



INFORMATIONAL MEMORANDUM

TO: Planning and Community Development

FROM: Nora Gierloff, DCD Director

BY: Mike Perfetti, Senior Program Manager PW

CC: Mayor Ekberg

DATE: May 31, 2022

SUBJECT: Gunter Levee Design Considerations

ISSUE

Staff is seeking policy direction from Council on City priorities for the design of the Gunter Levee improvements.

BACKGROUND

The Howard A. Hanson Dam and the system of levees along the Green River work together to reduce downstream flooding in Tukwila and adjacent cities. The certification for the Tukwila 205 Levee extending along the west bank of the River from I-405 to S. 196th Street expired in August 2013. The Tukwila Levee Accreditation Report – Phase I in 2015 and Phase 2 in 2018- found that approximately 80% of the levee requires repair or reconstruction (see Attachment A). The City is working to maintain Federal Emergency Management Agency (FEMA) accreditation requirements. The King County Flood Control District (District) is making levee improvements to contain the median estimate of a 500-year flood event in a manner that will enable certification and accreditation by the City.

Losing accreditation could potentially result in an expansion of lands mapped within the special flood hazard area (i.e 100-year floodplain), and subjecting development on those lands to floodplain regulation requirements and floodplain management standards at RCW 86.16.

In 2020 Tukwila updated its Shoreline Master Program and increased the shoreline buffer width to 125 feet landward from ordinary high-water mark in the Urban Conservancy environment for areas with levees. This was done to preserve space for the eventual setback and reconstruction of levees in the City. The District has agreed to begin several projects that will address levee deficiencies and improve flood protection to the new 500-year flood standard, including reconstruction of the Gunter Levee, which is the subject of this informational memorandum, and has committed \$39.3 million over the next six years for the design and construction of the project. The levee is being designed by a team from King County's Water and Land Resources Division (WLRD, as a service provider of the District) with a multi-benefit approach, integrating habitat restoration, flood risk reduction, and recreation.



