

NO: **R223**

COUNCIL DATE: **October 22, 2012**

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **October 17, 2012**

FROM: **General Manager, Engineering
General Manager, Planning and Development**

FILE: **6520-20** (NCP 5A -
Orchard Grove)

SUBJECT: **Alternate Stormwater Servicing Concept for Orchard Grove (Area #5A)
Neighbourhood Concept Plan in Grandview Heights**

RECOMMENDATION

The Engineering Department and the Planning and Development Department recommend that Council:

1. Receive this report as information;
2. Approve an alternate stormwater engineering servicing strategy and the related financial strategy as documented in this report as an optional means of managing the provision of stormwater infrastructure in support of development in the Orchard Grove (Area #5A) Neighbourhood Concept Plan (NCP) in Grandview Heights and other areas to the north of the subject NCP; and
3. Approve the alternate land use plan, as illustrated in Appendix I attached to this report, for the area in the Orchard Grove (Area 5A) NCP that is currently designated for a detention pond.

PURPOSE

The purpose of this report is to:

- Provide an overview and seek approval of an alternate stormwater servicing strategy and an alternate land use plan for the Orchard Grove (Area #5A) NCP in Grandview Heights; and
- Provide a synopsis of a public consultation process and engineering technical review that have been completed in relation to the proposed changes.

BACKGROUND

The Orchard Grove NCP is bounded by 164 Street to the west, 26 Avenue to the north, 168 Street to the east and 24 Avenue to the south as illustrated in the map attached as Appendix II. It contains approximately 53 individual properties with a total area of approximately 30 hectares (76

acres). The entire NCP area is designated "Suburban" under Surrey's Official Community Plan ("OCP") and the majority of the properties are currently zoned One-Acre Residential ("RA") Zone.

Council approved the Stage 1 Land Use Plan for the Orchard Grove NCP at its Regular meeting on September 13, 2010 (No. R207; 2010). The Stage 1 component of the NCP identified the location of land uses in the plan area, the alignment of roads and lanes, development densities and the location of neighbourhood parks, walkways and open spaces. Council authorized staff to proceed with the Stage 2 component of the NCP.

Council approved the Stage 2 component of the Orchard Grove NCP, attached as Appendix III to this report, at its Regular meeting on January 23, 2012 (Corporate reports numbered R009; 2012 and R016; 2012, respectively). The Stage 2 NCP work focused on preparing development guidelines for the neighbourhood and completing detailed servicing plans and a financial strategy for providing engineering services (transportation, water, sanitary, and stormwater) to the area covered by the plan.

The stormwater servicing strategy developed for the area included:

1. *A stormwater detention pond to control post-development flows due to rainfall events up to the 5-year return period;*
2. *Off-site stormwater trunks on 164 Street to convey flows from the NCP area to the existing downstream stormwater system; and*
3. *Stormwater source control measures to retain the first 25mm of rainfall from all impervious surfaces.*

The stormwater detention pond is proposed to be located on two properties in the northwest corner of the NCP area. This site was selected as it is the best location from a serviceability perspective and was supported by the NCP Citizens Advisory Committee (CAC).

Since completion of the NCP, the development community has been unable to secure the above-referenced two properties for the detention pond.

DISCUSSION

As noted in Corporate Report No. R009;2012 if a development applicant is not able to secure the properties required for the detention pond, they have the option of proposing an alternate location for the detention pond for consideration by the City.

Applicants for development projects within the subject NCP area have advised staff that they are unable to secure the properties that are required for the detention pond at a cost that will allow them to proceed.

Alternate Servicing Strategy

One of the applicants is now proposing a new location for the stormwater detention pond at the southeast corner of 164 Street and 32 Avenue as illustrated on the map attached to this report as Appendix IV.

The proposed detention pond will serve both the Orchard Grove (Area #5A) NCP area and part of the North Grandview Heights NCP area located to the north of the Orchard Grove NCP. An illustration of the proposed detention pond is attached as Appendix V to this report.

The following table provides a comparison of the characteristics of the pond as originally envisioned in the Orchard Grove NCP and alternate detention pond as described above.

Item	Originally Proposed Detention Pond	Newly Proposed Detention Pond	Difference in Attributes between Ponds
Area of Land	10,000 m ²	4,944 m ²	-50.6%
Surface Area of Pond	8,500 m ²	3,500 m ²	-58.8%
Volume of Storage	1,200 m ³	1,900 m ³	+58%

Planning Context

The implementation of the alternate stormwater detention pond will allow for a different land use concept to be implemented at the location of the original detention pond in the Orchard Grove NCP area. The alternate land use concept developed for the southeast corner of 26 Avenue and 164 Street in the Orchard Grove NCP as illustrated in Appendix I attached to this report introduces:

- a community gateway feature at the intersection of 164 Street and 26 Avenue;
- a transition landscape buffer (10-metre statutory right-of-way) on 26 Avenue;
- Large Lot Duplex or Large Lot Single Family (2-10 upa) development fronting 26 Avenue between 164 Street and 164A Street;
- 25A Avenue between 164 Street and 164A Street; and
- Small Lot Single Family development (10-15 units per acre) fronting 25A Avenue between 164 Street and 164A Street.

The proposed land uses are consistent with the approved land uses on the adjacent sites in the Orchard Grove NCP and will provide a consistent interface along 26 Avenue and 164 Street. The Land Use Policies or Design Guidelines that were part of the Stage 2 component of the Orchard Grove NCP remain unchanged.

Financial Analysis

A comprehensive financial analysis was completed for the alternate stormwater servicing strategy as described above. The following table summarizes the estimated DCC revenues and construction costs for the infrastructure involved in the alternate stormwater management strategy. The estimated DCC revenues reflect the projected development for the areas that will receive benefit from the alternate stormwater management strategy.

Area	DCC Expenditures on Eligible Works for the alternate strategy servicing			Estimated DCC Revenue	Shortfall
	Pond	Trunk	Total		
Area A	\$1,650,000	\$2,200,000	\$3,850,000	\$1,950,000	\$1,900,000
Area B and Area C	\$950,000	\$0	\$950,000	\$675,000	\$275,000
TOTAL	\$2,600,000	\$2,200,000	\$4,800,000	\$2,625,000	\$2,175,000

To address the estimated shortfall in DCC revenues in comparison to the costs of constructing the stormwater infrastructure, the developer(s) who undertakes the construction may enter into a DCC Front-ending Agreement to recover some of the costs from DCCs collected in the area and enter into a Development Works Agreement (DWA) to recover the remainder of the costs from other benefitting lands as and when they develop. This approach has been successfully applied for cost-sharing engineering services in other NCP areas.

