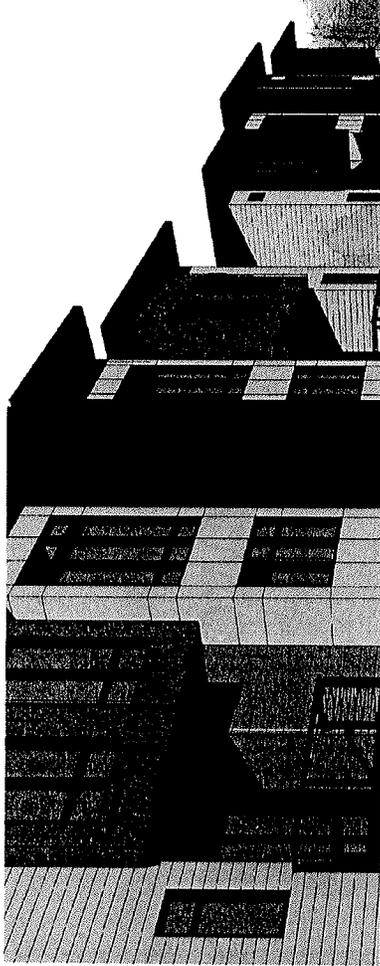


DESIGN INTENT PACKAGE

April 20, 2015



BREVA TOWNHOMES

SITE SIGNAGE

JOB ADDRESS: PARCEL # 2825059171 / 16229 Northrup Way / Bellevue WA, 98008

OWNER:

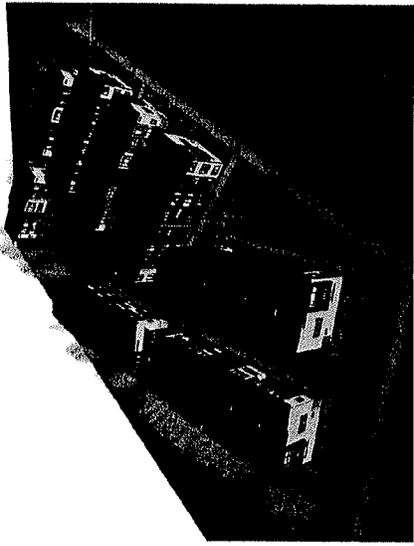
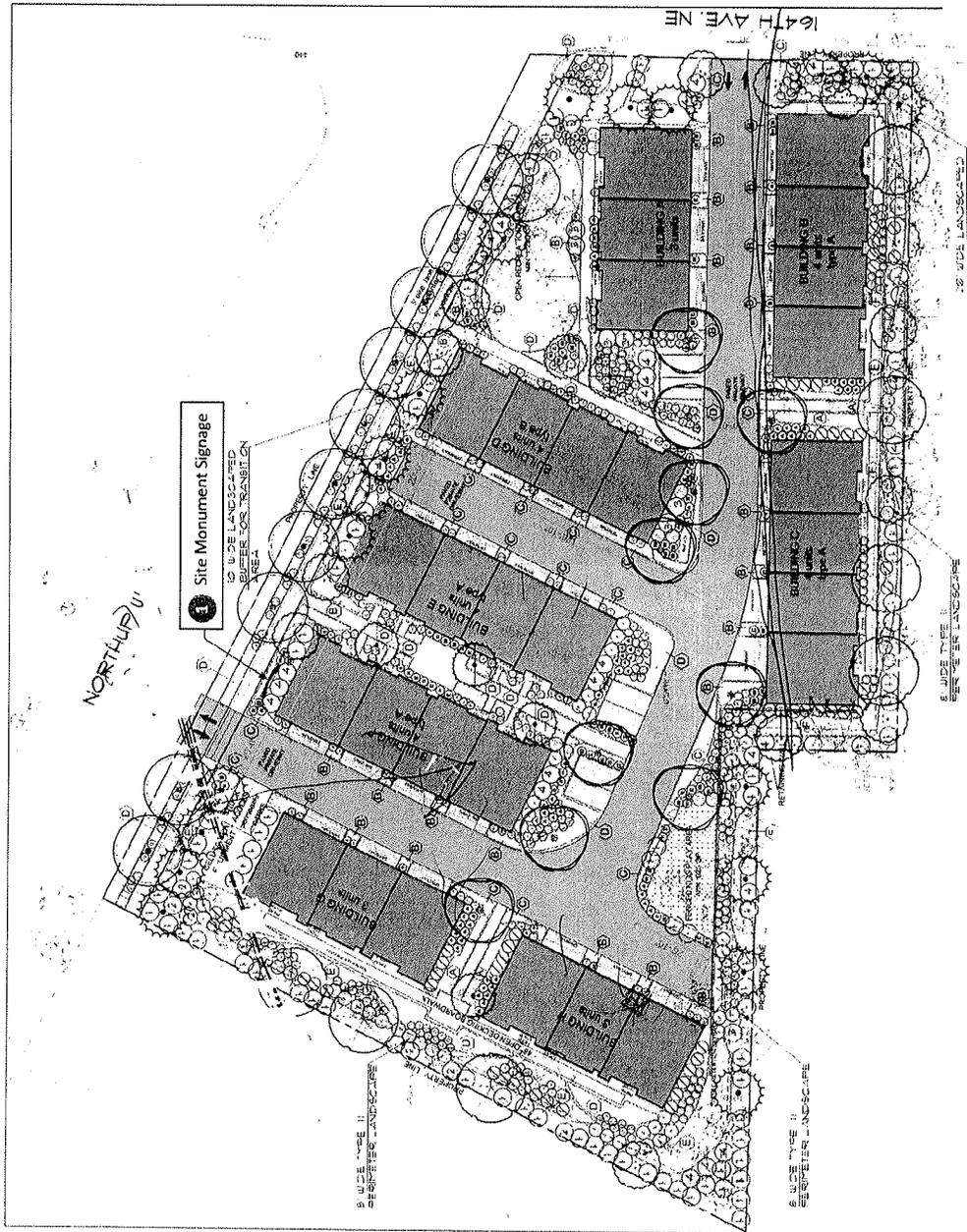
Barbara Rodgers / Sr. Land Development Manager
Quadrant Homes
14725 SE 36th, Ste 200
Bellevue, WA 98006
425-452-6542

CIVIL ENGINEER:

BCRA // Justin Goroch
2106 Pacific Avenue, Suite 300
Tacoma, WA 98402
253-627-4367
jgoroch@bcradesign.com



10/15/15
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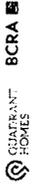


PERSPECTIVE 1



PERSPECTIVE 2

Monument Signage DESIGN



OVERVIEW

1. Base is to be poured in place sack finished concrete / top edge to be beveled for water run-off.
2. Primary background to be rolled 3/16" aluminum plates with exposed rivet detail / painted to match building color spec.
3. Top (horizontal) 1/4" thick panel centered and mounted on metal back panel. Additional horizontal panels to be surface mounted to front face of sign panel / painted to match building color spec.
4. Development mark (BREVVA) to be pin mounted 1/4" plate metal / painted to match brand standard color spec or accent metal spec.
5. Font used is **Tw Cen MT**
6. External illumination of front face by flood lighting.