1. Aerial Photo showing the Gunter Levee Location

DISCUSSION

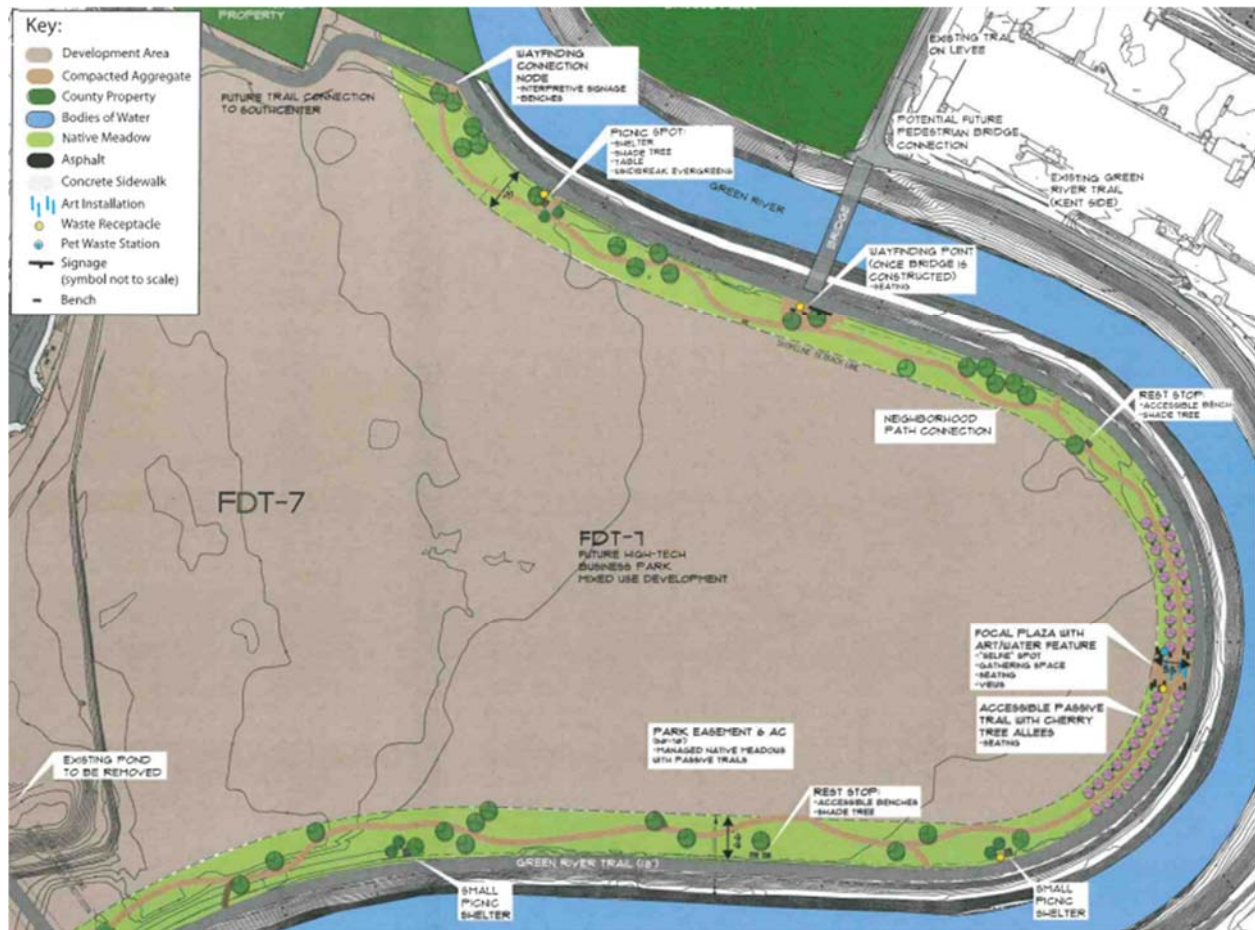
Regarding the Gunter levee, King County has an existing easement on the adjacent privately-owned property that varies in width, but is approximately 65-foot-wide, paralleling the river and includes within it an 18-foot wide trail easement that follows the top of the existing levee. In order to reconstruct the levee to provide 500-year flood protection and incorporate flood storage and habitat features necessary for on-site mitigation and to meet District goals, the District needs to purchase an additional 60 feet or so, at a minimum, out to the 125-foot setback and achieve a self-mitigating project. The property owner at the Gunter site entered into a Memorandum of Understanding (MOU) to sell the property in 2019 (Attachment B).

The Gunter levee site lies within the Tukwila South Overlay Zone (TSO). Per City code, residential development within the TSO requires both on and off-site recreation areas be provided for future housing. This requirement is to ensure a high quality of life for future residents as there are no existing or planned public parks in the area. The property owner has said that in the absence of the levee project they intended to provide much of this required off-site recreation area within the space that King County is seeking to purchase and is referenced in the draft MOU language. The property owner has visualized this as a linear park with a secondary trail, see conceptual plan at 2 below.

If that strip is acquired by King County, rather than locate recreation space for future housing elsewhere, the property owner is arguing for recreation space “credits” that would be developed as a linear trail/park waterward of the reconstructed levee as a condition of the sale to the District (see conceptual plans at 3, 4, and 5 below).

Based on earlier coordination, the property owner expressed willingness to provide this additional 60 ft width along the river (5.88 acres area) for flood risk reduction capital project improvements. Beyond the regional trail/maintenance road, the District likely would not purchase property for exclusive recreational use.

Each future residential unit in the TSO is required to have 125 square feet of off-site recreation space (in addition to 75 square feet of on-site space) so in terms of available area, this strip could meet that off-site requirement for approximately 2,200 units¹. However, to comply with the code, the recreation area would need to meet other location and design criteria at TMC 18.41.090 in conjunction with shoreline code requirements. The code anticipates that a variety of recreation activities be provided such as fields and sport courts which would not fit into a linear park. The Tukwila South Master Plan and Environmental Impact Statement anticipate development of between 700 and 1,900 residential units, <https://www.tukwilawa.gov/wp-content/uploads/DCD-Tukwila-South-Final-Environmental-Impact-Statement.pdf>.



