EBI Consulting
environmental | engineering | due diligence

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Burlington, MA 01803
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www.ebiconsulting.com

September 16, 2020

Verizon Wireless
3245 158th Avenue SE
Bellevue, Washington 98008

Re: Update to Protected Species Impact Evaluation for Proposed Wireless Facility
Site Identifier: STINGER - A / Fuze 5041449
Site Address: 29421 East Woodard Road, Troudtale, Multnomah County, Oregon 97060
EBI Project #: 6120000634

EBI Consulting (*EBI*) has prepared this second update to a Natural Resources Review (NR Update) for the above-referenced proposed wireless communications facility. The potential impacts of this facility on natural resources were originally evaluated by EBI in a May 16, 2017 Natural Resources Review (NR Review) and in a subsequent February 11, 2020 Natural Resources Review Update. EBI's evaluation in each of these previous instances, determined that the proposed facility will have 'no effect' on identified protected species.

The purpose of this subsequent NR Update is to re-assess the proposed project, in light of recent a public inquiry submitted to the Federal Communications Commission (FCC), into the potential effects of the project development on three federally listed threatened species: the Northern spotted owl (*Strix occidentalis caurina*), Yellow-billed cuckoo (*Coccyzus americanus*), and the Streaked horned lark (*Eremophila alpestris strigata*).

Project Scope

As part of this most recent NR Update, EBI re-evaluated the findings of its original assessment (which had considered impacts to each of the above-referenced species) and whether there had been any changes to the proposed facility design, location, or development plans.

As of the date of this NR Update, no changes have been made to the proposed facility design or location. The proposed facility will consist of a 156-foot monopine tower with associated support equipment located within a 33-foot by 35-foot fenced compound on a 50-foot by 50-foot lease area. Access will be gained via a 12-foot wide gravel access road within a 20-foot wide access/utility easement emanating north from East Woodard Road to the tower facility. The proposed lease area, including access and utility easement are herein referred to as the "Project Site." Please see the attached drawings for complete details.

EBI also assessed whether new information concerning the proposed access/utility easement and portions of the lease area – specifically that a total of nine trees will be removed as part of the development – would alter the findings of the previous assessments.

Protected Species Review

EBI utilized the United States Fish and Wildlife (USFWS) Information for Planning and Consultation[1] (IPaC) online project review tool to obtain an updated list of species that are federally listed or proposed for listing under the Endangered Species Act (ESA), and that are known to occur within the project vicinity. The USFWS IPaC report identified eight non-aquatic federal-listed (i.e. endangered or threatened) species that are known to occur within the project vicinity. These species are comprised of five plant species and three avian species. Recent public comments received by the FCC, expressed concern about the potential impacts on the three identified avian species. Table 1 below lists all of the avian and plant species identified by the IPaC report, and summarizes both their preferred habitats and EBI's findings of effect.

[1] USFWS Information and Consultation URL: http://ecos.fws.gov/ipac

EXHIBIT
tabbies
1.3

Table 1: Species

SPECIES LISTING Common Name (*Scientific Name*)	**STATUS**	**HABITAT DESCRIPTION**	**DETERMINATION OF EFFECT**
Northern spotted owl (*Strix occidentalis caurina*)	FT / ST	Moderate to high canopy closure; a multilayered, multispecies canopy dominated by large overstory trees; a high incidence of large trees with large cavities, broken tops, and other indications of decadence; numerous large snags; heavy accumulations of logs and other woody debris on the forest floor; and considerable open space within and beneath the canopy. Generally these conditions are found in old growth (at least 150-200 years old), but sometimes they occur in younger forests that include patches of older growth; in Washington and Oregon, conifer forests begin to develop conditions suitable for spotted owls about 80-120 years after clearcutting; coastal redwood forests are exceptional in that stands that are 50-80 years old or so may provide suitable conditions.	**No Effect** – Although trees will be removed from the Project Site; correspondence with the Oregon USFWS notes that the action area of the proposed cell tower project is not conducive to supporting spotted owls. Further, because the area contains only a small amount of minimally suitable habitat, within a landscape of residential properties, farm land, and suburban development, the action area could not support a territory for residential spotted owls. Finally, the Oregon USFWS notes that the action area is insufficient for supporting dispersing spotted owls. **See additional discussion below and attached correspondence with the OR USFWS.*
Streaked horned lark (*Eremophila alpestris strigata*)	FT	Grassland, tundra, sandy regions, areas with scattered low shrubs, desert playas, grazed pastures, stubble fields, open cultivated areas, and rarely open areas in forest (AOU 1983). Nests in hollow on ground often next to grass tuft or clod of earth or manure.	**No Effect** – Although potentially suitable habitat does occur within the vicinity of the Project Site, no such suitable habitat (i.e. grasslands, tundra, sandy regions with low shrubs) exists at the Project Site.
Yellow-billed cuckoo (*Coccyzus americanus*) *Western U.S. DPS	FT	Forest - Hardwood, Forest - Mixed, Old field, Shrubland/chaparral, Suburban/orchard, Woodland - Hardwood, Woodland – Mixed. BREEDING: Open woodland (especially where undergrowth is thick), parks, deciduous riparian woodland; in the West, nests in tall cottonwood and willow riparian woodland. Nests in deciduous woodlands, moist thickets, orchards, overgrown pastures; in tree, shrub, or vine, an average of 1-3 meters above ground.	**No Effect** – Although potentially suitable habitat does occur within the vicinity of the Project Site, no such suitable habitat (i.e. open woodlands with a thick understory and/or deciduous riparian woodlands with cottonwood and willow trees) exists at the Project Site.
Bradshaw's desert-parsley (*Lomatium bradshawii*)	FE	Wet prairie habitats including Deschampsia caespitosa Valley Prairie (DECA Valley Prairie). Open, clay soil bottomland with seasonal standing water. A few populations grow on shallow, basalt areas in Marion and Linn County near the Santiam River in Oregon.	**No Effect** – The Project Site does not consist of suitable habitat (i.e. wet prairie habitats) capable of supporting this species.

SPECIES LISTING Common Name (*Scientific Name*)	**STATUS**	**HABITAT DESCRIPTION**	**DETERMINATION OF EFFECT**
Kincaid's lupine (*Lupinus sulphureus ssp. kincaidii*)	FT	Kincaid's lupine is known to occur in native upland prairies and open oak woodlands.	**No Effect** – The Project Site does not consist of suitable habitat (i.e. upland prairies and open oak woodlands) capable of supporting this species.
Nelson's checker-mallow (*Sidalcea nelsoniana*)	FT	Within the Willamette Valley, Nelson's checkermallow most frequently occurs in Oregon ash (Fraxinus latifolia) swales and meadows with wet depressions, or along streams. The species also grows in wetlands within remnant prairie grasslands. Some populations occur along roadsides at stream crossings where non-native plants, such as reed canarygrass (Phalaris arundinacea), blackberry (Rubus spp.), and Queen Anne's lace (Daucus carota), are also present. Nelson's checkermallow primarily occurs in open areas with little or no shade and will not tolerate encroachment of woody species.	**No Effect** – The Project Site does not consist of suitable habitat (i.e. swales and meadows with wet depressions near aquatic habitats) capable of supporting this species.
Water howellia (*Howellia aquatilis*)	FT / ST	Small vernal wetlands with firmly consolidated bottoms. These include shallow, low-elevation glacial pothole ponds and former river oxbows with margins of deciduous trees and shrubs. These habitats are inundated by spring rains and snowmelt runoff and typically dry out by the end of the growing season. The plants tend to root in the shallow water at the edges of deeper ponds that are (at lower elevations) surrounded by deciduous trees.	**No Effect** – The Project Site does not consist of suitable habitat (i.e. vernal wetlands) capable of supporting this species.
Willamette daisy (*Erigeron decumbens*)	FE	Deschampsia Caespitosa Valley prairie. Clay soiled prairie in valley bottoms, often by creek drainages. Occurs in heavy soils in seasonally wet or dry upland prairie grassland	**No Effect** – The Project Site does not consist of suitable habitat (i.e. seasonally wet or dry upland prairies) capable of supporting this species.
FE = Federal Endangered; FT = Federal Threatened; SE = State Endangered; ST = State Threatened			

Please note that identified protected species which require strictly aquatic habitats (e.g. fish) were not included in the table above as no such habitat is present at the proposed Project Site.

Consultation

During the week of September 7, 2020, EBI corresponded via phone and email with the Portland, Oregon field office of the USFWS. EBI provided details of the proposed installation design and location and requested comment with regards to potential impacts of the proposed development on the three avian species raised as a concern in recent public comments.

In an email response dated September 9, 2020, Ms. Chelsea Waddell, Wildlife Biologist for the USFWS, stated that based on the information provided, "the action area of the proposed cell tower project is not conducive to supporting spotted owls." Ms. Waddell added that this statement is made based on information provided by EBI "that the that the larger landscape, including the action area, could not support a territory for residential spotted owl(s) because the area contains only small amount of minimally suitable habitat in a landscape of residential properties, farm land and suburban development. Additionally, the area is also insufficient for supporting dispersing spotted owls, which also need a minimum area to forage and roost in while moving though and looking for an area to support a territory." Please refer to the attachments for a copy of this correspondence.

Findings

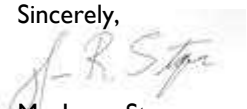
EBI has reevaluated it's previous determinations concerning the potential effects of the proposed wireless communications facility on protected species, as identified in the USFWS IPaC species list, and as identified by a recent public concern the FCC Inquiry.

Based on the review completed by EBI, in addition to correspondence with the USFWS, EBI makes no changes to the original finding with regard to the proposed facility's potential effects on protected species, as summarized in the original May 16, 2017 NR Review and February 11, 2020 NR Update. Specifically, EBI concludes that the proposed installation will have '**No Effect**' on the above-tabulated federally listed avian and plant species. Please note that the three avian species identified by IPaC are the same three avian species identified as a concern in a recent public comment. Please refer to the attached updated IPaC report.

Limitations

EBI is an independent contractor, not an employee of either the property owner or the project proponent, and its compensation was not based on the findings or recommendations made in this *Review* or on the closing of any business transaction.

Sincerely,



Mr. Jason Stayer
Biologist II

Mr. Christopher W. Baird
Technical Director, NEPA

Attachments: Updated Supporting Documentation
Original Natural Resource Review (May 16, 2017)
Qualifications

UPDATED SUPPORTING DOCUMENTATION

Jason Stayer

From: Waddell, Chelsea D <chelsea_waddell@fws.gov>
Sent: Wednesday, September 9, 2020 11:06 AM
To: Jason Stayer; Tuerler, Bridgette
Subject: Re: [EXTERNAL] EBI Project 6120000634 - Troutdale, OR

Jason,

Thanks for reaching out and requesting our technical assistance on this project. Based on the information you have provided, the action area of the proposed cell tower project is not conducive to supporting spotted owls. This is based on the information you provided documenting that the larger landscape, including the action area, could not support a territory for residential spotted owl(s) because the area contains only small amount of minimally suitable habitat in a landscape of residential properties, farm land and suburban development. Additionally, the area is also insufficient for supporting dispersing spotted owls, which also need a minimum area to forage and roost in while moving though and looking for an area to support a territory.

Please let myself or Bridgette know if you need any further assistance.

All the best,
Chelsea

Chelsea Waddell
Fish & Wildlife Biologist
Oregon Fish and Wildlife Office
US Fish and Wildlife Service
2600 SE 98th Ave, Ste 100
Portland, OR 97266
503-319-9487

From: Jason Stayer <jstayer@ebiconsulting.com>
Sent: Tuesday, September 8, 2020 12:29 PM
To: Tuerler, Bridgette <bridgette_tuerler@fws.gov>; Waddell, Chelsea D <chelsea_waddell@fws.gov>
Subject: [EXTERNAL] EBI Project 6120000634 - Troutdale, OR

Hello Bridgette and Chelsea,

Thank you both very much for taking the time to speak earlier today. I wanted to draft a summary of what we discussed to make sure we are all in agreement. EBI is determining that due to the lack of suitable nesting habitat, the proposed Project Site would have no effect on the Horned lark and Yellow-billed cuckoo. Further, although potentially marginal habitat for the Northern spotted owl does occur within the vicinity of the Project Site, due to the fragmented nature of the forested landscape and proximity to developed areas, the proposed communications facility will not impact nesting Spotted Owl habitat. Attached are the figures utilized to reach the conclusion. Please let me know if there are any discrepancies. Thank you.

Jason Stayer
Senior Biologist
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21 B Street | Burlington, MA | 01803
jstayer@ebiconsulting.com
Visit our website: www.ebiconsulting.com

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oregon Fish And Wildlife Office
2600 Southeast 98th Avenue, Suite 100
Portland, OR 97266-1398
Phone: (503) 231-6179 Fax: (503) 231-6195
https://www.fws.gov/oregonfwo/articles.cfm?id=149489416

In Reply Refer To: September 11, 2020
Consultation Code: 01EOFW00-2020-SLI-0573
Event Code: 01EOFW00-2020-E-01194
Project Name: STINGER - A

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. If you have questions regarding your responsibilities under the Act, please contact the Endangered Species Division at the Service's Oregon Fish and Wildlife Office at (503) 231-6179. For information regarding listed marine and anadromous species under the jurisdiction of NOAA Fisheries Service, please see their website (http://www.nwr.noaa.gov/habitat/habitat_conservation_in_the_nw/habitat_conservation_in_the_nw.html).

Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Oregon Fish And Wildlife Office
2600 Southeast 98th Avenue, Suite 100
Portland, OR 97266-1398
(503) 231-6179

Project Summary

Consultation Code: 01EOFW00-2020-SLI-0573

Event Code: 01EOFW00-2020-E-01194

Project Name: STINGER - A

Project Type: COMMUNICATIONS TOWER

Project Description: Construction of a 156-foot monopine tower with associated support equipment located within a 33-foot by 35-foot fenced compound on a 50-foot by 50-foot lease area.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/45.52427213368823N122.35961656631687W

Counties: Multnomah, OR

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Streaked Horned Lark *Eremophila alpestris strigata* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7268	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Fishes

NAME	STATUS
Bull Trout *Salvelinus confluentus* Population: U.S.A., conterminous, lower 48 states There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8212	Threatened

Flowering Plants

NAME	STATUS
Bradshaw's Desert-parsley *Lomatium bradshawii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5743	Endangered
Kincaid's Lupine *Lupinus sulphureus ssp. kincaidii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3747	Threatened
Nelson's Checker-mallow *Sidalcea nelsoniana* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7340	Threatened
Water Howellia *Howellia aquatilis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7090	Threatened
Willamette Daisy *Erigeron decumbens* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6270	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

ORIGINAL NATURAL RESOURCE REVIEW

EBI Consulting
environmental | engineering | due diligence

21 B Street
Burlington, MA 01803
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www.ebiconsulting.com

Natural Resource Review

May 16, 2017

RE: Proposed Communications Facility
Site Identifier: Stinger – A / FUZE 2491334
Site Address: 29421 East Woodard Road, Troutdale, Multnomah County, OR 97060
Latitude / Longitude: 45° 31' 31.51" / 122° 21' 33.95"
EBI Project No. 6117000962

On behalf of Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless), EBI Consulting (EBI) has prepared the following Natural Resource Review (the *Review*) for the above-referenced property (herein, the Subject Property). This *Review* was completed as a part of EBI's National Environmental Policy Act (NEPA) review of a proposed communications facility, and focuses specifically on identifying potential significant impacts to federally-protected lands; federal- and state-listed protected species; Federal Emergency Management Agency (FEMA) designated 100-year flood zones; and wetlands, which may require further environmental review per Federal Communications Commission (FCC) Rules Implementing NEPA [47 CFR 1.1307(a).]

Please note that EBI prepared this *Review* using readily-available online resources and visual observations made during EBI's site walk at the Subject Property on April 4, 2017. This *Review* is designed to provide a baseline evaluation of the potential for the proposed installation to affect on-site natural resources (including protected species) and to determine if additional review, on-site surveys, or consultation is required.

PROJECT SUMMARY

As of the date of this *Review*, Verizon Wireless proposes to construct a new communications facility on the northern portion of the Subject Property. The facility will consist of a 150-foot monopole tower and associated support equipment located within a 20-foot by 30-foot fenced compound on a 50-foot by 50-foot lease area. Verizon Wireless proposes to improve/construct a gravel access road within a 20-foot wide access and utility easement emanating north from East Woodard Road for approximately 1,035 feet to the tower facility. Utilities will follow the proposed access route. Please see the attached site drawings for complete details.

PROPERTY AND VICINITY DESCRIPTION

The Subject Property includes three parcels and consists of a residential house, garage, storage shed, landscaped lawn, gravel access road, and undeveloped wooded land. The area of the proposed installation (herein, the Project Site), currently consists of recently cleared land within a fragmented stand of wooded land and existing trail. There are no trees to be removed.

Property use in the vicinity of the Subject Property is primarily characterized by land utilized for agricultural purposes, residential housing, and undeveloped land.

FEDERAL LANDS REVIEW

EBI reviewed data maintained by the United States Geological Survey (USGS; http://nationalmap.gov) as depicted on EBI's 'Land Resources Map' (see attached), and other available online resources as necessary, to determine if the proposed communications facility is located within one mile of certain federally-protected lands. The following table outlines EBI's review.

FEDERALLY-PROTECTED LAND Jurisdictional Agency / Resource	*Within Boundary / Within One Mile*	
	YES	NO
Wilderness Area [47 CFR §1.1307(a)(1)] National Wilderness Preservation System (NWPS) National Park Service (NPS); U.S. Forest Service (USFS); U.S. Fish and Wildlife Service (USFWS); Bureau of Land Management (BLM) http://www.wilderness.net/index.cfm?fuse=NWPS	☐	☒
Wildlife Preserve [47 CFR §1.1307(a)(2)] National Wildlife Refuge System (NWRS) NPS; USFS; USFWS; BLM http://www.fws.gov/refuges	☐	☒
Wild & Scenic Rivers NPS; USFS; USFWS; BLM http://www.rivers.gov	☒	☐
National Scenic Trail NPS and Managing Systems and Trails Organization (MSTO) http://www.nps.gov/ncrc/programs/nts/nts_trails.html	☐	☒
Comments: The proposed Site is located approximately 0.65 miles north of a designated Wild & Scenic River (i.e. Sandy River) which is under the jurisdiction of the BLM Salem District.		

EBI contacted the BLM for comment concerning the proposed facility. In a response dated May 15, 2017, the BLM commented that the proposed facility was not within a designated Wild and Scenic Management Zone, and as such, the BLM has no regulatory authority concerning the proposed facility. The BLM did recommend that EBI follow the most current migratory bird guidance for tower construction.

PROTECTED SPECIES REVIEW

EBI reviewed online resources maintained by the USFWS (http://ecos.fws.gov/ipac) to identify any species that are federally-listed under the Endangered Species Act (ESA) as either endangered or threatened, and that are known to occur within the project vicinity. Based on EBI's research of online files maintained by the USFWS, three such non-aquatic, federally-listed (i.e. endangered or threatened) species are known to occur within the project vicinity.

Additionally, based on a review of the USFWS online Critical Habitat Portal (http://criticalhabitat.fws.gov), the proposed communications facility is not located within a designated critical habitat.

EBI also reviewed online resources maintained by the Oregon Department of Fish and Wildlife (ODFW) (http://www.dfw.state.or.us/wildlife/diversity/species/index.asp) to identify any state-protected animal species (i.e. endangered and threatened) that are known to occur within the State of Oregon. According to ODFW, eleven (non-aquatic) state-protected species occur within the State of Oregon. EBI also reviewed online resources maintained by the Oregon Department of Agriculture (ODA) (http://www.oregon.gov/ODA/PLANT/CONSERVATION/Pages/statelist.aspx) to identify any state-protected (i.e. endangered and threatened) plants that are known to occur within the Multnomah County, OR. According to the ODA, six state-protected plant species occur within Multnomah County, OR.

A review of the identified species and their associated habitats with respect to the proposed Site is provided in the following table.

