HARD COPIES)						
District:		Municipality:		Ward (Revenue Village):		
Sl. No.	Chalta No. (Temp No.)	LP Point ID	LP Point / Topo detail Geo-cods			Remarks
			X	Y	Z	
1	2	3	4a	4b	4c	5

2. Objections u/s 10 (1)

- Whenever **any landholder's request is received in Form-21** for boundary dispute, the Survey team after making detailed enquiry by issuing **Notices to effected party (s) in Form-22, make a speaking order in Form - 23**, by deciding and determining the boundary, under section 10 (1) of AP, S& B Act. **Such decided boundary shall be recorded and marked on ORI hardcopy & in Form-24**

FORM - 21
APPLICATION TO FILE OBJECTION WHILE DEMARCATING FIELD BOUNDARY

To _____

Sir/Madam

I have received notice to attend on dt. _____ at Sy. No./R.S.No./T.S.No.: _____ to show the boundaries of my landholding.

During demarcation, I raised objection for East/ West/ North/ South side of boundary of my landholding.

Hence, I request to resolve my boundary dispute by referring documents/ survey records at the earliest.

Yours Truly

Address

Phone No.: _____

Email ID: _____

FORM - 21(a)
Acknowledgement

I acknowledge the receipt of the application for objection while demarcating the field boundary by Sri _____ Claiming land in Sy.No./R.S.No./T.S.No: _____ Ward: _____, Municipality: _____, District: _____ in Form- _____.

Place : _____ Date : _____ Signature: _____
Name: _____
Designation: _____

FORM - 22
NOTICE AGAINST THE OBJECTION

The under signed has received Appeal / Objection during field survey in respect of demarcation of field boundary in Sy.No. ./R.S.No./T.S.No. _____ Ward _____ Municipality _____ District

Sri _____ is directed to attend at Sy.No. ./R.S.No./T.S.No. on Dt: _____ at _____ AM/PM to conduct the survey of disputed boundary.

Place : _____ Date : _____ Signature: _____
Name: _____
Designation: _____

FORM - 22(a)
Acknowledgement

I, acknowledge the receipt of the noticed dated: _____ issued against the objection filed in Sy.No./R.S.No./T.S.No. _____, Ward _____, Mandal _____, District _____

Place : _____ Date : _____ Signature: _____
Name: _____
Designation: _____

Phone no.: _____
Email ID: _____

ACTIVITY 12 Ground Truthing

<p style="text-align: center;">Form - 23</p> <p style="text-align: center;">DECISION OF SURVEY OFFICER U/S 10(1) AGAINST THE OBJECTION FILED DURING DEMARCTION</p>	<p style="text-align: center;">(page.2)</p> <p>9. Report of the Survey Officer after conducting survey u/s 10(1) This report should state clearly the nature of complaint</p>
<p>1 Register no. of complaint: _____</p> <p>2 Date of complaint : _____</p> <p>3 Nature of dispute : _____</p> <p>4 Name of Survey Officer: _____</p> <p>5 Designation: _____</p> <p>6 Date of disposal : _____</p> <p>7 Date of fiels inspection: _____</p> <p>8 Date of decision carried out in the records: _____</p>	<p>N.B- The surveyor making the above report should prepare a true copy of the field register for the survey fields in which the dispute lies and for all its adjoining survey fields and insert the copy of the register between pages 2 and 3 of this form</p>

Task No.	Task Description
A	Updation of PoLR data , based on remarks received during Ground Truthing, following statutory procedure.
B	Agency will vectorize and generate the records
B.1	Vectorization of ORI hard copy along with additional information received during Ground Truthing.
B.2	Generation of ULB/Ward map with Land Parcel Numbers.
B.3	Prepare the correlation statement with extents.
C	Each LP number shall have the Geo Coordinates and its extent with corresponding Sy.no/Sub.div.
E	Integration of correlation statement with updated PoLR data.
F	Generation of preliminary Records for Ground validation (Soft & Hard copies) <ul style="list-style-type: none"> 1. Preliminary Field Register 2. Preliminary Land Parcel Maps 3. Preliminary ULB/Ward Map 4. Preliminary Correlation Map 5. Area Comparison statement 6. Correlation Statement
G	Prior to Ground validation, the above record shall be checked for <ul style="list-style-type: none"> 1. All LP numbers are accounted for in the records. 2. All LP numbers and its attributes are properly linked. 3. All LPs are numbered and followed the sequence. 4. No gaps / overlaps exists in records.

A. Updation of PoLR data, based on remarks received during Ground Truthing, by following statutory procedure.

The following documents will be provided to the agency

- a) Marked ORI Hard copy (Appendix – 2)
- b) Geo-coordinates of land parcel on decision u/s10 (1) during Ground Truthing (**Form – 24**)
- a) Land parcel attributes (**Form – 17**)
- b) Additional / missing information (**Form – 18**)
- c) Quality check of demarcated marked copy of ORI – (ULB Level Team) (**Form – 25**)
- d) Quality check of additional information –ULB Level Team (**Form – 26**)
- e) Quality check of demarcated marked copy of ORI –ULB Level/ Mobile Magistrate Team (**Form – 27**)
- f) Quality check of additional information –ULB Level/ Mobile Magistrate Team (**Form – 28**)

ACTIVITY 13 Record integration/Data Processing after ground trutthing

B. The Agency will

- a) Vectorize the marked ORI to provide updated vector data in Appendix - 3.
- b) Generate the ULB map with Land Parcel (LP) Numbers. A statement showing each land parcel number with its area shall be generated.
- c) Prepare the Correlation Statement with extents
 - I. LP No. wise with reference to corresponding Sy.No/Sub.div.
 - II. Sy.No. wise with reference to corresponding LP No.

