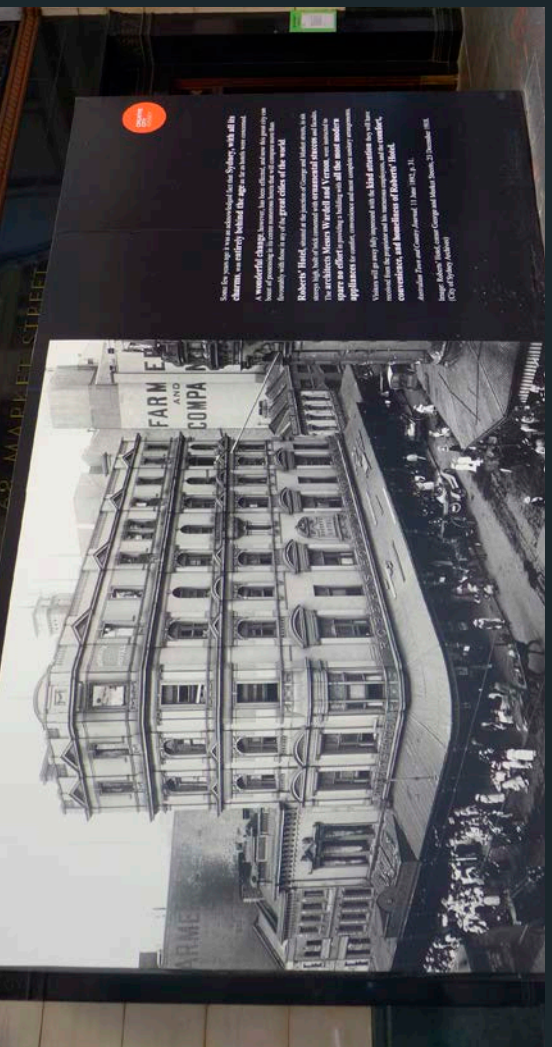
Attachment B

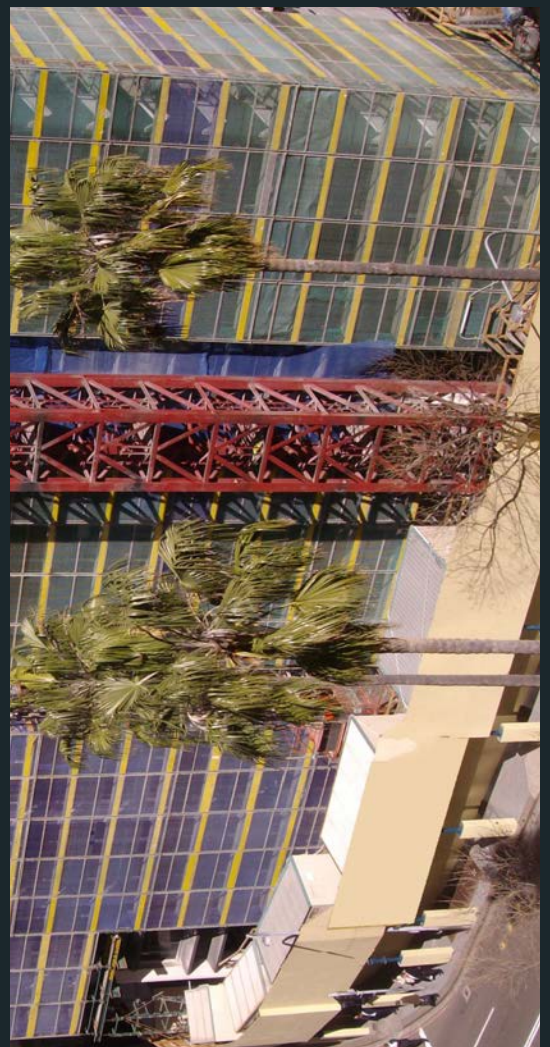
Guidelines for Hoardings and Scaffolding

CITY OF SYDNEY

Guidelines for Hoardings & Scaffolding

2017





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City of Sydney Council
Town Hall House
456 Kent Street
PO Box 1591 Sydney NSW 2001
www.cityofsydney.nsw.gov.au

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PART 01

1.1 Title of the Guidelines

These Guidelines ('the Guidelines') are called *'Guidelines for Hoardings and Scaffolding'.*

1.2 The purpose of the Guidelines

The City of Sydney local government area has an area of 26.15 square kilometres. The city is Australia's iconic face to the world and international gateway. The city is also home to more than 205,000 people.

Seven of the ten most popular international visitor attractions in Australia are located in the City of Sydney. More than 437,000 people work in the local area. The city attracts around 615,000 visitors each day, including international visitors, day visitors, students, shoppers and business related visitors.

It is important therefore that *temporary structures* erected in *public places* are designed and installed to cause the least possible impact on the city's appearance and large pedestrian population. Impacts on the safe movement of vehicles and bicycle riders must also be minimised.

The city undergoes continual change through the construction of new buildings and alterations and additions to existing buildings. Maintenance work on the city's substantial existing building stock is also a significant activity.

Temporary structures such as work area protective structures *(hoardings)*, perimeter *scaffolding* systems and cantilevered scaffolding are often a necessary part of development and maintenance activity. *Hoarding* structures are typically required to isolate the work area from the *public place* and to provide adequate protection and safety of the public. Other *temporary structures* such as *scaffolding* systems and cantilevered platforms are also required to screen and isolate worksites and to provide a work platform.

A significant aspect of *temporary structures* in terms of public access and amenity is the impact that these structures can have on pedestrian movement, motor vehicles and bicycle usage and associated public safety in vicinity of a worksite. Poorly designed and maintained *temporary structures* can also cause adverse visual impacts on the streetscape, particularly in the high-density city centre.

Temporary structures placed on the *City's* land therefore need to:

a) minimise pedestrian and cycleway obstructions and inconvenience;

b) maintain safe passage and high amenity including safe walking surfaces past worksites; and

c) minimise adverse visual impacts on the local environment.

The Guidelines also seek to integrate public art and high quality graphics and historic images with *temporary structures* to mitigate visual impacts and enrich and vitalise the *public place* to give added creativity, interest and meaning to Sydney's culture, vibrancy and history.

The Guidelines prescribe minimum performance objectives and specific design criteria (deemed-to-comply provisions) to limit and control these impacts whilst allowing proponents of development, contractors and building owners to undertake required work and to meet their legislative work safety responsibilities and other requirements.

1.3 Adoption and enforcement

These Guidelines have been made under the *Hoardings and Scaffolding Local Approvals Policy* (LAP). An application is considered and assessed through the LAP and is approved under s94 of the Local Government Act 1993 (an activity under category E(2) of the table to s68) and also under the Roads Act 1993. Both Acts apply to an approval and general regulation of such structures including enforcement action by the *City*.

1.4 The aims of the Guidelines

The Guidelines aim to:

a) provide practical controls for the design, approval, maintenance and regulation of *temporary structures (hoardings, scaffolding and cantilevered work platforms)* erected on or over the *City's* land within the City of Sydney local government area;

b) ensure that *temporary structures* are appropriately designed so as to minimise adverse impacts on pedestrian amenity, public safety and vehicle and bicycle movement within the *road* reserve including access for persons with disabilities and other pedestrians with special needs such as people using strollers, older persons and users of mobility scooters;

c) provide minimum design requirements (including public art and graphics content) for *temporary structures* that will be erected on or over the *City's* property; and

d) ensure that *temporary structures* contribute towards a vibrant, visually interesting, accessible and safe pedestrian oriented *public place* through encouraging, and where required by these Guidelines, the inclusion of interesting graphics, images and creative thought-provoking artwork.

1.5 Commencement of the Guidelines

The Guidelines commenced on 1 January 2017 through the adoption of a Local Approvals Policy, *'Hoardings and Scaffolding Policy'*.

1.6 Amendments to the Guidelines

The Guidelines replace a previous guideline *'Guidelines for Hoardings and Scaffolding 2014'* that was adopted by Council on 8 December 2014.

1.7 When will the Guidelines be reviewed?

The Guidelines will be reviewed periodically. The *City* reserves the right to vary or withdraw the Guidelines at any time in accordance with the Local Approvals Policy.

1.8 Where do the Guidelines apply?

The Guidelines relate specifically to the placement of *temporary structures* on or above a public *road* in association with development activity or other work being undertaken on a building or structure located on private land that adjoins a public *road* or structures on *roads* controlled by the *City*.

The Guidelines apply to all land within the City of Sydney Local Government Area (LGA) with the exception of land (roadways) under the control of the Sydney Harbour Foreshore Authority (SHFA). A map of the LGA is shown in Figure 1.

The map also defines the city centre and non-city centre areas where different *footway/roadway* occupation fees and other requirements apply. The areas under the control of SHFA are not shown in Figure 1 however a map is available on the *City's* website. Proponents seeking to erect *temporary structures* in the SHFA area must apply to the Authority to obtain approval.

1.9 To what approvals do the Guidelines relate?

The Guidelines specifically relate to approvals required under s68 of the Local Government Act 1993 and s115 and s138 of the Roads Act 1993.

Where a *temporary structure* is proposed to be placed on a *classified road* the concurrence of the NSW Roads and Maritime Services (RMS) must also be obtained (s138(2) of the Roads Act). A list of *classified roads* is available on the RMS website. In these cases the *City* will refer an application to RMS to seek their concurrence.

It is therefore important that proponents allow sufficient time in the work program to obtain the required concurrences and approvals.

Site perimeter fencing such as chain-wire fencing located wholly within a property allotment is not regulated through these Guidelines and does not require approval if associated with approved development or building activity that is classed as exempt or complying development. In these cases fencing must comply with the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

1.10 Relevant Acts, Regulations and documents

1.10.1 Primary relevant Acts and other policies:

The Acts, codes and policies listed below may be relevant to the design of *temporary structures* and should be considered when preparing an application and maintaining a *temporary structure*.

Note: This list is not exhaustive.

– Local Government Act 1993;

– Local Government (General) Regulation 2005;

– Protection of the Environment Operations Act 1997;

– Work Health and Safety Act 2011;

– Work Health and Safety Regulation 2011;

– Environmental Planning and Assessment Act 1979;

– Environmental Planning and Assessment Regulation 2000;

– Roads Act 1993;

– Roads Regulation 2008;

– The Building Code of Australia;

– Illegal Logging Prohibition Act 2012 and Regulation;

– The Code of Practice for Construction Hours/Noise within the Central Sydney Business District;

– The Sydney Local Environmental Plan 2012

– The Sydney Development Control Plan 2012;

– The City of Sydney 'Public Art Policy';

– The City of Sydney Creative City Cultural Policy and Action Plan

– The City of Sydney 'Graffiti Management Policy';

– The City of Sydney 'Tree Management Policy';

– The City of Sydney 'Inclusion (Disability) Action Plan';

– The City of Sydney 'Compliance Policy and Prosecution and Civil Enforcement Policy';

– The City of Sydney 'Display of Premises Numbers' information; and

– The City of Sydney Performance Bond Policy.

Figure 1: Map of the local government area and the city centre (refer to Figure 1a for a detail of the city centre area)

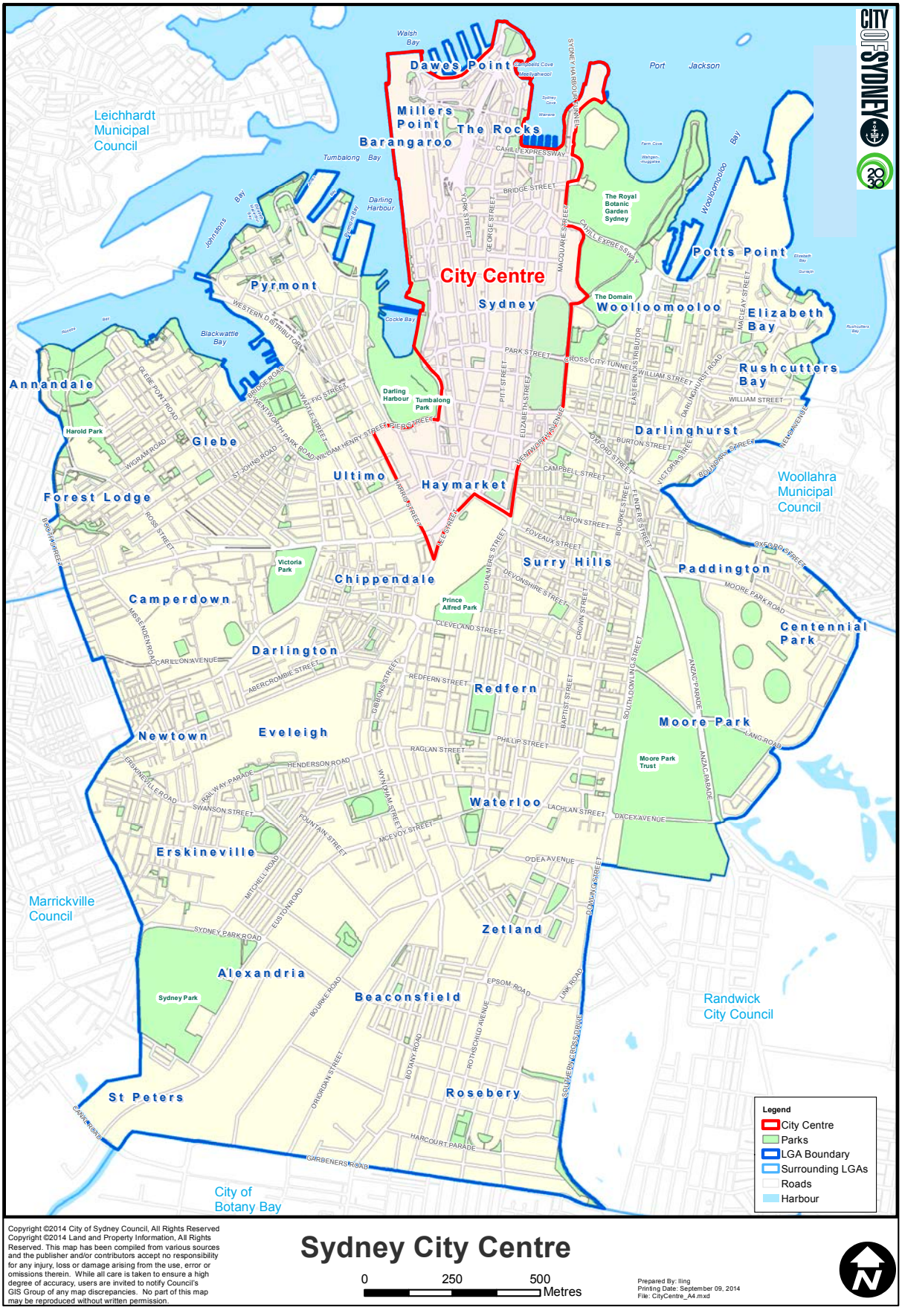
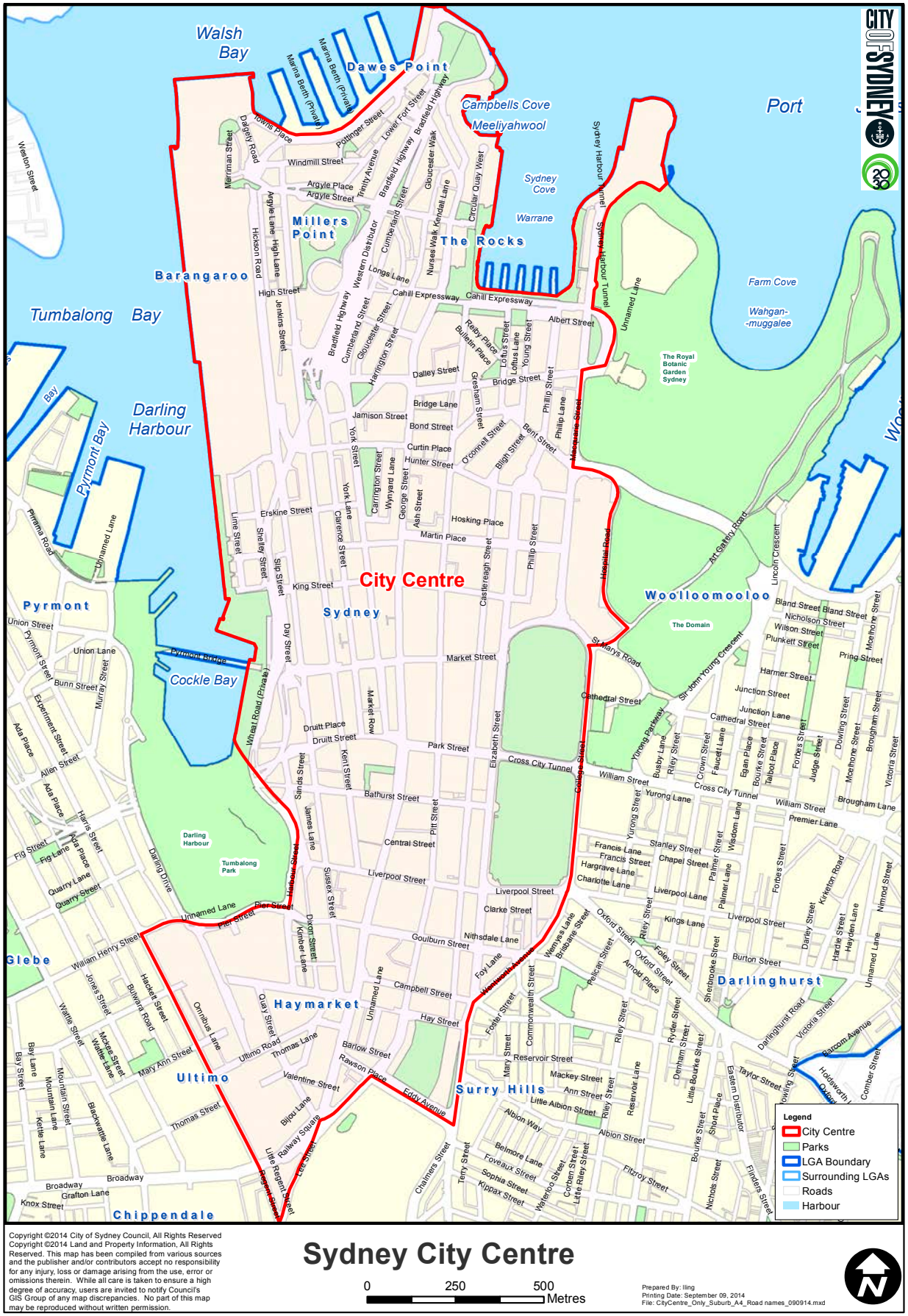


Figure 1a: *(detail)* Map showing the city centre



1.10.2 Other related documents applying to *temporary structures*:

– The relevant Australian Standards adopted by the Building Code of Australia (Specification A1.3), including but not limited to AS1170 Parts 0, 1, 2 & 4, AS 4100, AS 1720, AS 3600 and AS 1657;

– The 'Guide to Traffic Engineering Practice', Austroads;

– Technical directions issued by the NSW Roads and Maritime Services;

– Construction Work - Code of Practice, Safe Work Australia;

– Safe Design of Structures - Code of Practice, Safe Work Australia;

– Excavation Work - Code of Practice, Safe Work Australia;

– General Guide for Scaffolding and Scaffolding Work, Safe Work Australia;

– Traffic control at worksites, NSW Roads & Maritime Services

– SafeWork NSW Code of Practice for Overhead Protective Structures.

1.10.3 State and federal legislation and other provisions

The Guidelines do not override state or federal legislation. Applicants must therefore check other relevant legislation and adopted codes of practice and where necessary, consult the appropriate state and federal government departments and agencies to ensure that *temporary structures* comply and satisfy all statutory requirements including in particular, work health and safety obligations.

The Guidelines also do not override any relevant conditions of a development consent applying to the land adjoining the *road* on which a *temporary structure* is to be installed.

Notes:

1) As owner of the land on which the *temporary structure* is erected the *City* may require design elements or features in addition to these Acts, policies, codes or other documents as set out in 1.10.2.

2) Works associated with a *temporary structure* such as:

   a) the temporary barricading of a *roadway;*

   b) hoisting from and/or above a *roadway;* and

   c) the display of advertising on a *hoarding,*

will require separate applications and approvals under other legislative provisions, policies and plans.

1.11 What are the implications for non-compliance with the Guidelines?

An *authorised person* of the *City* may issue a determination (including an approval), issue penalty notices, give orders, issue directions, initiate court action for non-compliance with the Local Government Act, Roads Act or Environmental Planning and Assessment Act, and prosecute for associated breaches of the applicable legislation.

The *City* will take compliance and/or enforcement action in accordance with the Local Approvals Policy and the *City's* Compliance Policy and Prosecution and Civil Enforcement Policy.

A person who is guilty of an offence under the various Acts administered by the *City* may be liable, on conviction, for a maximum penalty as prescribed by the applicable legislation.

Parties not acting in accordance with these Guidelines and an approval allowing a *temporary structure* on or above the *City's roads* may be given notice in writing to comply before an infringement is issued.

The *City,* at all times, reserves the right to issue an immediate infringement notice or penalty depending on the seriousness of the circumstance and at the discretion of the *authorised person* including consideration of the *City's* Compliance Policy and Prosecution and Civil Enforcement Policy.

1.12 Certification and approval processes

1.12.1 Certification by qualified persons (Local Government Act, s93)

The *City* requires a certificate from an appropriately qualified person (see 2.7) confirming that the design of a *temporary structure* complies with the Guidelines including the structural adequacy requirements. The *City* will also require a certificate at completion of the erection/installation of a *temporary structure* to verify its structural adequacy and compliance with the approved plans, details and conditions of approval (see Part 04). Certification must be in the form as prescribed in the application form and approval determination *(Permit).*

1.12.2 *Performance bonds* (refer also to 2.12)

Performance bonds (documentary evidence such as bank guarantee or undertaking), bank cheque, cash or EFTPOS transfer are required for the installation of Type B *hoardings*. Bonds may also be required for any other type of *temporary structure* as determined by the *City*. The following provisions apply:

a) An approval will be granted subject to a condition requiring the applicant to provide a *performance bond* for making good any damage that may be caused to the *City's* property and for other purposes as set out in 2.12. Bank guarantees or other undertakings must not nominate a termination or expiry date (refer to the *City's* Performance Bond Policy).

b) Where a *performance bond* applies the amount will be determined at the time of assessing an application and will be specified as a condition of approval. The bond must be paid before an approval (*Permit*) is released.

c) Any damage caused to the *City's* infrastructure must be rectified to the *City's* standard requirements/specifications. The bond will not be returned until the *City* is notified that any required rectification works have been completed to the required acceptable standard or that no damage has occurred.

1.12.3 Granting an approval

An approval *(Permit)* for the placement of a *temporary structure* in, on or over a public *road (footway and/or roadway)* is granted under s94 of the Local Government Act 1993 and s139 of the Roads Act 1993.

Where barriers on *roadways* are proposed or street traffic/parking control signage will be affected by a hoarding the applicant will need to include a specific request for approval under s115 of the Roads Act.

A plan showing all existing traffic control and/or parking signs, proposed new signs and/or relocated signs must be submitted with a hoarding application (see 2.9.2).

A *Permit* will be issued with conditions which must be complied with.

1.12.4 Amending an approval

A person to whom an approval is granted may apply to amend an approval *(Permit)* under s87 of the Local Government Act if the amendment is minor only. The assessment for an amendment to an approval will include, but will not be limited to, the following matters:

a) whether the proposed amendment is substantially the same as that originally approved;

b) whether any prejudice will be caused to any person who made a submission concerning the original proposal; and

c) whether consultation with another authority such as the NSW Roads and Maritime Services is required.

An amended determination replaces the original approval from the date endorsed on the notice of determination *(Permit).*

1.12.5 Extending an approval

The *City* may determine to extend an approval under s107 of the Local Government Act if it is satisfied that there is good cause for doing so. An approval will not be extended beyond 5 years.

An approval may also not be extended where:

a) a *temporary structure* is structurally unsound, is not being satisfactorily maintained, or is non-compliant with an approval; or

b) graphics or artwork have not been installed in circumstances where the original approval, due to the short duration of installation of the *temporary structure* of the initially proposed installation (refer to 3.4), were not required to be provided. In these circumstances an extension will only be granted once the graphics are installed on the *hoarding* and/or *scaffolding* in accordance with the Guidelines; or

c) there are outstanding fees payable or there is a breach of the *Permit* conditions.

A certificate from an appropriately qualified person may also be required at prescribed intervals to confirm that the *temporary structure* remains structurally sound (refer to 2.11 and Part 04).

An approval to extend a *Permit* must be obtained before the *Permit* lapses.

1.12.6 Revoking an approval *(Permit)*

The *City* may revoke an approval where any of the following apply:

a) an applicant fails to act on directions to rectify a *temporary structure* particularly matters relating to structural adequacy where public safety is at risk; or

b) a *public liability insurance* policy for a *temporary structure* approval is not current or has been withdrawn by the insurer; or

c) the applicant fails to comply with an approval including conditions of the *Permit;* or

d) any other circumstance as determined by the *City*.

If an approval has been revoked and the structure is not removed, the *City* reserves the right to take action to have the unauthorised *temporary structure/s* removed and recover all associated costs (refer to 1.12.2 and 2.12).

Note: See s109 of the Local Government Act and s140 of the Roads Act for further information in relation to revoking an approval.

1.13 Criteria for consideration when issuing an approval

In assessing an application the *City* will consider s89 of the Local Government Act and s139 of the Roads Act including giving consideration to the provisions as set out in Parts 02, 03 and 04 of these Guidelines.

1.14 Other activities that require approval

Approval for the installation of *temporary structures* on or above a *road* reserve does not automatically permit the use of equipment (cranes and hoists) to swing (including vaning actions) or lift material across or over any part of a public *road* and the establishment of an associated *works zone*.

Note: It can take up to six (6) weeks or more to have a *works zone* application processed so it is important to lodge an application early in the site establishment planning process to prevent delays in commencing work.

A separate approval under Part E1 of the Table to Section 68 of the Local Government Act and the Roads Act must also be obtained for hoisting activity associated with:

a) the installation and removal of *temporary structures*;

b) the development site or work; and

c) the movement of any part of a hoisting device over a public *road* including crane vaning actions.

1.15 Definitions

All defined terms used in these Guidelines are italicised for ease of reference and use.

authorised person: an employee of Council (the *City*) generally or specially authorised in respect of or whose duty it is to deal with, or to act in regard to, any acts, matters or things in relation to which the expression is used. (Local Government Act 1993).

cantilevered facade-mounted materials landing platform: a fixed or retractable platform attached to a building's facade or building perimeter that overhangs a *road* and which is used to hoist and land material and equipment to and from a *workplace*, typically a floor of a multi-level building using site-based or mobile hoisting devices such as cranes.

cantilevered work platform: a temporary platform generally consisting of structural elements such as needle beams and decks attached to a building and on which *scaffolding* may be erected to undertake work on a building.

City: The Council of the City of Sydney.

classified road: (Roads Act 1993) includes:

- a main *road*;
- a highway;
- freeway;
- a controlled access *road*;
- a secondary *road*;
- a tourist *road*;
- a tollway;
- a transitway; and
- a State work.

Note: A full list of *classified roads* is available on the NSW Roads and Maritime Services' website.

control measure: in relation to a risk to health and safety, means a measure to eliminate or minimise the risk. (Work Health and Safety Regulation 2011)

crossing: the portion of a driveway or vehicular accessway between the carriageway of a *road* (street gutter) and property boundary (frontage).

footway: the part of a *road* that is set aside or formed as a path or way for pedestrian traffic (whether or not it may also be used by bicycle traffic). (Roads Act 1993)

hoarding: a *temporary structure* placed on the *City's* land *(footway/roadway)* that separates a *workplace* from the *public place* and may also provide an overhead protective barrier to protect the *public place* from objects that may fall from a work area.

performance bond: a financial bond lodged by an applicant and held by the *City* for use in circumstances set out in 1.12.2 and 2.12.

permit: an approval in force under the Local Government Act 1993 and Roads Act 1993.

person conducting a business or undertaking: (Section 5 of the Work Health and Safety Act 2011), for the purposes of these Guidelines, is the holder of a determination *(Permit)* for a *temporary structure* such as a builder; a contractor; or other person involved in placing a *temporary structure* in a *public place*.

public liability insurance: insurance where the insurer agrees to indemnify the insured for legal liability owed to another person who suffers loss, damage, injury or death by reason of the insured's activities.

public place: a *road*.

road:

a) highway, street, laneway, pathway, footpath, cycleway, thoroughfare, bridge, culvert, causeway, road-ferry, ford, crossing, by-pass and trackway, whether temporary or permanent; and

b) any part of a *road* and any part of any thing referred to in paragraph (a), and

c) any thing forming part of a *road* or any thing forming part of any thing referred to in paragraph (a). (Local Government Act 1993).

roadway: a *road* that may also include a laneway.

SafeWork NSW: the authority constituted under the Workplace Injury Management and Workers Compensation Act 1998.

scaffolder: a person engaged in erecting, altering or dismantling *scaffolding*. (AS/NZS 4576:1995 'Guidelines for Scaffolding')

scaffold: *(scaffolding):* a *temporary structure* specifically erected to allow and support access or work platforms.

Note: Where the word '*scaffolding*' appears in these Guidelines it refers to 'perimeter *scaffolding*' erected on or above the *City's* property (a *road*). It does not apply to *scaffolding* erected on private property associated with construction, demolition or maintenance activity on a building or other structure.

temporary structure: any or all of the following placed on or above a *public place:*

- Type A *hoarding* – a plywood sheet fence, with or without *scaffolding* used to enclose or isolate a work area from the *public place*;
- Type B *hoarding* – an overhead protective structure constructed of a steel frame that provides a barrier from objects that may fall from a work area into the *public place* and where necessary, to also enclose a worksite by means of a plywood sheet fence;
- *Cantilevered work platforms*; and
- *Scaffolding*.

workplace: a place where work is carried out for a business or undertaking and includes any place where a worker goes, or is likely to be, while at work. *(Work Health and Safety Act 2011)*

works zone: a space on a *road* dedicated to the temporary standing of vehicles associated with a worksite to allow the delivery and removal of material, plant and equipment to and from a *workplace*.

Note: Approval of a *Works zones* is not granted as part of a *temporary structures* approval. A separate application and approval is required.

Figure 2

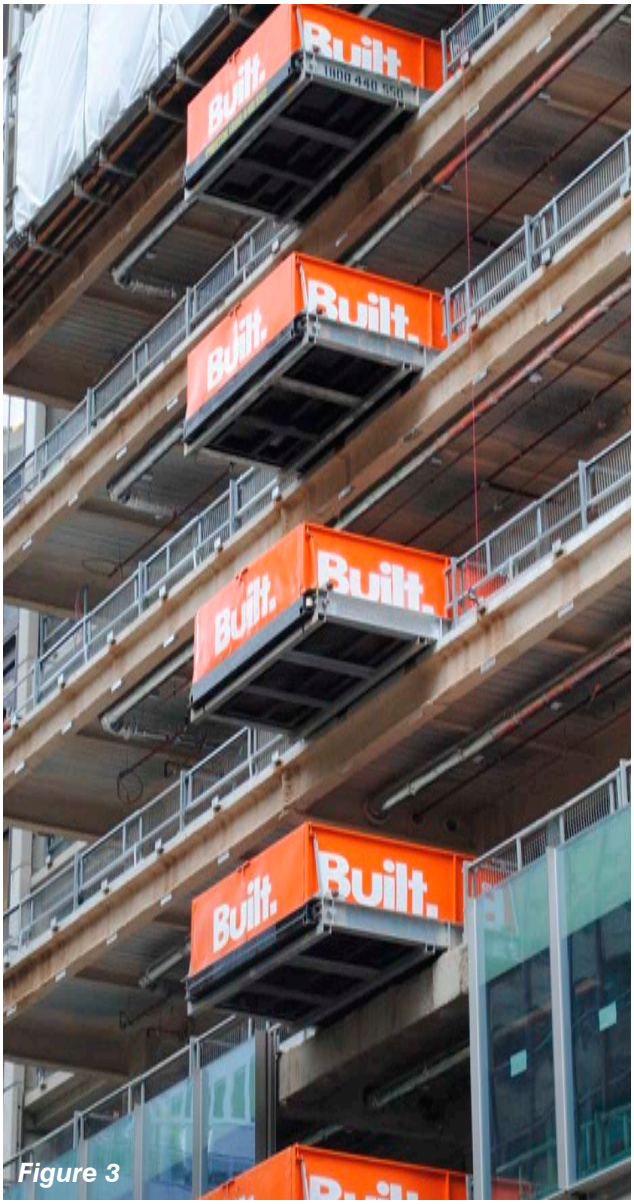


Figure 3

1.16 Structure of the Guidelines

1.16.1 The Parts

Part 01 (this part) provides an overview of the legislative context of the Guidelines.

Part 02 describes the general requirements for all *temporary structures*.

Part 03 describes the detailed requirements for the design of *temporary structures* and their component elements including the display of public art and graphics.

Part 04 specifies the structural requirements (including certification) for *temporary structures*.

Figure 2: Approval is required when swinging or hoisting material over a public *road* or slewing any part of a crane over a *road* including vaning actions.

Figure 3: *Cantilevered facade-mounted materials landing platforms* that project over a *road* require approval under the Local Government Act and the Roads Act.

1.16.2 Use of 'performance objectives' vs 'deemed-to-comply' approaches to design

The detailed guidelines for the design of *temporary structures* (Part 03) contain both 'performance objectives' and 'deemed-to-comply' provisions.

It is expected that in the majority of cases proposals for *temporary structures* will be capable of complying with the deemed-to-comply provisions. Compliance with the deemed-to-comply provisions automatically satisfies the performance objectives.

Where it is not possible to meet the deemed-to-comply provisions and/or there are clearly demonstrated construction and/or site constraints, consideration will be given to alternative designs that meet the performance objectives of the Guidelines. Consideration will also be given to designs that include elements that comply with the deemed-to-comply provisions and other elements that meet the performance objectives.

If a performance-based design approach is used, applicants will need to demonstrate how the relevant performance objectives will be satisfied (see 3.9).

1.16.3 The role of diagrams, photographs and notes in the Guidelines

The Guidelines consist predominately of text-based controls however diagrams and photographs are also included to assist the reader in understanding the text provisions. The diagrams do not nominate or specify all of the prescriptive requirements, therefore when designing *temporary structures* the reader must not rely solely on the details in the diagrams and/or photographs in order to comply with these Guidelines.

In the event of any inconsistency between the written prescriptive requirements and the diagrams the written requirements apply.

Notes in the text generally provide explanatory information and are provided to assist the reader in understanding the Guidelines and to draw attention to other relevant matters within and outside the Guidelines that may also need to be considered.

1.17 Submission of documents to the *City*

Where the Guidelines require documents to be submitted to the '*City*' the documents must be addressed to the Chief Executive Officer, Council of the City of Sydney. Documents can be posted to GPO Box 1591 Sydney 2001 or delivered by hand to the One-Stop-Shop, Level 2, Town Hall House, 456 Kent Street, Sydney, or any neighbourhood service centre.

Where an application has been lodged or an approval is granted and further documents are required to be submitted it is important to include a reference to the application number (referenced as a 'B' prefix in correspondence from the *City*).

General requirements

PART 02

Figure 4

2.1 Introduction to Part 02

The Guidelines are to be read and used in conjunction with the Policy. The Guidelines provide general and specific requirements that *temporary structures* must achieve in order to satisfy the objectives and requirements of the Policy.

The Guidelines include both deemed-to-comply and performance-based objectives that may be used depending on the circumstances of the site and scale of proposed development.

Part 02 sets out the general principles for the selection, design and installation of *temporary structures*; an overview of the requirements of the Work Health and Safety Act 2011 and Regulations; a summary of the matters to be considered when preparing an application for a *Permit* and general principles for the management of *temporary structures*.

2.2 Types of *temporary structures* (hoarding systems)

2.2.1 Type A *hoardings*

A Type A *hoarding* is a fence consisting of a structural frame of timber or steel, clad with water-resistant structural plywood sheets and having a minimum height of 2 metres that separates the worksite from the *road*.

Figure 4: A typical Type A *hoarding* finished with the standard colour (see 3.9.7). Encroachments on footways must be minimised to maintain convenient and safe movement of pedestrians. (See 3.9.3)

A key design requirement for Type A *hoardings* is to minimise the encroachment of the work area on *footways* and *roadways* to ensure that adequate space is provided for the safe and convenient movement of pedestrians, bicycle riders and vehicles.

Encroachments up to 1.0 metre may be permitted for site specific needs, such as shop-front replacement or alteration, construction, or excavation where shoring or piling is required along a property boundary. The site fence encroachment provisions also apply to fences of Type B *hoardings*.

2.2.2 Type B *hoardings* (prefabricated modular gantry design)

A Type B *hoarding* is typically a prefabricated modular steel gantry *hoarding* structure installed and assembled in segments to form an integrated overhead protective structure allowing pedestrians and bicycle riders to pass beneath.

A prefabricated modular Type B *hoarding* may incorporate a site fence.

The structural frame of Type B hoardings must be of steel. Timber framing is not permitted (see 3.3).

2.2.3 Type B *hoardings* (full structural – assembled in situ)

Designed to achieve the same purpose as a gantry system however generally a larger system of steel-framed overhead protective structure that is used to span wide *footways* and *roadways* under which vehicles can pass. This type of *hoarding* is often the preferred design solution because it provides greater flexibility to accommodate street furniture, poles and street trees whilst at the same time minimising *footway* encroachments (multiple support columns) and maximises clear pedestrian pathways particularly for wide *footways*.

This type of *hoarding* is often required:

a) in localities with high pedestrian densities such as the city centre to minimise obstructions and maximise the clear span between support columns; and

b) where multiple site sheds and other approved loads are proposed to be placed on a *hoarding* deck.

A full structural Type B *hoarding* may include a site fence of structural plywood.

Figure 5

Figure 6

2.2.4 Other structures associated with *hoardings*

Site sheds and *scaffolding* may be permitted on the deck of both forms of Type B *hoardings* where site constraints do not permit placement elsewhere within the site.

The *SafeWork NSW* 'Code of Practice for Overhead Protective Structures' requires that loads on Type B *hoardings*, including loads from *scaffolding*, must not exceed 40% of the design live load (generally 10 kPa). Design drawings must confirm that the *hoarding* is fully capable of carrying loads from any proposed *scaffolding*/sheds and complies with the Code of Practice.

Shed positions must be shown accurately on the certified design drawings lodged with an application (see 2.9.2).

2.2.5 Cantilevered overhead protective structures

Cantilevered overhead protective structures in lieu of gantry Type B *hoardings* are generally not encouraged or supported by the *City* as their construction and dismantling generally requires the closure of *footways* or *roadways* for significant periods that can disrupt pedestrian and vehicular movement.

Where there are clearly demonstrated site constraints or construction needs the *City* may consider allowing these types of *temporary structures*. Full details must be lodged with the *temporary structures* application setting out reasons why a conventional gantry Type B *hoarding* is not suitable for the site.

The time required for the installation and later dismantling of the *temporary structure* and impacts on pedestrian movement will form part of the *City's* consideration.

2.3 Relationship with applicable legislation

Clause 1.10 lists legislation, codes, policies and other documents that may also be relevant to the design, assessment and approval of *temporary structures* associated with work activity. *Temporary structures* are used for a number of purposes including isolating or protecting the *public place* from the work area and also as a work platform (e.g.: *scaffolding* placed on decks of Type B *hoardings*).

In terms of protecting the *public place* the principal statutes that regulate a *workplace* in NSW including managing and minimising risks associated with objects that may fall from a work area are the Work Health and Safety Act 2011 and Work Health and Safety Regulation 2011. The key provisions of the Regulations relating to worksites near a *public place* are set out in 2.4.1.

Figure 5: A typical Type B (pre-fabricated) gantry *hoarding* (without a site fence).

Figure 6: A Type B (full structural) hoarding under construction. This type of *hoarding* is custom designed in response to the characteristics of the site and construction needs. The structure is assembled in situ.

