HALE MILLIGAN
& ASSOCIATES LLC
CIVIL ENGINEERING & PLANNING

September 15, 2011

Eric Scott
City of Arlington
238 North Olympic Ave.
Arlington, WA 98223

RE: DRAINAGE MEMO FOR ARLINGTON ADVANCED MANUFACTURING PARK

Dear Mr. Scott,

The following is a drainage summary for the Arlington Advanced Manufacturing Park.

PROJECT DESCRIPTION
The project is generally located in Section 22, Township 31 North, Range 5 East Willamette Meridian. More specifically the project is located at 17825 59th Ave NE in Arlington, WA. A Vicinity Map is attached to this memo.

EXISING SITE CONDITIONS
The project includes 16 existing manufacturing and office buildings with associated infrastructure improvements on a 39.29 acre site. The existing site has approximately 455,721 S.F. of roof area, 446,267 S.F. of concrete area, 174,751 S.F. of asphalt area, 366,335 S.F. of gravel parking, 29,959 S.F. of pond tracts, and 197,225 S.F. of landscaping. The Existing Drainage Plan is attached to this memo.

The proposed Arlington Advanced Manufacturing project will not alter the existing drainage system or outfalls.

CONVEYANCE SYSTEM
Approximately 4.96 acres of the site are conveyed to the infiltration pond (Pond # 1) near the southwest corner of the site. Approximately 0.95 acres of this total area is from the parcel near the southwest corner of the site (Cook Building) that is no longer a part of this property. The conveyance system for Pond #1 consists of mostly 12” diameter pipe with type 1 catch basins.

Approximately 23.25 acres of the site are conveyed to the large water quality and infiltration pond (Pond # 2) near the south east corner of the site. The conveyance system consists of mostly 12” diameter pipe with type 1 catch basins. A Drainage Exhibit showing the existing drainage basins is attached to this map.

The conveyance system for Pond #2 has 3 pump stations. Pump Station #1 is north of Building #3 and appears accept runoff from proposed lots 1, 2, 3, 7, 8, and 10. Pump Station #2 is north of Building #11 and appears accept runoff from proposed lots 3, 4, and 8. Pump Station #3 is located on the east end of the Water Quality pond. Pump Station #3 pumps water from lots 1-18 which drain into the water quality pond and then into Pond #2.

The conveyance system was recently cleaned by Cuz Concrete. The storm system that was cleaned currently has green dots on the catch basins. The systems appears to be in working order however the ponds will need to be cleaned and a few catch basins that were missed during the original cleaning by CUZ Concrete will need to be cleaned.

SOIL

The existing soils consist of Lynnwood Sandy Loam 0-3 percent slopes per the National Resources Conservation Service (NRCS) Soil Survey of Snohomish County, see Appendix A. Lynnwood soils are classified in the USDA Soil Textural Classification as follows; the top layer of soil from 0 to 29 inches is classified as a loamy sand and has an infiltration rate of 2.0 – 6.0 inches per hour. The second layer of soil from 29 to 60 inches is classified as a clean gravelly sand and has an infiltration rate of 6.0 - 20.0 inches per hour.

DOWNSTREAM ANALYSIS

The existing site infiltrations into three ponds onsite with little to no stormwater runoff. The existing site is relatively flat however there is a slight slope to the northeast.

PROPOSED SITE CONDITIONS

The only change to the storm drainage impervious area will be at the northwest corner of the site. The project will add a paved entrance to the site consisting of 1,670 S.F. This is only .09% of the total impervious area. The proposed paved area will be conveyed to the existing system that flows into Infiltration Pond #2, therefore will have water quality treatment and flow control.

STORMWATER POLLUTION PREVENTION

The only construction that will be part of this Site Civil Permit will be the installation of water valves, water meters, sewer monitoring manholes, and a small paved area at the west entrance of the site. Stormwater pollution will be controlled with inlet protection, stabilization of soils and controlling pollutants.

OPERTATIONS AND MAINTENANCE

Operations and maintenance of the stormwater system will be the responsibility of the Arlington Advanced Manufacturing Park Business Owner's Association. All standard Department of Ecology accepted maintenance practices will be used by the business owners association to maintain the site.