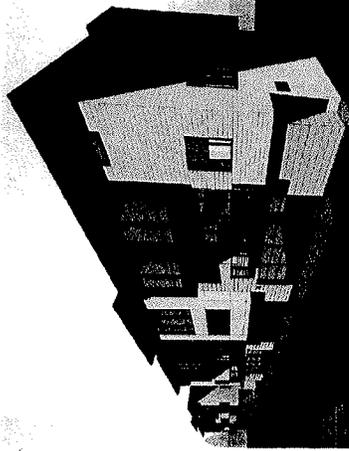


FRONT ELEVATION

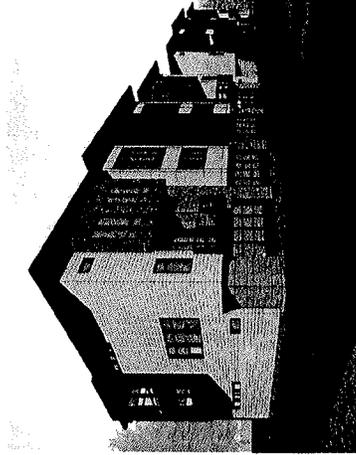


PLAN VIEW

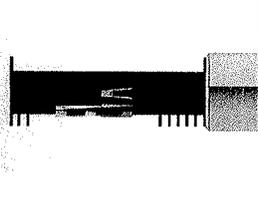
SCALE: 1/2"=1'-0"



PERSPECTIVE 3 - Townhome Design reference



PERSPECTIVE 4 - Townhome Design reference



SIDE ELEVATION - right

Masons Townhomes

16229 Northup Way, Bellevue WA
Parcel #2625059171

APR 22 2015
Permit Processing

Description of Proposal & Design Intent - Describe the total proposal and how it complies with the Design Review Criteria, the Transition Area or other relevant design criteria of the Land Use Code. Relate the criteria to the site; structure's, existing and proposed; planting; the context of surrounding environment; transition zoning (if applicable); parking (include number of proposed spaces by use); building area by use, building height and square footage; and overall consistency with plans and policies.

PROJECT DESCRIPTION:

Construction of 29 3-story townhouses on single parcel along with site development that includes 6 on-site parking stalls, landscaping, children's play area, frontage improvements and utilities. Each townhome has parking for 2 spaces within the first level of the buildings. Building totals 70,834 SF with 23,490 SF building footprint for 33% site coverage. Total impervious surface area is 44,000 SF or 61% coverage.

Existing Masonic Lodge building and all existing site improvements will be removed for this development. Some trees along property lines in setbacks and a minimum of 15% of the trees internal to the site will be retained. Much of the remaining existing vegetation internal to the site and the low lying landscaping along the property lines will be cleared from site in preparation for development.

ZONING and USE:

Comprehensive Plan designation: This project is located within the Crossroads Subarea and includes SF-M (single family medium), MF-M (multi-family medium) and MF-H (multi-family high). *The project use and site development is consistent with this designation.*

Zoning: R3.5 – Single Family, R20 & R30 - Multi-family within the Transition Area Design District. *The project use and site development is consistent with this designation.*

The property is surrounded by single- and multi-family housing some religious houses of worship further down the street. This Project is designed to comply with zone requirements for lot coverage, building height, parking and most landscaping requirements. An Alternative Landscape Option is being requested for the 20' street frontage buffer requirement to reduce the amount to 14' of width with an intervening sidewalk.





The building and site are designed to comply with requirements of the Transition Area Design District, including maximum building height of 30', building setbacks and landscape buffers. Surface parking areas are very limited, internal to the site, and appropriately screened. Mechanical equipment and refuse containers will be appropriately screened. Buildings are designed as described below.

BUILDING DESCRIPTION:

The architectural concept for the Breva project is in the "Northwest Contemporary" style. Exteriors will have some feature walls clad in horizontal cedar. The main bodies of each building will be painted smooth Hardie panels and smooth Hardie lap siding. At the entries there will be powder coated steel awnings. Along elevated walkways there will be powder coated steel guardrails and posts. The painted garage doors will have some glazing. All of the windows will be dark vinyl. The roofs will all be membrane roofing, light grey in color.

The building facades incorporate architectural modulation to create a variety of material and color changes. This will break down the scale and give a more residential aspect to the design.

The color palette is of earth grey tones with bright accents to enhance building details and be consistent with neighboring buildings. Building heights will vary, but will not exceed the 40-foot maximum height allowed per the zoning code with bonuses. Please reference the building materials and color samples submitted with this application.

ENVIRONMENTAL CHECKLIST

10/9/2009

Thank you in advance for your cooperation and adherence to these procedures. If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call Development Services (425-452-6800) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service).

INTRODUCTION**Purpose of the Checklist:**

The State Environmental Policy Act (SEPA), Chapter 43.21c RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the City of Bellevue identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the City decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Answer the questions briefly, with the most precise information known, or give the best description you can. You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer or if a question does not apply to your proposal, write "do not know" or "does not apply." Giving complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the Planner in the Permit Center can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. Include reference to any reports on studies that you are aware of which are relevant to the answers you provide. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.

Use of a Checklist for Nonproject Proposals: *A nonproject proposal includes plans, policies, and programs where actions are different or broader than a single site-specific proposal.*

For nonproject proposals, complete the Environmental Checklist even though you may answer "does not apply" to most questions. In addition, complete the Supplemental Sheet for Nonproject Actions available from Permit Processing.

For nonproject actions, the references in the checklist to the words *project*, *applicant*, and *property* or *site* should be read as *proposal*, *proposer*, and *affected geographic area*, respectively.

Attach an 8 ½" x 11 vicinity map which accurately locates the proposed site.

BACKGROUND INFORMATION

Property Owner:

Proponent:

Contact Person:

(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address:

Phone:

Proposal Title: Breva Townhomes

Proposal Location:

(Street address and nearest cross street or intersection) Provide a legal description if available.

