STATE OF OREGON

ARCHAEOLOGICAL PERMIT APPLICATION

Applicant Information

Applicant: Amira Ainis

Institution/Company: SWCA Environmental Consultants AP# 3136

Email: amira.ainis@swca.com

Project Information

Project Name: Strong Heights Subdivision Development Project SHPO Case#:

Agency with Management Control over the Project: Ward Development, LLC

Agency Contact Name: Steve Ward Phone #: 503-931-3460

Email: sward@westech-eng.com

Location

Township		Range		Section(s)
8	S	3	W	2, 11, 12

County: Marion

City or County Planning Department: City of Salem

Smithsonian Trinomial (as applicable):

Landowner

Landowner Name: Private Representative: Steve Ward

Email: sward@westech-eng.com Phone: 503-931-3460

Address: 6998 Chakarun Lane SE, Salem, OR 97306

Curation

Temporary Curation Facility: SWCA Environmental Consultants Laboratory

Permanent Curation Facility: University of Oregon Museum of Natural & Cultural History (UOMNCH)

For Private Lands, permanent curation facility must match what is selected on the private landowner letter.

If selecting other, an approval letter from UOMNCH is required.

Excavation Summary

Number of 30cm diameter shovel probes: 50 Number of 50x50 cm quarter test units: 10

Number of 1x1 meter test units: 5 Screen Size(s): 1/4" Dry

Levels: 10 cm arbitrary Surface Collection: No Bucket Auger: Yes Monitoring: Yes

Termination: After minimum of 50 cm where the last two levels are culturally sterile, barring impenetrable layers

Quantity and type of other units/probes, varied screening methods (if selected above), and other levels/termination:

Qualified Archaeologist(s) in the field who has direct charge of excavation (must include the applicant and each individual listed must be on the SHPO "Qualified Archaeologist" list): Amira Ainis

Estimated Starting Date of Fieldwork: June 2021

Estimated Date of Fieldwork Completion: July 2022

Attachments

Required Attachments:

Research Design (Per OAR 736-051-0080[4][c] and 0090[3][A]): ✔

USGS 7.5' topographic map depicting permit area: ✔

Other Attachments:

Landowner Letter (if permit is for Private Land): ✔

Curation Letter (if other curation facility is proposed for non-federal public land: ☐

Notes

Applicants are responsible for the accuracy of information in the application, in particular, regarding landowners, appropriate planning departments, and whether the application is for private or non-federal public lands.

Additional information on Oregon Archaeological Permits may be found on the SHPO website, in Archaeology Bulletin 2, Archaeology Bulletin 5, OAR 736-051-0000 to 0090, and ORS 390.235.

Curation of artifact collections at UOMNCH must meet museum guidelines. For collections being given to landowners a complete collection of field and lab records and digital photos needs to be sent to UOMNCH.

If the investigation is associated with a prehistoric or historic American Indian archaeological site, **consultation with the most appropriate Tribes must occur during the 30-day permit review period** (refer to ORS 358.950 and OAR 736-051-0080[8][c]).

When an applicant receives a final copy of their issued permit, please be mindful of any conditions from reviewers. Conditions ***must*** be met to comply with the permit. Applicants may become aware of conditions earlier in the process through consultation with reviewers.

Send complete applications to Arch.Permits@Oregon.gov. Do not submit applications to or cc: SHPO staff.

SWCA®
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

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June 10, 2021

Oregon State Historic Preservation Office
Oregon Parks & Recreation Department
725 Summer Street NE, Suite C
Salem, Oregon 97301

Re: Archaeological Permit Application for the Strong Heights Subdivision Development Project, Marion County, Oregon

Dear Oregon SHPO,

Please find enclosed SWCA Environmental Consultant's (SWCA's) archaeological permit application for the Strong Heights Subdivision Development Project located in Sections 2, 11, and 12, Township 8 South, Range 3 West of the Willamette Meridian, in Marion County, Oregon.

Ward Development proposes to construct housing for the Strong Heights Subdivision Development project on Tax Lot numbers 83W11A00100, 83W11A002000, and 83W11A00300, which are located along 2250 Old Strong Road SE in the city of Salem. The project encompasses approximately 4.46 acres of privately owned land, some of which has been previously developed (see the Research Design component of this permit application for project location figures).

Ward Development proposes to develop the 29-lot subdivision in one phase, with work planned to start in Fall 2021 and intended to be completed by late Spring 2022. Housing will be conventional single-family housing on fee simple lots. Depths of the proposed work will vary by task and will follow these parameters: the deepest street cut will be approximately 24 inches, the deepest sewer cut will be approximately 8 feet, the deepest storm drain cut will be approximately 4 feet, the deepest water line cut will be approximately 4 feet. Details regarding the project layout, lots, street locations, and utility details for the planned subdivision are available in the Research Design component of this archaeological permit application for the project under Appendix A.

SWCA Environmental Consultants (SWCA), contracted through Ward Development, LLC is assisting with cultural resources compliance for this project by conducting field investigations including an intensive pedestrian survey of the entire project area with subsurface testing, which will be followed by reporting. SWCA will also conduct archaeological monitoring during ground disturbing activities should it be recommended following field investigations. SWCA is notifying the Confederated Tribes of the Grand Ronde, the Confederated Tribes of Siletz Indians, and the Confederated Tribes of the Warm Springs Reservation of Oregon regarding this project and this permit application. To our knowledge, SHPO has not created a case number for this project.

If you have any questions or concerns, please contact me at amira.ainis@swca.com or 626-529-6030.

Sincerely,

Amira Ainis

Amira Ainis, Ph.D., RPA
Project Manager, Archaeologist
amira.ainis@swca.com
D 626.639.6052 | C 626.529.6030

RESEARCH DESIGN: ARCHAEOLOGICAL INVESTIGATION FOR THE STRONG HEIGHTS SUBDIVISION DEVELOPMENT PROJECT, SALEM, OREGON

Prepared by

SWCA Environmental Consultants
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Portland, Oregon 97205
(503) 224-0333
www.swca.com

June 10, 2021

INTRODUCTION

Ward Development, LLC, proposes to construct housing for the Strong Heights Subdivision Development project on Tax Lot numbers 83W11A00100, 83W11A002000, and 83W11A00300, which are located along 2250 Old Strong Road SE in the City of Salem (Figure 1). The project encompasses approximately 4.46 acres of privately owned land in Sections 2, 11, and 12 of Township 8 South, Range 3 West of the Willamette Meridian, in Marion County, Oregon (Figure 2).

Ward Development proposes to develop the 29-lot subdivision in one phase, with work planned to start in Fall 2021 and intended to be completed by late Spring 2022. Housing will be conventional single-family housing on fee simple lots. Depths of the proposed work will vary by task and will follow these parameters: the deepest street cut will be approximately 24 inches, the deepest sewer cut will be approximately 8 feet, the deepest storm drain cut will be approximately 4 feet, the deepest water line cut will be approximately 4 feet. Details regarding the project layout, lots, street locations, and utility details for the planned subdivision are available in Appendix A.

ENVIRONMENTAL SETTING

Geology and Soils

The project area lies within Oregon's Willamette Valley. The geologic origin of the Willamette Valley began 35 million years ago (mya) when a subducting portion of the oceanic crust became attached to the continental margin, and consequently, the volcanic mountain range moved farther to the east, leaving the attached oceanic crust to be covered by shallow sea water (Hulse et al. 2002). The Coast Range rose when the subducting oceanic plate forced the western edge of the continent upward, forming dry land by 20 mya (Hulse et al. 2002). Basaltic lava flows, ice, floods, and fluvial processes further shaped the Willamette Valley into its contemporary form (Hulse et al. 2002).

According to O'Conner et al. (2001), four distinct Quaternary geologic developments occurred within the Willamette Valley and ultimately created the physiographic region as we know it today. Fluvial sands and gravels deposited between 2.5 and 0.5 mya are the oldest and widespread surficial deposits in the valley (O'Conner et al. 2001). Additionally, the tectonic lowering of the Willamette Valley led to lacustrine and more fluvial fill ranging from 420,000 to 12,000 years ago (O'Conner et al. 2001). From around 15,000 to 12,700 years ago floods from Glacial Lake Missoula flowed up the Willamette Valley from the Columbia River, depositing gravel, sand, silt, and clay (O'Conner et al. 2001). From around 12,000 years ago, the Willamette River tributaries changed flow regimes, evolving to the incised and meandering rivers that created the floodplains and gravelly channel deposits we know today (O'Conner et al. 2001).

The Willamette Valley is now a north-south oriented valley measuring about 30 km wide and 160 km long with the Cascades and Coast Ranges flanking it to the east and west, and the Columbia River to Cottage Grove Oregon to the north and south. (Aikens et al. 2011; Franklin and Dyrness 1973:15). The Willamette River is 3.8 miles east of the current project area. The small Waln Creek crosses perpendicular to the project area. Surficial sediments in the project area are mapped as McAplin silty clay loam, which consist of very deep, moderately well drained soils that formed in clayey alluvium (Natural Resources Conservation Service 2021).

Figure 1. Aerial Imagery showing the Project area.

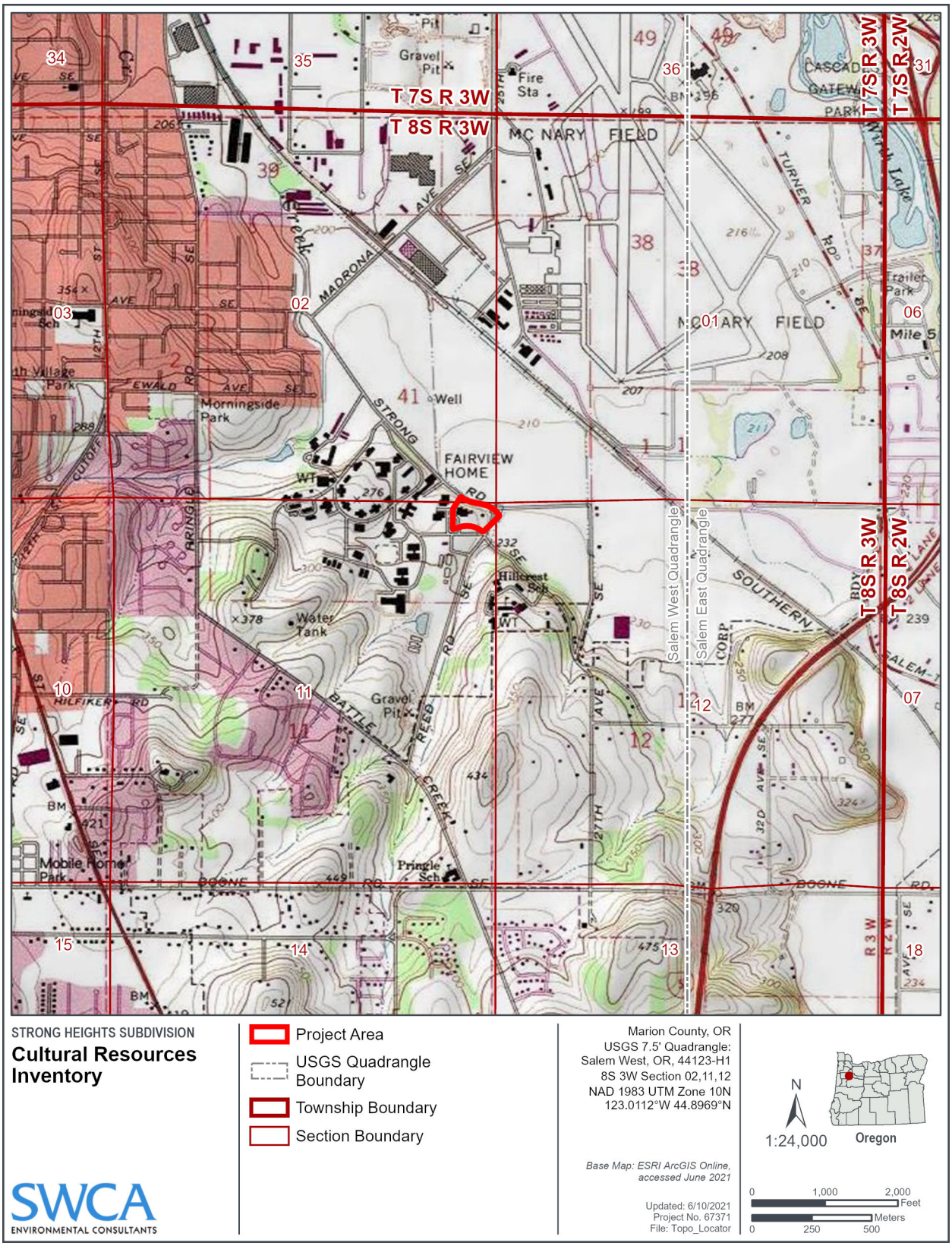

Figure 2. Topographic map showing the project location.

