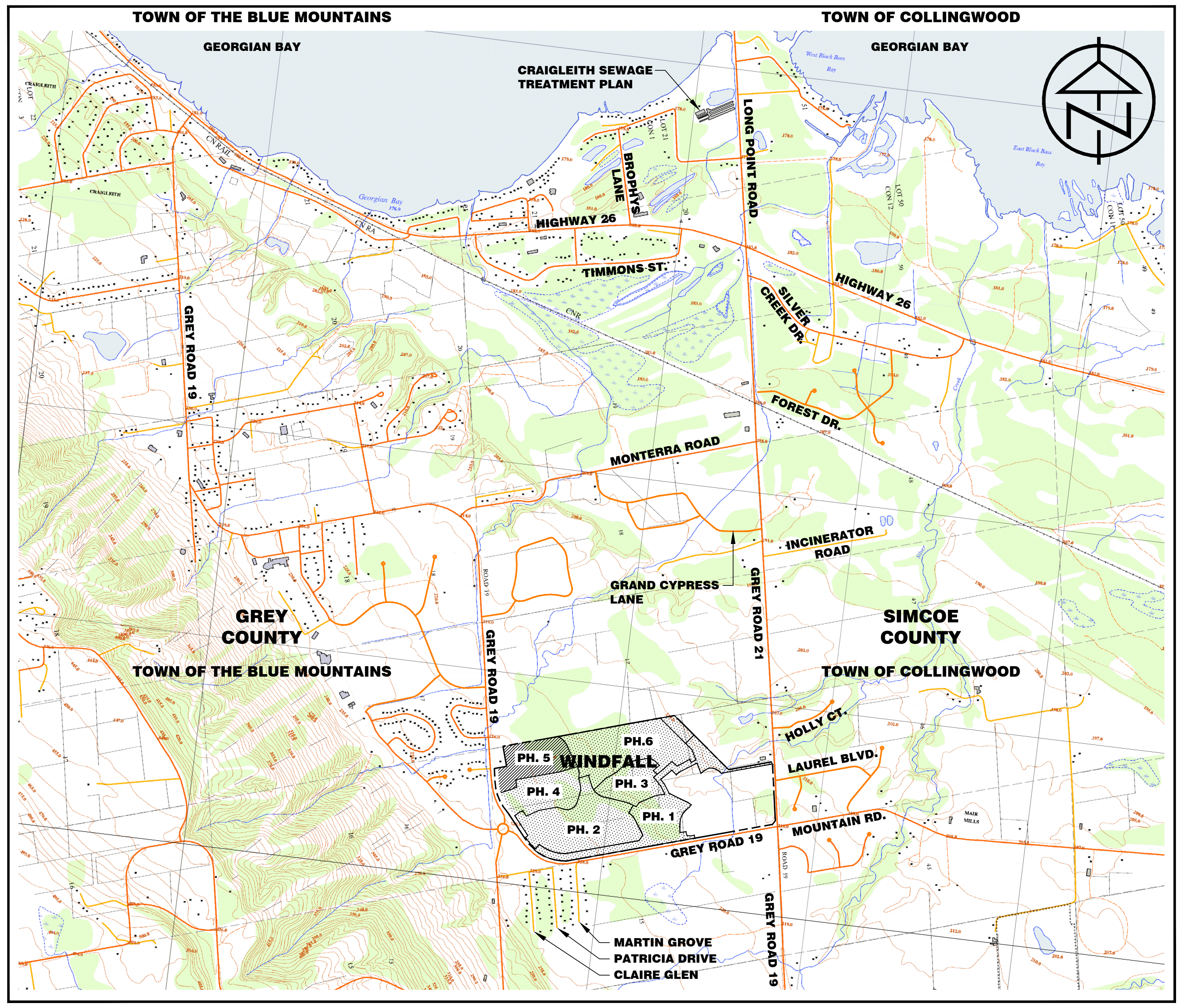
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS


TOWN OF THE BLUE MOUNTAINS
TOWN OF COLLINGWOOD
GEORGIAN BAY
GEORGIAN BAY
CRAIGLEITH SEWAGE TREATMENT PLAN
LONG POINT ROAD
BROPHY'S LANE
HIGHWAY 26
TIMMONS ST.
HIGHWAY 26
SILVER CREEK DR.
GREY ROAD 19
FOREST DR.
MONTERRA ROAD
INCINERATOR ROAD
GRAND CYPRESS LANE
GREY ROAD 21
GREY COUNTY
SIMCOE COUNTY
TOWN OF THE BLUE MOUNTAINS
TOWN OF COLLINGWOOD
GREY ROAD 19
HOLLY CT.
LAUREL BLVD.
PH.6
PH. 5
WINDFALL
PH. 4
PH. 3
PH. 1
PH. 2
MOUNTAIN RD.
GREY ROAD 19
MARTIN GROVE
PATRICIA DRIVE
CLAIRE GLEN
GREY ROAD 19
N

KEY PLAN

The Consultant shall provide a Communications Plan to notify the Town and Area Residents of significant Construction activities to the satisfaction of the Town.

At a minimum the Plan should provide:

- Installation of a Project Notification Sign, 1.2 m x 2.4 m minimum, to Town template, at each construction access to the Lands and visually obvious to the public, at least two (2) weeks before the construction start date, and maintained for full duration of construction.
- Notification of the construction project to property owners as deemed appropriate in consultation with Development Engineering via hand/mail delivery.
- Schedules of intended site activities updated routinely. (typically, weekly to bi-weekly).
- A minimum of two (2) weeks' notice following Town approval and prior to commencement of:
  - Significant site activities such as site alteration works e.g. tree clearing & grubbing, commencement of site servicing/grading, placement of asphalt, concrete curbs and sidewalk, and landscaping.
  - Off-site works on Town Owned Lands/Roads following receipt of a Municipal Land Use Permit (MLUP).

TATHAM
ENGINEERING

[redacted]

5TH SUBMISSION
Contract No. 111179-5
MAY 2021

INDEX

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CG-1	CLEARING AND GRUBBING PLAN
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PM-1	PAVEMENT MARKING AND SIGNAGE PLAN
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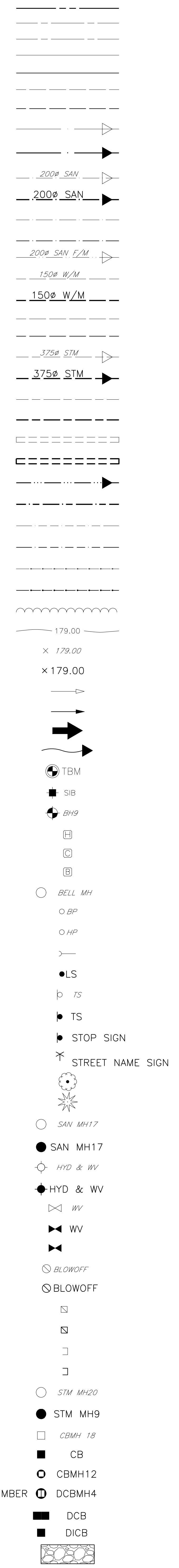
11129T-E3	INSTALLATION DETAILS AND LUMINAIRE SPECIFICATIONS
11129T-E4	ROAD CROSS SECTION
ET111021-7-LP-1	LANDSCAPE PLAN
ET111021-7-LP-2	LANDSCAPE PLAN
ET111021-7-LD-1	LANDSCAPE DETAILS

LEGEND



PROPERTY LINE	
EXISTING CENTERLINE	
PROPOSED CENTRELINE	
EXISTING EDGE OF ASPHALT	
PROPOSED EDGE OF ASPHALT	
EXISTING EDGE OF SHOULDER	
PROPOSED EDGE OF SHOULDER	
EXISTING DITCH/DIRECTION OF FLOW	
PROPOSED DITCH/DIRECTION OF FLOW	
EXISTING SANITARY SEWER/SIZE/DIRECTION OF FLOW	200ø SAN
PROPOSED SANITARY SEWER/SIZE/DIRECTION OF FLOW	200ø SAN
EXISTING SANITARY SERVICE	
PROPOSED SANITARY SERVICE	
EXISTING SANITARY FORCEMAIN/SIZE/DIRECTION OF FLOW	200ø SAN F/M
EXISTING WATERMAIN/SIZE	150ø W/M
PROPOSED WATERMAIN/SIZE	150ø W/M
EXISTING WATER SERVICE	
PROPOSED WATER SERVICE	
EXISTING STORM SEWER/SIZE/DIRECTION OF FLOW	375ø STM
PROPOSED STORM SEWER/SIZE/DIRECTION OF FLOW	375ø STM
EXISTING STORM SERVICE	
PROPOSED STORM SERVICE	
EXISTING CULVERT	
PROPOSED CULVERT	
PROPOSED SWALE LOCATION	
PROPOSED JOINT HYDRO, BELL AND ROGERS	
EXISTING GAS MAIN	
PROPOSED GAS MAIN	
EXISITNG FENCELINE	
PROPOSED FENCELINE	
EXISTING BUSHLINE	
EXISTING CONTOUR	179.00
EXISTING SPOT ELEVATION	× 179.00
PROPOSED SPOT ELEVATION	×179.00
EXISTING GRADING DIRECTION	
PROPOSED GRADING DIRECTION	
PROPOSED REAR YARD OVERFLOW ROUTE	
PROPOSED SWALE LOCATION	
EXISTING TEMPORARY BENCHMARK	TBM
EXISTING STANDARD IRON BAR	SIB
EXISTING BOREHOLE/NUMBER	BH9
EXISTING HYDRO TRANSFORMER	H
EXISTING CABLE PEDESTAL	C
EXISTING BELL PEDESTAL	B
EXISTING BELL MAINTENANCE HOLE	BELL MH
EXISTING BELL POLE	○ BP
EXISTING HYDRO POLE	○ HP
EXISTING HYDRO GUY WIRE	
PROPOSED LIGHT STANDARD	●LS
EXISTING TRAFFIC SIGN	TS
PROPOSED TRAFFIC SIGN	TS
PROPOSED STOP SIGN	STOP SIGN
PROPOSED STREET NAME SIGN	STREET NAME SIGN
EXISTING DECIDUOUS TREE	
EXISTING CONIFEROUS TREE	
EXISTING SANITARY MAINTENANCE HOLE/NUMBER	○ SAN MH17
PROPOSED SANITARY MAINTENANCE HOLE/NUMBER	● SAN MH17
EXISTING HYDRANT AND VALVE	HYD & WV
PROPOSED HYDRANT AND VALVE	HYD & WV
EXISTING WATER VALVE	WV
PROPOSED WATER VALVE	WV
PROPOSED CURB STOP VALVE	
EXISTING BLOW-OFF	BLOWOFF
PROPOSED BLOW-OFF	BLOWOFF
EXISTING WM. AUTOFLUSHER	
PROPOSED WM. AUTOFLUSHER	
EXISTING WATERMAIN TERMINATION POINT	
PROPOSED WATERMAIN TERMINATION POINT	
EXISTING STORM MAINTENANCE HOLE	○ STM MH20
PROPOSED STORM MAINTENANCE HOLE/NUMBER	● STM MH9
EXISTING CATCH BASIN	☐ CBMH 18
PROPOSED CATCH BASIN	■ CB
PROPOSED CATCH BASIN MAINTENANCE HOLE/NUMBER	CBMH12
PROPOSED DOUBLE CATCH BASIN MAINTENANCE HOLE/NUMBER	DCBMH4
PROPOSED DOUBLE CATCH BASIN	■■ DCB
PROPOSED DITCH INLET CATCH BASIN	■ DICB
PROPOSED RIP-RAP	

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

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ENGINEER STAMP

[redacted]

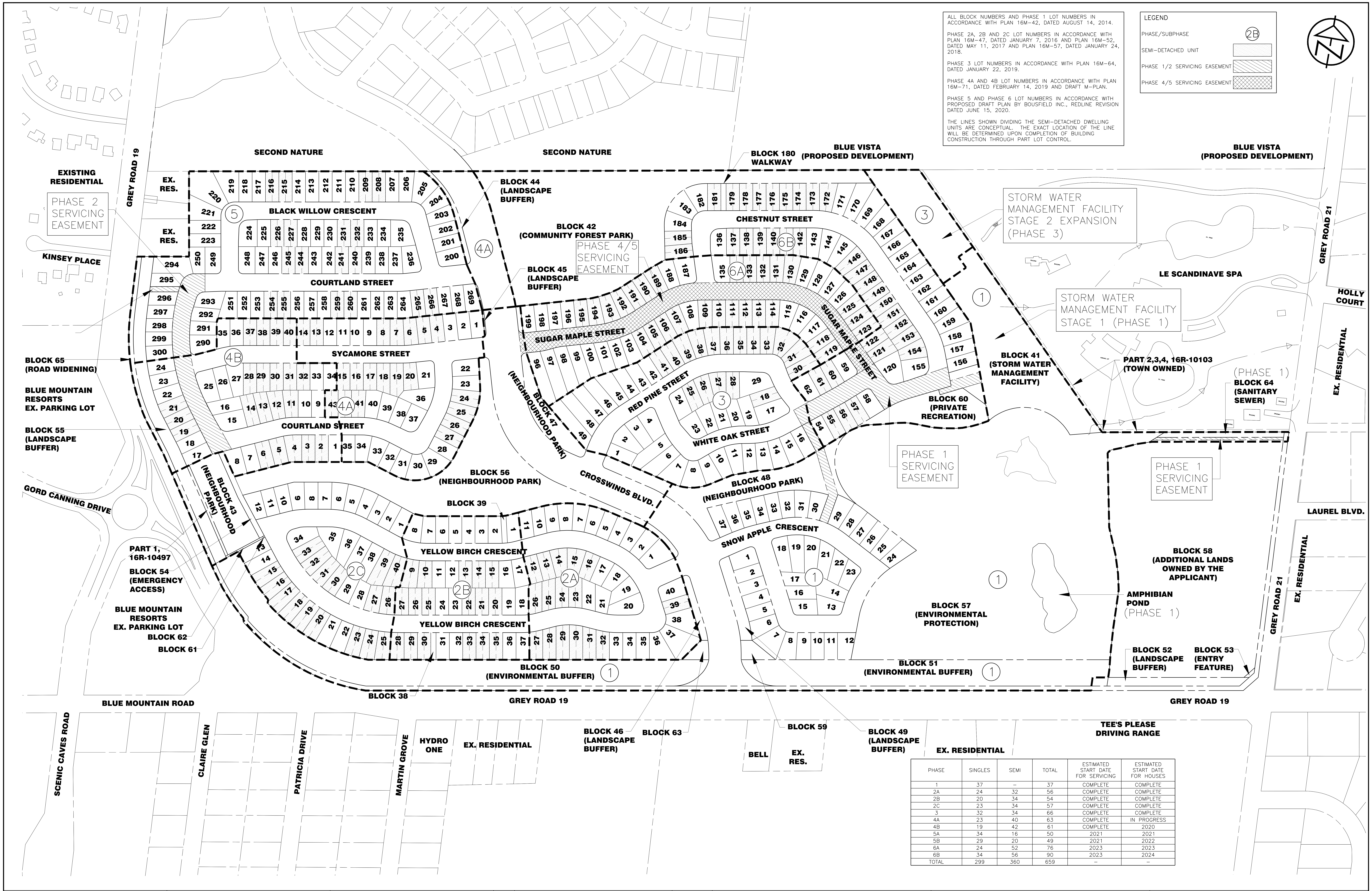
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM ENGINEERING

DRAWING INDEX AND LEGEND

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	**IN-1**
CHECK: JPA/MJC	SCALE: NTS	

Drawing Name: 111179-5-IN01.dwg, Plotted: May 18, 2021


SECOND NATURE
SECOND NATURE
BLUE VISTA (PROPOSED DEVELOPMENT)
BLUE VISTA (PROPOSED DEVELOPMENT)
EXISTING RESIDENTIAL
GREY ROAD 19
EX. RES.
EX. RES.
PHASE 2 SERVICING EASEMENT
KINSEY PLACE
BLACK WILLOW CRESCENT
COURTLAND STREET
SYCAMORE STREET
COURTLAND STREET
BLOCK 44 (LANDSCAPE BUFFER)
BLOCK 42 (COMMUNITY FOREST PARK)
PHASE 4/5 SERVICING EASEMENT
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CHESTNUT STREET
SUGAR MAPLE STREET
SUGAR MAPLE STREET
RED PINE STREET
WHITE OAK STREET
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STORM WATER MANAGEMENT FACILITY STAGE 2 EXPANSION (PHASE 3)
STORM WATER MANAGEMENT FACILITY STAGE 1 (PHASE 1)
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GREY ROAD 21
HOLLY COURT
EX. RESIDENTIAL
BLOCK 41 (STORM WATER MANAGEMENT FACILITY)
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(PHASE 1) BLOCK 64 (SANITARY SEWER)
BLOCK 60 (PRIVATE RECREATION)
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PHASE 1 SERVICING EASEMENT
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BLOCK 55 (LANDSCAPE BUFFER)
BLOCK 56 (NEIGHBOURHOOD PARK)
CROSSWINDS BLVD.
BLOCK 48 (NEIGHBOURHOOD PARK)
GORD CANNING DRIVE
BLOCK 43 (NEIGHBOURHOOD PARK)
BLOCK 39
YELLOW BIRCH CRESCENT
YELLOW BIRCH CRESCENT
SNOW APPLE CRESCENT
LAUREL BLVD.
BLOCK 58 (ADDITIONAL LANDS OWNED BY THE APPLICANT)
AMPHIBIAN POND (PHASE 1)
BLOCK 57 (ENVIRONMENTAL PROTECTION)
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BLOCK 54 (EMERGENCY ACCESS)
BLUE MOUNTAIN RESORTS EX. PARKING LOT
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BLOCK 61
BLOCK 50 (ENVIRONMENTAL BUFFER)
BLOCK 51 (ENVIRONMENTAL BUFFER)
BLOCK 52 (LANDSCAPE BUFFER)
BLOCK 53 (ENTRY FEATURE)
BLOCK 38
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GREY ROAD 19
GREY ROAD 19
SCENIC CAVES ROAD
CLAIRE GLEN
PATRICIA DRIVE
MARTIN GROVE
HYDRO ONE
EX. RESIDENTIAL
BLOCK 46 (LANDSCAPE BUFFER)
BLOCK 63
BLOCK 59
BELL
EX. RES.
BLOCK 49 (LANDSCAPE BUFFER)
EX. RESIDENTIAL
TEE'S PLEASE DRIVING RANGE
1
2A
2B
2C
3
4A
4B
5
6A
6B
N

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–47, DATED JANUARY 7, 2016 AND PLAN 16M–52, DATED MAY 11, 2017 AND PLAN 16M–57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–64, DATED JANUARY 22, 2019.

PHASE 4A AND 4B LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–71, DATED FEBRUARY 14, 2019 AND DRAFT M–PLAN.

PHASE 5 AND PHASE 6 LOT NUMBERS IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED JUNE 15, 2020.

THE LINES SHOWN DIVIDING THE SEMI–DETACHED DWELLING UNITS ARE CONCEPTUAL. THE EXACT LOCATION OF THE LINE WILL BE DETERMINED UPON COMPLETION OF BUILDING CONSTRUCTION THROUGH PART LOT CONTROL.

LEGEND

PHASE/SUBPHASE	⑵B
SEMI–DETACHED UNIT	░
PHASE 1/2 SERVICING EASEMENT	▨
PHASE 4/5 SERVICING EASEMENT	▦

PHASE	SINGLES	SEMI	TOTAL	ESTIMATED START DATE FOR SERVICING	ESTIMATED START DATE FOR HOUSES
1	37	–	37	COMPLETE	COMPLETE
2A	24	32	56	COMPLETE	COMPLETE
2B	20	34	54	COMPLETE	COMPLETE
2C	23	34	57	COMPLETE	COMPLETE
3	32	34	66	COMPLETE	COMPLETE
4A	23	40	63	COMPLETE	IN PROGRESS
4B	19	42	61	COMPLETE	2020
5A	34	16	50	2021	2021
5B	29	20	49	2021	2022
6A	24	52	76	2023	2023
6B	34	56	90	2023	2024
TOTAL	299	360	659	–	–

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SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

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[redacted]

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ENGINEER STAMP

[redacted]

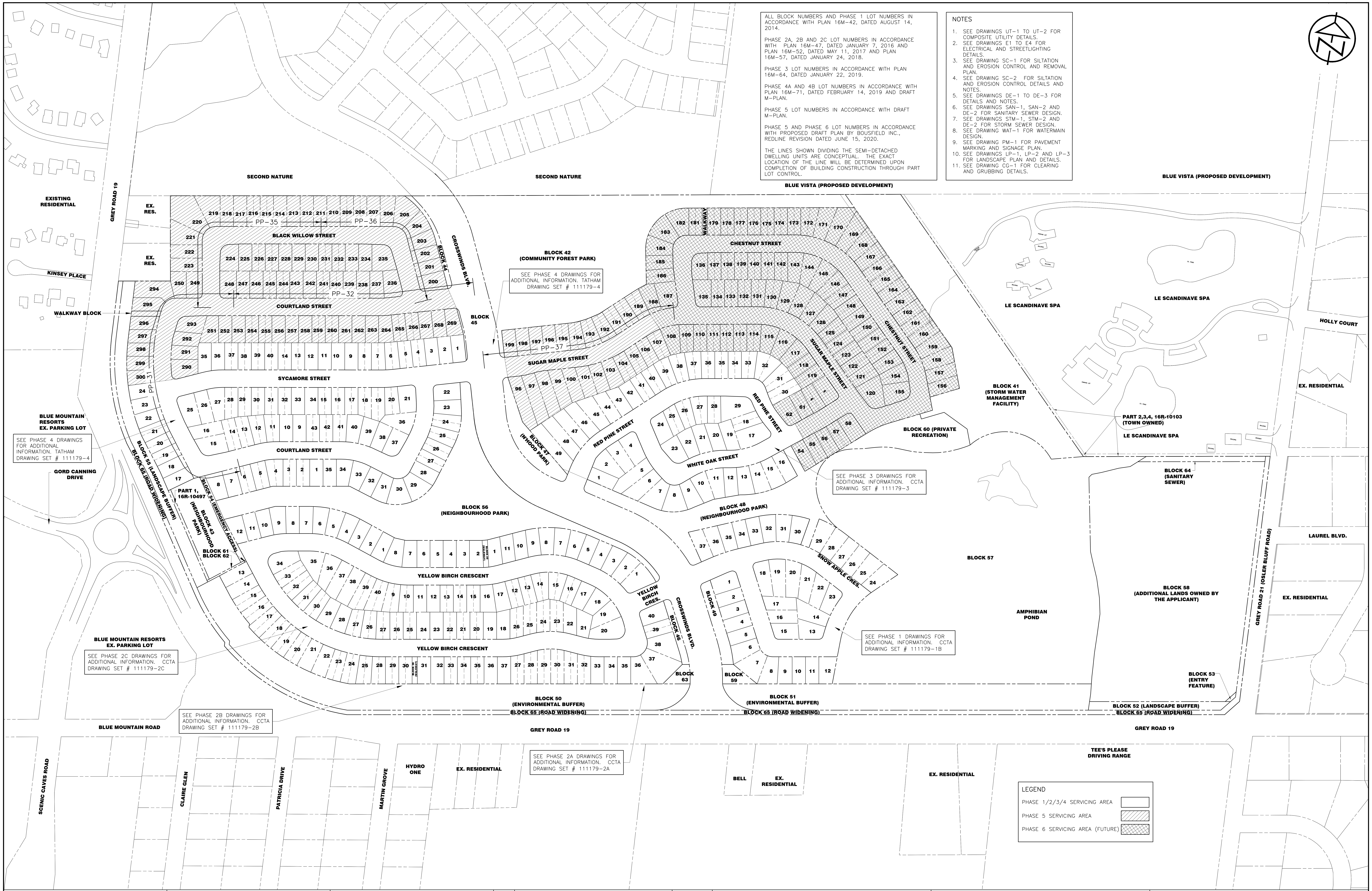
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM ENGINEERING

PHASING PLAN

DESIGN: BM	FILE: 111179–5	DWG:
DRAWN: BM	DATE: FEB 2021	**PH-1**
CHECK: JPA/MJC	SCALE: 1:2000	

Drawing Name: 111179–5–PH01.dwg, Plotted: May 17, 2021


SECOND NATURE
SECOND NATURE
BLUE VISTA (PROPOSED DEVELOPMENT)
BLUE VISTA (PROPOSED DEVELOPMENT)
EXISTING RESIDENTIAL
GREY ROAD 19
EX. RES.
EX. RES.
KINSEY PLACE
WALKWAY BLOCK
BLACK WILLOW STREET
COURTLAND STREET
SYCAMORE STREET
COURTLAND STREET
CROSSWINDS BLVD.
BLOCK 44
BLOCK 45
PP-35
PP-36
PP-32
PP-31
PP-37
BLOCK 42 (COMMUNITY FOREST PARK)
SEE PHASE 4 DRAWINGS FOR ADDITIONAL INFORMATION. TATHAM DRAWING SET # 111179-4
CHESTNUT STREET
WALKWAY
SUGAR MAPLE STREET
SUGAR MAPLE STREET
CHESTNUT STREET
RED PINE STREET
RED PINE STREET
WHITE OAK STREET
BLOCK 47 (WOOD PARK)
BLOCK 48 (NEIGHBOURHOOD PARK)
SEE PHASE 3 DRAWINGS FOR ADDITIONAL INFORMATION. CCTA DRAWING SET # 111179-3
BLOCK 60 (PRIVATE RECREATION)
BLOCK 41 (STORM WATER MANAGEMENT FACILITY)
PART 2,3,4, 16R-10103 (TOWN OWNED)
LE SCANDINAVE SPA
LE SCANDINAVE SPA
LE SCANDINAVE SPA
HOLLY COURT
EX. RESIDENTIAL
BLOCK 64 (SANITARY SEWER)
LAUREL BLVD.
GREY ROAD 21 (OSLER BLUFF ROAD)
EX. RESIDENTIAL
BLOCK 57
BLOCK 58 (ADDITIONAL LANDS OWNED BY THE APPLICANT)
AMPHIBIAN POND
BLOCK 53 (ENTRY FEATURE)
BLOCK 52 (LANDSCAPE BUFFER)
BLOCK 65 (ROAD WIDENING)
BLUE MOUNTAIN RESORTS EX. PARKING LOT
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GORD CANNING DRIVE
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BLOCK 66 (ROAD WIDENING)
PART 1, 16R-10497
BLOCK 54 (EMERGENCY ACCESS)
BLOCK 43 (NEIGHBOURHOOD PARK)
BLOCK 61
BLOCK 62
BLOCK 56 (NEIGHBOURHOOD PARK)
YELLOW BIRCH CRESCENT
YELLOW BIRCH CRESCENT
YELLOW BIRCH CRES.
CROSSWINDS BLVD.
BLOCK 46
BLOCK 63
BLOCK 49
BLOCK 59
SNOW APPLE CRES.
SEE PHASE 1 DRAWINGS FOR ADDITIONAL INFORMATION. CCTA DRAWING SET # 111179-1B
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BLOCK 65 (ROAD WIDENING)
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BLOCK 65 (ROAD WIDENING)
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GREY ROAD 19
GREY ROAD 19
SEE PHASE 2A DRAWINGS FOR ADDITIONAL INFORMATION. CCTA DRAWING SET # 111179-2A
SCENIC CAVES ROAD
CLAIRE GLEN
PATRICIA DRIVE
MARTIN GROVE
HYDRO ONE
EX. RESIDENTIAL
BELL
EX. RESIDENTIAL
EX. RESIDENTIAL
TEE'S PLEASE DRIVING RANGE
N

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NOTES

1. SEE DRAWINGS UT–1 TO UT–2 FOR COMPOSITE UTILITY DETAILS.
2. SEE DRAWINGS E1 TO E4 FOR ELECTRICAL AND STREETLIGHTING DETAILS.
3. SEE DRAWING SC–1 FOR SILTATION AND EROSION CONTROL AND REMOVAL PLAN.
4. SEE DRAWING SC–2 FOR SILTATION AND EROSION CONTROL DETAILS AND NOTES.
5. SEE DRAWINGS DE–1 TO DE–3 FOR DETAILS AND NOTES.
6. SEE DRAWINGS SAN–1, SAN–2 AND DE–2 FOR SANITARY SEWER DESIGN.
7. SEE DRAWINGS STM–1, STM–2 AND DE–2 FOR STORM SEWER DESIGN.
8. SEE DRAWING WAT–1 FOR WATERMAIN DESIGN.
9. SEE DRAWING PM–1 FOR PAVEMENT MARKING AND SIGNAGE PLAN.
10. SEE DRAWINGS LP–1, LP–2 AND LP–3 FOR LANDSCAPE PLAN AND DETAILS.
11. SEE DRAWING CG–1 FOR CLEARING AND GRUBBING DETAILS.

LEGEND

PHASE 1/2/3/4 SERVICING AREA	☐
PHASE 5 SERVICING AREA	▨
PHASE 6 SERVICING AREA (FUTURE)	▩

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BENCHMARKS

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SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

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ENGINEER STAMP

[redacted]

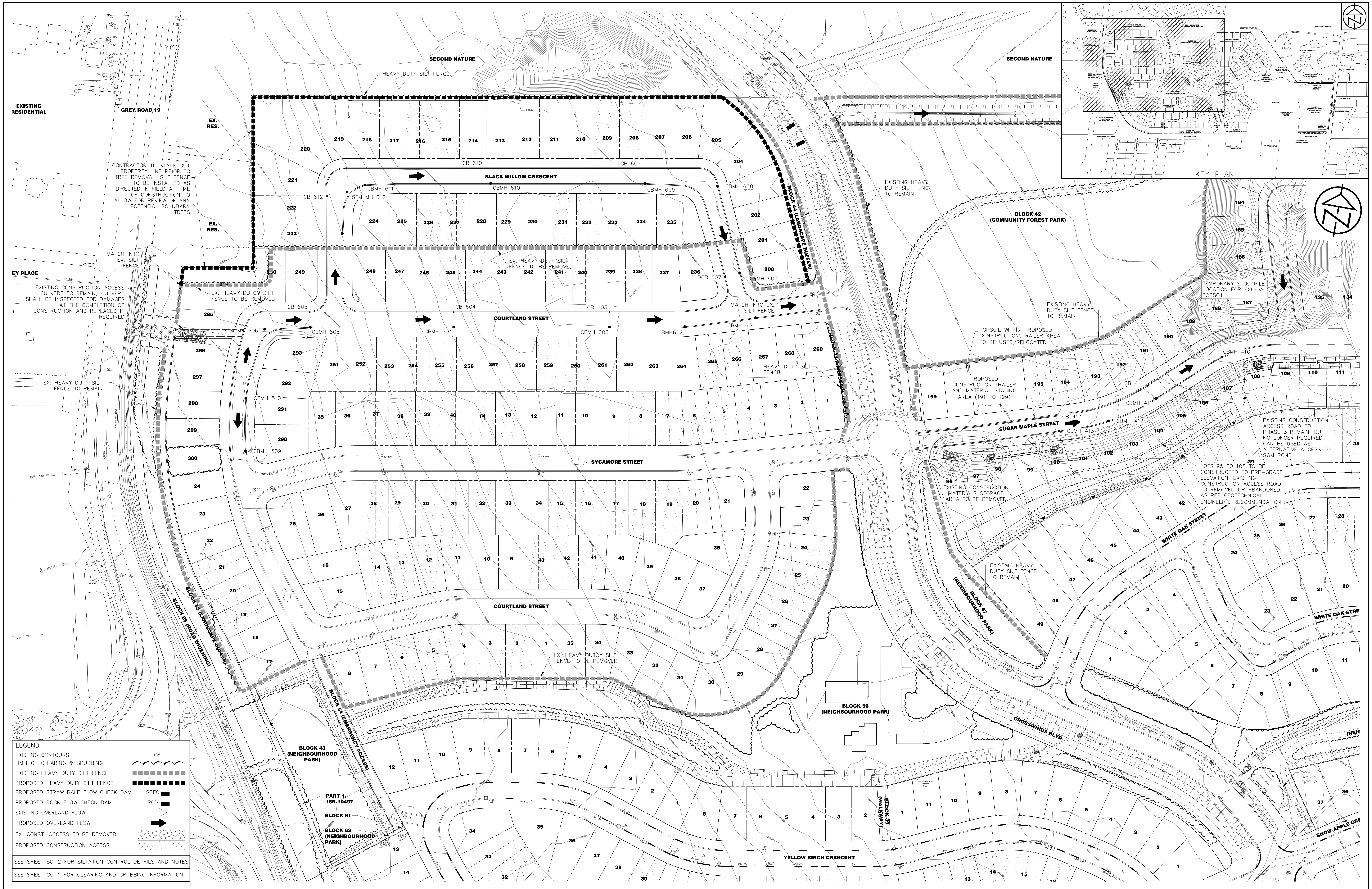
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM ENGINEERING

ORIENTATION PLAN

DESIGN: BM	FILE: 111179–5	DWG:
DRAWN: BM	DATE: FEB 2021	**OP-1**
CHECK: JPA/MJC	SCALE: 1:2000	

Drawing Name: 111179–5–OP01.dwg, Plotted: May 17, 2021


SECOND NATURE
HEAVY DUTY SILT FENCE
EXISTING RESIDENTIAL
GREY ROAD 19
EX. RES.
CONTRACTOR TO STAKE OUT PROPERTY LINE PRIOR TO TREE REMOVAL. SILT FENCE TO BE INSTALLED AS DIRECTED IN FIELD AT TIME OF CONSTRUCTION TO ALLOW FOR REVIEW OF ANY POTENTIAL BOUNDARY TREES
MATCH INTO EX. SILT FENCE
EY PLACE
EXISTING CONSTRUCTION ACCESS CULVERT TO REMAIN; CULVERT SHALL BE INSPECTED FOR DAMAGES AT THE COMPLETION OF CONSTRUCTION AND REPLACED IF REQUIRED
EX. HEAVY DUTY SILT FENCE TO BE REMOVED
EX. HEAVY DUTY SILT FENCE TO REMAIN
BLACK WILLOW CRESCENT
COURTLAND STREET
SYCAMORE STREET
SUGAR MAPLE STREET
WHITE OAK STREET
CROSSWINDS BLVD.
YELLOW BIRCH CRESCENT
SNOW APPLE CR
BLOCK 44 (LANDSCAPE BUFFER)
BLOCK 55 (LANDSCAPE BUFFER)
BLOCK 65 (ROAD WIDENING)
BLOCK 43 (NEIGHBOURHOOD PARK)
BLOCK 54 (EMERGENCY ACCESS)
PART 1, 16R-10497
BLOCK 61
BLOCK 62 (NEIGHBOURHOOD PARK)
BLOCK 56 (NEIGHBOURHOOD PARK)
BLOCK 39 (WALKWAY)
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 47 (NEIGHBOURHOOD PARK)
EXISTING HEAVY DUTY SILT FENCE TO REMAIN
MATCH INTO EX. SILT FENCE
TOPSOIL WITHIN PROPOSED CONSTRUCTION TRAILER AREA TO BE USED/RELOCATED
PROPOSED CONSTRUCTION TRAILER AND MATERIAL STAGING AREA (191 TO 199)
TEMPORARY STOCKPILE LOCATION FOR EXCESS TOPSOIL
EXISTING CONSTRUCTION ACCESS ROAD TO PHASE 3 REMAIN, BUT NO LONGER REQUIRED. CAN BE USED AS ALTERNATIVE ACCESS TO SWM POND
LOTS 95 TO 105 TO BE CONSTRUCTED TO PRE-GRADE ELEVATION. EXISTING CONSTRUCTION ACCESS ROAD TO REMOVED OR ABANDONED AS PER GEOTECHNICAL ENGINEER'S RECOMMENDATION
EXISTING CONSTRUCTION MATERIALS STORAGE AREA TO BE REMOVED
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EX. HEAVY DUTCY SILT FENCE TO BE REMOVED
RCD
CB 610
CB 609
CB 612
CBMH 611
CBMH 610
CBMH 609
CBMH 608
STM MH 612
CB 605
CB 604
CB 603
CBMH 605
CBMH 604
CBMH 603
CBMH602
CBMH 601
DCB 607
DCBMH 607
STM MH 606
CBMH 510
CBMH 509
CBMH 410
CB 411
CBMH 411
CB 413
CBMH 413
CBMH 412
KEY PLAN

LEGEND

EXISTING CONTOURS	185.0
LIMIT OF CLEARING & GRUBBING	⌒⌒⌒⌒⌒
EXISTING HEAVY DUTY SILT FENCE	■ ■ ■ ■
PROPOSED HEAVY DUTY SILT FENCE	■ ■ ■ ■
PROPOSED STRAW BALE FLOW CHECK DAM	SBFC ▬
PROPOSED ROCK FLOW CHECK DAM	RCD ▬
EXISTING OVERLAND FLOW	⇨
PROPOSED OVERLAND FLOW	➡
EX. CONST. ACCESS TO BE REMOVED	▩
PROPOSED CONSTRUCTION ACCESS	░

SEE SHEET SC-2 FOR SILTATION CONTROL DETAILS AND NOTES

SEE SHEET CG-1 FOR CLEARING AND GRUBBING INFORMATION

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
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2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

SILTATION AND EROSION CONTROL AND REMOVALS PLAN

TATHAM
ENGINEERING

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	SC-1
CHECK: JPA/MJC	SCALE: 1:1000	

Drawing Name: 111179-5-SC01.dwg, Plotted: May 17, 2021

NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SEDIMENT AND EROSION CONTROL MEASURES THAT ARE DESIGNED TO CONTROL RUNOFF FROM SPECIFIC AREAS MUST BE INSTALLED PRIOR TO ANY DISTURBANCE OF THAT PART OF THE SITE. THE LOCATION OF ALL SILTATION AND EROSION CONTROL WORKS TO BE REVIEWED ON SITE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER.

2. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES. SUCH MEASURES MUST BE PRESENTED IN WRITING TO THE ENGINEER FOR APPROVAL OF THE TOWN AND NOTTAWASAGA VALLEY CONSERVATION AUTHORITY.

3. THE CONTRACTOR SHALL HAVE MATERIALS AVAILABLE ON SITE TO REPAIR SEDIMENT AND EROSION CONTROL MEASURES IN THE EVENT OF UNFORESEEN CONDITIONS SUCH AS HIGH WATER, EXTREME RAINFALL EVENTS, ETC.

4. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED, CLEANED AND MAINTAINED BY THE CONTRACTOR AFTER EACH STORM EVENT. ALL WORKS WILL BE INSPECTED BY THE ENGINEER BI-WEEKLY AND AFTER EACH MAJOR STORM EVENT.

5. CONSTRUCTION OF ALL SILTATION AND EROSION CONTROL WORK IS TO BE IN ACCORDANCE WITH THE FOLLOWING STEPS:

   5.1. INSTALL NEW OR MAINTAIN EXISTING STONE MUD MAT AS PER DETAIL.
   5.2. INSTALL SILT FENCE AS PER NOTTAWASAGA VALLEY CONSERVATION AUTHORITY DRAWING BSD-23 DRAFT.
   5.3. INSTALL ROCK FLOW CHECK DAMS AS PER OPSD 219.211.
   5.4. INSTALL STRAW BALE FLOW CHECKS AS PER OPSD 219.180.
   5.5. INSTALL TEMPORARY CATCH BASIN SEDIMENT TRAPS ON ALL NEW AND EXISTING CATCH BASINS. SEDIMENT TRAPS TO BE RECTANGULAR CBST BY LAYFIELD OR APPROVED EQUAL. ALL CATCH BASINS TO REMAIN SCREENED UNTIL BASE COURSE ASPHALT IS PLACED AND LOT GRADING IS COMPLETE.

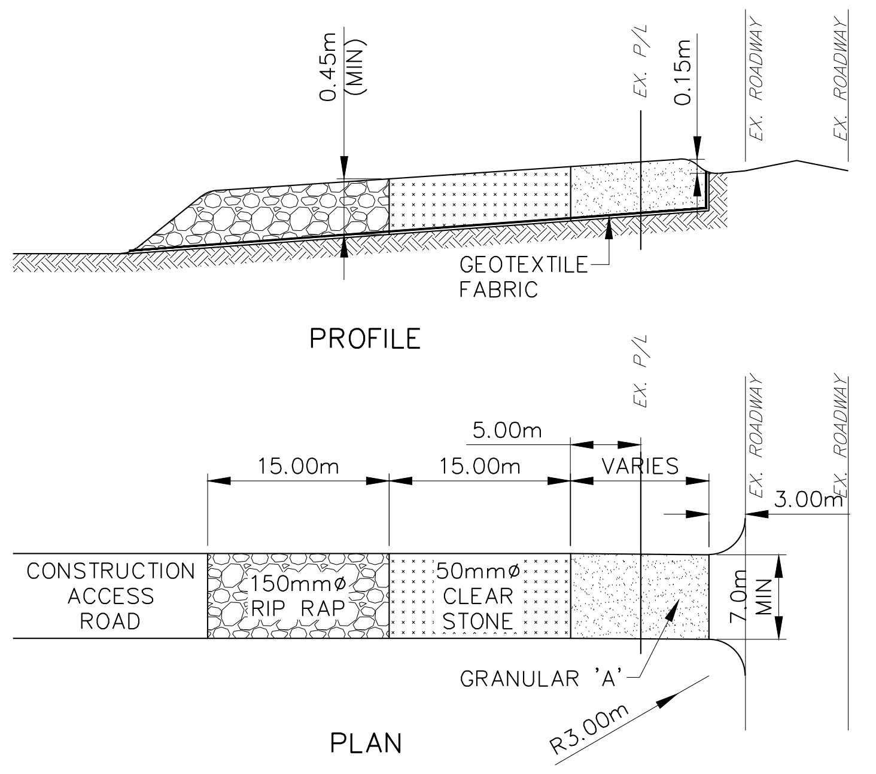
6. ALL CONSTRUCTION VEHICLES TO ACCESS SITE USING THE DESIGNATED CONSTRUCTION ACCESS POINTS.

7. EROSION AND SEDIMENT CONTROL MEASURES TO BE REMOVED BY THE CONTRACTOR ONCE GROUND COVER IS ESTABLISHED AND LANDSCAPING IS COMPLETE AND APPROVED BY THE ENGINEER.

8. STOCKPILE LOCATIONS ARE TO BE APPROVED BY THE ENGINEER.

9. PROVIDE FENCE OR APPROVED EQUAL ACROSS ALL CONSTRUCTION ACCESSES DURING PERIODS OF INACTIVITY.

10. CONSTRUCTION AREAS THAT EXCEED 30 DAYS OF INACTIVITY SHALL BE STABILIZED BY SEEDING IN ACCORDANCE WITH THE NOTTAWASAGA VALLEY CONSERVATION AUTHORITY'S TECHNICAL DESIGN GUIDELINES, STANDARDS AND POLICIES FOR SILTATION AND EROSION CONTROL, CONSTRUCTION CONTROL REQUIREMENTS, NOTES 1, 2 AND 3 AND/OR AS DIRECTED BY THE TOWN. THIS IS TO INCLUDE STOCKPILES OF FILL AND TOPSOIL.


0.45m (MIN)
EX. P/L
0.15m
EX. ROADWAY
EX. ROADWAY
GEOTEXTILE FABRIC
PROFILE
EX. P/L
EX. ROADWAY
EX. ROADWAY
5.00m
15.00m
15.00m
VARIES
3.00m
CONSTRUCTION ACCESS ROAD
150mmø RIP RAP
50mmø CLEAR STONE
7.0m MIN
GRANULAR 'A'
R3.00m
PLAN

STONE MUD MAT DETAIL

NTS

NOTES

1. STONE SIZE – THE STONE PAD SHALL BE A MIN. 450 mm THICK. USE GRANULAR 'A' FOR THE FIRST 5 m FROM THE PROPERTY LINE, 50 mm ø CLEAR STONE FOR NEXT 15 m AND 150 mm ø RIP RAP FOR THE REMAINING 15 m.

2. LENGTH – AS REQUIRED BUT NOT LESS THAN 35 m.

3. WIDTH – 7.0 m MIN. BUT NOT LESS THAN THE WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCURS.

4. GEOTEXTILE FABRIC – TERRAFIX 270R OR APPROVED EQUAL TO BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.

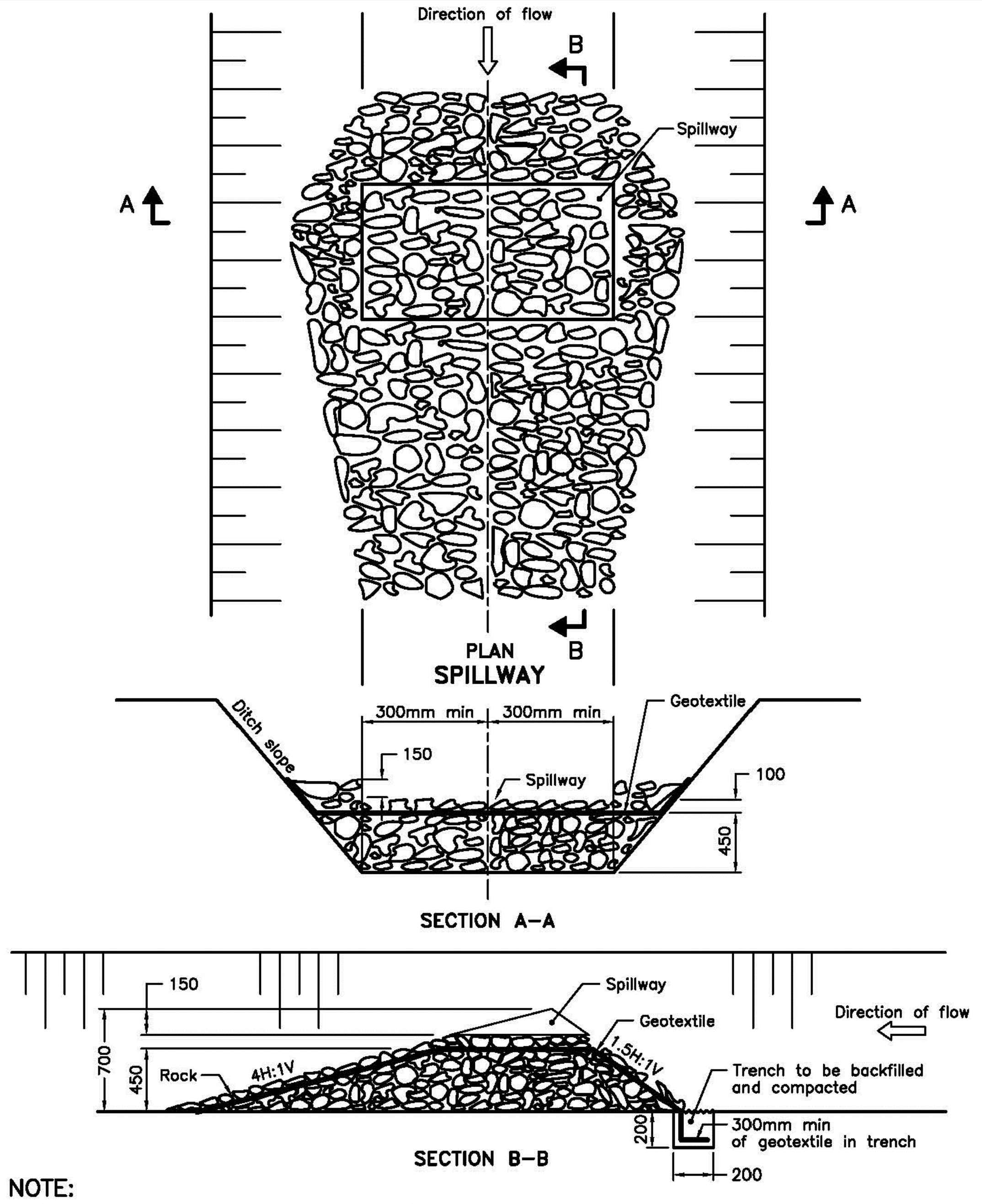
5. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIRECTED TOWARD CONSTRUCTION ACCESS SHALL BE DIRECTED ACROSS THE ACCESS THROUGH A TEMPORARY CULVERT,

6. MAINTENANCE – THE CONTRACTOR SHALL MAINTAIN THE MUD MAT IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.

7. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ACCESS ONTO THE PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

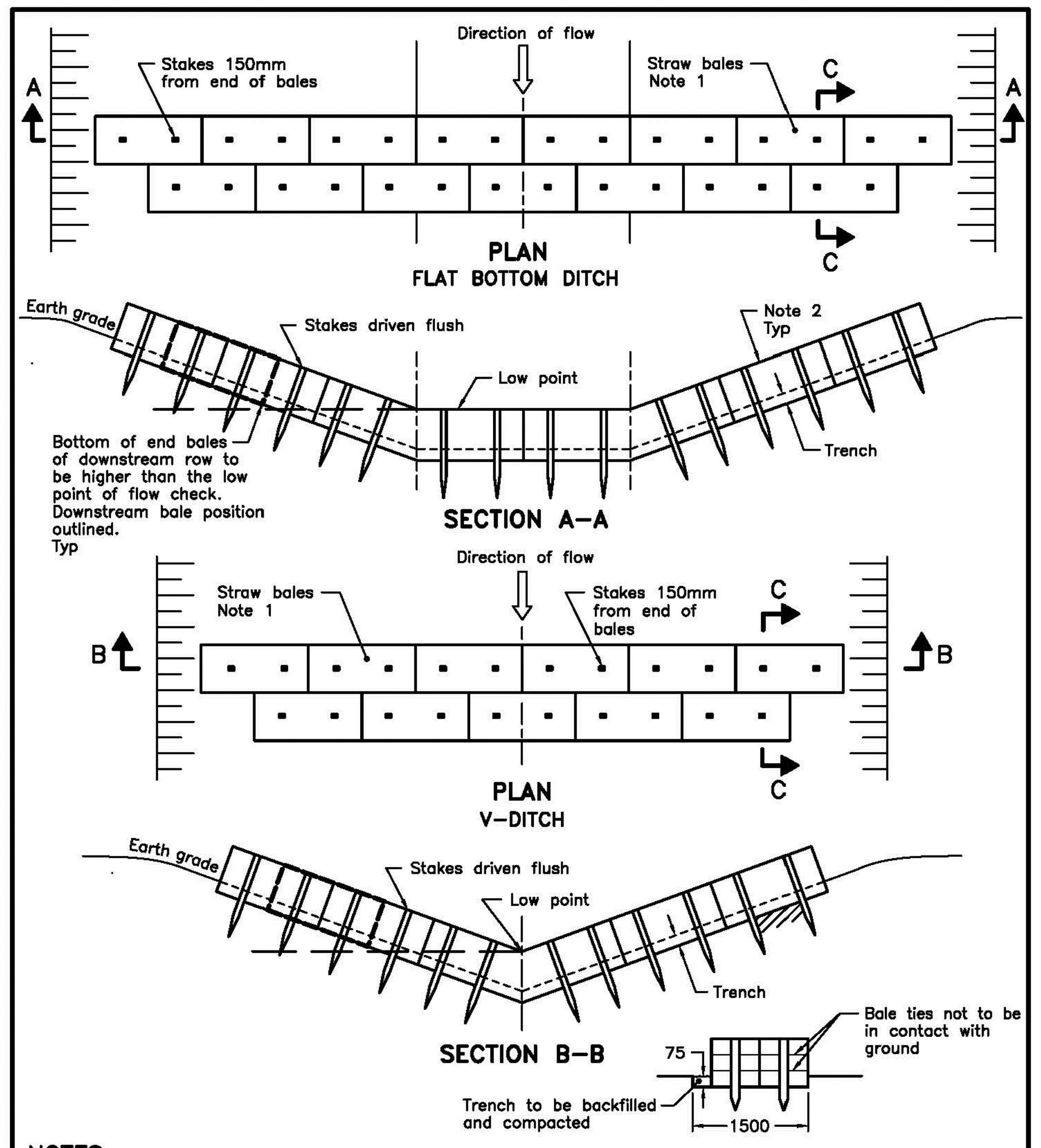
8. INSPECTION & MAINTENANCE – REQUIRED MAINTENANCE AFTER EACH RAIN EVENT SHALL BE PROVIDED BY THE CONTRACTOR.

9. REMOVAL – STONE MUD MAT TO REMAIN IN PLACE UNTIL COMMENCEMENT OF ROAD CONSTRUCTION


Direction of flow
B
Spillway
A
A
PLAN
B
SPILLWAY
Ditch slope
300mm min
300mm min
Geotextile
150
Spillway
100
450
SECTION A–A
150
Spillway
Geotextile
Direction of flow
700
450
Rock
4H:1V
1.5H:1V
Trench to be backfilled and compacted
200
300mm min of geotextile in trench
200
SECTION B–B

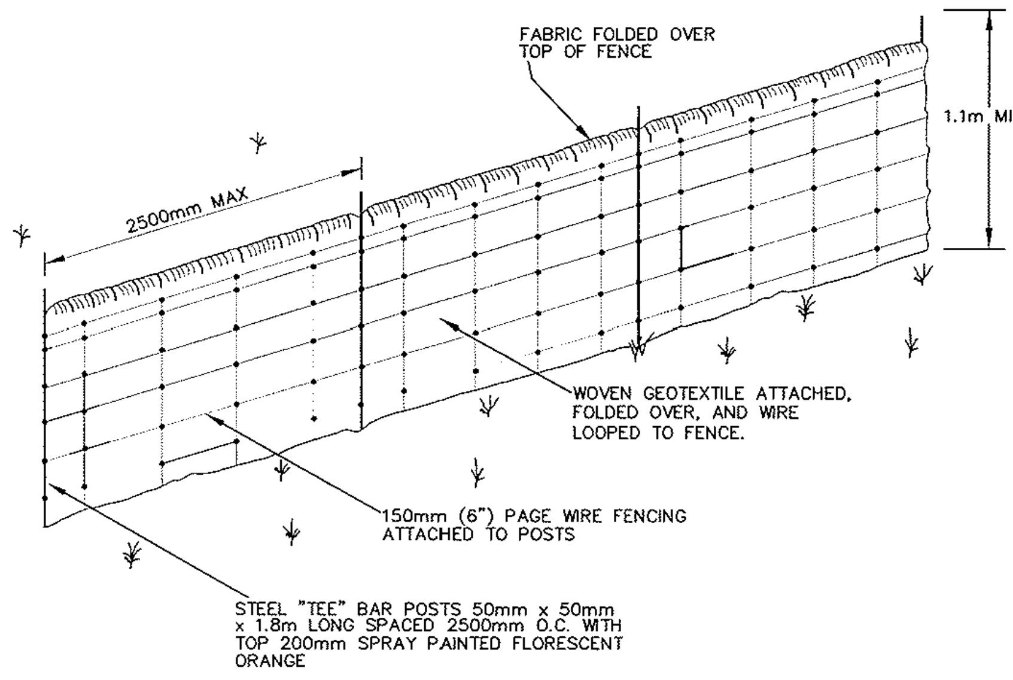
NOTE:
A All dimensions are in millimetres unless otherwise shown.

