

DRAFT
NARRATIVE

10500 SW Manhasset Drive

Type II Architectural Review Application

August 23, 2021

Prepared for:
City of Tualatin
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Tualatin, Oregon 97062
503-692-2000

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10500 SW MANHASSET DRIVE

Summary

Project Proposal

This project proposes a new speculative single-story warehouse building of approximately 44,700 GSF on the vacant portion of the NW Veterinary property. The proposed building will be of concrete tilt up construction with an interior clear height of 26'-0" and overall height of 38'. The structure will include selective storefront with loading docks on both the northeast and southeast locations. The project will be designed to accommodate warehouse storage.

Site Description

The property is approximately 4.90 acres, located on the southside of SW Manhasset Drive within tax parcel 2S122DD00200. The project proposal will be located on the vacant portion of land East of the existing building. The site is under the jurisdiction of Tualatin with a zoning designation of MG – General Manufacturing.

The Parcel is located in the southwest one-quarter of section-22, township 2 South, Range 1 West of the Willamette Meridian.

Project Data:

Building Address: 10500 SW Manhasset Drive, Tualatin, Oregon

Zoning: MG (General Manufacturing)

Site Area: 104,912 SF

Proposed Building Area: 44,745 GSF

Site Building Coverage: 17.4%

Building Setbacks: Front = 55'-6", Rear = 79'-2", Sides = 32'-8"

Construction Type: III-B

Occupancy: B, F1, S1

Parking: Total Standard Parking Stalls = 53 ; ADA = 3

APPLICABLE STANDARDS

The following narrative addresses the compliance of this project with all applicable codes and standards of the Tualatin Development Code (TDC) and the Tualatin Municipal Code (TMC).

Tualatin Development Code:

CHAPTER 32 - Applications and Approval Criteria

CHAPTER 33.020: Architectural Review

CHAPTER 33.110: Tree Removal Permit/Review

CHAPTER 61 - General Manufacturing Zone

CHAPTER 63 – Industrial Uses – Environmental Regulations

CHAPTER 71 – Wetland Protection District

CHAPTER 73A - Site Design Standards

CHAPTER 73B - Landscaping Standards

CHAPTER 73C - Parking Standards

CHAPTER 73D - Waste and Recyclables Management Standards

CHAPTER 74 - Public Improvements Requirements

CHAPTER 75 - Access Management

Tualatin Municipal Code:

Chapter 03-02: Sewer Regulations

Chapter 03-03: Water Service

**Chapter 03-05 Soil Erosion, Surface Water Management,
Water Quality, Facilities and Building & Sewers**

TDC 32 - Applications and Approval Criteria

Architectural Review Procedure Type II – Decision Body CM / Appeal Body ARB/CC. Pre-Application Conference Required and Neighborhood/Developer Meeting required.

Response: Applicant attended a Pre-Application Conference + Facilitated a Neighborhood/Developer Meeting

TDC 33.020: Architectural Review

TDC 33.110. - Tree Removal Permit/Review.

(3) *Procedure Type.* Tree Removal Permit applications are subject to Type II Review in accordance with TDC [Chapter 32](#). Tree Removal Permit applications submitted with an Architectural Review, Subdivision, or Partition application will be processed in conjunction with the Architectural Review, Subdivision, or Partition decision.

(4) *Specific Submittal Requirements.* In addition to the general submittal requirements in TDC [32.140](#) (Application Submittal), an applicant must submit the following:

(a) *Tree Preservation Plan.* A tree preservation plan drawn to scale must include:

(b) *Tree Assessment Report.* A tree assessment prepared by a certified arborist must include:

(c) *Tree Tags*. All trees on-site must be physically identified and numbered in the field with an arborist-approved tagging system that corresponds to the Tree Preservation Plan and Tree Assessment Report.

Response: Refer to Tree Assessment Report included in this application.

(5) *Approval Criteria*.

(a) An applicant must satisfactorily demonstrate that at least one of the following criteria are met:

(i) The tree is diseased and:

(ii) The tree represents a hazard which may include but not be limited to:

(iii) It is necessary to remove the tree to construct proposed improvements based on Architectural Review approval, building permit, or approval of a Subdivision or Partition Review.

(b) If none of the conditions in TDC [33.110](#)(5)(a) are met, the certified arborist must evaluate the condition of each tree.

(7) *Conditions of Approval*. Any tree required to be retained must be protected in accordance with the TDC [73B](#) and [73C](#)

Response: An arborist report which evaluates each tree on-site, is included in this submittal. Trees designated to be removed are indicated as within construction areas, or are dead, dying or dangerous and trees necessary to construct proposed improvements. Refer to Tree Assessment Report included in this application.

CHAPTER 61 – General Manufacturing Zone

TDC 61.200. Use Categories..

(1) *Use Categories*. Table 61-1 lists use categories Permitted Outright (P) or Conditionally Permitted (C) in the MG zone. Use categories may also be designated as Limited (L) and subject to the limitations listed in Table 61-1 and restrictions identified in TDC [61.210](#). Limitations may restrict the specific type of use, location, size, or other characteristics of the use category. Use categories which are not listed are prohibited within the zone, except for uses which are found by the City Manager or appointee to be of a similar character and to meet the purpose of this zone, as provided in TDC [31.070](#).

(2) *Use Categories in the Limited Commercial Setback*. Commercial uses may be further restricted within the Limited Commercial Setback, see TDC [60.210](#)(4).

(3) *Overlay Zones*. Additional uses may be allowed in a particular overlay zone. See the overlay zone Chapters for additional uses.

Response: Per Table 61-1 'Use Category in the MG Zone'.

Warehouse and Freight Movement is a permitted use with conditions. Conditional Uses are limited to: Conditional use required for warehousing of building materials and supplies. Proposal building Use will not warehouse building materials or supplies. Office is permitted with conditions. The building includes an administrative office mezzanine. Conditional Uses are limited to: Offices for

executive, administrative, and professional uses related to the sale or service of industrial products.

TDC 60.210. - Additional Limitations on Uses.

Response: None of the uses with limitation are proposed.

TDC 61.300. - Development Standards.

Table 61-2 Development in the MG Zone.

STANDARD	REQUIREMENT	LIMITATIONS AND CODE REFERENCES
LOT SIZE		
Minimum Lot Size	20,000 square feet	—
LOT DIMENSIONS		
Minimum Lot Width	100 feet	When lot has frontage on public street, minimum lot width at the street is 100 feet. When lot has frontage on cul-de-sac street, minimum lot width at the street is 50 feet.
Infrastructure and Utilities Uses	—	As determined through the Subdivision, Partition, or Lot Line Adjustment process
Flag Lots	—	Must be sufficient to comply with minimum access requirements of TDC 73C .

NOTES:

1. When lot has frontage on public street, minimum lot width at the street is 100 feet.
2. When lot has frontage on cul-de-sac street, minimum lot width at the street is 50 feet.

Response: Access for the project is via SW Manhasset Drive. Adequate frontage is provided.

MINIMUM SETBACKS		
Front	30 feet	
Front Setback Adjacent to Residential or Manufacturing Park Zone	50 feet	
Side	0-50 feet	Determined through Architectural Review process. No minimum setback if adjacent to railroad right-of-way or spur track.
Side Setback Adjacent to Residential or Manufacturing Park Zone	50 feet	
Rear	0-50 feet	Determined through Architectural Review process. No minimum setback if adjacent to railroad right-of-way or spur track.
Rear setback adjacent to Residential or Manufacturing Park Zone	50 feet	
Parking and Circulation Areas	5 feet	No minimum setback required adjacent to joint access approach in accordance with TDC 73C .
Parking and Circulation Areas Adjacent to Residential or Manufacturing Park Zone	10 feet	
Fences	10 feet	From public right-of-way.

NOTES:

1. Side Setback determined through Architectural Review process. No minimum setback if adjacent to railroad right-of-way or spur track.
2. Rear Setback determined through Architectural Review process. No minimum setback if adjacent to railroad right-of-way or spur track.
3. Parking and Circulation Areas have no minimum setback required adjacent to joint access approach in accordance with TDC [73C](#).
4. Fencing must be setback from public right-of-ways

Response: Design accounts for required setbacks.

Parking and Circulation Areas Adjacent to Residential or Manufacturing Park Zone	10 feet	
Fences	10 feet	From public right-of-way.
STRUCTURE HEIGHT		
Maximum Height	60 feet	May be increased to 100 feet if yards adjacent to structure are not less than a distance equal to the height of the structure. Measured at the 50-foot setback line, includes flagpoles. The building height may extend above 28 feet on a plane beginning at the 50-foot setback line at a slope of 45 degrees extending away from the 50-foot setback line. Flagpoles may extend to 100 feet.
Maximum Height Adjacent to Residential Zone	28 feet	

NOTES:

1. Building height may be increased to 100 feet if yards adjacent to structure are not less than a distance equal to one and one-half times the height of the structure.
2. Building height measured at the 50-foot setback line, includes flagpoles. The building height may extend above 28 feet on a plane beginning at the 50-foot setback line at a slope of 45 degrees extending away from the 50-foot setback line.
3. Flagpoles may extend to 100 feet

Response: Design accounts for required heights. The height of the building 38'

TDC 61.210. - Additional Development Standards.

(2) *Limited Commercial Uses.* Commercial uses permitted as limited uses, as specified in Table 61-1, must be located on the same lot or parcel as a permitted industrial use. The lot or parcel must be used substantially for industrial purposes and the commercial use is subject to the following standards:

(a) *Office Uses.* Office uses must not exceed 25 percent of the total gross floor area of all buildings on the lot or parcel.

Response: All proposed and future office uses will not exceed 25% of the total gross floor area.

TDC 63.010 – Industrial Uses and Utilities and Manufacturing Zones – Environmental Regulations

The purpose of this section is to protect the public health, safety and general welfare by applying environmental regulations to all industrial uses and utilities, and manufacturing planning districts in the City. These environmental regulations are also intended to protect natural areas from the adverse effects of industrial development. It is intended that the following standards provide statutory authority for the enforcement of regulations relating to noise, vibration, air quality, odors, heat, glare and lighting, storage and stored materials, liquid and solid waste materials, and dangerous substances.

TDC 63.051 – Noise

All uses and development must comply with the Oregon State Department of Environmental Quality standards relating to noise and the City of Tualatin noise ordinance in, TMC 6-14.

