



## Commence Works and Work Sites Supervision



Step 5 Milestones:

### 5.1 Preparation for Signing of Contract

- Learn about the major stakeholders in rehabilitation project
- Understand task arrangements before signing of contract and commencement of works



### 5.2 Manage Contract and Supervise Works after Commencement of Works

- Review progress of works on a regular basis
- Monitor quality of works
- Handle modifications of works
- Understand payment arrangements

## Step 5: Commence Works and Supervise Work Sites



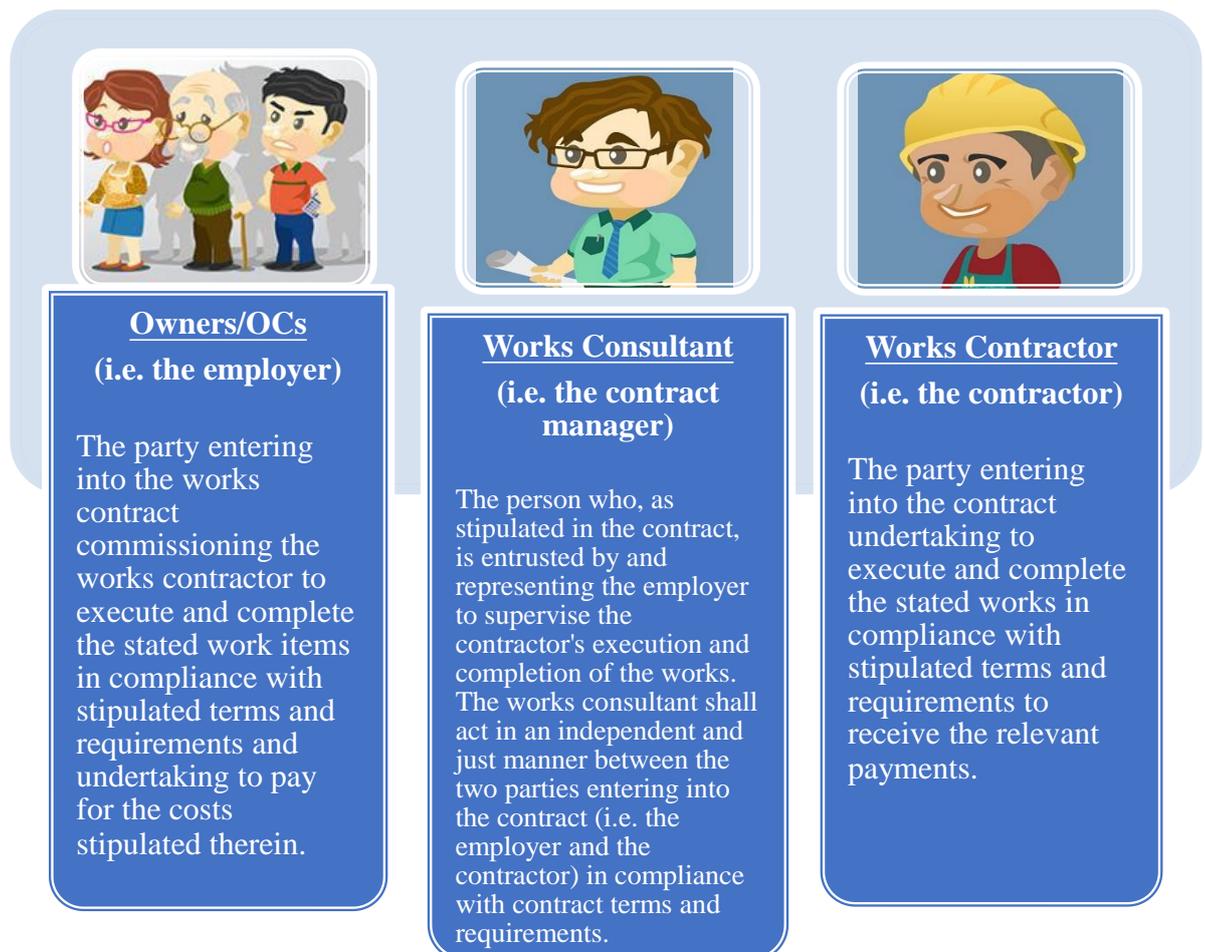
### Section 5.1 Preparation for Signing of Contract



(Scan QR Codes to Watch Videos on 'Building Rehab Platform' Website)

With meagre experience in managing work projects and contracts, **owners/OCs** may overlook the fundamental details or key points therein and fall prey to their rhetoric or pitfalls, resulting in poor quality of works despite all the effort and money. With this in mind, Step 5 describes the 'major stakeholders' in private building rehabilitation, the points to note and recommended feasible measures at each phase of work project and contract management to facilitate the **owners/OCs'** proper management and supervision of the works.