Flora and Fauna

Native vegetation within the project area would likely have been typical of the Willamette Valley, characterized by black cottonwood (*Populus trichocarpa*), willow (*Salix* sp.), big-leaf maple (*Acermacrophyllum*), red alder (*Alnus rubra*), and Oregon ash (*Fraxinus latifolia*) (Franklin and Dyrness 1973). Current uncultivated areas in the vicinity of the project area contain vegetation such as Douglas-fir (*Pseudotsuga menziesii*), Oregon white oak (*Quercus garryana*), and various grasses and shrubs.

The Willamette Valley contains rich faunal diversity. According to Hulse et al. (2002), there are an estimated 18 native amphibian species, 15 reptile species, 154 bird species, and 69 mammals currently inhabiting the Willamette Valley. Common fauna of this region includes chorus frog (*Pseudacris triseriata*), red-legged frog (*Rana draytonii*), non-native bullfrog, northwestern salamander (*Ambystoma gracile*), Canada goose (*Branta canadensis*), mallard (*Anas platyrhynchos*), gadwall (*Anas strepera*), wood duck (*Aix sponsa*), black-tailed deer (*Odocoileus hemionus*), coyote (*Canis latrans*), river otter (*Lontra canadensis*), and racoon (*Procyon lotor*) (U.S. Fish and Wildlife Service 2019). Before they were extirpated due to Euro-American settlement, at least six additional species called the Willamette Valley home: the California condor (*Gymnogyps californianus*), yellow-billed cuckoo (*Coccyzus americanus*), Lewis's woodpecker (*Melanerpes lewis*), black-crowned night heron (*Nycticorax nycticorax*), grizzly bear (*Ursus arctos*), and gray wolf (*Canis lupus*).

CULTURAL SETTING

Traditional Lifeways

The Native peoples of the region were recorded by early Euro-Americans as belonging to two bands of the Kalapuyan peoples, the Yamhill to the south and Atfaltai to the north, though there were many more groups of people throughout the Willamette Valley (Zenk 1990). The peoples of the Willamette Valley were all closely related but differentiated by language dialects (Thompson and Kinkade 1990).

During the winter months, the people of the Willamette Valley occupied permanent villages on the major tributary systems of the Willamette River, around the shores of lakes and other wetlands, and on prairies. The villages consisted of clusters of rectangular houses occupied by one or more families. The house walls were banked on the outside with dirt to provide additional insulation, and the floors were excavated to a depth of 2 to 3 feet (Jacobs 1945; Zenk 1990).

During the drier part of the year, families moved out of the villages and lived in temporary camps near resource-gathering areas; these temporary camps were often nothing more than shelters in a grove of trees or brush windbreaks (Zenk 1990). Western redcedar was used for house planks, posts, beams, and canoes, wherever available, and western hemlock and Douglas-fir saplings were used for poles and weirs. Red alder was used for utensils and dishes, and vine maples were used for small tools (Suttles 1990).

The most important plant food resources to the Kalapuya were camas, tarweed, and wapato. The Kalapuya burned the grasslands every year to maintain an open environment, a practice that was probably started thousands of years earlier and created the prairie and oak savanna that was characteristic of the valley (Aikens et al. 2011; Beckham 1977). Other secondary plant resources gathered by the Kalapuya included hazelnuts and various berries. Game resources used by the Kalapuya included small mammals, black-tailed and mule deer, elk, and black bear. Other non-plant foods included lamprey, grasshopper, and certain types of caterpillar. Grasshoppers were gathered from the burned-over prairies, and caterpillars were either pit-roasted or boiled (Zenk 1976, 1990).

The Kalapuyan way of life was greatly affected by European presence in North America, even before Euro-Americans began to settle in the Willamette Valley. In the 1770s, a smallpox epidemic devastated the Native American population of western Oregon, with an estimated mortality rate of 30 percent or more. Further epidemics struck the area through the 1850s, with an outbreak of malaria in the 1830s killing an estimated 90 percent of the total Kalapuya population. By 1840, only approximately 600 Kalapuyans remained (Boyd 1990). Brown (1977–1978) describes a horrific measles outbreak in 1847, affecting the Chemeketa and Chemawa people residing in their winter camp located at the northern edge of Marion Square, extending south to Mill Creek. Brown (1977–1978) states that because of the disease outbreak, nearly half of the residing Chemeketa and Chemawa lost their lives and were buried "in the flat above the Capitol Lumbering Mill" (Brown 1977–1978:30). This description overlaps the current project area, indicating that there is a high potential to inadvertently discover significant cultural material during the current project.

One of the first recorded contacts between Kalapuyans and Euro-Americans took place in 1812, when a Pacific Fur Company expedition, led by Donald Mackenzie, scouted the Willamette Valley for fur resources (Mackie 1998). By the 1830s, the first Euro-American settlers and missionaries had arrived in the Willamette Valley and established permanent settlements. Euro-American settlement of the region increased, and by the early 1850s, the Native groups of the valley signed a series of treaties in which they ceded ownership of most of their traditional lands to the U.S. government (Beckham 1990; Mackey 2004). Many of the Native Willamette groups were removed to the Grand Ronde Reservation, where their descendants still live today (Zenk 2018).

Historical sources and ethnographic accounts of the project area and vicinity suggest at least a moderate potential for archaeological resources to be present. No specific references to precontact sites or historic period occurrences was found related to the current project area. However, the location of the project area along a streambank suggests at least a moderate, and possibly high, potential to inadvertently discover significant cultural resources as waterways were used extensively by Native Peoples for thousands of years.

Historical Background

Euro-American Settlement and the City of Salem

The Willamette Valley was one of the primary destinations for the first Euro-American settlers in the Pacific Northwest. In the 1830s, the first Euro-Americans arrived in what is now Salem. Reverend Jason Lee established the Willamette Mission just north of present-day Salem, with the first log buildings constructed in 1834. In 1841, Lee built a two-story house along Mill Creek and named the new settlement Chemeketa. The settlement was later purchased by William H. Willson and renamed Salem (Lewis 2019). The Jason Lee house was the first non-Native settlement in the region and one of the earliest Euro-American settlements in Oregon Country (Lewis 2019). Lee established the Methodist Mission Great Reinforcement, located near the Kalapuyan village of Tchimikiti with the goal of converting Native peoples to Christianity (Lang 2018a).

The Methodist mission brought many Euro-American families to the region in 1840 to assist with that goal (Lang 2018a; Lewis 2019). Among those arrivals was Gustavus Hines who would be instrumental in the creation of the Oregon Institute in 1842, which eventually became Willamette University (Lang 2018b).

Beginning in 1841, a massive migration of Americans crossed the continent on the Oregon Trail, generally departing from Missouri and crossing to The Dalles, where they then traveled down the

Columbia River or travelled overland to the Willamette Valley (Bassett et al. 1998). The population of the Willamette Valley and City of Salem increased greatly due to the arrival of these thousands of migrants.

The influx of migrants rapidly transformed the mission into an urban city. William H. Willson, the "founder" of the city of Salem, platted the town in 1846. Salem became the territorial capital in 1851, and by 1864 it was the official capital (Lewis 2021). It was not until 1949 when Salem's western boundary expanded across the Willamette River, incorporating West Salem into the city where the current project area is located (Lewis 2021).

Land Development of the Project Area

SWCA archaeologists reviewed historic documents, General Land Office (GLO) maps, and historic aerial images to better understand the history of land use in the project area.

The earliest historical maps indicate two homesteads were present within the project area. A farm in the southeast quadrant of Section 2 is identified as belonging to Joseph E. Parrot. A farm in the north half of Section 12 is identified as belonging to Enoch Garrison. An unidentified road runs north south through the eastern half of Section 12 (General Land Office [GLO] 1852). The GLO cadastral map also indicates a second north south road approximately 1.25 mile west of Section 11.

In 1907, the land immediately to the west of the project area became home to State Institution for the Feeble-Minded. By 1908, the first patients began arriving as transfers from the Oregon State Hospital (Oregon Secretary of State Archives 2020). Between 1909 and 1915 there were 29 documented burials on the property. It is possible more burials occurred from 1911 to 1915 due to an administrative change in filing procedures (Darby 2004). The original institution consisted of an administration building, a laundry, a boiler and a dormitory (Oregon Secretary of State Archives 2020). During the following years 9 cottages would be built and a section of land was cleared for farming purposes. The institution would undergo improvements and name changes through the 1930's and 40's. In 1965 it became the Fairview Hospital and Training Center. Agricultural use was subsequently phased out and by the late 70's all the farming elements of the property were removed.

SWCAs review of historical aerial imagery from 1954 and 1955 shows a farmhouse in the northeast corner of the project area. The land between the project area appears open and agricultural. By 1982, aerial photos indicate the state hospital grounds had expanded into the western half of the project area. The hospital was finally closed on March 1, 2002. In 2004 the land was purchased by the Sustainable Development Inc. (Statesman Journal 2004). In 2010, arsonists burned one of the cottages that was still standing. In 2016 the remaining cottages were demolished, and the underground utilities were removed (Lynn 2016).

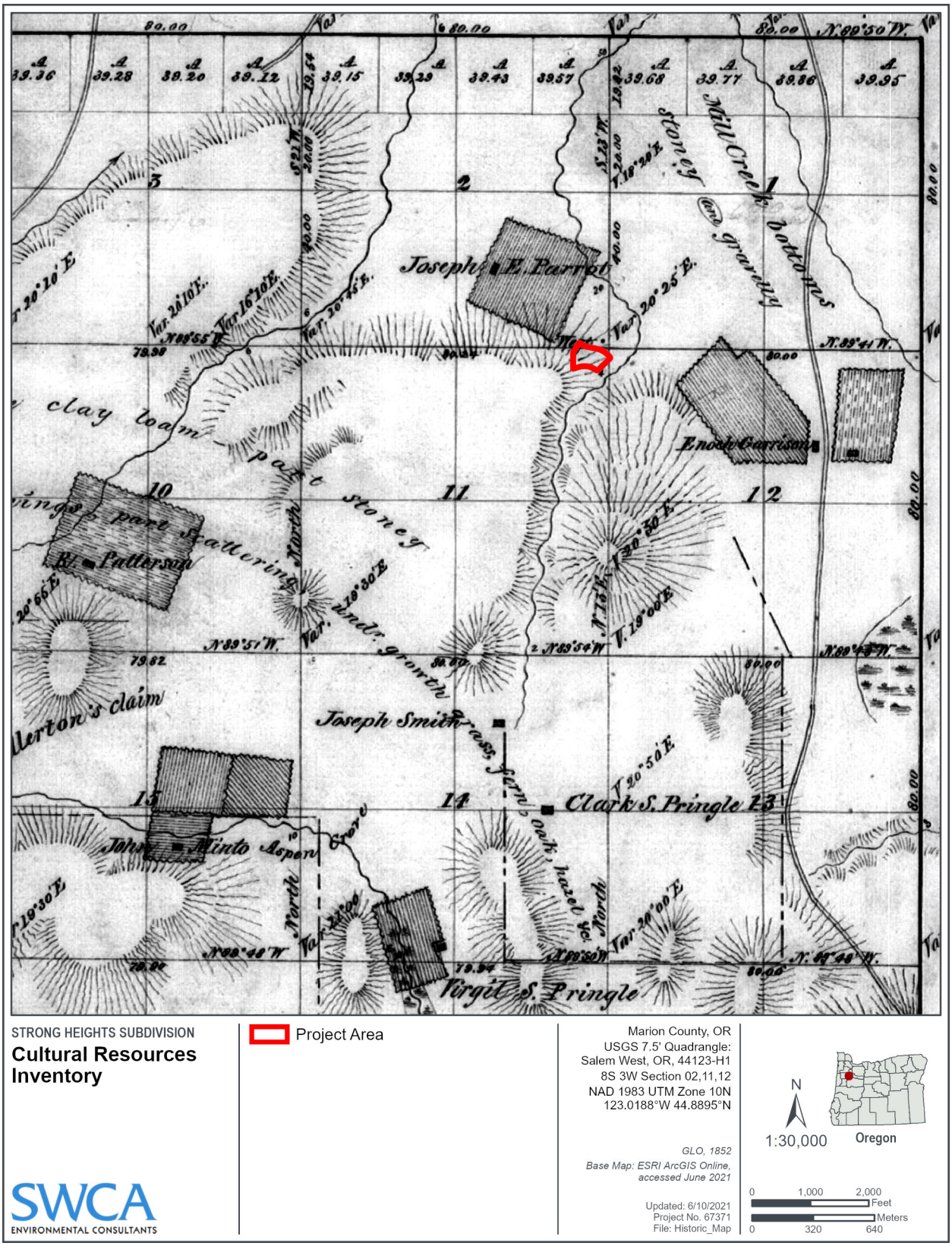

Figure 3. 1852 General Land Office Map showing the project area (GLO 1852).

