

ANNEXURE A

# Engineering Report





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Barwon Water

# Barwon Aqueduct

## Structural Engineering and Risk Assessment Report

Reference: BAR-HVP-REP-001

Issue for Permit | 28 August 2025



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# 1. Purpose of Document

This report has been prepared for Barwon Water and is intended to accompany a heritage permit application for a new project involving demolition of all spans of the heritage listed Ovoid Sewer Aqueduct over the Barwon River ('the Aqueduct').

This application for demolition follows an extensive period of condition reporting, structural engineering studies, constructability reviews, and risk assessments that have been undertaken by Barwon Water, Arup and the project team between 2019-2025, in the pursuit of reopening the Barwon River and seeking a safely constructible solution for the scope of works outlined in the 2020 heritage permit P32806 (namely partial demolition of the 4x river spans, and conservation works to the remainder of the structure).

The report is to be read in conjunction with the following documents:

- Lovell Chen: Heritage Impact Statement (August 2025)
- Lovell Chen/Arup: Heritage Infrastructure Management Plan Part 1 (2022)
- Arup: Barwon River Ovoid Sewer Aqueduct Demolition Works Drawings (P1 issue, 07/07/2025, 5 sheets)

## 2. Executive Summary

The studies and assessments undertaken on the aqueduct over the past five years have yielded a substantial body of knowledge regarding technical aspects of the existing structure, including its current condition, structural behaviour and potential failure modes. This has in turn informed significant safety limitations regarding any works in the vicinity of the structure, which have formed a brief for design of interventions to the structure.

In short, any interventions that require people working near the aqueduct are governed by significant safety risks during construction.

A range of key intervention categories were considered as part the work leading up to and after issue of the 2020 Heritage Permit P32806. These are introduced here, and expanded upon within the report body.

### 1. Structural Propping:

- The partial demolition scope outlined in the 2020 permit required propping to be installed under at least three of the retained spans of the aqueduct, to avoid inducing instability from ‘seesaw’ action during structural separation.
- The installation of propping under all aqueduct spans can additionally serve to mitigate against a catastrophic ‘chain reaction’ failure event.
- Propping does not arrest degradation of the structural fabric, which would continue unabated until the eventual failure of the structure.
- Propping underwent significant design, focussing on safety risks to workers during the installation. Any propping scheme comes with safety risks during construction that ultimately cannot be satisfactorily mitigated.
- It is not feasible to undertake maintenance on the propping structures due to safety risks. The propping structures will eventually degrade, noting the 1991 propping structure has not been maintained since it was installed.

### 2. Do Nothing

- The structure in its current state presents a significant public safety risk. A ‘do nothing’ approach does not address the key project outcome of opening the Barwon River and will result in an eventual uncontained structural collapse at some point in the future. As long as the structure remains standing, the public safety risk remains.

### 3. Concrete Repair:

- Following review with specialists early in the project lifecycle, it was deemed unfeasible to undertake any patch repairs, member recasting or other conservation works directly to the aqueduct structure, due to the safety risks posed for personnel required near the structure and the lack of efficacy of such methods due to the heavily degraded concrete condition.

### 4. Demolition

- The heritage permit P32806 accepted a partial demolition of the structure (4x river spans), in response to the public safety risks and lack of feasible alternative interventions for these spans.
- Following substantial assessment and review, the current proposal for demolition of all superstructure spans is deemed to be the only technically feasible option available that addresses the existing public safety risk profile, whilst not putting construction workers at undue risk during the works.
- The retention of pier bases and stairs as placemaking features is feasible after safe removal of the demolished structure, and allows footprint elements of the structure to be retained on the site as permanent markers.

This report expands upon and addresses the history of these interventions, along with a summary of the aqueduct’s structural behaviour, and existing conditions found during condition survey work.

### 3. Project Background

The Barwon Sewer Aqueduct, constructed between 1913 and 1916, is a heritage-listed reinforced concrete truss structure spanning the Barwon River near Breakwater, Victoria. The bridge is approximately 750m in length and comprises 14 interconnected spans. The aqueduct originally served to carry a gravity sewer pipe across the Barwon River and floodplain but was decommissioned in the early 1990's and now no longer serves a practical purpose.

The aqueduct was a pioneering feat of engineering at the time and remains of significant historical, architectural, and technical value – this was recognised in its heritage listing at the time of its decommissioning.

The structure has suffered significant decay, largely due to its unique reinforced concrete truss structural form and the relatively low-quality concrete comprising its primary structural elements. A significant number of repairs on the structure have been documented throughout its service life, from soon after construction up until its decommissioning. At decommissioning, the structure was already in poor condition, with propping being installed under Span 14. Since decommissioning, the structure has not had any recorded repairs, other than corrosion repair trials undertaken in 2009.

At inception of the current project in 2019, the area under the structure, including the Barwon River, had already been closed to the public for some time, due to safety risks posed by falling concrete and structural failure.

A key driver for the current project was to safely reopen the Barwon River and mitigate the risks to the public that are currently posed by the structure, whilst aiming to retain and conserve as much of the structure as possible. After testing a range of concept options in 2019, a partial demolition of the structure over the river spans was proposed, and a heritage permit issued in 2020 for this scope of works, coupled with conservation of the retained spans.

Since issue of the heritage permit, the project team has undertaken many detailed assessments and design iterations to attempt to satisfy the permit conditions. A history of the design iterations and features are presented within this report, along with commentary as to the outcomes and limitations faced due to the existing structural condition.

## 4. Structural Behaviour – Summary

A summary of the structural behaviour of the existing aqueduct is provided as background, given the criticality of the structure's behaviour when developing interventions and separation strategies, particularly when considering safety aspects.

### 4.1 Analysis Methods and Failure Prediction

In a typical situation, the process to predict behaviour of an existing structure involves gathering data on the existing materials and geometry, then undertaking numerical structural analysis to determine the factor of safety against failure. However, the heavily degraded nature of the aqueduct structure (refer Section 5 for full details) makes this type of structural analysis unreliable.

The level of internal degradation, particularly of the reinforcement and its anchorages is the principal unknown, but additionally there are many members of the structure which have been remediated in the past. These remediations do not have documentation available, thus it is not possible to ascertain all of the exact construction details of the structure.

Arup have undertaken a substantial amount of numerical modelling work on the structure, however due to the unknowns, this is not the only tool used for predicting future behaviour of the aqueduct structure. Failure mode identification and analysis is the primary tool used to identify and develop risks and assess efficacy of interventions for this project.

### 4.2 Balanced Cantilever Structure

Fundamentally, each pier and truss pair and of the aqueduct acts as a balanced cantilever, with the weight of the interconnecting walkway girders and pipe spans acting as loads on the truss tips. These loads are roughly equal so there is no net overturning experienced at the pier tower, analogous to a balanced seesaw. The situation is visually described in Figure 1.

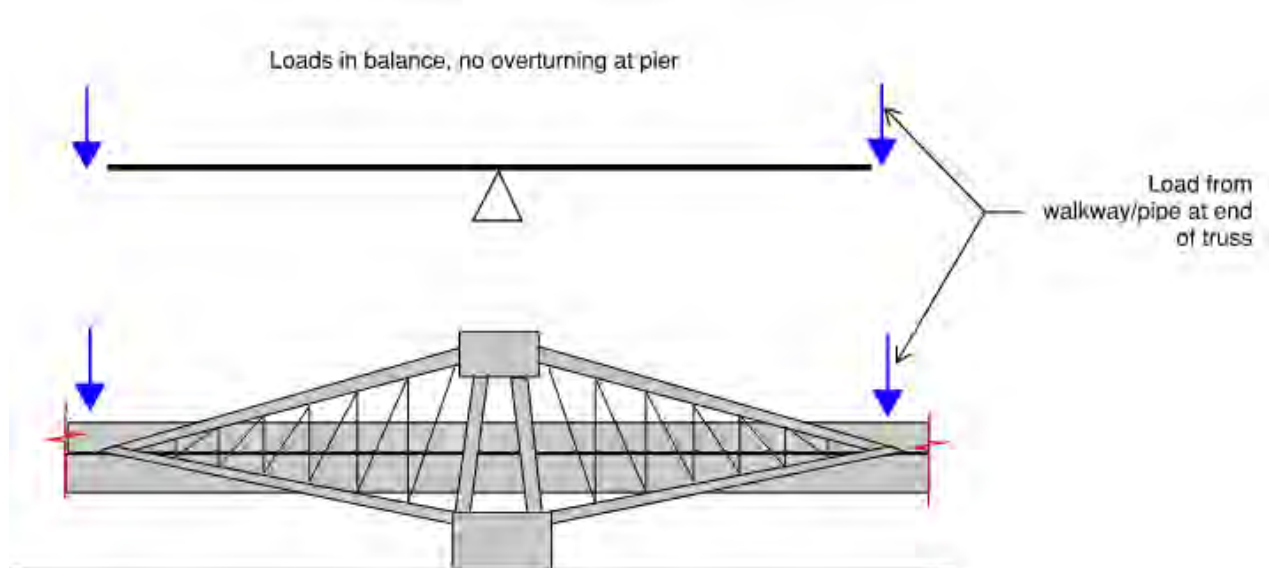
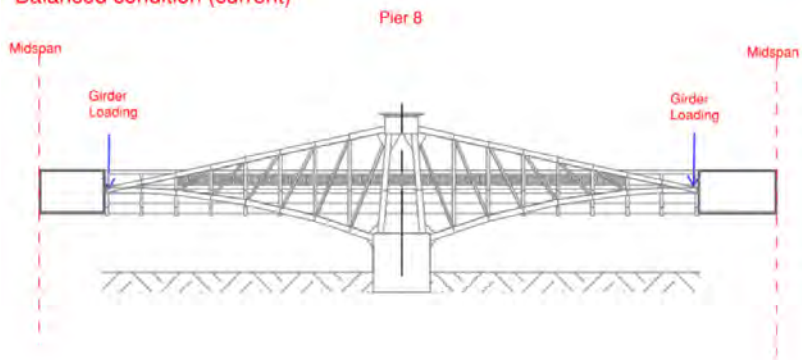


Figure 1 Balanced Cantilever - Seesaw Analogy

This behaviour is important when considering any proposed structural separation, because separating the structure involves a change in the loading regime. Figure 2 shows the potential situation at the separation end if the structure is unpropped, where the removal of load on the end pier could lead to a failure. This is the fundamental reason why propping is required in order to effectively separate the structure.

#### Balanced condition (current)



#### Condition at separation

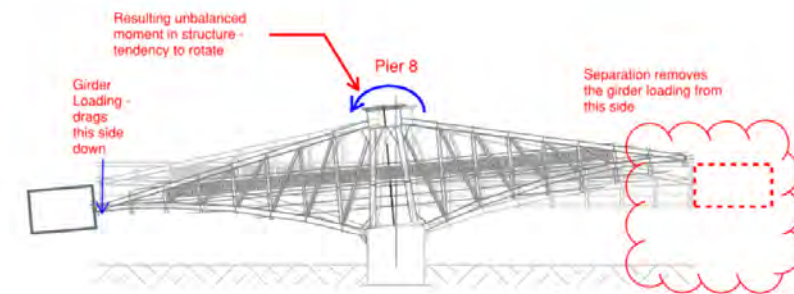


Figure 2 Separation of Structure

### 4.3 Span Failure

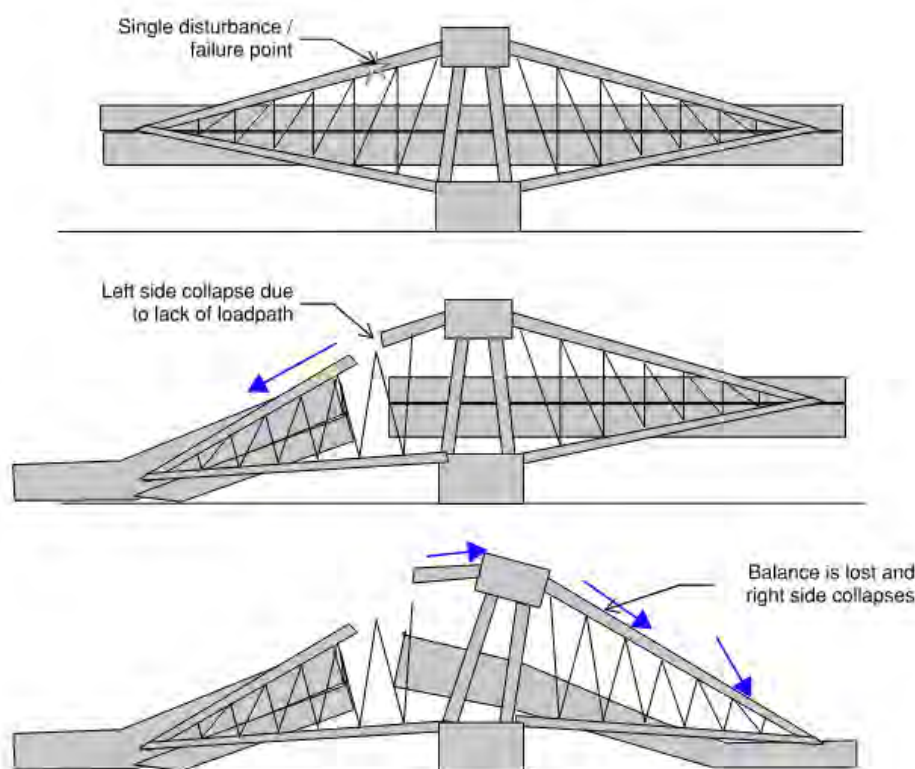
The structure has a low degree of redundancy, particularly in its trusses, thus single failure of the truss or tower can relatively easily lead to a more widespread collapse of the span, and beyond.

Span failure can arise from two basic causes:

1. Disturbance in the balanced loads as already illustrated in Figure 2 (i.e. removal of the walkway/pipe at end of truss ahead of separation)
2. Failure within the structure of the truss/tower system (i.e. single point member failure)

If either of these events occur, then the ‘seesaw’ has the potential to lose equilibrium, resulting in a collapse of the span. The sequence of collapse is described below and graphically in Figure 3:

1. A single member fails within a truss (Figure 3 top image) – or loading imbalance occurs
2. Load redistribution within the truss occurs, due to the failed member no longer carrying load.
3. The load redistribution causes other members in the truss to become overloaded and fail, in turn causing the entire truss span to fail. The failure deforms the tip of the truss downward (Figure 3 middle image).
4. The pier becomes unbalanced, causing a failure leading to the truss on the opposite side of the pier falling (Figure 3 bottom image).



**Figure 3 Failure of Truss due to single point failure.**

Similar effects are observed when the balanced loading on the span is disturbed.

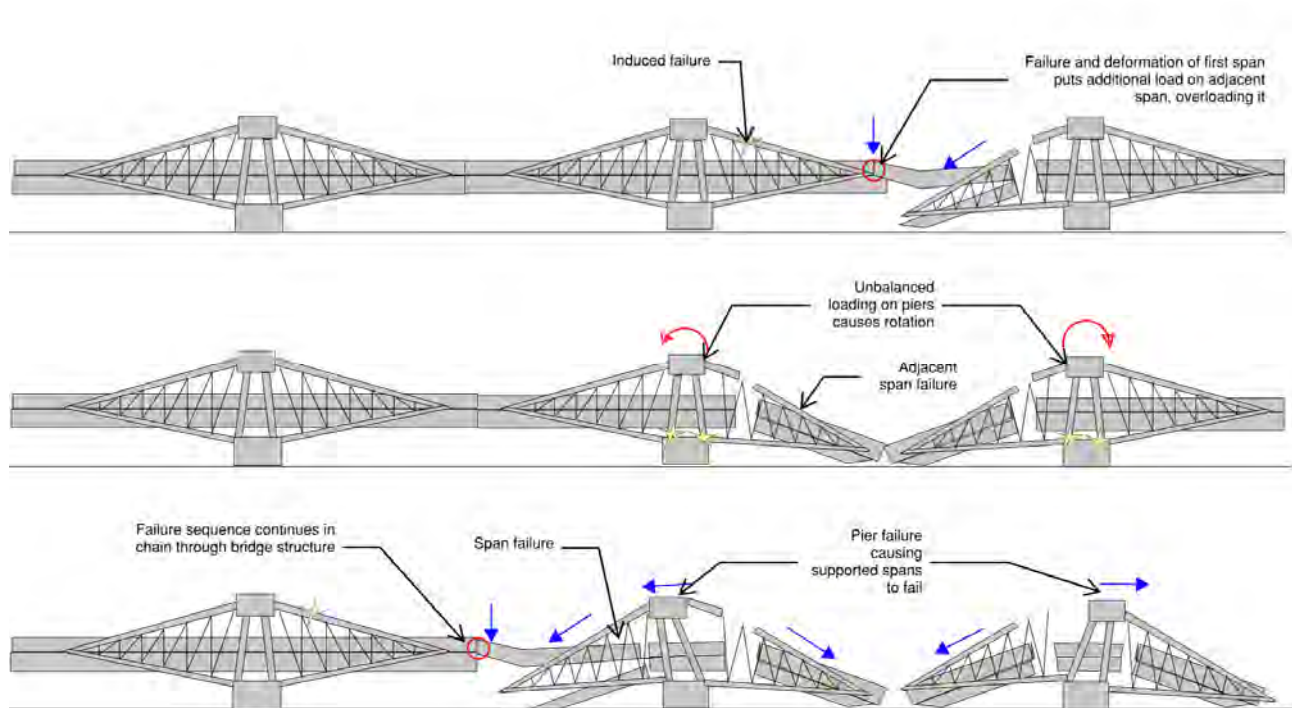


#### 4.4 Progressive ‘Catastrophic’ Collapse Scenario

The aqueduct is a single connected structure, with the pipe and walkway acting to link all spans together, thus there is the ability for transfer of effects between adjacent spans. This connectivity means that the span collapse mechanism described above could potentially continue and propagate through multiple spans, causing a ‘domino effect’ progressive collapse scenario.

This catastrophic scenario of ‘progressive collapse’ of the bridge is a possibility following a single span failure and reflects a worst-case scenario for the bridge. This is shown in Figure 4 as a continuation of the single span failure described previous:

4. The single span deformation pulls the attached walkway girder beam downward with it and places load on the adjacent truss span (Figure 4 top image)
5. The walkway girder beam movement and load overloads the adjacent span, causing failure of the span. This in turn results in loss of balance at the pier. (Figure 4 middle image)
6. The collapse repeats and propagate over multiple spans, i.e. a ‘domino effect’ (Figure 4 bottom image)



**Figure 4 Catastrophic Collapse Sequence**

Propping under the trusses aims to arrest the catastrophic collapse scenario by preventing imbalance from a single span failure from causing deformation and loading on the adjacent span.

There are safety challenges with installing and maintaining the propping due to these scenarios occurring during the construction works. These are discussed further in the report.



## 4.5 Failure Modes and Risk

Due to the limitations of traditional numerical methods as per Section 4.1, failure mode assessment work was undertaken on the existing structure, particularly for safety of personnel during the critical construction phase. This assessment followed the process as below:

1. Identify individual potential failure modes of the structure (i.e. 'top chord failure', 'pier leg failure')
2. Group the failure modes into 'sets' with similar overall outcomes/hazards
3. Assess the relative risk associated with each set.

The Heritage Infrastructure Management Plan (HIMP) Part 1 (August 2022) document provides an overview of the existing structure and introduces mechanisms involved with various failure modes of the aqueduct.

Individual failure modes were identified as part of the HIMP Part 1, and are listed below. These failure modes are described further in the HIMP document:

1. Compressive Failure within Truss
  - a. Bottom chord
  - b. Vertical web
2. Tensile Failure within Truss
  - a. Top chord
  - b. Diagonal web
3. Other Failures
  - a. Pier Leg Failure
  - b. Pier Roof Failure
  - c. Walkway Failure
  - d. Ovoid Pipe Hanger Failure
  - e. Ovoid Pipe Failure
  - f. Foundation Failure

From a safety risk perspective, the individual failure modes can be grouped broadly into three sets as below, with a similar hazard from each set. Each is discussed further in the following sections.

1. Sideways collapse –structural failure (or failures) leading to concrete debris falling outside the aqueduct footprint.
2. Vertical collapse –structural failure (or failures) leading to concrete debris falling within the aqueduct footprint
3. Spalling failures - localised chunks of concrete detaching from the structure

The formal risk assessment described in Section 7 expands on these further in the context of the finalised propping design. Refer to Section 6 for the structural engineering solutions developed in response to these hazards.

#### 4.5.1 Sideways Collapse Hazard

Sideways collapse represents the most significant challenge to safely implementing works around the aqueduct, due to the large footprint impacted by the potential collapse mode (refer below for graphical depiction).

The sideways collapse mode is fully described in the HIMP Part 1, Section 5.4. It requires multiple failure points for this mode to be mobilised. We note this failure mode has an **extremely low likelihood** of occurrence during the aqueduct construction works, but due to the unknowns inherent in the existing structure, and the bespoke/untested mitigations to protect worker during the works, there remains a high risk to workers. Refer Section 7 for further discussion on the construction safety risk.

The following is also noted:

- This is a complex failure mode, involving multiple individual members. Refer Figure 5 for the failure mode steps that must occur for this failure to be mobilised.
- The pier legs are in generally better external condition than other elements in the structure. They are not highly utilised in the current condition and show less signs of structural distress.
- Due to the complexity and compressive nature of the failure mode, it is expected that external visual cues, spalling and movement would be present prior to such a failure occurring.

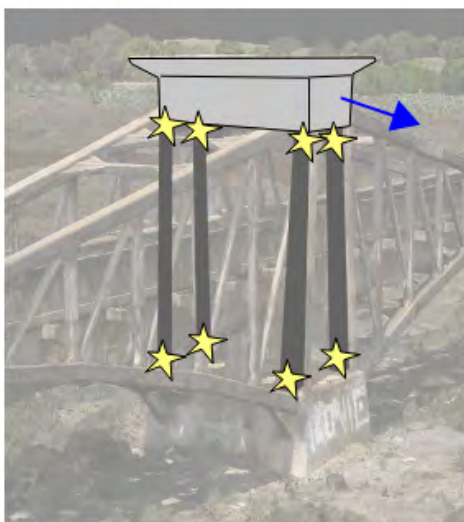
1. At rest condition. Rigid pier legs (4x) provide support to truss and pier head



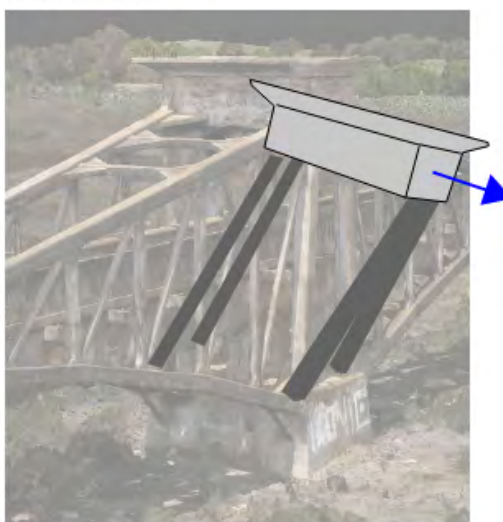
2. Single pier leg failure occurs. Minor sideways movement



3. Further sideways movement forces failure of other pier legs

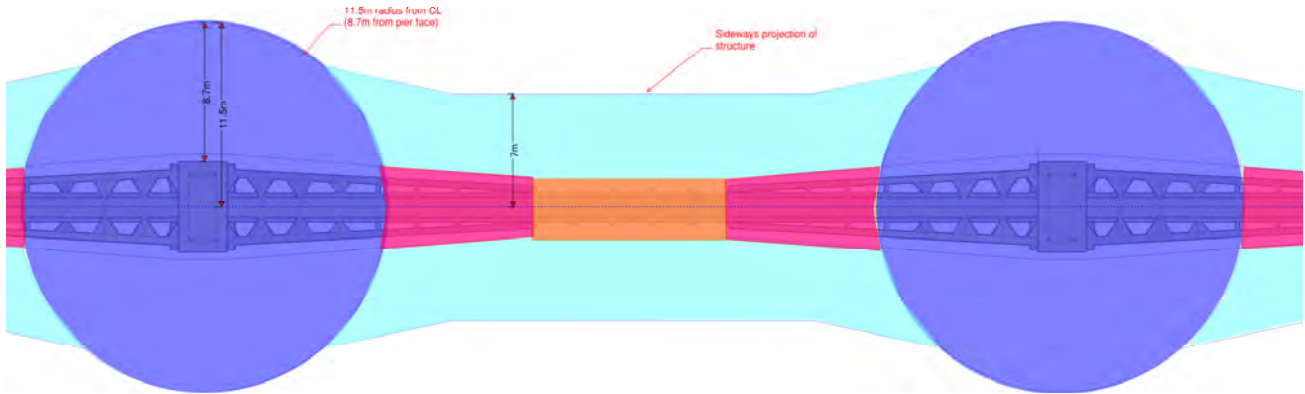


4. Hinges in pier legs cause uncontrolled collapse



**Figure 5 Pier Sideways Failure Mode (unmitigated condition)**

The plan zones around the aqueduct structure that are affected by this failure type are shown in Figure 6 below. The dark blue area represents the footprint that can potentially be affected by a sideways failure of the tower (max 11.5m from the aqueduct centerline), and the light blue area represents the footprint potentially affected by a sideways failure of the truss (7m from the aqueduct centreline). The hazard within these footprints is falling debris from a structural collapse, i.e. large portions of the aqueduct structure falling sideways. The large footprint and massive nature of the potential debris makes mitigation strategies for such an event challenging – development of these are described in Section 6.



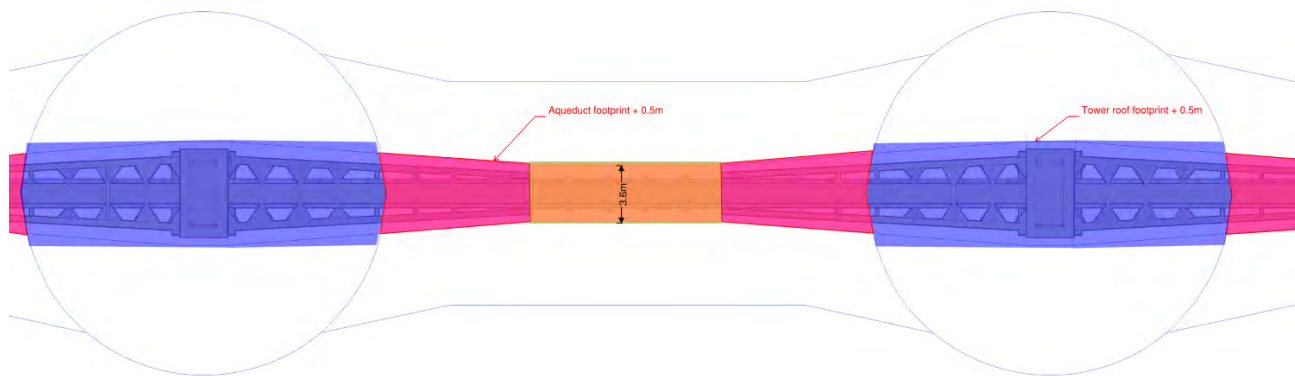
**Figure 6 Sideways Collapse - Risk Footprint**

#### 4.5.2 Vertical Collapse Hazard

A vertical collapse of the structure (i.e. confined to the footprint of the structure) is far more likely during the construction works, when compared with the sideways collapse mode. The vertical collapse sequence has been shown graphically already in Section 4.3, and can be brought on by many possible single failure modes (discussed at length in the HIMP Section 5). The end result is sections of large concrete debris from a structural collapse falling vertically, under the aqueduct footprint.

Whilst most of these failure modes would have signs of warning prior to failure occurring, there is the possibility of a sudden vertical failure brought on by tensile failure (eg truss top chord), which may not show prior warning signs prior to failure.

Figure 7 shows the risk footprint for a vertical collapse. The coloured areas represent the zone in which large scale concrete debris can be expected under the aqueduct footprint under this type of collapse.



**Figure 7 Vertical Collapse – Hazard Footprint**

#### 4.5.3 Spalling Hazard

Spalling failure involves localised pieces of concrete debris detaching from the structure and has a high likelihood of occurrence at any time. Spalling typically involves the delamination of cover concrete from structural members constitutes debris with estimated approximate weight up to 100kg.

Evidence of widespread spalling from the structure is already present, with chunks of concrete visible on the ground beneath the structure. Spalling hazards are a risk within the vertical risk zone as shown in Figure 7.

Spalling hazards are more readily mitigated during construction than the wholesale collapse hazards, due to the smaller size of concrete debris associated with a spalling failure. Typically spalling may be mitigated by providing overhead protection to any area with workers inside the defined risk zone.

## 5. Assessment of Existing Conditions

### 5.1 Condition Overview

The aqueduct structure has been in a poor condition for several decades, with advanced decay of the concrete being visually apparent in many locations throughout the structure. Propping was installed under Span 14 in the early 1990's due to concerns over the stability of that span, and the structure was fully fenced off in 1995.

The precise level of degradation of the structure is difficult to accurately quantify however, due to the unknown condition of the internal steel reinforcement and its anchorage in the concrete matrix. Nevertheless, external visual inspections provide an understanding of the spalling, degradation of externally visible reinforcement, and degradation over time. A systematic member by member assessment was undertaken by Arup in August 2024, which used three datasets obtained between 2021-2024 to provide a detailed picture of the existing conditions. The full condition assessment has been appended to this report.

### 5.2 Deterioration – Mechanisms

Deterioration of the concrete structure is due primarily to carbonation of the concrete where the alkaline matrix of the concrete is lost, thus making the internal reinforcement susceptible to rusting, or reducing the effectiveness of its anchorage. The typical sequence of events in the deterioration of a particular element is illustrated in the series of steps in Figure 8 (Condition Rankings as per Arup condition assessment report, ref Appendix B).

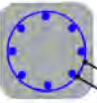
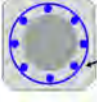
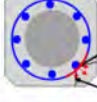

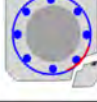

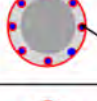

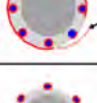

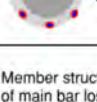

Cross Section	Visual	Condition Ranking
 <p>Original cross section</p> <p>Hoop reinforcement (longitudinal (main) reinforcement)</p>	No visible sign of decay	1
 <p>Carbonation</p> <p>Carbonation front (dashed line) moving inward, starting from the surface of the member. Hoop reinforcement is shown as blue dots.</p>	No visible sign of decay	1
 <p>Rusting of bar</p> <p>Rusting of bar increases volume (iron oxide) and creates expansive pressure in concrete. Expansion pressure causes cracking in concrete - visible on exterior as longitudinal cracks typical.</p>		2
 <p>Spalling</p> <p>Cracked cover concrete detaches, exposing rusty reinforcing bars to view.</p>		3, 4
 <p>Loss of Cover</p> <p>Spalling continues, with cover concrete lost.</p>		3, 4
 <p>Loss of hoop reinforcing</p> <p>Hoop reinforcement (small diameter) rusts through, causing breakage of hoop.</p>		5
 <p>Main bar Loss</p> <p>Main bars (larger diameter) rust through, and/or detach from remaining core of concrete.</p>		5+
Member structural failure follows after critical amount of main bar loss, critical loss of concrete core, buckling of main bars or loss of bar anchorage		5+

Figure 8 Degradation Process and Condition Ranking



Previous engineering reports have discussed at length the deterioration processes on the aqueduct structure, along with measurements of the cover and carbonation depths in various locations. Findings have shown that carbonation depth in the truss members typically exceeds the depth to reinforcement, and that carbonation is the primary mechanism contributing to the structure’s deterioration (Taywood Maunsell, 1990).

### 5.3 2024 Condition Assessment Summary

The Arup 2024 condition report (appended) represents a comparative study of the structural condition at three points in time, based upon separate visual datasets:

- July 2024 – Ground based site inspection (Arup)
- December 2023 - Drone LIDAR (Diospatial)
- 2021/2022 - Archival Photography (Glasshouse)

The primary purpose of the condition report was to prepare a baseline picture of the general structural condition of the structure and identify changes in condition over time, i.e. between the datasets. A condition rating system between 1 and 5 was developed, and a rating assigned for each visible member of the structure, (i.e. truss chord segment, truss web, pipe segment etc), with ratings of ‘5’ representing the worst degraded members, and ‘1’ representing no visual degradation.

There are a total of 2674 members within the structure, and of those, 2083 were able to be visually assessed in all three datasets (noting not all members were covered due to access limitations). The excerpt table below provides a comparative summary of the assessed members across the three datasets, showing the number and percentage of members assigned with each rating value.

**Table 1 Member Condition Ratings Comparison for 3x Datasets**

Rating	Glasshouse 03/2022		Pointerra Point Cloud 12/2023		Matterport 07/2024	
5	170	8.16%	183	8.79%	184	8.83%
4	347	16.7%	362	17.4%	366	17.6%
3	328	15.7%	346	16.6%	346	16.6%
2	406	19.5%	389	18.7%	401	19.3%
1	832	39.9%	803	38.6%	786	37.7%
Total	2083	100%	2083	100%	2083	100%

Key findings from this data are as below:

1. The structure is degrading over time. During the two years between the datasets, a total of 101 members had degraded sufficiently to receive an increased rating.
2. The structure is in poor condition overall, with only 37% of the members not showing any signs of degradation, and almost 9% of the members showing a critical ‘5’ rating.

Additional datasets are presented in the condition report and show the condition across the aqueduct length, with some spans experiencing more heavy degradation than others. Truss members are in the worst condition, and pier members are in relatively better condition. There are areas where bar ends are visible, indicating that anchorage to the bar has been lost.

We note that no confirmed failures or significant member deformations have yet been recorded in the structure. Whilst heavily degraded members are likely to have lost some of their structural capacity, the imposed load is either still being taken up by the member, or being redistributed to adjacent members, thus avoiding visible signs of failure.

Whilst collapse of the structure is a certainty at a point in the future, it is not possible to accurately predict the current safety factor against failure, the time remaining until the structure will fail, or the exact nature of the eventual failure(s). However, the condition reports provide sufficient evidence to suggest that significant safety risks are present from collapse and that failure cannot be ruled out during the construction period.

## 6. Structural Engineering for Stabilised Retention

### 6.1 Lovell Chen/Arup Heritage Impact Statement (2019 / 2020)

As part of pre-permit work, a series of high-level options assessments were undertaken by Arup and Lovell Chen, documented in the Heritage Impact Statement (HIS)<sup>1</sup>. Previously authored engineering investigation reports reviewed during this time (MacLeod, 2016, GHD, 2017) had also investigated options for the structure, and leaned toward a ‘managed ruin’ approach, rather than considering widespread repair as a realistic option. This conclusion was also reached following the HIS work.

Various intervention types were explored to scope out the project and balance the project outcomes with feasibility. These are summarised below, noting that the assessments were undertaken at a high level, and were based upon a visual inspection of the structure only. Detailed condition and risk analyses were only undertaken during later stages of the project.

#### 6.1.1 Land spans propping

This was identified as the most important and promising of the options proposed because in its most basic form, it enables separation of the connected spans, and with comprehensive propping it can serve as the most effective practical means to mitigate the catastrophic progressive collapse scenario. The 1991 Span 14 propping structure served as a precedent for propping concepts.

Two basic prop layouts were presented, with ‘minimal prop’ (Figure 9) and ‘full nodal propping’ (Figure 10) being considered. The minimal prop option was purely intended to counteract unbalanced load from separation, whereas the steel truss style prop enabled further protection against catastrophic collapse.

The nodal truss propping was subsequently taken through design development (with a change to a truss style steelwork design, due to effectiveness and aesthetics and a lower piling requirement). Tower propping was not identified at the early concept phase, due to the sideways collapse risk being identified in detail at a later stage in the project.

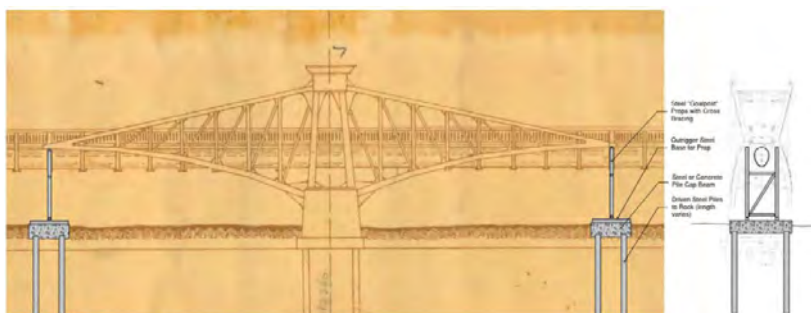


Figure 9 Minimal Prop Option - 2019



Figure 10 Full nodal propping – 2019

<sup>1</sup> Lodged with Heritage Victoria as part of initial permit application. Updated version lodged April 2020.

### 6.1.2 River span propping

The two river spans posed a special challenge for propping due to the permanent river channel. A self-supporting structure using pair of steel trusses under the existing concrete bridge was considered during options assessment, however this came with significant constructability issues in terms of ground works, barge operations and craneage in the river channels. Additionally, installation of such a span would require workers in the vicinity of the aqueduct, possibly whilst on barges in the river. This adds significant safety risk to this work, when considered against the land span propping.

Adding a structure below the aqueduct in the river channel also comes with risks in the permanent condition, with significant water loading and floodborne debris having the potential to cause failure of the propping and the aqueduct structure above.

After considering a combination of the scale of works required, feasibility, performance and safety, river span propping was assessed as being unfeasible and was not taken forward with the scope of works in the heritage permit.

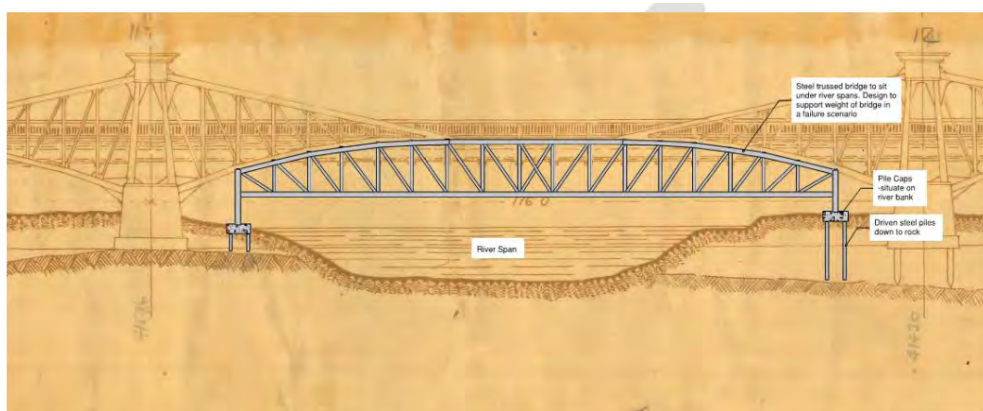


Figure 11 River Span Propping Concept - 2019

### 6.1.3 Restoration

Restoration of the structure was acknowledged as the only suite of options available that improves upon the current structural condition. Local restoration works are also prerequisites for the effective application of any corrosion inhibition measures (refer below).

In practice, restoration of the degraded structure would involve a combination of patch repairs and more invasive recasting of entire members of the structure, given their small cross-sectional size. The heavy state of degradation would likely require much of the existing reinforcement to be replaced, which would ultimately result in entire members being rebuilt. This process would require significant temporary works and stabilisation and would increase the risk of structural failure during the works. Any restoration works would involve workers being up close to the structure, and spending significant time working underneath the aqueduct structure.

The present condition of the Aqueduct structure unfortunately makes many of the reviewed techniques unlikely to be effective from a performance perspective. Liaison with concrete repair specialists during the study did not offer any viable options for the restoration of concrete structure in such an advanced state of deterioration with the construction services firm SRG Global providing detailed input on the various possibilities.

Feasibility of the restoration option was assessed as being dangerous, technically challenging and likely ineffective, therefore it was discounted as part of the assessment works.



#### 6.1.4 Reduction of load on aqueduct

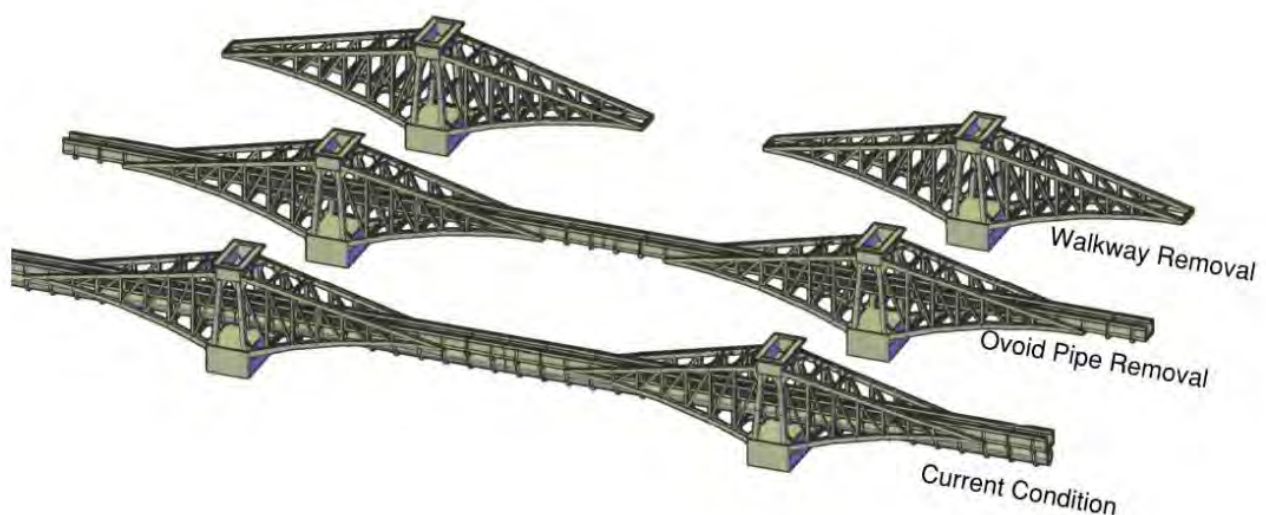
Reducing the load on the bridge was considered in an attempt to prolong the life of the structure. The aim of load reduction is to reduce the structural stress on the members, thus allowing the members to accommodate a higher amount of corrosion before they fail.

In practice, this would be an invasive action involving removal of secondary structure that are still integral parts of the aqueduct (pipe, walkway etc), refer Figure 12.

Removal of the ovoid pipe or walkway would be a challenging technical process as works would need to be carried out directly under the structure, and even within the trusses. Load removal would need to be carried out in a balanced fashion across the entire Aqueduct, along with significant temporary propping to avoid unbalancing the cantilever trusses. Worker safety was recognised as a major issue with this option.

Removal of the ovoid pipe will not eliminate the risk of progressive collapse and would change the Aqueduct's visual character and the legibility of its original designed function. The option was discounted due to technical feasibility of the removal, and the loss of place that would result from the drastic intervention.

Removal of the walkway would cause a loss of the aqueduct's continuity and result in a series of disconnected piers. Propping associated with this option would be extensive and subject to the same safety risks as described further in the report, with additional risks of working directly inside the trusses. Furthermore, the walkway currently offers additional structural stiffness to the trusses, with unknown consequences for the remaining structure if it was removed. Thus the walkway removal option was discounted on these grounds.



**Figure 12 Reduction of Load Considerations**

#### 6.1.5 Actions to slow structural decay

A suite of potential actions to arrest or retard the rate of structural decay had been considered historically. Successfully slowing the rate of decay would have the potential to prolong the life of the structure. These methods do not on their own address the current condition of the structure – they would be required to be used in conjunction with other means if any improvement in the condition is desired.

These actions were reviewed again during options assessment, however liaison with specialists found that the condition of the structure rendered the reviewed techniques unlikely to be effective from a performance perspective as discussed below.

##### **Electrochemical methods:**

These slow decay by addressing the chemical conditions within the concrete that allow corrosion of the steel inside. These methods employ either passive or actively generated electrical currents, either to change the chemistry of the concrete so that corrosion occurs at a slower rate or to provide an alternative (sacrificial)

element that can corrode in place of the structural reinforcement. The following available methods were reviewed:

- Realkalisation – this aims to increase the pH of already carbonated areas of concrete back to alkaline levels, thus protecting the reinforcement within. Trials had been undertaken in 2009 on the aqueduct structure, but results suggested this was not technically feasible as pH was not raised sufficiently. Additionally, realkalisation requires sound concrete and electrical continuity of reinforcement, two things that are not present in the aqueduct and would require significant work to achieve.
- Cathodic Protection - involves connecting the reinforcement structure to a sacrificial anode, so that the ongoing chemical activity corrodes the anode rather than the reinforcement. The use of impressed current to make this connection requires a current generator to be permanently installed; on remote structures this is typically a battery-based application that requires ongoing monitoring and service. Similar to realkalisation, the effectiveness of cathodic protection requires sound concrete and electrical continuity of reinforcement, two things that are not present in the aqueduct and would require significant work to achieve.

### **Surface coatings:**

Surface coatings are only effective in reducing deterioration in sections of the structure with sound, non-carbonated concrete where the material cover has not failed (or following overhaul repairs that restore such deteriorated sections.) Due to the extensive repairs that would be required as a prerequisite and works underneath the structure, surface coatings were not viewed as a feasible option supporting the retention of the structure without accompanying restorative repairs.

#### **6.1.6 Demolition and Outcomes**

Demolition of the aqueduct structure resolves the ongoing risks to public posed by the deteriorating structure and allows the river to be reopened. Outside of the heritage context, demolition is the expected resolution to a non-serviceable and redundant piece of infrastructure.

It was recognised at the time of assessment that demolition (partial or whole) may be the only outcome that allows for the feasible achievement of other identified management objectives, in particular the resolution of public access and stewardship and reconciliation objectives with respect to the river.

Following the options review, a partial demolition option was presented as preferred in the Heritage Impact Statement (2020), involving demolishing the four river spans and propping of the cut ends of the remaining structure, to balance the loads and prevent a collapse brought on by the separation (refer Section 4.2). This option was subsequently scoped in the heritage permit P32806, along with additional conditions for conservation works to the remaining structure.

## 6.2 Heritage Permit – Structural Design Brief

The heritage permit P32806 was issued in November 2020 for demolition of four spans of the structure, and included conditions for ‘conservation works’ as follows:

*20. .... The purpose of Stage 2 Conservation Works Package is to undertake conservation works that will reasonably avoid the catastrophic collapse of the Aqueduct structure, taking into consideration the flood prone nature of the site, the forthcoming demolition works, and to secure the long-term future of the structure....*

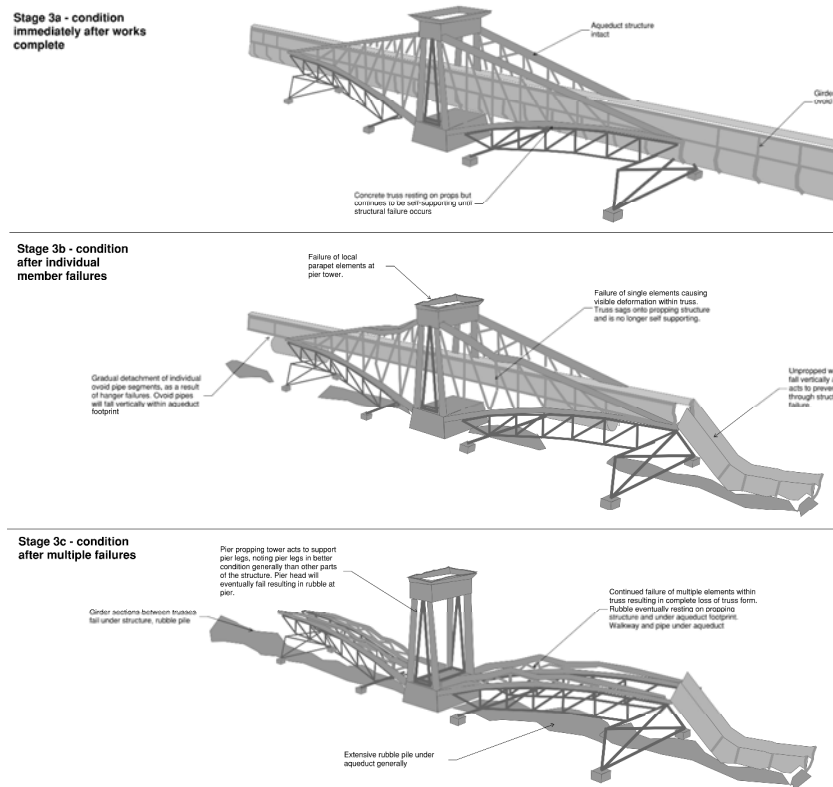
This definition was used as the basis for three broad engineering design criteria to inform the propping of the remaining structure:

- Provide a load path for unbalanced forces created by the separation of the structure, and avoid a collapse induced by the partial demolition works.
- Provide additional load path against single span truss collapse in event of a future single member failure in the primary bridge truss structures.
- Reasonably avoid the catastrophic collapse failure, i.e. a progressive collapse ‘domino effect’ scenario of multiple bridge spans.

### 6.2.1 Limitations of Propping Intervention

From the outset, propping had a limited use and purpose. It was not intended to prevent local failures of the structure, or improve its structural condition – only to prevent a catastrophic total failure. The HIMP Part 1 document (a condition of the heritage permit P32806) contains further details regarding specific failure modes of the aqueduct including where propping interaction will affect the behaviour following specific failures.

After completion of any propping works, the condition of the remaining aqueduct structure will continue to decline unabated over time, at its current rate of deterioration. This will eventually lead to visible failures within the structure, as local members deflect due to inability to carry load. Figure 13 shows an indicative view of the eventual failure sequence after the installation of propping to the structure, with gradual decay leading to an eventual loss of the aqueduct’s shape and rubble forming on the props.



**Figure 13 Failure Sequence after Propping Installation**

### 6.2.2 Long Term Propping Behaviour

The static propping structures are robust, however the lack of access for long-term maintenance of propping is a consideration in assessing their viability and effectiveness.

Immediately after installation of the propping, the risk zone around the aqueduct would be fenced off and isolated from the public. The aqueduct will continue to degrade further per Figure 13, and within the cordoned areas, the safety risk for any required works will increase due to local failures, spalling and collapse.

Because of the increased safety risk and instability of the aqueduct following localised failures, there is not an intent to maintain propping structures after their initial installation, other than managing vegetation under the propping. The steel propping can be designed for minimal maintenance and a long service life with appropriate coatings, but eventually it will begin to degrade, requiring repainting, rust removal and possible regrouting. Some limited maintenance from the safe areas at a distance is possible, (i.e. sand blasting and spray paint) but this unlikely to be fully effective due to the long reach required.

The 1991 propping is a case study for real world long-term performance of steelwork propping. It has not had any maintenance since its installation, due to the safety risks associated with this activity. The painted steelwork propping was inspected as part of the exploratory works and is generally in sound condition after 34 years, but over the longer term (a period of decades) the propping structure will continue to degrade until rusting of the steel structure and eventual failure to support the aqueduct rubble.

### 6.3 Early Propping Design History (2021-2023)

For propping to respond to the brief set out in the heritage permit, it must be installed under all trusses and towers of the aqueduct. This scope of propping simultaneously addresses the unbalanced load path created by demolition, as well as reasonably avoiding the catastrophic collapse failure. It was recognised at the start of design works that, due to the repetitive nature of the aqueduct structure, the propping could be a system with individual ‘modules’ of similar design that could be installed under the trusses and towers.

Initial design of the propping systems was undertaken by WGA and McMahon Constructions, with Arup acting as a technical reviewer. Early ‘active’ propping concepts were put forward by WGA /McMahon comprising cable stayed interventions acting to support the trusses. These were in turn supported on the existing pier towers, in an effort to reduce the requirement for piling.

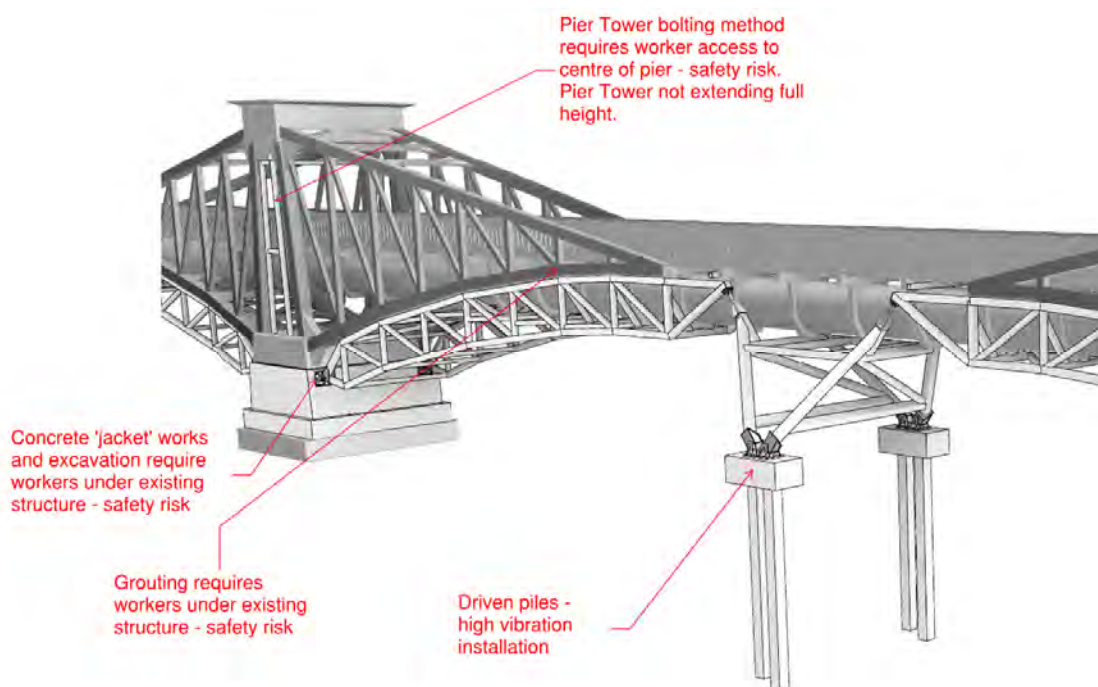
There were significant issues raised regarding the efficacy of such systems, and following workshopping and review, these were abandoned in favour of a fully ‘passive’ propping philosophy, which comprised steel trusses under the existing aqueduct trusses, and steel frames installed inside the existing aqueduct piers. The passive propping philosophy involves installation of the modules under the structure without preloading or jacking, where the propping system is only ‘activated’ following a failure of the aqueduct concrete structure.

Reviews during the design phase resulted in numerous changes to the design during early development, however it should be noted that the principal focus during design work was developing the efficacy of propping in its permanent condition, with construction/installation being a secondary focus.

### 6.4 Revised Design with Focus on Construction Safety (2023-2024)

The Heritage Infrastructure Management Plan (HIMP) Part 1 document was prepared concurrently with the early propping design work. The HIMP was prepared with future state considerations, and did not have a construction phase focus. Knowledge gained during preparation of the HIMP allowed for detailed understanding of the structure’s failure modes and risks posed by the structure, which also could be applied to the construction phase works.