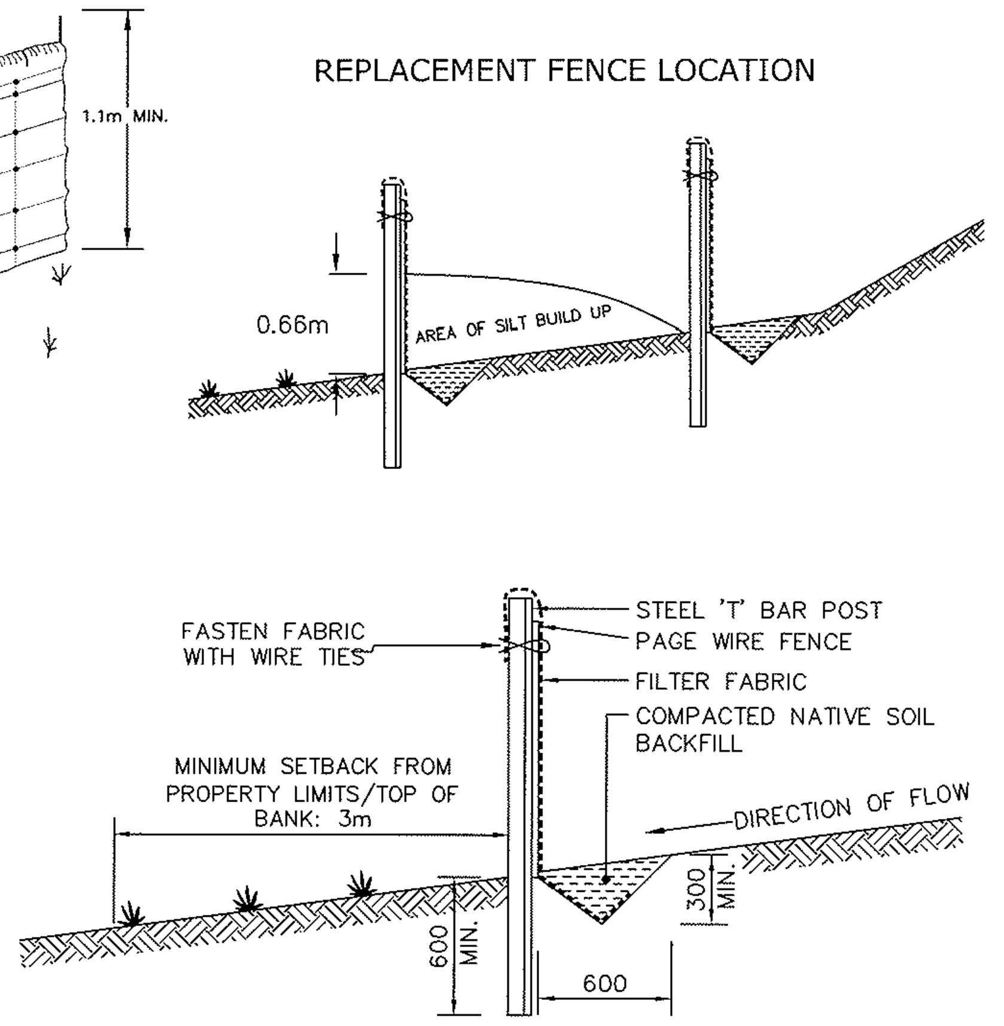
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev 1
ROCK FLOW CHECK DAM FLAT BOTTOM DITCH	**OPSD 219.211**	


Direction of flow
Stakes 150mm from end of bales
Straw bales Note 1
A
A
C
C
PLAN
FLAT BOTTOM DITCH
Earth grade
Stakes driven flush
Note 2 Typ
Low point
Trench
Bottom of end bales of downstream row to be higher than the low point of flow check. Downstream bale position outlined. Typ
SECTION A–A
Direction of flow
Straw bales Note 1
Stakes 150mm from end of bales
B
B
C
C
PLAN
V–DITCH
Earth grade
Stakes driven flush
Low point
Trench
SECTION B–B
75
Bale ties not to be in contact with ground
Trench to be backfilled and compacted
1500
SECTION C–C

NOTES:
1 Number of bales varies to suit ditch.
2 Straw bales to be butted tightly against adjoining bales and shaped to conform to the sides of the ditch to prevent water flow through barrier.
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev 1
STRAW BALE FLOW CHECK DAM	**OPSD 219.180**	


FABRIC FOLDED OVER TOP OF FENCE
2500mm MAX
1.1m MIN.
WOVEN GEOTEXTILE ATTACHED, FOLDED OVER, AND WIRE LOOPED TO FENCE.
150mm (6") PAGE WIRE FENCING ATTACHED TO POSTS
STEEL "TEE" BAR POSTS 50mm x 50mm x 1.8m LONG SPACED 2500mm O.C. WITH TOP 200mm SPRAY PAINTED FLORESCENT ORANGE


REPLACEMENT FENCE LOCATION
0.66m
AREA OF SILT BUILD UP
STEEL 'T' BAR POST
PAGE WIRE FENCE
FASTEN FABRIC WITH WIRE TIES
FILTER FABRIC
COMPACTED NATIVE SOIL BACKFILL
MINIMUM SETBACK FROM PROPERTY LIMITS/TOP OF BANK: 3m
DIRECTION OF FLOW
300 MIN.
600 MIN.
600

NOTES:
1. SILT CONTROL FENCE SHOULD BE ALIGNED WITH CONTOURS FOR SHEET OVERLAND FLOW.
2. SILT/SEDIMENT CONTROL FENCE IS TO BE LOCATED IN AREAS OF LOW SEDIMENT YIELD ON SLOPES THAT CONFORM TO MTO DRAINAGE MANUAL VOLUME 2 "CHART F4-3C TOPOGRAPHIC FACTOR LS BASED ON SLOPE LENGTH AND GRADIENT."
3. SILT/SEDIMENT CONTROL FENCE SHALL BE INSTALLED WITH FILTER MEDIA FABRIC TOED INTO THE SOIL A MIN. OF 300mm BY EITHER STATIC SLICING OR TRENCH METHODS WITH COMPACTION OF TRENCH MATERIAL MEETING 95% INSITU SOIL STRENGTH.
4. STEEL 'T' BAR POSTS ARE TO BE SPACED MAX. 2500mm ON CENTER.
5. FROZEN GROUND CONDITIONS REQUIRE FILTER FABRIC TO BE BACKFILLED IN TRENCH WITH CLEAR STONE.
6. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
7. GEOTEXTILE FABRIC TO BE COMPRISED OF WOVEN OR NON-WOVEN U.V. STABILIZED MATERIAL. FABRIC TO BE FOLDED OVER TOP OF FENCE MIN. 300mm AND WIRE FASTENED.

Nottawasaga Valley Conservation Authority				APR'D:	DATE: 03.03.06
				DRAWN: A.S.C	SCALE: NTS
TYPICAL DETAIL OF SILT/SEDIMENT FENCE	NO.	REVISION	APR'D	DATE	BSD-23 DRAFT

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

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ENGINEER STAMP

[redacted]

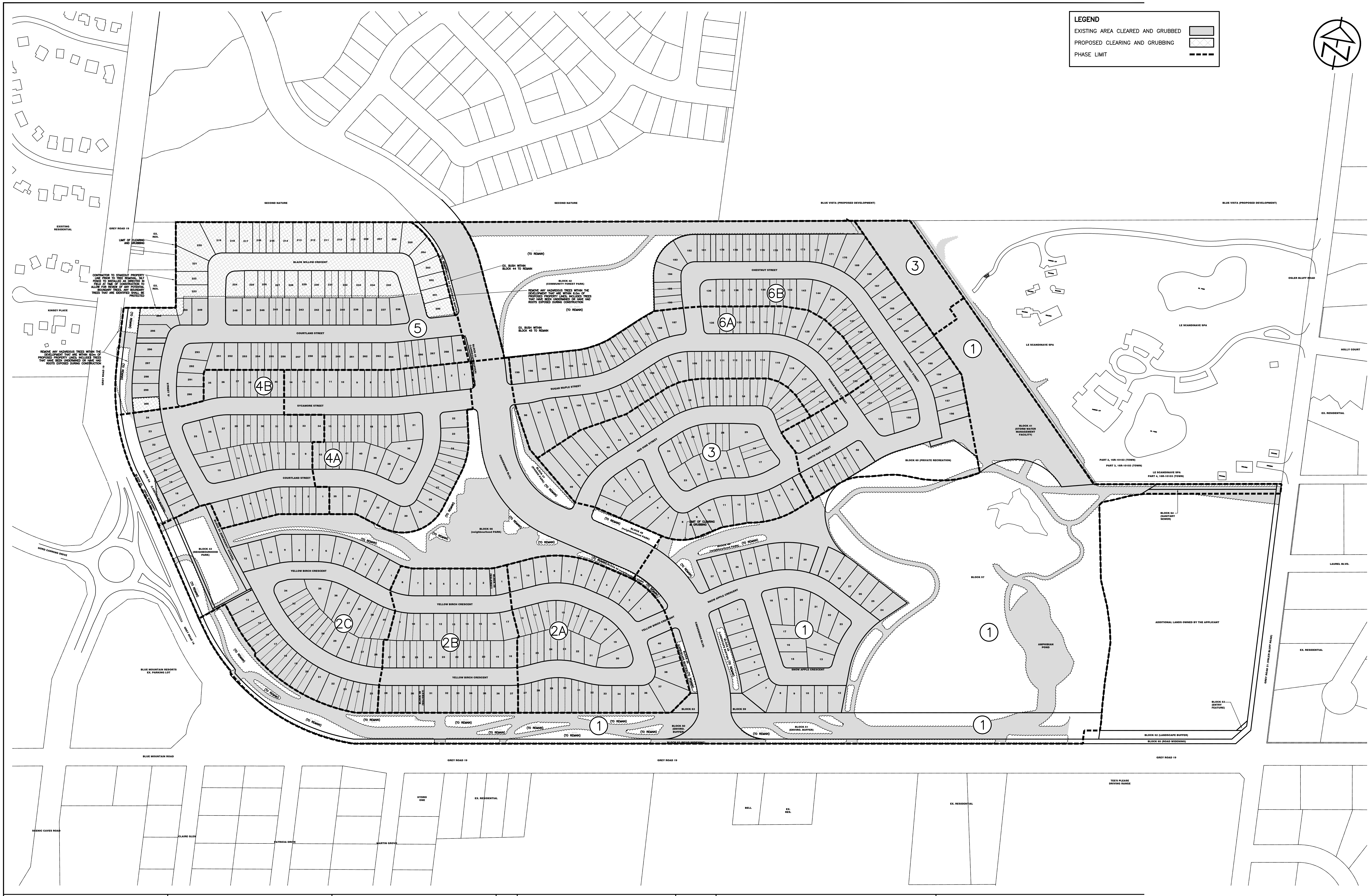
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

SILTATION AND EROSION CONTROL DETAILS AND NOTES

TATHAM ENGINEERING

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	**SC-2**
CHECK: JPA/MJC	SCALE: AS NOTED	

Drawing Name: 111179-5-SC-2.dwg, Plotted: May 17, 2021


LEGEND
EXISTING AREA CLEARED AND GRUBBED
PROPOSED CLEARING AND GRUBBING
PHASE LIMIT
N
SECOND NATURE
BLUE VISTA (PROPOSED DEVELOPMENT)
EXISTING RESIDENTIAL
GREY ROAD 19
EX. RES.
LIMIT OF CLEARING AND GRUBBING
CONTRACTOR TO STAKEOUT PROPERTY LINE PRIOR TO TREE REMOVAL. SILT FENCE TO INSTALLED AS DIRECTED IN FIELD AT TIME OF CONSTRUCTION TO ALLOW FOR REVIEW OF ANY POTENTIAL BOUNDARY TREES. ANY BOUNDARY TREES THAT ARE IDENTIFIED SHALL BE PROTECTED
KINSEY PLACE
REMOVE ANY HAZARDOUS TREES WITHIN THE DEVELOPMENT THAT ARE WITHIN 6.0m OF PROPOSED PROPERTY LINES; INCLUDES TREES THAT HAVE BEEN UNDERMINED OR HAVE HAD ROOTS EXPOSED DURING CONSTRUCTION
BLACK WILLOW CRECENT
COURTLAND STREET
SYCAMORE STREET
STREET 'D'
SUGAR MAPLE STREET
CHESTNUT STREET
RED PINE STREET
WHITE OAK STREET
YELLOW BIRCH CRESCENT
SNOW APPLE CRESCENT
EX. BUSH WITHIN BLOCK 44 TO REMAIN
EX. BUSH WITHIN BLOCK 45 TO REMAIN
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 44 (LANDSCAPE BUFFER)
BLOCK 45 (LANDSCAPE BUFFER)
(TO REMAIN)
BLOCK 41 (STORM WATER MANAGEMENT FACILITY)
BLOCK 60 (PRIVATE RECREATION)
BLOCK 56 (neighbourhood PARK)
BLOCK 43 (NEIGHBOURHOOD PARK)
BLOCK 57
AMPHIBIAN POND
ADDITIONAL LANDS OWNED BY THE APPLICANT
BLOCK 54 (SANITARY SEWER)
BLOCK 53 (ENTRY FEATURE)
BLOCK 52 (LANDSCAPE BUFFER)
BLOCK 65 (ROAD WIDENING)
BLOCK 51 (ENVIRO. BUFFER)
BLOCK 50 (ENVIRO. BUFFER)
BLOCK 63
BLOCK 59
LIMIT OF CLEARING & GRUBBING
LE SCANDINAVE SPA
OSLER BLUFF ROAD
HOLLY COURT
EX. RESIDENTIAL
PART 2, 16R-10103 (TOWN)
PART 3, 16R-10103 (TOWN)
PART 4, 16R-10103 (TOWN)
LAUREL BLVD.
GREY ROAD 21 (OSLER BLUFF ROAD)
GORD CANNING DRIVE
BLUE MOUNTAIN RESORTS EX. PARKING LOT
BLUE MOUNTAIN ROAD
TEE'S PLEASE DRIVING RANGE
HYDRO ONE
BELL
SCENIC CAVES ROAD
CLAIRE GLEN
PATRICIA DRIVE
MARTIN GROVE
1
2A
2B
2C
3
4A
4B
5
6A
6B

DISCLAIMER AND COPYRIGHT	**BENCHMARKS**	**NOTES**
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ENGINEER STAMP

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

CLEARING AND GRUBBING PLAN

TATHAM
ENGINEERING

BM
BM
JPA/MJC

FEB 2021
1:2000

CG-1

Drawing Name: 111179-5-CG01.dwg, Plotted: May 17, 2021

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–47, DATED JANUARY 7, 2016 AND PLAN 16M–52, DATED MAY 11, 2017 AND PLAN 16M–57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–64, DATED JANUARY 22, 2019.

PHASE 4A AND 4B LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–71M DATED FEBRUARY 14, 2019 AND DRAFT M–PLAN.

PHASE 5 AND PHASE 6 LOT NUMBERS IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED JUNE 15, 2020.

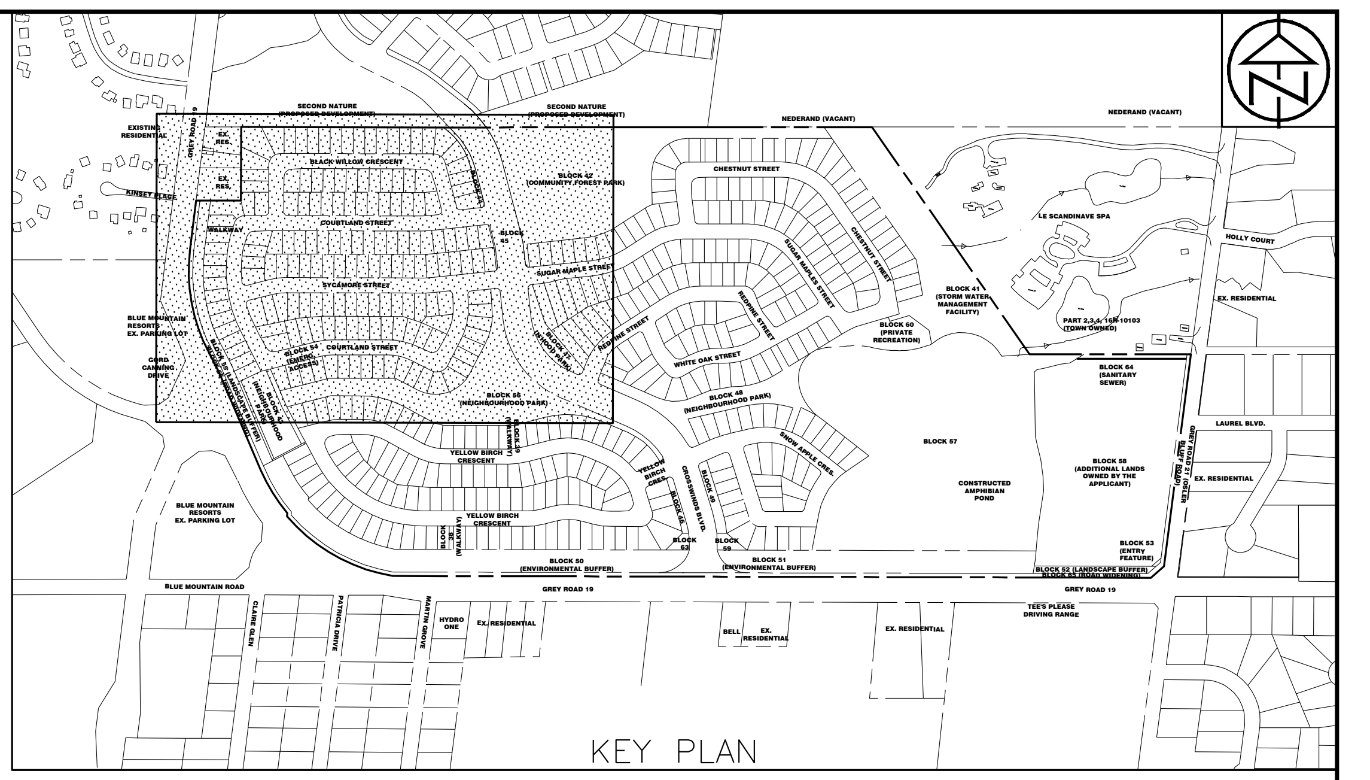
THE LINES SHOWN DIVIDING THE SEMI–DETACHED DWELLING UNITS ARE CONCEPTUAL. THE EXACT LOCATION OF THE LINE WILL BE DETERMINED UPON COMPLETION OF BUILDING CONSTRUCTION THROUGH PART LOT CONTROL.

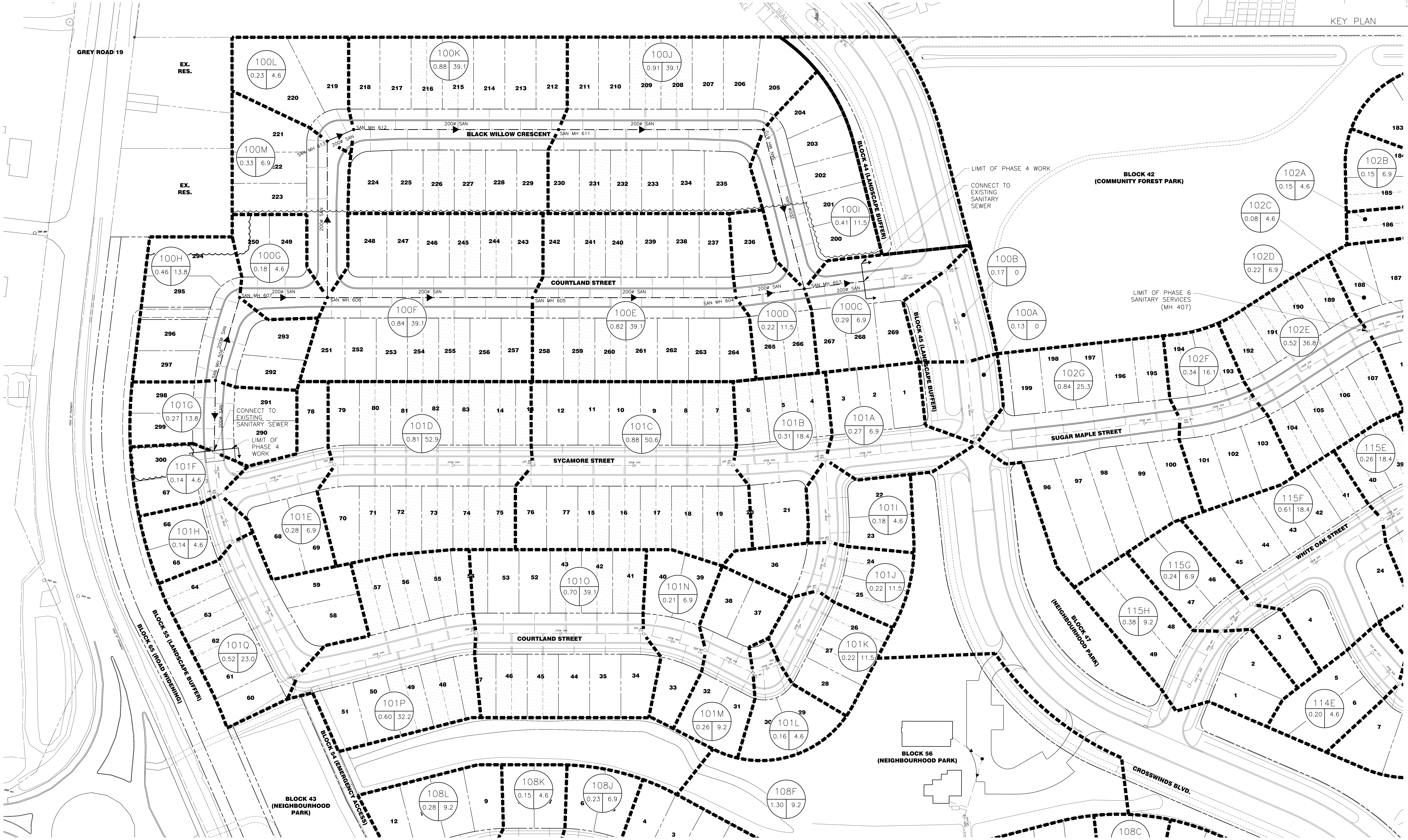
NOTES

1. SEE MASTER SERVICING SANITARY DRAINAGE PLAN (111179–2, SHEET SAN–1) FOR ADDITIONAL INFORMATION.
2. SEE DRAWING DE–2 FOR SANITARY SEWER DESIGN SHEET.
3. PHASE 4 WORK INCLUDED EXTENSION OF SANITARY SEWER ON SUGAR MAPLE STREET FROM SAN MH 112 TO SAN MH 410. THE SERVICE CONNECTIONS INCLUDING TEES AT MAIN WERE NOT CONSTRUCTED.
4. PHASE 4 WORK INCLUDED EXTENSION OF SANITARY SEWER ON CROSSWINDS BOULEVARD FROM SAN MH 410 TO SAN MH 412 AND FROM SAN MH 412 TO 35m WEST ON COURTLAND STREET.

LEGEND

SANITARY AREA BOUNDARY	■■■■■■■■■
AREA IDENTIFICATION NUMBER	112A
AREA IN HECTARES	13.36
POPULATION BASED ON 2.3 PERSONS PER UNIT	57.5
SEMI–DETACHED LOT	▨




N
GREY ROAD 19
EX. RES.
EX. RES.
BLACK WILLOW CRESCENT
COURTLAND STREET
COURTLAND STREET
SYCAMORE STREET
SUGAR MAPLE STREET
WHITE OAK STREET
CROSSWINDS BLVD.
BLOCK 44 (LANDSCAPE BUFFER)
BLOCK 45 (LANDSCAPE BUFFER)
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 47 (NEIGHBOURHOOD PARK)
BLOCK 56 (NEIGHBOURHOOD PARK)
BLOCK 43 (NEIGHBOURHOOD PARK)
BLOCK 54 (EMERGENCY ACCESS)
BLOCK 55 (LANDSCAPE BUFFER)
BLOCK 65 (ROAD WIDENING)
LIMIT OF PHASE 4 WORK
CONNECT TO EXISTING SANITARY SEWER
LIMIT OF PHASE 6 SANITARY SERVICES (MH 407)
CONNECT TO EXISTING SANITARY SEWER
LIMIT OF PHASE 4 WORK
SAN MH 603
SAN MH 604
SAN MH 605
SAN MH 606
SAN MH 607
SAN MH 611
SAN MH 612
SAN MH 613
200ø SAN
100L 0.23 4.6
100K 0.88 39.1
100J 0.91 39.1
100M 0.33 6.9
100I 0.41 11.5
100H 0.46 13.8
100G 0.18 4.6
100B 0.17 0
100A 0.13 0
100F 0.84 39.1
100E 0.82 39.1
100D 0.22 11.5
100C 0.29 6.9
101G 0.27 13.8
101D 0.81 52.9
101C 0.88 50.6
101B 0.31 18.4
101A 0.27 6.9
101F 0.14 4.6
101E 0.28 6.9
101H 0.14 4.6
101I 0.18 4.6
101O 0.70 39.1
101N 0.21 6.9
101J 0.22 11.5
101Q 0.52 23.0
101K 0.22 11.5
101P 0.60 32.2
101M 0.26 9.2
101L 0.16 4.6
108L 0.28 9.2
108K 0.15 4.6
108J 0.23 6.9
108F 1.30 9.2
108C
102A 0.15 4.6
102B 0.15 6.9
102C 0.08 4.6
102D 0.22 6.9
102E 0.52 36.8
102F 0.34 16.1
102G 0.84 25.3
115E 0.26 18.4
115F 0.61 18.4
115G 0.24 6.9
115H 0.38 9.2
114E 0.20 4.6

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BENCHMARKS

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SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

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ENGINEER STAMP

[redacted]

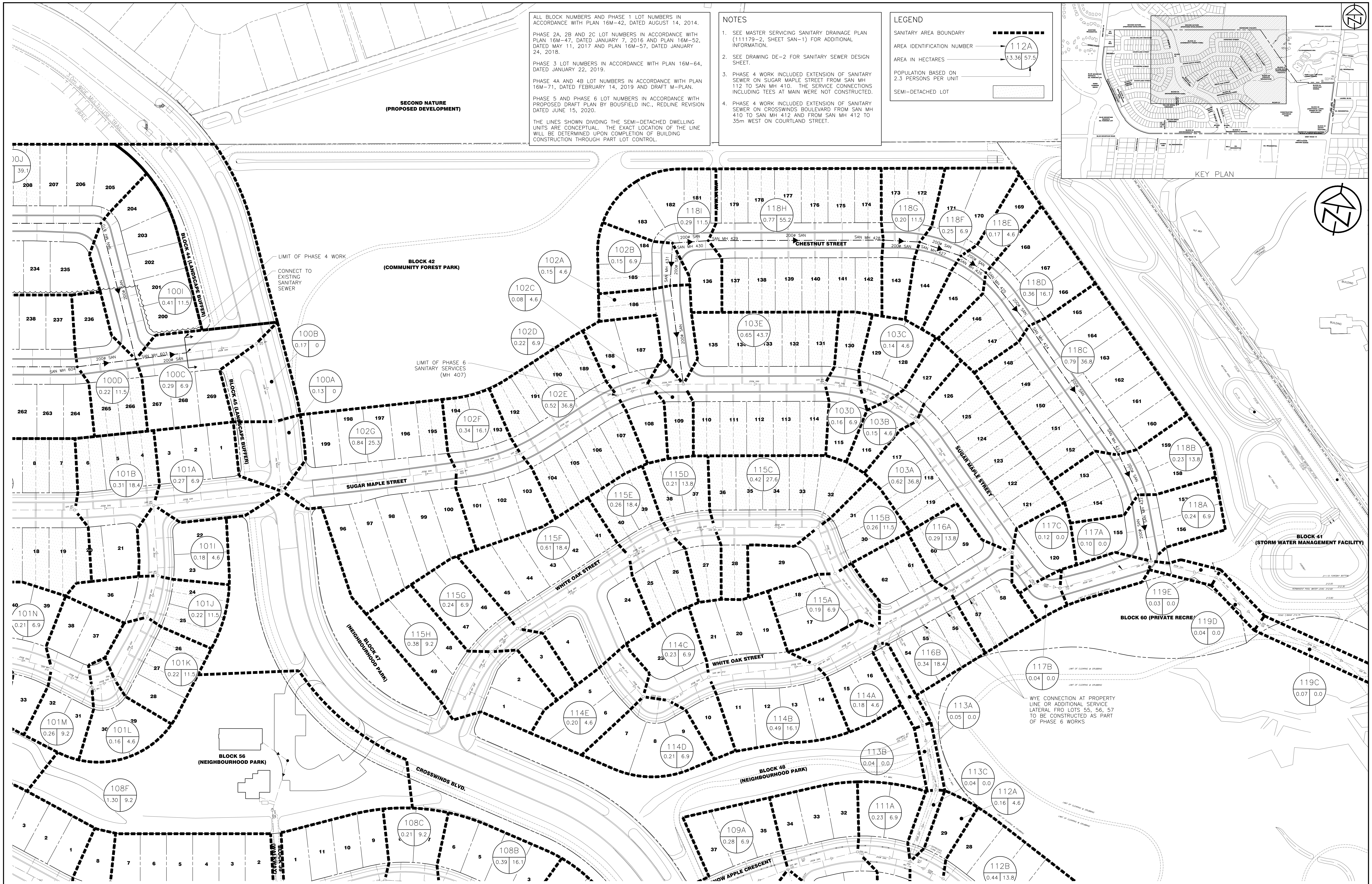
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM
ENGINEERING

SANITARY DRAINAGE PLAN

DESIGN: BM	FILE: 111179–5	DWG:
DRAWN: BM	DATE: FEB 2021	**SAN-1**
CHECK: JPA/MJC	SCALE: 1:1000	

Drawing Name: 111179–5–SAN01.dwg, Plotted: May 17, 2021


KEY PLAN
SECOND NATURE (PROPOSED DEVELOPMENT)
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 44 (LANDSCAPE BUFFER)
BLOCK 45 (LANDSCAPE BUFFER)
BLOCK 47 (NEIGHBOURHOOD PARK)
BLOCK 48 (NEIGHBOURHOOD PARK)
BLOCK 56 (NEIGHBOURHOOD PARK)
BLOCK 41 (STORM WATER MANAGEMENT FACILITY)
BLOCK 60 (PRIVATE RECRE
SUGAR MAPLE STREET
CHESTNUT STREET
WHITE OAK STREET
CROSSWINDS BLVD.
SNOW APPLE CRESCENT
LIMIT OF PHASE 4 WORK
CONNECT TO EXISTING SANITARY SEWER
LIMIT OF PHASE 6 SANITARY SERVICES (MH 407)
WYE CONNECTION AT PROPERTY LINE OR ADDITIONAL SERVICE LATERAL FRO LOTS 55, 56, 57 TO BE CONSTRUCTED AS PART OF PHASE 6 WORKS
100A 0.13 0
100B 0.17 0
100C 0.29 6.9
100D 0.22 11.5
100I 0.41 11.5
101A 0.27 6.9
101B 0.31 18.4
101I 0.18 4.6
101J 0.22 11.5
101K 0.22 11.5
101L 0.16 4.6
101M 0.26 9.2
101N 0.21 6.9
102A 0.15 4.6
102B 0.15 6.9
102C 0.08 4.6
102D 0.22 6.9
102E 0.52 36.8
102F 0.34 16.1
102G 0.84 25.3
103A 0.62 36.8
103B 0.15 4.6
103C 0.14 4.6
103D 0.16 6.9
103E 0.65 43.7
108B 0.39 16.1
108C 0.21 9.2
108F 1.30 9.2
109A 0.28 6.9
111A 0.23 6.9
112A 0.16 4.6
112B 0.44 13.8
113A 0.05 0.0
113B 0.04 0.0
113C 0.04 0.0
114A 0.18 4.6
114B 0.49 16.1
114C 0.23 6.9
114D 0.21 6.9
114E 0.20 4.6
115A 0.19 6.9
115B 0.26 11.5
115C 0.42 27.6
115D 0.21 13.8
115E 0.26 18.4
115F 0.61 18.4
115G 0.24 6.9
115H 0.38 9.2
116A 0.29 13.8
116B 0.34 18.4
117A 0.10 0.0
117B 0.04 0.0
117C 0.12 0.0
118A 0.24 6.9
118B 0.23 13.8
118C 0.79 36.8
118D 0.36 16.1
118E 0.17 4.6
118F 0.25 6.9
118G 0.20 11.5
118H 0.77 55.2
118I 0.29 11.5
119C 0.07 0.0
119D 0.04 0.0
119E 0.03 0.0
200ø SAN
SAN MH 429
SAN MH 430
SAN MH 428
SAN MH 427
SAN MH 603
SAN MH 604

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-47, DATED JANUARY 7, 2016 AND PLAN 16M-52, DATED MAY 11, 2017 AND PLAN 16M-57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-64, DATED JANUARY 22, 2019.

PHASE 4A AND 4B LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-71, DATED FEBRUARY 14, 2019 AND DRAFT M-PLAN.

PHASE 5 AND PHASE 6 LOT NUMBERS IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED JUNE 15, 2020.

THE LINES SHOWN DIVIDING THE SEMI-DETACHED DWELLING UNITS ARE CONCEPTUAL. THE EXACT LOCATION OF THE LINE WILL BE DETERMINED UPON COMPLETION OF BUILDING CONSTRUCTION THROUGH PART LOT CONTROL.

NOTES

1. SEE MASTER SERVICING SANITARY DRAINAGE PLAN (111179-2, SHEET SAN-1) FOR ADDITIONAL INFORMATION.
2. SEE DRAWING DE-2 FOR SANITARY SEWER DESIGN SHEET.
3. PHASE 4 WORK INCLUDED EXTENSION OF SANITARY SEWER ON SUGAR MAPLE STREET FROM SAN MH 112 TO SAN MH 410. THE SERVICE CONNECTIONS INCLUDING TEES AT MAIN WERE NOT CONSTRUCTED.
4. PHASE 4 WORK INCLUDED EXTENSION OF SANITARY SEWER ON CROSSWINDS BOULEVARD FROM SAN MH 410 TO SAN MH 412 AND FROM SAN MH 412 TO 35m WEST ON COURTLAND STREET.

LEGEND

SANITARY AREA BOUNDARY	■■■■■■■■■■
AREA IDENTIFICATION NUMBER	112A
AREA IN HECTARES	13.36
POPULATION BASED ON 2.3 PERSONS PER UNIT	57.5
SEMI-DETACHED LOT	▨

DISCLAIMER AND COPYRIGHT

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.

TATHAM ENGINEERING LIMITED CLAIMS COPYRIGHT TO THIS DRAWING WHICH MAY NOT BE USED FOR ANY PURPOSE OTHER THAN THAT PROVIDED IN THE CONTRACT BETWEEN THE OWNER/CLIENT AND THE ENGINEER WITHOUT THE EXPRESS CONSENT OF TATHAM ENGINEERING LIMITED.

BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

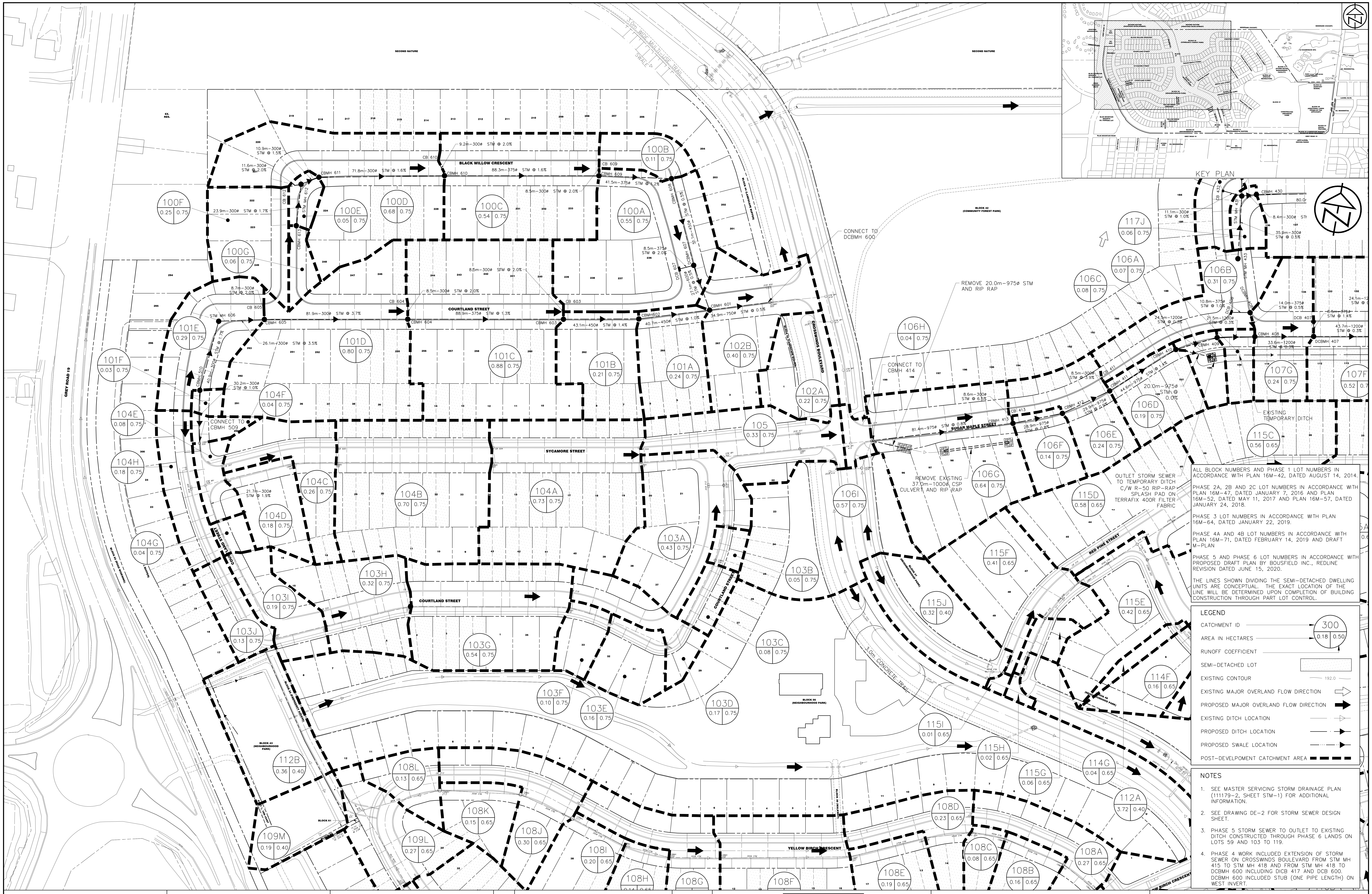
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

SANITARY DRAINAGE PLAN

TATHAM
ENGINEERING

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	**SAN-2**
CHECK: JPA/MJC	SCALE: 1:1000	

Drawing Name: 111179-5-SAN01.dwg, Plotted: May 17, 2021


KEY PLAN
GREY ROAD 19
BLACK WILLOW CRESCENT
COURTLAND STREET
SYCAMORE STREET
CROSSWINDS BOULEVARD
SUGAR MAPLE STREET
RED PINE STREET
YELLOW BIRCH CRESCENT
SECOND NATURE
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 56 (NEIGHBOURHOOD PARK)
BLOCK 43 (NEIGHBOURHOOD PARK)
3.0m CONCRETE TRAIL
CONNECT TO DCBMH 600
REMOVE 20.0m–975ø STM AND RIP RAP
CONNECT TO CBMH 414
CONNECT TO CBMH 509
REMOVE EXISTING 37.0m–1000ø CSP CULVERT AND RIP RAP
OUTLET STORM SEWER TO TEMPORARY DITCH C/W R–50 RIP–RAP SPLASH PAD ON TERRAFIX 400R FILTER FABRIC
EXISTING TEMPORARY DITCH
100F 0.25 0.75
100G 0.06 0.75
100E 0.05 0.75
100D 0.68 0.75
100C 0.54 0.75
100B 0.11 0.75
100A 0.55 0.75
101E 0.29 0.75
101F 0.03 0.75
101D 0.80 0.75
101C 0.88 0.75
101B 0.21 0.75
101A 0.24 0.75
102B 0.40 0.75
102A 0.22 0.75
104F 0.04 0.75
104E 0.08 0.75
104H 0.18 0.75
105 0.33 0.75
104C 0.26 0.75
104B 0.70 0.75
104A 0.73 0.75
104D 0.18 0.75
104G 0.04 0.75
103A 0.43 0.75
103H 0.32 0.75
103I 0.19 0.75
103J 0.13 0.75
103B 0.05 0.75
103G 0.54 0.75
103C 0.08 0.75
103F 0.10 0.75
103E 0.16 0.75
103D 0.17 0.75
106I 0.57 0.75
106H 0.04 0.75
106G 0.64 0.75
106F 0.14 0.75
106E 0.24 0.75
106D 0.19 0.75
106C 0.08 0.75
106A 0.07 0.75
106B 0.31 0.75
117J 0.06 0.75
107G 0.24 0.75
115C 0.56 0.65
115D 0.58 0.65
115F 0.41 0.65
115J 0.32 0.40
115E 0.42 0.65
114F 0.16 0.65
115I 0.01 0.65
115H 0.02 0.65
115G 0.06 0.65
114G 0.04 0.65
112A 3.72 0.40
112B 0.36 0.40
108L 0.13 0.65
108K 0.15 0.65
108J 0.30 0.65
109L 0.27 0.65
109M 0.19 0.40
108I 0.20 0.65
108D 0.23 0.65
108C 0.08 0.65
108A 0.27 0.65
108B 0.16 0.65
108E 0.19 0.65

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–47, DATED JANUARY 7, 2016 AND PLAN 16M–52, DATED MAY 11, 2017 AND PLAN 16M–57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–64, DATED JANUARY 22, 2019.

PHASE 4A AND 4B LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–71, DATED FEBRUARY 14, 2019 AND DRAFT M–PLAN

PHASE 5 AND PHASE 6 LOT NUMBERS IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED JUNE 15, 2020.

THE LINES SHOWN DIVIDING THE SEMI–DETACHED DWELLING UNITS ARE CONCEPTUAL. THE EXACT LOCATION OF THE LINE WILL BE DETERMINED UPON COMPLETION OF BUILDING CONSTRUCTION THROUGH PART LOT CONTROL.

LEGEND

CATCHMENT ID	300
AREA IN HECTARES	0.18
RUNOFF COEFFICIENT	0.50
SEMI–DETACHED LOT	▨
EXISTING CONTOUR	192.0
EXISTING MAJOR OVERLAND FLOW DIRECTION	⇨
PROPOSED MAJOR OVERLAND FLOW DIRECTION	➡
EXISTING DITCH LOCATION	—▷—
PROPOSED DITCH LOCATION	—▶—
PROPOSED SWALE LOCATION	—···—··▶—
POST–DEVELPOMENT CATCHMENT AREA	▬ ▬ ▬ ▬

NOTES

1. SEE MASTER SERVICING STORM DRAINAGE PLAN (111179–2, SHEET STM–1) FOR ADDITIONAL INFORMATION.
2. SEE DRAWING DE–2 FOR STORM SEWER DESIGN SHEET.
3. PHASE 5 STORM SEWER TO OUTLET TO EXISTING DITCH CONSTRUCTED THROUGH PHASE 6 LANDS ON LOTS 59 AND 103 TO 119.
4. PHASE 4 WORK INCLUDED EXTENSION OF STORM SEWER ON CROSSWINDS BOULEVARD FROM STM MH 415 TO STM MH 418 AND FROM STM MH 418 TO DCBMH 600 INCLUDING DICB 417 AND DCB 600. DCBMH 600 INCLUDED STUB (ONE PIPE LENGTH) ON WEST INVERT.

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

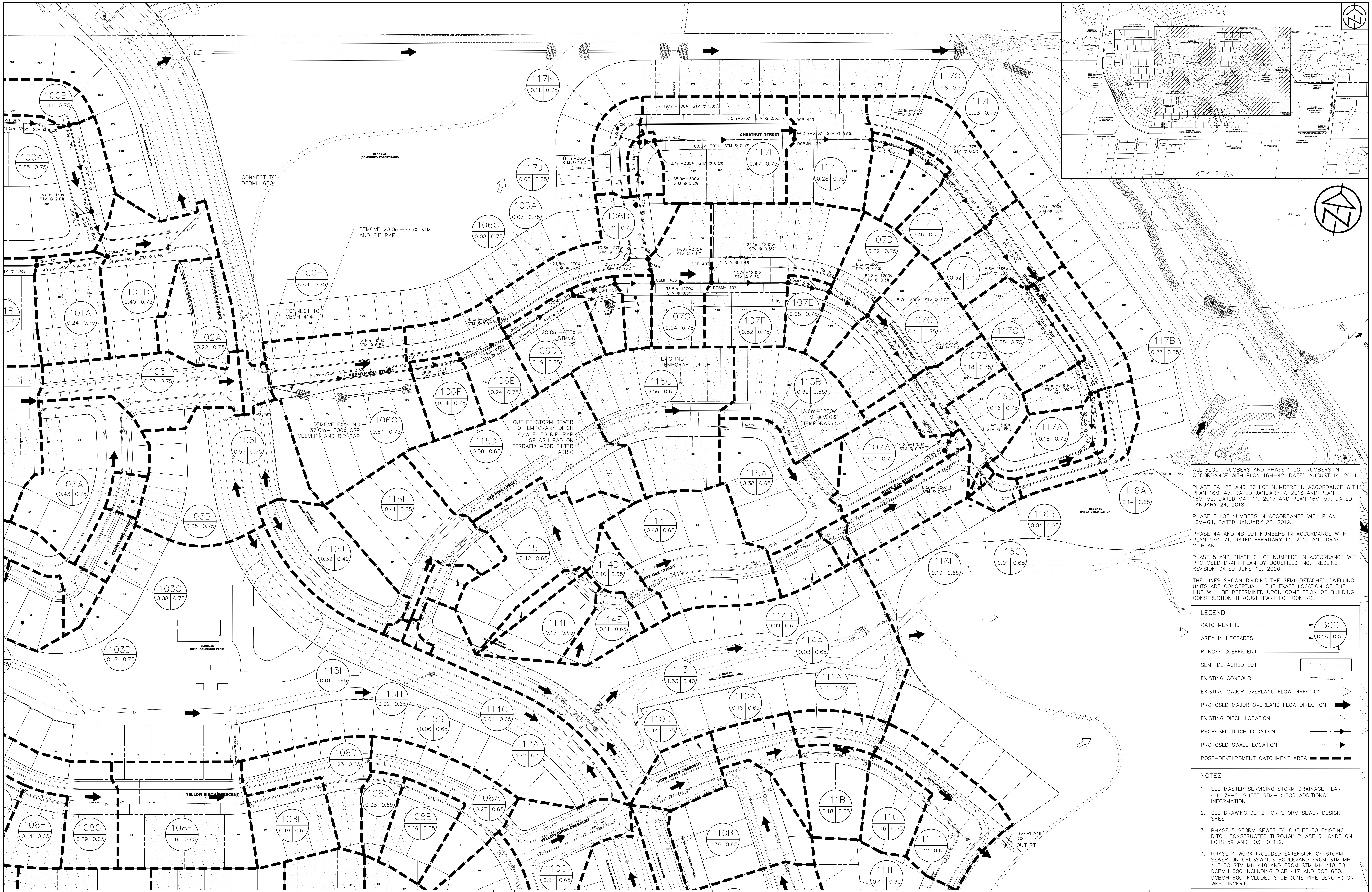
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

STORM DRAINAGE PLAN

TATHAM
ENGINEERING

DESIGN: BM	FILE: 111179–5	DWG:
DRAWN: BM	DATE: FEB 2021	STM-1
CHECK: JPA/MJC	SCALE: 1:1000	

Drawing Name: 111179–5–STM01.dwg, Plotted: May 17, 2021


KEY PLAN
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 41 (STORM WATER MANAGEMENT FACILITY)
BLOCK 60 (PRIVATE RECREATION)
BLOCK 56 (NEIGHBOURHOOD PARK)
CROSSWINDS BOULEVARD
SUGAR MAPLE STREET
CHESTNUT STREET
RED PINE STREET
WHITE OAK STREET
CORTLAND STREET
YELLOW BIRCH CRESCENT
SNOW APPLE CRESCENT
CONNECT TO DCBMH 600
REMOVE 20.0m–975ø STM AND RIP RAP
CONNECT TO CBMH 414
REMOVE EXISTING 37.0m–1000ø CSP CULVERT AND RIP RAP
OUTLET STORM SEWER TO TEMPORARY DITCH C/W R-50 RIP-RAP SPLASH PAD ON TERRAFIX 400R FILTER FABRIC
EXISTING TEMPORARY DITCH
16.6m–1200ø STM @ 3.0% (TEMPORARY)
HEAVY DUTY SILT FENCE
OVERLAND SPILL OUTLET
100A 0.55 0.75
100B 0.11 0.75
101A 0.24 0.75
102A 0.22 0.75
102B 0.40 0.75
103A 0.43 0.75
103B 0.05 0.75
103C 0.08 0.75
103D 0.17 0.75
105 0.33 0.75
106A 0.07 0.75
106B 0.31 0.75
106C 0.08 0.75
106D 0.19 0.75
106E 0.24 0.75
106F 0.14 0.75
106G 0.64 0.75
106H 0.04 0.75
106I 0.57 0.75
106J 0.06 0.75
107A 0.24 0.75
107B 0.18 0.75
107C 0.40 0.75
107D 0.22 0.75
107E 0.08 0.75
107F 0.52 0.75
107G 0.24 0.75
108A 0.27 0.65
108B 0.16 0.65
108C 0.08 0.65
108D 0.23 0.65
108E 0.19 0.65
108F 0.46 0.65
108G 0.29 0.65
108H 0.14 0.65
110A 0.16 0.65
110B 0.39 0.65
110D 0.14 0.65
110G 0.31 0.65
111A 0.10 0.65
111B 0.18 0.65
111C 0.16 0.65
111D 0.32 0.65
111E 0.44 0.65
112A 3.72 0.40
113 1.53 0.40
114A 0.03 0.65
114B 0.09 0.65
114C 0.48 0.65
114D 0.10 0.65
114E 0.11 0.65
114F 0.16 0.65
114G 0.04 0.65
115A 0.38 0.65
115B 0.32 0.65
115C 0.56 0.65
115D 0.58 0.65
115E 0.42 0.65
115F 0.41 0.65
115G 0.06 0.65
115H 0.02 0.65
115I 0.01 0.65
115J 0.32 0.40
116A 0.14 0.65
116B 0.04 0.65
116C 0.01 0.65
116D 0.16 0.75
116E 0.19 0.65
117A 0.18 0.75
117B 0.23 0.75
117C 0.25 0.75
117D 0.32 0.75
117E 0.36 0.75
117F 0.08 0.75
117G 0.08 0.75
117H 0.28 0.75
117I 0.47 0.75
117J 0.06 0.75
117K 0.11 0.75

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–47, DATED JANUARY 7, 2016 AND PLAN 16M–52, DATED MAY 11, 2017 AND PLAN 16M–57, DATED JANUARY 24, 2018.

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PHASE 5 AND PHASE 6 LOT NUMBERS IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED JUNE 15, 2020.

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LEGEND

CATCHMENT ID	300
AREA IN HECTARES	0.18
RUNOFF COEFFICIENT	0.50
SEMI–DETACHED LOT	▨
EXISTING CONTOUR	192.0
EXISTING MAJOR OVERLAND FLOW DIRECTION	⇨
PROPOSED MAJOR OVERLAND FLOW DIRECTION	➡
EXISTING DITCH LOCATION	—·▷—
PROPOSED DITCH LOCATION	—·▶—
PROPOSED SWALE LOCATION	—···—··▶—
POST–DEVELPOMENT CATCHMENT AREA	▬ ▬ ▬ ▬

NOTES

1. SEE MASTER SERVICING STORM DRAINAGE PLAN (111179–2, SHEET STM–1) FOR ADDITIONAL INFORMATION.
2. SEE DRAWING DE–2 FOR STORM SEWER DESIGN SHEET.
3. PHASE 5 STORM SEWER TO OUTLET TO EXISTING DITCH CONSTRUCTED THROUGH PHASE 6 LANDS ON LOTS 59 AND 103 TO 119.
4. PHASE 4 WORK INCLUDED EXTENSION OF STORM SEWER ON CROSSWINDS BOULEVARD FROM STM MH 415 TO STM MH 418 AND FROM STM MH 418 TO DCBMH 600 INCLUDING DICB 417 AND DCB 600. DCBMH 600 INCLUDED STUB (ONE PIPE LENGTH) ON WEST INVERT.

