

Structures Group – Method Statement

Project:	Prepared by:
Rylands Building, Market St, Manchester M60 1TA	Name: J Harrison
	Signature: 
	Date: 07/01/2022
Contractor:	Individual responsible for supervising, controlling and monitoring work:
Company: Structures Group	Company: Structures Group
Name: W. Jolley	Name:
Tel No: 07834 159013	Tel No:

1. Scope of Works *(brief description of the works including location)*

Site setup
 COVID-19 Control Measures
 Structural investigation
 Non-licensed ACM (Asbestos containing material) Removal
 Structural investigation (Type 1 - Beam & connections)
 Reinstatement (Type 1 - Beam & connections)
 Structural investigation (Type 2 - internal columns & splices)
 Reinstatement (Type 2 - internal columns & splices)
 Structural investigation (Type 3 - perimeter columns & splices)
 Reinstatement (Type 3 - perimeter columns & splices)
 Structural investigation (Type 4 – Typical slabs)
 Reinstatement (Type 4 – Typical slabs)
 Structural investigation (Type 5 – Basement slabs / foundations)
 Reinstatement (Type 5 – Basement slabs / foundations)
 Structural investigation (Type 6 – roof slabs)
 Reinstatement (Type 6 – roof slabs)
 Structural investigation (Type 7 – mansard roof)
 Reinstatement (Type 7 – mansard roof)
 Structural investigation (Type 8 – basement walls and piers)
 Reinstatement (Type 8 – basement walls and piers)

2. Sequence of Work and Control of Operations *(provide logical sequence of how the work will be carried out, make reference to floor levels, drawings and sketches where applicable).*

Site set up procedures:

- WJ Structures operatives are to be inducted by Arcadis Ltd site management team. All WJ Structures operatives' qualifications and certifications will be sent over via email to the appropriate client personnel prior to our start on site.
- The work areas are to be fully identified and co-ordinated between WJ Structures site supervisor and Arcadis Ltd site management team.
- Identify together with Arcadis Ltd site management team, all areas to be repaired and confirm methodology as per the method statement below.
- WJ Structures operatives to make themselves fully aware of all designated work areas and site-specific traffic routes including site welfare, office, and emergency assembly areas.

WJ Structures operatives to ensure work area is cordoned off from members of the public and other site personnel. Our work area will be locally cordoned off using chapter 8 barriers where required to establish a clear boundary between WJ Structures operatives and other personnel

COVID-19 Control Measures:

- All WJ Structures operatives shall wash their hands with soap and warm water frequently – for at least 20 seconds in regularly intervals and before/after all allocated break times.
- All WJ Structures operatives shall use hand sanitiser gel often, on access/egress of the site, entering their work vehicles, on using site welfare facilities, before and after using handheld tools/equipment.
- All WJ Structures operatives will cover their mouth and nose with tissues provided as part of their COVID-19 control kit if they require to cough or sneeze, avoiding using bare hands always. Structures Group operatives will wash hands thoroughly immediately after and place all used tissues in bins provided.
- WJ Structures operatives where reasonably practicable to do so, shall stay 2 metres (3 steps) away from other people/operatives and will wear face coverings provided when moving through all indoor communal areas.
- Throughout the duration of the works, WJ Structures operatives must always wear full PPE (including gloves, Hi-vis, Boots, Hard hat & Safety boots) including accessing/egressing the site, travelling through allocated pedestrian walkways and communal site areas.
- After using a tool, WJ Structures operatives shall wipe down handles and grip points before another operative uses it.
- WJ Structures operatives will always avoid congregating in site messing facilities during breaks. During break times WJ Structures operatives are to maintain good social distancing practices and keep a minimum of 2 metres away from each other at all times.

Structural investigation

- As the building is a grade II listed building, any opening works should be strictly limited to the minimum necessary to establish the principles above.
- All the works shall be carried out in such a manner as to ensure the safety of the public and to cause as little inconvenience as possible to them, the tenant, and the adjoining owners.
- Non-intrusive technologies will be used where feasible.
- The structural investigation will be carried out to the following elements
 - Beams
 - Columns, splices and holding down arrangements
 - Connections
 - Slabs
 - Retaining walls
 - Foundations
- The opening up works will be recorded through photographs, diagrammatic drawings documenting dimensional information, and a written report.
- The following attributes will be outlined as well as undertake the opening works.
 - Beams, columns (including piers) and splices and holding down arrangements
 - Overall breach of sections
 - Overall depth of section.
 - Flange thickness.
 - Web thickness (two values required for twin web sections)
 - Depth of cover on two perpendicular faces.
 - Distance from web to outstand flange (for twin web sections only)
 - Width of plates (for sections with plates only)
 - Thickness of plates (for sections with plates only)
 - Extents of plates (for sections with plates only)
 - For connections, the following attributes are to be identified.
 - Type of connection (for example angles on flanges/web, end plate, fin plate etc.)
 - Arrangement of connection showing number of fixing, layout spacing.
 - Type of fixings
 - Diameter of fixings.
 - Width, thickness and overall dimensions of plates (eg end plates, fin plates etc)
 - For typical slabs, roof slabs, and basement slabs, the following attributes are to be captured;
 - Slab depth
 - Screed / soffit finishes depth / subbase (if applicable)
 - Cover to reinforcement.
 - Reinforcement diameters (at least two bars to be measured in perpendicular directions)
 - Reinforcements spacing (spacing between at least two parallel bars to be measured in each perpendicular direction.
 - For basement walls, the following attributes are to be captured
 - Wall thickness
 - Cover reinforcement
 - Reinforcement diameters (at least two bars to be measured in perpendicular directions)

- Reinforcements spacing (spacing between at least two parallel bars to be measured in each perpendicular direction).
 - For foundations, the following attributes are to be captured
 - Foundation size (on plan size and depth).
 - Foundation spacing.
 - Cover reinforcement
 - Reinforcement diameters (at least two bars to be measured in perpendicular directions)
 - Reinforcements spacing (spacing between at least two parallel bars to be measured in each perpendicular direction).
- As part of the intrusive testing, the following types of testing are to be identified, locations are to be agreed as the site works progress.
 - Coupon
 - Metallic chemical
 - Hardness
 - Compressive
 - Petrographic

Structural investigation (Type 1 - Beam & connections)

