

**Draft
Environmental Assessment
Proposed Seismic Upgrades
White City Veterans Affairs Medical Center
Southern Oregon Rehabilitation Center & Clinics Campus
White City, OR**

October 2021



**U.S. Department of Veterans Affairs
Office of Construction and Facilities Management**



EXECUTIVE SUMMARY

The United States (U.S.) Department of Veterans Affairs (VA) prepared this Environmental Assessment (EA) to identify, analyze, and document the potential environmental impacts associated with the implementation of proposed seismic upgrades at the White City VA Medical Center Southern Oregon Rehabilitation Center and Clinics (SORCC), located in White City, Oregon.

VA prepared this EA in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code §§ 4321-4370h), as implemented by the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] §§ 1500-1508); *Environmental Effects of the Department of Veterans Affairs Actions* (38 CFR Part 26); and VA's *NEPA Interim Guidance for Projects* (VA 2010).

Purpose and Need

The purpose of the Proposed Action is to address existing seismic deficiencies at the SORCC. The Proposed Action is needed to improve safety for Veterans, staff, and visitors, and to ensure the continuity of health care services to Veterans at the SORCC.

Implementation of the Proposed Action would address seismic and associated safety risks at the SORCC, enhance VA services to Veterans at the SORCC, and meet VA's goal of having all essential facilities remain in operation after an earthquake.

Proposed Action

VA proposes to implement a phased program consisting of demolition, renovation, and construction activities over several years to address seismic deficiencies at the existing SORCC. VA proposes to implement the following seismic upgrades:

- perform a seismic retrofit of Buildings 200 (Administration), 201 (Radiology), 202 (VA Police), 219 (Canteen), 224 (Admin Support);
- perform renovations to Building 201A (Radiology);
- demolish Buildings 210, 222, 223, 227, 228, 229, 234, 235, 241, 242, 262, and connecting corridors and replace with the construction of Building 300 (Facilities Management, Business Office, Administration, etc.) and a new parking lot (Parking Lot A) to serve Building 300;
- demolish Buildings 209, 211, 212, 213, 214 and connecting corridors and replace with the construction of Building 301 (Clinical Support) and a new parking lot (Parking Lot B) to serve Building 301; and,
- demolish Buildings 239, 240, 243, 248, and connecting corridors and replace with the construction of Building 302 (Mental Health) and a new parking lot (Parking Lot C) to serve Buildings 301 and 302.

The Proposed Action would occur in three phases and have a total project duration of approximately nine years. By phasing the upgrades over several years VA would ensure continuity of care to Veterans.

Alternatives

After considering potential alternatives to meet the purpose of and need for the project, VA identified one action alternative for implementing the Proposed Action: the Preferred Alternative (the Proposed Action). This EA also analyzes the No Action Alternative. Under the No Action Alternative, VA would not implement the Proposed Action. Existing seismic issues and associated seismic risks would persist at the SORCC. The No Action Alternative does not meet the purpose of and need for the Proposed Action. However, as required by the VA NEPA regulations (39 CFR Part 26), the No Action Alternative is evaluated in VA EAs and provides a benchmark against which VA can compare the impacts of the Proposed Action.

Environmental Resource Areas Evaluated

This EA examined the potential environmental impacts from the Proposed Action and No Action Alternative on the following resource areas:

- Aesthetics
- Air Quality and Climate Change
- Cultural Resources
- Geology and Soils
- Hydrology and Water Quality
- Wildlife and Habitat
- Noise and Vibration
- Land Use
- Floodplains, Wetlands, and Coastal Zone Management
- Socioeconomics
- Community Services
- Solid Waste and Hazardous Materials
- Transportation and Parking
- Utilities
- Environmental Justice
- Cumulative Effects

Summary of Potential Environmental Consequences of the Alternatives

Table ES-1 summarizes the potential impacts to each resource area from implementation of each alternative analyzed in this EA.

Table ES-1 Summary of Potential Environmental Consequences

| Resource Area | Proposed Action | No Action Alternative |
|--|---|-----------------------|
| Aesthetics | Less than significant impact | No impact |
| Air Quality and Climate Change | Less than significant impact | No impact |
| Cultural Resources | Less than significant impact (anticipated*) | No impact |
| Geology and Soils | Beneficial impact | Adverse impact |
| Hydrology and Water Quality | Beneficial impact | No impact |
| Wildlife and Habitat | Less than significant impact | No impact |
| Noise and Vibration | Less than significant impact | No impact |
| Land Use | No impact | No impact |
| Floodplains, Wetlands, and Coastal Zone Management | No impact | No impact |
| Socioeconomics | Less than significant impact | No impact |
| Community Services | Beneficial impact | Adverse impact |
| Solid Waste and Hazardous Materials | Beneficial impact | No impact |
| Transportation and Parking | Beneficial impact | Adverse impact |
| Utilities | Beneficial impact | No impact |
| Environmental Justice | Less than significant impact | No impact |

Note: *Preliminary conclusion subject to outcome of on-going Section 106 consultation.

Public Involvement and Agency Consultations

VA published a project scoping notice in the *Mail Tribune* on June 6 and 7, 2021. VA did not receive any public scoping comments.

VA has made this Draft EA available for public review. VA announced the availability of the Draft EA by publishing a notice of availability of the Draft EA in the *Mail Tribune*, posting the notice of availability to the VA Office of Construction and Facilities Management website (<https://www.cfm.va.gov/environmental/index.asp>), and notifying stakeholders via email. VA will incorporate relevant feedback from stakeholders into the Final EA.

VA provided the following agencies, stakeholders, elected officials, and Tribal Nations with a notice describing the Proposed Action and opportunities for comment.

Federal Agencies

- U.S. Army Corps of Engineers, Portland District
- U.S. Environmental Protection, Agency Region 10
- U.S. Fish and Wildlife Service, Pacific Southwest Region

State Agencies

- Oregon Department of Environmental Quality
- Oregon Department of Fish and Wildlife
- State Historic Preservation Officer

Local Stakeholders

- Rogue Valley Sewer Service

State Elected Officials

- Duane Stark, Oregon State Representative District 4
- Art Robinson, Oregon State Senator District 2

Federal Elected Officials

- Ron Wyden, U.S. Senator — Oregon
- Jeff Merkley, U.S. Senator – Oregon
- Cliff Bentz, U.S. Congressman Oregon District 2

Federally Recognized Tribes with Interests in Jackson County, Oregon

- Confederated Tribes of the Grand Ronde Community of Oregon
- Confederated Tribes of the Siletz Indians of Oregon
- Confederated Tribes of the Warm Springs Reservation of Oregon
- Coquille Indian Tribe
- Cow Creek Band of Umpqua Tribe of Indians
- Klamath Tribes

Conclusion

Based on the analysis contained in this EA, VA concludes that the Proposed Action would not have a significant effect on the human environment and, therefore, an environmental impact statement will not be prepared.

Compliance with Section 508 of the Rehabilitation Act

To the extent possible, this document is compliant with Section 508 of the Rehabilitation Act. This allows assistive technology to be used to obtain the available information from the document. Due to the nature of graphics, figures, tables, and images occurring in the document, accessibility may be limited to a descriptive title for some items.

DRAFT
**ENVIRONMENTAL ASSESSMENT FOR
PROPOSED SEISMIC UPGRADES AT
WHITE CITY VETERANS AFFAIRS MEDICAL CENTER
SOUTHERN OREGON REHABILITATION CENTER & CLINICS
WHITE CITY, OREGON**
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ABBREVIATIONS AND ACRONYMS

| | | | |
|------------------|---|-------------------------------------|---|
| ACHP | Advisory Council on Historic Preservation | NEPA | National Environmental Policy Act |
| ACM | asbestos containing material | NHPA | National Historic Preservation Act |
| APE | area of potential effect | NO ₂ | nitrogen dioxide |
| BMP | best management practice | NRHP | National Register of Historic Places |
| CEQ | Council on Environmental Quality | O ₃ | ozone |
| CFR | Code of Federal Regulations | OARRA | Oregon Archaeological Records Remote Access |
| CO | carbon monoxide | OSHA | Occupational Safety and Health Administration |
| CO ₂ | carbon dioxide | Pb | lead |
| CO _{2e} | carbon dioxide equivalents | PM ₁₀ /PM _{2.5} | particulate matter less than 10 and 2.5 microns in diameter |
| dB | decibels | SHPO | State Historic Preservation Officer |
| dBA | A-weighted decibel | SO ₂ | sulfur dioxide |
| DEQ | Department of Environmental Quality | SORCC | Southern Oregon Rehabilitation Center & Clinics |
| EA | environmental assessment | SWPPP | Stormwater Pollution Prevention Plan |
| EO | Executive Order | TMDL | Total Maximum Daily Load |
| FEMA | Federal Emergency Management Agency | U.S. | United States |
| GHG | greenhouse gases | USACE | U.S. Army Corps of Engineers |
| GSF | Gross Square Feet/Footage | USEPA | U.S. Environmental Protection Agency |
| IPaC | Information for Planning and Consultation | USFWS | U.S. Fish and Wildlife Service |
| kV | kilovolt | VA | U.S. Department of Veterans Affairs |
| kW | kilowatt | VA CFM | VA Office of Construction and Facilities Management |
| LBP | lead based paint | VHA | Veterans Health Administration |
| LOS | level of service | | |
| MOA | Memorandum of Agreement | | |
| NAAQS | National Ambient Air Quality Standards | | |

CHAPTER 1 INTRODUCTION AND PURPOSE OF AND NEED FOR THE ACTION

1.1 INTRODUCTION

The United States (U.S.) Department of Veterans Affairs (VA) has prepared this environmental assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code 4321-4370h), as implemented by the Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] 1500-1508); *Environmental Effects of the Department of Veterans Affairs Actions* (38 CFR Part 26); and VA's *NEPA Interim Guidance for Projects* (VA 2010).

NEPA requires federal agencies to consider the environmental effects of their proposed actions. This EA evaluates the potential impacts on the human environment resulting from proposed seismic upgrades at the White City VA Medical Center Southern Oregon Rehabilitation Center & Clinics (SORCC), located at 8495 Crater Lake Highway, White City, OR (Figures 1-1 and 1-2).

VA will use this environmental impact analysis of the Proposed Action to determine whether it supports a finding of no significant impact or if it is necessary to prepare an environmental impact statement (if there is a potential for significant impacts).

As required under NEPA, this EA considers public, agency, and tribal input into the federal decision-making process, provides the federal decision-maker with an understanding of potential environmental effects of the decision before making it, identifies measures to reduce potential environmental effects, and documents the NEPA process.

1.2 PURPOSE AND NEED

The purpose of the Proposed Action is to address existing seismic deficiencies at the SORCC to meet VA seismic design requirements and to provide for renovations to meet regulatory and policy requirements. VA Handbook H-18-8, *Seismic Design Requirements* (VA 2019); VA Directive 7512, *Seismic Safety of VA Buildings* (VA 2017); and Executive Order (EO) 13717, *Establishing a Federal Earthquake Risk Management Standard*, define VA requirements and policy regarding seismic safety of buildings. These policies identify seismic risk and establish criteria to identify exceptionally high risk and high-risk VA buildings. They also establish a policy requiring seismic studies for higher priority (critical and essential) buildings in earthquake prone (high and very high) areas (VA 2021a).

The Proposed Action is needed to improve safety and reduce existing seismic risks for Veterans, staff, and visitors, and to ensure the continuity of health care services to Veterans following a seismic event. The SORCC is located within a high seismic zone (Figure 1-3) and a previous detailed structural assessment of the SORCC determined that numerous buildings are seismically deficient respective of this seismic classification and do not meet all modern life safety codes, VA criteria, as well as other guidelines. A major seismic event would inflict substantial damage to structures and potentially cause harm to patients and staff, and would limit VA's ability to continue operations at the facility as a result of these deficiencies (SORCC 2020).

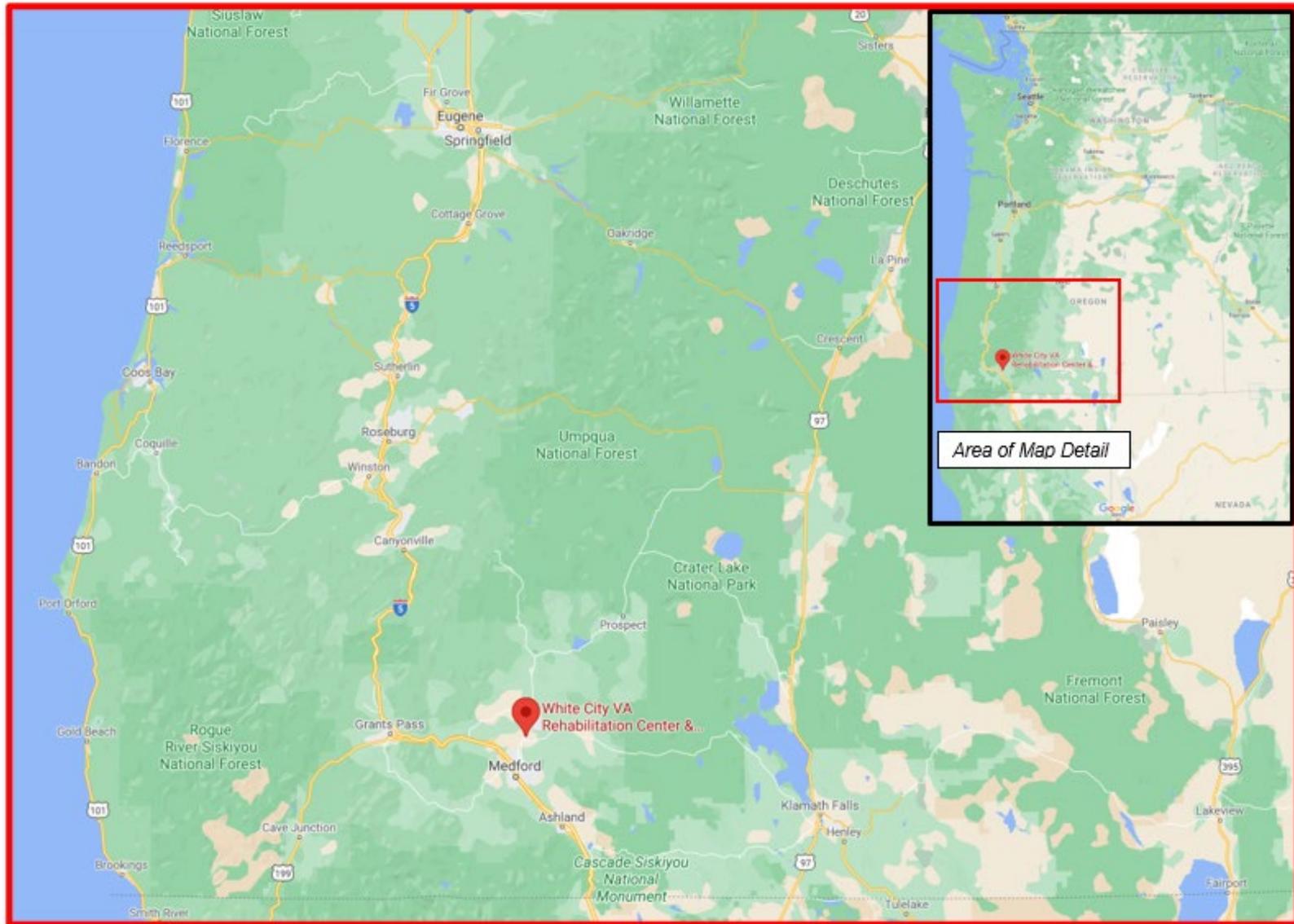


Figure 1-1 Regional Location of VA Medical Center Southern Oregon Rehabilitation Center & Clinics



Figure 1-2 Southern Oregon Rehabilitation Center & Clinics, White City, Oregon

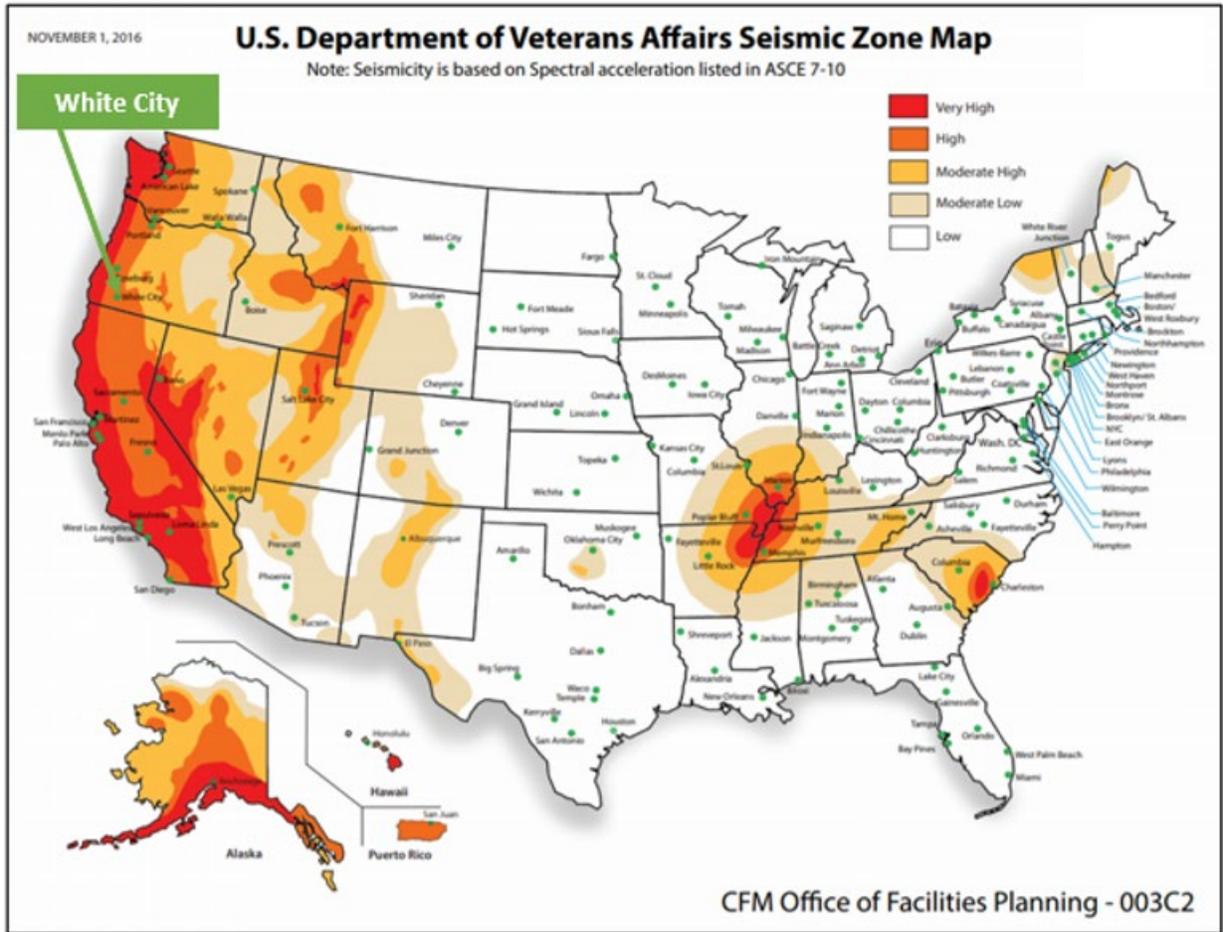


Figure 1-3 Seismic Zone Map (SORCC in a “High” Zone)

Implementing the Proposed Action would address seismic and associated safety risks, enhance VA services to Veterans at the SORCC, and meet VA’s goal of having all essential facilities remain in operation after a seismic event.

1.3 BACKGROUND

1.3.1 SORCC

The SORCC is 145-acres in size, located in White City, Oregon, on the site of the former Camp White. The Army began construction of Camp White in January of 1942, at the early onset of World War II. Many of the existing structures currently utilized by the SORCC date back to this era. These structures are typical of Army construction of this era and consist of wood framed walls, floors, and roofs with brick exteriors (SORCC 2020).

The SORCC provides standard clinical services as well as medical care with an emphasis on residential inpatient rehabilitation as well as primary medical and mental health outpatient services. The facility provides 255 inpatient residential rehabilitation beds and a Primary Care/Mental Health outpatient department to Veterans living in Oregon and surrounding states. The outpatient service alone serves more than 40,000 Veterans (SORCC 2020).

CHAPTER 2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 DEVELOPMENT OF ALTERNATIVES

NEPA implementing regulations require that the federal agency evaluate a reasonable alternatives for meeting the purpose of and need for action, including a “No Action Alternative.” VA explored and considered potential reasonable alternatives to the Proposed Action. Through this process, VA determined to evaluate the Proposed Action and the No Action Alternative in this EA (Section 2.2) and eliminated two potential alternatives from further consideration (Section 2.3).

2.2 ALTERNATIVES

2.2.1 Proposed Action

The Proposed Action reflects the best balance of demolition, retrofit, and new construction activities to efficiently meet VA seismic building requirements and meet the needs of continued service to Veterans.

2.2.1.1 Project Details

VA proposes to implement a phased program consisting of demolition, renovation, and construction activities over several years to address seismic deficiencies at the existing SORCC (Figure 2-1). VA proposes to implement the following seismic upgrades at the SORCC:

- perform a seismic retrofit of Buildings 200 (Administration), 201 (Radiology), 202 (VA Police), 219 (Canteen), 224 (Admin Support);
- perform renovations to Building 201A (Radiology);
- demolish Buildings 210, 222, 223, 227, 228, 229, 234, 235, 241, 242, 262, and connecting corridors and replace with the construction of Building 300 (Facilities Management, Business Office, Administration, etc.) and a new parking lot (Parking Lot A) to serve Building 300;
- demolish Buildings 209, 211, 212, 213, 214 and connecting corridors and replace with the construction of Building 301 (Clinical Support) and a new parking lot (Parking Lot B) to serve Building 301; and,
- demolish Buildings 239, 240, 243, 248, and connecting corridors and replace with the construction of Building 302 (Mental Health) and a new parking lot (Parking Lot C) to serve Buildings 301 and 302.

The Proposed Action would occur in phases and have a total project duration of approximately nine years. Table 2-1 summarizes each of the potential phrases and their associated elements and approximate durations. By phasing the upgrades over several years VA would ensure continuity of care to Veterans. Figure 2-2 depicts the SORCC at the completion of the Proposed Action.