Response: All proposed uses comply with the OSDEQ standards Chapter 340, Division 35, Noise Control Regulations and City noise ordinance TMC 6-14

TDC 63.052 – Vibration

(1) Restrictions. All uses and development must not cause or permit ground vibration into the property of another person that exceeds the limits set forth below in this section.

(a) Ground vibration as measured at the boundary of a residential planning district and an industrial planning district must not exceed 0.01 inches per second (0.00025 meters per second) RMS velocity.

(b) Ground vibration as measured at a common property boundary of any two properties within any industrial planning district must not exceed 0.1 inches per second (0.0025 meters per second) RMS velocity.

Response: The proposed use will be warehouse storage. All proposed uses comply with the OSDEQ standards for vibration standards

TDC 63.053 – Air Quality

(1) Restrictions. All uses and development must comply with the most recent air quality standards adopted by the Oregon Department of Environmental Quality. Plans of construction and operations must comply with the recommendations and regulations of the State Department of Environmental Quality.

Response: The proposed use will be warehouse storage. All proposed uses comply with the OSDEQ standards for air quality standards

TDC 63.054. - Odors.

All uses and development must not emit odors in such quantities as to create a nuisance condition at any point beyond the subject property line of the emitting use.

Response: The proposed use will be warehouse storage. All proposed uses will not emit odors.

TDC 63.055. - Heat and Glare.

(1) All uses and development must conduct all operations producing heat or glare entirely within an enclosed building.

Response: All storage producing heat or glare will entirely enclosed within the structure, expect upon delivery.

TDC 63.056. - Storage and Stored Materials.

(1) All uses and development must store all materials, including wastes, in a manner that will not attract or aid the propagation of insects or rodents, or in any other way create a health or safety hazard.

Response: All storage will be secured and fully contained in a manner not to attract or aid the propagation of insects and rodents.

TDC 63.057. - Liquid or Solid Waste Materials.

All uses and development are prohibited from disposing waste onto the site or into adjacent drainage ditches, creeks or other natural waterways in violation of State of Oregon DEQ standards, Clean Water Services Standards, City Standards, or in a manner that causes harm to wildlife.

Response: All storage will not be disposed at this location.

TDC 63.058. - Dangerous Substances.

All uses and development are prohibited from the storage, transfer, or processing of hazardous, toxic, or radioactive waste

Response: All storage at this location is not considered dangerous substances

CHAPTER 71 – Wetland Protection District

(1) There is hereby established in the City a Wetlands Protection District (WPD), which contains in excess of 300 acres of highly desirable developed and developable land within which there are situated certain natural marshes and wetlands. These natural marshes and wetlands constitute a wildlife habitat and natural resource of important physical, biological, recreational, aesthetic, educational and economic value to the existing and future residents of the City of Tualatin.

(2) It is the express purpose, objective and intent of this chapter to protect the natural marshes and wetlands of the City occurring within the Wetlands Protection District (WPD), as hereinafter identified and defined, while simultaneously permitting and encouraging development and use of the lands adjacent to these areas that lie within the Wetlands Protection District (WPD) to the fullest extent consistent with those primary planning district classifications that are applicable thereto.

(a) Accordingly, the Wetlands Protection District (WPD) is hereby divided into three sub-districts. One shall be designated the Wetlands Protected Area (WPA), which contains the natural marshes and wetlands to be protected by this chapter. The other shall be the Sweek Pond Management Area (SPMA) which contains the Sweek Pond and adjacent area planned for environmental, educational and interpretive land uses as authorized by this chapter of the City of Tualatin Development Code. The third shall be designated the Wetlands Fringe Area (WFA), which contains the balance of the land contained in the Wetlands Protection District

(WPD) and which is now, or which will be, subject of the development and usage to be permitted and encouraged by this chapter.

(b) The Wetlands Protection District (WPD) established hereby is an overriding planning district classification; and all conditions and restrictions of land use established by this chapter of the City of Tualatin Development Code shall apply as indicated herein to all lands and areas within the subdistricts above described, in addition to such restrictions and conditions as may be imposed and established in the primary planning district classifications applicable to such lands and areas by reason of the provisions of other chapters of the City's Development Code.

(c) Where conflicts develop between the provisions of this chapter and the provisions of the primary planning district or other regulations applicable to any specific area, areas or uses subject of this chapter, such conflicts shall be resolved in favor of the purposes, objectives and intent of this chapter above set forth.

(d) Subject to the provisions of TDC [71.090](#)(4) of this chapter, nothing contained in this Code shall be construed to prohibit or otherwise limit the City of Tualatin from acquiring from any owners of property lying within the Wetlands Protected Area (WPA) any form of interest in, or ownership of, all or any portion of such property by any lawful means for any lawful purpose.

(e) In the event that the City Council determines, after appropriate public hearings, that the areas contained within the Wetlands Protected Area (WPA) no longer constitute an important wildlife habitat, then the Council shall appropriately amend the Tualatin Comprehensive Plan and render this chapter to be of no further force or effect. The City shall notify the U.S. Army Corps of Engineers and other federal and state agencies who may have an interest in the Wetlands Protection District (WPD) prior to such action by the City Council.

CHAPTER 71.040 – Certification Required

(1) All applications to the City for permits or approvals to fill or excavate, to construct buildings or other improvements, or to engage in public works upon lands lying within the Wetlands Protection District (WPD) which are otherwise required by City ordinance shall be accompanied by a written certification by a qualified engineer, licensed by the State of Oregon, which certification shall contain the following:

(a) A statement that the activities subject to such application will conform to the environmental standards herein set forth;

(b) Proposed construction methods and schedule; and

(c) The basis upon which the engineer has founded the statements contained in such certification.

Response: Based on review of the submitted materials to Clean Water Services, the referenced project will not significantly impact the existing or potentially sensitive area(s) found near the site. Please see submitted Clean Water Services Provider Letter.

CHAPTER 73A - Site Design Standards

TDC 73A.010. - Site and Building Design Standards Purpose and Objectives.

(1) *Purpose.* The purpose of the site and building design objectives and standards found in TDC [73A](#) through TDC [73G](#) is to promote functional, safe, innovative, and attractive sites and buildings that are compatible with the surrounding environment, including, but not limited to:

(a) The building form, articulation of walls, roof design, materials, and placement of elements such as windows, doors, and identification features; and

(b) The placement, design, and relationship of proposed site elements such as buildings, vehicular parking, circulation areas, bikeways and bike parking, accessways, walkways, buffer areas, and landscaping.

(2) *Objectives.* The objectives of site and building design standards in TDC [73A](#) through TDC [73G](#) are to:

(a) Enhance Tualatin through the creation of attractively designed development and streetscapes;

(b) Encourage originality, flexibility, and innovation in building design;

(c) Create opportunities for, or areas of, visual and aesthetic interest for occupants and visitors to the site;

(d) Provide a composition of building elements which responds to function, land form, identity and image, accessibility, orientation and climatic factors;

(e) Conserve, protect, and restore fish and wildlife habitat areas, and maintain or create visual and physical corridors to adjacent fish and wildlife habitat areas;

(f) Enhance energy efficiency through the use of landscape and architectural elements; and

(g) Minimize disruption of natural site features such as topography, trees, and water features.

Response: The building has been designed to articulate the entry and features through the use of exterior cladding reveals, paint locations, canopies and windows to provide an aesthetically interesting building for occupants and visitors. The building design also provides

natural stormwater features along the streetscape, including plantings to increase biodiversity.

TDC 73A.400. - Industrial Design Standards.

The following standards are minimum requirements for industrial development in all zones:

(1) *Walkways.* Industrial development must provide walkways as follows:

(a) Walkways must be a minimum of five feet in width;

(b) Walkways must be constructed of asphalt, concrete, or a pervious surface such as pavers or grasscrete (not gravel or woody material);

(c) Walkways must meet ADA standards applicable at time of construction or alteration;

(e) Walkways must be provided between the main building entrances and other on-site buildings, accessways, and sidewalks along the public right-of-way;

(f) Walkways through parking areas, drive aisles, and loading areas must be of a different appearance than the adjacent paved vehicular areas; and

(g) Outdoor Recreation Access Routes must be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated.

Response: New concrete sidewalks meeting ADA requirements and connect the building entrance of the building to the public right of way along SW Manhasset Dr. The sidewalks shall be concrete and will transition to the asphalt paving when it crosses the truck loading circulation system.

(2) *Accessways.*

(a) *When Required.* Accessways are required to be constructed when a common wall development is adjacent to any of the following:

Response: The development does not propose any common walls.

(3) *Drive-up Uses.* Drive-up uses must comply with the following:

Response: The development does not propose a drive-up use.

(4) *Safety and Security.* Industrial development must provide safety and security features as follows:

(a) Locate windows and provide lighting in a manner that enables tenants, employees, and police to watch over pedestrian, parking, and loading areas;

(b) Locate windows and interior lighting to enable surveillance of interior activity from the public right-of-way;

(c) Locate, orient, and select exterior lighting to facilitate surveillance of on-site activities from the public right-of-way without shining into public rights-of-way or fish and wildlife habitat areas;

(d) Provide an identification system which clearly locates buildings and their entries for patrons and emergency services; and

(e) Above ground sewer or water pumping stations, pressure reading stations, water reservoirs, electrical substations, and above ground natural gas pumping stations must provide a minimum six foot tall security fence or wall.

Response: The proposed development locates windows for lighting and security toward public streetscapes and parking areas. Exterior lighting is proposed that complies with dark sky initiatives. Building addresses will be prominently displayed. No above ground sewer, water pumping stations, pressure reading stations, water reservoirs, electrical substations, or above ground natural gas pumping stations are proposed as part of this development.

(5) *Service, Delivery, and Screening.* Industrial development must provide service, delivery, and screening features as follows:

(a) Above grade and on-grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners must be screened with sight obscuring fences, walls or landscaping;

(b) Outdoor storage must be screened with a sight obscuring fence, wall, berm or dense evergreen landscaping; and

(c) Above ground pumping stations, pressure reading stations, water reservoirs; electrical substations, and above ground natural gas pumping stations must be screened with sight-obscuring fences or walls and landscaping.

Response: Above grade and on-grade utilities are screened with fences or walls and landscaping.

