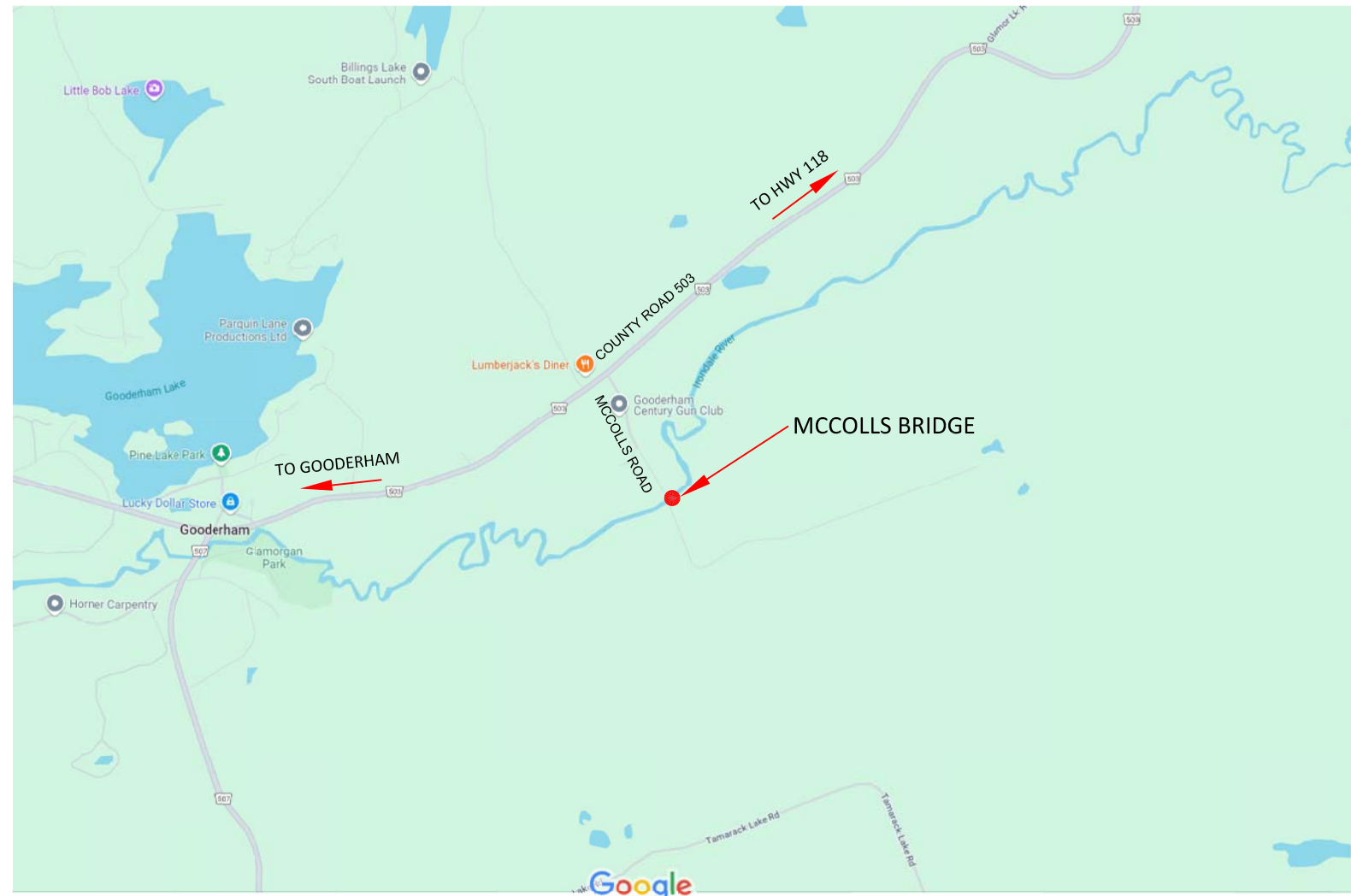


THE MUNICIPALITY OF HIGHLANDS EAST



Keystone Bridge Management Corp.



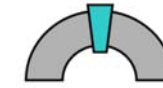
Map data ©2024 Google 200 m

**MCCOLLS BRIDGE REPLACEMENT
TENDER CONTRACT NO.**



MCCOLLS BRIDGE
GENERAL NOTES

SHEET
1



**Keystone Bridge
Management Corp.**

GENERAL NOTES

THE CONTRACTOR SHALL ENSURE THAT NO DELETERIOUS MATERIAL RESULTING FROM CONSTRUCTION ACTIVITIES ENTERS THE WATERCOURSE.

1. HOT DIP GALVANIZE BRIDGE HANDRAILS AND W250X45 BRIDGE CHAIRS.
2. CONCRETE: 35 MPA CLASS C-1 WITH 12 MM COARSE AGGREGATE.

SCOPE & GENERAL SEQUENCE OF WORK

SITE PREPARATION

1. ESTABLISH CONSTRUCTION SIGNING.
2. INSTALL ENVIRONMENTAL PROTECTION.
3. REMOVE FOLIAGE IN NW QUADRANT TO PERMIT CRANE AND LOAD MOVEMENT.
4. CONSTRUCT GRAVEL PADS FOR CRANE OUTRIGGERS.

NEW BRIDGE INSTALLATION PREPARATION

1. FABRICATE AND GALVANIZE W250X45 BRIDGE CHAIRS AND HSS HANDRAILS.
2. COORDINATE DELIVERY OF PREFABRICATED LESSARD WELDING NEW BRIDGE.
3. PRECUT ALL TIMBER GUIDERAIL POSTS FOR NEW BRIDGE.

BRIDGE PREPARATION

1. ESTABLISH ACCESS PLATFORMS ALONG BOTH ABUTMENTS.
2. CLEAN ABUTMENT BRIDGE SEATS OF ALL DEBRIS.
3. REMOVE GUIDERAIL FROM BRIDGE.
4. REMOVE PIPE HANDRAIL FROM BRIDGE.
5. PRE-BUILD 8 TIMBER DECK PANELS NOMINALLY 2.3 M X 4.3 M.
6. SAWCUT CONCRETE DECK TO REMOVE ONE 2.3 M LONG SECTION OF DECK.
7. REPLACE CONCRETE DECK SECTION WITH TIMBER DECK SECTION.
8. SAWCUT THE NEXT SECTION OF DECK AND REPEAT FOR A TOTAL OF 8 DECK PANELS.
9. REMOVE TOPS OF CONCRETE BALLAST WALLS ABOUT 20 CM BELOW GRADE.
10. INSTALL TRENCH PLATES OVER DECK ENDS.

ABUTMENT PREPARATION

1. REMOVE CONCRETE BOLSTER FROM NORTH ABUTMENT BRIDGE SEAT.
2. RELOCATE TIMBER BLOCKING ON NORTH ABUTMENT BRIDGE SEAT.
3. SCARIFY CONCRETE SURFACE WITH CUP GRINDER ABOUT 550 MM WIDE BETWEEN EXISTING BRIDGE BEARINGS.
4. CREATE A LEVEL CEMENTITIOUS GROUT PAD NOT MORE THAN 10 MM THICK AND 500 MM WIDE BETWEEN EXISTING BEARINGS.

BRIDGE REMOVAL PREPARATION

1. FLAME CUT GUSSET PLATES AND OTHER STRUCTURAL STEEL TO ENSURE A NOMINAL 10 MM GAP BETWEEN ALL STRUCTURAL STEEL AND ABUTMENT BALLAST WALLS.
2. FLAME CUT BEARING ANCHOR BOLTS.
3. PROOF JACK EXISTING TRUSS BRIDGE 25 MM AT ALL FOUR CORNERS TO ENSURE NO IMPEDIMENTS TO REMOVAL BY CRANE AND TO ENSURE BEARINGS CAN EASILY BE REMOVED.
4. REMEDY ANY IMPEDIMENTS TO BRIDGE REMOVAL AS REQUIRED.
5. REMOVE GUIDERAIL AT CRANE LOCATION TO SUIT OUTRIGGERS.

BRIDGE REMOVAL

1. INVOKE ROAD CLOSURE.
2. POSITION AND READY CRANE.
3. REMOVE TRENCH PLATES.
4. REMOVE 8 TIMBER DECK PANELS.
5. LIFT TRUSS BRIDGE WITH CRANE AND LOAD ON TRUCK FOR IMMEDIATE REMOVAL TO NEARBY YARD.
6. CLEAN AND SCARIFY BRIDGE SEAT CONCRETE WHERE TRUSS BRIDGE BEARINGS WERE LOCATED.

NEW BRIDGE INSTALLATION

1. SET NEW W250X45 BRIDGE CHAIRS APPROXIMATELY 100 MM FROM FACE OF ABUTMENT WALL.
2. DELIVER NEW BRIDGE TO CRANE.
3. SET FIRST HALF OF PREFABRICATED LESSARD BRIDGE.
4. SET SECOND HALF OF PREFABRICATED LESSARD BRIDGE.
5. CONNECT TWO HALVES OF LESSARD BRIDGE WITH SUPPLIED BOLTS.
6. INSTALL TIMBER GUIDERAIL POSTS ON LESSARD BRIDGE.
7. INSTALL GUIDERAIL ON LESSARD BRIDGE.
8. INSTALL TRENCH PLATES AT ENDS OF BRIDGE.
9. DEMOBILIZE CRANE.
10. OPEN BRIDGE TO TRAFFIC.

POST NEW BRIDGE INSTALLATION WORK

1. INSTALL PEDESTRIAN RAILINGS ON BRIDGE.
2. FIELD DRILL HOLES AND BOLT W250X45 CHAIRS TO NEW BRIDGE GIRDERS, 4 BOLTS TOTAL.
3. FORM BALLAST WALL AT EDGES OF NEW BRIDGE AND W250X45 CHAIRS FOR CONCRETE PLACEMENT.
4. CLOSE BRIDGE TEMPORARILY AND REMOVE TRENCH PLATES.
5. PLACE CONCRETE BETWEEN PREFABRICATED BRIDGE ENDS AND BALLAST WALLS TO COMPLETELY FILL GAP.
6. WOOD FLOAT FINISH TOP OF NEW CONCRETE FLUSH WITH BRIDGE SURFACE.
7. PLACE TRENCH PLATES TO PROTECT NEW CONCRETE FOR 48 HOURS.
8. FORM AND PLACE CEMENTITIOUS GROUT IN VOID BETWEEN BRIDGE SEATS AND ENDS OF W250X45 CHAIRS.
9. REMOVE ALL FORMWORK AND TRENCH PLATES.
10. REMOVE ACCESS PLATFORMS.

