McCullough Hill, PS

MEMORANDUM

TO: Tukwila City Council

FROM: John C. McCullough

DATE: July 13, 2009

RE: Proposed Shoreline Master Program
Levee Cross-sections within the Urban Shoreline

Attached for your review in connection with our comments at tonight's public hearing are six cross-sections prepared by Goldsmith Land Development Services. These cross-sections depict existing and proposed levee conditions in the vicinity of Tukwila South, in comparison to the City's current and proposed Shoreline Master Program regulations.

Attachments:

A Schematic of the Existing and Proposed Urban Shoreline

B Tukwila 205 Levee 2008 Repair Project, Site 3 Typical Section (near Home Depot)

C Tukwila 205 Levee 2008 Repair Project, Site 5 Typical Section s/ Retaining Wall (at Tukwila South near 180th)

D Tukwila 205 – Minimum Corps and King County Flood Plan Requirements

E Tukwila 205 Levee Modification for the Tukwila South Project

F Tukwila South Project Proposed Grading Plan within the Shoreline (under existing SMP regulations)

EXHIBIT 22 DATE 7-13-09
PROJECT NAME
PC Recommended SMP
FILE NO L06-088

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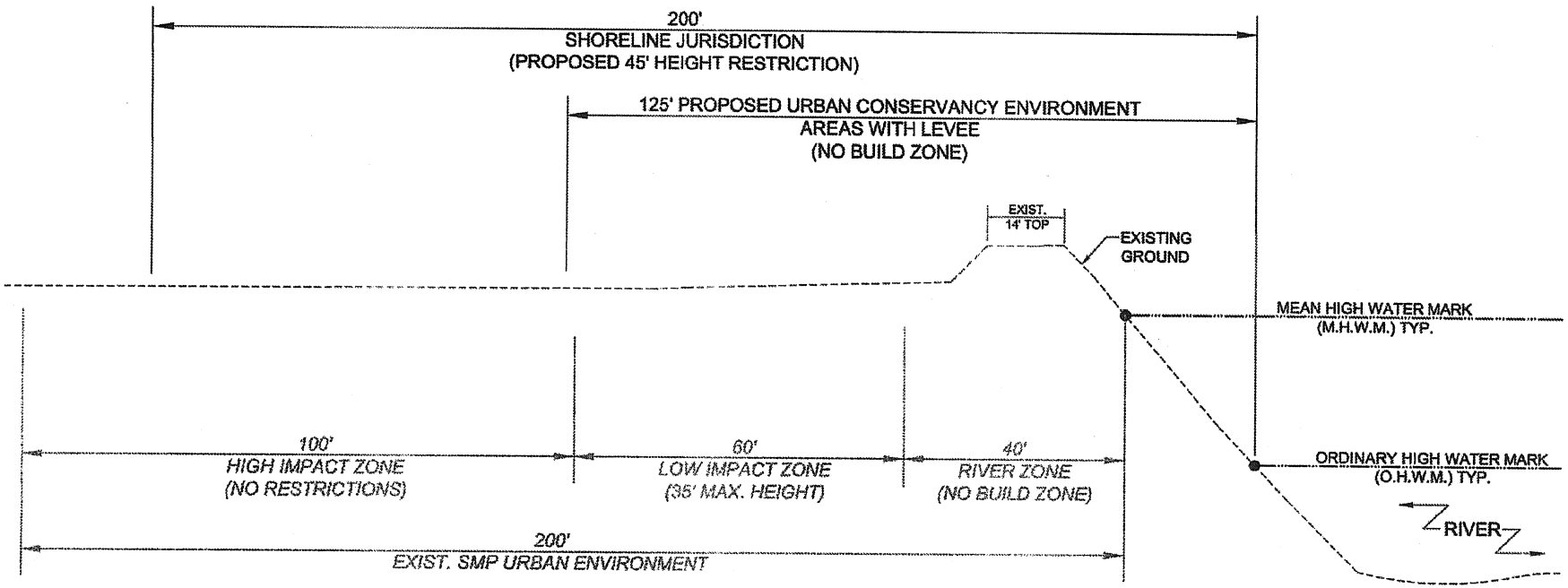

A

SCHEMATIC OF THE EXISTING AND PROPOSED URBAN SHORELINE

SCALE: 1" = 30'

