

# Surveyor Scope of Work

## Surveyor Training - 2 - Revit - IHT2

### INTRODUCTION

#### Objectives

This survey's purpose is to gather all necessary information to assist with the design of new stores, remodel existing ones, or expand/combine spaces. FSU will serve as the client's eyes and ears on site. Be on the lookout for any anomalies, as lengthy redlines for a 3D model or revisiting a site creates a heavy expense.

#### Confidentiality

Client information must be kept strictly confidential. When discussing the project with existing employees or site contacts, refer to it as an "insurance survey."

#### Site Regularity

Each site is unique and may have special requirements. This document is meant to be a general guideline for surveying. In general the PM will communicate with the site contact to get an "extent of survey" document. This can be anything from a CAD plan to a PDF or photos of the space. Ensure that the survey area encompasses all of this scope +20' of the surrounding area. This includes various areas that may need additional access while on site like adjacent rooms or other tenants.

#### Acceptance and Responsibilities:

By accepting this assignment and conducting the survey, you agree to the scope of work, deliverable requirements, delivery timeline, survey fee, and any other details provided below or by office staff. If the required information is not collected according to the scope, you may be required to revisit the site.

#### Quality and Professionalism:

Our Customer Service Standard is to exceed client expectations with a high level of professionalism. Surveys should be customized to meet the specific needs of each client and produced with care and pride. FSU utilizes strict protocols and review procedures to ensure the quality of its surveys. All FSU contractors are responsible for guaranteeing the quality of their work while adhering to FSU standards.

### PROJECT OPERATIONS

#### Payment & Reimbursables

Payment Terms:

- Pay when Paid: FSU pays its vendors after receiving payment from its clients.
- Surveyors should submit invoices for the survey fee only via the vendor bill portal in Quickbase.
- The survey fee is defined in Quickbase.
- Payment terms vary depending on the client.
- Clients are invoiced after FSU reviews and fully delivers all survey components and deliverables.
  - The vendor payment timeline starts once FSU submits the project invoice to the client, not when independent contractors submit their invoices to FSU.
  - It takes approximately 7 business days for FSU staff to process survey deliverables from the field.
- FSU will pay vendor invoices within 5 business days of receiving client payment.

#### Reimbursable Travel Expenses

- Travel expenses must be submitted and processed per the FSU Vendor Expense Report Policy.

#### Deliverable Turnaround/Upload Timeframe

- Deliverables must be uploaded within 24 hours of survey completion.

#### Attire

- Collared shirt and full-length khaki pants preferred (no shorts or open toed shoes).

- Safety vest, especially when working on the exterior of a site where there is vehicle traffic.
- FSU Badge/ID.
- For live constructions site proper PPE is required including vest & hardhats.

## Prep Time

**Touch Base with Site Contact:** This can be via email or a phone call: 10 min

**Charge Batteries:** 5 min

**Review Scope of Work:** This includes scope or work and extents documents in Dropbox, site contact responses in Quickbase, and Quickbase notes: 30 min

**Kick off call:** 30 min

**Check for Fastfields dispatch:** 5 min

**Book Travel:** 1 hr

**Total Estimated Time:**

±2.5 hr (based on the tasks provided, subject to adjustment)

## Site Time

Site time will vary depending on the site extents, site access hours, and scope of work. Generally speaking, Surveyor Training - 2 - Revit - IHT2 sites can be completed in 1-2 days on site. When reviewing the scope of work, let the project manager know if you will need more than a day on site. If there are unexpected delays on site and an extension is needed to complete the survey, please contact the project manager immediately so they can communicate the change to the site contact.

Surveyors who are employers are required to take a lunch break each day per the FSU Handbook.

## Closeout Tracking of Time

**360 Photos:** Renumber & Photo Map: 30 min

**Matterport:** Time: 5 min (95% done on site)

**Registration:** Time: 1 hr (60 min; field 360 handles most registration, quick verification and export)

**SSR Finalization & Follow-Up Email:** Time: 30 min

**Still Photos:** Renumber & Photo Map: 45 min

**Upload Time:** 15 min (to upload and organize files for S3/Dropbox)

**Total Estimated Time:**

±3 hr (based on the tasks provided, subject to adjustment)

## Travel Rules

### Travel & Expense Policy Summary

FSU reimburses reasonable business travel expenses for internal surveyors and employees. All travel costs (flights, lodging, transportation) must be pre-approved via the Teams Travel Channel, and receipts must be submitted in JPG or PDF format. **Please see the employee handbook (or for contractors, the [travel policy document](#))** for full details. **[Please see here for GSA Links.](#)** All items submitted for reimbursement need a valid receipt, bank statements or credit statements will not be accepted.

