EXHIBIT MAP

SITUATE IN THE S.W. 1/4 OF S.W. 1/4 OF SEC. 33, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

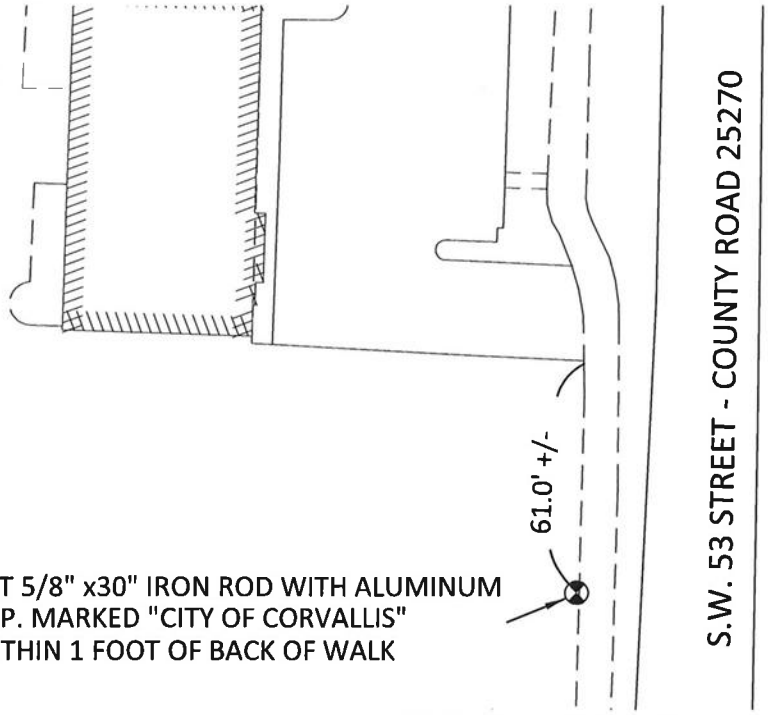
NORTHING (Y) 339652.461 (IF)
EASTING (X) 7469329.180 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 33' 47.95933" NORTH
LONGITUDE: 123° 18' 43.64410" WEST
CONVERGENCE [DEGREES] -1.99431857
POINT SCALE ---------- 0.99995002
COMBINED FACTOR --------- 0.99994046

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2016.2893)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	200.148 (IF)	= 61.005 (M)
ORTHOMETRIC ELEVATION :	274.232 (IF)	= 83.586 (M)
GEOIDAL SEPARATION :	-74.085 (IF)	= -22.581 (M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH AN ALUMINUM CAP MARKED "CITY OF CORVALLIS".

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	4-6-2017
SCALE:	1"=50'

G 106
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 111 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 2-10-2017 *209.250 (6) (e)*

LOCATION: N.W. ¼ of the N.W. ¼ of Section 28, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 1 inch copper disc with punch mark. Marked "City of Corvallis", and set in top of concrete curb. The disc is located in front of 4723 NW Elmwood Drive, East of NW Witham Hill Boulevard. (see attached exhibit map G 111). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This copper disc was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Crain TriMax tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 100% of the ambiguities were fixed, and 96% of the observations were used for the monument set with an overall RMS of 0.017 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	348902.749
Easting (X) [feet]	7471952.270
Convergence [degrees]	-1.98805846
Point Scale	0.99994543
Combined Factor	0.99992927

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 111 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE N.W. 1/4 OF N.W. 1/4 OF SEC. 28, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

NORTHING (Y) 348902.749 (IF)
EASTING (X) 7471952.270 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 35' 20.15019" NORTH
LONGITUDE: 123° 18' 11.86630" WEST
CONVERGENCE [DEGREES] -1.98805846
POINT SCALE ---------- 0.99994543
COMBINED FACTOR --------- 0.99992927

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2016.8821)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	338.163 (IF)	= 103.072(M)
ORTHOMETRIC ELEVATION:	412.103 (IF)	= 125.609(M)
GEOIDAL SEPARATION :	-73.940 (IF)	= -22.537(M)

N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 1" COPPER DISC IN TOP OF CURB PUNCH MARK IN CENTER, MARKED "CITY CORVALLIS".

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM

NAD — DENOTES NORTH AMERICAN DATUM

(IF) — DENOTES INTERNATIONAL FEET

(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	2-10-2017
SCALE:	1"=50'

G 111
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 112 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office	
C.C.R. NO.	23
FILING DATE	5-26-17
FILE SIZE	8 1/2 x 11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 2-10-2017 *209.250 (6) (e)*

LOCATION: S.E. ¼ of the S.W. ¼ of Section 21, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8"X30" iron rod with a yellow plastic cap marked "City of Corvallis", in the middle of a median island in NW Walnut boulevard, just east of the intersection with NW Audene Drive. (see attached exhibit map G 112). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This copper disc was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco fixed 2 meter tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 94% of the ambiguities were fixed, and 92% of the observations were used for the monument set with an overall RMS of 0.017 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	350655.745
Easting (X) [feet]	7472023.986
Convergence [degrees]	-1.98802890
Point Scale	0.99994460
Combined Factor	0.99993129

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR
OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS
RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 112 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.E. 1/4 OF S.W. 1/4 OF SEC. 21, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

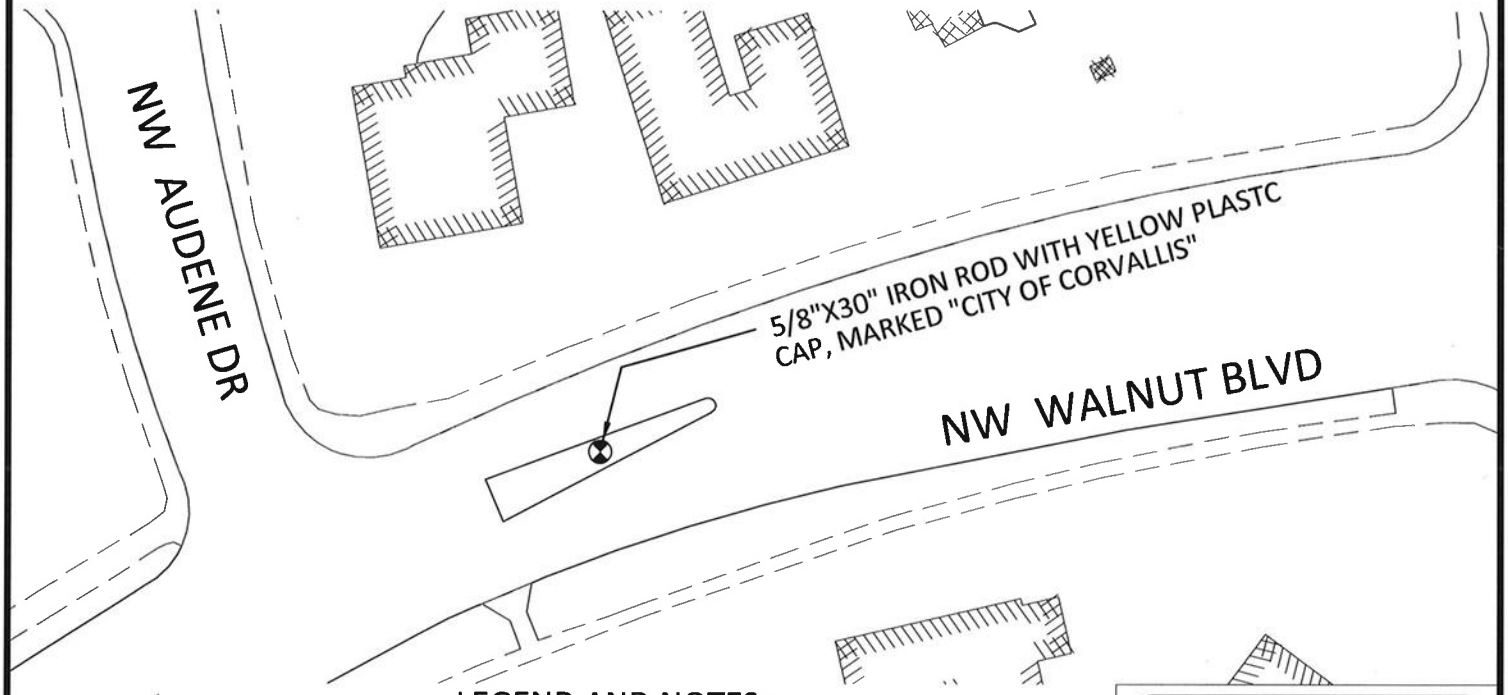
NORTHING (Y) 350655.745 (IF)
EASTING (X) 7472023.986 (IF)

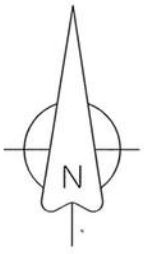
NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 35' 37.47505" NORTH
LONGITUDE: 123° 18' 11.71624" WEST
CONVERGENCE [DEGREES] -1.98802890
POINT SCALE ---------- 0.99994460
COMBINED FACTOR --------- 0.99993129

NAVD88 ELEVATION AND GEOID SEPARATION
IGS08 (EPOCH:2016.8821)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	278.606 (IF) =	84.917 (M)
ORTHOMETRIC ELEVATION:	352.503 (IF) =	107.441 (M)
GEOIDAL SEPARATION :	-73.898 (IF) =	-22.524 (M)





NORTH
SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS". FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	2-10-2017
SCALE:	1"=50'

G 112
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 117 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)

209.250 (6) (a)

Surveyor's Office

C.C.R. NO. 23

FILING DATE 5-26-17

FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-5-2017 *209.250 (6) (e)*

LOCATION: N.E. ¼ of the N.E. ¼ of Section 35, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Aluminum cap marked "City of Corvallis" with punch mark, and set 6.5 feet behind guardrail in gravel area. The cap is located approximately 10 ft. north of the large storm water outfall structure. Located at the northeast corner of the intersection of NE Water Ave. and State Highway 20 (NE 2nd street). (see attached exhibit map G117). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects on a later date. This Aluminum cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Crain "TriMax" tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 90% of the ambiguities were fixed, and 87% of the observations were used for the monument set with an overall RMS of 0.018 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:

GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	343257.697
Easting (X) [feet]	7484975.801
Convergence [degrees]	-1.95210198
Point Scale	0.99994796
Combined Factor	0.99994106

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 117 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE N.E. 1/4 OF N.E. 1/4 OF SEC. 35, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

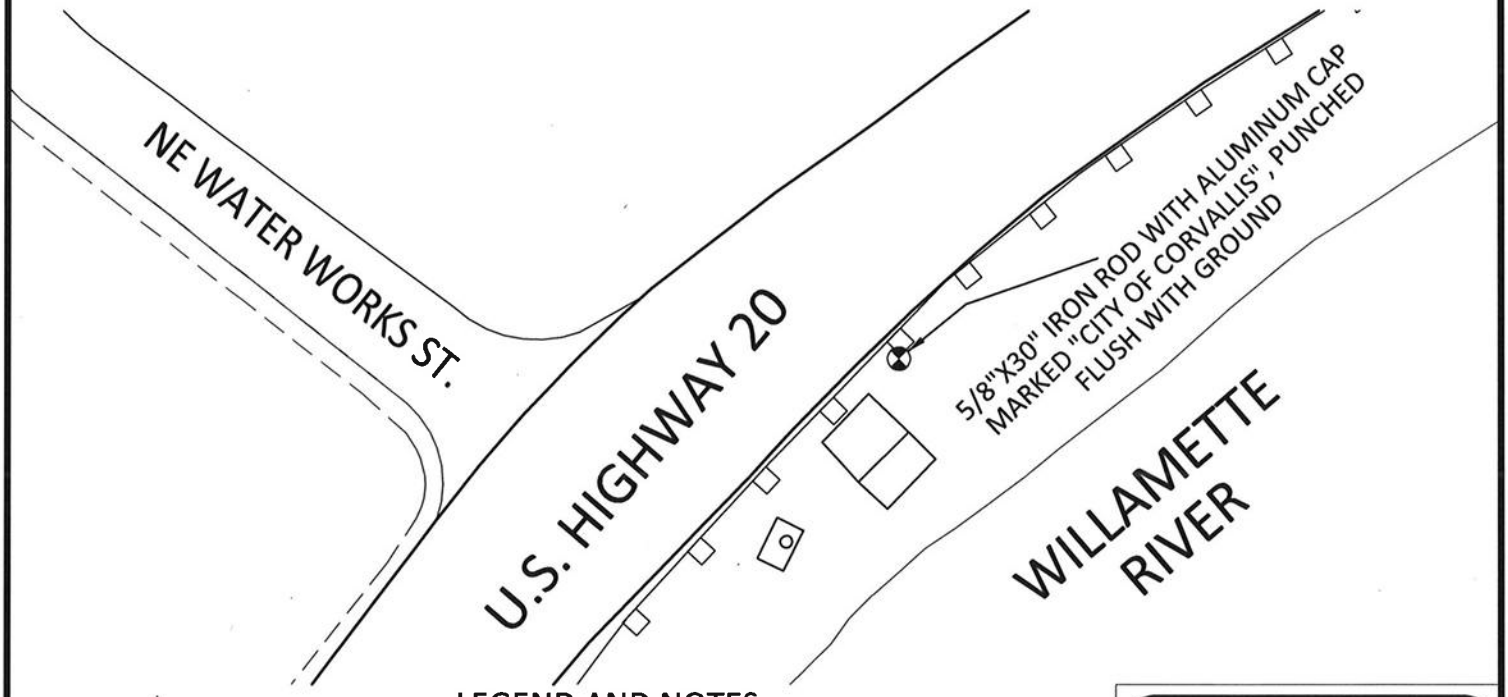
NORTHING (Y) 343257.697 (IF)
EASTING (X) 7484975.801 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 34' 28.85978" NORTH
LONGITUDE: 123° 15' 09.34247" WEST
CONVERGENCE [DEGREES] -1.95210198
POINT SCALE ---------- 0.99994796
COMBINED FACTOR --------- 0.99994106

