

CRITICAL AREA REPORT

**Park Place Middle School
Monroe, Washington**

November 24, 2015

RAEDEKE ASSOCIATES, INC.

Report To: Mr. John Mannix
Monroe School District #103
200 E. Fremont Street
Monroe, WA. 98272

Title: Critical Area Report for Park Place
Middle School Expansion and Renovation,
Monroe, Washington

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Project Manager: Kolten T. Kusters, M.S.
Wetland Scientist

Project Personnel: Richard W. Lundquist, M.S.
Vice President / Wildlife Biologist

Anne Cline, M.L.A.
Landscape Designer

Submitted by:



Signature

Kolten T. Kusters

Printed Name

November 24, 2015

Date:

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1.0 INTRODUCTION

1.1 PURPOSE

This report documents the results of our field investigations and assessment of wetlands, streams, and critical habitat area on or within vicinity of the Park Place Middle School property (Figure 1). The primary objective of our study is to provide baseline biological information for the existing conditions of wetlands, streams, and wildlife habitat located within or in the immediate vicinity of the project site. Using this baseline information we will assess probable impacts from the proposed development of new school facilities and provide analysis of proposed mitigation to compensate for adverse impacts to wetland buffers that may result from the project. This report includes information required for a critical area study as outlined under Section 20.05.060, of City of Monroe (2015) code.

1.2 PROJECT LOCATION

The Park Place Middle School project site is an approximately 20.96-acre assemblage of properties located at 1408 W Main Street, in the City of Monroe, Washington (Figure 1). The Site consists of four parcels identified as Snohomish County Tax Parcel Nos. 27060200409400, 27060100306500, 27061100100300, and 27061200201000. This places the project area in a portion of Section 1, Township 7 North, Range 6 East, W.M. Parcel maps retrieved on-line from Snohomish County depict the property boundaries.

1.3 SITE DESCRIPTION

The north half of the site contains existing school buildings, asphalt driveways, parking areas, and bus drop-off area. There are two portables south of the main buildings, as well as a greenhouse and outbuildings along the east property boundary. The south half of the site is contains a large grass field that is used primarily for athletic activities. Athletic facilities in the southern half of the site have been maintained since the early 1970s. The site is bordered to the north by Main Street, to the east and west by single family homes and commercial buildings, and to the south by a large flood control berm that extends the entire length of the school property. Perimeter fencing is located along the east and west property boundaries.

2.0 METHODS

2.1 DEFINITIONS AND METHODOLOGIES

Wetlands and streams are protected by federal law as well as by state and local regulations. Federal law (Section 404 of the Clean Water Act) prohibits the discharge of dredged or fill material into “Waters of the United States”, including certain wetlands, without a permit from the U.S. Army Corps of Engineers (COE 2012). The COE makes the final determination as to whether an area meets the definition of a wetland and whether the wetland is under their jurisdiction.

The COE wetland definition was used to determine if any portions of the project area could be classified as wetland. A wetland is defined as an area “inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (Federal Register 1986:41251).

We based our investigation upon the guidelines of the COE Wetlands Delineation Manual (Environmental Laboratory 1987), as further clarified in the Regional Supplement to the Corps of Engineers Delineation Manual: Western Mountains, Valleys, and Coasts Region (COE 2010). The COE wetlands manual is required by state law (WAC 173-22-035, as revised) for all local jurisdictions. As outlined in the 1987 wetland delineation manual, wetlands are distinguished by three diagnostic characteristics: hydrophytic vegetation (wetland plants), hydric soil (wetland soil), and wetland hydrology.

2.3 BACKGROUND RESEARCH

Prior to conducting our field investigations, we collected and analyzed background information available for the site from the U.S. Fish and Wildlife Service (2015) National Wetland Inventory (NWI), the U.S.D.A Natural Resource Conservation Service (USDA NRCS 2015) Web Soil Survey, the City of Monroe (2008a) Critical Areas and Buffer Map, and the Washington Department of Fish and Wildlife (WDFW 2015) Priority Habitats and Species (PHS). We also reviewed aerial imagery from Google Earth (2015) to assist in the definition of existing plan communities, drainage patterns, and land use. In addition, we reviewed the City of Monroe (2007) Shoreline Environmental Designations map to aid in the determination if shoreline or shore land areas were present within proximity to the Park Place Middle School study site.

2.4 FIELD SAMPLING PROCEDURES

2.4.1 Limits of Study Area

Raedeke Associates, Inc. investigated the Park Place Middle School property on July 30, 2015 to identify and delineate all wetlands within the project site. In addition, we

identified and described any off-site wetlands within approximately 200 feet of the site boundaries by visual observation from the property boundaries or from public access areas, where possible, in conjunction with information provided by the National Wetland Inventory (USFWS 2015), the Web Soil Survey (NRCS 2015), and aerial photographs (Google Earth 2015). Distance from the property boundary for the off-site wetland investigation was based on the maximum possible buffer plus the building setback that could be applied to an off-site wetland under City of Monroe (2015) code.

2.4.2 Wetlands

Vegetation, soils, and hydrology were examined in representative portions of the study area. During our field investigation of the project site, we inventoried, classified, and described representative areas of plant communities, soil profiles, and hydrologic conditions in both uplands and wetlands. We searched specifically for areas with positive indicators of hydrophytic vegetation, hydric soil, and wetland hydrology.

Vegetation, soils, and hydrology were examined in representative portions of the study area according to the procedures described in the Regional Supplement (COE 2010). Plant communities were inventoried, classified, and described during our field investigation. We estimated the percent coverage of each species. Plant identifications were made according to standard taxonomic procedures described in Hitchcock and Cronquist (1976), with nomenclature as updated by the U.S. Army Corps of Engineers National Wetland Plant List (Lichvar and Kartesz 2009). Wetland classification follows the USFWS wetland classification system (Cowardin et al. 1992). We determined the presence of a hydrophytic vegetation community using the procedure described in the Regional Supplement (COE 2010), which requires the use of the dominance test, unless positive indicators of hydric soils and wetland hydrology are also present, in which case the prevalence index or the use of other indicators of a hydrophytic vegetation community as described in the Regional Supplement (COE 2010) may also be required.

We excavated pits to at least 18 inches below the soil surface, where possible, in order to describe the soil and hydrologic conditions throughout the study area. We sampled soil at locations that corresponded with vegetation sampling areas and potential wetland areas. Soil colors were determined using the Munsell Soil Color Chart (Munsell Color 2009). We used the indicators described in the Regional Supplement (COE 2010) to determine the presence of hydric soils and wetland hydrology.