Figure 2-1 SORCC – Existing Buildings

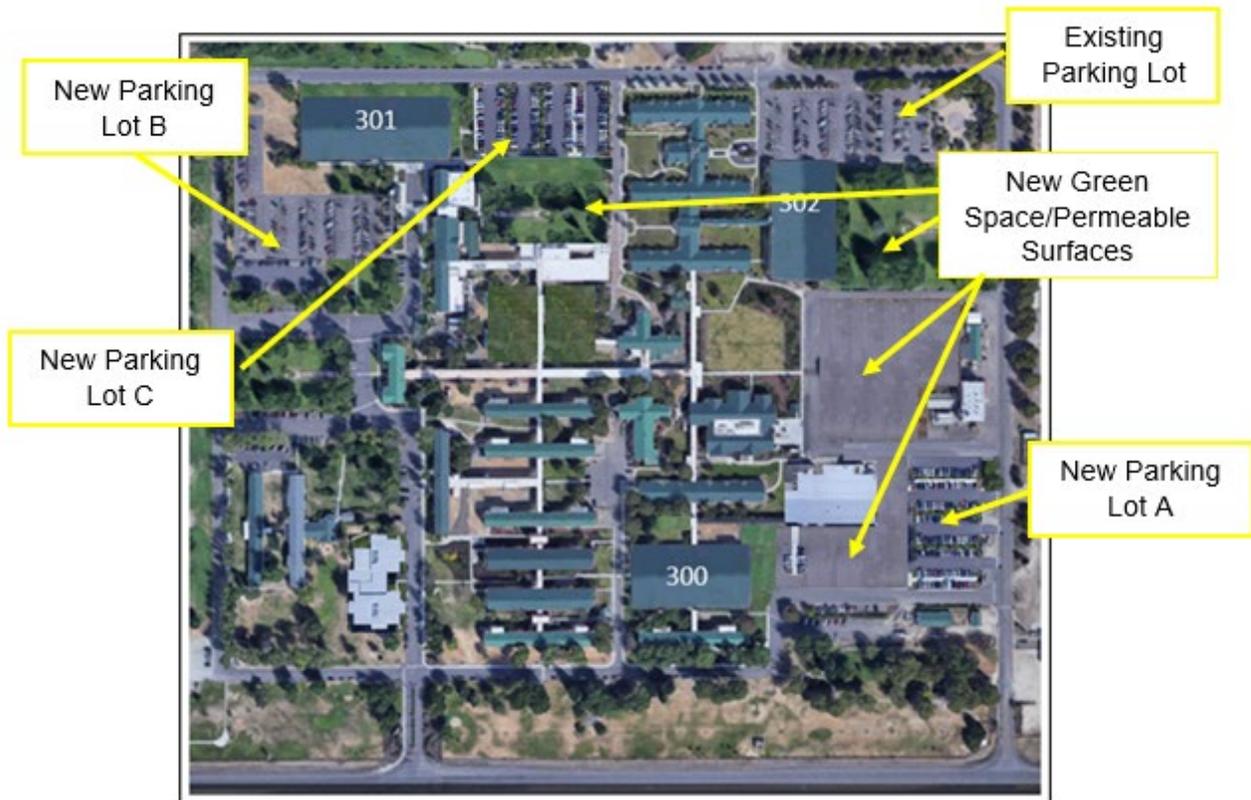


Figure 2-2 SORCC – Proposed Action

Table 2-1 Phases, Elements, and Approximate Duration of the Proposed Action

| Phase | Element | Duration |
|-------|--|------------------|
| A | Remodel Buildings 242 and 243 for use as swing space | 6 months |
| A | Relocate Departments to Buildings 222, 223, and 224 | 2 months |
| A | Demolish Buildings 222, 223, and Corridors 223 and 224 | 2 months |
| A | Retrofit Building 224 | 1 year |
| A | Construct Building 300 | 2 years |
| A | Relocate Departments to Building 300 | 2 months |
| | Total Estimated Duration Phase A | 3-4 years |
| B | Demolish Building 248 | 2 months |
| B | Construct New Building 301 Parking Lot B | 5 months |
| B | Demolish Existing Parking Lots O and G Demolish Buildings 227, 228, and 229 | 3 months |
| B | Construct Building 301 | 3 years |
| B | Construct New Building 300 Parking Lot A | 3 months |
| B | Relocate Departments to Building 301 | 4 months |
| B | Construct New Buildings 301 & 302 Parking Lot C | 3 months |
| | Total Estimated Duration Phase B | 4-5 years |
| C | Demolish Buildings 239, 240, 241, 262 | 5 months |
| C | Construct Building 302 | 18 months |
| C | Demolish Buildings 213 and 214 | 3 months |
| C | Retrofit Buildings 200, 201, 201A, 202, and 219 | 1 year |
| C | Relocate Departments to Buildings 200, 201, 201A, and 219 | 3 months |
| C | Relocate Departments to Building 302 | 3 months |
| C | Demolish Buildings 209, 210, 211, 212, 234, 235, 242, and 243 | 6 months |
| | Total Estimated Duration Phase C | 3-4 years |
| | Total Estimated Proposed Action Duration | 9 years |

Source: U.S. Army Corps of Engineers 2021 (Appendix A).

While Table 2-1 presents the approximate duration for each element as individually implemented, VA anticipates that one or more elements and/or phases of implementation would overlap. Thus, the total construction duration would be less than the combined durations of each element and phase. Appendix A (U.S. Army Corps of Engineers [USACE] 2021) provides details on the phases and associated elements.

2.2.1.2 Construction Staging Areas and Transportation

Contractors would use staging areas (a lay down area) for temporarily storing materials and equipment in previously disturbed areas (for example, at the baseball field parking area). All staging areas would be located on the SORCC. Workers would drive to the SORCC and park in designated construction parking zones. Deliveries of equipment and materials would occur during normal working hours and likely via the secondary entry (Andries Road) off Oregon Route (Highway) 62 to minimize impacts to Veterans, staff, and visitors.

2.2.1.3 Demolition and Retrofit

VA proposes to demolish approximately 310,000 gross square feet (GSF) of buildings and associated corridors under the Proposed Action. Prior to demolition, permitted workers would

abate and properly dispose all known hazardous, asbestos and lead containing materials. Workers would sort demolished materials, properly stockpile them in a secure area, and direct the materials for recycling or appropriate disposal at the nearest landfill or hazardous materials collection station. As shown on Figure 2-2, some of the existing building locations would revert to green space/permeable surface after construction (VA 2020).

The proposed retrofit of Buildings 201/201A, 202, 219, and 224 would address identified deficiencies and bring the buildings and connecting corridors up to compliance with current seismic standards performance criteria for structural and non-structural resiliency. The retrofitting would consist of interior and exterior building upgrades and generally result in a building footprint similar to existing configurations. VA engineers and architects would develop building-specific retrofit plans and designs for each phased element. The resulting building finishes would strive to match existing finishes as possible and be complementary with the overall SORCC architecture (SORCC 2020).

2.2.1.4 New Buildings and Parking Lots

VA would construct the following three new buildings.

Building 300 (Facilities Management, Business Office, Administration, etc.) would consolidate several departments currently occupying existing buildings proposed for demolition into a two-story structure providing up to approximately 160,860 GSF¹ of space. The architecture of the building would complement the overall SORCC architecture.

Building 301 (Clinical Support) would consolidate several services occupying existing buildings proposed for demolition into a two-story structure providing up to approximately 113,500 GSF of space. The architecture of the building would complement the overall SORCC architecture.

Building 302 (Mental Health) would consolidate several services currently occupying existing buildings proposed for demolition into a two-story structure providing up to approximately 66,000 GSF of space. The architecture of the building would complement the overall SORCC architecture.

VA would construct three new parking lots (A, B, and C) to consolidate existing parking areas and maximize available parking nearest the buildings that generate the greatest parking demand. The three new paved lots would result in a net increase of 85 parking spaces, resulting in a total of 891 parking spaces at the SORCC (VA 2020).

The areas surrounding the new buildings and parking lots would consist of concrete, asphalt, and stormwater drainage infrastructure. Landscaping would be consistent with surrounding features at the SORCC. The construction contractor would implement erosion control measures as part of the Proposed Action (VA 2020).

2.2.1.5 Sustainable Design

VA Office of Construction and Facilities Management (CFM) Policy Memorandum 003C-2021-21, *Green Building Certification Requirements*, established green building certification requirements to support VA facility compliance with applicable laws. The policy requires that VA

¹ The new building may not exceed 10 percent of the total GSF of the demolished departments; the GSF of the buildings and corridors proposed for demolition is 146,238.

must certify all VA major construction projects, including major renovations, using USGBC's LEED certification system and achieve a minimum certification level of silver (VA 2021b).

The renovated and new buildings would incorporate sustainable design elements to ensure achievement of LEED silver certification. Elements would include installing LED lighting; maximizing energy performance; installing advanced utility meters for electricity, natural gas, and/or steam; and employing total building commissioning practices (VA 2020).

2.2.1.6 Post-Construction

Staffing levels and provided services at SORCC would remain at approximately equal to existing levels. The increase in parking spaces would help alleviate existing parking constraints for existing patients and staff. The Proposed Action would complement other recently completed or on-going projects at the SORCC, supporting an overall improvement in the facilities and provided services at the SORCC.

2.2.2 No Action Alternative

Under the No Action Alternative, VA would not implement the Proposed Action. Existing seismic issues and associated seismic risks would persist at the SORCC. The No Action Alternative does not meet the purpose of and need for the Proposed Action. However, as required by the VA NEPA regulations (38CFR Part 26), the No Action Alternative is evaluated in VA EAs and provides a benchmark against which VA can compare the impacts of the Proposed Action.

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION

VA considered and eliminated two potential alternatives for meeting the purpose of and need for the Proposed Action.

2.3.1 Retrofitting All Seismically Deficient Buildings

VA considered retrofitting all seismically deficient buildings to meet seismic requirements; however, the existing original buildings are long, linear structures not easily retrofitted to meet seismic requirements. Thus, the sheer number of retrofits would be impractical and would not result in an efficient use of space at the SORCC. Furthermore, the age and associated construction of many of the buildings is such that they would have to undergo significant retrofitting resulting in an extensive level of effort. The utilization of space within the existing buildings is insufficient for current and future utilization and would require significant interior re-arrangement of spaces for increased efficiency of use. Retrofitting all of the buildings would be impractical and not consolidate complementary services, resulting in service inefficiencies.

2.3.2 Demolishing All Seismically Deficient Buildings and Constructing New Buildings

VA considered demolishing all seismically deficient buildings and constructing new buildings. VA determined that the level of effort associated with replacing the existing seismically deficient buildings with new facilities would be cost-prohibitive. Therefore, VA eliminated this potential alternative from further consideration.

CHAPTER 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES

This chapter describes the affected environment and evaluates the potential environmental effects on resource areas. The affected environment includes the project area, and depending on the resource area, a region surrounding the project area.

CEQ regulations (40 CFR 1501.3) specify that in considering whether the effects of a proposed action are significant, agencies shall analyze the potentially affected environment and degree of the effects of the action. In considering the potentially affected environment, agencies should consider, as appropriate to the specific action, the affected area (national, regional, or local) and its resources, such as listed species and designated critical habitat under the Endangered Species Act. Significance varies with the setting of the proposed action. For instance, in the case of this site-specific Proposed Action, significance usually depends only upon the effects in the White City-Medford area.

In considering the degree of the effects, this EA considers the following:

- Both short- and long-term effects.
- Both beneficial and adverse effects.
- Effects on public health and safety.
- Effects that would violate federal, state, tribal, or local laws protecting the environment.

This EA identifies potential environmental effects, as applicable, and the methodology and general assumptions used in the analysis for each resource area.

and identifies management measures such as best management practices (BMPs), as well as mitigation and monitoring measures, where applicable.

The Proposed Action would comply with all applicable federal, state, and local laws and regulations, including those listed in Appendix B.

In many instances, the existence of such laws and regulations renders impacts that might have occurred in the absence of such laws highly unlikely and not reasonably foreseeable. In other instances, such laws and regulations lessen potential impacts to levels that are not significant. Because compliance with applicable laws is mandatory, this EA does not identify compliance with the requirements of such laws and regulations as mitigation.

3.1 AESTHETICS

Aesthetics refers to the visual interaction between an individual and the environment. Visual resources may consist of natural landscapes and views or man-made features. Rare or unique natural settings or historic properties have a high sensitivity. Landscapes that are not unique or altered by modern development tend to have lesser sensitivity and thus lower aesthetic quality.

3.1.1 Affected Environment

The 145-acre SORCC is comprised of brick buildings, white-sided buildings, and landscaped areas. The buildings are both World War II-era construction and of more modern design. Building heights range from one to two stories. Surface parking lots, roads, sidewalks, and ornamental vegetation surround SORCC buildings. Construction associated with other projects is visible in certain areas of the campus. Overall the SORCC has a moderate aesthetic quality.

Development surrounding the SORCC is low-density mixed use and includes industrial to the northwest, commercial to the southwest, and commercial and residential mix to the east. The perimeter of the SORCC contains mature trees, which effectively screen the SORCC from off-SORCC viewers.

3.1.2 Environmental Consequences

3.1.2.1 Proposed Action

Seismic Upgrades

The presence of construction equipment, vehicles, materials, and related activity would impact the visual setting of the SORCC during construction of the seismic upgrades. Due to the phased approach to implementing the seismic upgrades, construction equipment would be visible for a nearly continuous period of approximately nine years. As construction finished in one area it would transfer to the next, thus transitioning the visual impact to other areas and perspectives on the SORCC. The project area is not clearly visible to surrounding public properties, and there are few potential viewers (that is, nearby residents) of the SORCC. As such, the phased construction would have no aesthetic impact to off-SORCC areas. Additionally, it would have minor to negligible aesthetic impacts to staff and patients of the SORCC during construction.

Operations

Buildings 300, 301, 302, and the renovated buildings would be visually consistent with the surrounding SORCC and the overall visual setting of the SORCC. The demolition of old and visually degraded buildings and the construction of new buildings would improve the aesthetics of the setting. The resulting configuration of the SORCC would also increase the amount of landscaping and greenspace, resulting in a more aesthetically pleasing viewshed. Therefore, implementation of the Proposed Action would result in a less than significant impact to aesthetics.

3.1.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to existing conditions. The SORCC would continue to have moderate visual quality. Therefore, implementation of the No Action Alternative would result in no impact to aesthetics.

3.2 AIR QUALITY AND CLIMATE CHANGE

Air quality refers to the concentration of air contaminants in a specific location. Air quality is determined by the type and volume of pollutants emitted into the atmosphere, the size and topography of the air basin, and prevailing meteorological conditions. Considerations related to climate change include 1) the effects of a project on climate change (through greenhouse gas [GHG] emissions or carbon sequestration), 2) the effects of climate change on a proposed project, and 3) the implications of climate change for the environmental effects of a proposed action.

The “*Final Air Quality Report, White City VA Medical Center, White City, OR*” (VA CFM 2021a) provides detailed information on the discussion presented in the following assessment.

3.2.1 Affected Environment

The U.S. Environmental Protection Agency (USEPA) and the State of Oregon Department of Environmental Quality (DEQ) developed and enforce air quality regulations related to activities at the SORCC. The Clean Air Act of 1970, 42 U.S. Code Section 7401 et seq. amended in 1977 and 1990, is the primary federal statute governing air pollution. One purpose of the Clean Air Act is to establish national ambient air quality standards (NAAQS) and classify areas as to their attainment status relative to NAAQS. Attainment is the achievement of ambient concentrations below specified levels determined to be protective of human health by the USEPA.

The six criteria pollutants for the NAAQS are: particulate matter less than 10 and 2.5 microns in diameter (PM₁₀ and PM_{2.5}), carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), lead (Pb), and ozone (O₃). The USEPA and DEQ also regulate GHGs including carbon dioxide and many other GHGs. GHG are related to climate change. Expressed in carbon dioxide (CO₂) equivalents (CO₂e), GHG emissions are the calculated combined value of the GHG potential of all GHG gases combined and expressed as an equivalent amount of CO₂.

The SORCC is located in Jackson County, OR within the Southwest Oregon Air Quality Control Region and within the Medford-Ashland Air Quality Management Area. The USEPA designated the Medford-Ashland Air Quality Management Area as nonattainment for PM₁₀ in 1990 and redesignated the area to attainment in 2006 with the requirements for a maintenance plan. Therefore, the SORCC is within a moderate maintenance area for PM₁₀ (USEPA 2021a).

The General Conformity Rule (40 CFR Part 93, Subpart B) requires any federal agency responsible for an action in a nonattainment area or maintenance area to determine that action conforms to the appropriate State Implementation Plan or that the action is exempt from the General Conformity Rule requirements. The General Conformity Rule sets applicability requirements for projects subject to the Rule through establishment of *de minimis* levels for annual criteria emissions applicable to the air basin. The applicable *de minimis* level for the project area is 100 tons per year of PM₁₀ emissions.

Sensitive receptors for air quality impacts are those persons that are the most sensitive to pollution effects, such as the very young, elderly, or people with respiratory and other related illnesses. As the SORCC is a medical facility, the SORCC itself is the nearest sensitive receptor. Other nearby sensitive receptors within an approximately one-mile radius of the

SORCC are: Loving Help Daycare, Southern Oregon Head Start, White Mountain Middle School, and Table Rock Elementary.

Stationary sources of emissions at the SORCC consist of a boiler plant (Building 232) and at least two emergency generators. The SORCC does not currently hold any air emission permits from the Oregon DEQ (Oregon DEQ 2021).

3.2.2 Environmental Consequences

3.2.2.1 Proposed Action

Implementation of the Proposed Action would produce construction-related emissions over a nine-year period and a permanent increase in operational emissions from new stationary equipment.

Seismic Upgrades

Construction emissions would primarily occur within the boundaries of the SORCC and come from the use of heavy equipment like cranes and concrete trucks and the commuting of construction workers and delivery of construction materials to the project area.

Proposed construction activities would create dust, or PM₁₀. Construction activities would limit particulate matter by following dust control BMPs such as lightly wetting down construction debris stockpiles and limiting dust generating activities during high winds.

Table 3-1 presents the estimated emissions from implementing the construction phase of all construction, demolition, and retrofits within one calendar year. This represents the unlikely worst-case scenario as the renovations could occur over nine years. Therefore, average annual emissions would be lower. However, the data in Table 3-1 demonstrate that even if VA were to complete the Proposed Action within one year, emissions would not exceed General Conformity Rule *de minimis* thresholds. Appendix C provides estimated emissions calculations, factors, and assumptions.

Table 3-1 Estimated Construction Emissions for All Buildings Combined Emissions (tons/year)

| Year and Activity | CO | VOC | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
|--|-------------|------------|-----------------|-----------------|------------------|-------------------|
| Year 1 – Heavy Construction (All Phases) | 23.3 | 4.1 | 27.3 | 0.0 | 1.9 | 1.7 |
| Year 1 – On-Road Vehicles and Worker Trips (All Phases) | 5.4 | 0.5 | 1.2 | 0.0 | 0.1 | 0.1 |
| Total Year 1 | 28.7 | 4.6 | 28.5 | 0.0 | 2.0 | 1.8 |
| <i>de minimis</i> Threshold for General Conformity Rule (per year) | N/A | N/A | N/A | N/A | 100 | N/A |
| Exceeds <i>de minimis</i> in any year? | No | No | No | No | No | No |

Notes: VOC = volatile organic compounds, NO_x = nitrogen oxides, SO_x = sulfur dioxide, N/A = Not Applicable

Table 3-2 summarizes potential CO₂e emissions the proposed construction activities would contribute to GHG emissions, which can affect climate change. As shown in Table 3-2, the estimated GHG emissions would not result in considerable significant effects to the environment because emissions would be well below the 25,000 metric tons level established for additional

quantitative analysis. Given the nature and location of the project area, no impacts from climate change (for example, sea level rise) would occur. Therefore, implementation of the Proposed Action would result in a less than significant impact to air quality and climate change.

Table 3-2 Estimated Construction CO₂e Emissions for All Buildings Combined

| Year and Activity | CO ₂ e (metric tons/year) |
|---|---|
| Year 1 – Heavy Construction (All Phases) | 19,081.9 |
| Year 1 – On-Road Vehicles and Worker Trips (All Phases) | 480.8 |
| Total Year 1 | 19,562.7 |
| Draft NEPA GHG Threshold (metric tons/year) | 25,000 |
| GHG exceeds threshold in any average year? | No |

Overall, implementation of the seismic upgrades would not exceed *de minimis* levels for PM₁₀ and VA does not need to conduct further review under the General Conformity Rule. As such, VA prepared a Record of Non-Applicability (Appendix C).

Operations

Tables 3-3 and 3-4 depict the emissions from the generators from 100 hours of operation of six new generators for Buildings 300, 301, and 302. The emissions estimates used Tier 2 generators. Tier 2 generators emit more pollutants than Tier 3 or Tier 4 generators. Larger generator engines are more likely to still be Tier 2, depending on manufacture year. The onus to meet regulations and specifications for the tiers is on the manufacturer. VA will ensure generators purchased are from reputable and certified vendors to ensure the appropriate tiered generators are delivered and installed. Additionally, and as required, the engine would have a certification plate indicating to which tier it is certified. Tier 4 is required for non-emergency generators, but not for emergency stand-by generators yet.

VA may need to obtain a permit from the Oregon DEQ for the six new generators, depending on the final engine size selected during the construction phase. The potential-to-emit and permit application could require verification of the tier of the generators. As shown in Tables 3-3 and 3-4, the yearly emissions from the generators would not exceed *de minimis* levels or exceed the GHG threshold.

Table 3-3 Estimated Operational Emissions

| Activity | CO | VOC | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
|--|-----------|-----------|-----------------|-----------------|------------------|-------------------|
| Operational – New Generators at 300, 301, and 302 – 100 Hours of Operation | 0.2 | 3.4 | 3.4 | 0.0 | 0.0 | 0.0 |
| <i>de minimis</i> Threshold for General Conformity Rule (per year) | 100 | N/A | N/A | N/A | 100 | N/A |
| Exceeds <i>de minimis</i> in any year? | No | No | No | No | No | No |

Notes: Table 3-3 reflects only new or larger stationary equipment.

The emissions do not account for use of the emergency generators in excess of 100 hours.