- Following previous intrusive investigations, it is known that the downstand beams are encased in concrete for fire protection, with plaster to the bottom flange typically.
- To obtain the details of each attribute, structures group are to break out the full depth and width of the incoming steel beams to a given location, over the minimum length required to outline the attributes.
- All reasonable precautions are to be taken to avoid unnecessary noise and vibration.
 - Structures Group to determine a selection of quiet and low vibration equipment to carry out the works.
 - Structures Group to review the methodology on site to identify if there are any other quieter methods not listed within this method statement. If quieter methods are identified, this method statement will be updated accordingly.
 - All construction activities with potential to cause noise pollution, will be strictly carried out during normal working hours (no works after 5pm and weekdays only).
 - prefabricated components and constructions wherever possible;
 - building materials and furnishings with low pollution emissions;
 - vehicles and construction plant operating on fuel that causes low
 - emissions of fine particles and vapours;
 - Vehicles, construction plant and other equipment that operate as quietly as possible;
 - an optimum site layout to ensure that: pollution-generating activities are located away from sensitive receptors or housed in closed environments where possible;
 - barriers and screens are used effectively to screen noise sources such as engines compressors, etc.
 - there is an adequate supply of water for damping down particles with sufficient hoses to reach all parts of the site;
 - water supply is conveniently located near particle-generating activities and site exits;
 - proper control and disposal of 'run-off' water from damping down is carried out;
 - good site housekeeping and management

- The demolition shall at all times comply with BS 5228:2009 noise control on construction and demolition sites
- Noise levels will be monitored throughout the works. Should agreed noise levels be exceeded then works will cease pending review.
- There will be no noisy working outside normal hours.
- The area surrounding the works shall be cordoned off by Structures.
- Safe access route and setting down area shall be established for the works.
- For breaking out existing concrete, A Hilti te1000 or te3000 electric jackhammer will be used.
- Please ensure the correct PPE is worn to operate the jackhammer (mask, hat, goggles, boots and tough clothing)
- Before breaking up the concrete, please assess the area and ensure there is no water, gas, power or telephone lines running beneath.
- If the area is good to break, please clear the area by removing any sticks, leaves, debris etc.
- Laying a polythene sheet over the concrete will stop chunks of stone and dust from flying beyond the work area, making it easier to clean up afterwards. Lightly sprinkling the concrete with water beforehand also helps to reduce dust escaping.
- Please ensure the jackhammer has adequate fuel to complete works.
- Have a good solid footing when breaking out.
- Always stand on solid, unbroken concrete.
- Start at the side farthest away from you so that you can stand on a steady surface as you break the concrete.
- Make sure the power cord is behind you and is not near the breaker point.
- Wear sturdy boots to help keep your feet planted.
- Start the breaking out by placing the chisel head on one corner of the slab.
- Hold the jackhammer firmly and upright.
- Switch on the breaker. It will start vibrating and hammering at the focus point.
- The breaker should start to crack the surface of the slab.
- It is best to break the concrete into smaller pieces to prevent the jackhammer getting stuck.
- Start slowly and carefully, letting the jackhammer do the work, making sure not to drill in a diagonal direction. Remain upright.
- Once a piece of concrete has cracked, move no more than 2 or 3 inches back before hammering the next section.
- Work from the corners into the centre of the slab.
- Remove concrete debris that gets in your way. Where concrete remains locked together, prise the chunks apart with a mattock or pickaxe.
- Where a Type 1 OIJW is noted on the appended drawings, the structures group to allow for opening to four incoming beams typically.
- Where the column head is haunched, the haunch and connection arrangement will be broken out to record the full connection arrangement.
- Beam investigations are shown on the relevant steelwork level drawings - ie. investigations for Level 02 are noted on the L02 drawing. In general these works will be undertaken from the level below, ie Level 01 for investigations marked at C02.
- The required beam & connection detail to be recorded from section 'Structural investigation'.

Reinstatement (Type 1 - Beam & connections)

- After inspection and measurement of the internal beam arrangement the reinstatement shall be undertaken.
- The area to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth.
- The exposed steel and concrete will be prepared by wire brushing the steel to remove existing primers and corrosion.
- Existing steel to be primed with a bonding agent (such as Sika MonoTop-610)
- Work area to be confirmed with Arcadis Ltd site management team and made ready for the installation of the steel reinforcement.
- Using either a float or trowel as a render, apply repair material in accordance with manufacturers recommended instructions.
- A high build concrete repair mortar will be applied and finished to match the existing concrete encasement (such as Sika MonoTop-615).
- Reaching original lines and profiles can be achieved by thicker applications of repair mortar. Should any repairs require multi-layer applications, all previous layers must be well keyed and stable. Final profiling can be obtained using a steel float.
- All rubble/debris arising from these works to be removed to skip upon completion.
- Work area to be signed off once completed.
- At this stage, where the existing element has an internal finish (for example plaster), Structures Group shall not to reinstate the finish.
- However, Structures Group shall provide a schedule of the locations where existing finishes have been broken out, including extents of removed finishes.

Structural investigation (Type 2 - internal columns & splices)

- Following previous intrusive investigations, it is known that the internal columns are encased in concrete, with minimal steel mesh in some locations.
- The attributes of both the column section itself and any splice connections is required.
- Structures group shall non-intrusively scan the internal columns to determine the possible presence of a splice. If a splice is located, this will determine the breakout out location.
- To non-intrusively scan the internal columns, a ground penetrating radar.
- The GPR will be passed over the concrete's exposed surface, sending a signal into the concrete.
- The signal is deflected back to the device in different patterns depending on what type of material is found in the concrete and how deep the material is. An experienced technician will be able to determine the location of the splice based off of this reading.
- If no splice is located, the Structures group may propose a breaking out location for review by Woolgar H Inter.
- The area surrounding the works shall be cordoned off by Structures.
- Safe access route and setting down area shall be established for the works.
- All reasonable precautions are to be taken to avoid unnecessary noise and vibration.
 - Structures Group to determine a selection of quiet and low vibration equipment to carry out the works.
 - Structures Group to review the methodology on site to identify If there are any other quieter methods not listed within this method statement. If quieter methods are identified, this method statement will be updated accordantly.