(6) *Adjacent to Transit.* Industrial development adjacent to transit must comply with the following:

(a) Development on a transit street designated in TDC Chapter 11 (Figure 11-5) must provide either a transit stop pad on-site, or an on-site or public sidewalk connection to a transit stop along the subject property's frontage on the transit street; and

(b)Development abutting major transit stops as designated in TDC Chapter 11 (Figure 11-5) must:

- (i) Locate any portion of a building within 20 feet of the major transit stop or provide a pedestrian plaza at the transit stop;
- (ii) Provide a reasonably direct pedestrian connection between the major transit stop and a building entrance on the site;
- (iii) Provide a transit passenger landing pad accessible to disabled persons;
- (iv) Provide an easement or dedication for a passenger shelter as determined by the City; and
- (v) Provide lighting at the major transit stop.

Response: The project does not abut a major transit stop. The closest access to public transportation mode is the #97 bus stop at SW Tualatin / Sherwood Rd @ Teton Ave. This stop is approximately 1,000 ft. from the project site.

CHAPTER 73B - Landscaping Standards

TDC 73B.020. - Landscape Area Standards Minimum Areas by Use and Zone.

The following are the minimum areas required to be landscaped for each use and zone:

(3) CO, CR, CC, CG, ML and MG zones within the Core Area Parking District—All uses:

Minimum Area Requirement - 10 percent of the total area to be developed

Minimum Area Requirement with dedication for wildlife habitat - 7.5 percent of the total area to be developed

Response: Please see below landscape areas for each building/lot.

BUILDING 1 AREA	= 44,745 SF
TOTAL SITE AREA	= 104,912 SF
LANDSCAPE AREA REQUIRED 10% OF SITE	= 10,491 SF
LANDSCAPE ARE PROPOSED 17.4 % OF SITE	= 18,254 SF

TDC 73B.050. - Additional Minimum Landscaping Requirements for Industrial Uses.

(1) *General.* In addition to requirements in TDC [73B.020](#), industrial uses must comply with the following:

- (a) All areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas, or undisturbed natural areas must be landscaped.
 - (i) This standard does not apply to areas subject to the Hedges Creek Wetlands Mitigation Agreement.
- (b) Minimum 5-foot-wide landscaped area must be located along all building perimeters viewable by the general public from parking lots or the public right-of-way, but the following may be used instead of the 5-foot-wide landscaped area requirement:

(i) Pedestrian amenities such as landscaped plazas and arcades; and
(ii) Areas developed with pavers, bricks, or other surfaces, for exclusive pedestrian use and contain pedestrian amenities, such as benches, tables with umbrellas, children's play areas, shade trees, canopies.

(c) Five-foot-wide landscaped area requirement does not apply to:

- (i) Loading areas,
- (ii) Bicycle parking areas,
- (iii) Pedestrian egress/ingress locations, and
- (iv) Where the distance along a wall between two vehicle or pedestrian access openings (such as entry doors, garage doors, carports and pedestrian corridors) is less than eight feet.

(d) Development that abuts an RL or MP Zone must have landscaping approved through Architectural Review and must provide and perpetually maintain dense, evergreen landscaped buffers between allowed uses and the adjacent RL and MP zones.

Response: All areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas, and undisturbed natural areas are landscaped. The perimeter of the building includes a minimum 5-foot wide landscaped area.

(2) *MP Area—Wetland Buffer.* Wetland buffer areas up to 50 feet in width may be counted toward the required percentage of site landscaping, subject to the following:

Response: No wetland exists on the proposed development site.

TDC 73B.070. - Minimum Landscaping Standards for All Zones.

The following are minimum standards for landscaping for all zones.

(1) Required Landscape Areas:

- Must be designed, constructed, installed, and maintained so that within three years the ground must be covered by living grass or other plant materials.
- The foliage crown of trees cannot be used to meet this requirement.
- A maximum of ten percent of the landscaped area may be covered with un-vegetated areas of bark chips, rock or stone.
- Must be installed in accordance with the provisions of the American National Standards Institute ANSI A300 (Part 1) (Latest Edition).
- Must be controlled by pruning, trimming, or otherwise so that:
 - It will not interfere with designated pedestrian or vehicular access; and
 - It will not constitute a traffic hazard because of reduced visibility.

Response: All landscape area complies with requirements. Please see the Landscape Plan for compliance with the above code requirements.

(2) Fences:

Landscape plans that include fences must integrate any fencing into the plan to guide wild animals toward animal crossings under, over, or around transportation corridors.

Response: The plan does not include fencing

(3) Tree Preservation:

Trees and other plant materials to be retained must be identified on the landscape plan and grading plan.

During construction:

Must provide above and below ground protection for existing trees and plant materials identified to remain; Trees and plant materials identified for preservation must be protected by chain link or other sturdy fencing placed around the tree at the drip line; If it is necessary to fence within the drip line, such fencing must be specified by a qualified arborist; Top soil storage and construction material storage must not be located within the drip line of trees designated to be preserved;

Where site conditions make necessary a grading, building, paving, trenching, boring, digging, or other similar encroachment upon a preserved tree's drip-line area, such grading, paving, trenching, boring, digging, or similar encroachment must only be permitted under the direction of a qualified arborist. Such direction must assure that the health needs of trees within the preserved area can be met; and Tree root ends must not remain exposed. Landscaping under preserved trees must be compatible with the retention and health of the preserved tree.

When it is necessary for a preserved tree to be removed in accordance with TDC [33.110](#) (Tree Removal Permit) the landscaped area surrounding the tree or trees must be maintained and replanted with trees that relate to the present landscape plan, or if there is no landscape plan, then trees that are complementary with existing, landscape materials. Native trees are encouraged.

100 percent of the area preserved under any tree or group of trees (Except for impervious surface areas) retained in the landscape plan must apply directly to the percentage of landscaping required for a development

Response: Existing trees to be removed due to construction. Please see the landscape plan for proposed new trees to be planted.

(4) Grading:

After completion of site grading, top-soil is to be restored to exposed cut and fill areas to provide a suitable base for seeding and planting.

All planting areas must be graded to provide positive drainage.

Soil, water, plant materials, mulch, or other materials must not be allowed to wash across roadways or walkways.

Impervious surface drainage must be directed away from pedestrian walkways, dwelling units, buildings, outdoor private and shared areas and landscape areas except where the landscape area is a water quality facility.

(5) Irrigation

Landscape areas must be irrigated with an automatic underground or drip irrigation system.

(6) Re-vegetation in Un-landscaped Areas:

Vegetation must be replanted in all areas where vegetation has been removed or damaged in areas not affected by the landscaping requirements and that are not to be occupied by structures or other improvements.

Plant materials must be watered at intervals sufficient to ensure survival and growth for a minimum of two growing seasons.

The use of native plant materials is encouraged to reduce irrigation and maintenance demands.

Disturbed soils should be amended to an original or higher level of porosity to regain infiltration and stormwater storage capacity.

Response: All disturbed areas as a result of construction will be vegetated.

TDC 73B.080. - Minimum Standards Trees and Plants.

The following minimum standards apply to the types of landscaping required to be installed for all zones.

(1) Deciduous Shade Trees:

One and on-half inch caliper measured six inches above ground;

Balled and burlapped; bare root trees will be acceptable to plant during their dormant season; Reach a mature height of 30 feet or more; Cast moderate to dense shade in summer; Live over 60 years; Do well in urban environments, tolerate pollution, heat, and resistant to drought; Require little maintenance and mechanically strong; Insect- and disease-resistant; Require little pruning; and Barren of fruit production.

Response: Deciduous Shade trees are specified at 1.5 inch caliper B&B, mature at 30 feet min., are long lived and do well in an urban environment. Please see the Landscape Plan for Tree species, size and specifications.

(2) Deciduous Ornamental Trees:

One and on-half inch caliper measured six inches above ground; balled and burlapped; bare root trees will be acceptable to plant during their dormant season; and Healthy, disease-free, damage-free, well-branched stock, characteristic of the species

Response: Ornamental trees are specified at 1.5 inch caliper B&B. Please see the Landscape Plan for Tree species, size and specifications.

(3) Coniferous Trees:

Five feet in height above ground; Balled and burlapped; bare root trees will be acceptable to plant during their dormant season; and Healthy, disease-free, damage-free, well-branched stock, characteristic of the species.

Response: Evergreen trees are specified at 5 feet tall B&B. Please see the Landscape Plan for Evergreen Tree species, size and specifications.

(4) Evergreen and Deciduous Shrubs:

One to five gallon size; Healthy, disease-free, damage-free, well-branched stock, characteristic of the species; and Side of shrub with best foliage must be oriented to public view.

Response: Please see the Landscape Plan for Shrub species, size and specifications.

(5) Groundcovers:

Fully rooted; Well branched or leafed; Healthy, disease-free, damage-free, well-branched stock, characteristic of the species; and English ivy (*Hedera helix*) is prohibited.

Response: Please see the Landscape Plan for groundcover species, size and specifications. No *Hedera helix* is proposed.

(6) Lawns:

Consist of grasses, including sod, or seeds of acceptable mix within the local landscape industry; 100 percent coverage and weed free; and Healthy, disease-free, damage-free, characteristic of the species.

Response: No lawn is proposed

CHAPTER 73C - Parking Standards

TDC 73C.100. - Off-Street Parking Minimum/Maximum Requirements.

(1) The following are the minimum and maximum requirements for off-street motor vehicle parking in the City, except these standards do not apply in the Core Area Parking District. The Core Area Parking District standards are in TDC [73C.110](#).

Response: The project site is not within the Core Area Parking District. The following off-street parking requirements apply.

(f) Industrial

(f) Industrial				
(i) Manufacturing	1.60 spaces per 1,000 square feet of gross floor area	None	2, or 0.10 spaces per 1,000 gross square feet, whichever is greater	First five spaces or 30 percent, whichever is greater
(ii) Warehousing	0.30 spaces per 1,000 square feet of gross floor area	Zone A: 0.4 spaces per 1,000 square feet of gross floor area Zone B: 0.5 spaces per 1,000 square feet of gross floor area	2, or 0.10 spaces per 1,000 gross square feet, whichever is greater	First five spaces or 30 percent, whichever is greater
(iii) Wholesale establishment	3.00 spaces per 1,000 square feet of gross floor area	None	2, or 0.50 spaces per 1,000 gross square feet, whichever is greater	First five spaces or 30 percent, whichever is greater

(ii) Warehousing

- Minimum Vehicle Parking - 0.30 spaces per 1,000 SF of gross floor area
- Maximum Vehicle Parking - Zone A: 0.4 spaces per 1,000 SF of gross floor area
- Bicycle Parking - 2, or 0.10 spaces per 1,000 GSF, whichever is greater
- % Bicycle Parking/Covered - First 5 spaces or 30%, whichever is greater

Response: Overall the site proposes 100% warehousing.