VOC = Volatile Organic Compounds, NO_x = nitrogen oxides, SO_x = sulfur dioxide, N/A = Not Applicable

Table 3-4 Estimated Operational CO₂e Emissions

| Activity | CO ₂ e (metric tons/year) |
|--|---|
| Operational – New Generators at Buildings 300, 301, and 302 – 100 Hours of Operation | 12,657.4 |
| Draft NEPA GHG Threshold (metric tons/year) | 25,000 |
| GHG exceeds threshold in any average year? | No |

Note: Table 3-4 reflects only new or larger stationary equipment.

Operational emissions would be similar to baseline conditions because there would not be an appreciable increase of employees, patients, or services at the SORCC. A decrease in emissions from building heating may occur because the new buildings would have a lower steam heating requirement from the central plant. Therefore, the boilers would have to run less to meet the steam needs and emissions from the central plant would decrease. Implementation of the Proposed Action would result in a less than significant impact to air quality and climate change.

3.2.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to existing conditions or change to air quality. The SORCC would continue to produce mobile and stationary source emissions. Therefore, implementation of the No Action Alternative would result in no impact to air quality and climate change.

3.3 CULTURAL RESOURCES

Cultural resources include both archeologically significant elements and historic elements. The Archeological Resources Protection Act prohibits the excavation of archeological resources on federal lands. The National Historic Preservation Act (NHPA) of 1966, as amended, provides for the preservation of historic properties. Section 106 of the NHPA requires that federal agencies consider the effects of their actions on such properties. Section 110 requires the heads of all Federal agencies to assume responsibility for the preservation of historic properties which are owned or controlled by such agency.

VA has initiated consultation with the Oregon State Historic Preservation Office (SHPO) and Tribes in accordance with Section 106 of the National Historic Preservation Act. VA will update the Final EA to reflect the outcome of Section 106 consultation.

The “Final Cultural and Archaeological Resources Survey Report, White City VA Medical Center, White City, OR” (VA CFM 2021b) provides detailed information on the discussion presented in the following assessment.

3.3.1 Affected Environment

Section 106 of the NHPA and its implementing regulations (Title 36 CFR Part 800) require that federal agencies take into account the effects of their actions (referred to as “undertakings” under Section 106) on properties that may be eligible for or listed in the National Register of Historic Places (NRHP) and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment.

3.3.1.1 Area of Potential Effect

An area of potential effect (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist (36 CFR Part 800.16(d)). The APE consists of the entire SORCC to take into account indirect visual effects to Building 200 and direct effects to buildings that contribute to the historic district (Figure 3-1).

3.3.1.2 Previously Conducted Cultural Investigations

A review of Oregon Archaeological Records Remote Access (OARRA) online database revealed that there have been eight archaeological investigations within 1 mile of the SORCC. No previously conducted investigations overlap the APE; however, two investigations were adjacent to the APE. The OARRA records search shows no archaeological resources are within the APE and no archaeological resources have been identified on the SORCC. Three total archaeological resources are within 1 mile of the APE. These sites consist of one historical debris scatter, one small low-density lithic scatter, and a polygon on the OARRA database indicating “Camp White” though there are no documents attached to the spatial data. None of these sites have been determined eligible by the Oregon SHPO.

The 145-acre SORCC is located on the site of the former Camp White. The Army began construction of Camp White in January of 1942, at the early onset of World War II. Many of the existing structures currently utilized by the SORCC date back to this era. These structures are typical of Army construction of this era and consist of wood framed walls, floors, and roofs with brick exteriors.

In 2007, VA commissioned an architectural survey of the SORCC to determine the SORCC’s eligibility for the NRHP as a historic district. The survey determined that the Camp White Station Hospital Historic District is eligible for listing in the NRHP. The survey identified 46 contributing buildings and structures. Of these 46, 19 of 20 structures proposed for demolition are contributing resources to the historic district (Figure 3-2). The survey also identified five of the other six structures proposed for seismic upgrades (Buildings 201, 201A, 202, 219, and 224) as contributing resources to the historic district. Building 200 was listed in the NRHP in 2016.



Figure 3-1 Area of Potential Effect for Cultural Resources

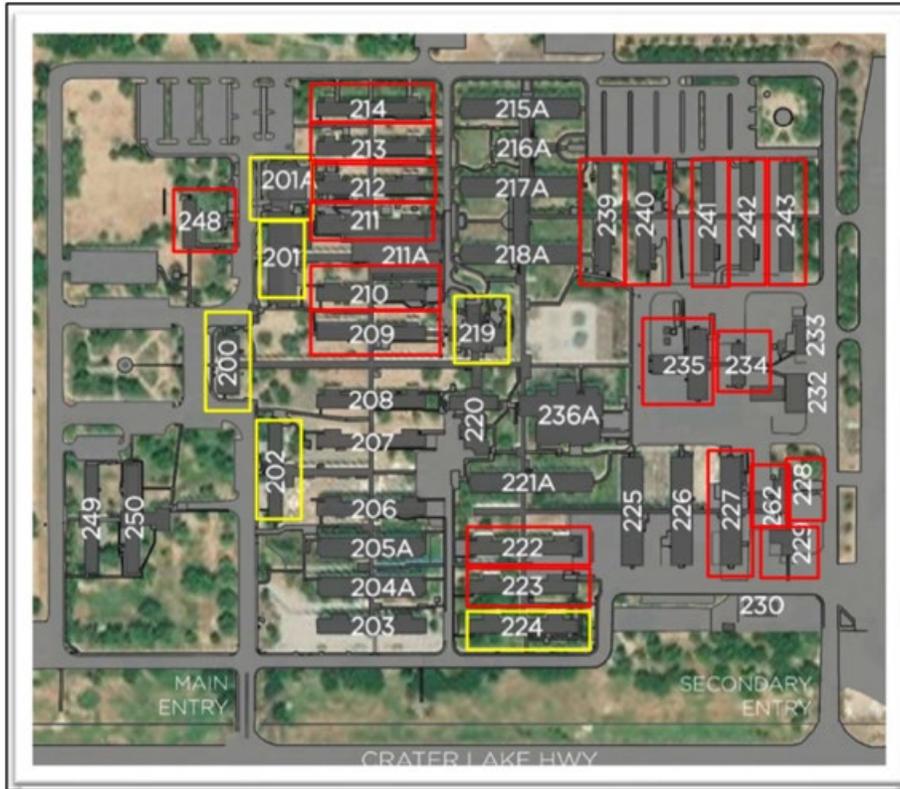


Figure 3-2 Contributing Resources to the Historic District (*resources proposed for demolition in red and resources proposed for renovation in yellow*)

In March 2008, the Department of Veterans Affairs, Oregon SHPO, and ACHP entered into a Memorandum of Agreement (MOA) regarding the demolition of Buildings 217 and 218 at SORCC. The MOA outlined the destruction plans and established stipulations prior to any undertakings. The stipulations included submission of new construction plans to the Oregon SHPO, outlined plans in the event of unanticipated discoveries (for example, historic structures/objects, archaeological resources, and human remains), and annual reporting for 5 years or until the termination of the MOA. SORCC demolished Buildings 217 and 218 (and the connecting corridor) in 2009 and 2012, respectively and constructed new buildings (217A and 218A) and a connecting corridor in the area vacated by the old buildings.

In January 2012, the Department of Veterans Affairs, Oregon SHPO, and ACHP entered into a new MOA regarding the demolition of Buildings 203, 205 to 208, 213, 214, 219, 220, 222 to 225, 227 to 229, 231, 233 to 235, 238, 239 to 242, 245, 248, 250, 259, 261, 262, 270, 273, and 274. The 2012 MOA outlined the destruction plans and established stipulations prior to any undertakings. The stipulations included submission of new construction plans to the Oregon SHPO and identified actions in the event of unanticipated discoveries (for example, historic structures/objects, archaeological resources, and human remains).

SORCC and SHPO established Amendment 1 to the 2012 MOA in June 2014, adding text stipulating that SORCC complete and send annual reports before January of each year to the Oregon SHPO. Additionally, the 2014 Amendment to the 2012 MOA set forth stipulations regarding Building 200 to nominate Building 200 to the NRHP and ensure that SORCC maintain and manage Building 200 in accordance with the *Manual for Built Resources*. In March 2015, SORCC and SHPO established Amendment 2 to the 2012 MOA. The 2015 amendment to the 2012 MOA terminated the 2014 amendment to the 2012 MOA. Though retaining all of the stipulations from the 2014 amendment, the 2015 amendment added two buildings (Buildings 226 and 269) to amend the list of buildings impacted (demolished) as part of the work to be in line with the 2012 MOA.

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action

Seismic Upgrades

Ground-disturbing activities would occur during the construction of the new buildings, associated utility corridors, and parking lots. Based on the background research, the proposed seismic upgrade activities within the direct APE has a moderate risk for inadvertently discovering archaeological resources.

If an inadvertent discovery of cultural materials (for example, unusual amounts of shell, animal bone, bottle glass, ceramics, and structural/building remains) or human remains occurs during construction activities associated with the Proposed Action, VA would halt ground disturbances in the area of the find and a qualified professional archaeologist would assess the discovery. The archaeologist would determine whether the resource is potentially significant per the evaluation criteria of the NHPA and would develop appropriate mitigation. If workers encounter human remains, VA would notify the coroner immediately upon discovery. If the coroner determines that the remains are of Native American origin, the provisions of the Native American Graves Protection and Repatriation Act would apply (25 U.S. Code Chapter 32).

Building 200 is the only structure at the SORCC listed in the NRHP. All of the existing buildings and connecting corridors included with the proposed undertaking are contributing resources to the eligible historic district. The 2012 MOA and the 2015 Amendment to the 2012 MOA completed the Section 106 review process for demolition of the following buildings: 213, 214, 222, 223, 227, 228, 229, 234, 235, 239, 240, 241, 242, 243, 248, and 262. The 2015 Amendment to the 2012 MOA stipulates the following measures:

1. The SORCC would continue to manage those properties identified for demolition, until such time as demolition is necessary, in accordance with the *Manual for Built Resources* as approved by the SHPO in 2010 so as to retain historic character while continuing to meet its primary operational mission; and
2. Any undertaking affecting a historic property at SORCC not identified for demolition in this MOA remains subject to review under Section 106 of the NHPA (36 CFR 800).

As such, in accordance with the 2012 MOA and the 2015 Amendment, VA has resolved adverse effects affects for the demolition of Buildings 213, 214, 222, 223, 227, 228, 229, 234, 235, 239, 240, 241, 242, 243, 248, and 262.

Conversely, the impacts associated with the proposed demolition of Buildings 209, 210, 211, and 212 and 20 building connecting corridors; the proposed seismic retrofit of Buildings 200, 201, 201A, 202, 219, and 224 and connecting corridors; and the construction of three new buildings, parking lots, and associated utilities have not been addressed and will be resolved under Section 106 of the NHPA.

The demolition of Buildings 209, 210, 211, and 212 and connecting corridors would result in an adverse effect to the NRHP-eligible historic district as they are all contributing resources. These additional demolitions and renovations would not in effect increase the magnitude of the adverse effect already consulted under the 2012 MOA and the 2015 amendment.

The proposed renovations of Building 200 would be consistent with Secretary of Interior Standards and would not result in additional adverse effects to Building 200. In accordance with the 2015 Amendment to the 2012 MOA stipulations specific to compatible design, SORCC would ensure the new structures meet all applicable provisions of the *Manual for Built Resources*, specifically, but not limited to: scale, placement, use of material, and roof pitch, relying principally upon the model established by replacement Building 204. Doing so would not result in an additional adverse effect.

Therefore, pursuant to 36 CFR 800.5(d)(2), SORCC has determined that historic properties identified in the APE would be adversely affected by the undertaking. SORCC proposes to expand the covered undertaking and lifespan of the agreement through a third amendment to the 2012 MOA to include the additional activities not previously addressed through consultation.

VA has initiated Section 106 consultation with the Oregon SHPO and Tribes for the undertaking. It is likely the outcome of consultation would result in an amendment to the MOA to address the effects to those buildings not previously identified for demolition and mitigation. Based on the outcome of previous construction activities and associated Section 106 consultation, and the scale and scope of the Proposed Action and the implementation of anticipated MOA Amendment measures, at this time VA anticipates that implementation of the Proposed Action would result in an adverse effect to historic resources. VA would manage the adverse effect through an amendment to the MOA and implementation of measures such as photo documentation of each building before demolition. VA will update the Final EA to reflect the outcome of Section 106 consultation.

Operations

SORCC would continue to manage the buildings in accordance with the MOA and Manual for Built Resources. Operations would be consistent with existing activity and no effects to historic properties would occur. Therefore, implementation of the Proposed Action would result in a less than significant impact to cultural resources.

3.3.2.2 No Action Alternative

Under the No Action Alternative, VA would not implement seismic upgrades at the SORCC. There would be no change in existing conditions and SORCC would continue to manage the properties in accordance with the MOA and amendments. Therefore, implementation the No Action Alternative would result in no impact to cultural resources.

3.4 GEOLOGY AND SOILS

Geology includes the geology, topography, and geologic hazards of a given area. The geology of an area includes surface and bedrock materials, its orientation and faulting, and geologic resources such as mineral deposits, petroleum reserves, and fossils. Topography is the elevation, slope, aspect, and surface features found within a given area. Potential geologic hazards include the seismicity (the relative frequency of earthquakes) and existence or potential for landslides, sinkholes, and liquefaction in a given area.

Soil refers to unconsolidated earthen materials overlaying bedrock or other parent material. Excavation, soil erosion, soil compaction, soil horizon removal, grading, and cutting and filling operations can result in a potential loss of soils and/or changes in geology.

3.4.1 Affected Environment

The SORCC is generally flat with little variation in topography. The SORCC is located within a moderate-high seismic zone. A structural assessment of the SORCC determined that numerous buildings are seismically deficient respective of this seismic classification and do not meet all modern life safety codes, VA criteria, as well as other guidelines (SORCC 2020). The nearest known fault zone to the project area is the Sky Lakes Fault Zone approximately 40 miles from the project area (U.S. Geological Survey 2021).

The SORCC sits on predominately brown silt soil, which is soft to medium stiff soil, depending on moisture. The project area soils consist of a thin surficial layer of soft soil underlain at a shallow depth by dense soil. The dense granular alluvium consists of sandy gravels with varying silt, and clay layers, and scattered layers of sandy clay, silty clay, silty sand, and sandy silt. The soil within the project area is considered to be moderately expansive, while the dense granular alluvium is non-expansive to slightly expansive (SORCC 2020).

3.4.2 Environmental Consequences

3.4.2.1 Proposed Action

Seismic Upgrades

Due to the relatively flat topography of the project area, slope stability and landslides would not be a concern. Proposed seismic upgrades would comply with all applicable requirements to address potential seismic hazards impacts associated with the proposed project, including ground shaking and liquefaction.

VA construction contractor(s) would prepare a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would include BMPs to control erosion associated with grading and other ground surface-disturbing activities. The construction contractor(s) would implement BMPs as necessary to minimize erosion and sedimentation. BMPs could include the installation of silt fencing, sediment traps, and storm drain inlet protection as well as other erosion and sedimentation BMPs.

Operations

The proposed seismic upgrades would address current seismic deficiencies throughout the SORCC, decreasing the risk of seismic-related impacts to people and property. New stormwater infrastructure and control measures implemented as part of the Proposed Action would reduce the potential for erosion, turbidity, and sediment transport. Therefore, implementation of the Proposed Action would result in a beneficial impact to geology and soils.

3.4.2.2 No Action Alternative

Under the No Action Alternative, there would be no change in existing conditions. No impacts to surface or bedrock materials, topography or soils would occur. However, existing seismic concerns would persist, continuing a potential risk to persons and property at the SORCC. Therefore, due to the potential impacts to people and property from seismic hazards, implementation of the No Action Alternative would result in an adverse impact to geology and soils.

3.5 HYDROLOGY AND WATER QUALITY

Hydrology and water quality considers surface water hydrology, groundwater, and water quality. The "*Final Hydrology/Stormwater Report White City VA Medical Center, White City, OR*" (VA CFM 2021c) provides detailed information on the discussion presented in the following assessment.

3.5.1 Affected Environment

3.5.1.1 Regional Surface Waters and Drainage

The SORCC is located partially in the Whetsone Creek-Rogue River and Kanutchan Creek-Little Butte Creek watersheds. The nearest receiving waterbody is Little-Butte Creek, which feeds into the Rogue River that then continues flowing west through the Siskiyou National Forest before draining to the Pacific Ocean at Gold Beach.

3.5.1.2 Regional Water Quality/Total Maximum Daily Load

The SORCC is located within the Total Maximum Daily Load (TMDL) watershed for the Rogue River Basin. The TMDL establishes waste load allocations for non-point sources, including drainage management agencies with the legal authority to achieve compliance with water quality standards. Jackson County has been identified as a drainage management agency and is responsible for developing and implementing a TMDL implementation plan which includes post-construction stormwater management requirements, including Total Suspended Solids reduction and flow control requirements.

3.5.1.3 Flood Hazard

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map shows the SORCC in "Zone X," an area of minimal flood hazard (FEMA 2021). According to the FEMA map, there is minimal risk for the SORCC to incur flooding from a 100-year storm event.

3.5.1.4 Hydrologic Conditions

The majority of the soil found at SORCC belongs to hydrologic soil group C, which has a slow infiltration rate when thoroughly wet. These moderately or fine texture soils thus impede the downward movement of water and yield a gradual rate of transmission. Based on soil borings seasonally high groundwater level is not within two feet of the ground surface (SORCC 2020).

The existing storm drain network consists of underground pipes which collect runoff from across the site and generally convey it towards the northwest. A smaller drain collects runoff from the frontage area along Highway 62 and discharges into a roadside ditch along Highway 62.

There is a recently constructed stormwater retention pond in the northwest area of the SORCC that receives discharges from nearly the entire developed portion of the SORCC (Figure 3-3). Additionally, SORCC has identified a future project to replace stormwater laterals in various buildings not included as part of the Proposed Action (SORCC 2021).



Figure 3-3 Approximate Location of the Stormwater Retention Pond (prior to construction) and Photo of Pond (May 11, 2021)

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action

Hydrology and Surface Water Quality

The Proposed Action includes the redevelopment of more than 2,500 square feet of impervious surface. As a result:

- The proposed seismic retrofits of Buildings 200, 201, 202, 224, and 219 would not create, replace, or remove impervious surfaces or alter the drainage patterns.
- The proposed demolition of existing buildings and the construction of Buildings 300, 301, and 302 and three new parking lots would result in a net decrease in impervious surface area (a decrease of 1.58 acres).

Flow control measures would reduce the runoff such that post-seismic upgrade, peak flow would not exceed the pre-development peak flow. The Proposed Action would result in a reduction in the peak flow rate and volume of runoff from the site compared to the pre-project conditions due to the reduction in the sites imperviousness, as well as the implementation of BMPs and flow control measures. As the majority of the soil on site is hydrologic soil group C, the project is exempt from the requirement to use Low Impact Development BMPs for treatment.

Furthermore, the Proposed Action would not result in any change to the existing usage of the site, and proposes no new activities which could have the potential to generate additional pollutants that may potentially impact water quality. The quantity and concentration of pollutants in stormwater runoff from the site would be less as compared to existing conditions, resulting in a beneficial impact to surface water quality and hydrology.

Construction Related Water Quality Impacts

Construction activities could potentially result in soil erosion and temporary impacts to surface water quality. These activities, including the proposed demolition of existing buildings and the addition of three new parking lots, may impact water quality through clearing, grading, and excavation actions. The construction contractor(s) would obtain a Construction General Permit from DEQ and prepare a SWPPP to identify required BMPs for implementation during construction in order to protect water quality and to prevent erosion, sedimentation, and pollutants in runoff. Temporary construction BMPs may include:

- Erosion Controls
- Sediment Controls
- Drainage Controls
- Non-Stormwater Controls
- Materials Management and Waste Management

The Proposed Action would include modifications to the internal storm drain network including the construction of new inlets, removal of existing inlets, and new connector pipes; however, there would be no change in the location of outfalls or the construction of new outfalls. Runoff from the SORCC would continue to discharge in the same locations as it did prior to the construction of the project. The BMPs and permanent stormwater infrastructure would minimize the potential for off-site impacts to nearby wetlands and surface water features.

Groundwater Impacts

The decrease in impervious surface (1.58 acres) would increase the amount of area for stormwater to infiltrate into the groundwater. The construction contractor(s) would identify and implement pollution-reducing BMPs to protect groundwater.

Operations

Implementation of the Proposed Action would improve many aspects of the site's hydrology and water quality, and reduce the amount of impervious surface. There would be no change in operations or activity under the Proposed Action; thus, the Proposed Action would not introduce a new hydrology or water quality concern. Therefore, implementation of the Proposed Action would result in a beneficial impact to hydrology and water quality.

3.5.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to existing conditions. SORCC would continue to manage stormwater and water quality using existing methods. Therefore, implementation of the No Action Alternative would result in no impact to hydrology and water quality.

3.6 WILDLIFE AND HABITAT

The Endangered Species Act prohibits actions that kill, harm, or harass species of fish or wildlife that are in danger of extinction, or that endanger the designated critical habitat of these species. The Migratory Bird Treaty Act (1918) makes it illegal to "take" migratory birds or their eggs, feathers, or nests. The Bald Eagle Protection Act of 1940 prohibits the taking, possession, or commerce of both bald and golden eagles.

3.6.1 Affected Environment

The 145-acre SORCC consists of buildings serviced by access roads and parking areas, interspersed with different types of landscaping, particularly grasses, flowers, bushes, and trees. The long-standing developed and landscaped areas within and adjacent to the project area have marginal value for wildlife because of high levels of human disturbance and activity, and limited vegetation development. Any potential habitat that exists is actively managed ornamental vegetation. However, common wildlife species, tolerant of human disturbance do occur throughout the SORCC. The predominant wildlife and habitat consist mainly of small fauna living within or around the area's flora, or those visiting on their migratory paths, most notably several species of birds.

The following discussions provide a description of the existing conditions within the approximately 73-acre "action area," which corresponds to the portion of the SORCC subject to direct impact (including staging areas), with a buffer around those areas subject to impact (Figure 3-3). The action area is a specific term used to define the potential area of impact for wildlife and habitat. The action area consists of developed and previously disturbed surfaces.

The U.S. Fish and Wildlife Service (USFWS) developed the Information for Planning and Consultation (IPaC) database to assist as a project planning tool to streamline the threatened and endangered species review process. As query of the IPaC database for the action area

revealed one threatened bird species, one crustacean, and three endangered flowering plant species that could potentially be present in-and-around the action area.