Figure 7

2.4 Work health and safety obligations

In allowing a *person conducting a business or undertaking* to meet their statutory responsibilities under the NSW Work Health and Safety legislation to protect and isolate the *public place* from a *workplace*, the *City* will permit the placement of *temporary structures* on or above a *road* subject to meeting minimum prescribed objectives relating to the design, installation and maintenance of *temporary structures* to ensure that:

a) such structures have the least possible adverse impact on pedestrian movement and amenity;

b) safe and convenient pedestrian, vehicular and cycling movement is provided and maintained past worksites; and

c) any adverse visual impacts in the streetscape are minimised.

2.4.1 Work Health and Safety Regulation 2011

There are several provisions that a *person conducting a business or undertaking* must satisfy:

54 Management of risk of falling objects

A *person conducting a business or undertaking* at a workplace must manage, in accordance with Part 3.1, risks to health and safety associated with an object falling on a person if the falling object is reasonably likely to injure the person.

Figure 7: The use of cantilevered overhead protective structures is generally not allowed. Where there are demonstrated construction needs or *public place* constraints such as a need to eliminate *hoarding* columns on the *footways* below due to high pedestrian densities and/or narrow *footways,* consideration will be given to the use of this type of protective structure.

Note: *WHS Act—section 19 (see clause 9)*

55 Minimising risk associated with falling objects

1) This clause applies if it is not reasonably practicable to eliminate the risk referred to in clause 54.

2) The *person conducting the business or undertaking* at a workplace must minimise the risk of an object falling on a person by providing adequate protection against the risk in accordance with this clause.

   MAXIMUM PENALTY:

   a) in the case of an individual - $6,000, or

   b) in the case of a body corporate - $30,000.

3) The person provides adequate protection against the risk if the person provides and maintains a safe system of work, including:

   a) preventing an object from falling freely, so far as is reasonably practicable, or

   b) if it is not reasonably practicable to prevent an object from falling freely - providing, so far as is reasonably practicable, a system to arrest the fall of a falling object.

      EXAMPLES

      – Providing a secure barrier.

      – Providing a safe means of raising and lowering objects.

      – Providing an exclusion zone persons are prohibited from entering.

298 Security of workplace

1) A person with management or control of a workplace at which construction work is carried out must ensure, so far as is reasonably practicable, that the workplace is secured from unauthorised access.

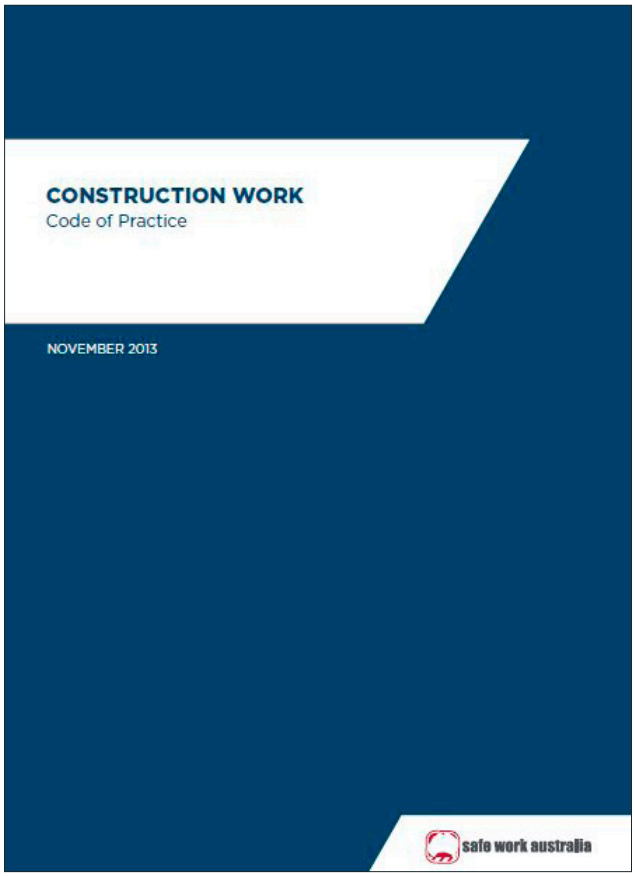
   MAXIMUM PENALTY:

   a) in the case of an individual - $3,600, or

   b) in the case of a body corporate - $18,000.

2) In complying with subclause (1), the person must have regard to all relevant matters, including:

   a) risks to health and safety arising from unauthorised access to the workplace, and



b) the likelihood of unauthorised access occurring, and (Example: The proximity of the workplace to places frequented by children, including schools, parks and shopping precincts.)

c) to the extent that unauthorised access to the workplace cannot be prevented - how to isolate hazards within the workplace.

2.4.2 Codes of Practice - construction work

a) Code of Practice – Overhead Protective Structures (SafeWork NSW)

Since 1995 the design and installation of *hoardings* has been guided by the Code of Practice – Overhead Protective Structures published by *SafeWork NSW*.

The purpose of the Code of Practice is to provide practical guidance for the design of overhead protective structures for use in New South Wales to enable persons in control of a *workplace* to meet their statutory work safety responsibilities under the NSW Occupational Health and Safety Act 2000 and Regulations (now repealed). The Code makes provision for a local council to impose "additional requirements regarding the overhead protective structure including the submission of drawings and calculations for approval before erection" (Code of Practice, Clause 8.1).

With the introduction of the national Work Health and Safety legislation in 2011 and the 'Construction Work - Code of Practice' published by Safe Work Australia, which includes protection requirements relating to objects that may fall from a *workplace*, a *person conducting a business or undertaking* is currently required to satisfy both Codes of Practice.

b) Construction Work – Code of Practice (Safe Work Australia)

This Code provides guidance to principal contractors and other *persons conducting a business or undertaking* (construction-related work) on how to meet the health and safety requirements under the Work Health and Safety Act and Regulations. This includes how to isolate *workplaces* from *public places* and protect persons from objects that may fall from a *workplace*.

2.4.3 Relationship of these Guidelines to the Codes of Practice

These Guidelines are not a substitute for the various Codes of Practice applying to construction work, but rather a supplement to these codes. The NSW Work Health and Safety Act, Work Health and Safety Regulation and relevant codes of practice including the Code of Practice - Construction Work are the primary statutes and codes that regulate work safety including public safety near a *workplace* (construction or worksite).

It is a proponent's role and responsibility to assess the risks to the public regarding an activity at a *workplace* adjoining a *public place*. This includes determining the type and extent of objects that may fall or project from a *workplace* including establishing the *control measures* required to be implemented to address such risks and any impacts on adjoining properties.

These Guidelines do not detail or address aspects for determining the *control measures* that may be required to deal with risks to persons in the *public place* by a *person conducting a business or undertaking*. The Guidelines focus on design solutions to minimise the impacts associated with placing *temporary structures* in the *public place* including primarily impacts on public convenience and amenity.

Applicants will therefore need to advise suppliers and contractors of *temporary structures* of the system of protection required to meet all relevant work, health and safety risks and obligations.

Figure 8

2.5 Public liability insurance

2.5.1 Indemnity during the erection, placement and dismantling of *temporary structures*

The *City* must be indemnified during the erection and dismantling of *temporary structures* and also throughout the period that structures are in place. The indemnification is against any claims for injury to persons, damage to adjoining properties and/or *public places*, and any excess on the insurance policy arising out of any claim.

Such indemnity must be expressed in the form of a *public liability insurance* policy with a minimum amount of $20,000,000 for any individual claim that may be made.

The insurance policy must be held in the name of the person or business holding the *temporary structures* approval.

Figure 8: Where a *temporary structure* is required to project in front of an adjoining property for construction, demolition or safety purposes, written evidence must be provided with the application confirming that the adjoining owner has been consulted and does not raise any objections to the proposed *temporary structure.* The *City* may also notify affected property owners (see 2.15.2).

2.5.2 Indemnity for the full duration that *temporary structures* are in place

Indemnity insurance must be held for the full duration that a *temporary structure* is in place. Where an insurance policy does not cover the full period of the proposed installation, the approval (*Permit*) will be restricted to the insured period. An application to extend an approval must be made at least two (2) weeks prior to the approval lapsing and evidence of the renewed policy must be included with the application.

2.5.3 Indemnity - change of entity holding a *Permit*

The person (applicant) holding an approval for a *temporary structure* must, in the case of the transfer of the project to another person or company, advise the proposed new entity to lodge a fresh application together with providing a new *public liability insurance* policy, to seek approval to allow the *temporary structure* to remain in place and for the approval to be held in the name of the new entity.

2.6 Designing and documenting a *temporary structure*

2.6.1 Drawings and details

Part 03 contains the detailed requirements and provisions for the design of *temporary structures*. An applicant seeking an approval (*Permit*) to install a *temporary structure* will need to address how compliance has been achieved with the requirements of the Guidelines and demonstrate this through the submitted drawings (see 2.9.2).

2.6.2 Impacts of *temporary structures* on adjoining or adjacent properties

Where it is proposed to place a *temporary structure* on a public way in front of an adjoining or adjacent property (Type B *hoardings* placed over laneways - see 3.9.4(f)) in order to achieve adequate overhead protection to the *public place*, the applicant must consult with affected owners/occupiers (see also 2.15).

Figure 9

2.7 Certification of *temporary structures* - eligibility

2.7.1 Eligibility of structural engineers

An appropriately qualified practising structural engineer certifying *temporary structures* using the *City*'s standard certificate form must have:

a) tertiary qualifications in structural engineering; and

b) chartered membership of Engineers Australia and/or hold National Engineers Registration (NER) regarding certification (see also 4.3).

2.7.2 Eligibility of *scaffolding* contractors

A *scaffolder* erecting and certifying a *scaffolding* structure must hold a *scaffolding* licence issued by *SafeWork NSW* appropriate for the type of *scaffold* (design and/or installation).

Where *scaffolding* ties are fixed (bolted) to an adjoining structure that is not of reinforced masonry or concrete construction, the *City* may require certification from a practising structural engineer complying with 2.7.1 verifying that the existing building is capable of providing adequate support to the *scaffolding* system (refer to 4.6.3).

2.8 Auditing

2.8.1 Rights to randomly audit

The *City* reserves the right to randomly audit:

a) certified documentation lodged both at application and at installation stage; and/or

b) installations of *temporary structures* including inspecting structures.

Where deemed necessary, the *City* may commission an independent assessment by a structural engineer or other person acting for the *City* (see 2.12.1(g)).

2.8.2 Access to sites

Where access is required to undertake inspections of *temporary structures* the applicant must not prevent or obstruct an *authorised person* or independent auditor acting on behalf of the *City* accessing a *workplace*, subject to satisfying the relevant visitor access provisions under the Work Health and Safety Act 2011.

2.9 Applications

2.9.1 An application must be submitted for *temporary structures*

To allow sufficient time to assess proposals, applications must be lodged at least two (2) weeks prior to the date of the proposed installation.

Note: Allow additional time for complex proposals and/or where infrastructure works may be affected (see 2.10.5).

Where an approval under Section 115 of the Roads Act is required such as the placement of traffic barriers on *roadways* and/or changes to traffic control signage, at least four (4) weeks must be allowed for assessment and determination (see also 1.12.3).

In cases where a *temporary structure* is proposed to be installed on a *classified road* additional time should also be allocated to allow for required concurrences to be obtained from Roads and Maritime Services (see 1.9).

Figure 9: Hoisting activity from an approved *works zone* on a *road* requires approval from the *City* (see 1.14).

2.9.2 Drawings and details

The following must be provided with an application:

a) two (2) sets of architectural-type drawings – fully dimensioned site plan at a minimum scale of 1:100 showing:

   i. the *footway* finish and widths including the accurate location of the *hoarding* and utility pits in the *footway* and other infrastructure such as poles, smart poles (and any impacts on banner display arms) and signage stems;

   ii. the site fence and *scaffolding* (where proposed) fully dimensioned including an elevation drawing of the extent of the proposed *scaffold*;

   iii. site sheds including their accurate position on Type B *hoardings*;

   iv. proposed or approved *works zone* on the *roadway*;

   v. existing building entrances, emergency egress exits and existing sprinkler/hydrant booster connections located on the building facade;

   vi. street trees (trunk diameter and dimensions of tree pits); and

   vii. street furniture (see 2.9.2 (k)) accurately plotted on drawings with clearances to site fences etc. clearly shown;

b) accurate and detailed sections and elevations clearly showing:

   i. the *hoarding* heights to the underside of the deck and bracing for Type B *hoardings* including the various heights where *hoardings* are to be located on sloping *footways*/*roadways*;

   ii. clear footway width dimensions and the location of the site fence including showing the proposed encroachment onto the *footway* where required for specific construction or access needs; and

   iii. detailed written justification for any site fence encroachment on the *footway* (refer to the application form);

c) the location of artwork or graphics proposed or required to be installed on the *temporary structure* (see 3.4);

d) the lighting system for Type B *hoardings* (location of luminaires);

e) details setting out the length of time that the *hoarding* will be installed as well as the nature of the works that are to be undertaken during this period (refer to the application form);

f) details (plan) of any required temporary pedestrian pathways (on *roadways*) past worksites or changes to street parking and traffic control signage that may be affected by the proposed hoarding (see also 1.12.3);

g) an indication (in the application form) if other *temporary structures* (other than *hoardings* and *scaffolding*) such as *cantilevered facade-mounted materials landing platforms* associated with crane hoisting activity that project over a *public place* are proposed.

Figure 10

Note: An approval is required for platforms (see Figure 3) and hoisting activity (see 1.14);

h) two (2) sets of fully detailed structural drawings that include:

i. the location of the proposed *temporary structure* including any relevant items such as:

- *scaffolding* and access stairs;
- location of site sheds on the hoarding deck;
- any construction equipment such as mast-climbing work platforms, construction hoists and suspended *scaffolds* (swinging stages) proposed to be placed on the deck of Type B *hoardings*.

Note: Hoisting activity over a public *road* requires a separate application and approval under s68 of the Local Government Act and the Roads Act (refer to 1.14); and

ii. section sizes, details of connections/ties including site fence, deck, vehicle and worker access gates, etc. and elevation/s including any required bracing for lateral stability, counterweighting (and connection to columns) and *hoarding* fascias including bracings for high fascias;

i) structural certification for design. Where *scaffolding*, site sheds and other structures are proposed to be placed on the deck a Type B *hoarding*, the drawings must indicate this and certification confirming that the *hoarding* is capable of supporting all superimposed loads and not exceed the loads specified in the *SafeWork NSW* 'Code of Practice for Overhead Protective Structures' must be provided;

j) street trees – The site plan must clearly and accurately show in plan and elevation the location of street trees including accurately specifying the height and canopy volume/diameter and significant branches of all street trees in the vicinity of the proposed *temporary structure*. If trees are likely to be affected, the structure must be designed to accommodate the tree/s without the need to prune major branches or limbs. Where it is not possible for a *hoarding* design to accommodate tree canopies, applicants must contact the *City's* Street Tree Contract Coordinator prior to finalising design drawings and lodging an application to discuss any design constraints (see 3.9.10 for details relating to street tree protection requirements);

k) street furniture and other infrastructure – The site plan must also show accurately all street furniture including street litter bins, bench-seats, bus shelters, public telephones, poster bollards, smart poles/power poles, street parking signage stems and the type of parking signage (if approval is to be sought for removal), bike racks and utility access hatches in the *footway*. An assessment of the likely impacts (obscuring viewing of the *public place*) on *City* controlled CCTV cameras/systems, traffic monitoring cameras and private CCTV cameras required by a condition of development consent must also be provided;

Figure 10: The location and potential impact on *City* infrastructure must be considered in the design of *temporary structures* and be identified and shown accurately on the design drawings.

Figure 11

l) where sightlines from *City* operated CCTV cameras:

– are likely to be affected particularly where a *temporary structure* will be in place for a lengthy duration; and/or

– the site is located in a high-risk and/or high pedestrian density area,

the *City* may require the camera to be relocated or an additional camera installed for the duration that the *temporary structure* is in place. All costs associated with relocating or installing additional cameras are to be borne by the applicant;

m) where *temporary structures* are likely to impact on parking signage stems, parking ticket machines or cause a reduction in the clear space for safe and convenient pedestrian movement, the *City* may require the temporary removal or relocation of the infrastructure at the applicant's cost. Any required adjustments must be identified in the application; and

n) where street furniture must be removed to accommodate a *temporary structure* all costs must be borne by the applicant. Separate specific approval for changes to street furniture and other infrastructure is required in addition to obtaining an approval (*Permit*) to erect a *temporary structure*.

Figure 11: Viewing sightlines from *City*-operated CCTV cameras must not be obstructed by *temporary structures*. Traffic monitoring cameras (and private property cameras required by a condition of development consent) must also not be obstructed.

2.9.3 Documents and fees that must be lodged prior to an approval being issued

The following must be provided:

a) a *performance bond* (see 1.12.2) for all Type B *hoardings* and any other *temporary structures* as determined by the *City*. The amount will be determined in accordance with the *City's* Schedule of Fees and Charges (available on the *City's* website). The bond will be used to recover all costs incurred by the *City* in repairing damaged infrastructure or undertaking maintenance to a *temporary structure* where the applicant fails to undertake the work and also for other purposes (see 2.11 and 2.12). The applicant should assess the condition of the *footway* and record any defects prior to installation *temporary structures*;

b) a copy of the current *public liability insurance* policy held in the name of the applicant;

c) payment of a *footway/roadway* occupation fee. Occupation fees vary depending on the location (city centre and non-city centre) and whether sheds and/or traffic barriers are included.

The map at Figure 1 shows the boundary of the city centre and non-city centre areas. The fees and *performance bond* will be determined as part of the assessment process. A hoardings fee and bond estimator is available on the City's website. Applicants will be advised of the required monies payable when a determination (approval) is ready for collection. The approval will not be issued and have no effect until all fees and bonds are paid; and

d) payment of any required construction industry long service leave levy.

2.10 *Hoarding* installation, removal, notification and certification

2.10.1 Prior to installing and removing a *temporary structure*

a) Before installing an approved *temporary structure*, separate approval is required for:

- installing temporary barricading to control pedestrians and traffic at the work area in which the *temporary structure* will be erected and dismantled;
- the days and work times for installation/removal; and
- hoisting the *temporary structure* or components to and from a vehicle standing on the *roadway* within authorised kerb-side parking spaces.

The application must include a traffic/pedestrian management plan for the site.

Accredited traffic and pedestrian controllers must be used during the installation, repair/modification and removal of a *temporary structure*.

b) Consultation with the *City* is recommended to identify:

- any requirements of the *City's* Local Pedestrian, Cycling and Traffic Calming Committee such as *works zone* or specific *road* usage requirements;
- current or proposed city infrastructure works including *footway* reconstruction/resurfacing;
- construction of the cycleway network and light rail transport system (see 2.10.5); and
- restrictions on the installation and removal of *temporary structures* during the Christmas and New Year holiday periods.

See also 1.14 for other approvals that may be required.

Note: When installing hoardings and/or scaffolding near aerial electricity power cables all applicable safety requirements must be followed (see Figure 17(b)).

2.10.2 Requirements when installing and removing *temporary structures*

a) Installation and removal of a temporary structure must be undertaken safely and not damage infrastructure including footways, kerbing, street trees and street gardens.

b) As a general requirement the City expects Type B hoard*ings* to be installed by hoisting gantry modules or structural members onto a *footway* directly from a truck standing legally on the adjoining *roadway*. In cases where there are site constraints preventing hoisting from the *roadway* such as street awnings or where there is restricted clear access along the kerb due to street trees or infrastructure, forklift operation on *footways* to install hoardings will be permitted during installation and removal subject to the following:

i. the size (mass) of the forklift or other similar equipment including the load must be limited to 7 tonnes (max.);

ii. 17 mm (minimum thickness) structural plywood sheets complying with AS/NZS 2269.0 must be placed on the footway surface to assist in distributing loads and to prevent damage to asphalt/stone surfaces (particularly as a result of wheel twisting), cracking or subsidence of granite stones or brick paving;

iii. utility service hatches/lids in the footway must be assessed for adequacy of loadbearing pressures and where necessary, temporary steel plates placed over pits;

iv. plywood sheets and steel plates required by (ii) and (iii) must have a smooth transition (chamfered edges) at the interface with the footway surface to avoid trip hazards for pedestrians moving, under supervision and assistance, through the work area;

v. forklift movement along footways must be minimised; and

vi. where existing vehicular crossings for forklift access are not available in close proximity to the work area appropriate and suitable temporary kerb ramps must be used for mounting a kerb to access the *footway* and work area.

2.10.3 Certification of installed *temporary structures*

Installation certification using the *City's* standard certificate template must be lodged within 24 hours of completing the installation of a *temporary structure* (refer to Part 04). An *authorised person* will inspect the completed structure for compliance with the approval. *Temporary structures* must not be used until the required certification is provided to and accepted by the *City*.

Figure 12

Note: Hoisting activity when installing and removing *temporary structures* requires a separate approval (see 1.14).

2.10.4 Use of *hoarding* decks

a) Type B *hoardings* must not be used as a work platform or associated activities other than approved:

- site sheds;
- scaffolding;
- associated minor ancillary structures such as awnings to provide weather protection to walkways and stairways; and
- parking of hoists and suspended *scaffolds* (swinging stages) that have the specific consent of the *City* (see 1.14).

b) The storage of materials and equipment on hoarding decks is generally not allowed unless there are clearly justified site-specific needs (see 3.9.4(h)).

Figure 12: The installation and removal of a *temporary structure* must be undertaken in accordance with the conditions of approval including maintaining the safe passage of pedestrians, bicycle riders and traffic past the work area.

Figure 13: A *hoarding* approval *(Permit)* does not include an approval to use the *roadway* for the loading and unloading of building material and equipment. A separate *works zone* approval must be obtained for this purpose.

2.10.5 Access to undertake works on *footways* and *roadways*

a) An extensive cycleway network is being constructed throughout the city area. The CBD and South-East Light Rail transport system is also under construction with a completion date scheduled for 2019.

Proponents must check with the *City* to establish whether these two construction projects will impact on the development site including the proposed installation of *temporary structures*. If modification of a *temporary structure* is required to accommodate the infrastructure works the Permit will need to be amended accordingly. Associated costs will be borne by the *Permit* holder.

b) Where a *footway*, cycleway and/or *roadway* in vicinity of a *temporary structure* is obstructed by the *temporary structure* and access is required by the *City*, its contractors or utility service providers in order to undertake works, the *temporary structure* must be temporarily removed or modified if so directed. The *City* will take into account any statutory obligations that a person in control of the worksite has under the Work Health and Safety Act to protect the *public place* before directing removal or substantial modification of the *temporary structure*. All associated costs must be borne by the *Permit* holder.

2.10.6 Removal of *temporary structures*

Temporary structures must be removed as soon as practicable after they are no longer required for public safety and/or work purposes. A separate approval to dismantle a *temporary structure* must be obtained prior to dismantling work commencing. See the *City's* website and *Permit* conditions for details.

Figure 13


Figure 14(a)

2.10.7 Managing impacts on the *public place*

a) Truck outriggers for hoisting activity must not be placed on *footways* or kerbing unless there are site constraints that prevent outriggers being positioned on the *roadway*. A *roadway* surface has a more stable surface and greater bearing capacity to carry loads from outriggers and is therefore the preferred method of support. Where outriggers must be placed on *footways* the loads must be evenly distributed over the *footway* surface using 5 mm thick 900 mm square steel plates.

b) Approval to install a *temporary structure* does not permit the use of the *roadway* for general loading and unloading to and from vehicles. A separate *works zone* application must be lodged and approval obtained where use of the *roadway* is required (see 1.14).

c) Where a proposed *works zone* adjoins a cycleway and requires temporary lane diversions to accommodate the *works zone* when in operation, the *City* may, particularly in high traffic volume *roads* and/or other critical *roadways*, limit the operational times of the zone to off-peak traffic periods (see 3.9.1(p)).

d) Hoisting activity using mobile cranes must not be undertaken in a *public place* without formal approval (see the *City's* website for further details and application form).

e) Building material and equipment including construction waste bins associated with a development site must not be stored in the *public place.*

f) Construction waste chutes installed over a *public place* are not permitted.


Figure 14(b)

g) *Footway* and *roadway* surfaces must be maintained by the applicant in a safe and tidy condition at all times including during installation and dismantling of *temporary structures*.

h) The *footway* or *roadway* must not be used as a platform for construction, demolition or maintenance work on a building without the prior written approval of the *City.*

Figures 14(a) and 14(b): Proponents must check with the City to establish that the construction of the light rail transport system and cycleway network will not be impacted through the installation of a temporary structure (see 3.7).

Figure 15


Figure 16

2.11 Maintenance of *temporary structures* and the *public place* adjoining *workplaces*

2.11.1 General requirements

a) Section 142 of the Roads Act requires a person who has benefit of a *temporary structure* on or over a public *road* to maintain the structure in a satisfactory state of repair and condition. Penalties apply where structures are not properly maintained.

b) The effective ongoing maintenance and appearance of *temporary structures* is important to maximise public safety and minimise adverse visual impacts. *Temporary structures* must therefore be maintained in a clean, tidy and safe condition at all times.

Suppliers of *temporary structures* must be notified of any defects or maintenance issues that may arise with a structure throughout a project so that correctional works can be carried out.

c) The general condition of the *public place* in vicinity of *hoardings* and the *workplace* must be kept tidy and clear of overgrown vegetation on nature strips, dust, debris and litter that can accumulate around *temporary structures* particularly where safe and convenient access by the *City's* cleansing and parks services may be restricted by the structures.

The *City* will vigorously monitor the condition of *temporary structures* and screening systems. If structures are inadequately maintained[1] the *City* will direct the applicant to rectify the defects.

d) In cases where the holder of a *Permit* (the applicant) fails to undertake required maintenance or repairs to a *temporary structure* a formal direction may be issued to require the defects to be rectified. A direction to the owner of a *temporary structure* may also be given. A penalty infringement notice (fine) may be issued where a direction is not complied with and the approval for the structure may be revoked.[2] If revoked, the structure will immediately be deemed unauthorised and its removal will be required.[3]

e) The holder of a *Permit* must ensure that the structural adequacy of a *temporary structure* is monitored regularly and is fully maintained for the duration that it is in place (see also 4.1.2 regarding periodic certification). The owner of a *temporary structure*, typically the supplier or contractor, may be held responsible for the removal of a structure where an approval lapses or is revoked and the *Permit* holder fails to arrange removal.

2.11.2 *Hoardings*

a) *Hoarding* site fences must be kept free of graffiti and bill posters and the structural frame of Type B *hoarding*s must be kept clean, tidy and in good condition, as determined by the *City*.

b) Graffiti and bill posters must be removed within 24 hours of being placed on *hoarding* site fences and, where the surface has been damaged, the site fence repaired and re-painted. In the case of damage to graphics, replacement of damaged sections will be required. General wear-and-tear on site fences and the *hoarding* structure will require periodic repair and/or re-painting throughout the duration of a project.

Figure 17(a)

Figure 17(b)

c) In cases where a *hoarding* is repeatedly targeted by bill posters the fixing of steel mesh to site fences may be permitted subject to meeting minimum design requirements (see 3.9.3(r) and Figure 92). Meshing however will only be permitted in problematic areas and in extreme cases of continual poster attachment. Approval to use mesh must be obtained from the *City* prior to installation.

d) Where maintenance is not carried out to an acceptable standard as directed by an *authorised person* including directions to maintain graphics and/or remove graffiti and bill posters, infringement notices (fines) may be issued. For *temporary structures* that are in place for more than 6 months, certification must be provided in accordance with 4.1.2.

2.11.3 *Scaffolding*

a) *Scaffolding* structures must be maintained to ensure continued compliance with the AS 1576.1: 2010 'Scaffolding – General requirements' and Clause 225 of the Work Health and Safety Regulation (see also 3.11.5).

b) The *scaffold* is not to be used until it has been inspected by a licensed *scaffolder* and/or structural engineer and certification provided to the *City* (using the *City's* standard certification form) confirming that the *scaffold* complies with the Standard (i.e. is structurally sound) and does not pose a risk to public safety.

c) Any modifications to a *scaffold* will require inspection and certification by the *scaffolder*.

d) The *City* can require proof of current compliance with the relevant Standards at any time.

e) Whilst a *scaffold* is being constructed or left unattended, the person with management or control of the site/*scaffold* must prevent unauthorised access.

f) Where *scaffolding* is in place for more than 6 months a new certification must be provided in accordance with 3.11.5.

Note: *Scaffolding* (and *hoardings*) installed near aerial electricity power cables must comply with all applicable safety requirements that may apply including during the installation and dismantling stages.

Figure 15: *Temporary structures* on *footways* and *roadways* can obstruct access by the *City's* cleansing services team particualrly mechanical footway sweeper plant. The person in control of a worksite must therefore keep the *public place* clean and tidy throughout the duration of the work or development.

Figure 16: Bill posters and graffiti must be removed regularly and the site fence and graphics kept in a clean and tidy condition. Where *hoardings* are not maintained on-the-spot fines may be issued.

Figure 17(a): The preferred finish for scaffolding is black mesh installed on the outer surface.

Figure 17(b): Where ply-sheeting is required to shield *temporary structures* from aerial electricity cables all sheeting must be painted in a colour and tone that matches the scaffolding mesh (see 'Note' in 2.11.3).

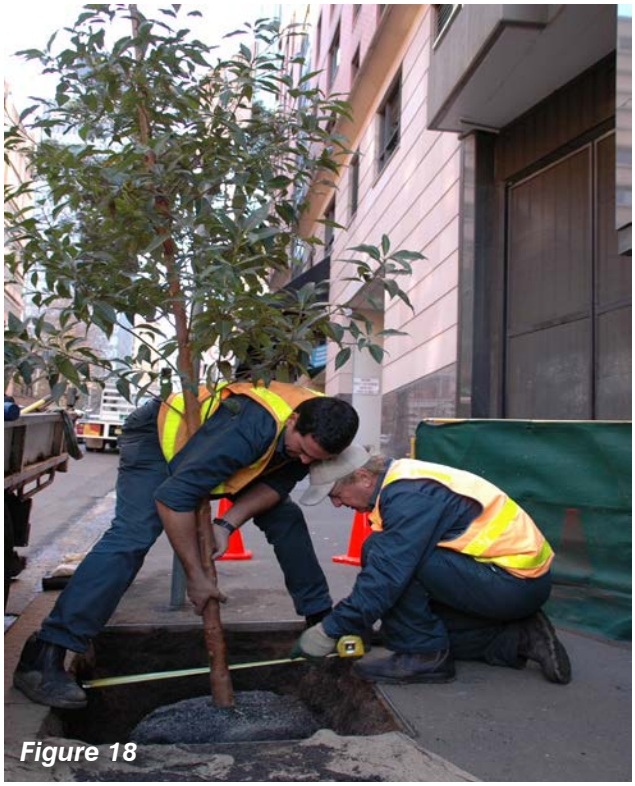


Figure 18

2.11.4 Screening systems and graphics

Screening systems and/or graphics/ images on *hoardings* and *scaffolding* must be fully and properly maintained for the full duration that a *temporary structure* is in place including keeping:

a) the screening mesh or fabric taut to minimise the adverse effects of wind on the structure and being visually pleasing; and

b) screening systems being maintained in good condition to maintain an acceptable and quality appearance in the streetscape.

Notes:

1) Section 140(1)(a) of the Roads Act 1993 requires the holder of an approval (*Permit*) to maintain a structure in a satisfactory state of repair.

2) Section 108 of the Local Government Act 1993 allows the *City* to revoke an approval for any circumstance set out in s109. Under s140 of the Roads Act 1993 the *City* can also revoke an approval at any time and for any reason.

3) A direction to remove a structure can be issued under s107 of the Roads Act 1993.

Figure 19

2.12 Performance bonds

2.12.1 *Public places* and infrastructure

Performance bonds (see also to 1.12.2) may be used to recover costs incurred by the *City* including, but not limited to, the following circumstances:

a) administering and enforcing the conditions of the approval and the provisions of these Guidelines where the person or company having the benefit of an approval (*Permit*) fails to comply with the conditions of approval and/or a direction of the *City* to rectify, repair or maintain a *temporary structure*;

b) repairs to damaged *City* infrastructure including street trees (and required maintenance) where the applicant fails to undertake required rectification work or where the work is not to the *City's* standards and satisfaction;

c) the removal of a *temporary structure* where an approval has lapsed or been revoked and the applicant fails to remove the structure;

d) the condition of a *temporary structure* is found to be structurally defective or inadequate requiring its removal or modification and the applicant or owner of the *temporary structure* fails to take appropriate action thereby requiring the *City* to remove the structure or carry out remedial repairs;

Figures 18 and 19: Street trees and gardens must be protected during the installation and removal of *hoardings* including for the full duration of the development or work. Performance bonds can be used to recover costs associated with rectifying damage or replacing trees (refer see 1.12.2).

e) general maintenance including the removal of graffiti and bill posters that has not been carried out regularly or a structure's surface is not kept in good repair and appearance requiring the *City* or its contractors to undertake maintenance work;

f) the installation and/or repair of graphics where the applicant fails to undertake works as required by these Guidelines and/or as directed by the *City*; and

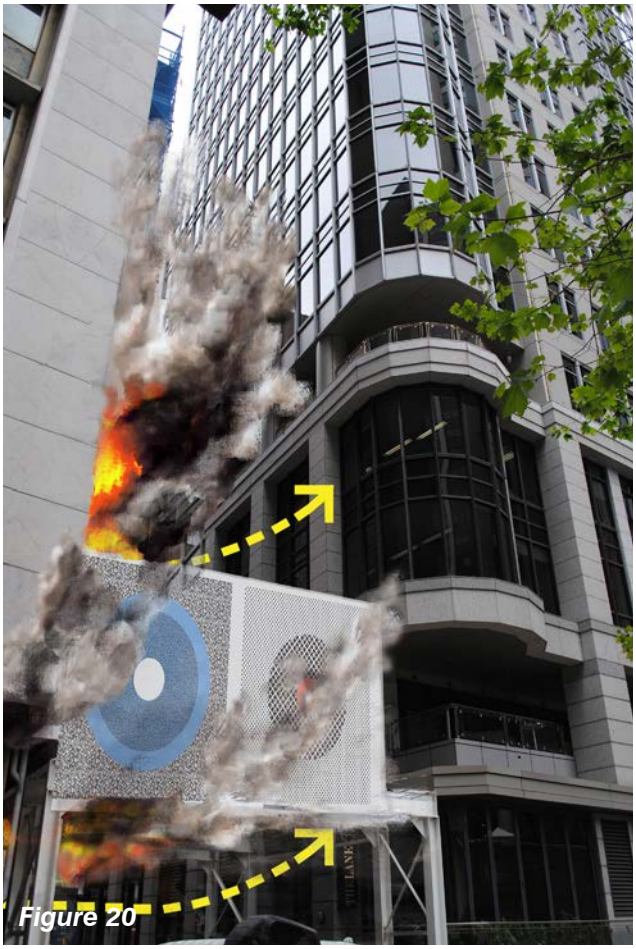
g) where the *City* considers that the design or installation of a *temporary structure* may be inadequate and/or is non-compliant with the Guidelines, the *City* may commission an independent engineer or other person to audit the submitted drawings and/or installation to determine the acceptability or otherwise of the structure (see 2.8).

Note: *Performance bonds* are generally not required for Type A *hoardings* and/or *scaffolding* systems. Where erected on granite paving or other special material the surface must be protected by 12 mm thick (min.) water-resistant plywood sheets laid on a durable plastic membrane under the footprint of the *hoarding* and work area (refer to Figures 53 and 89).

2.12.2 Street trees and street gardens

Performance bonds can also be used for the protection and/or maintenance of street trees, garden beds, landscaping and grass verges in the vicinity of a *temporary structure* where the applicant fails to protect and undertake required maintenance.

Where damage occurs and the applicant fails to follow a direction from an *authorised person* to undertake repairs, the *performance bond* will be used to recover costs associated with:



a) undertaking inspections and reporting on affected damage and required remedial works; and

b) the full removal and replacement of severely damaged tree/s and street landscaping/garden beds (as determined by the *City*) and the associated ongoing maintenance until the tree/s and gardens are fully established to the *City's* satisfaction (min. 12 months).

Figure 20: Where a Type B *hoarding* is proposed to be placed over a *roadway* (laneway) an assessment must be made of the potential risks associated with fire-spread between buildings and the operational needs of Fire and Rescue NSW to access and fight a fire in buildings adjoining and opposite a development site.

(Note: image is an indicative representation only.)

2.13 Fire safety and other risks - Type B *hoardings*

2.13.1 Emergency-related risks on *hoarding* decks

The applicant and/or the *person conducting a business or undertaking* must assess the risk of a fire occurrence or other emergency on occupiable Type B *hoardings* (housing site sheds and other approved structures or material) and satisfy any Safe Work Australia and/or *SafeWork NSW* requirements. Some of the matters that should be considered when developing a required *control measure* are:

a) the distance to reach egress points (stairways) on a *hoarding* deck and the distance between alternative exits;

b) the width of corridors, passageways and stairs to provide adequate egress to a safe place in an emergency (Note: Access doors/gates must not open over a *footway* or *roadway*); and

c) whether portable fire extinguishers and exit signage are necessary including the number and location of extinguishers.

2.13.2 Potential risks of fire-spread to buildings adjoining *hoardings*

Where a *hoarding* is erected over a *roadway* such as a laneway, an assessment must be undertaken in relation to the risk of fire spreading from the worksite to surrounding buildings via the *hoarding*, sheds, *scaffolding* and approved areas storing material/ equipment.

If it is established that there is a potential for fire to spread to adjoining or nearby building/s, the applicant must address these risks in the *hoarding* design and use. This is particularly important where surrounding buildings are not sprinkler-protected and/or where older buildings exist which may not comply with the principal fire control provisions of contemporary building control regulations such as the Building Code of Australia. To address identified risks, control measures may need to be developed and implemented which could include:

a) locating site sheds on hoardings away from likely fire risk sources or potential fire-spread pathways (see 3.9.1 Element 1 – 'Structure' for other general fire safety requirements);

b) limiting the nature and volume of combustible material on or as part of a *hoarding* such as timber decking components and fascia; and

c) installing temporary automatic sprinkler systems on *hoarding* decks/sheds and/or fire-fighting equipment such as hose reels on *hoarding* decks. This could assist construction workers undertaking initial fire-fighting (subject to meeting relevant work health and safety obligations and requirements as they apply to construction personnel) until the arrival of Fire and Rescue NSW personnel. Part E1 of the Building Code of Australia can provide some guidance on fire-fighting equipment including mandatory fire-fighting systems for buildings under construction.

2.13.3 Access for fire-fighting appliances and operations

a) *Hoardings* erected over *roadways* (laneways) must be assessed for any potential adverse impacts on the fire-fighting and rescue operational needs of Fire and Rescue NSW. This includes potential fire occurrences in buildings located above or in close proximity to worksites and *temporary structures* including obstruction to the use of access ladders and aerial fire-fighting appliances.

b) Where necessary, such as the installation of substantial *hoardings* erected over a long frontage of laneway, the applicant will need to seek feedback from the manager of the local fire station and incorporate any requirements in the design of *temporary structures* before an application is lodged.

2.14 Pollution control in a *public place* (dust, noise, water and litter)

2.14.1 Pollution controls

Adequate site controls must be implemented to prevent pollution of the *public place*. This includes but is not limited to the following:

a) General litter – maintain the footway/roadway area and remove any litter that accumulates around a *temporary structure* (see to 2.11);

b) Noise – comply with any conditions of development consent that regulate noise generation associated with the development site (see also 2.14.3);

c) Hours of operation – comply with the development consent and any conditions imposed through other approvals issued by the *City* (see also 2.14.3);

d) Dust and debris – contain dust and debris to the work area and where necessary provide a physical barrier or screening such as shadecloth or fabric mesh to encapsulate the *workplace*; and

e) Water – collect and dispose of rainwater falling on the deck of Type B *hoardings* in accordance with 3.9.4. Where water and/or cleaning agents are used to wash buildings or undertake other activity, all waste-water must be collected and disposed of to the sewer system (subject to meeting any Sydney Water requirements) or collected and disposed of by a licensed liquid waste contractor.

