



COMMUNITY DEVELOPMENT

333 Broadalbin Street SW, PO Box 490, Albany, Oregon 97321-0144 | BUILDING 541-917-7553 | PLANNING 541-917-7550

Staff Report

Floodplain Development Review

File: FP-02-20

August 18, 2020

Summary

This staff report evaluates a Floodplain Development Review application to place fill within the floodplain. The subject property is at the City of Albany wastewater treatment plant. The treatment plant address on the application is listed as 554 Columbus Street NE; however, the plant is generally located north of Front Avenue NE, between NE Columbus Street NE and Waverly Drive NE. Based on the effective FEMA Flood Insurance Study (FIRM 41043C0214H, dated Dec 8, 2016), the project area is located within a FEMA Zone AE Special Flood Hazard Area, in the right overbank of the floodplain of the Willamette River. A location map is included as Attachment A.

As shown on Attachment B, a regulatory floodway has been defined for the area and a portion of the subject property is located within the floodway; however, the project area is located outside of the floodway. The flood carrying capacity of the Willamette River is not affected by the proposed project because the fill will be placed outside the floodway.

The applicant proposes placement of fill in a location that will later be developed for a composting facility. An additional land use review will be required before a composting facility is permitted to be developed. At this time, the proposal is only for placement of fill over an approximate area of two acres (86,400 square feet) that is in the floodplain. The area proposed for fill is shown on the applicant's Plan Sheets C-1 and C-2 (Attachment F).

The City of Albany Development Code (ADC) allows fill, grading, excavation, and paving in the floodplain if Floodplain Development Review criteria ADC 6.111 are met; these criteria are addressed in this report and must be satisfied to grant approval for this application.

Application Information

Proposal:	Floodplain Review for fill and grading in the special flood hazard area
Review Body:	Staff (Type I-L review)
Property Owner/Applicant:	City of Albany; 333 Broadalbin Street SW, Albany, Oregon 97321
Engineer / Representative:	Public Works Engineering, Nolan Nelson on Behalf of the City of Albany; 310 Waverly Drive NE, Albany, Oregon 97321
Address/Location	554 Columbus Street NE (Multiple Addresses)
Map/Tax Lot:	Linn County Assessor's Map No. 11S-03W-05DB; Tax Lot 5600
Zoning:	Zoning at the Site Area: Heavy Industrial (HI) with Floodplain Overlay (/FP)



	Zoning on the Subject Property: Heavy Industrial (HI), Light Industrial (LI), Residential Medium Density (RM) with Floodplain Overlay (/FP), Riparian Corridor Overlay (/RC), and Significant Wetland Overlay (/SW)
Land Area:	Two-acre area on a property 45.26 acres in size
Existing Land Use:	Vacant land area at the Albany Wastewater Treatment Plant
Neighborhood:	Willamette
Surrounding Zoning:	North: Heavy Industrial (HI); Open Space (OS) South: HI and Light Industrial (LI); Residential Single Family (RS-5) East: Heavy Industrial (HI); City Limits – City of Millersburg West: Residential Single Family (RS-5); Residential Medium Density (RM)
Surrounding Uses:	North: Willamette River South: Residential East: ATI Wah Chang Industrial Facility and Talking Water Gardens West: Residential
Prior History:	<p>Previous land use files indicate the wastewater treatment plant was constructed in 1969. The plant was expanded in 1990, 2000, and 2007 (Planning Files SP-49-89, SP-49-99, and CU-01-06).</p> <p>RL-07-06: In 2006, a Replat consolidated all of the lots owned by the City of Albany at this location into two parcels of land.</p> <p>VC-01-09: In March 2009, the approval to vacate the Public Right-of-Way removed Willamette Avenue NE east of Davidson Street from the subject property.</p> <p>SP-13-09 and SP-14-09: Site Plan Review for the construction of three new buildings together with a tree felling application to remove 25 trees larger than 25 inches in diameter. This application was approved on May 7, 2009; however, the proposed office and meeting area building was never constructed.</p> <p>SP-05-15: Site Plan Review for new construction of a 5,300 square foot crew quarters building at the City of Albany’s Wastewater Treatment Plant.</p>

Public Notice

A Notice of Filing was mailed to surrounding property owners within 100 feet of the subject property on June 25, 2020. At the time the comment period ended on July 9, 2020, the Albany Planning Division had received one written comment letter regarding the proposed project. This comment letter is included as Attachment C, and it is addressed in this report.

Analysis of Development Code Criteria

The Albany Development Code (ADC) includes the following review criteria, which must be met for this application to be approved. Code criteria are written in **bold** followed by findings, conclusions, and conditions of approval where conditions are necessary to meet the review criteria.

Grading, Fill, Excavation and Paving in the Floodplain (ADC 6.111) Criterion 1

Provisions have been made to maintain adequate flood-carrying capacity of existing watercourses, including future maintenance of that capacity.

