

STATE HIGHWAY ADMINISTRATION

Revised: 01/25/2021

CONSTRUCTION DIRECTIVE 07220.100.41

SUBJECT: Mobile Device Requirements

FORM NO: N/A

- **A.** <u>GENERAL</u>: This Directive establishes new minimum requirements for mobile devices for construction management and inspection staff who are working on Maryland Department of Transportation State Highway Administration (MDOT SHA) projects. Consultant Firms shall provide mobile devices to all construction project engineers, office engineers and field inspectors to support the use of e-Construction. Required devices include but shall not be limited to both a smart phone and iPad.
- B. PURPOSE: The MDOT SHA Office of Construction (OOC) adopted a mobile-first approach that allows field employees to work with a device that many are already familiar with. The value of mobile devices is especially clear with our field employees and consultants. Mobile apps streamline our field operations by easily communicating project data, daily activities, schedules and needed resources while on a project. With access to relevant and timely project and customer information, field staff resolve customer issues more efficiently. This benefits all stakeholders, because by simply providing employees a mobile device with both internal & publicly available apps won't necessarily make their job easier. If the device does not provide useful information, is not able to connect to back-end systems efficiently or help make digital reporting easier, it will likely cause frustration and prove less helpful than pen and paper. This has enabled our employees to do their job more efficiently, and with greater security. Our internal mobile apps are integrating with back-end systems as efficiently as possible, bringing relevant information to the device in a timely, secure and user-friendly manner. This allows for a simple user interface and easier connection to update data. By integrating a mobile workforce with mobile apps to improve workflow, this is increasing employees' productivity.
- C. <u>PROCEDURE:</u> Firms shall consult the Assistant District Engineer of Construction (ADE-C) at their assigned district(s) or the OOC regarding approved devices and recommended accessories. The current device requirements for both a smart phone and iPad, along with recommendations of accessories are noted below:

D. 2021 Mobile Device Requirements

Consultant Firms shall provide mobile devices to construction project engineers, office engineers and field inspectors to support the use of e-Construction. Required devices include but shall not be limited to both a smart phone and iPad. Firms shall consult the ADE-C at their assigned district(s) or the OOC regarding approved and recommended devices.

Smartphone

•Wi-Fi + Cellular

•Data Plan: **Adequate GB to perform Job Duties**

If the device becomes Lost, Stolen or Damaged: Acceptable turnaround time for repair or replacement = 3 Business Days.

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Tablet

• Model: Reference "Supported Device Table" shown below

• Generation: Reference "Supported Device Table" shown below

Storage Capacity: Minimum 32GB

Wi-Fi + CellularData Plan: Unlimited

Screen Size: Minimum 9.7"

• If the device becomes Lost, Stolen or Damaged: Acceptable turnaround time for repair or replacement = 3 Business Days

• Software /Apps: As specified by MDOT SHA-OOC (See Recommendations below)

Apple iPad Devices with Cellular Connectivity

Name	Generation	Model #	Screen Size	Capacity (Minimum)
iPad (2017)	5 th	A1823	9.7"	32GB
iPad (2018)	6 th	A1954	9.7"	32GB
iPad (2019)	7 th	A2200	10.2"	32GB
iPad (2020)	8 th	A2428	10.2"	32GB
iPad Air (2019)	3 rd	A2153	10.5"	64GB
iPad Air (2020)	4 th	A2324	10.9"	64GB
iPad Pro (2017)	2 nd	A1709	10.5"	64GB
iPad Pro (2018)	1 st	A2013	11"	64GB
iPad Pro (2020)	2 nd	A2068	11"	128GB
iPad Pro (2017)	2 nd	A1671	12.9"	64GB
iPad Pro (2018)	3 rd	A2014	12.9"	64GB
iPad Pro (2020)	4 th	A2069	12.9"	128GB

****Apple Device needs to be compatible with latest iPadOS updates**** Please note the Device Models highlighted, indicate they are no longer supported with iPadOS updates, but do currently

exist in MDOT SHA Construction Inspection. Apple provides a new version of the iPad's operating system (iPadOS) each year. These iPadOS updates include new features, bug fixes, and improved security.

