

Safety Investigation Recommendations Follow-Up

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No Action Requested – Information Only



Completed Recommendations

Number	Recommendation	Status
WDR1	Establish operating procedures for bridge and gantry crane lifts.	Complete
WDRC1	Develop a standard lift plan for moving fixed hoist gates with gantry cranes.	Complete
WDRC2	Revise District Safety Program requirements for gantry and bridge crane operations.	Complete
WDRC3	Revise the Spillway OMI to include a procedure for operation of fixed hoist gates and actions to open the swing rails when lifting a fixed hoist gate.	Complete
WDRC4	Develop District Standard for what a good Pre-Task Plan (PTP) looks like	Complete
WDRC5	Implement PTP including metrics and adjustments as needed	Complete
WDRC7	Develop and implement job planning requirements and standards to ensure that formal job planning is performed.	Complete
WDRC9	Evaluate the practice of using working foreman (evaluation complete, actions underway)	Complete
WDRC8	Perform actions recommended in the Tetra Tech report to correct the design of the swing rails.	Complete
TTR2	Revise swing rail design	Complete
TTR3	Analyze interim modifications made to swing rails	Complete
TTRC1	Consider modifications to Crane 3 Block Leaders	Complete

Remaining Recommendations

Number	Recommendation	Status
WDR2	Establish degree of awareness for IRIS (Incident Reporting Investigation Standard) Currently transitioning to Event Learning Standard (ELS) and will use this term going forward (Safety)	Ongoing
WDRC6	Implement HPI Road map (Safety)	Complete
TTR1	Inspect spillway bays with swing rails (scheduled to coincide with operations) (Ops)	Ongoing
TTRC2	Consider eliminating swing rails (will be addressed as part of modernization project)	Transferred

Establish Degree of Awareness for Incident Reporting

Reporting Avenues

- *Safety Committees, Safety Meetings, Supervisor Interactions, Daily/Weekly Rollout Meetings, Safety Coordinators, Enablon, Maximo*

Enablon (Safety Data Management System)

- Fixing/patching system, granting access, improving workflows, creating feedback loops
- *Educating workforce on access*

Updating 'Event Learning Standard'

- *Focused on uncovering and improving local and organizational factors*

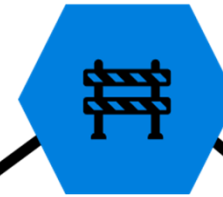
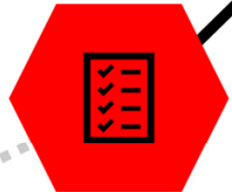
Evolution of HPI into H&OP

Systems Thinking

Including: 1st Principles, local & organizational factors, and alignment model.

Critical Steps

Including: recognition of risk important actions, critical steps, and defining intolerable failure.



Where we are now...

CCPUD is building upon all previous "HPI" efforts and maturing mental models to building blocks of "H&OP".

Risk Based Thinking

Educate employees on risk-based thinking as applicable to their role or level of leadership.

Systems Learning

Including: methods for learning from success & failure, drift, behavior choice assessment, rationality and local factor analysis, CAPA management.



