Department of Town & Country Planning, Haryana

User Manual
Mobile Application for Change Detection & Monitoring
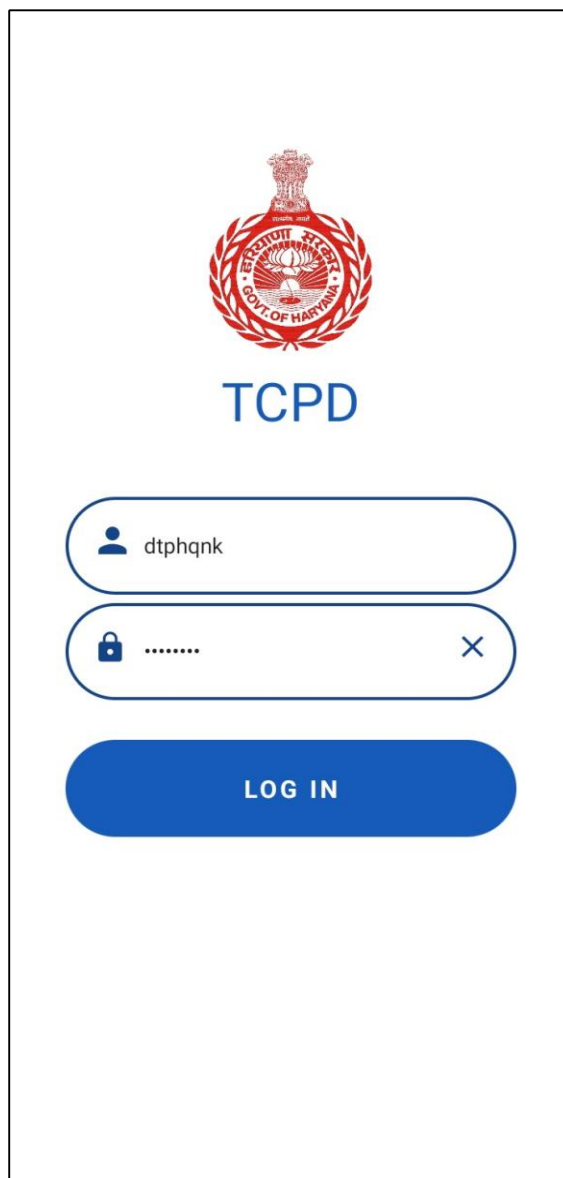
Developed by **SkyMap Global Private Limited**

Background:

Accurate Change detection, monitoring system and correct Enforcement using high resolution imagery is a prerequisite in understanding the true urban growth development process. In this scenario, Geospatial technology plays a critical role in providing spatial information that is helpful for change detection and monitoring for different activities. The technology is able to provide insight information about the land, cultivated areas, and agriculture land, built up structures. Therefore a Geo-tagging mobile Application is developed to verify the actual situation from the information provided by the web portal, and to enforce necessary steps which need to be taken.

SkyMap has designed, build, and delivered a customized user-friendly web-enabled GIS based Change Detection application platform and mobile app system. The purpose of the system is to view and manage 2D (area) and 3D (height) change detection of urban construction activities in the areas of interest using high resolution Satellite imagery; it will provide storage, access, and visualization of legacy and future data, including analysis result, illegal building notices and building status etc.

<u>Mobile Application</u>
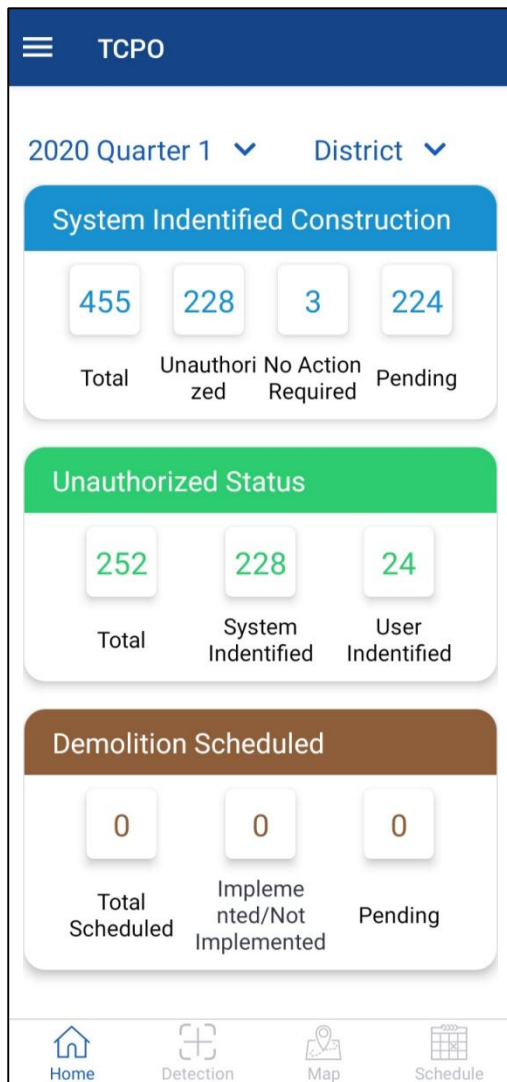
<u>Getting Started :-</u>
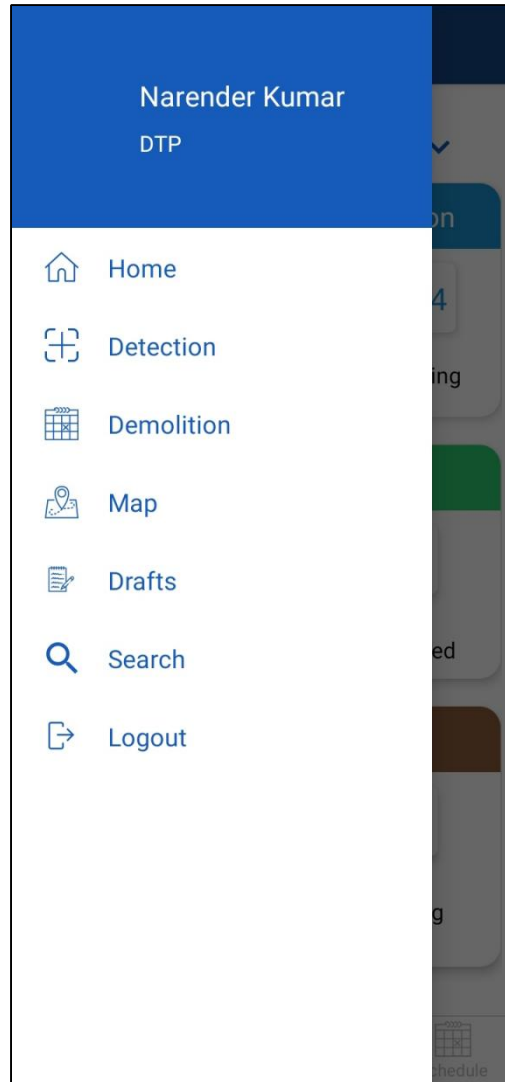

