

T E C H N I C A L M E M O R A N D U M

TO: Mike Warfel – Washington State Department of Ecology

cc: Nick Lenington, Bellevue Investors I LLC
Jim Broadlick, Bellevue Investors I LLC

FROM: Riley Conkin, Principal Geologist, L.G., L.H.G.

DATE: January 27, 2021

RE: **SUMMARY OF CONTINGENCY WELL DESIGN FOR
NORTHWESTERN AREA – BELLEVUE PLAZA PROPERTY
117 106TH AVENUE NORTHEAST
BELLEVUE, WASHINGTON
FARALLON PN: 397-034**

As requested by the Washington State Department of Ecology (Ecology), Farallon Consulting, L.L.C. (Farallon) has prepared this Technical Memorandum on behalf of Bellevue Investors I LLC (Bellevue Investors) to provide a summary of a contingency well design for the property at 117 106th Avenue Northeast in Bellevue, Washington (herein referred to as the Bellevue Plaza Property). The proposed contingency well design includes installing a series of steel sleeves through the floor slab of the lower parking level of the underground parking structure currently being constructed on the northwestern portion of the Bellevue Plaza Property. The purpose of the steel sleeves would be to provide a contingency to allow for the potential future installation of a series of remediation injection wells on the up-gradient northwestern portion of the Bellevue Plaza Property, if Ecology determines in the future that this remedial action should be performed by the parties liable for the sources of halogenated volatile organic compounds (HVOCs) migrating from an off-Bellevue Plaza Property source.

The remediation injection wells could be used to remediate the anticipated continued migration of the dissolved-phase plume of HVOCs migrating from an off-Bellevue Plaza Property source identified in Ecology records as the Town & Country Cleaners Bellevue Site at 310 105th Avenue Northeast in Bellevue, Washington, which is assigned FS Identification No. 2319. The contingency design would include the installation of four steel sleeves on the northwestern portion of the Bellevue Plaza Property, which would provide access for potential future installation of a series of remediation injection wells. The proposed locations of the contingency well sleeves are



shown in green on Figure 1 in the northwestern portion of the lower level P4 underground parking structure. Well construction details are provided on Figure 2. If required, each well would be constructed using a 2-inch-diameter casing with a screened interval of approximately 5 feet just below the P4 parking slab.

The remediation injection wells, if required by Ecology, would allow the injection of a passive bioremediation barrier by the source liable parties into the first encountered groundwater-bearing zone on the northwestern portion of the Bellevue Plaza Property. However, any use of the remediation injection wells should be considered only after active remediation of the high concentration source area(s) at the Town and Country Cleaners site combined with monitored natural attenuation of the dissolved-phase HVOC plume migrating in the first encountered groundwater-bearing zone onto multiple properties down-gradient of the Town and Country Cleaners, including the Bellevue Plaza Property.

CLOSING

We trust this Technical Memorandum is sufficient to address Ecology comments regarding potential future remedial efforts by Town and Country Cleaners to remediate its HVOC source area(s). Please contact Riley Conkin at (425) 417-4076 if you have questions or need additional information.

Attachment: Figure 1, *Proposed Contingency Well Sleeve Locations*
Figure 2, *Contingency Well Details*