Please attach an 8 ½" x 11" vicinity map that accurately locates the proposal site.

Give an accurate, brief description of the proposal's scope and nature:

1. General description: Construction of 29 3-story townhouses on single parcel along with site development such as landscaping, children's play area, frontage improvements and utilities.
2. Acreage of site:
3. Number of dwelling units/buildings to be demolished:
4. Number of dwelling units/buildings to be constructed:
5. Square footage of buildings to be demolished:
6. Square footage of buildings to be constructed: 70,834 SF
7. Quantity of earth movement (in cubic yards): 3400 CY
8. Proposed land use: multi-family townhouses
9. Design features, including building height, number of stories and proposed exterior materials:
3 stories; balconies and bay window elements; hardie panel & lap siding; accent colors
10. Other

Estimated date of completion of the proposal or timing of phasing:

From May 2016 to May 2017

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Geotechnical Evaluation; prepared by Associated Earth Sciences; January 2015
Preliminary Storm Drainage Report; prepared by BCRA; April 2015

Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known.

List any government approvals or permits that will be needed for your proposal, if known. If permits have been applied for, list application date and file numbers, if known.

Typical Building and Site Development Permits, including Clearing & Grading and Utility permits. City of Bellevue
Right-of-way Use Permit from City of Bellevue Transportation Dept
Developer Extension Agreement for Water, Sewer & Storm
Demolition permit through Puget Sound Clean Air Agency (PSCAA)

Please provide one or more of the following exhibits, if applicable to your proposal.
(Please check appropriate box(es) for exhibits submitted with your proposal):

- Land Use Reclassification (rezone) Map of existing and proposed zoning
- Preliminary Plat or Planned Unit Development
Preliminary plat map
- Clearing & Grading Permit
Plan of existing and proposed grading
Development plans
- Building Permit (or Design Review)
Site plan
Clearing & grading plan
- Shoreline Management Permit
Site plan

A. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site: Flat Rolling Hilly Steep slopes Mountains Other
- b. What is the steepest slope on the site (approximate percent slope)? 50% slope SW corner
- c. What general types of soil are found on the site (for example, clay, sand, gravel, peat, and muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.
- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Cut: 100 Cu. Yd.

Fill: 3,300 Cu. Yd. The source of fill is not yet known but will be from an approved location.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?
Approximately 61% of the site will be covered with buildings and impervious surfaces after the project is completed.
- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

2. AIR

- a. What types of emissions to the air would result from the proposal (i.e. dust, automobile odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
Some emissions are anticipated as a direct result of the construction workers use of personal and company vehicles to and from the subject site and from the operation of construction equipment. Once the buildings are occupied, resident automobile exhaust will be the main source of emissions.
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
- c. Proposed measures to reduce or control emissions or other impacts to the air, if any:

3. WATER

- a. Surface
 - (1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
 - (2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If Yes, please describe and attach available plans.

- (3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

- (4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

- (5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

- (6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

b. Ground

- (1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description.

During the soils testing, slight to moderate ground water seepage occurred in the SW corner of the site and is likely perched groundwater due to the somewhat impermeable barrier of lodgement till soils. A temporary stormwater pump may be used to manage groundwater during construction. No water is anticipated be discharged to ground water.

- (2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

c. Water Runoff (Including storm water)

- (1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Stormwater from the private road that provides access to the site will flow to Filterra units for treatment. Some of the sidewalks and landscaped areas on the site will sheet flow to the private road and flow to the Filterra units. The treated stormwater will then be conveyed to an underground detention vault. Stormwater from the roofs and the remaining sidewalks and landscaped areas will be collected by a system of pipes, ditches and catch basins that will convey them directly to the detention vault. Detention

- (2) Could waste materials enter ground or surface waters? If so, generally describe.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

4. Plants

a. Check or circle types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other madrona
- evergreen tree: fir, cedar, pine, other spruce
- shrubs
- grass
- pasture
- crop or grain
- wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Some trees along property lines in setbacks and a minimum of 15% of the trees interior to the site will be retained. Much of the remaining existing vegetation internal to the site and the low lying landscaping along the property lines will be cleared from site in preparation for development.

c. List threatened or endangered species known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

5. ANIMALS

a. Check or circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

- Birds: hawk, heron, eagle, songbirds, other: **Birds such as jays, crows, sparrows etc.**
- Mammals: deer, bear, elk, beaver, other: **Small mammals such as rodents/squirrels, raccoons**
- Fish: bass, salmon, trout, herring, shellfish, other:

- b. List any threatened or endangered species known to be on or near the site.
- c. Is the site part of a migration route? If so, explain.
- d. Proposed measures to preserve or enhance wildlife, if any:

6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy need? Describe whether it will be used for heating, manufacturing, etc.
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
- c. What kinds of energy conservation features are included in the plans of the proposal? List other proposed measures to reduce or control energy impacts, if any:

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

(1) Describe special emergency services that might be required.

(2) Proposed measures to reduce or control environmental health hazards, if any.

b. Noise

- (1) What types of noise exist in the area which may affect your project (for example, traffic, equipment, operation, other)?

- (2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example, traffic, construction, operation, other)? Indicate what hours noise would come from the site.

- (3) Proposed measures to reduce or control noise impacts, if any:

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties?

- b. Has the site been used for agriculture? If so, describe.

- c. Describe any structures on the site.

- d. Will any structures be demolished? If so, what?

- e. What is the current zoning classification of the site?

- f. What is the current comprehensive plan designation of the site?

- g. If applicable, what is the current shoreline master program designation of the site?

- h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

- i. Approximately how many people would reside or work in the completed project?
There will be 13 3-bedroom & 16 4-bedroom townhouses. There could potentially be anywhere from 80-130 occupants.
- j. Approximately how many people would the completed project displace?
None, as the Masonic temple did not house people and is currently not in use.

k. Proposed measures to avoid or reduce displacement impacts, if any:

i. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

c. Proposed measures to reduce or control housing impacts, if any:

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Buildings will not be taller than 30'. Materials for building envelope will be hardie panel siding, hardie lap siding, t&g cedar siding. Guardrails, entry lids and post will be steel. Windows & doors will be vinyl. Roof waterproof will

b. What views in the immediate vicinity would be altered or obstructed?

c. Proposed measures to reduce or control aesthetic impacts, if any:

Buildings will be designed to meet design standards. Building elevations are modulated with balconies and projections, multiple sloping roofs, and accent colors to help break up massing of elements.

