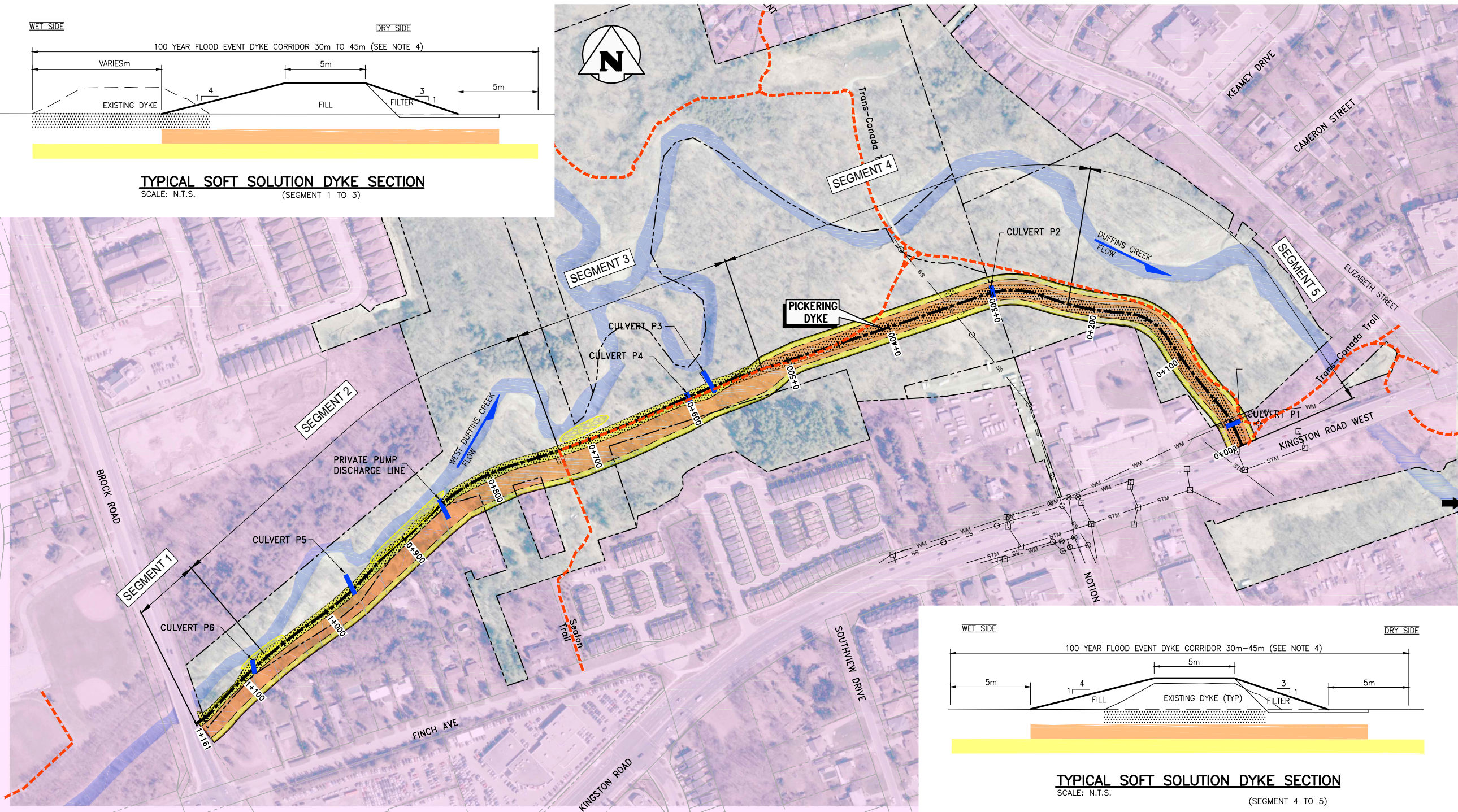
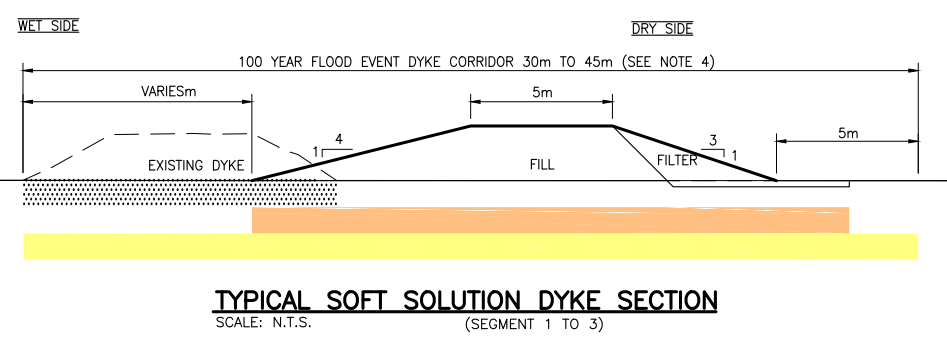
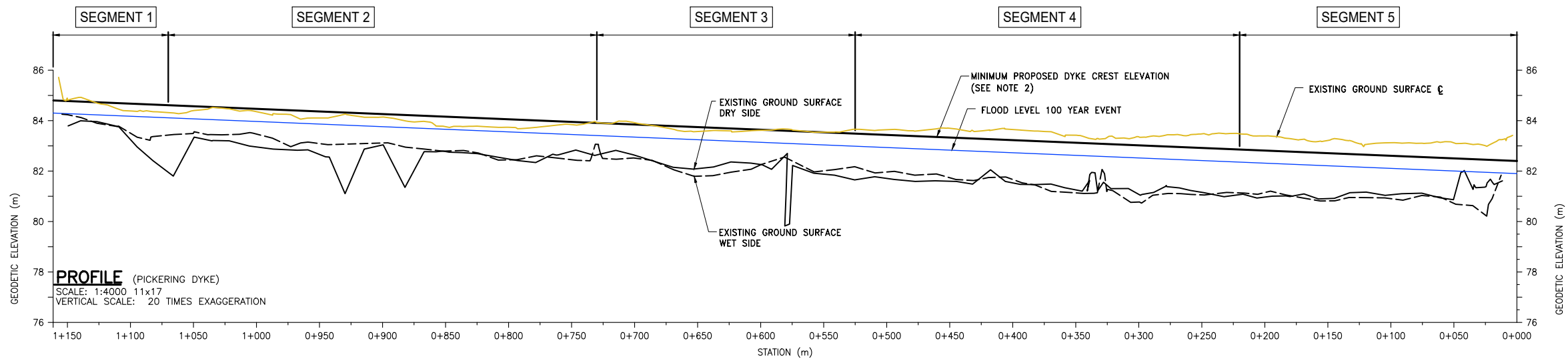