SPECIES LISTING Common Name (*Scientific Name*)	**FEDERAL / STATE STATUS**	**HABITAT DESCRIPTION**	**DETERMINATION OF EFFECT**
Northern spotted owl (*Strix occidentalis caurina*)	FT / ST	Moderate to high canopy closure; a multilayered, multispecies canopy dominated by large overstory trees; a high incidence of large trees with large cavities, broken tops, and other indications of decadence; numerous large snags; heavy accumulations of logs and other woody debris on the forest floor; and considerable open space within and beneath the canopy. Generally these conditions are found in old growth (at least 150-200 years old), but sometimes they occur in younger forests that include patches of older growth; in Washington and Oregon, conifer forests begin to develop conditions suitable for spotted owls about 80-120 years after clearcutting; coastal redwood forests are exceptional in that stands that are 50-80 years old or so may provide suitable conditions.	**No Effect** – Habitat at the Site does not consist of suitable habitat (i.e. forested areas) capable of supporting the listed species. Although trees are located within the immediate vicinity of the proposed Project Site, no trees are to be removed.
Streaked horned lark (*Eremphila alpestris strigata*)	FT / C	Habitat consists of large expanses of bare or thinly vegetated land, including fields, prairies, dunes, upper beaches, airports, and similar areas with low/sparse grassy vegetation.	**No Effect** – Habitat at the Site does not consist of suitable habitat (i.e. sparsely vegetated land) capable of supporting the listed species.
Yellow-billed cuckoo (*Coccyzus americanus*)	FT / C	Forest - Hardwood, Forest - Mixed, Old field, Shrubland/chaparral, Suburban/orchard, Woodland - Hardwood, Woodland – Mixed. BREEDING: Open woodland (especially where undergrowth is thick), parks, deciduous riparian woodland; in the West, nests in tall cottonwood and willow riparian woodland. Nests in deciduous woodlands, moist thickets, orchards, overgrown pastures; in tree, shrub, or vine, an average of 1-3 meters above ground.	**No Effect** – Habitat at the Site does not consist of suitable habitat (i.e. forested areas) capable of supporting the listed species. Although trees are located within the immediate vicinity of the proposed Project Site, no trees are to be removed.
FE = Federal Endangered; FT = Federal Threatened; FP = Federal Proposed; CH = Critical Habitat *SE = State Endangered; ST = State Threatened; I = In Need of Conservation; C = Candidate*			

Please note that identified protected species which require strictly aquatic habitats (e.g. fish) were not included in the table above as no such habitat is present at the proposed Project Site.

As noted in the table above, suitable habitats capable of supporting the listed species were not noted at the proposed Project Site. As such, the proposed installation is anticipated to have 'No Effect' on the identified species. Per the guidelines set forth in Section 7 of the Endangered Species Act (http://www.fws.gov/endangered/what-we-do/faq.html), no further consultation with the USFWS is required.

Migratory Birds

Consideration should also be given to the potential impacts of the construction and ongoing operation of the proposed installation on species protected under the Migratory Bird Treaty Act (MBTA) and ESA. The USFWS issued their *Revised Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning* (https://www.fws.gov/migratorybirds/pdf/management/usfwscommunicationtowerguidance.pdf) on September 27, 2013. The USFWS 2013 *Guidelines* are considered voluntary federal recommendations; however, EBI recommends they be followed to the extent feasible to minimize and/or avoid potential adverse impacts to migratory birds.

The proposed tower will be a 150-foot monopole with no lighting. As such, it meets most of the USFWS's tower siting and design recommendations and is therefore not anticipated to adversely affect migratory birds.

FLOOD ZONE REVIEW

Based on EBI's review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (www.fema.gov; Map #41051C0238H) the proposed Site is located within an area identified as Zone X, and therefore, is not located within a 100-year floodplain.

WETLANDS REVIEW

EBI did not observe any readily-identifiable wetlands or wetland characteristics (e.g. standing water, hydrophytic vegetation, soil saturation and inundation, drainage patterns and sediment deposition, watermarks and drift lines on trees and vegetation, or water stained leaves). Additionally, a review of the USFWS National Wetlands Inventory (NWI) map (see attached) did not identify any wetlands in the immediate vicinity (300 feet) of the Site.

EBI also reviewed the United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) for the Site and immediate vicinity. According to EBI's review, soil at the Site consists of Mershon silt loam with 0 to 8 percent slopes. This moderately well drained soil supports a depth to water table ranging between approximately 36 and 60 inches with a depth to restrictive layer of more than 80 inches. These soil type is not listed as hydric by the NRCS (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/).

Based on EBI's review as summarized above, the proposed communications facility installation is not anticipated to impact identified wetlands.

FINDINGS AND CONCLUSIONS

Based on the results of EBI's review as summarized herein, the proposed communications facility is:

- Anticipated to have 'no effect' on listed protected species associated or critical habitats;
- Not within the boundaries of, or within one mile of federally-protected land (i.e. wildlife preserves, wilderness areas, etc.);
- Not within the boundaries of a FEMA-designated 100-year flood zone; and
- Not anticipated to result in a significant change to surface features.

As such, EBI recommends no further review with regard to the potential for impacts on the natural resources evaluated in this report.

EBI is an independent contractor, not an employee of either the property owner or the project proponent, and its compensation was not based on the findings or recommendations made in this *Review* or on the closing of any business transaction.

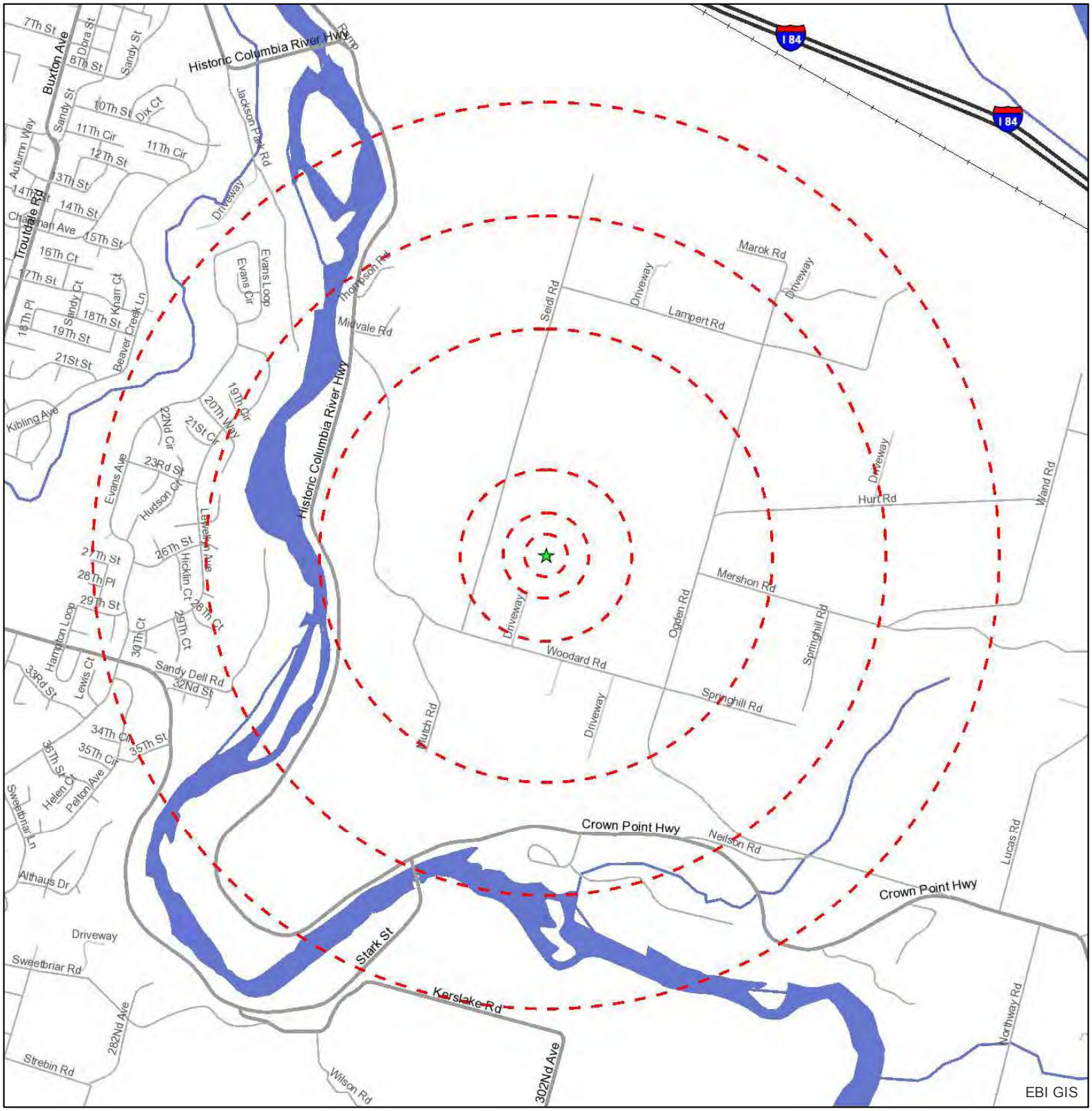
Sincerely,

Mr. Jason Stayer
Biologist II

Mr. Bill Arnerich
Biologist

Attachments: Figures & Drawings
Photographs
Species Review Documentation
Supporting Documentation
Qualifications

FIGURES & DRAWINGS



Legend

- ★ Project Site
- Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

Source: Selected data from ESRI, EBI & USGS

N

Date: 3/1/2017

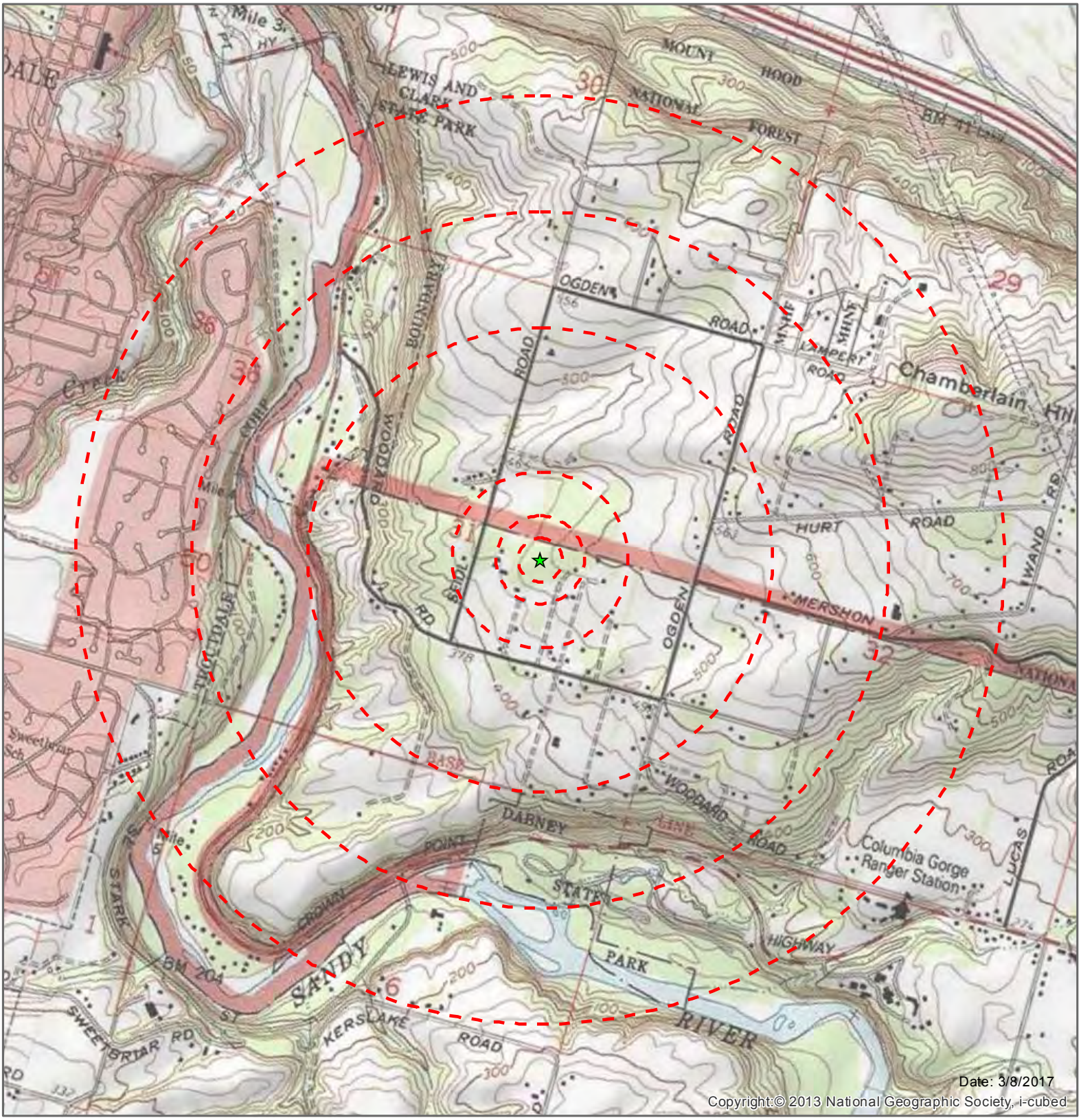
Figure 1: Site Location Map

0 500 1,000 2,000 3,000 Feet

ENSITE #30912 (425554) POR STINGER
29421 EAST WOODARD ROAD
TROUTDALE, OR 97060

PN: 6117000962

EBI Consulting
environmental | engineering | due diligence



Legend

Source: Selected data from USGS, ESRI and EBI.

★ Project Site

Project Radius at 250', 500', 1000', 1/2, 3/4 & 1 Mile

USGS 24K Quad: Washougal, WA 1986

Figure 2 - Topographic Map

0 1,000 2,000 4,000 Feet

Ensite #30912 (425554) / POR Stinger
29421 East Woodard Road
Troutdale, Oregon 97060

EBI Consulting
environmental | engineering | due diligence

PN: 6117000962

verizon

PROJECT NAME: **POR STINGER**

PROJECT LOCATION: **29421 E WOODARD RD**
TROUTDALE, OR 97060

VICINITY MAP

DRIVING DIRECTIONS

(FROM PORTLAND, OR)

- FOLLOW SIGNS TO I-84 E/US 30 E TOWARD THE DALLES
- MERGE ONTO I-84 E/US 30 E
- TAKE EXIT 18 TOWARD OXBOW REGIONAL PARK/LEWIS AND CLARK STATE PARK
- TURN LEFT ONTO JORDAN RD
- CONTINUE ONTO HISTORIC COLUMBIA RIVER HWY
- TURN LEFT ONTO SE WOODARD RD
- TURN LEFT ONTO DRIVEWAY AT 29241 E WOODARD RD
- FOLLOW DRIVEWAY, PAST HOUSE, THRU GATED FENCE TO SITE

PROJECT INFORMATION

JURISDICTION:	MULTNOMAH COUNTY
ZONING CLASS:	MUA – MIXED USE AGRICULTURE
OCCUPANCY GROUP:	UTILITY
CONSTRUCTION TYPE:	RAW LAND MONOPOLE
TAX PARCEL ID:	R322458/1N4E31DB 600
PARCEL SIZE:	358,007 SQ FT (8.22 ACRES)
LATITUDE:	45°31'31.51" N 45.525419°
LONGITUDE:	122°21'33.95" W -122.359431°
GROUND ELEVATION:	470.8' AMSL
STRUCTURE HEIGHT:	150'-0" (TOP OF PROPOSED MONOPOLE)
LEASE AREA:	2500 S.F.

LEGAL DESCRIPTION

SEE SITE SURVEY.

CONTACTS

APPLICANT/CLIENT AND IMPLEMENTATION CONTACT:
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(d/b/a VERIZON WIRELESS)
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PORTLAND, OR 97230
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jason.fallau@verizonwireless.com

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A&E CONTACT:
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PROPERTY OWNER CONTACT:
CLIFF HEGSTAD
PHONE: (503) 481-8927

ZONING PERMIT CONTACT:
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PROFESSIONAL OF RECORD:
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rlara@morrisonhershfield.com

SURVEYOR:
DUNCANSON COMPANY, INC.
145 SW 155TH ST, SUITE 102
SEATTLE, WA 98166
PHONE: (206) 244-4141

SCOPE OF WORK

VERIZON WIRELESS PROPOSES TO INSTALL AN UNMANNED TELECOMMUNICATIONS FACILITY CONSISTING OF THE INSTALLATION OF (12) NEW PANEL ANTENNAS WITH A 150'-0" TIP HEIGHT, (24) RRU'S, (3) HYBRID CABLES AND (3) RAYCAP SPLITTER/SURGE SUPPRESSORS ON A PROPOSED PLATFORM MOUNT ON A NEW 150' MONOPOLE. ALSO PROPOSED IS THE INSTALLATION OF (3) EQUIPMENT CABINETS, (3) RAYCAP SURGE SUPPRESSORS MOUNTED WITHIN A CABINET AND A 20kW DIESEL GENERATOR WITHIN A 20'-0"x30'-0" FENCED AREA IN A 50'-0"x50'-0" LEASE AREA.

LIST OF DRAWINGS

SHEET	DESCRIPTION
T-1	COVER SHEET
T-2	GENERAL NOTES AND SYMBOLS
SV1	SITE SURVEY
SV2	SITE SURVEY
A-1	SITE PLAN
A-1.1	PROPOSED COMPOUND AND EQUIPMENT PLANS
A-2	PROPOSED ELEVATION

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT CONDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

OREGON STATE AND LOCAL BUILDING CODES WITH THE FOLLOWING REFERENCE CODE:

2014 OREGON STRUCTURAL SPECIALTY CODE
2014 NATIONAL ELECTRICAL CODE
2014 OREGON MECHANICAL SPECIALTY CODE
2012 NFPA 101 LIFE SAFETY CODE

APPROVALS

	SIGNATURE	DATE
REPRESENTATIVE		
SITE OWNER		
RF ENGINEER		

REGISTERED ARCHITECT
ROBERT J. LARA
License # 5897
LANTANA, FL
STATE OF OREGON
Feb 17 2017
CoSign

ROBERT JERRY LARA
REGISTERED ARCHITECT
STATE OF OREGON
5897

ZONING

No.	Date	Revision
0	02/17/17	ISSUED FOR PERMIT
A	12/19/16	ISSUED FOR REVIEW

Client:

verizon

Implementation Team:

BLACK ROCK

A&E Team:

MORRISON HERSHFIELD
600 STEWART ST, SUITE 200
SEATTLE, WA 98101
Tel: 206.268.7370
www.morrisonhershfield.com

Project Info:

POR
STINGER
29421 E WOODARD RD
TROUTDALE, OR 97060

Drawing Title:

COVER SHEET

Project Number: 7160107	Start Date: 12/13/16
Drafter: JA	Designer: SV
Project Manager: RKL	Professional of Record: RL
Revision No: 0	Sheet No: T-1

