```
list_exists_wf  THM

⊢  ∀T:Type, P:(T→Prop), L:T List. ∃x∈L.P(x) ∈ Type  by UnivCD
|
1. T : Type
2. P : T→Prop
3. L : T List
⊢  ∃x∈L.P(x) ∈ Type  by ListInd 3
|
|\
| ⊢  ∃x∈nil.P(x) ∈ Type  by Rewrite (HigherC list_exists_unrollC) 0
| |
| ⊢  False ∈ Type  by Auto
|
.\
. 4. u : T
. 5. v : T List
. 6. ∃x∈v.P(x) ∈ Type
. ⊢  ∃x∈(u.v).P(x) ∈ Type  by Rewrite (HigherC list_exists_unrollC) 0
. |
. ⊢  (P(u) ∨ ∃x∈v.P(x)) ∈ Type  by Auto
END
```