Appendix D

Servicing Brief

development engineering
(London) Limited

Consulting Civil Engineers
41 Adelaide Street North, Unit 71
London, Ontario N6B 3P4
(519) 672-8310 Fax (519) 672-4182
e-mail: deveng@deveng.net
website: www.deveng.net

Greenhills Shopping Centre Proposal
Southeast Corner of Exeter Road & Wonderland Road

Servicing Strategy

As requested, our firm has reviewed the South West Area Plan information with respect to servicing options for the Wonderland Road South corridor from Dingman Drive to Exeter Road in London, Ontario. The following is a brief summary of our findings.

Transportation & Wonderland Road South

Greenhills is currently proposing to fully re-construct Wonderland Road from Exeter Road south to Hamlyn Street (+/- 600m) to a 5-lane ultimate urban cross section complete with a common left turn lane, curb & gutter, local drainage system, street lighting, and sidewalks. The roadway would then taper down to a 3-lane urban cross section south Hamlyn Street to Dingman Drive (+/- 800m).

Under current SWAP discussions and in consultation with the Province of Ontario, Wonderland Road South has been identified as an important gateway entrance to London to be developed and optimized as best and attractive as possible. There is one proposal to construct a 57m wide road allowance complete with six lanes, sidewalk, curbs and two landscape medians.

Upon detailed review, it has been determined that this proposed cross section will be at least 80% more expensive to construct than the standard 5- lane arterial road urban section currently found successful and affordable throughout the City of London. This includes Wonderland Road directly north of Exeter Road and Wharncliffe Road as well as both east and west along Exeter Road.

It is appreciated that a new interchange at Wonderland Road and Highway 401 is expected to be constructed in the near future and that an impressive gateway entrance from the Highway to the City is desirable. However, the proposed 57m right-of-way is not feasible nor warranted in this location. As the existing roadways directly north, east and west of Wonderland are all 36m road allowances, there is no realistic opportunity to construct this expensive gateway feature. Furthermore, the current roadway is restricted to 10m at the Highway 402 interchange such that only a portion of an extremely wide and pedestrian unfriendly roadway is only achievable adjacent to the Greenhill lands. Notably based on an inhibitive cost estimate and concerns concerning widening of the right-of-way along existing Greenhills and/or J-AAR properties, only a 5-lane urban work arterial road cross-section section has been costed at this time for the purposes of this submission. This work is expected to be fully constructed by Greenhills with financial assistance under a new front ending agreement or equivalent, with a portion of the longer term funding to be recovered from the CSRF respecting the present timing of this work in the GMIS and the City capital budget.

Projected Construction Costs: $3,177,000
Projected Claimable Works: $2,225,900

Sanitary Trunk Sewer Servicing

There is currently an existing 750mm trunk sanitary forcemain on Wonderland Road which discharges to the South London gravity sewer system from the Wonderland sanitary pumping station (SPS) on Dingman Drive. All flows directed to the pumping station are sent north along Wonderland Road via the 750mm forcemain and ultimately to the Greenway Pollution Control Centre (PCC). The existing pumping station is greatly underutilized as only minimal flows from growth have been allowed to be directed to the pumping station to date.

Greenhills is prepared to install the ultimate trunk gravity sanitary sewer from Dingman Drive north along Wonderland Road and sized to service not only the Greenhill lands, but also all of the future lands tributary to the Wonderland SPS. Under this proposal, a trunk sanitary main will be installed from the existing 900mm stub at Dingman Drive north to Exeter Road at a depth of roughly 9m within the Wonderland Road allowance. By installing the ultimate solution, not only are the proponent lands serviced, but also several of the important voice development lands along the Wonderland Gateway. In addition to the adjacent landowners, the neighboring community of Lambeth would benefit as current septic systems identified as a significant concern by the Ministry of Environment can be directed to the new gravity sanitary sewer system. In addition to installing the trunk sewer along Wonderland Road, Greenhills is also prepared to install a new trunk sanitary main west to Lambeth via the Hamlyn Street road allowance. This would allow the Southland PCP to be removed at a significant financial benefit and liability reduction to the City as well as eliminating potential environmental concerns. This would also eliminate the need for interim forcemain installations identified by City staff to provide additional immediate and future operating and capital cost savings. Similar to Lambeth, industrial and commercial lands to the east currently serviced by septic systems would have the opportunity to re-direct flows to the new Wonderland road trunk gravity sanitary sewer upon installation.