APPENDIX G

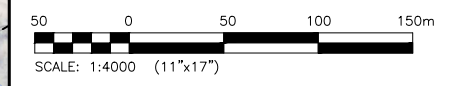
10% Design Drawings of Alternative Solutions for the
Pickering Ajax Dykes

File name: \\192.168.0.226\1-Data\Projects\2018\19-2839-003\Drawings\Sketches\19-2839-003_SK009 - TabRevd Plotted By: Tconwent 20/05/13 [Wed 9:09am] 11x17" PLOT SCALE: 1"=2"



- LEGEND:**
- ⊗ EXISTING CONTROL VALVE
 - EXISTING SANITARY/STORM MANHOLE
 - ⊕ EXISTING HYDRANT
 - EXISTING CATCH BASIN
 - SS — EXISTING SANITARY/SEWER SERVICE
 - STM — EXISTING STORM SEWER
 - WM — EXISTING WATERMAIN/WATER SERVICE
 - - - - - PROPERTY LINE
 - - - - - TRAIL
 - EXISTING CULVERT/DRAINAGE FEATURE
 - - - - - EXISTING DYKE CENTRE LINE STATIONING
 - PROPERTY NOT OWNED BY TRCA
 - ▨ EXISTING DEGRADED RIPRAP (SEE NOTE 1)
 - ▨ EXISTING DYKE FOOTPRINT
 - ▨ NEW DYKE FOOTPRINT
 - ▨ ASSUMED CONSTRUCTION DISTURBANCE FOOTPRINT (SEE NOTE 3)

- NOTES:**
1. APPROXIMATE DEGRADED RIPRAP LOCATION BASED ON VALDOR MARCH 2018 DYKE LEVEL OF SERVICE AND REHABILITATION REPORT PICKERING/AJAX SPA'S.
 2. BASED ON 1:100 YEAR DESIGN EVENT PLUS 0.5m FREEBOARD.
 3. CONSTRUCTION DISTURBANCE FOOTPRINT ASSUMES 5m DISTURBANCE BEYOND NEW DYKE TOES.
 4. DISTURBED CORRIDOR WILL VARY DEPENDING ON IF RELOCATION IS REQUIRED FROM EDGE OF BANK. DISTURBED CORRIDOR MAY VARY FROM 30m TO 45m (ESTIMATED USING TYPICAL CROSS SECTIONS).
 5. 10% DESIGN CONCEPT. TO BE REFINED IN SUBSEQUENT PROJECT PHASES.



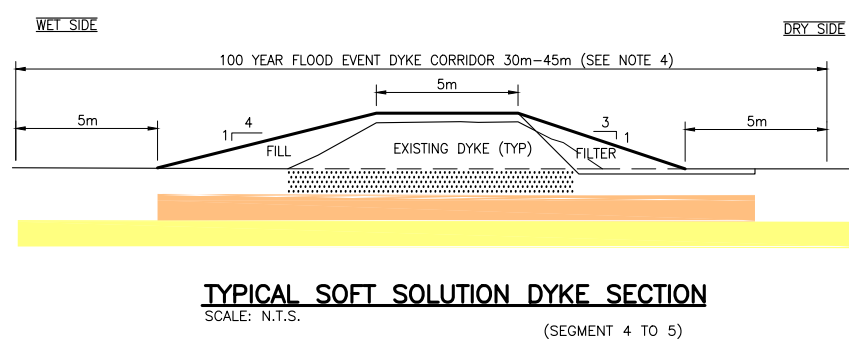
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D	19/10/11	ISSUED FOR CLC MEETING #2	CMR	BPA
C	19/09/26	RE-ISSUED FOR INFORMATION	CMR	BPA
B	19/09/24	RE-ISSUED FOR INFORMATION	CMR	BPA
A	19/09/18	ISSUED FOR INFORMATION	CMR	BPA

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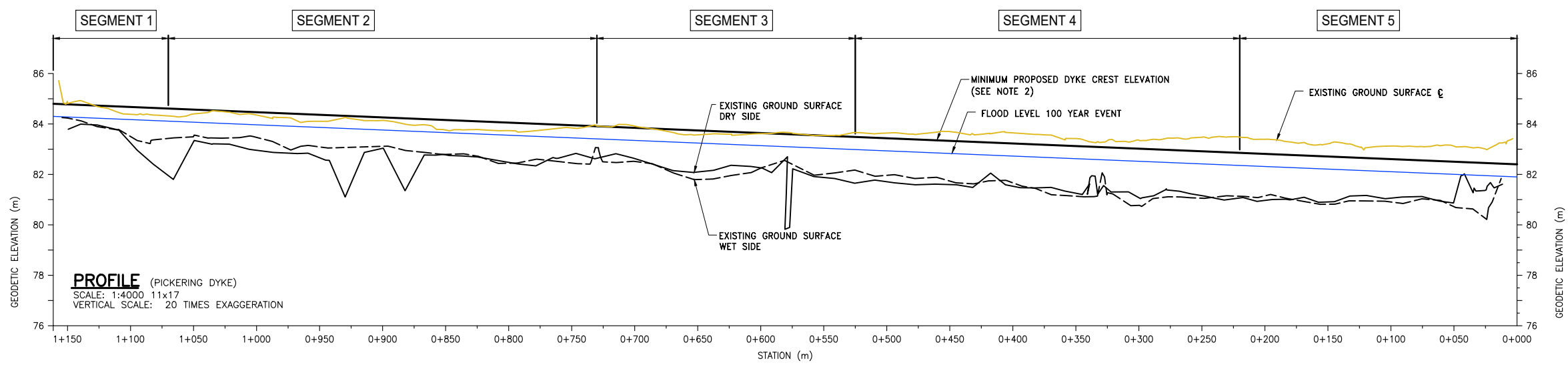
REMEDIAL FLOOD AND EROSION CONTROL PROJECTS FOR THE REHABILITATION OF THE PICKERING AND AJAX FLOOD CONTROL DYKES, ONTARIO