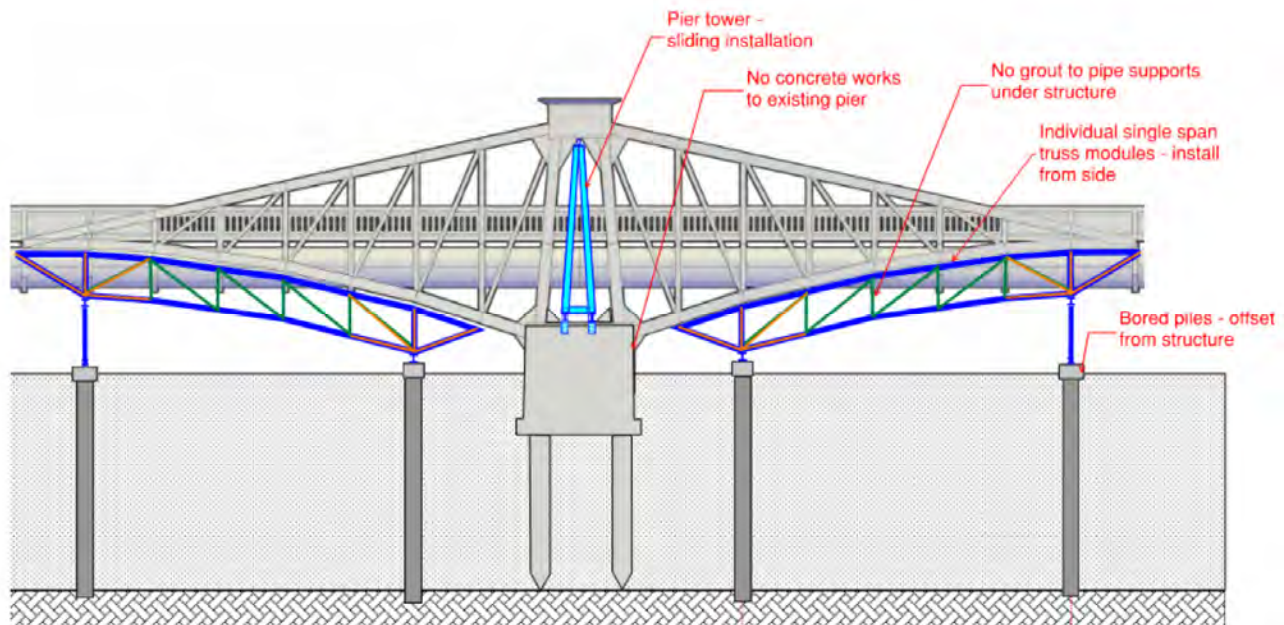
The HIMP Part 1 led to the creation of the risk zone footprints (refer Figure 6 and Figure 7), which drove thinking around safety during construction of the propping. A series of workshops were held in 2023 with all project parties (Barwon Water, WGA, Contractor, Arup) regarding construction safety of the propping. Following the workshops, some unmitigated construction safety issues remained with the WGA design, as summarised in Figure 14 below.



**Figure 14 WGA Propping Design showing Possible Installation Risk Items**



Arup took forward the design role for the propping from WGA in August 2023, with a revised concept being put forward by Arup at this time. The design was coupled with a range of mitigations proposed to reduce the identified risk where risk could not be designed out. A summary of the Arup design and mitigations is below, highlighting design risk eliminations that were implemented.



**Figure 15 Arup 2023 Propping Design Features**

#### 6.4.1 Design Elimination of Risks

The highest risk during construction is directly under the structure, arising from a vertical collapse or spalling. The previous WGA scheme included significant works under the structure. Mitigation (elimination) of this particular risk was undertaken through redesign, whereby installation details of the propping structure were altered so the system could be installed without requiring any worker access underneath the structure.

Design changes associated with this design change risk elimination involved:

- Removal of concrete jacketing to existing piers
- Prefabrication of all steelwork elements and sliding installation methodology
- Offsetting of piles away from the highest risk areas
- Changing high impact driven piles to low impact bored piles
- Incorporation of a 'grout bag' detail for final grouting of the steel-concrete interface.
- Removal of grouting to pipe supports (only grouting for truss chords)

#### 6.4.2 Mitigations of Remaining Risks

Following elimination of as many risk items as possible by design, the most significant remaining design challenge for construction safety was the sideways collapse mode, due to the large exclusion zone for this scenario, and large mass of potential debris (refer Figure 6).

Whilst alternatives were extensively tested, there was no feasible design solution identified which could keep workers completely outside of the sideways collapse risk zone (refer Figure 6) at all times during the installation. Certain activities associated with propping installation require workers to be within 1-2m of the structure at specific times during the installation process, in particular for piling works, during the final grouting process and for bolting steelwork modules together.

Therefore the team explored and workshopped mitigations to reduce the risk during the short periods of time that workers would be required to enter the sideways collapse risk zone, including temporary shielding, which involved erecting a heavy-duty overhead protection above any works zones. Ultimately shielding was discarded as a valid option due to the massive nature of required equipment to withstand a wholesale structural collapse.

Due to the unique nature of the remaining risks posed by the existing structure and the inability to undertake works fully outside of the exclusion zone, the 2023 design included a suite of mitigations proposed to improve worker safety as below.

### 1. Physical Mitigations:

- a. Temporary stabilisation of the pier head against lateral movements – incorporation of cable stayed basket (see below)
- b. Provide temporary overhead hoarding for spall protection (10kPa Class B protection) -required anywhere within 1m of overhead concrete.
- c. Stop works in high wind conditions

### 2. Management / “Administrative” Mitigations

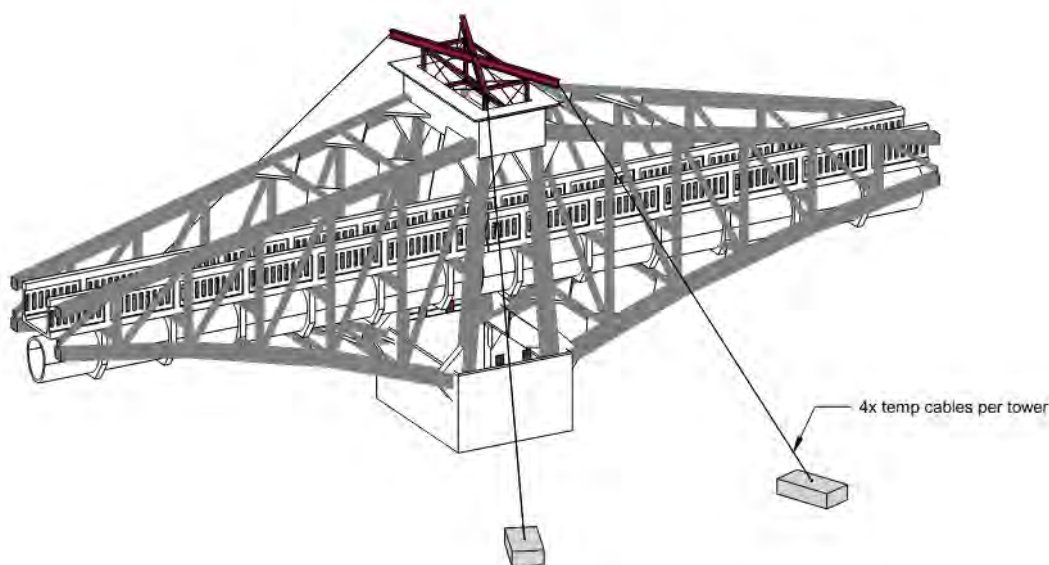
- a. Install real-time position monitor to detect movement of the pier head, with alarm for movements detection
- b. Install vibration monitoring with real time alarm
- c. Daily visual inspection of pier legs and pier (Contractor) checking for spalls, cracks, deformation
- d. Posting a spotter whenever people are within the outer exclusion zone boundary.
- e. Brief all personnel working in the area on the risks and have action/evacuation plan in the event of alarms/spotter alert

#### 6.4.3 Temporary Pier Head Stabilisation

Of these mitigations, the temporary stabilization of the pier head against lateral movements was the most important physical intervention, to reduce risk from the sideways collapse mode by ‘catching’ the structure before it fell.

This is an engineering control, which aims to maintain the pier in a vertical orientation in the event of an incipient pier failure and prevents a single point failure from deflecting significantly and ‘dragging’ the remainder of the tower sideways. The incipient pier failure could originate at any of the 14 pier heads, and because they are all connected, the temporary stabilisation would be required at all pier heads before work around the structure could commence.

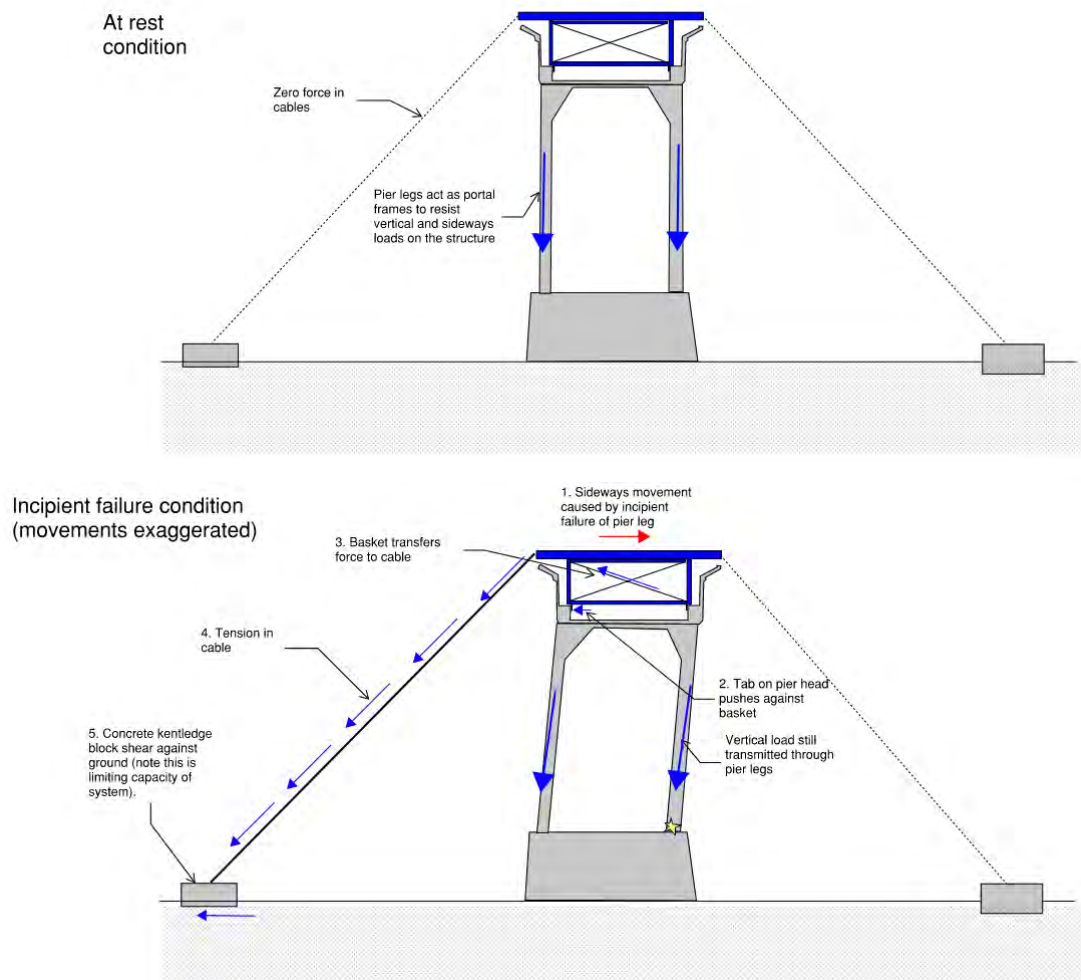
The stabilisation structure involves a lightweight structural steel ‘basket’ to be mounted in the existing pier head, with 4x inclined cables anchored to concrete blocks. Refer Figure 16 below for an overview of the temporary stabilisation structure.



**Figure 16 3d image of Temporary Pier Head Stabilisation**

Design of the stabilisation structure and cables is intended to provide an external load path in the event of an incipient sideways movement of the pier. If the incipient failure causes the pier to move a small distance sideways due to a local failure (per step 2, Figure 5), then the stabilisation structure would be activated and limit further sideways movement by providing an independent lateral loadpath (refer Figure 17). Additionally, a position monitor would provide warning of the movement, thus allowing evacuation of the site. The stabilisation structure was designed to be installed from a crane above, without requiring worker access to the high-risk zone around the pier.

Whilst the stabilisation structure acts to control the sideways failure mode and reduce the risk associated with this collapse mode, it also adds some safety risks for construction such as potential impacts to the stay cables during works and for the install procedure of the 'basket' on top of the pier head, particularly with the soft ground conditions in many parts of the site.



**Figure 17 Load Path Diagram for Temporary Pier Head Stabilisation**



## 7. Risk Assessment of Finalised Propping Scenario

Once the final design and mitigations were workshopped, they were then taken through a formal risk assessment process to assess the residual risks against Barwon Water's Risk Management Framework. This process and results are described below.

A risk assessment for the construction of the finalised propping scope was conducted in accordance with Barwon Water's Enterprise Risk Management Framework (ERMF) (Version 3.0, February 2024) and the Occupational Health and Safety Act 2004 (OHS Act). The ERMF, which aligns with ISO 31000 and the Victorian Government Risk Management Framework, defines Barwon Water's low tolerance for harm to people, contractors, and the public, and a similarly low tolerance for environmental impacts that could affect its licence to operate or areas of cultural significance.

Under these obligations, Arup, in collaboration with Barwon Water, Lovell Chen, and Simpson Construction, led a formal risk assessment aligned with both WorkSafe Victoria guidelines and Section 20(2) of the OHS Act. The process assessed:

- The likelihood and consequence of risks eventuating,
- What was known or should reasonably be known about each risk,
- Options to eliminate or reduce each risk,
- The feasibility and cost of available controls.

A Delphi Method workshop (as per ISO 31010) was used to gather expert consensus. Three principal structural failure modes were identified as already discussed above:

- Concrete spalling (localized delamination and deterioration) – refer Section 4.5.3
- Vertical collapse (catastrophic failure of piers or spans) – refer Section 4.5.2
- Horizontal collapse (outward or lateral truss failure) – refer Section 4.5.1

These failure modes were assessed to have inherent risk ratings ranging from high to extreme, primarily due to the degraded condition of the structure and the potential for serious injury or fatality. In response, Arup undertook design changes for elimination where possible, and then developed a range of potential controls for the remaining risks, which have been described in Section 6.4.2. These were evaluated in a formal risk workshop held on 29 August 2024. The outcomes of the control evaluation are summarised in Table 1, with the full residual risk tables for the three failure modes appended as Appendix A.

**Table 2 Hazard Control Quantities Post Workshop**

Hazard	Approved Controls	Partially Approved	Rejected Controls
Concrete Spalling	9	5	2
Vertical Collapse	18	2	9
Horizontal Collapse	24	1	7

The residual risk levels were recalculated following implementation of the proposed controls:

- Risks associated with spalling were reduced to insignificant to medium,
- Risks associated with vertical collapse remained between medium and high, largely due to the severe potential outcomes, despite low likelihood,
- Risks from horizontal collapse were reduced to medium.

Importantly, the “high” residual risk related to vertical collapse applies to the “Business as Usual” (BAU) scenario—i.e. the risk posed by deterioration if no works are undertaken—underscoring the importance of timely remediation. While many controls help reduce risks, the inherent condition of the structure means certain interventions (e.g. installing supports) expose workers to the very risks they aim to mitigate.

In summary, while the risk assessment identified a number of controls in-line with the requirement to minimise risks So Far As Is Reasonably Practicable (SFAIRP) as part of the remediation scheme, the residual risks to safety remained medium and high (principally due to the potential for serious injuries and fatalities). The primary control of temporary pier head stabilisation is a bespoke intervention, and the majority of other controls were administrative in nature.

These risks could not be reduced further within the context of the proposed propping schemes and as such, to further minimise or eliminate risks to safety in-line with Victoria’s OH&S Act, consideration of schemes that minimise human interaction with the Aqueduct (including demolition) would be needed.

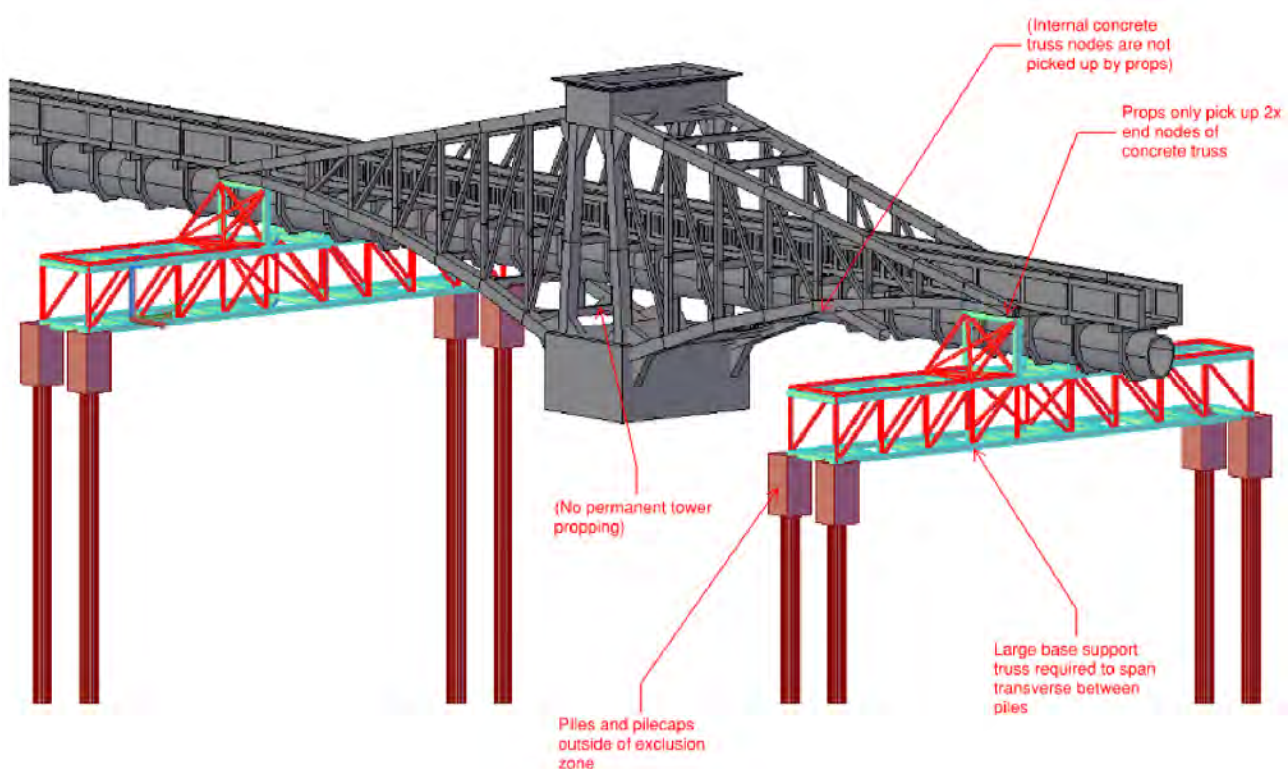
## 8. Modular End Propping – Alternative Scenario (2024)

### 8.1 Background

Following the risk assessment and residual safety challenges with installation of the propping design, an alternative design scenario was contemplated in late 2024. This scenario - the ‘modular end propping’ - sought to investigate whether a redesigned propping intervention could derisk the installation works sufficient to allow for the partial demolition scope to proceed.

Fundamentally, the modular propping is a less substantial intervention to the structure than the truss propping scheme and aims to provide permanent propping only to the truss tips at the end spans of the retained structure after demolition (piers 8 and 13). The purpose is purely to counteract imbalances generated in the structure at demolition and avoid a demolition-induced collapse during decoupling. It does not address long term stability/ or catastrophic collapse of the structure, due to the more limited interaction between the props and the existing structure (i.e. only at the truss tips), and the fact that there is no tower propping.

Figure 18 shows the modular propping and features.



**Figure 18 Modular End Propping - Key Features**

The main distinctions of the modular end propping that give it an improved construction safety profile when compared to the original propping are:

1. Tower prop modules are completely removed
2. Piling and ground works constructed outside of the sideways collapse exclusion zone
3. There are fewer contact points with the existing structure.

Figure 19 shows the modular propping installation sequence, illustrating the sliding mechanism to avoid works in the exclusion zone.

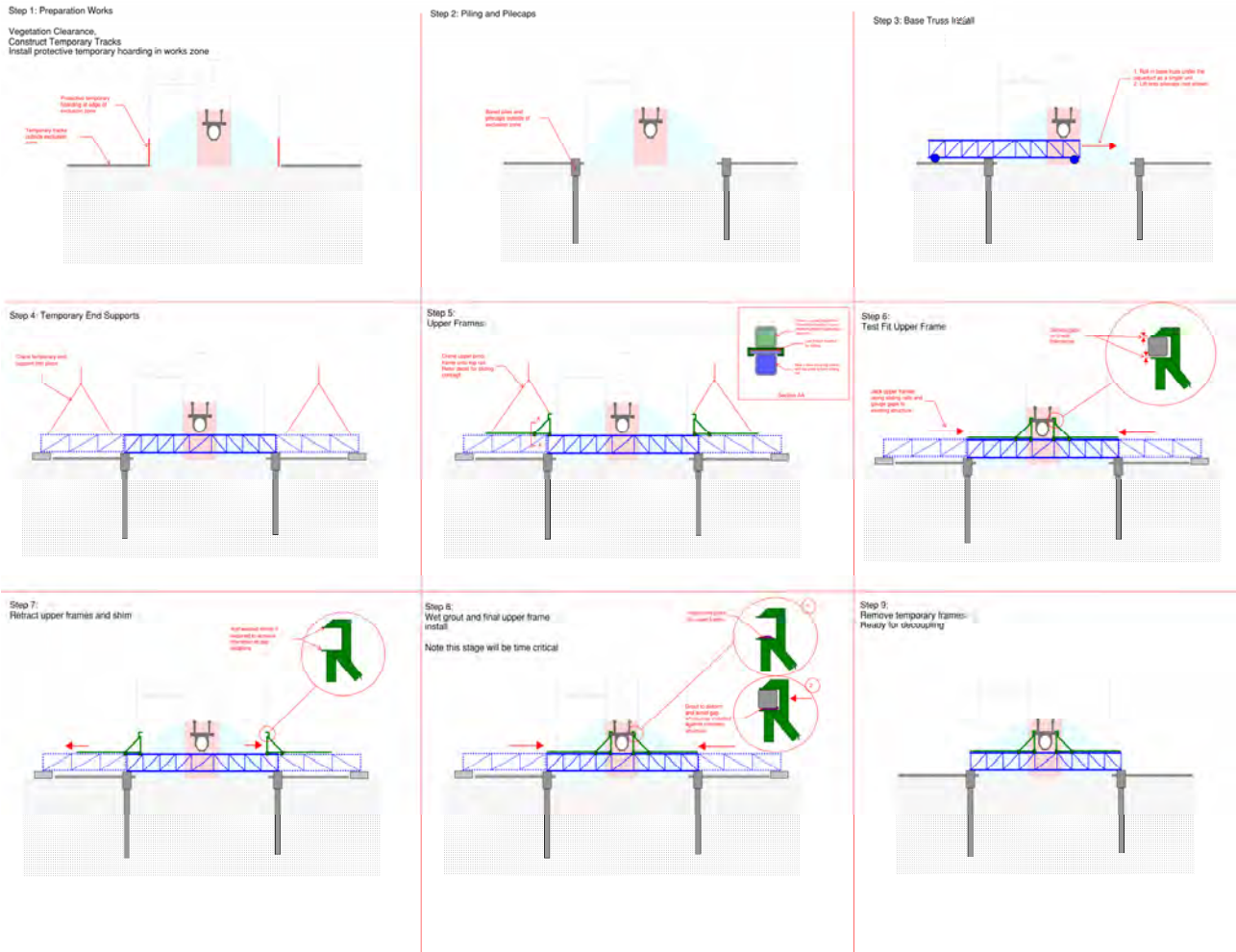


Figure 19 Modular Propping Install Sequence

## 8.2 Challenges

### 8.2.1 Construction Phase – Grouting Process

Whilst the modular end propping design mitigated many of the residual construction safety risks, a key challenge that remained was the interface between the prop structure and the existing concrete truss chord.

Detailed numerical modelling was undertaken which showed that any gaps between the prop and concrete would result in poor behaviour of the existing structure. Therefore for the propping to be effective, closing this gap was a key requirement. A remote system of grouting the gaps using grout bags was proposed, with grout pumping investigated.

Physical trials were undertaken on 1:1 scale models of the prop/aqueduct geometry, suggesting technical viability of the system with pumping of grout into the bags. However considering the approach holistically, it must be acknowledged as a bespoke application with the potential for technical failure. There is little redundancy if a technical failure does occur, i.e. if the grout bag system did not work, then any rectification or alternative methods for install would face the requirement for personnel to enter the risk area.



**Figure 20 Grout Bag Trial**

### 8.2.2 Residual Risks to Public

Even if the propping could be successfully installed, the remaining aqueduct structure will continue to pose a residual safety risk in the long term. This risk exists only within the proposed fenced area around the remnant structure. Affected parties are Barwon Water employees entering the perimeter for future maintenance works, and any members of the public who access the perimeter in an unauthorised manner. Whilst there is a robust fence proposed, it can deter access into the perimeter but not fully prevent it. The quantification of this risk was outside the scope of the construction risk workshop, but it is important to note that the presence of the decaying aqueduct structure, even if fenced, will continue to pose a safety risk.



## 9. Demolition Proposal

### 9.1 Background

As the previous sections have illustrated, all interventions examined to date during the extensive design period involve the presence of workers within a defined risk area around the aqueduct structure. Despite significant efforts by the project team, construction phase risks associated with retention and propping of the structure could not be reduced below the SFAIRP threshold.

Additionally, a ‘do nothing’ approach represents a significant risk to public safety and does not allow for the Barwon Water and surrounding area to be safely reopened to the public.

Thus the only viable option available to decrease the risk profile to a SFAIRP level is the safe demolition of the aqueduct superstructure, with retention and works to the pier base elements undertaken after elimination of the overhead structural risk and debris removal.

### 9.2 Scope of Works

The referenced Arup drawings document the scope of the demolition and retention works. The scope of works is provided below as a summary.

1. Demolish the entire aqueduct superstructure above the pier bases.
2. Retain all pier bases, and the stair/landing structures at the northern and southern ends of the aqueduct. Possible opportunistic salvage of other elements upon assessment after demolition and making safe (i.e. sewer pipe at ends of structure)
3. Cut all pier bases down to 1m above ground level (fall risk minimisation)
4. Patch repair all remaining concrete
5. Provide new 150mm concrete slab as a cap for the cut down pier bases (noting the pier bases have a rubble fill construction).

The proposed scope of demolition is shown graphically below.



Figure 21 Proposed Scope of Demolition

### 9.3 Demolition Considerations

Some unique aspects of the existing structure must be considered by the Contractor when developing the demolition methodology:

1. The previously defined exclusion zones should apply for any preparatory works required around the structure ahead of demolition whilst the aqueduct is standing (refer Figure 6 of this document).
2. A controlled 'step by step' dismantling of the structure may or may not be feasible. The following aspects shall be considered:
  - a. There is a lack of redundancy in the structure - for example if a single truss member is cut, there is a high likelihood of the entire truss failing (refer Section 4.3).
  - b. The interconnected nature of the structure means that a single span failure may lead to a domino effect of multiple spans collapsing (refer Section 4.4).
  - c. The structure relies on balanced loading for its stability - if elements are removed in an asymmetric manner that creates imbalance, this could lead to failure.
  - d. Temporary propping may be challenging to install, given the exclusion zones and risks presented in this report. This may result in a demolition method that does not rely on propping.
3. The possibility for a lateral/sideways collapse during the demolition works should be allowed for and should help to inform exclusion zones during demolition

### 9.4 Works to Retained Elements

The only components proposed for retention are the stairs and landing at each end of the structure, and the lower portions of the primary pier bases.

The staircases are structurally independent from the main truss spans and piers, and it is feasible to retain them without significant impact from the demolition works.

The retained pier bases sit underneath the main superstructure, and are robust structural elements. Depending on the demolition method and process, these elements may be impacted by the demolition works. Falling debris may strike the pier bases, causing some local damage to their top parts. However, given that the top of the piers will be eventually removed, it is unlikely that the demolition will cause damage to the retained portion of the piers. The repair scope following the demolition works will address any damage that occurs to these elements.

## 10. Conclusion

This report provides a summary of the extensive studies and assessments undertaken on the Barwon Sewer Aqueduct over the past five years.

Technical aspects of the existing structure, including its current condition, structural behaviour and potential failure modes have informed significant safety limitations regarding any works in the vicinity of the structure. These have underpinned propping design attempts to meet the criteria of heritage permit P32806.

A full range of possible intervention categories were considered during design and assessment, many of which were deemed unfeasible at the start of the assessment period, due to the poor condition of the structure (concrete repair, cathodic protection, river span propping, do nothing).

Structural propping of the land spans was developed as the most promising intervention, however after significant design work and iterations to eliminate and mitigate safety risks, the most viable design options still resulted in the exposure of construction workers to residual safety risks above the SFAIRP threshold.

The conclusion was reached that the stated goals of heritage permit P32806 (partial demolition and conservation of the remaining structure) could not be safely or practically met whilst upholding duty of care responsibilities under OSHA, as detailed in Lovell Chen's Heritage Impact Statement.

Thus demolition of the entire aqueduct superstructure is now put forward as the sole remaining option available. Retention of pier bases and stairs, and potential opportunistic salvage of other components post-demolition offers some limited opportunity to retain part of the aqueduct fabric.



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Arup



**Appendix A: Risk Workshop Residual Risk Tables**

Spalling Risk Register

Risk ID	Project Activity	Risk Description	Inherent Consequence	Likelihood Description	Inherent Likelihood	Inherent Risk Rating	Proposed Controls	Residual Consequence	Residual Likelihood	Residual Risk Rating	Notes
R.1.1	Site Mobilisation & Construction Works	Spontaneous concrete spalling / detachment results in concrete striking a person causing: R.1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury	Severe (C = 4)	Indicative of current condition of structure where spontaneous concrete spalling / detachment does occur at the aqueduct structure but would be unlikely to coincide with the time and location that works are taking place.	Unlikely B	Medium (4B)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Pre-spalling/dislodgement of concrete at risk of falling. - Spill protection structures to catch falling debris. Secondary controls: - Pre-work inspections, spontaneous spill monitoring a stop-work procedures - PPE to sensitive areas (eyes, head). - Emergency response planning for person(s) struck by debris.	Major (C = 3)	Rare A.	Event will only occur in exceptional circumstances	High (4A) In this scenario the detached concrete strikes the structure while falling causing a larger quantity of fragments than generated by the act of spalling alone but these fragments are dispersed over a wider area. Reduction to "rare" based on use of exclusion measures (e.g. fencing) to prevent person(s) being exposed to the risk outside of working areas. Consequence remains as C3 based on effectiveness of PPE.
R.1.2	Site Mobilisation & Construction Works	Works induced concrete spalling / detachment results in concrete striking a person causing: C.1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury	Severe (C = 4)	As above but works activities are more likely to create conditions for concrete detachment.	Possible C	High (1C)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Pre-spalling/dislodgement of concrete at risk of falling. - Spill protection structures to catch falling debris. Secondary controls: - Pre-work inspections, spontaneous spill monitoring a stop-work procedures - PPE to sensitive areas (eyes, head). - Emergency response planning for person(s) struck by debris.	Major (C = 3)	Unlikely B	Very few or known instances requires multiple factors to occur	Low (1B) Inherent likelihood increased relative to R.1.1 as both the works may increase likelihood of detachment and also the number of persons in the vicinity of the structure increases. Consequence reduced in C3 based on effectiveness of PPE.
R.2.1	Site Mobilisation & Construction Works	Spontaneous concrete spalling / detachment results in concrete striking a person causing: C.2 Impact to Person(s) leading to Single or Multiple deaths or Severe Permanent Disability	Extreme (C = 5)	While spontaneous concrete spalling is assessed as unlikely to cause serious injuries and fatalities, the size of spalling required in case serious injuries and fatalities (e.g. several kg) is lower likelihood.	Unlikely B	High (2B)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Pre-spalling/dislodgement of concrete at risk of falling. - Spill protection structures to catch falling debris. Secondary controls: - Pre-work inspections, spontaneous spill monitoring a stop-work procedures - PPE to sensitive areas (eyes, head). - Emergency response planning for person(s) struck by debris.	Severe (C = 4)	Rare A.	Event will only occur in exceptional circumstances	High (2A) In this scenario, the detached concrete remains largely intact and has a mass of several kg, which is sufficient to cause serious injuries and/or fatalities. Inherent likelihood is assessed as lower than for Risk ID R.1.1 above, however the likelihood does not fall into the "rare" category. Reduction of residual risk to "rare" based on use of exclusion measures (e.g. fencing) to prevent person(s) being exposed to the risk outside of working areas. Proposed controls reduce the likelihood that a person is struck by a large fragment and PPE may reduce potential consequences. Outside working areas likelihood is assessed to reduce (i.e. exclude persons) but as management activities may not have taken place and PPE reduce potential consequences but still result in serious injuries.
R.2.2	Site Mobilisation & Construction Works	Works induced concrete spalling / detachment results in concrete striking a person causing: C.2 Impact to Person(s) leading to Single or Multiple deaths or Severe Permanent Disability	Extreme (C = 5)	Works activities are more likely to create conditions for concrete detachment.	Possible C	Extreme (5C)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Pre-spalling/dislodgement of concrete at risk of falling. - Spill protection structures to catch falling debris. Secondary controls: - Pre-work inspections, spontaneous spill monitoring a stop-work procedures - PPE to sensitive areas (eyes, head). - Emergency response planning for person(s) struck by debris.	Severe (C = 4)	Unlikely B	Very few or known instances requires multiple factors to occur	Medium (4B) Inherent likelihood increased relative to R.2.1 as both the works may increase likelihood of detachment and also the number of persons in the vicinity of the structure increases. Proposed controls reduce the likelihood that a person is struck by a large fragment and PPE may reduce potential consequences. Within working areas likelihood is assessed to reduce (i.e. protection structures) but as management activities will deliberately create spall/dislodgement and the pattern of fall/impact with structure is complex to predict and hence inform the positioning of protective structures and PPE reduce potential consequences but still result in serious injuries.
R.3.1	Site Mobilisation & Construction Works	Spontaneous concrete spalling / detachment results in concrete striking a person causing: C.3 Minor Injury from Impact by Concrete Fragments	Moderate (C = 2)	Spontaneous concrete spalling / detachment does occur at the aqueduct structure but would be unlikely to coincide with the time and location that work are taking place.	Unlikely B	Medium (2B)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Pre-spalling/dislodgement of concrete at risk of falling. - Spill protection structures to catch falling debris. Secondary controls: - Pre-work inspections, spontaneous spill monitoring a stop-work procedures - PPE to sensitive areas (eyes, head). - Emergency response planning for person(s) struck by debris.	Moderate (C = 2)	Rare A	Event will only occur in exceptional circumstances	Medium (2A) Reduction to "rare" based on use of exclusion measures (e.g. fencing) to prevent person(s) being exposed to the risk outside of working areas.
R.3.2	Site Mobilisation & Construction Works	Works induced concrete spalling / detachment results in concrete striking a person causing: C.3 Minor Injury from Impact by Concrete Fragments	Moderate (C = 2)	Works activities are more likely to create conditions for concrete detachment.	Possible C	Low (2C)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Pre-spalling/dislodgement of concrete at risk of falling. - Spill protection structures to catch falling debris. Secondary controls: - Pre-work inspections, spontaneous spill monitoring a stop-work procedures - PPE to sensitive areas (eyes, head). - Emergency response planning for person(s) struck by debris.	Moderate (C = 2)	Unlikely B	Very few or known instances requires multiple factors to occur	High (2B) Likelihood reduction based upon efficacy of spill reduction measures. Consequence remains as "Minor injury".

Vertical Collapse Risk Register

Risk ID	Project Activity	Risk Description	Inherent Consequence	Likelihood Description	Inherent Likelihood	Inherent Risk Rating	Proposed Controls	Residual Consequence	Residual Likelihood	Residual Risk Rating	Notes
R 1.1.1	Construction Works	Additional Imposed Loads causing Vertical Structural Collapse During Construction resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4); 2 Crushing of Person(s) Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3)	Extreme (C = 5)	Nature of proposed works does limit additional loading on the structure (most items intended to be placed below the structure) but some items will be placed on the structure (e.g. baskets). Without additional controls "event could occur at some time".	Possible C Event could occur at some time.	Extreme (36)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Engineering assessment and limits on additional loads. - Alternative load paths / temporary & permanent support structures. Secondary controls: - Engineer approved method statements - Structural monitoring and alarm systems - PPE	Severe (C = 4)	Unlikely B Event is not expected to occur.	Medium (18)	Consequence reduced based on exclusion zone reducing likelihood of crushing consequences.  Likelihood reduction contingent on following method statement and administrative controls. Temporary structures may or may not be in place and hence partially effective.
R 1.1.2.1	Construction Works	Concrete Detachment via Works Activities causing Vertical Structural Collapse During Construction resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4); 2 Crushing of Person(s) Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3)	Extreme (C = 5)	Concrete detachment should only occur where the concrete is already weakened and provides little contribution to current structural capacity. If concrete detachment gives rise to collapse modes such events would potentially already have occurred.	Unlikely B Event is not expected to occur.	High (36)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Alternative load paths / temporary & permanent support structures. - Pre-works condition survey & works restrictions. Secondary controls: - Engineer approved method statements - Structural monitoring and alarm systems - PPE	Severe (C = 4)	Unlikely B Event is not expected to occur.	Medium (18)	Consequence reduced based on exclusion zone reducing likelihood of crushing consequences.  Likelihood reduction contingent on following condition survey and administrative controls. However, not sufficient to reduce likelihood to "rare". Temporary structures may or may not be in place and hence partially effective.
R 1.1.2.2	BAU Condition	Environmental Deterioration of Concrete and/or Steel causing Vertical Structural Collapse resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4); 2 Crushing of Person(s) Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3)	Extreme (C = 5)	If left untreated, the structure would be expected to degrade to the extent where collapse would occur. However, the nature of concrete under the structure is typically low in BAU conditions reducing the likelihood of persons being impacted by a collapse.	Possible C Event could occur at some time.	Extreme (36)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Alternative load paths / temporary & permanent support structures. Secondary controls: - Engineer approved method statements - Structural monitoring and alarm systems - PPE	Extreme (C = 5)	Unlikely B Event is not expected to occur.	High (36)	This represents the fundamental risk assessment for the project as a whole. Noted that exclusion zone is less likely to be effective in BAU as regular attendance at site will not deter unauthorised access.
R 1.2.1	Demolition Works	Impact by Structure During Demolition causing Vertical Structural Collapse resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4); 2 Crushing of Person(s) Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3)	Extreme (C = 5)	Given nature of structure (all elements being demolished at the same level) substantial impact during demolition is unlikely.	Unlikely B Event is not expected to occur.	High (36)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Alternative load paths / temporary & permanent support structures. - Demolition method statement. Secondary controls: - Structural monitoring and alarm systems - PPE	Severe (C = 4)	Unlikely B Event is not expected to occur.	Medium (18)	Consequence reduced based on exclusion zone reducing likelihood of crushing consequences.  Likelihood reduction contingent on following condition survey and administrative controls. However, not sufficient to reduce likelihood to "rare". Temporary structures may or may not be in place and hence partially effective.
R 1.2.2	Site Mobilisation, Demolition & Construction Works	Vehicle Impact causing Vertical Structural Collapse resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4); 2 Crushing of Person(s) Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3)	Extreme (C = 5)	Site is not located on a public road, also proposed roadway is c. 15m from existing structure (lower distance to cable anchorage and some specialist equipment e.g. lifting rigs may approach within 2m).	Unlikely B Event is not expected to occur.	High (36)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel and vehicles. - Alternative load paths / temporary & permanent support structures. - Impact protection for vulnerable / exposed elements. Secondary controls: - Structural monitoring and alarm systems - PPE - Site policies (speed, drug & alcohol)	Severe (C = 4)	Unlikely B Event is not expected to occur.	Medium (18)	Current proposed controls will substantially reduce the likelihood of impact at ground level (appropriate barriers and exclusion zones). Activities proposed at height (e.g. approaching structure in baskets / suspended platforms / temporary structures) primarily rely on administrative controls (e.g. method statements and work passes) likelihood is assessed to reduce - however it remains "unlikely". Note that risk is not eliminated - incidents such as crane failure have occurred in Victoria in the past few months.  Consequence reduction is contingent on exclusion zone however persons in the vicinity (2m zone) may still be injured by debris.
R 1.2.3	Site Mobilisation, Demolition & Construction Works	Plant or Remedial / Temporary Structure Impact causing Vertical Structural Collapse resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4); 2 Crushing of Person(s) Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3)	Extreme (C = 5)	Works activities take place within "baskets" or from ground below the structure which reduces the potential for substantial impact on the structure. However, in the absence of specific controls the scenario is considered Unlikely.	Unlikely B Event is not expected to occur.	High (36)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel. - Alternative load paths / temporary & permanent support structures. - Construction method statement. Secondary controls: - Structural monitoring and alarm systems - PPE	Severe (C = 4)	Unlikely B Event is not expected to occur.	Medium (18)	Consequence reduced based on exclusion zone reducing likelihood of crushing consequences.  Likelihood somewhat reduced but controls are either administrative (method statement) or partial temporary structures.
R 1.1	Site Mobilisation & Construction Works	Overload or Impact During Construction resulting in: 4 Progressive (Longitudinal) Collapse of Structure	Extreme (C = 5)	This risk is contingent on a previously identified risk scenario occurring, principally a scenario that results in an out of balance loading condition. However, given that the event is contingent on previous risks it is assessed as unlikely, bordering on rare.	Unlikely B Event is not expected to occur.	High (36)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Alternative load paths / temporary & permanent support structures. - Construction / demolition method statement. Secondary controls: - PPE - Structural monitoring and alarm systems - Evacuation zones (along length of viaduct)	Severe (C = 4)	Unlikely B Event is not expected to occur.	Medium (18)	Consequence reduced based on exclusion zone reducing likelihood of crushing consequences.  Likelihood somewhat reduced but controls are either administrative (method statement) or partial temporary structures.

Risk ID	Project Activity	Risk Description	Inherent Consequence	Likelihood Description	Inherent Likelihood	Inherent Risk Rating	Proposed Controls	Residual Consequence	Residual Likelihood	Residual Risk Rating	Notes
R.1.1.1	Site Mobilisation & Construction Works	Natural Event (e.g. high winds or seismic) causing Horizontal (Sideways) Structural Collapse During Construction resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4) 2 Crushing of Personnel Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3) 4 Fall from Height Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5)	Extreme (C = 5)	While structure is in a degraded state, it has not experienced collapse due to natural events to date. The expected scope of work itself should not alter the exposure to natural events.	Rare A Event will only occur in exceptional circumstances	Medium (SA)	Refer Bow Tie and Controls Description Attached. Key primary controls: - Proposed temporary structural supports (trusses and cables). - Personnel exclusion zones. Secondary Controls include: - Structural monitoring, alerts & evaluation.	Extreme (C = 5)	Rare A Event will only occur in exceptional circumstances	Medium (SA)	Both likelihood and consequence largely unchanged by controls (structure is currently subject to high winds and recent seismic events noted in workshop).
R.1.1.1.2	Site Mobilisation & Construction Works	Accelerated weakening of structure during construction works causing Horizontal (Sideways) Structural Collapse During Construction resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4) 2 Crushing of Personnel Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3) 4 Fall from Height Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5)	Extreme (C = 5)	Accelerated weakening could occur however to result in the collapse mode described requires multiple factors to occur.	Rare A Event will only occur in exceptional circumstances	Medium (SA)	Refer Bow Tie and Controls Description Attached. Key primary controls: - Proposed temporary structural supports (trusses and cables). - Personnel exclusion zones. Secondary Controls include: - Structural monitoring, alerts & evaluation. - Engineer method statements and associated limitations.	Extreme (C = 5)	Rare A Event will only occur in exceptional circumstances	Medium (SA)	Some factors potentially increase likelihood (e.g. concrete shangangment) however temporary works strategy is intended to provide supplemental structural stability to reduce likelihood of collapse.
R.1.1.1.3	Site Mobilisation & Construction Works	Addition of new materials / equipment load causing Horizontal (Sideways) Structural Collapse During Construction resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4) 2 Crushing of Personnel Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3) 4 Fall from Height Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5)	Extreme (C = 5)	Unintentional overload could occur however to result in the collapse mode described requires multiple factors to occur.	Rare A Event will only occur in exceptional circumstances	Medium (SA)	Refer Bow Tie and Controls Description Attached. Key primary controls: Proposed temporary structural supports (trusses and cables). - Personnel exclusion zones. Secondary Controls include: - Structural monitoring, alerts & evaluation. - Engineer method statements and associated limitations.	Extreme (C = 5)	Rare A Event will only occur in exceptional circumstances	Medium (SA)	Proposed works method does not involve the intentional placement of supplemental loads on the piers. Potential unintentional impact addressed below.
R.1.1.2	Site Mobilisation & Construction Works	Vehicle or Equipment Impact causing Horizontal (Sideways) Structural Collapse During Construction resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4) 2 Crushing of Personnel Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3) 4 Fall from Height Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5)	Extreme (C = 5)	Both side access and proposed works methods (work platforms and hoist cages) together with degree of site raise likelihood that unintentional impact could occur. Risk also possesses shorter chain of causation. However this style of impact is more likely to lead to a vertical collapse mode.	Rare A Event will only occur in exceptional circumstances	Medium (SA)	Refer Bow Tie and Controls Description Attached. Key primary controls are: - Enforced exclusion zone for non-critical personnel and vehicles. - Alternative load paths / temporary & permanent support structures. - Impact protection for vulnerable / exposed elements. Secondary controls: - Structural monitoring and alarm systems - PPE - Site policies (speed, drug & alcohol).	Extreme (C = 5)	Rare A Event will only occur in exceptional circumstances	Medium (SA)	Current proposed controls will substantially reduce the likelihood of impacts at ground level (appropriate barriers and exclusion zones). Activities practiced at height (e.g. approaching structure in beams / suspended platforms / temporary structures) primarily rely on administrative controls (e.g. method statements and works policies) likelihood is assessed to reduce - however it remains 'unlikely'. Note that risk is not eliminated - incidents such as crane failure have occurred in Victoria in the past few months.  Owing to horizontal collapse mode and potential influence area - risk of fatalities remains therefore consequence remains extreme.
R.1.1.3.2	Site Mobilisation & Construction Works	R.1.1.3.2 Vibration / Compaction of Soil due to Construction Activities causing Horizontal (Sideways) Structural Collapse During Construction resulting in: 1 Debris Impact to Sensitive / Vulnerable Areas Leading to Extensive and/or Permanent Injury or Illness (C = 4) 2 Crushing of Personnel Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5) 3 Dust Inhalation Leading to Significant Injury or Illness (C = 3) 4 Fall from Height Leading to Single or Multiple Deaths or Severe Permanent Disability (C = 5)	Extreme (C = 5)	Given age of asset, unanticipated changes in ground conditions are unlikely however proposed works could occur owing to construction works. Collapse mode still has multiple stages in chain of causation.	Unlikely B Very few or known matches requires multiple factors to occur	High (SB)	Refer Bow Tie and Controls Description Attached. Key primary controls: - Proposed temporary structural supports (trusses and cables). - Personnel exclusion zones. - Vibration Monitoring & Limits. Secondary Controls include: - Structural monitoring, alerts & evaluation. - Engineer method statements and associated limitations.	Extreme (C = 5)	Rare A Event will only occur in exceptional circumstances	Medium (SA)	Proposed vibration monitoring and associated controls should minimise / eliminate the risks associated with changing ground conditions.

**Appendix B: 2024 Arup Condition Report**



# Barwon Aqueduct Condition Report #1

**To** Laura Shelley, Barwon Water  
Cat McConkey, Barwon Water

**Date** 5 August 2024

**Copies** Joseph Correnza, Arup  
Jorja Zanotto, Arup

**Reference number** 280457

**From** Martin Luoni, Arup  
Kimberley Ng, Arup

**File reference**

**Subject** **Barwon Sewer Aqueduct  
Condition Report #1**

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## 1. Executive Summary

This document outlines Arup's condition report for the Ovoid Sewer Aqueduct over the Barwon River at Breakwater. The Aqueduct is a reinforced concrete truss bridge in an advanced state of deterioration and decay resulting from carbonation and material failure of the concrete cover and progressive rusting of the reinforcing steel structure<sup>1</sup>.

This report contains visual observations from comparative condition assessments carried out on three separate datasets obtained between 2022-2024. It is the first such condition report undertaken for the structure.

We find that some visual degradation of the structure has occurred between the compared datasets, including new spalling observed in some members. Whilst the majority of members remain unchanged in their outwardly visible condition, results do show that ongoing degradation of the structure is occurring and is likely to continue on a similar basis into the future. It is not possible to predict timing of future failures with any degree of accuracy, but ongoing degradation means that delays in commencement of the propping construction works will increase the risk of failures prior to completion of the propping works.

The condition inspections and reporting within this document are provided in accordance with Heritage Victoria permit ref P32806, Clause 14(d). We note this condition report is the initial instance of the expected ongoing reporting outlined within the permit, which calls for 6-monthly ongoing visual inspections.

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<sup>1</sup> HIMP Part 1, Page 5



## 2. Introduction

The Aqueduct is a reinforced concrete truss bridge in an advanced state of deterioration and decay resulting from carbonation and material failure of the concrete cover and progressive rusting of the reinforcing steel structure. In 2020, Heritage Victoria issued a permit (P32806) for the partial demolition of four of the Aqueduct's original fourteen spans, in combination with conservation works (structural propping) and other conditions. After the completion of the permitted works, the balance of the structure will be retained as a managed ruin within the future *Porronggitj Karrong* cultural and community precinct.

This condition report has been undertaken prior to any of the new propping or demolition works being carried out, with all 14 spans of the structure being intact at the time of observation, and no obvious signs of member failure being evident in the structure. The structure is self-supporting except for Span 14 which is already propped with steelwork (dating from 1991).

## 3. Site Captures and Inputs

This condition report represents a comparative study of the structural condition at three points in time, based upon separate visual datasets as follows:

### 3.1 2024/07/10 Site Inspection - Arup

Arup structural engineers undertook a site inspection on 10 July 2024 (Martin Luoni and Kimberley Ng). A Matterport Pro3 3D camera unit was used to capture the entire extent of the accessible structure and produce a suite of 3D Matterport models, which are accessible through online portal – refer links:

SE: <https://my.matterport.com/models/XRyJdfZLopY?section=media>

SW: <https://my.matterport.com/models/MZChVddmMkG?section=media>

NE: <https://my.matterport.com/models/npPeRkru1i1?section=media>

NW: <https://my.matterport.com/models/pVZBcq711tK?section=media>

A digital DSLR camera with zoom lens was also used to capture detailed photographs of heavily degraded areas where visible. Weather conditions during the inspection were fine, with light winds and temperatures approximately 10-14 degrees Celsius.

The site inspections were undertaken from ground level, following the exclusion zone limits with people always remaining 12m from the structure. Areas were captured in the following sequence, with all observations made travelling north-south.

1. South side – East
2. South side- West
3. North side – East
4. North side – West

Piers 10 and 11 (Goat Island) were unable to be captured due to access constraints. Additionally, limitations of the ground-based survey meant that the top sides of elements could not be viewed. Degraded areas on the rear faces of members are typically not visible due to the angle of viewing.

### 3.2 2023/12/12 Drone LIDAR - Diospatial

Diospatial (engaged via Arup) undertook a drone-based reality capture of the structure on 12 December 2023. A drone mounted YS Surveyor Ultra unit was used to capture the structure and produce a LiDAR model of the structure.

This model is hosted on the online portal Pointerra at the below link: (password *1915Wobble*)

[https://app.pointerra.io/users/guest\\_login/?token=pc\\_cnwGPo7vdwry7MZcpiSzeQ](https://app.pointerra.io/users/guest_login/?token=pc_cnwGPo7vdwry7MZcpiSzeQ)

The LiDAR model is a 3d photographic surface of high visual clarity and allows for good desktop review and comparison to other datasets, with the ability to review multiple angles of members. The entire extent of the structure was captured in the LiDAR model; however, the underside of elements is not resolved in all areas, due to the high angle of the drone. Additionally, heavy vegetation on Goat Island meant some members in that area were unable to be captured.

### **3.3 2021/2022 Archival Photography - Glasshouse**

Archival photography was undertaken by Glasshouse Creative Media, for the purpose of heritage record of the structure. The archival photography was provided to Arup by Lovell Chen on 27 June 2024 and used to inform condition reporting at that time. We understand the photography was captured over two separate site works periods:

2021: Jun 28 – July 9: Initial drone photography – elevation images used principally for condition reporting

2022: March 30/31: Subsequent static ground-based photography using DSLR

We have used assets from the photographic record where possible to compare back to the conditions at 2021/2022. The primary reference photographs set used were the 10m elevation drone shots.