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

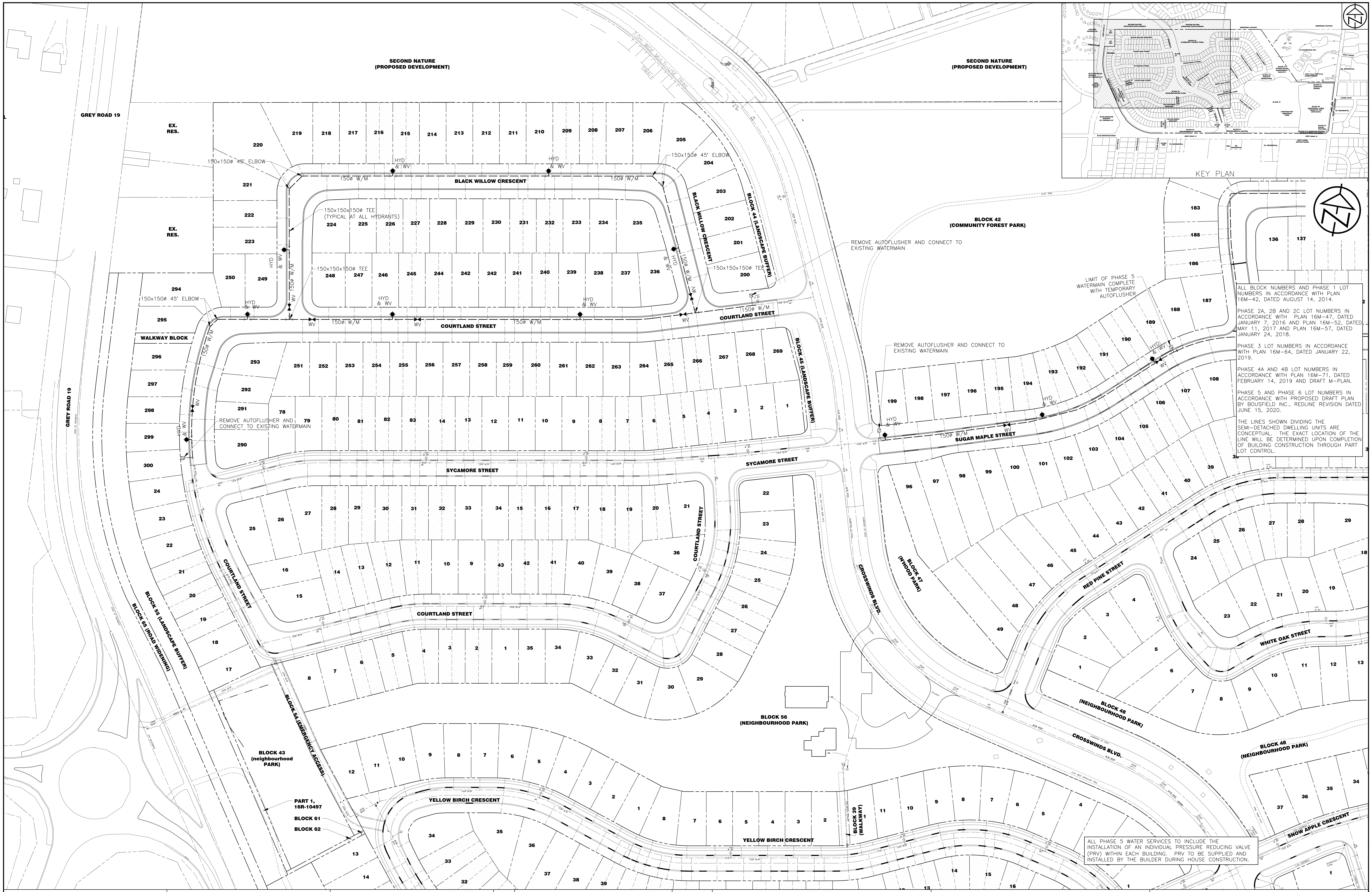
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

STORM DRAINAGE PLAN

TATHAM ENGINEERING

DESIGN: BM	FILE: 111179–5	DWG:
DRAWN: BM	DATE: FEB 2021	STM-2
CHECK: JPA/MJC	SCALE: 1:1000	

Drawing Name: 111179–5–STM01.dwg, Plotted: May 17, 2021


KEY PLAN
SECOND NATURE (PROPOSED DEVELOPMENT)
SECOND NATURE (PROPOSED DEVELOPMENT)
GREY ROAD 19
EX. RES.
EX. RES.
BLACK WILLOW CRESCENT
COURTLAND STREET
SYCAMORE STREET
SUGAR MAPLE STREET
CROSSWINDS BLVD.
RED PINE STREET
WHITE OAK STREET
SNOW APPLE CRESCENT
YELLOW BIRCH CRESCENT
WALKWAY BLOCK
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 44 (LANDSCAPE BUFFER)
BLOCK 46 (LANDSCAPE BUFFER)
BLOCK 47 (N'HOOD PARK)
BLOCK 48 (NEIGHBOURHOOD PARK)
BLOCK 55 (LANDSCAPE BUFFER)
BLOCK 65 (ROAD WIDENING)
BLOCK 54 (EMERGENCY ACCESS)
BLOCK 43 (neighbourhood PARK)
BLOCK 56 (NEIGHBOURHOOD PARK)
BLOCK 39 (WALKWAY)
PART 1, 16R-10497
BLOCK 61
BLOCK 62
150x150ø 45° ELBOW
150x150x150ø TEE (TYPICAL AT ALL HYDRANTS)
150x150x150ø TEE
150ø W/M
HYD & WV
WV
REMOVE AUTOFLUSHER AND CONNECT TO EXISTING WATERMAIN
LIMIT OF PHASE 5 WATERMAIN COMPLETE WITH TEMPORARY AUTOFLUSHER
SWALE

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–47, DATED JANUARY 7, 2016 AND PLAN 16M–52, DATED MAY 11, 2017 AND PLAN 16M–57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–64, DATED JANUARY 22, 2019.

PHASE 4A AND 4B LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–71, DATED FEBRUARY 14, 2019 AND DRAFT M–PLAN.

PHASE 5 AND PHASE 6 LOT NUMBERS IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED JUNE 15, 2020.

THE LINES SHOWN DIVIDING THE SEMI–DETACHED DWELLING UNITS ARE CONCEPTUAL. THE EXACT LOCATION OF THE LINE WILL BE DETERMINED UPON COMPLETION OF BUILDING CONSTRUCTION THROUGH PART LOT CONTROL.

ALL PHASE 5 WATER SERVICES TO INCLUDE THE INSTALLATION OF AN INDIVIDUAL PRESSURE REDUCING VALVE (PRV) WITHIN EACH BUILDING. PRV TO BE SUPPLIED AND INSTALLED BY THE BUILDER DURING HOUSE CONSTRUCTION.

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM ENGINEERING

WATER DISTRIBUTION PLAN

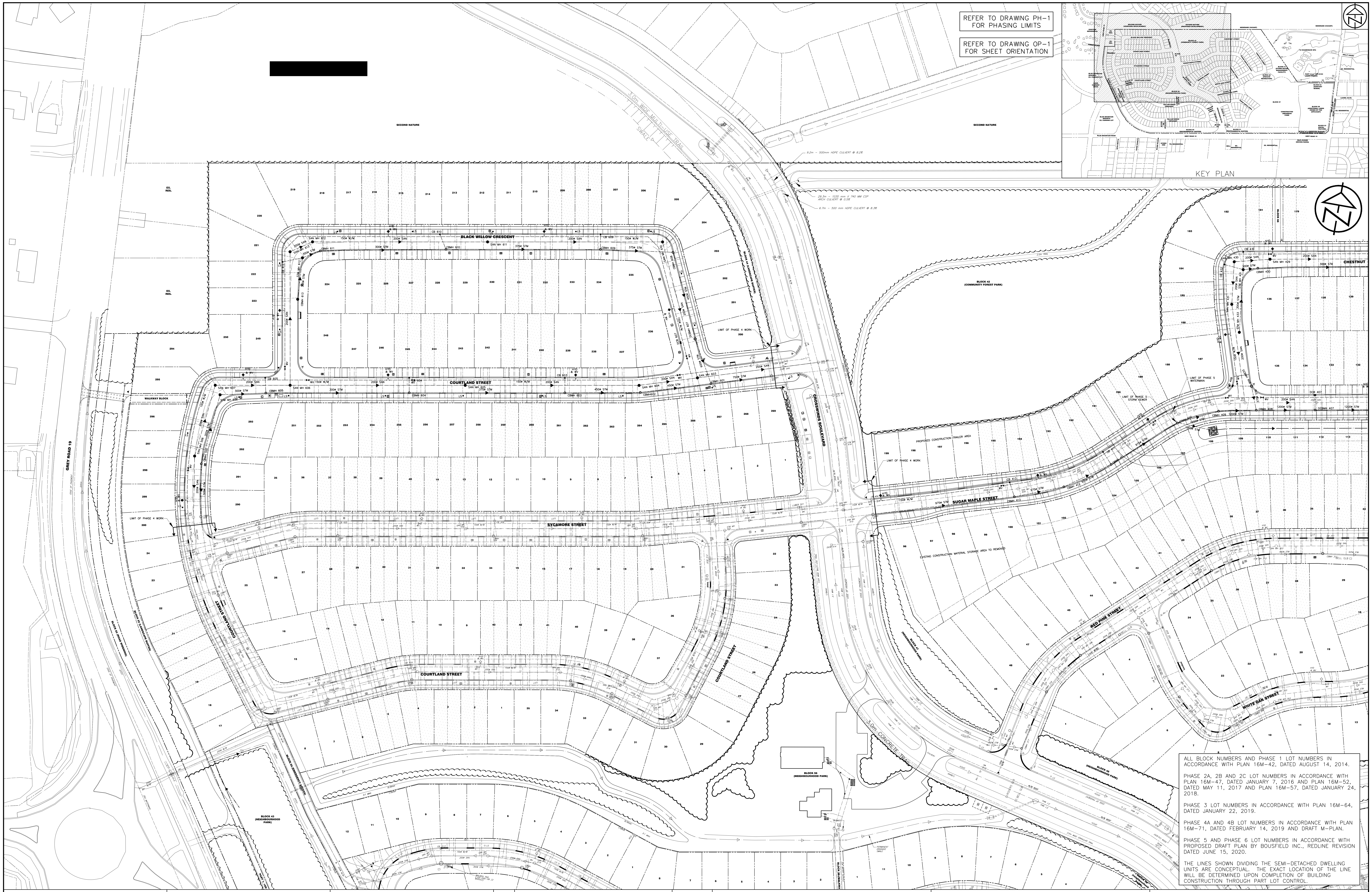
DESIGN: BM	FILE: 111179–5	DWG:
DRAWN: BM	DATE: FEB 2021	**WAT-1**
CHECK: JPA/MJC	SCALE: 1:1000	

Drawing Name: 111179–5–WAT01.dwg, Plotted: May 18, 2021

REFER TO DRAWING PH–1
FOR PHASING LIMITS

REFER TO DRAWING OP–1
FOR SHEET ORIENTATION

[redacted]


KEY PLAN
SECOND NATURE
SECOND NATURE
EX. RES.
EX. RES.
BLACK WILLOW CRESCENT
COURTLAND STREET
CROSSWINDS BOULEVARD
SYCAMORE STREET
SUGAR MAPLE STREET
CHESTNUT
RED PINE STREET
WHITE OAK STREET
GREY ROAD 19
WALKWAY BLOCK
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 43 (NEIGHBOURHOOD PARK)
BLOCK 48 (NEIGHBOURHOOD PARK)
BLOCK 56 (NEIGHBOURHOOD PARK)
3.0m CONCRETE TRAIL
3.0m WIDE GRANULAR TRAIL
PERMANENT DRAINAGE SWALE
LIMIT OF PHASE 4 WORK
LIMIT OF PHASE 5 WATERMAIN
LIMIT OF PHASE 5 STORM SEWER
PROPOSED CONSTRUCTION TRAILER AREA
EXISTING CONSTRUCTION MATERIAL STORAGE AREA TO REMOVED
SWALE

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–47, DATED JANUARY 7, 2016 AND PLAN 16M–52, DATED MAY 11, 2017 AND PLAN 16M–57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–64, DATED JANUARY 22, 2019.

PHASE 4A AND 4B LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–71, DATED FEBRUARY 14, 2019 AND DRAFT M–PLAN.

PHASE 5 AND PHASE 6 LOT NUMBERS IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED JUNE 15, 2020.

THE LINES SHOWN DIVIDING THE SEMI–DETACHED DWELLING UNITS ARE CONCEPTUAL. THE EXACT LOCATION OF THE LINE WILL BE DETERMINED UPON COMPLETION OF BUILDING CONSTRUCTION THROUGH PART LOT CONTROL.

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES LEGEND

PROPOSED WATER SERVICE	— — — — — —
PROPOSED SANITARY SERVICE	—·—·—·—·—
PROPOSED STORM SERVICE	— — — — — —

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

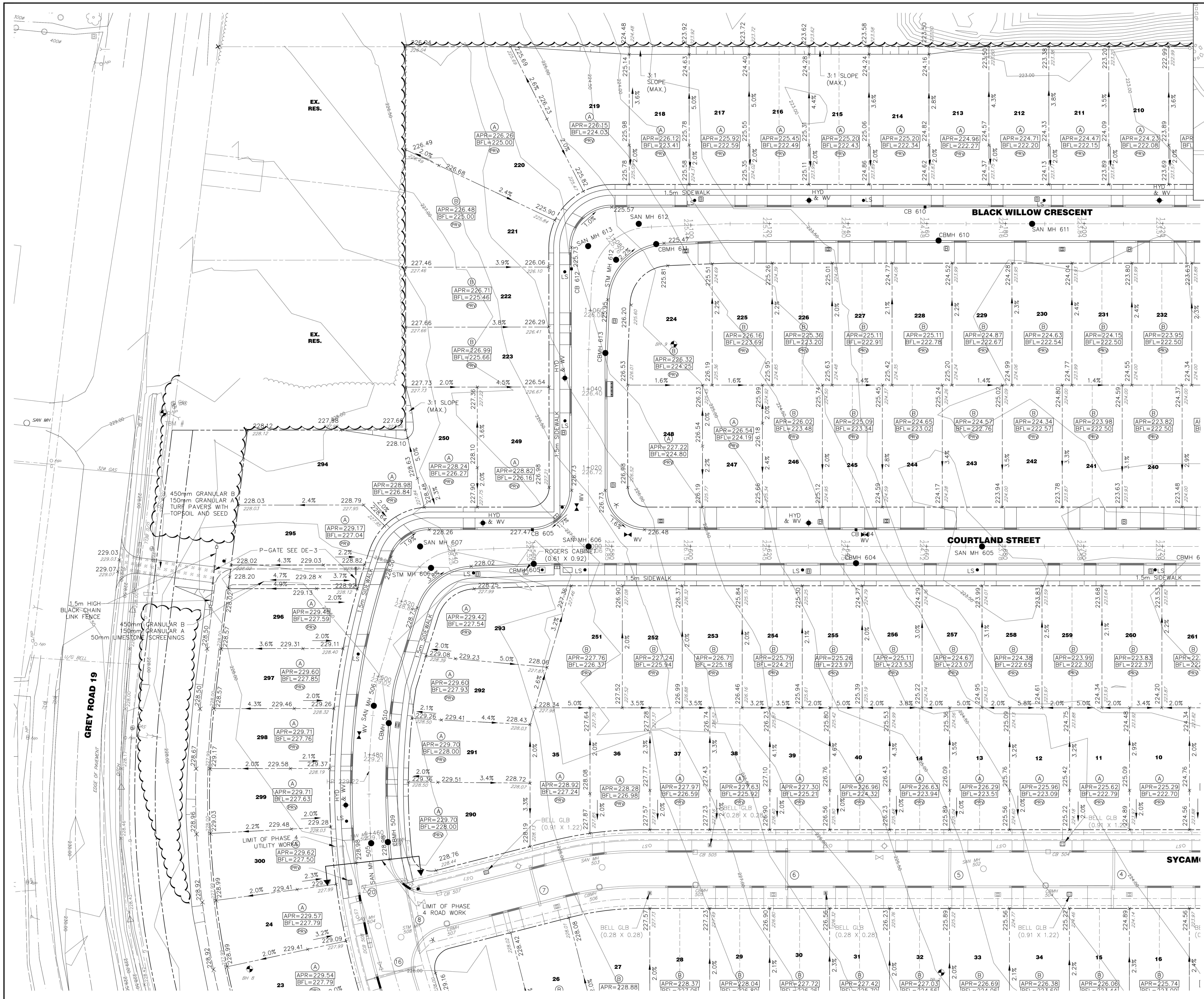
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

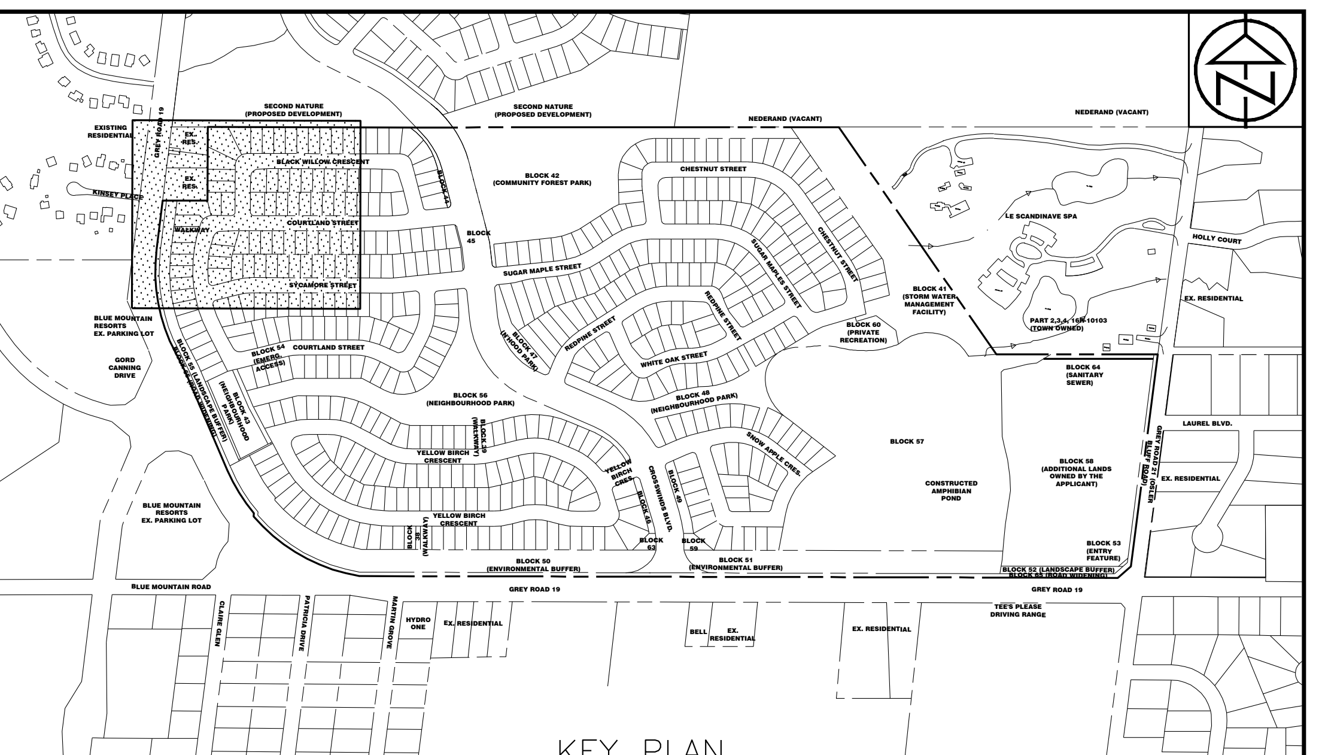
TATHAM
ENGINEERING

GENERAL SERVICING PLAN

DESIGN: BM	FILE: 111179–5	DWG:
DRAWN: BM	DATE: FEB 2021	**GS-1**
CHECK: JPA/MJC	SCALE: 1:1000	

Drawing Name: 111179–5–GS01.dwg, Plotted: May 18, 2021


BLACK WILLOW CRESCENT
COURTLAND STREET
SYCAMO
GREY ROAD 19
EX. RES.
EX. RES.
3:1 SLOPE (MAX.)
3:1 SLOPE (MAX.)
1.5m SIDEWALK
HYD & WV
SAN MH 612
SAN MH 613
SAN MH 611
SAN MH 607
SAN MH 606
SAN MH 605
SAN MH 506
CBMH 611
CBMH 610
CBMH 613
CBMH 605
CBMH 604
CBMH 510
CBMH 509
CB 610
CB 612
CB 605
CB 604
STM MH 612
STM MH 606
ROGERS CABINET (0.61 X 0.92)
450mm GRANULAR B 150mm GRANULAR A TURF PAVERS WITH TOPSOIL AND SEED
P-GATE SEE DE-3
1.5m HIGH BLACK CHAIN LINK FENCE
450mm GRANULAR B 150mm GRANULAR A 50mm LIMESTONE SCREENINGS
LIMIT OF PHASE 4 UTILITY WORK
LIMIT OF PHASE 4 ROAD WORK
BELL GLB (0.91 X 1.22)
BELL GLB (0.28 X 0.28)
BH 8
BH 9
SEE SHEET LG-2
APR=226.26 BFL=225.00
APR=226.15 BFL=224.03
APR=226.48 BFL=225.00
APR=226.71 BFL=225.46
APR=226.99 BFL=225.66
APR=228.24 BFL=226.27
APR=228.82 BFL=226.16
APR=228.98 BFL=226.84
APR=229.17 BFL=227.04
APR=229.42 BFL=227.54
APR=229.60 BFL=227.93
APR=229.70 BFL=228.00
APR=229.70 BFL=228.00
APR=229.48 BFL=227.59
APR=229.60 BFL=227.85
APR=229.71 BFL=227.76
APR=229.71 BFL=227.63
APR=229.62 BFL=227.50
APR=229.57 BFL=227.79
APR=229.54 BFL=227.79



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LEGEND

LOT No.	**68**
LOT GRADING TYPE (SEE LG-4)	Ⓐ
FIRE SEPARATION LOT	Ⓕ
MINIMUM APRON GRADE (ONE LOCATION)	APR=200.22
MINIMUM BASEMENT FLOOR ELEVATION	BFL=220.22
INDIVIDUAL PRESSURE REDUCING VALVE	(PRV)
EXISTING SPOT ELEVATION	× *219.50*
PROPOSED SPOT ELEVATION	× 219.60
EXISTING BOREHOLE	◐ *BH 1*
EXISTING TEST PIT	◐ *TP 1*
EXISTING GRADING DIRECTION	⟶
PROPOSED GRADING DIRECTION/SLOPE	2.0% →
EXISTING OVERLAND FLOW DIRECTION	⇨
PROPOSED OVERLAND FLOW DIRECTION	➡

NOTES

1. THE MINIMUM APRON GRADES SHOWN ON THE LOT GRADING PLANS ARE 0.2m TO 0.4m ABOVE THE HIGHEST SIDEYARD SWALE ELEVATION ADJACENT TO THE HOUSE. APRON GRADES ARE BASED ON A TYPICAL 14.0m LONG HOUSE AT A 6.0m FRONT YARD SETBACK. APRON GRADES ARE SUBJECT TO CHANGE BASED ON HOUSE TYPE, HOUSE DIMENSIONS AND FRONT YARD SETBACK, AS SHOWN ON THE INDIVIDUAL LOT GRADING PLANS PREPARED FOR EACH LOT.
2. REFER TO SHEET LG-4 FOR BOREHOLE DATA.
3. ENGINEERED FILL WILL BE PROVIDED ON INDIVIDUAL LOTS IN SOME AREAS. LIMITS OF ENGINEERED FILL TO BE RESOLVED WITH HOUSE BUILDER PRIOR TO SITE SERVICING. IN OTHER AREAS THE HOUSE BUILDER WILL BE REQUIRED TO EXTEND FOOTINGS TO SUITABLE NATIVE MATERIAL AS REQUIRED.
4. PLACEMENT OF ENGINEERED FILL TO BE CARRIED OUT UNDER THE SUPERVISION OF A QUALIFIED GEOTECHNICAL ENGINEER. ENGINEERED FILL TO BE COMPACTED TO A MINIMUM 98% OF THE MATERIAL'S SPMDD.
5. ALL PHASE 5 WATER SERVICES TO INCLUDE THE INSTALLATION OF AN INDIVIDUAL PRESSURE REDUCING VALVE (PRV) WITHIN EACH BUILDING. PRV TO BE SUPPLIED AND INSTALLED BY THE BUILDER DURING HOUSE CONSTRUCTION.
6. PORTIONS OF PHASE 5 LANDS CONTAIN EXISTING CONSTRUCTION ACCESS ROADS AND STOCKPILE AREAS NOT SHOWN. THE EXISTING TOPOGRAPHIC INFORMATION DOES NOT NECESSARILY REPRESENT EXISTING CONDITIONS WHERE THESE FEATURES EXIST.

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

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5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

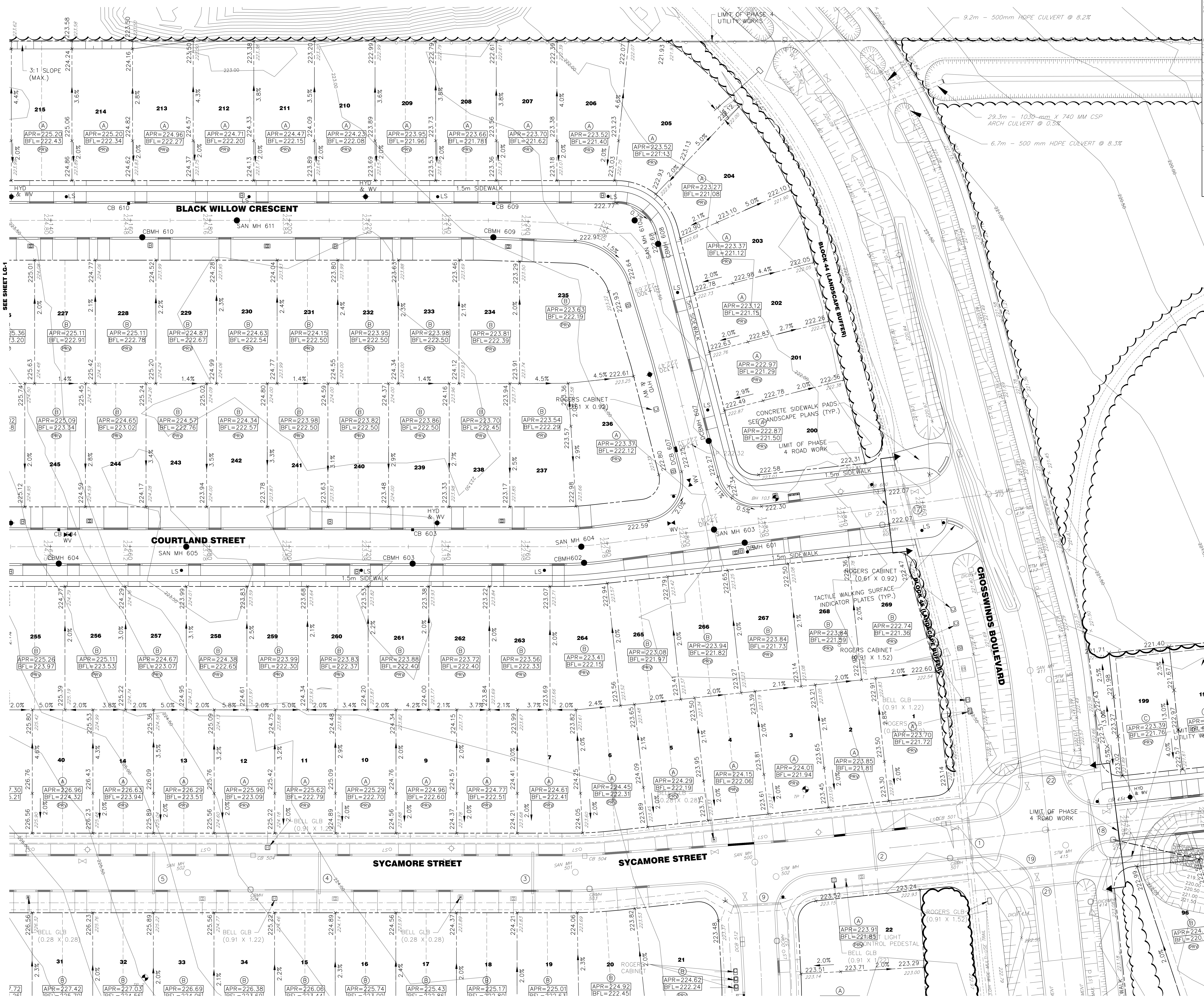
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM
ENGINEERING

LOT GRADING PLAN

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	**LG-1**
CHECK: JPA/MJC	SCALE: 1:500	

Drawing Name: 111179-5-LG01.dwg, Plotted: May 18, 2021


SEE SHEET LG-1
SEE SHEET LG-3
BLACK WILLOW CRESCENT
COURTLAND STREET
SYCAMORE STREET
CROSSWINDS BOULEVARD
BLOCK 44 (LANDSCAPE BUFFER)
LIMIT OF PHASE 4 UTILITY WORKS
LIMIT OF PHASE 4 ROAD WORK
9.2m - 500mm HDPE CULVERT @ 8.2%
29.3m - 1030 mm X 740 MM CSP ARCH CULVERT @ 0.5%
6.7m - 500 mm HDPE CULVERT @ 8.3%
3:1 SLOPE (MAX.)
1.5m SIDEWALK
CONCRETE SIDEWALK PADS SEE LANDSCAPE PLANS (TYP.)
TACTILE WALKING SURFACE INDICATOR PLATES (TYP.)
ROGERS CABINET (0.91 X 0.92)
ROGERS CABINET (0.61 X 0.92)
ROGERS CABINET (0.91 X 1.52)
BELL GLB (0.91 X 1.22)
BELL GLB (0.28 X 0.28)
ROGERS GLB (0.91 X 1.52)
STREET LIGHT CONTROL PEDESTAL
HYD & WV
CB 610
CB 609
CB 603
CB 604
CBMH 610
CBMH 609
CBMH 608
CBMH 607
CBMH 604
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CBMH602
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SAN MH 611
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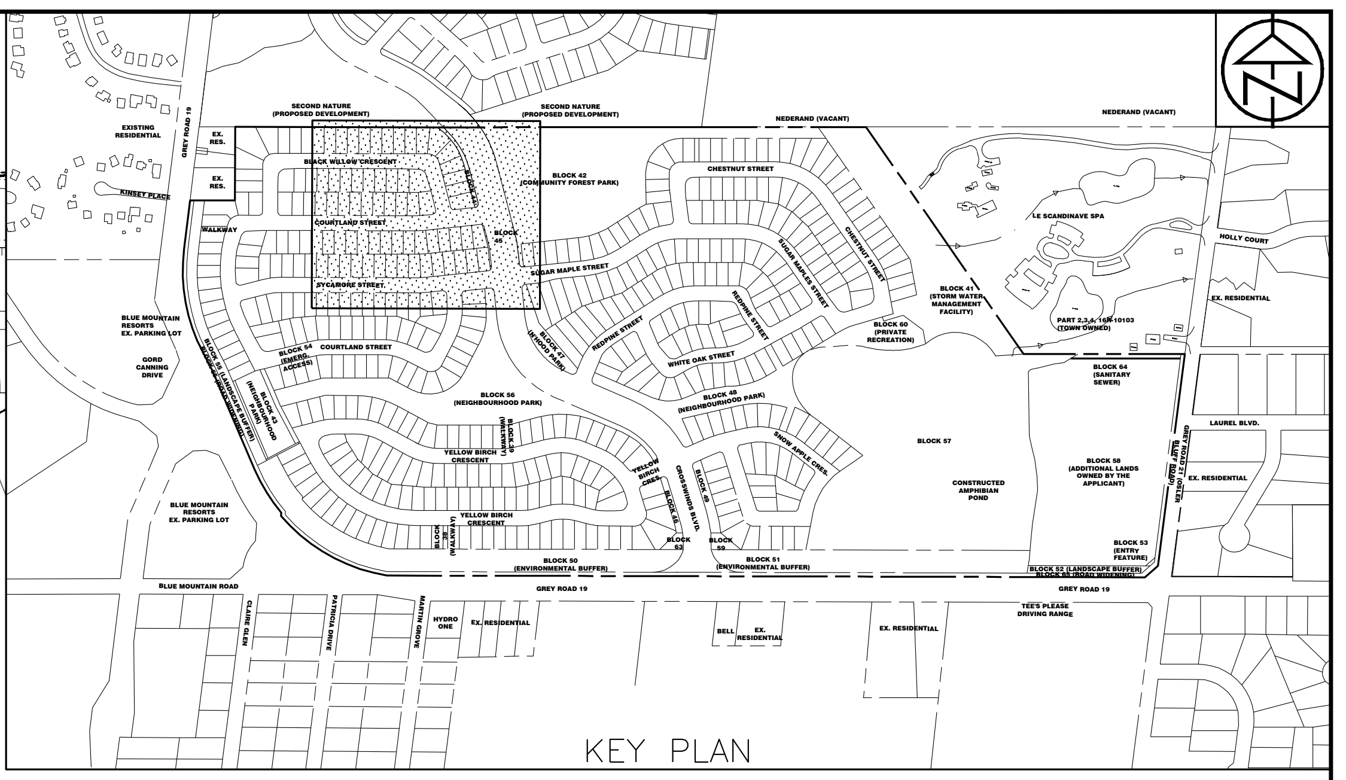
SAN MH 604
SAN MH 603
BH 103


KEY PLAN

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LEGEND

LOT No.	**68**
LOT GRADING TYPE (SEE LG–4)	Ⓐ
FIRE SEPARATION LOT	Ⓕ
MINIMUM APRON GRADE (ONE LOCATION)	APR=200.22
MINIMUM BASEMENT FLOOR ELEVATION	BFL=220.22
INDIVIDUAL PRESSURE REDUCING VALVE	(PRV)
EXISTING SPOT ELEVATION	× *219.50*
PROPOSED SPOT ELEVATION	× 219.60
EXISTING BOREHOLE	◐ *BH 1*
EXISTING TEST PIT	◐ *TP 1*
EXISTING GRADING DIRECTION	→
PROPOSED GRADING DIRECTION/SLOPE	2.0% →
EXISTING OVERLAND FLOW DIRECTION	⇨
PROPOSED OVERLAND FLOW DIRECTION	➡

NOTES

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BENCHMARKS

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SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
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ENGINEER STAMP

[redacted]

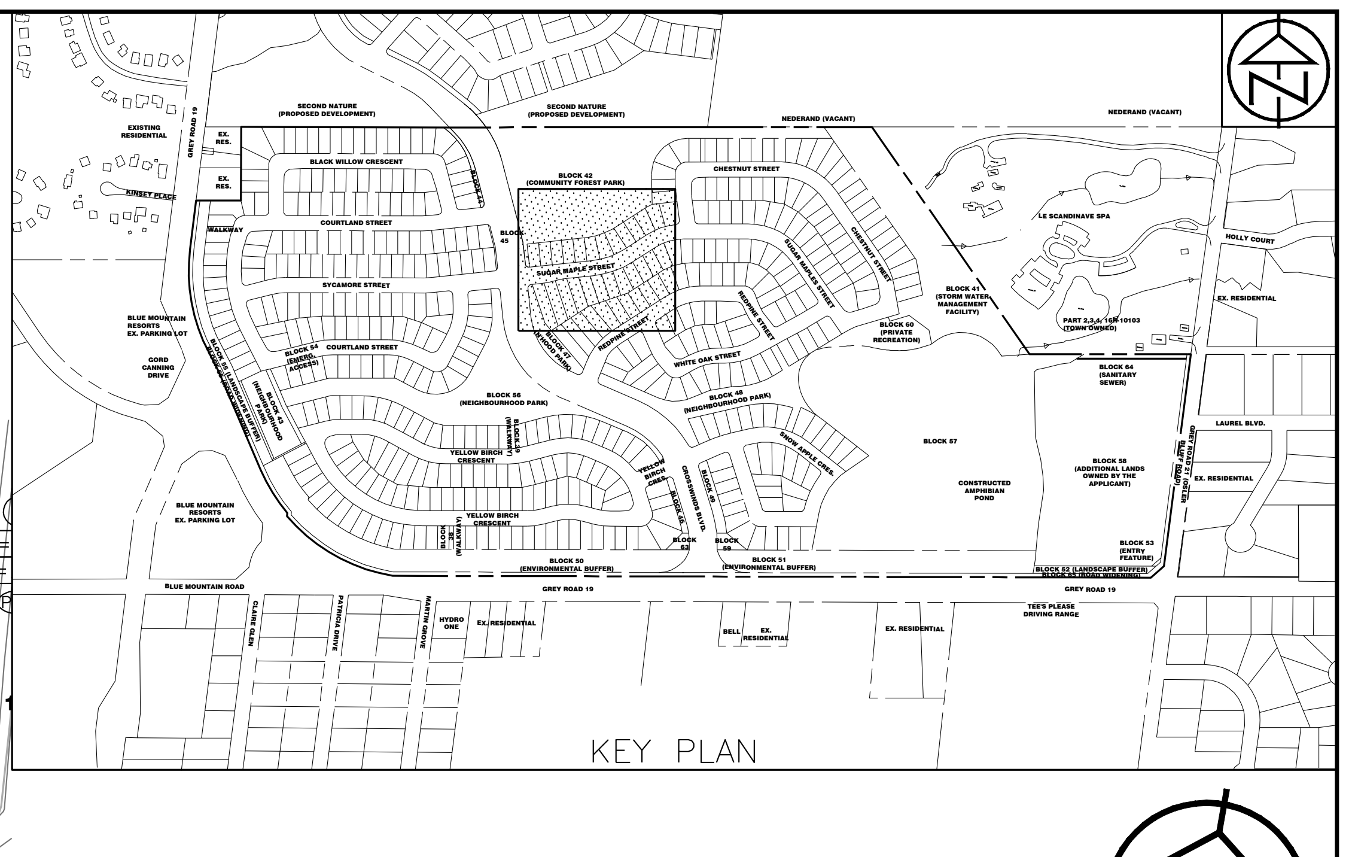
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

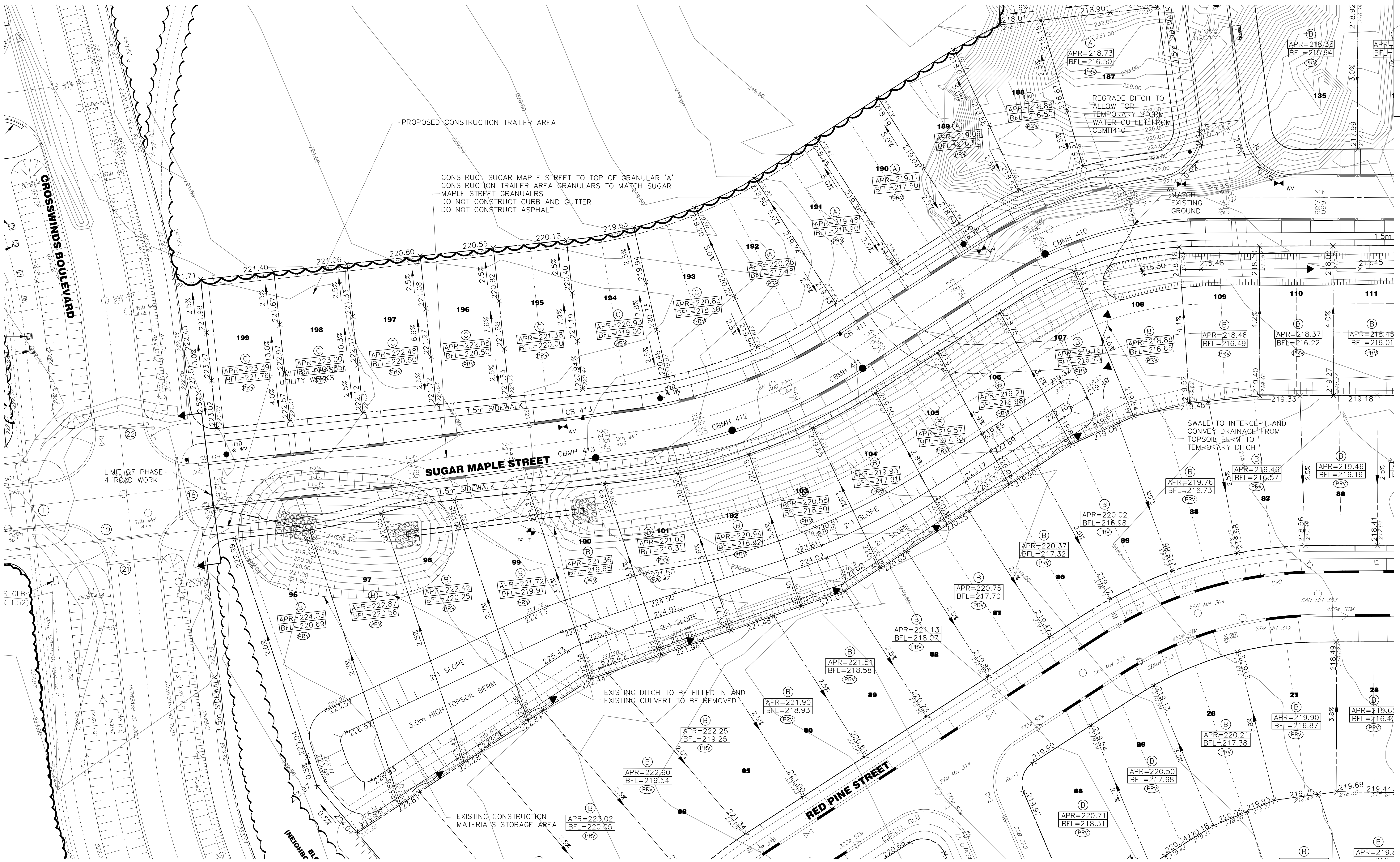
LOT GRADING PLAN

TATHAM
ENGINEERING

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	**LG-2**
CHECK: JPA/MJC	SCALE: 1:500	

Drawing Name: 111179–5–LG01.dwg, Plotted: May 18, 2021




CROSSWINDS BOULEVARD
SUGAR MAPLE STREET
RED PINE STREET
SEE SHEET LG-2
PROPOSED CONSTRUCTION TRAILER AREA
CONSTRUCT SUGAR MAPLE STREET TO TOP OF GRANULAR 'A'
CONSTRUCTION TRAILER AREA GRANULARS TO MATCH SUGAR
MAPLE STREET GRANULARS
DO NOT CONSTRUCT CURB AND GUTTER
DO NOT CONSTRUCT ASPHALT
REGRADE DITCH TO ALLOW FOR TEMPORARY STORM WATER OUTLET FROM CBMH410
MATCH EXISTING GROUND
LIMIT OF PHASE 4 ROAD WORK
SWALE TO INTERCEPT AND CONVEY DRAINAGE FROM TOPSOIL BERM TO TEMPORARY DITCH
EXISTING DITCH TO BE FILLED IN AND EXISTING CULVERT TO BE REMOVED
EXISTING CONSTRUCTION MATERIALS STORAGE AREA
3.0m HIGH TOPSOIL BERM
2:1 SLOPE
1.5m SIDEWALK
CBMH 410
CBMH 411
CBMH 412
CBMH 413
CB 411
CB 413
HYD & WV
TP 3
199
198
197
196
195
194
193
192
191
190
189
188
187
135
108
109
110
111
107
106
105
104
103
102
101
100
99
98
97
96

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–42, DATED AUGUST 14, 2014.

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LEGEND

LOT No.	**68**
LOT GRADING TYPE (SEE LG–4)	Ⓐ
FIRE SEPARATION LOT	Ⓕ
MINIMUM APRON GRADE (ONE LOCATION)	APR=200.22
MINIMUM BASEMENT FLOOR ELEVATION	BFL=220.22
INDIVIDUAL PRESSURE REDUCING VALVE	(PRV)
EXISTING SPOT ELEVATION	× *219.50*
PROPOSED SPOT ELEVATION	× 219.60
EXISTING BOREHOLE	*BH 1*
EXISTING TEST PIT	*TP 1*
EXISTING GRADING DIRECTION	→
PROPOSED GRADING DIRECTION/SLOPE	2.0% →
EXISTING OVERLAND FLOW DIRECTION	⇨
PROPOSED OVERLAND FLOW DIRECTION	➡

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NOTES

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ENGINEER STAMP

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM
ENGINEERING

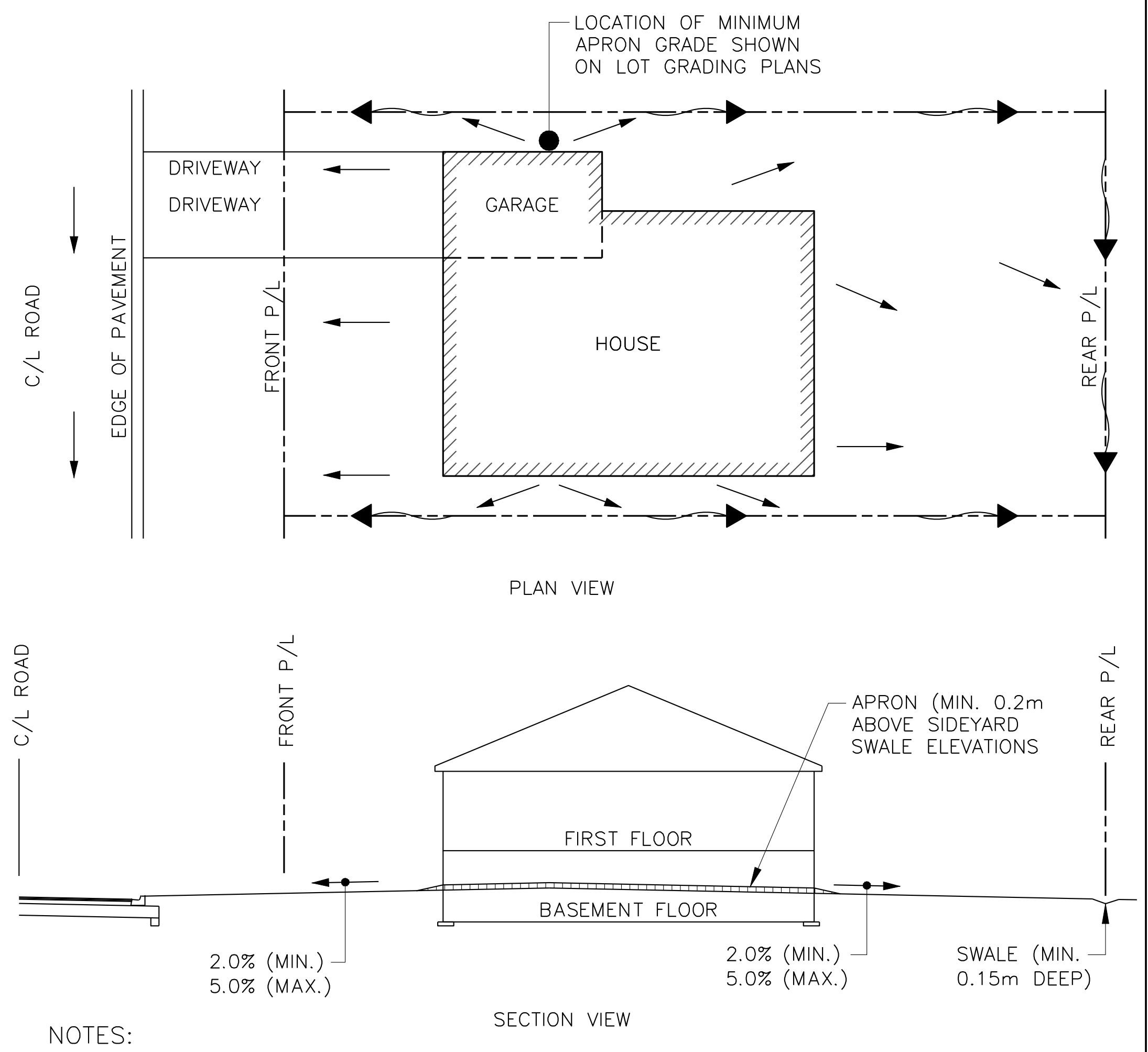
LOT GRADING PLAN

DESIGN: BM	FILE: 111179–5	DWG:
DRAWN: BM	DATE: FEB 2021	**LG-3**
CHECK: JPA/MJC	SCALE: 1:500	

Drawing Name: 111179–5–LG01.dwg, Plotted: May 18, 2021

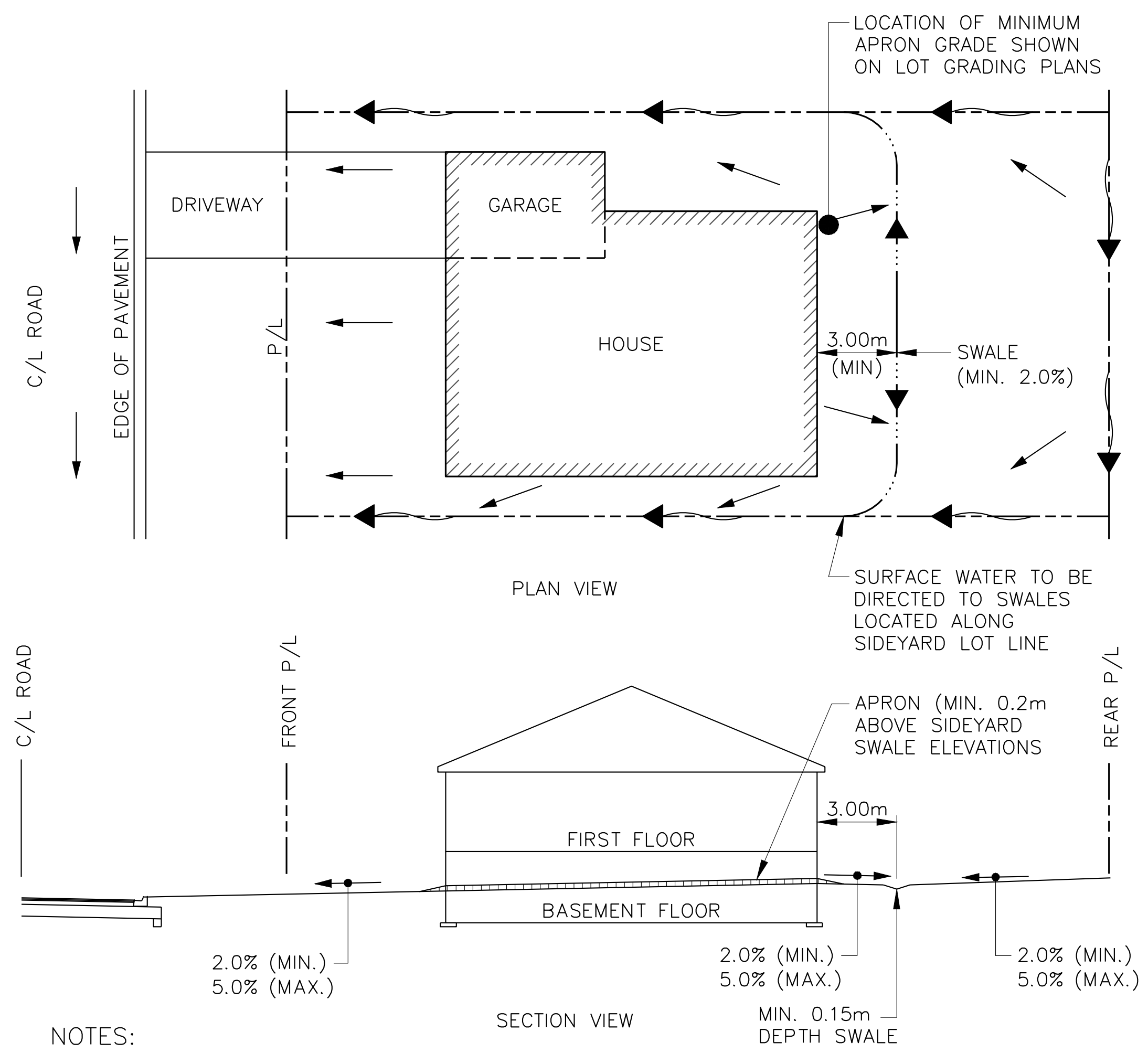
REFERENCE NUMBER	EX. GROUND SURFACE ELEV. (m)	SUGGESTED DEEPEST LOWER FLOOR LEVEL	
		DEPTH	ELEVATION
BH1	216.8	1.0	215.8
BH2	223.0	1.5	221.5
BH3	223.3	1.5	221.8
BH4	222.1	1.5	220.6
BH5	223.2	1.5	221.7
BH6	227.2	0.5	226.7
BH7	228.0	0.5	227.5
BH8	227.9	0.5	227.4
BH9	225.6	1.5	224.1
BHS1	215.9	1.5	214.4
BHS2	215.3	0.5	214.8
BHS3	216.0	0.5	215.5
BHS4	216.5	1.5	215.0
BHS5	216.1	0.0	216.1
BH101	226.5	1.5	225.0
BH102	223.4	1.5	221.9
BH103	223.1	1.5	221.6
BH104	219.6	1.5	218.1
BH105	218.0	1.0	217.0
BH106	213.4	1.0	212.4
TP1	223.2	1.5	221.7
TP2	225.6	1.5	224.1
TP3	221.2	1.5	219.7
TP4	216.2	0.5	215.7
TP5	222.5	1.5	221.0
TP6	227.0	1.0	226.0
TP7	222.2	1.5	220.7
TP8	212.5	1.0	211.5

DATA TAKEN FROM PAGE 9 OF SUPPLEMENTARY GEOTECHNICAL INVESTIGATION – PROPOSED WINDFALL DEVELOPMENT, PREPARED BY TERRAPROBE INC., DATED NOVEMBER 14, 2011, FILE No. 31–11–7117(A)


LOCATION OF MINIMUM APRON GRADE SHOWN ON LOT GRADING PLANS
DRIVEWAY
DRIVEWAY
GARAGE
HOUSE
C/L ROAD
EDGE OF PAVEMENT
FRONT P/L
REAR P/L
PLAN VIEW
C/L ROAD
FRONT P/L
REAR P/L
APRON (MIN. 0.2m ABOVE SIDEYARD SWALE ELEVATIONS
FIRST FLOOR
BASEMENT FLOOR
2.0% (MIN.) 5.0% (MAX.)
2.0% (MIN.) 5.0% (MAX.)
SWALE (MIN. 0.15m DEEP)
SECTION VIEW

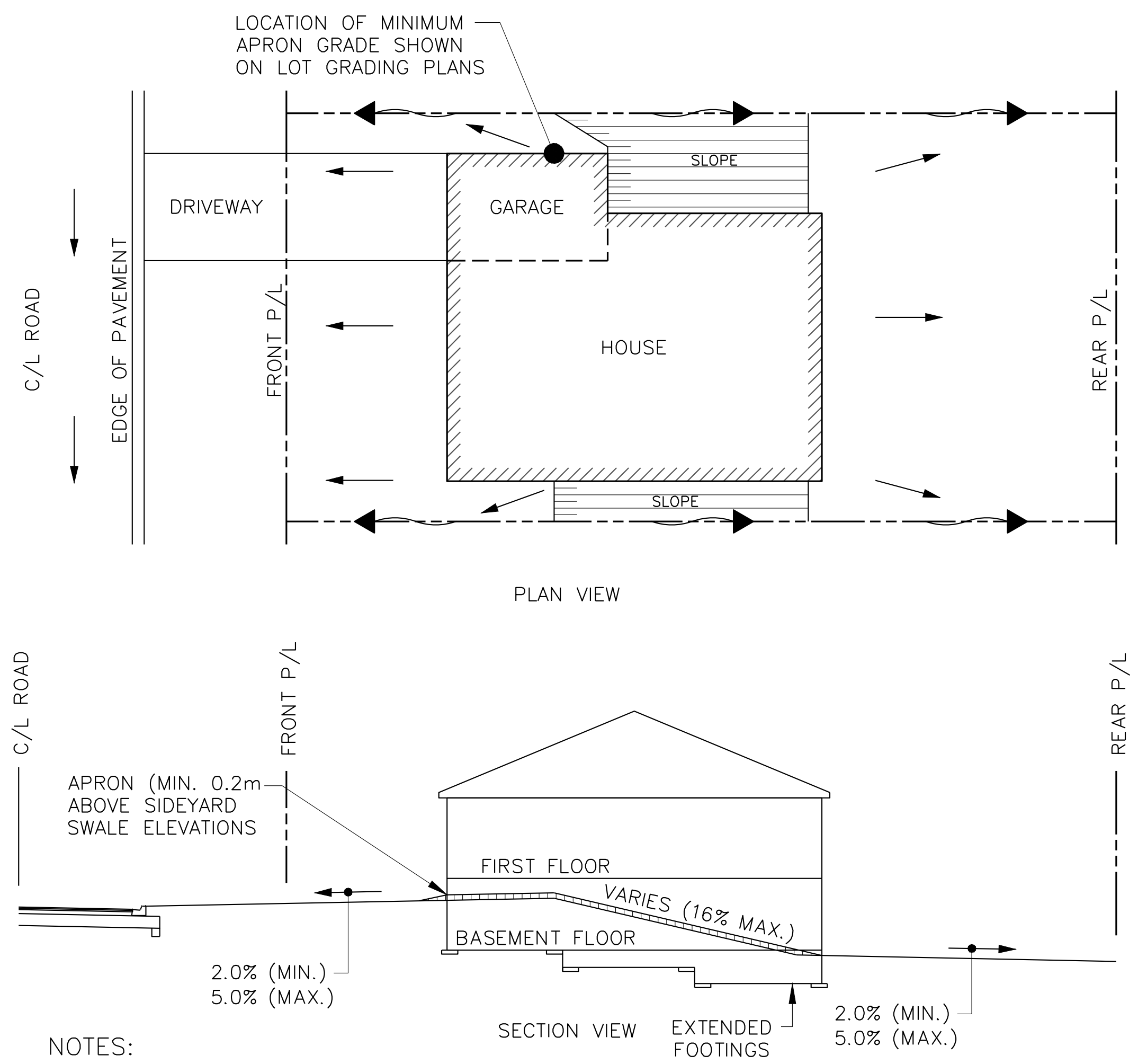
NOTES:
1. MUNICIPAL SIDEWALKS NOT SHOWN.
2. SHAPE, SIZE AND LOCATION OF HOUSE AND GARAGE SHOWN IS CONCEPTUAL.
3. DRIVEWAY AND GARAGE MAY BE ON OPPOSITE SIDE OF LOT.
4. SWALES ALONG THE REAR PROPERTY LINE ARE NOT REQUIRED WHERE CONTINUOUS POSITIVE DRAINAGE CAN BE ACHIEVED. ALTERNATIVE TREATMENT MAY BE REQUIRED FOR LOTS BACKING ONTO PARK BLOCKS OR ENVIRONMENTAL BUFFERS (I.E. RETAINING WALL OR SLOPE).
5. INDIVIDUAL LOT GRADING PLANS TO BE PREPARED AND APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO REFER TO THE APPROVED PLAN FOR FINAL GRADING DETAILS.

