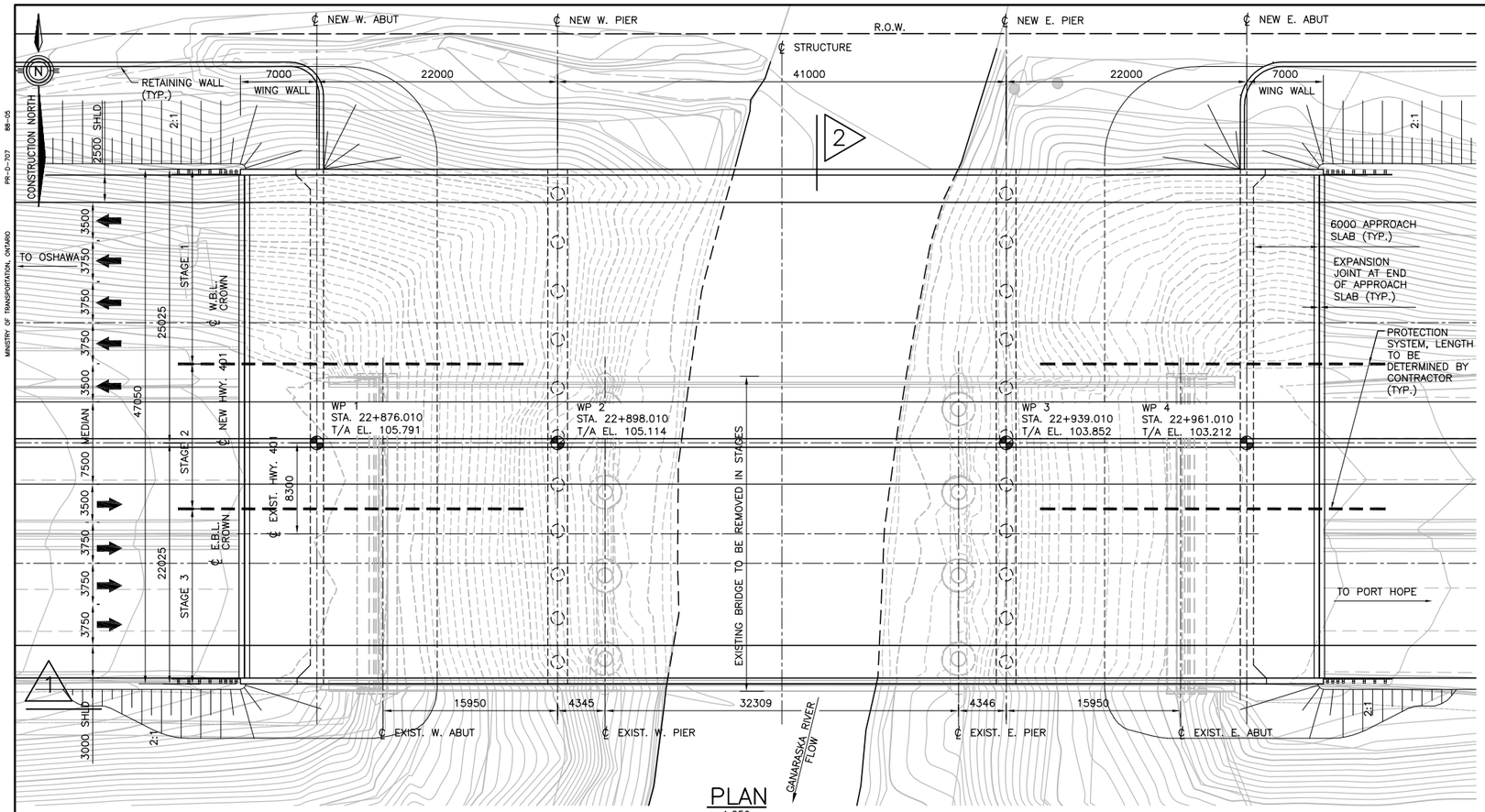

PLAN
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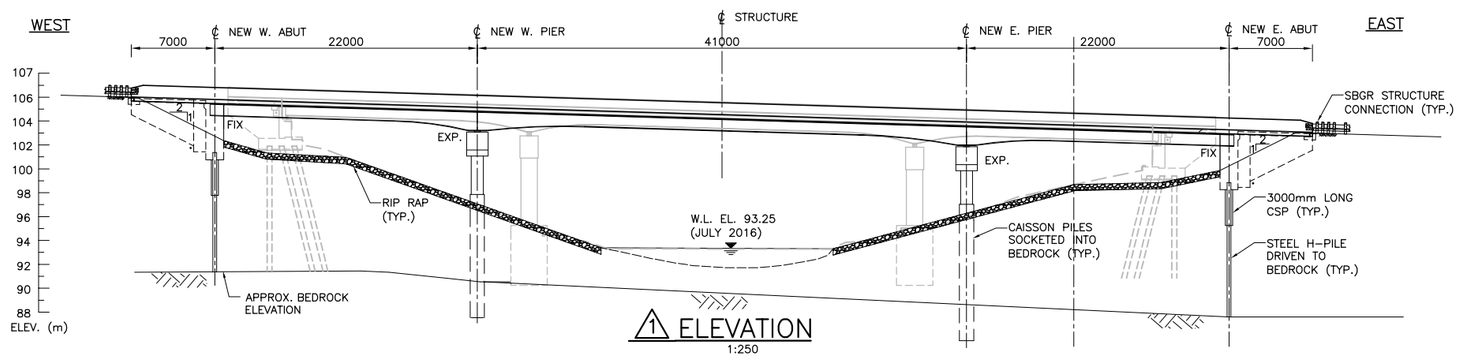

1 ELEVATION
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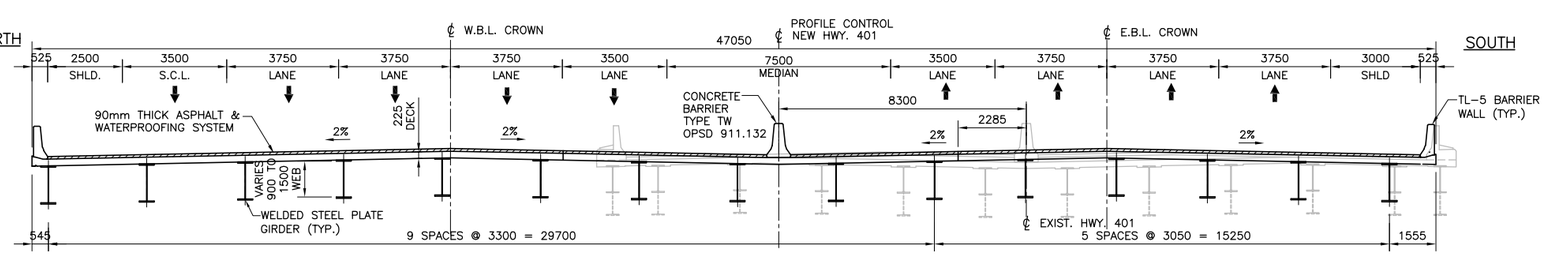


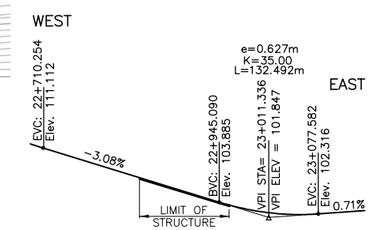
2 SECTION
1:100

METRIC

DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN

COORDINATES OF WORK POINTS

WP #	STATION	NORTH COORDINATE	EAST COORDINATE
1	22+876.010	4870651.132	401516.480
2	22+898.010	4870654.316	401538.249
3	22+939.010	4870660.250	401578.817
4	22+961.090	4870663.434	401600.585



PROFILE OF HWY 401
N.T.S.

