Appendix N: Final Preferred Solutions Conceptual Designs – Kidd’s Creek Watershed
SWMF RETROFIT FOR WATER QUALITY TREATMENT:
LEVEL 1 "ENHANCED" TREATMENT (80% TSS REMOVAL)
PHOSPHORUS REDUCTION = 59.9 kg/year
ADDITIONAL ACTIVE STORAGE = 5,015 m³

UNDERGROUND INFILTRATION SYSTEM:
DRAINAGE AREA = 60.0 ha
AREA = 1,640 m²
STORAGE VOLUME = 1,606 m³
PEAK DESIGN FLOW = AS NOTED (25 mm STORM)
TARGET CONTROL VOLUME = 2.68 mm
DEPTH OF COVER = 0.70 m (MIN.)
BOTTOM ELEVATION = 275.45 m

ACTIVE STORAGE VOLUME:
REGRADE SWMF TO PROVIDE ADDITIONAL
3,408 m³ OF ACTIVE STORAGE

EXISTING SWMF OUTLET CONTROLS:
1) 1 - 900 mm ø STM OUTLET PIPE (INV. 227.60 m)

EXISTING SWMF OUTLET CONTROLS TO REMAIN

PROPERTY ACQUISITION:

LEGEND
- PR STORM MAINTENANCE HOLE
- EX. WATERMAIN
- EX. STORM MAINTENANCE HOLE
- EX. STORM SEWER
- EX. SANITARY SEWER
- EX. SANITARY MAINTENANCE HOLE
- PR. LID
- EX. PROPERTY LINE
- PROPERTY ACQUISITION

DRAINAGE MASTER PLAN
FINAL PREFERRED ALTERNATIVE SOLUTION
PROJECT No. 1
SWMF RETROFIT No. 11 (KD06)
KIDD’S CREEK WATERSHED
SCALE = 1:750
DATE: MARCH 2019

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SWMF RETROFIT FOR WATER QUALITY TREATMENT:
LEVEL 1 "ENHANCED" TREATMENT (80% TSS REMOVAL)
PHOSPHORUS REDUCTION = 23.5 kg/year
ADDITIONAL ACTIVE STORAGE = 620 m³

UNDERGROUND INFILTRATION SYSTEM:
DRAINAGE AREA = 26.7 ha
AREA = 440 m² (20 m X 22 m)
STORAGE VOLUME = 620 m³
PEAK DESIGN FLOW = 0.71 m³/s (25 mm STORM)
TARGET CONTROL VOLUME = 2.33 mm
DEPTH OF COVER = 0.70 m (MIN)
BOTTOM ELEVATION = 280.00 m

EXISTING SWMF OUTLET CONTROLS:
1) 1 - 450 mm ø ORIFICE (INV. 283.10 m)
2) 1 - EMERGENCY OVERFLOW WEIR (INV. 285.30 m)

EX. STM TO BE REMOVED

PROPERTY ACQUISITION: NONE

DATE: MARCH 2019

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SWMF RETROFIT FOR WATER QUALITY TREATMENT:
LEVEL 1 "ENHANCED" TREATMENT (80% TSS REMOVAL)
PHOSPHORUS REDUCTION = 30.5 kg/year
ADDITIONAL ACTIVE STORAGE = 785 m$^3$

UNDERGROUND INFILTRATION SYSTEM:
DRAINAGE AREA = 27.8 ha
AREA = 560 m$^2$
STORAGE VOLUME = 785 m$^3$
PEAK DESIGN FLOW = 1.29 m$^3$/s (25 mm STORM)
TARGET CONTROL VOLUME = 6.34 mm
DEPTH OF COVER = 0.90 m
BOTTOM ELEVATION = 282.30 m

PROPERTY ACQUISITION: NONE

DRAINAGE MASTER PLAN
FINAL PREFERRED ALTERNATIVE SOLUTION

DATE: MARCH 2019
BANK EROSION

EX. SANITARY MAINTENANCE

EX. SANITARY SEWER

EX. STORM SEWER

EX. WATERCOURSE

EX. WATERMAIN

EX. STORM MAINTENANCE HOLE

EX. STORM SEWER

EX. PROPERTY LINE

PROPERTY ACQUISITION

LILLIAN CRES

KIDDS CREEK
(REACH Ki-1)

WATERCOURSE IMPROVEMENTS TO ADDRESS BANK EROSION AND PLANFORM ADJUSTMENT

REMOVE GABIONS AND CREATE POOL RIFFLE SEQUENCE AND STEP POOL SEQUENCE (SEE DETAILS)