A DWA requires the consent of the majority of the owners of lots within the benefitting area. In this case it will be necessary for the front-ending developer to pursue two DWAs: one for the Orchard Grove NCP area and the other for the area north of the Orchard Grove NCP area, which includes the North Grandview Heights NCP area and the area between the Orchard Grove NCP area and the North Grandview Heights NCP area.

Based on an estimated shortfall of \$1.9 million in relation to the expected DCC revenues for the Orchard Grove NCP area, the DWA charge is estimated at \$30,750 per developable acre of benefitting land. Based on a shortfall of \$275,000 for the benefitting area north of the Orchard Grove NCP area, the DWA cost is estimated at \$3,250 per developable acre of benefitting land.

If the front-ending developer is not able to generate sufficient property owner support to proceed with a DWA for either one of the areas, the front-ending developer will have the choice of:

- proceeding with the project, which will include acquiring the land and completing all of the infrastructure required to service the areas, and absorb the shortfall;
- re-initiating the voting process with revised boundaries; or
- not proceeding with the project.

There are no legislative constraints related to re-initiating a DWA vote or the number of times that such a vote can be undertaken.

Public Consultation

Public consultation for the proposed alternate stormwater servicing strategy included a Citizens' Advisory Committee ("CAC") meeting and a Public Open House.

As part of the public consultation process the developer leading this initiative only elected to provide the costs for properties within the Orchard Grove NCP area, and did not detail the costs for the alternate stormwater engineering servicing strategy for properties within the benefitting area north of the Orchard Grove NCP area. Although the developer did not provide any

estimated costs, the property owners within this area will be provided with clear information regarding such costs as part of the DWA approval process.

CAC Meeting – September 13, 2012

McElhanney Consulting Services staff, working on behalf of Qualico Developments Inc. who is the development applicant that has initiated the alternate stormwater servicing strategy, presented the proposal to the CAC, answered questions and received feedback. Staff of the Planning & Development Department, the Engineering Department and the Parks, Recreation and Culture Department also attended the meeting to observe the meeting and answer questions.

Of the original 16 members of the Orchard Grove CAC, 8 attended the meeting. None of the CAC members in attendance expressed any opposition to the proposal. No other feedback was received from the CAC members who were not able to attend the meeting.

Public Open House – September 20, 2012

McElhanney Consulting Services held a Public Open House at Elgin Hall in South Surrey (14250 Crescent Road) on September 20, 2012. Approximately 40 people attended the Open House, at which time the proposed alternate stormwater servicing strategy was presented. A series of display boards and questionnaires were provided to allow attendees to provide feedback on the proposal. Notice of the Public Open House was mailed to a total of 418 properties, including all those owners of lots within the Orchard Grove NCP area, affected properties within the North Grandview Heights NCP area, affected properties between the Orchard Grove and North Grandview Heights neighbourhoods and all properties within 100 metres (300 ft.) of these areas.

A total of 25 completed questionnaires were submitted either during or after the Public Open House. Three (3) people also responded prior to the Public Open House by telephone. In total, 28 responses were received. Fifteen (15) of the 28 respondents (54%) either supported or had no concerns with the proposed alternate stormwater servicing strategy. Eight (8) respondents (28%) did not oppose the proposal but expressed concerns. Five (5) of the 28 respondents (18%) indicated that they were opposed to the proposal.

Of the 15 respondents who expressed no concerns regarding the proposal, 8 specifically indicated support for the proposed alternate stormwater servicing strategy and new pond location, for the following reasons:

- Prefer the alternate stormwater servicing strategy option because it facilitates the development of both sides of 164 Street between 28 Avenue and 32 Avenue;
- Prefer the proposed alternate strategy if it is more cost-effective;
- Support the pond as it serves a larger drainage catchment area;
- Support the alternate option as it allows for development to commence in the Orchard Grove NCP area; and
- The proposed detention pond would create an attractive entrance to the Grandview area at 32 Avenue and 164 Street.

Eight (8) respondents indicated that while they were not opposed to the proposal, they had some concerns, including:

- Six (6) of the 8 respondents own property outside of the North Grandview Heights and Orchard Grove NCP areas, but within the stormwater catchment area. These respondents all expressed concern regarding the uncertainty of their future development potential;
- Environmental damage to April Creek, including flooding and erosion;
- Being left with poorly paved streets;
- Increased traffic on 164 Street at the proposed 25A Avenue intersection; and
- That moving the pond away from its current location would have a negative impact on the property values of surrounding homes.

Three (3) of the five (5) respondents who indicated opposition to the proposal were opposed because of the proposed alternate pond location and the proposed land use option, for the following reasons:

- The current pond location should be preserved because it preserves the semi-rural character of the street, and the integrity of the multi-million dollar homes on the north side of 26 Avenue east of 164 Street; and
- The current pond location should be preserved because it provides a transitional zone between the acreage lots on the north side of 26 Avenue and the future higher-density housing on the south side of 26 Avenue, and reduces the density of housing in the neighbourhood.

The other two (2) respondents in opposition to the proposal explained that they were opposed for the following reasons:

- Properties on the east side of 164 Street between North Grandview Heights and Orchard Grove are not adequately considered in terms of future development potential, meaning that the detention pond may not have the capacity to service all future development areas within the catchment area; and
- Concern with construction nuisances including noise and dirt.

Response to Public Consultation

The following section provides a response to the main concerns that were received through the public consultation process, including:

- (1) uncertainty of future development potential in the catchment area between the two NCPs;
- (2) interface and transition concerns;
- (3) environmental concerns, and
- (4) traffic concerns.

1. Uncertainty of future development potential concerns

There are a number of properties on the east side of 164 Street, between 26 Avenue and 28 Avenue, which are included in the stormwater catchment area for the alternate detention pond but are outside of the currently approved NCP areas. These properties are designated “Suburban Residential (1 to 2 upa)” in the Grandview Heights General Land Use Plan, and are located in Grandview Heights Area 5, for which an NCP has not yet been initiated. Eight (8) owners of properties located within this area responded to the questionnaire and expressed concerns

regarding the uncertainty of the development potential of their properties. The proposed detention pond is sized to control post-development flows from these properties based on a mix of RF-12 and RH lots. The development densities for these lots will be determined through a future planning process involving extensive public consultation. Additional stormwater detention may be required should a future land use plan for this area indicate greater development densities than those being assumed in relation to the sizing of the currently proposed detention pond; however, the densities being assumed for the purposes of sizing the detention pond appear reasonable in the context of the properties in question.

