

CITY OF SEATTLE

ORDINANCE _____

COUNCIL BILL _____

..title

AN ORDINANCE relating to The City of Seattle’s datum point; updating the vertical and horizontal reference datum for City of Seattle departments and outside entities as a standard elevation reference plane; requiring certain measurements for preliminary plats to be based on the updated vertical and horizontal datum; amending Chapter 1.20 of the Seattle Municipal Code; and amending Sections 23.22.020, 23.75.100, 25.06.030, 25.06.070, and 25.06.090 of the Seattle Municipal Code.

..body

WHEREAS, the local vertical datum, known as the City of Seattle Datum, was established in 1883 by Ordinance 383 and amended in 1891 by Ordinance 1836; and

WHEREAS, it is in the interest of The City of Seattle (City) to have a standard, regional, and consistent vertical and horizontal reference system; and

WHEREAS, it is in the interest of the public safety, health, and welfare that elements of the City’s infrastructure share a common vertical and horizontal reference system; and

WHEREAS, chapter 58.20 RCW establishes the "Washington coordinate system of 1983," based on the North American Datum of 1983, as determined by the National Geodetic Survey of the United States Department of Commerce, as a system for expressing positions or locations of points on the surface of the earth; and

WHEREAS, state, local, and regional entities adopted the Washington Coordinate System as a standard for expressing positions and locations of utilities, transportation elements, and other infrastructure in Geographic Information Systems, engineering records, mapping and land records; and

WHEREAS, published coordinates for the National Geodetic Survey geodetic control monuments, that provide the physical constraints for establishing coordinate values in the Washington Coordinate System, represent the most current adjustment of the North

1 American Datum of 1983, and the City of Seattle's primary control network monuments
2 have been constrained to said monuments and adjusted to the North American Datum of
3 1983 most current per WAC 332-130-060; and

4 WHEREAS, present surveying, engineering, and Geographic Information Systems methods and
5 technologies provide for and make practicable the establishment and adherence to a
6 common horizontal reference system; and

7 WHEREAS, the Central Geographic Data Base of the City of Seattle Geographic Information
8 System was developed in and maintained in the North American Datum of 1983 (most
9 current adjustment), and a longstanding goal of the City of Seattle Geographic
10 Information Systems is to include elements from engineering design projects and other
11 sources of horizontally reference spatial features; and

12 WHEREAS, the Washington State Department of Natural Resources, in advance of federal
13 changes to vertical datum measurement standards in 2022, is pursuing legislation to
14 amend chapter 58.20 RCW to refer to the new standards and future standards, and Seattle
15 has the same need to amend its code to refer to the new standards; NOW, THEREFORE,

16 **BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:**

17 Section 1. Chapter 1.20 of the Seattle Municipal Code, last amended by Ordinance
18 121291, is amended as follows:

19 **CHAPTER 1.20 DATUM POINT**

20 **1.20.010 (~~(Datum point established.)~~) Historical datum point**

21 ~~((A-Original))~~ Historical datum point. A base or datum point or line is established on the lower
22 step at the entrance to the Pioneer Block in The City of Seattle, at the southwest corner thereof,
23 the point or datum line being 19.79 feet below the top of the step, the point or datum line being

1 in correspondence with the datum point or line heretofore fixed by Ordinance No. 383. To
2 distinguish between the historical and current vertical datum, when it is necessary to refer to
3 both, this historical datum point shall be known as the “City of Seattle Datum.”

4 ~~((B. New datum point. The North American Vertical Datum of 1988 (NAVD88) and the~~
5 ~~North American Datum of 1983 (1991 adjustment) [NAD83 (1991)] are adopted as the new~~
6 ~~official vertical and horizontal datums of the City of Seattle; said datums being defined by a~~
7 ~~series of stable, monumented points and reference stations established and maintained by the~~
8 ~~United States National Geodetic Survey.))~~

9 **1.20.020 Current datums**

10 The official geodetic datums to which geodetic coordinates, including, but not limited to,
11 latitude, longitude, ellipsoid height, orthometric height, or dynamic height, are referenced within
12 Seattle city limits shall be as defined for the National Spatial Reference System (or its
13 successor).

