



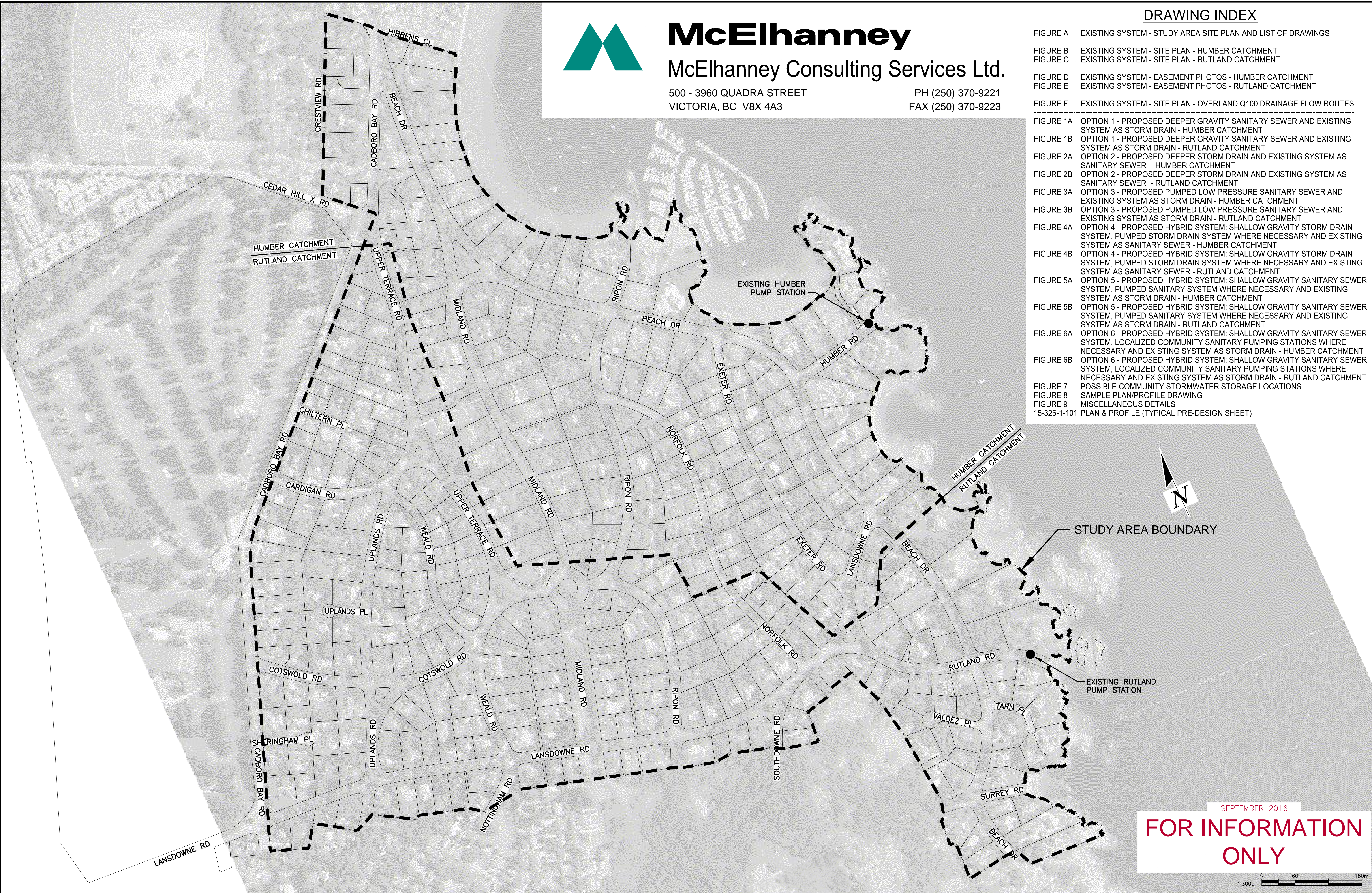
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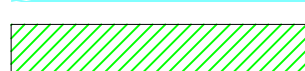
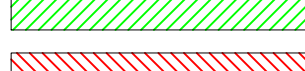
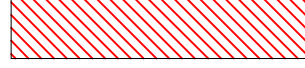
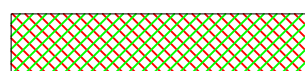
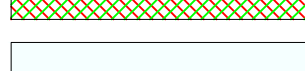




