

VISUAL TECHNICAL REPORT

Reconstruction of the North Recycling and Disposal Station

Prepared for

Seattle Public Utilities

March 2008

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Prepared for

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Contents

| | |
|---|-----|
| Acronyms | iii |
| Glossary | v |
| Introduction..... | 1 |
| Project Description | 2 |
| Construction Period | 2 |
| Existing Conditions..... | 5 |
| Methodology, Resources, and Coordination | 5 |
| Seattle Design Commission | 5 |
| City Code | 5 |
| Plans | 6 |
| Methodology | 7 |
| Government Regulations | 8 |
| State Regulations..... | 8 |
| Local Regulations | 8 |
| Existing Visual Environment..... | 8 |
| North Recycling and Disposal Station | 8 |
| Project Area..... | 8 |
| Visual Quality | 10 |
| Operational Impacts | 11 |
| Viewpoint Analysis | 11 |
| Light and Glare | 29 |
| Shadow Analysis | 29 |
| Construction Impacts | 31 |
| Potential Features to Limit Project Features..... | 33 |
| Operation | 33 |
| Construction..... | 33 |
| References..... | 35 |

Figures

| | | |
|------------|--|----|
| Figure 1. | North Recycling and Disposal Station (NRDS) site..... | 3 |
| Figure 2. | Viewpoints..... | 12 |
| Figure 3. | Viewpoint 1 – Existing ground level view looking south from the intersection of Carr Place North and North 35th Street. | 14 |
| Figure 4. | Viewpoint 2 – Ground level view on Carr Place North looking south from street center at the midway point between North 36th Street and North 37th Street..... | 16 |
| Figure 5. | Viewpoint 3 – Ground level view looking south from west of the roundabout at the intersection of Ashworth Avenue North and North 36th Street. | 18 |
| Figure 6. | Viewpoint 4 – Ground level view looking south from south of the intersection of Interlake Avenue North and North 36th Street..... | 20 |
| Figure 7. | Viewpoint 5 – Ground level view looking south from the sidewalk 15 feet west of the northwest corner of North 35th Street and Interlake Avenue North..... | 22 |
| Figure 8. | Viewpoint 6 – Second story view looking south from in front of the residential property on the northwest corner of Ashworth Avenue North and North 35th Street..... | 24 |
| Figure 9. | Viewpoint 7 – First story view looking south from in front of the residential property on the northeast corner of Ashworth Avenue North and North 35th Street..... | 26 |
| Figure 10. | Viewpoint 8 – First story view looking south from in front of the residential property (1506 North 35th Street) on North 35th Street between Ashworth Avenue North and Carr Place North..... | 28 |
| Figure 11. | Visual analysis matrix..... | 34 |

Acronyms

| | |
|--------------|---|
| FHWA | Federal Highway Administration |
| NEPA | National Environmental Policy Act |
| NRDS | North Recycling and Disposal Station (NRDS) |
| SEPA | State Environmental Policy Act |
| WSDOT | Washington State Department of Transportation |

Glossary

The following definitions were obtained from the FHWA Visual Impact Assessment for Highway Projects handbook:

- **Continuity** – The uninterrupted flow of pattern elements and the maintenance of visual relationships between immediately connected or related landscape components or features.
- **Diversity** – The number of pattern elements as well as the variety among them, and the edge relationships between them.
- **Distance Zones** – Three terms that define distance relationships defined as follows:
 - *Foreground* – Covers an area of 0 to 0.25 of a mile. The area which can be defined with clarity and simplicity because the observer is a direct participant.
 - *Middleground* – Covers an area of 0.25 to 0.5 of a mile to 2 miles. This is a critical area where parts of the landscape are viewed as joined together, or where conflicts of form, color, shape, or scale are exposed.
 - *Background* – Covers an area of 2 miles to infinite miles. That area where the distance of landforms will lose detail and the emphasis will be on the outline or edge of the landform.
- **Viewpoint** – A scene observed from a given vantage point.
- **Visual Character** – The visual character of a landscape is formed by the order of patterns composing it. Elements include the form, line, color, and texture of the landscape’s visual resources.
- **Visual Quality** – The three contributing factors to a landscape’s visual quality are:
 - *Vividness* – The memorability of the visual impression received from contrasting landscape elements
 - *Intactness* – The integrity of visual order in the natural and human-built landscape, and the extent to which the landscape is free from visual encroachment
 - *Unity* – The degree to which the visual resources of the landscape join together to form a coherent, harmonious visual pattern.

Introduction

This report presents the potential visual implications of the proposed reconstruction of the North Recycling and Disposal Station (NRDS). This report describes the character of the existing landscape and visual resources in the NRDS project area. It also describes the potential visual changes that would be created by the proposed project, the extent of those visual changes that could be experienced by viewers in the project area, and the potential shadow effects on the residential area north of the NRDS site. This analysis does not include photo or graphic simulations of the visual changes.

This visual technical report analyzes the primary project elements: the proposed demolition of the existing NRDS and construction of a new transfer station; the incorporation of a portion of Carr Place North, and 1550 North 34th Street, into the NRDS site; and the addition of recycling facilities, employee facilities, office, and parking. The addition of recycling facilities and the reconstruction of the transfer station will mean a changed landscape for viewers. For users of the new facility (visitors and employees), users of the surrounding street network (drivers, bicyclists), and for users of the surrounding sidewalks and Burke-Gilman Trail (pedestrians, bicyclists, neighborhood residents), the overall visual quality will be improved with increased intactness and unity.

If the proposed reconstruction of the transfer building within the NRDS is expanded east or west, or is raised in height within the zoning code, residential homes, and L & O Distributing located north of the property (north side of North 35th Street), are likely to experience a loss in visual quality. Because of their permanency, those dwelling in residential homes will likely experience a greater loss of visual quality compared to the non-permanent status of the patrons and employees (and employer) of L & O Distributing. If the proposed reconstruction of the transfer building within the NRDS is expanded east or west, or is raised in height within the zoning code, loss of views would potentially include portions of the downtown Seattle skyline and Lake Union, loss of mature vegetation, and diminished views of Queen Anne Hill and the Aurora Bridge. Users of North 35th Street and the adjacent sidewalks are likely to experience a change in views but due to the transient nature of these users, the loss in visual quality would be minimal. Because there is already an existing NRDS facility, the introduction of a new transfer station and conversion of Carr Place North and 1550 North 34th Street for additional recycling and other facilities will likely maintain the overall visual environment through the introduction of a tidier, more efficient facility that will reduce the number of idling cars and unsightly waste or recyclables.