PREVIOUS CULTURAL RESOURCE STUDIES

To gain more understanding for archaeological conditions in and near the project area, SWCA archaeologists reviewed records from the Oregon SHPO online records database (OARRA) to inventory the types of cultural resources previously recorded in or near the project area, and to determine if any cultural resource surveys have been conducted in the vicinity of the project area (Table 1). There have been 23 cultural resources studies conducted within 1 mile of the project area. Three of the studies overlap the project area itself (Ellis 1994; Darby 2004 and 2007).

Ellis' (1994) survey and testing program included the area just north and east of the current project area and extended to the northwest, northeast, east and southeast of the current project area. Several resources were recorded and updated as a result of this survey and testing effort (see section below and Table 2). Darby's (2004) survey included the current project area and extended to the west and south; several archaeological sites and isolated finds were recorded and updated as a result of this survey including three resources located within the project area (see section below and Table 2). Darby (2007) also conducted a remote sensing study that overlays the project area and identified three possible locations for the Historic-period Feeble Minded Cemetery, all of which are at least 0.25 miles south of the project area.

Table 1. Previous Cultural Resource Investigations Within Approximately 1 Mile of the Project Area

SHPO No.	Methods	Survey Project *Citation*	Distance from Project Area	Resources Within 0.5 Mile of Project Area
14618	Literature review, pedestrian survey, subsurface testing	Cultural Resource Evaluation of the Proposed Fairview Industrial Park, Salem, Oregon. *Ellis 1994*	Overlaps	35MA142, 35MA144, IS-93/125-1, IS-93/125-5, IS-93/125-7
19012	Literature review, pedestrian survey, subsurface survey	Archaeological Cultural Resources Inventory and Assessment – Fairview Training Center. *Darby 2004*	Overlaps	35MA142, 35MA193, 35MA194, 35MA195, ISO-1, ISO-2, ISO-3, ISO-4, ISO-5
24555	Remote sensing	Cultural Resources Remote Sensing Report for the Cemetery for the Feeble Minded and the Cary Family Cemetery *Darby 2007*	Overlaps	None
23693	Literature review, pedestrian survey, subsurface survey	Cultural Resources Investigation of the Northern Section of the Simpson Hill Development Site, Marion County, Oregon *Hale and Roulette 2010*	0.2 mile SW	None
16758	Literature review, pedestrian survey, subsurface survey	Cultural Resources Survey of Level 3's Proposed Fiber Optic Line from Eugene to Portland, Oregon. *Fagan et al 1998*	0.25 mile NE	None
20805	Damage Assessment	Summary of AARs Damage Assessment of Archaeological Sites 35MA142 and 35MA193 at the Pringle Creek Community Development Site, Salem, Oregon. *Roulette 2007*	0.26 mile NW	35MA142, 35MA193
22415	Literature review, pedestrian survey, subsurface survey	Archaeological Survey of Part of the Simpson Hill Development Site, Marion County, Oregon *Hale and Roulette 2009*	0.4 mi SW	35MA277
1292	NA	Personal notes on artifact possession – Undetermined author	0.45 mi W	None

SHPO No.	Methods	Survey Project *Citation*	Distance from Project Area	Resources Within 0.5 Mile of Project Area
13616	Pedestrian survey, subsurface testing	Cultural resource investigations at the proposed Pringle Road Middle School Site, Salem, Oregon. *Burnett and Fagan 1993*	0.5 mile W	None
28612	Construction monitoring	Cultural Resources Monitoring Report: City of Salem CWPTC Project *McClintock and Sheldon 2016*	0.6 mi E	None
27476	Literature review, pedestrian survey, subsurface survey	Cultural Resources Survey for the Kuebler Boulevard Widening Project *Dinwiddie and Perrin 2015*	0.7 mi S	None
7554	Pedestrian survey, subsurface survey	Cultural Resource Overview and Inventory of the Hayesville Interchange-Battle Creek Interchange Pacific Highway, Marion County, Oregon. *Minor and Beckham 1986*	0.75 mile SE	None
8981	Subsurface testing	Data Recovery Plan: Mill Creek Prehistoric Site Complex, Interstate 5 and Santiam Highway Interchange, Marion County, Oregon. *Minor 1988*	0.75 mile SE	None
21168	Literature review, pedestrian survey	Archaeological Survey of Bridge 07440A (Interstate 5 over the Union Pacific Railroad at Milepoint 252.13), Marion County, Oregon. University of Oregon Museum of Natural and Cultural History Research Report No. 2007-024 *Cabebe 2007*	0.75 mi SE	None
21172	Literature review, pedestrian survey	Archaeological Survey of Bridge 07441A (Interstate 5 over Marietta Street SE at Milepoint 251.79), Marion County, Oregon. University of Oregon Museum of Natural and Cultural History Research Report No. 2007-027 *Cabebe 2007*	0.75 mi SE	None
21173	Literature review, pedestrian survey	Archaeological Survey of Bridge 07538A (Interstate 5 over Boone Road SE at Milepoint 251.34), Marion County, Oregon. University of Oregon Museum of Natural and Cultural History Research Report No. 2007-028 *Cabebe 2007*	0.75 mi SE	None
5809	Pedestrian survey	Report on the archaeological survey of the proposed South Commercial-North Santiam Highway Project, Marion County. *Pettigrew 1984*	0.8 mi S	None
6353	Pedestrian survey	Report on the additional archaeological survey of the proposed South Commercial-North Santiam Highway Project, Marion County. *Pettigrew 1984*	0.8 mi S	None
6354	Pedestrian survey, subsurface survey	Archaeological Reconnaissance of the Salem Parkway, Marion County, Oregon. *Pettigrew 1985*	0.8 mi S	None
15114	Literature review, pedestrian survey, subsurface survey	Archaeological Testing and Evaluation of The Pringle Creek Site, 35MA136. *Ozbun and Fagan 1995*	0.8 mi W	None
21109	Literature review, pedestrian survey	Archaeological Survey of the Proposed I5 @ Kuebler Interchange Project, Marion County (ODOT Key No. 14054, Museum report 2007-010). *Connolly 2007*	0.8 mi SE	None

SHPO No.	Methods	Survey Project *Citation*	Distance from Project Area	Resources Within 0.5 Mile of Project Area
26658	Literature review, pedestrian survey, subsurface survey	Cultural Resource Survey for the Madrona Avenue / 25th Street SE Improvement Project, Marion County, Oregon *Davis et al 2014*	0.8 mi N	None
27371	Literature review, pedestrian survey, subsurface survey	Additional Cultural Resource Survey for the Madrona Avenue / 25th Street SE Improvement Project, Marion County, Oregon Memorandum *Davis 2015*	0.8 mi N	None
25068	Literature review, pedestrian survey, subsurface survey	Cultural Resource Survey for the SE Kuebler Boulevard Development Project Marion County, Oregon *Windler et al 2012*	0.9 mi S	None

Note: SHPO = State Historic Preservation Office.

PREVIOUSLY RECORDED ARCHAEOLOGICAL RESOURCES

The OARRA database indicates that there are three previously identified archaeological resources including one site and two isolates within the project area (Table 2). An additional 21 resources have been previously recorded within 0.5 mile of the project area including eight Prehistoric sites, one Historic-period site, nine Isolated finds, and three possible locations of the Historic-period Feeble Minded Cemetery (Table 2).

One historic-period archaeological site is located within the project area, 35MA195, was identified during cultural resources investigations by Melissa Darby in 2004. Darby (2004) also recorded two isolates within the project area. ISO-2 is comprised of three fire cracked rocks that appear to have been graded during construction of the parking lot, and ISO-3 is a flow blue ceramic fragment that dates to the turn of the century and was found in an isolated context in spite of good visibility due to mole hills. Darby (2004) also recorded and updated records for several resources within 0.5 miles of the current project area including five Prehistoric sites, two of which are lithic scatter and camp sites, two are rock cairn sites, and one is a petroglyph site; two additional Historic-period isolated finds and one multicomponent isolated find; and three possible locations for the Historic-period Feeble Minded Cemetery.

Ellis conducted an extensive survey north of the project area in 1994 and recorded and updated records for two sites and three isolated finds within 0.5 miles of the project area. Site 35MA144 is roughly 0.04 miles east of the project area and was recorded by Ellis (1994) as a Prehistoric lithic scatter and possible camp site due to the presence of fire cracked rocks. Test excavations revealed that artifacts had been disturbed by agricultural activities and defined the site dimensions as 100-m N-S × 70-m E-W. Test excavations at Site 35MA142 revealed several intact strata and produced 101 artifacts with two obsidian hydration readings suggesting a Late Archaic date for the site of less than 1100 years ago (Ellis 1994).

The remainder of the previously recorded archaeological sites are more than 0.25 miles from the project area (see Table 2) and will not be affected in any way by the current project.

Table 2. Archaeological Sites Within Approximately 0.5 Mile of the Project Area

Resource No.	Type	Description	NRHP Eligibility	Distance from Project Area
35MA195	Historic-period farmstead	Cartwright/Payne House Site	Unevaluated	Within
ISO-2	Prehistoric Isolate	Fire cracked rocks	Not eligible	Within
ISO-3	Historic-period isolate	Ceramic fragment	Not eligible	Within
35MA144	Prehistoric	Lithic scatter	Not eligible	0.04 mi E
93/125-5	Prehistoric isolate	Six flakes	Not eligible	0.11 mi NE
ISO-1	Historic-period isolate	Window glass	Not eligible	0.12 mi NW
ISO-5	Multicomponent isolate	Historic refuse and 1 flake	Not eligible	0.23 mi NW
N/A	Historic-period	Possible location for Feeble Minded Cemetery	Unevaluated	0.25 mi SW
35MA142	Prehistoric	Lithic scatter and camp site	Unevaluated	0.26 mi NW
N/A	Historic-period	Possible location for Feeble Minded Cemetery	Unevaluated	0.27 mi S
Site 4	Prehistoric	Rock cairn	Unevaluated	0.28 mi S
Site 3	Prehistoric	Rock cairn	Unevaluated	0.3 mi S
IS-93/125-7	Prehistoric isolate	Notched net weight	Not eligible	0.3 mi N
AAR 979-1i	Prehistoric isolate	CCS flake	Not eligible	0.31 mi S
N/A	Historic-period	Possible location for Feeble Minded Cemetery	Unevaluated	0.33 mi SW
35MA193	Prehistoric	Lithic scatter	Unevaluated	0.34 mi NW
ISO-4	Historic-period	Flat head nails	Not eligible	0.34 mi SW
AAR 790-3i	Prehistoric isolate	2 CCS flakes	Not eligible	0.36 mi S
35MA13	Prehistoric	Lithic scatter	Unevaluated	0.38 mi NE
IS-93/125-1	Multicomponent isolate	Lithic scatter and ceramic fragment	Not eligible	0.4 mi NW
35MA194	Prehistoric	Rock art - Petroglyph on boulder	Unevaluated	0.43 mi SW
35MA136	Prehistoric	Lithic scatter	Unevaluated	0.46 mi W
35MA277	Historic-period	Refuse scatter/possible homestead	Unevaluated	0.46 mi S
AAR 790-4i	Prehistoric isolate	Projectile point and flake	Not eligible	0.48 mi S

Note: NRHP = National Register of Historic Places.

PREVIOUSLY DOCUMENTED HISTORIC PROPERTIES

The Oregon Historic Sites database and map indicates that there are 2 previously recorded built environment resources within 1 mile of the current project area (Table 3). One built environment resource is Eligible for the NRHP and is located less than 0.25 miles from the current project area. The second built environment resource is a non-eligible home over 0.5 mile to the northwest. None of these resources will be affected in any way by the current project.