2. Segale Concept Drawing of Linear Park within Shoreline Buffer

Policy Question:

Should recreation space “credit” be granted for land not controlled, improved, or maintained by the property owner? For example, if Forterra purchased property in Tukwila

¹ The code mandates a minimum recreation space requirement for new residential developments. The property owner has indicated a willingness to construct more recreation space in Tukwila South than would be required by City Code. [https://tukwilawa.sharepoint.com/sites/mayorsoffice/cc/Council Agenda Items/DCD/Gunter Levee/Gunter Levee Rec Space Memo.docx](https://tukwilawa.sharepoint.com/sites/mayorsoffice/cc/Council%20Agenda%20Items/DCD/Gunter%20Levee/Gunter%20Levee%20Rec%20Space%20Memo.docx)

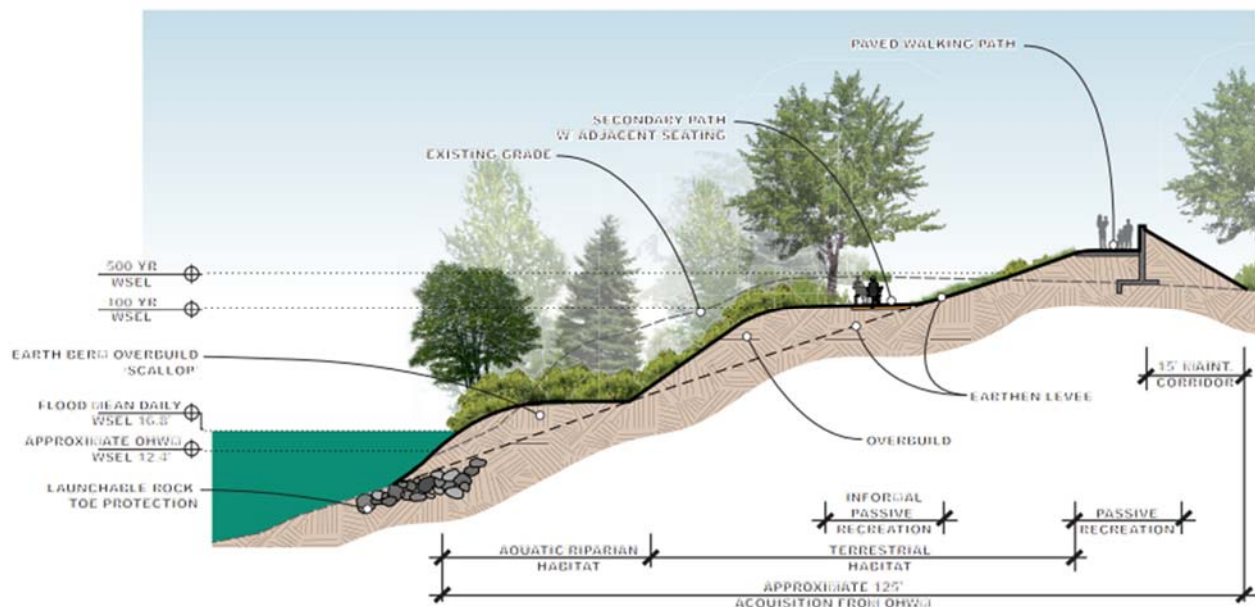
South and developed a park, would the former landowner be able to count that area as off-site recreation space for an apartment building they developed nearby?

Staff from Tukwila and King County WLRD as service provider to the District have met with the property owner to discuss what amount of usable recreation space could be incorporated into the levee design while continuing to meet other objectives such as flood risk reduction and fish habitat improvements. The TSO code requirements for off-site recreation space were reviewed, amended, and approved by the Council last year. At this time, the City is following those requirements to define recreational area.

TMC 18.41.090 A 3 c

(4) To qualify, the proposed recreation area must be located adjacent to, and highly visible from, a street (public or private) or trail and provide a range of active and passive recreational opportunities (as outlined in this Chapter) for multiple ages and physical abilities. Only those areas that are usable may count towards the off-site recreation space requirement. The following areas are excluded: parking lots, utility sheds, inaccessible natural/planted areas, any landscaped area required by code, and unimproved steep slopes as defined in TMC Section 18.45.120.

