



UW North Physics Laboratory HRA

May 22, 2013

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1. Introduction



Background

The University of Washington is undertaking a reroofing project at the North Physics Lab, including the Van de Graaff Generator Building and the portion of the Cyclotron Building that connects to the Van de Graaff Building. In addition to replacing the roof, the work will include devices for roof access safety and security fencing to prevent unauthorized access to the Van de Graaff Building roof from grade to the west.

The North Physics Lab was developed in stages – the Cyclotron Building was constructed in 1948 and underwent several additions, and the Van de Graaff Accelerator Building was completed in 1964. This Historic Resource Addendum provides a description of the history and architectural character of the North Physics Lab, as well as its historical significance as judged by the preservation policies and criteria outlined in the 2003 Seattle Campus Master Plan.

Research Methods

The research used in the preparation of this HRA for the North Physics Lab included documentation of original plans and modifications from the University of Washington and its Facilities Records, research of historic photographs in the UW Libraries Special Collections, on-site investigations and documentation of current conditions, and review of the proposed plans and details for the roof replacement project.

Project Goals

As part of the University's ongoing roof repairs as well as the initiative to provide a safe working environment for all maintenance and repair work, the new roofing and devices for roof access safety are needed on the North Physics Lab in order to extend the useful life of the facility and carry out future envelope repairs. Security issues must also be investigated to discourage public access from the slope above the facility to the roof edge. This rooftop open space is often used for illicit activities and is difficult to monitor. The goal of this HRA is to analyze the proposed modifications and determine if they can be accomplished without negatively impacting the historic character of the buildings, and to suggest mitigation measures if needed.



North Campus, 1899

2. Historic Preservation Framework

The University Stewardship and Historic Preservation Policies

The University of Washington Campus Master Plan approved in 2003 sets forth the project review process to insure historic context. Excerpted language from the Campus Master Plan:

“To further ensure that historic resources are considered, the University will prepare an Historic Resources Addendum (HRA) for any project that makes exterior alterations to a building of over 50 years old. The HRA will be an attachment to all project documentation and be considered by the appropriate decision maker.

The information and analysis provided in the HRA provides a framework and context to insure that important elements of the campus, its historic character and value, environmental considerations and landscape context are preserved, enhanced, and valued. The HRA further insures that improvements, changes and modifications to the physical environment may be clearly analyzed and documented.”

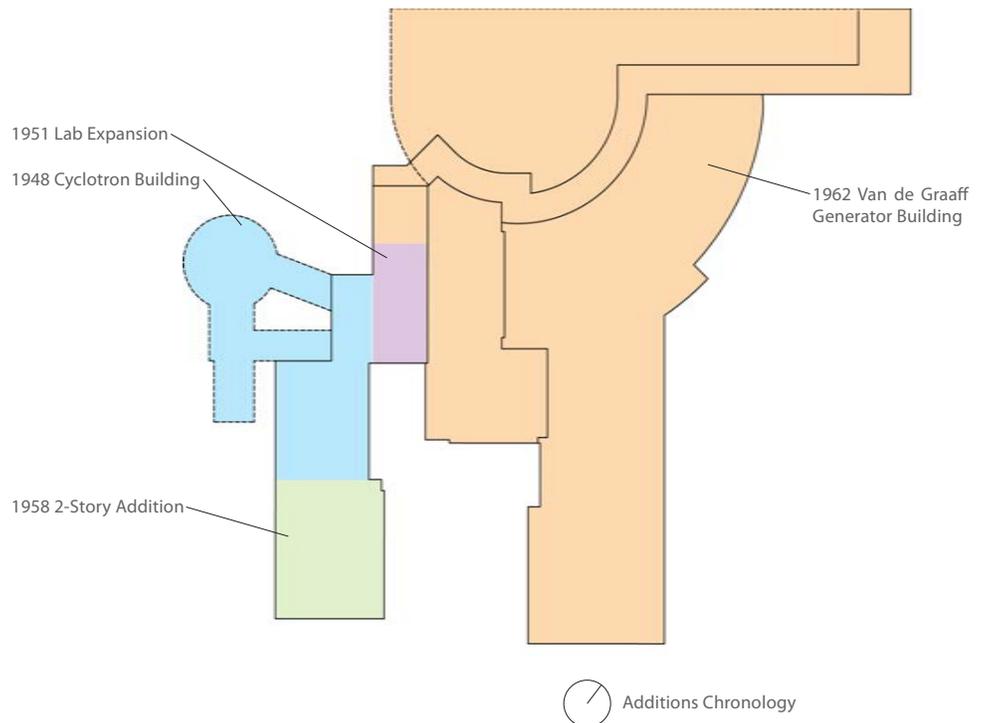
Guidelines for Evaluating Historic Resources

General guidelines are outlined in the Campus Master Plan for use in evaluating historic structures and proposed changes. The following is a summary of each guideline that applies to the North Physics Lab. A more detailed description is provided in the Historic Context and the Architectural Description sections of this HRA.

- **Age of project building, adjacent buildings and open spaces.**

The Cyclotron Building was constructed in 1948 and three years later the service/loading area on the east side was incorporated into a single story lab addition. In 1958 the original office/control room wing was renovated and a second story added to accommodate more office and lab space.

The Van de Graaff Accelerator Building was constructed in 1962 adjacent to the Cyclotron Building. At some point an original chain link fence encircling the pond on the below grade roof of the Cyclotron Building was removed (evidence of the fence post connections still exist) and in 1964 security fencing was installed on the west side of the building to prevent access to the roof.



Adjacent buildings include the CENPA Instrument Shop to the south, and Haggett Hall and McCarty Hall on the west side on the slope above.

There is a large open space over the below grade portion of the Van de Graaff Accelerator Building which is planted and maintained as a lawn, and this open space is currently accessible from the west slope below Haggett Hall. An adjacent open space over the below grade portion of the Cyclotron Building is planted with ground cover and features the round pond directly above the Cyclotron, and this area is secured by the 1964 chain link fence. A large undeveloped ravine is between this facility and NE 45th Street. Directly below the North Physics Lab toward the east is the Burke-Gilman Trail.



- **Information regarding the architect of the original building.**

John Graham & Co designed the Cyclotron Building and its major additions, as well as the Van de Graaff Accelerator Building. The firm was founded in 1900 by John Graham and maintained by John Graham Jr. from 1946 until its merger into the DLR Group in 1986. The firm’s primary focus was commercial projects including Frederick & Nelson (now Nordstrom), the Bon Marche (now Macy’s), Northgate Mall, the Westin Hotel, Ala Moana Hotel in Hawaii – and is probably best known for the Space Needle (with Victor Steinbruek).

On the University of Washington campus John Graham & Co designed the Physics Building (now Mary Gates Hall) in 1928 followed by the North Physics Lab.

- **Description of interior and exterior, and site surroundings of the building or campus feature, including the traditional views of the site, if any.**

The exterior of the North Physics Lab is primarily cast-in-place concrete walls painted white, and anodized aluminum storefront with porcelain enameled insulated spandrel panels on the office wings and corrugated metal panels on some of the support structures. The above grade portions of the roof consist of built-up roofing with an extruded aluminum flashing. Roof mounted equipment includes small exhaust fan housings and some exposed ductwork – all either painted white or unfinished galvanized steel.



The interior spaces are utilitarian with exposed concrete floors, white plaster walls and exposed wood or concrete ceiling structure in the large lab spaces, and vinyl asbestos floor tiles and acoustical ceiling tiles in the office areas.

The approach to the North Physics Lab is from the South through the N12 Parking area driveway. The facility is hidden from view by dense landscaping.

The main entrance to the North Physics Lab is through a small courtyard between the Cyclotron Shop and the Van de Graaff office wing. The entrance is not prominent and not visible from any public drives or major pedestrian pathways. The facility is visible from the Burke-Gilman Trail and 25th Avenue NE in the winter and early spring through mature deciduous trees, and partially visible from NE 45th Street through the dense natural forest in the ravine. An important view of the facility – especially of the roofscape – is from the dormitory structures above.

- **Information regarding the distinctive visible characteristics of an architectural style, or period, or of a method of construction, if any.**
The North Physics Lab is an example of the Modernism architectural movement featuring a straight-forward expression of the uses without ornament or references to earlier historical forms. The strong forms of the facility are emphasized by the use of a uniform white painted exterior. The Modern Movement and analysis of the architectural character of the North Physics Lab is discussed further in the Architectural Description section.
- **Potential mitigation measures, such as façade treatment, street treatment and design treatment sympathetic to the historic significance of the development site or adjacent campus feature, if any.**
Mitigation measures to reduce the impact of the proposed roof replacement, roof access safety and security fencing are discussed in the Evaluation and Recommendations section.



Approach from the South



Entry Courtyard

3. Historical Context

Development of the University of Washington Campus

The city of Seattle was one of several settlements in the mid to late 19th century vying for primacy in the newly formed Washington Territory. In 1854, territorial governor Isaac Stevens recommended the establishment of a university in Washington.

In 1861, scouting began for an appropriate 10 acres (4 ha) site in Seattle to serve as the campus for a new university. Denny, along with fellow pioneers Edward Lander and Charlie Terry, donated a site on “Denny’s Knoll” in downtown Seattle. This tract was bounded by 4th and 6th Avenues on the west and east and Union and Seneca Streets on the north and south.

UW opened officially on November 4, 1861, as the Territorial University of Washington. The following year, the legislature passed articles formally incorporating the University and establishing a Board of Regents. By the time Washington entered the Union in 1889, both Seattle and the University had grown substantially. Enrollment had increased from an initial 30 students to nearly 300, and the relative isolation of the campus had given way to encroaching development.

A special legislative committee headed by UW graduate Edmond Meany was created for the purpose of finding a new campus better able to serve the growing student population. The committee selected a site on Union Bay northeast of downtown, and the legislature appropriated funds for its purchase and subsequent construction. The University relocated from downtown to the new campus in 1895, moving into the newly built Denny Hall.