This visual impacts analysis compares potential impacts from the proposed project to existing conditions with a special focus on impacts to areas north of the transfer site. It also discusses possible measures to reduce potential impacts from the proposed project. This report has been prepared as a technical report to support preparation of an environmental checklist under the State Environmental Policy Act (SEPA).

Project Description

The project includes the existing site, Carr Place North between North 34th Street and North 35th Street, and the building at 1550 North 34th Street (the 1550 building). The proposed project includes demolition of existing structures on the existing NRDS property, demolition of the 1550 building, and construction of a transfer station, recycling facilities, employee facilities, an office, parking, and other associated utility facilities. The lot north of North 35th Street between Carr Place North and Woodlawn Avenue North will continue to be used for employee parking and utility vehicle parking.

The site boundaries and vicinity of the NRDS facility are shown in Figure 1. The new transfer building will be located on the existing NRDS property. The building will be fully enclosed except for vehicle entrances on the sides. The building height and development setbacks follow area zoning regulations.

The site will also contain a small fueling station for onsite equipment. Carr Place North, between North 34th Street and North 35th Street, will be vacated and incorporated into the NRDS site. The 1550 building property will be used as a recycling drop-off area with recycling bins, and also as an office with employee facilities, a meeting room, and other utility functions. An existing parking lot north of North 35th Street, between Carr Place North and Woodlawn Avenue North, will continue to be used for SPU employee parking. The main facility access will be located off of North 34th Street. A secondary access for transfer trailers will be located off of North 35th Street. In addition, certain design standards and operational practices will be implemented by SPU to maximize the facility's aesthetics. These project components are discussed in the *Potential Features to Limit Project Impacts* section of this report.

Construction Period

Although timing and design details of specific project elements have not yet been determined, the project is expected to be constructed in three stages: demolition, site preparation, and building construction. Construction is expected to last between 20 and 28 months. During that period, transfer operations will shift to the South Recycling and Disposal Station, and staging will occur on site.

Demolition will require approximately 2 to 4 months. During demolition, all onsite structures and non-reusable materials will be removed, and debris will be hauled off site to a suitable demolition disposal or recycling site. Site preparation will require approximately 6 months. During site preparation, the site topography will be adjusted to meet new construction requirements. Any excavated material will either be used on site to prepare the grade, or hauled off site. During site preparation, utility lines will also be installed. Building construction is expected to require about 12 to 18 months; however, building construction may take longer due to weather and other types of delays. During that period, driveway and exterior work areas will be paved and building foundations and superstructure will be constructed. Before the upgraded facility starts operating, final inspection and testing of all equipment and procedures will take place.



Not to scale

Figure 1. Site map for the North Recycling and Disposal Station (NRDS), 1350 North 34th Street, Seattle, Washington.

Existing Conditions

Methodology, Resources, and Coordination

The goal of this report is to evaluate the potential change in visual quality based on the proposed changes to the NRDS. As such, this analysis includes a study of the visual environment from the perspective of those looking toward the project site.

Information was gathered by visiting the project area several times to access potential views, to inventory visual resources, and to establish viewsheds. Photos were used to record the visual resources from established viewpoints. The background information reviewed included maps, aerial photography, and Seattle Municipal Code (SMC 25.05.675) documents. Public opinion, including perceptions of the visual character of the project, was obtained from the scoping summary of public meetings held August through October of 2004 by Seattle Public Utilities for the Solid Waste Facilities Master Plan Supplemental Environmental Impact Statement (Seattle Public Utilities 2004) and community and stakeholder meetings held in 2007 and 2008. Information specific to public facilities, including services and pedestrian, bicycle, and transit facilities were obtained from the Transportation Strategic Plan (Seattle 2005a). Information specific to public views were obtained from the neighborhood section of the City of Seattle Comprehensive Plan update, “Toward a Sustainable Seattle: A Plan for Managing Growth 2004-2024” (Seattle 2005b), the City of Seattle Comprehensive Plan update, “What’s New 2007” (Seattle 2007), and the South Wallingford Amendment to the Wallingford Neighborhood Plan (South Wallingford Planning Committee 2002). The following section describes the Seattle Design Commission process, Seattle Municipal Code, plans, and policies as they relate to the proposed project, and the methodology used in this analysis.

Seattle Design Commission

The Seattle Design Commission reviews the City’s Capital Improvement Projects (CIP) built on City property or with City funding as a required part of the City’s formalized design review process. Ten citizens including those representing the fields of art, architecture, urban planning, engineering, environmental planning, and landscape architecture, serve on the Design Commission along with one “at-large representative” and one “get engaged member”. The Commission’s review helps the City’s departments, Mayor, and the City Council make decisions about the development. The Design Commission meets on the first and third Thursdays of every month. Review typically includes consultant selection, concept design, and pre-design (Seattle 2008).

City Code

Some public views to Lake Union and the downtown skyline, and public views of historic landmarks designated by the Landmarks Preservation Board are protected under the Seattle

Municipal Code (SMC 25.05.665) for environmental protection and historic preservation. The policy for public view protection further specifies that adopted land use codes as related to height and bulk controls and other zoning regulations attempt to protect private views but it is impractical to protect private views through project-specific review.

It is the City's policy to protect public views of significant natural and human-made features from public places such as specified viewpoints, parks, scenic routes, and view corridors that have been officially designated by the City. North 34th Street has been designated a public view corridor; however, public views of significant natural and human-made features (i.e., Lake Union, the downtown skyline, Aurora Bridge) from North 34th Street will not be impeded by the proposed project. Finally, the decision maker may condition or deny a proposal to eliminate or reduce its adverse impacts on designated public views, whether or not the project meets the criteria of the overview policy set forth in the code.

The George Washington Memorial Bridge (Aurora Bridge) over the Lake Washington Ship Canal is designated a landmark by the Landmarks Preservation Board under ordinance 110345, and Seattle Municipal Code (SMC 25.05.665) specifies that the city's policy is to protect public views of historic landmarks. Public views of the Aurora Bridge from specified viewpoints are identified in the project impacts section of this document.

Plans

The South Wallingford Neighborhood Plan element of the City of Seattle's 2004 Comprehensive Plan update (City of Seattle 2005b) specifically calls for the preservation of existing views of Lake Union and downtown Seattle from viewpoints and parks. Public views of Lake Union and downtown Seattle from specified viewpoints are identified in the Project Impacts section of this document.