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.1065)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	144.370 (IF) =	44.004 (M)
ORTHOMETRIC ELEVATION:	218.900 (IF) =	66.720 (M)
GEOIDAL SEPARATION :	-74.528 (IF) =	-22.716(M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH ALUMINUM CAP, MARKED "CITY OF CORVALLIS", PUNCHED, FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	4-5-2017
SCALE:	1"=50'

G 117
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 118 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-5-2017 *209.250 (6) (e)*

LOCATION: S.E. ¼ of the N.E. ¼ of Section 25, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Aluminum cap marked "City of Corvallis" set approx. 10 feet east of end of the paved entrance to cell phone tower site property, approximately 25 feet from the northerly fog line on NE Circle Blvd. Located at the intersection of Highway 20 and NE Circle Blvd. (see attached exhibit map G 118). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Aluminum cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco 2 meter fixed tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 94% of the ambiguities were fixed, and 94% of the observations were used for the monument set with an overall RMS of 0.015 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	348220.125
Easting (X) [feet]	7490485.971
Convergence [degrees]	-1.93757071
Point Scale	0.99994546
Combined Factor	0.99993879

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 118 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.E. 1/4 OF N.E. 1/4 OF SEC. 25, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

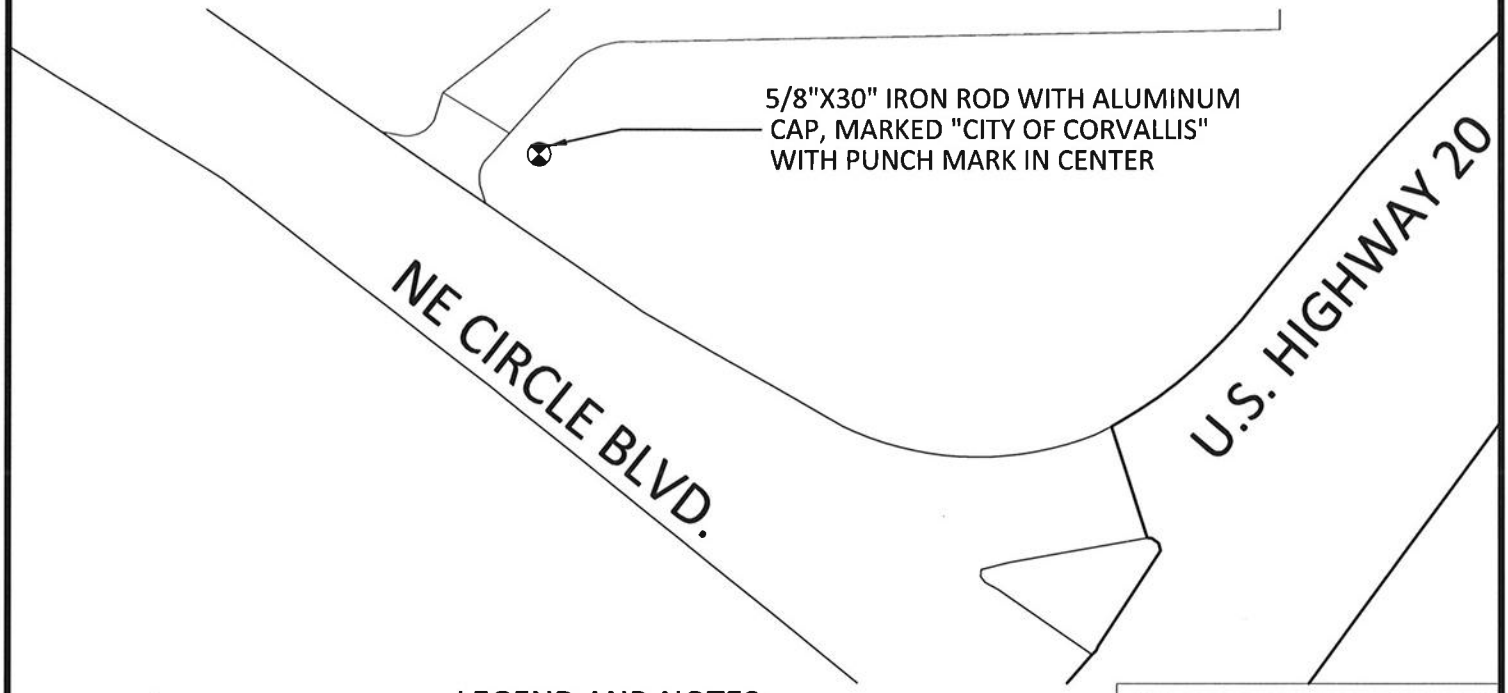
NORTHING (Y) 348220.125 (IF)
EASTING (X) 7490485.971 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 35' 19.68185" NORTH
LONGITUDE: 123° 13' 55.57822" WEST
CONVERGENCE [DEGREES] -1.93757071
POINT SCALE ---------- 0.99994546
COMBINED FACTOR --------- 0.99993879

NAVD88 ELEVATION AND GEOID SEPARATION
IGS08 (EPOCH:2017.1065)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	139.590 (IF) =	42.547 (M)
ORTHOMETRIC ELEVATION:	214.219 (IF) =	65.294 (M)
GEOIDAL SEPARATION :	-74.629 (IF) =	-22.747(M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH ALUMINUM CAP, MARKED "CITY OF CORVALLIS". PUNCHED, FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	4-5-2017
SCALE:	1"=50'

G 118
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 119 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)

209.250 (6) (a)

Surveyor's Office

C.C.R. NO. 23

FILING DATE 5-26-17

FILE SIZE 8½ x 11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-5-2017 *209.250 (6) (e)*

LOCATION: S.W. ¼ of the S.E. ¼ of Section 22, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Aluminum cap marked "City of Corvallis" with punch mark, in park strip 0.5 feet from sidewalk, and 0.25 feet from sidewalk ramp. Located at the northwest corner of the intersection of NW Century Dr. and NW Kings Blvd. (see attached exhibit map G 119). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Aluminum cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Crain "TriMax" tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 91% of the ambiguities were fixed, and 88% of the observations were used for the monument set with an overall RMS of 0.019 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:

GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	350424.482
Easting (X) [feet]	7478736.683
Convergence [degrees]	-1.96974275
Point Scale	0.99994460
Combined Factor	0.99993245

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 119 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.W. 1/4 OF S.E. 1/4 OF SEC. 22, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

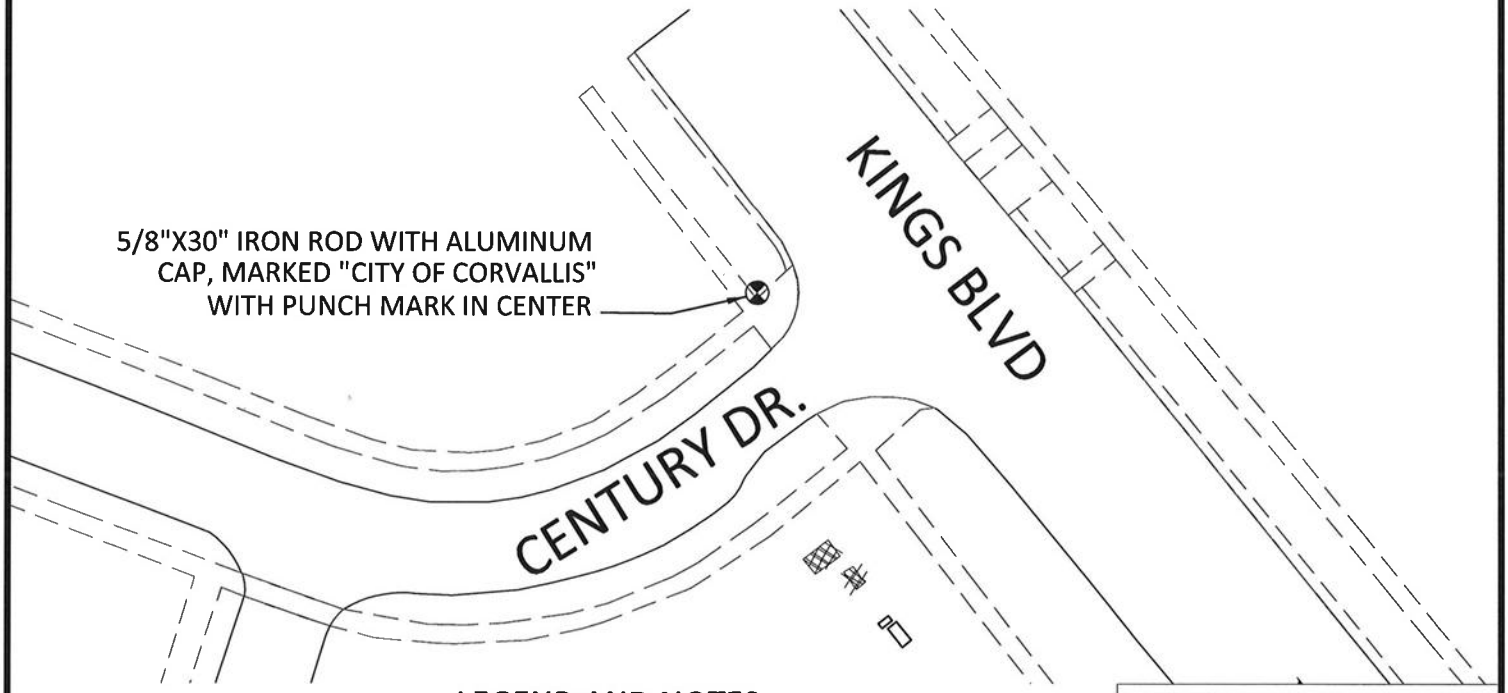
NORTHING (Y) 350424.482 (IF)
EASTING (X) 7478736.683 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 35' 37.48169" NORTH
LONGITUDE: 123° 16' 38.89130" WEST
CONVERGENCE [DEGREES] -1.96974275
POINT SCALE ---------- 0.99994460
COMBINED FACTOR --------- 0.99993245

NAVD88 ELEVATION AND GEOID SEPARATION
IGS08 (EPOCH:2017.1119)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	254.252 (IF) =	77.496 (M)
ORTHOMETRIC ELEVATION:	328.415 (IF) =	100.101(M)
GEOIDAL SEPARATION :	-74.163 (IF) =	-22.605(M)



N

NORTH
SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH ALUMINUM CAP, MARKED "CITY OF CORVALLIS". PUNCHED, FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	4-5-2017
SCALE:	1"=50'

G 119
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 120 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)

209.250 (6) (a)

Surveyor's Office

C.C.R. NO. 23

FILING DATE 5-26-17

FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-3-2017 *209.250 (6) (e)*

LOCATION: N.W. ¼ of the N.W. ¼ of Section 22, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Aluminum cap marked "City of Corvallis" with punch mark, set approx. 10 feet west of the intersection of the face of sidewalk, and west side of sidewalk ramp, 1 foot south of sidewalk. Also, approximately 4 feet east of water meter serving corner lot at northwest corner of intersection. Located just west of the northwest corner of NW Bunting Dr. and NW 29th St. (see attached exhibit map G 120). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Aluminum cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco 2 meter fixed tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 85% of the ambiguities were fixed, and 93% of the observations were used for the monument set with an overall RMS of 0.018 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:

GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	354121.027
Easting (X) [feet]	7476189.295
Convergence [degrees]	-1.97702107
Point Scale	0.99994289
Combined Factor	0.99992285

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 120 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE N.W. 1/4 OF N.W. 1/4 OF SEC. 22, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

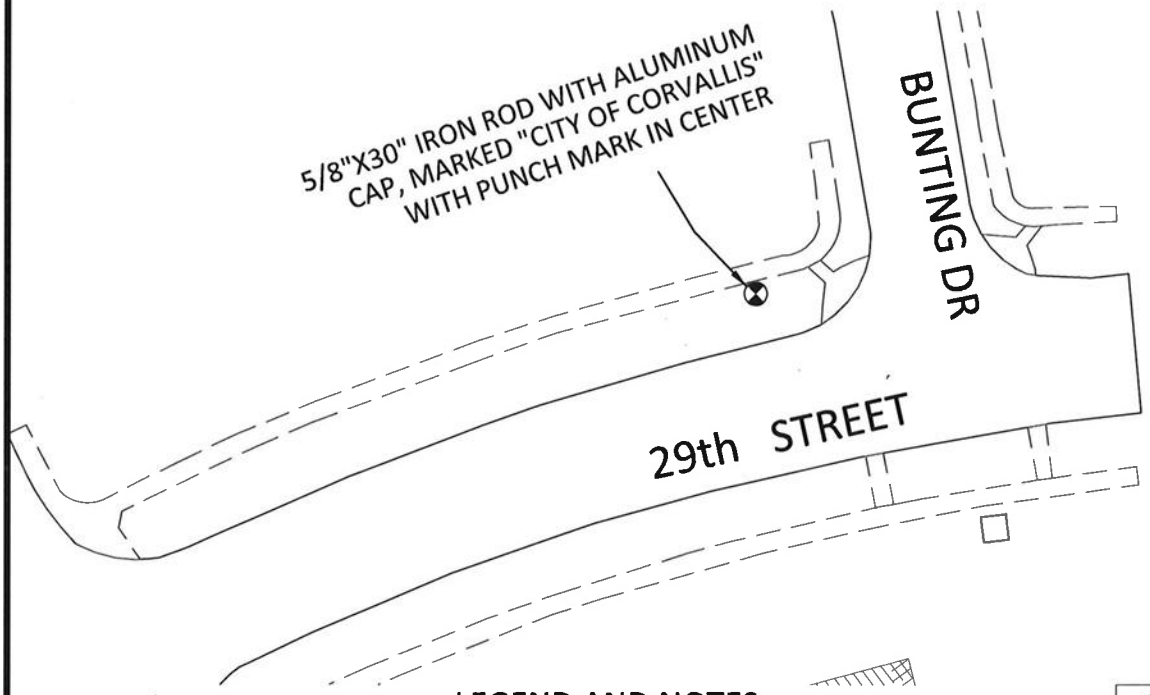
NORTHING (Y) 354121.027 (IF)
EASTING (X) 7476189.295 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 36' 13.09696" NORTH
LONGITUDE: 123° 17' 15.83784" WEST
CONVERGENCE [DEGREES] -1.97702107
POINT SCALE ---------- 0.99994289
COMBINED FACTOR --------- 0.99992285

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.1119)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	419.413 (IF) =	127.837 (M)
ORTHOMETRIC ELEVATION:	493.379 (IF) =	150.382 (M)
GEOIDAL SEPARATION :	-73.966 (IF) =	-22.995 (M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH ALUMINUM CAP, MARKED "CITY OF CORVALLIS". PUNCHED, FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
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DATE	4-5-2017
SCALE:	1"=50'

G 120
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 121 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½ x 11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 3-29-2017 *209.250 (6) (e)*

LOCATION: S.W. ¼ of the N.W. ¼ of Section 24, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis". Set 2.5 feet easterly from the face of curb line in the grass. Across from the driveway to 3220 NW 9th St. South east from the intersection with Elks Drive (see attached exhibit map G 121). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco 2 meter fixed tripod. This unit was used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 97% of the ambiguities were fixed, and 94% of the observations were used for the monument set with an overall RMS of 0.016 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	352297.031
Easting (X) [feet]	7486285.522
Convergence [degrees]	-1.94937636
Point Scale	0.99994359
Combined Factor	0.99993575

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 121 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.W. 1/4 OF N.W. 1/4 OF SEC. 24, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

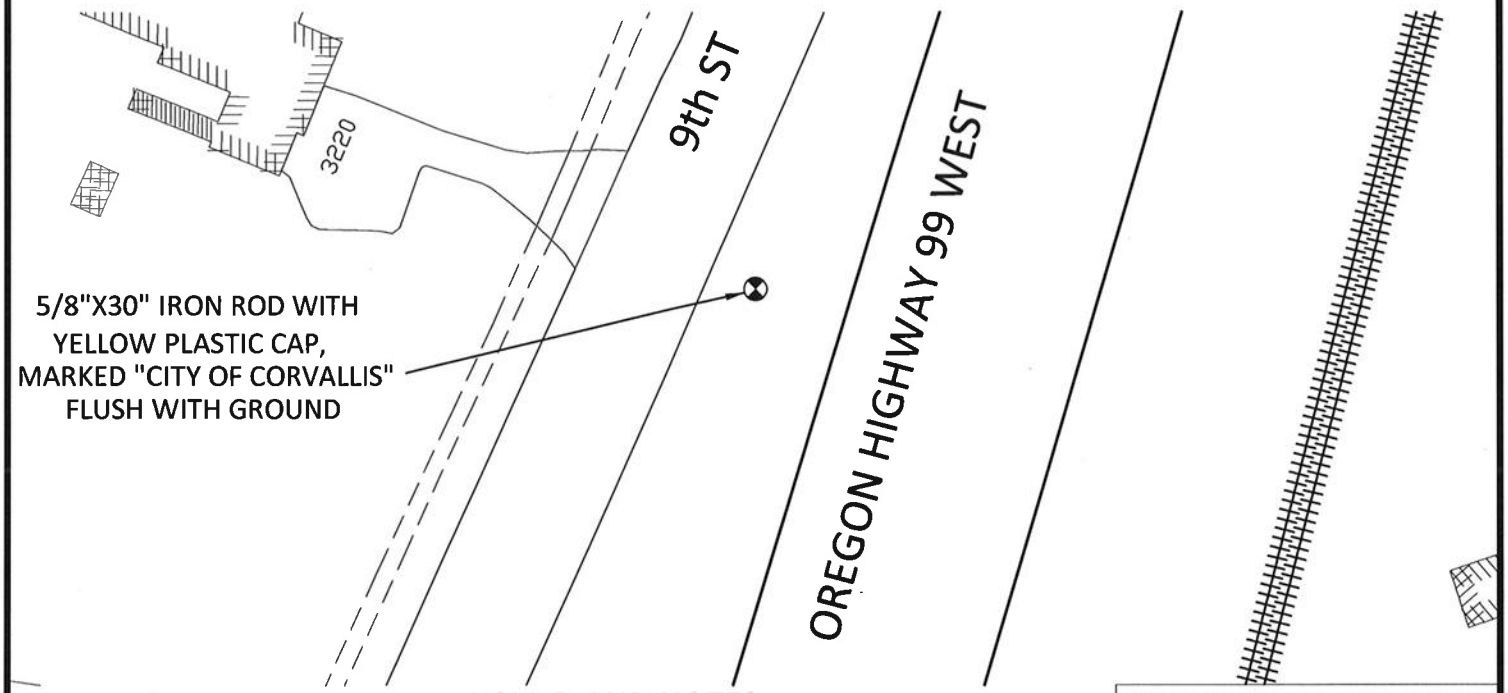
NORTHING (Y) 352297.031 (IF)
EASTING (X) 7486285.522 (IF)

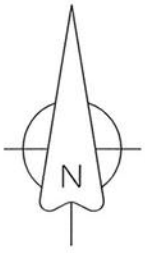
NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 35' 58.51116" NORTH
LONGITUDE: 123° 14' 55.50658" WEST
CONVERGENCE [DEGREES] -1.94937636
POINT SCALE ---------- 0.99994359
COMBINED FACTOR --------- 0.99993575

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2406)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	164.104 (IF) =	50.019 (M)
ORTHOMETRIC ELEVATION:	238.517 (IF) =	72.700 (M)
GEOIDAL SEPARATION :	-74.413 (IF) =	-22.681(M)





NORTH
SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS". FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	3-29-2017
SCALE:	1"=50'

G 121
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 122 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 3-29-2017 *209.250 (6) (e)*

LOCATION: N.W. 1/4 of the N.E. 1/4 of Section 24, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set approx. 1 foot north westerly of the S.W. corner of the curb inlet catch basin at the south west corner of the cul-de-sac at the northern end of Lancaster St... (see attached exhibit map G 122). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Crain TriMAX tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 95% of the ambiguities were fixed, and 96% of the observations were used for the monument set with an overall RMS of 0.016 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	353830.856
Easting (X) [feet]	7488602.500
Convergence [degrees]	-1.94321300
Point Scale	0.99994283
Combined Factor	0.99993597

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 122 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE N.W. 1/4 OF N.E. 1/4 , SEC. 24, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

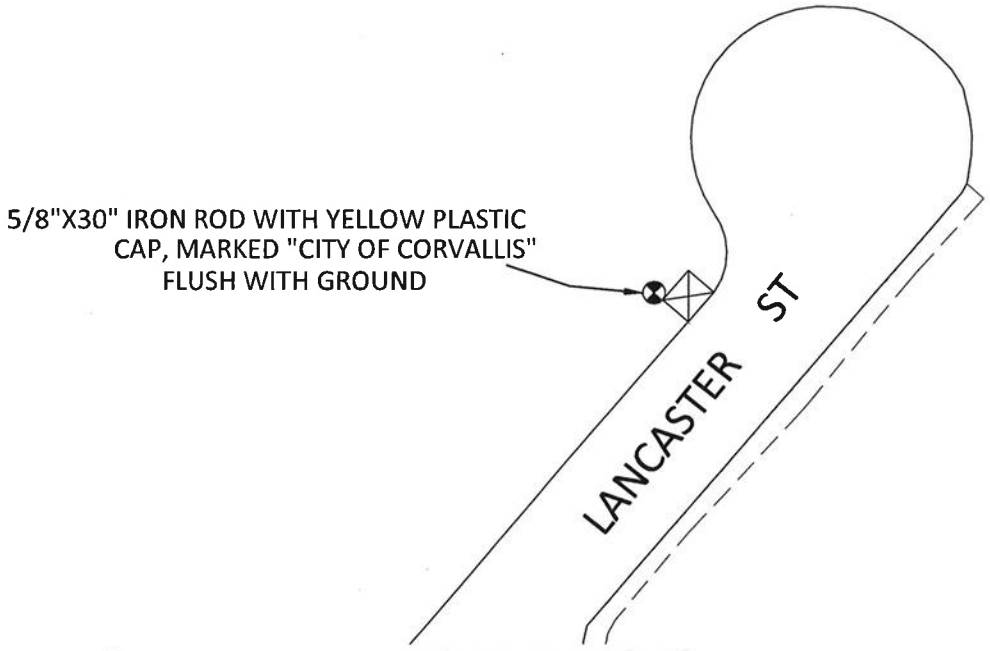
NORTHING (Y) 353830.856 (IF)
EASTING (X) 7488602.500 (IF)

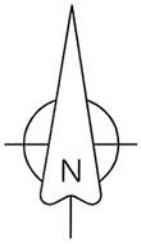
NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 36' 14.42593" NORTH
LONGITUDE: 123° 14' 24.21985" WEST
CONVERGENCE [DEGREES] -1.94321300
POINT SCALE ---------- 0.99994283
COMBINED FACTOR --------- 0.99993597

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2406)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	143.468 (IF) =	43.729 (M)
ORTHOMETRIC ELEVATION:	217.940 (IF) =	66.428 (M)
GEOIDAL SEPARATION :	-74.472 (IF) =	-22.699 (M)





NORTH
SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS". FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	3-29-2017
SCALE:	1"=50'

G 122
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 123 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-5-2017 *209.250 (6) (e)*

LOCATION: N.W. ¼ of the N.W. ¼ of Section 28, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set approx. 4 feet south of the west end of the third parking stall at the south side of the entrance to Martin Luther King park. Approximately 50 feet westerly from the back of walk on Walnut Blvd. (see attached exhibit map G 123). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco 2 meter fixed tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 93% of the ambiguities were fixed, and 89% of the observations were used for the monument set with an overall RMS of 0.017 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	349467.589
Easting (X) [feet]	7470827.749
Convergence [degrees]	-1.99117130
Point Scale	0.99994518
Combined Factor	0.99993003