#### 5.1.1 'Major Stakeholders' in Building Rehabilitation



Reference: *Standard Form of Contract for Maintenance and Renovation Works* (First amendments Dec 2014) by The Hong Kong Institute of Surveyors.

In addition to the major stakeholders above, a supervisory role is usually involved in comprehensive work projects. Given the complexity of building rehabilitation, **owners/OCs** may as well, under feasible financial condition, engage an independent ‘works supervisor’ for professional third-party advices to further enhance the quality of the works.



### **Works Supervisor**

Works supervisor is a person entrusted by **owners/OCs** or the contract manager on site for patrol, inspection, review, inventory supply and documentation of all facilities and activities involved.

While works contractor will undertake to conduct regular site patrols for overall supervision, if they are not permanently stationed, the comprehensive monitoring of works, especially the large-scale items, may well be hindered by the ever-evolving site circumstances. Works carried out on scaffolding or in enclosed spaces that require inspections by engineers with relevant licenses may also be impacted.

As such, to ensure better quality standard, **owners/OCs** may engage a works supervisor (procured directly or through the works consultant) to be permanently stationed on site during the entire rehabilitation project to inspect operations at all key phases to ensure their compliance with quality specifications and **owners/OCs'** expectations, while reporting to the **owners/OCs** directly on the progress, quality and any safety issues of the works on a daily or weekly basis.

A works supervisor shall possess at least 4 years of relevant experience and one of the following academic or professional qualifications: (a) bachelor's degree in civil/structural/geotechnical engineering, architectural technology, materials science, testing and certification, building surveying or architectural studies; or (b) registered professional engineer (civil, structural, geotechnical, material or construction); or (c) registered architect; or (d) registered professional surveyor (building surveying).



Reference: *Standard Form of Contract for Maintenance and Renovation Works* (First amendments Dec 2014) by The Hong Kong Institute of Surveyors and *Code of Practice for Site Supervision 2009* by the Buildings Department (BD).

## 5.1.2 Signing of Contract and Task Arrangements before Commencement of Works

### Collection of Funds

In most comprehensive building rehabilitation projects where mammoth funds are involved, the work costs contributable by **owners** are determined by the ‘undivided shares’ stipulated in the Deed of Mutual Covenant (DMC) of the building and other specific criteria. The **owners/OCs** shall formulate the relevant payment deadlines and methods. In case of uncertainties concerning payment regulations in the DMC, they shall consider seeking professional advice.

⇒ **To understand ‘undivided shares’ – Please refer to [Section 1.2.2](#)**

### Reservation of a Reasonable Timeframe for Formulation of Contract

The formulation of works contract, to be done after the owners’ meeting where resolution on the selection of works contractor is passed, generally takes a certain period of time. **Owners/OCs** should reserve a reasonable timeframe (say one month) for the works consultant to follow up on relevant issues, including detailed discussion, negotiation and clarification of contract content and terms with the awardee so as to minimise disputes in the future.

#### **Useful Tip**

##### **‘Letter of Acceptance’**

In view of the time necessary for contract formulation, the works consultant will generally issue a ‘Letter of Acceptance’ to notify the successful tenderer of the result and actual commencement date of the contract, with previous correspondences and supplementary documentation of tender documents attached. This letter heralds the formulation of the works contract, whose terms and conditions are to be complied by the two parties entering into it. As such, the contractor shall promptly commence relevant preparation works upon receipt of the ‘Letter of Acceptance’.

### **Clarification of ‘Contract Period’**

The ‘contract period’ concerning the completion deadline of the works shall have already been formulated in the tender documents. In the case where matters overlooked by the works consultant or the **OCs** are brought up by the works contractor before signing of contract, the works consultant and **owners/OCs** concerned may have to reconsider the reasonability of the ‘contract period’. However, **owners/OCs** should take note of the fact that it is unfair to modify contract fulfilment deadline once tenders are opened, and that re-procurement may be necessary if circumstances so require.