Our evaluation of the wetland boundaries was based on the presence of hydric soil, hydrophytic vegetation, and indicators of wetland hydrology. Topographic changes within the context of the landscape were used to aid in our delineation of the wetland boundaries. Our delineation was professionally surveyed by Harmsen & Associates, Inc. and is depicted on maps received in our office from Harmsen & Associates, Inc. on October 26, 2015.

3.0 EXISTING CONDITIONS

3.1 RESULTS OF BACKGROUND INVESTIGATION

The USDA Natural Resources Conservation Service (USDA NRCS 2015) Web Soil Survey for the area maps the soils as Puyallup fine sandy loam and Pilchuck loamy sand. Both Puyallup and Pilchuck soils are listed as hydric soils (Figure 2). Soil series boundaries or mapping units are mapped from aerial photographs with limited field verification. Thus, the location and extent of boundaries between mapping units may not be approximate for a given parcel of land within the survey area.

The U.S. Fish and Wildlife Service (2015) National Wetland Inventory (NWI) map shows a large wetland complex of palustrine, forested and palustrine, aquatic bed immediately south of the Park Place Middle School project site (Figure 3). NWI maps are based on aerial photographic surveys with relatively limited field verification. The actual extent of wetlands may differ from those shown on the NWI maps.

The City of Monroe (2008a) Critical Areas and Buffer Map depicts a large wetland south of the Park Place Middle School property that corresponds generally with that shown on the USFWS (2015) NWI map (Figure 4). This wetland is inventoried as Wetland 33, and is rated as a Category I wetland. The City of Monroe (2008a) Critical Areas and Buffer Map also depicts an unclassified stream within the wetland south of the Park Place Middle School project site. No additional wetlands are shown within vicinity of the project area.

The Washington Department Fish and Wildlife (WDFW 2015) Priority Habitats and Species (PHS) maps for the site and vicinity shows a large wetland complex located immediately south of the Park Place Middle School project area in the same general location as the USFWS (2015) NWI and City of Monroe (2008) maps.

The City of Monroe (2008b) Shoreline and Environment Designations map depicts the extent of the shoreland boundary along the north edge of the wetland immediately south edge of the Park Place Middle School property (Figure 5). As the extent of the shoreland does not extend onto the Park Place Middle School property, no permits are required under the Shoreline Management Plan.

3.2 RESULTS OF FIELD INVESTIGATIONS

3.2.1 Weather Conditions

Weather conditions at the time of our July 29, 2015 site investigation were sunny and dry with temperatures in the 80s (Fahrenheit). Weather conditions a week prior to our site visit were warm and sunny with temperatures in the 80s. No precipitation was recorded within a week of our site visit.

3.2.2 Site Description

The north half of the project site contains an existing school with buildings, asphalt driveways, paved parking areas, and a school bus turn around. Two portables are located south of the main school facilities, in addition to a greenhouse and outbuildings. Scattered ornamental trees and landscaped flower beds are located along the north edge of the property. The south half of the school ground contains a large grass field that has been maintained and used for athletics since the early 1970s. A large berm is located along the south edge of the ball field and rises 6 to 8 feet in elevation above the field.

The berm contains a forested vegetation community comprised of a mixed overstory of bigleaf maple (*Acer macrophyllum*, FACU), red alder (*Alnus rubra*, FAC), and black cottonwood (*Populus balsamifera*, FAC) trees with scattered Douglas-fir (*Pseudotsuga menziesii*, FACU). The understory contains patches of dense thickets of Himalayan blackberry (*Rubus armeniacus*, FACU), with scattered patches of salmonberry (*Rubus spectabilis*, FAC), thimbleberry (*Rubus parviflorus*, FACU), snowberry (*Symphoricarpos albus*, FACU), and western swordfern (*Polystichum munitum*, FACU) (Sample Plots SP 1, and SP 3). Soils along the berm consisted of up to 16 inches of very dark grayish brown (10YR 3/2) to dark brown (10YR 3/3) sandy loams (Sample Plots SP1 and SP 3). The elevation of the berm drops steeply to the south (approximately 10-12 feet). An off-site wetland is located at the base of the berm to the south.

3.2.3 Wetlands

During our July 29, 2015 field investigation, Raedeke Associates, Inc. staff identified and delineated the northern edge of a large wetland complex located off-site to the south of the Park Place Middle School property (Figure 6). Wetland 1 is in what appears to be a large abandoned oxbow channel of the Skykomish River. We determined that Wetland 1 consisted of a depressional hydrogeomorphic (HGM) class.

Wetland 1

Wetland 1 (Monroe Wetland Inventory No. 33) is located in what appears to be an abandoned oxbow of the Skykomish River. Based on our visual observations from the project site, public roadways, and Google Earth (2015) aerial imagery, the wetland appears to be part of a large wetland complex (approximately 81 acres in size) that continues the south before eventually draining into the Skykomish River (Figure 6).

The wetland contains several diverse and distinct vegetation communities including aquatic bed (PAB), palustrine, emergent (PEM), palustrine shrub-scrub (PSS), and palustrine, forested (PFO). The portion of the wetland in proximity to the Park Place Middle school property consists of a shrub-scrub overstory consisting of an overstory of redosier dogwood (*Cornus alba*, FACW), twinberry honeysuckle (*Lonicera involucrata*, FAC), Pacific willow (*Salix lasiandra*, FACW) and salmonberry, with an understory of slough sedge (*Carex obnupta*, OBL), blackgirdle bulrush (*Scirpus atrocinctus*, OBL), and subarctic lady fern (*Athyrium filix-femina*, FAC) (Sample Plots SP 2 and SP 4).

Soils within the wetland consisted of up to 2 inches of very dark grayish brown (10YR 3/2) sandy loams, over dark gray (10YR 4/1) to dark grayish brown (10YR 4/2) sandy loams with redoximorphic concentrations in the matrix to a depth of greater than 22 inches below the surface (Sample Plots SP 2 and SP 4). At the time of our July 29, 2015 site visit, soils in the profile were not saturated and we did not observe a water table. We did observe water marks, drift lines, and water stained leaves, suggesting that the wetland is subject to regular inundation.

Positive indicators for each of the three wetland parameters were present at the time of our site investigation. Therefore, the delineated area meets the necessary criteria for designation as a wetland according to the guidelines of the COE (Environmental Laboratory 1987) wetland delineation manual and the Regional Supplement (COE 2010). Wetland 1 contains aquatic bed (PAB), palustrine, emergent (PEM), palustrine, shrub-scrub (PSS), and palustrine, forested (PFO) vegetation classes according to the USFWS wetland classification system (Cowardin et al. 1992).