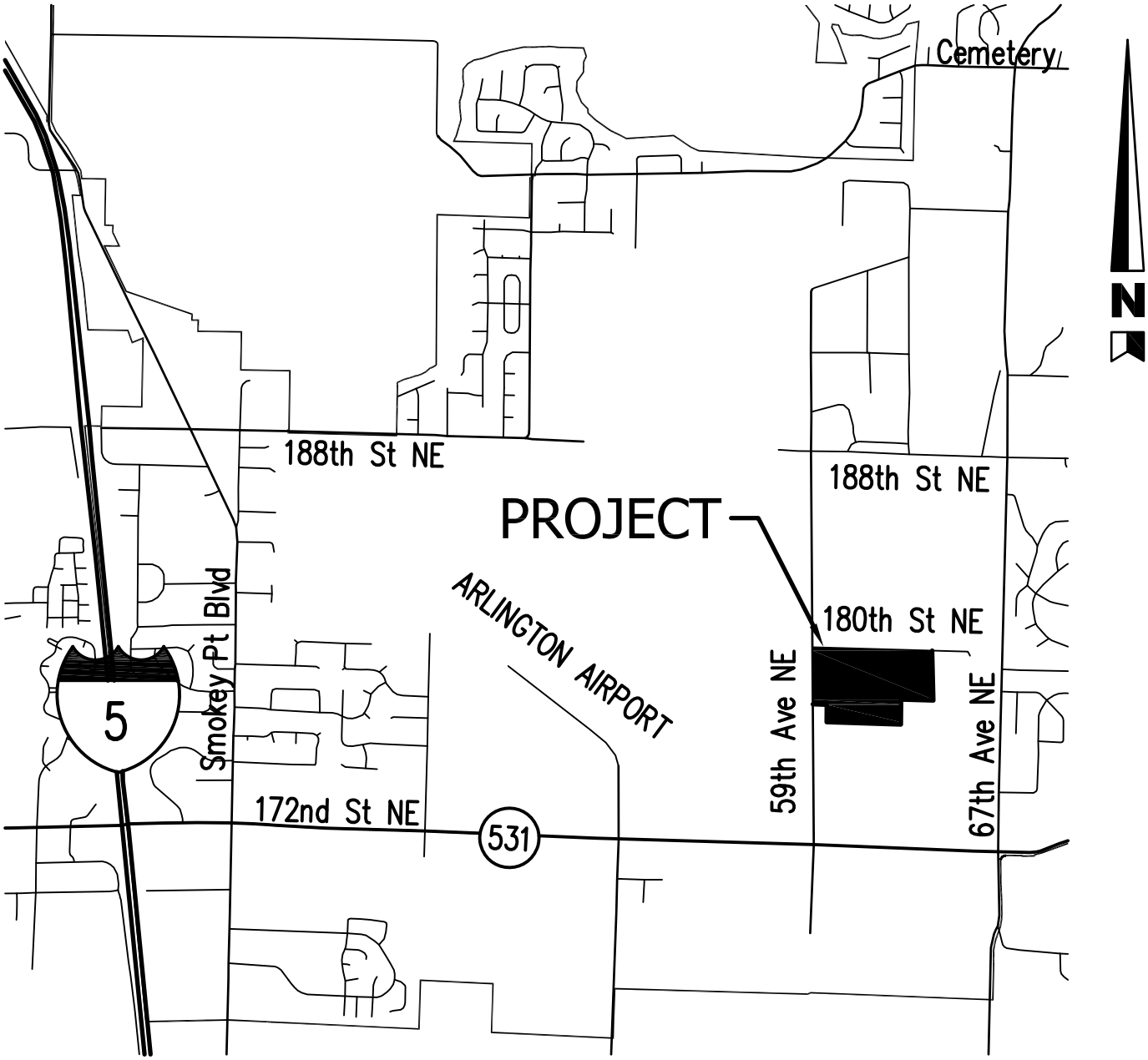
If you have any questions or concerns please contact me by phone at (360)474-4624 or by email at kelli@halemilligan.com.

Thanks,

Kelli Hale, PE

307 N Olympic Ave
Suite 213
Arlington, WA 98223

Phone: 360.474.4624
Fax: 425.968.1245
www.halemilligan.com



VICINITY MAP

N.T.S.