Login Page – Username & Password

Login to TCPD/DTCP Mobile App with registered Enforcement/SSO Username and Password.

Login is based on AOI for:-

- *JE/DTP login can see his district*

- *STP login can see his circle districts*

- *DTCP & CTP login for entire districts*

Home Page

Home Page – Sidebar Menu

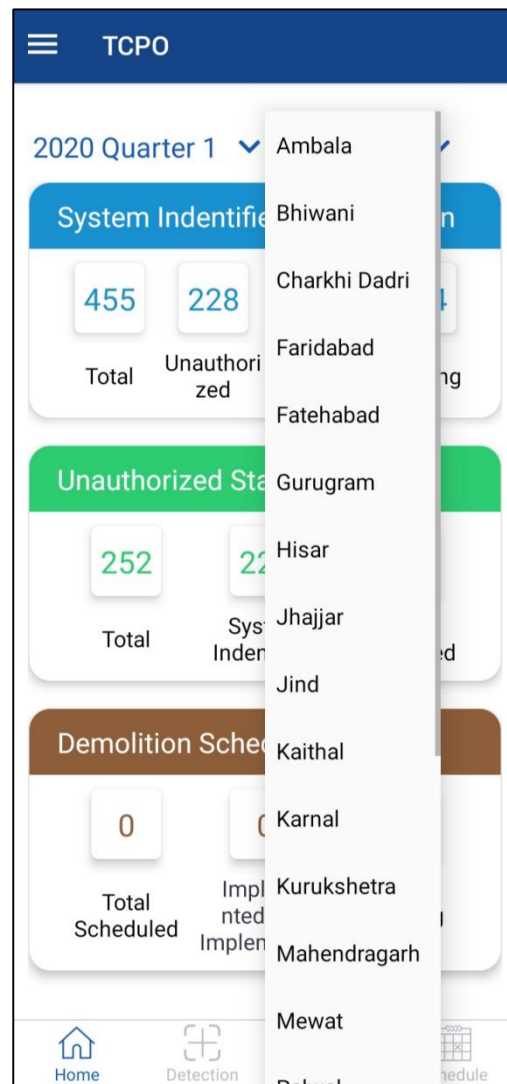Sidebar menu shows the same navigation as the Bottom Navigation Bar:

- Add Detection Report
- Demolition Schedule
- Change Detection Map
- Saved Drafts.

User can also log out of User account in Sidebar Menu by clicking on the Log Out button.

User can also Search in Sidebar Menu by clicking on the Search option.
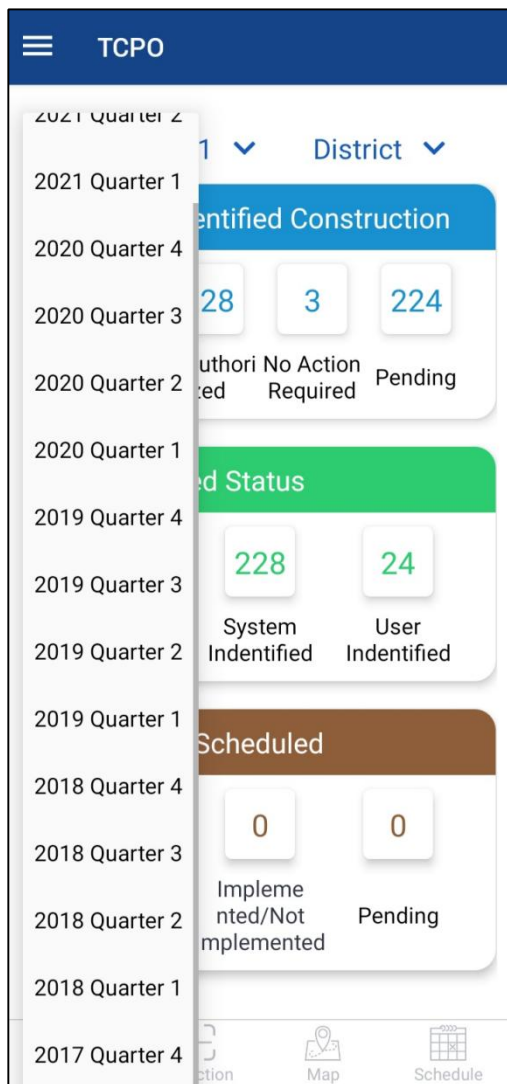
Home Page – Select Time Period   *Home Page – Select District*

