



Rijkswaterstaat
Ministerie van Infrastructuur en Waterstaat

Market update Building the new west arch

Tuesday, July 21, 2026
16.00 (CET)



Vernieuwen Van Brienenoordbrug
Straks klaar voor de volgende generaties



Building the new Van Brienenoord Bridge together



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Straks klaar voor de volgende generaties



Programme

Programma	
The projectteam	
Introduction	
About the project	
Planning	
Contract	
Break	
Collaboration	
Project scope	
Design responsibility	
Design process	
Construction Staging	
Interfaces	
Devil's Island	
Closing and network drinks	



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Team Contract 2: Building the new west arch



Magda Pikkaart

Technical Manager



Maarten Roest

Contract Manager



Lilian Pol

Project Control



Nancy Martens

Procurement





IPM-Team Van Brienenoordbrug



Wop Schat

Project Manager



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Contract Manager



Mathieu Marell

Manager
Project control



Jörgen v/d Meer

Stakeholder
Manager





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Ministerie van Infrastructuur en Waterstaat

Introduction



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Market update

On the one hand:

- To raise awareness of the project
- To highlight the project's appeal

On the other hand:

- Provide more detailed insight into the scope, technical aspects, contract and tender process
- ~~• To seek advice on how the contract or project might be improved~~





Renewal of the Van Brienenoord Bridge



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Movable bridges

- Bridge bascule leaf and operating machinery of the east bridges are outdated
- Operating, control and monitoring systems are outdated

West arch (1990)

- Fatigue in the steel deck
- Coating is outdated
- The arch is in good condition
- Outdated components

East arch (1965)

- The structure requires replacement
- Coating is end of life



2 á 3 x
a week



400
per day



230,000
per day



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Renewed procurement strategy

- Project divided in 4 contracts
- Minimise interfaces between the contracts
- Limit contractual risks for market participants
- Contract types aligned with the risk profile of the work





Result

Four contracts:

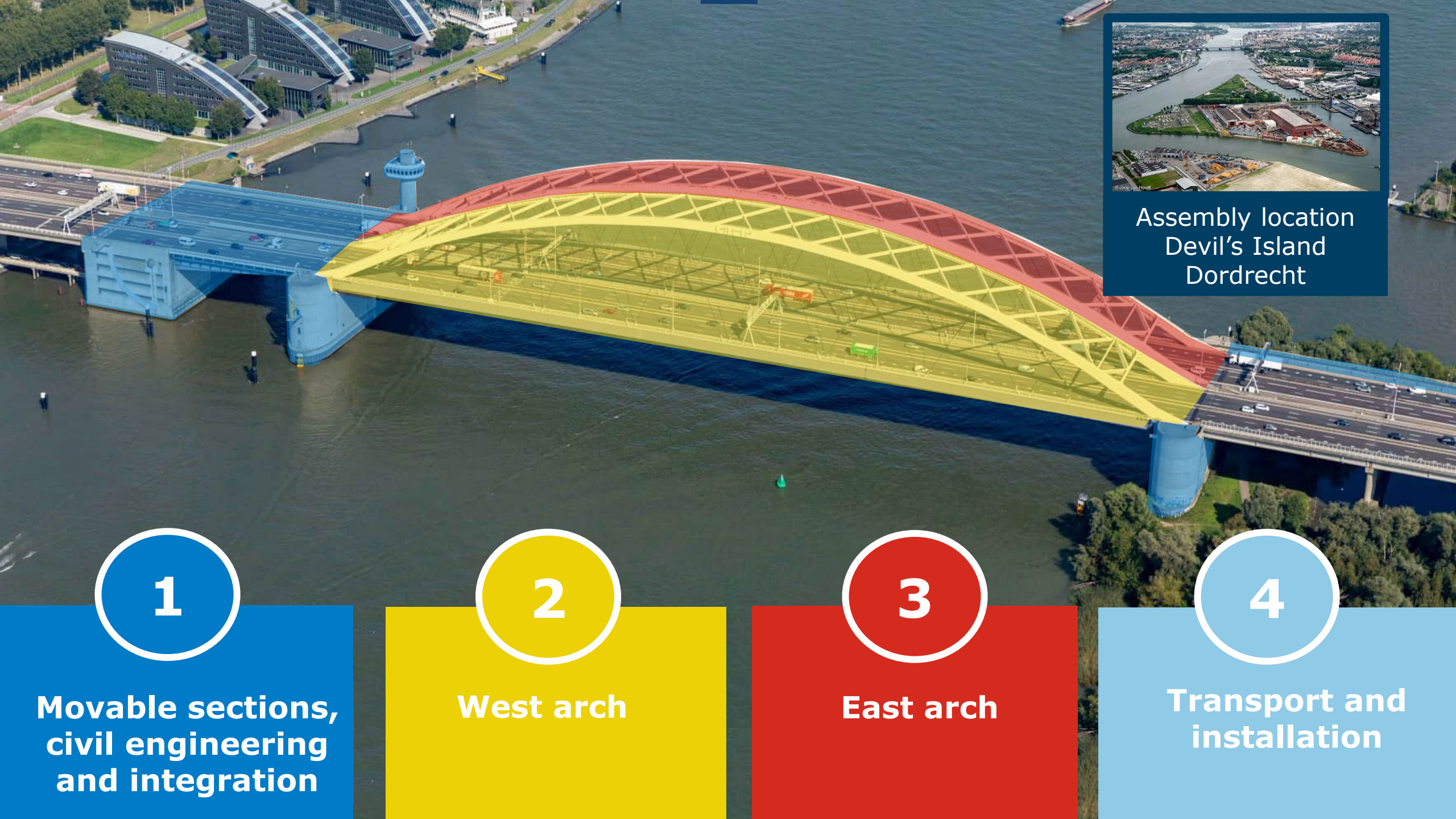
Contract 1: New movable bridges, civil engineering works and integration of the arches

Contract 2: New west arch

Contract 3: Renovation of the existing west arch as the east arch

Contract 4: Transport and installation of the arches





Assembly location
Devil's Island
Dordrecht

1

Movable sections,
civil engineering
and integration

2

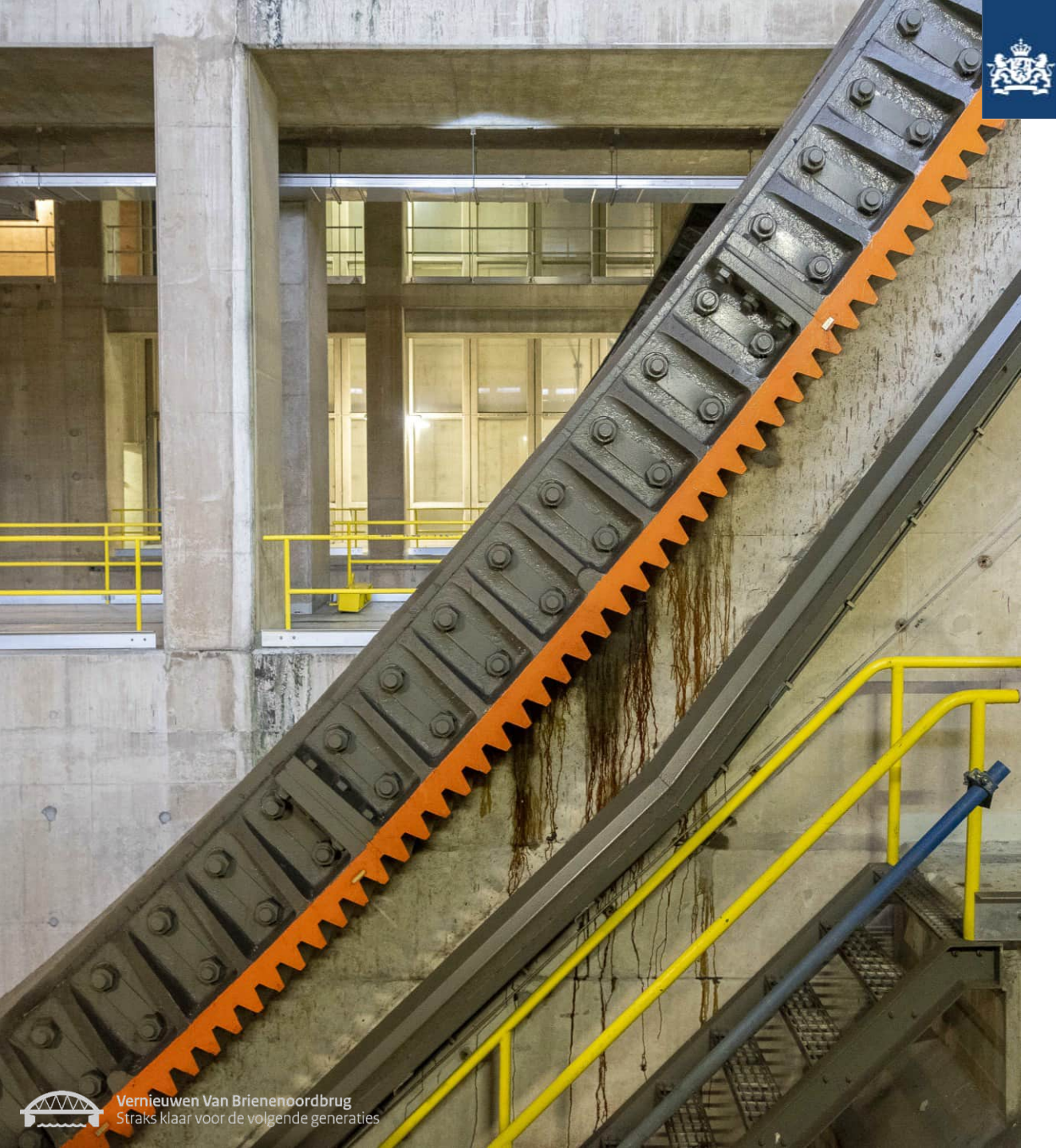
West arch

3

East arch

4

Transport and
installation



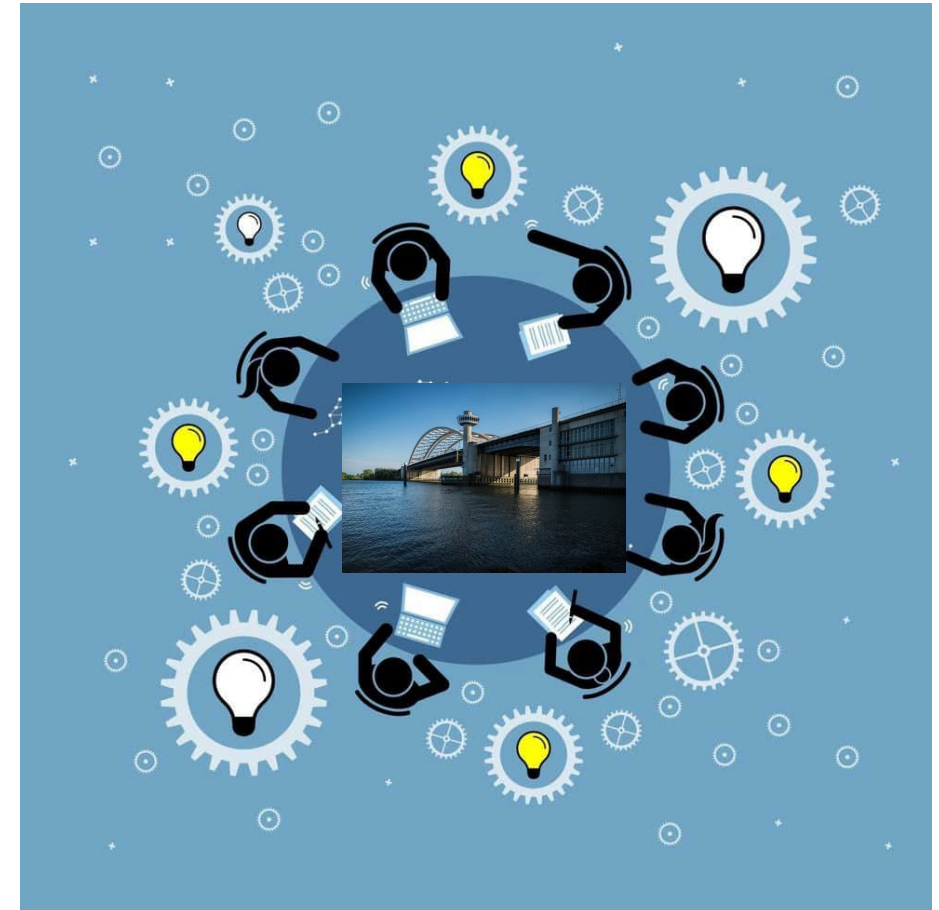
RWS as integrator

- Proactive, goal-oriented culture of collaboration
- RWS is responsible for interfaces
- The market supports this approach

RWS as integrator

Two coordination agreements:

1. Between contracts C1 up to and including C4; for Contract 2 this concerns design coordination
2. Between C2, C3, C4 and Devil's Island; this agreement concerns coordination of construction activities on Devil's Island. Contract 2 serves as the coordinating contractor





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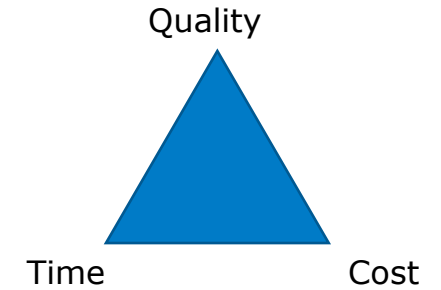


Regarding Contract 2:
Construction of the
new west arch



Project objectives

1. Achieving optimal technical quality within the time and cost constraints
2. Managing the interfaces with the other contracts
3. Collaborating professionally with the market to utilise knowledge and expertise
4. Working safely





E&C contract

Based on the project objectives, we have sought to draw up an attractive E&C contract with a limited risk profile

In the following slides, we outline how we achieve this





Input from interviews with Infrastructure Task Force

Steel construction companies often (have to) work in partnership with civil engineering contractors, with sometimes uneven distribution of turnover and risk

- Contract 2: monodisciplinary work (scope is steel construction works)

Big overhead (related to IPM roles)

- Contract 2: cannot be entirely avoided; however, the core team is limited in terms of roles





Input from interviews with Infrastructure Task Force

Focus of RWS on processes

- Contract 2: limit process requirements and verifications. Better balance between control and workload in relation to processes and evidence

ROK 2.0 increases costs and introduces risks due to differing interpretations of requirements.

