



June 14, 2019

Dawn Bell
Project Manager, Development Center
City of Lee's Summit
220 SE Green Street
Lee's Summit, MO 64063

Via Email: Dawn.Bell@cityofls.net

Re: Summit Waves – Wave Pool - Plan Review Responses

Dear Ms. Bell:

We received initial review comments on the Summit Waves Wave Pool Addition and our responses are as follows:

June 5, 2019 Plan Review Conditions

Review Status:

Required Corrections:

| Planning Review | Shannon McGuire (816) 969-1237 | Planner Shannon.McGuire@cityofls.net | Corrections |
|-----------------|-----------------------------------|---|-------------|
|-----------------|-----------------------------------|---|-------------|

1. On sheet L-1.1, please show the location of all oil/gas wells within the subject property. If none are present, please add a note stating such and cite the source of your information. **No oil/gas wells found and note added citing source.**
2. Please provide details on the total height of the proposed pole and wall mounted lighting. **Information provided see Luminaire Schedule Sheet E-0.**
3. Sheet E-7 provides cut sheet information for wall-mounted lighting but sheet E-8 does not show the location. Please provide information on where the wall mounted lighting will be install, to include the proposed height. Additionally, wall-mounted lights shall utilize full cut-off fixtures. Please propose a light fixture that complies with this UDO requirement. **See Revised Fixture Cut Sheet E-7 and Luminaire Schedule on E-0.**
4. Please confirm that no roof or ground mounted equipment is being proposed. **Confirmed.**

5. The sign depicted on sheet A-201 will require a sign permit to be submitted by separate application. **Acknowledged.**

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|---------------------------|---------------------------------|---|-------------|
| Engineering Review | Gene Williams (816) 969-1223 | Senior Staff Engineer Gene.Williams@cityofls.net | Corrections |
|---------------------------|---------------------------------|---|-------------|

1. If placing the private fire hydrant as shown, a backflow vault and backflow assembly is required. This should be shown on the plans, along with a reference to the standard detail for the backflow vault and backflow assembly. A gate valve must be shown on the plan view immediately prior to the vault. Finally, the method used to drain the sump shown on the standard detail must be specifically shown in the form of a site-specific design (i.e., drain to daylight, drain to a storm structure, or creation of an infiltration trench). **The fire hydrant has been relocated within Jefferson Street Right of Way to make the fire hydrant public. With the fire hydrant now being public, the backflow vault and assembly are no longer needed.**

2. If placing the fire hydrant as shown, a cut-in tee is required. A wet tap is not allowed. **Acknowledged.**

3. There still appears to be confusion on water meter sizing. The City does not utilize 2.5 " domestic water meters. **The Meter will be 2".**

4. The legend on Sheet C-5 is missing the symbol for what appears to be a water meter. **See Revised Legend on Sheet C-5.**

5. The City does not allow 3" corporation stop installations on any water mains. The maximum size is 2 inch, before a cut-in tee is required. **Acknowledged - Size will be 2" as Required.**

6. Sheet C-5: It is assumed the symbol at the end of the 6" water line is a new fire hydrant. However, nothing is defined within the legend on this sheet other than the symbol for "existing fire hydrant". Finally, the gate valve should be shown just prior to the in-line fire hydrant, not at the tee. **Acknowledged.**

7. Sheet C-5: The domestic water line material is called-out as PVC. Please see standard detail WAT-11 for specific information related to copper requirements for the domestic water line. The plans do not comply with these requirements from the public main, to the distance shown on WAT-11 (i.e., 10 feet beyond the meter well minimum distance). **Acknowledged.**

8. Sheet C-5: The material for the fire line serving what appears to be a fire hydrant should be specified as C-900. **Acknowledged.**

9. Are you absolutely certain you will need a 3" water meter (assuming the 2.5" call-out was a typographical error)? The cost for this meter is over \$70,000, and it is not clear whether you will need this size meter. In addition, the City does not provide a meter well or lid for this size meter. You will

need to provide a site-specific design for any meter well 3 inch and higher. **Meter will 2" - See Revised Plans.**

10. A separate traffic control plan was provided, but does not appear to contain sufficient detail to meet City standards. As an example, how will access be provided to the daycare facility on the west side of Jefferson St.? There is a considerable amount of traffic for drop-off and pickup, with the middle turn lane used extensively. As shown, it does not appear access will be provided to this business owner. Please see Traffic comments related to these deficiencies. **See Revised Traffic Plan.**