PICKERING DYKE 100 YEAR FLOOD EVENT PROPOSED ENGINEERED SOFT SOLUTION DYKE FOOTPRINT

OCTOBER 2019 SKETCH 09 REV: E



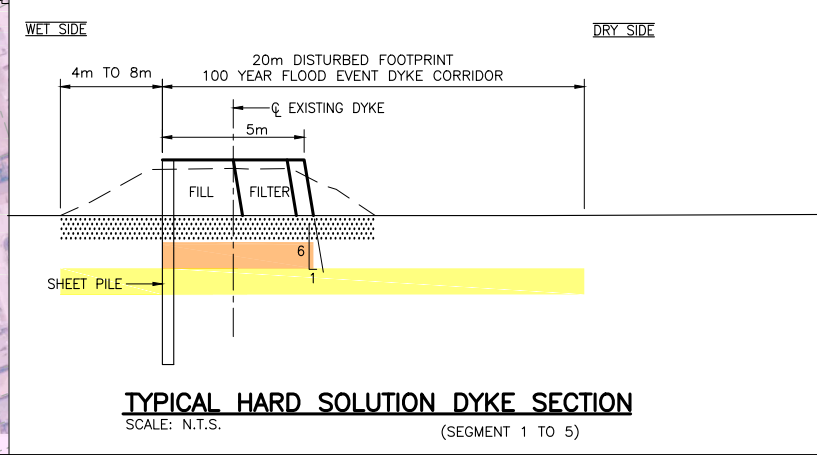
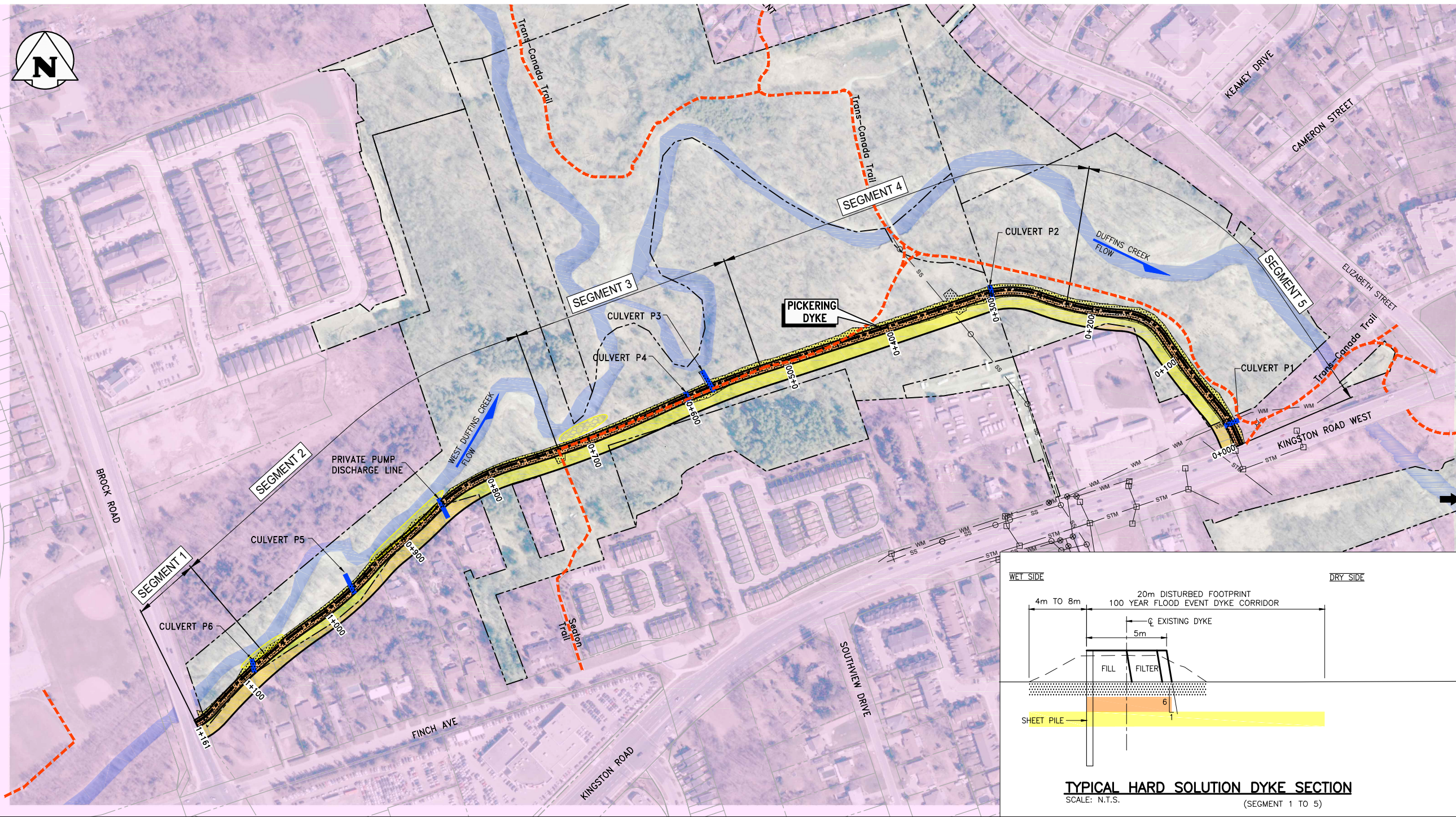
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- LEGEND:**
- ⊗ EXISTING CONTROL VALVE
 - EXISTING SANITARY/STORM MANHOLE
 - ⊕ EXISTING HYDRANT
 - EXISTING CATCH BASIN
 - SS — EXISTING SANITARY/SEWER SERVICE
 - STM — EXISTING STORM SEWER
 - WM — EXISTING WATERMAIN/WATER SERVICE
 - - - - - PROPERTY LINE
 - - - - - TRAIL
 - — — — — EXISTING CULVERT/DRAINAGE FEATURE
 - - - - - EXISTING DYKE CENTRE LINE STATIONING
 - PROPERTY NOT OWNED BY TRCA
 - ▨ EXISTING DEGRADED RIPRAP (SEE NOTE 1)
 - ▨ EXISTING DYKE FOOTPRINT
 - ▨ NEW DYKE FOOTPRINT
 - ▨ ASSUMED CONSTRUCTION DISTURBANCE FOOTPRINT (SEE NOTE 3)

- NOTES:**
- APPROXIMATE DEGRADED RIPRAP LOCATION BASED ON VALDOR MARCH 2018 DYKE LEVEL OF SERVICE AND REHABILITATION REPORT PICKERING/AJAX SPA'S.
 - BASED ON 1:100 YEAR DESIGN EVENT PLUS 0.5m FREEBOARD.
 - FINAL CONFIGURATION OF FILTER TO BE DETERMINED IN DETAILED DESIGN.
 - 10% DESIGN CONCEPT. TO BE REFINED IN SUBSEQUENT PROJECT PHASES.

NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY
E	20/05/12	ISSUED WITH ESR	CMR	BPA
D	19/10/11	ISSUED FOR CLC MEETING #2	CMR	BPA
C	19/09/26	RE-ISSUED FOR INFORMATION	CMR	BPA
B	19/09/24	RE-ISSUED FOR INFORMATION	CMR	BPA
A	19/09/18	ISSUED FOR INFORMATION	CMR	BPA

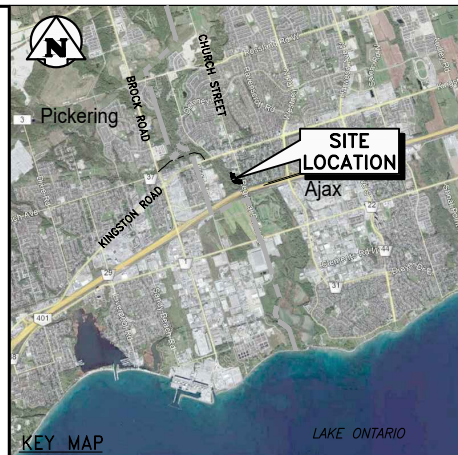
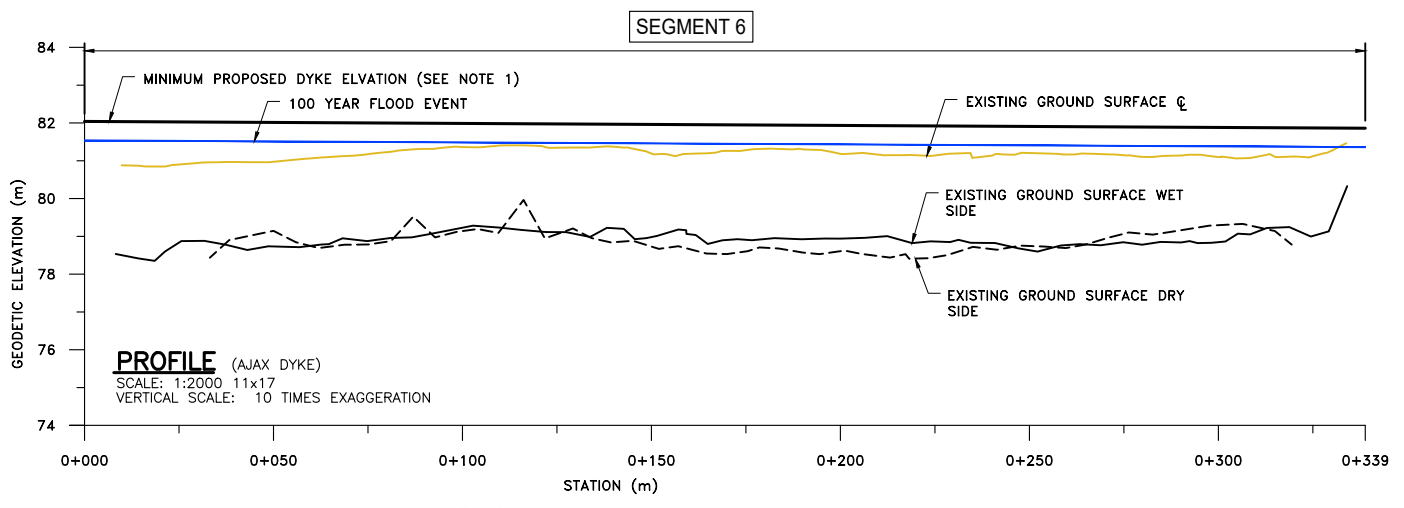