GENERAL NOTES

1. WORK SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. ALL NECESSARY LICENSES, CERTIFICATES, ETC., REQUIRED BY AUTHORITY HAVING JURISDICTION SHALL BE PROCURED AND PAID FOR BY THE CONTRACTOR.
2. MORRISON HERSHFIELD CORPORATION HAS NOT CONDUCTED, NOR DOES IT INTEND TO CONDUCT ANY INVESTIGATION AS TO THE PRESENCE OF HAZARDOUS MATERIAL, INCLUDING, BUT NOT LIMITED TO, ASBESTOS WITHIN THE CONFINES OF THIS PROJECT. MORRISON HERSHFIELD CORPORATION DOES NOT ACCEPT RESPONSIBILITY FOR THE INDEMNIFICATION, THE REMOVAL, OR ANY EFFECTS FROM THE PRESENCE OF THESE MATERIALS. IF EVIDENCE OF HAZARDOUS MATERIALS IS FOUND, WORK IS TO BE SUSPENDED AND THE OWNER NOTIFIED. THE CONTRACTOR IS NOT TO PROCEED WITH FURTHER WORK UNTIL INSTRUCTED BY THE OWNER IN WRITING.
3. ALL MATERIAL FURNISHED UNDER THIS CONTRACT SHALL BE NEW, UNLESS OTHERWISE NOTED. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP. THE CONTRACTOR SHALL REPAIR OR REPLACE AT HIS EXPENSE ALL WORK THAT MAY DEVELOP DEFECTS IN MATERIALS OR WORKMANSHIP WITHIN SAID PERIOD OF TIME OR FOR ONE YEAR AFTER THE FINAL ACCEPTANCE OF THE ENTIRE PROJECT, WHICHEVER IS GREATER.
4. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND UTILITIES AT THE JOB SITE BEFORE WORK IS STARTED. NO CLAIMS FOR EXTRA COMPENSATION FOR WORK WHICH COULD HAVE BEEN FORESEEN BY AN INSPECTION, WHETHER SHOWN ON THE CONTRACT DOCUMENTS OR NOT, WILL BE ACCEPTED OR PAID.
5. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND CONDITIONS AT THE JOB SITE WHICH COULD AFFECT THE WORK UNDER THIS CONTRACT. ALL MANUFACTURERS RECOMMENDED SPECIFICATIONS, EXCEPT THOSE SPECIFICATIONS HEREIN, WHERE MOST STRINGENT SHALL BE COMPLIED WITH.
6. THE CONTRACTOR SHALL VERIFY AND COORDINATE SIZE AND LOCATION OF ALL OPENINGS FOR STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL, OR ARCHITECTURAL WORK.
7. THE CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST BETWEEN THE LOCATIONS OF ANY AND ALL MECHANICAL, ELECTRICAL, PLUMBING, OR STRUCTURAL ELEMENTS, AND THAT ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE ARE MET. NOTIFY THE CONSULTANT OF ANY CONFLICTS. THE CONSULTANT HAS THE RIGHT TO MAKE MINOR MODIFICATIONS IN THE DESIGN OF THE CONTRACT WITHOUT THE CONTRACTOR GETTING ADDITIONAL COMPENSATION.
8. DO NOT SCALE THE DRAWINGS. DIMENSIONS ARE EITHER TO THE FACE OF FINISHED ELEMENTS OR TO THE CENTER LINE OF ELEMENTS, UNLESS NOTED OTHERWISE. CRITICAL DIMENSIONS SHALL BE VERIFIED AND NOTIFY THE CONSULTANT OF ANY DISCREPANCIES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEAN UP OF ALL TRADES AND REMOVE ALL DEBRIS FROM THE CONSTRUCTION SITE. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE BUILDING, SITE, AND ANY OTHER SURROUNDING AREAS TO A BETTER THAN EXISTING CONDITION.
10. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, ETC. ACCORDING TO APPLICABLE CODES, STANDARDS, AND GOOD CONSTRUCTION PRACTICES.
11. THE CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS FOR ALL INSTALLATIONS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO THE EXISTING CONSTRUCTION AND REPAIR ALL DAMAGES TO BETTER THAN NEW CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DAMAGE TO THE BUILDING SITE OR ANY ADJACENT STRUCTURES AROUND THE PROJECT. THE CONSULTANT SHALL BE SOLE AND FINAL JUDGE AS TO THE QUALITY OF THE REPAIRED CONSTRUCTION. ANY ADDITIONAL MODIFICATIONS WHICH MUST BE MADE SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.
13. WHERE ONE DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, EVEN THOUGH NOT SPECIFICALLY MARKED ON THE DRAWINGS OR REFERRED TO IN THE SPECIFICATIONS, UNLESS NOTED OTHERWISE.
14. WHERE NEW PAVING, CONCRETE SIDEWALKS OR PATHS MEET EXISTING CONSTRUCTION, THE CONTRACTOR SHALL MATCH THE EXISTING PITCH, GRADE, AND ELEVATION SO THE ENTIRE STRUCTURE SHALL HAVE A SMOOTH TRANSITION.
15. THE CONTRACTOR SHALL MODIFY THE EXISTING FLOORS, WALL, CEILING, OR OTHER CONSTRUCTION AS REQUIRED TO GAIN ACCESS TO AREAS FOR ALL MECHANICAL, PLUMBING, ELECTRICAL, OR STRUCTURAL MODIFICATIONS. WHERE THE EXISTING CONSTRUCTION DOORS, PARTITIONS, CEILING, ETC., ARE TO BE REMOVED, MODIFIED, OR REARRANGED OR WHERE THE EXPOSED OR HIDDEN MECHANICAL, ELECTRICAL, SYSTEMS ARE ADDED OR MODIFIED, THE GENERAL CONTRACTOR SHALL REPAIR, PATCH AND MATCH ALL EXISTING CONSTRUCTION AND FINISHES OF ALL FLOORS WALLS AND CEILINGS. WHERE CONCRETE MASONRY CONSTRUCTION IS MODIFIED, THE CONTRACTOR SHALL TOOTH IN ALL NEW CONSTRUCTION TO MATCH THE EXISTING BOND. WHERE CONCRETE CONSTRUCTION IS MODIFIED, THE CONTRACTOR SHALL VERIFY THE EXACT DETAILS TO BE USED FOR CONSTRUCTION. ALL WORK SHALL BE COVERED UNDER THE GENERAL CONTRACT.
16. VERIFY ALL EXISTING DIMENSIONS PRIOR TO PERFORMING WORK.
17. VERIFY LOCATION OF ALL BURIED UTILITIES PRIOR TO ANY EXCAVATION.
18. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING FOR COMMERCIAL POWER IMMEDIATELY UPON AWARD OF CONTRACT. THE GENERAL CONTRACTOR IS REQUIRED TO KEEP ALL DOCUMENTATION RECEIVED FROM THE POWER COMPANY, ACKNOWLEDGING APPLICATION FOR POWER, WRITTEN AND VERBAL DISCUSSIONS WITH THE POWER COMPANY, ETC.
19. THE GENERAL CONTRACTOR SHALL OBTAIN WRITTEN CONFIRMATION OF THE EXPECTED DATE OF COMPLETION OF THE POWER CONNECTION FROM THE POWER COMPANY.
20. IF THE POWER COMPANY IS UNABLE TO PROVIDE THE POWER CONNECTION BY OWNER'S REQUIRED DATE, THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN A TEMPORARY GENERATOR UNTIL THE POWER COMPANY CONNECTION IS COMPLETED. COSTS ASSOCIATED WITH THE TEMPORARY GENERATOR TO BE APPROVED BY THE OWNER.
21. IF THE GENERAL CONTRACTOR FAILS TO TAKE NECESSARY MEASURES AS DESCRIBED IN NOTES 18, 19 AND 20 ABOVE, THE GENERAL CONTRACTOR SHALL PROVIDE A TEMPORARY GENERATOR AT NO COST TO THE OWNER.
22. PLANS PART OF THIS SET ARE COMPLEMENTARY. INFORMATION IS NOT LIMITED TO ONE PLAN. DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF THE ARCHITECT, WHETHER THE PROJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSION TO THIS PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO THE ARCHITECT. THESE PLANS WERE PREPARED TO BE SUBMITTED TO GOVERNMENTAL BUILDING AUTHORITIES FOR REVIEW FOR COMPLIANCE WITH APPLICABLE CODES AND IT IS THE SOLE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO BUILD ACCORDING TO APPLICABLE BUILDING CODES.
23. IF CONTRACTOR OR SUB-CONTRACTOR FIND IT NECESSARY TO DEVIATE FROM ORIGINAL APPROVED PLANS, THEN IT IS THE CONTRACTOR'S AND THE SUB-CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE ARCHITECT WITH 4 COPIES OF THE PROPOSED CHANGES FOR HIS APPROVAL BEFORE PROCEEDING WITH THE WORK. IN ADDITION THE CONTRACTOR AND SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY APPROVALS FROM THE BUILDING AUTHORITIES FOR THE PROPOSED CHANGES BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR AND SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY INSPECTIONS AND APPROVALS FROM BUILDING AUTHORITIES DURING THE EXECUTION OF THE WORK.
24. IN EVERY EVENT, THESE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL BE INTERPRETED TO BE A MINIMUM ACCEPTABLE MEANS OF CONSTRUCTION BUT THIS SHALL NOT RELIEVE THE CONTRACTOR, SUB-CONTRACTOR, AND/OR SUPPLIER/MANUFACTURER FROM PROVIDING A COMPLETE AND CORRECT JOB WHEN ADDITIONAL ITEMS ARE REQUIRED TO THE MINIMUM SPECIFICATION. IF ANY ITEMS NEED TO EXCEED THESE MINIMUM SPECIFICATIONS TO PROVIDE A COMPLETE, ADEQUATE AND SAFE WORKING CONDITION, THEN IT SHALL BE THE DEEMED AND UNDERSTOOD TO BE INCLUDED IN THE DRAWINGS. FOR EXAMPLE, IF AN ITEM AND/OR PIECE OF EQUIPMENT REQUIRES A LARGER WIRE SIZE (I.E. ELECTRICAL WIRE), STRONGER OR LARGER PIPING, INCREASED QUANTITY (I.E. STRUCTURAL ELEMENTS), REDUCED SPACING, AND/OR INCREASED LENGTH (I.E. BOLT LENGTHS, BAR LENGTHS) THEN IT SHALL BE DEEMED AND UNDERSTOOD TO BE INCLUDED IN THE BID/PROPOSAL. THESE DOCUMENTS ARE MEANT AS A GUIDE AND ALL ITEMS REASONABLY INFERRED SHALL BE DEEMED TO BE INCLUDED.
25. THESE CONTRACT DOCUMENTS AND SPECIFICATIONS SHALL NOT BE CONSTRUED TO CREATE A CONTRACTUAL RELATIONSHIP OF ANY KIND BETWEEN THE ARCHITECT AND THE CONTRACTOR.
26. CONTRACTOR & ANY SUBCONTRACTORS TO MAINTAIN KEEPING THE ROAD ACCESS GATE LOCKED AT ALL TIMES.
27. IN RAWLAND CONDITIONS, TOWER FOUNDATION STRUCTURAL STEEL TO BE GROUNDED PRIOR TO CONCRETE POUR. TOWER FOUNDATION STRUCTURAL STEEL TO BE CONNECTED TO PERMANENT GROUND ROD PRIOR TO TOWER ERECTION. TOWER GROUND MUST BE MAINTAINED AT ALL TIMES.

LINE/ANTENNA NOTES

1. ALL THREADED STRUCTURAL FASTENERS FOR ANTENNA SUPPORT ASSEMBLES SHALL CONFORM TO ASTM A307 OR ASTM A36. ALL STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8" MIN. DIA. BEARING TYPE CONNECTIONS WITH THREADS EXCLUDED FROM THE PLANE. ALL EXPOSED FASTENERS, NUTS, AND WASHERS SHALL BE GALVANIZED OTHERWISE NOTED. CONCRETE EXPANSION ANCHORS SHALL BE HILTI KWIK BOLTS UNLESS OTHER WISED NOTED. ALL ANCHORS INTO CONCRETE SHALL BE STAINLESS STEEL.
2. THE CONTRACTOR SHALL FURNISH ALL CONNECTION HARDWARE REQUIRED TO SECURE THE CABLES. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
3. NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY NORTH AND NOTIFY CONSULTANT OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.
4. PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
5. THOROUGHLY REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND CONNECTIONS.
6. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. ALL BENDS TO BE A MIN. OF 8" RADIUS
7. FOR GROUNDING TO BUILDING FRAME & HATCH PLATE GROUND BARS. USE A TWO-BOLT HOLE NEMA DRILLED CONNECTOR SUCH AS T&B 32007 OR APPROVED EQUAL
8. FOR ALL EXTERNAL GROUND CONNECTIONS, CLAMPS & CADWELDS, APPLY A LIBERAL PROTECTIVE COATING OR AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORN CHEMICAL COMPANY.
9. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY THERMO-WELDING. USE ERICO T-319 GALVANIZING BAR/COLD GALVANIZING PAINT.
10. SEAL ALL CONDUIT PENETRATIONS INTO MODULAR BUILDING WITH A SILICONE SEALANT AND ALL CONDUIT OPENINGS.
11. ALL COAXIAL CABLE WILL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE AT DISTANCES NOT TO EXCEED 3' OR THE CABLE MANUFACTURES SPECIFICATIONS WHICHEVER IS LESS, WITH HARDWARE SPECIFIED IN THE COAXIAL CABLE ROUTING DETAILS OF THE SUPPLIED STRUCTURAL REPORT.
12. THE COAXIAL ANTENNA CABLE INSTALLER SHALL BE RESPONSIBLE FOR PERFORMING AND SUPPLYING THREE (3) TYPEWRITTEN SWEEP TESTS (ANTENNA RETURN LOSS TEST). THIS TEST SHALL BE PERFORMED TO THE SPECIFICATIONS AND PARAMETERS OUTLINED BY THE VERIZON WIRELESS RADIO FREQUENCY THRU ENGINEER. THIS TEST SHALL BE PERFORMED PRIOR TO FINAL ACCEPTANCE OF THE SITE. (1) COPY TO BE PLACED IN SHELTER.
13. THE COAXIAL ANTENNA CABLE INSTALLER SHALL BE RESPONSIBLE FOR PERFORMING AND SUPPLYING VERIZON WIRELESS WITH THREE TYPE WRITTEN TIME DOMAIN REFLECTOMETER TESTS TO VERIFY CABLE LENGTH AND TO CHECK FOR WATER DAMAGE.
14. VAPOR WRAP WILL BE USED TO SEAL ALL CONNECTIONS.
15. ALL JUMPERS TO THE ANTENNAS FROM THE MAIN TRANSMISSION LINE WILL BE 1/2" DIA, AND SHALL NOT EXCEED 6'-0"
16. ALL MAIN TRANSMISSION CABLE WILL BE TERMINATED AT A VERIZON WIRELESS POLYPHASER PROTECTOR LOCATED WITHIN 1'-0" OF THE EQUIPMENT SHELTER.
17. ANTENNA CABLE LENGTHS HAVE BEEN DETERMINED BASED ON THESE PLANS, CABLE LENGTHS LISTED ARE APPROXIMATED AND ARE NOT INTENDED TO BE USED FOR FABRICATION DUE TO FIELD CONDITIONS ACTUAL CABLE LENGTHS REQUIRE. CONTRACTOR MUST FIELD VERIFY ANTENNA CABLE LENGTHS PRIOR TO ORDER.
18. ALL MAIN CABLES WILL BE COLOR CODED AT FOUR LOCATIONS: A) AT ANTENNA PRIOR TO JUMPER, B) AT THE BOTTOM OF THE TOWER, C) EXTERIOR PART OF THE WAVE GUIDE ENTRY PORT (AT THE SHELTER/CABINET WALL), D) INTERIOR OF THE SHELTER/CABINET.
19. ALL MAIN CABLES WILL BE GROUNDED AT: A) AT THE ANTENNA MOUNTING PIPE, B) MIDDLE OF THE CABLE RUN IF OVER 200', C) PRIOR TO ENTERING EQUIPMENT SHELTER/CABINET (WITHIN 1' OF ENTRY).
20. PROVIDE AT LEAST 6" OF SLACK IN THE MAIN COAXIAL CABLES AT THE TOWER TOP TO PROVIDE FOR FUTURE CONNECTOR REPLACEMENT.
21. PROVIDE A CABLE DRIP LOOP AT THE BOTTOM OF THE TOWER BELOW THE TOWER BOTTOM GROUND CONNECTIONS AND AS THE CABLE TRANSITIONS TO THE SHELTER/CABINET.
22. ANTENNAS AND COAX TO BE PROVIDED BY **VERIZON WIRELESS**, CONTRACTOR TO COORDINATE DELIVERY.

PROJECT INFORMATION

1. THIS IS AN UNMANNED FACILITY AND RESTRICTED ACCESS EQUIPMENT AND WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNALS FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
2. **VERIZON WIRELESS** CERTIFIES THAT THIS TELEPHONE EQUIPMENT FACILITY WILL BE SERVICED ONLY BY **VERIZON WIRELESS** EMPLOYEE SERVICE PERSONNEL FOR REPAIR PURPOSES ONLY. THIS FACILITY IS UNOCCUPIED AND NOT DESIGNED FOR HUMAN OCCUPANCY THUS IT IS NOT OPEN TO THE PUBLIC.
3. THIS FACILITY WILL CONSUME NO UNRECOVERABLE ENERGY.
4. NO POTABLE WATER SUPPLY IS TO BE PROVIDED AT THIS LOCATION.
5. NO WASTE WATER WILL BE GENERATED AT THIS LOCATION.
6. NO SOLID WASTE WILL BE GENERATED AT THIS LOCATION.
7. **VERIZON WIRELESS** MAINTENANCE CREW (TYPICALLY ONE PERSON) WILL MAKE AN AVERAGE OF ONE TRIP PER MONTH AT ONE HOUR PER VISIT.

ABBREVIATIONS

AGL	ABOVE GROUND LEVEL
A/C	AIR CONDITIONING
APPROX	APPROXIMATELY
AZ	AZIMUTH
BLDG	BUILDING
BLK	BLOCKING
CLG	CEILING
℄	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DBL	DOUBLE
DN	DOWN
DWG	DRAWING
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
(E)	EXISTING
EXT	EXTERIOR
FIN	FINISH
FLR	FLOOR
FLUOR	FLUORESCENT
FT	FOOT
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GRND	GROUND
GYP BD	GYPSUM WALL BOARD
HT	HEIGHT
HVAC	HEATING VENTILATION AIR CONDITIONING
HORZ	HORIZONTAL
HR	HOUR
IN	INCH
INFO	INFORMATION
ID	INSIDE DIAMETER
INSUL	INSULATION
INT	INTERIOR
IBC	INTERNATIONAL BUILDING CODE
LBS	POUNDS
MGR	MANAGER
MFR	MANUFACTURER
MAX	MAXIMUM
MECH	MECHANICAL
MTL	METAL
MIN	MINIMUM
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PLYWD	PLYWOOD
PT	PRESSURE TREATED
PROJ	PROJECT
PROP	PROPERTY
(P)	PROPOSED
QTY	QUANTITY
REQ	REQUIRED
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
SF	SQUARE FOOT
SS	STAINLESS STEEL
STL	STEEL
STRUCT	STRUCTURAL
STD	STUD
SUSP	SUSPENDED
THRU	THROUGH
TNNG	TINNED
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
VERT	VERTICAL
WP	WATER PROOF
W/	WITH
W/O	WITHOUT

—— UGP —— UG POWER CONDUIT

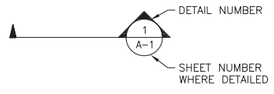
—— UGT —— UG TELCO CONDUIT

IMPORTANT NOTICE

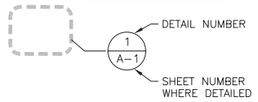
THE EXISTING CONDITIONS REPRESENTED HEREIN ARE BASED ON VISUAL OBSERVATIONS AND INFORMATION PROVIDED BY OTHERS. MORRISON HERSHFIELD CORPORATION CANNOT GUARANTEE THE CORRECTNESS NOR COMPLETENESS OF THE EXISTING CONDITIONS SHOWN AND ASSUMES NO RESPONSIBILITY THEREOF. CONTRACTOR AND HIS SUB-CONTRACTORS SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AS REQUIRED FOR PROPER EXECUTION OF PROJECT. REPORT ANY CONFLICTS OR DISCREPANCIES TO THE CONSULTANT PRIOR TO CONSTRUCTION.

