



DATE: April 24, 2017
TO: Honorable Mayor and City Council
FROM: Paul Spence, Community Development Director
SUBJECT: Discussion and Direction on I Street Garage Study

RECOMMENDED ACTION

Staff recommends the City Council review staff and consultant findings and identified options for the I Street parking garage and provide direction to staff to further refine plans for one or more preferred options for the I Street Garage.

DISCUSSION

At its September meeting, City Council directed staff to study the options for providing additional parking adjacent to the existing Livermore Valley Center (LVC) Parking Garage. The intent was to reduce the impact of the parking lost through eventual development of the Livermore Village site and to consider the provision of parking for a downtown hotel. Based on this direction, staff has utilized our existing parking consultant services contract with Watry Buehler to study existing and projected traffic circulation, existing and projected garage operations, different layouts and designs for an I Street garage, and fiscal impacts of each alternative.

This report is to provide Council with an overview of study findings and to seek direction from Council prior to the preparation of the final analysis of parking structure options.

Regulatory Environment:

The City's General Plan establishes a mid-Level of Service (LOS) of D (maximum 45 second delay) at most signalized intersections outside the Downtown. The General Plan specifically exempts Downtown intersections from LOS requirements. This policy recognizes that tradeoffs may be required between vehicular and pedestrian activity and establishes the priority of a comfortable pedestrian environment and encourages walkability in the Downtown.

The Downtown Specific Plan (DSP) also identifies three key objectives for parking in the downtown:

- Ensure that parking facilities are reasonably dispersed so drivers have options depending on their ultimate destination.
- Locate parking facilities to intercept drivers as they enter downtown.
- Size the parking structures to be about 500 spaces to minimize the number and size of the facility entry/exit points.

In addition, the DSP identifies strategies to meet the estimated build-out parking demand. Those strategies include:

- Implement phase II of the Livermore Valley Parking garage adding up to 300 spaces.
- Promote valet parking operations in the downtown.

The DSP also establishes parking requirements for specific uses. For commercial, retail and office uses, parking is required at one space per 300 square feet which can be reduced to 1 space per 400 square feet if parking is available for non-exclusive use.

The DSP establishes a permitted building height of 45 feet on most parcels in the Downtown Core; however, exceptions were anticipated for public facilities, such as parking garages. These exceptions can be allowed through a Specific Plan amendment with Planning Commission review and City Council approval.

Existing Conditions:

The existing Livermore Valley parking garage is a 3 level, 22-foot-tall structure with 508 parking spaces. It is heavily utilized during the evening especially when both the Bankhead Theater and Livermore Cinemas are hosting popular shows. During these times parking spaces at the Livermore Valley garage, as well as nearby surface parking lots and street parking, can be hard to find. Attachment 1 is a Location Map showing the general vicinity, the footprint of parking garage options, and City owned parcels as well as adjacent lands.

The DSP area was developed as a pedestrian friendly zone. To accomplish this, First Street was narrowed and diagonal parking was installed throughout the area. Pedestrian activity was given preference over auto traffic, including provision of mid-block cross walks and shortened crossings using bulb-outs. Through traffic was meant to use peripheral streets with east/west traffic using Fourth Street and Railroad Avenue; while north/south traffic was funneled to L Street, Livermore Avenue, and Maple/Railroad. The City and consultant team analyzed the traffic circulation during the midday and evening peak hours. Existing traffic counts were analyzed and the results indicate that both Livermore Avenue at Railroad Avenue and the intersection of Maple Street at First Street are currently experiencing moderate delays (LOS D) during the evening peak hours. The analysis also determined that the existing left turn pockets along Railroad Avenue are minimally adequate for existing conditions. Occasionally, the number of

vehicles trying to access the existing garage from the west exceeds the length of the existing left turn pocket.

East/west through traffic along Fourth Street and Railroad Avenue is generally free flowing with the exception of when event activities occur at Carnegie Park and the Bankhead/Shea Plaza. During such events heavy pedestrian flows across Fourth and Railroad, can interrupt through traffic flows. North/south traffic flow is generally free flowing on L Street except that minor delays occur at First and L due to required signal phasing. Livermore Avenue from Railroad to Fourth runs through the core of the Downtown. There is public perception that this segment is congested throughout the day. Through traffic may experience multiple disruptions due to mid-block pedestrian crossings, heavy parking and pedestrian activity and unconventional intersections at Second, Third and Fourth Street.

The consultant team also observed operations of the existing garage. The geometry of the existing pedestrian crosswalk in relation to the garage exit complicates pedestrian vehicular interactions. The existing exit has a large radius exit and the crosswalk is more than 20 feet west of the actual exit itself. Another observation was that congestion on the up ramp causes backups onto Railroad Avenue. Pedestrian crossings of the ramp further added to entry congestion.

I Street Parking Proposal:

Traffic analysis was performed to determine the limiting factors for adding additional parking adjacent to the existing LVC garage. Preliminary analysis of turning movements, garage operations, queueing capacity, and impacts to intersection levels of service during peak hours show that eastbound left turn capacity from Railroad Avenue into the garage, garage entrance capacity, and the volume of traffic at Livermore/Railroad Intersection are limiting factors. Eastbound left turn capacity can be maximized by widening Railroad Avenue along the Speedee Lube site. Garage entrance capacity can be enhanced by providing a new entrance along Railroad Avenue at I Street. In addition, the entry lanes within the garages can include a clear distance of at least 100 feet. With these improvements, about 375 additional parking spaces can be adequately served through a new parking garage at I Street.