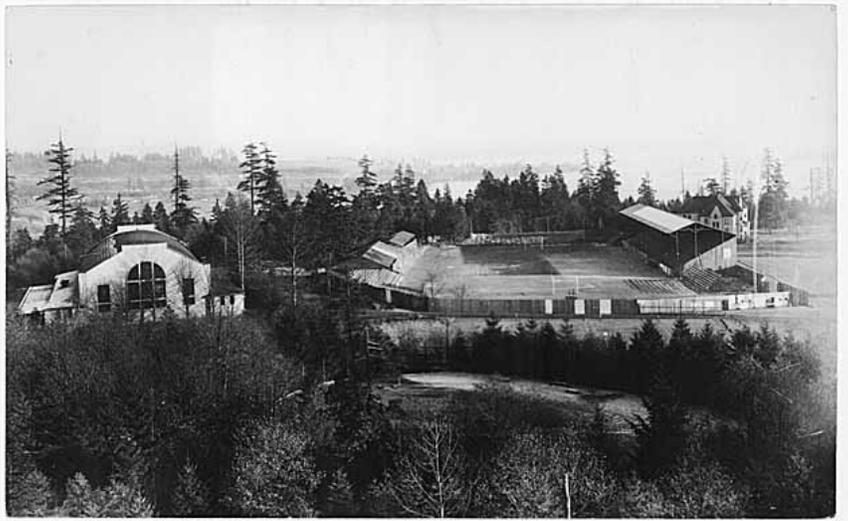
Organizers of the 1909 Alaska-Yukon-Pacific Exposition eyed the still largely undeveloped campus as a prime setting for their world’s fair. They came to an agreement with the Board of Regents that allowed them to use the campus grounds for the exposition. In exchange, the University would be able to take advantage of the development of the campus for the fair after its conclusion. This included a detailed site plan and several buildings. The plan for the A-Y-P Exposition prepared by John Charles Olmsted was later incorporated into the overall campus master plan and permanently affected the layout of the campus.



The original University of Washington building on Denny’s Knoll, c. 1870



Alaska-Yukon-Pacific Exposition on the UW campus toward Mount Rainier in 1909



Gymnasium and Denny Field, 1910

[Historical Overview of the North Physics Lab](#)

The northeastern portion of the University of Washington campus was originally assigned to the athletic program and included a gymnasium built in 1896 and a playing field to the south, now Denny Field. In 1935 it was decided to relocate the dormitories from the northwestern corner of campus to this sector, and Hansee Hall was constructed in 1936 in the Collegiate Gothic style of the Liberal Arts Quadrangle favored by architect Carl Gould. By the 1950's the regents began to allow architectural modernism on campus, and the North Physics Lab and the new dormitories on the ridge above – McCarty Hall, Haggett Hall and McMahon Hall – all exhibit modern design characteristics.

In 1946 there was widespread interest in nuclear physics, and Dr. Fred Schmidt joined the faculty to build the nuclear physics program at the University of Washington. The first building in the Nuclear Physics Lab (renamed later as the North Physics Lab) was the Cyclotron Building constructed in 1948. It is likely that the northeast corner of campus was seen as an ideal location due to the large undeveloped area of the site and its isolation from the rest of the campus. Nuclear physics was viewed as a controversial and somewhat secretive field, and keeping the new facility obscure was preferred. The cyclotron was a device to accelerate particles to smash atoms into one another, producing nuclear reactions. In 1951 the lab was expanded into a service/loading area, and in 1958 a second story was added to the original office/control room wing to accommodate more office and lab space. In 1964 a chain link security fence was installed to limit access from the open spaces above. The cyclotron was decommissioned in the 1980's and is currently dormant and largely disassembled.

The Van de Graaff Generator Building was constructed in 1962 to house a new, cutting edge particle accelerator adjacent to the Cyclotron Building. Like the earlier Cyclotron Building the new facility was built into and partially buried in the hillside. In 1984 a large liquid nitrogen storage facility was added on the east side of the building, and since that time there have been a series of mechanical and electrical upgrades. At some point a 10' high chain link fence was fastened to the guardrail at the edge of the below grade portion of the building to make it more difficult to throw objects over the edge from the open space above. The Van de Graaf accelerator is still in regular use by a variety of experimenters. Currently the North Physics Lab is under the auspices of the Center for Experimental Nuclear Physics and Astrophysics.

4. Architectural Description

Campus Setting and Site Features

The northeast corner is the least developed and most isolated sector of the campus. From the dormitory lined ridge toward the west the topography slopes down steeply approximately 35' to a flat bench where the North Physics Lab is sited. Continuing east from the facility the topography slopes down again another 35' to Pend Oreille Road and the Burke-Gilman Trail. Vehicular access to the facility is from the south along Mason Place and through two sections of the N12 parking lots. There are no designated pedestrian routes adjacent to the facility, and the entrance courtyard is relatively hidden. Furthering the feeling of isolation is the forested ravine to the north between the North Physics Lab and NE 45th Street and the viaduct.



View from NE 45th Street Ravine Looking South



View from Burke-Gilman Trail and Pend Oreille Road Looking West



View from Haggett Hall Looking East



Haggett Hall from the Green Roof of the North Physics Lab Looking South

Views of the facility are very limited, with an obscure glimpse of the building through the trees from NE 45th Street, a partial view from the east through the trees from Pend Oreille Road, the Burke-Gilman Trail and Montlake Boulevard NE. A portion of the facility is visible from Mason Place beyond the CENPA Instrument Shop building. The most prominent view is of the roof from McCarty Hall and Haggett Hall on the uphill side, but even this view is obscured in the summer and early fall by large deciduous trees.



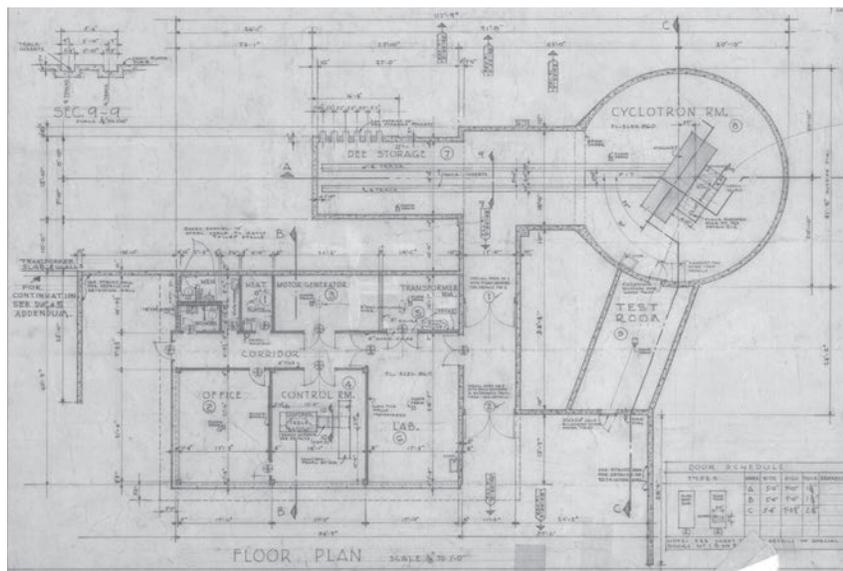
View of the Van de Graaff Accelerator Building from the East

Style of Architecture

Both the Cyclotron Building (and its later additions) and the Van de Graaff Accelerator Building were designed by John Graham & Co in the Modernist style. The modern movement began in Europe in the 1920's as an optimistic belief that science and the new technologies of industrialization should be reflected in a modern age of architecture based on universal principals. The movement was reaction against the 19th Century revival of historical forms, and was popular in the Pacific Northwest from about 1930 to 1970.

On the University of Washington campus, modern buildings began to appear in the late 1940's with the School of Medicine (now the Magnuson Heath Sciences Center) and continued with Sieg Hall, Balmer Hall, and the first addition to Suzzallo Library. As noted by Norman J. Johnston in *The Fountain and the Mountain*, in describing the postwar campus evolution - the University Architectural Commission at the time influenced the demise of collegiate Gothic as the campus design standard, and one architect stated - "The philosophies of modern architectural design did not accept eclecticism and the university's role as a leader in teaching and research was not consistent with façade design and construction methods developed centuries earlier."

The typical characteristics of this style were incorporated in the North Physics Lab. First, the use of simple, concrete shapes that express the interior functions was an ideal form for the modern scientific research taking place and the operation of large scale equipment. This was also an appropriate form for a structure that was partially below grade because of the use and the topography of the site. Second, the use of curtain wall construction for the office wings was a modern expression of modular, efficient and economical façade treatment. Finally, the use of flat roofs is also typical of the Modernist style. All of these characteristics demonstrate that the architect was determined to create a modern building appropriate to the function of a modern scientific research lab.



1948 Cyclotron Building Plan



Existing Roofing



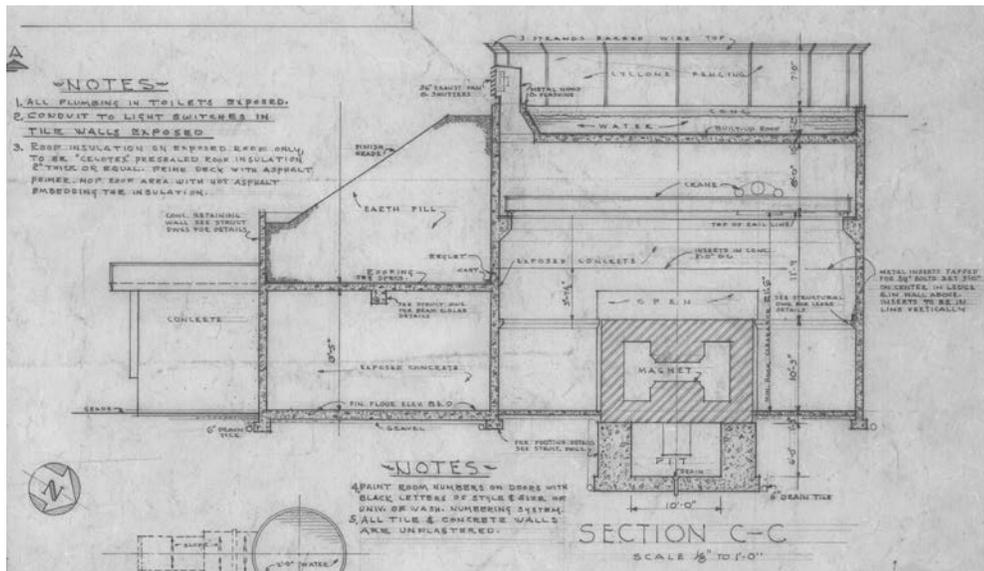
Damage Caused by Railing Mounting

Roof and Roofing Materials

All the roofs of the North Physics Lab are flat roofs, with minimal slopes to internal roof drains. Nearly half of the facility is below grade with earth backfill and planting areas above. The above grade roof structures of the Cyclotron Building are the 1951 addition and the 1958 second story addition, consisting of built-up roofing over 2" insulation. Only the roof of the 1951 addition is being replaced.

