

Survey Project Manager

James Harper, a BRH Senior Associate, will (a) keep the **client** informed and updated during each survey assignment, (b) supervise our survey crews and CAD technicians, and (c) oversee quality reviews. The result will be accurate and reliable survey services, delivered to you on time.

James' experience dates back to 1997.

At the start, anticipate frequent interface with **client** in scoping each task. Once each survey is underway, expect coordination with **client**, while providing day-to-day oversight for each element of the survey, and James maintaining responsibility for the accuracy and overall quality of the mapping deliverables.

James' experience dates back to 1997.

Relevant Projects Include

City Streets and Utilities

City of University Place Lakewood Drive Overlay Project

This street improvement survey, within the University Place East sub-basin, extended approximately 1,245 feet from 64th Street West to Hanna Pierce Road. James provided a topographic survey, showing above and below grade utilities as detected and located. The scope included street cross-sections with spot heights, curbs, gutters, sidewalks and significant vegetation. All field work was conducted with full PPE. The deliverable was a surface model prepared as an AutoCAD 2018 file.

City of Edgewood On-Call

(1) James performed a topographic survey on Meridian Avenue East (SR-161) from 18th Street to 24th Street East. The scope included utility detection and location. The purpose of the survey was to provide the city with as-built records to administrate future development applications. (2) A second Task Order was to conduct a Boundary Deed Investigation. (3) A third assignment called for the location of wetland habitat at and around Lake Chalet. A biologist delineated waterfront vs uplands vegetation along the shoreline, and along an adjacent creek. BRH then documented the vegetation flag locations.

City of Renton Water Main Replacement – Renton Hill Streets for Water Main Project – Renton Hill

James served the City of Renton Public Works Public Utilities Division with their 2015-2016 watermain replacement program. His scope of work was to provide boundary and topographic surveys, including utility detection and location. Phase I included work along South 7th Street, South 9th Street, Renton Avenue South (north), High Avenue South, and Jones Avenue South.

Phase II included work along South 4th Street, South 7th Street (east), South 10th Street, Cedar Avenue South, Renton Avenue South, and Grant Avenue South.

The project called for surveying the full right-of-way, and the mapping extended to show limited topography of the residence footprints. BRH worked closely with the City when surveying on private property, and he coordinated with the City to make sure our field crews respectfully interfaced with home owners.

Professional Registration:

State of Washington (PLS) 2008

Professional Affiliation:

- ◆ Land Surveyor's Association of Washington

Streets for Water Main Project – Monterey Terrace

Our work in the city Rights-of-Way supported utility upgrades along Index Avenue NE, Camas Avenue NE, NE 8th Street, SE 5th Place, and all the laterals in the Monterey Terrace plat. His scope was to locate and map the underground water main route, and also depict streets extending to, and beyond property lines on either side of the Rights-of-Way.

Scope components included boundary and topographic surveys, including utility detection and location. We used City of Renton vertical datum (NAVD 88) and set three benchmarks to establish control. Horizontal datum was NAD 84/91. James surveyed pavements, sidewalks, and private residence features such as stairs, walls, fences, rockeries, driveways, and structure footprints, and noted property addresses on the mapping. Encroachments into the city right-of-way were identified on the mapping deliverables.

Spot elevations captured key terrain features, to an accuracy of 0.01-foot. Topography differentiated between various surfaces, and James showed tree locations and vegetation drip outlines. Utilities included rims grates and vaults. Water valve rim elevations and nut elevations were shown. Below grade utilities included location and elevation, pipe types and sizes, rim and invert elevations. Our field crews employed traffic safety procedures to limit community impact and ensure safe passage for vehicles.

Water Main Replacement – President Park

James provided water main replacement surveys in the Renton Highlands. The utilities are located along Monroe Avenue NE, and several lateral streets. His surveys included topographic and utility mapping within the right-of-way along the route.

City of Seattle – Street Surveys Sewer Lines in City Rights-of-Way

James wrote sewer easement and relinquishment descriptions over a four-block area in the vicinity of NE 40th and 11th Avenue, north of Boat Street. The purpose of this UW funded survey was to give SPU access rights for utility maintenance.

Mercer Street West Corridor

James was involved in this major arterial improvement. His task was to provide surveys depicting limited access right-of-way margins to support the corridor reconfiguration. These surveys were conducted along both north and south sides of the corridor, between Fairview and Boren, as the new alignment widens over existing property lines.

South Lake Union

As part of the Fred Hutchinson development, James surveyed multiple city streets and utilities surrounding this 8-block, 28-acre campus. These were **Fairview Avenue North**, **Fairview**

Avenue East, Eastlake Avenue East, Aloha Street, Ward Street, Valley Street and Yale Avenue North.

Additional City Streets

(1) James performed a site topographic survey for a housing campus in Seattle for that included the full right-of-way width of **Roosevelt Way NE** from the full **NE 47th Street** intersection south for 420-feet, as well as portions of **9th Avenue NE**. All mapping was coordinated with SDOT.