We rated Wetland 1 using the Washington Department of Ecology's (WDOE) Wetland Rating System for Western Washington (Hruby 2014). The wetland meets criteria to be regulated as a Category I because it scored a total of 26 points (with a score of 9 points for habitat functions; Appendix A).

4.0 REGULATORY CONSIDERATIONS

Wetlands are protected by Section 404 of the Federal Clean Water Act and other state and local policies and ordinances including City of Monroe (2015) code. Regulatory considerations pertinent to wetlands identified within the study area are discussed below; however, this discussion should not be considered comprehensive. Additional information may be obtained from agencies with jurisdictional responsibility for, or interest in, the site. A brief review of the U.S. Army Corps of Engineers regulations and Snohomish County policy, relative to wetlands, is presented below.

4.1 FEDERAL CLEAN WATER ACT (U.S. ARMY CORPS OF ENGINEERS)

Federal law (Section 404 of the Clean Water Act) discourages the discharge of dredged or fill material into the nation's waters, including most wetlands and streams, without a permit from the U.S. Army Corps of Engineers (COE). The COE makes the final determination as to whether an area meets the definition of "Waters of the U.S." as defined by the federal government (Federal Register 1986:41251), and thus, if it is under their jurisdiction.

We should caution that the placement of fill within wetlands or other "Waters of the U.S." without authorization from the COE is not advised, as the COE makes the final determination regarding whether any permits would be required for any proposed alteration (COE 2012). Because the COE makes the final determination regarding permitting under their jurisdiction, a jurisdictional determination from the COE is generally recommended prior to any construction activities, if any modification of wetlands is proposed. A jurisdictional determination would also provide evaluation and confirmation of the wetland delineations by the COE.

4.2 WASHINGTON STATE

Under Section 401 of the Clean Water Act, an activity involving a discharge in waters of the U.S. authorized by a federal permit must receive certification by the affected certifying agency. In Washington State, the certifying agency is WDOE, which has regulatory authority over waters of the state, including streams and isolated wetlands, under the state Water Pollution Control Act (90.48 RCW) and the Shoreline Management Act (90.58 RCW).

4.3 CITY OF MONROE

Monroe (2015) code regulates activities within and adjacent to wetlands and streams under 20.05 "Critical Areas". Alterations of wetlands and their buffers are generally prohibited, except as allowed under certain conditions specified in Chapter 20.05.080. The City of Monroe (2015) may allow for buffer reductions if specific criteria in section 20.050.080(F) are met. In addition, the City may allow for buffer averaging under section 20.05.080(G) of the code provided the applicant demonstrates that the averaging will not reduce any area by greater than 25% of the standard buffer, and that the total area

contained within the buffer averaging is no less than that contained in the standard buffer prior to averaging. The City of Monroe has final authority to determine wetland ratings, buffers, and allowed uses of wetlands and other sensitive areas that are under their jurisdiction.

The City of Monroe (2015) determines wetland buffer widths based on a wetland's overall rating (Category I, II, III, or IV) using the WDOE wetland rating system. Section 20.05.030 of the City of Monroe (2015) code specifies use of the Washington Department of Ecology (1996; WDOE Publication 3-74 or as revised) Wetland Rating System for western Washington to be used to rate wetlands.

On November 4, 2014, the Washington Department of Ecology issued an updated version of this rating system (Hruby 2014), which is required for use by jurisdictions as of January 1, 2015. We understand that the City of Monroe is in the process of updating their code to accommodate the new rating system, but the proposed ordinance is under review, and no changes have been adopted as of this writing. Thus, the City of Monroe (2015) code, as with many other local jurisdictions, has not yet fully incorporated the 2014 wetland rating methodology into their regulations for buffer widths based on habitat function scores, and does not currently define buffer widths based on the recently issued, revised WDOE Wetland Rating System (Hruby 2014). However, the City of Monroe is expected to incorporate the new rating system into its Critical Areas Regulations sometime this year (possibly in the next couple of months). Therefore, we determined preliminary ratings for the off-site wetland using the Washington Department of Ecology (Hruby 2014) Wetland Rating System for Western Washington (see Appendix B).

Using the 2014 WDOE methodology, Wetland 1 meets criteria to be regulated as Category I because it scored a total of 26 points (9 points for habitat function) on the wetland rating form. Several jurisdictions, including Monroe, have not yet fully incorporated the WDOE 2014 wetland rating system methodology into their regulations for buffer widths based on habitat function scores. A conversion table has been developed by WDOE (2015) that allows the current habitat function scores to be interpreted using existing regulations. Based on this conversion, we determined that Wetland 1 provides a high level of habitat function. Typically, the City of Monroe requires a 200-foot-wide buffer for Category I wetlands with a high level of habitat function.

5.0 IMPACTS

5.1 PROJECT DESCRIPTION

The project proposes to renovate existing school infrastructure and improve the existing athletic fields with artificial turf, a synthetic track, and lighting. The upgraded fields will be in the same location as the existing fields and will not extend any clearing or grading beyond the current extent of grass fields (Figure 7).

The site plan includes a stormwater drainage plan. The northern half of the site would direct stormwater from impervious surfaces and roofs to a series of infiltration trenches and bio-retention facilities before being dispersed to existing City of Monroe stormwater facilities along Main Street. In the southern half of the site, direct stormwater runoff from the new track and ball field facilities will be directed toward centrally located 8 foot wide infiltration facility intended to promote infiltration to groundwater. The infiltration trenches would be located within the central portion of the baseball and soccer fields and connected to an existing stormwater overflow. The existing overflow drains south into Wetland 1.

5.2 WETLAND IMPACTS

5.2.1 Direct Impacts

Direct impacts to Wetland 1 would be avoided under the proposed Park Place Middle School development plan. The wetland is located off-site to the south of the project area and is separated by a large forested berm.

5.2.2 Hydrologic Impacts

The primary source of hydrology input to Wetland 1 is from surface sheet flow, shallow interflow, and direct precipitation. A large flood control berm is located along the south edge of the Park Place Middle School property and separates the ball field from off-site Wetland 1. The berm acts as a hydrologic barrier and does not allow surface flow from the wetland buffer to flow into the wetland. An existing stormwater facility channels a portion of stormwater from the southwest portion of the site directly to the wetland area. The proposed site plan for the project has been designed to encourage 100% infiltration of stormwater runoff. Stormwater derived from new impervious surfaces in the buffer (artificial track and field facilities) would be directed to infiltration trenches (See Figure 7). The stormwater infiltration system would tie into an existing stormwater line that drains to the south and outlets to Wetland 1. This outlet is designed as an emergency outlet in case of extreme rainfall events.