TYPICAL SPLIT LOT DRAINAGE WITH ATTACHED GARAGE
TYPE – A
NTS


LOCATION OF MINIMUM APRON GRADE SHOWN ON LOT GRADING PLANS
DRIVEWAY
GARAGE
HOUSE
C/L ROAD
EDGE OF PAVEMENT
P/L
REAR P/L
3.00m (MIN)
SWALE (MIN. 2.0%)
SURFACE WATER TO BE DIRECTED TO SWALES LOCATED ALONG SIDEYARD LOT LINE
PLAN VIEW
C/L ROAD
FRONT P/L
REAR P/L
APRON (MIN. 0.2m ABOVE SIDEYARD SWALE ELEVATIONS
3.00m
FIRST FLOOR
BASEMENT FLOOR
2.0% (MIN.) 5.0% (MAX.)
2.0% (MIN.) 5.0% (MAX.)
2.0% (MIN.) 5.0% (MAX.)
MIN. 0.15m DEPTH SWALE
SECTION VIEW

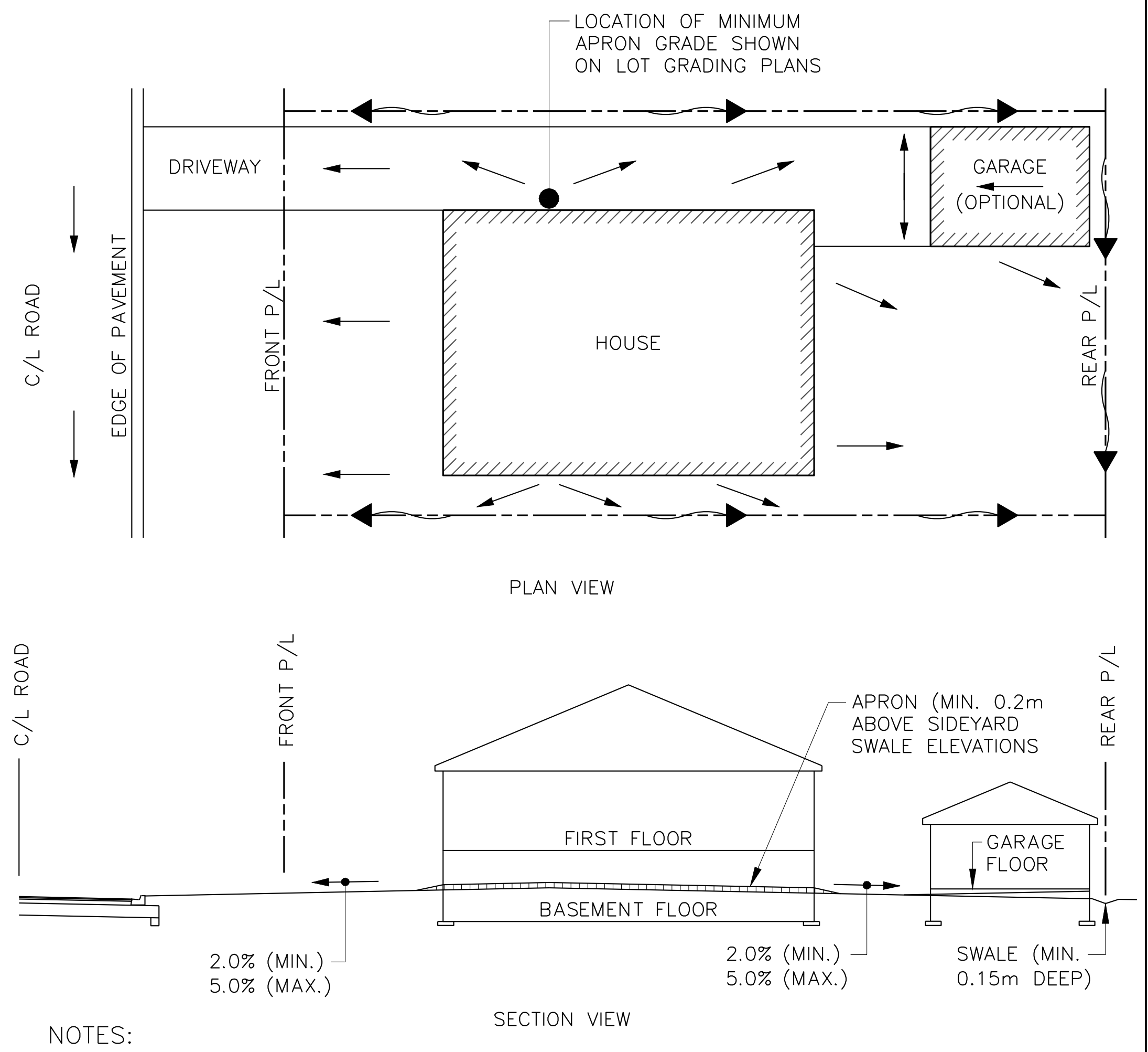
NOTES:
1. MUNICIPAL SIDEWALKS NOT SHOWN.
2. SHAPE, SIZE AND LOCATION OF HOUSE AND GARAGE SHOWN IS CONCEPTUAL.
3. DRIVEWAY AND GARAGE MAY BE ON OPPOSITE SIDE OF LOT.
4. SWALES ALONG THE REAR PROPERTY LINE ARE NOT REQUIRED WHERE CONTINUOUS POSITIVE DRAINAGE CAN BE ACHIEVED. ALTERNATIVE TREATMENT MAY BE REQUIRED FOR LOTS BACKING ONTO PARK BLOCKS OR ENVIRONMENTAL BUFFERS (I.E. RETAINING WALL OR SLOPE).
5. INDIVIDUAL LOT GRADING PLANS TO BE PREPARED AND APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO REFER TO THE APPROVED PLAN FOR FINAL GRADING DETAILS.

TYPICAL REAR TO FRONT LOT DRAINAGE WITH ATTACHED GARAGE
TYPE – B
NTS


LOCATION OF MINIMUM APRON GRADE SHOWN ON LOT GRADING PLANS
SLOPE
DRIVEWAY
GARAGE
HOUSE
SLOPE
C/L ROAD
EDGE OF PAVEMENT
FRONT P/L
REAR P/L
PLAN VIEW
C/L ROAD
FRONT P/L
REAR P/L
APRON (MIN. 0.2m ABOVE SIDEYARD SWALE ELEVATIONS
FIRST FLOOR
VARIES (16% MAX.)
BASEMENT FLOOR
2.0% (MIN.) 5.0% (MAX.)
SECTION VIEW
EXTENDED FOOTINGS
2.0% (MIN.) 5.0% (MAX.)

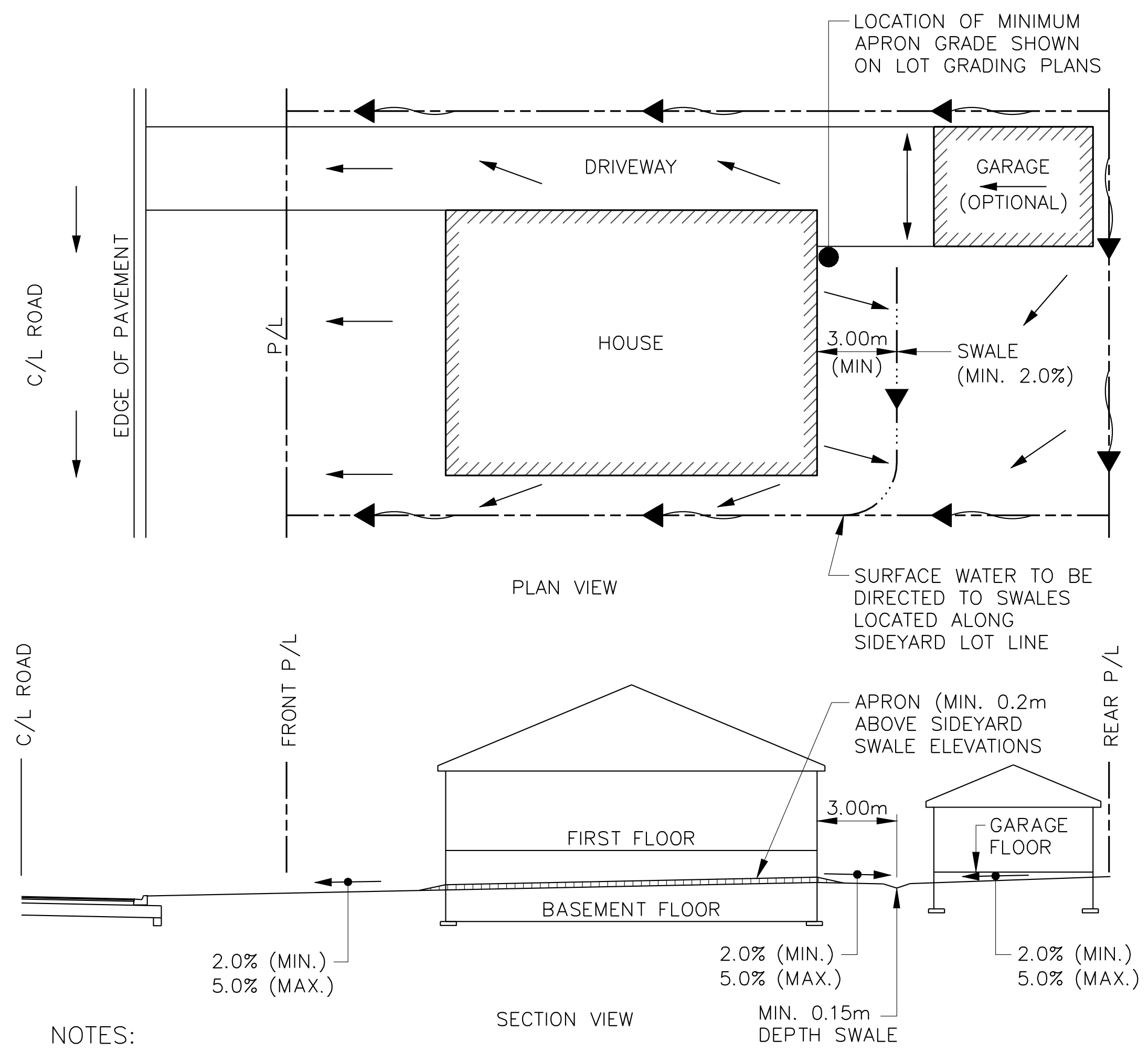
NOTES:
1. MUNICIPAL SIDEWALKS NOT SHOWN.
2. SHAPE, SIZE AND LOCATION OF HOUSE AND GARAGE SHOWN IS CONCEPTUAL.
3. DRIVEWAY AND GARAGE MAY BE ON OPPOSITE SIDE OF LOT.
4. SWALES ALONG THE REAR PROPERTY LINE ARE NOT REQUIRED WHERE CONTINUOUS POSITIVE DRAINAGE CAN BE ACHIEVED. ALTERNATIVE TREATMENT MAY BE REQUIRED FOR LOTS BACKING ONTO PARK BLOCKS OR ENVIRONMENTAL BUFFERS (I.E. RETAINING WALL OR SLOPE).
5. INDIVIDUAL LOT GRADING PLANS TO BE PREPARED AND APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO REFER TO THE APPROVED PLAN FOR FINAL GRADING DETAILS.

TYPICAL SPLIT LOT DRAINAGE WITH WALKOUT/LOOKOUT HOUSE TYPE
TYPE – C
NTS


LOCATION OF MINIMUM APRON GRADE SHOWN ON LOT GRADING PLANS
DRIVEWAY
GARAGE (OPTIONAL)
HOUSE
C/L ROAD
EDGE OF PAVEMENT
FRONT P/L
REAR P/L
PLAN VIEW
C/L ROAD
FRONT P/L
REAR P/L
APRON (MIN. 0.2m ABOVE SIDEYARD SWALE ELEVATIONS
FIRST FLOOR
BASEMENT FLOOR
GARAGE FLOOR
2.0% (MIN.) 5.0% (MAX.)
2.0% (MIN.) 5.0% (MAX.)
SWALE (MIN. 0.15m DEEP)
SECTION VIEW

NOTES:
1. MUNICIPAL SIDEWALKS NOT SHOWN.
2. SHAPE, SIZE AND LOCATION OF HOUSE AND GARAGE SHOWN IS CONCEPTUAL.
3. DRIVEWAY AND GARAGE MAY BE ON OPPOSITE SIDE OF LOT.
4. SWALES ALONG THE REAR PROPERTY LINE ARE NOT REQUIRED WHERE CONTINUOUS POSITIVE DRAINAGE CAN BE ACHIEVED. ALTERNATIVE TREATMENT MAY BE REQUIRED FOR LOTS BACKING ONTO PARK BLOCKS OR ENVIRONMENTAL BUFFERS (I.E. RETAINING WALL OR SLOPE).
5. INDIVIDUAL LOT GRADING PLANS TO BE PREPARED AND APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO REFER TO THE APPROVED PLAN FOR FINAL GRADING DETAILS.

TYPICAL SPLIT LOT DRAINAGE WITH REAR GARAGE
TYPE – A
NTS


LOCATION OF MINIMUM APRON GRADE SHOWN ON LOT GRADING PLANS
DRIVEWAY
GARAGE (OPTIONAL)
HOUSE
C/L ROAD
EDGE OF PAVEMENT
P/L
REAR P/L
3.00m (MIN)
SWALE (MIN. 2.0%)
SURFACE WATER TO BE DIRECTED TO SWALES LOCATED ALONG SIDEYARD LOT LINE
PLAN VIEW
C/L ROAD
FRONT P/L
REAR P/L
APRON (MIN. 0.2m ABOVE SIDEYARD SWALE ELEVATIONS
3.00m
GARAGE FLOOR
FIRST FLOOR
BASEMENT FLOOR
2.0% (MIN.) 5.0% (MAX.)
2.0% (MIN.) 5.0% (MAX.)
2.0% (MIN.) 5.0% (MAX.)
MIN. 0.15m DEPTH SWALE
SECTION VIEW

NOTES:
1. MUNICIPAL SIDEWALKS NOT SHOWN.
2. SHAPE, SIZE AND LOCATION OF HOUSE AND GARAGE SHOWN IS CONCEPTUAL.
3. DRIVEWAY AND GARAGE MAY BE ON OPPOSITE SIDE OF LOT.
4. SWALES ALONG THE REAR PROPERTY LINE ARE NOT REQUIRED WHERE CONTINUOUS POSITIVE DRAINAGE CAN BE ACHIEVED. ALTERNATIVE TREATMENT MAY BE REQUIRED FOR LOTS BACKING ONTO PARK BLOCKS OR ENVIRONMENTAL BUFFERS (I.E. RETAINING WALL OR SLOPE).
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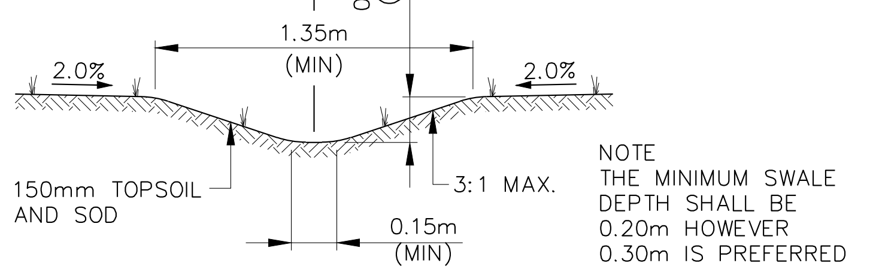
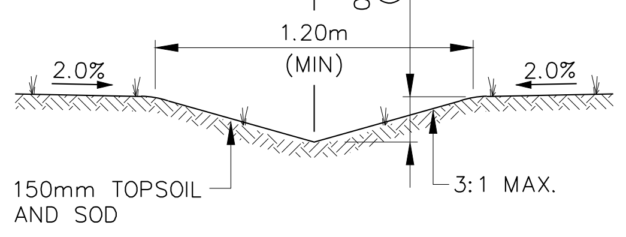
TYPICAL REAR TO FRONT LOT DRAINAGE WITH REAR GARAGE
TYPE – B
NTS


P/L
0.20m (MIN)
1.35m (MIN)
2.0%
2.0%
150mm TOPSOIL AND SOD
3:1 MAX.
0.15m (MIN)

NOTE
THE MINIMUM SWALE DEPTH SHALL BE 0.20m HOWEVER 0.30m IS PREFERRED

TYPICAL SIDE AND REAR YARD SWALE DETAIL
NTS


P/L
0.20m (MIN)
1.20m (MIN)
2.0%
2.0%
150mm TOPSOIL AND SOD
3:1 MAX.

TYPICAL SIDE AND REAR YARD SWALE DETAIL
ADJACENT TO GARAGE AND DRIVEWAY
NTS

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

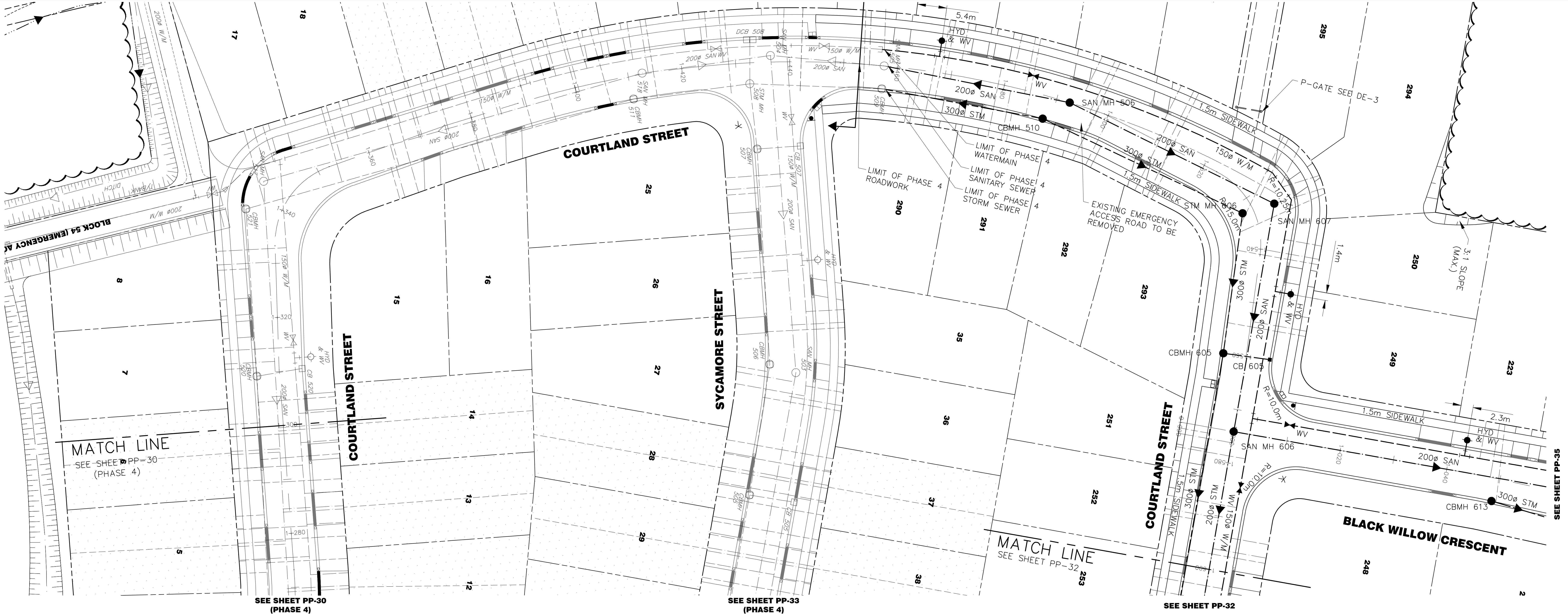
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

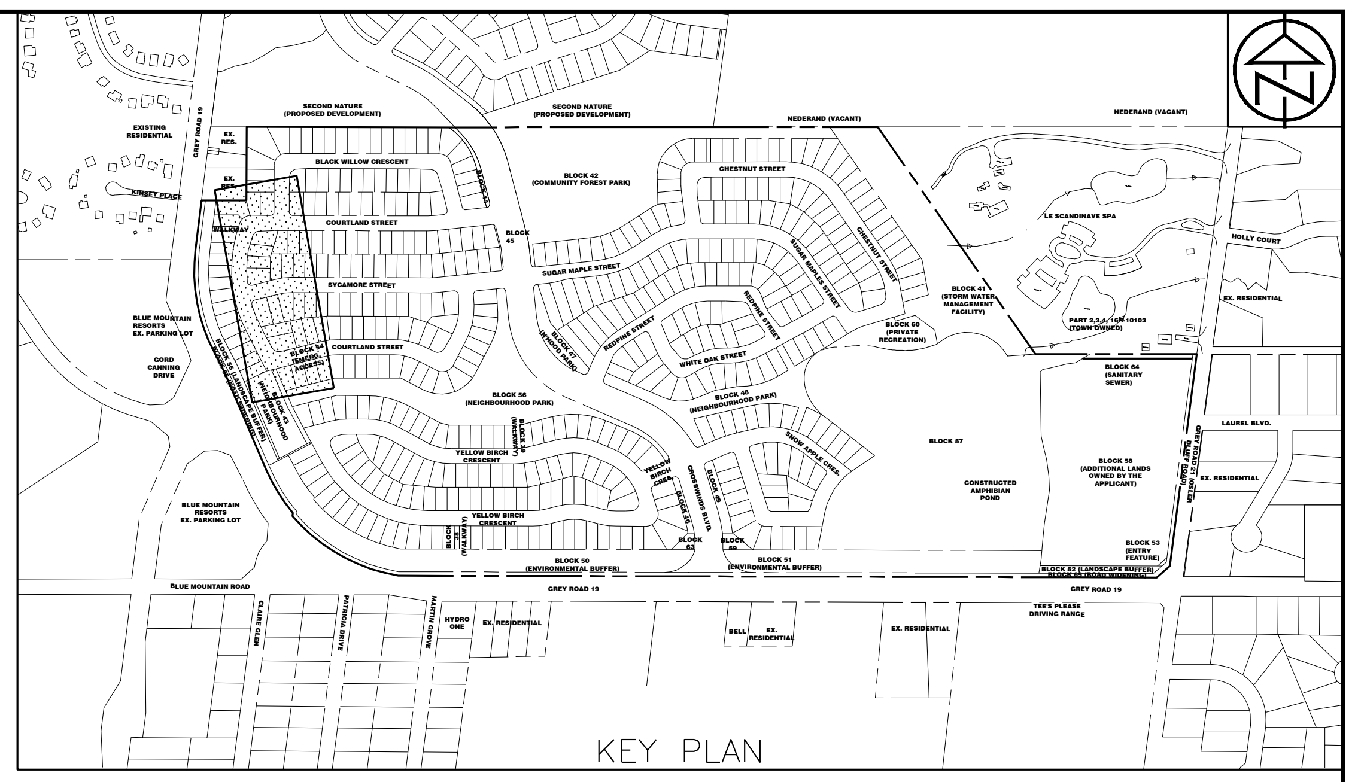
TATHAM
ENGINEERING

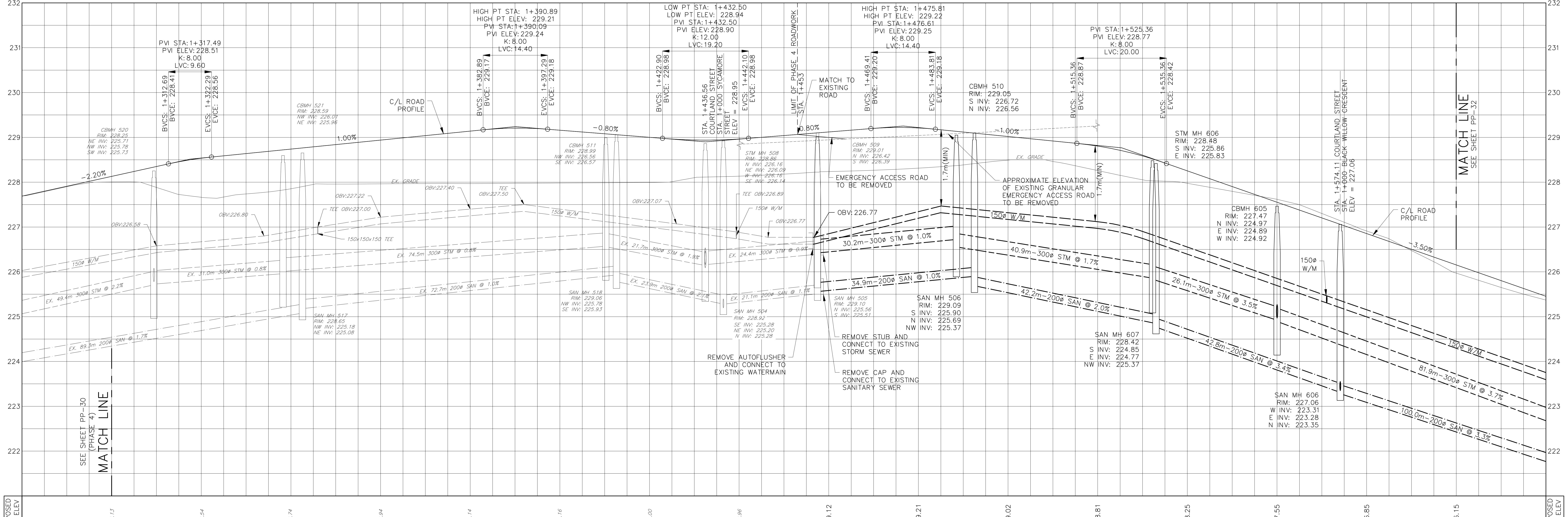
LOT GRADING DETAILS

DESIGN: BM	FILE: 111179–5	DWG:
DRAWN: BM	DATE: FEB 2021	**LG-4**
CHECK: JPA/MJC	SCALE: AS SHOWN	

Drawing Name: 111179–5–LG04.dwg, Plotted: May 17, 2021


COURTLAND STREET
SYCAMORE STREET
BLACK WILLOW CRESCENT
BLOCK 54 (EMERGENCY A
MATCH LINE
SEE SHEET PP-30 (PHASE 4)
MATCH LINE
SEE SHEET PP-32
SEE SHEET PP-30 (PHASE 4)
SEE SHEET PP-33 (PHASE 4)
SEE SHEET PP-32
SEE SHEET PP-35
P-GATE SEE DE-3
LIMIT OF PHASE 4 ROADWORK
LIMIT OF PHASE 4 WATERMAIN
LIMIT OF PHASE 4 SANITARY SEWER
LIMIT OF PHASE 4 STORM SEWER
EXISTING EMERGENCY ACCESS ROAD TO BE REMOVED
1.5m SIDEWALK
200ø SAN
150ø W/M
300ø STM
SAN MH 606
SAN MH 607
CBMH 510
CBMH 605
CB 609
CBMH 613
HYD & WV
5.4m
2.3m
1.4m
3:1 SLOPE (MAX.)
R=10.0m




PVI STA: 1+317.49
PVI ELEV: 228.51
K: 8.00
LVC: 9.60
BVCS: 1+312.69
BVCE: 228.41
EVCS: 1+322.29
EVCE: 228.56
HIGH PT STA: 1+390.89
HIGH PT ELEV: 229.21
PVI STA: 1+390.09
PVI ELEV: 229.24
K: 8.00
LVC: 14.40
BVCS: 1+382.89
BVCE: 229.17
EVCS: 1+397.29
EVCE: 229.18
LOW PT STA: 1+432.50
LOW PT ELEV: 228.94
PVI STA: 1+432.50
PVI ELEV: 228.90
K: 12.00
LVC: 19.20
BVCS: 1+422.90
BVCE: 228.98
STA. 1+436.56 COURTLAND STREET
STA. 1+000 SYCAMORE STREET
ELEV = 228.95
EVCS: 1+442.10
EVCE: 228.98
LIMIT OF PHASE 4 ROADWORK STA. 1+453
MATCH TO EXISTING ROAD
HIGH PT STA: 1+475.81
HIGH PT ELEV: 229.22
PVI STA: 1+476.61
PVI ELEV: 229.25
K: 8.00
LVC: 14.40
BVCS: 1+469.41
BVCE: 229.20
EVCS: 1+483.81
EVCE: 229.18
PVI STA: 1+525.36
PVI ELEV: 228.77
K: 8.00
LVC: 20.00
BVCS: 1+515.36
BVCE: 228.87
EVCS: 1+535.36
EVCE: 228.42
CBMH 510
RIM: 229.05
S INV: 226.72
N INV: 226.56
STM MH 606
RIM: 228.48
S INV: 225.86
E INV: 225.83
CBMH 605
RIM: 227.47
N INV: 224.97
E INV: 224.89
W INV: 224.92
STA. 1+574.11 COURTLAND STREET
STA. 1+000 BLACK WILLOW CRESCENT
ELEV = 227.08
C/L ROAD PROFILE
-2.20%
1.00%
-0.80%
0.80%
-1.00%
-3.50%
EX. GRADE
EMERGENCY ACCESS ROAD TO BE REMOVED
APPROXIMATE ELEVATION OF EXISTING GRANULAR EMERGENCY ACCESS ROAD TO BE REMOVED
1.7m(MIN)
OBV: 226.77
150ø W/M
30.2m-300ø STM @ 1.0%
40.9m-300ø STM @ 1.7%
34.9m-200ø SAN @ 1.0%
42.2m-200ø SAN @ 2.0%
26.1m-300ø STM @ 3.5%
42.8m-200ø SAN @ 3.4%
81.9m-300ø STM @ 3.7%
100.0m-200ø SAN @ 3.3%
SAN MH 506
RIM: 229.09
S INV: 225.90
N INV: 225.69
NW INV: 225.37
SAN MH 607
RIM: 228.42
S INV: 224.85
E INV: 224.77
NW INV: 225.37
SAN MH 606
RIM: 227.06
W INV: 223.31
E INV: 223.28
N INV: 223.35
REMOVE AUTOFLUSHER AND CONNECT TO EXISTING WATERMAIN
REMOVE STUB AND CONNECT TO EXISTING STORM SEWER
REMOVE CAP AND CONNECT TO EXISTING SANITARY SEWER
CBMH 520
CBMH 521
CBMH 511
CBMH 509
STM MH 508
SAN MH 518
SAN MH 517
SAN MH 505
SAN MH 504
EX. 49.4m 300ø STM @ 2.2%
EX. 31.0m 300ø STM @ 0.8%
EX. 74.5m 300ø STM @ 0.8%
EX. 21.7m 300ø STM @ 1.9%
EX. 24.4m 300ø STM @ 0.9%
EX. 89.3m 200ø SAN @ 1.7%
EX. 72.7m 200ø SAN @ 1.0%
EX. 23.9m 200ø SAN @ 2.1%
EX. 21.1m 200ø SAN @ 1.1%
150x150x150 TEE
MATCH LINE
SEE SHEET PP-30 (PHASE 4)
MATCH LINE
SEE SHEET PP-32
232
231
230
229
228
227
226
225
224
223
222

CHAINAGE	1+300	1+320	1+340	1+360	1+380	1+400	1+420	1+440	1+460	1+480	1+500	1+520	1+540	1+560	1+580	1+600
PROPOSED C/L ELEV	228.13	228.54	228.74	228.94	229.14	229.16	229.00	228.96	229.12	229.21	229.02	228.81	228.25	227.55	226.85	226.15
EXISTING C/L ELEV	228.00	227.66	227.85	227.96	227.97	227.98	228.00	228.13	228.24	228.31	228.49	228.26	227.97	227.62	226.91	225.97

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

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5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

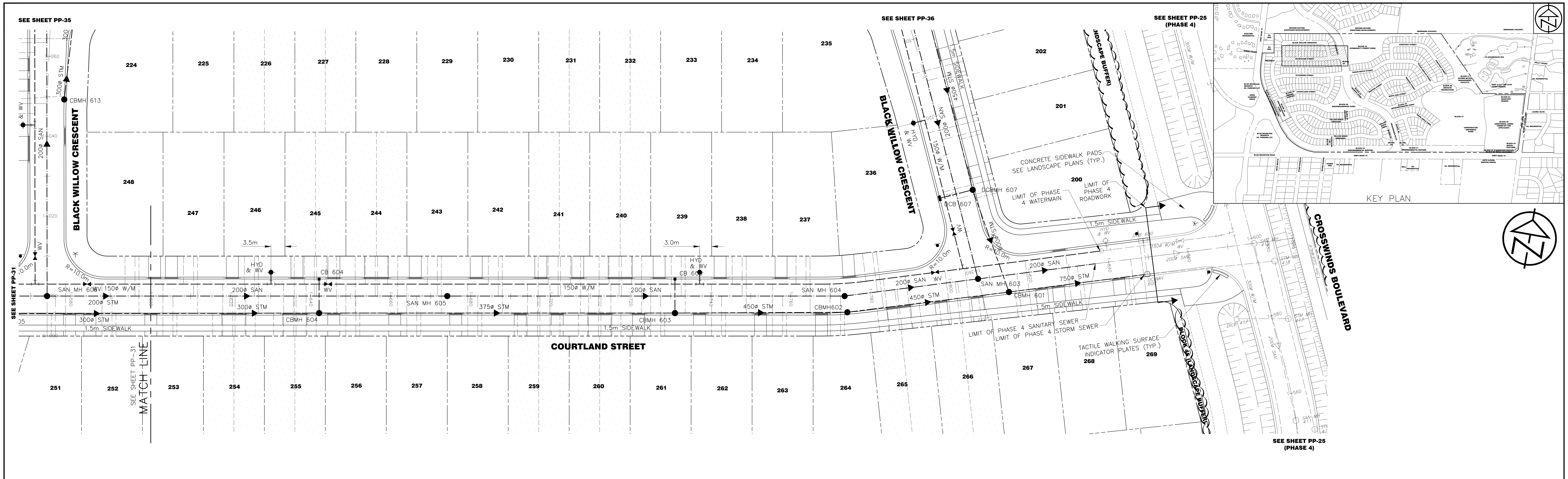
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

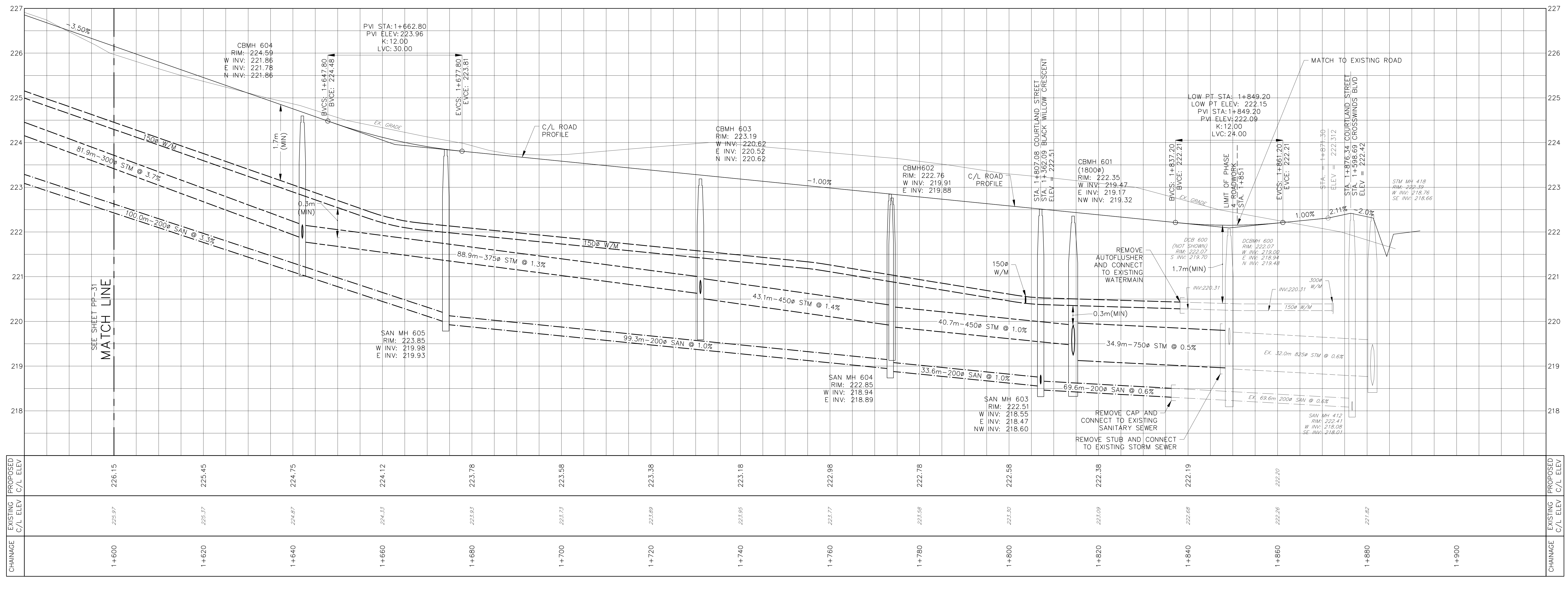
PLAN AND PROFILE
COURTLAND STREET
STA 1+300 TO 1+600

TATHAM
ENGINEERING

DESIGN: BM
DRAWN: BM
CHECK: JPA/MJC
FILE: 111179-5
DATE: FEB 2021
SCALE: H 1:500, V 1:50
DWG: **PP-31**

Drawing Name: 111179-5-PP01.dwg, Plotted: May 17, 2021


SEE SHEET PP-35
SEE SHEET PP-36
SEE SHEET PP-25 (PHASE 4)
SEE SHEET PP-31
SEE SHEET PP-31 MATCH LINE
BLACK WILLOW CRESCENT
COURTLAND STREET
CROSSWINDS BOULEVARD
KEY PLAN
CBMH 613
CBMH 604
CBMH 603
CBMH602
CBMH 601
SAN MH 606
SAN MH 605
SAN MH 604
SAN MH 603
DCBMH 607
DCB 607
CB 604
CB 603
HYD & WV
150ø W/M
200ø SAN
200ø STM
300ø STM
375ø STM
450ø STM
750ø STM
1.5m SIDEWALK
CONCRETE SIDEWALK PADS. SEE LANDSCAPE PLANS (TYP.)
LIMIT OF PHASE 4 WATERMAIN
LIMIT OF PHASE 4 ROADWORK
LIMIT OF PHASE 4 SANITARY SEWER
LIMIT OF PHASE 4 STORM SEWER
TACTILE WALKING SURFACE INDICATOR PLATES (TYP.)
LANDSCAPE BUFFER
R=10.0m
3.5m
3.0m
224 225 226 227 228 229 230 231 232 233 234 235
248 247 246 245 244 243 242 241 240 239 238 237 236
202 201 200
251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269


C/L ROAD PROFILE
EX. GRADE
MATCH TO EXISTING ROAD
MATCH LINE SEE SHEET PP-31
-3.50%
-1.00%
1.00%
2.11%
-2.0%
CBMH 604 RIM: 224.59 W INV: 221.86 E INV: 221.78 N INV: 221.86
PVI STA:1+662.80 PVI ELEV:223.96 K:12.00 LVC:30.00
BVCS: 1+647.80 BVCE: 224.48
EVCS: 1+677.80 EVCE: 223.81
CBMH 603 RIM: 223.19 W INV: 220.62 E INV: 220.52 N INV: 220.62
CBMH602 RIM: 222.76 W INV: 219.91 E INV: 219.88
STA. 1+807.08 COURTLAND STREET STA. 1+362.09 BLACK WILLOW CRESCENT ELEV = 222.51
CBMH 601 (1800ø) RIM: 222.35 W INV: 219.47 E INV: 219.17 NW INV: 219.32
LOW PT STA: 1+849.20 LOW PT ELEV: 222.15 PVI STA:1+849.20 PVI ELEV:222.09 K:12.00 LVC:24.00
BVCS: 1+837.20 BVCE: 222.21
LIMIT OF PHASE 4 ROADWORK STA. 1+851
EVCS: 1+861.20 EVCE: 222.21
STA. 1+871.30 ELEV = 222.312
STA. 1+876.34 COURTLAND STREET STA. 1+598.69 CROSSWINDS BLVD ELEV = 222.42
STM MH 418 RIM: 222.39 W INV: 218.76 SE INV: 218.66
1.7m (MIN)
0.3m (MIN)
150ø W/M
81.9m-300ø STM @ 3.7%
100.0m-200ø SAN @ 3.3%
88.9m-375ø STM @ 1.3%
43.1m-450ø STM @ 1.4%
40.7m-450ø STM @ 1.0%
34.9m-750ø STM @ 0.5%
99.3m-200ø SAN @ 1.0%
33.6m-200ø SAN @ 1.0%
69.6m-200ø SAN @ 0.6%
EX. 32.0m 825ø STM @ 0.6%
EX. 69.6m 200ø SAN @ 0.6%
SAN MH 605 RIM: 223.85 W INV: 219.98 E INV: 219.93
SAN MH 604 RIM: 222.85 W INV: 218.94 E INV: 218.89
SAN MH 603 RIM: 222.51 W INV: 218.55 E INV: 218.47 NW INV: 218.60
SAN MH 412 RIM: 222.41 W INV: 218.08 SE INV: 218.01
DCB 600 (NOT SHOWN) RIM: 222.07 S INV: 219.70
DCBMH 600 RIM: 222.07 W INV: 219.00 E INV: 218.94 N INV: 219.48
REMOVE AUTOFLUSHER AND CONNECT TO EXISTING WATERMAIN
INV:220.31
300ø W/M
REMOVE CAP AND CONNECT TO EXISTING SANITARY SEWER
REMOVE STUB AND CONNECT TO EXISTING STORM SEWER
227 226 225 224 223 222 221 220 219 218
PROPOSED C/L ELEV
EXISTING C/L ELEV
CHAINAGE

CHAINAGE	1+600	1+620	1+640	1+660	1+680	1+700	1+720	1+740	1+760	1+780	1+800	1+820	1+840	1+860	1+880	1+900
PROPOSED C/L ELEV	226.15	225.45	224.75	224.12	223.78	223.58	223.38	223.18	222.98	222.78	222.58	222.38	222.19	222.20		
EXISTING C/L ELEV	225.97	225.37	224.87	224.33	223.93	223.73	223.89	223.95	223.77	223.58	223.30	223.09	222.68	222.26	221.82	

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

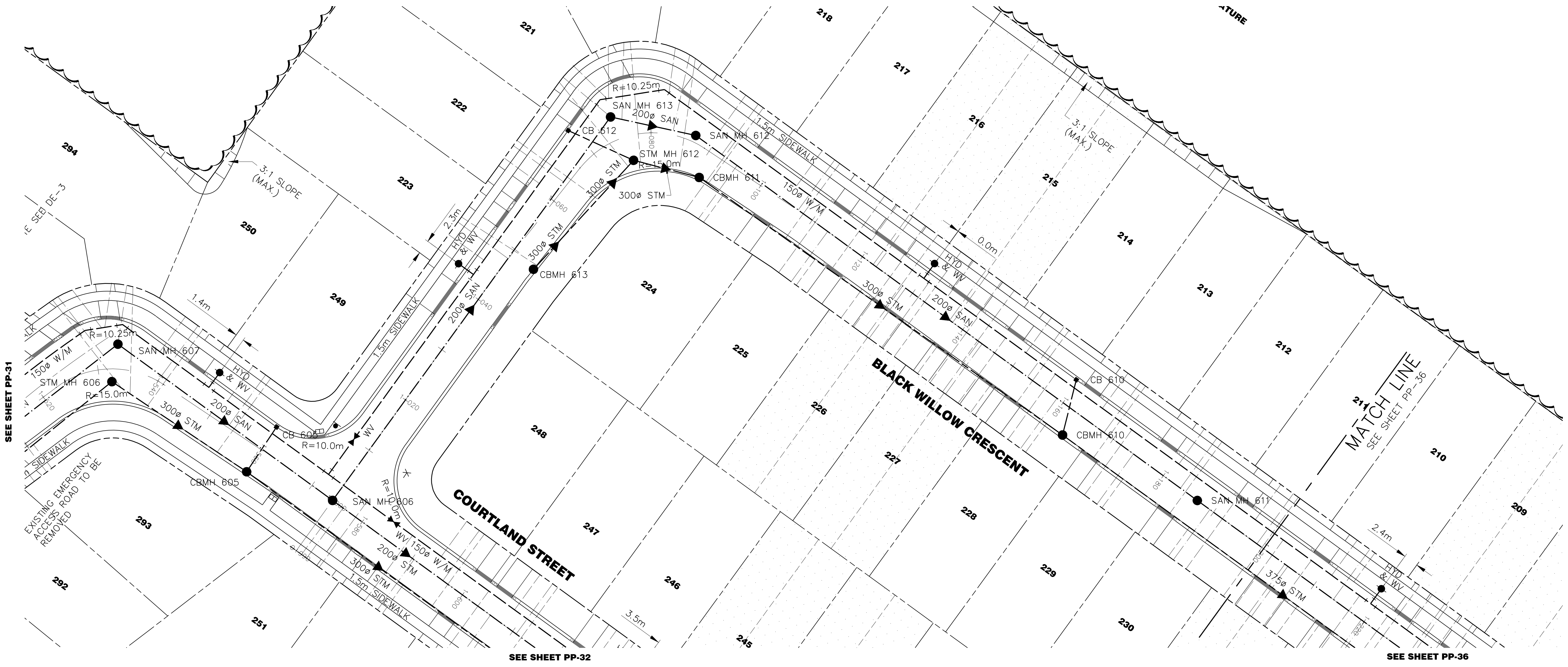
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

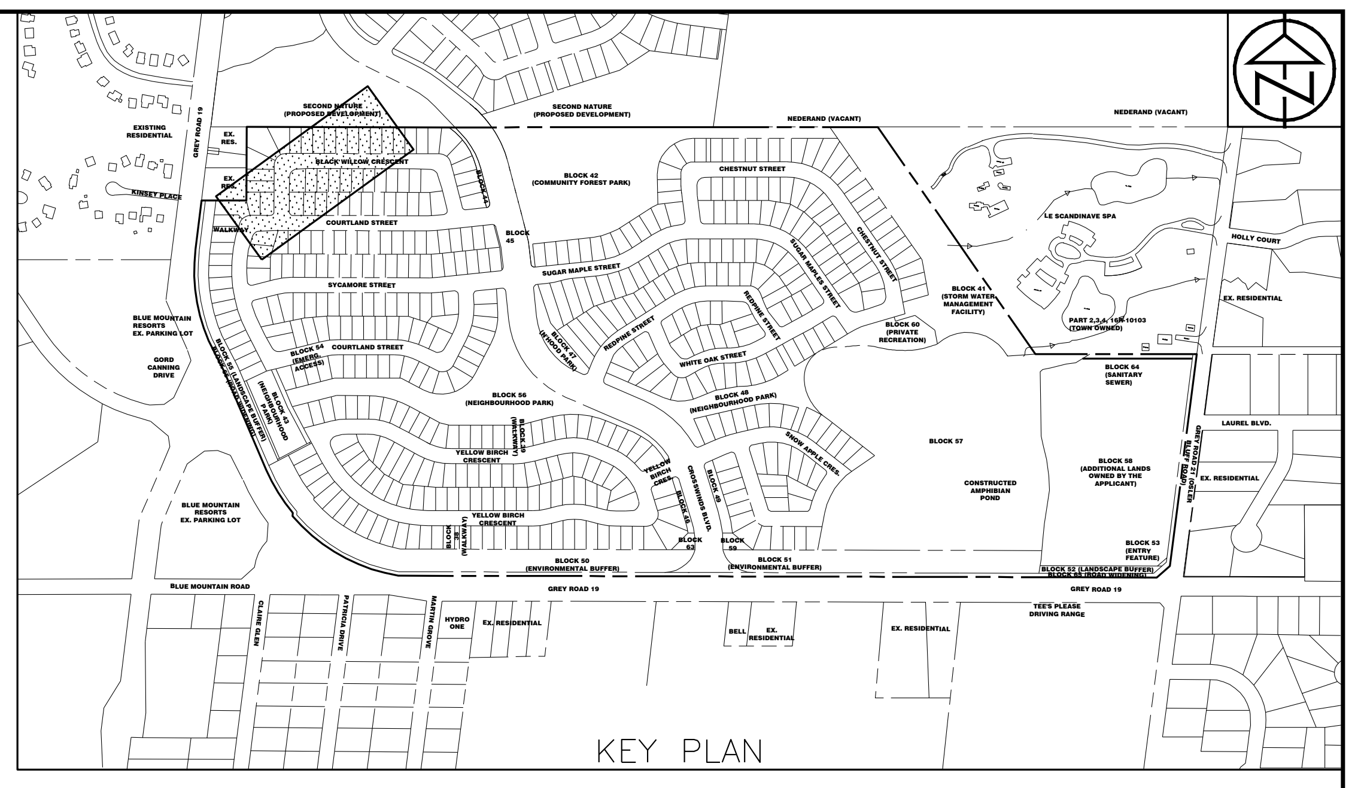
PLAN AND PROFILE
COURTLAND STREET
STA 1+600 TO 1+900