- Contract 2: ROK 2.0 is the contract and governance framework for complex infrastructure RWS projects. All ROK 2.0 requirements relating to design have already been incorporated into the Detailed Design. The interpretation of ROK 2.0 implementation requirements can be clarified by RWS during the dialogue phase so that there are fewer 'surprises' after the contract has been awarded.





Input from interviews with Infrastructure Task Force

High transaction costs

- Contract 2: adequate reimbursement of tender costs (900,000 euros per tenderer)

Risk profile

- Contract 2 – Key aspects:
 - No transport of the arch to the Van Brienenoord Bridge
 - RWS will provide an assembly location
 - Very limited stakeholder management (RWS will secure the building permit)





Risk provision for price increases

Risk of price increases for steel and labour covered by a risk provision:

- 80% of the contract sum
- The breakdown is to be determined by mutual agreement





Insurance

RWS has two insurance policies for the entire Brienenoord Bridge Renewal project:

1. CAR insurance
2. Transport insurance (for the transport of the arches)





Limited process requirements

- RWS is looking for a better balance between project governance and control on the one hand, and the effort required for processes and verification activities on the other.
- This has resulted in a 'light' version of the process requirements





Devil's Island

- RWS will provide an assembly site (Devil's Island)
- This construction site has already been fitted out with (un)loading quays and is already equipped with foundations for assembly of the bridge

Ahead of the announcement of the tender for the construction of the new west arch of the Van Brienenoord Bridge (31213788), the contracting authority wishes to inform interested parties of a key principle for this tender, which was not yet known at the time of the market consultation for this contract (18 March 2026):

The contractor is obliged to assemble the new west arch of the Van Brienenoord Bridge from at least five arch segments and at least five deck segments (in accordance with the construction staging drawings) at the Devil's Island site made available for this purpose by Rijkswaterstaat.





Interfaces

- There are overlaps with other contracts within the Brienenoord Bridge Renewal project
- RWS is taking on the role of integrator in this regard





Eligibility requirements

a. During the ten-year period preceding the deadline for receipt of requests to participate, the contractor must have carried out at least one contract in the construction sector (civil engineering, building construction, building services engineering) with an agreed contract sum or invoiced amount equal to or greater than 40 million euros (excluding VAT), in which the contractor was responsible for the day-to-day organisation and management of the contract (project management) and bore ultimate responsibility to the client for the execution of the contract. The contract was carried out in a professional and proper manner, and the work was completed within the agreed timeframe (including any granted extension of the completion deadline), or an equivalent action took place.



Eligibility requirements

b. The contractor must have designed and manufactured a steel road bridge or a steel railway bridge with a main span of at least 120 metres during the ten-year period preceding the deadline for receipt of applications to participate.



How to win the tender

- Submission of a tender price
- Submission of qualitative criteria
- BPKV (Best Price–Quality Ratio)



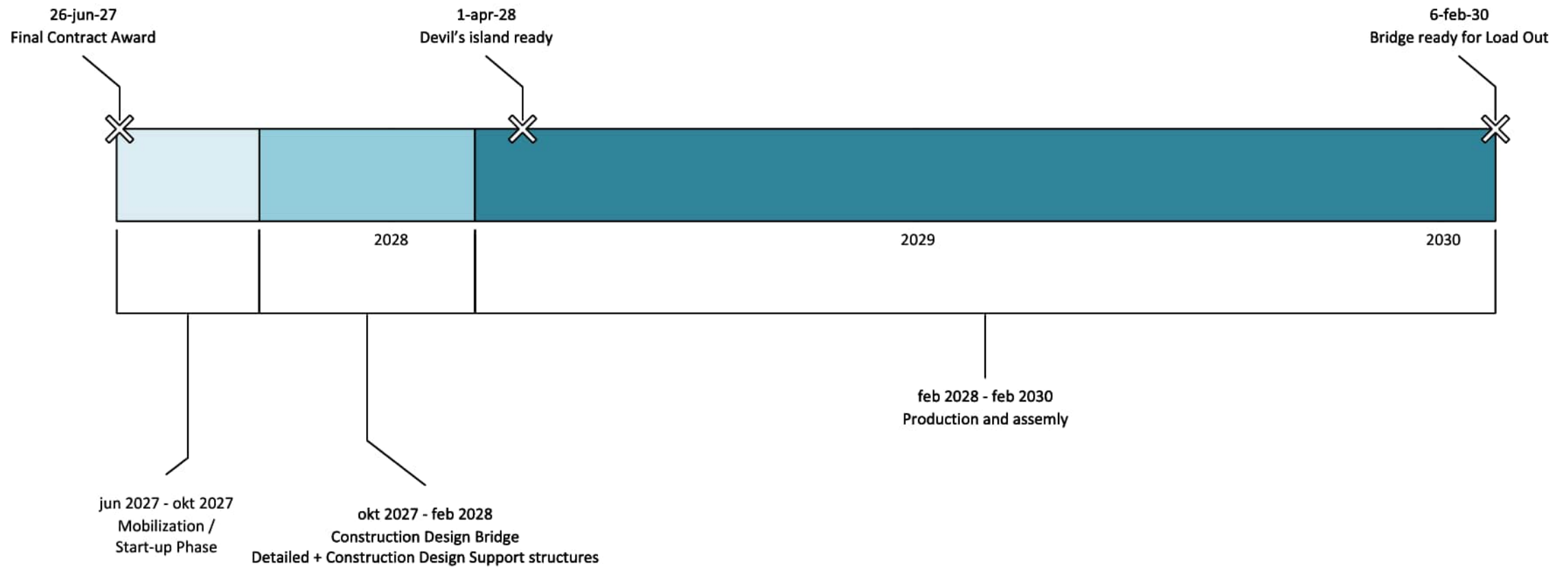


BPKV criteria

1. Risk Management Plan addressing the following risks:
 - Technical quality
 - Site preparation and enabling works at Devil's Island
 - Interfaces between Devil's Island, Contract 1 and Contract 4
2. Robust Project Schedule Plan
3. CO₂ Performance Ladder

The required performance level may be determined during project execution





Planning





Collaboration



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I'LL FOLLOW YOU
TO SEE IF IT'S
GOING WELL.

AH, GREAT!

GOOD THAT
WE'RE WORKING
TOGETHER!



Projectsucces

Evaluations show that:

A project is only a success **for all parties** involved when there is good cooperation



CAN YOU
DO IT CHEAPER?

OF COURSE -
WHICH CARD
SHALL WE
TEAR UP?



Fair pay for fair work

Fair pay... → the contract price is realistic and allows for a reasonable profit

... for fair work → what is delivered meets the agreed specifications



THAT'S RIGHT,
AND NOW
DON'T WALK AWAY

AND YET ARTICLE 4,
SECTION III,
SUB-SECTION f
STATES THAT...



Interests

- We have shared interests
- And we have our own interests
- Only if we are open with one another about this, we can help one another
- Don't walk away from a problem just because it isn't your problem; problems belong to all of us



Challenges

- Challenges? Let's talk!
- It's precisely when things get difficult that you need to have a conversation

Follow up programme

Project scope

Design responsibility

Design process

Construction staging

Interfaces

Devil's Island

Opportunity for questions

Closing and network drinks





Assembly site
Devil's Island
Dordrecht

1

Movable bridge systems, civil engineering works and arch integration

Civil works | bridge movable parts (+ transport and installation) | receiving of the arch bridges | E, IA, ME | TMS, asphalt works | cycle path | maintenance of movable systems/control systems, TMS | traffic staging | arch strengthening works

2

West arch

Construction of the new western arch | strengthening works / temporary support structures

3

East arch

Refurbishment and reuse of the existing west arch as the east arch

4

Transport & Installation arch bridges

Transport and installation of the arches | design advisory and review of the arches (incl. strengthening works) | advisory services for landing facilities at the assembly site



Project scope

2

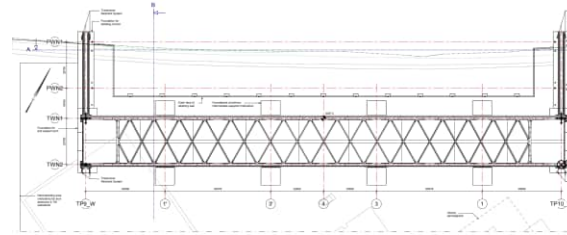
Design



Advance the provided Detailed Design to Execution Design

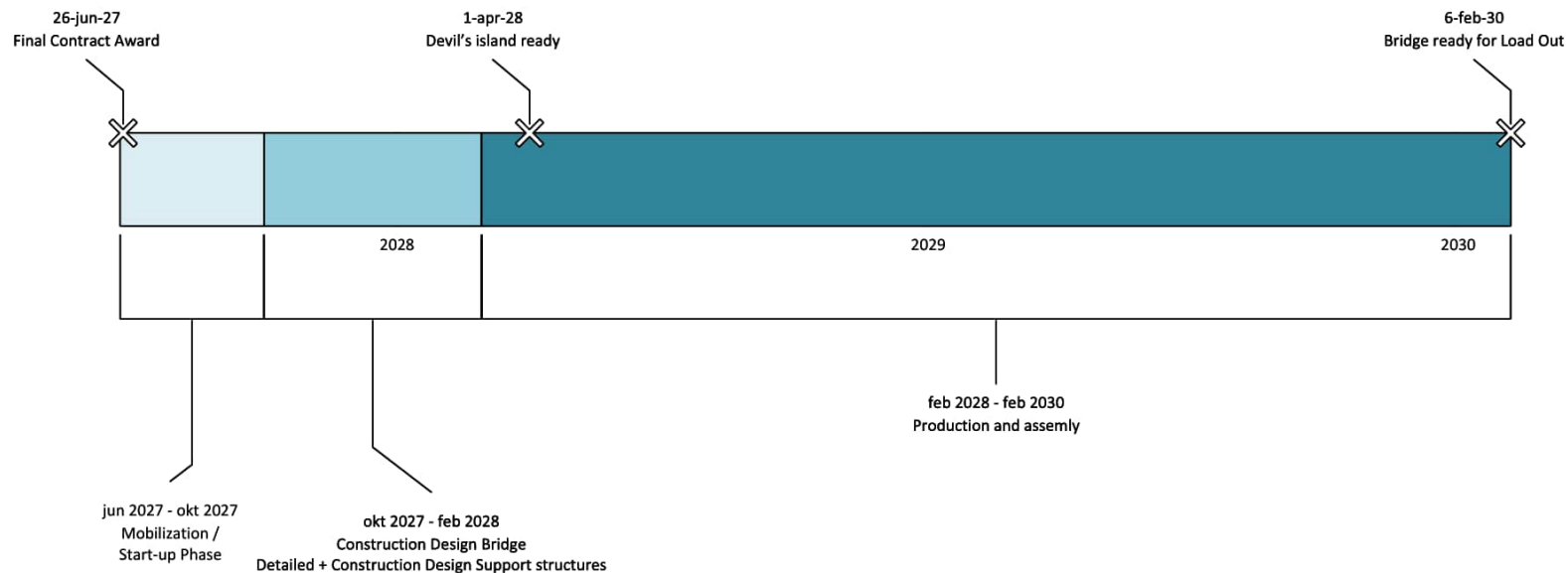
Engineering and design of the temporary works