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LAND DEVELOPMENT SERVICES
1215 114th Ave SE, Bellevue, WA 98004 | PO Box 3565, Bellevue, WA 98009
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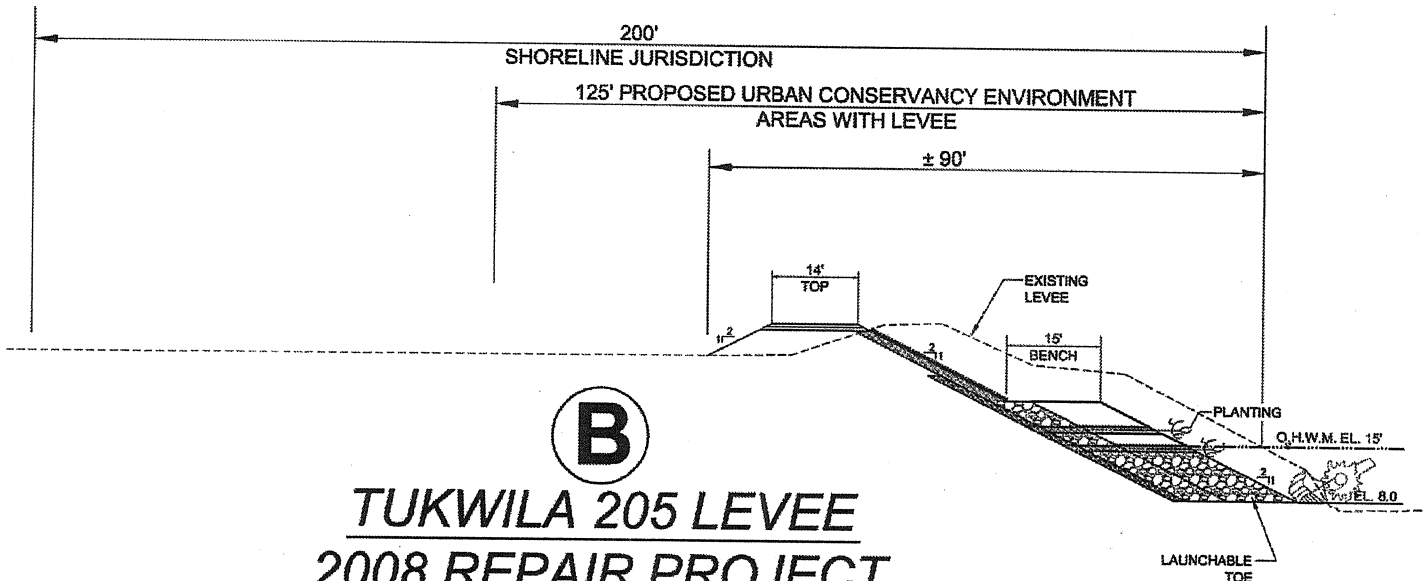

B

TUKWILA 205 LEVEE 2008 REPAIR PROJECT, SITE 3 TYPICAL SECTION

SCALE: 1" = 30'

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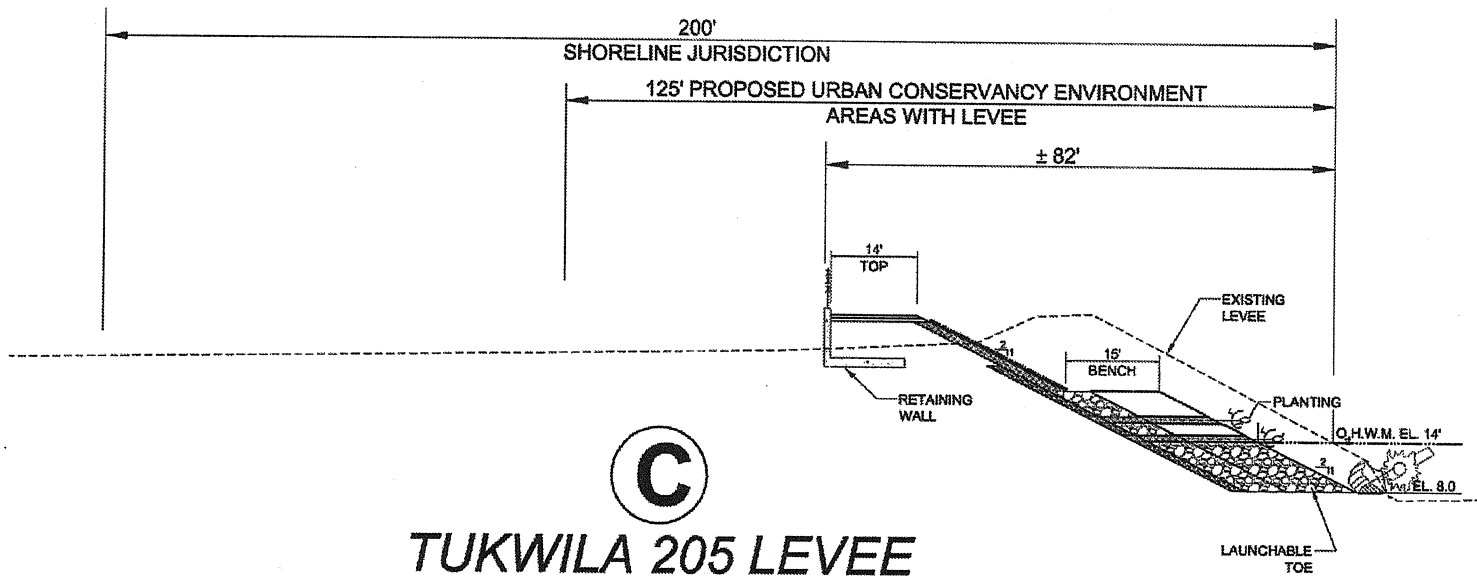
NOTE:

THE SITE IS LOCATED SOUTH OF S.180TH ST., EAST OF ANDOVER PARK EAST
THIS SECTION WAS TAKEN DIRECTLY FROM THE CORPS OF ENGINEERS PLANS FOR THE LEVEE REPAIRS.
THE LEVEE WAS SET BACK TO ADD WOODY DEBRIS AT THE TOE OF THE SLOPE, THE SLOPE OF THE LEVEE WAS FLATTENED, ADDING ARMOR PROTECTION ROCK, AND WOODY DEBRIS AT THE TOE. THIS SECTION REQUIRED APPROXIMATELY 90' FROM THE OHWM.



C

TUKWILA 205 LEVEE
2008 REPAIR PROJECT,
SITE 5 TYPICAL SECTION w/ RETAINING WALL

SCALE: 1" = 30'

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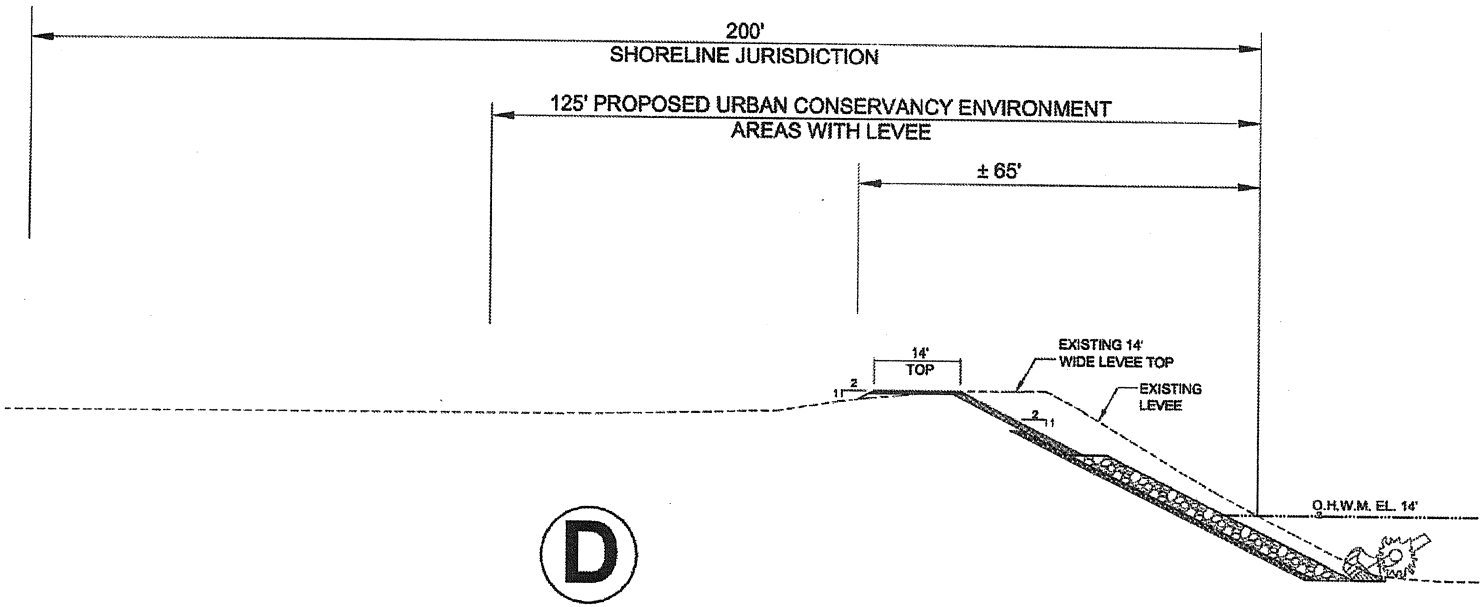
NOTE:

THIS SITE IS LOCATED JUST SOUTH OF S.180TH ST., IN SEGALE BUSINESS PARK
THIS SECTION WAS TAKEN DIRECTLY FROM THE CORPS OF ENGINEERS PLANS FOR THE LEVEE REPAIRS
THE LEVEE WAS SET BACK TO ADD WOODY DEBRIS AT THE TOE OF THE SLOPE, THE SLOPE OF THE LEVEE WAS FLATTENED TO A 2:1 SLOPE WITH ARMOR PROTECTION ROCK ADDED AND A 15' WIDE MID BENCH WAS ADDED FOR FUTURE MAINTENANCE. IN ADDITION, A VERTICAL WALL WAS CONSTRUCTED ON THE LANDWARD SIDE OF THE LEVEE TOP, ELIMINATING THE SLOPE AND REDUCING THE OVERALL DIMENSION NEEDED FOR THE LEVEE. ALL OF THIS WAS COMPLETED IN APPROXIMATELY 82' FROM THE OHWM



D

TUKWILA 205 - MINIMUM CORPS AND KING COUNTY FLOOD PLAN REQUIREMENTS

TYPICAL SECTION w/ 2:1 SLOPE

SCALE: 1" = 30'

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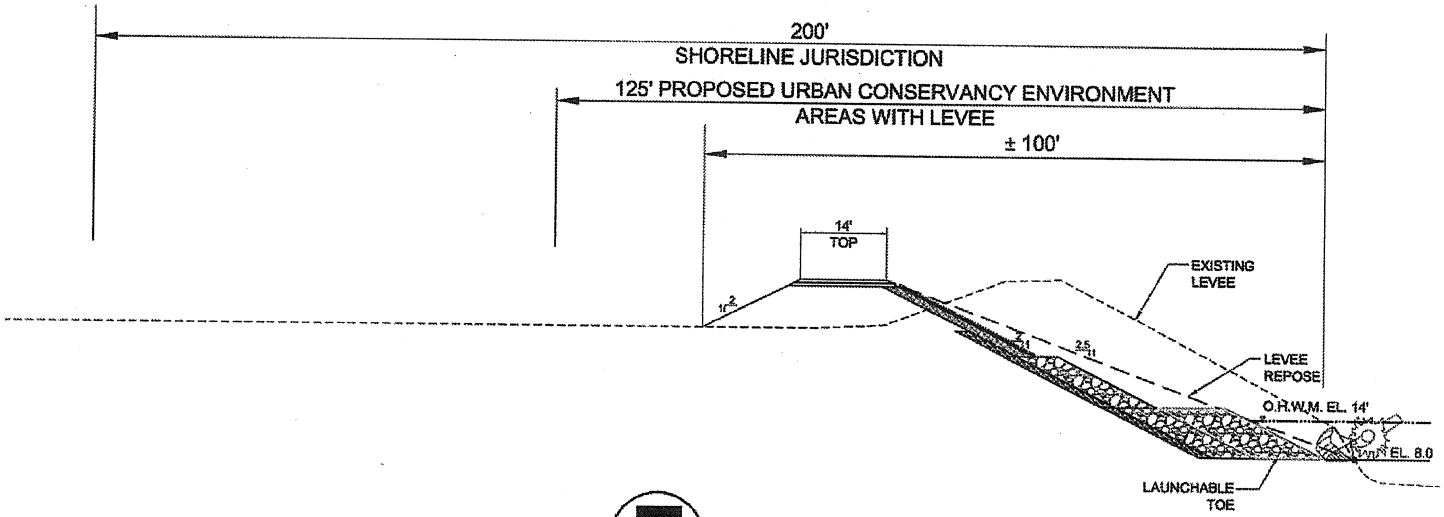
NOTE:

THE CORPS REQUIRES THE USE OF THE CORPS LEVEE DESIGN MANUAL FOR ALL REPAIRS AND MODIFICATIONS TO THE TUKWILA 205 LEVEE. THE CURRENT KING COUNTY FLOOD HAZARD MANAGEMENT PLAN REQUIRES THE USE OF THE CORPS LEVEE DESIGN MANUAL FOR ALL REPAIRS AND MODIFICATIONS TO THE TUKWILA 205 LEVEE, FROM S.180TH TO S.204TH. THE MINIMUM REQUIRED LEVEE SLOPE PER THE MANUAL IS 2:1. ADDING ARMOR PROTECTION ROCK AND WOODY DEBRIS AT THE TOE, THIS SECTION WOULD REQUIRE APPROXIMATELY 65' FROM THE OHWM.