Liquids, other than uncontaminated rainwater falling on and draining from the deck of a Type B *hoarding* (see 3.9.4), must not be allowed to flow into the street gutter and stormwater drainage system.

2.14.2 Pollution offences

In granting approval to erect a *temporary structure* on *City* owned land applicants must, in addition to complying with these Guidelines and conditions of approval, comply with the State's environmental protection laws (Protection of the Environment Operations Act 1997) and relevant Regulations. Penalties may apply where offences occur.

2.14.3 City of Sydney Code of Practice for Construction Hours/Noise

Persons in control of a *workplace* must comply with the *City's* Code of Practice for Construction Hours/Noise within the Central Business District and, where applicable, conditions of development consent that apply to a development site.

2.15 Impacts on building use

2.15.1 Buildings undergoing change

Proponents of *temporary structures* installations and/or building owners are responsible for any adverse impacts that *temporary structures* may cause on the continued use and occupation of buildings such as retail premises on the ground floor including approved outdoor dining areas on the adjoining footway.

The *City*, in approving the installation of *temporary structures*, has no responsibility to advise tenants of the proposed works and the application seeking approval to install *temporary structures*.

The proponent and/or building owner should therefore communicate with building occupants to advise of the proposed works and address any issues. A minimum of seven (7) days' notice shall be provided prior to installation occurring.

2.15.2 Adjoining and surrounding properties

Where a *hoarding* is proposed to span a roadway (laneway), see 3.9.4(f), or project in front of an adjoining property (see 2.6.2), potential adverse impacts on affected properties must be considered and, where necessary, the *hoarding* design may need to be modified to minimise identified potential impacts.

Proponents should consult with owners/occupiers of affected properties prior to lodgment of an application. Where the *City* believes that there could be an adverse impact the *City* will inform affected parties in writing of the proposed *hoarding* placement and consider any feedback received.

Design requirements

PART 03

Figure 21

3.1 Introduction to Part 03: design quality requirements

The Guidelines aim to achieve a high standard of design quality for *temporary structures*. It is expected that this quality standard will also be attained in the variable circumstances of individual sites. The design solutions must address specific conditions including problems posed by narrow laneways and *footways*, local traffic conditions and site access constraints.

This Part sets out the detailed design requirements for *temporary structures*. It includes deemed-to-comply standards and objectives where a performance-based design approach is proposed to be used.

This Part also sets out the requirements for finishes, artwork and graphic displays on *hoardings* and *scaffolding*.

Figure 21: Where permitted, double-stacked sheds must be fully screened by appropriate fascia treatment. Refer to 3.4 and 3.9.6 for requirements relating to the display of graphics and permissible signage and public information about a development.

3.2 Type A and Type B *hoardings*

The high density city centre and other major commercial and retail centres have special needs in terms of pedestrian movement, convenience and amenity.

Footway obstructions resulting from the placement of *temporary structures* are often a necessary part of construction and building maintenance activity. The *City* will therefore permit such structures subject to strict controls being followed.

In allowing the installation of these structures in a *public place* it is essential that they have the least possible impact on residents, workers, visitors and business activity and allow for safe and convenient pedestrian movement. There are also significant visual impacts that result from development activity therefore quality design features apply to minimise these impacts.

Hoardings must therefore meet prescribed minimum design criteria. The diagrams at Figures 25 and 26 describe the key design elements and features that must be satisfied when proposing to install a *hoarding*.

Figure 22(a)

Figure 22(b)

Figure 23

Figure 22(a) and 22(b): The design of *temporary structures* at busy pedestrian intersections and bus-stops must be given special consideration to minimise impacts on circulation and queuing spaces to ensure safe and convenient pedestrian movement.

Figure 23: The design and placement of *temporary structures* must address the special needs of the high pedestrian density city centre and other major commercial and retail centres. The placement of *hoarding* support columns at kerb ramps must be avoided.

Figure 24: Typical features of a 'Type B' *hoarding* (elevation).

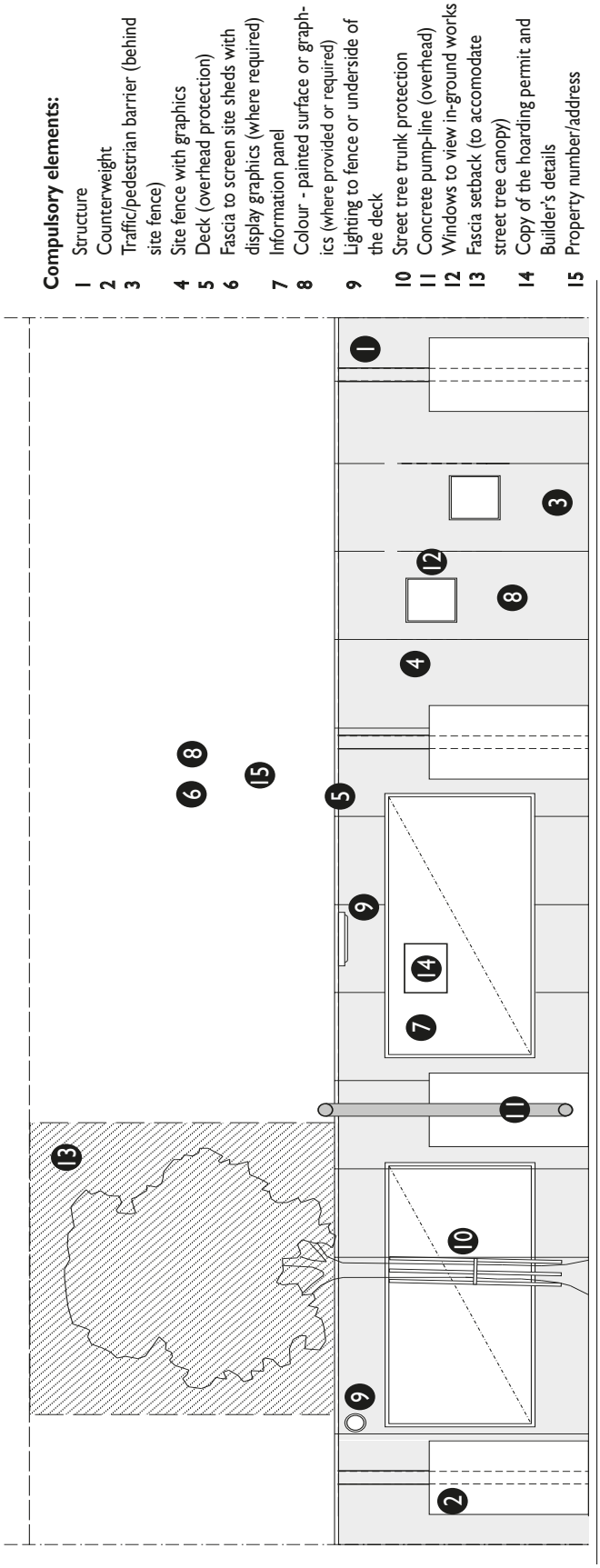
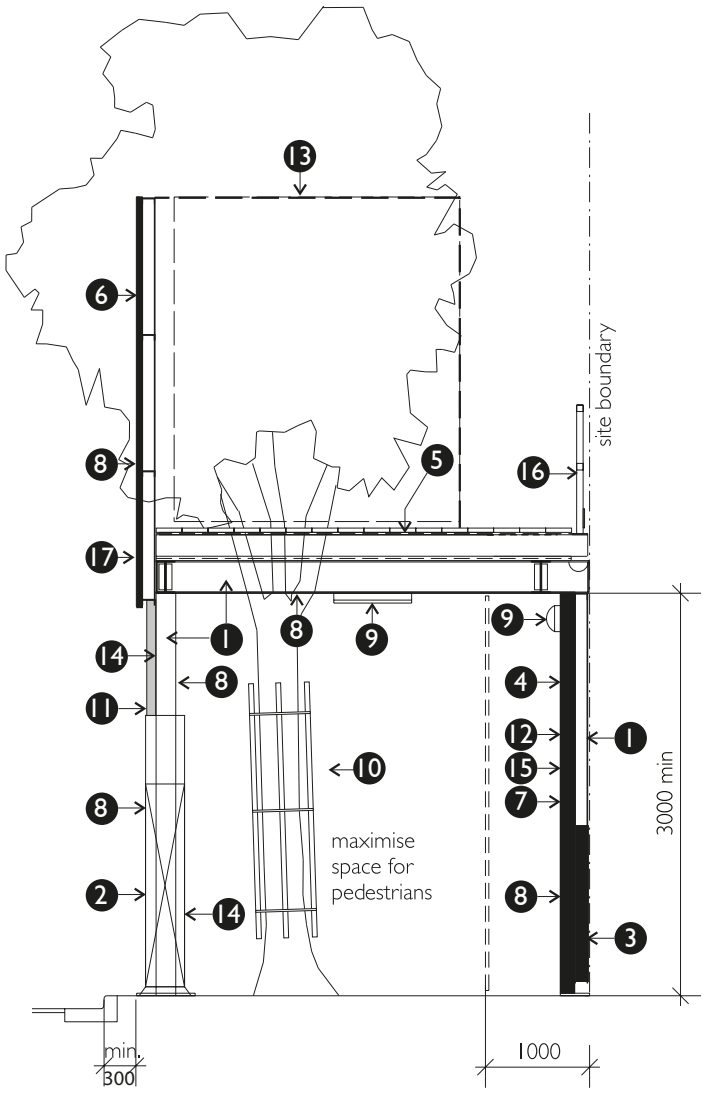


Figure 25: Typical features of a 'Type B' *hoarding* (section).



Compulsory

1 Structure
2 Counterweight
3 Traffic/pedestrian barrier (rear of fence)
4 Site fence
5 Deck (providing overhead protection)
6 Fascia (to screen site sheds)
7 Information panel
8 Colour - site fence and fascia
9 Lighting (fence-mounted or to underside of deck)
10 Street tree protection (timber battens around trunk)
11 Concrete pumping-line (overhead)
12 Public viewing panels to in-ground works
13 Fascia setback (to accomodate street tree canopy)
14 Safety screen (crane hoisting zone)
15 Signage & copy of the Permit
16 Safety balustrade (min. 1000 mm)
17 Property number/address

Maximum intrusion of the site fence onto the footway. In some cases a lesser encroachment will be required particularly in the city centre.

Note: Where a site fence is proposed to encroach onto the footway full justification for such an encroachment must be provided with the hoarding application (Clause 2.9.2(b)).

Figure 26: A typical cross-section of a 'Type A' *hoarding* incorporating a traffic barrier protecting a deep excavation (with the barrier located behind the site fence).

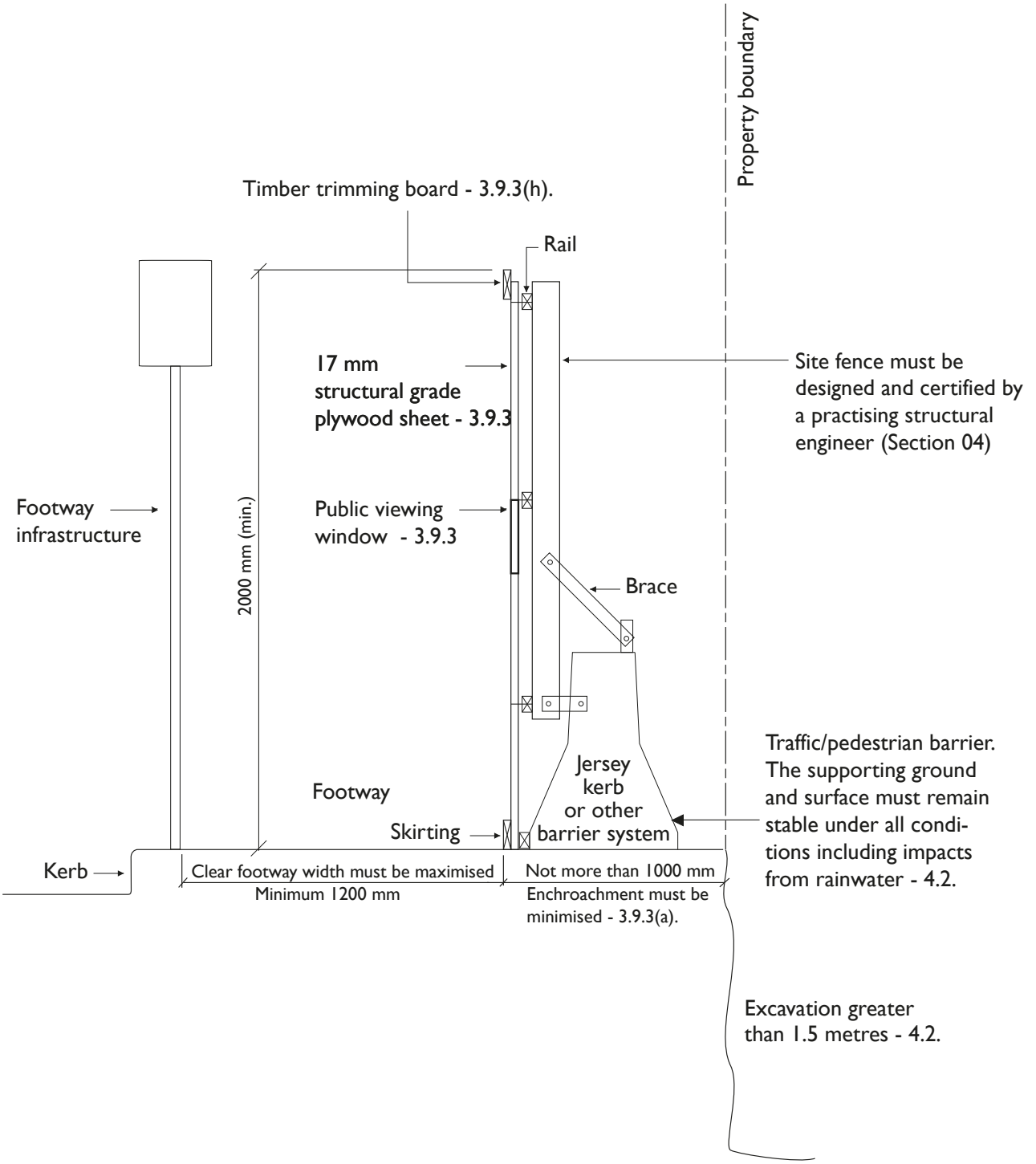


Figure 27(a)

3.3 Prohibited forms of Type B *hoardings and site fencing*

The *City* does NOT PERMIT:

a) Type B overhead protective structures constructed of pipe *scaffolding;*

b) the use of modified shipping containers to act as protective structures;

c) chain-wire or mesh fencing placed on City-owned land (footways/roadways); and

d) timber-framed Type B hoardings.

These types of *hoarding* systems do not satisfy several key provisions of the Guidelines including:

- minimising physical and visual obstruction of the *footway* (3.9.2);
- base counterweights (mesh fencing) that do not project into the pedestrian thoroughfare (to prevent trip hazards);
- providing a tidy, uncluttered and visually pleasing structure (3.9.1);
- eliminating elements that permit easy climbing (3.9.1);
- maximising the clear width of the *footway* between support columns particularly for wide *footways* (3.9.2);
- structural adequacy of the *hoarding* (particularly pipe *scaffolds*) and impacts by vehicles (3.9.1);
- minimising the size and number of sole-boards and baseplates to prevent trip hazards; and
- difficulties of integrating counterweights within the structure in a visually uncluttered manner (3.9.2).

Figure 27(b)

Figure 27(c)

Figures 27(a), (b) and (c): These three forms of *temporary structures* and installation are NOT PERMITTED on *footways* and *roadways* within the City of Sydney area.

Figure 28

3.4 Artwork, graphics, images and innovative hoarding finishes

The display of artwork, graphics and images on *temporary structures* is strongly encouraged. In certain circumstances this is mandatory (see Table 1). The display of artwork and graphics minimises adverse impacts, adds visual interest and increases the presence of creativity in the streetscape.

Figure 29

Figure 30

Figure 28: Visually interesting *hoarding* finishes including the display of public art is encouraged and in some cases is mandatory (see Table 1).

Figure 29: Minor public information about a development or maintenance/restoration work and/or directional signage to public places or facilities may be displayed on *temporary structures* (refer to 3.4.4).

Figure 30: The *City* reserves the right to require the installation of specific graphics, artwork and community information on *temporary structures* placed on City-owned land.

The installation of artwork on *temporary structures* aligns with the *City*'s Creative City Cultural Policy and Action Plan. Artwork and graphics discourage graffiti and bill poster attachment by eliminating blank surfaces.

As *temporary structures* are placed on land owned by the *City,* the *City* reserves the right to require an applicant to display specific artwork and community information about *City* initiatives. This includes, but not limited to, major projects and special events and festivals supported by the *City*'s Creative City Cultural Policy and Action Plan and other initiatives undertaken by the *City* from time-to-time.

For *temporary structures* installed in prominent highly visible locations including high pedestrian density commercial districts or major transport corridors/ roads, applicants should contact the *City* to establish if a specific artwork will be required to be displayed on the *temporary structure/s*. Variations to the prescriptive design elements for *temporary structures* (see 3.9) in order to accommodate innovative designs such

Figure 31(a)


Figure 31(b)


Figure 32(a)


Figure 32(b)

as sculptured hoarding fences/fascias (see Figures 31(a) and 52) may be permitted subject to site-specific assessment and approval. This will include consideration of the suitability of the locality including the potential impacts caused by obstructions and safe pedestrian movement. This is particularly important in the high pedestrian density areas of the city centre and other commercial areas.

3.4.1 Mandatory artwork and graphics on *temporary structures*

To enhance the appearance of *temporary structures* particularly where they are installed in highly visible sites and localities including lengthy periods of installation, artwork, graphics and/or images as set out in Table 1 must be displayed.

Where graphics are not required (see Table 1) but dark colour finishes on hoardings are proposed, it is mandatory for graphics and images in accordance with 3.4.3 to be displayed to break-up the large colour mass and to add visual interest in the streetscape.

3.4.2 Recycling of graphic substrates

Substrates (mesh and fabric) used for the display of graphics and project information must be of material that can be reused or is recyclable.

3.4.3 Artwork, graphics and images required on *temporary structures*

a) Where required by Table 1 or as a condition of development consent *temporary structures* must, with the exception of *temporary structures* associated with heritage items (see (b) below), incorporate one of the following:

Figure 31(a) and Figure 31(b): Creative *hoarding* designs and finishes are permitted subject to site-specific suitability including the availability of sufficient *footway* width.

Figure 32(a) and Figure 32(b): The use of innovative and visually interesting *hoarding* designs and finishes is encouraged where safe and convenient pedestrian movement can be maintained past a worksite.

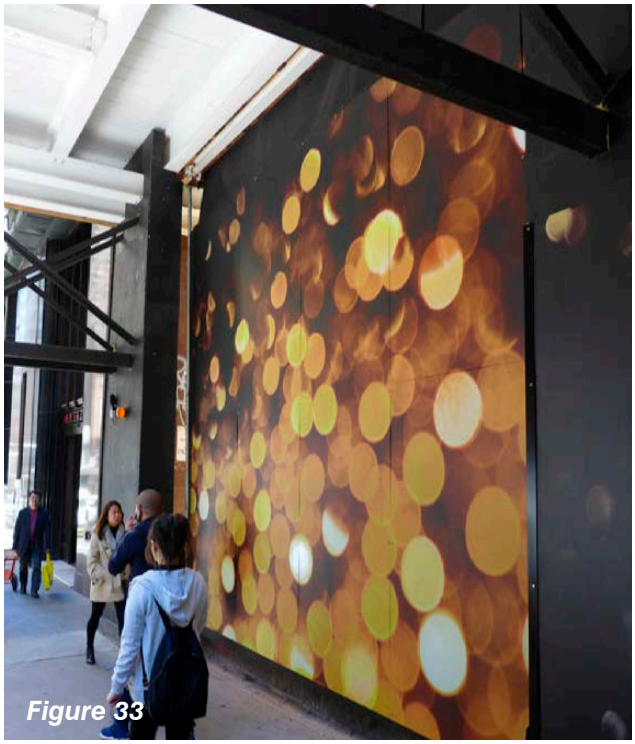


Figure 33

i. a standard Creative City graphic. Information, including artwork and graphics files, are available from the *City's* Creative City hoardings image bank: www.cityofsydney.nsw.gov.au; or

ii. approved site-specific high quality artwork commissioned by developers/builders or as required by the *City* that adds visual interest in the streetscape and which is appropriate for the locality. Proponents must discuss their proposal with the *City* prior to commencing detailed artwork design and commissioning; or

iii. vegetated (green wall) site fence and/or fascia (Figure 35). Vegetative finishes will need to include an integrated automatic sub-surface drip irrigation system. Details of the capacity of the hoarding structure to support a saturated green wall; the method of attachment and integration with the fence/fascia; proposed plant species (suitable for the site conditions); watering system; and maintenance program, will also need to be provided with the application.

Figure 33: Artwork/graphics must be displayed on access doors (having a width greater than 2 metres) and cover at least 75 per cent of the surface area. For duarability purposes graphics on doors must be printed/adhered to composite base-board and screw-fixed to the door (PVC banner fabric and sail track is not allowed).

Figure 34: An example of digital art projected onto *scaffolding* mesh enclosing a worksite.

Figure 34

b) For works associated with heritage items, historic images of the building/local streetscape or photographs from the *City's* image bank must be used as the graphic display. The display of historic images may also be required for *temporary structures* located in heritage conservation areas. Historic city images are available through the *City's* image bank at: www.cityofsydney.nsw.gov.au

c) At least 75 per cent of the surface area of a site fence including return end panels, major/large access gates/doors (wider than 2 metres) and

Figure 35

Figure 36

Figure 37

fascias must be covered by a graphic display (which also includes any proposed signage as set out in Table 2) with the remaining surface finished and painted flat black or other approved colour appropriate for the graphic display. For Type B highbay hoardings where the deck height is greater than 3 metres the graphics must be installed on the site fence up to at least the lateral bracing elements.

3.4.4 Signage on *temporary structures*

Signage associated with the development or work is permitted subject to meeting the controls set out in Table 2 and also in Figure 39.

Figure 35: Finishing site fences and *hoarding* fascias with a 'green wall' installation is an innovative and attractive way to mask development sites in prominent locations and improve streetscape amenity. Where approval is given specific conditions will apply including minimum maintenance requirements.

Figure 36: A combination of graphic image and 'green wall' may be an appropriate solution to enhance the appearance of *hoarding* fences.

Figure 37: Site-specific historic images are permitted subject to City approval.

Table 1: Graphics and images to be displayed on *temporary structures* (refer to 3.4.1)

Type of temporary structure	Location (refer to map at Figure 1)	When required, including installation period	Graphic requirement
Type A	City centre	More than 4 weeks	Refer to 3.4.3
	Adjoining major roads and/or transport corridors outside the city centre (as determined by the *City*)	More than 8 weeks*	
	All other areas	More than 12 weeks*	
Type B (site fence and fascia)	City centre	More than 4 weeks	
	Adjoining major roads and/or transport corridors (including harbour locations) outside the city centre (as determined by the *City*)	More than 8 weeks*	
	All other areas	More than 12 weeks*	
Type B (fascias screening double-stacked site sheds)	All localities	Any duration	Refer to 3.4.3
Type A and Type B with dark colour finishes	All localities	Any duration	Refer to 3.4.3
Large *scaffolding* systems and/or installed in prominent localities (as determined by the *City* - see 3.4.5)	All localities	As determined by the *City*; OR As required by a condition of development consent applying to the development or work	Refer to 3.4.3(a)(ii) and 3.4.5

***Notes:**

1) The display of graphics is not required on hoarding installations in minor or secondary roadways such as rear laneways that are used primarily for local traffic and where the prevailing form of the laneway consists of rear fences, garages, gates, roller doors and the like.

2) In cases where a hoarding is installed on the main frontage of a corner block and the hoarding extends along the side laneway having a width of less than 6 metres measured from the property boundaries, graphics must be displayed for a length of at least 5 metres within the laneway measured from the corner intersection (see Figure 38). Where a side laneway width exceeds 6 metres, graphics must be displayed for the full length of the hoarding.

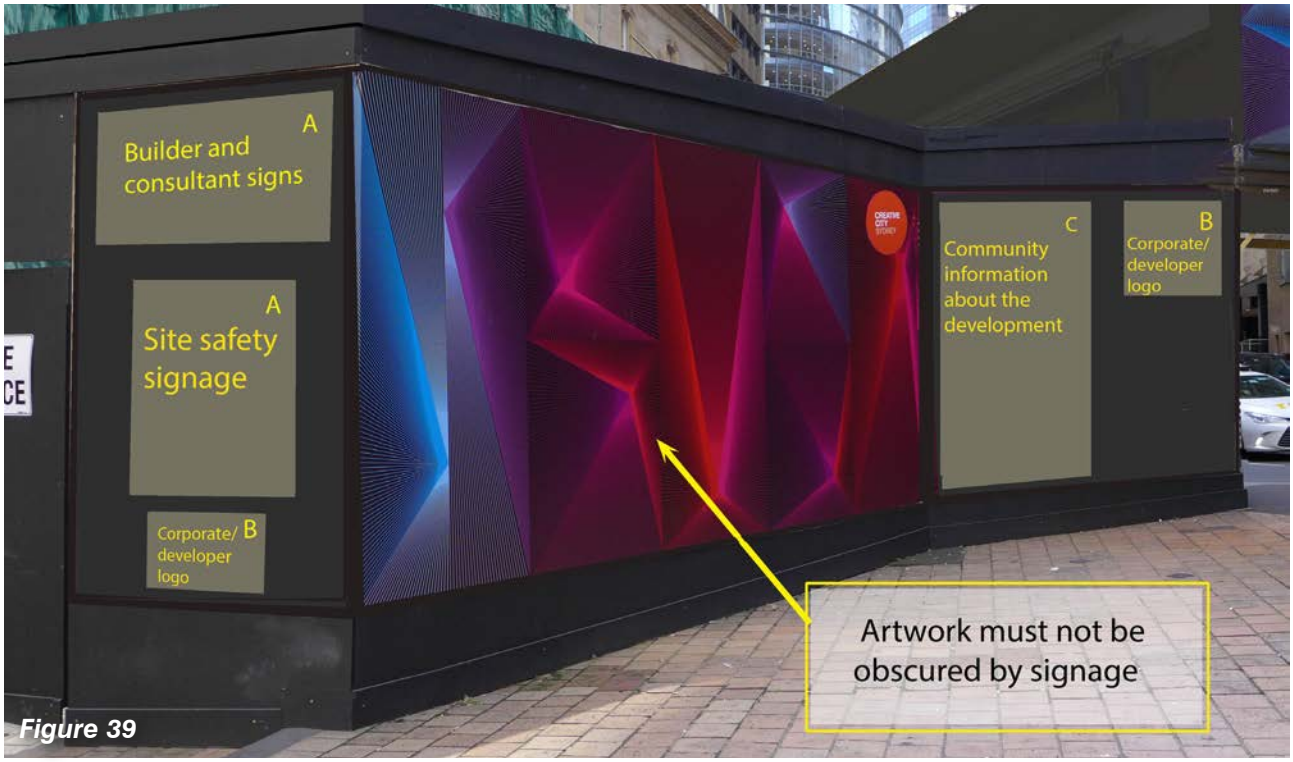


Figure 38: For a corner site adjoining a laneway the installation of graphics on the secondary road (laneway with a width less than 6 metres) must extend a distance of at least 5 metres from the primary road hoarding frontage as indicated (refer to 'Note 2' in Table 1) and the remainder of the hoarding must be painted flat black.

Figure 39: All signage permitted by Table 2 must be positioned clear of the approved artwork/graphics and installed within panels having a flat black background and located in panels at the ends of site fences and fascias or in a black panel adjacent to the site access door. Refer to Table 2 and the 'Creative City Hoardings Design and Installation Guide' for further details.

Table 2: Signage controls *(hoardings)* - refer also to Figure 39

	Type of signage	Maximum size		Location & maximum number	Other requirements
A	Builder, principal contractor, safety signage and design consultants identification.	• No more than 5% of the aggregate outer surface area* of the hoarding in each street frontage; or • 5 square metres, whichever is the lesser.		• One (1) sign per frontage; and • Not higher than 8 metres above the footway/roadway surface.	1. Signage must be sympathetic with the graphic design and placed in accordance with Figure 39; & 2. Names of subcontractors and material/equipment suppliers must not be displayed on the hoarding and scaffolding.
B	Developer or corporate identification (name/logo).	• No more that 5% (combined) of the aggregate outer surface area* of the hoarding in each street frontage; or • 5 square metres, whichever is the lesser.		• Up to two (2) brandings per street frontage; and • Not higher than 8 metres above the footway/roadway surface.	1. Must be sympathetic with the graphic design and placed in black panels at the perimeter edges of graphics (see Figure 39); & 2. Product images or the like must not be displayed; & 3. Only minor text messaging associated with logos is permitted; & 4. Corporate signage is only permitted when associated with the corporate identity of the current or future principal occupancy of the site/building; & 5. Only one website address can be displayed being a minor component of the corporate name/logo content and not a web address directly containing sales, leasing information or the like; & 6. The names and logos of other entities such as property investors must not be displayed.
C	Community information that may include: - details about the development or work; - civic or community events; - festivals; & - public interest messages.	Type A	• No more than 20% of the aggregate outer surface area* of the hoarding in each street frontage; or • 10 square metres, whichever is the lesser.	One (1) sign per frontage	1. At least 50% of the permitted signage area allocated for information about the development or work must display an image of the proposed building or work; & 2. Signage must be sympathetic with the graphic design and be placed in accordance with Figure 39.
		Type B	• No more than 10% of the aggregate outer surface area* of the hoarding in each street frontage, or • 10 square metres, whichever is the lesser.	One (1) sign per frontage	
D	Advertising (commercial, promotional, sale/leasing signage) and the like.	These guidelines to not regulate advertising signage. Separate development consent is required for all proposed advertising signage unless the signage is determined to be exempt development.			

Note: * *'aggregate outer surface area'* is the area of the site fence (including access gates/doors and end panels) and the fascia of Type B hoardings.

Figure 40

3.4.5 *Scaffolding* - graphics and images (construction/scaffolding wraps)

Where required by Table 1, the whole *scaffolding* face or a lesser area where specifically approved by the *City*, must display a coordinated and integrated graphic display that can include facade replication, community images, historical city images or public art to mitigate the adverse visual impacts on the *public place* and add visual interest and vibrancy in the streetscape.[2]

The *City* must give approval to a proposed artwork or graphic display and reserves the right to specify a particular type of display (see 3.11.4). The projection of digital images and/or public information onto *scaffolding* mesh/wrap may also be required. In determining what is considered a 'prominent locality' requiring the installation of a graphic display the following will apply:

a) whether the site is located in close proximity to a significant transport corridor such as a main *road* or rail line;

b) the extent of exposure and impact that the *scaffolding* system will have in the *public place* including prominent sites with vistas from reserves, squares and malls, major road intersections and the harbour; and

c) the proximity to significant landmarks including heritage items.

Figure 40: The use of construction wrap images on scaffolding and worksites is encouraged. In some cases it is mandatory that a wrap be installed (refer to Table 1).

3.4.6 Printing and installation

Printing of graphic displays must use UV-stabilised or latex-based inks. The system of installation and attachment of graphic displays to *temporary structures* must consider the long-term durability, appearance and maintenance requirements to ensure that an acceptable quality appearance is provided and maintained. The following provisions apply:

a) PVC and polyethylene flex display fabric is the preferred material for the display of graphics. The fabric must be attached to the hoarding using pre-painted black powder-coated sail track or other similar track system (not eyelets) to ensure an even and taut condition is achieved and maintained (see also 3.4.2 regarding recycling requirements);

b) sail tracks and the display fabric must be installed in accordance with the *City's* Design and Installation Guide to ensure a clean and neat finish on the *hoarding* face. Fixing tracks and graphics must be installed within the internal edges of the perimeter trimming boards (see the *City's* Design and Installation Guide). Tracks and fixing systems must also be designed and installed to eliminate sharp edges, joins and fixings (low profile screwheads are to be used); and

c) self-adhesive display material will generally only be permitted on Type A *hoardings* protected by street awnings and on the site fence of Type B *hoardings* where the overhead deck affords weather and sun protection to prevent panel shrinkage and loss of adhesion. Where specifically allowed, adhesive

Figure 41

Figure 42

vinyl will be permitted in circumstances as set out in the Design and Installation Guide;

d) access doors exceeding 2 metres in width must have graphics installed and be printed on or adhered to composite base-board for long-term durability purposes; and

e) for steeply sloping sites, graphics/images must be installed in panels to match the stepping of the hoarding and/or footway gradient.

For further information about printing and installation standards refer to the *City's* Creative City Hoardings Design and Installation Guide.

Notes:

1) In approving graphics, the *City* accepts no copyright responsibilities that the applicant may need to meet.

2) The material on which images are printed and displayed must comply with the Australian Standard for *scaffolding*, applicable Codes of Practice and any work safety standards.

3) Where approved advertising on a *temporary structure* will produce a financial return to the owner of the structure or site, then the *City*, as landowner over which the *hoarding* and/or *scaffolding* is erected, may require through a condition of development consent the owner of the site or the applicant to negotiate with the *City* an appropriate percentage distribution of the advertising income.

Figure 41: Typical 'Type B' *hoarding* (displaying a historic image)

Figure 42: Typical gantry 'Type B' hoarding (with graphic).

3.5 Requirements applying to the key design features of Type A and Type B *hoardings*

3.5.1 Objectives for the design of hoardings

The following objectives apply to the design and installation of Type A and Type B *hoardings*:

a) provide a safe and structurally adequate *temporary structure* in accordance with the relevant regulations, *SafeWork NSW* requirements, adopted Australian Standards and the Safe Work Australia 'Construction Work - Code of Practice';

b) minimise unnecessary footway encroachments, obstructions and clutter;

c) maintain the highest possible standard of pedestrian access, amenity and safety past a worksite;

d) ensure that *hoardings* contribute positively to the streetscape;

e) ensure that high quality public art, graphic designs, images and information appropriate to the location are provided where proposed or required by these Guidelines;

f) inform pedestrians and the city community about the development or work through appropriate messaging on hoardings;

g) maintain materials, finishes, structure and graphics in a good and sound condition;

h) avoid or minimise impacts on utility access pits and hatches, street furniture, street trees and other infrastructure; and

i) ensure that timber and timber products used in *hoardings* are sourced from sustainable forests and consist of products that are legally logged.

3.5.2 Mandatory design features for Type A and Type B *hoardings*

The following design features are mandatory for Type A and Type B *hoardings*:

a) obstruction of the footway by the *hoarding* is to be minimised. Columns of Type B *hoardings* are to be located at least 300 mm from the kerb edge and site fences are to be positioned as close as possible to the site boundary.

Note: Columns set back more than 300 mm from the kerb require special consideration (see 3.9.1(k));

b) Type B *hoardings* must provide visual transparency of the *footway* beneath by maintaining at least a nominated minimum height clearance to the underside of *hoarding* decks and, in the city centre, provide vertical and non-continuous counterweights at the kerb;

c) site sheds installed on Type B *hoardings* must be screened on the side/s facing the *public place* through the use of fascias or approved fabric screens that display high quality graphics (see 3.4);

d) high standards of design and detailing are to be applied to all *hoardings* including finishes and, where proposed or required by Table 1, the integration of public art, colour, images and graphics;

e) co-ordinated information about the development and integrated graphics (where required) on both the fascia and site fence including end panels are to be provided including the display of the property address (number) in numerals at least 100 mm high;

f) provision for in-ground site works to be viewed by pedestrians (through windows in the site fence);

g) high quality and effective lighting of ground surfaces under Type B *hoardings* to enhance safety and amenity for pedestrians and bicycle riders;

h) weather protection for pedestrians and bicycle riders (Type B *hoardings*) through the provision of watertight graded decks;

i) structures that are designed for easy and effective maintenance through the use of durable and appropriate materials and finishes; and

j) timber and timber products including site fences, fascias and decks of *hoardings* must be sourced from legally logged forests as required by the Commonwealth government's Illegal Logging Prohibition Act 2012.

3.6 Requirements for the key design features of *scaffolding* systems

3.6.1 Objectives for *scaffolding* systems

The following objectives apply to *scaffolding* systems:

a) minimise *footway* obstructions and clutter;

b) maintain the highest possible standard of pedestrian amenity, access and safety past *scaffolding* structures;

c) ensure *scaffolding* screening systems contribute positively in the streetscape;

d) ensure that where proposed or required high quality artwork, graphic designs that include public art and images on screening systems (scaffolding wrap) are appropriate to the location and duration of the *scaffolding* installation;

e) inform visitors and the city community about the development or work;

f) maintain screening systems and graphics to a high standard to minimise adverse visual impacts;

g) provide a safe and structurally stable *temporary structure* in the *public place* in accordance with the relevant regulations, applicable Australian Standards including *AS/NZS 1576.1: 2010 'Scaffolding – General requirements'*, Codes of Practice and any requirements of the *SafeWork NSW*; and

h) minimise physical impacts (fixings) on the fabric of historic buildings and other significant structures.

3.6.2 Mandatory design features for *scaffolding* systems

The following design features are mandatory for *scaffolding* systems:

a) as a general rule *scaffolding* systems must not rest on the *footway* in the city centre, other areas of high pedestrian volumes or where the width of a *footway* is narrow and would result in blockage of the footway. In these areas the *scaffolding system* is to be placed on the deck of Type B *hoardings*. Applicants must discuss their proposal with *City* officers before proceeding with an application for *scaffolding* in busy parts of the city;

b) in visually prominent locations and any other place required by the *City* (see Table 1) the *scaffolding* must be screened from the *public place* by mesh or graphics fixed to the outside face of the *scaffolding* frame (see also 3.11.3);

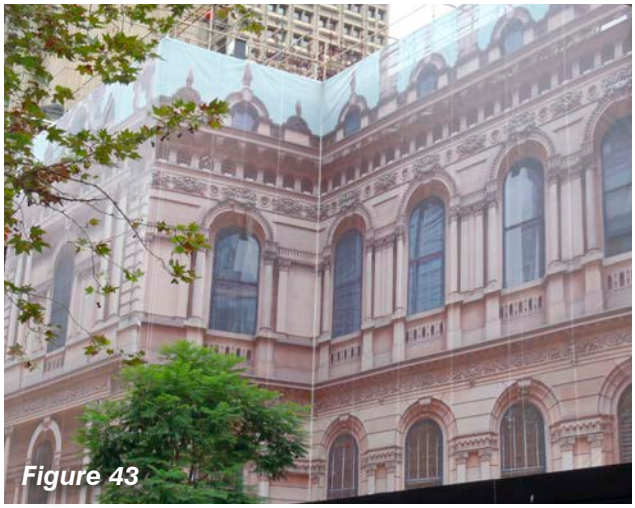


Figure 43


Figure 44

c) any graphics or images incorporated in the screening (whether mesh or fabric) are to be printed using high quality graphics/images including public art where required by the *City*. In some cases this may be mandatory (see Table 1); and

d) screening systems must be installed and maintained to a clean, tidy and secure standard to the *City*'s requirements.