11. As requested in the previous applicant letter, the trench check detail for the sanitary sewer lateral was missing from the plan set. This is a City standard detail. **See Revised Plans with Required Detail.**

12. As requested in the previous applicant letter, a curb and gutter detail was still missing which shows the extension of Mo DOT Type 5 aggregate, 95% compacted subgrade a minimum of one (1) foot beyond the back of curb. This is required in order to prevent "curb rotation" after placement. **Detail has been added to sheet C-5.**

13. The resubmittal did not appear to include the cost estimate requested in the previous applicant letter. Please see comment #21 for specific itemized costs that are required. In addition, a backflow vault and backflow assembly will also be required, as well as traffic control. **Acknowledged - See Detailed Civil Utility OPC and 100% Construction Documents OPC Attached.**

Fire Review

Jim Eden
(816) 969-1303

Assistant Chief
Jim.Eden@cityofls.net

Corrections

1. All issues pertaining to life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to the safety to fire fighters and emergency responders during emergency operations, shall be in accordance with the 2018 International Fire Code. **Acknowledged.**

2. Provide an overall Site Plan for the project. **See Sheet L1.1.**

3. IFC 503.1.1 - Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. Exception: The fire code official is authorized to increase the dimension of 150 feet (45 720 mm) where: 1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3. 2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided. **Acknowledged. Fire Lane is as required per Fire Marshall.**

Action required: Provide a fire lane up to the building for emergency access. **Acknowledged.**

4. IFC 503.2.3 - Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities. **Acknowledged.**

Action required: The fire lane shall carry the weight of fire apparatus, including the area over the subsurface detention. **Acknowledged.**

5. IFC 503.4 - Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 shall be maintained at all times. **Acknowledged.**

Action required: Removable bollards are not permitted. Provide a gate with a Knox padlock.

6. IFC 506.1 - Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location. The key box shall be of an approved type listed in accordance with UL 1037, and shall contain keys to gain necessary access as required by the fire code official. 506.1.1 Locks. An approved lock shall be installed on gates or similar barriers when required by the fire code official. **Acknowledged – See Revised Plans.**

Knox padlocks will be sufficient. Boxes are not required. **Acknowledged.**

7. IFC 507.5.1 - Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 300 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

Action required: Provide a hydrant plan. Hydrants shall be accessible from fire department access. **A hydrant has been provided on the west side of the pool, along Jefferson Street. The Fire Code states that the building must be within 300 feet of a fire hydrant, which the proposed fire hydrant meets this criteria. We could relocate this fire hydrant to be closer to the proposed fire lane, however, it would require extending the existing 12" water line north. This 12" water line would dead end or could potentially tie in to the 4" water line on the west side of Jefferson Street - There is no other known water line nearby that could create a looped system. If this is the preferred option, we would propose the two other water taps be installed on this new 12" line.**

The water line locations, as shown on this plan, are due to our first round of city comments, received on May 16th, from the engineering department. The comment stated not to extend the 12" water line. We have not been able to reach the engineering department concerning this issue, therefore we are

continuing to show the three water connections off the existing 12" water line. Please let us know how to proceed.

8. IFC 105.6.20 - A Hazardous materials permit is required for the using, dispensing, transporting, handling, and/or storing of extremely hazardous substances. "Extremely Hazardous Substances (EHS) Facilities" are defined as facilities subject to the provisions of Superfund Amendments and Reauthorization Act of 1986 (SARA TITLE III), Section 302, for storing, dispensing, using, or handling of listed chemicals in excess of their threshold planning quantities (TPQ). See amended Section 5001.4 of the 2018 International Fire Code.

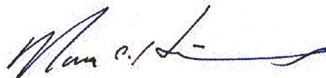
Action required: Provide a listing of materials and quantities to be stored and used. **Provided - See SP Sheets.**

| | | | |
|------------------------------|--------------------------------|--|--------------------------|
| Traffic Review | Michael Park (816) 969-1820 | City Traffic Engineer Michael.Park@cityofls.net | No Comments |
| Building Codes Review | Joe Frogge (816) 969-1241 | Plans Examiner Joe.Frogge@cityofls.net | Approved with Conditions |

Please refer to the revised and updated Review Plans and Bid Set Dated June 2019 and any supplemental information provided as required based on the above comments.