User can see the brief overview of the recent activities according to the selected time period; user can select the time period and District from dropdown. Additional info will also be shown when user clicks a specific group(eg: Unauthorized enforcement report).
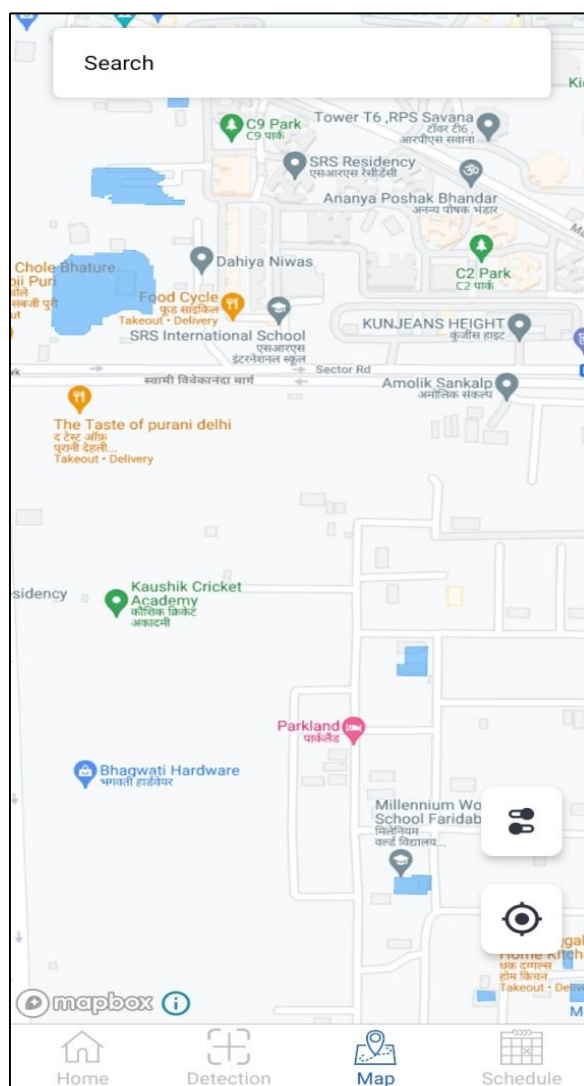
Change Detection Map - Explore Map

User can see User position on the map along with latest change detections nearby.

The map will also highlight an area within 10m radius from User location, this radius can be adjusted by clicking on the settings icon.

a) In case the detection detail is already available in the DB, the application will take the user straight away to the Demolition screen

b) In case, the detection detail is not available in the DB, the mobile app will take user straight away to the detection screen.

c) For unauthorized constructions (including colonies) identified in the quarterly report, if thedata already exist in the Enforcement desktop app of the department, there will be a provision to create a polygon in mobile app and link the existing enforcement-id with that polygon.

d) For constructions that are not identified in the quarterly report, give option to user to add new polygon > user will be able to create a polygon on map and add detection details / link enforcement file id with the polygon
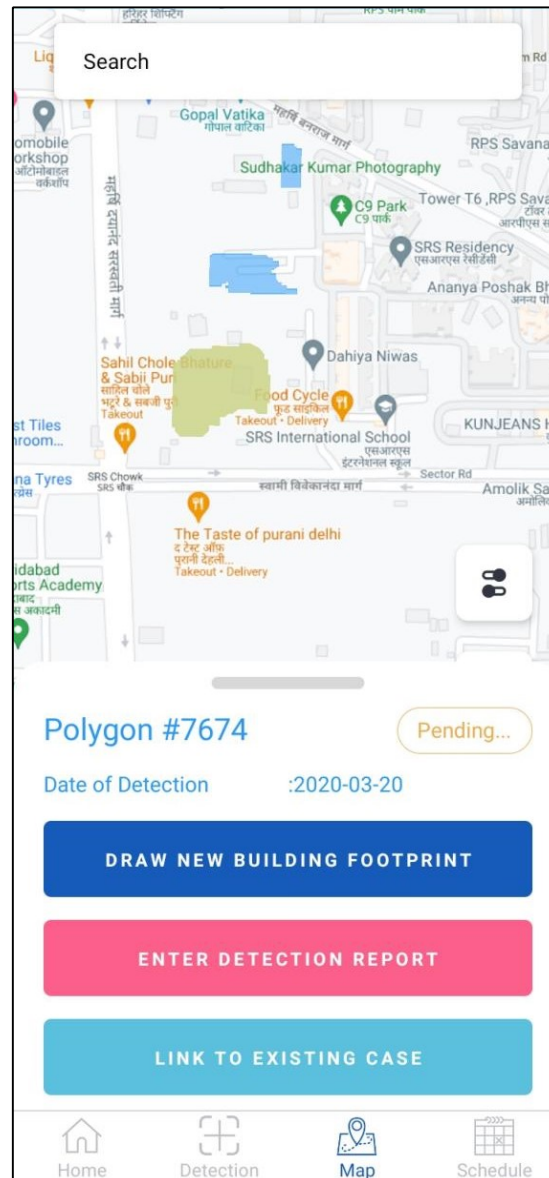
Change Detection Map - Select Polygon
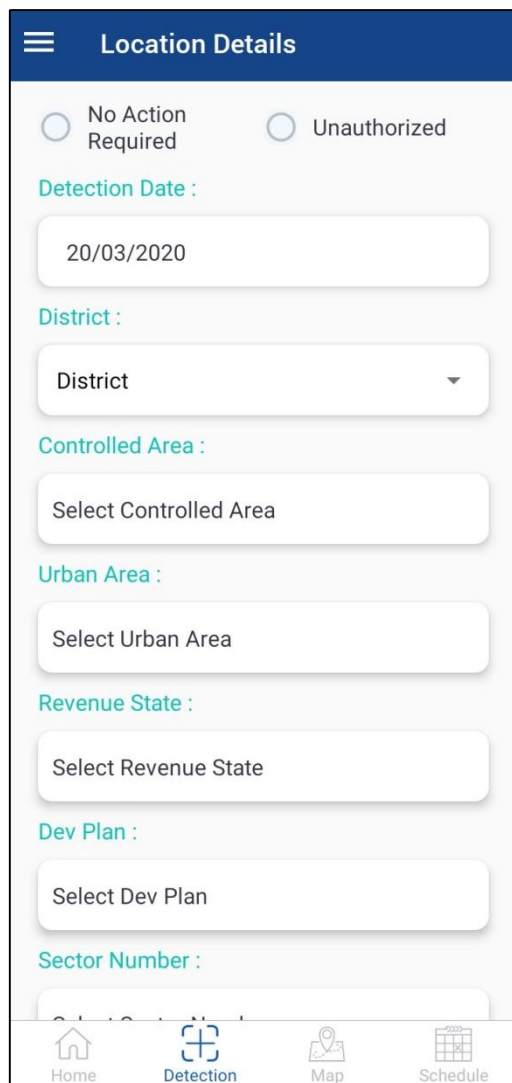
User can select a change detection polygon and view the status of the change detection polygon.