WATERPROOFING AND PAVING

1. TEMPORARILY CLOSE BRIDGE TO TRAFFIC.
2. CLEAN AND DRY BRIDGE DECK SURFACE.
3. APPLY "PEEL AND STICK" WATERPROOFING MEMBRANE TO BRIDGE SURFACE.
4. PAVE BRIDGE DECK AND APPROACHES.
5. ALLOW ASPHALT PAVEMENT TO COOL.
6. REOPEN BRIDGE TO TRAFFIC.

FINAL ROAD WORK & DEMOBILIZATION

1. REMOVE EXISTING GUIDERAIL AND INSTALL NEW GUIDERAIL AND END TREATMENTS ON APPROACHES.
2. REMOVE CRANE PADS.
3. REMOVE SILT FENCE AND OTHER ENVIRONMENTAL MEASURES.
4. CLEAN UP AND GRADE SITE TO NEAT AND TIDY CONDITION.
5. APPLY ROADSIDE SEED MIX TO DISTURBED GROUND.
6. REMOVE CONSTRUCTION SIGNAGE.
7. REMOVE ALL EQUIPMENT, SCRAP, ETC., FROM LAYDOWN AREAS.
8. FULLY DEMOBILIZE FROM SITE AND LAYDOWN AREA.

LIST OF DRAWINGS

1. GENERAL NOTES
2. GENERAL ARRANGEMENT EXISTING BRIDGE
3. GENERAL ARRANGEMENT NEW BRIDGE
4. TEMPORARY TIMBER DECK DETAILS
5. SITEPLAN AND ROAD PROFILE, ENVIRONMENTAL PROTECTION PLAN
6. SECTIONS AND DETAILS NEW BRIDGE
7. EXISTING ABUTMENTS AND WING WALLS
8. REMOVAL PROCEDURES
9. EXISTING ROAD CROSS SECTIONS
STA 0+020, 0+030 AND 0+040
10. EXISTING ROAD CROSS SECTIONS
STA 0+060, 0+070 AND 0+080

LIST OF APPLICABLE STANDARD DRAWINGS

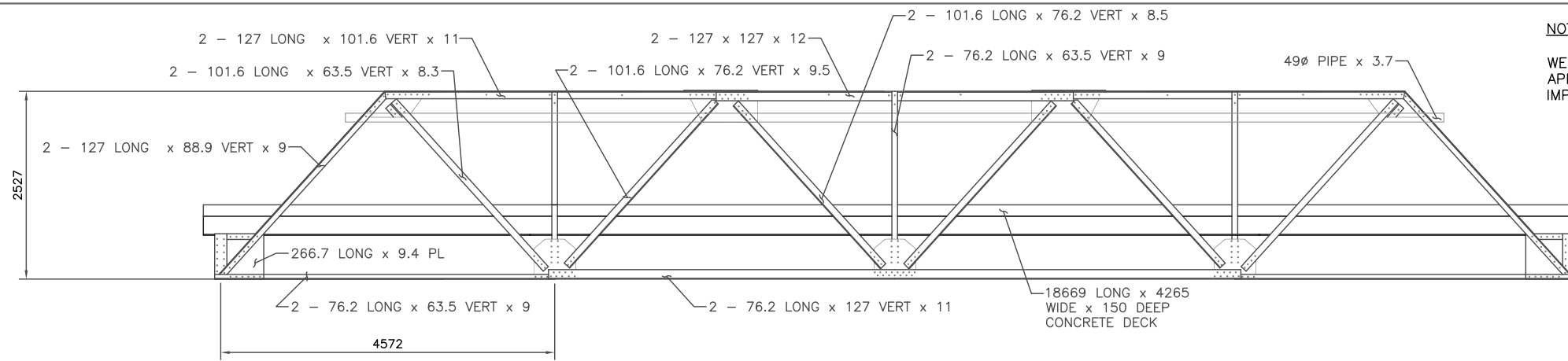
- OPSD 219.110 LIGHT DUTY SILT FENCE BARRIER
OPSD 902.01 STEEL BEAM GUIDE RAIL RAIL DETAIL