Building: 44,647 SF

Warehouse (100%)

- $0.30/1000=13$ spaces minimum
- $0.10/1000 = 5$ bike spaces required.
- first 5 bike spaces covered.

Response: Parking spaces provided = 53; Bike parking spaces provided = 5 (covered). The project proposes two short-term bike racks in front of entry and 5 indoor bike parking spaces upon entry.

(2) In addition to the general parking requirements in subsection (1), the following are the minimum number of off-street vanpool and carpool parking for commercial, institutional, and industrial uses.

<u>Number of Required Parking Spaces</u>	<u>Number Vanpool/Carpool spaces</u>
0-10 spaces	1 space
10-25 spaces	2 spaces
26 spaces and greater	1/each 25 spaces

Response:

Building:

**Vanpool/Carpool Required - 2 spaces
 Provided – 2 spaces**

TDC 73C.120. - Off-Street Loading Facilities Minimum Requirements.

(1) The minimum number of off-street loading berths for commercial, industrial, and institutional users as follows:

<u>Industrial</u>	<u># of Berths</u>	<u>Dimensions</u>	<u>Unobstructed Clearance</u>
Less than 5,000 SF	0	0	0
5,000 - 25,000	1	12' x 60'	14'
25,000 - 60,000	2	12' x 60'	14'
60,000 and over	3	12' x 60'	14'

Response:

Building:

**Off-street loading Required 2 berths
 Provided 2 berths**

(2) Loading berths must not use the public right-of-way as part of the required off-street loading area.

Response: The loading areas for the building is designed with adequate maneuvering room to eliminate the use of the right-of-way.

(3) Required loading areas must be screened from public view, public streets, and adjacent properties by means of sight-obscuring landscaping, walls or other means, as approved through the Architectural Review process.

Response: The loading areas for the building are located on either end of the building. These loading areas will be screened from public view using landscaping.

(4) Required loading facilities must be installed prior to final building inspection and must be permanently maintained as a condition of use.

Response: The loading facilities will be installed prior to final building inspection and will be maintained to the highest standard.

(5) The off-street loading facilities must in all cases be on the same lot or parcel as the structure they are intended to serve. In no case must the required off-street loading spaces be part of the area used to satisfy the off-street parking requirements.

Response: The loading areas for the building are located on the lot, with the building it serves.

TDC 73C.130. - Parking Lot Driveway and Walkway Minimum Requirements.

Parking lot driveways and walkways must comply with the following requirements:

(3) *Industrial Use.* Ingress and egress for industrial uses must not be less than the following:

<u>Required Spaces</u>	<u>Min. # Required</u>	<u>Min. Pavement</u>	<u>Min. walkways</u>
1 -250	1	36' for 1st 50' ROW 24' thereafter	No curbs or walkways required

Response: Per the submitted site plan the project meets these requirements.

(6) *Maximum Driveway Widths and Other Requirements.*

(a) Unless otherwise provided in this chapter, maximum driveway widths for Commercial, Industrial, and Institutional uses must not exceed 40 feet.

(b) Driveways must not be constructed within five feet of an adjacent property line, unless the two adjacent property owners elect to provide joint access to their respective properties, as provided by TDC73C.040.

(c) The provisions of subsection (b) do not apply to townhouses and duplexes, which are allowed to construct driveways within five feet of adjacent property lines.

(d) There must be a minimum distance of 40 feet between any two adjacent driveways on a single property unless a lesser distance is approved by the City Manager.

(e) Must comply with the distance requirements for access as provided in TDC 75.

(f) Must comply with vision clearance requirements in TDC 75.

Response: Per the submitted site plan the project meets these requirements.

Parking Lot Landscape

TDC 73C.240. - Industrial Parking Lot Landscaping Requirements.

Industrial uses must comply with the following landscaping requirements for parking lots in all zones.

(1) *General.* Locate landscaping or approved substitute materials in all areas not necessary for vehicular parking and maneuvering.

(2) *Clear Zone*. Clear zone required for the driver at ends of on-site drive aisles and at driveway entrances, vertically between a maximum of 30 inches and a minimum of eight feet as measured from the ground level.

(a) Exception: does not apply to parking structures and underground parking.

(3) *Perimeter*. Minimum five feet in width in all off-street parking and vehicular circulation areas, including loading areas and must comply with the following:

(a) Deciduous trees located not more than 30 feet apart on average as measured on center;

(b) Shrubs or ground cover, planted so as to achieve 90 percent coverage within three years;

(c) Plantings which reach a mature height of 30 inches in three years which provide screening of vehicular headlights year round;

(d) Native trees and shrubs are encouraged; and

(e) Exception: Not required where off-street parking areas on separate lots are adjacent to one another and connected by vehicular access.

Response: Parking and vehicular circulation is edged by a minimum 5'-0" landscape buffer planted with trees, evergreen hedge and groundcovers. A continuous evergreen hedge is proposed that will reach a mature height of 30 inches in three years. Ground cover is proposed and will achieve 90% coverage in three years.

(4) *Landscape Island*. Minimum 25 square feet per parking stall must be improved with landscape island areas and must comply with the following.

(a) May be lower than the surrounding parking surface to allow them to receive stormwater run-off and function as water quality facilities as well as parking lot landscaping;

(b) Must be protected from vehicles by curbs, but the curbs may have spaces to allow drainage into the islands;

(c) Islands must be utilized at aisle ends to protect parked vehicles from moving vehicles and emphasize vehicular circulation patterns;

(d) Landscape separation required for every eight continuous spaces in a row;

(e) Must be planted with one deciduous shade trees for every four parking spaces; Required trees must be evenly dispersed throughout the parking lot;

- (f) Must be planted with groundcover or shrubs;
 - (g) Native plant materials are encouraged;
 - (h) Landscape island areas with trees must be a minimum of five feet in width (from inside of curb to curb);
 - (i) Required plant material in landscape islands must achieve 90 percent coverage within three years; and
 - (j) Exception: Landscape square footage requirements do not apply to parking structures and underground parking.
- (5) *Landscaping Along Driveway Access*. For lots with 12 or more parking spaces:
- (a) Landscape area at least five (5) feet in width on each side of an accessway;
 - (b) Landscape area must extend 30 feet back from the property line; and
 - (c) Exceptions: does not apply to parking structures and underground parking which must be determined through the Architectural Review process.

Response: Landscape islands are provided at every eight parking spaces and at the ends of parking spaces. Each island is planted with a deciduous shade tree and groundcover. Driveway access landscaping is proposed along each side a minimum of 5 feet wide and extends 30 feet into the property. See the Landscape plans for species

CHAPTER 73D - Waste and Recyclables Management Standards

TDC 73D.020. - Design Methods.

An applicant required to provide mixed solid waste and source separated recyclables storage areas must comply with one of following methods:

- (1) The minimum standards method in TDSC [73D.030](#);
- (2) The waste assessment method in TDC [73D.040](#);
- (3) The comprehensive recycling plan method in TDC [73D.050](#); or
- (4) The franchised hauler review method in TDC [73D.060](#).

Response: The minimum standard method has been used to size the solid waste and recycling storage areas.

TDC 73D.030. - Minimum Standards Method.

This method specifies a minimum storage area requirement based on the size and general use category of the new or expanded development. This method is most appropriate when specific use of a new or expanded development is not known. It provides specific dimensional standards for the minimum size of storage areas by general use category.

(1) The size and location of the storage area(s) must be indicated on the site plan. Requirements are based on an assumed storage area height of four feet for mixed solid waste and source separated recyclables. Vertical storage higher than four feet, but no higher than seven feet may be used to accommodate the same volume of storage in a reduced floor space (potential reduction of 43 percent of specific requirements). Where vertical or stacked storage is proposed, submitted plans must include drawings to illustrate the layout of the storage area and dimensions for containers.

(2) The storage area requirement is based on uses. If a building has more than one use and that use occupies 20 percent or less of the gross leasable area (GLA) of the building, the GLA occupied by that use must be counted toward the floor area of the predominant use(s). If a building has more than one use and that use occupies more than 20 percent of the GLA of the building, then the storage area requirement for the whole building must be the sum of the area of each use. Minimum storage area requirements by use is as follows:

(a) Common wall residential five to ten units must provide 50 square feet.

(b) Common wall residential greater than ten units must provide 50 square feet plus an additional five square feet per unit above ten.

(c) Commercial, industrial, and institutional developments must provide a minimum storage area of ten square feet plus:

(i) Office—Four square feet/1,000 square feet gross leasable area (GLA);

(ii) Retail—Ten square feet/1,000 square feet GLA;

(iii) Wholesale/Warehouse/Manufacturing—Six square feet/1,000 square feet GLA;

(iv) Educational and Institutional—Four square feet/1,000 square feet GLA; and

(v) All other uses—Four square feet/1,000 square feet GLA.

(3) Mixed solid waste and source separated recyclables storage areas for multiple tenants on a single site may be combined and shared.

Response: 267 square feet of trash/recycling storage is required for the proposed building

TDC 73D.070. - Location, Design and Access Standards.

The following location, design, and access standards are applicable to all storage areas:

(1) Location Standards.

(a) The storage area for source separated recyclables may be collocated with the storage area for mixed solid waste.

(b) Storage area space requirements can be satisfied with a single location or multiple locations, and can combine both interior and exterior locations.

(c) Exterior storage areas must:

(i) Be located in central and visible locations on the site to enhance security for users;

(ii) Be located in a parking area; and

(iii) Not be located within a required front yard setback or in a yard adjacent to a public or private street.

(2) Design Standards.

(a) The dimensions of the storage area must accommodate containers consistent with current methods of local collection at time of construction or alteration.

(b) Indoor and outdoor storage areas must comply with Oregon Building and Fire Code requirements.

(c) Exterior storage areas must be enclosed by a sight obscuring fence or wall at least six feet in height.

(d) Evergreen plants must be placed around the enclosure walls, excluding the gate or entrance openings for common wall, commercial, and institutional developments.

(e) Gate openings for haulers must be a minimum of ten feet wide and must be capable of being secured in a closed and open position.

(f) Horizontal clearance must be a minimum of ten feet and a vertical clearance of eight feet is required if the storage area is covered.

(g) A separate pedestrian access must also be provided in common wall, commercial, and institutional developments.

(h) Exterior storage areas must have either a concrete or asphalt floor surface.

(i) Storage areas and containers must be clearly labeled to indicate the type of material accepted.

