

DAVID HILL URBAN RESERVE AREA

Total Acres	328	Parcel Acres	321
Gross Vacant Buildable Acres	175	Net Vacant Buildable Acres	133

General Description (see attached map)

The David Hill Urban Reserve Area is an irregular shaped area on the northwest edge of Forest Grove located in the vicinity of NW David Hill Road. The UGB forms the boundary on the eastern side and rural reserve land is to the west, north and south. The high point of the area is near David Hill Road and the land slopes down to the south towards NW Gales Creek Road and east towards NW Thatcher Road losing 440 and 360 feet respectively. Access to the area is provided by NW David Hill Road, NW Gales Creek Road and NW Thatcher Road.

Parcelization, Building Values, Development Pattern (see attached aerial photo)

This small reserve area contains 23 parcels that range from just under an acre to 57 acres in size. Eleven parcels are greater than ten acres in size and four parcels are greater than 25 acres. Two parcels are split by the urban reserve boundary with a small portion of each already inside the UGB. The area contains rural residences mostly on forested parcels and very limited agricultural activities. Overall, 17 of the 23 parcels have improvements with a median value of \$196,020. There are two improvements with a building value over \$250,000. A City of Forest Grove water reservoir is located in the reserve area.

GOAL 14 LOCATIONAL FACTORS

Efficient accommodation of identified land needs

This reserve area is almost entirely composed of land with slopes greater than ten percent, which eliminates the ability to accommodate employment land needs. There also are some significant locations of land with slopes greater than 25%, which could reduce the amount of residences or the ability to design a compact residential community. This area is able to accommodate a residential land need.

Orderly and economic provision of public facilities and services

Sanitary Sewer Services

Capacity of existing facilities to serve areas already inside the UGB

The City of Forest Grove operates a local sanitary sewer utility that feeds into the regional sanitary sewer system operated by Clean Water Services (CWS). CWS provides wastewater treatment through the Rock Creek Waste Water Treatment Plant. CWS has indicated that the Rock Creek treatment plant has sufficient capacity. The City of Forest Grove has a current project to replace old pipes within their system.

Capacity of existing facilities to serve areas proposed for addition to the UGB

The estimated peak flow added to the system with the development of the reserve area is approximately 2.0 cfs (1.3 MGD). The southern portion of the site would connect to an existing City of Forest Grove gravity sewer line in NW Gales Creek Road. The northern portion of the site would connect to an existing City of Forest Grove gravity sewer line in NW Thatcher Road. Existing lines vary from 12-inch to 21-inch. City of Forest Grove lines connect to a CWS interceptor near Hwy 47 and Sunset Drive and waste is conveyed to the Hillsboro and/or Rock Creek treatment plants. CWS indicated that the Hillsboro treatment plant is undergoing improvements; however, there are no plans for future expansion. Flows that exceed the capacity of the Hillsboro treatment plant are sent to the Rock Creek treatment plant which has available capacity. Available capacity within the City of Forest Grove and CWS sewer lines is unknown at this time.

Impacts to existing facilities that serve nearby areas already inside the UGB

In order to connect to existing facilities, sewer lines will need to be constructed through the undeveloped portion of David Hill (inside the UGB). If the David Hill area is developed prior to the reserve area, those lines would be constructed with capacity for the reserve area. Impacts to the wastewater system are primarily financial. New wastewater mains must be provided to allow development of the reserve area and a small upgrade to the treatment plant may be necessary. The amount of any upsizing that would be needed is not known at this time. The upgrades and financial impacts are beyond the scope of this narrative.