2. Interface and transition concerns

Concerns were raised from three (3) respondents regarding the transition and interface along 26 Avenue. Respondents requested that the detention pond remain at the location it is proposed within the Orchard Grove NCP in that it acts to reduce the density of housing at this location, and provides a transitional zone between acreages fronting the north side of 26 Avenue and higher-density homes proposed along the south side of 26 Avenue in the Orchard Grove NCP. The alternate Orchard Grove Land Use Plan is generally consistent with the Stage I Land Use Plan that was approved by Council, which did not include a detention pond at the corner of 26 Avenue and 164 Street. The alternate land use plan shows a transitional land use designation of “Large-Lot Duplex or Large Lot Single Family (2-10 upa)” at this location along with a “Transition Landscape Buffer”. This is considered to be an appropriate transitional treatment and is consistent with the transitional guidelines contained in the Orchard Grove NCP.

3. Environmental concerns

One (1) respondent raised concerns regarding potential damage to April Creek, including flooding and erosion. The Old Logging Ditch / Burrows Integrated Stormwater Management Plan (ISMP) outlines infrastructure and target release rates from new developments tributary to April Creek. The proposed works are consistent with the recommendations in the ISMP for the area, which was developed with a view to accommodating development in the Creek catchment area.

4. Traffic concerns

One (1) respondent raised concerns regarding traffic at 164 Street and the proposed 25A Avenue intersection, which would connect to 164 Street if development occurs in a manner consistent with the alternate land use option. This road connection was also contemplated in the Stage 1 Land Use Plan as approved by Council and was only excluded when a detention pond was included in the NCP land use plan as part of the Stage II component of the NCP planning process for Orchard Grove.

Next Steps

Subject to Council approving the recommendations of this report, both the original Orchard Grove servicing strategy and the alternate servicing strategy will be approved servicing options for the Orchard Grove NCP area, and development applicants will be able to choose their preferred alternative, initiate detailed design of the pond, obtain all necessary approvals including approval from the Department of Fisheries & Oceans, and apply for each of a DCC Front-Ending Agreement and a DWA Agreement to recover the costs associated with constructing the preferred stormwater servicing strategy.

Regardless of its location the land required to accommodate the detention pond must be secured in favour of the City before any development proceeds in the pond's catchment area.

CONCLUSION

The infrastructure discussed in this report will support the build-out of the Orchard Grove (Grandview Heights Area #5A) NCP and part of the North Grandview Heights NCP. The financial strategy as proposed in this report is consistent with the "development-pay" principle.

Based on the above discussion, it is recommended that Council:

- Approve an alternate stormwater engineering servicing strategy and the related financial strategy as documented in this report as an optional means of managing the provision of stormwater infrastructure in support of development in the Orchard Grove (Area #5A) Neighbourhood Concept Plan (NCP) in Grandview Heights and other areas to the north of the subject NCP; and
- Approve the alternate land use plan, as illustrated in Appendix I attached to this report, for the area in the Orchard Grove (Area 5A) NCP that is currently designated for a detention pond.

Jean Lamontagne
General Manager
Planning and Development

Vincent Lalonde, P. Eng.
General Manager
Engineering Department

JA/CL/CAB/brb

Attachments:

- Appendix I - Alternate Land Use Plan for the Orchard Grove NCP
- Appendix II - Orchard Grove NCP Boundaries
- Appendix III - Stage 2 Approved Land Use Plan for the Orchard Grove NCP
- Appendix IV - Alternate Stormwater Servicing Strategy
- Appendix V - Illustration of the Proposed Detention Pond at 164 Street and 32 Avenue

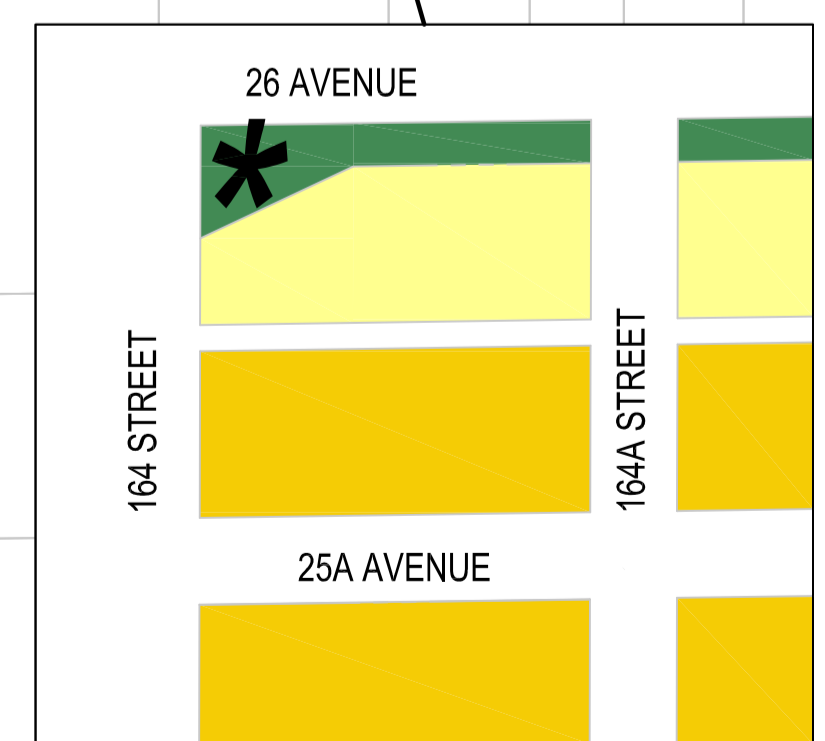
Alternate Land Use Plan for the Orchard Grove NCP

