



Government of India  
Office of the Superintending Archaeologist  
Archaeological Survey of India  
Ranchi Circle, Ranchi

Ranchi  
Dated 23 June 2025

File No. 04/survey/017/2025-26.

**QUOTATION CALL NOTICE**

Sealed quotations are invited from the registered Contractors / Firms etc. having valid PAN / GST etc. towards execution of following work to be executed in the districts of Gumla and Sahibganj State: Jharkhand.

The quotation should be addressed to **THE SUPERINTENDING ARCHAEOLOGIST, ARCHAEOLOGICAL SURVEY OF INDIA, RANCHI CIRCLE, JAIN VILLA, P.P.COMPOUND RANCHI-1** and as to reach on or before **08 July 2025 by 15:00hrs.** by person or by post, which will be opened on the same day.

**Terms & conditions:**

- The Agency/Firms should attach copy of the valid PAN, GSTIN etc. with the quotation.
- The rates should be quoted individually per Unit, including or indicating separately, the GST, terms & conditions, transportation charges etc. i.e. without any hidden cost.
- Payment will be released after successful completion of work. TDS will be deducted as per rule.
- The competent authority reserves the right to accept or reject any or all quotations without assigning any reason thereof.
- The schedule of quantity given below are for reference only – payment will be made as per actual measurement.
- Terms & Conditions as Mentioned in Annexure – I and Annexure – II to be followed.

The cover containing quotation should be super-scribed as **“Photogrammetric Survey for Preparation of Survey Plan of the Centrally Protected Monuments / Sites Covering Protected, Prohibited and Regulated Areas”**.

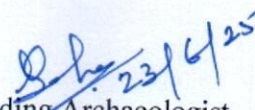
Sl. No.	Particulars of Work	Quantity	Unit	Remark
(1)	Preparation Of Survey Plan Of The Centrally Protected Monuments / Sites Covering Protected, Prohibited And Regulated Areas. (Scope of Work and Other Terms & Conditions are attached as Annexure – I & II)	Ac 295.000	Acre	<ul style="list-style-type: none"><li>The work is to be carried out in the districts of Gumla and Sahibganj, State: Jharkhand.</li><li>Any discrepancy / difficulties found should be brought to the notice of the Work-in-charge.</li></ul>



Sl. No.	Particulars of Work	Quantity	Unit	Remark
				<ul style="list-style-type: none"> <li>Date of Final Submission of Work: 06 Months from 10<sup>th</sup> day of issue of Work Order.</li> </ul>

Copy to:

- i) Notice Board (Ranchi Circle).

  
 Superintending Archaeologist  
 ASI, Ranchi Circle, Ranchi





GOVERNMENT OF INDIA  
MINISTRY OF CULTURE  
ARCHAEOLOGICAL SURVEY OF INDIA  
RANCHI CIRCLE, RANCHI

**NAME OF WORK: "PREPARATION OF SURVEY PLAN OF THE CENTRALLY  
PROTECTED MONUMENTS / SITES COVERING PROTECTED, PROHIBITED  
AND REGULATED AREAS"**

2025-26



OFFICE OF THE SUPERINTENDING ARCHAEOLOGIST  
ARCHAEOLOGICAL SURVEY OF INDIA, RANCHI CIRCLE  
JAIN VILLA, P.P. COMPOUND,  
RANCHI, JHARKHAND



## **1.1 Introductions:**

Archaeological Survey of India (ASI) intends to prepare Survey Plans through Photogrammetric Survey for the Centrally Protected Monuments/Sites covering the Protected, Prohibited and Regulated areas in phased manner under the jurisdiction of Ranchi Circle, as below:

## **1.2 Scope of Work:- Preparation of Survey Plan (Following parameters shall be adhered to and incorporated in photogrammetric survey plan):**

- I. Contouring, preferably at one meter interval. It can vary depending of landscape if it is hilly plain terrain with cliffs then contour intervals can be increased. If the landscape is plain then it can be reduced to 0.5 meter.
- II. Fixing of Bench Mark on ground at one or more locations.
- III. Fixing reference survey points on ground at one or more locations,
- IV. Protected area of monument or site needs to be mapped in such a manner that all structures and features present within the area can be easily identified.
- V. Mapping of all structures within the area of the survey on the plan,
- VI. Mapping other features like tank, embankment, mud fortifications, remains of ancient structures, important land marks, building, etc. on the plan
- VII. Indicating roads and pathways on the plan,
- VIII. Indicating, garden area, green area, open areas, water bodies on the plan,
- IX. Indicating trees,
- X. Indicating sewer lines, open drains and water supply lines, rivers, streams, rivulets, etc.
- XI. Indicating portion of pond / river / sea / water body etc., if falls within the area of Survey plan.
- XII. The surveyed area to be superimposed with digitised & georeferenced cadastral/revenue maps with plot boundary, village boundary, notified boundary of the monument, boundary under possession etc. and the revenue plot details to be submitted in a tabular format mentioning ASI Zones
- XIII. The Survey Plan shall be gridded suitably considering size of the area covered under survey plan.
- XIV. Any other feature that is required to be incorporated in consultation with the Superintending Archaeologist, Archaeological Survey of India, Ranchi Circle, Ranchi.