Execution of the Works



Construction of the new west arch in the factory and assembly on Devil's island

Management of interfaces with contract 1 and 4



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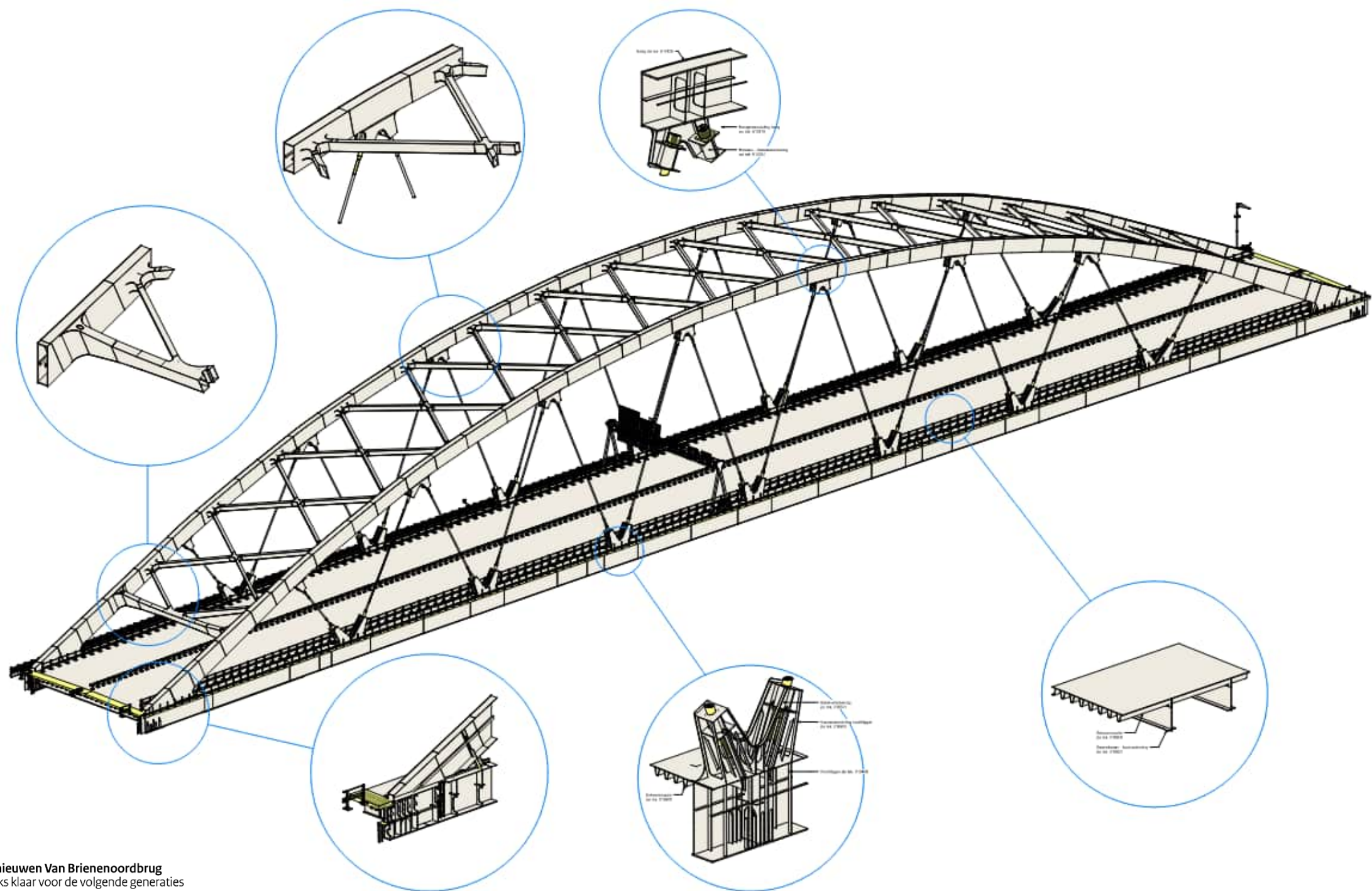
Bridge technical numbers

- Span length = 300m
- Width = 30m
- Height = 44m
- Weight = 7550t

Component	Description	Quantity
Steel bridge deck	24mm steel deck, 8mm troughs	2300 [tonnes]
Arches	Steel (S355)	2250 [tonnes]
Wind bracings	Steel (S355)	300 [tonnes]
Main girders	Steel (S355)	1550 [tonnes]
Cross girders	Steel (S355)	800 [tonnes]
Hangers and hanger connections	Hangers (parallel strand system)	350 [tonnes]
Total steel weight		7550 [tonnes]

1st VBB	5500t	Heavier than the west arch
2nd VBB	4700t	The lightest arch
New arch	7550t	Designed to meet the new-build requirements







Design responsibility and collaboration

- Everyone is responsible for their own design:
 - Client is responsible for the provided Detailed Design
 - Contractor is responsible for the designs they produce
- Collaboration whereby:
 - We work together to achieve an optimal design, review and acceptance process

Contractor is *not* asked to take over the responsibility for RWS's designs





Design process

- Detailed Design of the new west arch → Contractor to develop the Detailed Design into Execution Design
- Construction staging
- Contractor designs all temporary structures
- Contractor create a Detailed Design:
 - Hangers





Execution of the Works

- Construction staging
- Interface
 - Contract 1
 - Contract 4
 - Devil's Island

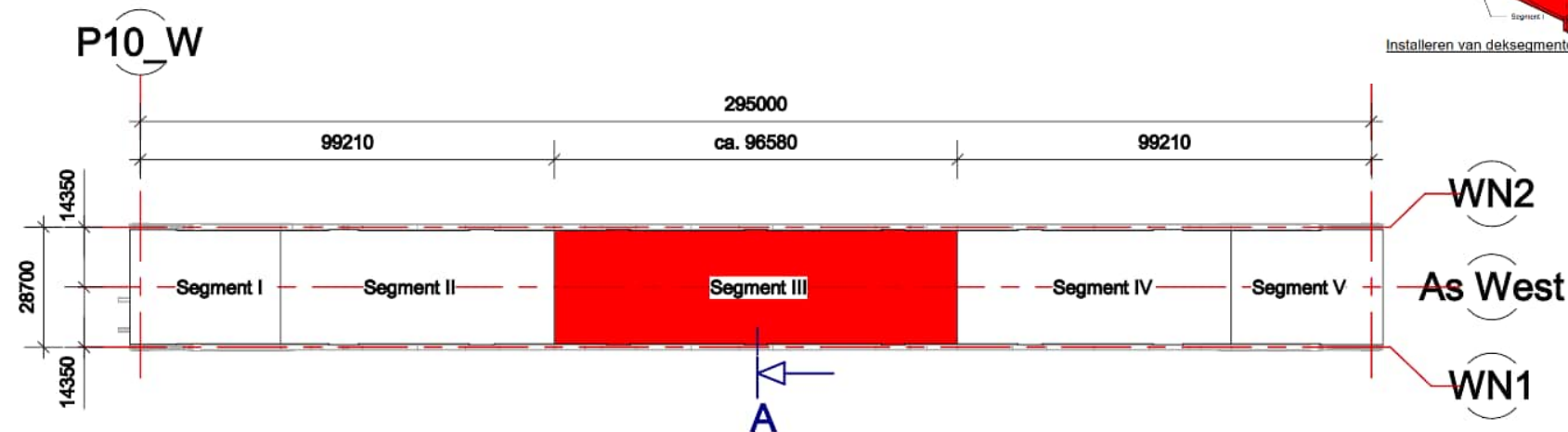
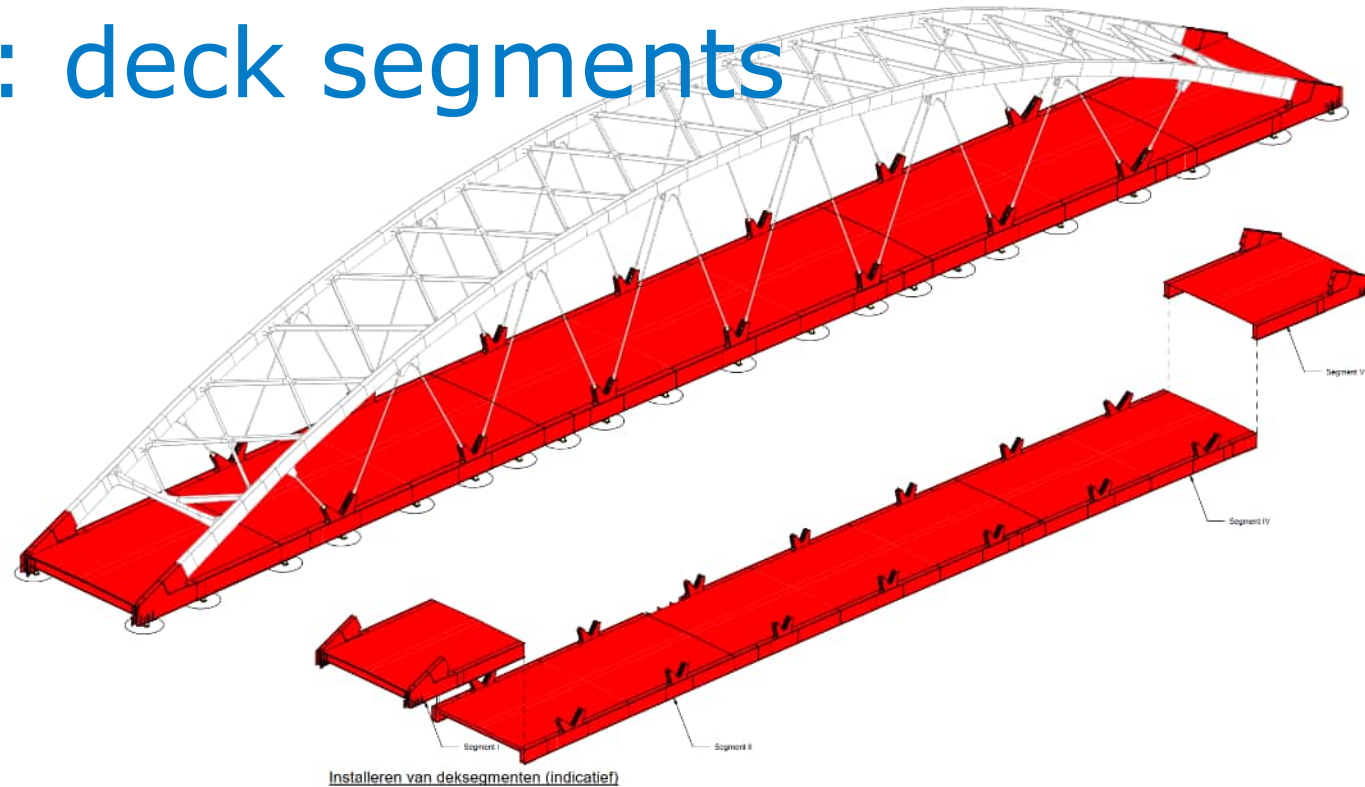


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Construction staging: deck segments