Recommendations:

Case

Case Type: Otterbox Defender Series (Protection)

Carry Latch System: Otterbox Latch II Utility Series (Carry Holster)

Field Apps

eMCMS Web App (Hyperlink – Shortcut Added to Home Screen)
 https://emcms.mdot.maryland.gov/web/Account/Login?ReturnUrl=%2fweb%2fCPOM

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- eMCMS Mobile App (Formerly known as CCMS)
- iOS Measure (Native)
- MMS Login (Hyperlink Shortcut Added to Home Screen) <u>https://mms.sha.maryland.gov</u>
- ArcGIS Collector Mobile App
- Google Earth Mobile App
- OED Toolkit (Hyperlink Shortcut Added to Home Screen) https://apps.roads.maryland.gov/oedtoolkits
- PaveCool Mobile App
- SHA COVID19 Screening (Hyperlink Shortcut Added to Home Screen) https://apps.roads.maryland.gov/shacovid19/
- SHA Internet (Hyperlink Shortcut Added to Home Screen) https://roads.maryland.gov/pages/home.aspx
- MDOT Web Portal (Hyperlink Shortcut Added to Home Screen) https://portal.mdot.maryland.gov/dana-na/auth/url_default/welcome.cgi
- Standards & Specs (Hyperlink Shortcut Added to Home Screen)
 https://www.roads.maryland.gov/mdotsha/pages/Index.aspx?PageId=122
- OOC Forms (Hyperlink Shortcut Added to Home Screen)
 https://www.roads.maryland.gov/mdotsha/pages/OOCForms.aspx?SA=Forms&P
 ageId=115

Microsoft Apps

- OneDrive
- SharePoint
- Teams
- Outlook
- Word
- Excel
- PowerPoint
- Lens

Navigation Apps

- iOS Maps (Native)
- Google Maps Mobile App
- Waze Mobile App
- Rand McNally (Hyperlink Shortcut Added to Home Screen) http://maps.randmcnally.com/?loc%5B%5D=&loc%5B%5D=

Weather Apps

- The Weather Channel Mobile App
- AccuWeather Mobile App
- Wunderground Mobile App
- NOAA Weather Radar Mobile App

Reading Apps

- Adobe Acrobat Mobile App
- iOS Books (Native)

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Training Apps

- Cornerstone on Demand (Hyperlink Shortcut Added to Home Screen) https://shamd.csod.com/client/shamd/default.aspx
- NHI FHWA (Hyperlink Shortcut Added to Home Screen) https://www.nhi.fhwa.dot.gov/course-search?res=1
- TC3 AASHTO (Hyperlink Shortcut Added to Home Screen) https://tc3.transportation.org/training-resources/

MDOT -SHA Administrative Apps

- Workday Mobile App *Only SHA Devices*
- POSC (Hyperlink Shortcut Added to Home Screen) *Only SHA Devices*
- MDOT Jobs (Hyperlink Shortcut Added to Home Screen) *Only SHA Devices*
- MD State Job (Hyperlink Shortcut Added to Home Screen) *Only SHA Devices*

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Standard Apps

- VMware Hub (Device Info) Mobile App *Only SHA Devices*
- VMware Content (Repository) Mobile App *Only SHA Devices*
- MDOT SHA AirWatch (Hyperlink Shortcut Added to Home Screen) *Only SHA*
- iOS Find iPhone (Native)
- iOS Voice Memo (Native)
- iOS Calendar (Native)

iOS Dock Bar

- iOS Safari (Native)
- Google Chrome Mobile App
- iOS Camera (Native)
- iOS Photos (Native)
- iOS Notes (Native)
- iOS Folders (Native)
- iOS Settings (Native)

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APPROVED:

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