➡ **To understand how to formulate ‘contract period’ – Please refer to Section 3.2.2**

### **Arrangement of Meetings**

Before the works commence, preliminary meetings should be organised by **owners/OCs**, works consultant and work contractor for communicating the requirements of the **owners/OCs** and the works consultant, as well as execution proposals and needs of the works contractor to facilitate mutual coordination and proper preparation.

### **Preparation of Site Supervision Plan by the Works Consultant**

The works consultant shall formulate an appropriate site supervision scheme with the **owners**, specifying involvement of professionals during the works, frequency of site patrols, qualification and background of inspectors, work items requiring inspection and testing, arrangement of meetings and measures concerning quality assurance, etc.

### **Submission of Documentation by the Works Contractor for Review**

(i) **Organisational Chart of Management Personnel and Workers**

An organisational chart of management personnel and workers helps identify discrepancies in the allocation and qualification between the manpower actually deployed and the relevant contract terms. It also offers a glimpse at the organisational structure of the responsible personnel and their contact information, which facilitates resolution of possible problems during the works in future.

(ii) **Works Schedule**

Cases in which indemnification for delay of works have to be made by works contractor are very common. While indemnification terms and arrangements are generally stipulated in tender documents and the works contract, it is advisable to instruct the works contractor to table a works schedule prior to signing of contract for discussion, negotiation and approval. A works schedule not only facilitates the prompt understanding of relevant arrangements before the works commence (e.g. ways to achieve the contract validity period's target, the connection of work phases, etc.) and the works' impact on the daily operation of the building, but can also be used as a reference for supervision of progress during the works.

(iii) **Emergency Contact Numbers**

In view of inevitable emergencies during the works, **owners/OCs** should instruct the works contractor to provide 24-hour emergency contact numbers, with commitment to on-time arrival to facilitate resolution of the issues.

(iv) **Samples of Work Permits and Uniforms for Workers**

Workers should wear uniforms and work permits to facilitate their identification by security staff and **owners/OCs** of the subject building. The relevant samples should be submitted before the works commence for preparation.

(v) **Works Execution Plans**

It is imperative for the works contractor to formulate a management scheme for the whole rehabilitation project, which shall be tabled for approval before the works commence. The works execution proposal should cover code of practice for workers (e.g. no smoking or gambling), methods and frequencies of daily site cleaning, site supervision and patrol arrangements, safety measures, samples of notices, etc.

(vi) **Insurance Information**

Before the works commence, the works contractor shall procure appropriate insurance policies on statutory requirements in relation to the works (e.g. all-risk insurance, employees' compensation insurance, third-party risks insurance and performance bond, etc.) to minimise physical loss of work materials caused by accidents and to protect the insured against liabilities arising from work casualties of its employees during their employment. The works contractor shall also take heed of the terms and conditions, coverage and claim requirements stipulated therein.

## Section 5.2 Manage Contract and Supervise Works after Commencement of Works

The duration required for rehabilitation works ranges from a few months to over one year depending on the scale and complexity involved. To avoid delay of works which may result in inconvenience to **owners** and occupants, additional costs and failure to comply with statutory orders, the **owners/OCs** should monitor the progress of works closely under the guidance of the works consultant.



### Simulated Scenario

#### Case 1: Delay of Works

The rehabilitation works of “Building A” have been started for more than five months, but some of the main works are still not completed and the owners are very dissatisfied. After investigation, Supervision of works by the works consultant’s site supervisory team for a building rehabilitation project was lax (e.g. infrequent site visits by professional staff). The works contractor therefore gave priority to some other projects, and the works consultant took no action on the delay.

#### Case 2: Over-reliance on works consultant

The MC solely relied on the progress reports submitted by the works consultant, and accepted the latter’s various excuses for the delay. Moreover, property owners were not provided with a work programme or any progress information throughout the project.

#### Point to discuss :

- Who need to responsible for the “delay”?
- Is there any measure to reduce the chance of “project delays”?