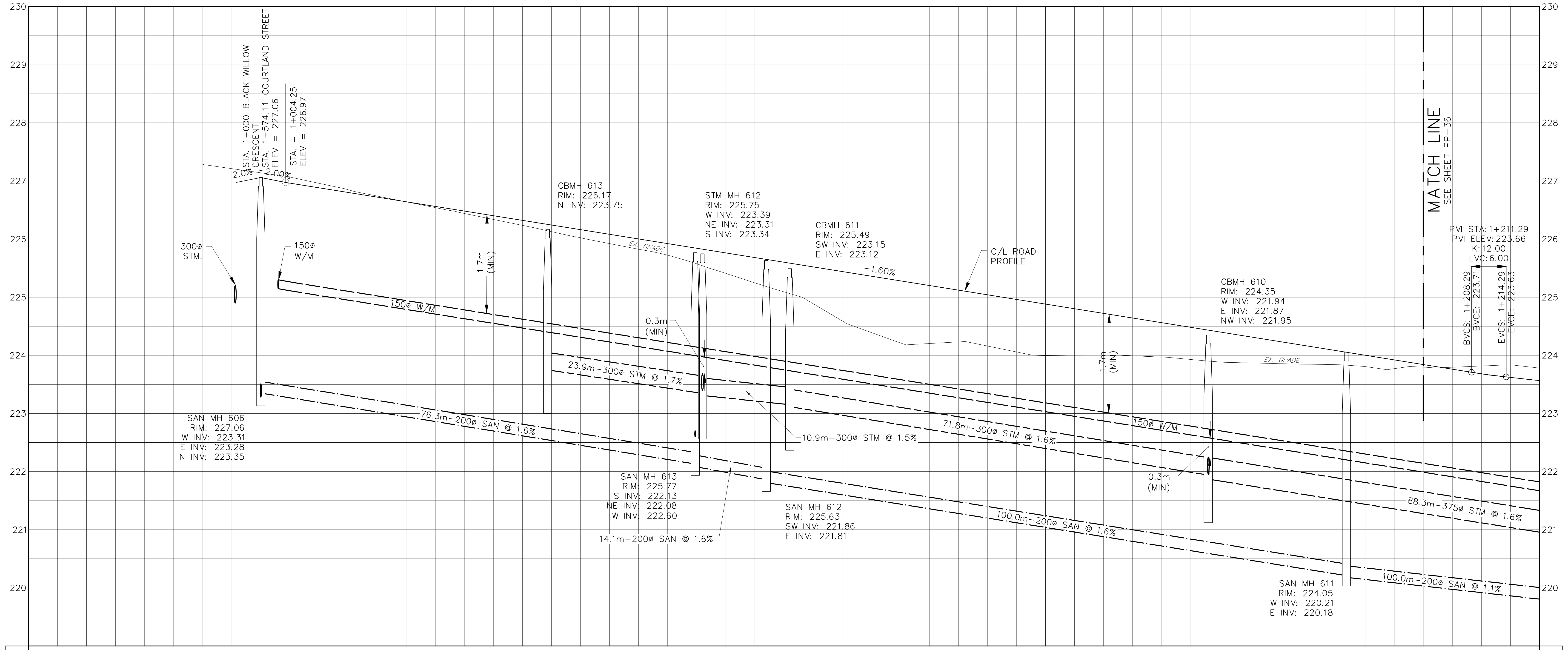
TATHAM
ENGINEERING

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	**PP-32**
CHECK: JPA/MJC	SCALE: H 1:500, V 1:50	

Drawing Name: 111179-5-PP01.dwg, Plotted: May 17, 2021


SEE SHEET PP-31
SEE SHEET PP-32
SEE SHEET PP-36
MATCH LINE
SEE SHEET PP-36
BLACK WILLOW CRESCENT
COURTLAND STREET
SAN MH 613
SAN MH 612
SAN MH 611
SAN MH 607
SAN MH 606
STM MH 612
STM MH 606
CB 612
CB 610
CB 606
CBMH 613
CBMH 611
CBMH 610
CBMH 605
R=10.25m
R=15.0m
R=10.0m
200ø SAN
300ø STM
375ø STM
150ø W/M
1.5m SIDEWALK
HYD & WV
3:1 SLOPE (MAX.)
SEE SED DE-3
EXISTING EMERGENCY ACCESS ROAD TO BE REMOVED
1.4m
2.3m
2.4m
3.5m
0.0m
221 222 223 224 225 226 227 228 229 230
209 210 211 212 213 214 215 216 217 218
245 246 247 248 249 250 251
292 293 294




230
229
228
227
226
225
224
223
222
221
220
STA. 1+000 BLACK WILLOW CRESCENT
STA. 1+574.11 COURTLAND STREET
ELEV = 227.06
STA. = 1+004.25
ELEV = 226.97
2.0%
-2.00%
300ø STM.
150ø W/M
1.7m (MIN)
150ø W/M
CBMH 613
RIM: 226.17
N INV: 223.75
STM MH 612
RIM: 225.75
W INV: 223.39
NE INV: 223.31
S INV: 223.34
CBMH 611
RIM: 225.49
SW INV: 223.15
E INV: 223.12
C/L ROAD PROFILE
-1.60%
EX. GRADE
0.3m (MIN)
23.9m-300ø STM @ 1.7%
10.9m-300ø STM @ 1.5%
71.8m-300ø STM @ 1.6%
88.3m-375ø STM @ 1.6%
SAN MH 606
RIM: 227.06
W INV: 223.31
E INV: 223.28
N INV: 223.35
76.3m-200ø SAN @ 1.6%
SAN MH 613
RIM: 225.77
S INV: 222.13
NE INV: 222.08
W INV: 222.60
14.1m-200ø SAN @ 1.6%
SAN MH 612
RIM: 225.63
SW INV: 221.86
E INV: 221.81
100.0m-200ø SAN @ 1.6%
CBMH 610
RIM: 224.35
W INV: 221.94
E INV: 221.87
NW INV: 221.95
SAN MH 611
RIM: 224.05
W INV: 220.21
E INV: 220.18
100.0m-200ø SAN @ 1.1%
MATCH LINE
SEE SHEET PP-36
PVI STA: 1+211.29
PVI ELEV: 223.66
K: 12.00
LVC: 6.00
BVCS: 1+208.29
BVCE: 223.71
EVCS: 1+214.29
EVCE: 223.63

CHAINAGE	0+980	1+000	1+020	1+040	1+060	1+080	1+100	1+120	1+140	1+160	1+180	1+200
PROPOSED C/L ELEV		227.06	226.72	226.40	226.08	225.76	225.44	225.12	224.80	224.48	224.16	223.84
EXISTING C/L ELEV		227.14	226.74	226.34	225.92	225.41	224.59	224.23	224.00	223.93	223.85	223.80

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BENCHMARKS

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

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ENGINEER STAMP

[redacted]

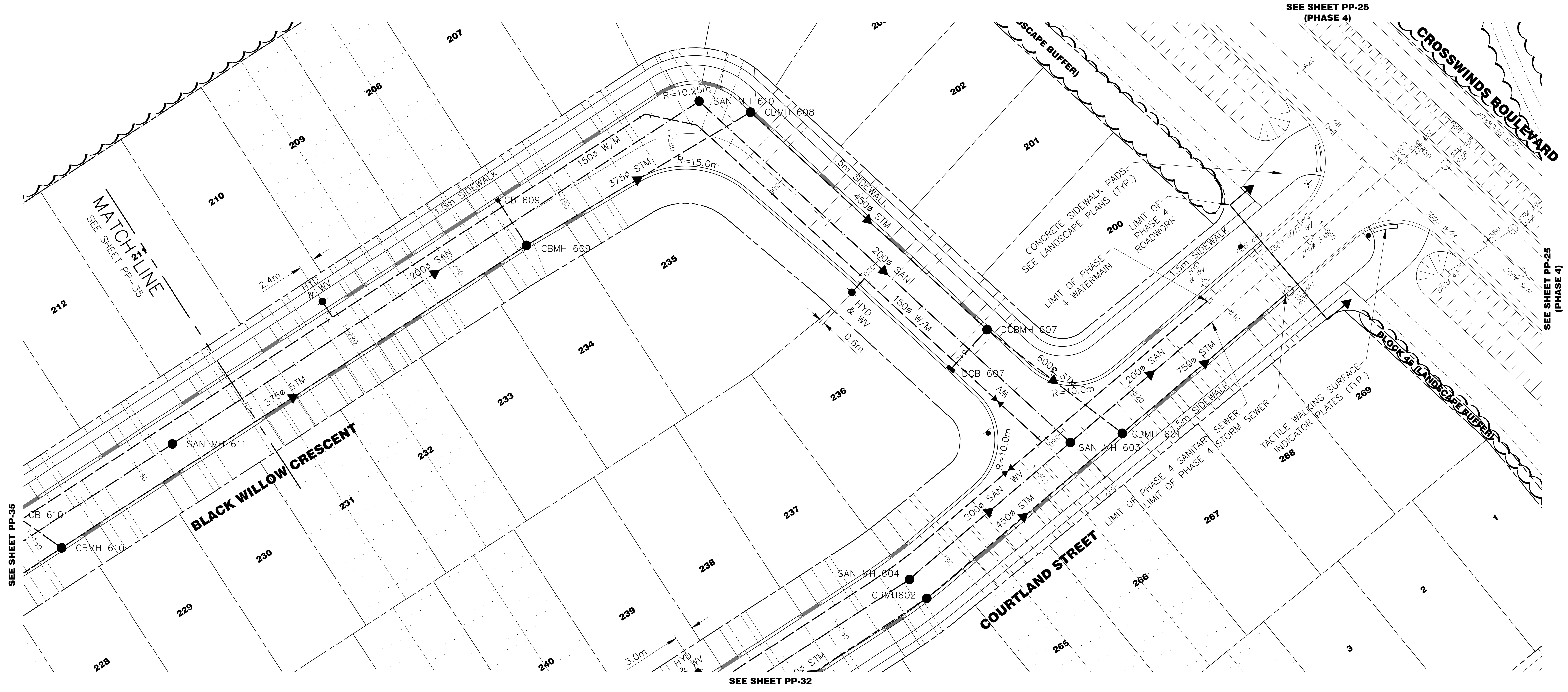
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

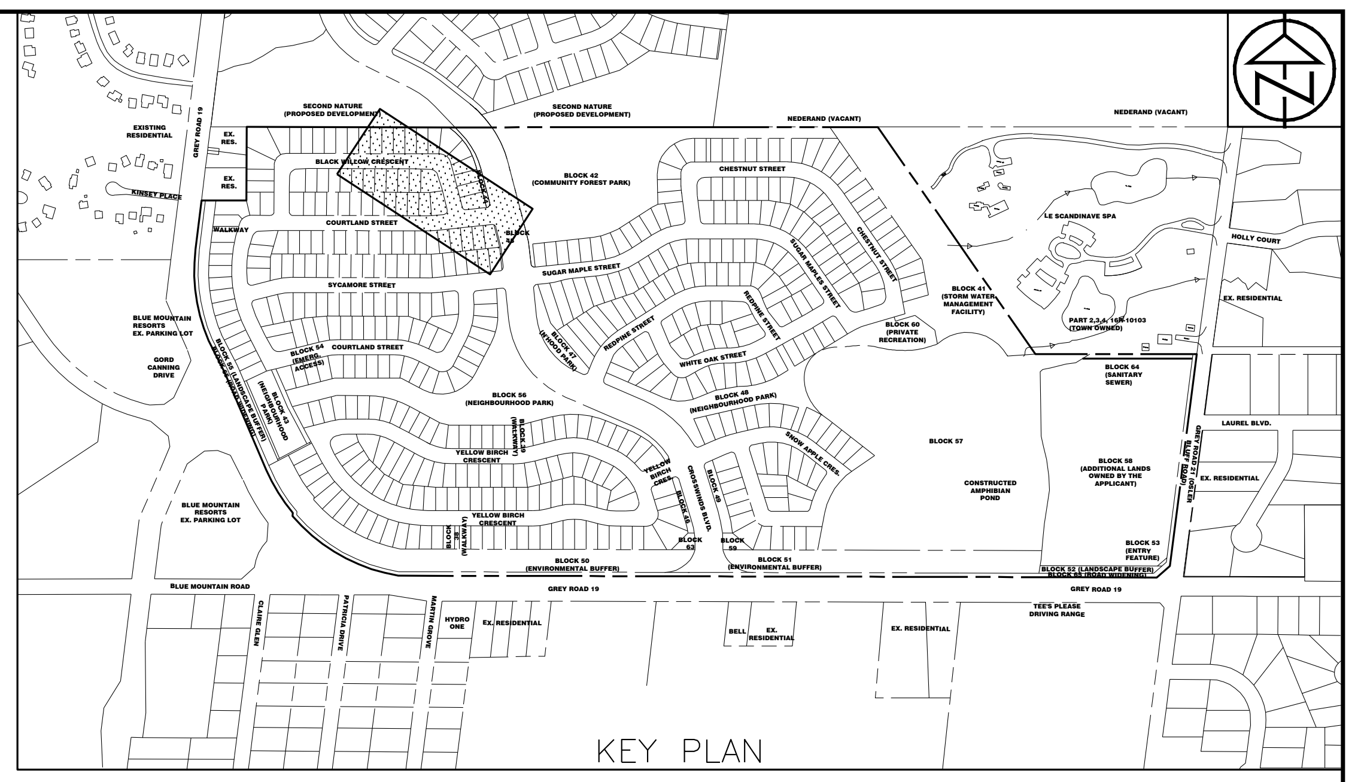
PLAN AND PROFILE
BLACK WILLOW CRESCENT
STA 1+000 TO 1+200

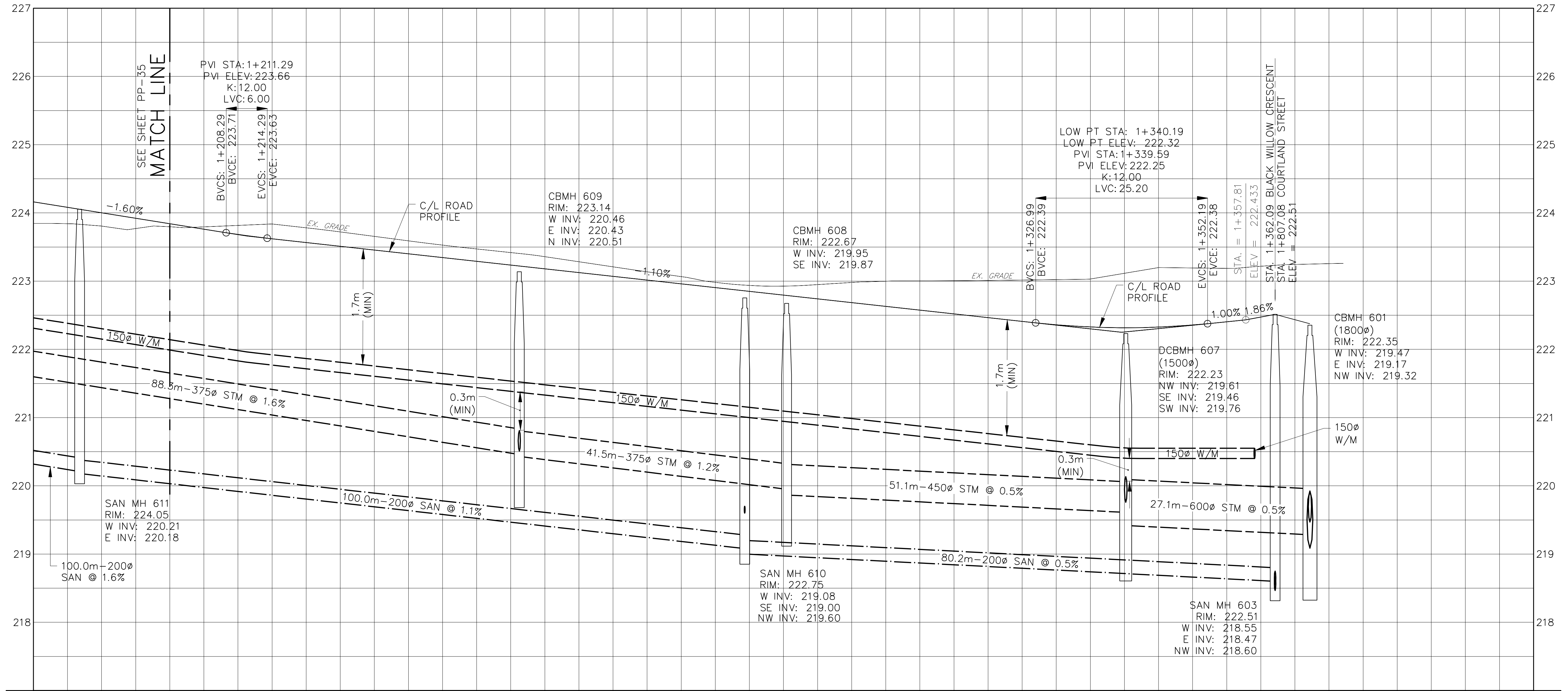
TATHAM ENGINEERING

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	PP-35
CHECK: JPA/MJC	SCALE: H 1:500, V 1:50	

Drawing Name: 111179-5-PP01.dwg, Plotted: May 17, 2021


SEE SHEET PP-25 (PHASE 4)
SEE SHEET PP-25 (PHASE 4)
SEE SHEET PP-35
SEE SHEET PP-32
MATCHLINE SEE SHEET PP-35
CROSSWINDS BOULEVARD
BLACK WILLOW CRESCENT
COURTLAND STREET
LANDSCAPE BUFFER
BLOCK 1A LANDSCAPE BUFFER
SAN MH 610
CBMH 608
CB 609
CBMH 609
SAN MH 611
CB 610
CBMH 610
DCBMH 607
DCB 607
SAN MH 603
CBMH 601
SAN MH 604
CBMH602
1.5m SIDEWALK
150ø W/M
375ø STM
450ø STM
200ø SAN
600ø STM
750ø STM
R=10.25m
R=15.0m
R=10.0m
HYD & WV
2.4m
0.6m
3.0m
CONCRETE SIDEWALK PADS. SEE LANDSCAPE PLANS (TYP.)
LIMIT OF PHASE 4 WATERMAIN
LIMIT OF PHASE 4 ROADWORK
LIMIT OF PHASE 4 SANITARY SEWER
LIMIT OF PHASE 4 STORM SEWER
TACTILE WALKING SURFACE INDICATOR PLATES (TYP.)
200
201
202
207
208
209
210
211
212
228
229
230
231
232
233
234
235
236
237
238
239
240
265
266
267
268
269
1
2
3


KEY PLAN


227
226
225
224
223
222
221
220
219
218
SEE SHEET PP-35
MATCH LINE
PVI STA: 1+211.29
PVI ELEV: 223.66
K: 12.00
LVC: 6.00
BVCS: 1+208.29
BVCE: 223.71
EVCS: 1+214.29
EVCE: 223.63
-1.60%
EX. GRADE
C/L ROAD PROFILE
CBMH 609
RIM: 223.14
W INV: 220.46
E INV: 220.43
N INV: 220.51
CBMH 608
RIM: 222.67
W INV: 219.95
SE INV: 219.87
-1.10%
LOW PT STA: 1+340.19
LOW PT ELEV: 222.32
PVI STA: 1+339.59
PVI ELEV: 222.25
K: 12.00
LVC: 25.20
BVCS: 1+326.99
BVCE: 222.39
EVCS: 1+352.19
EVCE: 222.38
STA. = 1+357.81
ELEV. = 222.43
STA. 1+362.29 BLACK WILLOW CRESCENT
STA. 1+807.08 COURTLAND STREET
ELEV. = 222.51
1.00%
1.86%
CBMH 601
(1800ø)
RIM: 222.35
W INV: 219.47
E INV: 219.17
NW INV: 219.32
DCBMH 607
(1500ø)
RIM: 222.23
NW INV: 219.61
SE INV: 219.46
SW INV: 219.76
150ø W/M
1.7m (MIN)
0.3m (MIN)
88.5m-375ø STM @ 1.6%
41.5m-375ø STM @ 1.2%
51.1m-450ø STM @ 0.5%
27.1m-600ø STM @ 0.5%
100.0m-200ø SAN @ 1.1%
80.2m-200ø SAN @ 0.5%
100.0m-200ø SAN @ 1.6%
SAN MH 611
RIM: 224.05
W INV: 220.21
E INV: 220.18
SAN MH 610
RIM: 222.75
W INV: 219.08
SE INV: 219.00
NW INV: 219.60
SAN MH 603
RIM: 222.51
W INV: 218.55
E INV: 218.47
NW INV: 218.60

PROPOSED C/L ELEV	223.84	223.57	223.35	223.13	222.91	222.69	222.47	222.32	222.47	
EXISTING C/L ELEV	223.80	223.78	223.53	223.28	222.98	222.98	223.01	223.11	223.22	
CHAINAGE	1+200	1+220	1+240	1+260	1+280	1+300	1+320	1+340	1+360	1+380

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BENCHMARKS

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

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5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

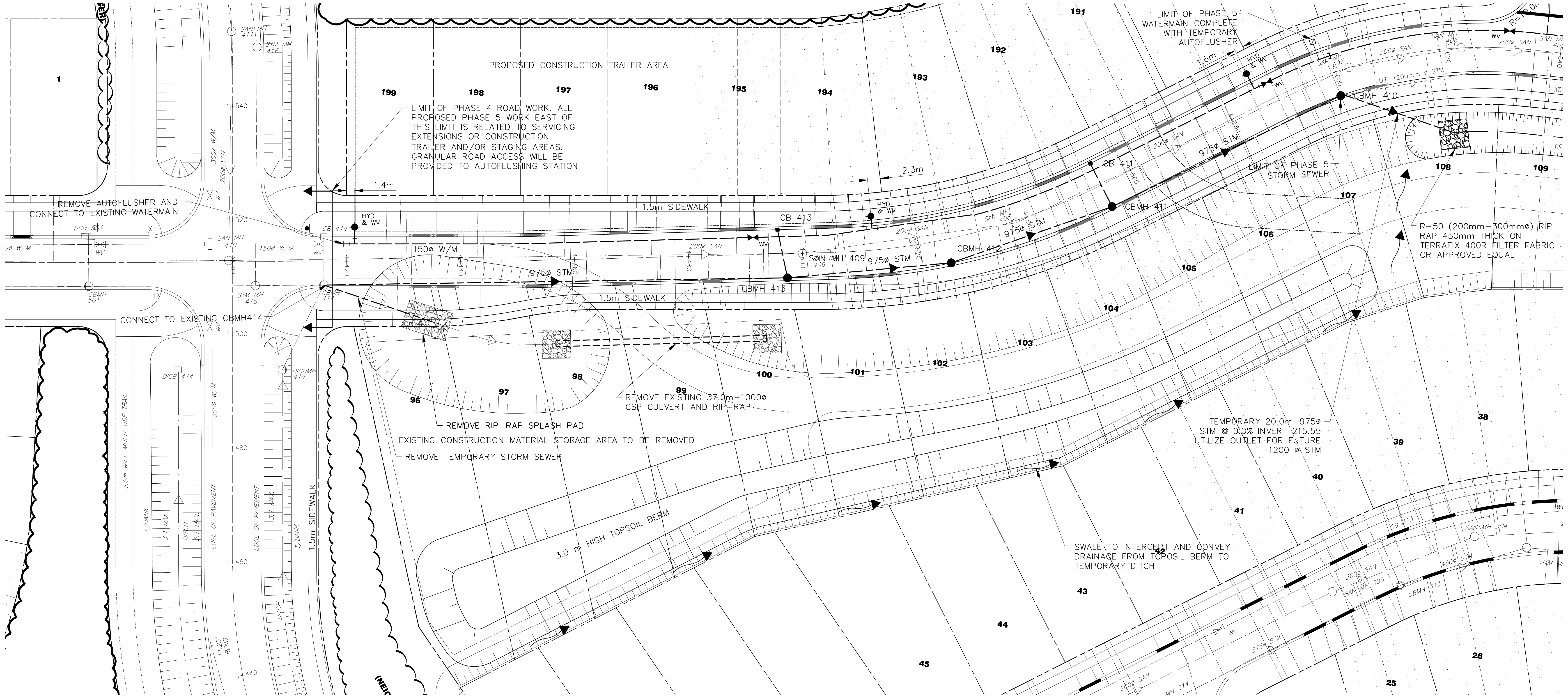
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

PLAN AND PROFILE
BLACK WILLOW CRESCENT
STA 1+200 TO 1+380

TATHAM
ENGINEERING

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	PP-36
CHECK: JPA/MJC	SCALE: H 1:500, V 1:50	

Drawing Name: 111179-5-PP01.dwg, Plotted: May 17, 2021


PROPOSED CONSTRUCTION TRAILER AREA
LIMIT OF PHASE 4 ROAD WORK. ALL PROPOSED PHASE 5 WORK EAST OF THIS LIMIT IS RELATED TO SERVICING EXTENSIONS OR CONSTRUCTION TRAILER AND/OR STAGING AREAS. GRANULAR ROAD ACCESS WILL BE PROVIDED TO AUTOFLUSHING STATION
LIMIT OF PHASE 5 WATERMAIN COMPLETE WITH TEMPORARY AUTOFLUSHER
REMOVE AUTOFLUSHER AND CONNECT TO EXISTING WATERMAIN
CONNECT TO EXISTING CBMH414
1.5m SIDEWALK
150ø W/M
975ø STM
CB 413
CBMH 413
CBMH 412
CBMH 411
CBMH 410
SAN MH 409
LIMIT OF PHASE 5 STORM SEWER
R-50 (200mm-300mmø) RIP RAP 450mm THICK ON TERRAFIX 400R FILTER FABRIC OR APPROVED EQUAL
REMOVE RIP-RAP SPLASH PAD
EXISTING CONSTRUCTION MATERIAL STORAGE AREA TO BE REMOVED
REMOVE TEMPORARY STORM SEWER
REMOVE EXISTING 37.0m-1000ø CSP CULVERT AND RIP-RAP
TEMPORARY 20.0m-975ø STM @ 0.0% INVERT 215.55 UTILIZE OUTLET FOR FUTURE 1200 ø STM
3.0 m HIGH TOPSOIL BERM
SWALE TO INTERCEPT AND CONVEY DRAINAGE FROM TOPSOIL BERM TO TEMPORARY DITCH
3.0m WIDE MULTI-USE TRAIL
EDGE OF PAVEMENT
1.4m
2.3m
1.6m
HYD & WV
1+540
1+520
1+500
1+480
1+460
1+440
199
198
197
196
195
194
193
192
191
108
109
107
106
105
104
103
102
101
100
99
98
97
96
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41
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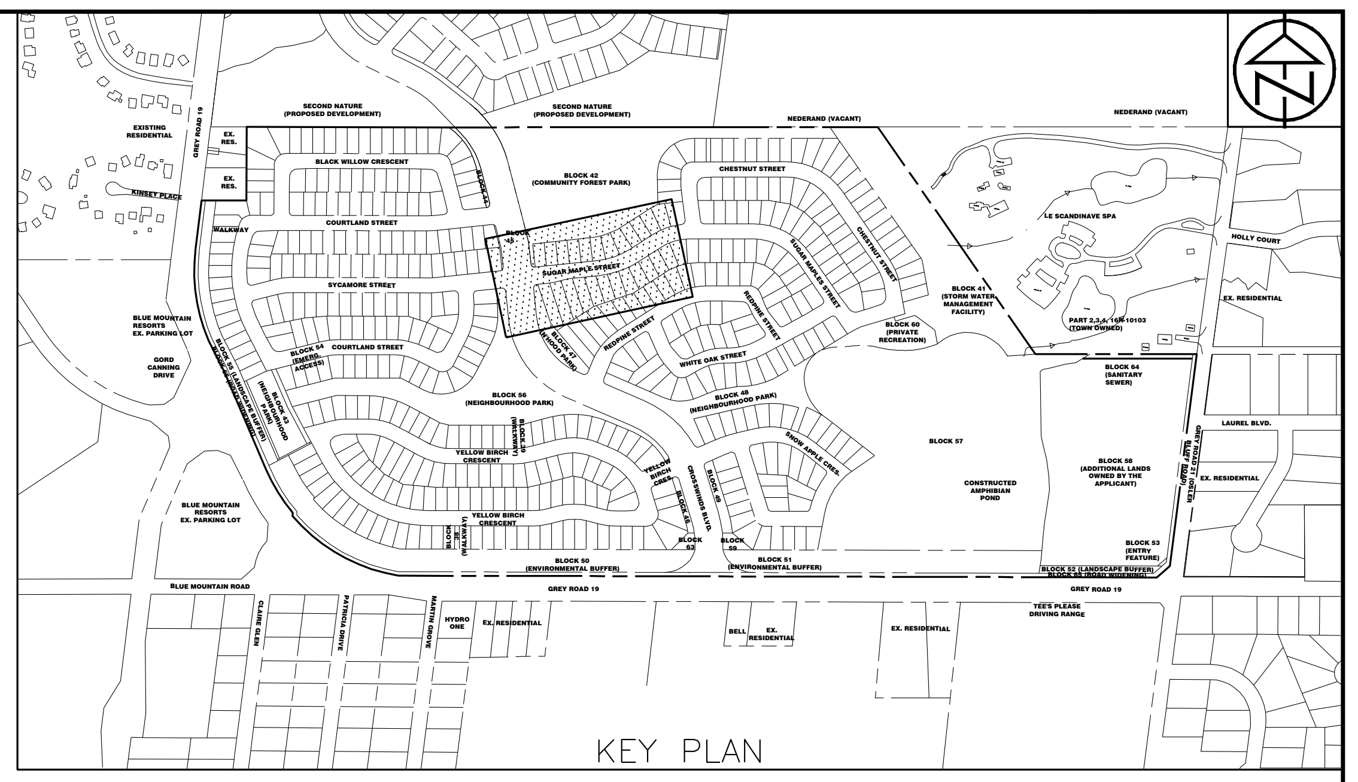
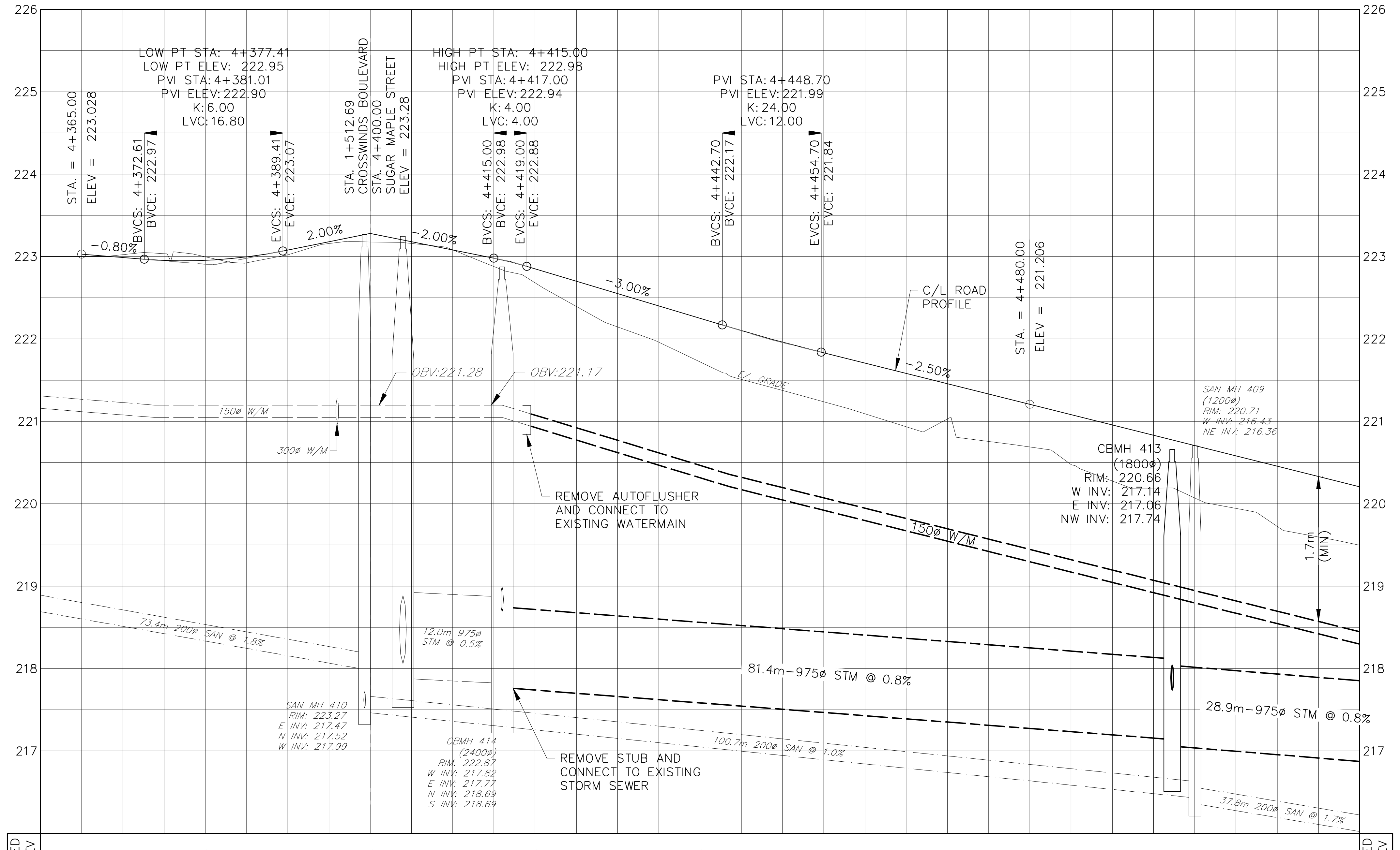
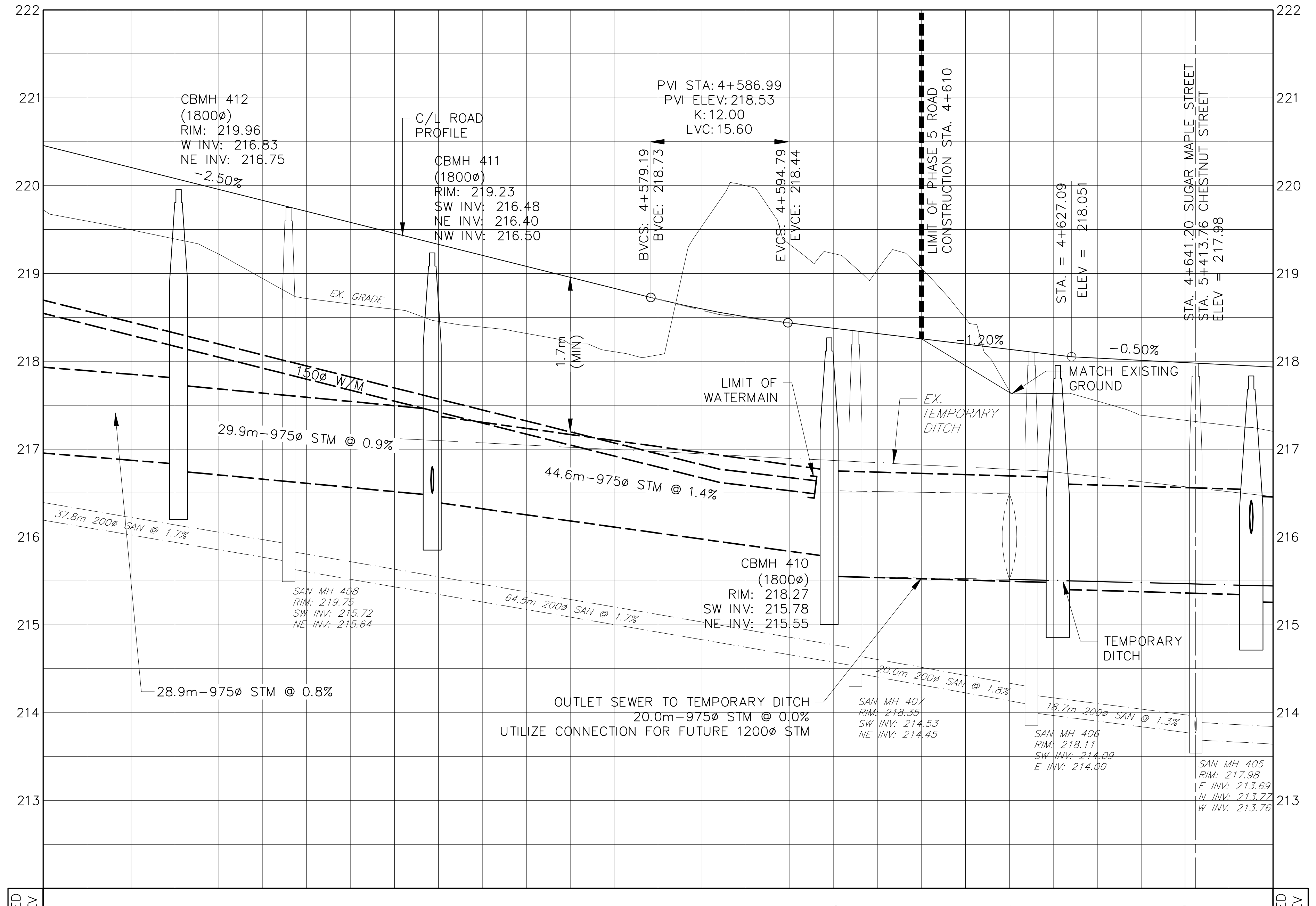
43
44
45
25
26
1




STA. = 4+355.00
ELEV = 223.028
LOW PT STA: 4+377.41
LOW PT ELEV: 222.95
PVI STA: 4+381.01
PVI ELEV: 222.90
K:6.00
LVC:16.80
BVCS: 4+372.61
BVCE: 222.97
EVCS: 4+389.41
EVCE: 223.07
STA. 1+512.69 CROSSWINDS BOULEVARD
STA. 4+400.00 SUGAR MAPLE STREET
ELEV = 223.28
HIGH PT STA: 4+415.00
HIGH PT ELEV: 222.98
PVI STA: 4+417.00
PVI ELEV: 222.94
K:4.00
LVC:4.00
BVCS: 4+415.00
BVCE: 222.98
EVCS: 4+419.00
EVCE: 222.88
PVI STA: 4+448.70
PVI ELEV: 221.99
K:24.00
LVC:12.00
BVCS: 4+442.70
BVCE: 222.17
EVCS: 4+454.70
EVCE: 221.84
STA. = 4+480.00
ELEV = 221.206
-0.80%
2.00%
-2.00%
-3.00%
-2.50%
C/L ROAD PROFILE
EX. GRADE
OBV:221.28
OBV:221.17
150ø W/M
300ø W/M
REMOVE AUTOFLUSHER AND CONNECT TO EXISTING WATERMAIN
150ø W/M
81.4m-975ø STM @ 0.8%
28.9m-975ø STM @ 0.8%
12.0m 975ø STM @ 0.5%
CBMH 413 (1800ø) RIM: 220.66 W INV: 217.14 E INV: 217.06 NW INV: 217.74
SAN MH 409 (1200ø) RIM: 220.71 W INV: 216.43 NE INV: 216.36
1.7m (MIN)
SAN MH 410 RIM: 223.27 E INV: 217.47 N INV: 217.52 W INV: 217.99
CBMH 414 (2400ø) RIM: 222.87 W INV: 217.82 E INV: 217.77 N INV: 218.69 S INV: 218.69
REMOVE STUB AND CONNECT TO EXISTING STORM SEWER
73.4m 200ø SAN @ 1.6%
100.7m 200ø SAN @ 1.0%
37.8m 200ø SAN @ 1.7%
226
225
224
223
222
221
220
219
218
217

CHAINAGE	4+380	4+400	4+420	4+440	4+460	4+480	4+500
PROPOSED C/L ELEV	222.95	223.28	222.85	222.25	221.71	221.21	220.71
EXISTING C/L ELEV	223.00	223.18	222.68	221.72	221.09	220.69	220.07


CBMH 412 (1800ø) RIM: 219.96 W INV: 216.83 NE INV: 216.75
C/L ROAD PROFILE
CBMH 411 (1800ø) RIM: 219.23 SW INV: 216.48 NE INV: 216.40 NW INV: 216.50
PVI STA: 4+586.99
PVI ELEV: 218.53
K:12.00
LVC:15.60
BVCS: 4+579.19
BVCE: 218.73
EVCS: 4+594.79
EVCE: 218.44
LIMIT OF PHASE 5 ROAD CONSTRUCTION STA. 4+610
STA. = 4+627.09
ELEV = 218.051
STA. 4+641.20 SUGAR MAPLE STREET
STA. 5+413.76 CHESTNUT STREET
ELEV = 217.98
-2.50%
-1.20%
-0.50%
EX. GRADE
150ø W/M
1.7m (MIN)
LIMIT OF WATERMAIN
EX. TEMPORARY DITCH
MATCH EXISTING GROUND
29.9m-975ø STM @ 0.9%
44.6m-975ø STM @ 1.4%
28.9m-975ø STM @ 0.8%
CBMH 410 (1800ø) RIM: 218.27 SW INV: 215.78 NE INV: 215.55
OUTLET SEWER TO TEMPORARY DITCH 20.0m-975ø STM @ 0.0% UTILIZE CONNECTION FOR FUTURE 1200ø STM
TEMPORARY DITCH
37.8m 200ø SAN @ 1.7%
64.5m 200ø SAN @ 1.7%
20.0m 200ø SAN @ 1.8%
18.7m 200ø SAN @ 1.3%
SAN MH 408 RIM: 219.75 SW INV: 215.72 NE INV: 215.64
SAN MH 407 RIM: 218.35 SW INV: 214.53 NE INV: 214.45
SAN MH 406 RIM: 218.11 SW INV: 214.09 E INV: 214.00
SAN MH 405 RIM: 217.98 E INV: 213.69 N INV: 213.77 W INV: 213.76
222
221
220
219
218
217
216
215
214
213

CHAINAGE	4+520	4+540	4+560	4+580	4+600	4+620	4+640
PROPOSED C/L ELEV	220.21	219.71	219.21	218.71	218.38	218.14	217.99
EXISTING C/L ELEV	219.50	218.72	218.39	218.07	219.23	217.66	217.33

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SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

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5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

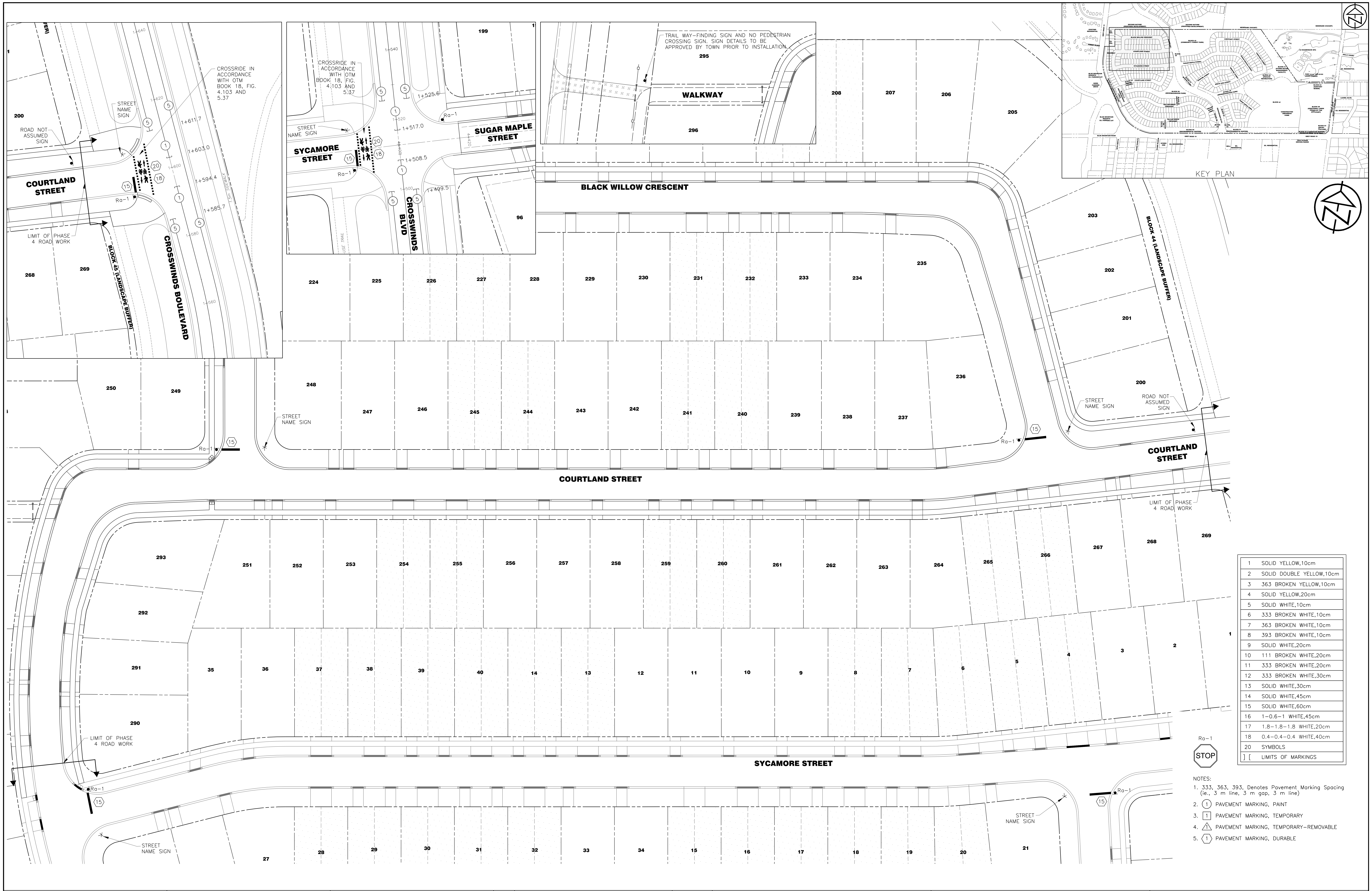
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

PLAN AND PROFILE
SUGAR MAPLE STREET
STA 4+400 TO 4+620

TATHAM
ENGINEERING

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	**PP-37**
CHECK: JPA/MJC	SCALE: H 1:500, V 1:50	

Drawing Name: 111179-5-PP01.dwg, Plotted: May 18, 2021


CROSSRIDE IN ACCORDANCE WITH OTM BOOK 18, FIG. 4.103 AND 5.37
STREET NAME SIGN
ROAD NOT ASSUMED SIGN
COURTLAND STREET
LIMIT OF PHASE 4 ROAD WORK
BLOCK 45 (LANDSCAPE BUFFER)
CROSSWINDS BOULEVARD
Ra–1
1+611.7
1+603.0
1+594.4
1+585.7
SYCAMORE STREET
SUGAR MAPLE STREET
CROSSWINDS BLVD
1+525.6
1+517.0
1+508.5
1+499.5
TRAIL WAY–FINDING SIGN AND NO PEDESTRIAN CROSSING SIGN. SIGN DETAILS TO BE APPROVED BY TOWN PRIOR TO INSTALLATION.
WALKWAY
BLACK WILLOW CRESCENT
BLOCK 44 (LANDSCAPE BUFFER)
KEY PLAN
COURTLAND STREET
SYCAMORE STREET
STOP

1	SOLID YELLOW,10cm
2	SOLID DOUBLE YELLOW,10cm
3	363 BROKEN YELLOW,10cm
4	SOLID YELLOW,20cm
5	SOLID WHITE,10cm
6	333 BROKEN WHITE,10cm
7	363 BROKEN WHITE,10cm
8	393 BROKEN WHITE,10cm
9	SOLID WHITE,20cm
10	111 BROKEN WHITE,20cm
11	333 BROKEN WHITE,20cm
12	333 BROKEN WHITE,30cm
13	SOLID WHITE,30cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
16	1–0.6–1 WHITE,45cm
17	1.8–1.8–1.8 WHITE,20cm
18	0.4–0.4–0.4 WHITE,40cm
20	SYMBOLS
] [	LIMITS OF MARKINGS

NOTES:

1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. (1) PAVEMENT MARKING, PAINT
3. [1] PAVEMENT MARKING, TEMPORARY
4. △1 PAVEMENT MARKING, TEMPORARY–REMOVABLE
5. ⬡1 PAVEMENT MARKING, DURABLE

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM ENGINEERING

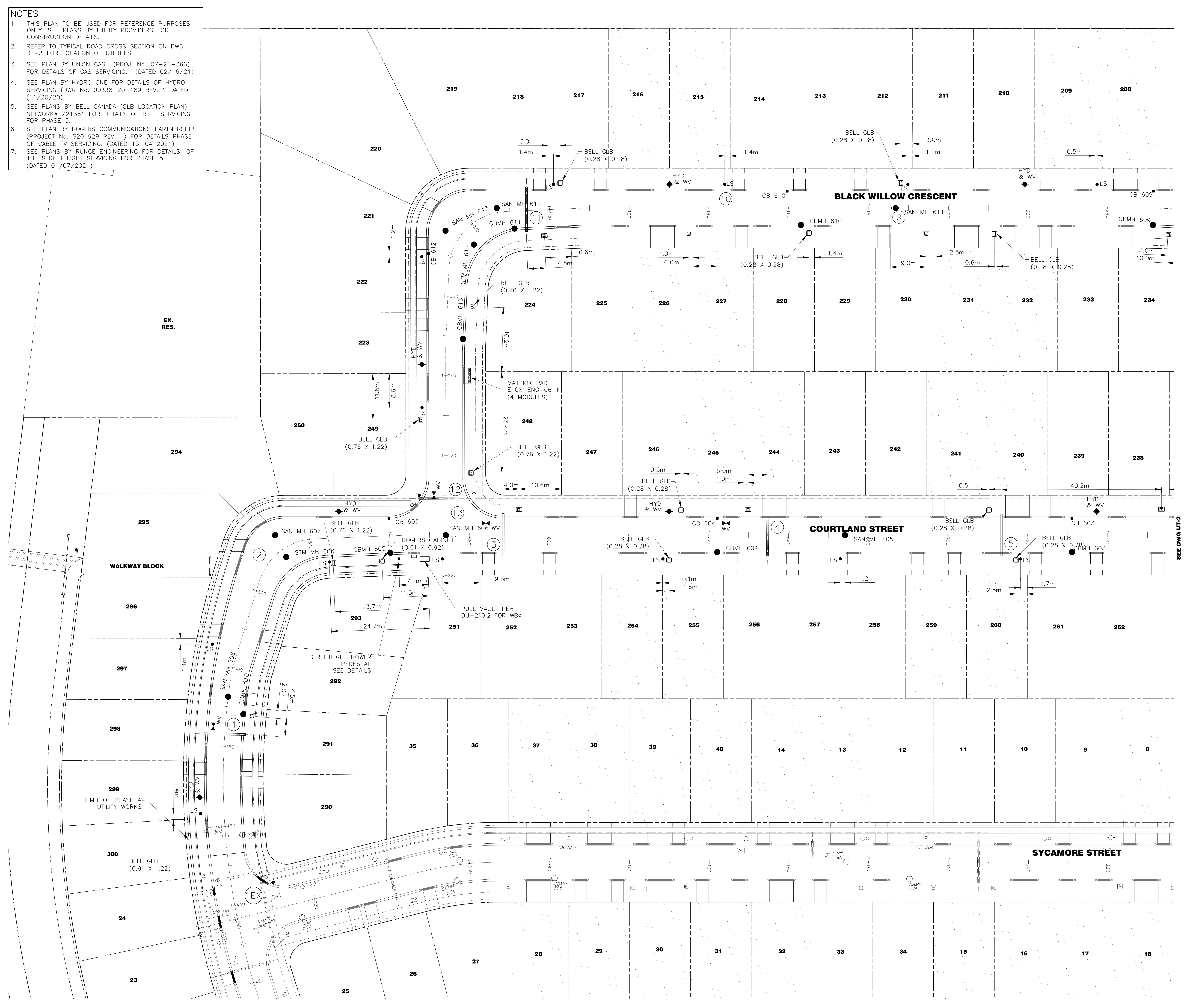
PAVEMENT MARKING AND SIGNAGE PLAN

DESIGN: BM	FILE: 111179–5	DWG:
DRAWN: BM	DATE: FEB 2021	**PM-1**
CHECK: JPA/MJC	SCALE: 1:1000	

Drawing Name: 111179–5–PM1.dwg, Plotted: May 17, 2021

NOTES

1. THIS PLAN TO BE USED FOR REFERENCE PURPOSES ONLY. SEE PLANS BY UTILITY PROVIDERS FOR CONSTRUCTION DETAILS.
2. REFER TO TYPICAL ROAD CROSS SECTION ON DWG. DE−3 FOR LOCATION OF UTILITIES.
3. SEE PLAN BY UNION GAS (PROJ. No. 07−21−366) FOR DETAILS OF GAS SERVICING. (DATED 02/16/21)
4. SEE PLAN BY HYDRO ONE FOR DETAILS OF HYDRO SERVICING (DWG No. 00338−20−189 REV. 1 DATED (11/20/20)
5. SEE PLANS BY BELL CANADA (GLB LOCATION PLAN) NETWORK# Z21361 FOR DETAILS OF BELL SERVICING FOR PHASE 5.
6. SEE PLAN BY ROGERS COMMUNICATIONS PARTNERSHIP (PROJECT No. S201929 REV. 1) FOR DETAILS PHASE OF CABLE TV SERVICING. (DATED 15, 04 2021)
7. SEE PLANS BY RUNGE ENGINEERING FOR DETAILS OF THE STREET LIGHT SERVICING FOR PHASE 5. (DATED 01/07/2021)