- XV. Additional 10 to 20meter area beyond the exterior limit of regulated area shall be included in the survey plan for better understanding.
- XVI. Other guideline to be followed are enclosed as Annexure – II.
- XVII. Apart from the above parameters, other information to be furnished in the photogrammetric map are specified as; height and built up area of the building/structures present in the prohibited, first regulated (100 to 200m) and second regulated (200 to 300m) areas direction wise; MSL & height of the monument; précised GPS coordinates of the monument; close 3D model / photography covering the protected, prohibited and regulated area of the monument; close 3D photography showing the condition of the monument and its premises; common land use in the prohibited and regulated area of the monument; naming and demarcation of existing government, public, religious, and other buildings; demarcation of vernacular architecture if present; area calculation in square meters / acres of the land present under the protected, prohibited and regulated boundaries of the monument; demarcation of natural elements such as – water bodies, rivers, mountains, forest lands etc., if present; the forms of open spaces present; types of roads present – metalled, bitumen, cement concrete, earthen, paved etc.; total area in square meters covered under the roads and pathways present in the prohibited and the regulated area of the monument; total area of the land covered under the circulation pathways inside the protected limit of the monument.

### **1.3 Conditions to be observed during survey:**

- I. Establishing precise and adequately timed Ground Control Points (GCP) using DGPS.
- II. Aerial Photography capturing High Resolution  $\leq 2\text{cm}$  or less GSD aerial imagery for the entire region. The photography shall be collected utilising a direct digital aerial mapping.
- III. The digital aerial camera system must be equipped with GPS.
- IV. Photography shall not be taken when the ground is obscured by snow, haze, fog, dust or when cloud shadows shall appear on more than five percent (5%) of the area in any one photo.
- V. The proposed approach to aerial photography acquisition should outline the respondent's intended flight plan including proposed date and time of



photography, flight height, scale, flight lines, end lap and side lap, planned aerial equipment, materials, and relevant quality control procedures.

- VI. Crab must not exceed 5degrees between any two consecutive flights, nor more than 3degrees on anyone flight line. The aerial acquisition shall extend two exposures beyond the mapping limits to obtain full or the photo images and to reach pre-targeted ground control points, as necessary.
- VII. Geo referencing & Creation of Ortho Photo, DTM, DEM Contours, for the entire project area should be created to support the generation  $\leq 2\text{CM}$  GSD Ortho photos.
- VIII. Break lines shall also be captured comprehensively wherever slope changes are visible in stereo model due to complicated terrains or manmade structures. Proper use of hard and soft break lines shall be made in DTM editing.
- IX. DTM points shall be captured automatically, semi-automatically or manually, as per the condition of the terrain and land use / land cover. It is required to produce digital colour ortho-photo images for the entire Area of Interest (Aol) in exactly  $\leq 2\text{cm}$  GSD native pixel resolutions.
- X. Ortho photo files must have no overlap and must be precisely edge matched and contrast and tone balanced so as to appear to be a continuous photographic image over the entire Aol. Upon completion of the aerial photography, and as soon as possible afterwards, the bidder shall provide with one or more sample digital image(s) in raw \*.tiff format for overall image quality verification.
- XI. The images shall be tonal balanced, mosaic ked and feature enhanced for achieving the best result for the vectorisation. All ground positions determined shall be in the common reference system that is WGS 84 Datum and UTM Projection. Final values shall be in meter and two places of decimal.
- XII. As far as possible Differential Global Positioning System (DGPS) instruments shall be used for collection of Ground Control Planning (GCP), and all DGPS equipment must be set-in to GCS-World Geodetic System 1984 (WGS 84) Datum uniformly.
- XIII. RAW and post-processed DGPS readings along with original source file for each location shall be submitted. As soon as the work is completed, in case of TS, original downloaded file and a \*.CSV file must be submitted along with raw data clearly depicting the occupied station, back station and the co-ordinates in NEZ format.