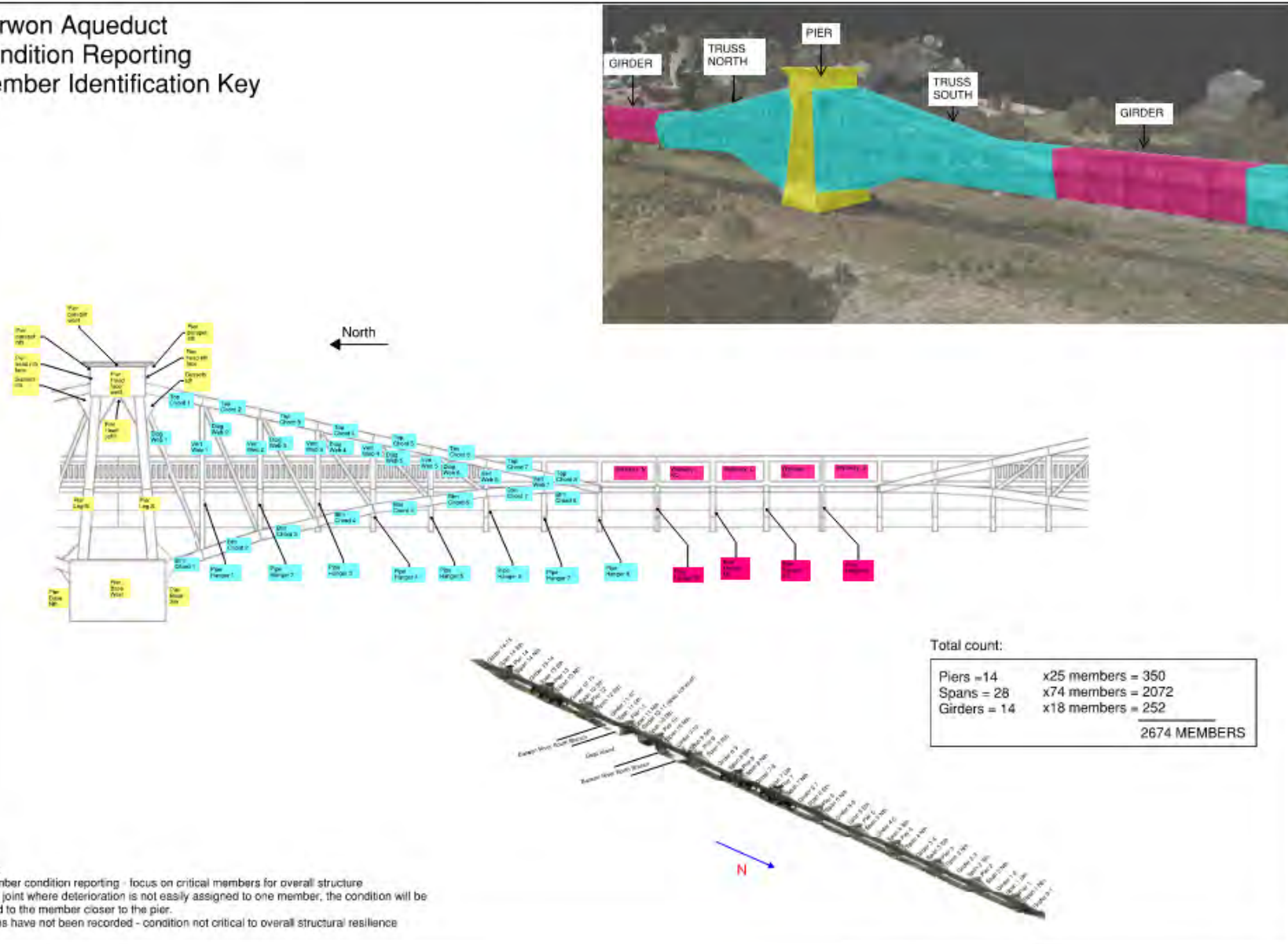
#### 4. Condition Reporting – Intent and Methodology

The primary purpose of this condition report is to prepare a baseline picture of the general structural condition of the structure and identify changes in condition between the datasets. We have focussed on key structural elements of the structure when considering review of members.

The methodology broadly involved the following steps:

1. Define individual members of the structure – refer Figure 1 on next page for key. A total of 2674 members were identified for the reporting. The highest risk members for structural failure were the primary focus of the review, particularly around the trusses and piers, noting the lower redundancy of these elements against failure. Pipes, walkway and walkway support beams within the truss extents were not included in the condition reporting as these elements were not deemed as critical for the ongoing load carrying capability of the structure.
2. Create a ranking key for identification of individual members of the structure (1-5) – refer Figure 2 for a full table and reference images of each ranking. The condition rankings are as follows:
  - (0. Unrated due to lack of visual information)
  1. No visible deterioration, or hairline cracking only. No visible loss of material.
  2. Open cracks present, no visible loss of material
  3. Localised spalling to one or two areas of member
  4. Widespread spalling to member, cover concrete lost. Bars visible, core concrete intact
  5. Widespread loss of cover concrete. Loss of concrete around bar. Visible degradation of reinforcement present
  6. Visible member failure or complete loss
3. Assess each member condition based upon the visual information available and provide a ranking on the 1-6 scale. Note any obvious past remedial works to the member, such as shotcrete repairs.
4. For heavily degraded members where reinforcement is visible (category 5 and above), obtain detailed visual reference (photo or screen clip) and compare side by side to identify any changes in the condition. Map heavily degraded members on a visual (long section) of the structure.

### Barwon Aqueduct Condition Reporting Member Identification Key



### Figure 1 Member Identification Key

## Barwon Aqueduct Condition Reporting - Member Rating Key

Rating 0: is for members where the member cannot be examined because either

- no data was collected
- the data is obscured by shadows/lack of data (for Point Cloud) OR
- vegetation obscures the member





























1	2	3	4	5	6
Cracking hairline only, or not present No visible loss of material	Open cracks present No loss of material	Localised spalling to one or two areas of member.	Widespread spalling to member Cover concrete lost Bars visible over large part of member, but core concrete intact	Widespread loss of cover concrete Loss of concrete around bar Visible degradation of reinforcement present	Complete member loss / deformation
     	     	     	     	   	<p>No examples currently.</p> <p>Visual evidence includes :</p> <p>Clearly visible deformation of member.</p> <p>Detachment of member from structure</p> <p>Note that this category only applies to visibly deformed members.</p>

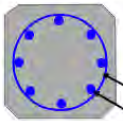
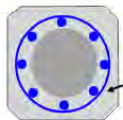
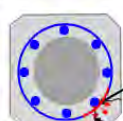



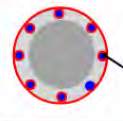

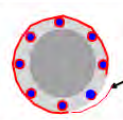



Figure 2 Member Rating Key



## 5. Deterioration – Mechanisms and Visual Cues

Deterioration of the concrete structure is due primarily to carbonation of the concrete where the alkaline matrix of the concrete is lost, thus making the internal reinforcement susceptible to rusting. The typical sequence of events in the deterioration of a particular element is illustrated in the series of steps in Figure 3.

Previous engineering reports have discussed at length the deterioration processes on the aqueduct structure, along with measurements of the cover and carbonation depths in various locations. Findings have shown that carbonation depth in the truss members typically exceeds the depth to reinforcement, and that carbonation is the primary mechanism contributing to the structure's deterioration (Taywood Maunsell, 1990).

Cross Section	Visual	Condition Ranking
 <p><b>Original cross section</b></p> <p>Hoop reinforcement Longitudinal (main) reinforcement</p>	No visible sign of decay	1
 <p><b>Carbonation</b></p> <p>Carbonated concrete - carbonation progresses internally, starting from surface of member. Once carbonation passes reinforcement depth, rusting of bars can occur.</p>	No visible sign of decay	1
 <p><b>Rusting of bar</b></p> <p>Rusting of bar increases volume (iron oxide) and creates expansionary pressure in concrete. Expansion pressure causes cracking in concrete - visible on exterior as longitudinal cracks typical.</p>		2
 <p><b>Spalling</b></p> <p>Cracked cover concrete detaches, exposing rusty reinforcing bars to view</p>		3 , 4
 <p><b>Loss of Cover</b></p> <p>Spalling continues, with cover concrete lost.</p>		3 , 4
 <p><b>Loss of hoop reinforcing</b></p> <p>Hoop reinforcing (small diameter) rusts through, causing breakage of hoop</p>		5
 <p><b>Main bar Loss</b></p> <p>Main bars (larger diameter) rust through, and/or detach from remaining core of concrete.</p>		5+
Member structural failure follows after critical amount of main bar loss, critical loss of concrete core, buckling of main bars or loss of bar anchorage		5+

**Figure 3 Deterioration Steps**



## 6. Condition Results

### 6.1 Raw Data

Refer appended table Appendix A for full grading of all members in the structure.

A summary of members by category is provided in Table 1 and shows the number of structural elements in each category. Note that the number of unrated '0' members in each dataset represents the number of members unable to be seen in the review. The '0' count is different in each dataset as it is dependent on the extent of visual access. This demonstrates the relative lack of access to certain members, either due to limitations of ground-based review (Goat Island and river spans inaccessible) or other limitations (e.g. drone survey blocked by vegetation on Goat Island).

The raw data is shown in Table 1 for completeness – noting that for all subsequent comparison metrics in the remainder of this report, any members with a '0' rating were removed from datasets before providing comparison statistics, so that clear measurements of change could be made by comparing a like for like set of data points.

**Table 1 Raw Data - Member Ratings**

Rating	Glasshouse 03/2022	Pointerra Point Cloud 12/2023	Matterport 07/2024
0	0	0	0
5	199	206	191
4	402	421	369
3	396	423	355
2	510	478	407
1	1085	1024	801
0 (unrated)	82	122	551
Total assessed	2592	2552	2123
Total members	2674	2674	2674

### 6.2 Comparison Data – Overall Results

When directly comparing members between the three datasets, (i.e. removing unrated '0' members if they exist in any of the datasets), a total of **2083** common members were able to be used for direct comparison. Refer Table 2 for the results and the ratings of each type.

**Table 2 Comparison Data - Available Datapoints**

Rating	Glasshouse 03/2022		Pointerra Point Cloud 12/2023		Matterport 07/2024	
5	170	8.16%	183	8.79%	184	8.83%
4	347	16.7%	362	17.4%	366	17.6%
3	328	15.7%	346	16.6%	346	16.6%
2	406	19.5%	389	18.7%	401	19.3%
1	832	39.9%	803	38.6%	786	37.7%
Total	2083	100%	2083	100%	2083	100%

More detailed side by side comparisons were undertaken for the 2022-2023 and 2023-2024 result sets. Note that due to visual limitations around resolution of the Matterport data, some finer details associated with cracking were difficult to interpret accurately. (For future ground-based surveys, high resolution photos shall be taken to supplement the Matterport captures.)

The Table 3 result comparison below between 2022-2023 (approx. 1 year period) below shows additional visible degradation occurred in 75 members, or approximately 4 % of the total population. Of the members showing degradation, 45 members degraded by a single category whilst 30 members degraded by two or more categories.

4x new category 5 members were identified over the period.

**Table 3 Comparison Results – Member Rating 2022-2023**

<b>Glasshouse 03/2022 - Member Category</b>		<b>Pointerra Point Cloud 12/2023 - Member Category</b>	<b>Number of Elements</b>	<b>% of total</b>
1	to	1	803	39%
1	to	2	13	1%
1	to	3	12	1%
1	to	4	3	0%
1	to	5	1	0%
2	to	2	376	18%
2	to	3	18	1%
2	to	4	6	0%
2	to	5	6	0%
3	to	3	316	15%
3	to	4	10	0%
3	to	5	2	0%
4	to	4	343	16%
4	to	5	4	0%
5	to	5	170	8%
<b>Total members unchanged</b>			<b>2008</b>	<b>96%</b>
<b>Total members degraded</b>			<b>75</b>	<b>4%</b>
<b>Total members overall</b>			<b>2083</b>	<b>100%</b>

The Table 4 result comparison below between 2023-2024 (approx. 6 month period) shows additional degradation occurred in 26 members, or approximately 1% of the total population. Of the members showing degradation, 24 members degraded by a single category whilst 2 members degraded by two or more categories.

1x new category 5 member was found over the period.

**Table 4 Comparison Results - Member Rating 2023-2024**

<b>Pointerra Point Cloud 12/2023 - Member Category</b>		<b>Matterport 07/2024 - Member Category</b>	<b>Number of Elements</b>	<b>% of total</b>
1	to	1	786	38%
1	to	2	16	1%
1	to	3	1	0%
1	to	4	0	0%
1	to	5	0	0%
2	to	2	385	18%
2	to	3	3	0%
2	to	4	1	0%
2	to	5	0	0%
3	to	3	342	16%
3	to	4	4	0%
3	to	5	0	0%
4	to	4	361	17%
4	to	5	1	0%
5	to	5	183	9%
<b>Total members unchanged</b>			<b>2057</b>	<b>99%</b>
<b>Total members degraded</b>			<b>26</b>	<b>1%</b>
<b>Total members overall</b>			<b>2083</b>	<b>100%</b>

### 6.3 Comparison Data – By Structural Zone

The comparison data was also compared based on span/pier/girder structural zones, to illustrate the relative distribution of member degradation and level of degradation across the structure. Refer Page 5 for graphical definition of the structural zones.

Note that some zones (Span 9-12) had insufficient datapoints available (due to lack of access) to allow a meaningful comparison to be undertaken, so were omitted from results.

The zone score is provided as a measure of relative degradation across the zone and is shown on a rating scale between 0 and 1, to provide a comparative condition across different zones of the structure. (Note that when comparing results, zones should only be compared to other zones of the same type, as the zone types have been normalised as a group.)

The zone rating is calculated with the formula below, with the resulting rating then being normalised into a 0-1 scale for the zone type. Thus when reading the results table, the most degraded zone of each type is rated as 1.0, and the least degraded zone is rated as 0.0.

$$\text{Zone rating} = \left( \frac{\sum \text{member category ratings}}{\text{Total member count}} \right)$$

Table 5 shows the pattern of span (truss) zones degradation across the structure. A higher level of degradation is seen around Span 3 than other spans. We note the spans around the demolition cut points (Span 8 and Span 13) are the least degraded of all spans. A temporal pattern of increasing degradation across the datasets is illustrated in most spans.

**Table 5 Condition Comparison by Zone - Spans**

Zone	Glasshouse 03/2022		Pointerra Point Cloud 12/2023		Matterport 07/2024	
	Number of Members Analysed	Overall Rating	Number of Members Analysed	Overall Rating	Number of Members Analysed	Overall Rating
Span 1 Nth	61	0.25	61	0.29	61	0.34
Span 1 Sth	73	0.21	73	0.29	73	0.29
Span 2 Nth	74	0.36	74	0.36	74	0.36
Span 2 Sth	74	0.38	74	0.47	74	0.48
Span 3 Nth	74	0.99	74	1.00	74	1.00
Span 3 Sth	74	0.75	74	0.87	74	0.87
Span 4 Nth	74	0.40	74	0.46	74	0.46
Span 4 Sth	74	0.36	74	0.36	74	0.36
Span 5 Nth	74	0.36	74	0.36	74	0.36
Span 5 Sth	74	0.23	74	0.29	74	0.30
Span 6 Nth	74	0.41	74	0.42	74	0.44
Span 6 Sth	74	0.24	74	0.35	74	0.35
Span 7 Nth	74	0.35	74	0.37	74	0.37
Span 7 Sth	74	0.35	74	0.38	74	0.38
Span 8 Nth	74	0.08	74	0.09	74	0.09
Span 8 Sth	74	0.00	74	0.05	74	0.07
Span 9 Nth	74	0.30	74	0.39	74	0.39
Span 9 Sth	insufficient data for comparison					
Span 10 Nth	insufficient data for comparison					
Span 10 Sth	insufficient data for comparison					
Span 11 Nth	insufficient data for comparison					
Span 11 Sth	insufficient data for comparison					
Span 12 Nth	insufficient data for comparison					
Span 12 Sth	69	0.40	69	0.43	69	0.46
Span 13 Nth	72	0.17	72	0.17	72	0.20
Span 13 Sth	74	0.05	74	0.06	74	0.09
Span 14 Nth	69	0.74	69	0.76	69	0.77
Span 14 Sth	62	0.52	62	0.52	62	0.52

Table 6 shows the pattern of pier zones degradation. Piers are generally more uniformly degraded than trusses typically, but again Pier 3-4 show the highest level of degradation. (Noting that most of the analysed members in the pier are concentrated around faces of the the pier head, which is not a structurally critical element.)

**Table 6 Condition Comparison by Zone - Piers**

	Glasshouse 03/2022		Pointerra Point Cloud 12/2023		Matterport 07/2024	
	Number of Members	Overall	Number of Members	Overall	Number of Members	Overall
Zone	Analysed	Rating	Analysed	Rating	Analysed	Rating
Pier 1	19	0.00	19	0.11	19	0.11
Pier 2	22	0.13	22	0.20	22	0.20
Pier 3	25	0.86	25	0.86	25	0.86
Pier 4	24	1.00	24	1.00	24	1.00
Pier 5	23	0.34	23	0.39	23	0.39
Pier 6	23	0.76	23	0.78	23	0.80
Pier 7	23	0.82	23	0.82	23	0.82
Pier 8	24	0.54	24	0.54	24	0.54
Pier 9	20	0.78	20	0.80	20	0.80
Pier 10	insufficient data for comparison					
Pier 11	insufficient data for comparison					
Pier 12	insufficient data for comparison					
Pier 13	21	0.63	21	0.63	21	0.63
Pier 14	21	0.77	21	0.77	21	0.79

Table 7 shows the pattern of girder zones degradation. Again, girders are more uniformly degraded than trusses typically across the structure and show slight increases in temporal degradation across the three datasets. We also note that girders are typically much less degraded than trusses and have a higher degree of redundancy.

**Table 7 Condition Comparison by Zone - Girders**

	Glasshouse 03/2022		Pointerra Point Cloud 12/2023		Matterport 07/2024	
	Number of Members	Overall	Number of Members	Overall	Number of Members	Overall
Zone	Analysed	Rating	Analysed	Rating	Analysed	Rating
Girder 1-2	16	0.65	16	0.69	16	0.69
Girder 2-3	18	0.71	18	0.83	18	0.88
Girder 3-4	18	0.50	18	0.50	18	0.50
Girder 4-5	11	0.46	11	0.46	11	0.46
Girder 5-6	18	0.00	18	0.00	18	0.00
Girder 6-7	17	0.55	17	0.63	17	0.68
Girder 7-8	18	0.88	18	0.88	18	0.88
Girder 8-9	18	0.58	18	0.58	18	0.58
Girder 9-10	insufficient data for comparison					
Girder 10-11	insufficient data for comparison					
Girder 11-12	insufficient data for comparison					
Girder 12-13	18	0.92	18	1.00	18	1.00
Girder 13-14	18	0.63	18	0.63	18	0.63
Girder 14-15	18	0.88	18	0.96	18	0.96



## 6.4 Results Discussion

The general results show that approximately 8.83% of the compared structural members are in very poor condition (Category 5) in 2024, increasing from 8.16% in 2022. We have provided a graphical summary (refer Figure 6) to illustrate the distribution of Category 5 members occurrence within the structure. Please see over for the summary, noting the concentration of heavily degraded members in the Span 3-4 area. This correlates with the results in Table 5.

As discussed in previous documents, whilst general conclusions can be drawn from the condition results, it is not possible to predict future failures with any degree of accuracy, in terms of timing of eventual structural failures. This is due to the following reasons:

1. Presence of additional unseen degradation in the member additional to what can be seen
2. Possibility of load redistribution through the structure, with load bypassing failed members
3. Effectiveness of reinforcement anchorage in the structure.

## 6.5 Category 5 Members - Detailed Review

Members of the structure that are in the worst condition are classed as Category 5. There are currently **184** Category 5 members as identified in the latest dataset.

The breakdown of Category 5 members per member type is shown in Table 8 below across the datasets. The Category 5 members are primarily truss members, with bottom chords, top chords and vertical web members making up most of the Category 5 heavily degraded dataset. The vertical webs have the highest level of relative degradation as a population, with approximately 19% of all vertical webs being at Category 5. This is likely due to the small cross section size of this member type, and the extensive ligatures resulting in more expansion forces which leads to spalling of cover concrete.

**Table 8 Category 5 members split out by member type**

		Glasshouse 03/2022		Pointerra Point Cloud 12/2023		Matterport 07/2024	
Element Type	Total Number of Members	Number of Category 5 members	Percent of Total at Category 5	Number of Category 5 members	Percent of Total at Category 5	Number of Category 5 members	Percent of Total at Category 5
Walkway beam	109	4	4%	4	4%	4	4%
Pipe hanger	457	18	4%	21	5%	21	5%
Top Chord	360	35	10%	36	10%	36	10%
Btm Chord	354	41	12%	45	13%	45	13%
Diag Web	274	3	1%	5	2%	5	2%
Vert Web	318	56	18%	59	19%	59	19%
Pier Leg	47	4	9%	4	9%	5	11%
Pier head	89	6	7%	6	7%	6	7%
Gussets	46	1	2%	1	2%	1	2%
Pier base	29	2	7%	2	7%	2	7%
<b>SUM</b>	<b>2083</b>	<b>170</b>		<b>183</b>		<b>184</b>	

The category 5 members are of most interest in condition reporting, as they are the most likely points for future failure initiation. We note that pier members are typically in better condition than the trusses – the pier members also have a relatively higher capacity for degradation based upon their larger cross sectional size. The most severely degraded members are in the trusses, both chords and vertical webs.

Some defects observed in the Category 5 members include the below (in order of increasing severity):

- Spalling of cover concrete, sometimes on all faces of the member
- Loss of confining stirrups/ligatures. The confining wire ligatures have been lost in several locations, exposing the main bars to potential buckling and accelerated corrosion. This is more critical in compression members (bottom chords, vertical webs) than tension members.
- In approximately 13x locations throughout the truss top and bottom chord of the bridge, main bar ends are visible and, in some cases, have detached from the core concrete. The bars appear to be splice points in the original structure. Bar ends that are visible are not anchored in the concrete matrix, and thus will not develop tension in the bar at the as-designed location. The exact effect of the development loss is difficult to quantify based upon visual review only, but is expected to have a significant effect on the load carrying capacity of these members and is thus a likely point of future failure. Refer Figure 4 for example.



**Figure 4 Example of reinforcement splice degradation (member ref 598)**

- Buckled main reinforcement - mainly in the thin vertical webs. This is evident where the reinforcing bars are no longer straight and have pulled away from the concrete core (typically coupled with loss of ligatures). Again, this effect has a significant effect on the load carrying capacity of these members. Refer Figure 5 for example.



**Figure 5 Example of main bar buckling (Member Ref 1032) – daylight visible between bar and core concrete**

Refer Figure 6 over for summary of Category 5 members on the structure, and Appendix B for full table of the Category 5 members. Where available, photos and/or point cloud images have been included and visually assessed side by side to determine any obvious signs of additional distress or further degradation. Isolated areas of additional spalling were identified in some of the Category 5 members (refer Appendix C), but no additional outward sign of increased distress in the members.

We note that as yet, no confirmed failures or significant member deformations (Category 6) have currently been recorded in the structure. Whilst heavily degraded members are likely to have lost some of their structural capacity, the imposed load is either still being taken by the member or being redistributed to adjacent members, thus avoiding visible signs of failure.

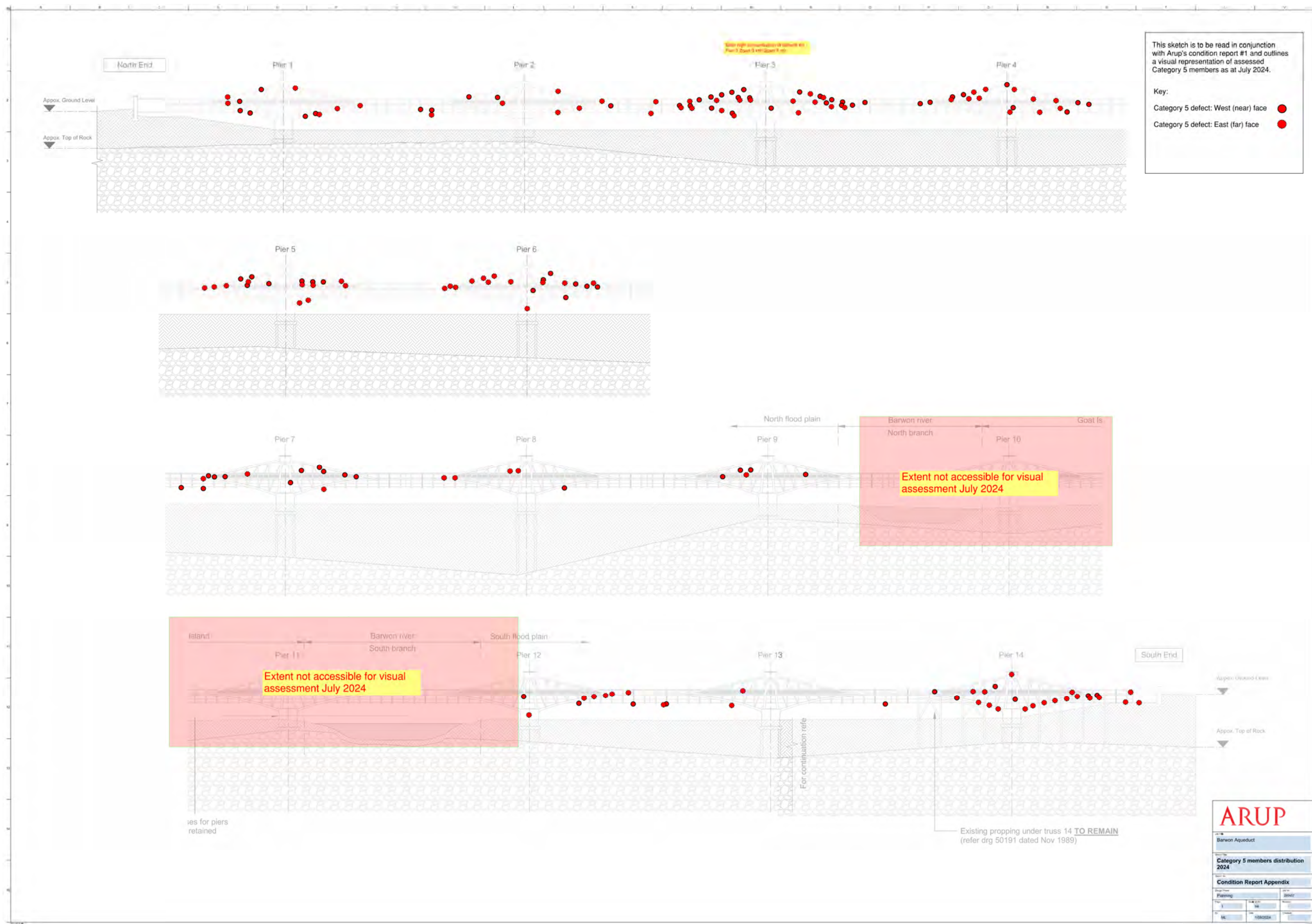


Figure 6 Summary of Category 5 members (2024)

## **7. Limitations of Condition Reporting**

Visual inspection of the structure is limited to viewing the external surfaces of members, and therefore requires a degree of interpretation to understand the internal condition of the structure. Additionally, deterioration is a highly localised phenomenon, with different parts of the structure affected to varying degrees, as demonstrated in inspection records.

Finally, whilst drawings are available for the original structure, there are many members of the structure which have been remediated in the past, likely with additional reinforcement added. These remediations do not have documentation available, thus it is not possible to ascertain the exact construction details of the structure.

## **8. Conclusion**

We trust the condition reporting herein provides a summary of the current condition of the structure. If there are any queries please don't hesitate to contact us.

Under the conditions of the Heritage Permit, we understand that condition inspection and reporting will be undertaken every 6 months in the first 5 years. This initial report can be used as a basis to inform future inspections and reporting.



**Appendix A: Full Condition Assessment table**

Member/Face	Span/Pier	Side	Component	Member Type	Original or previously repaired?	Notes	Condition Type - Glasshouse 03/2022	Condition Type - Pointerra Point Cloud 12/2023	Condition Type - Matterport 07/2024	Grade Change - Glasshouse 03/2022 to Pointerra Point Cloud 12/2023	Comments - Glasshouse 03/2022 to Pointerra Point Cloud 12/2023	Grade Change - Pointerra Point Cloud 12/2023 to Matterport 07/2024	Comments - Pointerra Point Cloud 12/2023 to Matterport 07/2024
	Unique ID	Reference											
1	Girder 0-1	West	Girder	Walkway beam North			0	1	0	Insufficient Data		Insufficient Data	
2	Girder 0-1	West	Girder	Walkway beam North-central			2	2	0	na		Insufficient Data	
3	Girder 0-1	West	Girder	Walkway beam Central			3	3	0	na		Insufficient Data	
4	Girder 0-1	West	Girder	Walkway beam South-central			3	3	0	na		Insufficient Data	
5	Girder 0-1	West	Girder	Walkway beam South			3	3	0	na		Insufficient Data	
6	Girder 0-1	West	Girder	Pipe hanger North	Shotcrete		0	0	0	Insufficient Data		Insufficient Data	
7	Girder 0-1	West	Girder	Pipe hanger North-central	Shotcrete		0	1	0	Insufficient Data		Insufficient Data	
8	Girder 0-1	West	Girder	Pipe hanger South-central	Shotcrete		0	3	0	Insufficient Data		Insufficient Data	
9	Girder 0-1	West	Girder	Pipe hanger South	Shotcrete		0	3	0	Insufficient Data		Insufficient Data	
10	Girder 0-1	East	Girder	Walkway beam North			4	4	4	na		na	
11	Girder 0-1	East	Girder	Walkway beam North-central			4	4	4	na		na	
12	Girder 0-1	East	Girder	Walkway beam Central	Patch repair		3	3	3	na		na	
13	Girder 0-1	East	Girder	Walkway beam South-central			3	3	3	na		na	
14	Girder 0-1	East	Girder	Walkway beam South			3	3	3	na		na	
15	Girder 0-1	East	Girder	Pipe hanger North			0	0	0	Insufficient Data		Insufficient Data	
16	Girder 0-1	East	Girder	Pipe hanger North-central			0	3	3	Insufficient Data		na	
17	Girder 0-1	East	Girder	Pipe hanger South-central			0	3	3	Insufficient Data		na	
18	Girder 0-1	East	Girder	Pipe hanger South			0	1	1	Insufficient Data		na	
19	Span 1 Nth	West	Truss	Top Chord 1			2	2	2	na		na	
20	Span 1 Nth	West	Truss	Top Chord 2			5	5	5	na		na	No signs of further degradation
21	Span 1 Nth	West	Truss	Top Chord 3			1	1	3	na		1 to 3	Loss of concrete cover
22	Span 1 Nth	West	Truss	Top Chord 4			1	1	1	na		na	
23	Span 1 Nth	West	Truss	Top Chord 5			2	2	2	na		na	
24	Span 1 Nth	West	Truss	Top Chord 6			1	1	1	na		na	
25	Span 1 Nth	West	Truss	Top Chord 7			1	1	1	na		na	
26	Span 1 Nth	West	Truss	Top Chord 8			1	1	1	na		na	
27	Span 1 Nth	West	Truss	Btm Chord 1			0	1	1	Insufficient Data		na	
28	Span 1 Nth	West	Truss	Btm Chord 2			1	1	1	na		na	
29	Span 1 Nth	West	Truss	Btm Chord 3			5	5	5	na		na	
30	Span 1 Nth	West	Truss	Btm Chord 4			5	5	5	na		na	
31	Span 1 Nth	West	Truss	Btm Chord 5			3	4	4	3 to 4	Loss of concrete cover	na	
32	Span 1 Nth	West	Truss	Btm Chord 6			1	4	4	1 to 4	Loss of concrete cover	na	No signs of further degradation
33	Span 1 Nth	West	Truss	Btm Chord 7			2	2	2	na		na	
34	Span 1 Nth	West	Truss	Btm Chord 8			1	1	1	na		na	
35	Span 1 Nth	West	Truss	Diag Web 1	Shotcrete		3	3	3	na		na	
36	Span 1 Nth	West	Truss	Vert Web 1	Shotcrete		1	1	1	na		na	
37	Span 1 Nth	West	Truss	Diag Web 2	Shotcrete		1	1	1	na		na	
38	Span 1 Nth	West	Truss	Vert Web 2	Shotcrete		2	2	2	na		na	
39	Span 1 Nth	West	Truss	Diag Web 3	Shotcrete		1	1	1	na		na	
40	Span 1 Nth	West	Truss	Vert Web 3	Shotcrete		1	1	1	na		na	
41	Span 1 Nth	West	Truss	Diag Web 4	Shotcrete		5	5	5	na		na	No signs of further degradation
42	Span 1 Nth	West	Truss	Vert Web 4	Shotcrete		1	1	0	na		Insufficient Data	
43	Span 1 Nth	West	Truss	Diag Web 5	Shotcrete		1	1	1	na		na	
44	Span 1 Nth	West	Truss	Vert Web 5	Shotcrete		1	1	1	na		na	
45	Span 1 Nth	West	Truss	Diag Web 6	Shotcrete		1	1	1	na		na	
46	Span 1 Nth	West	Truss	Vert Web 6	Shotcrete		1	1	1	na		na	
47	Span 1 Nth	West	Truss	Vert Web 7	Shotcrete		1	1	1	na		na	
48	Span 1 Nth	West	Truss	Pipe Hanger 1	Cast patch repair		1	1	1	na		na	
49	Span 1 Nth	West	Truss	Pipe Hanger 2	Cast patch repair		1	1	0	na		Insufficient Data	
50	Span 1 Nth	West	Truss	Pipe Hanger 3	Cast patch repair		1	1	0	na		Insufficient Data	
51	Span 1 Nth	West	Truss	Pipe Hanger 4	Cast patch repair		0	1	0	Insufficient Data		Insufficient Data	
52	Span 1 Nth	West	Truss	Pipe Hanger 5	Cast patch repair		2	2	0	na		Insufficient Data	
53	Span 1 Nth	West	Truss	Pipe Hanger 6			0	4	0	Insufficient Data		Insufficient Data	
54	Span 1 Nth	West	Truss	Pipe Hanger 7	Cast patch repair		4	4	0	na		Insufficient Data	
55	Span 1 Nth	West	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint	4	4	0	na		Insufficient Data	
56	Span 1 Nth	East	Truss	Top Chord 1			2	2	2	na		na	
57	Span 1 Nth	East	Truss	Top Chord 2			1	1	1	na		na	
58	Span 1 Nth	East	Truss	Top Chord 3			2	2	2	na		na	
59	Span 1 Nth	East	Truss	Top Chord 4			3	3	3	na		na	
60	Span 1 Nth	East	Truss	Top Chord 5			5	5	5	na		na	No signs of further degradation
61	Span 1 Nth	East	Truss	Top Chord 6			2	2	2	na		na	
62	Span 1 Nth	East	Truss	Top Chord 7			2	2	2	na		na	
63	Span 1 Nth	East	Truss	Top Chord 8			1	1	1	na		na	
64	Span 1 Nth	East	Truss	Btm Chord 1			1	1	1	na		na	
65	Span 1 Nth	East	Truss	Btm Chord 2			1	1	1	na		na	
66	Span 1 Nth	East	Truss	Btm Chord 3			1	1	1	na		na	
67	Span 1 Nth	East	Truss	Btm Chord 4			3	3	4	na		3 to 4	New loss of concrete cover
68	Span 1 Nth	East	Truss	Btm Chord 5			2	2	2	na		na	
69	Span 1 Nth	East	Truss	Btm Chord 6			2	2	2	na		na	
70	Span 1 Nth	East	Truss	Btm Chord 7			2	2	2	na		na	
71	Span 1 Nth	East	Truss	Btm Chord 8			3	3	3	na		na	
72	Span 1 Nth	East	Truss	Diag Web 1	Shotcrete		2	2	2	na		na	
73	Span 1 Nth	East	Truss	Vert Web 1	Shotcrete		1	1	1	na		na	
74	Span 1 Nth	East	Truss	Diag Web 2	Shotcrete		2	2	2	na		na	
75	Span 1 Nth	East	Truss	Vert Web 2	Shotcrete		1	1	1	na		na	
76	Span 1 Nth	East	Truss	Diag Web 3	Shotcrete		3	3	3	na		na	
77	Span 1 Nth	East	Truss	Vert Web 3	Shotcrete		1	1	1	na		na	
78	Span 1 Nth	East	Truss	Diag Web 4	Shotcrete		1	1	1	na		na	
79	Span 1 Nth	East	Truss	Vert Web 4	Shotcrete		1	1	1	na		na	
80	Span 1 Nth	East	Truss	Diag Web 5	Shotcrete		5	5	5	na		na	No signs of further degradation
81	Span 1 Nth	East	Truss	Vert Web 5	Shotcrete		1	1	1	na		na	
82	Span 1 Nth	East	Truss	Diag Web 6	Shotcrete		1	1	1	na		na	
83	Span 1 Nth	East	Truss	Vert Web 6	Shotcrete		1	1	1	na		na	
84	Span 1 Nth	East	Truss	Vert Web 7	Shotcrete		1	1	1	na		na	
85	Span 1 Nth	East	Truss	Pipe Hanger 1	Cast patch repair		3	3	4	na		3 to 4	Loss of concrete cover
86	Span 1 Nth	East	Truss	Pipe Hanger 2	Cast patch repair		0	1	2	Insufficient Data		1 to 2	Visible cracking
87	Span 1 Nth	East	Truss	Pipe Hanger 3	Cast patch repair		0	1	1	Insufficient Data		na	
88	Span 1 Nth	East	Truss	Pipe Hanger 4	Cast patch repair		0	0	1	Insufficient Data		Insufficient Data	
89	Span 1 Nth	East	Truss	Pipe Hanger 5	Cast patch repair		3	3	3	na		na	
90	Span 1 Nth	East	Truss	Pipe Hanger 6			3	0	0	Insufficient Data		Insufficient Data	
91	Span 1 Nth	East	Truss	Pipe Hanger 7	Cast patch repair		4	4	4	na		na	
92	Span 1 Nth	East	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint	4	4	4	na		na	
93	Pier 1	West	Pier	Pier Leg Nth	Shotcrete		1	1	1	na		na	
94	Pier 1	West	Pier	Pier Leg Sth	Shotcrete		1	1	1	na		na	
95	Pier 1	East	Pier	Pier Leg Nth	Shotcrete		1	1	1	na		na	
96	Pier 1	East	Pier	Pier Leg Sth	Shotcrete		1	1	1	na		na	
97	Pier 1	West	Pier	Pier head Parapet west			3	3	3	na		na	
98	Pier 1	West	Pier	Pier head Face west			3	3	3	na		na	
99	Pier 1	East	Pier	Pier head Parapet east			3	3	3	na		na	
100	Pier 1	East	Pier	Pier head Face east			1	1	1	na		na	
101	Pier 1	na	Pier	Pier head Parapet nth			1	1	0	na		Insufficient Data	
102	Pier 1	na	Pier	Pier head Face nth			1	1	0	na		Insufficient Data	
103	Pier 1	na	Pier	Pier head Parapet sth			1	1	1	na		na	
104	Pier 1	na	Pier	Pier head Face sth			3	3	3	na		na	
105	Pier 1	na	Pier	Pier head soffit			3	0	3	Insufficient Data		Insufficient Data	
106	Pier 1	West	Pier	Gussets Nth	Shotcrete		1	3	3	1 to 3	Point Cloud defect area not captured	na	
107	Pier 1	West	Pier	Gussets Sth	Shotcrete		4	4	4	na		na	
108	Pier 1	East	Pier	Gussets Nth	Shotcrete		3	3	3	na		na	
109	Pier 1	East	Pier	Gussets Sth	Shotcrete		1	1	1	na		na	
110	Pier 1	West	Pier	Pipe hanger and strut nth	Cast patch repair		1	1	1	na		na	
111	Pier 1	West	Pier	Pipe hanger and strut sth	Cast patch repair		1	1	1	na		na	
112	Pier 1	East	Pier	Pipe hanger and strut nth	Cast patch repair		1	3	3	1 to 3	Point Cloud defect area not captured	na	
113	Pier 1	East	Pier	Pipe hanger and strut sth	Cast patch repair		3	3	3	na		na	
114	Pier 1	West	Pier	Pier base west face			1	1	1	na		na	
115	Pier 1	East	Pier	Pier base east face			4	0	0	Insufficient Data		Insufficient Data	
116	Pier 1	na	Pier	Pier base south face			0	0	0	Insufficient Data		Insufficient Data	
117	Pier 1	na	Pier	Pier base north face			0	0	0	Insufficient Data		Insufficient Data	
118	Span 1 Sth	West	Truss	Top Chord 1			1	1	1	na		na	
119	Span 1 Sth	West	Truss	Top Chord 2			3	3	3	na		na	
120	Span 1 Sth	West	Truss	Top Chord 3	Cast patch repair		1	1	1	na		na	
121	Span 1 Sth	West	Truss	Top Chord 4			1	1	1	na		na	
122	Span 1 Sth	West	Truss	Top Chord 5			1	1	1	na		na	
123	Span 1 Sth	West	Truss	Top Chord 6			1	1	1	na		na	
124	Span 1 Sth	West	Truss	Top Chord 7			2	2	2	na		na	
125	Span 1 Sth	West	Truss	Top Chord 8			1	1	1	na		na	
126	Span 1 Sth	West	Truss	Btm Chord 1			3	3	3	na		na	
127	Span 1 Sth	West	Truss	Btm Chord 2			5	5	5	na	Loss of ligatures	na	No signs of further degradation
128	Span 1 Sth	West	Truss	Btm Chord 3			2	5	5	2 to 5	Loss of concrete cover	na	No signs of further degradation
129	Span 1 Sth	West	Truss	Btm Chord 4			2	4	4				

152	Span 1 Sth	West	Truss	Pipe Hanger 6	Cast patch repair		4	4	4	na	na	
153	Span 1 Sth	West	Truss	Pipe Hanger 7	Cast patch repair		4	4	4	na	na	
154	Span 1 Sth	West	Truss	Pipe Hanger 8	Cast patch repair		4	4	4	na	na	
155	Span 1 Sth	East	Truss	Top Chord 1			5	5	5	na	na	No signs of further degradation
156	Span 1 Sth	East	Truss	Top Chord 2			1	1	1	na	na	
157	Span 1 Sth	East	Truss	Top Chord 3			1	1	1	na	na	
158	Span 1 Sth	East	Truss	Top Chord 4			2	2	2	na	na	
159	Span 1 Sth	East	Truss	Top Chord 5			2	2	2	na	na	
160	Span 1 Sth	East	Truss	Top Chord 6			2	2	2	na	na	
161	Span 1 Sth	East	Truss	Top Chord 7			2	2	2	na	na	
162	Span 1 Sth	East	Truss	Top Chord 8			3	3	3	na	na	
163	Span 1 Sth	East	Truss	Btm Chord 1			2	2	0	na	Insufficient Data	
164	Span 1 Sth	East	Truss	Btm Chord 2			2	2	2	na	na	
165	Span 1 Sth	East	Truss	Btm Chord 3			5	5	5	na	na	No signs of further degradation
166	Span 1 Sth	East	Truss	Btm Chord 4			4	4	4	na	na	
167	Span 1 Sth	East	Truss	Btm Chord 5			5	5	5	na	na	No signs of further degradation
168	Span 1 Sth	East	Truss	Btm Chord 6			1	1	1	na	na	
169	Span 1 Sth	East	Truss	Btm Chord 7			2	5	5	2 to 5	Loss of concrete cover	
170	Span 1 Sth	East	Truss	Btm Chord 8			1	1	1	na	na	
171	Span 1 Sth	East	Truss	Diag Web 1	Shotcrete		3	3	3	na	na	
172	Span 1 Sth	East	Truss	Vert Web 1	Shotcrete		1	1	1	na	na	
173	Span 1 Sth	East	Truss	Diag Web 2	Shotcrete		1	1	1	na	na	
174	Span 1 Sth	East	Truss	Vert Web 2	Shotcrete		3	3	3	na	na	
175	Span 1 Sth	East	Truss	Diag Web 3	Shotcrete		1	1	1	na	na	
176	Span 1 Sth	East	Truss	Vert Web 3	Shotcrete		1	1	1	na	na	
177	Span 1 Sth	East	Truss	Diag Web 4	Shotcrete		1	1	1	na	na	
178	Span 1 Sth	East	Truss	Vert Web 4	Shotcrete		1	1	1	na	na	
179	Span 1 Sth	East	Truss	Diag Web 5	Shotcrete		1	1	1	na	na	
180	Span 1 Sth	East	Truss	Vert Web 5	Shotcrete		1	1	1	na	na	
181	Span 1 Sth	East	Truss	Diag Web 6	Shotcrete		1	1	1	na	na	
182	Span 1 Sth	East	Truss	Vert Web 6	Shotcrete		1	1	1	na	na	
183	Span 1 Sth	East	Truss	Vert Web 7	Shotcrete		1	1	1	na	na	
184	Span 1 Sth	East	Truss	Pipe Hanger 1			1	1	1	na	na	
185	Span 1 Sth	East	Truss	Pipe Hanger 2			2	2	2	na	na	
186	Span 1 Sth	East	Truss	Pipe Hanger 3			3	3	3	na	na	
187	Span 1 Sth	East	Truss	Pipe Hanger 4			3	3	3	na	na	New loss of concrete cover
188	Span 1 Sth	East	Truss	Pipe Hanger 5			2	2	2	na	na	
189	Span 1 Sth	East	Truss	Pipe Hanger 6			1	1	1	na	na	
190	Span 1 Sth	East	Truss	Pipe Hanger 7			3	3	3	na	na	
191	Span 1 Sth	East	Truss	Pipe Hanger 8			3	3	3	na	na	
192	Girder 1-2	West	Girder	Walkway beam North			4	4	4	na	na	
193	Girder 1-2	West	Girder	Walkway beam North-central			4	4	4	na	na	
194	Girder 1-2	West	Girder	Walkway beam Central			4	4	4	na	na	Loss of concrete cover
195	Girder 1-2	West	Girder	Walkway beam South-central			4	4	4	na	na	
196	Girder 1-2	West	Girder	Walkway beam South			4	4	4	na	na	
197	Girder 1-2	West	Girder	Pipe hanger North			2	3	3	2 to 3	Loss of concrete cover	
198	Girder 1-2	West	Girder	Pipe hanger North-central	Tie		4	4	4	na	na	
199	Girder 1-2	West	Girder	Pipe hanger South-central	Tie		4	4	4	na	na	
200	Girder 1-2	West	Girder	Pipe hanger South	Tie		5	5	5	na	na	
201	Girder 1-2	East	Girder	Walkway beam North			1	1	1	na	na	
202	Girder 1-2	East	Girder	Walkway beam North-central			1	1	0	na	Insufficient Data	
203	Girder 1-2	East	Girder	Walkway beam Central			3	3	3	na	na	
204	Girder 1-2	East	Girder	Walkway beam South-central			1	1	1	na	na	
205	Girder 1-2	East	Girder	Walkway beam South			1	1	0	na	Insufficient Data	
206	Girder 1-2	East	Girder	Pipe hanger North			4	4	4	na	na	
207	Girder 1-2	East	Girder	Pipe hanger North-central	Tie		3	3	3	na	na	
208	Girder 1-2	East	Girder	Pipe hanger South-central	Tie		3	3	3	na	na	
209	Girder 1-2	East	Girder	Pipe hanger South	Tie		2	2	2	na	na	
210	Span 2 Nth	West	Truss	Top Chord 1			1	1	1	na	na	
211	Span 2 Nth	West	Truss	Top Chord 2			2	2	2	na	na	Crack growth
212	Span 2 Nth	West	Truss	Top Chord 3			2	2	2	na	na	
213	Span 2 Nth	West	Truss	Top Chord 4			2	2	2	na	na	
214	Span 2 Nth	West	Truss	Top Chord 5			5	5	5	na	na	No signs of further degradation
215	Span 2 Nth	West	Truss	Top Chord 6			2	2	2	na	na	
216	Span 2 Nth	West	Truss	Top Chord 7			2	2	2	na	na	
217	Span 2 Nth	West	Truss	Top Chord 8			2	2	2	na	na	
218	Span 2 Nth	West	Truss	Btm Chord 1			1	1	1	na	na	
219	Span 2 Nth	West	Truss	Btm Chord 2			2	2	2	na	na	
220	Span 2 Nth	West	Truss	Btm Chord 3			2	2	2	na	na	
221	Span 2 Nth	West	Truss	Btm Chord 4			1	1	1	na	na	
222	Span 2 Nth	West	Truss	Btm Chord 5			1	1	1	na	na	
223	Span 2 Nth	West	Truss	Btm Chord 6			1	1	1	na	na	
224	Span 2 Nth	West	Truss	Btm Chord 7			1	1	1	na	na	
225	Span 2 Nth	West	Truss	Btm Chord 8			2	2	2	na	na	
226	Span 2 Nth	West	Truss	Diag Web 1	Shotcrete		1	1	1	na	na	
227	Span 2 Nth	West	Truss	Vert Web 1	Shotcrete		1	1	1	na	na	
228	Span 2 Nth	West	Truss	Diag Web 2	Shotcrete		1	1	1	na	na	
229	Span 2 Nth	West	Truss	Vert Web 2	Shotcrete		5	5	5	na	na	No signs of further degradation
230	Span 2 Nth	West	Truss	Diag Web 3	Shotcrete		1	1	1	na	na	
231	Span 2 Nth	West	Truss	Vert Web 3	Shotcrete		1	1	1	na	na	
232	Span 2 Nth	West	Truss	Diag Web 4	Shotcrete		1	1	1	na	na	
233	Span 2 Nth	West	Truss	Vert Web 4	Shotcrete		1	1	1	na	na	
234	Span 2 Nth	West	Truss	Diag Web 5	Shotcrete		1	1	1	na	na	
235	Span 2 Nth	West	Truss	Vert Web 5	Shotcrete		1	1	1	na	na	
236	Span 2 Nth	West	Truss	Diag Web 6	Shotcrete		1	1	1	na	na	
237	Span 2 Nth	West	Truss	Vert Web 6	Shotcrete		1	1	1	na	na	
238	Span 2 Nth	West	Truss	Vert Web 7	Shotcrete		1	1	1	na	na	
239	Span 2 Nth	West	Truss	Pipe Hanger 1	Cast patch repair		2	2	2	na	na	
240	Span 2 Nth	West	Truss	Pipe Hanger 2	Cast patch repair		3	3	3	na	na	
241	Span 2 Nth	West	Truss	Pipe Hanger 3	Cast patch repair		4	4	4	na	na	
242	Span 2 Nth	West	Truss	Pipe Hanger 4	Cast patch repair		2	2	2	na	na	
243	Span 2 Nth	West	Truss	Pipe Hanger 5	Cast patch repair		4	4	4	na	na	
244	Span 2 Nth	West	Truss	Pipe Hanger 6	Cast patch repair		4	4	4	na	na	
245	Span 2 Nth	West	Truss	Pipe Hanger 7	Cast patch repair		4	4	4	na	na	
246	Span 2 Nth	West	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint	5	5	5	na	na	
247	Span 2 Nth	East	Truss	Top Chord 1			1	1	1	na	na	
248	Span 2 Nth	East	Truss	Top Chord 2			2	2	2	na	na	Crack growth
249	Span 2 Nth	East	Truss	Top Chord 3			2	2	2	na	na	
250	Span 2 Nth	East	Truss	Top Chord 4			1	1	1	na	na	
251	Span 2 Nth	East	Truss	Top Chord 5			2	2	2	na	na	
252	Span 2 Nth	East	Truss	Top Chord 6			2	2	2	na	na	
253	Span 2 Nth	East	Truss	Top Chord 7			1	1	1	na	na	
254	Span 2 Nth	East	Truss	Top Chord 8			2	2	2	na	na	
255	Span 2 Nth	East	Truss	Btm Chord 1			3	3	3	na	na	
256	Span 2 Nth	East	Truss	Btm Chord 2			3	3	3	na	na	
257	Span 2 Nth	East	Truss	Btm Chord 3			1	1	1	na	na	
258	Span 2 Nth	East	Truss	Btm Chord 4			2	2	2	na	na	
259	Span 2 Nth	East	Truss	Btm Chord 5			2	2	2	na	na	
260	Span 2 Nth	East	Truss	Btm Chord 6			1	1	1	na	na	
261	Span 2 Nth	East	Truss	Btm Chord 7			4	4	4	na	na	
262	Span 2 Nth	East	Truss	Btm Chord 8			2	2	2	na	na	
263	Span 2 Nth	East	Truss	Diag Web 1	Shotcrete		1	1	1	na	na	
264	Span 2 Nth	East	Truss	Vert Web 1	Shotcrete		1	1	1	na	na	
265	Span 2 Nth	East	Truss	Diag Web 2	Shotcrete		1	1	1	na	na	
266	Span 2 Nth	East	Truss	Vert Web 2	Shotcrete		5	5	5	na	na	No signs of further degradation
267	Span 2 Nth	East	Truss	Diag Web 3	Shotcrete		1	1	1	na	na	
268	Span 2 Nth	East	Truss	Vert Web 3	Shotcrete		4	4	4	na	na	
269	Span 2 Nth	East	Truss	Diag Web 4	Shotcrete		1	1	1	na	na	
270	Span 2 Nth	East	Truss	Vert Web 4	Shotcrete	Testing	3	3	3	na	na	
271	Span 2 Nth	East	Truss	Diag Web 5	Shotcrete		1	1	1	na	na	
272	Span 2 Nth	East	Truss	Vert Web 5	Shotcrete		3	3	3	na	na	
273	Span 2 Nth	East	Truss	Diag Web 6	Shotcrete		1	1	1	na	na	
274	Span 2 Nth	East	Truss	Vert Web 6	Shotcrete		1	1	1	na	na	
275	Span 2 Nth	East	Truss	Vert Web 7	Shotcrete		1	1	1	na	na	
276	Span 2 Nth	East	Truss	Pipe Hanger 1	Cast patch repair		3	3	3	na	na	
277	Span 2 Nth	East	Truss	Pipe Hanger 2	Cast patch repair		4	4	4	na	na	
278	Span 2 Nth	East	Truss	Pipe Hanger 3	Cast patch repair		4	4	4	na	na	
279	Span 2 Nth	East	Truss	Pipe Hanger 4	Cast patch repair		3	3	3	na	na	
280	Span 2 Nth	East	Truss	Pipe Hanger 5	Cast patch repair		4	4	4	na	na	
281	Span 2 Nth	East	Truss	Pipe Hanger 6	Cast patch repair		3	3	3	na	na	
282	Span 2 Nth	East	Truss	Pipe Hanger 7	Cast patch repair		2	2	2	na	na	
283	Span 2 Nth	East	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint	5	5	5	na	na	No signs of further degradation
284	Pier 2	West	Pier	Pier Leg Nth	Shotcrete		1	1	1	na	na	
285	Pier 2	West	Pier	Pier Leg Sth	Shotcrete		1	1	1	na	na	
286	Pier 2	East	Pier	Pier Leg Nth	Shotcrete		4	4	4	na	na	
287	Pier 2	East	Pier	Pier Leg Sth	Shotcrete		3	3	3	na	na	
288	Pier 2	West	Pier	Pier head Parapet west			1	1	1	na	na	
289	Pier 2	West	Pier	Pier head Face west			1	1	1	na	na	
290	Pier 2	East	Pier	Pier head Parapet east			3	3	3	na	na	
29												