REVISIONS	DESCRIPTION			
	DESIGN	CHK	CODE	DATE
	HK	CHK		DEC 2024
	SR	CHK	SITE HE-12	DWG 1



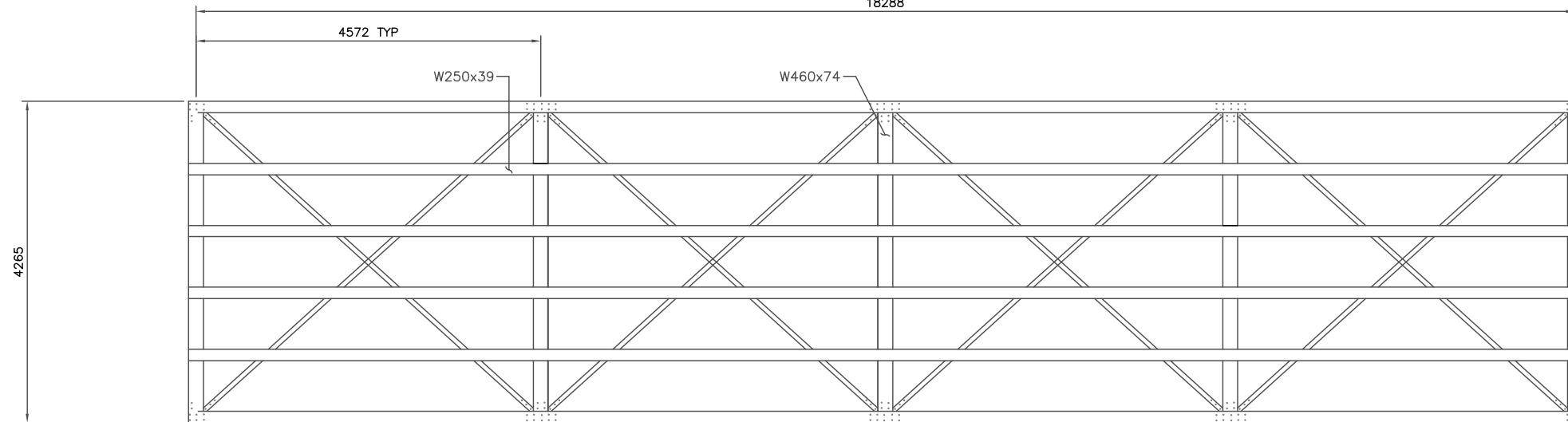
MCCOLLS BRIDGE
GENERAL ARRANGEMENT EXISTING BRIDGE

SHEET
2

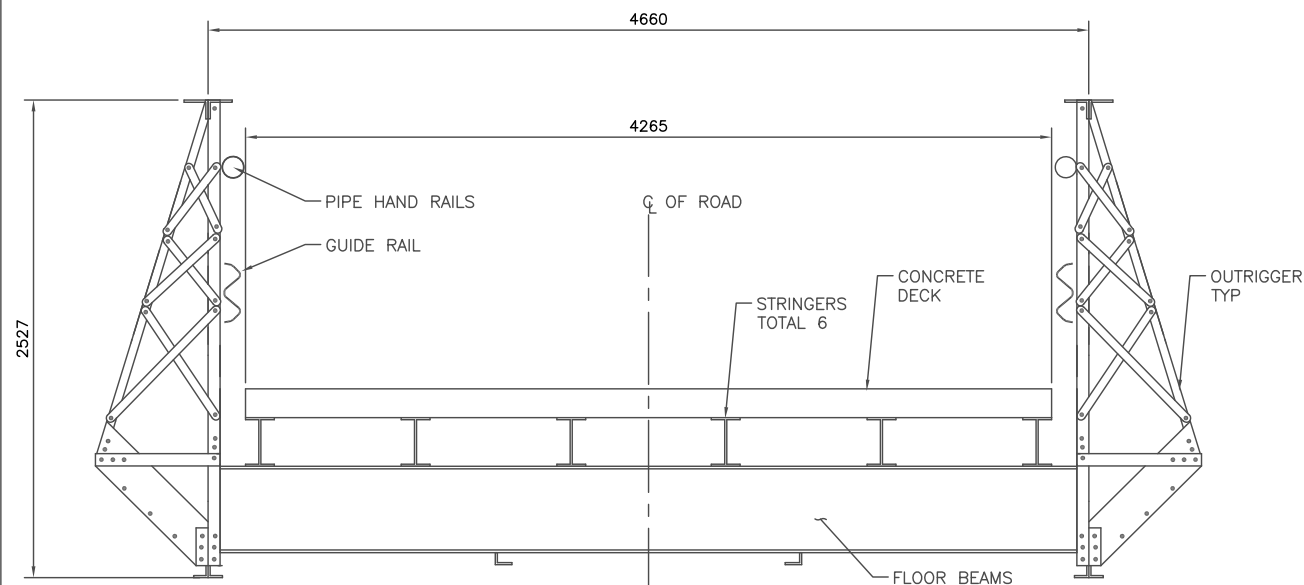


NOTE:
WEIGHT OF BARE TRUSS (NO DECK) IS APPROXIMATELY 13 TONNES OR 15 IMPERIAL TONS

WL 97.00
EXISTING BRIDGE ELEVATION
1:40
18288



EXISTING BRIDGE STEEL FLOOR SYSTEM
1:40



EXISTING BRIDGE SECTION
1:20



BRIDGE APPROACH 2024



BRIDGE ELEVATION 2024



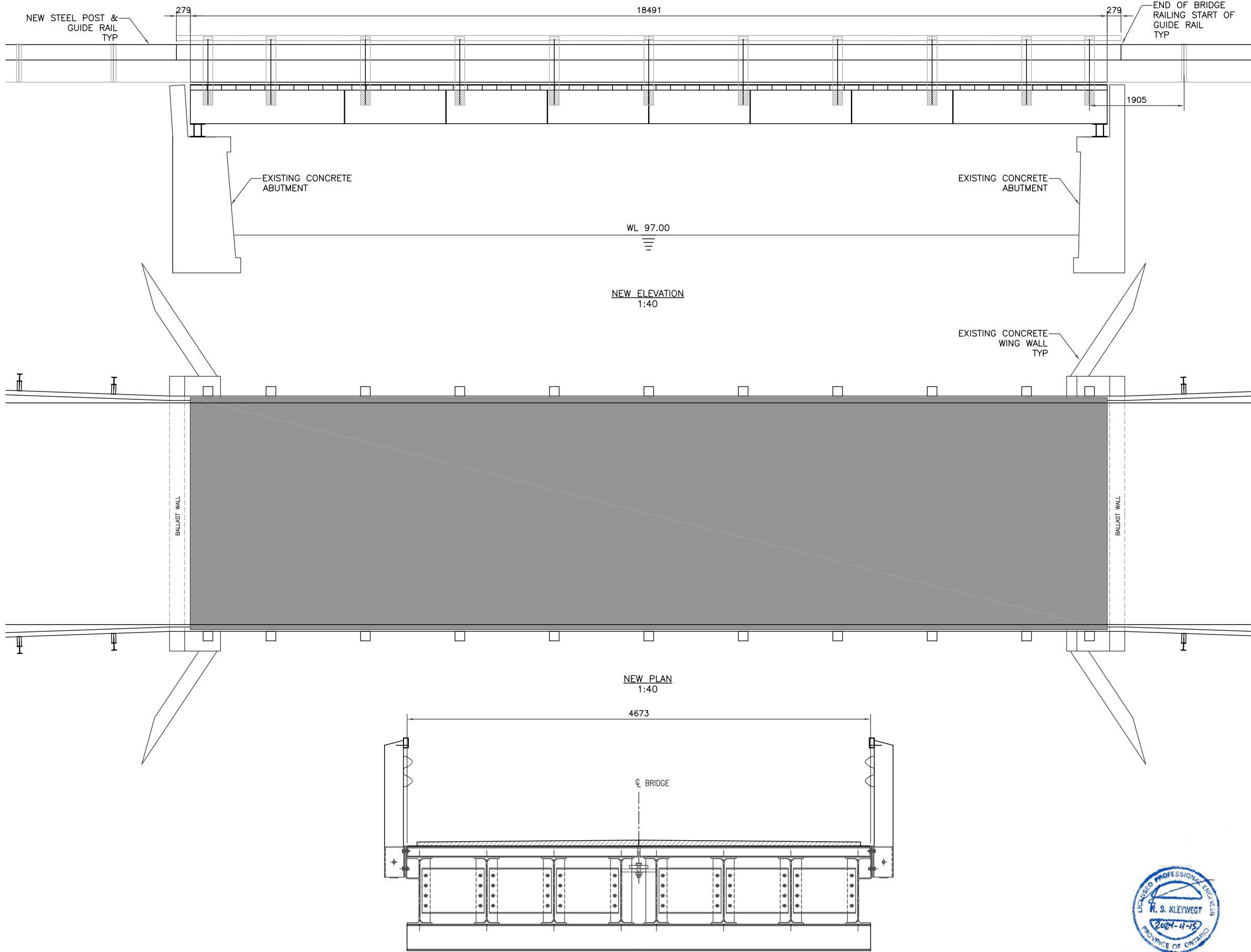
BRIDGE FLOOR SYSTEM 2024



REVISIONS		DESCRIPTION		
DESIGN	HK	CHK	CODE	DATE DEC 2024
DRAWN	SR	CHK	SITE HE-12	DWG 2

LESSARD WELDING SINGLE LANE MODULAR BRIDGE

18491



MCCOLLS BRIDGE
GENERAL ARRANGEMENT NEW BRIDGE

SHEET
3



**Keystone Bridge
Management Corp.**

WL 97.00

NEW ELEVATION
1:40

NEW PLAN
1:40

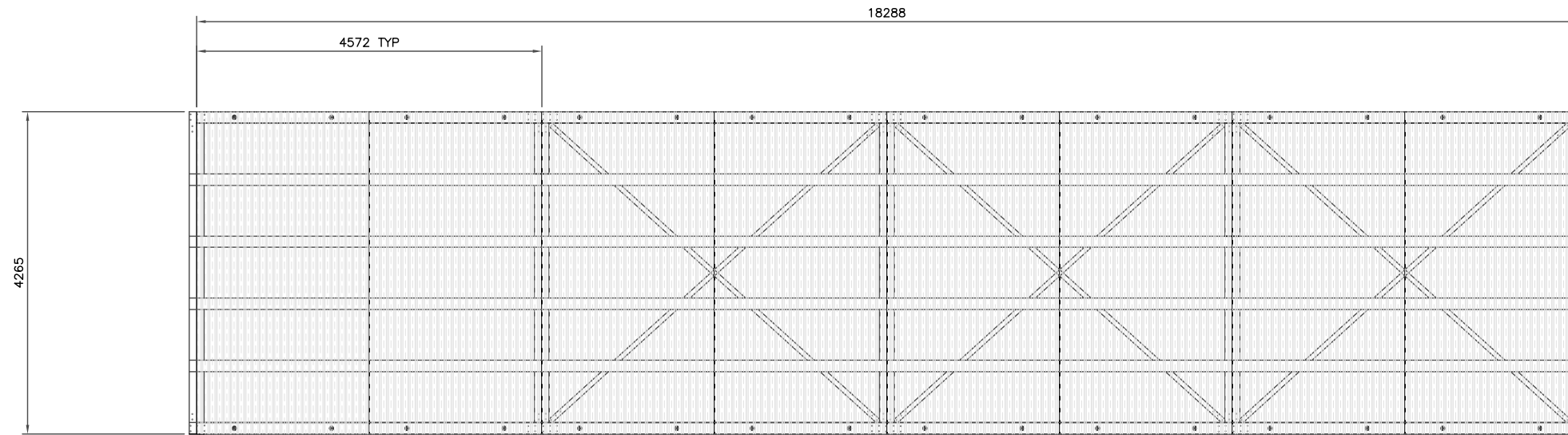
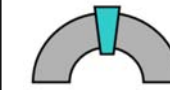
4673

BRIDGE

NEW CROSS SECTION
1:20



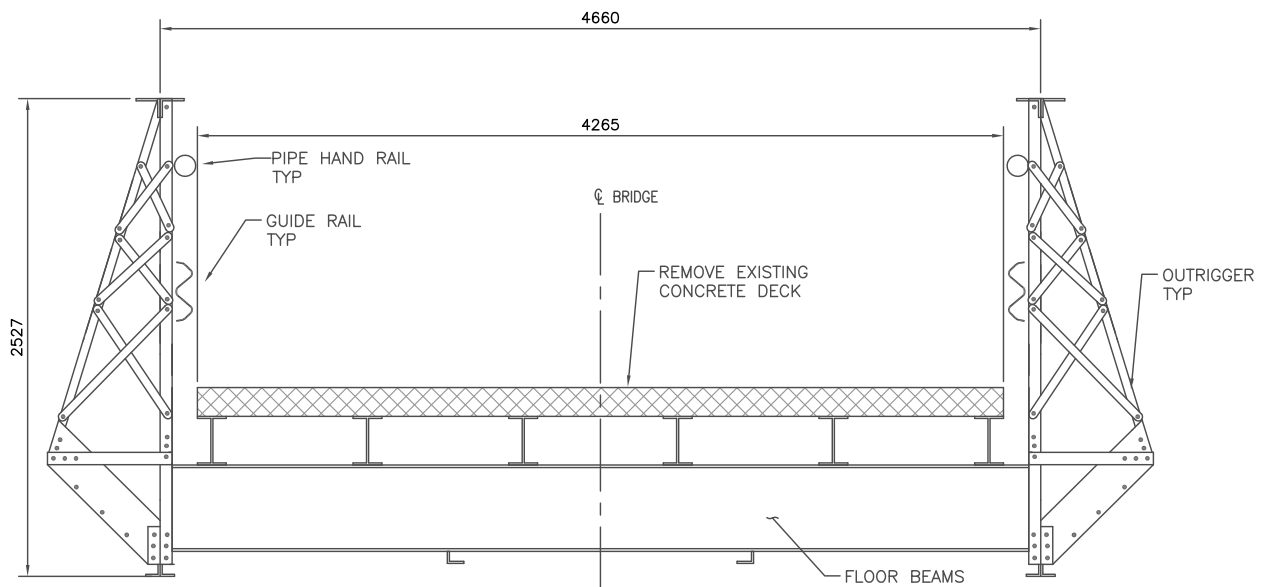
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DRAWN	SR	CHK	SITE HE-12	DWG 3



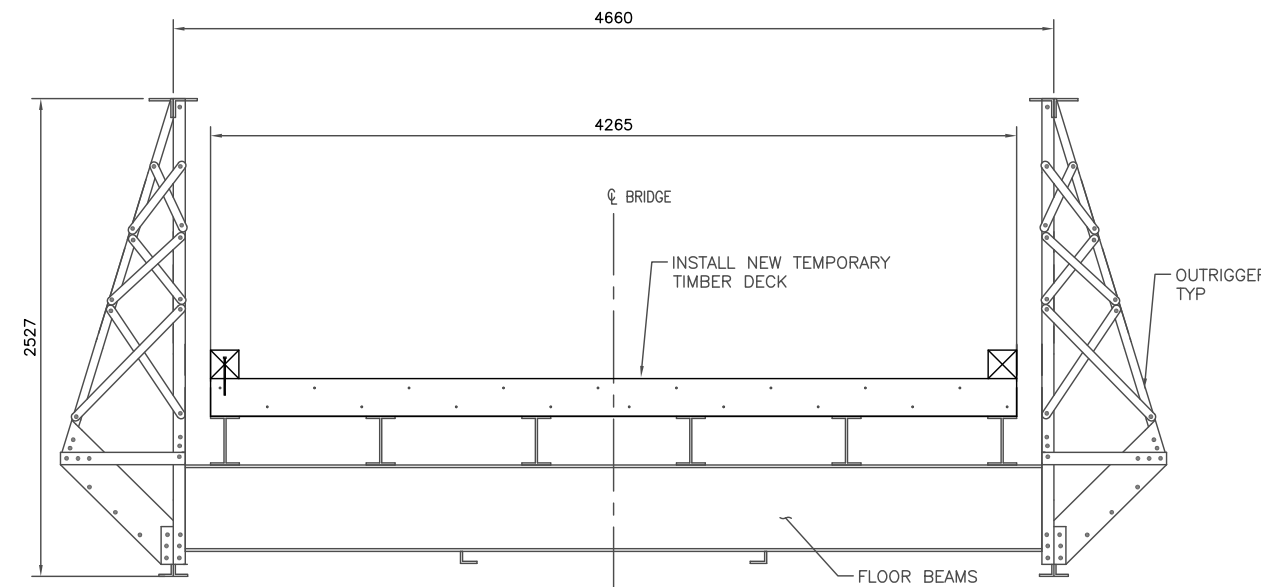
EXISTING BRIDGE PLAN
1:40

NOTES:

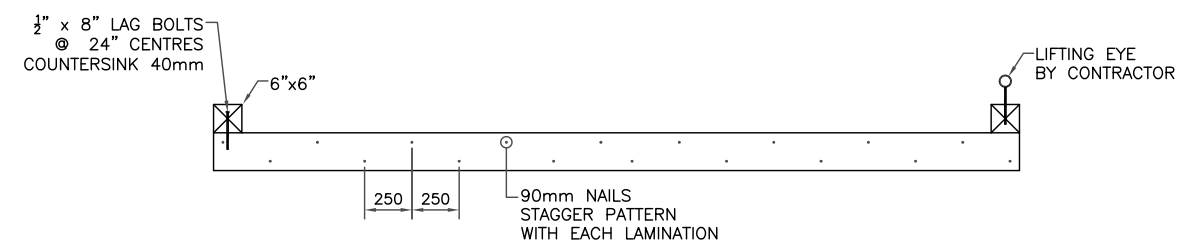
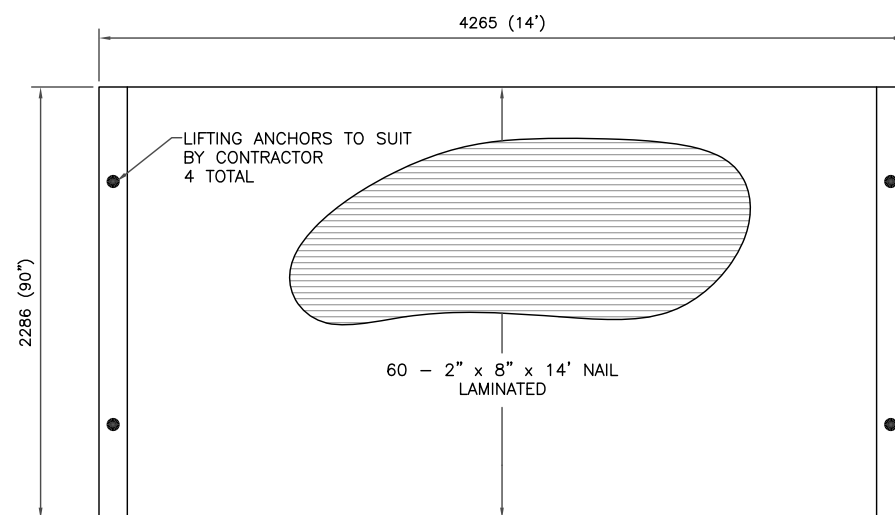
1. REMOVE PIPE HANDRAILS AND EXISTING GUIDE RAIL FROM BRIDGE.
2. REMOVE 2286mm LENGTH OF CONCRETE DECK.
3. REPLACE REMOVED DECK SECTION WITH 2286mm NAIL LAMINATED DECK PANEL.
4. REPEAT FOR 8 SECTIONS OF DECK.
5. TRIM 4265mm DECK LUMBER TO ENSURE EASE OF PLACEMENT OF NEW DECK PANELS.
6. COVER ANY GAPS IN DECK WITH TRENCH PLATES.



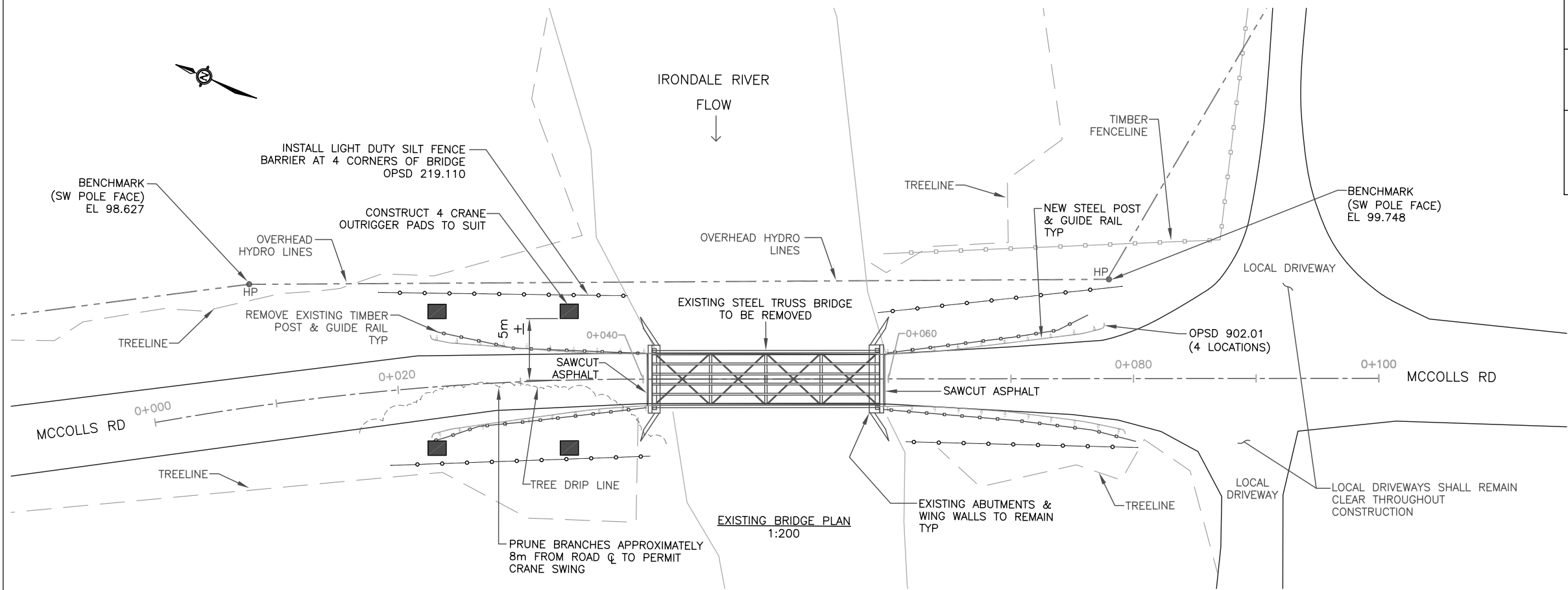
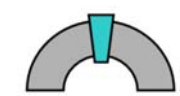
CONCRETE DECK REMOVAL SECTION
1:20