- All construction activities with potential to cause noise pollution, will be strictly carried out during normal working hours (no works after 5pm and weekdays only).
- prefabricated components and constructions wherever possible;
- building materials and furnishings with low pollution emissions;
- vehicles and construction plant operating on fuel that causes low
- emissions of fine particles and vapours;
- Vehicles, construction plant and other equipment that operate as quietly as possible;
- an optimum site layout to ensure that: pollution-generating activities are located away from sensitive receptors or housed in closed environments where possible;
- barriers and screens are used effectively to screen noise sources such as engines compressors, etc.
- there is an adequate supply of water for damping down particles with sufficient hoses to reach all parts of the site;
- water supply is conveniently located near particle-generating activities and site exits;
- proper control and disposal of 'run-off' water from damping down is carried out;
- good site housekeeping and management
- The demolition shall at all times comply with BS 5228:2009 noise control on construction and demolition sites
- Noise levels will be monitored throughout the works. Should agreed noise levels be exceeded then works will cease pending review.
- There will be no noisy working outside normal hours.
- The area surrounding the works shall be cordoned off by Structures.
- Safe access route and setting down area shall be established for the works.
- For breaking out existing concrete, A Hilti te1000 or te3000 electric jackhammer will be used.
- Please ensure the correct PPE is worn to operate the jackhammer (mask, hat, goggles, boots and tough clothing)
- Before breaking up the concrete, please assess the area and ensure there is no water, gas, power or telephone lines running beneath.
- If the area is good to break, please clear the area by removing any sticks, leaves, debris etc.
- Laying a polythene sheet over the concrete will stop chunks of stone and dust from flying beyond the work area, making it easier to clean up afterwards. Lightly sprinkling the concrete with water beforehand also helps to reduce dust escaping.
- Please ensure the jackhammer has adequate fuel to complete works.
- Have a good solid footing when breaking out.
- Always stand on solid, unbroken concrete.
- Start at the side farthest away from you so that you can stand on a steady surface as you break the concrete.
- Make sure the power cord is behind you and is not near the breaker point.
- Wear sturdy boots to help keep your feet planted.
- Start the breaking out by placing the chisel head on one corner of the slab.
- Hold the jackhammer firmly and upright.
- Switch on the breaker. It will start vibrating and hammering at the focus point.
- The breaker should start to crack the surface of the slab.
- It is best to break the concrete into smaller pieces to prevent the jackhammer getting stuck.
- Start slowly and carefully, letting the jackhammer do the work, making sure not to drill in a diagonal direction. Remain upright.

- Once a piece of concrete has cracked, move no more than 2 or 3 inches back before hammering the next section.
- Work from the corners into the centre of the slab.
- Remove concrete debris that gets in your way. Where concrete remains locked together, prise the chunks apart with a mattock or pickaxe.
- Where possible, it is suggested that the column opening up works occur at high level where the contractor may also be required to break out beams and connections as per the Type 1 OCJW noted previously. If opening up the column can be combined with the beam investigations this will minimise the required intrusive work. At this stage the contractor should allow for breaking out at a splice at all column investigation locations.
- Where the opening up works are undertaken for the bottom column stack, the contractor should break out the base of the column to determine the holding down arrangement, which may be a flared gusset base,
- The required column and splice attributes to be recorded from section 'Structural investigation'.

Reinstatement (Type 2 - internal columns & splices)

- After inspection and measurement of the internal Column arrangement the reinstatement shall be undertaken.
- The area to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth.
- The exposed steel and concrete will be prepared by wire brushing the steel to remove existing primers and corrosion.
- Existing steel to be primed with a bonding agent (such as Sika MonoTop-610)
- Work area to be confirmed with Arcadis Ltd site management team and made ready for the installation of the steel reinforcement.
- Using either a float or trowel as a render, apply repair material in accordance with manufacturers recommended instructions.
- A high build concrete repair mortar will be applied and finished to match the existing concrete encasement (such as Sika MonoTop-615).
- Reaching original lines and profiles can be achieved by thicker applications of repair mortar. Should any repairs require multi-layer applications, all previous layers must be well keyed and stable. Final profiling can be obtained using a steel float.
- All rubble/debris arising from these works to be removed to skip upon completion.
- Work area to be signed off once completed.
- At this stage, where the existing element has an internal finish (for example plaster), Structures Group shall not to reinstate the finish.
- However, Structures Group shall provide a schedule of the locations where existing finishes have been broken out, including extents of removed finishes.

Structural investigation (Type 3 - perimeter columns & splices)

- Following previous intrusive investigations, it is known that the perimeter columns are located within brick piers, with the bricks toothed into the web typically.

- At other locations, structures group may encounter concrete upstands at low level adjacent to the perimeter pier.
- Structures group will remove brickwork to locate the steel column within the pier.
- Perimeter column splices have typically been located at low level. Structures group will remove the brickwork to locate a splice at each perimeter column investigation location. The splices are required to be exposed in full.
- Bricks are to be removed by mechanical means using a small angle grinder fitted with a diamond tipped disc to cut around the perimeter of the defective brick.
- Using small Hilti type breaker with a flat chisel attachment, remove any mortar from around the bricks. The brick is to be fully removed and no surrounding brickwork or adjacent materials are to be damaged
- Brickwork is to be retained for use in restatement as noted below. Care must be taken in the removal of masonry and particularly when working around the steelwork to avoid any actions which could cause movement of the external Portland Stone cladding.
- Where the opening up works are undertaken for the bottom column stack, Structures group are to break out the base of the column to determine the holding down arrangement, which may be a flared gusset base.
- All reasonable precautions are to be taken to avoid unnecessary noise and vibration.
 - Structures Group to determine a selection of quiet and low vibration equipment to carry out the works.
 - Structures Group to review the methodology on site to identify If there are any other quieter methods not listed within this method statement. If quieter methods are identified, this method statement will be updated accordantly.
 - All construction activities with potential to cause noise pollution, will be strictly carried out during normal working hours (no works after 5pm and weekdays only).
 - prefabricated components and constructions wherever possible;
 - building materials and furnishings with low pollution emissions;
 - ehicles and construction plant operating on fuel that causes low
 - emissions of fine particles and vapours;
 - Vehicles, construction plant and other equipment that operate as quietly as possible;
 - an optimum site layout to ensure that:pollution-generating activities are located away from sensitive receptors or housed in closed environments where possible;
 - barriers and screens are used effectively to screen noise sources such as engines compressors, etc.
 - there is an adequate supply of water for damping down particles with sufficient hoses to reach all parts of the site;
 - water supply is conveniently located near particle-generating activities and site exits;
 - proper control and disposal of 'run-off' water from damping down is carried out;
 - good site housekeeping and management
- The demolition shall at all times comply with BS 5228:2009 noise control on construction and demolition sites
- Noise levels will be monitored throughout the works. Should agreed noise levels be exceeded then works will cease pending review.
- There will be no noisy working outside normal hours.
- The area surrounding the works shall be cordoned off by Structures.
- The required column and splice attributes to be recorded from section 'Structural investigation'.