If we can answer any questions, please feel to us at our office (972) 770-1300.

Sincerely and With Regards,



Mark C. Hatchel, State of Missouri LA-2011010334
Vice President and Senior Project Manager



Summit Waves Wave Pool Addition
Lees Summit, MO

100% Construction Documents Opinion of Probable Cost

6/14/2019

BASE BID

| Item | Unit | Quantity | Cost | Item Cost |
|--|-------------|-----------------|----------------|-----------------------|
| Grading and Site Preparation Allowance | LS | 1 | \$250,000.00 | \$250,000.00 |
| Utilities and Storm Drainage Allowance | LS | 1 | \$350,000.00 | \$350,000.00 |
| Concrete or Asphalt Trails and Sidewalks | SF | 3,517 | \$7.00 | \$24,619.00 |
| 5" Concrete Pool Deck Paving | SF | 20,839 | \$9.00 | \$187,551.00 |
| 6" Concrete Fire Lane and Service Drive | SF | 8,193 | \$11.00 | \$90,123.00 |
| Wave Pool Mechanical/Bath House Building | LS | 1 | \$800,000.00 | \$800,000.00 |
| Wave Pool Equipment Allowance | LS | 1 | \$150,000.00 | \$150,000.00 |
| Wave Pool | LS | 1 | \$2,000,000.00 | \$2,000,000.00 |
| 16 FT Square Shade Structures (By Owner) | EA | 12 | \$14,000.00 | \$168,000.00 |
| 30 Hex Group Shade Structures (By Owner) | EA | 1 | \$30,000.00 | \$30,000.00 |
| Vinyl Coated Chain Link Fence and Gates | LF | 620 | \$70.00 | \$43,400.00 |
| Landscape and Irrigation Allowance | LS | 1 | \$150,000.00 | \$150,000.00 |
| Site Furnishings Allowance (By Owner) | LS | 1 | \$50,000.00 | \$50,000.00 |
| Testing Allowance (By Owner) | LS | 1 | \$50,000.00 | \$50,000.00 |
| Contingency Allowance | LS | 1 | \$250,000.00 | \$250,000.00 |
| Indirect Costs (Architecture and Engineering, Survey, Geotech) | LS | 1 | \$390,000.00 | \$390,000.00 |
| TOTAL PROJECT COST | | | | <u>\$4,983,693.00</u> |
| TOTAL PROJECT COST (SAY) | | | | \$5,000,000.00 |