The proposed site plan has been designed to achieve 100% infiltration. Therefore, post-development hydrologic impacts to Wetland 1 would result in a no-net change. Hydrologic connectivity between the wetland and its buffer is already significantly limited by the flood control berm located along the southern edge of the project site.

5.2.3 Wetland Buffer Impacts

The proposed project will improve existing athletic fields with artificial turf, construction of a synthetic track, and installation of lighting. The existing athletic facilities are presently located within the 200 foot buffer of a large off-site wetland (Wetland 1). The project would result in impacts to 112,220 square feet of wetland buffer. These improvements would be isolated to the footprint of the existing athletic facilities. The impact area has been historically maintained as an athletic facility since the early 1970s. No clearing of existing forested buffer (on the berm) would occur.

Buffer Reduction and Buffer Averaging

The City of Monroe (2015; MMC 20.05.080(F)) allows for a buffer reduction of up to 25% of the buffer requirement if the specific criteria listed in the code are met:

- (1) The applicant has demonstrated that mitigation sequencing efforts have been appropriately utilized; avoid, minimize and lastly mitigate;
- (2) The proposed buffer reduction shall be accompanied by a mitigation plan that includes enhancement of the reduced buffer area;
- (3) The reduction will not adversely affect water quality;
- (4) The reduction will not destroy, damage, or disrupt a significant habitat area; and
- (5) The reduction is necessary for reasonable development of the subject property.

Section 20.05.080 MMC (City of Monroe 2015) allows for buffer averaging, provided that the development proposal meets specific conditions listed in MMC 20.05.080(G):

- (1) The buffer area after averaging is no less than that which would be contained within the standard buffer; and
- (2) The buffer width shall not be reduced by more than twenty-five percent at any one point as a result of buffer averaging.

The proposed project is not able to meet the specific criteria for either buffer reduction or buffer averaging. A significant portion of the 200-foot buffer for Wetland 1 extends through nearly the half of the existing field located in the south half of the project site. Even if the project were to meet the specific criteria for a buffer reduction, a significant portion of the new track and ball field facility would still occur within the wetland buffer area. Similarly, the proposed project would not be able to meet the specific criteria for buffer averaging because there is not adequate space to increase buffer widths in other locations on site without significantly impacting the functionality of the proposed track and field facilities.

Exceptions

The City of Monroe (2015) code 20.05.080(A) prohibits activities and uses from Category I wetlands, except as provided under MMC 20.05.050(C)(1) which allows for exceptions to the Critical Areas Ordinance by public agencies or utilities. This exception is based on the applicant's ability to provide adequate information that has considered all possible construction techniques that would eliminate any unreasonable risk of impact to a critical area, and all other alignments that would meet the project purpose have been considered. In addition, the proposal must minimize and mitigate unavoidable impacts to critical areas and/or critical area buffers.

The Monroe School District is requesting an exception for the proposed project activities that would improve the existing athletic facilities within the 200-foot buffer of Wetland 1 (Monroe Wetland 33), located to the south. These improvements would include replacing the existing grass fields with artificial turf, a synthetic track, and lighting. The upgraded fields would be in the same location and will not extend any clearing or grading beyond the existing grass fields.

6.0 MITIGATION

This wetland mitigation plan has been prepared in compliance with all applicable sections of the Snohomish County code (SCC 30.62A.150 and SCC 30.62A.310). Mitigation has been defined by the State Environmental Policy Act (SEPA) (WAC 197-11-768; cf. Cooper 1987), and also in a Memorandum of Agreement between the Environmental Protection Agency and the U.S. Army Corps of Engineers (Anonymous 1989). In order of desirability, mitigation may include:

1. **Avoidance** - avoiding impacts by not taking action or parts of an action;
2. **Minimization** - minimizing impacts by limiting the degree or magnitude of the action and its implementation;
3. **Compensation** - which may involve:
 - a) repairing, rehabilitating, or restoring the affected environment;
 - b) replacing or creating substitute resources or environments;
 - c) mitigation banking.

The proposed expansion of the school facilities would incorporate one or more mitigating measures that would avoid or reduce impacts to wetlands on-site.

6.1 AVOIDANCE AND MINIMIZATION OF IMPACTS

The proposed development plan for the Park Place Middle School renovation was designed to avoid direct impacts to wetlands. The project incorporates a number of design features that would avoid or minimize impacts to the wetland, including:

- Direct impacts to wetlands will be avoided;
- The proposed stormwater plan would direct run-off from the track and field facilities would direct stormwater into collection trench designed to promote infiltration.
- Native vegetation on the berm will not be removed under the development plan. Vegetation on the berm will be retained to the greatest extent, and where possible will be enhanced. Vegetation be removed for creation of equipment parking and material staging areas, these areas will be located within existing paved areas adjacent to the construction;
- Temporary erosion and sediment control (TESC) measures would be installed during construction and would utilize appropriate best management practices (BMPs) designed to prevent sediment from entering surface waters during and after construction, including placement of straw waddles and silt fencing between work activities and adjacent wetlands and designated buffer areas.

- All potentially hazardous material (e.g., fuel, lubricating fluids) would be stored within the designated staging area, and no fueling or servicing of construction vehicles would be permitted within the wetland or stream buffers.
- Upon completion of the project, the areas disturbed during construction that are not converted to permanent development features shall be re-graded to be compatible with the natural terrain and replanted with grass or other appropriate landscaping to prevent erosion.

6.2 COMPENSATORY MITIGATION

Direct wetland impacts would be avoided under the proposed development plan; therefore, creation, re-establishment, rehabilitation, or enhancement of wetlands is not proposed.

The proposed project would result in direct impacts to approximately 112,220 square feet of wetland buffer. The buffer is currently maintained as an athletic field and is regularly mowed and maintained, and thus provides a low level of habitat function. In addition, a flood control berm along the southern half of the property isolates any direct hydrologic inputs from the on-site portion of the buffer boundary to the wetland. The project proposes to compensate for impacts to the buffer through the purchase of mitigation credits from the Skykomish Habitat Bank. Mitigation credits from the Skykomish Habitat bank are directed at enhancing wetland and stream functions within the Snohomish River watershed, and will provide an equivalent or greater biological and hydrological functions and values than the current wetland buffer.

The City of Monroe (2015; MMC 20.05.080(H)(4)) may consider off-site and in-kind compensation when the applicant can demonstrate that equivalent or greater biological and hydrological functions and values will be achieved. The compensation may include restoration, creation, or enhancement of wetlands or streams so long as the project is within the same subdrainage basin.

The Skykomish Mitigation Bank provides credits for buffer restoration at a 0.2:1 ratio (per personal communications with Zach Woodward on November 16, 2015). Therefore, to compensate for the impacts to the 112,220 square feet of impact to buffer proposed by the project 22,444 credits would need to be purchased. The Skykomish Mitigation bank is located within the same subbasin as the project. Purchasing of wetland mitigation credits from the bank requires completion of a bond process.