Figure 45

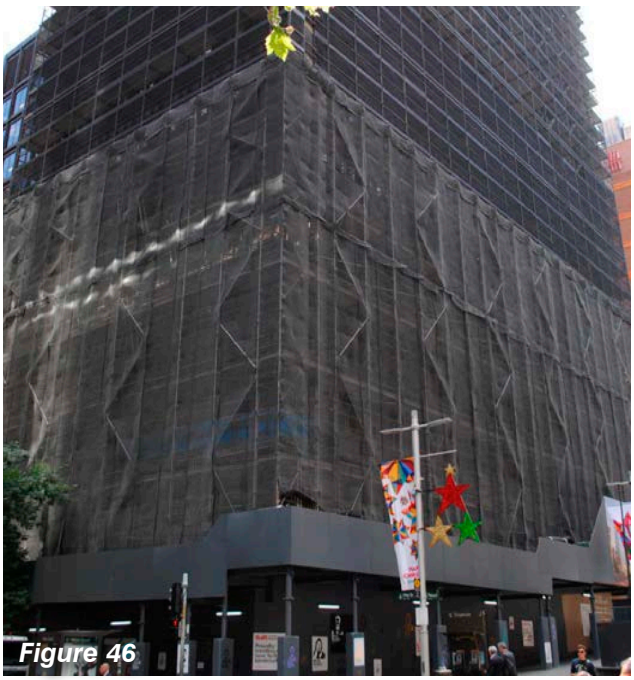


Figure 46

Figure 43: Screening of *scaffolding* using a high-quality *scaffolding* wrap is particularly appropriate in prominent locations and on historic buildings.

Figure 44: Where *scaffolding* is required to encapsulate a worksite the *City* may require a construction wrap image to be installed to mitigate adverse visual impacts of the structure in the *public place* (see Table 1).

Figure 45: Full encapsulation of worksites using impervious fabric to contain dust and debris is permitted subject to the *scaffolding* system being designed and installed to withstand all expected wind actions in the locality and the fabric in accordance with the City's requirements.

Figure 46: Quality *scaffolding*/meshing systems fixed on the outside face to fully screen the *scaffold* frame are preferred. Black mesh is also preferred, however other colours may be permitted if suitable for the locality or required for work health and safety issues to address *scaffold* exposure to the sun (excessive heat gain) and impacts on workers. For heritage-listed buildings consideration must be given to the use of sympathetic colours (see Figure 126).

Figure 47: An example of a building wrap showing a historic city image. A comprehensive collection of historic images is freely available from the *City's* website Archives Unit (refer to 3.4.3).

Figure 48: An example of a scaffolding wrap and fascia graphics associated with a special city event. The *City* strongly encourages the use of images and graphics including large format printed public art on *temporary structures*. In some localities this is mandatory (see Table 1).

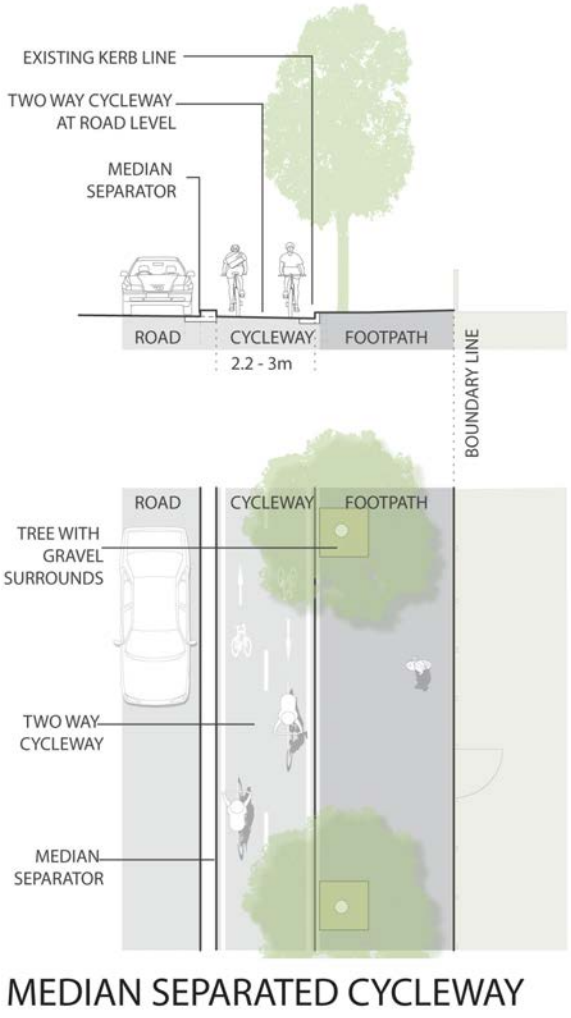


Figure 49: There are three principal cycleway designs. This design separates the cycleway from traffic lanes using a median separator. Refer to 3.9.1 for details when placing *hoardings* above cycleways.

3.7 Cycleway network

An extensive cycleway network is being constructed throughout the local government area. Several major sections of the cycleway have been completed and are in use.

It is therefore critical that *hoardings* do not interrupt the flow of bicycle movement along cycleways nor interfere with the construction of cycleways (see 2.10.5).

3.7.1 Cycleways and the design of *hoardings*

The design, installation and use of *hoardings* must accommodate the three principal cycleway designs including satisfying all requirements of the Guidelines relating to the safe and convenient passage of bicycle riders including pedestrians and vehicles. To achieve acceptable outcomes for bicycle riders and other *road* users a number of design requirements apply and are set out in 3.9.1.

3.7.2 Shared pedestrian/cycleway pathways

Hoardings erected in shared pedestrian/cycleway pathways require special consideration. There are no 'deemed-to-comply' provisions for shared pathways. In these circumstances applicants will need to discuss their proposal with the *City's* Cycling Unit before proceeding with design drawings and lodgment of an application.

3.8 Introduction to the component elements of *hoardings* – Types A and B

Hoardings are constructed and finished from a range of separate elements. These are discussed in detail in the following section (3.9), but the key components are:

1. **Structure**

   The primary framework of a *hoarding* consisting of steel columns and beams for Type B *hoardings* and a timber or steel frame for Type A *hoardings* including, if necessary, bracing and/or counterweights.

2. **Counterweights, column bases, traffic barriers and pedestrian safety barriers.**

   Counterweights stabilise a *hoarding* particularly where sheds are installed on *hoarding* decks and/or where *hoardings* are exposed to high wind actions in the locality. Traffic and crowd barriers protect pedestrians and motorists at excavated sites. Safety barriers (where permitted) such as steel picket screens on Type B *hoardings* protect pedestrians from hoisting activity from a *works zone* on the *roadway*.

3. **Site fence**

   The primary element of Type A *hoardings* and often also part of Type B *hoardings*. Fences form a safety barrier and visual screen between the *public place* and the *workplace*. They also provide a surface for the display of graphics and public information about the development or work.

4. **Deck and overhead protection**

   Located over the *public place* (*footway, roadway*, cycleway) to protect pedestrians, bicycle riders and vehicles from objects that may fall from a *workplace* and to provide impervious weather protection to *a public place*. The deck can also provide a platform for site sheds and *scaffolding* and where specifically approved, the parking of suspended *scaffold* (swinging stages).

5. **Fascia**

   Fascias are provided on the *public place* side of Type B *hoarding* decks to afford fall protection for workers on trafficable decks. Fascias also screen site sheds, spandrel beams and any longitudinal knee bracings. A fascia can also act as a vertical protective barrier to arrest objects that may fall from a *workplace* hitting and ricocheting off the deck. This element also acts as a surface for the display of public art, graphics and development-related community information.[1]

6. **Artwork, graphics and information (on fascias and site fences)**

   Used to minimise adverse visual impacts and add interest and increase the presence of creativity in the streetscape through the installation of required and approved artwork.

7. **Colour**

   Standard colours are to be used on hoardings. Where graphics and artwork are installed hoardings must be painted black (with white to the underside of the deck and white visual bandings on the columns of Type B *hoardings*).

8. **Access gates**

   Access gates are used to secure openings in the site fence and allow access for construction personnel, vehicles and machinery. Access gates must be imperforate (solid); extend to the underside of the deck of Type B *hoardings*; lockable and open inward or slide internally.[2]

   Graphics must also be installed on large access gates and doors including at truck access points.

9. **Lighting**

   Located at high level on the site fence or on the deck soffit of Type B *hoardings* to provide a well illuminated and safe passage for pedestrians including the illumination of support columns (*footway* obstructions). Where *hoardings* are installed over *roadways* and cycleways lighting also provides for safe movement including visual sighting of pedestrians passing along or across *roadways* and cycleways. Lighting also illuminates artwork and graphics on site fences.

10. **Street tree protection**

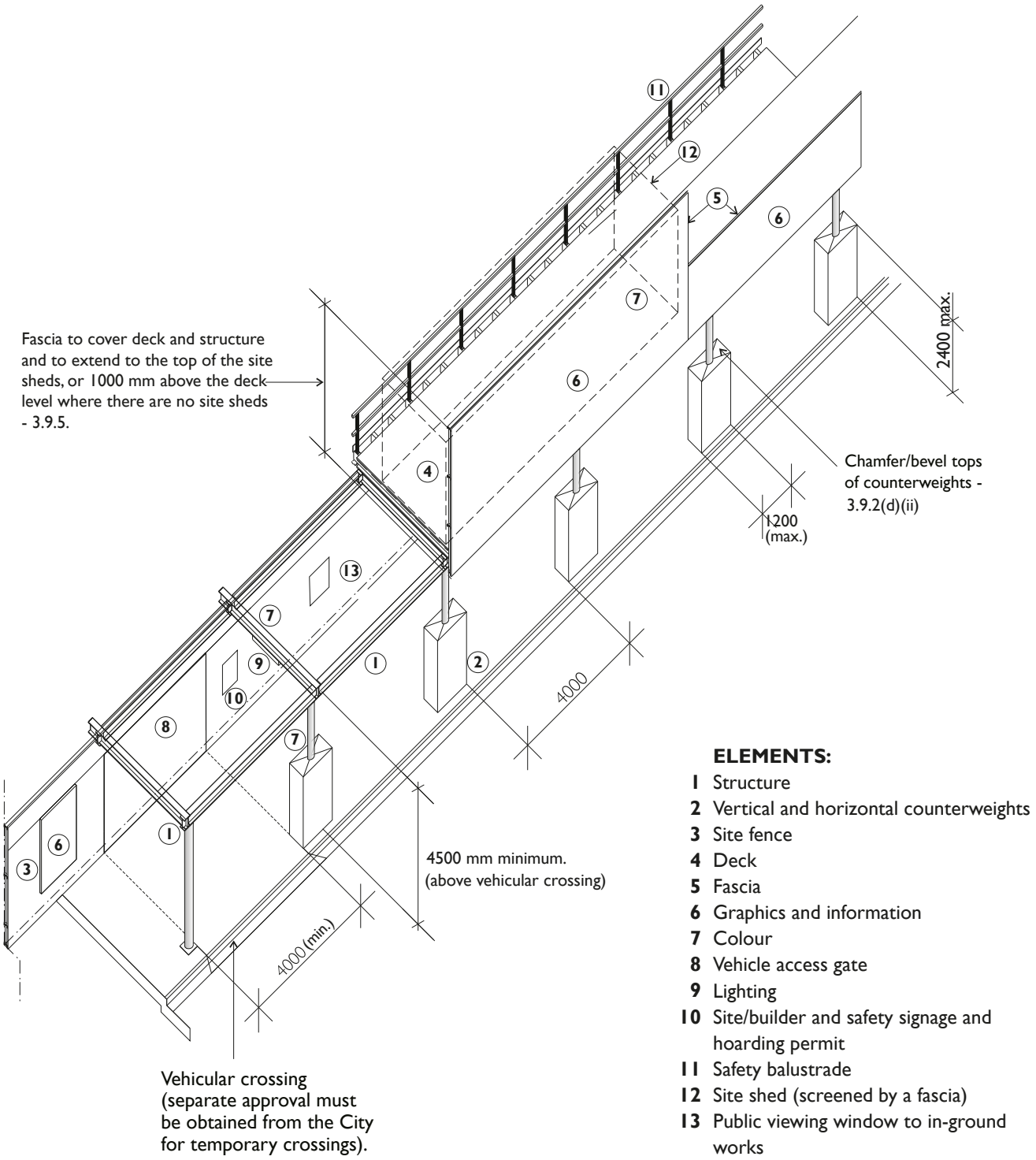
    Street trees are an important part of the streetscape and can contribute to the visual screening of *temporary structures*. Designs must therefore accommodate all affected street trees by minimising the need for branch pruning and by locating support columns away from tree bases and fascias set back from tree canopies. Trunk and limb protection must also be provided.

Notes:

1) Details of proposed artwork and graphics on fascias must be nominated and/or included with an application – refer to 2.9.2 and Table 1.

2) It is an offence under Clause 21 of the Roads Regulation 2008 to allow a door or gate to open outwards into a *road* including a *footway*.

Figure 50: A 'Type B' *hoarding*. The location and design of counterweights is critical to minimise pedestrian obstruction and to enhance openness along the kerb in the city centre and other busy commercial areas (see 3.9.2).



ELEMENTS:

1. Structure
2. Vertical and horizontal counterweights
3. Site fence
4. Deck
5. Fascia
6. Graphics and information
7. Colour
8. Vehicle access gate
9. Lighting
10. Site/builder and safety signage and hoarding permit
11. Safety balustrade
12. Site shed (screened by a fascia)
13. Public viewing window to in-ground works

3.9 Using the objectives and deemed-to-comply provisions applying to the design and use of *hoardings*

This section details specific design requirements for the various elements of Type A and Type B *hoardings*.

Hoarding designs must satisfy the 'performance objectives' applicable to each design element. Compliance with the objectives is automatically satisfied by designing a *hoarding* that meets the 'deemed-to-comply' provisions.

If compliance with the deemed-to-comply provisions cannot be achieved due to specific site or building constraints, applicants must clearly show that an alternative design solution meets the performance objectives. This must be clearly described in the application including details on how the objective provisions will be satisfied.

3.9.1 Element 1 - Structure (Type A and Type B *hoardings)*

Objectives:

i. The provision and maintenance of a structurally adequate and stable structure under all conditions that complies with relevant structural design standards, work health and safety legislation and applicable Codes of Practice;

ii. The open character of a *footway* below the Type B *hoarding* is maintained and the amount and quality of natural light reaching the *footway* is preserved.

iii. Pedestrian safety and amenity is protected through pedestrians being readily visible from the *road*way;

iv. Safe and convenient pedestrian movement and amenity is provided including access to and from vehicles parked along the kerb;

v. Physical access for maintenance of the *footway*, including regular cleaning, is not affected significantly by the *temporary structure*;

vi. Physical encroachment and obstruction of the *hoarding* on the *footway* is minimised;

vii. Safe and convenient access is maintained along cycleways including unencumbered clear width, height, column setback and column spacings;

viii. Safe and convenient access and egress is maintained to and from occupied buildings in the vicinity of the *temporary structure;*

ix. *Temporary structures* are appropriately designed and maintained to minimise adverse visual impacts on the *public place*; and

x. Access to utility pits in the *footway* and fire-fighting services such as sprinkler and hydrant booster connections located on building facades is maintained.

Deemed-to-Comply provisions for Element 1:

Height/clearances

a) The minimum height clearance to the underside of a Type B deck structure is 3000 mm measured above the footway (see Figure 54).[1]

b) Knee-bracing must not be less than 2500 mm above the footway and the size of bracing is to be minimised.

c) A minimum height clearance of 4500 mm must be provided above a *roadway* or at a truck entrance to a site.

Column spacings and location

d) Columns and/or column/counterweight units[2] must be located with a minimum clear spacing of:

i. 4 metres along the footpath in the city centre[3] with a greater spacing for *hoardings* erected over cycleways (see (ii) below) in areas outside the city centre;

ii. 2500 mm along the kerb-side outside the city centre except where it is determined that there are site specific needs to require a greater spacing[3] or where a cycleway is affected in which case columns must be placed at 4 metre clear spacings (min.);

iii. Columns must not be placed on or in close proximity to utility service pits/hatches/ chambers (bearing pressures) - see 4.5.2.

e) Columns and/or column/counterweight units[2] must be located at equal spacings wherever possible unless this would conflict with street trees, furniture, utility pits or other site constraints[3]

Column and fence bases

f) The bases of *hoarding* fences and columns, including vertical counterweights erected on granite stone paving, must be separated from the paving with 12 mm (min.) structural grade plywood placed on one layer of a heavy duty waterproof membrane to prevent rust staining, all cut flush with the fence or column base. See also 4.5.2 in relation to the safe load capacity of *footways*.

g) Where there are clearly demonstrated site specific construction needs for a *hoarding* to be supported on concrete footings within a *footway* (see (o)) and the *hoarding* will be in place for a lengthy duration (as determined by the *City*), consideration may be given to permit this form of *hoarding* (column) support (see 4.5.2).

Figure 51

Clear pedestrian width

h) Where high pedestrian densities are present, such as at busy *road* intersections in the city centre, Type B *hoardings* must span the full width of *footways* with columns set back from kerb ramps and the hoarding deck and fascia splayed. For some narrow *roadways* (including laneways) it may be necessary to span the full width of the carriageway (see 3.10 and Figure 58).

i) Where *hoardings* are required to be notched around street trees and other infrastructure, intermediate columns to support the notched sections (deck beams) are not permitted (to minimise pedestrian obstructions) - see Figures 119 and 120.

j) The clear span across the *footway* is to be maximised.[4] Where the *footway* width will be reduced by a *hoarding* site fence encroachment or column placement and is located in a high pedestrian density area such as the city centre (refer to Figure 1a) or other area as determined by the *City* such as:

- in a shopping district;
- intensive commercial area; or
- at major public transport nodes,

a detailed assessment must be made of the likely impacts on safe and convenient pedestrian movement. This may require the submission of a pedestrian and/or traffic management assessment report prepared by a suitably qualified person to determine whether a site fence encroachment and/or reduced column spacing across the *footway* is acceptable. In some cases such as local needs and circumstances, a standard modular gantry-type *hoarding* will not be permitted and a full structural *hoarding* system may be required to maximise the spanning distance over the *footway* (see also 3.9.3(a)).

Figure 52

k) Where the *footway* is wider than the standard width (typically about 3.6 metres in the city centre and other major roads) and it is not proposed, feasible or required by the *City* to span the full width, the applicant or *person conducting a business or undertaking* should assess any risks to pedestrians from any objects that may fall from the work area onto the unprotected area.[5] In some localities it may also be necessary to set the *hoarding* back more than 300 mm from the kerb for site specific needs such as minimising impacts on bus stops (loading and unloading of passengers) and bus manoeuvring. Where this is necessary it must be fully detailed in the *hoarding* application.

Figure 51: A typical Type A *hoarding* with a painted finish using the standard colour (see 3.9.7).

Figure 52: A site-fabricated full structural 'Type B' *hoarding* with an artwork installation on the fascia. Innovative designs (shapes) for fascias are permitted subject to complying with minimum height controls (see 3.9.5).

Figure 53: Cross-section of a Typical 'Type A' *hoarding* (without counterweighting or lateral bracing at the base).

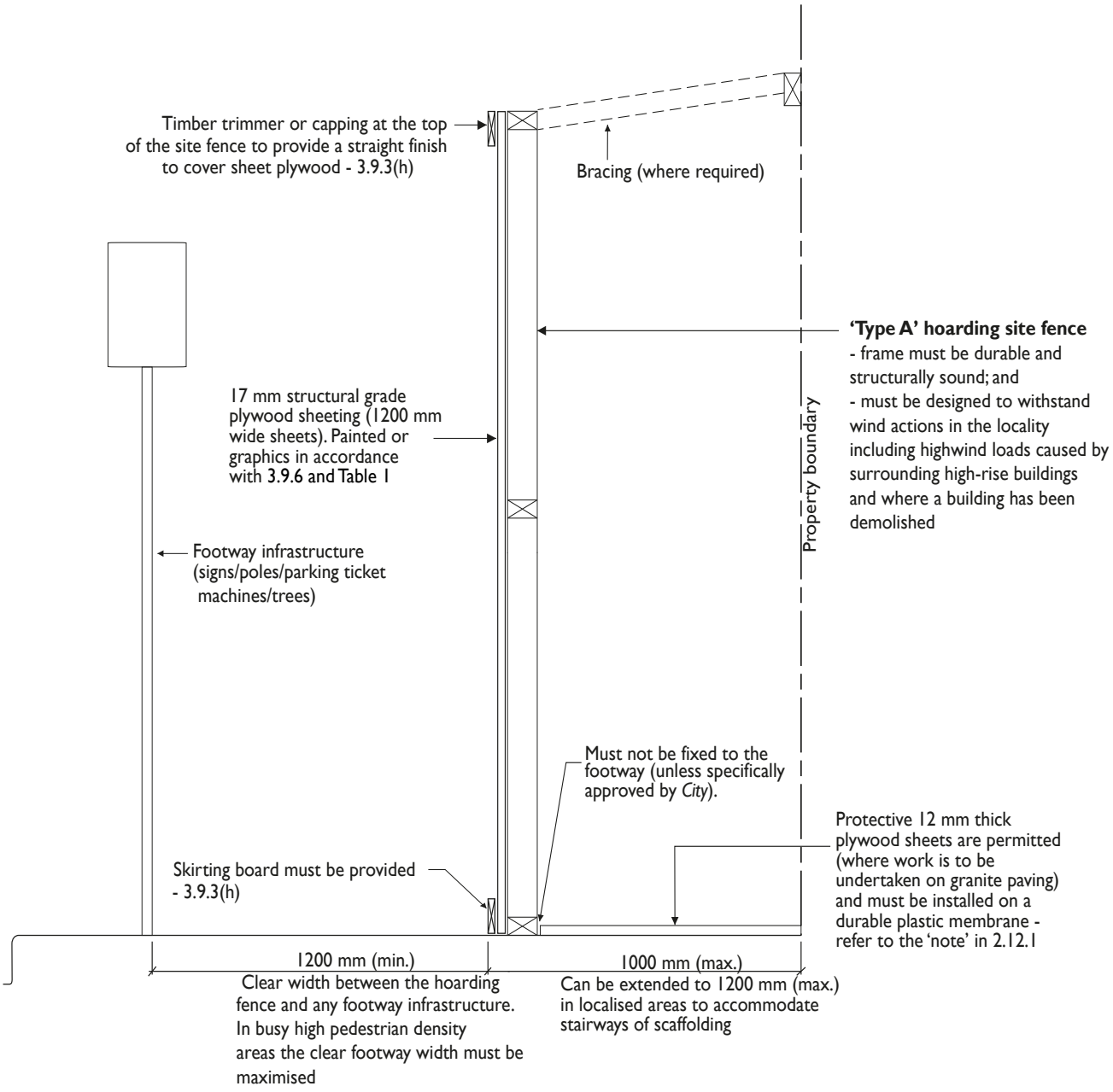
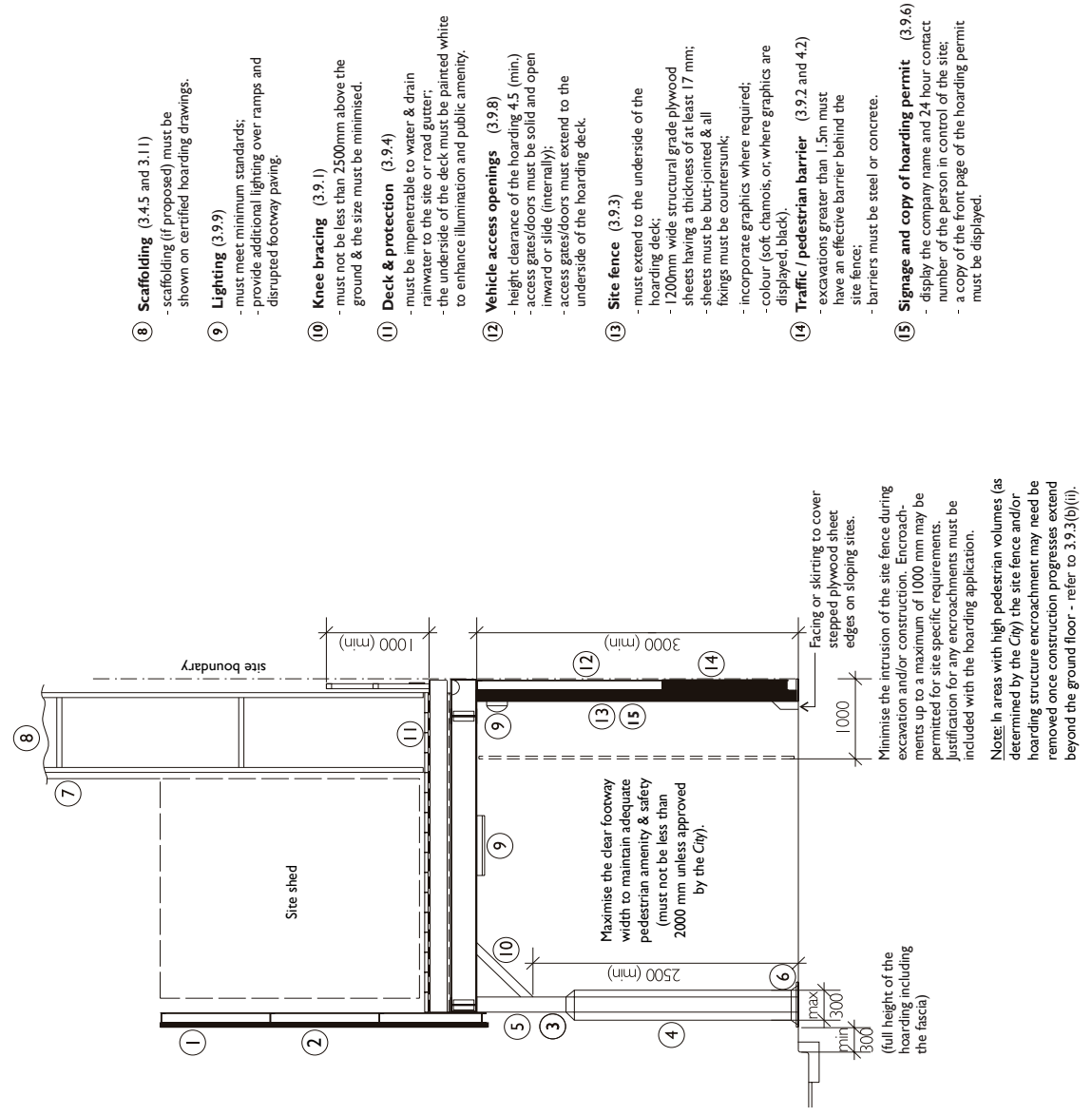


Figure 54: Elements of a 'Type B' *hoarding* (section).



① **Fascia** (3.9.5)
- must fully screen site sheds;
- where sheds are not installed a half fascia panel must be provided (minimum height 1000 mm).

② **Graphics, information & colour** (3.9.6)
- must provide a suitable graphic to enhance the streetscape (refer to 3.4);
- fascia & site fence must be painted in accordance with 3.9.7.

③ **Steel structure** (3.9.1)

④ **Counterweights** (3.9.2)
- generally must be vertical and be incorporated as part of the hoarding column;
- maximum width along the kerb 1200 mm & minimise depth (across the footway) 300 mm; tops must be chamferred or sloped to avoid the collection of refuse where the top of the counterweight is less than 2100 mm high;
- must be high quality smooth finish;
- clear distances between counterweights 4000 mm in the city centre (greater for cycleways);
- corners must be bevelled or rounded.

⑤ **Crane hoisting safety barrier** (3.9.2)
- where required for safety reasons, durable steel barrier (see Figure 82) at high level to allow pedestrian movement to and from the kerb to protect pedestrians from crane hoisting activities.

note: crane hoisting safety barriers will only be considered where the need is clearly demonstrated.

⑥ **Soleplates** (3.9.1)
- must be of the least possible length & width and align parallel with the footway;
- must be designed to minimise trip hazards.

⑦ **Construction wrap** (3.4.5)
- where scaffolding is used to encapsulate the building or site for a significant period and/or where the site is located in a prominant area the scaffolding system may be required to be covered by an approved graphic image printed on mesh fabric;
- wraps displaying graphics/images can be installed on scaffolding in all locations;
- where a wrap is not proposed or required, black mesh is preferred and should cover the whole scaffolding frame.

⑧ **Scaffolding** (3.4.5 and 3.11)
- scaffolding (if proposed) must be shown on certified hoarding drawings.

⑨ **Lighting** (3.9.9)
- must meet minimum standards;
- provide additional lighting over ramps and disrupted footway paving.

⑩ **Knee bracing** (3.9.1)
- must not be less than 2500mm above the ground & the size must be minimised.

⑪ **Deck & protection** (3.9.4)
- must be impenetrable to water & drain rainwater to the site or road gutter;
- the underside of the deck must be painted white to enhance illumination and public amenity.

⑫ **Vehicle access openings** (3.9.8)
- height clearance of the hoarding 4.5 (min.)
- access gates/doors must be solid and open inward or slide (internally);
- access gates/doors must extend to the underside of the hoarding deck.

⑬ **Site fence** (3.9.3)
- must extend to the underside of the hoarding deck;
- 1200mm wide structural grade plywood sheets having a thickness of at least 17 mm;
- sheets must be butt-jointed & all fixings must be countersunk;
- incorporate graphics where required;
- colour (soft chamois, or, where graphics are displayed, black).

⑭ **Traffic / pedestrian barrier** (3.9.2 and 4.2)
- excavations greater than 1.5m must have an effective barrier behind the site fence;
- barriers must be steel or concrete.

⑮ **Signage and copy of hoarding permit** (3.9.6)
- display the company name and 24 hour contact number of the person in control of the site;
- a copy of the front page of the hoarding permit must be displayed.

Figure 55


Figure 56

Figure 57

Figure 55: Where a Type B *hoarding* is required to span a *road* special consideration must be given to the design including minimum clearance heights (4.5 metres) and height limit signage (see also Figure 58).

Figure 56: Clear column spacing of not less than 4 metres is required in the city centre (refer to map at Figure 1a) however this can be varied for special site-specific needs and conditions such as buildings with heritage significance (see Figure 57).

Figure 57: Consideration will be given to allow reduced column spacings in the city centre where there are special needs such as undertaking work on heritage-listed buildings that have significant street awnings and that cannot be altered.

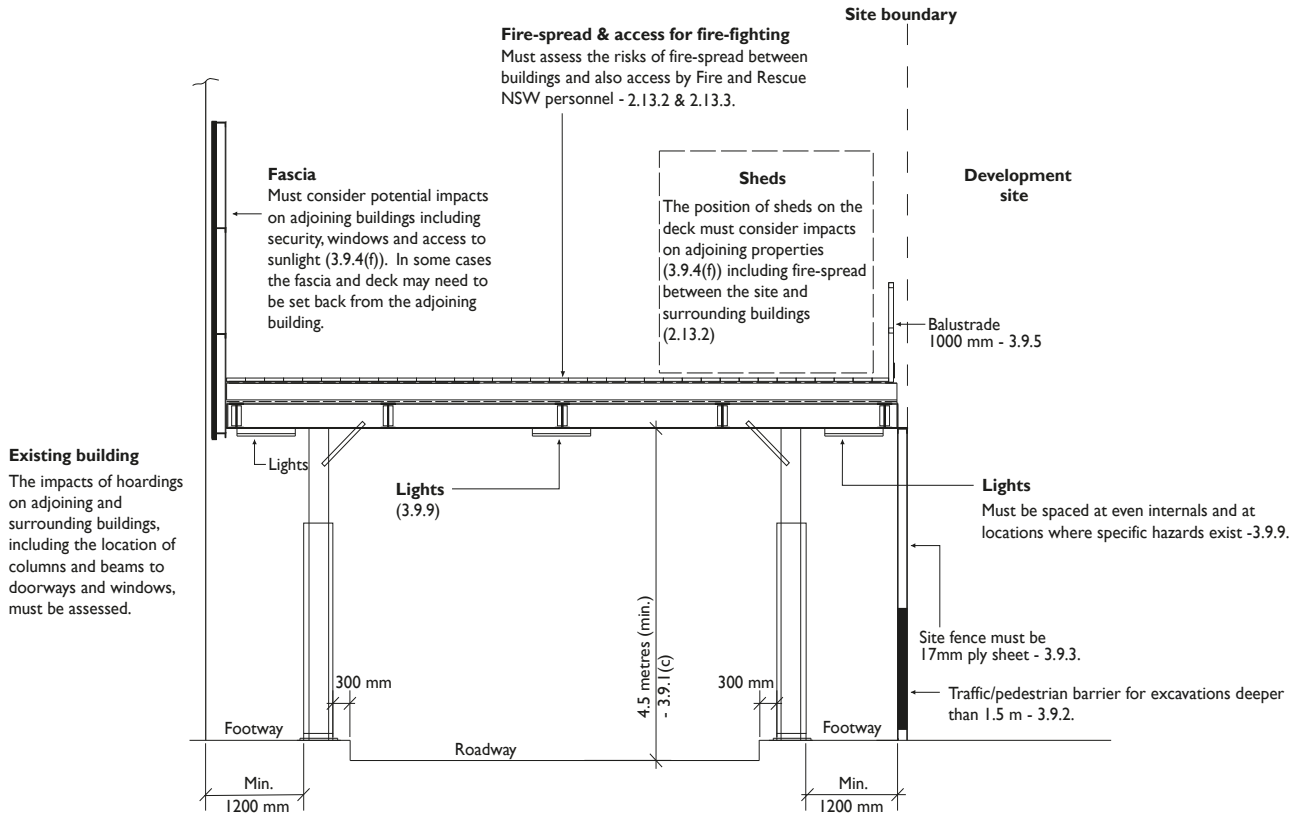
Where a setback greater than 300 mm is proposed or necessary, consideration must be given to the potential impacts on pedestrians including:

- injury resulting from walking or stumbling into columns placed within the main pedestrian thoroughfare; and
- pedestrians walking close to the *roadway* between the kerb and the *hoarding* columns and the resulting potential for pedestrians to inadvertently step off the kerb and/or be hit by passing vehicles including impacts from external vehicle side mirrors, particularly buses and trucks.

Where a dark-coloured *hoarding* frame (columns) are required by 3.9.7 or are proposed, the columns must be painted with a 1 metre high white band commencing 500 mm above the *footway* surface to clearly identify the obstruction (see Figure 63(a)). This is particularly important for pedestrians with a vision impairment.

Where vertical counterweights are incorporated with the column the corners must also be painted with a white 1 metre high marking (see Figure 63(b)). In some cases it may also be necessary to provide additional lighting (refer to 3.9.9).

l) Where a Type B *hoarding* spans over a *roadway*, a minimum clearance of 4.5 metres must be provided (see Figure 58 and 60), measured from any point on the *roadway* surface vertically to the underside of all parts of the structure, excluding minor knee bracings on the outer kerb-side edges.



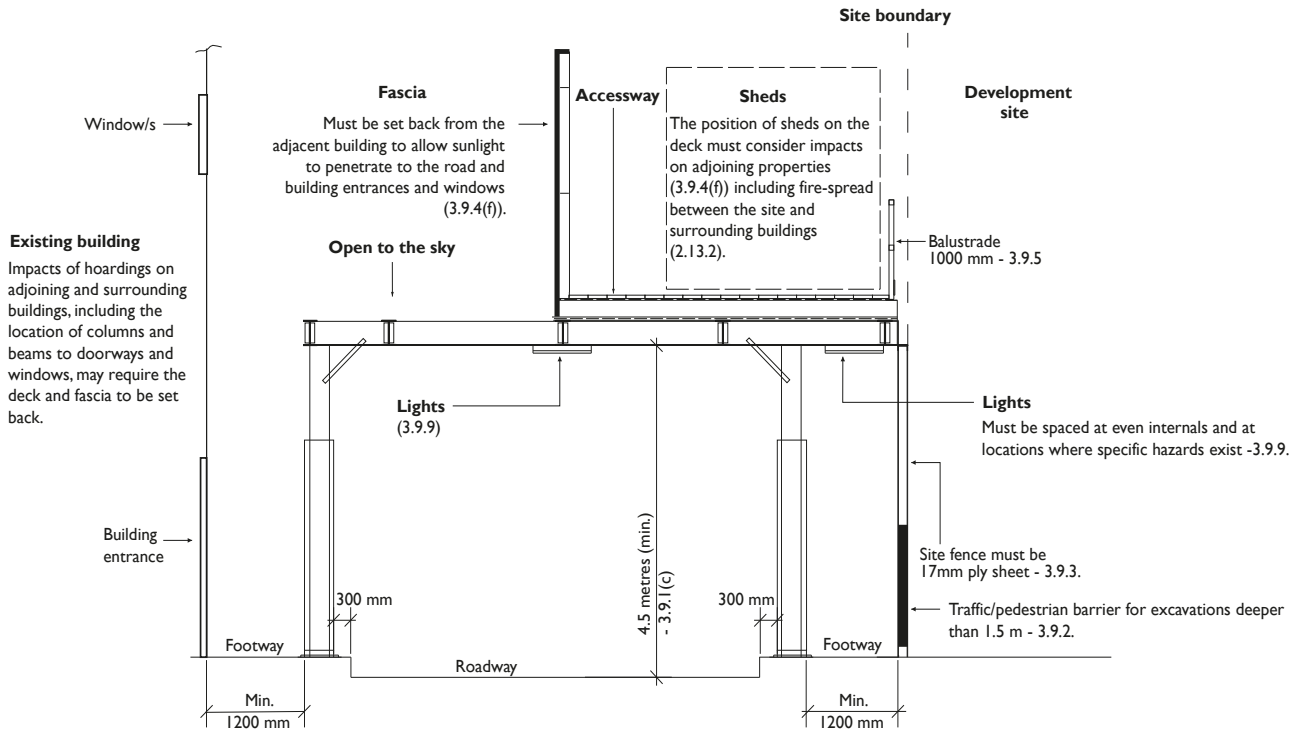


Figure 58 (a) (top): Section detail of a 'Type B' *hoarding* erected over a *roadway*. Potential impacts on adjoining properties and on vehicles including vehicle access to driveways must be considered in the design.

Figure 58 (b) (bottom): Where the *City* determines that a hoarding deck over a *roadway* will have unacceptable impacts on adjacent properties such as loss of sunlight for occupants, the deck and fascia must be set back from the adjacent building/s.

Figure 59

m) Where support columns are required to be placed more than 300 mm from the kerb due to specific site constraints or requirements, an acceptable primary accessible pathway must still be maintained. For standard width *footways* a clear width of at least 2.0 metres must be provided however this is subject to site specific approval based on local pedestrian conditions and volumes (see (j)). Variations to this requirement will only be considered where valid reasons for a lesser width are provided.[6]

n) Where works require the installation of a Type B *hoarding* adjoining a heritage item (building) or architecturally significant street awning the *City* will allow the installation of specially designed *hoardings* where beams are partially supported from the building and span across the *footway* to the support columns along the kerb-line (see Figure 57).

Columns supported on footings

o) In special cases where the *City* has agreed to consider the use of fixed column placement (footings) within a *footway* the following must be provided with an application:

   i. detailed drawings of the footing system designed and certified by a practising structural engineer (see 2.7.1);

   ii. a full survey to identify sub-surface utility services;

   iii. the footing system must not interfere with any services and where located in close proximity to or within the zone of influence of services, the formal approval of the utility owner must be obtained and evidence of such approval provided; and

   iv. an assessment and report prepared by an arborist on the extent of the root system of street trees located nearby and confirming that there will be no impact from the proposed footings. The design and report must be accepted by the *City's* Street Tree Contracts Coordinator.

   Where approval is given, upon removal of the *hoarding* structure the footings must be removed to a depth of at least 1.5 metres below the *footway* surface and the *footway* reinstated to the *City's* specifications and satisfaction.

Hoardings over cycleways

p) The following provisions apply to Type B *hoardings* erected over cycleways:

   i. Where a cycleway adjoins a development site or *workplace* and it is proposed to establish a *works zone*, the *hoarding* must be designed to accommodate the cycleway in addition to the needs of pedestrians. The duration of *hoarding* placement over a cycleway must be minimised to reduce adverse impacts on the cycleway and bicycle riders. This may require:

   - a Type B *hoarding* to be in place during demolition of a building;
   - removing the *hoarding* over the cycleway at completion of the demolition works and during in-ground works, install a Type A *hoarding* on the *footway*; and

Figure 59: At busy *road* intersections that have high pedestrian densities special consideration must be given to the design of a *hoarding* including the location of support columns and site fence to maximise queuing space and pedestrian amenity.