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					PROJECT NO. 15-326	ISSUED/REVISION							
					APPROVING AUTHORITY FILE NO.								
					DRAWING NO.								
					FIGURE A								



NOTE:
THIS DRAWING ILLUSTRATES KNOWN
INFORMATION AS OF OCT. 5, 2015 BASED
ON OAK BAY RECORDS, AND IS INTENDED
TO DETERMINE OVERALL OPTIONS
DIFFERENTIATION, NOT TO ASSESS DETAILED
INDIVIDUAL PROPERTY SERVICING NEEDS.

LEGEND:

- | | |
|---|--|
|  | EXISTING COMBINED SEWER |
|  | EXISTING SANITARY SEWER |
|  | EXISTING STORM DRAIN |
|  | EXISTING WATER |
|  | EXISTING GAS |
|  | EXISTING HYDRO/TEL/CABLE |
|  | COMBINED SEWER WITHIN REGISTERED EASEMENT |
|  | R.O.W. PLAN REGISTERED BUT NO R.O.W. DOCUMENT, THEREFORE NO RIGHTS WERE/ARE CONVEYED |
|  | EASEMENT REQUIRED FOR SERVICE |
|  | LOT WITH STORM PUMP |
|  | LOT WITH SANITARY PUMP |
|  | LOT WITH BOTH STORM & SANITARY PUMPS |
|  | LOT WITH SANITARY & STORM SERVICES |
|  | LOT WITH POSSIBLE STORM PUMP |
|  | LOT WITH POSSIBLE SANITARY PUMP |

OCTOBER 2015

FOR INFORMATION
ONLY



SFA

PROJECT:
UPLANDS COMBINED SEWER SEPARATION
EXISTING SYSTEM

TITLE:
SITE PLAN
HUMBER CATCHMENT

SCALE

PROJECT NO. 15-326	ISSUED/REVISION
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APPROVING AUTHORITY FILE NO.

DRAWING NO. **FIGURE B**

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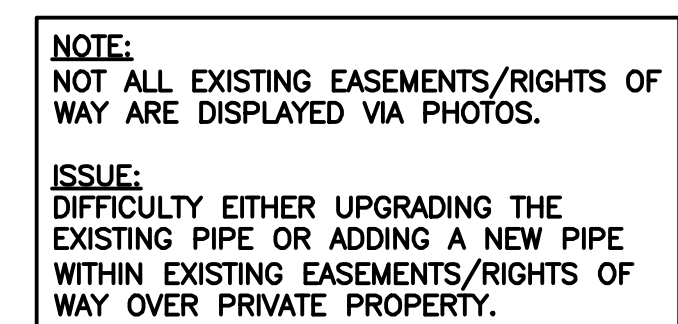
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McElhanney

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OCTOBER 2015

1:2500

0 50 150m

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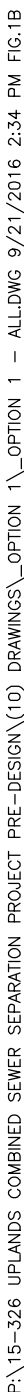
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PROJECT:	UPLANDS COMBINED SEWER SEPARATION EXISTING SYSTEM
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TITLE:
EASEMENT PHOTOS
HUMBER CATCHMENT

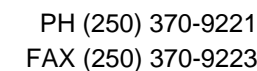
SCALE	
HORIZ: 1:2500	VERT: N/A
PROJECT NO. 15-326	ISSUED/REVISION
APPROVING AUTHORITY FILE NO.	
DRAWING NO.	