LEGEND

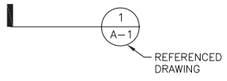
BUILDING/WALL/DETAIL SECTION



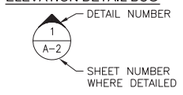
LARGE SCALE DETAIL



REFERENCE



ELEVATION DETAIL BUG



REGISTERED ARCHITECT
ROBERT J. LARA
License # 5897
LANTANA ON, FL
STATE OF OREGON
Feb 17 2017

ROBERT JERRY LARA
REGISTERED ARCHITECT
STATE OF OREGON
5897

ZONING

0	02/17/17	ISSUED FOR PERMIT
A	12/19/16	ISSUED FOR REVIEW
No.	Date	Revision

Client:

verizon

Implementation Team:

BLACK ROCK

A&E Team:

MORRISON HERSHFIELD
600 STEWART ST, SUITE 200
SEATTLE, WA 98101
Tel: 206.268.7370
www.morrisonhershfield.com

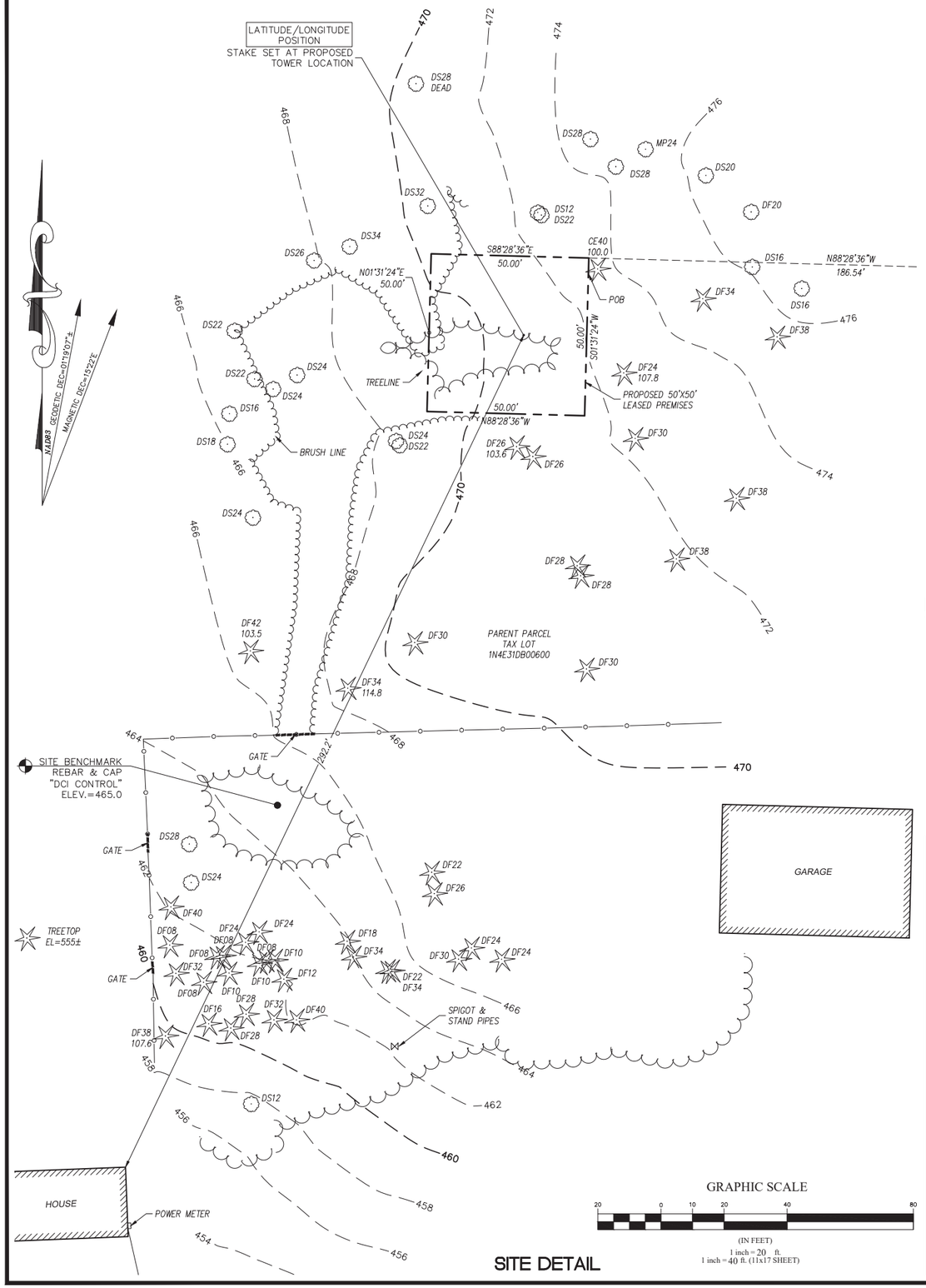
Project Info:

POR
STINGER
29421 E WOODARD RD
TROUTDALE, OR 97060

Drawing Title:

GENERAL NOTES AND SYMBOLS

Project Number: 7160107	Start Date: 12/13/16
Drafter: JA	Designer: SV
Project Manager: RKL	Professional of Record: RL
Revision No: 0	Sheet No: T-2



LATITUDE/LONGITUDE POSITION

COORDINATE DATA AT CENTER OF PROPOSED MONOPOLE:
NAD 83
LAT – 45°31'31.51" N NAVD 88
LONG – 122°21'33.95" W ELEV.= 470.8 FEET

NAVD 88

BENCHMARK IS "JIME"
NGS GPS CORS STATION.
ELEV = 250.1

ELEVATION DERIVED USING GPS. ACCURACY MEETS OR EXCEEDS 1A STANDARDS AS DEFINED ON THE FAA ASAC INFORMATION SHEET 91:003.

NOTES

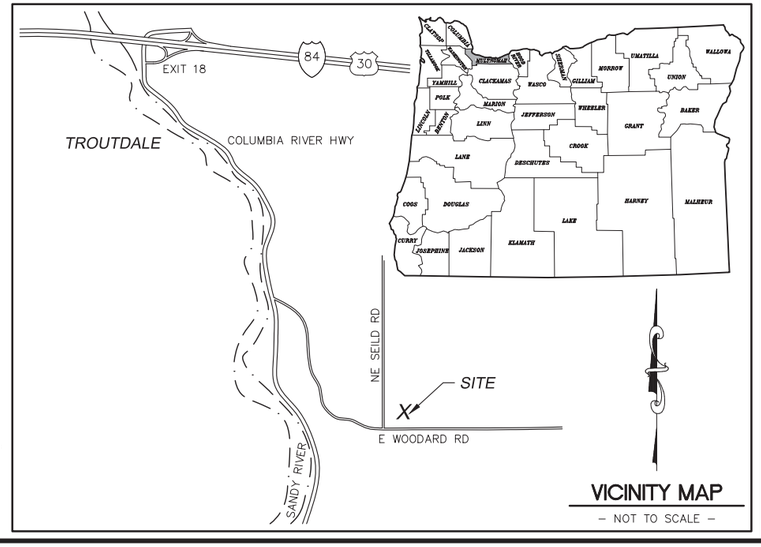
1) TITLE ISSUED BY FIDELITY NATIONAL TITLE COMPANY OF OREGON, ORDER NO. 4514635883, EFFECTIVE DATE NOVEMBER 21, 2016.
2) FIELD WORK CONDUCTED IN DECEMBER, 2016.
3) BASIS OF BEARING: OREGON COORDINATE SYSTEM, NORTH ZONE (NAD83).
4) UNDERGROUND UTILITIES SHOWN HEREON, IF ANY, WERE DELINEATED FROM SURFACE EVIDENCE AND/OR UTILITY COMPANY RECORDS. CRITICAL LOCATIONS SHOULD BE VERIFIED PRIOR TO DESIGN AND CONSTRUCTION.
5) FEMA DESIGNATION: ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, PANEL 238 OF 550, FIRM MAP NUMBER 41051C0238H, EFFECTIVE DATE DECEMBER 18, 2009.

LEASED PREMISES LEGAL DESCRIPTION

THAT PORTION OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 31, TOWNSHIP 1 NORTH, RANGE 4 EAST OF THE WILLAMETTE MERIDIAN, IN THE COUNTY OF MULTNOMAH AND STATE OF OREGON, DESCRIBED AS FOLLOWS:

COMMENCING AT A FOUND IRON PIPE LOCATED AT THE MOST SOUTHERLY SOUTHEAST CORNER OF PARCEL "A" PER SURVEY RECORDING NUMBER 40822, RECORDS OF MULTNOMAH COUNTY, SAID POINT ALSO BEING THE NORTHERLY MARGIN OF EAST WOODARD ROAD;
THENCE ALONG SAID NORTHERLY MARGIN, SOUTH 89°32'16" EAST 292.04 FEET TO A FOUND IRON PIPE;
THENCE NORTH 01°31'24" EAST 585.53 FEET TO THE EASTERLY MOST SOUTHEAST CORNER OF SAID PARCEL "A";
THENCE CONTINUING ALONG THE EAST LINE OF SAID PARCEL "A", NORTH 01°31'24" EAST 419.96 FEET;
THENCE NORTH 88°28'36" WEST 186.54 FEET TO THE POINT OF BEGINNING;
THENCE SOUTH 01°31'24" WEST 50.00 FEET;
THENCE NORTH 88°28'36" WEST 50.00 FEET;
THENCE NORTH 01°31'24" EAST 50.00 FEET;
THENCE SOUTH 88°28'36" EAST 50.00 FEET TO THE POINT OF BEGINNING;

CONTAINING 2,500 SQUARE FEET, MORE OR LESS.



VICINITY MAP
– NOT TO SCALE –

LEGEND

- SUBJECT BOUNDARY LINE
- RIGHT–OF–WAY CENTERLINE
- RIGHT–OF–WAY LINE
- ADJACENT BOUNDARY LINE
- SECTIONAL BREAKDOWN LINE
- OP OVERHEAD POWER LINE
- UP BURIED POWER LINE
- G BURIED GAS LINE
- OT OVERHEAD TELEPHONE LINE
- UT BURIED TELEPHONE LINE
- W BURIED WATER LINE
- SS BURIED SANITARY SEWER
- SD BURIED STORM DRAIN
- DITCH LINE/FLOW LINE
- ROCK RETAINING WALL
- VEGETATION LINE
- CHAIN LINK FENCE
- WOOD FENCE
- BARBED WIRE/WIRE FENCE

TRANSFORMER	FIRE HYDRANT
LIGHT STANDARD	GATE VALVE
POWER VAULT	WATER METER
UTILITY BOX	FIRE STAND PIPE
UTILITY POLE	IRRIGATION CONTROL
POLE GUY WIRE	CATCH BASIN, TYPE I
GAS VALVE	CATCH BASIN, TYPE II
GAS METER	SIGN
TELEPHONE VAULT	BOLLARD
TEL. MANHOLE	MAIL BOX
TELEPHONE RISER	234.21 SPOT ELEVATION

NOTE:
1) ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL) AND ARE REFERENCED TO THE NAVD88 DATUM.
2) ALL TOWER, TREE AND APPURTENANCE HEIGHTS ARE ABOVE GROUND LEVEL (AGL) AND ARE ACCURATE TO ± 0.5 FEET OR ± 1% OF TOTAL HEIGHT, WHICHEVER IS GREATER.

TREE LEGEND

DECIDUOUS TREE
AL12 ← TRUNK DIAMETER (IN)
TYPE

EVERGREEN TREE
DF18 195.2
HEIGHT AGL IF MEASURED

AL=ALDER
MP=MAPLE
DS=DECIDUOUS
MA=MADRONA
OK=OAK
CH=CHERRY

CE=CEDAR
DF=DOUGLAS FIR
HE=HEMLOCK
PI=PINE
EVG=EVERGREEN

NOTE:
TREE DRIP LINES ARE NOT TO SCALE. TREE SYMBOLS REFERENCE TRUNK LOCATION ONLY. TRUNK DIAMETERS WERE APPROXIMATED AT 3.5' TO 4' ABOVE GROUND LEVEL. TREES SHOWN ARE FOR REFERENCE ONLY AND OTHER TREES AND VEGETATION MAY EXIST.

SITE INFORMATION

TAX LOT NUMBER	1N4E31DB00600
SITE ADDRESS	29421 E WOODARD ROAD TROUTDALE, OR 97060
SITE CONTACT	CLIFF HEGSTAD
PHONE NUMBER	503–484–8927
ZONING	MUA (MULTNOMAH COUNTY)
TOTAL LOT AREA	358,007± S.F. (8.22 AC.)–TL 600 102,610± S.F. (2.36 AC.)–TL 500
PROJECT AREA	2,500 S.F.

SURVEY REFERENCE

1. SURVEY, RECORDING NO. 9950, RECORDS OF MULTNOMAH COUNTY.
2. SURVEY, RECORDING NO. 40822, RECORDS OF MULTNOMAH COUNTY.

BOUNDARY DISCLAIMER

THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY. SUBJECT AND ADJACENT PROPERTY LINES ARE DEPICTED USING FIELD–FOUND EVIDENCE AND RECORD INFORMATION.

CAUTION!

UNDERGROUND UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY BE INCOMPLETE. STATE LAW REQUIRES THAT CONTRACTOR CONTACT THE ONE–CALL UTILITY LOCATE SERVICE AT LEAST 48 HOURS BEFORE STARTING ANY CONSTRUCTION.

1-800-424-5555

verizon

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DUNCANSON
Company, Inc.
145 SW 155th Street, Suite 102
Seattle, Washington 98166
Phone 206.244.4141
Fax 206.244.4455

SITE
POR STINGER
29421 E WOODARD ROAD
TROUTDALE, OR 97060
MULTNOMAH COUNTY

FLD. CREW:	CR/NR
FLD. BOOK:	428/89
DRAWN BY:	RLP
JOB #:	99544.1430
DATE:	12/13/16

REVISIONS

DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL LAND SURVEYOR
DEC 13, 2016
OREGON
MAY 10, 2011
JONATHAN MARLO BECKER
84870
RENEWS: 12/31/2017

SHEET TITLE
EXISTING SITE SURVEY
SEC 31, TWP 1 N, RNG 4 E, WM

SHEET NUMBER
SV1

EASEMENTS

(#) CORRESPONDS WITH ITEM NUMBER IN 'SCHEDULE B' OF TITLE REPORT.

THE FOLLOWING EASEMENTS FROM THE REFERENCED TITLE REPORT CONTAIN SUFFICIENT INFORMATION TO BE DEPICTED ON THE PLAN. OTHER EASEMENTS OR ENCUMBRANCES, IF ANY, MAY AFFECT THE PROPERTY, BUT LACK SUFFICIENT INFORMATION TO BE SHOWN.

(3) BLANKET EASEMENT FOR RIGHT OF WAY, CANALS OR DITCHES FOR MINING OR IRRIGATION, RECORDED IN BOOK 2139, PAGE 531 – DOCUMENT CONTAINS INSUFFICIENT INFORMATION TO LOCATE HEREON, NOT SHOWN.

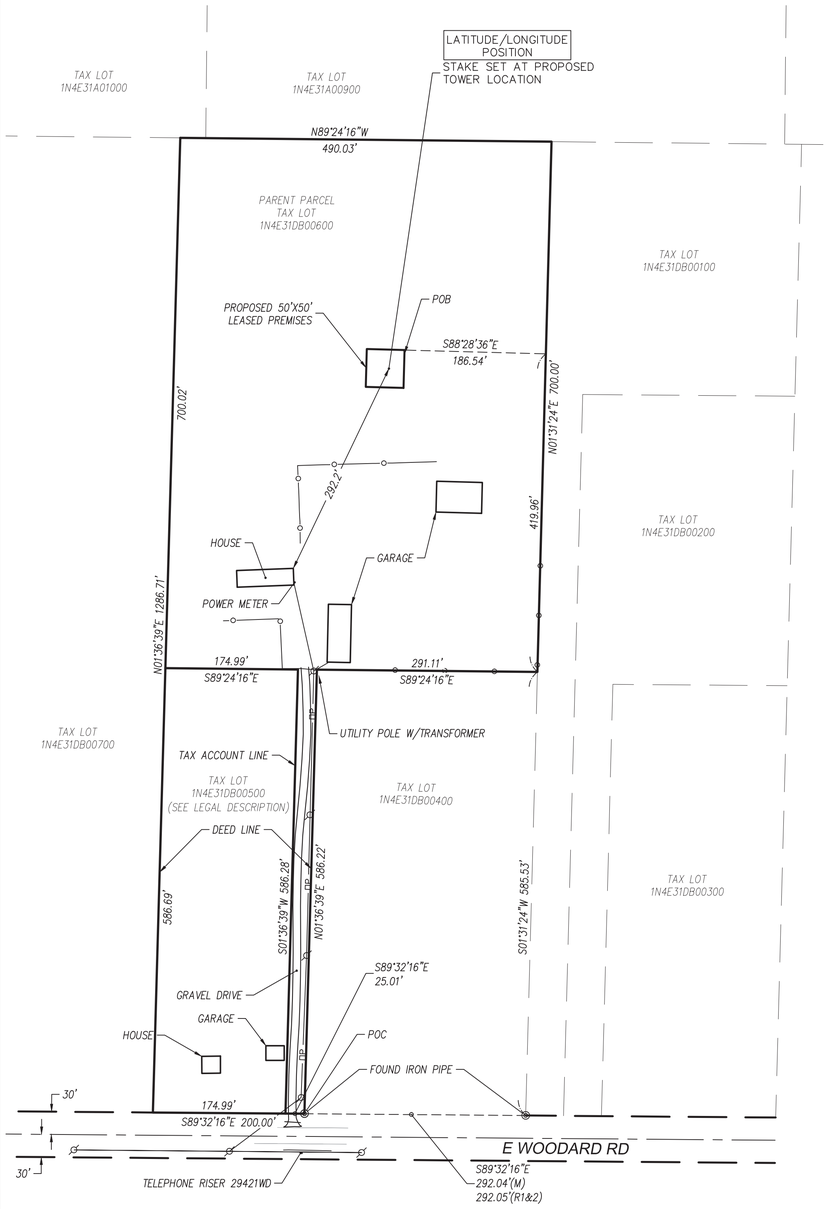
PARENT PARCEL LEGAL DESCRIPTION

TRACT IN SECTION 31, TOWNSHIP 1 NORTH, RANGE 4 EAST OF THE WILLAMETTE MERIDIAN, IN THE COUNTY OF MULTNOMAH AND STATE OF OREGON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF THE WEST 15 ACRES OF THE NORTHWEST ONE–QUARTER OF THE SOUTHEAST ONE–QUARTER OF SECTION 31, SAID TOWNSHIP AND RANGE, SAID POINT BEING SOUTH 89°20'00" WEST 2132.13 FEET AND SOUTH 0°20'55" WEST 1316.67 FEET FROM THE EAST ONE–QUARTER CORNER OF SAID SECTION 31 AND RUNNING THENCE NORTH 0°20'55" EAST ALONG THE EAST LINE OF THE SAID 15 ACRE TRACT, 1316.67 FEET TO THE NORTHEAST CORNER OF SAID TRACT; THENCE NORTH 89°20'00" EAST 490.03 FEET TO THE NORTHWEST CORNER OF THE PROPERTY DESCRIBED IN THE DEED RECORDED IN BOOK 315, PAGE 113, MULTNOMAH COUNTY RECORDS OF DEEDS; THENCE SOUTH 0°15'40" WEST ALONG THE WEST LINE OF THE LAST MENTIONED PROPERTY, 700 FEET; THENCE SOUTH 89°20'00" WEST 291.11 FEET; THENCE SOUTH 0°20'55" WEST 616.23 FEET TO THE SOUTH LINE OF THE NORTHWEST ONE–QUARTER OF THE SOUTHEAST ONE–QUARTER OF SAID SECTION 31; THENCE SOUTH 89°12'00" WEST ALONG SAID SOUTH LINE 200 FEET TO THE POINT OF BEGINNING.**

NOTE:
PROVIDED LEGAL DESCRIPTION DESCRIBES BOTH TAX LOT NUMBERS 1N4E31DB00600 & 1N4E31DB00500 AND THE PUBLIC RIGHT OF WAY OF WOODARD ROAD.

** EXCEPTING THAT PORTION LYING WITHIN THE RIGHT OF WAY OF WOODARD ROAD (PER VESTING DEED REC. #2016098955)



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
1 inch = 40 ft. (11x17 SHEET)

SITE DETAIL

LATITUDE/LONGITUDE POSITION

COORDINATE DATA AT CENTER OF PROPOSED MONOPOLE:
NAD 83
LAT – 45°31'31.51" N NAVD 88
LONG – 122°21'33.95" W ELEV.= 470.8 FEET

BENCHMARK IS "JIME"
NGS GPS CORS STATION.
ELEV = 250.1

ELEVATION DERIVED USING GPS. ACCURACY MEETS OR EXCEEDS 1A STANDARDS AS DEFINED ON THE FAA ASAC INFORMATION SHEET 91:003.