User can then add new building footprint by clicking on 'Draw New Building Footprint'; the building footprint will be initialized by the selected change detection polygon, but User will be able to adjust thepolygon
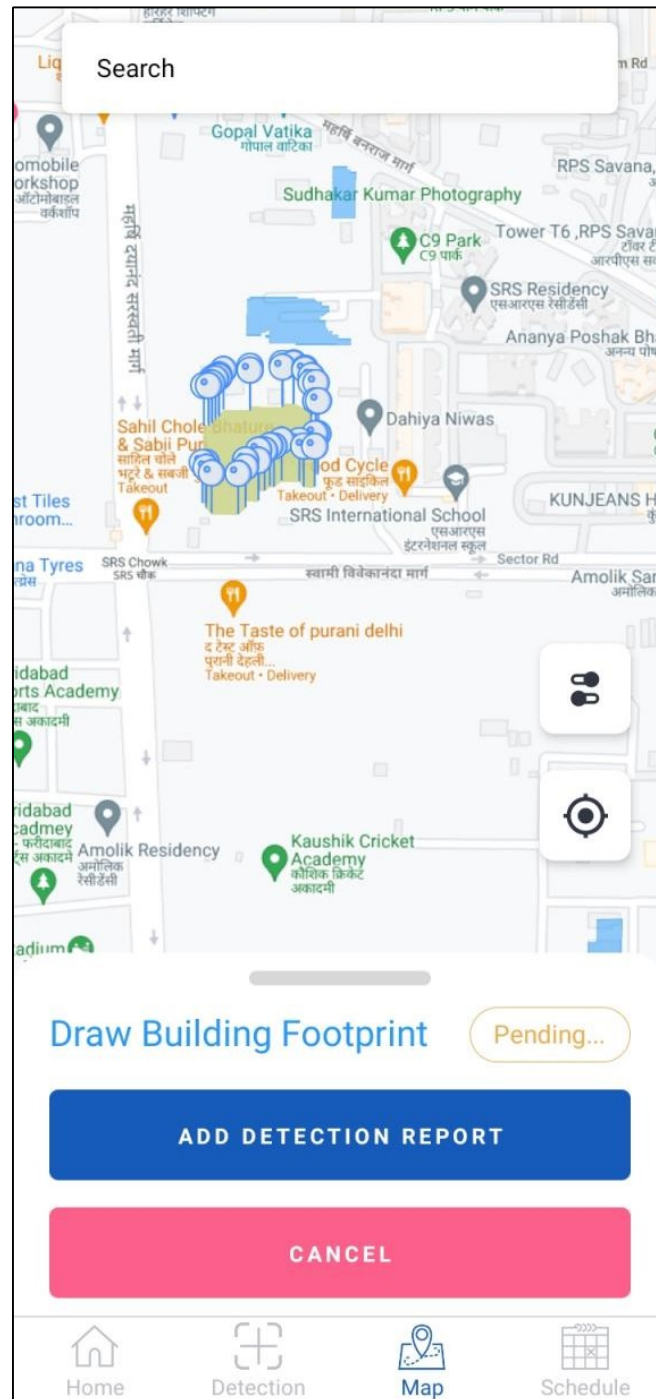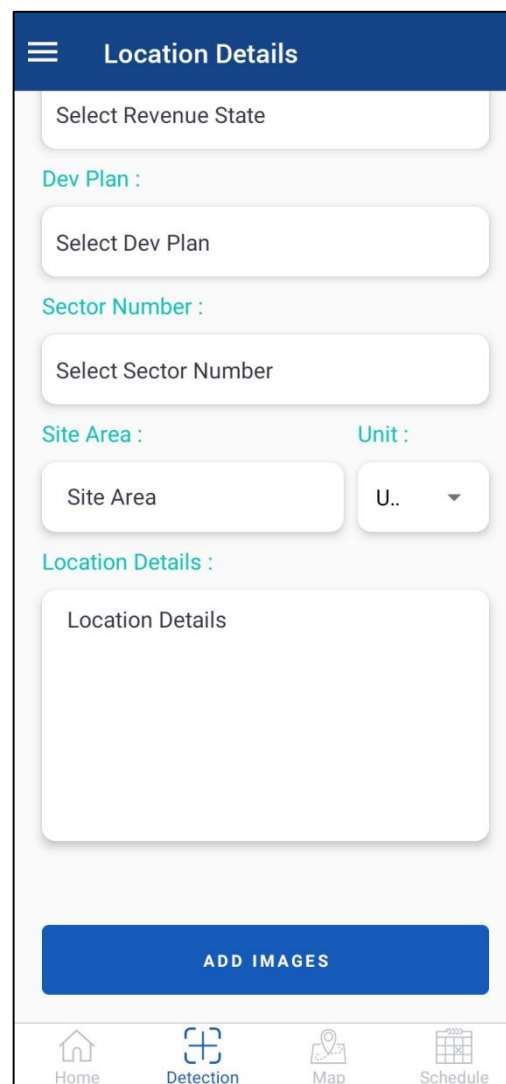
Detection – Adjust Building footprint