14 Section 2. Work that constitutes the "practice of engineering" or the "practice of land
15 surveying", chapter 18.43 RCW, including but not limited to, land survey maps, plans, records of
16 surveys, plats, short plats, descriptions of real property, and boundary line adjustments, which
17 are performed by or for The City of Seattle, or on properties and/or infrastructures owned,
18 funded, or maintained by The City of Seattle, shall reference the current datums for Seattle
19 whenever there is a reference to a horizontal datum (any reference to bearings, azimuths, or
20 geographical or state plane coordinates) or a vertical component of the work, or an elevation is
21 noted.

22 Section 3. All land survey maps and plans, records of surveys, plats, short plats, boundary
23 line adjustments, and legal descriptions submitted to the City for its approval, and all plans,

1 elevations, maps, drawings, and legal descriptions submitted to obtain permits for construction
2 and development of private improvements, shall reference the current datums for Seattle
3 whenever there is a reference to a horizontal datum (any reference to bearings, azimuths, or
4 geographical or state plane coordinates) or a vertical component of the work, or an elevation is
5 noted.

6 Section 4. The City of Seattle Standard Specifications for Road, Bridge, and Municipal
7 Construction, Standard Specification 1-05.5, shall be revised to require the horizontal and
8 vertical datums for Seattle current at the time this ordinance takes effect for all work referenced
9 in Section 2 of this ordinance.

10 Section 5. Subsection 23.22.020.A of the Seattle Municipal Code, which section was last
11 amended by Ordinance 123963, is amended as follows:

12 **23.22.020 Content of preliminary plat application**

13 A. Every preliminary plat application shall consist of one ~~((4))~~ or more maps together
14 with written data including the following:

- 15 1. The name of the proposed subdivision;
- 16 2. North arrow and scale; the location of existing property lines; streets, building,
17 if any; watercourses and all general features;
- 18 3. The legal description of the land contained within the subdivision;
- 19 4. The names and addresses of all persons, firms, and corporations holding
20 interest in the lands, including easement rights and interest;
- 21 5. The proposed names, locations, widths, dimensions, and bearings of proposed
22 streets, alleys, easements, parks, lots, building lines, if any, and all other information necessary
23 to interpret the plat, including the location of existing utility and access easements ~~((which))~~ that

1 are to remain, all horizontal references (any reference to bearings, azimuths, or geographical or
2 state plane coordinates) shall reference the (~~North American Datum of 1983 (1991 adjustment)~~)
3 current horizontal datum for Seattle under Section 1.20.020;

4 6. The location of streets in adjoining plats and the approximate locations of
5 adjoining utilities and proposed extensions into the plat;

6 7. The names of adjoining plats;

7 8. The name, address, (~~and~~) telephone number, and seal of the registered land
8 surveyor who made the survey or under whose supervision it was made;

9 9. The date of the survey;

10 10. All existing monuments and markers located by the survey;

11 11. The zoning classification applicable to the land within the subdivision;

12 12. The conditions of or the limitations on dedications, if any, including slope
13 rights;

14 13. Contour intervals as required, based upon (~~the North American Vertical~~
15 ~~Datum of 1988~~) current horizontal datum for Seattle under Section 1.20.020;

16 14. Property information including, but not limited to, address, legal description,
17 and Assessor's Parcel number;

18 15. Evidence of ownership or authorization from the property owner to make the
19 application;

20 16. A signed statement of financial responsibility by the applicant and owner
21 acknowledging financial responsibility for all applicable permit fees;

22 17. Drainage plan;

23 18. Landscape plan;

1 19. Identification of any adjacent property within (~~three hundred (300)~~) 300(300) feet
2 of the proposed subdivision that is owned or controlled by the applicant; and

3 20. Specific location and description of all trees at least (~~six (6)~~) 6(6) inches in
4 diameter measured (~~four and one-half (4 1/2)~~) 4 1/2(4 1/2) feet above the ground, with species indicated.

5 * * *

6 Section 6. Section 23.75.100 of the Seattle Municipal Code, enacted by Ordinance
7 123963, is amended as follows:

8 **23.75.100 Structure height**

9 A. Structure height is not allowed to exceed the applicable height limit established in
10 Exhibit A for 23.75.100. In areas shown in Exhibit A for 23.75.100 where the height limit is
11 "85/" followed by a second number, 85 feet is the applicable height limit for non-highrise
12 structures. The number following the "/" is the applicable height limit for highrise structures.

13 B. The number, distribution, and maximum gross floor area per story of highrise
14 structures are restricted according to Section 23.75.120.

