BARGHAUSEN

PRELIMINARY STORMWATER SITE PLAN

Proposed Northwest Logistics Center No. 2 – Parking Expansion

NEC – Center Drive and International Place
DuPont, Washington

Prepared for:
Panattoni Development Company, Inc.
1821 Dock Street, Suite 100
Tacoma, WA 98402

06/30/2020

June 30, 2020
Our Job No. 21227

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1.0 PROJECT OVERVIEW

1.0 PROJECT OVERVIEW

The proposed Northwest Logistics Center No. 2 – Parking Expansion development is located on two parcels totaling approximately 37.50 acres, located at the northwest corner of International Place and Center Drive in the City of DuPont, Washington.

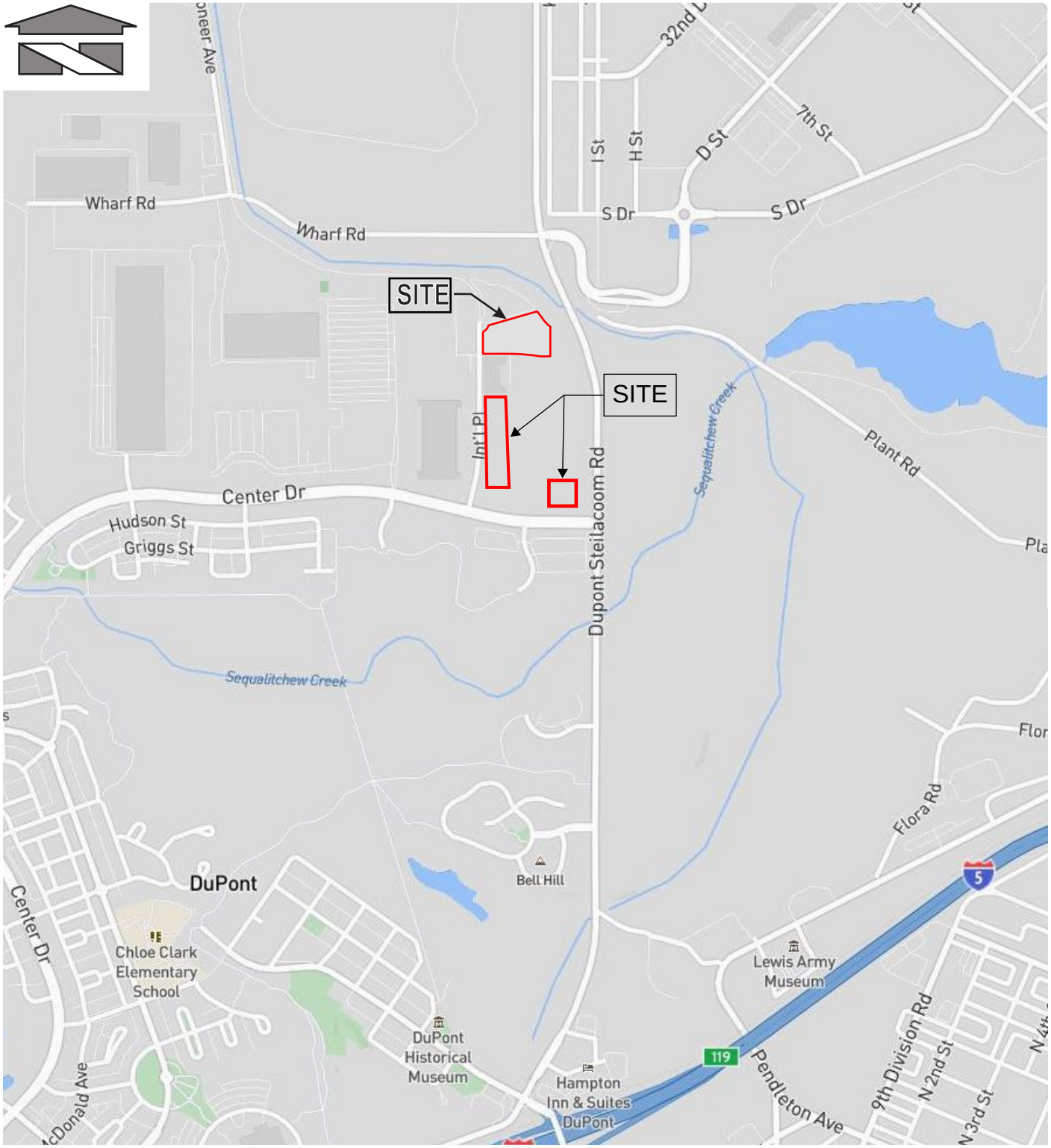
Please see the attached Vicinity Map for the exact location of the project site. The site developments lie across two parcels; Tax Parcel No. 300039-0011 of 32.16 acres, and Tax Parcel No. 300039-0282 of 5.34 acres. The larger parcel is to the south and was previously developed as a 628,640 square foot warehouse building with associated dock-high loading, parking, drive aisles and landscaping. The smaller parcel is to the north, and is currently a sparsely vegetated lot that was previously cleared and graded.

The proposal for this development is to construct a new passenger vehicle parking area on the northern lot as well as a truck and trailer access road with guard house to check in deliveries. The improvements total approximately 5.43 acres of new and replaced impervious surfaces which includes both asphalt and concrete paving.

Based on zoning requirements of the site, the disturbed areas of the site are required to provide 20% landscaping. The project is requesting a variance to allow for 19.4% landscaping as provided with the current site plan.

Infiltration is the proposed method of flow control for this project with basic water quality required for pretreatment prior to infiltration.

VICINITY MAP



REFERENCE: Rand McNally (2020)

Scale: Horizontal: N.T.S. Vertical: N/A	For: NW Logistics 2 - Parking Expansion Dupont, Washington	Job Number 21227
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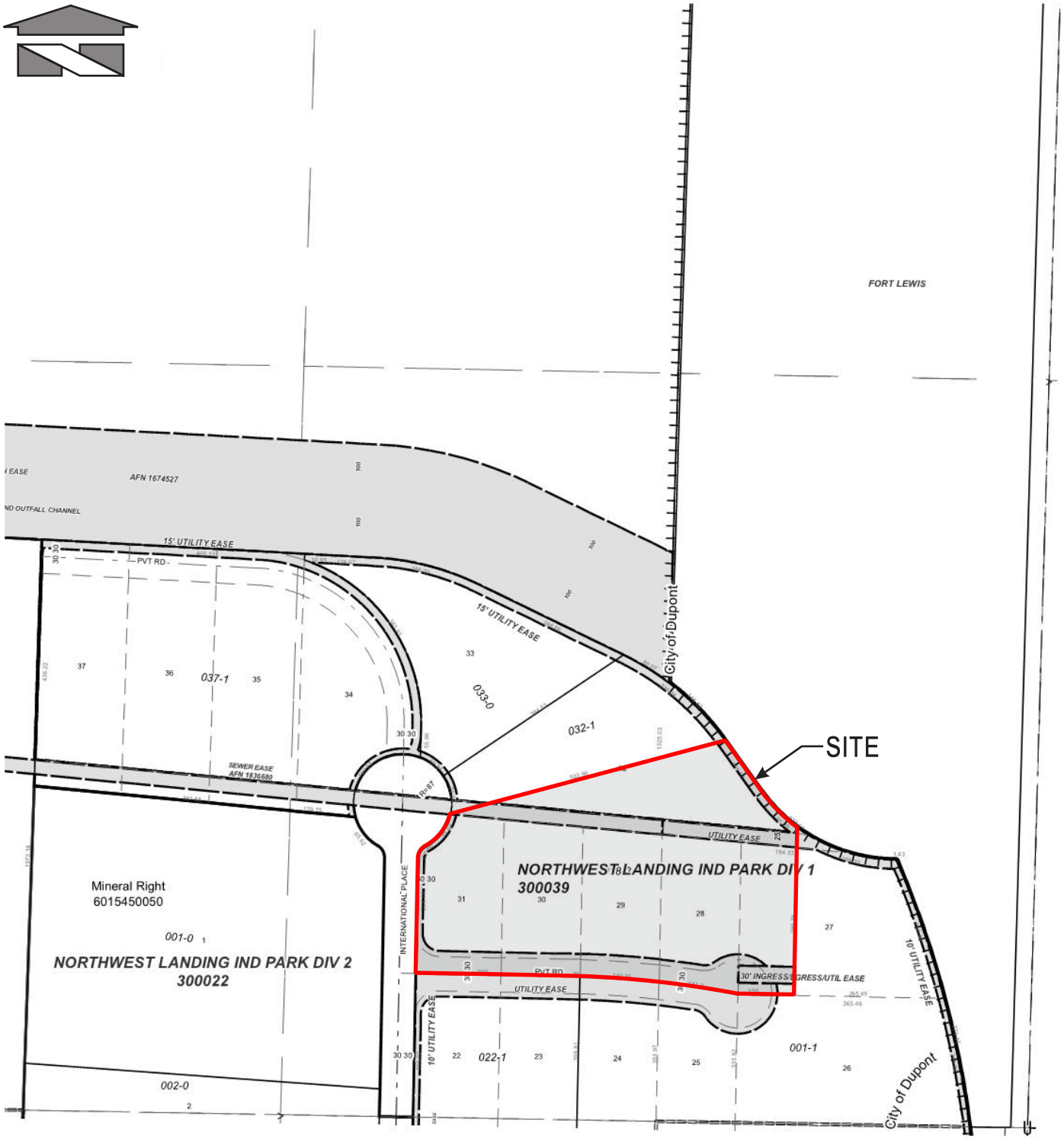
ASSESSOR MAP



REFERENCE: Pierce County Department of Assessments (Jan. 2019)

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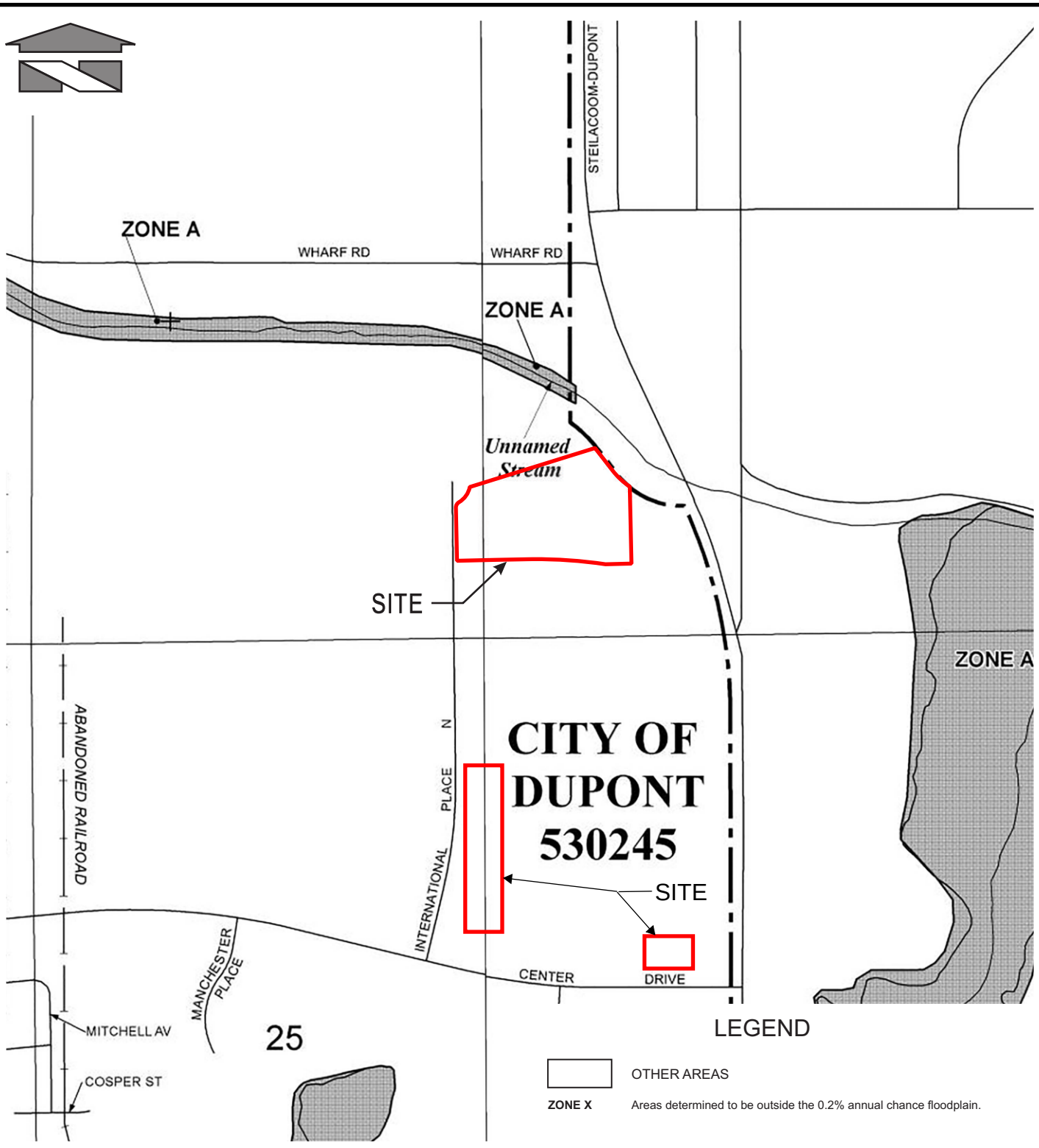
FEMA MAP



REFERENCE: Federal Emergency Management Agency (Portion of Map 53053C0507E, March 2017)

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Dupont, Washington

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FEMA MAP

DATE: 06/01/20

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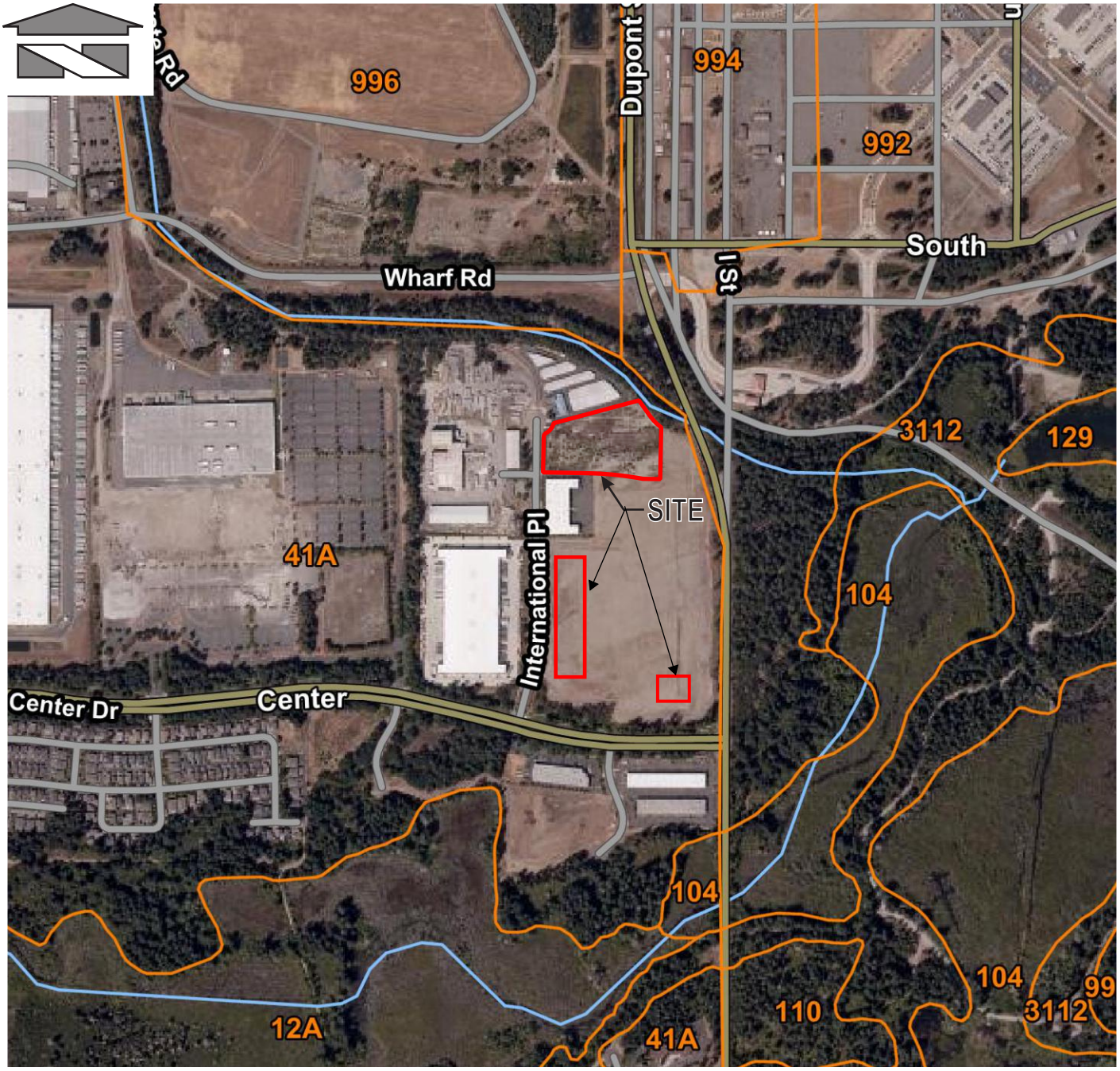
SOIL SURVEY MAP



REFERENCE: USDA, Natural Resources Conservation Service

LEGEND:	HSG
41A = Spanaway gravelly sandy loam	A

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SOIL SURVEY MAP

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SENSITIVE AREAS MAP

REFERENCE: Pierce County PublicGIS

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SENSITIVE AREAS MAP

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2.0 ANALYSIS OF THE MINIMUM REQUIREMENTS

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Minimum Requirement No. 1 – Preparation of Stormwater Site Plan:

This document fulfills the requirements of a Stormwater Site Plan.

Minimum Requirement No. 2 – Construction Stormwater Pollution Prevention:

The Construction Stormwater Pollution Prevention Plan is included in section 6.0 of this report.

Minimum Requirement No. 3 – Source Control Prevention:

Source control will be provided on site in the form of regular sweeping of the parking areas, as well as educating the owner about the proper use of fertilizers and pesticides on the landscaping areas.

Minimum Requirement No. 4 – Preservation of Natural Drainage Systems and Outfalls:

This area consists of gravelly, sandy type soils that infiltrate over the entire site. The infiltration rate utilized was 12 inches per hour as allowed by the geotechnical report for long-term infiltration.

Minimum Requirement No. 5 – On-Site Stormwater Management:

This project achieves the Low Impact Development Performance Standard due to full infiltration of runoff from all impervious areas on-site.

Minimum Requirement No. 6 – Runoff Treatment:

All areas requiring runoff treatment will have runoff from those areas routed to a basic water quality facility prior to draining to infiltrating.

Minimum Requirement No. 7 – Flow Control:

Flow control for this development will be provided through the use of infiltration galleries designed to infiltrate 100% of the runoff for historical storm events using the Western Washington Hydrology Model (WWHM) 2012.

Minimum Requirement No. 8 – Wetland Protection:

There are no wetlands on this project site.

Minimum Requirement No. 9 – Operations and Maintenance:

An Operations and Maintenance Manual will be prepared and included in the final stormwater site plan prepared for this development.

3.0 EXISTING CONDITIONS SUMMARY

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The on-site soils are Spanaway gravelly sandy loam type, which is an "A" type soil and exhibits infiltration rates 12 inches per hour. The existing condition of the site consists of previously cleared and graded land that is currently covered in small brush with no significant trees. The site is bound on the north by a rental storage facility, west by International Place, on the south by Center Drive, and on the east by DuPont-Steilacoom Road S.W.

4.0 OFF-SITE ANALYSIS REPORT

4.0 OFF-SITE ANALYSIS REPORT

The project site is surrounding by Dupont-Steilacoom Road to the East, Center Drive to the South, International Place and a warehouse building to the West and a rental storage facility on the North.

The storm water from southeast and west parking lots is collected and discharged to an existing infiltration gallery. Due to the nature of the work in these two areas there will no change in the way the storm water is collected or discharged. The storm water from the proposed northeast parking lot area will be collected by several on-site catch basins and piped to a proposed infiltration gallery at the northeastern end of the parking lot. No storm water runs onto the site from off-site areas.

Since infiltration is proposed as the flow control method for the entire project site, and there are very minimal if any off-site areas contributing to this site, no further off-site analysis has been prepared for this development.

5.0 PERMANENT STORMWATER CONTROL PLAN

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A. **Existing Site Hydrology**: The existing project site consists of land that has been previously cleared and graded that is now covered in small deciduous trees and brush, driveways and asphalt parking areas. The existing driveways and asphalt parking areas are being discharged to existing roadside ditches or infiltration galleries. The on-site soil type is considered Spanaway type soil. This creates a pre-developed condition of no runoff from the site, even in peak storm events. All runoff infiltrates into the ground or evaporates. This will be matched in the developed condition through the use of infiltration.

B. **Developed Site Hydrology**: Under developed conditions, all runoff from the on-site improvements will be routed through water quality features prior to infiltration on-site. An infiltration rate of 12 inches per hour was utilized based on the soils report.

C. **Performance Standards and Goals**: These conveyance facilities will be sized using the modified rational method as each contributing basin is less than 10 acres. The infiltration facilities were sized using the Western Washington Hydrology Model (WWHM), utilizing an infiltration rate of 12 inches per hour and providing 100% infiltration for up to the 100-year storm event for historic rainfall data. Basic water quality is provided for 91% of the historic runoff volume as required for this development.

D. **Flow Control System:** Flow control will be provided by an infiltration gallery on-site. The system has been designed based off the geotechnical engineer's preliminary infiltration rate of 12 inches per hour. Conceptual design is provided within this preliminary storm report, with a final design to be provided for site development permitting.

E. **Water Quality System**: Basic water quality will be provided for treatment of pollution generating runoff prior to infiltration. Please refer to the following pages of this report for the grading and drainage plan for this development. Conceptual design is provided within this preliminary storm report, with a final design to be provided for site development permitting.

F. **Conveyance System Analysis and Design**: The conveyance system for this project will be sized using the rational method and will be completed during final engineering design for site development permitting.

