

**WEST SOUND UTILITY DISTRICT  
RESOLUTION 512-14**

**A RESOLUTION OF THE  
WEST SOUND UTILITY DISTRICT BOARD OF COMMISSIONERS  
AUTHORIZING A PROFESSIONAL SERVICES CONTRACT  
WITH HDR ENGINEERING FIRM TO DESIGN  
THE VILLA CARMEL LIFT STATION**

**WHEREAS**, although West Sound Utility District has allocated \$200,000 in the 2014 Sewer Capital for the construction and relocation of the lift station in Villa Carmel development, it is estimated that the design and construction cost will be closer to \$350,000; and

**WHEREAS**, the District staff sought proposals from qualified engineering firms for the planning and design of the lift station; and

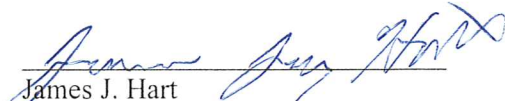
**WHEREAS**, the District has concluded that the firm of HDR Engineers was best suited to meet the District's professional service needs for this project; NOW, THEREFORE,

**THE BOARD OF COMMISSIONERS OF WEST SOUND UTILITY DISTRICT  
HEREBY RESOLVES:**

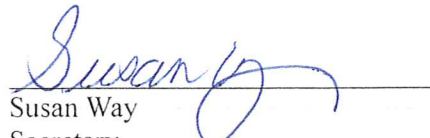
**Section 1.** The Board of Commissioners hereby approves the attached professional services contract (Exhibit "A") and scope of work from HDR Engineers, Inc. for the preparation of engineering plans for the Villa Carmel lift station, and further authorizes the General Manager to sign the agreement with HDR Engineers. The base engineering services outlined in the contract shall not exceed \$68,028, plus a \$5,000 contingency for potential HDR services during bidding and construction.

**APPROVED and ADOPTED** by the Board of Commissioners of West Sound Utility District at a Board meeting scheduled on August 4, 2014.

**WEST SOUND UTILITY DISTRICT**  
Kitsap County, Washington

  
James J. Hart  
Chairperson

  
Jerry Lundberg  
Vice Chairperson

  
Susan Way  
Secretary

# **EXHIBIT “A”**

## **Scope of Services**

### **West Sound Utility District Villa Carmel Lift Station Design**

July 2014



606 Columbia Street NW  
Suite 200  
Olympia, WA 98501  
(360) 570-4400

# **Scope of Services**

## **West Sound Utility District**

### **Villa Carmel Lift Station Design**

---

West Sound Utility District (District) has retained the services of HDR Engineering, Inc. (HDR) to provide design and construction assistance to the District for the new Villa Carmel Lift Station.

HDR will make all reasonable efforts to contain project-related costs limited within the authorized funding, and notify the District of any changes in scope, outstanding issues, concerns or other considerations that may influence the actual project costs or require a change in scope or an amendment to HDR's authorized budget.

The project work will be organized under the tasks listed below.

## **1.0 Project Management**

### **Objectives**

The purpose of this task is to monitor, control, and adjust the scope, schedule, and budget as well as provide monthly status reporting, accounting, and invoicing, and management of the project team in coordination with District staff.

### **HDR Services**

1. Prepare monthly invoices and status reports describing services completed during the period, issues to be addressed, and services planned for the next period.

### **District Responsibilities**

1. Prompt processing and payment of compliant invoices. The District will make one progress payment each month provided invoices are complete and accurate from the consultant and in the format requested by the District.

### **Assumptions**

1. The project duration for Tasks 1 through 3 will be six consecutive months and is assumed to occur between August 2014 and January 2015. Task 4 is an optional Task during construction.

### **Deliverables**

1. Monthly reports and invoices (one copy with invoice).
2. Quality control reviews on all deliverables.

## **2.0 Preliminary Design**

### **Objective**

Prepare a Preliminary Design Technical Memorandum (TM) to confirm the design criteria and identify the improvements to be included in the final design. The TM will document the following:

1. The service area and design flows to be served by the Villa Carmel Lift Station.
2. The design criteria utilized for evaluation and sizing of the proposed improvements.
3. Capacity analysis for sizing the proposed lift station, pumps, appurtenances, and associated forcemain.
4. 30% design drawings.

### **HDR Services**

1. Review survey and geotechnical data provided by the District.
2. Evaluate/Confirm the existing service area tributary to the Villa Carmel Lift Station.
  - a. Service area will be illustrated on a basin map.
  - b. Confirm current and future buildout flows for basins tributary to Villa Carmel Lift Station.
3. Perform hydraulic analysis to confirm size and depth of wetwell, submersible pumps, and associated forcemain.
4. Prepare a draft TM.
5. Prepare 30% design drawings. This will include the conceptual site layout and mechanical section for the Lift Station.