15 C. Structure height is measured pursuant to (~~Section~~) subsection 23.86.006.A, except in
16 the view corridor height restriction areas depicted in Exhibit A for 23.75.100, where solely for
17 the purposes of this Section 23.75.100 and Section 23.75.110, structure height is measured from
18 an elevation above (~~a fixed sea level measurement, the North American Vertical Datum of 1988~~
19 (~~NAVD 88~~)) the current vertical datum for Seattle under Section 1.20.020.

20 D. If a structure is within more than one of the areas designated on Exhibit A for
21 23.75.100, the height limits apply separately to the portions of the structure in each area.

Exhibit A for Section 23.75.100 Height limits



- 300' MAX. HEIGHT
- 240' MAX. HEIGHT
- 160' MAX. HEIGHT
- VIEW CORRIDOR HEIGHT RESTRICTION AREA

- A** MAX. HEIGHT 310' ABOVE VERTICAL DATUM NAVD 88
- B** MAX. HEIGHT 280' ABOVE VERTICAL DATUM NAVD 88
- C** HEIGHT TRANSITION ALIGNED WITH NORTH MARGIN OF FIR ST.
- D** HEIGHT TRANSITION ALIGNED WITH EAST MARGIN OF 9TH AVE.

- E** HEIGHT TRANSITION ALIGNED WITH WEST MARGIN OF BROADWAY
- F** HEIGHT TRANSITION ALIGNED WITH CENTERLINE OF S MAIN ST BETWEEN 10TH AVE S. & 12TH AVE S.
- G** HEIGHT TRANSITION ALIGNED WITH CENTERLINE OF S WASHINGTON ST., IN THE SEGMENT BETWEEN 200' & 300' WEST OF INTERSECTION WITH 10TH AVE S.

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1 Section 7. Subsection 25.06.030.C of the Seattle Municipal Code, which section was last
2 amended by Ordinance 124919, is amended as follows:

3 **25.06.030 Definitions**

4 * * *

5 C. "Base flood level" and "base flood elevation" both mean the level or elevation above
6 mean sea level, as calculated by reference to the ~~((National Geodetic Vertical Datum (NGVD)))~~
7 National Spatial Reference System under Section 1.20.020, of floodwaters in a particular area
8 during flood having a one ~~((1))~~ percent chance of occurring in any given year.

9 * * *

10 Section 8. Section 25.06.070 of the Seattle Municipal Code, enacted by Ordinance
11 114395, is amended as follows:

12 **25.06.070 Application for floodplain development approval or license~~((:))~~**

13 Application for a floodplain development license or for floodplain development approval shall be
14 made on forms furnished by the Administrators. The application shall include, but shall not be
15 limited to, the following information:

16 A. Elevation prepared by a licensed surveyor or a registered professional civil engineer in
17 relation to mean sea level, as calculated based on the ~~((National Geodetic Vertical Datum~~
18 ~~(NGVD)))~~ National Spatial Reference System under Section 1.20.020, of the lowest floor
19 (including basement) of all structures;

20 B. Elevation prepared by a licensed surveyor or a registered professional civil engineer in
21 relation to mean sea level, as calculated based on the ~~((National Geodetic Vertical Datum~~
22 ~~(NGVD)))~~ National Spatial Reference System under Section 1.20.020, to which any structure has
23 been or will be floodproofed;

1 C. Certification by a registered professional civil engineer that the floodproofing methods
2 for any nonresidential structure meet the floodproofing criteria in Section 25.06.110; and

3 D. Description of the extent to which any watercourse will be altered or relocated as a
4 result of the proposed development.

5 Section 9. Section 25.06.090 of the Seattle Municipal Code, last amended by Ordinance
6 121115, is amended as follows:

7 **25.06.090 Functions of the Administrators((:))**

8 Functions of the Administrators under this ((chapter)) Chapter 25.06 shall include the following:

9 * * *

10 D. Where base flood elevation data is provided through the Flood Insurance Study or
11 required and obtained through subsection 25.06.090.C above, obtain and record the actual (as-
12 built) elevation (in relation to mean sea level as calculated based on the ((National Geodetic
13 ~~Vertical Datum~~)) National Spatial Reference System under Section 1.20.020) of the lowest
14 floor, including basement, of all new or substantially improved structures, and indicate whether
15 or not the structure contains a basement;

16 * * *