The South Wallingford Amendment to the Wallingford Neighborhood Plan (South Wallingford Planning Committee 2002) recommends that the City identify and protect existing views of Lake Union, the downtown skyline, the surrounding hillsides of Queen Anne and Capitol Hill, the University of Washington, the Fremont Bridge, and the Aurora Bridge from public rights-of-way, viewpoints, and scenic routes, including views to the south from all north-south avenue rights-of-way from Stone Way North to Fourth Avenue NE, south of North 40th Street, as well as views in and through the Shoreline area. With this said, view corridors within the context of the proposed project include Interlake Avenue North, Ashworth Avenue North, and Carr Place North. Public views of Lake Union, downtown Seattle, and the Aurora Bridge from specified viewpoints are identified in the Project Impacts section of this document (South Wallingford Planning Committee 2002). However, none of the public views evaluated in this analysis are "designated" views that are subject to protection under the City's substantive SEPA policies, SMC 25.05.675 (P), and the City does not prohibit or restrict development that might change private views.

In addition, the South Wallingford Amendment recommends that protection could be achieved through the adoption of neighborhood-specific design review guidelines such as restricting building height, bulk, and configuration; requiring view-conserving building setbacks; cutting back the corners of buildings adjacent to intersections to open up views on side streets; and placing utility wires below grade when street improvements are made, especially on arterials with views such as Wallingford Avenue North, Stone Way North, Pacific Street and North Northlake Way (South Wallingford Planning Committee 2002).

Methodology

Several methodologies exist for evaluating visual quality and the visual impacts of projects, including methodologies used by the U.S. Bureau of Land Management, the U.S. Forest Service, and the Federal Highway Administration (FHWA). Each provides internally consistent terminology and a structured approach to the characterization of the visual environment and a project's visual impacts. In part because of the urban character of the NRDS site, the FHWA methodology is used for this report. The visual impact assessment was documented with methodology from the Federal Highway Administration (FHWA) Visual Impact Assessment for Highway Projects (FHWA-HI-88-054) handbook (FHWA 1983). As a way to quantify the visual changes, the WSDOT visual changes analysis matrix from the WSDOT Environmental Procedures Manual (WSDOT 2007) was used to rate the existing and proposed visual quality. Using the FHWA handbook and the WSDOT Environmental Procedures Manual, the methodology to determine visual quality changes included the following components:

- Description of visual character
- Assessment of existing visual character
- A visual quality description of existing conditions, including an analysis of the following viewshed features:
 - Vividness, intactness, and unity
 - Distance zones including foreground, middleground, and background
 - Estimated number of viewers
 - Duration and frequency of views
 - Light and glare/shadow analysis
 - Vegetation
- Determination of the viewers – those who have a view of the project
- Identification of the affected viewshed from specified viewpoints looking towards the project area

- Identification of visual changes on the existing visual resource and the importance of the view to people, or the sensitivity of the viewer to the visual resources in the landscape
- Description of ways to avoid, minimize, or reduce visual impacts.

Government Regulations

A number of local and state regulations ensure that the effects of projects on visual resources and aesthetics are adequately considered. The following are the regulations that have been set forth:

State Regulations

- State Environmental Policy Act (SEPA) (Chapter 197-11 WAC, Chapter 43.21C RCW)

Local Regulations

- Seattle Municipal Code (SMC), Environmental Protection and Historic Preservation (Chapter 25.05.675) – Public View Protection, Shadows on Open Spaces.

Existing Visual Environment

North Recycling and Disposal Station

The NRDS transfer station serves north Seattle, primarily north of the Lake Washington Ship Canal but not limited to that area. Solid waste is compacted into intermodal containers and trucked to an intermodal yard for transfer to trains. At one end of the station, organic materials (yard waste and food waste) are collected in open-top containers that are trucked to an offsite composting facility. Wood waste, appliances, scrap metal, plastics, paper, aluminum, and other recyclable materials are collected and transported to other recycling facilities.

Project Area

South Wallingford is located on a moderate south-facing slope and includes urban trees, shrub, and grassy areas; single- and multi-family residences; office buildings; marine-related light industry; and small businesses. South Wallingford affords many opportunities to experience visually striking distant views of Lake Union and the downtown Seattle skyline. The NRDS site is located immediately adjacent to an area designated in City of Seattle Comprehensive Plan, “Toward a Sustainable Seattle” as a growth center (the Fremont Hub Urban Village) and near the

Wallingford Residential Urban Village. The immediate project vicinity is visually dominated by man-made structures, including roadways, buildings, and fencing.

Streets in the project vicinity include North 34th Street, North 35th Street, Stone Way, Interlake Avenue North, Ashworth Avenue North, Carr Place North, Woodlawn Avenue North, and North Northlake Place. The project area is bordered on the north by 35th Avenue North, serving as a collector arterial, and on the south by 34th Avenue North, serving as a primary arterial. Combined, these arterials support freight, transit, automobile, pedestrian, and bicycle traffic. The area north of North 35th Street is characterized by narrow streets, sidewalks, and roundabouts serving modest-sized residences and small businesses. Overall, automobile traffic, pedestrians and bicyclists are visually evident with a particular concentration along arterials in the immediate vicinity of the NRDS site.

Carr Place North is currently a narrow, one-way street (running south to north) with one lane of parking on the east side. Mature honey locust trees line the sidewalk along the west side of street and a large, rectilinear, nearly solid façade, beige industrial and office building (the 1550 building) occupies the entire block east of Carr Place North. Sections of the building's exterior are in disrepair. Looking south along Carr Place North, views to the lake are obscured by a large office building located at 1441 North 34th Street.

North of North 35th Street between Carr Place North and Woodlawn Avenue is a large, 60-space paved parking lot that is proposed for NRDS parking. The lot is surrounded by a low-lying, chain link fence with sparse, patchy landscaping along the perimeter. A bus stop is located south of the parking lot on North 35th Street.

Features of the NRDS site include a horizontally extensive (approximately 245 feet long from east to west) transfer building of moderate height. The remaining visual environment consists of driveways, parking spaces, stands of mature trees, heavy equipment, transfer trailers, containers (i.e., dumpsters), compactors, and ancillary buildings. The ancillary buildings include the scale house, and an office building. Activities at the site include vehicle queuing, and employees that can be seen working at the site wearing safety vests and hard hats. Visual clutter includes stacks of discarded appliances, various sized dumpsters and canisters, lighting fixtures, signs, fencing, and orange cones. The various components of the NRDS site form a diverse visual mosaic. This diversity, however, is lessened by structures having muted shades of gray and brown (i.e., transfer station, driveways, fencing).