Findings of Fact and Conclusion

- 1.1 The application is for Floodplain Development Review to place fill within the floodplain. The subject property is at the City of Albany wastewater treatment plant. The treatment plant address on the application is listed as 554 Columbus Street NE; however, the plant is generally located north of Front Avenue NE, between NE Columbus Street NE and Waverly Drive NE. A location map is included as Attachment A.
- 1.2 The project area is located within the Special Flood Hazard Area (SFHA) as defined by Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) for Linn County. Based on the effective FEMA Flood Insurance Rate Map (FIRM), panel 41043C0214H, dated Dec 8, 2016, the subject property is located within a FEMA Zone AE of the SFHA, in the right overbank of the floodplain of the Willamette River.
- 1.3 As shown on Attachment B, a regulatory floodway has been defined for the area and a portion of the subject property is located within the floodway; however, the project area is located outside of the floodway. The flood carrying capacity of the Willamette River is not affected by the proposed project because the fill will be placed outside the floodway.
- 1.4 The applicant proposes placement of fill in a location that will later be developed for a composting facility. An additional land use review will be required before a composting facility is permitted to be developed. At this time, the proposal is only for placement of fill over an approximate area of two acres (86,400 square feet) that is in the floodplain. The area proposed for fill is shown on the applicant's Plan Sheets C-1 and C-2 (Attachment F).
- 1.5 The Grading Plan (Attachment F, Sheet C-1) shows the area impacted is 86,400 square feet in size. There will be 3,200 cubic yards of native material cut and 8,800 cubic yards of material filled, which will result in 5,600 net cubic yards of fill on-site. The grading plan shows the fill will bring the existing ground elevation up by approximately six feet at its highest to an elevation of 204.38 feet (NAVD 1988). The FIS and FIRM show the Base Flood Elevation (BFE) at the site is 203 feet (NAVD 1988). Therefore, the impacted area is proposed to be raised above the BFE.
- 1.6 The fill will be stabilized, as described in the application material (Attachment E). The proposed fill is located on City property and it will be maintained by the City of Albany.
- 1.7 The City requested a review of this application from Ken Puhn, PE, CFM, of WEST Consultants, Inc., who found the application material adequately addresses ADC 6.111(1). The review memo by Ken Puhn states: "*The City of Albany Development Code allows fill within the floodway fringe provided it does not reduce the flood carrying capacity of existing watercourses. Preliminary grading and fill plans provided by the applicant's engineer (Kennedy Jenks) show that the fill will be placed outside the floodway; therefore, flood carrying capacity is not affected. Provisions 6.100 and 6.111 require that the proposed plans be stamped by a licensed engineer. Since the provided plans are considered preliminary, they are not stamped. Provided that the final stamped plans, to be submitted at a future date, remain consistent with the preliminary plans and the proposed fill remains outside of the regulatory floodway, provisions 6.100 and 6.111 of the City of Albany Development Code are satisfied (Attachment D).*"
- 1.8 At the conclusion of grading and filling the project area, documentation is necessary to verify implementation is consistent with the preliminary plans as proposed.
- 1.9 As proposed and conditioned, the proposed fill project will maintain adequate flood-carrying capacity of existing watercourses. This review criterion can be met with the following conditions of approval.

Conditions of Approval

- Condition 1 Prior to issuance of an EPSC permit, the applicant shall submit to the Community Development Department a final grading plan stamped by a licensed engineer.
- Condition 2 At the conclusion of the proposed project, the following documentation shall be submitted to the Community Development Department:
- a) As-built drawings with elevations provided; and
 - b) Letter from the Engineer of Record who is licensed in the state of Oregon, stating the fill was placed in accordance with the signed plans.

Criterion 2

The proposal will be approved only where adequate provisions for stormwater runoff have been made that are consistent with the Public Works Engineering standards, or are otherwise approved by the City Engineer.

Findings of Fact and Conclusion

- 2.1 There is an existing on-site stormwater collection system and sanitary sewer system serving this area of the site. The subject property extends to the north to the Willamette River. There are no intervening properties to the north of the project area to the Willamette River.
- 2.2 It is the property owner's responsibility to ensure any proposed grading, fill, excavation, or other site work does not negatively impact drainage patterns to, or from, adjacent properties. Any proposed drainage systems must be shown on the construction drawings. The type of drainage system, as well as the location and method of connection to the public system must be reviewed and approved by the City of Albany's Engineering Division.
- 2.3 Because the site is a Department of Environmental Quality (DEQ) permitted site, the applicant is proposing to direct runoff from impervious areas to the existing onsite sanitary sewer system. Grass (hydroseeded) areas will sheet flow to existing drainage that flows to the north as it currently drains.
- 2.4 The applicant has shown that the stormwater runoff from the fill area will be accommodated by the existing sanitary sewer system or will flow to the north as the existing area currently drains.
- 2.5 The City's Engineering staff has reviewed the stormwater drainage plans and has determined the development has made adequate provisions for storm water runoff.
- 2.6 This criterion is met without conditions.

Criterion 3

No grading, fill, excavation, or paving will be permitted over an existing public storm drain, sanitary sewer, or water line unless it can be demonstrated to the satisfaction of the City Engineer that the proposed grading, fill, excavation, or paving will not be detrimental to the anticipated service life, operation, and maintenance of the existing utility.

Findings of Fact and Conclusion

- 3.1 A 54-inch trunk sewer main runs through the area of proposed fill. The fill will add up to six feet at the highest point of cover over this main. The City Engineer has approved the additional fill over the sewer main.
- 3.2 The applicant's submittal indicates a manhole will be raised to the new elevation to accommodate the change in depth over the existing sewer main.

- 3.3 A letter was submitted during the 14-day comment period from a nearby property owner, Robyn Morley of Willamette River View Holdings and their representative, Richard Walker of AKS Engineering & Forestry (Attachment C). The letter states: “*Our understanding, based on several meetings with the City related to our development project, is that the existing sanitary sewer trunk main through our site [595 Geary Street NE] is already at maximum cover for the pipe material and unable to support additional overburden. We have gone to great lengths in the design and layout of this development to eliminate any additional overburden on the City’s sewer.*

The proposed land use application grading and fill plan (sheet C-1) shown on the notice file FP-02-20 includes ± 4 feet of fill over the same sanitary sewer trunk main just downstream of The Banks [project]. We have no objections to this application but think it is important to draw attention to the additional fill for the record. We are confident that City staff will take into consideration the proposed fill over the sewer main with their staff decision and include conditions that will ensure that any additional fill will be completed in a way that protects the service life, operation and maintenance of this critical City infrastructure.”