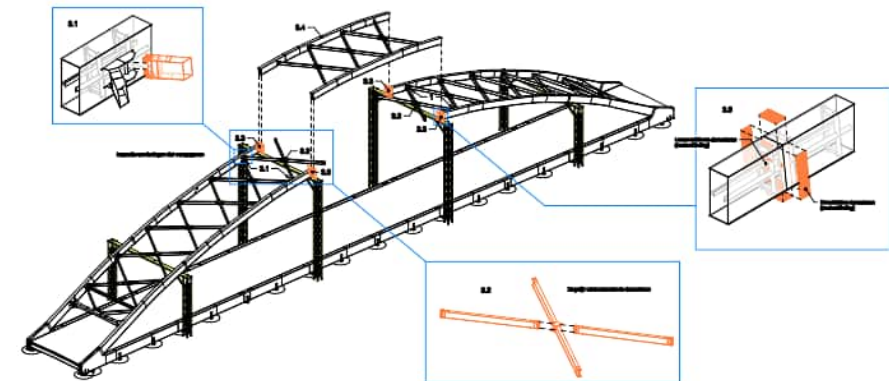
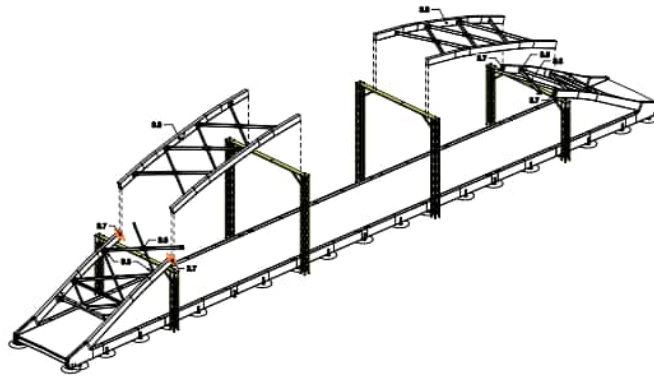
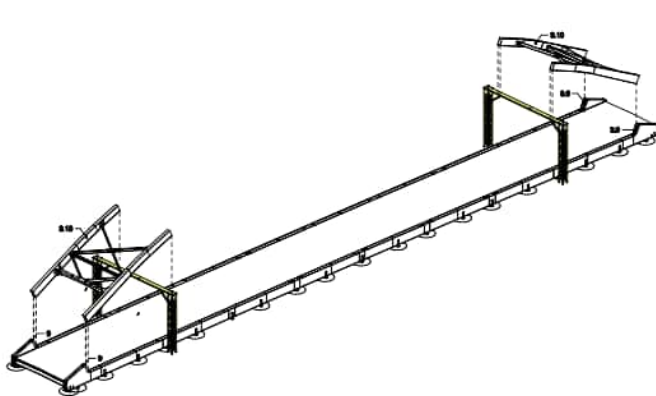
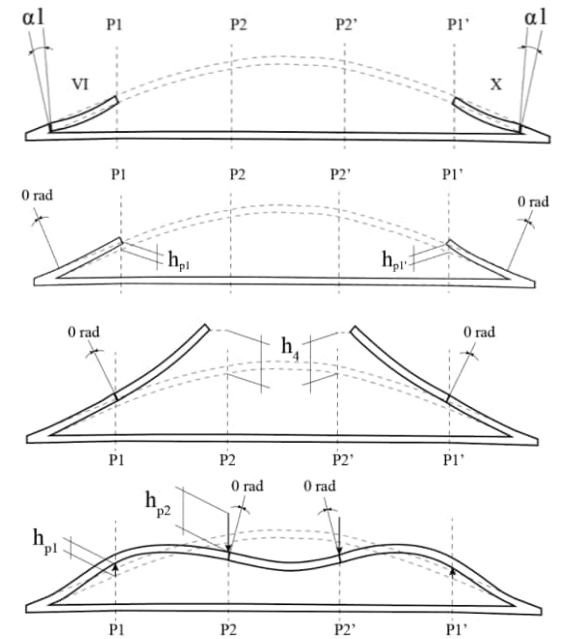
Deck segments	Length [m]	Width [m]	Weight [t]
III	96.6	31.4	1450
II & IV	65.6	31.4	800
I & V	35.1	31.4	900
Total deck	298	31.4	4850





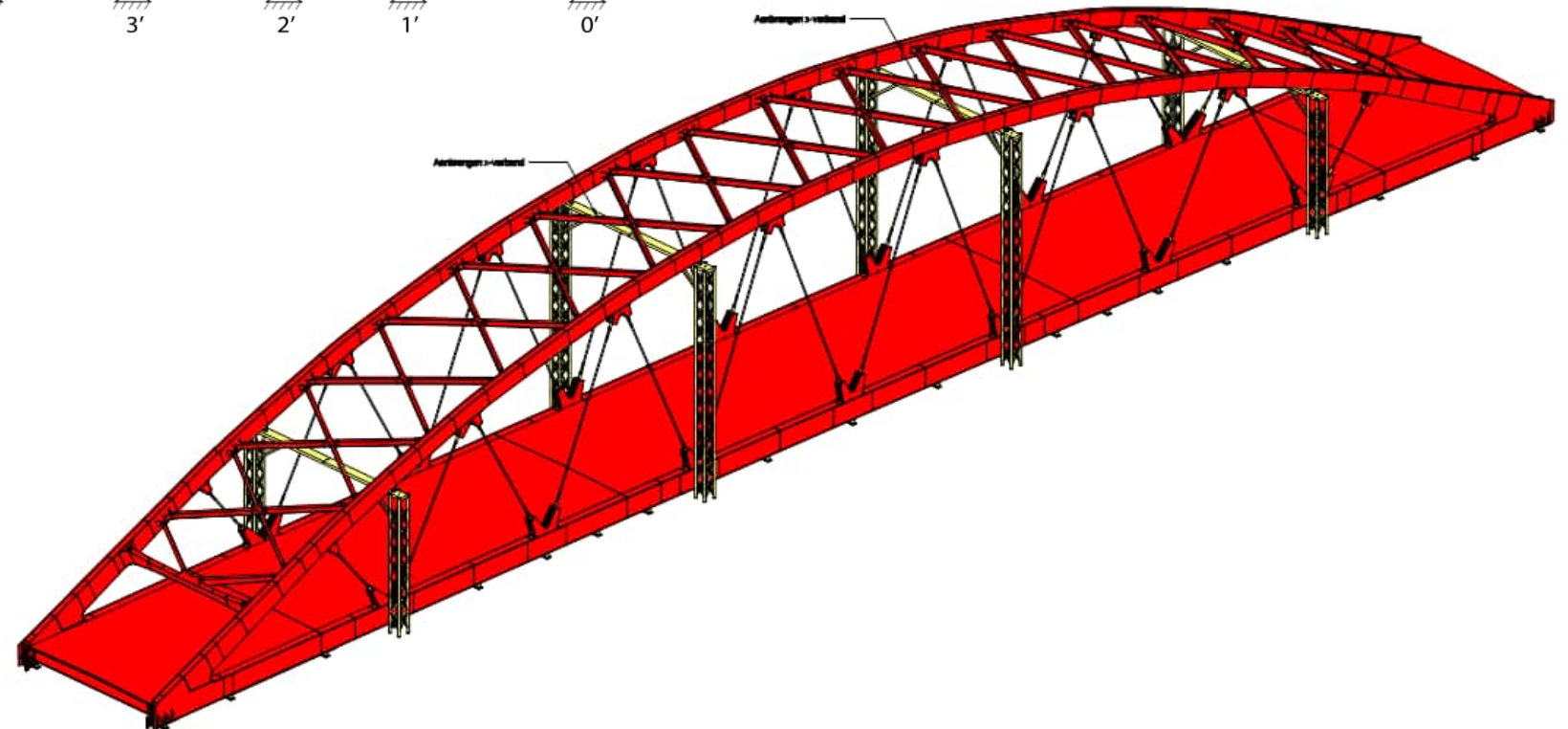
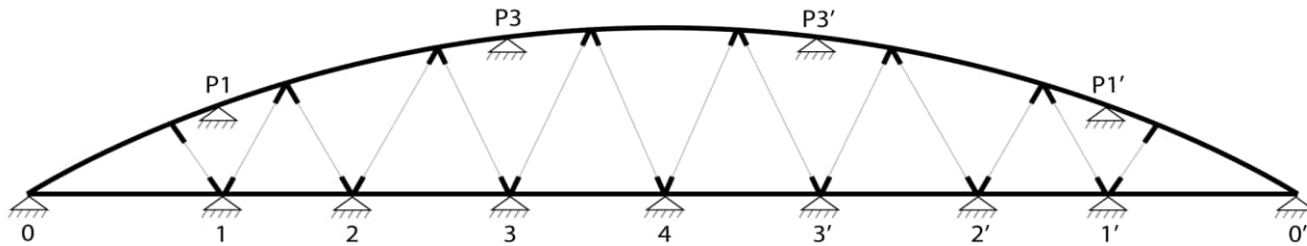
Construction staging: arch segments

Arch segments	Length [m]	Width [m]	Weight [t]
VI & X	49.1	29.9	465
VII & IX	65.6	29.9	590
VIII	65.7	29.9	590
Totall arch	295.0	29.9	2700





Construction staging: support structures



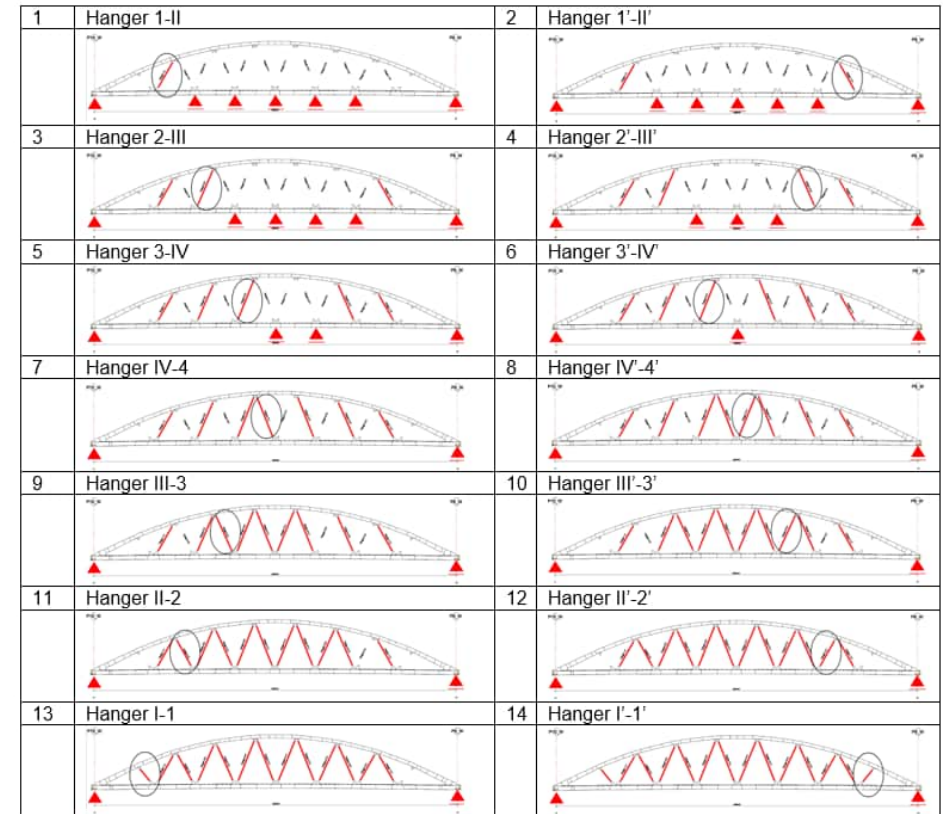
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Construction staging: hangers

Hanger installation procedure developed to achieve the following objectives:

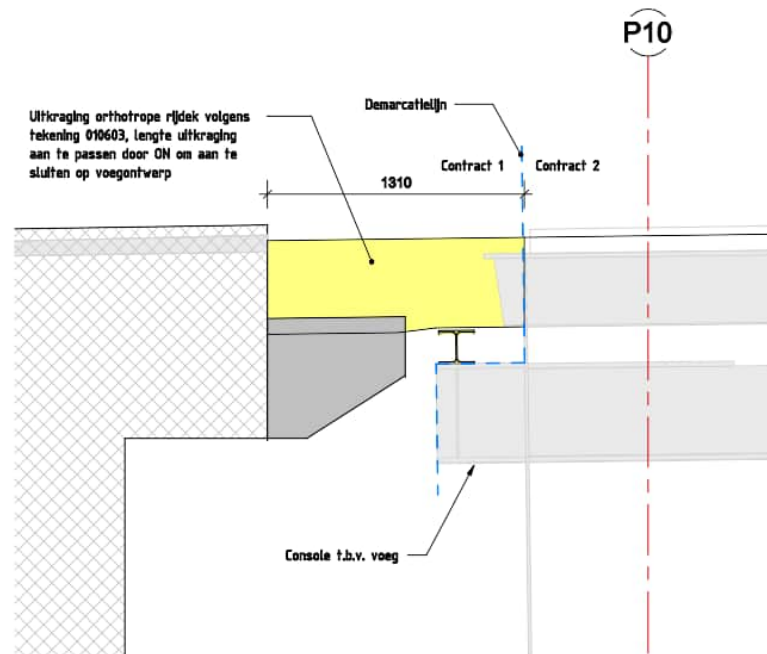
- Multiple load steps are applied to calibrate the structural analysis models and improve the accuracy of the final hanger force distribution for the existing structure
- Adequate clearance between the arch and the main girder is required to enable force transfer in the hangers and to achieve sufficient tension for proper seating of the wedges
- The magnitude of the hanger forces is controlled to prevent overstressing of the structure