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KGS GROUP CONSULTING ENGINEERS	Toronto and Region Conservation Authority
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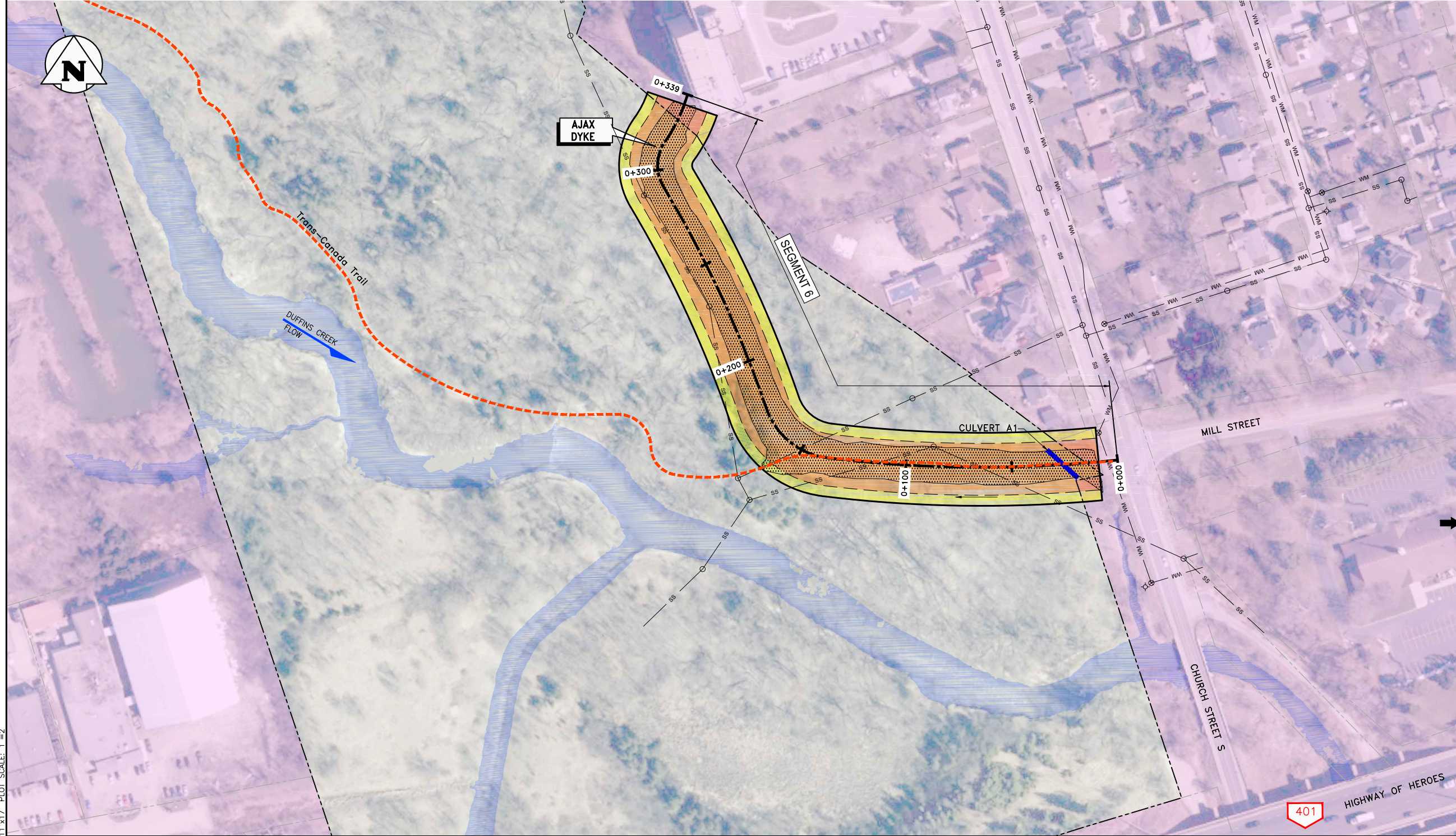
REMEDIAL FLOOD AND EROSION CONTROL PROJECTS FOR THE REHABILITATION OF THE PICKERING AND AJAX FLOOD CONTROL DYKES, ONTARIO
 PICKERING DYKE 100 YEAR FLOOD EVENT PROPOSED ENGINEERED HARD SOLUTION DYKE FOOTPRINT

OCTOBER 2019 SKETCH 10 REV: E



- LEGEND:**
- ⊗ EXISTING CONTROL VALVE
 - EXISTING SANITARY/STORM MANHOLE
 - ⊕ EXISTING HYDRANT
 - EXISTING CATCH BASIN
 - SS — EXISTING SANITARY/SEWER SERVICE
 - WM — EXISTING WATERMAIN/WATER SERVICE
 - - - TRAIL
 - — — EXISTING CULVERT/DRAINAGE FEATURE
 - - - EXISTING DYKE CENTRE LINE STATIONING
 - - - PROPERTY LINE
 - PROPERTY NOT OWNED BY TRCA
 - EXISTING DYKE FOOTPRINT
 - NEW DYKE FOOTPRINT
 - ASSUMED CONSTRUCTION DISTURBANCE FOOTPRINT (SEE NOTE 2)

- NOTES:**
1. BASED ON 1:100 YEAR DESIGN EVENT PLUS 0.5m FREEBOARD.
 2. CONSTRUCTION DISTURBANCE FOOTPRINT ASSUMES 5m DISTURBANCE BEYOND THE DYKE TOES.
 3. DISTURBED CORRIDOR WILL VARY, DEPENDING ON IF RELOCATION IS REQUIRED. IT HAS BEEN ESTIMATED TO BE APPROXIMATELY 30m BASED ON TYPICAL CORSS SECTIONS.
 4. DISTURBED CORRIDOR FOR THE SOLUTION CONSIDERING A 50 YEAR DESIGN EVENT WOULD BE APPROXIMATELY 4m NARROWER.
 5. 10% DESIGN CONCEPT. TO BE REFINED IN SUBSEQUENT PROJECT PHASES.
- 25 0 25 50 75m
SCALE: 1:2000 (11"x17")



NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY
E	20/05/12	ISSUED WITH ESR	CMR	BPA
D	19/10/11	ISSUED FOR CLC MEETING #2	CMR	BPA
C	19/09/26	RE-ISSUED FOR INFORMATION	CMR	BPA
B	19/09/24	RE-ISSUED FOR INFORMATION	CMR	BPA
A	19/09/18	ISSUED FOR INFORMATION	CMR	BPA

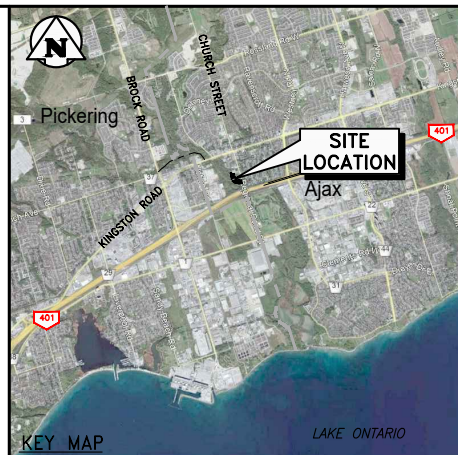
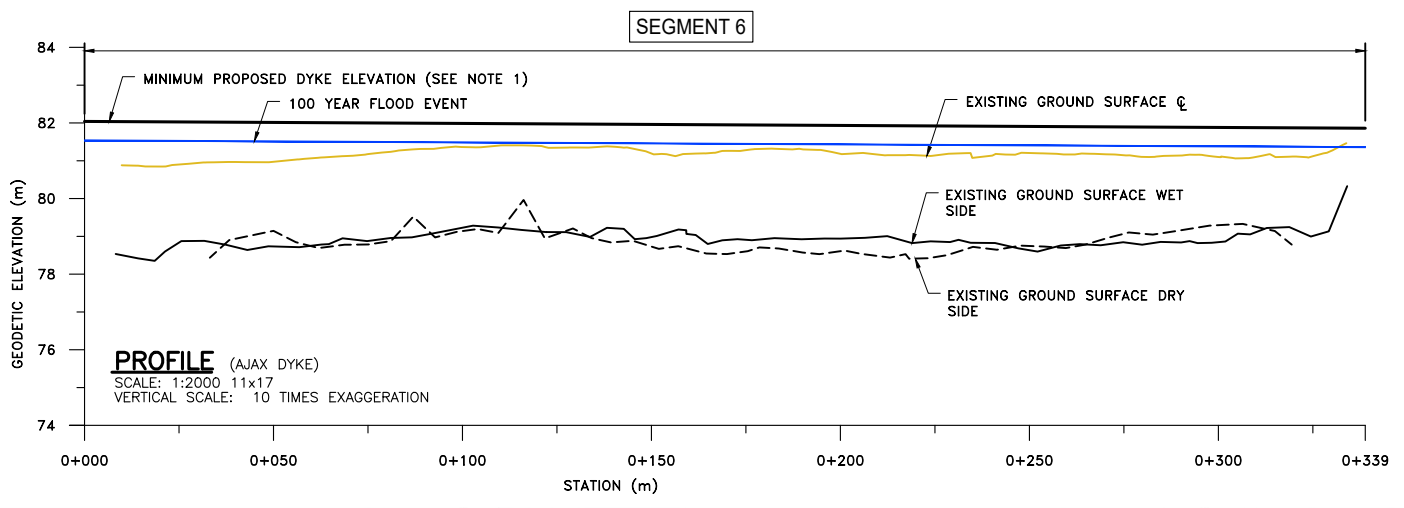
REVISIONS / ISSUE