The above grade roof structure of the Van de Graaff Accelerator Building is over the lab, office and shop wings, and is configured at three elevations according to the height requirements of the spaces below. The roof assembly consists of built-up roofing over 2" insulation, typically with a 7-3/4" metal flashing painted white. All of the above grade roofing is being replaced.

A welded 1/1-2" diameter steel pipe railing is shown at the south edge of the below grade portion on the original Van de Graaff Building and this railing is still in place. The mounting for the rail posts penetrate through the top of the concrete curb and are in poor condition. The railing will be replaced.



1948 Cyclotron Building Section



Wall Panels



Security Fencing Behind the Cyclotron Building

Wall Panels

Metal wall panels with a vertical corrugated pattern clad the west, south and a portion of the east walls of the west block of the Van de Graaff Accelerator Building. These are original corrugated aluminum panels with a factory finish – white with a slight beige tint. The rest of the east wall is clad in white porcelain enamel panels.

Security Fencing

Limiting access to the rooftop planted areas above the below grade portions of the facility has been a concern throughout the operation of the North Physics Lab. There is no indication that the rooftop uses were intended as public open space.

The original 1948 plans for the Cyclotron Building show a 6’ high chain link fence with a 1’ barbed wire extension at the top around the 42’ diameter circular pond above the cyclotron – this fence does not currently exist. The pond provided shielding for the Cyclotron below and will be drained and landscaped. In 1964 a similar chain link fence was installed from the southwest corner of the office wing around the west side of the facility all the way to the northwest corner of the 1951 addition, effectively securing all of the below grade portions of the building. This fence currently exists.

The Van de Graaff Accelerator Building plans do not indicate any security fencing; however there is currently a 10’ high chain link fence around a portion of the northeast wing where the planted roof area is approximately 24’ above grade. Documentation of the installation of this fence addition could not be found.

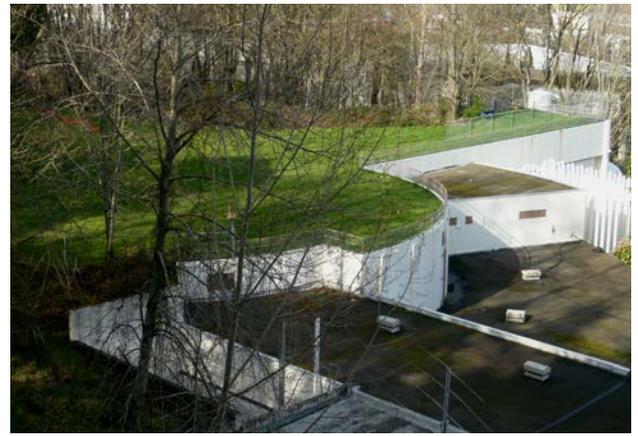
Current Conditions

The North Physics Lab is in relatively good condition; however the roof is in need of replacement and the base of the railings at the edge of the Van de Graaff Accelerator Building are deteriorated and showing rust streaks on the face of the wall. Also of concern is the currently unsafe situation for accessing the roof areas for maintenance and repair work. There is no fall protection system currently for any of the above grade roof areas. Finally, the large open space on the below grade portions of the Van de Graaff roof are accessible to the public from the west slope, leading to vandalism, debris and general student mischief



Security Fencing at the Van de Graaff Accelerator Rooftop

5. Evaluation and Recommendations



Van de Graaff Accelerator Building Green Roof

Identification of Conditions Requiring Recommendations

Recommendations will be made for the exterior of the North Physics Lab where the proposed reroofing, the safe access and roof anchor system, and the security fencing will require modifications to the roof and railing system. Primary consideration will be given to the visibility of these changes to the public view of the structure from the approach drive on Mason Place, from the east on the Burke-Gilman Trail and Pend Oreille Road, and from the west from the Haggett Hall.

- **Roof Replacement**

The existing built-up roofing is nearing the end of its life, and removal and replacement with a new, torch applied modified bitumen roofing system with a granulated cap sheet. The proposed cap sheet will be light grey in color, and with the granulated surface will be similar in appearance to the existing gravel over the grey roofing. The roof slope will also be increased from 1/8":12" to 1/4":12" to improve drainage.

In order to improve the thermal characteristics of the roof, the existing 2" layer of insulation will be removed and replaced with up to two layers of 3" poly iso insulation, which will increase the roof thickness and roof edge profile along with the increase to roof slope.

- **Safe Access and Roof Anchor System**

The existing guardrail at the edge of the below grade portion of the Van de Graaff Building is top mounted in the concrete curb and the deterioration from this connection is causing staining and cracking of the concrete wall. Replacement of this guardrail with a new face mounted pipe rail matching the style and spacing of the original is proposed. In addition, the same new face mounted pipe railing is proposed to extend toward the southeast to protect the opening into the lower mechanical equipment space, as well as a portion of the intermediate height roof over the mechanical room. There was no railing originally or currently at these new locations.

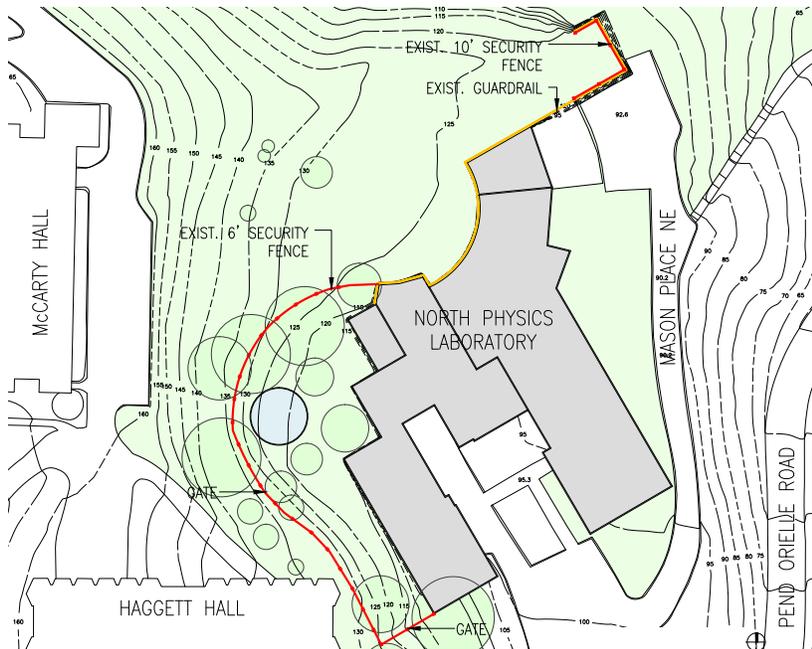
Wall mounted access ladders and transfer platforms are proposed in three locations of the Van de Graaff building to connect the various lower roof levels

A total of 18 new roof mounted fall arrest anchors are proposed for the various roof levels of the Van de Graaff Building. There were no fall arrest anchors originally or currently on the building.

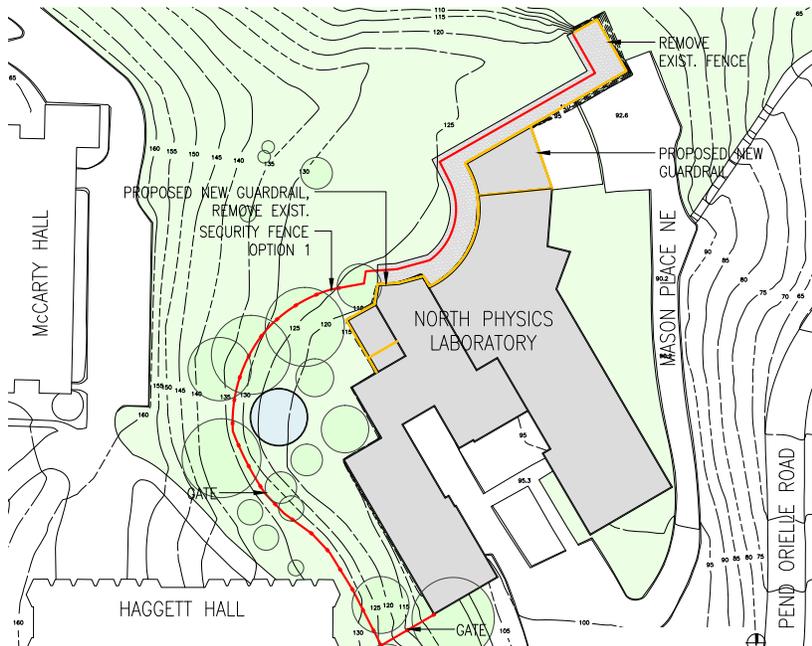
A network of new walking pads on the Van de Graaff Building roof is proposed to connect the roof access points and ladders. There were no walking pads originally or currently on the building.

- **Security Fencing**

There is currently a 6' high chain link fence from the southwest corner of the Cyclotron Building addition, around the west side of the pond and connecting to the guardrail at the below grade portion of the Van de Graaff Building. A 10' high chain link fence is attached to a portion of the guardrail. The following security fencing options are being considered to prevent access to the roof edge from the west slope above.



