

# PORT OF SEATTLE DRAFT SITE DEVELOPMENT ANALYSIS FOR The 17 Acre Sites

REPORT PREPARED BY INNOVA ARCHITECTS INC.

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#### 1. Executive Summary

#### Introduction

This report is a summary of our proposed development options for the 17 Acre sites owned by the Port of Seattle, and located in the City of Des Moines. The site is located on 18th Avenue South, north of the intersection with South 216th Street (see the Site Vicinity Map herein). The purpose of this report is to provide the Port with the information needed to solicit and negotiate contracts with private developers, in order to lease the land for development purposes. Concept plans showing three development options for each of the sites are provided and are as follows:

- Distribution Center
- Manufacturing Facilities
- Small Business Incubator
- Office Building (Multi-story)

Each of the four options list above considers site layout based on the partial acquisition of the adjacent WSDOT property that is located to the east of the site. No matter which site plan option is used, we expect that this site will be developed to take advantage of the need for nearby air cargo facilities. This site will have access to Air Cargo Road, located to the north of the site (via 28th Avenue South transitioning into 24th Avenue South) upon the completion of connection 28th Avenue South from South 200th Street to South208th Street. Site costs run higher than some other sites due to the costs or earthwork, walls and storm detention facilities, but we believe the rental structure for this product in this location with close proximity to the airport will justify the added costs.

Each of the options presented will result in a different building coverage on the site with different development costs and incomes structure related to the developed property and different potential for creating jobs. The civil site design is much the same for all options, so we only provide a single cost estimate for the site development, regardless of which design option is used. However, cost data is provided for all the options related to the cost of the buildings placed on the site.

This work is being done in collaboration with Property Counselors, hired by the Port of Seattle. The scope of the Property Counselors' work is to perform market analysis for each of our proposed development options. They will then define lease rate structures for each of the development options in order to compile a pro-forma for each option. The work of Property Councilors combine with our work will provide the Port of Seattle with the necessary information to successfully market and lease the subject property, and should put the Port of Seattle in an informed position when negotiating contracts with private developers.

Each site and building layout option includes: a site plan, marketing renderings of the proposed buildings, and civil engineering concept plan, and the detailed report. Our work also includes construction and development cost information provided to the Port to aid in assessing the value of the development and thereby the value of the land to be leased to developers.

#### **Background**

INNOVA Architects was hired by the Port of Seattle indirectly through their contract with Commercial Real Estate Solutions LLC. That contract issued to INNOVA is Service Directive 20. INNOVA is well qualified to perform this scope of work because INNOVA's Principals and staff have been engaged in the feasibility analysis, as well as complete engineering and architectural design of similar industrial properties within the Puget Sound region for the last 26 years. We have designed over two million square feet of industrial facility in the Puget Sound region over the last 24 months alone, and during the last 26 years have designed more than 50 million square feet of industrial facilities.

#### **Disclaimer to Developers**

Developers may use the information in this report to better understand the information available relating to this site. We have attempted to formulate realistic site plans and realistic civil engineering design concepts. We state the estimated cuts and fills for earthwork, size of buildings that can be constructed and size of storm water vaults anticipated to be required. We also show proposed water and sewer sizes and locations, and even provide proposed road improvement concept plans. All of this is provided as a concept for the developer to understand what may be possible in developing this site. And although this is provided based on our best understanding of what is possible, the developer shall not base his proposal on any of these plans or information in the report, without first verifying with the developers own team of consultants, that the information is correct. The developer shall engage its own design team, consultants or experts to research and develop the plans and concepts for which his pro-forma is based on. The Port of Seattle shall not be liable in any way for any specific size of building proposed, or volume of earthwork, or lengths and sizes of pipes or storm vaults. In summary, what is provided is an opinion of what might be possible, but the developer may not rely on this, but rather must verify through his own means all information that the developer believes necessary in support of the developer's proposal to the Port. This disclaimer applies to both the plans and this report.

#### Site Description

Following this summary is a vicinity map showing the location of the site. We have defined on the Site Plan areas currently owned by the Port of Seattle, 682,120 sf (15.65 Acres) and areas to be acquired from WS DOT. The Port of Seattle is currently in discussion to acquire an additional 180,471 sf (4.1 Acres) to the east of their current property boundary, which is currently owned by Washington Department of Transportation. The development area limits for the 17 Acre Site include the area to be acquired from WS DOT. The development area, which is also the gross site area, for this site is 19.8 acres.