Table 3-5 summarizes the listed species and their potential presence in the action area. As shown in Figure 3-4, the IPaC report does indicate that the SORCC overlaps critical habitat for the federally listed vernal pool fairy shrimp (*Branchinecta lynchi*); however, there are no known vernal pools on the SORCC. The critical habitat is associated with the wetland area located to the east of the SORCC across Highway 62. The topographic gradient falls off from Highway 62 towards the SORCC therefore making it highly unlikely that activities on the SORCC would affect the critical habitat.

Table 3-5 Federally Listed Species and Habitat Potentially Present within the Vicinity of the Action Area

| Species | Status | Habitat | Potential Habitat in Action Area? |
|--|------------|---|--|
| Northern Spotted Owl (<i>Strix occidentalis caurina</i>) | Threatened | Dense canopy closure of mature and old-growth trees, abundant logs, standing snags, and live trees with broken tops | No |
| Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>) | Threatened | Vernal pools | No; habitat is across Highway 62 which serves as an effective hydrologic barrier |
| Cook's Lomatium (<i>Lomatium cookii</i>) | Endangered | Vernally wet habitats including vernal pools and adjacent mounds and wet floodplains | No |
| Gentner's Fritillary (<i>Fritillaria gentneri</i>) | Endangered | From shaded riparian areas to dry, open woodlands and chaparral | No |
| Large-flowered Woolly Meadowfoam (<i>Limnanthes pumila</i> ssp. <i>Grandiflora</i>) | Endangered | Vernal pools | No |

Source: USFWS 2021a.

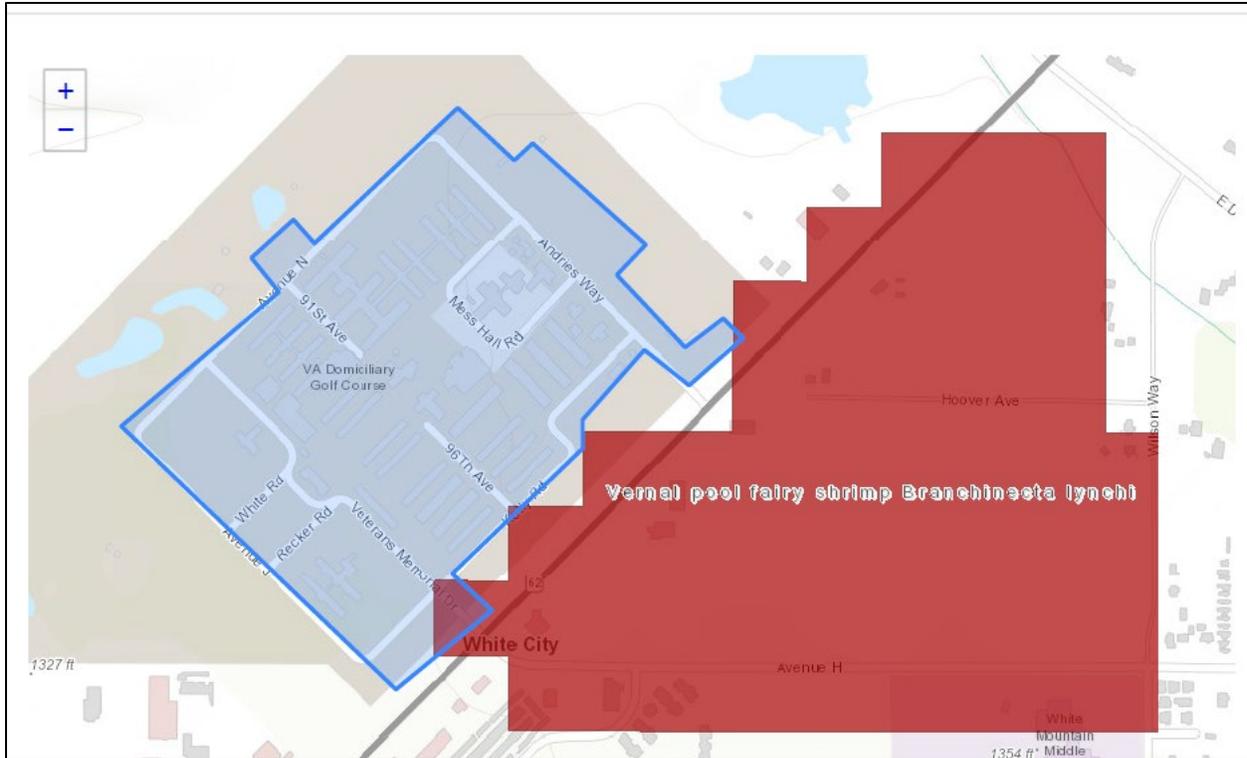


Figure 3-4 Action Area (blue) and USFWS IPaC-indicated Fairy Shrimp Critical Habitat (red)

The Denman Wildlife Refuge is located approximately one mile west of the SORCC. Additionally, the IPaC query identified ten migratory bird species that visit the area during one or more parts of the year (USFWS 2021a):

- Bald Eagle (*Haliaeetus leucocephalus*)
- California Thrasher (*Toxostoma redivivum*)
- Clark's Grebe (*Aechmophorus clarkii*)
- Golden Eagle (*Aquila chrysaetos*)

- Lesser Yellowlegs (*Tringa flavipes*)
- Olive-sided Flycatcher (*Contopus cooperi*)
- Rufous Hummingbird (*Selasphorus rufus*)
- Semipalmated Sandpiper (*Calidris pusilla*)
- Western Screech-owl (*Megascops kennicottii kennicottii*)

3.6.2 Environmental Consequences

3.6.2.1 Proposed Action

Seismic Upgrades

Proposed seismic upgrade activities would result in the direct loss of common, less-mobile wildlife species, such as lizards and ground squirrels within the action area. However, the numbers of individuals potentially lost would be inconsequential to populations present at the SORCC.

Indirect, temporary, adverse impacts to wildlife species would occur within the action area due to an increase in dust, noise, or other demolition-related disturbances. Temporary disturbances due to noise associated with construction, as well as an increase in the general activity and human presence could mask bird vocalizations, invoke stress in birds, and cause common bird and wildlife species to avoid the work area during construction. The noise would be temporary and intermittent and not likely to impair wildlife species from foraging, nesting, or resting.

Due to the lack of habitat within the action area and lack of observations, no impacts to the aforementioned five federally listed species would occur. Additionally, VA has no plans to cut down large mature trees that could potentially serve as habitat for the spotted owl. Proposed seismic upgrade activities would occur in previously disturbed areas that have been subject to alteration for decades. While critical habitat for the fairy shrimp overlaps a portion of the SORCC, the overlap does not reflect existing site topography. The topographic gradient falls off from Highway 62 towards the SORCC therefore making it highly unlikely that any activities on the SORCC would have the potential to affect the critical habitat via stormwater runoff. Thus, the Proposed Action would not impacts fairy shrimp or its critical habitat.

The Proposed Action would comply with the Migratory Bird Treaty Act by initiating construction/demolition during the non-nesting season (the non-nesting season is September 1 through January 31) to the extent feasible. If project activities start during the nesting season (February 1 through August 31), a qualified biologist would first conduct pre-disturbance surveys to identify any nesting birds. Surveys should occur no more than 15 days prior to the initiation of disturbance. If the biologist or workers detect nesting birds near (that is, within 50 feet of) disturbance areas, or raptors within 150 feet, a no-work buffer area would be established around active nests. The protective buffer area around an active bird nest is typically 75- 250 feet, determined at the discretion of the qualified biologist. To avoid inadvertent impacts to an active bird nest, no construction activities would occur within the protective buffer area(s) until the juvenile birds have fledged (left the nest), and there is no evidence of a second attempt at nesting, as determined by the qualified biologist.

Operations

Implementation of the Proposed Action would not result in a change in operations and therefore introduce any new activities or land uses that might have the potential to impact wildlife or habitat. At the conclusion of each construction phase common species would have the opportunity to re-establish in the disturbed areas. The increase in vegetated surface would increase the amount of available habitat for common species. Therefore, implementation of the Proposed Action would result in a less than significant impact to wildlife and habitat.

3.6.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to existing conditions. SORCC would continue to manage and maintain the existing landscaping that provides marginal habitat for wildlife. Therefore, implementation of the No Action Alternative would result in no impact to wildlife and habitat.

3.7 NOISE AND VIBRATION

Noise is generally defined as an unwanted sound. Sound is most commonly measured in decibels (dB). The Noise Pollution and Abatement Act of 1972 initiated a federal program of regulating noise pollution with the intent of protecting human health and minimizing annoyance of noise to the general public.

The “*Final Baseline and Desktop Noise Analysis Report, White City VA Medical Center, White City, OR*” (VA CFM 2021d) provides detailed information on the discussion presented in the following assessment.

3.7.1 Affected Environment

Noise is an unwanted or annoying sound that interferes with or disrupts normal human activities. Although continuous and extended exposure to high noise levels (for example, through occupational exposure) can cause hearing loss, the principal human response to noise is annoyance. The response of different individuals to similar noise events is diverse. The type of noise, perceived importance of the noise, its appropriateness in the setting, time of day, type of activity during which the noise occurs, and sensitivity of the individual influence the response to the noise.

Sound characteristics include the sound power, which relates to the source of the sound and sound pressure, which is the sound received at a receptor. Sound power is the amount of energy of sound at the source. Sound pressure is the pressure vibrations caused by the source but perceived at the ear.

The dB is the common unit to measure levels of noise. However, several factors affect how the human ear perceives sound: the actual level of noise, frequency, period of exposure, and fluctuations in noise levels during exposure.

Because the human ear cannot equally perceive all pitches or frequencies, scientists adjust noise measurements metrics to compensate for the human lack of sensitivity to low- and high-pitched sounds. This commonly used adjusted unit is known as the A-weighted decibel, or dBA. The A-weighted metric de-emphasizes very low and very high-pitched sound generated by motor vehicle traffic and construction equipment.

The project area is located on the SORCC. During a site visit (November 17, 2020), contractor staff found the SORCC noise environment to be relatively quiet, primarily due to its semi-rural location. A closed golf course surrounds the SORCC on two sides, Crater Lake Highway is on another side, and a large open area with commercial business in the distance are on the other side of the SORCC. There are several active construction projects on the SORCC.

Table 3-6 presents the noise levels associated with the operation of representative construction equipment at 50 feet. Maximum noise levels produced by common construction equipment, including trucks, cranes, and earth-moving equipment (excavators) are 74 to 90 dB at 50 feet.

Table 3-6 Estimated Construction Equipment Noise Levels

| Equipment Type | Estimated Noise Level (dB) at 50 feet |
|-----------------------|--|
| Air compressor | 81 |
| Backhoe | 80 |
| Compactor | 82 |
| Concrete Saw | 90 |
| Crane, mobile | 83 |
| Bulldozer | 85 |
| Generator | 81 |
| Grader | 85 |
| Jack Hammer | 88 |
| Loader | 85 |
| Scraper | 89 |
| Truck (heavy) | 88 |
| Welding Torch | 74 |

Source: Federal Highway Administration 2006.

The State of Oregon, Noise Control Regulations, Chapter 340-35-0035, exempts noise emanating from construction sites from the state noise regulation levels (Oregon 2018).

VA requires construction contractors to maintain lower noise values than those presented in Table 3-6 in accordance with Part 1(F) of VA Temporary Environmental Controls, Section 01 57 19 (VA 2014), resulting in noise levels 5 to 10 dBA less than those listed in Table 3-6. Noise levels reported in this document are without VA controls in place. Therefore, actual noise levels would be less than presented using the controls specified in Part 1(F).

The SORCC contains several sensitive receptors. The noise-sensitive areas are associated with living facilities and include Buildings 203A, 204A, 205A, and 206A. Building 215A also serves as a transitional care unit (similar to a nursing home). There are no off-SORCC sensitive noise receptors.

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action

Seismic Upgrades

The proposed seismic upgrades would generate localized noise levels typical of demolition and construction activities. The highest noise levels generated during construction would be from heavy equipment such as cranes, excavators, backhoes, pavers, and dump trucks and stationary equipment such as air compressors and power generators.

The main sources of noise would include:

- medium and heavy-duty trucks bringing equipment and supplies to the site,
- miscellaneous light earth moving equipment such a trenchers, tractors, and front-end loaders,
- equipment moving equipment such as cranes and forklifts, and
- a variety of light tools and generators.

The following sections provide a description of general noise sources and estimated noise levels generated as a result of proposed seismic upgrade activities on- and off-SORCC.

Estimated Noise Levels

The noise modeling assumes a full suite of demolition and construction equipment operating at the same time at all buildings. As the workers may distribute their equipment across all buildings, this analysis modeled the equipment noise as having workers use the equipment at the center of the combined construction site. For modeling purposes, the center of construction would be at the building under construction, in this case the new Buildings: 300, 301, and 302.

Noise levels would be highest outside the buildings in the vicinity of demolition and construction. Patients and staff in nearby buildings such as Buildings 203A and 205A would hear moderate noise levels due to noise suppression from walls and windows. Workers could further reduce construction and demolition noise by using quieter equipment, utilizing demolition/construction practices that minimize noise, turning off equipment not in use, and requiring mufflers on construction machinery. VA could also restrict work hours to avoid undue disruption.

The closest building to the new Building 300 would be Building 205A. Table 3-7 provides the noise source, distances to sensitive receptors, distance, and estimated noise levels. Distances are in 200-foot increments to provide a representative noise level at given distances that also relate to specific source/receptor combinations. Additionally, receptors are typically indoors, and exterior walls of buildings reduce noise levels.

Table 3-7 Estimated Exterior Construction Noise Levels

| Source (Building Number) | Sensitive Receptor (Building Number) | Distance (feet) | Noise Level (dBA L_{eq}) |
|--------------------------|--------------------------------------|-----------------|-----------------------------|
| 300 | 204A, 205A | 200 | 76.1 |
| 300 | 206A | 300 | 72.6 |
| 301 | 205A | 800 | 64.1 |
| 302 | 205A | 1,000 | 62.1 |
| 302 | 203A | 1,200 | 60.5 |

Note: ¹ L_{eq} = equivalent continuous sound level.

Source: Noise levels estimated using the FHWA Road Construction Noise Model.

Noise levels in Table 3-7 assume worst case scenarios with all of the equipment running at the center of construction. In reality, there would be some sequencing to the project to allow the construction contractor some efficiency of equipment usage. For instance, workers would probably use forklifts (modeled as tractors) sequentially rather than simultaneously to avoid having to tie up multiple forklifts on one job.

The most sensitive receptors would be the locations on SORCC that are continuously inhabited: Buildings 203A, 204A, 205A, and 206A. The estimated loudest exterior noise levels at these locations would range from 76.1 to 60.5 dBA L_{eq} depending upon the construction sequencing. Overall, with the shielding afforded by windows and walls, noise levels at these facilities would be low and construction noise would be almost undistinguishable relative to existing conditions.

Ultimately, actual noise levels would depend upon the location, activity, type of equipment used, number of pieces of equipment, frequency and duration of equipment operation, proximity of noise-generating equipment to each other, location within the construction/demolition area (potential echo effects that could enhance noise issues), and the distance to the person

perceiving the sound. Given that it is unlikely this modeled “worst cast” scenario would occur, actual noise levels would be lower than estimated.

Off-SORCC Noise

Demolition and construction noise, including roadway-generated noise from project-related trips, may be noticeable to persons in the vicinity of the activity. While the construction-related noise may be potentially noticeable off-SORCC, the sound levels would not be disruptive given the nearest neighbors are located at least 1,000 feet away from the project area. Existing vehicle noise would continue to dominate the noise environment.

Operations

After construction, there would be no change in the operational noise environment at the SORCC as the Proposed Action would not create any new sources of noise that would contribute to the overall noise environment. While there would be a change in traffic patterns and parking, these changes would not substantially alter the existing noise environment. Furthermore, the replacement of old buildings with modern buildings would serve to dampen outside noise levels to people inside the buildings.

Traffic, operations, and construction would continue to dominate the overall quiet noise setting of the SORCC. Therefore, implementation of the Proposed Action would result in a less than significant impact to noise and vibration.

3.7.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to the existing noise environment. Construction, operations, vehicles, and occasional aircraft would continue to dominate the noise environment. Therefore, implementation of the No Action Alternative would result in no impact to noise and vibration.

3.8 LAND USE

Land use is the current and planned use of a subject property as determined by governing authorities.

3.8.1 Affected Environment

The SORCC is located in White City off of Highway 62, between Avenue G and Dutton Road. Jackson County has designated the land that the SORCC occupies as for general industrial uses. Industrial uses surround the SORCC to the north, west, and south, with commercial and residential uses to the east. The Jackson County Comprehensive Plan (Jackson County 2003, 2004) governs land use for the areas surrounding the SORCC.

3.8.2 Environmental Consequences

3.8.2.1 Proposed Action

Implementation of the Proposed Action would not alter the type of land use at the SORCC or in the surrounding vicinity because VA would continue to provide the same services in the same area. There would be no change in activity or land use. As a result, the Proposed Action would

not introduce a new land use that would be incompatible with existing development at the SORCC or to adjacent properties.

Although the SORCC is a federal facility and Jackson County does not require VA to comply with local land use policies, the use proposed at the project area would nonetheless continue to be consistent with uses allowed in the Jackson County Comprehensive Plan (Jackson County 2004). Therefore, implementation of the Proposed Action would result in no impact to land use.

3.8.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to existing conditions. Existing land use would remain the same. Therefore, implementation of the No Action Alternative would result in no impact to land use.

3.9 FLOODPLAINS, WETLANDS, AND COASTAL ZONE MANAGEMENT

EO 11988, *Floodplain Management* (42 CFR 26971), requires federal agencies to evaluate the potential effects of actions those agencies may take in floodplains in order to avoid adversely impacting floodplains wherever possible, and to ensure that their planning programs and budget requests reflect consideration of flood hazards and floodplain management. EO 11990, *Protection of Wetlands* (42 CFR 26961) requires federal agencies to minimize impacts of their actions to wetlands. Federal agencies must show consistency with state Coastal Zone Management Programs to the maximum extent practicable.

3.9.1 Affected Environment

As determined by reviewing FEMA data (FEMA 2021), the SORCC is not located in a floodplain. National Wetlands Inventory map data (USFWS 2021b) indicates that none of the current buildings or outlying areas within the 145-acre SORCC are located within a wetland. Scientist conducted a site visit in May 2021 and confirmed no wetlands within the project area; however, the National Wetlands Inventory map does indicate wetlands and ponds adjacent to the SORCC and project area, respectively (Figure 3-5).

Furthermore, as it is located approximately 75 miles due east of the Pacific Ocean, the SORCC is not located within the boundaries of the State of Oregon's coastal zone as codified on May 29, 1973 through Oregon Senate Bill 100 (Oregon 1973) and approved by the National Oceanic and Atmospheric Administration in 1977 (National Oceanic and Atmospheric Administration 1977).

The hydrology and water quality section (Section 3.7) assesses the potential for indirect impacts to off-SORCC water resources, including nearby wetlands and ponds.



Figure 3-5 Wetlands, Riverine Habitat, and Ponds Near the SORCC

3.9.2 Environmental Consequences

3.9.2.1 Proposed Action

As the project area is not located within a floodplain, wetland, or Oregon’s coastal zone, there would be no effect to these resources. Therefore, implementation of the Proposed Action would result in no impact to floodplains, wetlands, and coastal zone management.

Under the No Action Alternative, there would be no change to existing conditions. Because there are no floodplains, wetlands, or coastal zones in the affected environment, no effects would occur. Therefore, implementation of the No Action Alternative would result in no impact to floodplains, wetlands, and coastal zone management.

3.10 SOCIOECONOMICS

Socioeconomics refers to the effect that a proposed action may have on the social or economic conditions in the surrounding area.

3.10.1 Affected Environment

The SORCC employs hundreds of people and is responsible for generating economic benefits to the region by way of employment, Veteran visits, and goods and services. The SORCC procures goods and services from local, regional, and in some cases, worldwide markets. In addition to economic infusions (spending) associated with SORCC employees, construction associated with other projects at the SORCC supports local and regional employment and contributes to local and regional economic revenue.

As of 2020, the rental vacancy rate in the Medford area was currently approximately 3.25 percent, slightly lower than the Oregon-wide rate of 4 percent (Department of Numbers 2021). As of 2019 the population of White City was approximately 10,000 and the population of Medford was approximately 81,000 (U.S. Census Bureau 2021).

3.10.2 Environmental Consequences

3.10.2.1 Proposed Action

Seismic Upgrades

Implementation of the Proposed Action would result in a positive impact on the local economy. Proposed construction activities would attract skilled and non-skilled labor construction workers over an approximately nine-year period. The construction labor pool would likely be mostly come from regional populations; however, given the long duration of construction it is possible that some outside workers could relocate to the region with the hope of long-term employment (several years). If there is an influx of labor relocating to the area the relatively low rental vacancy rate may make it difficult for new residents to find housing.

During the sustained construction period, there would be an economic benefit to the local area from the incidental spending by workers on food, lodging, and equipment, as well as indirect benefits from an increase in material and equipment deliveries.

Operations

Implementation of the Proposed Action would not result in an appreciable increase of employees or patients at the SORCC. There would be a negligible impact to housing, school, economics, or population. Therefore, implementation of the Proposed Action would result in a less than significant impact to socioeconomics.

3.10.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to existing conditions. Existing population, employment, schooling, and economic conditions would continue. Therefore, implementation of the No Action Alternative would result in no impact to socioeconomics.

3.11 COMMUNITY SERVICES

Services provided by VA or surrounding communities such as police, fire, ambulance, and emergency services are considered community services.

3.11.1 Affected Environment

The Jackson County Fire District provides fire protection services at the SORCC. SORCC Police Service provides for the welfare and safety of Veterans, staff, and visitors at the SORCC. Eagle Point School District Nine administers public schools in the project vicinity. Veterans Health Administration (VHA) Directive 7715 (2017) establishes policy for maintaining a safe and healthy worksite for staff, patients, volunteers, visitors, contractors, and the public during construction and renovation-related activities (VHA 2017).

The SORCC provides standard clinical services as well as medical care with an emphasis on residential inpatient rehabilitation as well as primary medical and mental health outpatient services. The facility provides 255 inpatient residential rehabilitation beds and a Primary Care/Mental Health outpatient department to Veterans living in Oregon and surrounding states. The outpatient service alone serves more than 40,000 Veterans (SORCC 2020).