#### 1.4 Deliverables:

- I. The bidder shall submit key plan of the site in appropriate scale in Hard Copy. All plans, indicating the contour lines, demarcating all permanent features as mentioned above.
- II. Scaled Ortho image of the surveyed area, all sides of the main monument & other important structures, top view showing the detailed sculptures, images, carvings etc. to be submitted along with 3D model of the protected area.
- III. Contour maps of site:- The grids for the survey work shall be established in N-S & E-W direction (Corresponding to magnetic North) and the survey reference shall be spheroid WGS 84,
- IV. The surveyed area to be superimposed with digitised & georeferenced cadastral/revenue maps with plot boundary, village boundary, notified boundary of the monument, boundary under possession etc. and the revenue plot details to be submitted in a separate tabular format mentioning ASI Zone.
- V. Ortho map, 3D point cloud, DST, DTM, ECW etc., all those which can be generated from the collected raw data to be submitted, as required by ASI.
- VI. The bidder shall submit three hard copies and soft copies of all draft reports / final report for review and approval.
- VII. All the raw data generated through Photogrammetric Survey / Differential Global Positioning System (DGPS) / Total Station Survey (TSS) should be processed to provide the output.
- VIII. All the raw and processed data in any form, becomes the property of ASI and must be handed over to ASI. All electronic data should be copied in a Hard Disc Drive and to be submitted to ASI.
- IX. All drawings should be submitted in GIS & CAD compatible format following Annexure - I also.



### SCHEDULE OF QUANTITY AND WORK

Name of work: **Preparation of Survey Plan of the Centrally Protected Monuments / Sites Covering Protected, Prohibited and Regulated Areas**

Place where the work to be executed: State of Jharkhand

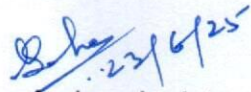
I / We here by tender for the above-mentioned work on behalf of the President of India; the under mentioned memorandum according to the specification within the time specified therein subject to the conditions of the contract.

Sl. No.	Name of the Monument / Site	Approx. Area in Acre
01.	Palace and Temple Complex at Navratangarh, Dist. Gumla, Jharkhand	Ac. 110.000
02.	Jami Mosque and Baradari at Mangal Hat, Rajmahal, Dist. Sahibganj, Jharkhand	Ac.185.000
Total =		Ac. 295.000

(The schedule of quantity given above is for reference only)

Rates are to be valid for a period of 180 Days or till completion of work; Site may be inspected before quoting the rates; all the machineries/materials to be used for works should be got verified /approved before taking up the work;

ASI reserves the right to amend or withdraw any of the terms and conditions contained in the Tender Document or to reject any or all tenders without giving any notice or assigning any reason. The decision of ASI in this regard shall be final.

  
Superintending Archaeologist  
Archaeological Survey of India  
Ranchi Circle, Ranchi



**1.5 Eligibility Criteria:** The bidder should fulfil the following eligibility criteria (proof of each to be submitted):

- I. The Bidder should be a registered company/Partnerships/Proprietor,
- II. Bidder should have valid PAN Number,
- III. The Bidder should also have Goods and Service Tax (GST) Number,
- IV. The average annual turnover for financial year 2021-22, 2022-23, 2023-24 should be minimum 50Lakhs.
- V. The Bidder shall possess necessary survey equipment for Photogrammetric survey to be executed,
- VI. The bidder must own 05 Nos. DGCA compliant Drones on the date of submission of the bid,
- VII. The bidder must possess the necessary licensed photogrammetric software (s) for processing of data,
- VIII. The bidder must have undertaken projects of Photogrammetric survey for topography & cadastral mapping, for Government / reputed public sector companies or similar bodies. The area should have covered minimum 50 SqKM in a single work order,
- IX. The bidder undertaken projects of Photogrammetric survey for Archaeological Survey of India (ASI) will be preferred,
- X. Documentary evidence must be submitted in the form of Work Orders, Completion Certificate / Experience Certificates in support of above claims. Any statements with regards to above qualification criteria without proof will be assumed to be invalid and agency will be disqualified on that ground.
- XI. Bidders awarded or completed similar type of Survey Work in ASI will be preferred.
- XII. Those Agencies having licence in Jharkhand or neighbouring state will be preferred.

**1.6 Site Visit:**

- I. Any site information given in this tender document is for reference only. The bidder is advised to visit and examine the site of works and its surroundings and obtain ground information for himself at his own responsibility and cost. All information that may be necessary for preparing the tender and for the execution of the assignment. The bidder shall be deemed to have inspected the site and its surroundings beforehand and taken into account all relevant factors pertaining to the site in the preparation and submission of the tender.
- II. All cost / expenditure for visiting the monument or site and other contingencies involved for the purpose of preparing Survey Plans shall be borne by the bidder.



- III. The bidder and any of his personnel or agents may contact the Surveyor, Gr. – I or In-Charge of Sub-circles of ASI, for the purpose of such inspection, but only upon the express condition that, the bidder, his personnel and agents, will release and indemnify the Engineer or his representatives from and against all liability in respect of such inspection and will also be responsible for death or personal injury, loss or damage to property and any other loss, damage, costs and expenses incurred as a result of the inspection.
- IV. The bidder should inform about schedule of site visit well in advance for better communication.