FLOW CONTROL AND WATER QUALITY SIZING CRITERIA

Project: **NW Logistics 2 - Parking Expansion**
BCE #: 21227

Total Disturbed Area	sf	ac	%
Total Impervious	255,740	5.87	85%
Total Pervious	46,045	1.06	15%
Total Pavement	255,740	5.87	48%
Total Area	301,785	6.93	100%

WQ Area Totals	sf	ac
Impervious to WQ	226,100	5.19
Pervious to WQ	38,810	0.89
Area to WQ	264,910	6.08
Offline WQ Flowrate (cfs)		0.4577
100 Year Flowrate (cfs)		4.6464

INFILTRATION AND WATER QUALITY SIZING CALCULATIONS

WWHM2012

PROJECT REPORT

NW Logistics 2 - Parking Expansion
BCE#21227
FC & WQ Calculations
6/29/2020

General Model Information

Project Name:	21227-FC
Site Name:	NW Logistics 2 - Parking Expansion
Site Address:	3330 International Place
City:	DuPont
Report Date:	6/29/2020
Gage:	40 IN EAST
Data Start:	10/01/1901
Data End:	09/30/2059
Timestep:	15 Minute
Precip Scale:	0.000 (adjusted)
Version Date:	2019/09/13
Version:	4.2.17

POC Thresholds

Low Flow Threshold for POC1:	50 Percent of the 2 Year
High Flow Threshold for POC1:	50 Year

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Forest, Flat	4.86
Pervious Total	4.86

Impervious Land Use	acre
ROADS FLAT	1.22
Impervious Total	1.22
Basin Total	6.08

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
A B, Lawn, Flat	0.89
Pervious Total	0.89

Impervious Land Use	acre
ROADS FLAT	5.19
Impervious Total	5.19
Basin Total	6.08

Element Flows To:

Surface	Interflow	Groundwater
Gravel Trench Bed 1	Gravel Trench Bed 1	

Mitigated Routing

Gravel Trench Bed 1

Bottom Length:	218.00 ft.
Bottom Width:	30.00 ft.
Trench bottom slope 1:	0 To 1
Trench Left side slope 0:	0 To 1
Trench right side slope 2:	0 To 1
Material thickness of first layer:	1.75
Pour Space of material for first layer:	0.3
Material thickness of second layer:	1.5
Pour Space of material for second layer:	0.3825
Material thickness of third layer:	1.75
Pour Space of material for third layer:	0.3
Infiltration On	
Infiltration rate:	12
Infiltration safety factor:	1
Total Volume Infiltrated (ac-ft.):	2219.1
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	2219.1
Percent Infiltrated:	100
Total Precip Applied to Facility:	0
Total Evap From Facility:	0
Discharge Structure	
Riser Height:	5 ft.
Riser Diameter:	18 in.
Element Flows To:	
Outlet 1	Outlet 2

Gravel Trench Bed Hydraulic Table

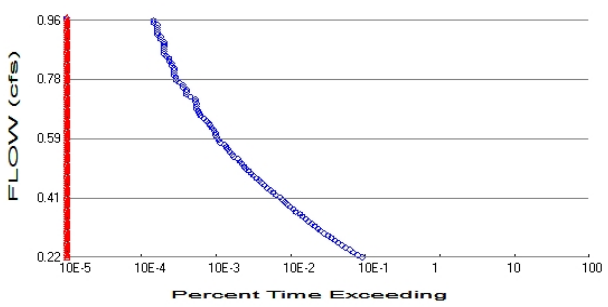
Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.150	0.000	0.000	0.000
0.0667	0.150	0.003	0.000	1.816
0.1333	0.150	0.006	0.000	1.816
0.2000	0.150	0.009	0.000	1.816
0.2667	0.150	0.012	0.000	1.816
0.3333	0.150	0.015	0.000	1.816
0.4000	0.150	0.018	0.000	1.816
0.4667	0.150	0.021	0.000	1.816
0.5333	0.150	0.024	0.000	1.816
0.6000	0.150	0.027	0.000	1.816
0.6667	0.150	0.030	0.000	1.816
0.7333	0.150	0.033	0.000	1.816
0.8000	0.150	0.036	0.000	1.816
0.8667	0.150	0.039	0.000	1.816
0.9333	0.150	0.042	0.000	1.816
1.0000	0.150	0.045	0.000	1.816
1.0667	0.150	0.048	0.000	1.816
1.1333	0.150	0.051	0.000	1.816
1.2000	0.150	0.054	0.000	1.816
1.2667	0.150	0.057	0.000	1.816
1.3333	0.150	0.060	0.000	1.816
1.4000	0.150	0.063	0.000	1.816
1.4667	0.150	0.066	0.000	1.816
1.5333	0.150	0.069	0.000	1.816

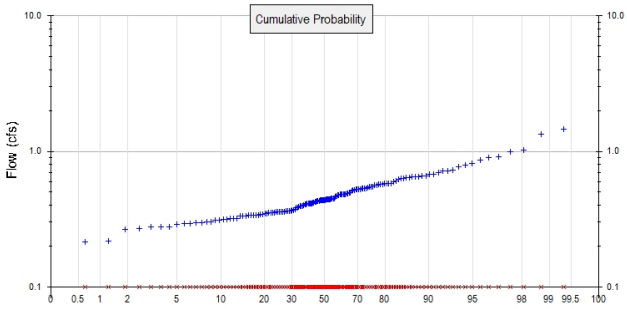
1.6000	0.150	0.072	0.000	1.816
1.6667	0.150	0.075	0.000	1.816
1.7333	0.150	0.078	0.000	1.816
1.8000	0.150	0.081	0.000	1.816
1.8667	0.150	0.085	0.000	1.816
1.9333	0.150	0.089	0.000	1.816
2.0000	0.150	0.093	0.000	1.816
2.0667	0.150	0.097	0.000	1.816
2.1333	0.150	0.101	0.000	1.816
2.2000	0.150	0.104	0.000	1.816
2.2667	0.150	0.108	0.000	1.816
2.3333	0.150	0.112	0.000	1.816
2.4000	0.150	0.116	0.000	1.816
2.4667	0.150	0.120	0.000	1.816
2.5333	0.150	0.124	0.000	1.816
2.6000	0.150	0.127	0.000	1.816
2.6667	0.150	0.131	0.000	1.816
2.7333	0.150	0.135	0.000	1.816
2.8000	0.150	0.139	0.000	1.816
2.8667	0.150	0.143	0.000	1.816
2.9333	0.150	0.147	0.000	1.816
3.0000	0.150	0.150	0.000	1.816
3.0667	0.150	0.154	0.000	1.816
3.1333	0.150	0.158	0.000	1.816
3.2000	0.150	0.162	0.000	1.816
3.2667	0.150	0.165	0.000	1.816
3.3333	0.150	0.168	0.000	1.816
3.4000	0.150	0.171	0.000	1.816
3.4667	0.150	0.174	0.000	1.816
3.5333	0.150	0.177	0.000	1.816
3.6000	0.150	0.180	0.000	1.816
3.6667	0.150	0.183	0.000	1.816
3.7333	0.150	0.186	0.000	1.816
3.8000	0.150	0.189	0.000	1.816
3.8667	0.150	0.192	0.000	1.816
3.9333	0.150	0.195	0.000	1.816
4.0000	0.150	0.198	0.000	1.816
4.0667	0.150	0.201	0.000	1.816
4.1333	0.150	0.204	0.000	1.816
4.2000	0.150	0.207	0.000	1.816
4.2667	0.150	0.210	0.000	1.816
4.3333	0.150	0.213	0.000	1.816
4.4000	0.150	0.216	0.000	1.816
4.4667	0.150	0.219	0.000	1.816
4.5333	0.150	0.222	0.000	1.816
4.6000	0.150	0.225	0.000	1.816
4.6667	0.150	0.228	0.000	1.816
4.7333	0.150	0.231	0.000	1.816
4.8000	0.150	0.234	0.000	1.816
4.8667	0.150	0.237	0.000	1.816
4.9333	0.150	0.240	0.000	1.816
5.0000	0.150	0.250	0.000	1.816
5.0667	0.150	0.260	0.273	1.816
5.1333	0.150	0.270	0.771	1.816
5.2000	0.150	0.280	1.404	1.816
5.2667	0.150	0.290	2.123	1.816
5.3333	0.150	0.300	2.882	1.816
5.4000	0.150	0.310	3.632	1.816

5.4667	0.150	0.320	4.326	1.816
5.5333	0.150	0.330	4.924	1.816
5.6000	0.150	0.340	5.401	1.816
5.6667	0.150	0.350	5.754	1.816
5.7333	0.150	0.360	6.014	1.816
5.8000	0.150	0.370	6.338	1.816
5.8667	0.150	0.380	6.597	1.816
5.9333	0.150	0.390	6.846	1.816
6.0000	0.150	0.400	7.086	1.816

Analysis Results

POC 1





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 4.86
Total Impervious Area: 1.22

Mitigated Landuse Totals for POC #1
Total Pervious Area: 0.89
Total Impervious Area: 5.19

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	**Flow(cfs)**
2 year	0.438721
5 year	0.587968
10 year	0.696309
25 year	0.844441
50 year	0.963224
100 year	1.089463

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	**Flow(cfs)**
2 year	0
5 year	0
10 year	0
25 year	0
50 year	0
100 year	0

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #1

Year	**Predeveloped**	**Mitigated**
1902	0.520	0.000
1903	0.574	0.000
1904	0.648	0.000
1905	0.292	0.000
1906	0.331	0.000
1907	0.435	0.000
1908	0.361	0.000
1909	0.441	0.000
1910	0.423	0.000
1911	0.477	0.000

1912	0.787	0.000
1913	0.340	0.000
1914	1.459	0.000
1915	0.297	0.000
1916	0.550	0.000
1917	0.218	0.000
1918	0.438	0.000
1919	0.277	0.000
1920	0.361	0.000
1921	0.311	0.000
1922	0.483	0.000
1923	0.340	0.000
1924	0.636	0.000
1925	0.269	0.000
1926	0.517	0.000
1927	0.442	0.000
1928	0.316	0.000
1929	0.627	0.000
1930	0.661	0.000
1931	0.321	0.000
1932	0.341	0.000
1933	0.339	0.000
1934	0.548	0.000
1935	0.299	0.000
1936	0.407	0.000
1937	0.531	0.000
1938	0.301	0.000
1939	0.367	0.000
1940	0.662	0.000
1941	0.723	0.000
1942	0.487	0.000
1943	0.485	0.000
1944	0.700	0.000
1945	0.526	0.000
1946	0.414	0.000
1947	0.319	0.000
1948	0.439	0.000
1949	0.676	0.000
1950	0.375	0.000
1951	0.577	0.000
1952	0.648	0.000
1953	0.599	0.000
1954	0.357	0.000
1955	0.333	0.000
1956	0.308	0.000
1957	0.354	0.000
1958	0.442	0.000
1959	0.441	0.000
1960	0.358	0.000
1961	0.991	0.000
1962	0.428	0.000
1963	0.317	0.000
1964	0.913	0.000
1965	0.429	0.000
1966	0.346	0.000
1967	0.484	0.000
1968	0.411	0.000
1969	0.369	0.000

1970	0.412	0.000
1971	0.404	0.000
1972	1.335	0.000
1973	0.772	0.000
1974	0.568	0.000
1975	0.580	0.000
1976	0.618	0.000
1977	0.266	0.000
1978	0.447	0.000
1979	0.489	0.000
1980	0.464	0.000
1981	0.445	0.000
1982	0.359	0.000
1983	0.485	0.000
1984	0.482	0.000
1985	0.546	0.000
1986	0.278	0.000
1987	0.497	0.000
1988	0.292	0.000
1989	0.290	0.000
1990	0.352	0.000
1991	0.533	0.000
1992	0.511	0.000
1993	0.566	0.000
1994	0.390	0.000
1995	0.303	0.000
1996	0.409	0.000
1997	0.364	0.000
1998	0.437	0.000
1999	0.496	0.000
2000	0.413	0.000
2001	0.338	0.000
2002	0.602	0.000
2003	0.350	0.000
2004	0.528	0.000
2005	1.026	0.000
2006	0.473	0.000
2007	0.532	0.000
2008	0.435	0.000
2009	0.332	0.000
2010	0.427	0.000
2011	0.443	0.000
2012	0.418	0.000
2013	0.396	0.000
2014	0.385	0.000
2015	0.628	0.000
2016	0.416	0.000
2017	0.641	0.000
2018	0.382	0.000
2019	0.569	0.000
2020	0.466	0.000
2021	0.394	0.000
2022	0.653	0.000
2023	0.818	0.000
2024	0.856	0.000
2025	0.430	0.000
2026	0.485	0.000
2027	0.528	0.000

2028	0.205	0.000
2029	0.340	0.000
2030	0.716	0.000
2031	0.215	0.000
2032	0.358	0.000
2033	0.452	0.000
2034	0.343	0.000
2035	0.438	0.000
2036	0.355	0.000
2037	0.476	0.000
2038	0.449	0.000
2039	0.902	0.000
2040	0.356	0.000
2041	0.451	0.000
2042	0.527	0.000
2043	0.576	0.000
2044	0.397	0.000
2045	0.320	0.000
2046	0.355	0.000
2047	0.438	0.000
2048	0.360	0.000
2049	0.533	0.000
2050	0.402	0.000
2051	0.560	0.000
2052	0.432	0.000
2053	0.365	0.000
2054	0.717	0.000
2055	0.412	0.000
2056	0.576	0.000
2057	0.275	0.000
2058	0.539	0.000
2059	0.681	0.000

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

Rank	**Predeveloped**	**Mitigated**
1	1.4586	0.0000
2	1.3352	0.0000
3	1.0258	0.0000
4	0.9911	0.0000
5	0.9131	0.0000
6	0.9017	0.0000
7	0.8563	0.0000
8	0.8184	0.0000
9	0.7870	0.0000
10	0.7717	0.0000
11	0.7230	0.0000
12	0.7165	0.0000
13	0.7156	0.0000
14	0.7000	0.0000
15	0.6810	0.0000
16	0.6760	0.0000
17	0.6615	0.0000
18	0.6608	0.0000
19	0.6526	0.0000
20	0.6481	0.0000
21	0.6479	0.0000
22	0.6415	0.0000

23	0.6364	0.0000
24	0.6279	0.0000
25	0.6269	0.0000
26	0.6180	0.0000
27	0.6017	0.0000
28	0.5992	0.0000
29	0.5795	0.0000
30	0.5767	0.0000
31	0.5763	0.0000
32	0.5758	0.0000
33	0.5736	0.0000
34	0.5686	0.0000
35	0.5682	0.0000
36	0.5660	0.0000
37	0.5597	0.0000
38	0.5498	0.0000
39	0.5480	0.0000
40	0.5458	0.0000
41	0.5385	0.0000
42	0.5333	0.0000
43	0.5326	0.0000
44	0.5319	0.0000
45	0.5309	0.0000
46	0.5283	0.0000
47	0.5279	0.0000
48	0.5270	0.0000
49	0.5262	0.0000
50	0.5196	0.0000
51	0.5166	0.0000
52	0.5111	0.0000
53	0.4966	0.0000
54	0.4961	0.0000
55	0.4888	0.0000
56	0.4874	0.0000
57	0.4851	0.0000
58	0.4850	0.0000
59	0.4847	0.0000
60	0.4843	0.0000
61	0.4831	0.0000
62	0.4823	0.0000
63	0.4773	0.0000
64	0.4765	0.0000
65	0.4729	0.0000
66	0.4665	0.0000
67	0.4644	0.0000
68	0.4518	0.0000
69	0.4509	0.0000
70	0.4488	0.0000
71	0.4472	0.0000
72	0.4455	0.0000
73	0.4426	0.0000
74	0.4419	0.0000
75	0.4415	0.0000
76	0.4410	0.0000
77	0.4406	0.0000
78	0.4386	0.0000
79	0.4383	0.0000
80	0.4378	0.0000

81	0.4377	0.0000
82	0.4368	0.0000
83	0.4351	0.0000
84	0.4347	0.0000
85	0.4323	0.0000
86	0.4296	0.0000
87	0.4293	0.0000
88	0.4279	0.0000
89	0.4268	0.0000
90	0.4226	0.0000
91	0.4181	0.0000
92	0.4156	0.0000
93	0.4144	0.0000
94	0.4128	0.0000
95	0.4124	0.0000
96	0.4122	0.0000
97	0.4107	0.0000
98	0.4093	0.0000
99	0.4068	0.0000
100	0.4037	0.0000
101	0.4021	0.0000
102	0.3970	0.0000
103	0.3962	0.0000
104	0.3942	0.0000
105	0.3901	0.0000
106	0.3849	0.0000
107	0.3821	0.0000
108	0.3750	0.0000
109	0.3693	0.0000
110	0.3672	0.0000
111	0.3645	0.0000
112	0.3644	0.0000
113	0.3614	0.0000
114	0.3607	0.0000
115	0.3595	0.0000
116	0.3589	0.0000
117	0.3581	0.0000
118	0.3580	0.0000
119	0.3574	0.0000
120	0.3561	0.0000
121	0.3551	0.0000
122	0.3547	0.0000
123	0.3540	0.0000
124	0.3524	0.0000
125	0.3500	0.0000
126	0.3463	0.0000
127	0.3430	0.0000
128	0.3407	0.0000
129	0.3401	0.0000
130	0.3399	0.0000
131	0.3396	0.0000
132	0.3391	0.0000
133	0.3376	0.0000
134	0.3332	0.0000
135	0.3316	0.0000
136	0.3313	0.0000
137	0.3206	0.0000
138	0.3196	0.0000

139	0.3192	0.0000
140	0.3165	0.0000
141	0.3158	0.0000
142	0.3112	0.0000
143	0.3083	0.0000
144	0.3034	0.0000
145	0.3006	0.0000
146	0.2987	0.0000
147	0.2966	0.0000
148	0.2922	0.0000
149	0.2919	0.0000
150	0.2898	0.0000
151	0.2779	0.0000
152	0.2771	0.0000
153	0.2754	0.0000
154	0.2691	0.0000
155	0.2664	0.0000
156	0.2181	0.0000
157	0.2149	0.0000
158	0.2046	0.0000

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.2194	4981	0	0	Pass
0.2269	4422	0	0	Pass
0.2344	3851	0	0	Pass
0.2419	3435	0	0	Pass
0.2494	3012	0	0	Pass
0.2569	2715	0	0	Pass
0.2644	2401	0	0	Pass
0.2720	2171	0	0	Pass
0.2795	1942	0	0	Pass
0.2870	1756	0	0	Pass
0.2945	1565	0	0	Pass
0.3020	1404	0	0	Pass
0.3095	1283	0	0	Pass
0.3170	1152	0	0	Pass
0.3246	1058	0	0	Pass
0.3321	965	0	0	Pass
0.3396	879	0	0	Pass
0.3471	796	0	0	Pass
0.3546	739	0	0	Pass
0.3621	647	0	0	Pass
0.3696	602	0	0	Pass
0.3771	545	0	0	Pass
0.3847	502	0	0	Pass
0.3922	468	0	0	Pass
0.3997	433	0	0	Pass
0.4072	395	0	0	Pass
0.4147	352	0	0	Pass
0.4222	322	0	0	Pass
0.4297	296	0	0	Pass
0.4373	267	0	0	Pass
0.4448	247	0	0	Pass
0.4523	222	0	0	Pass
0.4598	209	0	0	Pass
0.4673	192	0	0	Pass
0.4748	178	0	0	Pass
0.4823	166	0	0	Pass
0.4899	150	0	0	Pass
0.4974	137	0	0	Pass
0.5049	131	0	0	Pass
0.5124	123	0	0	Pass
0.5199	116	0	0	Pass
0.5274	108	0	0	Pass
0.5349	94	0	0	Pass
0.5425	91	0	0	Pass
0.5500	84	0	0	Pass
0.5575	80	0	0	Pass
0.5650	76	0	0	Pass
0.5725	71	0	0	Pass
0.5800	62	0	0	Pass
0.5875	61	0	0	Pass
0.5950	56	0	0	Pass
0.6026	54	0	0	Pass
0.6101	54	0	0	Pass

0.6176	52	0	0	Pass
0.6251	49	0	0	Pass
0.6326	46	0	0	Pass
0.6401	44	0	0	Pass
0.6476	41	0	0	Pass
0.6552	38	0	0	Pass
0.6627	34	0	0	Pass
0.6702	33	0	0	Pass
0.6777	32	0	0	Pass
0.6852	30	0	0	Pass
0.6927	30	0	0	Pass
0.7002	30	0	0	Pass
0.7078	29	0	0	Pass
0.7153	29	0	0	Pass
0.7228	25	0	0	Pass
0.7303	22	0	0	Pass
0.7378	22	0	0	Pass
0.7453	22	0	0	Pass
0.7528	20	0	0	Pass
0.7604	20	0	0	Pass
0.7679	18	0	0	Pass
0.7754	16	0	0	Pass
0.7829	16	0	0	Pass
0.7904	15	0	0	Pass
0.7979	15	0	0	Pass
0.8054	15	0	0	Pass
0.8129	15	0	0	Pass
0.8205	14	0	0	Pass
0.8280	14	0	0	Pass
0.8355	13	0	0	Pass
0.8430	13	0	0	Pass
0.8505	12	0	0	Pass
0.8580	11	0	0	Pass
0.8655	11	0	0	Pass
0.8731	11	0	0	Pass
0.8806	11	0	0	Pass
0.8881	11	0	0	Pass
0.8956	11	0	0	Pass
0.9031	10	0	0	Pass
0.9106	10	0	0	Pass
0.9181	9	0	0	Pass
0.9257	9	0	0	Pass
0.9332	9	0	0	Pass
0.9407	9	0	0	Pass
0.9482	9	0	0	Pass
0.9557	8	0	0	Pass
0.9632	8	0	0	Pass

Water Quality

Water Quality BMP Flow and Volume for POC #1

On-line facility volume:	0.5677 acre-feet
On-line facility target flow:	0.7879 cfs.
Adjusted for 15 min:	0.7879 cfs.
Off-line facility target flow:	0.4577 cfs.
Adjusted for 15 min:	0.4577 cfs.

LID Report

LID Technique	Used for Treatment ?	Total Volume Needs Treatment (ac-ft)	Volume Through Facility (ac-ft)	Infiltration Volume (ac-ft)	Cumulative Volume Infiltration Credit	Percent Volume Infiltrated	Water Quality	Percent Water Quality Treated	Comment
Gravel Trench Bed 1 POC	☐	2019.38			☐	100.00			
Total Volume Infiltrated		2019.38	0.00	0.00		100.00	0.00	0%	No Treat. Credit
Compliance with LID Standard 8% of 2-yr to 50% of 2-yr									Duration Analysis Result = Passed

Model Default Modifications

Total of 0 changes have been made.

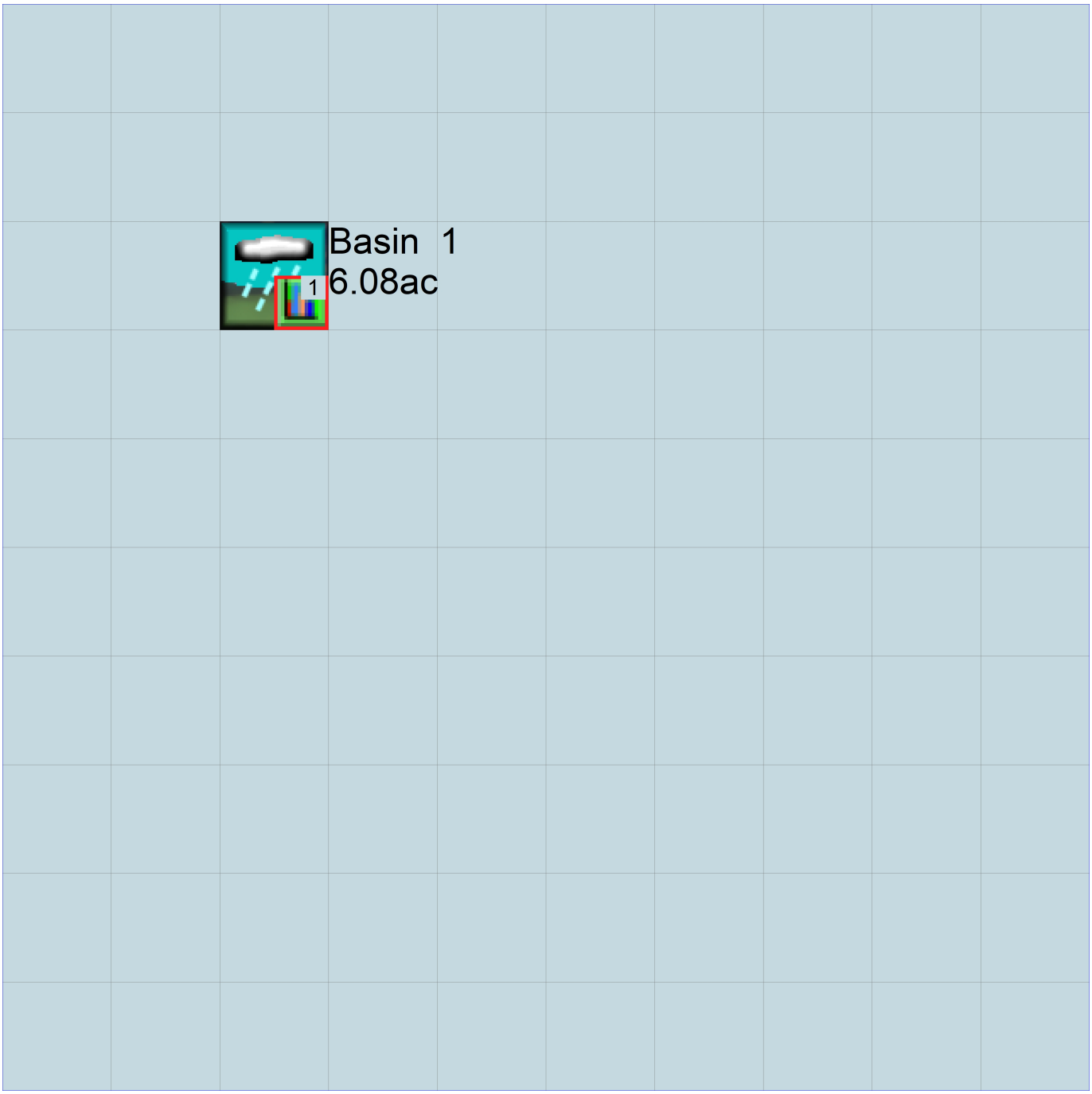
PERLND Changes

No PERLND changes have been made.