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LEGEND

- Large Lot Duplex or Large Lot Single Family (2-10 upa)
- Small Lot Single Family w/wo Coach House (10-15 upa)
- Single Family (10 upa) or Townhouse with Tree Preservation (15 upa)
- Townhouse (15-30 upa)
- Townhouse (15 upa) or Multi-Family with Tree Preservation (30 upa)
- Multi-Family (30-45 upa)
- Mixed-Use Commercial/Residential (30-45 upa)
- Stormwater Detention Pond
- Park
- Walkways
- Habitat Corridor
- Transition Landscape Buffer
- Special Commercial Street
- Green Street
- Residential Flex Street
- Multi-Use Pathway (8m SROW)
- Tree Preservation Area
- Gateway Feature



Alternative Land Use Option

ORCHARD GROVE
GRANDVIEW HEIGHTS 5A

**CONCEPTUAL
LAND USE PLAN**

Orchard Grove NCP Boundaries



 NCP Area 5A

Existing Property Boundaries



2011 Air Photo

Stage 2 Approved Land Use Plan for the Orchard Grove NCP

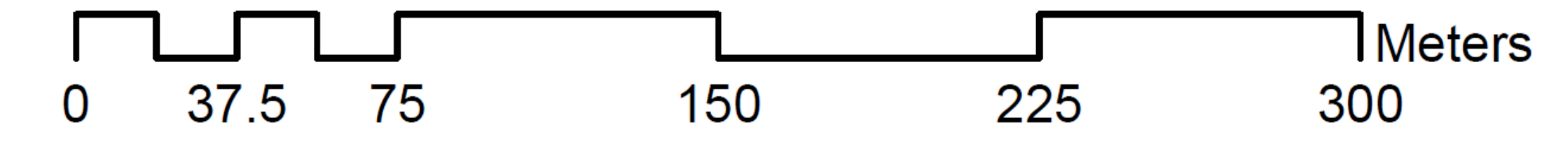
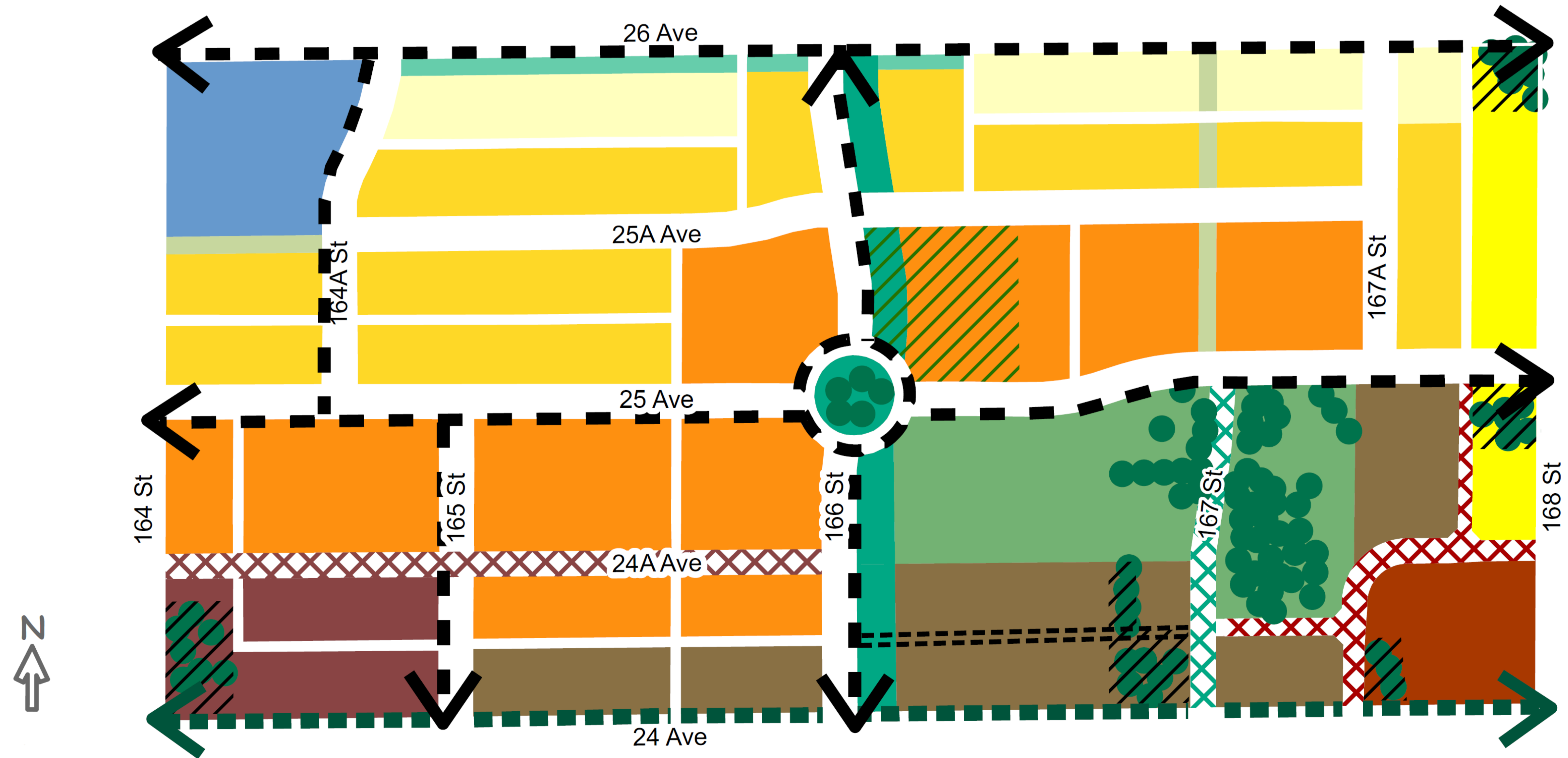
Land Use Concept Plan