309	Span 2 Sth	West	Truss	Top Chord 1				1	2	2 1 to 2	Point Cloud defect area not captured	na	
310	Span 2 Sth	West	Truss	Top Chord 2				1	1	1 na		na	
311	Span 2 Sth	West	Truss	Top Chord 3				1	2	2 1 to 2	Point Cloud defect area not captured	na	
312	Span 2 Sth	West	Truss	Top Chord 4				1	1	1 na		na	
313	Span 2 Sth	West	Truss	Top Chord 5				4	4	4 na		na	
314	Span 2 Sth	West	Truss	Top Chord 6				1	1	1 na		na	
315	Span 2 Sth	West	Truss	Top Chord 7				2	2	2 na		na	
316	Span 2 Sth	West	Truss	Top Chord 8				1	1	1 na		na	
317	Span 2 Sth	West	Truss	Btm Chord 1				1	1	1 na		na	
318	Span 2 Sth	West	Truss	Btm Chord 2				1	1	1 na		na	
319	Span 2 Sth	West	Truss	Btm Chord 3	Patch repair			1	1	1 na		na	
320	Span 2 Sth	West	Truss	Btm Chord 4				3	3	3 na		na	
321	Span 2 Sth	West	Truss	Btm Chord 5				1	1	1 na		na	
322	Span 2 Sth	West	Truss	Btm Chord 6				3	3	3 na		na	
323	Span 2 Sth	West	Truss	Btm Chord 7				4	4	4 na		na	
324	Span 2 Sth	West	Truss	Btm Chord 8				5	5	5 na		na	No signs of further degradation
325	Span 2 Sth	West	Truss	Diag Web 1	Shotcrete			1	1	1 na		na	
326	Span 2 Sth	West	Truss	Vert Web 1	Shotcrete			1	1	1 na		na	
327	Span 2 Sth	West	Truss	Diag Web 2	Shotcrete			1	1	1 na		na	
328	Span 2 Sth	West	Truss	Vert Web 2	Shotcrete			1	1	1 na		na	
329	Span 2 Sth	West	Truss	Diag Web 3	Shotcrete			1	1	1 na		na	
330	Span 2 Sth	West	Truss	Vert Web 3	Shotcrete			1	1	1 na		na	
331	Span 2 Sth	West	Truss	Diag Web 4	Shotcrete			1	1	1 na		na	
332	Span 2 Sth	West	Truss	Vert Web 4	Shotcrete			1	1	1 na		na	
333	Span 2 Sth	West	Truss	Diag Web 5	Shotcrete			1	1	1 na		na	
334	Span 2 Sth	West	Truss	Vert Web 5	Shotcrete			1	1	1 na		na	
335	Span 2 Sth	West	Truss	Diag Web 6	Shotcrete			1	1	1 na		na	
336	Span 2 Sth	West	Truss	Vert Web 6	Shotcrete			1	1	1 na		na	
337	Span 2 Sth	West	Truss	Vert Web 7	Shotcrete			1	1	1 na		na	
338	Span 2 Sth	West	Truss	Pipe Hanger 1	Cast patch repair			4	4	4 na		na	
339	Span 2 Sth	West	Truss	Pipe Hanger 2	Cast patch repair			2	3	3 2 to 3	Point Cloud defect area not captured	na	
340	Span 2 Sth	West	Truss	Pipe Hanger 3	Cast patch repair			4	4	4 na		na	
341	Span 2 Sth	West	Truss	Pipe Hanger 4	Cast patch repair			3	4	4 3 to 4	Point Cloud defect area not captured	na	
342	Span 2 Sth	West	Truss	Pipe Hanger 5	Cast patch repair			4	4	4 na		na	
343	Span 2 Sth	West	Truss	Pipe Hanger 6	Cast patch repair			4	4	4 na		na	
344	Span 2 Sth	West	Truss	Pipe Hanger 7	Cast patch repair			4	4	4 na		na	
345	Span 2 Sth	West	Truss	Pipe Hanger 8	Cast patch repair			2	2	2 na		na	
346	Span 2 Sth	East	Truss	Top Chord 1				2	2	2 na		na	
347	Span 2 Sth	East	Truss	Top Chord 2				1	1	1 na		na	
348	Span 2 Sth	East	Truss	Top Chord 3				5	5	5 na		na	No signs of further degradation
349	Span 2 Sth	East	Truss	Top Chord 4				1	1	2 na		1 to 2	Crack growth
350	Span 2 Sth	East	Truss	Top Chord 5				4	4	4 na		na	
351	Span 2 Sth	East	Truss	Top Chord 6				2	4	4 2 to 4	Loss of concrete cover	na	
352	Span 2 Sth	East	Truss	Top Chord 7				5	5	5 na	Loss of concrete cover	na	No signs of further degradation
353	Span 2 Sth	East	Truss	Top Chord 8				2	2	2 na		na	
354	Span 2 Sth	East	Truss	Btm Chord 1				2	2	2 na		na	
355	Span 2 Sth	East	Truss	Btm Chord 2				4	4	4 na		na	
356	Span 2 Sth	East	Truss	Btm Chord 3				5	5	5 na		na	No signs of further degradation
357	Span 2 Sth	East	Truss	Btm Chord 4				4	4	4 na	Loss of concrete cover	na	
358	Span 2 Sth	East	Truss	Btm Chord 5				5	5	5 na		na	No signs of further degradation
359	Span 2 Sth	East	Truss	Btm Chord 6				4	4	4 na		na	
360	Span 2 Sth	East	Truss	Btm Chord 7				1	1	1 na		na	
361	Span 2 Sth	East	Truss	Btm Chord 8				2	2	2 na		na	
362	Span 2 Sth	East	Truss	Diag Web 1	Shotcrete			1	1	1 na		na	
363	Span 2 Sth	East	Truss	Vert Web 1	Shotcrete			3	3	3 na		na	
364	Span 2 Sth	East	Truss	Diag Web 2	Shotcrete			1	1	1 na		na	
365	Span 2 Sth	East	Truss	Vert Web 2	Shotcrete			1	1	1 na		na	
366	Span 2 Sth	East	Truss	Diag Web 3	Shotcrete			1	1	1 na		na	
367	Span 2 Sth	East	Truss	Vert Web 3	Shotcrete			1	1	1 na		na	
368	Span 2 Sth	East	Truss	Diag Web 4	Shotcrete			1	1	1 na		na	
369	Span 2 Sth	East	Truss	Vert Web 4	Shotcrete			1	1	1 na		na	
370	Span 2 Sth	East	Truss	Diag Web 5	Shotcrete			1	1	1 na		na	
371	Span 2 Sth	East	Truss	Vert Web 5	Shotcrete			1	1	1 na		na	
372	Span 2 Sth	East	Truss	Diag Web 6	Shotcrete			1	1	1 na		na	
373	Span 2 Sth	East	Truss	Vert Web 6	Shotcrete			1	1	1 na		na	
374	Span 2 Sth	East	Truss	Vert Web 7	Shotcrete			1	1	1 na		na	
375	Span 2 Sth	East	Truss	Pipe Hanger 1	Cast patch repair			4	4	4 na		na	
376	Span 2 Sth	East	Truss	Pipe Hanger 2	Cast patch repair			3	4	4 3 to 4	Point Cloud defect area not captured	na	
377	Span 2 Sth	East	Truss	Pipe Hanger 3	Cast patch repair			4	4	4 na		na	
378	Span 2 Sth	East	Truss	Pipe Hanger 4	Cast patch repair			3	4	4 3 to 4	Point Cloud defect area not captured	na	
379	Span 2 Sth	East	Truss	Pipe Hanger 5	Cast patch repair			3	4	4 3 to 4	Point Cloud defect area not captured	na	
380	Span 2 Sth	East	Truss	Pipe Hanger 6	Cast patch repair			2	2	2 na		na	
381	Span 2 Sth	East	Truss	Pipe Hanger 7	Cast patch repair			4	4	4 na		na	
382	Span 2 Sth	East	Truss	Pipe Hanger 8	Cast patch repair			2	2	2 na		na	
383	Girder 2-3	West	Girder	Walkway beam North	Patch repair			4	4	4 na		na	
384	Girder 2-3	West	Girder	Walkway beam North-central				4	4	4 na		na	
385	Girder 2-3	West	Girder	Walkway beam Central	Patch repair			3	3	3 na		na	
386	Girder 2-3	West	Girder	Walkway beam South-central	Patch repair			4	4	4 na		na	
387	Girder 2-3	West	Girder	Walkway beam South	Patch repair			4	4	4 na		na	
388	Girder 2-3	West	Girder	Pipe hanger North	Cast patch repair			3	3	3 na		na	
389	Girder 2-3	West	Girder	Pipe hanger North-central	Cast patch repair			1	3	3 1 to 3	Point Cloud defect area not captured	na	
390	Girder 2-3	West	Girder	Pipe hanger South-central	Cast patch repair			4	4	4 na		na	
391	Girder 2-3	West	Girder	Pipe hanger South	Cast patch repair			1	2	3 1 to 2	Point Cloud defect area not captured	2 to 3	Loss of concrete cover
392	Girder 2-3	East	Girder	Walkway beam North				3	3	3 na		na	
393	Girder 2-3	East	Girder	Walkway beam North-central				3	3	3 na		na	
394	Girder 2-3	East	Girder	Walkway beam Central				3	3	3 na		na	
395	Girder 2-3	East	Girder	Walkway beam South-central				5	5	5 na		na	
396	Girder 2-3	East	Girder	Walkway beam South				4	4	4 na		na	
397	Girder 2-3	East	Girder	Pipe hanger North				3	3	3 na		na	
398	Girder 2-3	East	Girder	Pipe hanger North-central				3	3	3 na		na	
399	Girder 2-3	East	Girder	Pipe hanger South-central				5	5	5 na		na	
400	Girder 2-3	East	Girder	Pipe hanger South				3	3	3 na		na	
401	Span 3 Nth	West	Truss	Top Chord 1				1	1	1 na		na	
402	Span 3 Nth	West	Truss	Top Chord 2				5	5	5 na	Loss of concrete cover	na	Loss of concrete cover
403	Span 3 Nth	West	Truss	Top Chord 3				5	5	5 na		na	Loss of concrete cover
404	Span 3 Nth	West	Truss	Top Chord 4				5	5	5 na		na	
405	Span 3 Nth	West	Truss	Top Chord 5				5	5	5 na		na	
406	Span 3 Nth	West	Truss	Top Chord 6				5	5	5 na		na	
407	Span 3 Nth	West	Truss	Top Chord 7				2	2	2 na		na	
408	Span 3 Nth	West	Truss	Top Chord 8				2	2	2 na		na	
409	Span 3 Nth	West	Truss	Btm Chord 1				1	1	1 na		na	
410	Span 3 Nth	West	Truss	Btm Chord 2				1	1	1 na		na	
411	Span 3 Nth	West	Truss	Btm Chord 3				5	5	5 na		na	No signs of further degradation
412	Span 3 Nth	West	Truss	Btm Chord 4				1	1	1 na		na	
413	Span 3 Nth	West	Truss	Btm Chord 5				5	5	5 na		na	No signs of further degradation
414	Span 3 Nth	West	Truss	Btm Chord 6				1	1	1 na		na	
415	Span 3 Nth	West	Truss	Btm Chord 7				5	5	5 na		na	No signs of further degradation
416	Span 3 Nth	West	Truss	Btm Chord 8				5	5	5 na		na	Loss of concrete cover
417	Span 3 Nth	West	Truss	Diag Web 1	Cast patch repair			1	1	1 na		na	
418	Span 3 Nth	West	Truss	Vert Web 1	Cast patch repair			5	5	5 na		na	No signs of further degradation
419	Span 3 Nth	West	Truss	Diag Web 2	Cast patch repair			1	1	1 na		na	
420	Span 3 Nth	West	Truss	Vert Web 2	Cast patch repair			5	5	5 na		na	No signs of further degradation
421	Span 3 Nth	West	Truss	Diag Web 3	Cast patch repair			1	1	1 na		na	
422	Span 3 Nth	West	Truss	Vert Web 3	Cast patch repair	Testing		3	3	3 na		na	
423	Span 3 Nth	West	Truss	Diag Web 4	Cast patch repair			1	1	1 na		na	
424	Span 3 Nth	West	Truss	Vert Web 4	Cast patch repair			1	1	1 na		na	
425	Span 3 Nth	West	Truss	Diag Web 5	Cast patch repair			1	1	1 na		na	
426	Span 3 Nth	West	Truss	Vert Web 5	Cast patch repair			1	1	1 na		na	
427	Span 3 Nth	West	Truss	Diag Web 6	Cast patch repair			1	1	1 na		na	
428	Span 3 Nth	West	Truss	Vert Web 6				4	4	4 na		na	
429	Span 3 Nth	West	Truss	Vert Web 7				4	4	4 na		na	
430	Span 3 Nth	West	Truss	Pipe Hanger 1	Cast patch repair			4	4	4 na		na	
431	Span 3 Nth	West	Truss	Pipe Hanger 2	Cast patch repair			4	4	4 na		na	
432	Span 3 Nth	West	Truss	Pipe Hanger 3	Cast patch repair			4	4	4 na		na	
433	Span 3 Nth	West	Truss	Pipe Hanger 4	Cast patch repair			4	4	4 na		na	
434	Span 3 Nth	West	Truss	Pipe Hanger 5	Cast patch repair			4	4	4 na		na	
435	Span 3 Nth	West	Truss	Pipe Hanger 6	Cast patch repair			4	4	4 na		na	
436	Span 3 Nth	West	Truss	Pipe Hanger 7	Cast patch repair			4	4	4 na		na	
437	Span 3 Nth	West	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint		4	4	4 na		na	
438	Span 3 Nth	East	Truss	Top Chord 1				2	2	2 na		na	
439	Span 3 Nth	East	Truss	Top Chord 2				2	2	2 na		na	
440	Span 3 Nth	East	Truss	Top Chord 3				2	2	2 na		na	
441	Span 3 Nth	East	Truss										



466	Span 3 Nth	East	Truss	Vert Web 7		Loose concrete on truss	3	3	3	na		
467	Span 3 Nth	East	Truss	Pipe Hanger 1	Cast patch repair		4	4	4	na		
468	Span 3 Nth	East	Truss	Pipe Hanger 2	Cast patch repair		4	4	4	na		
469	Span 3 Nth	East	Truss	Pipe Hanger 3	Cast patch repair		2	2	2	na		
470	Span 3 Nth	East	Truss	Pipe Hanger 4	Cast patch repair		2	2	2	na		
471	Span 3 Nth	East	Truss	Pipe Hanger 5	Cast patch repair		4	4	4	na		
472	Span 3 Nth	East	Truss	Pipe Hanger 6	Cast patch repair		4	4	4	na		
473	Span 3 Nth	East	Truss	Pipe Hanger 7	Cast patch repair		4	4	4	na		
474	Span 3 Nth	East	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint	4	4	4	na		
475	Pier 3	West	Pier	Pier Leg Nth			4	4	4	na		
476	Pier 3	West	Pier	Pier Leg Sth			5	5	5	na		
477	Pier 3	East	Pier	Pier Leg Nth	Cast patch repair		4	4	4	na		No signs of further degradation
478	Pier 3	East	Pier	Pier Leg Sth	Cast patch repair		4	4	4	na		
479	Pier 3	West	Pier	Pier head Parapet west			3	3	3	na		No signs of further degradation
480	Pier 3	West	Pier	Pier head Face west	Patch repair		3	3	3	na		
481	Pier 3	East	Pier	Pier head Parapet east			4	4	4	na		
482	Pier 3	East	Pier	Pier head Face east	Patch repair		4	4	4	na		
483	Pier 3	na	Pier	Pier head Parapet nth			2	2	2	na		
484	Pier 3	na	Pier	Pier head Face nth	Patch repair		5	5	5	na		
485	Pier 3	na	Pier	Pier head Parapet sth			4	4	4	na		
486	Pier 3	na	Pier	Pier head Face sth	Patch repair		4	4	4	na		
487	Pier 3	na	Pier	Pier head soffit			4	4	4	na		
488	Pier 3	West	Pier	Gussets Nth	Cast patch repair		3	3	3	na		
489	Pier 3	West	Pier	Gussets Sth	Cast patch repair		4	4	4	na		
490	Pier 3	East	Pier	Gussets Nth	Cast patch repair		2	2	2	na		
491	Pier 3	East	Pier	Gussets Sth	Cast patch repair		2	2	2	na		
492	Pier 3	West	Pier	Pipe hanger and strut nth	Cast patch repair		4	4	4	na		
493	Pier 3	West	Pier	Pipe hanger and strut sth	Cast patch repair	Testing	4	4	4	na		
494	Pier 3	East	Pier	Pipe hanger and strut nth	Cast patch repair		4	4	4	na		
495	Pier 3	East	Pier	Pipe hanger and strut sth	Cast patch repair		4	4	4	na		
496	Pier 3	West	Pier	Pier base west face			3	3	3	na		
497	Pier 3	East	Pier	Pier base east face			4	4	4	na		
498	Pier 3	na	Pier	Pier base south face			1	1	1	na		
499	Pier 3	na	Pier	Pier base north face			3	3	3	na		
500	Span 3 Sth	West	Truss	Top Chord 1			3	3	3	na		
501	Span 3 Sth	West	Truss	Top Chord 2			1	1	1	na		
502	Span 3 Sth	West	Truss	Top Chord 3			5	5	5	na		No signs of further degradation
503	Span 3 Sth	West	Truss	Top Chord 4			4	4	4	na		
504	Span 3 Sth	West	Truss	Top Chord 5			5	5	5	na		
505	Span 3 Sth	West	Truss	Top Chord 6			5	5	5	na		
506	Span 3 Sth	West	Truss	Top Chord 7			5	5	5	na		No signs of further degradation
507	Span 3 Sth	West	Truss	Top Chord 8			1	1	1	na		
508	Span 3 Sth	West	Truss	Btm Chord 1			1	1	1	na		
509	Span 3 Sth	West	Truss	Btm Chord 2			1	1	1	na		
510	Span 3 Sth	West	Truss	Btm Chord 3			1	1	1	na		
511	Span 3 Sth	West	Truss	Btm Chord 4			1	1	1	na		
512	Span 3 Sth	West	Truss	Btm Chord 5			1	1	1	na		
513	Span 3 Sth	West	Truss	Btm Chord 6			1	1	1	na		
514	Span 3 Sth	West	Truss	Btm Chord 7			5	5	5	na	Loss of concrete cover	No signs of further degradation
515	Span 3 Sth	West	Truss	Btm Chord 8			5	5	5	na		
516	Span 3 Sth	West	Truss	Diag Web 1	Cast patch repair		4	4	4	na		
517	Span 3 Sth	West	Truss	Vert Web 1	Cast patch repair		4	4	4	na		
518	Span 3 Sth	West	Truss	Diag Web 2	Cast patch repair		1	1	1	na		
519	Span 3 Sth	West	Truss	Vert Web 2	Cast patch repair		1	1	1	na		
520	Span 3 Sth	West	Truss	Diag Web 3	Cast patch repair		1	1	1	na		
521	Span 3 Sth	West	Truss	Vert Web 3	Cast patch repair		2	2	2	na		
522	Span 3 Sth	West	Truss	Diag Web 4	Cast patch repair		1	1	1	na		
523	Span 3 Sth	West	Truss	Vert Web 4	Patch repair		2	2	2	na		
524	Span 3 Sth	West	Truss	Diag Web 5	Cast patch repair		1	2	2	1 to 2	Point Cloud defect area not captured	
525	Span 3 Sth	West	Truss	Vert Web 5	Patch repair		2	5	5	2 to 5	Loss of concrete cover	
526	Span 3 Sth	West	Truss	Diag Web 6	Cast patch repair		1	1	1	na		
527	Span 3 Sth	West	Truss	Vert Web 6			2	2	2	na		
528	Span 3 Sth	West	Truss	Vert Web 7			2	2	2	na		
529	Span 3 Sth	West	Truss	Pipe Hanger 1	Cast patch repair		4	4	4	na		
530	Span 3 Sth	West	Truss	Pipe Hanger 2	Cast patch repair		4	4	4	na		
531	Span 3 Sth	West	Truss	Pipe Hanger 3	Cast patch repair		4	4	4	na		
532	Span 3 Sth	West	Truss	Pipe Hanger 4	Cast patch repair		4	4	4	na		
533	Span 3 Sth	West	Truss	Pipe Hanger 5	Cast patch repair		4	4	4	na		
534	Span 3 Sth	West	Truss	Pipe Hanger 6	Cast patch repair		4	4	4	na		
535	Span 3 Sth	West	Truss	Pipe Hanger 7	Cast patch repair		4	4	4	na		
536	Span 3 Sth	West	Truss	Pipe Hanger 8	Cast patch repair		3	3	3	na		
537	Span 3 Sth	East	Truss	Top Chord 1			2	2	2	na		Crack growth
538	Span 3 Sth	East	Truss	Top Chord 2			2	2	2	na		
539	Span 3 Sth	East	Truss	Top Chord 3			2	2	2	na		
540	Span 3 Sth	East	Truss	Top Chord 4			2	5	5	2 to 5	Loss of concrete cover	
541	Span 3 Sth	East	Truss	Top Chord 5			5	5	5	na	Loss of concrete cover	No signs of further degradation
542	Span 3 Sth	East	Truss	Top Chord 6			2	2	2	na		
543	Span 3 Sth	East	Truss	Top Chord 7			2	2	2	na		
544	Span 3 Sth	East	Truss	Top Chord 8			2	2	2	na		
545	Span 3 Sth	East	Truss	Btm Chord 1			1	1	1	na		
546	Span 3 Sth	East	Truss	Btm Chord 2			1	1	1	na		
547	Span 3 Sth	East	Truss	Btm Chord 3			4	5	5	4 to 5	Loss of concrete cover	No signs of further degradation
548	Span 3 Sth	East	Truss	Btm Chord 4			2	2	2	na		
549	Span 3 Sth	East	Truss	Btm Chord 5			1	1	1	na		
550	Span 3 Sth	East	Truss	Btm Chord 6			5	5	5	na		
551	Span 3 Sth	East	Truss	Btm Chord 7			5	5	5	na		No signs of further degradation
552	Span 3 Sth	East	Truss	Btm Chord 8			3	3	3	na		No signs of further degradation
553	Span 3 Sth	East	Truss	Diag Web 1	Cast patch repair		1	4	4	1 to 4	Point Cloud defect area not captured	
554	Span 3 Sth	East	Truss	Vert Web 1	Cast patch repair		3	3	3	na		
555	Span 3 Sth	East	Truss	Diag Web 2	Cast patch repair		1	1	1	na		
556	Span 3 Sth	East	Truss	Vert Web 2	Cast patch repair		5	5	5	na		No signs of further degradation
557	Span 3 Sth	East	Truss	Diag Web 3	Patch repair		3	3	3	na		
558	Span 3 Sth	East	Truss	Vert Web 3	Cast patch repair		1	1	1	na		
559	Span 3 Sth	East	Truss	Diag Web 4	Patch repair		3	3	3	na		
560	Span 3 Sth	East	Truss	Vert Web 4	Cast patch repair		5	5	5	na	Loss of concrete cover	No signs of further degradation
561	Span 3 Sth	East	Truss	Diag Web 5	Patch repair		1	1	1	na		
562	Span 3 Sth	East	Truss	Vert Web 5	Cast patch repair		4	4	4	na		
563	Span 3 Sth	East	Truss	Diag Web 6	Cast patch repair		1	1	1	na		
564	Span 3 Sth	East	Truss	Vert Web 6	Cast patch repair		4	4	4	na		
565	Span 3 Sth	East	Truss	Vert Web 7			4	4	4	na		
566	Span 3 Sth	East	Truss	Pipe Hanger 1			3	3	3	na		
567	Span 3 Sth	East	Truss	Pipe Hanger 2			1	3	3	1 to 3	Point Cloud defect area not captured	
568	Span 3 Sth	East	Truss	Pipe Hanger 3			3	3	3	na		
569	Span 3 Sth	East	Truss	Pipe Hanger 4			2	2	2	na		
570	Span 3 Sth	East	Truss	Pipe Hanger 5			4	4	4	na		
571	Span 3 Sth	East	Truss	Pipe Hanger 6			3	3	3	na		
572	Span 3 Sth	East	Truss	Pipe Hanger 7			3	3	3	na		
573	Span 3 Sth	East	Truss	Pipe Hanger 8			3	3	3	na		
574	Girder 3-4	West	Girder	Walkway beam North			5	5	5	na		
575	Girder 3-4	West	Girder	Walkway beam North-central			4	4	4	na		
576	Girder 3-4	West	Girder	Walkway beam Central			3	3	3	na		
577	Girder 3-4	West	Girder	Walkway beam South-central			3	3	3	na		
578	Girder 3-4	West	Girder	Walkway beam South			2	2	2	na		
579	Girder 3-4	West	Girder	Pipe hanger North	Tie		3	3	3	na		
580	Girder 3-4	West	Girder	Pipe hanger North-central	Tie		1	1	1	na		
581	Girder 3-4	West	Girder	Pipe hanger South-central	Tie		4	4	4	na		
582	Girder 3-4	West	Girder	Pipe hanger South			4	4	4	na		
583	Girder 3-4	East	Girder	Walkway beam North			2	2	2	na		
584	Girder 3-4	East	Girder	Walkway beam North-central			2	2	2	na		
585	Girder 3-4	East	Girder	Walkway beam Central			3	3	3	na		
586	Girder 3-4	East	Girder	Walkway beam South-central			4	4	4	na		
587	Girder 3-4	East	Girder	Walkway beam South			1	1	1	na		No signs of further degradation
588	Girder 3-4	East	Girder	Pipe hanger North	Tie	Cast patch repair	4	4	4	na		
589	Girder 3-4	East	Girder	Pipe hanger North-central	Tie	Cast patch repair	3	3	3	na		
590	Girder 3-4	East	Girder	Pipe hanger South-central	Tie	Cast patch repair	3	3	3	na		
591	Girder 3-4	East	Girder	Pipe hanger South		Cast patch repair	4	4	4	na		
592	Span 4 Nth	West	Truss	Top Chord 1			1	1	1	na		
593	Span 4 Nth	West	Truss	Top Chord 2			1	1	1	na		
594	Span 4 Nth	West	Truss	Top Chord 3			2	2	2	na		
595	Span 4 Nth	West	Truss	Top Chord 4			5	5	5	na		
596	Span 4 Nth	West	Truss	Top Chord 5			5	5	5	na		
597	Span 4 Nth	West	Truss	Top Chord 6			2	2	2	na		
598	Span 4 Nth	West	Truss	Top Chord 7			5	5	5	na		No signs of further degradation
599	Span 4 Nth	West	Truss	Top Chord 8			1	1	1	na		
600	Span 4 Nth	West	Truss	Btm Chord 1			1	1	1	na		
601	Span 4 Nth	West	Truss	Btm Chord 2			1	1	1	na		
602	Span 4 Nth	West	Truss	Btm Chord 3			2	2	2	na		
603	Span 4 Nth	West	Truss	Btm Chord 4			1	1	1	na		
604	Span 4 Nth	West	Truss	Btm Chord 5			1	1	1	na		
605	Span 4 Nth	West	Truss	Btm Chord 6			2	2	2	na		
606	Span 4 Nth	West	Truss	Btm Chord 7			2	2	2	na		
607	Span 4 Nth	West	Truss	Btm Chord 8			5	5	5	na		



623	Span 4 Nth	West	Truss	Pipe Hanger 3	Cast patch repair		4	4	4 na		na	
624	Span 4 Nth	West	Truss	Pipe Hanger 4	Cast patch repair		2	3	3 2 to 3	Point Cloud defect area not captured	na	
625	Span 4 Nth	West	Truss	Pipe Hanger 5	Cast patch repair		2	2	2 na		na	
626	Span 4 Nth	West	Truss	Pipe Hanger 6	Cast patch repair		4	4	4 na		na	
627	Span 4 Nth	West	Truss	Pipe Hanger 7	Cast patch repair		2	2	2 na		na	
628	Span 4 Nth	West	Truss	Pipe Hanger 8	Cast patch repair		4	4	4 na		na	
629	Span 4 Nth	East	Truss	Top Chord 1			1	1	1 na		na	
630	Span 4 Nth	East	Truss	Top Chord 2			5	5	5 na		na	No signs of further degradation
631	Span 4 Nth	East	Truss	Top Chord 3			5	5	5 na		na	No signs of further degradation
632	Span 4 Nth	East	Truss	Top Chord 4			4	4	4 na		na	
633	Span 4 Nth	East	Truss	Top Chord 5			5	5	5 na		na	
634	Span 4 Nth	East	Truss	Top Chord 6	Cast patch repair		2	2	2 na		na	
635	Span 4 Nth	East	Truss	Top Chord 7			1	1	1 na		na	
636	Span 4 Nth	East	Truss	Top Chord 8	Cast patch repair		1	1	1 na		na	
637	Span 4 Nth	East	Truss	Btm Chord 1			1	1	1 na		na	
638	Span 4 Nth	East	Truss	Btm Chord 2			1	1	1 na		na	
639	Span 4 Nth	East	Truss	Btm Chord 3			1	1	1 na		na	
640	Span 4 Nth	East	Truss	Btm Chord 4			1	1	1 na		na	
641	Span 4 Nth	East	Truss	Btm Chord 5			1	1	1 na		na	
642	Span 4 Nth	East	Truss	Btm Chord 6			1	1	1 na		na	
643	Span 4 Nth	East	Truss	Btm Chord 7	Cast patch repair		1	1	1 na		na	
644	Span 4 Nth	East	Truss	Btm Chord 8	Cast patch repair		1	1	1 na		na	
645	Span 4 Nth	East	Truss	Diag Web 1	Patch repair		4	4	4 na		na	
646	Span 4 Nth	East	Truss	Vert Web 1	Cast patch repair		1	1	1 na		na	
647	Span 4 Nth	East	Truss	Diag Web 2	Patch repair		1	1	1 na		na	
648	Span 4 Nth	East	Truss	Vert Web 2	Cast patch repair		5	5	5 na		na	
649	Span 4 Nth	East	Truss	Diag Web 3	Patch repair		1	2	2 1 to 2	Crack appearance	na	
650	Span 4 Nth	East	Truss	Vert Web 3	Patch repair		5	5	5 na		na	Loss of concrete cover
651	Span 4 Nth	East	Truss	Diag Web 4	Patch repair		1	2	2 1 to 2	Crack appearance	na	
652	Span 4 Nth	East	Truss	Vert Web 4	Cast patch repair		1	1	1 na		na	
653	Span 4 Nth	East	Truss	Diag Web 5	Patch repair		1	1	1 na		na	
654	Span 4 Nth	East	Truss	Vert Web 5	Cast patch repair		1	1	1 na		na	
655	Span 4 Nth	East	Truss	Diag Web 6	Cast patch repair		3	3	3 na		na	
656	Span 4 Nth	East	Truss	Vert Web 6	Cast patch repair		3	3	3 na		na	
657	Span 4 Nth	East	Truss	Vert Web 7			1	1	1 na		na	
658	Span 4 Nth	East	Truss	Pipe Hanger 1			4	4	4 na		na	
659	Span 4 Nth	East	Truss	Pipe Hanger 2			1	1	1 na		na	
660	Span 4 Nth	East	Truss	Pipe Hanger 3			3	3	3 na		na	
661	Span 4 Nth	East	Truss	Pipe Hanger 4			1	1	1 na		na	
662	Span 4 Nth	East	Truss	Pipe Hanger 5			2	3	3 2 to 3	Point Cloud defect area not captured	na	
663	Span 4 Nth	East	Truss	Pipe Hanger 6			1	1	1 na		na	
664	Span 4 Nth	East	Truss	Pipe Hanger 7		Bolt	2	2	2 na		na	
665	Span 4 Nth	East	Truss	Pipe Hanger 8		Expansion Joint	4	4	4 na		na	
666	Pier 4	West	Pier	Pier Leg Nth	Cast patch repair		2	2	2 na		na	
667	Pier 4	West	Pier	Pier Leg Sth	Patch repair		5	5	5 na		na	No signs of further degradation
668	Pier 4	East	Pier	Pier Leg Nth	Patch repair		4	4	4 na		na	
669	Pier 4	East	Pier	Pier Leg Sth	Cast patch repair		4	4	4 na		na	
670	Pier 4	West	Pier	Pier head Parapet west			4	4	4 na		na	
671	Pier 4	West	Pier	Pier head Face west	Patch repair		5	5	5 na		na	No signs of further degradation
672	Pier 4	East	Pier	Pier head Parapet east	Patch repair		4	4	4 na		na	
673	Pier 4	East	Pier	Pier head Face east	Patch repair		4	4	4 na		na	
674	Pier 4	na	Pier	Pier head Parapet nth			4	4	4 na		na	
675	Pier 4	na	Pier	Pier head Face nth	Patch repair		5	5	5 na		na	
676	Pier 4	na	Pier	Pier head Parapet sth			4	4	4 na		na	
677	Pier 4	na	Pier	Pier head Face sth	Patch repair		5	5	5 na		na	
678	Pier 4	na	Pier	Pier head soffit			5	5	5 na		na	
679	Pier 4	West	Pier	Gussets Nth	Cast patch repair		1	1	1 na		na	
680	Pier 4	West	Pier	Gussets Sth	Cast patch repair		2	2	2 na		na	
681	Pier 4	East	Pier	Gussets Nth	Cast patch repair		4	4	4 na		na	
682	Pier 4	East	Pier	Gussets Sth	Cast patch repair		5	5	5 na		na	
683	Pier 4	West	Pier	Pipe hanger and strut nth	Cast patch repair		4	4	4 na		na	
684	Pier 4	West	Pier	Pipe hanger and strut sth	Cast patch repair		3	3	3 na		na	
685	Pier 4	East	Pier	Pipe hanger and strut nth	Cast patch repair		3	3	3 na		na	
686	Pier 4	East	Pier	Pipe hanger and strut sth	Cast patch repair		5	5	5 na		na	
687	Pier 4	West	Pier	Pier base west face			4	4	4 na		na	
688	Pier 4	East	Pier	Pier base east face			4	4	4 na		na	
689	Pier 4	na	Pier	Pier base south face			1	1	0 na		Insufficient Data	
690	Pier 4	na	Pier	Pier base north face			1	1	1 na		na	
691	Span 4 Sth	West	Truss	Top Chord 1			1	1	1 na		na	
692	Span 4 Sth	West	Truss	Top Chord 2			1	1	1 na		na	
693	Span 4 Sth	West	Truss	Top Chord 3			1	1	1 na		na	
694	Span 4 Sth	West	Truss	Top Chord 4			1	1	1 na		na	
695	Span 4 Sth	West	Truss	Top Chord 5			2	2	2 na		na	
696	Span 4 Sth	West	Truss	Top Chord 6			2	2	2 na		na	
697	Span 4 Sth	West	Truss	Top Chord 7	Cast patch repair		1	1	1 na		na	
698	Span 4 Sth	West	Truss	Top Chord 8			2	2	2 na		na	
699	Span 4 Sth	West	Truss	Btm Chord 1			2	2	2 na		na	
700	Span 4 Sth	West	Truss	Btm Chord 2			2	2	2 na		na	
701	Span 4 Sth	West	Truss	Btm Chord 3			2	2	2 na		na	
702	Span 4 Sth	West	Truss	Btm Chord 4			1	1	1 na		na	
703	Span 4 Sth	West	Truss	Btm Chord 5			2	2	2 na		na	
704	Span 4 Sth	West	Truss	Btm Chord 6			2	2	2 na		na	
705	Span 4 Sth	West	Truss	Btm Chord 7			2	2	2 na		na	
706	Span 4 Sth	West	Truss	Btm Chord 8			1	1	1 na		na	
707	Span 4 Sth	West	Truss	Diag Web 1	Cast patch repair		3	3	3 na		na	
708	Span 4 Sth	West	Truss	Vert Web 1			2	2	2 na		na	
709	Span 4 Sth	West	Truss	Diag Web 2	Cast patch repair		1	1	1 na		na	
710	Span 4 Sth	West	Truss	Vert Web 2			3	3	3 na		na	
711	Span 4 Sth	West	Truss	Diag Web 3	Cast patch repair		1	1	1 na		na	
712	Span 4 Sth	West	Truss	Vert Web 3			1	1	1 na		na	
713	Span 4 Sth	West	Truss	Diag Web 4	Cast patch repair		1	1	1 na		na	
714	Span 4 Sth	West	Truss	Vert Web 4			3	3	3 na		na	
715	Span 4 Sth	West	Truss	Diag Web 5	Cast patch repair		1	1	1 na		na	
716	Span 4 Sth	West	Truss	Vert Web 5			3	3	3 na		na	
717	Span 4 Sth	West	Truss	Diag Web 6	Cast patch repair		1	1	1 na		na	
718	Span 4 Sth	West	Truss	Vert Web 6	Cast patch repair		5	5	5 na		na	
719	Span 4 Sth	West	Truss	Vert Web 7			5	5	5 na		na	
720	Span 4 Sth	West	Truss	Pipe Hanger 1			3	3	3 na		na	
721	Span 4 Sth	West	Truss	Pipe Hanger 2			2	2	2 na		na	
722	Span 4 Sth	West	Truss	Pipe Hanger 3			4	4	4 na		na	
723	Span 4 Sth	West	Truss	Pipe Hanger 4			1	2	2 1 to 2	Crack appearance	na	
724	Span 4 Sth	West	Truss	Pipe Hanger 5			5	5	5 na		na	
725	Span 4 Sth	West	Truss	Pipe Hanger 6			1	1	1 na		na	
726	Span 4 Sth	West	Truss	Pipe Hanger 7			2	2	2 na		na	
727	Span 4 Sth	West	Truss	Pipe Hanger 8			3	3	3 na		na	
728	Span 4 Sth	East	Truss	Top Chord 1			1	1	1 na		na	
729	Span 4 Sth	East	Truss	Top Chord 2			2	2	2 na		na	
730	Span 4 Sth	East	Truss	Top Chord 3			2	2	2 na		na	
731	Span 4 Sth	East	Truss	Top Chord 4			2	2	2 na		na	
732	Span 4 Sth	East	Truss	Top Chord 5			2	2	2 na		na	
733	Span 4 Sth	East	Truss	Top Chord 6			2	2	2 na		na	
734	Span 4 Sth	East	Truss	Top Chord 7			1	1	1 na		na	
735	Span 4 Sth	East	Truss	Top Chord 8			2	2	2 na		na	
736	Span 4 Sth	East	Truss	Btm Chord 1			4	4	4 na		na	
737	Span 4 Sth	East	Truss	Btm Chord 2			2	2	2 na		na	
738	Span 4 Sth	East	Truss	Btm Chord 3			5	5	5 na	Loss of concrete cover	na	
739	Span 4 Sth	East	Truss	Btm Chord 4			1	1	1 na		na	
740	Span 4 Sth	East	Truss	Btm Chord 5			5	5	5 na		na	
741	Span 4 Sth	East	Truss	Btm Chord 6			2	2	2 na		na	Crack growth
742	Span 4 Sth	East	Truss	Btm Chord 7			2	2	2 na		na	
743	Span 4 Sth	East	Truss	Btm Chord 8			2	2	2 na		na	
744	Span 4 Sth	East	Truss	Diag Web 1			3	3	3 na		na	
745	Span 4 Sth	East	Truss	Vert Web 1	Cast patch repair		1	1	1 na		na	
746	Span 4 Sth	East	Truss	Diag Web 2	Cast patch repair		3	3	3 na		na	
747	Span 4 Sth	East	Truss	Vert Web 2	Patch repair		5	5	5 na		na	Loss of concrete cover
748	Span 4 Sth	East	Truss	Diag Web 3			1	1	1 na		na	
749	Span 4 Sth	East	Truss	Vert Web 3	Cast patch repair		3	3	3 na		na	
750	Span 4 Sth	East	Truss	Diag Web 4			1	1	1 na		na	
751	Span 4 Sth	East	Truss	Vert Web 4	Cast patch repair		5	5	5 na		na	No signs of further degradation
752	Span 4 Sth	East	Truss	Diag Web 5	Cast patch repair		1	1	1 na		na	
753	Span 4 Sth	East	Truss	Vert Web 5	Cast patch repair		2	2	2 na		na	
754	Span 4 Sth	East	Truss	Diag Web 6	Cast patch repair		1	1	1 na		na	
755	Span 4 Sth	East	Truss	Vert Web 6	Cast patch repair		1	1	1 na		na	
756	Span 4 Sth	East	Truss	Vert Web 7			4	4	4 na		na	
757	Span 4 Sth	East	Truss	Pipe Hanger 1	Cast patch repair		1	1	1 na		na	
758	Span 4 Sth	East	Truss	Pipe Hanger 2	Cast patch repair		1	1	1 na		na	
759	Span 4 Sth	East	Truss	Pipe Hanger 3	Cast patch repair		4	4	4 na		na	
760	Span 4 Sth	East	Truss	Pipe Hanger 4	Cast patch repair		1	1	1 na		na	
761	Span 4 Sth	East	Truss	Pipe Hanger 5	Cast patch repair		1	1	1 na		na	
762	Span 4 Sth	East	Truss	Pipe Hanger 6	Cast patch repair		1	1	1 na		na	
763	Span 4 Sth	East	Truss	Pipe Hanger 7	Cast patch repair		1	1	1 na		na	

780	Girder 4-5	East	Girder	Pipe hanger North-central	Tie	Cast patch repair	3	3	3	na	na	
781	Girder 4-5	East	Girder	Pipe hanger South-central	Tie	Cast patch repair	1	1	1	na	na	
782	Girder 4-5	East	Girder	Pipe hanger South		Cast patch repair	3	3	3	na	na	
783	Span 5 Nth	West	Truss	Top Chord 1			1	1	1	na	na	
784	Span 5 Nth	West	Truss	Top Chord 2			2	2	2	na	na	
785	Span 5 Nth	West	Truss	Top Chord 3			5	5	5	na	na	No signs of further degradation
786	Span 5 Nth	West	Truss	Top Chord 4			5	5	5	na	na	
787	Span 5 Nth	West	Truss	Top Chord 5			2	2	2	na	na	
788	Span 5 Nth	West	Truss	Top Chord 6			2	2	2	na	na	
789	Span 5 Nth	West	Truss	Top Chord 7			2	2	2	na	na	
790	Span 5 Nth	West	Truss	Top Chord 8			1	1	1	na	na	
791	Span 5 Nth	West	Truss	Btm Chord 1			1	1	1	na	na	
792	Span 5 Nth	West	Truss	Btm Chord 2			2	2	2	na	na	
793	Span 5 Nth	West	Truss	Btm Chord 3			2	2	2	na	na	
794	Span 5 Nth	West	Truss	Btm Chord 4			2	2	2	na	na	
795	Span 5 Nth	West	Truss	Btm Chord 5			2	2	2	na	na	
796	Span 5 Nth	West	Truss	Btm Chord 6			1	1	2	na	1 to 2	Crack growth
797	Span 5 Nth	West	Truss	Btm Chord 7	Cast patch repair		2	2	2	na	na	
798	Span 5 Nth	West	Truss	Btm Chord 8			1	1	1	na	na	
799	Span 5 Nth	West	Truss	Diag Web 1	Cast patch repair		4	4	4	na	na	
800	Span 5 Nth	West	Truss	Vert Web 1			1	1	1	na	na	
801	Span 5 Nth	West	Truss	Diag Web 2	Cast patch repair		1	1	1	na	na	
802	Span 5 Nth	West	Truss	Vert Web 2			5	5	5	na	na	No signs of further degradation
803	Span 5 Nth	West	Truss	Diag Web 3	Cast patch repair		1	1	1	na	na	
804	Span 5 Nth	West	Truss	Vert Web 3			2	2	2	na	na	
805	Span 5 Nth	West	Truss	Diag Web 4	Cast patch repair		1	1	1	na	na	
806	Span 5 Nth	West	Truss	Vert Web 4			5	5	5	na	na	
807	Span 5 Nth	West	Truss	Diag Web 5	Cast patch repair		1	1	1	na	na	
808	Span 5 Nth	West	Truss	Vert Web 5	Cast patch repair		1	1	1	na	na	
809	Span 5 Nth	West	Truss	Diag Web 6	Cast patch repair		3	3	3	na	na	
810	Span 5 Nth	West	Truss	Vert Web 6			4	4	4	na	na	
811	Span 5 Nth	West	Truss	Vert Web 7			3	3	3	na	na	
812	Span 5 Nth	West	Truss	Pipe Hanger 1	Cast patch repair		1	1	1	na	na	
813	Span 5 Nth	West	Truss	Pipe Hanger 2	Cast patch repair		1	1	1	na	na	
814	Span 5 Nth	West	Truss	Pipe Hanger 3	Cast patch repair		3	3	3	na	na	
815	Span 5 Nth	West	Truss	Pipe Hanger 4	Cast patch repair		1	1	1	na	na	
816	Span 5 Nth	West	Truss	Pipe Hanger 5	Cast patch repair		2	2	2	na	na	
817	Span 5 Nth	West	Truss	Pipe Hanger 6	Cast patch repair		3	3	3	na	na	
818	Span 5 Nth	West	Truss	Pipe Hanger 7	Cast patch repair		1	1	1	na	na	
819	Span 5 Nth	West	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint	1	1	1	na	na	
820	Span 5 Nth	East	Truss	Top Chord 1	Cast patch repair		2	2	2	na	na	
821	Span 5 Nth	East	Truss	Top Chord 2	Cast patch repair		1	1	1	na	na	
822	Span 5 Nth	East	Truss	Top Chord 3	Cast patch repair		1	1	1	na	na	
823	Span 5 Nth	East	Truss	Top Chord 4			4	4	4	na	na	
824	Span 5 Nth	East	Truss	Top Chord 5			2	2	2	na	na	Crack growth
825	Span 5 Nth	East	Truss	Top Chord 6			1	1	1	na	na	
826	Span 5 Nth	East	Truss	Top Chord 7	Cast patch repair		2	2	2	na	na	
827	Span 5 Nth	East	Truss	Top Chord 8	Cast patch repair		1	1	1	na	na	
828	Span 5 Nth	East	Truss	Btm Chord 1			2	2	2	na	na	
829	Span 5 Nth	East	Truss	Btm Chord 2			2	2	2	na	na	
830	Span 5 Nth	East	Truss	Btm Chord 3			2	2	2	na	na	
831	Span 5 Nth	East	Truss	Btm Chord 4			1	1	1	na	na	
832	Span 5 Nth	East	Truss	Btm Chord 5			1	1	1	na	na	
833	Span 5 Nth	East	Truss	Btm Chord 6			1	1	1	na	na	
834	Span 5 Nth	East	Truss	Btm Chord 7			1	1	1	na	na	
835	Span 5 Nth	East	Truss	Btm Chord 8			1	1	1	na	na	
836	Span 5 Nth	East	Truss	Diag Web 1	Cast patch repair		4	4	4	na	na	
837	Span 5 Nth	East	Truss	Vert Web 1			4	4	4	na	Loss of concrete cover	
838	Span 5 Nth	East	Truss	Diag Web 2	Cast patch repair		4	4	4	na	na	
839	Span 5 Nth	East	Truss	Vert Web 2			2	2	2	na	na	
840	Span 5 Nth	East	Truss	Diag Web 3	Cast patch repair		2	2	2	na	na	
841	Span 5 Nth	East	Truss	Vert Web 3			5	5	5	na	na	No signs of further degradation
842	Span 5 Nth	East	Truss	Diag Web 4	Cast patch repair		1	1	1	na	na	
843	Span 5 Nth	East	Truss	Vert Web 4	Cast patch repair		3	3	3	na	na	
844	Span 5 Nth	East	Truss	Diag Web 5	Cast patch repair		1	1	1	na	na	
845	Span 5 Nth	East	Truss	Vert Web 5	Cast patch repair		5	5	5	na	na	
846	Span 5 Nth	East	Truss	Diag Web 6	Cast patch repair		1	1	1	na	na	
847	Span 5 Nth	East	Truss	Vert Web 6	Cast patch repair		5	5	5	na	na	No signs of further degradation
848	Span 5 Nth	East	Truss	Vert Web 7			5	5	5	na	na	
849	Span 5 Nth	East	Truss	Pipe Hanger 1	Cast patch repair		1	1	1	na	na	
850	Span 5 Nth	East	Truss	Pipe Hanger 2	Cast patch repair		1	1	1	na	na	
851	Span 5 Nth	East	Truss	Pipe Hanger 3	Cast patch repair		3	3	3	na	na	
852	Span 5 Nth	East	Truss	Pipe Hanger 4	Cast patch repair		1	1	1	na	na	
853	Span 5 Nth	East	Truss	Pipe Hanger 5	Cast patch repair		1	1	1	na	na	
854	Span 5 Nth	East	Truss	Pipe Hanger 6	Cast patch repair		2	2	2	na	na	
855	Span 5 Nth	East	Truss	Pipe Hanger 7	Cast patch repair		2	2	2	na	na	
856	Span 5 Nth	East	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint	1	1	1	na	na	
857	Pier 5	West	Pier	Pier Leg Nth			3	3	3	na	na	
858	Pier 5	West	Pier	Pier Leg Sth	Cast patch repair		3	3	3	na	na	
859	Pier 5	East	Pier	Pier Leg Nth	Cast patch repair		2	2	2	na	na	
860	Pier 5	East	Pier	Pier Leg Sth	Cast patch repair		2	2	2	na	na	
861	Pier 5	West	Pier	Pier head Parapet west			1	1	1	na	na	
862	Pier 5	West	Pier	Pier head Face west	Patch repair		1	1	1	na	na	
863	Pier 5	East	Pier	Pier head Parapet east			3	3	3	na	na	
864	Pier 5	East	Pier	Pier head Face east	Patch repair		4	4	4	na	na	Loss of concrete cover
865	Pier 5	na	Pier	Pier head Parapet nth			1	1	1	na	na	
866	Pier 5	na	Pier	Pier head Face nth	Patch repair		4	4	4	na	na	
867	Pier 5	na	Pier	Pier head Parapet sth			1	1	1	na	na	
868	Pier 5	na	Pier	Pier head Face sth	Patch repair		3	3	3	na	na	
869	Pier 5	na	Pier	Pier head soffit			5	0	5	Insufficient Data	Insufficient Data	
870	Pier 5	West	Pier	Gussets Nth	Cast patch repair		3	3	3	na	na	
871	Pier 5	West	Pier	Gussets Sth	Cast patch repair		3	3	3	na	na	
872	Pier 5	East	Pier	Gussets Nth	Cast patch repair		4	4	4	na	na	
873	Pier 5	East	Pier	Gussets Sth	Cast patch repair		4	4	4	na	na	
874	Pier 5	West	Pier	Pipe hanger and strut nth	Cast patch repair		1	1	1	na	na	
875	Pier 5	West	Pier	Pipe hanger and strut sth	Cast patch repair		1	3	3	1 to 3	Point Cloud defect area not captured	
876	Pier 5	East	Pier	Pipe hanger and strut nth	Cast patch repair		4	4	4	na	na	
877	Pier 5	East	Pier	Pipe hanger and strut sth	Cast patch repair		4	4	4	na	na	
878	Pier 5	West	Pier	Pier base west face			3	3	3	na	na	
879	Pier 5	East	Pier	Pier base east face			1	1	1	na	na	
880	Pier 5	na	Pier	Pier base south face			1	1	0	na	Insufficient Data	
881	Pier 5	na	Pier	Pier base north face			1	1	1	na	na	
882	Span 5 Sth	West	Truss	Top Chord 1			1	1	1	na	na	
883	Span 5 Sth	West	Truss	Top Chord 2			1	1	1	na	na	
884	Span 5 Sth	West	Truss	Top Chord 3			1	1	1	na	na	
885	Span 5 Sth	West	Truss	Top Chord 4			1	1	1	na	na	
886	Span 5 Sth	West	Truss	Top Chord 5			1	1	1	na	na	
887	Span 5 Sth	West	Truss	Top Chord 6			1	1	1	na	na	
888	Span 5 Sth	West	Truss	Top Chord 7			2	2	2	na	na	
889	Span 5 Sth	West	Truss	Top Chord 8			1	1	1	na	na	
890	Span 5 Sth	West	Truss	Btm Chord 1			1	1	1	na	na	
891	Span 5 Sth	West	Truss	Btm Chord 2			2	2	2	na	na	
892	Span 5 Sth	West	Truss	Btm Chord 3			2	2	2	na	na	
893	Span 5 Sth	West	Truss	Btm Chord 4			1	1	1	na	na	
894	Span 5 Sth	West	Truss	Btm Chord 5			2	2	2	na	na	
895	Span 5 Sth	West	Truss	Btm Chord 6			2	2	2	na	na	
896	Span 5 Sth	West	Truss	Btm Chord 7			1	1	1	na	na	
897	Span 5 Sth	West	Truss	Btm Chord 8			1	1	1	na	na	
898	Span 5 Sth	West	Truss	Diag Web 1	Cast patch repair		1	1	1	na	na	
899	Span 5 Sth	West	Truss	Vert Web 1			5	5	5	na	na	
900	Span 5 Sth	West	Truss	Diag Web 2	Cast patch repair		1	1	1	na	na	
901	Span 5 Sth	West	Truss	Vert Web 2			5	5	5	na	na	
902	Span 5 Sth	West	Truss	Diag Web 3	Cast patch repair		1	1	1	na	na	
903	Span 5 Sth	West	Truss	Vert Web 3			5	5	5	na	na	
904	Span 5 Sth	West	Truss	Diag Web 4	Cast patch repair		1	3	3	1 to 3	Point Cloud defect area not captured	
905	Span 5 Sth	West	Truss	Vert Web 4			1	1	1	na	na	
906	Span 5 Sth	West	Truss	Diag Web 5	Cast patch repair		1	1	1	na	na	
907	Span 5 Sth	West	Truss	Vert Web 5			1	1	1	na	na	
908	Span 5 Sth	West	Truss	Diag Web 6	Cast patch repair		1	1	1	na	na	
909	Span 5 Sth	West	Truss	Vert Web 6			1	2	2	1 to 2	Point Cloud defect area not captured	
910	Span 5 Sth	West	Truss	Vert Web 7			1	1	1	na	na	
911	Span 5 Sth	West	Truss	Pipe Hanger 1	Cast patch repair		1	1	1	na	na	
912	Span 5 Sth	West	Truss	Pipe Hanger 2	Cast patch repair		1	1	1	na	na	
913	Span 5 Sth	West	Truss	Pipe Hanger 3	Cast patch repair		4	4	4	na	na	
914	Span 5 Sth	West	Truss	Pipe Hanger 4	Cast patch repair		1	1	1	na	na	
915	Span 5 Sth	West	Truss	Pipe Hanger 5	Cast patch repair		1	1	1	na	na	
916	Span 5 Sth	West	Truss	Pipe Hanger 6	Cast patch repair		2	2	2	na	na	
917	Span 5 Sth	West	Truss	Pipe Hanger 7	Cast patch repair		1	1	1	na	na	
918	Span 5 Sth	West	Truss	Pipe Hanger 8	Cast patch repair		2	2	2	na	na	
919												