**1.7 Other Conditions:**

- 1) The successful bidder must submit DD drawn in favour of the Superintending Archaeologist, Archaeological Survey of India, Ranchi Circle, Ranchi and payable at Ranchi, **towards Performance Security Deposit i.e. 5% of Bid Value.**
- 2) The successful bidder should give an undertaking that the data observed and submitted are genuine, accurate and are not interpolated. High level of accuracy of data, which should only be empirical and not interpolated, is expected, binding on the bidder and he should ensure the same.
- 3) The successful bidder must deploy the instruments and manpower to initiate the work within the stipulated time.
- 4) The performance will be evaluated by an Experts Committee constituted for this purpose in a given schedule of time. If the Experts Committee is of the opinion that the standard of data generated by the bidder is below standard or inaccurate or arbitrary, the work order will be cancelled and the performance security will be forfeited.
- 5) The Experts Committee will devise its own method of verification of data submitted by the firm and the decision of the Committee is final and binding on the firm. The data generated may also be checked and verified by an officer deputed by this office on day-to-day basis.
- 6) Performance security may be invoked if the firm did not initiate or complete the work within the stipulated time or their work is not up to the standards in the periodic evaluation by Experts Committee.
- 7) In case of areas / structures obscured by vegetation in aerial imagery the measurement and marking of the structures in plan present within the survey area to be executed using proper methods of ground survey using Total Station / DGPS or other similar equipment.



- 8) A bidder cannot modify the bid after the submission. Bidder may withdraw his bid before the expiration of deadline prescribed for submission of bids.
- 9) Bids shall be valid for ninety (180) days from the date of opening.
- 10) ASI reserves the right to accept any bid, and to cancel / abort the Tender process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected agency or agencies, of any obligation to inform the affected agency of the grounds for ASI action and without assigning any reason.
- 11) Any effort by a bidder to influence ASI in its decisions on bid evaluation, bid comparison or award of the contract may result in the bid rejection.
- 12) The drawings, reports, data, etc., used for the survey work shall be the sole property of Archaeological Survey of India and the bidder will not reproduce or pass on this to any other person or firm etc. All the documents and drawings created out of the assigned work will become the sole property of ASI and ASI will be free to use the same in any manner deemed fit.
- 13) The format and titles of all the drawings to be submitted by the bidder shall be as per the guidelines and demand of ASI.
- 14) The bidder must impart the necessary training to the staff at ASI for processing and editing the final dataset of the photogrammetric survey and shall have no claim or use whatsoever.
- 15) The bidder shall not reproduce any data collected from the work in any form.
- 16) In case of any discrepancy in the description of work in the tender documents, the decision made by Archaeological Survey of India shall be final and binding on the bidder.
- 17) Any error in description, quantity or rate in schedule of quantity or any omission therefrom shall not vitiate the contract or release the bidder from the execution of the whole or any part of the contract comprised there in according to drawings and specifications or from any office obligations under the contract.

**1.8 Payment:**

- 1) The price should be quoted including GST, conveyance, mobilisation charge etc., that are all involved to deliver the work satisfactorily.
- 2) The payment will be made through account through NEFT / RTGS on production of invoice and a mandate form from the Bank within reasonable time.
- 3) All statutory deductions like TDS will be done as per rules.

**1.9 Calculation of Surveyed Area:**



- 1) Since the areas of the above said centrally protected monuments / sites may be of not well defined and irregular, the payment will be made on the basis of area calculated from the final drawing.
- 2) The area calculated by the successful bidder on the above basis may be submitted to ASI for verification. The decision taken by ASI will be final and binding on either side.
- 3) The payment will be released after the completion of the work in all respect.

\*\*\*\*\*



Site plans are essential in facilitating the preparation of Heritage bye-laws. The purpose of a Site plan is to document the entire existing setting around the Centrally Protected Monument as well as to demarcate the Protected, Prohibited and Regulated boundaries.

Significance of a Survey/Site Plan in the preparation of Heritage bye-laws:

- (i) In understanding the context and setting of the monument.
- (ii) In understanding the on-scale extents of the protected, prohibited and regulated boundaries.
- (iii) In analyzing the skyline and views and vistas of and from the monument.
- (iv) In identifying the pressures and pattern of development on the monument and subsequently give guidelines for the same.

Rule 21 and the First Schedule of AMASR Rules, 2011 elaborates on the requirement of a Site plan.