Orchard Grove - Grandview Heights 5A Neighbourhood Concept Plan

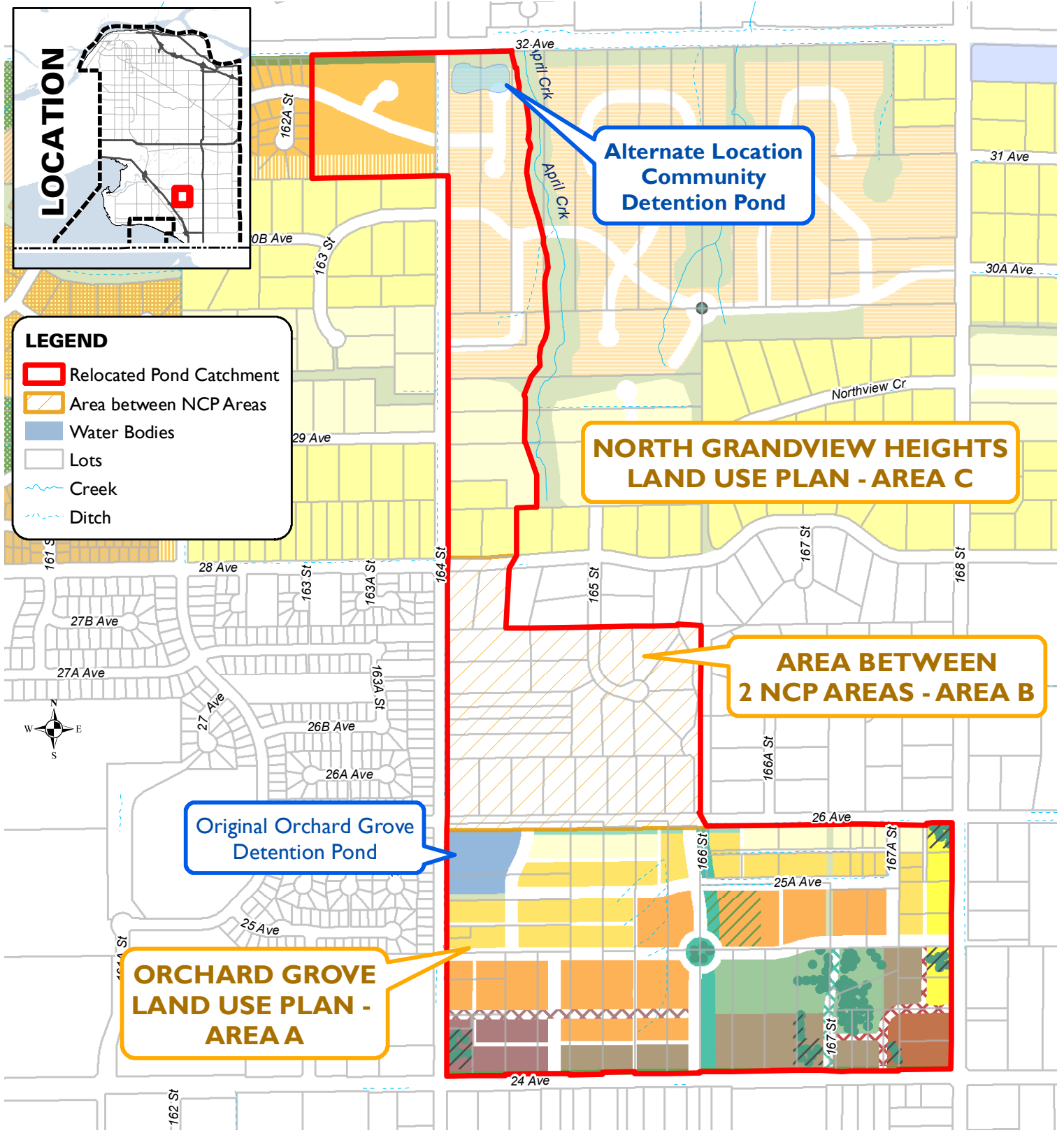
August 30 2011

Legend

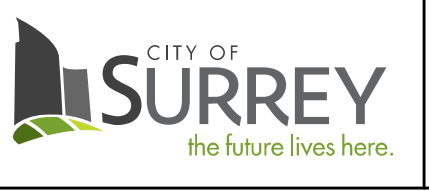
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|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|  Large Lot Duplex or Large Lot Single Family (2-10 upa) |  Park |  Amenity Connector (2.5 m sidewalk requiring SROW) |
|  Small Lot Single Family w/wo Coach House (10-15 upa) |  Walkway (10 m) |  Shared Access (SROW) |
|  Single Family (10 upa) or Townhouse with Tree Preservation (15 upa) |  Habitat Corridor (20 m SROW) |  Multi-Use Pathway (8 m SROW) |
|  Townhouse (15-30 upa) |  Transition Landscape Buffer (10 m SROW) |  Potential Orchard Preservation |
|  Townhouse (15 upa) or Multi-Family with Tree Preservation (30 upa) |  Special Commercial Street |  Tree Preservation Areas |
|  Multi-Family (30-45 upa) |  Green Street |  Tree Cluster |
|  Mixed-Use Commercial/Residential (30-45 upa) |  Residential Flex Street (14.5 m) | |
|  Stormwater Detention Pond | | |