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 123 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.W. 1/4 OF N.W. 1/4 OF SEC. 28, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

NORTHING (Y) 349467.589 (IF)
EASTING (X) 7470827.749 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 35' 25.33906" NORTH
LONGITUDE: 123° 18' 27.66779" WEST
CONVERGENCE [DEGREES] -1.99117130
POINT SCALE ---------- 0.99994518
COMBINED FACTOR --------- 0.99993003

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.1283)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	316.991 (IF) =	96.619 (M)
ORTHOMETRIC ELEVATION:	390.873 (IF) =	119.138 (M)
GEOIDAL SEPARATION :	-73.881 (IF) =	-22.519 (M)

N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH A YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS", FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
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CHECKED	
DATE	4-6-2017
SCALE:	1"=50'

G 123
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 124 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-8-2017 *209.250 (6) (e)*

LOCATION: N.W. 1/4 of the S.W. 1/4 of Section 21, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" 0.10' from A.C. in the gravel next to the SW corner of A.C. entrance to a path. The cap is located at the southwest corner of the paved path apron at the southwest corner of the intersection of NW Deer Run St. and NW Ponderosa Ave. (see attached exhibit map G 124). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Crain "TriMax" tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 89% of the ambiguities were fixed, and 83% of the observations were used for the monument set with an overall RMS of 0.020 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	351495.046
Easting (X) [feet]	7470010.285
Convergence [degrees]	-1.99358737
Point Scale	0.99994423
Combined Factor	0.99992478

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR
OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS
RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 124 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE N.W. 1/4 OF S.W. 1/4 OF SEC. 21, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

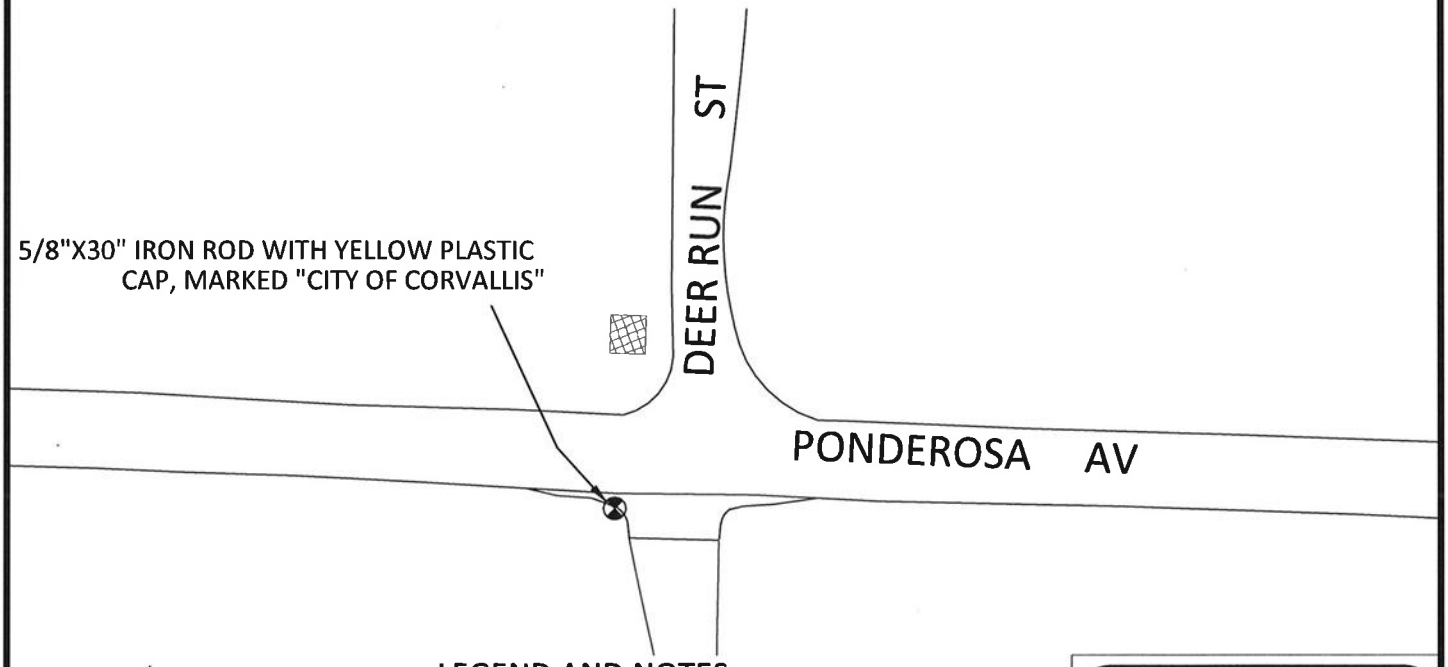
NORTHING (Y) 351495.046 (IF)
EASTING (X) 7470010.285 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 35' 45.06731" NORTH
LONGITUDE: 123° 18' 39.93236" WEST
CONVERGENCE [DEGREES] -1.99358737
POINT SCALE ---------- 0.99994423
COMBINED FACTOR --------- 0.99992478

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.1283)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	407.080 (IF) =	124.078 (M)
ORTHOMETRIC ELEVATION:	480.873 (IF) =	146.570 (M)
GEOIDAL SEPARATION :	-73.793 (IF) =	-22.492 (M)



N

NORTH
SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS" FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
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DATE	4-8-2017
SCALE:	1"=50'

G 124
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 125 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)

209.250 (6) (a)

Surveyor's Office

C.C.R. NO. 23

FILING DATE 5-26-17

FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-5-2017 *209.250 (6) (e)*

LOCATION: S.E. 1/4 of the N.E. 1/4 of Section 6, Township: 12 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set approx. 10 feet south of the edge of pavement of S.W. Reservoir Road. Approximately 50 feet southwesterly from the west wall of a large metal building. (see attached exhibit map G 125). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco 2 meter fixed tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 92% of the ambiguities were fixed, and 97% of the observations were used for the monument set with an overall RMS of 0.016 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:

GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	337861.969
Easting (X) [feet]	7463589.068
Convergence [degrees]	-2.00975731
Point Scale	0.99995102
Combined Factor	0.99993923

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 125 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.E. 1/4 OF N.E. 1/4 OF SEC. 6, TOWNSHIP 12 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

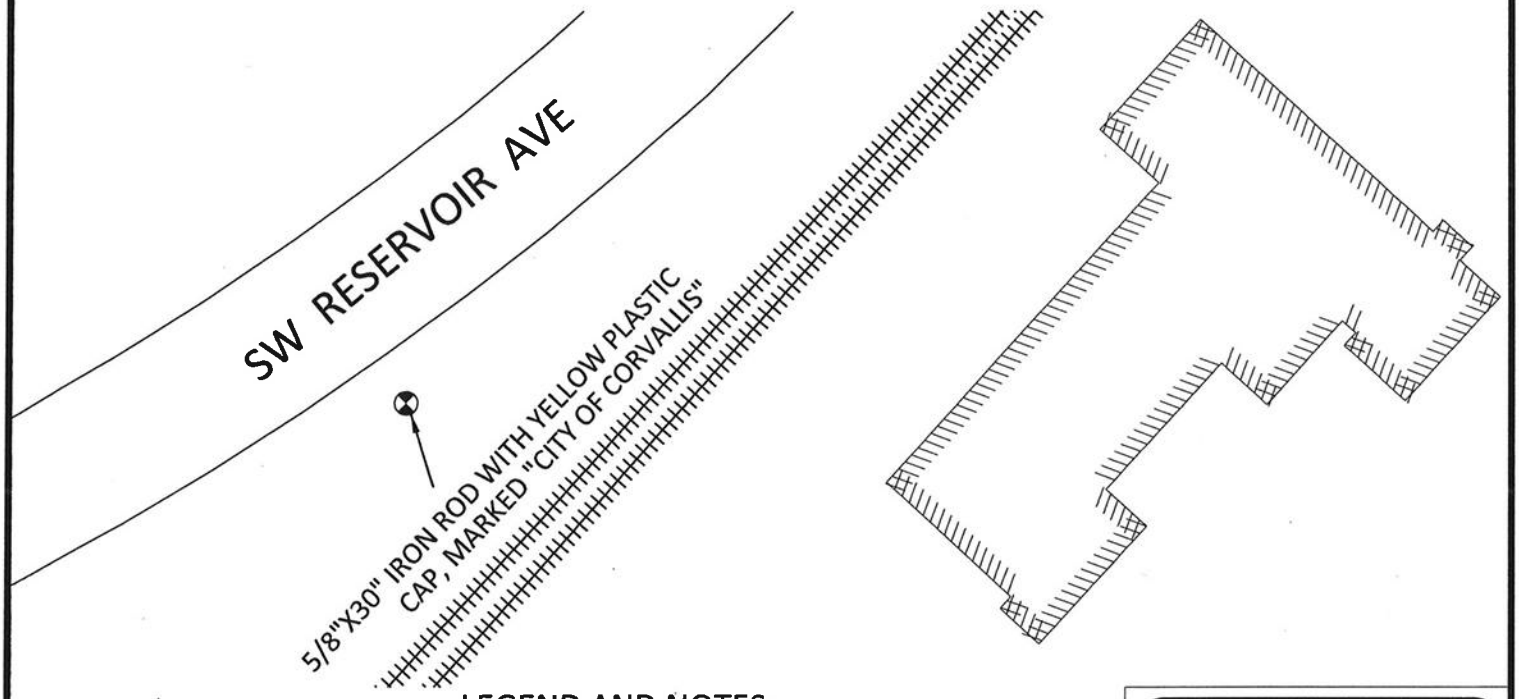
NORTHING (Y) 337861.969(IF)
EASTING (X) 7463589.068 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 33' 28.30888" NORTH
LONGITUDE: 123° 20' 02.01490" WEST
CONVERGENCE [DEGREES] -2.00975731
POINT SCALE ---------- 0.99995102
COMBINED FACTOR --------- 0.99993923

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2434)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	246.677 (IF) =	75.187 (M)
ORTHOMETRIC ELEVATION:	320.610 (IF) =	97.722 (M)
GEOIDAL SEPARATION :	-73.934 (IF) =	-22.535 (M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS" FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM

NAD — DENOTES NORTH AMERICAN DATUM

(IF) — DENOTES INTERNATIONAL FEET

(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	4-5-2017
SCALE:	1"=50'

G 125
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 126 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)

209.250 (6) (a)

Surveyor's Office

C.C.R. NO. 23

FILING DATE 5-26-17

FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 3-30-2017 *209.250 (6) (e)*

LOCATION: S.E. 1/4 of the N.W. 1/4 of Section 8, Township: 12 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set 1.0 foot from A.C. in the grass next to the SW corner of A.C. entrance to a muti-modal path. Directly across from the south entrance to the Nursery at 6510 S.W. Philomath Blvd. (see attached exhibit map G 126). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Crain "TriMax" tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 96% of the ambiguities were fixed, and 96% of the observations were used for the monument set with an overall RMS of 0.018 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:

GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	333286.575
Easting (X) [feet]	7465421.736
Convergence [degrees]	-2.00433863
Point Scale	0.99995332
Combined Factor	0.99994349

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 126 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.E. 1/4 OF N.W. 1/4 OF SEC. 8, TOWNSHIP 12 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