**To know more about the progress monitoring ? – Please refer to**

**[5.2.1](#)**

### 5.2.1 Regular Review of Work Progress

To monitor the progress of rehabilitation works effectively, **owners/OCs** may consider the following measures:

### **Works Schedule**

Before the works commence, the works consultant shall instruct the works contractor to table a works schedule for review and approval. After the works have commenced, the **owners/OCs** should conduct regular progress reviews on site. In case of delay, they should instruct the works consultant and the works contractor to provide explanations and rectification plans. The **owners/OCs** may request for and verify amendments to the approved schedule by the works consultant whenever necessary. The works schedule may also be posted at the lobby for reference and supervision purposes.

### **Regular Meetings**

**Owners/OCs** should take the initiative to arrange regular meetings with the works consultant and the works contractor to monitor the progress of works closely on its conformity with the works schedule and to understand the issues arisen in the execution and their solutions, with meeting minutes properly documented and archived.

### **Supervision of Works**

The works consultant shall, in compliance with contract terms and the site supervision scheme, conduct regular site patrols on the progress, quality, safety and materials etc. of the works to ensure their compliance with relevant laws and contractual requirements. **Owners/OCs** should also participate in regular site patrols together with the works consultant and the works contractor to facilitate the clear communication to and their understanding of issues on the spot (the **owners/OCs** may also engage works supervisors for daily patrols if necessary).

### **Regular Reports**

**Owners/OCs** may instruct the works consultant and the works contractor to table works reports on a regular basis to acquire relevant information. A works report should cover the progress of the works, defects and their rectification plans, summaries of modifications, contract sums and instructions given by the contract manager, safety reports, etc.



### Useful Tip

#### **Create Effective Channels for Communication**

A building rehabilitation project is often met with numerous problems. In case of emergency issues, the **owners/OCs** should notify the works consultant and the works contractor for prompt resolution. In the case where only non-emergency issues or defects of individual works are concerned, the **owners/OCs** may consider setting up channels for communication of opinions, e.g. suggestion boxes/books placed at prominent locations of the building for owners to express their voices on the progress and conditions of the works. Proper and effective communication not only facilitates the responsible personnel's prompt understanding, handling and follow-up of defects, but also their priority order. Solution reports prepared by the responsible personnel may also be communicated to the owners through such channels, in turn facilitating the **owners/OCs**' grasp of work progress.

### 5.2.2 Quality Inspection

One of the works consultant's responsibilities is to supervise quality of works on site with inspections and testing to ensure the works contractor's compliance with contractual specifications and requirements of statutory orders/notices (if applicable) in their execution of works. To avoid riggings arising from lack of supervision, **owners/OCs** should monitor the consultant's performance in supervision of works closely.



#### Simulated Scenario

##### **Lax supervision**

Supervision of works by the works consultant's site supervisory team for a building maintenance project was lax – the works consultant only deployed inexperienced site staff to conduct infrequent site visits , Completely ignore those projects that are not up to standard (especially concealed works) and use inferior repair materials.

The MC relied entirely on the works consultant's flimsy reports with no details or proof/assurance of works done. Moreover, property owners were not provided with adequate information about the project, such as the works to be done and materials to be used.

##### **Point to discuss :**

- What are the possible ways to ensure the quality of the project?

### **Site Supervision Scheme**

Under possible circumstances, **owners/OCs** may conduct random inspections on the works consultant's site supervision to see if it complies with the approved supervision scheme. In case of any discrepancies, they should promptly instruct the works consultant for rectifications.

### **Materials, Methods of Execution and Floor Plans**

The works contractor shall obtain the works consultant's approval before adopting any recommended materials, methods of execution and floor plans. **Owners/OCs** may instruct the consultant to report the relevant progress regularly and attach the findings in the regular works report.

### **Samples of Materials**

Samples of materials approved by the works consultant should be displayed at proper location to facilitate reference and follow-up by the **owners/OCs** or workers. The **owners/OCs** may also instruct the works consultant to attach signed labels on the samples as verification of their approved models, sizes and colours etc. to avoid errors.

### **Design and Work Execution Templates**

The works contractor shall create templates of more complicated procedures for the works consultant's approval of designs and results before execution. The approved templates shall also be displayed at proper location to facilitate verification and execution of the relevant works. Examples include positioning concept of exposed outlet pipes and finishes of external walls, etc.

### **Contractual Requirements and Specifications**

Besides entrusting the works consultant with supervision of the contract, **owners/OCs** should as well be familiar with requirements and specifications of each item therein. If any inappropriate issues are found, they should notify the works consultant for handling.