7.0 LIMITATIONS

We have prepared this report for the exclusive use of the Monroe School District #103 and their consultants. No other person or agency may rely upon the information, analysis, or conclusions contained herein without permission from the Monroe School District #103.

The determination of ecological system classifications, functions, values, and boundaries is an inexact science, and different individuals and agencies may reach different conclusions. With regard to wetlands, the final determination of their boundaries for regulatory purposes is the responsibility of the various agencies that regulate development activities in wetlands. We cannot guarantee the outcome of such determinations. Therefore, the conclusions of this report should be reviewed by the appropriate regulatory agencies.

We warrant that the work performed conforms to standards generally accepted in our field, and prepared substantially in accordance with then-current technical guidelines and criteria. The conclusions of this report represent the results of our analysis of the information provided by the project proponent and their consultants, together with information gathered in the course of the study. No other warranty, expressed or implied, is made.

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FIGURES

Figure 1

Figure 2.

Figure 3.

Figure 4.

APPENDIX A

Field Survey Data

APPENDIX B

**Washington Department of Ecology Wetland Rating Forms for Western
Washington**

PARK PLACE MIDDLE SCHOOL

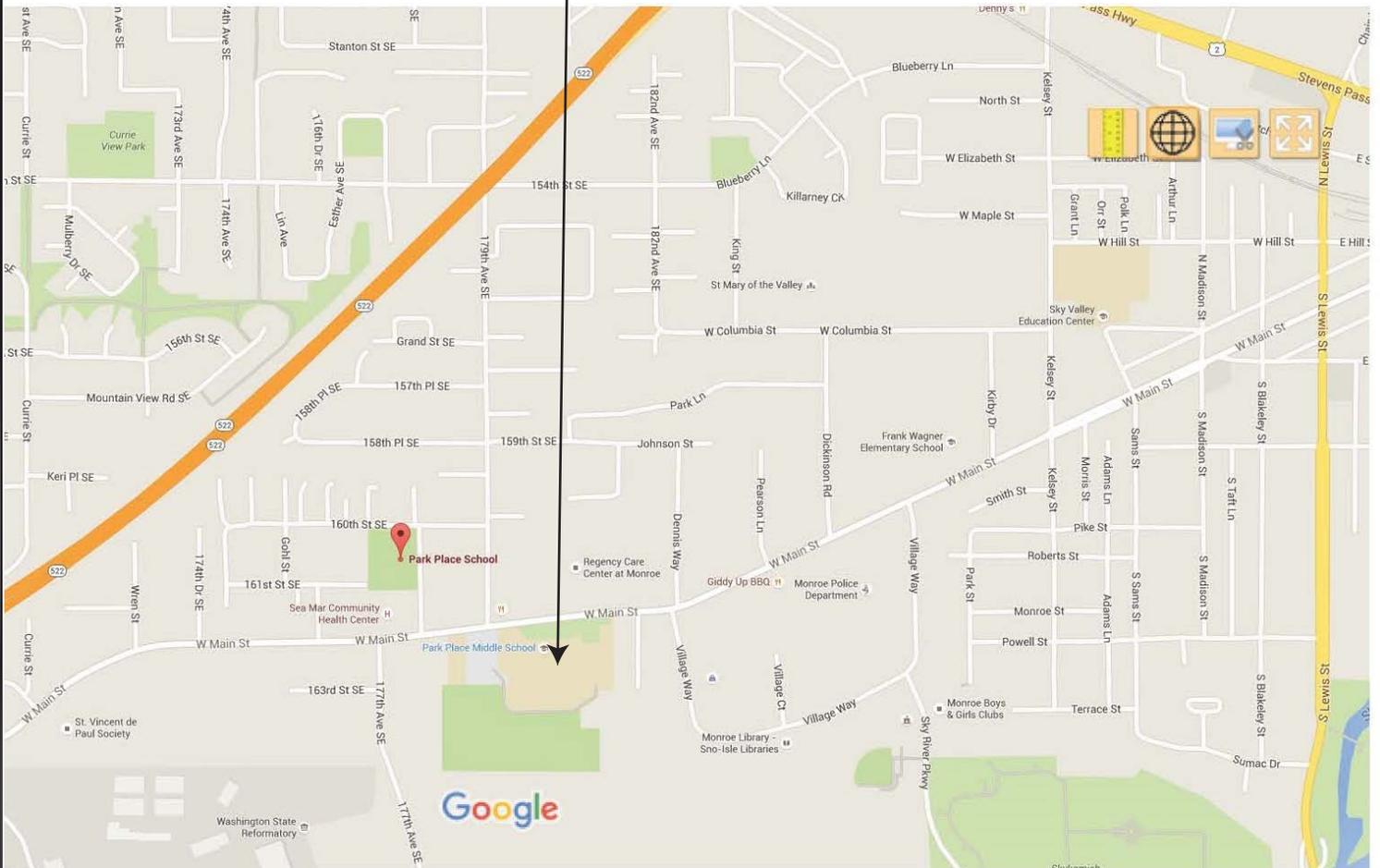
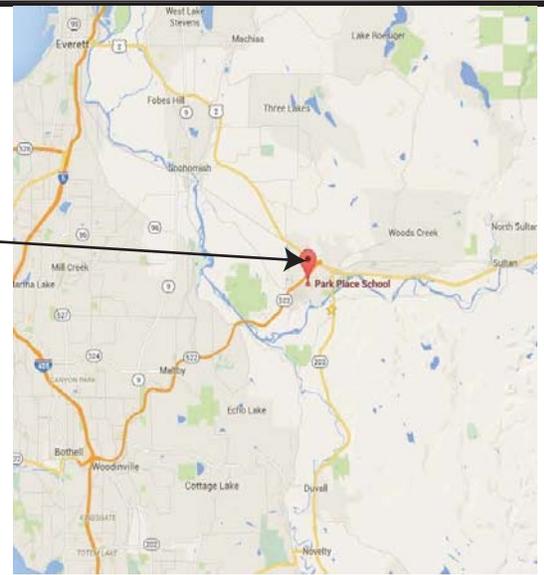


FIGURE 1
REGIONAL & VICINITY MAP
PARK PLACE MIDDLE SCHOOL
MONROE, WA

PARK PLACE MIDDLE SCHOOL



T:\2015\2015-044 Park Place Monroe\Park Place Figures.svg

Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/>. Accessed [2015/6/17].