The 17 Acre site is located on South 216th Street between 20th Avenue South and 14th Avenue South, as shown on the vicinity map on page 6 of this report. The site is located within the City of Des Moines, will have access to Air Cargo Road via 28th once the city of SeaTac completes the connection of 26th Ave South to 24th Ave South at 208th Street.

#### Scope of Work

As part of our work we have gathered and review information on: zoning, municipal code, critical and sensitive areas mapping; Port and City inter-local agreement; adjoining roads, including roadway classification and template requirements, planned vacations, recent improvements, and City planned area transportation and capital improvement projects; utilities GIS and as-built data; utilities capacity data (as available); and, other pertinent information provided to us by the City and utility districts. We have contacted City of Des Moines planning and engineering staff, and worked with the water, sewer, power, and gas purveyors. We have attempted to gather the same level of information as we would need had we been a consultant for a developer in preparation to proceed with full design of this project.

We understand the power available, the fire flow available, and the sewer elevations needed to ensure they work with the finish floor elevations shown. We have researched what available wetland information exists. Based on all available information, we have provided site plans we believe can be developed, and which will prove to be a financially viable project.

We have set finished floor elevations, calculated cuts and fills, made sure sewer elevations will be adequate for the proposed development, and calculated locations and height of all required site retaining walls. We have spoken with city engineers to understand issues related to the storm water, and have estimated storm water storage needed and used a combination of open ponds where possible, and underground vaults where required. We have chosen to use underground storm water vaults in order to achieve a higher level of building coverage on the site. Any combination of pond and vault could be explored, but we have biased our design concepts toward maximizing building coverage.

This report is organized as shown on the following:

#### **Executive Summary**

#### **Architectural Narrative**

#### **Site Civil Narrative**

Appendix A – Vicinity Map and Site Plan of Development Limits

Appendix B – Conceptual Architectural Site Plans and Civil Engineering Plans

Appendix C – Architectural Renderings

Appendix D – City of Des Moines Zoning, Transportation & Capital Improvement Plan

Appendix E – Port of Seattle-City of SeaTac Inter-local Agreement (Excerpts)

Appendix F – City of SeaTac Watershed Basin Report (Excerpts and Mapping); Port NPDES (Excerpts); City Flow Control and Water Quality Mapping; and ESA Wetland Reconnaissance Memo

Appendix G – Utilities (Storm, Sewer, Water) GIS and As-builts

Appendix H – Sanitary Sewer Pump Station As-builts

Appendix I – Existing Conditions Topography & Site Drainage Basins/Existing Conditions Photos

Appendix J – Site Earthwork Quantity Exhibits

Appendix K – Redevelopment Cost Opinion

#### 2. Architectural Planning

Below is a summary of the zoning and site plan options proposed in this report.

#### a. Zoning

- i. B-P (Business Park), this is the City's future comprehensive zoning.
  - Allowed uses Distribution Center, Professional and Business Offices
  - Of note, current zoning is R-SE (Residential Suburban Estate) but is planned to be rezoned to B-P by the City by means of Comprehensive Plan adoption in 2017.

#### ii. Parking Requirements

- Shown on site plans
- b. Distribution Center Development Option See Attached Site Plan Sheet A1.
  - i. Building Access
    - Site access is via South 216th Street, which is a two-lane local access roadway. The driveway can be accessed from either the east or west.
  - ii. Buildings
    - The distribution building is 291,800 SF, single-loaded truck dock.
  - iii. Building Width
    - Single loaded building. 300 feet wide.
  - iv. Developer/End User Profile The distribution center building type is, in our opinion, the most marketable of the three options proposed in the current marketplace. There has been an upswing in this (distribution) market. Developers who build speculative spaces are prevalent and looking for more land to develop.
  - v. Site Development Reference civil plans Sheets C1.
- c. Manufacturing Facility Option See Attached Site Plan Sheet A2.

#### **Manufacturing Facility Option:**

- i. Buildings Access
- Site access is via South 216th Street, which is a two-lane local access roadway. The driveway can be accessed from either the east or west.
- ii. Buildings Two manufacturing buildings
  - Building A 145,730 SF, single-loaded truck dock.

• Building B – 149,180 SF, single-loaded truck dock.

#### iii. Building Width

- <u>Building A</u> Single loaded building 385 feet wide.
- <u>Building B</u> Single loaded building 400 feet wide.
- vi. Site Development Reference civil plans Sheets C2.
- d. Small Business Incubator Option See Attached Site Plan Sheet A3.
  - i. Buildings Access
  - Site access is via South 216th Street, which is a two-lane local access roadway. The driveway can be accessed from either the east or west.