Title 38 – U.S. Code, section 8105 required the VA Secretary to assure that each medical facility constructed or altered shall be of construction that is resistant to fire, earthquake, and other natural disasters. This initiated the creation of the Secretary's Advisory Committee on Structural Safety of VA Facilities, which formally approved in 1975 the original VA Seismic Design document, H-08-8, *Earthquake Resistant Design Requirements for VA Facilities*. The committee developed the requirements (far in advance of National Codes) with the concept that all VA essential facilities must remain in operation after an earthquake (VA 2019).

VA Directive 7512, *Seismic Safety of VA Buildings*, and EO 13717, *Establishing a Federal Earthquake Risk Management Standard*, define VA policy regarding seismic buildings. These policies identify seismic risk and establish criteria to identify exceptionally high risk and high-risk VA buildings. They also establish a policy requiring seismic studies for higher priority (critical and essential buildings) in earthquake prone (high and very high) areas (VA 2021a).

3.11.2 Environmental Consequences

3.11.2.1 Proposed Action

Under the Proposed Action, there would be no change in community services, nor increase in fire protection or security services. Because no additional permanent employment would occur, there would be no increase in school enrollment.

Implementation of the Proposed Action would abide by VHA Directive 7715 to maintain a healthy worksite during construction. Once upgraded, the buildings would be more resilient during a seismic event. Thus, increasing the safety of Veterans, staff, and visitors, and reducing potential fire response following a seismic event. The seismic upgrades would ensure that the SORCC could continue to serve patients after a seismic event.

Implementation of the seismic upgrades would achieve compliance with current VA regulations and address existing seismic deficiencies at the SORCC, increasing VA's ability to better and

safely continue to serve Oregon area Veterans. The seismic upgrades would also improve workplace safety and meet VA's goal of having all essential facilities remain in operation after a seismic event. Furthermore, as described in Section 2.2.1, VA would phase construction activities to ensure continuity of services to Veterans during implementation of the Proposed Action.

Implementation of the Proposed Action would facilitate VA's ability to sustain the provision of affordable health care services to Veterans living in the region, in accordance with seismic-related directives, resulting in a positive impact to Veterans. Therefore, implementation of the Proposed Action would result in a beneficial impact to community services.

3.11.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to existing conditions. The existing seismic-related risk to persons and property at the SORCC would continue and VA would not comply with existing VA directives and standards. Existing seismic-related risks to the community would persist, perpetuating the potential for stress on community emergency responders in the event of a seismic event. Therefore, implementation of the No Action Alternative would result in an adverse impact to community services.

3.12 SOLID WASTE AND HAZARDOUS MATERIALS

Hazardous materials include, but are not limited to, hazardous and toxic substances and waste, and any materials that pose a potential hazard to human health and the environment due to their quantity, concentration, or physical and chemical properties.

Hazardous wastes are characterized by their ignitability, corrosivity, reactivity, and toxicity. Hazardous materials and wastes, if not controlled, may either (1) cause or significantly contribute to an increase in mortality, serious irreversible illness, or incapacitating reversible illness, or (2) pose a substantial threat to human health or the environment.

The "*Final Environmental Condition of Property Report, White City VA Medical Center, White City, OR*" (VA CFM 2021e) provides detailed information on the discussion presented in the following assessment.

3.12.1 Affected Environment

The SORCC requires contractors and staff to handle and dispose of solid wastes in such a manner that would prevent contamination of the environment, including disposal of waste in compliance with federal, state, and local laws.

The SORCC uses a variety of hazardous materials in its patient care activities. Most of the hazardous materials typically consist of chemical reagents in laboratories, chemical pharmaceuticals, and radiopharmaceuticals used in diagnostics. The SORCC uses and stores hazardous materials in small quantities. Hazardous wastes generated by patient care consists of chemical wastes, low-level radioactive wastes, and medical wastes. SORCC manages these materials and wastes in accordance with all applicable regulations.

Operations at the SORCC involving hazardous materials include diesel fuel, lubricants, oils, and related products. Maintenance (janitorial and landscaping) activities include the use of cleaners,

solvents, degreasers, paints, and pesticides. Contractors collect waste materials from routine operations and temporarily store them until removed by a commercial vendor for appropriate off-site disposal.

The National Emission Standards for Hazardous Air Pollutants regulation for asbestos regulates asbestos fiber emissions and asbestos waste disposal practices. It requires the identification of existing asbestos-containing material (ACM) according to friability prior to demolition or renovation activity. Friable is a material containing more than 1 percent asbestos that, when dry, hand pressure can crumble, pulverize, or reduce it to powder (VA CFM 2021e).

In Jackson County, National Emission Standards for Hazardous Air Pollutants requirements are administered by the Oregon DEQ. The Oregon DEQ requires that asbestos-related activities be conducted by certified personnel. Additionally, Oregon Administrative Rule 43-010 states that the building owner, operator, or the contractor must provide DEQ with written notification at least 10 working days prior to beginning the removal of friable ACM and at least five days before beginning removal of non-friable ACM. Removal of ACM must be conducted by an Oregon-licensed asbestos abatement contractor. In addition, third party air clearance monitoring must be performed following the abatement of any friable ACM of quantities greater than 160 square feet or 260 linear feet (VA CFM 2021e).

Lead is regulated by the USEPA and Occupational Safety and Health Administration (OSHA). The USEPA regulates lead use, removal, and disposal, while OSHA regulates lead exposure to workers. USEPA and the Department of Housing and Urban Development lead regulations apply to child-occupied facilities and target housing built before 1978 where more than six square feet per room of interior or 20 square feet of exterior lead based paint (LBP) is disturbed during renovation or demolition activities (VA CFM 2021e). As defined by OSHA, any detectable concentration of lead creates the requirement for implementing worker, and in some cases, environmental protection. The current OSHA standard (29 CFR 1926.62) dictate that when the Permissible Exposure Limit is exceeded, the hierarchy of controls requires employers to institute feasible engineering and work practice controls as the primary means to reduce and maintain employee exposures to levels at or below the Permissible Exposure Limit (VA CFM 2021e).

Due to their age, many of the buildings at the SORCC have the possibility of containing ACM and/or LBP. An asbestos survey conducted in 2020 (VA CFM 2021e) concluded that ACM are in Buildings 200, 201, 202, 209, 210, 211, 212, 213, 214, 219, 222, 223, 224, 227, 228, 229, 234, 235, 239, 240, 241, 242, 243, 248, 262, and 270.

A lead survey conducted in 2020 concluded that LBP is in Buildings 200, 201, 202, 209, 210, 211, 212, 213, 214, 219, 222, 223, 227, 228, 229, 234, 235, 239, 240, 241, 242, 243, 248, 262, and 270 (VA CFM 2021e).

In summary, all buildings subject to disturbance under the Proposed Action contain ACM and/or LBP.

3.12.2 Environmental Consequences

3.12.2.1 Proposed Action

Seismic Upgrades

Implementation of the Proposed Action would require the use of hazardous materials (for example, fuels, lubricants, solvents, etc.), which would require proper storage, handling, use, and disposal. Construction-related wastes would be subject to federal and state disposal requirements and local laws. Compliance with these requirements would be mandatory and would minimize adverse environmental effects. The construction contractor(s) would manage hazardous materials and solid waste in accordance with all applicable regulations.

Prior to demolition, the construction contractor(s) would conduct a review of prior inventories/surveys to confirm the potential presence of ACM and/or LBP. The construction contractor(s) would treat and abate all locations known to contain ACM and/or LBP in accordance with applicable Occupational Safety and Health Administration, USEPA, VA, and state regulations. The construction contractor(s) would dispose of ACM and LBP at a DEQ-permitted solid waste landfill that meets the standards of 40 CFR 258.

Workers would sort demolition debris into recyclable materials and waste materials, then store or stockpile them in a secured and controlled area before loading them into dumpsters or on trucks for off-site disposal at an appropriate facility.

Workers would handle any hazardous materials encountered in accordance with all applicable regulations. Though not anticipated, during the course of demolition, if workers discover any soil contamination, the construction contractor(s) and VA would assess and treat/dispose of the contamination in accordance with all applicable regulations.

Operations

The SORCC would continue to manage its use of hazardous materials and wastes, in both patient care activities and maintenance activities, in accordance with all applicable state and federal regulations. There would be no change in the amount of medical waste generated, managed, and disposed of as there would be no change in operations or services. ACM and LBP would no longer be present in the new building systems, increasing the safety for Veterans, staff, and visitors. Therefore, implementation of the Proposed Action would result in a beneficial impact to solid wastes and hazardous materials.

3.12.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to existing conditions. VA would continue to manage their solid wastes and hazardous materials in accordance with all applicable regulations. Therefore, implementation of the No Action Alternative would result in no impact to solid wastes and hazardous materials.

3.13 TRANSPORTATION AND PARKING

Transportation and parking refers to the movement and parking of people, goods, and equipment on a local and regional transportation network, consisting of streets, railroads, transit facilities, bicycle lanes, and other modes of transportation, including walking.

The “*Final Traffic Report, White City VA Medical Center, White City, OR*” (VA CFM 2021f) provides detailed information on the discussion presented in the following assessment.

3.13.1 Affected Environment

Surface transportation refers to the movement of people, goods, and equipment on a local and regional transportation network, consisting of streets, railroads, transit facilities, bicycle lanes, and other modes of transportation. Interstate highways and other freeways maximize travel speed or relatively long distances while providing minimal or no access to fronting land uses. By contrast, local roads provide direct access to adjacent property while having substantially lower speeds than freeways or arterial highways. Collector roads typically provide a connection between local streets and arterial highways, and their design balances capacity and access to adjoining land. Transit facilities consist of local and regional bus services and both light rail and heavy rail transit.

Level of Service (LOS) is a widely used and accepted method for characterizing the operating performance of numerous roadway facilities, such as roadway segments, freeway weaving sections, and intersections. LOS rates performance on a scale of A to F, with LOS A reflecting free flowing conditions and LOS F representing heavily congested conditions (Transportation Research Board 2016).

A network of freeways, multi-lane arterial highways, and collector and local roadways provide access to the SORCC. Highway 62 provides primary access to and from the SORCC. Within the site, perimeter roads (Avenue J, Avenue N, Andries Way, and Kelly Road) and internal roads (Veterans Memorial Drive, 91st Avenue, 96th Avenue, and Mess Hall Road) are the major roads. An unsignalized intersection at Highway 62/Andries Way provides secondary access to the SORCC (though SORCC typically keeps the gate closed).

Based on traffic data collected in October 2020, the Highway 62/Avenue H intersection operates at LOS C conditions during both peak hours. Although White City has no published LOS standards, jurisdictions generally consider LOS C or LOS D to be acceptable in suburban areas. This EA recognizes that it is likely that COVID-19 pandemic may have resulted in traffic conditions in October 2020 that were different from historical averages.

The SORCC provides four main parking areas. There are two visitor parking lots off Ricker Road, one off Veterans Memorial Drive, and the other near Avenue N. In total the lots provide 806 parking spaces (739 regular spaces + 67 Americans with Disability Act-compliant spaces or 8.3 percent Americans with Disability Act spaces).

The SORCC has identified a future project to seal existing roadways throughout the SORCC and a separate project to add a new parking lot (with 37 spaces) adjacent to Building 250 (SORCC 2021).

3.13.2 Environmental Consequences

A proposed project's potential effect on transportation and parking is measured based on its direct or induced impact on traffic congestion and/or parking capacity. The severity of these impacts is determined based on the location, intensity, and persistence of the effects on transportation and parking facilities. For instance, a potentially significant impact could occur if a project were to result in a substantial and recurring increase in traffic generation within an already-congested area. By contrast, a project's impacts could be considered relatively minor if they would result in a minimal increase in traffic that would be temporary and localized.

3.13.2.1 Proposed Action

Seismic Upgrades

Construction-related activities would involve the removal of construction and demolition debris, the delivery of construction materials and equipment, worker commuting, and the removal of equipment after construction concludes. Delivery and removal activities would be periodic and would not recur regularly through the duration of construction. Construction worker travel would recur on a daily basis and may coincide with peak commuting periods. While worker trips would recur during the peak commuting periods, some of these trips would likely involve carpooling and/or transit, thus limiting effects on traffic.

Delivery and removal trips would be periodic and may occur outside of the traditional peak commuting periods. Furthermore, worker trips and construction equipment/material deliveries could use Andries Way to access SORCC and project area, minimizing the impact to regular Veteran, staff, and visitor trips through the main entrance (Figure 3-6).

Implementation of the seismic upgrades would temporally affect parking availability. To minimize parking impacts, the contractor would prepare a Maintenance of Parking Plan for the entire area on a building-by-building basis. The Plan would designate construction staging areas and parking for construction employees in areas outside of the main SORCC core, north of the main entrance. Within the core area, construction contractors and VA administrators should plan to maintain and/or replace parking spaces so that Veterans, staff, and visitors would have adequate parking.



Figure 3-6 Vehicular Access to SORCC with Completion of Proposed Action Operations

3.13.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to existing conditions. VA would continue to have a shortfall in parking spaces, which would perpetuate the existing parking issues. SORCC would continue to minimize the impact of the parking shortage to drivers through ride-shares and other measures. Therefore, implementation of the No Action Alternative would result in an adverse impact to transportation and parking.

3.14 UTILITIES

Utilities are the services that support the efficient and comfortable operation of a facility or location. Utilities typically considered include electricity, natural gas, steam, telecommunications, water, and wastewater.

The “*Final Utilities Report, White City VA Medical Center, White City, OR*” (VA CFM 2021g) provides detailed information on the discussion presented in the following assessment.

3.14.1 Affected Environment

This section describes the following existing utilities serving the SORCC:

- Electricity
- Natural Gas
- Steam
- Telecommunications
- Water
- Wastewater

The SORCC is located within the greater Medford area and local utility companies provide the SORCC with most of its utilities, including electricity, natural gas, water, and wastewater. VA staff regularly communicate, plan, and coordinate utility service and maintenance with their respective providers.

The SORCC has identified several projects to replace and/or upgrade utilities. Some of these projects include replacing old steam lines, replacing various electrical distribution lines, upgrading lighting protection, and instituting a COVID-19 upgrade to heating, ventilation, and air condition systems (SORCC 2021).

3.14.1.1 Electricity

Pacific Power Utility provides electricity to the SORCC. An overhead service from Pacific Power Utility, consisting of a 12.47 kilovolt (kV) drop feeder, provides power to the SORCC. A 140-ampere fuse on the incoming service line limits the incoming service to approximately 1,933 kilowatts (kW). The medium voltage parallel 12.47 kV, 1,200 A metal clad switchgear is located in an outdoor, walk-in enclosure. A 1.2-megawatt solar photovoltaic field, located on the north edge of the SORCC, provides an approximate average of 300 kW to the SORCC. This system serves mostly to mitigate the peak utility draw in the summer months (SORCC 2020).

Two 1,875 kilovolt-amperes, 1,500 W, 12.47 kV generators provide standby power to the medium voltage loop. Four emergency generators provide emergency backup power to individual buildings. The emergency generators serve the secondary side of the transformer. Generator 3 serves Building 232 – the boiler plant. Generator 4 serves the main telecommunications distribution and security equipment in Buildings 202 and 250 as well as miscellaneous panels in Buildings 203, 204, 205, 206, 207, and 208. A fifth generator provides emergency backup power to the radiology equipment in Building 201A. A sixth generator provides emergency backup power to all of Building 238, and life safety to Building 225 (SORCC 2020).

According to the Project Book, the peak electrical load pulled from August of 2019 was 1,672 kW. The two standby generators can provide 3,000 kW and can meet the peak demand. There is no data or information to suggest that the existing electrical supply is inadequate to meet the demands of the SORCC (SORCC 2020).

3.14.1.2 Natural Gas

Avista Utilities provides natural gas to the SORCC. A natural gas line, which runs up Avenue L and west on Mess Hall Road East, provides natural gas to the SORCC. Building 232, Building 236, the kitchen, and a new line running to the future Building 220a are currently the only buildings using natural gas in the SORCC (SORCC 2021). There is currently only one natural gas line that feeds the SORCC, which comes in from the southeast corner (SORCC 2020). There is no data or information to suggest that the existing natural gas supply is inadequate to meet the needs of the SORCC, as there have been no capacity problems in the last 10 years (SORCC 2020).

3.14.1.3 Steam

The SORCC self-generates steam in Building 232 – Boiler Plant. VA completed renovating the Boiler Plant in 2019. Three steam boilers generate steam for the SORCC. The steam load in summer is very low (SORCC 2020). The capacity of the boilers is 25,875 pounds per hour at 11 pounds per square inch operating pressure (SORCC 2020). There is no data or information to suggest that the existing steam supply is inadequate to meet the needs of the SORCC.

3.14.1.4 Telecommunications

Century Link provides fiber utility to the SORCC, entering at a vault to the south of Building 249. There is second redundant fiber provided by Hunter Communication which enters the SORCC on the Crater Lake Highway side of Building 203. Charter Communications provides fiber for guest Wi-Fi and cable to the SORCC.

All SORCC fiber runs originate from the data center and run to the SORCC buildings via a combination of interior corridor and exterior vault pathways. As of October 2021, a project is extending multi-144 count fiber from the network core in Building 210 to a data room in CC236. From CC236, spliced fiber home runs will run to Buildings 200, 201, 201A, 202, 204, 205, 206, 207, 208, 211, 211A, 212, 213, 214, 215A, 217A, 218A, 219, 221A, 222, 223, 224, 248, 249 and 250 (SORCC 2020).

Century Link provides analog telephone to the SORCC. Analog telephone enters the SORCC through Building 200 and demarks in Building 210. Building 211A houses the public Wi-Fi headend (SORCC 2020). VA began a project to upgrade the SORCC data infrastructure in August 2020 (SORCC 2020). There is no data or information indicating that the existing telecommunications is inadequate to meet the needs of the SORCC.

3.14.1.5 Water

The Medford Water Commission provides water to the SORCC. A water main that runs beneath Veterans Memorial Drive, and a second water main, that runs beneath Avenue H, provide water to the SORCC. A 12-inch water line that runs beneath Highway 62 serves as a water connection point for the southern and eastern portion of the SORCC (SORCC 2020) and a 12-inch water line runs from Avenue J to serve the SORCC.

There are no known water storage tanks onsite, and the water connections are all serviced by the same general main. There is a well located in the southeast corner of the SORCC that provides emergency water service to the SORCC at a rate of approximately 30 gallons per minute. There is no data or information to suggest that the existing water supply is inadequate to meet the needs of the SORCC. At this time, the single water connection provides all of the SORCC water needs (SORCC 2020).

Wastewater

Rogue Valley Sewer Services provides wastewater utility to the SORCC. A sanitary sewer main runs to the south of the SORCC and provides wastewater service to the SORCC. A project, beginning in February 2021, will replace all water, sewer, and stormwater lines (SORCC 2020). There is no data or information to suggest that the existing wastewater utility is inadequate to meet the needs of the SORCC.

3.14.2 Environmental Consequences

3.14.2.1 Proposed Action

Seismic Upgrades

Proposed seismic upgrades would require the use of utilities, primarily electricity, to perform the identified actions. During proposed seismic upgrades, some buildings/users would be subject to temporary utility outages. The construction contractor(s) would coordinate the outages in advance to minimize the potential for impacts to operations.

Operations

In general, utilities under the proposed seismic upgrades would not substantially alter utility demand because there would be little to no change in the volume of operations currently occurring at the SORCC. The proposed seismic upgrade project would consolidate functions into central locations. The new buildings and facilities would be more efficient in their use of utilities as compared to existing conditions. The renovated and new buildings would incorporate sustainable design elements to ensure achievement of LEED silver certification. Elements would include installing LED lighting; maximizing energy performance; installing advanced utility meters for electricity, natural gas, and/or steam; and employing total building commissioning practices (VA 2020). Therefore, implementation of the Proposed Action would result in a beneficial impact to utilities.

3.14.2.2 No Action Alternative

Under the No Action Alternative, seismic upgrades including building demolition and construction would not occur. The SORCC would use utilities at current demand. However, many of the existing buildings (proposed for demolition) are not energy or water efficient. Therefore, implementation of the No Action Alternative would result in no impact to utilities.

3.15 ENVIRONMENTAL JUSTICE

EO 12898, *Environmental Justice in Minority Populations*, requires federal agencies, departments, and their contractors to consider any potentially disproportionate human health or environmental risks their activities, policies, or programs may pose to minority or low-income populations.

Minorities are individuals who are members of the following population groups: American Indian, or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. CEQ requires identification of minority populations where either: (a) the minority population of the affected area exceeds 50 percent; or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

A low-income person is a person whose household income is at or below the income level. In 2019, the U.S. Census Bureau data identified this level as \$26,370 for a family of four (U.S. Census Bureau 2020). Poverty areas are census tracts or blocks numbering areas where at least 20 percent of residents were below the poverty level.

EO 13045, *Protection of Children for Environmental Health Risks and Safety Risks*, requires federal agencies to identify and assess health risks and safety risks that may disproportionately affect children. Agencies must ensure that its policies, programs, activities, and standards address disproportionate risks to children that results from environmental health or safety risks.

3.15.1 Affected Environment

Table 3-8 presents environmental justice statistics for an area within a three-mile radius of the SORCC. As demonstrated by recent census data, the percent of minority or low-income communities located within White City is below the threshold for defining an environmental justice community.

Table 3-8 Environmental Justice Data for the Broader Project Area

| Area | Minority Population | Low-Income Population | Median Household Income |
|---------------------------|---------------------|-----------------------|-------------------------|
| White City/Jackson County | 28% | 12% | \$45,000-54,999 |

Sources: USEPA 2021b, U.S. Census Bureau 2019

The project area is located on government property with restricted access. While children may be present at the SORCC when with family members, no permanent population of children is located within the SORCC.

3.15.2 Environmental Consequences

As displayed in Table 3-8, the population within the affected area does not exceed the 50 percent minority or the 20 percent poverty thresholds. There would be no change in operations that might introduce a new source of concern to the community (for example, loud noises or

noxious emissions). Therefore, there would be no disproportionate effects on low-income or minority populations with implementation of the Proposed Action.