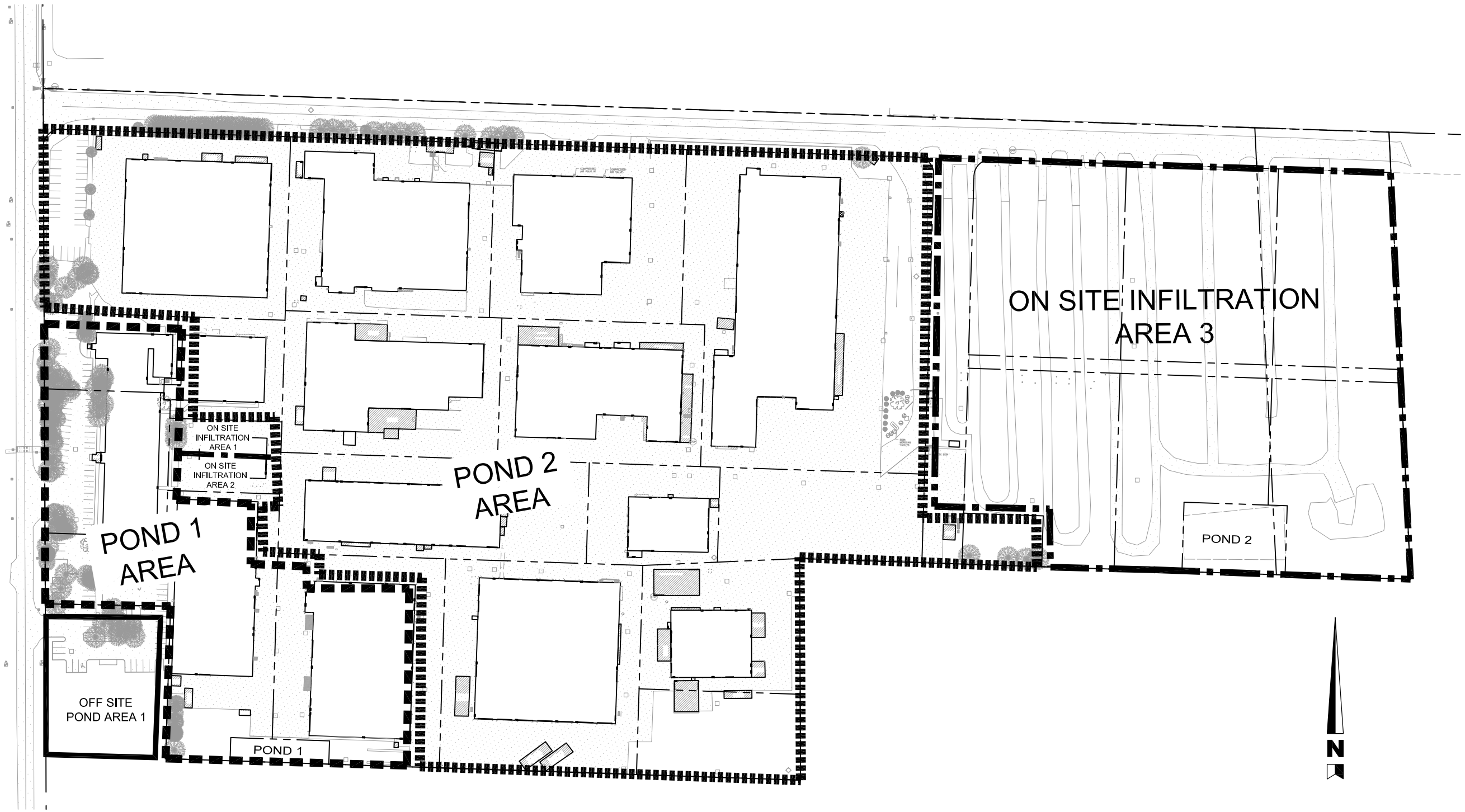
ARLINGTON ADVANCED MANUFACTURING PARK

HALE MILLIGAN & ASSOCIATES LLC

CIVIL ENGINEERING PLANNING PROJECT MANAGEMENT

307 OLYMPIC AVENUE, SUITE 213 ARLINGTON, WA 98223

P: (360) 474-4624 F: (425) 968-1245



POND AREA 1	4.96 ACRES
POND AREA 2	23.25 ACRES
ON SITE INFILTRATION	
AREA 1	0.19 ACRES
AREA 2	0.23 ACRES
AREA 3	9.71 ACRES
OFF SITE AREA	0.95 ACRES
TOTAL	39.29 ACRES