(2) As part of a survey for Virginia Mason Medical Center, James provided a SDOT compliant right-of-way topographic and utility survey, for the full width of **9th Avenue between Spring and Seneca**.

NE Pacific Street

As part of services for the UW Medical Center, James provided a full right-of-way survey of NE Pacific Street. This ROW survey provided information of elevations, center lane, channelization and utilities. In addition, he captured details of street poles, overhead power lines and bus wires and guys, traffic signs and signal loops.

City of Lynnwood – Street Surveys

James provided an ALTA survey and ALTA update for a site bound by **Highway 99** and 176th Street SW in Lynnwood. The survey captured right-of-way as-built street and utility data up to the roadway centerlines.

James also surveyed portions of **36th Avenue West**, and **188th Street SW** as part of the Alderwood Mall Expansion project. These surveys mapped roadway topography and the drawings indicated utilities – storm, sewer, water, gas and cable – in the right-of-way. These included a historic 12-inch wood water main. In addition, we surveyed portions of **33rd Avenue West**, **184th Street SW**, **28th Avenue West**, and **26th Avenue West**.

City of Enumclaw – Street Surveys

The rebuilding of the Enumclaw Regional Hospital required a multi-block, multi-parcel boundary and topographic survey for the new hospital. Streets mapped included Cinkovich Avenue, Battersbye Avenue, Jensen Street, Adams Avenue and Kibler Avenue.

City of Auburn – Street Surveys

BRH mapped the 155-acre Supermall, and also provided extensive street topography around the site. Altogether, 3 miles of City of Auburn roads were base mapped, including **SR-167** ramps. Ramp access options were evaluated by the design team, and our survey scope supported their investigations.

City of Issaquah – Street Surveys

In support of development projects, our team base mapped multiple full-width rights-of-way, in compliance with City of Issaquah specifications.

- 17th Avenue NW from the I-90 ramps to NW Maple Street
- NW Gilman Boulevard from 19th Ave NW to 12th Ave NW
- 18th Avenue NW and portions of NW Poplar Way
- 19th Avenue NW from Poplar Way to NW Maple
- NW Mall Street and NW Maple up to 12th Avenue NW
- 12th Avenue NW from Gilman to Maple Street

Our approach included aerial photogrammetric surveys conducted by a BRH subconsultant, with portions of the mapping enhanced by our in-house subsurface utility detection and location survey crews.

Puget Sound Energy - Redmond

Substation Site

This former substation on 152nd Avenue NE was undergoing a developer feasibility study. James provided an ALTA/NSPS survey and topographic survey.

City and County - Facilities

City of Seattle and King County

Ship Canal Water Quality Project

Seattle Public Utilities and King County are coordinating to build an underground storage tunnel to reduce the amount of polluted water that spills into the Lake Washington Ship Canal from Ballard, Fremont, Wallingford, and north Queen Anne. The 2.7-mile long, 18-foot diameter tunnel will keep more than 75 million gallons of polluted stormwater and sewage out of the Ship Canal, Salmon Bay, and Lake Union on average each year.

A portion of this public work will be adjacent to Salmon Bay, and James surveyed 3 parcels that extend from Shilshole Avenue NW down to the waterfront. These properties were acquired by the City and County to be used for the Pump Station at the tunnel's West Portal and for two Outfalls. James' survey incorporated an earlier (1977) survey on the property, also conducted by BRH. The survey scope included topographic mapping, utilities, a lot line adjustment and a lot boundary adjustment.

City of Tukwila

Fire Station 51

This replacement station is being built as part of the City's Public Safety Plan. It is the Tukwila Fire Department HQ housing Fire Administration and Emergency Management offices. The station responds to incidents throughout the City of Tukwila, and is staffed with suppression personnel, reserve fire engines, technical rescue equipment, and a reserve fire boat. James provided the environmental consultants with a wetland marker survey.

City of Bellevue

Fire Station 5

This station, on NE 24th Street in Clyde Hill operates Engine 105. The Station serves NW Bellevue, Clyde Hill, Medina, Hunt's Point, and Yarrow Point. – James provided a topographic and utility survey, and was involved in easement investigations and the preparation of exhibits.

City of Seattle Municipal Tower

When the City of Seattle purchased the Key Tower the 2,900 square foot entry area underwent a complex remodel. James provided intensive topographic detail to enable the architect to accurately develop floor elevations relative to the existing street cross-sections. In addition, the slope of the sidewalk, governed by the street topography, had to be precisely depicted to enable the architect to meet ADA requirements.

Justice Center Monitoring

BRH's services included extensive monitoring—for example, the s-shaped tunnel that jogs between the jail and the Justice Center, was monitored daily.

James also monitored water and steam lines that intersected the site, as well as all adjacent buildings. These were observed on a schedule that was driven by construction activity. A tight monitoring grid was employed, reflecting the need for great accuracy. For example, the old electrical conduit running under Fifth Avenue was very brittle and it was vital not to disturb it. The monitoring measured earth movement and ensured that construction activity did not impact the surroundings.