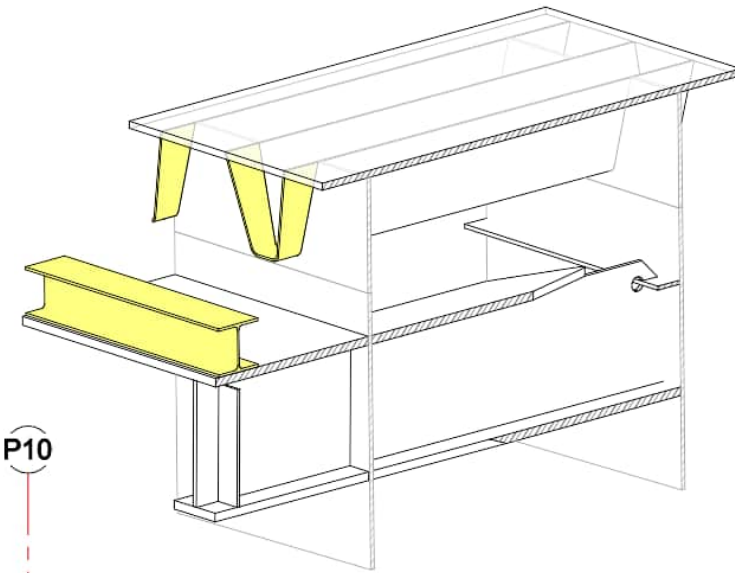
Interface Contract 1

- Expansion joints
- Bearings
- Hand railings
- Cables & ducts (utilities)
- Bridge road furniture
 - Traffic barriers
 - Portal frames
 - Barrier gate/cabinet
 - Light poles
- Asphalt



Principe doorsnede – Voegovergang noord

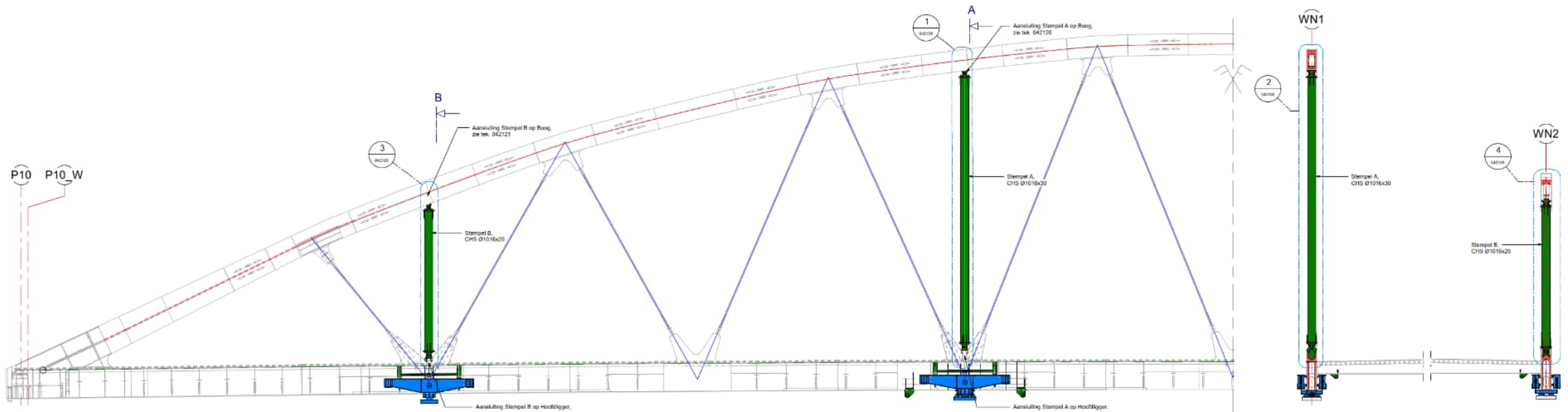
schaal: 1 : 20





Interface Contract 4

- Transport strengthening & facilities
- Construction site





Circular Construction Site Devil's Island (CWD)



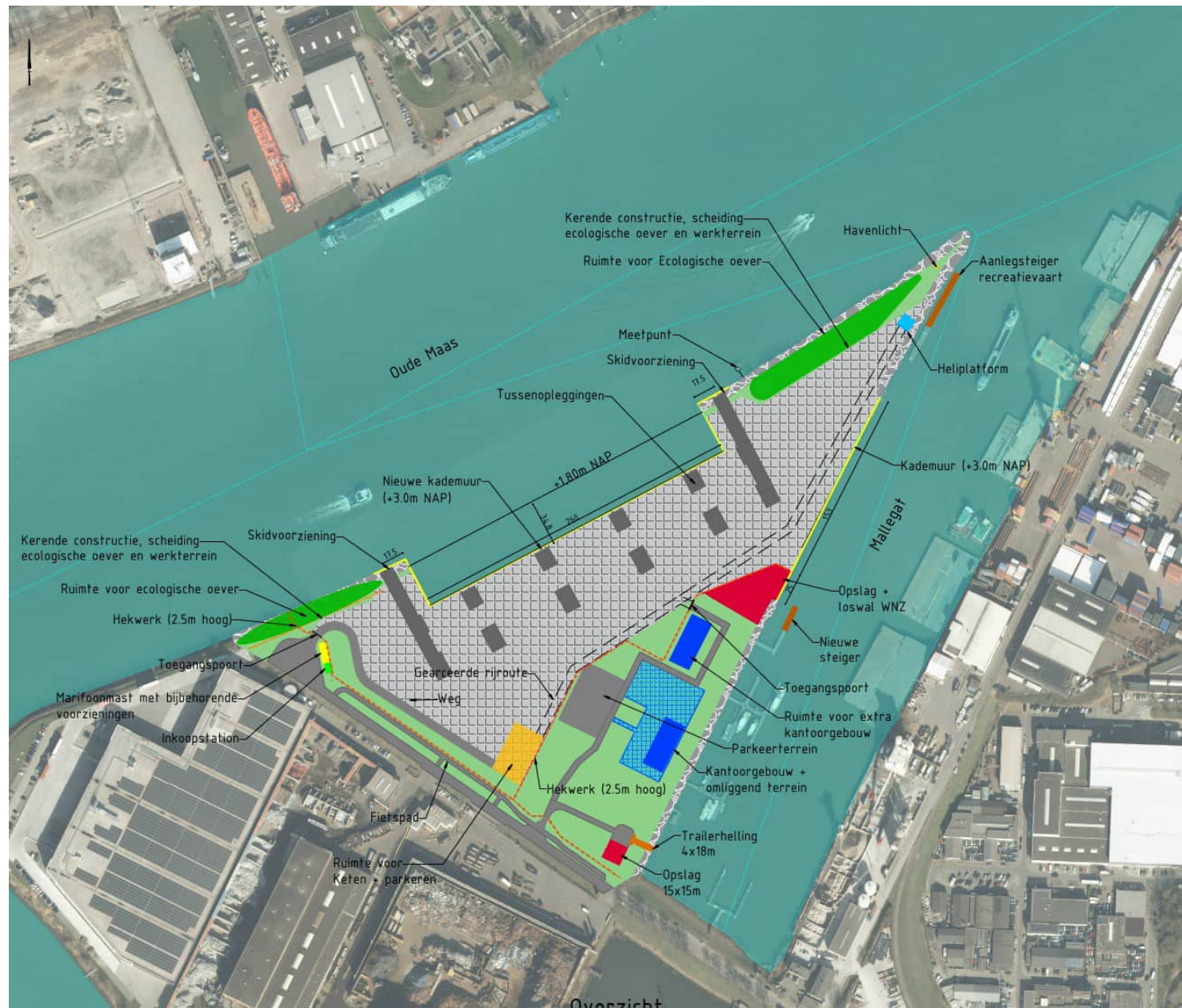


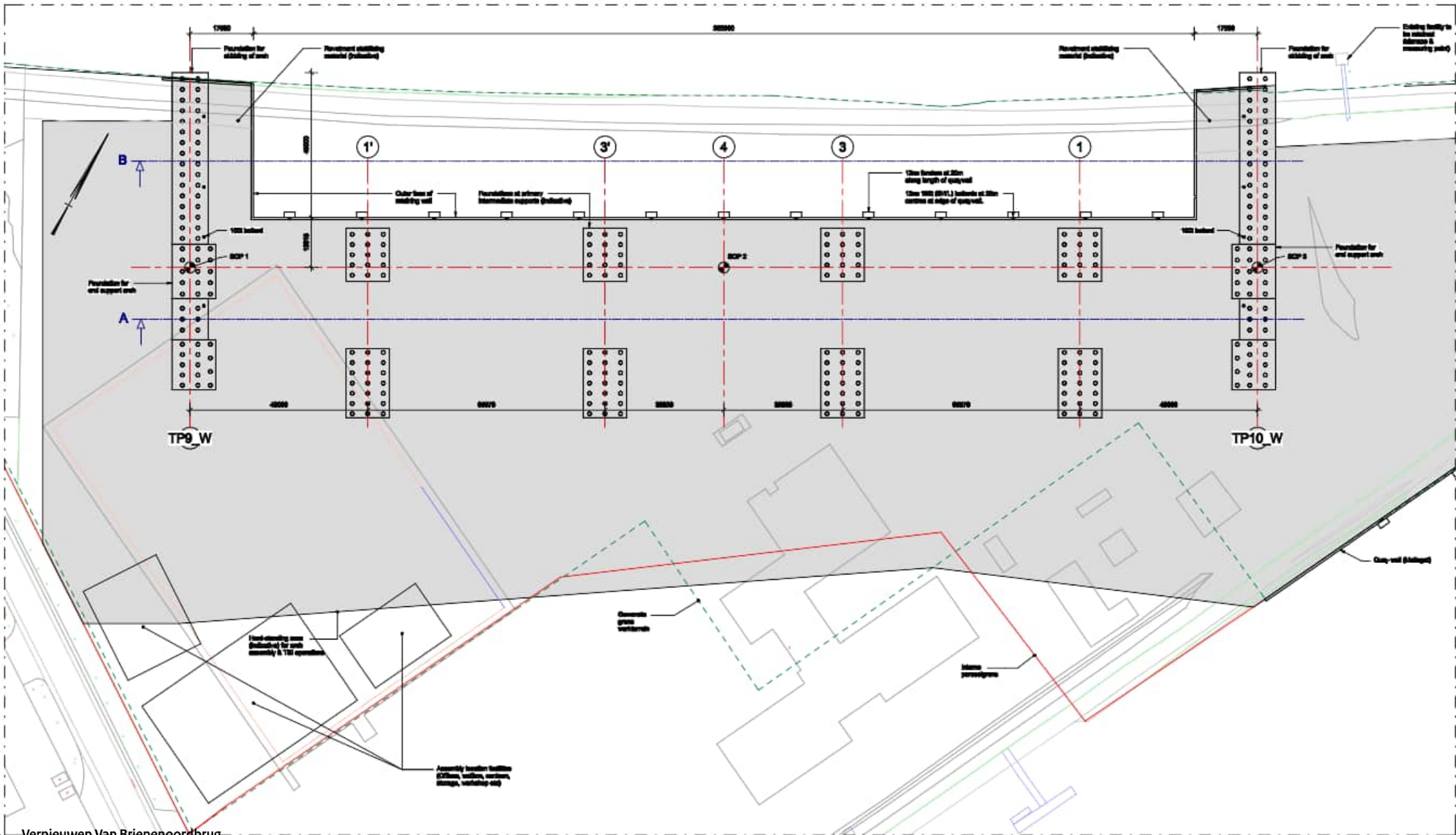
Devil's Island (CWD)