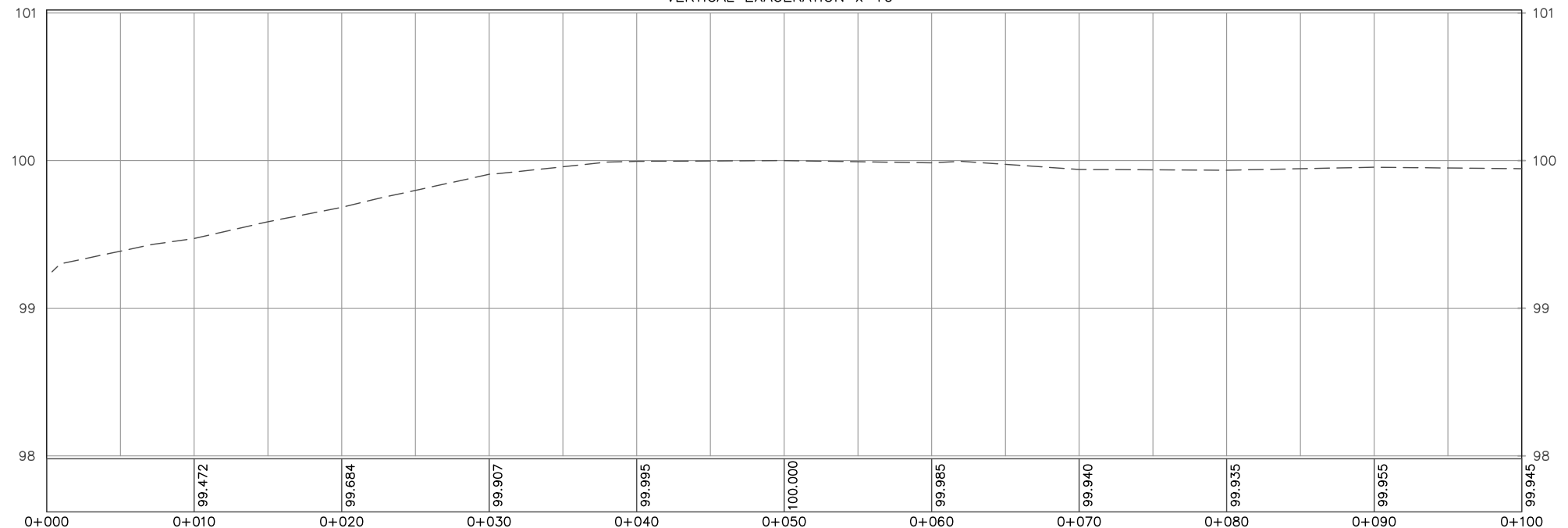
TEMPORARY TIMBER DECK SECTION
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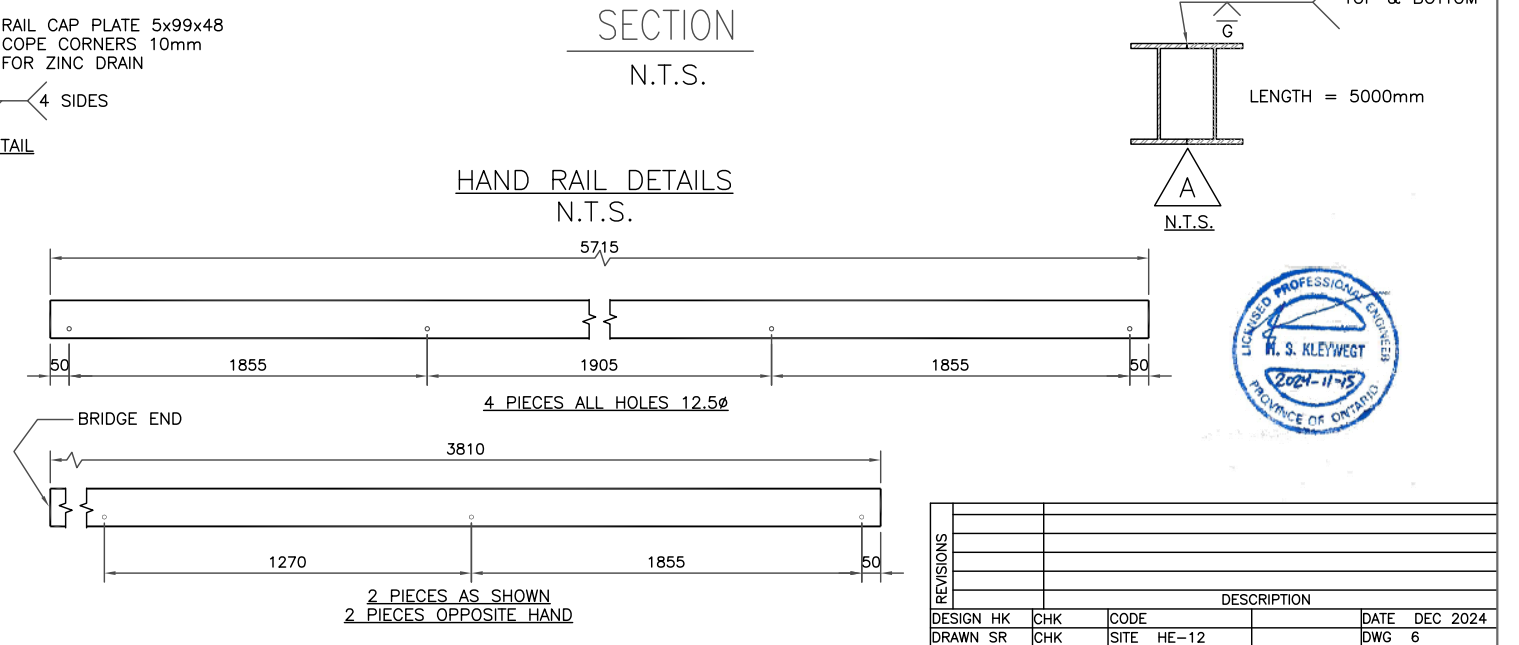
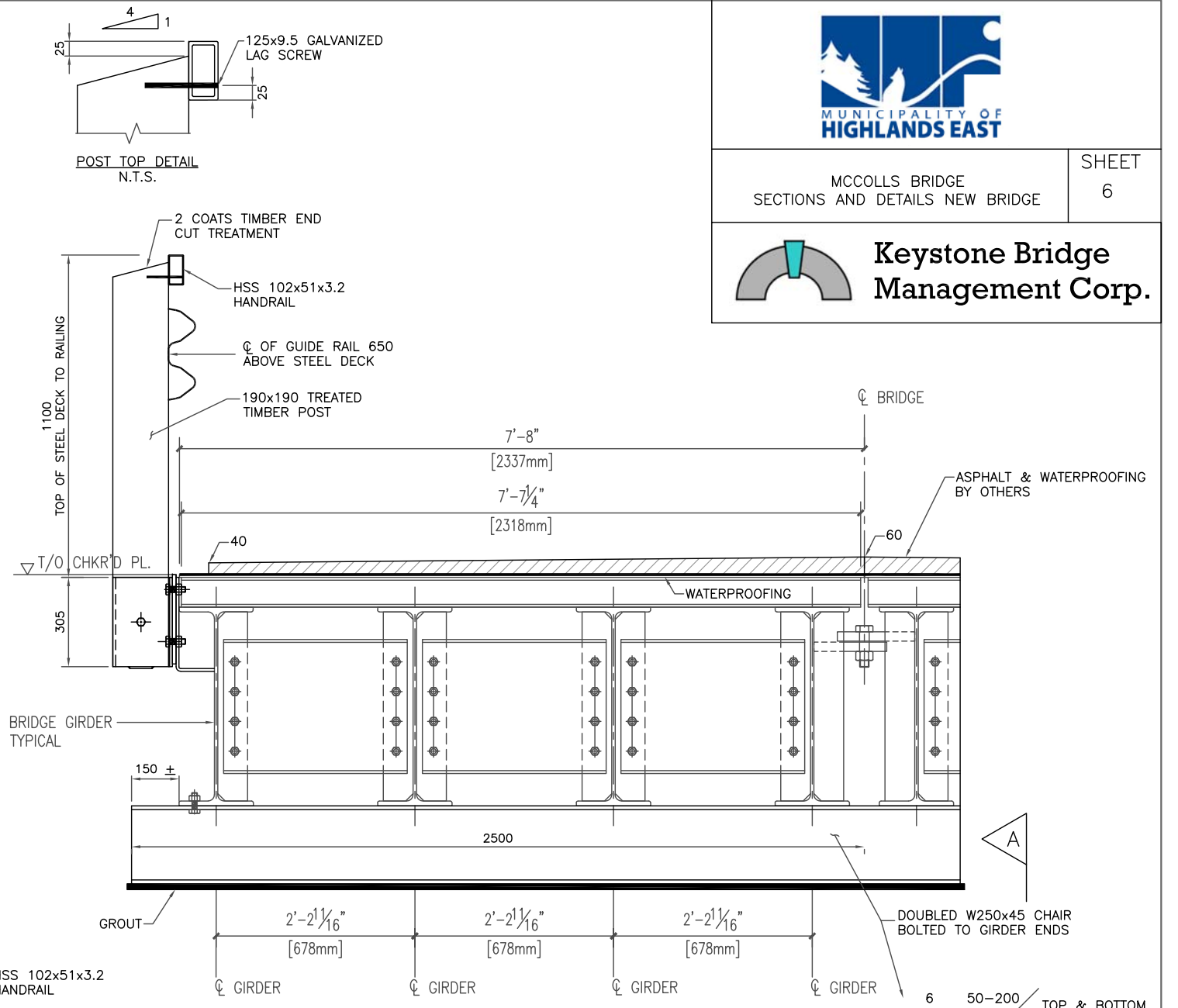
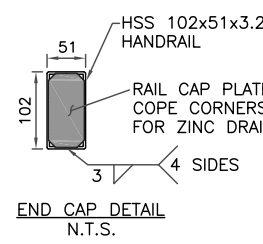
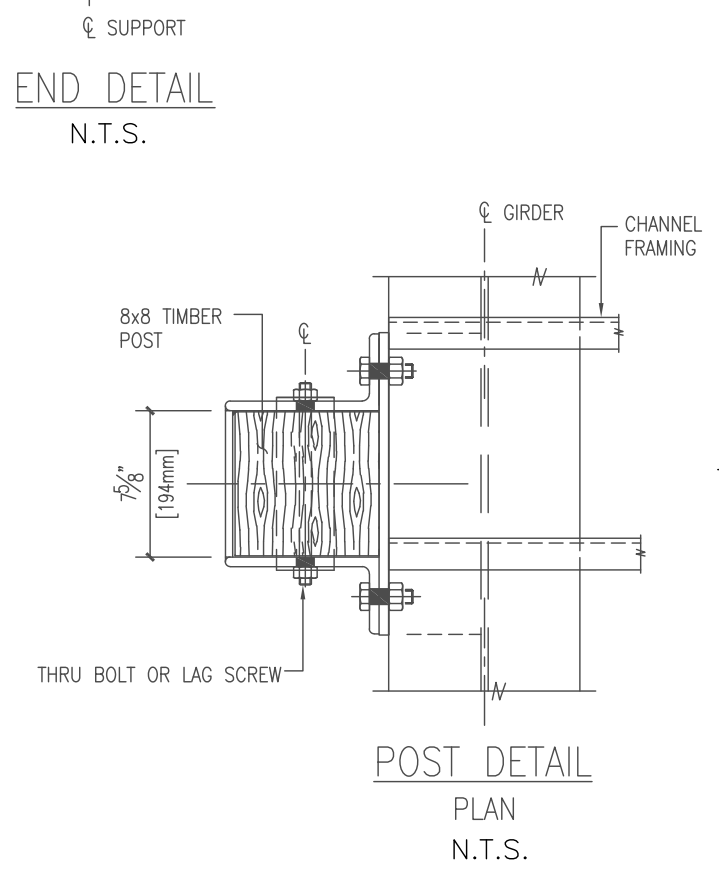
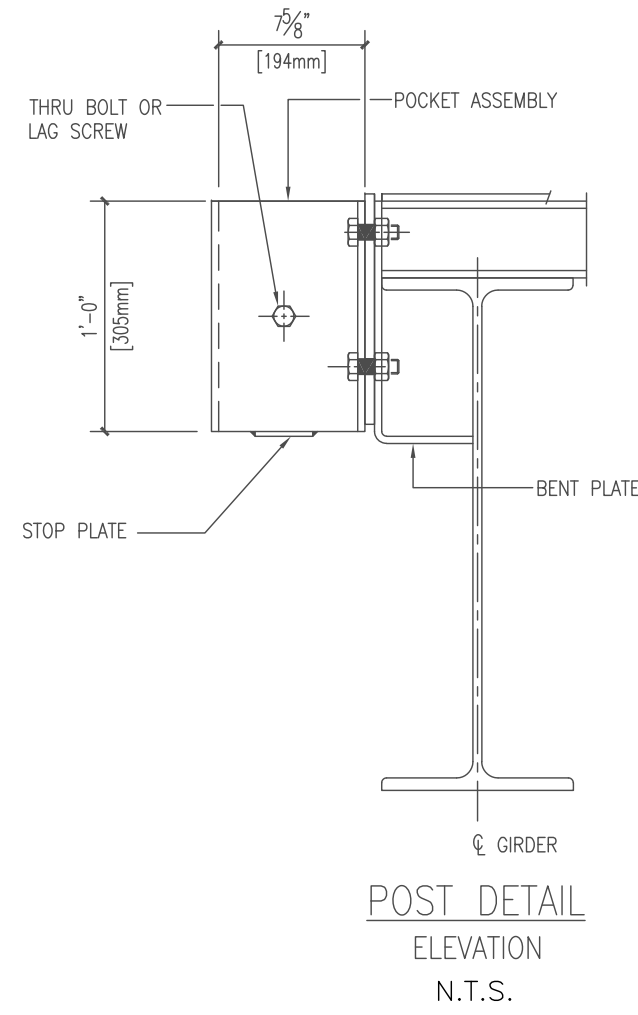
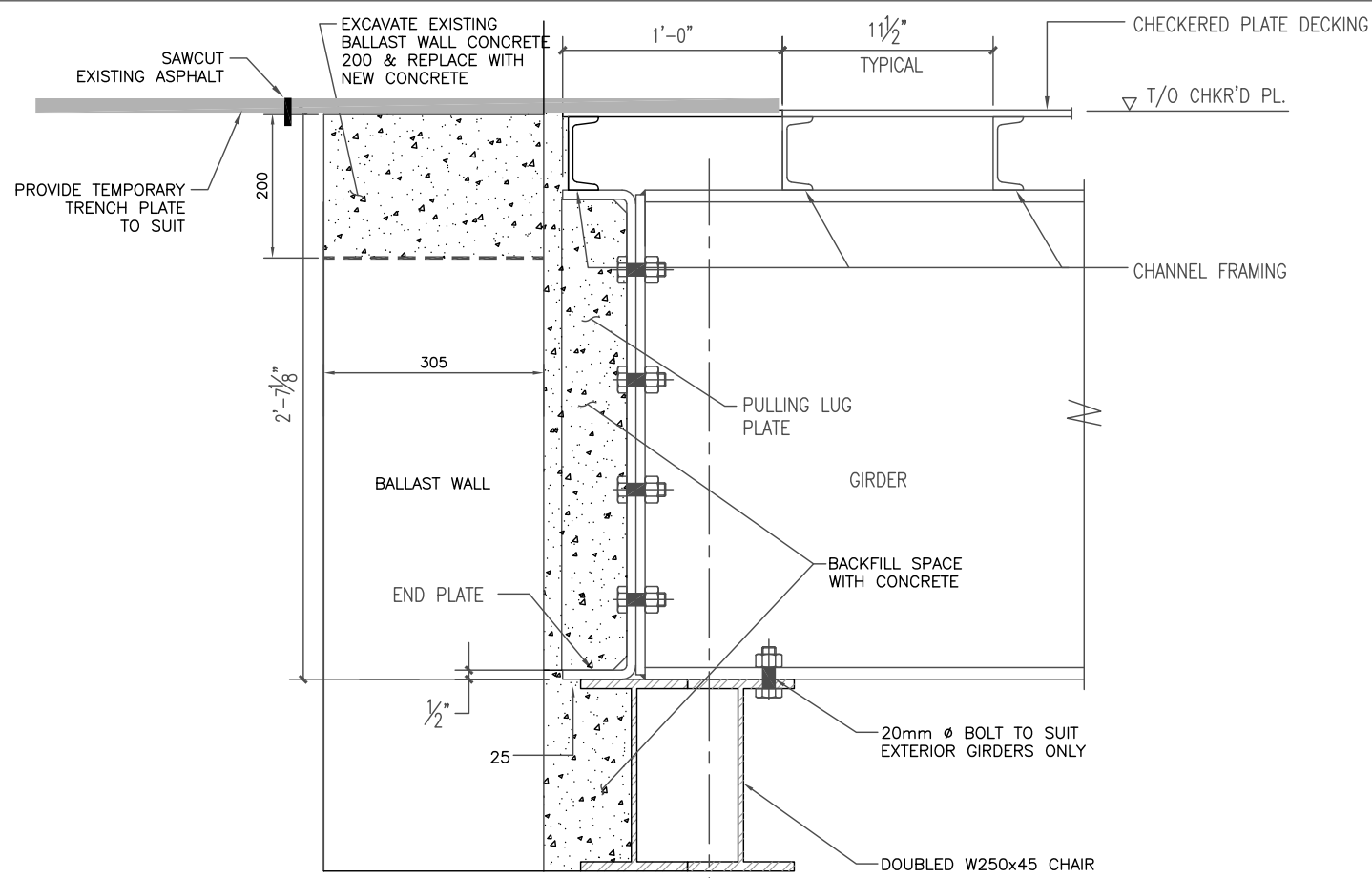
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DESIGN	HK	CHK	CODE	DATE DEC 2024
DRAWN	SR	CHK	SITE HE-12	DWG 4