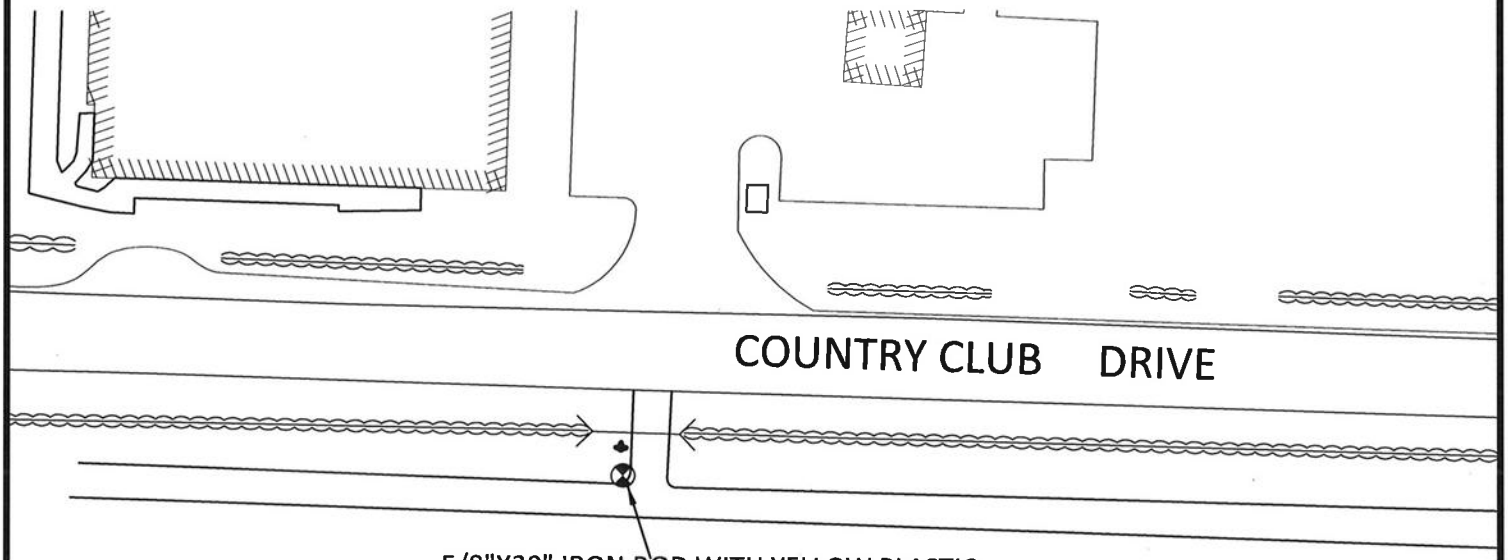
NORTHING (Y) 333286.575 (IF)
EASTING (X) 7465421.736 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 32' 43.78871" NORTH
LONGITUDE: 123° 19' 34.50836" WEST
CONVERGENCE [DEGREES] --2.00433863
POINT SCALE ---------- 0.99995332
COMBINED FACTOR --------- 0.99994349

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2434)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	205.761 (IF) =	62.716 (M)
ORTHOMETRIC ELEVATION:	279.849 (IF) =	85.298 (M)
GEOIDAL SEPARATION :	-74.088 (IF) =	-22.582 (M)



5/8"X30" IRON ROD WITH YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS"

N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS" FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM

NAD — DENOTES NORTH AMERICAN DATUM

(IF) — DENOTES INTERNATIONAL FEET

(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
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DATE	3-30-2017
SCALE:	1"=50'

G 126
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 127 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)

209.250 (6) (a)

Surveyor's Office

C.C.R. NO. 23

FILING DATE 5-26-17

FILE SIZE 8½ x 11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 3-28-2017 *209.250 (6) (e)*

LOCATION: S.W. 1/4 of the N.E. 1/4 of Section 35, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set approx. 12.5 feet east of guard rail and approximately 28 feet northerly from the south end of the same guard rail. Located on the east side of N.E. Third Street (State Highway 99 W) at the south west entrance to the city of Corvallis waste water recovery plant. (see attached exhibit map G 127). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco 2 meter fixed tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 100% of the ambiguities were fixed, and 96% of the observations were used for the monument set with an overall RMS of 0.016 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:

GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	343326.257
Easting (X) [feet]	7483961.942
Convergence [degrees]	-1.95486605
Point Scale	0.99994794
Combined Factor	0.99994048

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 127 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.W. 1/4 OF N.E. 1/4 OF SEC. 35, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

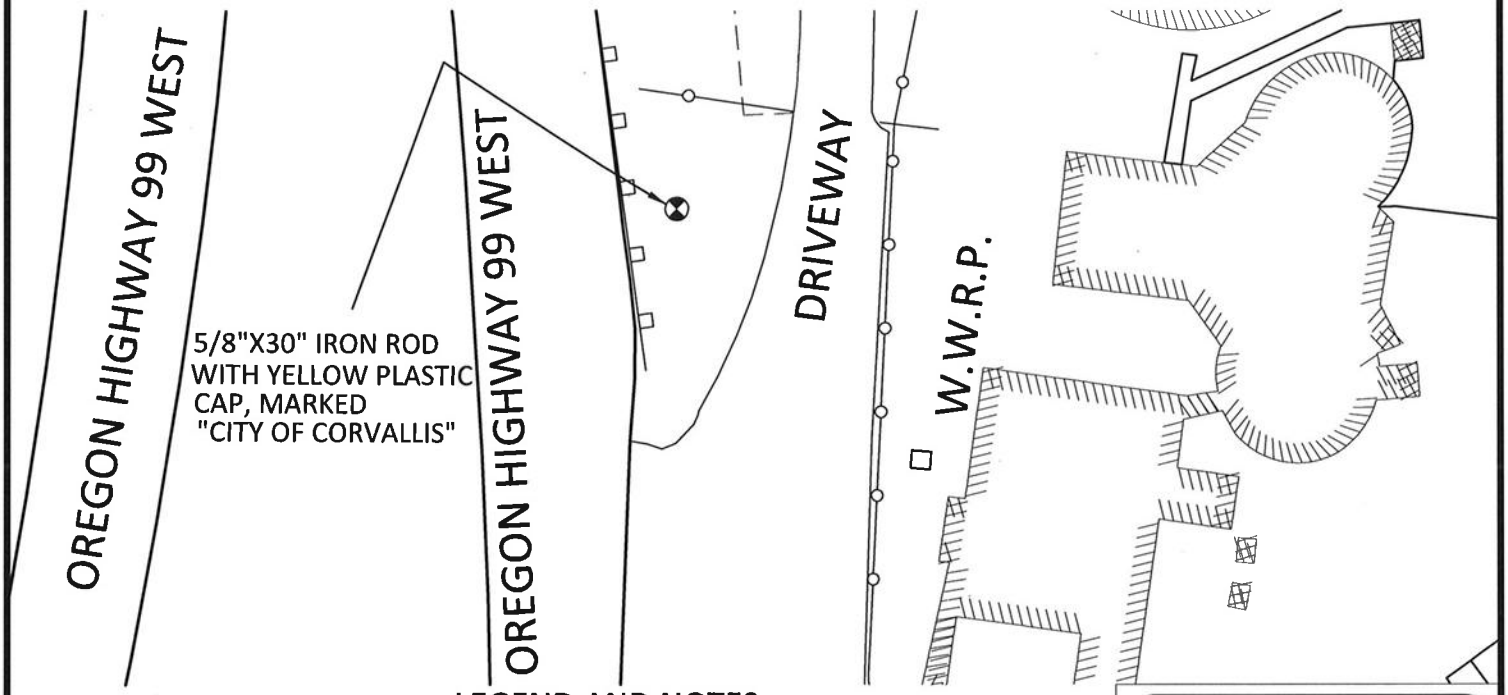
NORTHING (Y) 343326.257 (IF)
EASTING (X) 7483961.942 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 34' 29.19514" NORTH
LONGITUDE: 123° 15' 23.37359" WEST
CONVERGENCE [DEGREES] -1.95486605
POINT SCALE ---------- 0.99994794
COMBINED FACTOR --------- 0.99994048

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2378)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	156.030 (IF) =	47.558 (M)
ORTHOMETRIC ELEVATION:	230.525 (IF) =	70.264 (M)
GEOIDAL SEPARATION :	-74.495 (IF) =	-22.706 (M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS" FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	3-28-2017
SCALE:	1"=50'

G 127
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 128 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 3-28-2017 *209.250 (6) (e)*

LOCATION: S.E. 1/4 of the N.E. 1/4 of Section 26, Township: 11 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" approximately 3 feet east of the back of extruded curb in the gravel next to the ditch SW corner intersection of Circle Blvd. and highway 99 W. Just north east of the Bi-Mart parking lot. (see attached exhibit map G 128). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Crain "TriMax" tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 96% of the ambiguities were fixed, and 91% of the observations were used for the monument set with an overall RMS of 0.018 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	348297.910
Easting (X) [feet]	7484871.033
Convergence [degrees]	-1.95285440
Point Scale	0.99994551
Combined Factor	0.99993821

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 128 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.E. 1/4 OF N.E. 1/4 OF SEC. 26, TOWNSHIP 11 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

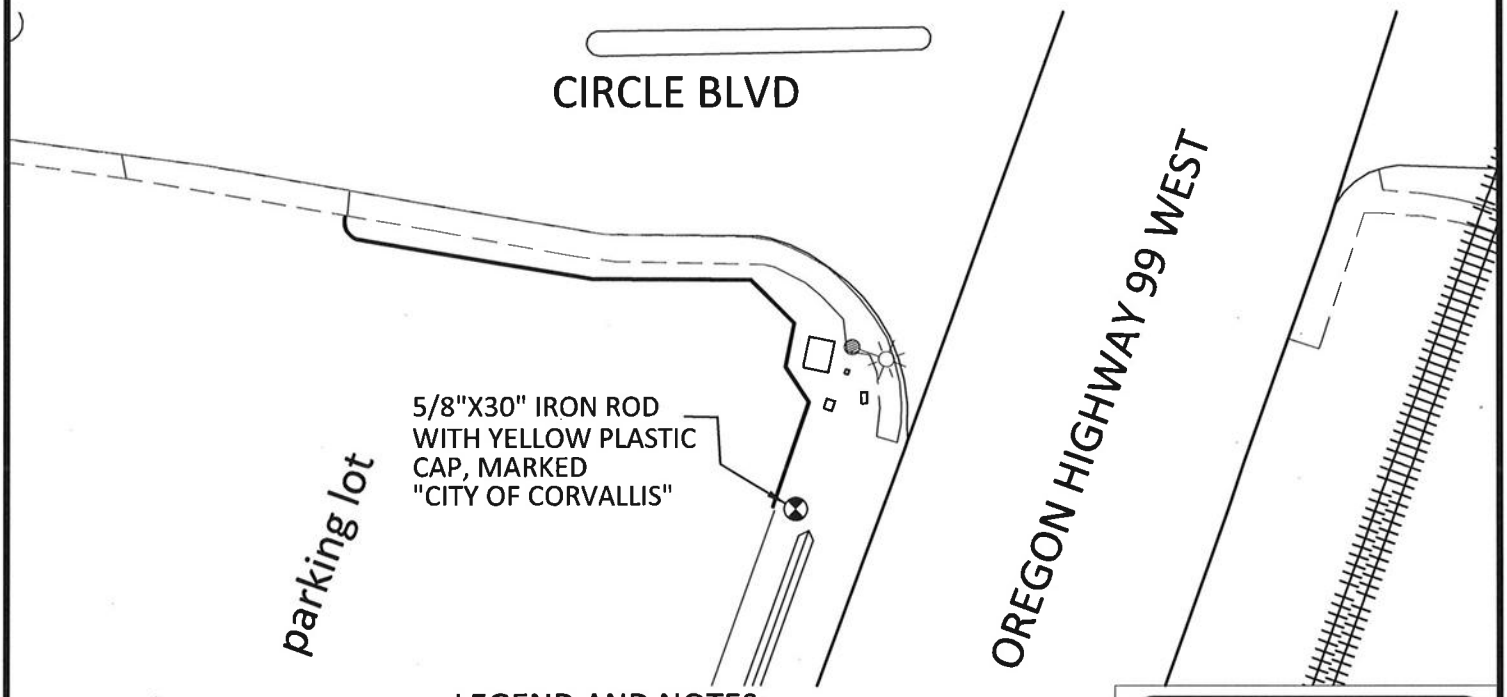
NORTHING (Y) 348297.910 (IF)
EASTING (X) 7484871.033 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 35' 18.56744" NORTH
LONGITUDE: 123° 15' 13.16194" WEST
CONVERGENCE [DEGREES] -1.95285440
POINT SCALE ---------- 0.99994551
COMBINED FACTOR --------- 0.99993821

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2378)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	152.677 (IF) =	46.536 (M)
ORTHOMETRIC ELEVATION:	227.116 (IF) =	69.225 (M)
GEOIDAL SEPARATION :	-74.439 (IF) =	-22.689 (M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS" FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	3-28-2017
SCALE:	1"=50'

G 128
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 130 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)

209.250 (6) (a)

Surveyor's Office

C.C.R. NO. 23

FILING DATE 5-26-17

FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-3-2017 *209.250 (6) (e)*

LOCATION: N.E. 1/4 of the S.W. 1/4 of Section 10, Township: 12 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set approx. 0.5 feet south westerly from the back of sidewalk on the south side of Brooklane drive. park. Approximately 50 feet south westerly from the intersection of Brooklane drive with a private road on the north side of the street. (see attached exhibit map G 130). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco 2 meter fixed tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 100% of the ambiguities were fixed, and 95% of the observations were used for the monument set with an overall RMS of 0.015 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:

GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	331150.305
Easting (X) [feet]	7475960.102
Convergence [degrees]	-1.97548862
Point Scale	0.99995424
Combined Factor	0.99994620