APPENDIX IV



Produced by GIS Section: Oct 3, 2012, CS



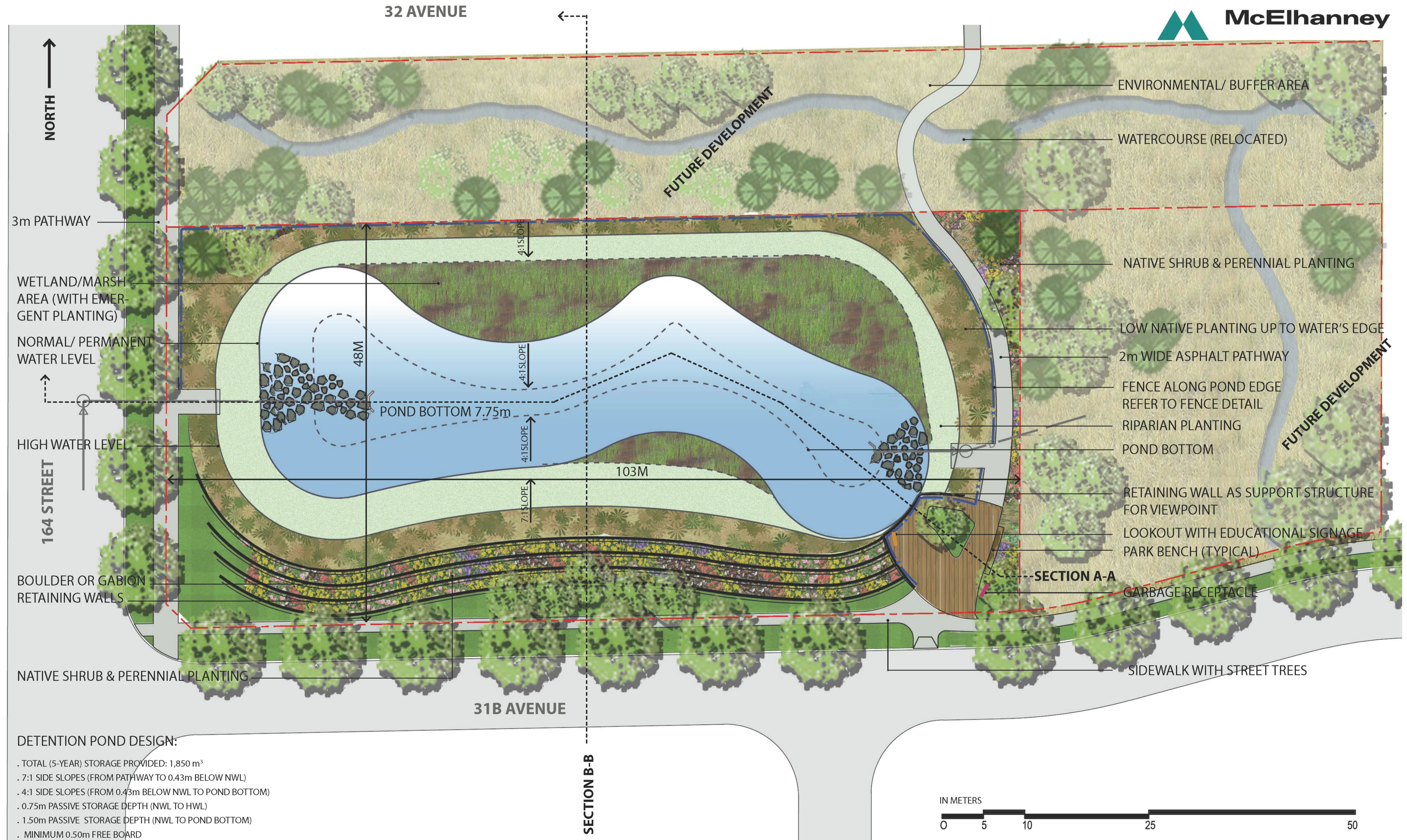
Alternate Stormwater Servicing Strategy

ENGINEERING DEPARTMENT

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, Legal descriptions and encumbrances must be confirmed at the Land Title Office.

G:\MAPPING\GIS\MAPS\CORPORATE REPORTS\Eng-Utilities\CS-AltStormwater-32Ave146St-JL-A.mxd

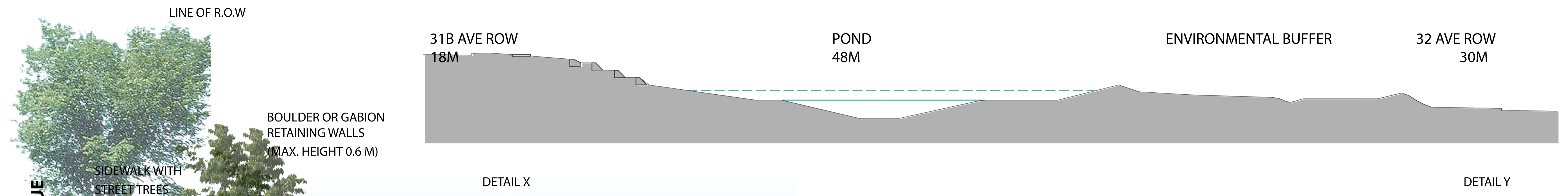
PROPOSED DETENTION POND



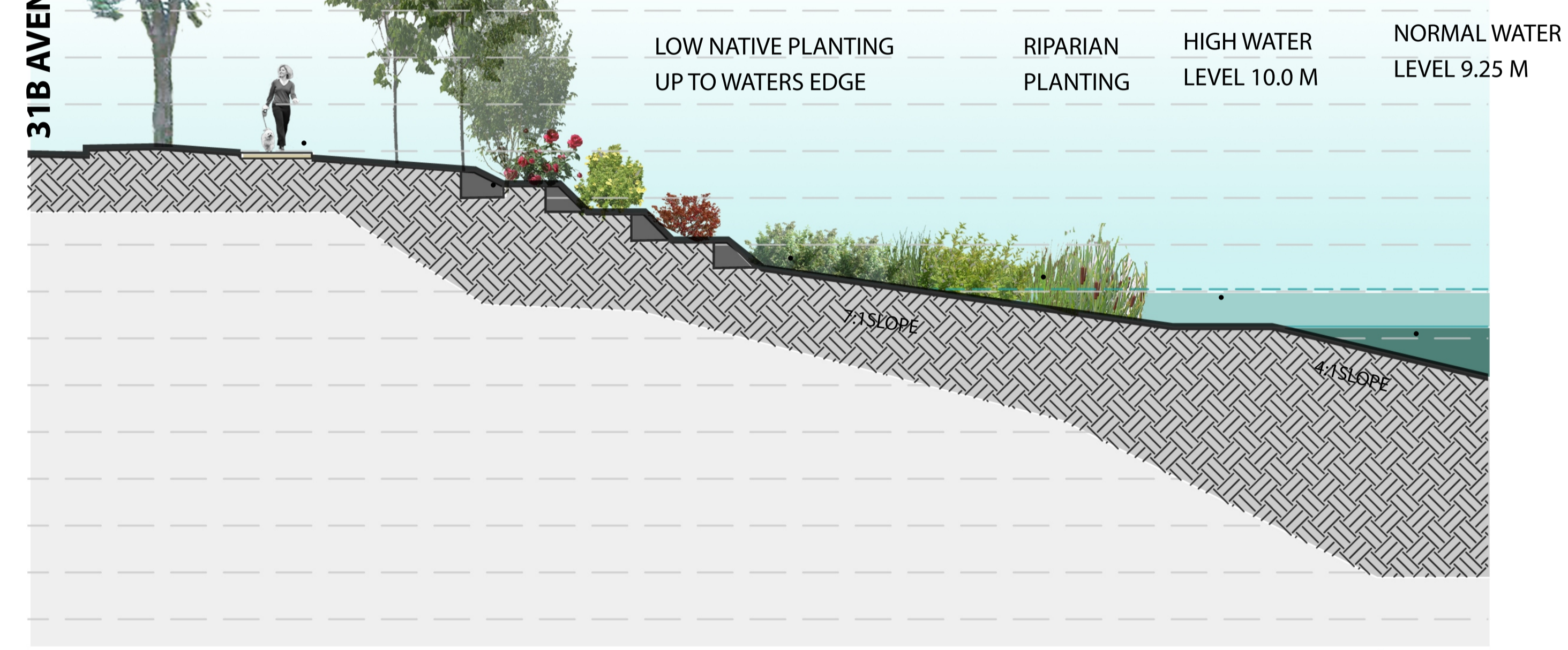
- DETENTION POND DESIGN:**
- . TOTAL (5-YEAR) STORAGE PROVIDED: 1,850 m³
 - . 7:1 SIDE SLOPES (FROM PATHWAY TO 0.43m BELOW NWL)
 - . 4:1 SIDE SLOPES (FROM 0.43m BELOW NWL TO POND BOTTOM)
 - . 0.75m PASSIVE STORAGE DEPTH (NWL TO HWL)
 - . 1.50m PASSIVE STORAGE DEPTH (NWL TO POND BOTTOM)
 - . MINIMUM 0.50m FREE BOARD
 - . 3.0m MAINTENANCE ACCESS
 - . 1.5m (MIN) PATHWAY