E

TUKWILA 205 LEVEE MODIFICATION, FOR THE TUKWILA SOUTH PROJECT

SCALE: 1" = 30'

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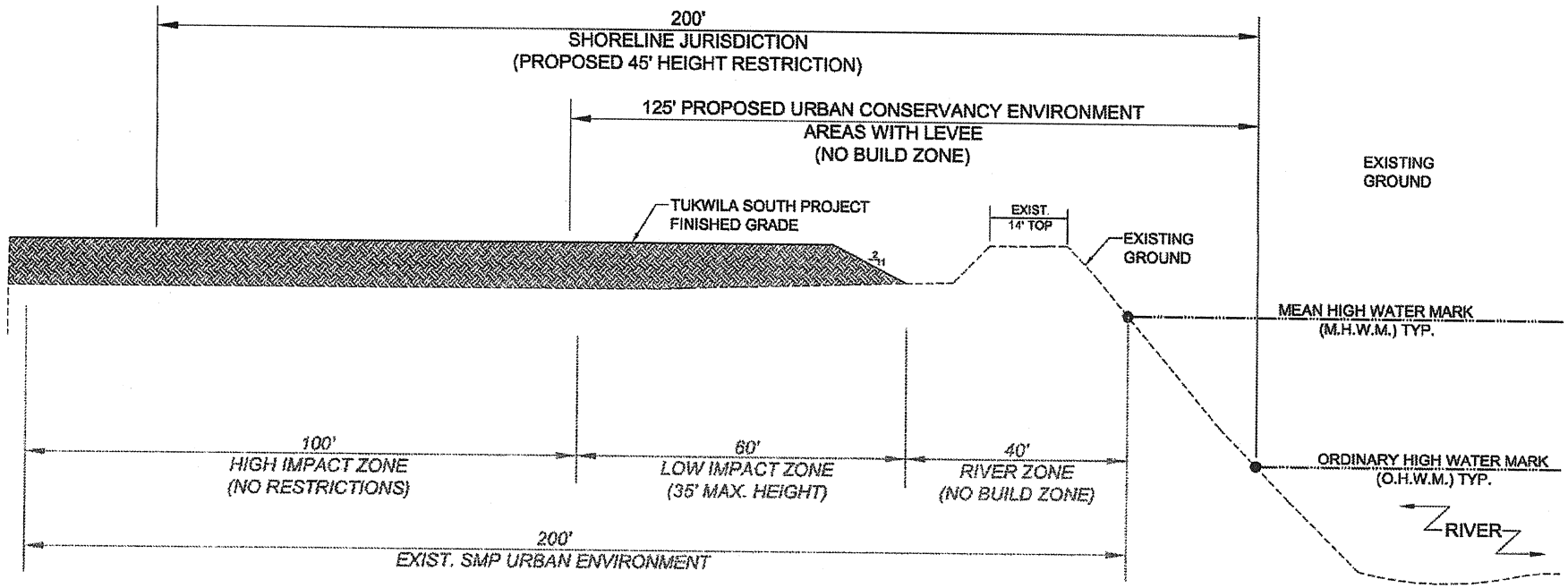
NOTE:

LA PIANTA AGREED TO PROVIDE, AS PART OF THE TUKWILA SOUTH DEVELOPMENT AGREEMENT, LEVEE EASEMENTS FROM S.196TH TO S.204TH, WHICH WOULD ALLOW FOR AN OVERALL 2.5:1 LEVEE SLOPE. LA PIANTA IS ALSO CONSTRUCTING THE LEVEE IN THIS AREA TO MEET CORPS DESIGN STANDARDS. ADDING ARMOR PROTECTION ROCK AND WOODY DEBRIS AT THE TOE, THIS SECTION WOULD REQUIRE APPROXIMATELY 100' FROM THE OHWM.



F

TUKWILA SOUTH PROJECT PROPOSED GRADING PLAN WITHIN THE SHORELINE

SCALE: 1" = 30'

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NOTE:

THE CURRENT GRADING PLAN FOR THE TUKWILA SOUTH PROJECT, IN THE AREA FROM APPROXIMATELY S.186TH TO S.196TH, IS TO FILL HORIZONTALLY, AS CLOSE AS POSSIBLE, TO THE BACK OF THE EXISTING LEVEE, AND VERTICALLY, AT OR NEAR THE SAME ELEVATION AS THE EXISTING LEVEE. THIS WILL PROVIDE ADDITIONAL SAFETY TO THE LEVEE.