Reinstatement rebuild brickwork (Type 3 - perimeter columns & splices)

- After the measurements and inspection of the condition of the steelwork and bracketry has occurred, the reinstatement may be undertaken.
- The existing bricks are to be reinstated in their original location and flush with the in-situ brickwork, using suitable lime mortar.
- The lime mortar will be used to allow for easier removal of the brickwork in the future if and when further OIJW are required for the same area.
- To begin the rebuild, mix mortar as per specification on drawing, using a belle mixer.
- Mixer to be positioned on a drip trip always, mixing area to be protected with ply board or visqueen sheeting to protect floor beneath.
- If Mixer requires refuelling, always try to refuel of site. Where this is not possible ensure a spill, kit is available and that the on-site refilling rules are followed. If unsure about these rules, please contact the site manager who will locate the refuelling area.
- When mortar is being mixed ensure operative is wearing a fp3 face fit mask.
- Once mortar is mixed it can be taken to the work area. To get it onto the scaffold a genie wheel which will be provided ad fitted by principal contractor unless works are at low level, a wheelbarrow will be used to get materials to work area.
- When mortar is at work area, the brickwork can start to be rebuilt.
- Existing lines and bound shall be followed when rebuild commences.
- Once rebuild is completed a pointing mix shall be made to match existing colour.
- Pointing shall be completed to match existing.
- All areas highlighted on drawing to be repointed will be completed.
- Once desired finish is achieved then
- Once completed area shall be signed off by principal contractor.
- When cleaning is completed, any debris shall be bagged and put into correct wastes skips
- Work area to be left tidy ready for next trade
- Plaster will not be applied to the bricks once reinstated, as there is potential for further OIJW at the same location.
- At this stage, where the existing element has an internal finish (for example plaster), Structures Group shall not reinstate the finish.
- Structures Group to provide a schedule of the locations where existing finishes have been broken out, including extents of removed finishes.

Structural investigation (Type 4 – Typical slabs)

- Following previous intrusive investigations, the concrete slabs are known to be lightly reinforced.
- Structures Group shall break out typical floor slabs to locate reinforcement and confirm thickness of the structural slab, as well as any top surface or soffit finishes.
- The floor level being opened and the level below must be made safe during the opening up works by hoarding off or otherwise protecting other site operatives from falling debris or openings in the floor. All openings must be made safe after opening up until full reinstatement has been undertaken — either by plating over or hoarding off the area.
- All reasonable precautions are to be taken to avoid unnecessary noise and vibration.
 - Structures Group to determine a selection of quiet and low vibration equipment to carry out the works.

- Structures Group to review the methodology on site to identify If there are any other quieter methods not listed within this method statement. If quieter methods are identified, this method statement will be updated accordantly.
- All construction activities with potential to cause noise pollution, will be strictly carried out during normal working hours (no works after 5pm and weekdays only).
- prefabricated components and constructions wherever possible;
- building materials and furnishings with low pollution emissions;
- ehicles and construction plant operating on fuel that causes low
- emissions of fine particles and vapours;
- Vehicles, construction plant and other equipment that operate as quietly as possible;
- an optimum site layout to ensure that:pollution-generating activities are located away from sensitive receptors or housed in closed environments where possible;
- barriers and screens are used effectively to screen noise sources such as engines compressors, etc.
- there is an adequate supply of water for damping down particles with sufficient hoses to reach all parts of the site;
- water supply is conveniently located near particle-generating activities and site exits;
- proper control and disposal of 'run-off' water from damping down is carried out;
- good site housekeeping and management
- The demolition shall at all times comply with BS 5228:2009 noise control on construction and demolition sites
- Noise levels will be monitored throughout the works. Should agreed noise levels be exceeded then works will cease pending review.
- There will be no noisy working outside normal hours.
- The area surrounding the works shall be cordoned off by Structures.
- Safe access route and setting down area shall be established for the works.
- For breaking out existing concrete, A Hilta te1000 or te3000 electric jackhammer will be used.
- Please ensure the correct PPE is worn to operate the jackhammer (mask, hat, goggles, boots and tough clothing)
- Before breaking up the concrete, please assess the area and ensure there is no water, gas, power or telephone lines running beneath.
- If the area is good to break, please clear the area by removing any sticks, leaves, debris etc.
- Laying a polythene sheet over the concrete will stop chunks of stone and dust from flying beyond the work area, making it easier to clean up afterwards. Lightly sprinkling the concrete with water beforehand also helps to reduce dust escaping.
- Please ensure the jackhammer has adequate fuel to compete works.
- Have a good solid footing when breaking out.
- Always stand on solid, unbroken concrete.
- Start at the side farthest away from you so that you can stand on a steady surface as you break the concrete.
- Make sure the power cord is behind you and is not near the breaker point.
- Wear sturdy boots to help keep your feet planted.
- Start the breaking out by placing the chisel head on one corner of the slab.
- Hold the jackhammer firmly and upright.
- Switch on the breaker. It will start vibrating and hammering at the focus point.
- The breaker should start to crack the surface of the slab.

- It is best to break the concrete into smaller pieces to prevent the jackhammer getting stuck.
- Start slowly and carefully, letting the jackhammer do the work, making sure not to drill in a diagonal direction. Remain upright.
- Once a piece of concrete has cracked, move no more than 2 or 3 inches back before hammering the next section.
- Work from the corners into the centre of the slab.
- Remove concrete debris that gets in your way. Where concrete remains locked together, prise the chunks apart with a mattock or pickaxe.
- The required slab attributes column and splice attributes to be recorded from section 'Structural investigation'.