LIST OF DRAWINGS

1. GENERAL ARRANGEMENT
2. BOREHOLE LOCATIONS AND SOIL STRATA
3. SOIL STRATA
4. CONSTRUCTION STAGING
5. FOUNDATION LAYOUT AND DETAILS
6. FOUNDATION DETAILS
7. ABUTMENTS
8. WINGWALLS
9. PIER DETAILS
10. BEARINGS I
11. BEARINGS II
12. STRUCTURAL STEEL – I
13. STRUCTURAL STEEL – II
14. STRUCTURAL STEEL – III
15. STRUCTURAL STEEL – IV
16. DECK LAYOUT
17. DECK DETAILS I
18. BARRIER WALL W/O RAILING, TL-5
19. 6000mm APPROACH SLAB
20. EXPANSION JOINT (TYPE C) AND SLEEPER SLAB
21. STANDARD DETAILS

DRAWING NOT TO BE SCALED
100 mm ON ORIGINAL DRAWING

HWY. 401
CONT No
WP No

GANARASKA RIVER BRIDGE REPLACEMENT

GENERAL ARRANGEMENT

SHEET –

LEA McINTOSH PERRY Joint Venture

GENERAL NOTES:

CLASS OF CONCRETE

CAISSONS	35 MPa
DECK	30 MPa
REMAINDER (UNLESS NOTED OTHERWISE)	30 MPa

CLEAR COVER TO REINFORCING STEEL

FOOTINGS		100 ± 25
DECK	TOP	70 ± 20
	BOT.	40 ± 10
CAISSONS		90 ± 20
REMAINDER (UNLESS NOTED OTHERWISE)		70 ± 20

REINFORCING STEEL

REINFORCING STEEL SHALL BE GRADE 500W UNLESS OTHERWISE SPECIFIED.

UNLESS SHOWN OTHERWISE, TENSION LAP SPLICE SHALL BE CLASS B.

GLASS FIBRE REINFORCED POLYMER REINFORCING BARS SHALL BE GRADE III AS SPECIFIED IN THE CONTRACT DRAWINGS. THE NOMINAL DIAMETER, TENSILE MODULUS OF ELASTICITY AND GUARANTEED MINIMUM TENSILE STRENGTH SHALL BE AS SPECIFIED IN THE CONTRACT DOCUMENTS.

BAR MARKS WITH SUFFIX "S" DENOTE STAINLESS STEEL REINFORCEMENT. STAINLESS REINFORCING STEEL SHALL BE TYPE 316LN OR DUPLEX 2205 AND HAVE MINIMUM YIELD STRENGTH OF 500 MPa.

BAR MARKS WITH THE PREFIX GIII DENOTE GRADE III GLASS FIBRE REINFORCED POLYMER BARS.

BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIAMETERS, WHILE STIRRUPS AND TIES SHALL HAVE MINIMUM HOOK DIMENSIONS. ALL HOOKS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL STANDARD DRAWINGS SS12-1, UNLESS INDICATED OTHERWISE.

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL ESTABLISH THE BEARING SEAT ELEVATIONS BY DEDUCTING THE ACTUAL BEARING THICKNESSES FROM THE TOP OF BEARING ELEVATIONS. IF THE ACTUAL BEARING THICKNESSES ARE DIFFERENT FROM THOSE GIVEN WITH THE BEARING DESIGN DATA, THE CONTRACTOR SHALL ADJUST THE REINFORCING STEEL TO SUIT.
2. BACKFILL SHALL NOT BE PLACED BEHIND THE ABUTMENTS UNTIL THE DECK ENDS HAVE BEEN CONSTRUCTED AND HAVE ATTAINED COMPRESSIVE STRENGTH OF 25 MPa.
3. BACKFILL SHALL BE PLACED SIMULTANEOUSLY BEHIND BOTH ABUTMENTS KEEPING THE HEIGHT OF THE BACKFILL APPROXIMATELY THE SAME. AT NO TIME SHALL THE DIFFERENCE IN ELEVATION BE GREATER THAN 500mm.
4. THE CONTRACTOR SHALL ENSURE THE STABILITY OF THE GIRDERS, UNTIL THE DECK IS CONSTRUCTED AND HAS ATTAINED A COMPRESSIVE STRENGTH OF 25 MPa.