The Proposed Action would occur on government property, where VA controls access. Children are not typically present on the SORCC and there is a limited residential housing near the SORCC. The construction contractor(s) would implement standard job site safety measures, which include securing equipment, materials, and vehicles, and neutralizing safety hazards during construction. There would be no change in operations that might introduce a new hazard/attractant for children. Therefore, there would be no impact to the health and safety of children from implementation of the Proposed Action. Therefore, implementation of the Proposed Action would result in a less than significant impact to Environmental Justice.

3.15.2.2 No Action Alternative

Under the No Action Alternative, there would be no change to existing conditions. Existing population demographic characteristics would likely continue. Therefore, implementation of the No Action Alternative would result in no impact to environmental justice.

3.16 CUMULATIVE EFFECTS

A cumulative effect is an impact on the environment that results from the incremental impact of a proposed action when added to the impacts of other past, present, and reasonably foreseeable future actions. The cumulative impacts analysis considers other actions regardless of which agency (local, state, or federal) or person undertakes the actions.

Although CEQ's July 2020 changes to the NEPA regulations repealed the definition of cumulative effects and no longer required specific cumulative effects analysis, the current VA NEPA Interim Guidance for Projects (VA 2010) still requires an analysis of cumulative effects.

The goal of a cumulative effects analysis is to help VA decision makers and the public understand the "big picture" view of the cumulative effects of each proposed action, when added to the effects of other projects, on the future sustainability of the resource areas considered in detail in this EA.

Cumulative impacts are most likely to arise when a relationship or synergism exists between a proposed action and other actions expected to occur in a similar location or during a similar period. Actions overlapping with or near a proposed action have more potential for a relationship than those more geographically separated. Similarly, relatively concurrent actions would tend to offer a higher potential for cumulative impacts.

As noted throughout the preceding discussion in applicable resource areas, SORCC conducts non-recurring maintenance and minor and major construction projects (for example, stormwater retention and conveyance projects identified in Section 3.5). In sum, SORCC has identified the following cumulative projects for consideration in this EA (SORCC 2021):

- Seismically Retrofit Connecting Corridors
- Replace Aged and Deficient Steam Lines
- Replace Various Electrical Distribution Lines
- Replace Storm Water Laterals
- Upgrade Non-Structural Components and Equipment

- Upgrade Lightning Protection & Various Electrical
- Seal Campus Roadways
- Upgrade HVAC Systems
- Restoration of Site for Mental Health
- Partially Demo B250 and Add New Parking Lot

Thus, the following cumulative analysis focuses on the following resource areas of concern because these resource areas have the most potential to interact with the cumulative projects:

- Air Quality and Climate Change
- Cultural Resources
- Noise and Vibration
- Transportation and Parking
- Utilities

3.16.1 Air Quality and Climate Change

As shown in Table 3-2, in any given year, the average annual emissions from the Proposed Action would be below the GHG threshold identified by CEQ in draft guidance for evaluating the significance of GHG emissions. Present and future projects at the SORCC and throughout the Southwest Oregon Air Quality Control Region would contribute criteria pollutant and GHG emissions. As demonstrated by the current attainment status of Oregon State for the NAAQS, regional emissions have not resulted in an exceedance of the NAAQS; however the region is within a moderate maintenance area for PM₁₀. To reduce the potential for dust generation (and thereby PM₁₀ emissions) the Proposed Action and cumulative projects would enact dust control measures to reduce fugitive dust emissions. Therefore, the Proposed Action when combined with past, present, and reasonably foreseeable projects would not result in significant impacts to air quality and climate change.

3.16.2 Cultural Resources

SORCC consults with the SHPO and Tribes for projects to avoid or minimize potential impacts to cultural resources. In addition to implementing project-specific measures and mitigation as identified through Section 106 consultation, SORCC does, and would continue to manage structures in accordance with the *Manual for Built Resources* as approved by the SHPO in 2010. Therefore, the Proposed Action when combined with past, present, and reasonably foreseeable projects would not result in significant impacts to cultural resources.

3.16.3 Noise and Vibration

Identified sensitive noise receptors would likely detect noise and vibrations generated by the Proposed Action and cumulative projects. As construction activity continues over the next few years, the overall noise environment will increase. But, with the conclusion of the construction projects, the overall noise and vibration environment will improve. Therefore, the Proposed Action when combined with past, present, and reasonably foreseeable projects would not result in significant impacts from noise and vibration.

3.16.4 Transportation and Parking

Construction-related traffic would increase the volume of traffic and potentially lead to congestion during peak commute periods. In addition, parking at the campus has been an on-going issue. There may be a temporary loss of a handful of parking spaces around the perimeter of each building and the campus during the building-specific upgrade and renovation activity and cumulative projects. While short-term adverse cumulative impacts would occur to transportation and parking, all of the above improvements would result in a long-term cumulative beneficial effect on transportation and parking. Therefore, the Proposed Action when combined with past, present, and reasonably foreseeable projects would result in a beneficial impact to transportation and parking.

3.16.5 Utilities

Under the Proposed Action, the new buildings and facilities would be more efficient in their use of utilities as compared to existing conditions. The renovated and new buildings would incorporate sustainable design elements to ensure achievement of LEED silver certification. Many of the identified cumulative projects are utility-centric projects that would result in benefits to utilities by improving utility service redundancy and resiliency and reducing energy demand. Furthermore, in combination with future projects, the overall utility conditions would improve. Therefore, the Proposed Action when combined with past, present, and reasonably foreseeable projects would result in beneficial impacts to utilities.

CHAPTER 4 MANAGEMENT, MITIGATION, AND MINIMIZATION MEASURES

In accordance with established regulations, protocols, procedures, and permits, construction contractors would implement BMPs as applicable before, during, and after construction. BMPs, or management measures, are routine actions that construction contractor(s) regularly implement. Mitigation measures, however, are non-routine actions taken to offset impacts from a proposed action and in some instances, avoid the potential for a proposed action to result in significant impacts.

The following section summarizes the measures VA would implement as part of the Proposed Action to avoid or minimize impacts to resource areas as indicated. The absence of measures for a resource area indicated that no measures are necessary.

4.1 AIR QUALITY

- To minimize fugitive dust emissions, the construction contractor(s) would implement dust control BMPs such as ensuring all equipment has pollution prevention devices, limiting construction debris stockpiles, and limiting dust generating activities during high winds.
- VA may need to obtain a permit from the Oregon DEQ for the six new generators, depending on the final engine size selected during the construction phase.

4.2 CULTURAL RESOURCES

- If an inadvertent discovery of cultural materials (for example, unusual amounts of shell, animal bone, bottle glass, ceramics, and structural/building remains) or human remains occurs during construction activities associated with the Proposed Action, VA would halt ground disturbances in the area of the find and a qualified professional archaeologist would assess the discovery. The archaeologist would determine whether the resource is potentially significant per the evaluation criteria of the NHPA and would develop appropriate mitigation. If workers encounter human remains, VA would notify the coroner immediately upon discovery. If the coroner determines that the remains are of Native American origin, the provisions of the Native American Graves Protection and Repatriation Act would apply (25 U.S. Code Chapter 32).
- The SORCC would continue to manage those properties identified for demolition, until such time as demolition is necessary, in accordance with the *Manual for Built Resources* as approved by the SHPO in 2010 so as to retain historic character while continuing to meet its primary operational mission.
- In accordance with the 2015 Amendment to the 2012 MOA stipulations specific to compatible design, SORCC would ensure the new structures meet all applicable provisions of the *Manual for Built Resources*, specifically, but not limited to: scale, placement, use of material, and roof pitch, relying principally upon the model established by replacement Building 204. Doing so would not result in an additional adverse effect.
- VA has initiated Section 106 consultation for the undertaking. It is likely the outcome of consultation will include stipulations to avoid, minimize, and mitigate for adverse effects to cultural resources. For example, the proposed roof repairs must use materials

consistent with the existing roofs so that the resulting roofs would be visually consistent with the existing roofs, and the exterior shotcrete wall finishes must match the existing exterior building color and texture. All stipulations will be included in this section in the Final EA.

4.3 HYDROLOGY AND WATER QUALITY

- VA construction contractor(s) would prepare a SWPPP. The SWPPP would include BMPs to control erosion associated with grading and other ground surface-disturbing activities. The construction contractor(s) would implement BMPs as necessary to minimize erosion and sedimentation. BMPs could include the installation of silt fencing, sediment traps, and storm drain inlet protection.

4.4 WILDLIFE AND HABITAT

- The Proposed Action would comply with the Migratory Bird Treaty Act by initiating construction/demolition during the non-nesting season (the non-nesting season is September 1 through January 31) to the extent feasible. If project activities start during the nesting season (February 1 through August 31), a qualified biologist would first conduct pre-disturbance surveys to identify any nesting birds. Surveys should occur no more than 15 days prior to the initiation of disturbance. If the biologist or workers detect nesting birds near (that is, within 50 feet of) disturbance areas, or raptors within 150 feet, a no-work buffer area would be established around active nests. The protective buffer area around an active bird nest is typically 75- 250 feet, determined at the discretion of the qualified biologist. To avoid inadvertent impacts to an active bird nest, no construction activities would occur within the protective buffer area(s) until the juvenile birds have fledged (left the nest), and there is no evidence of a second attempt at nesting, as determined by the qualified biologist.

4.5 SOLID WASTE AND HAZARDOUS MATERIALS

- The construction contractor(s) would treat and abate locations known to contain ACM and/or LBP in accordance with applicable OSHA, USEPA, VA, and state regulations.

4.6 TRANSPORTATION AND PARKING

- The construction contractor(s) would develop and implement phase-specific Traffic Control Plan(s) and single Maintenance of Parking Plan for the entire campus to deconflict and minimize Proposed Action-specific and cumulative impacts to transportation and parking. The Traffic Control Plan(s) would include measures such as a flow plan, flaggers, staggered delivery times, re-routing worker and delivery trips, and worker carpooling. Depending on the timing of the Proposed Action, VA would initiate one overall Traffic Control Plan or have the contractors develop phase or project-specific plans.

CHAPTER 5 PUBLIC PARTICIPATION, COORDINATION, AND CONSULTATION

5.1 PUBLIC INVOLVEMENT

VA published a project scoping notice in the *Mail Tribune* on June 6 and 7, 2021 (Appendix D). VA did not receive any public scoping comments.

VA has made the Draft EA available for public review. VA announced the availability of the Draft EA by publishing a notice of availability of the Draft EA in the *Mail Tribune*, posting the notice of availability to the VA CFM website (<https://www.cfm.va.gov/environmental/index.asp>), and notifying stakeholders via email. VA will incorporate relevant feedback from stakeholders into the Final EA.

5.1.1 Coordination and Consultation

VA has initiated Section 106 consultation with the Oregon SHPO and Tribes for the Proposed Action. It is likely the outcome of consultation will include stipulations to avoid, minimize, and mitigate for adverse effects to cultural resources. For example, the proposed roof repairs must use materials consistent with the existing roofs so that the resulting roofs would be visually consistent with the existing roofs, and the exterior shotcrete wall finishes must match the existing exterior building color and texture. All stipulations will be included in the Final EA.

5.1.2 Stakeholder Notification

VA sent stakeholder scoping notification and Draft EA notice of availability letters (Appendix D) to the following entities. VA will incorporate all relevant responses and information into the Final EA.

Federal Agencies

- U.S. Army Corps of Engineers, Portland District
- U.S. Environmental Protection, Agency Region 10
- U.S. Fish and Wildlife Service, Pacific Southwest Region

State Agencies

- Oregon Department of Environmental Quality
- Oregon Department of Fish and Wildlife
- State Historic Preservation Officer

Local Stakeholders

- Rogue Valley Sewer Service

State Elected Officials

- Duane Stark, Oregon State Representative District 4
- Art Robinson, Oregon State Senator District 2

Federal Elected Officials

- Ron Wyden, U.S. Senator — Oregon
- Jeff Merkley, U.S. Senator – Oregon
- Cliff Bentz, U.S. Congressman Oregon District 2

Federally Recognized Tribes with Interests in Jackson County, Oregon

- Confederated Tribes of the Grand Ronde Community of Oregon
- Confederated Tribes of the Siletz Indians of Oregon
- Confederated Tribes of the Warm Springs Reservation of Oregon
- Coquille Indian Tribe
- Cow Creek Band of Umpqua Tribe of Indians
- Klamath Tribes

CHAPTER 6 LIST OF PREPARERS

The following professionals contributed to the preparation of this EA.

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APPENDIX A Proposed Action Phasing Details

APPENDIX B Environmental Permit and Compliance Requirements

To comply with the Clean Water Act, the construction contractor would obtain a Construction General Permit from the Oregon Department of Environmental Quality. The contractor would also prepare a Stormwater Pollution Prevention Plan and implement BMPs prior to construction.

Table B-1 identifies the principle federal and state laws and regulations that are applicable to the Proposed Action and describes briefly how U.S. Department of Veterans Affairs (VA) would comply with the applicable requirements.

Table B-1. Compliance Requirements Applicable to the Proposed Action

| Federal, State, Local, and Regional Land Use Plans, Policies, and Controls | Status of Compliance |
|---|--|
| National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code [U.S.C.] 4321-4370h), as implemented by the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500-1508); <i>Environmental Effects of the Department of Veterans Affairs Actions</i> (38 CFR Part 26); and VA's <i>NEPA Interim Guidance for Projects</i> . | VA has prepared this environmental assessment in compliance with NEPA, Council on Environmental Quality regulations implementing NEPA, and VA NEPA procedures. |
| Clean Air Act (42 U.S.C. section 7401 et seq.) | Because the Proposed Action is in a non-attainment area, VA has prepared a Record of Non-Applicability demonstrating emissions would be below <i>de minimis</i> thresholds and the Proposed Action would thus comply with the Clean Air Act. |
| NHPA (section 6, 54 U.S.C. section 3001 et seq.) | VA has initiated consultation with the Oregon State Historic Preservation Office and Tribes in accordance with Section 106 of the NHPA. The anticipated agreement is likely to include stipulations to avoid, minimize, and mitigate for adverse effects to cultural resources. |
| Native American Graves Protection and Repatriation Act (25 U.S.C. Chapter 32) | If workers encounter human remains, VA would notify the local county coroner's office immediately upon discovery. If the coroner determines that the remains are not of recent history and potentially of Native American origin, VA would inform Tribes and the Oregon SHPO and consult on their disposition. |
| Executive Order (EO) 13175, <i>Consultation and Coordination with Indian Tribal Governments</i> | Through the Section 106 process, VA is conducting meaningful consultation and collaboration with Indian Tribal officials. |
| VA Handbook H-18-8, <i>Seismic Design Requirements</i> ; VA Directive 7512, <i>Seismic Safety of VA Buildings</i> ; EO 13717, <i>Establishing a Federal Earthquake Risk Management Standard</i> , and Title 38 U.S.C. section 8105, <i>Structural Requirements</i> | The Proposed Action would address current seismic deficiencies, comply with VA seismic design requirements and regulatory and policy requirements that define VA requirements and policy regarding seismic safety of buildings, and decrease the risk of seismic-related impacts to people and property. |
| Clean Water Act (33 U.S.C. section 1251 et seq.) | Proposed demolition, construction, and renovation activities would follow BMPs to limit potential water quality impacts and comply with the Clean Water Act. |

| Federal, State, Local, and Regional Land Use Plans, Policies, and Controls | Status of Compliance |
|---|---|
| | Activities would also comply with the Construction General Permit provisions. |
| Endangered Species Act (16 U.S. Code section 1531 et seq.) | No critical habitat or federally listed endangered or threatened species are known to occur in the project area; thus no impacts are anticipated to Endangered Species Act listed species. |
| Migratory Bird Treaty Act (16 U.S.C. Sections 703-712) | No impacts to migratory birds or their habitat would occur. |
| Noise Pollution and Abatement Act of 1972, State of Oregon, Noise Control Regulations, Chapter 340-35-0035, and VA Temporary Environmental Controls, Section 01 57 19 (VA 2014) | The Proposed Action would generate temporary noise at levels below those that could impact human health. Construction noise at temporary construction sites is exempt from WAC 173-60. |
| EO 11988, <i>Floodplain Management</i> | No impacts to floodplains would occur. |
| EO 12898, <i>Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations</i> | The Proposed Action would not result in disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. |
| EO 13045, <i>Protection of Children from Environmental Health Risks and Safety Risks</i> | The Proposed Action would not result in environmental health risks and safety risks that may disproportionately affect children. |
| <u>Veterans</u> Health Administration Directive 7715, <i>Safety and Health During Construction</i> | The Proposed Action would maintain a healthy worksite during construction. |
| Asbestos National Emission Standards for Hazardous Air Pollutants and Oregon Administrative Rule 43-010 | Through the construction contractor, VA would notify the Oregon Department of Environmental Quality at least ten working days prior to the commencement of asbestos removal projects. A State of Oregon-certified asbestos abatement contractor would conduct the removal of ACM. |
| Occupational Safety and Health Administration (29 CFR 1926.62) | VA would ensure workers handle all lead containing components in accordance with Occupational Safety and Health Administration regulations. |

APPENDIX C Air Quality Emissions Estimates and Record of Non-Applicability

**RECORD OF NON-APPLICABILITY (RONA) FOR
CLEAN AIR ACT CONFORMITY**

**PROPOSED SEISMIC UPGRADES at the
WHITE CITY VA SOUTHERN OREGON REHABILITATION CENTER AND CLINICS
Southwest Oregon Air Quality Control Region**

INTRODUCTION

The U.S. Environmental Protection Agency (USEPA) published *Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule* in the 30 November 1993, Federal Register (40 Code of Federal Regulations [CFR] Parts 6, 51, and 93). This publication provides implementing guidance to document CAA Conformity Determination requirements.

Federal regulations state that no department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license to permit, or approve any activity that does not conform to an applicable implementation plan. It is the responsibility of the federal agency to determine whether a federal action conforms to the applicable implementation plan, before the federal agency takes the action (40 CFR Part 1, Section 51.850[a]).

The general conformity rule applies to federal actions proposed within areas for which the USEPA has designated as being either nonattainment or maintenance areas for a National Ambient Air Quality Standard (NAAQS). The USEPA has designated former nonattainment areas that have attained a NAAQS as maintenance areas. Emissions of pollutants for which an area is in attainment are exempt from conformity analyses.

The Proposed Action would occur at the White City VA Southern Oregon Rehabilitation Center and Clinics (SORCC) in White City Oregon within the Southwest Oregon Air Quality Control Region. The SORCC is specifically located in the Medford-Ashland Air Quality Management Area (AQMA), which is a designated as a maintenance area for particulate matter less than 10 microns in diameter (PM₁₀) and within the Urban Growth Boundary, carbon monoxide (CO); however, the SORCC is not within the Urban Growth Boundary. The EPA designated the Medford-Ashland AQMA as nonattainment for PM₁₀ in 1990 and redesignated the area to attainment in 2006 with requirements for a maintenance plan

The annual *de minimis* levels for this region are 100 tons of PM₁₀, as listed in Table 1. Federal actions may be exempt from conformity determinations if they do not exceed designated *de minimis* levels (40 CFR Part 1, Section 51.853[b]).

**Table 1. Conformity *de minimis* Levels for Criteria Pollutants
in the Medford-Ashland AQMA**

| Criteria Pollutant | <i>De minimis</i> Level (tons/year) |
|--|-------------------------------------|
| Particulate Matter <10 microns (PM ₁₀) | 100 |

PROPOSED ACTION

Action Proponent: Department of Veterans Affairs, White City VA Southern Oregon Rehabilitation Center and Clinics

Location: White City, Oregon

Proposed Action Name: Proposed Seismic Upgrades at White City VA Southern Oregon Rehabilitation Center and Clinics

Proposed Action & Emissions Summary: Under the Proposed Action, the Department of Veterans Affairs (VA) intends to address the potential seismic upgrades at the SORCC as follows:

- perform a seismic retrofit of Buildings 200 (Administration), 201 (Radiology), 202 (VA Police), 219 (Canteen), 224 (Admin Support);
- perform renovations to Building 201A (Radiology)
- demolish Buildings 210, 222, 223, 227, 228, 229, 234, 235, 241, 242, 262, and connecting corridors and replace with the construction of Building 300 (Facilities Management, Business Office, Administration, etc.) and a new parking lot (Parking Lot A) to serve Building 300;
- demolish Buildings 209, 211, 212, 213, 214 and connecting corridors and replace with the construction of Building 301 (Clinical Support) and a new parking lot (Parking Lot B) to serve Building 301; and,
- demolish Buildings 239, 240, 243, 248, and connecting corridors and replace with the construction of Building 302 (Mental Health) and a new parking lot (Parking Lot C) to serve Buildings 301 and 302.

The projects includes utility relocation and landscaping of demolished and newly constructed facilities. The project also adds six emergency generators to the operational emissions of the SORCC and would reduce operational emissions from the steam boilers due to efficiencies. The VA anticipates beginning construction as soon as 2022. The exact construction year is unknown and the project may go into multiple years.

Table 2 presents a summary of the emissions associated with construction under the Proposed Action. As shown in Table 2 and Table 3, annual emissions from construction activities and the operational generators would be well below *de minimis* thresholds and would not trigger a formal Conformity Determination under the CAA General Conformity Rule.

Table 2. Project Emissions – Construction Emissions

| Emission Source | Emissions (tons/year) |
|---|-----------------------|
| | PM ₁₀ |
| Year 1 – Heavy Construction (All Phases) | 1.9 |
| Year 1 – On-Road Vehicles and Worker Trips (All Phases) | 0.1 |
| Total Emissions of Construction Year 1 | 2.0 |
| Conformity <i>de minimis</i> Thresholds | 100 |
| Exceeds Conformity <i>de minimis</i> Thresholds? | No |

Table 3. Project Emissions – Additional Operational Emissions

| Emission Source | Emissions (tons/year) |
|--|-----------------------|
| | PM ₁₀ |
| Total Emissions Per Year | 0.0 |
| Conformity <i>de minimis</i> Thresholds | 100 |
| Exceeds Conformity <i>de minimis</i> Thresholds? | No |

Affected Air Basin: Southwest Oregon Air Quality Control Region

Date RONA Prepared: December 23, 2020

RONA Prepared By: Julie Werner, PE (Washington State), Scout Environmental

PROPOSED ACTION EXEMPTION(S)

The Proposed Action is located within a nonattainment area; therefore, the Proposed Action is subject to the General Conformity Rule requirements. Because project emissions would be below *de minimis* thresholds, the project has demonstrated conformity with the requirements of the General Conformity Rule and the VA does not need to conduct a formal conformity determination.