Reinstatement (Type 4 – Typical slabs)

- After inspection and measurement of the slab voids and cores of the slab are taken, the reinstatement shall be undertaken.
- The area to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth.
- The exposed steel and concrete will be prepared by wire brushing the steel to remove existing primers and corrosion.
- Existing steel to be primed with a bonding agent (such as Sika MonoTop-610)
- Work area to be confirmed with Arcadis Ltd site management team and made ready for the installation of the steel reinforcement.
- Using either a float or trowel as a render, apply repair material in accordance with manufacturers recommended instructions.
- A high build concrete repair mortar will be applied and finished to match the existing concrete encasement (such as Sika MonoTop-615).
- Reaching original lines and profiles can be achieved by thicker applications of repair mortar. Should any repairs require multi-layer applications, all previous layers must be well keyed and stable. Final profiling can be obtained using a steel float.
- All rubble/debris arising from these works to be removed to skip upon completion.
- Work area to be signed off once completed.
- At this stage, where the existing element has an internal finish (for example plaster), Structures Group Shall not to reinstate the finish.
- However, Structures Group shall provide a schedule of the locations where existing finishes have been broken out, including extents of removed finishes.

Structural investigation (Type 5 – Basement slabs / foundations)

- The existing basement slab is a reinforced cast insitu concrete slab, assumed to be ground bearing, The slab thickness is expected to be in the region of 150mm to 200mm based on the previous investigations by RTA.
- There are existing drains and drainage runs beneath the sub-basement and basement slab.
- Structures Group should be cognisant of the existing manholes and extensive services at both basement levels while undertaking the works.

- Structures Group shall break out the full foundation extents on plan to be able to document the required foundation attributes, This is likely to require trenching in two perpendicular directions for each foundation.
- All reasonable precautions are to be taken to avoid unnecessary noise and vibration.
 - Structures Group to determine a selection of quiet and low vibration equipment to carry out the works.
 - Structures Group to review the methodology on site to identify If there are any other quieter methods not listed within this method statement. If quieter methods are identified, this method statement will be updated accordantly.
 - All construction activities with potential to cause noise pollution, will be strictly carried out during normal working hours (no works after 5pm and weekdays only).
 - prefabricated components and constructions wherever possible;
 - building materials and furnishings with low pollution emissions;
 - ehicles and construction plant operating on fuel that causes low
 - emissions of fine particles and vapours;
 - Vehicles, construction plant and other equipment that operate as quietly as possible;
 - an optimum site layout to ensure that:pollution-generating activities are located away from sensitive receptors or housed in closed environments where possible;
 - barriers and screens are used effectively to screen noise sources such as engines compressors, etc.
 - there is an adequate supply of water for damping down particles with sufficient hoses to reach all parts of the site;
 - water supply is conveniently located near particle-generating activities and site exits;
 - proper control and disposal of 'run-off' water from damping down is carried out;
 - good site housekeeping and management
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- The demolition shall at all times comply with BS 5228:2009 noise control on construction and demolition sites
- Noise levels will be monitored throughout the works. Should agreed noise levels be exceeded then works will cease pending review.
- There will be no noisy working outside normal hours.
- The area surrounding the works shall be cordoned off by Structures.
- Safe access route and setting down area shall be established for the works.
- For breaking out existing concrete, A Hilta te1000 or te3000 electric jackhammer will be used.
- Please ensure the correct PPE is worn to operate the jackhammer (mask, hat, goggles, boots and tough clothing)
- Before breaking up the concrete, please assess the area and ensure there is no water, gas, power or telephone lines running beneath.
- If the area is good to break, please clear the area by removing any sticks, leaves, debris etc.
- Laying a polythene sheet over the concrete will stop chunks of stone and dust from flying beyond the work area, making it easier to clean up afterwards. Lightly sprinkling the concrete with water beforehand also helps to reduce dust escaping.
- Please ensure the jackhammer has adequate fuel to compete works.
- Have a good solid footing when breaking out.
- Always stand on solid, unbroken concrete.
- Start at the side farthest away from you so that you can stand on a steady surface as you break the concrete.

- Make sure the power cord is behind you and is not near the breaker point.
- Wear sturdy boots to help keep your feet planted.
- Start the breaking out by placing the chisel head on one corner of the slab.
- Hold the jackhammer firmly and upright.
- Switch on the breaker. It will start vibrating and hammering at the focus point.
- The breaker should start to crack the surface of the slab.
- It is best to break the concrete into smaller pieces to prevent the jackhammer getting stuck.
- Start slowly and carefully, letting the jackhammer do the work, making sure not to drill in a diagonal direction. Remain upright.
- Once a piece of concrete has cracked, move no more than 2 or 3 inches back before hammering the next section.
- Work from the corners into the centre of the slab.
- Remove concrete debris that gets in your way. Where concrete remains locked together, prise the chunks apart with a mattock or pickaxe.
- The required slab and foundation attributes to be recorded from the OCJW are described in Section 'Structural investigation'.

Reinstatement (Type 5 – Basement slabs / foundations)

- Until the OUW have occurred, the reinforcement provision and waterproofing membrane presence is unknown.
- Nonetheless, it is the intention that - if removed - equivalent reinforcement, waterproofing, and concrete to be provided Structures Group to reinstate the building fabric removed as part of intrusive works.
- After inspection and measurement of the slab voids and cores of the slab are taken, the reinstatement shall be undertaken.
- The area to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth.
- The exposed steel and concrete will be prepared by wire brushing the steel to remove existing primers and corrosion.
- Existing steel to be primed with a bonding agent (such as Sika MonoTop-610).
- Work area to be confirmed with Arcadis Ltd site management team and made ready for the installation of the steel reinforcement.
- Using either a float or trowel as a render, apply repair material in accordance with manufacturers recommended instructions.
- A high build concrete repair mortar will be applied and finished to match the existing concrete encasement (such as Sika MonoTop-615).
- Reaching original lines and profiles can be achieved by thicker applications of repair mortar. Should any repairs require multi-layer applications, all previous layers must be well keyed and stable. Final profiling can be obtained using a steel float.
- All rubble/debris arising from these works to be removed to skip upon completion.
- Work area to be signed off once completed.
- At this stage, where the existing element has an internal finish (for example plaster), Structures Group shall not to reinstate the finish.
- However, Structures Group shall provide a schedule of the locations where existing finishes have been broken out, including extents of removed finishes.