User can draw/adjust the building footprint for the detection report. Click 'Add Detection Report' to proceed to the Detection Report form.

Detection – Add Site Information

Detection – Extended Site Information

This is the first page of Detection Report form. User can fill in Site Information of the detected building.

- Select type of site: Construction/Colony.

- Select status of site: No Action Required / Unauthorized.

- If User have previously drawn a building footprint, the District Id, Controlled Area, Urban Area Id, and Area will be pre-filled based on the Building Footprint drawn but User can manually adjust it if User needs to.

- Click 'Next' to proceed.
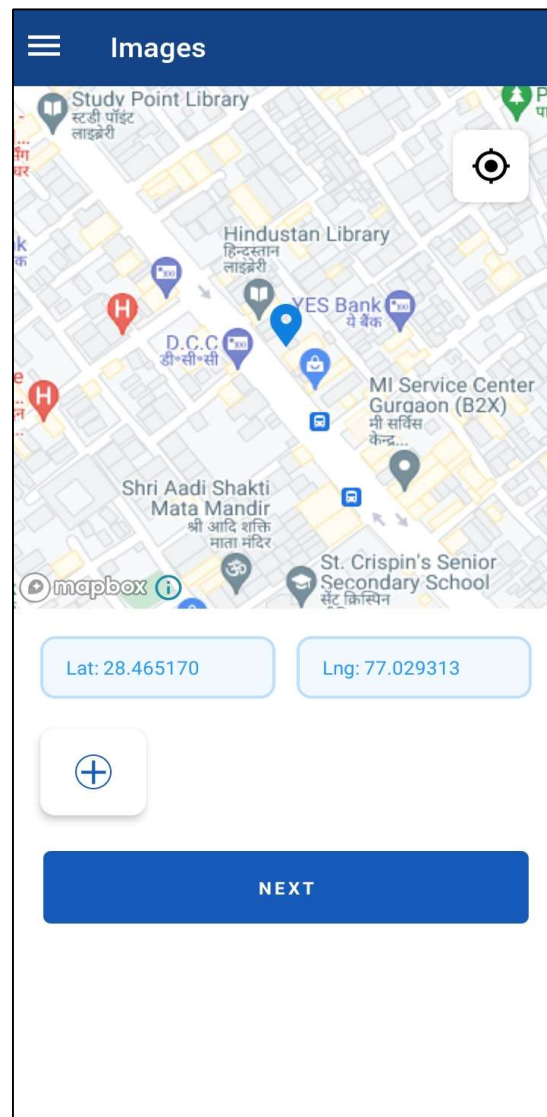
Detection Report - Coordinate and Images

- ☐ Coordinate will be pre-filled based on User GPS location but User can adjust it if needed.

- ☐ User can also add related photograph for the detection report.

- ☐ Photograph is not optional for Authorized Building. Click 'Next' to proceed.

Detection – Capture Images

Capture Photograph; Click the 'Cross' icon to cancel, click 'Camera' icon to capture, click 'Check' icon to confirm image. For authorized building Image Capture is not compulsory. But for Un-Authorized and Demolition Image Capture is compulsory.

Detection – Info for Authorized building   *Detection – Authorized Category Options*
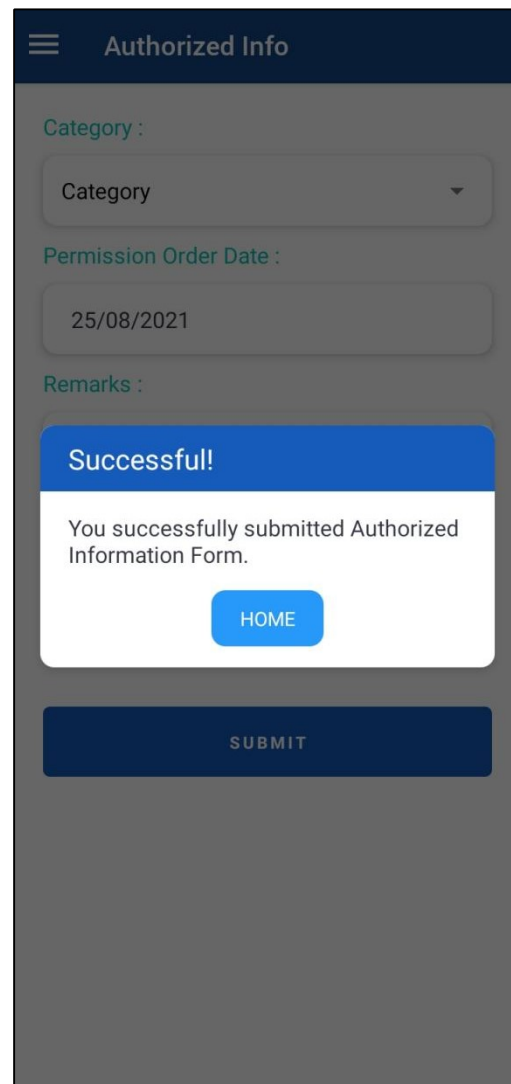
Add additional information regarding the detected authorized building. User will have the information with him/her regarding the details of authorized building. We will rename or detele the "Permission Order Date" if required by the department.