REMOVE FORMER SWMF BERMS AND REINSTATE CHANNEL OVERBANKS

REMOVE LARGE DEBRIS/OBSTRUCTIONS FROM WATERCOURSE AND REINSTATE BED/BANKS

OVERBANKS

REINSTATE CHANNEL SWMF BERMS AND REMOVE FORMER

OVERBANKS

REINSTATE CHANNEL SWMF BERMS AND REMOVE FORMER

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LEGEND

BANK EROSION

BED EROSION/KNICKPOINT

INFRASTRUCTURE AT RISK

PR. STORM MAINTENANCE HOLE

PR. STORM SEWER

EX. SANITARY MAINTENANCE HOLE

EX. SANITARY SEWER

EX. STORM MAINTENANCE HOLE

EX. STORM SEWER

EX. PROPERTY LINE

PROPERTY ACQUISITION

DRAINAGE MASTER PLAN
FINAL PREFERRED ALTERNATIVE SOLUTION

PROJECT No. 4
WATERCOURSE IMPROVEMENT No. 1
KIDD'S CREEK WATERSHED
(SHEET 1 OF 2)

SCALE = 1:1,000

DATE: MARCH 2019
CONCEPTUAL DESIGNS FOR THE UPPER REACHES OF KIDDS CREEK HAVE BEEN COMPLETED UNDER SEPARATE STUDY (UPPER KIDDS CREEK HYDROGEO MORPHIC ASSESSMENT & SELECTIONS FOR PRELIMINARY PREFERRED ALTERNATIVE STUDY)

STORMMAINTENANCE

BANK EROSION INFRASTRUCTURE AT RISK

BED EROSION/KNICKPOINT

EX. SANITARY MAINTENANCE HOLE

EX. SANITARY SEWER

EX. WATER SEWER

EX. PROPERTY LINE

PROPERTY ACQUISITION

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LEGEND

BANK EROSION

BED EROSION/ KNICKPOINT

INFRASTRUCTURE AT RISK

PR. STORM MAINTENANCE HOLE

PR. STORM SEWER

EX. SANITARY MAINTENANCE HOLE

EX. SANITARY SEWER

EX. WATER SEWER

EX. PROPERTY LINE

PROPERTY ACQUISITION

DRAINAGE MASTER PLAN

FINAL PREFERRED ALTERNATIVE SOLUTION

PROJECT No. 4
WATERCOURSE IMPROVEMENT No. 1
KIDD'S CREEK WATERSHED
(SHEET 2 OF 2)

SCALE = 1:1,000

DATE: MARCH 2019
CUNDLES ROAD W.:  
ROAD CLASSIFICATION = ARTERIAL  
DESIGN FLOOD FREQUENCY CRITERIA = 1:100 YEAR

EXISTING: 2200 mm ø CSP CULVERT 
CONVEYANCE CAPACITY = 15.7 m³/s (EXISTING FLOWS)  
DESIGN FREQUENCY = 1:50 YEAR 
DEPTH OF OVERTOPPING = 0.47 m (REGULATORY EVENT)

PROPOSED: 3455 mm x 2195 mm CONC. ELLIPTICAL CULVERT 
CONVEYANCE CAPACITY = 23.2 m³/s (FUTURE FLOWS)  
DESIGN FREQUENCY = 1:100 YEAR 
DEPTH OF OVERTOPPING = 0.17 m (REGULATORY EVENT) 
CULVERT SIZED TO PROVIDE SAFE ACCESS/EGRESS

CUNDLES RD W.
CONCEPTUAL DESIGNS FOR THE UPPER REACHED OF KIDD’S CREEK HAVE BEEN COMPLETE UNDER SEPARATE STUDY (UPPER KIDD’S CREEK HYDROGEOLOGIC ASSESSMENT & SECTIONS FOR PRELIMINARY PREFERRED ALTERNATIVE STUDY)

DRAINAGE MASTER PLAN
FINAL PREFERRED ALTERNATIVE SOLUTION
PROJECT No. 161
WATERCOURSE IMPROVEMENT No. 34
KIDD’S CREEK WATERSHED
(SHEET 1 OF 3)
SCALE = 1:1,000
DATE: MARCH 2019