- C. **Each LP number shall have the Geo Coordinates and its extent with corresponding Sy.no/Sub.div.**
- D. **Details of all lands/Properties** (with the name of the owner, etc.,) and all Govt. lands (with the type of Govt. land, etc.) **will be available.**
- E. The Agency and the data processing unit designated by A.P., shall integrate the Correlation Statement (**Form - 30**) with Updated PoLR and generate LP. No wise records and also generate the area comparison statement (**Form – 29**) of the ORI to the area recorded in the updated PoLR record

ACTIVITY 13

Record integration/Data Processing after ground truthing

*1) missing points 2) Bend not considered 3) Bends not required 4) improper selection of boundaries

5) Selected cultivation bunds 6) Right of way not included 7) field channel not included 8) joint structure i.e., well, pump sheds, etc.

Note

1) Point ID shall also be written on ORI
2) Additional data which is NOT recorded in Adangal/ Survey Record shall be recorded

Form - 29

Area Comparison Statement

District:						
Municipality:						
Ward (Revenue Vilalge):						
Sl.No.	LP No.	PoLR Survey/SD No.	Extent as per PoLR	Extent as per Re-Survey	% of variation	Remarks
1	2	3	4	5	6	7

Form – 30

Correlation Statement

District:						
Municipality:						
Ward (Revenue Vilalge):						
Sl.No.	LP.No.	Old survey No. (Sy. No./R.s.No./T. S. No.)	Subdivision No.	LP No. Extent	Remarks	
1	2	3	4	5	6	

F. All the updated Data will be given to the Survey teams in two statements:

- a) The **first statement** will be the **updated PoLR** duly showing all the Correlated land parcel numbers, extent, etc. for each of the Sy.No. Sub- Division No.

- b) The **second statement** will be a similar statement containing all the information of the updated PoLR but will be LP No. Wise. This statement is the most important statement which is being developed in the Webland old document. Preliminary **Field Register (Form – 31 (L.P No. wise), Form – 32 (SY. No. wise)** will be generated by the Agency using the Webland gold and Field Attribute data.

ACTIVITY 13

Record integration/Data Processing after ground truthing

Task No.	Task Description
A	Random check of Ground truthing
B	Correction / Rectification of Ground truthing data if required

- A. Supervisory team shall check the 20% of the Ground truthing carried out as per the prescribed process by CSS&LR. Such quality checked information shall also be checked randomly for not less than 10% by the ULB Level Team and Mobile Magistrate Team Form-16, Form-27 & Form-28
- B. All the additional information obtained during the Ground Truthing exercise, shall be 100% scrutinized by the ULB Level Team and record variations in the Form-16, Form-25, Form-26.
- C. On due certification, the marked ORI hardcopy, PoLR with remarks, Land Parcel attributes data, additional/missing information data in the prescribed formats shall be submitted to the District processing team and to the Agency in acknowledgement (Form-12) for data processing

ACTIVITY 15 **Ground Validation**

Task No.	Task Description
A	<p>The following documents will be provided to Field Level/ward Survey Teams:-</p> <ol style="list-style-type: none">1. Preliminary field Register.2. Preliminary Land Parcel Maps with extent(s).3. Preliminary ward Map (including LPMs) on ORI.4. Additional / missing information form to be filled by ward Survey Team for missing information in ORI.
B	Formal information to land holders
C	Ground validation Conducting physical measurements in case of dis-agreed landholders and requested for measurement.

ACTIVITY 15 **Ground Validation**

Task No.	Task Description
D	Additional Information from Ground validation
E	<p>Objections u/s10(1):</p> <p>During the Ground Validation, if any objections raised on recorded boundary, the ULB level team shall conduct enquiry u/s 10(1) and pass orders accordingly and the data regarding that boundary shall be collected using Rover / ETS.</p>
F	<p>Completion of quality check on additional information by the ULB level team. Submission of ORI, additional information data, if any rectification Submission of remarks, if any regarding rough field register.</p>

Ground Validation is the process subsequently to be conducted for confirmation of extents arrived during Ground Truthing. Ground Validation to be done in respect of cases wherever dispute arise. After Appeals u/s 11, Ground validation invariably needs to be done.

A. The following documents will be provided to the Survey Teams:

1. Preliminary Land Register (Survey Register/ Property Register/Assessment Register)
2. Preliminary Land Parcel Maps with extent (s) .
3. Preliminary ULB Map (including LPMs) on ORI.
4. Additional / missing information form to be filled by Survey Team for missing information in ORI.

ACTIVITY 15 **Ground Validation**

B. Formal information to Landholders:

- A **formal notice in Form – 33A** to attend for ground validation shall be given by the survey team **to all the Property Owners in Form – 33B** and for Govt. Dept.'s mentioning the date and time of the schedule.
- A **general notice in Form – 34** to attend for ground validation shall be given by the survey team by conducting Ward Sabha and display of this information at conspicuous places and website of ULB/C&DMA/CSSLR and local publicity by the beat of Tom-Tom and display on the notice board of the office.