Table 3. Built Environment Resources Adjacent to the Project Area

National Register / SHPO ID	Property Address	Build Date	NRHP Eligibility	Distance from Project Area
649412	2450 Strong Rd SE, Salem, OR	1950	Eligible/ Contributing	**0.16 mile S**
654042	1361 Kipling Cr SE, Salem, OR	1910	Non eligible/ non-contributing	**0.86 mile NW**

Note: NRHP = National Register of Historic Places.

RESEARCH DESIGN AND METHODS

The research design for this archaeological permit application has four components. The first component involves intensive pedestrian survey and subsurface testing to determine if significant archaeological resources are present within the project area. The second component consists of archaeological monitoring of ground-disturbing activities during streambank repair and stabilization efforts, should this be recommended by the SHPO. The third component details the testing and evaluation approach to be followed should an archaeological resource be found. The fourth component involves laboratory and curation procedures for collected artifacts should they be uncovered.

All four components will be directed at answering the following research questions, which will be modified to be more specific based on any information that SWCA is able to gather as a result of the fieldwork and further background research:

1. *Are archaeological sites or isolates present within the survey area? If so, what is the horizontal and vertical extent of any archaeological deposits within the survey area?*
   Determining the extent of an identified archaeological resource within the project area will aid in understanding the distribution of cultural remains and how vulnerable those remains may be to potential ground-disturbing project activities. This information could also provide evidence for determining the frequency and duration of occupation at the location: was it used habitually through time, used occasionally, or used only once?
2. *What was the primary function of the archaeological site?*
   Understanding the spatial arrangements among activities within a site and between sites within a region is helpful to understanding precontact land use. For example, concentrations of artifacts may suggest evidence of discrete tasks. What role did the site play in the larger settlement system? The presence of flaked-stone artifacts may suggest activities such as hunting, faunal processing, or stone tool manufacture or maintenance that may have occurred at the site. An analysis of the lithic tools and debitage present at the site will allow for a more thorough understanding of the role that flaked-stone technologies played. For historic-period sites, investigations may be able to determine if there is evidence of activities such as logging, ranching, herding, and/or domestic occupation.
3. *When was the site used?*
   The temporal range of the resource is a key factor in evaluating it within its historic context. Excavations at newly recorded precontact sites may reveal deposits of material suitable for radiometric dating or temporally diagnostic artifacts. The discovery of diagnostic precontact tools would allow a comparison with projectile point types identified and dated at other sites along the Columbia River and the Coastal Foothills. For historic-period sites, the investigations may be able to determine if the archaeological evidence supports the age of occupation suggested by the

historical research. The investigations will also explore additional historical research that may be able to shed light on the duration of occupation or site use.

4. *To what degree have modern disturbances affected the site constituents?*
   If archaeological resources are identified during cultural resources investigations, are the observed artifacts found *in situ* or from secondary context? Historic-period artifacts are anticipated because of the long period of residential use and industrialization along Oxford and 14th Street. However, if precontact artifacts are identified, how has this history of urbanization affected their provenience?

Research Methods: Survey and Testing

SWCA's field archaeologist will conduct an intensive pedestrian survey along with subsurface testing including shovel probing and auguring of the project area prior to commencement of project work. Following an intensive pedestrian survey, SWCA field crews will conduct shovel probing and auguring in unpaved areas where ground-disturbance is planned. Up to fifty shovel probes will be excavated to determine if archaeological resources are present and to record any stratigraphic changes across the project area. No shovel probes will be excavated in areas that are hardscaped.

The shovel probes will be at least 30 cm in diameter and will be excavated in 10-cm levels to a depth of at least 50 cm below the surface (cmbs) and until culturally sterile soil is encountered for two consecutive levels (assuming that fewer than 10 artifacts are identified in the whole probe). Shovel probes will be terminated at shallower depths if the count of artifacts in the probe reaches 10, in which case the resource would then be identified as a site. A bucket auger will be used to sample more deeply buried sediments up to 200 cmbs. All soils will be screened through ¼-inch mesh hardware cloth. Archaeological materials recovered from shovel probes will be collected. A sample of completely excavated shovel probes, artifact concentrations, and/or features will be photographed in plan view.

As a historic-period site (35MA195, the Cartwright/Payne House site) was previously documented in the project area (Darby 2004) but has since been disturbed and impacted to an unknown degree by the demolition of a modern residence adjacent to the site, shovel probe testing may result in excavation of this previously recorded historic-period site as the vertical parameters of this site were never established and remain unknown. If a new site or isolate is identified, SWCA will excavate additional shovel probes to delineate its boundaries. In the event that archaeological materials are encountered in a shovel probe, an additional probe will be excavated no more than 10 m beyond the positive to determine if a site is present. During boundary delineation, the sediment from all shovel probes will be screened through ¼-inch mesh hardware cloth. Boundary delineation shovel probes will be limited to the project area.

If precontact or historic-period cultural materials are found within the project area, SWCA field personnel will document the cultural resource(s) on field forms designed to capture the information required for Oregon State site and isolate forms. At each site or isolate, archaeologists will describe the environmental and cultural characteristics of the resource, including descriptions of cultural materials and boundaries. SWCA will prepare scaled sketch maps and will maintain a standardized log of all the photographs taken. The location of artifacts, as well as all site boundaries, surface features, and shovel probe locations will be recorded with Samsung tablet equipped with Collector software. Archaeological materials recovered from shovel probes will be collected, then catalogued and analyzed, as explained under the laboratory methods below. Archaeological resources will be recorded on the online Oregon SHPO site form.

Research Methods: Monitoring

If archaeological monitoring is recommended for this project, the following methods will be followed. The Archaeological Monitor will be a professional archaeologist working under the supervision of the Project Archaeologist, who will be an individual meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology. The Archaeological Monitor will be present during ground-disturbing excavation activities in areas where native soils may be visible and will examine sediments and spoils removed during project activities for the presence of cultural materials. The Project Archaeologist will communicate with cultural resources staff at the Confederated Tribes of the Grand Ronde, Confederated Tribes of Siletz, and Confederated Tribes of Warm Springs prior to the start of project work. SWCA will inform all interested Tribal entities about the project and monitoring schedule.

The project will use an Inadvertent Discovery Plan (IDP) in addition to this research design with a detailed communication plan in the event of an inadvertent discovery during archaeological monitoring. The Archaeological Monitor will be present during ground-disturbing activities in areas where sediments containing cultural materials are likely to be exposed as a result of project-related activities.

In the event that potentially significant archaeological resources are identified during archaeological monitoring of construction, the Archaeological Monitor will request a pause in construction activities in the area of discovery. The Archaeological Monitor will be allowed to access any pre-contact and historical archaeological materials exposed. Safety permitting, the Archaeological Monitor may enter excavations to examine exposed sidewalls and surfaces more closely. The Archaeological Monitor may also request that project personnel and modify construction procedures to expose subsurface stratigraphy in thin lifts in an effort to document cultural resources. Initial evaluation efforts will focus on determining the vertical and horizontal extent of any potentially significant archaeological deposit within the limits of construction work. Excavation shoring will be the responsibility of the construction contractor. The Archaeological Monitor will be responsible for maintaining daily work records and documenting any discoveries. In the case of a discovery when the Archaeological Monitor is present, the applicable procedures and the communication protocol from the section below on inadvertent discoveries will be followed.

The following protocol will be implemented if archaeological resources that appear to be older than 75 years of age are encountered:

1. If a potential cultural resource is discovered, construction work will temporarily pause in the immediate location of the find. The potential cultural resource will be left in place, and the personnel who made the discovery will notify the *Construction Manager*. The *Construction Manager* will notify the *Project Manager* to request that the *Archaeological Monitor* identify the nature of the discovery. If the *Archaeological Monitor* determines that the discovery is not a pre-contact or historical cultural resource, then construction may resume. If the discovery is determined to be a pre-contact or historical cultural resource, then additional steps are required.

2. If the discovery is related to Native American activities, or involves potentially significant concentrations of historical materials, then the *Archaeological Monitor* will notify the *On-Site Project Manager* to stop all work within 50 feet of the find. The *Project Manager* will notify the *Construction Manager*, *SHPO*, and the Tribes. The *Archaeological Monitor* or *Project Archaeologist* may assist the *Project Manager* with these notifications. The contractor will secure and protect the discovery during the work stoppage.

3. The *Archaeological Monitor* will document all pre-contact and historical cultural resources on standard forms. Initial efforts will focus on establishing the nature, provenience, and integrity of

any discovery. Documentation methods may include photographs, sketches, scaled drawings, and written descriptions. Surface samples may be taken for identification or analysis by a specialist, but the discovery will not be excavated into without first obtaining an excavation permit from SHPO. The *Construction Manager* will ensure that sufficient time and safe conditions are granted to document and evaluate the discovery.

4. The *Archaeological Monitor* or *Project Archaeologist* will brief the *Project Manager* on the cultural significance of the discovery on-site or by telephone after initial evaluation. Documentation of the discovery will then be assembled and forwarded to the *Project Manager*. The *Project Manager* will submit all cultural resources documentation to the *SHPO* and the Tribes. The *Project Archaeologist* may assist the *Project Manager* with these submittals.

5. The *SHPO* will consult with the *Project Manager* and the Tribes to determine next steps. Project activity will be prohibited within 50 feet of the discovery and may not proceed until the consulting parties have concluded that further construction activities will not adversely affect the cultural resource. If the discovery is not considered significant, then the *SHPO* will issue notice to proceed to the *Project Manager*, and the *Project Manager* will notify the *Project Archaeologist*, the *Archaeological Monitor*, and the *Construction Manager* that work in the area of the discovery may resume. The *Project Archaeologist* may assist the *Project Manager* with these steps.

6. If the discovery is considered significant, and adverse effects to the cultural resource cannot be avoided by altering construction means and methods, then the *Project Manager* will retain the *Project Archaeologist* to develop a plan to mitigate negative impacts to the cultural resource in consultation with the *SHPO* and the Tribes.

7. Additional archaeological investigations or historical research may be required to appropriately evaluate the significance of the discovery. The *Project Manager* may ask the *Construction Manager* to assist with additional archaeological investigations: for example, removing fill from a historic surface to allow for excavation. Additional archaeological work or project excavations within an identified archaeological site may be covered under the research design purposed in this document.

8. The *Project Archaeologist* will submit a report describing the results of any archaeological investigations completed during construction to the *Project Manager* at the conclusion of the project. The *Project Archaeologist* can also submit interim memos to the *Project Manager* describing preliminary results during construction, if requested. The *Project Manager* or the *Project Archaeologist* will forward final cultural resources reports prepared for the project to the *SHPO* and the Tribes. If applicable, the report will include one or more Oregon State Archaeological Site Inventory Forms with maps, photographs, and descriptions of the cultural materials that were identified during construction.

9. The *SHPO* will inform the *Project Manager* when it is safe for work to resume, and the *Construction Manager* will ensure that no work occurs near the discovery until notice to proceed is received. If *SHPO* approves, construction work may proceed elsewhere on-site during the localized work stoppage. Depending on the significance of the discovery, *SHPO* may request a halt to all ongoing construction excavations in the project area. *SHPO* may alternatively request that ongoing construction excavations be monitored by a professional archaeologist.

Research Methods: Testing and Evaluation

Should an archaeological resource be identified during the survey or monitoring phase, and if through coordination with SHPO, the City of Salem, and Tribal entities it is determined that the resource will potentially be affected by project activities, SWCA will excavate up to ten 50 × 50–cm quarter test units (QTUs) to better explore the stratigraphic context of the find and to assess the resource's eligibility for the National Register of Historic Places (NRHP). QTUs will be excavated in 10-cm levels and will proceed to at least 50 cm below the surface and until culturally sterile soil is encountered for two consecutive levels. QTUs may be extended in depth with an auger if hand-excavation is no longer feasible. During testing and evaluation, the sediment from all QTUs will be screened through ⅛-inch mesh hardware cloth. Up to 10 QTUs will be excavated within the project area.

QTUs will be numbered sequentially, and QTU forms will be maintained that include the site number, QTU number, soil characteristics, and results by level. All precontact artifacts encountered within the QTUs will be collected and bagged by level and stratum, as applicable. We will collect all cultural material that is clearly not modern. Completely excavated QTUs, artifact concentrations, and/or features will be photographed in plan view.