(5) Larger off-site recreational areas are typically characterized by recreational activities that serve a range of individuals and groups, such as field games, court games, craft areas, playground apparatus, picnicking, and space for quiet/passive activities. Neighborhood recreation areas may contain active recreational facilities such as softball, basketball, volleyball, handball, tennis, children’s play structures, trails, and grass areas for activities and/or picnic facilities.



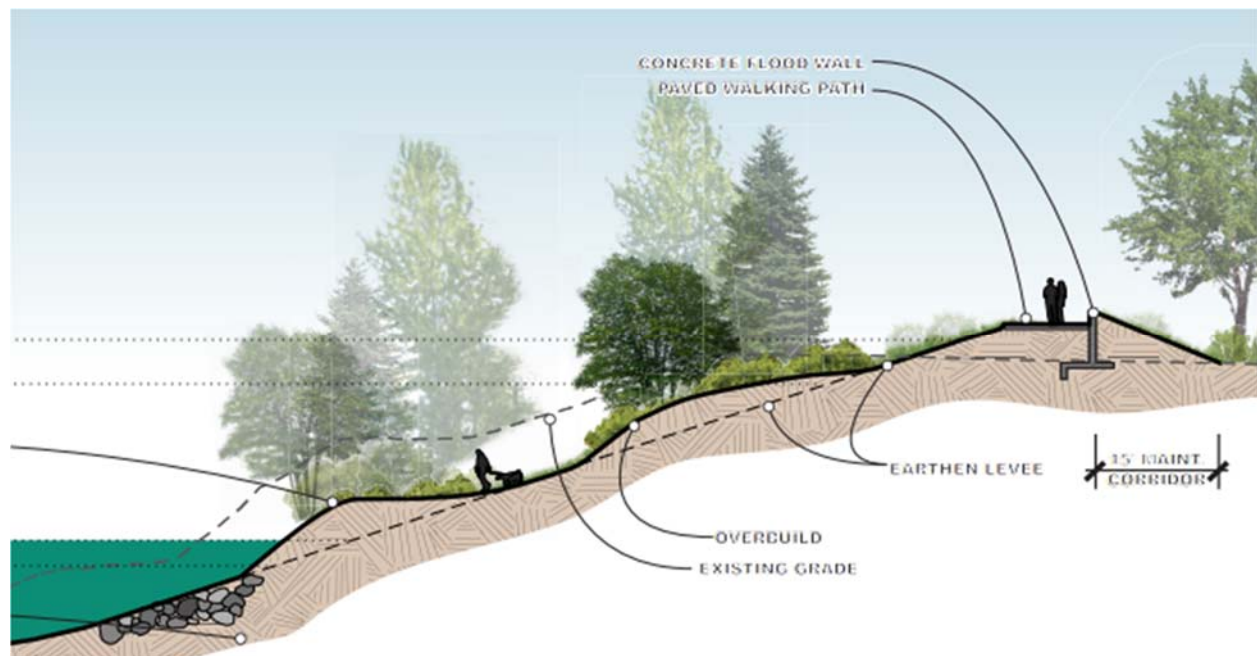
3. Conceptual Levee Cross Section with additional Recreation Space along a side path

King County WLRD staff has stated that in purchasing the land, they would need to have input on how recreation features are developed so that they can work towards achieving the self-mitigating and multi-beneficial project, which is the intent of the property purchase. The WLRD staff anticipates that the Green River Trail will be rebuilt atop the revised levee crest that results from this project. It is typical for the District, in the Green River watershed, to accommodate the

regional Green River trail in this way, and it typically serves as maintenance access for them. On some projects, the District allowed a limited degree of trail-related recreation within the levee project area. They have stated that the Gunter levee project could achieve some level of recreation and have referenced other projects in the watershed as examples.