- re-installing a Type B *hoarding* over the cycleway if overhead protection is necessary such as to undertake crane hoisting activity from a *works zone*.

Where a *hoarding* is proposed to be erected on a shared pedestrian/cycleway pathway, see 3.7.2 for further details and requirements.

ii. A *hoarding* must span the full width of a cycleway including providing column setbacks of at least 300 mm on both sides of the cycleway. Where a *footway* has sufficient width to allow the safe and convenient movement of pedestrians a greater setback from the cycling kerb may be required.

The preferred location for column placement adjoining a cycleway with a median separator is to locate columns on the traffic lane side of the kerb (see Figures 49 and 66). Where there are constraints preventing this, the *City* may consider permitting columns to be placed on median separators and a reduced setback from the edge of the cycleway being allowed if it considers that:

- the median separator foundation/footing is adequate to support the bearing pressures/ loads from the *hoarding* structure and any additional loads from site sheds and/or *scaffolding*; and
- the cycleway pathway line markings can be adjusted to provide an acceptable bicycle-rider setback from columns (see Figure 67) and columns are provided with white bandings (see Figure 63(a) and tiger-tailings on the structure at the portals to clearly identify the potential hazard.

If this design solution is sought, full structural details must be provided with the application confirming the structural adequacy of the median kerb to support the *hoarding (see 4.5.2)*. The approval of the *City's* Cycleway Unit must also be obtained regarding bicycle rider safety.

Note: Refer to (d) and (e) for column spacings along the kerb.

iii. Where the preferred design option is proposed (columns on the *roadway*), traffic lane diversions will require the endorsement of the *City's* Traffic Operations Unit (see Figure 68). Where a *works zone* application is made the required lane diversions must be included in the application documentation.

iv. Bicycle rider/pedestrian warning and caution signage complying with (Figure 65) must be provided at each end of a *hoarding* to provide sufficient notice to bicycle riders that they are entering a construction area and to be alert and watch for pedestrians and site workers crossing the cycleway.

v. Both sides of a cycleway must remain open and accessible (except at locations where Jersey kerbs are required to protect support columns) to allow pedestrians to cross the adjoining *roadway* to reach the safety of the *footway*. Caution signage in accordance with (see Figure 69) must be provided to alert pedestrians that they are entering a cycleway and to watch for bicycle riders.

vi. The person in control of the site must ensure that the area of the work activity including *temporary structures* and work activity in the *public place* is carried out in accordance with the requirements of the Work Health and Safety Act and Regulation. This must include instructing workers, contractors, and truck drivers using the *works zone* and/or entering and leaving the site to take care and watch for bicycle riders.

vii. At truck access points to the site concertina control gates must be installed at each side of driveways and be appropriately manned to prevent bicycle riders moving through the driveway zone/s when vehicles are entering and exiting the site. Traffic and pedestrian controllers must wear required and distinctive uniforms or vests in accordance with the requirements of Roads and Maritime Services.

viii. Control gates must be removed from the public spaces when not in use or be retained in situ where the device can be fully secured to prevent unauthorised use and also not obstruct the *footway* or cycleway.

ix. The cycleway beneath a *hoarding* must be provided with lighting systems complying with 3.9.9.

x. The surface of the cycleway must be maintained in a safe condition including being kept clear of material, debris and litter at all times.

xi. The *hoarding* deck over both the *footway* and cycleway must be impervious to fluids including rainwater (3.9.4).

xii. Concrete pump-lines and ramps over lines are not permitted in cycleways (see also (z)).

Figure 60

Figure 61

Figure 62

Figure 60: Minimum clearance to the soffit of *hoardings* over *roadways* is 4.5 metres to the underside of deck/ beams.

Figure 61: For localities outside the city centre column spacings of 2.5 metres are permitted. The *City* may however require a greater spacing for site specific needs including hoardings adjoining cycleways (min. 4 metre spacing).

Figure 62: The positioning of *hoarding* columns and braced bays near bus stops must be given special consideration including *road* surface camber and the need to keep columns clear of bus-stop loading/unloading areas and shelters.

Relocation of infrastructure

q) Where *footway* infrastructure such as parking ticket machine, bus shelter, bicycle rack and other street furniture are required to be temporarily removed or relocated to accommodate a *hoarding* or to enhance safe pedestrian movement and amenity, a separate approval must be obtained. Costs associated with the removal, storage and reinstatement of infrastructure must be borne by the applicant.

Longitudinal bracing

r) Where longitudinal cross-bracing is required to provide structural stability to a *hoarding* the cross-bracing must:


Figure 63(a)


Figure 63(b)

i. be located behind the site fence. Where this cannot be achieved or additional bracing is required on the kerb side, bracing must be restricted to bays that are least likely to restrict pedestrian movement across a *road* such as in approved designated *works zone;*

ii. not be located near pedestrian crossings, bus stop zones and *road* intersections;

iii. where permitted along the kerb, be covered with water-resistant plywood sheeting on both sides to prevent pedestrian access through the open braced sections and to eliminate climbing elements; and

iv. the size of all secondary structural members below deck level (excluding columns) is to be minimised.

Other requirements

s) Access and egress from buildings (fire exit doors), access to fire hydrants, sprinkler booster connections and utility pits must not be obstructed. If it is not possible to avoid placing a *hoarding* site fence/*scaffolding* over minor utility pits the affected section of the *hoarding* fence must be designed to be easily removable and *scaffolding* must be installed to provide safe and convenient access in the locality of the pit for utility service personnel. Where major service pits are affected including electricity services pits and substations, the owner of the utility must be consulted and any requirements for access or conditions of installation imposed by the utility owner must be submitted with the *hoarding* application (see 4.5.2).


Figure 64

Figure 63(a) and Figure 63(b): Where approval is given to permit dark-coloured *hoardings* (such as black finishes) the columns must be marked with white bandings and markings on the corners of counterweights to assist pedestrians seeing the *footway* obstructions. *Hoarding* portals may also require distinctive markings, particularly when a dark hoarding finish is used.

Figure 64: The use of fixed columns on footings placed within a *footway* is generally not allowed. Where however there are clearly demonstrated site specific needs for concrete footings, approval (through a road opening application) may be given, subject to stringent requirements for the design, installation, removal and site rectification at completion of a project.

Figure 65

t) Where a *hoarding* is required to extend in front of an adjoining building or across a *roadway* (laneway) and therefore adjoin another building, all potential impacts on the affected properties must be assessed and considered in the design including:

   i. security issues;

   ii. reduction of natural light to windows;

   iii. fire-safety such as restricted access by Fire and Rescue NSW to hydrants and booster connections including impacts on the use of aerial fire-fighting and rescue appliances (see 2.13.3);

   iv. potential for fire-spread between buildings via the *hoarding* and sheds (see 2.13.2);

   v. access and egress to and from affected buildings;

   vi. access for delivery trucks and waste collection vehicles; and

   vii. obstruction to shop-fronts and building/ business signage.

Figure 65: Where a *person conducting a business or undertaking* determines that a temporary overhead protective structure is required, *hoardings* erected over cycleways must satisfy special design and operational requirements including caution signage and distinctive markings on columns at the portals.

Applicants must also consult with affected property owners and authorities and address any concerns that may be raised. Details of the contacts made and any feedback received from affected parties must be provided with the application. The *City* may also notify affected property owners and/ or relevant government agencies in writing upon lodgment of an application to seek feedback on the proposed design (see 2.15).

In some cases it may be necessary to locate site sheds on *hoarding* decks away from adjoining buildings and/or cut-back decks from windows of affected buildings to maintain access to natural light (see Figures 99 and 100) and to address any potential fire-spread issues.

u) Kerbstones and gutters must not be cut or damaged to accommodate or install a *hoarding*. Approval for the removal of kerbstones and/or part of a gutter such as for temporary vehicle *crossings* must be obtained by completing and lodging a vehicle *crossing* (driveway) application. The kerb gutter must be kept clear of structures at all times unless otherwise specifically approved. The gutter must also be kept clean and free of debris.

v) Pedestrian crossings and kerb ramps must be kept clear of obstructions and be maintained in a safe and accessible condition at all times. This is particularly important for persons with mobility restrictions, wheelchair-users, mobility scooters, strollers and delivery workers using trolleys. *Hoardings* should be splayed at intersections (see Figure 72) to minimise columns near kerb ramps and pedestrian queuing spaces.

Figure 66: A sectional detail of a Type B *hoarding* design for installation over a cycleway (See also Figure 67).

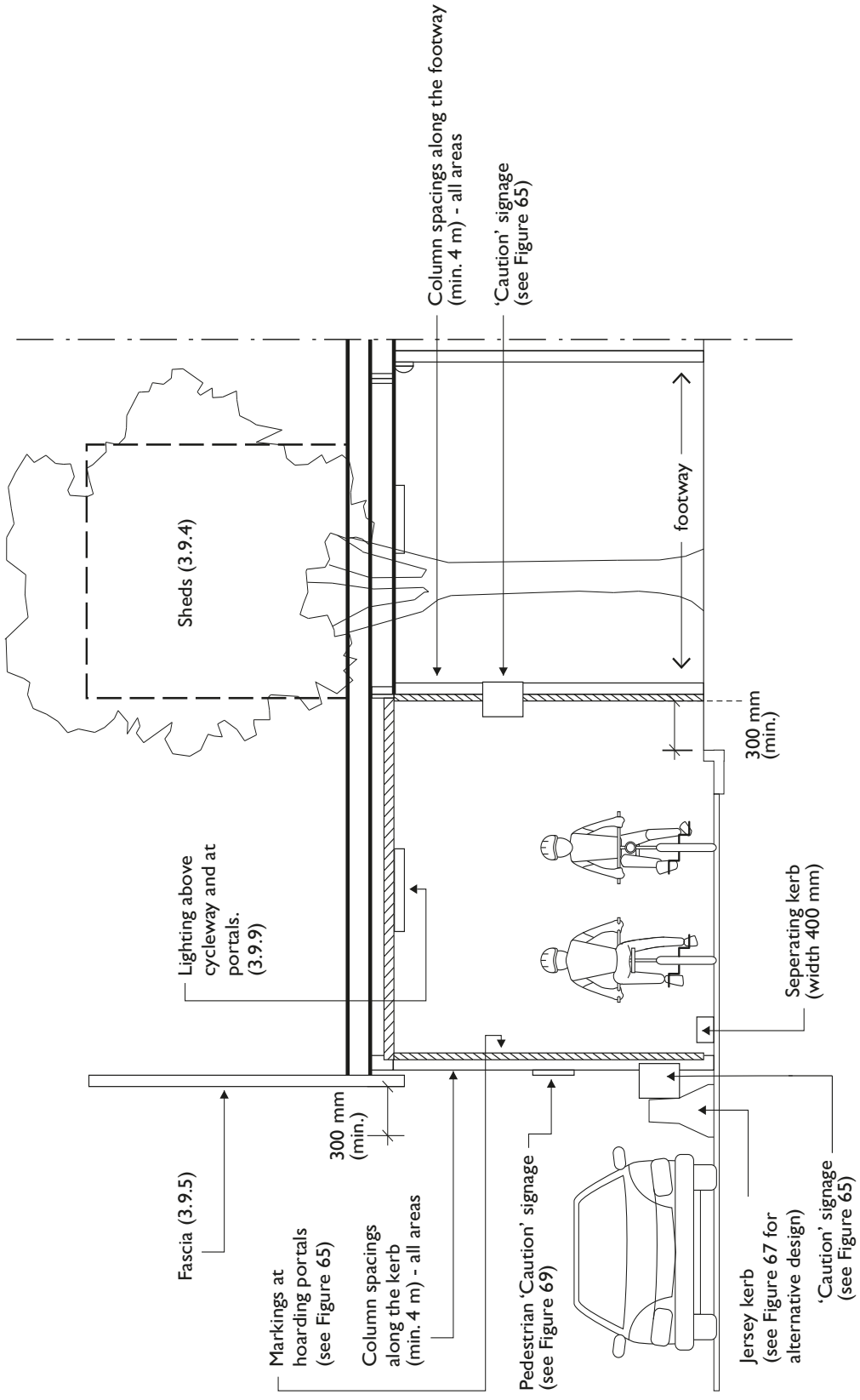
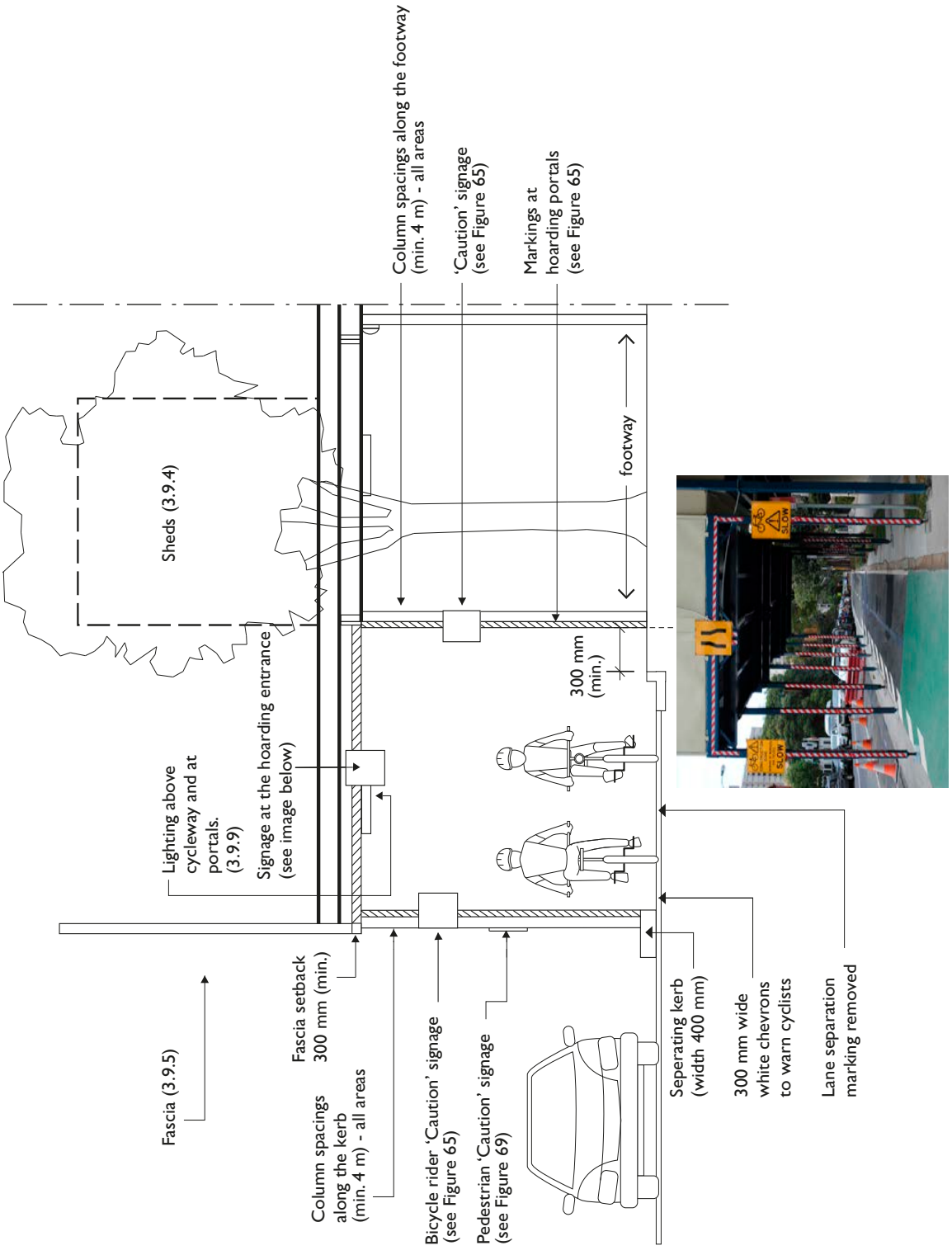


Figure 67: Alternative Type B *hoarding* design for installation over a cycleway where, due to local *road* and traffic conditions, it is not possible to comply with the standard design in Figure 66.



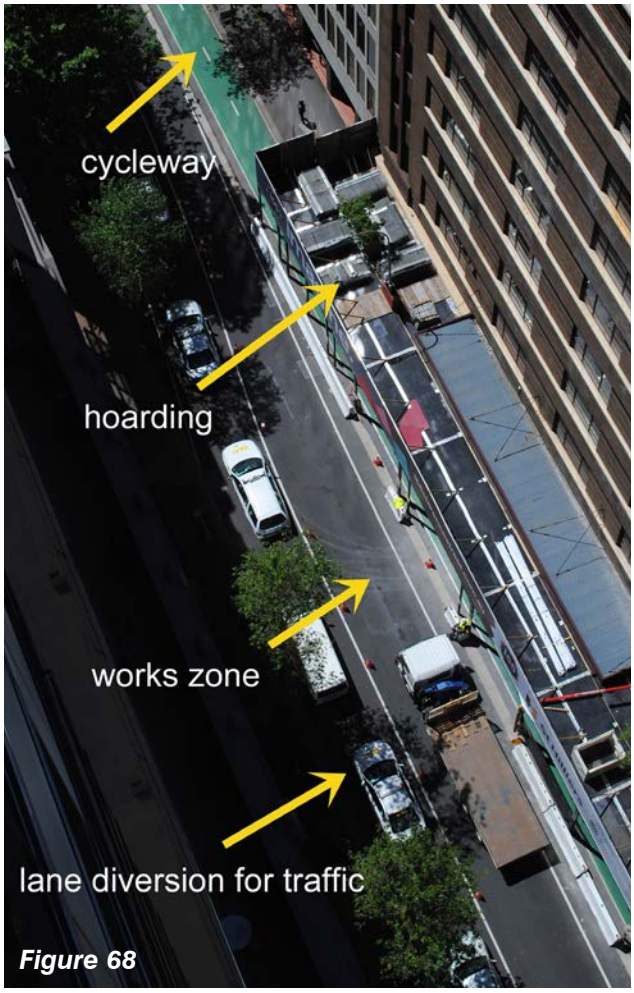


Figure 68

Figure 69

Traffic control signals

w) The line-of-sight to traffic control signals and signs must not be obstructed. An assessment of potential impacts on control signals must be undertaken and a *hoarding* design adjusted to accommodate signals and signs. Where, due to site specific constraints or *hoarding* design, control signals need to be relocated or remounted on the *hoarding* to maintain full visibility to *road* users and pedestrians, the applicant or *hoarding* contractor must consult with the NSW Roads and Maritime Services and obtain their approval to reposition traffic signals and signage.

Figure 68: Where a hoarding is proposed to be erected over a cycleway and a *works zone* is required on the *roadway* special consideration must be given to the hoarding's design and traffic movement. Endorsement by the *City's* Traffic Operations Unit for any required traffic lane diversions and *works zone* will be required.

Figure 69: Cautionary signage for pedestrians must be installed at kerb-side entry points to *hoardings* erected over cycleways.

x) The design of a *temporary structure* must accommodate all existing street trees and consider other physical constraints of the site. Refer to Element 10 – 'Street Tree Preservation' (3.9.10) for details regarding tree protection and *performance bonds*.

Concrete pump-lines and screening

y) The following provisions apply:

i. Where approval is sought to install a steel pipe concrete pump-line across a *footway* the line must be installed on the deck of a Type B *hoarding* (where installed) so as not to disrupt the *footway* surface i.e. to ensure safe and convenient pedestrian movement. In areas of low pedestrian movement approval may be given to allow a pump-line at grade with a ramp over (see Figure 73 and 75). In very busy pedestrian areas ramps over pump-lines will generally not be permitted (except for in-ground works) and therefore a Type B *hoarding* must be provided over which a pump-line must be installed. In all cases however, when building construction reaches the first floor level pump-lines must be removed from the *footway* and placed on the deck of a Type B *hoarding*, unless there are clearly demonstrated reasons to allow the line (and ramp) to remain at *footway* level;

ii. Permanently fitted pump-lines and connection points (see Figure 76) will be permitted subject to an approved *works zone* being in place and there being no obstruction to traffic and pedestrians;

iii. Pump-line couplings and junctions must be adequately shielded or sheathed to prevent concrete spraying onto the *footway* (pedestrians), cycleway and *roadway* in the event of a junction/coupling failure;

Figure 70

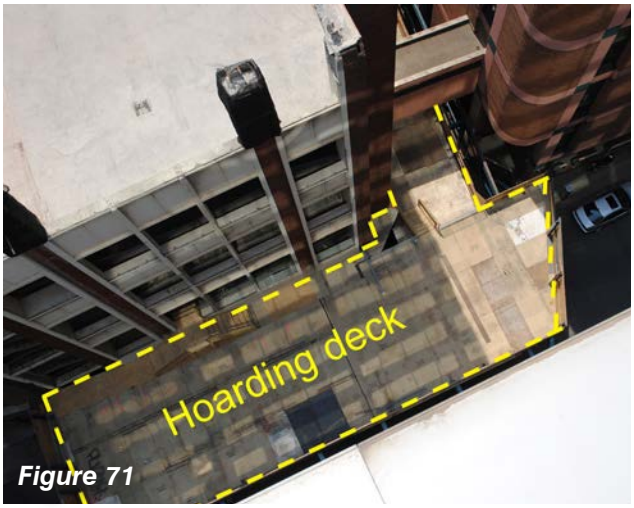


Figure 71


Figure 72


Figure 73

Figure 70: Fire services such as hydrant and sprinkler booster connections and fire exits must not be obstructed by *temporary structures.*

Figure 71: The deck of a Type B hoarding erected above a public road (see 3.9.4). All potential impacts including loss of natural light to surrounding properties and potential fire-spread issues must be considered and addressed in the design (see Figure 100 and 2.13.2).

Figure 72: Hoardings placed at street intersections, particularly in the city centre, can have adverse impacts on safe and convenient pedestrian movement. Hoarding columns must therefore be placed well clear of kerb ramps. In the majority of cases hoardings will also need to be splayed at corner junctions.

Figure 73: Where specific approval is given to install concrete pump-lines across footways, durable metal pedestrian ramps complying with the minimum design criteria must be provided (see Figure 75).

iv. Temporary pump-lines used on a daily basis must not be placed across the *footway* unless there are special constraints or construction needs of the site. Where applicants wish to place lines at *footway* level, specific details (and reasons) including the installation of ramps (see (z)) to allow pedestrians to pass safety and conveniently over the pipe must be provided. An application for a pedestrian ramp on the *footway* must be made and approval obtained before installation; and

v. Pump-lines at grade with ramps over are only permitted on *footways*. Under no circumstances will they be permitted in cycleways due to the potential fall and injury risks to bicycle riders. Type B *hoardings*, or other suitable approved *temporary structure*, must therefore be provided in the area of the pump-line connection point at the outer kerb-alignment for lines to pass over a cycleway and *footway* to reach the site.

Figure 74: Axonometric view of the design of Type B *hoarding* showing column / counterweights and the location of kerb-side bracing which must be given thorough consideration particularly in the city centre and other major centres with high pedestrian densities.

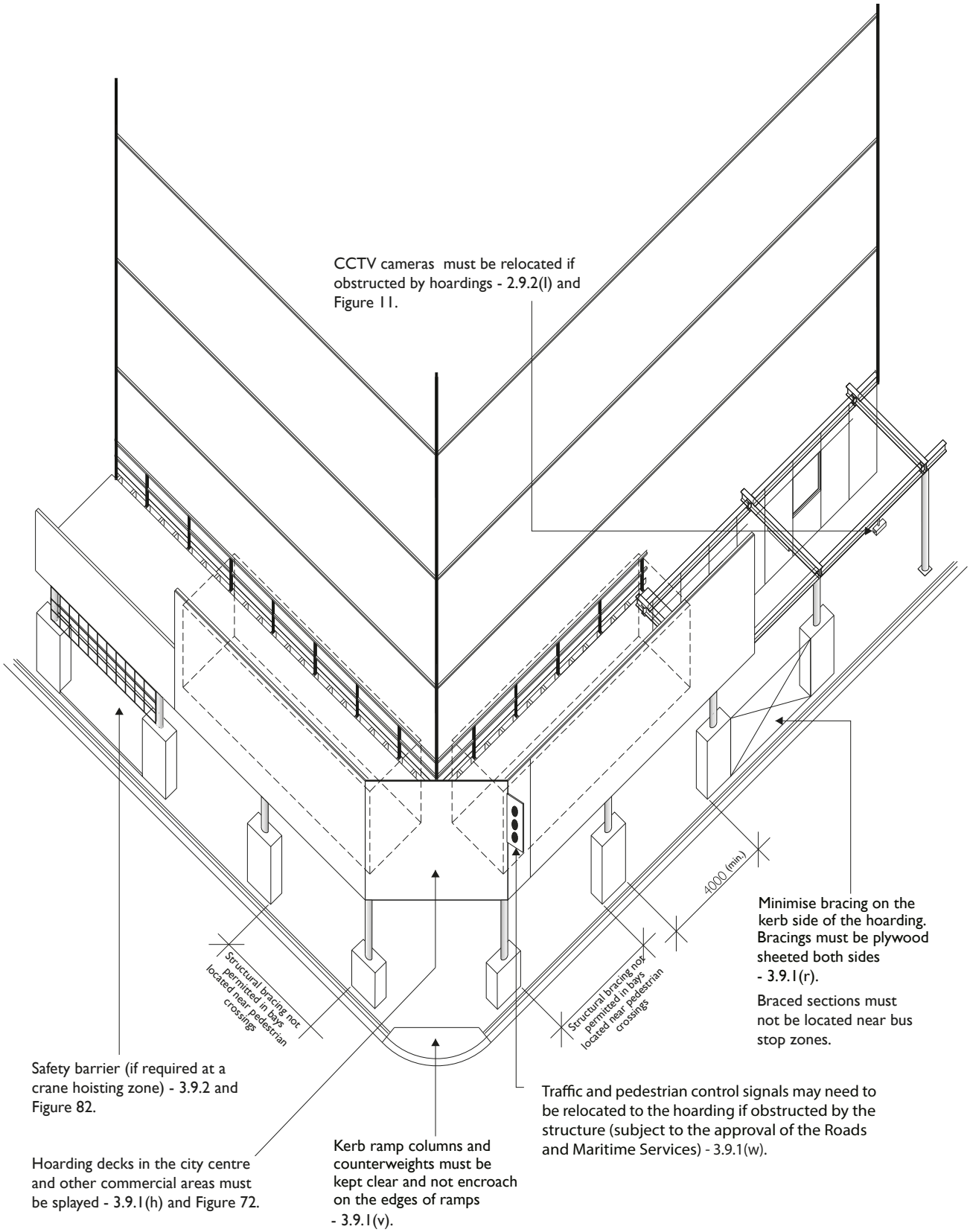
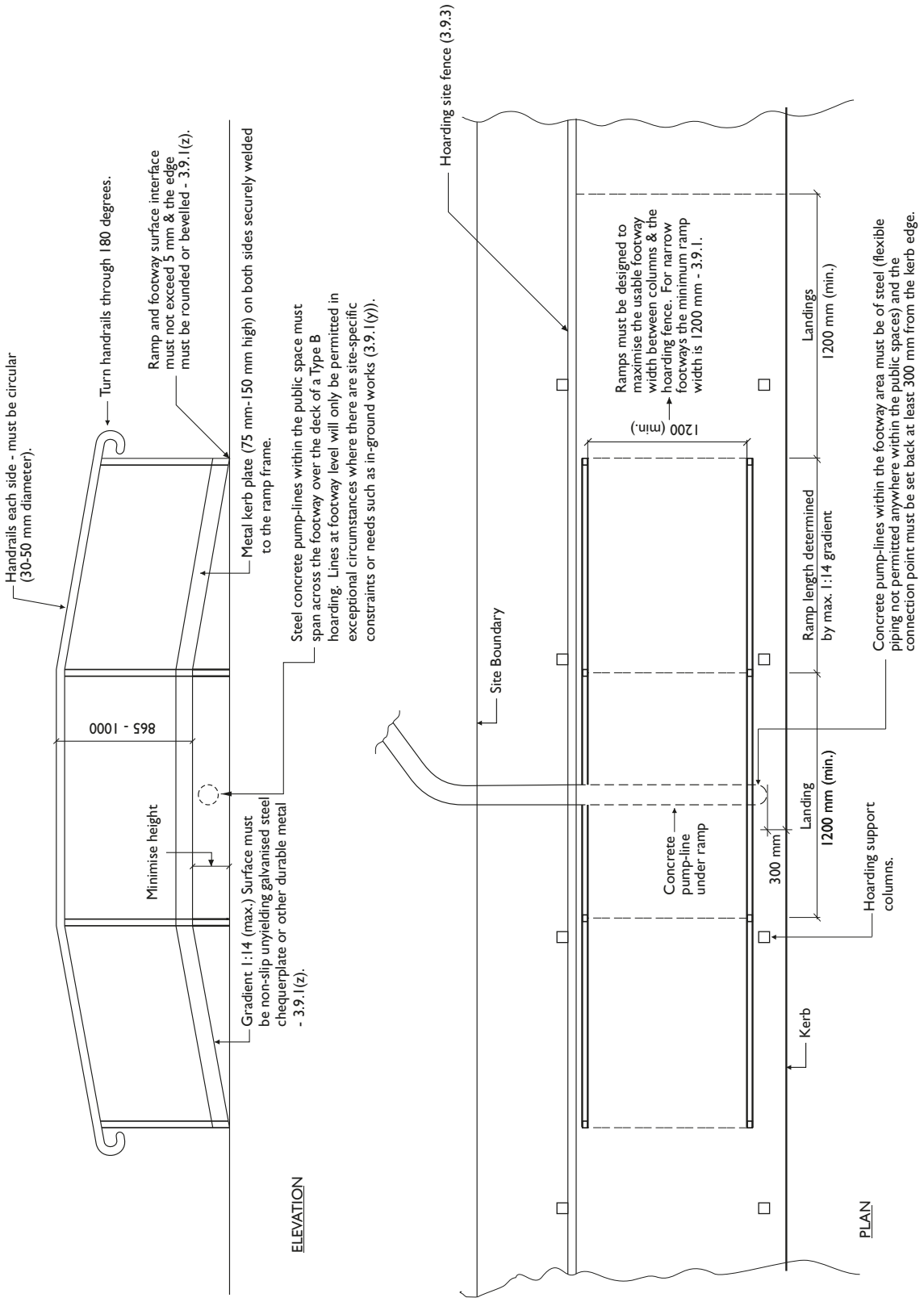


Figure 75: *Design details for pedestrian ramps over concrete pump-lines (see Figure 73).*



z) Where, due to site-specific needs, concrete pump-lines must cross *footways* at grade they must be bridged by durable galvanised steel ramps or other corrosion-resistant metal having a slip-resistant chequer-plate walkway surface and comply with the principal design provisions of AS1428.1 'Design for access and mobility – General requirements for access' and specifically as follows, including compliance with:

i. maximum ramp gradient shall be 1:14 and having a non-slip surface;

ii. a minimum landing length of 1200 mm;

iii. the height of the landing above a pump-line must be minimised;

iv. handrails (865 mm to 1000 mm high) and kerbs (65 mm to 150 mm high) in accordance with AS1428.1;

v. the ramp surface/*footway* interface must not exceed 5 mm; and

vi. the ramp width must be maximised. In areas of high pedestrian density ramps must match the width of the *footway* between the site fence and *hoarding* columns of Type B *hoardings* (less the required handrail and hand-grasping dimensions).

aa) Where screening of concrete intake hoppers on pump appliances is required to protect pedestrians from concrete over-splash, the screen must be of a suitable standard and meet the *City's* requirements in relation to visual appearance and be capable of withstanding likely wind actions of the locality in relation to stability.

Notes:

1) A reduced height clearance may be allowed in some circumstances such as demolition sites where there is a low first floor, an existing low street awning or *footway* with steep gradients. Proposals for heights less than 2700 mm will generally not be supported.

2) Refer to Element 2 (3.9.2).

3) A reduced or irregular column span may be unavoidable in situations where the column set-out must accommodate bus stops, utility pits, existing building features, footpath light-wells to basements, driveways, laneways, steep *footway* gradients and other features in the *public place*. *Hoardings* may also need to be stepped or notched to accommodate existing street trees. The *SafeWork NSW* Code of Practice for Overhead Protective Structures also requires a *hoarding* with a minimum capacity to maintain the structural integrity of the deck in the event of the removal (knockout) of any one column.

4) The *City's* primary objective is to minimise adverse impacts on safe pedestrian movement and amenity adjoining worksites. To meet this aim it is generally required that the site fence and columns of Type B *hoardings* be moved closer to a site's property alignment once the development has been constructed to first floor level or for other works such as shop-front alterations or refurbishment are completed.

5) Work Health and Safety Regulation 2011, Clause 54 – 'Management of risks of falling objects'. (Refer to 2.4.1).

6) In busy and high pedestrian density areas of the city centre, other major commercial areas, major *road* intersections and crossings, a minimum width of 2.0 metres may not be sufficient and therefore a reduced *footway* width will not be allowed.


Figure 76

Figure 76: Concrete pumping connection points and riser pipes attached to Type B *hoardings* are permitted where an approved *works zone* is in place on the adjoining *roadway*. Pipe couplings must be sheathed or covered to protect the public place from concrete spills resulting from coupling ruptures.

3.9.2 *Element 2 - Counterweights, column bases, traffic and pedestrian safety barriers (Type A and Type B Hoardings)*

Objectives:

i. Minimise the physical encroachment on the *footway* and obstruction of pedestrians;

ii. Maintain the visual openness of the *footway*;

iii. Integrate high quality finish counterweights and connections, columns, pedestrian and traffic safety barriers within the design of the *hoarding* structure;

iv. Provide required stability to the structure;

v. Afford adequate protection to excavations to prevent falls from the *public place*; and

vi. Where clearly identified safety needs exist to protect pedestrians from crane hoisting activity from an approved *works zone* on the *roadway*, safety barriers must be designed to minimise obstructions along the kerb and to maintain natural light penetration onto the *footway* beneath a Type B hoarding.

Deemed-to-Comply provisions for Element 2:

Counterweights (general)

a) Structural stability and adequacy of *hoardings* including stability under wind actions that prevail or are expected in the locality particularly after a building is demolished (loss of wind shielding to *hoardings*)[1], are to be achieved with the least impact upon the width and openness of the *footway*. Consideration must be given to the suitability of potential alternatives to kerb-side counterweights, e.g. stabilised by fixing to the shoring system or bracing to the first floor of the building structure (new building construction only) where the design of the building can safely accommodate the structural and overhead protection requirements applying to the *hoarding*.

b) Where kerb-side counterweight units are necessary to deal with the effects of wind actions, vehicle impact and other actions they must be isolated units in the city centre and other areas where the *City* deems it necessary, rather than continuous horizontal counterweights or barriers between columns. Counterweights must be designed as architectural elements that are appropriately and visually integrated within the *hoarding* design including well designed and integrated connections.

i. Counterweights are to have a high quality smooth finish with 45 degree beveled edges to minimise the risk of pedestrian injury, and be painted the standard colour (see 3.9.7); including visual bandings on corners of counterweights (see Figure 63(b)).

ii. Counterweight connection systems to columns must be of a high quality structural design[2] with minimum protrusions (fixings) and preferably be concealed or recessed to minimise sharp edges.

iii. Vertical counterweights are permitted to be placed (supported) on footways. For horizontal counterweights they must be supported at least 150 mm above the *footway* or ground surface through the use of appropriately designed support systems (brackets) on columns to prevent the accumulation of litter and debris around horizontal counterweights and to allow for easy cleaning of footways. Timber blocks or other similar systems to support counterweights are not permitted.

iv. The top surface of horizontal counterweights must not exceed 1200 mm above the *footway*/ ground surface.

v. a minimum setback of 300 mm from the kerb must be maintained including to all vertical parts of the structure.

The following requirements apply to kerb-side vertical counterweights:

i. maximum dimensions of 1200 mm (length along the footpath inclusive of columns and counterweights), 300 mm (width across footpath), and height as required.[2] In cases where additional counterweighting is necessary to address wind loads on tall *hoardings* and fascias, counterweights up to 1500 mm length will be allowed; and

ii. where the tops of counterweights are located less than 2100 mm above the ground, they are to be chamfered or sloped to avoid the collection of dirt and litter.

c) Where it is not possible to install integrated vertical counterweights or where horizontal weights are used, consideration must be given to the impacts on kerb-side parking including safe and convenient access for persons alighting from and entering vehicles. Safe pedestrian access to and from the *footway* and *roadway* interface must also be considered. This is particularly important in the city centre and other busy centres.

d) Horizontal placement may be permitted outside the city centre subject to site specific assessment and approval. Where permitted, counterweighting will only be permitted in every second bay (min.) between columns to allow safe and convenient pedestrian access between the kerb/*roadway* and the *footway* (see Figure 61).

e) Continuous counterweights may be used adjacent to the site boundary provided that they are screened from the footpath by the site fence.

f) Counterweights for Type A *hoardings*[3] are typically of a formed concrete block or Jersey kerb configuration with cast-in connection/bracing points (see Figure 78). Alternatives may be allowed such as the use of sand or sandbags placed within durable secured containers e.g. steel tubs or drums fitted with sealable lids and capable of being securely fastened to the *hoarding* fence/frame (see Figure 79).

g) Columns must have levelling devices or be cut level with the *footway*. The height of levelling screws above soleplates must not exceed 150 mm. Packing under soleplates to level the structure will not be accepted unless otherwise specifically approved to address special needs. Soleplates are to be:

i. of the least possible thickness and dimensions to avoid trip hazards and are to be aligned parallel with the footway; and

ii. designed to ensure that all loads from the hoarding and site sheds are evenly distributed to avoid damage to the footway (see also 3.9.4(i) and (j) regarding material and equipment storage on hoarding decks).

Figure 77: Fully integrated and appropriately detailed counterweight connections to columns and frame must be provided. For pedestrian safety, bolt protrusions must be minimised (preferably recessed or countersunk). Horizontal counterweights must be supported from columns with the bottom edge located not less than 150mm above the ground surface with the top surface not more than 1200mm above the ground surface.

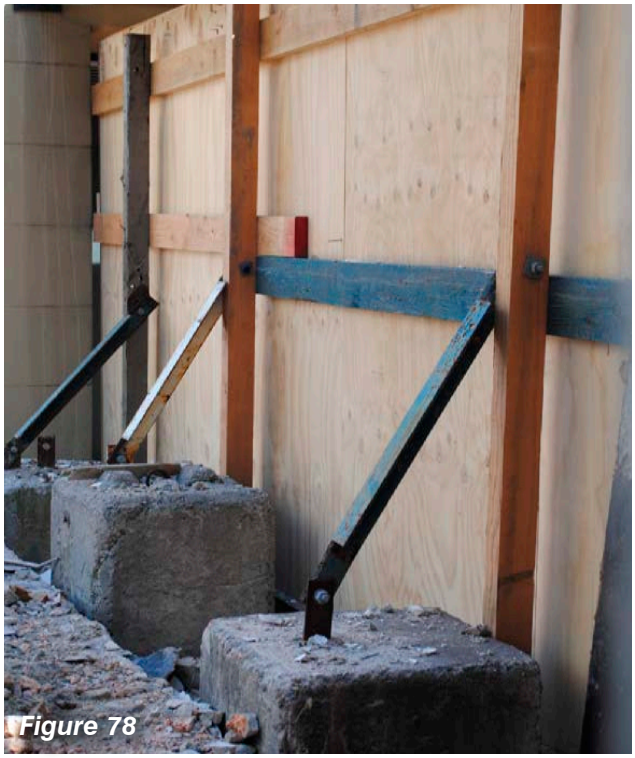


Figure 78


Figure 79

Figure 78: Typical concrete block counterweight with lateral bracings.

Figure 79: Durable (metal) boxes containing sandbags for counterweighting purposes can be used for Type A hoardings subject to appropriately designed and secure connections being used and containers made fully securable to prevent unauthorised removal of sandbags.