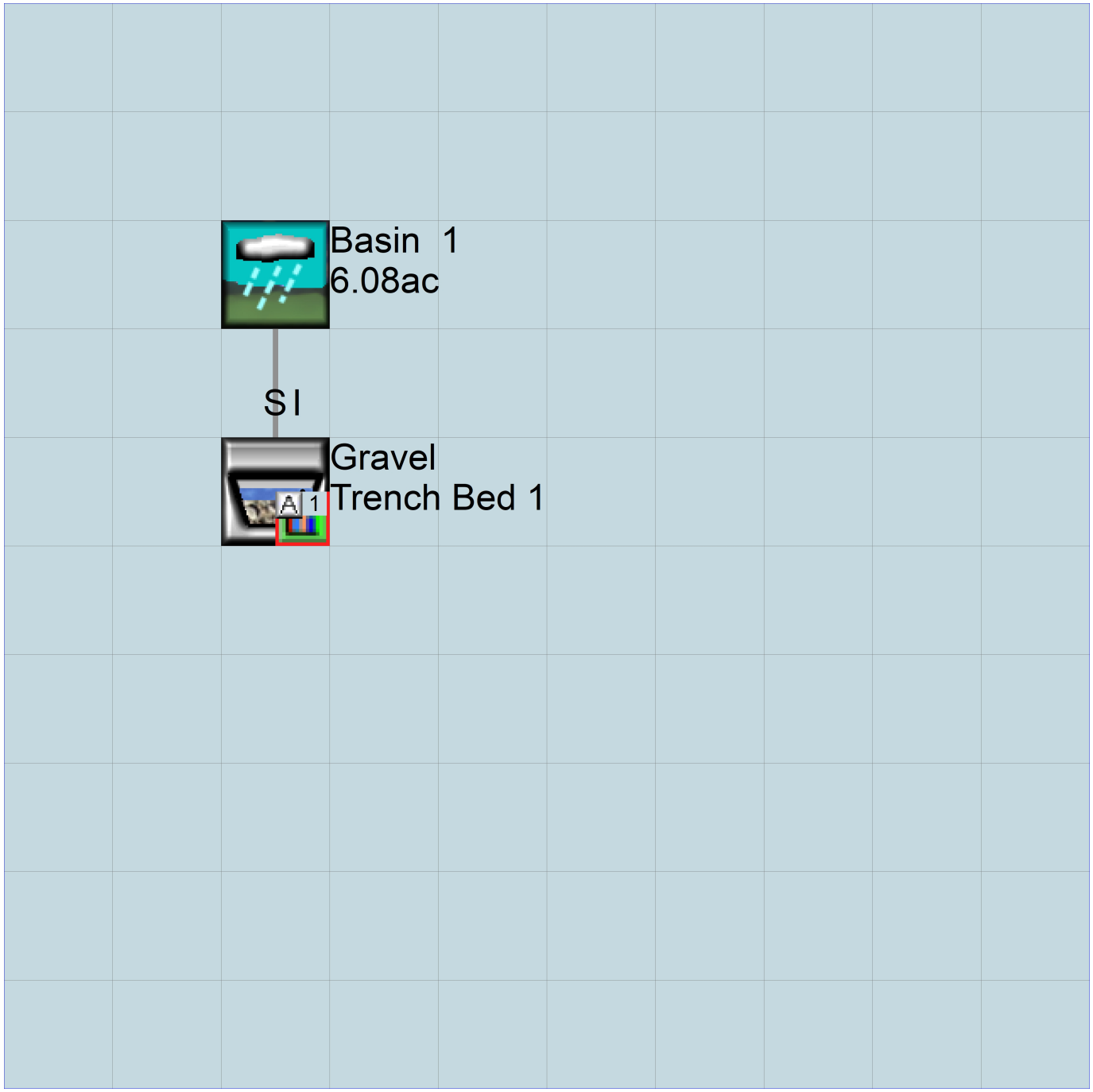
IMPLND Changes

No IMPLND changes have been made.

Appendix
Predeveloped Schematic



Mitigated Schematic



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6.0 CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN

6.0 CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN

The site has been previous cleared and graded. The erosion control measures proposed under this plan include a sediment trap, v-ditches with rock check dams, silt fence, inlet protection and construction entrances. For further detail please see the attached SWPPP and design plans.

Construction Stormwater General Permit

Stormwater Pollution Prevention Plan (SWPPP)

for

Northwest Logistics Center Phase 2 – Parking Lot Expansion

Prepared for:

The Washington State Department of Ecology

Southwest Regional Office

Permittee / Owner	Developer	Operator / Contractor
Panattoni Development Company, Inc. 1821 Dock St, Suite 100 Tacoma, WA 98402	Panattoni Development Company, Inc. 1821 Dock St, Suite 100 Tacoma, WA 98402	Sierra Construction 14800 NE Woodinville Way Woodinville, WA 98072

NEC – Center Drive and International Place, DuPont WA

Certified Erosion and Sediment Control Lead (CESCL)

Name	Organization	Contact Phone Number
	Sierra Construction	

SWPPP Prepared By

Name	Organization	Contact Phone Number
Dan Balmelli	Barghausen Consulting Engineers, Inc.	(425) 251-6222

SWPPP Preparation Date

June 30, 2020

Project Construction Dates

Start Date	End Date
October 2020	July 2021

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Appendix/Glossary

A. Site Map

B. BMP Detail

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D. Site Inspection Form

E. Construction Stormwater General Permit (CSWGP)

F. Engineering Calculations

List of Acronyms and Abbreviations

Acronym / Abbreviation	Explanation
303(d)	Section of the Clean Water Act pertaining to Impaired Waterbodies
BFO	Bellingham Field Office of the Department of Ecology
BMP(s)	Best Management Practice(s)
CESCL	Certified Erosion and Sediment Control Lead
CO_2	Carbon Dioxide
CRO	Central Regional Office of the Department of Ecology
CSWGP	Construction Stormwater General Permit
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
ERO	Eastern Regional Office of the Department of Ecology
ERTS	Environmental Report Tracking System
ESC	Erosion and Sediment Control
GULD	General Use Level Designation
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Units
NWRO	Northwest Regional Office of the Department of Ecology
pH	Power of Hydrogen
RCW	Revised Code of Washington
SPCC	Spill Prevention, Control, and Countermeasure
su	Standard Units
SWMMEW	Stormwater Management Manual for Eastern Washington
SWMMWW	Stormwater Management Manual for Western Washington
SWPPP	Stormwater Pollution Prevention Plan
TESC	Temporary Erosion and Sediment Control
SWRO	Southwest Regional Office of the Department of Ecology
TMDL	Total Maximum Daily Load
VFO	Vancouver Field Office of the Department of Ecology
WAC	Washington Administrative Code
WSDOT	Washington Department of Transportation
WWHM	Western Washington Hydrology Model

1 Project Information

Project/Site Name: Northwest Logistics Center 2 – Parking Lot Expansion
Street/Location: NEC – Center Drive and International Place
City: DuPont **State:** WA **Zip code:** 98327
Subdivision: Northwest Landing
Receiving waterbody: (infiltration)_

1.1 Existing Conditions

Total acreage (including support activities such as off-site equipment staging yards, material storage areas, borrow areas).

Total acreage:	37.50 ac
Disturbed acreage:	6.93 ac
Existing structures:	The southern parcel has an existing warehouse building that will remain with the site construction.
Landscape topography:	The existing southern parcel is fully developed with existing landscaping at the perimeter. The smaller northern parcel is undeveloped and has been previously cleared and graded. The only vegetation is small brush and shrubs. The sites are relatively flat in grade
Drainage patterns:	The site currently infiltrates on-site through outwash soils.
Existing Vegetation:	The existing site has grasses and other small shrubs.
Critical Areas:	The site is located within a critical aquifer recharge area. There is also an Oak Tree Protection Area within the larger site to the south which will remain undisturbed during construction.

List of known impairments for 303(d) listed or Total Maximum Daily Load (TMDL) for the receiving waterbody: No impairments for 303(d) are known for the receiving waterbody.

Table 1 – Summary of Site Pollutant Constituents

Constituent (Pollutant)	Location	Depth	Max. Concentration Detected (mg/kg)

1.2 Proposed Construction Activities

Description of site development (example: subdivision):
The proposed conditions for this site include vehicular parking and drive aisles, a guard house, sidewalks, landscape area, and an underground infiltration trench for stormwater management.

Description of construction activities (example: site preparation, demolition, excavation):
The construction activities covered under this SWPPP for this project will include demolition, site preparation, TESC installation, site grading, utility installation, guard house footprint construction and site paving.

Description of site drainage including flow from and onto adjacent properties. Must be consistent with Site Map in Appendix A:

The sites and roadways surrounding this project have conveyance systems in place, so there is no runoff expected to enter this site from off site properties. The soils on site are outwash soils with high infiltration rates, therefore any potential site runoff is assumed to infiltrate into these soils.

Description of final stabilization (example: extent of revegetation, paving, landscaping):
With the completion of construction, the entire site area of 37.50 acres will be approximately 80.6% impervious surfaces and 19.4% will be landscape areas or existing vegetation.

Contaminated Site Information:

Proposed activities regarding contaminated soils or groundwater (example: on-site treatment system, authorized sanitary sewer discharge):
The site is not expected to encounter any contaminated soils or groundwater.

2 Construction Stormwater Best Management Practices (BMPs)

The SWPPP is a living document reflecting current conditions and changes throughout the life of the project. These changes may be informal (i.e., hand-written notes and deletions). Update the SWPPP when the CESCL has noted a deficiency in BMPs or deviation from original design.

2.1 The 13 Elements

2.1.1 Element 1: Preserve Vegetation / Mark Clearing Limits

To protect adjacent properties and to reduce the area of soil exposed to construction, the limits of construction will be clearly marked before land-disturbing activities begin. Areas that are to be preserved, as well as all sensitive areas and their buffers, shall be clearly delineated, both in the field and on the plans. A silt fence will be installed around the perimeter of the project site to mark the limits of construction as well as protect surrounding properties from any possible sediment laden runoff and grading will occur around the perimeter the site to insure there is no runoff of any ponded stormwater.

List and describe BMPs:

BMP C233: Silt Fence

Installation Schedules: TBD

Inspection and Maintenance plan:

Silt Fence Maintenance

- Repair any damage immediately.
- Intercept and convey all evident concentrated flows uphill of the silt fence to a sediment pond.
- Check the uphill side of the fence for signs of the fence clogging and acting as a barrier to flow and then causing channelization of flows parallel to the fence. If this occurs, replace the fence or remove the trapped sediment.
- Remove sediment deposits when the deposit reaches approximately one-third the height of the silt fence, or install a second silt fence.
- Replace filter fabric that has deteriorated due to ultraviolet breakdown.

Responsible Staff: Contractor/CESL

2.1.2 Element 2: Establish Construction Access

Access points shall be stabilized to prevent the tracking of sediment onto public roads. Street sweeping, and street cleaning shall be employed to prevent sediment from entering state waters. One stabilized construction entrance will be installed to the southwest entrance to the project site. The roads shall be swept daily should sediment collect on them.

List and describe BMPs:

BMP C105: Stabilized Construction Entrance

Installation Schedules: TBD

Inspection and Maintenance plan:

Stabilized Construction Entrance Maintenance

- Quarry spalls shall be added if the pad is no longer in accordance with the specifications.
- If the entrance is not preventing sediment from being tracked onto pavement, then alternative measures to keep the streets free of sediment shall be used. This may include replacement/cleaning of the existing quarry spalls, street sweeping, and an increase in the dimensions of the entrance.
- Any sediment that is tracked onto pavement shall be removed by shoveling or street sweeping. The sediment collected by sweeping shall be removed or stabilized on site. The pavement shall not be cleaned by washing down the street, except when high efficiency sweeping is ineffective and there is a threat to public safety. If it is necessary to wash the streets, the construction of a small sump to contain the wash water shall be considered. The sediment would then be washed into the sump where it can be controlled.
- Perform street sweeping by hand or with a high efficiency sweeper. Do not use a non-high efficiency mechanical sweeper because this creates dust and throws soils into storm systems or conveyance ditches.
- Any quarry spalls that are loosened from the pad, which end up on the roadway shall be removed immediately.
- If vehicles are entering or exiting the site at points other than the construction entrance(s), fencing (see BMP C103) shall be installed to control traffic.
- Upon project completion and site stabilization, all construction accesses intended as permanent access for maintenance shall be permanently stabilized.

Responsible Staff: Contractor/CESL

2.1.3 Element 3: Control Flow Rates

In order to protect the properties and waterways downstream of the project site, stormwater from the site will be controlled by construction of temporary sediment trap as one of the first items of construction along with installation of silt fence around the downstream property boundary areas. Once the trap is constructed, stormwater during construction will be captured through v-ditches with rock check dams in order to control the flow of stormwater runoff before reaching the temporary sediment trap. The temporary trap has been located at a low point on site with adequate surface area for sediment settlement per the DOE requirements from BMP C240 and also outside the limits of permanent infiltration facilities. The sediment trap discharge will infiltrate onsite. The facilities must be functioning properly before construction of site improvements.

Will you construct stormwater retention and/or detention facilities?
☒ Yes ☐ No

Will you use permanent infiltration ponds or other low impact development (example: rain gardens, bio-retention, porous pavement) to control flow during construction?
☐ Yes ☒ No

List and describe BMPs:
BMP C240: Sediment Trap

BMP C207: Check Dams

Installation Schedules: TBD

Inspection and Maintenance plan:

Sediment Trap Maintenance

- Sediment shall be removed from the trap when it reaches 1-foot in depth.
- Any damage to the pond embankments or slopes shall be repaired.

Check Dam Maintenance

- Check dams shall be monitored for performance and sediment accumulation during and after each runoff producing rainfall.
- Sediment shall be removed when it reaches one half the sump depth.
- Anticipate submergence and deposition above the check dam and erosion from high flows around the edges of the dam.
- If significant erosion occurs between dams, install a protective riprap liner in that portion of the channel.

Responsible Staff: Contractor/CESCL

2.1.4 Element 4: Install Sediment Controls

Constructing the silt fence and sediment trap are the first steps to create the necessary gradients to prevent off-site discharge of sediment. Rock check dams and v-ditches will be used to convey stormwater runoff into the sediment trap to collect out sediment. The sediment trap is expected to be adequate for sediment control for the site. The surface area requirements for the sediment trap is met with the designed TESC plan and it is not expected that further treatment or other sediment controlling measures are necessary.

However, if the proposed sediment controls are ineffective as determined by the CESCL, they will promptly initiate the implementation of one or more of the alternative BMPs listed in Appendix B.

List and describe BMPs:

BMP C233: Silt Fence

BMP C240: Sediment Trap

Installation Schedules: TBD

Inspection and Maintenance plan:

Silt Fence Maintenance

- Repair any damage immediately.
- Intercept and convey all evident concentrated flows uphill of the silt fence to a sediment pond.
- Check the uphill side of the fence for signs of the fence clogging and acting as a barrier to flow and then causing channelization of flows parallel to the fence. If this occurs, replace the fence or remove the trapped sediment.
- Remove sediment deposits when the deposit reaches approximately one-third the height of the silt fence, or install a second silt fence.
- Replace filter fabric that has deteriorated due to ultraviolet breakdown.

Sediment Trap Maintenance

- Sediment shall be removed from the trap when it reaches 1-foot in depth.
- Any damage to the pond embankments or slopes shall be repaired.

Responsible Staff: Contractor/CESL

2.1.5 Element 5: Stabilize Soils

Exposed and unworked soils shall be stabilized with the application of effective BMPs to prevent erosion throughout the life of the project. In general, cut and fill slopes will be stabilized as soon as possible and soil stockpiles will be stabilized through hydroseeding. All stockpiled soils shall be stabilized from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels. To minimize the amount of soil exposed through the life of the project, grading will be completed within a reasonable time frame after the preloading of the building footprints is completed. To minimize soil compaction, a construction entrance will be used as well as keeping heavy equipment and machinery off unpaved areas as much as possible.

West of the Cascade Mountains Crest

Season	Dates	Number of Days Soils Can be Left Exposed
During the Dry Season	May 1 – September 30	7 days
During the Wet Season	October 1 – April 30	2 days
Soils must be stabilized at the end of the shift before a holiday or weekend if needed based on the weather forecast.		

Anticipated project dates: Start date: May 2018 **End date:** May 2019

Will you construct during the wet season?
☒ Yes ☐ No

List and describe BMPs:

BMP C121: Mulching

BMP C140: Dust Control

Installation Schedules: TBD

Inspection and Maintenance plan:

Dust Control Maintenance

- Respray area as necessary to keep dust to a minimum.

Mulching Maintenance

- The thickness of the cover must be maintained.
- Any areas that experience erosion shall be remulched and/or protected with a net or blanket. If the erosion problem is drainage related, then the problem shall be fixed and the eroded area remulched.

Responsible Staff: Contractor/CESL

2.1.6 Element 6: Protect Slopes

All cut and fill slopes will be designed, constructed, and protected in a manner that minimizes erosion. It is required that any temporary pipe slope drains must handle the peak 10-minute flow rate from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. For modeling the condition with the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas have been modeled as "landscaped area". Scouring will be reduced by using v-ditches to convey stormwater to the sediment trap on site. However, if the proposed BMPs to protect slopes are ineffective as determined by the CESCL, they will promptly initiate the implementation of one or more of the alternative BMPs listed in Appendix B.

Will steep slopes be present at the site during construction?
☐ Yes ☒ No

List and describe BMPs:

BMP C120: Temporary and Permanent Seeding

Installation Schedules: TBD

Inspection and Maintenance plan:

Temporary and Permanent Seeding Maintenance

- Reseed any seeded areas that fail to establish at least 80 percent cover (100 percent cover for areas that receive sheet or concentrated flows). If reseeding is ineffective, use an alternate method such as sodding, mulching, or nets/blankets. If winter weather prevents adequate grass growth, this time limit may be relaxed at the discretion of the local authority when sensitive areas would otherwise be protected.
- Reseed and protect by mulch any areas that experience erosion after achieving adequate cover. Reseed and protect by mulch any eroded area.
- Supply seeded areas with adequate moisture, but do not water to the extent that it causes runoff.

Responsible Staff: Contractor/CESL

2.1.7 Element 7: Protect Drain Inlets

All storm drain inlets and culverts made operable during construction shall be protected to prevent unfiltered or untreated water from entering the drainage conveyance system. However, the first priority is to keep all access roads clean of sediment and keep wash water separate from entering storm drains until treatment can be provided. Storm Drain Inlet Protection (BMP C220) will be implemented for all drainage inlets and culverts that could potentially be impacted by sediment-laden runoff on and near the project site. If this is deemed ineffective by the CESCL, additional BMPs may be necessary, as listed in Appendix B. Inlet protection is the last component of a treatment train and protection of drain inlets include additional sediment and erosion control measures. Inlet protection devices will be cleaned (or removed and replaced), when sediment has filled the device by one third (1/3) or as specified by the manufacturer.

List and describe BMPs:

BMP C220: Storm Drain Inlet Protection

Installation Schedules: TBD

Inspection and Maintenance plan:

Storm Drain Inlet Protection Maintenance

- Inspect catch basin filters frequently, especially after storm events. Clean and replace clogged inserts. For systems with clogged stone filters: pull away the stones from the inlet and clean or replace. An alternative approach would be to use the clogged stone as fill and put fresh stone around the inlet.
- Do not wash sediment into storm drains while cleaning. Spread all excavated material evenly over the surrounding land area or stockpile and stabilize as appropriate.
- Inlets to be inspected weekly and a minimum of daily during storm events

Responsible Staff: Contractor/CESL

2.1.8 Element 8: Stabilize Channels and Outlets

For construction stormwater conveyance, v-ditches with rock check dams will be installed to stabilize channels. Stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent streambanks, slopes, and downstream reaches shall be provided at the outlets of all conveyance systems. The project site is located west of the Cascade Mountain Crest. As such, all temporary on-site conveyance channels shall be designed, constructed, and stabilized to prevent erosion from the expected peak 10 minute velocity of flow from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the WWHM to predict flows, bare soil areas should be modeled as “landscaped area”.

Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches, will be installed at the outlets of all conveyance systems.

List and describe BMPs:

BMP C207: Check Dams

Installation Schedules: TBD

Inspection and Maintenance plan:

Check Dam Maintenance

- Check dams shall be monitored for performance and sediment accumulation during and after each runoff producing rainfall. Sediment shall be removed when it reaches one half the sump depth.
- Anticipate submergence and deposition above the check dam and erosion from high flows around the edges of the dam.
- If significant erosion occurs between dams, install a protective riprap liner in that portion of the channel.

Responsible Staff: Contractor/CESCL

2.1.9 Element 9: Control Pollutants

The following pollutants are anticipated to be present on-site:

Table 2 – Pollutants

Pollutant (List pollutants and source, if applicable)
Hydraulic fluid - May be present on site with construction equipment.
Diesel - May be present on site with construction equipment.
Motor Oil - May be present on site with construction equipment.

All pollutants, including waste materials and demolition debris, that occur onsite shall be handled and disposed of in a manner that does not cause contamination of stormwater. Good housekeeping and preventative measures will be taken to ensure that the site will be kept clean, well-organized, and free of debris. Chemicals, liquid products, petroleum products, and other polluting materials will be kept covered, stored appropriately, and locked when not in use to prevent vandalism or misuse of these materials that may pollute state waters.

If required, BMPs to be implemented to control specific sources of pollutants are discussed below. Vehicles, construction equipment, and/or petroleum product storage/dispensing:

All vehicles, equipment, and petroleum product storage/dispensing areas will be inspected regularly to detect any leaks or spills, and to identify maintenance needs to prevent leaks or spills.

On-site fueling tanks and petroleum product storage containers shall include secondary containment.

Spill prevention measures, such as drip pans, will be used when conducting maintenance and repair of vehicles or equipment.

In order to perform emergency repairs on site, temporary plastic will be placed beneath and, if raining, over the vehicle.

Contaminated surfaces shall be cleaned immediately following any discharge or spill incident.

Storm drain inlets vulnerable to stormwater discharge carrying dust, soil, or debris will be protected using Storm Drain Inlet Protection (BMP C220 as described above for Element 7).

Process water and slurry resulting from sawcutting and surfacing operations will be prevented from entering the waters of the State by implementing Sawcutting and Surfacing Pollution Prevention measures (BMP C152).

Concrete and grout:

Process water and slurry resulting from concrete work will be prevented from entering the waters of the State by implementing Concrete Handling measures (BMP C151).

List and describe BMPs:

BMP C151: Concrete Handling

BMP C152: Sawcutting and Surfacing Pollution Prevention

Installation Schedules: TBD

Inspection and Maintenance plan:

Concrete Handling Maintenance

- Check containers for holes in the liner daily during concrete pours and repair the same day.