Views of the NRDS property are partially occluded by a cyclone fence with brown plastic slats, mature deciduous and coniferous trees, buildings on adjacent properties and topography. In the areas where the primary tree growth is deciduous, views of the NRDS and activities at the site become more visible for the period of time following fall senescence. Graffiti is present on the fence in many locations and the brown plastic slats are missing from some sections.

The expanse of the transfer station, its ancillary buildings, and its equipment are most evident when looking toward the NRDS site from the north and south. The view from the east (Carr Place North) is primarily of trees and the cyclone fence. The exception to the cyclone fence is

the chain link fence and the graduated retaining wall that separates the NRDS site from the adjacent private property to the west. The adjacent property consists of a mix of old commercial buildings, storage facilities and parking. The adjacent commercial land use is visually contextual with the NRDS site.

The NRDS site may be viewed from the elevated roadway of Aurora Avenue, and also from local streets. The tops of structures on the site are visible from Queen Anne Hill and from the great mound at Gas Works Park.

Together, the buildings, containers, mature trees, utility poles, ancillary buildings, roadways, and heavy equipment form a diverse, cluttered appearance. The diversity is lessened by colors of muted shades of gray and brown and lack of appealing architectural style – most notably of the horizontally extensive transfer building and the brown slatted fencing surrounding a majority of the site. For the most part, the diverse, cluttered appearance is contained by the fencing surrounding the site. Views of the NRDS site from the neighborhood to the north are subsidiary to the views of Lake Union, the downtown skyline, and the Aurora Avenue Bridge.

Visual Quality

The existing visual quality of the NRDS site is low. The vividness of the NRDS site is low due to the muted shades of gray and brown and the minimal structural diversity of buildings, fencing, and driveways. The visual intactness can be classified as medium low. Intactness is characterized by the surrounding fence that contains and partially conceals visual clutter, including ancillary buildings, heavy equipment, dumpsters, signage, utilities, and vehicle queuing. The existing facility, located adjacent to visually dissimilar residences, arterials, recreational opportunities, and commercial structures, does not visually blend into the surrounding context; therefore, unity is low.

Operational Impacts

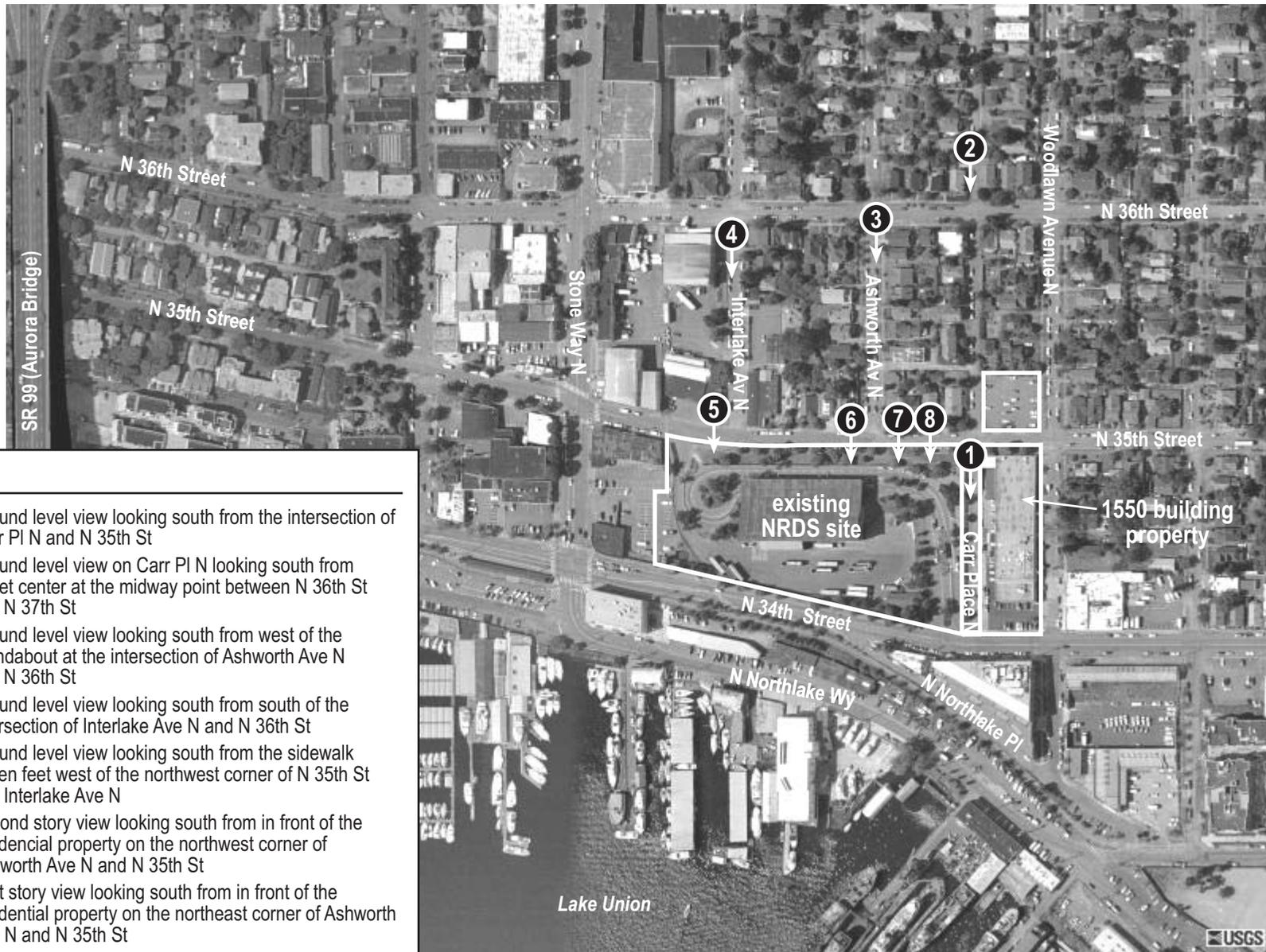
Depending on the positioning of the proposed transfer building within the NRDS site, the quality of views towards the proposed project may be changed for residents living directly north of the proposed project along North 35th Street. Because the NRDS visual landscape already has low visual character, the proposed project will likely improve the overall visual quality by increasing visual intactness. The following section summarizes the visual environment of the proposed project from selected views looking toward the project area. The views were selected based on the likelihood of their sensitivity to the proposed project. The viewpoint analysis includes the viewing populations, existing views, views once the NRDS project is constructed, and the level of visual change that will occur because of the proposed reconstruction.