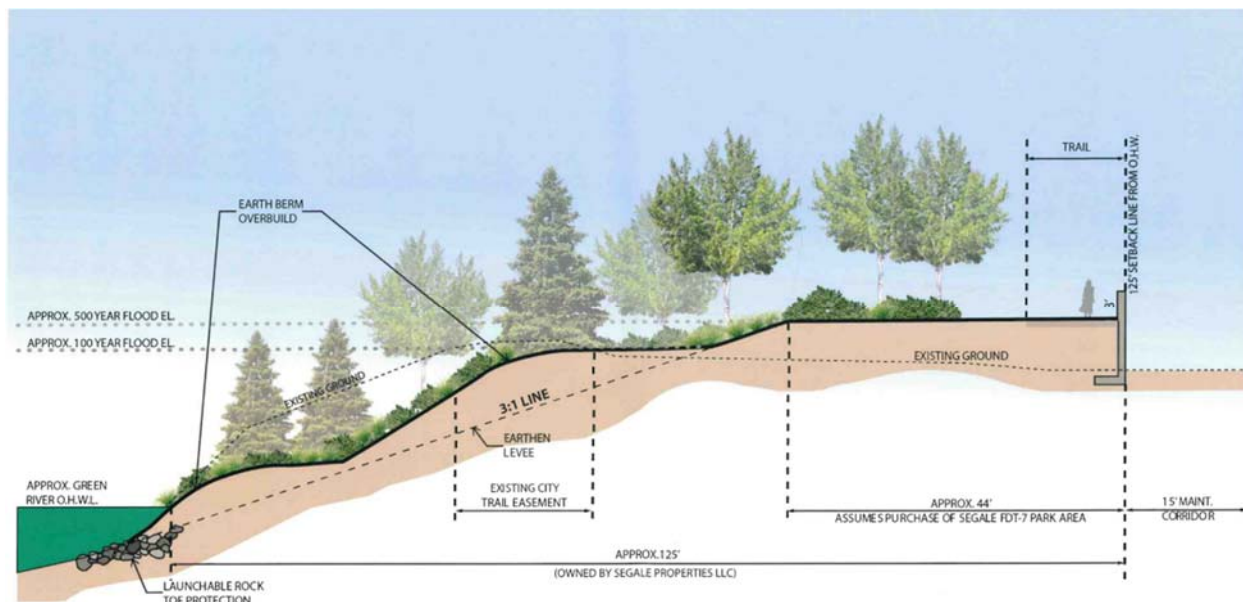
Above is an example of a very schematic design developed for discussion purposes, showing possible recreational access along the main trail and an adjacent secondary path/overlook area on one section of the levee face. Staff expressed support for crediting the trail as well as some selected areas that meet the TSO code requirements listed above toward off-site recreation space which might result in 400 to 500 units worth of recreation space.

However, Staff questioned the utility and safety of inviting the public into sloped areas subject to flooding and not highly visible from the trail as shown on the left side of the diagram below. It is staff's determination that these types of spaces would not meet the off-site recreation criteria at TMC 18.41.090, as an inaccessible natural/planted area.



4. Conceptual Levee Cross Section with Recreation Space on Levee Face

The property owner has suggested a cross section (shown below at 5) that creates a high elevation flat area within the land that District is offering to purchase that would be utilized to create recreation credits. However, this recreation space would be developed at the expense of the habitat and flood storage objectives. Therefore, the design would not meet the District's design objectives and would be unlikely to be permitted without additional off-site mitigation, which the District is trying to avoid.



5. Segale Conceptual Levee Cross Section with Recreation Area at top

Discussions between the City, the District and the property owner about the sale have reached an impasse. Tukwila staff has suggested a compromise solution of a wider trail to alleviate conflicts between bicycle commuters and recreational users along with one or more overlooks containing seating or picnic tables. The County is reluctant to deviate from the standard of a 12-foot trail with 2-foot shoulders (16 foot easement) because of implications to provide adequate space for habitat and to ensure the flood improvement project can be self mitigating. The standard trail design would result in less recreation area credit than the property owner desires.

Options:

- 1) Maintain current policy of granting off-site recreation space credit for all usable levee areas (trail, overlooks, picnic areas) that meet the current TSO code requirements ; or
- 2) Lower the code requirement for off-site recreation space in the TSO Zone so that the area generated by the standard trail and useable recreation space along the future levee would accommodate off-site recreation credits supporting a specific number of future housing units desired by the property owner; or
- 3) Eliminate the code requirement for off-site recreation space in the TSO Zone to remove an impediment to the reconstruction of the Gunter levee. This would result in 75 square feet of on-site recreation area for each future housing unit, the District constructed trail, and whatever off-site space the property owner voluntarily constructs. The property owner has indicated that it intends to install more recreation space than is already required by City code, thus the off-site recreation space requirement is redundant.; or
- 4) Clarify for staff that planted areas on levee slopes which are not intended for human use meet the intent of off-site recreation space so that we can calculate a recreation credit to the property owner for future residential development; or
- 5) Clarify for staff that only recreation space owned, developed, and maintained by the property owner or an entity affiliated with the housing developer should be counted as off-site recreation space for future housing units.