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 130 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE N.E. 1/4 OF S.W. 1/4 OF SEC. 10, TOWNSHIP 12 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

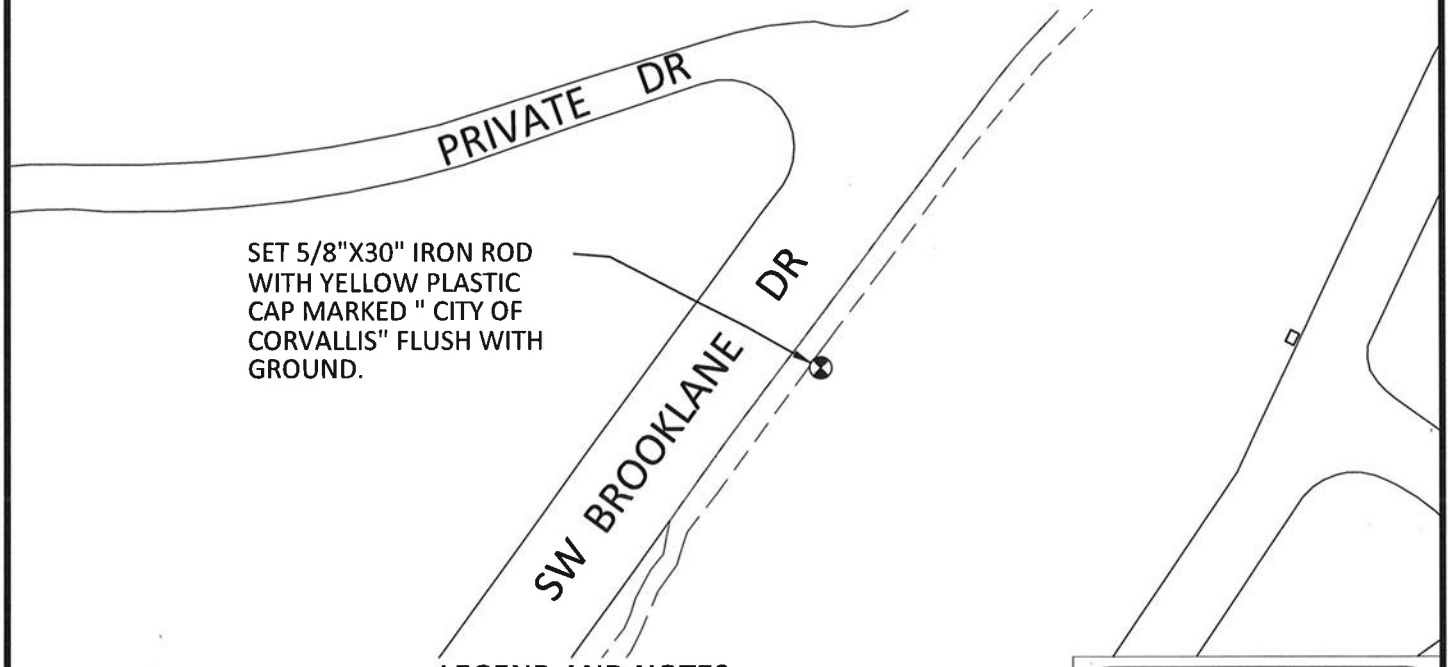
NORTHING (Y) 331150.305 (IF)
EASTING (X) 7475960.102 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 32' 26.31946" NORTH
LONGITUDE: 123° 17' 08.05875" WEST
CONVERGENCE [DEGREES] -1.97548862
POINT SCALE ---------- 0.99995424
COMBINED FACTOR --------- 0.99994620

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2543)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	168.314 (IF) =	51.302 (M)
ORTHOMETRIC ELEVATION:	242.742 (IF) =	73.988 (M)
GEOIDAL SEPARATION :	-74.429 (IF) =	-22.686 (M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD WITH YELLOW PLASTIC CAP, MARKED "CITY OF CORVALLIS" FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM

NAD — DENOTES NORTH AMERICAN DATUM

(IF) — DENOTES INTERNATIONAL FEET

(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	4-3-2017
SCALE:	1"=50'

G 130
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 131 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)

209.250 (6) (a)

Surveyor's Office

C.C.R. NO. 23

FILING DATE 5-26-17

FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 3-31-2017 *209.250 (6) (e)*

LOCATION: S.W. 1/4 of the N.W. 1/4 of Section 3, Township: 12 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 1" copper disk in the top of curb on the east side of S.W. 35th street. Approximately 515 feet north of the intersection of SW 35th Street, and SW Western Blvd. Also about 30 feet south of the centerline of the north parking lot entrance to 800 to 850 SW 35th street. (see attached exhibit map G 131). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Crain "TriMax" tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 90% of the ambiguities were fixed, and 92% of the observations were used for the monument set with an overall RMS of 0.015 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:

GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	337626.942
Easting (X) [feet]	7475139.446
Convergence [degrees]	-1.97832762
Point Scale	0.99995094
Combined Factor	0.99994329

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 131 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.W. 1/4 OF THE N.W. 1/4 OF SEC. 3,
TOWNSHIP 12 SOUTH, RANGE 5 WEST, W.M.
BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM
OF 1983 - NORTH ZONE (3601)

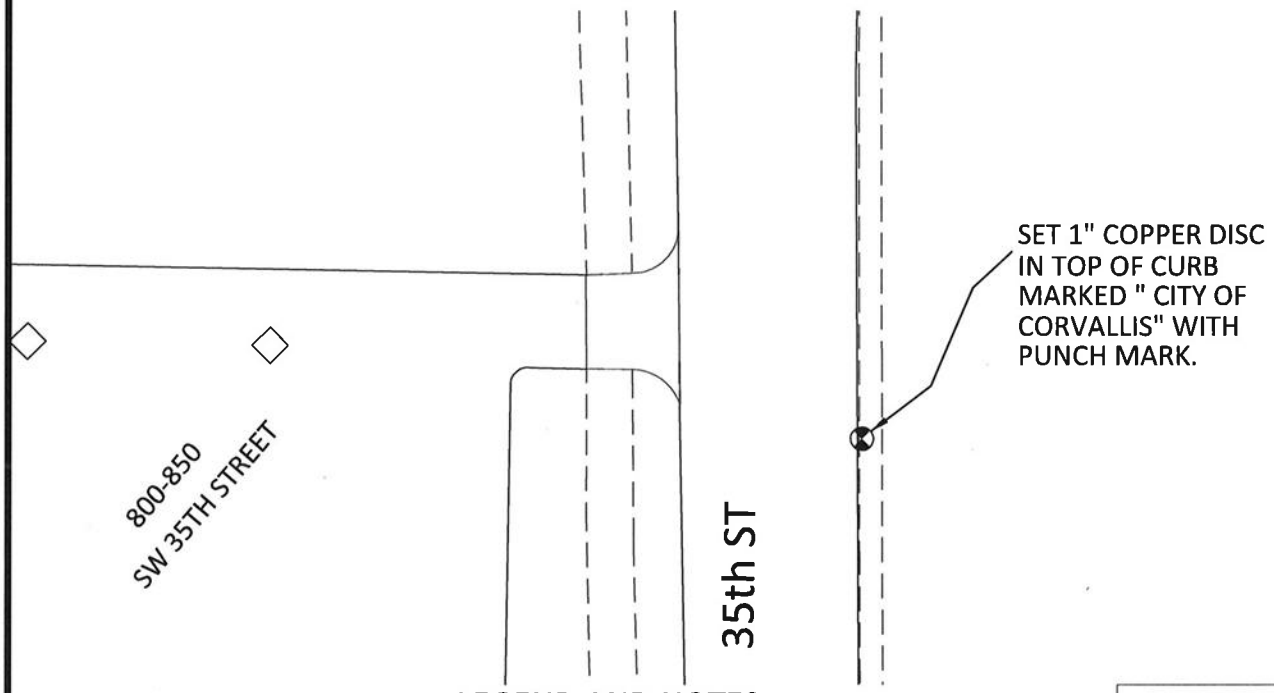
NORTHING (Y) 337626.942 (IF)
EASTING (X) 7475139.446 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 33' 29.95820" NORTH
LONGITUDE: 123° 17' 22.47018" WEST
CONVERGENCE [DEGREES] -1.97832762
POINT SCALE ---------- 0.99995094
COMBINED FACTOR --------- 0.99994329

NAVD88 ELEVATION AND GEOID SEPARATION
IGS08 (EPOCH:2017.2460)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	160.062 (IF) =	48.787 (M)
ORTHOMETRIC ELEVATION:	234.367 (IF) =	71.435 (M)
GEOIDAL SEPARATION :	-74.304 (IF) =	-22.648 (M)



N

NORTH
SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 1" COPPER DISC, IN TOP OF CURB, MARKED "CITY OF CORVALLIS" WITH PUNCH MARK.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY
PER OREGON REVISED STATUTES 2013, CHAPTER 93.312
DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT
OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5,
SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	3-31-2017
SCALE:	1"=50'

G 131
CITY OF CORVALLIS
MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 132 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 3-31-2017 *209.250 (6) (e)*

LOCATION: S.E. 1/4 of the S.W. 1/4 of Section 4, Township: 12 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set approx. 3.25 feet easterly from the face of curb of SW Technology loop. Approximately 55 feet south easterly from the south side of the entrance to a retail building between SW Philomath Blvd./ Hwy 20 / Hwy 34, and SW Research Way. (see attached exhibit map G 132). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco 2 meter fixed tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 94% of the ambiguities were fixed, and 92% of the observations were used for the monument set with an overall RMS of 0.013 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	335363.960
Easting (X) [feet]	7470702.864
Convergence [degrees]	-1.99017768
Point Scale	0.99995216
Combined Factor	0.99994342

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 132 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.E. 1/4 OF S.W. 1/4 OF SEC. 4, TOWNSHIP 12 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

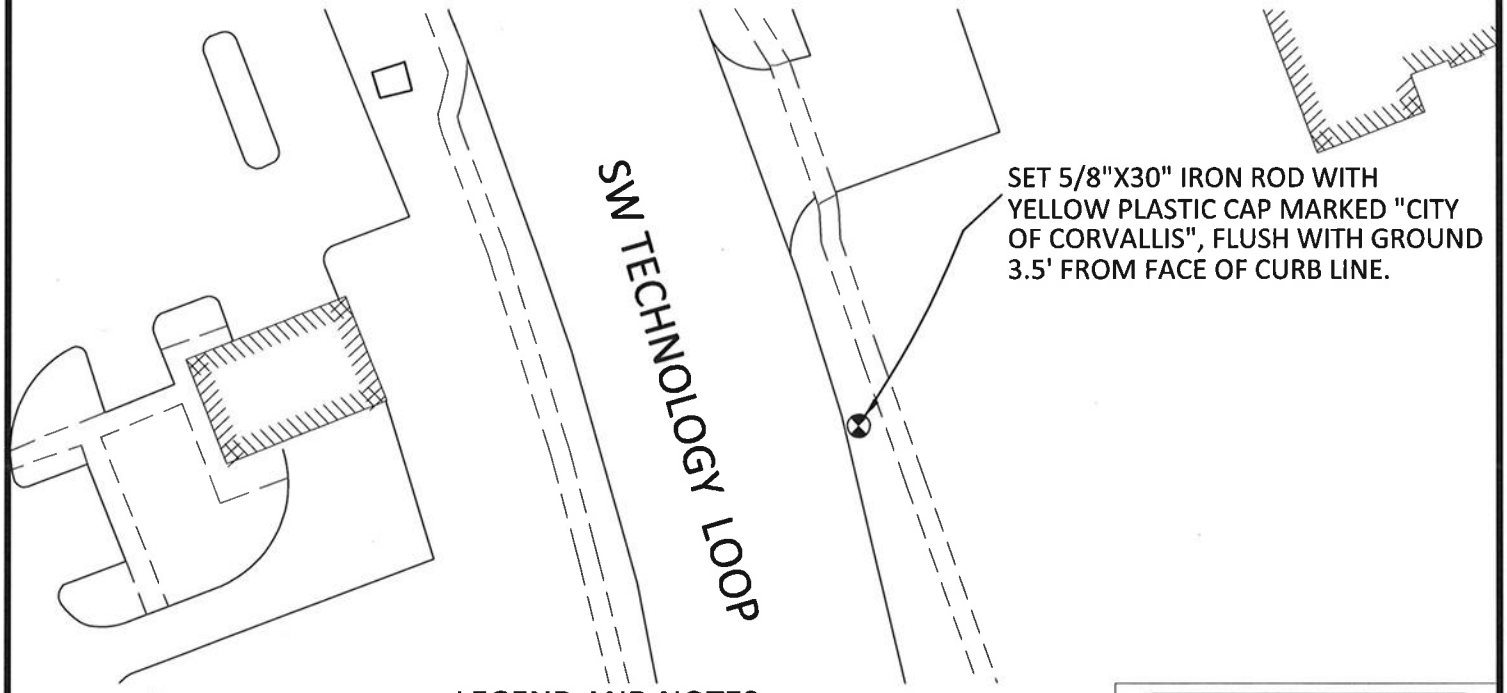
NORTHING (Y) 335363.960 (IF)
EASTING (X) 7470702.864 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 33' 06.10786" NORTH
LONGITUDE: 123° 18' 22.62399" WEST
CONVERGENCE [DEGREES] -1.99017768
POINT SCALE ---------- 0.99995216
COMBINED FACTOR --------- 0.99994342