Viewpoint Analysis

This analysis describes views toward the site from the streets and residences surrounding the project area. The locations of the viewpoints are shown in Figure 2. The completed project will not be a dominant visual feature in views from more distant locations where the site is in the middleground or background of the view. Visually, the proposed project is most likely to affect foreground views. Analysis of lighting, shadows, and visual impacts of both the proposed NRDS site and the reconstruction of the new facility will follow this discussion of viewpoints. A rating system was used to make a comparative analysis between existing views, and the likely view with the proposed project. These ratings are designed to provide a comparison among the measures of vividness, intactness, and unity. The analysis results are provided in Figure 11 near the end of this document.

The major viewing populations for views toward the project from nearby locations are permanent (residential) and transient (drivers, pedestrians). These populations include:

- **Drivers of vehicles.** These include privately operated vehicles traveling to places of employment in the neighborhood, commuting, visiting the NRDS site and local businesses, or passing through the area; and commercial truck drivers passing through, visiting the NRDS site, or visiting other local businesses.
- **Residential.** These include residents living in the neighborhood north of the NRDS site.
- **Pedestrians.** These include residents who live north of the project area, people who utilize the bus stop along North 35th Street, and patrons of local businesses.



KEY

1. Ground level view looking south from the intersection of Carr PI N and N 35th St
2. Ground level view on Carr PI N looking south from street center at the midway point between N 36th St and N 37th St
3. Ground level view looking south from west of the roundabout at the intersection of Ashworth Ave N and N 36th St
4. Ground level view looking south from south of the intersection of Interlake Ave N and N 36th St
5. Ground level view looking south from the sidewalk fifteen feet west of the northwest corner of N 35th St and Interlake Ave N
6. Second story view looking south from in front of the residential property on the northwest corner of Ashworth Ave N and N 35th St
7. First story view looking south from in front of the residential property on the northeast corner of Ashworth Ave N and N 35th St
8. First story view looking south from in front of the residential property (1506 N 35th St) on N 35th St between Ashworth Ave N and Carr PI N

Not to scale

Figure 2. Viewpoints.

- **Viewpoint 1** – *Ground level view looking south from the intersection of Carr Place North and North 35th Street:*
 - Viewing population: The major viewing populations consist of private drivers and pedestrians. Because of the transient nature of the viewing population, the duration of viewer exposure is low.
 - Existing views (Figure 3): The existing foreground view includes a downward-sloping, narrow streetscape with a linear progression of trees, sidewalk, power lines, and fencing along the eastern edge of the existing NRDS property; and a large, low-lying rectilinear building with a linear progression of shrubs, roadway, and parked cars along the eastern edge of Carr Place North. This linear character terminates at a modern, well-kept office building at the intersection of North 34th Street and Carr Place North. Traffic on Carr Place North is northbound only and volumes are minimal. The existing background view is limited to the very tops of downtown skyline buildings. The view lacks prominence and diversity. The orderly, linear progression of features abutting both sides of the road creates a sense of unity and continuity that is disrupted by the intrusion of the office building. The existing visual quality is moderately low.
 - View with project: If the grade of the Carr Place North right-of-way and the 1550 building site is lowered, the ground level view looking south from the intersection of Carr Place North and North 35th Street will be similar to the existing view. The post-project foreground view will include the loss of existing features (linear character of trees, shrubs, sidewalk, and fenceline) along the edges of Carr Place North.

If the street features of the eastern edge will be replaced by an orderly progression of rectilinear recycling containers angled with the existing topographic downslope, views will include an increase in activity and customer traffic in the vicinity of the recycling containers. The viewing population will likely retain views of the office building and the distant downtown skyline.

If structures are placed in the current Carr Place North right-of-way at its existing grade, views will include higher visibility of the new recycling facilities and lower visibility of the office building and the distant downtown skyline. The diversity of the visual experience will increase with the increased movement of traffic as well as the activities in the vicinity of the recycling area.



Figure 3. Viewpoint 1 - Existing ground level view looking south from the intersection of Carr Place North and North 35th Street.

In either case if the project keeps the existing grade of Carr Place North, the orderly, linear progression will be lessened with the stop-and-go movement of traffic and loss of sidewalk and vegetation. The existing moderately low visual quality will remain moderately low.

■ **Viewpoint 2** – *Ground level view on Carr Place North looking south from street center at the midway point between North 36th Street and North 37th Street:*

- Viewing population: The major viewing populations consist of private drivers and pedestrians. Because of the transient nature of the viewing population, the duration of viewer exposure is low.
- Existing views (Figure 4): The existing foreground view includes a downward-sloping, narrow residential streetscape with a linear progression of trees, sidewalk, roadway, power lines, and parallel-parked cars along one side of the street. Single family residential homes are mostly occluded by mature trees and other vegetation. The foreground view terminates at the office building on North 34th Street. In the location of the proposed project, the only visible feature is parallel parked cars along the eastern perimeter of the street.

The distant and prominent view is the downtown Seattle skyline. The foreground view of the office building on North 35th Street somewhat degrades the distant view of downtown, and completely eliminates the view of Lake Union, thereby lessening intactness. The orderly, linear progression of features abutting both sides of the road creates a sense of unity. The trees and residential homes in the foreground, combined with a distant view of downtown, provide a moderate to high vividness. The existing visual quality is average.

- Views with project: It is likely that the structures or recycling containers and activities proposed for Carr Place North will be visible from the post-project foreground view. Views of the office building on North 34th Street may be reduced. No views will be lost. The viewing population will retain the prominent view of the downtown skyline. Because of the distance and elevation difference between the viewer and any NRDS facilities along Carr Place North, little will change from this viewpoint. The existing visual quality will remain average.



Figure 4. Viewpoint 2 - Existing ground level view on Carr Place North looking south from street center at the midway point between North 36th Street and North 37th Street.