Sawcutting and Surfacing Pollution Prevention

- Continually monitor operations to determine whether slurry, cuttings, or process water could enter waters of the state. If inspections show that a violation of water quality standards could occur, stop operations and immediately implement preventive measures such as berms, barriers, secondary containment, and vacuum trucks.

Responsible Staff: Contractor/CESL

Will maintenance, fueling, and/or repair of heavy equipment and vehicles occur on-site?
☐ Yes ☒ No

Will wheel wash or tire bath system BMPs be used during construction?
☐ Yes ☒ No

Will pH-modifying sources be present on-site?
☐ Yes ☒ No

Table 3 – pH-Modifying Sources

☒	None
☐	Bulk cement
☐	Cement kiln dust
☐	Fly ash
☐	Other cementitious materials
☐	New concrete washing or curing waters
☐	Waste streams generated from concrete grinding and sawing
☐	Exposed aggregate processes
☐	Dewatering concrete vaults

☐	Concrete pumping and mixer washout waters
☐	Recycled concrete
☐	Recycled concrete stockpiles
☐	Other (i.e., calcium lignosulfate) [please describe:]

Concrete trucks must not be washed out onto the ground, or into storm drains, open ditches, streets, or streams. Excess concrete must not be dumped on-site, except in designated concrete washout areas with appropriate BMPs installed.

Will uncontaminated water from water-only based shaft drilling for construction of building, road, and bridge foundations be infiltrated provided the wastewater is managed in a way that prohibits discharge to surface waters?

☐ Yes ☒ No

2.1.10 Element 10: Control Dewatering

All dewatering water from open cut excavation, tunneling, foundation work, trench, or underground vaults will be collected into a controlled holding tank prior to discharge to the sanitary sewer. Highly turbid dewatering water from soils known or suspected to be contaminated, or from use of construction equipment, may require additional monitoring and treatment as required for the specific pollutants based on the sanitary sewer permit conditions. Such monitoring is the responsibility of the contractor. It is not anticipated that any dewatering will be needed however BMPs from Appendix B may be implemented by the CESCL if needed.

Table 4 – Dewatering BMPs

☒	Infiltration
☐	Transport off-site in a vehicle (vacuum truck for legal disposal)
☐	Ecology-approved on-site chemical treatment or other suitable treatment technologies
☐	Sanitary or combined sewer discharge with local sewer district approval (last resort)
☐	Use of sedimentation bag with discharge to ditch or swale (small volumes of localized dewatering)

List and describe BMPs: N/A

Installation Schedules: N/A

Inspection and Maintenance plan: N/A

Responsible Staff: N/A

2.1.11 Element 11: Maintain BMPs

All temporary and permanent Erosion and Sediment Control (ESC) BMPs shall be maintained and repaired as needed to ensure continued performance of their intended function.

Maintenance and repair shall be conducted in accordance with each particular BMP specification (see *Volume II of the SWMMWW or Chapter 7 of the SWMMEW*).

Visual monitoring of all BMPs installed at the site will be conducted at least once every calendar week and within 24 hours of any stormwater or non-stormwater discharge from the site. If the site becomes inactive and is temporarily stabilized, the inspection frequency may be reduced to once every calendar month.

All temporary ESC BMPs shall be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed.

Trapped sediment shall be stabilized on-site or removed. Disturbed soil resulting from removal of either BMPs or vegetation shall be permanently stabilized.

Additionally, protection must be provided for all BMPs installed for the permanent control of stormwater from sediment and compaction. BMPs that are to remain in place following completion of construction shall be examined and restored to full operating condition. If sediment enters these BMPs during construction, the sediment shall be removed and the facility shall be returned to conditions specified in the construction documents.

2.1.12 Element 12: Manage the Project

The project will be managed based on the following principles:

- Projects will be phased to the maximum extent practicable and seasonal work limitations will be taken into account.
- Inspection and monitoring:
    - Inspection, maintenance and repair of all BMPs will occur as needed to ensure performance of their intended function.
    - Site inspections and monitoring will be conducted in accordance with Special Condition S4 of the CSWGP. Sampling locations are indicated on the Site Map. Sampling station(s) are located in accordance with applicable requirements of the CSWGP.
- Maintain an updated SWPPP.
    - The SWPPP will be updated, maintained, and implemented in accordance with Special Conditions S3, S4, and S9 of the CSWGP.

As site work progresses the SWPPP will be modified routinely to reflect changing site conditions. The SWPPP will be reviewed monthly to ensure the content is current.

Table 5 – Management

☒	Design the project to fit the existing topography, soils, and drainage patterns
☒	Emphasize erosion control rather than sediment control
☒	Minimize the extent and duration of the area exposed
☒	Keep runoff velocities low
☒	Retain sediment on-site
☒	Thoroughly monitor site and maintain all ESC measures
☒	Schedule major earthwork during the dry season
☐	Other (please describe)

Table 6 – BMP Implementation Schedule

Phase of Construction Project	Stormwater BMPs	Date	Wet/Dry Season
TBD			

2.1.13 Element 13: Protect Low Impact Development (LID) BMPS

In order to protect LID BMPs during the construction process, many steps can be taken through proper erosion and sedimentation control. For this project, an infiltration trench is proposed for the flow control. In order to protect this BMP care should be taken not to compact the area for the trench during construction. To ensure the high infiltration rate of the soil is maintained, the site should be swept before the stormwater facility goes online as well. Care should also be taken not to discharge sediment laden water to the existing infiltration galleries for the southern developed sites.

3 Pollution Prevention Team

Table 7 – Team Information

Title	Name(s)	Phone Number
Certified Erosion and Sediment Control Lead (CESCL)	TBD	
Resident Engineer	Dan Balmelli	(425) 251-6222
Emergency Ecology Contact	Southwest Regional Office: WA Emergency Management Division	1-800-258-5990
Emergency Permittee/ Owner Contact	Brian Mattson	(206) 422-1871
Non-Emergency Owner Contact	Bjorn Brynestad	(253) 444-8747
Monitoring Personnel	TBD	
Ecology Regional Office	Southwest Regional Office	(360) 407-6300

4 Monitoring and Sampling Requirements

Monitoring includes visual inspection, sampling for water quality parameters of concern, and documentation of the inspection and sampling findings in a site log book. A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements
- Site inspections
- Stormwater sampling data

File a blank form under Appendix D.

The site log book must be maintained on-site within reasonable access to the site and be made available upon request to Ecology or the local jurisdiction.

4.1 Site Inspection

Site inspections will be conducted at least once every calendar week and within 24 hours following any discharge from the site. For sites that are temporarily stabilized and inactive, the required frequency is reduced to once per calendar month.

The discharge point(s) to the sanitary sewer are indicated on the Site Map (see Appendix A) and in accordance with the applicable requirements of the CSWGP.

5 Reporting and Record Keeping

5.1 Record Keeping

5.1.1 Site Log Book

A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements
- Site inspections
- Sample logs

5.1.2 Records Retention

Records will be retained during the life of the project and for a minimum of three (3) years following the termination of permit coverage in accordance with Special Condition S5.C of the CSWGP.

Permit documentation to be retained on-site:

- CSWGP
- Permit Coverage Letter
- SWPPP
- Site Log Book

Permit documentation will be provided within 14 days of receipt of a written request from Ecology. A copy of the SWPPP or access to the SWPPP will be provided to the public when requested in writing in accordance with Special Condition S5.G.2.b of the CSWGP.

5.1.3 Updating the SWPPP

The SWPPP will be modified if:

- Found ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site.
- There is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.

The SWPPP will be modified within seven (7) days if inspection(s) or investigation(s) determine additional or modified BMPs are necessary for compliance. An updated timeline for BMP implementation will be prepared.

5.2 Reporting

5.2.1 Discharge Monitoring Reports

Cumulative soil disturbance is one (1) acre or larger; therefore, Discharge Monitoring Reports (DMRs) will be submitted to Ecology monthly. If there was no discharge during a given monitoring period the DMR will be submitted as required, reporting "No Discharge". The DMR due date is fifteen (15) days following the end of each calendar month.

DMRs will be reported online through Ecology's WQWebDMR System.

5.2.2 Notification of Noncompliance

If any of the terms and conditions of the permit is not met, and the resulting noncompliance may cause a threat to human health or the environment, the following actions will be taken:

1. Ecology will be notified within 24-hours of the failure to comply by calling the applicable Regional office ERTS phone number (Regional office numbers listed below).
2. Immediate action will be taken to prevent the discharge/pollution or otherwise stop or correct the noncompliance. If applicable, sampling and analysis of any noncompliance will be repeated immediately and the results submitted to Ecology within five (5) days of becoming aware of the violation.
3. A detailed written report describing the noncompliance will be submitted to Ecology within five (5) days, unless requested earlier by Ecology.

Anytime turbidity sampling indicates turbidity is 250 NTUs or greater, or water transparency is 6 cm or less, the Ecology Regional office will be notified by phone within 24 hours of analysis as required by Special Condition S5.A of the CSWGP.

- **Central Region** at (509) 575-2490 for Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, or Yakima County
- **Eastern Region** at (509) 329-3400 for Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, or Whitman County
- **Northwest Region** at (425) 649-7000 for Island, King, Kitsap, San Juan, Skagit, Snohomish, or Whatcom County
- **Southwest Region** at (360) 407-6300 for Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, or Wahkiakum

Include the following information:

1. Your name and / Phone number
2. Permit number
3. City / County of project
4. Sample results

5. Date / Time of call
6. Date / Time of sample
7. Project name

In accordance with Special Condition S4.D.5.b of the CSWGP, the Ecology Regional office will be notified if chemical treatment other than CO_2 sparging is planned for adjustment of high pH water.

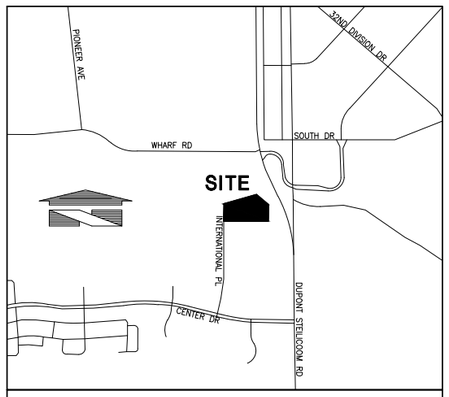
A. Site Map

PRELIMINARY COVER SHEET
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

N

0 50' 100' 200'
SCALE: 1"=100'

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



VICINITY MAP DUPONT, WASHINGTON

SURVEY INFORMATION

LEGAL DESCRIPTIONS:
(PER FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO. NCS-921048-WA1, DATED AUGUST 31, 2018 8:00AM)

PARCEL A:
RESULTANT PARCEL, CITY OF DUPONT LOT COMBINATION NO. LLE 15-01, RECORDED MARCH 13, 2015 UNDER RECORDING NO. 201503130126, RECORDS OF PIERCE COUNTY, WASHINGTON.

PARCEL B:
A NON-EXCLUSIVE EASEMENT FOR INGRESS, EGRESS AND UTILITIES AS CREATED BY INSTRUMENT RECORDED MAY 17, 2006 UNDER RECORDING NO. 200605170142 AND AS DELINEATED ON SAID BOUNDARY LINE ADJUSTMENT RECORDED MARCH 21, 2007 UNDER RECORDING NO. 200703215009, IN PIERCE COUNTY, WASHINGTON.

HORIZONTAL DATUM - BASIS OF BEARINGS:
THE BASIS OF BEARINGS IS THE BEARING BETWEEN WCCS POINTS 413 (GPS 031) AND 1130 (LEWIS GP 809), TAKEN AS SOUTH 02° 28' 12" EAST, BASED UPON THE NORTH AMERICAN DATUM OF 1983-NAD 83 (91) - WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.

VERTICAL DATUM:
NATIONAL GEODETIC VERTICAL DATUM OF 1929 - NGVD 29
FROM DATA PROVIDED BY THE CITY OF DUPONT PLANNING DEPARTMENT - THE BENCHMARK IS THE SURFACE MON AT THE CENTERLINE OF THE INTERNATIONAL PLACE CUL-DE-SAC, TAKEN AS 221.82 FEET

PROCEDURE / NARRATIVE:
A FIELD TRAVERSE USING A TOPCON GT 1000 AND DELL TABLET WITH MAGNET FEILD WITH FIELD NOTES WAS PERFORMED, ESTABLISHING THE ANGULAR, DISTANCE, AND VERTICAL RELATIONSHIPS BETWEEN THE MONUMENTS, PROPERTY LINES AND IMPROVEMENTS. THE RESULTING DATA MEETS OR EXCEEDS THE STANDARDS FOR LAND BOUNDARY SURVEYS AS SET FORTH IN WAC 332-130-090.

LOT AREA:
232,834 SQ. FT.± (5.35 ACRES±)

SITE ADDRESS:
3330 INTERNATIONAL PL, DUPONT, WA 98327

TITLE INFORMATION:
FIDELITY NATIONAL TITLE OF WASHINGTON, INC ESCROW NO. 14255634-410-CFS, DATED MAY 16, 2012 WAS RELIED UPON FOR TITLE INFORMATION AND SUPPORTING DOCUMENTS. PLEASE REFER TO THAT REPORT FOR FURTHER INFORMATION REGARDING FINANCIAL MATTERS BEYOND THE SCOPE OF THIS SURVEY. DUE TO THE AGE OF THIS REPORT, THIS SURVEY DOESN'T PURPORT TO SHOW ALL EASEMENTS OF RECORD.

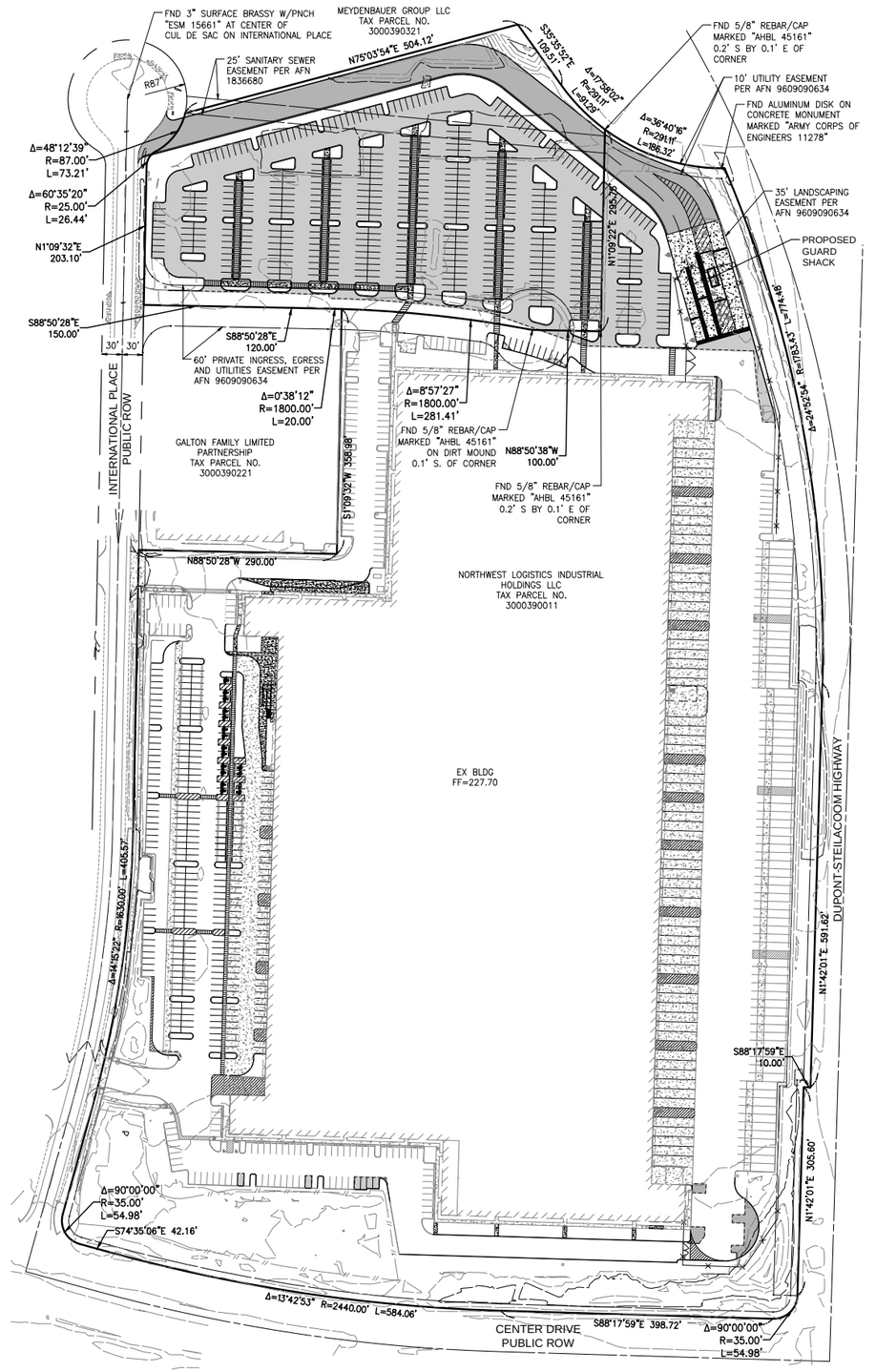
DATES OF SURVEYS:
THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING ON MAY 4, 2020. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN MAYL OF 2020.

TAX ACCOUNT NUMBERS:
APN 300039-0282

SURVEYORS NOTES:
- ALL DISTANCES SHOWN HEREON ARE GROUND MEASUREMENTS IN U.S. SURVEY FEET.
- UNDERGROUND UTILITIES AND FEATURES DEPICTED HEREON ARE BASED ON FIELD OBSERVATION ONLY. THE TRUE LOCATION, NATURE AND/OR EXISTENCE OF BELOW GROUND FEATURES, DETECTED OR UNDETECTED, SHOULD BE VERIFIED. THERE IS NO EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS. THERE IS NO EVIDENCE OF ANY CHANGES IN THE STREET RIGHT-OF-WAYS OR STREET/SIDEWALK REPAIRS OR ANY USE AS A LANDFILL.
- THIS SURVEY WAS PERFORMED WITHOUT A CURRENT TITLE REPORT AND DOESN'T PURPORT TO SHOW ALL EASEMENTS OF RECORD.

GENERAL SITE NOTES:

1. THE CONTRACTOR SHALL OBTAIN AND HAVE AVAILABLE COPIES OF THE APPLICABLE GOVERNING AGENCY STANDARDS AT THE JOB SITE DURING THE RELATED CONSTRUCTION OPERATIONS.
2. CONTRACTOR SHALL ASSURE THAT ALL NECESSARY PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE OR SHOWN ON RECORD DRAWING PROVIDED BY OTHERS ARE SHOWN HEREON. EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND ARE SUBJECT TO A DEGREE OF UNKNOWN VARIATION. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. BARGHAUSEN CONSULTING ENGINEERS, INC. ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS OR RECORDS OF OTHERS. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE APPROPRIATE UTILITIES INVOLVED PRIOR TO CONSTRUCTION.
6. INSPECTION OF SITE WORK WILL BE ACCOMPLISHED BY A REPRESENTATIVE OF THE GOVERNING JURISDICTION. INSPECTION OF PRIVATE FACILITIES WILL BE ACCOMPLISHED BY A REPRESENTATIVE OF THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE INSPECTOR 24 HOURS IN ADVANCE OF BACKFILLING ALL CONSTRUCTION.
7. PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY THE CONTRACTOR SHALL CONTACT THE AGENCY AND/OR UTILITY INSPECTION PERSONNEL AND ARRANGE ANY REQUIRED PRE-CONSTRUCTION MEETING(S). CONTRACTOR SHALL PROVIDE ONE WEEK MINIMUM ADVANCE NOTIFICATION TO OWNER, FIELD ENGINEER AND ENGINEER OF PRE-CONSTRUCTION MEETINGS.
8. THE CONTRACTOR IS RESPONSIBLE FOR WORKER AND SITE SAFETY AND SHALL COMPLY WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED.
10. PROTECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ALL ADJACENT PUBLIC AND PRIVATE PROPERTIES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITY SERVICES THAT ARE TO REMAIN OPERATIONAL WITHIN THE CONSTRUCTION AREA WHETHER SHOWN OR NOT SHOWN ON THE PLANS.
11. TWO (2) COPIES OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS. ONE (1) SET WITH RECORDS OF AS-BUILT INFORMATION SHALL BE SUBMITTED TO BARGHAUSEN CONSULTING ENGINEERS, INC. AT COMPLETION OF PROJECT.
12. CONTRACTOR SHALL OBTAIN SERVICES OF A LICENSED LAND SURVEYOR TO STAKE HORIZONTAL CONTROL FOR ALL NEW IMPROVEMENTS. STAKING CONTROL SHALL BE TAKEN FROM ELECTRONIC PLAN FILES PROVIDED BY BARGHAUSEN CONSULTING ENGINEERS, INC.
13. CONTRACTOR SHALL REQUEST FROM BARGHAUSEN CONSULTING ENGINEERS, INC., PRIOR TO ANY CONSTRUCTION STAKING OR CONSTRUCTION WORK, A FORMAL CONSTRUCTION RELEASE PLAN SET OR SPECIFIC RELEASE IN WRITING. THE APPROVED AGENCY PERMIT DRAWINGS WILL NOT BE CONSIDERED CONSTRUCTION RELEASE PLANS BY BARGHAUSEN CONSULTING ENGINEERS, INC. UNLESS BARGHAUSEN CONSULTING ENGINEERS, INC. HAS GIVEN A FORMAL WRITTEN RELEASE OR ISSUED A CONSTRUCTION RELEASE PLAN SET.



ESTIMATED EARTHWORK QUANTITIES

CUT = 7,000 CY

FILL =8,000 CY

NET = +1,000 CY

AREA TO BE DISTURBED = 6.93 AC

CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORTS DATED **MAY 12, 2020** FOR THIS SITE PREPARED BY **TERRA ASSOCIATES** FOR GRADING RECOMMENDATIONS. EARTHWORK QUANTITIES ARE FOR PERMITTING PURPOSES ONLY AND SHALL NOT BE USED FOR BIDDING PURPOSES. CONTRACTOR SHALL PERFORM AN INDEPENDENT ANALYSIS FOR THE PURPOSES OF PREPARING THEIR BID.

UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 811 AT LEAST 48 HOURS PRIOR TO POTHOLING. ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS ARE TO BE POTHOLED TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

MONUMENT DEMOLITION NOTE

CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OBTAINING PERMITS FROM ANY JURISDICTIONS HAVING AUTHORITY FOR REMOVING AND REPLACING ALL SURVEY MONUMENTATION THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITY. UPON COMPLETION OF CONSTRUCTION, ALL MONUMENTS DISPLACED, REMOVED, OR DESTROYED SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR, AT THE COST AND AT THE DIRECTION OF THE CONTRACTOR, PURSUANT TO THESE REGULATIONS. THE APPROPRIATE FORMS FOR REPLACEMENT OF SAID MONUMENTATION SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR.