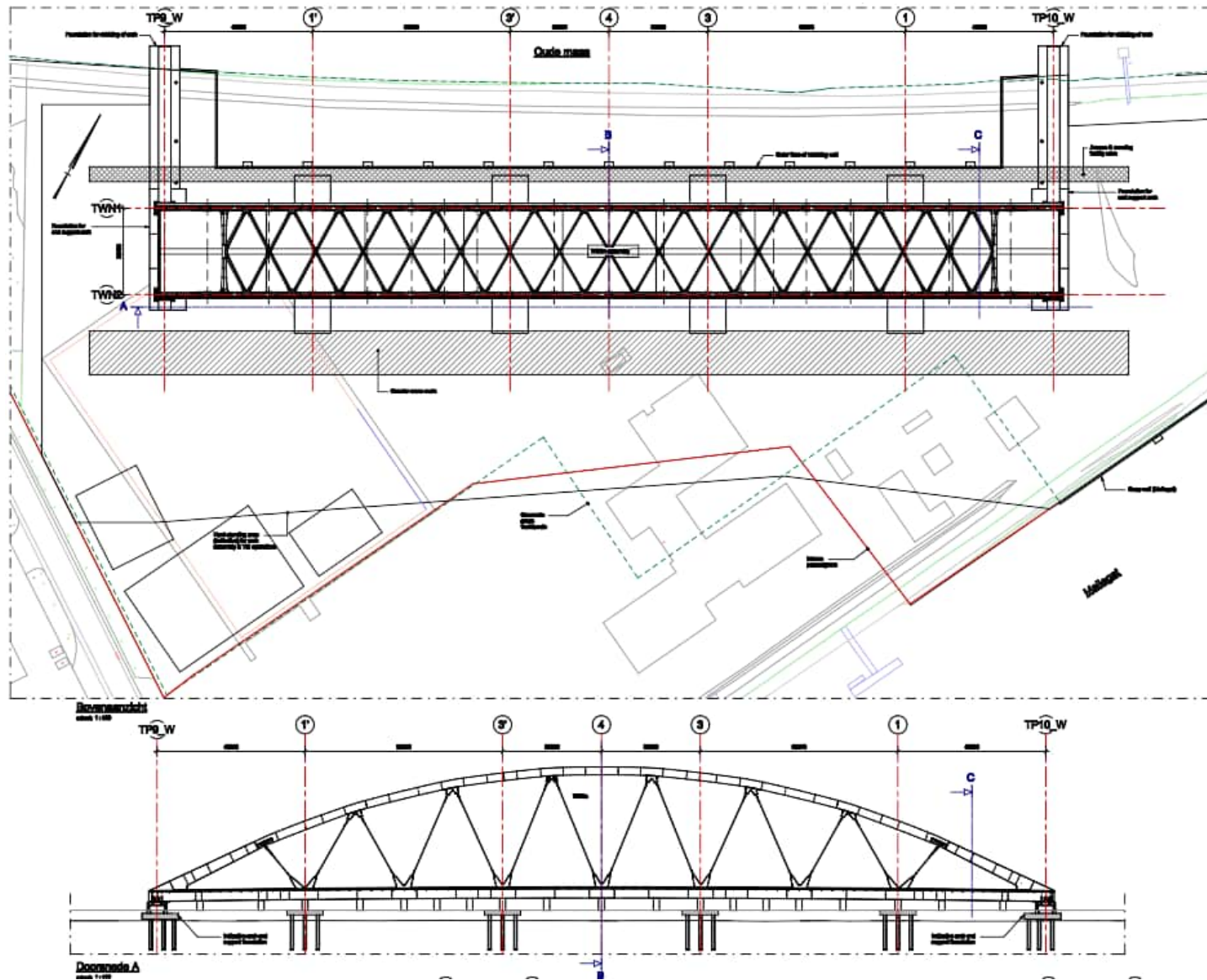
- CWD is construction site
- Building permit granted
- Delivery bridge segments
- Assembly
- Maintenance
- Load-out



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After today

- Intended start of tendering process:
September 1, 2026





Closing Remarks and Questions



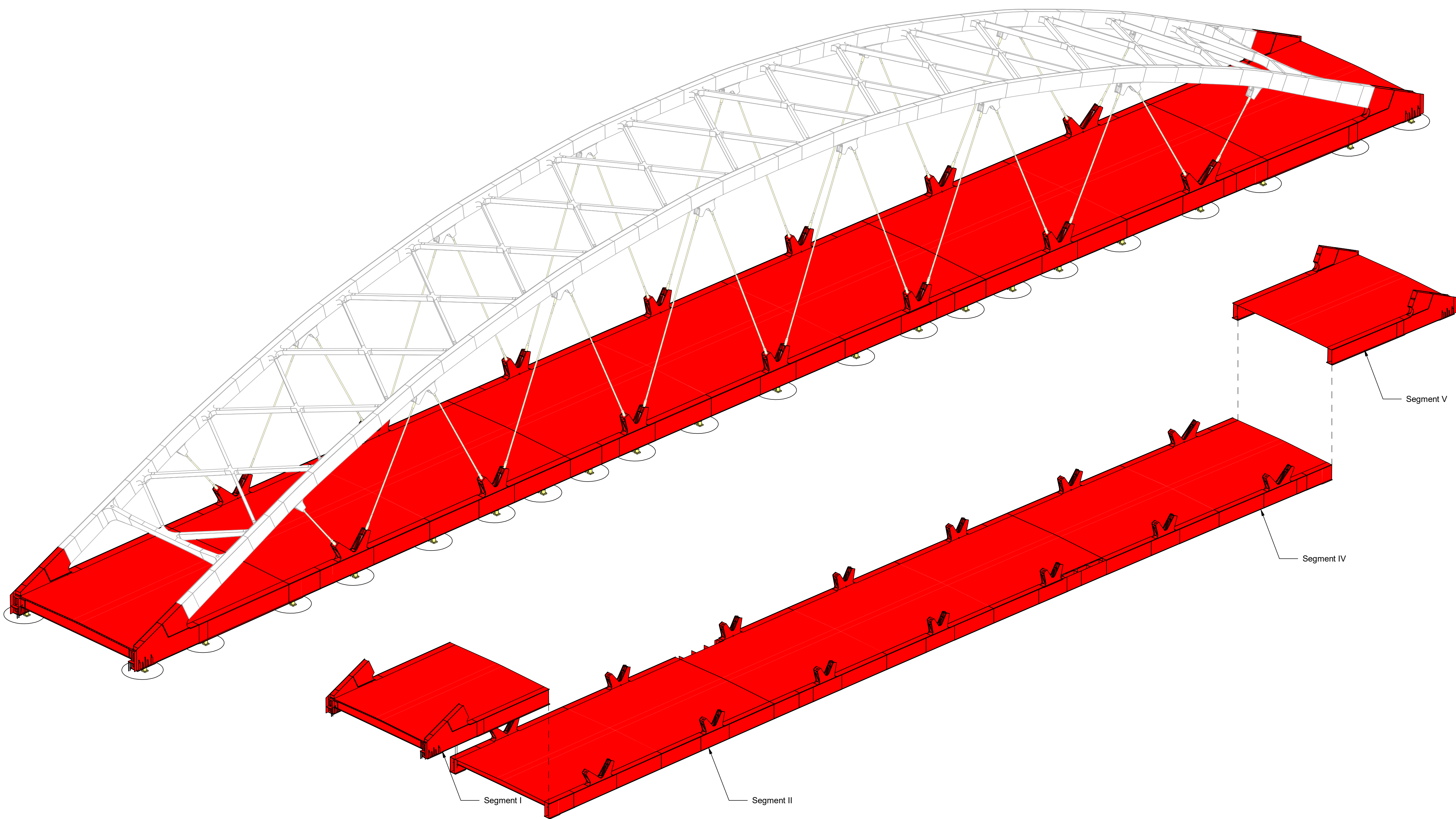
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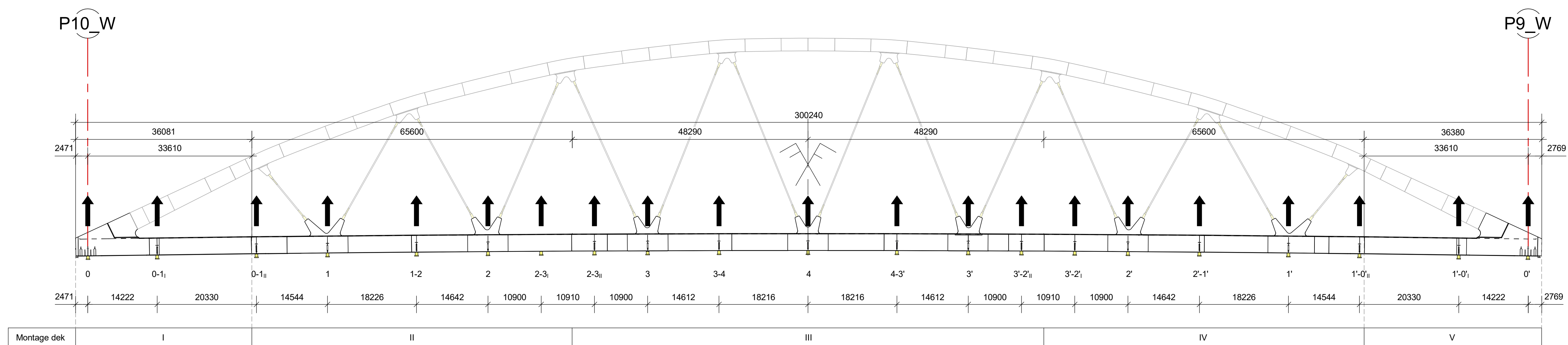
- During the tender process, during the dialogue and specialist meetings, in the contract documents, in the documents to be exchanged and in formal consultations during implementation the official language is Dutch
- To take part in the tender, you must access the system (and submit your documents) via TenderNed
- If you have never worked with TenderNed before and have any questions about how it works, we can explain this to you in a one-to-one session (mail to VBB@rws.nl when interested)
- We will **NOT** discuss substantive matters, but purely procedural issues to help you familiarise yourself with TenderNed



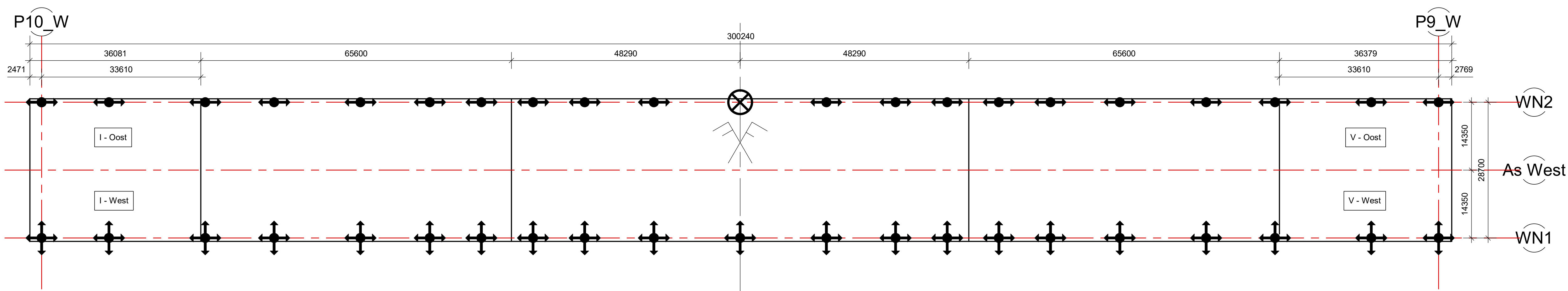




Installeren van deksegmenten (indicatief)



Zij aanzicht Westzijde
schaal: 1 : 500



Vrijheidsgraden oplegschema
schaal: 1 : 500

Werkzaamheden

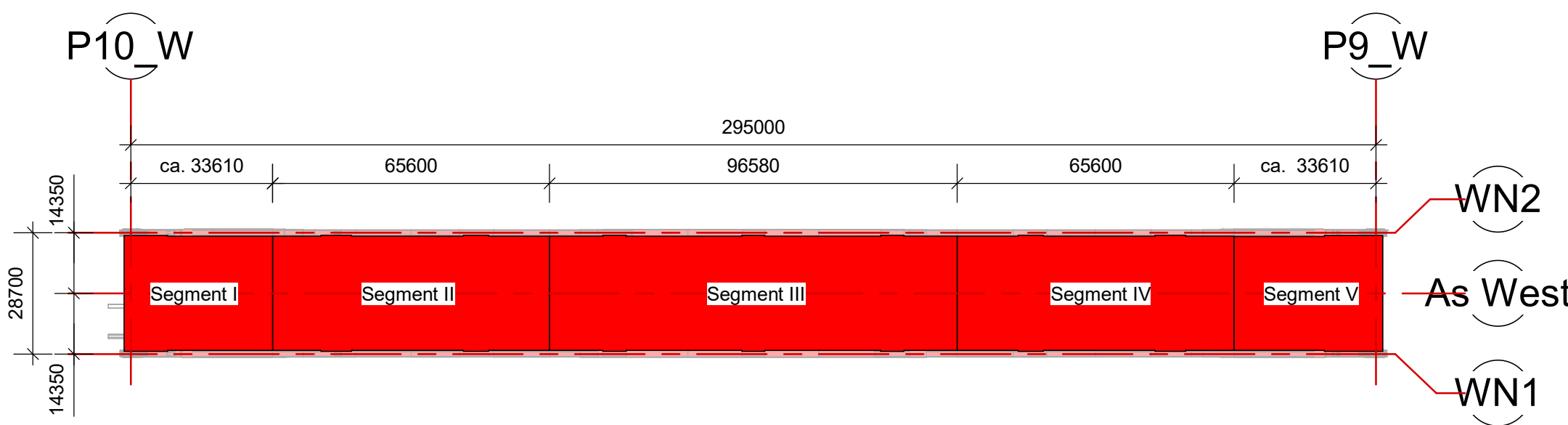
Activiteiten:

Verbinding van dek segmenten II met I en IV met V:

- 1.4(a) Dek segmenten I en V opgelegd op voorgeschreven opleggingen (geometrie volgens bouwtekening)
- 1.4(b) Uittijnen van de uiteinden van de hoofdliggers
- 1.4(c) Uitvoeren lassen in dwarsrichting van dekplaat en troggen
- 1.4(d) Uitvoeren lassen in dwarsrichting van hoofdliggers

Activiteiten parallel:

Verbinding van dek segment I met II tegelijk met V met IV.