937	Span 5 Sth	East	Truss	Diag Web 2				4	4	4	na		
938	Span 5 Sth	East	Truss	Vert Web 2	Cast patch repair			5	5	5	na		No signs of further degradation
939	Span 5 Sth	East	Truss	Diag Web 3				1	1	1	na		
940	Span 5 Sth	East	Truss	Vert Web 3	Cast patch repair			2	2	2	na		
941	Span 5 Sth	East	Truss	Diag Web 4				1	1	1	na		
942	Span 5 Sth	East	Truss	Vert Web 4	Cast patch repair			2	2	2	na		Crack growth
943	Span 5 Sth	East	Truss	Diag Web 5				1	1	1	na		
944	Span 5 Sth	East	Truss	Vert Web 5	Cast patch repair			5	5	5	na		No signs of further degradation
945	Span 5 Sth	East	Truss	Diag Web 6	Patch repair			2	2	2	na		
946	Span 5 Sth	East	Truss	Vert Web 6				2	2	2	na		
947	Span 5 Sth	East	Truss	Vert Web 7		Loose concrete on truss		2	2	2	na		
948	Span 5 Sth	East	Truss	Pipe Hanger 1	Cast patch repair			1	1	1	na		
949	Span 5 Sth	East	Truss	Pipe Hanger 2	Cast patch repair			3	3	3	na		
950	Span 5 Sth	East	Truss	Pipe Hanger 3	Cast patch repair			4	4	4	na		
951	Span 5 Sth	East	Truss	Pipe Hanger 4	Cast patch repair			1	2	2	1 to 2	Point Cloud defect area not captured	
952	Span 5 Sth	East	Truss	Pipe Hanger 5	Cast patch repair			1	1	1	na		
953	Span 5 Sth	East	Truss	Pipe Hanger 6	Cast patch repair			1	1	1	na		
954	Span 5 Sth	East	Truss	Pipe Hanger 7	Cast patch repair			1	1	1	na		
955	Span 5 Sth	East	Truss	Pipe Hanger 8	Cast patch repair			3	3	3	na		
956	Girder 5-6	West	Girder	Walkway beam North				1	1	1	na		
957	Girder 5-6	West	Girder	Walkway beam North-central				1	1	1	na		
958	Girder 5-6	West	Girder	Walkway beam Central				1	1	1	na		
959	Girder 5-6	West	Girder	Walkway beam South-central				1	1	1	na		
960	Girder 5-6	West	Girder	Walkway beam South				1	1	1	na		
961	Girder 5-6	West	Girder	Pipe hanger North	Cast patch repair			4	4	4	na		
962	Girder 5-6	West	Girder	Pipe hanger North-central	Cast patch repair			4	4	4	na		
963	Girder 5-6	West	Girder	Pipe hanger South-central	Cast patch repair			4	4	4	na		
964	Girder 5-6	West	Girder	Pipe hanger South	Cast patch repair			4	4	4	na		
965	Girder 5-6	East	Girder	Walkway beam North				3	3	3	na		
966	Girder 5-6	East	Girder	Walkway beam North-central				3	3	3	na		
967	Girder 5-6	East	Girder	Walkway beam Central				1	1	1	na		
968	Girder 5-6	East	Girder	Walkway beam South-central				1	1	1	na		
969	Girder 5-6	East	Girder	Walkway beam South				3	3	3	na		
970	Girder 5-6	East	Girder	Pipe hanger North	Cast patch repair			3	3	3	na		
971	Girder 5-6	East	Girder	Pipe hanger North-central	Cast patch repair			3	3	3	na		
972	Girder 5-6	East	Girder	Pipe hanger South-central	Cast patch repair			3	3	3	na		
973	Girder 5-6	East	Girder	Pipe hanger South	Cast patch repair			2	2	2	na		
974	Span 6 Nth	West	Truss	Top Chord 1				2	2	2	na		
975	Span 6 Nth	West	Truss	Top Chord 2				2	2	2	na		
976	Span 6 Nth	West	Truss	Top Chord 3				2	2	2	na		
977	Span 6 Nth	West	Truss	Top Chord 4				2	2	2	na		
978	Span 6 Nth	West	Truss	Top Chord 5				2	2	2	na		
979	Span 6 Nth	West	Truss	Top Chord 6	Cast patch repair			1	1	1	na		
980	Span 6 Nth	West	Truss	Top Chord 7	Cast patch repair			1	1	1	na		
981	Span 6 Nth	West	Truss	Top Chord 8	Cast patch repair			3	3	3	na		
982	Span 6 Nth	West	Truss	Btm Chord 1				2	2	2	na		
983	Span 6 Nth	West	Truss	Btm Chord 2				2	2	2	na		
984	Span 6 Nth	West	Truss	Btm Chord 3				2	2	2	na		
985	Span 6 Nth	West	Truss	Btm Chord 4				1	1	1	na		
986	Span 6 Nth	West	Truss	Btm Chord 5				1	1	2	na	1 to 2	New crack
987	Span 6 Nth	West	Truss	Btm Chord 6				1	1	1	na		
988	Span 6 Nth	West	Truss	Btm Chord 7				2	2	2	na		
989	Span 6 Nth	West	Truss	Btm Chord 8				3	3	3	na		
990	Span 6 Nth	West	Truss	Diag Web 1				4	4	4	na		
991	Span 6 Nth	West	Truss	Vert Web 1	Cast patch repair			1	1	1	na		
992	Span 6 Nth	West	Truss	Diag Web 2				1	1	1	na		
993	Span 6 Nth	West	Truss	Vert Web 2	Cast patch repair			1	1	1	na		
994	Span 6 Nth	West	Truss	Diag Web 3				1	1	1	na		
995	Span 6 Nth	West	Truss	Vert Web 3	Cast patch repair			4	4	4	na		
996	Span 6 Nth	West	Truss	Diag Web 4				1	1	1	na		
997	Span 6 Nth	West	Truss	Vert Web 4	Cast patch repair			1	1	1	na		
998	Span 6 Nth	West	Truss	Diag Web 5				1	1	1	na		
999	Span 6 Nth	West	Truss	Vert Web 5	Cast patch repair			1	1	1	na		
1000	Span 6 Nth	West	Truss	Diag Web 6				1	1	1	na		
1001	Span 6 Nth	West	Truss	Vert Web 6	Cast patch repair			3	3	3	na		
1002	Span 6 Nth	West	Truss	Vert Web 7				2	2	2	na		
1003	Span 6 Nth	West	Truss	Pipe Hanger 1	Cast patch repair			1	1	1	na		
1004	Span 6 Nth	West	Truss	Pipe Hanger 2	Cast patch repair			1	1	1	na		
1005	Span 6 Nth	West	Truss	Pipe Hanger 3	Cast patch repair			4	4	4	na		
1006	Span 6 Nth	West	Truss	Pipe Hanger 4	Cast patch repair			2	2	2	na		
1007	Span 6 Nth	West	Truss	Pipe Hanger 5	Cast patch repair			4	4	4	na	Point Cloud defect area not captured	
1008	Span 6 Nth	West	Truss	Pipe Hanger 6	Cast patch repair			4	4	4	na		
1009	Span 6 Nth	West	Truss	Pipe Hanger 7	Cast patch repair			1	1	1	na		
1010	Span 6 Nth	West	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint		3	3	3	na		
1011	Span 6 Nth	East	Truss	Top Chord 1				2	2	2	na		
1012	Span 6 Nth	East	Truss	Top Chord 2				2	2	2	na		
1013	Span 6 Nth	East	Truss	Top Chord 3				5	5	5	na		
1014	Span 6 Nth	East	Truss	Top Chord 4				5	5	5	na		No signs of further degradation
1015	Span 6 Nth	East	Truss	Top Chord 5				5	5	5	na		No signs of further degradation
1016	Span 6 Nth	East	Truss	Top Chord 6				2	2	2	na		Crack growth
1017	Span 6 Nth	East	Truss	Top Chord 7		Loose concrete on truss		5	5	5	na		
1018	Span 6 Nth	East	Truss	Top Chord 8				4	4	4	na		
1019	Span 6 Nth	East	Truss	Btm Chord 1				2	2	2	na		
1020	Span 6 Nth	East	Truss	Btm Chord 2				2	2	2	na		Crack growth
1021	Span 6 Nth	East	Truss	Btm Chord 3				3	3	3	na		
1022	Span 6 Nth	East	Truss	Btm Chord 4				1	1	1	na		
1023	Span 6 Nth	East	Truss	Btm Chord 5				1	1	1	na		
1024	Span 6 Nth	East	Truss	Btm Chord 6				1	1	2	na	1 to 2	Crack growth
1025	Span 6 Nth	East	Truss	Btm Chord 7				1	1	1	na		
1026	Span 6 Nth	East	Truss	Btm Chord 8				4	4	4	na		
1027	Span 6 Nth	East	Truss	Diag Web 1				3	4	4	3 to 4	Point Cloud defect area not captured	
1028	Span 6 Nth	East	Truss	Vert Web 1				5	5	5	na		No signs of further degradation
1029	Span 6 Nth	East	Truss	Diag Web 2				1	1	1	na		
1030	Span 6 Nth	East	Truss	Vert Web 2	Cast patch repair			2	2	2	na		
1031	Span 6 Nth	East	Truss	Diag Web 3				2	2	2	na		
1032	Span 6 Nth	East	Truss	Vert Web 3				5	5	5	na		No signs of further degradation
1033	Span 6 Nth	East	Truss	Diag Web 4				1	1	1	na		
1034	Span 6 Nth	East	Truss	Vert Web 4				2	2	2	na		
1035	Span 6 Nth	East	Truss	Diag Web 5				1	1	1	na		
1036	Span 6 Nth	East	Truss	Vert Web 5	Cast patch repair			1	1	1	na		
1037	Span 6 Nth	East	Truss	Diag Web 6	Cast patch repair			1	1	1	na		
1038	Span 6 Nth	East	Truss	Vert Web 6				5	5	5	na		No signs of further degradation
1039	Span 6 Nth	East	Truss	Vert Web 7				5	5	5	na		
1040	Span 6 Nth	East	Truss	Pipe Hanger 1	Cast patch repair			1	1	1	na		
1041	Span 6 Nth	East	Truss	Pipe Hanger 2	Cast patch repair			1	1	1	na		
1042	Span 6 Nth	East	Truss	Pipe Hanger 3	Cast patch repair			3	3	3	na		
1043	Span 6 Nth	East	Truss	Pipe Hanger 4	Cast patch repair			1	1	1	na		
1044	Span 6 Nth	East	Truss	Pipe Hanger 5	Cast patch repair			2	2	2	na		
1045	Span 6 Nth	East	Truss	Pipe Hanger 6	Cast patch repair			1	1	1	na		
1046	Span 6 Nth	East	Truss	Pipe Hanger 7	Cast patch repair			1	1	1	na		
1047	Span 6 Nth	East	Truss	Pipe Hanger 8	Cast patch repair			3	3	3	na		
1048	Pier 6	West	Pier	Pier Leg Nth	Cast patch repair			4	4	4	na		
1049	Pier 6	West	Pier	Pier Leg Sth	Cast patch repair			4	4	5	na	Loss of concrete cover	Loss of concrete cover
1050	Pier 6	East	Pier	Pier Leg Nth				4	4	4	na		
1051	Pier 6	East	Pier	Pier Leg Sth	Cast patch repair			4	4	4	na		
1052	Pier 6	West	Pier	Pier head Parapet west				3	3	3	na		
1053	Pier 6	West	Pier	Pier head Face west	Patch repair			3	3	3	na		
1054	Pier 6	East	Pier	Pier head Parapet east				2	2	2	na		
1055	Pier 6	East	Pier	Pier head Face east	Patch repair			3	3	3	na		
1056	Pier 6	na	Pier	Pier head Parapet nth				2	2	2	na		
1057	Pier 6	na	Pier	Pier head Face nth	Patch repair			4	4	4	na		
1058	Pier 6	na	Pier	Pier head Parapet sth				4	4	4	na		
1059	Pier 6	na	Pier	Pier head Face sth	Patch repair			4	4	4	na		
1060	Pier 6	na	Pier	Pier head soffit				3	0	4	Insufficient Data	Insufficient Data	
1061	Pier 6	West	Pier	Gussets Nth	Cast patch repair			4	4	4	na		
1062	Pier 6	West	Pier	Gussets Sth	Cast patch repair			2	3	3	2 to 3	Point Cloud defect area not captured	
1063	Pier 6	East	Pier	Gussets Nth	Cast patch repair			3	3	3	na		
1064	Pier 6	East	Pier	Gussets Sth	Cast patch repair			3	3	3	na		
1065	Pier 6	West	Pier	Pipe hanger and strut nth	Cast patch repair			4	4	4	na		
1066	Pier 6	West	Pier	Pipe hanger and strut sth	Cast patch repair			4	4	4	na		
1067	Pier 6	East	Pier	Pipe hanger and strut nth	Cast patch repair			4	4	4	na		
1068	Pier 6	East	Pier	Pipe hanger and strut sth	Cast patch repair			4	4	4	na		
1069	Pier 6	West	Pier	Pier base west face				1	1	1	na		
1070	Pier 6	East	Pier	Pier base east face				5	5	5	na		
1071	Pier 6	na	Pier	Pier base south face				1	1				



1094	Span 6 Sth	West	Truss	Vert Web 3				3	4	4	3 to 4	Loss of concrete cover	na	
1095	Span 6 Sth	West	Truss	Diag Web 4				1	1	1	1 na		na	
1096	Span 6 Sth	West	Truss	Vert Web 4	Cast patch repair			2	5	5	2 to 5	Loss of concrete cover	na	No signs of further degradation
1097	Span 6 Sth	West	Truss	Diag Web 5				1	1	1	1 na		na	
1098	Span 6 Sth	West	Truss	Vert Web 5				5	5	5	na		na	No signs of further degradation
1099	Span 6 Sth	West	Truss	Diag Web 6				1	1	1	1 na		na	
1100	Span 6 Sth	West	Truss	Vert Web 6				5	5	5	na		na	No signs of further degradation
1101	Span 6 Sth	West	Truss	Vert Web 7				1	1	1	1 na		na	
1102	Span 6 Sth	West	Truss	Pipe Hanger 1	Cast patch repair			1	1	1	1 na		na	
1103	Span 6 Sth	West	Truss	Pipe Hanger 2	Cast patch repair			1	4	4	1 to 4	Point Cloud defect area not captured	na	
1104	Span 6 Sth	West	Truss	Pipe Hanger 3	Cast patch repair			3	5	5	3 to 5	Point Cloud defect area not captured	na	
1105	Span 6 Sth	West	Truss	Pipe Hanger 4	Cast patch repair			4	4	4	na		na	
1106	Span 6 Sth	West	Truss	Pipe Hanger 5	Cast patch repair			4	4	4	na		na	
1107	Span 6 Sth	West	Truss	Pipe Hanger 6	Cast patch repair			1	1	1	1 na		na	
1108	Span 6 Sth	West	Truss	Pipe Hanger 7	Cast patch repair			2	2	2	na		na	
1109	Span 6 Sth	West	Truss	Pipe Hanger 8	Cast patch repair			3	3	3	na		na	
1110	Span 6 Sth	East	Truss	Top Chord 1				2	2	2	na		na	
1111	Span 6 Sth	East	Truss	Top Chord 2				2	2	2	na		na	
1112	Span 6 Sth	East	Truss	Top Chord 3	Cast patch repair			1	1	1	1 na		na	
1113	Span 6 Sth	East	Truss	Top Chord 4				1	1	1	1 na		na	
1114	Span 6 Sth	East	Truss	Top Chord 5	Cast patch repair			1	1	1	1 na		na	
1115	Span 6 Sth	East	Truss	Top Chord 6				5	5	5	na		na	
1116	Span 6 Sth	East	Truss	Top Chord 7	Cast patch repair			2	2	2	na		na	
1117	Span 6 Sth	East	Truss	Top Chord 8	Cast patch repair			1	1	1	1 na		na	
1118	Span 6 Sth	East	Truss	Btm Chord 1				1	1	1	1 na		na	
1119	Span 6 Sth	East	Truss	Btm Chord 2				1	1	1	1 na		na	
1120	Span 6 Sth	East	Truss	Btm Chord 3				1	1	1	1 na		na	
1121	Span 6 Sth	East	Truss	Btm Chord 4				1	1	1	1 na		na	
1122	Span 6 Sth	East	Truss	Btm Chord 5				1	1	1	1 na		na	
1123	Span 6 Sth	East	Truss	Btm Chord 6				1	1	1	1 na		na	
1124	Span 6 Sth	East	Truss	Btm Chord 7				2	2	2	na		na	
1125	Span 6 Sth	East	Truss	Btm Chord 8				1	1	1	1 na		na	
1126	Span 6 Sth	East	Truss	Diag Web 1				3	3	3	na		na	
1127	Span 6 Sth	East	Truss	Vert Web 1				5	5	5	na		na	No signs of further degradation
1128	Span 6 Sth	East	Truss	Diag Web 2				3	3	3	na		na	
1129	Span 6 Sth	East	Truss	Vert Web 2	Cast patch repair			5	5	5	na		na	
1130	Span 6 Sth	East	Truss	Diag Web 3				1	1	1	1 na		na	
1131	Span 6 Sth	East	Truss	Vert Web 3	Cast patch repair			2	2	2	na		na	
1132	Span 6 Sth	East	Truss	Diag Web 4				1	1	1	1 na		na	
1133	Span 6 Sth	East	Truss	Vert Web 4	Cast patch repair			2	2	2	na		na	
1134	Span 6 Sth	East	Truss	Diag Web 5				1	1	1	1 na		na	
1135	Span 6 Sth	East	Truss	Vert Web 5	Cast patch repair			3	3	3	na		na	
1136	Span 6 Sth	East	Truss	Diag Web 6				1	1	1	1 na		na	
1137	Span 6 Sth	East	Truss	Vert Web 6	Cast patch repair			1	1	1	1 na		na	
1138	Span 6 Sth	East	Truss	Vert Web 7				1	3	3	1 to 3	Point Cloud defect area not captured	na	
1139	Span 6 Sth	East	Truss	Pipe Hanger 1	Cast patch repair			1	1	1	1 na		na	
1140	Span 6 Sth	East	Truss	Pipe Hanger 2	Cast patch repair			4	4	4	na		na	
1141	Span 6 Sth	East	Truss	Pipe Hanger 3	Cast patch repair			3	3	3	na		na	
1142	Span 6 Sth	East	Truss	Pipe Hanger 4	Cast patch repair			1	1	1	1 na		na	
1143	Span 6 Sth	East	Truss	Pipe Hanger 5	Cast patch repair			3	3	3	na		na	
1144	Span 6 Sth	East	Truss	Pipe Hanger 6	Cast patch repair			3	3	3	na		na	
1145	Span 6 Sth	East	Truss	Pipe Hanger 7	Cast patch repair			1	1	1	1 na		na	
1146	Span 6 Sth	East	Truss	Pipe Hanger 8	Cast patch repair			3	3	3	na		na	
1147	Girder 6-7	West	Girder	Walkway beam North				1	1	1	1 na		na	
1148	Girder 6-7	West	Girder	Walkway beam North-central				3	3	3	na		na	
1149	Girder 6-7	West	Girder	Walkway beam Central				3	3	3	na		na	
1150	Girder 6-7	West	Girder	Walkway beam South-central				1	1	1	1 na		na	
1151	Girder 6-7	West	Girder	Walkway beam South				1	1	1	1 na		na	
1152	Girder 6-7	West	Girder	Pipe hanger North		Cast patch repair		4	4	4	na		na	
1153	Girder 6-7	West	Girder	Pipe hanger North-central		Cast patch repair		3	3	3	na		na	
1154	Girder 6-7	West	Girder	Pipe hanger South-central		Cast patch repair		2	2	3	na		2 to 3	Loss of concrete cover
1155	Girder 6-7	West	Girder	Pipe hanger South	Tie	Cast patch repair		5	5	5	na		na	
1156	Girder 6-7	East	Girder	Walkway beam North				4	4	4	4 na		na	
1157	Girder 6-7	East	Girder	Walkway beam North-central				4	4	4	4 na		na	
1158	Girder 6-7	East	Girder	Walkway beam Central				4	4	4	4 na		na	
1159	Girder 6-7	East	Girder	Walkway beam South-central				4	4	4	4 na		na	
1160	Girder 6-7	East	Girder	Walkway beam South				0	3	3	Insufficient Data		na	
1161	Girder 6-7	East	Girder	Pipe hanger North		Cast patch repair		4	4	4	4 na		na	
1162	Girder 6-7	East	Girder	Pipe hanger North-central		Cast patch repair		4	4	4	4 na		na	
1163	Girder 6-7	East	Girder	Pipe hanger South-central		Cast patch repair		2	4	4	2 to 4	Loss of concrete cover	na	
1164	Girder 6-7	East	Girder	Pipe hanger South	Tie	Cast patch repair		4	4	4	4 na		na	
1165	Span 7 Nth	West	Truss	Top Chord 1				1	1	1	1 na		na	
1166	Span 7 Nth	West	Truss	Top Chord 2				1	1	1	1 na		na	
1167	Span 7 Nth	West	Truss	Top Chord 3	Cast patch repair			1	1	1	1 na		na	
1168	Span 7 Nth	West	Truss	Top Chord 4	Cast patch repair			1	1	1	1 na		na	
1169	Span 7 Nth	West	Truss	Top Chord 5	Cast patch repair			1	1	1	1 na		na	
1170	Span 7 Nth	West	Truss	Top Chord 6				3	3	3	na		na	
1171	Span 7 Nth	West	Truss	Top Chord 7				5	5	5	na		na	No signs of further degradation
1172	Span 7 Nth	West	Truss	Top Chord 8				2	2	2	na		na	
1173	Span 7 Nth	West	Truss	Btm Chord 1				1	1	1	1 na		na	
1174	Span 7 Nth	West	Truss	Btm Chord 2				1	1	1	1 na		na	
1175	Span 7 Nth	West	Truss	Btm Chord 3	Cast patch repair			2	3	3	2 to 3	Loss of concrete cover	na	
1176	Span 7 Nth	West	Truss	Btm Chord 4				1	1	1	1 na		na	
1177	Span 7 Nth	West	Truss	Btm Chord 5				1	1	1	1 na		na	
1178	Span 7 Nth	West	Truss	Btm Chord 6				1	1	1	1 na		na	
1179	Span 7 Nth	West	Truss	Btm Chord 7				2	2	2	na		na	
1180	Span 7 Nth	West	Truss	Btm Chord 8				3	3	3	na		na	
1181	Span 7 Nth	West	Truss	Diag Web 1				3	3	3	na		na	
1182	Span 7 Nth	West	Truss	Vert Web 1	Cast patch repair			4	4	4	na	Point Cloud defect area not captured	na	
1183	Span 7 Nth	West	Truss	Diag Web 2				3	3	3	na		na	
1184	Span 7 Nth	West	Truss	Vert Web 2	Cast patch repair			2	4	4	2 to 4	Loss of concrete cover	na	
1185	Span 7 Nth	West	Truss	Diag Web 3				1	1	1	1 na		na	
1186	Span 7 Nth	West	Truss	Vert Web 3	Cast patch repair			2	2	2	na		na	
1187	Span 7 Nth	West	Truss	Diag Web 4				3	3	3	na		na	
1188	Span 7 Nth	West	Truss	Vert Web 4	Cast patch repair			1	1	1	1 na		na	
1189	Span 7 Nth	West	Truss	Diag Web 5				1	1	1	1 na		na	
1190	Span 7 Nth	West	Truss	Vert Web 5				5	5	5	na		na	No signs of further degradation
1191	Span 7 Nth	West	Truss	Diag Web 6				1	1	1	1 na		na	
1192	Span 7 Nth	West	Truss	Vert Web 6				5	5	5	na		na	
1193	Span 7 Nth	West	Truss	Vert Web 7				1	1	1	1 na		na	
1194	Span 7 Nth	West	Truss	Pipe Hanger 1	Cast patch repair			3	3	3	na		na	
1195	Span 7 Nth	West	Truss	Pipe Hanger 2	Cast patch repair			3	3	3	na		na	
1196	Span 7 Nth	West	Truss	Pipe Hanger 3	Cast patch repair			4	4	4	na		na	
1197	Span 7 Nth	West	Truss	Pipe Hanger 4	Cast patch repair			2	2	2	na		na	
1198	Span 7 Nth	West	Truss	Pipe Hanger 5	Cast patch repair			2	2	2	na		na	
1199	Span 7 Nth	West	Truss	Pipe Hanger 6	Cast patch repair			1	1	1	1 na		na	
1200	Span 7 Nth	West	Truss	Pipe Hanger 7	Cast patch repair			5	5	5	na		na	
1201	Span 7 Nth	West	Truss	Pipe Hanger 8	Cast patch repair			3	3	3	na		na	
1202	Span 7 Nth	East	Truss	Top Chord 1				1	1	1	1 na		na	
1203	Span 7 Nth	East	Truss	Top Chord 2				2	2	2	na		na	
1204	Span 7 Nth	East	Truss	Top Chord 3				4	4	4	na		na	
1205	Span 7 Nth	East	Truss	Top Chord 4				1	1	1	1 na		na	
1206	Span 7 Nth	East	Truss	Top Chord 5				2	2	2	na		na	
1207	Span 7 Nth	East	Truss	Top Chord 6				2	2	2	na		na	
1208	Span 7 Nth	East	Truss	Top Chord 7	Cast patch repair			1	1	1	1 na		na	
1209	Span 7 Nth	East	Truss	Top Chord 8	Cast patch repair			1	1	1	1 na		na	
1210	Span 7 Nth	East	Truss	Btm Chord 1				1	1	1	1 na		na	
1211	Span 7 Nth	East	Truss	Btm Chord 2				3	3	3	na		na	
1212	Span 7 Nth	East	Truss	Btm Chord 3				4	4	4	4 na		na	
1213	Span 7 Nth	East	Truss	Btm Chord 4				1	1	1	1 na		na	
1214	Span 7 Nth	East	Truss	Btm Chord 5				1	1	1	1 na		na	
1215	Span 7 Nth	East	Truss	Btm Chord 6				1	1	1	1 na		na	
1216	Span 7 Nth	East	Truss	Btm Chord 7				1	1	1	1 na		na	
1217	Span 7 Nth	East	Truss	Btm Chord 8	Cast patch repair			1	1	1	1 na		na	
1218	Span 7 Nth	East	Truss	Diag Web 1				4	4					

1251	Pier 7	na	Pier	Pier head soffit			5	0	5	Insufficient Data		Insufficient Data	
1252	Pier 7	West	Pier	Gussets Nth			3	3	3	na		na	
1253	Pier 7	West	Pier	Gussets Sth			3	3	3	na		na	
1254	Pier 7	East	Pier	Gussets Nth	Cast patch repair		4	4	4	na		na	
1255	Pier 7	East	Pier	Gussets Sth	Cast patch repair		4	4	4	na		na	
1256	Pier 7	West	Pier	Pipe hanger and strut nth	Cast patch repair		2	2	2	na		na	
1257	Pier 7	West	Pier	Pipe hanger and strut sth	Cast patch repair		4	4	4	na		na	
1258	Pier 7	East	Pier	Pipe hanger and strut nth	Cast patch repair		4	4	4	na		na	
1259	Pier 7	East	Pier	Pipe hanger and strut sth	Cast patch repair		4	4	4	na		na	
1260	Pier 7	West	Pier	Pier base west face			3	3	3	na		na	
1261	Pier 7	East	Pier	Pier base east face			3	3	3	na		na	
1262	Pier 7	na	Pier	Pier base south face			1	1	0	na		Insufficient Data	
1263	Pier 7	na	Pier	Pier base north face			3	3	3	na		na	
1264	Span 7 Sth	West	Truss	Top Chord 1			1	1	1	na		na	
1265	Span 7 Sth	West	Truss	Top Chord 2			1	1	1	na		na	
1266	Span 7 Sth	West	Truss	Top Chord 3			5	5	5	na		na	No signs of further degradation
1267	Span 7 Sth	West	Truss	Top Chord 4			2	2	2	na		na	
1268	Span 7 Sth	West	Truss	Top Chord 5			2	2	2	na		na	
1269	Span 7 Sth	West	Truss	Top Chord 6			2	2	2	na		na	
1270	Span 7 Sth	West	Truss	Top Chord 7			2	2	2	na		na	
1271	Span 7 Sth	West	Truss	Top Chord 8			1	1	1	na		na	
1272	Span 7 Sth	West	Truss	Btm Chord 1			1	1	1	na		na	
1273	Span 7 Sth	West	Truss	Btm Chord 2			2	2	2	na		na	
1274	Span 7 Sth	West	Truss	Btm Chord 3			2	2	2	na		na	
1275	Span 7 Sth	West	Truss	Btm Chord 4			1	1	1	na		na	
1276	Span 7 Sth	West	Truss	Btm Chord 5			1	1	1	na		na	
1277	Span 7 Sth	West	Truss	Btm Chord 6			2	2	2	na		na	
1278	Span 7 Sth	West	Truss	Btm Chord 7			2	2	2	na		na	
1279	Span 7 Sth	West	Truss	Btm Chord 8			1	1	1	na		na	
1280	Span 7 Sth	West	Truss	Diag Web 1	Cast patch repair		3	3	3	na	Point Cloud defect area not captured	na	
1281	Span 7 Sth	West	Truss	Vert Web 1			5	5	5	na		na	
1282	Span 7 Sth	West	Truss	Diag Web 2			1	1	1	na		na	
1283	Span 7 Sth	West	Truss	Vert Web 2			1	1	1	na		na	
1284	Span 7 Sth	West	Truss	Diag Web 3			1	1	1	na		na	
1285	Span 7 Sth	West	Truss	Vert Web 3			5	5	5	na		na	No signs of further degradation
1286	Span 7 Sth	West	Truss	Diag Web 4			1	1	1	na		na	
1287	Span 7 Sth	West	Truss	Vert Web 4	Cast patch repair		1	1	1	na		na	
1288	Span 7 Sth	West	Truss	Diag Web 5			1	1	1	na		na	
1289	Span 7 Sth	West	Truss	Vert Web 5			5	5	5	na		na	No signs of further degradation
1290	Span 7 Sth	West	Truss	Diag Web 6			1	1	1	na		na	
1291	Span 7 Sth	West	Truss	Vert Web 6			5	5	5	na		na	
1292	Span 7 Sth	West	Truss	Vert Web 7			2	2	2	na		na	
1293	Span 7 Sth	West	Truss	Pipe Hanger 1	Cast patch repair		1	1	1	na		na	
1294	Span 7 Sth	West	Truss	Pipe Hanger 2	Cast patch repair		1	3	3	1 to 3	Point Cloud defect area not captured	na	
1295	Span 7 Sth	West	Truss	Pipe Hanger 3	Cast patch repair		4	4	4	na		na	
1296	Span 7 Sth	West	Truss	Pipe Hanger 4	Cast patch repair		3	3	3	na		na	
1297	Span 7 Sth	West	Truss	Pipe Hanger 5	Cast patch repair		4	4	4	na		na	
1298	Span 7 Sth	West	Truss	Pipe Hanger 6	Cast patch repair		3	3	3	na		na	
1299	Span 7 Sth	West	Truss	Pipe Hanger 7	Cast patch repair		2	3	3	2 to 3	Loss of concrete cover	na	
1300	Span 7 Sth	West	Truss	Pipe Hanger 8	Cast patch repair		3	3	3	na		na	
1301	Span 7 Sth	East	Truss	Top Chord 1			2	2	2	na		na	
1302	Span 7 Sth	East	Truss	Top Chord 2			2	2	2	na		na	
1303	Span 7 Sth	East	Truss	Top Chord 3			2	2	2	na		na	
1304	Span 7 Sth	East	Truss	Top Chord 4			2	2	2	na		na	
1305	Span 7 Sth	East	Truss	Top Chord 5	Cast patch repair		2	2	2	na		na	
1306	Span 7 Sth	East	Truss	Top Chord 6	Cast patch repair		1	1	1	na		na	
1307	Span 7 Sth	East	Truss	Top Chord 7	Cast patch repair		1	1	1	na		na	
1308	Span 7 Sth	East	Truss	Top Chord 8	Cast patch repair		2	2	2	na		na	
1309	Span 7 Sth	East	Truss	Btm Chord 1			1	1	1	na		na	
1310	Span 7 Sth	East	Truss	Btm Chord 2			1	1	1	na		na	
1311	Span 7 Sth	East	Truss	Btm Chord 3			2	3	3	2 to 3	Loss of concrete cover	na	
1312	Span 7 Sth	East	Truss	Btm Chord 4			1	1	1	na		na	
1313	Span 7 Sth	East	Truss	Btm Chord 5			2	2	2	na		na	
1314	Span 7 Sth	East	Truss	Btm Chord 6			2	2	2	na		na	
1315	Span 7 Sth	East	Truss	Btm Chord 7			1	1	1	na		na	
1316	Span 7 Sth	East	Truss	Btm Chord 8			2	2	2	na		na	
1317	Span 7 Sth	East	Truss	Diag Web 1			4	4	4	na		na	
1318	Span 7 Sth	East	Truss	Vert Web 1			1	1	1	na		na	
1319	Span 7 Sth	East	Truss	Diag Web 2			3	3	3	na		na	
1320	Span 7 Sth	East	Truss	Vert Web 2	Cast patch repair		3	3	3	na		na	
1321	Span 7 Sth	East	Truss	Diag Web 3			3	3	3	na		na	
1322	Span 7 Sth	East	Truss	Vert Web 3			3	3	3	na		na	
1323	Span 7 Sth	East	Truss	Diag Web 4			1	1	1	na		na	
1324	Span 7 Sth	East	Truss	Vert Web 4			2	2	2	na		na	
1325	Span 7 Sth	East	Truss	Diag Web 5			1	1	1	na		na	
1326	Span 7 Sth	East	Truss	Vert Web 5			1	1	1	na		na	
1327	Span 7 Sth	East	Truss	Diag Web 6			1	1	1	na		na	
1328	Span 7 Sth	East	Truss	Vert Web 6	Cast patch repair		2	2	2	na		na	
1329	Span 7 Sth	East	Truss	Vert Web 7			5	5	5	na		na	
1330	Span 7 Sth	East	Truss	Pipe Hanger 1	Cast patch repair		1	1	1	na		na	
1331	Span 7 Sth	East	Truss	Pipe Hanger 2	Cast patch repair		2	2	2	na		na	
1332	Span 7 Sth	East	Truss	Pipe Hanger 3	Cast patch repair		5	5	5	na		na	
1333	Span 7 Sth	East	Truss	Pipe Hanger 4	Cast patch repair		2	2	2	na		na	
1334	Span 7 Sth	East	Truss	Pipe Hanger 5	Cast patch repair		3	3	3	na		na	
1335	Span 7 Sth	East	Truss	Pipe Hanger 6	Cast patch repair		1	1	1	na		na	
1336	Span 7 Sth	East	Truss	Pipe Hanger 7	Cast patch repair		2	2	2	na		na	
1337	Span 7 Sth	East	Truss	Pipe Hanger 8	Cast patch repair		3	3	3	na		na	
1338	Girder 7-8	West	Girder	Walkway beam North			4	4	4	na		na	
1339	Girder 7-8	West	Girder	Walkway beam North-central			4	4	4	na		na	
1340	Girder 7-8	West	Girder	Walkway beam Central			3	3	3	na		na	
1341	Girder 7-8	West	Girder	Walkway beam South-central			4	4	4	na		na	
1342	Girder 7-8	West	Girder	Walkway beam South			1	1	1	na		na	
1343	Girder 7-8	West	Girder	Pipe hanger North		Cast patch repair	4	4	4	na		na	
1344	Girder 7-8	West	Girder	Pipe hanger North-central	Tie	Cast patch repair	4	4	4	na		na	
1345	Girder 7-8	West	Girder	Pipe hanger South-central	Tie	Cast patch repair	4	4	4	na		na	
1346	Girder 7-8	West	Girder	Pipe hanger South		Cast patch repair	3	3	3	na		na	
1347	Girder 7-8	East	Girder	Walkway beam North			4	4	4	na		na	
1348	Girder 7-8	East	Girder	Walkway beam North-central			3	3	3	na		na	
1349	Girder 7-8	East	Girder	Walkway beam Central			4	4	4	na		na	
1350	Girder 7-8	East	Girder	Walkway beam South-central			3	3	3	na		na	
1351	Girder 7-8	East	Girder	Walkway beam South			3	3	3	na		na	
1352	Girder 7-8	East	Girder	Pipe hanger North			4	4	4	na		na	
1353	Girder 7-8	East	Girder	Pipe hanger North-central	Tie		4	4	4	na		na	
1354	Girder 7-8	East	Girder	Pipe hanger South-central	Tie		4	4	4	na		na	
1355	Girder 7-8	East	Girder	Pipe hanger South			4	4	4	na		na	
1356	Span 8 Nth	West	Truss	Top Chord 1			1	1	1	na		na	
1357	Span 8 Nth	West	Truss	Top Chord 2			1	1	1	na		na	
1358	Span 8 Nth	West	Truss	Top Chord 3			1	1	1	na		na	
1359	Span 8 Nth	West	Truss	Top Chord 4			1	1	1	na		na	
1360	Span 8 Nth	West	Truss	Top Chord 5			1	1	1	na		na	
1361	Span 8 Nth	West	Truss	Top Chord 6			1	1	1	na		na	
1362	Span 8 Nth	West	Truss	Top Chord 7			1	1	1	na		na	
1363	Span 8 Nth	West	Truss	Top Chord 8			1	1	1	na		na	
1364	Span 8 Nth	West	Truss	Btm Chord 1			1	1	1	na		na	
1365	Span 8 Nth	West	Truss	Btm Chord 2	Patch repair		2	2	2	na		na	
1366	Span 8 Nth	West	Truss	Btm Chord 3			2	2	2	na		na	
1367	Span 8 Nth	West	Truss	Btm Chord 4	Patch repair		1	1	1	na		na	
1368	Span 8 Nth	West	Truss	Btm Chord 5	Patch repair		1	1	1	na		na	
1369	Span 8 Nth	West	Truss	Btm Chord 6			1	1	1	na		na	
1370	Span 8 Nth	West	Truss	Btm Chord 7			2	2	2	na		na	
1371	Span 8 Nth	West	Truss	Btm Chord 8			1	1	1	na		na	
1372	Span 8 Nth	West	Truss	Diag Web 1			1	2	2	1 to 2	Point Cloud defect area not captured	na	
1373	Span 8 Nth	West	Truss	Vert Web 1			1	1	1	na		na	
1374	Span 8 Nth	West	Truss	Diag Web 2			1	1	1	na		na	
1375	Span 8 Nth	West	Truss	Vert Web 2			1	1	1	na		na	
1376	Span 8 Nth	West	Truss	Diag Web 3			1	1	1	na		na	
1377	Span 8 Nth	West	Truss	Vert Web 3			1	1	1	na		na	
1378	Span 8 Nth	West	Truss	Diag Web 4			1	1	1	na		na	
1379	Span 8 Nth	West	Truss	Vert Web 4			1	1	1	na		na	
1380	Span 8 Nth	West	Truss	Diag Web 5			1	1	1	na		na	
1381	Span 8 Nth	West	Truss	Vert Web 5			3	3	3	na		na	
1382	Span 8 Nth	West	Truss	Diag Web 6			1	1	1	na		na	
1383	Span 8 Nth	West	Truss	Vert Web 6									

1408	Span 8 Nth	East	Truss	Btm Chord 8				1	1	1	na		
1409	Span 8 Nth	East	Truss	Diag Web 1				5	5	5	na		
1410	Span 8 Nth	East	Truss	Vert Web 1				5	5	5	na		No signs of further degradation
1411	Span 8 Nth	East	Truss	Diag Web 2				3	3	3	na		
1412	Span 8 Nth	East	Truss	Vert Web 2				1	1	1	na		
1413	Span 8 Nth	East	Truss	Diag Web 3				1	1	1	na		
1414	Span 8 Nth	East	Truss	Vert Web 3				1	1	1	na		
1415	Span 8 Nth	East	Truss	Diag Web 4				1	1	1	na		
1416	Span 8 Nth	East	Truss	Vert Web 4				1	1	1	na		
1417	Span 8 Nth	East	Truss	Diag Web 5				1	1	1	na		
1418	Span 8 Nth	East	Truss	Vert Web 5	Cast patch repair			2	2	2	na		
1419	Span 8 Nth	East	Truss	Diag Web 6				1	1	1	na		
1420	Span 8 Nth	East	Truss	Vert Web 6				5	5	5	na		No signs of further degradation
1421	Span 8 Nth	East	Truss	Vert Web 7				5	5	5	na		
1422	Span 8 Nth	East	Truss	Pipe Hanger 1	Cast patch repair			2	2	2	na		
1423	Span 8 Nth	East	Truss	Pipe Hanger 2	Cast patch repair			1	1	1	na		
1424	Span 8 Nth	East	Truss	Pipe Hanger 3	Cast patch repair			3	3	3	na		
1425	Span 8 Nth	East	Truss	Pipe Hanger 4	Cast patch repair			3	3	3	na		
1426	Span 8 Nth	East	Truss	Pipe Hanger 5	Cast patch repair			2	2	2	na		
1427	Span 8 Nth	East	Truss	Pipe Hanger 6	Cast patch repair			1	1	1	na		
1428	Span 8 Nth	East	Truss	Pipe Hanger 7	Cast patch repair			1	1	1	na		
1429	Span 8 Nth	East	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint		2	2	2	na		
1430	Pier 8	West	Pier	Pier Leg Nth				3	3	3	na		
1431	Pier 8	West	Pier	Pier Leg Sth				3	3	3	na		
1432	Pier 8	East	Pier	Pier Leg Nth				4	4	4	na		
1433	Pier 8	East	Pier	Pier Leg Sth				4	4	4	na		
1434	Pier 8	West	Pier	Pier head Parapet west				4	4	4	na		
1435	Pier 8	West	Pier	Pier head Face west	Patch repair			2	2	2	na		
1436	Pier 8	East	Pier	Pier head Parapet east				3	3	3	na		
1437	Pier 8	East	Pier	Pier head Face east	Patch repair			4	4	4	na		
1438	Pier 8	na	Pier	Pier head Parapet nth				4	4	4	na		
1439	Pier 8	na	Pier	Pier head Face nth	Patch repair			4	4	4	na		
1440	Pier 8	na	Pier	Pier head Parapet sth				2	2	2	na		
1441	Pier 8	na	Pier	Pier head Face sth	Patch repair			2	2	2	na		
1442	Pier 8	na	Pier	Pier head soffit				5	0	5	Insufficient Data		Insufficient Data
1443	Pier 8	West	Pier	Gussets Nth				3	3	3	na		
1444	Pier 8	West	Pier	Gussets Sth				4	4	4	na		
1445	Pier 8	East	Pier	Gussets Nth	Cast patch repair			3	3	3	na		
1446	Pier 8	East	Pier	Gussets Sth	Cast patch repair			4	4	4	na		
1447	Pier 8	West	Pier	Pipe hanger and strut nth	Cast patch repair			4	4	4	na		
1448	Pier 8	West	Pier	Pipe hanger and strut sth	Cast patch repair			3	3	3	na		
1449	Pier 8	East	Pier	Pipe hanger and strut nth	Cast patch repair			4	4	4	na		
1450	Pier 8	East	Pier	Pipe hanger and strut sth	Cast patch repair			1	1	1	na		
1451	Pier 8	West	Pier	Pier base west face				1	1	1	na		
1452	Pier 8	East	Pier	Pier base east face				1	1	1	na		
1453	Pier 8	na	Pier	Pier base south face				1	1	1	na		
1454	Pier 8	na	Pier	Pier base north face				1	1	1	na		
1455	Span 8 Sth	West	Truss	Top Chord 1				1	1	1	na		
1456	Span 8 Sth	West	Truss	Top Chord 2				1	1	1	na		
1457	Span 8 Sth	West	Truss	Top Chord 3				1	1	1	na		
1458	Span 8 Sth	West	Truss	Top Chord 4				1	1	1	na		
1459	Span 8 Sth	West	Truss	Top Chord 5				1	1	1	na		
1460	Span 8 Sth	West	Truss	Top Chord 6				2	2	2	na		
1461	Span 8 Sth	West	Truss	Top Chord 7				2	2	2	na		
1462	Span 8 Sth	West	Truss	Top Chord 8				1	1	1	na		
1463	Span 8 Sth	West	Truss	Btm Chord 1				1	1	1	na		
1464	Span 8 Sth	West	Truss	Btm Chord 2				1	1	1	na		
1465	Span 8 Sth	West	Truss	Btm Chord 3				1	1	1	na		
1466	Span 8 Sth	West	Truss	Btm Chord 4				2	2	2	na		
1467	Span 8 Sth	West	Truss	Btm Chord 5	Cast patch repair			1	1	1	na		
1468	Span 8 Sth	West	Truss	Btm Chord 6				2	2	2	na		
1469	Span 8 Sth	West	Truss	Btm Chord 7				2	2	2	na		
1470	Span 8 Sth	West	Truss	Btm Chord 8				1	1	1	na		
1471	Span 8 Sth	West	Truss	Diag Web 1				3	3	3	na		
1472	Span 8 Sth	West	Truss	Vert Web 1				3	3	3	na		
1473	Span 8 Sth	West	Truss	Diag Web 2				1	1	1	na		
1474	Span 8 Sth	West	Truss	Vert Web 2				1	1	1	na		
1475	Span 8 Sth	West	Truss	Diag Web 3				1	1	1	na		
1476	Span 8 Sth	West	Truss	Vert Web 3				2	2	2	na		
1477	Span 8 Sth	West	Truss	Diag Web 4				1	1	1	na		
1478	Span 8 Sth	West	Truss	Vert Web 4				1	1	1	na		
1479	Span 8 Sth	West	Truss	Diag Web 5				1	1	1	na		
1480	Span 8 Sth	West	Truss	Vert Web 5				2	2	2	na		
1481	Span 8 Sth	West	Truss	Diag Web 6				1	1	1	na		
1482	Span 8 Sth	West	Truss	Vert Web 6				1	1	1	na		
1483	Span 8 Sth	West	Truss	Vert Web 7				1	1	1	na		
1484	Span 8 Sth	West	Truss	Pipe Hanger 1	Cast patch repair			3	3	3	na		
1485	Span 8 Sth	West	Truss	Pipe Hanger 2	Cast patch repair			1	1	1	na		
1486	Span 8 Sth	West	Truss	Pipe Hanger 3	Cast patch repair			5	5	5	na		
1487	Span 8 Sth	West	Truss	Pipe Hanger 4	Cast patch repair			1	3	3	1 to 3		Point Cloud defect area not captured
1488	Span 8 Sth	West	Truss	Pipe Hanger 5	Cast patch repair			1	1	1	na		
1489	Span 8 Sth	West	Truss	Pipe Hanger 6	Cast patch repair			2	2	2	na		
1490	Span 8 Sth	West	Truss	Pipe Hanger 7	Cast patch repair			2	2	2	na		
1491	Span 8 Sth	West	Truss	Pipe Hanger 8	Cast patch repair			2	2	2	na		
1492	Span 8 Sth	East	Truss	Top Chord 1				1	1	1	na		
1493	Span 8 Sth	East	Truss	Top Chord 2				1	1	1	na		
1494	Span 8 Sth	East	Truss	Top Chord 3	Patch repair			1	1	1	na		
1495	Span 8 Sth	East	Truss	Top Chord 4	Patch repair			1	1	1	na		
1496	Span 8 Sth	East	Truss	Top Chord 5	Patch repair			2	2	2	na		
1497	Span 8 Sth	East	Truss	Top Chord 6				1	1	1	na		
1498	Span 8 Sth	East	Truss	Top Chord 7				1	1	1	na		
1499	Span 8 Sth	East	Truss	Top Chord 8				3	3	3	na		
1500	Span 8 Sth	East	Truss	Btm Chord 1				1	1	1	na		
1501	Span 8 Sth	East	Truss	Btm Chord 2				1	1	1	na		
1502	Span 8 Sth	East	Truss	Btm Chord 3				4	4	4	na		
1503	Span 8 Sth	East	Truss	Btm Chord 4				1	1	1	na		
1504	Span 8 Sth	East	Truss	Btm Chord 5				1	1	1	na		
1505	Span 8 Sth	East	Truss	Btm Chord 6				2	2	2	na		
1506	Span 8 Sth	East	Truss	Btm Chord 7				2	2	2	na		
1507	Span 8 Sth	East	Truss	Btm Chord 8				3	3	3	na		
1508	Span 8 Sth	East	Truss	Diag Web 1				1	1	1	na		
1509	Span 8 Sth	East	Truss	Vert Web 1				1	1	1	na		
1510	Span 8 Sth	East	Truss	Diag Web 2				1	1	1	na		
1511	Span 8 Sth	East	Truss	Vert Web 2				1	1	1	na		
1512	Span 8 Sth	East	Truss	Diag Web 3				2	2	2	na		
1513	Span 8 Sth	East	Truss	Vert Web 3				2	2	4	na		2 to 4
1514	Span 8 Sth	East	Truss	Diag Web 4				1	1	1	na		Loss of concrete cover
1515	Span 8 Sth	East	Truss	Vert Web 4				1	1	1	na		
1516	Span 8 Sth	East	Truss	Diag Web 5				1	3	3	1 to 3		Point Cloud defect area not captured
1517	Span 8 Sth	East	Truss	Vert Web 5				1	1	1	na		
1518	Span 8 Sth	East	Truss	Diag Web 6				1	1	1	na		
1519	Span 8 Sth	East	Truss	Vert Web 6				3	3	3	na		
1520	Span 8 Sth	East	Truss	Vert Web 7				2	2	2	na		
1521	Span 8 Sth	East	Truss	Pipe Hanger 1				2	3	3	2 to 3		Point Cloud defect area not captured
1522	Span 8 Sth	East	Truss	Pipe Hanger 2				1	1	1	na		
1523	Span 8 Sth	East	Truss	Pipe Hanger 3				4	4	4	na		
1524	Span 8 Sth	East	Truss	Pipe Hanger 4				1	1	1	na		
1525	Span 8 Sth	East	Truss	Pipe Hanger 5				1	1	1	na		
1526	Span 8 Sth	East	Truss	Pipe Hanger 6				3	3	3	na		
1527	Span 8 Sth	East	Truss	Pipe Hanger 7				3	3	3	na		
1528	Span 8 Sth	East	Truss	Pipe Hanger 8				3	3	3	na		
1529	Girder 8-9	West	Girder	Walkway beam North				4	4	4	na		
1530	Girder 8-9	West	Girder	Walkway beam North-central				3	3	3	na		
1531	Girder 8-9	West	Girder	Walkway beam Central				4	4	4	na		
1532	Girder 8-9	West	Girder	Walkway beam South-central				2	2	2	na		
1533	Girder 8-9	West	Girder	Walkway beam South				2	2	2	na		
1534	Girder 8-9	West	Girder	Pipe hanger North		Cast patch repair		4	4	4	na		
1535	Girder 8-9	West	Girder	Pipe hanger North-central		Cast patch repair		1	1	1	na		
1536	Girder 8-9	West	Girder	Pipe hanger South-central		Cast patch repair		4	4	4	na		
1537	Girder 8-9	West	Girder	Pipe hanger South	Tie	Cast patch repair		3	3	3	na		
1538	Girder 8-9	East	Girder	Walkway beam North				4	4	4	na		
1539	Girder 8-9	East	Girder	Walkway beam North-central				2	2	2	na		
1540	Girder 8-9	East	Girder	Walkway beam Central				4	4	4	na		
1541	Girder 8-9	East	Girder	Walkway beam South-central				4	4	4	na		
1542	Girder 8-9	East	Girder	Walkway beam South				2	2	2	na		
1543	Girder 8-9	East	Girder	Pipe hanger North		Cast patch repair		3	3	3	na		
1544	Girder												