H & OP

Human & Organizational Performance

First Principles of H & OP

People have dignity

Error is normal

Blame fixes nothing

Context drives behavior

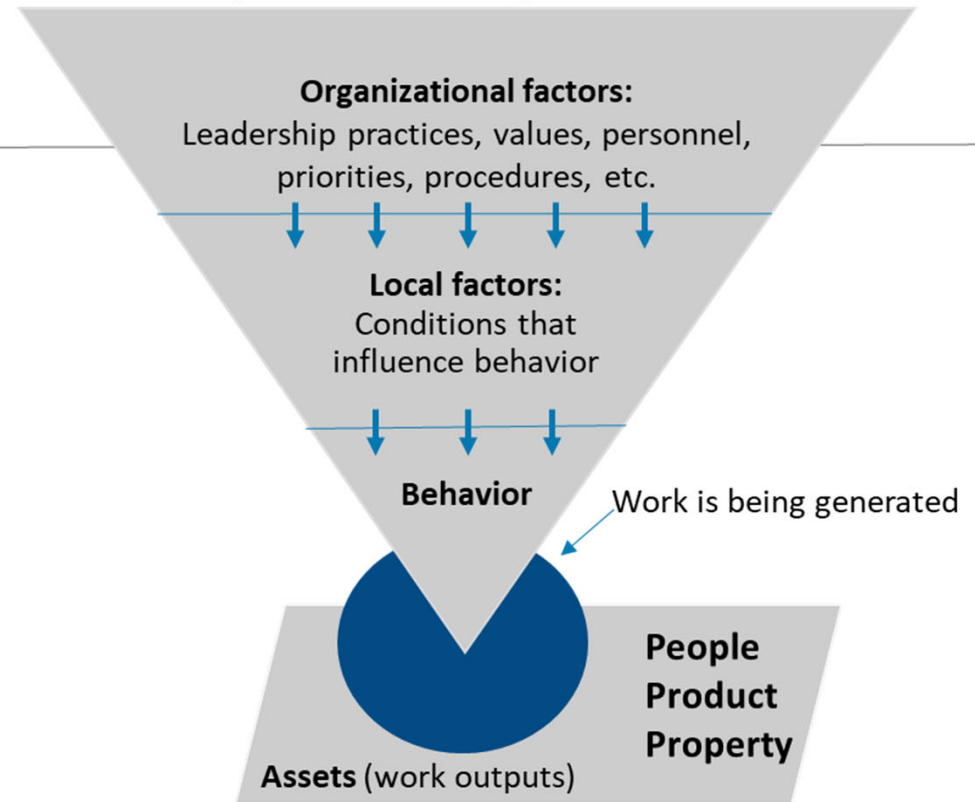
Learning is deliberate & vital

Our response matters

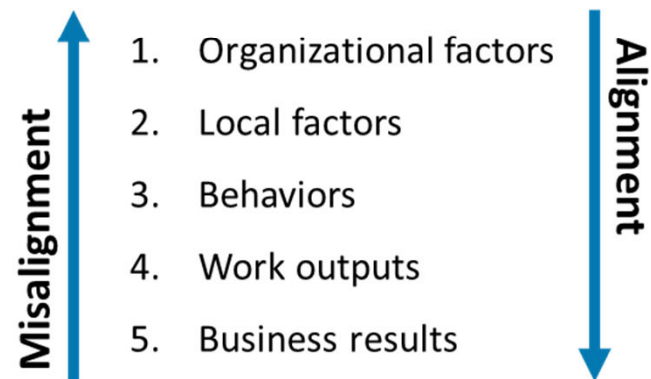


Management has the most influence, power and responsibility to change (for good & bad) the local and organizational factors.