Tabel Oplegreactie Hoofdligger steunpunten (kN)

Steunpunt	0	0-1i	0-1u	1	1-2	2	2-3i	2-3u	3	3-4	4
1.2(e)	-	-	-	-	-	-	-	777.5	1024	1168	1205
1.3(a)-(d)	-	-	615.5	1329	1188	1006	779.5	778.5	1024	1168	1205
1.4(a)-(d)	1522	1880	844.5	1295	1192	1086	700.5	695	1106	1165	1210

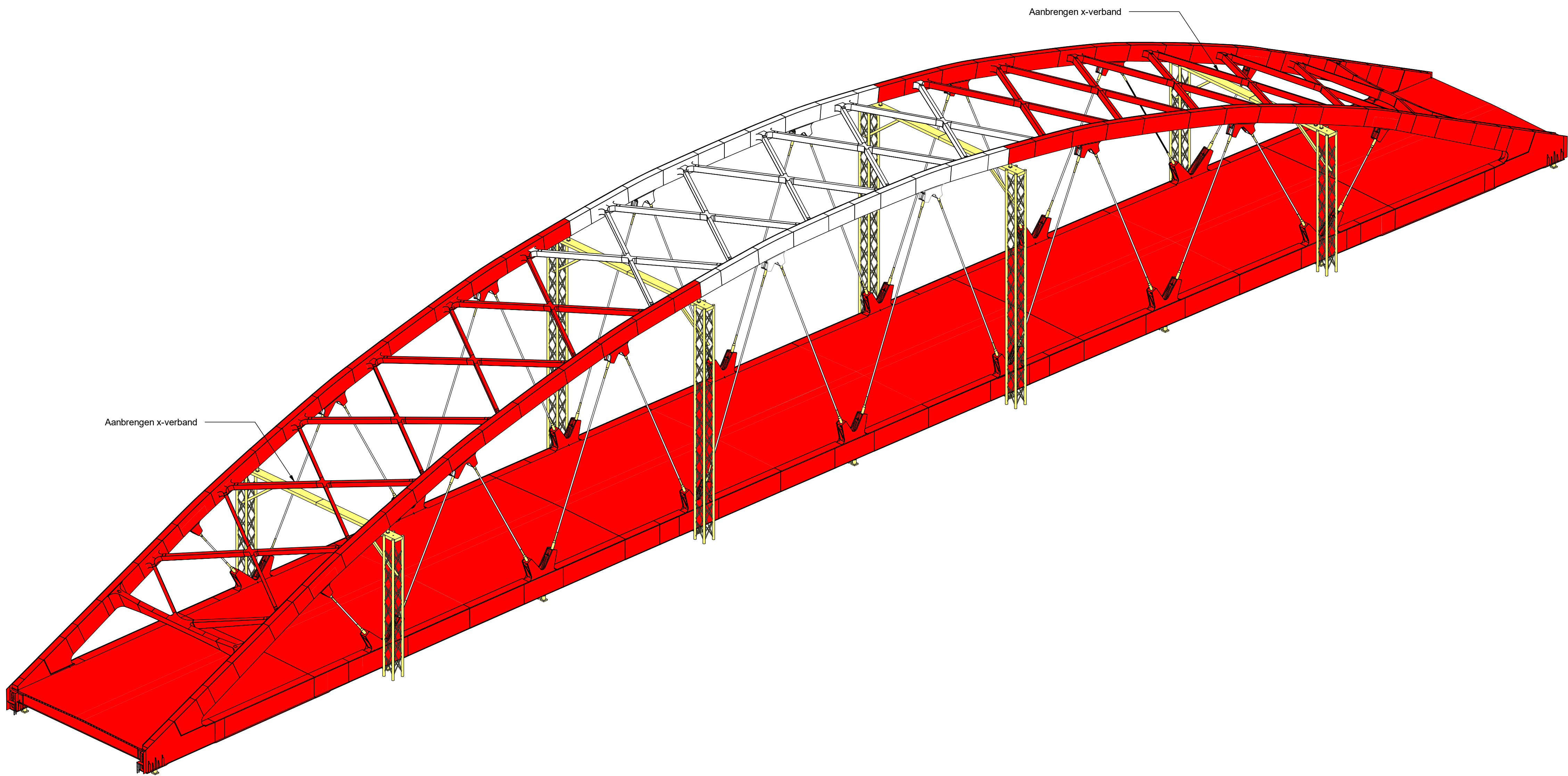
Tabel Benodigde kracht om de vrije uitenden van de hoofdliggers op een lijn te brengen (kN)

Hoofdligger uiteinde	Segment I-II	Segment II-III	Segment III-IV	Segment IV-V
1.3(a)-(d)	-	210	210	-
1.4(a)-(d)	185	210	210	185

Legenda

- Betreffend onderdeel
- Overige onderdelen (grijs)
- Nieuw staal
OG=DO, ON=UO
- OG = (functionele specificatie,
ON=VO/DO/UO
- Asfalt
- Gemonteerd onderdeel
- Vrije oplegging in alle horizontale richtingen
- Vrije oplegging in aangegeven horizontale richting (zie pijl)
- Horizontale vaste oplegging

2.0	01-05-2023	Aanpassingen krachten tabellen	TvM	KAC	DTJ
1.0	01-11-2022	Definitief	TvM	KAC	DTJ
Rev	Datum	Omschrijving	Get.	Get.	Acc.
Aup Project Titel Renovatie/vervanging Van Briene noordbogen			Opdrachtgever Rijkswaterstaat		
Onderwerp WB8n - Bouwfase 1.4 Verbinding dekconstructie II met I en IV met V			Managing Contractor - RWS Steel Bridge Renovation Rijkswaterstaat, Water Service Infrastructuur PO Box 20000, 3502 LA Utrecht, The Netherlands Grijssteaan 2, 3526 LA Utrecht, The Netherlands		
Formaat A0	Schaal Zie tekening		ARUP Rijkswaterstaat		
Projectnummer 210035-01	Fase 2	Status Definitief	Tekeningnummer 210035-01 - I - 2 - 011004		Revisie 2.0



Werkzaamheden

Activiteiten:

Verbinding van windverbanden bij boog segment splitsing VI-VII en IX-X:

- 2.3(a) Uitlijnen kruis windverband bij boog segment splitsing
- 2.3(b) Uitvoeren lassen tussen boog segmenten en kruis windverbanden

Tabel Oplegreactie Hoofdligger steunpunten (kN)

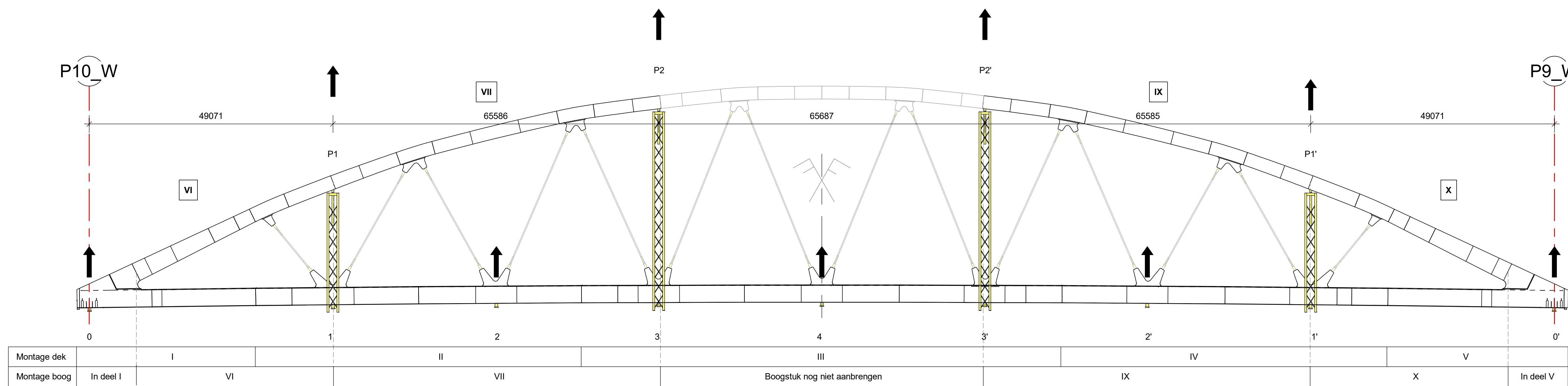
Steunpunt	0	0-1 _l	0-1 _s	1	1-2	2	2-3 _l	2-3 _s	3	3-4	4
1.2(e)	-	-	-	-	-	-	-	777.5	1024	1168	1205
1.3(a)-(d)	-	-	615.5	1329	1188	1006	779.5	778.5	1024	1168	1205
1.4(a)-(d)	1522	1880	844.5	1295	1192	1086	700.5	695	1106	1165	1210
1.5	2571	-	-	3888	-	1982	-	-	2515	-	2279
2.1(a)-(e)	3493	-	-	4267	-	1866	-	-	2536	-	2268
2.2(a)-(e)	3493	-	-	4267	-	1866	-	-	2536	-	2268
2.3(a)-(e)	3493	-	-	4267	-	1866	-	-	2536	-	2268

Tabel Oplegreactie Boog steunpunten (kN)

Stap	P1 en P1'		P2 en P2'	
	Fz (kN) per stap	Fz (kN) cumulatief	Fz (kN) per stap	Fz (kN) cumulatief
2.1(a)-(e)	1120	1120	-	-
2.2(a)-(e)	1467	2587	1424	1424
2.3(a)-(b)	73	2660	1	1425

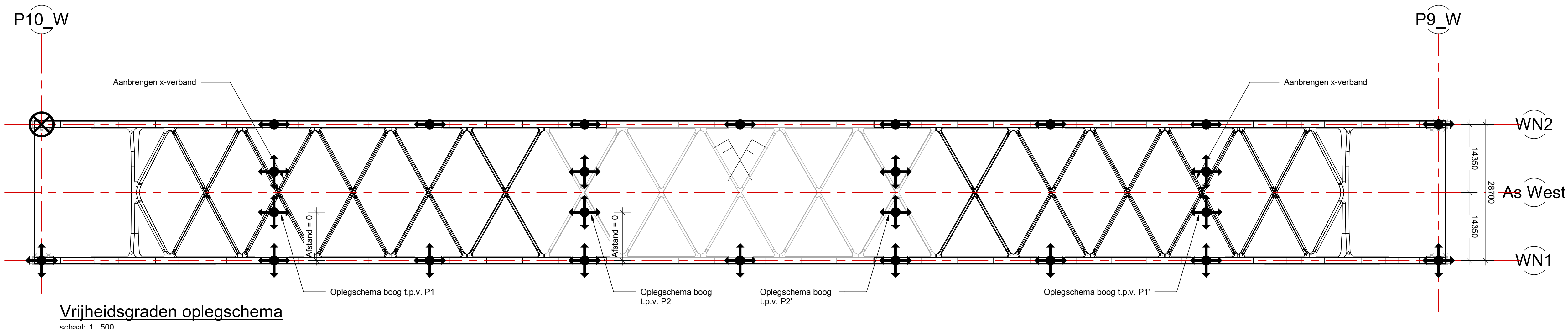
Tabel Boog Vijzelhoogten boven of onder bouwzeeg geometrie. Hoogten afgerond op 5mm nauwkeurig (+ = omhoog - = omlaag).