C. Ground validation process

- The Survey team shall again visit each Land parcel with the concerned Property owners / Depts. / Stakeholders and confirm the Land parcel boundaries and Areas.
- For the Property owners who agree with the details, an appropriate format to be used for taking acceptance in **Form – 49**
- For Property owners who do not accept, area of the land parcel, measurements may be done by **GNSS Rover**. If still not agreed, it may be done by using the ETS machine. If necessary physical measurements and area calculation may be done using conventional instruments (Chain & Cross staff).
- For any other data where there is a non-satisfaction, appropriate action may be taken under the provisions of Act, Rules, and G.O.s. All efforts should be made to resolve the non-agreement except those, which are in court / revenue cases.

D. Additional Information from Ground validation:

- Additional information to be collected by the ULB Level team for the following:
 - i. Variation in Geo-codes for which correction is required in **Form-35**.
 - ii. Any further corrections in Preliminary property Register in **Form-36**
- Variation in Correlation of the sketch wherever corrections required.

E. Objections u/s10 (1) :

- Whenever any Landholder is not satisfied with the Ground Truthing information, as per his request in Form - 21 for boundary dispute, the Survey team after making a detailed enquiry by **issuing Notices to the effected party (s) in Form-22**, then **make a speaking order in Form - 23**, deciding and determining the boundary, under section 10 (1) of A.P, S & B Act. Such decided boundary shall be recorded and **marked on ORI hard copy & in Form-37**.

F. Quality Check of Ground validation and additional information:

- **The variations to be noted in the remark's column provided for ULB Level Team (Form-35 & Form- 36) and similarly Mobile Magistrate Team.**
- The teams constituted at Supervisory Team and ULB Level Team check the ground truthing, ground validation works of Survey teams and also the quality of records generated to the prescribed percentage. Not less than 10% of the records shall be verified.
- Such quality checked information shall be also checked randomly by the Mobile Magistrate Team.
- On due certification, the records shall be submitted to the District processing team.

ACTIVITY 16 Data Updation after Ground Validation

Task No.	Task Description
A	Updation of all necessary records as per additional information received in Ground Validation (Spatial Data)
B	Updation of all necessary records as per additional information received in field register during Ground validation in the PoLR Data following due procedure and reflecting the same into the Preliminary Field Register.
C	Generation of draft records i.e., i. Draft Land Register ii. Draft Land Parcel Maps iii. Draft ward/ULB map iv. Draft Correlation Map v. Correlation Statement for quality check

A. Updation of all necessary records as per additional information received in Ground Validation (Spatial Data)

• The following documents will be provided to the Agency for Updation

- i. Preliminary Land Register (Survey Register, Property Register, Assessment Register) (**Form – 31** (L.P No. wise) , **Form – 32** (SY. No. wise))
- ii. Preliminary Land Parcel Maps (**Appendix – 4**)
- iii. Preliminary ULB Map (**Appendix – 5**)
- iv. Preliminary Correlation Map (**Appendix – 6**)
- v. Additional/ Missing information found during Ground Validation of Land Parcel Maps (**Form – 35**)
- vi. Additional/ Missing information found during Ground Validation in Field Register (**Form-36**)
- vii. Geo-cods of land parcel on decision u/s10 (1) during Ground Validation (**Form – 37**)

ACTIVITY 16 Data Updation after Ground Validation

B. Updation of all necessary records as per additional information received in Ground validation in the PoLR Data, by following due procedure and reflecting the same into the preliminary Field Register.

C. Generation of draft records i.e.,

- Draft Land Register (Survey Register, Property Register, Assessment Register) (**Form – 38**)
- Draft Land Parcel Maps (Appendix – 4)
- Draft ULB Map (Appendix – 5)
- Draft Correlation Map (Appendix – 6)
- Correlation Statement (**Form – 30**) for Quality check.

Task No.	Task Description
A	Quality check of Draft Records shall be conducted at three (3) levels with Senior Officers for the prescribed %
A.1	Quality check of Draft Records by ULB Level
A.2	Quality check of Draft Records by Divisional Team headed by RDO / Sub Collector
A.3	Quality check of Draft Records by District Team headed by Joint Collector along with Assistant Director
B	QC Team shall verify
B.1	Whether all Govt. lands are properly resurveyed and recorded in the records. This is a special step to ensure that all Govt. lands are protected
B.2	LPM with Ground status and Field Register with reference to PoLR Data for prescribed Percentage. If any errors noticed, shall be processed for Updation of records.
B.3	Certification of the Draft Records
B.4	Updated records will be sent for generation of 9(2) / 10(2) Notices.

The following documents will be provided to the ULB, District Teams

- Draft Land Register (Survey Register, Property Register, Assessment Register) (**Form – 38**)
- Draft Land Parcel Maps (Appendix – 4)
- DraftULB Map (Appendix – 5)
- Draft Correlation Map (Appendix – 6)
- Correlation Statement (**Form – 30**)

A. Quality check of Draft Records shall be conducted at three (3) levels with Senior Officers for the prescribed percentage.