### **Concealed Works**

For works concealed upon completion (such as rust removal on reinforcing bars) where unethical riggings may be covered, the works consultant and **owners/OCs** should demand for orientation photos for documentation and reference of the proper completion of each procedure (before, during and after the works). The proper documentation of repaired parts and their scopes, for instance, can prevent liability disputes on parts with and without rehabilitation in case of accidents in the future.

### **Logistics Supervision**

Proper supervision procedures on logistics of work materials like paints, renderings and waterproofing materials should be carried out. For instance, **owners/OCs** should keep the relevant payment and delivery receipts, on which information such as brands, quantities, unit price breakdowns and delivery location etc. should be specified. The relevant materials should also be stored at locations designated by the **owners/OCs** for effective measurement of their usage while preventing misuse or abuse.

### **5.2.3 Variations of Works**

Modifications of works refers to changes to progress or specifications of works after its contract is awarded, which should be avoided lest unforeseeable financial burden be made to the **owners/OCs** and the works contractor. In the case of any necessary modifications (except emergency works), the works consultant shall provide analysis and advice on their impact on the works schedule and cost for the **owners/OCs**' consideration, agreement and approval before instructing the works contractor to proceed. For modifications inducing an increase of costs (i.e. items not existing in the original contract), the works consultant shall review the relevant quotes provided by the works contractor before giving advices to the **owners/OCs**.



### Useful Tip

#### **Reserve provision for the works**

In view of unforeseeable issues and risks that may arise during building rehabilitation, some **owners/OCs** will reserve or charge for provision of a certain amount during fund collection to support any extra costs arising from emergency issues.



**To learn more about provision for works – Please refer to [Section 3.3.1](#)**

## 5.2.4 Payment for the Works

The payment of works should be made on the relevant contract terms. Under general circumstances, the works consultant will approve interim payments depending on the works contractor's applications and the proportion of completed works. Therefore, besides entrusting the works consultant with supervision and approval of the works contractor's works and applications, **owners/OCs** should instruct the works contractor to table important documents such as reports, photos, certificates and government approval notices for documentation and reference, and conduct necessary on-site inspections for approval of payments. For application for final payment, the **owners/OCs** should verify the works contractor's completion of all works in compliance with contractual standards; if substandard items are found, release of relevant payment and performance bond shall be suspended until rectifications are made by the works contractor.



### Useful Tip

#### **Proper financial management**

**Owners/OCs** should take heed of and verify all accounting records of the myriad transactions involved from the beginning to the end of the building rehabilitation project. It is advisable to open an independent account book or bank account to handle relevant incomes and expenditures wherever possible. The relevant receipts, invoices, vouchers, slips and other documents should also be kept in proper condition to facilitate reference in the future.



**For more information about anti-corruption - Please refer to [Appendix I](#)**

# Reference

1. Building Maintenance Toolkit published by ICAC
2. Building Maintenance Guidebook published by Buildings Department
3. Smart Tender DIY toolkit published by URA

# **Appendix – Relevant Information**

## Step 5

Appendix I – Anti-Corruption Information (Building Rehabilitation Workflow – Step 5)

## Anti-Corruption Information (Building Rehabilitation Workflow – Step 5)

Stage	Risk of corruption and malpractices	Tips of preventing corruption
Progress Monitoring	<ul style="list-style-type: none"> <li>- Lax supervision of the work progress and connivance at the contractor's work delays</li> <li>- Total reliance on the consultant in monitoring work progress</li> </ul>	<ul style="list-style-type: none"> <li>- with the assistance of the consultant, require the contractor to submit a master work programme upon the commencement of the contract, showing the stages and deliverables of the maintenance works required, with timely updates thereafter should there be any changes (e.g. weekly or biweekly rolling programmes);</li> <li>- post the master work programme/weekly or biweekly rolling programmes in a prominent place of the building for information and monitoring by property owners/occupants;</li> <li>- require the consultant to closely monitor the progress of work against the work programme, and report any deviations and follow-up actions taken/to be taken;</li> <li>- conduct regular meetings and joint inspections of work progress with the consultant and contractor to closely monitor work progress.</li> </ul>
Quality Checks	<ul style="list-style-type: none"> <li>- Lax supervision, and acceptance of or connivance at substandard/incomplete works, poor workmanship and/or substandard materials</li> <li>- No supervision or quality check on hidden works, which cannot be seen/checked after the works are completed</li> </ul>	<ul style="list-style-type: none"> <li>- require the consultant to submit a site supervision plan, providing detailed arrangement on supervision of the repair works, upon commencement of the project for the OC/MC's approval;</li> <li>- where practicable, conduct random checks on the consultant's compliance with the approved site supervision plan, and require immediate rectification if any deviation is noted;</li> <li>- require the consultant to report on a regular basis (say, biweekly) on the progress and quality of the repair carried out;</li> <li>- require the contractor to submit measurement records and site photos (before and after work completion) certified by the consultant for hidden works which cannot be seen/checked after the works are completed; require the contractor to provide samples of construction /repair materials approved by the consultant for reference, and displace the samples at an appropriate location for the information of and reference by property owners to enhance transparency;</li> </ul>