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2460)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	182.927 (IF) =	55.756 (M)
ORTHOMETRIC ELEVATION:	257.136 (IF) =	78.375 (M)
GEOIDAL SEPARATION :	-74.209 (IF) =	-22.619 (M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD, WITH YELLOW PLASTIC CAP MARKED "CITY OF CORVALLIS", FLUSH WITH GROUND

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM

NAD — DENOTES NORTH AMERICAN DATUM

(IF) — DENOTES INTERNATIONAL FEET

(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
CHECKED	
DATE	3-31-2017
SCALE:	1"=50'

G 132
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 133 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8 1/2 x 11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-4-2017 *209.250 (6) (e)*

LOCATION: N.E. 1/4 of the N.W. 1/4 of Section 14, Township: 12 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set 1.4 feet east from face of concrete sidewalk. Located on the West side of south 3rd street (Highway 99W), and approximately 125 feet south from the centerline of the driveway access for 3075 S. 3rd street located on the east side of the highway. (see attached exhibit map G 133). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Crain "TriMax" tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 97% of the ambiguities were fixed, and 96% of the observations were used for the monument set with an overall RMS of 0.019 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	328409.295
Easting (X) [feet]	7480631.512
Convergence [degrees]	-1.96253453
Point Scale	0.99995559
Combined Factor	0.99994780

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 133 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE N.E. 1/4 OF N.W. 1/4 OF SEC. 14, TOWNSHIP 12 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

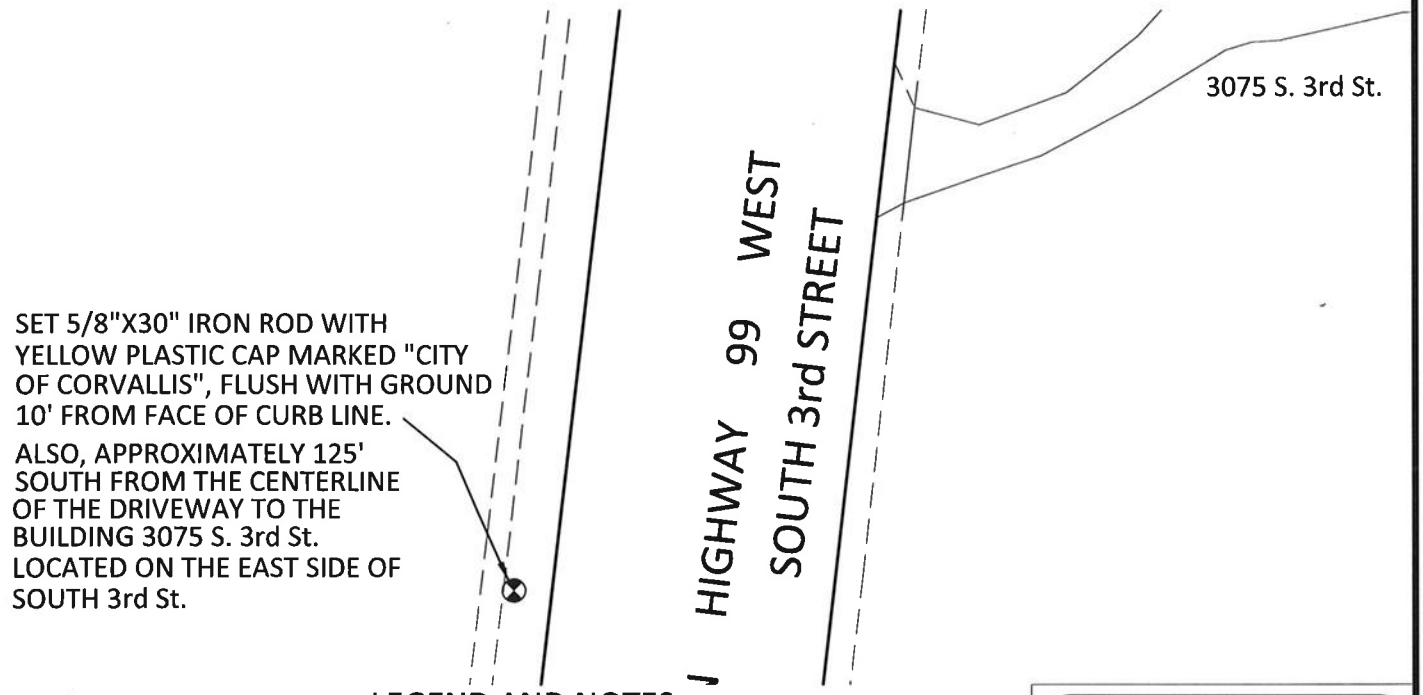
NORTHING (Y) 328409.295 (IF)
EASTING (X) 7480631.512 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 32' 00.85312" NORTH
LONGITUDE: 123° 16' 02.30063" WEST
CONVERGENCE [DEGREES] -1.96253453
POINT SCALE ---------- 0.99995559
COMBINED FACTOR --------- 0.99994780

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2570)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	162.979 (IF) =	49.676 (M)
ORTHOMETRIC ELEVATION:	237.582 (IF) =	72.415 (M)
GEOIDAL SEPARATION :	-74.603 (IF) =	-22.739 (M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD, WITH YELLOW PLASTIC CAP MARKED "CITY OF CORVALLIS", FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

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CHECKED	
DATE	4-4-2017
SCALE:	1"=50'

G 133
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 134 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-4-2017 *209.250 (6) (e)*

LOCATION: N.W. 1/4 of the N.E. 1/4 of Section 11, Township: 12 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set approx. 3 feet west from face of curb in the park strip, at the northwest corner of the intersection of SE Crystal lake circle, and SE Crystal lake drive. (see attached exhibit map G 134). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco 2 meter fixed tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 96% of the ambiguities were fixed, and 92% of the observations were used for the monument set with an overall RMS of 0.020 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	332958.986
Easting (X) [feet]	7483806.132
Convergence [degrees]	-1.95432763
Point Scale	0.99995317
Combined Factor	0.99994549

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 134 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE N.W. 1/4 OF THE N.E. 1/4 OF SEC. 11, TOWNSHIP 12 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

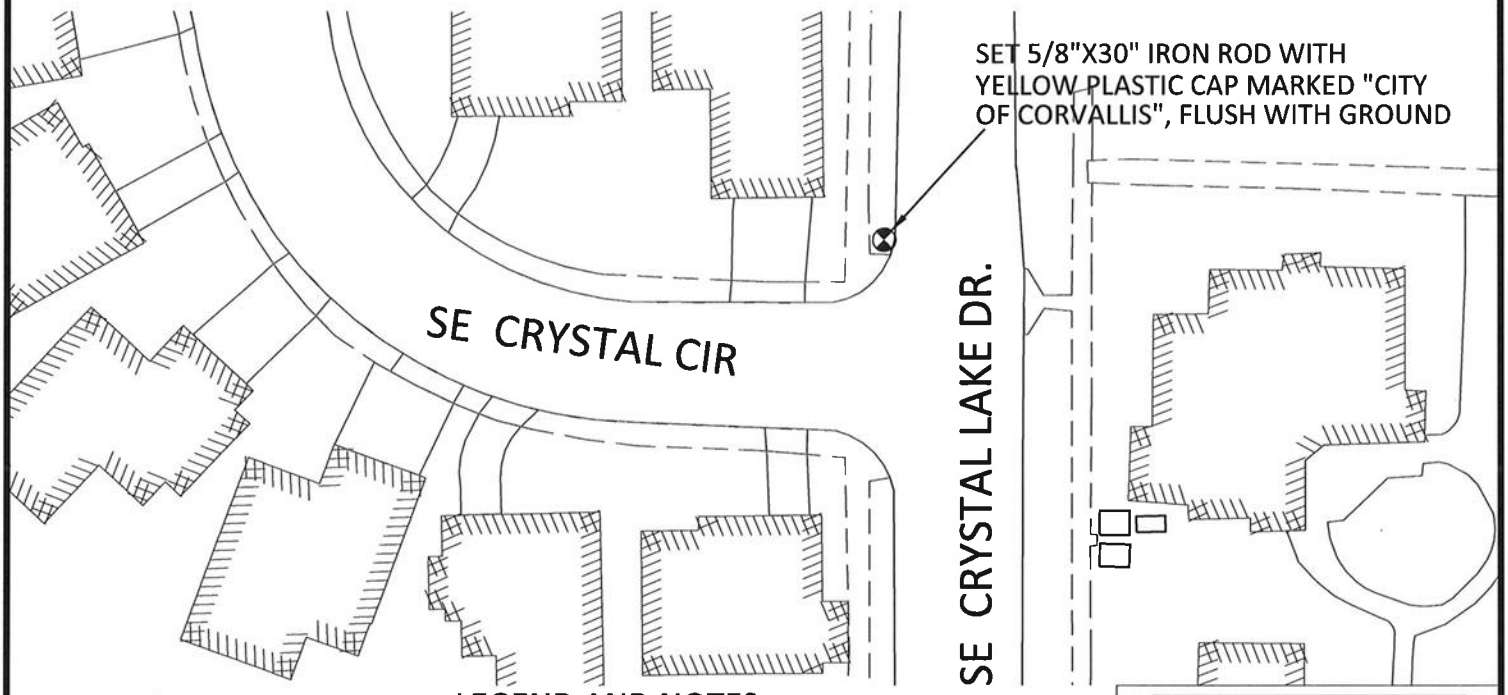
NORTHING (Y) 332958.986 (IF)
EASTING (X) 7483806.132 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 32' 46.82610" NORTH
LONGITUDE: 123° 15' 20.64041" WEST
CONVERGENCE [DEGREES] -1.95432763
POINT SCALE ---------- 0.99995317
COMBINED FACTOR --------- 0.99994549

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2571)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	160.620 (IF) =	48.957 (M)
ORTHOMETRIC ELEVATION:	235.253 (IF) =	71.705 (M)
GEOIDAL SEPARATION :	-74.633 (IF) =	-22.745 (M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD, WITH YELLOW PLASTIC CAP MARKED "CITY OF CORVALLIS", FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM

NAD — DENOTES NORTH AMERICAN DATUM

(IF) — DENOTES INTERNATIONAL FEET

(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
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CHECKED	
DATE	4-4-2017
SCALE:	1"=50'

G 134
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 135 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-6-2017 *209.250 (6) (e)*

LOCATION: S.E. 1/4 of the S.W. 1/4 of Section 2, Township: 12 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set approximately 70 feet east from the east face of curb on south 3rd street in the south side of railroad ballast rock, in rail bed with no tracks. (see attached exhibit map G 135). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Crain "TriMax" tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 91% of the ambiguities were fixed, and 91% of the observations were used for the monument set with an overall RMS of 0.016 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	335430.253
Easting (X) [feet]	7481569.308
Convergence [degrees]	-1.96063882
Point Scale	0.99995194
Combined Factor	0.99994485

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 135 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.E. 1/4 OF THE S.W. 1/4 OF SEC. 2, TOWNSHIP 12 SOUTH, RANGE 5 WEST, W.M. BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM OF 1983 - NORTH ZONE (3601)