SOILS KEY:

- 50: Pilchuck loamy sand
- 56: Puyallup fine sandy loam
- 66: Sultan silt loam

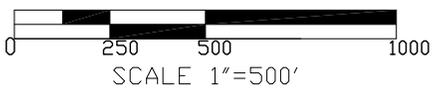


FIGURE 2
SOILS MAP
PARK PLACE MIDDLE SCHOOL
MONROE, WA

Raedeke
Associates, Inc.
2111 N. Northgate Way, Ste. 219
Seattle, WA 98133

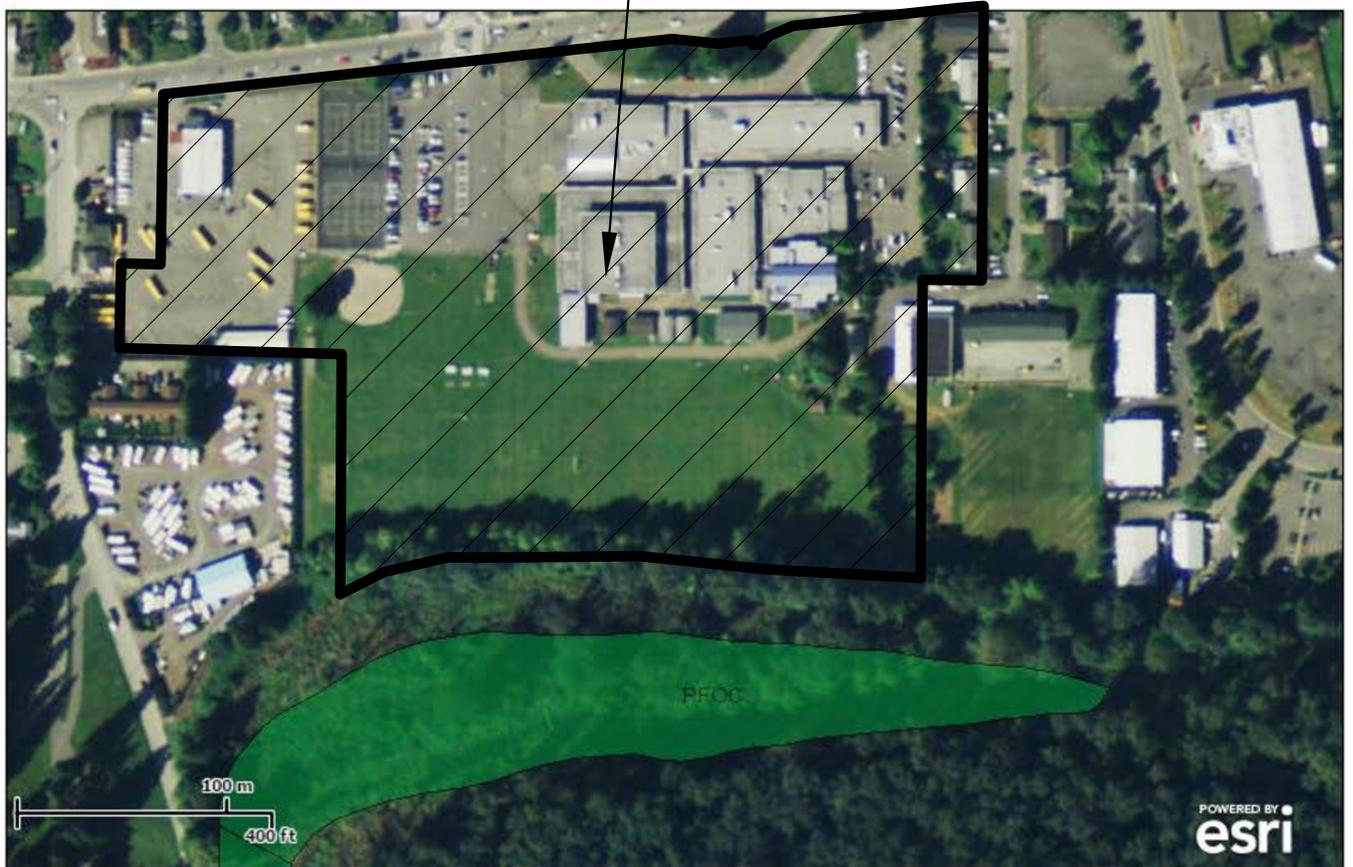
RAI # 2015-044

PARK PLACE MIDDLE SCHOOL



U.S. Fish and Wildlife Service

National Wetlands Inventory



This map is for general reference only. The US Fish and Wildlife Service is not

T:\2015\2015-044 Park Place Monroe\Park Place Figures.dwg

Source: US Fish and Wildlife Service National Wetlands Inventory, Wetlands Mapper. Available at <http://www.fws.gov/wetlands/data/mapper.HTML>. Accessed on 2015/11/20.

NWI WETLAND KEY:

PFOC: Palustrine, Forested, Seasonally Flooded.