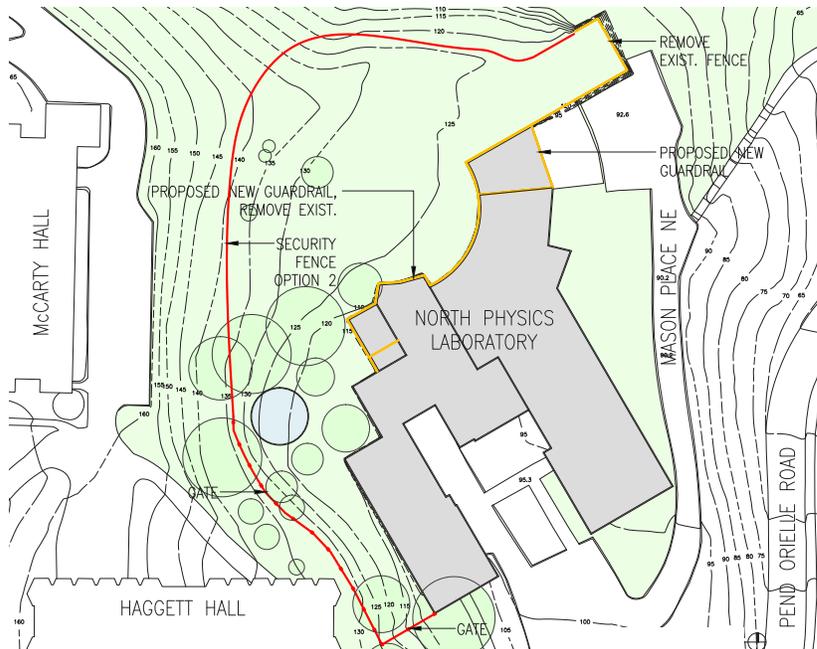
Existing Condition



Option 1

Option 1 – Security Fencing Near the Roof Edge

The existing chain link fence at the guardrail would be removed and a new 10' high chain link fence would be installed approximately 10' behind the guardrail and roof edge. This would prevent public access to the roof edge but still allow access to enjoy a large portion of the existing open space on the roof. The 10' margin between the guardrail and the fence would be for maintenance access and would be paved in gravel. Because this area would be for maintenance personnel only, the proposed open guardrail design would be allowed.



Option 2

Option 2 – Security Fencing Midway Up the West Slope

The existing chain link fence at the guardrail would be removed and a new 10’ high chain link fence would be installed approximately half way up the west slope. This would prevent public access to the entire open space on the roof, which has some security advantage as this is a secluded area attracting homeless encampments and illicit activities. The entire rooftop open space would be accessible only by maintenance personnel.

In both options the existing security fencing behind the Cyclotron Building would be maintained or upgraded.

Impact of Proposed Changes

The impact of the proposed changes is minimal due to the very limited exposure of the North Physics Lab to any public roads, pathways or view corridors. The partial views of the facility are further obscured by large deciduous trees in the late spring, summer and early fall. The most significant impact of these changes is from the dormitory facilities at the top of the west slope, and even those views are screened by deciduous trees.

- **Roof Replacement**

The impact of the proposed roof replacement is minimal, and only affects the height of the metal fascia at the roof edge due to the added thickness of insulation. The new fascias will be approximately 1'-4" in height, about twice as high as the existing 7-3/4" fascias. In locations where there is existing metal wall cladding, the panels will be raised slightly to allow the original fascia size. The new roofing surface approximates the color and texture of the existing roofing. There is no change to the existing vent and air intake units currently on the roof, except to raise them to accommodate the added insulation thickness. Slopes to new roof drains are also proposed, which will eliminate the current ponding on portions of the existing roof.

- **Safe Access and Roof Anchor System**

The proposed new guardrail at the edge of the below grade portion of the Van de Graaff Building has the same configuration, materials and spacing as the original steel pipe railing, and would be painted the same beige color as the existing (unknown if this is the original color). The only difference will be face mounting to the wall instead of top mounting. The stanchions will be welded to a 9"x9" steel plate with 4 anchor bolts for each connection. This mounting will prevent further rust staining and cracks in the concrete wall. The proposed new guardrail at the southeast portion of the roof will not be seen from ground level. The proposed new guardrail over the mechanical room roof will be visible from both ground level and from the dormitories above, but by matching the design with the rest of the guardrail, these new rails will not look out of place.



Existing View of Van de Graaff Accelerator Building



Proposed Increase in Roof Fascia Height and Guardrail Replacement/Access Ladder

The proposed wall ladders and transfer platforms would be barely visible from a few ground level locations, and would be galvanized steel to not stand out. These ladder and platform locations are hidden from view from the dormitories above by the various roof and wall elements.

The proposed fall arrest anchors are well back from the roof edge and not visible from ground level. They are quite small – 3" diameter pipe with a 3/4" U-bar at the top and at a minimal height above the roof, and therefore will not be noticeable from the dormitories above.

The proposed new walking pads consist of an additional layer of the roofing cap sheet, so this element will also not be noticeable from the dormitories above.

- **Security Fencing**

In both options the elimination of the existing fence attached to the existing guard rail on the Van de Graaff Building removes an unsightly addition and represents a return to the original historic character.

Option 1 would set the fence 10' back from the roof edge and hide it from most ground level views.

Option 2 would set the fence farther up the hill and in the vegetation, obscuring it from ground level views and from the dormitories above.

Mitigation Recommendations

- **Roof Replacement**

Consideration should be given to increasing the height of the white wall panels and raising the existing metal cap flashing, thereby reducing the visual impact of the thicker roof edge.

- **Safe Access and Roof Anchor System**

Consideration should be given to painting the guardrail brackets white to blend in with the white walls.

- **Security Fencing**

The existing chain link fencing is galvanized. Any new chain link fencing should have a black vinyl coating to reduce its visual impact.