BLACK WILLOW CRESCENT
COURTLAND STREET
SYCAMORE STREET
WALKWAY BLOCK
EX. RES.
SEE DWG UT-2
LIMIT OF PHASE 4 UTILITY WORKS
MAILBOX PAD E10X-ENG-06-E (4 MODULES)
ROGERS CABINET (0.61 X 0.92)
PULL VAULT PER DU-210.2 FOR WBØ
STREETLIGHT POWER PEDESTAL SEE DETAILS
BELL GLB (0.28 X 0.28)
BELL GLB (0.76 X 1.22)
BELL GLB (0.91 X 1.22)
HYD & WV
SAN MH 605
SAN MH 606
SAN MH 607
SAN MH 611
SAN MH 612
SAN MH 613
STM MH 606
STM MH 612
SAN MH 506
CBMH 510
CBMH 603
CBMH 604
CBMH 605
CBMH 609
CBMH 610
CBMH 611
CB 603
CB 604
CB 605
CB 609
CB 610
CB 612
CBMH 613
LS
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1EX
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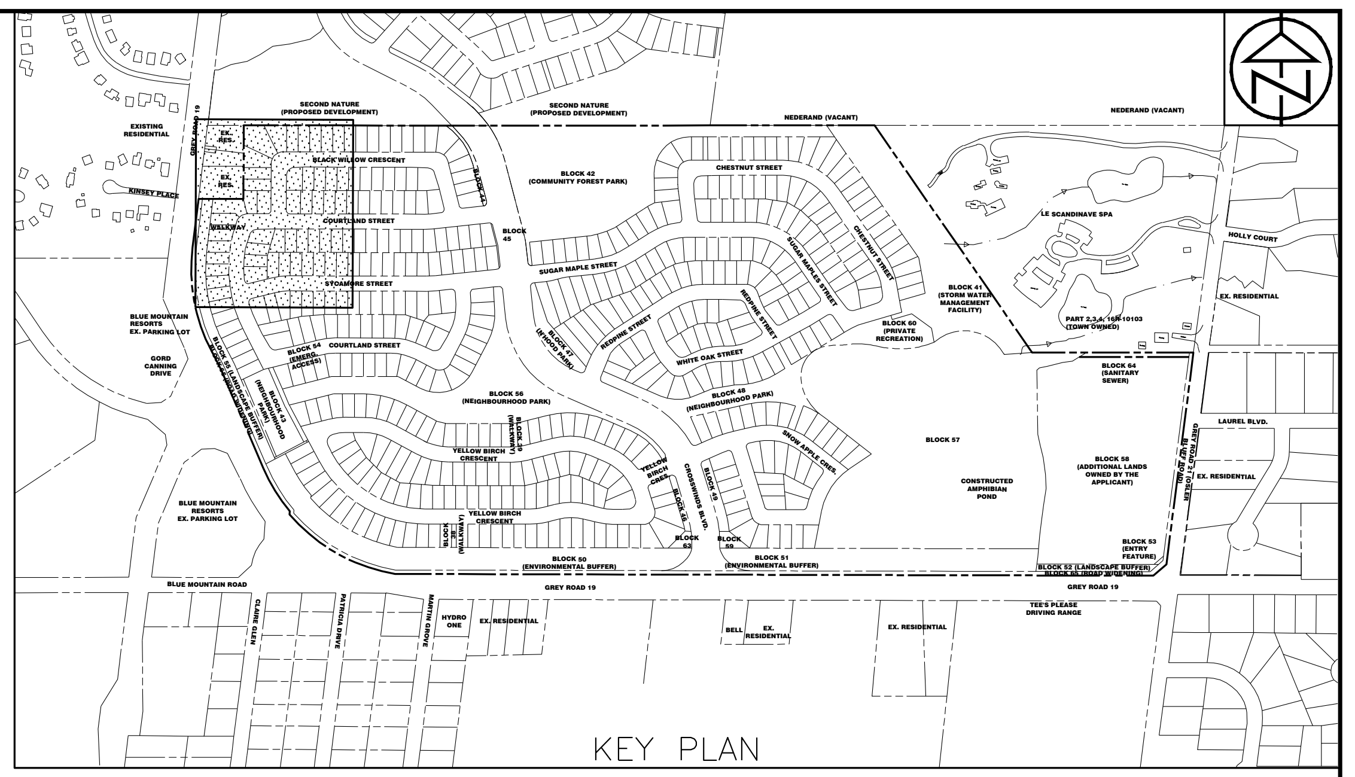
KEY PLAN
GREY ROAD 19
EX. RESIDENTIAL
BELL
TEE'S PLEASE DRIVING RANGE

LEGEND

EXISTING UTILITY TRENCH	—— — · — ——
EXISTING GAS MAIN	—— — · — — · ——
EXISTING BELL MAINTENANCE HOLE	○ BELL MH
EXISTING BELL MARKER	⊕ BELL
EXISTING HYDRO POLE	○ HP
EXISTING HYDRO GUY WIRE	)——
EXISTING GAS MAIN MARKER	⊕ GAS
PROPOSED HYDRO TRANSFORMER	H
EXISTING HYDRO SWITCHING VAULT	H SWITCH VAULT
EXISTING HYDRO METER	M
EXISTING LIGHT STANDARD	○ LS
PROPOSED LIGHT STANDARD	○ LS
PROPOSED STREET LIGHT PEDESTAL	S
PROPOSED ROGERS PEDESTAL AND VAULT	C
PROPOSED ROGERS GRADE LEVEL BOX	▭ ROGERS GLB
PROPOSED BELL PEDESTAL	B
PROPOSED BELL GRADE LEVEL BOX	▭ BELL GLB
PROPOSED UTILITY TRENCH	—— — · —— — · ——
PROPOSED UTILITY DUCT CROSSING	▭
PROPOSED STREET LIGHT DUCT CROSSING	▭
PROPOSED DUCT CROSSING REFERENCE NUMBER	①
PROPOSED GAS MAIN	—— — · — — · ——
PROPOSED MAIL BOX AND PAD	M
SEMI−DETACHED UNIT	▭

DUCT CROSSING CHART

DUCT CROSSING No.	NUMBER AND TYPE OF DUCT	LENGTH OF DUCT (m)
1	9HYD, 0SL, 0XSL, 0B, 2R	10.5
2	0HYD, 2SL, 1XSL, 0B, 0R	18.3
3	10HYD, 4SL, 1XSL, 0B, 0R	10.5
4	6HYD, 0SL, 0XSL, 0B, 0R	10.5
5	3HYD, 0SL, 0XSL, 0B, 0R	10.5
6	4HYD, 0SL, 0XSL, 2B, 1R	11.2
7	1GAS	13.0
8	9HYD, 0SL, 0XSL, 0B, 2R	11.2
9	8HYD, 0SL, 0XSL, 0B, 0R	10.5
10	5HYD, 0SL, 0XSL, 0B, 0R	10.5
11	10HYD, 0SL, 0XSL, 0B, 0R	11.2
12	1GAS	11.2
13	2HYD, 2SL, 1XSL, 2B, 0R	15.2
1EX	9HYD, 0SL, 0XSL, 2B, 1R	18.4
2EX	4HYD, 0SL, 0XSL, 2B, 2R	10.6

CROSSINGS

1HYD	1 PRIMARY DUCT
1SL	1 STREET LIGHT DUCT
1XSL	1 SPARE STREET LIGHT DUCT
1B	1 BELL DUCT
1R	1 ROGERS DUCT
1GAS	1 UNION GAS (100 mm PVC GREY, 1.0 m COVER)

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SEE DRAWING DE−1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

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ENGINEER STAMP

[redacted]

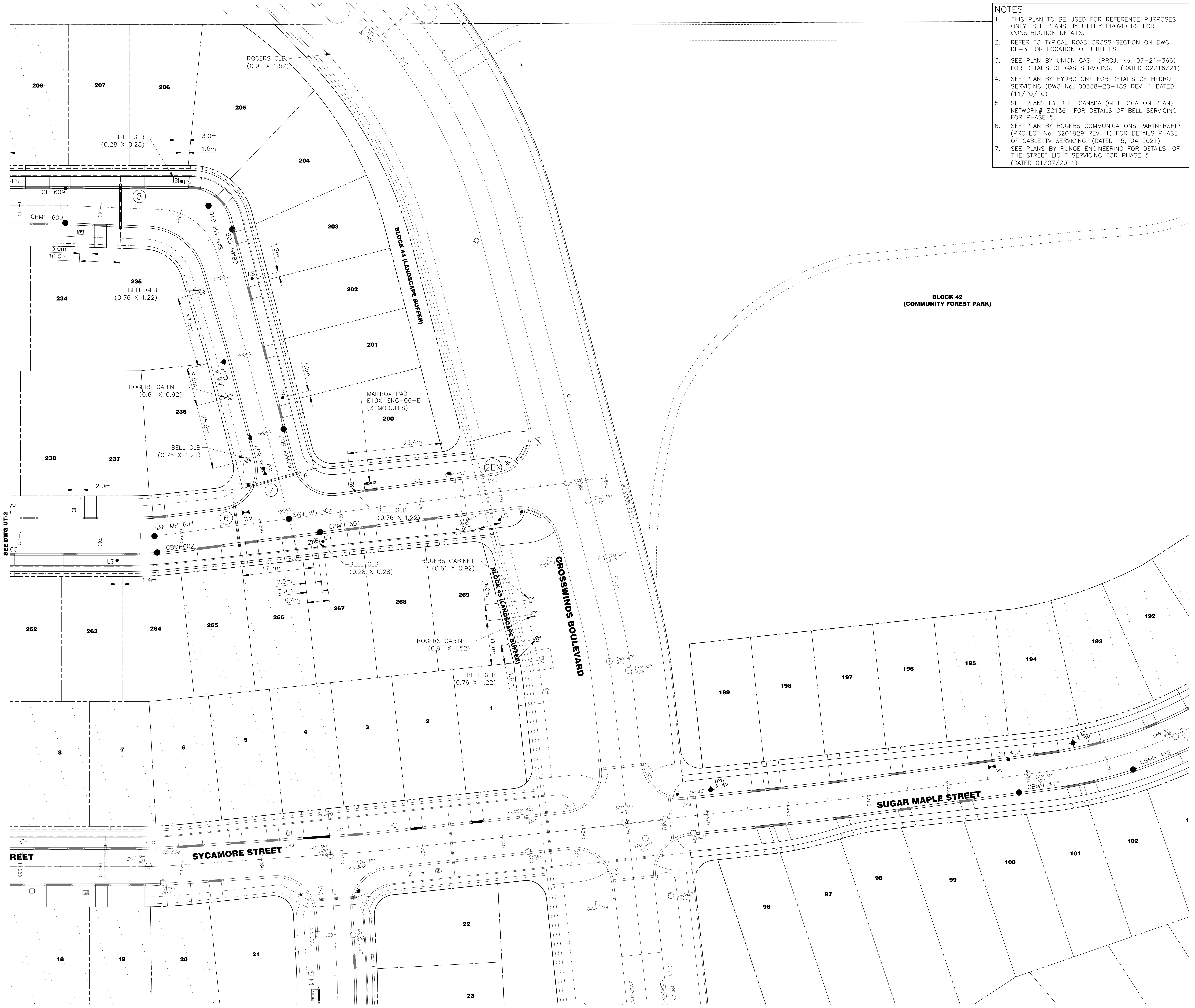
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM ENGINEERING

COMPOSITE UTILITY PLAN

DESIGN: BM	FILE: 111179−5	DWG:
DRAWN: BM	DATE: FEB 2021	**UT-1**
CHECK: JPA/MJC	SCALE: 1:500	

Drawing Name: 111179−5−UT01.dwg, Plotted: May 18, 2021


BLOCK 42
(COMMUNITY FOREST PARK)
BLOCK 44 (LANDSCAPE BUFFER)
BLOCK 45 (LANDSCAPE BUFFER)
CROSSWINDS BOULEVARD
SUGAR MAPLE STREET
SYCAMORE STREET
SEE DWG UT-2
ROGERS GLB (0.91 X 1.52)
BELL GLB (0.28 X 0.28)
BELL GLB (0.76 X 1.22)
ROGERS CABINET (0.61 X 0.92)
ROGERS CABINET (0.91 X 1.52)
MAILBOX PAD E10X-ENG-06-E (3 MODULES)
SAN MH 603
SAN MH 604
CBMH 601
CBMH602
CBMH 609
CB 609
CB 413
CBMH 412
CBMH 413
2EX

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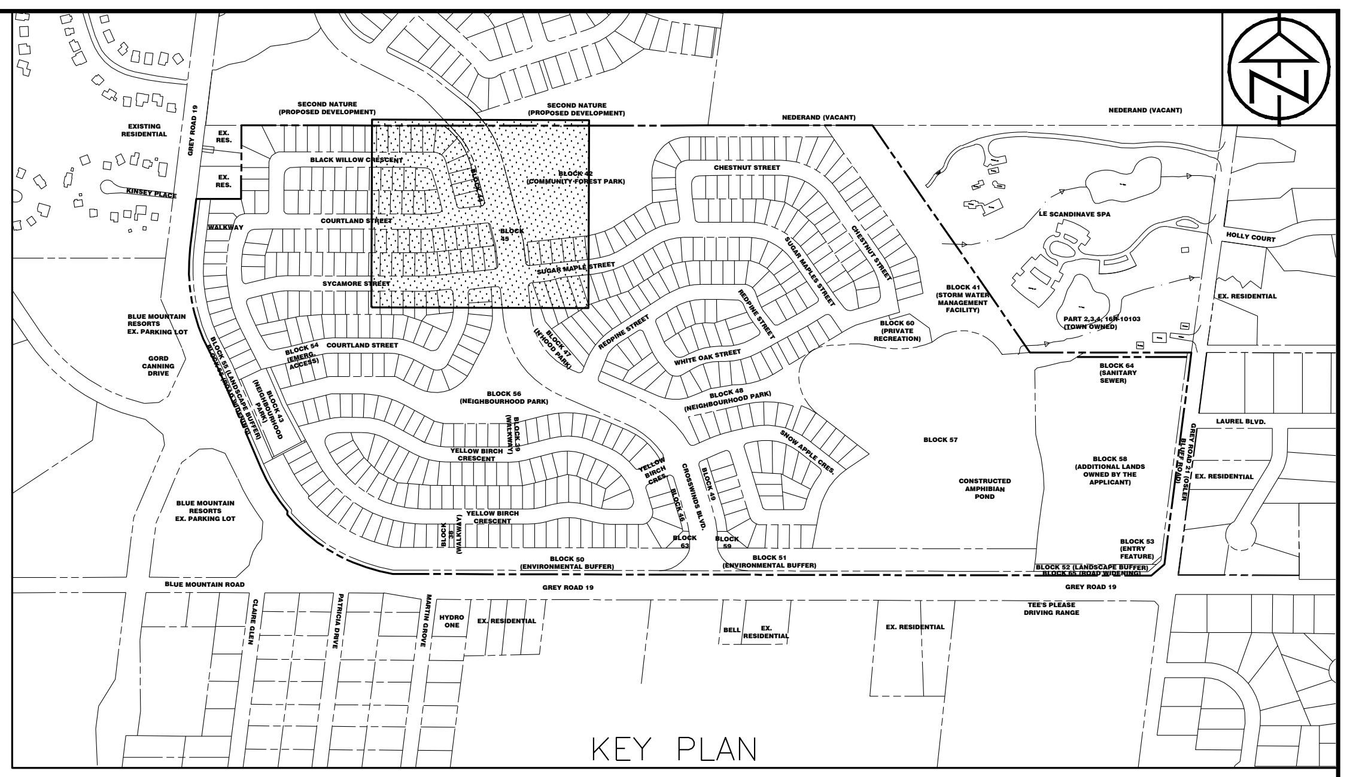
GREY ROAD 19
TEE'S PLEASE DRIVING RANGE
EX. RESIDENTIAL
HYDRO ONE
BELL

KEY PLAN

LEGEND

EXISTING UTILITY TRENCH	— — · — —
EXISTING GAS MAIN	— — · — · —
EXISTING BELL MAINTENANCE HOLE	○ BELL MH
EXISTING BELL MARKER	⊕ BELL
EXISTING HYDRO POLE	○ HP
EXISTING HYDRO GUY WIRE	)—
EXISTING GAS MAIN MARKER	⊕ GAS
PROPOSED HYDRO TRANSFORMER	H
EXISTING HYDRO SWITCHING VAULT	H SWITCH VAULT
EXISTING HYDRO METER	M
EXISTING LIGHT STANDARD	○ LS
PROPOSED LIGHT STANDARD	○ LS
PROPOSED STREET LIGHT PEDESTAL	S
PROPOSED ROGERS PEDESTAL AND VAULT	C
PROPOSED ROGERS GRADE LEVEL BOX	▭ ROGERS GLB
PROPOSED BELL PEDESTAL	B
PROPOSED BELL GRADE LEVEL BOX	▭ BELL GLB
PROPOSED UTILITY TRENCH	— – · — – · —
PROPOSED UTILITY DUCT CROSSING	▭
PROPOSED STREET LIGHT DUCT CROSSING	▭
PROPOSED DUCT CROSSING REFERENCE NUMBER	①
PROPOSED GAS MAIN	— — · — — · —
PROPOSED MAIL BOX AND PAD	M
SEMI–DETACHED UNIT	▨

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4	6HYD, 0SL, 0XSL, 0B, 0R	10.5
5	3HYD, 0SL, 0XSL, 0B, 0R	10.5
6	4HYD, 0SL, 0XSL, 2B, 1R	11.2
7	1GAS	13.0
8	9HYD, 0SL, 0XSL, 0B, 2R	11.2
9	8HYD, 0SL, 0XSL, 0B, 0R	10.5
10	5HYD, 0SL, 0XSL, 0B, 0R	10.5
11	10HYD, 0SL, 0XSL, 0B, 0R	11.2
12	1GAS	11.2
13	2HYD, 2SL, 1XSL, 2B, 0R	15.2
1EX	9HYD, 0SL, 0XSL, 2B, 1R	18.4
2EX	4HYD, 0SL, 0XSL, 2B, 2R	10.6

CROSSINGS

1HYD	1	PRIMARY DUCT
1SL	1	STREET LIGHT DUCT
1XSL	1	SPARE STREET LIGHT DUCT
1B	1	BELL DUCT
1R	1	ROGERS DUCT
1GAS	1	UNION GAS (100 mm PVC GREY, 1.0 m COVER)

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SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

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5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM ENGINEERING

COMPOSITE UTILITY PLAN

DESIGN: BM
FILE: 111179–5
DWG: **UT-2**
DRAWN: BM
DATE: FEB 2021
CHECK: JPA/MJC
SCALE: 1:500

LIST OF BENCHMARKS

BM – ELEVATION 181.032m

CONCRETE CULVERT UNDER HIGHWAY No. 26 OVER SILVER CREEK, 1.18 km EAST OF JUNCTION OF HIGHWAY No. 26 AND COUNTY ROAD 21, 45.4 m SOUTHEAST OF OF CENTRE LINE OF SILVER CREEK DRIVE, TABLET WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT.

TBM 15 – ELEVATION 217.537m

NAIL & WASHER IN HYDRO POLE @ N/E CORNER OF OSLER BLUFF ROAD AND GREY ROAD 19.

TBM 16 – ELEVATION 217.986m

TOP NUT OF HYDRANT # 263, FIRST HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 17 – ELEVATION 217.320m

TOP NUT OF HYDRANT # 262, SECOND HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 18 – ELEVATION 218.708m

TOP NUT OF HYDRANT # 261, THIRD HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 19 – ELEVATION 221.484m

TOP NUT OF HYDRANT # 260, FORTH HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 20 – ELEVATION 224.089m

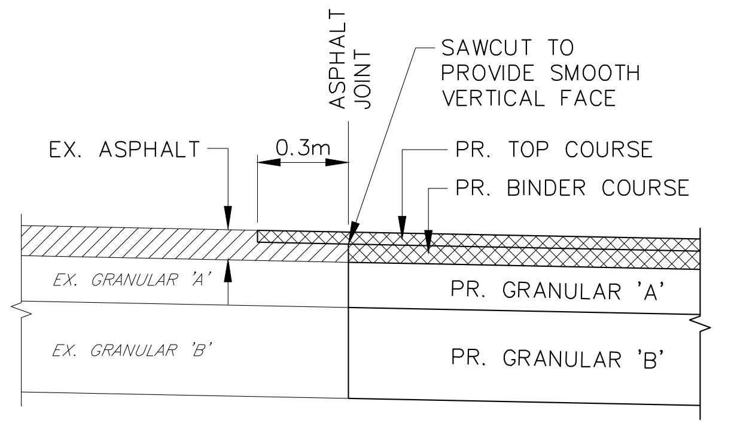
TOP NUT OF HYDRANT # 259, FIFTH HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 21 – ELEVATION 226.200m

TOP NUT OF HYDRANT # 258, SIXTH HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 22 – ELEVATION 227.684m

TOP NUT OF HYDRANT # 315 AT SOUTHWEST CORNER OF MARTIN GROVE AND GREY ROAD 19.



TYPICAL DETAIL FOR LAP JOINT
NTS

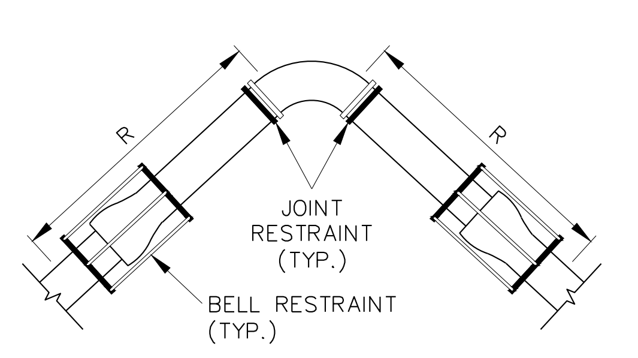


FIGURE 1
HORIZONTAL BEND

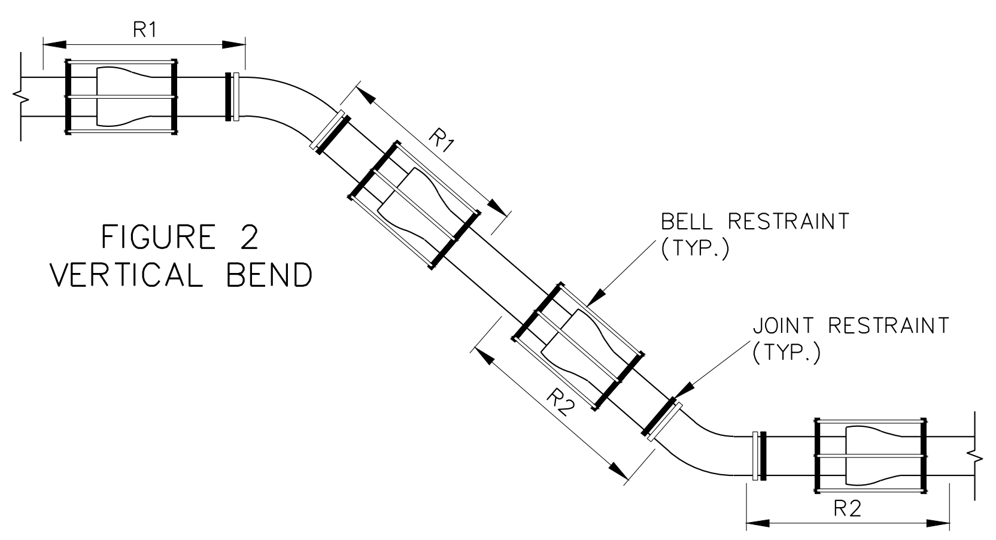


FIGURE 2
VERTICAL BEND

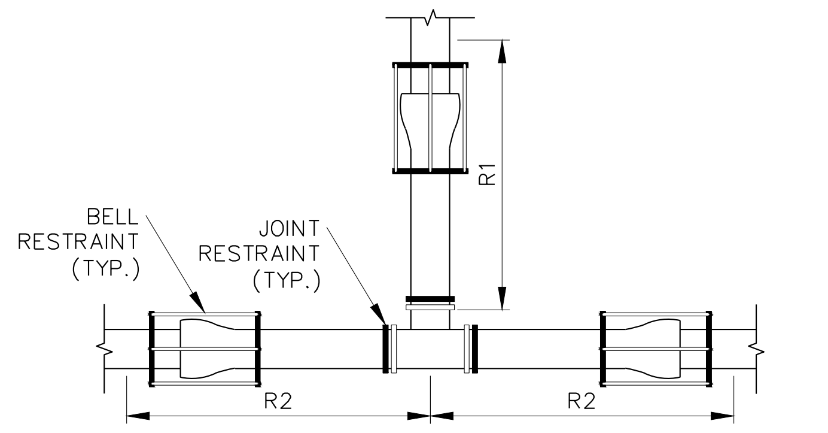


FIGURE 3
TEE

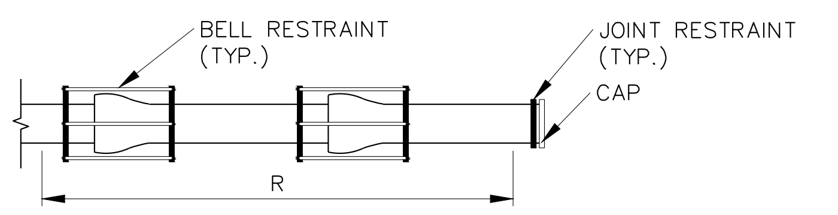


FIGURE 4
DEAD END

CHARACTERISTICS USED TO CALCULATE RESTRAINT LENGTH:

PIPE MATERIAL:	PVC
SOIL TYPE:	ML (SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS)
SAFETY FACTOR:	1.5 TO 1
TRENCH TYPE:	5 (PIPE BEDDED IN COMPACT GRANULAR MATERIAL)
DEPTH OF BURY:	1.8m (6 ft)
TEST PRESSURE:	1035 kPa (150 p.s.i.)
PROGRAM:	SIGMA IRON – RESTRAINT LENGTH CALCULATOR 1.0

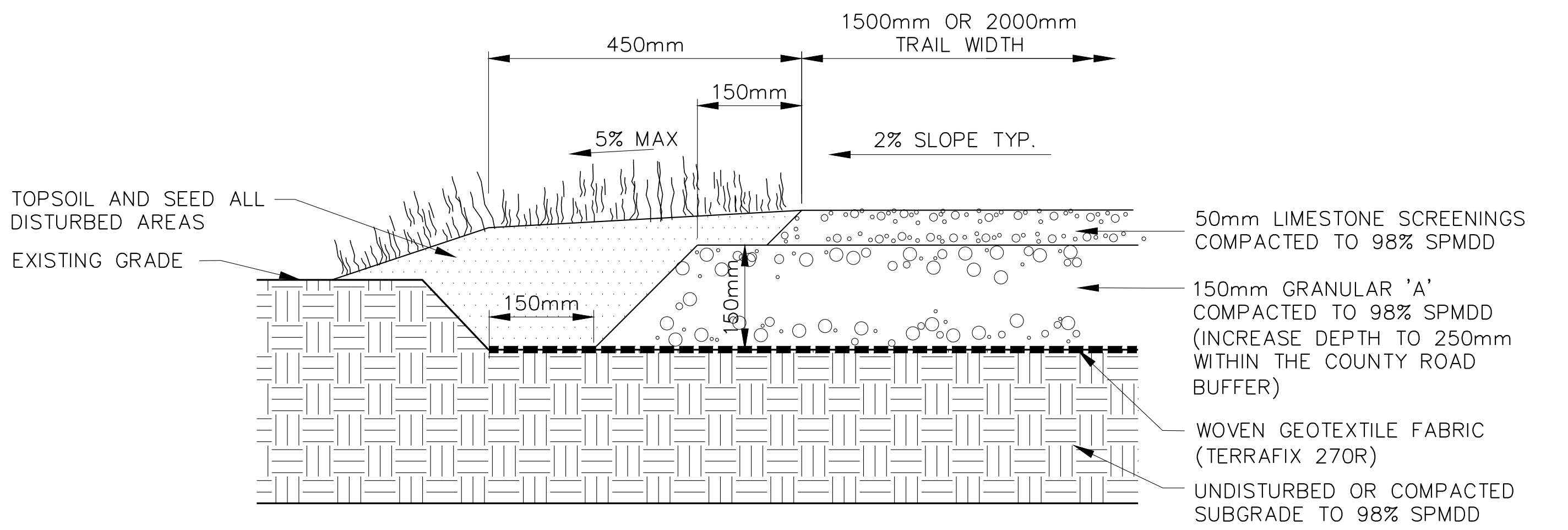
TABLE 1: PIPE RESTRAINT SCHEDULE FOR PVC PIPE (ALL JOINTS AND BELLS LOCATED WITHIN THE CALCULATED RESTRAINT LENGTH SHALL BE RESTRAINED WITH APPROVED BELL AND JOINT RESTRAINTS)

		HORIZONTAL BEND	VERTICAL BEND		DEAD END (NO BEND ANGLE)
PIPE DIA.	BEND ANGLE	RESTRAINT LENGTH (m)	RESTRAINT 1 LENGTH (m)	RESTRAINT 2 LENGTH (m)	RESTRAINT LENGTH (m)
150ø	90°	3.7	–	–	11.6
	45°	1.6	4.9	1.5	
	22.5°	0.9	2.5	0.9	
	11°	0.6	1.3	0.6	
200ø	90°	4.6	–	–	15.0
	45°	2.2	6.1	2.2	
	22.5°	0.9	3.1	1.0	
	11°	0.6	1.6	0.6	
300ø	90°	6.4	–	–	21.4
	45°	2.8	8.9	2.8	
	22.5°	1.5	4.3	1.5	
	11°	0.9	3.4	0.9	

TABLE 2: PIPE RESTRAINT SCHEDULE FOR PVC TEES (ALL JOINTS AND BELLS LOCATED WITHIN THE CALCULATED RESTRAINT LENGTH SHALL BE RESTRAINED WITH APPROVED BELL AND JOINT RESTRAINTS)

TEES			
NOMINAL PIPE DIA.	BRANCH PIPE DIA.	RESTRAINT 1 LENGTH (m)	RESTRAINT 2 LENGTH (m)
150	150	4.6	3.0
200	150	2.4	3.0
150	200	9.8	3.0
200	200	7.9	3.0
300	150	0.3	3.0
300	200	4.0	3.0
300	300	14.3	3.0

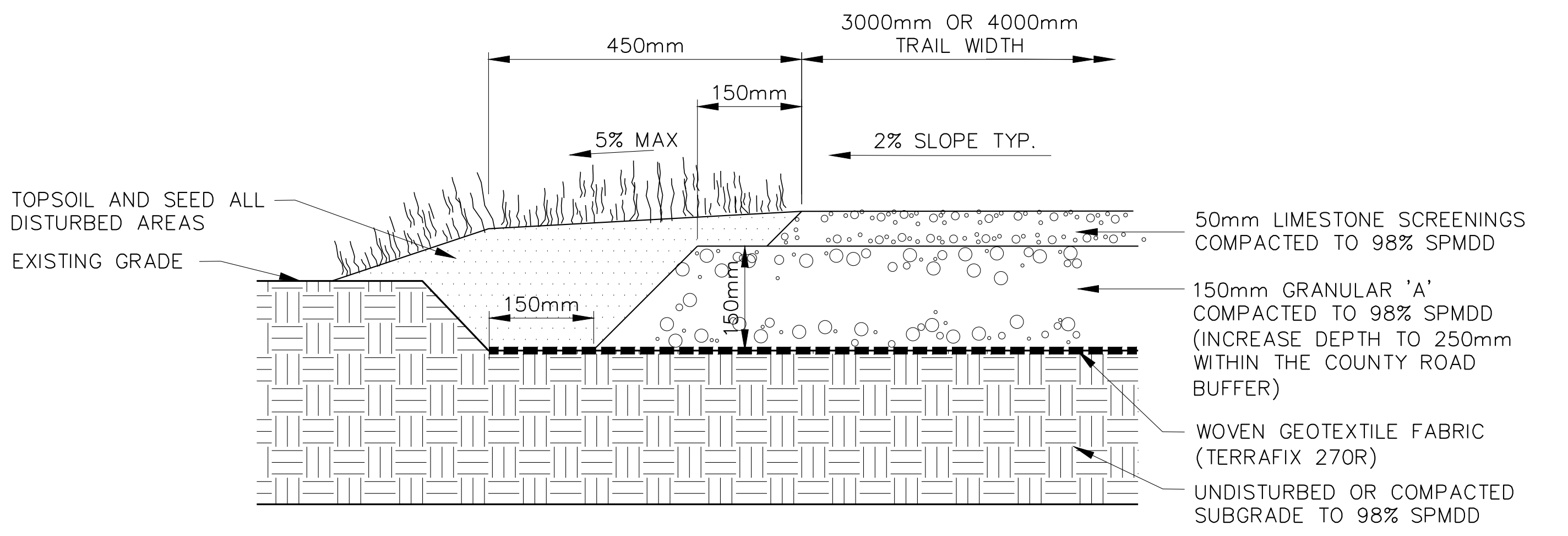
NOTES:
1. CONTRACTOR TO REPORT IN WRITING TO THE ENGINEER ANY CHANGES TO SOIL OR SITE CHARACTERISTIC THAT MAY ALTER THE PIPE RESTRAINT CALCULATION.
2. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THRUST RESTRAINT REQUIREMENTS WITH THE PIPE AND RESTRAINT MANUFACTURERS.
3. VALVES TO BE RESTRAINED AS IF THEY ARE DEAD ENDS.


450mm
1500mm OR 2000mm TRAIL WIDTH
150mm
5% MAX
2% SLOPE TYP.
TOPSOIL AND SEED ALL DISTURBED AREAS
EXISTING GRADE
150mm
150mm
50mm LIMESTONE SCREENINGS COMPACTED TO 98% SPMDD
150mm GRANULAR 'A' COMPACTED TO 98% SPMDD (INCREASE DEPTH TO 250mm WITHIN THE COUNTY ROAD BUFFER)
WOVEN GEOTEXTILE FABRIC (TERRAFIX 270R)
UNDISTURBED OR COMPACTED SUBGRADE TO 98% SPMDD

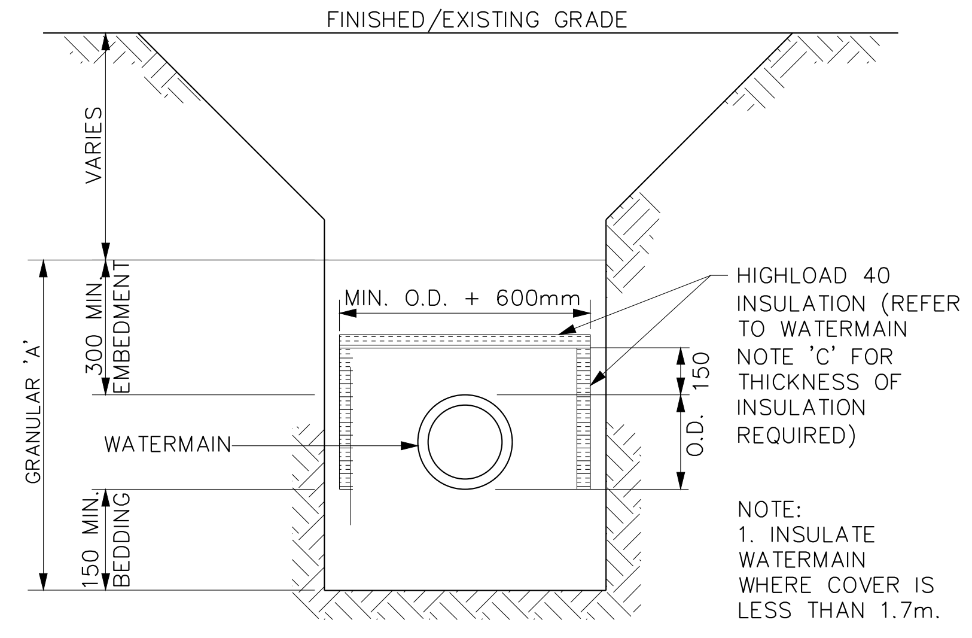
1.5m OR 2.0m GRANULAR TRAIL DETAIL
NTS

WTM/FITTING	ANODE SIZE (kg)	SPACING
100 mm	2.3	PER LENGTH OVER 3.0 m OR FITTING OF SIMILAR SIZE
150 mm	2.3	
200 mm	5.5	
250 mm	5.5	
300 mm	11	
COPPER SERVICE	2.3	AT EACH CURBSTOP
HYDRANT	5.5	AT HYDRANT BASE
VALVE	5.5	AT EACH VALVE
SERVICE SADDLE	2.3	AT EACH SERVICE SADDLE (CONNECT WIRE TO BOLT ON SADDLE TIGHT BETWEEN 2 NUTS)
TEES, ELBOWS ETC.	2.3	ON EACH FITTING FOR 100 mm – 150 mm PIPE
TEES, ELBOWS ETC.	5.5	ON EACH FITTING FOR 200 mm – 300 mm PIPE

ANODE SIZING CHART FOR ZINC ANODES


450mm
3000mm OR 4000mm TRAIL WIDTH
150mm
5% MAX
2% SLOPE TYP.
TOPSOIL AND SEED ALL DISTURBED AREAS
EXISTING GRADE
150mm
150mm
50mm LIMESTONE SCREENINGS COMPACTED TO 98% SPMDD
150mm GRANULAR 'A' COMPACTED TO 98% SPMDD (INCREASE DEPTH TO 250mm WITHIN THE COUNTY ROAD BUFFER)
WOVEN GEOTEXTILE FABRIC (TERRAFIX 270R)
UNDISTURBED OR COMPACTED SUBGRADE TO 98% SPMDD

3.0m OR 4.0m GRANULAR TRAIL DETAIL
NTS



NOTE:
1. INSULATE WATERMAIN WHERE COVER IS LESS THAN 1.7m.

TYPICAL WATERMAIN INSULATION DETAIL
NTS

GENERAL

A. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH TOWN OF THE BLUE MOUNTAINS STANDARDS AND OPS STANDARDS. WHERE CONFLICT OCCURS, TOWN STANDARDS TO GOVERN.
B. THE CONTRACTOR MUST OBTAIN A ROAD OCCUPANCY PERMIT FROM THE TOWN AND/OR COUNTRY AS NECESSARY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
C. THE OWNER'S ENGINEER SHALL PROVIDE BENCHMARK ELEVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK.
D. ALL PROPERTY BARS TO BE PRESERVED AND REPLACED BY AN OLS AT CONTRACTOR'S EXPENSE IF REMOVED/DISTRURBED DURING CONSTRUCTION.
E. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY WATER AND POWER.
F. DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS.MUNI 517 AND OPSS.MUNI 518. MAINTAIN ALL TRENCHES IN A DRY CONDITION. A MECP PERMIT TO TAKE WATER (PTTW) HAS BEEN OBTAINED FOR THIS PROJECT. THE CONTRACTOR SHALL ENSURE THAT ALL DEWATERING WORKS ARE IN ACCORDANCE WITH THE PERMIT.
G. ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL DISTRICT.
H. GENERAL INSTALLATION AND TESTING OF SEWERS, WATERMAIN AND APPURTENANCES TO BE IN ACCORDANCE WITH OPSS 407, 408, OPSS.MUNI 409, OPSS.MUNI 410, OPSS.MUNI 421 AND OPSS.MUNI 441, AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS.
I. ALL MAINTENANCE HOLES ARE 1200 mm DIAMETER, UNLESS OTHERWISE SPECIFIED.
J. ALL STRUCTURES TO BE INSTALLED WITH FROST STRAPS TO OPSD 701.100.
K. PIPE SUPPORT AT ALL STRUCTURES TO OPSD 708.020.
L. ALL MAINTENANCE HOLE AND CATCH BASIN FRAME AND GRATES TO BE SET TO BASE COURSE ASPHALT ELEVATION IN ACCORDANCE WITH OPSD 704.010. FRAME AND GRATES TO BE RAISED TO FINISHED GRADE PRIOR TO THE PLACEMENT OF SURFACE COURSE ASPHALT USING CONCRETE ADJUSTMENT UNITS. MAXIMUM COMBINED HEIGHT OF ADJUSTMENT UNITS SHALL BE 450 mm.
M. TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL OR IMPORTED SELECT SUBGRADE MATERIAL TO OPSS.MUNI 1010. BACKFILL TO BE PLACED IN MAXIMUM 200 mm THICK LIFTS (OR AS OTHERWISE DIRECTED BY THE GEOTECHNICAL CONSULTANT) AND COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
N. PIPE EMBEDMENT TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD. BACKFILL AND EMBEDMENT TO OPSD 802.010 (FLEXIBLE PIPE), GRANULAR 'A' EMBEDMENT OR OPSD 802.031 (RIGID PIPE) CLASS 'B', GRANULAR 'A' BEDDING, GRANULAR 'B' COVER (MAX. AGGREGATE SIZE 25 mm). MINIMUM BEDDING DEPTH 150 mm, MINIMUM COVER DEPTH 300 mm ON ALL PIPES. WHERE EXCESSIVELY WET OR POOR SUBGRADE IS ENCOUNTERED AT THE INVERT LEVEL, IT MAY BE NECESSARY TO INCREASE THE BEDDING THICKNESS.
O. CLEAR STONE COMPLETELY WRAPPED IN FILTER FABRIC MAY BE SUBSTITUTED FOR EMBEDMENT MATERIAL IF APPROVED BY THE ENGINEER.
P. DISTURBED AREAS TO BE REINSTATED TO PREVIOUS CONDITION OR BETTER.
Q. REINSTATEMENT OF ALL DISTURBED BOULEVARDS AND DITCHES TO INCLUDE REGRADING, PLACEMENT OF TOPSOIL AND SEED/SOD IN ACCORDANCE WITH DWG. DE-3 CROSS-SECTION NOTES, OPSS.MUNI 802 AND OPSS.MUNI 803. SOD TO BE STAKED WHERE NECESSARY TO AVOID MOVEMENT.
R. THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL EXISTING INFRASTRUCTURE/FACILITIES AS WELL AS NOTIFYING ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND CO-ORDINATE CONSTRUCTION ACCORDINGLY.
S. ALL ON-SITE MATERIAL SHALL BE PROPERLY STORED, SECURED, MONITORED AND COVERED AS REQUIRED. SPECIFICALLY, ALL PVC PIPE SHALL BE COVERED WHILE STORED ON-SITE.
T. ALL SIGNAGE TO COMPLY WITH THE TOWN OF THE BLUE MOUNTAINS SIGN BY-LAW.
U. HAZARDOUS TREE REMOVAL IS TO BE COMPLETED ALONG ANY WALKING PATHS OR TRAILS, LEANING OR BACKING ONTO INDIVIDUAL LOTS, OR ADJACENT TO ANY DITCHES OR ANY PROPOSED DITCHES TO A MINIMUM OF 6.0m FROM PROPERTY LINES, TRAILS, AND DITCHES. TREES THAT HAVE BEEN UNDERMINED OR HAVE HAD ITS ROOTS EXPOSED DURING CONSTRUCTION MAY BECOME A HAZARDOUS TREE AND MUST ALSO BE REMOVED.
V. THE MINIMUM COVER OVER ALL CULVERTS SHALL BE 0.3m IN ACCORDANCE WITH TOWN STANDARDS OR AS REQUIRED IN ACCORDANCE WITH MANUFACTURING GUIDELINES. THE GREATER SHALL GOVERN.
W. THE MINIMUM COVER OVER ALL UTILITIES SHALL BE 0.9m IN ACCORDANCE WITH TOWN STANDARDS OR AS REQUIRED BY UTILITY PROVIDER. THE GREATER SHALL GOVERN.

ROADS

A. SUBGRADE AND BOULEVARD MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD. SUBGRADE TO BE PROOF ROLLED WITH THE TOWN AND GEOTECHNICAL REPRESENTATIVE PRESENT PRIOR TO PLACING GRANULAR 'B'.
B. LIMESTONE SCREENINGS, GRANULAR 'A' AND 'B' TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 100% OF THE MATERIAL'S RESPECTIVE SPMDD.
C. ASPHALT TO BE COMPACTED TO A MINIMUM OF 92% OF THE MARSHALL MAXIMUM RELATIVE DENSITY (M.R.D).
D. ROADWAYS WITHIN MUNICIPAL RIGHT-OF-WAY TO BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE ROAD CROSS-SECTIONS.
E. JOINTS WITH EXISTING ASPHALT TO BE SAW CUT STRAIGHT PRIOR TO PLACING NEW ASPHALT. WHERE EXISTING ASPHALT IS THICKER THAN 75 mm, A 300 mm WIDE LAP JOINT SHALL BE GROUND INTO EXISTING ASPHALT PRIOR TO THE PLACEMENT OF SURFACE COURSE ASPHALT (SEE DETAIL).
F. ALL GRANULAR AND ASPHALT MATERIAL TO BE PLACED IN ACCORDANCE WITH OPSS.MUNI 310 AND OPSS.MUNI 314.
G. STOP SIGNS AND STREET SIGNS TO BE SUPPLIED AND INSTALLED PER TOWN STANDARDS.
H. TACK COAT TO BE APPLIED BETWEEN BASE AND TOP COURSE ASPHALT.
I. CONCRETE CURB AND GUTTER TO OPSD 600.040, AND OPSS.MUNI 353. CURB DEPRESSIONS AT SIDEWALK CROSSINGS IN ACCORDANCE WITH OPSD 310.033. DEPRESSIONS AT DRIVEWAYS IN ACCORDANCE WITH OPSD 351.010, THE MAXIMUM WIDTH SHALL BE IN ACCORDANCE WITH TOWN BYLAW 2014-48.
J. CONCRETE CURB TERMINATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSD 608.010.
K. CONCRETE SIDEWALK TO OPSD 310.010, CONCRETE SIDEWALK RAMPS TO OPSD 310.033 AND OPSS.MUNI 351. SUBBASE TO CONSIST OF 150 mm DEPTH GRANULAR 'A'.
L. UNPAINTED CAST IRON TACTILE WALKING SURFACE INDICATOR COMPONENTS TO BE IN ACCORDANCE WITH OPSD 310.039
M. 100 mm DIAMETER PIPE SUBDRAINS SHALL BE PROVIDED ON BOTH SIDES OF THE ROAD IN ACCORDANCE WITH OPSS.MUNI 405 AND OPSD 216.021, UNWRAPPED TRENCH, GRANULAR 'A' EMBEDMENT.
N. SUBDRAINS TO BE PERFORATED, COMPLETE WITH FILTER SOCK, OTHER THAN THE 2.0 m SECTION IMMEDIATELY UPSTREAM OF ALL STRUCTURES WHICH SHALL BE NON-PERFORATED.
O. All ROADWAY CULVERTS TO HAVE FROST TREATMENT AS PER OPSD 803.031.
P. SURFACE ASPHALT SHALL BE COMPLETED IN A SINGLE MOBILIZATION FOR BOTH PHASE 5A AND PHASE 5B
Q. SURFACE ASPHALT SHALL BE COMPLETED ON CROSSWINDS BOULEVARD PRIOR TO OPENING TO THE PUBLIC
R. DESIGN SPEED FOR LOCAL STREETS WITHIN WINDFALL SUBDIVISION IS 50Km/h. DESIGN SPEED FOR CROSSWINDS BOULEVARD IS 60Km/h.
S. POND MAINTENANCE ACCESS GATES AND TRAIL ACCESS GATES AS PER DETAIL ON DE-3.

STORM SEWER

A. MAINTENANCE HOLES AND CATCH BASIN MAINTENANCE HOLES TO OPSD 701.010, 701.011, 701.012.
B. MAINTENANCE HOLES TO BE BENCHED TO OPSD 701.021. MINIMUM BENCHING WIDTH SHALL BE 230 mm. CATCH BASIN MAINTENANCE HOLES TO HAVE A SUMP PER OPSD 701.010.
C. MAINTENANCE HOLE AND CATCH BASIN MAINTENANCE HOLE STEPS TO OPSD 405.010.
D. MAINTENANCE HOLE FRAMES AND GRATES TO OPSD 401.010 TYPE 'A' CLOSED COVER.
E. CATCH BASINS, DOUBLE CATCH BASINS AND REAR LOT CATCH BASINS TO OPSD 705.010 AND 705.020. ROADSIDE CATCH BASINS TO HAVE A SUMP. REAR LOT CATCH BASINS TO BE BENCHED.
F. DITCH INLET CATCH BASINS TO OPSD 705.030. DITCH INLET CATCH BASIN GRATES TO OPSD 403.010, 3:1 GRATE UNLESS OTHERWISE SPECIFIED.
G. CATCH BASIN AND CATCH BASIN MAINTENANCE HOLE FRAMES AND GRATES TO OPSD 400.020. FRAME AND GRATES TO BE INSTALLED IN THE CURB LINE TO OPSS 610.010.
H. CATCH BASIN LEADS – 300 mm DIAMETER SINGLE AND 375 mm DIAMETER DOUBLE. CATCH BASIN CONNECTIONS TO OPSD 708.010 AND OPSD 708.030.
I. RESIDENTIAL STORM SERVICE CONNECTIONS TO TOWN STD. DRAWING ST-STD-SUMP, 100 mm DIAMETER, GRANULAR 'A' EMBEDMENT (MIN. 150 mm BEDDING AND 300 mm COVER), USING PREMANUFACTURED CONNECTIONS TO THE MAIN. TERMINATE AT PROPERTY LINE WHERE SHOWN C/W A CAP/PLUG AND A 38 mm X 89 mm MARKER PLACED FROM THE INVERT TO 600 mm ABOVE FINISHED GRADE PAINTED WHITE. MINIMUM GRADE TO BE 1.0%. TERMINATE AT AN OBVERT ELEVATION AT LEAST 1.4 m BELOW PROPOSED GRADE AT PROPERTY LINE.
J. STUBS FOR PVC STORM SEWERS TO BE MIN. 1.0m LONG COMPLETE WITH PRE-MANUFACURED CAP. STUBS FOR CONCRETE STORM SEWERS TO BE MIN. 1 PIPE LENGTH (+/- 2.44m) COMPLETE WITH PRE-MANUFACTURED CAP.
K. DROP STRUCTURES AT MAINTENANCE HOLES TO OPSD 1003.020.
L. ALL ROADWAY CULVERTS TO HAVE FROST TREATMENT AS PER OPSD 803.031.

SANITARY SEWER

A. MAINTENANCE HOLES TO OPSD 701.010.
B. MAINTENANCE HOLES TO BE BENCHED TO OPSD 701.021 ALL CONNECTIONS TO MAINTENANCE HOLES TO INCLUDE KOR-N-SEAL RUBBER BOOT PIPE CONNECTION.
C. MAINTENANCE HOLE STEPS TO OPSD 405.010
D. MAINTENANCE HOLE FRAME AND COVER TO OPSD 401.010 TYPE 'A' CLOSED COVER. WHERE SPECIFIED, WATER TIGHT FRAME AND GRATE TO OPSD 401.050 SHALL BE USED.
E. MAINTENANCE HOLE STRUCTURES EXCEEDING 5.0m IN DEPTH TO INCLUDE SAFETY PLATFORM TO OPSD 404.020.
F. DROP STRUCTURES AT MAINTENANCE HOLES TO OPSD 1003.020.
G. RESIDENTIAL SERVICE CONNECTIONS TO OPSD 1006.020, 125 mm DIAMETER, GRANULAR 'A' EMBEDMENT (MIN. 150 mm BEDDING AND 300 mm COVER). RADIUS BENDS TO BE USED ON ALL SEWER CONNECTIONS WHERE THE ANGLE OF CONNECTION BETWEEN THE SERVICE AND SEWER EXCEEDS 90°.
H. RESIDENTIAL SERVICE CONNECTIONS TO BE TERMINATED AT THE PROPERTY LINE WITH A WATER TIGHT CAP, 125 mm x 100 mm REDUCER, CAP SUITABLY BRACED TO WITHSTAND TEST PRESSURES AND AN 38mm x 89mm MARKER PLACED FROM THE INVERT OF THE CONNECTION TO 600 mm ABOVE FINISHED GRADE PAINTED GREEN. MINIMUM GRADE OF SERVICE TO BE 2%, MAXIMUM GRADE TO BE 8%. TERMINATE AT AN ELEVATION AT LEAST 2.8 m BELOW PROPOSED GRADE AT PROPERTY LINE.
I. STUBS FOR FUTURE SANITARY SEWERS TO BE MIN. 1.0 m LONG COMPLETE WITH PRE-MANUFACTURED CAP.

WATERMAIN

A. ALL WORK ON EXISTING WATERMAIN TO BE COORDINATED WITH THE TOWN. TOWN TO BE PROVIDED WITH PRELIMINARY SCHEDULE AND 48 HOURS NOTICE.
B. MINIMUM GROUND COVER OVER WATERMAIN, SERVICE LATERALS AND HYDRANT LEADS TO BE 1.7m AT ALL POINTS, MAXIMUM GROUND COVER OVER WATERMAIN TO BE 2.5 m.
C. INSULATION TO BE INSTALLED OVER WATERMAIN OR SERVICES WITH LESS THAN 1.7m DEPTH OF COVER AS NOTED ON THE DRAWINGS OR MINIMUM AS FOLLOWS:
DEPTH OF COVER BETWEEN 1.4 TO 1.7m REQUIRES 50mm INSULATION.
DEPTH OF COVER BETWEEN 1.2 TO 1.7m REQUIRES 100mm INSULATION.
D. WATERMAIN NOT TO BE INSTALLED WITH LESS THAN 1.2 METRES DEPTH OF COVER.
E. PIPE RESTRAINTS TO BE PROVIDED AT ALL CHANGES IN PIPE DIRECTION, TERMINATIONS AND ANY LOCATION WHERE THRUST PRESSURES MAY OCCUR. WATER VALVES SHALL BE RESTRAINED ON EITHER SIDE TO THE SAME STANDARD THAT A DEAD END WOULD BE. WHERE SOIL CONDITIONS ARE SUSPECT, SUCH AS IN DISTURBED SOILS OR SOILS WITH BEARING STRENGTH OF LESS THAN 200 kPa, SIGMA SLCS SHALL BE USED. IN LIEU OF THRUST BLOCKS PIPE RESTRAINTS FOR PVC SHALL BE PER TOWN STANDARDS, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS (SEE CHART). THREADED ROD IN JOINT RESTRAINT IS NOT PERMISSIBLE.
F. CATHODIC PROTECTION OF ALL WATERMAIN FITTINGS AND APPURTENANCES TO BE PROVIDED AS PER TOWN STANDARD (SEE CHART).
G. RESIDENTIAL SERVICE CONNECTIONS TO OPSD 1104.010, 25 mm DIAMETER, 300 mm DEPTH GRANULAR 'A' EMBEDMENT.
H. RESIDENTIAL SERVICE CONNECTIONS TO TERMINATE AT PROPERTY LINE COMPLETE WITH CURB STOP VALVE, TESTING TAIL TO SURFACE CAPPED OR CRIMPED AND A 38mm x 89mm MARKER FROM THE INVERT OF THE SERVICE TO 600 mm ABOVE GRADE PAINTED BLUE.
I. ALL WATER SERVICES TO INCLUDE THE INSTALLATION OF AN INDIVIDUAL PRV WITHIN EACH BUILDING. PRV TO BE SUPPLIED AND INSTALLED BY THE BUILDER DURING HOUSE CONSTRUCTION.
J. HYDRANTS TO BE INSTALLED TO OPSD 1105.010.
K. HYDRANTS TO BE PAINTED CHROME YELLOW AND INCLUDE A FLEXSTAKE HYDRANT MARKER MODEL FHV804, 1.2 m LONG, COLOUR YELLOW WITH REFLECTIVE GRAPHIC ON BOTH SIDES AT THE TOP OF THE MARKER. MARKER TO BE POSITIONED ON THE RIGHT PORT AS VIEWED FROM THE STREET. A FIRE HYDRANT MARKER POST AND SIGN SHALL BE INSTALLED 0.3 m BEHIND EACH HYDRANT. THE SIGN SHALL BE REFLECTIVE WITH A RED HYDRANT ON A WHITE BACKGROUND AND MEASURE 0.3 x 0.3 m (OR APPROVED EQUAL). THE SIGN SHALL BE MOUNTED 1.5 m ABOVE GRADE.
L. ALL PVC WATERMAIN AND PE RESIDENTIAL SERVICES TO HAVE TRACER WIRE BETWEEN HYDRANTS AND OTHER CONDUCTING APPURTENANCES. CONTRACTOR SHALL TEST ALL TRACER WIRE TO CONFIRM CONNECTIVITY.
M. TRACER WIRE TO BE 10 GAUGE, MULTI-STRAND SHALL BE PLACED ON TOP AND ATTACHED IN TWO PLACES ON EACH LENGTH OF PVC OR PE PIPE. ALL CONNECTIONS SHALL BE MADE WITH "DRYCONN WATERPROOF CONNECTORS" OR APPROVED EQUAL.
N. VERTICAL CLEARANCE BETWEEN WATERMAINS AND SEWERS TO BE A MINIMUM OF 0.5m WHEN WATERMAIN IS BELOW THE SEWERS, HORIZONTAL CLEARANCE BETWEEN WATERMAINS AND SEWERS TO BE A MINIMUM OF 2.5m.
O. THE COMPLETE WATER SYSTEM, INCLUDING RESIDENTIAL SERVICE CONNECTIONS TO THE PROPERTY LINE AND HYDRANTS SHALL BE TESTED IN ACCORDANCE WITH THE TOWN'S WATERMAIN COMMISSIONING PROTOCOL. CONTRACTOR TO PROVIDE DETAILED WRITTEN WATERMAIN COMMISSIONING PROTOCOL FOR APPROVAL PRIOR TO COMMENCING TESTING OPERATIONS. CONNECTIONS TO EXISTING MAINS SHALL NOT BE MADE UNTIL WRITTEN AUTHORIZATION IS PROVIDED BY THE ENGINEER AND THE TOWN.
P. DURING CHLORINATION OR DECHLORINATION, CONTRACTOR SHALL OPERATE EACH SERVICE TO VERIFY FULL FLOW AND PRESSURE AT CURB STOP TO SATISFACTION OF THE ENGINEER.
Q. EXISTING WATER SERVICES THAT ARE TO BE ABANDONED MUST BE CAPPED AT MAIN INCLUDING MAIN STOP REMOVED, PLUG INSERTED TO TOWN STANDARDS AND REINSTATEMENT OF ALL DISTURBED AREAS TO EXISTING CONDITION OR BETTER.
R. WATER VALVES TO BE OPERATED BY TOWN STAFF ONLY.
S. ALL WATER USED IN COMMISSIONING AND TESTING TO BE POTABLE AND SUPPLIED FROM THE TOWN OF THE BLUE MOUNTAINS, THE TOWN OF COLLINGWOOD OR THE MUNICIPALITY OF MEAFORD.