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
- b. Could light or glare from the finished project be a safety hazard or interfere with views?
- c. What existing off-site sources of light or glare may affect your proposal?
- d. Proposed measures to reduce or control light or glare impacts, if any:

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?
- b. Would the proposed project displace any existing recreational uses? If so, describe.
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
The project will include an on-site fenced children's play area.

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
- b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site.
- c. Proposed measures to reduce or control impacts, if any:

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
- c. How many parking spaces would be completed project have? How many would the project eliminate?
All existing parking areas will be eliminated prior to development. Each townhome unit would have 2 parking



- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
- g. Proposed measures to reduce or control transportation impacts, if any:

15. Public Services

- a. Would the project result in an increased need for the public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
- b. Proposed measures to reduce or control direct impacts on public services, if any:

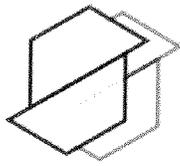
16. Utilities

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature..........Date Submitted.....04/21/2015.....
 Apr 20 2015 8:18 PM cosign



a s s o c i a t e d
e a r t h s c i e n c e s
i n c o r p o r a t e d

January 23, 2015
Project No. TE150011A

BCRA Design
2106 Pacific Avenue, Suite 300
Tacoma, Washington 98402

APR 22 2015

Permit Processing

Attention: Mr. Justin Goroch, P.E.

Subject: Limited Subsurface Exploration and Geotechnical Feasibility Evaluation
Bellevue Masonic Property
16229 Northup Way
Bellevue, Washington

Dear Mr. Goroch:

Associated Earth Sciences, Inc. (AESI) is pleased to submit this report describing our limited subsurface exploration and geotechnical feasibility evaluation of the existing Bellevue Masonic Center site in Bellevue, Washington. Our services were completed in general accordance with our proposal dated January 7, 2015, and were verbally authorized by you on January 13, 2015. AESI is also conducting a Phase I Environmental Site Assessment of the site, and that report will be submitted as a separate document.

1.0 PROJECT AND SITE DESCRIPTION

The project site is a commercial/residential parcel located in the Crossroads neighborhood of Bellevue, as shown on the attached "Vicinity Map" (Figure 1). This parcel is visually delineated by Northup Way on the north, by 164th Avenue NE on the east, and by multi-family residences on the west and south. It measures approximately 200 feet by 400 feet overall and encompasses about 1.8 acres. For several decades, the site has been occupied by a Masonic temple, but this facility is now abandoned. Our attached "Site and Exploration Plan" (Figure 2) illustrates the site boundaries and existing features.

Conceptual development plans call for removing all existing structures and other surface features, and then constructing a multi-family residential townhome complex on the site. No layout plans have yet been developed for this townhome complex, but we anticipate that all new buildings will be two- or three-story, at-grade, wood-frame structures with slab-on-grade

floors. We understand that some storm water might be infiltrated near the southwestern corner of the site, if soil conditions render this feasible.

2.0 PURPOSE AND SCOPE

AESI performed this prior-to-purchase geotechnical evaluation to broadly characterize subsurface conditions, from which we can determine the geotechnical feasibility of developing the site as envisioned. Our scope of work included the following tasks.

- Performed a visual surface reconnaissance of the site and immediate surroundings.
- Advanced four exploration pits (designated EP-1 through EP-4) to depths ranging from about 6 to 10½ feet, at strategic locations across the site as shown on Figure 2.
- Visually classified all soil samples obtained from our explorations.
- Analyzed all research and field data in context with the conceptually proposed site improvements.
- Prepared this geotechnical feasibility report summarizing our findings, conclusions, and recommendations.

3.0 FIELD EXPLORATION PROCEDURES

We explored subsurface conditions at the site on January 21, 2015. The number, locations, and depths of our explorations were completed within site access and budgetary constraints. Our exploration procedures are described below. The various types of sediments, as well as the depths where characteristics of the sediments changed, are indicated on the exploration logs presented in Appendix A. Soil contact depths shown on the logs should be regarded as only an approximation; the actual changes between sediment types are often gradational and/or undulating.

The conclusions and recommendations presented in this report are based, in part, on conditions encountered by our explorations completed for this study. Due to the nature of subsurface exploratory work, it is necessary to interpolate and extrapolate soil conditions between and beyond the field explorations. Differing subsurface conditions could be present outside the area of the explorations due to the random nature of deposition and the alteration of topography by past grading and/or filling. The nature and extent of any variations between the field explorations might not become fully evident until construction. If variations are observed at that time, it could be necessary to modify specific conclusions or recommendations in this report.

3.1 Exploration Pits

All exploration pits were performed by Northwest Excavating, Inc., working under subcontract to AESI. Each pit was dug using a track-mounted excavator so as to allow direct, visual observation of subsurface conditions. Materials encountered in the exploration pits were studied and classified in the field by a geologist from our firm. Before we left the site, all exploration pits were backfilled with excavated soils, and the surface was bucket-tamped. Selected samples were then transported to our laboratory for further visual classification and storage. Detailed descriptions of the sediments encountered are provided on the exploration logs included in Appendix A.

4.0 SITE CONDITIONS

The following text sections describe current site conditions, including existing site development, site topography, regional geology, local soils, and local ground water. Our sources of information include topographic maps published by the U.S. Geological Survey (USGS) and geologic maps published by Geo Map Northwest (GMNW) and the USGS.

4.1 Existing Development

The center of the site is currently occupied by a two-story, wood-frame, at-grade building. The surrounding areas are covered by asphalt-paved parking lots and access driveways, as well as landscaping grass, bushes, and trees. We did not observe any obvious indications of distress within the building or across the pavements.

4.2 Regional and Local Topography

The project site is situated on a large upland plateau east of Lake Sammamish. Regional surface grades across this plateau slope downward to the east at a slight angle. Local surface grades at the site are fairly flat and level, with an elevation of about 375 feet (USGS datum). It appears that minor grading was previously performed as part of the existing site development, particularly on the western side of the site, which appears to have been filled to level out the parking lot.

4.3 Regional Geology

The 2007 GMNW *Geologic Map of King County* and the 2012 USGS *Geologic Map of the East Half of the Bellevue South 7.5' x 15' Quadrangle, Issaquah Area, King County, Washington* (1:24,000 scale) indicate that the project site lies within a broad upland area underlain by Quaternary-age glacial lodgement till. It was deposited at the base of an active continental glacier during the Vashon Stade of the Fraser Glaciation approximately 15,000 years ago and was subsequently compacted to a very dense condition by the weight of the overlying glacial

ice. Typically, lodgement till comprises a very dense, unsorted mixture of silts, sands, gravels, cobbles, and boulders. Thicknesses can range from a few feet to several tens of feet.