### **District Responsibilities**

1. Contract with both a registered land surveyor and geotechnical professional to provide required topographic data and soils investigation reports. The District will provide all coordination required for scheduling these services.
2. Contact electric utility for new construction electric service application and location of facility new service transformer, if required. Provide electric utility new service information to HDR design team.
3. Provide existing hydraulic model, if available.
4. Provide digital copy of forcemain alignment, gravity sewer mains, if available.
5. Provide pump curves and run times for existing lift station, if available.
6. Review and compile staff comments on draft TM.

### **Assumptions**

1. The District will obtain licensed surveyor to perform topographical survey. The Surveyor will have the following responsibilities:

- a. Provide 1" = 20', one foot contour interval design mapping of the project area.
- b. Request a design locate for utilities within the right of way.
- c. Provide field survey of all accessible utility features, located service paint marks, and interior information of all accessible storm, water, and sanitary structures, power within the project area.
- d. Locate existing lift station and provide measure down data.
- e. Provide elevations and locations of all surface features within project area (road, signs, fences etc).
- f. Provide the location of street right of way and property lines within the project area.
- g. Establish survey control points as required.
- h. Provide horizontal location and elevation of utility pothole locations.

The Surveyor will provide data to the District in the following format.

- a. Mapping using APWA standard layers, line types, and symbols in AutoCAD or later format.
  - b. Digital Terrain Model (DTM) in AutoCAD 2013 or later format.
2. The District will obtain a licensed geotechnical engineer to plan and coordinate a field investigation consisting of a minimum of one machine-drilled exploratory boring at the lift station site. The District will locate all utilities prior to field work conducted. The geotechnical engineer will document the findings from the boring in a Geotechnical Report. Providing recommendations for design and construction of the Lift Station facility.
  3. No Record Drawings are available for the construction of the existing Lift Station, gravity sewers or forcemains. The existing PVC forcemain is a 4-inches in diameter installed at minimum 3-foot cover.
  4. The wastewater basin currently serves 90 single family residential customers. The basin is fully built out; no additional wastewater flows are anticipated.
  5. No downstream analysis is required for the existing gravity sewer system.
  6. The existing forcemain has capacity for current/buildout wastewater flows.
  7. The Lift Station will be designed to meet current District Standards.
  8. The District desires to reuse the existing lift station structure for overflow storage (1-hour maximum) as required by the latest edition of the Department of Ecology Sewage Works Design (Orange Book).
  9. Existing Power is available onsite (single phase). The District requests to utilize variable frequency drives (VFDs) to eliminate the requirements for three phase power. VFDs should be installed in locations where the maximum ambient temperature does not exceed 40 [degrees] C (104 [degrees] F).
  10. No odor control facilities are required at this location per District staff.
  11. The District desires the use of a precast concrete CXT building for housing all electrical and controls systems.
  12. The District requests to provide a generator set connection on the exterior of the building for emergency use.

13. The District requests to utilize the existing Lift Station wetwell for overflow emergency storage (1-hour minimum per Department of Ecology Sewage Works Design Manual).
14. The District will provide all public relations with the surrounding neighbors.
15. The District will obtain all permits required for construction of the Lift Station and associated facilities.
16. The District will address removal of the large tree on the site.
17. The draft TM will be up to 2 pages maximum.
18. The 30% design drawings will be included within the appendix of the TM and will consist of one (1) Civil Site Layout Plan sheet and one (1) Mechanical Section Plan of the Lift Station.
19. The District will provide comments back to HDR on the draft TM within two weeks of delivery.

### **Deliverables**

1. Draft TM (one file in pdf format)

## **3.0 Final Design**

### **Objective**

Prepare drawings, contract documents, and engineer's opinion of probable construction cost based upon the TM in Task 2.0.

### **HDR Services**

1. Prepare drawings, contract documents, and engineer's opinion of probable construction cost at the 90% and 100% design levels. Construction drawings will be comprised of the following:
  - a. Cover Sheet / Location, Vicinity Map, Drawing Index (1 Sheet)
  - b. General – Legend Abbreviations, Electrical Legend (2 Sheets)
  - c. Civil Sheets (6 Sheets)
    - i. Site Plan
    - ii. Drainage, Grading, and ESC Plan
    - iii. Civil Details
    - iv. ESC Notes and Details
  - d. Mechanical Sheets (5 Sheets)
    - i. Wetwell Plan and Sections
    - ii. CXT Building Layout
    - iii. Detail Sheets
  - e. Structural Sheets (3 Sheets)
    - i. CXT Building foundation

- ii. Structural General Notes
- iii. Details
- f. Electrical (5 Sheets) [Lift station Duplex or Triplex Wet Well Sewage Pumps]
  - i. Site Plan (1 sheet)
  - ii. One Line Diagram (1 sheet)
  - iii. Lift Station Power, Grounding and Lighting Plan (1 sheet)
  - iv. Conduit & Wiring Interconnection Block Diagram (1 sheet)
  - v. Conduit and Cable Schedule (1 sheet)
- g. Instrumentation and Controls (4 Sheets) [Lift station Duplex Sewage Pumps]
  - i. Control Schematics and Details (3 sheets total)
  - ii. Block Diagram PLC System (1 sheet)

### **District Responsibilities**

1. Provide input and written comments. Written comments shall be compiled onto one set of District review comments.
2. Provide HDR with electronic version of the District's Division 0 and Division 1 specifications.