DEVELOPER
PANATTONI DEVELOPMENT COMPANY
CONTACT: BRIAN MATTSON
ADDRESS: 1821 DOCK ST. SUITE 100 TACOMA, WA 98402
PHONE: (206) 838-6182
EMAIL: BMATTSON@PANATTONI.COM

CIVIL ENGINEER
BARGHAUSEN CONSULTING ENGINEERS
CONTACT: DANIEL K. BALMELLI, P.E.
ADDRESS: 18215 72ND AVENUE SOUTH KENT, WA 98032
PHONE: (425) 251-6222
EMAIL: DBALMELLI@BARGHAUSEN.COM

ARCHITECT
NELSON ARCHITECTS
CONTACT: MIKE SNYDER
ADDRESS: 1200 5TH AVE SUITE 1300 SEATTLE, WA 98101
PHONE: (206) 408-8500M
EMAIL: SNYDER@NELSONWW.COM

GEOTECHNICAL ENGINEER
TERRA ASSOCIATES
CONTACT: TED SCHEPPER
ADDRESS: 12220 113TH AVE NE, SUITE 130 KIRKLAND, WA 98034
PHONE: (425) 821-7777
EMAIL: TSCHEPPER@TERRA-ASSOCIATES.COM

SURVEYOR
BARGHAUSEN CONSULTING ENGINEERS
CONTACT: BRIAN GILLOOLY, P.L.S.
ADDRESS: 18215 72ND AVENUE SOUTH KENT, WA 98032
PHONE: (425) 251-6222
EMAIL: BGILLOOLY@BARGHAUSEN.COM

APPROVED FOR CONSTRUCTION

BY: _____ CITY OF DUPONT

DATE: _____

THESE DRAWINGS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 12 MONTHS FROM THE DATE SHOWN HEREON. THE CITY RESERVES THE RIGHT TO MAKE REVISIONS, ADDITIONS, DELETIONS OR MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMITATION. THE CITY, BY APPROVING THESE DOCUMENTS, ASSUMES NO LIABILITY IN REGARDS TO THEIR ACCURACY OR OMISSIONS.

GEOTECHNICAL REPORT NOTES:

1. THE FOLLOWING GEOTECHNICAL REPORTS FOR THE SITE SHALL BE CONSIDERED PART OF THESE CONSTRUCTION DOCUMENTS:

   SOILS REPORTS: **GEOTECHNICAL ENGINEERING STUDY**
   DUPONT TRAILER YARD
   PROJECT NO: T-6897-3
   DATE: MAY 12, 2020

   PREPARED BY: **TERRA ASSOCIATES**
   12220 113TH AVE NE, SUITE 130
   KIRKLAND, WA 98034
   (425) 821-777

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL PROVISIONS OF THE SOILS REPORT FOR THE SITE BE OBSERVED AND COMPLIED WITH DURING ALL PHASES OF THE SITE PREPARATION, GRADING OPERATIONS, FOUNDATION, SLAB, AND PAVING CONSTRUCTION.
3. ANY PROVISIONS OF THE SOILS REPORT WHICH CONFLICT WITH INFORMATION SHOWN ELSEWHERE ON THESE DRAWINGS, OR WHICH REQUIRE FURTHER CLARIFICATION, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR DETERMINATION.
4. A REPRESENTATIVE OF THE SOILS ENGINEER SHALL BE AVAILABLE TO OBSERVE AND APPROVE THE EARTHWORK OPERATIONS AND TO VERIFY FIELD CONDITIONS AS WORK PROCEEDS. THE SOILS ENGINEER SHALL SUBMIT FIELD REPORTS CERTIFYING THAT THE METHODS AND MATERIALS OF THE EARTHWORK OPERATIONS WERE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOILS INVESTIGATION AND THAT THE WORK WAS PERFORMED TO HIS/HER SATISFACTION.
5. THE SOILS ENGINEER SHOULD BE NOTIFIED AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY SITE CLEARING OR GRADING.

SHEET INDEX

LEGEND:

SURVEY MONUMENT
EX. POWER VAULT
EX. LUMINAIRE (LUM.)
EX. LOT LIGHT
EX. POWER POLE
EX. JUNCTION BOX
EX. CATCH BASIN (CB)
EX. CATCH BASIN (CB) TYPE 2
EX. SANITARY SEWER MANHOLE (SSMH)
EX. GAS METER
EX. GAS VALVE
EX. WATER VALVE (WV)
EX. FIRE HYDRANT (FH)
MAIL BOX
EX. WATER METER
EX. SIGN
EX. WATER LINE -W- -W-
EX. SANITARY SEWER LINE
EX. STORM DRAINAGE LINE
EX. POWER UNDERGROUND P(UG)
EX. POWER OVERHEAD P(OH)
EX. METAL FENCE ***
EX. WOOD FENCE //

PROPOSED TYPE II CATCH BASIN
PROPOSED TYPE I CATCH BASIN
PROPOSED STORM DRAIN FLOW ARROW
PROPOSED STORM DRAINAGE LINE
PROPOSED TRENCH DRAIN
PROPOSED SANITARY SEWER LINE
PROPOSED SANITARY SEWER CLEANOUT
PROPOSED WATERMAIN
PROPOSED FIRE HYDRANT
PROPOSED WATER VALVE
PROPOSED CONCRETE BLOCKING
PROPOSED 90° BEND
PROPOSED SPOT ELEVATIONS 23.20
EXISTING SPOT ELEVATIONS +100.0
EXISTING CONTOURS
PROPOSED CONTOURS
EXISTING PAVEMENT
PROPOSED PAVEMENT
PROPOSED CONCRETE

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY COVER SHEET FOR NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALMELLI — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal 1"=100' Vertical -

Designed WED Drawn WED Checked LD Approved DKB Date 6/10/20

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 21227 Sheet C1 of 12

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PRELIMINARY OVERALL CIVIL SITE PLAN
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

N

0 30' 60' 120'
SCALE: 1"=60'

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

APPROVED FOR CONSTRUCTION

BY: _____
CITY OF DUPONT

DATE: _____

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INTERNATIONAL PL (PUBLIC ROW)

CENTER DRIVE (PUBLIC ROW)

Δ=90°00'00"
R=35.00'
L=54.98'

S15°24'54"W 188.48'

S74°35'06"E 42.16'

Δ=14°15'22" R=1830.00' L=455.57'

S1°09'32"W 410.91'

PROPOSED EXTRUDED CURB

PROPOSED LIGHT DUTY ASPHALT PAVING

PROPOSED PAVEMENT STRIPING

PROPOSED LANDSCAPE ISLAND (TYP)

PROPOSED RAMP

PROPOSED STAIRS

PROPOSED SMOKING SHELTER

PROPOSED CONCRETE WALK AND BUS DROP OFF LANE

PROPOSED DROP OFF SHELTER

N88°50'28"W 290.00'

S1°09'32"W 358.98'

S88°50'28"E 150.00'

S88°50'28"E 120.00'

N1°09'32"E 203.10'

Δ=60°35'20"
R=25.00'
L=26.44'

Δ=48°12'39"
R=87.00'
L=73.21'

PROPOSED HEAVY DUTY ASPHALT FOR ACCESS ROAD

N15°03'54"E 504.12'

PROPOSED LIGHT DUTY ASPHALT (TYP)

PROPOSED EXTRUDED CURB (TYP)

PROPOSED EXTRUDED CURB

PROPOSED LIGHT DUTY ASPHALT

Δ=15°42'53" R=2440.00' L=584.08'

EXISTING BUILDING
FF=227.7
628,640 SF

PROPOSED SIDEWALK EXTENSION

PROPOSED EXTRUDED CURB

PROPOSED SIDEWALK EXTENSION

S88°17'59"E 398.72'

PROPOSED SIDEWALK

Δ=8°53'27" R=1800.00' L=279.31'

S35°35'52"E 109.51'

Δ=17°58'02"
R=291.11'
L=91.29'

N88°50'38"W 100.00'

N1°09'22"E 295.75'

PROPOSED PAVEMENT STRIPING

PROPOSED EXTRUDED CURB

PROPOSED SMOKING SHELTER

PROPOSED EXTRUDED CURB

PROPOSED HEAVY DUTY ASPHALT PAVING

PROPOSED PAVEMENT STRIPING

PROPOSED EXTRUDED CURB

PROPOSED HEAVY DUTY ASPHALT

Δ=38°40'16" R=234.17' L=158.12'

PROPOSED GUARD SHACK

PROPOSED SITE FENCING

N1°42'01"E 305.60'

S88°17'59"E 10.00'

N1°42'01"E 591.62'

Δ=24°52'54" R=1783.43' L=774.48'

PROPOSED SITE FENCING

DUPONT-STEILACOOM HIGHWAY

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY OVERALL CIVIL SITE PLAN FOR NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALMER — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal 1"=60' Vertical –

Designed MED Drawn MED Checked LD Approved DKB Date 6/10/20

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 21227

Sheet C2 of 12

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PRELIMINARY EXISTING CONDITIONS AND DEMO PLAN NORTH
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

N

0 20' 40' 80'
SCALE: 1"=40'

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

APPROVED FOR CONSTRUCTION

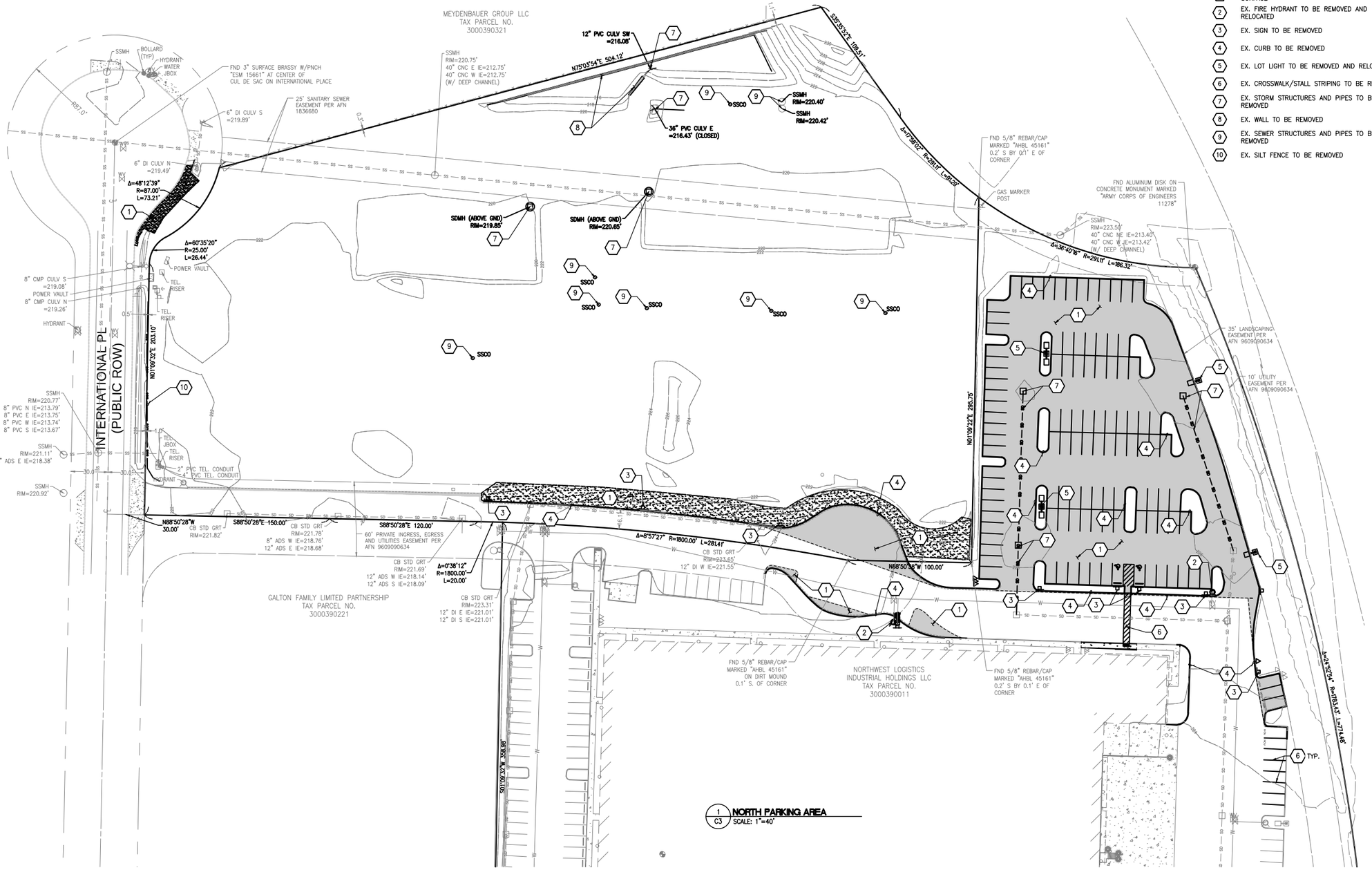
BY: _____
CITY OF DUPONT

DATE: _____

THESE DRAWINGS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 12 MONTHS FROM THE DATE SHOWN HEREON. THE CITY RESERVES THE RIGHT TO MAKE REVISIONS, ADDITIONS, DELETIONS OR MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMITATION. THE CITY, BY APPROVING THESE DOCUMENTS, ASSUMES NO LIABILITY IN REGARDS TO THEIR ACCURACY OR OMISSIONS.

DEMOLITION SCHEDULE

1. REMOVE EX. ASPHALT, CONCRETE, GRAVEL SURFACE
2. EX. FIRE HYDRANT TO BE REMOVED AND RELOCATED
3. EX. SIGN TO BE REMOVED
4. EX. CURB TO BE REMOVED
5. EX. LOT LIGHT TO BE REMOVED AND RELOCATED
6. EX. CROSSWALK/STALL STRIPING TO BE REMOVED
7. EX. STORM STRUCTURES AND PIPES TO BE REMOVED
8. EX. WALL TO BE REMOVED
9. EX. SEWER STRUCTURES AND PIPES TO BE REMOVED
10. EX. SILT FENCE TO BE REMOVED



1 / C3 NORTH PARKING AREA
SCALE: 1"=40'

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY EXISTING CONDITIONS AND DEMO PLAN NORTH FOR NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALMAT — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal 1"=40' Vertical -

Designed WED Drawn WED Checked LD Approved DKB Date 6/10/20

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18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Job Number 21227

Sheet C3 of 12

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PREILIMINARY EXISTING CONDITIONS AND DEMO PLAN SOUTH
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

N

0 20' 40' 80'
SCALE: 1"=40'

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CITY OF DUPONT

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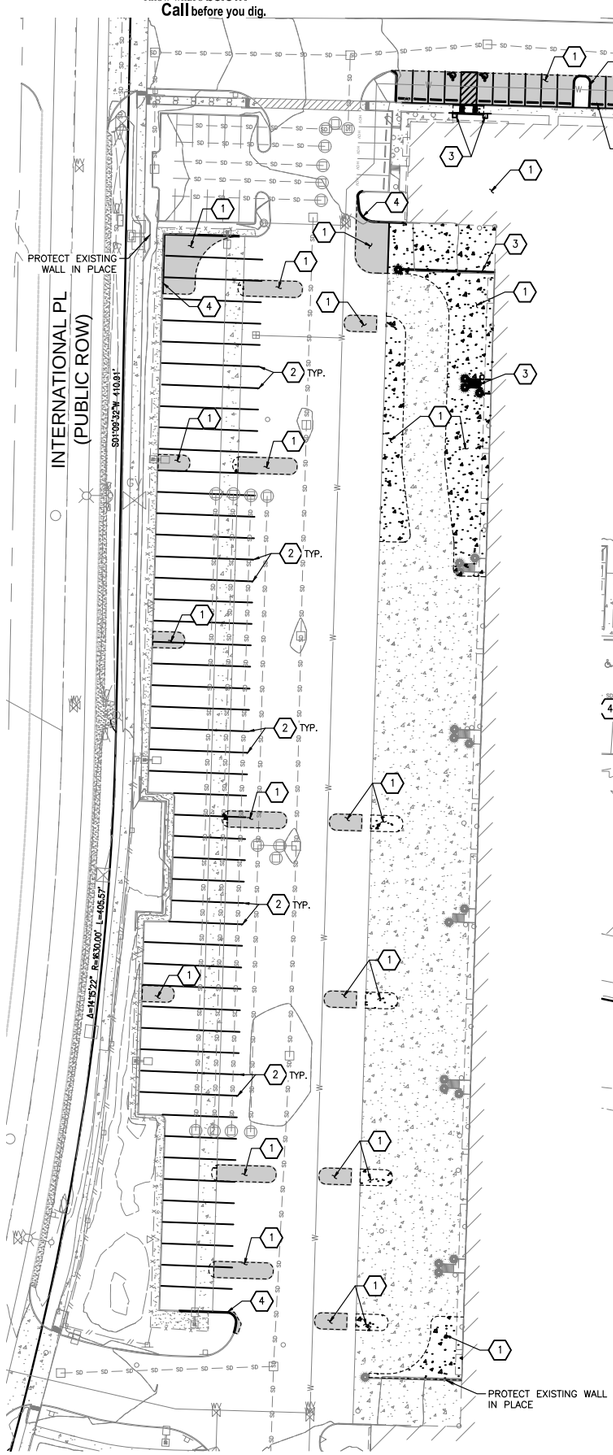
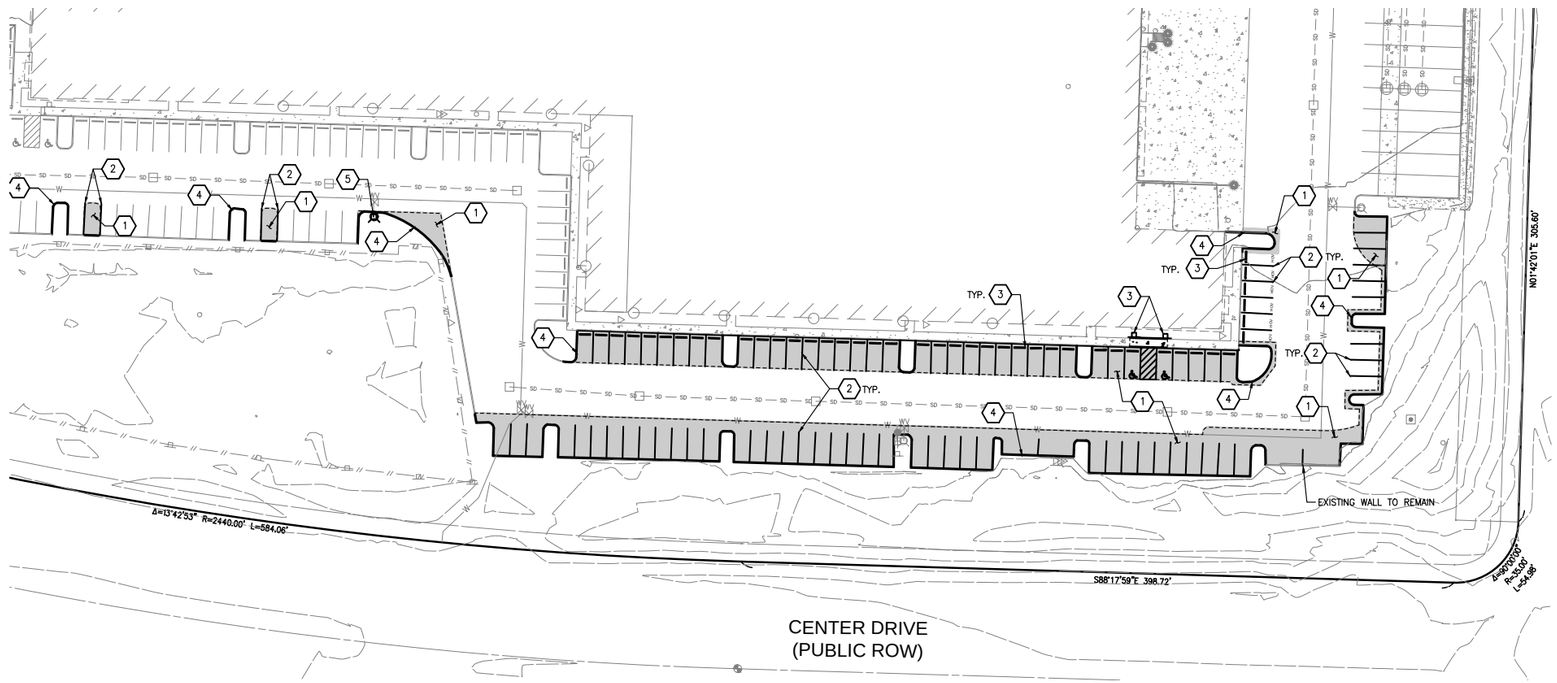
DEMOLITION SCHEDULE

1. REMOVE EX. ASPHALT, CONCRETE, GRAVEL SURFACE
2. EX. STRIPING TO BE REMOVED
3. EX. CURB STOP TO BE REMOVED
4. EX. CURB TO BE REMOVED
5. EX. FIRE HYDRANT TO BE RELOCATED



1 C4 **WEST PARKING AREA**
SCALE: 1"=40'



2 C4 **SOUTH PARKING AREA**
SCALE: 1"=40'

No.	Date	By	Ckd.	Appr.	Revision

Title: PREILIMINARY EXISTING CONDITIONS AND DEMO PLAN SOUTH FOR NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALDERA — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal 1"=40' Vertical -

Designed MED Drawn MED Checked LD Approved DKB Date 6/10/20

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Kent, WA 98032
425.251.6222 barghausen.com

Job Number 21227

Sheet C4 of 12

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PRELIMINARY TESC PLAN NORTH
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

N

0 20' 40' 80'
SCALE: 1"=40'

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CITY OF DUPONT

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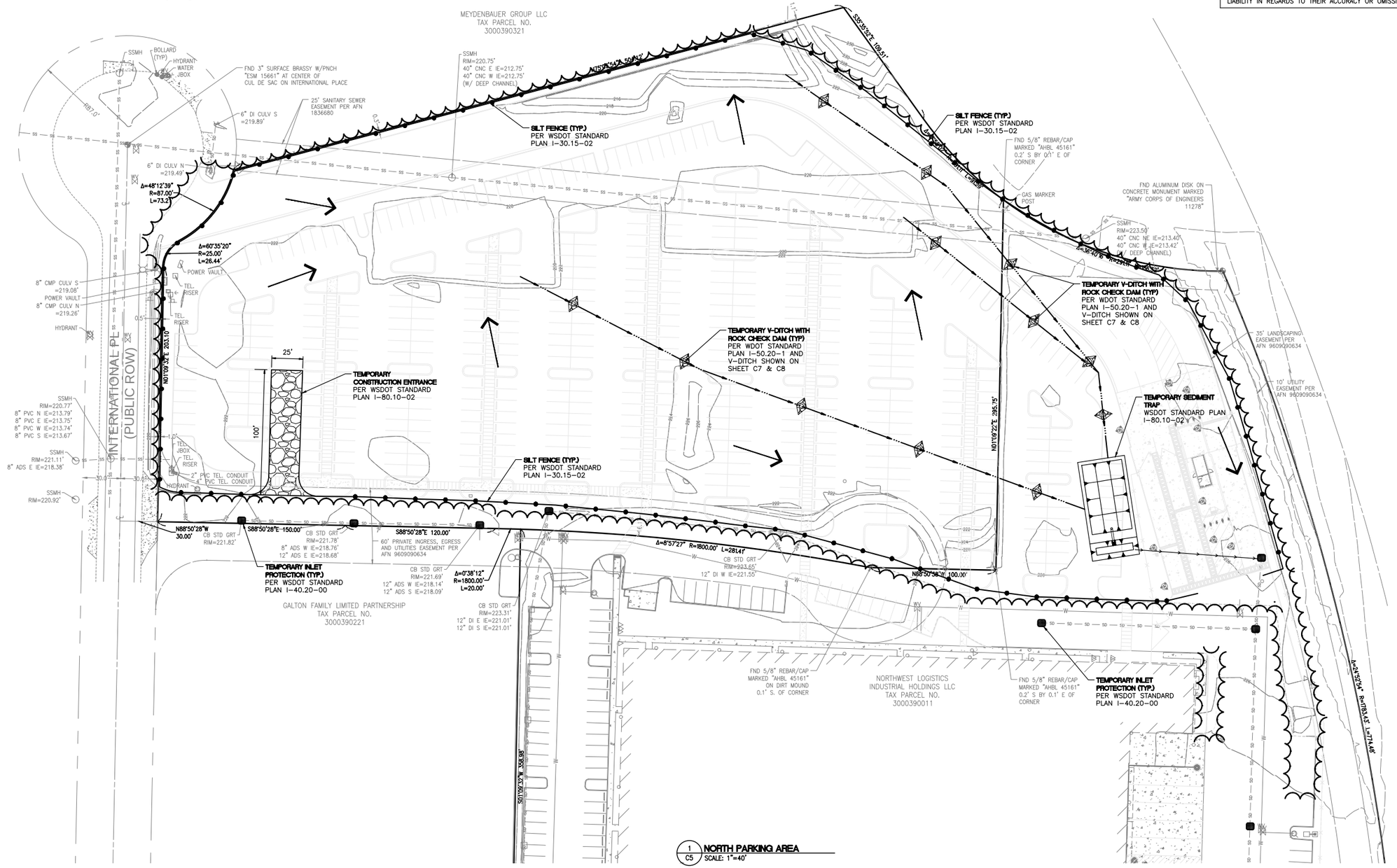