4.4 Local Soils

Our exploration pits disclosed Vashon lodgement till below the site, as indicated on the above-referenced geology maps. Across part of the site, this native till deposit was mantled by uncontrolled fill soils. On-site soil conditions are summarized in the paragraphs below and are detailed on the attached exploration pit logs.

Uncontrolled Fill: Exploration pits EP-3 and EP-4, which were located on the western side of the site, encountered surficial fill soils (soils not naturally placed). This fill extended to depths of 3 to 5 feet and generally consisted of loose, silty, fine sand. It appears similar to the underlying weathered native till and was likely derived from on-site cuts. The loose condition indicates that the fill was placed in an uncontrolled manner. At the time of exploration, we observed that the existing fill was above its optimum moisture content for compaction purposes.

Lodgement Till: All four exploration pits encountered lodgement till immediately below the ground surface or below the uncontrolled fill soils (where present). This lodgement till consisted of silty, gravelly sand with scattered cobbles, and it extended to the full depths explored. Lodgement till typically possesses high strength and low-compressibility; however, the upper 2 to 3 feet of the on-site till was weathered to a loose or medium dense condition.

4.5 Local Ground Water

Slight to moderate ground water seepage was observed in EP-3, near the southwestern corner of the site, at a depth of about 5 feet. This seepage was flowing from the existing fill and weathered till, near the contact with the underlying unweathered, dense glacial till. We interpret the observed seepage to represent perched ground water. This condition can occur when surface water infiltrates down through relatively permeable soils, such as existing fill or weathered lodgement till, and becomes trapped or “perched” atop a comparatively impermeable barrier such as dense, unweathered lodgement till. No other seepages were observed on-site. However, the location, duration, and quantity of seepage will vary with soil type, topography, seasonal precipitation, on- and off-site land usage, and other factors.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on our surface reconnaissance, subsurface exploration, and document research, we conclude that the conceptually proposed site improvements are feasible from a geotechnical standpoint, contingent on proper design implementation and construction practices. Our general geotechnical conclusions and recommendations concerning future development are presented in the following paragraphs.

Geological Hazards: Our geotechnical evaluation did not reveal any geological hazards associated with steep slopes, erosion zones, landslide zones, peat deposits, or abandoned landfills, at or near the subject site. In addition, we infer that the dense glacial deposits underlying the site represent a negligible hazard with respect to seismically induced liquefaction. Earthquake activity is obviously a widespread hazard throughout Western Washington, but the risk of associated shaking and ground rupture does not appear to be any higher at this site than elsewhere in Bellevue. Consequently, the site development is not constrained by any geologic hazards, in our opinion.

Foundation Support: The dense lodgement till deposit underlying the site appears to be capable of supporting new buildings on conventional spread footings. Suitable bearing soils were observed at depths of about 1½ to 3 feet below existing grades on the eastern side of the site, and at depths of about 5 to 6½ feet below existing grades on the western side of the site (where it was overlain by several feet of uncontrolled fill soils). Footings could be extended downward to bear directly on the lodgement till or, alternatively, could bear on structural fill pads placed over the lodgement till. We anticipate that an allowable bearing pressure in the range of 3,000 to 6,000 pounds per square foot would be appropriate for footing design, depending on which subgrade option is selected. The existing uncontrolled fill is not suitable for structural support and would need to be removed from any future building areas.

Floor Support: We infer that slab-on-grade floors may be supported either directly on the undisturbed, medium dense to dense, native soils, or on structural fill placed over these native materials. The existing uncontrolled fill is not suitable for slab-on-grade floor support and would need to be removed from any future building areas. Where existing fill is overexcavated, it would need to be replaced with compacted structural fill.

Earthwork Considerations: Our explorations encountered uncontrolled fill soils in the western part of the site, and lodgement till underlying all four corners of the site. These soils are generally very moisture-sensitive and susceptible to disturbance when wet. The on-site native soils and portions of existing fill that are free of deleterious materials might be suitable for reuse as structural fill, provided they are placed at a moisture content suitable for achieving the specified compaction. Wet soils would likely require some moisture conditioning.

Seismic Site Class: The 2012 *International Building Code* (IBC) assigns a seismic Site Class on the basis of geological conditions prevailing within a depth of 100 feet below the local ground surface. Although our explorations did not extend to a depth of 100 feet, we infer from near-surface soil observations and from available geologic maps that the overall subsurface conditions correspond to Site Class "C" as defined by the IBC.

Infiltration Potential: We understand that infiltration near the southwest corner of the site is under consideration for management of storm water runoff from impervious surfaces. Our explorations indicate that this area is underlain by lodgement till. As noted previously, lodgement till typically has a very low permeability due to its high density, low porosity, and

high content of fine-grained material; consequently, these sediments are not considered a suitable receptor horizon for infiltration systems. Under some circumstances, deep infiltration structures, such as dry wells or Underground Injection Control (UIC) wells, can be used to access suitable receptor soils (typically advance outwash) below the lodgement till. However, our scope of work for this study was not intended to assess the feasibility of deep storm water infiltration. Typically, such an assessment would involve completion of deep exploration borings to verify the presence and depth of the receptor horizon, as well as the installation of a monitoring well to measure ground water depths. We are available to discuss this approach further upon request.

6.0 CLOSURE

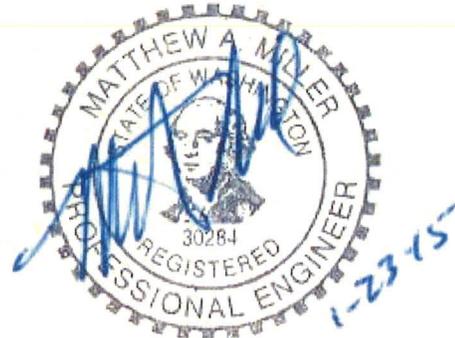
AESI has prepared this report for the exclusive use of our client and their agents, for specific application to this project. Within the limitations of scope and schedule, our services have been performed in accordance with generally accepted local geotechnical engineering practices in effect at the time our report was prepared. No other warranty, express or implied, is made.

We appreciate the opportunity to be of continued service to you on this project. Should you have any questions regarding this report or other geotechnical aspects of the project, please call us at your earliest convenience.