NOTES

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5) FEMA DESIGNATION: ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, PANEL 238 OF 550, FIRM MAP NUMBER 41051C0238H, EFFECTIVE DATE DECEMBER 18, 2009.

LEGEND

- SUBJECT BOUNDARY LINE
- RIGHT–OF–WAY CENTERLINE
- RIGHT–OF–WAY LINE
- ADJACENT BOUNDARY LINE
- SECTIONAL BREAKDOWN LINE
- OHP OVERHEAD POWER LINE
- UP BURIED POWER LINE
- G BURIED GAS LINE
- OT OVERHEAD TELEPHONE LINE
- UT BURIED TELEPHONE LINE
- W BURIED WATER LINE
- SS BURIED SANITARY SEWER
- SD BURIED STORM DRAIN
- DITCH LINE/FLOW LINE
- ROCK RETAINING WALL
- VEGETATION LINE
- CHAIN LINK FENCE
- WOOD FENCE
- BARBED WIRE/WIRE FENCE

TRANSFORMER	FIRE HYDRANT
LIGHT STANDARD	GATE VALVE
POWER VAULT	WATER METER
UTILITY BOX	FIRE STAND PIPE
UTILITY POLE	IRRIGATION CONTROL
POLE GUY WIRE	CATCH BASIN, TYPE I
GAS VALVE	CATCH BASIN, TYPE II
GAS METER	SIGN
TELEPHONE VAULT	BOLLARD
TEL. MANHOLE	MAIL BOX
TELEPHONE RISER	234.21 SPOT ELEVATION

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TREE LEGEND

DECIDUOUS TREE
AL12 ← TRUNK DIAMETER (IN)
TYPE

AL=ALDER
MP=MAPLE
DS=DECIDUOUS
MA=MADRONA
OK=OAK
CH=CHERRY

EVERGREEN TREE
DF18
195.2
HEIGHT AGL IF MEASURED

CE=CEDAR
DF=DOUGLAS FIR
HE=HEMLOCK
PI=PINE
EVG=EVERGREEN

NOTE:
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SITE INFORMATION

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SITE ADDRESS	29421 E WOODARD ROAD TROUTDALE, OR 97060
SITE CONTACT	CLIFF HEGSTAD
PHONE NUMBER	503–484–8927
ZONING	MUA (MULTNOMAH COUNTY)
TOTAL LOT AREA	358,007± S.F. (8.22 AC.)–TL 600 102,610± S.F. (2.36 AC.)–TL 500
PROJECT AREA	2,500 S.F.

SURVEY REFERENCE

1. SURVEY, RECORDING NO. 9950, RECORDS OF MULTNOMAH COUNTY.
2. SURVEY, RECORDING NO. 40822, RECORDS OF MULTNOMAH COUNTY.

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1-800-424-5555

verizon

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SITE
POR STINGER
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MULTNOMAH COUNTY

FLD. CREW:	CR/NR
FLD. BOOK:	428/89
DRAWN BY:	RLP
JOB #:	99544.1430
DATE:	12/13/16

REVISIONS

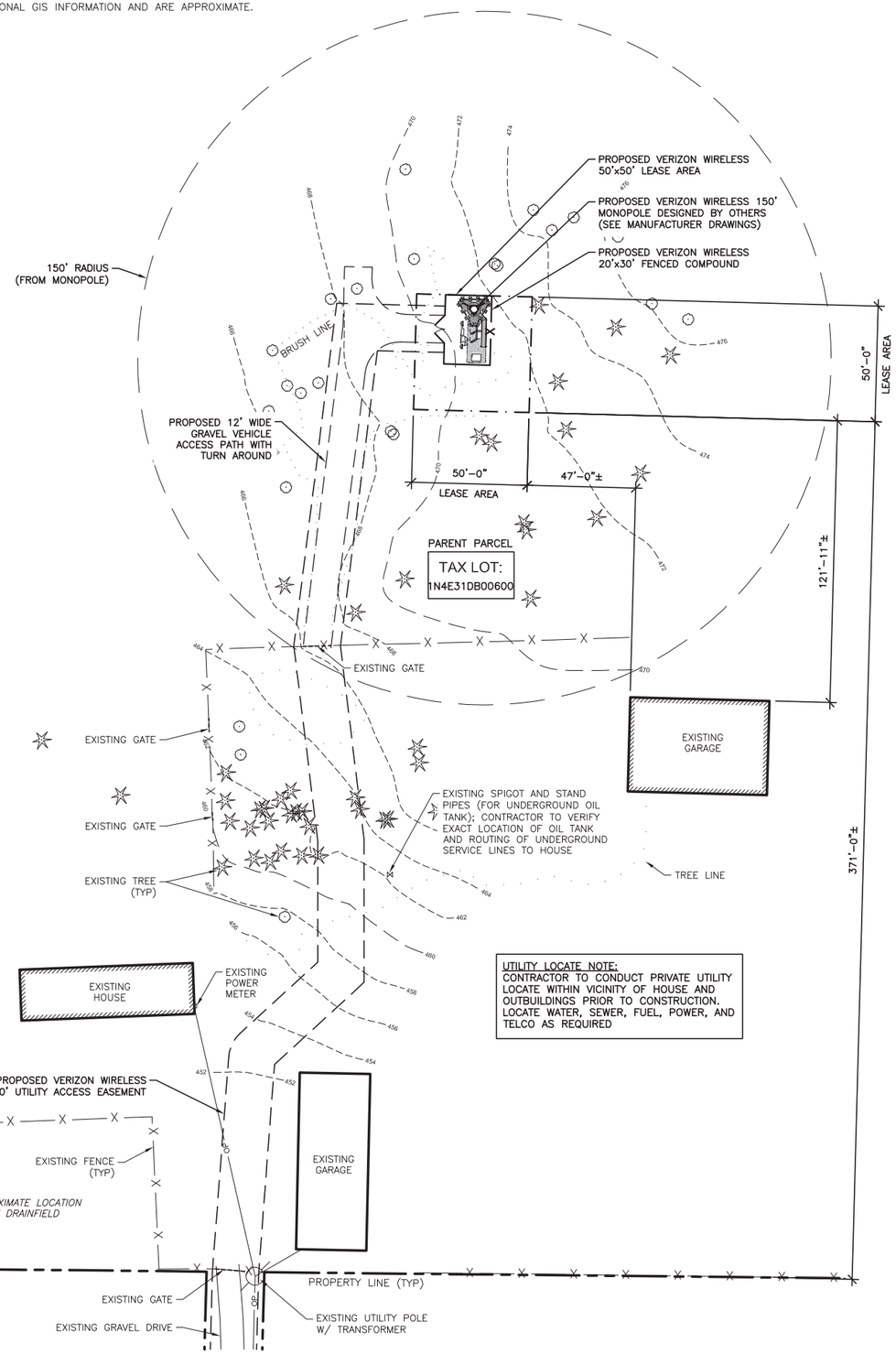
DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL LAND SURVEYOR
DEC 13, 2016
OREGON
MAY 10, 2011
JONATHAN MARLO BECKER
84870
RENEWS: 12/31/2017

SHEET TITLE
EXISTING SITE SURVEY
SEC 31, TWP 1 N, RNG 4 E, WM

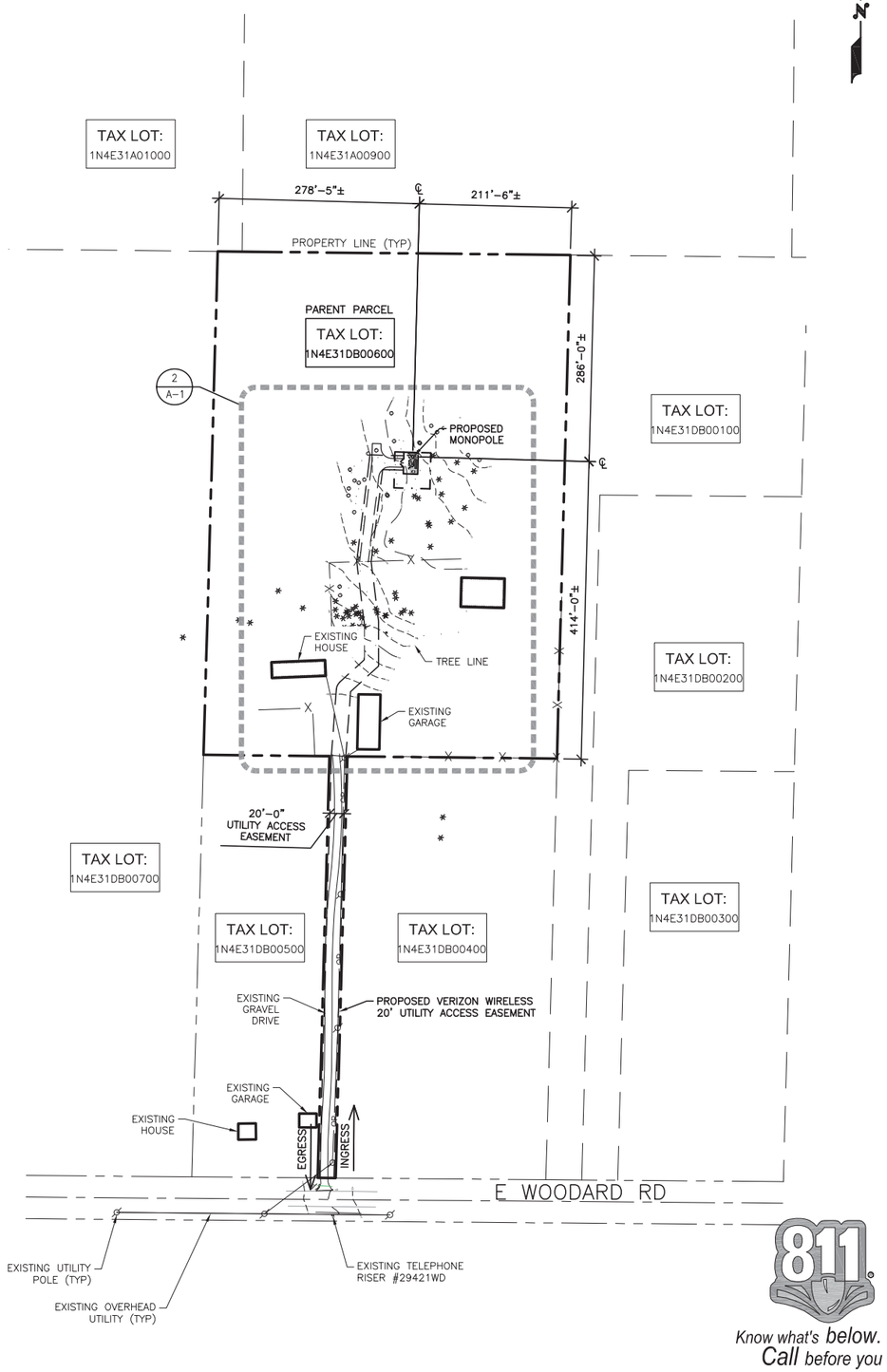
SHEET NUMBER
SV2

NOTE:
THIS IS NOT A SURVEY. ALL INFORMATION AND TRUE NORTH HAVE BEEN OBTAINED FROM EXISTING DRAWINGS AND JURISDICTIONAL GIS INFORMATION AND ARE APPROXIMATE.



24"x36" SCALE: 1" = 30'-0"
11"x17" SCALE: 1" = 60'-0"
30' 15' 0" 30'

ENLARGED SITE PLAN | 2



24"x36" SCALE: 1" = 100'-0"
11"x17" SCALE: 1" = 200'-0"
100' 50' 0" 100'

SITE PLAN | 1

811 Know what's below. Call before you dig.

DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ADVISE CONSULTANTS OF ANY ERRORS OR OMISSIONS. NO VARIATIONS OR MODIFICATIONS TO WORK SHOWN SHALL BE IMPLEMENTED WITHOUT PRIOR WRITTEN APPROVAL. ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED BY THE LATEST REVISION. ALL DRAWINGS AND SPECIFICATIONS REMAIN THE PROPERTY OF MORRISON HERSHFIELD CORPORATION. NEITHER MORRISON HERSHFIELD NOR THE ARCHITECT WILL BE PROVIDING CONSTRUCTION REVIEW OF THIS PROJECT.

REGISTERED ARCHITECT
ROBERT J. LARA
License # 5897
PLANTATION, FL
STATE OF OREGON
Feb 17 2017
ROBERT JERRY LARA
REGISTERED ARCHITECT
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5897

ZONING

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A	12/19/16	ISSUED FOR REVIEW
No.	Date	Revision

Client:
verizon

Implementation Team:
BLACK ROCK

A&E Team:
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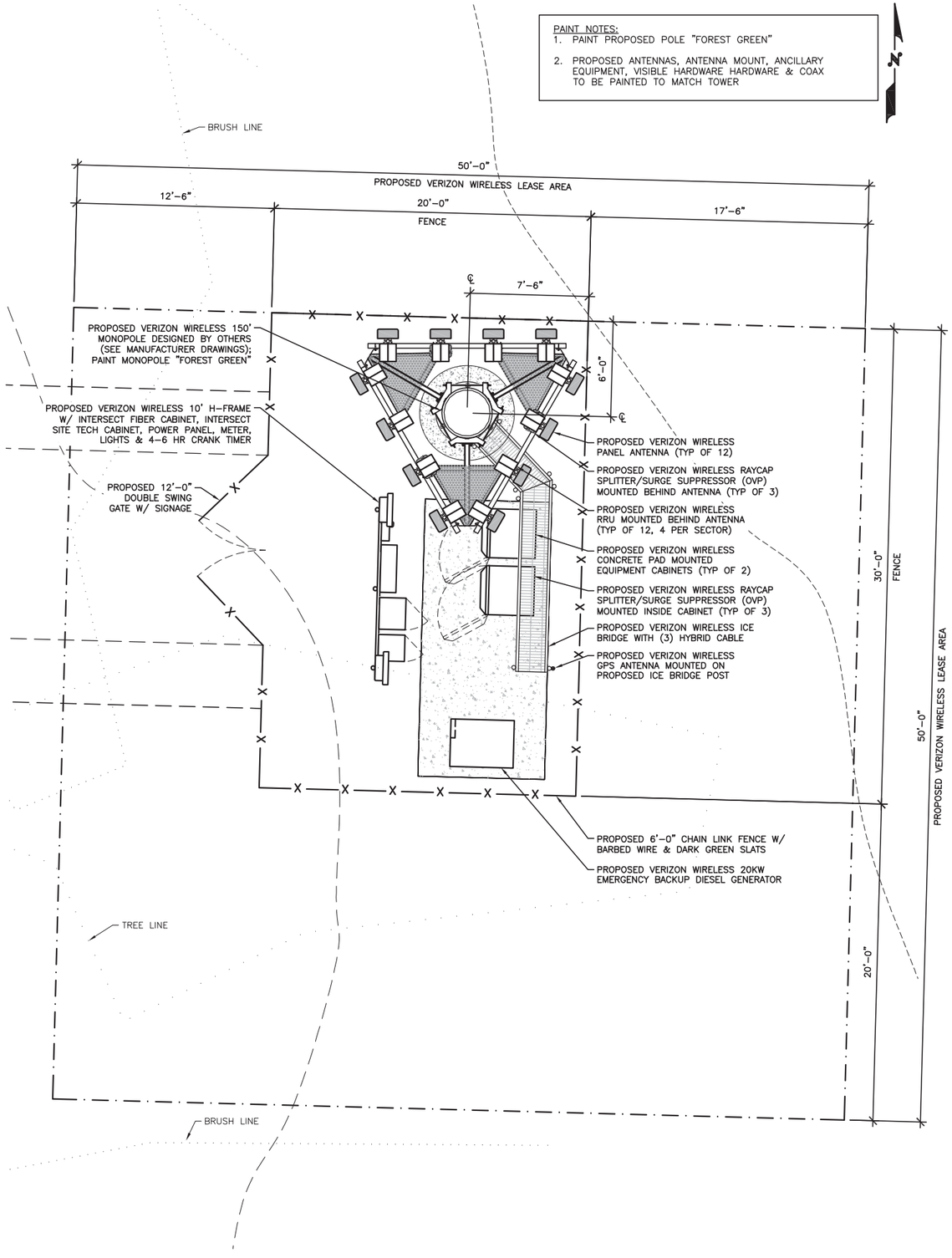
600 STEWART ST, SUITE 200
SEATTLE, WA 98101
Tel: 206.268.7370
www.morrisonhershfield.com

Project Info:
POR
STINGER
29421 E WOODARD RD
TROUTDALE, OR 97060

Drawing Title:
SITE PLAN

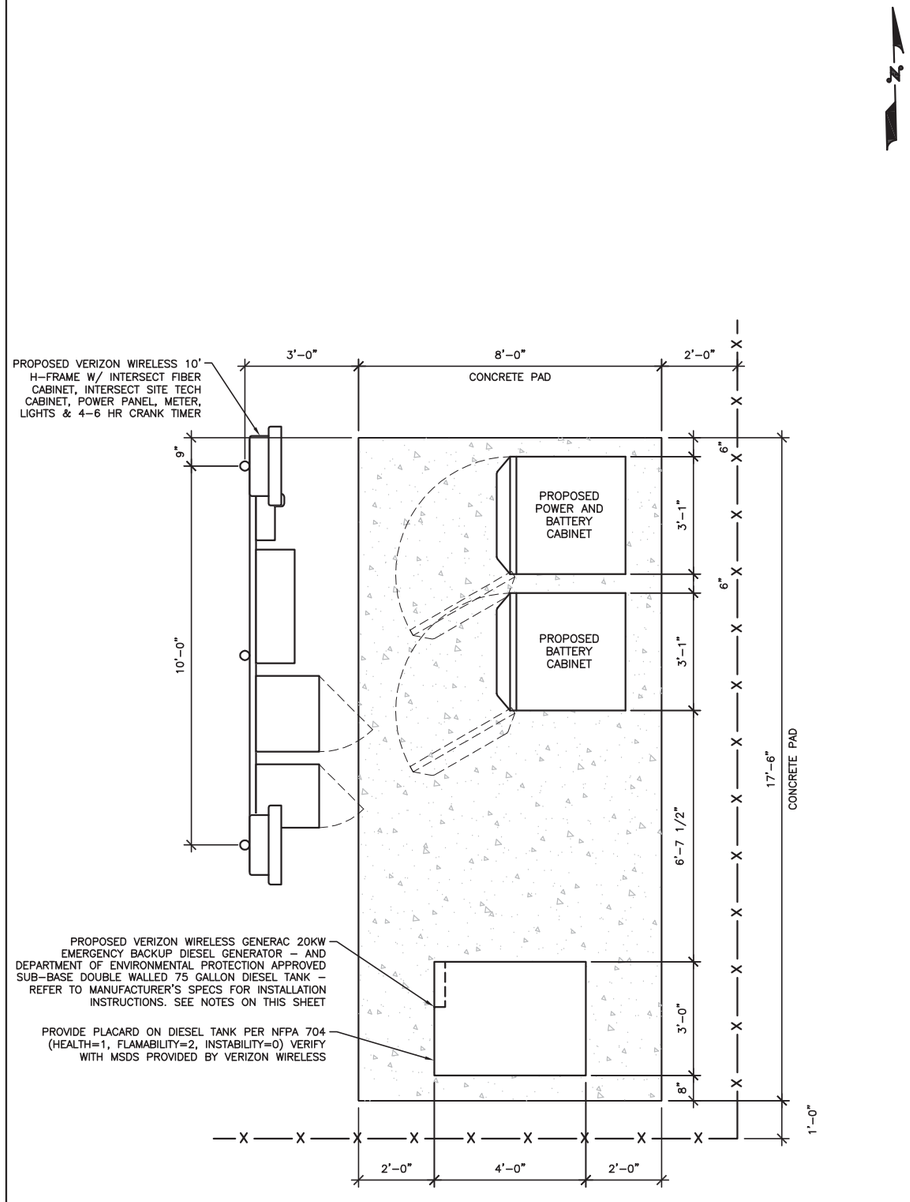
Project Number: 7160107	Start Date: 12/13/16
Drafter: JA	Designer: SV
Project Manager: RKL	Professional of Record: RL
Revision No: 0	Sheet No: A-1

PAINT NOTES:
1. PAINT PROPOSED POLE "FOREST GREEN"
2. PROPOSED ANTENNAS, ANTENNA MOUNT, ANCILLARY EQUIPMENT, VISIBLE HARDWARE HARDWARE & COAX TO BE PAINTED TO MATCH TOWER



24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0" 4'

PROPOSED COMPOUND PLAN | 2



NFPA NOTES:

1. CONSTRUCTION, INSTALLATION, MAINTENANCE, & OPERATIONAL TESTING OF EPSS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF NFPA 110.
2. ALL ELECTRICAL WORK SHALL COMPLY WITH LATEST ADOPTED EDITION OF NFPA 70 - NATIONAL ELECTRICAL CODE.

