PRELIMINARY UTILITY REPORT

WYATT APARTMENTS

SITE PLAN & DESIGN REVIEW SUBMITTAL

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PROJECT DESCRIPTION

This report presents the preliminary drainage, utility and road design for the Wyatt Apartments Site Plan & Design Review submittal. The project is in the Madison Avenue District zone and is located at the NE corner of Madison Avenue & Wyatt Way. The apartments will be situated in two buildings with 36 units in the front/southern building and 6 townhouses in the rear/northern building for a total of 42 residential units.

The on-site access drive and parking court will be pervious pavement. Stormwater runoff from the new access drive, parking and rooftops will be collected and conveyed to the existing storm drainage system in Madison Avenue. The southern building will span most of the property frontage and the two way access from Wyatt Way will pass through the building (see Figure 1). There will be two floors above the building pass through entrance.

EXISTING CONDITIONS

The project site consists of one backwards L-shaped parcel fronting Madison Avenue to the west and Wyatt Way to the south on Bainbridge Island, Washington (see Figure 1). The project area is approximately 1.3-acres, with tax parcel ID 262502-2-129-2007 which is in Section 26, Township 25 North, Range 2 East.

The site is currently undeveloped and vegetated with pasture grass and interspersed with native shrubs and trees. The land slopes evenly at about a 5% grade from northeast to southwest. Historically several single family residences existed on the property but were demolished in the early 2000's.

Soils on-site mapped by the USDA Natural Resources Conservation Service are predominantly Ragnar fine sandy loam with a small amount of Kapowsin gravelly ashy loam along the eastern property line.

STORM DRAINAGE

Upstream System

A small amount of land drains uncontrolled toward the property from the Bainbridge Island Park District's Tot Lot located north of the project site. The Tot Lot is treed with play equipment and lawn beneath the tree canopy.

Existing System

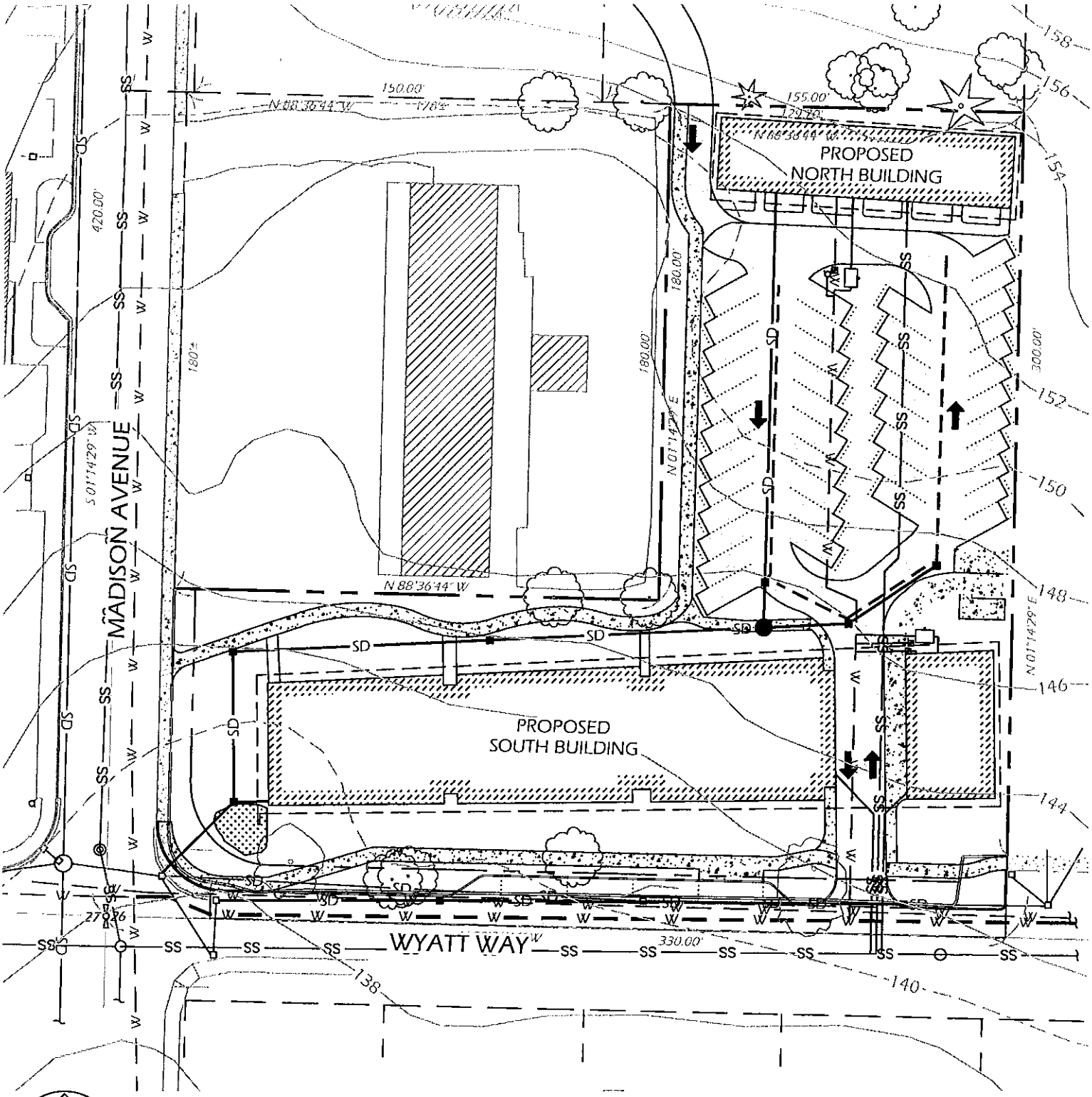
The site sheet flows surface water runoff in a dispersed manner across the site toward Wyatt Way and does not have an existing conveyance system on-site. The existing storm drainage system in Wyatt Way picks up surface water runoff from the site.