Figure 80: The use of hardwood timber soleboards on unsealed ground surfaces to support columns must be assessed and approved by a practising engineer. Soleboards must be periodically checked for continued acceptable durability and stability throughtout the installation period. The use of multiple layers of plywood is not permitted. After removal, the nature strip must be reinstated to a condition satisfactory to the *City*.


Figure 80

Column bases and soleplates

h) Edges of soleplates may in some cases require a colour contrast with the *footway* surface to clearly distinguish the plate to enhance pedestrian safety.

i) Hardwood timber sole-boards are permitted where columns bear onto unsealed surfaces such as grass nature strips (consideration must be given to timber durability where a hoarding is to be installed for a lengthy duration). Timber sole-boards must be recessed into the ground and made level with the surrounding surface to eliminate trip hazards.

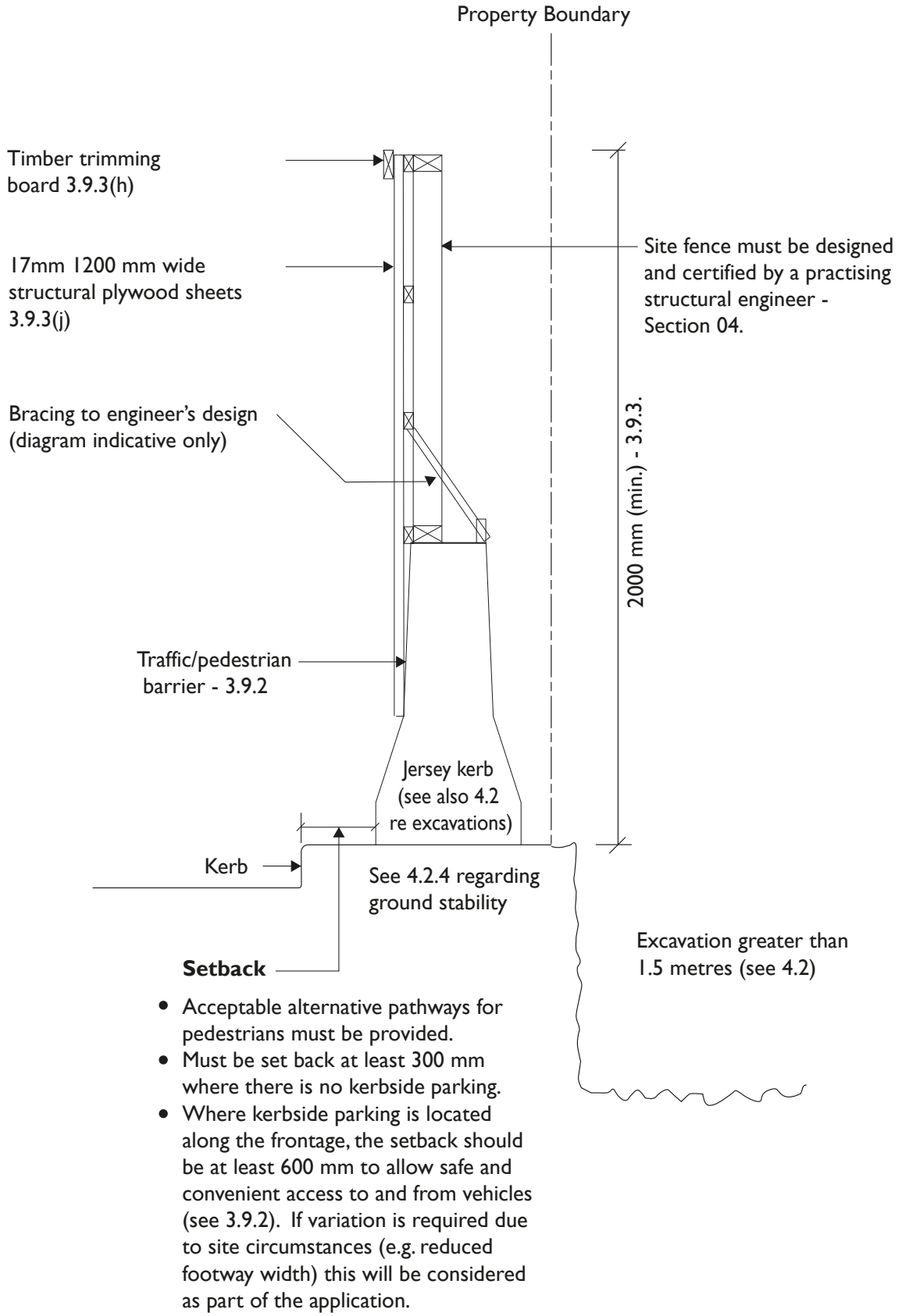
j) Footings, bolts, ground anchors or spikes must not be inserted into the *roadway, footway* surfaces or nature strips, unless specific approval is given by the *City* including the relevant utility service authority where services are located in close proximity to the *hoarding.* (see (u)and (v)).

Barriers protecting excavations

k) Where a site is excavated and in close proximity to the property alignment with a *public place*, the *person conducting a business or undertaking* must consider fall risks to the public.[4] Refer to 4.2 for details relating to the protection of excavations and safety barriers.

Any required pedestrian (crowd) and traffic barriers should be incorporated into the *hoarding* structure. Freestanding barriers such as concrete barriers provided between the site fence and the edge of the excavation can also be used. Where a barrier is required it must be of concrete or steel, designed to AS1170.1 and to any required pedestrian and traffic risk assessment recommendations including the requirements of Safe Work Australia's Code of Practice for Excavation Work.[4]

Figure 81: Section detail of a 'Type A' *hoarding* integrated with a traffic barrier. This design is only permitted where there is a narrow *footway* or laneway where vehicular access and turning into garages/driveways opposite must be maintained (the preferred design is for site fences to commence at the surface of the *footway* as shown in Figure 26).



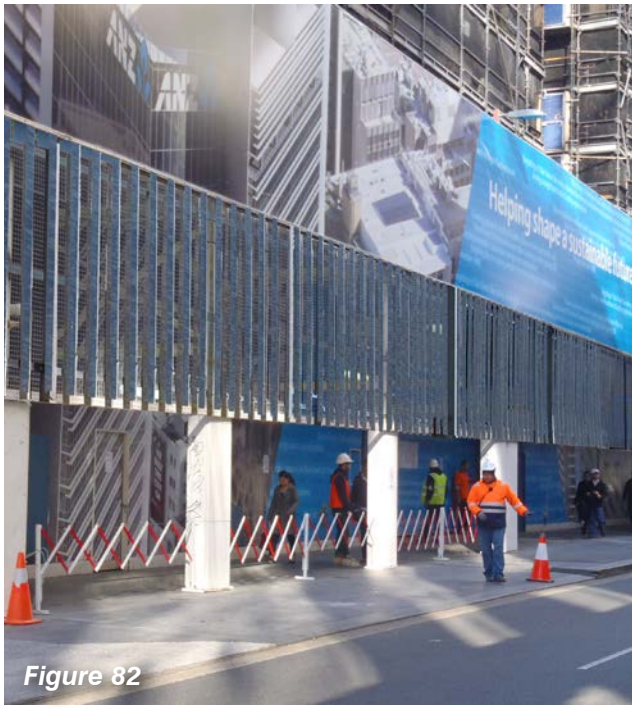


Figure 82

Barriers at hoisting zones

l) The use of full height safety barriers or screens at hoisting areas[6] adjoining an approved *works zone* is not allowed as they enclose the *footway* and conflict with several key objectives of the Guidelines including maintaining convenient and safe unencumbered movement of pedestrians to and from the kerb when crossing a *roadway*.

Where however there are clearly demonstrated construction and pedestrian safety needs adjoining hoisting areas particularly where high-bay hoardings are used, barriers in the upper section of a *hoarding* (Figure 82) may be allowed. The necessity for such barriers must be clearly demonstrated and details included in the application to install a *hoarding which will be considered as part of the hoarding assessment process*.

m) Where high level barriers are allowed they must:

i. be of solid or box section galvanised vertical pickets having dimensions not exceeding 50mm square; fixed to achieve an open space of at least 100 mm between pickets and securely fastened to the *hoarding* frame;

ii. be set back at least 300 mm from the kerb;

iii. commence not less than 2500 mm above the surface directly beneath;

iv. not extend more than one (1) semi-trailer tray length within the approved *works zone*; and

v. not cover the *hoarding* fascia.

Notes:

1) The impacts of wind actions on *hoardings* is particularly critical for worksites in the vicinity of large open spaces such as the harbour, large reserves/parks and squares. The certifying structural engineer must consider this aspect in the design of *temporary structures*.

2) Counterweights, particularly vertically proportioned counterweights, must have connections to columns that are designed to withstand dislodgment resulting from vehicle impacts.

3) Refer to Element 3 (3.9.3).

4) Work Health and Safety Regulation 2011 (Clause 78) and Safe Work Australia Code of Practice – Excavation Work.

5) Work Health and Safety Regulation 2011 (Clause 305) and Safe Work Australia - Code of Practice - Construction Work.

6) An approval under s68 of the Local Government Act 1993 and the Roads Act 1993 is required to undertake hoisting activity over a public *road* in addition to obtaining an approval for a *works zone*.

Figure 82: Where permitted by the *City* safety screens at crane hoisting zones must satisfy minimum design criteria to maintain acceptable pedestrian amenity including maintaining pedestrian access along the kerb. This is particularly important when the *works zone* is not in operation.

3.9.3 Element 3 - Site fence (Type A and Type B *hoardings)*

Objectives:

i. Minimise the impact of *hoardings* on safe pedestrian movement and amenity;

ii. Fence sheeting, framing rails and battens are structurally adequate for the type of work to be undertaken including the likely wind actions in the locality, be well constructed and finished (plumb and true) and have a smooth and even surface including where necessary, a surface that can accommodate graphics;

iii. Materials must be sturdy, durable and allow easy maintenance for repainting and cleaning purposes and be kept clean and tidy;

iv. Effectively screen and secure the work area from the *public place*; and

v. Provide pedestrians with a view of site excavation works through the provision of viewing windows.

Deemed-to-Comply provisions for Element 3: Encroachments

a) Where there are reasonable and fully justifiable site construction needs, the site fence may intrude upon the footpath by up to 1000 mm subject to consideration of local conditions including the availability of adequate clear pathway width, pedestrian density and duration of installation.

b) Intrusions on *footways* exceeding 1000 mm other than localised intrusions for stairways (see (i) below), will only be considered in exceptional circumstances. Intrusions exceeding 1000 mm for construction purposes must be fully justified in an application and must include details of how acceptable pedestrian safety, movement and amenity will be maintained past the work area. This is particularly important in high pedestrian density areas of the city centre and other busy commercial areas. The following also applies:

i. Intrusions up to 1200 mm will generally only be permitted in localised circumstances e.g. stair access to *scaffolding* in cases where access cannot be accommodated:

- within the permissible 1000 mm intrusion; or
- from within the property; or
- where original glazed pavement lights (providing illumination to basements) are installed in the *footway*; or
- for special construction or work needs.

Approval will only be given where there will be no adverse impact on safe and convenient pedestrian movement (see also (ii) below).

Note: In cases where approval is granted for a site fence encroachment greater than 1200 mm and where the enclosed space is approved for use as a work or material/ equipment compound, a footway occupation fee based on a square metre rate will apply.

Figure 83: Plan view of a 'Type A' *hoarding* with scaffolding behind the site fence. Encroachments must be minimised and a clear pedestrian width of 1200 mm must also be provided.

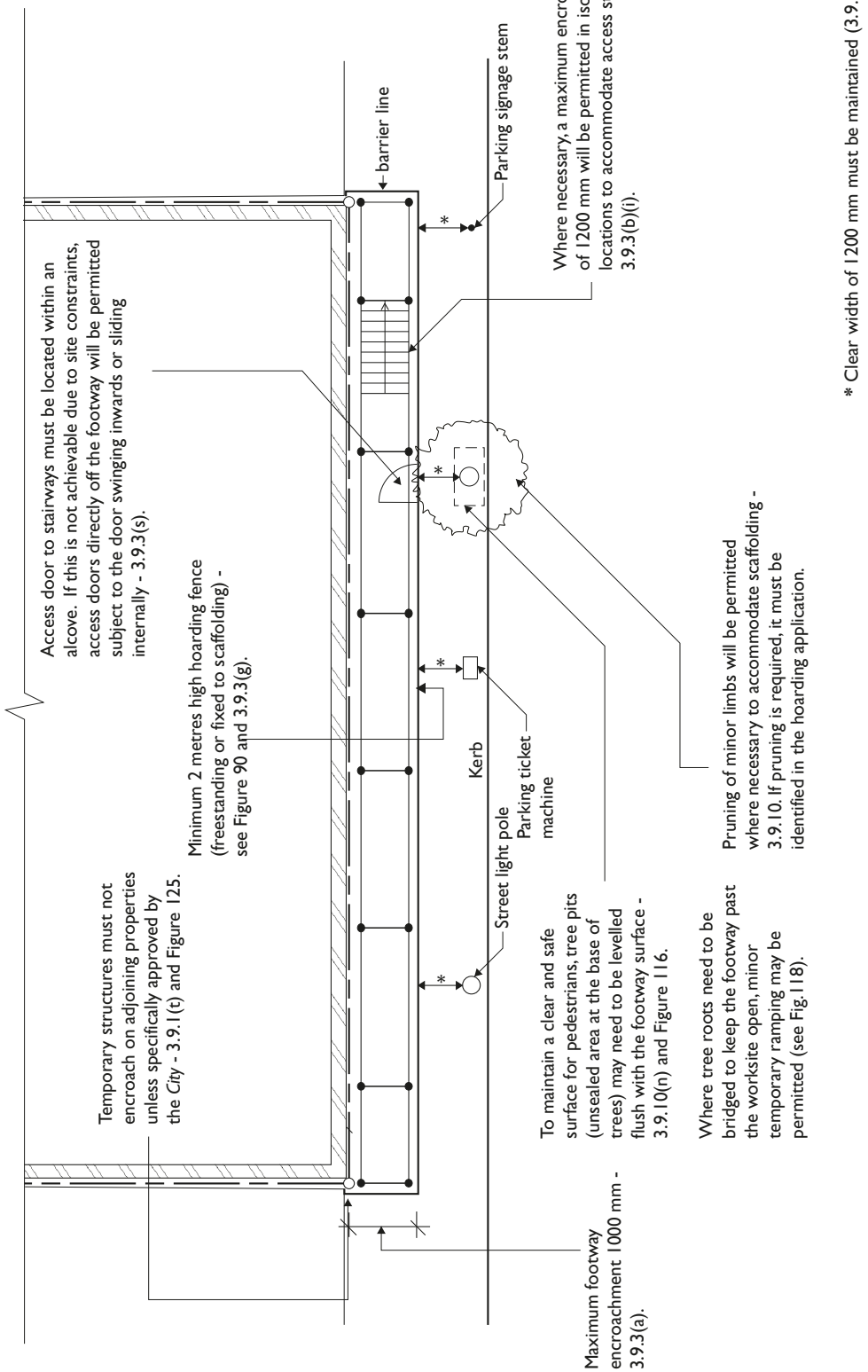


Figure 84(a)

Figure 84(b)

Figure 85

ii. In areas with high pedestrian volumes particularly in the city centre, the site fence must be located as close as possible to the site boundary alignment. Once the development has reached a stage where the fence intrusion is no longer required the fence must be relocated to the building alignment or other agreed position. For Type B *hoardings* this may be required when the development has been constructed to first floor level unless there are clearly demonstrated site or construction needs to require the encroachment for the full duration of the development.

Note: It is unlikely that approval will be granted for significant encroachments for the full duration of the development in areas of high pedestrian traffic, at busy intersections, and/or where the *footway* width is particularly narrow.

Figure 84(a) and Figure 84(b): *Hoarding* fences must be designed to maintain clear pathways at kerb ramps and around street trees (see also Figure 85).

Figure 85: Where *hoardings* are erected on narrow footways it may be necessary to indent hoarding fences and *scaffolding* (using ladder beams) to provide clear minimum widths around infrastructure (signage stems, parking ticket machines, light poles etc.) and street trees. A clear height of 2.4m must be provided in the recessed sections.

Figure 86

iii. Full and detailed consideration must be given to the design of a *hoarding* to allow for its easy relocation and/or modification to satisfy (ii) above. This must be detailed in the application.

c) Where a Type A *hoarding* fence is proposed on a narrow *footway* and it is not possible to provide a Type B *hoarding* to keep the *footway* fully open, the *City* will expect the method of work and/or *hoarding* to be designed to minimise the site fence encroachment.

Where *scaffolding* is proposed and it is not possible to reduce the encroachment to maintain a clear minimum *footway* width (generally 1200 mm in low pedestrian volume areas) past trees, posts, parking ticket machines and other *footway* infrastructure, the site fence may need to be adjusted or recessed such as between *scaffolding* standards in the locality of the *footway* obstruction (see Figure 85).

Temporary closure of footways

d) In cases where the work or *scaffolding* cannot be modified to limit the site fence encroachment or the *footway* is very narrow, approval may be given to allow the *footway* to be temporarily closed (see also 3.10.1). This design solution is however not preferred. In considering such proposals the following factors will be considered to ensure safe and convenient pedestrian movement is not compromised:

Figure 87

i. the locality, number and type of pedestrians (children, persons with restricted mobility and the elderly) that are likely to use the *footway*;

Figure 86: Temporary traffic barriers are required where a *temporary structure* is located within 300 mm of the kerb. This design will only be permitted where there are no impacts on turning and manoeuvering pathways at vehicle *crossings* and entrances to properties/garages. Applicants will need to verify vehicle turning paths using the templates in AS 2890.1. Where acceptable vehicle manoeuvering cannot be achieved scaffolding may need to be cantilevered from the building above a *road*.

Figure 87: Access to parking ticket machines must be maintained and appropriate signage fixed to the *hoarding* to clearly indicate the location of the machine.

Figure 88(a)

Figure 88(b)

ii. the width and appropriateness of the *roadway* to safely accommodate an alternative barricaded pedestrian pathway (a minimum width of 1200 mm or a width that matches the existing *footway).* This will need to be considered by the *City's* Traffic Operations Unit;

iii. whether there is a satisfactory alternative *footway* on the opposite side of the *roadway* and appropriate safety measures can be incorporated to ensure the safe crossing of pedestrians (pedestrian management systems); and

iv. the type of carriageway (one-way or two-way traffic movement) and the type and volume of vehicle usage in the street.

e) Where the *City* is satisfied that pedestrian safety and convenience can be adequately accommodated through the temporary closure of a *footway* and use of alternative pathways, approval may be given to allow a *temporary structure* to take-up the full width of a *footway.* Figure 88 shows a typical acceptable alternative pedestrian pathway arrangement past a worksite.

f) Where approval is sought to temporarily close a *footway* and a *hoarding* fence is to be located along the kerb-line the following matters must be addressed in the design and preparation of an application and will apply in the assessment of the proposal:

i. the potential impacts on kerb-side parking including access restrictions caused to persons to easily and safety enter and alight vehicles;

ii. the potential need to temporarily remove on-street kerb-side parking adjoining the site/ *hoarding* and impacts of loss of street parking;

iii. the need to place barriers such as Jersey kerbs in the kerb gutter to prevent vehicle impacts on the site fence;

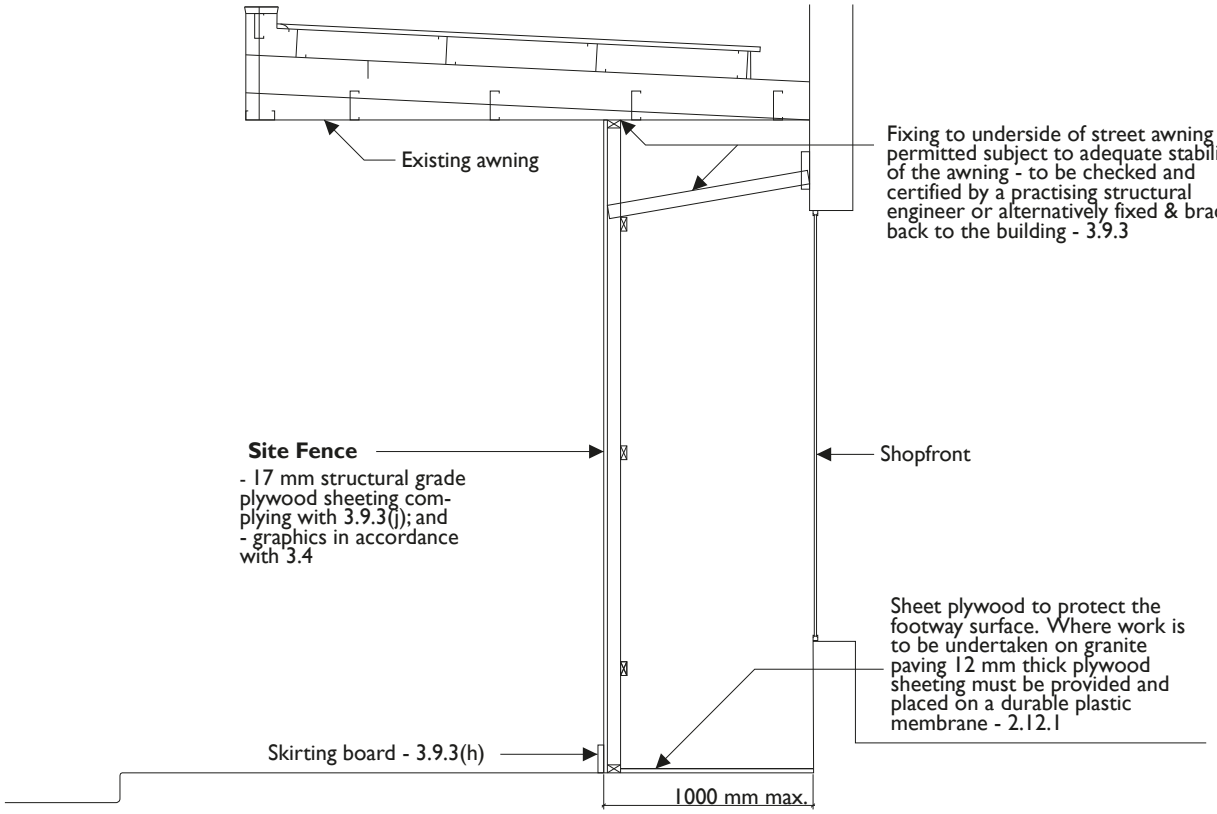
iv. where the *City* agrees to the temporary removal of kerb-side parking, a letter-drop in the locality must be undertaken by the applicant to notify the community of the temporary loss of parking and the duration of the project. Letter-drop requirements including the extent of notification will be a specified as a condition of approval;

v. where metered street parking spaces are affected payment for the usage of the space/s will be required according to the *City's* Schedule of Fees and Charges; and

vi. where a parking ticket machine is affected by a *hoarding*, full access must be maintained and appropriate signage installed on the *hoarding* fence indicating the machine location. Where the *hoarding* obstructs illumination of the machine from the street lighting system, the alcove must be provided with a vandal-proof lighting fixture powered from the site.

Figure 88(a) and Figure 88(b): Where it is not feasible or possible to keep a *footway* open, particularly in cases where narrow footways will be affected, temporary pedestrian pathways and kerb ramps may be used where the roadway has sufficient width to safely accommodate the encroachment (temporary pathway). This design solution must be endorsed by the City's Traffic Operations Unit (see also 3.10.1)

Figure 89: Section detail of a Type A *hoarding* for site specific needs such as dust and/or noise control, site fences are permitted to extend to the underside of street awnings.



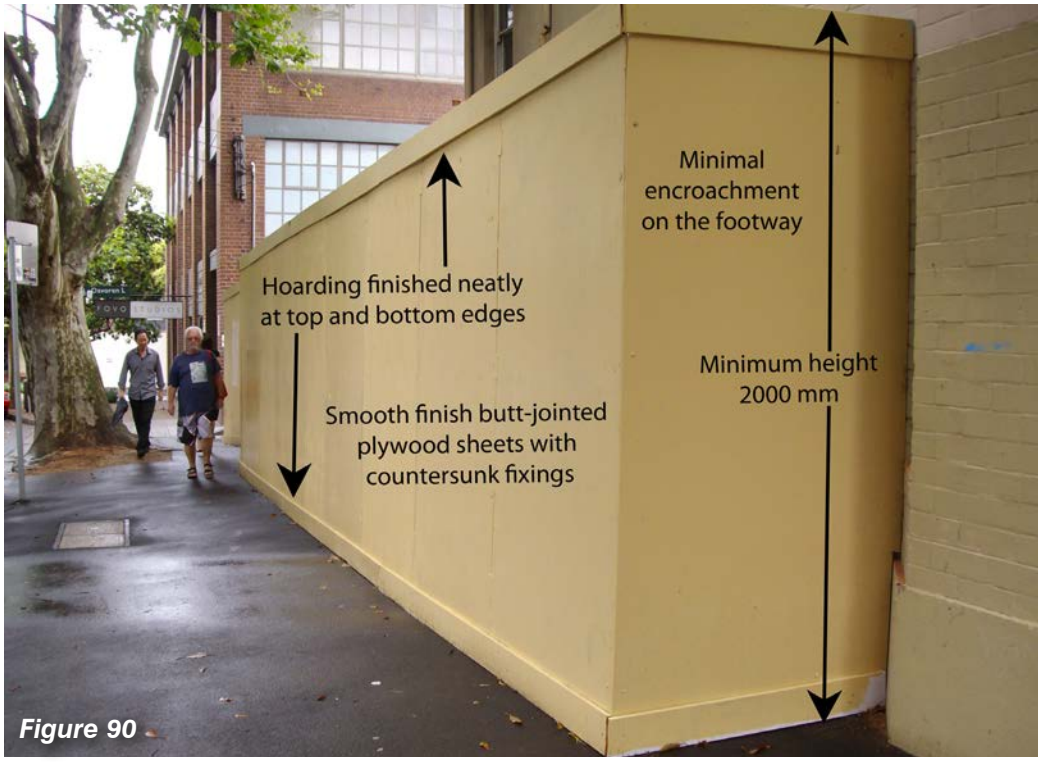


Figure 90: A typical Type A *hoarding* without graphics. The top and bottom of the fence must be capped and trimmed and painted in accordance with the standard colours (3.9.7).

Figure 91: Example of a typical temporary pedestrian pathway past a worksite (refer also to 3.10.1 and Figure 88).

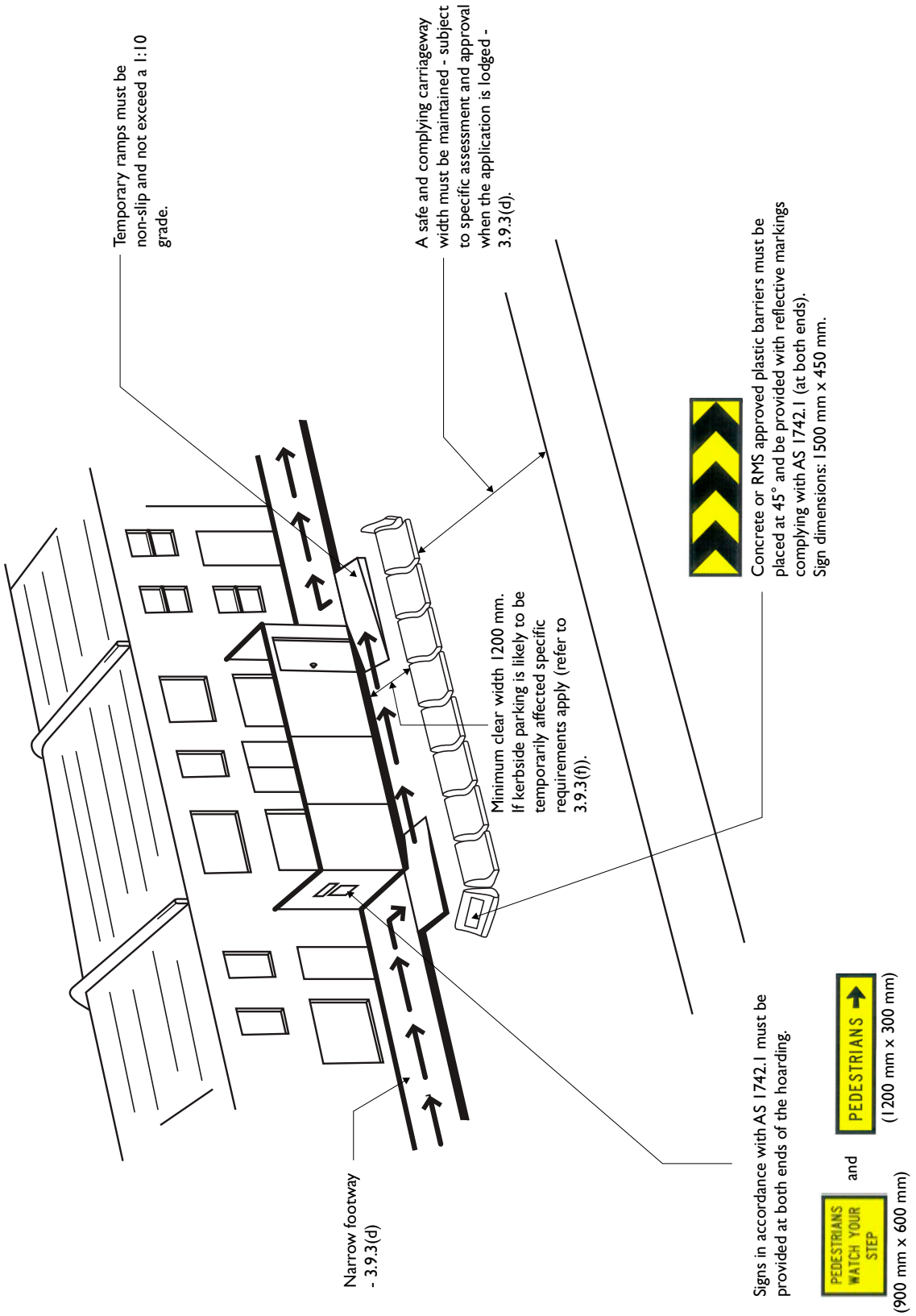


Figure 92


Figure 93


Figure 94

Figure 95

Figure 92: For problematic sites that are regularly impacted by bill poster attachment meshing of site fences will be permitted subject to meeting minimum prescribed standards and obtaining the approval of the *City*.

Figure 93: Where possible, *hoarding* fences and *scaffolding* must be designed to avoid obstruction of utility service pits. Pit locations must be accurately shown on drawings lodged with a *hoarding* application (see 2.9).

Figure 94: Site fence fixings must be screw fasteners (countersunk or flush-finished).

Figure 95: Approved services cabinets in hoarding fences must be appropriately labelled.

Site fence

g) For Type B *hoardings* the site fence must extend to the underside of the deck. Fences of Type A *hoardings* must have a minimum height of 2 metres. Where there are construction or security needs Type A fences can be higher than 2 metres and may extend to the underside of street awnings (see Figure 89).

h) The site fence must be finished neatly top and bottom. The top edge of Type A *hoardings* must be capped or finished with a trimming board and skirting boards at the base (refer to Figure 26). The trimming boards and capping must be not less than 90 mm and painted the same colour as the fence or an alternative approved contrasting colour (see Figure 90).

i) Where *hoardings* affect occupied buildings, safe access to building entrances must be maintained. Alcoves that may be formed should be minimised to ensure the safety of pedestrians (from persons secluding themselves from view). Where necessary, alcoves may need to be provided with lighting at night.

j) The site fence must comply with (g) and (h) including minimum fence thickness (17 mm). For some Type A *hoardings* a fence thickness of 12 mm using water-resistant plywood sheeting may be permitted particularly for securing the base of *scaffolding* (see also 3.9.8 - access gates). This is however subject to the person in control of the site being satisfied that the fence thickness will provide adequate protection to the public for the work being undertaken i.e. adequate to prevent projectiles penetrating the fence and satisfying any applicable work, health and safety codes of practice. Fences must also be well constructed, plumb, smooth and plywood sheets flush (butt) finished.

k) Viewing windows for in-ground works (see (p)) must be removed or blanked off with plywood once the development is constructed to ground level and painted or finished to match the site fence.

l) The toe of a site fence (excluding any required skirting boards) must not protrude onto the *footway* to ensure the fence does not create a trip hazard for pedestrians.

m) Except where graphics or images are used (see 3.4.3), the site fence, including any vehicular and personnel access doors, must be painted/ finished in accordance with the Guidelines[1] and be maintained in a tidy and clean condition throughout the full duration the *hoarding* is in place.

n) Site fencing must be constructed of solid durable material e.g.: 17 mm thick structural plywood complying with AS/NZS 2269-2012 of approximately 1200 mm wide sheets which are butt-jointed (not overlapped). The fence of Type B *hoardings* must cover all structural elements (framing and support columns on the site-side) and the surface must be smooth finished and capable of accommodating graphics.[2] Complying knee-bracing at deck level is permitted to project through the site fence however the preferred finish is to have all structural elements fully covered. For minor works 12 mm plywood may be acceptable (see (j)).

   For Type B *hoardings* where 3 metre high fences are required, some minor overlapping of horizontally placed ply-sheets will be allowed subject to neat, tidy and secure connections and fixings complying with (Figure 94 and (o)) being used and subject to graphics being capable of being neatly attached and finished to the fence.

o) Site fence plywood sheeting (including access openings or gates) must be securely fixed to a structurally sound and adequate frame using appropriately sized fasteners. Fasteners suitable for the site work being undertaken and the likely wind actions in the locality must be used. Fasteners must also not protrude past the fence surface i.e. be finished flush or countersunk (Figure 94) to prevent injury to passing pedestrians and/or damage to clothing caused by potential snagging points.

Viewing windows in site fences (excavations)

p) Where work involves excavation and in-ground works, at least one viewing window must be provided per frontage to allow the public to view works and construction up to ground level. For long frontages windows must be located at spacings of approximately 20 metres. The viewing windows must be 500 mm square with the bottom edge located approximately 1000 mm above the *footway* surface.

q) Windows must be of a clear durable material such as Perspex having a minimum thickness of 12 mm, trimmed at the site fence interface and maintained to provide good site visibility and safety. Where a hoarding:

   - adjoins a narrow *footway;* or
   - encroaches onto a busy *footway;* or
   - is located on a roadway; or
   - impacts on convenient pedestrian movement,

   the *City* may dispense with the requirement for windows to prevent excessive obstruction of the *footway* or prevent viewing from a roadway.

Bill poster control

r) In circumstances where bill posters are repeatedly attached to hoardings the *City* may require the installation of steel grid mesh on the fence (see Figure 92) to prevent poster attachment. Where meshing is allowed or required the following provisions apply:

   i. the mesh must be galvanised;

   ii. the wire aperture must be not less than 25 mm square and have a wire diameter of 3-4 mm; and

   iii. the mesh must be securely fixed to the site fence using plated 'U' nails or durable staples and the perimeter trimmed neatly with rebated battens to fully cover the wire end-edges for pedestrian safety.

Note: Meshing is not the preferred treatment to manage bill poster attachment (see 2.11.2). For problematic sites where it has been clearly demonstrated by the builder that repeated poster removal and re-painting has failed to control poster attachment or the builder fails to control posters, meshing will be allowed or required.

Access doors and gates

s) Access doors and gates in site fences must comply with 3.9.8 and be installed to swing inwards only or slide internally parallel to the *hoarding* fence.(3)

t) The use of roller-doors at access openings (see Figure 109) are generally not preferred however where permitted, must be of a satisfactory standard and durability including maintenance (easy on-going cleaning and where necessary, re-painting) and satisfy any work safety requirements and codes of practice.

Utility services (pits and hatches) and metering

u) Utility service pits and hatches must not be obstructed. Where a *hoarding* fence cannot be positioned to avoid pits the fence must be constructed to allow access or panels designed to allow easy removal and access to pits. Signage may also be required. Utility service providers must be consulted and approval granted in these circumstances.

v) Where utility service pits are located behind a site fence or obstructed in any way the approval of utility owner must consent to the obstruction and which may require appropriate signage being displayed on the fence to indicate the pit location/s and type of utility service.

w) Electricity metering equipment and switchboards should, where possible, be located within the site. Where the local electricity supplier/authority requires the installation of metering equipment at the site boundary (within the site fence), the meter cabinet must:

   i. be recessed within the site fence to ensure that the closed doors do not project past the fence surface;

   ii. have frames and latches/locks that do not protrude forward of the fence surface;

   iii. have signage affixed to cabinet doors indicating the type of utility service;

   iv. cabinets must be kept locked at all times except when being accessed by authorised personnel; and

   v. comply fully with any requirements of applicable Australian Standards and the local electricity supply authority.

Notes:

1) Refer to Element 7 – 'Standard Colours';

2) Refer to Element 6 - 'Graphics and Information', for details of graphic information and panels for site fences.

3) It is an offence to allow a gate or door to open over a *road* (Clause 21, Roads Regulation 2008).

3.9.4 Element 4 - *Hoarding* deck and overhead protection (Type B hoardings)

Objectives:

i. Allow the *person conducting a business or undertaking* to provide an overhead barrier to protect the *public place* from objects that may fall from a *workplace*;

ii. Safely contain items on the deck (where specifically permitted by the *City*);

iii. Protect pedestrians from rainwater and other liquids that fall onto the deck;

iv. Collect and drain water from the deck in a controlled and appropriate manner to prevent nuisances;

v. Provide a cleanly detailed and finished soffit (support beams permitted);

vi. Ensure that decks do not cause excessive loss of sunlight to windows of neighbouring buildings where *hoardings* span *roadways*; and

vii. Where required, allow the placement of approved construction site sheds, *scaffolding* and construction hoisting equipment e.g.: mast-climbing devices, swinging stages and hoists, where specifically approved for installation on decks.

Deemed-to-Comply provisions for Element 4:

General

a) The underside of a deck is to be painted in accordance with Element 7 - 'Standard Colours' - 3.9.7

b) Fully lined deck soffits (see Figure 98) are permitted and encouraged particularly in the high density city centre where a *hoarding* is proposed to be in place for a lengthy duration. The *City* reserves the right to require fully lined soffits on a site specific basis.

c) The deck must be impervious to liquids and designed to collect and drain rainwater via a drainage system discharging to the site (behind the site fence) or *road* gutter (a minimum 2 per cent gradient must be provided). Rainwater is to be collected and disposed of without impacting on pedestrians. *Hoardings* must be checked periodically to ensure that the deck remains impervious to liquids including, importantly, rainwater.

d) Where *hoardings* are installed on sloping *footways* and the deck is stepped with the gradient of the *roadway* or *footway* the vertical openings at *hoarding* segment junctions must be sealed to provide an impervious deck surface (see Figure 97).

e) Where decks are trafficable such as for accessing site sheds, balustrades must be provided on stairways and openings to prevent falls.

Decks spanning roads (laneways)

f) Where a *hoarding* spans across a *roadway* and impacts on neighbouring buildings the applicant must consider the potential impacts on adjoining properties such as loss of sunlight to windows, security issues and the position of site sheds (noise from workers and loss of sunlight to windows). To minimise impacts the *City* may require part of a *hoarding* deck to be cut back and the fascia positioned away from windows to a distance as nominated by the *City* to allow solar access to affected buildings (see Figures 99, 100 and 58(b)). Aspects relating to fire-spread via *hoardings* and access by fire-fighting personnel must be addressed (see 2.13.2 and 2.13.3).

Superimposed loads

g) Superimposed loads including sheds and *scaffolding* are not permitted on *hoardings* unless shown on the certified structural drawings accompanying the application forming part of an approval. Refer to 2.2.4 for maximum loading requirements.