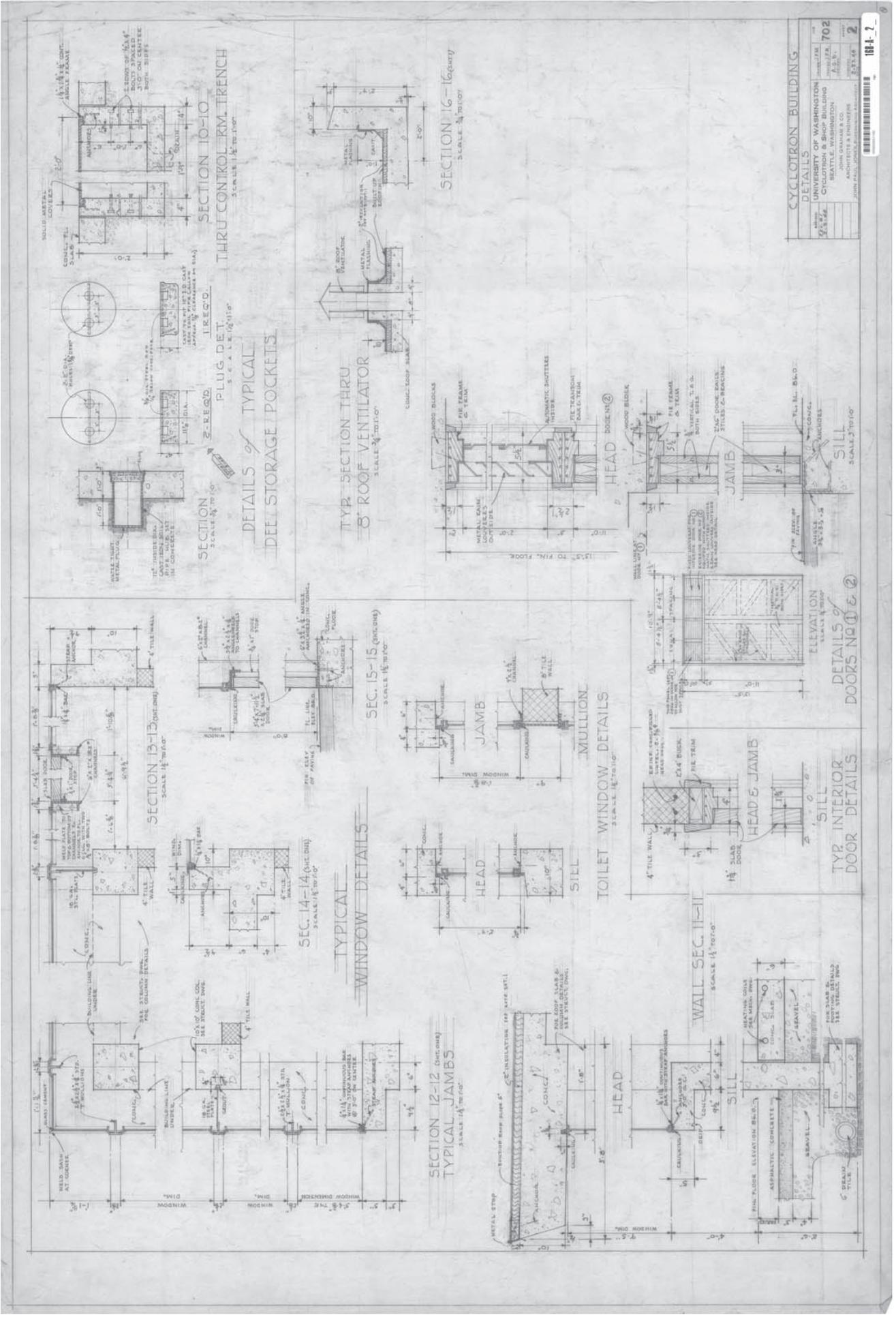


Existing View from South Approach



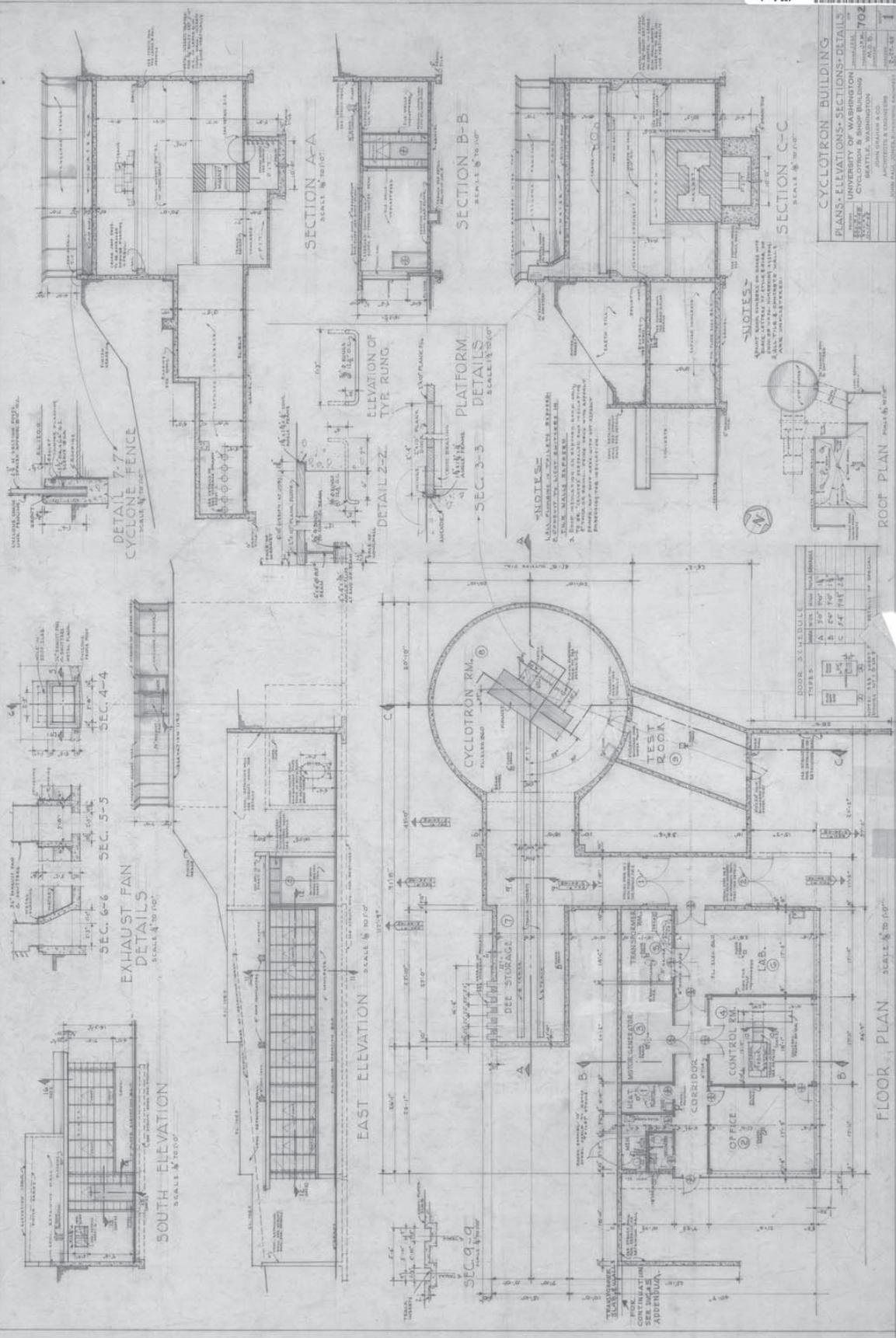
Proposed Relocated Black Security Fencing

6. Drawings

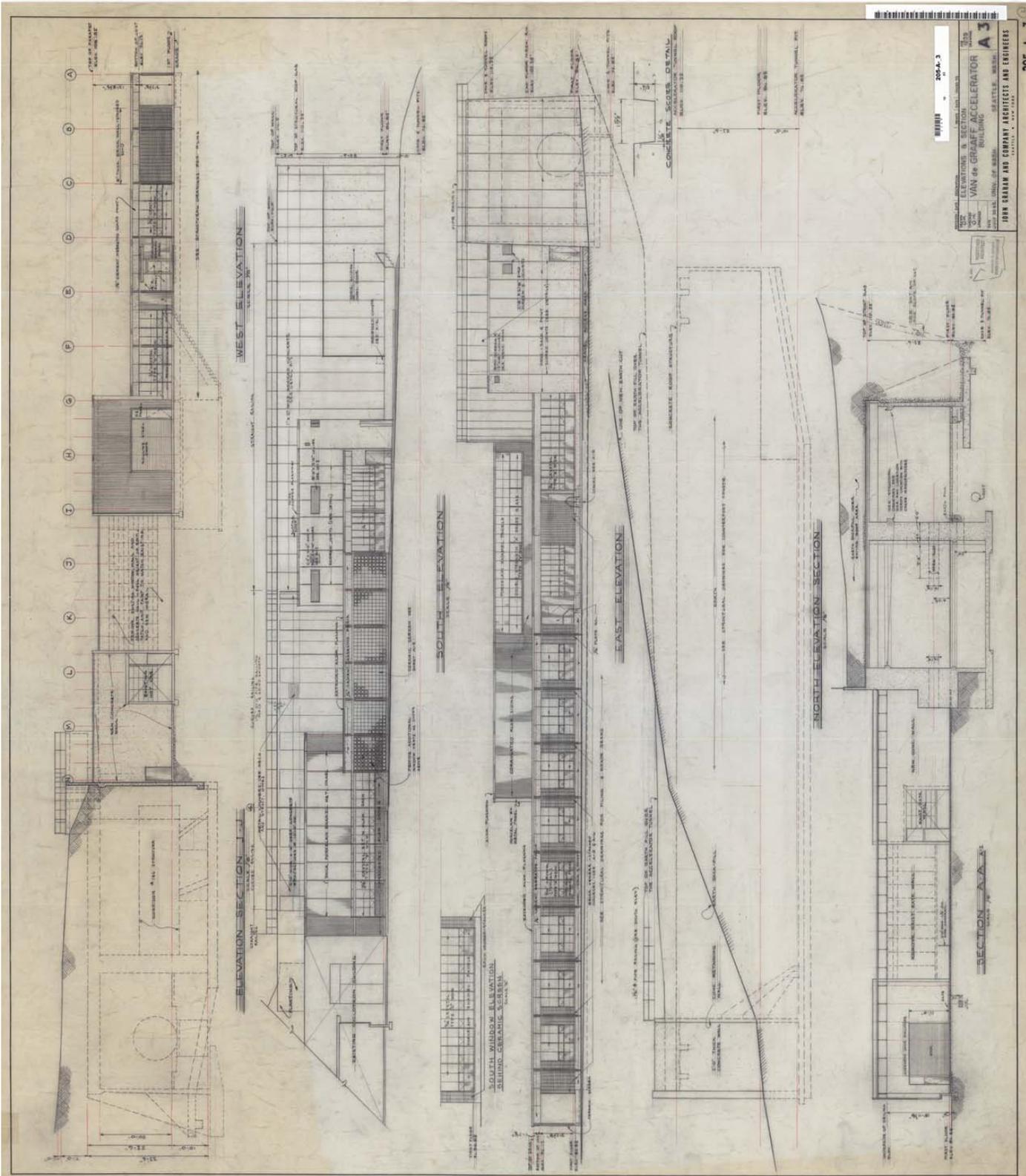


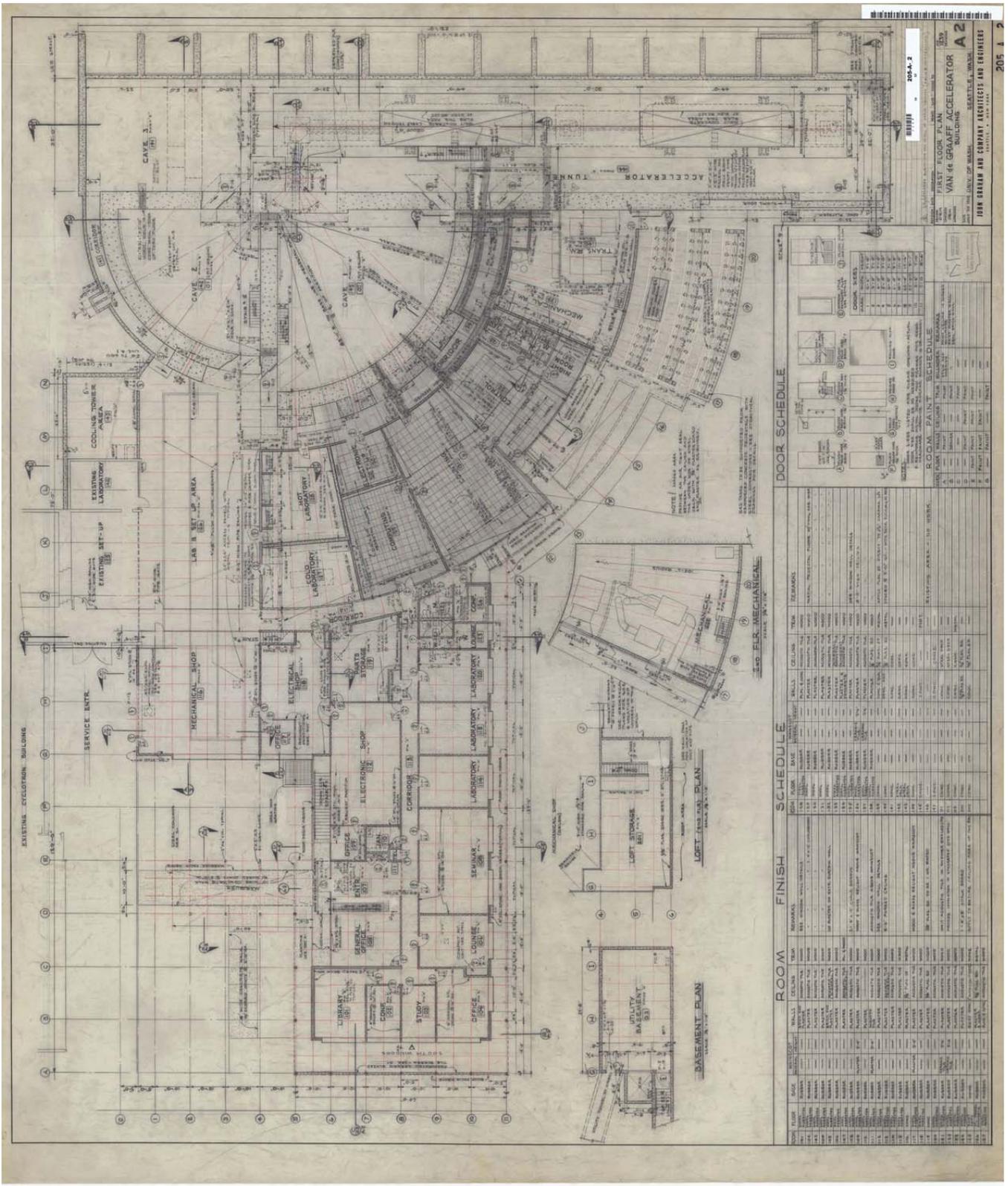
CYCLOTRON BUILDING	
DATE	7/24/44
PROJECT	UNIVERSITY OF WASHINGTON CYCLOTRON & SHOP BUILDING
NO.	702
DESIGNED BY	JOHN GRANAN & CO.
DRAWN BY	W. J. W. & C.
CHECKED BY	J. W. W.
SCALE	AS SHOWN