Sanitary Sewer Piping Costs

Sanitary sewer piping costs	Cost (in millions)
Less than 12" pipe (gravity)	\$3.60
12 - 18" pipe (gravity)	\$1.35
Total	\$4.95

Water Distribution Services

Capacity of existing facilities to serve areas already inside the UGB

The City of Forest Grove is currently in the process of updating their Water Master Plan. According to the City, if current growth trends continue, they will have enough water capacity through the year 2050. If growth trends exceeded expectations, the City would have options to purchase

additional water or become a partner in the Willamette Water Supply. The City has its own treatment plant that can treat 3.7 MGD. They can supplement with up to 10 MGD of water from the Joint Water Commission. Treatment capacity is sufficient for areas currently within the UGB. City of Forest Grove water storage capacity is sufficient based on current growth trends. Anticipated industrial growth within the City could create a storage deficit within the next 10 years. If the industrial growth occurs, the city plans to utilize SDC funds to construct additional storage. A currently undeveloped area of David Hill (located within the existing UGB) is located at an elevation higher than what they can serve with existing storage. New storage and associated pumps will be needed to serve this area of the UGB. The City indicated that most piping within the current UGB is sufficient; however, some piping within the David Hill area may need upsizing. If needed, these improvements would likely be completed by developers, as development occurs.

Capacity of existing facilities to serve areas proposed for addition to the UGB

Availability of water for the reserve area appears to be adequate; or they will be able to generate the supply as this area is urbanized. New storage and associated pumps are necessary to serve the reserve area as well as the David Hill area as noted above. Once constructed, this storage could also be utilized by the David Hill reserve area if sized appropriately. The City indicated that some piping within the David Hill area already inside the UGB may need upsizing. If needed, these improvements would likely be completed by developers, as development occurs.

Impacts to existing facilities that serve nearby areas already inside the UGB

New reservoirs, water pumps, and water mains will be needed to develop the area. For the purpose of this report and cost estimate, it is assumed that a water line will be constructed in NW Thatcher Road along the boundary of the existing undeveloped David Hill area, in order to connect to existing facilities. If the David Hill area (inside the UGB) is developed prior to the reserve area, then the water line would likely be constructed with that development. The amount of any upsizing from the serving utility that would be needed is unknown at this time.

Water Costs

Water piping/storage/pumping costs	Cost (in millions)
12" and smaller	\$2.49
18" and larger	\$4.45
Storage/pumping	\$1.75
Total	\$8.69

Storm Sewer Services

Capacity of existing facilities to serve areas already inside the UGB

There is no indication of issues with existing stormwater management facilities that serve the land inside the UGB.

Capacity of existing facilities to serve areas proposed for addition to the UGB

Stormwater will be conveyed, treated, and disposed of within the reserve area, therefore, it is not anticipated that existing facilities would be utilized.

Impacts to existing facilities that serve nearby areas already inside the UGB

Stormwater will be conveyed, treated, and disposed of within the reserve area; therefore, no impacts to existing facilities are anticipated.

Storm sewer conveyance and water quality/detention costs for roadways

Conveyance & water quality/detention costs	Cost (in millions)
Conveyance	\$7.94
Water quality/detention	\$7.35
Total	\$15.29

Transportation Services

Capacity of existing facilities to serve areas already inside the UGB

Roadway: All of the roads in Forest Grove have an acceptable volume/capacity ratio (<0.9) for the 2015 pm peak. Highway 47 between NW David Hill Road and NW Martin Road and Pacific Ave between Cornelius and E Street are classified as high injury corridors for automobiles. 19th Ave between B Street and Pacific Ave is classified as a high injury corridor for pedestrians.

Transit: TriMet bus line 57 provides service to Forest Grove from the Beaverton Transit Center along the Pacific Ave/19th Ave couplet. Line 57 connects with the MAX Light Rail Blue Line in Hillsboro. Grove Link is a locally run bus service that serves a greater part of the city and connects residents to downtown Forest Grove and TriMet line 57.

Bike: Forest Grove has almost 9.5 miles of dedicated bike lanes, 3.5 miles of established bikeways and a handful of streets considered bike friendly. Most of these facilities are either focused on the Town Center and Pacific University or provide routes along the edge of the city paralleling Highway 47. Significant portions of the city do not have bike facilities including employment areas.

Pedestrian: Most of the residential neighborhoods in Forest Grove have sidewalks including the older historic neighborhood and more recent development. The Town Center is well served by sidewalks however the employment areas are not. The Gales Creek Trail and the Highway 47 Trail connect the outer edges of the city with some nearby residential areas.

Capacity of existing facilities to serve areas proposed for addition to the UGB

Roadway: All of the roads in Forest Grove have an acceptable volume/capacity ratio (<0.9) for the 2015 pm peak.