MCCOLLS ROAD CL PROFILE
VERTICAL EXAGGERATION x 10



REVISIONS		DESCRIPTION	
DESIGN	HK	CHK	CODE
DRAWN	SR	CHK	SITE HE-12
			DATE DEC 2024
			DWG 5

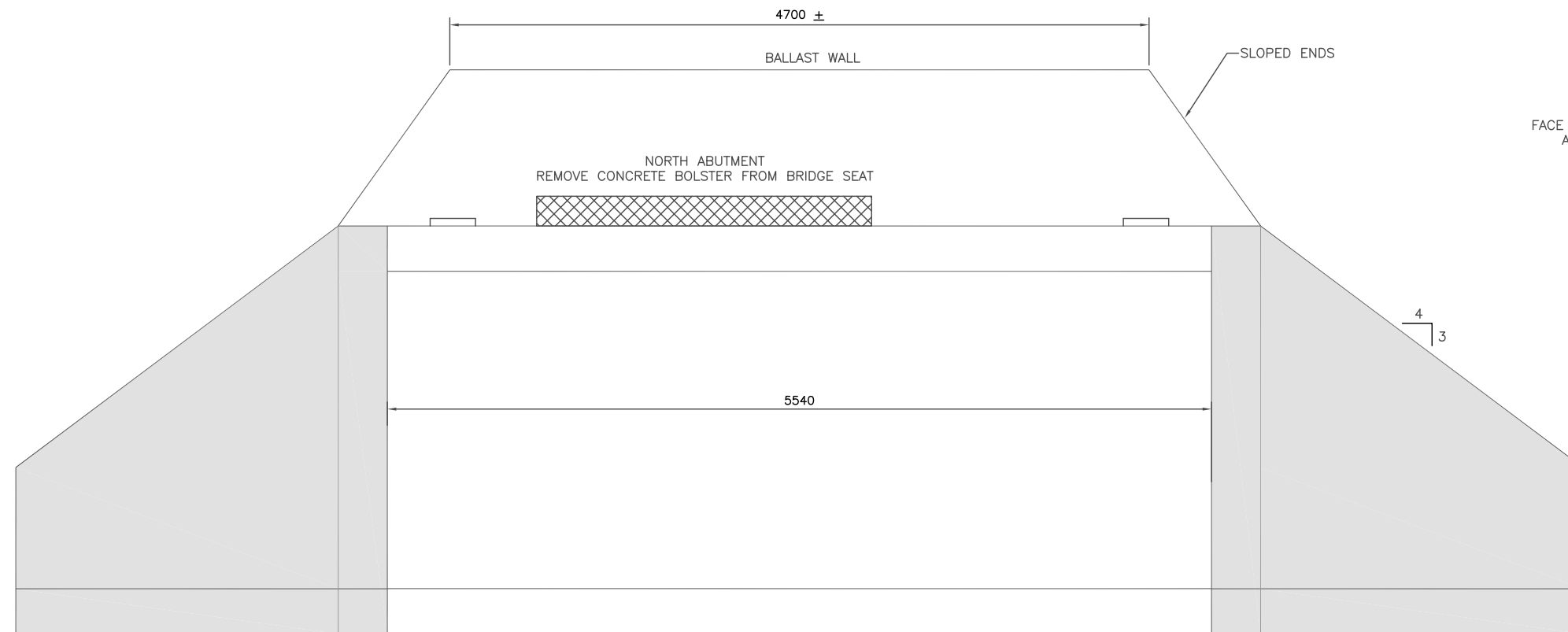


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NO.	DATE	DESCRIPTION	BY	CHK

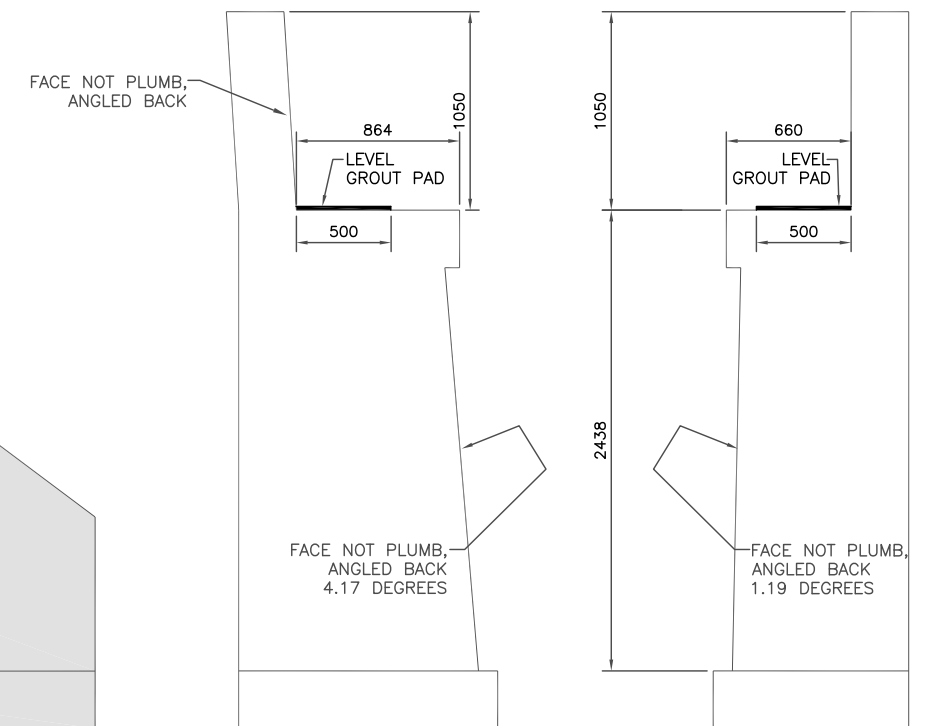
DESIGN	HK	CHK	CODE	DATE	DEC 2024
DRAWN	SR	CHK	SITE HE-12	DWG	6

NOTES:

1. PROVIDE SUITABLE TEMPORARY ACCESS SCAFFOLDING TO BRIDGE SEAT.
2. COMPLETELY REMOVE CONCRETE BOLSTER FROM NORTH ABUTMENT.
3. SCARIFY AND CLEAN BRIDGE SEATS FROM EXISTING BEARINGS TO EXISTING BEARINGS.
4. PREPARE NEW LEVEL SURFACE NOT MORE THAN 10mm THICK WITH CEMENTITIOUS GROUT.