FUEL TANK NOTE:

CONTRACTOR SHALL SUPPLY AND INSTALL THE FOLLOWING ITEMS IF NOT SUPPLIED WITH TANK.

INSTALL 12' VENT PIPES FOR TANK AS REQUIRED BY JURISDICTION.

THE TANK SHALL BE MANUFACTURED WITH THE FOLLOWING: INTERSTITIAL ELECTRONICALLY MONITORED RUPTURE BASIN ALARM TO MONITOR THE SPACE BETWEEN THE PRIMARY AND SECONDARY TANK. OVERFILL ALERT TO VISUALLY WARN WHEN THE TANK IS FILLED UPON CAPACITY. OVERSPILL CONTAINMENT AT FILL PORT TO PREVENT SPILL OF FUEL DURING FILLING OPERATIONS. 2.5 GALLON OVERSPILL CONTAINMENT W/ LOCKABLE CAP.

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"
2' 1' 0" 2'

PROPOSED EQUIPMENT PLAN | 1

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PLANTATION, FL
STATE OF OREGON
Feb 17 2017

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SEATTLE, WA 98101
Tel: 206.268.7370
www.morrisonhershfield.com

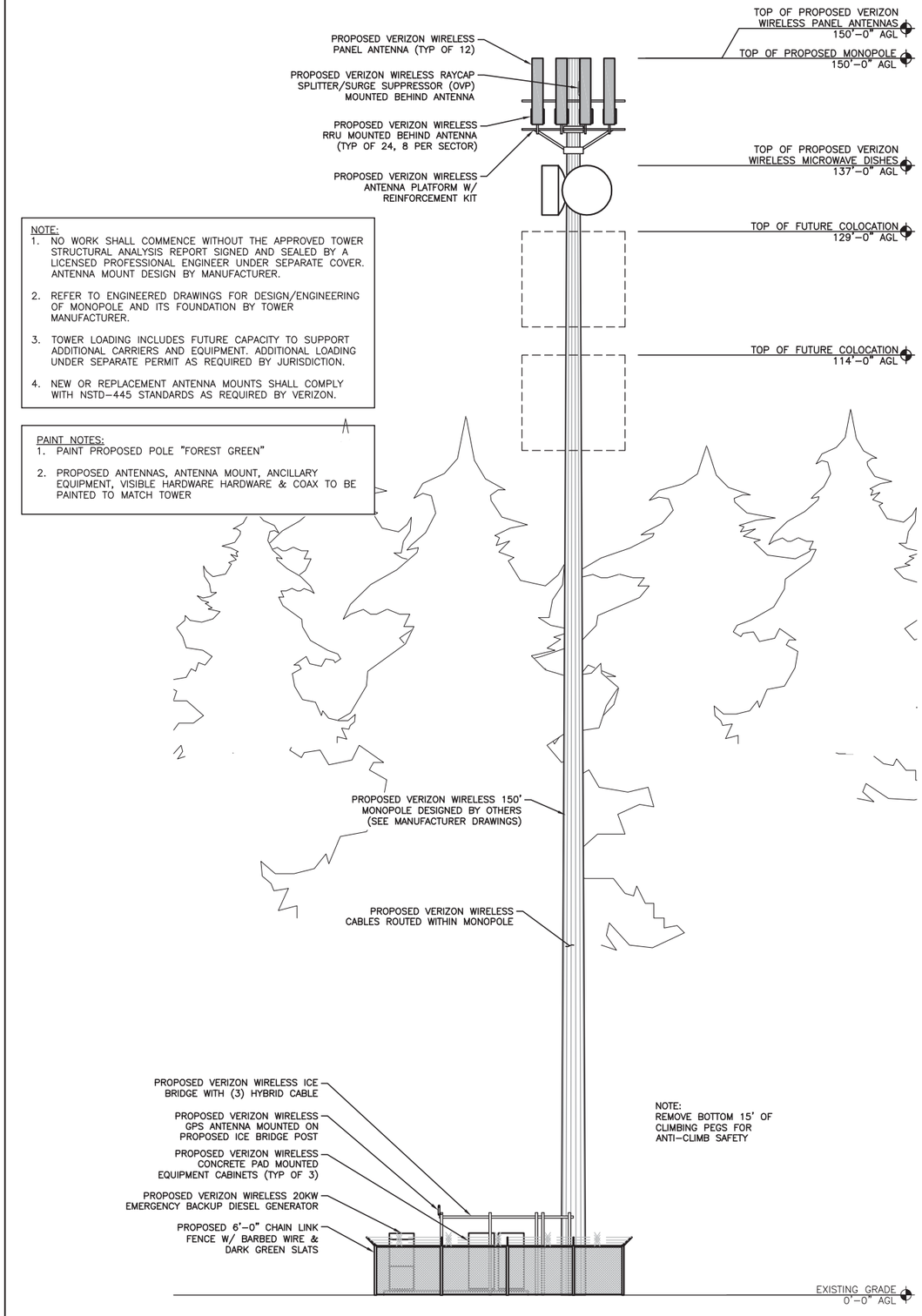
Project Info:

POR
STINGER
29421 E WOODARD RD
TROUTDALE, OR 97060

Drawing Title:

PROPOSED COMPOUND AND EQUIPMENT PLANS

Project Number:	Start Date:
7160107	12/13/16
Drafter: JA	Designer: SV
Project Manager: RKL	Professional of Record: RL
Revision No: 0	Sheet No: A-1.1



NOTE:
1. NO WORK SHALL COMMENCE WITHOUT THE APPROVED TOWER STRUCTURAL ANALYSIS REPORT SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER UNDER SEPARATE COVER. ANTENNA MOUNT DESIGN BY MANUFACTURER.
2. REFER TO ENGINEERED DRAWINGS FOR DESIGN/ENGINEERING OF MONOPOLE AND ITS FOUNDATION BY TOWER MANUFACTURER.
3. TOWER LOADING INCLUDES FUTURE CAPACITY TO SUPPORT ADDITIONAL CARRIERS AND EQUIPMENT. ADDITIONAL LOADING UNDER SEPARATE PERMIT AS REQUIRED BY JURISDICTION.
4. NEW OR REPLACEMENT ANTENNA MOUNTS SHALL COMPLY WITH NSTD-445 STANDARDS AS REQUIRED BY VERIZON.

PAINT NOTES:
1. PAINT PROPOSED POLE "FOREST GREEN"
2. PROPOSED ANTENNAS, ANTENNA MOUNT, ANCILLARY EQUIPMENT, VISIBLE HARDWARE HARDWARE & COAX TO BE PAINTED TO MATCH TOWER

REGISTERED ARCHITECT
ROBERT J. LARA
License # 5897
PLANTATION, FL
STATE OF OREGON
Feb 17 2017

ROBERT JERRY LARA
REGISTERED ARCHITECT
STATE OF OREGON
5897

ZONING

0	02/17/17	ISSUED FOR PERMIT
A	12/19/16	ISSUED FOR REVIEW
No.	Date	Revision

Client:

verizon

Implementation Team:

BLACK ROCK

A&E Team:

MORRISON HERSHFIELD
600 STEWART ST, SUITE 200
SEATTLE, WA 98101
Tel: 206.268.7370
www.morrisonhershfield.com

Project Info:

POR
STINGER
29421 E WOODARD RD
TROUTDALE, OR 97060

Drawing Title:

PROPOSED ELEVATION

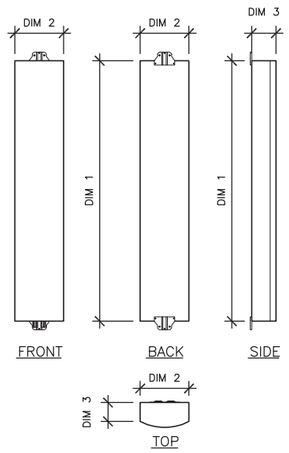
Project Number:	Start Date:
7160107	12/13/16
Drafter: JA	Designer: SV
Project Manager: RKL	Professional of Record: RL
Revision No: 0	Sheet No: A-2

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

NOT USED | 2

24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 6' 4' 2' 0" 8'

PROPOSED ELEVATION | 1

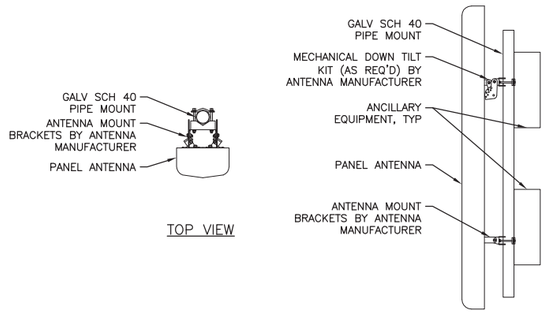


	QTY	DIM 1	DIM 2	DIM 3	WEIGHT
SECTOR ALPHA					
TBD	X	X"	X"	X"	x LBS
SECTOR BETA					
TBD	X	X"	X"	X"	x LBS
SECTOR GAMMA					
TBD	X	X"	X"	X"	x LBS

NOTES:
1. INSTALL ANTENNAS PER MANUFACTURER SPECIFICATIONS
2. CONTRACTOR TO TORQUE ALL MOUNTING HARDWARE PER MANUFACTURER SPECIFICATIONS

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

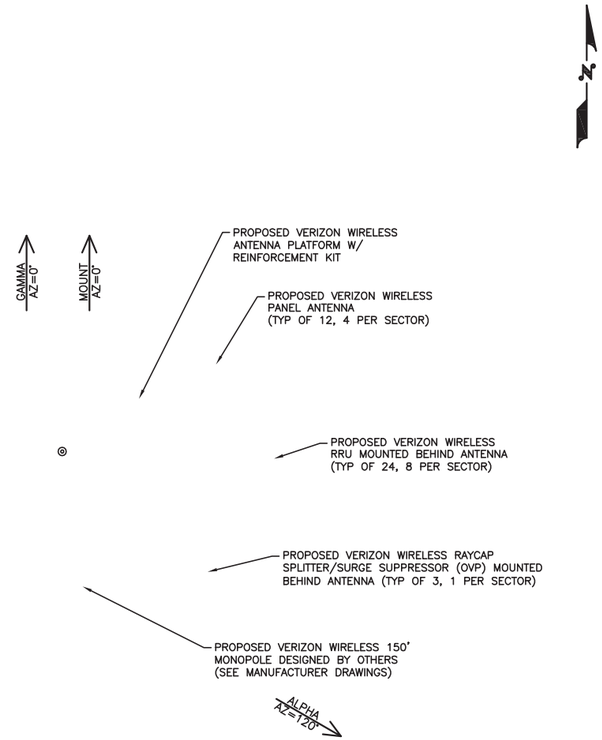
PROPOSED ANTENNA DIMENSIONS | 3



24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

TYPICAL ANTENNA ATTACHMENT | 2

PROPOSED ANTENNA AND COAX SCHEDULE											
SECTOR ALPHA	AZIMUTH	TIP HEIGHT	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC TILT	MECH DOWNTILT	NUMBER OF FEEDERS	FEEDER TYPE	FEEDER LENGTH	ADDITIONAL EQUIPMENT
–	0°	150'–0"	4	–	TBD	0°	0°	1	HYBRID	185'±	(8) RRU (1) OVP
SECTOR BETA	AZIMUTH	TIP HEIGHT	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC TILT	MECH DOWNTILT	NUMBER OF FEEDERS	FEEDER TYPE	FEEDER LENGTH	ADDITIONAL EQUIPMENT
–	120°	150'–0"	4	–	TBD	0°	0°	1	HYBRID	185'±	(8) RRU (1) OVP
SECTOR GAMMA	AZIMUTH	TIP HEIGHT	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC TILT	MECH DOWNTILT	NUMBER OF FEEDERS	FEEDER TYPE	FEEDER LENGTH	ADDITIONAL EQUIPMENT
–	240°	150'–0"	4	–	TBD	0°	0°	1	HYBRID	185'±	(8) RRU (1) OVP



24"x36" SCALE: 1/2" = 1'–0"
11"x17" SCALE: 1/4" = 1'–0"
2' 1' 0" 2'

PROPOSED ANTENNA CONFIGURATION | 1

REGISTERED ARCHITECT
ROBERT J. LARA
License # 5897
PLANTATION, FL
STATE OF OREGON
Feb 17 2017

ROBERT JERRY LARA
REGISTERED ARCHITECT
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ZONING

No.	Date	Revision
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Client:

verizon

Implementation Team:

BLACK ROCK

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Project Number:	Start Date:
7160107	12/13/16
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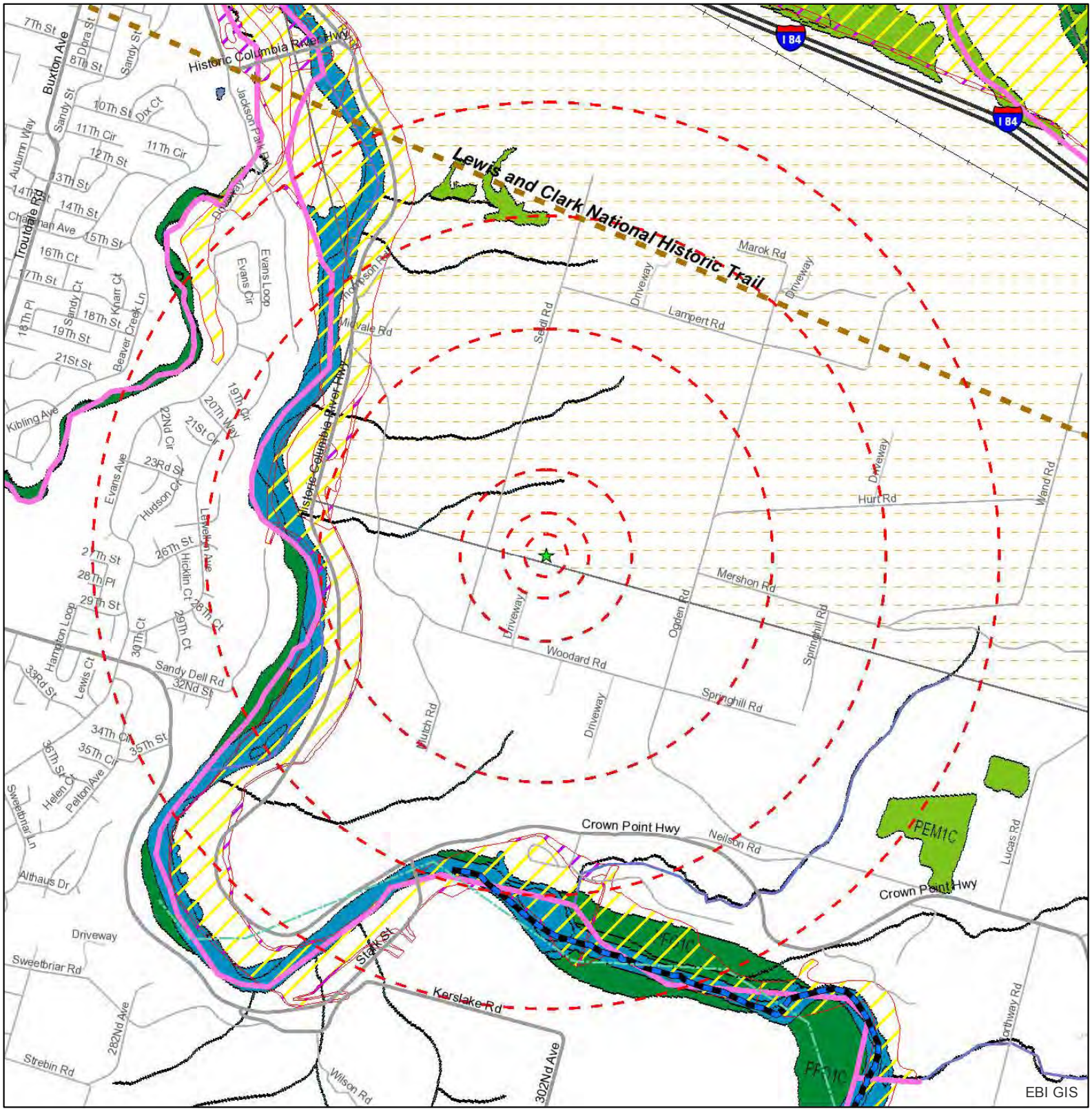
Revision No: 0	Sheet No: RF–1



Legend

★ Project Site

Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

*See associated legend for additional map symbology

Source: Selected data from ESRI & EBI.
See associated map legend for more details

Date: 3/28/2017

Land Resources Map

0 500 1,000 2,000 3,000 Feet

ENSITE #30912 (425554) POR STINGER
29421 EAST WOODARD ROAD
TROUTDALE, OR 97060

PN: 6117000962

EBI Consulting
environmental | engineering | due diligence

Land Resources Legend

Scenic Parkways, Rivers & Trails

- National Scenic Parkway
- National Park Service Trail / Appalachian Trail
- AZ - BLM Historic Trail
- CT - DEP Trail
- MT- Lewis & Clark Trail
- NY - Trails
- NY - Scenic Landmark Area
- NY - Statewide Area of Scenic Significance
- National Wild, Scenic River
- CA, MT, PA - Wild or Scenic River

Sources: National Park Service http://www.nps.gov/gis/data_info/ ; Bureau of land management http://www.blm.gov/wo/st/en.html ; CT DEP http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20 ; NY GIS Clearinghouse http://gis.ny.gov/ ; National W & S Rivers http://www.rivers.gov/rivers/mapping-gis.php ; Montana GIS http://nris.mt.gov/gis ; California Atlas http://atlas.ca.gov/

State Conservation, Lands & Wildlife Areas

- CT - DEP Property
- CO - Public Access Wildlife Area
- FL - Wildlife Management Area
- MT - National Wildlife Refuge
- NH - WMNF Management Area
- ME - Conservation Land
- TN - Wildlife Resource Land
- TX - State Park or Wildlife Mgt Area
- TX - Audubon Sanctuary
- CT - DEP Municipal and Open Space
- NH - Conservation Land
- NY - DEC State Lands
- NY - Agricultural District

Sources: CT DEP http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20 CO Wildlife Space http://ndis.nrel.colostate.edu/ftp/ftp_response.asp ; Florida Fish and Wildlife www.MyFWC.com ; Montana GIS http://nris.mt.gov/gis ; NH GRANIT ttp://www.granit.unh.edu/data/downloadfreedata ; ME GIS http://megis.maine.gov/catalog ; TN GIS http://www.state.tn.us/environment/parks/gis/data/ ; TX GIS http://www.glo.state.tx.us/nri/data/index.html ; NY GIS Clearinghouse http://gis.ny.gov/

US FWS NWI Wetland Type

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

State Endangered Threatened & Protected Species

- AZ - Areas of Environmental Concern
- CA - Spotted Owl Territory
- CA - NDDB T & E Species
- CT - NDDB Area Feature
- CT - DEP Critical Habitat
- MA - NHESP Estimated Habitats of Rare Wildlife
- TX - Protected Species
- MA - NHESP Priority Habitats of Rare Species
- FL - Conservation Species
- MA - NHESP Certified Vernal Pool
- ME - Candidate Vernal Pool
- NY - Important Bird Area
- TX - Ecologically Unique Rivers Streams

Sources: AZ BLM Page http://www.blm.gov/az/st/en/prog/maps/gis_files.html ; CNDDB http://www.dfg.ca.gov/biogeodata/cnddb/ ; CT DEP http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20 ; MAGIS http://www.mass.gov/mgis/laylist.htm ; TX GIS http://www.glo.state.tx.us/nri/data/index.html ; Florida Fish and Wildlife www.MyFWC.com; NY GIS Clearinghouse http://gis.ny.gov/

Federal & National Coverage Data Layers

- USFWS Critical Habitat
- USFWS Critical Habitat Area
- National Park Service
- National Wildlife Area or Refuge
- Federally Owned Land
- National Wilderness Areas
- National Park Service Site

FEMA Q3 Flood Zone 2006

- 500-year inundation area.
- 100-year inundation area.
- 100-year inundation area with velocity hazard.
- Undetermined but possible flood hazard area.
- Floodway area, including watercourse extent.