80 0 80 160
SCALE IN FEET

HALE MILLIGAN & ASSOCIATES LLC
CIVIL ENGINEERING PLANNING PROJECT MANAGEMENT
307 OLYMPIC AVENUE, SUITE 213 ARLINGTON, WA 98223
P: (360) 474-4624 F: (425) 968-1245

DATE	NO.	REVISION	BY

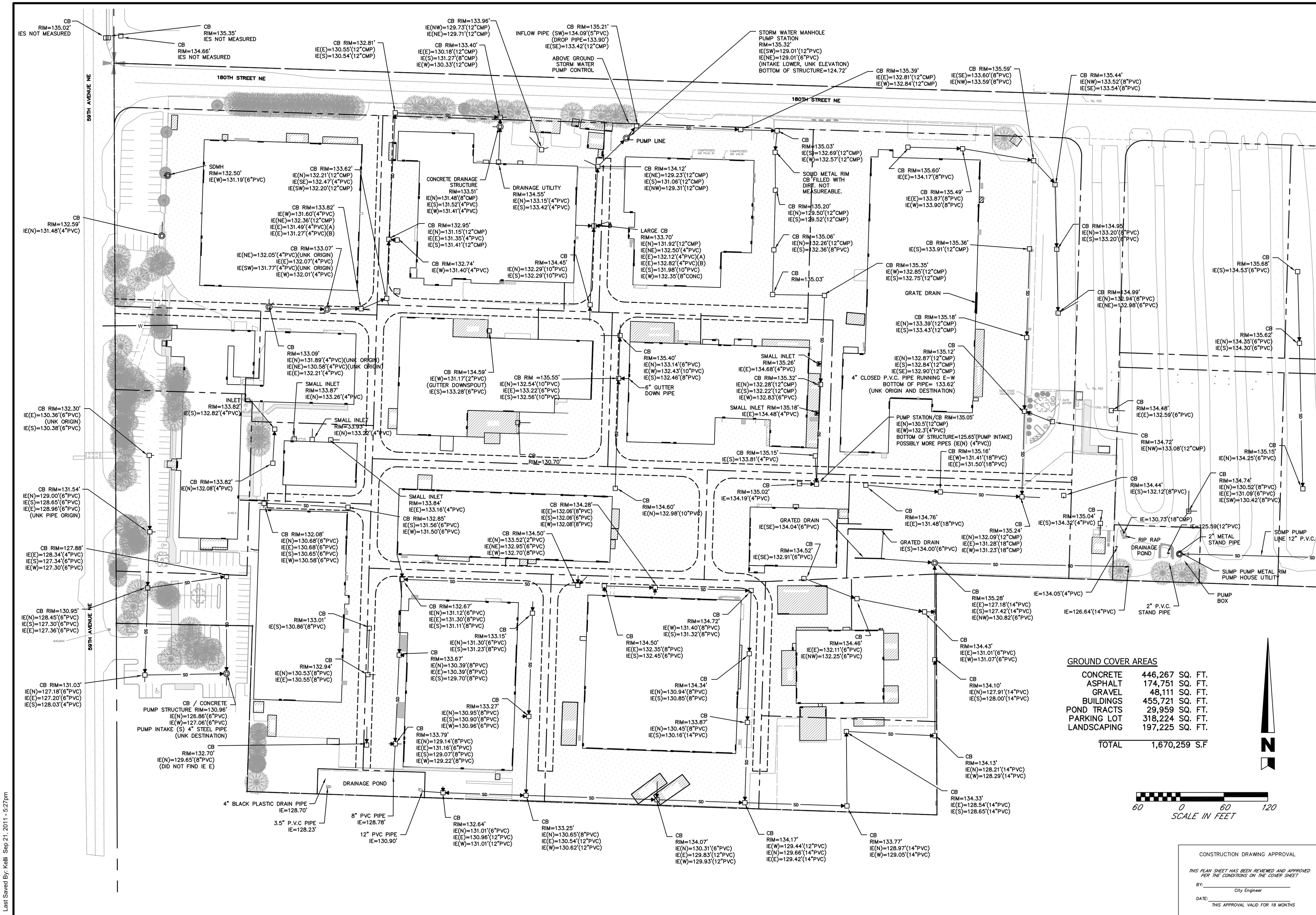
DESIGNED BY: KSH
DRAWN BY: KSH/JSM

ARLINGTON ADVANCE MANUFACTURING PARK
EXISTING DRAINAGE EXHIBIT

2011018

— OF —

Plotted: Sep 15, 2011 - 6:29pm Kelli C:\Projects\ArlingtonAdvancedManufacturing\DWG\Bayliner-Const-Plan.dwg Layout Name: DRAINAGE EXHIBIT
Last Saved By: Kelli Sep 15, 2011 - 5:29pm



GROUND COVER AREAS

CONCRETE	446,267	SQ. FT.
ASPHALT	174,751	SQ. FT.
GRAVEL	48,111	SQ. FT.
BUILDINGS	455,721	SQ. FT.
POND TRACTS	29,959	SQ. FT.
PARKING LOT	318,224	SQ. FT.
LANDSCAPING	197,225	SQ. FT.
TOTAL	1,670,259	S.F

CONSTRUCTION DRAWING APPROVAL

THIS PLAN SHEET HAS BEEN REVIEWED AND APPROVED PER THE CONDITIONS ON THE COVER SHEET

BY: _____ City Engineer

DATE: _____ THIS APPROVAL VALID FOR 18 MONTHS

HALE MILLIGAN & ASSOCIATES LLC
CIVIL ENGINEERING PLANNING PROJECT MANAGEMENT
307 OLYMPIC AVENUE, SUITE 213 ARLINGTON, WA 98223
P: (360) 474-4624 F: (425) 966-1246