City of Renton

Hazen Reservoir

BRH was asked to provide an as-built of the reservoir on 142nd and Sunset Highway. The scope included the main 4.2 MG welded storage tank and supports, as well as the control valve vault, and flow meter vault. We also showed the 16" and 12" water mains, as well as the overflow funnel lip and the location of the pond overflow. Finally, James base mapped the 9.34 acre site and the reservoir access road, staked the boundary corners, and created a records of survey drawing.

Trees greater than 6-inches were located and identified.

The scope also called for a 1-mile bench circuit to an existing tower. This provided the consultants with precise elevation differences.

City of Puyallup

City Hall and Parking Garage

The city hall is a 50,000 sq. ft., five-story building on South Meridian Street. James was called in to assist the project team identify and resolve complex layout difficulties during Phase I of the construction. As a result of our work, we were engaged to provide Phase II survey services. James provided building control for both the city hall and the garage, as well as street improvement layouts and utility staking on Meridian.

City of Bothell

City Hall

James provided an ALTA survey for the \$46M city hall on 101st Avenue Northeast. The 53,000 sq. ft. building contains three levels of underground parking.

Public Works Operations Center

This assignment called for an ALTA survey of the City Maintenance Yards on SE 214th Street. James also provided grid layout surveys to support construction activities.

Additional Facility Surveys

City of Seattle

- ♦ Gas Works Park

- ♦ Monorail Station

City of Bellingham

- ♦ City Park

City of Renton

- ♦ Black River Riparian Forest
- ♦ Maplewood Golf Course Driving Range

King County

- ♦ Parking Garage – Seattle

Housing and Residential Projects

Interim Community Development Association Eastern Hotel – 2022

Interim CDA is a nonprofit affordable housing and community development organization based in Seattle's Chinatown / International District (CID). James provided an ALTA Survey, and a condominium survey for this building on Maynard Avenue South.

Community Roots Housing 2320 East Union Street

James provided a topographic survey and an ALTA survey update for this site near 24th Avenue in Capitol Hill.

Community Roots Housing The Haines

This development at 1415 East Olive Street required James to provide an ALTA survey.

Community Roots Housing New Housing

This Seattle Mennonite Church site is being converted to housing. James provided a topographic survey.

Plymouth Housing Group 710 Cherry Street

This project at 7th and Cherry needed topographic mapping, an ALTA survey and update, and a sidewalk easement description and exhibit.

Plymouth Housing Group 2013 Third Avenue

James provided a legal description and exhibit, and topographic mapping of an improved alley adjacent to the site. He also produced a SDOT right-of-way update for submittal to the city.

Catholic Housing Services Monica's Village

This development on 23rd Avenue South and South Main required BRH to prepare topographic mapping and a legal description. Most recently, James provided a condominium survey, and a final ALTA survey for this development.

Catholic Housing Services Ives and Harrison Family Housing - Centralia

This is a 74-unit low income housing facility, contained in 32 building units. James provided a legal description for the owner.

Urban Shelters

12th Avenue and East Pike Street

James provided a boundary and topographic survey, plus a boundary line adjustment, a lot boundary adjustment, and detail on wall encroachments. In addition, we were asked to provide an ALTA survey update for this shelter project.

University of Washington

Cedar Apartments Student Housing

This 6-story, 344-unit building on NE 41st Street features two- and four-bedroom apartments and studios, each with a furnished kitchen. James' survey for this full block facility included a boundary survey, topographic mapping with utility detection and location. Also included were right-of-way SDOT base maps.

University of Washington

Elm Hall Student Housing

This 533-student, 6 story residence hall on NW Campus Parkway contains triples, doubles and studios. James provided a boundary survey, topographic mapping and utility detection and location.

American Baptist Homes of the West

Harborview Manor - Tacoma

This 14-story high-rise in downtown Tacoma is a senior living facility with 163 units. The building was completely renovated, including family and community rooms, the fitness area, kitchen and dining rooms. James' role was to perform a boundary survey in support of the renovation team.

Seattle Housing Authority

NewHolly

BRH has provided multiple boundary, topographic and ALTA surveys for this garden community development. James supported the project with boundary, topographic, utility mapping, legal descriptions and easements.

Seattle Housing Authority

High Point

BRH completed a comprehensive boundary and topographic survey of this 120-acre, 1,600-unit redevelopment. We platted the entire site and provided surveying and mapping services through all phases. James's role included topographic surveys. The scope also called for a short plat and full 120-acre plat.

Seattle Housing Authority

107 27th Avenue

This two-story multi-family development in the Leschi neighborhood required an ALTA survey.

American Campus Communities

University Center

James performed site topographic mapping that included full ROW surveys of adjacent roadways.

Tarragon

Black Lake Village - Olympia

This 18-acre complex offers 1-, 2-, and 3-bedroom market rate apartments. The site contains a club house, spa and other amenities. James supported the property transfer with an ALTA survey.