LIST OF ABBREVIATIONS:

T/A	– TOP OF ASPHALT (FINISHED ELEV.)
WP	– WORKING POINT
T/FTG.	– TOP OF FOOTING
BRGS.	– BEARINGS
CONC.	– CONCRETE
TYP.	– TYPICAL
EL.	– ELEVATION
ABUT.	– ABUTMENT
W.L.	– WATER LEVEL
℄	– CENTRE LINE
STA.	– STATION

APPLICABLE STANDARD DRAWINGS:

OPSD– 912.430	GUIDE RAIL SYSTEM, STEEL BEAM STRUCTURE CONNECTION
OPSD–3101.150	WALLS ABUTMENT, BACKFILL MINIMUM GRANULAR REQUIREMENT
OPSD–3102.100	WALLS ABUTMENT BACKFILL DRAIN
OPSD–3370.100	DECK, WATERPROOFING HOT APPLIED ASPHALT MEMBRANE WITH PROTECTION BOARD
OPSD–3419.100	DECK, WATERPROOFING HOT APPLIED ASPHALT MEMBRANE AT ACTIVE CRACKS GREATER THAN 2mm WIDE AND CONSTRUCTION JOINT

REVISIONS

DATE	BY	DESCRIPTION

DESIGN	PC	CHK	RTK	CODE CHBDC S6-19	LOAD ONT CL-625	DATE NOV 2021	
DRAWN	DT	CHK	PC	SITE 21X-0231/B0	STRUCT –	SCHEME –	DWG 1

MINISTRY OF TRANSPORTATION, ONTARIO
PR-D-707 88-05
DRAWING NAME: F:\18374\Assignment #13 – Hwy 401 Port Hope PD\4. Bridge (Structural)\4.5 Drafting\Drawings for SDR's\Ganaraska River GA-S01.dwg
CREATED: MAY 2021 MODIFIED: Dec 14, 2021-12:09pm

METRIC

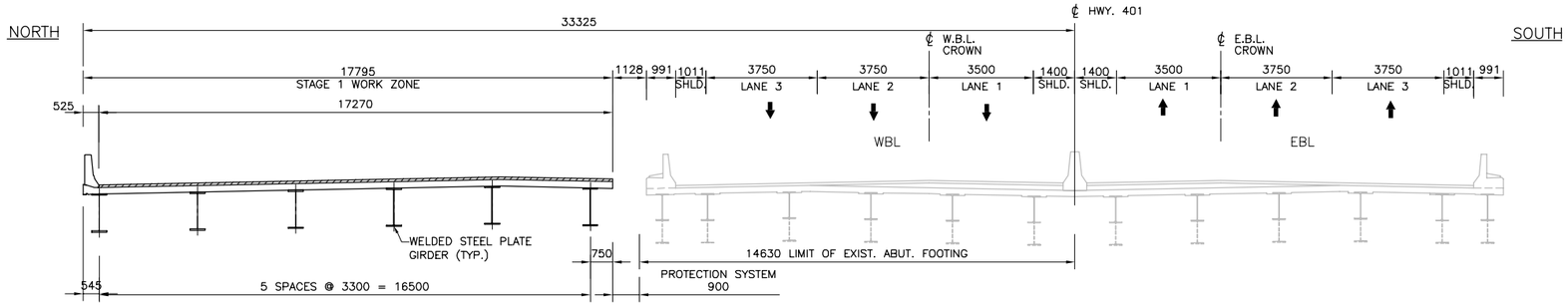
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN

CONT No
WP No

GANARASKA RIVER BRDGE
BRIDGE REPLACEMENT
CONSTRUCTION STAGING

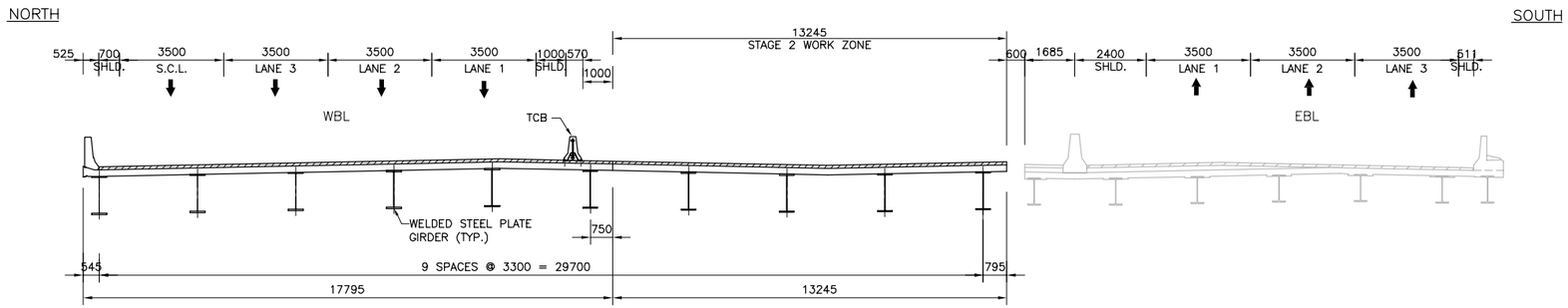
SHEET

McINTOSH PERRY
Joint Venture



STAGE 1 – GANARASKA RIVER BRIDGE

1:100



STAGE 2 – GANARASKA RIVER BRIDGE

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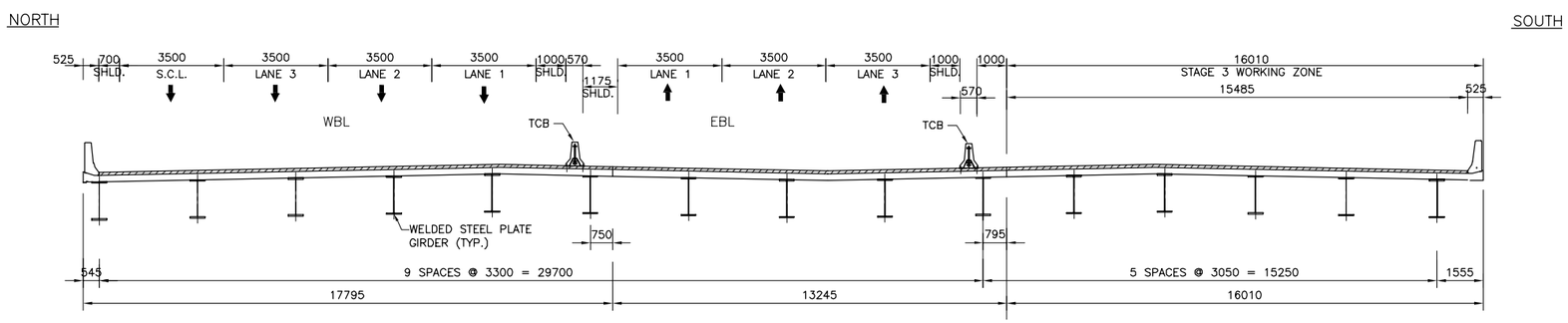
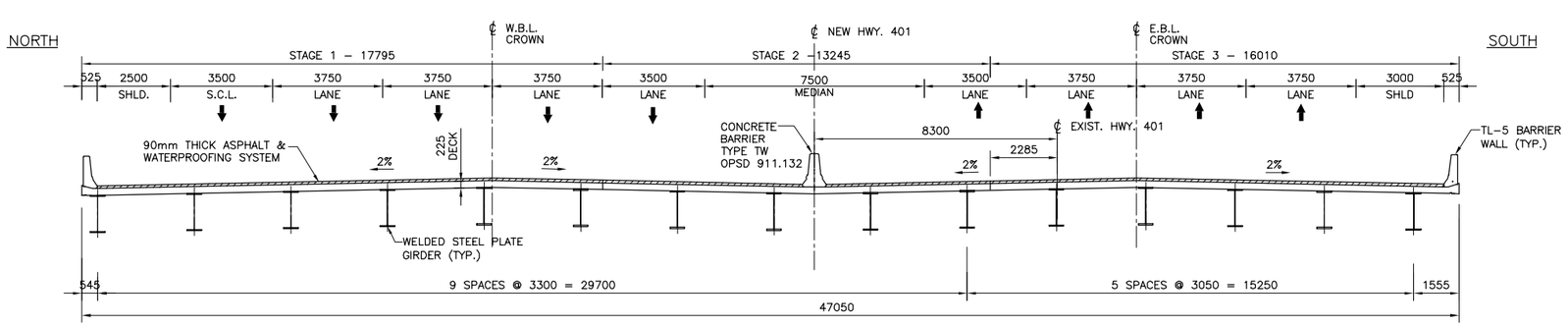