PROPERTY ACQUISITION:
NONE

LEGEND
- BANK EROSION
- BED EROSION/ KNICKPOINT
- INFRASTRUCTURE AT RISK
- PR. STORM MAINTENANCE HOLE
- PR. STORM SEWER
- EX. SANITARY MAINTENANCE HOLE
- EX. SANITARY SEWER
- EX. WATERCOURSE
- EX. WATERMAIN
- EX. STORM MAINTENANCE HOLE
- EX. STORM SEWER
- EX. PROPERTY LINE
- PROPERTY ACQUISITION

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UTILIZE BIO-ENGINEERED BACK PROTECTION TO STABILIZE WATERCOURSE BANKS & MEANDER (SEE DETAILS)

REMOVE DEBRIS AND OBSTRUCTIONS FROM WATERCOURSE CHANNEL AND REINSTATE CHANNEL BED AND BANKS

CULVERT IMPROVEMENT No.13
(SEE PROJECT No. 5)

ARMOUR STONE GRADE CONTROL AND PLUNGE POOL AT CULVERT OUTLET (SEE DETAILS)
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 LEGEND

- BANK EROSION
- BED EROSION/KNICKPOINT
- INFRASTRUCTURE AT RISK
- PLUNGE POOL TRANSITION
- PR. STORM MAINTENANCE HOLE
- EX. SANITARY MAINTENANCE HOLE
- EX. SANITARY SEWER
- EX. WATERCOURSE
- EX. WATERMAIN
- EX. STORM MAINTENANCE HOLE
- EX. STORM SEWER
- EX. PROPERTY LINE
- PROPERTY ACQUISITION

CONCEPTUAL DESIGNS FOR THE UPPER REACHED OF KIDD’S CREEK HAVE BEEN COMPLETE UNDER SEPARATE STUDY (UPPER KIDD’S CREEK HYDROGEO MORPHIC ASSESSMENT & SECTIONS FOR PRELIMINARY PREFERRED ALTERNATIVE STUDY)

DRAINAGE MASTER PLAN
FINAL PREFERRED ALTERNATIVE SOLUTION

PROJECT No. 161
WATERCOURSE IMPROVEMENT No. 34
KIDD’S CREEK WATERSHED
(SHEET 2 OF 3)

SCALE = 1:1,000

DATE: MARCH 2019

PLUNGE POOL TRANSITION

UTILIZE BIO-ENGINEERED BACK PROTECTION TO STABILIZE WATERCOURSE BANKS & MEANDER (SEE DETAILS)
CONCEPTUAL DESIGNS FOR THE UPPER REACHED OF KIDD’S CREEK HAVE BEEN COMPLETE UNDER SEPARATE STUDY (UPPER KIDD’S CREEK HYDROGEO MorPHIC ASSESSMENT & SECTIONS FOR PRELIMINARY PREFERRED ALTERNATIVE STUDY)

**LEGEND**

- **BANK EROSION**
- **BED EROSION/ KNICKPOINT**
- **INFRASTRUCTURE AT RISK**
- **PR. STORM MAINTENANCE HOLE**
- **EX. STORM MAINTENANCE HOLE**
- **EX. SANITARY MAINTENANCE HOLE**
- **EX. SANITARY SEWER**
- **EX. WATERCOURSE**
- **EX. WATER MAIN**
- **EX. STORM SEWER**
- **EX. PROPERTY LINE**
- **PROPERTY ACQUISITION**

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**DRAINAGE MASTER PLAN**
**FINAL PREFERRED ALTERNATIVE SOLUTION**

**PROJECT No. 161**
**WATERCOURSE IMPROVEMENT No. 34**
**KIDD’S CREEK WATERSHED**

(SHEET 3 OF 3)

**SCALE = 1:1,000**

**DATE: MARCH 2019**
THE CITY IS TO PROGRESSIVELY ACQUIRE LAND OR EASEMENTS FOR DRAINS, WATERCOURSES AND STORAGE AREAS CROSSING OR UPON PRIVATE PROPERTY WHERE IT IS CONSIDERED IN THE CITY’S INTEREST TO DO SO (BY-LAW 90-92: TO PROHIBIT OBSTRUCTION OF DRAINS & WATERCOURSES). PROPERTY ACQUISITION VIA EASEMENT, BLOCK, LOT OR PARCEL IS TO THE CITY’S DISCRETION.