No Flood Data No Flood Data Available

Sources: National Park Service http://www.nps.gov/gis/data_info/ ; USFWS http://crithab.fws.gov/ ; National Park Service http://science.nature.nps.gov/nrdata/index.cfm ; The National Map http://nationalmap.gov/ ; Wilderness.net http://www.wilderness.net/ ; FEMA - Q3 Flood Data https://msc.fema.gov

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Jason Stayer

From: Huston, John <jhuston@blm.gov>
Sent: Monday, May 15, 2017 4:41 PM
To: Jason Stayer
Subject: Re: Troutdale Communications Facility (Within 0.75 mi of the Sandy Wild and Scenic River)

Hi Jason,

Here are our comments,

- This location is not within a Wild and Scenic Management zone.

- Since this project is on private land, the BLM has no regulatory authority.

- The area would be expected to have migratory birds flying through the area. BLM's recommendation would be to follow the guidance that the US-FWS has for tower construction. The link to the page is as follows:

https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/communication-towers.php

No others at this time.

John

On Tue, May 9, 2017 at 8:17 AM, Jason Stayer <jstayer@ebiconsulting.com> wrote:

> Hello John,
>
> Thank you for your response. As noted on the phone Verizon Wireless is proposing to construct a 150-foot monopole tower and associated support equipment located within a 20-foot by 30-foot fenced compound on a 50-foot by 50-foot lease area. Verizon Wireless proposes to improve/construct a gravel access road within a 20-foot wide access and utility easement emanating north from East Woodard Road for approximately 1,035 feet to the tower facility. Utilities will follow the proposed access route. This site is located approximately 0.75 miles from the Sandy Wild and Scenic River (see site information below). EBI would like to know if the BLM has any comments/recommendations pertaining to the proposed project. Thank you for your time.
>
> Site Identifier: POR Stinger / EnSite #30912
>
> Site Address: 29421 East Woodard Road, Troutdale, Multnomah County, OR 97060
>
> Latitude / Longitude: 45° 31' 31.51" / 122° 21' 33.95"
>
> EBI Project No. 6117000962
>
> **JASON STAYER**

Biologist II

P: 512.914.8615

3703 Long Beach Boulevard

Suite 421, 2nd Floor

Long Beach, CA 90807

jstayer@ebiconsulting.com

Visit our new website: www.ebiconsulting.com

EBI Consulting
environmental | engineering | due diligence

--

John Huston
Field Manager
Northwest Oregon District
Bureau of Land Management
Tel. (503) 315-5969
Email: jhuston@blm.gov

PHOTOGRAPHS

	**1.** Overview of the Project Area, view to the north.
	**2.** Overview of the Project Area, view to the west.

	**3.** Overview of the Project Area, view to the south.
	**4.** Overview of the Project Area, view to the east.

	**5.** View north from the Project Area.
	**6.** View east from the Project Area.

	**7.** View southeast from the Project Area.
	**8.** View south from the Project Area.

SPECIES REVIEW DOCUMENTATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oregon Fish And Wildlife Office
2600 Southeast 98th Avenue, Suite 100
Portland, OR 97266-1398
Phone: (503) 231-6179 Fax: (503) 231-6195
https://www.fws.gov/oregonfwo/articles.cfm?id=149489416

In Reply Refer To: March 28, 2017
Consultation Code: 01EOFW00-2017-SLI-0275
Event Code: 01EOFW00-2017-E-00385
Project Name: POR Stinger / EnSite #30912

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. If you have questions regarding your responsibilities under the Act, please contact the Endangered Species Division at the Service's Oregon Fish and Wildlife Office at (503) 231-6179. For information regarding listed marine and anadromous species under the jurisdiction of NOAA Fisheries Service, please see their website (http://www.nwr.noaa.gov/habitat/habitat_conservation_in_the_nw/habitat_conservation_in_the_r).

Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Oregon Fish And Wildlife Office
2600 Southeast 98th Avenue, Suite 100
Portland, OR 97266-1398
(503) 231-6179

Project Summary

Consultation Code: 01EOFW00-2017-SLI-0275

Event Code: 01EOFW00-2017-E-00385

Project Name: POR Stinger / EnSite #30912

Project Type: COMMUNICATIONS TOWER

Project Description: Construction of a 150-foot monopole tower and associated support equipment located within a 20-foot by 30-foot fenced compound on a 50-foot by 50-foot lease area.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/45.52482064371573N122.35937776507899W

Counties: Multnomah, OR

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Birds

NAME	STATUS
Northern Spotted Owl *(Strix occidentalis caurina)*	Threatened

There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/1123

Streaked Horned Lark *(Eremophila alpestris strigata)*	Threatened

There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/7268

Yellow-billed Cuckoo *(Coccyzus americanus)*	Threatened

Population: Western U.S. DPS
There is a **proposed** critical habitat for this species. Your location is outside the proposed critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/3911

Fishes

NAME	STATUS
Bull Trout *(Salvelinus confluentus)*	Threatened

Population: U.S.A., conterminous, lower 48 states
There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/8212

Flowering Plants

NAME	STATUS
Bradshaw's Desert-parsley *(Lomatium bradshawii)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5743	Endangered
Kincaid's Lupine *(Lupinus sulphureus ssp. kincaidii)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3747	Threatened
Nelson's Checker-mallow *(Sidalcea nelsoniana)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7340	Threatened
Water Howellia *(Howellia aquatilis)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7090	Threatened
Willamette Daisy *(Erigeron decumbens)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6270	Endangered

Critical habitats

There are no critical habitats within your project area.

Home ▾ Critical Habitat for Threatened & Endangered Species [USFWS]

Details | Basemap | Share Print | Measure Bookmarks 29421 East Woodard Road, Troutdale

About Content Legend

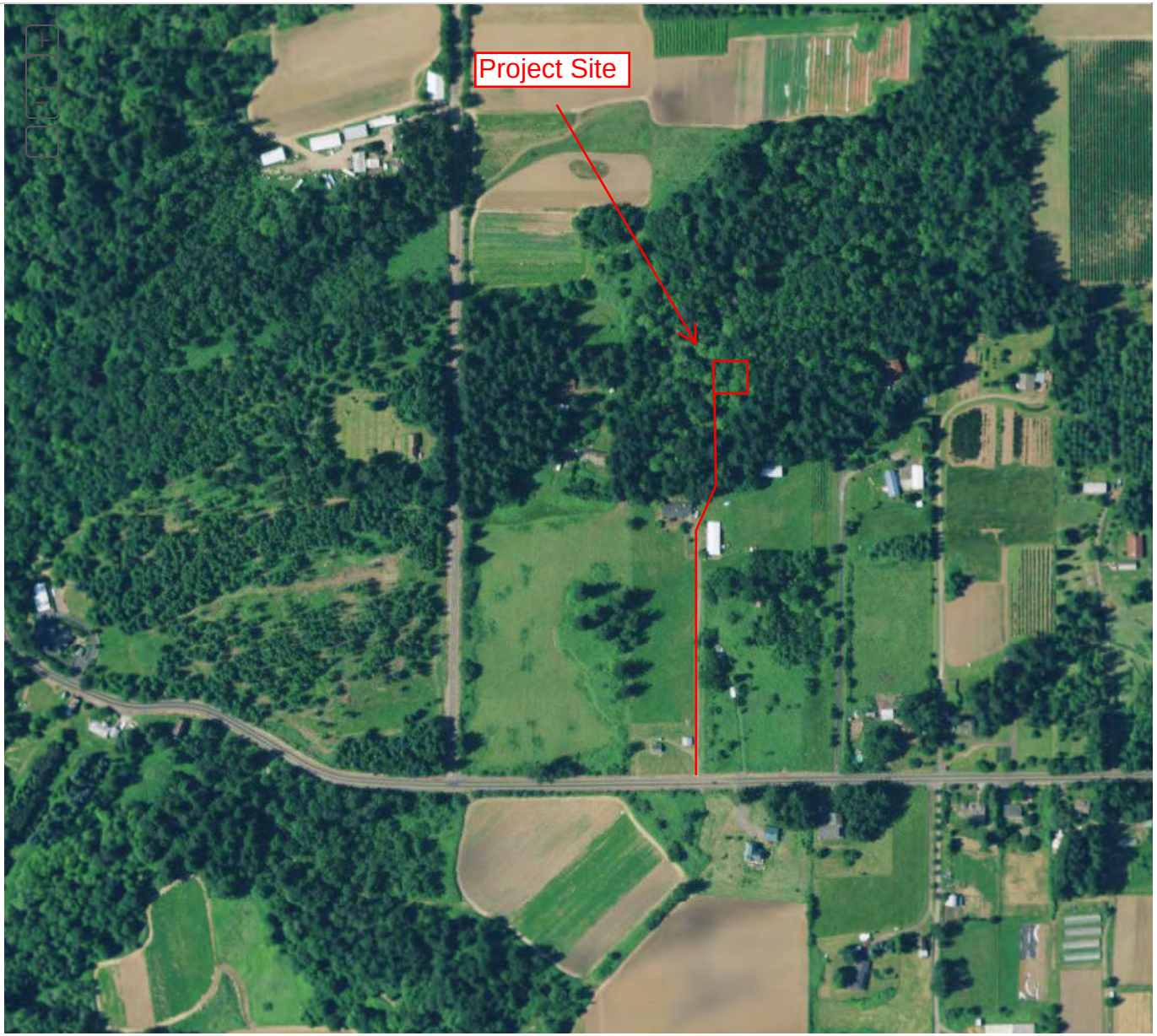
Legend

Final Linear Features

Final Polygon Features

Proposed Linear Features

Proposed Polygon Features



Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon

The State of Oregon and the federal government maintain separate lists of threatened and endangered (T&E) species. These are species whose status is such that they are at some degree of risk of becoming extinct.

Under State law (ORS 496.171-496.192) the Fish and Wildlife Commission through ODFW maintains the list of native wildlife species in Oregon that have been determined to be either “threatened” or “endangered” according to criteria set forth by rule (OAR 635-100-0105).

Plant listings are handled through the Oregon Department of Agriculture.

Most invertebrate listings are handled through the Oregon Natural Heritage Program.

Under federal law the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration share responsibility for implementing the federal Endangered Species Act of 1973 (Public Law 93-205, 16 U.S.C. § 1531), as amended. In general, USFWS has oversight for land and freshwater species and NOAA for marine and anadromous species. In addition to information about species already listed, the USFWS-Oregon Field Office maintains a list of Species of Concern.

Additional information about the federal programs in place in Oregon can be found at the following websites:
• U.S. Fish and Wildlife-Oregon (http://www.fws.gov/oregonfwo)
• Northwest Region of NOAA-Fisheries (http://www.nwr.nmfs.noaa.gov)

Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon
(T=threatened, E=endangered, C=candidate, DPS=Distinct Population Segment)

Common Name	Scientific Name	State status	Federal status
FISH			
Borax Lake Chub	*Gila boraxobius*	E	E
Bull Trout (Range-wide)	*Salvelinus confluentus*		T
Columbia River Chum Salmon	*Oncorhynchus keta*		T
Foskett Speckled Dace	*Rhinichthys osculus* ssp	T	T
Green sturgeon (Southern DPS)	*Acipenser medirostris*		T
Hutton Spring Tui Chub	*Gila bicolor* ssp.	T	T
Lahontan Cutthroat Trout	*Oncorhynchus clarki henshawi*	T	T
Lost River Sucker	*Deltistes luxatus*	E	E
Lower Columbia River Chinook Salmon	*Oncorhynchus tshawytscha*		T
Lower Columbia River Coho Salmon	*Oncorhynchus kisutch*	E	T
Lower Columbia River Steelhead	*Oncorhynchus mykiss*		T
Middle Columbia River Steelhead	*Oncorhynchus mykiss*		T
Modoc sucker	*Catostomus microps*		E
Oregon Chub	*Oregonichthys crameri*		T
Oregon Coast Coho Salmon	*Oncorhynchus kisutch*		T
Pacific Eulachon/Smelt (Southern DPS)	*Thaleichthys pacificus*		T
Shortnose Sucker	*Chasmistes brevirostris*	E	E
Snake River Chinook Salmon (Fall)	*Oncorhynchus tshawytscha*	T	T
Snake River Chinook Salmon (Spring/Summer)	*Oncorhynchus tshawytscha*	T	T
Snake River Sockeye Salmon	*Oncorhynchus nerka*		E
Snake River Steelhead	*Oncorhynchus mykiss*		T
Southern Oregon Coho Salmon	*Oncorhynchus kisutch*		T
Upper Columbia River Spring Chinook Salmon	*Oncorhynchus tshawytscha*		E
Upper Columbia River Steelhead	*Oncorhynchus mykiss*		T
Upper Willamette River Chinook Salmon	*Oncorhynchus tshawytscha*		T

Common Name	Scientific Name	State status	Federal status
Upper Willamette River Steelhead	*Oncorhynchus mykiss*		T
Warner Sucker	*Catostomus warnerensis*	T	T
AMPHIBIANS AND REPTILES			
Columbia spotted frog	*Rana luteiventris*		C
Green Sea Turtle	*Chelonia mydas*	E	E
Leatherback Sea Turtle	*Dermochelys coriacea*	E	E
Loggerhead Sea Turtle	*Caretta caretta*	T	T
Oregon spotted frog	*Rana pretiosa*		C
Pacific Ridley Sea Turtle	*Lepidochelys olivacea*	T	T
BIRDS			
Bald Eagle	*Haliaeetus leucocephalus*	T	
Brown Pelican	*Pelecanus occidentalis*	E	E
California Least Tern	*Sterna antillarum browni*	E	E
Marbled Murrelet	*Brachyramphus marmoratus*	T	T
Northern Spotted Owl	*Strix occidentalis caurina*	T	T
Short-tailed Albatross	*Diomedea albatrus*	E	E
Streaked horned lark	*Eremophila alpestris strigata*		C
Western Snowy Plover	*Charadrius alexandrinus nivosus*	T	T (Coastal population only)
Yellow-billed cuckoo	*Coccyzus americanus*		C
MAMMALS			
Blue Whale	*Balaenoptera musculus*	E	E
Columbian White-tailed Deer(Lower Columbia River population only)	*Odocolieus virginianus leucurus*		E
Fin Whale	*Balaenoptera physalus*	E	E
Fisher	*Martes pennanti*		C
Gray Whale	*Eschrichtius robustus*	E	
Gray Wolf	*Canis lupus*	E	E
Humpback Whale	*Megaptera novaeangliae*	E	E
Kit Fox	*Vulpes macrotis*	T	
North Pacific Right Whale	*Eubalaena japonica*	E	E
Northern (Steller) Sea Lion	*Eumetopias jubatus*		T
Sea Otter	*Enhydra lutris*	T	T
Sei Whale	*Balaenoptera borealis*	E	E
Sperm Whale	*Physeter macrocephalus*	E	E
Washington Ground Squirrel	*Spermophilus washingtoni*	E	
Wolverine	*Gulo gulo*	T	

Oregon listed plants by county - map view

Based on Oregon listed plants by county - complete list for map
(No description provided)

	County	Scientific name - Common name - Listing status	Location 1
1	Baker County	*Hackelia cronquistii* - Cronquist's stickseed - Threatened	(44.718420000000002°, -117.663285°)
2	Benton County	*Castilleja levisecta** - Golden paintbrush - Endangered	(44.500839999999997°, -123.446434°)
3	Clackamas County	*Delphinium leucophaeum* - White rock larkspur - Endangered	(45.173558999999997°, -122.258746°)
4	Clatsop County	*Abronia umbellata* var. *breviflora* - Pink sandverbena - Endangered	(45.984323000000003°, -123.658697°)
5	Columbia County	*Howellia aquatilis* - Howellia - Threatened	(45.970179000000002°, -123.0728710000
6	Coos County	*Abronia umbellata* var. *breviflora* - Pink sandverbena - Endangered	(43.148466999999997°, -124.096074°)
7	Crook County	NONE	(44.154356°, -120.381141°)
8	Curry County	*Abronia umbellata* var. *breviflora* - Pink sandverbena - Endangered	(42.456716999999998°, -124.1563040000
9	Deschutes County	*Astragalus peckii* - Peck's milkvetch - Threatened	(44.005012999999998°, -121.482299°)

County Multnomah County

Scientific name - Common name - Listing status
Artemisia campestris var. *wormskioldii* - Northern wormwood - Endangered
Castilleja levisecta - Golden paintbrush - Endangered
Delphinium leucophaeum - White rock larkspur - Endangered
Delphinium pavonaceum - Peacock larkspur - Endangered
Howellia aquatilis - Howellia - Threatened
Sericocarpus rigidus - White-topped aster - Threatened

Location 1 (45.522235000000002°, -122.09684900000001°)

Viewing row 26 of 36

Bill Arnerich

From: Brian Ratliff <brian.s.ratliff@state.or.us>
Sent: Tuesday, August 23, 2016 9:14 AM
To: Bill Arnerich
Subject: RE: 6116002185 / BK42 Gold Hill COW Site / 10148856

Bill

I spoke with division and ODFW will not comment on federal processes (ex. NEPA & ESA Section 7). ODFW will provide input if and when the project goes through the local or state permitting process. As always if a project is planned within my district and you would like to give me call and talk about it feel free to do so.

Brian Ratliff
Oregon Department of Fish and Wildlife
Baker District Wildlife Biologist
2995 Hughes Lane
Baker City, OR 97814
Phone: 541-523-5832
Fax : 541-523-5874

From: Bill Arnerich [mailto:barnerich@ebiconsulting.com]
Sent: Tuesday, August 23, 2016 8:40 AM
To: Brian Ratliff <brian.s.ratliff@state.or.us>
Subject: RE: 6116002185 / BK42 Gold Hill COW Site / 10148856

Hey Brian,
I received your message yesterday. If you don't mind, can you please send me an email briefly explaining what you said in your message? My client prefers to have something in writing.

Thank you,

BILL ARNERICH
Biologist
P: 707.322.5769 | F: 781.425.5142
3703 Long Beach Boulevard, Suite 421, 2nd Floor
Long Beach, CA 90807
barnerich@ebiconsulting.com
Visit our new website: www.ebiconsulting.com

Bill Arnerich

From: Maurice, Kevin [kevin_maurice@fws.gov]
Sent: Thursday, February 25, 2016 11:15 AM
To: Bill Arnerich
Subject: Re: No Effect Projects

Hi Bill. You are correct there is no mechanism with in sec 7 to concur with a no effect determination. Refer to the attached e-mail from 2014 in respect to documenting your logic train and supporting information you used to reach the NE determination and keep it on file for future but unlikely 3rd party challenges. Of course if there are effects to listed species or risk of an adverse mod. to critical habitat the project should be consulted upon and could fit into an informal consultation with a NLAA determination. The best way to achieve these determinations is to have early contact w/the agencies in the pre project planning phase. Avoiding take and minimizing effects is the easiest way to make a project come off on schedule and budget. Feel free to contact myself or this office if you ever ave any questions. KJM

On Thu, Feb 25, 2016 at 9:45 AM, Bill Arnerich <barnerich@ebiconsulting.com> wrote:

Hello Kevin,

We are updating our records and we have an email from you from 2014 (see attached) in which you state - a no effect determination does not require concurrence from the USFWS. This was in regards to projects that have been determined to have “no effect” by a lead agency or in this case, an FCC designated consultant.