Stap	P1 en P1'		P2 en P2'	
	Uz (mm) per stap	Uz (mm) cumulatief	Uz (mm) per stap	Uz (mm) cumulatief
2.1(a)-(e)	55	55	-	-
2.2(a)-(e)	0	55	750	750
2.3(a)-(b)	0	55	0	750



Zijaanzicht Westzijde

schaal: 1 : 500



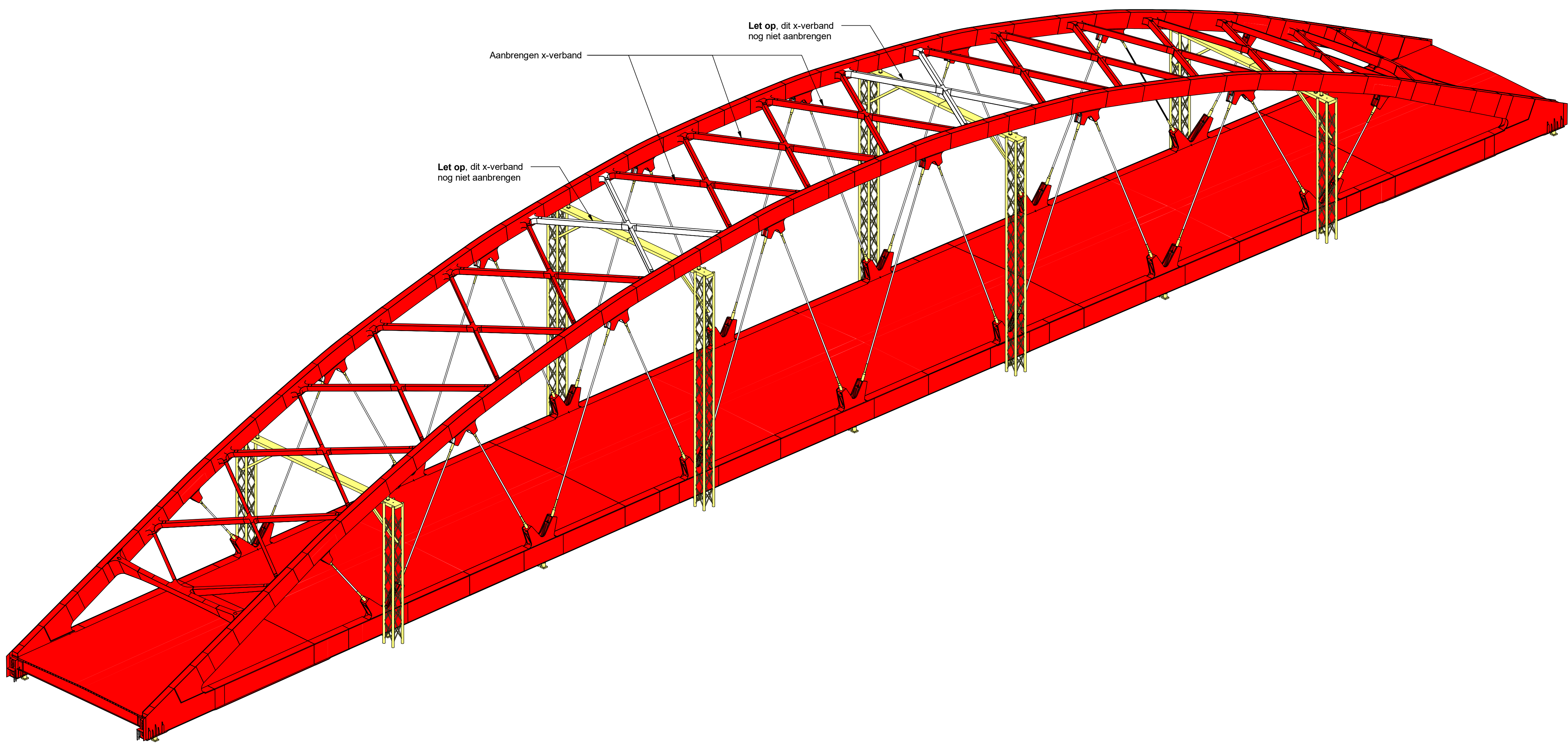
Vrijheidsgraden oplegschema

schaal: 1 : 500

Legenda

- Betreffend onderdeel
- Overige onderdelen (gris)
- Nieuw staal
OG=DO, ON=UO
- OG = (functionele specificatie,
ON=VO/DO/UO
- Asfalt
- Gemonteerde onderdeel
- Vrije oplegging in alle horizontale richtingen
- Vrije oplegging in aangegeven horizontale richting (zie pijl)
- Horizontale vaste oplegging

2.0	01-05-2023	Aanpassingen krachten tabellen	TvM	KAG	DTJ
1.0	01-11-2022	Definitief	TvM	KAG	DTJ
Rev	Datum	Omschrijving	Get.	Get.	Acc.
Arap Project Titel			Opdrachtgever		
Renovatie/vervanging Van Briene noordbogen			Rijkswaterstaat		
Onderwerp			Managing Contractor - RWS Steel Bridge Renovation		
WB8n - Bouwfase 2.3 Verbinding			Bijgewerkte, Water Service Infrastructure		
windverbanden t.p.v. boogconstructie VI-VII			PO Box 20000, 3502 LA Utrecht, The Netherlands		
en IX-X			Giftenlaan 2, 3526 LA Utrecht, The Netherlands		
Formaat			Schaal		
A0			Zie tekening		
Projectnummer			Status		
210035-01			Definitief		
Tekeningsnummer			Revisie		
210035-01 - 1 - 2 - 011006			2.0		



Werkzaamheden

Activiteiten:

Verbinding boog segment VIII, boog sluiting:

- Aanpassen vizel hoogte van de steunpunten voor de boog (zie table)
- Montage van boog segment VIII bestaande uit bogen en windverbanden, exclusief kruis windverband bij boog segment splitsing
- Boog segment opgelegd op voorgeschreven vizels
- Uitlijnen boog segment met reeds geïnstalleerde boog
- Uitvoeren lassen tussen boog segment en reeds geïnstalleerde boog

Activiteiten parallel:

Activiteiten voorgeschreven in fase 2.5

Tabel Oplegreactie Hoofdligger steunpunten (kN)

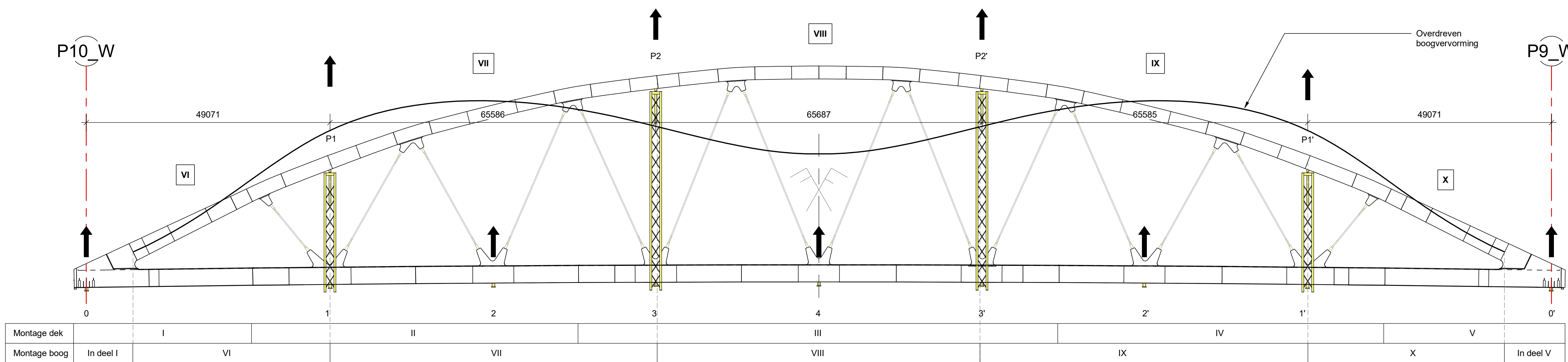
Steunpunt	0	0-1 ₁	0-1 ₂	1	1-2	2	2-3 ₁	2-3 ₂	3	3-4	4
1.2(e)	-	-	-	-	-	-	-	777,5	1024	1168	1205
1.3(a)-(d)	-	-	615,5	1329	1188	1006	779,5	778,5	1024	1168	1205
1.4(a)-(d)	1522	1880	844,5	1295	1192	1086	700,5	695	1106	1165	1210
1.5	2571	-	-	3888	-	1982	-	-	2515	-	2279
2.1(a)-(e)	3493	-	-	4267	-	1866	-	-	2536	-	2268
2.2(a)-(e)	3493	-	-	4267	-	1866	-	-	2536	-	2268
2.3(a)-(e)	3493	-	-	4267	-	1866	-	-	2536	-	2268
2.4(a)-(e)	2702	-	-	2538	-	2392	-	-	2424	-	2327

Tabel Oplegreactie Boog steunpunten (kN)

Stap	P1 en P1'		P2 en P2'	
	Fz (kN) per stap	Fz (kN) cumulatief	Fz (kN) per stap	Fz (kN) cumulatief
2.1(a)-(e)	1120	1120	-	-
2.2(a)-(e)	1467	2587	1424	1424
2.3(a)-(b)	73	2660	1	1425
2.4(a)	3013	5673	-714	711
2.4(b)-(c)	0	5673	1396	2107

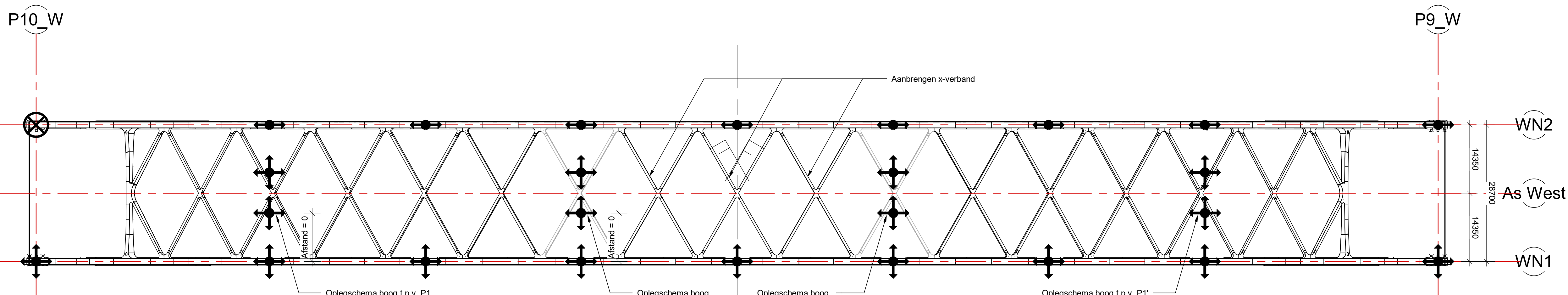
Tabel Boog Vijzelhoogten boven of onder bouwzeeg geometrie. Hoogten afgerond op 5mm nauwkeurig (+ = omhoog - = omlaag).

Stap	P1 en P1'		P2 en P2'	
	Uz (mm) per stap	Uz (mm) cumulatief	Uz (mm) per stap	Uz (mm) cumulatief
2.1(a)-(e)	55	55	-	-
2.2(a)-(e)	0	55	750	750
2.3(a)-(b)	0	55	0	750
2.4(a)	98	153	-1129	-379
2.4(b)-(c)	0	153	0	-379



Zijaanzicht Westzijde

schaal: 1 : 500



Vrijheidsgraden oplegschema

schaal: 1 : 500

Legenda

- Betreffend onderdeel
- Overige onderdelen (grijs)
- Nieuw staal
OG=D0, ON=U0
- OG = (functionele specificatie,
ON=VO/D0/U0
- Asfalt
- Gemonteerde onderdeel
- Vrije oplegging in alle horizontale richtingen
- Vrije oplegging in aangegeven horizontale richting (zie pijl)
- Horizontale vaste oplegging

2.0	01-05-2023	Aanpassingen krachten tabellen	TvM	KAC	DTJ
1.0	01-11-2022	Definitief	TvM	KAC	DTJ
Rev	Datum	Omschrijving	Get.	Get.	Acc.
Arup Project Titel			Opdrachtgever		
Renovatievervanging Van Briene noordbogen			Rijkswaterstaat		
Onderwerp			ARUP		
WBbn - Bouwfase 2.4 Verbinding boogconstructie VII en IX met VIII			Managing Contractor - RWS Steel Bridge Renovation		
Formaat			Schaal		
A0			Zie tekening		
Projectnummer			Tekeningsnummer		
210035-01			210035-01 - 1 - 2 - 011009		
Fase			Status		
2			Definitief		
Revisie			2.0		