Response: Because the sewer trunk main lies within City property (Albany Wastewater Treatment Plant), no public utility easement is needed over the main to provide access to and space for maintenance/repair of the trunk main. Typically, easements for sewers are wide enough to allow for one horizontal foot on each side of the main for each foot of depth. For a 25-foot deep sewer, this would result in a 50-foot wide easement. Such an easement would likely significantly affect development on private property, and the impact on private property of potential repair of the main would also be significant. Because the trunk sewers near the WWTP are typically among the deepest in the City, the Treatment Plant is designed to accommodate such depths and any issues with maintenance and repair do not impact private property owners.

- 3.4 The City Engineer has determined that the additional fill over the existing public sanitary sewer main will not be detrimental to the anticipated service life, operation, and maintenance of the existing utility.
- 3.5 This criterion is met without conditions.

Criterion 4

In areas where no floodway has been designated on the applicable FIRM, grading will not be permitted unless it is demonstrated by the applicant that the cumulative effect of the proposed grading, fill, excavation, or paving when combined with all other existing and planned development, will not increase the water surface elevation of the base flood more than a maximum of one foot (cumulative) at any point within the community.

Findings of Fact and Conclusion

- 4.1 Based on the effective FEMA FIS and FIRM Panel No. 41043C0214H, dated December 8, 2016, the project area is entirely located within the flood fringe, in Zone AE of the SFHA, where a floodway has been established.
- 4.2 The subject property is located entirely outside of the floodway, within the flood fringe. Therefore, this review criterion is not applicable.

Criterion 5

The applicant shall notify the City of Albany, any adjacent community, and the Natural Hazards Mitigation Office of the Oregon Department of Land Conservation and Development of any proposed grading, fill, excavation, or paving activity that will result in alteration or relocation of a watercourse (See Section 6.101).

Findings of Fact and Conclusion

- 5.1 Notice was provided to Linn County, City of Millersburg, and the Natural Hazards Program of the

Oregon Department of Land Conservation and Development, at least 30 days prior to issuance of a decision on this project.

- 5.2 The subject property is located entirely outside of the floodway, within the flood fringe. There are no watercourses located within the area proposed for fill on the subject property. The proposal does not include alteration or relocation of a watercourse.
- 5.3 This criterion is met without conditions.

Criterion 6

All drainage facilities shall be designed to carry waters to the nearest practicable watercourse approved by the designee as a safe place to deposit such waters. Erosion of ground in the area of discharge shall be prevented by installation of non-erosive down spouts and diffusers or other devices.

Findings of Fact and Conclusion

- 6.1 The applicant states the proposed development's stormwater runoff will be directed toward the sanitary sewer system because this is a DEQ permitted site. All runoff that is on unpaved surfaces will sheet flow to the north to the Willamette River as it does currently.
- 6.2 Erosion of ground is prevented by paving covered areas and hydroseeding remaining areas. In addition, an Erosion Prevention and Sediment Control (EPSC) permit is required, prior to site development.
- 6.3 This criterion is met without conditions.

Criterion 7

Building pads shall have a drainage gradient of two percent toward approved drainage facilities, unless waived by the Building Official or designee.

Findings of Fact and Conclusion

- 7.1 No building pads are proposed to be constructed at this time; therefore, this criterion is not applicable.

Overall Conclusion

As proposed and conditioned, the application for Floodplain Development Review to place fill in the floodplain satisfies all applicable review criteria as outlined in this report.