Research Methods: Laboratory and Curation

Cultural artifacts encountered during subsurface testing will be collected. The provenience of collected artifacts will be referenced to an established datum point. Any artifacts collected in the course of this project will be cataloged, described, and analyzed in SWCA's laboratory using appropriate non-destructive techniques and protocols. The artifact catalog will be included in an appendix of the archaeological inventory report prepared at the conclusion of this project. SWCA will send the Tribes a copy of the artifact catalog and they will be given time to review. The artifact assemblage and appropriate copies of all field notes and documentation will then be curated at the University of Oregon Museum of Natural and Cultural History.

Discovery of Human Remains

If human remains are identified at any time during this project, any excavation at that location will cease and the discovery area will be secured from further disturbance. The county coroner and the Marion County Sheriff's Office will be immediately notified. Should the coroner and sheriff determine that the remains do not represent a crime scene and are historic or precontact in origin, pursuant to ORS 97.745 (4), SWCA will promptly notify the Oregon SHPO and City of Salem, the Commission of Indian Services (CIS), and the appropriate tribes.

Reporting and Curation

SWCA will produce a report detailing the results of the archaeological survey, monitoring, and any additional investigations conducted that conforms to Oregon SHPO guidelines. Minimally, this report will include a project description, detailed historic context, expectations, methods, results of the investigations, and conclusions and recommendations. Appropriate artifact photographs and analysis tables will be provided, if applicable. Complete artifact inventories will be provided as an appendix to the report. Archaeological resource forms will be updated using the Oregon SHPO online site and isolate forms and new resources forms will be prepared for each newly recorded resource.

All records, maps, photographs, and cultural materials will be cataloged and curated according to state and federal standards. Collected artifacts and copies of all field records and forms under this SHPO permit will be curated with the Oregon Museum of Natural and Cultural History.

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APPENDIX A

Engineering Plans for:

Strong Heights Subdivision Development Project, Salem, Oregon.

DRAWINGS FOR:

STRONG HEIGHTS SUBDIVISION

TAX LOTS: 083W11A00100
083W11A00200
083W11A00300

FOR:

WARD DEVELOPMENT, LLC
6998 Chakarun Lane SE
Salem, OR 97306

Steve Ward
503-931-3460
sward@westech-eng.com

DRAWING INDEX

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

ENGINEER:

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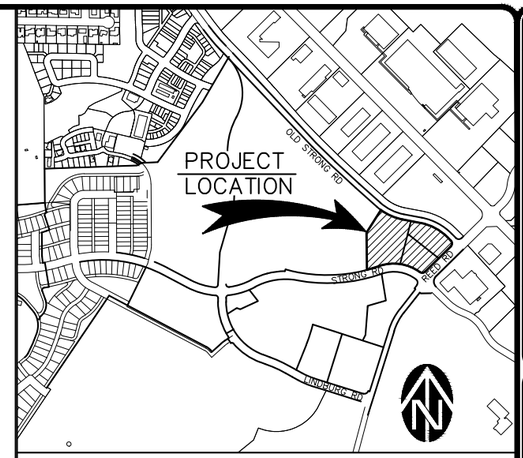

VICINITY MAP

GENERAL LEGEND

ITEM	PROPOSED	EXISTING
SANITARY SEWER		SS
STORM DRAIN		SD
WATER		W
GAS		G
TELEPHONE		T
POWER		P
FENCE	X X	X X
BARRICADE		
TELEPHONE MANHOLE		T
TELEPHONE PEDESTAL		TEL
SANITARY SEWER MANHOLE	S	S
STORM DRAIN MANHOLE	D	D
CATCH BASIN		
FIRE HYDRANT AND VALVE		
WATER METER		
WATER VALVE		
POWER POLE		
POWER POLE W/ANCHOR		
POLE W/LUMINARE		
LIGHT POLE		
SIGN POST		
MAILBOX		
HEDGE OR BRUSH		
TREES		

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
1			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
0 1"

DSN. SAW
DRN. AR
CKD. SAW
DATE: FEB 2021

REVIEW
REGISTERED PROFESSIONAL ENGINEER
STEVEN A. WARD
RENEWS: 6/30/2022

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

WARD DEVELOPMENT, LLC
STRONG HEIGHTS SUBDIVISION

COVER SHEET, VICINITY & LOCATION MAPS, DRAWING INDEX

DRAWING
C0.0

JOB NUMBER
2720.7000.0

X REMOVE TREE

0 15 30 60
(feet)

OLD STRONG RD SE

EXIST 50' ESMT TO COS

CRUSHED CONCRETE/GRAVEL

CRUSHED CONCRETE/GRAVEL

CRUSHED CONCRETE/GRAVEL

CONC

ASPHALT

ASPHALT

STRONG RD

REED RD (MR 25)

250.91
PVC 4" VERTICAL 2'

251.23
PVC 2" VERTICAL 2'

PED WTR

248.86
PVC 2" VERTICAL 3'

SN THE GROVE
SN SHARP COR

REVISIONS				
NO.	DATE	DESCRIPTION		BY
1				

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING 1"
IF NOT ONE INCH, ADJUST SCALES ACCORDINGLY

DSN. SAW
DRN. AR
CKD. SAW
DATE: FEB 2021

REGISTERED PROFESSIONAL ENGINEER
STEVEN A. WARD
EXPIRES: 12/31/2022
REVIEW
RENEWS: 6/30/2022

WESTECH ENGINEERING, INC.
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WARD DEVELOPMENT, LLC
STRONG HEIGHTS SUBDIVISION

EXISTING CONDITIONS

DRAWING
C1.0

JOB NUMBER
2720.7000.0

TREE TABLE

#	SPECIES	DBH	DRIP
1	FIR	28"	22'
2	FIR	33"	25'
3	FIR	31"	23'
4	FIR	31"	22'
5	FIR	24"	19'
6	FIR	23"	20'
7	FIR	19"	18'
8	FIR	23"	27'
9	FIR	46"	18'
~~10~~	STUMP		
~~11~~	STUMP		
~~12~~	PINE	25"	17'
~~13~~	PINE	34"	18'
~~14~~	PINE	41"	23'
15	CEDAR	64"	19'
~~16~~	DECD	46"	18'
~~17~~	DECD	12"	10'
~~18~~	DECD	30"	17'
19	SEQUO	90"	27'
~~20~~	SILVER BIRCH	17"	12'
~~21~~	SILVER BIRCH	17"	12'
~~22~~	SILVER BIRCH	17"	12'
23	SEQUO	66"	22'
~~24~~	ENGLISH WALNUT	21"	20'
~~25~~	ENGLISH WALNUT	23"	21'
~~26~~	BLACK WALNUT	9"	5'
~~27~~	BLACK WALNUT	10"	15'
~~28~~	CEDAR	35"	20'
~~29~~	CEDAR	24"	19'
30	OAK	38"	33'
~~31~~	SEQUO	81"	22'
~~32~~	FIR	53"	19'
~~33~~	CEDAR	56"	15'

TREES/STUMPS REMOVED=20=60.6%
TREES SAVED=13=39.4%

VERIFY SCALE
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IF NOT ONE INCH, ADJUST SCALES ACCORDINGLY
DSN. SAW
DRN. AR
CKD. SAW
DATE: FEB 2021

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

REGISTERED PROFESSIONAL ENGINEER
STEVEN A. WARD
OREGON JULY 19, 2005
RENEWS: 6/30/2022

REVIEW

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

WARD DEVELOPMENT, LLC
STRONG HEIGHTS SUBDIVISION

TREE CONSERVATION PLAN

DRAWING
C1.1

JOB NUMBER
2720.7000.0

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PARCEL SUMMARY

MIN LOT SIZE	2,590 SF	
MAX LOT SIZE	5,959 SF	
AVG LOT SIZE	3,559 SF	
PARCEL SIZE	194,288 SF	4.46 AC
29 / 4.46 =	6.5 LOTS/AC	2.37 AC
HOA	91,088 SF	2.09 AC

ALL LOTS TO HAVE WORK UNIT OR ADU OVER THE GARAGE.

BUILDING/D/W ENVELOPE LEGEND

0 15 30 60 (feet)

CURVE DATA

	RADIUS	LENGTH	DELTA
(A)	280'	48.8'	N80°00'45"E
(B)	50'	89.6'	N12°43'39"W
(C)	547.4'	77.6'	N81°52'30"E
(D)	240'	144.4'	N55°31'00"E
(E)	120'	70.9'	N56°09'36"E

MINOR ADJUSTMENTS

1. DRIVEWAY DEPTH OF 24' VS 20' ALLOWED (20% VARIANCE).
2. ADD 2 LOTS TO THE AMENDED, AMENDED FAIRVIEW REFINEMENT PLAN II.

NO.	DESCRIPTION / REVISIONS	DATE	BY
1			

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DATE: FEB 2021

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 16, 1976
STEVEN A. WARD
REVIEW
RENEWS: 6/30/2022

WESTECH ENGINEERING, INC.
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WARD DEVELOPMENT, LLC
STRONG HEIGHTS SUBDIVISION

LOT LAYOUT

DRAWING
C2.0

JOB NUMBER
2720.7000.0

LEGEND

AU–RES ADAPTIVE RESTRICTED

AU ADAPTIVE USE

VC VILLAGE CENTER ZONING

MI MEDIUM INTENSITY

PRINGLE COMMUNITY

OLD STRONG ROAD

FAIRVIEW INDUSTRIAL PARK

TL100

AU

TL300

TL200

CITY PARK

AU

LINDBURG DRIVE

LEGACY HEIGHTS

AU–RES

STRONG ROAD

AU

VILLAGE CENTER NE

VC

FAIRVIEW ADDITION

VILLAGE CENTER NW

VC

VILLAGE CENTER SE

MWIC "THE GROVE"

VC

HERITAGE SCHOOL

AU

MI

REED ROAD

OREGON BEHAVIORAL HOSPITAL

VILLAGE CENTER SW

VC

SIMPSON HILLS

0 50 100 200

(feet)

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DATE: FEB 2021

REVIEW
REGISTERED PROFESSIONAL ENGINEER
STEVEN A. WARD
RENEWS: 6/30/2022

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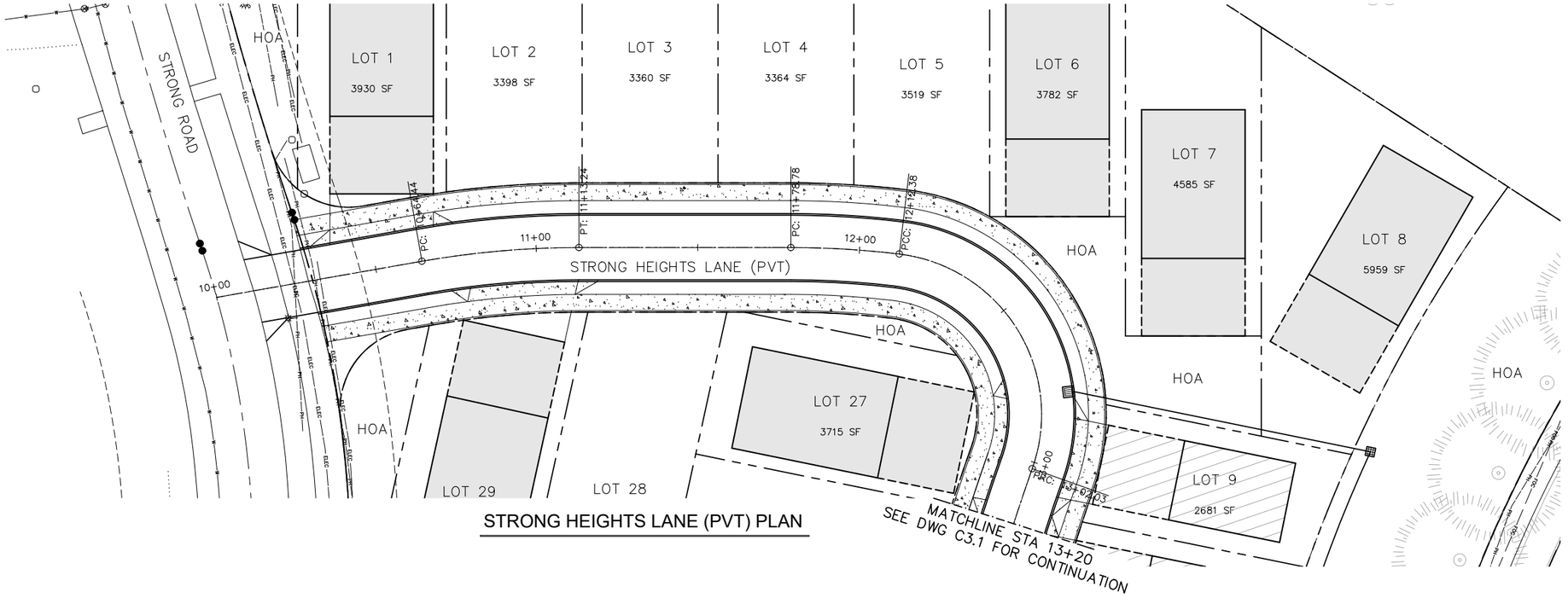
WARD DEVELOPMENT, LLC