Is this still an accurate statement?

Thank you,

BILL ARNERICH

Biologist

P: 707.322.5769 | F: 781.425.5142

11445 East Via Linda, Suite 2 #472 | Scottsdale, AZ 85259

barnerich@ebiconsulting.com

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Please consider the environment before printing this email

--
Kevin J. Maurice, Wildlife Biologist
U.S. Fish & Wildlife Service
Oregon Fish & Wildlife Office
2600 SE 98th Ave., Suite 100
Portland, OR 97266
(503) 231-6179

From:	Maurice, Kevin
To:	Tony Maguire
Cc:	Joe Zisa
Subject:	Re:
Date:	Friday, January 17, 2014 2:44:14 PM

Hi. Correct, a no effect determination does not require concurrence from USFWS. That determination was made by a qualified professional and the logic train and references used to make that determination should be documented and kept on file in case a 3rd party challenge occurs. If your analysis was tight you should have no problem with 3rd party challenges in respect to ESA sec. 7 consultation.

Feel free to call or e-mail me in the future if you have any questions. Good luck w/your projects. KJM

On Fri, Jan 17, 2014 at 12:59 PM, Tony Maguire <tmaguire@ebiconsulting.com> wrote:

> Kevin, thanks for taking the time to discuss the above named project with me today. As discussed, the FWS does not need to review or provide comment/recommendations for projects that have been determined to have “no effect” by a lead agency or in this case, an FCC designated consultant, which is EBI (attached FCC designation letter). However, you did review this project and agreed it would have no effect on protected species.
>
> For future projects in Oregon, could you please confirm the below statement is accurate.
>
> “No effect" means there will be no impacts, positive or negative, to listed or proposed resources. Generally, this means no listed resources will be exposed to action and its environmental consequences. Concurrence from the Service is not required.”
>
> Thanks again,
>
> Tony
>
> **Anthony J. Maguire, PWS**
>
> Wetland Biologist
>
> P: 650 833-9592

2030 Cordilleras Rd, Emerald Hills CA 94062

tmaguire@ebiconsulting.com

Visit our new website: www.ebiconsulting.com

SUPPORTING DOCUMENTATION

MAP SCALE 1" = 500'

250 0 500 1000

FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0238H

FIRM

FLOOD INSURANCE RATE MAP

MULTNOMAH COUNTY, OREGON AND INCORPORATED AREAS

PANEL 238 OF 550

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MULTNOMAH COUNTY	410179	0238	H
TROUTDALE, CITY OF	410184	0238	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

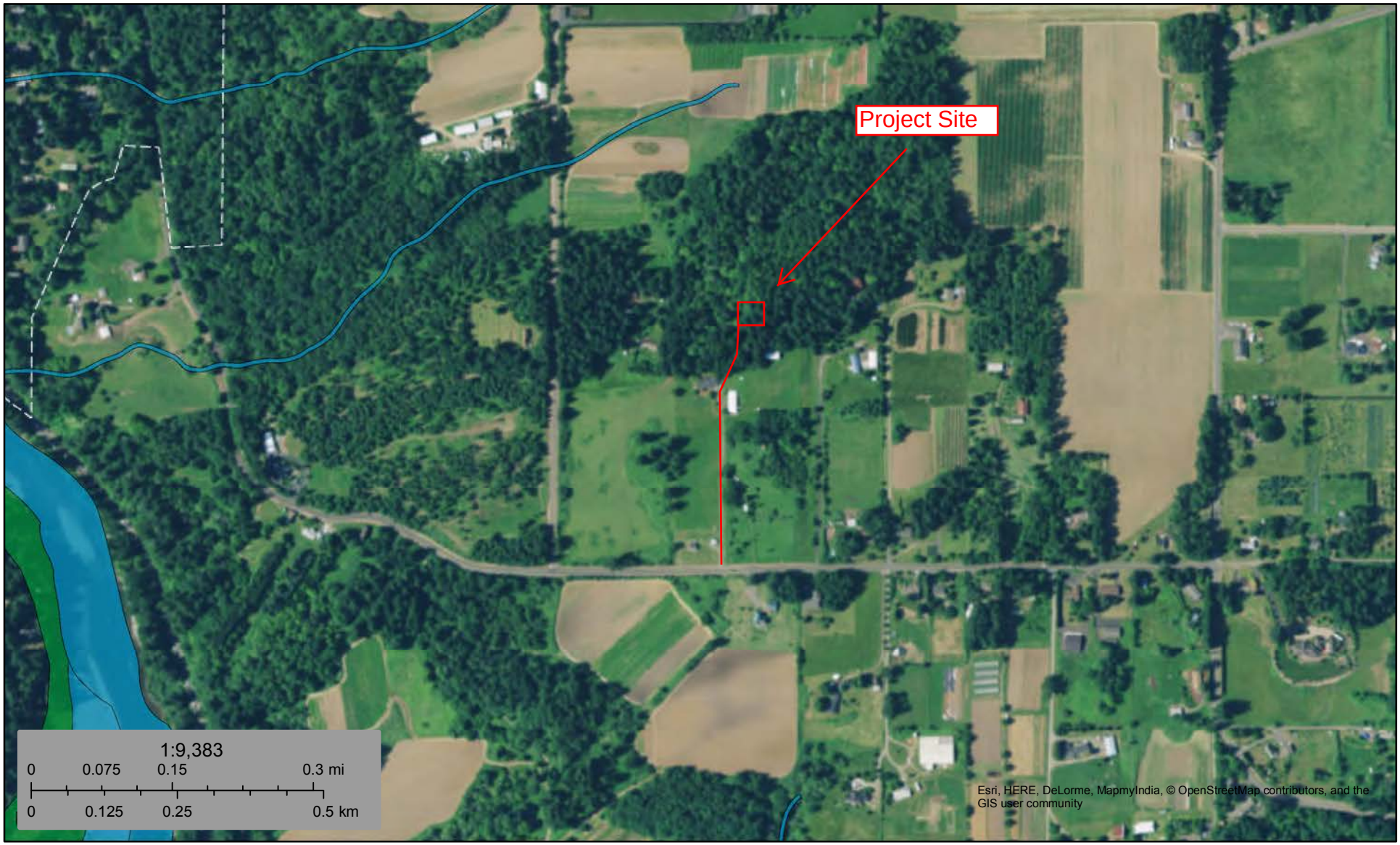
MAP NUMBER
41051C0238H

EFFECTIVE DATE
DECEMBER 18, 2009

Federal Emergency Management Agency

U.S. Fish and Wildlife Service
National Wetlands Inventory

POR Stinger / EnSite #30912



March 28, 2017

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Multnomah County Area, Oregon

POR Stinger / EnSite #30912

March 28, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,340 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Multnomah County Area, Oregon
Survey Area Data: Version 14, Sep 16, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 8, 2010—Sep 4, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Multnomah County Area, Oregon (OR051)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
10B	Cornelius silt loam, 3 to 8 percent slopes	3.2	15.1%
27B	Mershon silt loam, 0 to 8 percent slopes	17.8	84.1%
37B	Quatama loam, 3 to 8 percent slopes	0.2	0.8%
Totals for Area of Interest		**21.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Multnomah County Area, Oregon

10B—Cornelius silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 228c
Elevation: 250 to 1,400 feet
Mean annual precipitation: 40 to 70 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cornelius and similar soils: 90 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cornelius

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty materials over mixed old alluvium

Typical profile

H1 - 0 to 20 inches: silt loam
H2 - 20 to 33 inches: silty clay loam
H3 - 33 to 60 inches: silty clay loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 30 to 40 inches to fragipan
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 27 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Other vegetative classification: Moderately Well Drained < 15% Slopes (G002XY004OR)
Hydric soil rating: No

Minor Components

Delena

Percent of map unit: 3 percent
Landform: Terraces

Landform position (three-dimensional): Riser
Down-slope shape: Concave
Across-slope shape: Linear
Other vegetative classification: Poorly Drained (G002XY006OR)
Hydric soil rating: Yes

27B—Mershon silt loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 229d
Elevation: 450 to 1,300 feet
Mean annual precipitation: 60 to 70 inches
Mean annual air temperature: 50 to 52 degrees F
Frost-free period: 165 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Mershon and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mershon

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess and medium textured old alluvium

Typical profile

H1 - 0 to 15 inches: silt loam
H2 - 15 to 56 inches: silt loam
H3 - 56 to 60 inches: loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 11.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Hydric soil rating: No

37B—Quatama loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 22b5
Elevation: 80 to 400 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Quatama and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Quatama

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Old alluvium

Typical profile

H1 - 0 to 14 inches: loam
H2 - 14 to 33 inches: clay loam
H3 - 33 to 60 inches: sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Other vegetative classification: Moderately Well Drained < 15% Slopes (G002XY004OR)
Hydric soil rating: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

QUALIFICATIONS

EBI Consulting
environmental | engineering | due diligence

Jason Stayer
Biologist II
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SUMMARY OF EXPERIENCE

Mr. Stayer received his BS in the Management of Information Systems from the University of Texas at Arlington with an emphasis in database managment. Mr. Stayer also received a MS in Wildlife Ecology from Texas State University with an emphasis on avian species, specifically a Master's Thesis on raptor species. He has spent 5 years working for the U.S. Fish and Wildlife Service (USFWS) responsible for conducting numerous wildlife and habitat assessments, understanding and implementing all sections of the Endangered Species Act (ESA), responsible for reviewing National Environmental Policy Act (NEPA) documents, writing and reviewing grant proposals, writing and reviewing biological reports, and publication of numerous documents related to the Endangered Species Act.

RELEVANT PROJECT EXPERIENCE

Mr. Stayer has worked with EBI Consulting as a Biologist II since January of 2014. Prior to working with EBI, Mr. Stayer worked as a wildlife biologist for the USFWS Carlsbad Field Office. Mr. Stayer worked closely with the U.S. Navy and National Park Service to establish a habitat monitoring program for the Federally threatened island night lizard. He has also worked with numerous water districts to assess project impacts, develop project alternatives, and propose mitigation for numerous Federally listed threatened and endangered species in complice with the ESA and NEPA. As a USFWS fish and wildlife biologist Jason has conducted numerous species and habitat assessments and developed ESA Section 4 documents for the Cocachella Valley Fringe-toed Lizard, Island Night Lizard, Coastal California Gnatcatcher, Santa Ana Sucker, and Southwestern Willow Flycatcher. Jason has also drafted Section 7 Consultation documents for 30 different state and federally listed species.

EDUCATION

Bachelor of Science, Management of Information Systems, December 2002
University of Texas at Arlington, Arlington, TX

Master of Science, Wildlife Ecology, August 2008
Texas State University, San Marcos, TX

PROFESSIONAL REGISTRATIONS

Seabird Assessment Oil Spill Response, March 2009
Carlsbad Fish and Wildlife Office, Carlsbad, CA

Listing and Candidate Assessment (Section 4 - ESA), March 2010
Lakewood Fish and Wildlife Office, Lakewood, CO

Habitat Conservation Plan Development (Section 10 - ESA), March 2011
Carlsbad Fish and Wildlife Office, Carlsbad, CA

Recovery Planning Implementation (Section 4 - ESA), April 2011
National Convention Training Center, Shepherdstown, WV

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Interagency Consultation (Section 7 - ESA), April 2012
Carlsbad Fish and Wildlife Office, Carlsbad, CA

Critical Writing and Critical Thinking, June 2012
National Convention Training Center, Shepherdstown, WV

24 hour HAZWOPER Certification, March 2013
Carlsbad Fish and Wildlife Office, Carlsbad, CA

PUBLICATIONS

USFWS Publication	5-year review on the Coachella Valley fringe-toed lizard (August 10, 2010)
Federal Register	Proposed revised critical habitat for the southwestern willow flycatcher – assist Arizona Fish and Wildlife Office (Carlsbad Field Office lead) (August 15, 2011)
Federal Register	90-day finding on the coastal California gnatcatcher (October 26, 2011)
USFWS Publication	5-year review on the island night lizard (October 10, 2012)
Federal Register	Final revised critical habitat for the southwestern willow flycatcher – assist Arizona Fish and Wildlife Office (Carlsbad Field Office lead) (January 03, 2013)
Federal Register	Island night lizard proposed delisting rule (February 04, 2013)
Federal Register	Draft post-delisting monitoring plan for the night lizard (February 04, 2013)
Federal Register	Island night lizard final delisting rule (April, 01 2014)
Federal Register	Final post-delisting monitoring plan for the night lizard (April, 01 2014)

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Bill Arnerich
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SUMMARY OF EXPERIENCE

Bill Arnerich, Biologist, has extensive experience as a biological consultant since 2002 specializing in biological assessments, wetland delineations, endangered species surveys, project management, biological monitoring, restoration projects, and interagency consultations. With a degree in Environmental Studies from Sonoma State University, he has widespread experience and a thorough knowledge of ecological practices throughout the United States. Mr. Arnerich's areas of expertise include the National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), Clean Water Act (CWA), Endangered Species Act (ESA), California Department of Fish and Wildlife Code, and Migratory Bird Treaty Act (MBTA). Furthermore, Mr. Arnerich has experience in the submission and acquisition of a variety of biological and environmental related permits from local, State and Federal agencies.

At EBI Consulting, Mr. Arnerich serves as a Biologist within the West Telecom Environmental group. His responsibilities in this role include conducting biological assessments, wetland delineations, endangered species surveys, project management, and biological monitoring throughout the United States. Mr. Arnerich also conducts senior technical reviews of the above-mentioned assessments and supports EBI's clients nationally by preparing proposals for natural resource related investigations.

RELEVANT PROJECT EXPERIENCE

Mr. Arnerich has conducted hundreds of various natural resources related surveys and assessments within a variety of habitats throughout the United States. Habitats have included but are not limited to: oak woodland, seasonal wetlands, riparian forest, and annual grassland. Mr. Arnerich also has extensive experience with wildlife species identification. Species of note in which he has experience preparing United States Fish and Wildlife Service (USFWS) Section 7 Consultation documents include the California red-legged frog, California tiger salamander, San Francisco garter snake, burrowing owl, desert tortoise, salt marsh harvest mouse, Alameda whipsnake, California clapper rail, and San Joaquin kit fox. Further, Mr. Arnerich has conducted numerous avian nest surveys for a variety of bird species.

EDUCATION

BA, Environmental Studies, Sonoma State University

Professional Affiliations

California Native Plant Society
CEQA NEPA Environmental Professionals
Desert Tortoise Conservation and Management
Environmental Consulting Professionals
Society for Conservation Biology
Biological Monitors & Environmental Inspectors, US and Canada

Bill Arnerich
EBI Consulting

PROFESSIONAL REGISTRATIONS

California tiger salamander: Ecology and Survey Techniques, Sonoma State University
Endangered Species Regulation and Protection Seminar, UC Davis University Extension
Wetland Delineation and Management Trained, U.S. Army Corps of Engineers
Desert Tortoise Handling Workshop, Desert Tortoise Council
Salt Marsh Harvest Mouse Workshop, Wetland Research Associates

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SUMMARY OF EXPERIENCE

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Christopher Baird
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SUMMARY OF EXPERIENCE

Mr. Christopher W. Baird, NEPA Technical Director has extensive experience in the environmental due diligence and compliance industry since 1997. Mr. Baird's experience includes conducting and managing National Environmental Policy Act (NEPA) and related environmental compliance assessments, Phase I and II Environmental Site Assessments (ESA) and Property Condition Assessments (PCA). In addition, Mr. Baird has experience with environmental contaminant monitoring, sampling and clean-up.

Mr. Baird currently oversees NEPA and related environmental compliance services for EBI's Telecom division. Specifically, Mr. Baird is responsible for developing and implementing policies and protocols to ensure EBI's compliance with applicable environmental regulations under NEPA. Mr. Baird is also responsible for cost and budget analysis, preparing proposals, site selection support, project oversight and regulatory training for EBI staff and clients.

Relevant Project Experience

NEPA Assessments

Mr. Baird's experience with NEPA assessments currently focuses primarily on wireless communications projects subject to the Federal Communications Commission's (FCC) environmental policies. However, Mr. Baird has also accumulated years of experience performing NEPA screening and Environmental Assessments (EA) under the environmental policies and procedures of the United States Forest Service, Department of Defense, Department of Commerce, Department of Agriculture, Department of Veterans Affairs (VA), Department of Housing and Urban Development (HUD), the Bureau of Land Management (BLM), the Bureau of Indian Affairs (BIA), the U.S. Postal Service, the National Aeronautic and Space Agency (NASA), and the National Oceanic and Atmospheric Administration (NOAA).

Mr. Baird researches and interprets local, state, and federal environmental regulations as they pertain to NEPA and related state environmental regulations, and assist clients by facilitating the required environmental review process for their projects in accordance with these regulations. Specifically, these environmental reviews include an assessment of a project's potential impacts on sensitive resources including wetlands, endangered species, floodplains, and historic properties. To facilitate these reviews, Mr. Baird also acts as a liaison between clients and regulatory bodies at the local, state, and federal levels, including, but not limited to, state environmental departments, local and state historic preservation commissions, and the United States Fish and Wildlife Service (USFWS). Mr. Baird also has extensive experience as a liaison between clients and representatives of the sovereign nations of federally-recognized Native American Indian Tribes.

Environmental Site Assessments

In addition to overseeing EBI Consulting's NEPA-related work, Mr. Baird has conducted over five hundred Phase I Environmental Site Assessments for a wide range of property-types, including filling stations/bulk fuel storage facilities, single and multi-family residential properties, industrial and manufacturing facilities, commercial retail and business spaces, and large-scale agricultural

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operations. These assessments were performed to evaluate site conditions, potential off-site liabilities, environmental control systems, and site remediation costs in order to advise prospective buyers, operators, and owners of potential and existing environmental concerns. Mr. Baird has successfully completed ASTM Phase I Site Assessments for various nationwide lending institutions throughout the United States and the Micronesian Island of Guam.
Phase II ESA / Subsurface Investigations
Mr. Baird has completed subsurface investigations at commercial and residential properties throughout the United States. Subsurface Investigations have included the removal and proper closure of underground storage tanks, the installation of soil borings and groundwater monitoring wells, and the sampling of environmental media.

Property Condition Assessments
Mr. Baird has conducted over 50 Property Condition Assessments (PCAs) in accordance with ASTM Standards, on a wide range of residential, commercial, manufacturing, and industrial properties throughout the United States and on the Micronesian Island of Guam.

Environmental Contaminant Investigations, Monitoring & Clean-up
Mr. Baird has completed asbestos, lead paint, mold, heavy metal, and air quality investigations at numerous commercial, office, and residential properties throughout the United States. Asbestos investigations have included visual observations as well as bulk sampling of friable materials and roofing materials.

Mr. Baird also supervised the clean-up of contaminated dust from salvageable office supplies, equipment, and documents, and performed air quality monitoring to test for the presence of asbestos and heavy metals (including mercury) at the offices of a major financial investment company in New York City's World Financial Tower 1 (i.e. "Ground Zero") during salvage operations following the attacks of 9/11.

Education
Bachelor of Science, Environmental Science – Acadia University, Nova Scotia, Canada
Certificate Implementation of the NEPA, Duke University, Durham, North Carolina
Certificate, Law of NEPA, Duke University, Durham, North Carolina

Professional Registrations
U.S. Army Corps. of Engineers 38 Hour Wetlands Delineation & Management Program (2007)
OSHA 40 Hour Hazardous Waste Operations (HAZWOPER) Certification (2002)
Asbestos Hazard Emergency Response Act (AHERA) Asbestos Inspector Accreditation (2006)
Qualified Environmental Professional (as defined §312.10 of 40 CFR 312)
RF Site Safety Awareness Training 1910.132 (f)(1) and 1910.268 (p)(3)