Detection – Submit Detection Report for Authorized building

☐ User successfully submitted the Authorized Detection Form.

☐ For Authorized Buildings detail will be stored in the Change Detection Database.

Note: The Enforcement file id will be created only in case the construction is identified as unauthorized after field updation by the staff.

Detection – Select Case Type for Unauthorized Site

- Select type of case for unauthorized site: UC/ISL/MOL.

Detection – Add site details ofUnauthorized Site
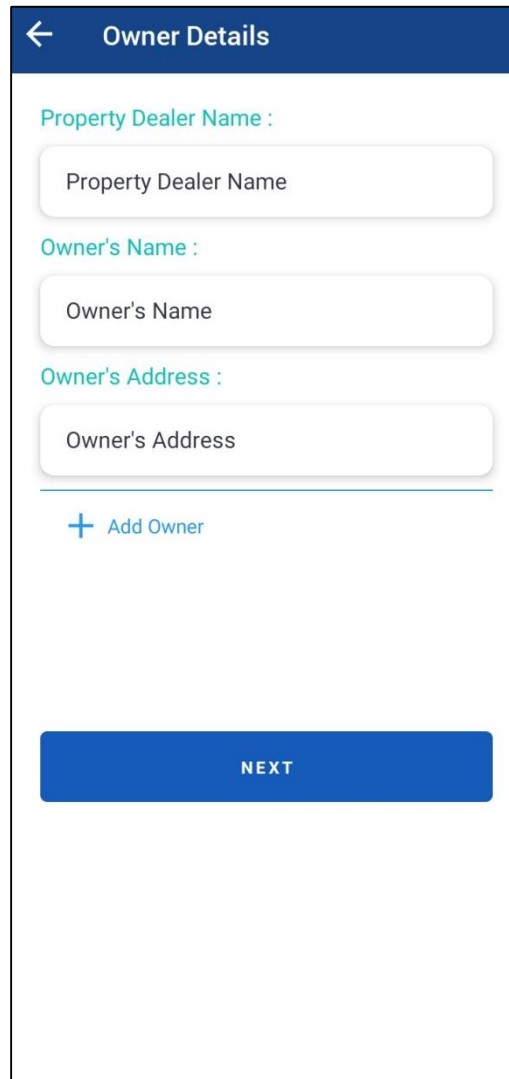
Detection – Extended Add site details of Unauthorized Site

- Site information such as development plan and sector number will be fetched from the TCP GIS Database for auto fill up. Mobile user can edit these details.

- Click 'Next' to proceed.

Detection – Owner details for Unauthorized Building

Add additional information regarding the building owner.

This is the last form for UC type, if the case type is ISL/MOL, user can click 'Next' to proceed. (The type of button shown will depend on the Case Type selected in Site Details). We will adjust the Owner or Property dealer details according to case type if required by the department.

Detection – Unauthorized Construction Report Submitted

The file once submitted for a particular detection to enforcement module, same cannotbe submitted again.
User successfully submitted the UC Detection Report!

Detection – Add Additional Details for ISL Report

Add additional ISL related information if the type of unauthorized building is Illegal Subdivision of Land (ISL). Click 'Submit' to submit the ILS Detection form.

Detection – Illegal Subdivision of Land Report Submitted

User successfully submitted the ISL Detection Report!
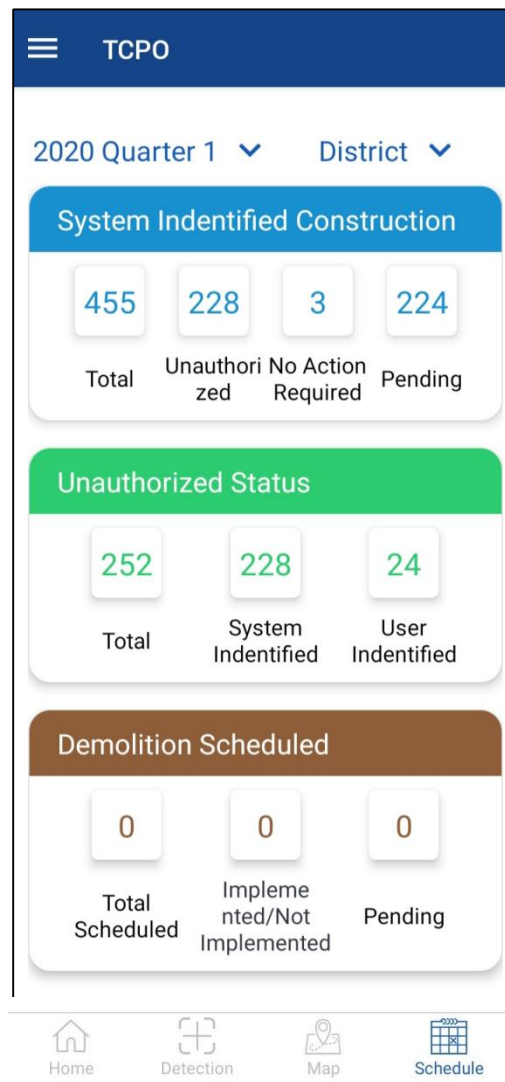
Home Page – Select Schedule