In the near to mid-term Options 1 through 4 would all result in the same amount of recreation space being developed, the levee trail, assuming that the property owner proceeded with the sale.

- The property owner has said that Option 1 does not meet their needs and that is why staff is bringing the issue to Council.
- Option 2 would be a compromise and the reduction in required off site recreation space would need to be negotiated.
- Option 3 would likely be the most straightforward path to facilitating an agreement for the property purchase and levee reconstruction as it removes the recreation space issue from the property sale negotiation.
- Options 2 and 3 would each require amending the Zoning Code with a process that requires a Planning Commission hearing and SEPA Determination.

FINANCIAL IMPACT

There is no financial impact to the City budget since District is offering to purchase the property and is funding the Gunter levee project. However, if an agreement for the property purchase is not reached in the near future the District could shift their funding to another project. This could result in an increased danger of a flood event and additional areas within Tukwila being mapped as floodplain, limiting their development potential.

RECOMMENDATION

Staff is seeking policy direction to enable negotiations for the Gunter Levee project to move forward. Staff believes that option 3 is straight forward and recommends the City Council adopt an ordinance to remove the offsite recreation space requirement. Council is being asked to consider this item at the June 13, 2022 Committee of the Whole meeting. If an option requiring a zoning code change is chosen staff asks that it be sent directly to Planning Commission rather than returning to PCD Committee in order to expedite a resolution to this issue.

ATTACHMENTS

- A. Tukwila 205 Certification Study Letter
- B. Tukwila South Levee Transfer Request with Appendix A MOU



May 1, 2019

King County Flood Control District
Michelle Clark, Executive Director
516 3rd Avenue, Room 1200
Seattle, WA 98104

RE: Tukwila 205 – Certification Study
King County Flood District's 2019 Capital Budget - Proposed City Projects

Dear Ms. Clark:

The City of Tukwila is working with Northwest Hydraulics Consultants (NHC) to evaluate and certify the Tukwila 205 Levee in accordance with Federal Emergency Management Agency (FEMA) requirements. The 4.5-mile long levee is located on the left bank of the Green River between Interstate 405 and South 196th Street and protects the highly developed Tukwila Urban Center. Work to date is comprised of a Phase 1 and Phase 2 Accreditation report.

The Phase 1 report evaluated the levee conditions relative to Code of Federal Regulations Title 44, Chapter I, Subchapter B, Part 65, Section 10 criteria on a project reach scale, to determine if the levee could be certified in the existing condition. The Phase 1 report found that steep side slopes result in significant lengths of levee failing to meet the required factor of safety for several geotechnical criteria. FEMA requires that levees be certified in their entirety therefore the entire levee cannot be accredited in its current condition.

The Phase 2 report took a detailed look at each segment identified in the Phase 1 report as not meeting FEMA requirements. This included using site specific information, including additional geotechnical and survey work, to further investigate and more accurately define the limits of the deficient segments. This detailed work has shown that approximately 80% of the Tukwila 205 Levee cannot be certified in its existing condition. The Phase 2 report also considered large scale improvement options for repair and certifying the deficient levee segments, developed conceptual plans and initial cost estimates, and proposed a prioritization for constructing large scale improvements.

The following list of ten prioritized projects was developed as a result of this certification effort. They are the City of Tukwila's highest priority regarding flood risk throughout the City and are needed to certify the Tukwila 205 Levee as providing 100-year level of protection. The City of Tukwila is requesting that each of these projects be included in the Flood Districts Capital Budget for construction within the next 10 years.

1. **Gaco-Mitchell-Segale Levee** from RM 15.41 to RM 15.90. Approximately 2,600' of levee repair to address the highest calculated levee failure risks based on computed factor of safety. This project should also seek to obtain additional property rights to allow for the levee to be setback to reduce overall project costs, construction impacts, and to provide needed habitat benefits.