STRONG HEIGHTS SUBDIVISION

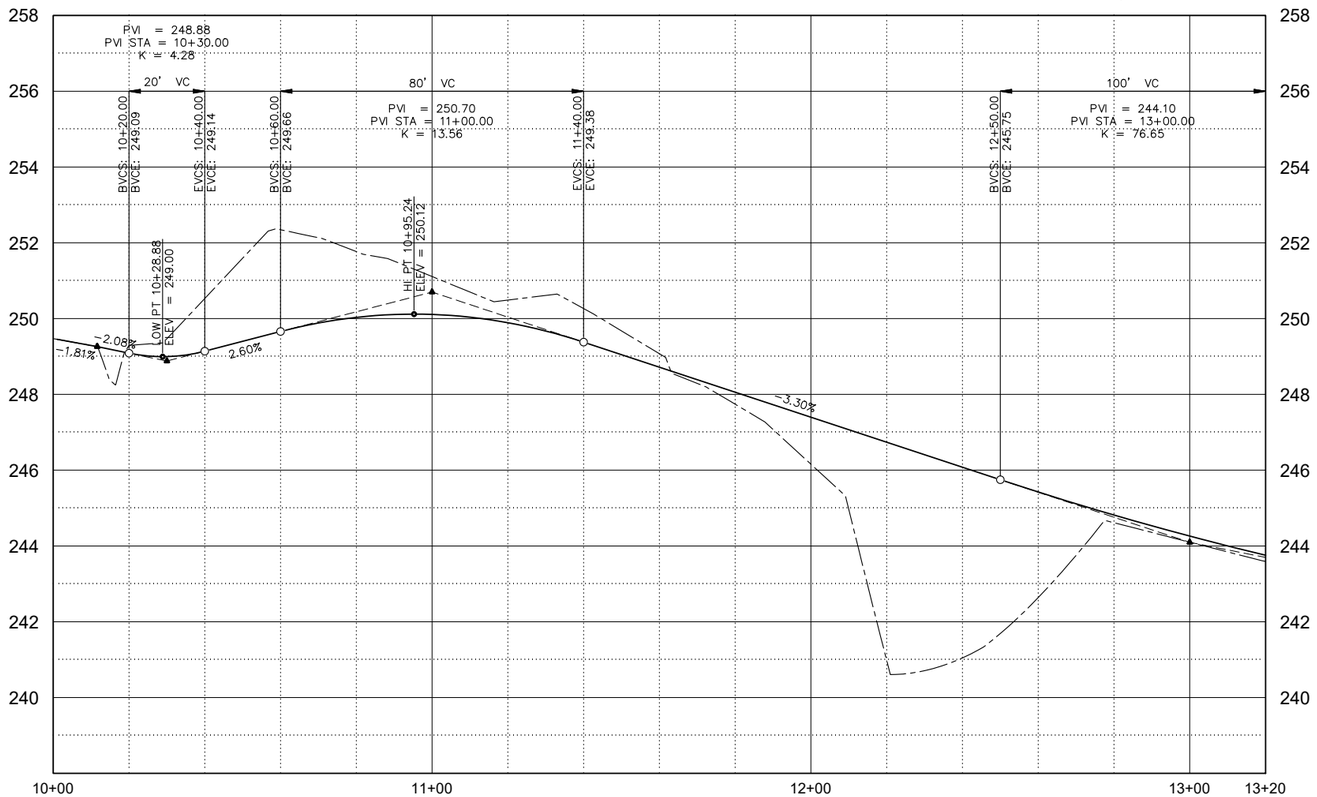
OVERALL ZONING MAP

DRAWING
C2.1

JOB NUMBER
2720.7000.0



STRONG HEIGHTS LANE (PVT) PLAN



STRONG HEIGHTS LANE PROFILE

1" = 20' H, 1" = 2' V

0 10 20 40
(feet)

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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1"

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CKD. SAW
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REGISTERED PROFESSIONAL ENGINEER
STEVEN A. WARD
OREGON
REVIEW
RENEWS: 6/30/2022

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WARD DEVELOPMENT, LLC

STRONG HEIGHTS SUBDIVISION

STRONG HEIGHTS LANE (PVT) PLAN–PROFILE STA 10+00 to STA 13+20

DRAWING
C3.0

JOB NUMBER
2720.7000.0

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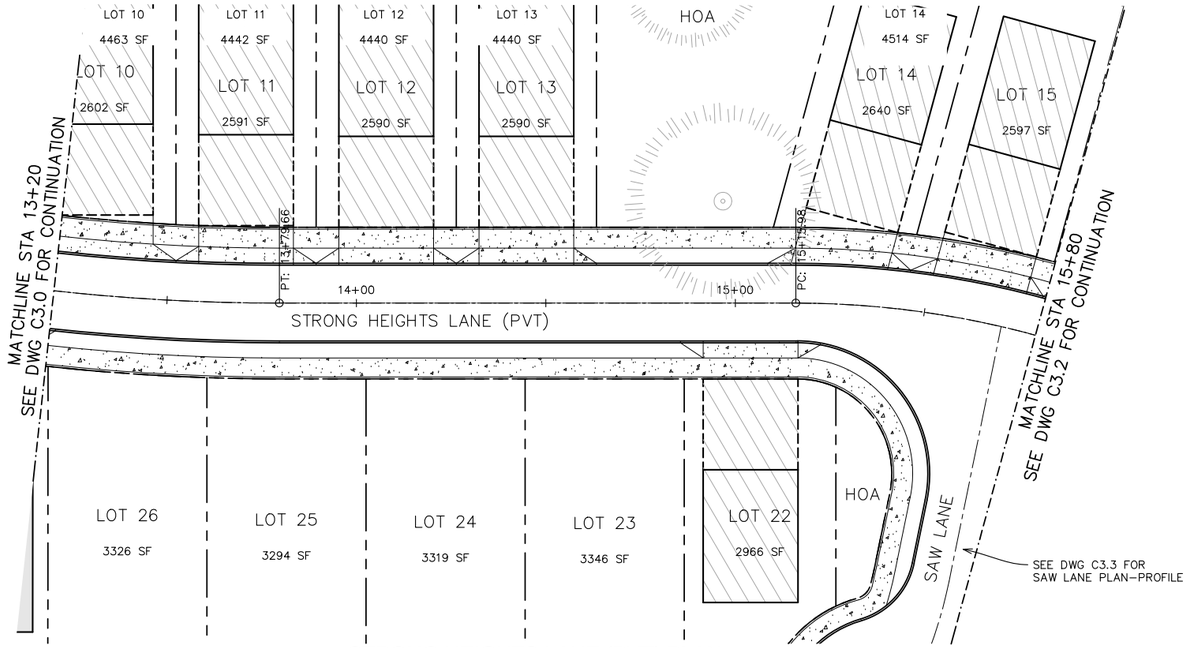
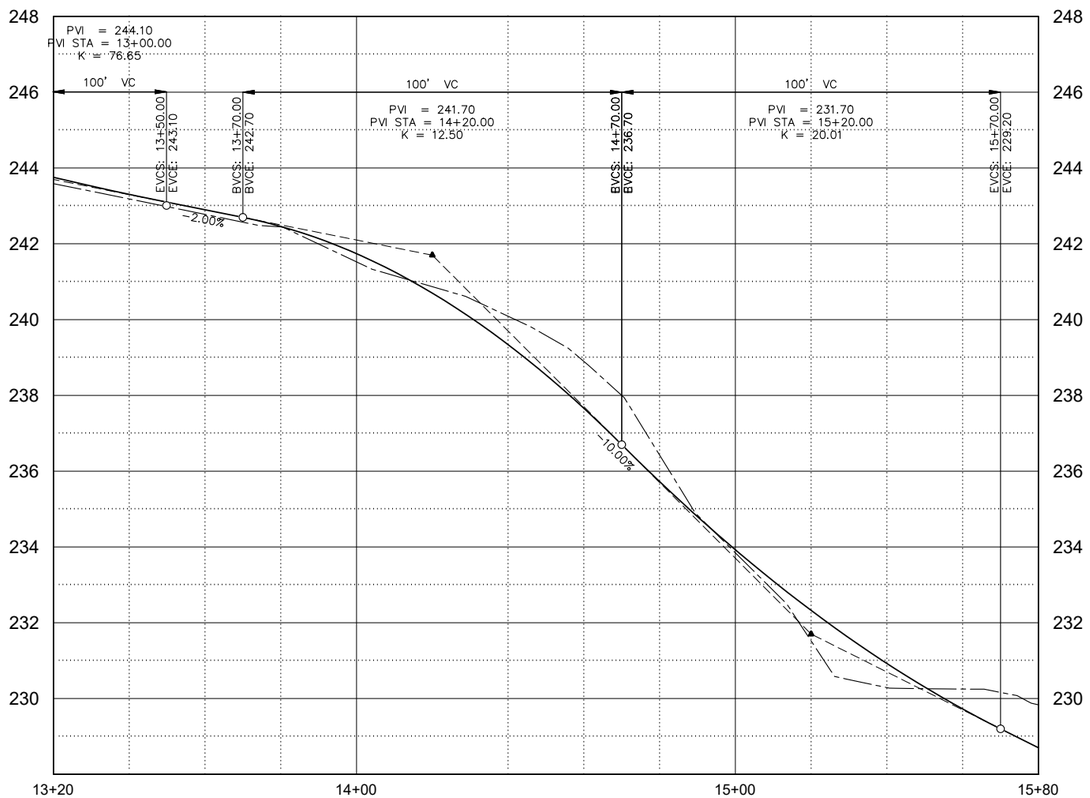


STRONG HEIGHTS LANE (PVT) PLAN



STRONG HEIGHTS LANE PROFILE

1" = 20' H, 1" = 2' V

0 10 20 40
(feet)

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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REGISTERED PROFESSIONAL ENGINEER
STEVEN A. WARD
REVIEW
RENEWS: 6/30/2022

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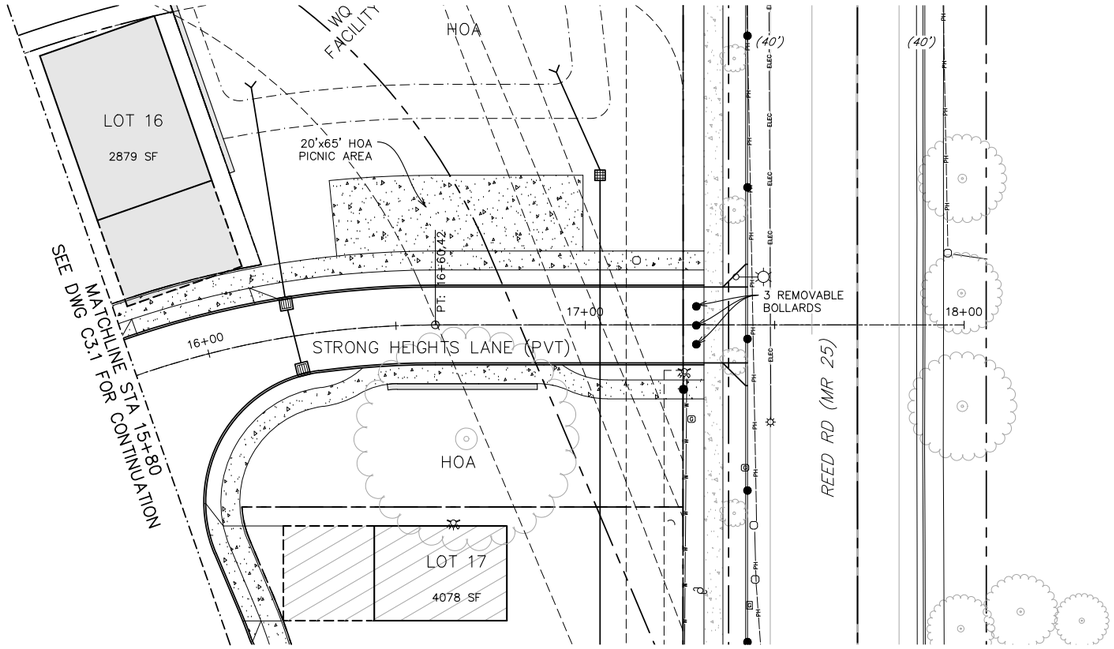
WARD DEVELOPMENT, LLC