Demolition – Demolition Schedule

User can check Demolition Schedule and select a File ID that contains Demolition ID that Userwant to update, then click 'Go to Demolition Drive'
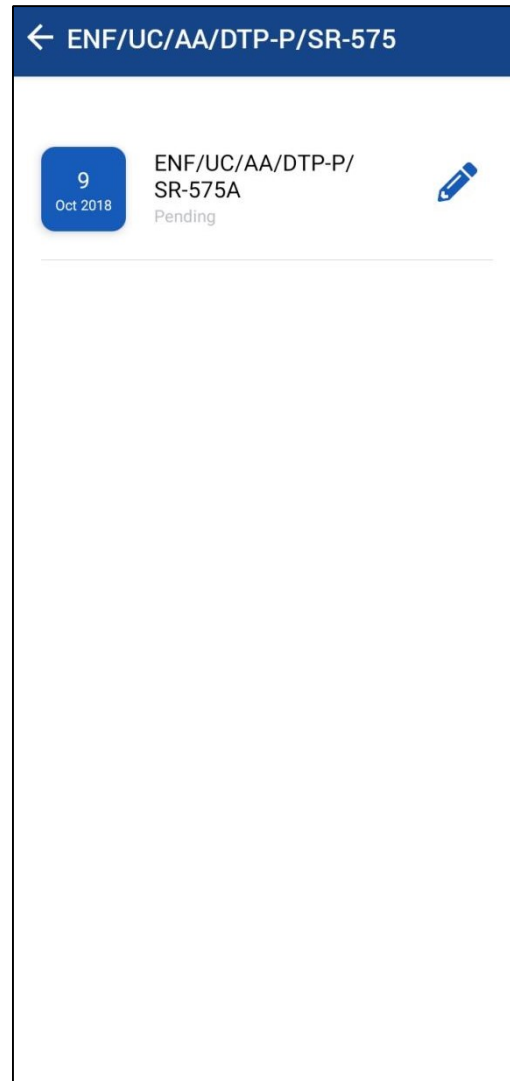
Demolition – Selection of Demolition ID

Click 'Edit' on the row of the Demolition ID that User want to update

Demolition – Updation of Demolition Status

Update the information that needs to be updated and optionally add images related to the demolition. Click 'Update' to save the changes.
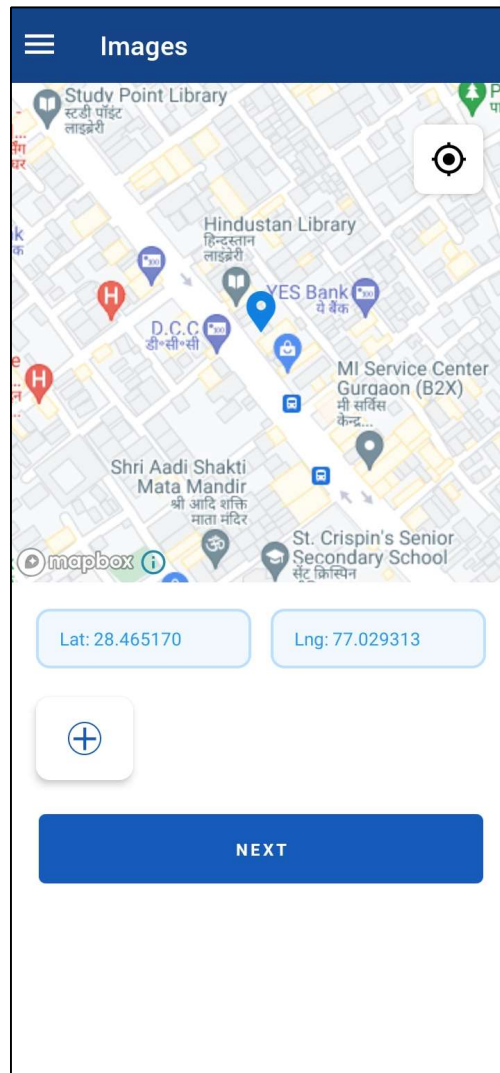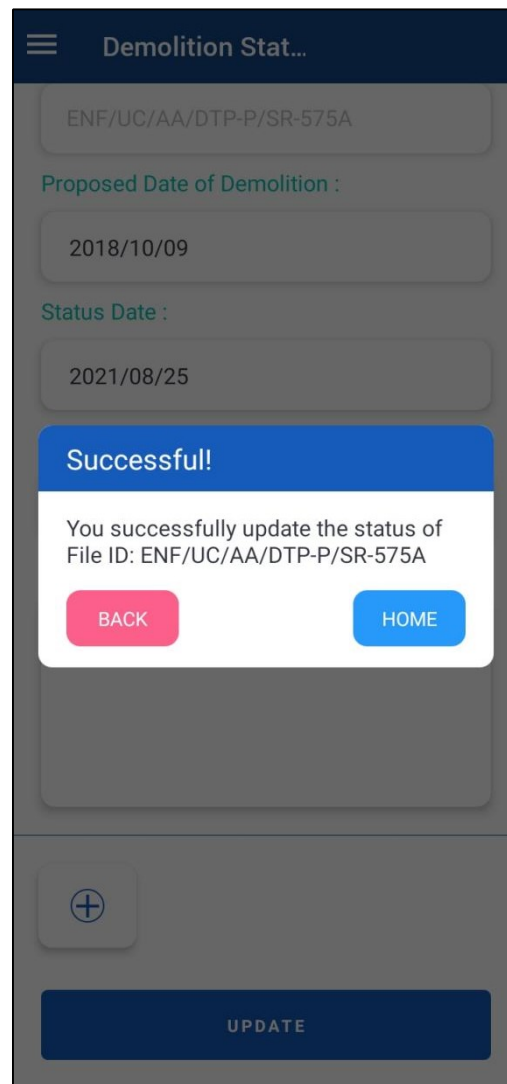
Demolition – ADD Geo-tagged Photograph