#### **The First Schedule [Rule 21 (1)]**

##### **Parameters for the Preparation of Site Plans**

While preparing a site plan for the protected, prohibited and regulated areas, the following parameters shall be adhered to and incorporated:

- (i) Mapping of all structures in the protected area;
- (ii) Mapping of all structures in the area under control of the Archaeological Survey of India and acquired area; structures outside the protected area;
- (iii) Clearly indicating protected area and area acquired or transferred to the Archaeological Survey of India;
- (iv) Mapping of all structures in Prohibited and Regulated Area on plan;
- (v) Other features like tank, embankment, mud fortification, remnants of ancient structures, etc. to be shown;
- (vi) Roads and pathways;
- (vii) Open area;
- (viii) Sewerage pipelines, big open drains with more than one meter width, canals, etc.;
- (ix) Water supply lines, water works, etc.

#### **The Second Schedule [Rule 22]**

##### **Parameters for Heritage Bye-Laws**

The heritage bye-laws shall be framed on the basis of the site plan prepared for each of the prohibited and regulated areas of the protected monuments and the following parameters, namely -

- (i) Architectural, historical and archaeological value of the monument.
- (ii) Sensitivity of the monument (e.g. developmental pressure, urbanization, population pressure, etc.)
- (iii) Visibility from the protected monument or area and visibility from the regulated area
- (iv) Land-use to be identified
- (v) Archaeological heritage remains other than the protected monument(s)
- (vi) Cultural landscape
- (vii) Significant natural landscapes that form part of cultural landscape and also helps in protecting



- the monument from environmental pollution
- (viii) Usage of open space and constructions
- (ix) Traditional, historical and cultural activities
- (x) Skyline as visible from the monument and from regulated areas
- (xi) Vernacular architecture
- (xii) Development plan as available by the local authorities
- (xiii) Building related parameters; height, floor area, usage, façade design, roof design, building material, colour, etc.
- (xiv) Visitor facilities and amenities

### **Components of a Site plan**

#### **I) Revenue map as the base of the site plan:**

As per Rule 21 (2) of AMASR Rules, 2011 states: "the demarcation of the protected monument and protected area shall be undertaken in consultation with concerned revenue officer on the basis of revenue map duly mentioning revenue plot numbers and schedule thereto".

Rule 21 (4) of AMASR Rules, 2011 states: "The site plan shall be prepared following the notified protected limit of the protected monument or the protected area, the duly authenticated revenue records and the revenue map furnished by the District Collector or District Commissioner as the case maybe".

Mapping of the site plan on the Revenue map as the base is crucial in rationalizing the boundaries of the protected, prohibited and regulated areas. It clearly indicates the status of the plots falling in these areas.

#### **II) Administrative Boundaries:** Village boundary, tehsil boundary, district boundary, state boundary, etc.

#### **III) Grid lines:** usually in latitude and longitude or coordinates for precise location reference.

As mentioned in the First schedule of AMASR Act, 1958 of year 2018 copy: "Protected area needs to be mapped in such a manner that property and feature within the area can easily be identified. Therefore the area shall be required to be gridded both on map and ground. Grids can be of 50 x 50 metres."

#### **IV) Notified Protected Boundary:**

The site plan should accurately demarcate the notified protected limits along with mapping of all the structures in the protected limit of the monument.

Site coordinates on all the edges of the protected boundary so as to precisely demarcate the boundary on other digital platforms.

#### **V) Boundary of Acquired Land under ASI:** any adjoining land beyond the protected limit under the Supervision of ASI such as Donated / Gifted / Taken Over / Acquired / Purchased, Etc. shall also be denoted in the site plan. {Refer Annexure I (Point 24- 34)}

#### **VI) Mapping of the Protected Monument:**

Rule 21 (7) of AMASR Rules, 2011 states: "The mapping of protected monument and protected area shall comprise of plan and section of each structure, pathways, landscaped area, open spaces, trees, other features like tank, well, embankments, fortifications, remnants of ancient



structures and such other features including caves and rock-shelters as may be deemed fit that form part of cultural landscape of the protected area”.

## ANNEXURE - II

The overall height of the monument or other structures in the protected area should be mentioned. A cross section of the monument and its protected limit, mentioning the height or depth of the structure (in case of sub-terranean structures) is important to understand the skyline of the monument and its relationship with that of its surroundings.

### VII) Boundaries of the Prohibited and Regulated Areas:

The Site plan should accurately demarcate the boundaries of the prohibited and regulated areas. Since this is the most important aspect of a site plan, it is essential that these boundaries are clearly visible amongst all the other elements shown in the plan. Standard colours should be used for the same, as mentioned in the Legend attached.