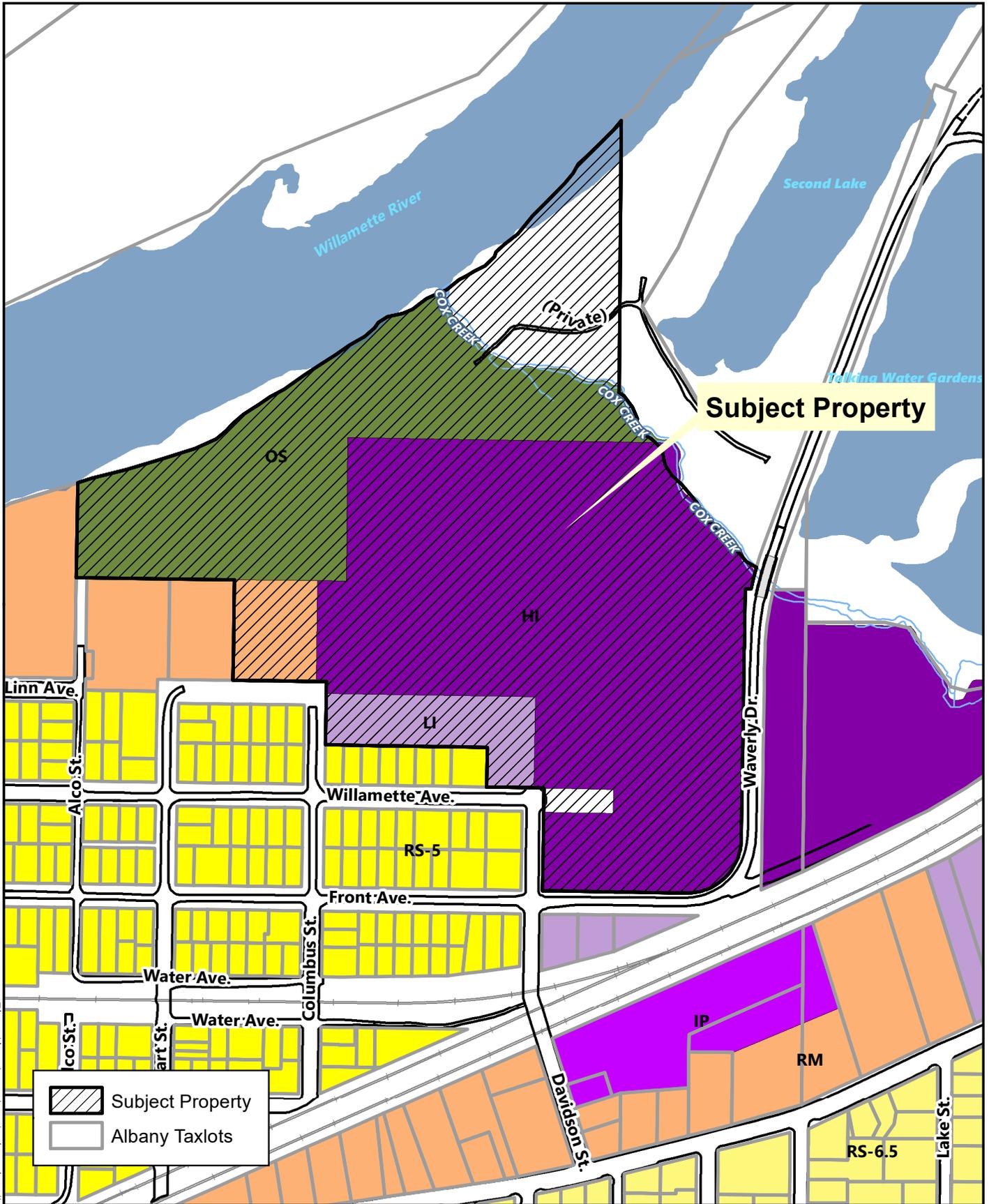
Conditions of Approval

- Condition 1 Prior to issuance of an EPSC permit, the applicant shall submit to the Community Development Department a final grading plan stamped by a licensed engineer.
- Condition 2 At the conclusion of the proposed project, the following documentation shall be submitted to the Community Development Department:
 - a) As-built drawings with elevations provided; and
 - b) Letter from the Engineer of Record who is licensed in the state of Oregon, stating the fill was placed in accordance with the signed plans.

Attachments

- A. Location and Zoning Map
- B. FIRMette Maps
- C. Comment from AKS Engineering and Willamette River View Holdings (dated July 6, 2020)
- D. Floodplain Review by Ken Puhn, WEST Consultants (dated July 11, 2020)

- E. Applicant's Findings
- F. Applicant's Plan Set, Sheets C-1 and C-2



Location Map: 554 Columbus Street NE

Date: 6/23/2020 Map Source: City of Albany

City of Albany, OR





MAP SCALE 1" = 500'



PANEL 0214H

FIRM

FLOOD INSURANCE RATE MAP LINN COUNTY, OREGON AND INCORPORATED AREAS

PANEL 214 OF 1575

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALBANY, CITY OF	410137	0214	H
LINN COUNTY	410136	0214	H
MILLERSBURG, CITY OF	410284	0214	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



**MAP NUMBER
41043C0214H
MAP REVISED
DECEMBER 8, 2016**

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using FIRMette - Desktop version 3.0. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. Further information about National Flood Insurance Program flood hazard maps is available at <http://www.msc.fema.gov/>.

National Flood Hazard Layer FIRMMette



123°5'2"W 44°38'47"N



Legend ATTACHMENT B

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

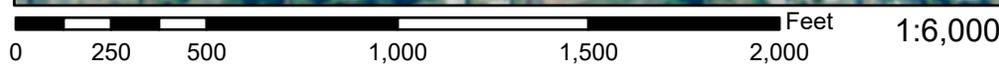
- | | |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SPECIAL FLOOD HAZARD AREAS | Without Base Flood Elevation (BFE)
Zone A, V, A99 |
| | With BFE or Depth Zone AE, AO, AH, VE, AR |
| | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
| | Future Conditions 1% Annual Chance Flood Hazard Zone X |
| | Area with Reduced Flood Risk due to Levee. See Notes. Zone X |
| | Area with Flood Risk due to Levee Zone D |
| OTHER AREAS | NO SCREEN Area of Minimal Flood Hazard Zone X |
| | Effective LOMRs |
| | Area of Undetermined Flood Hazard Zone D |
| GENERAL STRUCTURES | Channel, Culvert, or Storm Sewer |
| | Levee, Dike, or Floodwall |
| OTHER FEATURES | B 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | 17.5 Coastal Transect |
| | Base Flood Elevation Line (BFE) |
| | Limit of Study |
| | Jurisdiction Boundary |
| | Coastal Transect Baseline |
| | Profile Baseline |
| | Hydrographic Feature |
| MAP PANELS | Digital Data Available |
| | No Digital Data Available |
| | Unmapped |
- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **8/10/2020 at 8:38 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

USGS The National Map: Orthoimagery. Data refreshed April 2020



123°4'25"W 44°38'22"N



July 06, 2020

Melissa Anderson
City of Albany – Planning Department
PO Box 490,
Albany, OR 97321

RE: Written Comment for Notice of Filing (File: FP-02-20) – 554 Columbus Street NE (Linn County Assessor’s Map No. 11S-03W-05DB; Tax lot 5600)

Mrs. Anderson:

We have prepared this letter as written comment for the above referenced notice that our client received due to their project’s proximity to the 554 Columbus Street project. Our client is Willamette Riverview Holdings II, LLC and is the ownership group for The Banks Apartment project located at 595 Geary Street NE (SP-01-19, WG-01-19, FP-01-19). Please consider the comment below for the staff decision of the floodplain development permit.