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DRAINAGE MASTER PLAN
FINAL PREFERRED ALTERNATIVE SOLUTION
PROJECT No. 8A
CULVERT IMPROVEMENT No. 16
(THOMPSON STREET)
KIDD’S CREEK WATERSHED
SCALE = 1:500
DATE: MARCH 2019

THOMSON STREET:
ROAD CLASSIFICATION: URBAN LOCAL
DESIGN FLOOD FREQUENCY CRITERIA = 1:50 YEAR
MDP RECOMMENDED FLOOD FREQUENCY CRITERIA = 1:100 YEAR

EXISTING: 1850 mm x 1050 mm CONC. BOX CULVERT
CONVEYANCE CAPACITY = 5.8 m³/s (EXISTING FLOWS)
DESIGN FLOOD FREQUENCY = 1:50 YEAR
DEPTH OF OVERTOPPING = 0.89 m (REGULATORY EVENT)

PROPOSED: 1800 mm x 900 mm CONC. BOX CULVERT
CONVEYANCE CAPACITY = 3.9 m³/s (FUTURE FLOWS)
COMBINED DESIGN FREQUENCY = 1:100 YEAR
DEPTH OF OVERTOPPING = 0.86 m (REGULATORY EVENT)

PROPOSED TRUNK STORM SEWER SIZE TO BE REVIEWED AT DETAILED DESIGN TO REDUCE DEPTH OF OVERTOPPING

PROPERTY ACQUISITION:
A) 27 THOMSON ST.
B) 22 THOMSON ST. (PORTION OF)
MINIMUM RECOMMENDED PROPERTY ACQUISITION SHOWN
ACTUAL PROPERTY ACQUISITION TO BE CONFIRMED AT DETAILED DESIGN

Ex. Sanitary Sewer
Ex. Storm Sewer
Ex. Storm Maintenance Hole
Ex. Sanitary Maintenance Hole
Ex. Culvert
Ex. Watermain
Ex. Property Line
Property Acquisition

LEGEND

Daylighting
Pr. Watercourse
Pr. Culvert
Pr. Trunk Sewer
Ex. Sanitary Sewer
Ex. Sanitary Maintenance Hole
Ex. Storm Sewer
Ex. Storm Maintenance Hole
Ex. Culvert
Ex. Watermain
Ex. Property Line
Property Acquisition

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TRUNK STORM SEWER IMPROVEMENT:
PROPOSED: 1345 mm X 865 mm CONC. ELLIPTICAL TRUNK STORM SEWER CONVEYANCE CAPACITY = 3.3 m³/s

PROPOSED TRUNK STORM SEWER SIZE TO BE REVIEWED AT DETAILED DESIGN TO REDUCE DEPTH OF OVERTOPPING.

REMOVE AND REPLACE EXISTING LOCAL STORM SEWER WITH TRUNK STORM SEWER

PROPERTY ACQUISITION:
NONE

LEGEND

EX. WATERCOURSE
EX. STORM MAINTENANCE HOLE
EX. CULVERT
EX. STORM SEWER
EX. PROPERTY LINE

EX. EROSION SITES

DRAINAGE MASTER PLAN
FINAL PREFERRED ALTERNATIVE SOLUTION

PROJECT No. 162
TRUNK STORM SEWER No. 9
KIDD'S CREEK WATERSHED

SCALE = 1:2,000

DATE: MARCH 2019

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UTILIZE ARMOURSTONE KEYED INTO THE BANK AND/OR BIO-ENGINEERED BANK TREATMENT TO MITIGATE BANK FAILURES AND ENHANCE BANK STABILITY (SEE DETAILS)

PROPERTY ACQUISITION:
A) 18 THOMSON ST. (PORTION OF)
B) 14 THOMSON ST. (PORTION OF)
C) 77 ECCLES ST. (PORTION OF)
D) 75 ECCLES ST. (PORTION OF)

MINIMUM RECOMMENDED PROPERTY ACQUISITION SHOWN ACTUAL PROPERTY ACQUISITION TO BE CONFIRMED AT DETAILED DESIGN

EX. 18 m EASEMENT

EX. SANITARY MAINTENANCE HOLE

EX. STORM SEWER

EX. WATERCOURSE

EX. WATERMAIN

EX. STORM MAINTENANCE HOLE

EX. SANITARY SEWER

EX. PROPERTY LINE

PROPERTY ACQUISITION

EX. WATERCOURSE IMPROVEMENT No. 9
(SEE PROJECT No. 162)

TRUNK STORM SEWER IMPROVEMENT No. 9
(SEE PROJECT No. 163)

CULVERT IMPROVEMENT No. 16
(SEE PROJECT No. 8)

KIDDS CREEK
(REACH KI-8A)