- Quality check of Draft Records by the ULB Team headed by Deputy Commissioner.
- Quality check of Draft Records by the **Divisional Team** headed by RDO / Sub Collector
- Quality check of Draft Records by the **District Team** headed by Joint Collector along with Assistant Director

ACTIVITY 17 Quality Check Of the Draft Records

B. QC Team shall verify.

- Whether all the Govt. Lands are properly resurveyed and recorded in the records and in the field.
This is a special step to ensure that all Govt. lands are protected.
- LPM with Ground status and Field Register with reference to PoLR Data. If any errors are noticed, shall be processed for Updation of records.
- Certification of the Draft Records wide check memos **Form – 39** by the ULB Team, **Form – 40** by the Divisional Team and **Form – 41** by the District Team.
- Updated records will be sent for the generation of 9 (2) / 10 (2) Notices.

Task No.	Task Description
A	Statutory notices (Issuance of notices u/s 9(2) and 10(2) by the Field Level/ward Survey Teams duly communicating the decisions to the registered land holders.)

ACTIVITY 18 Statutory Notices under Section9 (2) & Section 10

A. Statutory notices (Issuance of notices u/s 9 (2) and 10 (2) :

- A Notice under Section 9 (2) **Form-42** of Survey & Boundaries Act-1923, shall be served to individual Property/Land Owner for all undisputed properties along with Land Parcel Map, by the ward Level Teams.
- A Notice under Section 10 (2) **Form-43** of Survey & Boundaries Act-1923, shall be served to individual Property/Land Owner for all disputed properties along with Land Parcel Map, by the ward Survey Teams.
- The property owner confirms the Notice under Section 9 (2) the property details shall be processed for publication.
- The property owner raises any objection on the notice served, the details shall be re-verified either in Lab or in field (if in the field shall ensure presence of the neighbors only) .
- For properties covered under dispute shall take necessary steps to resolve the issue by the ULB level team

ACTIVITY 19 Appeals

Task No.	Task Description
A	Receiving of appeals: An appeal can be filed U/s 11 before Appellate Authority (Mobile Mandal Magistrate Team) within 30 days by the land holders affected by a decision U/s 9, the registered holder or any other person who is party to the dispute U/s 10.
B	Disposal of appeals: The appeal peons will be disposed within 30 days of the last date of filing of appeals.
C	Orders of appeals: The decisions / Orders of Mobile Mandal Magistrate reflect to any changes in the records, to be communicated for further processing.

A. Receiving of Appeals:

- Any Registered holder affected by a decision U/s section 9; any registered holder or any other person who is a party to the dispute U/s 10 may file appeal U/s 11 in **Form – 44** to the appellate authority (mobile ULB Magistrate team) within 30 days from date of receipt of such notice.
- The System is being worked out to receive these appeal petitions in the Ward Secretariat itself.
- The mobile magistrate team shall have the necessary systems to receive the appeals, verify each of the appeals, hear the pattadar / person, conduct an enquiry, field inspection and issue speaking orders. A Computer Software will be in operation for the Registration of the appeals, fixing of the hearing dates and field inspections and uploading of orders.

ACTIVITY 19 Appeals

B. Disposal of appeals:

- All the appeal petitions shall be disposed of within 30 days of the last date of filing of appeals.
- Thus, the total period for receiving the objections and their disposal is 60 days.

C. Orders of appeals:

- The decisions / Orders (**Form – 45**) of the Mobile Magistrate team reflecting any changes in the records have to be communicated in **Form – 46** for further Incorporation.

Task No.	Task Description
A	Updation of PoLR data and spatial data will be processed in the records, wherever changes occurred after the decision on appeals.

- After the final Quality Check, the entire spatial records shall be submitted to data processing team for Updation of this spatial data, wherever changes occurred during redressal of Appeals.
- The selected attributes will be attached to soft data in GIS software by the Data Processing unit as provided in Appeal.
- The Tahsildar will update Textual data by following statutory procedure and finalize the Resurvey Land register.

Task No.	Task Description
A	The survey records and the land records has to be transferred to the newly created permanent Database of Survey and Land Records.
B	The Unique land parcel ID will be integrated to each parcel.
C	The permanent survey and land records i.e., ULB/Ward Map, Land Parcel Maps, Land Register etc., will be prepared for final notification.

- A. The survey records and the land records have to be transferred to the **newly created permanent Data base of Survey and land records.**
- B. A **Unique land parcel ID** will be integrated into each parcel number which will become like **Aadhar number for each land parcel.**
- C. The following **permanent survey and land records** shall be prepared for final Notification by the competent authority, Assistant Director S&LR.