Like most developments within London, we are proposing an uphill servicing strategy, south to north, where would see the lands at the existing outlet location developed immediately with the extension of the ultimate municipal storm and sanitary drainage systems moving upstream. Conversely, City staff identified a north to south scenario whereby temporary pumping stations would be installed in order to allow gradual development to the south along the Wonderland corridor. As the cost of temporary solutions are not recoverable from the CSRF, those works would be ‘throw away’ costs and would only temporarily service limited development in the area with overflow risks. The proposal being brought forward by Greenhills is the ultimate solution which will eliminate the need for interim servicing measures and throw away costs while promoting much larger assessment and employment growth opportunities within the very attractive SW London development area. By installing the Wonderland trunk sanitary, the opportunity for servicing additional lands to the north can be readily expanded pending private or public funding. The large costs associated with future development in the area have been at the south end of the Modified Urban Growth Boundary (MUGB) in this location, and Greenhills is willing to carry some of the infrastructure financing costs until such time as identified in the GMIS or a front-ending agreement can be executed to address any CSRF or capital budget concerns.

Projected Construction Costs: $1,900,000; Projected Claimable Works: $1,900,000

Water Servicing

There is currently a 100mm PVC watermain located on Wonderland Road which would not suffice for development servicing. There is also a trunk 600mm transmission watermain on Exeter Road that operates at low pressures at approximately 58 psi. It is understood that a high pressure feed from White Oak Road west along Dingman Drive and north to the site is required for the ultimate servicing of the area. It is also agreed with the City that this would be an expensive installation to undertake on an upfront cost basis. Therefore, it would be our recommendation to construct an interim connection to the existing 600mm trunk watermain on Exeter Road and construct the ultimate trunk 300mm watermain within the road allowance from Dingman Drive to Exeter Road at this time only. The future extension across Dingman Drive could occur at a later date under the CSRF, GMIS and/or capital works program. The installation of the 300mm main on Wonderland Road would provide a looped service for the proponent lands and ensure sufficient water quality and fire flow/pressure in the area.

Projected Construction Costs: $365,000
Projected Claimable Works: $365,000

Drainage & Stormwater Management

There are currently no storm sewers on Wonderland Road. Several trunk sewer and open storm drains currently direct flow from north of Exeter Road south to the Pincombe Drain via sewers on Exeter Road. A new regional stormwater management (SWM) facility has been identified in the City's master plan as to be established on the south side of the Greenhill lands; adjacent to Wonderland Road.

This will require a substantial land allotment to accommodate the proposed SWM pond. This area has also been identified as a ground water recharge area which will require infiltration and water balance calculations for any proposed development throughout the site. This could be addressed through the introduction of permeable pavement systems or infiltration galleries, and will effectively complement the ‘off septic tanks soon ’concept associated with this proposal.

At this time, Greenhills is proposing to install a local storm sewer system as part of the ultimate Wonderland Road 5-in accordance with the 5-lane widening. These sewers would outlet to the interim/ultimate SWM facility to be located on the Greenhills lands in accordance with, the approved EA. In addition to addressing local storm runoff from Wonderland Road, it is also proposed to install the future required trunk storm sewer from Exeter Road south through the Greenhill lands to the regional SWM pond facility as part of the site development agreement requirements.