There would be no significant direct or indirect impacts to air quality under the Proposed Action. Therefore, the VA concludes that the Proposed Action does not require formal Conformity Determination procedures, resulting in this RONA.

RONA APPROVAL

To the best of my knowledge, the information presented in this RONA is correct and accurate, and I concur in the finding that implementation of the Proposed Action does not require a formal CAA Conformity Determination.

Mr. Scott Duble
GEMS Program Manager
VA SORCC

Date

Emissions Summary

VA SORCC Seismic Retrofit of Building 200, 201, 202,
219 and 224, Demolition of Various Buildings and
Construction of Buildings 300, 301, and 302

Construction Emissions

| Year and Activity | Emissions (tons/year) | | | | | | Emissions (metric tons/year) | | | CO ₂ e (metric tons/year) |
|---|-----------------------|------------|-----------------|-----------------|------------------|-------------------|------------------------------|-----------------|------------------|---|
| | CO | VOC | NO _x | SO _x | PM ₁₀ | PM _{2.5} | CO ₂ | CH ₄ | N ₂ O | |
| Year 1 – Heavy Construction (All Phases) | 23.3 | 4.1 | 27.3 | 0.0 | 1.9 | 1.7 | 14,825.0 | 2.1 | 13.6 | 19,081.9 |
| Year 1 – On-Road Vehicles and Worker Trips (All Phases) | 5.4 | 0.5 | 1.2 | 0.0 | 0.1 | 0.1 | 473.1 | 0.0 | 0.0 | 480.8 |
| Total Emissions - Year 1 | 28.8 | 4.5 | 28.5 | 0.0 | 2.0 | 1.7 | 15,298.1 | 2.1 | 13.6 | 19,562.7 |
| <i>de minimis</i> Threshold for GCR (per year) | N/A | N/A | N/A | N/A | 100 | N/A | -- | | | |
| Exceeds <i>de minimis</i> in any year? | No | No | No | No | No | No | -- | | | |
| Draft NEPA Greenhouse Gases (GHG) Threshold (mtpy) | | | | | | | | | | 25,000 |
| GHG exceeds threshold in any year? | | | | | | | | | | No |

Operational Emissions

| Activity | Emissions (tons/year) | | | | | | Emissions (metric tons/year) | | | CO ₂ e (metric tons/year) |
|--|-----------------------|------------|-----------------|-----------------|------------------|-------------------|------------------------------|-----------------|------------------|---|
| | CO | VOC | NO _x | SO _x | PM ₁₀ | PM _{2.5} | CO ₂ | CH ₄ | N ₂ O | |
| Total Emissions Per Year | 0.2 | 3.4 | 3.4 | 0.0 | 0.0 | 0.0 | 9,715.9 | 3.2 | 9.3 | 12,657.4 |
| <i>de minimis</i> Threshold for GCR (per year) | N/A | N/A | N/A | N/A | 100 | N/A | -- | | | |
| Exceeds <i>de minimis</i> ? | No | No | No | No | No | No | -- | | | |
| Draft NEPA Greenhouse Gases (GHG) Threshold (mtpy) | | | | | | | | | | 25,000 |
| GHG exceeds threshold in any year? | | | | | | | | | | No |

Note to reviewers: The No Action Alternative would not result in any change in air quality impacts from baseline.
Numbers may not add precisely by hand if calculated from this table due to rounding and decimal values not shown. Values are shown in the table rounded to the nearest 10th.
The actual calculation result may include values in the 1000th place, and may summarize to a value with a result in the 10th place.

Construction and Operational Assumptions

VA SORCC Seismic Retrofit of Building 200, 201, 202, 219 and 224, Demolition of Various Buildings and Construction of Buildings 300, 301, and 302

- Assume construction takes one year to complete and that once construction begins there are no gaps in the projects. This is the most conservative approach. Construction could start as early as 2022; however generic construction years are used (Year 1) as to not limit the VA to specific calendar years.
- There may be several construction contracts occurring simultaneously or they could take place in sequential order. The emissions estimation calculations will assume that contracts occur simultaneously to capture the potential emissions during the maximum expected construction intensity.
- Assume dump trucks/haul trucks are highway licensed and worthy vehicles due to distance of fill haul, not quarry-type dump trucks.
- Assume a crew of 100 every day for one year to complete work.
- For vehicle trips for workers, a light-duty pick up truck is the assumed most common vehicle. Actual worker vehicle usage will vary.
- Emissions calculated based on methodology and data published in U.S. Environmental Protection Agency's (EPA) Motor Vehicle Emission Simulator, 2014b, CALEE MOD, an emissions modeling software published by the California Air Resources Board and San Diego County Air Pollution Control District, and the International Council on Clean Transportation's Working Paper 16-4, Non-road emission inventory model methodology.
- Fugitive emissions of dust are calculated assuming no control measures (such as watering) are used. Actual emissions would be lower if dust suppression best management practices, like watering down a site, are used.
- Estimated operational emissions are only calculated for known additional or sources that are a large upgrade to existing equipment. The calculated operation emissions do not include all replacement heating and cooling units at individual buildings.

Construction Phasing:

| Element | Year | Notes |
|---------------------------------|------|----------------------|
| Phase 1 - Building 224 | 1 | Only retrofit |
| Phase 2 - Building 300 | 1 | |
| Phase 3 - Building 302 | 1 | |
| Phase 4 - Building 301 and 201A | 1 | |
| Phase 5 - Building 201 | 1 | |
| Phase 6 - Building 200 | 1 | Combine for analysis |
| Phase 7 - Building 202 | 1 | |
| Phase 8 - Building 219 | 1 | |

Sources for Phasing:
SORCC 2020

Heavy Equipment Construction Emissions Estimates and Fugitive Dust
VA SORCC Seismic Retrofit of Building 200, 201, 202, 219 and 224, Demolition of Various Buildings and Construction of Buildings 300, 301, and 302

Nonroad Equipment Emissions

| Year | Phase/Element | Equipment | | | | Equipment Operations | | | | Emissions (lbs/day) | | | | | | | | | Emissions | | | | | | | | | |
|-------|---|--|-------------------|-----------------|-------------|----------------------|---------------|-----------------|-------|---------------------|-------|-----|------|---------|-----------|----------|-------|----------|-----------|-----------|-----------|------------|-------------|------------|------------|------------|-----|-----|
| | | Equipment | Fuel Type | Horsepower (hp) | Load Factor | Pieces of Equipment | Hours per day | Days in Service | CO | VOC | NOx | SOx | PM10 | PM2.5 | CO2 | CH4 | N2O | CO (tpy) | VOC (tpy) | NOx (tpy) | SOx (tpy) | PM10 (tpy) | PM2.5 (tpy) | CO2 (mtpy) | CH4 (mtpy) | N2O (mtpy) | | |
| 1 | Phase 1 - Seismic Retrofit and Repairs Building 224 | Concrete Truck | Diesel | 210 | 20 | 1 | 6 | 2 | 1.5 | 0.4 | 4.5 | 0.0 | 0.2 | 0.2 | 28,224.0 | 2.8 | 29.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.6 | 0.0 | 0.0 | |
| 1 | | Fork Lift | Diesel | 83 | 30 | 2 | 4 | 50 | 1.5 | 0.4 | 3.8 | 0.0 | 0.3 | 0.3 | 14,661.1 | 2.5 | 15.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 332.5 | 0.1 | 0.4 | |
| 1 | | Crane - 150 Ton | Diesel | 314 | 41 | 1 | 4 | 10 | 3.1 | 0.8 | 9.3 | 0.0 | 0.4 | 0.4 | 57,675.5 | 5.8 | 60.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 261.6 | 0.0 | 0.3 | |
| 1 | | CAT 416 Rubber Tire Backhoe/Loader | Diesel | 87 | 55 | 1 | 4 | 50 | 66.6 | 11.0 | 74.1 | 0.1 | 5.6 | 5.0 | 52,060.8 | 4.3 | 42.1 | 1.7 | 0.3 | 1.9 | 0.0 | 0.1 | 0.1 | 1,180.7 | 0.1 | 1.0 | | |
| 1 | | Trencher | Diesel | 69 | 75 | 1 | 4 | 5 | 95.2 | 23.7 | 146.1 | 0.2 | 12.2 | 11.7 | 13,434.3 | 2.1 | 13.9 | 0.2 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 30.5 | 0.0 | 0.0 | |
| 1 | | Skid Steer Loader | Diesel | 37 | 55 | 1 | 4 | 50 | 17.4 | 3.1 | 16.7 | 0.0 | 0.9 | 0.8 | 2,075.7 | 0.3 | 1.6 | 0.4 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 47.1 | 0.0 | 0.0 | |
| Total | | | | | | | | | 185.3 | 39.4 | 254.6 | 0.3 | 19.7 | 18.4 | 168,131.4 | 17.8 | 164.0 | 2.4 | 0.4 | 2.8 | 0.0 | 0.2 | 0.2 | 1,878.0 | 0.2 | 1.7 | | |
| 1 | Year 1 - Phase 2 - Building 300 - New Building | Concrete Truck | Diesel | 210 | 20 | 2 | 6 | 20 | 3.0 | 0.8 | 9.1 | 0.0 | 0.4 | 0.4 | 56,448.0 | 5.6 | 59.5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 512.1 | 0.1 | 0.5 | |
| 1 | | Generator - 50 KW | Diesel | 30 | 74 | 2 | 8 | 100 | 3.9 | 1.4 | 5.4 | 0.0 | 0.0 | 0.0 | 10,869.1 | 3.6 | 10.4 | 0.2 | 0.1 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 493.0 | 0.2 | 0.5 | |
| 1 | | Fork Lift | Diesel | 83 | 30 | 1 | 4 | 100 | 0.8 | 0.2 | 1.9 | 0.0 | 0.2 | 0.1 | 7,330.6 | 1.3 | 7.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 332.5 | 0.1 | 0.4 | |
| 1 | | Crane - 150 Ton | Diesel | 314 | 41 | 1 | 4 | 10 | 3.1 | 0.8 | 9.3 | 0.0 | 0.4 | 0.4 | 57,675.5 | 5.8 | 60.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 261.6 | 0.0 | 0.3 | |
| 1 | | CAT 416 Rubber Tire Backhoe/Loader | Diesel | 87 | 55 | 1 | 4 | 20 | 66.6 | 11.0 | 74.1 | 0.1 | 5.6 | 5.0 | 52,060.8 | 4.3 | 42.1 | 0.7 | 0.1 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 472.3 | 0.0 | 0.4 | |
| 1 | | Trencher | Diesel | 69 | 75 | 1 | 4 | 2 | 95.2 | 23.7 | 146.1 | 0.2 | 12.2 | 11.7 | 13,434.3 | 2.1 | 13.9 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 12.2 | 0.0 | 0.0 | |
| 1 | | Paver | Diesel | 89 | 62 | 1 | 4 | 10 | 109.7 | 27.3 | 165.0 | 0.2 | 14.0 | 12.5 | 15,273.8 | 2.4 | 15.7 | 0.5 | 0.1 | 0.8 | 0.0 | 0.1 | 0.1 | 0.1 | 69.3 | 0.0 | 0.1 | |
| 1 | | Roller Compactor | Diesel | 84 | 56 | 1 | 4 | 10 | 75.3 | 16.1 | 103.5 | 0.1 | 8.5 | 7.6 | 11,101.4 | 1.4 | 9.8 | 0.4 | 0.1 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 50.4 | 0.0 | 0.0 | |
| 1 | Skid Steer Loader | Diesel | 37 | 55 | 1 | 4 | 10 | 17.4 | 3.1 | 16.7 | 0.0 | 0.9 | 0.8 | 2,075.7 | 0.3 | 1.6 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 9.4 | 0.0 | 0.0 | | |
| Total | | | | | | | | | 811.0 | 134.1 | 926.8 | 1.4 | 64.6 | 58.4 | 378,751.4 | 38.0 | 329.4 | 6.4 | 1.0 | 6.8 | 0.0 | 0.4 | 0.4 | 3,596.0 | 0.5 | 3.1 | | |
| 1 | Year 1 - Phase 2 - Demolish 210, 222, 223, 227, 228, 229, 234, 235, 241, 242, 262, and connecting corridors | CAT 416 Rubber Tire Backhoe/Loader | Diesel | 87 | 55 | 2 | 4 | 20 | 133.2 | 22.1 | 148.1 | 0.2 | 11.2 | 10.0 | 104,121.6 | 8.6 | 84.2 | 1.3 | 0.2 | 1.5 | 0.0 | 0.1 | 0.1 | 0.1 | 944.6 | 0.1 | 0.8 | |
| 1 | | Skid Steer Loader | Diesel | 37 | 55 | 2 | 4 | 20 | 34.8 | 6.2 | 33.4 | 0.0 | 1.8 | 1.6 | 4,151.4 | 0.6 | 3.2 | 0.3 | 0.1 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 37.7 | 0.0 | 0.0 | |
| 1 | | Water Truck - 4000 Gallon | Diesel | 235 | 61 | 1 | 4 | 20 | 268.1 | 21.6 | 214.2 | 0.5 | 9.2 | 8.2 | 44,209.1 | 1.9 | 20.4 | 2.7 | 0.2 | 2.1 | 0.0 | 0.1 | 0.1 | 401.1 | 0.0 | 0.2 | | |
| Total | | | | | | | | | 811.0 | 134.1 | 926.8 | 1.4 | 64.6 | 58.4 | 378,751.4 | 38.0 | 329.4 | 6.4 | 1.0 | 6.8 | 0.0 | 0.4 | 0.4 | 3,596.0 | 0.5 | 3.1 | | |
| 1 | | Year 1 - Phase 3 - Building 302 - New Building | Concrete Truck | Diesel | 210 | 20 | 2 | 6 | 10 | 3.0 | 0.8 | 9.1 | 0.0 | 0.4 | 0.4 | 56,448.0 | 5.6 | 59.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 256.0 | 0.0 | 0.3 |
| 1 | | | Generator - 50 KW | Diesel | 30 | 74 | 2 | 8 | 60 | 3.9 | 1.4 | 5.4 | 0.0 | 0.0 | 0.0 | 10,869.1 | 3.6 | 10.4 | 0.1 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 295.8 | 0.1 | 0.3 |
| 1 | | | Fork Lift | Diesel | 83 | 30 | 1 | 4 | 60 | 0.8 | 0.2 | 1.9 | 0.0 | 0.2 | 0.1 | 7,330.6 | 1.3 | 7.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 199.5 | 0.0 | 0.2 |
| 1 | | | Crane - 150 Ton | Diesel | 314 | 41 | 1 | 4 | 10 | 3.1 | 0.8 | 9.3 | 0.0 | 0.4 | 0.4 | 57,675.5 | 5.8 | 60.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 261.6 | 0.0 | 0.3 |
| 1 | CAT 416 Rubber Tire Backhoe/Loader | | Diesel | 87 | 55 | 1 | 4 | 10 | 66.6 | 11.0 | 74.1 | 0.1 | 5.6 | 5.0 | 52,060.8 | 4.3 | 42.1 | 0.3 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 236.1 | 0.0 | 0.2 | |
| 1 | Trencher | | Diesel | 69 | 75 | 1 | 4 | 2 | 95.2 | 23.7 | 146.1 | 0.2 | 12.2 | 11.7 | 13,434.3 | 2.1 | 13.9 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 12.2 | 0.0 | 0.0 | |
| 1 | Paver | | Diesel | 89 | 62 | 1 | 4 | 10 | 109.7 | 27.3 | 165.0 | 0.2 | 14.0 | 12.5 | 15,273.8 | 2.4 | 15.7 | 0.5 | 0.1 | 0.8 | 0.0 | 0.1 | 0.1 | 0.1 | 69.3 | 0.0 | 0.1 | |
| 1 | Roller Compactor | | Diesel | 84 | 56 | 1 | 4 | 10 | 75.3 | 16.1 | 103.5 | 0.1 | 8.5 | 7.6 | 11,101.4 | 1.4 | 9.8 | 0.4 | 0.1 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 50.4 | 0.0 | 0.0 | |
| 1 | Skid Steer Loader | Diesel | 37 | 55 | 1 | 4 | 10 | 17.4 | 3.1 | 16.7 | 0.0 | 0.9 | 0.8 | 2,075.7 | 0.3 | 1.6 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 9.4 | 0.0 | 0.0 | | |
| Total | | | | | | | | | 811.0 | 134.1 | 926.8 | 1.4 | 64.6 | 58.4 | 378,751.4 | 38.0 | 329.4 | 6.4 | 1.0 | 6.8 | 0.0 | 0.4 | 0.4 | 3,596.0 | 0.5 | 3.1 | | |
| 1 | Year 1 - Phase 3 - Demolish 239, 240, 243, 248 and connecting corridors | CAT 416 Rubber Tire Backhoe/Loader | Diesel | 87 | 55 | 2 | 4 | 10 | 133.2 | 22.1 | 148.1 | 0.2 | 11.2 | 10.0 | 104,121.6 | 8.6 | 84.2 | 0.7 | 0.1 | 0.7 | 0.0 | 0.1 | 0.0 | 0.0 | 472.3 | 0.0 | 0.4 | |
| 1 | | Skid Steer Loader | Diesel | 37 | 55 | 2 | 4 | 10 | 34.8 | 6.2 | 33.4 | 0.0 | 1.8 | 1.6 | 4,151.4 | 0.6 | 3.2 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 18.8 | 0.0 | 0.0 | |
| 1 | | Water Truck - 4000 Gallon | Diesel | 235 | 61 | 1 | 4 | 10 | 268.1 | 21.6 | 214.2 | 0.5 | 9.2 | 8.2 | 44,209.1 | 1.9 | 20.4 | 1.3 | 0.1 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 200.5 | 0.0 | 0.1 | |
| Total | | | | | | | | | 811.0 | 134.1 | 926.8 | 1.4 | 64.6 | 58.4 | 378,751.4 | 38.0 | 329.4 | 6.4 | 1.0 | 6.8 | 0.0 | 0.4 | 0.4 | 3,596.0 | 0.5 | 3.1 | | |
| 1 | Year 1 - Phase 4 - Building 302 - New Building | Concrete Truck | Diesel | 210 | 20 | 2 | 6 | 30 | 3.0 | 0.8 | 9.1 | 0.0 | 0.4 | 0.4 | 56,448.0 | 5.6 | 59.5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 768.1 | 0.1 | 0.8 | |
| 1 | | Generator - 50 KW | Diesel | 30 | 74 | 2 | 8 | 120 | 3.9 | 1.4 | 5.4 | 0.0 | 0.0 | 0.0 | 10,869.1 | 3.6 | 10.4 | 0.2 | 0.1 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 591.6 | 0.2 | 0.6 | |
| 1 | | Fork Lift | Diesel | 83 | 30 | 1 | 4 | 120 | 0.8 | 0.2 | 1.9 | 0.0 | 0.2 | 0.1 | 7,330.6 | 1.3 | 7.9 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 399.0 | 0.1 | 0.4 | |
| 1 | | Crane - 150 Ton | Diesel | 314 | 41 | 1 | 4 | 15 | 3.1 | 0.8 | 9.3 | 0.0 | 0.4 | 0.4 | 57,675.5 | 5.8 | 60.8 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 392.4 | 0.0 | 0.4 | |
| 1 | | CAT 416 Rubber Tire Backhoe/Loader | Diesel | 87 | 55 | 1 | 4 | 25 | 66.6 | 11.0 | 74.1 | 0.1 | 5.6 | 5.0 | 52,060.8 | 4.3 | 42.1 | 0.8 | 0.1 | 0.9 | 0.0 | 0.1 | 0.1 | 590.4 | 0.0 | 0.5 | | |
| 1 | | Trencher | Diesel | 69 | 75 | 1 | 4 | 4 | 95.2 | 23.7 | 146.1 | 0.2 | 12.2 | 11.7 | 13,434.3 | 2.1 | 13.9 | 0.2 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 24.4 | 0.0 | 0.0 | |
| 1 | | Paver | Diesel | 89 | 62 | 1 | 4 | 50 | 109.7 | 27.3 | 165.0 | 0.2 | 14.0 | 12.5 | 15,273.8 | 2.4 | 15.7 | 0.7 | 0.1 | 0.4 | 0.0 | 0.4 | 0.3 | 346.4 | 0.1 | 0.4 | | |
| 1 | | Roller Compactor | Diesel | 84 | 56 | 1 | 4 | 50 | 75.3 | 16.1 | 103.5 | 0.1 | 8.5 | 7.6 | 11,101.4 | 1.4 | 9.8 | 1.9 | 0.4 | 2.6 | 0.0 | 0.2 | 0.2 | 251.8 | 0.0 | 0.2 | | |
| 1 | Skid Steer Loader | Diesel | 37 | 55 | 1 | 4 | 50 | 17.4 | 3.1 | 16.7 | 0.0 | 0.9 | 0.8 | 2,075.7 | 0.3 | 1.6 | 0.4 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 47.1 | 0.0 | 0.0 | | |
| Total | | | | | | | | | 811.0 | 134.1 | 926.8 | 1.4 | 64.6 | 58.4 | 378,751.4 | 38.0 | 329.4 | 6.4 | 1.0 | 6.8 | 0.0 | 0.4 | 0.4 | 3,596.0 | 0.5 | 3.1 | | |
| 1 | Year 1 - Phase 4 - Demolish 209 | CAT 416 Rubber Tire Backhoe/Loader | Diesel | 87 | 55 | 2 | 4 | 15 | 133.2 | 22.1 | 148.1 | 0.2 | 11.2 | 10.0 | 104,121.6 | 8.6 | 84.2 | 1.0 | 0.2 | 1.1 | 0.0 | 0.1 | 0.1 | 708.4 | 0.1 | 0.6 | | |