### VIII) Area of the Protected, Prohibited and Regulated Areas:

The site plan should mention the quantified area covered by the protected, prohibited and regulated areas individually and collectively in standard SI units. ( $A+B+C = D$ )

### IX) Geographical Setting and Natural Features

#### (i) Terrain:

**Contours:** Mapping of contours is essential to understand the topography and terrain of the protected monument/area as well as its surrounding (ex. hilly or mountainous terrain will have denser contours as opposed to a flat land). On a more site specific level, contours are required in understanding the drainage in and around the site.

**Contour Intervals:** The vertical distance between adjacent contour lines, which indicates the steepness of the terrain. Smaller intervals are used in steeper areas, while larger intervals are used in flatter areas.

As mentioned in the First schedule of AMASR Act, 1958 of year 2018 copy :  
“Contouring (1metre interval) is preferable. However, it can vary depending on the nature of landscape. If it is hilly terrain with cliffs, then contour intervals can be increased. If the landscape is plain, then it can be reduced to 0.5 metre.”

\*Spot levels between the contour lines are not required.

#### (ii) Hydrography: Depiction of water bodies, including seas, oceans, rivers, lakes, ponds, and wetlands, with depth contours and flow direction when applicable.

- Shore line along sea-front and ocean front, Ghats and other riverfront developments to be marked on the site plan.

#### (iii) Eco sensitive areas: Eco-Sensitive Areas (ESAs) are designated regions that are ecologically fragile and require special attention and protection to conserve their unique environmental and ecological characteristics. Ex. National parks, bird sanctuaries, biodiversity parks, botanical gardens, mangroves, zoo, etc.

#### (iv) Green and Open Spaces: Representation of different types of vegetation, such as forests, grasslands, shrub lands, and cultivated areas, etc.



**X) Built fabric:**

As mentioned in the First Schedule; all built structures should be mapped on the site plans. The size and shape of existing buildings and structures including houses, garages, sheds, and any other significant features should be noted.

- (i) **Building footprint and plot boundary:** It is important to mark both the plot boundary/compound wall and the building footprint to understand the relationship of the built and open spaces, setbacks, etc.

(ii) **Building use:**

While mapping the built structures, information regarding the building use/typology such as residential, commercial, institutional, industrial, etc. should be collected. This information shall be denoted as per the Legend provided in Annexure I.

In certain cases, the Major Designated land-uses falling in the vicinity of a CPM may be identified and denoted.

This information is important to understand the type of activity around the CPM, thus important for the bye-laws.

Refer Annexure I (Pt 24- 34) for the legend of common building usages.

- (iii) **Vernacular/traditional architecture:** Denoting vernacular/traditional architecture and settlements, if any around the monument, should specify the building use {Refer IX (ii) of the Manual}, its material and style in the legend. It shall be denoted as - V.HT {Refer Annexure I (Pt 30)} on the specific hatch of the building footprint.  
e.g. kath kuni architecture is the vernacular building style of the hills of northern India.

- (iv) **Building height:** All the structures mapped in the Site plan should mention their height on the building footprint. This information is essential to understand the skyline around the monument and analyze the viewpoints of and from the monument.

- (v) **Centrally Protected Monuments in close vicinity** with one another and overlapping Prohibited or Regulated Areas shall be considered as a cluster and it is suggested they be prepared in a single site plan.

- (vi) **Other Protected Monuments and Heritage Buildings:** Any other state protected monument or listed heritage building by the local authorities including but not limited to unprotected Archaeological Monuments and buried sites, if any, in the Prohibited or Regulated area to be denoted on the Site Plan as designated in the Legend (Annexure I).

- (vii) **Temporary Constructions:** Temporary structures refer to constructions and buildings that are designed for short-term use. Generally materials such as tin sheets, asbestos sheets, tarpaulin and tensile membrane roofs, etc.

- (viii) **Slums / Squatter Settlement / Unauthorized Construction :** Any Slum, Squatter Settlement and Unauthorized Construction Area shall be marked with the designated hatch as per Annexure I.

- (ix) **Under Construction:** Ongoing construction projects to be marked on the site plans.

- (x) **Army/ Cantonment Area:** Defense / military areas, compounds and campuses.

**XI) Transportation:**



(i) **Roads:** national highways, state highways, expressways, by-pass, ring roads, major city roads, earthen roads, paved roads, etc. **ANNEX**

(ii) Flyover, foot-over-bridge, tunnel, bridge across river, BRTS, etc

(iii) Railway tracks, metro tracks, tram tracks, cycle tracks, etc

(iv) Railway station, airports, metro station, harbour, port, bus stands, bus terminals, Etc.

**XII) Public amenities:**

(i) **Parking:** The layout of parking areas, including multi-level parking, parking spaces, aisles, and any necessary handicapped-accessible spaces.

(ii) Footpaths and Pathways

(iii) Drinking water facility, toilets, kiosks, facilities for physically challenged, publication counter, souvenir shops, ticket booths, information counters, visitor facilitation centres, parking facilities for various types of vehicle, generator rooms.