STRONG HEIGHTS SUBDIVISION

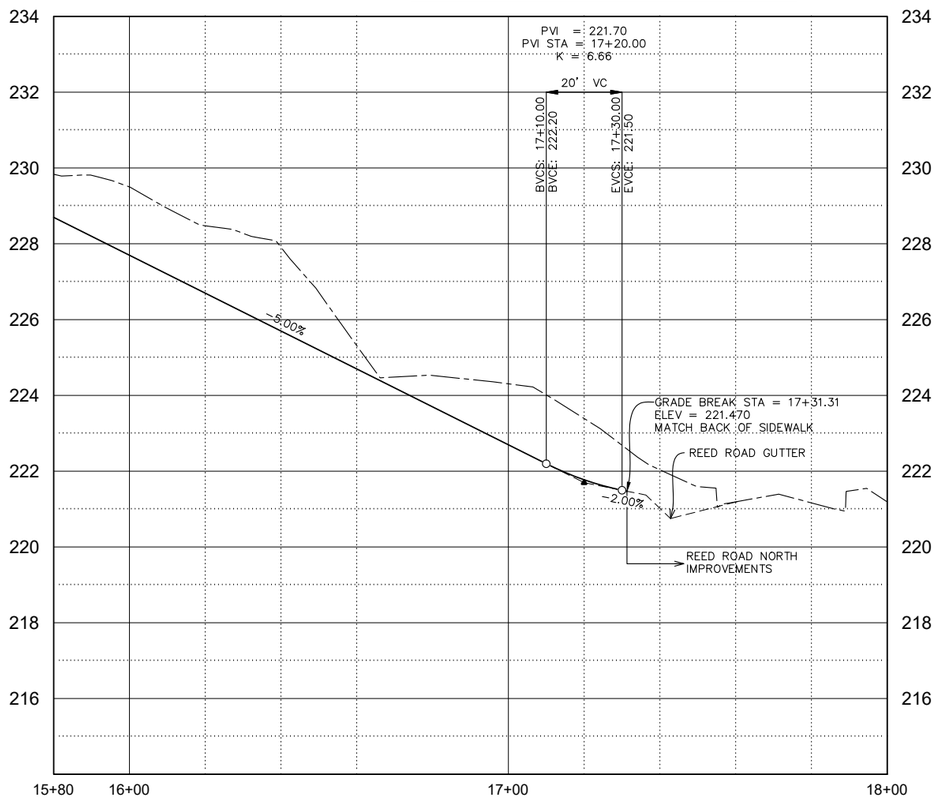
STRONG HEIGHTS LANE (PVT) PLAN–PROFILE STA 13+20 to STA 15+80

DRAWING
C3.1

JOB NUMBER
2720.7000.0



STRONG HEIGHTS LANE (PVT) PLAN



STRONG HEIGHTS LANE PROFILE

1" = 20' H, 1" = 2' V

0 10 20 40
(feet)

VERIFY SCALE
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1"

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REVIEW
REGISTERED PROFESSIONAL ENGINEER
STEVEN A. WARD
RENEWS: 6/30/2022

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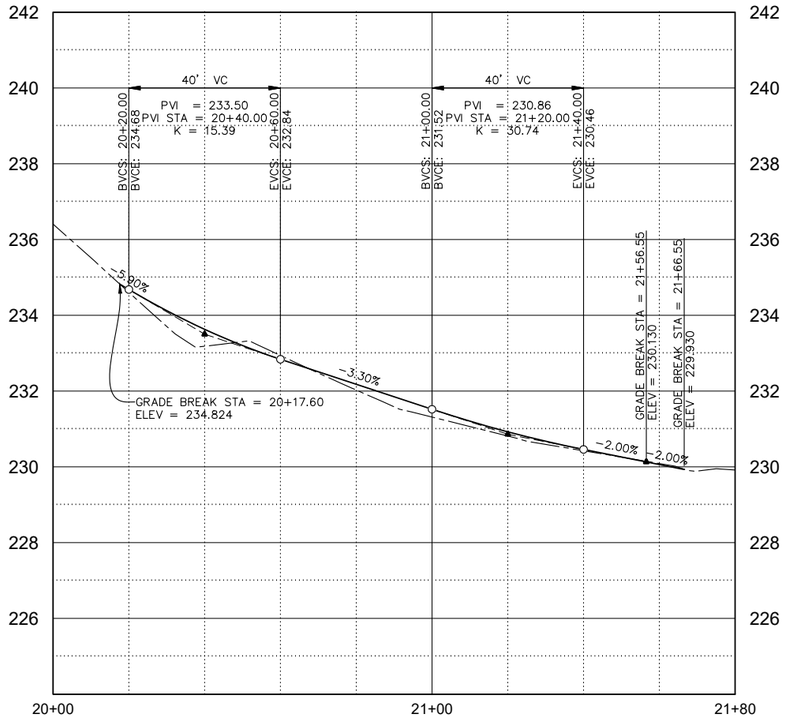
WARD DEVELOPMENT, LLC
STRONG HEIGHTS SUBDIVISION

STRONG HEIGHTS LANE (PVT) PLAN–PROFILE STA 16+20 to END

DRAWING
C3.2

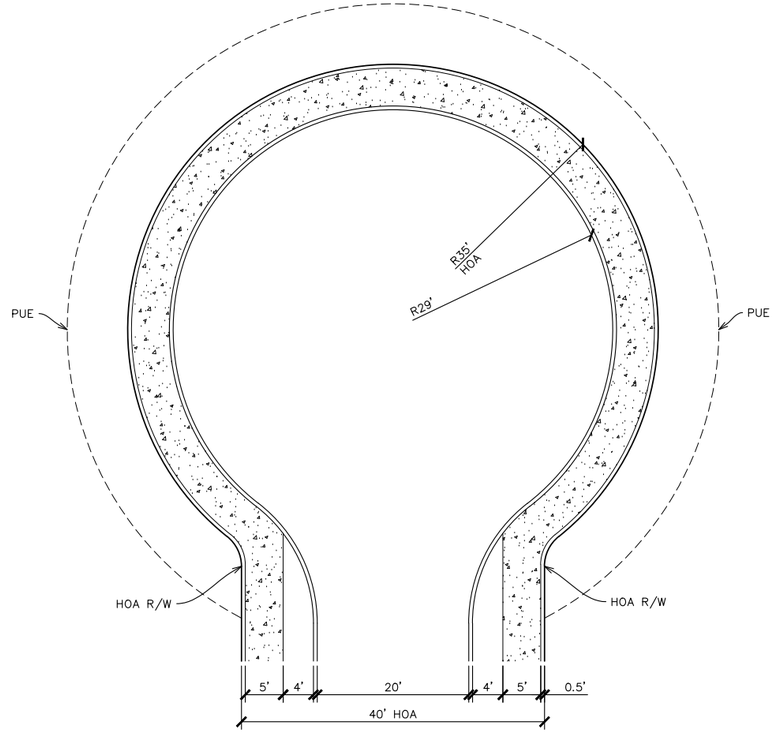
JOB NUMBER
2720.7000.0

SAW LANE (PVT) PLAN



SAW LANE PROFILE

1" = 20' H, 1" = 2' V



TYPICAL MODIFIED CUL-DE-SAC

NTS

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REVIEW
REGISTERED PROFESSIONAL ENGINEER
STEVEN A. WARD
RENEWS: 6/30/2022

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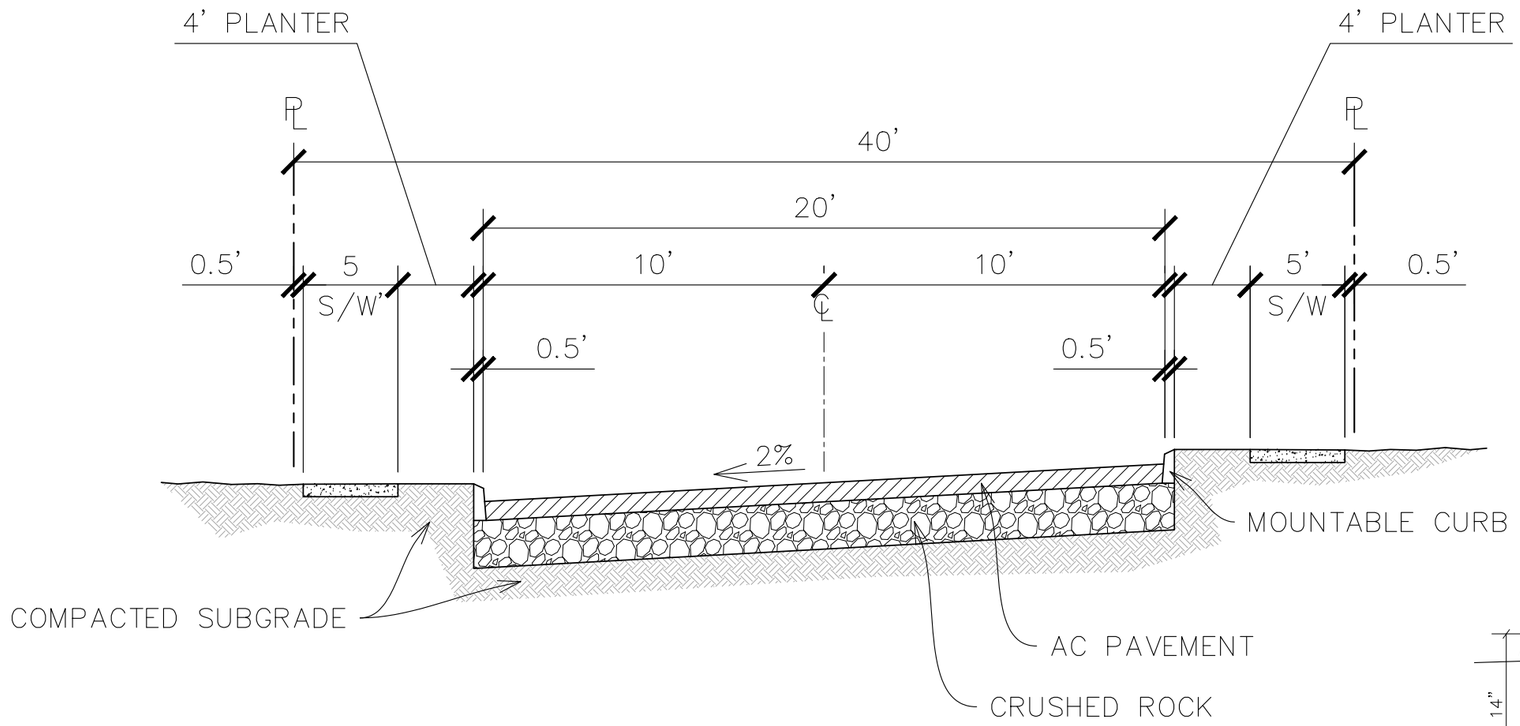
WARD DEVELOPMENT, LLC
STRONG HEIGHTS SUBDIVISION

SAW LANE (PVT) PLAN–PROFILE

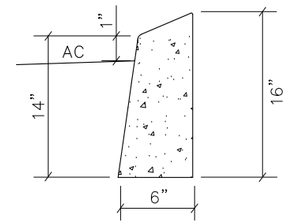
DRAWING
C3.3

JOB NUMBER
2720.7000.0



TYPICAL STREET SECTION

N.T.S.



MOUNTABLE CURB

N.T.S.

NOTES:

1. STREETS CLASSIFIED AS PRIVATE STREETS WITH CURBS IN ACCORDANCE WITH THE APPROVED AMENDED REFINEMENT PLAN.
2. NO PARALLEL STREET PARKING ALLOWED.
3. STREET PAVEMENT SECTION TBD.
4. STREET MAINTAINED BY HOA.