Transit: TriMet bus line 57 does not run near the reserve area with the closest transit stop is well over two miles away at B Street and 19th Ave. Grove Link stops approximately three-quarters of a mile from the reserve area at Watercrest Road and Forest Gale Drive.

Bike: The Emerald Necklace Trail that can be accessed off of Ridge Pointe Drive runs through Forest Glen Park to NW Gales Creek Road where it connects to a dedicated bike lane that runs almost the entire way to downtown. However the only way to access the trail from the reserve area is to follow local neighborhood streets three-quarters of a mile due to steep slopes and the development pattern of the adjacent homes within the UGB.

Pedestrian: The sidewalks within the nearby residential neighborhoods do not connect to the reserve area and given the existing development pattern it would be difficult to connect to them in the future, with the exception of one location near NW David Hill Road.

Impacts to existing facilities that serve nearby areas already inside the UGB

Roadway: NW Gales Creek Road, NW David Hill Road, NW Thatcher Road and Forest Gale Drive would see additional traffic as a result of urbanization.

Transit: There is potential impact to TriMet bus line 57. See transit analysis below.

Bike: The bike lane on NW Gales Creek Road is the only bike facility that may see additional use, especially if the bike lane is extended 3,000 feet to the reserve boundary.

Pedestrian: The existing sidewalks within the nearby residential neighborhoods would not be impacted.

Need for new transportation facilities and costs (see attached transportation map)

NW Gales Creek Road will need to be improved to urban arterial standards. NW David Hill Road will need to be improved to urban collector standards and four new collectors are needed to provide access to the central portion of the area and additional connections to the east.

Facility Class		
Arterials	Type	Cost (in millions)
	Existing/Improved	\$34.10
Collectors	Type	Cost (in millions)
	Existing/Improved	\$17.60
	New	\$70.45
Total		\$122.15

Provision of public transit service

TriMet evaluated the reserve area for providing transit service. TriMet could provide services to the reserve area although there is no guarantee of service. Actual service depends on the level of development in the expansion area and in the corridors leading to the reserve area. Service could

be provided at 30 minute headways for all day service seven days a week by extending line 57 with two additional buses at a capital cost of \$800,000 (recurs every 16 years). Annual service cost is \$1,310,000 and grows 2% per year.

Prior to land being included in the UGB a more detailed concept plan, consistent with the requirements of Metro's Urban Growth Management Functional Plan Title 11, is required. This concept plan process will develop more refined public facility and service needs and cost estimates.

Comparative environmental, energy, economic and social consequences (ESEE analysis)

Environmental

Two different sections of a stream flow south along the eastern edge of the reserve area for approximately 2,585 feet. All but 460 feet of the stream is located within an area of slopes greater than 25% and is mostly wooded. There is riparian habitat associated with the stream sections along with a few small locations of upland habitat identified. There are no wetlands or floodplains identified in the reserve area. The land east of the stream inside the UGB is either owned by the City of Forest Grove as open space or is developed with single family homes that face the opposite direction with no connection potential. This eliminates the ability or need for any east-west road connections that would impact the stream corridor. Given the increased protection levels for streams, habitat areas and steep slopes within the UGB and the adjacent land uses to the east inside the UGB, urbanization of the area can occur with minimal impact to this stream corridor and habitat areas.

Energy, Economic & Social

This small reserve area is a mixture of forested parcels, rural residences and agricultural activities on a hill that descends 400 feet from the high to the low point. Much of the land is on slopes greater than 25% that would result in a less dense development pattern. This will reduce the overall urbanization impact on the small number of existing residents in terms of loss of sense of place and rural lifestyle. Directly to the east is a large area of land that is inside the UGB but is currently undeveloped. Once this area is developed to urban levels, the loss of the rural lifestyle for the current residents of the reserve area will be less and they will be closer to established urban neighborhoods. The area contains a limited amount of the agricultural activities and the potential economic impact of urbanizing this area should outweigh the loss of the economic impact from these agricultural uses. There are 0.5 miles of stream corridors and approximately 45% of the land is identified as containing riparian or upland habitat areas. The cost for protecting these natural resource areas is considerable in contrast to the potential economic impact of urbanizing the developable lands in a well connected manner. The additional traffic generated through urbanization will impact NW David Hill Road, NW Thatcher Road, and NW Gales Creek Road which could provide negative energy impacts, although currently these roads are fairly lightly traveled. This may change when the substantial amount of land already inside the UGB builds out at urban densities. Overall this reserve area has low economic, social and energy consequences from urbanization.