#### iii. Buildings -

- Building A 54,000 SF, with at grade truck docks
- Building B 65,475 SF, with at grade truck docks
- Building C 65,475 SF, with at grade truck docks
- Building D 66,825 SF, with at grade truck docks

#### iv. Building Width

- Buildings A, B, C and D: 135-feet wide
- v. **Developer/End User Profile** This development option provides the least building coverage on the site; however, it has the potential to offer the most jobs of the three options and provides the highest rents.
- vi. **Site Development** Reference civil plans Sheet C3.
- e. Small Multi-Story Office Option See Attached Site Plan Sheet A4.
  - ii. Buildings Access
    - Site access is via South 216th Street, which is a two-lane local access roadway. The driveway can be accessed from either the east or west.

#### vii. Building -

- Building A 60,500 SF footprint, 5- stories proposed.
- viii. **Developer/End User Profile** This development option provides for a corporate office campus and a significant building lease area. It has the potential to offer the most jobs of all options and provides the highest rents.

#### 3. Civil Site Concepts

Below is the narrative for site and civil engineering issues organized by categories for easy reference.

#### a. Critical Areas

#### i. Wetlands

- Onsite Wetlands: The site was reviewed for the presents of wetland indicators by Environmental Science Associates (ESA). ESA concluded that there are three wetlands, labeled B2-1, B2-2 and B2-3, located within the construction boundaries. Wetland B2-1 and B2-2 are preexisting wetlands that were previously identified on the site map. These two wetlands have not grown in size and according the ESA report Wetland B2-2 appears to have gotten smaller in size. The third wetland, B2-3, is similar in size to the two predetermined wetlands. The three wetlands are described as forested and depressional. A memorandum summarizing ESA's findings is provided in Appendix C
- <u>Mitigation Credit Program</u>: King County offers this program as an option for projects that result in unavoidable impacts to wetlands, rivers, streams or buffers. Included in Appendix X is the "Using Credits from In-Lieu Fee Program" which details the procedure to receive credits for alternate mitigation for the wetlands located on this site.
- Offsite Wetlands: From the review done by ESA, they concluded that there are two wetlands located off site to the west.

#### ii. Development on a Hillside

• The City of Des Moines municipal code defines a hillside with a slope of 15 percent or greater a critical area. The city's municipal code, Chapter 16.10.220 (Hillside of 15 percent slope and greater – Development standards – Disturbance limitation) restricts the maximum slope disturbance allowed on a development site. For slopes up to 15 percent there are no restrictions, for slopes from 15 – 25 percent, the percentage of the slope that may be disturbed is reduced to 60 percent, for slopes 25 – 40 percent the disturbed area is reduced to 45 percent and for slopes over 40 percent only 30 percent of the slope may be disturbed. For a combination for slope categories there is a formula to be used that can be found within this section of the city code.

#### b. Grading

#### i. Existing Conditions

The site is vacant has remained undeveloped, it is current covered with prairie grasses, brush and deciduous and conifer trees. See Appendix F for an existing conditions map that shows topographic and utilities data. The site is fronted by South 216th Street along the southern boundary, property currently owned by WS

DOT along the northern and eastern boundary and residential property along the western boundary.

The rectangular-shaped property slopes from the east to the west from a high elevation of 276-feet to a low elevation of approximately 192-feet. Slopes range across the site. In the western portion of the site slopes range from approximately 10- to 20-percent. Slopes in the eastern portion of the site range from gentle slopes of approximately 3-percent to 10-percent. There are steep slopes 40-percent and steeper located around the wetlands located along the western property line.

The development area has been kept to the east side of the property boundary. This will allow for the least amount of grading required. Slopes greater than 25 percent are generally only on the west side of the site around the wetlands. Conceptual development plans included in this report show development near these steep slopes. Keeping the development area away from the steeper slopes will limit the disturbance on the wetlands and reduce the credits received from the Mitigation Reserve Program.

A geotechnical study and slope assessment and analysis have not been conducted and are outside the scope of this report. The developer is responsible for preparing proposed development plans and providing any special studies, including geotechnical assessments and studies, required by the City of Des Moines or other jurisdictions having approval authority.