Sincerely,
ASSOCIATED EARTH SCIENCES, INC.
Tacoma, Washington



James M. Brisbane, P.E., L.G., L.E.G.
Senior Associate Geotechnical Engineer



Matthew A. Miller, P.E.
Principal Engineer

Attachments: Figure 1: Vicinity Map
 Figure 2: Site and Exploration Plan
 Appendix A: Exploration Logs

Document Path: H:\GIS_Projects\Templates\VM_Template\VM_Template\TempToDelete\Eventually\Project\Vicinity_King_150011.mxd



REFERENCE: USGS, KING CO

NOTE: BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.

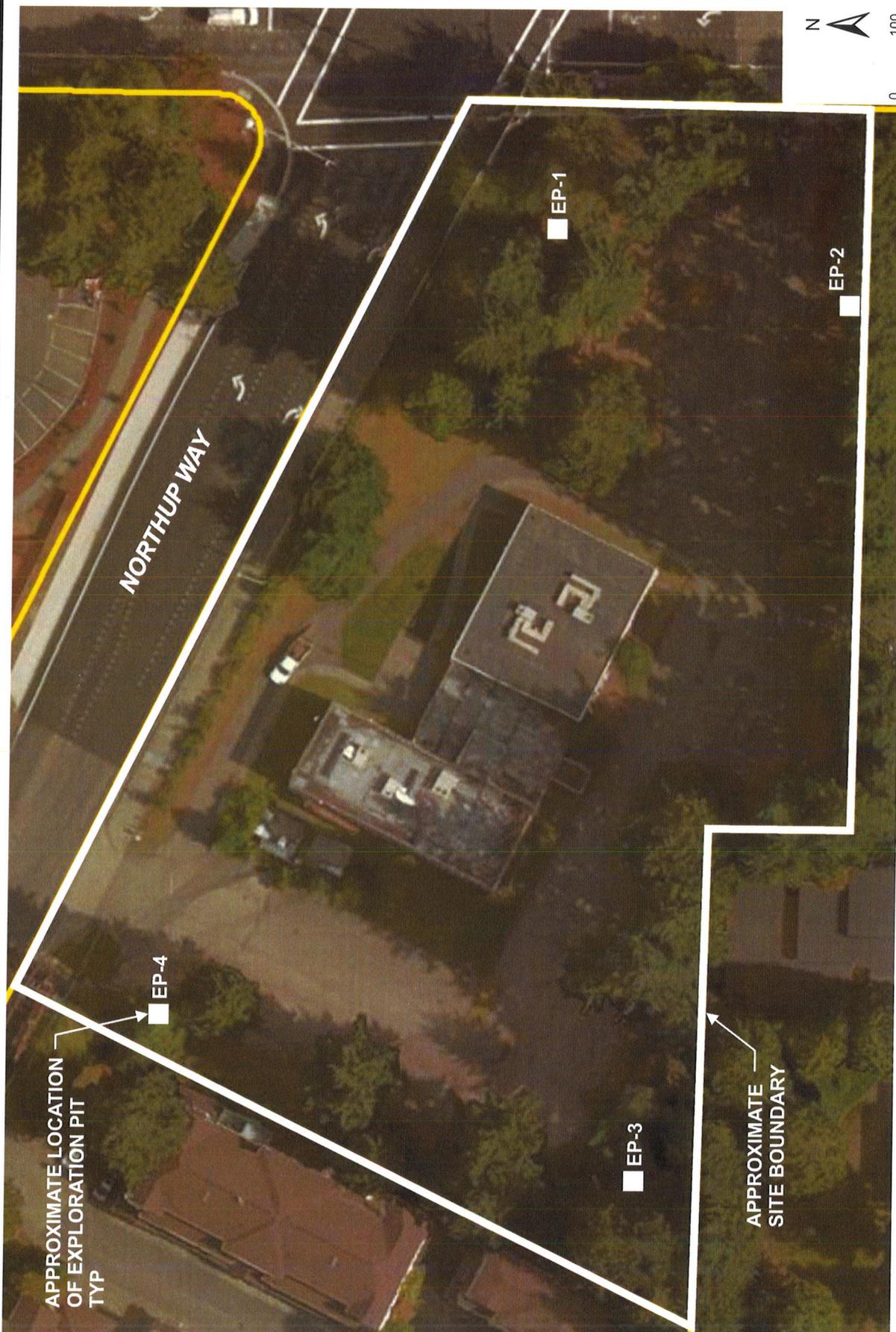


VICINITY MAP
 BELLEVUE MASONIC PROPERTY
 BELLEVUE, WASHINGTON

FIGURE 1

DATE 1/15

PROJ. NO. TE150011A



NOTE: BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.

REFERENCE: BING



associated
earth sciences
incorporated

SITE AND EXPLORATION PLAN
 BELLEVUE MASONIC PROPERTY
 BELLEVUE, WASHINGTON

FIGURE 2

DATE 1/15

PROJ. NO. TE150011A

APPENDIX A

Exploration Logs

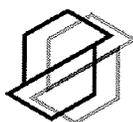
LOG OF EXPLORATION PIT NO. EP-1

Depth (ft)	
	<p>This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.</p> <p>DESCRIPTION</p>
1	<p>Weathered Vashon Lodgement Till</p> <p>Loose to medium dense, very moist, reddish brown, silty fine SAND, some gravel (SM).</p>
2	
3	<p>Vashon Lodgement Till</p>
4	<p>Very dense, moist to very moist, gray, silty fine SAND, some medium to coarse sand, some fine to coarse gravel; diamict (SM).</p>
5	
6	<p>Trace medium to coarse sand.</p>
7	<p>Bottom of exploration pit at depth 6 feet No seepage. No caving.</p>
8	
9	
10	
11	
12	
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17	
18	
19	
20	

KCTP3 150011.GPJ January 23, 2015

Bellevue Masonic Property Bellevue, WA

Logged by: LDM
Approved by: JNS



a s s o c i a t e d
e a r t h s c i e n c e s
i n c o r p o r a t e d

Project No. TE150011A

1/21/15

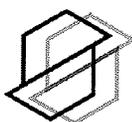
LOG OF EXPLORATION PIT NO. EP-2

Depth (ft)	DESCRIPTION
	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.
	Weathered Vashon Lodgement Till
1	Loose to medium dense, very moist, reddish brown, silty fine SAND, some gravel (SM).
	Vashon Lodgement Till
2	Very dense, moist to very moist, gray, silty fine SAND, trace medium to coarse sand, some fine to coarse gravel; diamict (SM).
3	
4	
5	
6	
7	
8	Bottom of exploration pit at depth 7 feet No seepage. No caving.
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