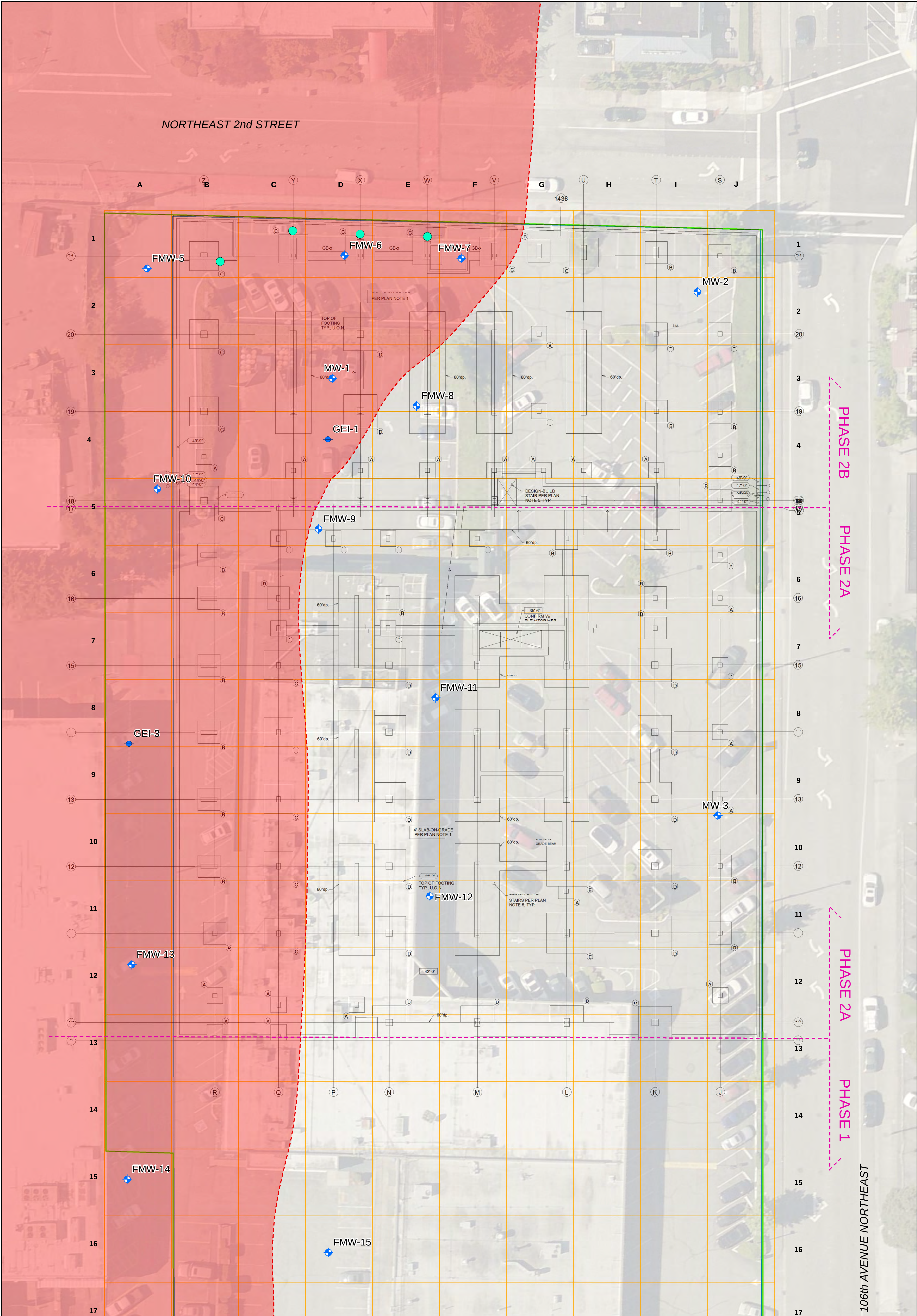
JRC:cm

FIGURES

SUMMARY OF CONTINGENCY WELL DESIGN FOR NORTHWESTERN AREA – BELLEVUE PLAZA PROPERTY

117 106th Avenue Northeast
Bellevue, Washington

Farallon PN: 397-034



LEGEND

- PROPOSED CONTINGENCY WELL SLEEVE LOCATION
- SHALLOW MONITORING WELL (FARALLON)
- DEEP MONITORING WELL (GEOENGINEERS)
- MASS EXCAVATION AREA
- BELLEVUE PLAZA PROPERTY BOUNDARY
- EXCAVATION GRID (30'X30')
- CONSTRUCTION PHASE BOUNDARY
- ESTIMATED AREA OF HVOC CONTAMINATED GROUNDWATER FROM TOWN AND COUNTRY CLEANERS AND KWIK CLEANERS SOURCES