| Year | Phase/Element | Equipment | Fuel | Qty | Hours | CO | VOC | NOx | SOx | PM10 | PM2.5 | CO2 | CH4 | N2O | PM10 | PM2.5 | CO2 | CH4 | N2O | PM10 | PM2.5 | CO2 | CH4 | N2O | | | |
|------|---|------------------------------------|--------|-----|-------|----------------------|-----|-----|----------------|--------------|----------------|------------|--------------|--------------|--------------------|--------------|----------------|-------------|------------|-------------|------------|------------|------------|-----------------|----------------|-------------|------------|
| 1 | 211, 212, 213, 214 and connecting corridors | Skid Steer Loader | Diesel | 37 | 55 | 2 | 4 | 15 | 34.8 | 6.2 | 33.4 | 0.0 | 1.8 | 1.6 | 4,151.4 | 0.6 | 3.2 | 0.3 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 28.2 | 0.0 | 0.0 |
| 1 | | Water Truck - 4000 Gallon | Diesel | 235 | 61 | 1 | 4 | 15 | 268.1 | 21.6 | 214.2 | 0.5 | 9.2 | 8.2 | 44,209.1 | 1.9 | 20.4 | 2.0 | 0.2 | 1.6 | 0.0 | 0.1 | 0.1 | 0.1 | 300.8 | 0.0 | 0.1 |
| | | | | | | Total | | | 811.0 | 134.1 | 926.8 | 1.4 | 64.6 | 58.4 | 378,751.4 | 38.0 | 329.4 | 9.7 | 1.8 | 12.0 | 0.0 | 0.9 | 0.8 | 0.8 | 4,448.6 | 0.6 | 4.1 |
| 1 | Year 1 - Phase 5, 6, 7 and 8 Seismic Retrofit Building 201, 200, 202, 219 | Fork Lift | Diesel | 83 | 30 | 2 | 4 | 150 | 1.5 | 0.4 | 3.8 | 0.0 | 0.3 | 0.3 | 14,661.1 | 2.5 | 15.9 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 997.5 | 0.2 | 1.1 |
| 1 | | Generator - 50 KW | Diesel | 30 | 74 | 4 | 4 | 150 | 3.9 | 1.4 | 5.4 | 0.0 | 0.0 | 0.0 | 10,869.1 | 3.6 | 10.4 | 0.3 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 739.5 | 0.2 | 0.7 |
| 1 | | Crane - 150 Ton | Diesel | 314 | 41 | 1 | 4 | 15 | 3.1 | 0.8 | 9.3 | 0.0 | 0.4 | 0.4 | 57,675.5 | 5.8 | 60.8 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 392.4 | 0.0 | 0.4 |
| 1 | | CAT 416 Rubber Tire Backhoe/Loader | Diesel | 87 | 55 | 1 | 4 | 15 | 66.6 | 11.0 | 74.1 | 0.1 | 5.6 | 5.0 | 52,060.8 | 4.3 | 42.1 | 0.5 | 0.1 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 354.2 | 0.0 | 0.3 |
| 1 | | Impact Hammer | Diesel | 300 | 50 | 1 | 4 | 5 | 3.6 | 0.9 | 10.8 | 0.0 | 0.5 | 0.5 | 2,580.0 | 0.3 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.9 | 0.0 | 0.0 |
| 1 | | Concrete Truck | Diesel | 210 | 20 | 4 | 4 | 4 | 4.0 | 1.0 | 12.1 | 0.0 | 0.6 | 0.5 | 75,264.0 | 7.5 | 79.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 136.6 | 0.0 | 0.1 |
| 1 | | Air Compressor | Diesel | 50 | 48 | 1 | 4 | 200 | 0.7 | 0.2 | 1.9 | 0.0 | 0.1 | 0.1 | 2,140.8 | 1.0 | 2.2 | 0.1 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 194.2 | 0.1 | 0.2 |
| | | | | | | Total | | | 83.4 | 15.8 | 117.3 | 0.1 | 7.6 | 6.8 | 215,251.4 | 25.0 | 212.4 | 1.0 | 0.3 | 1.6 | 0.0 | 0.1 | 0.1 | 0.1 | 2,820.3 | 0.6 | 2.8 |
| | | | | | | Overall Total | | | 2,701.9 | 457.6 | 3,152.4 | 4.7 | 220.9 | 200.3 | 1,519,637.0 | 156.8 | 1,364.5 | 23.3 | 4.1 | 27.3 | 0.0 | 1.9 | 1.7 | 14,825.0 | 2.1 | 13.6 | |

Notes:

tpy = tons per year
Conversion to metric tons = 1 short ton (2000 lbs) =

metric tons
0.9071847 metric tons

Emissions Factors:

| Equipment | CO | VOC | NOx | SOx | PM10 | PM2.5 | CO2 | CH4 | N2O |
|------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Excavator - Large (250 hp) | 6.0E-03 | 1.5E-03 | 1.8E-02 | 1.1E-05 | 8.4E-04 | 7.5E-04 | 7.4E+01 | 1.3E-02 | 8.0E-02 |
| Water Truck - 4000 Gallon | 4.7E-01 | 3.8E-02 | 3.7E-01 | 9.0E-04 | 1.6E-02 | 1.4E-02 | 7.7E+01 | 3.4E-03 | 3.6E-02 |
| Grader | 6.0E-03 | 1.5E-03 | 1.8E-02 | 1.1E-05 | 5.3E-02 | 4.7E-02 | 1.1E+02 | 1.1E-02 | 1.2E-01 |
| Concrete Truck | 6.0E-03 | 1.5E-03 | 1.8E-02 | 1.1E-05 | 8.4E-04 | 7.5E-04 | 1.1E+02 | 1.1E-02 | 1.2E-01 |
| Generator - 50 KW | 1.1E-02 | 4.0E-03 | 1.5E-02 | 1.1E-05 | 1.7E-05 | 1.5E-05 | 3.1E+01 | 1.0E-02 | 2.9E-02 |
| Fork Lift | 7.7E-03 | 2.2E-03 | 1.9E-02 | 1.1E-05 | 1.5E-03 | 1.4E-03 | 7.4E+01 | 1.3E-02 | 8.0E-02 |
| CAT 416 Rubber Tire Backhoe/Loader | 3.5E-01 | 5.8E-02 | 3.9E-01 | 6.0E-04 | 2.9E-02 | 2.6E-02 | 2.7E+02 | 2.3E-02 | 2.2E-01 |
| Trencher | 4.6E-01 | 1.1E-01 | 7.1E-01 | 8.0E-04 | 5.9E-02 | 5.7E-02 | 6.5E+01 | 1.0E-02 | 6.7E-02 |
| Crane - 150 Ton | 6.0E-03 | 1.5E-03 | 1.8E-02 | 1.1E-05 | 8.4E-04 | 7.5E-04 | 1.1E+02 | 1.1E-02 | 1.2E-01 |
| Skid Steer Loader | 2.1E-01 | 3.8E-02 | 2.1E-01 | 3.0E-04 | 1.1E-02 | 1.0E-02 | 2.6E+01 | 3.4E-03 | 2.0E-02 |

Fugitive Dust - Particulate Emissions

| Year | Phase/Element | Cubic Yard of Material Moved (in 1000 CY) | Acres | Months | PM10 Emissions ton/acre-month | PM10 Emissions ton/1000 cubic yards off-site fill | PM10 (tpy) |
|------|---|---|-------|--------|-------------------------------|---|------------|
| 3 | Clearing and Grubbing for new buildings | 0 | 2.0 | 2 | 0.011 | 0.22 | 0.044 |

Note: No grading or fill placement for this Proposed Action

United States Environmental Protection Agency (USEPA). 2018. Exhaust and Crankcase Emissions Factors for Nonroad Compression-Ignition Engines in MOVES2014b.
USEPA MOVES2014b Motor Vehicle Emissions Simulator
Western Governor's Association. 2006. Western Regional Air Partnership Fugitive Dust Handbook. September 7.

Emissions Summary Onroad Vehicles Trips - Construction
VA SORCC Seismic Retrofit of Building 200, 201, 202, 219 and 224, Demolition of Various Buildings and Construction of Buildings 300, 301, and 302

| Year | Phase | Vehicle Class | No. of Vehicles Trips (per day) | Average Speed (mph) | VMT (m/vehicle trip-day) | Hours per day per trip | Total Hours Per day per Vehicle Type | Emissions (lbs/day) | | | | | | | | | Days of Work | Emissions | | | | | | | | |
|--------------|-----------------------------------|---|---------------------------------|---------------------|--------------------------|------------------------|--------------------------------------|---------------------|-------------|-------------|------------|------------|------------|----------------|------------|------------|--------------|------------|------------|------------|------------|------------|-------------|--------------|------------|------------|
| | | | | | | | | CO | VOC | NOx | SOx | PM10 | PM2.5 | CO2 | CH4 | N2O | | CO (tpy) | VOC (tpy) | NOx (tpy) | SOx (tpy) | PM10 (tpy) | PM2.5 (tpy) | CO2 (Mtpy) | CH4 (Mtpy) | N2O (Mtpy) |
| 1 | Take Debris for Disposal | Heavy-duty truck, diesel, GVWR 33,000 and up, 2003 and up | 10 | 40 | 60 | 3 | 30 | 2.4 | 4.5 | 8.9 | 0.0 | 0.5 | 0.5 | 2,801.4 | 0.1 | 0.0 | 50 | 0.1 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 63.5 | 0.0 | 0.0 |
| 1 | Transport Trucks/Trailer Delivery | Heavy-duty truck, diesel, GVWR 33,000 and up, 2003 and up | 8 | 40 | 60 | 3 | 18 | 2.4 | 4.5 | 8.9 | 0.0 | 0.5 | 0.5 | 1,680.8 | 0.0 | 0.0 | 50 | 0.1 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 38.1 | 0.0 | 0.0 |
| 1 | Parking Shuttles | Light-duty truck (gasoline) with catalyst | 10 | 20 | 10 | 1 | 10 | 35.5 | 1.5 | 5.2 | 0.1 | 0.3 | 0.3 | 107.8 | 0.0 | 0.0 | 50 | 0.9 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 |
| 1 | Moving Trucks | Light-duty truck (gasoline) with catalyst | 10 | 20 | 10 | 1 | 10 | 35.5 | 1.5 | 5.2 | 0.1 | 0.3 | 0.3 | 107.8 | 0.0 | 0.0 | 50 | 0.9 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 |
| 1 | Worker Vehicle Trips | Light-duty truck (gasoline) with catalyst | 100 | 55 | 40 | 2 | 200 | 35.5 | 1.5 | 5.2 | 0.1 | 0.3 | 0.3 | 4,040.6 | 0.2 | 0.3 | 200 | 3.5 | 0.2 | 0.5 | 0.0 | 0.0 | 0.0 | 366.6 | 0.0 | 0.0 |
| Total | | | | | | | | 111.3 | 13.7 | 33.4 | 0.2 | 2.0 | 1.8 | 8,738.3 | 0.3 | 0.3 | | 5.4 | 0.5 | 1.2 | 0.0 | 0.1 | 0.1 | 473.1 | 0.0 | 0.0 |

Notes:

For notes on phasing and which buildings are within each construction year, see Off-Road Construction Table.

mph = miles per hour

VMT = Vehicle Miles Traveled

tpy = Tons per year

mtpy = metric tons per year

Conversion of grams to pounds (lb)

453.6

- Conversion to metric tons = 1 short ton (2000 lbs) =

0.907 metric tons

Emissions Factors:

| Equipment | CO | | VOCs | | | | | | NOx | | SOx | | PM10 | | | | CO2 | | CH4 | | N2O | | |
|---|------------------------|--------------------|------------------------|--------------------|-------------------|-----------------------|----------------------------|----------------------------|------------------------|--------------------|------------------------|--------------------|------------------------|--------------------|------------------|-------------------|------------------------|--------------------|------------------------|--------------------|------------------------|--------------------|------|
| | Running Exhaust (g/mi) | Start-up (g/start) | Running Exhaust (g/mi) | Start-up (g/start) | Hot-Soak (g/trip) | Refueling Loss (g/hr) | Running Evaporative (g/mi) | Diurnal Evaporative (g/hr) | Running Exhaust (g/mi) | Start-up (g/start) | Running Exhaust (g/mi) | Start-up (g/start) | Running Exhaust (g/mi) | Start-up (g/start) | Tire Wear (g/mi) | Brake Wear (g/mi) | Running Exhaust (g/mi) | Start-up (g/start) | Running Exhaust (g/mi) | Start-up (g/start) | Running Exhaust (g/mi) | Start-up (g/start) | |
| Heavy-duty truck, diesel, GVWR 33,000 and up, 2003 and up | 1.83 | | 3.44 | | | | | | 6.76 | 0.02 | | | | 0.36 | 0.04 | 0.01 | 2,117.80 | | 0.04 | | | 0.00 | |
| Light-duty truck (gasoline) with catalyst | 3.44 | 11.79 | 0.06 | 0.87 | 0.08 | 0.05 | 0.07 | 0.02 | 0.56 | 0.59 | 0.01 | 0.00 | | 0.01 | 0.02 | 0.01 | 0.01 | 448.00 | 203.87 | 0.03 | 0.05 | 0.03 | 0.06 |

Emission Factor Sources:

United States Environmental Protection Agency. 2015. Exhaust Emission Rates for Heavy Duty On-road Vehicles in MOVES2014. November.

USEPA 2016. Air Toxic Emissions from On-road Vehicles in MOVES2014

USEPA MOVES2014b Motor Vehicle Emissions Simulator

Emissions Summary Operational Emissions - Stationary
VA SORCC Seismic Retrofit of Building 200, 201, 202, 219 and 224, Demolition of Various Buildings and Construction of Buildings 300, 301, and 302

Stationary Equipment Emissions

| Year | Phase/Element | Equipment | | | Equipment Operations | | | Emissions (lbs/day) | | | | | | | Emissions | | | | | | | |
|--------------|--|-------------------------------------|-----------|-----------------|----------------------|---------------------|---------------|---------------------|-------------|--------------|--------------|------------|------------------|--------------|--------------|------------|------------|------------|------------|----------------|------------|------------|
| | | Equipment | Fuel Type | Horsepower (hp) | Load Factor | Pieces of Equipment | Hours per day | Days in Service | CO | VOC | NOx | PM10 | CO2 | CH4 | N2O | CO (tpy) | VOC (tpy) | NOx (tpy) | PM10 (tpy) | CO2 (mtpy) | CH4 (mtpy) | N2O (mtpy) |
| Ongoing | Operational - Generator for Building 300/224 | Emergency Generator, 1650 kW and up | Diesel | 1750 | 80 | 2 | 4 | 25 | 4.9 | 108.6 | 108.6 | 0.0 | 342,720.0 | 113.1 | 327.0 | 0.1 | 1.4 | 1.4 | 0.0 | 3,886.4 | 1.3 | 3.7 |
| Ongoing | Operational - Generator for 302 | Emergency Generator, 1650 kW and up | Diesel | 875 | 80 | 2 | 4 | 25 | 2.5 | 54.3 | 54.3 | 0.0 | 171,360.0 | 56.6 | 163.5 | 0.0 | 0.7 | 0.7 | 0.0 | 1,943.2 | 0.6 | 1.9 |
| Ongoing | Operational - Generator for Building 301 | Emergency Generator, 1650 kW and up | Diesel | 1750 | 80 | 2 | 4 | 25 | 4.9 | 108.6 | 108.6 | 0.0 | 342,720.0 | 113.1 | 327.0 | 0.1 | 1.4 | 1.4 | 0.0 | 3,886.4 | 1.3 | 3.7 |
| Total | | | | | | | | | 12.3 | 271.6 | 271.6 | 0.0 | 856,800.0 | 282.8 | 817.6 | 0.2 | 3.4 | 3.4 | 0.0 | 9,715.9 | 3.2 | 9.3 |

Notes:

tpy = tons per year

mtpy =

metric tons

Conversion to metric tons = 1 short ton (2000 lbs) =

0.9071847 metric tons

Conversion of grams to pounds (lb)

453.592 grams/lb

Emissions Factors (g/hp-hr)

| Equipment | CO | VOC | NOx | PM10 | CO2 | CH4 | N2O |
|-------------------------------------|---------|---------|---------|---------|-------|--------|--------|
| Emergency Generator, 1650 kW and up | 4.4E-04 | 9.7E-03 | 9.7E-03 | 0.0E+00 | 30.60 | 0.0101 | 0.0292 |

Emission Factor Sources:

CAT Electric Power Technical Spec Sheet 3516C 1650 eKW/2050 kVA/60 Hz/1800 rpm/480 V/0.8 Power Factor 2018.

Assume Hydrocarbon emissions are equivalent to VOC emissions.

Appendix D Stakeholder Correspondence

SCOUT ENVIRONMENTAL INC
169 SAXONY RD STE 214
ENCINITAS, CA 92024

Affidavit of Publication

THIS IS NOT A BILL

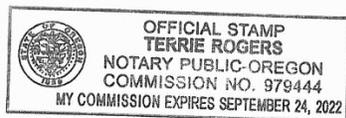
State of Oregon
County of Jackson

CASE NO.

I, Sarah Lucier, being first duly sworn, depose and say that I am the principal clerk of Medford Mail Tribune, a newspaper of general circulation, as defined by ORS 193.010 and 193.020; printed at Medford in the aforesaid county and state; that the PUBLIC NOTICE, a printed copy of which is hereto annexed, was published in the entire issue of said newspaper for 2 successive and consecutive insertion(s) in the following issues 6/6/2021, 6/7/2021 (HERE SET FORTH DATES OF ISSUE)



Subscribed and sworn to before me this 18th day of June, 2021.



Terrie Rogers
NOTARY PUBLIC FOR OREGON

My commission expires 24th day of Sept., 2022.

Rosebud Media - Mail Tribune - Ashland Tidings
111 N Fir St
Medford, OR 97501

| PUBLICATION | EXPIRE DATE | AD CAPTION | # TIMES | AMOUNT | PO |
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| MAIL TRIBUNE | 6/7/2021 | PUBLIC NOTICE PREPARATION OF A | 2 | 429.33 | |

**PUBLIC NOTICE
PREPARATION OF AN ENVIRONMENTAL ASSESSMENT
U.S. DEPARTMENT OF VETERANS AFFAIRS (VA)
Proposed Seismic Upgrades at the White City VA Medical Center
Southern Oregon Rehabilitation Center & Clinics (SORCC) Campus
White City, Oregon**

The U.S. Department of Veterans Affairs (VA) announces the preparation an Environmental Assessment (EA) for proposed seismic upgrades of the SORCC Campus, located in White City, OR. The VA proposes to implement a phased program of demolition, renovation, and construction over several years at the SORCC Campus. The purpose of the Proposed Action is to address existing seismic deficiencies at the SORCC Campus. The Proposed Action is needed to improve safety for Veterans, staff, and visitors, and to ensure the continuity of health care services to Veterans at the SORCC Campus.

The VA anticipates releasing the Draft EA for a 30-day public review and comment period in Summer 2021. The VA will publish a notice of availability of the Draft EA in the Mail Tribune and solicit public comments at that time. The EA will be available at White City Library, via the VA website at: <https://www.southernoregon.va.gov/news/index.asp>, and via email/mail upon request. If you wish to receive direct notification of the Draft EA or have questions or comments at this time, all submissions should be sent/made via email to vacoenvironment@va.gov with the subject line "White City Seismic Upgrades EA." For additional information or questions please contact Mr. Patrick Read, VA Environmental Engineer at the email above or (202) 891-9713 or Ms. Rhonda Haney, SORCC Public Affairs Officer at (541) 830 7585. Reference "White City Seismic Upgrades EA" in your correspondence.

June 6 and 7, 2021

[Public Notice Publication Affidavit]



DEPARTMENT OF VETERANS AFFAIRS
Southern Oregon Rehabilitation Center & Clinics
8495 Crater Lake Highway
White City, Oregon 97503-3011

Month Day, 2021

Stakeholder Name

Organization

Address

City, State, Zip

Sent via email to:

SUBJECT: Notification of Preparation of an Environmental Assessment for Proposed Seismic Upgrades at the White City Veterans Affairs Medical Center, Southern Oregon Rehabilitation Center & Clinics Campus, White City, Oregon

Dear Stakeholder,

The U.S. Department of Veterans Affairs (VA), Office of Construction and Facilities Management is proposing to address seismic deficiencies at the White City VA Medical Center, Southern Oregon Rehabilitation Center and Clinics (SORCC) Campus located at 8495 Crater Lake Highway, White City, Oregon (Figures 1 to 3). The purpose of the Proposed Action is to address existing seismic deficiencies at the SORCC Campus. The Proposed Action is needed to improve safety for Veterans, staff, and visitors, and to ensure the continuity of health care services to Veterans at the SORCC Campus. The VA proposes to implement the Proposed Action in a phased program consisting of demolition, renovation, and construction over several years at the SORCC Campus.

The VA is preparing an Environmental Assessment (EA) to assess the potential environmental impacts associated with implementing the potential seismic upgrades at the Campus. The EA will be prepared in accordance with the regulations implementing the procedural provisions of the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code §§ 4321-4370h), as implemented by the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] §§ 1500-1508), and VA's Implementing Regulations (38 CFR Part 26). The EA will evaluate the potential direct and indirect impacts on the human environment resulting from the Proposed Action.

The VA anticipates releasing the Draft EA for a 30-day public review and comment period in Summer 2021. The VA will publish a notice of availability of the Draft EA in the *Mail Tribune*, notify stakeholders via email/mail, and solicit public comments at that time. The EA will be available at White City Library and the VA website at: <https://www.southernoregon.va.gov/news/index.asp>, and via email/mail upon request.

If you wish to receive direct notification of the Draft EA or have questions or comments at this time, please contact the VA. Due to the on-going COVID-19 pandemic, all submissions/comments should be sent/made via email to vacoenvironment@va.gov with the subject line "White City Seismic Upgrades EA" within 30 days of receipt of this letter. For additional questions, please contact Mr. Patrick Read, CFM



Figure 1 White City VA SORCC – Existing Buildings



Figure 2 White City VA SORCC – Proposed Action

From: THPO <THPO@coquilletribe.org>
Sent: Wednesday, June 9, 2021 12:40 PM
To: Read, Patrick R. (CFM) <Patrick.Read@va.gov>
Subject: [EXTERNAL] RE: Notification Letter for Veterans Affairs Seismic Upgrades Environmental Assessment, White City, OR

Good morning Patrick,

Coquille THPO will defer cultural resources comments to the other tribes indicated by Oregon LCIS for this project (Veterans Affairs Seismic Upgrades Environmental Assessment, White City, OR).

Please keep us informed of significant archaeological findings, which may include ancestral human remains or funerary items. In the event that ancestral remains are observed or disturbed, follow the [State Guidelines](#). In the event that proposed mitigation measures may be developed for other cultural resources in the Project area, we would like to have the opportunity to comment.

Masi (thank you),
Todd

Todd Martin
Tribal Historic Preservation Specialist
Coquille Indian Tribe
495 Miluk Drive
Coos Bay, Oregon 97420

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o: 541-756-0904 x1209
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