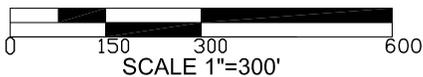
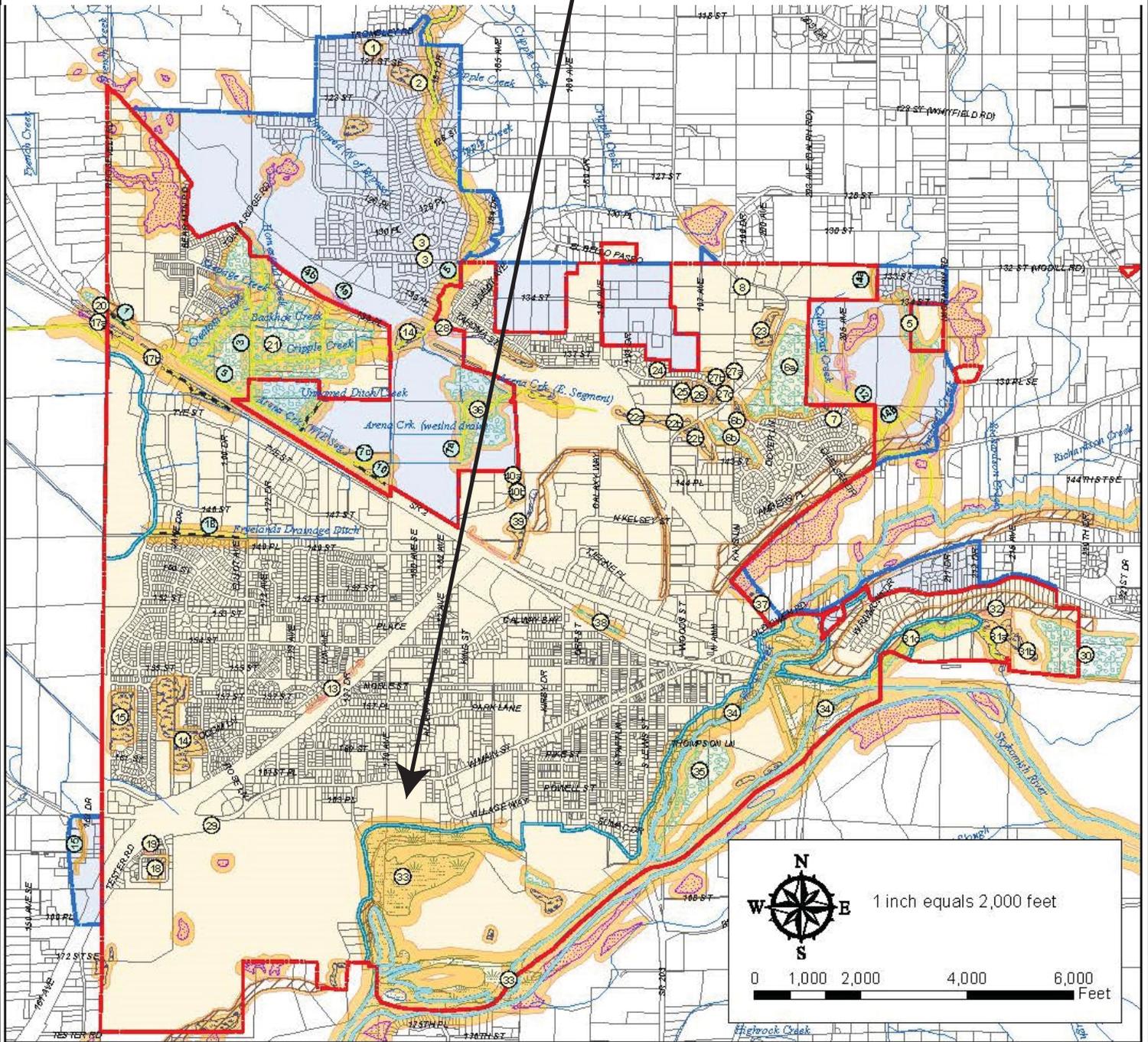


FIGURE 3
NWI MAP
PARK PLACE MIDDLE SCHOOL
MONROE, WA

Raedeke
Associates, Inc.
2111 N. Northgate Way, Ste. 219
Seattle, WA, 98133
RAI # 2015-044

PARK PLACE MIDDLE SCHOOL



Source: City of Monroe, WA. Accessed on 2015/6/17.

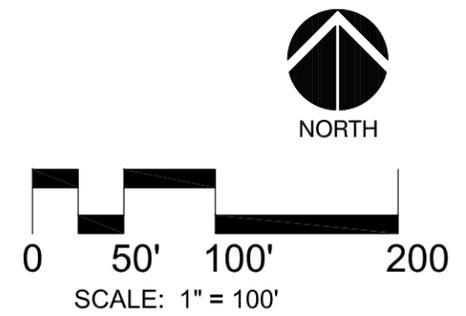
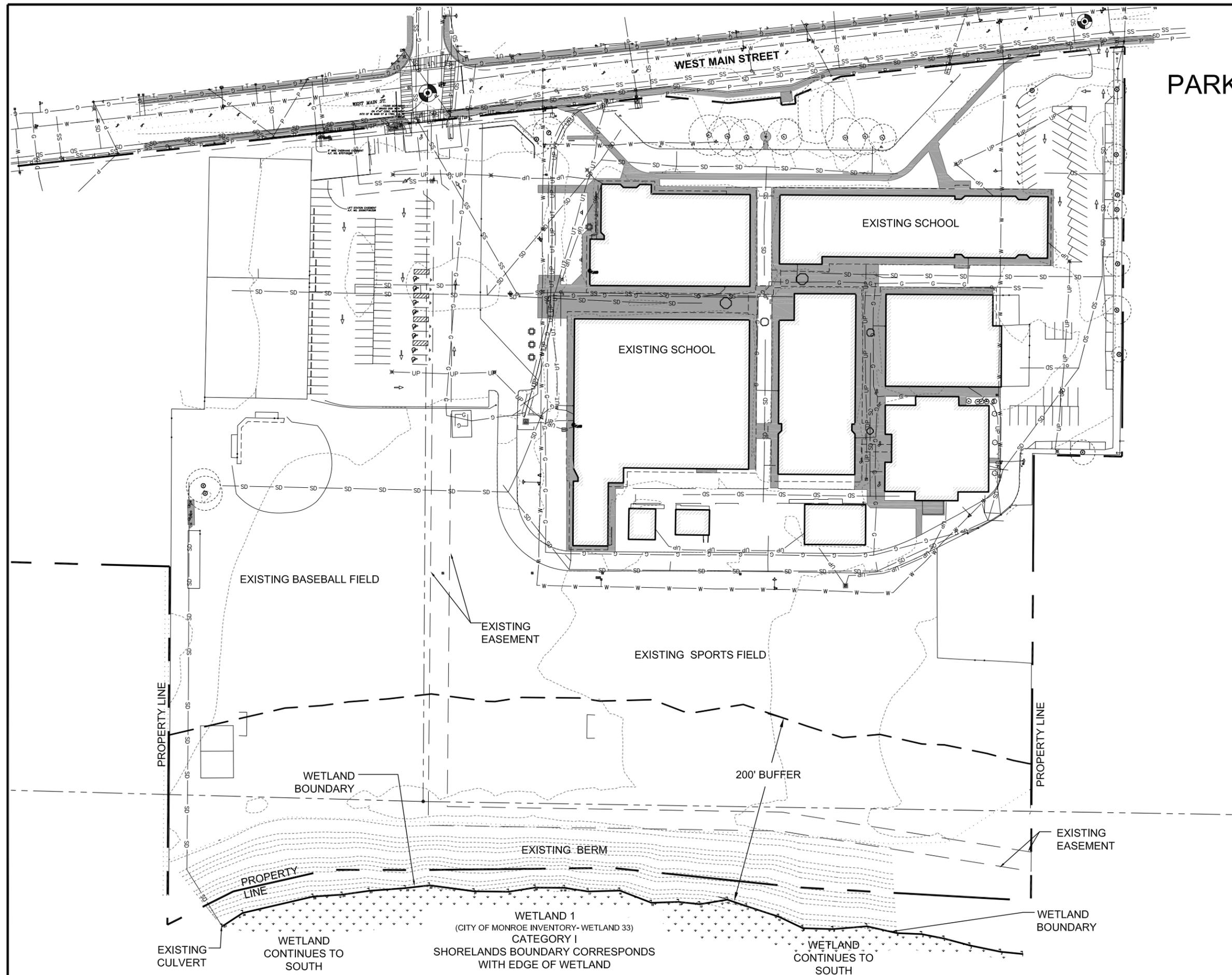
Critical Areas and Buffers