- Airfare: Book economy class flights at the lowest available fare, including Southwest. One checked bag is reimbursed. Leica Scanners must be carried on.
- Lodging: Stay within GSA per diem rates. Airbnb/VRBO is allowed if cost-effective with free cancellation. Additional nights require PM approval.
- Ground Transportation: Use the most economical option when it comes to renting a vehicle including not getting one and using rideshare apps. Rental cars should be cost-effective, and fuel must be refilled before return (Trucks/Vans/Large SUVs not permitted unless ladder is required). Personal car mileage is reimbursed at GSA rates.
- Parking & Tolls: Airport parking must be under \$10/day (cheapest economy) when available. Site parking and tolls are reimbursable with receipts.
- Meals: Reimbursed per GSA per diem rates, with a max 20% tip. Itemized receipts are required.

- Non-Reimbursable Items: Includes in-flight purchases, excess baggage fees, childcare, pet boarding, toiletries, airline club memberships, and fines.
- Traveler safety is a priority. Employees must provide emergency contacts before trips. Following these guidelines ensures full and timely reimbursement.

## **FSU project contacts:**

### **Scheduling & Site Access Escalation:**

1. Project Coordinator
2. Project Manager
3. VP of Operations

### **Survey & Scope Questions Escalation:**

1. Project Manager
2. Revit/BIM Specialist

### **Equipment Issues on Site Escalation:**

1. Revit/BIM Specialist
2. Project Manager

### **Surveyor Communication Requirements:**

- Notify FSU (Project Manager) when all deliverables have been uploaded.
- Respond to drafters and FSU staff phone calls within 6 hours, emails within 12 hours.

### **Surveyor Responsibilities:**

1. Review the provided 'Extent' drawing document.
2. Address any questions with the project lead prior to the survey.
3. Coordinate feasible survey dates with FSU, then book travel.
4. Coordinate with the site contact prior to the survey for site visit timing and any requirements.
5. Contact the Project Lead with any on-site issues or concerns impacting client needs or project timeline.
6. Enter the 'actual survey date' in Quickbase.
7. Enter the 'date surveyor deliverables in' in Quickbase.
8. Record the amount of time the survey took and any items of note in the 'survey update/site notes' field in Quickbase.
9. Upload all documentation/deliverables to Quickbase on time and notify the project lead. Note: All deliverables must be completed in full prior to upload; partial deliverable uploads will not be accepted.
10. Complete a Water Test sample from an unfiltered source at the site and seal the kit into a package with the provided mailing label and paperwork.

## **Point-Cloud Scanning:**

### **Scope Consistency:**

The scope of work stays unchanged regardless of the technology or technique used for the survey. All scope items must be completed. If a scan does not capture any scope item, ensure proper documentation is completed. This may include photos, field drawings or written documentation.

### **Device Inventory:**

Ensure the device package is complete and 'checked out' from Quickbase resource tracking. This is to ensure the proper scanner and its satellite accessories are all tracked and accounted for.

### **Data Review:**

Review with the Revit team if all scans and/or projects are backed up to the drive and can be deleted from the device.

### **Communication:**

Communicate any issues or delays that happen on site with the scanning devices to the Revit team.

## Best Practices:

- BLK2Go 3D Laser Scanning Best Practices
- Tripod Based 3D Laser Scanning Best Practices

## Data Processing:

Process the point-cloud scan file in Register360 and upload the RAF project file to S3 (for internal users) or a file-sharing service (for contractors).

When using non-Leica based point-cloud technology, the deliverable will be to provide a unified, undecimated point cloud along with the raw scan data. The unified point cloud should be decimated (1mm) and unified to remove any unnecessary points but still keep the important details intact. Including the raw scan data so FSU can also import the scans and register if needed is also important.

## Surveyor Deliverables

### Extent of Survey Document Compliance

- Always review the site notes on Quickbase for any special requirements before scanning.
- All areas within the highlighted or called out area on the client provided document must be surveyed according to this scope of work and attached tables. **(If there are no extents on dropbox or quickbase, stop and contact the PM & BIM Manager)**
- When remote storage areas are requested, laser scanning will focus primarily on architectural elements and any existing equipment, especially in established storage spaces. In cases where the storage is newly designated, thorough documentation of all fixed objects (including architectural features and MEP) must be captured. Please see *site notes* for any site-specific information on remote storage.