18 THOMSON ST.

14 THOMSON ST.

22 THOMSON ST.

77 ECCLES ST.

75 ECCLES ST.

10:100 SCALE = 1:500

DATE: MARCH 2019

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DRAINAGE MASTER PLAN
FINAL PREFERRED ALTERNATIVE SOLUTION
PROJECT No. 163
WATERCOURSE IMPROVEMENT No. 2
KIDDS CREEK WATERSHED

Barrie
TATHAM
ENGINEERING

LEGEND

- BANK EROSION
- BED EROSION/ KNICKPOINT
- INFRASTRUCTURE AT RISK
- PR. STORM MAINTENANCE HOLE
- EX. STORM SEWER
- EX. SANITARY MAINTENANCE HOLE
- EX. SANITARY SEWER
- EX. PROPERTY LINE
- EX. WATERCOURSE
- EX. WATERMAIN
- EX. STORM MAINTENANCE HOLE
- PROPERTY ACQUISITION
WELLINGTON STREET W.
ROAD CLASSIFICATION = ARTERIAL
DESIGN FLOOD FREQUENCY CRITERIA = 1:100 YEAR

EXISTING: 600 mm ø CSP CULVERT
CONVEYANCE CAPACITY = 0.7 m³/s (EXISTING FLOWS)
DESIGN FREQUENCY = 1.2 YEAR
DEPTH OF OVERTOPPING = 0.24 m (REGULATORY EVENT)

PROPOSED: 1345 mm x 855 mm CONC. ELLIPTICAL CULVERT
CONVEYANCE CAPACITY = 2.3 m³/s (FUTURE FLOWS)
DESIGN FLOOD FREQUENCY = 1:100 YEAR
DEPTH OF OVERTOPPING = 0.00 m (REGULATORY EVENT)

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UTILIZE ARMOURSTONE KEYED INTO THE BANK AND/OR BIO-ENGINEERED BANK TREATMENT TO MITIGATE BANK FAILURES AND ENHANCE BANK STABILITY (SEE DETAILS)

PROPERTY ACQUISITION:
A) ADDRESS NOT AVAILABLE (PORTION OF)
MINIMUM RECOMMENDED PROPERTY ACQUISITION SHOWN
ACTUAL PROPERTY ACQUISITION TO BE CONFIRMED AT DETAILED DESIGN

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LEGEND
- BANK EROSION
- BED EROSION/ KNICKPOINT
- INFRASTRUCTURE AT RISK
- PR. STORM MAINTENANCE HOLE
- PR. STORM SEWER
- EX. SANITARY MAINTENANCE HOLE
- EX. SANITARY SEWER
- EX. WATERCOURSE
- EX. WATERMAIN
- EX. STORM MAINTENANCE HOLE
- EX. STORM SEWER
- EX. PROPERTY LINE
- PROPERTY ACQUISITION
UTILIZE ARMOURSTONE KEYED INTO THE BANK AND/OR BIO-ENGINEERED BANK TREATMENT TO MITIGATE BANK FAILURES AND ENHANCE BANK STABILITY (SEE DETAILS)

PROPERTY ACQUISITION:
A) 19 DONALD ST. (PORTION OF)
B) 11 DONALD ST. (PORTION OF)
C) 38 ECCLES ST. (PORTION OF)
D) 10 HENRY ST. (PORTION OF)

THE CITY IS TO PROGRESSIVELY ACQUIRE LAND OR EASEMENTS FOR DRAINS, WATERCOURSES AND STORAGE AREAS CROSSING OR UPON PRIVATE PROPERTY WHERE IT IS CONSIDERED IN THE CITY'S INTEREST TO DO SO (BY-LAW 90-92: TO PROHIBIT OBSTRUCTION OF DRAINS & WATERCOURSES). PROPERTY ACQUISITION VIA EASEMENT, BLOCK, LOT OR PARCEL IS TO THE CITY'S DISCRETION.