Downstream System

Existing drainage structures in Wyatt Way collect runoff from the site as well as Wyatt Way roadway runoff. The system collects runoff along the north side of Wyatt Way and connects to the storm drainage system in Madison Avenue. The drainage system conveys runoff from the east to the west side of Madison Avenue in a 15-inch pipe. The 15-inch pipe then discharges into a manhole with a 36-inch outlet pipe. This system then conveys runoff south along the western edge of Madison Avenue where it eventually transitions to 42-inch diameter prior to discharge near the shoreline of Eagle Harbor.

Proposed System

The proposed apartment complex will remain private and the new stormwater collection system serving the project will tie into the public storm drainage system near the intersection of Wyatt Way & Madison Avenue. A storm drainage collection system is proposed for the new hard surface areas, consisting of pervious pavement, roof downspout and footing drain collection systems and surface water collection. Under drains beneath the pervious pavement will convey collected water to a treatment filter to provide water quality treatment.



TOPOGRAPHY BASED ON KITSAP COUNTY PUD
AERIAL LIDAR 2-FT CONTOURS, NOT A SURVEY.
DATUM: NAVD88
SCALE: 1" = 50'

0 25 50 100

FIGURE 1
PROPOSED SITE
WYATT APARTMENTS

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Threshold Determination

The proposed project is considered New Development since there is less than 35% existing impervious surfaces on the property. The proposed ±18,500-square feet (sf) rooftop, ±15,000-sf pervious pavement and walkways will create greater than 5,000-sf of new hard surfaces and, based on BIMC 15.20.060, the project is required to meet Minimum Requirements No.'s 1 - 9. Table 1 outlines how the design meets each Minimum Requirement.