MATERIALS

A. ALL MATERIAL TO COMPLY WITH CSA, OPSS AND TOWN STANDARDS.
B. SANITARY SEWER – PVC DR 35.
C. SANITARY SERVICE CONNECTIONS – PVC SDR 28.
D. STORM SEWER – PVC SDR 35 OR CONCRETE 65-D. ALL SEWERS TO BE JOINED WITH A GASKETED BALL AND SPIGOT SYSTEM. NON-REINFORCED CONCRETE PIPE MAY BE USED FOR SIZES UP TO AND INCLUDING 375 mm DIA. REINFORCED CONCRETE PIPE MAY BE USED FOR ALL SIZES OF SEWER.
E. STORM SERVICE CONNECTIONS – PVC SDR 28, COLOUR WHITE.
F. CULVERTS – GALVANIZED CORRUGATED STEEL PIPE. MIN. WALL THICKNESS 2.0 mm UNLESS OTHERWISE NOTED. ALL CULVERTS TO HAVE END PROTECTION TO OPSD 810.010 (BOTH ENDS), TYPE B – COMPLETE WITH FILTER FABRIC.
G. PERFORATED SUBDRAIN – BIG 'O' WITH GEOTEXTILE FILTER SOCK OR APPROVED EQUAL.
H. ALL CHEMICALS AND MATERIALS USED IN THE ALTERATION OR OPERATION OF THE DRINKING WATER SYSTEM THAT COME IN CONTACT WITH WATER WITHIN THE SYSTEM SHALL MEET ALL APPLICABLE STANDARDS SET BY BOTH THE AMERICAN WATER WORKS ASSOCIATION ("AWWA") AND THE AMERICAN NATIONAL STANDARDS INSTITUTE ("ANSI") SAFETY CRITERIA STANDARDS NSF/60, NSF/61 AND NSF372.
I. WATERMAIN – PVC DR 18.
J. WATER SERVICE CONNECTIONS TO BE TYPE 'K' COPPER PIPE, REHAU'S MUNICIPLEX (BLUE).
K. WATER SERVICE FITTINGS SHALL BE:
    MAIN STOP – MUELLER H25008
    CURB STOP – MUELLER H25209
    SERVICE SADDLE – ROBAR 2616
    TAPPING SADDLE – ROBAR 6906
    SERVICE BOXES – MUELLER A-726, STAINLESS STEEL RODS
L. PIPE RESTRAINERS – SIGMA C-900.
M. HYDRANTS – CLOW D51 CONCORD PREMIER, OPEN LEFT, WITH STORTZ CONNECTIONS ON ALL STEAMER PORTS. HYDRANT SETS SHALL BE INSTALLED NOT LESS THAN 0.9 m FROM THE CENTER OF THE VALVE TO THE CENTER OF THE HYDRANT. TRACER WIRE SHALL BE ATTACHED TO THE OUTSIDE OF THE VALVE BOX AND WIRE BROUGHT INTO VALVE BOX UNDER CAP.
N. LIVE TAP SADDLES TO BE EPOXY COATED COMPLETE WITH STAINLESS STEEL BOLTS.
O. MECHANICAL JOINT DUCTILE FITTINGS TO AWWA/ANSI C153/A21.53. INCLUDING PROTECTO-CAPS, CAT NO. 175P190 OR APPROVED EQUAL.
P. ISOLATION VALVES TO BE RESILIENT SEAT GATE VALVES WITH MECHANICAL JOINTS, OPEN LEFT, CLOW. VALVE BOXES TO BE 5-SL-48 SLIDING OR MUELLER MVB COMPOSITE COMPLETE WITH GUIDE PLATE AND DUCTILE ADJUSTABLE TOP AND LID OR APPROVED EQUAL. CAPS TO BE PAINTED BLUE.
Q. ALL WATERMAIN FASTNERS (STAINLESS BOLTS) TO BE COMPLETE WITH ZINC CAPS.
R. BLOWOFFS IN ACCORDANCE WITH OPSD 1104.030, MIN 50mm DIA.
S. ALL SPECIFIED AGGREGATES TO OPSD 1010.
T. RIPRAP TO OPSS 1004.05.05, ON FILTER FABRIC.
U. FILTER FABRIC – TERRAFIX 270R OR APPROVED EQUAL.
V. INSULATION – STYROFOAM HIGHLOAD 40 EXTRUDED POLYSTYRENE FOAM INSULATION, 50mm THICK SHEETS.
W. TURF PAVERS – TURFSTONE BY UNILOCK OR APPROVED EQUAL.

DISCLAIMER AND COPYRIGHT

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.

BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM
ENGINEERING

DETAILS, SECTIONS AND NOTES

DESIGN: BM	FILE: 111179-5	DWG: DE-1
DRAWN: BM	DATE: FEB 2021	
CHECK: JPA/MJC	SCALE: AS NOTED	

Drawing Name: 111179-5-DE01.dwg, Plotted: May 17, 2021

STORM SEWER DESIGN SHEET - 5 YEAR

Approved: [redacted]

IDF Curve Coefficients			
Storm	A	B	C
2 Year	854.100	7.781	0.830
5 Year	**1234.576**	**8.297**	**0.851**
25 Year	1750.276	8.303	0.862
100 Year	2171.754	8.303	0.867

Manning's Coefficient	
CSP	0.024
Conc.	0.013
PVC	0.009

Project Name: Windfall - Phase 5
Project Number: 111179-5
Municipality: Town of The Blue Mountains
Designed By: BM
Date: August 13, 2020
Checked By: AO
Date: August 31, 2020

Legend: Existing ▨
Proposed 🟨
Future ☐

LOCATION OF SECTION	AREA LABEL	UPSTREAM MAINTENANCE HOLE	DOWNSTREAM MAINTENANCE HOLE	TRIBUTARY AREA - A	RUNOFF COEFFICIENT - C	INDIVIDUAL A x C	CUMULATIVE AREA	CUMULATIVE A x C	TIME OF CONCENTRATION	RAINFALL INTENSITY	PEAK FLOW	MANNING'S ROUGHNESS COEFFICIENT	LENGTH	SLOPE	DIAMETER	FULL FLOW VELOCITY	FULL FLOW CAPACITY	ACTUAL VELOCITY	TIME OF FLOW	CALCULATED PIPE DIAMETER	TIME OF CONCENTRATION
		MH No.	MH No.	ha					min.	mm/hr	cms		m	m/m	mm	m/s	cms	m/s	min	mm	min
Black Willow Crescent	100G	CBMH 613	STM MH 612	0.060	0.75	0.045	0.060	0.045	15.00	84.71	0.011	0.009	23.9	0.0170	300	2.58	0.182	1.35	0.29	103	15.29
Black Willow Crescent	100F	STM MH 612	CBMH 611	0.250	0.75	0.188	0.310	0.233	15.29	83.81	0.054	0.009	10.9	0.0150	300	2.42	0.171	2.00	0.09	195	15.39
Black Willow Crescent	100E	CBMH 611	CBMH 610	0.050	0.75	0.038	0.360	0.270	15.39	83.54	0.063	0.009	71.8	0.0160	300	2.50	0.177	2.14	0.56	203	15.95
Black Willow Crescent	100D	CBMH 610	CBMH 609	0.680	0.75	0.510	1.040	0.780	15.95	81.89	0.177	0.009	88.3	0.0160	375	2.90	0.320	2.80	0.53	300	16.47
Black Willow Crescent	100C	CBMH 609	CBMH 608	0.540	0.75	0.405	1.580	1.185	16.47	80.41	0.265	0.009	41.5	0.0120	375	2.51	0.277	2.51	0.28	368	16.75
Black Willow Crescent	100B	CBMH 608	DCBMH 607	0.110	0.75	0.083	1.690	1.268	16.75	79.66	0.280	0.009	51.1	0.0050	450	1.83	0.291	1.83	0.47	444	17.21
Black Willow Crescent	100A	DCBMH 607	CBMH 601	0.550	0.75	0.413	2.240	1.680	17.21	78.42	0.366	0.013	27.1	0.0050	600	1.54	0.434	1.54	0.29	563	17.51
Courtland Street	101F	CBMH510	STM MH 606	0.030	0.75	0.023	0.030	0.023	15.00	84.71	0.005	0.009	40.9	0.0170	300	2.58	0.182	1.12	0.61	80	15.61
Courtland Street	-	STM MH 606	CBMH 605	0.000	0.75	0.000	0.030	0.023	15.61	82.87	0.005	0.009	26.1	0.0350	300	3.70	0.261	1.46	0.30	69	15.91
Courtland Street	101E	CBMH 605	CBMH 604	0.290	0.75	0.218	0.320	0.240	15.91	82.00	0.055	0.009	81.9	0.0370	300	3.80	0.269	2.81	0.49	165	16.39
Courtland Street	101D	CBMH 604	CBMH 603	0.800	0.75	0.600	1.120	0.840	16.39	80.63	0.188	0.009	88.9	0.0130	375	2.61	0.289	2.61	0.57	319	16.96
Courtland Street	101C	CBMH 603	CBMH 602	0.880	0.75	0.660	2.000	1.500	16.96	79.08	0.330	0.009	43.1	0.0140	450	3.06	0.487	3.06	0.23	388	17.19
Courtland Street	101B	CBMH 602	CBMH 601	0.260	0.75	0.195	2.260	1.695	17.19	78.47	0.369	0.009	40.7	0.0100	450	2.59	0.412	2.59	0.26	432	17.46
Courtland Street	101A	CBMH 601	DCBMH 600	0.240	0.75	0.180	4.740	3.555	17.51	77.66	0.767	0.013	34.9	0.0050	750	1.78	0.787	1.78	0.33	742	17.83
Courtland Street	102B	DCBMH 600	STM MH 418	0.400	0.75	0.300	5.140	3.855	17.83	76.83	0.823	0.013	32.0	0.0050	825	1.90	1.015	1.90	0.28	762	18.11
Courtland Street	-	CBMH 511	CBMH 521	-	-	0.000	-	0.000	15.00	84.71	0.000	0.009	74.7	0.0080	300	1.77	0.125	0.00	-	0	15.00
Courtland Street	103J	CBMH 521	CBMH 520	0.130	0.75	0.098	0.130	0.098	15.00	84.71	0.023	0.009	30.9	0.0080	300	1.77	0.125	1.26	0.41	159	15.41
Courtland Street	103I	CBMH 520	CBMH 519	0.190	0.75	0.143	0.320	0.240	15.41	83.47	0.056	0.009	49.9	0.0220	300	2.93	0.207	2.33	0.36	183	15.77
Courtland Street	103H	CBMH 519	CBMH 518	0.320	0.75	0.240	0.640	0.480	15.77	82.41	0.110	0.009	90.2	0.0220	300	2.93	0.207	2.80	0.54	236	16.30
Courtland Street	103G	CBMH 518	CBMH 517	0.540	0.75	0.405	1.180	0.885	16.30	80.88	0.199	0.009	24.6	0.0220	300	2.93	0.207	2.93	0.14	295	16.44
Courtland Street	103F	CBMH 517	CBMH 516	0.100	0.75	0.075	1.280	0.960	16.44	80.49	0.215	0.009	34.7	0.0130	375	2.61	0.289	2.61	0.22	335	16.66
Courtland Street	103E	CBMH 516	CBMH 515	0.160	0.75	0.120	1.440	1.080	16.66	79.88	0.240	0.009	16.9	0.0080	450	2.32	0.368	2.32	0.12	383	16.79
Courtland Street	103D	CBMH 515	CBMH 514	0.170	0.75	0.128	1.610	1.208	16.79	79.55	0.267	0.009	37.3	0.0080	450	2.32	0.368	2.32	0.27	399	17.05
Courtland Street	103C	CBMH 514	CBMH 513	0.080	0.75	0.060	1.690	1.268	17.05	78.83	0.278	0.009	21.7	0.0080	450	2.32	0.368	2.32	0.16	405	17.21
Courtland Street	103B	CBMH 513	DCBMH 512	0.050	0.75	0.038	1.740	1.305	17.21	78.42	0.284	0.009	24.0	0.0080	450	2.32	0.368	2.32	0.17	408	17.38
Courtland Street	103A	DCBMH 512	STM MH 502	0.430	0.75	0.323	2.170	1.628	17.38	77.97	0.353	0.009	15.6	0.0080	450	2.32	0.368	2.32	0.11	442	17.50
Courtland Street	-	CBMH 510	CBMH 509	-	-	0.000	-	0.000	15.00	84.71	0.000	0.009	34.2	0.0100	300	1.98	0.140	0.00	-	0	15.00
Courtland Street	104F	CBMH 509	STM MH 508	0.040	0.75	0.030	0.040	0.030	15.00	84.71	0.007	0.009	24.2	0.0100	300	1.98	0.140	1.00	0.41	98	15.41
Courtland Street	104G	CBMH 511	STM MH 508	0.040	0.75	0.030	0.040	0.030	15.00	84.71	0.007	0.009	21.9	0.0200	300	2.79	0.198	1.29	0.28	86	15.28
Sycamore Street	104H	STM MH 508	CBMH 507	0.180	0.75	0.135	0.260	0.195	15.41	83.48	0.045	0.009	10.4	0.0190	375	3.16	0.349	2.06	0.08	174	15.49
Sycamore Street	104E	CBMH 507	CBMH 506	0.080	0.75	0.060	0.340	0.255	15.49	83.23	0.059	0.009	39.8	0.0220	375	3.40	0.376	2.34	0.28	187	15.77
Sycamore Street	104D	CBMH 506	CBMH 505	0.180	0.75	0.135	0.520	0.390	15.77	82.39	0.089	0.009	24.7	0.0220	375	3.40	0.376	2.61	0.16	219	15.93
Sycamore Street	104C	CBMH 505	CBMH 504	0.260	0.75	0.195	0.780	0.585	15.93	81.94	0.133	0.009	88.8	0.0220	375	3.40	0.376	2.91	0.51	254	16.44
Sycamore Street	104B	CBMH 504	CBMH 503	0.700	0.75	0.525	1.480	1.110	16.44	80.50	0.248	0.009	85.2	0.0150	375	2.81	0.310	2.81	0.51	345	16.94
Sycamore Street	104A	CBMH 503	STM MH 502	0.730	0.75	0.548	2.210	1.658	16.94	79.13	0.364	0.009	46.4	0.0140	450	3.06	0.487	3.06	0.25	403	17.20
Sycamore Street	-	STM MH 502	DCBMH 501	0.000	0.75	0.000	4.380	3.285	17.50	77.68	0.709	0.013	44.8	0.0100	675	2.35	0.841	2.35	0.32	633	17.81
Sycamore Street	105	DCBMH 501	STM MH 415	0.330	0.75	0.248	4.710	3.533	17.81	76.88	0.754	0.013	29.3	0.0100	675	2.35	0.841	2.35	0.21	648	18.02
Crosswinds Boulevard	---	STM MH 418	STMMH 417	0.000	0.75	0.000	5.140	3.855	18.11	76.14	0.815	0.013	14.8	0.0050	825	1.90	1.015	1.90	0.13	760	18.24
Crosswinds Boulevard	102A	STMMH 417	STMMH 416	0.220	0.75	0.165	5.360	4.020	18.24	75.82	0.847	0.013	28.5	0.0050	825	1.90	1.015	1.90	0.25	770	18.49
Crosswinds Boulevard	---	STMMH 416	STMMH 415	0.000	0.75	0.000	5.360	4.020	18.49	75.21	0.840	0.013	41.8	0.0050	825	1.90	1.015	1.90	0.37	768	18.86
Sugar Maple Street	---	STMMH 415	CBMH 414	0.000	0.75	0.000	10.070	7.553	18.86	74.35	1.560	0.013	12.0	0.0080	975	2.68	2.004	2.68	0.07	887	18.94
Sugar Maple Street	106I	DICBMH 414	CBMH 414	0.570	0.75	0.428	0.570	0.428	15.00	84.71	0.101	0.009	16.6	0.1000	300	6.25	0.442	4.78	0.06	172	15.00
Sugar Maple Street	106H	CBMH 414	CBMH 413	0.040	0.75	0.030	10.680	8.010	18.94	74.18	1.650	0.013	81.4	0.0080	975	2.68	2.004	2.68	0.51	906	19.44
Sugar Maple Street	106G	CBMH 413	CBMH 412	0.640	0.75	0.480	11.320	8.490	19.44	73.02	1.722	0.013	28.9	0.0080	975	2.68	2.004	2.68	0.18	921	19.62
Sugar Maple Street	106F	CBMH 412	CBMH 411	0.140	0.75	0.105	11.460	8.595	19.62	72.63	1.734	0.013	29.9	0.0090	975	2.85	2.126	2.85	0.18	903	19.79
Sugar Maple Street	106E	CBMH 411	CBMH 410	0.240	0.75	0.180	11.700	8.775	19.79	72.24	1.761	0.013	44.6	0.0140	975	3.55	2.652	3.55	0.21	836	20.00
Sugar Maple Street	106D	CBMH 410	CBMH 409	0.190	0.75	0.143	11.890	8.918	20.00	71.78	1.778	0.013	24.5	0.0030	1200	1.89	2.135	1.89	0.22	1120	20.22
Sugar Maple Street	106C	CBMH 409	CBMH 408	0.080	0.75	0.060	11.970	8.978	20.22	71.32	1.779	0.013	21.5	0.0030	1200	1.89	2.135	1.89	0.19	1120	20.41
Sugar Maple Street	106B	DCBMH 408	CBMH 408	0.310	0.75	0.233	0.310	0.233	15.00	84.71	0.055	0.009	14.0	0.0050	375	1.62	0.179	1.32	0.18	240	15.18
Sugar Maple Street	106A	CBMH 408	DCBMH 407	0.070	0.75	0.053	12.350	9.263	20.41	70.92	1.825	0.013	33.6	0.0030	1200	1.89	2.135	1.89	0.30	1131	20.71
Sugar Maple Street	107G	DCBMH 407	CBMH 406	0.240	0.75	0.180	12.590	9.443	20.71	70.30	1.844	0.013	43.7	0.0030	1200	1.89	2.135	1.89	0.39	1135	21.09
Sugar Maple Street	107F	CBMH 406	CBMH 405	0.520	0.75	0.390	13.110	9.833	21.09	69.52	1.899	0.013	24.1	0.0030	1200	1.89	2.135	1.89	0.21	1148	21.31
Sugar Maple Street	107E	CBMH 405	CBMH 404	0.080	0.75	0.060	13.190	9.893	21.31	69.09	1.899	0.013	25.8	0.0030	1200	1.89	2.135	1.89	0.23	1148	21.53
Sugar Maple Street	107D	CBMH 404	DCBMH 403	0.220	0.75	0.165	13.410	10.058	21.53	68.64	1.918	0.013	44.0	0.0030	1200	1.89	2.135	1.89	0.39	1152	21.92
Sugar Maple Street	107C	DCBMH 403	CBMH 402	0.400	0.75	0.300	13.810	10.358	21.92	67.89	1.953	0.013	39.3	0.0030	1200	1.89	2.135	1.89	0.35	1160	22.27
Sugar Maple Street	107B	CBMH 402	DCBMH 401	0.180	0.75	0.135	13.990	10.493	22.27	67.23	1.960	0.013	10.2	0.0030	1200	1.89	2.135	1.89	0.09	1162	22.36
Sugar Maple Street	107A	DCBMH 401	DCBMH 107	0.240	0.75	0.180	14.230	10.673	22.36	67.07	1.988	0.013	8.5	0.0040	1200	2.18	2.466	2.18	0.06	1107	22.42
Yellow Birch Crescent	-	STM MH 226	CBMH 213	-	-	-	-	-	-	-	-	-	45.3	0.0050	300	-	-	-	-	-	-
Yellow Birch Crescent	108L	CBMH 213	CBMH 212	0.130	0.65	0.085	0.130	0.085	15.00	84.71	0.020	0.009	46.2	0.0090	300	1.87	0.133	1.27	0.61	147	15.61
Yellow Birch Crescent	108K	CBMH 212	CBMH 211	0.150	0.65	0.098	0.280	0.182	15.61	82.87	0.042	0.009	32.6	0.0110	300	2.07	0.146	1.67	0.33	188	15.93
Yellow Birch Crescent	108J	CBMH 211	CBMH 210	0.300	0.65	0.195	0.580	0.377	15.93	81.93	0.086	0.009	33.7	0.0110	300	2.07	0.146	2.02	0.28	245	16.21
Yellow Birch Crescent	108I	CBMH 210	CBMH 209	0.200	0.65	0.130	0.780	0.507	16.21	81.14	0.114	0.009	26.3	0.0110	300	2.07	0.146	2.07	0.21	273	16.42
Yellow Birch Crescent	108H	CBMH 209	CBMH 208	0.140	0.65	0.091	0.920	0.598	16.42	80.54	0.134	0.009	29.2	0.0215	300	2.90	0.205	2.90	0.17	256	16.59
Yellow Birch Crescent	108G	CBMH 208	CBMH 207	0.290	0.65	0.189	1.210	0.787	16.59	80.08	0.175	0.009	74.3	0.0215	300	2.90	0.205	2.90	0.43	283	17.02
Yellow Birch Crescent	108F	CBMH 207	CBMH 206	0.460	0.65	0.299	1.670	1.086	17.02	78.93	0.238	0.009	44.2	0.0100	375	2.29	0.253	2.29	0.32	366	17.34
Yellow Birch Crescent	108E	CBMH 206	CBMH 205	0.190	0.65	0.124	1.860	1.209	17.34	78.09	0.262	0.009	26.8	0.0100	450	2.59	0.412	2.59	0.17	380	17.51
Yellow Birch Crescent	108D	CBMH 205	CBMH 204	0.230	0.65	0.150	2.090	1.359	17.51	77.64	0.293	0.009	19.3	0.0075	450	2.24	0.357	2.24	0.14	418	17.66
Yellow Birch Crescent	108C	CBMH 204	CBMH 203	0.080	0.65	0.052	2.170	1.411	17.66	77.28	0.303	0.009	36.6	0.0075	450	2.24	0.357	2.24	0.27	423	17.93
Yellow Birch Crescent	108B	CBMH 203	CBMH 202	0.160	0.65	0.104	2.330	1.515	17.93	76.59	0.322	0.009	23.2	0.0075	450	2.24	0.357	2.24	0.17	433	18.10
Yellow Birch Crescent	108A	CBMH 202	DCBMH 201	0.270	0.65	0.176	2.600	1.690	18.10	76.17	0.358	0.009	20.7	0.0075	525	2.49	0.538	2.49	0.14	450	18.24
Yellow Birch Crescent	109M	DICB	STM MH 226	0.190	0.40	0.076	0.190	0.076	15.00	84.71	0.018	0.009	15.1	0.0200	300	2.79	0.198	1.65	0.15	122	15.15
Yellow Birch Crescent	-	STM MH 226	CBMH 225	0.000	0.00	0.000	0.190	0.076	15.15	84.24	0.018	0.009	49.4	0.0050	300	1.40	0.099	0.99	0.83	158	15.99
Yellow Birch Crescent	109L	CBMH 225	CBMH 224	0.270	0.65	0.176	0.460	0.252	15.99	81.78	0.057	0.009	27.5	0.0050	300	1.40	0.099	1.35	0.34	244	16.32
Yellow Birch Crescent	109K	CBMH 224	CBMH 223	0.060	0.65	0.039	0.520	0.291	16.32	80.82	0.065	0.009	28.0	0.0050	300	1.40	0.099	1.40	0.33	257	16.66
Yellow Birch Crescent	109J	CBMH 223	CBMH 222	0.070	0.65	0.046	0.590	0.336	16.66	79.90	0.075	0.009	28.0	0.0050	300	1.40	0.099	1.40	0.33	270	16.99
Yellow Birch Crescent	109I	CBMH 222	CBMH 221	0.370	0.65	0.241	0.960	0.577	16.99	79.00	0.127	0.009	28.0	0.0050	375	1.62	0.179	1.62	0.29	329	17.28
Yellow Birch Crescent	109H	CBMH 221	CBMH 220	0.090	0.65	0.059	1.050	0.635	17.28	78.24	0.138	0.009	28.8	0.0120	375	2.51	0.277	2.35	0.20	289	17.48
Yellow Birch Crescent	109G	CBMH 220	CBMH 219	0.320	0.65	0.208	1.370	0.843	17.48	77.72	0.182	0.009	80.6	0.0160	375	2.90	0.320	2.82	0.48	303	17.96
Yellow Birch Crescent	109F	CBMH 219	CBMH 218	0.650	0.65	0.423	2.020	1.266	17.96	76.51	0.269	0.009	76.2	0.0200	375	3.24	0.358	3.24	0.39	337	18.35
Yellow Birch Crescent	109E	CBMH 218	CBMH 217	0.630	0.65	0.410	2.650	1.675	18.35	75.56	0.352	0.009	46.5	0.0075	450	2.24	0.357	2.24	0.35	447	18.70
Yellow Birch Crescent	109D	CBMH 217	CBMH 216	0.410	0.65	0.267	3.060	1.942	18.70	74.73	0.403	0.009	46.5	0.0075	525	2.49	0.538	2.49	0.31	471	19.01
Yellow Birch Crescent	109C	CBMH 216	CBMH 215	0.350	0.65	0.228	3.410	2.169	19.01	74.00	0.446	0.009	39.6	0.0075	525	2.49	0.538	2.49	0.27	489	19.27
Yellow Birch Crescent	109B	CBMH 215	STM MH 214	0.160	0.65	0.104	3.570	2.273	19.27	73.40	0.463	0.009	16.8	0.0075	525	2.49	0.538	2.49	0.11	496	19.39
Yellow Birch Crescent	109A	STM MH 214	DCBMH 201	0.260	0.65	0.169	3.830	2.442	19.39	73.14	0.496	0.009	32.8	0.0075	525	2.49	0.538	2.49	0.22	509	19.61
Yellow Birch Crescent	110H	DCBMH 201	DCBMH 119	0.240	0.65	0.156	6.670	4.288	19.61	72.65	0.865	0.009	53.8	0.0135	600	3.64	1.030	3.64	0.25	562	19.85
Crosswinds Boulevard	110G	DCBMH 119	STMMH 118	0.310	0.65	0.202	6.980	4.490	19.85	72.11	0.899	0.009	9.5	0.0135	600	3.64	1.030	3.64	0.04	570	19.90
Crosswinds Boulevard	110F	STMMH 118	STMMH 117	0.420	0.65	0.273	7.400	4.763	19.90	72.02	0.953	0.013	24.4	0.0180	675	3.15	1.128	3.15	0.13	633	20.03
Snow Apple Crescent	110E	STMMH 117	CBMH 116	0.200	0.65	0.130	7.600	4.893	20.03	71.74	0.975	0.013	43.2	0.020	675	3.32	1.189	3.32	0.22	626	20.24
Snow Apple Crescent	110D	CBMH 116	STMMH 115	0.140	0.65	0.091	7.740	4.984	20.24	71.27	0.987	0.013	19.4	0.020	675	3.32	1.189	3.32	0.10	629	20.34
Snow Apple Crescent	---	STM MH 122	CBMH 121	0.000	0.65	0.000	0.000	0.000	15.00	84.71	0.000	0.009	42.8	0.010	300	1.98	0.140	0.00	-	0	15.00
Snow Apple Crescent	110C	CBMH 121	DCBMH 120	0.400	0.65	0.260	0.400	0.260	15.00	84.71	0.061	0.009	39.3	0.010	300	1.98	0.140	1.78	0.37	220	15.37
Snow Apple Crescent	110B	DCBMH 120	STMMH 115	0.390	0.65	0.254	0.790	0.514	15.37	83.59	0.119	0.009	18.0	0.005	375	1.62	0.179	1.62	0.19	322	15.55
Snow Apple Crescent	---	STMMH 115	CBMH 114	0.000	0.65	0.000	8.530	5.497	20.34	71.07	1.085	0.013	31.3	0.020	750	3.56	1.574	3.56	0.15	652	20.49
Snow Apple Crescent	110A	CBMH 114	CBMH 113	0.160	0.65	0.104	8.690	5.601	20.49	70.76	1.101	0.013	34.9	0.015	750	3.09	1.363	3.09	0.19	692	20.67
Snow Apple Crescent	---	STM MH 122	CBMH 128	0.000	0.65	0.000	0.000	0.000	15.00	84.71	0.000	0.009	37.4	0.027	300	3.25	0.230	0.00	-	0	15.00
Snow Apple Crescent	111F	CBMH 128	STMMH 127	0.320	0.65	0.208	0.320	0.208	15.00	84.71	0.049	0.009	23.2	0.022	300	2.93	0.207	2.25	0.17	175	15.17
Snow Apple Crescent	---	STMMH 127	CBMH 126	0.000	0.65	0.000	0.320	0.208	15.17	84.18	0.049	0.009	32.0	0.005	300	1.40	0.099	1.30	0.41	230	15.58
Snow Apple Crescent	111E	CBMH 126	DCBMH 124	0.440	0.65	0.286	0.760	0.494	15.58	82.95	0.114	0.009	30.7	0.005	375	1.62	0.179	1.61	0.32	316	15.90
Snow Apple Crescent	111D	DCBMH 124	CBMH 123	0.320	0.65	0.208	1.080	0.702	15.90	82.02	0.160	0.009	24.9	0.005	375	1.62	0.179	1.62	0.26	359	16.16
Snow Apple Crescent	111C	CBMH 123	CBMH 113	0.150	0.65	0.098	1.230	0.800	16.16	81.29	0.181	0.009	40.2	0.005	450	1.83	0.291	1.81	0.37	376	16.53
Snow Apple Crescent	111B	CBMH 113	CBMH 112	0.180	0.65	0.117	10.100	6.518	20.67	70.37	1.274	0.013	8.5	0.005	975	2.12	1.585	2.12	0.07	898	20.74
Snow Apple Crescent	111A	CBMH 112	STMMH 111	0.100	0.65	0.065	10.200	6.583	20.74	70.23	1.284	0.013	42.0	0.002	1200	1.54	1.744	1.54	0.45	1070	21.20
Block 48	---	STMMH 111	STM MH 110	0.000	0.65	0.000	10.200	6.583	21.20	69.31	1.267	0.013	33.5	0.002	1200	1.54	1.744	1.54	0.36	1064	21.56
Block 48	112/113	HEADWALL #3	STM MH 110	5.610	0.40	2.244	5.610	2.244	45.00	41.89	0.261	0.009	14.5	0.060	600	7.68	2.172	4.95	0.05	271	45.05
Block 48	---	STM MH 110	STM MH 109	0.000	0.65	0.000	15.810	8.827	21.56	68.59	1.682	0.013	53.9	0.002	1350	1.67	2.387	1.67	0.54	1183	22.10
White Oak Street	114G	CBMH 307	CBMH 306	0.040	0.65	0.026	0.040	0.026	15.00	84.71	0.006	0.009	17.7	0.016	300	2.50	0.177	1.14	0.26	85	15.26
White Oak Street	114F	CBMH 306	CBMH 305	0.160	0.65	0.104	0.200	0.130	15.26	83.92	0.030	0.009	17.6	0.015	300	2.44	0.173	1.73	0.17	156	15.43
White Oak Street	114E	CBMH 305	CBMH 304	0.110	0.65	0.072	0.310	0.202	15.43	83.41	0.047	0.009	13.4	0.026	300	3.19	0.225	2.36	0.09	166	15.52
White Oak Street	114D	CBMH 304	STM MH 303	0.100	0.65	0.065	0.410	0.267	15.52	83.12	0.062	0.009	15.9	0.032	300	3.53	0.250	2.75	0.10	177	15.62
White Oak Street	---	STM MH 303	CBMH 302	0.000	0.00	0.000	0.410	0.267	15.62	82.84	0.061	0.009	57.4	0.005	300	1.40	0.099	1.38	0.69	251	16.31
White Oak Street	114C	CBMH 302	CBMH 301	0.480	0.65	0.312	0.890	0.579	16.31	80.85	0.130	0.009	32.4	0.014	300	2.34	0.165	2.34	0.23	274	16.54
White Oak Street	114B	CBMH 301	STM MH 109	0.090	0.65	0.059	0.980	0.637	16.54	80.21	0.142	0.009	12.4	0.018	300	2.65	0.187	2.65	0.08	270	16.62
Block 48	---	STM MH 109	CBMH 108	0.000	0.65	0.000	16.790	9.464	22.10	67.56	1.776	0.013	8.5	0.0035	1350	2.21	3.158	2.13	0.07	1088	22.16
Red Pine Street	115J	DICB 318	CBMH 318	0.320	0.40	0.128	0.320	0.128	15.00	141.67	0.101	0.009	9.9	0.026	300	3.19	0.225	2.91	0.06	222	15.06
Red Pine Street	115I	CBMH 318	STM MH 317	0.010	0.65	0.007	0.330	0.135	15.06	84.54	0.032	0.009	9.9	0.010	300	1.98	0.140	1.49	0.11	172	15.17
Red Pine Street	115H	STM MH 317	STM MH 316	0.020	0.65	0.013	0.350	0.148	15.17	84.20	0.034	0.009	35.2	0.010	300	1.94	0.137	1.50	0.39	179	15.56
Red Pine Street	115G	CBMH 316	STM MH 315	0.060	0.65	0.039	0.410	0.187	15.56	83.02	0.043	0.009	28.5	0.031	300	3.48	0.246	2.46	0.19	156	15.75
Red Pine Street	115F	CBMH 315	STM MH 314	0.410	0.65	0.267	0.820	0.453	15.75	82.46	0.104	0.009	39.7	0.035	300	3.70	0.261	3.27	0.20	212	15.95
Red Pine Street	115E	DCBMH 320	STM MH 314	0.420	0.65	0.273	0.420	0.273	15.00	84.71	0.064	0.009	10.7	0.004	375	1.45	0.160	1.27	0.14	266	15.00
Red Pine Street	---	STM MH 314	CBMH 313	0.000	0.00	0.000	1.240	0.726	15.95	81.87	0.165	0.009	49.6	0.014	375	2.66	0.294	2.58	0.32	302	16.27
Red Pine Street	115D	CBMH 313	STM MH 312	0.580	0.65	0.377	1.820	1.103	16.27	80.96	0.248	0.009	23.2	0.004	450	1.64	0.260	1.64	0.24	442	16.51
Red Pine Street	---	STM MH 312	CBMH 311	0.000	0.00	0.000	1.820	1.103	16.51	80.30	0.246	0.009	42.2	0.004	450	1.64	0.260	1.64	0.43	440	16.94
Red Pine Street	115C	CBMH 311	STM MH 310	0.560	0.65	0.364	2.380	1.467	16.94	79.14	0.322	0.009	36.7	0.004	525	1.81	0.393	1.81	0.34	487	17.28
Red Pine Street	---	STM MH 310	CBMH 309	0.000	0.00	0.000	2.380	1.467	17.28	78.25	0.319	0.009	20.8	0.004	525	1.81	0.393	1.81	0.19	485	17.47
Red Pine Street	115B	CBMH 309	CBMH 308	0.320	0.65	0.208	2.700	1.675	17.47	77.76	0.362	0.009	19.7	0.004	525	1.81	0.393	1.81	0.18	509	17.65
Red Pine Street	115A	DCBMH 308	CBMH 108	0.380	0.65	0.247	3.080	1.922	17.65	77.30	0.413	0.009	25.1	0.004	600	1.98	0.561	1.98	0.21	535	17.86
White Oak Street	114A	CBMH 108	DCBMH 107	0.030	0.65	0.020	19.900	11.405	22.16	67.43	2.136	0.013	69.3	0.002	1350	1.67	2.387	1.67	0.69	1294	22.86
White Oak Street	116E	DCBMH 107	CBMH 106	0.190	0.65	0.124	34.320	22.201	22.86	66.15	4.080	0.013	15.7	0.004	1500	2.53	4.471	2.53	0.10	1449	22.96
Sugar Maple Street	116D	CBMH 106	CBMH 105	0.160	0.65	0.104	34.480	22.305	22.96	65.97	4.087	0.013	8.2	0.004	1500	2.53	4.471	2.53	0.05	1450	23.01
Sugar Maple Street	116C	CBMH 105	CBMH 104	0.010	0.65	0.007	34.490	22.312	23.01	65.87	4.082	0.013	18.0	0.004	1500	2.53	4.471	2.53	0.12	1449	23.13
Sugar Maple Street	116B	CBMH 104	DCBMH 103	0.040	0.65	0.026	34.530	22.338	23.13	65.66	4.074	0.013	48.9	0.004	1500	2.53	4.471	2.53	0.32	1448	23.45
Chestnut Street	---	STMMH 433	STMMH 431	0.000	0.75	0.000	0.000	0.000	15.00	84.71	0.000	0.009	35.9	0.005	300	1.40	0.099	0.00	-	0	15.00
Chestnut Street	117K	STMMH 431	CBMH 430	0.110	0.75	0.083	0.110	0.083	15.00	84.71	0.019	0.009	8.4	0.005	300	1.40	0.099	1.01	0.14	183	15.14
Chestnut Street	117J	CBMH 430	DCBMH 429	0.060	0.75	0.045	0.170	0.128	15.14	84.29	0.030	0.009	80.0	0.005	300	1.40	0.099	1.14	1.17	191	16.31
Chestnut Street	117I	DCBMH 429	CBMH 428	0.470	0.75	0.353	0.640	0.480	16.31	80.86	0.108	0.009	44.3	0.005	375	1.62	0.179	1.59	0.46	310	16.78
Chestnut Street	117H	CBMH 428	CBMH 427	0.280	0.75	0.210	0.920	0.690	16.78	79.58	0.153	0.009	23.6	0.005	375	1.62	0.179	1.62	0.24	353	17.02
Chestnut Street	117G	CBMH 427	CBMH 426	0.080	0.75	0.060	1.000	0.750	17.02	78.93	0.164	0.009	24.1	0.005	375	1.62	0.179	1.62	0.25	363	17.27
Chestnut Street	117F	CBMH 426	CBMH 425	0.080	0.75	0.060	1.080	0.810	17.27	78.28	0.176	0.009	37.1	0.005	375	1.62	0.179	1.62	0.38	373	17.65
Chestnut Street	117E	CBMH 425	DCMMH 424	0.360	0.75	0.270	1.440	1.080	17.65	77.30	0.232	0.009	42.3	0.005	450	1.83	0.291	1.83	0.39	413	18.03
Chestnut Street	117D	DCBMH 424	CBMH 423	0.320	0.75	0.240	1.760	1.320	18.03	76.34	0.280	0.009	52.0	0.005	450	1.83	0.291	1.83	0.47	443	18.51
Chestnut Street	117C	CBMH 423	CBMH 422	0.250	0.75	0.188	2.010	1.508	18.51	75.19	0.315	0.009	18.8	0.005	525	2.03	0.439	2.03	0.15	463	18.66
Chestnut Street	117B	CBMH 422	DCBMH 421	0.230	0.75	0.173	2.240	1.680	18.66	74.82	0.349	0.009	29.1	0.005	525	2.03	0.439	2.03	0.24	482	18.90
Chestnut Street	117A	DCBMH 421	DCBMH 103	0.180	0.75	0.135	2.420	1.815	18.90	74.26	0.374	0.009	11.4	0.005	525	2.01	0.435	2.01	0.09	496	18.99
Chestnut Street	116A	DCBMH 103	HEADWALL #1	0.140	0.65	0.091	37.090	24.244	23.45	65.09	4.383	0.013	65.4	0.0055	1500	2.97	5.242	2.97	0.37	1402	23.82

Notes:
1. Refer to Storm Drainage Plan drawing STM-1 prepared by C.C. Tatham and Associates (dated January 2014) for catchment areas and pipe details.
2. Refer to Master Servicing Storm Drainage Plan (111179-2, sheet STM-1) for additional information.
3. Manning's roughness co-efficient have been used based on the assumption that during final design, pipes less than or equal to 600 mm Dia. will be specified PVC and pipes great than 600 mm Dia. will be specified concrete.
4. The Composite Runoff Coefficient - C value of 0.75 on a typical lot layout was based on 40% lot coverage (maximum allowable lot coverage for the Windfall development).
5. The initial Time of Concentration used for area label 112/113 (Neighbourhood Park) was calculated using the airport method and verified through Visual OTTHYMO.
6. The storm sewer from DICB 318 to CBMH 318 has been sized to convey the 100 year storm event with an assumed 50% blockage at the inlet (i.e. the calculated Peak Flow was increased by a factor of 2).
7. Existing storm pipe cells are in grey, proposed storm pipe cells are yellow and future storm pipe cells are white.

I:\2011 Projects\111179 - Windfall Development\Design\16 - Phase 5 Final Design\111179-16-Storm Sewer Design Sheet

1 of 1

PHASE 5 - SANITARY SEWER DESIGN SHEET - FINAL DESIGN

Approved: [redacted]

FLOW CRITERIA

Average Flow Rate:	450 l/cap/d
Infiltration Rate:	0.23 l/s/ha
Population:	2.3 cap/unit
Peaking Factor:	Harmon

Project Name: Windfall - Phase 5
Project Number: 111179-5
Municipality: Town of The Blue Mountains
Designed By: BM
Date: August 13, 2020
Checked By: AO
Date: August 28, 2020