1565	Span 9 Nth	West	Truss	Diag Web 2				1	1	1	na	na	
1566	Span 9 Nth	West	Truss	Vert Web 2	Cast patch repair			5	5	5	na	na	
1567	Span 9 Nth	West	Truss	Diag Web 3				1	1	1	na	na	
1568	Span 9 Nth	West	Truss	Vert Web 3	Cast patch repair			1	1	1	na	na	
1569	Span 9 Nth	West	Truss	Diag Web 4				2	5	5	2 to 5	Loss of concrete cover	
1570	Span 9 Nth	West	Truss	Vert Web 4				1	1	1	na	na	
1571	Span 9 Nth	West	Truss	Diag Web 5				2	2	2	na	na	
1572	Span 9 Nth	West	Truss	Vert Web 5				2	2	2	na	na	
1573	Span 9 Nth	West	Truss	Diag Web 6				1	1	1	na	na	
1574	Span 9 Nth	West	Truss	Vert Web 6				1	1	1	na	na	
1575	Span 9 Nth	West	Truss	Vert Web 7				1	1	1	na	na	
1576	Span 9 Nth	West	Truss	Pipe Hanger 1				4	4	4	na	na	
1577	Span 9 Nth	West	Truss	Pipe Hanger 2				2	2	2	na	na	
1578	Span 9 Nth	West	Truss	Pipe Hanger 3				2	3	3	2 to 3	Point Cloud defect area not captured	
1579	Span 9 Nth	West	Truss	Pipe Hanger 4				3	3	3	na	na	
1580	Span 9 Nth	West	Truss	Pipe Hanger 5				2	2	2	na	na	
1581	Span 9 Nth	West	Truss	Pipe Hanger 6				3	3	3	na	na	
1582	Span 9 Nth	West	Truss	Pipe Hanger 7				2	2	2	na	na	
1583	Span 9 Nth	West	Truss	Pipe Hanger 8		Expansion Joint		4	4	4	na	na	
1584	Span 9 Nth	East	Truss	Top Chord 1				1	1	1	na	na	
1585	Span 9 Nth	East	Truss	Top Chord 2				1	1	1	na	na	
1586	Span 9 Nth	East	Truss	Top Chord 3				2	2	2	na	na	
1587	Span 9 Nth	East	Truss	Top Chord 4				2	2	2	na	na	
1588	Span 9 Nth	East	Truss	Top Chord 5				4	4	4	na	na	
1589	Span 9 Nth	East	Truss	Top Chord 6				1	1	1	na	na	
1590	Span 9 Nth	East	Truss	Top Chord 7				2	2	2	na	na	
1591	Span 9 Nth	East	Truss	Top Chord 8				2	2	2	na	na	
1592	Span 9 Nth	East	Truss	Btm Chord 1				1	1	1	na	na	
1593	Span 9 Nth	East	Truss	Btm Chord 2				1	1	1	na	na	
1594	Span 9 Nth	East	Truss	Btm Chord 3				1	1	1	na	na	
1595	Span 9 Nth	East	Truss	Btm Chord 4				1	1	1	na	na	
1596	Span 9 Nth	East	Truss	Btm Chord 5				1	1	1	na	na	
1597	Span 9 Nth	East	Truss	Btm Chord 6				3	3	3	na	na	
1598	Span 9 Nth	East	Truss	Btm Chord 7				2	2	2	na	na	
1599	Span 9 Nth	East	Truss	Btm Chord 8				1	1	1	na	na	
1600	Span 9 Nth	East	Truss	Diag Web 1	Cast patch repair			2	2	2	na	na	
1601	Span 9 Nth	East	Truss	Vert Web 1	Cast patch repair			1	1	1	na	na	
1602	Span 9 Nth	East	Truss	Diag Web 2				1	5	5	1 to 5	Point Cloud defect area not captured	
1603	Span 9 Nth	East	Truss	Vert Web 2				4	4	4	na	na	
1604	Span 9 Nth	East	Truss	Diag Web 3				1	1	1	na	na	
1605	Span 9 Nth	East	Truss	Vert Web 3	Patch repair			4	4	4	na	na	
1606	Span 9 Nth	East	Truss	Diag Web 4				4	4	4	na	na	
1607	Span 9 Nth	East	Truss	Vert Web 4				4	4	4	na	na	
1608	Span 9 Nth	East	Truss	Diag Web 5				4	4	4	na	na	No signs of further degradation
1609	Span 9 Nth	East	Truss	Vert Web 5				1	1	1	na	na	
1610	Span 9 Nth	East	Truss	Diag Web 6				3	3	3	na	na	
1611	Span 9 Nth	East	Truss	Vert Web 6	Cast patch repair			3	3	3	na	na	
1612	Span 9 Nth	East	Truss	Vert Web 7				1	1	1	na	na	
1613	Span 9 Nth	East	Truss	Pipe Hanger 1	Cast patch repair			4	4	4	na	na	
1614	Span 9 Nth	East	Truss	Pipe Hanger 2	Cast patch repair			2	2	2	na	na	
1615	Span 9 Nth	East	Truss	Pipe Hanger 3	Cast patch repair			3	3	3	na	na	
1616	Span 9 Nth	East	Truss	Pipe Hanger 4	Cast patch repair			3	3	3	na	na	
1617	Span 9 Nth	East	Truss	Pipe Hanger 5	Cast patch repair			2	2	2	na	na	
1618	Span 9 Nth	East	Truss	Pipe Hanger 6	Cast patch repair			4	4	4	na	na	
1619	Span 9 Nth	East	Truss	Pipe Hanger 7	Cast patch repair			2	2	2	na	na	
1620	Span 9 Nth	East	Truss	Pipe Hanger 8	Cast patch repair			2	2	2	na	na	
1621	Pier 9	West	Pier	Pier Leg Nth				4	4	4	na	na	
1622	Pier 9	West	Pier	Pier Leg Sth				4	4	4	na	na	
1623	Pier 9	East	Pier	Pier Leg Nth				4	4	4	na	na	
1624	Pier 9	East	Pier	Pier Leg Sth				4	4	4	na	na	
1625	Pier 9	West	Pier	Pier head Parapet west				4	4	4	na	na	
1626	Pier 9	West	Pier	Pier head Face west				3	3	3	na	na	
1627	Pier 9	East	Pier	Pier head Parapet east				2	2	2	na	na	
1628	Pier 9	East	Pier	Pier head Face east	Patch repair			4	4	4	na	na	
1629	Pier 9	na	Pier	Pier head Parapet nth				3	3	3	na	na	
1630	Pier 9	na	Pier	Pier head Face nth	Patch repair			4	4	4	na	na	
1631	Pier 9	na	Pier	Pier head Parapet sth				2	0	0	Insufficient Data	Insufficient Data	
1632	Pier 9	na	Pier	Pier head Face sth	Patch repair			3	3	0	na	Insufficient Data	
1633	Pier 9	na	Pier	Pier head soffit				5	0	5	Insufficient Data	Insufficient Data	
1634	Pier 9	West	Pier	Gussets Nth	Cast patch repair			3	3	3	na	na	
1635	Pier 9	West	Pier	Gussets Sth	Cast patch repair			4	4	4	na	na	
1636	Pier 9	East	Pier	Gussets Nth	Cast patch repair			3	3	3	na	na	
1637	Pier 9	East	Pier	Gussets Sth	Cast patch repair			3	3	3	na	na	
1638	Pier 9	West	Pier	Pipe hanger and strut nth	Cast patch repair			3	4	4	3 to 4	Point Cloud defect area not captured	
1639	Pier 9	West	Pier	Pipe hanger and strut sth	Cast patch repair			4	4	4	na	na	
1640	Pier 9	East	Pier	Pipe hanger and strut nth	Cast patch repair			4	4	4	na	na	
1641	Pier 9	East	Pier	Pipe hanger and strut sth	Cast patch repair			3	3	3	na	na	
1642	Pier 9	West	Pier	Pier base west face				1	1	1	na	na	
1643	Pier 9	East	Pier	Pier base east face				3	3	3	na	na	
1644	Pier 9	na	Pier	Pier base south face				1	1	0	na	Insufficient Data	
1645	Pier 9	na	Pier	Pier base north face				1	1	0	na	Insufficient Data	
1646	Span 9 Sth	West	Truss	Top Chord 1				1	1	1	na	na	
1647	Span 9 Sth	West	Truss	Top Chord 2				0	2	2	Insufficient Data	na	
1648	Span 9 Sth	West	Truss	Top Chord 3				0	1	1	Insufficient Data	na	
1649	Span 9 Sth	West	Truss	Top Chord 4				0	1	0	Insufficient Data	Insufficient Data	
1650	Span 9 Sth	West	Truss	Top Chord 5				0	0	0	Insufficient Data	Insufficient Data	
1651	Span 9 Sth	West	Truss	Top Chord 6				0	0	0	Insufficient Data	Insufficient Data	
1652	Span 9 Sth	West	Truss	Top Chord 7				0	0	0	Insufficient Data	Insufficient Data	
1653	Span 9 Sth	West	Truss	Top Chord 8				0	0	0	Insufficient Data	Insufficient Data	
1654	Span 9 Sth	West	Truss	Btm Chord 1				1	1	1	na	na	
1655	Span 9 Sth	West	Truss	Btm Chord 2				1	1	1	na	na	
1656	Span 9 Sth	West	Truss	Btm Chord 3				1	1	1	na	na	
1657	Span 9 Sth	West	Truss	Btm Chord 4				1	1	1	na	na	
1658	Span 9 Sth	West	Truss	Btm Chord 5				1	0	0	Insufficient Data	Insufficient Data	
1659	Span 9 Sth	West	Truss	Btm Chord 6				1	0	0	Insufficient Data	Insufficient Data	
1660	Span 9 Sth	West	Truss	Btm Chord 7				0	0	0	Insufficient Data	Insufficient Data	
1661	Span 9 Sth	West	Truss	Btm Chord 8				0	0	0	Insufficient Data	Insufficient Data	
1662	Span 9 Sth	West	Truss	Diag Web 1				3	3	3	na	na	
1663	Span 9 Sth	West	Truss	Vert Web 1				4	4	4	na	na	
1664	Span 9 Sth	West	Truss	Diag Web 2				1	1	1	na	na	
1665	Span 9 Sth	West	Truss	Vert Web 2				3	3	3	na	Vegetation	
1666	Span 9 Sth	West	Truss	Diag Web 3				1	1	1	na	na	
1667	Span 9 Sth	West	Truss	Vert Web 3				5	5	5	na	na	
1668	Span 9 Sth	West	Truss	Diag Web 4				1	1	1	na	na	
1669	Span 9 Sth	West	Truss	Vert Web 4				2	2	0	na	Insufficient Data	
1670	Span 9 Sth	West	Truss	Diag Web 5				1	0	0	Insufficient Data	Vegetation	
1671	Span 9 Sth	West	Truss	Vert Web 5				1	0	0	Insufficient Data	Vegetation	
1672	Span 9 Sth	West	Truss	Diag Web 6				0	0	0	Insufficient Data	Insufficient Data	
1673	Span 9 Sth	West	Truss	Vert Web 6				0	0	0	Insufficient Data	Insufficient Data	
1674	Span 9 Sth	West	Truss	Vert Web 7				0	0	0	Insufficient Data	Insufficient Data	
1675	Span 9 Sth	West	Truss	Pipe Hanger 1				1	1	1	na	na	
1676	Span 9 Sth	West	Truss	Pipe Hanger 2				2	2	2	na	na	
1677	Span 9 Sth	West	Truss	Pipe Hanger 3				1	0	1	Insufficient Data	Insufficient Data	
1678	Span 9 Sth	West	Truss	Pipe Hanger 4				0	0	1	Insufficient Data	Insufficient Data	
1679	Span 9 Sth	West	Truss	Pipe Hanger 5				0	0	1	Insufficient Data	Insufficient Data	
1680	Span 9 Sth	West	Truss	Pipe Hanger 6				0	0	0	Insufficient Data	Insufficient Data	
1681	Span 9 Sth	West	Truss	Pipe Hanger 7				0	0	0	Insufficient Data	Insufficient Data	
1682	Span 9 Sth	West	Truss	Pipe Hanger 8				2	0	0	Insufficient Data	Insufficient Data	
1683	Span 9 Sth	East	Truss	Top Chord 1				1	1	1	na	na	
1684	Span 9 Sth	East	Truss	Top Chord 2				2	2	2	na	na	Crack growth
1685	Span 9 Sth	East	Truss	Top Chord 3				2	2	2	na	na	
1686	Span 9 Sth	East	Truss	Top Chord 4				1	1	2	na	1 to 2	Crack growth
1687	Span 9 Sth	East	Truss	Top Chord 5				1	1	0	na	Insufficient Data	
1688	Span 9 Sth	East	Truss	Top Chord 6				1	0	0	Insufficient Data	Insufficient Data	
1689	Span 9 Sth	East	Truss	Top Chord 7				1	0	0	Insufficient Data	Insufficient Data	
1690	Span 9 Sth	East	Truss	Top Chord 8				1	0	0	Insufficient Data	Insufficient Data	
1691	Span 9 Sth	East	Truss	Btm Chord 1				1	1	1	na	na	
1692	Span 9 Sth	East	Truss	Btm Chord 2				1	1	1	na	na	
1693	Span 9 Sth	East	Truss	Btm Chord 3				1	1	1	na	na	
1694	Span 9 Sth	East	Truss	Btm Chord 4				1	1	1	na	na	
1695	Span 9 Sth	East	Truss	Btm Chord 5				1	0	1	Insufficient Data	Insufficient Data	
1696	Span 9 Sth	East	Truss	Btm Chord 6				1	0	1	Insufficient Data	Insufficient Data	
1697	Span 9 Sth	East	Truss	Btm Chord 7									

1722	Girder 9-10	West	Girder	Walkway beam Central				1	1	0	na		Insufficient Data	
1723	Girder 9-10	West	Girder	Walkway beam South-central				1	1	0	na		Insufficient Data	
1724	Girder 9-10	West	Girder	Walkway beam South				1	1	0	na		Insufficient Data	
1725	Girder 9-10	West	Girder	Pipe hanger North	Tie		Cast patch repair	3	3	0	na		Insufficient Data	
1726	Girder 9-10	West	Girder	Pipe hanger North-central	Tie		Cast patch repair	3	3	0	na		Insufficient Data	
1727	Girder 9-10	West	Girder	Pipe hanger South-central	Tie		Cast patch repair	4	4	0	na		Insufficient Data	
1728	Girder 9-10	West	Girder	Pipe hanger South	Tie		Cast patch repair	2	2	0	na		Insufficient Data	
1729	Girder 9-10	East	Girder	Walkway beam North				1	1	0	na		Insufficient Data	
1730	Girder 9-10	East	Girder	Walkway beam North-central				3	3	0	na		Insufficient Data	
1731	Girder 9-10	East	Girder	Walkway beam Central				3	3	0	na		Insufficient Data	
1732	Girder 9-10	East	Girder	Walkway beam South-central				4	4	0	na		Insufficient Data	
1733	Girder 9-10	East	Girder	Walkway beam South				3	3	0	na		Insufficient Data	
1734	Girder 9-10	East	Girder	Pipe hanger North	Tie		Cast patch repair	4	4	0	na		Insufficient Data	
1735	Girder 9-10	East	Girder	Pipe hanger North-central	Tie		Cast patch repair	3	3	0	na		Insufficient Data	
1736	Girder 9-10	East	Girder	Pipe hanger South-central	Tie		Cast patch repair	2	2	0	na		Insufficient Data	
1737	Girder 9-10	East	Girder	Pipe hanger South	Tie		Cast patch repair	4	4	0	na		Insufficient Data	
1738	Span 10 Nth	West	Truss	Top Chord 1				1	1	0	na		Insufficient Data	
1739	Span 10 Nth	West	Truss	Top Chord 2				1	1	0	na		Insufficient Data	
1740	Span 10 Nth	West	Truss	Top Chord 3				1	1	0	na		Insufficient Data	
1741	Span 10 Nth	West	Truss	Top Chord 4				2	2	0	na		Insufficient Data	
1742	Span 10 Nth	West	Truss	Top Chord 5				2	2	0	na		Insufficient Data	
1743	Span 10 Nth	West	Truss	Top Chord 6				2	2	0	na		Insufficient Data	
1744	Span 10 Nth	West	Truss	Top Chord 7				2	2	0	na		Insufficient Data	
1745	Span 10 Nth	West	Truss	Top Chord 8				1	1	0	na		Insufficient Data	
1746	Span 10 Nth	West	Truss	Btm Chord 1				2	0	0	Insufficient Data		Insufficient Data	
1747	Span 10 Nth	West	Truss	Btm Chord 2				2	2	0	na		Insufficient Data	
1748	Span 10 Nth	West	Truss	Btm Chord 3				3	3	0	na		Insufficient Data	
1749	Span 10 Nth	West	Truss	Btm Chord 4				2	2	0	na		Insufficient Data	
1750	Span 10 Nth	West	Truss	Btm Chord 5				2	2	0	na		Insufficient Data	
1751	Span 10 Nth	West	Truss	Btm Chord 6				1	1	0	na		Insufficient Data	
1752	Span 10 Nth	West	Truss	Btm Chord 7				2	2	0	na		Insufficient Data	
1753	Span 10 Nth	West	Truss	Btm Chord 8				2	2	0	na		Insufficient Data	
1754	Span 10 Nth	West	Truss	Diag Web 1	Attachment			1	1	0	na		Insufficient Data	
1755	Span 10 Nth	West	Truss	Vert Web 1				5	5	0	na		Insufficient Data	
1756	Span 10 Nth	West	Truss	Diag Web 2				1	1	0	na		Insufficient Data	
1757	Span 10 Nth	West	Truss	Vert Web 2	Cast patch repair			1	1	0	na		Insufficient Data	
1758	Span 10 Nth	West	Truss	Diag Web 3				1	1	0	na		Insufficient Data	
1759	Span 10 Nth	West	Truss	Vert Web 3				5	5	0	na		Insufficient Data	
1760	Span 10 Nth	West	Truss	Diag Web 4				1	1	0	na		Insufficient Data	
1761	Span 10 Nth	West	Truss	Vert Web 4				1	1	0	na		Insufficient Data	
1762	Span 10 Nth	West	Truss	Diag Web 5				1	1	0	na		Insufficient Data	
1763	Span 10 Nth	West	Truss	Vert Web 5				3	3	0	na		Insufficient Data	
1764	Span 10 Nth	West	Truss	Diag Web 6				1	1	0	na		Insufficient Data	
1765	Span 10 Nth	West	Truss	Vert Web 6				2	2	0	na		Insufficient Data	
1766	Span 10 Nth	West	Truss	Vert Web 7				1	1	0	na		Insufficient Data	
1767	Span 10 Nth	West	Truss	Pipe Hanger 1				3	3	0	na		Insufficient Data	
1768	Span 10 Nth	West	Truss	Pipe Hanger 2				3	3	0	na		Insufficient Data	
1769	Span 10 Nth	West	Truss	Pipe Hanger 3				4	4	0	na		Insufficient Data	
1770	Span 10 Nth	West	Truss	Pipe Hanger 4				4	4	0	na		Insufficient Data	
1771	Span 10 Nth	West	Truss	Pipe Hanger 5				2	2	0	na		Insufficient Data	
1772	Span 10 Nth	West	Truss	Pipe Hanger 6				2	2	0	na		Insufficient Data	
1773	Span 10 Nth	West	Truss	Pipe Hanger 7				1	1	0	na		Insufficient Data	
1774	Span 10 Nth	West	Truss	Pipe Hanger 8				3	3	0	na		Insufficient Data	
1775	Span 10 Nth	East	Truss	Top Chord 1				2	2	0	na		Insufficient Data	
1776	Span 10 Nth	East	Truss	Top Chord 2				1	1	0	na		Insufficient Data	
1777	Span 10 Nth	East	Truss	Top Chord 3				2	2	0	na		Insufficient Data	
1778	Span 10 Nth	East	Truss	Top Chord 4				2	2	0	na		Insufficient Data	
1779	Span 10 Nth	East	Truss	Top Chord 5				2	2	0	na		Insufficient Data	
1780	Span 10 Nth	East	Truss	Top Chord 6				1	1	0	na		Insufficient Data	
1781	Span 10 Nth	East	Truss	Top Chord 7	Cast patch repair			1	1	0	na		Insufficient Data	
1782	Span 10 Nth	East	Truss	Top Chord 8				4	4	0	na		Insufficient Data	
1783	Span 10 Nth	East	Truss	Btm Chord 1				1	0	0	Insufficient Data		Insufficient Data	
1784	Span 10 Nth	East	Truss	Btm Chord 2				2	2	0	na		Insufficient Data	
1785	Span 10 Nth	East	Truss	Btm Chord 3				2	2	0	na		Insufficient Data	
1786	Span 10 Nth	East	Truss	Btm Chord 4				1	1	0	na		Insufficient Data	
1787	Span 10 Nth	East	Truss	Btm Chord 5				2	2	0	na		Insufficient Data	
1788	Span 10 Nth	East	Truss	Btm Chord 6				2	2	0	na		Insufficient Data	
1789	Span 10 Nth	East	Truss	Btm Chord 7				4	4	0	na		Insufficient Data	
1790	Span 10 Nth	East	Truss	Btm Chord 8				4	4	0	na		Insufficient Data	
1791	Span 10 Nth	East	Truss	Diag Web 1				1	3	0	1 to 3	Point Cloud defect area not captured	Insufficient Data	
1792	Span 10 Nth	East	Truss	Vert Web 1				1	1	0	na		Insufficient Data	
1793	Span 10 Nth	East	Truss	Diag Web 2				4	4	0	na		Insufficient Data	
1794	Span 10 Nth	East	Truss	Vert Web 2				5	5	0	na		Insufficient Data	
1795	Span 10 Nth	East	Truss	Diag Web 3				1	2	0	1 to 2	Point Cloud defect area not captured	Insufficient Data	
1796	Span 10 Nth	East	Truss	Vert Web 3				5	5	0	na		Insufficient Data	
1797	Span 10 Nth	East	Truss	Diag Web 4				1	2	0	1 to 2	Point Cloud defect area not captured	Insufficient Data	
1798	Span 10 Nth	East	Truss	Vert Web 4				5	5	0	na		Insufficient Data	
1799	Span 10 Nth	East	Truss	Diag Web 5				1	1	0	na		Insufficient Data	
1800	Span 10 Nth	East	Truss	Vert Web 5				4	4	0	na		Insufficient Data	
1801	Span 10 Nth	East	Truss	Diag Web 6				1	1	0	na		Insufficient Data	
1802	Span 10 Nth	East	Truss	Vert Web 6				3	3	0	na		Insufficient Data	
1803	Span 10 Nth	East	Truss	Vert Web 7				1	1	0	na		Insufficient Data	
1804	Span 10 Nth	East	Truss	Pipe Hanger 1	Cast patch repair			1	1	0	na		Insufficient Data	
1805	Span 10 Nth	East	Truss	Pipe Hanger 2	Cast patch repair			3	3	0	na		Insufficient Data	
1806	Span 10 Nth	East	Truss	Pipe Hanger 3	Cast patch repair			3	3	0	na		Insufficient Data	
1807	Span 10 Nth	East	Truss	Pipe Hanger 4	Cast patch repair			3	3	0	na		Insufficient Data	
1808	Span 10 Nth	East	Truss	Pipe Hanger 5	Cast patch repair			2	2	0	na		Insufficient Data	
1809	Span 10 Nth	East	Truss	Pipe Hanger 6	Cast patch repair			1	1	0	na		Insufficient Data	
1810	Span 10 Nth	East	Truss	Pipe Hanger 7	Cast patch repair			1	1	0	na		Insufficient Data	
1811	Span 10 Nth	East	Truss	Pipe Hanger 8	Cast patch repair			4	4	0	na		Insufficient Data	
1812	Pier 10	West	Pier	Pier Leg Nth				4	4	0	na		Insufficient Data	
1813	Pier 10	West	Pier	Pier Leg Sth				4	4	0	na		Insufficient Data	
1814	Pier 10	East	Pier	Pier Leg Nth	Cast patch repair	Vegetation		2	2	0	na		Insufficient Data	
1815	Pier 10	East	Pier	Pier Leg Sth		Vegetation		4	4	0	na		Insufficient Data	
1816	Pier 10	West	Pier	Pier head Parapet west				1	1	0	na		Insufficient Data	
1817	Pier 10	West	Pier	Pier head Face west	Cast patch repair			1	1	0	na		Insufficient Data	
1818	Pier 10	East	Pier	Pier head Parapet east				3	3	0	na		Insufficient Data	
1819	Pier 10	East	Pier	Pier head Face east	Patch repair			4	4	0	na		Insufficient Data	
1820	Pier 10	na	Pier	Pier head Parapet nth				1	1	0	na		Insufficient Data	
1821	Pier 10	na	Pier	Pier head Face nth	Patch repair			4	4	0	na		Insufficient Data	
1822	Pier 10	na	Pier	Pier head Parapet sth				1	1	0	na		Insufficient Data	
1823	Pier 10	na	Pier	Pier head Face sth	Patch repair			4	4	0	na		Insufficient Data	
1824	Pier 10	na	Pier	Pier head soffit				0	0	0	Insufficient Data		Insufficient Data	
1825	Pier 10	West	Pier	Gussets Nth				4	4	0	na		Insufficient Data	
1826	Pier 10	West	Pier	Gussets Sth				2	2	0	na		Insufficient Data	
1827	Pier 10	East	Pier	Gussets Nth				3	3	0	na		Insufficient Data	
1828	Pier 10	East	Pier	Gussets Sth				3	3	0	na		Insufficient Data	
1829	Pier 10	West	Pier	Pipe hanger and strut nth				2	3	0	2 to 3	Point Cloud defect area not captured	Insufficient Data	
1830	Pier 10	West	Pier	Pipe hanger and strut sth				1	1	0	na		Insufficient Data	
1831	Pier 10	East	Pier	Pipe hanger and strut nth	Cast patch repair			1	0	0	Insufficient Data		Insufficient Data	
1832	Pier 10	East	Pier	Pipe hanger and strut sth	Cast patch repair			1	0	0	Insufficient Data		Insufficient Data	
1833	Pier 10	West	Pier	Pier base west face				1	0	0	Insufficient Data		Insufficient Data	
1834	Pier 10	East	Pier	Pier base east face				0	0	0	Insufficient Data		Insufficient Data	
1835	Pier 10	na	Pier	Pier base south face				0	0	0	Insufficient Data		Insufficient Data	
1836	Pier 10	na	Pier	Pier base north face				0	0	0	Insufficient Data		Insufficient Data	
1837	Span 10 Sth	West	Truss	Top Chord 1				1	1	0	na		Insufficient Data	
1838	Span 10 Sth	West	Truss	Top Chord 2				1	1	0	na		Insufficient Data	
1839	Span 10 Sth	West	Truss	Top Chord 3				1	1	0	na		Insufficient Data	
1840	Span 10 Sth	West	Truss	Top Chord 4				1	1	0	na		Insufficient Data	
1841	Span 10 Sth	West	Truss	Top Chord 5				1	1	0	na		Insufficient Data	
1842	Span 10 Sth	West	Truss	Top Chord 6				1	1	0	na		Insufficient Data	
1843	Span 10 Sth	West	Truss	Top Chord 7				1	1	0	na		Insufficient Data	
1844	Span 10 Sth	West	Truss	Top Chord 8				1	1	0	na		Insufficient Data	
1845	Span 10 Sth	West	Truss	Btm Chord 1				1	0	0	Insufficient Data			

1879	Span 10 Sth	East	Truss	Top Chord 6				1	1	0	na		Insufficient Data	
1880	Span 10 Sth	East	Truss	Top Chord 7				1	1	0	na		Insufficient Data	
1881	Span 10 Sth	East	Truss	Top Chord 8				1	1	0	na		Insufficient Data	
1882	Span 10 Sth	East	Truss	Btm Chord 1				1	0	0	Insufficient Data		Insufficient Data	
1883	Span 10 Sth	East	Truss	Btm Chord 2				1	0	0	Insufficient Data		Insufficient Data	
1884	Span 10 Sth	East	Truss	Btm Chord 3				1	0	0	Insufficient Data		Insufficient Data	
1885	Span 10 Sth	East	Truss	Btm Chord 4				1	1	0	na		Insufficient Data	
1886	Span 10 Sth	East	Truss	Btm Chord 5				1	1	0	na		Insufficient Data	
1887	Span 10 Sth	East	Truss	Btm Chord 6				1	1	0	na		Insufficient Data	
1888	Span 10 Sth	East	Truss	Btm Chord 7				2	2	0	na		Insufficient Data	
1889	Span 10 Sth	East	Truss	Btm Chord 8				2	2	0	na		Insufficient Data	
1890	Span 10 Sth	East	Truss	Diag Web 1		Vegetation		1	4	0	1 to 4	Point Cloud defect area not captured	Insufficient Data	
1891	Span 10 Sth	East	Truss	Vert Web 1		Vegetation		1	1	0	na		Insufficient Data	
1892	Span 10 Sth	East	Truss	Diag Web 2		Vegetation		1	1	0	na		Insufficient Data	
1893	Span 10 Sth	East	Truss	Vert Web 2		Vegetation		5	5	0	na		Insufficient Data	
1894	Span 10 Sth	East	Truss	Diag Web 3		Vegetation		1	1	0	na		Insufficient Data	
1895	Span 10 Sth	East	Truss	Vert Web 3				5	5	0	na		Insufficient Data	
1896	Span 10 Sth	East	Truss	Diag Web 4				1	1	0	na		Insufficient Data	
1897	Span 10 Sth	East	Truss	Vert Web 4	Cast patch repair			1	1	0	na		Insufficient Data	
1898	Span 10 Sth	East	Truss	Diag Web 5				1	1	0	na		Insufficient Data	
1899	Span 10 Sth	East	Truss	Vert Web 5	Cast patch repair			1	1	0	na		Insufficient Data	
1900	Span 10 Sth	East	Truss	Diag Web 6				1	1	0	na		Insufficient Data	
1901	Span 10 Sth	East	Truss	Vert Web 6				3	3	0	na		Insufficient Data	
1902	Span 10 Sth	East	Truss	Vert Web 7				1	1	0	na		Insufficient Data	
1903	Span 10 Sth	East	Truss	Pipe Hanger 1	Cast patch repair			0	0	0	Insufficient Data		Insufficient Data	
1904	Span 10 Sth	East	Truss	Pipe Hanger 2	Cast patch repair	Vegetation		0	1	0	Insufficient Data		Insufficient Data	
1905	Span 10 Sth	East	Truss	Pipe Hanger 3	Cast patch repair	Vegetation		0	1	0	Insufficient Data		Insufficient Data	
1906	Span 10 Sth	East	Truss	Pipe Hanger 4	Cast patch repair	Vegetation		0	3	0	Insufficient Data		Insufficient Data	
1907	Span 10 Sth	East	Truss	Pipe Hanger 5	Cast patch repair	Vegetation		0	1	0	Insufficient Data		Insufficient Data	
1908	Span 10 Sth	East	Truss	Pipe Hanger 6	Cast patch repair	Vegetation		1	1	0	na		Insufficient Data	
1909	Span 10 Sth	East	Truss	Pipe Hanger 7	Cast patch repair	Vegetation		1	1	0	na		Insufficient Data	
1910	Span 10 Sth	East	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint		2	0	0	Insufficient Data		Insufficient Data	
1911	Span 11 Nth	West	Truss	Top Chord 1				1	1	0	na		Insufficient Data	
1912	Span 11 Nth	West	Truss	Top Chord 2				1	1	0	na		Insufficient Data	
1913	Span 11 Nth	West	Truss	Top Chord 3				4	4	0	na		Insufficient Data	
1914	Span 11 Nth	West	Truss	Top Chord 4				1	1	0	na		Insufficient Data	
1915	Span 11 Nth	West	Truss	Top Chord 5				2	2	0	na		Insufficient Data	
1916	Span 11 Nth	West	Truss	Top Chord 6				1	1	0	na		Insufficient Data	
1917	Span 11 Nth	West	Truss	Top Chord 7				5	5	0	na		Insufficient Data	
1918	Span 11 Nth	West	Truss	Top Chord 8				2	2	0	na		Insufficient Data	
1919	Span 11 Nth	West	Truss	Btm Chord 1				0	0	0	Insufficient Data		Insufficient Data	
1920	Span 11 Nth	West	Truss	Btm Chord 2				1	0	0	Insufficient Data		Insufficient Data	
1921	Span 11 Nth	West	Truss	Btm Chord 3				1	0	0	Insufficient Data		Insufficient Data	
1922	Span 11 Nth	West	Truss	Btm Chord 4				1	0	0	Insufficient Data		Insufficient Data	
1923	Span 11 Nth	West	Truss	Btm Chord 5				1	0	0	Insufficient Data		Insufficient Data	
1924	Span 11 Nth	West	Truss	Btm Chord 6				1	0	0	Insufficient Data		Insufficient Data	
1925	Span 11 Nth	West	Truss	Btm Chord 7				1	0	0	Insufficient Data		Insufficient Data	
1926	Span 11 Nth	West	Truss	Btm Chord 8				1	0	0	Insufficient Data		Insufficient Data	
1927	Span 11 Nth	West	Truss	Diag Web 1				1	1	0	na		Insufficient Data	
1928	Span 11 Nth	West	Truss	Vert Web 1				5	5	0	na		Insufficient Data	
1929	Span 11 Nth	West	Truss	Diag Web 2				1	1	0	na		Insufficient Data	
1930	Span 11 Nth	West	Truss	Vert Web 2				5	5	0	na		Insufficient Data	
1931	Span 11 Nth	West	Truss	Diag Web 3				1	1	0	na		Insufficient Data	
1932	Span 11 Nth	West	Truss	Vert Web 3	Cast patch repair			5	5	0	na		Insufficient Data	
1933	Span 11 Nth	West	Truss	Diag Web 4				3	3	0	na		Insufficient Data	
1934	Span 11 Nth	West	Truss	Vert Web 4				1	1	0	na		Insufficient Data	
1935	Span 11 Nth	West	Truss	Diag Web 5				1	1	0	na		Insufficient Data	
1936	Span 11 Nth	West	Truss	Vert Web 5				5	5	0	na		Insufficient Data	
1937	Span 11 Nth	West	Truss	Diag Web 6				1	1	0	na		Insufficient Data	
1938	Span 11 Nth	West	Truss	Vert Web 6				5	5	0	na		Insufficient Data	
1939	Span 11 Nth	West	Truss	Vert Web 7				1	0	0	Insufficient Data		Insufficient Data	
1940	Span 11 Nth	West	Truss	Pipe Hanger 1	Cast patch repair	Vegetation		0	1	0	Insufficient Data		Insufficient Data	
1941	Span 11 Nth	West	Truss	Pipe Hanger 2	Cast patch repair	Vegetation		0	2	0	Insufficient Data		Insufficient Data	
1942	Span 11 Nth	West	Truss	Pipe Hanger 3				0	0	0	Insufficient Data		Insufficient Data	
1943	Span 11 Nth	West	Truss	Pipe Hanger 4	Cast patch repair	Vegetation		3	3	0	na		Insufficient Data	
1944	Span 11 Nth	West	Truss	Pipe Hanger 5	Cast patch repair	Vegetation		4	4	0	na		Insufficient Data	
1945	Span 11 Nth	West	Truss	Pipe Hanger 6				0	0	0	Insufficient Data		Insufficient Data	
1946	Span 11 Nth	West	Truss	Pipe Hanger 7				2	0	0	Insufficient Data		Insufficient Data	
1947	Span 11 Nth	West	Truss	Pipe Hanger 8		Expansion Joint		2	0	0	Insufficient Data		Insufficient Data	
1948	Span 11 Nth	East	Truss	Top Chord 1				1	1	0	na		Insufficient Data	
1949	Span 11 Nth	East	Truss	Top Chord 2				1	1	0	na		Insufficient Data	
1950	Span 11 Nth	East	Truss	Top Chord 3	Patch repair			2	2	0	na		Insufficient Data	
1951	Span 11 Nth	East	Truss	Top Chord 4				1	1	0	na		Insufficient Data	
1952	Span 11 Nth	East	Truss	Top Chord 5				1	1	0	na		Insufficient Data	
1953	Span 11 Nth	East	Truss	Top Chord 6		Vegetation		1	1	0	na		Insufficient Data	
1954	Span 11 Nth	East	Truss	Top Chord 7		Concrete on truss		1	1	0	na		Insufficient Data	
1955	Span 11 Nth	East	Truss	Top Chord 8				1	1	0	na		Insufficient Data	
1956	Span 11 Nth	East	Truss	Btm Chord 1				0	0	0	Insufficient Data		Insufficient Data	
1957	Span 11 Nth	East	Truss	Btm Chord 2				0	0	0	Insufficient Data		Insufficient Data	
1958	Span 11 Nth	East	Truss	Btm Chord 3				0	0	0	Insufficient Data		Insufficient Data	
1959	Span 11 Nth	East	Truss	Btm Chord 4				4	0	0	Insufficient Data		Insufficient Data	
1960	Span 11 Nth	East	Truss	Btm Chord 5				4	0	0	Insufficient Data		Insufficient Data	
1961	Span 11 Nth	East	Truss	Btm Chord 6				2	0	0	Insufficient Data		Insufficient Data	
1962	Span 11 Nth	East	Truss	Btm Chord 7				1	0	0	Insufficient Data		Insufficient Data	
1963	Span 11 Nth	East	Truss	Btm Chord 8				1	0	0	Insufficient Data		Insufficient Data	
1964	Span 11 Nth	East	Truss	Diag Web 1		Vegetation		1	1	0	na		Insufficient Data	
1965	Span 11 Nth	East	Truss	Vert Web 1		Vegetation		3	3	0	na		Insufficient Data	
1966	Span 11 Nth	East	Truss	Diag Web 2		Vegetation		1	2	0	1 to 2	Crack appearance	Insufficient Data	
1967	Span 11 Nth	East	Truss	Vert Web 2		Vegetation		2	4	0	2 to 4	Loss of concrete cover	Insufficient Data	
1968	Span 11 Nth	East	Truss	Diag Web 3		Vegetation		1	1	0	na		Insufficient Data	
1969	Span 11 Nth	East	Truss	Vert Web 3		Vegetation		1	1	0	na		Insufficient Data	
1970	Span 11 Nth	East	Truss	Diag Web 4		Vegetation		1	1	0	na		Insufficient Data	
1971	Span 11 Nth	East	Truss	Vert Web 4				1	0	0	Insufficient Data		Insufficient Data	
1972	Span 11 Nth	East	Truss	Diag Web 5				1	0	0	Insufficient Data		Insufficient Data	
1973	Span 11 Nth	East	Truss	Vert Web 5				4	0	0	Insufficient Data		Insufficient Data	
1974	Span 11 Nth	East	Truss	Diag Web 6				1	0	0	Insufficient Data		Insufficient Data	
1975	Span 11 Nth	East	Truss	Vert Web 6				1	0	0	Insufficient Data		Insufficient Data	
1976	Span 11 Nth	East	Truss	Vert Web 7				1	0	0	Insufficient Data		Insufficient Data	
1977	Span 11 Nth	East	Truss	Pipe Hanger 1				0	0	0	Insufficient Data		Insufficient Data	
1978	Span 11 Nth	East	Truss	Pipe Hanger 2				0	0	0	Insufficient Data		Insufficient Data	
1979	Span 11 Nth	East	Truss	Pipe Hanger 3				0	0	0	Insufficient Data		Insufficient Data	
1980	Span 11 Nth	East	Truss	Pipe Hanger 4				0	0	0	Insufficient Data		Insufficient Data	
1981	Span 11 Nth	East	Truss	Pipe Hanger 5				0	0	0	Insufficient Data		Insufficient Data	
1982	Span 11 Nth	East	Truss	Pipe Hanger 6				0	0	0	Insufficient Data		Insufficient Data	
1983	Span 11 Nth	East	Truss	Pipe Hanger 7				0	0	0	Insufficient Data		Insufficient Data	
1984	Span 11 Nth	East	Truss	Pipe Hanger 8		Vegetation		0	4	0	Insufficient Data		Insufficient Data	
1985	Pier 11	West	Pier	Pier Leg Nth	Cast patch repair			4	4	0	na		Insufficient Data	
1986	Pier 11	West	Pier	Pier Leg Sth	Cast patch repair			4	4	0	na		Insufficient Data	
1987	Pier 11	East	Pier	Pier Leg Nth	Cast patch repair	Vegetation		2	2	0	na		Insufficient Data	
1988	Pier 11	East	Pier	Pier Leg Sth	Cast patch repair	Vegetation		4	4	0	na		Insufficient Data	
1989	Pier 11	West	Pier	Pier head Parapet west				1	1	0	na		Insufficient Data	
1990	Pier 11	West	Pier	Pier head Face west	Patch repair			3	3	0	na		Insufficient Data	
1991	Pier 11	East	Pier	Pier head Parapet east				1	1	0	na		Insufficient Data	
1992	Pier 11	East	Pier	Pier head Face east	Patch repair			1	1	0	na		Insufficient Data	
1993	Pier 11	na	Pier	Pier head Parapet nth				1	1	0	na		Insufficient Data	
1994	Pier 11	na	Pier	Pier head Face nth	Patch repair			1	1	0	na		Insufficient Data	
1995	Pier 11	na	Pier	Pier head Parapet sth				1	1	0	na		Insufficient Data	
1996	Pier 11	na	Pier	Pier head Face sth	Patch repair			4	4	0	na		Insufficient Data	
1997	Pier 11	na	Pier	Pier head soffit				0	4	0	Insufficient Data		Insufficient Data	
1998	Pier 11	West	Pier	Gussets Nth	Cast patch repair			4	4	0	na		Insufficient Data	
1999	Pier 11	West	Pier	Gussets Sth	Cast patch repair			3	3	0	na		Insufficient Data	
2000	Pier 11	East	Pier	Gussets Nth	Cast patch repair			3	3	0	na		Insufficient Data	
2001	Pier 11</													



2036	Span 11 Sth	West	Truss	Diag Web 6				1	1	0	na		Insufficient Data	
2037	Span 11 Sth	West	Truss	Vert Web 6				2	2	0	na		Insufficient Data	
2038	Span 11 Sth	West	Truss	Vert Web 7				1	1	0	na		Insufficient Data	
2039	Span 11 Sth	West	Truss	Pipe Hanger 1	Cast patch repair			2	2	0	na		Insufficient Data	
2040	Span 11 Sth	West	Truss	Pipe Hanger 2	Cast patch repair			3	5	0	3 to 5	Point Cloud defect area not captured	Insufficient Data	
2041	Span 11 Sth	West	Truss	Pipe Hanger 3	Cast patch repair			3	3	0	na		Insufficient Data	
2042	Span 11 Sth	West	Truss	Pipe Hanger 4	Cast patch repair			2	2	0	na		Insufficient Data	
2043	Span 11 Sth	West	Truss	Pipe Hanger 5	Cast patch repair			1	1	0	na		Insufficient Data	
2044	Span 11 Sth	West	Truss	Pipe Hanger 6	Cast patch repair			1	1	0	na		Insufficient Data	
2045	Span 11 Sth	West	Truss	Pipe Hanger 7	Cast patch repair			4	4	0	na		Insufficient Data	
2046	Span 11 Sth	West	Truss	Pipe Hanger 8	Cast patch repair			3	3	0	na		Insufficient Data	
2047	Span 11 Sth	East	Truss	Top Chord 1				1	1	0	na		Insufficient Data	
2048	Span 11 Sth	East	Truss	Top Chord 2				1	1	0	na		Insufficient Data	
2049	Span 11 Sth	East	Truss	Top Chord 3				1	1	0	na		Insufficient Data	
2050	Span 11 Sth	East	Truss	Top Chord 4				2	2	0	na		Insufficient Data	
2051	Span 11 Sth	East	Truss	Top Chord 5				2	2	0	na		Insufficient Data	
2052	Span 11 Sth	East	Truss	Top Chord 6				1	1	0	na		Insufficient Data	
2053	Span 11 Sth	East	Truss	Top Chord 7				2	2	0	na		Insufficient Data	
2054	Span 11 Sth	East	Truss	Top Chord 8				3	3	0	na		Insufficient Data	
2055	Span 11 Sth	East	Truss	Btm Chord 1				0	0	0	Insufficient Data		Insufficient Data	
2056	Span 11 Sth	East	Truss	Btm Chord 2				2	0	0	Insufficient Data		Insufficient Data	
2057	Span 11 Sth	East	Truss	Btm Chord 3				5	5	0	na		Insufficient Data	
2058	Span 11 Sth	East	Truss	Btm Chord 4				5	5	0	na		Insufficient Data	
2059	Span 11 Sth	East	Truss	Btm Chord 5				2	2	0	na		Insufficient Data	
2060	Span 11 Sth	East	Truss	Btm Chord 6				2	2	0	na		Insufficient Data	
2061	Span 11 Sth	East	Truss	Btm Chord 7				2	2	0	na		Insufficient Data	
2062	Span 11 Sth	East	Truss	Btm Chord 8				3	3	0	na		Insufficient Data	
2063	Span 11 Sth	East	Truss	Diag Web 1				1	4	0	1 to 4	Point Cloud defect area not captured	Insufficient Data	
2064	Span 11 Sth	East	Truss	Vert Web 1				5	5	0	na		Insufficient Data	
2065	Span 11 Sth	East	Truss	Diag Web 2				1	1	0	na		Insufficient Data	
2066	Span 11 Sth	East	Truss	Vert Web 2	Cast patch repair			5	5	0	na		Insufficient Data	
2067	Span 11 Sth	East	Truss	Diag Web 3				1	1	0	na		Insufficient Data	
2068	Span 11 Sth	East	Truss	Vert Web 3	Cast patch repair			1	1	0	na		Insufficient Data	
2069	Span 11 Sth	East	Truss	Diag Web 4				1	1	0	na		Insufficient Data	
2070	Span 11 Sth	East	Truss	Vert Web 4	Cast patch repair			1	1	0	na		Insufficient Data	
2071	Span 11 Sth	East	Truss	Diag Web 5				1	1	0	na		Insufficient Data	
2072	Span 11 Sth	East	Truss	Vert Web 5	Cast patch repair			2	2	0	na		Insufficient Data	
2073	Span 11 Sth	East	Truss	Diag Web 6				1	1	0	na		Insufficient Data	
2074	Span 11 Sth	East	Truss	Vert Web 6	Cast patch repair			1	1	0	na		Insufficient Data	
2075	Span 11 Sth	East	Truss	Vert Web 7				3	3	0	na		Insufficient Data	
2076	Span 11 Sth	East	Truss	Pipe Hanger 1				2	0	0	Insufficient Data		Insufficient Data	
2077	Span 11 Sth	East	Truss	Pipe Hanger 2	Cast patch repair	Vegetation		3	3	0	na		Insufficient Data	
2078	Span 11 Sth	East	Truss	Pipe Hanger 3	Cast patch repair	Vegetation		4	4	0	na		Insufficient Data	
2079	Span 11 Sth	East	Truss	Pipe Hanger 4	Cast patch repair	Vegetation		4	4	0	na		Insufficient Data	
2080	Span 11 Sth	East	Truss	Pipe Hanger 5	Cast patch repair			2	2	0	na		Insufficient Data	
2081	Span 11 Sth	East	Truss	Pipe Hanger 6	Cast patch repair			1	1	0	na		Insufficient Data	
2082	Span 11 Sth	East	Truss	Pipe Hanger 7	Cast patch repair			1	2	0	1 to 2	Point Cloud defect area not captured	Insufficient Data	
2083	Span 11 Sth	East	Truss	Pipe Hanger 8	Cast patch repair			4	4	0	na		Insufficient Data	
2084	Girder 11-12	West	Girder	Walkway beam North				1	1	0	na		Insufficient Data	
2085	Girder 11-12	West	Girder	Walkway beam North-central				2	2	0	na		Insufficient Data	
2086	Girder 11-12	West	Girder	Walkway beam Central				1	1	0	na		Insufficient Data	
2087	Girder 11-12	West	Girder	Walkway beam South-central	Cast patch repair			2	2	0	na		Insufficient Data	
2088	Girder 11-12	West	Girder	Walkway beam South				4	4	0	na		Insufficient Data	
2089	Girder 11-12	West	Girder	Pipe hanger North	Tie			2	2	0	na		Insufficient Data	
2090	Girder 11-12	West	Girder	Pipe hanger North-central				3	3	0	na		Insufficient Data	
2091	Girder 11-12	West	Girder	Pipe hanger South-central	Tie			1	1	0	na		Insufficient Data	
2092	Girder 11-12	West	Girder	Pipe hanger South	Tie			3	3	0	na		Insufficient Data	
2093	Girder 11-12	East	Girder	Walkway beam North				2	2	0	na		Insufficient Data	
2094	Girder 11-12	East	Girder	Walkway beam North-central				3	3	0	na		Insufficient Data	
2095	Girder 11-12	East	Girder	Walkway beam Central				4	4	0	na		Insufficient Data	
2096	Girder 11-12	East	Girder	Walkway beam South-central				2	2	0	na		Insufficient Data	
2097	Girder 11-12	East	Girder	Walkway beam South				3	3	0	na		Insufficient Data	
2098	Girder 11-12	East	Girder	Pipe hanger North	Tie			2	2	0	na		Insufficient Data	
2099	Girder 11-12	East	Girder	Pipe hanger North-central	Tie			2	2	0	na		Insufficient Data	
2100	Girder 11-12	East	Girder	Pipe hanger South-central	Tie			3	3	0	na		Insufficient Data	
2101	Girder 11-12	East	Girder	Pipe hanger South	Tie			3	3	0	na		Insufficient Data	
2102	Span 12 Nth	West	Truss	Top Chord 1				1	1	0	na		Insufficient Data	
2103	Span 12 Nth	West	Truss	Top Chord 2				1	1	0	na		Insufficient Data	
2104	Span 12 Nth	West	Truss	Top Chord 3				1	1	0	na		Insufficient Data	
2105	Span 12 Nth	West	Truss	Top Chord 4				2	2	0	na		Insufficient Data	
2106	Span 12 Nth	West	Truss	Top Chord 5				2	2	0	na		Insufficient Data	
2107	Span 12 Nth	West	Truss	Top Chord 6				1	1	0	na		Insufficient Data	
2108	Span 12 Nth	West	Truss	Top Chord 7				1	1	0	na		Insufficient Data	
2109	Span 12 Nth	West	Truss	Top Chord 8				1	1	0	na		Insufficient Data	
2110	Span 12 Nth	West	Truss	Btm Chord 1				1	1	0	na		Insufficient Data	
2111	Span 12 Nth	West	Truss	Btm Chord 2				1	1	0	na		Insufficient Data	
2112	Span 12 Nth	West	Truss	Btm Chord 3				1	1	0	na		Insufficient Data	
2113	Span 12 Nth	West	Truss	Btm Chord 4				1	1	0	na		Insufficient Data	
2114	Span 12 Nth	West	Truss	Btm Chord 5				1	1	0	na		Insufficient Data	
2115	Span 12 Nth	West	Truss	Btm Chord 6				1	1	0	na		Insufficient Data	
2116	Span 12 Nth	West	Truss	Btm Chord 7				1	1	0	na		Insufficient Data	
2117	Span 12 Nth	West	Truss	Btm Chord 8				1	1	0	na		Insufficient Data	
2118	Span 12 Nth	West	Truss	Diag Web 1				3	3	0	na		Insufficient Data	
2119	Span 12 Nth	West	Truss	Vert Web 1	Cast patch repair			5	5	0	na		Insufficient Data	
2120	Span 12 Nth	West	Truss	Diag Web 2				1	1	0	na		Insufficient Data	
2121	Span 12 Nth	West	Truss	Vert Web 2	Cast patch repair			5	5	0	na		Insufficient Data	
2122	Span 12 Nth	West	Truss	Diag Web 3				1	1	0	na		Insufficient Data	
2123	Span 12 Nth	West	Truss	Vert Web 3	Cast patch repair			3	3	0	na		Insufficient Data	
2124	Span 12 Nth	West	Truss	Diag Web 4				1	1	0	na		Insufficient Data	
2125	Span 12 Nth	West	Truss	Vert Web 4				3	3	0	na		Insufficient Data	
2126	Span 12 Nth	West	Truss	Diag Web 5				1	1	0	na		Insufficient Data	
2127	Span 12 Nth	West	Truss	Vert Web 5				3	3	0	na		Insufficient Data	
2128	Span 12 Nth	West	Truss	Diag Web 6				2	2	0	na		Insufficient Data	
2129	Span 12 Nth	West	Truss	Vert Web 6				5	5	0	na	Loss of concrete cover	Insufficient Data	
2130	Span 12 Nth	West	Truss	Vert Web 7				1	1	0	na		Insufficient Data	
2131	Span 12 Nth	West	Truss	Pipe Hanger 1	Cast patch repair			2	2	0	na		Insufficient Data	
2132	Span 12 Nth	West	Truss	Pipe Hanger 2	Cast patch repair			2	2	0	na		Insufficient Data	
2133	Span 12 Nth	West	Truss	Pipe Hanger 3	Cast patch repair			0	3	0	Insufficient Data		Insufficient Data	
2134	Span 12 Nth	West	Truss	Pipe Hanger 4	Cast patch repair			3	3	0	na		Insufficient Data	
2135	Span 12 Nth	West	Truss	Pipe Hanger 5	Cast patch repair			2	2	0	na		Insufficient Data	
2136	Span 12 Nth	West	Truss	Pipe Hanger 6	Cast patch repair			3	3	0	na		Insufficient Data	
2137	Span 12 Nth	West	Truss	Pipe Hanger 7	Cast patch repair			2	2	0	na		Insufficient Data	
2138	Span 12 Nth	West	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint		3	3	0	na		Insufficient Data	
2139	Span 12 Nth	East	Truss	Top Chord 1				1	1	1	na		na	
2140	Span 12 Nth	East	Truss	Top Chord 2				1	1	2	na		1 to 2	Crack growth
2141	Span 12 Nth	East	Truss	Top Chord 3				3	3	3	na		na	
2142	Span 12 Nth	East	Truss	Top Chord 4				1	1	0	na		Insufficient Data	
2143	Span 12 Nth	East	Truss	Top Chord 5				1	1	0	na		Insufficient Data	
2144	Span 12 Nth	East	Truss	Top Chord 6				1	1	0	na		Insufficient Data	
2145	Span 12 Nth	East	Truss	Top Chord 7				2	2	0	na		Insufficient Data	
2146	Span 12 Nth	East	Truss	Top Chord 8				2	2	0	na		Insufficient Data	
2147	Span 12 Nth	East	Truss	Btm Chord 1				1	1	0	na		Insufficient Data	
2148	Span 12 Nth	East	Truss	Btm Chord 2				1	1	0	na		Insufficient Data	
2149	Span 12 Nth	East	Truss	Btm Chord 3				2	2	0	na		Insufficient Data	
2150	Span 12 Nth	East	Truss	Btm Chord 4				2	2	0	na		Insufficient Data	
2151	Span 12 Nth	East	Truss	Btm Chord 5				3	3	0	na		Insufficient Data	
2152	Span 12 Nth	East	Truss	Btm Chord 6				2	2	0	na		Insufficient Data	
2153	Span 12 Nth	East	Truss	Btm Chord 7				2	2	0	na		Insufficient Data	
2154	Span 12 Nth	East	Truss	Btm Chord 8				1	1	0	na		Insufficient Data	
2155	Span 12 Nth	East	Truss	Diag Web 1				4	4	4	na		na	
2156	Span 12 Nth	East	Truss	Vert Web 1	Cast patch repair			3	3	3	na		na	
2157	Span 12 Nth	East	Truss	Diag Web 2				4	4	4	na		na	
2158	Span 12 Nth	East	Truss	Vert Web 2	Patch repair			5	5					