(3) *Access Standards.*

(a) Storage areas must be accessible to users at convenient times of the day, and to hauler personnel on the day and approximate time they are scheduled to provide hauler service.

(b) Storage areas must be designed to be easily accessible to hauler trucks and equipment, considering paving, grade, gate clearance and vehicle access.

(c) Storage areas must be accessible to hauler trucks without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius must be provided to allow hauler trucks to safely exit the site in a forward motion.

(d) Storage areas must be located so that pedestrian and vehicular traffic movement are not obstructed on site or on public streets adjacent to the site.

(e) The following is an exception to the access standard:

(i) Access may be limited for security reasons.

Response: Trash/recycling enclosures will comply with the requirements above. The space will be constructed of 6' concrete tilt up enclosure with chain-link fence and vinyl slats. The gate openings for haulers will be a minimum of ten feet wide and must be capable of being secured in a closed and open position. Pedestrian access will be provided by a 4' wide opening in the front wall of the enclosure.

CHAPTER 74: Public Improvement Requirements

IMPROVEMENTS

Section 74.110 Phasing of Improvements.

The applicant may build the development in phases. If the development is to be phased the applicant shall submit a phasing plan to the City Engineer for approval with the development application. The timing and extent or scope of public improvements and the conditions of development shall be determined by the City Council on subdivision applications and by the City Engineer on other development applications.

Response: The development will not be phased.

Section 74.120 Public Improvements.

(1) Except as specially provided, all public improvements shall be installed at the expense of the applicant. All public improvements installed by the applicant shall be constructed and guaranteed as to workmanship and material as required by the Public Works Construction Code prior to acceptance by the City. No work shall be undertaken on any public improvement until after the construction plans have been approved by the City Engineer and a Public Works Permit issued and the required fees paid.

(2) In accordance with the Tualatin Basin Program for fish and wildlife habitat the City intends to minimize or eliminate the negative effects of public streets by modifying right-of-way widths and street improvements when appropriate. The City Engineer is authorized to modify right-of-way widths and street improvements to address the negative effects on fish and wildlife habitat.

Response: Public improvement along SW Manhasset will be limited to replacing portions of the sidewalk to ensure ADA slopes, surface, width, and to match the surrounding area at the expense of the applicant. The existing 5' width sidewalk is in remarkable condition and will remain.

Section 74.130 Private Improvements.

All private improvements shall be installed at the expense of the applicant. The property owner shall retain maintenance responsibilities over all private improvements.

Response: All private improvements to be installed at expense of the applicant.

Section 74.140 Construction Timing.

(1) All the public improvements required under this chapter shall be completed and accepted by the City prior to the issuance of a Certificate of Occupancy; or, for subdivision and partition applications, in accordance with the requirements of the Subdivision regulations.

(2) All private improvements required under this chapter shall be approved by the City prior to the issuance of a Certificate of Occupancy; or for subdivision and partition applications, in accordance with the requirements of the Subdivision regulations. [Ord. 895-93, 5/24/1993]

Response: All improvements to be done before issuance of Certificate of Occupancy.

RIGHT-OF-WAY

Section 74.210 Minimum Street Right-of-Way Widths.

The width of streets in feet shall not be less than the width required to accommodate a street improvement needed to mitigate the impact of a proposed development. In cases where a street is required to be improved according to the standards of the TDC, the width of the right-of-way shall not be less than the minimums indicated in TDC Chapter 74, Public Improvement Requirements, [Figures 74-2A through 74-2G](#).

(2) For development applications other than subdivisions and partitions, wherever existing or future streets adjacent to property proposed for development are of inadequate right-of-way width, the additional right-of-way necessary to comply with TDC Chapter 74, Public Improvement Requirements, [Figures 74-2A through 74-2G](#) of the Tualatin Community Plan shall be dedicated to the City for use by the public prior to issuance of any building permit for the proposed development. This right-of-way dedication shall be for the full width of the property abutting the roadway and, if required by the City Engineer, additional dedications shall be provided for slope and utility easements if deemed necessary.

Response: We request to retain the curb-tight sidewalk based on existing meeting ADA slope, surface, width, etc matching the surrounding area. The existing street adjacent to the property is an adequate width of the right-of-way. As discussed with the City Engineers, the public improvement along SW Manhasset will be limited to replacing only portions of the sidewalk at the expense of the applicant. The existing 5' width sidewalk is in remarkable condition and will remain.

Section 74.330 Utility Easements.

(1) Utility easements for water, sanitary sewer and storm drainage facilities, telephone, television cable, gas, electric lines and other public utilities shall be granted to the City.

(2) For subdivision and partition applications, the on-site public utility easement dedication area shall be shown to be dedicated to the City on the final subdivision or partition plat prior to approval of the plat by the City; and

(3) For subdivision and partition applications which require off-site public utility easements to serve the proposed development, a utility easement shall be granted to the City prior to approval of the final plat by the City. The City may elect to exercise eminent domain and condemn necessary off-site public utility easements at the applicant's request and expense. The City Council shall determine when condemnation proceedings are to be used.

(4) For development applications other than subdivisions and partitions, and for both on-site and off-site easement areas, a utility easement shall be granted to the City; building permits shall not be issued for the development prior to acceptance of the easement by the City. The City may elect to exercise eminent domain and condemn necessary off-site public utility easements at the applicant's request and expense. The City Council shall determine when condemnation proceedings are to be used.

(5) The width of the public utility easement shall meet the requirements of the Public Works Construction Code. All subdivisions and partitions shall have a 6-foot public utility easement adjacent to the street and a 5-foot public utility easement adjacent to all side and rear lot lines.

Response: No additional public utility easements have been requested by staff nor are proposed.

Section 74.340 Watercourse Easements.

(1) Where a proposed development site is traversed by or adjacent to a watercourse, drainage way, channel or stream, the applicant shall provide a storm water easement, drainage right-of-way, or other means of preservation approved by the City Engineer, conforming substantially with the lines of the watercourse. The City Engineer shall determine the width of the easement, or other means of preservation, required to accommodate all the requirements of the Surface Water Management Ordinance, existing and future storm drainage needs and access for operation and maintenance.

Response: The project site is not traversed by a water way. This criteria does not apply.

Section 74.350 - Maintenance Easement or Lots

A dedicated lot or easement will be required when access to public improvements for operation and maintenance is required, as determined by the City Manager. Access for maintenance vehicles must be constructed of an all-weather driving surface capable of carrying a 50,000-pound vehicle. The width of the lot or easement must be at least 15-feet in order to accommodate City maintenance vehicles. In subdivisions and partitions, the easement or lot must be dedicated to the City on the final plat. In any other development, the easement or lot must be granted to the City and recorded prior to issuance of a building permit.

Response: This does not apply.

TDC 74.420 – Street Improvements

When an applicant proposes to develop land adjacent to an existing or proposed street, including land which has been excluded under TDC [74.220](#), the applicant should be responsible for the improvements to the adjacent existing or proposed street that will bring the improvement of the street into conformance with the Transportation Plan (TDC Chapter 11), TDC [74.425](#) (Street Design Standards), and the City's Public Works Construction Code, subject to the following provisions:

(2)

The required improvements may include the rebuilding or the reconstruction of any existing facilities located within the right-of-way adjacent to the proposed development to bring the facilities into compliance with the Public Works Construction Code.

Response: We request to retain the curb-tight sidewalk based on existing meeting ADA slope, surface, width, etc matching the surrounding area. The existing street adjacent to the property is an adequate width of the right-of-way. As discussed with the City Engineers, the public improvement along SW Manhasset will be limited to replacing only portions of the sidewalk at the expense of the applicant. The existing 5' width sidewalk is in remarkable condition and will remain.

TDC 74.430 Streets, Modifications of Requirements in Cases of Unusual Conditions

(1) When, in the opinion of the City Manager, the construction of street improvements in accordance with TDC [74.420](#) would result in the creation of a hazard, or would be impractical, or would be detrimental to the City, the City Manager may modify the scope of the required improvement to eliminate such hazardous, impractical, or detrimental results. Examples of conditions requiring modifications to improvement requirements include but are not limited to horizontal alignment, vertical alignment, significant stands of trees, fish and wildlife habitat areas, the amount of traffic generated by the proposed development, timing of the development or other conditions creating hazards for pedestrian, bicycle or motor vehicle traffic. The City Manager may determine that, although an improvement may be impractical at the time of development, it will be necessary at some future date. In such cases, a written agreement guaranteeing future performance by the applicant in installing the required improvements must be signed by the applicant and approved by the City.

Response: We request to retain the curb-tight sidewalk based on existing meeting ADA slope, surface, width, etc matching the surrounding area. The existing street adjacent to the property is an adequate width of the right-of-way. As discussed with the City Engineers, the public improvement along SW Manhasset will be limited to replacing only portions of the sidewalk at the expense of the applicant. The existing 5' width sidewalk is in remarkable condition and will remain.

TDC 74.440. - Streets, Traffic Study Required.

(1) The City Manager may require a traffic study to be provided by the applicant and furnished to the City as part of the development approval process as provided by this Code, when the City Manager determines that such a study is necessary in connection with a proposed development project in order to:

(2) The required traffic study must be completed prior to the approval of the development application.

(3) The traffic study must include, at a minimum:

(4) The applicant must implement all or a portion of the improvements called for in the traffic study as determined by the City Manager.

Response: A Traffic Study is included in this application package.

TDC 74.450. - Bikeways and Pedestrian Paths.

Response: Pedestrian paths are currently proposed with this project and site design.

TDC 74.470. - Street Lights.

- (1) Street light poles and luminaries must be installed in accordance with the Public Works Construction Code.
- (2) The applicant must submit a street lighting plan for all interior and exterior streets on the proposed development site prior to issuance of a Public Works Permit.

Response: Street lights are currently proposed with this project and site design. See Photometric/Lighting Plan.

TDC 74.485 Street Trees

- (2) In nonresidential subdivisions and partitions street trees must be planted by the owners of the individual lots as development occurs.
- (3) The Street Tree Ordinance specifies the species of tree which is to be planted and the spacing between trees.

Response: Street trees will be planted behind the existing sidewalk. See landscape plan.

UTILITIES

TDC 74.610. - Water Service.

- (1) Water lines must be installed to serve each property in accordance with the Public Works Construction Code. Water line construction plans must be submitted to the City Manager for review and approval prior to construction.

Response: Please refer to Utility Plan for sanitary sewer service design

TDC 74.620. - Sanitary Sewer Service.