1)	Land Parcel Map (LPM)	(Appendix – 4)
2)	ULB map	(Appendix – 5)
3)	Land Register	(Form - 38)
4)	Correlation Map	(Appendix – 6)
5)	Correlation Statement	(Form - 30)
6)	GCPs Map with Coordinates data	(Appendix – 7)

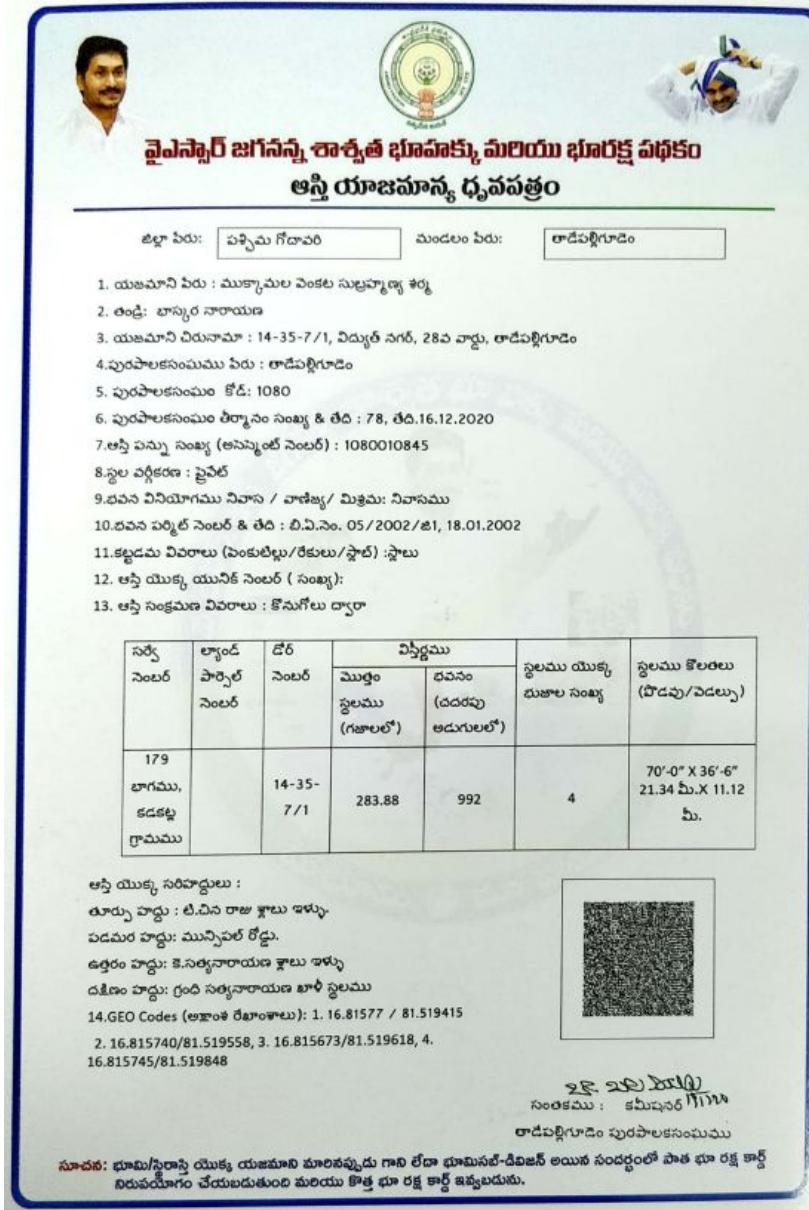
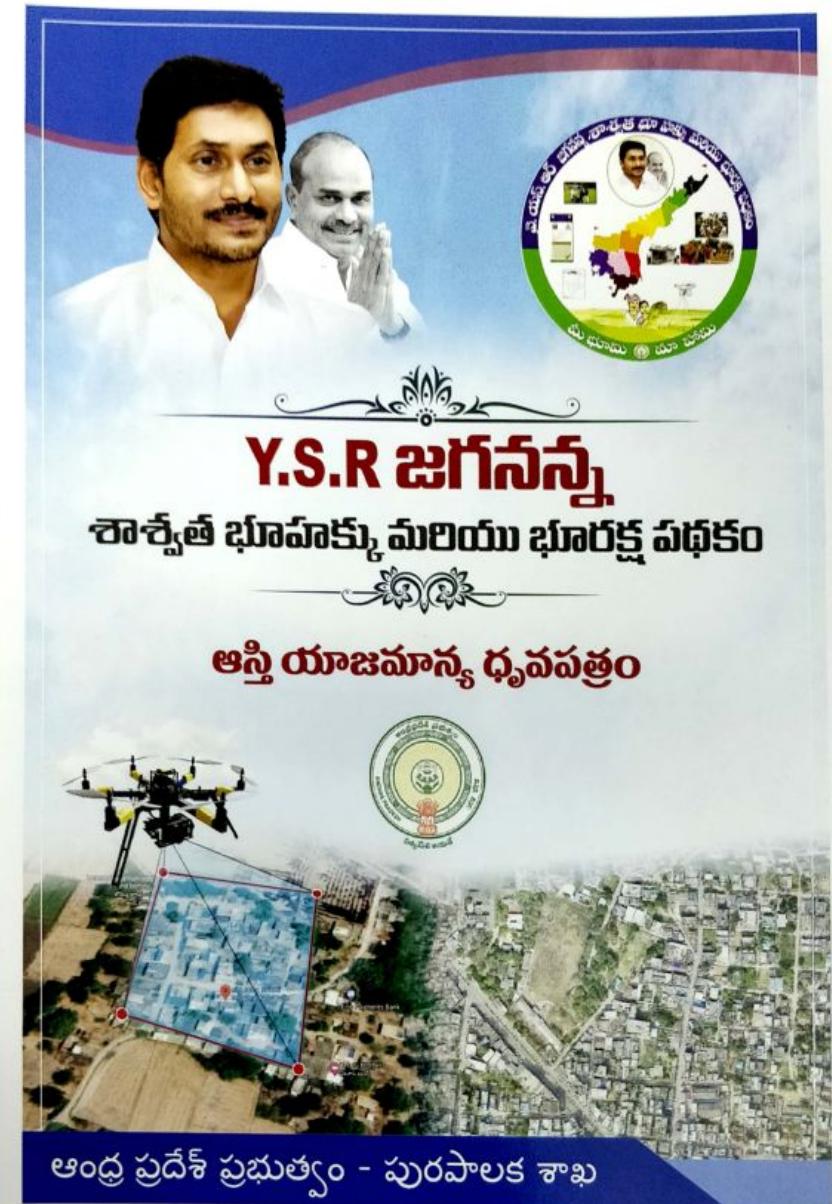
ACTIVITY 2: Statutory Notification/Publication under Section 13 of S&B Act, 1923