### Point Cloud Scans

- Surveyors must ensure the scanner is adequately picking up all necessary information.
  - Scans must document all required scope information and 'Extent' defined items.
  - Make sure to check quickbase for site notes as well as any client communications that may have been discussed. If there are no notes, reach out to the Project Manager for details.
- Scans must pick up the following (But not limited to, see client specific scope for exact requirements):
  - Walk-around floor plan showing walls, doors, windows (sill/head height), and partial-height walls with all relevant dimensions.
  - Equipment and furniture should be 3'+ from scanner to capture details.
  - Demising wall thickness and location.
  - Structural and deck heights above finished floors (AFF).
  - Exterior and interior elevations, including glazing, mullions, sills, and overhangs.
  - Reflected ceiling plans (RCP) detailing headers, soffits, ceiling surfaces, changes, lighting, cameras, sensors, fire strobes, sprinklers, and vents.
  - Above ceiling plans include deck and structure, heights (AFF), penetrations, sprinkler lines (with pipe sizes and heights), and duct distribution plans (with sizes and heights).
  - Mechanical, electrical, plumbing, and fire sprinkler equipment and pipes/ducts.
  - Floor finishes and transitions, indicating material types and color changes.
  - Casework and built-ins for the entire space, including counters and cabinets.
  - Exterior plans and site information as applicable, reviewing the 'Extent of Survey' document for specifics.
  - Restrooms showing sinks, toilets, grab bars, water heaters, and general placements of dispensers.
  - Check *site notes* for Roof being requested in scope.

### Photos

- Photos cannot be taken at night unless the client requires an overnight survey. In those cases, we will try to capture photos closer to dawn or dusk. This allows us to use available lighting more effectively during overnight surveys. If shooting is only possible during the midnight hours, be prepared to use a long exposure camera on a tripod to maximize light capture.

- Provide a photo key organized by area. Photo key should be based off section cut of a point cloud to represent a floor plan.
- Include photos of all surveyed areas (interior and exterior), architectural details, utility equipment, and all associated utility systems.
- For existing stores (if applicable), include photos of:
  - All front-of-house (FOH) and back-of-house (BOH) equipment and labels.
  - Customer seating, furniture, casework, cabinetry, and merchandise displays.
  - Under-counter conditions, showing drains and outlets. (Use a 360 Camera with HDR if space allows)
  - Check *site notes* for Roof being requested in scope. Simple roof array and MFG labels are standard.
- Provide comprehensive above-ceiling photos and a roof photo array capturing all rooftop equipment.
  - When taking above ceiling photos using a 360 Camera. HDR Rendering may not be sufficient. In those doing a manual long exposure may be the best practice.
- Document the path from accessible parking to the front entry door, from the surveyed space to the trash area, remote storage, MEP/Telecom, delivery area and from the surveyed space to common bathrooms (if applicable).
- Photo Format:
  - Minimum size: 1920x1440
  - Minimum resolution: 200 dpi
  - Landscape format only.
- Photo Naming & Numbering: Use the format (SITE #)\_*(SITE-NAME)*-photos###,
  - e.g., 10899\_University-Student-Center-Photos\_001.

### 360-Degree Photos

- Capture 360-degree photos using a tripod mounted at 5'-6' AFF, utilizing a remote trigger to avoid self-portraits.
- Create a key for each 360-degree photo. Photo key should be based off section cut of a point cloud to represent a floor plan.
- Take at least one 360-degree photo in each closed room/space. 360 photos should not be taken further than 10' apart.
- 360-degree photos should not be resized and cannot replace standard array photos.
- Use the format (SITE #)\_*(SITE-NAME)*-360 photos\_###,
  - e.g., 10899\_University-Student-Center-360 Photos\_001.

### Site Survey Report (SSR)

- Surveyors must submit a completed SSR for each site using the Fastfields app.
- Complete and submit SSR while on site. Do not leave without submission.
- The SSR must be fully filled out. Notify the SSR Project Manager via Teams or phone if something is missing or unable to be captured.
- The SSR will be considered incomplete if any field information is missing without communication with the PM and could warrant a return. If there is any missing information please email the site contact and CC the **SSR Assignee** & the **SSR Project Manager**.

### Water Sample Test:

- Conduct a water test sample from an unfiltered source at the site and seal the kit in a package with the mailing label and paperwork.
- Upload the mailing label and paperwork to Dropbox, if there is no access to Dropbox, send directly to the Project Manager.
- Shipping Instructions:
  - The sample must be shipped as part of the on-site survey and should be completed immediately after finishing the site.
  - Do not travel with the sample to your home or next site.
  - If shipping out multiple kits, the uploaded label(s) must clearly show which tracking number goes with which project/site.

- Option 1: Add a quick note directly on the image identifying which *Site ID* goes with which tracking number.
- Option 2: Make two copies of the shipping receipt. Cross out the tracking number that doesn't go with the site. Upload each individual one to the correct site.
- It is the surveyors responsibility to monitor the number of water test kits on their person, and to make sure that if they are running low (less than 6) that they reach out to Project Coordinator to receive additional water test kits.
- Notify the **Project Manager** immediately if unable to complete the water test.