FIGURE D



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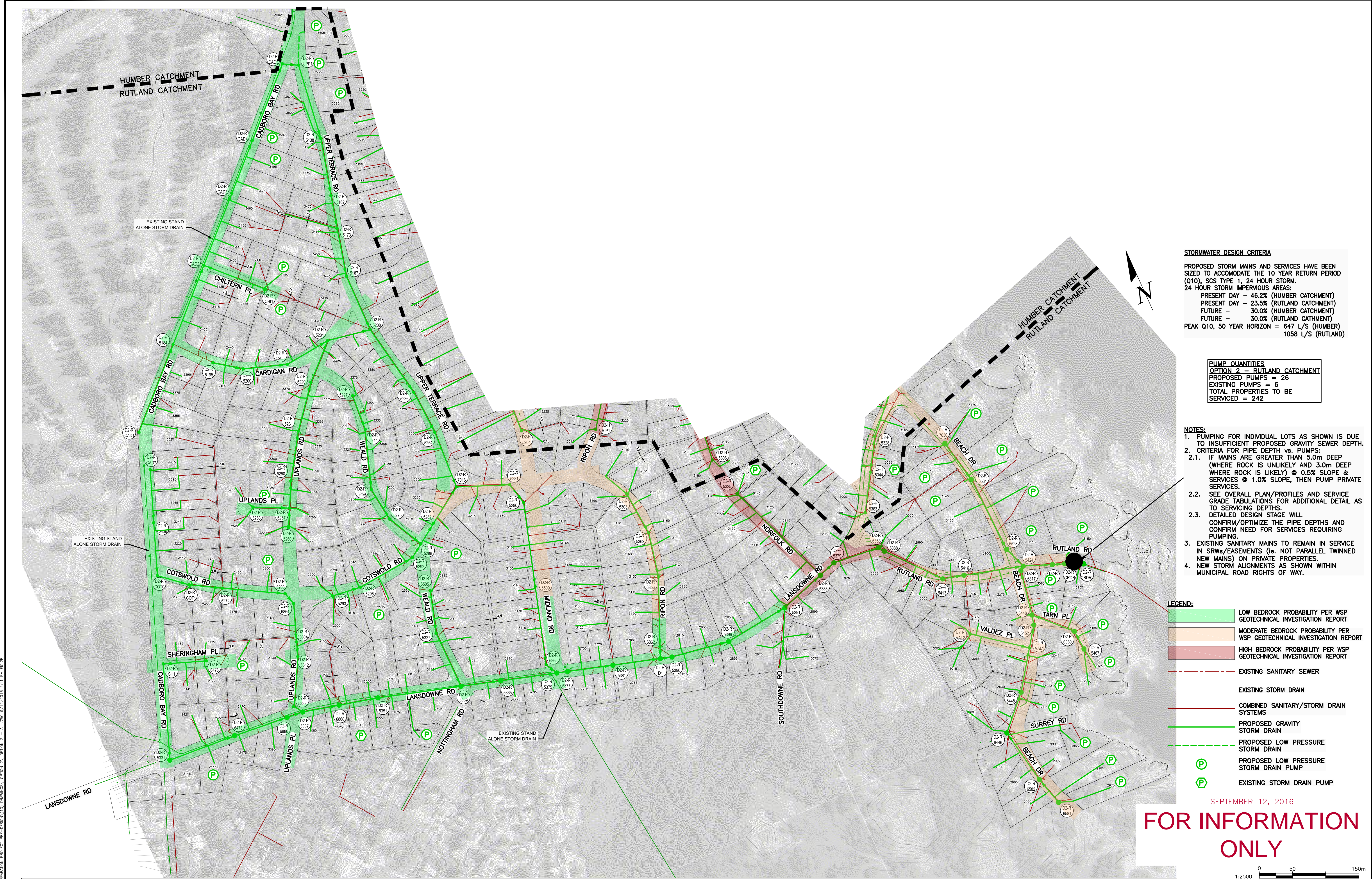
- LOCALIZED AREA:
COMBINATION OF EXISTING
STORM AND EXISTING COMBINED
SYSTEM TO BE UPGRADED TO
SUIT Q5 STORM EVENT.