100-1-1



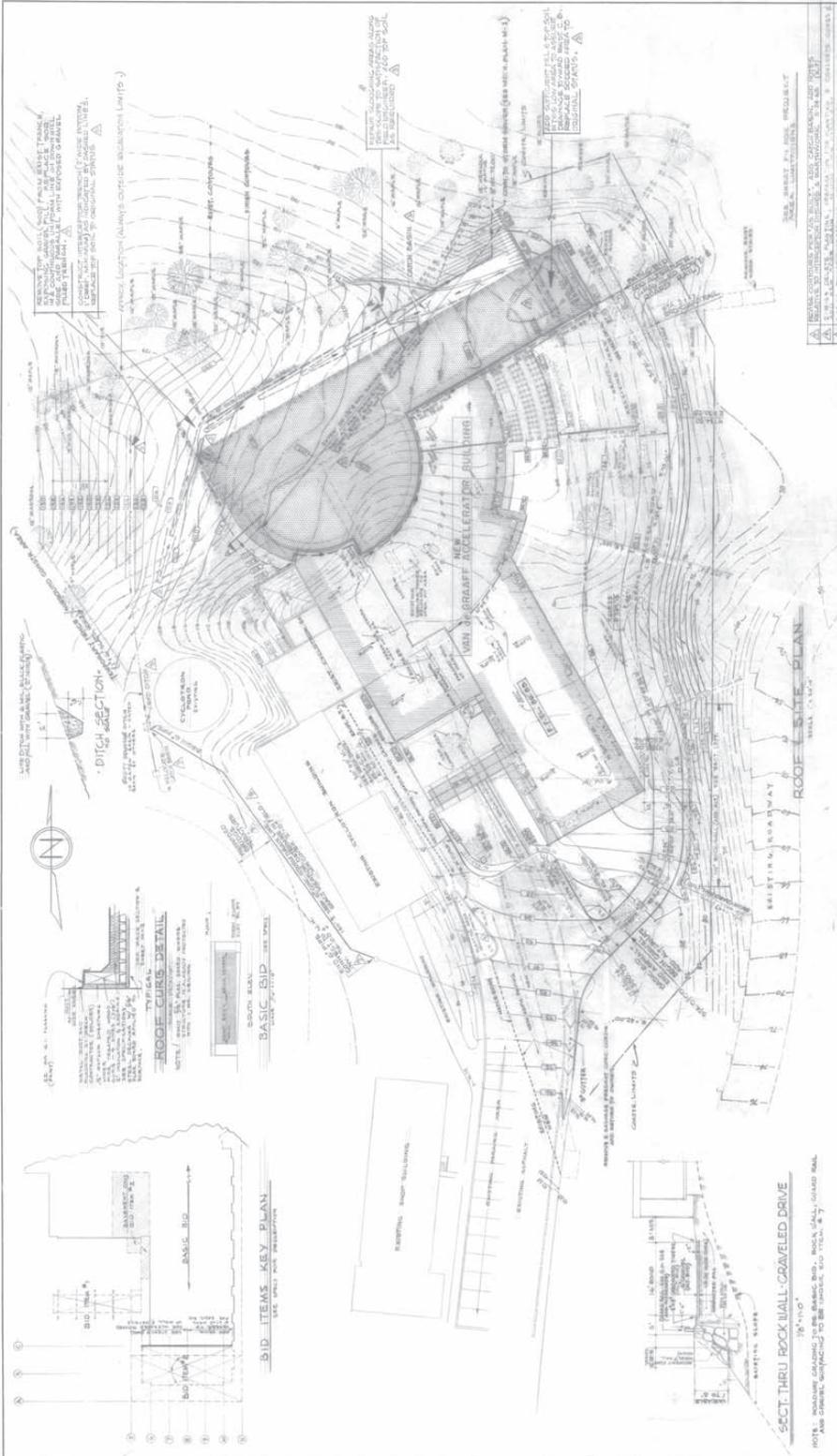
CYCLOTRON BUILDING
PLANS - ELEVATIONS - SECTIONS - DETAILS
 UNIVERSITY OF WASHINGTON
 DEPARTMENT OF PHYSICS
 SEATTLE, WASHINGTON
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: [Date]





SHEET NO. 204-A-3
 FIRST FLOOR PLAN
 BUILDING
 VAN DE GRAAFF ACCELERATOR
 ARCHITECTS
 JOHN BEAMAN AND COMPANY ARCHITECTS AND ENGINEERS
 205 1 3

ROOM		FINISH		SCHEDULE		DOOR SCHEDULE	
NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	CEILING	1	PAINT	1	WOOD	1	WOOD
2	WALLS	2	PAINT	2	GLASS	2	GLASS
3	FLOOR	3	PAINT	3	STEEL	3	STEEL
4	DOOR	4	PAINT	4	WOOD	4	WOOD
5	WINDOW	5	PAINT	5	GLASS	5	GLASS
6	CEILING	6	PAINT	6	WOOD	6	WOOD
7	WALLS	7	PAINT	7	GLASS	7	GLASS
8	FLOOR	8	PAINT	8	STEEL	8	STEEL
9	DOOR	9	PAINT	9	WOOD	9	WOOD
10	WINDOW	10	PAINT	10	GLASS	10	GLASS
11	CEILING	11	PAINT	11	WOOD	11	WOOD
12	WALLS	12	PAINT	12	GLASS	12	GLASS
13	FLOOR	13	PAINT	13	STEEL	13	STEEL
14	DOOR	14	PAINT	14	WOOD	14	WOOD
15	WINDOW	15	PAINT	15	GLASS	15	GLASS
16	CEILING	16	PAINT	16	WOOD	16	WOOD
17	WALLS	17	PAINT	17	GLASS	17	GLASS
18	FLOOR	18	PAINT	18	STEEL	18	STEEL
19	DOOR	19	PAINT	19	WOOD	19	WOOD
20	WINDOW	20	PAINT	20	GLASS	20	GLASS
21	CEILING	21	PAINT	21	WOOD	21	WOOD
22	WALLS	22	PAINT	22	GLASS	22	GLASS
23	FLOOR	23	PAINT	23	STEEL	23	STEEL
24	DOOR	24	PAINT	24	WOOD	24	WOOD
25	WINDOW	25	PAINT	25	GLASS	25	GLASS
26	CEILING	26	PAINT	26	WOOD	26	WOOD
27	WALLS	27	PAINT	27	GLASS	27	GLASS
28	FLOOR	28	PAINT	28	STEEL	28	STEEL
29	DOOR	29	PAINT	29	WOOD	29	WOOD
30	WINDOW	30	PAINT	30	GLASS	30	GLASS



GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
2. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES.
4. THE CONTRACTOR SHALL MAINTAIN THE SITE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND STANDARDS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND RESTORATION OF ALL NATURAL RESOURCES.
6. THE CONTRACTOR SHALL MAINTAIN THE SITE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND STANDARDS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND RESTORATION OF ALL NATURAL RESOURCES.
8. THE CONTRACTOR SHALL MAINTAIN THE SITE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND STANDARDS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND RESTORATION OF ALL NATURAL RESOURCES.
10. THE CONTRACTOR SHALL MAINTAIN THE SITE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND STANDARDS.

INDEX TO DRAWINGS

ARCHITECTURAL	SI - SITE PLAN & DETAILS
STRUCTURAL	ST - STRUCTURAL FOUNDATION & ROOF DETAILS
Mechanical	ME - MECHANICAL SYSTEMS & DETAILS
Electrical	EL - ELECTRICAL SYSTEMS & DETAILS
Plumbing	PL - PLUMBING SYSTEMS & DETAILS
Landscaping	LS - LANDSCAPE & SITEWORK



SECTION - A

ROCK WALL ON GRAVELLED DRIVE

1. ROCK WALL SHALL BE CONSTRUCTED OF 18" x 18" x 24" BLOCKS.

2. GRAVELLED DRIVE SHALL BE 12" DEEP WITH 1/2" GRAVEL.

3. SOIL SHALL BE PROTECTED AND RESTORED TO ORIGINAL CONDITION.

SECTION - B

ROCK WALL ON GRAVELLED DRIVE

1. ROCK WALL SHALL BE CONSTRUCTED OF 18" x 18" x 24" BLOCKS.

2. GRAVELLED DRIVE SHALL BE 12" DEEP WITH 1/2" GRAVEL.

3. SOIL SHALL BE PROTECTED AND RESTORED TO ORIGINAL CONDITION.

SECTION - C

ROCK WALL ON GRAVELLED DRIVE

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2. GRAVELLED DRIVE SHALL BE 12" DEEP WITH 1/2" GRAVEL.

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SECTION - D

ROCK WALL ON GRAVELLED DRIVE

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SECTION - E

ROCK WALL ON GRAVELLED DRIVE

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2. GRAVELLED DRIVE SHALL BE 12" DEEP WITH 1/2" GRAVEL.

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SECTION - F

ROCK WALL ON GRAVELLED DRIVE

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3. SOIL SHALL BE PROTECTED AND RESTORED TO ORIGINAL CONDITION.

SECTION - G

ROCK WALL ON GRAVELLED DRIVE

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SECTION - H

ROCK WALL ON GRAVELLED DRIVE

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SECTION - I

ROCK WALL ON GRAVELLED DRIVE

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SECTION - J

ROCK WALL ON GRAVELLED DRIVE

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SECTION - K

ROCK WALL ON GRAVELLED DRIVE

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3. SOIL SHALL BE PROTECTED AND RESTORED TO ORIGINAL CONDITION.

SECTION - L

ROCK WALL ON GRAVELLED DRIVE

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SECTION - M

ROCK WALL ON GRAVELLED DRIVE

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2. GRAVELLED DRIVE SHALL BE 12" DEEP WITH 1/2" GRAVEL.