Compatibility of proposed urban uses with nearby agricultural and forest activities occurring on farm and forest land outside the UGB (see attached resource land map)

To the south across NW Gales Creek Road is a large block of Exclusive Farm Use (EFU) zoned land that extends for a number of miles. All of the land that abuts the south side of NW Gales Creek Road is in field crop production. NW Gales Creek Road would provide a buffer between the agricultural activities occurring in this location and a new urban area, however the road alone would not make the two uses compatible and there could still be complaints due to noise, odor, dust and the use of pesticides and fertilizer. In addition, the improvement of NW Gales Creek Road to urban standards includes its own set of compatibility issues related to street light illumination, weeds and pedestrian movements that can reduce compatibility between the two uses, some of which may be addressed through road design. Urbanization of the reserve area would increase traffic on NW Gales Creek Road which could impact the movement of both farm equipment and goods, although the amount of traffic would not be great from this relatively small reserve area with significant slopes. Thus, the proposed urban uses are not compatible with the extensive nearby agricultural activities occurring on the farm land to the south and mitigation measures on the urban land will be necessary.

To the west between NW Gales Creek Road and NW David Hill Road is a large block of Agriculture Forest (AF20) zoned land that is mostly forested with some sporadic locations of agricultural activities including the David Hill Vineyards and Winery. An unnamed stream flows in a forested ravine along the western edge of the reserve area, essentially buffering the vineyard from the proposed urban area. There does not appear to be any active forest activities occurring to the west, thus the proposed urban uses would be compatible with nearby agricultural and forest activities in this location.

There is a small area of AF20 land on the north side of the reserve area boundary in the vicinity of NW David Hill Road. It appears that some of the property has been logged in the past. In addition, directly north is land zoned Exclusive Forest and Conservation (EFC) that is owned by Stimson Lumber and has been logged in the recent past. While it is conceivable that the trees will be harvested again in the future it is not known what the timing would be given the long-term cycle of forest harvesting. Urbanization of the reserve area would increase traffic on NW David Hill Road which could impact the movement of both forestry equipment and goods, however again the timing of these activities is unknown. Thus, the proposed urban uses are compatible with the nearby forest activities occurring on the forest land in this location in the near term but conflicts may occur in the long-term.

There is a block of EFU zoned land that straddles NW Thatcher Road and extends for a number of miles to the north/northeast. The land directly adjacent to the reserve area is in agricultural production and includes mainly field and nursery crops. Urbanization of the reserve area would impact this small area of agricultural production as there could be complaints due to noise, odor, dust and the use of pesticides and fertilizer. Mitigation measures on this short northern edge may be needed. To the east of NW Thatcher Road is a significant block of nursery and field crops that extend north to NW Kemper Road and east to Highway 47. This area of agricultural activity could be

impacted by the increase in traffic on NW Thatcher Road, although the amount of increased traffic would not be great from this small area with steep slopes. The vast majority of the area east of the reserve that is inside the UGB is still in a rural state. Once this area urbanizes overall impacts to the agricultural activities in this location will increase, especially as more traffic moves north to access Highway 47.