DATE	NO.	REVISION	BY

DESIGNED BY: KSH

DRAWN BY: KSH / JSM

ARLINGTON ADVANCE MANUFACTURING PARK EXISTING DRAINAGE

2011018

Plotted: Sep 21, 2011 - 5:57pm Kelli C:\Projects\ArlingtonAdvancedManufacturing\DWG\Bayliner-Const-Plan.dwg Layout Name: Storm
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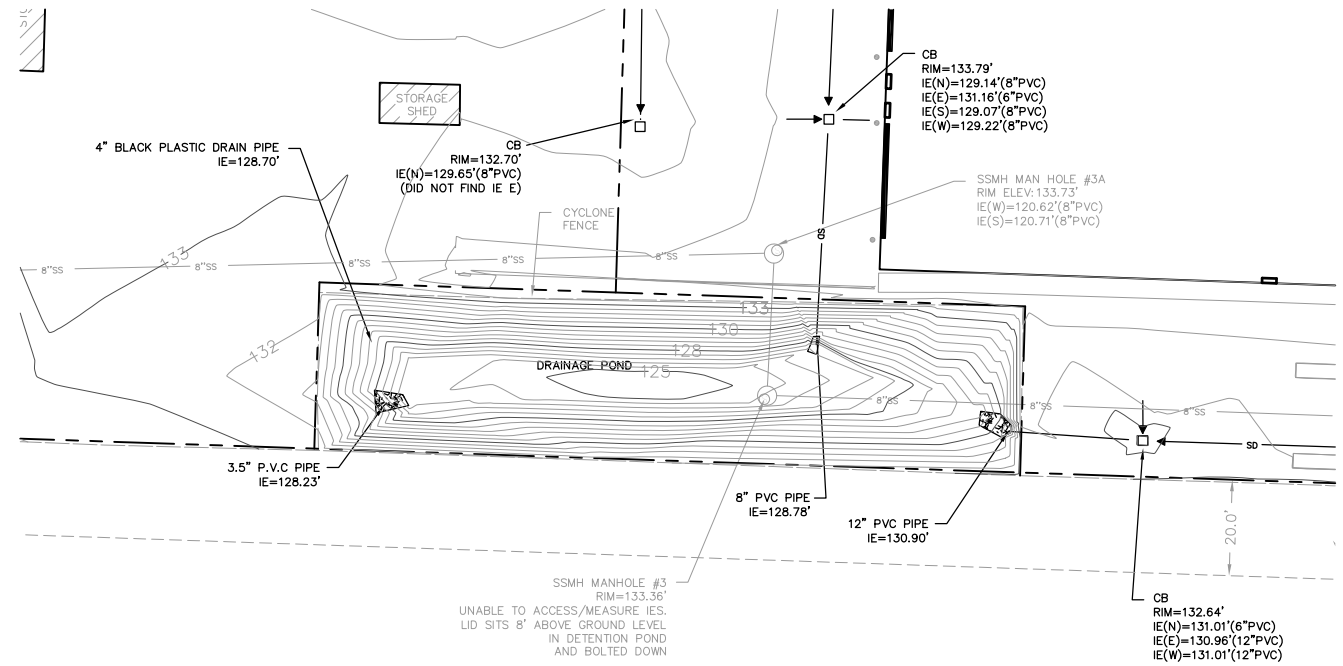
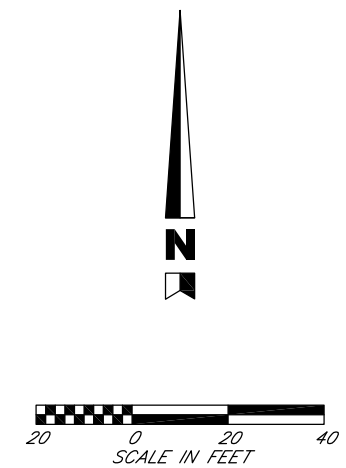
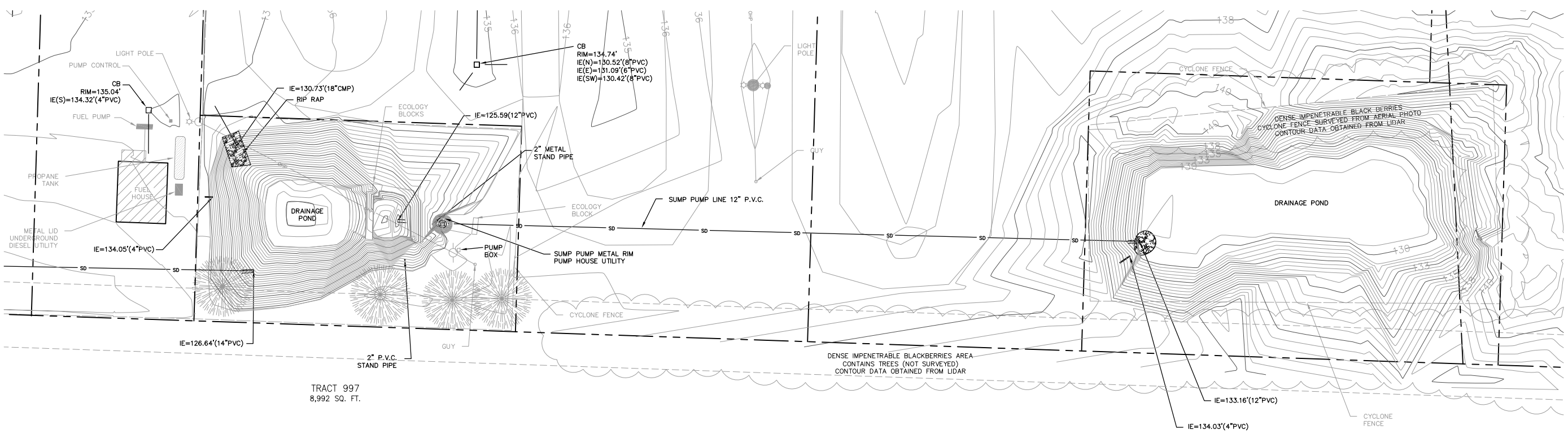


TRACT 996
POND 1





TRACT 997
8,992 SQ. FT.

TRACT 997
POND 2

TRACT 998
POND 3

CONSTRUCTION DRAWING APPROVAL

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BY: _____
City Engineer

DATE: _____
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DESIGNED BY: KSH
DRAWN BY: KSH/JSM

STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER 41779

ARLINGTON ADVANCE MANUFACTURING PARK EXISTING INFILTRATION PONDS

2011018

Plotted: Sep 16, 2011 - 2:46pm Kelli C:\Projects\ArlingtonAdvancedManufacturing\DWG\Bayliner-Const-Plan.dwg Layout Name: Ponds
Last Saved By: Kelli Sep 16, 2011 - 1:27pm