REMEDIAL FLOOD AND EROSION CONTROL PROJECTS FOR THE REHABILITATION OF THE PICKERING AND AJAX FLOOD CONTROL DYKES, ONTARIO

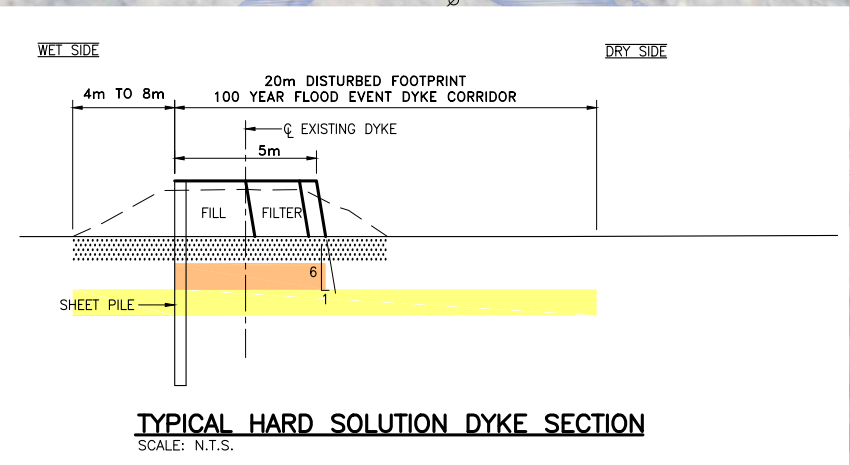
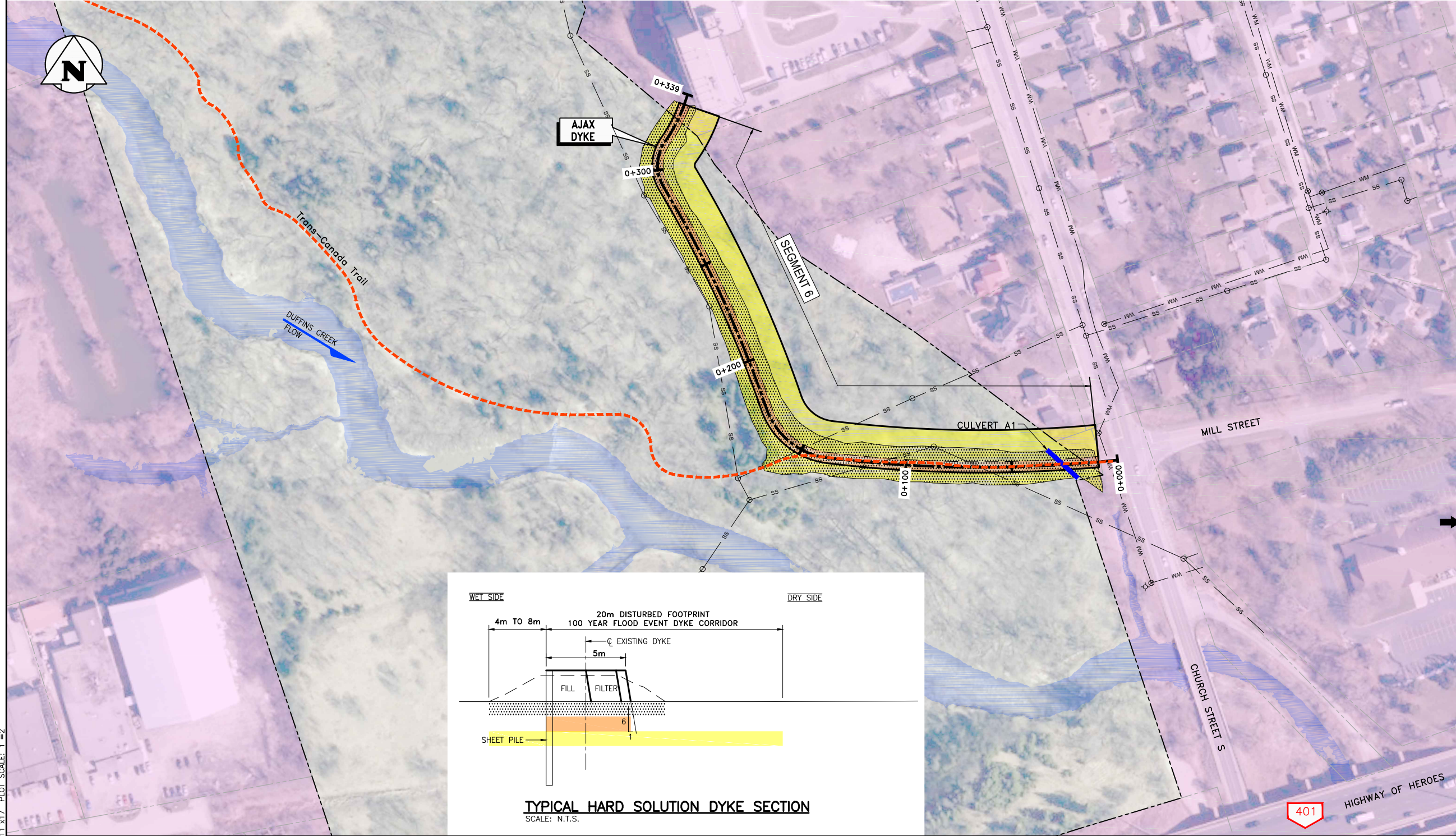
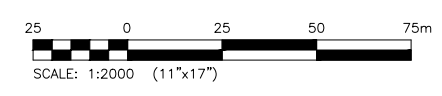
AJAX DYKE 100 YEAR FLOOD EVENT PROPOSED ENGINEERED SOFT SOLUTION DYKE FOOTPRINT