- (1) Sanitary sewer lines must be installed to serve each property in accordance with the Public Works Construction Code. Sanitary sewer construction plans and calculations must be submitted to the City Manager for review and approval prior to construction.

Response: Please refer to Utility Plan for sanitary sewer service design

TDC 74.630. - Storm Drainage System.

- (1) Storm drainage lines must be installed to serve each property in accordance with City standards. Storm drainage construction plans and calculations must be submitted to the City Manager for review and approval prior to construction.
- (2) The storm drainage calculations must confirm that adequate capacity exists to serve the site. The discharge from the development must be analyzed in accordance with the City's Storm and Surface Water Regulations.

A general stormwater agreement will also be put into place between the two properties for some drainage area overlaps. Although all piping and structures for each properties system will be completely contained within the subject property.

Response: Submitted plans and storm drainage calculations conform to the City of Tualatin and Clean Water Services (CWS) current design standards. A general stormwater agreement will also be put into place between the parcels as the storm system provides drainage, treatment and flow control for the entire development area and all the associated parcels.

TDC 74.640. - Grading.

(1) Development sites must be graded to minimize the impact of storm water runoff onto adjacent properties and to allow adjacent properties to drain as they did before the new development.

(2) A development applicant must submit a grading plan showing that all lots in all portions of the development will be served by gravity drainage from the building crawl spaces; and that this development will not affect the drainage on adjacent properties. The City Manager may require the applicant to remove all excess material from the development site.

Response: Submitted grading plans show that all runoff is contained within the development area. No changes to drainage of adjacent sites will occur.

TDC 74.650. - Water Quality, Storm Water Detention and Erosion Control.

The applicant must comply with the water quality, storm water detention and erosion control requirements in the Surface Water Management Ordinance. If required:

(2) On all other development applications, prior to issuance of any building permit, the applicant must arrange to construct a permanent on-site water quality facility and storm water detention facility and submit a design and calculations indicating that the requirements of the Surface Water Management Ordinance will be met and obtain a Stormwater Connection Permit from Clean Water Services.

(3) For on-site private and regional non-residential public facilities, the applicant must submit a stormwater facility agreement, which will include an operation and maintenance plan provided by the City, for the water quality facility for the City's review and approval. The applicant must submit an erosion control plan prior to issuance of a Public Works Permit. No construction or disturbing of the site must occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.

Response: Submitted plans and storm drainage calculations conform to the City of Tualatin and Clean Water Services (CWS) current design standards.

TDC 74.660. - Underground.

(1) All utility lines including, but not limited to, those required for gas, electric, communication, lighting and cable television services and related facilities must be placed underground. Surface-mounted transformers, surface-mounted connection boxes and meter cabinets may be placed above ground. Temporary utility service facilities, high capacity electric and communication feeder lines, and utility transmission lines operating at 50,000 volts or above may be placed above ground. The applicant must make all necessary arrangements with all utility companies to provide the underground services. The City reserves the right to approve the location of all surface-mounted transformers.

(2) Any existing overhead utilities may not be upgraded to serve any proposed development. If existing overhead utilities are not adequate to serve the proposed development, the applicant must, at their own expense, provide an underground system. The applicant must be responsible for obtaining any off-site deeds and/or easements necessary to provide utility service to this site; the deeds and/or easements must be submitted to the City Manager for acceptance by the City prior to issuance of the Public Works Permit.

Response: Utilities will be installed underground.

TDC 74.765. - Street Tree Species and Planting Locations.

All trees, plants or shrubs planted in the right-of-way of the City must conform in species and location and in accordance with the street tree plan and City standards, including Table 74-1. If the City Manager determines that none of the species in City standards, including Table 74-1 is appropriate or finds appropriate a species not listed, the City Manager may substitute an unlisted species.

Response: Street trees conform to the street tree plan and city standards. Street trees will be planted behind the existing sidewalk

CHAPTER 75 - Access Management

TDC 75.020. - Permit for New Driveway Approach.

(1) *Applicability.* A driveway approach permit must be obtained prior to constructing, relocating, reconstructing, enlarging, or altering any driveway approach.

(2) *Exceptions.* A driveway approach permit is not required for:

(a) The construction, relocation, reconstruction, enlargement, or alteration of any driveway approach that requires a state highway access permit; or

(b) The construction, relocation, reconstruction, enlargement or alteration of any driveway approach that is part of the construction of a publicly or privately engineered public improvement project.

(3) *Procedure Type.* A Driveway Approach Permit is processed as a Type II procedure under TDC [32.220](#) (Type II).

(4) *Submittal Requirements.* In addition to the application materials required by TDC [32.140](#) (Application Submittal), the following application materials are also required:

(5) *Criteria.* A Driveway Approach Permit must be granted if:

(a) The proposed driveway approach meets the standards of this Chapter and the Public Works Construction Code;

(b) No site conditions prevent placing the driveway approach in the required location;

(c) The number of driveway approaches onto an arterial are minimized;

(d) The proposed driveway approach, where possible:

(i) Is shared with an adjacent property; or

(ii) Takes access from the lowest classification of street abutting the property;

- (e) The proposed driveway approach meets vision clearance standards;
- (f) The proposed driveway approach does not create traffic hazards and provides for safe turning movements and access;
- (g) The proposed driveway approach does not result in significant adverse impacts to the vicinity;
- (h) The proposed driveway approach minimizes impact to the functionality of adjacent streets and intersections; and
- (i) The proposed driveway approach balances the adverse impacts to residentially zoned property and the functionality of adjacent streets.

Response: The project will require an additional access point from SW Manhasset per the City standards.

TDC 75.040. - Driveway Approach Requirements.

(1) The provision and maintenance of driveway approaches from private property to the public streets as stipulated in this Code are continuing requirements for the use of any structure or parcel of real property in the City of Tualatin. No building or other permit may be issued until scale plans are presented that show how the driveway approach requirement is to be fulfilled. If the owner or occupant of a lot or building changes the use to which the lot or building is put, thereby increasing driveway approach requirements, it is unlawful and a violation of this code to begin or maintain such altered use until the required increase in driveway approach is authorized by the City.

(2) Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same driveway approach when the combined driveway approach of both uses, structures, or parcels of land satisfies their combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use. Copies of said deeds, easements, leases or contracts must be placed on permanent file with the City Recorder.

(3) Joint and Cross Access.

(a) Adjacent commercial uses may be required to provide cross access drive and pedestrian access to allow circulation between sites.

(b) A system of joint use driveways and cross access easements may be required and may incorporate the following:

(i) A continuous service drive or cross access corridor extending the entire length of each block served to provide for driveway separation consistent with the access management classification system and standards;

(ii) A design speed of ten mph and a maximum width of 24 feet to accommodate two-way travel aisles designated to accommodate automobiles, service vehicles, and loading vehicles;

- (iii) Stub-outs and other design features to make it visually obvious that the abutting properties may be tied in to provide cross access via a service drive; and
- (iv) A unified access and circulation system plan for coordinated or shared parking areas.

- (c) Pursuant to this section, property owners may be required to:
- (i) Record an easement with the deed allowing cross access to and from other properties served by the joint use driveways and cross access or service drive;
 - (ii) Record an agreement with the deed that remaining access rights along the roadway will be dedicated to the city and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway;
 - (iii) Record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners; and
 - (iv) If subsection(i) through (iii) above involve access to the state highway system or county road system, ODOT or the county must be contacted and must approve changes to subsection(i) through (iii) above prior to any changes.

(6) Except as provided in TDC [53.100](#), all driveway approach must connect directly with public streets.

(7) To afford safe pedestrian access and egress for properties within the City, a sidewalk must be constructed along all street frontage, prior to use or occupancy of the building or structure proposed for said property. The sidewalks required by this section must be constructed to City standards, except in the case of streets with inadequate right-of-way width or where the final street design and grade have not been established, in which case the sidewalks must be constructed to a design and in a manner approved by the City Manager. Sidewalks approved by the City Manager may include temporary sidewalks and sidewalks constructed on private property; provided, however, that such sidewalks must provide continuity with sidewalks of adjoining commercial developments existing or proposed. When a sidewalk is to adjoin a future street improvement, the sidewalk construction must include construction of the curb and gutter section to grades and alignment established by the City Manager.

Response: We request to retain the curb-tight sidewalk based on existing meeting ADA slope, surface, width, etc matching the surrounding area. The existing street adjacent to the property is an adequate width of the right-of-way. As discussed with the City Engineers, the public improvement along SW Manhasset will be limited to replacing only portions of the sidewalk at the expense of the applicant. The existing 5’ width sidewalk is in remarkable condition and will remain. The project will require an additional access point from SW Manhasset per the City standards.

**TABLE 75-1
Driveway Approach Width**

Industrial	36 feet	Over 250 Parking Spaces = As Required by the City Manager, but not exceeding 40 feet
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(10) *Driveway Approach Separation.* There must be a minimum distance of 40 feet between any two adjacent driveways on a single property unless a lesser distance is approved by the City Manager.

(11) *Distance between Driveways and Intersections.* Except for single-family dwellings, the minimum distance between driveways and intersections must be as provided below. Distances listed must be measured from the stop bar at the intersection.

(a) At the intersection of collector or arterial streets, driveways must be located a minimum of 150 feet from the intersection.

(b) At the intersection of two local streets, driveways must be located a minimum of 30 feet from the intersection.

(c) If the subject property is not of sufficient width to allow for the separation between driveway and intersection as provided, the driveway must be constructed as far from the intersection as possible, while still maintaining the 5-foot setback between the driveway and property line.

(d) When considering a driveway approach permit, the City Manager may approve the location of a driveway closer than 150 feet from the intersection of collector or arterial streets, based on written findings of fact in support of the decision.

Response: The new driveway approach width is designed in accordance to the City Stanards.

(12) *Vision Clearance Area.*

(a) *Local Streets.* A vision clearance area for all local street intersections, local street and driveway intersections, and local street or driveway and railroad intersections must be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are ten feet from the intersection point of the right-of-way lines, as measured along such lines (see Figure 73-2 for illustration).

(b) *Collector Streets.* A vision clearance area for all collector/arterial street intersections, collector/arterial street and local street intersections, and collector/arterial street and railroad intersections must be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 25 feet from the intersection point of the right-of-way lines, as measured along such lines. Where a driveway intersects with a collector/arterial street, the distance measured along the driveway line for the triangular area must be ten feet (see Figure 73-2 for illustration).