3. SOIL SHALL BE PROTECTED AND RESTORED TO ORIGINAL CONDITION.

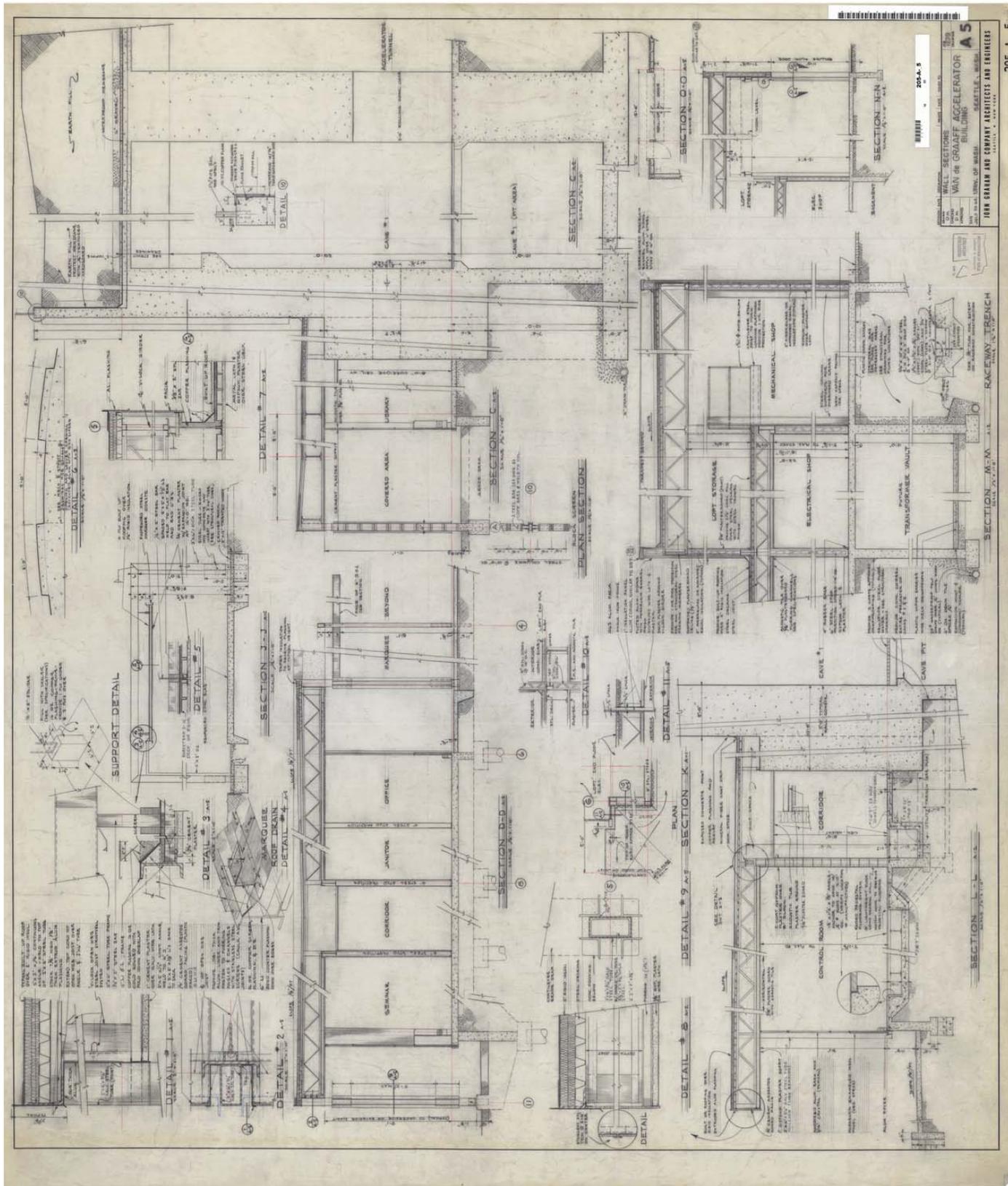
SECTION - N

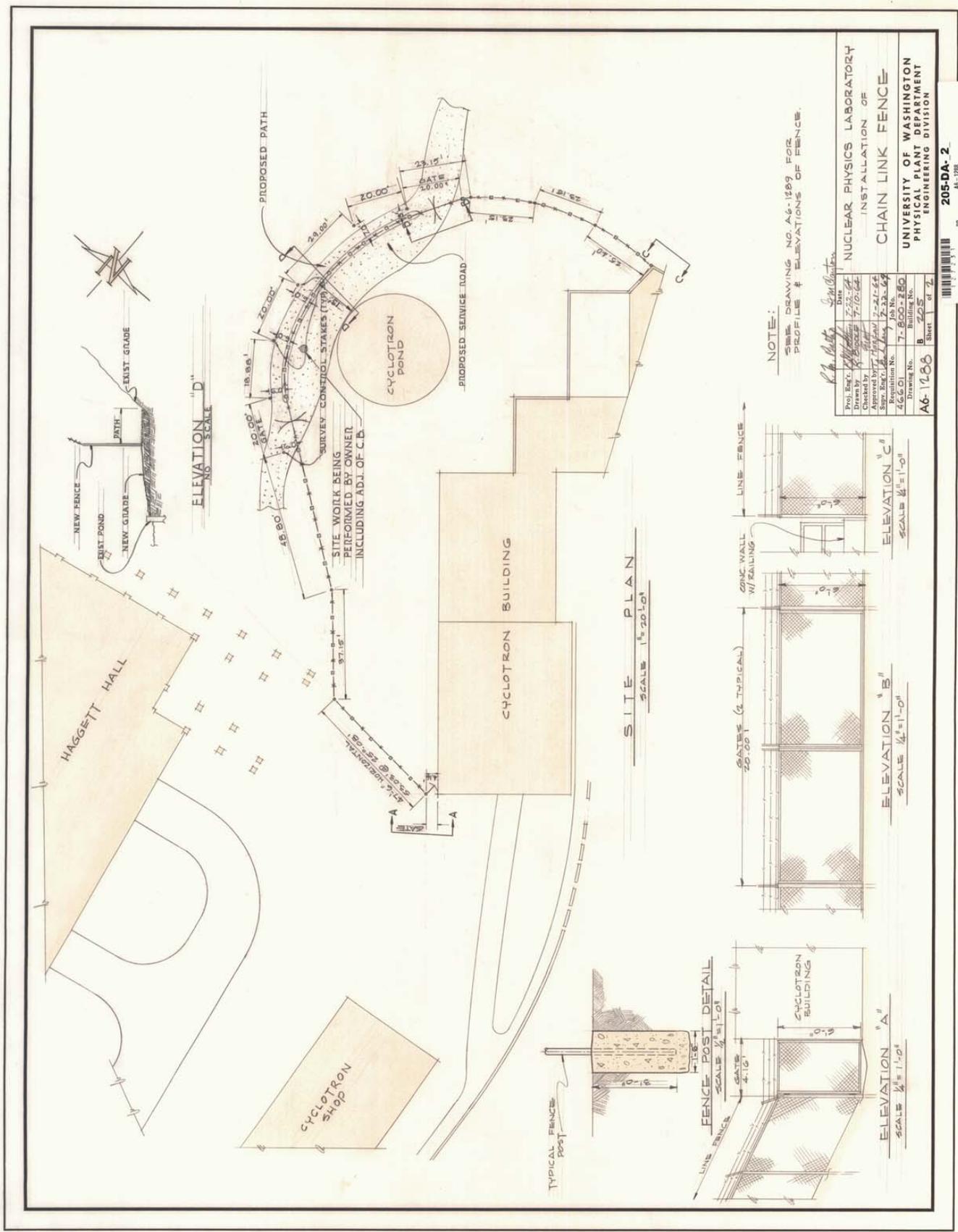
ROCK WALL ON GRAVELLED DRIVE

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PROJECT: NUCLEAR PHYSICS LABORATORY DRAWING: INSTALLATION OF CHAIN LINK FENCE	
DRAWN BY: [Name] CHECKED BY: [Name]	REGISTRATION NO.: [Number] JOB NO.: [Number]
SUPERVISOR: [Name]	BUILDING NO.: [Number] SHEET OF 2
DRAWING NO. A6-1288	

NOTE:
 SEE DRAWING NO. A6-1289 FOR
 PROFILE & ELEVATIONS OF FENCE.