STAGE 3 – GANARASKA RIVER BRIDGE

1:100



FINAL – GANARASKA RIVER BRIDGE

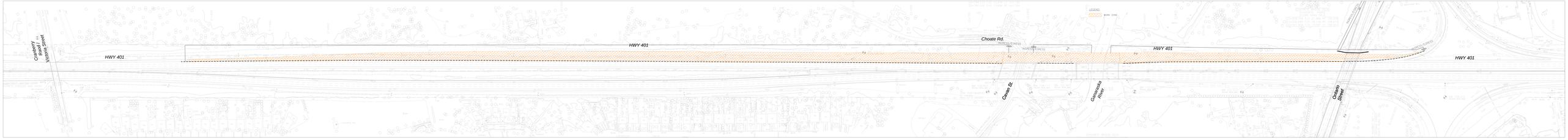
1:100

DRAWING NOT TO BE SCALED
100 mm ON ORIGINAL DRAWING

REVISIONS		
DATE	BY	DESCRIPTION

DESIGN	PC	CHK	RTK	CODE CHBDC S6-19	LOAD ONT CL-625	DATE	NOV 2021
DRAWN	DT	CHK	PC	SITE 21X-0231/B0	STRUCT –	SCHEME –	DWG 1

DRAWING NAME: \\mor-fs01\active\18374\assignment #13 – Hwy 401 Port Hope PD\4. Bridge (Structural)\4.5 Drafting\Drawings for SDRs\Staging GAN_Option 1B, 2B & 3.dwg
CREATED: MAY 2007 MODIFIED: Nov 29, 2021-4:47pm
MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05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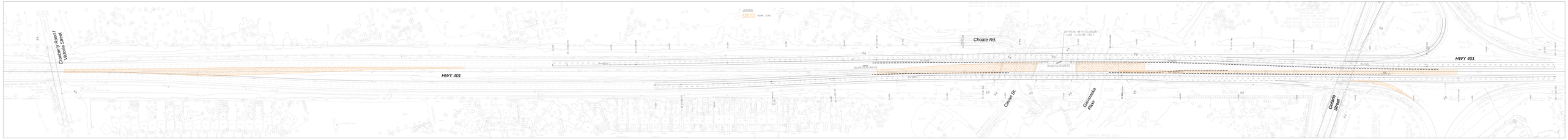
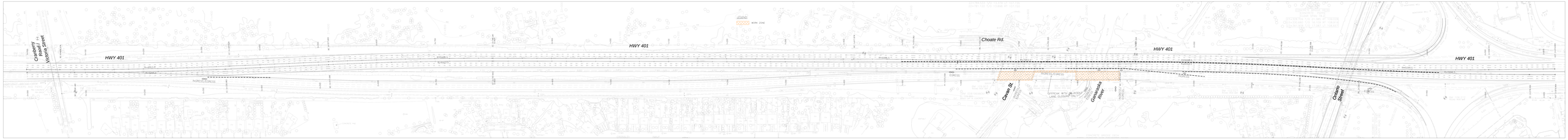
Victoria Street
HWY 401
HWY 401
Choate Rd.
HWY 401
HWY 401
Cavan St.
Gananoque River
Ontario Street


LEGEND
WORK ZONE
Cadberry Road / Victoria Street
HWY 401
Choate Rd.
OFFPEAK WITH ADJACENT LANE CLOSURE ONLY
WORKS CLOSED
WORKS CLOSED
Cavalli St.
Cataraqui River
Ontario Street
HWY 401


LEGEND
WORK ZONE
HWY 401
HWY 401
HWY 401
HWY 401
Choate Rd.
Victoria Street
Carson St.
Carson Street
Gananoque River
NORTHBOUND
SOUTHBOUND
NORTHBOUND
SOUTHBOUND
NORTHBOUND
SOUTHBOUND