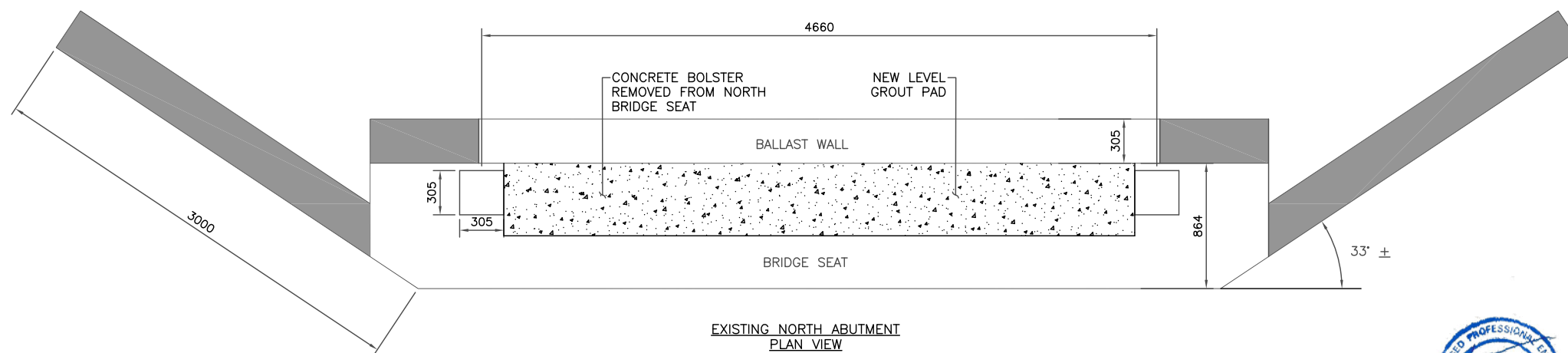


EXISTING NORTH ABUTMENT
ELEVATION VIEW
1:20



EXISTING NORTH ABUTMENT
SECTION VIEW
1:20

EXISTING SOUTH ABUTMENT
SECTION VIEW
1:20



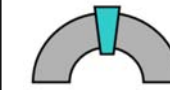
EXISTING NORTH ABUTMENT
PLAN VIEW
1:20



TYPICAL ABUTMENT & WING WALLS



REVISIONS		DESCRIPTION		
DESIGN	HK	CHK	CODE	DATE
DRAWN	SR	CHK	SITE HE-12	DEC 2024
				DWG 7



Notes

1. Remove concrete bolster under floor beam at north abutment.
2. Relocate timber bolster under stringer to edge of bridge seat.

Note:

1. Remove structural steel to leave minimum 10 mm gap at ballast wall in advance of bridge removal, typical at all four corners of bridge.
2. Remove all debris to clean concrete surface, cut any anchor bolts flush with base plate, typical at all four corners of bridge.



Note:

1. Jack at locations shown (four locations total) to ensure bridge is free of any impediments to removal by crane.
2. Clean and scarify top of bridge seat. Provide smooth level surface of self-levelling cementitious grout 500 mm wide by not more than 10 mm deep for full length of bridge seat to receive paired W250 new bridge chairs. (Both abutments).

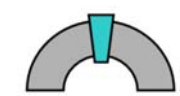


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	HK	CHK		DEC 2024
	SR	CHK	SITE HE-12	DWG 8

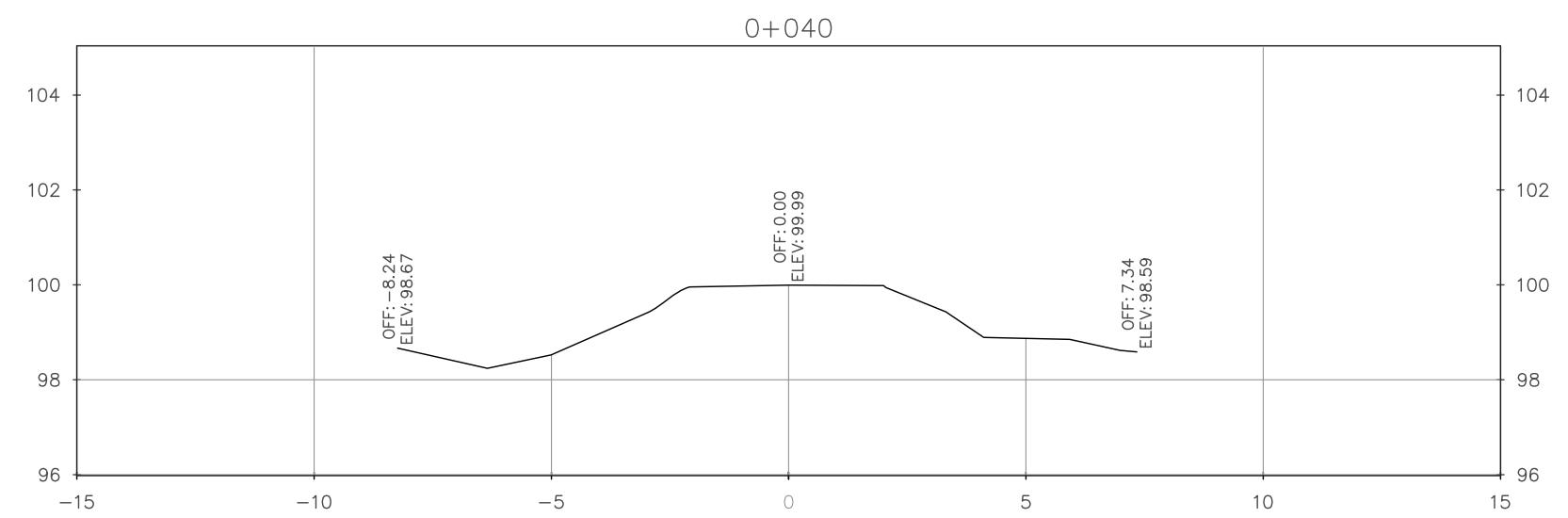
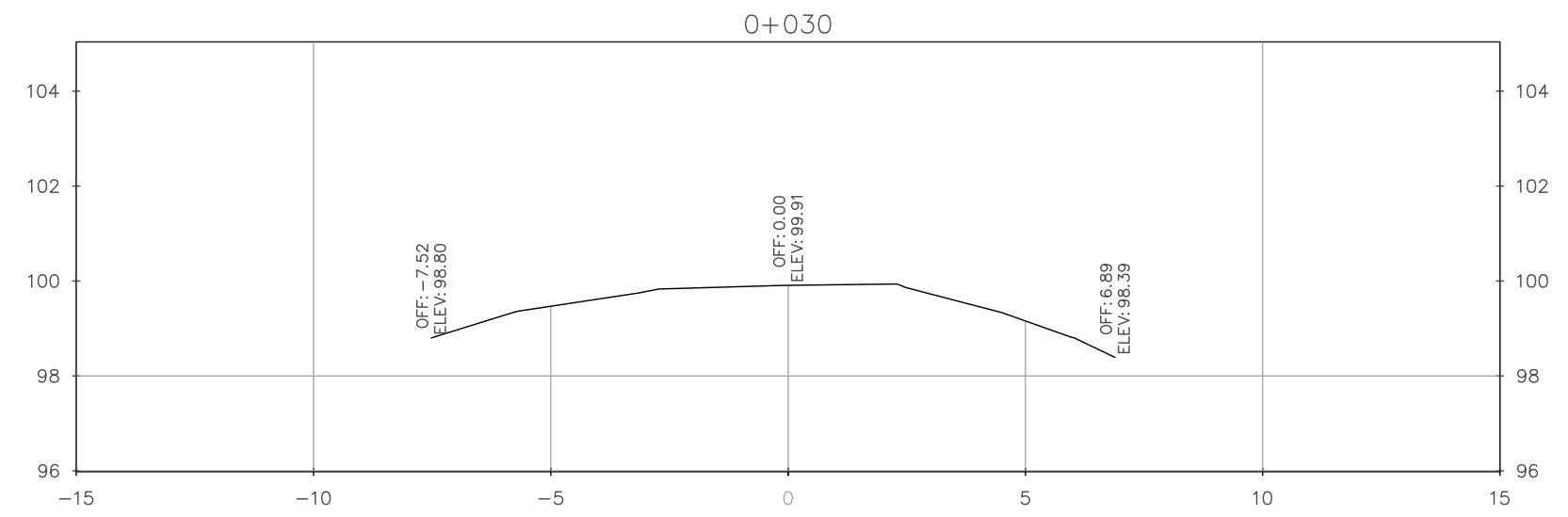
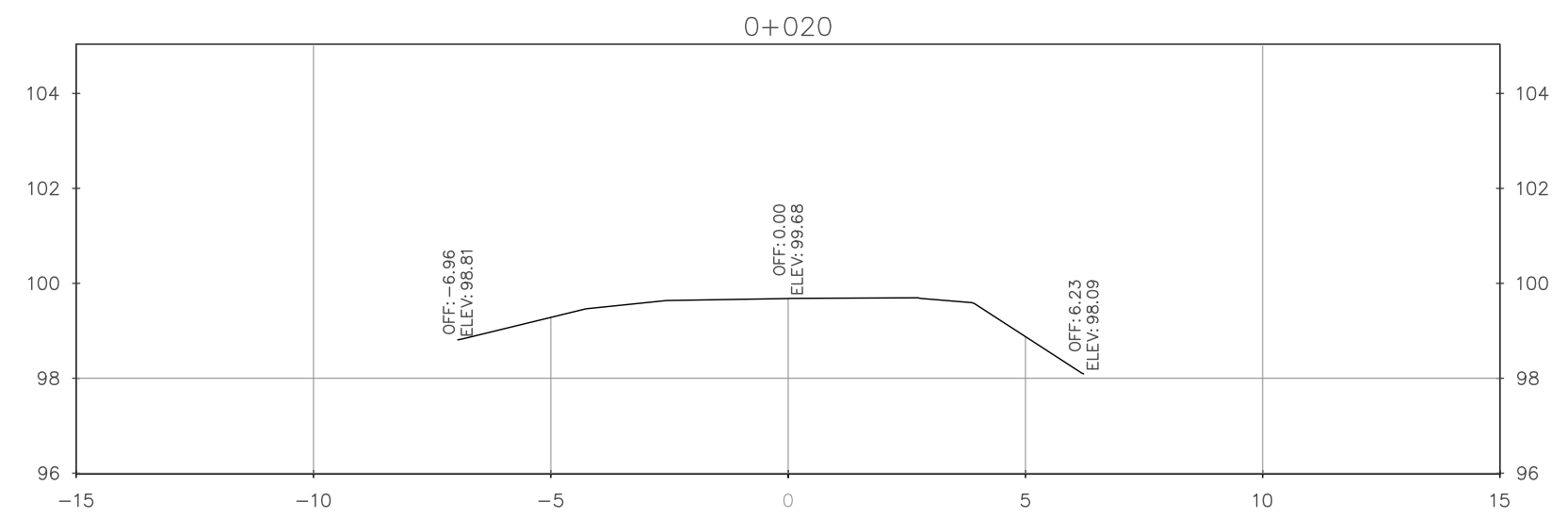