Our understanding, based on several meetings with the City related to our development project, is that the existing sanitary sewer trunk main through our site is already at maximum cover for the pipe material and unable to support additional overburden. We have gone to great lengths in the design and layout of this development to eliminate any additional overburden on the City’s sewer.

The proposed Land Use Application Grading and Fill Plan (Sheet C-1) shown in the Notice File FP-02-20 includes ±4-feet of fill over the same sanitary sewer trunk main just downstream of The Banks. We have no objections to this application but think it is important to draw attention to the additional fill for the record. We are confident that City staff will take into consideration the proposed fill over the sewer main with their staff decision and include conditions that will ensure that any additional fill will be completed in a way that protects the service life, operation, and maintenance of this critical City infrastructure.

Sincerely,
AKS ENGINEERING & FORESTRY, LLC

Richard C. Walker, P.E., Associate
3700 N River Road, Suite 1, Keizer, OR 97303
503-400-6028 | richardw@aks-eng.com

WILLAMETTE RIVER VIEW HOLDINGS II, LLC

Robyn R. Morley, Member
3545 Deerfield Drive, Salem, OR 64302
503-400-2363 | robyn_morley@yahoo.com

Technical Memo

WEST Consultants, Inc.

2601 25th St. SE

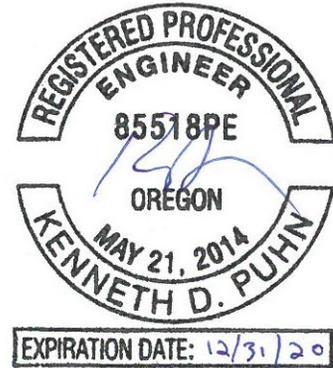
Suite 450

Salem, OR 97302-1286

(503) 485 5490

(503) 485-5491 Fax

www.westconsultants.com



To: Melissa Anderson, AICP, PMP, CFM
Community Development Department, City of Albany, Oregon

Date: July 11, 2020

From: Ken Puhn, P.E., CFM

Subject: Review of Floodplain Development Permit Application FP-02-20, Albany Wastewater Treatment Plant.

Background

WEST Consultants has completed a review of the Floodplain Development Permit Application no. FP-02-20. The subject property is the City of Albany wastewater treatment plant. The treatment plant address on the application is listed as 554 Columbus Street NE; however, the plant is generally located north of Front Ave NE, between NE Columbus Street and Waverly Drive NE. Based on the effective FEMA Flood Insurance Study (FIRM 41043C0214H, dated Dec 8, 2016), the subject property is located within a FEMA Zone AE Special Flood Hazard Area, in the right overbank of the floodplain of the Willamette River. A regulatory floodway has been defined for the area and a portion of the subject property is located within the floodway.

The applicant proposes placement of fill in a location to be later used as a composting facility. The fill will be placed over an approximate area of 1.2 acres, which is located within the floodplain, but outside the floodway. The approximate fill area is shown in Figure 1.

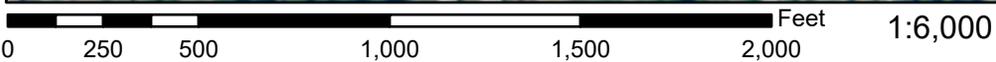
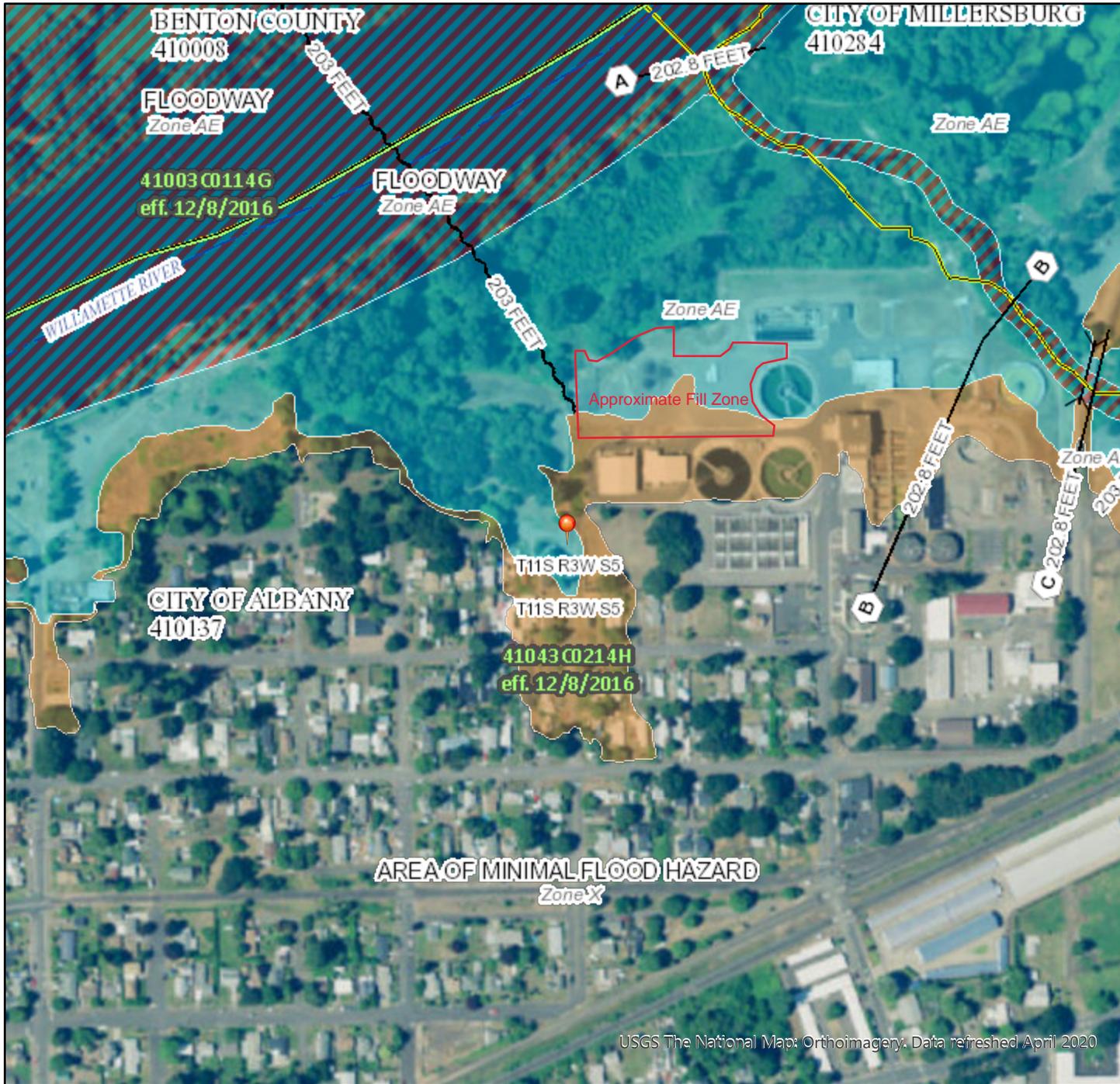
Findings