2193	Pier 12	West	Pier	Pipe hanger and strut nth	Cast patch repair			4	4	0	na		Insufficient Data	
2194	Pier 12	West	Pier	Pipe hanger and strut sth	Cast patch repair			4	4	0	na		Insufficient Data	
2195	Pier 12	East	Pier	Pipe hanger and strut nth	Cast patch repair			4	4	4	na			
2196	Pier 12	East	Pier	Pipe hanger and strut sth	Cast patch repair			4	4	4	na			
2197	Pier 12	West	Pier	Pier base west face	Patch repair			3	3	0	na		Insufficient Data	
2198	Pier 12	East	Pier	Pier base east face				5	5	5	na			
2199	Pier 12	na	Pier	Pier base south face				1	1	0	na		Insufficient Data	
2200	Pier 12	na	Pier	Pier base north face				1	1	0	na		Insufficient Data	
2201	Span 12 Sth	West	Truss	Top Chord 1				1	1	1	na		na	
2202	Span 12 Sth	West	Truss	Top Chord 2				1	1	2	na		1 to 2	New crack
2203	Span 12 Sth	West	Truss	Top Chord 3				1	1	2	na		1 to 2	New crack
2204	Span 12 Sth	West	Truss	Top Chord 4				1	1	1	na		na	
2205	Span 12 Sth	West	Truss	Top Chord 5				1	1	1	na		na	
2206	Span 12 Sth	West	Truss	Top Chord 6				1	1	1	na		na	
2207	Span 12 Sth	West	Truss	Top Chord 7				1	1	1	na		na	
2208	Span 12 Sth	West	Truss	Top Chord 8				1	1	1	na		na	
2209	Span 12 Sth	West	Truss	Btm Chord 1				1	1	0	na		Insufficient Data	
2210	Span 12 Sth	West	Truss	Btm Chord 2				1	1	0	na		Insufficient Data	
2211	Span 12 Sth	West	Truss	Btm Chord 3				2	2	2	na		na	
2212	Span 12 Sth	West	Truss	Btm Chord 4				2	2	2	na		na	
2213	Span 12 Sth	West	Truss	Btm Chord 5				2	2	2	na		na	
2214	Span 12 Sth	West	Truss	Btm Chord 6				3	3	3	na		na	
2215	Span 12 Sth	West	Truss	Btm Chord 7				4	4	4	na		na	
2216	Span 12 Sth	West	Truss	Btm Chord 8				3	3	3	na		na	
2217	Span 12 Sth	West	Truss	Diag Web 1				1	4	0	1 to 4	Point Cloud defect area not captured	Insufficient Data	
2218	Span 12 Sth	West	Truss	Vert Web 1	Cast patch repair			3	3	3	na		na	
2219	Span 12 Sth	West	Truss	Diag Web 2				1	1	1	na		na	
2220	Span 12 Sth	West	Truss	Vert Web 2	Cast patch repair			1	1	1	na		na	
2221	Span 12 Sth	West	Truss	Diag Web 3				2	2	2	na		na	
2222	Span 12 Sth	West	Truss	Vert Web 3	Patch repair			1	1	1	na		na	
2223	Span 12 Sth	West	Truss	Diag Web 4				4	4	4	na		na	
2224	Span 12 Sth	West	Truss	Vert Web 4				1	1	1	na		na	
2225	Span 12 Sth	West	Truss	Diag Web 5				1	1	1	na		na	
2226	Span 12 Sth	West	Truss	Vert Web 5				1	1	1	na		na	
2227	Span 12 Sth	West	Truss	Diag Web 6				1	1	1	na		na	
2228	Span 12 Sth	West	Truss	Vert Web 6				1	1	1	na		na	
2229	Span 12 Sth	West	Truss	Vert Web 7				1	1	1	na		na	
2230	Span 12 Sth	West	Truss	Pipe Hanger 1	Cast patch repair			3	3	4	na		3 to 4	Loss of concrete cover
2231	Span 12 Sth	West	Truss	Pipe Hanger 2	Cast patch repair			2	2	2	na		na	
2232	Span 12 Sth	West	Truss	Pipe Hanger 3	Cast patch repair			4	4	4	na		na	
2233	Span 12 Sth	West	Truss	Pipe Hanger 4	Cast patch repair			5	5	5	na		na	
2234	Span 12 Sth	West	Truss	Pipe Hanger 5	Cast patch repair			4	4	4	na		na	
2235	Span 12 Sth	West	Truss	Pipe Hanger 6	Cast patch repair			2	2	2	na		na	
2236	Span 12 Sth	West	Truss	Pipe Hanger 7	Cast patch repair			3	3	3	na		na	
2237	Span 12 Sth	West	Truss	Pipe Hanger 8	Cast patch repair			2	3	3	2 to 3	Point Cloud defect area not captured	na	
2238	Span 12 Sth	East	Truss	Top Chord 1				1	1	1	na		na	
2239	Span 12 Sth	East	Truss	Top Chord 2				1	1	1	na		na	
2240	Span 12 Sth	East	Truss	Top Chord 3				1	1	1	na		na	
2241	Span 12 Sth	East	Truss	Top Chord 4				1	1	1	na		na	
2242	Span 12 Sth	East	Truss	Top Chord 5				2	2	2	na		na	
2243	Span 12 Sth	East	Truss	Top Chord 6				2	2	2	na		na	
2244	Span 12 Sth	East	Truss	Top Chord 7				1	1	1	na		na	
2245	Span 12 Sth	East	Truss	Top Chord 8				3	3	3	na		na	
2246	Span 12 Sth	East	Truss	Btm Chord 1				1	1	1	na		na	
2247	Span 12 Sth	East	Truss	Btm Chord 2				1	1	1	na		na	
2248	Span 12 Sth	East	Truss	Btm Chord 3				2	2	2	na		na	
2249	Span 12 Sth	East	Truss	Btm Chord 4				2	2	2	na		na	
2250	Span 12 Sth	East	Truss	Btm Chord 5				5	5	5	na		na	No signs of further degradation
2251	Span 12 Sth	East	Truss	Btm Chord 6				5	5	5	na		na	
2252	Span 12 Sth	East	Truss	Btm Chord 7				4	5	5	4 to 5	Loss of concrete cover	na	Loss of concrete cover
2253	Span 12 Sth	East	Truss	Btm Chord 8				3	3	3	na		na	
2254	Span 12 Sth	East	Truss	Diag Web 1				2	2	2	na		na	
2255	Span 12 Sth	East	Truss	Vert Web 1	Cast patch repair			4	4	4	na		na	
2256	Span 12 Sth	East	Truss	Diag Web 2				1	2	2	1 to 2	Point Cloud defect area not captured	na	
2257	Span 12 Sth	East	Truss	Vert Web 2	Cast patch repair			1	1	1	na		na	
2258	Span 12 Sth	East	Truss	Diag Web 3				1	1	1	na		na	
2259	Span 12 Sth	East	Truss	Vert Web 3	Cast patch repair			2	2	2	na		na	
2260	Span 12 Sth	East	Truss	Diag Web 4				1	1	1	na		na	
2261	Span 12 Sth	East	Truss	Vert Web 4				3	3	3	na		na	
2262	Span 12 Sth	East	Truss	Diag Web 5	Patch repair			2	2	2	na		na	
2263	Span 12 Sth	East	Truss	Vert Web 5				3	3	3	na		na	
2264	Span 12 Sth	East	Truss	Diag Web 6				2	2	2	na		na	
2265	Span 12 Sth	East	Truss	Vert Web 6	Cast patch repair			3	3	3	na		na	
2266	Span 12 Sth	East	Truss	Vert Web 7				5	5	5	na		na	
2267	Span 12 Sth	East	Truss	Pipe Hanger 1	Cast patch repair			2	2	2	na		na	
2268	Span 12 Sth	East	Truss	Pipe Hanger 2	Cast patch repair			3	3	0	na		Insufficient Data	
2269	Span 12 Sth	East	Truss	Pipe Hanger 3	Cast patch repair			5	5	5	na		na	
2270	Span 12 Sth	East	Truss	Pipe Hanger 4	Cast patch repair			3	3	0	na		Insufficient Data	
2271	Span 12 Sth	East	Truss	Pipe Hanger 5	Cast patch repair			3	3	3	na		na	
2272	Span 12 Sth	East	Truss	Pipe Hanger 6	Cast patch repair			4	4	4	na		na	
2273	Span 12 Sth	East	Truss	Pipe Hanger 7	Cast patch repair			3	3	3	na		na	
2274	Span 12 Sth	East	Truss	Pipe Hanger 8	Cast patch repair			2	2	2	na		na	
2275	Girder 12-13	West	Girder	Walkway beam North				4	4	4	na		na	
2276	Girder 12-13	West	Girder	Walkway beam North-central				3	3	3	na		na	
2277	Girder 12-13	West	Girder	Walkway beam Central				3	3	3	na		na	
2278	Girder 12-13	West	Girder	Walkway beam South-central				4	4	4	na		na	
2279	Girder 12-13	West	Girder	Walkway beam South				4	4	4	na		na	
2280	Girder 12-13	West	Girder	Pipe hanger North		Cast patch repair		4	4	4	na		na	
2281	Girder 12-13	West	Girder	Pipe hanger North-central		Cast patch repair		3	3	3	na		na	
2282	Girder 12-13	West	Girder	Pipe hanger South-central	Tie	Cast patch repair		4	4	4	na		na	
2283	Girder 12-13	West	Girder	Pipe hanger South	Tie	Cast patch repair		4	5	5	4 to 5	Point Cloud defect area not captured	na	
2284	Girder 12-13	East	Girder	Walkway beam North				5	5	5	na		na	No signs of further degradation
2285	Girder 12-13	East	Girder	Walkway beam North-central				2	2	2	na		na	
2286	Girder 12-13	East	Girder	Walkway beam Central				3	3	3	na		na	
2287	Girder 12-13	East	Girder	Walkway beam South-central				4	4	4	na		na	
2288	Girder 12-13	East	Girder	Walkway beam South				4	4	4	na		na	No signs of further degradation
2289	Girder 12-13	East	Girder	Pipe hanger North		Patch repair		2	3	3	2 to 3	Point Cloud defect area not captured	na	
2290	Girder 12-13	East	Girder	Pipe hanger North-central		Cast patch repair		3	3	3	na		na	
2291	Girder 12-13	East	Girder	Pipe hanger South-central	Tie	Patch repair		5	5	5	na		na	No signs of further degradation
2292	Girder 12-13	East	Girder	Pipe hanger South	Tie	Cast patch repair		4	4	4	na		na	
2293	Span 13 Nth	West	Truss	Top Chord 1				1	1	1	na		na	
2294	Span 13 Nth	West	Truss	Top Chord 2				1	1	1	na		na	
2295	Span 13 Nth	West	Truss	Top Chord 3				1	1	1	na		na	
2296	Span 13 Nth	West	Truss	Top Chord 4				1	1	1	na		na	
2297	Span 13 Nth	West	Truss	Top Chord 5				1	1	1	na		na	
2298	Span 13 Nth	West	Truss	Top Chord 6				1	1	1	na		na	
2299	Span 13 Nth	West	Truss	Top Chord 7		Loose concrete on truss		3	3	4	na		3 to 4	New crack
2300	Span 13 Nth	West	Truss	Top Chord 8				1	1	2	na		1 to 2	New crack
2301	Span 13 Nth	West	Truss	Btm Chord 1				1	1	0	na		Insufficient Data	
2302	Span 13 Nth	West	Truss	Btm Chord 2				3	3	0	na		Insufficient Data	
2303	Span 13 Nth	West	Truss	Btm Chord 3				4	4	4	na		na	
2304	Span 13 Nth	West	Truss	Btm Chord 4				2	2	3	na		2 to 3	New crack
2305	Span 13 Nth	West	Truss	Btm Chord 5				2	2	2	na		na	New crack
2306	Span 13 Nth	West	Truss	Btm Chord 6				1	1	1	na		na	
2307	Span 13 Nth	West	Truss	Btm Chord 7				1	1	1	na		na	
2308	Span 13 Nth	West	Truss	Btm Chord 8				1	1	1	na		na	
2309	Span 13 Nth	West	Truss	Diag Web 1				1	1	1	na		na	
2310	Span 13 Nth	West	Truss	Vert Web 1	Cast patch repair			1	1	1	na		na	
2311	Span 13 Nth	West	Truss	Diag Web 2				1	1	1	na		na	
2312	Span 13 Nth	West	Truss	Vert Web 2	Cast patch repair			1	1	1	na		na	
2313	Span 13 Nth	West	Truss	Diag Web 3				1	1	1	na		na	
2314	Span 13 Nth	West	Truss	Vert Web 3				1	1	1	na		na	
2315	Span 13 Nth	West	Truss	Diag Web 4				1	1	1	na		na	
2316	Span 13 Nth	West	Truss	Vert Web 4				1	1	1	na		na	
2317	Span 13 Nth	West	Truss	Diag Web 5										

2350	Span 13 Nth	East	Truss	Diag Web 3				1	1	1	na		
2351	Span 13 Nth	East	Truss	Vert Web 3				1	1	1	na		
2352	Span 13 Nth	East	Truss	Diag Web 4				2	2	2	na		
2353	Span 13 Nth	East	Truss	Vert Web 4				1	1	1	na		
2354	Span 13 Nth	East	Truss	Diag Web 5				1	1	1	na		
2355	Span 13 Nth	East	Truss	Vert Web 5				1	1	1	na		
2356	Span 13 Nth	East	Truss	Diag Web 6				1	1	1	na		
2357	Span 13 Nth	East	Truss	Vert Web 6				1	1	1	na		
2358	Span 13 Nth	East	Truss	Vert Web 7				1	1	1	na		
2359	Span 13 Nth	East	Truss	Pipe Hanger 1	Cast patch repair			4	4	4	na		
2360	Span 13 Nth	East	Truss	Pipe Hanger 2	Cast patch repair			1	1	1	na		
2361	Span 13 Nth	East	Truss	Pipe Hanger 3	Cast patch repair			5	5	5	na		
2362	Span 13 Nth	East	Truss	Pipe Hanger 4	Cast patch repair			4	4	4	na		
2363	Span 13 Nth	East	Truss	Pipe Hanger 5	Cast patch repair			2	2	2	na		
2364	Span 13 Nth	East	Truss	Pipe Hanger 6	Cast patch repair			3	3	3	na		
2365	Span 13 Nth	East	Truss	Pipe Hanger 7	Cast patch repair			1	1	1	na		
2366	Span 13 Nth	East	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint		3	3	3	na		
2367	Pier 13	West	Pier	Pier Leg Nth				4	4	4	na		
2368	Pier 13	West	Pier	Pier Leg Sth				4	4	4	na		
2369	Pier 13	East	Pier	Pier Leg Nth	Patch repair			4	4	4	na		
2370	Pier 13	East	Pier	Pier Leg Sth	Patch repair			3	3	3	na		
2371	Pier 13	West	Pier	Pier head Parapet west				2	2	2	na		
2372	Pier 13	West	Pier	Pier head Face west	Patch repair			2	2	2	na		
2373	Pier 13	East	Pier	Pier head Parapet east				3	3	3	na		
2374	Pier 13	East	Pier	Pier head Face east	Patch repair			3	3	3	na		
2375	Pier 13	na	Pier	Pier head Parapet nth				1	1	1	na		
2376	Pier 13	na	Pier	Pier head Face nth	Patch repair			4	4	4	na		
2377	Pier 13	na	Pier	Pier head Parapet sth				2	2	2	na		
2378	Pier 13	na	Pier	Pier head Face sth	Patch repair			1	1	1	na		
2379	Pier 13	na	Pier	Pier head soffit				5	0	5	Insufficient Data	Insufficient Data	
2380	Pier 13	West	Pier	Gussets Nth	Cast patch repair			4	4	4	na		
2381	Pier 13	West	Pier	Gussets Sth	Cast patch repair			3	3	3	na		
2382	Pier 13	East	Pier	Gussets Nth	Cast patch repair			1	1	1	na		
2383	Pier 13	East	Pier	Gussets Sth	Cast patch repair			4	4	4	na		
2384	Pier 13	West	Pier	Pipe hanger and strut nth	Cast patch repair			4	4	4	na		
2385	Pier 13	West	Pier	Pipe hanger and strut sth	Cast patch repair			4	4	4	na		
2386	Pier 13	East	Pier	Pipe hanger and strut nth	Cast patch repair			4	4	4	na		
2387	Pier 13	East	Pier	Pipe hanger and strut sth	Cast patch repair			3	3	3	na		
2388	Pier 13	West	Pier	Pier base west face				3	3	0	na	Insufficient Data	
2389	Pier 13	East	Pier	Pier base east face				4	4	4	na		
2390	Pier 13	na	Pier	Pier base south face				1	1	0	na	Insufficient Data	
2391	Pier 13	na	Pier	Pier base north face				1	1	0	na	Insufficient Data	
2392	Span 13 Sth	West	Truss	Top Chord 1				1	1	1	na		
2393	Span 13 Sth	West	Truss	Top Chord 2				1	1	1	na		
2394	Span 13 Sth	West	Truss	Top Chord 3				1	1	1	na		
2395	Span 13 Sth	West	Truss	Top Chord 4	Cast patch repair			1	1	1	na		
2396	Span 13 Sth	West	Truss	Top Chord 5				1	1	1	na		
2397	Span 13 Sth	West	Truss	Top Chord 6				3	3	3	na		
2398	Span 13 Sth	West	Truss	Top Chord 7				1	1	1	na		
2399	Span 13 Sth	West	Truss	Top Chord 8				1	1	1	na		
2400	Span 13 Sth	West	Truss	Btm Chord 1				1	1	1	na		
2401	Span 13 Sth	West	Truss	Btm Chord 2				3	3	3	na		New crack
2402	Span 13 Sth	West	Truss	Btm Chord 3				1	1	1	na		New crack
2403	Span 13 Sth	West	Truss	Btm Chord 4				2	2	2	na		New crack
2404	Span 13 Sth	West	Truss	Btm Chord 5				2	2	2	na		
2405	Span 13 Sth	West	Truss	Btm Chord 6				1	1	1	na		
2406	Span 13 Sth	West	Truss	Btm Chord 7				1	1	2	na	1 to 2	New crack
2407	Span 13 Sth	West	Truss	Btm Chord 8				1	1	1	na		
2408	Span 13 Sth	West	Truss	Diag Web 1	Patch repair			4	4	4	na		
2409	Span 13 Sth	West	Truss	Vert Web 1	Patch repair			1	1	1	na		
2410	Span 13 Sth	West	Truss	Diag Web 2	Patch repair			1	1	1	na		
2411	Span 13 Sth	West	Truss	Vert Web 2				1	1	1	na		
2412	Span 13 Sth	West	Truss	Diag Web 3	Patch repair			1	1	1	na		
2413	Span 13 Sth	West	Truss	Vert Web 3				1	1	2	na	1 to 2	New crack
2414	Span 13 Sth	West	Truss	Diag Web 4	Patch repair			1	1	1	na		
2415	Span 13 Sth	West	Truss	Vert Web 4				1	1	1	na		
2416	Span 13 Sth	West	Truss	Diag Web 5	Patch repair			1	1	1	na		
2417	Span 13 Sth	West	Truss	Vert Web 5				1	1	1	na		
2418	Span 13 Sth	West	Truss	Diag Web 6	Patch repair			1	1	1	na		
2419	Span 13 Sth	West	Truss	Vert Web 6				1	1	1	na		
2420	Span 13 Sth	West	Truss	Vert Web 7				3	3	3	na		
2421	Span 13 Sth	West	Truss	Pipe Hanger 1				4	4	4	na		
2422	Span 13 Sth	West	Truss	Pipe Hanger 2				1	1	1	na		
2423	Span 13 Sth	West	Truss	Pipe Hanger 3				4	4	4	na		
2424	Span 13 Sth	West	Truss	Pipe Hanger 4				3	3	3	na		
2425	Span 13 Sth	West	Truss	Pipe Hanger 5				2	2	2	na		
2426	Span 13 Sth	West	Truss	Pipe Hanger 6				4	4	4	na		
2427	Span 13 Sth	West	Truss	Pipe Hanger 7				3	3	3	na		
2428	Span 13 Sth	West	Truss	Pipe Hanger 8				3	3	3	na		
2429	Span 13 Sth	East	Truss	Top Chord 1				1	1	1	na		
2430	Span 13 Sth	East	Truss	Top Chord 2				1	1	1	na		
2431	Span 13 Sth	East	Truss	Top Chord 3				2	2	2	na		
2432	Span 13 Sth	East	Truss	Top Chord 4				1	1	1	na		
2433	Span 13 Sth	East	Truss	Top Chord 5				3	3	3	na		
2434	Span 13 Sth	East	Truss	Top Chord 6				1	1	1	na		
2435	Span 13 Sth	East	Truss	Top Chord 7				1	1	1	na		
2436	Span 13 Sth	East	Truss	Top Chord 8				2	2	2	na		
2437	Span 13 Sth	East	Truss	Btm Chord 1				1	1	1	na		
2438	Span 13 Sth	East	Truss	Btm Chord 2				3	3	3	na		
2439	Span 13 Sth	East	Truss	Btm Chord 3				3	3	3	na		
2440	Span 13 Sth	East	Truss	Btm Chord 4				1	1	1	na		
2441	Span 13 Sth	East	Truss	Btm Chord 5				1	1	1	na		
2442	Span 13 Sth	East	Truss	Btm Chord 6				1	1	1	na		
2443	Span 13 Sth	East	Truss	Btm Chord 7				2	2	2	na		
2444	Span 13 Sth	East	Truss	Btm Chord 8				2	2	2	na		
2445	Span 13 Sth	East	Truss	Diag Web 1	Patch repair			1	1	1	na		
2446	Span 13 Sth	East	Truss	Vert Web 1				1	1	1	na		
2447	Span 13 Sth	East	Truss	Diag Web 2				1	1	1	na		
2448	Span 13 Sth	East	Truss	Vert Web 2				1	1	1	na		
2449	Span 13 Sth	East	Truss	Diag Web 3				1	1	1	na		
2450	Span 13 Sth	East	Truss	Vert Web 3				1	1	1	na		
2451	Span 13 Sth	East	Truss	Diag Web 4				1	1	1	na		
2452	Span 13 Sth	East	Truss	Vert Web 4				1	1	1	na		
2453	Span 13 Sth	East	Truss	Diag Web 5				2	2	2	na		
2454	Span 13 Sth	East	Truss	Vert Web 5				1	1	2	na	1 to 2	New crack
2455	Span 13 Sth	East	Truss	Diag Web 6				1	1	1	na		
2456	Span 13 Sth	East	Truss	Vert Web 6				1	1	2	na	1 to 2	New crack
2457	Span 13 Sth	East	Truss	Vert Web 7				1	1	1	na		
2458	Span 13 Sth	East	Truss	Pipe Hanger 1				4	4	4	na		
2459	Span 13 Sth	East	Truss	Pipe Hanger 2				1	1	1	na		
2460	Span 13 Sth	East	Truss	Pipe Hanger 3				4	4	4	na		
2461	Span 13 Sth	East	Truss	Pipe Hanger 4				3	3	3	na		
2462	Span 13 Sth	East	Truss	Pipe Hanger 5				2	3	3/2 to 3		Point Cloud defect area not captured	
2463	Span 13 Sth	East	Truss	Pipe Hanger 6				2	2	2	na		
2464	Span 13 Sth	East	Truss	Pipe Hanger 7				1	1	1	na		
2465	Span 13 Sth	East	Truss	Pipe Hanger 8				3	3	3	na		
2466	Girder 13-14	West	Girder	Walkway beam North				2	2	2	na		
2467	Girder 13-14	West	Girder	Walkway beam North-central				1	1	1	na		
2468	Girder 13-14	West	Girder	Walkway beam Central				3	3	3	na		
2469	Girder 13-14	West	Girder	Walkway beam South-central				2	2	2	na		
2470	Girder 13-14	West	Girder	Walkway beam South				3	3	3	na		
2471	Girder 13-14	West	Girder	Pipe hanger North	Cast patch repair			5	5	5	na		
2472	Girder 13-14	West	Girder	Pipe hanger North-central	Tie	Cast patch repair		5	5	5	na		
2473	Girder 13-14	West	Girder	Pipe hanger South-central		Cast patch repair		1	1	1	na		
2474	Girder 13-14	West	Girder	Pipe hanger South		Cast patch repair		4	4	4	na		
2475	Girder 13-14	East	Girder	Walkway beam North				4	4	4	na		
2476	Girder 13-14	East	Girder	Walkway beam North-central				3	3	3	na		
2477	Girder 13-14	East	Girder	Walkway beam Central				4	4	4	na		
2478	Girder 13-14	East	Girder	Walkway beam South-central				4	4	4	na		
2479	Girder 13-14	East	Girder	Walkway beam South				2	2	2	na		
2480	Girder 13-14	East	Girder	Pipe hanger North	Cast patch repair			4	4	4	na		
2481	Girder 13-14	East	Girder	Pipe hanger North-central	Tie	Cast patch repair		4	4	4	na		
2482	Girder 13-14	East	Girder	Pipe hanger South-central		Cast patch repair		4	4	4	na		
2483	Girder 13-14	East	Girder	Pipe hanger South		Cast patch repair		3	3	3	na		
2484	Span 14 Nth	West</											










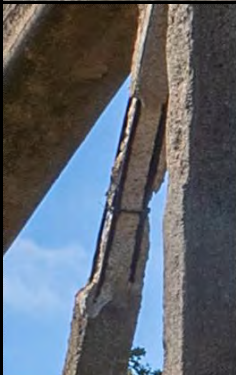






















2507	Span 14 Nth	West	Truss	Vert Web 4	Cast patch repair		3	3	3	na		
2508	Span 14 Nth	West	Truss	Diag Web 5			1	1	1	na		
2509	Span 14 Nth	West	Truss	Vert Web 5			4	4	4	na		
2510	Span 14 Nth	West	Truss	Diag Web 6	Cast patch repair		1	1	1	na		
2511	Span 14 Nth	West	Truss	Vert Web 6	Cast patch repair		3	3	3	na		
2512	Span 14 Nth	West	Truss	Vert Web 7		Loose concrete on truss	3	3	3	na		
2513	Span 14 Nth	West	Truss	Pipe Hanger 1			4	4	4	na		
2514	Span 14 Nth	West	Truss	Pipe Hanger 2			4	4	4	na		
2515	Span 14 Nth	West	Truss	Pipe Hanger 3			4	4	4	na		
2516	Span 14 Nth	West	Truss	Pipe Hanger 4			4	4	0	na		Insufficient Data
2517	Span 14 Nth	West	Truss	Pipe Hanger 5			4	4	0	na		Insufficient Data
2518	Span 14 Nth	West	Truss	Pipe Hanger 6			2	2	0	na		Insufficient Data
2519	Span 14 Nth	West	Truss	Pipe Hanger 7			3	3	0	na		Insufficient Data
2520	Span 14 Nth	West	Truss	Pipe Hanger 8		Expansion Joint	4	4	0	na		Insufficient Data
2521	Span 14 Nth	East	Truss	Top Chord 1			3	3	3	na		
2522	Span 14 Nth	East	Truss	Top Chord 2			2	2	2	na		
2523	Span 14 Nth	East	Truss	Top Chord 3			2	2	2	na		
2524	Span 14 Nth	East	Truss	Top Chord 4			2	2	2	na		
2525	Span 14 Nth	East	Truss	Top Chord 5			2	2	2	na		
2526	Span 14 Nth	East	Truss	Top Chord 6			2	2	2	na		
2527	Span 14 Nth	East	Truss	Top Chord 7			2	2	2	na		
2528	Span 14 Nth	East	Truss	Top Chord 8			2	2	2	na		
2529	Span 14 Nth	East	Truss	Btm Chord 1			5	5	5	na	Loss of concrete cover	No signs of further degradation
2530	Span 14 Nth	East	Truss	Btm Chord 2			5	5	5	na		No signs of further degradation
2531	Span 14 Nth	East	Truss	Btm Chord 3			5	5	5	na		No signs of further degradation
2532	Span 14 Nth	East	Truss	Btm Chord 4			2	2	2	na		
2533	Span 14 Nth	East	Truss	Btm Chord 5			2	2	2	na		
2534	Span 14 Nth	East	Truss	Btm Chord 6			2	2	2	na		
2535	Span 14 Nth	East	Truss	Btm Chord 7			2	2	2	na		
2536	Span 14 Nth	East	Truss	Btm Chord 8			2	2	2	na		
2537	Span 14 Nth	East	Truss	Diag Web 1			3	3	3	na		
2538	Span 14 Nth	East	Truss	Vert Web 1	Cast patch repair		3	3	3	na		
2539	Span 14 Nth	East	Truss	Diag Web 2			1	1	1	na		
2540	Span 14 Nth	East	Truss	Vert Web 2	Cast patch repair		5	5	5	na		No signs of further degradation
2541	Span 14 Nth	East	Truss	Diag Web 3			1	1	1	na		
2542	Span 14 Nth	East	Truss	Vert Web 3	Cast patch repair		5	5	5	na		No signs of further degradation
2543	Span 14 Nth	East	Truss	Diag Web 4			1	1	1	na		
2544	Span 14 Nth	East	Truss	Vert Web 4			4	4	4	na		
2545	Span 14 Nth	East	Truss	Diag Web 5			1	1	1	na		
2546	Span 14 Nth	East	Truss	Vert Web 5			3	3	3	na		
2547	Span 14 Nth	East	Truss	Diag Web 6			1	1	1	na		
2548	Span 14 Nth	East	Truss	Vert Web 6			3	3	3	na		
2549	Span 14 Nth	East	Truss	Vert Web 7			3	3	3	na		
2550	Span 14 Nth	East	Truss	Pipe Hanger 1	Cast patch repair		4	4	4	na		
2551	Span 14 Nth	East	Truss	Pipe Hanger 2	Cast patch repair		2	2	2	na		
2552	Span 14 Nth	East	Truss	Pipe Hanger 3	Cast patch repair		4	4	4	na		
2553	Span 14 Nth	East	Truss	Pipe Hanger 4	Cast patch repair		4	4	4	na		
2554	Span 14 Nth	East	Truss	Pipe Hanger 5	Cast patch repair		3	3	3	na		
2555	Span 14 Nth	East	Truss	Pipe Hanger 6	Cast patch repair		3	3	3	na		
2556	Span 14 Nth	East	Truss	Pipe Hanger 7	Cast patch repair		3	3	3	na		
2557	Span 14 Nth	East	Truss	Pipe Hanger 8	Cast patch repair	Expansion Joint	2	2	2	na		
2558	Pier 14	West	Pier	Pier Leg Nth	Cast patch repair		4	4	4	na		
2559	Pier 14	West	Pier	Pier Leg Sth	Cast patch repair		1	1	2	na	1 to 2	New crack
2560	Pier 14	East	Pier	Pier Leg Nth			4	4	4	na		
2561	Pier 14	East	Pier	Pier Leg Sth	Cast patch repair		1	1	1	na		
2562	Pier 14	West	Pier	Pier head Parapet west			3	0	3	Insufficient Data		Insufficient Data
2563	Pier 14	West	Pier	Pier head Face west			1	1	1	na		
2564	Pier 14	East	Pier	Pier head Parapet east			4	4	4	na		
2565	Pier 14	East	Pier	Pier head Face east	Cast patch repair		5	5	5	na		
2566	Pier 14	na	Pier	Pier head Parapet nth			3	3	3	na		
2567	Pier 14	na	Pier	Pier head Face nth	Patch repair		3	3	3	na		
2568	Pier 14	na	Pier	Pier head Parapet sth			4	4	4	na		
2569	Pier 14	na	Pier	Pier head Face sth	Patch repair		4	4	4	na		
2570	Pier 14	na	Pier	Pier head soffit			5	0	5	Insufficient Data		Insufficient Data
2571	Pier 14	West	Pier	Gussets Nth	Cast patch repair		4	4	4	na		
2572	Pier 14	West	Pier	Gussets Sth	Cast patch repair		4	4	4	na		
2573	Pier 14	East	Pier	Gussets Nth	Cast patch repair		3	3	3	na		
2574	Pier 14	East	Pier	Gussets Sth	Cast patch repair		2	2	2	na		
2575	Pier 14	West	Pier	Pipe hanger and strut nth	Cast patch repair		4	4	4	na		
2576	Pier 14	West	Pier	Pipe hanger and strut sth	Cast patch repair		5	5	5	na		
2577	Pier 14	East	Pier	Pipe hanger and strut nth	Cast patch repair		4	4	4	na		
2578	Pier 14	East	Pier	Pipe hanger and strut sth	Cast patch repair		4	4	4	na		
2579	Pier 14	West	Pier	Pier base west face			3	3	3	na		
2580	Pier 14	East	Pier	Pier base east face			3	3	3	na		
2581	Pier 14	na	Pier	Pier base south face			3	3	0	na		Insufficient Data
2582	Pier 14	na	Pier	Pier base north face			3	3	0	na		Insufficient Data
2583	Span 14 Sth	West	Truss	Top Chord 1			1	1	1	na		
2584	Span 14 Sth	West	Truss	Top Chord 2			2	2	2	na		
2585	Span 14 Sth	West	Truss	Top Chord 3			2	2	2	na		
2586	Span 14 Sth	West	Truss	Top Chord 4			2	2	2	na		
2587	Span 14 Sth	West	Truss	Top Chord 5			1	1	1	na		
2588	Span 14 Sth	West	Truss	Top Chord 6			1	1	1	na		
2589	Span 14 Sth	West	Truss	Top Chord 7			1	1	1	na		
2590	Span 14 Sth	West	Truss	Top Chord 8	Cast patch repair		4	4	4	na		
2591	Span 14 Sth	West	Truss	Btm Chord 1			2	2	2	na		
2592	Span 14 Sth	West	Truss	Btm Chord 2			2	2	2	na		New crack
2593	Span 14 Sth	West	Truss	Btm Chord 3			2	2	2	na		
2594	Span 14 Sth	West	Truss	Btm Chord 4			2	2	2	na		
2595	Span 14 Sth	West	Truss	Btm Chord 5			2	2	2	na		
2596	Span 14 Sth	West	Truss	Btm Chord 6	Cast patch repair		2	2	2	na		
2597	Span 14 Sth	West	Truss	Btm Chord 7	Cast patch repair		5	5	5	na		No signs of further degradation
2598	Span 14 Sth	West	Truss	Btm Chord 8	Cast patch repair		5	5	5	na		No signs of further degradation
2599	Span 14 Sth	West	Truss	Diag Web 1			1	1	1	na		
2600	Span 14 Sth	West	Truss	Vert Web 1	Cast patch repair		1	1	1	na		
2601	Span 14 Sth	West	Truss	Diag Web 2			1	1	1	na		
2602	Span 14 Sth	West	Truss	Vert Web 2	Cast patch repair		1	1	1	na		
2603	Span 14 Sth	West	Truss	Diag Web 3			1	1	1	na		
2604	Span 14 Sth	West	Truss	Vert Web 3	Cast patch repair		4	4	4	na		
2605	Span 14 Sth	West	Truss	Diag Web 4			1	1	1	na		
2606	Span 14 Sth	West	Truss	Vert Web 4	Cast patch repair		1	1	1	na		
2607	Span 14 Sth	West	Truss	Diag Web 5			1	1	1	na		
2608	Span 14 Sth	West	Truss	Vert Web 5	Cast patch repair		3	3	3	na		
2609	Span 14 Sth	West	Truss	Diag Web 6			2	2	2	na		
2610	Span 14 Sth	West	Truss	Vert Web 6			3	3	3	na		
2611	Span 14 Sth	West	Truss	Vert Web 7			1	1	1	na		
2612	Span 14 Sth	West	Truss	Pipe Hanger 1			4	4	4	na		
2613	Span 14 Sth	West	Truss	Pipe Hanger 2			0	3	3	Insufficient Data		
2614	Span 14 Sth	West	Truss	Pipe Hanger 3			0	4	4	Insufficient Data		
2615	Span 14 Sth	West	Truss	Pipe Hanger 4			4	4	0	na		Insufficient Data
2616	Span 14 Sth	West	Truss	Pipe Hanger 5			4	4	0	na		Insufficient Data
2617	Span 14 Sth	West	Truss	Pipe Hanger 6			2	2	0	na		Insufficient Data
2618	Span 14 Sth	West	Truss	Pipe Hanger 7			4	4	0	na		Insufficient Data
2619	Span 14 Sth	West	Truss	Pipe Hanger 8			2	2	0	na		Insufficient Data
2620	Span 14 Sth	East	Truss	Top Chord 1			1	1	1	na		
2621	Span 14 Sth	East	Truss	Top Chord 2			2	2	2	na		
2622	Span 14 Sth	East	Truss	Top Chord 3	Cast patch repair		1	1	1	na		
2623	Span 14 Sth	East	Truss	Top Chord 4			2	2	2	na		
2624	Span 14 Sth	East	Truss	Top Chord 5			2	2	2	na		
2625	Span 14 Sth	East	Truss	Top Chord 6			1	1	1	na		
2626	Span 14 Sth	East	Truss	Top Chord 7			1	1	1	na		
2627	Span 14 Sth	East	Truss	Top Chord 8			2	2	2	na		
2628	Span 14 Sth	East	Truss	Btm Chord 1			5	5	5	na		No signs of further degradation
2629	Span 14 Sth	East	Truss	Btm Chord 2			5	5	5	na		No signs of further degradation
2630	Span 14 Sth	East	Truss	Btm Chord 3			5	5	5	na		
2631	Span 14 Sth	East	Truss	Btm Chord 4			5	5	5	na		No signs of further degradation
2632	Span 14 Sth	East	Truss	Btm Chord 5			5	5	5	na		No signs of further degradation
2633	Span 14 Sth	East	Truss	Btm Chord 6			5	5	5	na		
2634	Span 14 Sth	East	Truss	Btm Chord 7			5	5	5	na		
2635	Span 14 Sth	East	Truss	Btm Chord 8			5	5	5	na		
2636	Span 14 Sth	East	Truss	Diag Web 1			1	1	1	na		
2637	Span 14 Sth	East	Truss	Vert Web 1	Cast patch repair		1	1	1	na		
2638	Span 14 Sth	East	Truss	Diag Web 2			1	1	1	na		
2639	Span 14 Sth	East	Truss	Vert Web 2	Cast patch repair		1	1	1	na		
2640	Span 14 Sth	East	Truss	Diag Web 3			1	1	1	na		
2641	Span 14 Sth	East	Truss	Vert Web 3	Cast patch repair		1	1	1	na		
2642	Span 14 Sth	East	Truss	Diag Web 4			1	1	1	na		
2643	Span 14 Sth	East	Truss	Vert Web 4			4	4	4	na		
2644	Span 14 Sth	East	Truss	Diag Web 5			1	1	1	na		
2645	Span 14 Sth	East	Truss	Vert Web 5			5	5	5	na		
2646	Span 14 Sth	East	Truss	Diag Web 6			1					

2664	Girder 14-15	West	Girder	Pipe hanger South-central	Cast patch repair	Extra width	1	1	1	na		na	
2665	Girder 14-15	West	Girder	Pipe hanger South	Cast patch repair		4	4	4	na		na	
2666	Girder 14-15	East	Girder	Walkway beam North			3	3	3	na		na	
2667	Girder 14-15	East	Girder	Walkway beam North-central			4	4	4	na		na	
2668	Girder 14-15	East	Girder	Walkway beam Central			4	4	4	na		na	
2669	Girder 14-15	East	Girder	Walkway beam South-central			4	4	4	na		na	
2670	Girder 14-15	East	Girder	Walkway beam South			5	5	5	na		na	
2671	Girder 14-15	East	Girder	Pipe hanger North	Cast patch repair		3	4	4	3 to 4	Loss of concrete cover	na	
2672	Girder 14-15	East	Girder	Pipe hanger North-central	Cast patch repair		5	5	5	na		na	
2673	Girder 14-15	East	Girder	Pipe hanger South-central	Cast patch repair	Extra width	3	3	3	na		na	
2674	Girder 14-15	East	Girder	Pipe hanger South	Cast patch repair		4	5	5	4 to 5	Point Cloud defect area not captured	na	

**Appendix B: Category 5 elements – photographs and visual comparison table**










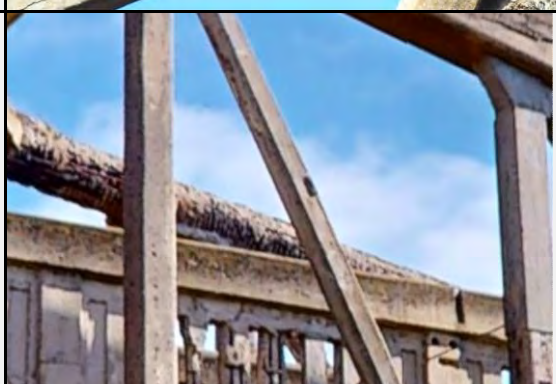

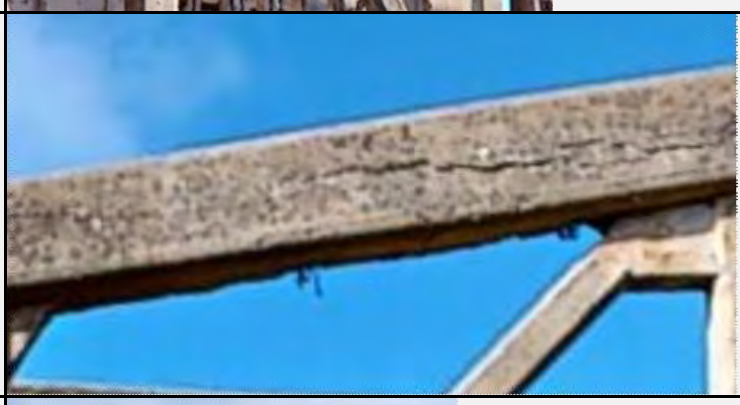





Member/Face Unique ID	Span/Pier Reference	Side	Component	Member Type	Original or previously repaired?	Condition Type - Glasshouse 03/2022	Images - Glasshouse 03/2022	Condition Type - Pointerra Point Cloud 12/2023	Images - Pointerra Point Cloud 12/2023	Condition Type - Matterport 07/2024	Images - Matterport 07/2024	Grade Change - Glasshouse 03/2022 to Pointerra Point Cloud 12/2023	Comments - Glasshouse 03/2022 to Pointerra Point Cloud 12/2023	Grade Change - Pointerra Point Cloud 12/2023 to Matterport 07/2024	Comments - Pointerra Point Cloud 12/2023 to Matterport 07/2024
20	Span 1 Nth	West	Truss	Top Chord 2		5		5		5		na		na	No signs of further degradation
29	Span 1 Nth	West	Truss	Btm Chord 3		5		5		5		na		na	
30	Span 1 Nth	West	Truss	Btm Chord 4		5		5		5		na		na	
41	Span 1 Nth	West	Truss	Diag Web 4	Shotcrete	5		5		5		na		na	No signs of further degradation
60	Span 1 Nth	East	Truss	Top Chord 5		5		5		5		na		na	No signs of further degradation
80	Span 1 Nth	East	Truss	Diag Web 5	Shotcrete	5		5		5		na		na	No signs of further degradation
127	Span 1 Sth	West	Truss	Btm Chord 2		5		5		5		na	Loss of ligatures	na	No signs of further degradation
128	Span 1 Sth	West	Truss	Btm Chord 3		2		5		5		2 to 5	Loss of concrete cover	na	No signs of further degradation
155	Span 1 Sth	East	Truss	Top Chord 1		5		5		5		na		na	No signs of further degradation
165	Span 1 Sth	East	Truss	Btm Chord 3		5		5		5		na		na	No signs of further degradation



167	Span 1 Sth	East	Truss	Btm Chord 5		5			5			5		na	Loss of concrete cover	na	No signs of further degradation
169	Span 1 Sth	East	Truss	Btm Chord 7		2			5			5		2 to 5	Loss of concrete cover	na	
200	Girder 1-2	West	Girder	Pipe hanger South	Tie	5			5			5		na		na	
214	Span 2 Nth	West	Truss	Top Chord 5		5			5			5		na		na	No signs of further degradation
229	Span 2 Nth	West	Truss	Vert Web 2	Shotcrete	5			5			5		na		na	No signs of further degradation
246	Span 2 Nth	West	Truss	Pipe Hanger 8	Cast patch repair	5			5			5		na		na	
266	Span 2 Nth	East	Truss	Vert Web 2	Shotcrete	5			5			5		na		na	No signs of further degradation
283	Span 2 Nth	East	Truss	Pipe Hanger 8	Cast patch repair	5			5			5		na		na	No signs of further degradation
324	Span 2 Sth	West	Truss	Btm Chord 8		5			5			5		na		na	No signs of further degradation
348	Span 2 Sth	East	Truss	Top Chord 3		5			5			5		na		na	No signs of further degradation













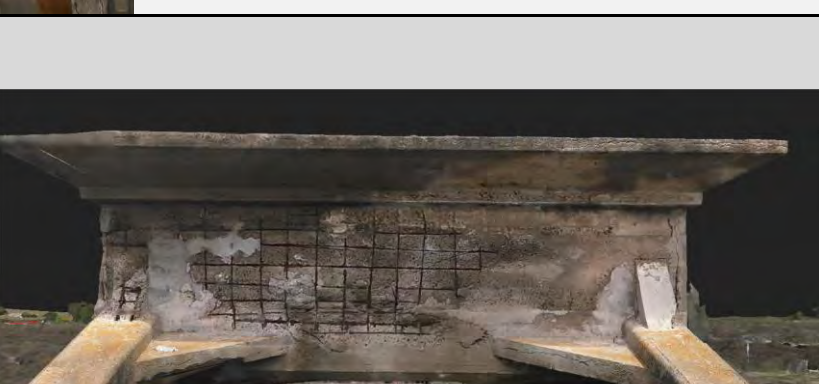

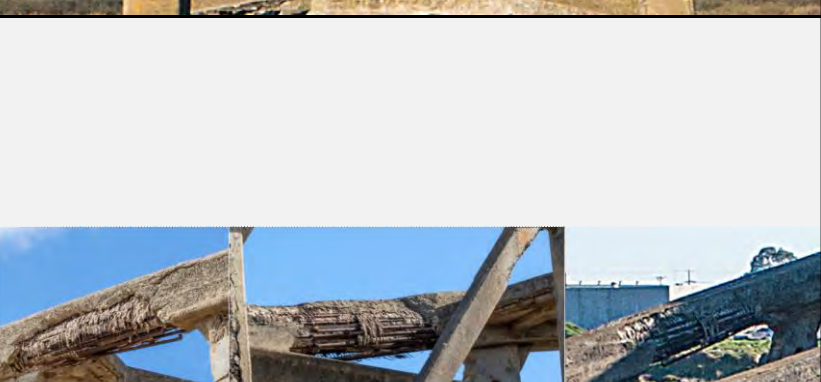


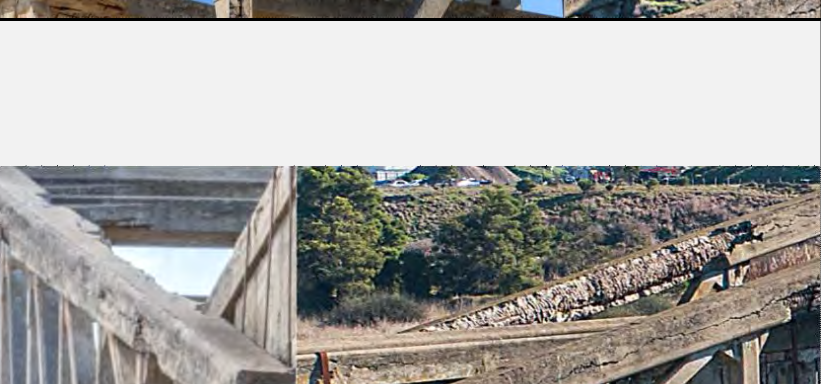


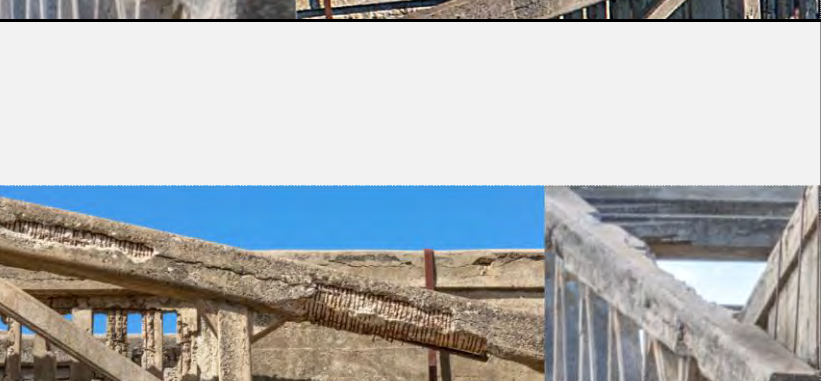

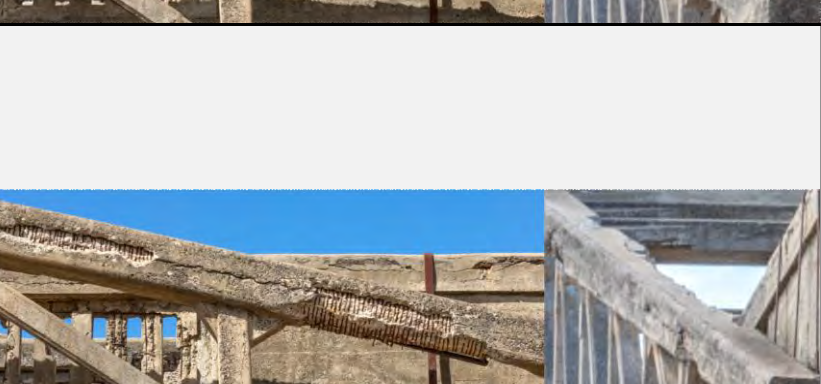




352	Span 2 Sth	East	Truss	Top Chord 7	5		5		5		na	Loss of concrete cover	na	No signs of further degradation
356	Span 2 Sth	East	Truss	Btm Chord 3	5		5		5		na		na	No signs of further degradation
358	Span 2 Sth	East	Truss	Btm Chord 5	5		5		5		na		na	No signs of further degradation
395	Girder 2-3	East	Girder	Walkway beam South-central	5		5		5		na		na	
399	Girder 2-3	East	Girder	Pipe hanger South-central	5		5		5		na		na	
402	Span 3 Nth	West	Truss	Top Chord 2	5		5		5		na	Loss of concrete cover	na	Loss of concrete cover
403	Span 3 Nth	West	Truss	Top Chord 3	5		5		5		na		na	Loss of concrete cover
404	Span 3 Nth	West	Truss	Top Chord 4	5		5		5		na		na	
405	Span 3 Nth	West	Truss	Top Chord 5	5		5		5		na		na	
406	Span 3 Nth	West	Truss	Top Chord 6	5		5		5		na		na	



411	Span 3 Nth	West	Truss	Btm Chord 3		5		5		5		na		na	No signs of further degradation
413	Span 3 Nth	West	Truss	Btm Chord 5		5		5		5		na		na	No signs of further degradation
415	Span 3 Nth	West	Truss	Btm Chord 7		5		5		5		na		na	No signs of further degradation
416	Span 3 Nth	West	Truss	Btm Chord 8		5		5		5		na		na	Loss of concrete cover
418	Span 3 Nth	West	Truss	Vert Web 1	Cast patch repair	5		5		5		na		na	No signs of further degradation
420	Span 3 Nth	West	Truss	Vert Web 2	Cast patch repair	5		5		5		na		na	No signs of further degradation
444	Span 3 Nth	East	Truss	Top Chord 7		5		5		5		na		na	No signs of further degradation
448	Span 3 Nth	East	Truss	Btm Chord 3		5		5		5		na		na	No signs of further degradation
449	Span 3 Nth	East	Truss	Btm Chord 4		5		5		5		na		na	No signs of further degradation
452	Span 3 Nth	East	Truss	Btm Chord 7		5		5		5		na	Loss of concrete cover	na	No signs of further degradation


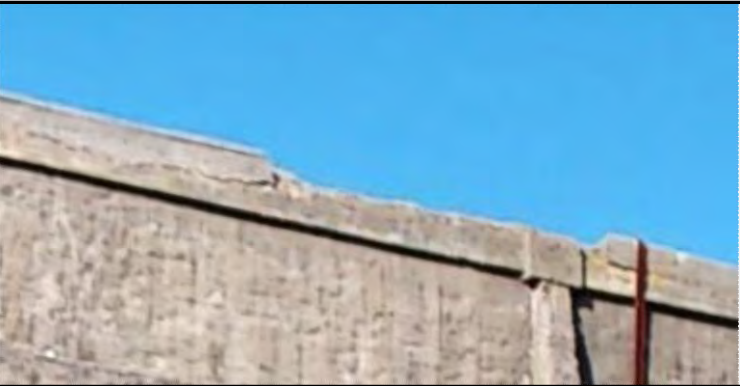



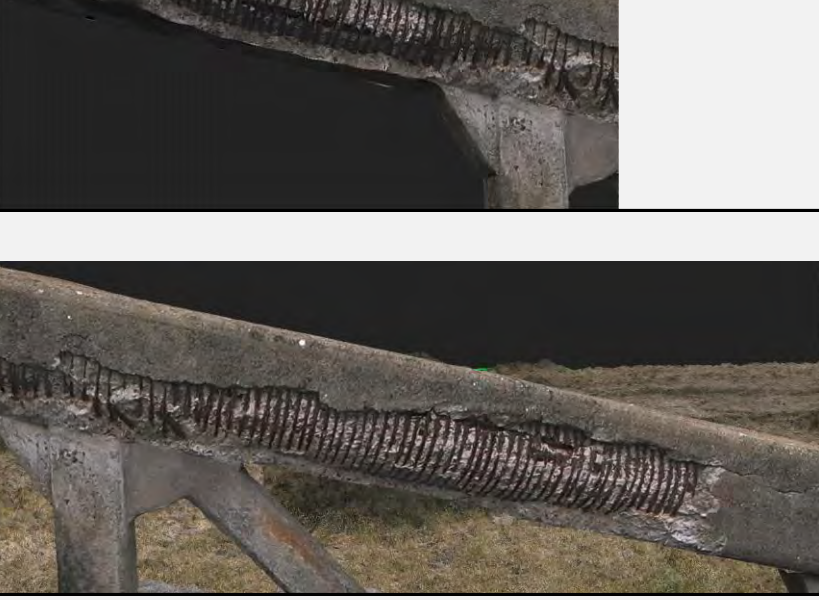








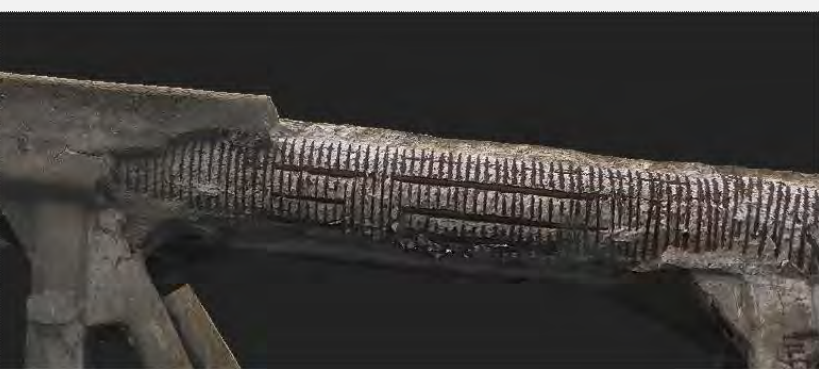















453	Span 3 Nth	East	Truss	Btm Chord 8		5		5		5		na	Loss of concrete cover	na	No signs of further degradation
455	Span 3 Nth	East	Truss	Vert Web 1	Cast patch repair	5		5		5		na		na	No signs of further degradation
457	Span 3 Nth	East	Truss	Vert Web 2	Cast patch repair	5		5		5		na		na	No signs of further degradation
461	Span 3 Nth	East	Truss	Vert Web 4	Cast patch repair	5		5		5		na	Loss of concrete cover	na	No signs of further degradation
476	Pier 3	West	Pier	Pier Leg Sth		5		5		5		na		na	No signs of further degradation
484	Pier 3	na	Pier	Pier head Face nth	Patch repair	5		5		5		na		na	
502	Span 3 Sth	West	Truss	Top Chord 3		5		5		5		na		na	No signs of further degradation
504	Span 3 Sth	West	Truss	Top Chord 5		5		5		5		na		na	
505	Span 3 Sth	West	Truss	Top Chord 6		5		5		5		na		na	
506	Span 3 Sth	West	Truss	Top Chord 7		5		5		5		na		na	No signs of further degradation



514	Span 3 Sth	West	Truss	Btm Chord 7		5			5		5		na	Loss of concrete cover	na	No signs of further degradation
515	Span 3 Sth	West	Truss	Btm Chord 8		5			5		5		na		na	
525	Span 3 Sth	West	Truss	Vert Web 5	Patch repair	2			5		5		2 to 5	Loss of concrete cover	na	
540	Span 3 Sth	East	Truss	Top Chord 4		2			5		5		2 to 5	Loss of concrete cover	na	
541	Span 3 Sth	East	Truss	Top Chord 5		5			5		5		na	Loss of concrete cover	na	No signs of further degradation
547	Span 3 Sth	East	Truss	Btm Chord 3		4			5		5		4 to 5	Loss of concrete cover	na	No signs of further degradation
550	Span 3 Sth	East	Truss	Btm Chord 6		5			5		5		na		na	
551	Span 3 Sth	East	Truss	Btm Chord 7		5			5		5		na		na	No signs of further degradation
556	Span 3 Sth	East	Truss	Vert Web 2	Cast patch repair	5			5		5		na		na	No signs of further degradation
560	Span 3 Sth	East	Truss	Vert Web 4	Cast patch repair	5			5		5		na	Loss of concrete cover	na	No signs of further degradation



574	Girder 3-4	West	Girder	Walkway beam North		5		5		5		na		na	
595	Span 4 Nth	West	Truss	Top Chord 4		5		5		5		na		na	
596	Span 4 Nth	West	Truss	Top Chord 5		5		5		5		na		na	
598	Span 4 Nth	West	Truss	Top Chord 7		5		5		5		na		na	No signs of further degradation
607	Span 4 Nth	West	Truss	Btm Chord 8		5		5		5		na		na	
630	Span 4 Nth	East	Truss	Top Chord 2		5		5		5		na		na	No signs of further degradation
631	Span 4 Nth	East	Truss	Top Chord 3		5		5		5		na		na	No signs of further degradation
633	Span 4 Nth	East	Truss	Top Chord 5		5		5		5		na		na	
648	Span 4 Nth	East	Truss	Vert Web 2	Cast patch repair	5		5		5		na		na	
650	Span 4 Nth	East	Truss	Vert Web 3	Patch repair	5		5		5		na		na	Loss of concrete cover
