SCALE	
HORIZ: 1:2500	VERT: N/A
PROJECT NO. 15-326	ISSUED/REVISION 1
APPROVING AUTHORITY FILE NO.	
DRAWING NO.	
FIGURE 1B	

SEPTEMBER 12, 2016

FOR INFORMATION
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STORMWATER DESIGN CRITERIA

PROPOSED STORM MAINS AND SERVICES HAVE BEEN SIZED TO ACCOMMODATE THE 10 YEAR RETURN PERIOD (Q10), SCS TYPE 1, 24 HOUR STORM.

24 HOUR STORM IMPERVIOUS AREAS:

- PRESENT DAY - 46.2% (HUMBER CATCHMENT)
- PRESENT DAY - 23.5% (RUTLAND CATCHMENT)
- FUTURE - 30.0% (HUMBER CATCHMENT)
- FUTURE - 30.0% (RUTLAND CATCHMENT)

PEAK Q10, 50 YEAR HORIZON = 647 L/S (HUMBER)
1058 L/S (RUTLAND)

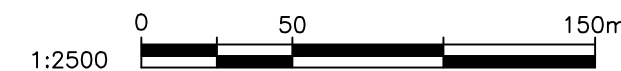
PUMP QUANTITIES
OPTION 2 - RUTLAND CATCHMENT
PROPOSED PUMPS = 26
EXISTING PUMPS = 6
TOTAL PROPERTIES TO BE SERVICED = 242

- NOTES:**
- PUMPING FOR INDIVIDUAL LOTS AS SHOWN IS DUE TO INSUFFICIENT PROPOSED GRAVITY SEWER DEPTH.
 - CRITERIA FOR PIPE DEPTH vs. PUMPS:
 - IF MAINS ARE GREATER THAN 5.0m DEEP (WHERE ROCK IS UNLIKELY AND 3.0m DEEP WHERE ROCK IS LIKELY) @ 0.5% SLOPE & SERVICES @ 1.0% SLOPE, THEN PUMP PRIVATE SERVICES.
 - SEE OVERALL PLAN/PROFILES AND SERVICE GRADE TABULATIONS FOR ADDITIONAL DETAIL AS TO SERVICING DEPTHS.
 - DETAILED DESIGN STAGE WILL CONFIRM/OPTIMIZE THE PIPE DEPTHS AND CONFIRM NEED FOR SERVICES REQUIRING PUMPING.
 - EXISTING SANITARY MAINS TO REMAIN IN SERVICE IN SRW/EASEMENTS (i.e. NOT PARALLEL TWINNED NEW MAINS) ON PRIVATE PROPERTIES.
 - NEW STORM ALIGNMENTS AS SHOWN WITHIN MUNICIPAL ROAD RIGHTS OF WAY.

- LEGEND:**
- LOW BEDROCK PROBABILITY PER WSP GEOTECHNICAL INVESTIGATION REPORT
 - MODERATE BEDROCK PROBABILITY PER WSP GEOTECHNICAL INVESTIGATION REPORT
 - HIGH BEDROCK PROBABILITY PER WSP GEOTECHNICAL INVESTIGATION REPORT
 - EXISTING SANITARY SEWER
 - EXISTING STORM DRAIN
 - COMBINED SANITARY/STORM DRAIN SYSTEMS
 - PROPOSED GRAVITY STORM DRAIN
 - PROPOSED LOW PRESSURE STORM DRAIN
 - PROPOSED LOW PRESSURE STORM DRAIN PUMP
 - EXISTING STORM DRAIN PUMP

SEPTEMBER 12, 2016

FOR INFORMATION ONLY



P:\15-328 UPLANDS COMBINED SEWER SEPARATION PROJECT PRE-DESIGN (10) DRAWINGS\OPTION 2 - ALLIANCE 9/12/2016 2:11 PM FIG.2B

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