KCTP3 150011.GPJ January 23, 2015

Bellevue Masonic Property Bellevue, WA

Logged by: LDM
Approved by: JNS



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i n c o r p o r a t e d

Project No. TE150011A

1/21/15

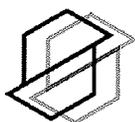
LOG OF EXPLORATION PIT NO. EP-3

Depth (ft)	DESCRIPTION
1	Fill
2	Loose, very moist, reddish brown, silty fine SAND, some gravel (SM).
3	
4	
5	Relict Topsoil
6	Weathered Vashon Lodgement Till
7	Loose to medium dense, very moist to wet, reddish brown, silty fine SAND, some gravel (SM).
8	Vashon Lodgement Till
9	Very dense, moist to very moist, gray to brown, silty fine SAND, trace medium to coarse sand, some fine to coarse gravel; diamict (SM).
10	
11	Bottom of exploration pit at depth 10.5 feet Moderate seepage 5 to 6 feet. Slight caving in old topsoil layer at 5 feet.
12	
13	
14	
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19	
20	

KCTP3 150011.GPJ January 23, 2015

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Project No. TE150011A

1/21/15

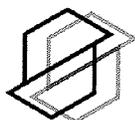
LOG OF EXPLORATION PIT NO. EP-4

Depth (ft)	DESCRIPTION
	Fill
1	Loose, very moist, reddish brown, silty fine SAND, some gravel (SM).
2	
3	Relict Topsoil
	Weathered Vashon Lodgement Till
4	Loose to medium dense, very moist, reddish brown, silty fine SAND, some gravel (SM).
5	Vashon Lodgement Till
6	Very dense, moist to very moist, gray to brown, silty fine SAND, trace medium to coarse sand, some fine to coarse gravel; diamict (SM).
7	
8	Bottom of exploration pit at depth 7 feet No seepage. No caving.
9	
10	
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KCTP3 150011.GPJ January 23, 2015

Bellevue Masonic Property Bellevue, WA

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Project No. TE150011A

1/21/15



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Masons Townhomes
Illumination Retrofit Calculations
RDM
04/20/15

Target Light Level

Tertiary & Tertiary Int (Retrofit)
Avg: 10.0Lux
Avg/Min: 6:1

Tertiary RD (Retrofit)
Avg: 5.0Lux
Avg/Min: 6:1

APR 22 2015
Permit Processing



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Luminaire Definition(s)

94W LED

94W LED

Filename	ERL1_E3E130_tcm201-92063.IES
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	6800
Luminaire Lumens	6800
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.820
Luminaire Watts	91
Arrangement Watts	91
Arrangement	SINGLE
Arm Length	9.5
Offset	0
Road Classification	Type II, Medium, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	927.4	N.A.	13.6
LCS-FM	2811.4	N.A.	41.3
LCS-FH	1340.4	N.A.	19.7
LCS-FVH	27.1	N.A.	0.4
LCS-BL	678.4	N.A.	10.0
LCS-BM	702.1	N.A.	10.3
LCS-BH	304.8	N.A.	4.5
LCS-BVH	8.2	N.A.	0.1
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	6799.8	N.A.	100.0
BUG Rating	B2-U0-G1		
Indoor Classification	Direct		
LER	75		

106W led

106W led

Filename	ers2_e3a1550-120-277v_tcm201-95195.ies
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	9100
Luminaire Lumens	9100
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.820
Luminaire Watts	99
Arrangement Watts	99
Arrangement	SINGLE



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Luminaire Definition(s) - Cont.

Arm Length 7.5
Offset 0
Road Classification Type I, Medium, N.A. (deprecated)
Upward Waste Light Ratio 0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	1679.4	N.A.	18.5
LCS-FM	2854.7	N.A.	31.4
LCS-FH	1489.1	N.A.	16.4
LCS-FVH	60.1	N.A.	0.7
LCS-BL	1044.0	N.A.	11.5
LCS-BM	1188.9	N.A.	13.1
LCS-BH	748.1	N.A.	8.2
LCS-BVH	35.8	N.A.	0.4
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	9100.1	N.A.	100.0

BUG Rating B3-U0-G2
Indoor Classification Direct
LER 92

54W LED-8ft

54W LED-8ft

Filename ERS1_B2B2540-120-277V_tcm201-92785.IES
Lumens Per Lamp N.A.
Number of Lamps 1
Total Lamp Lumens N.A.
Arrangement Lamp Lumens N.A.
Arrangement Luminaire Lumens 4200
Luminaire Lumens 4200
Luminaire Efficiency (%) N.A.
Total Light Loss Factor 0.820
Luminaire Watts 53
Arrangement Watts 53
Arrangement SINGLE
Arm Length 9.5
Offset 0
Road Classification Type II, Medium, N.A. (deprecated)
Upward Waste Light Ratio 0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	648.6	N.A.	15.4
LCS-FM	1471.4	N.A.	35.0
LCS-FH	907.7	N.A.	21.6
LCS-FVH	43.5	N.A.	1.0
LCS-BL	390.9	N.A.	9.3
LCS-BM	433.2	N.A.	10.3
LCS-BH	286.8	N.A.	6.8
LCS-BVH	17.9	N.A.	0.4
LCS-UL	0.0	N.A.	0.0



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Luminaire Definition(s) - Cont.

LCS-UH	0.0	N.A.	0.0
Total	4200.0	N.A.	100.0
BUG Rating	B1-U0-G1		
Indoor Classification	Direct		
LER	79		

67W LED

67W LED

Filename	ers1_c3b1540-347-480v_tcm201-94991.ies
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	6800
Luminaire Lumens	6800
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.820
Luminaire Watts	80
Arrangement Watts	80
Arrangement	SINGLE
Arm Length	7.5
Offset	0
Road Classification	Type II, Medium, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	1193.8	N.A.	17.6
LCS-FM	2742.3	N.A.	40.3
LCS-FH	1051.9	N.A.	15.5
LCS-FVH	42.8	N.A.	0.6
LCS-BL	679.7	N.A.	10.0
LCS-BM	742.2	N.A.	10.9
LCS-BH	328.3	N.A.	4.8
LCS-BVH	19.0	N.A.	0.3
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	6800.0	N.A.	100.0
BUG Rating	B2-U0-G1		
Indoor Classification	Direct		
LER	85		

55W LED-12

ERL1_C7D130_____ -347-480V

Filename	ERL1_C7D130-347-480V_tcm201-92013.IES
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.



