

CONSTRUCTION DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: Project Inspection and Documentation	NUMBER: IIM-CD-2020-03.01
SPECIFIC SUBJECT: Tablet Based Inspection	DATE: September 21, 2020
	SUPERSEDES: N/A
APPROVED:	Kerry. A. Bates, P.E. State Construction Engineer

EFFECTIVE DATE

Tablet based inspection and PlanGrid as described in this Instructional and Informational Memorandum (IIM) shall be used on all VDOT administered projects advertised after October 6, 2020. In addition, District Construction Engineers have the discretion and authority to require the use of tablet based inspection and PlanGrid on any project in their District advertised prior to this date.

TABLET BASED INSPECTION GUIDANCE

1. DEFINITIONS

Tablet Based Inspection: The use of tablet computers to remotely access project records, for collection of data, and collaboration with other team members in real time or near real time.

PlanGrid: A construction productivity software application that allows construction staff to remotely access plans, mark-up PDF copies of plan sheets, attach pictures to plan sheets, compose daily work reports, and collaborate with other project staff.

2. LICENSING USERS & PLANGRID ACCOUNT CREATION

All Construction staff assigned to a VDOT construction project shall be provided a PlanGrid license. License requests shall be made through VDOT's System Access Request Application (SARA). Once a request is initiated, the Central Office eConstruction team will assign a PlanGrid license to the individual's VDOT email address. The individual will then receive instructions from PlanGrid on how to complete their account setup.

Consultant staff shall provide their own PlanGrid licenses in accordance with the most current Mobile Communications Device Memorandum applicable at execution of the task.

3. TRAINING

A series of nine eLearning modules are available in VDOT University. These modules will familiarize users with the eConstruction program, iPads, and the PlanGrid software. Any user assigned a PlanGrid license shall complete all nine training modules.

4. PROJECT CREATION

The use of PlanGrid is required on the following:

- Tier 1 & 2 plan assembly projects
- No plan and minimum plan projects
- Interstate and primary route plant mix and pavement schedule projects
- Any project with Federal Oversight (FO or PODI)
- All Design Build (DB) projects

The use of PlanGrid is strongly recommended on the following:

- Task based/On-Call projects
- Secondary/Minor route pavement schedule projects
- Emergency Force Account projects

The ACE may require the use of PlanGrid on any project.

Following project advertisement Central Office eConstruction will create projects in PlanGrid and upload the following documents:

- Advertised Plan Sheets
- Advertised Bid Proposal
- Current Standard Reference Documents (Road and Bridge Specifications, Road and Bridge Standards, Virginia Work Area Protection Manual, etc.)

Projects shall only be created by Central Office eConstruction team or with their express concurrence. Individual users may not create their own projects.

To request a project not created by Central Office eConstruction at advertisement (i.e. emergency contracts), email econstruction@vdot.virginia.gov. The project UPC must be included in the request.

5. PERMISSION LEVELS

PlanGrid offers three permission levels to which users may be assigned. These include:

- Collaborator - provides the ability to:
 - View and navigate plans and documents
 - Create personal markups, photos, notes, and links (these items will not be published to the PlanGrid project and will therefore not be viewable by others)
 - Complete and submit field reports
- Power Collaborator – provides the same abilities as Collaborator but may also:
 - Publish and delete mark-ups, photos, notes, and links so that other members of the project team can see them
- Admin - provides the same abilities as Power Collaborator but may also:
 - Upload and delete plan sheets, plan revisions, and documents
 - Add and remove users from the project

6. ASSIGNING & REMOVING USERS TO PROJECTS

As part of project creation, the eConstruction team will make the below assignments:

- Admin: District representative and eConstruction team
- Power Collaborator: District Construction Engineer (DCE), District Contract Manager (DCM), CQIP Reviewers, and NPDES Coordinators

The ACE by default will be the Project Administrator. The ACE may delegate project administrative duties to a designee by assigning this individual admin permission level. To help ensure the integrity of project records, it is important to limit the assignment of the admin permission level as this permission level allows users to delete project records.

It is the responsibility of the Project Administrator to assign team members access to their projects at the appropriate permission level. Team member's access should be periodically reviewed to ensure access is provided to active users at the appropriate permission level only. The eConstruction team shall not be removed from the project. Except with the express concurrence of the eConstruction team, contractors may only be added to projects with the collaborator permission level. The default permission level for all other users should be power collaborator.

7. PLANGRID USE DURING CONSTRUCTION

a. MAINTAINING PLANGRID DOCUMENTS

The Project Administrator is responsible for uploading the executed contract to the project.

The Project Administrator is responsible for uploading revised plans, updated reference documents, and project-specific documents after project creation and throughout the life of the project. This includes uploading Approved for Construction (AFC) plans on design-build and P3 projects. It is important that plan revisions be numbered in accordance with the instructions for naming plan revisions which can be found on the eConstruction insideVDOT site (See section 10.c for the address to this site). The eConstruction team may be consulted for support and guidance with uploading documents and revised plan sheets.

For no-plan projects, Central Office eConstruction will upload the no-plan assembly. The project Administrator should upload aerial images of the project location(s) in PDF format to serve as additional plan sheets after project creation. This will allow construction personnel to tag photos, note as-built conditions, and identify locations for punch list work on the aerial images. The aerial images do not need to be to scale.

Documents uploaded into PlanGrid are at the discretion of the ACE and may include contract award letters, execution letters, environmental permits, contractor baseline schedules, schedule updates, RFIs, executed change orders, shop drawings, etc.

b. STAFF COLLABORATION

PlanGrid will be used by the project team to access project records, for collection of data, and collaboration with other team members in real time or near real time.