- | | | |
|---------------------------------|---------------------------------|---------------------|
| STREAMS | WETLANDS | STEEP SLOPES |
| Type 1 | Cat I | 40% or > slope |
| Type 3 | Cat II | |
| Type 3u* | Cat III | |
| Type 4 | Cat IV | |
| Type 5 | Unclassified Wetlands | |
| Unclassified Stream | Wetland Inventory No. | |
| Stream Inventory No. | | |
| *Under one mile on adjacent way | | |
| BOUNDARIES | BUFFERS* | |
| Urban Growth Area | Combined Critical Areas Buffers | |
| Monroe City Limits | | |
| Shoreline Boundary | | |
- *Type 4 stream buffer is 100 feet except for the class I. Type 4 stream buffer is 200 feet for stream with channel, lake or other water body. See MRC 2010 for type 4 buffer.

FIGURE 4
 CITY OF MONROE CRITICAL
 AREAS & BUFFERS MAP
 PARK PLACE MIDDLE SCHOOL
 MONROE, WA



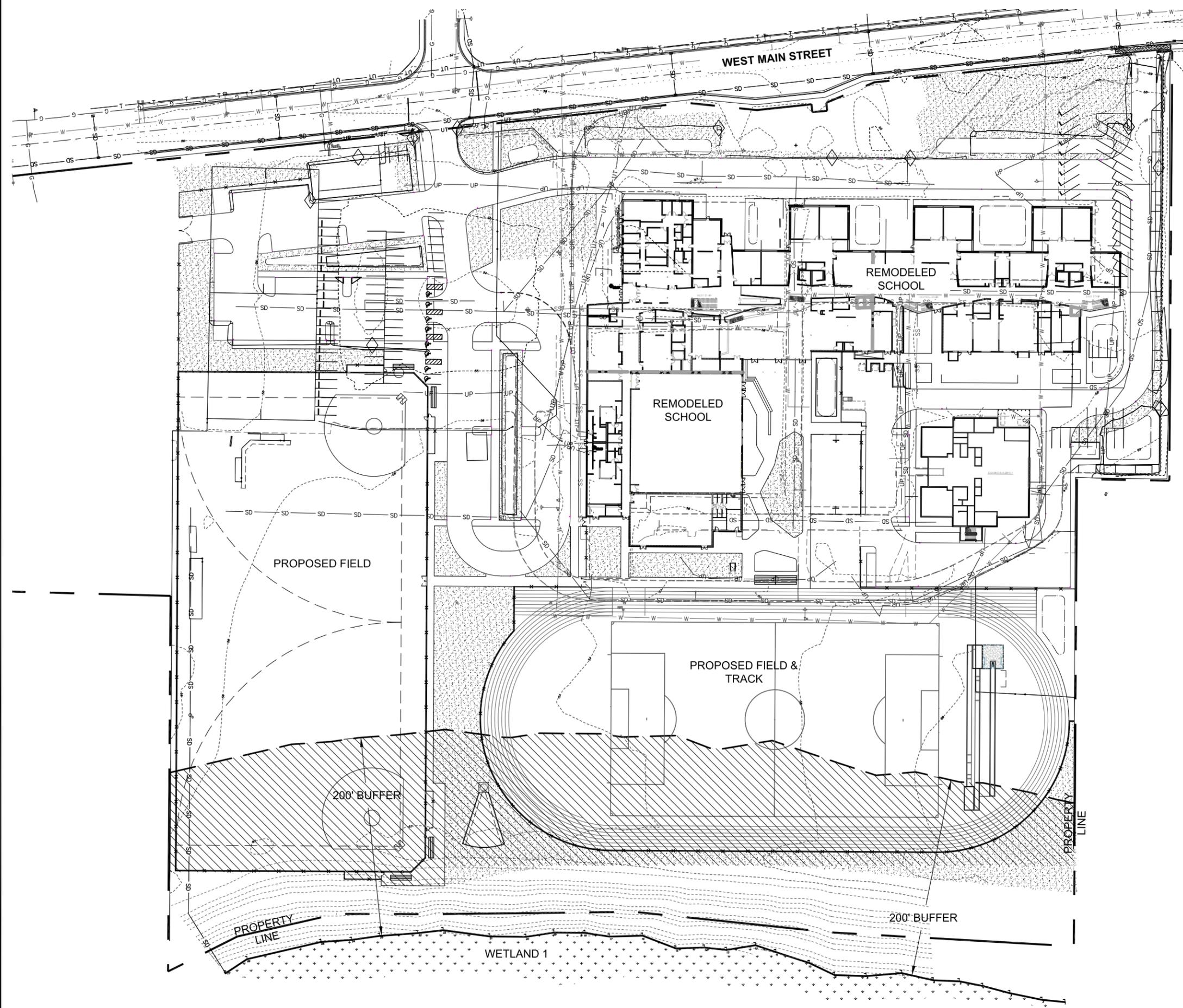
FIGURE 6
MONROE SCHOOL DISTRICT
PARK PLACE MIDDLE SCHOOL
 CRITICAL AREAS REPORT
 EXISTING CONDITIONS



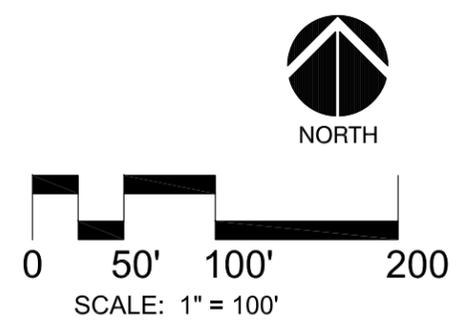
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 Associates, Inc.
 2111 N. Northgate Way, Ste 219
 Seattle, WA 98133

RAI PROJECT: 2015-044	
DATE: NOVEMBER 23, 2015	
DRAWN BY: AC	PM: KK
BASE INFORMATION: SURVEY	
PROVIDED BY Harmsen & Associates Inc.	
OFFICE: (360) 794-7811 Monroe, WA	

FIGURE 7
 MONROE SCHOOL DISTRICT
 PARK PLACE MIDDLE SCHOOL
 CRITICAL AREAS REPORT
 PROPOSED SITE PLAN



LEGEND
 BUFFER DISTURBANCE
 112,220 SF



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 Seattle, WA 98133

RAI PROJECT: 2015-044	
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