Use of decks for storage or work platforms

h) The primary aim of a *hoarding* deck is to form a barrier to objects that may fall from work area and thereby prevent objects hitting the *public place*. Decks generally must therefore not to be used as a work platform including the placement of material, equipment and hoists unless there are fully justified reasons for doing so (and specifically approved by the *City* – see (i)). Decks may however be used to accommodate site sheds and *scaffolding*, subject to the approval of the *hoarding* design engineer and the *City*.

i) Where the *City* determines that there are sufficient grounds to allow a deck to be used as a work platform and/or for material/equipment storage, a site operation and management plan must be lodged with a *hoarding* application. The plan must provide details of the type/s of activity to be undertaken on the deck including the proposed loads and be assessed by the engineer responsible for the design of the *hoarding* to:

   i. determine the adequacy of the *hoarding* and footway/roadway to carry the proposed loads and activity without causing damage to City-owned infrastructure and services infrastructure (see 2.2.4);

   ii. consider the type/s of material, equipment and work including the type of movement to, from and on the deck and recommend any required *control measures* to address identified risks;

   iii. clearly specify on the drawings the extent and location that material and equipment can be placed on the *hoarding* deck;

   iv. determine whether operational procedures and conditions of use including any *control measures* and *SafeWork NSW* requirements, are required to be followed in addition to the site management plan; and

   v. certify the design of the *hoarding* against the proposed (and approved) usage plan.

j) The person in the control of the *workplace* (typically the builder or principal contractor) must manage the placement and movement of material, equipment and work to ensure that the on-going structural capability and stability of the *hoarding* is fully maintained and that compliance with any operational conditions specified by the design engineer and required as part of the *hoarding* approval are complied with at all times.

   Where approval is given all material and equipment must be screened from the *public place* (see 3.9.5).

k) Fuel tanks for site cranes and other equipment including temporary electricity generators and compressors must not be placed on *hoarding* decks.

Figure 96: Sheds on *hoarding* decks may be permitted if they are fully screened from the public place. Sheds must be shown clearly on structurally certified drawings lodged with a *hoarding* application.

Figure 97: *Hoardings* on sloping sites that need to be stepped with the gradient of the footway must have the vertical openings infilled using 17mm thick structural plywood. The infill panels must be painted to match the white deck soffit (see 3.9.7).

Figure 98: Fully lined *hoarding* soffits are permitted and encouraged particularly in the high pedestrian density shopping and commercial districts of the city centre. This is particularly important where a hoarding will be in place for a lengthy period.

Figure 99: Type B *hoardings* spanning *roadways* may be permitted where alternatives are not viable and impacts on neighbouring buildings including loss of sunlight and impacts on ventilation are acceptable. Risks such as fire-spread must also be assessed (see 2.13.2 and 2.13.3).

Figure 100: A Type B *hoarding* showing a section of open deck (located away from the work area) to maintain solar access to the building opposite. Proponents should consult with affected property owners as part of the hoarding design process. The placement of sheds on decks in these circumstances is discouraged. The *City* will, where necessary or appropriate, inform affected parties in writing where a hoarding is proposed to span a roadway (see 2.15).

Figure 101: Suspended scaffolds (swinging stages) and other hoisting equipment such as mast-climbing work platforms require approval under the Local Government Act and Roads Act when hoisting over a public road.

Approval to park swinging stages on a *hoarding* deck may be given subject to the *hoarding* design engineer certifying that the structure is capable of carrying all imposed loads and actions. This includes not exceeding the superimposed load requirements of the SafeWork NSW Code of Practice for Overhead Protective Structures.

Where permitted, parked equipment must be fully screened from the *public place* using a fascia (see 3.9.5).


Figure 96

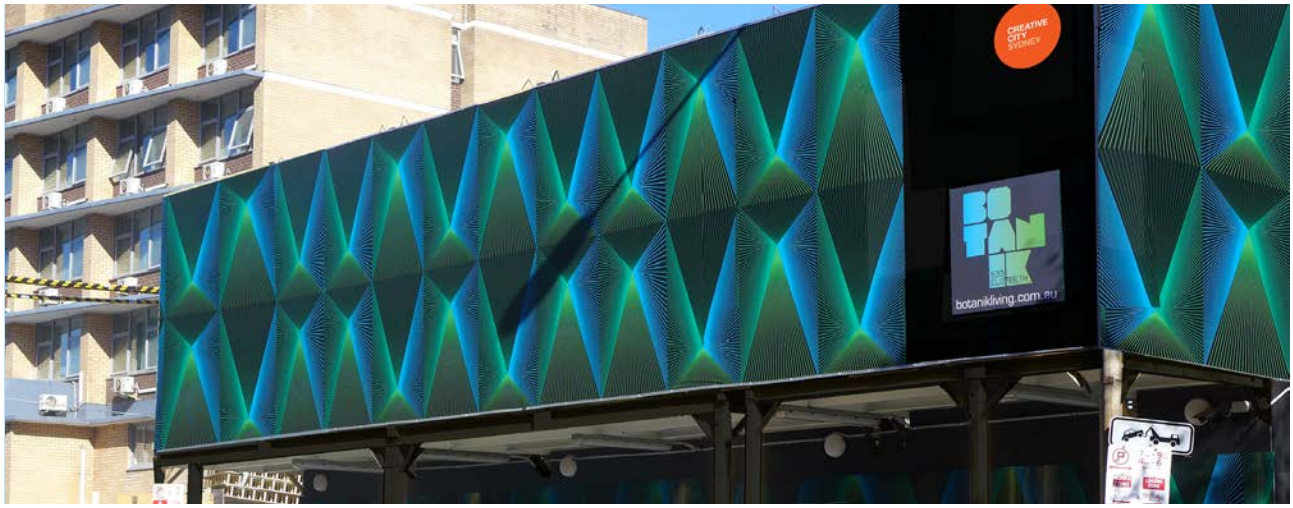

Figure 97


Figure 98


Figure 99


Figure 100


Figure 101



3.9.5 Element 5 - Fascia (Type B *hoardings*)

Objectives:

i. Screen construction sheds from the *public place* to minimise adverse visual impacts;

ii. Contain objects that may fall from a *workplace* onto a deck and minimise the risk of falling objects ricocheting from a *hoarding* deck;

iii. Provide a barrier to prevent workers falling from a deck into the site or *public place*;

iv. Screen beams and knee-bracings of full site-assembled structural hoardings and supplementary beams associated with gantry modules; and

v. Provide a smooth and even surface to allow the display of public art, graphics and information about the development.

Deemed-to-Comply provisions for Element 5:

a) A fascia must be provided to fully screen approved site sheds placed on *hoarding* decks and extend to at least the top of sheds. Where special and specific approval is given to allow equipment and material to be placed on decks (see 3.9.4(i) the fascia must fully screen the equipment and material, bases of construction hoists and suspended *scaffolds* (swinging stages) parked on a *hoarding* deck (see Figure 101).

b) The fascia of site-fabricated and assembled structural *hoardings* must extend below the *hoarding* deck to fully cover the deck structure, beams and knee-bracing. Where supplementary structural beams are used on gantry hoardings the fascia must fully cover the beams and extend along the full length of the hoarding in a consistent straight horizontal line.

c) 'Half fascia' panels must be provided in locations where site sheds are not placed on the deck. The panels are to extend a minimum height of 1000 mm above the deck floor and for site-fabricated and assembled *hoardings* including gantry hoardings where supplementary beams are used, fully cover the deck structure as required by (b) and be securely fixed to the structural frame of the *hoarding*.

d) A fascia must be constructed from durable impervious material such as structural plywood or sheet steel that is capable of accommodating graphics and public art.(1) Other material may be permitted where it can be clearly demonstrated that it meets the objectives, can effectively accommodate graphics and comply with any applicable provisions of work safety codes of practice.

e) Fascia panels must be butt-joined neatly with minimal openings/gaps.

f) Fascias and associated bracings must be designed to withstand all likely imposed loads including wind actions in the locality. This is particularly critical where *hoardings* are located in expansive open areas such as:

- near parks, reserves and squares;
- harbour locations;
- vacant sites;
- sites on which buildings are proposed to be demolished (loss of wind-shielding); and
- where concentrated wind forces (including wind-funnelling caused by large buildings in the locality) are likely e.g.: in the city centre and other areas with surrounding multi-level buildings.

Figure 102

Figure 103

g) Fascias must be fully and securely braced using durable and structurally adequate elements including appropriate and durable fasteners (screws/bolts are mandatory).

h) Fascias must be designed and installed to fully accommodate street tree canopies.[2] Where this is not possible and minor branch trimming is required, refer to 3.9.10 for further details.

Notes:

1) Refer to Element 6 - 'Graphics and Information' and Element 7 - 'Standard Colours', for further provisions.

2) Refer to Element 10 – 'Street tree protection' – 3.9.10 for details.

Figure 102: Where full 'structural' Type B *hoardings* are installed all structural elements including beams and knee-bracings on the kerb-side must be fully covered by the fascia (both half and full fascia *hoardings*). Where supplementary beams are used on gantry modules the ends of beams must be covered by the fascia.

Figure 103: Fascia panels must be designed and securely fastened to the *hoarding* structure to withstand all likely wind actions in the locality. Panel junctions must also be neatly butt-jointed and close-fitting.

3.9.6 Element 6 - Graphics and public information (Type A and Type B *hoardings)*

Objectives:

i. Provide high quality public art and graphics on *temporary structures* including, where appropriate or required, the projection of digital images onto *hoarding* fascias (and *scaffolding* mesh) to enhance the *public place* and add visual interest in the locality;

ii. Minimise adverse visual impacts of *temporary structures*;

iii. Provide legible, well designed and appropriately integrated information about the development; and

iv. Provide community information (where appropriate in the locality) and public art where required by the *City* and these Guidelines.

Deemed-to-Comply provisions for Element 6:

General

a) Public art, graphics and images must be provided in accordance with 3.4.

b) Graphic designs, artwork and images[1] must:

i. exhibit a vibrant artistic content;

ii. incorporate information of community benefit or interest and/or public art;

iii. display other material or information as required by the *City;* and

iv. be installed on all surfaces including end-returns panels of the site fence and fascia, large access doors and gates (greater than 2 metres in width).

c) The *City* may, as owner of the land on which a *temporary structure* is installed, require the applicant to install or allow the *City* to place public art or community information on site fences and/ or the fascias of *hoardings* and on *scaffolding* (see 3.4). The applicant will also be required to maintain the graphic for the full duration of required placement or for the full period of the *temporary structure* approval.

Signage

d) A prominent and water-resistant sign containing the information listed below must be displayed at the boundary of the site in accordance with the relevant Regulations, conditions of approval and the *City's Code of Practice for Construction Hours/ Noise within the Central Sydney Business District*:

i. that unauthorised entry is prohibited;

ii. the name of the principal person in control of the *workplace* and who is responsible for the site and the hoarding; and

iii. a 24 hour emergency contact name and telephone number.

e) The property number and the building name (where applicable), must be clearly displayed on the fascia of Type B *hoardings* or on the site fence of Type A *hoardings* where the property number on the building is obscured (see 3.5.2(e)).

f) A copy of the front page of the *hoarding* approval determination (the *Permit*) placed within a durable waterproof clear covering or plastic sleeve must be securely affixed in a prominent position such as near the site access doorway in the *hoarding* fence.

g) The excessive display of a developer's or principal contractor's name on *temporary structures* is not permitted. Where signage is proposed it must comply with Table 2.

h) The names of sub-contractors, material/ equipment suppliers or other similar signage must not be displayed, unless specifically approved by the *City*. Refer to Table 2 for permissible corporate signage/branding and development information.

i) Where specific approval is given to allow the illumination of graphics and public information the lighting system must not cause adverse impacts such as glare in the locality particularly to residential buildings (see 3.9.9). Where necessary, luminaires are to be concealed. Flashing lights or signs are not permitted.

Figure 104

Figure 105

Figure 106

Figure 104: The *City*, as owner of the land on which a *temporary structure* is erected, reserves the right to require the display of community information such as *City* initiatives and other special events.

Figure 105: Site information signage that includes a 24 hour contact person and telephone number must be displayed in a prominent position on the *hoarding* site fence. (see Table 2 for general signage requirements).

Figure 106: Innovative graphic designs on *hoardings* add visual interest in the streetscape and are encouraged.

j) All surfaces, graphics/artwork and information must be fully maintained to an acceptable standard as determined by the *City*. See 3.4.6 for installation requirements.

Advertising

k) Development consent is required for any proposed advertising[2] on *hoarding* fascias, site fences or *scaffolding.*

l) Real estate sale and leasing signage including agent/developer contact details must not be displayed on *temporary structures* unless development consent is first obtained.

Notes:

1) In approving any graphics, other than *City* supplied artwork/graphics, the *City* accepts no copyright responsibilities that the applicant may need to meet.

2) Where advertising is approved through a development consent and will produce a financial return to the owner of the site, the *City* as landowner over which the *temporary structure* is to be erected, will require the owner of the site to negotiate with the *City* an appropriate percentage distribution of the advertising income.

3.9.7 Element 7 - Standard Colours (Type A and Type B *hoardings*)

Objectives:

i. Establish a colour standard that provides a consistent colour scheme across the city, minimises visual impacts of *hoardings* and enhances the *public place*;

ii. Permit site specific colour schemes for *hoardings* that are acceptable in the locality and any required graphic; and

iii. Promote the creative use of colour as part of a graphic design concept (see 3.9.6).

Deemed-to-Comply provisions for Element 7:

a) The standard colours that must be used are:-

i. for hoardings that are not required to display graphics:

- steel frame structure, fascias, counter-weights, site fence – Dulux 'Soft Chamois'.
- soffit of the *hoarding* deck, beams and vertical infill panels (see Figures 97 and 107) – White.

ii. for hoardings that are required to display graphics:

- steel frame structure, fascias, counter-weights, site fence – black (with white bandings and markings on columns and corners of counterweights - see Figure 63).
- soffit of the *hoarding* deck, beams and vertical infill panels (see Figures 97 and 107) – White.
- site fence/fascia on which graphics are installed - black

b) Non-standard colours may be permitted subject to site specific consideration and approval. Where dark colours such as black are proposed (but not mandatory under Table 1), graphics must be used to break-up the large colour mass and add visual interest in the streetscape (see Table 1). Enhanced lighting may also be required (see 3.9.9).


Figure 107

Figure 107: The soffit (deck and beams) of Type B *hoardings* must be painted white to enhance pedestrian amenity and increase illumination, particularly at night.

'White'
Element: Underside of the deck including beams and vertical infill panels of stepped *hoardings*.

Dulux 'Soft chamois'
Colour code: P13.F4
Formula: EE468LL32M12

'Black'
Element: Where a graphic is required by Table 1 or is proposed, all parts of the hoarding (except the underside of the deck which must be white) are to be painted black.

3.9.8 Element 8 - Access gates and pedestrian/bicycle rider/traffic control systems (Type A and Type B *hoardings*)

Objectives:

i. Minimise the number of access points and impacts on pedestrian movement caused by vehicle and personnel access gates;

ii. Pedestrians and bicycle riders are effectively controlled at truck access points when vehicles are entering and exiting a site;

iii. Minimise impacts on cycleways adjoining worksites;

iv. Minimise pedestrian obstructions and enhance safe pedestrian and bicycle rider movement;

v. Provide effective and visually pleasing access gates and doors that secure the site from the *public place* and protect the public.

Deemed-to-Comply provisions for Element 8:

a) Vehicle and personnel access gates provided in a site fence must either slide internally or open inward.(1) The number of access points and gates must be minimised to provide a clean and uninterrupted surface on the site fence and minimise impacts on the public *footway* from site personnel entering and exiting the site.

b) Pedestrian and cycleway control gates (concertina fences not higher that 1000 mm) at truck access points (see Figure 110a) must be used to ensure the safe movement of vehicles to and from the site. Control gates must be placed on each side of an access driveway and be manned by appropriately accredited persons.

c) Concertina gates are to be removed or secured (locked back) to prevent unauthorised use at the end of each day's work. They are not to encroach on the clear *footway* and cycleway width when not in use.

d) At truck access points to the site caution signage must be installed (see Figure 110(b))

e) Control gates used on cycleways must be separate to the pedestrian control devices and be controlled by accredited persons.

f) A pedestrian and cycleway management plan must be included with the *hoarding* application where a *works zone* approval is not in place or proposed for the site.(2)

g) Access gates/doors including truck access points must comply with the following:

i. a minimum height clearance of 4.5 metres to the underside of Type B *hoardings* at truck access points must be provided. For sites where small truck access only is proposed a reduced height is permitted subject to minimum height clearance signage being displayed on the *hoarding* fascia above the driveway.

ii. appropriate signage must be installed at conspicuous location/s indicating the minimum height clearance to the underside of *hoarding* truck access bays.

Figure 108(a)

iii. vehicle access gates must:

- be of solid durable material e.g. plywood or sheet steel (subject to satisfying any work health and safety codes of practice). Chain-link or welded mesh gates are not permitted;
- be securely fixed to a structurally sound and adequate frame;
- extend to the underside of the deck and be close-fitting to the frame and the ground surface to prevent unauthorised access and to afford protection to the *public place* (see Figure 108a); and
- be lockable and remain closed when access is not required.

h) To ensure the safe man-handling of large access gates particularly in high-bay truck access openings the mass of doors/gates can be reduced by using sliding (single or in two leafs) or two-leaf side-hinged doors. Barnyard-type doors are also allowed subject to the doors being close-fitting. To reduce door mass, steel sheeting in lieu of 17 mm plywood sheeting is permitted subject to satisfying any work health and safety requirements including codes of practice.

Figure 108(a) and 108(b): Hinged access gates must open inwards and sliding gates must slide internally (see Figure 111). Gates must be close-fitting and be kept closed when not in use and extend over the full area of the opening.

Figure 109: Roller-type site access doors are not preferred as graphics cannot be attached to such surfaces. Where permitted, doors must be fully maintained throughout the *hoarding* installation and satisfy the requirements of a site or work risk assessment including any work safety codes of practice.

Figure 108(b)

i) Roller-shutter doors on access openings (see Figure 109) are generally not permitted however where specific approval is given for their use must meet acceptable durability standards and maintenance requirements (easy ongoing cleaning and where necessary, re-painting) and also satisfy work safety requirements including codes of practice issued by *SafeWork NSW.*

j) Where vehicles enter and exit a site, traffic control measures must be implemented in accordance with the 'Guide to Traffic Engineering Practice' and to the current AS 1742 - Part 3 'Manual of uniform traffic control devices – Traffic control devices for works on roads'.

k) Where truck access is required and an existing vehicular *crossing* is to be used an assessment of the structural adequacy and dimensions of the *crossing* (to fully accommodate all truck wheels) must be made before commencing use. Where a temporary *crossing* is required a separate approval must be obtained prior to any vehicles accessing the site.[3]

Figure 109

Figure 110(a)

Figure 110(b)

Figure 111

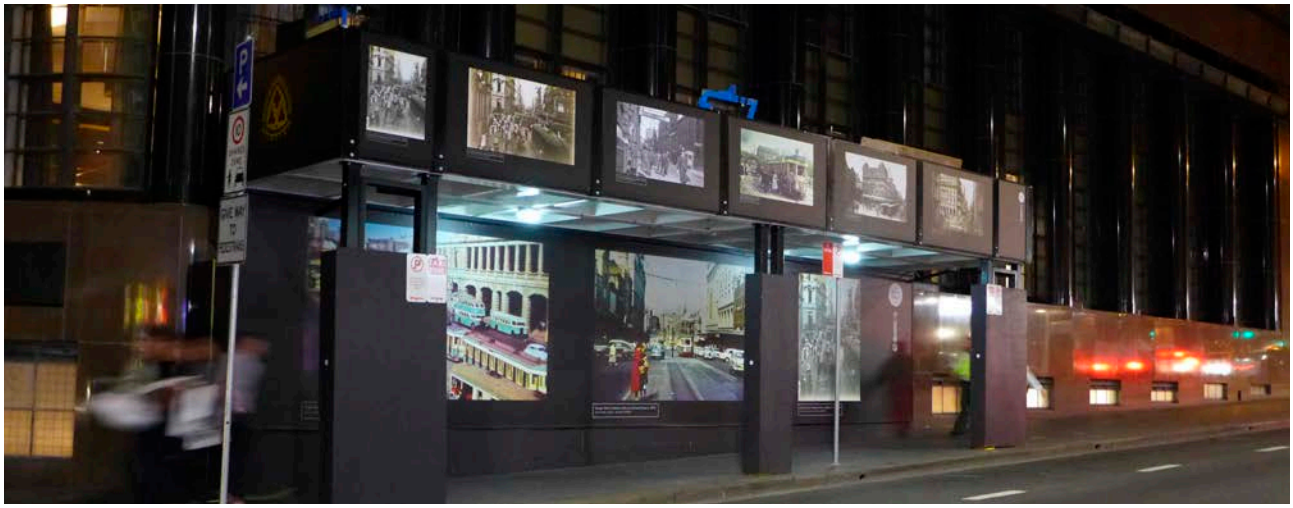
Notes:

1) It is an offence to allow a gate or door to open over a *road* (Clause 21, Roads Regulation 2008).
2) Where a *works zone* approval is to be sought a pedestrian and cycleway management plan must be included as part of the construction traffic management plan (CTMP).
3) An application must be lodged for the construction of temporary vehicular *crossings* or any required or proposed modifications to an existing crossing.

Figure 110(a): Concertina gates to control pedestrian and bicycle rider movement at truck access points are mandatory in the city centre and in other busy pedestrian areas outside the city centre. Gates must be provided on each side of vehicular *crossings* including cycleways and specific approval of the *City* must be obtained before installation.

Figure 110(b): Truck-crossing caution signage fixed to the underside of *hoarding* decks must be installed in all cases and areas including above cycleways.

Figure 111: Access doors in *hoardings* must be adequately framed and supported and extend over the entire face of an opening. Hinged doors must open inward and sliding doors must slide internally.



3.9.9 Element 9 - Lighting (Type B *hoardings)*

Objectives:

i. Provide adequate and effective illumination of the *footway* and *roadway* with a minimum shadowed area to maintain the safety and amenity of pedestrians including persons with mobility limitations or vision impairment;(1)

ii. Provide adequate and effective illumination of a cycleway with a minimum shadowed area to ensure the safe passage of bicycle riders and also to afford effective sighting of pedestrians crossing cycleways at night;

iii. Provide effective illumination of graphics on site fences of Type B hoardings; and

iv. Minimise light-spill and glare impacts on surrounding properties and public spaces.

Deemed-to-Comply provisions for Element 9:

General

a) Lighting levels beneath a *hoarding* must achieve an illuminance of not less than:

i. for *footways* and *roadways*, 30 lux average with a minimum at any point of 10 lux; and

ii. for cycleways, 40 lux average with a minimum at any point of 10 lux with external lighting over each portal to adequately illuminate the *hoarding* entrances and caution signage (Figures 65 & 69), in accordance with AS/NZS 1158.3.1: 2005 'Lighting for *roads* and public spaces'.

b) Luminaires (light fittings) and conduits must not be installed or fixed over site fence graphics.

Figure 112

c) Lighting systems must be installed and made operational at the end of each installation shift or stage to illuminate the area beneath the *hoarding* to provide a safe illuminated passage for pedestrians and bicycle riders.

d) Where there are site specific hazards such as:

- pedestrian ramps over concrete pump-lines;
- disrupted (temporary) *footway* paving;
- temporary vehicular access *crossing*;
- *hoarding* columns located more than 300 mm from the kerb or placed within the main pedestrian thoroughfare;
- long lengths of enclosed *hoardings* (where approved); or
- *hoardings* that span a wide footway (greater than 3.6 metres)

Figure 112: In areas of disrupted footway grades such as at truck access crossings and where temporary pedestrian ramps (see Figure 75 for design details) are installed greater illumination intensity must be provided to improve pedestrian safety.

Figure 113


Figure 114

luminaires must be mounted on the underside of the *hoarding* deck along the centre-line to maximise illumination of the footway or alternatively greater lighting intensity or luminaires must be used on the site fence to adequately illuminate to clearly identify potential hazards including black-painted columns (see Figure 63 for requirements regarding white banding of columns).

e) Where a Type B *hoarding* is installed above a street awning and there is no lighting or insufficient lighting below the awning, luminaires must be provided on the *hoarding* columns or on the underside of the awning to adequately illuminate the *footway* and supporting columns to ensure pedestrians can clearly see the obstructions (columns).

f) Luminaires must be of the fluorescent or LED type. Where a dark colour such as black is used the lighting system must be designed to ensure that the minimum illumination levels specified in this section will be achieved.

g) Luminaires illuminating cycleways must be mounted on the *hoarding* soffit above the centre-line of the cycleway.

h) Cabling of lighting systems must be securely and neatly fixed to the *hoarding* structure and exposed conduits and/or cabling must be painted to match the colour of the site fence or underside of the deck.

Operation and maintenance

i) Lighting systems must be checked at least weekly to ensure that all luminaires remain operational.

j) Lighting systems must operate as follows:

   i. where a *hoarding* spans over a cycleway in the city centre (see Figure 1a); and in other areas where specifically required by the *City*, the lighting system over the *footway* and cycleway must operate at all times;

   ii. for *hoarding* installations outside the city centre lighting systems must be controlled by:

   - light sensors located under the *hoarding* to ensure the system operates automatically when there are low levels of natural light; or
   - timers programmed to commence operation at least one (1) hour before sunset and turn-off not less than one (1) hour after sunrise (and the timer adjusted at least fortnightly);

   iii. in areas with low levels of natural light (such as the city centre and narrow lanes), the lighting system should operate at all times.

Light spill

k) Lighting systems must not result in excessive light-spill where *hoardings* adjoin or are located opposite residential-type buildings. Where a nuisance occurs the *City* may require modification of the system.

l) There must be no upward light-spill into open space.

m) Lighting glare must be controlled in accordance with AS 4282.

Note (1): It is an offence under Clause 16 of the Roads Regulation 2008 to obscure a street light. Lighting systems must therefore provide adequate illumination of the *public place* at night.

Figure 113: Lighting systems over a cycleway must meet a greater illumination standard than that applying to footways.

Figure 114: Where practical wiring for lighting systems must be concealed. Where exposed wiring is used it must be painted to match the background surface.

3.9.10 Element 10 - Street tree and garden protection and maintenance (Type A and Type B *hoardings)*

Objectives:

i. Provide effective protection of street trees adjoining worksites;

ii. Minimise adverse impacts on trees by accommodating tree canopies as part of a *temporary structure's* design; and

iii. Maintain and monitor the health and general condition of street trees and street gardens throughout a project.

Deemed-to-Comply provisions for Element 10:

General

a) Where street trees adjoin a development or worksite their location, height, canopy volume/diameter, health and condition must be ascertained in conjunction in preparing a *temporary structures* application. An assessment must also be made regarding whether the tree/s require pruning or are required to be removed and replaced as part of a development consent applying to the site.

b) In addition to (a), where street trees and/or footway garden beds are likely to be affected applicants must detail in the *temporary structure* application all mitigation measures to be implemented. This may require the submission of a report from a qualified arborist to enable the *City's* Street Tree Officers to thoroughly assess and determine the impacts on existing trees and garden beds. Specific additional protection measures may also be required through the development consent and/or *temporary structures* approval.

c) *Temporary structures* must be designed and installed to prevent injury to trees. Plans must clearly and accurately show the position of trees in relation to a proposed *temporary structure* and demonstrate how affected trees will be protected. Required tree protection must be installed before a *temporary structure* is installed (see Figure 117).

d) For trees with large trunks and canopies it may be necessary to notch the *hoarding* structure and/or fascia to accommodate a tree canopy or to minimise the amount of branch pruning that may be required. Where pruning is required this must be identified in the application. Where specific approval is given to allow decks to be used for material/equipment storage (see 3.9.4(i)) high fascias around tree canopies may be required.

e) Where a *hoarding* deck is required to be set back to accommodate street trees double support columns around the tree to support the deck are not permitted. The deck must be supported by a system of bridging beams at the deck level (see Figures 120).

Removal of street trees

f) Street trees will not be permitted to be removed simply to allow for the installation of a *temporary structure*. Where trees are in poor health and/or condition and it is demonstrated that they must be removed to accommodate specific site needs, the *City* may allow tree removal subject to the applicant agreeing to replace affected trees and maintain them for a prescribed period after the *temporary structure* is removed. All costs associated with the removal of trees and their replacement and maintenance must be borne by the applicant and will be subject to the lodgment of a *performance bond* and/or advance payment.

Street tree protection

g) Tree trunk and major limb protection must be undertaken prior to installation of *temporary structures*. The protection systems must be installed by a qualified arborist (AQF Levels 2 or 3) including satisfying the following:

   i. an adequate clearance, minimum 250 mm, between the structure (including site sheds and *hoarding* fascias) and tree branches, limbs and trunk at all times;

   ii. tree trunk/s and/or major branches located within 500 mm of any part of a *temporary structure*, must be wrapped with protective hessian or similar acceptable material to prevent tree injury;

   iii. timber battens (50 mm x 100 mm or similar) must be placed around tree trunks with battens spaced at 100 mm intervals and fixed against the trunk using metal or durable plastic strapping with connections appropriately finished or covered to protect pedestrians from snagging injury (see Figure 117(b)). The hessian and timber battens must not be fixed to the tree; and

   iv. tree trunk and major branch protection are to remain in place whilst the *temporary structure* is in place and must be removed at the completion of the project.

h) For *temporary structure* approvals exceeding 6 months, 3-monthly reports from a qualified arborist (min AQF Level 4) must be submitted to the *City's* Street Tree Contracts Coordinator to assess whether the tree protection and mitigation measures are being fully and effectively implemented to maintain the healthy condition of the tree/s.

i) All supporting columns of *temporary structures* or *scaffolding* must be placed at least 300 mm from the edge of existing tree pit edges so that no subsidence or damage occurs. If this is not possible appropriate approved measures must be implemented to distribute the loads to prevent damage to the tree surrounds.

Tree pruning

j) The consent of the *City* must be obtained prior to the undertaking any street tree pruning works (including tree roots). Only minor pruning works will be approved to accommodate *temporary structures*; and

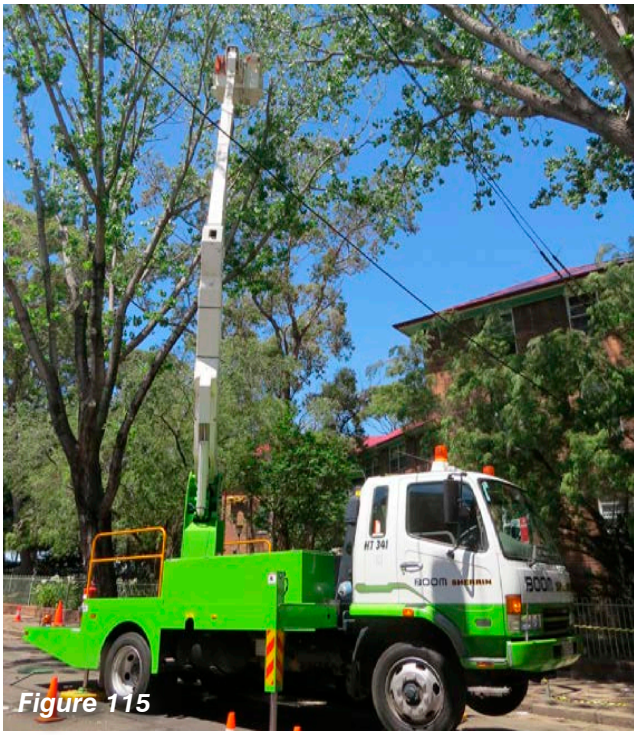


Figure 115: *Temporary structures* should be designed to prevent unnecessary pruning of street trees. Any required pruning must be identified in an application.

Figure 116: Where a *temporary structure* is in place for a lengthy period (as determined by the *City*) and there is a need to maximise the available *footway* width, resin-bonded porous granular paving may be required to stabilise and level tree pits.

k) Any pruning that is approved must be carried out by a qualified arborist (min. AQF3 Level 3) in accordance with AS4373-2007 'Pruning of Amenity Trees'.

Maintaining clear pedestrian pathways

l) Where a *hoarding* site fence is approved to encroach onto the *footway* that results in a reduction in the available clear pedestrian width and there are unsealed *footway* surfaces at the base of trees, the tree pit surface (if not flush with the *footway*) must be made safe and level using stabilised decomposed granite.

m) Where a temporary surface is installed it must be maintained in a sound and safe condition level with the *footway* surface for the duration that the *hoarding* is in place including the *footway* surface being swept daily to remove any crushed granite material walked or scuffed from the tree pit.

n) For sites where a *hoarding* will be in place for more than 12 weeks or is located in a high pedestrian traffic area, the *City* may require the tree pit surface be made safe and level using resin-bonded porous paving to a depth of 50 mm or otherwise as permitted by the *City* (refer to Figure 116).

Tree and garden damage

o) Where the person holding an approval fails to undertake required works, maintenance or supply information (reports) on affected trees and garden beds, the *performance bond* will be used to:

   i. undertake remedial repairs to damaged trees, garden beds and other areas;

   ii. obtain an arborist's report on the condition of trees and any required remedial repairs;

   iii. replace street trees or shrubs as result of negligent or accidental damage associated with the *temporary structure's* placement; or

   iv. install or maintain required tree protection devices as required by these Guidelines and/or a condition of approval.

p) Any damage sustained to street trees, street garden beds or landscaping as a result of the *temporary structure* installation is to be reported immediately to the *City's* Street Tree Contracts Coordinator to determine the appropriate action for maintaining the health and structural integrity of the tree/s and safety of pedestrians.[1]


Figure 117(a)

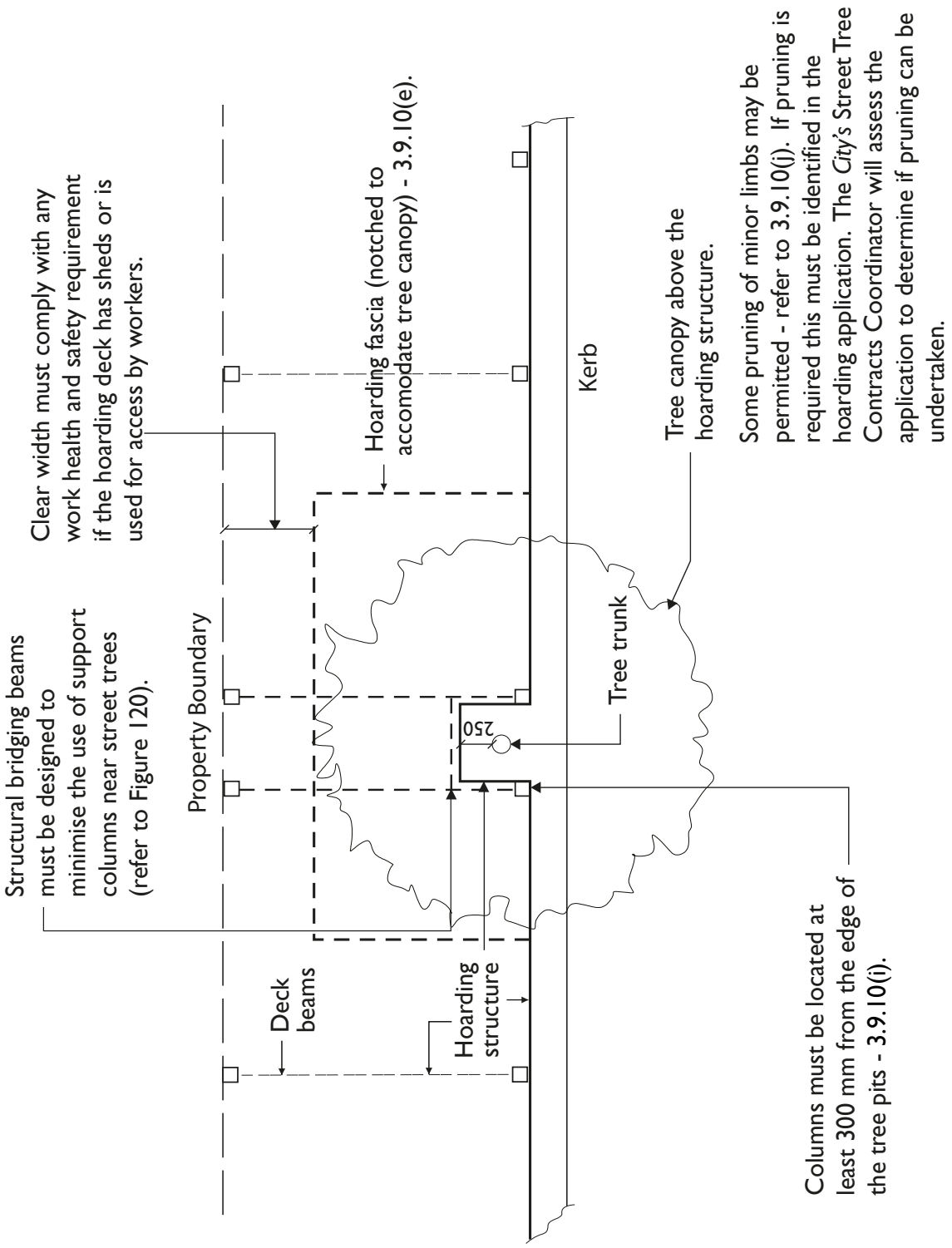

Figure 117(b)


Figure 118

Figure 117(a) and Figure 117(b): Tree trunks must be fully protected prior to the erection of the *temporary structure* and for the full duration of the development or work. Timber battens protecting trunks must be securely fixed using flexible steel or durable plastic banding and the band-ends finished neatly to avoid protruding sharp edges.

Figure 118: Where street tree surface roots are exposed and the use of the tree pit is needed to increase the width of the pedestrian passageway past a hoarding, temporary minor ramping using non-slip plywood sheeting to span over roots may be permitted.

Figure 119: *(Plan view)* Where street trees are affected by *hoardings* minimum design elements and treatments must be incorporated and undertaken. 'Type B' *hoardings* must be designed and installed to accommodate street trees including notching decks and fascias around trunks and canopies including the use of bridging beams (see Figure 120). Multiple support columns around trees are not permitted.



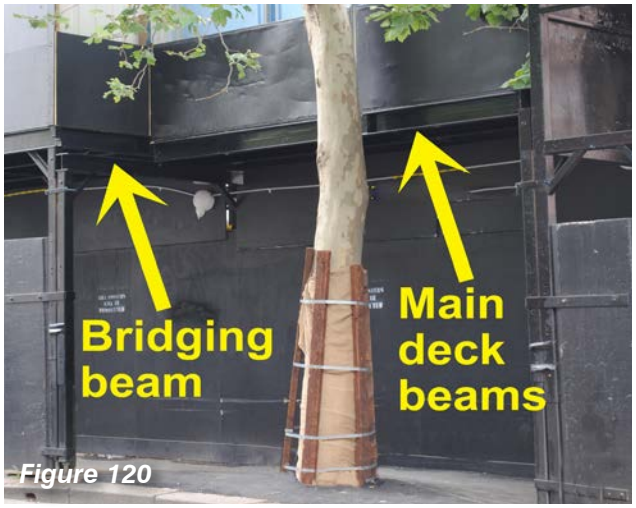


Figure 120


Figure 121

Maintenance

All replacement street trees must be maintained by a qualified horticulturist or arborist (minimum AQF Level 2) for a minimum period of twelve (12) months. Maintenance must conform with the technical planting details of the *City's* Street Tree Master Plan.

q) The maintenance period will commence from the date of inspection by the *City's* Street Tree Contracts Coordinator who will confirm in writing that the tree/s have been planted in accordance with the *City's* specifications. Should the tree/s die or be substantially damaged within the 12 months maintenance period replacement tree/s must be planted by the applicant at their cost and the 12 months maintenance period will recommence.

At the end of the maintenance period formal notice must be given to the *City* seeking handover. Trees will be assessed and if found satisfactory, the *performance bond* will be returned.