		<ul style="list-style-type: none"> <li>- where practicable and under safe conditions, conduct joint inspections or site observations on the works, materials and work progress with the consultant;</li> <li>- inform the consultant of any irregularities observed on the work of the contractor (e.g. the materials used are different from those approved) for follow-up action, and request the project consultant to report back on the corrective actions taken.</li> </ul>
<p>Contract Payments</p>	<ul style="list-style-type: none"> <li>- Exaggerating work progress to expedite contract payment; release payment before work/stage completion</li> <li>- Certifying defective works to facilitate payment before the defective works are rectified</li> <li>- Lack of segregation of duties in payment process, e.g. same person certifies work completion and signs cheques</li> </ul>	<ul style="list-style-type: none"> <li>- require the contractor to submit invoices with details on the actual quantities of work done, against the estimated quantities and prices for individual major works items in tender submission/contract, with reasons for significant variations, and evidence such as photos where applicable, in its payment claims;</li> <li>- require the consultant to assess the cost of the works completed, excluding those that are defective, when certifying contractors' payment claims;</li> <li>- where practicable and under safe conditions, conduct joint inspections with the consultant to check the works claimed to have been completed before making payment;</li> <li>- require the consultant to submit reports on work progress and financial statements of the project account to the MCs/OCs regularly for monitoring;</li> <li>- display the reports on work progress and financial statements in a prominent place of the buildings for property owners/occupants' monitoring and information;</li> <li>- make payment to the contractor in accordance with the contract terms, including the time limit for processing and effecting payments;</li> <li>- where practicable, appoint the treasurer and at least two MC members to sign the cheques for payments;</li> <li>- require the contractor to provide certificates, test reports and any other relevant documents before releasing the final payment;</li> <li>- for a high value, complicated project, consider engaging an independent consultant, e.g. a quantity surveyor, to provide independent<sup>1</sup> assessment of contract payment claims and assist the OC in cost control.</li> </ul>

<p>Work Variations</p>	<ul style="list-style-type: none"> <li>- Omitting certain repair works from the tender invitation and subsequently causing variation orders to be issued for such works to the contractor at inflated prices after the award of contract</li> <li>- Causing the issue of orders for unnecessary works during project implementation</li> <li>- Unnecessary switching to higher-priced materials during project implementation to increase the contractor's profit</li> </ul>	<ul style="list-style-type: none"> <li>- when engaging a consultant to carry out a building maintenance project in response to a repair order/ notification, require the consultant to assess the need of and advise on all necessary maintenance works, and include, as far as practicable, all necessary works items in the tender specification and the works contract to minimise the need for using variation orders after commencement of the contract;</li> <li>- require the consultant to justify the needs and seek approval of the MC/OC before ordering/endorsing any work variations;</li> <li>- lay down clear financial limits on the maximum amount of variations that the MC is authorised to approve, above which approval from OC meeting should be sought;</li> <li>- require the consultant to provide cost estimate for any variations requested;</li> <li>- assess the reasonableness of the costs of the work variations required, making reference to the tender prices of similar works items in the contract, if available;</li> <li>- for major/costly work variations, where practicable, consider engaging an independent consultant (e.g. a quantity surveyor) to provide independent cost advice;</li> <li>- properly document any work variations and the costs involved, and disclose them to all property owners /occupants through notices posted in a prominent place of the buildings</li> </ul>
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