1 / C5 **NORTH PARKING AREA**
SCALE: 1"=40'

T.E.S.C. LEGEND

- FLOW ARROW
- CHECK DAM
- CLEARING LIMITS
- SILT FENCE
- INTERCEPTOR DITCH
- INLET PROTECTION

SEDIMENT TRAP SIZING:
AREA DRAINING TO TRAP = 6.05 AC
REQUIRED VOLUME = 6.05 AC * 35 CY/AC = 212 CY = 5,724 CF
NORTH SEDIMENT TRAP DIMENSIONS:
WIDTH = 50 FT
LENGTH = 115 FT
SIDE SLOPES = 3:1
PROVIDED VOLUME = 5,750 CF

NOTE:
CLEARING LIMITS ARE APPROXIMATE
LIMITS OF DISTURBANCE

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY TESC PLAN NORTH
FOR
NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALMELLI — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal 1"=40' Vertical –

Designed WED Drawn WED Checked LD Approved DKB Date 6/10/20

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425.251.6222 barghausen.com

Job Number 21227
Sheet C5 of 12

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PRELIMINARY TESC PLAN SOUTH
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

APPROVED FOR CONSTRUCTION

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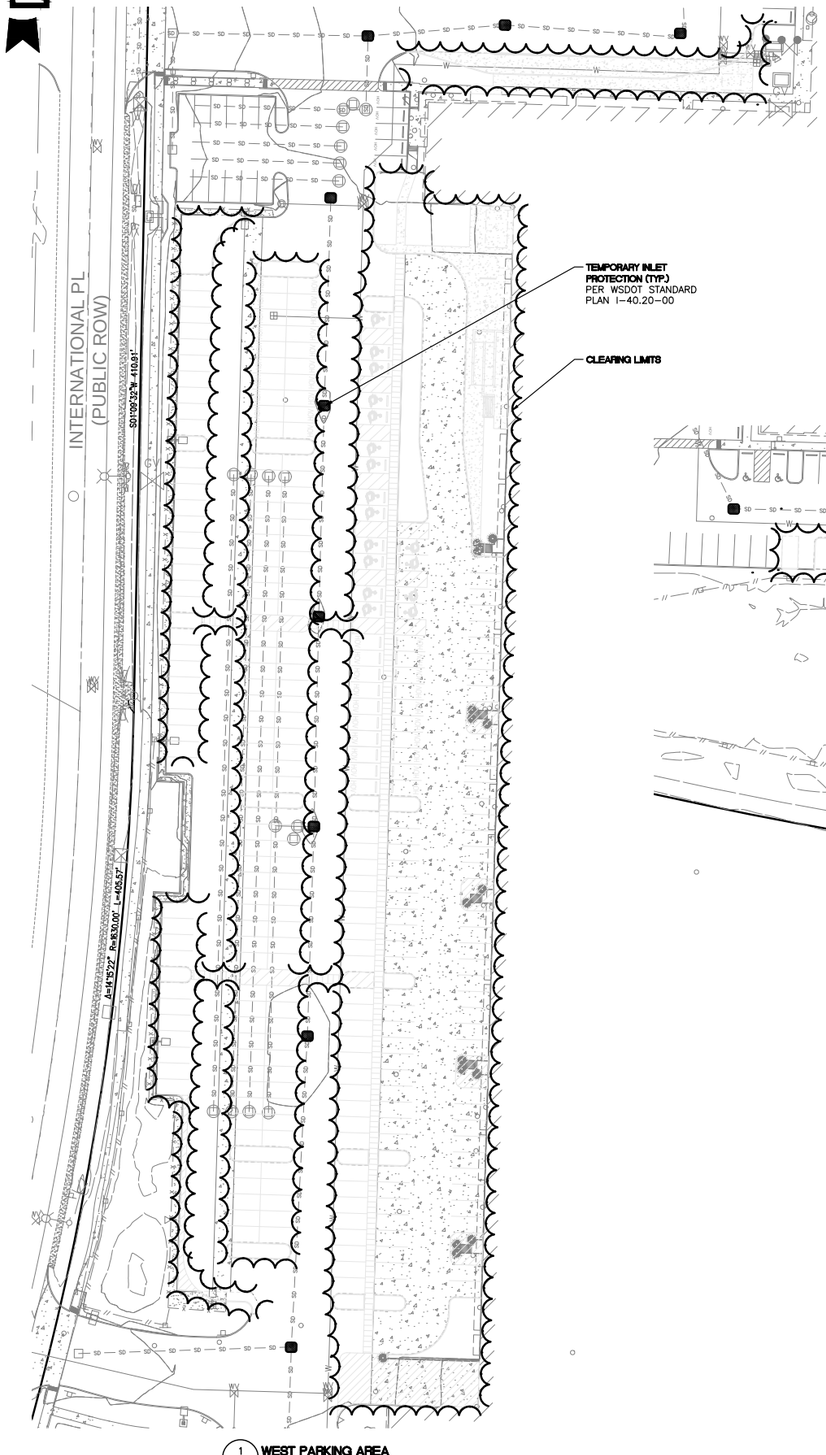
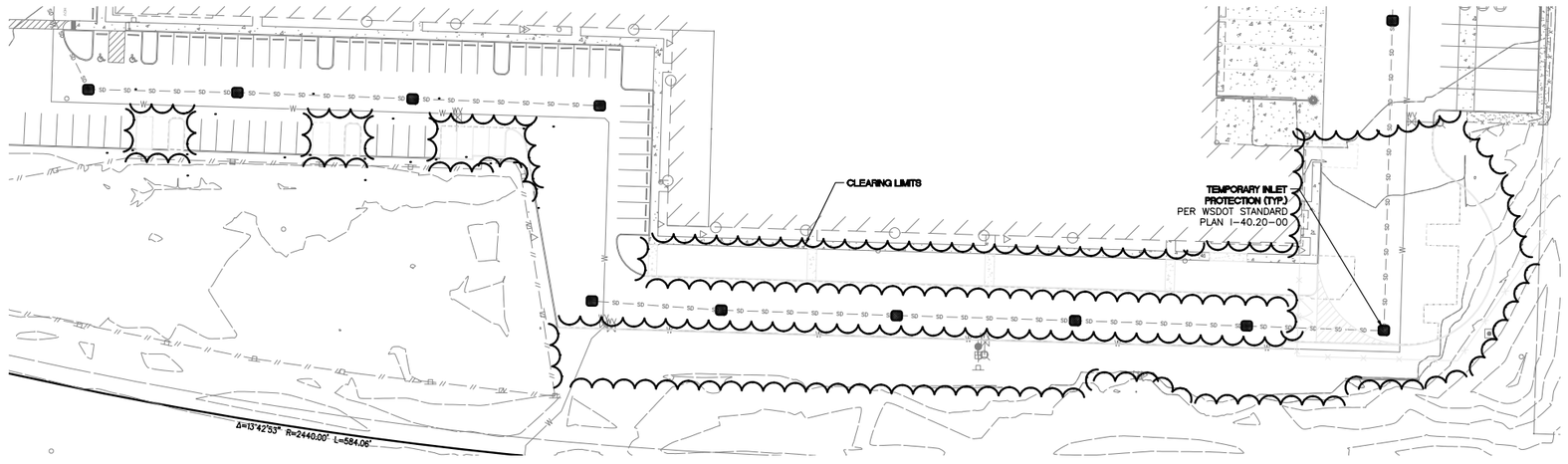
N

0 20' 40' 80'
SCALE: 1"=40'

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



1 C6 **WEST PARKING AREA**
SCALE: 1"=40'



2 C6 **SOUTH PARKING AREA**
SCALE: 1"=40'

T.E.S.C. LEGEND

- FLOW ARROW
- CHECK DAM
- CLEARING LIMITS
- SILT FENCE
- INTERCEPTOR DITCH
- INLET PROTECTION

NOTE:
CLEARING LIMITS ARE APPROXIMATE LIMITS OF DISTURBANCE

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY TESC PLAN SOUTH
FOR
NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALMER — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal 1"=40' Vertical -

Designed WED
Drawn WED
Checked LD
Approved DKB
Date 6/10/20

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 21227
Sheet C6 of 12

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PRELIMINARY TESC DETAILS
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

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

APPROVED FOR CONSTRUCTION

BY: _____
CITY OF DUPONT

DATE: _____

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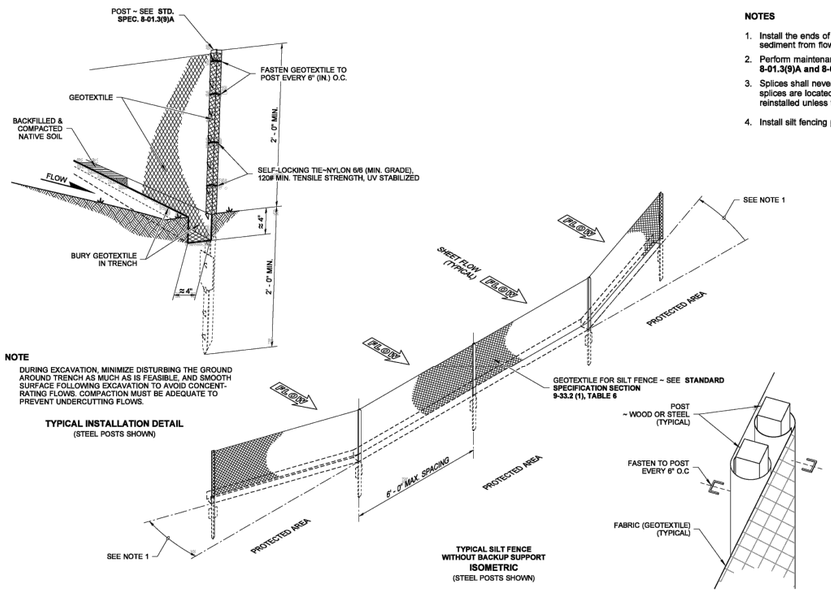
DRAWN BY: BILL BERENS



NOTE
DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS. COMPACTION MUST BE ADEQUATE TO PREVENT UNDERCUTTING FLOWS.

TYPICAL INSTALLATION DETAIL
(STEEL POSTS SHOWN)

TYPICAL SILT FENCE WITHOUT BACKUP SUPPORT ISOMETRIC
(STEEL POSTS SHOWN)

SPLICED FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP.

SPLICE DETAIL
(WOOD POSTS SHOWN)

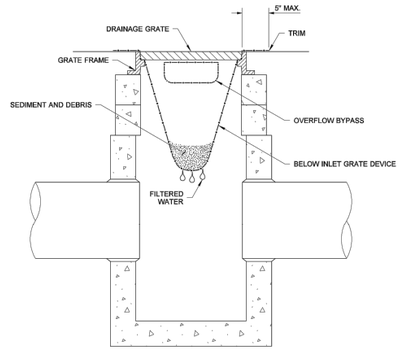
NOTES
1. Install the ends of the silt fence to point slightly upslope to prevent sediment from flowing around the ends of the fence.
2. Perform maintenance in accordance with **Standard Specifications 8-01.3(9)A and 8-01.3(15)**.
3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.
4. Install silt fencing parallel to mapped contour lines.

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
SANDRA L. SALISBURY
CERTIFICATE NO. 000860
NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

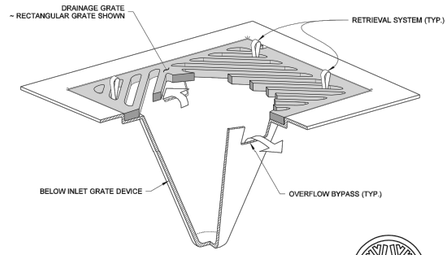
SILT FENCE
STANDARD PLAN I-30.15-02
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III 3/22/13
STATE DESIGN ENGINEER — DATE
Washington State Department of Transportation

DRAWN BY: LISA OXFORD



SECTION VIEW
NOT TO SCALE



ISOMETRIC VIEW

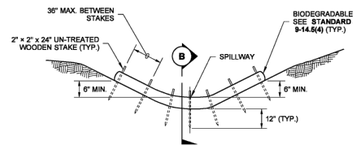
NOTES
1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 8-01.3(15).

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
MARK W. MAURER
CERTIFICATE NO. 000598
NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

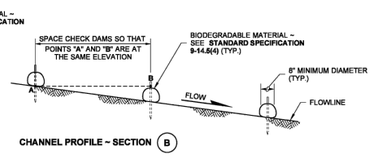
STORM DRAIN INLET PROTECTION
STANDARD PLAN I-40.20-00
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III 09-20-07
STATE DESIGN ENGINEER — DATE
Washington State Department of Transportation

DRAWN BY: FERN LIDDELL



TYPICAL CHANNEL SECTION

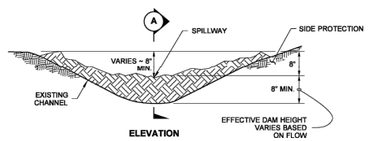


CHANNEL PROFILE ~ SECTION (B)

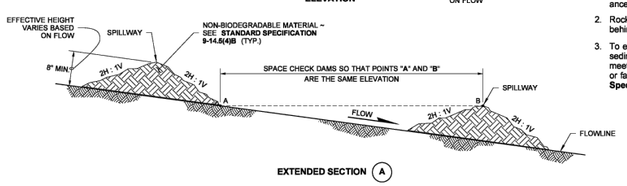
BIODEGRADABLE CHECK DAM

GENERAL NOTES
1. Check Dams shall meet the requirements of **Standard Specifications 8-01.3(6) and 9-14.5(4).**
2. In channels, install the sloped ends of the Check Dam a minimum of 8" higher than the spillway to ensure water flows over the dam and not around it.
3. Perform maintenance in accordance with **Standard Specification 8-01.3(15).**
4. Remove Check Dams in accordance with **Standard Specification 8-01.3(16).**

BIODEGRADABLE CHECK DAM NOTE
1. Biodegradable Check Dams may need additional or modified staking to prevent undercutting or scouring.



ELEVATION



EXTENDED SECTION (A)

NON-BIODEGRADABLE CHECK DAM

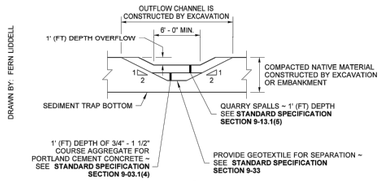
NON-BIODEGRADABLE CHECK DAM NOTES
1. Non-Biodegradable Manufactured Check Dam devices approved for use under **Standard Specification 9-14.5(4)** shall be installed per manufacturer's recommendations and shall perform in accordance with **Standard Specification 8-01.3(6).**
2. Rock Check Dams shall be placed outside of the clear zone or behind traffic barrier.
3. To ensure adequate damming time, Rock Check Dams used as sediment control may need to be enhanced with plastic that meets the requirements of **Standard Specification 9-14.5(3)** or fabric that meets the geotextile requirements of **Standard Specification 9-33.2(1), Table 6.**

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
Sandra L. Salisbury
SANDRA L. SALISBURY
LICENSE NO. 860
DATE: June 5, 2013
NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

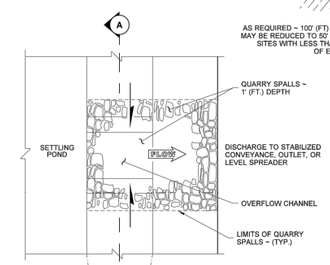
CHECK DAMS ON CHANNELS
STANDARD PLAN I-50.20-01
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III 6/10/13
STATE DESIGN ENGINEER — DATE
Washington State Department of Transportation

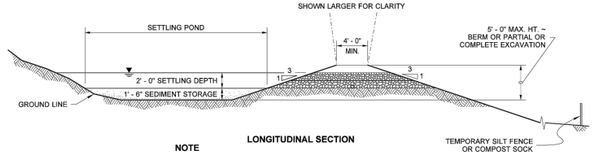
DRAWN BY: FERN LIDDELL



SECTION (A)



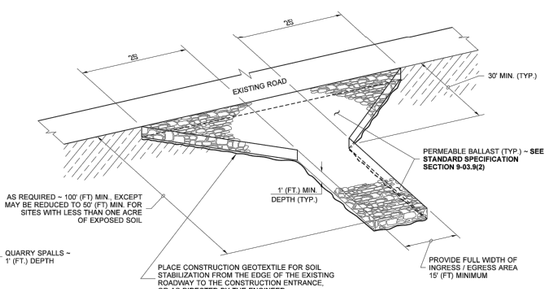
PARTIAL PLAN VIEW OF BERM
SHOWN LARGER FOR CLARITY



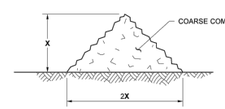
LONGITUDINAL SECTION

NOTE
PLACE GEOTEXTILE UNDER THE SPILLWAY AND SIDE SLOPES. PROVIDE A CONTINUOUS LAYER BETWEEN THE GRAVEL/ROCK AND THE NATIVE EARTHEN MATERIAL.

TEMPORARY SEDIMENT TRAP



ISOMETRIC VIEW
STABILIZED CONSTRUCTION ENTRANCE
STABILIZED CONSTRUCTION ENTRANCE SHALL MEET THE REQUIREMENTS OF **STANDARD SPECIFICATION SECTION 9-01.5(7).**



X = 1' - 0" FOR SLOPES 4H:1V OR FLATTER
X = 1' - 6" FOR SLOPES STEEPER THAN 4H:1V

TYPICAL SECTION
COMPOST BERM DETAIL

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
JULI DEE HARTWIG
LICENSE NO. 1422
DATE: 06-21-17

MISCELLANEOUS EROSION CONTROL DETAILS
STANDARD PLAN I-80.10-02
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Carpenter, Jeff Carpenter, Jeff Jul 15 2016 2:28 PM
STATE DESIGN ENGINEER
Washington State Department of Transportation

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY TESC DETAILS
FOR
NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALMER — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal – Vertical –

Designed WED | Drawn WED | Checked LD | Approved DKB | Date 6/10/20

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 21227
Sheet C7 of 12

P:\21000s\21227\preliminary\21227-E.dwg 6/30/2020 11:31 AM WDUNLAP

PRELIMINARY TESC NOTES AND DETAILS
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

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

APPROVED FOR CONSTRUCTION

BY: _____
CITY OF DUPONT

DATE: _____

THESE DRAWINGS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 12 MONTHS FROM THE DATE SHOWN HEREON. THE CITY RESERVES THE RIGHT TO MAKE REVISIONS, ADDITIONS, DELETIONS OR MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMITATION. THE CITY, BY APPROVING THESE DOCUMENTS, ASSUMES NO LIABILITY IN REGARDS TO THEIR ACCURACY OR OMISSIONS.

GRADING, EROSION AND SEDIMENTATION CONTROL NOTES:

1. ON-SITE INSPECTIONS ARE REQUIRED AT THE FOLLOWING CONSTRUCTION STAGES:

   INSPECTION NO. 1: INSTALLATION OF EROSION CONTROL FACILITIES PRIOR TO CLEARING
   INSPECTION NO. 2: COMPLETION OF CLEARING
   INSPECTION NO. 3: UPON COMPLETION OF EXCAVATION, FILLING, AND EARTHWORK
   INSPECTION NO. 4: COMPLETION OF PROJECT
   INSPECTION NO. 5: AS NEEDED TO DETERMINE COMPLIANCE WITH APPROVED PLANS AND/OR SPECIFICATIONS

2. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION AS PRESCRIBED ON THE PLANS SHALL BE CLEARLY FLAGGED IN THE FIELD AND OBSERVED DURING CONSTRUCTION.

3. ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES, AND PROTECTIVE MEASURES FOR CRITICAL AREAS AND SIGNIFICANT TREES SHALL BE INSTALLED PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITIES.

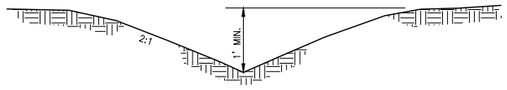
4. ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER ANY EXISTING DRAINAGE SYSTEM. THE CONTRACTOR SHALL SCHEDULE AN INSPECTION OF THE EROSION CONTROL FACILITIES PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION AS DETERMINED BY THE CITY, UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ONSITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE EROSION AND SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE PERMITTEE.

5. THE EROSION AND SEDIMENTATION CONTROL SYSTEM FACILITIES DEPICTED ON THESE PLANS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITTEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY THEIR ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.

6. ANY DISTURBED AREA WHICH HAS BEEN STRIPPED OF VEGETATION AND WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 7 DAYS OR MORE DURING THE DRY SEASON (MAY 1 – SEPT 30) OR 2 DAYS OR MORE IN THE WET SEASON (OCT 1 – APR 30), SHALL BE IMMEDIATELY STABILIZED WITH MULCHING, GRASS PLANTING, OR OTHER APPROVED EROSION CONTROL TREATMENT APPLICABLE TO THE TIME OF YEAR IN QUESTION. GRASS SEEDING ALONE WILL BE ACCEPTABLE ONLY DURING THE MONTHS OF MAY THROUGH SEPTEMBER INCLUSIVE. SEEDING MAY PROCEED OUTSIDE THE SPECIFIED TIME PERIOD WHENEVER IT IS IN THE INTEREST OF THE PERMITTEE BUT SHALL BE AUGMENTED WITH MULCHING, NETTING, OR OTHER TREATMENT APPROVED BY THE CITY.

7. IN CASE EROSION OR SEDIMENTATION OCCURS TO ADJACENT PROPERTIES, ALL CONSTRUCTION WORK WITHIN THE DEVELOPMENT THAT WILL FURTHER AGGRAVATE THE SITUATION MUST CEASE, AND THE OWNER/CONTRACTOR SHALL IMMEDIATELY COMMENCE RESTORATION METHODS. RESTORATION ACTIVITY WILL CONTINUE UNTIL SUCH TIME AS THE AFFECTED PROPERTY OWNER IS SATISFIED.

8. NO TEMPORARY OR PERMANENT STOCKPILING OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN CRITICAL AREAS OR ASSOCIATED BUFFERS, OR THE CRITICAL ROOT ZONE FOR VEGETATION PROPOSED FOR RETENTION.