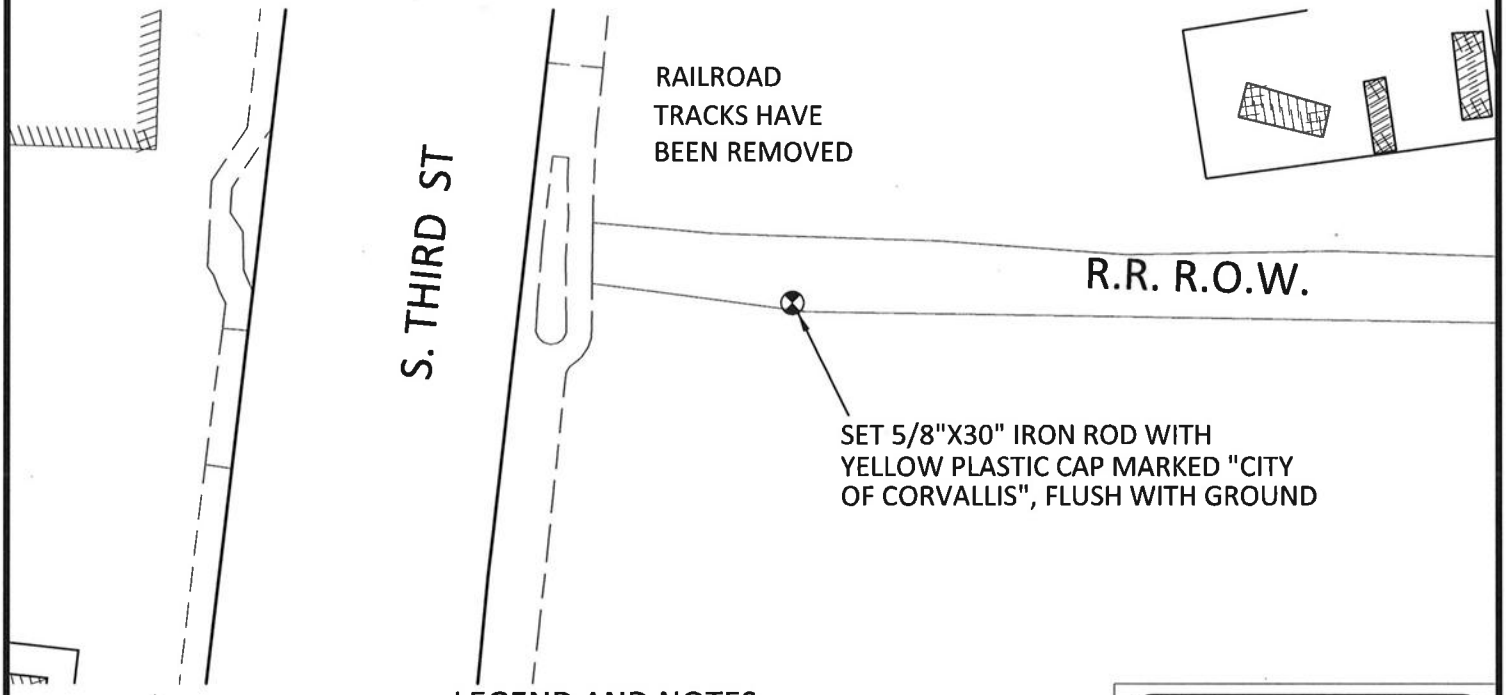
NORTHING (Y) 335430.253 (IF)
EASTING (X) 7481569.308 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 33' 10.46097" NORTH
LONGITUDE: 123° 15' 52.67755" WEST
CONVERGENCE [DEGREES] -1.96063882
POINT SCALE ---------- 0.99995194
COMBINED FACTOR --------- 0.99994485

NAVD88 ELEVATION AND GEOID SEPARATION IGS08 (EPOCH:2017.2626)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	148.373 (IF) =	45.224 (M)
ORTHOMETRIC ELEVATION:	222.910 (IF) =	67.943 (M)
GEOIDAL SEPARATION :	-74.537 (IF) =	-22.971 (M)



N

NORTH

SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD, WITH YELLOW PLASTIC CAP MARKED "CITY OF CORVALLIS", FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM

NAD — DENOTES NORTH AMERICAN DATUM

(IF) — DENOTES INTERNATIONAL FEET

(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY PER OREGON REVISED STATUTES 2013, CHAPTER 93.312 DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5, SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
DRAWN	CRB
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DATE	4-6-2017
SCALE:	1"=50'

G 135
CITY OF CORVALLIS MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.

G 136 - Control Data Sheet (Per O.R.S. 209.250 2013 ed.)
209.250 (6) (a)

Surveyor's Office
C.C.R. NO. 23
FILING DATE 5-26-17
FILE SIZE 8½x11

City of Corvallis *209.250 (6) (f)*
Public Works Department
Engineering Division
1245 NE Third Street
P.O. Box 1083
Corvallis, Oregon 97339-1083

DATE: 4-6-2017 *209.250 (6) (e)*

LOCATION: S.E. 1/4 of the S.E. 1/4 of Section 11, Township: 12 South, Range: 5 West, W.M., Benton County, Oregon. *209.250 (6) (b)*

DESCRIPTION: Set 5/8" by 30" iron rod with Yellow Plastic Cap marked "City of Corvallis" set approx. 40 feet south of the edge of pavement of S.E. Goodnight avenue, between S.E. Clear water drive, and S.E. Park avenue.. Approximately 25 feet easterly from the east edge of pavement on S.E. Park avenue. (see attached exhibit map G 136). *209.250 (6) (g)*

NARRATIVE: The purpose of this survey was to collect 4+ hours of GNSS data. Baseline data collection methodology was selected in order to establish point pair baselines for processing by OPUS Projects at a later date. This Yellow Plastic Cap and iron rod was set for one of those baseline points. This location was chosen for reasonable satellite visibility, and access within the public right of way for ease of future use. Trimble R10 antenna/receiver units were used on both points. The unit for this occupation used a Seco 2 meter fixed tripod. These units were used to collect the static field data in the Trimble Navigation TO2 file format. This data was then converted to RINEX ver. 2.11 files using "convertTo RINEX" ver. 2.2.5.0 by Trimble Navigation Limited for data submission to the N.G.S. as a GPS only OPUS static session. The data was submitted a minimum of 14 days after collection in order to use the IGS precise satellite ephemeris. The following data reflects the N.G.S. GPS only static session results. 98% of the ambiguities were fixed, and 92% of the observations were used for the monument set with an overall RMS of 0.015 (M) per the OPUS data report. The full OPUS data report for this occupation session includes the CORS stations used for this solution, and their NSRS (ITRF) framework accuracy, and is available, on request. *209.250 (6) (h)*

Abbreviations:
GNSS - Denotes Global Navigation Satellite System
GPS - Denotes Global Positioning System
N.G.S. - National Geodetic Survey
RINEX - "Receiver INdependent Exchange" format
IGS - International GPS Service
CORS - Continuously Operating Reference Station
NSRS - National Spatial Reference System
ITRF - International Terrestrial Reference Frame

STATE PLANE COORDINATES – NAD 83 - International Foot SPC (3601 OR North zone)

Northing (Y) [feet]	329439.698
Easting (X) [feet]	7484235.597
Convergence [degrees]	-1.95283382
Point Scale	0.99995499
Combined Factor	0.99994715

One International Foot = 0.3048 meters exactly
Per Oregon Revised Statutes 2013, Chapter 93.312,
Defined in Oregon Administrative Rules Department
of Transportation, Highway Division, Division 5,
Sections, 734-005-0010 (2), and 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

SEE ATTACHMENTS: EXHIBIT MAP - Page 2 of 2 - G 136 *209.250 (6) (a)*

EXHIBIT MAP

SITUATE IN THE S.E. 1/4 OF THE S.E. 1/4 OF SEC. 11,
TOWNSHIP 12 SOUTH, RANGE 5 WEST, W.M.
BENTON COUNTY, OREGON.

SURVEYOR'S OFFICE

C.C.R. FILE NO. 23

FILING DATE 5-26-17

FILE SIZE 8 1/2" X 11"

OREGON STATE PLANE COORDINATE SYSTEM
OF 1983 - NORTH ZONE (3601)

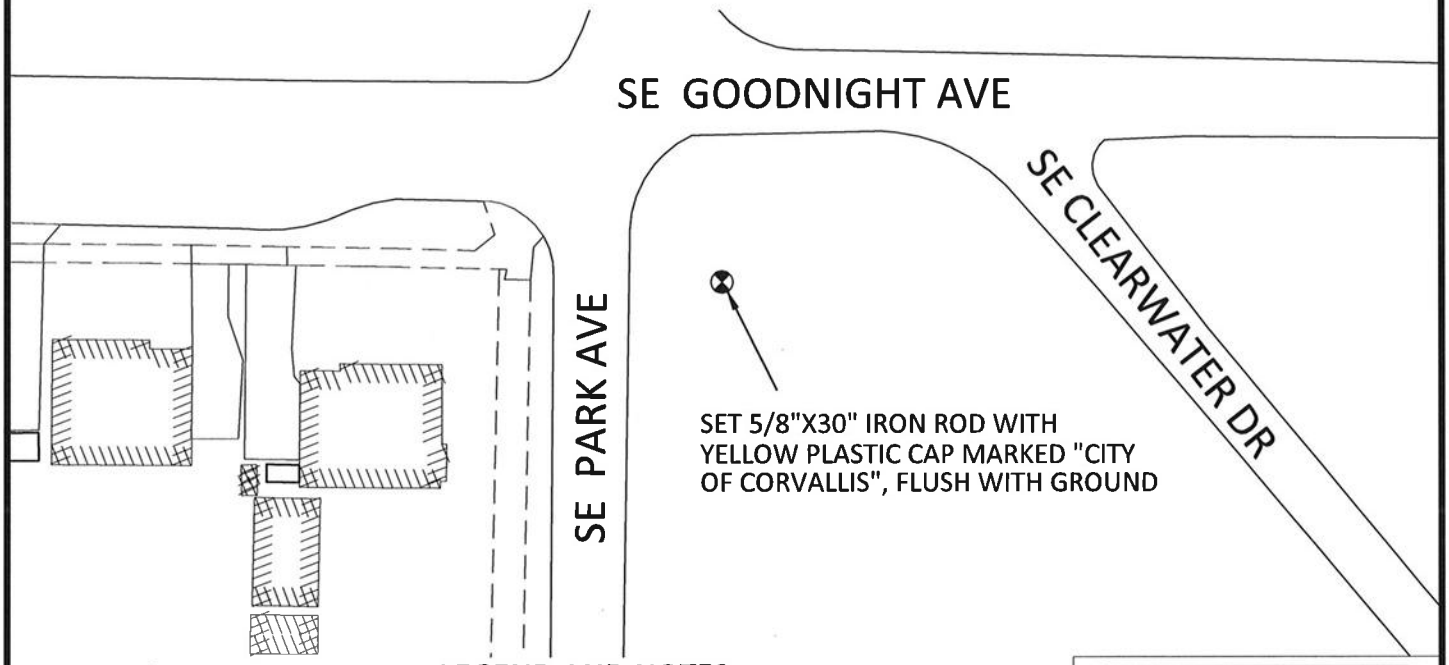
NORTHING (Y) 329439.698 (IF)
EASTING (X) 7484235.597 (IF)

NAD 83 (2011) (EPOCH: 2010)

LATTITUDE: 44° 32' 12.23814" NORTH
LONGITUDE: 123° 15' 13.05747" WEST
CONVERGENCE [DEGREES] -1.95283382
POINT SCALE ---------- 0.99995499
COMBINED FACTOR --------- 0.99994715

NAVD88 ELEVATION AND GEOID SEPARATION
IGS08 (EPOCH:2017.2626)(COMPUTED USING GEOID12B)

	NAVD 88	GEOID 12B
ELLLIPSOIDAL HEIGHT (EL):	164.062 (IF) =	50.006 (M)
ORTHOMETRIC ELEVATION:	238.750 (IF) =	72.771 (M)
GEOIDAL SEPARATION :	-74.688 (IF) =	-22.765 (M)



N

NORTH
SCALE: AS NOTED

LEGEND AND NOTES:

⊗ — DENOTES SET 5/8"X30" IRON ROD, WITH YELLOW PLASTIC CAP MARKED "CITY OF CORVALLIS", FLUSH WITH GROUND.

NAVD — DENOTES NORTH AMERICAN VERTICAL DATUM
NAD — DENOTES NORTH AMERICAN DATUM
(IF) — DENOTES INTERNATIONAL FEET
(M) — DENOTES METER

ONE INTERNATIONAL FOOT = 0.3048 METERS EXACTLY
PER OREGON REVISED STATUTES 2013, CHAPTER 93.312
DEFINED IN OREGON ADMINSTRATIVE RULES, DEPARTMENT
OF TRANSPORTATION, HIGHWAY DIVISION, DIVISION 5,
SECTIONS, 734-005-0010 (2), 734-005-0015 (2) (a)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 9, 2002
CLAY R. BROOKS
58556LS

RENEWS: 12/31/2017

PAGE	2 OF 2
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CHECKED	
DATE	4-6-2017
SCALE:	1"=50'

G 136
CITY OF CORVALLIS
MONUMENT SKETCH

CORVALLIS
ENHANCING COMMUNITY LIVABILITY
Public Works, Engineering Div.