NORTH GRANDVIEW HEIGHTS PROPOSED POND

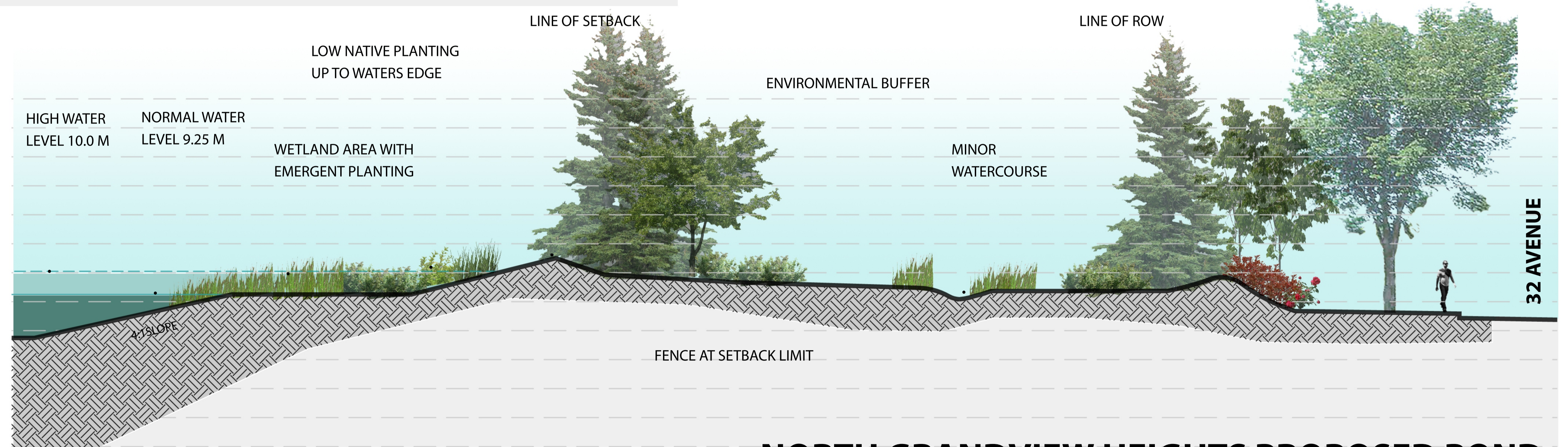
PROPOSED DETENTION POND



PROPOSED POND - SECTION B-B PROFILE



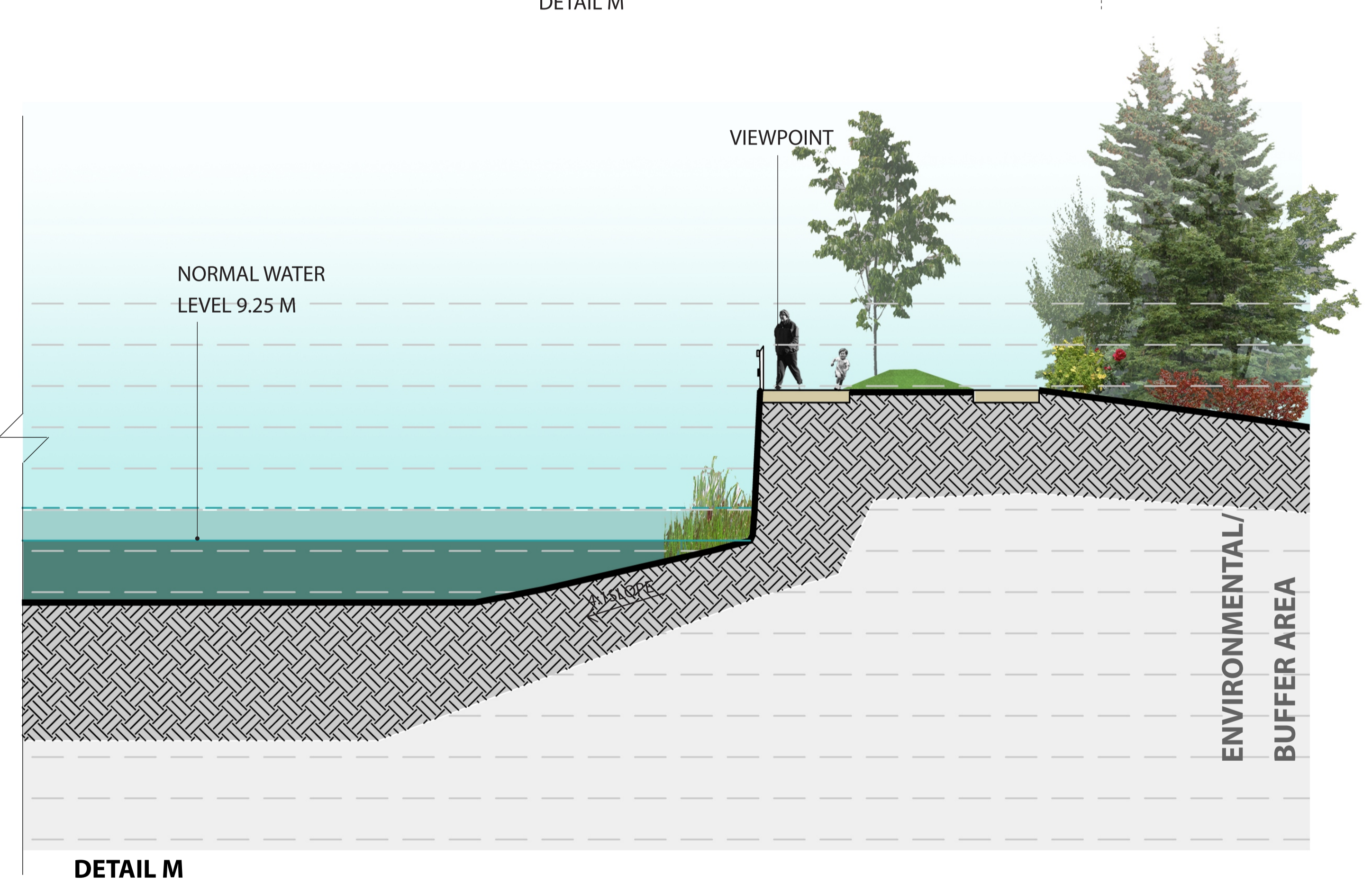