205-DA-2
 48-108

6' HIGH

7. Photos of Existing Condition



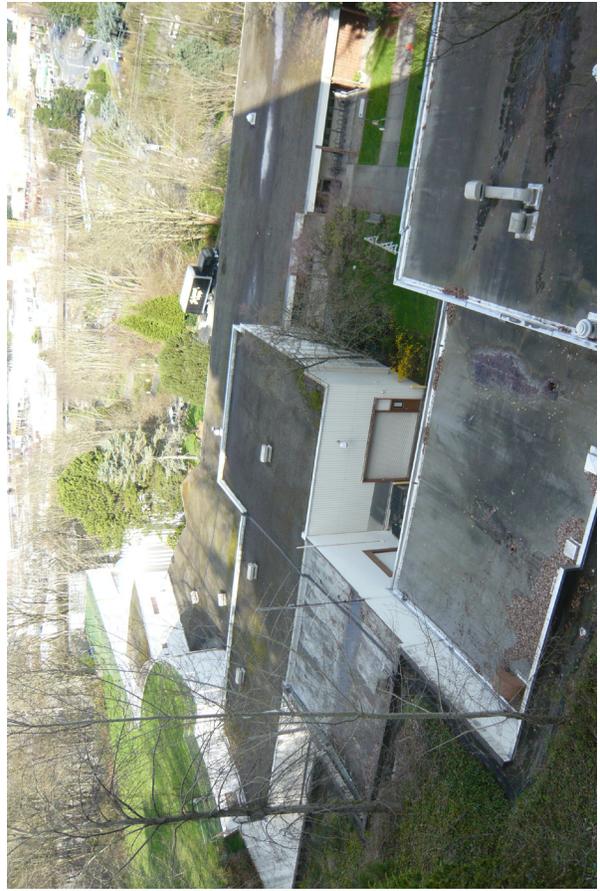
View from the West



Cyclotron Pond



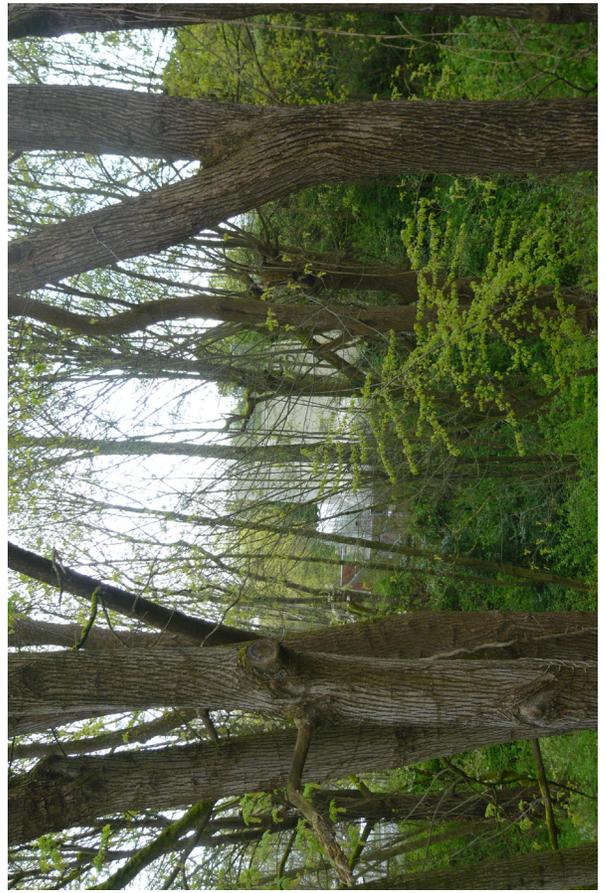
View from Haggett Hall Looking East



View from Haggett Hall Looking East



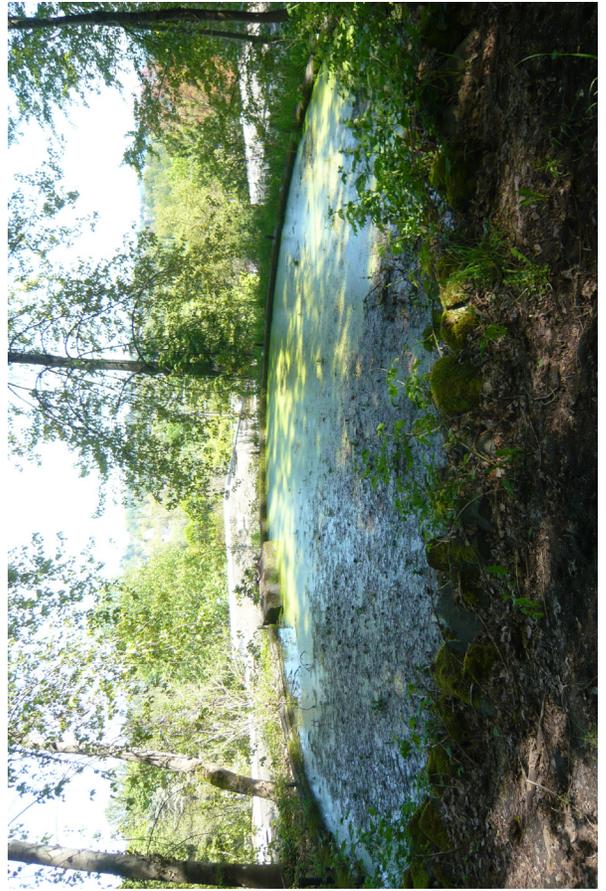
Security Fencing at Northeast Corner of Green Roof



View from Northeast 45th Street Rav



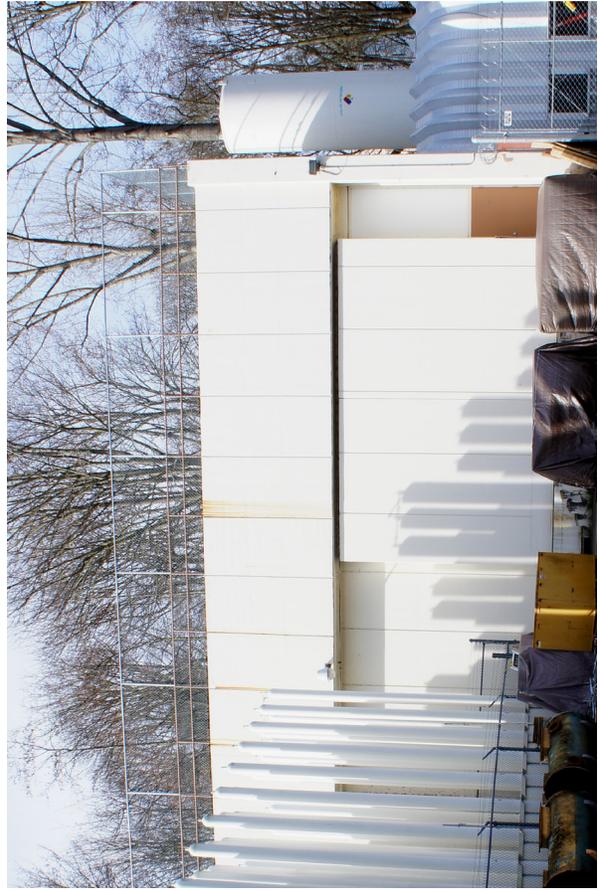
Security Fencing at Green Roof Looking Southeast



Cyclotron Pond



View of Van de Graaff Building Looking East



Liquid nitrogen Storage Facility



Entry Courtyard Looking East



View of Van de Graaff Building Looking North



Entry Courtyard



South Approach



South Approach



View from N12 Parking Area



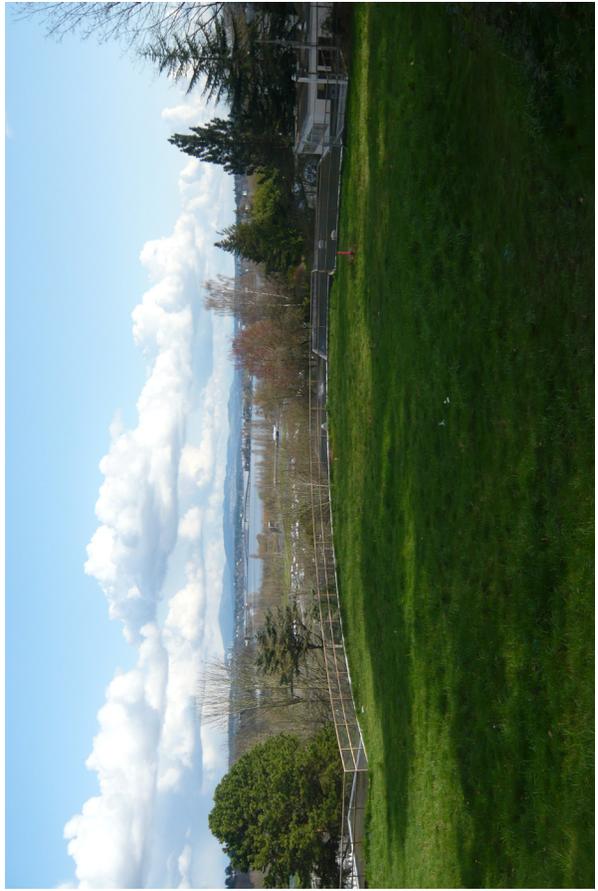
View Looking South



Mechanical Room



Haggett Hall from Green Roof Looking South



Green Roof Looking South



Green Roof Looking South



Guardrail and Security Fencing



Green Roof Looking East



View Looking South



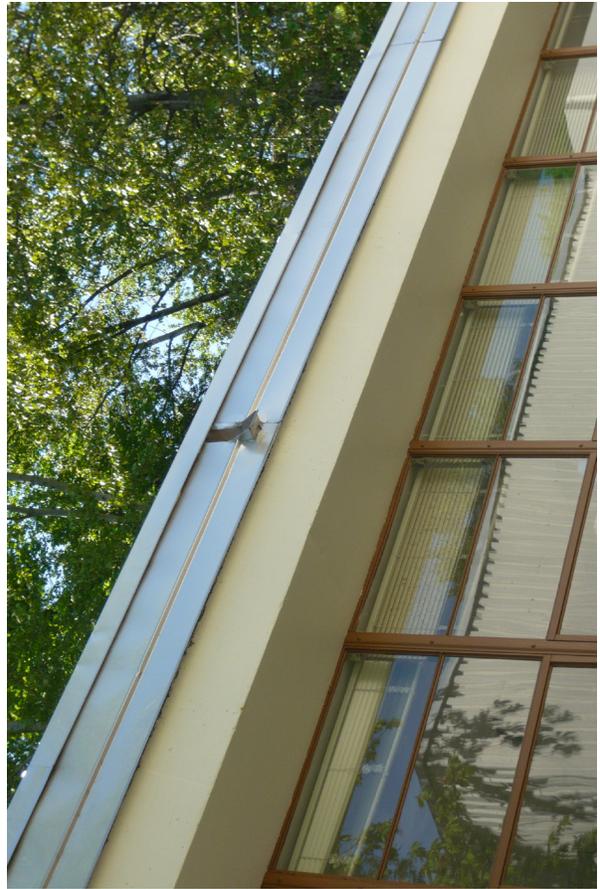
Service Entry



Wall Panels



View from Burke-Gilman Trail Looking West



Roof Fascia



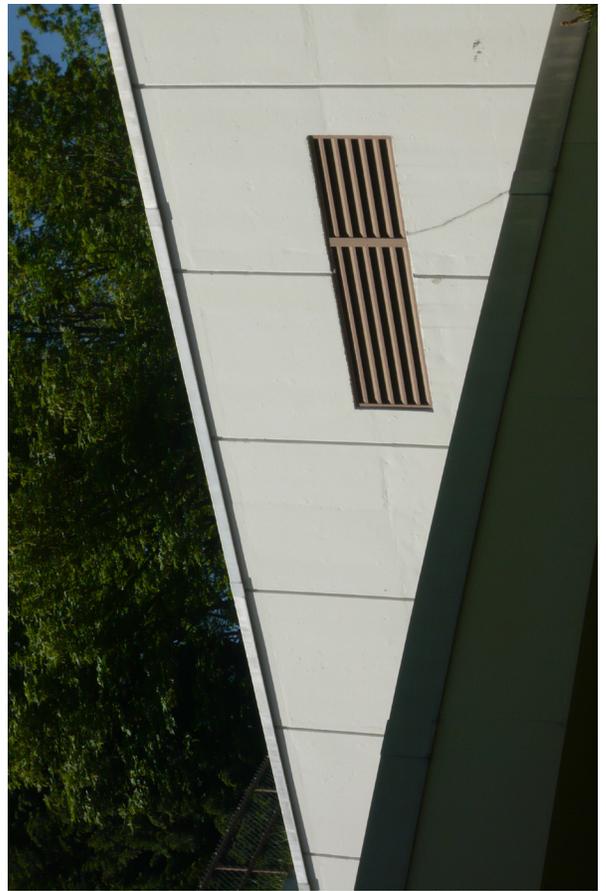
Corrugated Metal Wall Panels



Wall Panels



Roof Fascia



Wall Panels



Damage Caused by Guardrail Mounting



Mechanical Room Roof



Guardrail and Security Fencing



Damage Caused by Guardrail Mounting

8. Bibliography and Sources

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The University of Washington Daily, November 8, 2007

Docomomo WEWA