(c) *Vertical Height Restriction.* Except for items associated with utilities or publicly owned structures such as poles and signs and existing street trees, no vehicular parking, hedge,

planting, fence, wall structure, or temporary or permanent physical obstruction must be permitted between 30 inches and eight feet above the established height of the curb in the clear vision area (see Figure 73-2 for illustration).

Response: The Traffic Engineer has verified that the project meets the minimum vision clearance areas for the proposed driveways.

Tualatin Municipal Code

CHAPTER 3-02 - Sewer Regulations

TMC 3-2-030 - Material and Manner of Construction

(1) All building sewers, side sewers and connections to the main sewer shall be so constructed as to conform to the requirements of the Oregon State Plumbing Laws and rules and regulations and specifications for sewerage construction of the City.

(2) Old building sewers may be used in connection with new buildings only when they are found, upon examination and test by the City Inspector, to meet all requirements of the City.

Response: Submitted plans show private sanitary sewer service connections for the proposed building. General utility notes specify that connections are to conform to the requirements of the current codes and the requirements of the City of Tualatin and CWS.

TMC 3-2-050 - Industrial Wastes.

(1) The admission into the public sewers of any waters or wastes having

Response: Industrial wastes as described in this code section will not be produced by potential uses and tenants.

TMC 3-2-160 Construction Standards

All sewer line construction and installation of services and equipment shall be in conformance with the City of Tualatin Public Works Construction Code. In addition, whenever a property owner extends a sewer line, the extension shall be carried to the opposite property line or to such other point as determined by the Public Works Director.

Response: Submitted plans show private sanitary sewer service connections for the proposed building. General utility notes specify that connections are to conform to the requirements of the current codes and the requirements of the City of Tualatin and CWS.

CHAPTER 3-03 - Water Service

TMC 3-3-040 Separate Services Required.

Except as authorized by the City Engineer, a separate service and meter to supply regular water service or fire protection services shall be required for each building, residential unit of structure served. For the purposes of this section, trailer parks and multi-family residences of more than four dwelling units shall constitute a single unit unless the City Engineer determines that separate services are required.

Response: Submitted plans show private domestic water services for the proposed building and a private fire service connection.

TMC 3-3-080 - Fire Protection Service.

Fire protection facilities will be allowed under the following conditions:

(1) The owner of a fire protection system shall furnish and install a service meter approved by the City.

(2) When a building has a fire protection service which is separate from the regular water service to the building, an appropriate backflow device, but not less than a double check detector check, approved by the Operations Director, shall be used in place of a service meter. Water supplied through this service shall not be used for any purpose except for suppressing a fire or testing of the fire protection system. If registration of regular water usage is recorded on the detector check meter, the City may require installation of a service meter or removal of the fire protection service.

(3) The service meter shall be owned and maintained by the City and the appropriate backflow device shall be owned and maintained by the owner.

(4) No charge shall be made for water used in the extinguishing of a fire or system testing if the customer reports the use to the City in writing within ten days of the use.

(5) Water may be obtained from fire protection facilities for filling a tank connected with the fire service, but only if written permission is secured from the City in advance and an approved means of measurement is available and utilized. The water used shall be charged at the rates for general use.

(6) Charges for fire protection service shall be as specified in the rates and charges.

Response: Submitted plans show a single private site fire service connection.

TMC 3-3-100 - Meters.

(1) Meters up to and including two inches will be furnished by the City. Meters larger than two inches may be furnished by the customer upon approval of the Operations Director.

(2) All meters, including those for fire protection service, shall be located within the public right-of-way or within an access easement approved by the City Engineer.

Response: Submitted plans show separate private domestic water services for the proposed building and a single private site fire service connection. No changes to the existing building's water service(s) are proposed.

TMC 3-3-110 Construction Standards.

All water line construction and installation of services and equipment shall be in conformance with the City of Tualatin Public Works Construction Code. In addition, whenever a property owner extends a water line, which upon completion, is intended to be dedicated to the City as part of the public water system, said extension shall be carried to the opposite property line or to such other point as determined by the City Engineer. Water line size shall be determined by the

City Engineer in accordance with the City's Development Code or implementing ordinances and the Public Works Construction Code.

Response: Submitted plans show private domestic water services for the proposed building with a single private site fire service connection. General utility notes indicate work is to conform to the new building plumbing and fire codes and to the requirements of the City of Tualatin and Tualatin Valley Fire and Rescue.

TMC 3-3-120 Backflow Prevention Devices and Cross Connections.

The owner of property to which City water is furnished for human consumption shall install in accordance with City standards an appropriate backflow prevention device on the premises where any of the following circumstances exist:

Except as otherwise provided in this subsection, all irrigation systems shall be installed with a double check valve assembly. Irrigation system backflow prevention device assemblies installed before the effective date of this ordinance, which were approved at the time they were installed but are not on the current list of approved device assemblies maintained by the Oregon State Health Division, shall be permitted to remain in service provided they are properly maintained, are commensurate with the degree of hazard, are tested at least annually, and perform satisfactorily. When devices of this type are moved, or require more than minimum maintenance, they shall be replaced by device assemblies which are on the Health Division list of approved device assemblies.

Response: Submitted plans show private domestic water services for the proposed building and a single private site fire service connection. General utility notes indicate approved fire and domestic backflow devices are to be installed at the site right of way.

TMC 3-3-130 Control Valves.

The customer shall install a suitable valve, as close to the meter location as practical, the operation of which will control the entire water supply from the service. The operation by the customer of the curb stop in the meter box is prohibited.

Response: Submitted plans show required valves adjacent to the domestic meters.

CHAPTER 3-05 - Soil Erosion, Surface Water Management, Water Quality Facilities, and Building and Sewers

TMC 3-5-050 Erosion Control Permits

(1) Except as noted in subsection (3) of this section, no person shall cause any change to improved or unimproved real property that causes, will cause, or is likely to cause a temporary or permanent increase in the rate of soil erosion from the site without first obtaining a permit from the City and paying prescribed fees. Such changes to land shall include, but are not limited to, grading, excavating, filling, working of land, or stripping of soil or vegetation from land.

(2) No construction, land development, grading, excavation, fill, or the clearing of land is allowed until the City has issued an Erosion Control Permit covering such work, or the City has determined that no such permit is required. No public agency or body shall undertake any public works project without first obtaining from the City an Erosion Control Permit covering such work, or receiving a determination from the City that none is required.

(3) No Erosion Control Permit from City is required for the following:

Response: Erosion and sediment control plans and permit applications conforming to the requirements of the City of Tualatin, CWS, and Oregon Department of Environmental Quality will be provided with the construction permit submittal documents.

TMC 3-5-060 Permit Process

(1) *Applications for an Erosion Control Permit.* Application for an Erosion Control Permit shall include an Erosion Control Plan which contains methods and interim facilities to be constructed or used concurrently and to be operated during construction to control erosion. The plan shall include either:

Response: Erosion and sediment control plans and permit applications conforming to the requirements of the City of Tualatin, CWS, and Oregon Department of Environmental Quality will be provided with the construction permit submittal documents.

TMC 3-5-110 - Air Pollution—Dust, Fumes, Smoke and Odors.

(1) Dust shall be minimized to the extent practicable, utilizing all measures necessary, including, but not limited to:

Response: BMPs and construction means and methods will be provided to prevent air pollution from leaving the site.

TMC 3-5-120 - Maintaining Water Quality.

(4) All sediment-laden water from construction operations shall be routed through stilling basins, filtered or otherwise treated to reduce the sediment load.

Response: Erosion control measures and construction means and methods will be in place to prevent water contamination onsite or leaving the site.

TMC 3-5-140 - Control of Noise Levels.

Construction noise shall be minimized by the use of proper engine mufflers, protective sound reducing enclosures, and other sound barriers. Construction activities producing excessive noise that cannot be reduced by mechanical means shall be restricted to locations where their sound impact is reduced to a minimum at the edge of work area.

Response: The contractor will be required to have methods in place to reduce noise pollution to meet standards during construction.

TMC 3-5-150 - Natural Vegetation.

(1) As far as is practicable, the natural vegetation shall be protected and left in place. Work areas shall be carefully located and marked to reduce potential damage. Trees shall not be used as anchors for stabilizing working equipment.

(2) During clearing operations, trees shall not be permitted to fall outside the work area. In areas designated for selective cutting or clearing, care in falling and removing trees and brush shall be taken to avoid injuring trees and shrubs to be left in place.

(3) Where natural vegetation has been removed, or the original land contours disturbed, the site shall be revegetated, and the vegetation established, as soon as practicable after construction has commenced, except where construction of sewers will be followed by paving.

Response: All areas of disturbance will be re-vegetated per the Landscape plan.

TMC 3-5-180 - Contaminated Soils.

If the construction process reveals soils contaminated with hazardous materials or chemicals the contractor shall stop work immediately, ensure no contaminated material is hauled from the site, remove the contractor's work force from the immediate area of the contaminated area, leaving all machinery and equipment, and secure the area from access by the public until such time as a mitigation team has relieved them of that responsibility. Contractor shall notify the City and an emergency response team (911) of the situation upon its discovery. No employees who may have come in contact with the contaminated material shall be allowed to leave the site until such time as the emergency response team releases them.

Response: No contaminated soils are known to be on site, but if encountered the contractor will export them off site for treatment at one of the approved treatment facilities.

TMC 3-5-190 - Soil Erosion Control Matrix and Methods.

(1) *Establishing Primary Access Point.* As one of the initial activities at the start of any earthwork, a gravel driveway shall be established. The driveway shall meet the following:

(2) *Additional Access.* Construction and delivery vehicles and equipment shall use the primary access point (the gravel driveway). Vehicles and equipment shall not access the property from any other point (shall not "hop the curb"), unless required due to the physical layout of the parcel, and not simply due to convenience.

Response: A construction entrance is proposed and will be shown on the permit plans.

If is necessary to access the site at other than the primary access point:

(a) A second temporary or permanent crushed rock access point shall be established if there is an ongoing need to access the property at a second point. Large or difficult properties may require more than one permanent access point

(b) If there is only a one time or infrequent need to access the property at other than an established access point, then the vehicle or equipment may "hop the curb". Each time the vehicle or equipment reenters the street any mud, dirt, or other such debris that falls or is deposited on the street shall be immediately cleaned using hand labor or mechanical means. *Immediate* means within five minutes of the mud, dirt, or debris being deposited on the street. Mud, dirt and debris shall not be allowed to accumulate to be cleaned up at the end of the day or "later". Under no circumstance shall mud, dirt or debris be washed into the storm and surface water system.