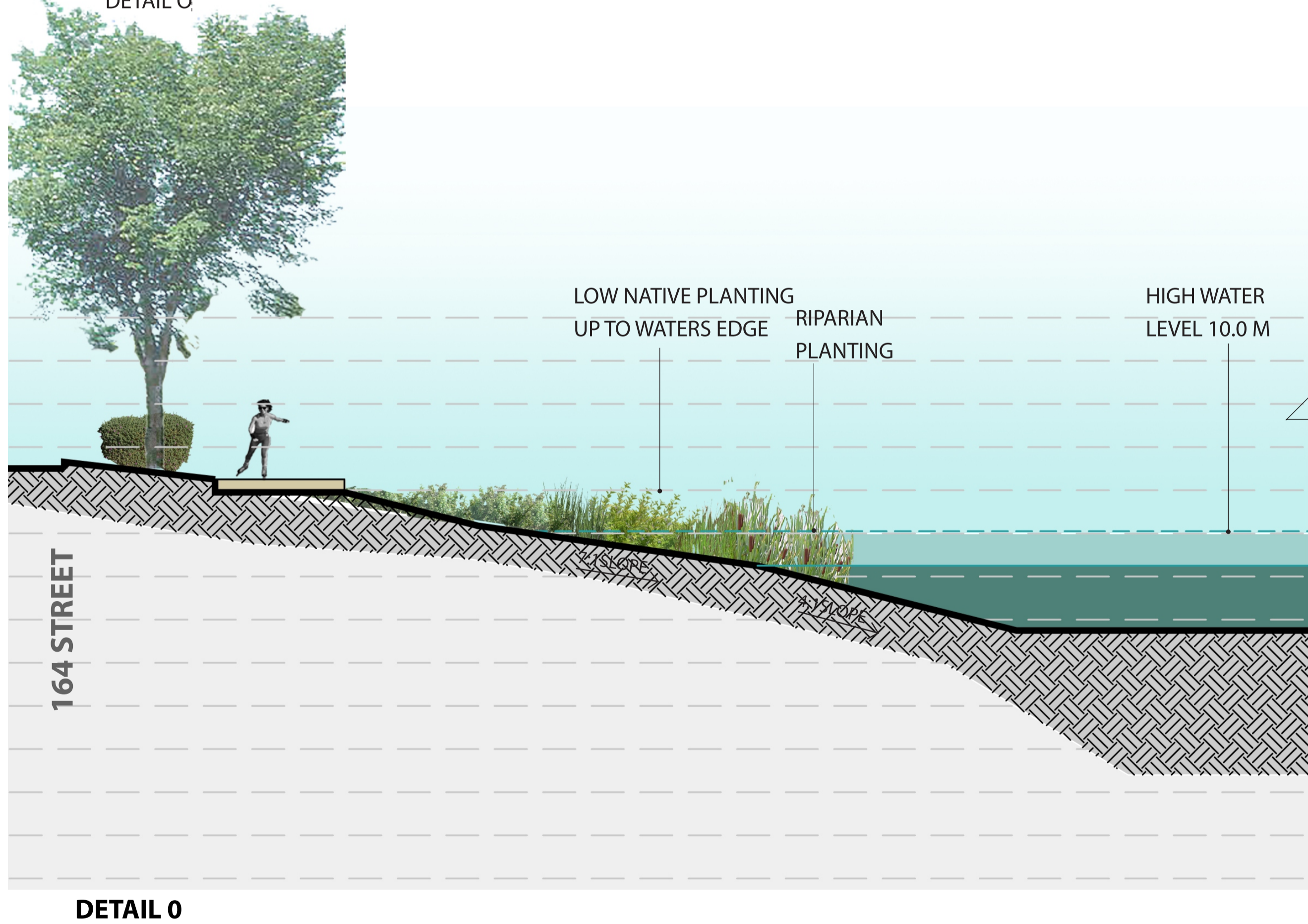
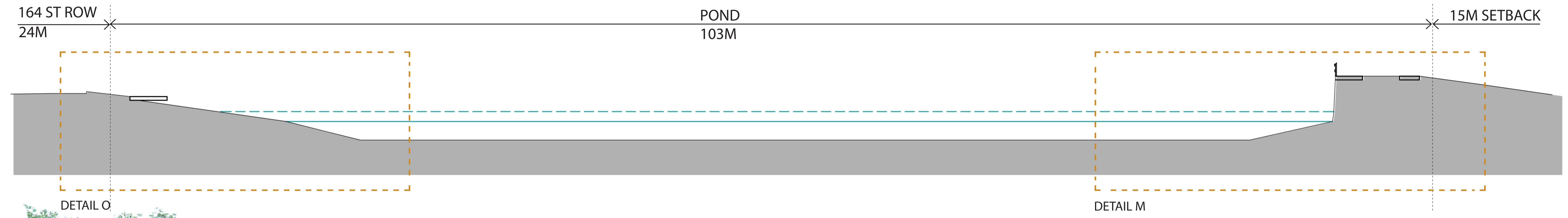
DETAIL X



PROPOSED DETENTION POND



PROPOSED POND - SECTION A-A PROFILE



NORTH GRANDVIEW HEIGHTS PROPOSED POND