Task No.	Task Description
A	The District Competent Authority shall notify the records U/s 13 of S&B Act.
B	After publication U/s 13, the notified Survey and Land Record will become the permanent Survey records
C	Any person aggrieved by the Orders of Mobile Mandal Magistrate, can prefer a civil suit U/s 14.

- A. The District Competent Authority shall prepare Final Check Memo in **Form – 47** verifying entire Resurvey records
- B. The District Competent Authority shall notify completion of the survey of the ULB u/s 13 of S&B Act in **Form – 48**. It shall include the unique ID number, the land parcel number, and the correlated old survey, subdivision number. After the publication of u/s 13, the notified Survey and land record shall become the permanent resurvey record and will be maintained in a newly created permanent Database.
- C. Any person aggrieved by the orders of the ULB Magistrate can prefer a civil suit as per the provisions of section 14 of AP Survey and Boundaries Act within 60 days from the date of publication u/s 13.

ACTIVITY 2: Hakku patram

Task No.	Task Description	
A	The District Competent Authority shall notify the records U/s 13 of S&B Act.	<p>A. The District Competent Authority shall prepare Final Check Memo in Form – 47 verifying entire Resurvey records</p> <p>B. The District Competent Authority shall notify completion of the survey of the ULB u/s 13 of S&B Act in Form – 48. It shall include the unique ID number, the land parcel number, and the correlated old survey, subdivision number. After the publication of u/s 13, the notified Survey and land record shall become the permanent resurvey record and will be maintained in a newly created permanent Database.</p>
B	After publication U/s 13, the notified Survey and Land Record will become the permanent Survey records	
C	Any person aggrieved by the Orders of Mobile Mandal Magistrate, can prefer a civil suit U/s 14.	<p>C. Any person aggrieved by the orders of the ULB Magistrate can prefer a civil suit as per the provisions of section 14 of AP Survey and Boundaries Act within 60 days from the date of publication u/s 13.</p>



PREPAREDNESS OF ULB'S

- 1. Constitution of ULB level Team as per orders**
- 2. Notification and Publicity**
- 3. PMU Constitution at ULB level**
- 4. Trainings – Details of ToTs**
- 5. Identification/Demarcation of Government lands /ULB**
- 6. Fixing/Demarcation of ULB Boundary**
- 7. List of available Data and Records**
- 8. No.of Revenue (Land)**
- 9. Budget and Requirement**

BUDGET

S. No.	Description	Unit Cost	Quantity (Nos)	Total Budget required (Rs. In Crs)	Remarks
II	Field Equipment				
	a. GNS Rovers	Approx. Rs.10.00 Lakhs each/ as per the procurements of CSSLR.	400	40.00	Rovers will be procured as detailed below:- N.Ps.,Gr-III, II and I ULBs – 2 per ULB Special & Sel Grade ULBs - 4 per ULB Municipal Corporations - 8 per Corp. GVMC - 34 Nos.
	b. ETS	Approx. Rs.10.00 Lakhs each/ as per the procurements of CSSLR.	200	20.00	ETS(Electronic Total Station), will be establishment as detailed below:- N.Ps.,Gr-III, II and I ULBs – 1 per ULB Special & Sel Grade ULBs - 2 per ULB Municipal Corporations - 4 per Corp. GVMC - 17 Nos.
<i>Sub- Total</i>				<i>60.00</i>	

S. No.	Description	Unit Cost	Quantity (Nos)	Total Budget required (Rs. In Crs)	Remarks
III	IT Infrastructure				
	a. Data Centre	Rs. 5.05 Lakh/-	200	10.10	(The tentative required infrastructure in data centre is as follows: 1 Work Station @ Rs.1.75 lakhs 1 Printer with Scanner @ Rs.0.30L 1 Plotter @ Rs.2.00 lakhs Software/Hardware & Power Back Up @ Rs.1.00
	a. Laptop/ Desktop	Rs.70,000/-	4151 Ward Secretariat Functionaries	29.06	I5 Processor with 8 Gb Ram and 1 TB Hard Disk
	a. Tabs	Rs.25,000/-		10.38	
<i>Sub Total</i>				49.54	