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Luminaire Definition(s) - Cont.

Arrangement Luminaire Lumens	4700
Luminaire Lumens	4700
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.820
Luminaire Watts	55
Arrangement Watts	55
Arrangement	SINGLE
Arm Length	13.5
Offset	0
Road Classification	Type III, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	581.4	N.A.	12.4
LCS-FM	2102.4	N.A.	44.7
LCS-FH	1000.8	N.A.	21.3
LCS-FVH	18.7	N.A.	0.4
LCS-BL	384.8	N.A.	8.2
LCS-BM	473.2	N.A.	10.1
LCS-BH	136.5	N.A.	2.9
LCS-BVH	2.2	N.A.	0.0
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	4700.0	N.A.	100.0
BUG Rating	B1-U0-G1		
Indoor Classification	Direct		
LER	85		



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Calculation Summary

164th

Project: Project_1
Polygon
Coordinates in Feet

Point Spacing L-R	5
Point Spacing T-B	5
Grid Orient	0
Grid Tilt	0
Meter Type	Horizontal

Illuminance (Lux)	
Average	5.08
Maximum	30.9
Minimum	0.9
Avg/Min	5.64
Max/Min	34.33

INT-Northup&164th

Project: Project_1
Polygon
Coordinates in Feet

Point Spacing L-R	5
Point Spacing T-B	5
Grid Orient	0
Grid Tilt	0
Meter Type	Horizontal

Illuminance (Lux)	
Average	12.91
Maximum	31.2
Minimum	2.3
Avg/Min	5.61
Max/Min	13.57

NorthupWay

Project: Project_1
Polygon
Coordinates in Feet

Point Spacing L-R	5
Point Spacing T-B	5
Grid Orient	0
Grid Tilt	0
Meter Type	Horizontal



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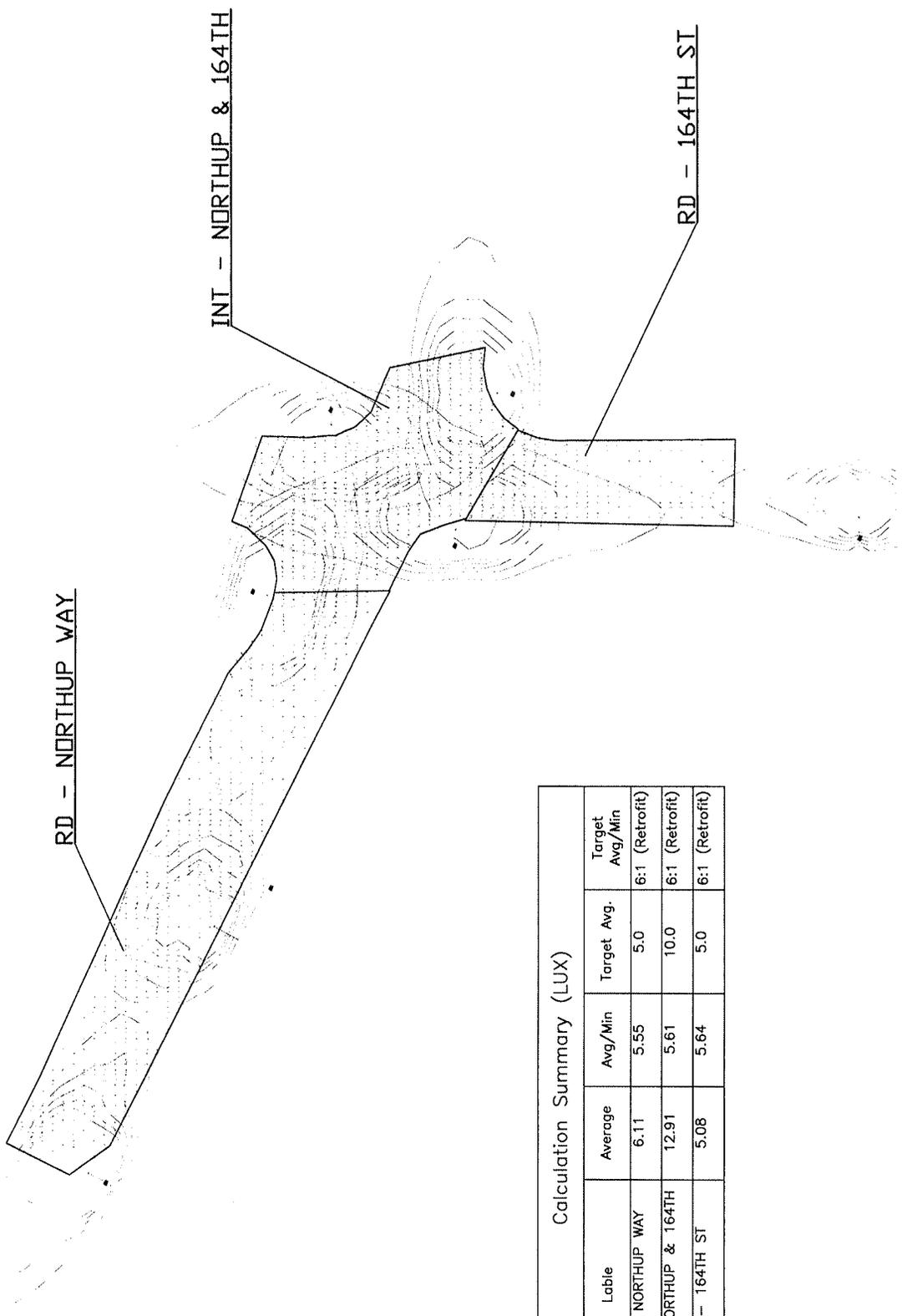
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Calculation Summary - Cont.

Illuminance (Lux)	
Average	6.11
Maximum	29.7
Minimum	1.1
Avg/Min	5.55
Max/Min	27.00



NOT TO SCALE



Calculation Summary (LUX)

Label	Average	Avg/Min	Target Avg.	Target Avg./Min
RD - NORTHUP WAY	6.11	5.55	5.0	6:1 (Retrofit)
INT - NORTHUP & 164TH	12.91	5.61	10.0	6:1 (Retrofit)
RD - 164TH ST	5.08	5.64	5.0	6:1 (Retrofit)

Illumination Calculation Areas

15090

M:\15\15090.PR - Masons Townhomes\Engineering\CAD\Supporting Files\illumination\QuadrantHomes.dwg<L1>Bobby Miller 4/20/2015 1:14 PM

FIGURE

1