- Plans and Field Notes
Review and markup plans to note key details related to the construction process, identify areas of non-compliance/non-conformance, and redline field changes
- Taking Photos
Attach photos to plan sheets to document discrepancies and deficiencies and monitor progress. Progress photos should be taken and housed in the same photo stamp
- Collaborating with Project Staff
Share published mark-ups, export and email PDFs, and track deficiencies using the PlanGrid tasks feature
- Generating Daily Work Reports
Record work performed, equipment provided, and personnel and crews on site, etc. as identified below in Section 7. c.
- Developing Punch lists
Maintain a running punch list of deficiencies encountered during construction using the tasks feature
- Completing other Reports and Forms
Complete forms and reports (other than the daily work report) in PlanGrid as directed by the ACE (these may include the C-107, Workzone Safety Checklist, and other electronic forms provided by Central Office eConstruction and uploaded by the Project Administrator in the "Reports" section of PlanGrid)

c. DAILY WORK REPORTS IN PLANGRID

Inspectors will complete their daily work reports in PlanGrid. Below are descriptions for the fields found in the PlanGrid Daily Work Report. The reports should generally include the information specified in Appendix C of the Construction Manual. It is expected that the content and level of detail included in the daily work report will vary based on the type of project and work performed each day.

- General Project Information
Date, UPC, contract number, project name, inspector name, and inspector hours worked

- Narratives
A description of the work performed documented in the appropriate fields on the report. Include all information needed to justify payment (this may include calculations, sketches, written descriptions, directives issued by project leadership, and communication between the VDOT project team and the contractor)
- Personnel
Prime contractor, superintendent name, prime contractor's arrival and departure time, types of work crews, number of laborers in each crew, and other personnel (contractor, consultant, or VDOT) that visited the job site
- Schedule activities performed that day
Activities from the approved baseline schedule or two-week look ahead schedule that were performed that day, recorded in the appropriate tables, including the schedule activity name and schedule activity id
- Equipment
Contractor and subcontractor equipment on the project
- Quantities of work items installed
Daily quantities of work items installed and their associated line item and bid item numbers, recorded in the appropriate fields in the work item table
- Photos
Include photos as references on the cover sheet as necessary to justify payment, identify non-conforming work, or otherwise explain the work performed
- Weather
PlanGrid pulls weather data from the nearest NOAA Weather Station based on the project location and report date. It is the inspector's responsibility to confirm the weather identified on the cover sheet and document any discrepancies in the daily work report narrative

Inspectors should submit completed reports for review through the PlanGrid system in the timeline specified in the VDOT Construction Manual. Daily Work Reports cannot be deleted once published to the project. If a daily work report needs to be revised following submission to the project, the original report should be copied, appropriate edits made and clearly denoted as changes on the revised version, and the revised version of the report submitted to the project.

The Project Administrator may further control who has access to submit and review reports through the teams and templates features of the field reports module. See the eConstruction insideVDOT site for details on this.

d. DAILY WORK REPORTS IN SITEMANAGER

At a minimum, the Contractors and Work Items tabs in the SiteManager Daily Work Report Panel must be completed to denote the work performed. These tabs shall be populated with the required information from the preceding seven days no later than the last business day of the week. The ACE may require this information be populated more frequently. The day on which an individual pay item is installed shall match the payment date entered in SiteManager. Distinct work items installed over multiple days shall not be combined into a single day and quantity. This

date of pay item installation in SiteManager shall match and be fully supported by the PlanGrid DWR.

The PlanGrid DWR shall also contain all information required to support District Civil Rights personnel's review and compliance certifications. A duplicate SiteManager DWR is not required to contain the supporting information that is contained in the PlanGrid DWR. SiteManager is accessible from tablet computers by following the instructions identified on the eConstruction insideVDOT site.

e. PROJECT RECORDS REVIEW

As specified in Appendix C of the Construction Manual, project diaries and project records are to be reviewed by the Construction Manager (CM), ACE, and/or DCE on at least a monthly basis. It is the CM's responsibility to regularly review and ensure the information in PlanGrid and SiteManager is consistent, accurate, concise, and complete prior to recommending approval of the estimate in SiteManager.

8. PROJECT CLOSEOUT

Once final acceptance has been issued, the Project Administrator will:

- Review the project notes, markups, photos, and reports for accuracy
- Download a copy of the project records from the PlanGrid system and upload them in the projects records system by following the instructions identified on the eConstruction insideVDOT site

Sixty (60) days after final payment is issued, the eConstruction team will remove all district users from the project. The project will still be available for future reference within PlanGrid and requests for access after closeout can be made by contacting the eConstruction team at econstruction@vdot.virginia.gov

9. TECHNICAL SUPPORT

- a. For issues with iPads and hardware (cases, keyboards, pens, etc.), users should contact their District Technology Resource Manager or District Technology Coordinator for assistance
- b. For issues with the PlanGrid software, users should contact PlanGrid support through the PlanGrid application
- c. For frequently asked questions, informational videos, and literature involving the Tablet-Based Inspection Program, users should visit the eConstruction homepage within insideVDOT at the web address below:

<https://insidevdot.cov.virginia.gov/div/sc/IV2XM/SitePages/Tablet-Based%20Inspection.aspx>

- d. For programmatic issues, users should contact the eConstruction team at econstruction@vdot.virginia.gov.