S. No.	Description	Unit Cost	Quantity (Nos)	Total Budget required (Rs. In Crs)	Remarks
IV	Miscellaneous Expenditure				
	a. Printing and Stationery (Colour printing, Stationery, Etc.)	Lumpsum	123 ULBs	5.88	(@ Rs.4.00 Lakhs per each Data Center in Corporation – 81 X 4 lakhs = Rs.3.24 Crs) (@ Rs.3.00 Lakhs per each Data Center in Selection/Spl. Gr. Municipality – 26 X 3 lakhs = Rs.0.78 Crs) (@ Rs.2.00 Lakhs per each Data Center in Grade-I, II, III Municipalities & NPs – 93 X 2 lakhs = 1.86 Crs)
	<i>Sub Total</i>			<i>5.88</i>	

WAY FORWARD

Hiring of Drone Services for Large scale Mapping in Urban Local Bodies

Agency-Wise Allotment

Sl. No.	Name of the Region	Name of the Agency	No.of ULBS Covered	ULBs Covered
1	Vishakapatnam Region	M/s Geo Con Surveys, Vishakapatnam & JV with Redbay Technology Pvt. Ltd., Hyderabad	14	Narsipatnam, Palakonda, Parvathipuram, Salur, Amadalavalasa, Ichchapuram, Palasa, Srikakulam, Bheemunipatnam, Yelamanchili, Rajam, Bobbili, Vizianagaram, Nellimarla.
2	Rajamahendravaram Region	M/s SAAR IT Resources Pvt. Ltd, Mumbai	33	Rajamahendravaram, Kovvur, Nidadavole, Eluru, Jangareddigudem, Chintalapudi, Nuzividu, Kakinada, Peddapuram, Pithapuram, Samalkota, Tuni, Gollaprolu, Yeleswaram, Amalapuram, Mandapeta, Ramachandrapuram, Mummidivaram, Gudivada, Machilipatnam, Pedana, Vuyyuru, YSR Tadigadapa, Jaggaiahpet, Vijayawada, Nandigama, Tiruvuru, Kondapalli, Bhimavaram, Narasapuram, Palacole, Tanuku, Akividu.
3	Guntur Region	M/s Brane Services Pvt. Ltd., Hyderabad	33	Bapatla, Repalle, Chirala, Addanki, Guntur, Mangalagiri Tadepalli, Ponnur, Tenali, Ongole, Chilakaluripet, Macherla, Narasaraopet, Sattenapalli, Vinukonda, Piduguralla, Dachepalli, Gurajala, Markapuram, Giddalur, Chimakurthy, Kanigiri, Darsi, Podili, Kandukuru, Kavali, Nellore, Atmakur, Buchireddipalem, Allur, , Gudur, Venkatagiri, Sullurpet, Naidupet, ,
4	Ananthapur Region	M/s Aero Dyne Ventures Pvt Ltd., New Delhi	42	Anantapur, Guntakal, Rayadurg, Tadipatri, Gooty, Kalyanadurg, Atmakur, Madanapalle, Beerongi Kothakota, Rajampeta, Rayachoti, Chittoor, Punganuru, Palamaner, Nagari, Kuppam, Adoni, Kurnool, Yemmiganur, Gudur, Nandyal, Dhone, Nandikotkur, Allagadda, Bethamcherla, Dharmavaram, Hindupur, Kadiri, Madakasira, Purraparty, Penukonda, Srikalahasti, Tirupati, Puttur, Kadapa, Proddutur, Pulivendula, Badvel, Jammalamadugu, Mydukur, Yerraguntla, Kamalapuram.



Status of Information on Proforma - I to IV

Proforma -I

PMU establishment at ULB level:-

- Out of 123 ULBs 118 ULBs established PMU.
- 5 ULBs not established - GVMC, GUNTUR, ONGOLE, ANANTHAPURAM, KURNOOL

Proforma –II

Submission of Master Trainers list:-

- Out of 123 ULBs 118 ULBs Submitted.
- 3 ULBs not Submitted -GVMC, GUNTUR, ONGOLE

Proforma- III

a. Constitution of Monitoring Committee as per G.O.Rt No 381 MA&UD Dt: 03-06-2022

Out of 123 ULBs **103** ULBs Constituted

The following ULBs not constituted so far,

VSP Region - GVMC, Ichapuram,

RJY Region - Pedana, Nandigama, Jaggaiahpet, Kondapalli

GNT Region - Guntur, Mangalag-Tadepalli, Chilakaluripet, Dachepalli, Gurajala, Bapatla, Ongole,

ATP Region - Kalyandurg, Atmakur, Proddutur, Rajampet, Rayachoti, Yerraguntla, Tirupati.

b. Fixing the ULB Boundaries

Out of 123 ULBs **77** ULBs fixed boundaries

The following ULBs not fixed boundaries so far,

VSP Region - GVMC, Vizianagaram Municipal Corporation, Rajam, Salur, Yelamanchili,

RJY Region - Rajamahendravaram, Nidadavolu, Kovvuru, Pitapuram, Eluru, Jangareddigudem, Pedana, Vuyyur,
Nandigama,

GNT Region - Guntur, Mangalagiri-Tadepalli, Chilakaluripet, Sattenapalli, Dachepalli, Gurajala, Bapatla, Ongole,
Podili, Buchireddipalem,