(iv) Police booths/ security posts, etc.

(v) Street lights, seating arrangements, etc.

**XIII) Electrical:** Electrical pole, transformers, high tension tower / transmission tower, electric substation, etc.

**XIV) Water Supply, Drainage and Sewage:** Information about storm-water management, including catch basins, culverts, and drainage channels to prevent flooding and manage water runoff.

- Over-head water tanks and other water storage chambers.
- Hand-pumps/ tube-wells, wells
- Sewage lines, Sewage Treatment Plants and other solid waste management techniques.



**a. Legends and Symbols:** A legend or key that explains the symbols, colors, lines and abbreviations used in the site plan to represent various features and characteristics.

- i. Standard colours of **RED**, **YELLOW** and **GREEN** may be used to demarcate the protected, prohibited and regulated areas respectively.
- ii. Standardised legend for symbols to be used in site plan. The same is enclosed in Annexure I for reference.
- iii. All the categories in the legend must be divided into separate layers in AutoCAD and PDF for convenience in reading and analysis of the site plans at the time of preparation of the HBL.

**b. Measurement and Units:**

- i. Standard SI units to be followed for measurements (km, meters, sq meters, etc)
- ii. A graphical or bar scale for measurement to be provided in the format of the Site plan as the plan may be reproduced at a smaller or larger scale in the final bye-laws.

**c. Contours:**

- i. The contour interval should be determined by the slope of the terrain. For ex. in steep areas, with dense contours, the contour intervals should be more so as to avoid overlapping of layers, as opposed to flat terrains.
- ii. The layer of the contours must be of lower line-weight and under all the other layers.
- iii. The contour lines must be visible under the hatching of the built structures to clearly understand the terrain of the land.
- iv. Contour lines to be consistent and continuous throughout the Site Plan.

**d. Other Guidelines:**

- i. The line-weight (line thickness) of the boundaries of the Protected, Prohibited and Regulated areas to be thicker than other lines in the plan, so that this demarcated area stands out.
  - ii. Height of all the built structures should be mentioned on the footprint of the structures shown in the Site Plan.
  - iii. The hatching of built structures should not be solid but as depicted in the legend. It must be of lower line-thickness and in the suggested colour for the specific typology of the building.
  - iv. Text size should be legible in print.
- New technologies like orthomosaic mapping and drone should be encouraged in the preparation of the site plans as illustrated by Experts of the Domain.

**e. Standardised Format**

In order to bring uniformity in the contents, format and style of the Site Plans prepared by the different circles of ASI, the following is proposed:-

Refer Annexure II



**Annexure II SITE PLAN SHOWING THE PROTECTED, PROHIBITED AND REGULATED AREA OF (MONUMENT NAME), (DISTRICT), (STATE)**

**LEGEND**

SYMBOL	DESCRIPTION
[Symbol]	Monument
[Symbol]	Protected Area
[Symbol]	Prohibited Area
[Symbol]	Regulated Area
[Symbol]	Other

**MONUMENT DETAILS**

NAME	LOCATION	DATE

**AREA STATEMENT**

AREA OF LAND UNDER PROTECTION (A) (sq. m)	AREA OF LAND UNDER PROHIBITION (B) (sq. m)	AREA OF LAND UNDER REGULATION (C) (sq. m)	TOTAL AREA (A+B+C) (sq. m)

**SITE COORDINATES**

POINT	EASTING	NORTHING
1		
2		
3		
4		

**TIME DETAILS**

DATE	TIME	LOCATION	NAME

**NAME OF THE MONUMENT**

**OTHER DETAILS**

1. Height of the Monument: \_\_\_\_\_
2. All dimensions and its nature shall be specified
3. Contour Interval: \_\_\_\_\_
4. Surveyed Date: \_\_\_\_\_
5. Drawing No: \_\_\_\_\_

**SCALE**

**DATE**

**SURVEYOR**

**REGIONAL DIRECTOR**

\* This is a representation of the Standard Format and the information to be shown in the Survey Plan. Additional information may vary according to the monument and its context

The site plan should be plotted on a suitable scale and sheet size as may deem fit. The format should mention the following points:

1. Name and location of the Monument
2. Grid lines
3. North symbol to be present mandatorily in all of the site plans which is essential for understanding the site's relationship to cardinal directions.
4. Legend
5. Site Sections
6. Site Photographs
7. Area statement: Quantified areas within the Protected, Prohibited and the Regulated boundary ( $A+B+C = D$ )
8. Site coordinates of the monument on all edges of the protected boundary
9. Benchmarks (Tbm) coordinates
10. Survey date
11. Graphical Scale
12. Surveyor/Agency name to be mentioned.
13. All site plans to be duly signed and stamped by the concerned officials. Soft copies (PDF) of the Site plan to have digital signatures.
14. Any other site specific relevant data and information.