MCCOLLS BRIDGE
EXISTING ROAD CROSS SECTIONS
STA 0+020, 0+030 & 0+040

SHEET
9



**Keystone Bridge
Management Corp.**



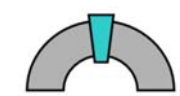
REVISIONS		DESCRIPTION	

DESIGN	HK	CHK	CODE	DATE	DEC 2024
DRAWN	SR	CHK	SITE HE-12	DWG	9

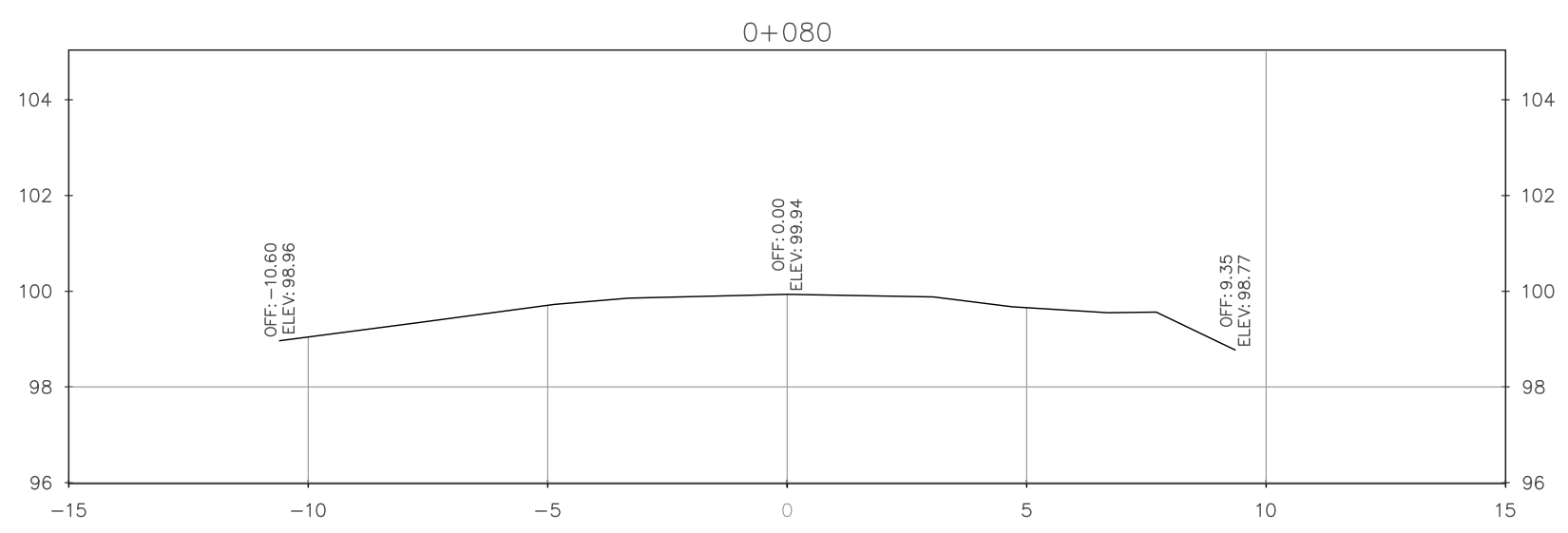
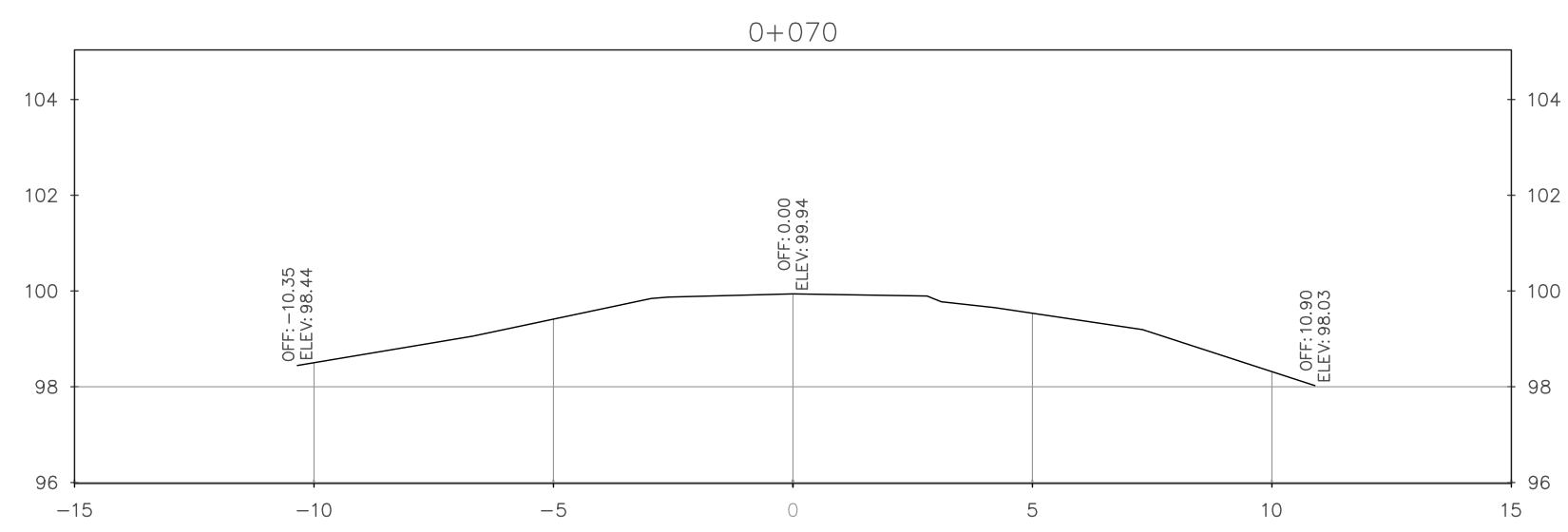
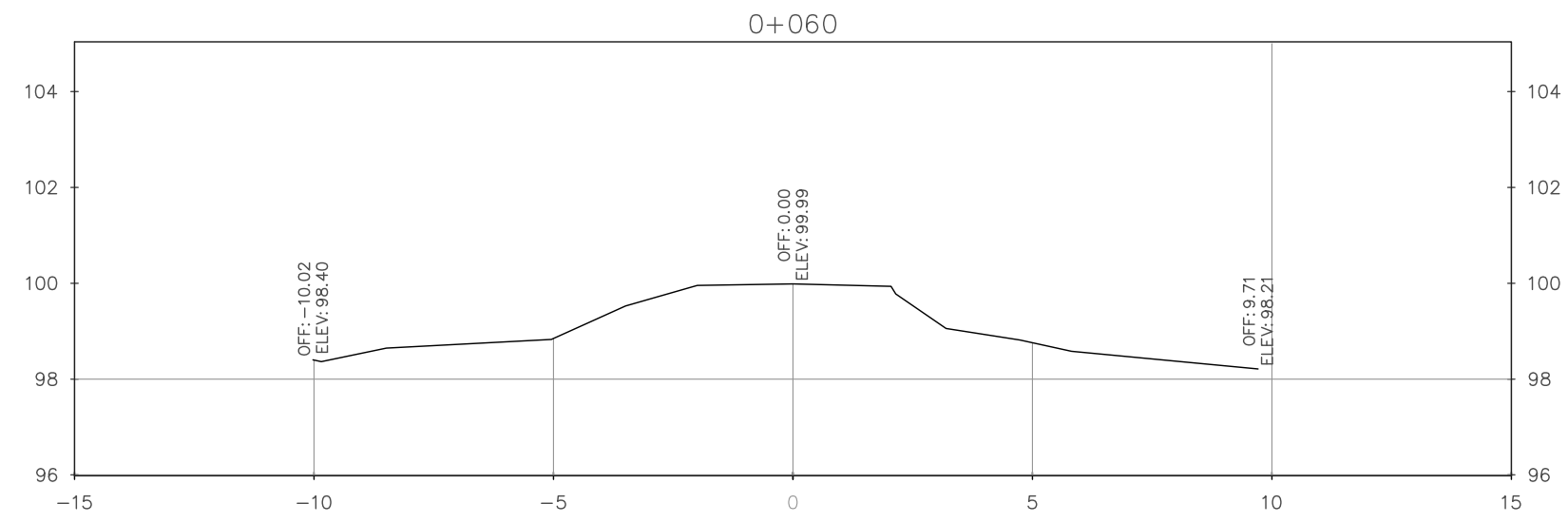


MCCOLLS BRIDGE
EXISTING ROAD CROSS SECTIONS
STA 0+060, 0+070 & 0+080

SHEET
10



**Keystone Bridge
Management Corp.**



REVISIONS		DESCRIPTION		DATE
DESIGN	HK	CHK	CODE	DEC 2024
DRAWN	SR	CHK	SITE HE-12	DWG 10