ATP Region - Ananthapur, Hindupur, Guntakal, Tadipatri, Dharmavaram, Kadiri, Kalayandurg, Yemmiganur,
Nandikotkur, Gudur, Allagadda, Atmakur, Kadapa, Proddutur, Rajampeta, Rayachoti, Yerraguntla,
Chittor, Madhanapalli, Punganur, Palamaner, B Kottakota

Proforma- III Continued.,

c. Preparation and Readiness of ULB Maps with Boundaries in KML format

Out of 123 ULBs **93** ULBs Prepared

The following ULBs not prepared:-

VSP Region - GVMC, Vizianagaram municipal corporation, Bobbili, Rajam, Narsipatnam,
Yelamanchili,

RJY Region – Akiveedu, Chinthalapudi, Vuyyur, Nandigama,

GNP Region – Guntur, Mangalagiri- Tadepalli, Chilakaluripet, Dachepalli, Gurajala, Chirala, Ongole,
Markapur, Buchireddipalem,

ATP Region – Hindupur, Tadipatri, Dharmavaram, Kadiri, Atmakur, Proddutur, Jammalamadugu,

Yerraguntla, Tirupati, Palamaner, B Kothakota

Proforma- III Continued.,

d. Identification & Readiness the Ground Control Points (GCPs)

Out of 123 ULBs **38** ULBs Identified

The following ULBs not Identified:-

VSP Region – GVMC, Srikakulam municipal corporation, Amudalavalasa, Palasa, Vizianagaram municipal corporation, Bobbili, Rajam, Palakonda, Parvathipuram, Salur, Narsipatnam, Yelamanchili.

RJY Region – Rajamahendravaram, Nidadavolu, Kovvuru, Samrlakota, Mandapeta, Bhimavaram, Narasapur, Akiveedu, Eluru, Nuzvid, Jangareddigudem, Chinthalapudi, Gudivada, YSR Thadigapa, Pedana, Vuyyur, Nandigama, Jaggaiahpeta, Thiruvuru, Kondapalli, Machilipatnam, Palakollu,

GNL Region – Tenali, Mangalagiri-Tadepalli, Ponnur, Narasaraopet, Chilakaluripet, Macherla, Sattenapalli, Vinukonda, Piduguralla, Dachepalli, Gurajala, Bapatla, Repalle, Chirala, Addanki, Ongole, Markapur, Giddalur, Chimakurthy, Kanigiri, Darsi, Podili, Nellore Municipal Corporation, Alluru, Buchireddipalem, Kandukur, Gudur, Sullurpet, Naidupeta.

ATP Region – Hindupur, Guntakal, Tadipatri, Dharmavaram, Kadiri, Kalyandurg, Puttaparthi, Nandyal, Yemmiganur, Nandikotkur, Gudur, Allagadda, Atmakur, Kadapa, Proddutur, Jammalamadugu, Rajampet, Rayachoti, Yerraguntla, Kamalapuram, Tirupati, B Kothakota.

Proforma- IV

- Govt. lands data:
- **Out of 123 ULBs only the following 11 ULBs submitted:-**

VSP Region - Amudalavalasa, Ichapuram, Palasa, Bobbili, Rajam, Nellimerla, Salur

RJY Region – Gollaprolu NP, Amalapuram, Tuni, Kakinada,

GNL Region – Nill

ATP Region – Nill

- MCs to Constitute Monitoring Committee, PMUs at ULB level immediately.
- MCs to Prepare & Keep Ready ULB Maps with Boundaries in KML format immediately .
- MCs Identify & keep Ready the Ground Control Points (GCPs) immediately.
- MCs are requested to takeup all the activities & strictly adhere to time lines.
- RDMA, RDDTP are requested to closely monitor the entire resurvey activity.

Re-Survey – Activity Timelines

S.No	Description	Time Lines
1	Notification under Section 5 & Section 6 of S&B Act, 1923	Completed 6(1) Notification to be displayed in ULB notice board
2	Constitution of teams for Ward level survey, supervising & quality check	10th AUG 2022
3	Trainings	15th SEP 2022
4	Publicity/Publication/Awareness	15th AUG 2022
5	Demarcation of Boundary /Jurisdiction (ULB/Ward) & Map in KML formats	20th AUG 2022
6	GCP identification, fixing & Integration with CORS Network.	20th AUG 2022
7	Identification/ Demarcation of Government/ULB Land's/Properties	31st AUG 2022
8	Purification of Land Records (PoLR)	31st OCT 2022
9	Drone flying	
10	Drone Data Processing & ORI map	SEPT 2022 to FEB 2023
11	Quality check of ORI map	
12	Ground Truthing	MAY 2023

Re-Survey – Activity Timelines

S. No.	Description	Time Lines
13	Record integration/Data Processing after ground truthing	MAY 2023
14	Quality check by supervisory team of ground truthing done by Ward level Survey teams	
15	Ground Validation	JULY 2023
16	Data updation after ground validation	
17	Quality check of draft records	
18	Statutory Notices Section 9 (2) & Section 10 of S&B Act 1923	
19	Appeals	SEPT 2023
20	Data processing after appeal	OCT 2023
21	Preparation of final records & Notification	
22	Statutory Notification/Publication under Section 13 of S&B Act, 1923	NOV 2023
23	Distribution of Hakku Patram	DEC 2023

*Thank
you!*



**MUNICIPAL ADMINISTRATION AND URBAN DEVELOPMENT
DEPARTMENT**