Table 1 – Minimum Requirement Summary

Minimum Requirement	
1. Preparation of Stormwater Site Plan	See Utility Plan and this report. A detailed stormwater drainage plan will be developed during construction design documents.
2. Construction Stormwater Pollution Prevention Plan	A detailed TESC Plan will be developed during construction design documents.
3. Source Control of Pollution	Not applicable.
4. Preservation of Natural Outfalls	All stormwater will continue to discharge in the natural direction from the site, toward Wyatt Way but in a more controlled manner.
5. On-site Stormwater Management	See Table 2 for BMP selection.
6. Runoff Treatment	Stormwater from the access drive and parking stalls will receive water quality treatment by infiltrating into the pervious pavement and passing through a water quality treatment filter prior to discharge from the site.
7. Flow Control	Stormwater discharges to a manmade conveyance system to Eagle Harbor; therefore, no flow control is required.
8. Wetlands Protection	Not applicable.
9. Operation & Maintenance	Complete O&M Manual will be developed during construction permit submittal.

Stormwater is proposed to be kept on-site to the extent feasible through the use of soil amendment of all landscaping areas and the installation of pervious pavement.

The site is flow control exempt due to the existing storm drain extending down Madison Avenue in a manmade conveyance system to the ordinary high water line of Puget Sound.

For Minimum Requirement No. 7 Flow Control exemption, the 2014 Stormwater Management Manual for Western Washington (SWMMWW) requires the manmade conveyance system to have sufficient hydraulic capacity to convey discharges from full build-out of the project site and the existing condition from non-project areas in the drainage basin.

A capacity analysis of the existing storm drain system in Madison Avenue by Browne Engineering, Inc. (BEI) titled Wyatt Way/Madison Avenue/Bjune Drive Storm Drain Capacity Analysis, dated January 15, 2008 assumed fully developed conditions, with the maximum impervious area allowed per zone, of the approximate 107-acre drainage basin. This zone was assumed to have 80% impervious area and no on-site detention. The letter by BEI indicated that downstream of Wyatt Way the existing storm drain system in Madison Avenue has adequate capacity to convey runoff from a 25-year storm event and not overtop the catch basin rims, for full build out of the drainage basin with no on-site flow rate mitigation (flow control). The analysis was performed for a project located on this same property, but was not constructed.

BIMC 15.20.060.B indicates that direct or indirect discharges through a stormwater drainage system to Puget Sound still need to evaluate on-site stormwater management BMP's per List #2. Table 2 presents an

amended List #2 from Volume I of the 2014 SWMMWW as well as BMP applicability and BMP selection reasoning.

Table 2 - List #2 from Volume I 2014 SWMMWW, as amended for clarity

Surface Type & On-Site BMP*	BMP Selection Reasoning
Lawn & Landscaped Areas:	
1. BMP T5.13 – Soil Amendment	Selected. Landscaping will have soils amended.
Rooftop Areas:	
1. BMP T5.30 - Full Dispersion or BMP T5.10A - Full Infiltration	Not selected. Site design does not allow adequate native vegetation retention. Not selected. Site does not have suitable soils for full infiltration.
2. Bioretention with minimum surface area below overflow of 5% of area directed to facility.	Site does not have suitable soils for infiltration but the southern building will have downspouts conveyed to a water feature at the SW corner that will act as a rain garden/bioretention cell with an under drain. The site does not have adequate space to accommodate a larger one.
3. BMP T5.10B - Downspout Dispersion	Not applicable.
4. BMP T5.10C - Perforated Stub-Out Connection	Not applicable.
Other Hard Surfaces:	
1. BMP T5.30 - Full Dispersion	Not selected. Site design does not allow adequate native vegetation retention.
2. BMP T5.15 - Permeable Pavement	Selected. Site does not have suitable native soils for infiltration but is proposing to implement pervious pavement with an under drain system to collect excess stormwater.
3. Bioretention with minimum surface area below overflow of 5% of area directed to facility.	Not applicable.
4. BMP T5.12 - Sheet Flow Dispersion	Not applicable

*As indicated by the 2014 SWMMWW, BMP's are considered in the order listed for each type of surface. The first feasible BMP shall be selected and no other On-Site Stormwater Management BMP's are necessary for those surfaces.

Pervious pavement will be utilized for on-site BMP's as well as peak flow attenuation. An under drain system will collect excess stormwater under the pervious pavement that does not infiltrate into the native soil. Water quality treatment for the collected stormwater and any surface water runoff from the parking court will be provided by a water quality treatment filter.