11x17



- LEGEND:**
- ⊗ EXISTING CONTROL VALVE
 - EXISTING SANITARY/STORM MANHOLE
 - ⊕ EXISTING HYDRANT
 - EXISTING CATCH BASIN
 - SS — EXISTING SANITARY/SEWER SERVICE
 - WM — EXISTING WATERMAIN/WATER SERVICE
 - - - - - PROPERTY LINE
 - TRAIL
 - █ EXISTING CULVERT/DRAINAGE FEATURE
 - EXISTING DYKE CENTRE LINE STATIONING
 - PROPERTY NOT OWNED BY TRCA
 - ▨ EXISTING DYKE FOOTPRINT
 - █ NEW DYKE FOOTPRINT
 - █ ASSUMED CONSTRUCTION DISTURBANCE FOOTPRINT (SEE NOTE 2)

- NOTES:**
1. BASED ON 1:100 YEAR DESIGN EVENT PLUS 0.5m FREEBOARD.
 2. THIS DRAWING HAS BEEN BASED ON A DYKE SOLUTION CONSIDERING A 100 YEAR EVENT. THE DISTURBED AREA FOR A DYKE SOLUTION CONSIDERING A 50 YEAR EVENT WOULD BE ESSENTIALLY THE SAME.
 3. 10% DESIGN CONCEPT. TO BE REFINED IN SUBSEQUENT PROJECT PHASES.



NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY
E	20/05/12	ISSUED WITH ESR	CMR	BPA
D	19/10/11	ISSUED FOR CLC MEETING #2	CMR	BPA
C	19/09/26	RE-ISSUED FOR INFORMATION	CMR	BPA
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REVISIONS / ISSUE

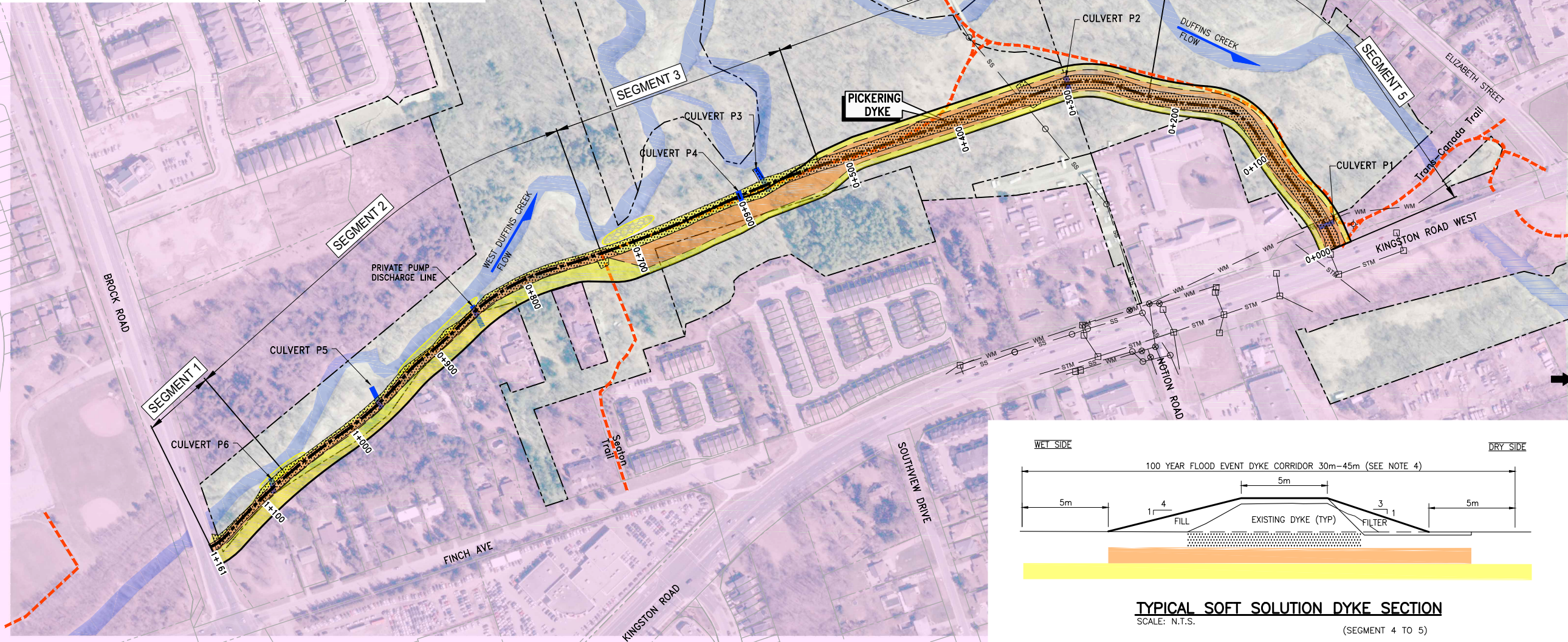
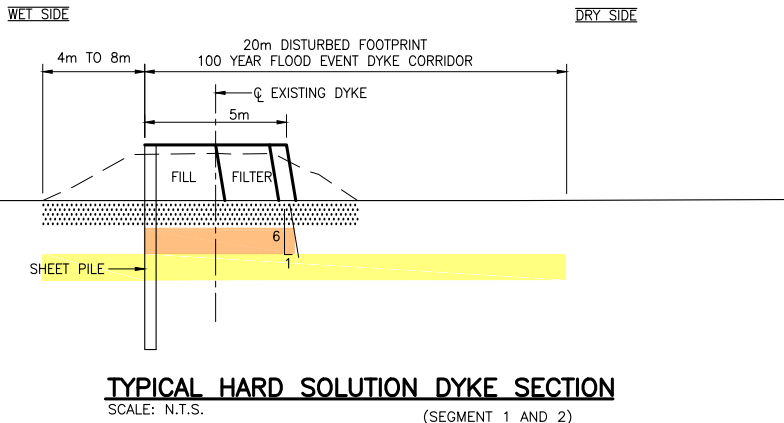
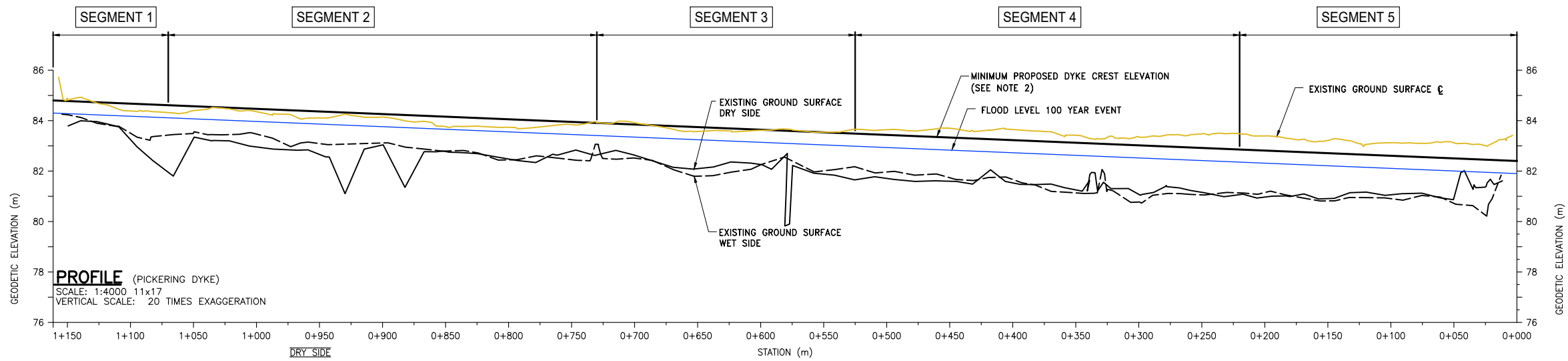