The City of Albany Development Code allows fill within the floodway provided it does not reduce the flood carrying capacity of existing watercourses. Preliminary grading and fill plans provided by the applicant's engineer (Kennedy Jenks) show that the fill will be placed outside the floodway; therefore, flood carrying capacity is not affected. Provisions 6.100 and 6.111 require that the proposed plans be stamped by a licensed engineer. Since the provided plans are considered preliminary, they are not stamped. Provided that the final stamped plans, to be submitted at a future date, remain consistent with the preliminary plans and the proposed fill remains outside of the regulatory floodway, provisions 6.100 and 6.111 of the City of Albany Development Code are satisfied. The Floodplain Permit Review Checklist is shown in Appendix A. Supporting documentation is included in Appendix B.

National Flood Hazard Layer FIRMMette



123°5'2"W 44°38'47"N



123°4'25"W 44°38'22"N

Legend ATTACHMENT D

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SPECIAL FLOOD HAZARD AREAS | Without Base Flood Elevation (BFE)
Zone A, V, A99 |
| | With BFE or Depth Zone AE, AO, AH, VE, AR |
| | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
| | Future Conditions 1% Annual Chance Flood Hazard Zone X |
| | Area with Reduced Flood Risk due to Levee. See Notes. Zone X |
| | Area with Flood Risk due to Levee Zone D |
| OTHER AREAS | NO SCREEN Area of Minimal Flood Hazard Zone X |
| | Effective LOMRs |
| | Area of Undetermined Flood Hazard Zone D |
| GENERAL STRUCTURES | Channel, Culvert, or Storm Sewer |
| | Levee, Dike, or Floodwall |
| OTHER FEATURES | B 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
17.5 |
| | C Coastal Transect |
| | Base Flood Elevation Line (BFE) |
| | Limit of Study |
| | Jurisdiction Boundary |
| | Coastal Transect Baseline |
| | Profile Baseline |
| | Hydrographic Feature |
| MAP PANELS | Digital Data Available |
| | No Digital Data Available |
| | Unmapped |
- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Figure 1

APPENDIX A – Floodplain Review Checklist

City of Albany, Oregon
Floodplain Permit Review Checklist

Permit Reference No: FP-02-20

Project: City of Albany Water Treatment Plant

Stream: Willamette River

Projection Description: Fill and grading and future composting facility

Reviewed By: Ken Puhn, P.E., CFM

6.100 Floodway Restrictions.

- FEMA Designated Floodway**
 - Development is outside the designated floodway
 - Development within floodway does not result in any increase in 100-year flood levels
 - Finding based upon applicant-supplied evidence
 - Certified by a registered professional engineer (Note: preliminary drawings provided by the applicant are not stamped by an engineer. Satisfaction of this criteria will require final stamped maps to be submitted.)
 - Allowed Floodway Development
 - 6.100(1) Does not involve the construction of permanent or habitable structures (including fences)
 - 6.100(2) A public or private park or recreational use or municipal utility use
 - 6.100(3) A water-dependent structure such as a dock, pier, bridge, or floating marina.
 - 6.100(4) The temporary storage or processing of materials will not become buoyant, flammable, hazardous explosive or otherwise potentially injurious to human, animal or plant life in times of flooding.
 - 6.100(5) The temporary storage of material or equipment are not subject to major damage by floods and is firmly anchored to prevent flotation or is readily removable from the area within the time available after flood warning.
- Regulated Floodplain (Non designated FEMA Floodway)**
 - Development along estimated floodway boundary shall not result in an increase of the base flood level greater than 1-foot
 - Finding based upon applicant-supplied evidence
 - Certified by a registered professional engineer

6.101 Alteration of a Watercourse

- Watercourse altered**
 - changes occur within its banks
 - installation of new culverts and/or bridges
 - size modifications to existing culverts and bridges

- 6.101(1) Development does not diminish the flood-carrying capacity of a watercourse. Finding based upon applicant-supplied evidence.

- 6.101(4) The applicant shall be responsible for ensuring necessary maintenance of the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

6.111 Grading, Fill, Excavation, and Paving

- FEMA Designated Floodway**
 - Grading is outside the floodway.
 - Grading is inside the floodway and does not result in any increase in flood levels within the floodway during the occurrence of the 100-year flood.
 - Finding based upon applicant-supplied evidence
 - Certified by a registered professional engineer (Note: preliminary drawings provided by the applicant are not stamped by an engineer. Satisfaction of this criteria will require final stamped maps to be submitted.)