DESIGN EXCEPTION REQUESTED FOR PRIVATE STREETS:

1. VERTICAL CURVE K VALUES.
2. HORIZONTAL CURVE RADIUS AT STRONG HEIGHTS 90° CORNER.
3. DRIVEWAY APRON VS CURB RETURN AT STRONG ROAD.
4. MOUNTABLE CURB FOR PCC CURBS.
5. 2% CROSS SLOPE IN LIEU OF A NORMAL CROWNED STREET.

NO.	DATE	DESCRIPTION	BY
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0 1"

DSN. SAW
DRN. AR
CKD. SAW
DATE: FEB 2021

REVIEW
REGISTERED PROFESSIONAL ENGINEER
STEVEN A. WARD
RENEWS: 6/30/2022

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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WARD DEVELOPMENT, LLC
STRONG HEIGHTS SUBDIVISION

TYPICAL STREET SECTION

DRAWING
C3.4

JOB NUMBER
2720.7000.0

LOT 8
5959 SF

LOT 7
4585 SF

LOT 6
3782 SF

LOT 5
3519 SF

LOT 4
3364 SF

LOT 3
3360 SF

LOT 2
3398 SF

LOT 1
3930 SF

LOT 9
2681 SF

LOT 10
2602 SF

LOT 11
2591 SF

LOT 12
2590 SF

LOT 13
2590 SF

LOT 14
2640 SF

LOT 15
2597 SF

LOT 16
2879 SF

LOT 27
3715 SF

LOT 26
3326 SF

LOT 25
3294 SF

LOT 24
3319 SF

LOT 23
3346 SF

LOT 22
2966 SF

LOT 28
5235 SF

LOT 29
5370 SF

LOT 21
4534 SF

LOT 20
3378 SF

LOT 17
4078 SF

LOT 18
3280 SF

LOT 19
4293 SF

HOA

50' ESMT TO THE COS

8" PRIVATE SD

STRONG HEIGHTS LANE (PVT)

8" PUBLIC SS

8" PUBLIC W/L

NEW FH

OLD STRONG

WQ FACILITY

WQ

SWARD LANE (PVT)

8" PRIVATE SD

EXIST FH

3 REMOVABLE BOLLARDS

REED RD (MR 25)

STRONG RD

PED WTR

SN THE GROVE

SN SHARP COR

0 15 30 60
(feet)

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DATE: FEB 2021

REVIEW

REGISTERED PROFESSIONAL ENGINEER
STEVEN A. WARD
OREGON
JULY 16, 1976

RENEWS: 6/30/2022

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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WARD DEVELOPMENT, LLC
STRONG HEIGHTS SUBDIVISION

OVERALL UTILITY PLAN

DRAWING
C4.0

JOB NUMBER
2720.7000.0

5/19/2021 12:06:07 PM
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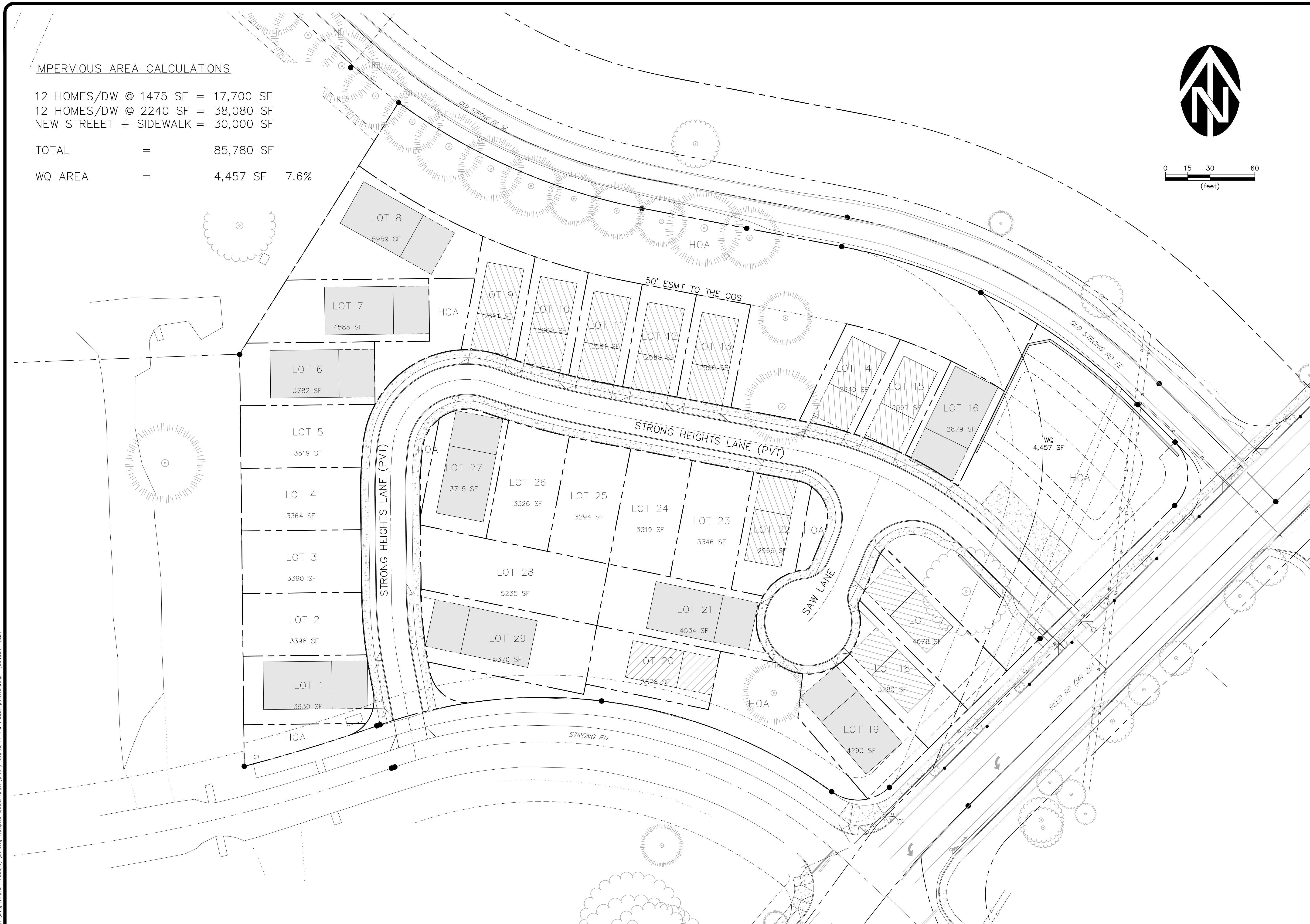
IMPERVIOUS AREA CALCULATIONS

12 HOMES/DW @ 1475 SF	=	17,700 SF
12 HOMES/DW @ 2240 SF	=	38,080 SF
NEW STREEET + SIDEWALK	=	30,000 SF
TOTAL	=	85,780 SF
WQ AREA	=	4,457 SF 7.6%



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DATE: FEB 2021

REGISTERED PROFESSIONAL ENGINEER 11143 OREGON JULY 16, 1982 STEVEN A. WARD
RENEWS: 6/30/2022
REVIEW

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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WARD DEVELOPMENT, LLC
STRONG HEIGHTS SUBDIVISION

WATER QUALITY ASSUMPTIONS

DRAWING
C4.1

JOB NUMBER
2720.7000.0

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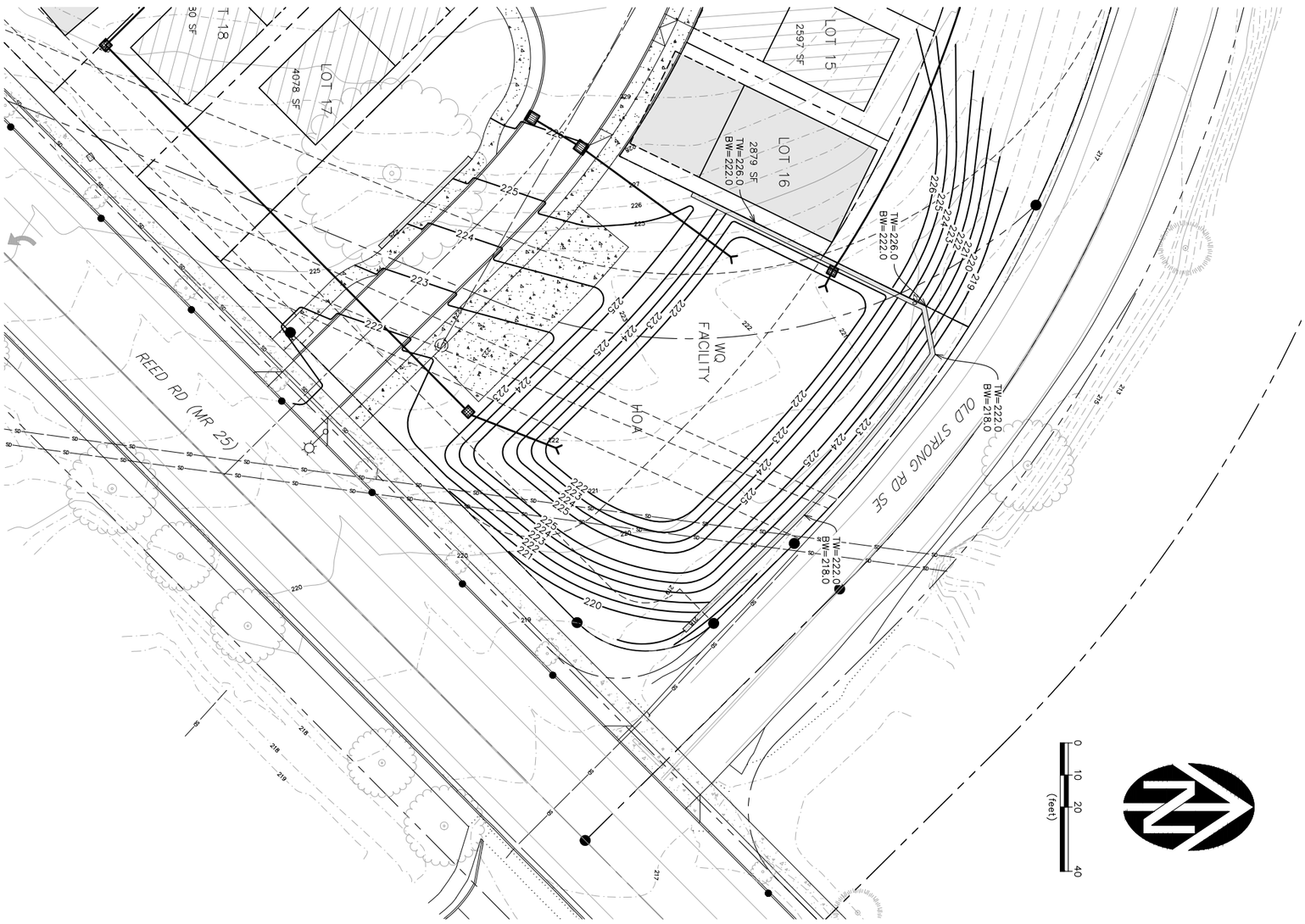

WARD DEVELOPMENT, LLC

STRONG HEIGHTS SUBDIVISION

WATER QUALITY FACILITY

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 16, 1982
STEVEN A. WARD
RENEWS: 6/30/2022

REVIEW

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CKD. SAW
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1			

REVISIONS

JOB NUMBER 2720.7000.0

DRAWING C4.2

June 1, 2021

John Pouley
State Archaeologist
Oregon State Historic Preservation Office
725 Summer Street NE, Suite C
Salem OR 97301

SUBJECT: **Archaeological Permit for the Strong Heights Subdivision Development Project**
SHPO Case No. has not been assigned.

Dear Mr. Pouley:

With this letter, I authorize SWCA Environmental Consultants (SWCA) to conduct cultural resources investigations for the Strong Heights Subdivision Development project on private land, as recommended by the City of Salem.

By authorizing this work, I acknowledge Ward Development's responsibility to provide sufficient funding to complete archaeological survey and testing, monitoring, artifact analysis, preparation of a final report, and formal curation of all artifacts discovered during excavations. SWCA has permission to collect artifacts and other cultural material discovered on private land during the field work for identification and laboratory analysis.

Sincerely,

Steve Ward, Manager
Ward Development, LLC
6998 Chakarun Lane SE
Salem, OR 97306

cc: Amira Ainis, PhD, RPA, Project Manager, SWCA