- **Viewpoint 3** – *Ground level view looking south from west of the roundabout at the intersection of Ashworth Avenue North and North 36th Street:*
 - Viewing population: The major viewing populations consist of private drivers and pedestrians. Because of the transient nature of the viewing population, the duration of viewer exposure is low.
 - Existing views (Figure 5): The existing foreground view includes a downward-sloping, broad, residential streetscape with a linear progression of trees, sidewalk, roadway, power lines, and parallel parked cars (along both sides of the street). Single family residential homes are partially occluded by trees and other vegetation. In the location of the proposed project, the fence and the transfer building are visible but not prominent. Even during the winter months, the transfer building is almost completely occluded by deciduous tree growth along the west side of Ashworth Avenue North.

The elevation and openness of the streetscape provides a prominent distant view of the downtown Seattle skyline from this viewpoint. Lake Union is visible, but this feature is not visually prominent. The orderly, linear progression of features abutting both sides of the road creates some sense of unity and continuity. The low-lying fence line at the terminus of Ashworth Avenue North does not visually impede views of downtown. Deciduous and coniferous trees within the right-of-way on the south side of North 35th Street and within the NRDS site block views of Lake Union. The utility poles along the east side of Ashworth Avenue North visually interrupt the vertically dominant buildings of the downtown skyline.

The memorability of the view is medium with foreground views of a residential streetscape contrasted with distant views of the downtown skyline. The orderly, linear progression of features creates some sense of unity and continuity. The unity and continuity are lessened by the clutter of utility poles and the termination of the streetscape at the location of the NRDS site. The existing visual quality is average.

- Views with project: If the construction of the transfer building extends further east from its current position, and/or to a greater height in compliance with the zoning code, it will be visible from the post-project foreground view. Because of the distance and the higher elevation from this viewpoint to the potential alignment and height of the transfer building, the views of the downtown skyline and the upper portions of buildings (to the east) will be retained, but views of shorter buildings to the west will likely be obscured. The existing visual quality will remain average.



Figure 5. Viewpoint 3 - Existing ground level view looking south from west of the roundabout at the intersection of Ashworth Avenue North and North 36th Street.

▪ **Viewpoint 4** – *Ground level view looking south from south of the intersection of Interlake Avenue North and North 36th Street:*

- Viewing population: The major viewing populations consist of private drivers and pedestrians. Because of the transient nature of the viewing population, the duration of viewer exposure is low.
- Existing views (Figure 6): The existing foreground view includes a downward-sloping streetscape lined with single family residences, multiple family residences, and commercial buildings. From this viewpoint, there is a linear progression of roadway, trees, sidewalk, power line, and parallel parked cars (along both sides of the street). Interlake Avenue terminates at the NRDS site, providing a prominent view of the transfer building and mature deciduous and coniferous trees.

Because of the position of transfer building, the existing distant view of the downtown skyline is limited to the upper levels of the downtown buildings, although the view of the downtown skyline is still prominent. Several subsidiary buildings on the west side of the downtown skyline are partially occluded by mature trees west of the NRDS transfer building. There is a middleground view of Queen Anne Hill. The views are diverse with a distant view of downtown, a middleground view of Queen Anne, and foreground views of various manmade features and mature vegetation. The stand of mature trees creates a sense of intactness and unity by softening the visual intrusion of the bulky transfer building. There is an overall average visual quality.

- Views with project: If the construction of the transfer building extends further west from the current position, and/or to a greater height in compliance with the zoning code, it will be highly visible from the post-project foreground view. A portion of the downtown skyline will be lost from this view. The viewing population will retain distant downtown skyline views of the upper levels of buildings (to the east), but views of the less vertically extensive buildings to the west will be lost if the current building footprint is extended westwards. The mature vegetation that complements and diversifies the view will be removed for the purpose of the proposed construction, adversely impacting the view. Queen Anne will remain visible. The existing visual quality will change from average to moderately low.



Figure 6. Viewpoint 4 - Existing ground level view looking south from south of the intersection of Interlake Avenue North and North 36th Street.

- **Viewpoint 5** – *Ground level view looking south from the sidewalk 15 feet west of the northwest corner of North 35th Street and Interlake Avenue North:*
 - Viewing population: The major viewing populations consist of pedestrians and patrons and employees of the adjacent business (L & O Distributing). Because of the transient nature of the viewing population, the duration of viewer exposure is low.
 - Existing views (Figure 7): The existing foreground view includes the western face of the transfer building, cyclone fence, and stands of coniferous and deciduous trees on the NRDS site. Other views include 35th Street North, sidewalks, parked cars, and light poles. No distant views are present. The mature stand of trees provides intactness and unity between the natural and built environment. The view from this vantage point is limited to foreground views, and lacks diversity and significance, resulting in moderately low visual quality.
 - Views with project: If the construction of the transfer building extends further west from the current position, it will be highly visible from the post-project foreground view. Some of the mature vegetation will be removed for the purpose of the proposed construction, adversely impacting the view. The existing moderately low visual quality will become low.



Figure 7. Viewpoint 5 - Existing ground level view looking south from the sidewalk fifteen feet west of the northwest corner of North 35th Street and Interlake Avenue North.

- **Viewpoint 6** – *Second story view looking south from in front of the residential property on the northwest corner of Ashworth Avenue North and North 35th Street:*

Note: Because the second story viewpoint is from the perspective of private property, the viewpoint description is assumed rather than actual. The photograph used for Viewpoint 6 for Figure 8 was captured from the sidewalk (ground-level view) in front of the private residence.

- Viewing population: The major viewing population consists of a person or persons dwelling at the two-story, single family residential property. Because of the permanency of the viewing population, the duration of viewer exposure is high.

Existing views (Figure 8): The existing foreground view includes a streetscape that separates the viewer's property from the NRDS site. Beyond the streetscape is a view of the north and east facing sides, and the broad, flat roof of the transfer building. The distant view includes the downtown Seattle skyline and middleground views of Lake Union. To the west (out of the right-hand side of Figure 8), the view includes the rolling topography of the west side of the Queen Anne neighborhood and the broad expanse of the Aurora Bridge. The prominent view is that of Lake Union and the downtown skyline. Because of the prominence of nearby visual elements on the NRDS site, the distant views from this viewpoint are of average visual quality.

- Views with project: If the construction of the transfer building extends further west and/or to a greater height in compliance with the zoning code, the post-project view will likely change very little. Prominent distant views will remain intact; therefore, the visual quality from this viewpoint will remain average.



Note: Viewpoint discussion in text describes the view from the second story of the residential property.