As noted previously, it is proposed to only construct an interim SWM facility at this time as the ultimate SWMF#4 is not slated for construction for several years. The interim facility will be sized to accommodate all of the proponent lands as well as the other Wonderland Road Gateway, enterprise, and adjacent landowners development servicing requirements; pending appropriate financial contribution. Any interim facility would be sized and designed for expansion to the ultimate footprint and servicing capacity for the lands to the north as will be required by the City.

As discussed above, City staff have proposed 'orderly development' from north to south. However, to achieve this, each landowner will be required to install very expensive on-site controls to address both water quality and quantity control. This will add considerable costs to each and all developments in the area including detailed review and approval requirements. As well, with that approach, the approved EA becomes outdated and the ultimate SWM pond will be greatly affected, with cost increases, with revised design requirements. Similarly, as for sanitary servicing, industry-standard engineering practice is to install the downstream outlets and facilities first and then extend the major drainage systems 'uphill the' to service the upstream tributary lands. Under the Greenhills proposal, this will be achieved in the most cost-effective manner to the City in every way.

Projected Trunk Storm Sewer Construction Costs: $450,000
Projected Claimable Works: $400,000
Projected Interim SWM Construction Costs: $1,000,000
Projected Claimable Works: $500,000

Summary

1. Construct and front-end a new 5-lane urban cross section from Exeter Road south to Hamlyn Street complete with curb & gutter, storm drainage, sidewalks, and lighting.
2. Construct and front-end an improved 3-lane urban cross section from Hamlyn Street south to Dingman Drive complete with curb/gutter, drainage, sidewalks, and lighting.
3. Construct and finance/front-end/MSFA the ultimate gravity trunk sanitary sewer from Dingman Drive north to Exeter Road to service the Gateway and Lambeth septic tanks.
4. Construct and finance a new trunk 300mm watermain from Dingman Drive north to Exeter Road.
5. Construct a new trunk storm sewer from Exeter Road south to the interim and future stormwater management facility through the Greenhill lands.
6. Construct an interim SWM facility in the ultimate location to accommodate immediately imminent upstream development proposals.
7. Construct the ultimate gravity sewer main along Hamlyn Street to the Southland PCP new permanent SPS station to properly service Lambeth.

We trust this to be sufficient for present purposes. Please call if you have any questions.

Prepared and respectfully submitted by:
DEVELOPMENT ENGINEERING (LONDON) LIMITED

Jeff Thomas, Managing Partner

EXISTING ASH MUNIC DRAIN

PROPOSED 1.5m SIDEWALK

EXETER ROAD

PROPOSED SMART CENTRE DEVELOPMENT

WONDERLAND ROAD CROSS SECTION
(PROPOSED 5 LANE URBAN CROSS SECTION)

WONDERLAND ROAD SOUTH

-CONSTRUCT 5-LANE ULTIMATE URBAN CROSS SECTION FROM EXETER ROAD TO HAMLYN STREET AND 3 LANE URBAN CROSS SECTION FROM HAMLYN STREET SOUTH TO DINGMAN DRIVE COMPLETE WITH LOCAL STORM DRAINAGE, SIDEWALK, CURB, ROAD TAPER AND STREET LIGHTING
-INITIALLY FINANCED BY DEVELOPER WITH REPAYMENT FROM GMIS IN FUTURE

EXETER ROAD

BOSTWICK ROAD

HAMLYN STREET

SOUTHWEST AREA PLAN - OPTION 2
ULTIMATE TRANSPORTATION
REQUIREMENTS FIGURE 1A -
WONDERLAND ROAD

SCALE – 1 : 2000
20 0 40m

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PINCOMBE DRAIN

WONDERLAND ROAD CROSS SECTION
(PROPOSED 3 LANE URBAN CROSS SECTION)

PROPOSED 1.5m SIDEWALK

DINGMAN DRIVE

WONDERLAND ROAD SOUTH

HAMLYN STREET

-CONSTRUCT 3-LANE ULTIMATE URBAN CROSS SECTION FROM HAMLYN STREET TO DINGMAN DRIVE COMPLETE WITH LOCAL STORM DRAINAGE, SIDEWALK, CURB, ROAD TAPER AND STREET LIGHTING
-FINANCED BY DEVELOPER