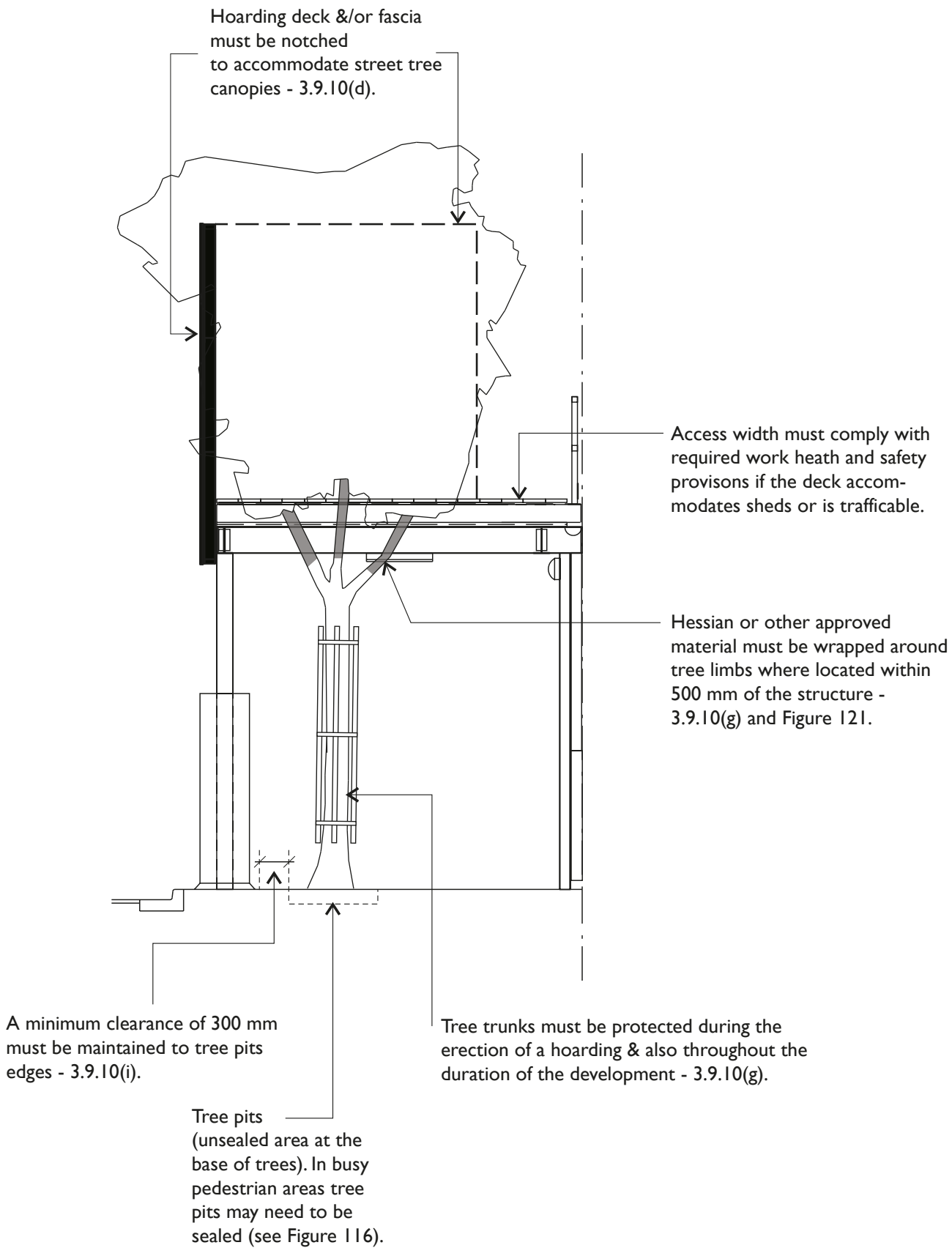
r) Tree pits must be maintained in a safe condition to minimise trip and slip hazards. Damaged or sunken tree pits resulting from the development or work activity on the site that are not repaired may be rectified by the *City* and the costs associated with this work will be recovered from the *performance bond* held against an approval.

Note (1): The City will enforce the Tree Management Controls contained within the Sydney LEP 2012 and the Sydney DCP 2012 in relation to damage to trees, with fines of up to $100,000 in the Local Court and $1,100,000 in the Land & Environment Court. In addition, the Court may also require the person or corporation having the benefit of the approval (Permit) to replace damaged or destroyed tree/s and to maintain replacement tree/s to maturity.

Figure 120: *Hoardings* must be designed to minimise impacts on tree canopies and also maintain clear pedestrian passage. This can be achieved by designing a system of strategically placed columns and bridging beams.

Figure 121: Tree limbs located close to elements of *hoardings* and *scaffolding* must be fully protected throughout the project.

Figure 122: Section detail - Where street trees are affected by *hoardings*, minimum design elements and treatments must be incorporated.



3.10 Specific design requirements for *hoardings* on or over *roadways* including cantilevered structures (needle-beams)

3.10.1 Temporary (full or partial) closure of *footways*

a) Where a *footway* has insufficient width to allow a *hoarding* to be placed on the *footway* the required overhead protection may:

   i. span a protective deck across the full width of a minor *roadway*; OR

   ii. provide a deck/awning supported by steel beams cantilevered from the building (see Figure 123).

   The appropriate design solution for a particular site will need to be discussed with the *City* early in the design and site establishment processes.

b) Other methods that may also be appropriate include closure of a *footway.* This will only be considered:

   i. in minor streets with minor traffic movement such as laneways and where the safe redirection of pedestrians to the *footway* opposite the site can be accommodated and subject to pedestrian flow patterns, the potential for pedestrian inconvenience and any other traffic/pedestrian safety issues in the locality; and/or

   ii. closing part of the *roadway* to accommodate a *temporary structure* and directing pedestrians past the site via a protective temporary pathway on the *roadway.*

   Either of these methods will require the endorsement of the *City's* Traffic Operations Unit.

c) Where specific endorsement is given to allow pedestrians to use an alternative route/pathway, appropriate temporary access kerb ramps, barriers and signage must be provided (see Figure 91).

d) Where approval is sought to temporarily close a *footway* and to place a *hoarding* fence along the kerb-line the requirements set out in 3.9.3(d) apply.

3.10.2 *Cantilevered work platforms* (minor works only)

Where minor works are to be undertaken on building facades such as maintenance or replacement of balcony balustrades or windows, consideration will be given to allow *cantilevered work platforms* if it can be demonstrated that:

a) there are no other feasible and effective means to satisfy any statutory safety requirements[1] such as erecting a *scaffold* from the *public place* below the work area;

b) the *public place* can be effectively barricaded to exclude pedestrians, bicycle riders and vehicles from the area below the worksite (including any additional safety exclusion zone that may be required) during the installation and removal of a *cantilevered work platform;* and

c) the work area can be effectively enclosed to contain material, tools and bins within the work area of the platform to protect the public place.

Cantilevered work platforms erected over adjoining private property are not regulated by the *City* nor through these Guidelines and cannot be approved under the Local Government Act or Roads Act. Proponents will therefore need to obtain access agreements from affected landowners (see Figure 124). Further details are set out in the Access to Neighbouring Land Act 2000.

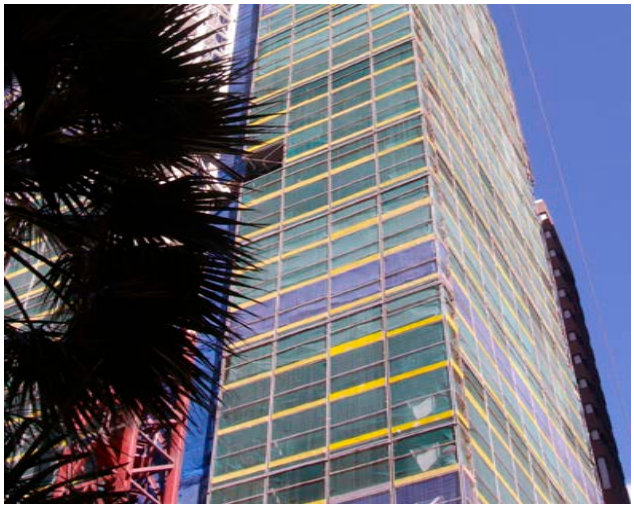
Figure 123

Figure 124

Note (1): In proposing a *cantilevered work platform* it is the responsibility of the person undertaking the work to satisfy the relevant provisions of the Work Health and Safety Act 2011 and Regulations in relation to public safety below a work area.

Figure 123: *Cantilevered work platforms* and *scaffolding* are generally not allowed however in narrow laneways where traffic and pedestrian movement must be maintained, approval may be given subject to systems being fully engineered and certified (see 2.7.1). Note: Externally installed screening mesh is preferred.

Figure 124: *Cantilevered work platforms* and other *temporary structures* located over or on private land are not regulated or approved by the *City*. It is therefore the responsibility of the person undertaking the works to obtain an access agreement from affected landowner/s. Access orders under the Access to Neighbouring Land Act 2000 can be sought through the Courts where agreement with neighbouring landowners cannot be obtained.



3.11 Specific design requirements for *scaffolding* systems

The key design requirements for elements of *scaffolding* systems, installation and meshing screens are:

3.11.1 *Scaffolding* frame

Scaffolding must be designed and erected in accordance with AS/NZS 1576.

3.11.2 Fixing to building facades including architecturally significant buildings and heritage-listed buildings

Fixing *scaffolding* to masonry elements is to be avoided wherever possible. *Scaffold* ties fixed through window openings should be used where practicable.

Where the physical anchoring of *scaffolding* ties to significant facades is unavoidable the following measures must be implemented (subject to satisfying any Safe Work Australia Codes of Practice for *scaffolding* work):

a) where possible and structurally acceptable, fix at locations of existing wall penetrations or where a masonry surface is already damaged to minimise the amount of new drilling into sound masonry;

b) the fixing must be designed to be fully reversible by using:

   i. an expansion-type fixing that can be fully removed provided there is no risk of splitting the masonry and the method of fixing complies with any Codes of Practice and/or engineering design requirements that may apply to the building and/or *scaffolding* design; and

   ii. a chemical anchor or non-removable expansion anchor that is inset at least 100 mm into the masonry to allow a 100 mm plug/biscuit infill to make good the facade penetration; and

c) the fixing point must be made good as the *scaffolding* is dismantled by:

   i. inserting a 100 mm thick masonry plug or biscuit that matches exactly the type and colour of the surrounding original stone masonry. The repair must be tight-fitting with a hairline joint; and

   ii. if the repair is to sandstone, the orientation and porosity of the grain/bedding pattern of the repair plug/biscuit must match the surrounding original stone.

3.11.3 Screening and meshing

a) The preferred method for screening *scaffolding*, including all diagonal bracing, is to install durable mesh or fabric on the outer surface (*public place* side) of the frame including at the end returns to the building. In cases where *scaffolding* will be in place for a significant duration (as determined by the *City*) or it is determined that the locality is significant in terms of visual aesthetics, it will be mandatory for the screening mesh to be installed on the outer surfaces (see Table 1 and 3.6.2(b)).

b) Mesh screens must:

   i. be in good condition (no permanent creases or warping) - must be checked and confirmed by the proponent prior to installation;

   ii. have a consistent colour throughout;

   iii. be properly and neatly fixed including quality joining at seams;

   iv. be fitted tightly and tensioned to the *scaffolding* frame to provide a quality even finish throughout;

   v. during progressive dismantling such as during demolition, the mesh must not be allowed to hang untethered from the scaffolding frame; and

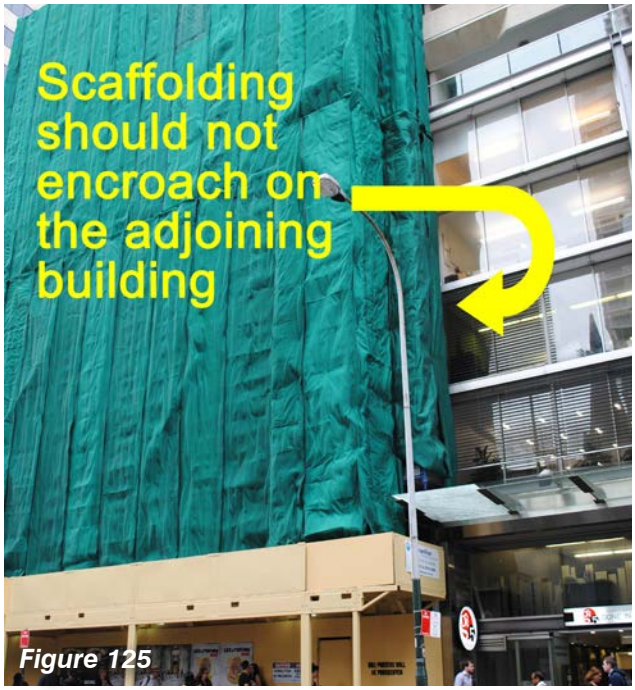


Figure 125

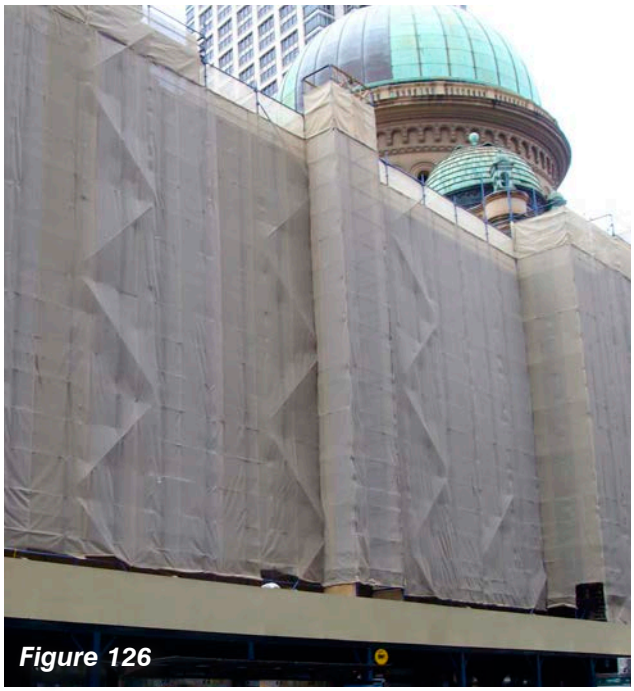


Figure 126

Figure 125: *Temporary structures* must not encroach on frontages of adjoining properties unless specifically approved by the *City*.

Figure 126: The preferred colour for *scaffolding* mesh is black although for older buildings, including heritage-listed buildings, other colours that are sympathetic to the building and locality may be required.

vi. be fully and effectively fixed to withstand likely wind loads in the locality and to ensure that the mesh/fabric is installed and maintained in a taut condition throughout the full duration of the installation. The *scaffolder* must take account of any additional wind loads and impacts on the *scaffold* as a result of perimeter meshing and scaffolding artwork wraps (see 3.11.4).

c) The preferred colour of mesh screening is black. Other neutral colours may be permitted subject to the colour being appropriate to the development site and locality, particularly where *scaffolding* is installed on or near older significant buildings including heritage-listed buildings (see Figure 126).

3.11.4 Graphics and images on screening systems of *scaffolding structures*

Where *scaffolding* is used to encapsulate a building or development site, the *City* encourages the installation of quality graphics/images including public art or community images on *scaffolding* particularly for projects of lengthy duration. See also 3.4.

Where a development site is located in a prominent position and/or the *scaffolding* will be in place for a lengthy duration, the *City* may require the *scaffolding* frame to incorporate an agreed integrated graphic display (see 3.4.5).

The *City* also reserves the right, as owner of the land on which a *temporary structure* is to be erected, to require an applicant to install an approved mesh or fabric covering to a specified standard over the *scaffolding* as a surface to allow the projection of digital images such as public art and/or information onto the *temporary structure*.

3.11.5 Maintenance and inspections

Scaffolding systems must be inspected to ensure that the *scaffold* has not been changed from the approved design and to also satisfy Clause 225 of the Work Health and Safety Regulation 2011.

Periodic inspections must be carried out as required by applicable regulations and these Guidelines but in any case not less than at six-monthly intervals (see 4.1.2). Inspections must be undertaken by an appropriately qualified practising structural engineer or licensed *scaffolder* (see 4.6.2) and certified using the *City's* standard form. The certificate must be submitted after having incorporated and re-inspected any remedial works required to be undertaken.

3.11.6 Advertising

Any proposed advertising on *scaffolding* requires development consent.

Figure 127: Section detail of a typical Type A *hoarding* fence attached to a *scaffold* frame.

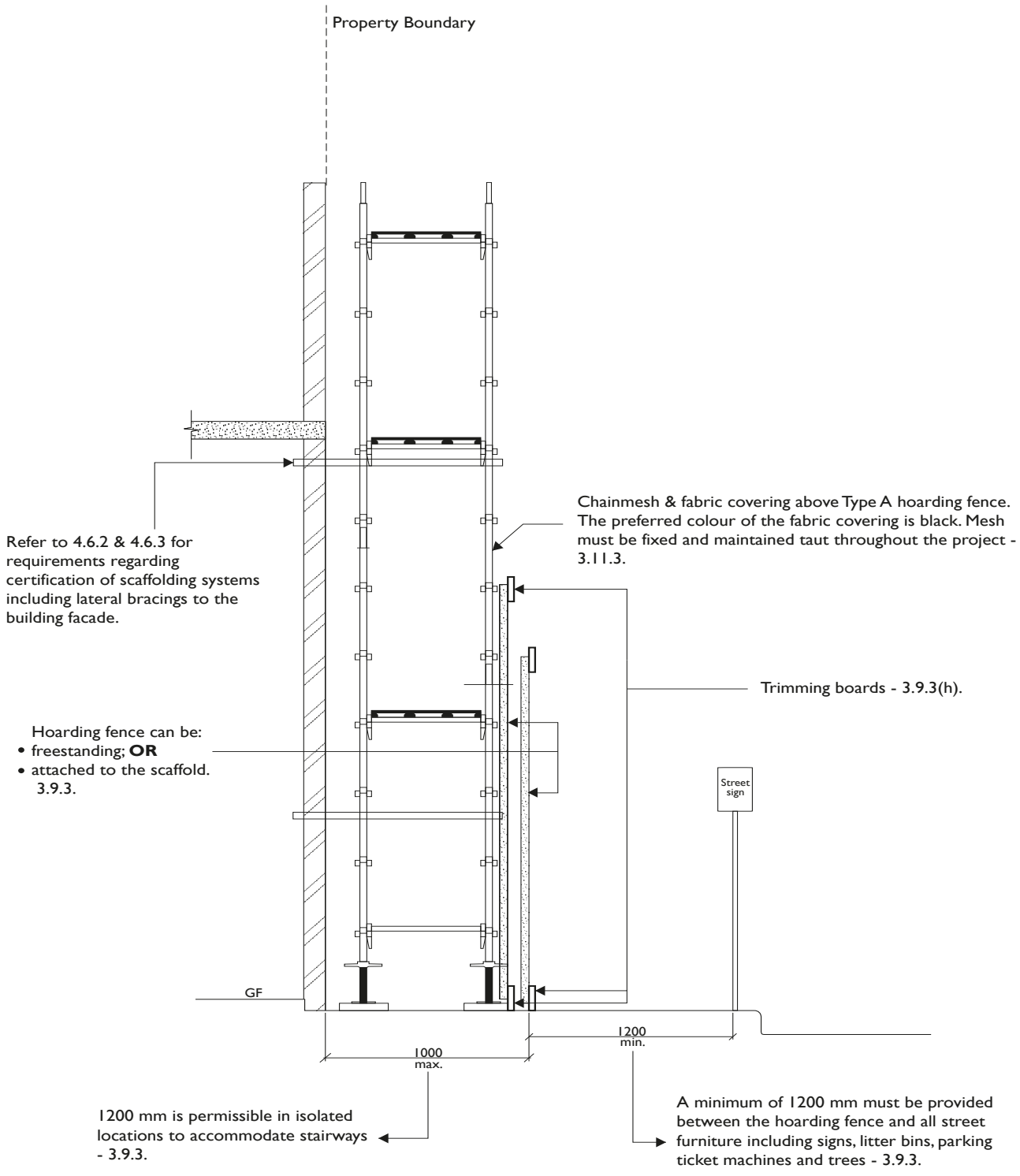
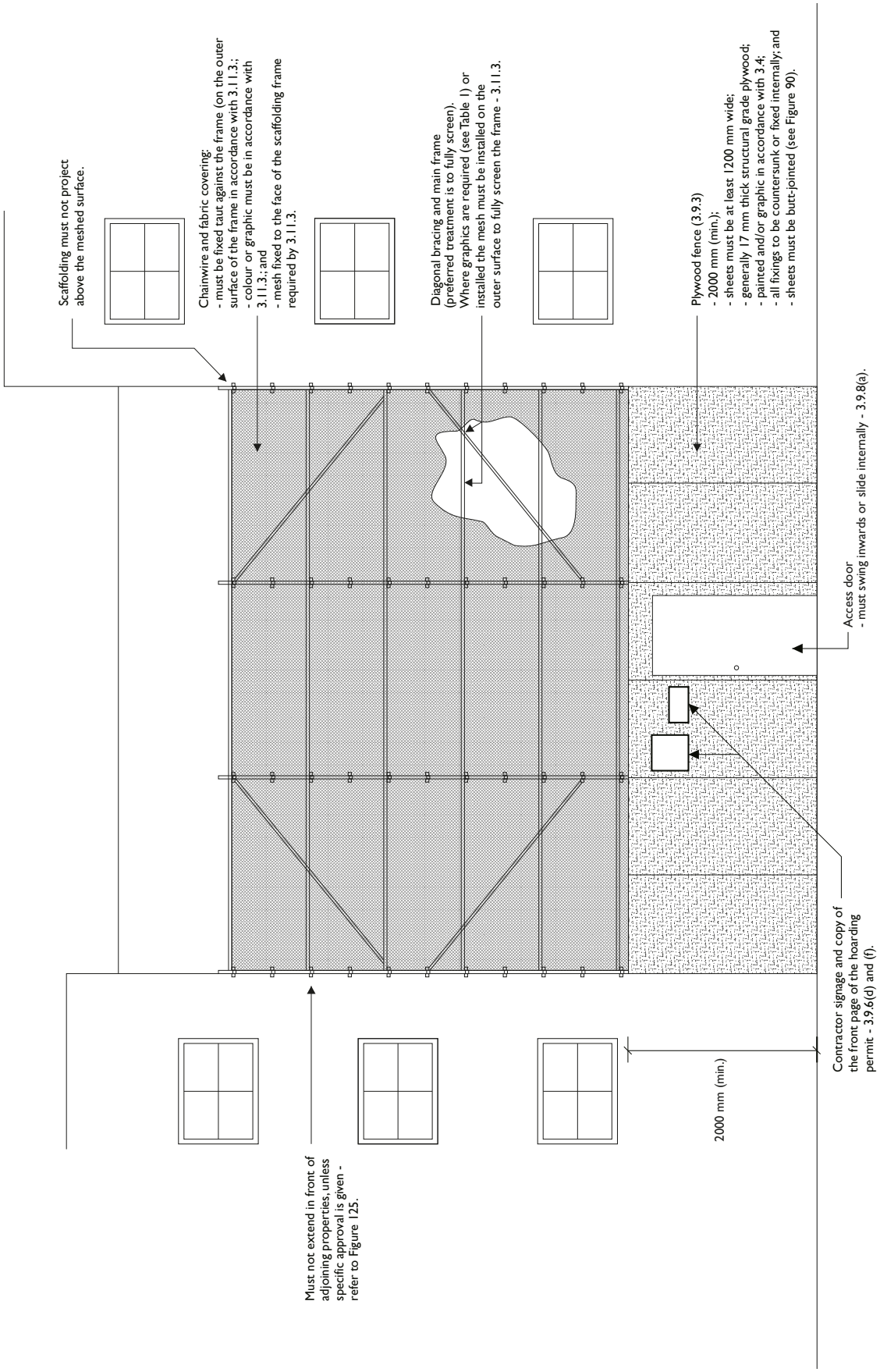


Figure 128: Elevation showing the key design features for *scaffolding* and 'Type A' *hoardings*.



Structural and other requirements

PART 04

4.1 Structural requirements - general

Temporary structures must be designed in accordance with the relevant Australian Standards including AS1170 Part 1 - Permanent, imposed and other actions, AS1170 Part 2 - Wind actions and AS1170 Part 4 – Earthquake actions.

The design and installation of *temporary structures* must also comply with the relevant provisions of the NSW Work Health and Safety Act and Regulations.

4.1.1 Documents required to be submitted with an application

Documents include:

a) structural design drawings and details including plan view drawings, typical sections, member sizes, connection and soleplate details;

b) for *hoardings*, structural certification of the design using the *City's* standard certification form (attached to the temporary structures application form) issued by an appropriately qualified, registered and experienced practising structural engineer (refer to 2.7).

   For large complex *scaffolding* installations the designer must hold appropriate and required qualifications and licence in accordance with the Work Health and Safety Act/Regulation and *SafeWork NSW* requirements. The City may also require a certificate from a structural engineer. A certificate of design for the proposed *scaffolding* system must be provided with the application; and

c) other information and details as set out in these Guidelines and in the *temporary structures* application form.

A full list of all documents required as part of an application for a *temporary structure* can be found at 2.9.

4.1.2 Installation and six (6) monthly certification

A structural certificate of installation in a form required by the *City* issued by an appropriately qualified and registered practising structural engineer (see 2.7) must be submitted to the *City* prior to use of a *temporary structure* or commencement of approved site works including hoisting activity from a public *road* over a *temporary structure*.

The *person conducting a business or undertaking* must have inspections undertaken of *temporary structures* (*hoarding*/*scaffolding*/cantilevered decks) at not less than six (6) monthly intervals by an appropriately qualified practising structural engineer/licensed *scaffolder* using the *City's* standard form. The certificate must be submitted to the *City* after inspection and completion of any remedial work that is required.

Figure 129

Figure 130

4.2 *Hoardings* associated with excavations

4.2.1 General

The Work Health and Safety Regulation 2011 requires the person undertaking excavation work and the principal contractor to manage the risks and comply with Clause 305 of the Regulation. This includes potential hazards for pedestrians in the *public place* falling into an excavation (see Figure 129).

The *person conducting a business or undertaking* responsible for the worksite and the owner/installer of the *hoarding* must also satisfy any other requirements such as relevant Safe Work Australia codes of practice.

Risks associated with motor vehicles crashing through *hoardings* and falling into deep excavations must be considered when assessing risks to the public. Section 103 of the Roads Act allows the *City* as a *roads* authority to direct an owner or occupier of land to install barriers where it considers that an excavation poses a sufficiently dangerous risk or condition to threaten the safety of persons using a public *road* adjoining the worksite. This is particularly relevant for sites adjoining very busy *roads* and at *road* intersections.

The *City* may, irrespective of any risk assessment undertaken by the person in control of the site, require appropriate safety barriers to protect an excavation.

Where a risk assessment establishes that safety barriers are required, *hoardings* placed on a *roadway* or *footway* adjoining an excavation must have any required continuous traffic barrier located behind the site fence (see Figures 129 and 130).

The barrier must be of concrete or steel and designed to the relevant loading standards based on the recommendations of any pedestrian/traffic risk assessment that has been undertaken to satisfy relevant requirements of the Work Health and Safety Act and Regulations including codes of practice.

4.2.2 Impacts of public crowding on site fences

The *person conducting a business or undertaking* including the designer and installer of a *hoarding* must consider the loads imposed on *hoarding* site fences resulting from live actions of public crowding pushing against a *hoarding* fence. This is particularly important in the city centre where large gatherings associated with public events can be expected.

4.2.3 Caution signage - excavations

Caution signage (see Figure 131) must be securely fixed at each end of the site fence warning of a deep excavation (more than 1.5 metres below the footway/ *roadway* surface) behind the fence. For long frontages (greater than 30 metres) additional intermediate signage must be displayed on the site fence in a method that does not interfere with installed graphics/ artwork (see 3.4).

Figure 129: Sites undergoing deep excavation can pose a significant safety risk to the public including occupants of motor vehicles. Where an assessment by the *person conducting a business or undertaking* and/or the *City* identifies that a risk exists and control measures such as barriers are required, the standards for their location must comply with these Guidelines.

Figure 130: A Type A *hoarding* braced to a Jersey kerb protecting an excavation.

4.2.4 Stability considerations - ground erosion and subsidence

The positioning of *temporary structures*, particularly support columns of Type B *hoardings* and concrete traffic/pedestrian barriers adjoining sites that are proposed to be excavated must, in the design of *temporary structures*, consider and take into account any risks associated with:

a) partial settlement of the public *road;* or

b) major subsidence/collapse of the *roadway*/ surface resulting from excavation works.

This includes:

- the impacts of water accumulation and run-off (rainwater) and
- ruptured water-supply pipes),

which may affect the foundation material providing support and stability to a *temporary structure*.

Figure 131

Figure 131: For *hoardings* associated with an excavated site deeper than 1.5 metres, caution signage must be displayed indicating a deep excavation behind the site fence. Signage must not be fixed over hoarding graphics/ artwork.

4.3 Design certification by a structural engineer

A certificate of structural design in a form required by the *City* (refer to the *temporary structures* application form and 2.9) and complying with 2.7 must be submitted with an application for Type B *hoardings* and other *temporary structures* such as *cantilevered work platforms* and some forms of Type A hoardings.

Note: Many *temporary structures* particularly Type B *hoardings* often have complex design factors that need to be considered when designing and inspecting structures to verify compliance with the Guidelines including importantly the structural design aspects. Other factors that must be considered include:

a) the various dynamics associated with the demolition;

b) excavation and construction of buildings;

c) external factors in the public spaces such as vehicle impacts;

d) how *temporary structures* interact with these activities; and

e) loading actions.

In designing and checking compliance it is important therefore that engineers certify within their area of skill and experience. In this regard certifiers must apply Engineers Australia's Code of Ethics. This requires engineers to "act on the basis of adequate knowledge". Engineers Australia's Guidelines on Professional Conduct also require that engineers "practice within areas of competence and seek peer review" (when considered necessary).


Figure 132


Figure 133

Design certification for some forms of Type A *hoardings* and *scaffolding* systems will be determined by the *City* at the time of lodgment or assessment based on a number of factors including, but not limited to, the size/extent of the *temporary structure* and the locality.

4.4 Structural requirements for 'Type A' *Hoardings*

A Type A *hoarding* must comply with the relevant provisions of the Work Health and Safety Act 2011, Regulations and applicable Safe Work Australia and *SafeWork NSW* codes of practice.

Figure 132: *Scaffolding* encapsulating a building undergoing demolition and later used as a *hoarding* site fence must be adequately counterweighted. Wind actions in the locality including potential extreme wind velocities from surrounding buildings must be considered by the person in control of a *workplace* and the *scaffolding* contractor. Excavated sites must also be protected using appropriate pedestrian and traffic barriers (see 4.2).

Figure 133: Under some circumstances the *City* will allow *scaffolding* to be installed on a street awning if supported from the *footway* below. These designs must be fully engineered including a detailed assessment of the structural condition and adequacy of the existing awning being fully documented and lodged with an application (see also 4.6.6).

4.5 Structural requirements for 'Type B' *Hoardings*

4.5.1 General

Type B *hoardings* must comply with the relevant requirements of the Work Health and Safety Act 2011, Regulations and Safe Work Australia and *SafeWork NSW* codes of practice.

4.5.2 Column and footing design

The applicant (typically the developer or principal contractor) is responsible for maintaining the condition of the *footway* adjoining a worksite to a standard at least equal to the surface condition prior to commencement of work.

An appropriately qualified person must assess the safe load capacity of the *footway* and subsurface ground conditions to support a proposed *temporary structure* including site sheds placed on Type B hoardings and any approved hoisting equipment placed on *hoarding* decks to prevent damage to the existing paving and utility services beneath the *footway*.

The following are considered minimum requirements that must be satisfied:

a) thoroughly survey all utility services and underground structures (pits) in the area of the proposed *temporary structure*. Utility service access hatches including Ausgrid services must not be obstructed at any time unless specific approval is given by the utility service provider. For location of utility service, call 'Dial Before You Dig' on 1100 or website: www.1100.com.au with UBD reference grid identification;

Figure 134(a)

b) consult the relevant utility authority for design bearing pressure on or near any services likely to be affected by loads from the *temporary structure*; and

c) special consideration must be given to *temporary structures* adjacent to sites undergoing demolition or excavation activity. Bearing pressures must allow for any likely ground disturbance caused by the proposed siteworks including adverse impacts resulting from erosion by water (see 4.2.4).

Figure 134(a) and Figure 134(b): The preferred method of *scaffolding* installation where work above a street awning is involved. The *scaffold* is fully support from the *footway* with openings cut into in the awning for the projection of *scaffold* standards. This method may however not be suitable for some awnings of architectural importance or heritage significance including heritage-listed buildings.

4.6 Placement of *scaffolding* in a *public place*

4.6.1 General

The use of a mobile work platform (*scaffolds*) up to 4.0 metres in height on a *footway/roadway* requires the approval of the *City* (temporary works application). For all other *scaffolding* proposals on or over a *public place,* approval is also required and documentation in accordance with 2.9 must be provided with the application.

4.6.2 Certification - *scaffolder*

Certification by a *SafeWork NSW* licensed *scaffolder* in accordance with the *City's* standard form must be provided within 24 hours of the completion of a *scaffolding* structure.

For *scaffolding* that is erected and occupied or altered in stages during construction or work the *person conducting a business or undertaking* (typically the principal contractor) must obtain and retain installation and scaffold modification certification from the *scaffolder*. The *City* reserves the right to require, at any time, evidence (copies) of progressive certification documentation for a *scaffold* structure.

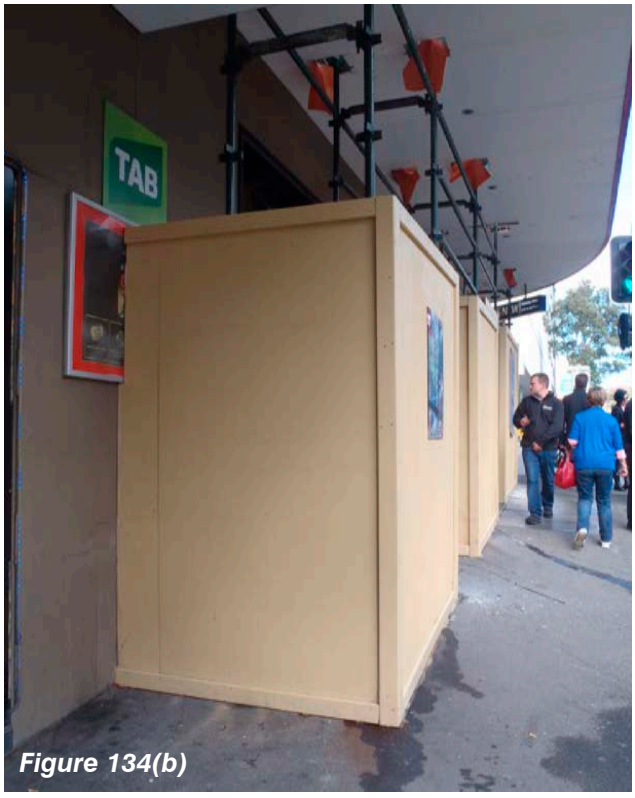


Figure 134(b)

4.6.3 Attachment of *scaffolding* to certain buildings - certification

The structural adequacy of a building to which *scaffolding* is proposed to be fixed or braced must be assessed to determine its structural capability to sustain all likely imposed lateral loads including live and wind load actions.

Where *scaffolding* is proposed to be fixed to reinforced concrete or reinforced masonry elements the *City* may rely solely on certification of structural adequacy from a licensed *scaffolder*.

Where *scaffolding* is to be fixed to non-reinforced masonry walls or parapets, an assessment of structural adequacy of the wall by a suitably qualified person (such as a practising structural engineer) will be required (see 2.7).

Where necessary and/or required by the *City* (see 2.7.2), a suitably qualified structural engineer must certify the *scaffolding* design and method of attachment to a building including the adequacy of the building to support the *scaffold.* The required certification must be provided prior to the issuing of a *Permit*.

4.6.4 Building demolition and perimeter *scaffolding*

Where *scaffolding* is used to enclose a building undergoing demolition and the ground level section of the *scaffold* structure is to be retained to support a Type A *hoarding* fence to maintain security of the site after demolition, adequate counterweighting must be installed to provide full stability to the *temporary structures* particularly under all expected wind actions and velocities in the locality (see Figure 132).

4.6.5 *Scaffolding* supported on Type B *hoardings*

The engineer responsible for the design, installation and inspection of a Type B *hoarding* must certify that the *hoarding* is capable of supporting proposed and/or approved *scaffolding* to the requirements of the relevant Acts, Regulations and codes of practice.

A certificate in accordance with the *City's* standard form must be completed and submitted to the *City* prior to handover and the commencement of site work and use of the *scaffold*/*hoarding*.

4.6.6 *Scaffolding* supported from street awnings

a) The placement and support of *scaffolding* directly on street awnings to undertake work on existing buildings is generally not permitted for a number of reasons including:

   i. the difficulties assessing the condition and structural adequacy of an awning to carry the additional loads including live actions of workers on the awning and scaffolding; and

   ii. the risks to pedestrians below a street awning should the awning fail due to excessive loads and actions of workers.

b) The preferred method is for:

   i. *scaffolding* standards to be supported from the *footway* surface with standards projecting through openings made in the awning; and

   ii. the section of *scaffolding* below the awning to be sheeted with plywood along the *scaffolding* frontage/installation (see Figure 134(b)) and not solely around individual *scaffold* standards. Sheeting is to extend to a height of at least 2 metres above the *footway* and satisfy other requirements of these Guidelines including maintaining clear minimum *footway* widths for pedestrians.

Where this preferred design solution is not possible or feasible due to such factors as awnings having architectural significance or heritage-listing, the *City* may allow *scaffolding* to be placed on an awning with supporting *scaffolding* placed beneath the awning soffit (see Figure 133). This will only be permitted where *scaffolding* support systems can be set back a sufficient distance from the kerb to address potential risks associated with motor vehicle impacts and to provide sufficient space on the *footway* for the safe and convenient passage of pedestrians past the worksite.

c) *Scaffolding* placed on cantilevered street awnings with no additional temporary supports from the *footway* is generally not permitted due to:

   i. many awnings do not comply with current building code loading standards and therefore any additional loads may adversely affect the structural adequacy and stability of an awning;

   ii. difficulties in satisfactorily establishing the structural condition of awnings, particularly older awnings, regarding their capability to support additional loads and the impacts of live actions (loads) *scaffolders* and other workers moving about on awnings;

   iii. concentrated loads from *scaffolding* components placed on awnings awaiting erection or during dismantling may cause an awning to be overloaded and collapse (fully or partially);

   iv. the difficulties in effectively managing a work site to control and mitigate risks particularly controlling individual worker practices and dynamic actions; and

   v. the significant risks to the public should a supporting awning fail and collapse. This is particularly critical in the busy city centre and other commercial districts with high pedestrian densities including footway dining areas beneath street awnings.

d) Where a proponent wishes to utilise solely a street awning to support *scaffolding (*partially or fully), as a minimum the following must be satisfied:

   i. a full and detailed assessment of the structural condition of the awning, including a thorough visual inspection of all concealed structural members, the cantilever rod support connections and anchor points to the facade (including potential non-visible corrosion within the wall of the facade), must be undertaken by an experienced practising structural engineer (see 4.3); and

   ii. the engineer must hold industry qualifications and registration (see 4.6.7) to verify the adequacy of the awning and supporting building structure to carry all proposed imposed loads including live actions and concentrated loads from the placement of *scaffolding* during the erection and dismantling processes; and

   iii. the engineer must prepare a site management and work plan setting out required *control measures* to address all potential and assessed risks to the public; and

   iv. fully engineered design drawings specifying the location of the scaffold on the awning and any required spreader beams/sole-boards, site management procedures to control the placement of *scaffolding* and material on the awning together with certification, in accordance with the *City's* requirements including a statement that it is issued under Section 93 of the Local Government Act 1993, must be lodged with the application.

4.6.7 Structural certification

For the eligibility of a structural engineer to certify *temporary structures* including *scaffolding* in the circumstances set out in this section, see 2.7 and 4.3.