2. **S. 180th Bridge to Pedestrian Bridge** from RM 14.33 to RM 14.75. Approximately 2,000' of levee repair to address this high scour area and over steepened banks.
3. **Christensen Rd. Levee** from RM 13.40 to RM 13.60. Approximately 1,200' of levee repair to address slope stability.
4. **Ratolo Levee** from RM 14.75 to RM 14.92. Approximately 1,000' of levee repair along S. 180th St. between the pedestrian bridge and Segale Floodwall to address a moderate to high risk of slope failure.
5. **Van Warden Levee** from RM 12.77 to RM 12.98 adjacent to the Riverview Plaza Business Park. Approximately 1,100' of levee repair to address a high risk of slope failure.
6. **Christensen Rd. Levee** from RM 13.85 to RM 14.32. Approximately 2,450' of levee repair to address slope stability.
7. **Segale-Green Levee** from RM 15.10 to RM 15.41. Approximately 1,600' of levee repair for moderate risk of slope failure. The upstream end point of this repair will tie into the Gaco-Mitchell-Segale repair so the exact limits will need to be determined once this repair is complete.
8. **Gunter Levee** from RM 15.90 to RM 16.70. Approximately 4,250' of levee repair to address moderate risk of slope failure. The downstream project limit will tie into the Gaco-Mitchell-Segale project.
9. **Christensen Rd. Levee** RM 12.56 to RM 12.67. Approximately 1,000' of levee repair to address a low risk of slope failure.
10. **Cross Levee** from RM 16.70 to high ground tie in. Approximately 1,050' of levee repair to address moderate freeboard and stability issues.

In closing, the City requests that the Flood District provide funding for the ten Tukwila 205 certifications projects in the Flood District's 2019 Capital Budget. These projects are the City's highest priority and will provide the Tukwila Urban Center with a 100-year level of flood protection. Thank you for your consideration of the City's flood control needs.

Sincerely,



Allan Ekberg
Mayor, City of Tukwila

Enclosures: Tukwila Levee Accreditation – Phase 2 Report



COMMERCIAL • INDUSTRIAL • AGRICULTURAL • NATURAL RESOURCES

October 16, 2019

Michelle Clark, Executive Director
King County Flood Control District
516 3rd Avenue, Room 1200
Seattle, WA 98104

RE: Tukwila South Levee Transfer Request

Dear Director Clark,

Through this letter, Segale Properties LLC (Segale) is formally requesting that the King County Flood Control District (FCD) accept into their inventory, the Tukwila South Levee located on the left bank of the Green River between River Mile 16.8 and 17.2.

This levee was originally proposed by Segale as an extension of the Tukwila 205 Levee and was designed and constructed by Segale to meet all applicable US Army Corps of Engineers' (USACE) requirements. The City of Tukwila supported Segale in this effort and formally submitted a Section 408 Levee Modification to the USACE in April 2009. This request was denied because it was determined that it would require Congressional approval to change the area that was protected under the original 205 program authorization. Since its completion in 2013, Segale has maintained the Tukwila South levee as a private levee.

Segale made a request to the King County Flood Control District (FCD) concerning the possible transfer of the levee into the District's inventory. In response to this inquiry, Aspect Consulting was hired by River and Floodplain Management Section (RFMS) staff to study, inspect, and produce a report on the levee system's overall condition. The report concluded that this levee, in general, meets the criteria for Levee Certification by FEMA and is eligible for the PL 84-99 program by USACE. Additionally, Segale and FCD have agreed to some minor conditions which are listed in a Memorandum of Understanding, attached as Appendix A of this letter.

The proposed Memorandum of Understanding is enclosed for your convenience. RFMS staff is in control of the report prepared by Aspect Consulting and can provide it upon request. All RFMS noted field deficiencies have been corrected by Segale and all as-built and construction records have been transmitted to RFMS staff for review and for their records. In summary, the levee improvements constructed by Segale satisfy all the conditions and requirements for

acceptance of the Tukwila South Levee into the FCD inventory as an FCD asset to be maintained by the FCD in perpetuity.