Systems Thinking for H & OP



Alignment Model



Engineering Controls

Spillway bay inspections



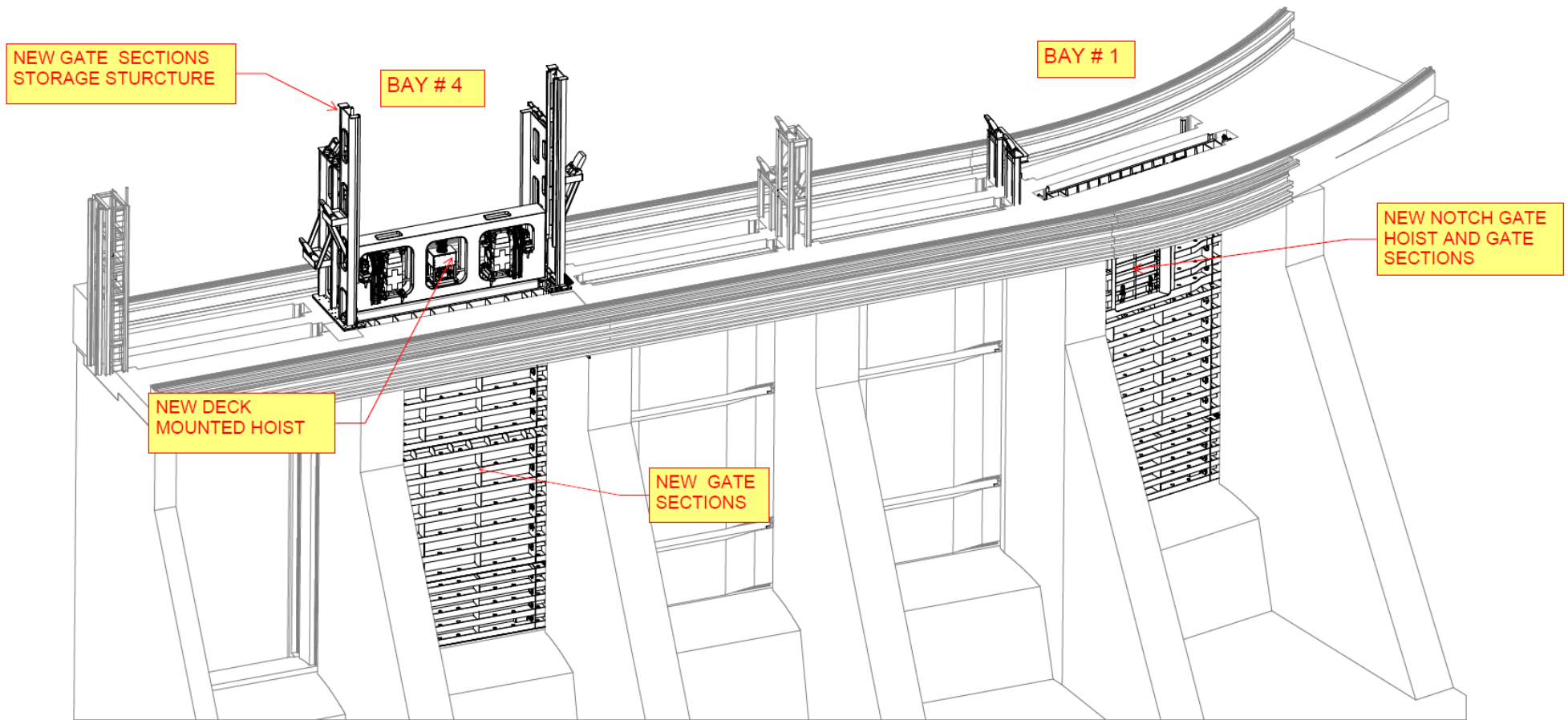
- 11 Spill bays with auto hoists and swing rails
- Inspect and document spill bay condition
- Make corrective repairs when needed
- 6 of 11 Completed (17, 20, 22, 25, 19 and 10)
- Scheduling 2 spill bay/hoist inspections per year until complete, est. 2026
- The inspections and corrective actions are extensive, taking about 2000 labor hours to complete.