Figure 8. Viewpoint 6 - Existing ground-level view looking south from in front of the residential property on the northwest corner of Ashworth Avenue North and North 35th Street.

- **Viewpoint 7** – *First story view looking south from in front of the residential property on the northeast corner of Ashworth Avenue North and North 35th Street:*

Note: Because the first story viewpoint is from the perspective of private property, the viewpoint description is assumed rather than actual. The photograph used for Viewpoint 7 for Figure 9 was captured from the sidewalk (ground-level view) in front of the private residence.

- Viewing population: The major viewing population consists of a person or persons dwelling at the one-story, single family residential property. Because of the permanency of the viewing population, the duration of viewer exposure is high.

Existing views (Figure 9): The existing foreground view includes a streetscape that separates the viewer's property from the NRDS site. The streetscape consists of sidewalks, several mature trees, and utility poles. Two prominent, mature trees are in the right-of-way closest to the viewer's property line. Beyond the right-of-way is an abrupt drop in elevation to the NRDS site with minimal landscaping. The drop in elevation to NRDS eliminates views of lower-lying features, but it does not obscure the view of the bulky transfer building or large vehicles passing through the site.

The prominent distant view includes the Seattle skyline and the west side of Queen Anne with some interruption by utility poles and trees (including trees nearest the property line). The change in topography from a higher elevation to a lower elevation offers some openness and diversity to the view. The distant view of the downtown skyline adds visual diversity to the foreground view. The existing visual quality is average to moderately low.

- Views with project: If the location of the NRDS transfer building is extended further east, and/or to a greater height in compliance with the zoning code, it will likely result in a post-project view that includes a greater foreground view of the horizontally extensive transfer station. The transfer station will dominate the view. The vividness from this viewpoint will be lessened by the elimination of the view of the downtown skyline. Compared to existing conditions, diversity will be lessened and the openness will become closed. The visual quality from this viewpoint will decrease to low.



Figure 9. Viewpoint 7 - Existing ground-level view looking south from in front of the residential property on the northeast corner of Ashworth Avenue North and North 35th Street.

- **Viewpoint 8** – *First story view looking south from in front of the residential property (1506 North 35th Street) on North 35th Street between Ashworth Avenue North and Carr Place North:*

Note: Because the first story viewpoint is from the perspective of private property, the viewpoint description is assumed rather than actual. The photograph used for Viewpoint 8 for Figure 10 was captured from the sidewalk (ground-level view) in front of the private residence.

- Viewing population: The major viewing population consists of a person or persons dwelling at the single family residential property. Because of the permanency of the viewing population, the duration of viewer exposure is high
- Existing views (Figure 10): The existing foreground view includes the eastern face of the transfer building, cyclone fence, ancillary buildings, vehicles, light poles, and stands of coniferous and deciduous trees of the NRDS site. Other foreground views include 35th Street North, sidewalks, a large deciduous tree in the right-of-way, parked cars, power lines, and beyond the NRDS site, the office building at the terminus of Carr Place North.

Distant views include the tops of downtown skyscrapers, and the top of the Space Needle. The middleground views of Lake Union (and associated marine craft) with a backdrop of the west side of Queen Anne create a sense of diversity. The mature trees in the foreground provide connectivity to trees visible on Queen Anne. The view from this vantage point is average.

- Views with project: If the construction of the transfer building extends further east from the current position, and/or to a greater height in compliance with the zoning code, it will be highly visible from this viewpoint. The entire view of Lake Union and much of the view Queen Anne Hill could be lost. Some of the mature vegetation will be removed for the purpose of the proposed construction, adversely impacting the view further. Views of the tops of downtown skyscrapers, the upper elevations of Queen Anne, and the Space Needle will be maintained. The existing visual quality will become low.



Figure 10. Viewpoint 8 - Existing ground-level view looking south from in front of the residential property (1506 North 35th Street) on North 35th Street between Ashworth Avenue North and Carr Place North.

Light and Glare

Due to the proximity of residences to NRDS, light and glare from the NRDS facility have the potential to cause impacts. Glare from reflective surfaces is not a current issue at the site. The site is illuminated for security with a combination of approximately seven double-headed, tall light poles, ten single-headed tall light poles and eight-wall mounted light fixtures. Primarily the luminaires cast light onto the site, limiting light exposure to the adjacent streets and structures. The wall-mounted fixtures on the south face of the building cast light outward from the structure, contributing to glare along North 34th Street. Additional light from inside the main structure is visible through the architectural fenestration, although the light is subdued.

Lighting on the reconstructed NRDS site will be similar to the lighting provided at the current site. Light fixtures will illuminate the site for security reasons. Luminaires that cast light downward toward the ground will be selected rather than luminaires that cast light outward toward the surrounding residential properties. Non-reflective materials will be utilized for the construction of the new facilities to reduce glare toward adjacent properties. The transfer building will be a solid-walled structure, and will be less visually porous. As a result, less light will exude from the building and glare visible from adjacent properties will probably be reduced in comparison to the existing building.

Shadow Analysis

Design details of specific project elements have not yet been determined. However, to evaluate the shadows cast by a potential transfer station footprint that may be horizontally larger (to the east and west) than the existing transfer station, a specific methodology was used to determine shading to the residential housing north of the proposed project. The dates of December 21 and June 21 were used as the basis for this analysis. On December 21 of each year, the sun is the lowest in the sky and shadows are longest, and on June 21 of each year, the sun is highest in the sky and shadows are comparatively shorter. The times of 9 a.m., noon, and 3 p.m. were used as the representative hours to demonstrate shadow lengths on December 21 and June 21.

From November through January, it is likely that shadows are cast on the front yards of the residential homes north of North 35th Street that extend from Ashworth Avenue North west to Interlake Avenue North during the midday hours. Mid morning sun likely casts shadows on the school located on the northeast corner of Interlake Avenue North and L & O Distributing located on the northwest corner of Interlake Avenue North. Because of a difference in grade, shadows are not cast on buildings north of the existing transfer building at 3 p.m. No shadows are cast on buildings north of North 35th Street during the remaining months of the year.