 LEGEND

- BANK EROSION
- BED EROSION/ KNICKPOINT
- INFRASTRUCTURE AT RISK
- PR. STORM MAINTENANCE HOLE
- EX. SANITARY SEWER
- EX. STORM MAINTENANCE HOLE
- EX. STORM SEWER
- EX. PROPERTY LINE
- PROPERTY ACQUISITION

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PROPERTY ACQUISITION:
A) 17 ECCLES ST.
MINIMUM RECOMMENDED PROPERTY ACQUISITION SHOWN ACTUAL PROPERTY ACQUISITION TO BE CONFIRMED AT DETAILED DESIGN

LEGEND
- BANK EROSION
- BED EROSION/ KNICKPOINT
- INFRASTRUCTURE AT RISK
- PR. STORM MAINTENANCE HOLE
- EX. SANITARY MAINTENANCE HOLE
- EX. SANITARY SEWER
- EX. WATERCOURSE
- EX. WATERMAIN
- EX. STORM MAINTENANCE HOLE
- EX. STORM SEWER
- EX. PROPERTY LINE
- PROPERTY ACQUISITION

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THE CITY IS TO PROGRESSIVELY ACQUIRE LAND OR EASEMENTS FOR DRAINS, WATERCOURSES AND STORAGE AREAS CROSSING OR UPON PRIVATE PROPERTY WHERE IT IS CONSIDERED IN THE CITY'S INTEREST TO DO SO (BY-LAW 90-92: TO PROHIBIT OBSTRUCTION OF DRAINS & WATERCOURSES). PROPERTY ACQUISITION VIA EASEMENT, BLOCK, LOT OR PARCEL IS TO THE CITY'S DISCRETION.

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LEGEND

- BANK EROSION
- BED EROSION/ KNICKPOINT
- INFRASTRUCTURE AT RISK
- PR. STORM MAINTENANCE HOLE
- EX. STORM SEWER
- EX. SANITARY MAINTENANCE HOLE
- EX. SANITARY SEWER
- EX. WATERCOURSE
- EX. WATERMAIN
- EX. STORM MAINTENANCE HOLE
- EX. STORM SEWER
- EX. PROPERTY LINE
- PROPERTY ACQUISITION

DRAINAGE MASTER PLAN
FINAL PREFERRED ALTERNATIVE SOLUTION

PROJECT No. 165
WATERCOURSE IMPROVEMENT No. 25
KIDD'S CREEK WATERSHED

SCALE = 1:500

DATE: MARCH 2019
DUNLOP STREET W.:  
ROAD CLASSIFICATION = ARTERIAL  
DESIGN FLOOD FREQUENCY CRITERIA = 1:100 YEAR  

EXISTING: 3000 mm x 1950 mm CONC. HORIZONTAL ELLIPSE  
CONVEYANCE CAPACITY = 5.3 m³/s (EXISTING FLOWS)  
RETURN FREQUENCY = 1.2 YEAR  
DEPTH OF OVERTOPPING = 0.66 m (REGULATORY EVENT)  

PROPOSED: 6000 mm x 1500 mm BOX CULVERT  
CONVEYANCE CAPACITY = 14.8 m³/s (FUTURE FLOWS)  
RETURN FREQUENCY = 1:100 YEAR  
DEPTH OF OVERTOPPING = 0.56 m (REGULATORY EVENT)  

PROPOSED CULVERT SIZE TO BE REVIEWED AT DETAIL  
DESIGN TO REDUCE DEPTH OF OVERTOPPING  

PROPERTY ACQUISITION: NONE  

DRAINAGE MASTER PLAN  
FINAL PREFERRED ALTERNATIVE SOLUTION  
PROJECT No. 166  
CULVERT IMPROVEMENT No. 145  
(DUNLOP STREET WEST)  
KIDD'S CREEK WATERSHED  
SCALE = 1:500  
DATE: MARCH 2019  

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DAYLIGHT WATERCOURSE (WATERCOURSE CROSS SECTION TO MATCH UPSTREAM)

CULVERT IMPROVEMENT No. 145
(SEE PROJECT No. 166)

EXISTING TRUNK STORM SEWER TO BE REMOVED

CAST-IN-PLACE ARCHITECTURAL CONC. WALL

125 DUNLOP ST. W. (CITY OWNED)

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BRADFORD STREET
ROAD CLASSIFICATION = ARTERIAL
DESIGN FLOOD FREQUENCY CRITERIA = 1:100 YEAR

EXISTING 3000 mm x 1950 mm CONC. HORIZONTAL ELLIPSE
CONVEYANCE CAPACITY = 5.8 m³/s (EXISTING FLOWS)
RETURN FREQUENCY = 1:2 YEAR
DEPTH OF OVERTOPPING = 0.66 m (REGULATORY EVENT)

PROPOSED 6000 mm x 1500 mm BOX CULVERT
CONVEYANCE CAPACITY = 14.8 m³/s (FUTURE FLOWS)
RETURN FREQUENCY = 1:100 YEAR
DEPTH OF OVERTOPPING = 0.37 m (REGULATORY EVENT)

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