Demolition – Capture Geo-tagged Photograph
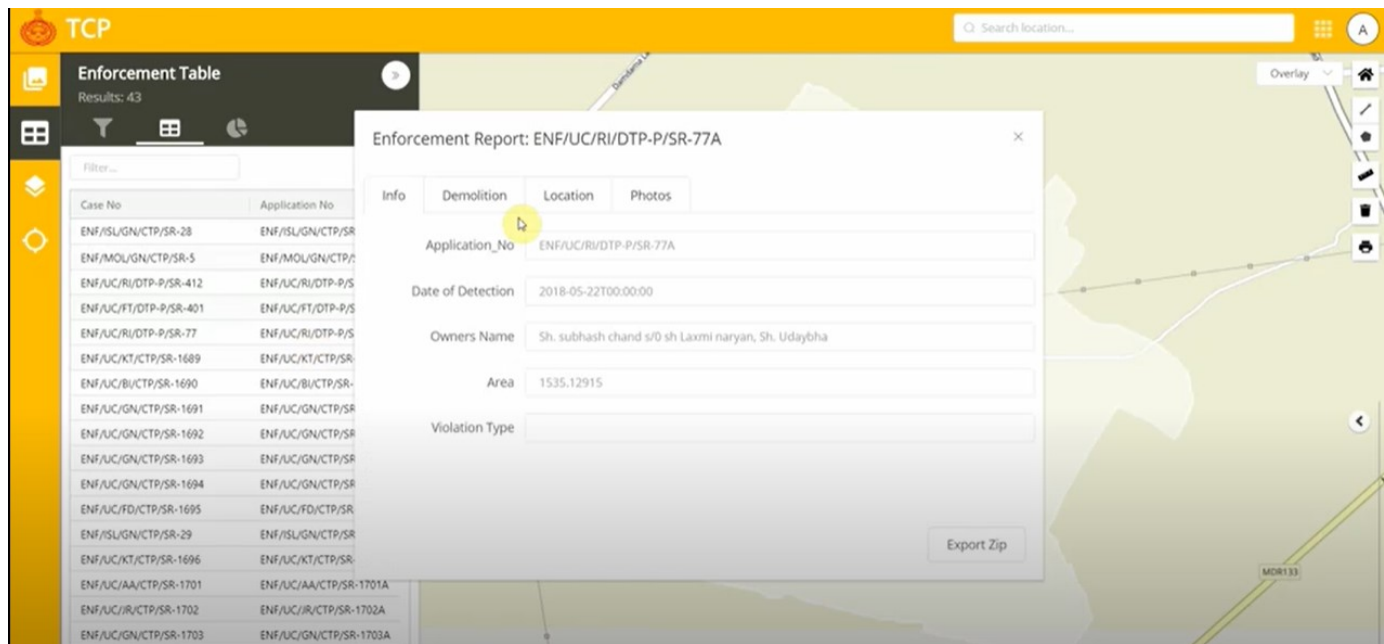
It is compulsory to add photos by the Mobile User.

Demolition – Submission of Demolition Status

User successfully updated the Demolition Update Form!

After successfully updating the form in Mobile Application, user can check the report on the Web Application
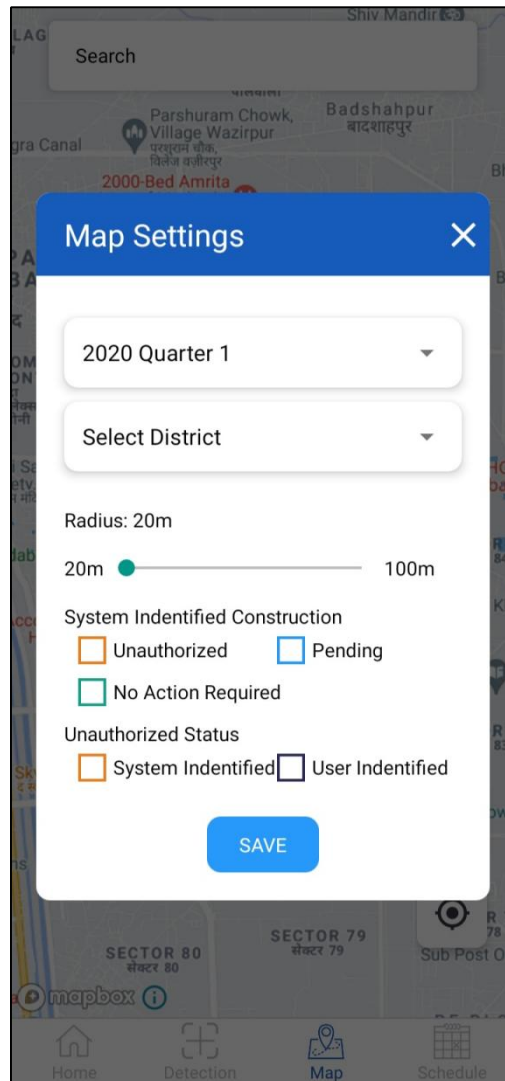
General Mobile APP Settings

Search by :
- [ ] File ID
- [ ] Owner Name
- [ ] Revenue Estate
- [ ] Demolition Date Range
- [ ] Detection Date Range
- [ ] Controlled Area
- [ ] Urban Area