(c) Under no circumstance shall vehicles or equipment enter a property adjacent to a stream, water course, or other storm and surface water facility, or a wetland such that it would not be possible to avoid contaminating or depositing mud, dirt, or debris into the water or wetland.

(3) *Silt Barriers.* Silt barriers shall be installed concurrent with grading, and will be inspected prior to "footing" inspection. They shall be installed downhill of all graded, filled and stripped areas, and across the path of concentrated flows. They shall be designed and installed to capture erosion on site. Silt barriers can be:

(6) *Protection Measure Removal*. The erosion control facilities and techniques shall remain in place and be maintained in good condition until all disturbed soil areas are permanently stabilized by installation of landscaping, seeding, mulching or otherwise covered and protected from erosion.

(7) *Miscellaneous*. Filter systems may not be used on catch basins in public streets as a part of single-family erosion control plans. Plastic sheeting should generally not be used as an erosion control measure in single family house construction. Plastic sheeting may be used to protect small, highly erodible areas, or temporary stock-piles of material. If used, the path of concentrated flow from the plastic must be protected.

Response: Erosion and sediment control plans and permit applications conforming to the requirements of the City of Tualatin, CWS, and Oregon Department of Environmental Quality will be provided with the construction permit submittal documents.

ADDITIONAL SURFACE WATER MANAGEMENT STANDARDS

TMC 3-5-200 - Downstream Protection Requirement.

Each new development is responsible for mitigating the impacts of that development upon the public storm water quantity system. The development may satisfy this requirement through the use of any of the following techniques, subject to the limitations and requirements in TMC [3-5-210](#):

- (1) Construction of permanent on-site stormwater quantity detention facilities designed in accordance with this title;
- (2) Enlargement of the downstream conveyance system in accordance with this title and the Public Works Construction Code;
- (3) The payment of a Storm and Surface Water Management System Development Charge, which includes a water quantity component designated to meet these requirements.

Response: The submitted plans and drainage calculations provide on site flow control (detention) as mandated in the City of Tualatin and CWS standards.

TMC 3-5-210 - Review of Downstream System.

For new development other than the construction of a single-family house or duplex, plans shall document review by the design engineer of the downstream capacity of any existing storm drainage facilities impacted by the proposed development. That review shall extend downstream to a point where the impacts to the water surface elevation from the development will be insignificant, or to a point where the conveyance system has adequate capacity, as determined by the City Engineer.

To determine the point at which the downstream impacts are insignificant or the drainage system has adequate capacity, the design engineer shall submit an analysis using the following guidelines:

Response: The submitted plans and drainage calculations provide on-site flow control (detention) as mandated in the City of Tualatin and CWS standards, including downstream analysis.

TMC 3-5-220 - Criteria for Requiring On-Site Detention to be Constructed.

The City shall determine whether the onsite facility shall be constructed. If the onsite facility is constructed, the development shall be eligible for a credit against Storm and Surface Water System Development Charges, as provided in City ordinance.

On-site facilities shall be constructed when any of the following conditions exist:

Response: The submitted plans and drainage calculations provide on-site flow control (detention) as mandated in the City of Tualatin and CWS standards.

TMC 3-5-230 - On-Site Detention Design Criteria.

(1) Unless designed to meet the requirements of an identified downstream deficiency as defined in TMC 3-5.210, stormwater quantity onsite detention facilities shall be designed to capture run-off so the run-off rates from the site after development do not exceed predevelopment conditions, based upon a 25-year, 24-hour return storm.

(2) When designed to meet the requirements of an identified downstream deficiency as defined in TMC 3-5.210, stormwater quantity on-site detention facilities shall be designed such that the peak runoff rates will not exceed predevelopment rates for the two through 100-year storms, as required by the determined downstream deficiency.

(3) Construction of on-site detention shall not be allowed as an option if such a detention facility would have an adverse effect upon receiving waters in the basin or sub basin in the event of flooding, or would increase the likelihood or severity of flooding problems downstream of the site.

Response: The submitted plans and drainage calculations provide on-site flow control (detention) as mandated in the City of Tualatin and CWS standards.

TMC 3-5-240 - On-Site Detention Design Method.

(1) The procedure for determining the detention quantities is set forth in Section 4.4 Retention/Detention Facility Analysis and Design, King County, Washington, Surface Water Design Manual, January, 1990, except subchapters 4.4.5 Tanks, 4.4.6 Vaults and Figure 4.4.4G Permanent Surface Water Control Pond Sign. This reference shall be used for procedure only. The design criteria shall be as noted herein. Engineers desiring to utilize a procedure other than that set forth herein shall obtain City approval prior to submitting calculations utilizing the proposed procedure.

(3) All developments other than single family and duplex, whether residential, multi-family, commercial, industrial, or other uses, the sizing of stormwater quantity detention facilities shall be based on the impervious area to be created by the development, including structures and all roads and impervious areas which are assessed a surface water management monthly fee under Unified Sewerage Agency rules. Impervious surfaces shall be determined based upon building permits, construction plans, site visits or other appropriate methods deemed reliable by City.

Response: The submitted plans and drainage calculations provide on-site flow control (detention) as mandated in the City of Tualatin and CWS standards.

TMC 3-5-280 - Placement of Water Quality Facilities.

Title III specifies that certain properties shall install water quality facilities for the purpose of removing phosphorous. No such water quality facilities shall be constructed within the defined area of existing or created wetlands unless a mitigation action, approved by the City, is constructed to replace the area used for the water quality facility.

Response: The submitted plans and drainage calculations provide on-site storm runoff treatment as mandated in the City of Tualatin and CWS standards.

PERMANENT ON-SITE WATER QUALITY FACILITIES

TMC 3-5-350 - Phosphorous Removal Standard.

The stormwater quality control facilities shall be designed to remove 65 percent of the phosphorous from the runoff from 100 percent of the newly constructed impervious surfaces. Impervious surfaces shall include pavement, buildings, public and private roadways, and all other surfaces with similar runoff characteristics.

Response: The submitted plans and drainage calculations provide on-site storm runoff treatment as mandated in the City of Tualatin and CWS standards.

TMC 3-5-360 - Design Storm.

The stormwater quality control facilities shall be designed to meet the removal efficiency of TMC [3-5-350](#) for a mean summertime storm event totaling 0.36 inches of precipitation falling in four hours with an average return period of 96 hours.

Response: The submitted plans and drainage calculations provide on-site storm runoff treatment as mandated in the City of Tualatin and CWS standards.

TMC 3-5-370 - Design Requirements.

TMC 3-5-430 - Placement of Water Quality Facilities.

No water quality facilities shall be constructed within the defined area of existing or created wetlands unless a mitigation action is approved by the City, and is constructed to replace the area used for water quality.

Response: The submitted plans and drainage calculations provide on-site storm runoff treatment as mandated in the City of Tualatin and CWS standards.

MC 3-5-440 - General Provisions.

(1) The specifications contained in this Title III, together with the State of Oregon Uniform Plumbing Code and all other applicable requirements of federal, state and local law, shall govern the installation of all building and side sewers.

Response: Submitted plans show separate private sanitary sewer service connections for the building. General utility notes specify that connections are to conform to the requirements of the new building and plumbing codes and the requirements of the City of Tualatin and CWS.

TMC 3-5-450 - Building Sewers.

(1) *Materials.* Pipes for building sewers shall be one of the following types or approved equal:

(2) *Joints.* The ends of pipes, collars, gaskets and retaining clamps shall be kept clean and free of foreign material when pipe is laid. All joints shall be made watertight and gastight.

(3) *Cleanouts.* All changes in direction shall be made with long radius bends, 45 degrees, 22½ degrees, tee or wye branches with straight-through opening plugged for a cleanout. Cleanouts shall be installed in the building sewer between the building outlet and the side sewer when the distance is greater than 100 feet. All bends within the sewer shall not exceed 135 degrees without

an additional cleanout. Cleanouts shall be plugged to prevent entrance of dirt, roots, or ground water. Plugs shall be sealed with rubber gaskets and secured against back pressure.

(4) *Size.* The minimum size of any building sewer shall be determined on the basis of the total number of fixture units drained by such sewer in accordance with Table 4-3 of the Oregon State Plumbing Code.

(5) *Installation.*

(6) *Excavation.* All excavations required for the installation of a building sewer shall be open trench work unless otherwise approved by the City.

(7) *Alignment.* All pipe shall be true to grade with the bells up grade. Pipe shall be carefully centered prior to jointing. The bottom of the trench shall be smooth and free from rocks which may injure the pipe. The pipe shall be laid on four inches of 3/4-inch minus crushed rock throughout its entire length, and any such piping laid in fill shall be laid on a bed of approved materials and shall be adequately supported to the satisfaction of the City.

(8) *Grade.* All sewers shall be laid on a grade of not less than 1/4 inch per foot for a four-inch pipe and 3/16-inch per foot for a six-inch pipe.

(9) *Backfill.* If common material is available which is free from rocks one inch in diameter, it may be used to backfill the remainder of the ditch. If suitable material is not available, 3/4-inch minus granular material shall be used to backfill the trench to a point six inches above the top of the pipe. The remainder of the ditch may then be backfilled with common material.

A modified method of backfilling shall be used where the house service laterals cross lawn, shrub, or planting areas between the curb and the property line. In this area, backfill shall be modified so that a minimum of 18 inches and a maximum of 36 inches of compacted top soil shall be provided in the upper portions of the trench. The lower portions of the trench shall be backfilled as described above.

(10) *Cover.* Cover on private property shall be not less than 12 inches from top of pipe to finished grade.

(11) *Sewer and Water Lines.* Building sewers or drainage piping of materials which are not approved for use within a building shall not be laid in the same trench with water service pipes unless both of the following requirements are met.

(12) *Testing.* All building sewers shall be tested for leakage 15 minutes prior to the City inspection and prior to backfilling the trench. Sewers shall be tested by plugging the building sewer at its point of connection with the side sewer and completely filling the building sewer with water from the lowest point to the highest point thereof. The building sewer shall be watertight and have no visible leakage.

A tee shall be installed at the property line at the expense of the installer. After the test is complete, a plug shall be inserted in the tee. After a satisfactory test has been performed, the trench shall be backfilled.

Response: Submitted plans show separate private sanitary sewer service connections for the building. General utility notes specify that connections are to conform to the requirements of the new building and plumbing codes and the requirements of the City of Tualatin and CWS.