SOUTHWEST AREA PLAN - OPTION 2
ULTIMATE TRANSPORTATION REQUIREMENTS FIGURE 1B - WONDERLAND ROAD

SCALE – 1 : 2000
20 0 40m

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PROPOSED SMART CENTRE DEVELOPMENT

EXETER ROAD

1500Ø STM

1500Ø STM

1500Ø STM

EXISTING ASH MUNIC DRAIN

1500Ø STM

1500Ø STM

1500Ø STM

1500Ø STM

PHASE 1 INTERIM SWM FACILITY

SWM POND #4

1800Ø STM

WONDERLAND ROAD SOUTH

300Ø STM

375Ø STM

375Ø STM

450Ø STM

450Ø STM

EXISTING
750Ø FORCEMAIN

450Ø STM

600Ø STM

300Ø STM

450Ø SAN

450Ø SAN

450Ø SAN

450Ø SAN

450Ø SAN

450Ø SAN

900Ø SAN

825Ø SAN

825Ø SAN

825Ø SAN

BOSTWICK ROAD

HAMLYN STREET

EXETER ROAD

-CONSTRUCT ULTIMATE GRAVITY SANITARY SEWER FROM EXETER ROAD TO DINGMAN DRIVE PUMPING STATION
-CONSTRUCT LOCAL ULTIMATE STORM SEWER FOR WONDERLAND ROAD FROM EXETER ROAD TO INTERIM SWM FACILITY INCLUDING INTERIM DITCH INLET DRAINS FOR LANDS ON WEST SIDE OF WONDERLAND ROAD SOUTH
-CONSTRUCT 1500Ø ULTIMATE STORM TO REPLACE ASH MUNIC DRAIN
-CONSTRUCT INTERIM STORM WATER MANAGEMENT FACILITY TO SERVICE SMART CENTRE LANDS AND WONDERLAND ROAD

SOUTHWEST AREA PLAN - OPTION 2
ULTIMATE SERVICING REQUIREMENTS FIGURE 2A - WONDERLAND NORTH

SCALE – 1 : 2000
20 0 40m

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-CONSTRUCT ULTIMATE GRAVITY SANITARY SEWER FROM PROJECT SITE TO DINGMAN DRIVE PUMPING STATION
-CONSTRUCT LOCAL STORM SEWER FOR WONDERLAND ROAD FROM SOUTH OF HAMLYN STREET TO DITCH ALONG NORTH SIDE OF DINGMAN DRIVE INCLUDING INTERIM DITCH INLET DRAINAGE FOR LANDS ON WEST SIDE OF WONDERLAND ROAD SOUTH
-CONSTRUCT INTERIM STORM WATER MANAGEMENT FACILITY TO SERVICE SMART CENTRE LANDS AND WONDERLAND ROAD

PHASE 2 ULTIMATE SWM FACILITY

PINCOMBE DRAIN

DINGMAN DRIVE

EXISTING
750Ø FORCEMAIN

525Ø STM

900Ø SAN

300Ø STM 300Ø STM 375Ø STM 375Ø STM 450Ø STM 450Ø STM 450Ø STM 450Ø STM

900Ø SAN 900Ø SAN 900Ø SAN 900Ø SAN 900Ø SAN 900Ø SAN 900Ø SAN 900Ø SAN

WONDERLAND ROAD SOUTH

WONDERLAND ROAD SOUTH

SOUTH LIMIT OF ROAD RECONSTRUCTION

825Ø SAN

825Ø SAN

HAMLYN STREET

SOUTHWEST AREA PLAN - OPTION 2
ULTIMATE SERVICING
REQUIREMENTS FIGURE 2B -
WONDERLAND SOUTH

SCALE – 1 : 2000
20 0 40m

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