TEMPORARY "V" DITCH

NOT TO SCALE

CONSTRUCTION SEQUENCE:

1. SCHEDULE AND ATTEND PRE-CONSTRUCTION MEETING WITH CITY OF LAKEWOOD OFFICIALS.
2. FLAG CLEARING AND GRADING LIMITS FOR PROJECT AS SHOWN ON THE PLANS PER THIS SHEET.
3. POST SIGN WITH NAME AND PHONE NUMBER OF THE CESCL.
4. INSTALL TEMPORARY FILTER FABRIC FENCE AND CB PROTECTION AS SHOWN ON PLANS TO PROTECT ADJACENT PROPERTIES AND STORMWATER SYSTEM.
5. GRADE AND INSTALL CONSTRUCTION ENTRANCE PER PLAN.
6. REMOVE ALL EXISTING SITE IMPROVEMENTS AND DEMO EXISTING BUILDINGS AS INDICATED ON PLANS.
7. INSTALL TEMPORARY SEDIMENT POND.
8. CONSTRUCT INTERCEPTOR DITCHES WHERE SHOWN.
9. CITY REPRESENTATIVE TO INSPECT AND APPROVE INSTALLATION OF T.E.S.C. MEASURES BEFORE SITE CLEARING AND GRADING.
10. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY AND NPDES PERMIT REQUIREMENTS.
11. PROTECT ALL PROPERTIES ADJACENT TO THE PROJECT FROM SEDIMENT DEPOSITION.
12. NO RUNOFF IS TO LEAVE SITE WITHOUT TREATMENT.
13. CLEAR AND GRADE SITE, AMEND T.E.S.C. FACILITIES AS REQUIRED.
14. ONCE INFILTRATION GALLERY IS OPEN TO BOTTOM ELEVATION, PERFORM INFILTRATION TEST(S) IN ACCORDANCE WITH PIERCE COUNTY STANDARDS TO CONFIRM INFILTRATION RATE OF 10 IN/HR.
15. COVER ALL AREAS THAT WILL REMAIN UNWORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON OR TWO DAYS DURING THE WET SEASON WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR EQUIVALENT.
16. SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
17. WHEREVER CONSTRUCTION VEHICLES ACCESS ROUTE CROSSES PAVED ROADS, CARE MUST BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT (MUD) ONTO THE PAVED ROAD. IF SEDIMENT IS TRANSPORTED ONTO PAVED SURFACE, THE ROAD SHALL BE CLEANED IMMEDIATELY.
18. WITH EACH LAYER OF FILL MATERIAL, INTERCEPTOR DITCHES AND T.E.S.C. FACILITIES MUST BE GRADED AND MAINTAINED TO PROVIDE POSITIVE SLOPE FOR DRAINAGE TO DISCHARGE POINT.
19. MAINTAIN T.E.S.C. FACILITIES UNTIL ALL RISK OF EROSION/SEDIMENTATION DRAINAGE HAS PASSED AND PERMANENT STORM DRAINAGE SYSTEM IS INSTALLED AND FUNCTIONAL. DO NOT CONVEY SEDIMENT-LADEN WATER INTO STORM DRAINAGE SYSTEM. REMOVE TEMPORARY EROSION & SEDIMENTATION CONTROL MEASURES UPON FINAL SITE STABILIZATION AND APPROVAL FROM THE CITY INSPECTOR.
20. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE REVEGETATED AND BEST MANAGEMENT PRACTICES REMOVED IF APPROPRIATE.
21. COMPLETE INSPECTION/ PUNCHLIST

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY TESC NOTES AND DETAILS FOR NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALMER — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal – Vertical –

Designed WED Drawn WED Checked LD Approved DKB Date 6/10/20

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 21227

Sheet C8 of 12

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PRELIMINARY GRADING PLAN NORTH
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

N

0 20' 40' 80'
SCALE: 1"=40'

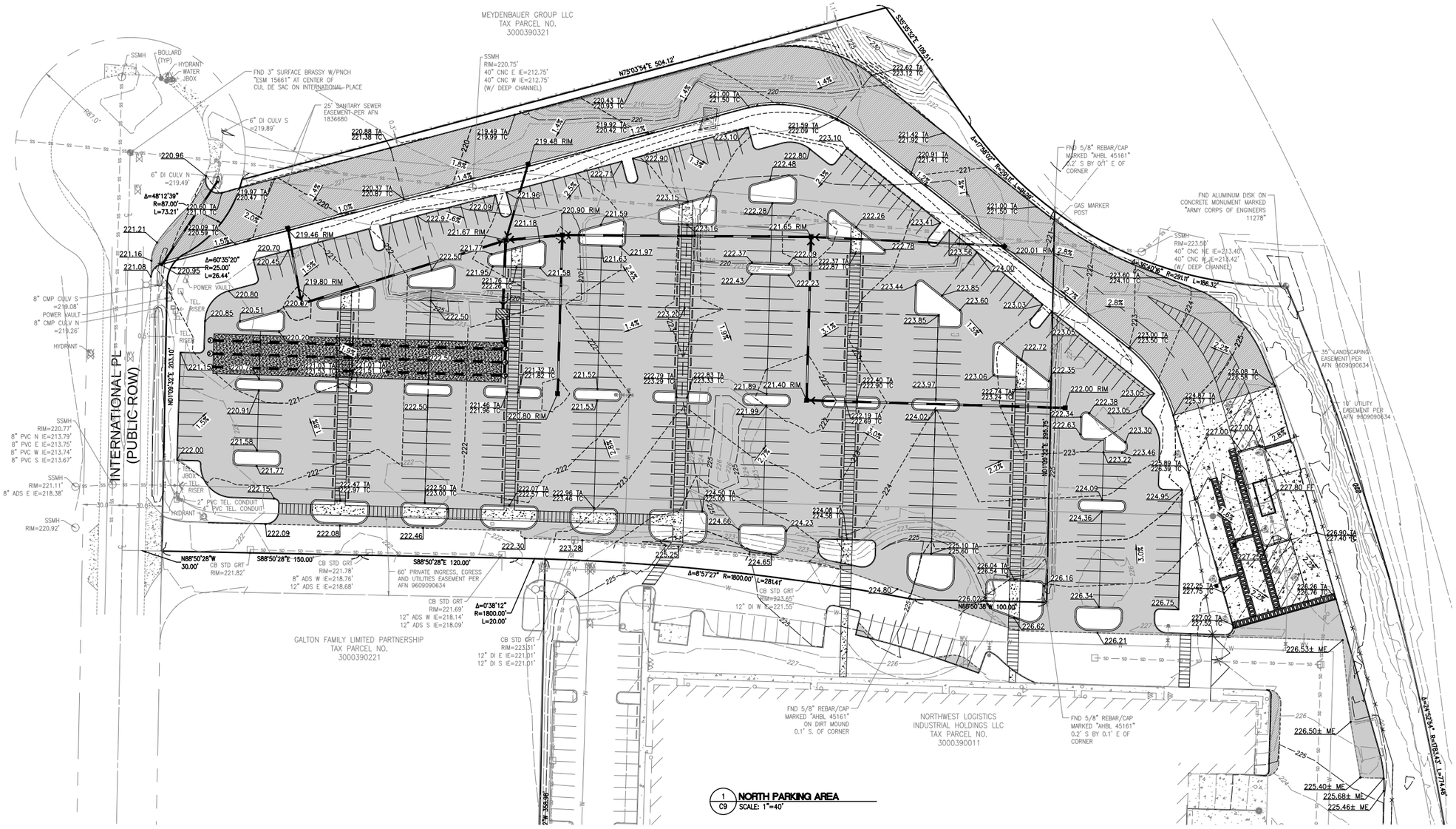
811 Know what's below. Call before you dig.

APPROVED FOR CONSTRUCTION

BY: _____
CITY OF DUPONT

DATE: _____

THESE DRAWINGS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 12 MONTHS FROM THE DATE SHOWN HEREON. THE CITY RESERVES THE RIGHT TO MAKE REVISIONS, ADDITIONS, DELETIONS OR MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMITATION. THE CITY, BY APPROVING THESE DOCUMENTS, ASSUMES NO LIABILITY IN REGARDS TO THEIR ACCURACY OR OMISSIONS.



1 C9 NORTH PARKING AREA
SCALE: 1"=40'

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY GRADING PLAN NORTH
FOR
NW LOGISTICS 2 - PARKING EXPANSION

For:
PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALDERA — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal 1"=40' Vertical –
Designed MED Drawn MED Checked LD Approved DKB Date 6/10/20

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18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 21227
Sheet C9 of 12

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PRELIMINARY GRADING PLAN SOUTH
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

N

0 20' 40' 80'
SCALE: 1"=40'

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APPROVED FOR CONSTRUCTION

BY: _____
CITY OF DUPONT

DATE: _____

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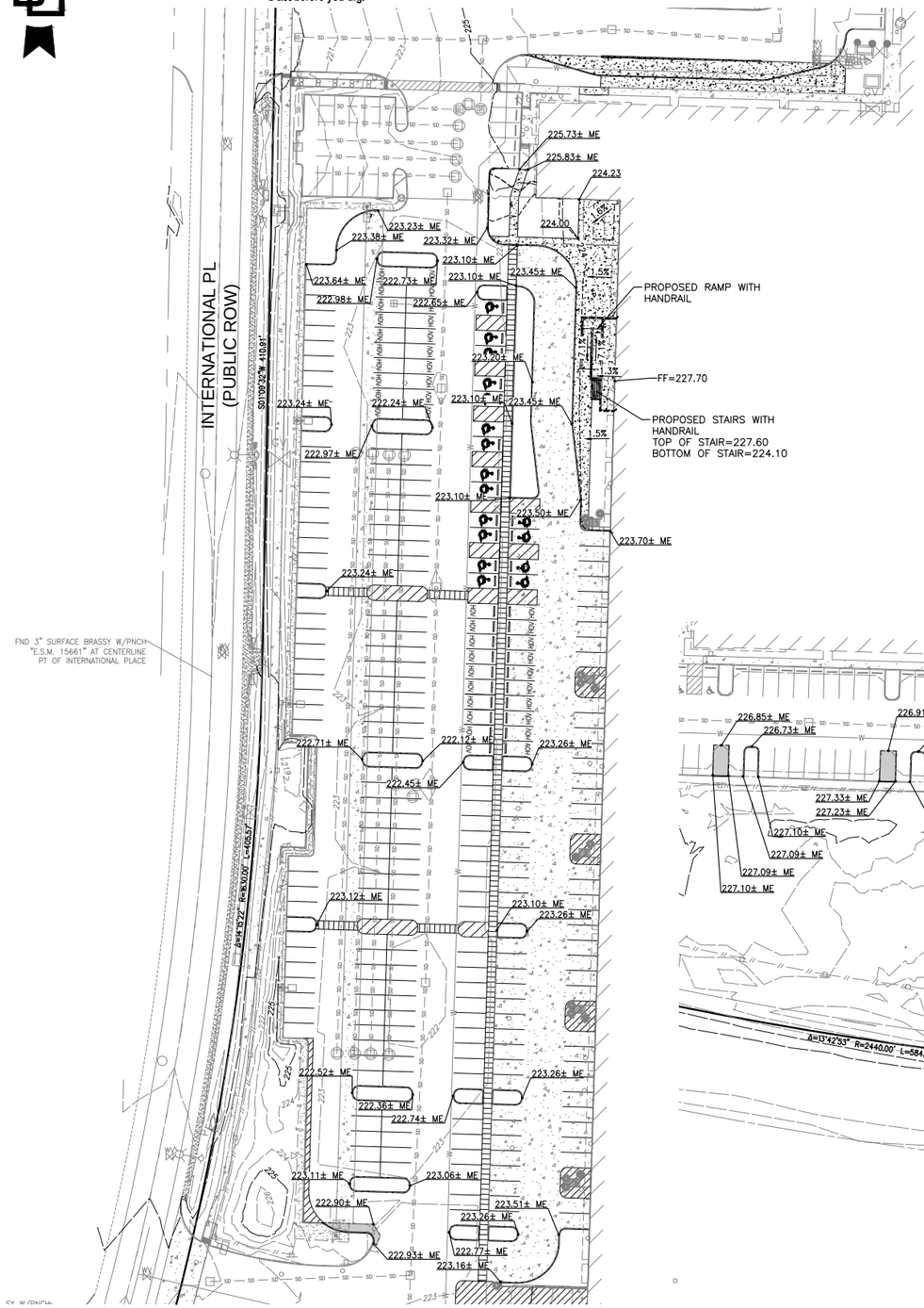
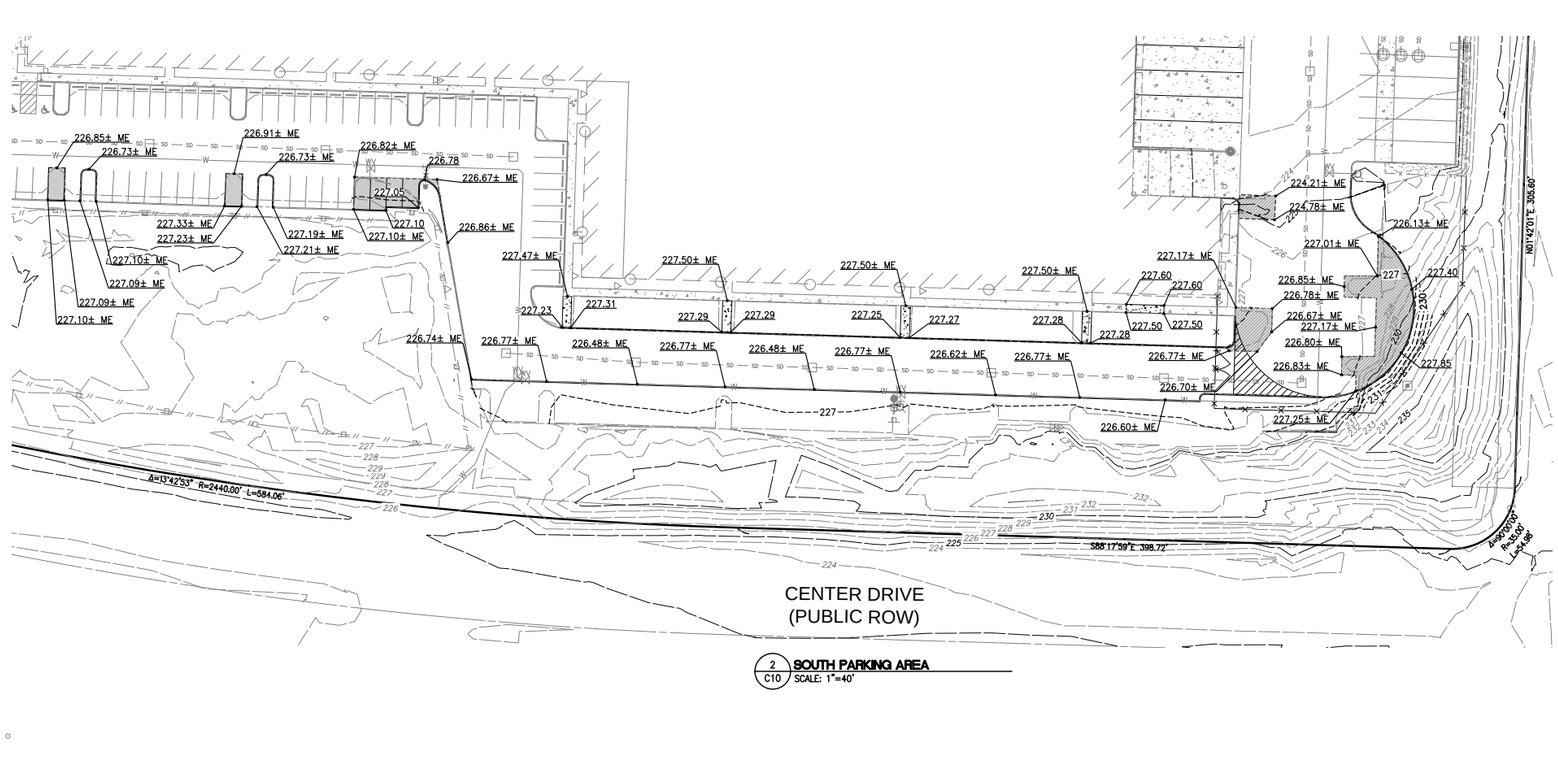


1 C10 **WEST PARKING AREA**
SCALE: 1"=40'



2 C10 **SOUTH PARKING AREA**
SCALE: 1"=40'

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY GRADING PLAN SOUTH
FOR
NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALMER — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal 1"=40' Vertical -

Designed WED Drawn WED Checked LD Approved DKB Date 6/10/20

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 21227

Sheet C10 of 12

P:\21000s\21227\preliminary\21227-GM.dwg 6/30/2020 12:35 PM WDUNLAP

PRELIMINARY UTILITY PLAN
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

N

0 20' 40' 80'
SCALE: 1"=40'

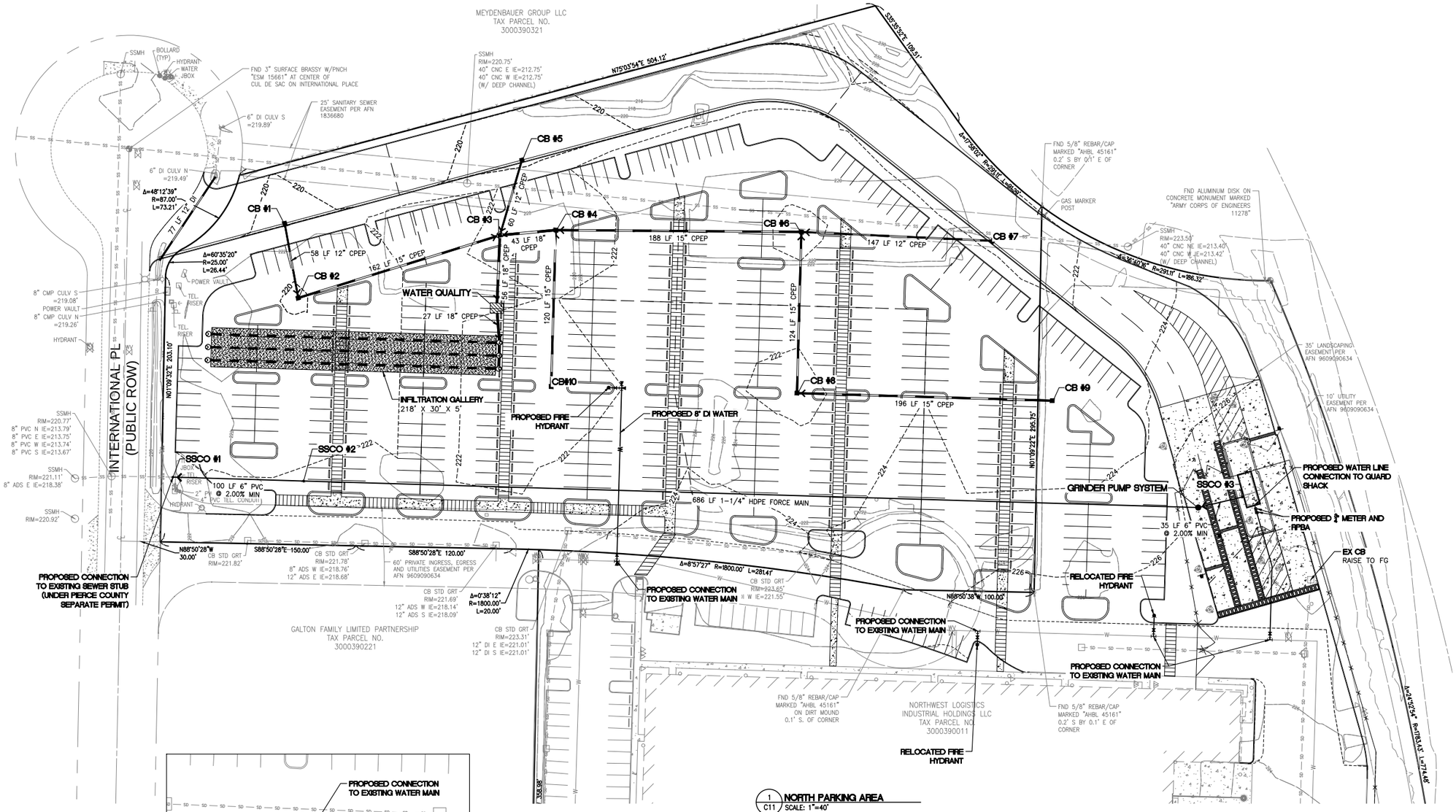
811 Know what's below. Call before you dig.

APPROVED FOR CONSTRUCTION

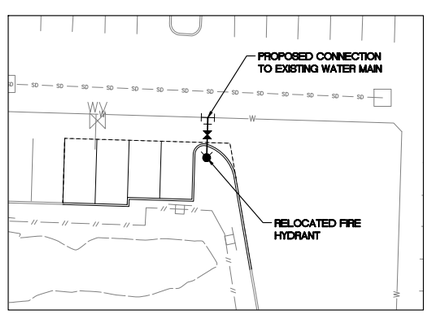
BY: _____
CITY OF DUPONT

DATE: _____

THESE DRAWINGS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 12 MONTHS FROM THE DATE SHOWN HEREON. THE CITY RESERVES THE RIGHT TO MAKE REVISIONS, ADDITIONS, DELETIONS OR MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMITATION. THE CITY, BY APPROVING THESE DOCUMENTS, ASSUMES NO LIABILITY IN REGARDS TO THEIR ACCURACY OR OMISSIONS.



1 / C11 NORTH PARKING AREA
SCALE: 1"=40'



2 / C11 SOUTH HYDRANT BLOW UP
SCALE: 1"=20'

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY UTILITY PLAN
FOR
NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALMER — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal 1"=40' Vertical -

Designed MED Drawn MED Checked LD Approved DKB Date 6/10/20

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
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Job Number 21227

Sheet C11 of 12

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PRELIMINARY CONSTRUCTION NOTES AND DETAILS
FOR
NW LOGISTICS 2 - PARKING EXPANSION
PTN OF THE SE1/4 OF THE SW1/4 OF SEC. 24, TWP. 19 N., RGE 1 EAST, W. M.
CITY OF DUPONT, PEIRCE COUNTY, STATE OF WASHINGTON

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

GENERAL NOTES

10. GENERAL NOTES AND DRAWINGS

10.1 GENERAL NOTES (STREET CONSTRUCTION)

1. THESE DRAWINGS ARE APPROVED UNTIL _____ _____, _____ [EXPIRATION OF PRELIMINARY PLAT OR SITE PLAN APPROVAL]. THE CITY RESERVES THE RIGHT TO MAKE MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMIT. THE CITY, BY APPROVING THESE DOCUMENTS, IN NO WAY WARRANTS THEIR ACCURACY OR ACKNOWLEDGES ANY OMISSIONS.
2. A PRECONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.

A COPY OF THE APPROVED ROADWAY PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF DUPONT'S STREET STANDARDS AND STORM WATER MANAGEMENT MANUAL AND THE MOST CURRENT EDITION OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ADEQUATE TEMPORARY TRAFFIC CONTROL TO ENSURE TRAFFIC SAFETY DURING CONSTRUCTION ACTIVITIES. THEREFORE, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE PUBLIC WORKS DEPARTMENT AT LEAST 48 HOURS PRIOR TO STARTING ANY WORK IN THE RIGHT-OF-WAY. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).

ALL CURB AND GUTTER, STREET GRADES, SIDEWALK GRADES, AND ANY OTHER VERTICAL AND/OR HORIZONTAL ALIGNMENT SHALL BE STAKED BY A PROFESSIONAL ENGINEER OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK.

ANY ROADWAY SIGNAGE OR STRIPING REMOVED OR TEMPORARILY MOVED BY THE CONTRACTOR SHALL BE RESTORED SO AS TO MEET THE CURRENT MUTCD STANDARDS.

WHERE NEW ASPHALT JOINS EXISTING, THE EXISTING ASPHALT SHALL BE CUT TO A NEAT VERTICAL EDGE AND TACKED WITH ASPHALT EMULSION TYPE CSS-1 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE JOINT SHALL BE SEALED WITH GRADE AR-4000W PAVING ASPHALT.

COMPACTION OF SUBGRADE, ROCK, AND ASPHALT SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. SEE CITY OF DUPONT STREET STANDARDS FOR TESTING AND SAMPLING FREQUENCIES. DENSITY TEST REPORTS WILL BE REQUIRED FOR ALL PUBLIC ROADWAYS.

FORM AND SUBGRADE INSPECTION BY THE CITY IS REQUIRED BEFORE PLACING CONCRETE. TWENTY-FOUR HOURS ADVANCE NOTICE IS REQUIRED FOR THE SCHEDULING OF INSPECTION.

CALL UNDERGROUND UTILITY LOCATE LINE, 1-800-424-5555 OR 811, PRIOR TO ANY EXCAVATION.