N

0 20

SCALE IN FEET

FARALLON

CONSULTING

Quality Service for Environmental Solutions | farallonconsulting.com

Drawn By: j Jones

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Baker City

California
Oakland | Folsom | Irvine

Checked By: LS

FIGURE 1

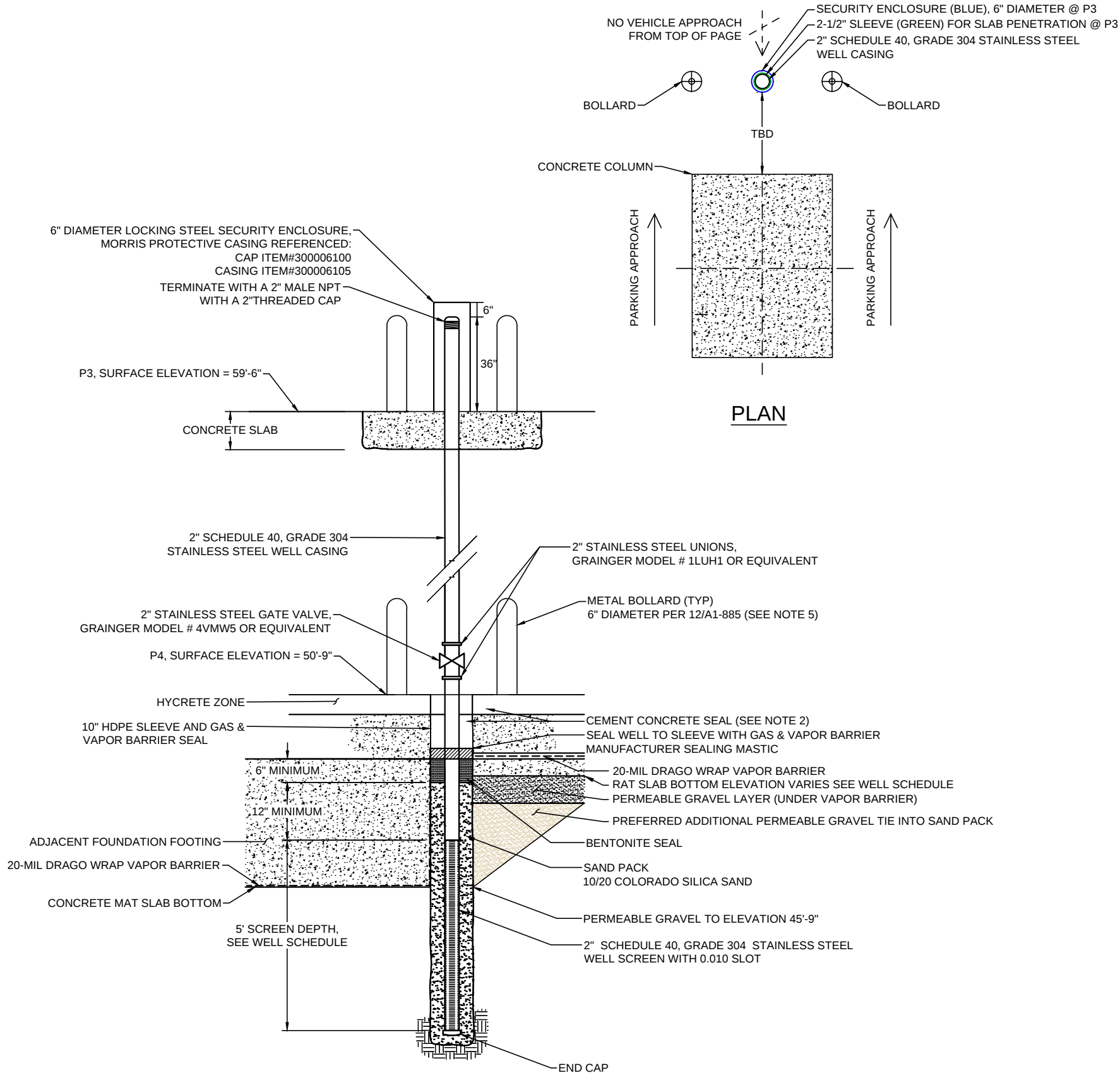
PROPOSED CONTINGENCY WELL SLEEVE LOCATIONS
BELLEVUE PLAZA PROPERTY
117 106th AVENUE NORTHEAST,
10502 AND 10510 MAIN STREET
BELLEVUE, WASHINGTON

FARALLON PN: 397-034

Date: 1/27/2021

Disc Reference:

R:\Projects\397-034\CAD\Engineering-Drawings\397-034-INJECTION-WELL-DETAIL S.dwg 12/22/2020 3:46 PM (Nick Miller)



MONITORING WELL DETAIL (SEE NOTE 1)

NOT TO SCALE

MONITORING WELL SCHEDULE	
	NORTH WELLS
ENCLOSURE ELEVATION	63'-0"
TOP OF CASING ELEVATION	62'-6"
P3 - TOP OF SLAB	59'-6"
P4 - BOTTOM OF SLAB	48'-3"
P4 - BOTTOM OF RAT SLAB	47'-11"
P4 - BOTTOM OF ADJACENT FOOTINGS	45'-9"
TOP OF WELL SCREEN	46'-9"
BOTTOM OF WELL SCREEN	41'-9"

ASSUMES 4" RAT SLAB
NO RAT SLAB PER RFI-52

BOS = BOTTOM OF SLAB ELEVATION
TOS = TOP OF SLAB ELEVATION

NOTES:

- MONITORING WELLS SHALL BE INSTALLED IN ACCORDANCE WITH WASHINGTON ADMINISTRATIVE CODE (WAC) 173-160-400: GENERAL REQUIREMENTS FOR RESOURCE PROTECTION WELL REQUIREMENTS.
- WELL CASING PENETRATION AT THE MAT AND RAT SLABS AND AT PARKING LEVEL P3 DETAIL TO BE PROVIDED BY OTHERS. SEALING THE WELL CASING SLAB PENETRATION AT THE P4 PARKING LEVEL TO BE SPECIFIED BY OTHERS.
- MONITORING WELLS COMPLETED ABOVE GRADE SHALL BE PROTECTED AS DETAILED IN ACCORDANCE WITH WASHINGTON STATE DEPARTMENT OF ECOLOGY WELL VARIANCE REQUEST APPROVAL PER WAC 173-160-420.
- ELEVATION IN FEET RELATIVE TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- MONITORING WELLS COMPLETED ABOVE GRADE SHALL BE PROTECTED IN ACCORDANCE WITH WAC 173-160-420 FOR SURFACE PROTECTION REQUIREMENTS. MODIFIED ABOVE GRADE PROTECTION ASSUMES APPROVAL OF WASHINGTON STATE DEPARTMENT OF ECOLOGY WELL VARIANCE TO TWO BOLLARDS DUE TO ADJACENT CONCRETE STRUCTURES.



Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Baker City

California
Oakland | Folsom | Irvine

FARALLON
CONSULTING

Quality Service for Environmental Solutions | farallonconsulting.com

Drawn By: NM Checked By: LS

FIGURE 2

CONTINGENCY WELL DETAILS
INSIDE BUILDING BELLEVUE PLAZA
117 106TH AVENUE NORTHEAST
BELLEVUE, WASHINGTON

FARALLON PN:397-034