ONSITE UTILITIES

WATER

Existing

A 12-inch water main is located in Madison Avenue near the eastern edge of the road. The main is on the high pressure zone of the Winslow Water System. There is a 6-inch AC water main parallel to it that is abandoned.

A 4-inch water main is located in Wyatt Way near the northern edge of the road. The main is connected to an 8-inch water main located to the east but does not connect to the existing 12-inch main in Madison Avenue.

Three water meters are located along Wyatt Way that provided water service to the houses that were previously on the site but are now demolished.

A fire hydrant is located at the northwest corner of the intersection of Madison Avenue and Wyatt Way. Another fire hydrant is located along Wyatt Way approximately 175-ft east of the site.

Proposed

The project proposes to install a new 8-inch water main along the Wyatt Way frontage. The new water main will connect to the 12-inch main in Madison Avenue and extend approximately 150-ft past the property frontage to connect to the existing 8-inch water main approximately at the midpoint of the Island Homestead Apartments.

A new 8-inch water main will extend into the project to a new fire hydrant within the landscape island of the parking court. Each building will be protected with fire sprinklers that will be served off the new water main. Design will be completed by a fire suppression engineer.

Two water meters, one for each building, will provide water service to the apartment units.

SANITARY SEWER

Existing

8-inch sewer mains are located in both Madison Avenue and Wyatt Way.

Proposed

Each building will be provided with a building sewer stub. No sewer main extensions are proposed.

OTHER SITE UTILITIES

Aerial power is located on the southern edge of Wyatt Way. Power, telephone and cable will be designed by others.

SITE ACCESS

Existing

The property frontage along Wyatt Way has multiple pull out/access points where driveways were located for the existing residences. The pull outs currently are most commonly used for overflow parking for businesses across the street.

A parcel to the northwest of this subject property, which is in common ownership, has a looped gravel driveway off of Madison Avenue which provides access to the Tot Lot to the north. In a previous development proposal, the access easement was revised to loop out through this subject property to Wyatt Way rather than loop back to Madison Avenue.

Proposed

A two-way site access is proposed off Wyatt Way. The access will pass under the proposed building which will maintain a minimum of 14.5' vertical clearance. Internally the project will have a one-way looped parking court.

The Tot Lot will have a one-way entry into the subject property near the northwest corner and tie into the parking court for exit onto Wyatt Way. This one way access from the north will also accommodate emergency vehicles.

FRONTAGE IMPROVEMENTS

Existing

There are currently no frontage improvements on Wyatt Way. Madison Avenue frontage has been improved with a sidewalk along the road.

Existing right-of-way width along Wyatt Way is to the edge of existing public use, which is approximately 11-ft from the quarter section line, for a total width of approximately 41-ft. Along Madison Avenue property frontage, the existing right-of-way width is 25-ft from the section line, with a total width of 55-ft.

Proposed

Madison Avenue is classified as a secondary urban arterial roadway which has a required right-of-way width of 60-ft. 5-ft of property frontage will be dedicated along Madison Avenue for a total width of 60-ft.

Wyatt Way is classified as an urban collector which has a required right-of-way width of 50-ft. Property frontage will be dedicated along Wyatt Way for a total of 50-ft right-of-way width.

To accommodate a future roundabout at the intersection of Madison Avenue and Wyatt Way, a portion of the SW corner of the property will be dedicated as right-of-way. The corner will have a 30-ft radius arc tangent to the new Madison Avenue and Wyatt Way property lines.

Proposed frontage improvements along Wyatt Way consist of repaving the north driving lane, 4 on-street parallel parking stalls, concrete curb & gutter, a planting strip and a 5-foot wide sidewalk.

The water main and storm drain installations along Wyatt Way as well as lane widening will necessitate repaving of the north lane. Replacing impervious surfaces for utility construction with in-kind materials are not considered new or replaced hard surfaces, therefore are not subject to stormwater mitigation.

The lane widening and parallel parking stalls will create approximately 955-sf of new hard surfaces within the right-of-way.

EROSION CONTROL

A detailed erosion and sediment control plan will be developed and submitted for plat utility permit.