- Where there are local OUW, this may be reinstated using the noted Sika MonoTop 610 and 615 products to build up and float to match the level of the existing floor.
- In the event of more extensive OUW, the reinstatement should be completed using traditional concrete with reinforcement reinstated to match existing.
- At this stage, where the existing element has an internal finish (for example plaster), Structures Group shall not reinstate the finish.
- Structures are to provide a schedule of the locations where existing finishes have been broken out, including extents of removed finishes.

Structural investigation (Type 6 – roof slabs)

- Following previous intrusive investigations, the concrete slabs are known to be lightly reinforced.
- Structures Group shall break out roof build up and concrete roof slabs to locate reinforcement. Where the investigation location is directly above a column, Structures Group shall document the column capping detail.
- Timber and correx temporary weather protection to be provided by Structures Group.
- The roof to be covered with correx and fixed down securely on the roof surface with timber boards.
- All reasonable precautions are to be taken to avoid unnecessary noise and vibration.
 - Structures Group to determine a selection of quiet and low vibration equipment to carry out the works.
 - Structures Group to review the methodology on site to identify if there are any other quieter methods not listed within this method statement. If quieter methods are identified, this method statement will be updated accordingly.
 - All construction activities with potential to cause noise pollution, will be strictly carried out during normal working hours (no works after 5pm and weekdays only).
 - prefabricated components and constructions wherever possible;
 - building materials and furnishings with low pollution emissions;
 - vehicles and construction plant operating on fuel that causes low emissions of fine particles and vapours;
 - Vehicles, construction plant and other equipment that operate as quietly as possible;
 - an optimum site layout to ensure that: pollution-generating activities are located away from sensitive receptors or housed in closed environments where possible;
 - barriers and screens are used effectively to screen noise sources such as engines compressors, etc.
 - there is an adequate supply of water for damping down particles with sufficient hoses to reach all parts of the site;
 - water supply is conveniently located near particle-generating activities and site exits;
 - proper control and disposal of 'run-off' water from damping down is carried out;
 - good site housekeeping and management
- The demolition shall at all times comply with BS 5228:2009 noise control on construction and demolition sites
- Noise levels will be monitored throughout the works. Should agreed noise levels be exceeded then works will cease pending review.

- There will be no noisy working outside normal hours.
- The area surrounding the works shall be cordoned off by Structures.
- Safe access route and setting down area shall be established for the works.
- For breaking out existing concrete, A Hilti te1000 or te3000 electric jackhammer will be used.
- Please ensure the correct PPE is worn to operate the jackhammer (mask, hat, goggles, boots and tough clothing)
- Before breaking up the concrete, please assess the area and ensure there is no water, gas, power or telephone lines running beneath.
- If the area is good to break, please clear the area by removing any sticks, leaves, debris etc.
- Laying a polythene sheet over the concrete will stop chunks of stone and dust from flying beyond the work area, making it easier to clean up afterwards. Lightly sprinkling the concrete with water beforehand also helps to reduce dust escaping.
- Please ensure the jackhammer has adequate fuel to complete works.
- Have a good solid footing when breaking out.
- Always stand on solid, unbroken concrete.
- Start at the side farthest away from you so that you can stand on a steady surface as you break the concrete.
- Make sure the power cord is behind you and is not near the breaker point.
- Wear sturdy boots to help keep your feet planted.
- Start the breaking out by placing the chisel head on one corner of the slab.
- Hold the jackhammer firmly and upright.
- Switch on the breaker. It will start vibrating and hammering at the focus point.
- The breaker should start to crack the surface of the slab.
- It is best to break the concrete into smaller pieces to prevent the jackhammer getting stuck.
- Start slowly and carefully, letting the jackhammer do the work, making sure not to drill in a diagonal direction. Remain upright.
- Once a piece of concrete has cracked, move no more than 2 or 3 inches back before hammering the next section.
- Work from the corners into the centre of the slab.
- Remove concrete debris that gets in your way. Where concrete remains locked together, prise the chunks apart with a mattock or pickaxe.
- The required column and splice attributes to be recorded from the OUW are described in Section Structural investigation.

Reinstatement (Type 6 – roof slabs)

- After inspection and measurement of the column tops and roof buildup arrangement the reinstatement shall be undertaken.
- The area to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth.
- As the roof build up is not known, a suitable repair detail will be developed upon opening up.
- A compatible waterproof repair detail will be required for the existing roof.
- The exposed steel and concrete will be prepared by wire brushing the steel to remove existing primers and corrosion.
- Existing steel to be primed with a bonding agent (such as Sika MonoTop-610)
- Work area to be confirmed with Arcadis Ltd site management team and made ready for the installation of the steel reinforcement.

- Using either a float or trowel as a render, apply repair material in accordance with manufacturers recommended instructions.
- A high build concrete repair mortar will be applied and finished to match the existing concrete encasement (such as Sika MonoTop-615).
- Reaching original lines and profiles can be achieved by thicker applications of repair mortar. Should any repairs require multi-layer applications, all previous layers must be well keyed and stable. Final profiling can be obtained using a steel float.
- All rubble/debris arising from these works to be removed to skip upon completion.
- Work area to be signed off once completed.
- At this stage, where the existing element has an internal finish (for example plaster), Structures Group shall not to reinstate the finish.
- However, Structures Group shall provide a schedule of the locations where existing finishes have been broken out, including extents of removed finishes.

Structural investigation (Type 7 – mansard roof)

- Following previous intrusive investigations, it is known the primary structure for the mansard roof is comprised of cranked downstand steel beams and columns. The downstand beams are typically encased in concrete for fire protection, with steel mesh in some locations.
- Where mansard opening up works are depicted, Structures Group shall open up the primary downstand beams, column, and to two incoming secondary beams.
- Structures Group shall break out the full depth and width of the steel beam over the minimum length required to obtain with confidence the attributes listed in 'Structural investigation'
- All reasonable precautions are to be taken to avoid unnecessary noise and vibration.
 - Structures Group to determine a selection of quiet and low vibration equipment to carry out the works.
 - Structures Group to review the methodology on site to identify If there are any other quieter methods not listed within this method statement. If quieter methods are identified, this method statement will be updated accordantly.
 - All construction activities with potential to cause noise pollution, will be strictly carried out during normal working hours (no works after 5pm and weekdays only).
 - prefabricated components and constructions wherever possible;
 - building materials and furnishings with low pollution emissions;
 - ehicles and construction plant operating on fuel that causes low
 - emissions of fine particles and vapours;
 - Vehicles, construction plant and other equipment that operate as quietly as possible;
 - an optimum site layout to ensure that:pollution-generating activities are located away from sensitive receptors or housed in closed environments where possible;
 - barriers and screens are used effectively to screen noise sources such as engines compressors, etc.
 - there is an adequate supply of water for damping down particles with sufficient hoses to reach all parts of the site;
 - water supply is conveniently located near particle-generating activities and site exits;
 - proper control and disposal of 'run-off' water from damping down is carried out;
 - good site housekeeping and management