- Special Flood Hazard Area (100-year floodplain)**
 - 6.111(1) Provisions have been made to maintain adequate flood-carrying capacity of existing watercourses, including future maintenance of that capacity.

- Regulated Floodplain (Non designated FEMA Floodway)**
 - 6.111(5) Demonstrate the cumulative effect of the proposed grading, fill, excavation, or paving when combined with all other existing and planned development, will not increase the water surface elevation of the base flood more than a maximum of one foot (cumulative) at any point within the community.

Grading, Fill, Excavation and Paving in the Floodplain (ADC 6.111)

Criterion 1

Provisions have been made to maintain adequate flood-carrying capacity of existing watercourses, including future maintenance of that capacity.

- The subject property is located within a FEMA Zone AE Special Flood Hazard Area, on the FEMA Flood Insurance Rate Map (FIRM) No. 41043C0214H, effective date Dec. 8, 2016. The Flood Insurance Study and FIRM show the Base Flood Elevation at the site is 203 feet (NAVD 1988).
- The subject property is located entirely outside of the floodway, within the flood fringe. There are no watercourses located within the area proposed for fill on the subject property.
- The size of the area proposed for fill is 86,400 square feet. The Grading Plan shows the proposal will cut 3,200 cubic yards of native material and fill 8,800 cubic yards of material, which will result in 5,600 net cubic yards of fill on-site. The grading plan shows the fill will bring the existing ground elevation up by approximately 6 feet at its highest to an elevation of 204.38 feet (NAVD 1988).
- Fill will be stabilized using the following criteria:
 - Select Fill should consist of 1 or ¾-inch minus, clean (i.e., less than 5% passing the #200 U.S. Sieve), well-graded, crushed gravel or rock.
 - Granular Site Fill should consist of ±3-inch minus, clean (i.e., less than 5% passing the #200 U.S. Sieve), well-graded, crushed gravel or rock, or approved rounded gravel. It may be used to raise site grades if there is insufficient General Site Fill.
 - General Site Fill should consist of existing stockpiled material approved by Foundation Engineering. The General Site Fill should be free of expansive clay, organic matter, or construction debris.
 - The Separation Geotextile should meet the minimum requirements of an AASHTO M 288-17 geotextile for separation and have Mean Average Roll Value (MARV) strength properties meeting the requirements of an AASHTO M 288-17 Class 2, woven geotextile.
 - Compact all fill in loose lifts not exceeding 12 inches. Thinner lifts of 8 inches or less will be required if light or hand-operated equipment is used. Compact all fill to a minimum of 95% relative compaction, unless otherwise specified. The maximum dry density of ASTM D 698 should be used as the standard for estimating relative compaction, unless otherwise specified. Field density tests should be run frequently to confirm adequate compaction of the fill. The stockpiled General Site Fill is variable and contains oversized gravels and cobbles. Therefore, confirmation of adequate compaction of this material will required proof rolling. The proof rolling should be completed using a loaded water truck, dump truck or other approved vehicle and should be observe by a Foundation Engineering representative.
 - Compact the stripped surface prior to placing backfill. Proof roll the prepared subgrade prior to placing any new site fill. Overexcavate any disturbed or pumping areas and replace it with approved General Site Fill, Select Fill, or Granular Site Fill (if additional imported fill is required).
 - Where new site fill is required, place General Site Fill or Granular Site Fill in lifts and mechanically compact as specified above during dry weather only. The suitability of the stockpiled fill for use as General Site Fill should be confirmed by Foundation Engineering as it is placed. If needed, remove pockets of plastic clay, debris, or over-sized cobbles. Individual

- lifts should be constructed at slopes no steeper than 10:1 (H:V). Finished slopes should be graded at 3:1 (H:V), or flatter.
- Proof roll the new fill as it is placed using an approved truck or vehicle. Where more than 2 feet of fill is required, the fill should be proof rolled in lifts. The proof roll should be observed by Foundation Engineering. If excessive deflection or rutting is observed, the fill should be removed, moisture-conditioned (dried), re-compacted, and proof rolled again.
 - Cap General Site Fill and Granular Site Fill under all floor slabs or AC surfaces with at least 12 inches of Select Fill. Compact the Select Fill as recommended above.
 - Place at least 12 inches of compacted Select Fill under new footings or blocks. This thickness can be reduced to a leveling course (4 to 6 inches thick) in areas underlain by existing dense gravel.

Criterion 2

The proposal will be approved only where adequate provisions for stormwater runoff have been made that are consistent with the Public Works Engineering standards or are otherwise approved by the City Engineer.

Runoff from impervious areas will be directed to the onsite sewer system. Grass(hydroseeded) areas will simply be sheet flow to existing drainage that flows to the north as it currently drains.

Criterion 3

No grading, fill, excavation, or paving will be permitted over an existing public storm drain, sanitary sewer unless it can be demonstrated to the satisfaction of the City engineer that the proposed grading, fill, excavation, or paving will not be detrimental to the anticipated service life, operation and maintenance of the existing utility.

A trunk sewer runs through our fill area. A manhole will be raised to the new elevation to accommodate.

Criterion 4

In areas where no floodway has been designated on the applicable FIRM, grading will not be permitted unless it is demonstrated by the applicant that the cumulative effect of the proposed grading, fill, excavation, or paving when combined with all other existing and planned development, will not increase the water surface elevation of the base flood more than a maximum of one foot (cumulative) at any point within the community.