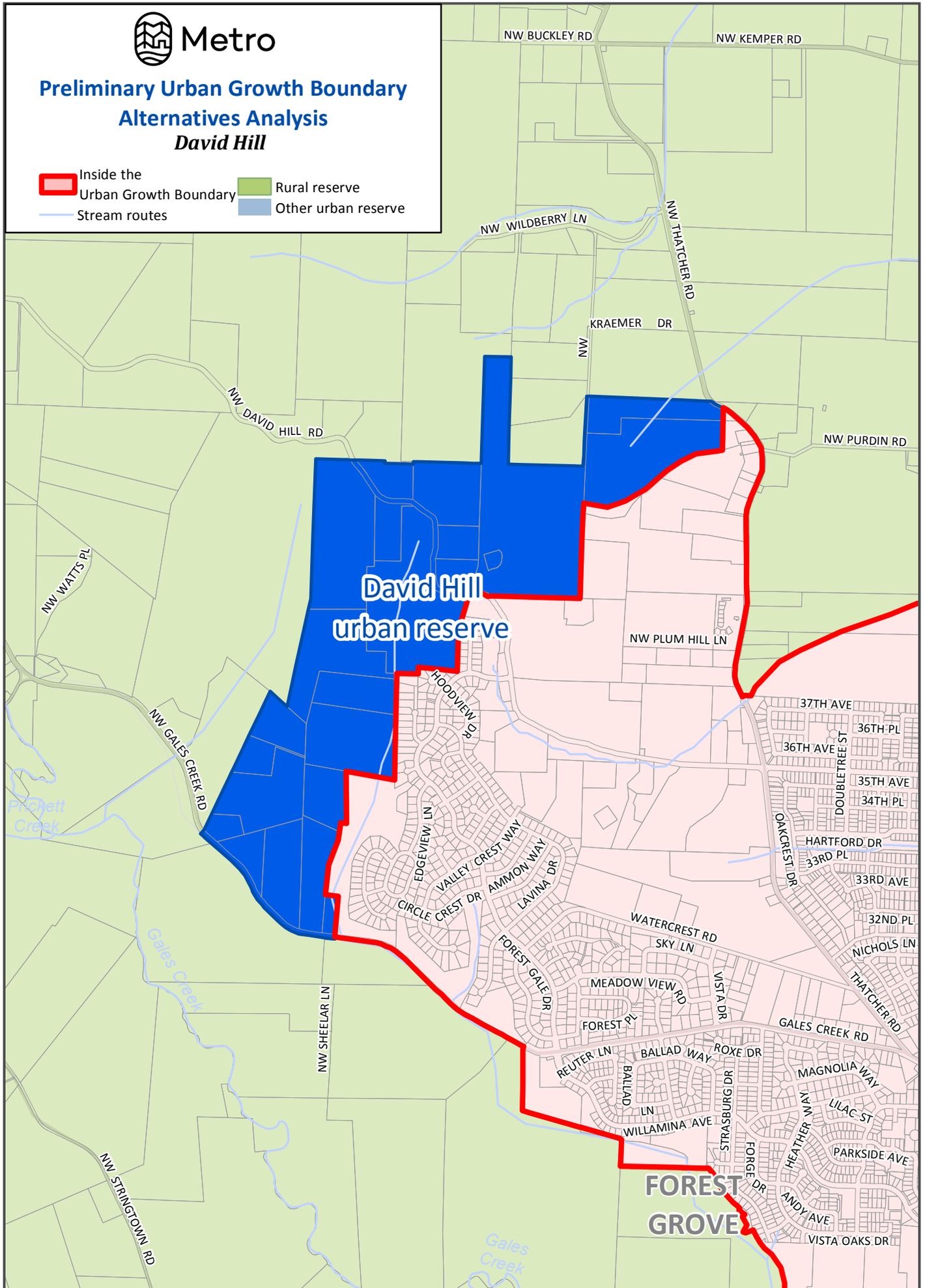
In summary, the proposed urban uses are generally compatible with nearby agricultural and forest activities occurring on farm and forest land outside the UGB to the west and north of the reserve area. As noted above, there may be compatibility issues with the forestry lands to the north at some point in the future if and when those lands are harvested. The proposed urban uses are not compatible with the agricultural activities occurring on the farm land to the south and mitigation measures on the urban land will be necessary. Thus, the reserve area is moderately compatible with nearby agricultural and forest activities occurring on farm and forest land outside the UGB.



Metro

Preliminary Urban Growth Boundary Alternatives Analysis David Hill

-  Inside the Urban Growth Boundary
-  Rural reserve
-  Other urban reserve
-  Stream routes



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