### **Assumptions**

1. Drawings:
  - A. The Drawings will be per HDR standards. District Standard Details will be used where applicable.
2. Contract Documents:
  - A. Contract documents will include the front end legal documents, general conditions (Division 0 and Division 1) and technical specifications
    - i. Division 0 documents will be developed in accordance with the standard District bidding procedures using District front end specifications (e.g. Invitation to Bid, Instructions to Bidders, Bid Form)
    - ii. Division 1 documents will be Standard General Conditions of the Construction Contract as prepared by the Engineers Joint Contract Documents Committee (EJCDC) that are based on Construction Specification Institute (CSI) format.
    - iii. Technical specifications will be based on Construction Specification Institute (CSI) 48 breaker format.
3. 100% Submittal of Drawings and Contract Documents will be suitable for bidding and will be stamped by a professional engineer licensed in the State of Washington.
4. Hydraulics of pump station and force main will be validated. Surge analysis of pumps and forcemain is not included in this scope of services.
5. Acoustic study of the pump station is not included in this scope of services.
6. Traffic Control Plan is not included in this scope of services.

7. Traffic Control Plan will be the responsibility of the Contractor and reviewed by the District.
8. Dewatering Plan is not included in this scope of services. Dewatering Plan will be the responsibility of the Contractor and reviewed by the District.
9. The District requests to relocate the existing Mission Control telemetry components from the existing control panel to the new panel. Integration (i.e., connecting, programming, testing) of the existing telemetry system to the new control panel will be a requirement of the contractor. No design services are included related to this integration.
10. The District requests to replace the existing floats with a Multitrode pump controller.

## **Deliverables**

1. 90%, and 100% drawings (one file in pdf format, half-size drawings 11" x 17")
2. 90%, and 100% technical specifications (one file in pdf format)
3. 90%, and 100% Engineer's Opinion of Probable Construction Cost (one file in pdf format)

## **4.0 Assistance During Bidding & Construction**

### **Objective**

Assist District staff as requested (and as budgeted) during bidding and construction phases of the project.

*Note: The schedule/timing for bidding and construction is not currently known. Therefore, this task identifies services HDR can offer to the District; however, the District's selected services, assistance, and authorized budget for this task will be negotiated at a later time prior to initiating this task. Example scope items include the following:*

### **HDR Services (Potential)**

1. Respond to District staff technical questions.
2. Prepare addenda as may be required during bidding and participate in pre-bid conferences, respond to questions from bidders, and provide clarification or interpretations of the bidding documents.
3. RFIs – Prepare and distribute responses to Requests for Information (RFIs) by Contractors or the City.
4. Prepare Change orders.
5. Submittals – Prepare and distribute reviews of material and equipment submittals.
6. Construction Meetings – Attend Bi-weekly meetings to review progress and issues relevant to completing the work. Prepare and distribute meeting minutes.
7. Construction Field Observation – Provide services onsite as requested by District staff.
8. Project Closeout – Provide final field visits, document observed deviations from contract requirements, and provide a final punch list in the form of a brief letter-report to the City.



- Record Documents – Prepare and supply completed record drawings based on contractor and/or City-provided field records and mark-ups.

**District Responsibilities**

- Issue documents for bidding.
- Issue addenda to prospective bidders.
- Contract Administration – Provide construction contract administrative functions including issuing notice-to-proceed and monthly progress and pay estimates.
- Attend construction progress meetings.

**Assumptions**

- Duration for Task 4.0 is assumed to be six consecutive months but the schedule is unknown, thus the budget for Task 4.0 will be agreed to prior to task initiation. HDR has included a budget of \$5,000 (not to utilize or exceed without District authorization).

**Deliverables**

- To be determined.

**Schedule**

A summary of key schedule milestones is summarized below.

Task/Key Milestone	Duration
Task 1.0 – Project Management	6 to 12 months
Task 2.0 – Preliminary Design	1 to 2 months
Task 3.0 – Final Design	4 to 5 months
Task 4.0 – Assistance During Bidding & Construction	6 months

**Fee Estimate for Professional Services**

The estimated fee to complete the professional services identified in this Scope of Services is offered on a **time-and-materials basis not-to-exceed \$73,028**. The table on the following page provides a breakdown of estimated professional services costs for the tasks provided in this scope of services.

Professional services rendered in connection with this scope of services will be billed on a time and materials basis for actual hours rendered by HDR employees up to the estimated total contract amount in accordance with the terms and conditions outlined in the signed Agreement.