- The site is entirely located within the flood fringe, in Zone AE of the SFHA, where a BFE and a floodway have been established. ***This review criterion is not applicable.***

Criterion 5

The applicant shall notify the City of Albany, any adjacent community, and the Natural Hazards Mitigation Office of the Oregon Department of Land Conservation and Development of any proposed grading, fill, excavation, or paving activity that will result in alteration or relocation of a watercourse (See Section 6.101).

Findings of Fact

- The proposal does not include alteration or relocation of a watercourse. ***This review criterion is not applicable.***

Criterion 6

All drainage facilities shall be designed to carry waters to the nearest practicable watercourse approved by the designee as a safe place to deposit such waters. Erosion of ground in the area of discharge shall be prevented by installation of non-erosive down spouts and diffusers or other devices.

- The proposed development's stormwater runoff will be directed towards the sanitary sewer system as this is a DEQ permitted site. All runoff that is on unpaved surfaces will sheet flow to the north as it does currently.
- Erosion of ground is prevented paving, covered areas, and hydroseeding.

Criterion 7

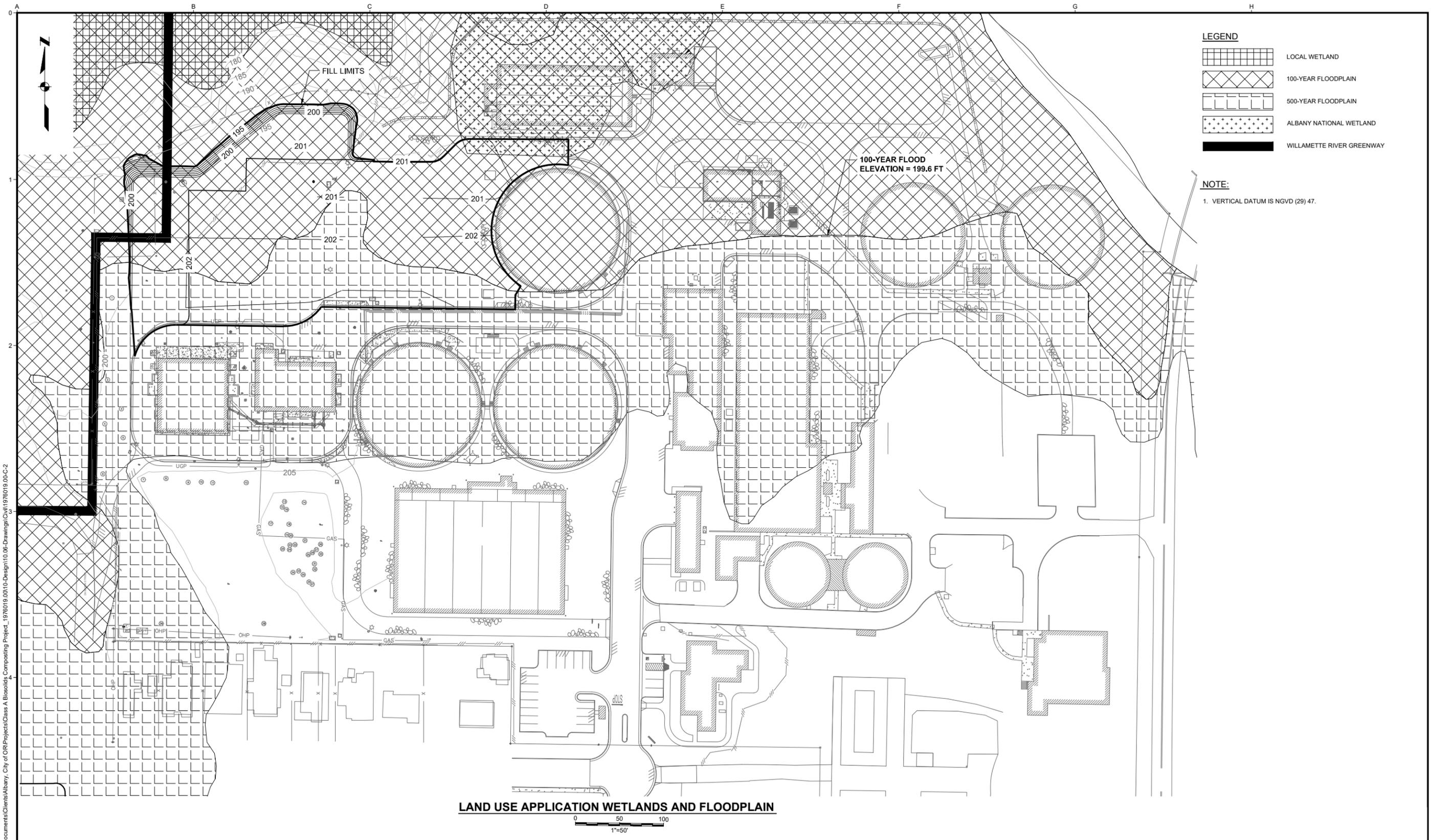
Building pads shall have a drainage gradient of two percent toward approved drainage facilities, unless waived by the Building Official or designee.

- The proposal does not include any building pads; therefore, ***this criterion is not applicable.***
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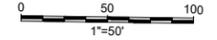
ATTACHMENT E

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LAND USE APPLICATION WETLANDS AND FLOODPLAIN



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NO.	REVISION	DATE	BY

SCALES
 0 1"
 0 25mm
 IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED
CLW
 DRAWN
GAS
 CHECKED

CITY OF ALBANY
 ALBANY, OR
CLASS A BIOSOLIDS COMPOSTING PROJECT: PHASE 1

LAND USE APPLICATION WETLANDS AND FLOODPLAIN

FILE NAME
1976019.00-C-2.dwg
 JOB NO.
1976019.00
 DATE
APRIL 2020
 SHEET OF
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