It is felt that a well prepared site plan shall not only ease the preparation of HBL in a timebound manner but also iron out any potential ambiguities.



## LEGEND

Sl. No.	DESCRIPTION	SYMBOL
1	Revenue Boundary Colour Code- 200,148,147	
2	Protected Boundary Colour Code- 255,0,0	
3	Prohibited Boundary Colour Code- 255,255,0	
4	Regulated Boundary Colour Code- 0,255,0	
5	Boundary of <b>Acquired land*</b> under ASI Colour Code- 255,0,0	
6	Structures in the Protected area Colour Code- 255,127,0	
7	Other State Protected Monuments and Heritage Structures** Colour Code- 236,184,168	
8	Gate of the Monument	
9	State Boundary	
10	District Boundary	
11	Tehsil/Block Boundary	
12	Village Boundary Colour Code- 246,101,251	
13	Contour Line Colour Code- 176,98,57	
14	Water Bodies (River, Lake, Pond, Ocean, Sea, Etc.) Colour Code- 0,191,255	
15	Eco Sensitive zones Colour Code- 23,112,71	
16	Green Spaces (gardens, parks, landscaping, Etc.) Colour Code- 23,112,71	

Sl. No.	DESCRIPTION	SYMBOL
17	Open land/field Colour Code- 204,127,102	
18	Agricultural Land Colour Code- 104,161,106	
19	Forest Area Colour Code- 104,161,106	
20	Forest Boundary Colour Code- 40,121,21	
21	Plot Boundary	
22	Boundary Wall Colour Code- 127,0,31	
23	Fencing	
24	Building-Residential Colour Code- 255,255,0	
25	Building-Commercial Colour Code- 255,255,0	
26	Building-Industrial Colour Code- 127,0,255	
27	Building-Educational Colour Code- 0,0,255	
28	Building-Public / Semi Public Colour Code- 176,98,57	
29	Health Services Colour Code- 89,172,166	
30	Vernacular/Traditional Colour Code as per Building Use	
31	Mixed Use buildings Colour Code- 255,127,0	
32	Utilitarian buildings Colour Code- 153,153,0	

\*Acquired land: purchased/acquired/donated/gifted/taken over by ASI etc.

\*\*Including but not limited to unprotected archaeological monuments and buried sites within prohibited and regulated areas. 1



# LEGEND

















Sl. No.	DESCRIPTION	SYMBOL
33	Slum Area/ Unauthorised Construction Colour Code- 211,185,150	
34	Army/Cantt. area	
35	Under Construction Land Colour Code- 167,142,195	UC
36	Temporary Construction Colour Code- 167,142,195	
37*	National Highway Colour Code- 166,166,166	NH
38*	State Highways, Expressway, Bypass, Ring Road, Major City Roads Colour Code- 166,166,166	Name of the road
39*	BRTS Colour Code- 173,173,173	BRTS
40*	Paved Area/Road Colour Code- 99,100,102	
41*	Earthen Road Colour Code- 204,153,102	
42*	Bridge across river Colour Code- 132,132,132 Colour Code- 0,127,255	
43*	Under pass Colour Code- 132,132,132	
44*	Flyover	
45*	Subway	
46*	Foot over bridge	
47*	Tunnel	
48*	Railway Track	

Sl. No.	DESCRIPTION	SYMBOL
49*	Metro Line Colour Code- 255,191,0	
50*	Cycle Track Colour Code- 132,132,132	
51	Railway Station	
52	Bus Terminal / Bus Stops	
53	Airport/Airstrip	
54	Metro Station	
55	Port/Harbour	
56	Parking	
57	Footpath Colour Code- 255,191,127	
58	Public Toilet	
59	Police Booth/ PCR	
60	Street Light	
61	Electrical Pole	
62	High Tension Towers / Transmission tower	
63	Electric Sub-Station	SUB
64	Electric Power Plant	

\*37-50 - Right of way / road width shall be mentioned.



**Annexure - II**

Sl. No.	DESCRIPTION	SYMBOL
65	Transformer Colour Code— 204,0,0	
66	Water Supply Line Colour Code— 102,153,204	
67	Water Pumping Station	
68	Water Treatment Plant	
69	Culvert	
70	Over Head Tank	
71	Hand Pump/Tubewell	
72	Well Colour Code— 0,255,255	
73	Drain Colour Code— 0,191,255	
74	Main Sewer Line Colour Code— 140,94,59	
75	Sewage Treatment Plant Colour Code— 127,79,63	
76	Temple	
77	Mosque	
78	Church	
79	Gurudwara	
80	Cemetery/ Graveyard	

[illegible]