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

SUMMIT WAVES WAVE POOL ADDITION - UTILITIES AND DRAINAGE - OPINION OF PROBABLE CONSTRUCTION COSTS

100% Construction Documents - 6/14/2019

| <u>ITEM</u> | <u>UNIT</u> | <u>QUANTITY</u> | <u>COST/UNIT</u> | <u>TOTAL COST</u> |
|--|-------------|--------------------|------------------|----------------------|
| CONNECT TO EXISTING MANHOLE | EA | 1 | \$ 2,000.00 | \$ 2,000.00 |
| 4' STANDARD MANHOLE PER LEE'S SUMMIT DETAIL | EA | 1 | \$ 5,000.00 | \$ 5,000.00 |
| 4' DROP CONNECTION MANHOLE PER LEE'S SUMMIT DETAIL | EA | 1 | \$ 5,500.00 | \$ 5,500.00 |
| SEWER CLEANOUT | EA | 3 | \$ 800.00 | \$ 2,400.00 |
| SEWER STUB PER LEE'S SUMMIT DETAIL | EA | 2 | \$ 500.00 | \$ 1,000.00 |
| 8" PVC SEWER | LF | 165 | \$ 40.00 | \$ 6,600.00 |
| 6" PVC SEWER | LF | 40 | \$ 35.00 | \$ 1,400.00 |
| 4" PVC SEWER | LF | 120 | \$ 30.00 | \$ 3,600.00 |
| | | SUBTOTAL | | \$ 27,500.00 |
| CONNECT TO EXISTING 12" WATER | EA | 3 | \$ 1,000.00 | \$ 3,000.00 |
| 12" GATE VALVE | EA | 1 | \$ 3,000.00 | \$ 3,000.00 |
| 6" GATE VALVE | EA | 1 | \$ 1,500.00 | \$ 1,500.00 |
| 12"x6" CUT-IN TEE | EA | 1 | \$ 5,000.00 | \$ 5,000.00 |
| 12"x3" CUT-IN TEE | EA | 1 | \$ 3,000.00 | \$ 3,000.00 |
| 12"x2" CORP STOP | EA | 2 | \$ 1,000.00 | \$ 2,000.00 |
| FIRE HYDRANT PER LEE'S SUMMIT DETAIL | EA | 1 | \$ 5,000.00 | \$ 5,000.00 |
| 1.5" IRRIGATION METER | EA | 1 | \$ 1,800.00 | \$ 1,800.00 |
| 2" DOMESTIC METER | EA | 1 | \$ 2,000.00 | \$ 2,000.00 |
| 2"x3" REDUCER | EA | 1 | \$ 200.00 | \$ 200.00 |
| 2" K COPPER SERVICE LINE | LF | 390 | \$ 15.00 | \$ 5,850.00 |
| 3" K COPPER SERVICE LINE | LF | 150 | \$ 20.00 | \$ 3,000.00 |
| 6" C-900 | LF | 75 | \$ 60.00 | \$ 4,500.00 |
| BENDS (ALL SIZES) | EA | 8 | \$ 400.00 | \$ 3,200.00 |
| WATER SERVICE CONNECTION PER LEE'S SUMMIT DETAIL | EA | 2 | \$ 800.00 | \$ 1,600.00 |
| | | SUBTOTAL | | \$ 44,650.00 |
| REMOVE CONCRETE CURB AND GUTTER | LF | 11 | \$ 17.00 | \$ 187.00 |
| REMOVE PAVEMENT | SF | 235 | \$ 13.00 | \$ 3,055.00 |
| REMOVE SIDEWALK | SF | 110 | \$ 13.00 | \$ 1,430.00 |
| CONCRETE PAVEMENT | SF | 235 | \$ 20.00 | \$ 4,700.00 |
| CONCRETE CURB AND GUTTER PER MDOT DETAIL | LF | 11 | \$ 25.00 | \$ 275.00 |
| SIDEWALK PAVEMENT PER LEE'S SUMMIT DETAIL | SF | 110 | \$ 10.00 | \$ 1,100.00 |
| SILT FENCE, BMPS, INSPECTIONS, MAINTENANCE | LS | 1 | \$ 15,000.00 | \$ 15,000.00 |
| MOBILIZATION | LS | 1 | \$ 15,000.00 | \$ 15,000.00 |
| | | SUBTOTAL | | \$ 40,747.00 |
| STORMTRAP SYSTEM | LS | 1 | \$ 115,000.00 | \$ 113,468.98 |
| TYPE S HEADWALL | EA | 1 | \$ 3,000.00 | \$ 3,000.00 |
| VORTSENTRY STRUCTURE | EA | 1 | \$ 15,000.00 | \$ 15,000.00 |
| 4'X4' JUNCTION BOX WITH DETENTION OUTFALL OPENINGS | EA | 1 | \$ 10,000.00 | \$ 10,000.00 |
| 3"X3" RCB | LF | 3 | \$ 1,000.00 | \$ 3,000.00 |
| 24" RCP | LF | 325 | \$ 70.00 | \$ 22,750.00 |
| 12" RCP | LF | 240 | \$ 60.00 | \$ 14,400.00 |
| 4" PVC | LF | 145 | \$ 10.00 | \$ 1,450.00 |
| | | SUBTOTAL | | \$ 183,068.98 |
| | | CONTINGENCY | | \$ 50,000.00 |
| | | TOTAL | | \$ 345,965.98 |
| | | TOTAL SAY | | \$ 350,000.00 |

Notes:

1. Review all notes and assumptions . These OPC's are not intended for basing financial decisions, or securing funding. Since Kimley-Horn & Associates, Inc. has no control over the cost of labor, materials, equipment, or services furnished by others, or over methods of determining price, or over competitive bidding or market conditions, any and all opinions as to the cost herein, including but not limited to opinions as to the costs of construction materials, shall be made on the basis of experience and best available data. Kimley-Horn & Associates, Inc. cannot and does not guarantee that proposals, bids, or actual costs will not vary from the opinions on costs shown herein. The total costs and other numbers in this Opinion of Probable Cost have not been rounded. This practice of not rounding is not intended to reflect or imply a level of certainty with respect to accuracy of the amount.