- The demolition shall at all times comply with BS 5228:2009 noise control on construction and demolition sites
- Noise levels will be monitored throughout the works. Should agreed noise levels be exceeded then works will cease pending review.
- There will be no noisy working outside normal hours.
- The area surrounding the works shall be cordoned off by Structures.
- Safe access route and setting down area shall be established for the works.
- For breaking out existing concrete, A Hilti te1000 or te3000 electric jackhammer will be used.
- Please ensure the correct PPE is worn to operate the jackhammer (mask, hat, goggles, boots and tough clothing)
- Before breaking up the concrete, please assess the area and ensure there is no water, gas, power or telephone lines running beneath.
- If the area is good to break, please clear the area by removing any sticks, leaves, debris etc.
- Laying a polythene sheet over the concrete will stop chunks of stone and dust from flying beyond the work area, making it easier to clean up afterwards. Lightly sprinkling the concrete with water beforehand also helps to reduce dust escaping.
- Please ensure the jackhammer has adequate fuel to complete works.
- Have a good solid footing when breaking out.
- Always stand on solid, unbroken concrete.
- Start at the side farthest away from you so that you can stand on a steady surface as you break the concrete.
- Make sure the power cord is behind you and is not near the breaker point.
- Wear sturdy boots to help keep your feet planted.
- Start the breaking out by placing the chisel head on one corner of the slab.
- Hold the jackhammer firmly and upright.
- Switch on the breaker. It will start vibrating and hammering at the focus point.
- The breaker should start to crack the surface of the slab.
- It is best to break the concrete into smaller pieces to prevent the jackhammer getting stuck.
- Start slowly and carefully, letting the jackhammer do the work, making sure not to drill in a diagonal direction. Remain upright.
- Once a piece of concrete has cracked, move no more than 2 or 3 inches back before hammering the next section.
- Work from the corners into the centre of the slab.
- Remove concrete debris that gets in your way. Where concrete remains locked together, prise the chunks apart with a mattock or pickaxe.
- The required column and splice attributes to be recorded from the OUW are described in **Structural investigation**

Reinstatement (Type 7 – mansard roof)

- After inspection and measurement of the mansard beam arrangement the reinstatement shall be undertaken.
- The area to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth.
- The exposed steel and concrete will be prepared by wire brushing the steel to remove existing primers and corrosion.

- Existing steel to be primed with a bonding agent (such as Sika MonoTop-610)
- Work area to be confirmed with Arcadis Ltd site management team and made ready for the installation of the steel reinforcement.
- Using either a float or trowel as a render, apply repair material in accordance with manufacturers recommended instructions.
- A high build concrete repair mortar will be applied and finished to match the existing concrete encasement (such as Sika MonoTop-615).
- Reaching original lines and profiles can be achieved by thicker applications of repair mortar. Should any repairs require multi-layer applications, all previous layers must be well keyed and stable. Final profiling can be obtained using a steel float.
- All rubble/debris arising from these works to be removed to skip upon completion.
- Work area to be signed off once completed.
- At this stage, where the existing element has an internal finish (for example plaster), Structures Group Shall not to reinstate the finish.
- However, Structures Group shall provide a schedule of the locations where existing finishes have been broken out, including extents of removed finishes.

Structural investigation (Type 8 – basement walls and piers)

- To date, intrusive investigations have not been undertaken to the basement walls, piers, or foundations.
- It is assumed that the piers are concrete, which are encasing steel columns, likely to be plated sections.
- Structures Group are to breakout the pier to locate the full width and depth of the encased steel column.
- Where the opening up works are undertaken for the bottom column stack, Structures Group are to break out the base of the column to determine the holding down arrangement, which may be a flared gusset base.
- For the basement wall, Structures Group are to break out a concrete wall to locate the vertical and horizontal reinforcement.
- All reasonable precautions are to be taken to avoid unnecessary noise and vibration.
 - Structures Group to determine a selection of quiet and low vibration equipment to carry out the works.
 - Structures Group to review the methodology on site to identify If there are any other quieter methods not listed within this method statement. If quieter methods are identified, this method statement will be updated accordantly.
 - All construction activities with potential to cause noise pollution, will be strictly carried out during normal working hours (no works after 5pm and weekdays only).
 - prefabricated components and constructions wherever possible;
 - building materials and furnishings with low pollution emissions;
 - ehicles and construction plant operating on fuel that causes low
 - emissions of fine particles and vapours;
 - Vehicles, construction plant and other equipment that operate as quietly as possible;
 - an optimum site layout to ensure that:pollution-generating activities are located away from sensitive receptors or housed in closed environments where possible;
 - barriers and screens are used effectively to screen noise sources such as engines compressors, etc.