If the footprint of the transfer station were extended further east, properties along 35th Avenue North that do not currently have shadows cast on them will probably have shadows cast on them during the morning hours from the end of November through the end of January. The number of

private residential homes east of the school (northeast corner of Interlake Avenue North and North 35th Street) that could have shadow impacts increases as the footprint of the proposed transfer station extends in an easterly direction. If the transfer station is extended to the eastern fence line of the NRDS site, the affected properties could likely include the following:

- A residential home at the northeast intersection of 35th Street North and Ashworth Avenue
- A residential home at 3511 Ashworth Avenue North
- Residential homes north of North 35th Street that extend west of Ashworth Avenue North to Interlake Avenue North.

Because of the difference in grade, it is unlikely that shadows would be cast on residential homes during the mid to late afternoon hours from the end of November through the end of January. No shadows are likely to be cast during the remaining months of the year.

Historic records show that the mean monthly percent of possible sunshine for the Seattle-Tacoma area during the months of September to March ranges from 23 percent to 62 percent. From April to August, the monthly averages of sunshine range from a low of 52 percent to a high of 65 percent (WRCC 2007). Because of the projected duration (months and times of day) and the extent of shadowing from the proposed transfer building, the influence of shadowing will likely be low.

Depending on the time of year, location, and size of the property, shadows will both partially and completely encompass sidewalks, driveways, and roadways immediately north of the transfer building on all days of the year.

Construction Impacts

Construction, which is expected to last between 20 and 28 months, will likely include the visual presence of construction equipment, workers, materials, debris, signage, and staging areas. Temporary visual quality impacts from the presence of construction related equipment and activities will be incurred by the users (primarily drivers) of local streets, business owners and their employees, residents of homes north of the site, pedestrians, and bicycle commuters. Visual impacts will also likely include light and glare from temporary construction lighting, the loss of mature vegetation, impaired views for adjacent residential housing, and loss of views outside the construction areas due to visual distraction of construction (e.g., the downtown skyline).

Potential Features to Limit Project Impacts

The City could include features within the design to limit impacts on views and the visual character of the area with special attention to at-grade pedestrian activity and residents living north of the site as follows:

Operation

- Consistent architectural styling that minimizes visual attention to NRDS site
- Consistent lighting supports and fixtures
- Lighting that is both functional and non-intrusive to residents living north of the site and near the proposed employee parking area
- Landscape materials, street trees, and other vegetation treatments that will obscure and enhance the outer appearance of the NRDS site and the proposed employee parking area north of the site
- Aesthetically benign architectural features within the NRDS site to limit the visual prominence of the NRDS site and retain visual awareness of surroundings with higher visual quality.

Construction

- Construction could include visual features to inform public of construction activities including displays to provide public notification of detours, area closures, and a public access plan with graphics
- Maintenance of an organized and clean work site
- Control of queuing to prevent vehicles from lining up along the roads
- Completing construction promptly to limit the duration of construction impacts.

| Viewpoint Location | | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 |
|----------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Alternative | | Existing | Build | Existing | Build | Existing | Build | Existing | Build | Existing | Build | Existing | Build | Existing | Build | Existing | Build |
| View Orientation | | South | South | South | South | South | South | South | South | South | South |
| View Distance | Foreground | 0 to ¼ mile | 0 to ¼ mile | 0 to ¼ mile | 0 to ¼ mile | 0 to ¼ mile | 0 to ¼ mile | 0 to ¼ mile | 0 to ¼ mile | 0 to ¼ mile | 0 to ¼ mile |
| | Middleground | NA | NA | NA | NA | NA | NA | ¼ to 2 miles | ¼ to 2 miles | NA | NA | ¼ to 2 miles |
| | Background | >2 miles | >2 miles | >2 miles | >2 miles | >2 miles | >2 miles | >2 miles | >2 miles | >2 miles | >2 miles |
| Viewer Position | Inferior | | | | | | | | | X | X | | | | | | |
| | Level | | | | | | | | | | | | | | | | |
| | Superior | X | X | X | X | X | X | X | X | | | X | X | X | X | X | X |
| Vividness | Landform | 1 | 1 | 6 | 6 | 6 | 6 | 4 | 2 | 2 | 0 | 7 | 7 | 5 | 1 | 5 | 1 |
| | Waterform | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 6.5 | 6.5 | 0 | 0 | 4 | 0 |
| | Vegetative | 1 | 3 | 5 | 6 | 4 | 5 | 6 | 7 | 6 | 6 | 4 | 4 | 5 | 2 | 3 | 4 |
| | Human Made | 2 | 5 | 8 | 8 | 9 | 9 | 5 | 2 | 1 | 1 | 8 | 8 | 5 | 1 | 5 | 1 |
| | Average | 1 | 2.25 | 4.75 | 5 | 5 | 5.25 | 3.75 | 2.75 | 2.25 | 1.75 | 6.38 | 6.38 | 3.75 | 1 | 4.25 | 1.5 |
| Intactness | Development | 2 | 2 | 6 | 6 | 4 | 4 | 3 | 2 | 3 | 1 | 7 | 7 | 2 | 1 | 3 | 1 |
| | Encroachment | 7 | 3 | 4 | 4 | 3 | 2.5 | 3 | 2 | 4 | 3 | 3 | 2 | 3 | 2 | 3 | 2 |
| | Average | 4.5 | 2.5 | 4.5 | 4.5 | 4.5 | 3.25 | 3 | 2 | 3.5 | 2 | 5 | 4.5 | 2 | 1.5 | 3 | 1.5 |
| Unity | Overall | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 2 | 4 | 2 | 5 | 5 | 4 | 1 | 3 | 1 |
| Total Visual Quality | | 2.43 | 2.57 | 4.71 | 4.86 | 4.29 | 4.36 | 3.60 | 2.43 | 2.86 | 1.85 | 5.79 | 5.64 | 3.43 | 1.14 | 3.76 | 1.43 |

| Visual Quality Assessment Rating Scale | | | |
|--|---------------------|-------------------------|--------------------------|
| Vividness | Unity | Intactness: Development | Intactness: Encroachment |
| 10 Very High | 10 Very High | 10 Very High | 10 None |
| 9 High | 9 High | 9 High | 9 Few |
| 7,8 Moderately High | 7,8 Moderately High | 7,8 Moderately High | 7,8 Some |
| 4,5,6 Average | 4,5,6 Average | 4,5,6 Average | 4,5,6 Average |
| 2,3 Moderately Low | 2,3 Moderately Low | 2,3 Some | 2,3 Several |
| 1 Low | 1 Low | 1 Little | 1 Many |
| 0 Very Low | 0 Very Low | 0 None | 0 Very Many |

Figure 11. Visual analysis matrix.

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