667	Pier 4	West	Pier	Pier Leg Sth	Patch repair	5		5		5		na	na	No signs of further degradation
671	Pier 4	West	Pier	Pier head Face west	Patch repair	5		5		5		na	na	No signs of further degradation
675	Pier 4	na	Pier	Pier head Face nth	Patch repair	5		5		5		na	na	
677	Pier 4	na	Pier	Pier head Face sth	Patch repair	5		5		5		na	na	
678	Pier 4	na	Pier	Pier head soffit		5		5		5		na	na	
682	Pier 4	East	Pier	Gussets Sth	Cast patch repair	5		5		5		na	na	
686	Pier 4	East	Pier	Pipe hanger and strut sth	Cast patch repair	5		5		5		na	na	
718	Span 4 Sth	West	Truss	Vert Web 6	Cast patch repair	5		5		5		na	na	
719	Span 4 Sth	West	Truss	Vert Web 7		5		5		5		na	na	
724	Span 4 Sth	West	Truss	Pipe Hanger 5		5		5		5		na	na	






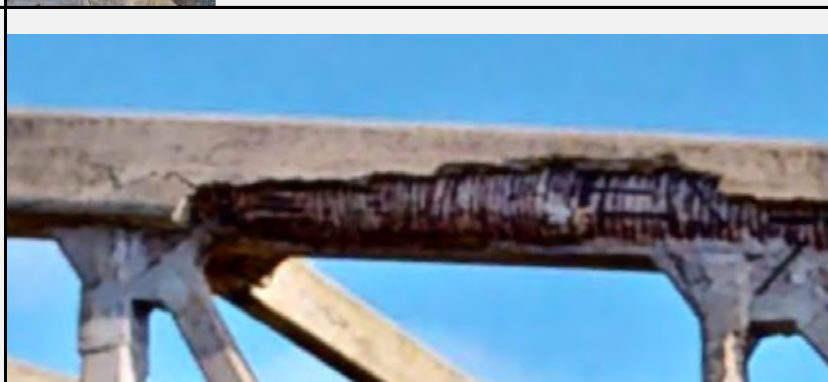




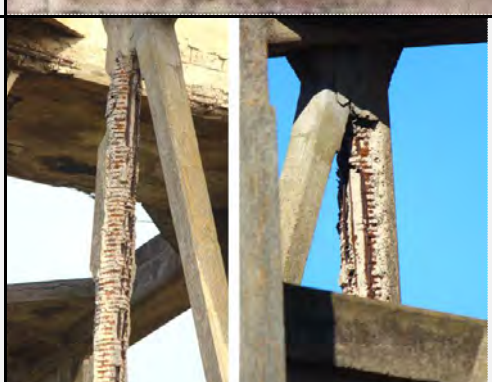






738	Span 4 Sth	East	Truss	Btm Chord 3		5		5		5		na	Loss of concrete cover	na	
740	Span 4 Sth	East	Truss	Btm Chord 5		5		5		5		na		na	
747	Span 4 Sth	East	Truss	Vert Web 2	Patch repair	5		5		5		na		na	Loss of concrete cover
751	Span 4 Sth	East	Truss	Vert Web 4	Cast patch repair	5		5		5		na		na	No signs of further degradation
785	Span 5 Nth	West	Truss	Top Chord 3		5		5		5		na		na	No signs of further degradation
786	Span 5 Nth	West	Truss	Top Chord 4		5		5		5		na		na	
802	Span 5 Nth	West	Truss	Vert Web 2		5		5		5		na		na	No signs of further degradation
806	Span 5 Nth	West	Truss	Vert Web 4		5		5		5		na		na	
841	Span 5 Nth	East	Truss	Vert Web 3		5		5		5		na		na	No signs of further degradation
845	Span 5 Nth	East	Truss	Vert Web 5	Cast patch repair	5		5		5		na		na	



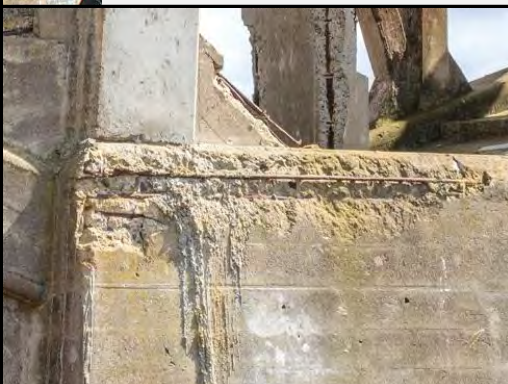
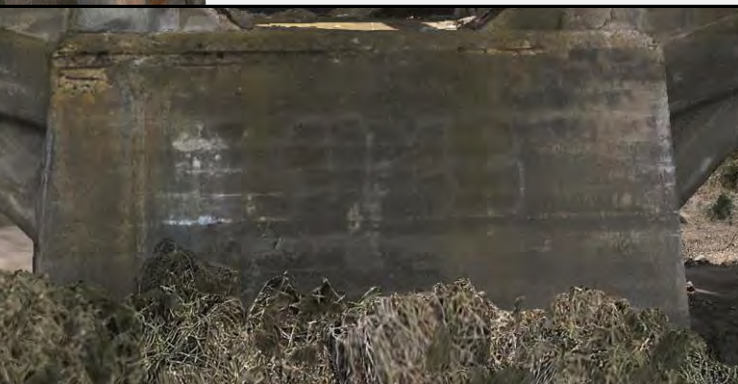




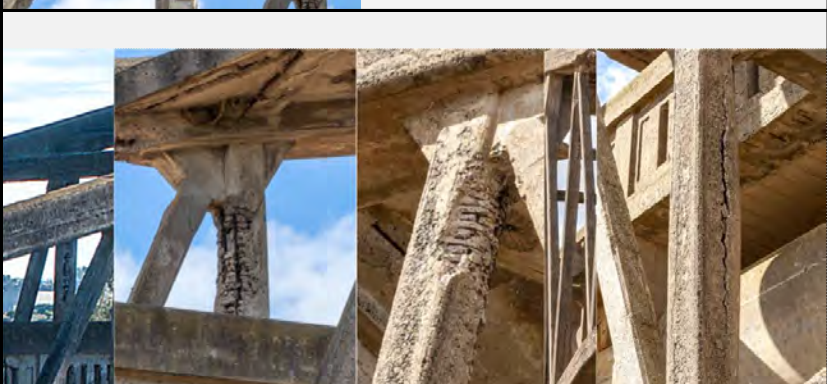












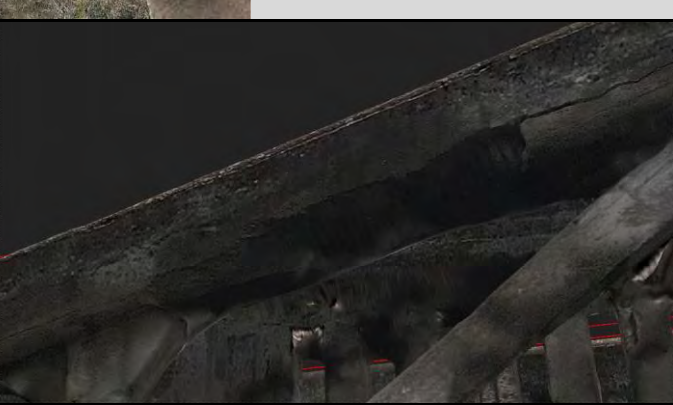
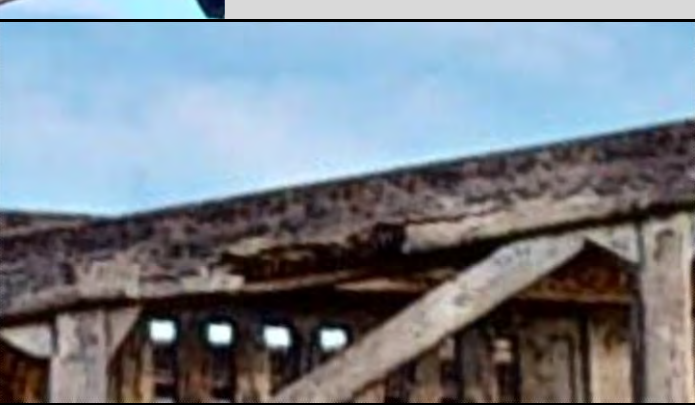





847	Span 5 Nth	East	Truss	Vert Web 6	Cast patch repair	5			5			5		na		na	No signs of further degradation
848	Span 5 Nth	East	Truss	Vert Web 7		5			5			5		na		na	
869	Pier 5	na	Pier	Pier head soffit		5			0	na		5		Insufficient Data		Insufficient Data	
899	Span 5 Sth	West	Truss	Vert Web 1		5			5			5		na		na	
901	Span 5 Sth	West	Truss	Vert Web 2		5			5			5		na		na	
903	Span 5 Sth	West	Truss	Vert Web 3		5			5			5		na		na	
923	Span 5 Sth	East	Truss	Top Chord 5	Cast patch repair	5			5			5		na		na	No signs of further degradation
927	Span 5 Sth	East	Truss	Btm Chord 1		5			5			5		na		na	No signs of further degradation
928	Span 5 Sth	East	Truss	Btm Chord 2		5			5			5		na		na	
936	Span 5 Sth	East	Truss	Vert Web 1	Cast patch repair	5			5			5		na		na	No signs of further degradation




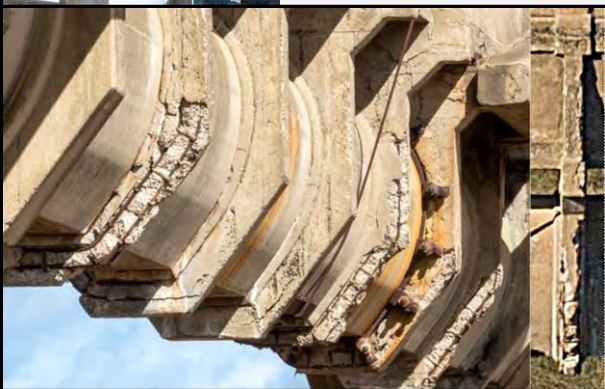
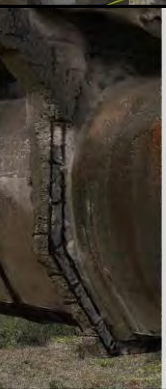

















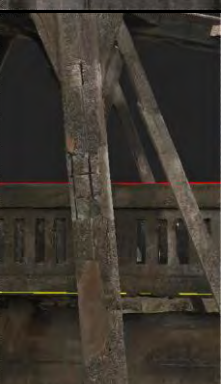

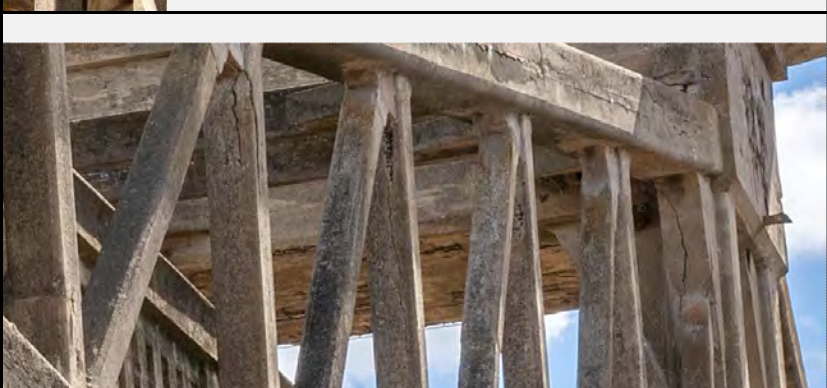






938	Span 5 Sth	East	Truss	Vert Web 2	Cast patch repair	5			5			5		na		na	No signs of further degradation
944	Span 5 Sth	East	Truss	Vert Web 5	Cast patch repair	5			5			5		na		na	No signs of further degradation
1013	Span 6 Nth	East	Truss	Top Chord 3		5			5			5		na		na	
1014	Span 6 Nth	East	Truss	Top Chord 4		5			5			5		na		na	No signs of further degradation
1015	Span 6 Nth	East	Truss	Top Chord 5		5			5			5		na		na	No signs of further degradation
1017	Span 6 Nth	East	Truss	Top Chord 7		5			5			5		na		na	
1028	Span 6 Nth	East	Truss	Vert Web 1		5			5			5		na		na	No signs of further degradation
1032	Span 6 Nth	East	Truss	Vert Web 3		5			5			5		na		na	No signs of further degradation
1038	Span 6 Nth	East	Truss	Vert Web 6		5			5			5		na		na	No signs of further degradation
1039	Span 6 Nth	East	Truss	Vert Web 7		5			5			5		na		na	





1049	Pier 6	West	Pier	Pier Leg Sth	Cast patch repair	4			4			5		na	Loss of concrete cover	4 to 5	Loss of concrete cover
1070	Pier 6	East	Pier	Pier base east face		5			5			5		na		na	
1074	Span 6 Sth	West	Truss	Top Chord 2		5			5			5		na		na	No signs of further degradation
1090	Span 6 Sth	West	Truss	Vert Web 1		5			5			5		na	Loss of concrete cover	na	No signs of further degradation
1096	Span 6 Sth	West	Truss	Vert Web 4	Cast patch repair	2			5			5		2 to 5	Loss of concrete cover	na	No signs of further degradation
1098	Span 6 Sth	West	Truss	Vert Web 5		5			5			5		na		na	No signs of further degradation
1100	Span 6 Sth	West	Truss	Vert Web 6		5			5			5		na		na	No signs of further degradation
1104	Span 6 Sth	West	Truss	Pipe Hanger 3	Cast patch repair	3			5			5		3 to 5	Point Cloud defect area not captured	na	
1115	Span 6 Sth	East	Truss	Top Chord 6		5			5			5		na		na	
1127	Span 6 Sth	East	Truss	Vert Web 1		5			5			5		na		na	No signs of further degradation









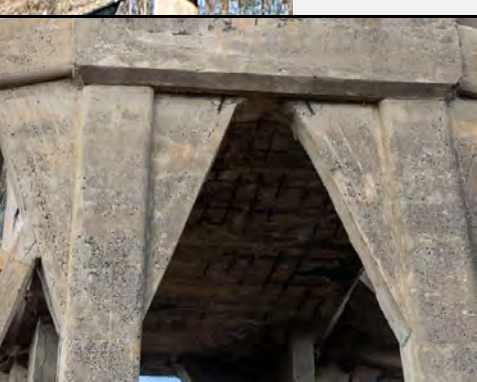
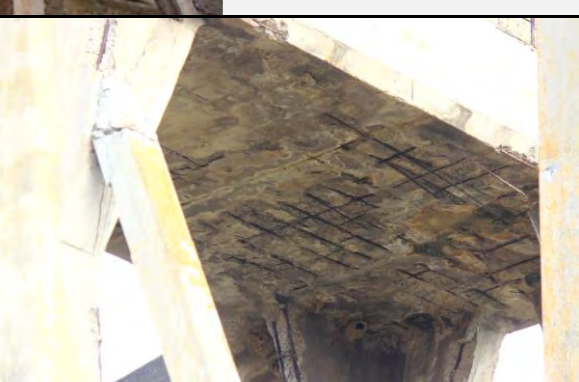





1129	Span 6 Sth	East	Truss	Vert Web 2	Cast patch repair	5		5		5		na		na	
1155	Girder 6-7	West	Girder	Pipe hanger South	Tie	5		5		5		na		na	
1171	Span 7 Nth	West	Truss	Top Chord 7		5		5		5		na		na	No signs of further degradation
1190	Span 7 Nth	West	Truss	Vert Web 5		5		5		5		na		na	No signs of further degradation
1192	Span 7 Nth	West	Truss	Vert Web 6		5		5		5		na		na	
1200	Span 7 Nth	West	Truss	Pipe Hanger 7	Cast patch repair	5		5		5		na		na	
1223	Span 7 Nth	East	Truss	Vert Web 3		5		5		5		na		na	No signs of further degradation
1240	Pier 7	West	Pier	Pier Leg Sth	Patch repair	5		5		5		na		na	No signs of further degradation
1251	Pier 7	na	Pier	Pier head soffit		5		0		5		Insufficient Data		Insufficient Data	
1266	Span 7 Sth	West	Truss	Top Chord 3		5		5		5		na		na	No signs of further degradation



1281	Span 7 Sth	West	Truss	Vert Web 1		5			5			5		na		na	
1285	Span 7 Sth	West	Truss	Vert Web 3		5			5			5		na		na	No signs of further degradation
1289	Span 7 Sth	West	Truss	Vert Web 5		5			5			5		na		na	No signs of further degradation
1291	Span 7 Sth	West	Truss	Vert Web 6		5			5			5		na		na	
1329	Span 7 Sth	East	Truss	Vert Web 7		5			5			5		na		na	
1332	Span 7 Sth	East	Truss	Pipe Hanger 3	Cast patch repair	5			5			5		na		na	
1409	Span 8 Nth	East	Truss	Diag Web 1		5			5			5		na		na	
1410	Span 8 Nth	East	Truss	Vert Web 1		5			5			5		na		na	No signs of further degradation
1420	Span 8 Nth	East	Truss	Vert Web 6		5			5			5		na		na	No signs of further degradation
1421	Span 8 Nth	East	Truss	Vert Web 7		5			5			5		na		na	



1442	Pier 8	na	Pier	Pier head soffit		5			0	na		5			Insufficient Data		Insufficient Data	
1486	Span 8 Sth	West	Truss	Pipe Hanger 3	Cast patch repair	5			5			5			na		na	
1564	Span 9 Nth	West	Truss	Vert Web 1	Cast patch repair	3			5			5			3 to 5	Loss of concrete cover	na	
1566	Span 9 Nth	West	Truss	Vert Web 2	Cast patch repair	5			5			5			na		na	
1569	Span 9 Nth	West	Truss	Diag Web 4		2			5			5			2 to 5	Loss of concrete cover	na	
1602	Span 9 Nth	East	Truss	Diag Web 2		1			5			5			1 to 5	Point Cloud defect area not captured	na	
1633	Pier 9	na	Pier	Pier head soffit		5			0	na		5			Insufficient Data		Insufficient Data	
1667	Span 9 Sth	West	Truss	Vert Web 3		5			5			5			na		na	
1755	Span 10 Nth	West	Truss	Vert Web 1		5			5			0	na		na		Insufficient Data	
1759	Span 10 Nth	West	Truss	Vert Web 3		5			5			0	na		na		Insufficient Data	






















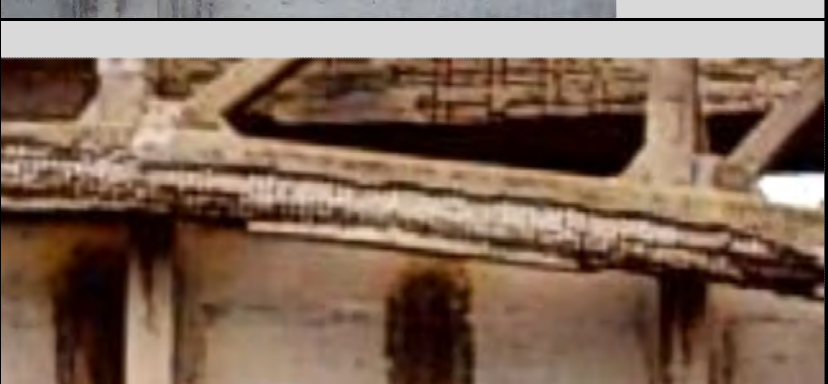






1794	Span 10 Nth	East	Truss	Vert Web 2		5			5			0	na	na		Insufficient Data	
1796	Span 10 Nth	East	Truss	Vert Web 3		5			5			0	na	na		Insufficient Data	
1798	Span 10 Nth	East	Truss	Vert Web 4		5			5			0	na	na		Insufficient Data	
1893	Span 10 Sth	East	Truss	Vert Web 2		5			5			0	na	na		Insufficient Data	
1895	Span 10 Sth	East	Truss	Vert Web 3		5			5			0	na	na		Insufficient Data	
1917	Span 11 Nth	West	Truss	Top Chord 7		5			5			0	na	na		Insufficient Data	
1928	Span 11 Nth	West	Truss	Vert Web 1		5			5			0	na	na		Insufficient Data	
1930	Span 11 Nth	West	Truss	Vert Web 2		5			5			0	na	na		Insufficient Data	
1932	Span 11 Nth	West	Truss	Vert Web 3	Cast patch repair	5			5			0	na	na		Insufficient Data	
1936	Span 11 Nth	West	Truss	Vert Web 5		5			5			0	na	na		Insufficient Data	













1938	Span 11 Nth	West	Truss	Vert Web 6		5			5			0	na	na		Insufficient Data	
2029	Span 11 Sth	West	Truss	Vert Web 2	Cast patch repair	5			5			0	na	na		Insufficient Data	
2031	Span 11 Sth	West	Truss	Vert Web 3	Cast patch repair	5			5			0	na	na		Insufficient Data	
2040	Span 11 Sth	West	Truss	Pipe Hanger 2	Cast patch repair	3			5			0	na	3 to 5	Point Cloud defect area not captured	Insufficient Data	
2057	Span 11 Sth	East	Truss	Btm Chord 3		5			5			0	na	na		Insufficient Data	
2058	Span 11 Sth	East	Truss	Btm Chord 4		5			5			0	na	na		Insufficient Data	
2064	Span 11 Sth	East	Truss	Vert Web 1		5			5			0	na	na		Insufficient Data	
2066	Span 11 Sth	East	Truss	Vert Web 2	Cast patch repair	5			5			0	na	na		Insufficient Data	
2119	Span 12 Nth	West	Truss	Vert Web 1	Cast patch repair	5			5			0	na	na		Insufficient Data	
2121	Span 12 Nth	West	Truss	Vert Web 2	Cast patch repair	5			5			0	na	na		Insufficient Data	











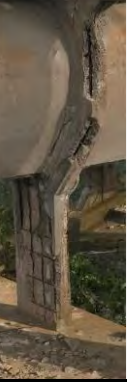



2129	Span 12 Nth	West	Truss	Vert Web 6		5			5			0	na	na	Loss of concrete cover	Insufficient Data	
2158	Span 12 Nth	East	Truss	Vert Web 2	Patch repair	5			5			5		na		na	Loss of concrete cover
2176	Pier 12	West	Pier	Pier Leg Nth	Patch repair	5			5			5		na		na	No signs of further degradation
2188	Pier 12	na	Pier	Pier head soffit		5			0	na		5		Insufficient Data		Insufficient Data	
2198	Pier 12	East	Pier	Pier base east face		5			5			5		na		na	
2233	Span 12 Sth	West	Truss	Pipe Hanger 4	Cast patch repair	5			5			5		na		na	
2250	Span 12 Sth	East	Truss	Btm Chord 5		5			5			5		na		na	No signs of further degradation
2251	Span 12 Sth	East	Truss	Btm Chord 6		5			5			5		na		na	
2252	Span 12 Sth	East	Truss	Btm Chord 7		4			5			5		4 to 5	Loss of concrete cover	na	Loss of concrete cover
2266	Span 12 Sth	East	Truss	Vert Web 7		5			5			5		na		na	





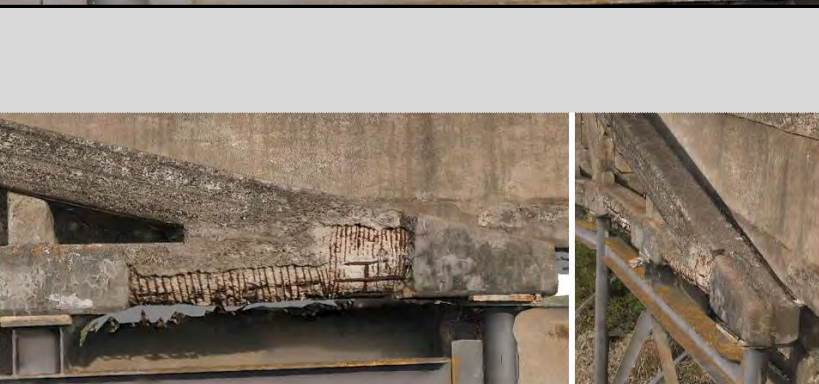
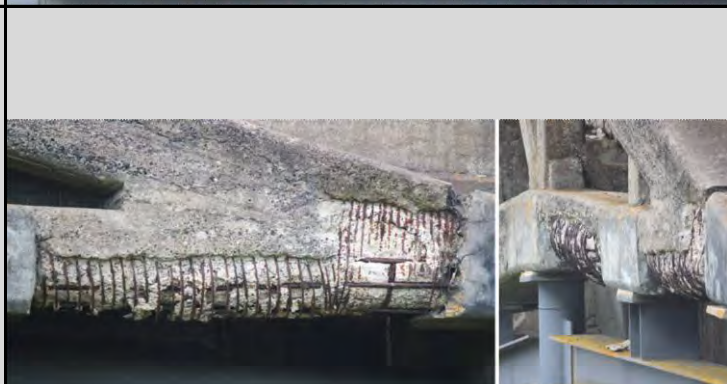












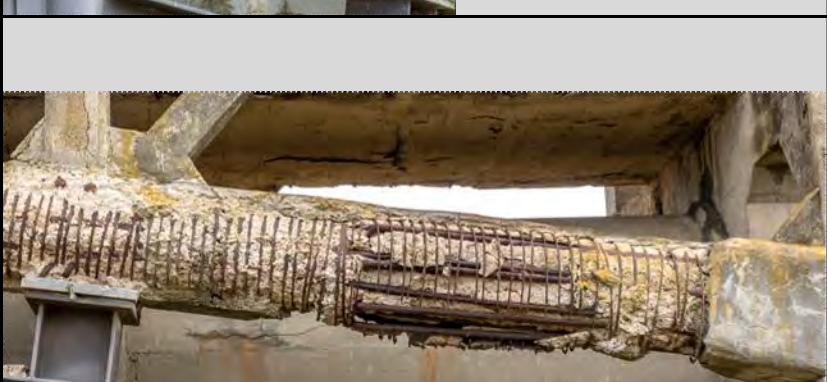

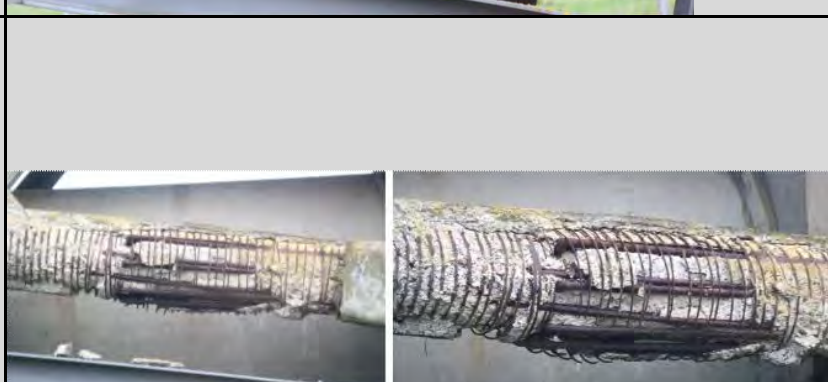

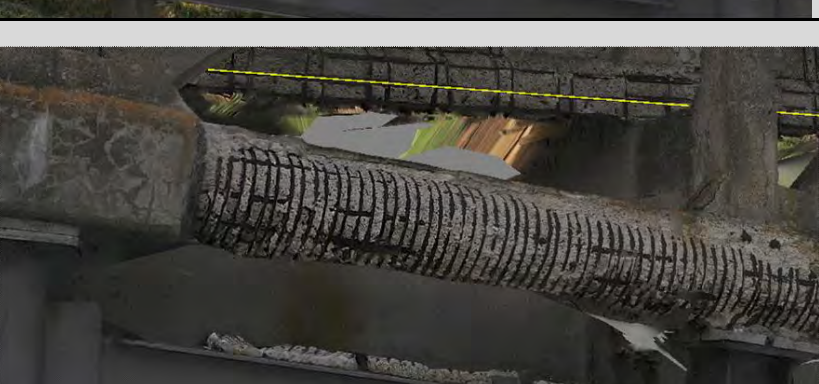
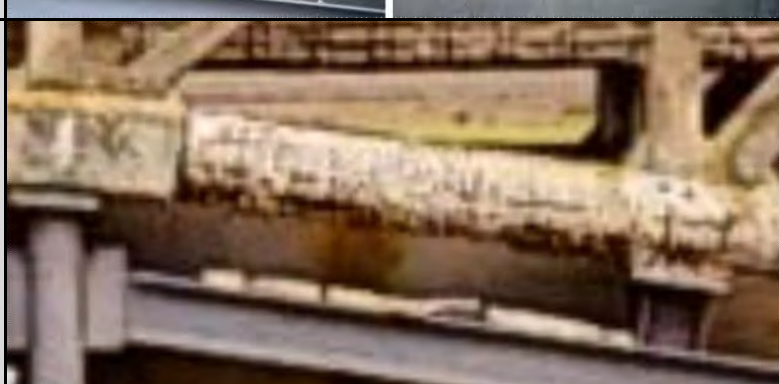
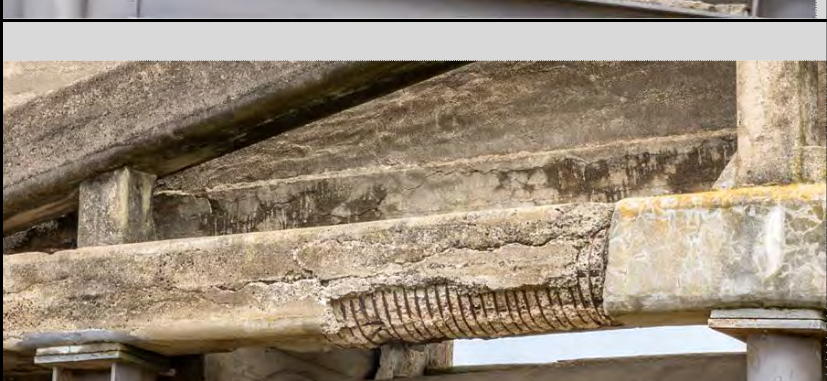

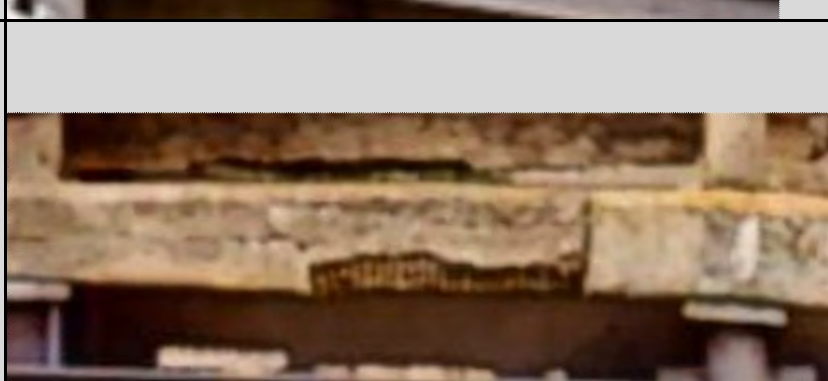
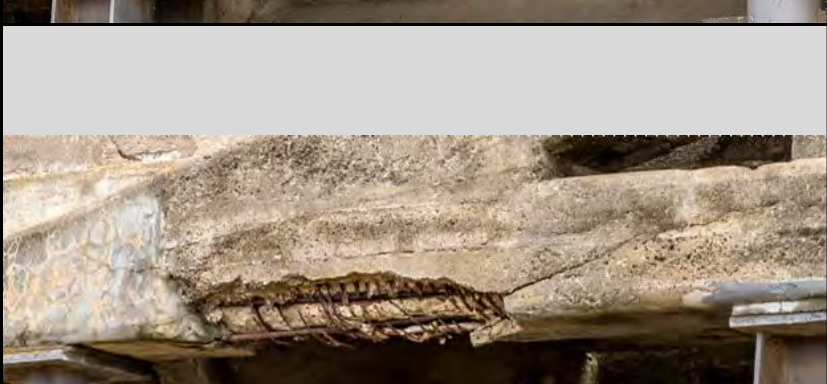
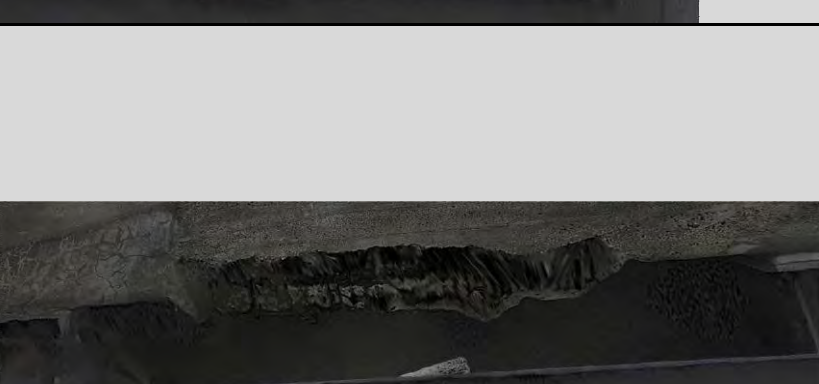



2269	Span 12 Sth	East	Truss	Pipe Hanger 3	Cast patch repair	5			5			5		na		na	
2283	Girder 12-13	West	Girder	Pipe hanger South	Tie	4			5			5		4 to 5	Point Cloud defect area not captured	na	
2284	Girder 12-13	East	Girder	Walkway beam North		5			5			5		na	Loss of concrete cover	na	No signs of further degradation
2291	Girder 12-13	East	Girder	Pipe hanger South-central	Tie	5			5			5		na		na	No signs of further degradation
2349	Span 13 Nth	East	Truss	Vert Web 2		5			5			5		na		na	
2361	Span 13 Nth	East	Truss	Pipe Hanger 3	Cast patch repair	5			5			5		na		na	
2379	Pier 13	na	Pier	Pier head soffit		5		0	na			5		Insufficient Data		Insufficient Data	
2471	Girder 13-14	West	Girder	Pipe hanger North		5			5			5		na		na	
2472	Girder 13-14	West	Girder	Pipe hanger North-central	Tie	5			5			5		na		na	
2490	Span 14 Nth	West	Truss	Top Chord 7		5			5			5		na		na	No signs of further degradation



2496	Span 14 Nth	West	Truss	Btm Chord 5	Metal support	5			5			5		na		na	
2501	Span 14 Nth	West	Truss	Vert Web 1	Cast patch repair	5			5			5		na		na	
2529	Span 14 Nth	East	Truss	Btm Chord 1		5			5			5		na	Loss of concrete cover	na	No signs of further degradation
2530	Span 14 Nth	East	Truss	Btm Chord 2		5			5			5		na		na	No signs of further degradation
2531	Span 14 Nth	East	Truss	Btm Chord 3		5			5			5		na		na	No signs of further degradation
2540	Span 14 Nth	East	Truss	Vert Web 2	Cast patch repair	5			5			5		na		na	No signs of further degradation
2542	Span 14 Nth	East	Truss	Vert Web 3	Cast patch repair	5			5			5		na		na	No signs of further degradation
2565	Pier 14	East	Pier	Pier head Face east	Cast patch repair	5			5			5		na		na	
2570	Pier 14	na	Pier	Pier head soffit		5			0	na		5		Insufficient Data		Insufficient Data	
2576	Pier 14	West	Pier	Pipe hanger and strut sth	Cast patch repair	5			5			5		na		na	



2597	Span 14 Sth	West	Truss	Btm Chord 7	Cast patch repair	5		5		5		na		na	No signs of further degradation
2598	Span 14 Sth	West	Truss	Btm Chord 8	Cast patch repair	5		5		5		na		na	No signs of further degradation
2628	Span 14 Sth	East	Truss	Btm Chord 1		5		5		5		na		na	No signs of further degradation
2629	Span 14 Sth	East	Truss	Btm Chord 2		5		5		5		na		na	No signs of further degradation
2630	Span 14 Sth	East	Truss	Btm Chord 3		5		5		5		na		na	No signs of further degradation
2631	Span 14 Sth	East	Truss	Btm Chord 4		5		5		5		na		na	No signs of further degradation
2632	Span 14 Sth	East	Truss	Btm Chord 5		5		5		5		na		na	No signs of further degradation
2633	Span 14 Sth	East	Truss	Btm Chord 6		5		5		5		na		na	No signs of further degradation
2634	Span 14 Sth	East	Truss	Btm Chord 7		5		5		5		na		na	No signs of further degradation
2635	Span 14 Sth	East	Truss	Btm Chord 8		5		5		5		na		na	No signs of further degradation













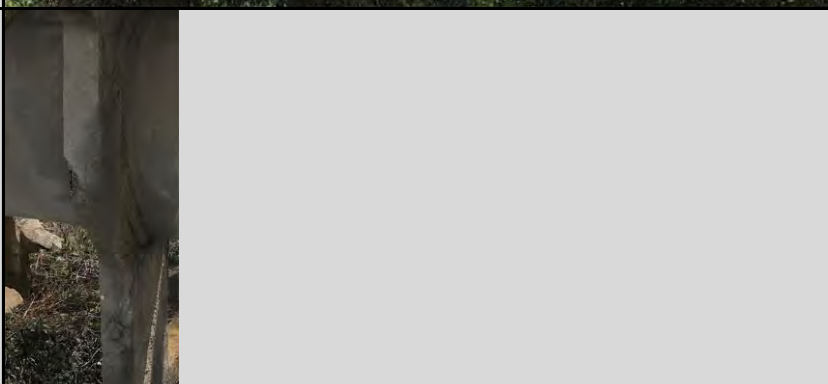
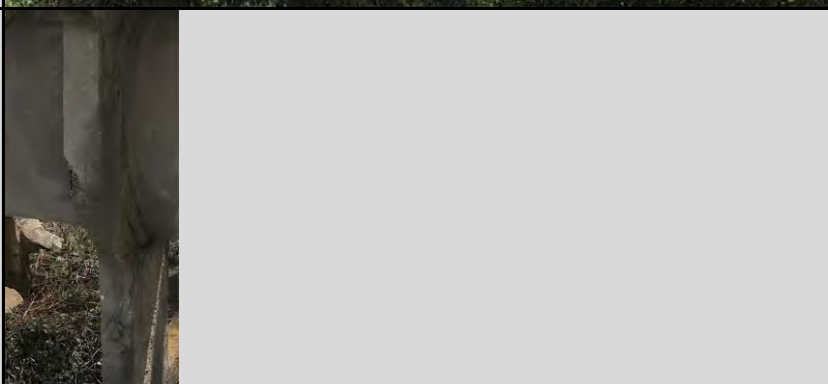









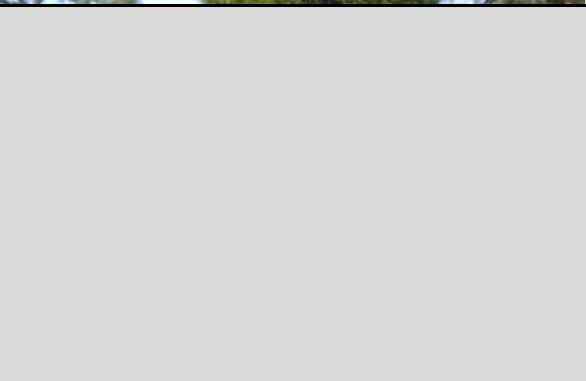




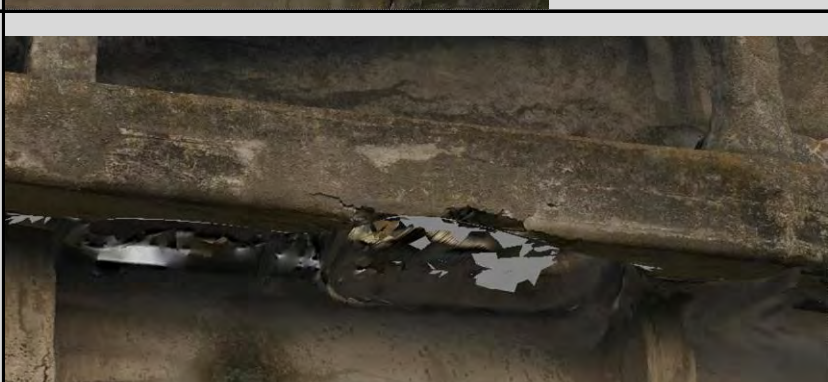



2645	Span 14 Sth	East	Truss	Vert Web 5		5			5		5		na		na	
2670	Girder 14-15	East	Girder	Walkway beam South		5			5		5		na		na	
2672	Girder 14-15	East	Girder	Pipe hanger North-central	Cast patch repair	5			5		5		na		na	
2674	Girder 14-15	East	Girder	Pipe hanger South	Cast patch repair	4			5		5		4 to 5	Point Cloud defect area not captured	na	







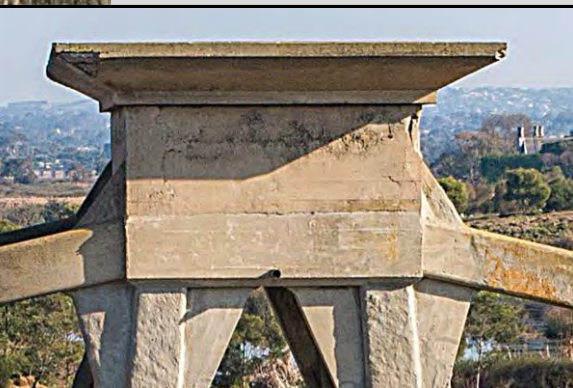


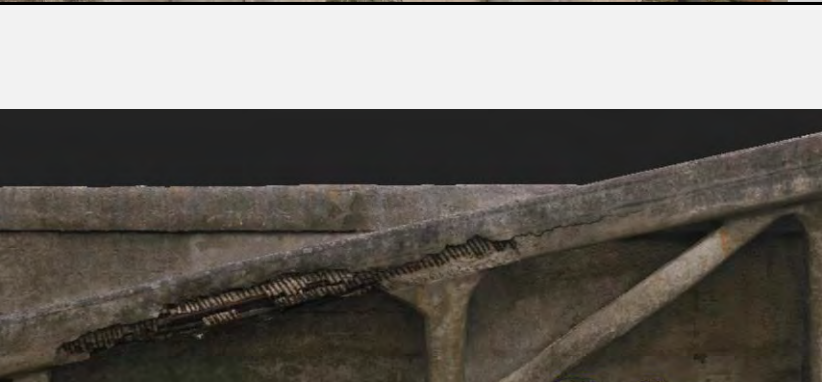

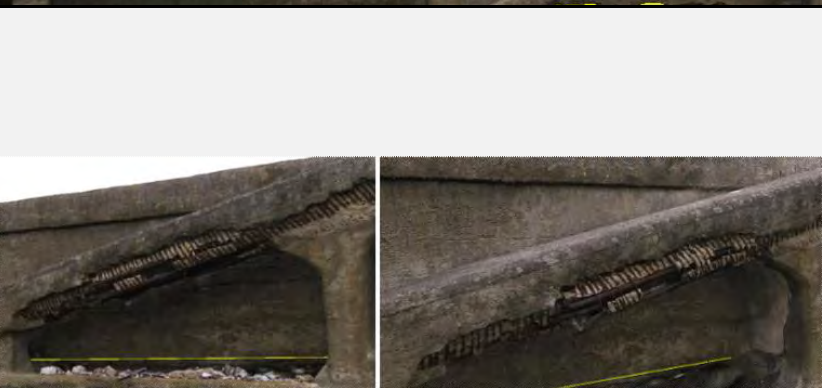


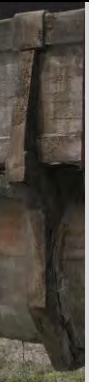


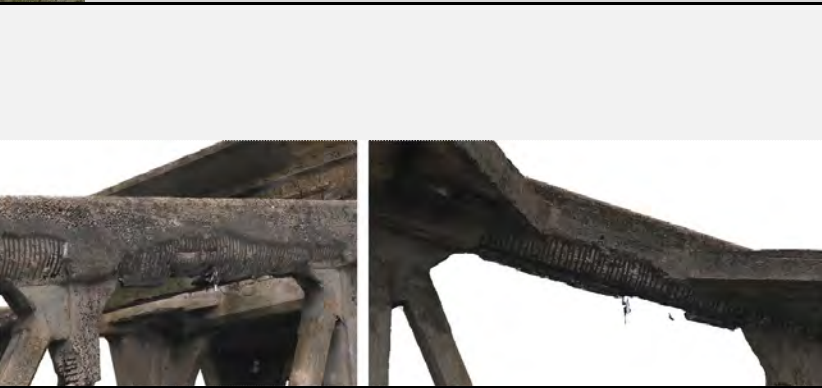




**Appendix C: Loss of Concrete Cover Reporting**



Member/Fac e Unique ID	Span/Pier Reference	Side	Component	Member Type	Condition Type - Glasshouse 03/2022	Images - Glasshouse 03/2022	Condition Type - Pointerra Point Cloud 12/2023	Images - Pointerra Point Cloud 12/2023	Condition Type - Matterport 07/2024	Images - Matterport 07/2024	Grade Change - Glasshouse 03/2022 to Pointerra Point Cloud 12/2023	Comments - Glasshouse 03/2022 to Pointerra Point Cloud 12/2023	Grade Change - Pointerra Point Cloud 12/2023 to Matterport 07/2024	Comments - Pointerra Point Cloud 12/2023 to Matterport 07/2024
21	Span 1 Nth	West	Truss	Top Chord 3	1		1		3		na		1 to 3	Loss of concrete cover
31	Span 1 Nth	West	Truss	Btm Chord 5	3		4		4		3 to 4	Loss of concrete cover	na	
32	Span 1 Nth	West	Truss	Btm Chord 6	1		4		4		1 to 4	Loss of concrete cover	na	No signs of further degradation
67	Span 1 Nth	East	Truss	Btm Chord 4	3		3		4		na		3 to 4	New loss of concrete cover
85	Span 1 Nth	East	Truss	Pipe Hanger 1	3		3		4		na		3 to 4	Loss of concrete cover
127	Span 1 Sth	West	Truss	Btm Chord 2	5		5		5		na	Loss of ligatures	na	No signs of further degradation
128	Span 1 Sth	West	Truss	Btm Chord 3	2		5		5		2 to 5	Loss of concrete cover	na	No signs of further degradation
129	Span 1 Sth	West	Truss	Btm Chord 4	2		4		4		2 to 4	Loss of concrete cover	na	
167	Span 1 Sth	East	Truss	Btm Chord 5	5		5		5		na	Loss of concrete cover	na	No signs of further degradation
169	Span 1 Sth	East	Truss	Btm Chord 7	2		5		5		2 to 5	Loss of concrete cover	na	



187	Span 1 Sth	East	Truss	Pipe Hanger 4	3		3		na		na	New loss of concrete cover
194	Girder 1-2	West	Girder	Walkway beam Central	4		4		na	Loss of concrete cover	na	
197	Girder 1-2	West	Girder	Pipe hanger North	2		3		2 to 3	Loss of concrete cover	na	
291	Pier 2	East	Pier	Pier head Face east	2		3		2 to 3	Loss of concrete cover	na	
351	Span 2 Sth	East	Truss	Top Chord 6	2		4		2 to 4	Loss of concrete cover	na	
352	Span 2 Sth	East	Truss	Top Chord 7	5		5		na	Loss of concrete cover	na	No signs of further degradation
357	Span 2 Sth	East	Truss	Btm Chord 4	4		4		na	Loss of concrete cover	na	
391	Girder 2-3	West	Girder	Pipe hanger South	1		2		1 to 2	Point Cloud defect area not captured	2 to 3	Loss of concrete cover
402	Span 3 Nth	West	Truss	Top Chord 2	5		5		na	Loss of concrete cover	na	Loss of concrete cover
403	Span 3 Nth	West	Truss	Top Chord 3	5		5		na		na	Loss of concrete cover



416	Span 3 Nth	West	Truss	Btm Chord 8	5			5		5			na		na	Loss of concrete cover
452	Span 3 Nth	East	Truss	Btm Chord 7	5			5		5			na	Loss of concrete cover	na	No signs of further degradation
453	Span 3 Nth	East	Truss	Btm Chord 8	5			5		5			na	Loss of concrete cover	na	No signs of further degradation
461	Span 3 Nth	East	Truss	Vert Web 4	5			5		5			na	Loss of concrete cover	na	No signs of further degradation
514	Span 3 Sth	West	Truss	Btm Chord 7	5			5		5			na	Loss of concrete cover	na	No signs of further degradation
525	Span 3 Sth	West	Truss	Vert Web 5	2			5		5			2 to 5	Loss of concrete cover	na	
540	Span 3 Sth	East	Truss	Top Chord 4	2			5		5			2 to 5	Loss of concrete cover	na	
541	Span 3 Sth	East	Truss	Top Chord 5	5			5		5			na	Loss of concrete cover	na	No signs of further degradation
547	Span 3 Sth	East	Truss	Btm Chord 3	4			5		5			4 to 5	Loss of concrete cover	na	No signs of further degradation
560	Span 3 Sth	East	Truss	Vert Web 4	5			5		5			na	Loss of concrete cover	na	No signs of further degradation







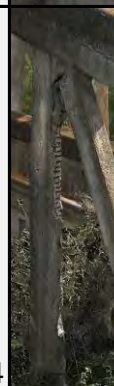






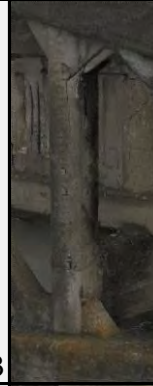


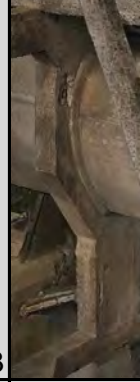


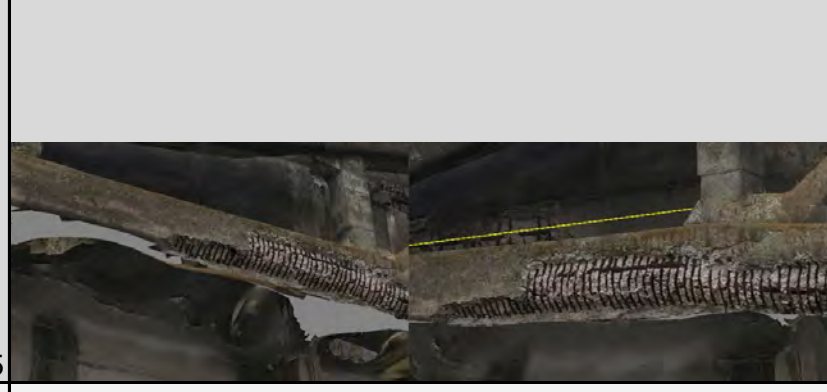






618	Span 4 Nth	West	Truss	Diag Web 6	2		3		3		2 to 3	Loss of concrete cover	na	
650	Span 4 Nth	East	Truss	Vert Web 3	5		5		5		na		na	Loss of concrete cover
738	Span 4 Sth	East	Truss	Btm Chord 3	5		5		5		na	Loss of concrete cover	na	
747	Span 4 Sth	East	Truss	Vert Web 2	5		5		5		na		na	Loss of concrete cover
837	Span 5 Nth	East	Truss	Vert Web 1	4		4		4		na	Loss of concrete cover	na	
864	Pier 5	East	Pier	Pier head Face east	4		4		4		na		na	Loss of concrete cover
1049	Pier 6	West	Pier	Pier Leg Sth	4		4		5		na	Loss of concrete cover	4 to 5	Loss of concrete cover
1090	Span 6 Sth	West	Truss	Vert Web 1	5		5		5		na	Loss of concrete cover	na	No signs of further degradation
1094	Span 6 Sth	West	Truss	Vert Web 3	3		4		4		3 to 4	Loss of concrete cover	na	
1096	Span 6 Sth	West	Truss	Vert Web 4	2		5		5		2 to 5	Loss of concrete cover	na	No signs of further degradation













1154	Girder 6-7	West	Girder	Pipe hanger South-central	2		2		3		na	2 to 3	Loss of concrete cover
1163	Girder 6-7	East	Girder	Pipe hanger South-central	2		4		4		2 to 4	Loss of concrete cover	na
1175	Span 7 Nth	West	Truss	Btm Chord 3	2		3		3		2 to 3	Loss of concrete cover	na
1184	Span 7 Nth	West	Truss	Vert Web 2	2		4		4		2 to 4	Loss of concrete cover	na
1299	Span 7 Sth	West	Truss	Pipe Hanger 7	2		3		3		2 to 3	Loss of concrete cover	na
1311	Span 7 Sth	East	Truss	Btm Chord 3	2		3		3		2 to 3	Loss of concrete cover	na
1387	Span 8 Nth	West	Truss	Pipe Hanger 3	4		4		4		na	Loss of concrete cover	na
1513	Span 8 Sth	East	Truss	Vert Web 3	2		2		4		na	2 to 4	Loss of concrete cover
1563	Span 9 Nth	West	Truss	Diag Web 1	3		3		3		na	Loss of concrete cover	na
1564	Span 9 Nth	West	Truss	Vert Web 1	3		5		5		3 to 5	Loss of concrete cover	na



1569	Span 9 Nth	West	Truss	Diag Web 4	2		5		5		2 to 5	Loss of concrete cover	na	
1702	Span 9 Sth	East	Truss	Vert Web 2	2		4		4		2 to 4	Loss of concrete cover	na	
1967	Span 11 Nth	East	Truss	Vert Web 2	2		4		0		2 to 4	Loss of concrete cover	Insufficient Data	
2129	Span 12 Nth	West	Truss	Vert Web 6	5		5		0	na	na	Loss of concrete cover	Insufficient Data	
2158	Span 12 Nth	East	Truss	Vert Web 2	5		5		5		na		na	Loss of concrete cover
2164	Span 12 Nth	East	Truss	Vert Web 5	2		3		0		2 to 3	Loss of concrete cover	Insufficient Data	
2190	Pier 12	West	Pier	Gussets Sth	2		4		0		2 to 4	Loss of concrete cover	Insufficient Data	
2230	Span 12 Sth	West	Truss	Pipe Hanger 1	3		3		4		na		3 to 4	Loss of concrete cover
2252	Span 12 Sth	East	Truss	Btm Chord 7	4		5		5		4 to 5	Loss of concrete cover	na	Loss of concrete cover
2284	Girder 12-13	East	Girder	Walkway beam North	5		5		5		na	Loss of concrete cover	na	No signs of further degradation



2324	Span 13 Nth	West	Truss	Pipe Hanger 3	4			4				na	Loss of concrete cover	na	
2494	Span 14 Nth	West	Truss	Btm Chord 3	2			3				2 to 3	Loss of concrete cover (loose concrete on truss)	na	
2502	Span 14 Nth	West	Truss	Diag Web 2	2			3				2 to 3	Loss of concrete cover	na	
2529	Span 14 Nth	East	Truss	Btm Chord 1	5			5				na	Loss of concrete cover	na	No signs of further degradation
2671	Girder 14-15	East	Girder	Pipe hanger North	3			4				3 to 4	Loss of concrete cover	na	