- there is an adequate supply of water for damping down particles with sufficient hoses to reach all parts of the site;
- water supply is conveniently located near particle-generating activities and site exits;
- proper control and disposal of 'run-off' water from damping down is carried out;
- good site housekeeping and management
- The demolition shall at all times comply with BS 5228:2009 noise control on construction and demolition sites
- Noise levels will be monitored throughout the works. Should agreed noise levels be exceeded then works will cease pending review.
- There will be no noisy working outside normal hours.
- The area surrounding the works shall be cordoned off by Structures.
- Safe access route and setting down area shall be established for the works.
- For breaking out existing concrete, A Hilti te1000 or te3000 electric jackhammer will be used.
- Please ensure the correct PPE is worn to operate the jackhammer (mask, hat, goggles, boots and tough clothing)
- Before breaking up the concrete, please assess the area and ensure there is no water, gas, power or telephone lines running beneath.
- If the area is good to break, please clear the area by removing any sticks, leaves, debris etc.
- Laying a polythene sheet over the concrete will stop chunks of stone and dust from flying beyond the work area, making it easier to clean up afterwards. Lightly sprinkling the concrete with water beforehand also helps to reduce dust escaping.
- Please ensure the jackhammer has adequate fuel to complete works.
- Have a good solid footing when breaking out.
- Always stand on solid, unbroken concrete.
- Start at the side farthest away from you so that you can stand on a steady surface as you break the concrete.
- Make sure the power cord is behind you and is not near the breaker point.
- Wear sturdy boots to help keep your feet planted.
- Start the breaking out by placing the chisel head on one corner of the slab.
- Hold the jackhammer firmly and upright.
- Switch on the breaker. It will start vibrating and hammering at the focus point.
- The breaker should start to crack the surface of the slab.
- It is best to break the concrete into smaller pieces to prevent the jackhammer getting stuck.
- Start slowly and carefully, letting the jackhammer do the work, making sure not to drill in a diagonal direction. Remain upright.
- Once a piece of concrete has cracked, move no more than 2 or 3 inches back before hammering the next section.
- Work from the corners into the centre of the slab.
- Remove concrete debris that gets in your way. Where concrete remains locked together, prise the chunks apart with a mattock or pickaxe.
- Where Type 8 01-JW are noted on drawings at the perimeter of the ground floor, this relates to opening up the building fabric to understand the head of the basement wall. The same attributes as for an internal foundation (depth, width etc) are required, as well as any record of any waterproofing treatment and interfaces with the building fabric.
- Structures Group are to be cognisant of the existing manholes and extensive services at both the basement and sub-basement levels while undertaking the works.

- The required column and splice attributes to be recorded from the 01-JW are described in Section Structural investigation.

Reinstatement (Type 8 – basement walls and piers)

- Until the OUW have occurred, the reinforcement provision and waterproofing membrane presence is unknown.
- Nonetheless, it is the intention that - if removed - equivalent reinforcement, waterproofing, and concrete to be provided Structures Group to reinstate the building fabric removed as part of intrusive works.
- After inspection and measurement of the slab voids and cores of the slab are taken, the reinstatement shall be undertaken.
- The area to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth.
- The exposed steel and concrete will be prepared by wire brushing the steel to remove existing primers and corrosion.
- Existing steel to be primed with a bonding agent (such as Sika MonoTop-610).
- Work area to be confirmed with Arcadis Ltd site management team and made ready for the installation of the steel reinforcement.
- Using either a float or trowel as a render, apply repair material in accordance with manufacturers recommended instructions.
- A high build concrete repair mortar will be applied and finished to match the existing concrete encasement (such as Sika MonoTop-615).
- Reaching original lines and profiles can be achieved by thicker applications of repair mortar. Should any repairs require multi-layer applications, all previous layers must be well keyed and stable. Final profiling can be obtained using a steel float.
- All rubble/debris arising from these works to be removed to skip upon completion.
- Work area to be signed off once completed.
- At this stage, where the existing element has an internal finish (for example plaster), Structures Group Shall not to reinstate the finish.
- However, Structures Group shall provide a schedule of the locations where existing finishes have been broken out, including extents of removed finishes.
- Where there are local OUW, this may be reinstated using the noted Sika MonoTop 610 and 615 products to build up and float to match the level of the existing floor.
- In the event of more extensive OUW, the reinstatement should be completed using traditional concrete with reinforcement reinstated to match existing.
- At this stage, where the existing element has an internal finish (for example plaster), Structures Group shall not reinstate the finish.
- Structures are to provide a schedule of the locations where existing finishes have been broken out, including extents of removed finishes.

3. Communications and Coordination of Works

The method statement will be communicated to all operatives working on the project, the method statement will be submitted to **Arcadis Ltd** for approval prior to works are to be managed at all times by the Structures Group site supervisor.

4. Plant Materials and Equipment

Plant
Hand Tools
Petrol/Diesel
110v transformer with associated leads
Waste skips
Correx
Timber boards
Concrete repair mortar
Concrete repair primer
Large scale concrete repair
Reinforcement
Mesh
Waterproofing
Brick mortar
Jackhammer

5. Risk Assessments

The following risk have been identified as potential risk associated with the task.

1. Obstruction of assigned emergency routes
2. Slips, Trips and Falls on the same level
3. Public / Third Party Protection
4. Collision of vehicles / plant with persons or structures
5. COVID-19: Spread via uncleanness
6. COVID-19: Coughing, sneezing etc spreading the virus.
7. COVID-19: Virus carry on hand tools passed around.
8. COVID-19: General virus spread.
9. Inhalation of harmful substances
10. Use of tools (tools left lying on site)
11. Use of tools (use of sharp tools)
12. Use of tools (misuse)
13. Fire / Explosion
14. Manual Handling

15. Falling objects
16. Flying particles
17. Contact with hazardous materials / dusts
18. Noise
19. Power tools and hand tools
20. Public Interface
21. Fall of materials from height
22. Asbestos – Hazardous Materials
23. Noise / Vibration
24. Working alone
25. Fire prevention
26. Sprains and strains
27. Hazardous Chemicals
28. Cuts and bruises / Lacerations
29. Stairwells

6. Environmental Controls

All works to be carried out in accordance to the site environmental policy

7. First Aid and PPE requirements

A COMPETENT PERSON WILL BE ONSITE AT ALL TIMES TO CONTACT EMERGENCY SERVICES IF REQUIRED.

All Structures supervisors are qualified in SSSTS & First Aid.

PPE

Hard Hat, Hi-Viz, Boots and Gloves must be worn at all times without exception.

FFP3 dust mask to be worn during the raking & cleaning stage.

Eye protection to be worn as the operative will be using a DOFF cleaning system generating particles in the air and raking out

Hard Hat in accordance with BS EN 50365

Hi-Viz in accordance with BS EN 471

Steel Toe Cap Footwear in accordance with BS EN20345

Gloves in accordance with BS EN 388

Cut Resistant Gloves in accordance with BS EN 388

FFP3 Face Fit Dust Mask in accordance with BS EN 140

Eye Protection in accordance with BS EN 166

8. Special Control Measures/Emergency Procedures



9. Record of briefing of persons undertaking the work. *(briefing to be completed prior to work commencing)*

<u>Name</u>	<u>Signature</u>	<u>Date</u>	<u>Comments</u>

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