Spillway Modernization Project

Prototype Designs

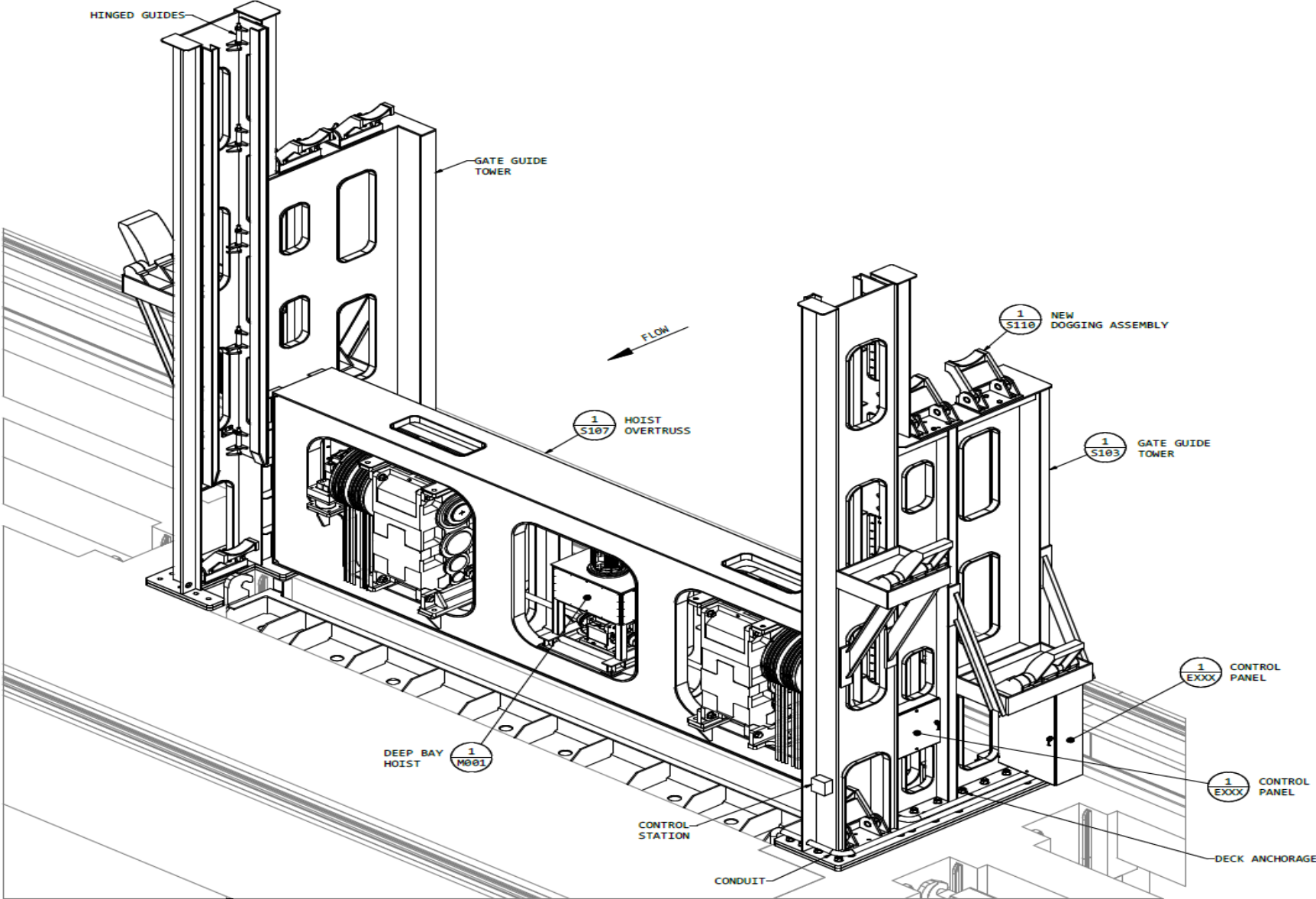
ROCK ISLAND SPILLWAY GATE HANDLING IMPROVEMENT - PROTOTYPES

1. SEE SHEET G5001 FOR STRUCTURAL GENERAL



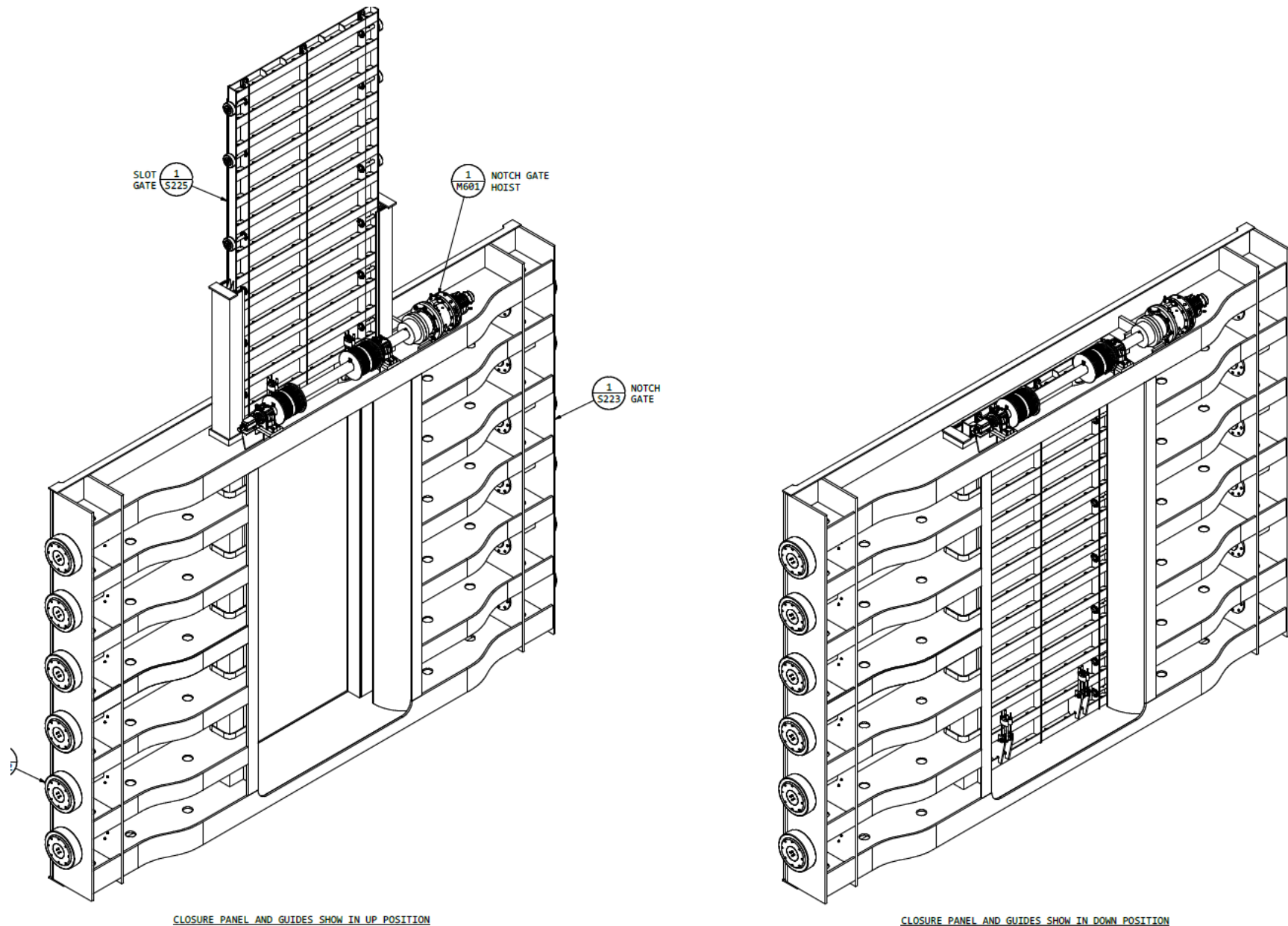
STRUCTURAL GENERAL ARRANGEMENT - ISOMETRIC

Prototype: Deck Hoists & Storage



GATE GUIDES / OVERTRUSS ISOMETRIC

Prototype: Notch Gates



CLOSURE PANEL AND GUIDES SHOW IN UP POSITION

CLOSURE PANEL AND GUIDES SHOW IN DOWN POSITION

Questions?