The draft easement required to inspect, repair and upgrade the levee is enclosed for your review. The easement will be executed and recorded upon the FCD accepting the Tukwila South Levee as an asset to be maintained by the FCD

If you have any questions or require any additional information to evaluate this request, please feel free to contact me at 206-575-2000.

Very truly yours,

SEGALE PROPERTIES LLC

A handwritten signature in black ink, appearing to read 'Mark A. Segale', written over the printed name and title.

Mark A. Segale
President of Its Manager

Attachments: Easement documents
Memorandum of Understanding

Appendix A

October 15, 2019

Memorandum of Understanding between the King County Flood Control District (FCD) and Segale Properties LLC (Segale)

Gaco-Mitchell-Segale Levee Replacement CIP related items for Right-of-Way (ROW) to support the project:

1. Segale agrees to provide at fair market value, additional ROW or easements (maybe only the 5-15 ft. wide grassy area between existing fence and the parking lot strip) between the levee and the Segale warehouse (parcel number 352304-9115), provided it doesn't affect/impact the current Segale business operations.
2. Segale agrees to provide at fair market value, additional ROW or easement at two levee transition areas upstream (u/s) and downstream (d/s) of Gaco and Mitchell properties where the potential setback levee is planned and needs to be transitioned to the u/s and d/s levee sections.
3. FCD agrees to provide at fair market value, any surplus ROW or easement to Segale, where the surplus ROW or easement is adjacent to Segale ownership, between RM 15.88 and RM 16.7.
4. Segale agrees to provide at fair market value, additional ROW or easement between the existing easement and 125 feet landward of the OHWM for the levee section between RM 15.88 and RM 16.7 for the FCD to construct a levee wall to contain the 500-year flood. It is understood the additional ROW or easement granted by Segale will be the minimal amount needed to complete the levee wall.
5. Easement along the Segale stormwater pond (RM 17.2 – 17.3): Segale will provide additional easement area between Segale's pond and the river. The additional easement is for the FCD to be able to maintain the entire levee prism on the river side and on the pond side without encroaching into private property during potential future repairs. Segale has provided an exhibit showing the location of the existing City of Tukwila levee easement with the requested additional easement area along Segale's stormwater pond. In addition, Segale revised the easement to match the as-built levee at the S. 200th bridge (River and Floodplain Management Section has been provided drawings showing both areas).

6. The new levee easement along the west border of the Segale mitigation project (RM 16.85-17.0): The landward levee slope is retrofitted to meet the slope requirements as requested by United States Army Corps of Engineers (USACE). The current easement language shows the easement border at the top of the slope, on the landward side.

Segale will add language in the levee easement for two potential future conditions:

- If the area is filled to the top of the levee, the easement will stay as is.
- If not filled at the time of development, the easement will extend to the landward toe plus 10 feet of inspection area.

Segale has provided a red-line to the existing City of Tukwila easement which includes the above language and will be included in the levee easement accepted by FCD.

7. U/S terminus of the Tukwila South Levee has jersey barriers at S. 204th St. At the time of transfer, the FCD will build a gate and Segale would remove the jersey barriers. Both the FCD and Segale will have keys to access the levee top.
8. King County Drainage District #2 owns the property which contains Johnson Creek and its outfall to the Green River. Johnson Creek outfall is deemed not fish passable by WRIA at this time. Segale indicated that during the time of construction, Washington Department of Fish and Wildlife approved the design of the outfall culvert and the gate. The gate is designed to stay open and be fish passable until the water in the Green River gets too high, at which time the gate closes for flood protection.

Segale will not oppose modification of this outfall if needed in the future, provided after review of final plans there is no impact to Segale's existing, adjacent stormwater pond and properties.

9. Gunter Cut-off Levee access or by-pass around the temporary jersey barriers. Segale has built a temporary gravel bypass road around the jersey barriers which is acceptable to the King County River and Floodplain and Management Section. The by-pass will remain in place until the future development allows for removal of the utility crossing and/or buries the utility.
10. Segale stormwater pond (RM 17.2- 17.3) outfall control structure: The FCD is waiting for an opinion from the USACE if this structure would be acceptable within the levee prism in the context of PL 84-99 eligibility. If not, Segale agrees to work with the FCD to resolve this issue.