#### ii. Proposed Concept Design

There are three conceptual development options proposed for the 17 Acre site:

- Distribution Center
- Manufacturing Facility
- o Small Business Incubator
- Earthwork Factors guiding conceptual site layout and grading design are:
  - Maximizing building square footages
  - o Balancing to extent possible site cut and fill quantities
  - Minimizing site retaining walls
  - Minimizing site-work construction costs

Preliminary earthwork quantities were estimated for each of the development options. Color-coded figures showing extent of cuts and fills is provided in Appendix G. Estimated quantities are based on the conceptual design for the Distribution Center, Manufacturing Facility, and Small Business Incubator developments. The conceptual development options show a net export of approximately 3,700 cubic yards for the Manufacturing Facility, 9,900 cubic yards of import for the Small Business Incubator and 8,600 cubic yards of import for the Distribution Center. Final

design by the developer will further refine earthwork quantities and may reduce cut (export) and fill (import) quantities. Also, estimated earthwork quantities were based on the conceptual layouts shown and GIS data obtained from King County. Actual earthwork quantities may vary considerably depending on site layout and actual site survey data; and therefore, earthwork quantities shall be determined by each developer. Each developer shall perform their own analysis to determine earthwork quantities for their project.

#### c. Site Walls

#### i. Existing Conditions

 There is a rockery retaining wall along the edge of the shoulder on the north side of South 216th Street. It is approximately 220 feet in length and has a maximum height of about 6 feet at the southwest corner of the project site, which is where the rockery wall ends.

#### ii. Proposed Design

• Estimated wall heights are shown on the conceptual civil plans, sheets C1 – C3, for each of the three options (Distribution Center, Manufacturing Facility, and Small Business Incubator). Site walls are anticipated to range from 2-feet to 20-feet, as shown on the conceptual civil plans. Wall heights shown on the conceptual plans are based on building site options shown. Each developer shall design the site to determine the wall heights necessary for their own proposed designs.

#### d. Storm Design

#### i. Existing Site Conditions

• The 17 Acre site is located within the City of Des Moines and drains into the Des Moines Creek Basin. The Des Moines Creek Basin is approximately 3.5 miles long and encompasses over 30 acres of wetlands. It is the largest stream flowing through the city and flows from a high elevation of 350 to sea level where it meets the Puget Sound at Des Moines Creek Beach Park. The drainage systems serving the 17 Acre site will be reviewed by the City of Des Moines.

#### ii. Proposed Description

- City of Des Moines follows the King County Surface Water Design Manual
- <u>Agency Reviews</u> The site will drain off site through a 24-inch pipe within South 216th Street, this drainage system flows into the Des Moines Creek Basin and ultimately in the Puget Sound. This storm system will require the review/approval from the City of Des Moines and the Corp of Engineers.
- City of Des Moines design standards:

- O King County Surface Water Design Manual (KCSWDM) (2009 Edition) The City of Des Moines has established in their municipal code (16.10.350 Surface Water Design Manual) to adopt the King County Surface Water Design Manual,2009 Edition, including all subsequent revisions as the Surface Water Design Manual for the City of Des Moines, as part of the City of Des Moines Stormwater Management Program, updated March 2016.
- Des Moines Street Development Standards
- Washington State Department of Transportation Standard Specification for Road, Bridge, and Municipal Construction

#### • Proposed Storm Water Facilities -

This site drains to the Des Moines Creek Basin therefore; this site would need to meet City storm water standards, the *KCSWDM* 2009 edition. Flow control standards that are to be met are Conservation Flow Control, Level 2; and, water quality standards that are to be met are Enhanced Water Quality. In addition, Core Requirement #9 of the *KCSWDM* 2016 edition would also apply. As noted above, this core requirement calls for flow control BMPs, such as infiltration, dispersion and application of low-impact design to the extent feasible. The developer will likely be required by the City to provide flow control BMPs, or, show that these BMP (e.g. onsite infiltration, dispersion, low-impact features) are not feasible. Since USGS mapping shows those areas soils are till, which are not favorable for infiltration, the conceptual plans show detention vaults and ponds for flow control and modular wetlands for enhanced treatment. However, it is responsibility of the developer to fully determine the appropriate flow control and water quality facilities necessary to meet City standards, and whether flow control BMPs are feasible.

The approximately 8.5 acre area north of South 150<sup>th</sup> Street is shown on the conceptual plans discharging to the existing 12-inch pipe that crosses 24<sup>th</sup> Avenue South to the NEPL site. This 12-inch pipe is located within the City of SeaTac's right-of-way. Although this area drains to the NEPL Pond, drainage from this area would be conveyed through a storm pipe within the City's right-of-way and maintained by the City. City staff indicated in preliminary discussions that the L-Shaped site is to comply with *KCSWDM* 2016 edition standards and the City's *Addendum*. The developer is fully responsible for determining, through coordinating with the Port and City, applicable design standards that must be followed to meet Port and City requirements.