DEAD-END STREETS SHALL BE APPROPRIATELY SIGNED AND BARRICADED.

WHERE A SIDEWALK IS TO BE CONSTRUCTED ABOVE A SLOPE OR ADJACENT TO A ROCKERY OR RETAINING WALL, WHERE THE LOWEST FINISHED ELEVATION OF THE SLOPE, ROCKERY, OR RETAINING WALL IS TO BE THIRTY INCHES (30") OR MORE BELOW THE FINISHED ELEVATION OF THE SIDEWALK, A SAFETY RAILING SHALL BE REQUIRED WHEN:

THE PLANE OF THE WALL IS LESS THAN 4' IN HORIZONTAL DISTANCE FROM THE OUTSIDE EDGE OF THE SIDEWALK.

THE PLANS OF THE WALL FACE IS GREATER THAN 4' HORIZONTAL DISTANCE TO THE OUTSIDE EDGE OF THE SIDEWALK, BUT THE SLOPE DOWN TO THE WALL TOP EXCEEDS THREE TO ONE.

THE SLOPES ADJACENT TO THE SIDEWALK AVERAGE GREATER THAN TWO TO ONE.

ANY VAULT CONSTRUCTION SHALL HAVE EITHER;

(A.) PROVIDED WITH WATER STOPS AT CAST-IN-PLACE CONSTRUCTION JOINTS.

(B.) PRE-CAST VAULT SHALL HAVE APPROVED RUBBER GASKET SYSTEM.

10.2 EROSION/SEDIMENTATION CONTROL NOTES.

THE CONTRACTOR SHALL PROVIDE EROSION CONTROL METHODS ACCORDING TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY'S (WDOE) "STORMWATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN". THE FOLLOWING NOTES ARE ONLY A FEW OF THE MINIMUM REQUIREMENTS AND SHOULD NOT BE INTERPRETED TO EXCLUDE ANY EROSION CONTROL PRACTICES AS SPECIFIED IN THE WDOE STORMWATER MANUAL.

1. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION AS PRESCRIBED ON THE PLAN SHALL BE CLEARLY FLAGGED BY THE ENGINEER IN THE FIELD AND OBSERVED DURING CONSTRUCTION.
2. ALL REQUIRED SEDIMENTATION/EROSION CONTROL FACILITIES MUST BE IN OPERATION PRIOR TO LAND CLEARING AND/OR OTHER CONSTRUCTION TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT AND ADDITIONS TO EROSION/SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE EROSION AND SEDIMENTATION CONTROL SYSTEMS DEPICTED ON THIS DRAWING ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND AS UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE CONTRACTOR SHOULD ANTICIPATE THAT MORE EROSION AND SEDIMENTATION CONTROL FACILITIES WILL BE NECESSARY TO INSURE COMPLETE SILTATION CONTROL ON THE PROPOSED SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES AND WATER QUALITY OF THE RECEIVING DRAINAGE
4. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF THE SEDIMENT. ALL CATCH BASINS, CONVEYANCE LINES AND DITCHES ALONG INTERNATIONAL PLACE AND CENTER DRIVE SHALL BE CLEANED PRIOR TO PAVING.
5. THE CONTRACTOR SHALL REMOVE MATERIAL DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO THE CITY RIGHT-OF-WAY OR INTO THE STORM DRAINAGE SYSTEM ON INTERNATIONAL PLACE, CENTER DRIVE AND DUPONT-STEILACOOM HIGHWAY. DEBRIS SHALL NOT BE WASHED INTO THE STORM DRAINAGE SYSTEM.
6. TEMPORARY EROSION CONTROL FACILITIES SHALL BE INSPECTED WEEKLY AND MAINTAINED WITH 24 HOURS FOLLOWING A STORM EVENT. SEDIMENT SHALL BE REMOVED TO ENSURE THE FACILITIES WILL FUNCTION PROPERLY. THE FACILITIES SHALL BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
7. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORMWATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

NO DISTURBED SOIL SHALL REMAIN UNSTABILIZED FOR MOR THAN TWO DAYS.

GENERAL NOTES (WATER SYSTEM CONSTRUCTION)

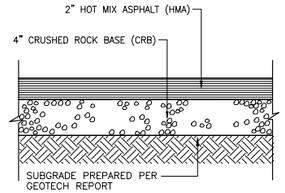
1. ALL IRRIGATION CROSSINGS SHALL HAVE SCHEDULE 80 SLEEVES AND THE SIZE SHALL BE PER THE APPROVED IRRIGATION DRAWINGS.
2. LIGHT POLES SHALL BE LOCATED A MINIMUM OF 3 FEET FROM ALL UNDERGROUND UTILITIES, INCLUDING WATER METERS. LIGHT POLES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM FIRE HYDRANTS.
3. WATER MAINS AND FITTINGS TO BE INSTALLED SHALL BE DUCTILE IRON FOR ALL SIZES, UNLESS SPECIFICALLY NOTED OTHERWISE. THE CLASS OF THE DUCTILE IRON PIPE SHALL BE THICKNESS CLASS 52 FOR ALL DIAMETERS.
4. WATER MAINS SHALL MAINTAIN A MINIMUM OF 3 FEET AND A MAXIMUM OF 5 FEET OF COVER.
5. UTILITY CROSSINGS HAVING LESS THAN 1 FOOT OF VERTICAL SEPARATION SHALL BE CONSTRUCTED WITH CONTROLLED DENSITY FILL (CDF) TO PREVENT POSSIBLE DAMAGE TO EITHER UTILITY.
6. WATER MAIN DEFLECTIONS AT JOINTS ARE NOT TO EXCEED MANUFACTURER'S RECOMMENDATIONS PLUS AN ADDITIONAL FACTOR OF SAFETY OF 50 PERCENT.
7. IDENTIFY A MINIMUM HORIZONTAL SEPARATION OF 10 FEET BETWEEN SANITARY SEWER MAINS AND WATER MAINS, BOTH EXISTING AND PROPOSED.
8. FOR PROPOSED WATER MAINS, IDENTIFY RESTRAINED JOINT FITTINGS AND PUSH-ON JOINTS AT LOCATIONS WHERE THRUST BLOCKS WILL NOT HAVE SUFFICIENT UNDISTURBED ADJACENT AREA FOR BEARING.
9. WATER SERVICE CONNECTIONS SHALL BE MADE PERPENDICULAR TO THE MAIN.
10. THE WATER MAIN PIPES SHALL BE DISINFECTED AND TESTED BEFORE BEING PLACE IN SERVICE. ALL WATER MAIN TESTING AND DISINFECTION SHALL BE PER CITY OF DUPONT PUBLIC WORKS STANDARDS.
11. WATER MAIN STUBOUTS THAT ARE NOT USED SHALL BE DISCONNECTED AT THE MAIN, WITH A BLIND FLANGE INSTALLED AT THE TEE.
12. TEE CONNECTIONS TO EXISTING WATER MAINS SHALL BE WET TAPS.
13. SEPARATE WATER CONNECTIONS WILL BE REQUIRED FOR DOMESTIC, FIRE, AND IRRIGATION. ALL SERVICES SHALL INCLUDE BACKFLOW PREVENTION DEVICES LOCATED OUTSIDE OF ANY PROPOSED BUILDINGS.
14. ALL FIRE PROTECTION SYSTEM INSTALLATIONS, INCLUDING PIPELINES AND DOUBLE DETECTOR CHECK ASSEMBLIES, ARE SUBJECT TO THE CONSTRUCTION STANDARDS OF NFPA 24 AND TO THE INSPECTION AND TESTING REQUIREMENTS OF THE CITY OF DUPONT FIRE DEPARTMENT.
15. THE FIRE PROTECTION SYSTEMS, INCLUDING THE BACKFLOW PREVENTION DEVICES, UNDERGROUND FIRE SERVICE LINES, AND FIRE DEPARTMENT CONNECTIONS, ARE SUBJECT TO SEPARATE REVIEW, PERMITTING, AND APPROVAL BY THE CITY OF DUPONT FIRE DEPARTMENT.
16. RELOCATE THE FIRE DEPARTMENT CONNECTIONS (FDCS) TO PLANTER ISLANDS OR OTHER LOCATIONS, AS FEASIBLE, TO BE OUTSIDE OF THE BUILDING COLLAPSE ZONES.
17. THE APPLICANT SHALL FURNISH METER SIZING CALCULATIONS FOR DOMESTIC AND FIRE WATER SERVICES. THE SPRINKLER SYSTEM DESIGN, INCLUDING CONFIRMATION OF THE PROVIDED SIZING FOR THE FIRE LINE COMPONENTS SHALL BE REVIEWED AND APPROVED BY THE CITY BUILDING DEPARTMENT AND FIRE DEPARTMENT AS PART OF THE BUILDING PERMIT PROCESS. EACH FIRE LINE CONNECTION TO A CITY WATER MAIN WILL REQUIRE A DOUBLE DETECTOR CHECK VALVE ASSEMBLY (DDCVA) IN AN UNDERGROUND VAULT AND A FIRE DEPARTMENT CONNECTION (FDC) WITHIN 50 FEET OF A FIRE HYDRANT.

APPROVED FOR CONSTRUCTION

BY: _____
CITY OF DUPONT

DATE: _____

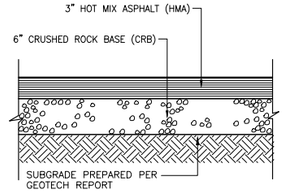
THESE DRAWINGS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF 12 MONTHS FROM THE DATE SHOWN HEREON. THE CITY RESERVES THE RIGHT TO MAKE REVISIONS, ADDITIONS, DELETIONS OR MODIFICATIONS SHOULD CONSTRUCTION BE DELAYED BEYOND THIS TIME LIMITATION. THE CITY, BY APPROVING THESE DOCUMENTS, ASSUMES NO LIABILITY IN REGARDS TO THEIR ACCURACY OR OMISSIONS.



NOTE:
REFER TO SOIL ENGINEER'S RECOMMENDATIONS FOR SITE PREPARATION & ALTERNATE PAVEMENT SECTIONS

TYPICAL LIGHT DUTY ON-SITE PAVEMENT SECTION

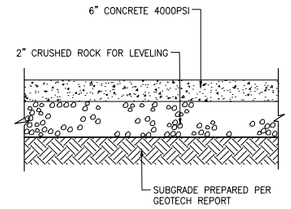
NOT TO SCALE



NOTE:
REFER TO SOIL ENGINEER'S RECOMMENDATIONS FOR SITE PREPARATION & ALTERNATE PAVEMENT SECTIONS

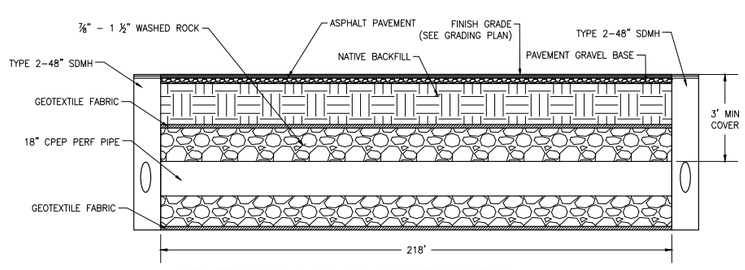
TYPICAL HEAVY DUTY ON-SITE PAVEMENT SECTION

NOT TO SCALE



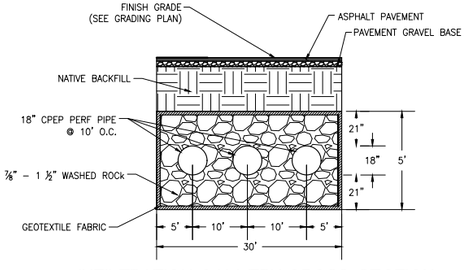
TYPICAL CONCRETE PAVEMENT SECTION

NOT TO SCALE

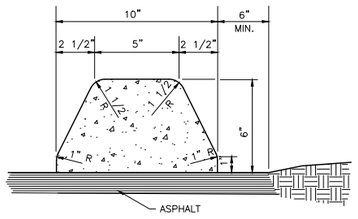


INFILTRATION GALLERY SECTION VIEW

NTS



INFILTRATION GALLERY CROSS-SECTION



EXTRUDED CONCRETE CURB DETAIL

NOT TO SCALE

No.	Date	By	Ckd.	Appr.	Revision

Title: PRELIMINARY CONSTRUCTION NOTES AND DETAILS FOR NW LOGISTICS 2 - PARKING EXPANSION

For: PANATTONI DEVELOPMENT COMPANY
1821 DOCK ST. SUITE 100
TACOMA, WA 98402
CONTACT: BRIAN MATTSON

DANIEL K. BALMAT — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
5/26/2020

Scale: Horizontal 1 Vertical –

Designed WED Drawn WED Checked LD Approved DKB Date 6/10/20

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Job Number 21227

Sheet C12 of 12

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B. BMP Detail

Please see following pages for appropriate BMP details.
Below is a list of Alternative BMPs to be used if the BMPs listed in the body of this document are deemed ineffective by the CESCL.

Element #1 - Mark Clearing Limits
BMP C101: Preserving Natural Vegetation
BMP C102: Buffer Zones
BMP C103: High Visibility Fence

Element #2 - Establish Construction Access
BMP C107: Construction Road/Parking Area Stabilization

Element #3 - Control Flow Rates
BMP C203: Water Bars
BMP C209: Outlet Protection
BMP C235: Wattles

Element #4 - Install Sediment Controls
BMP C231: Brush Barrier
BMP C232: Gravel Filter Berm
BMP C234: Vegetated Strip
BMP C235: Wattles
BMP C250: Construction Stormwater Chemical Treatment
BMP C251: Construction Stormwater Filtration
Other Proprietary Sediment Control Technologies

Element #5 - Stabilize Soils
BMP C122: Nets and Blankets
BMP C124: Sodding
BMP C125 Compost
BMP C126: Topsoiling
BMP C127: Polyacrylamide for Soil Erosion Protection
BMP C130: Surface Roughening
BMP C131: Gradient Terraces

Element #6 - Protect Slopes
BMP C121: Mulching
BMP C122: Nets and Blankets
BMP C131: Gradient Terraces
BMP C200: Interceptor Dike and Swale
BMP C201: Grass-Lined Channels
BMP C203: Water Bars
BMP C204: Pipe Slope Drains
BMP C205: Subsurface Drains
BMP C206: Level Spreader
BMP C208: Triangular Silt Dike (Geotextile-Encased Check Dam)

Element #7 - Protect Drain Inlets
BMP C220: Storm Drain Inlet Protection

Element #8 - Stabilize Channels and Outlets
BMP C122: Nets and Blankets
BMP C202: Channel Lining
BMP C209: Outlet Protection

Element #9 - Control Pollutants
BMP C152: Sawcutting and Surface Pollution Prevention
BMP C153: Material Delivery, Storage, Containment
BMP C154: Concrete Washout Area
BMP C250: Construction Stormwater Chemical Treatment
BMP C251: Construction Stormwater Filtration
BMP C252: High pH Neutralization Using Co_2
BMP C253: pH Control for High pH Water
Source Control BMPs As Appropriate

Element #10 - Control Dewatering
BMP C203: Water Bars
BMP C226: Vegetative Filtration

Element #11 - Maintain BMPs
BMP C150: Materials on Hand
BMP C160 Erosion and Sedimentation Control Lead

Element #12 - Manage the Project
BMP C150: Materials on Hand
BMP C160: Erosion and Sediment Control Lead
BMP C162: Scheduling

Element #13: Protect Low Impact Development
BMP C102: Buffer Zone
BMP C103: High Visibility Fence
BMP C200: Interceptor Dike and Swale
BMP C201: Grass-Lined Channels
BMP C207: Check Dams
BMP C208: Triangular Silt Dike (TSD) (Geotextile-Encased Check Dam)
BMP C231: Brush Barrier
BMP C233: Silt Fence
BMP C234: Vegetated Strip

C. Correspondence

Please see following for any pertinent correspondence regarding this project.

Applicable information to be inserted here as needed.

D. Site Inspection Form

Please see following pages for the site inspection form.

Construction Stormwater Site Inspection Form

Project Name _____ Permit # _____ Inspection Date _____ Time _____

Name of Certified Erosion Sediment Control Lead (CESCL) or qualified inspector if *less than one acre*
Print Name: _____

Approximate rainfall amount since the last inspection (in inches): _____

Approximate rainfall amount in the last 24 hours (in inches): _____

Current Weather Clear ☐ Cloudy ☐ Mist ☐ Rain ☐ Wind ☐ Fog ☐

A. Type of inspection: Weekly ☐ Post Storm Event ☐ Other ☐

B. Phase of Active Construction (*check all that apply*):

Pre Construction/installation of erosion/sediment controls	☐	Clearing/Demo/Grading	☐	Infrastructure/storm/roads	☐
Concrete pours	☐	Vertical Construction/buildings	☐	Utilities	☐
Offsite improvements	☐	Site temporary stabilized	☐	Final stabilization	☐

C. Questions:

1. Were all areas of construction and discharge points inspected? Yes ___ No ___
2. Did you observe the presence of suspended sediment, turbidity, discoloration, or oil sheen Yes ___ No ___
3. Was a water quality sample taken during inspection? (*refer to permit conditions S4 & S5*) Yes ___ No ___
4. Was there a turbid discharge 250 NTU or greater, or Transparency 6 cm or less?* Yes ___ No ___
5. If yes to #4 was it reported to Ecology? Yes ___ No ___
6. Is pH sampling required? pH range required is 6.5 to 8.5. Yes ___ No ___

If answering yes to a discharge, describe the event. Include when, where, and why it happened; what action was taken, and when.

_____

_____

_____

_____

*If answering yes to # 4 record NTU/Transparency with continual sampling daily until turbidity is 25 NTU or less/ transparency is 33 cm or greater.

Sampling Results: Date: _____

Parameter	Method (circle one)	Result			Other/Note
		NTU	cm	pH	
Turbidity	tube, meter, laboratory				
pH	Paper, kit, meter				

Construction Stormwater Site Inspection Form

D. Check the observed status of all items. Provide "Action Required "details and dates.

Element #	Inspection	BMPs Inspected			BMP needs maintenance	BMP failed	Action required (describe in section F)
		yes	no	n/a			
1 Clearing Limits	Before beginning land disturbing activities are all clearing limits, natural resource areas (streams, wetlands, buffers, trees) protected with barriers or similar BMPs? (high visibility recommended)						
2 Construction Access	Construction access is stabilized with quarry spalls or equivalent BMP to prevent sediment from being tracked onto roads?						
	Sediment tracked onto the road way was cleaned thoroughly at the end of the day or more frequent as necessary.						
3 Control Flow Rates	Are flow control measures installed to control stormwater volumes and velocity during construction and do they protect downstream properties and waterways from erosion?						
	If permanent infiltration ponds are used for flow control during construction, are they protected from siltation?						
4 Sediment Controls	All perimeter sediment controls (e.g. silt fence, wattles, compost socks, berms, etc.) installed, and maintained in accordance with the Stormwater Pollution Prevention Plan (SWPPP).						
	Sediment control BMPs (sediment ponds, traps, filters etc.) have been constructed and functional as the first step of grading.						
	Stormwater runoff from disturbed areas is directed to sediment removal BMP.						
5 Stabilize Soils	Have exposed un-worked soils been stabilized with effective BMP to prevent erosion and sediment deposition?						

Construction Stormwater Site Inspection Form

Element #	Inspection	BMPs Inspected			BMP needs maintenance	BMP failed	Action required (describe in section F)
		yes	no	n/a			
5 Stabilize Soils Cont.	Are stockpiles stabilized from erosion, protected with sediment trapping measures and located away from drain inlet, waterways, and drainage channels?						
	Have soils been stabilized at the end of the shift, before a holiday or weekend if needed based on the weather forecast?						
6 Protect Slopes	Has stormwater and ground water been diverted away from slopes and disturbed areas with interceptor dikes, pipes and or swales?						
	Is off-site storm water managed separately from stormwater generated on the site?						
	Is excavated material placed on uphill side of trenches consistent with safety and space considerations?						
	Have check dams been placed at regular intervals within constructed channels that are cut down a slope?						
7 Drain Inlets	Storm drain inlets made operable during construction are protected.						
	Are existing storm drains within the influence of the project protected?						
8 Stabilize Channel and Outlets	Have all on-site conveyance channels been designed, constructed and stabilized to prevent erosion from expected peak flows?						
	Is stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes and downstream conveyance systems?						
9 Control Pollutants	Are waste materials and demolition debris handled and disposed of to prevent contamination of stormwater?						
	Has cover been provided for all chemicals, liquid products, petroleum products, and other material?						
	Has secondary containment been provided capable of containing 110% of the volume?						
	Were contaminated surfaces cleaned immediately after a spill incident?						
	Were BMPs used to prevent contamination of stormwater by a pH modifying sources?						

Construction Stormwater Site Inspection Form

Element #	Inspection	BMPs Inspected			BMP needs maintenance	BMP failed	Action required (describe in section F)
		yes	no	n/a			
9 Cont.	Wheel wash wastewater is handled and disposed of properly.						
10 Control Dewatering	Concrete washout in designated areas. No washout or excess concrete on the ground.						
	Dewatering has been done to an approved source and in compliance with the SWPPP.						
	Were there any clean non turbid dewatering discharges?						
11 Maintain BMP	Are all temporary and permanent erosion and sediment control BMPs maintained to perform as intended?						
12 Manage the Project	Has the project been phased to the maximum degree practicable?						
	Has regular inspection, monitoring and maintenance been performed as required by the permit?						
	Has the SWPPP been updated, implemented and records maintained?						
13 Protect LID	Is all Bioretention and Rain Garden Facilities protected from sedimentation with appropriate BMPs?						
	Is the Bioretention and Rain Garden protected against over compaction of construction equipment and foot traffic to retain its infiltration capabilities?						
	Permeable pavements are clean and free of sediment and sediment laden-water runoff. Muddy construction equipment has not been on the base material or pavement.						
	Have soiled permeable pavements been cleaned of sediments and pass infiltration test as required by stormwater manual methodology?						
	Heavy equipment has been kept off existing soils under LID facilities to retain infiltration rate.						

E. Check all areas that have been inspected. ✔

All in place BMPs ☐ All disturbed soils ☐ All concrete wash out area ☐ All material storage areas ☐
All discharge locations ☐ All equipment storage areas ☐ All construction entrances/exits ☐

F. Elements checked "Action Required" (section D) describe corrective action to be taken. List the element number; be specific on location and work needed. Document, initial, and date when the corrective action has been completed and inspected.

Element #	Description and Location	Action Required	Completion Date	Initials

Attach additional page if needed

Sign the following certification:

"I certify that this report is true, accurate, and complete, to the best of my knowledge and belief"

Inspected by: (print) _____ (Signature) _____ Date: _____

Title/Qualification of Inspector: _____

E. Construction Stormwater General Permit (CSWGP)

Please see following attachment for the CSWGP

TO BE INCLUDED IN FINAL REPORT

F. Engineering Calculations

Please see following for calculations.

TO BE INCLUDED IN FINAL REPORT

7.0 SPECIAL REPORTS AND STUDIES

7.0 SPECIAL REPORTS AND STUDIES

Special reports for this project include:

- Geotechnical Report prepared by Terra Associates – May 12, 2020

8.0 OTHER PERMITS

8.0 OTHER PERMITS

Other permits for this project include:

- Site Development Permit
- Building Permit
- Sanitary Sewer Connection Permit
- Right-of-Way Use Permit
- Construction Stormwater General Permit (NPDES)

9.0 OPERATION AND MAINTENANCE MANUAL

9.0 OPERATION AND MAINTENANCE MANUAL

The Operation and Maintenance Manual will be provided with the Final Stormwater Site Plan during final site development permitting.

10.0 BOND QUANTITIES WORKSHEET

10.0 BOND QUANTITIES WORKSHEET

Performance bonding or other appropriate financial instruments shall be provided as determined necessary by the City of Dupont.