Legend: Exsiting ▨
Proposed 🟨
Future ☐

LOCATION OF SECTION	AREA LABEL	UPSTREAM MAINTENANCE HOLE	DOWNSTREAM MAINTENANCE HOLE	POPULATION	ACCUMULATED POPULATION	PEAKING FACTOR	AREA	ACCUMULATED AREA	AVERAGE FLOW			PEAK FLOW			PROPOSED SEWER					
									RESIDENTIAL	INFILTRATION	TOTAL	RESIDENTIAL	INFILTRATION	TOTAL	LENGTH OF PIPE	PIPE DIAMETER	GRADE	FULL FLOW CAPACITY	FULL FLOW VELOCITY	PEAK FLOW VELOCITY (ZERO INFILTRATION)
		MH No.	MH No.	cap.	cap.		ha	ha	l/s	l/s	l/s	l/s	l/s	l/s	m	mm	%	l/s	m/s	m/s
Black Willow Street	100M	SAN MH 606	SAN MH 613	6.9	6.9	4.43	0.33	0.33	0.04	0.08	0.11	0.16	0.08	0.24	76.3	200	1.60%	41.48	1.32	0.34
Black Willow Street	100L	SAN MH 613	SAN MH 612	4.6	11.5	4.41	0.23	0.56	0.06	0.13	0.19	0.26	0.13	0.39	14.1	200	1.60%	41.48	1.32	0.39
Black Willow Street	100K	SAN MH 612	SAN MH 611	39.1	50.6	4.31	0.88	1.44	0.26	0.33	0.60	1.14	0.33	1.47	100.0	200	1.60%	41.48	1.32	0.57
Black Willow Street	100J	SAN MH 611	SAN MH 610	39.1	89.7	4.26	0.91	2.35	0.47	0.54	1.01	1.99	0.54	2.53	100.0	200	1.10%	34.40	1.09	0.58
Black Willow Street	100I	SAN MH 610	SAN MH 603	11.5	101.2	4.24	0.41	2.76	0.53	0.64	1.16	2.24	0.64	2.87	80.2	200	0.50%	23.19	0.74	0.45
Courtland Street	100H	SAN MH 506	SAN MH 607	13.8	13.8	4.40	0.46	0.46	0.07	0.11	0.18	0.32	0.11	0.42	42.2	200	2.00%	46.38	1.48	0.44
Courtland Street	100G	SAN MH 607	SAN MH 606	4.6	18.4	4.39	0.18	0.64	0.10	0.15	0.24	0.42	0.15	0.57	42.8	200	3.40%	60.47	1.92	0.58
Courtland Street	100F	SAN MH 606	SAN MH 605	39.1	57.5	4.30	0.84	1.48	0.30	0.34	0.64	1.29	0.34	1.63	100.0	200	3.30%	59.58	1.90	0.77
Courtland Street	100E	SAN MH 605	SAN MH 604	39.1	96.6	4.25	0.82	2.30	0.50	0.53	1.03	2.14	0.53	2.67	99.3	200	1.00%	32.80	1.04	0.57
Courtland Street	100D	SAN MH 604	SAN MH 603	11.5	108.1	4.23	0.22	2.52	0.56	0.58	1.14	2.38	0.58	2.96	33.6	200	1.00%	32.80	1.04	0.59
Courtland Street	100C	SAN MH 603	SAN MH 412	6.9	216.2	4.14	0.29	5.57	1.13	1.28	2.41	4.66	1.28	5.94	69.6	200	0.50%	23.19	0.74	0.55
Crosswinds Boulevard	100B	SAN MH 412	SAN MH 411	0.0	216.2	4.14	0.17	5.74	1.13	1.32	2.45	4.66	1.32	5.98	45.7	200	0.50%	23.19	0.74	0.55
Crosswinds Boulevard	100A	SAN MH 411	SAN MH410	0.0	216.2	4.14	0.13	5.87	1.13	1.35	2.48	4.66	1.35	6.01	40.2	200	0.50%	23.19	0.74	0.55
Courtland Street	101Q	SAN MH 518	SAN MH 517	23.0	23.0	4.37	0.52	0.52	0.12	0.12	0.24	0.52	0.12	0.64	72.5	200	1.00%	32.80	1.04	0.39
Courtland Street	101P	SAN MH 517	SAN MH 516	32.2	55.2	4.31	0.60	1.12	0.29	0.26	0.55	1.24	0.26	1.50	89.3	200	1.70%	42.76	1.36	0.60
Courtland Street	101O	SAN MH 516	SAN MH 515	39.1	94.3	4.25	0.70	1.82	0.49	0.42	0.91	2.09	0.42	2.51	81.6	200	2.20%	48.64	1.55	0.76
Courtland Street	101N	SAN MH 515	SAN MH 514	6.9	101.2	4.24	0.21	2.03	0.53	0.47	0.99	2.24	0.47	2.70	31.5	200	2.20%	48.64	1.55	0.78
Courtland Street	101M	SAN MH 514	SAN MH 513	9.2	110.4	4.23	0.26	2.29	0.58	0.53	1.10	2.43	0.53	2.96	25.4	200	2.20%	48.64	1.55	0.79
Courtland Street	101L	SAN MH 513	SAN MH 512	4.6	115.0	4.23	0.16	2.45	0.60	0.56	1.16	2.53	0.56	3.09	13.7	200	0.80%	29.33	0.93	0.55
Courtland Street	101K	SAN MH 512	SAN MH 511	11.5	126.5	4.21	0.22	2.67	0.66	0.61	1.27	2.78	0.61	3.39	40.2	200	0.80%	29.33	0.93	0.57
Courtland Street	101J	SAN MH 511	SAN MH 510	11.5	138.0	4.20	0.22	2.89	0.72	0.66	1.38	3.02	0.66	3.69	24.4	200	0.50%	23.19	0.74	0.49
Courtland Street	101I	SAN MH 510	SAN MH 500	4.6	142.6	4.20	0.18	3.07	0.74	0.71	1.45	3.12	0.71	3.82	40.5	200	0.50%	23.19	0.74	0.49
Courtland Street	101H	SAN MH 518	SAN MH 504	9.2	9.2	4.42	0.14	0.14	0.05	0.03	0.08	0.21	0.03	0.24	23.9	200	2.00%	46.38	1.48	0.40
Courtland Street	101G	SAN MH 506	SAN MH 505	9.2	9.2	4.42	0.27	0.27	0.05	0.06	0.11	0.21	0.06	0.27	34.9	200	1.00%	32.80	1.04	0.31
Courtland Street	101F	SAN MH 505	SAN MH 504	4.6	13.8	4.40	0.14	0.41	0.07	0.09	0.17	0.32	0.09	0.41	20.9	200	1.00%	32.80	1.04	0.34
Sycamore Street	101E	SAN MH 504	SAN MH 503	6.9	29.9	4.35	0.28	0.8	0.16	0.19	0.35	0.68	0.19	0.87	57.1	200	2.20%	48.64	1.55	0.56
Sycamore Street	101D	SAN MH 503	SAN MH 502	52.9	82.8	4.27	0.81	1.64	0.43	0.38	0.81	1.84	0.38	2.22	97.1	200	2.20%	48.64	1.55	0.74
Sycamore Street	101C	SAN MH 502	SAN MH 501	50.6	133.4	4.21	0.88	2.52	0.69	0.58	1.27	2.92	0.58	3.50	97.9	200	1.60%	41.48	1.32	0.74
Sycamore Street	101B	SAN MH 501	SAN MH 500	18.4	151.8	4.19	0.31	2.83	0.79	0.65	1.44	3.31	0.65	3.96	45.1	200	1.60%	41.48	1.32	0.77
Sycamore street	101A	SAN MH 500	SAN MH 410	6.9	301.3	4.08	0.27	6.2	1.57	1.42	2.99	6.40	1.42	7.82	74.1	200	1.70%	42.76	1.36	0.94
Sugar Maple Street	102G	SAN MH 410	SAN MH 409	25.3	542.8	3.96	0.84	12.9	2.83	2.96	5.79	11.18	2.96	14.15	100.0	200	1.00%	32.80	1.04	0.90
Sugar Maple Street	102F	SAN MH 409	SAN MH 408	16.1	558.9	3.95	0.34	13.22	2.91	3.04	5.95	11.49	3.04	14.54	37.8	200	1.70%	42.76	1.36	1.10
Sugar Maple Street	102E	SAN MH 408	SAN MH 407	36.8	595.7	3.93	0.52	13.74	3.10	3.16	6.26	12.21	3.16	15.37	64.5	200	1.70%	42.76	1.36	1.12
Sugar Maple Street	102D	SAN MH 407	SAN MH 406	6.9	602.6	3.93	0.22	13.96	3.14	3.21	6.35	12.34	3.21	15.55	20.0	200	1.70%	42.76	1.36	1.12
Sugar Maple Street	102C	SAN MH 406	SAN MH 405	4.6	607.2	3.93	0.08	14.04	3.16	3.23	6.39	12.43	3.23	15.66	18.7	200	1.70%	42.76	1.36	1.12
Chestnut Street	102B	SAN MH 430	SAN MH 431	6.9	6.9	4.43	0.15	0.15	0.04	0.03	0.07	0.16	0.03	0.19	24.3	200	1.30%	37.39	1.19	0.31
Chestnut Street	102A	SAN MH 431	SAN MH 405	4.6	11.5	4.41	0.15	0.30	0.06	0.07	0.13	0.26	0.07	0.33	56.8	200	1.30%	37.39	1.19	0.36
Sugar Maple Street	103E	SAN MH 405	SAN MH 404	43.7	662.4	3.91	0.65	14.99	3.45	3.45	6.90	13.48	3.45	16.93	80.9	200	0.50%	23.19	0.74	0.73
Sugar Maple Street	103D	SAN MH 404	SAN MH 403	6.9	669.3	3.91	0.16	15.15	3.49	3.49	6.97	13.62	3.49	17.10	20.5	200	0.50%	23.19	0.74	0.74
Sugar Maple Street	103C	SAN MH 403	SAN MH 402	4.6	673.9	3.90	0.14	15.29	3.51	3.52	7.03	13.70	3.52	17.22	17.2	200	0.50%	23.19	0.74	0.74
Sugar Maple Street	103B	SAN MH 402	SAN MH 401	4.6	678.5	3.90	0.15	15.44	3.53	3.55	7.09	13.79	3.55	17.34	20.2	200	0.50%	23.19	0.74	0.74
Sugar Maple Street	103A	SAN MH 401	SAN MH 112	36.8	715.3	3.89	0.62	16.06	3.73	3.69	7.42	14.49	3.69	18.18	92.7	200	0.50%	23.19	0.74	0.74
Yellow Birch Crescent	108L	SAN MH211	SAN MH 221	9.2	9.2	4.42	0.28	0.28	0.05	0.06	0.11	0.21	0.06	0.28	37.2	200	1.10%	34.40	1.09	0.32
Yellow Birch Crescent	108K	SAN MH 221	SAN MH 220	4.6	13.8	4.40	0.15	0.43	0.07	0.10	0.17	0.32	0.10	0.42	32.0	200	1.10%	34.40	1.09	0.35
Yellow Birch Crescent	108J	SAN MH 220	SAN MH 219	6.9	20.7	4.38	0.23	0.66	0.11	0.15	0.26	0.47	0.15	0.62	27.1	200	1.10%	34.40	1.09	0.40
Yellow Birch Crescent	108I	SAN MH 219	SAN MH 218	20.7	41.4	4.33	0.58	1.24	0.22	0.29	0.50	0.93	0.29	1.22	63.4	200	1.10%	34.40	1.09	0.48
Yellow Birch Crescent	108H	SAN MH 218	SAN MH 217	11.5	52.9	4.31	0.22	1.46	0.28	0.34	0.61	1.19	0.34	1.52	22.2	200	1.10%	34.40	1.09	0.51
Yellow Birch Crescent	108G	SAN MH 217	SAN MH 216	36.8	89.7	4.26	0.76	2.22	0.47	0.51	0.98	1.99	0.51	2.50	96.4	200	2.70%	53.89	1.72	0.81
Yellow Birch Crescent	108F	SAN MH222	SAN MH 216	9.2	9.2	4.42	1.30	1.30	0.05	0.30	0.35	0.21	0.30	0.51	54.5	200	0.50%	23.19	0.74	0.24
Yellow Birch Crescent	108E	SAN MH 216	SAN MH 215	2.3	101.2	4.24	0.07	3.59	0.53	0.83	1.35	2.24	0.83	3.06	9.1	200	0.70%	27.44	0.87	0.51
Yellow Birch Crescent	108D	SAN MH 215	SAN MH 214	25.3	126.5	4.21	0.51	4.10	0.66	0.94	1.60	2.78	0.94	3.72	54.1	200	0.70%	27.44	0.87	0.54
Yellow Birch Crescent	108C	SAN MH 214	SAN MH 213	9.2	135.7	4.20	0.21	4.31	0.71	0.99	1.70	2.97	0.99	3.96	30.9	200	0.70%	27.44	0.87	0.55
Yellow Birch Crescent	108B	SAN MH 213	SAN MH 212	16.1	151.8	4.19	0.39	4.70	0.79	1.08	1.87	3.31	1.08	4.39	49.0	200	0.70%	27.44	0.87	0.57
Yellow Birch Crescent	108A	SAN MH 212	SAN MH 122	9.2	161.0	4.18	0.32	5.02	0.84	1.15	1.99	3.51	1.15	4.66	36.2	200	2.16%	48.20	1.53	0.87
Yellow Birch Crescent	106E	SAN MH211	SAN MH 210	16.1	16.1	4.39	0.40	0.40	0.08	0.09	0.18	0.37	0.09	0.46	56.7	200	1.00%	32.80	1.04	0.36
Yellow Birch Crescent	106D	SAN MH 210	SAN MH 209	23.0	39.1	4.34	0.36	0.76	0.20	0.17	0.38	0.88	0.17	1.06	40.4	200	1.00%	32.80	1.04	0.45
Yellow Birch Crescent	106C	SAN MH 209	SAN MH 208	18.4	57.5	4.30	0.36	1.12	0.30	0.26	0.56	1.29	0.26	1.55	42.5	200	1.00%	32.80	1.04	0.50
Yellow Birch Crescent	106B	SAN MH 208	SAN MH 207	18.4	75.9	4.27	0.35	1.47	0.40	0.34	0.73	1.69	0.34	2.03	42.5	200	1.00%	32.80	1.04	0.54
Yellow Birch Crescent	106A	SAN MH 207	SAN MH 206	36.8	112.7	4.23	0.51	1.98	0.59	0.46	1.04	2.48	0.46	2.94	55.7	200	1.40%	38.80	1.24	0.68
Various Ex. Streets	104/105	SAN MH 223	SAN MH 206	363.4	363.4	4.04	13.36	13.36	1.89	3.07	4.97	7.65	3.07	10.72	45.0	200	0.40%	20.74	0.66	0.58
Yellow Birch Crescent	107F	SAN MH 206	SAN MH 205	41.4	517.5	3.97	0.76	16.10	2.70	3.70	6.40	10.69	3.70	14.39	100.0	200	1.40%	38.80	1.24	1.00
Yellow Birch Crescent	107E	SAN MH 205	SAN MH 204	32.2	549.7	3.95	0.54	16.64	2.86	3.83	6.69	11.32	3.83	15.14	59.3	200	0.75%	28.40	0.90	0.81
Yellow Birch Crescent	107D	SAN MH 204	SAN MH 203	23.0	572.7	3.94	0.40	17.04	2.98	3.92	6.90	11.76	3.92	15.68	40.5	200	0.75%	28.40	0.90	0.82
Yellow Birch Crescent	107C	SAN MH 203	SAN MH 202	6.9	579.6	3.94	0.19	17.23	3.02	3.96	6.98	11.89	3.96	15.86	48.4	200	0.75%	28.40	0.90	0.82
Yellow Birch Crescent	107B	SAN MH 202	SAN MH 201	6.9	586.5	3.94	0.28	17.51	3.05	4.03	7.08	12.03	4.03	16.06	15.8	200	0.75%	28.40	0.90	0.82
Yellow Birch Crescent	107A	SAN MH 201	SAN MH 122	9.2	595.7	3.93	0.31	17.82	3.10	4.10	7.20	12.21	4.10	16.30	35.9	200	1.59%	41.35	1.32	1.09
Yellow Birch Crescent	109B	SAN MH 122	SAN MH 121	0.0	756.7	3.87	0.18	23.02	3.94	5.29	9.24	15.27	5.29	20.57	85.8	200	1.35%	38.10	1.21	1.09
Snow Apple Crescent	109A	SAN MH 121	SAN MH 120	6.9	763.6	3.87	0.28	23.30	3.98	5.36	9.34	15.40	5.36	20.76	54.8	200	2.60%	52.88	1.68	1.39
Snow Apple Crescent	110B	SAN MH 124	SAN MH 123	9.2	9.2	4.42	0.42	0.42	0.05	0.10	0.14	0.21	0.10	0.31	42.4	200	1.00%	32.80	1.04	0.31
Snow Apple Crescent	110A	SAN MH 123	SAN MH 120	6.9	16.1	4.39	0.33	0.75	0.08	0.17	0.26	0.37	0.17	0.54	65.1	200	1.00%	32.80	1.04	0.36
Snow Apple Crescent	111B	SAN MH 120	SAN MH 119	11.5	791.2	3.86	0.37	24.42	4.12	5.62	9.74	15.92	5.62	21.54	41.0	200	2.00%	46.38	1.48	1.27
Snow Apple Crescent	111A	SAN MH 119	SAN MH 118	6.9	798.1	3.86	0.23	24.65	4.16	5.67	9.83	16.05	5.67	21.72	30.5	200	1.50%	40.17	1.28	1.15
Snow Apple Crescent	112E	SAN MH 124	SAN MH 128	11.5	11.5	4.41	0.39	0.39	0.06	0.09	0.15	0.26	0.09	0.35	69.4	200	2.20%	48.64	1.55	0.44
Snow Apple Crescent	112D	SAN MH 128	SAN MH 127	4.6	16.1	4.39	0.19	0.58	0.08	0.13	0.22	0.37	0.13	0.50	31.5	200	1.70%	42.76	1.36	0.43
Snow Apple Crescent	112C	SAN MH 127	SAN MH 126	2.3	18.4	4.39	0.15	0.73	0.10	0.17	0.26	0.42	0.17	0.59	40.0	200	1.00%	32.80	1.04	0.37
Snow Apple Crescent	112B	SAN MH 126	SAN MH 125	13.8	32.2	4.35	0.44	1.17	0.17	0.27	0.44	0.73	0.27	1.00	54.7	200	0.50%	23.19	0.74	0.33
Snow Apple Crescent	112A	SAN MH 125	SAN MH 118	4.6	36.8	4.34	0.16	1.33	0.19	0.31	0.50	0.83	0.31	1.14	21.2	200	0.50%	23.19	0.74	0.35
BLOCK 48	113C	SAN MH 118	SAN MH 117	0.0	834.9	3.85	0.04	26.02	4.35	5.98	10.33	16.74	5.98	22.72	43.6	200	0.50%	23.19	0.74	0.74
BLOCK 48	113B	SAN MH 117	SAN MH 116	0.0	834.9	3.85	0.04	26.06	4.35	5.99	10.34	16.74	5.99	22.73	37.5	200	0.50%	23.19	0.74	0.74
BLOCK 48	113A	SAN MH 116	SAN MH 115	0.0	834.9	3.85	0.05	26.11	4.35	6.01	10.35	16.74	6.01	22.74	54.2	200	1.25%	36.67	1.17	1.09
BLOCK 48	---	SAN MH 115	SAN MH 114	0.0	834.9	3.85	0.00	26.11	4.35	6.01	10.35	16.74	6.01	22.74	7.7	200	0.60%	25.40	0.81	0.81
White Oak Street	114E	SAN MH 313	SAN MH 312	4.6	4.6	4.44	0.20	0.20	0.02	0.05	0.07	0.11	0.05	0.15	19.9	200	1.25%	36.67	1.17	0.28
White Oak Street	114D	SAN MH 312	SAN MH 311	6.9	11.5	4.41	0.21	0.41	0.06	0.09	0.15	0.26	0.09	0.36	14.4	200	2.09%	47.41	1.51	0.43
White Oak Street	114C	SAN MH 311	SAN MH 310	6.9	18.4	4.39	0.23	0.64	0.10	0.15	0.24	0.42	0.15	0.57	26.9	200	2.53%	52.16	1.66	0.52
White Oak Street	114B	SAN MH 310	SAN MH 309	16.1	34.5	4.34	0.49	1.13	0.18	0.26	0.44	0.78	0.26	1.04	61.0	200	2.05%	46.96	1.49	0.57
White Oak Street	114A	SAN MH 309	SAN MH 114	4.6	39.1	4.34	0.18	1.31	0.20	0.30	0.50	0.88	0.30	1.18	42.1	200	3.52%	61.53	1.96	0.72
Red Pine Street	115H	SAN MH 308	SAN MH 307	9.2	9.2	4.42	0.38	0.38	0.05	0.09	0.14	0.21	0.09	0.30	30.9	200	2.04%	46.84	1.49	0.40
Red Pine Street	115G	SAN MH 307	SAN MH 306	6.9	16.1	4.39	0.24	0.62	0.08	0.14	0.23	0.37	0.14	0.51	19.8	200	2.94%	56.23	1.79	0.53
Red Pine Street	115F	SAN MH 306	SAN MH 305	20.7	36.8	4.34	0.61	1.23	0.19	0.28	0.47	0.83	0.28	1.11	76.1	200	2.50%	51.85	1.65	0.62
Red Pine Street	115E	SAN MH 305	SAN MH 304	18.4	55.2	4.31	0.26	1.49	0.29	0.34	0.63	1.24	0.34	1.58	26.8	200	1.45%	39.49	1.26	0.57
Red Pine Street	115D	SAN MH 304	SAN MH 303	13.8	69.0	4.28	0.21	1.70	0.36	0.39	0.75	1.54	0.39	1.93	25.2	200	0.63%	26.03	0.83	0.44
Red Pine Street	115C	SAN MH 303	SAN MH 302	27.6	96.6	4.25	0.42	2.12	0.50	0.49	0.99	2.14	0.49	2.62	59.2	200	0.84%	30.06	0.96	0.54
Red Pine Street	115B	SAN MH 302	SAN MH 301	13.8	110.4	4.23	0.26	2.38	0.58	0.55	1.12	2.43	0.55	2.98	28.2	200	0.64%	26.24	0.84	0.51
Red Pine Street	115A	SAN MH 301	SAN MH 114	4.6	115.0	4.23	0.19	2.57	0.60	0.59	1.19	2.53	0.59	3.12	40.6	200	2.88%	55.66	1.77	0.88
White Oak Street	116B	SAN MH 114	SAN MH 113	18.4	1007.4	3.80	0.34	30.33	5.25	6.98	12.22	19.93	6.98	26.90	45.6	250	0.66%	48.31	0.98	0.89
White Oak Street	116A	SAN MH 113	SAN MH 112	13.8	1021.2	3.79	0.29	30.62	5.32	7.04	12.36	20.18	7.04	27.22	41.9	250	0.60%	46.06	0.94	0.86
Sugar Maple Street	117C	SAN MH 112	SAN MH 111	0.0	1736.5	3.63	0.12	46.80	9.04	10.76	19.81	32.85	10.76	43.62	21.6	300	0.50%	68.37	0.97	0.91
Sugar Maple Street	117B	SAN MH 111	SAN MH 110	0.0	1736.5	3.63	0.04	46.84	9.04	10.77	19.82	32.85	10.77	43.63	15.3	300	0.50%	68.37	0.97	0.91
Sugar Maple Street	117A	SAN MH 110	SAN MH 109	0.0	1736.5	3.63	0.10	46.94	9.04	10.80	19.84	32.85	10.80	43.65	54.3	300	0.50%	68.37	0.97	0.91
Chestnut Street	118I	SAN MH 430	SAN MH 429	11.5	11.5	4.41	0.29	0.29	0.06	0.07	0.13	0.26	0.07	0.33	20.5	200	1.00%	32.80	1.04	0.33
Chestnut Street	118H	SAN MH 429	SAN MH 428	55.2	66.7	4.29	0.77	1.06	0.35	0.24	0.59	1.49	0.24	1.73	100.0	200	0.70%	27.44	0.87	0.46
Chestnut Street	118G	SAN MH 428	SAN MH 427	11.5	78.2	4.27	0.20	1.26	0.41	0.29	0.70	1.74	0.29	2.03	20.8	200	0.70%	27.44	0.87	0.48
Chestnut Street	118F	SAN MH 427	SAN MH 426	6.9	85.1	4.26	0.25	1.51	0.44	0.35	0.79	1.89	0.35	2.24	24.9	200	0.70%	27.44	0.87	0.49
Chestnut Street	118E	SAN MH 426	SAN MH 425	4.6	89.7	4.26	0.17	1.68	0.47	0.39	0.85	1.99	0.39	2.37	17.1	200	0.70%	27.44	0.87	0.49
Chestnut Street	118D	SAN MH 425	SAN MH 424	16.1	105.8	4.24	0.36	2.04	0.55	0.47	1.02	2.33	0.47	2.80	39.1	200	0.70%	27.44	0.87	0.52
Chestnut Street	118C	SAN MH 424	SAN MH 423	36.8	142.6	4.20	0.79	2.83	0.74	0.65	1.39	3.12	0.65	3.77	89.6	200	0.70%	27.44	0.87	0.56
Chestnut Street	118B	SAN MH 423	SAN MH 422	13.8	156.4	4.19	0.23	3.06	0.81	0.70	1.52	3.41	0.70	4.11	25.7	200	0.70%	27.44	0.87	0.57
Chestnut Street	118A	SAN MH 422	SAN MH 109	6.9	163.3	4.18	0.24	3.30	0.85	0.76	1.61	3.55	0.76	4.31	38.6	200	0.70%	27.44	0.87	0.58
6.0 m EASEMENT	119E	SAN MH 109	SAN MH 106	0.0	1899.8	3.60	0.03	50.27	9.89	11.56	21.46	35.65	11.56	47.21	38.3	300	0.50%	68.37	0.97	0.93
BLOCK 41	119D	SAN MH 106	SAN MH 105	0.0	1899.8	3.60	0.04	50.31	9.89	11.57	21.47	35.65	11.57	47.22	35.9	300	0.50%	68.37	0.97	0.93
BLOCK 57	119C	SAN MH 105	SAN MH 104	0.0	1899.8	3.60	0.07	50.38	9.89	11.59	21.48	35.65	11.59	47.24	71.4	300	0.50%	68.37	0.97	0.93
BLOCK 57	119B	SAN MH 104	SAN MH 103	0.0	1899.8	3.60	0.05	50.43	9.89	11.60	21.49	35.65	11.60	47.25	51.3	300	0.50%	68.37	0.97	0.93
BLOCK 57	119A	SAN MH 103	SAN MH 102	0.0	1899.8	3.60	0.06	50.49	9.89	11.61	21.51	35.65	11.61	47.26	57.5	300	0.50%	68.37	0.97	0.93
BLOCK 64	120B	SAN MH 102	SAN MH 101	529.0	2428.8	3.52	4.88	55.37	12.65	12.74	25.39	44.51	12.74	57.25	84.2	300	0.50%	68.37	0.97	0.97
BLOCK 64	120A	SAN MH 101	SAN MH E29	0.0	2428.8	3.52	0.08	55.45	12.65	12.75	25.40	44.51	12.75	57.27	83.9	300	0.50%	68.37	0.97	0.97

Notes:
1. Refer to Phase 4 Sanitary Drainage Plan drawing SAN-1 prepared by Tatham for catchment areas and pipe details. Excludes increased density for redline revision.
2. Refer to Master Servicing Danitary Drainage Plan (111179-2, sheet SAN-1) for additional information.
3. An allowance of 4 equilivent residential units has been provided for the Amenity Building located in Block B (Neighborhood Park)
4. Existing sanitary pipe cells are in grey, proposed sanitary pipe cells are yellow and future sanitary pipe cells are white.

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

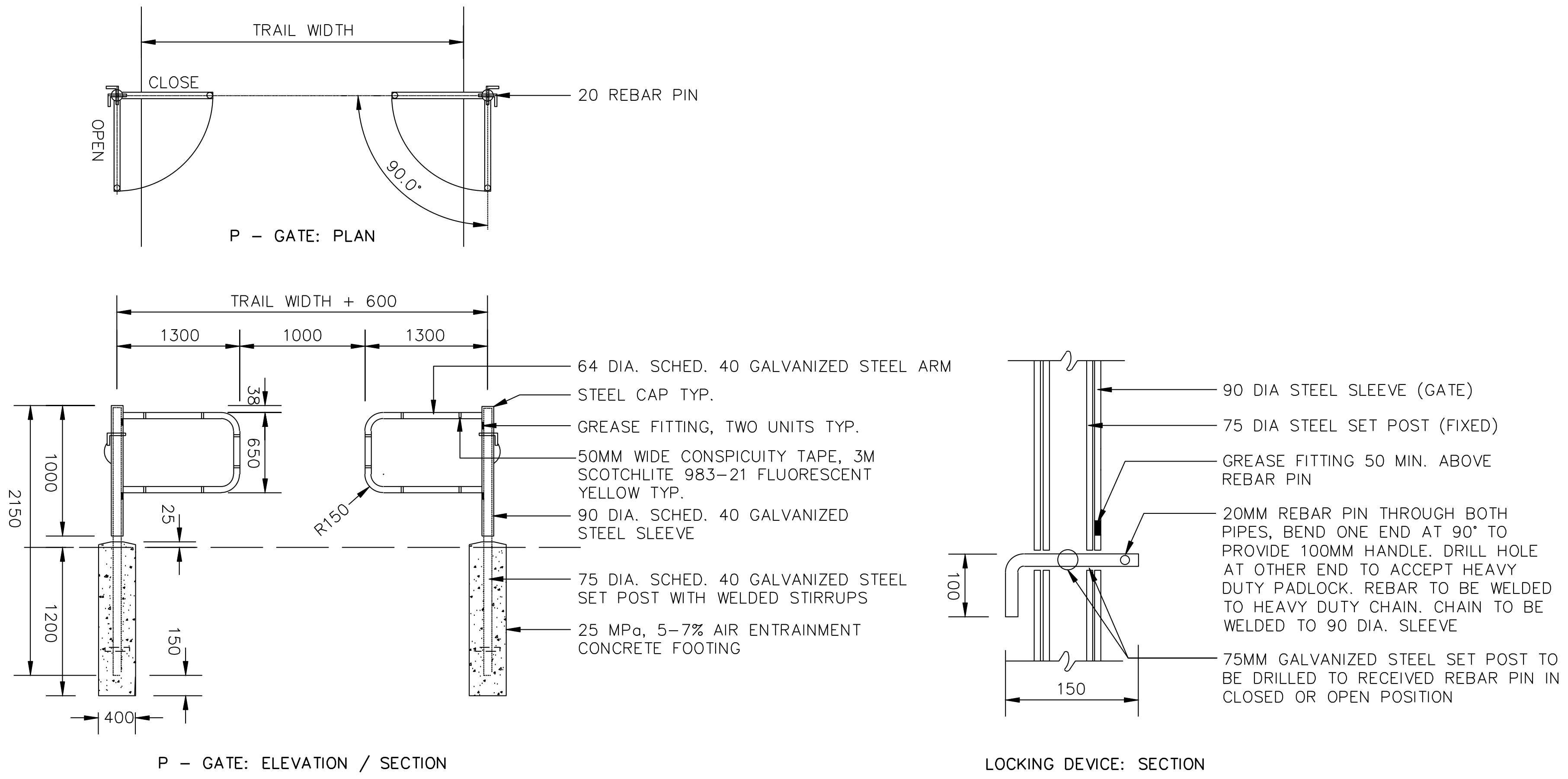
[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

DETAILS, SECTIONS AND NOTES

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2021	**DE-2**
CHECK: JPA/MJC	SCALE: AS NOTED	

Drawing Name: 111179-5-DE01.dwg, Plotted: May 17, 2021


TRAIL WIDTH
CLOSE
OPEN
90.0°
20 REBAR PIN
TRAIL WIDTH + 600
1300
1000
1300
38
650
1000
2150
25
R150
1200
150
400
64 DIA. SCHED. 40 GALVANIZED STEEL ARM
STEEL CAP TYP.
GREASE FITTING, TWO UNITS TYP.
50MM WIDE CONSPICUITY TAPE, 3M SCOTCHLITE 983-21 FLUORESCENT YELLOW TYP.
90 DIA. SCHED. 40 GALVANIZED STEEL SLEEVE
75 DIA. SCHED. 40 GALVANIZED STEEL SET POST WITH WELDED STIRRUPS
25 MPa, 5-7% AIR ENTRAINMENT CONCRETE FOOTING
90 DIA STEEL SLEEVE (GATE)
75 DIA STEEL SET POST (FIXED)
GREASE FITTING 50 MIN. ABOVE REBAR PIN
20MM REBAR PIN THROUGH BOTH PIPES, BEND ONE END AT 90° TO PROVIDE 100MM HANDLE. DRILL HOLE AT OTHER END TO ACCEPT HEAVY DUTY PADLOCK. REBAR TO BE WELDED TO HEAVY DUTY CHAIN. CHAIN TO BE WELDED TO 90 DIA. SLEEVE
75MM GALVANIZED STEEL SET POST TO BE DRILLED TO RECEIVED REBAR PIN IN CLOSED OR OPEN POSITION
100
150

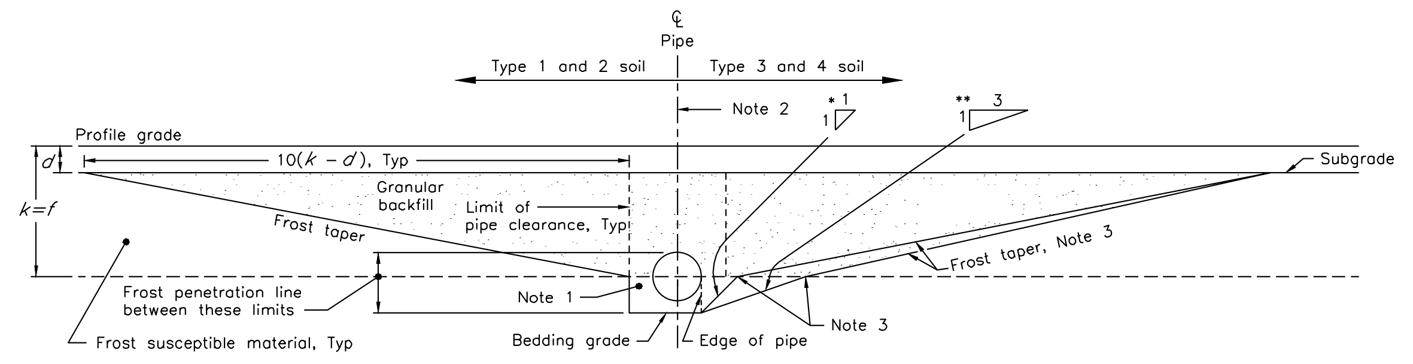
P - GATE: PLAN

P - GATE: ELEVATION / SECTION

LOCKING DEVICE: SECTION

NOTES:
1. ALL PIPE SHALL BE SCHEDULE 40 STEEL.
2. ALL WELDS TO BE 5 MM CONTINUOUS SEAM AND GROUND SMOOTH
3. CONTRACTOR TO SUPPLY HEAVY DUTY PADLOCK AS REQUIRED.
4. CONTRACTOR TO SUBMIT SHOP DRAWINGS.
5. LOCATION OF GATES TO BE FIELD STAKED BY CONTRACTOR FOR REVIEW BY TOWN. LOCATION TO BE APPROVED PRIOR TO INSTALLATION.

TRAIL SWING GATES
NTS


℄ Pipe
Type 1 and 2 soil
Type 3 and 4 soil
Note 2
* 1
1
** 3
1
Profile grade
d
10(k − d), Typ
k=f
Granular backfill
Limit of pipe clearance, Typ
Frost taper
Subgrade
Frost taper, Note 3
Frost penetration line between these limits
Note 1
Frost susceptible material, Typ
Bedding grade
Edge of pipe
Note 3

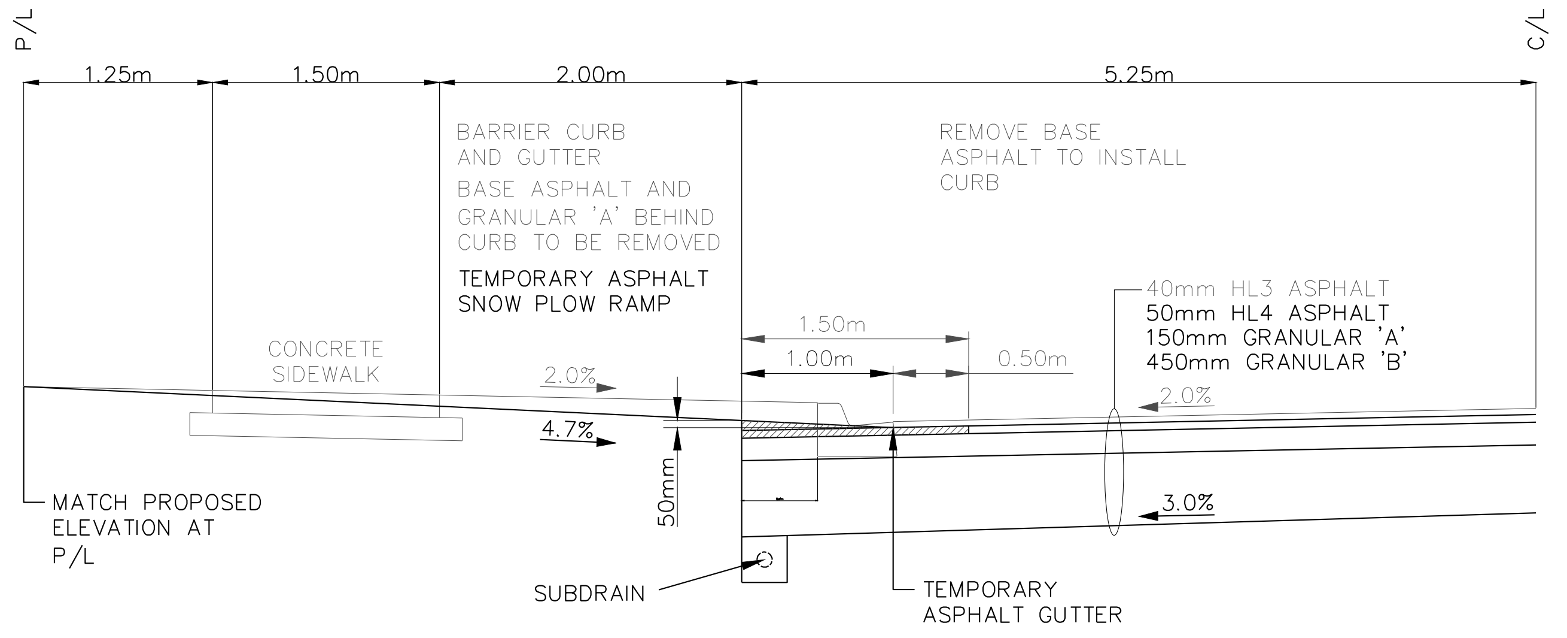
FROST TREATMENT
RIGID AND FLEXIBLE PIPE

NOTES:
1 Pipe embedment or bedding, cover, and backfill shall be according to:
  a) Flexible OPSD 802.010, 802.013, 802.014, 802.020, 802.023, and 802.024.
  b) Rigid – OPSD 802.030, 802.031, 802.032, 802.033, 802.034, 802.050, 802.051, 802.052, 802.053, and 802.054.
2 Condition of frost treatment symmetrical about centreline of pipe.
3 Frost tapers shall start at the intersection of the 1H:1V or 3H:1V slope and the frost penetration line.

A Soil types as defined in the Occupational Health and Safety Act and Regulations for Construction Projects.

LEGEND:
d – depth of roadbed granular
k – depth of frost treatment below profile grade
f – depth of frost penetration below profile grade
* – Type 3 soil
** – Type 4 soil

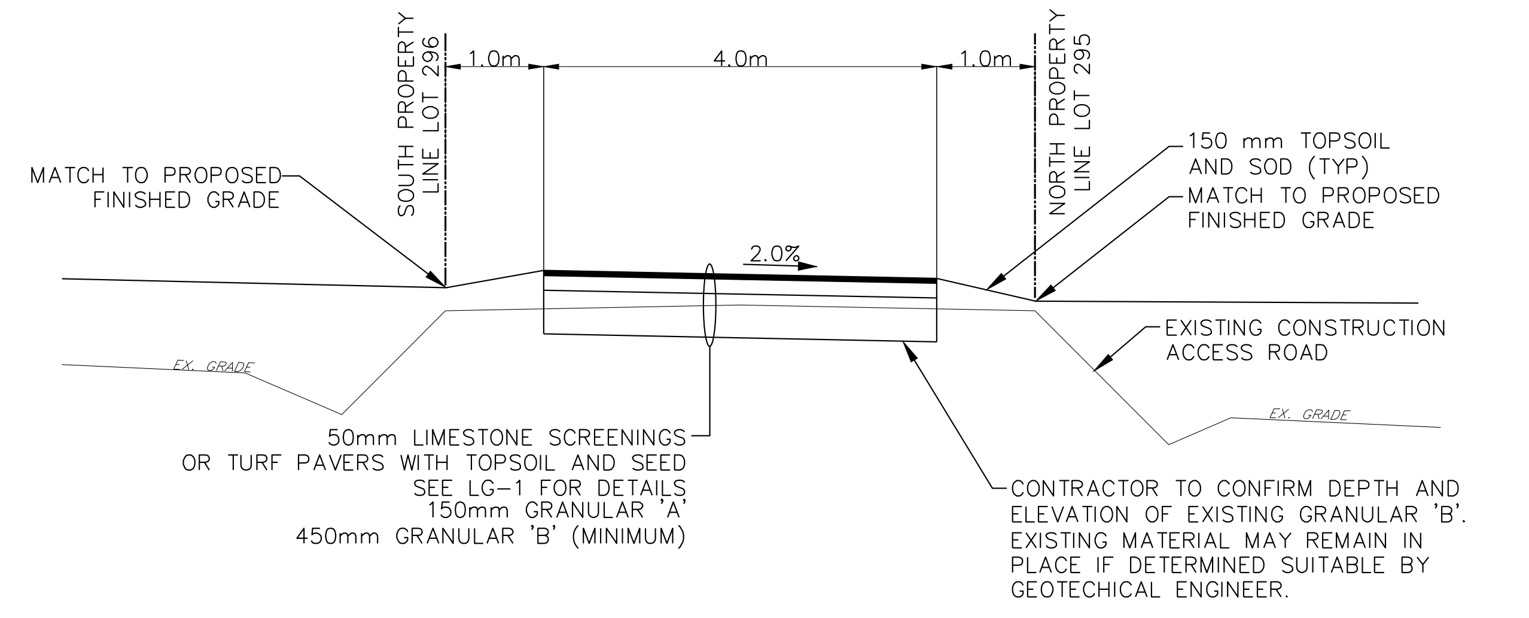
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 4
FROST TREATMENT – PIPE CULVERTS FROST PENETRATION LINE BETWEEN TOP OF PIPE AND BEDDING GRADE	OPSD 803.031	


P/L
C/L
1.25m
1.50m
2.00m
5.25m
BARRIER CURB AND GUTTER
BASE ASPHALT AND GRANULAR 'A' BEHIND CURB TO BE REMOVED
TEMPORARY ASPHALT SNOW PLOW RAMP
REMOVE BASE ASPHALT TO INSTALL CURB
CONCRETE SIDEWALK
40mm HL3 ASPHALT
50mm HL4 ASPHALT
150mm GRANULAR 'A'
450mm GRANULAR 'B'
1.50m
1.00m
0.50m
2.0%
4.7%
2.0%
3.0%
50mm
MATCH PROPOSED ELEVATION AT P/L
SUBDRAIN
TEMPORARY ASPHALT GUTTER

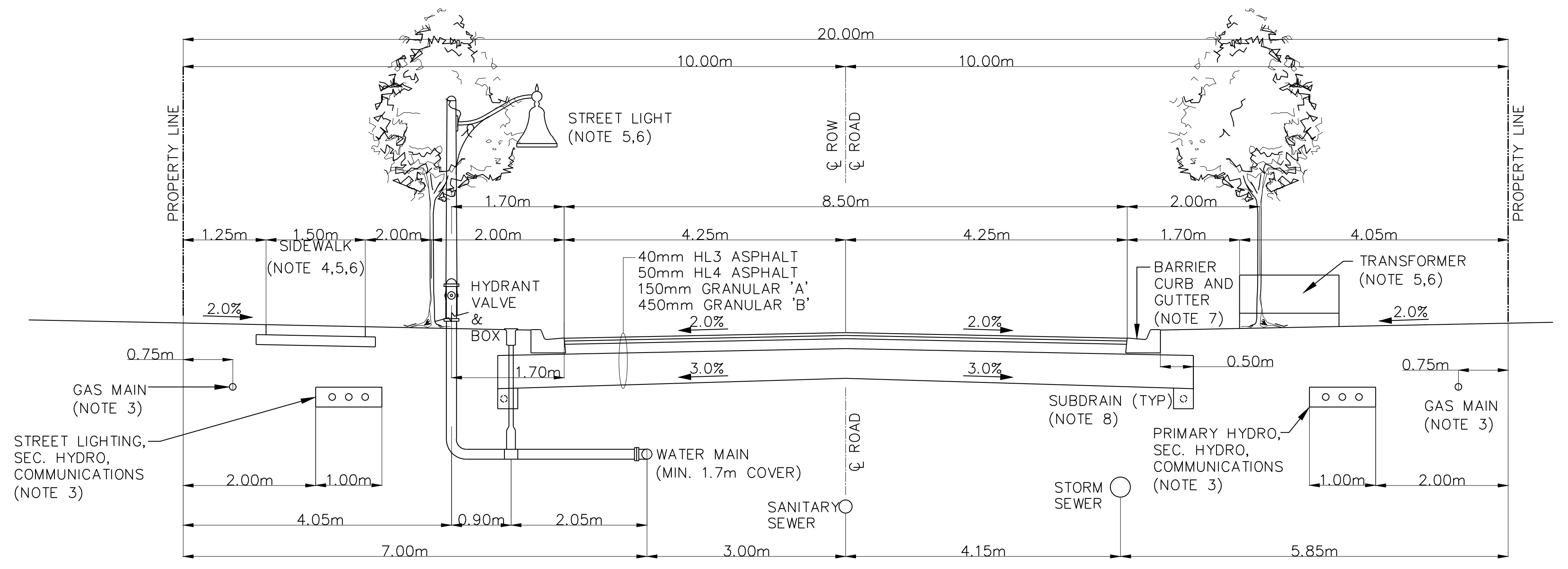
STAGE 1 ———
STAGE 2 ———

DETAIL OF TWO STAGE
URBAN ROAD CROSS-SECTION
NTS

NOTES
1. CATCH BASINS TO BE SET TO BASE COURSE ASPHALT AND RAISED PRIOR TO PLACEMENT OF SURFACE COURSE ASPHALT
2. MAIN LINE WATER VALVE BOXES TO BE SET TO TEMPORARY BOULEVARD ELEVATION AND RAISED TO FINAL GRADE ONCE CURB AND SIDEWALKS HAVE BEEN INSTALLED
3. BOULEVARDS TO BE TEMPORARILY CONSTRUCTED USING SUBGRADE MATERIAL UNTIL SUCH TIME AS CURB AND SIDEWALK IS CONSTRUCTED AT WHICH POINT THE SUBGRADE MATERIAL IS TO BE REMOVED TO ALLOW FOR THE PLACEMENT OF 300 mm TOPSOIL AND NURSERY SOD.

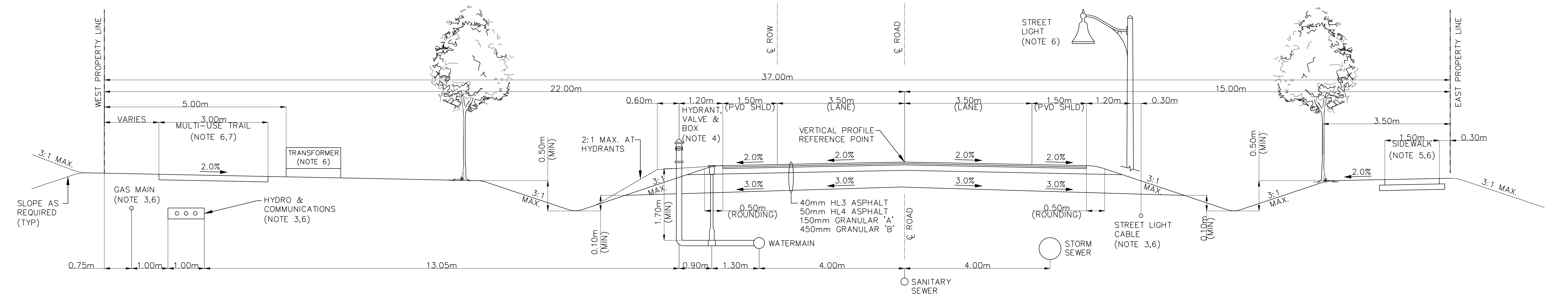

SOUTH PROPERTY LINE LOT 296
NORTH PROPERTY LINE LOT 295
1.0m
4.0m
1.0m
MATCH TO PROPOSED FINISHED GRADE
150 mm TOPSOIL AND SOD (TYP)
MATCH TO PROPOSED FINISHED GRADE
2.0%
EX. GRADE
EXISTING CONSTRUCTION ACCESS ROAD
EX. GRADE
50mm LIMESTONE SCREENINGS OR TURF PAVERS WITH TOPSOIL AND SEED SEE LG-1 FOR DETAILS
150mm GRANULAR 'A'
450mm GRANULAR 'B' (MINIMUM)
CONTRACTOR TO CONFIRM DEPTH AND ELEVATION OF EXISTING GRANULAR 'B'. EXISTING MATERIAL MAY REMAIN IN PLACE IF DETERMINED SUITABLE BY GEOTECHICAL ENGINEER.

WALKWAY BETWEEN LOT 295 AND LOT 296
NTS


20.00m
10.00m
10.00m
PROPERTY LINE
STREET LIGHT (NOTE 5,6)
℄ ROW
℄ ROAD
1.70m
8.50m
2.00m
1.25m
1.50m
2.00m
2.00m
4.25m
4.25m
1.70m
4.05m
SIDEWALK (NOTE 4,5,6)
HYDRANT VALVE & BOX
40mm HL3 ASPHALT
50mm HL4 ASPHALT
150mm GRANULAR 'A'
450mm GRANULAR 'B'
BARRIER CURB AND GUTTER (NOTE 7)
TRANSFORMER (NOTE 5,6)
2.0%
2.0%
2.0%
2.0%
0.75m
1.70m
3.0%
3.0%
0.50m
0.75m
GAS MAIN (NOTE 3)
SUBDRAIN (TYP) (NOTE 8)
GAS MAIN (NOTE 3)
STREET LIGHTING, SEC. HYDRO, COMMUNICATIONS (NOTE 3)
WATER MAIN (MIN. 1.7m COVER)
℄ ROAD
PRIMARY HYDRO, SEC. HYDRO, COMMUNICATIONS (NOTE 3)
STORM SEWER
SANITARY SEWER
2.00m
1.00m
1.00m
2.00m
4.05m
0.90m
2.05m
7.00m
3.00m
4.15m
5.85m
PROPERTY LINE

NOTES
1. TOPSOIL TO BE REMOVED TO ITS FULL DEPTH ALONG ENTIRE WIDTH OF ROAD ALLOWANCE BY CONTRACTOR.
2. BOULEVARD – 300mm TOPSOIL AND SOD.
3. DEPTH FOR ALL UTILITIES 0.9m MIN., SEE COMMON TRENCH DETAIL ON DWG. UT-1.
4. SIDEWALKS TO OPSD 310.010, COMPLETE WITH 150mm GRANULAR 'A' BASE.
5. SIDEWALK, STREET LIGHTS AND TRANSFORMERS ONE SIDE ONLY.
6. SIDEWALK AND STREET LIGHTS TO BE ON SAME SIDE OF ROAD AND TRANSFORMER TO BE ON OPPOSITE SIDE.
7. CONCRETE BARRIER CURB AND GUTTER TO OPSD 600.040 (TYP)
8. SUBDRAINS TO OUTLET TO CATCH BASINS AS PER OPSD 216.021.

20m ROW – URBAN CROSS-SECTION
NTS


WEST PROPERTY LINE
℄ ROW
℄ ROAD
STREET LIGHT (NOTE 6)
EAST PROPERTY LINE
37.00m
22.00m
15.00m
5.00m
VARIES
3.00m
MULTI-USE TRAIL (NOTE 6,7)
TRANSFORMER (NOTE 6)
0.60m
1.20m
1.50m (PVD SHLD)
3.50m (LANE)
3.50m (LANE)
1.50m (PVD SHLD)
1.20m
0.30m
3.50m
1.50m
0.30m
SIDEWALK (NOTE 5,6)
HYDRANT, VALVE & BOX (NOTE 4)
2:1 MAX. AT HYDRANTS
VERTICAL PROFILE REFERENCE POINT
0.50m (MIN)
0.50m (MIN)
3:1 MAX.
3:1 MAX.
3:1 MAX.
3:1 MAX.
3:1 MAX.
3:1 MAX.
2.0%
2.0%
2.0%
2.0%
2.0%
2.0%
3.0%
3.0%
3.0%
3.0%
SLOPE AS REQUIRED (TYP)
GAS MAIN (NOTE 3,6)
HYDRO & COMMUNICATIONS (NOTE 3,6)
0.10m (MIN)
1.70m (MIN)
0.50m (ROUNDING)
0.50m (ROUNDING)
40mm HL3 ASPHALT
50mm HL4 ASPHALT
150mm GRANULAR 'A'
450mm GRANULAR 'B'
WATERMAIN
STREET LIGHT CABLE (NOTE 3,6)
STORM SEWER
0.10m (MIN)
SANITARY SEWER
0.75m
1.00m
1.00m
13.05m
0.90m
1.30m
4.00m
4.00m

NOTES
1. TOPSOIL TO BE REMOVED TO ITS FULL DEPTH ALONG ENTIRE WIDTH OF ROAD ALLOWANCE BY CONTRACTOR.
2. BOULEVARD – 150mm TOPSOIL AND SEED.
3. DEPTH FOR ALL UTILITIES 0.9m MIN., SEE COMMON TRENCH DETAIL ON DWG. UT-1.
4. HYDRANT VALVE BOXES TO BE IN ASPHALT.
5. SIDEWALKS TO OPSD 310.010, COMPLETE WITH 150mm GRANULAR 'A' BASE.
6. SIDEWALK AND STREET LIGHTS TO BE ON THE SAME SIDE OF THE ROAD AND ARE ONLY ON ONE SIDE. TRANSFORMER, HYDRO CABLES, COMMUNICATION CABLES, GAS MAIN AND MULTI-USE TRAIL TO BE ON OPPOSITE SIDE.
7. MULTI-USE TRAIL AS PER DETAIL ON DWG. DE-1.

NTS

37.0m ROW – RURAL CROSS-SECTION
(CROSSWIINDS BOULEVARD)
NTS

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BENCHMARKS

TBM1 – ELEVATION 181.032
BENCHMARK 72U311 – CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	SEP 1/20
2.	2ND SUBMISSION	DEC 10/20
3.	3RD SUBMISSION	FEB 24/21
4.	4TH SUBMISSION	MAR 30/21
5.	5TH SUBMISSION	MAY 17/21

ENGINEER STAMP

[redacted]

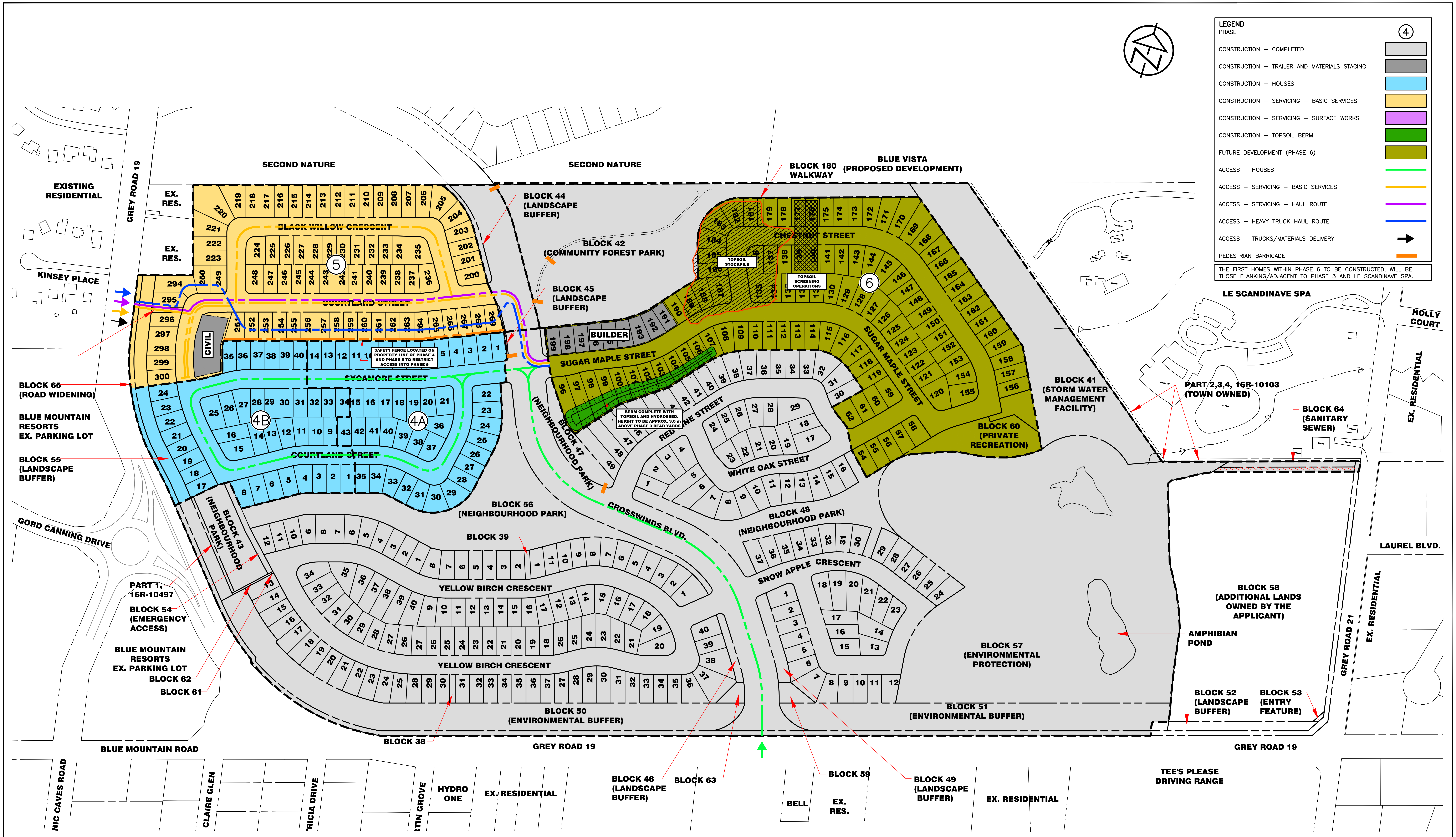
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

TATHAM
ENGINEERING

DETAILS, SECTIONS AND NOTES

DESIGN: BM
DRAWN: BM
CHECK: JPA/MJC
FILE: 111179-5
DATE: FEB 2021
SCALE: AS NOTED
DWG: **DE-3**

Drawing Name: 111179-5-DE01.dwg, Plotted: May 17, 2021


SECOND NATURE
SECOND NATURE
BLUE VISTA (PROPOSED DEVELOPMENT)
BLOCK 180 WALKWAY
EXISTING RESIDENTIAL
EX. RES.
EX. RES.
GREY ROAD 19
KINSEY PLACE
BLACK WILLOW CRESCENT
COURTLAND STREET
CIVIL
5
4B
4A
6
SYCAMORE STREET
COURTLAND STREET
SAFETY FENCE LOCATED ON PROPERTY LINE OF PHASE 4 AND PHASE 5 TO RESTRICT ACCESS INTO PHASE 5
BLOCK 44 (LANDSCAPE BUFFER)
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 45 (LANDSCAPE BUFFER)
BUILDER
SUGAR MAPLE STREET
CHESTNUT STREET
TOPSOIL STOCKPILE
TOPSOIL SCREENING OPERATIONS
BERM COMPLETE WITH TOPSOIL AND HYDROSEED. HEIGHT TO BE APPROX. 3.0 m ABOVE PHASE 3 REAR YARDS
RED PINE STREET
WHITE OAK STREET
SUGAR MAPLE STREET
BLOCK 47 (NEIGHBOURHOOD PARK)
BLOCK 60 (PRIVATE RECREATION)
BLOCK 41 (STORM WATER MANAGEMENT FACILITY)
LE SCANDINAVE SPA
HOLLY COURT
PART 2,3,4, 16R-10103 (TOWN OWNED)
BLOCK 64 (SANITARY SEWER)
EX. RESIDENTIAL
BLOCK 65 (ROAD WIDENING)
BLUE MOUNTAIN RESORTS EX. PARKING LOT
BLOCK 55 (LANDSCAPE BUFFER)
GORD CANNING DRIVE
BLOCK 43 (NEIGHBOURHOOD PARK)
BLOCK 56 (NEIGHBOURHOOD PARK)
CROSSWINDS BLVD.
BLOCK 48 (NEIGHBOURHOOD PARK)
BLOCK 39
SNOW APPLE CRESCENT
YELLOW BIRCH CRESCENT
YELLOW BIRCH CRESCENT
PART 1, 16R-10497
BLOCK 54 (EMERGENCY ACCESS)
BLUE MOUNTAIN RESORTS EX. PARKING LOT
BLOCK 62
BLOCK 61
LAUREL BLVD.
BLOCK 58 (ADDITIONAL LANDS OWNED BY THE APPLICANT)
AMPHIBIAN POND
BLOCK 57 (ENVIRONMENTAL PROTECTION)
BLOCK 50 (ENVIRONMENTAL BUFFER)
BLOCK 51 (ENVIRONMENTAL BUFFER)
BLOCK 52 (LANDSCAPE BUFFER)
BLOCK 53 (ENTRY FEATURE)
GREY ROAD 21
EX. RESIDENTIAL
BLUE MOUNTAIN ROAD
BLOCK 38
GREY ROAD 19
GREY ROAD 19
NIC CAVES ROAD
CLAIRE GLEN
TRICIA DRIVE
TIN GROVE
HYDRO ONE
EX. RESIDENTIAL
BLOCK 46 (LANDSCAPE BUFFER)
BLOCK 63
BLOCK 59
BELL
EX. RES.
BLOCK 49 (LANDSCAPE BUFFER)
EX. RESIDENTIAL
TEE'S PLEASE DRIVING RANGE

LEGEND
PHASE ④

CONSTRUCTION – COMPLETED	⬜
CONSTRUCTION – TRAILER AND MATERIALS STAGING	⬛
CONSTRUCTION – HOUSES	🟦
CONSTRUCTION – SERVICING – BASIC SERVICES	🟨
CONSTRUCTION – SERVICING – SURFACE WORKS	🟪
CONSTRUCTION – TOPSOIL BERM	🟩
FUTURE DEVELOPMENT (PHASE 6)	🟫
ACCESS – HOUSES	━
ACCESS – SERVICING – BASIC SERVICES	━
ACCESS – SERVICING – HAUL ROUTE	━
ACCESS – HEAVY TRUCK HAUL ROUTE	━
ACCESS – TRUCKS/MATERIALS DELIVERY	➡
PEDESTRIAN BARRICADE	▬

THE FIRST HOMES WITHIN PHASE 6 TO BE CONSTRUCTED, WILL BE THOSE FLANKING/ADJACENT TO PHASE 3 AND LE SCANDINAVE SPA.

ALL ACCESS PLANS ARE SUBJECT TO CHANGE BASED ON TIMING FOR APPROVALS AND PROGRESS OF CONSTRUCTION

[redacted]

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

NOTES

No.	REVISION DESCRIPTION	DATE
1.	3RD SUBMISSION	FEB 23/21
2.	PHASE 5 PRE-SERVICING AGREEMENT	MAR 16/21
3.	5TH SUBMISSION	JUN 24/21

ENGINEER STAMP

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 5
TOWN OF THE BLUE MOUNTAINS

CONSTRUCTION ACCESS PLAN

TATHAM
ENGINEERING

DESIGN: BM	FILE: 111179-5	DWG:
DRAWN: BM	DATE: FEB 2020	**CAP-1**
CHECK: JPA/MJC	SCALE: 1:2000	

Drawing Name: 111179-5-CAP1.dwg, Plotted: Aug 16, 2021