#### e. Water

#### i. Existing Condition

• The water district serving the 17 Acre sites is Highline Water District. There is an 18 inch cast iron main that runs along S. 216th Street. There is also an 8 inch ductile iron

pipe that runs the western border of the site boundary which is fed from the 18 inch main in S. 216th Street.

<u>Available Fire Flow</u> – Highline Water District provided estimated pressure for the 18-inch cast iron main in S 216th Street. The District indicated that the main is near a high elevation point of their system and therefore, lower in available pressure. Also, the District did not have flow data for the system. Therefore, flow testing is needed to determine actual flows available to the site. District also indicated that applicant (developer) must submit a "Water Availability" application and arrange for testing.

o Southwest corner of the 17 Acre site

**Static Pressure:** 119 psi

S. 216th Street @ 18th Ave. SStatic Pressure: 93 psi

S. 216th Street @ 20th Ave. SStatic Pressure: 82 psi

#### ii. Proposed Design

- <u>Site Fire Protection</u> The fire flow anticipated to be required for site development, considering Type 5B construction, is 4,000 GPM (2015 International Fire Code). This anticipated flow, 4,000 GPM, is based on taking into account a 50-percent reduction for buildings equipped with an automatic sprinkler system. With the pressures provided by the Highline Water District in an 18 inch cast iron main, it is assumed that there will be sufficient flow for fire protection; however this will need to be confirmed by the jurisdictional Fire Marshal once development design is confirmed. It is recommended that the developer contact the District to arrange for fire flow testing to confirm actual available flow and to determine fire system design requirements to attain needed pressure/flow. Interior water-main loop shown on the conceptual plans for the 17 Acre site is an 8-inch loop, connecting to S 216th Street.
- <u>Domestic Service</u> Domestic meter sizing will depend on demand for each of the development options. Irrigation meters will also need to be provided with backflow prevention.

#### f. Sewer

#### i. Existing Condition

The sewer district serving the 17 Acre site is Midway Sewer District. An 8-inch sanitary sewer main is located for connection north of the site location. Before 18th Ave. S was vacated a sewer manhole was installed at what was going to be the intersection of 18th Ave. S and S 212th Street. This manhole has sufficient depth to allow connection to the site.

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#### ii. Proposed Design

• The conceptual plans show connecting to the manhole that was to be located at the intersection of 18th Ave. S and S 212th Street. Midway Sewer District was contacted and confirms the availability to connect to their system at this location.

#### g. Gas

• Gas is available to the 17 Acre sites along South 216th Street. Puget Sound Energy (PSE), the gas purveyor, could not provide capacity data at this time, and indicated that a "Customer Service Information Sheet" would be required to confirm capacity.

#### h. Power/Cable/Fiber

#### i. Existing Condition

- The purveyor for power is Puget Sound Energy (PSE). Overhead power is available on S. 216th Street. Puget Sound Energy indicated that a power application, "Customer Service Information Sheet" indicating power needs before power capacity can be confirmed.

#### ii. Proposed Design

- It is anticipated that power for the 17 Acre site will be served from S 216th Street. As
  mentioned in the "Existing Condition" section above, Puget Sound Energy could not
  provide power capacity data, and indicated that a "Customer Service Information
  Sheet", which is to include power requirements and a site map, would be required to
  begin a power assessment and determine if additional feeders would be needed to
  serve the sites.
- Cable and fiber capacity and availability will need to be confirmed with Comcast and Century Link. As indicated in the paragraph above, conduit will need to be routed onto the sites to serve building facilities. In addition, the overhead lines on S 216th Street may need to be underground since line height on the existing poles may not provide needed vertical clearance for semi-trucks.

#### i. Dedications/Easements/Vacations

#### i. Right-of-Way (ROW) Dedications

The City of Des Moines has approved of a project to improve the South 216th Street and 24th Avenue South rights-of-way. This project is to be known as the Transportation Gateway Project. South 216th Street from 24th Avenue South to 18th Avenue South is to be widened to a five lane arterial with a middle turn lane. The city has waived the requirement of a twenty (20) foot wide Type I landscaping strip including a five (5) foot

tall earthen berm adjacent to South 24th Avenue South and South 216th Street, in lieu the required landscaping shall be a ten (10) foot wide Type II landscaping striped as defined by DMMC 18.195.390. It is assumed that these design standards will continue to the west to the edge of the project boundary. The project site currently is fronted with a rockery retaining wall with a maximum height of approximate height of 6 feet. It is the cities intent to negotiate with the Port of Seattle to remove the retaining wall with this portion of South 216th Street is widened and grade towards the site rather than replacing the retaining wall. This will require a Right-of-Way dedication to the City of Des Moines to include a slope easement.