REMEDIAL FLOOD AND EROSION CONTROL PROJECTS FOR THE REHABILITATION OF THE PICKERING AND AJAX FLOOD CONTROL DYKES, ONTARIO

AJAX DYKE 100 YEAR FLOOD EVENT PROPOSED ENGINEERED HARD SOLUTION DYKE FOOTPRINT

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File name: \\192.168.0.226\19-2839-003\Projects\2019\19-2839-003\Drawings\Sketches\19-2839-003_SK15 - TabRevd Plotted By: Tconwent 20/05/13 [Wed 2:32pm] 11"x17" PLOT SCALE: 1"=2'



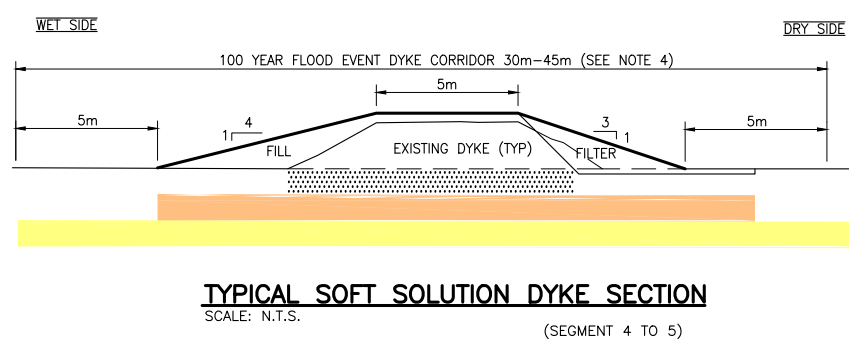
- LEGEND:**
- ⊗ EXISTING CONTROL VALVE
 - EXISTING SANITARY/STORM MANHOLE
 - ⊕ EXISTING HYDRANT
 - EXISTING CATCH BASIN
 - SS — EXISTING SANITARY/SEWER SERVICE
 - STM — EXISTING STORM SEWER
 - WM — EXISTING WATERMAIN/WATER SERVICE
 - - - - - PROPERTY LINE
 - TRAIL
 - EXISTING CULVERT/DRAINAGE FEATURE
 - EXISTING DYKE CENTRE LINE STATIONING
 - PROPERTY NOT OWNED BY TRCA
 - ▨ EXISTING DEGRADED RIPRAP (SEE NOTE 1)
 - ▨ EXISTING DYKE FOOTPRINT
 - ▨ NEW DYKE FOOTPRINT
 - ▨ ASSUMED CONSTRUCTION DISTURBANCE FOOTPRINT (SEE NOTE 3)

- NOTES:**
1. APPROXIMATE DEGRADED RIPRAP LOCATION BASED ON VALDOR MARCH 2018 DYKE LEVEL OF SERVICE AND REHABILITATION REPORT PICKERING/AJAX SPA'S.
 2. BASED ON 1:100 YEAR DESIGN EVENT PLUS 0.5m FREEBOARD.
 3. CONSTRUCTION DISTURBANCE FOOTPRINT ASSUMES 5m DISTURBANCE BEYOND NEW DYKE TOES.
 4. DISTURBED CORRIDOR WILL VARY DEPENDING ON IF RELOCATION IS REQUIRED FROM EDGE OF BANK. DISTURBED CORRIDOR MAY VARY FROM 30m TO 45m (ESTIMATED USING TYPICAL CROSS SECTIONS).
 5. 10% DESIGN CONCEPT. TO BE REFINED IN SUBSEQUENT PROJECT PHASES.
- 50 0 50 100 150m
 SCALE: 1:4000 (11"x17")

B	20/05/12	ISSUED WITH ESR	CMR	BPA
A	19/10/21	ISSUED FOR INFORMATION	CMR	BPA
NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY

REVISIONS / ISSUE

REMEDIAL FLOOD AND EROSION CONTROL PROJECTS FOR THE REHABILITATION OF THE PICKERING AND AJAX FLOOD CONTROL DYKES, ONTARIO
 PICKERING DYKE 100 YEAR FLOOD EVENT PREFERRED ALTERNATIVE SOLUTION



KGS
GROUP

Experience in Action