#### ii. Easements

• 15-foot wide easements conveyed to Highline Water District will be required for the interior 8-inch water main loops through the 17 Acre sites.

#### j. Assumptions/Exclusions/Unknowns & Risks

#### i. Further Wetland Studies

• A full wetland study and assessment will be required for the 17 Acre sites to confirm that the wetlands that exist on the sites are categorized correctly.

#### ii. Property Boundary

- <u>Alta Survey</u> An Alta Survey has not been conducted at this time, and will be required
  to confirm the actual boundary of the property, as well as to confirm any dedications,
  slope easements, and utilities easements.
- <u>Topography</u> A topographic survey has not been conducted for the 17 Acre sites. GIS data was used for the preparation of conceptual designs. Therefore, a topographic survey and utilities locates will need to be conducted/obtained by the developer for use in their design.

#### iii. Geotechnical Considerations

- A geotechnical investigation/study has not been conducted for the 17 Acre Site.
   Geotechnical investigation/study will need to be done by the developer to confirm site soil conditions for site and building development. USGS mapping show area soils as till.
   Infiltration testing will also be required by the City of Des Moines to confirm feasibility of low-impact design features, including onsite infiltration.
- Ravine sidewalls and bluffs The City of Des Moines defines a ravine as "a steep slope which abuts and rises from the valley floor..." the ravine will also "contain slopes predominantly in excess of 40 percent... the top of a ravine sidewall is typically a distinct line where the slope abruptly levels out", Chapter 16.01.050 Definitions. The Des Moines municipal code, 16.10.210 Ravine sidewalls and bluffs Development

standards, requires a 50-foot undisturbed buffer from the top, toe and sides of all ravines sidewalls. The municipality will allow a reduction to the buffer to a minimum of 10-feet when a special environmental study is done by a licensed engineer specializing in geotechnical analysis of a licensed engineering geologist.

 <u>Hillsides of 15 percent slope and greater</u> – Before site design and grade is done for the 17 Acre site a number of limitations will need to be taken into consideration. *Chapter* 16.10.220 Hillsides of 15 percent slope and greater is to be used to determine the area of usable land for the site. This chapter also provided guidance for landscape and shrub requirements.

#### iv. Storm-water Requirements

- Per discussions with the City of SeaTac City Engineer and Storm Assets Management Coordinator, there has not been any drainage or flooding complaints relating to the storm conveyance system within the immediate area of the site. The City adopted the 2016 edition of the KCSWDM on January 1, 2017. Considering the 2016 edition of the SCSWDM, City flow control mapping (see Appendix C) shows that the site is located in a Conservation Flow Control Area. Properties located in this area designation typically must meet Level 2 Flow Control requirements of the King County SCSWDM, which state that developed discharge from a site must meet pre-developed durations from 50-percent of the 2-year peak flow up to the full 50-year peak flow. Pre-developed site conditions or land cover is to be considered as "historic" conditions, or typically forested. In addition, peak discharge rates from the developed site must meet pre-developed peak discharge rates for the 2- and 10- year return periods. Water quality level that will be required to protect downstream sensitive areas is enhanced water quality facilities.
- Since the southern leg of the 24th Avenue South conveyance system out-lets to the SR-518 right-of-way, drainage systems for the L-Shaped site connected to this conveyance line will be required to also meet WSDOT storm water standards, as indicated in the storm water section of this report.
- See the storm water section of this report for discussion on the storm water requirements for the NEPL site.

# **Appendix A**

# Vicinity Map And Site Plan of Extent of Development Limits

# **Appendix B**

# Conceptual Architectural Site Plans And Conceptual Civil Engineering Plans

# **Appendix C**

### **Architectural Renderings**

# **Appendix D**

# City of Des Moines Zoning, Transportation & Capital Improvement Plan (Excerpts)

# **Appendix E**

### **City of Des Moines Storm Water & Critical Areas**

# **Appendix F**

Utilities (Storm, Sewer, Water) GIS and As-Builts

# **Appendix G**

**City of Des Moines CIP** 

# **Appendix H**

SR-509 Land Use