At approximately 375 spaces, the parking structure could adequately serve the parking demands generated by a 135 room hotel, with some (4ksf) conference space, a large (6ksf) restaurant and limited (4ksf) flex space with 195 hotel parking spaces. It would also provide parking to offset any parking displaced by the footprint of the hotel and the parking lost during construction of a new Livermore Village garage. This level of development is consistent with the Downtown Specific Plan, which as noted above contemplates adding 300 spaces as phase II of the LVC garage (DSP Chapter 8, parking).

I Street Garage Design Concepts:

The Consultant Team initially evaluated six options for the I Street garage. As outlined below, the parking structure options presented a range from 260 to 403 self-serve spaces. Additional detailed analysis will refine the limits of parking space capacity. Staff will ensure that final parking structure options are appropriately sized relative to the capacity constraints identified in the final traffic analysis. All but Option 5 are accessed from a new entrance at I Street and also through the existing garage. A garage layout plan and section are included for each option in Attachment 2. Attachment 3 identifies which properties need to be acquired to build each option. Attachment 4 provides the statistics for each option.

Option 1 provides 362 spaces in a garage on City owned property directly west of the existing garage at the north end of I Street. This option is approximately 45 feet tall and is set back from Railroad Avenue which provides more entry/exit storage capacity off of Railroad Avenue. This option does not impact existing uses on nearby private property and allows these or future uses to continue to front Railroad Avenue. Pedestrian access to the garage would be via a sidewalk along I Street. Option 1 is the smallest footprint because it is limited to City owned property. Due to the configuration of the City owned parcels (with a notch at one end) Option 1 has some inefficiency in terms of the layout of the aisles and stalls increasing the per stall cost. Although it will be set back from Railroad Avenue, this building will be noticeably taller than other buildings in the area.

Option 2 provides 396 stalls in a garage on the City owned properties but extends across an approximately 4,000 sf portion of the private property parcel immediately west of the City properties--which would need to be acquired. This allows for a more efficient garage layout. The garage would be 37 feet tall (5 levels of parking, 4 above grade and one below). The private property owner has provided initial feedback that they have some interest in a lease or property swap for their entire site. The City could consider other uses for the remainder property. An alternative that eliminates below grade parking reduces the costs by \$2.2 million, but increases the height of the structure to 49 feet. This garage is also set back from Railroad Avenue which provides stacking capacity off of Railroad Avenue. Although it will be set back from Railroad Avenue, this building will be taller than other buildings in the area, especially if the garage is entirely above grade. This option allows existing private uses to remain fronting Railroad Avenue. Primary pedestrian access is provided via a sidewalk along the south side of the garage and I Street.

Option 3 provides 403 spaces in a garage that would utilize the City properties and also would require acquisition of two private parcels south of the City owned property. The garage would be 22' high (3 levels, all above grade) and would front Railroad Avenue. This garage would be very similar in height to, and could mimic, the design of the existing LVC garage. It requires acquisition from two private parties. Based on preliminary outreach, one of the parties has indicated they have no interest in selling while the other party has expressed interest provided their tenant can be relocated. This option would require the use of eminent domain if one of the private property owners remains uninterested in selling. This option would displace the two existing businesses along Railroad Avenue.

Option 4 is similar to *Option 3*. However, it is set back behind Railroad Avenue to allow commercial space along the Railroad frontage. This option provides 391 parking spaces but the garage would be 33 feet high. There are pros and cons associated with the identified commercial space. On the positive side, it has the potential to create a more active streetscape on Railroad Avenue from a pedestrian perspective and add some interest and activity to the north side of the street. On the negative side, it could be a very challenging location for a retail use and the retail frontage would also limit visibility into this section of the garage, which could create a perception that it is less safe.

Option 5 proposes a garage to the east side of the existing LVC garage. It would require acquisition of two private parcels. The garage would have stacked (mechanical) parking on the first floor and then the roof would be an extension of the 3rd level of the LVC garage. This garage would accommodate 260 spaces. This location is further from the Downtown core and it provides the least amount of new parking. Operations of this facility could complicate the existing LAVTA Transit Center operations. Mechanical parking is not appropriate for self-parking but can be advantageous for valet operations. The cost of operating and maintaining mechanical parking could be substantial.

Option 6 proposes a garage on City property and extends to include one private parcel immediately adjacent to the west of the LVC garage. This option provides 380 parking spaces and the garage would be 33 feet tall. It would displace one of the existing businesses along Railroad Avenue. The property owner has indicated they are willing to consider acquisition provided the tenant can be satisfactorily relocated. This option allows for existing businesses to remain on Railroad Avenue west of the new garage.

Traffic and Parking Analysis with Project:

As noted above, both traffic and parking analyses were performed to determine the impacts of adding additional parking spaces adjacent to the existing LVC garage. For the purposes of this analysis, hotel traffic was assumed to be valeted from either the site immediately west and adjacent to the Bankhead Theater or from a site immediately west of Blacksmith Square. A total of 154 mid-day and 246 pm peak hour trips were estimated to occur. A new entry at I Street is also included in the analysis.

The addition of a 375 space garage adjacent to the LVC garage and a hotel in this general vicinity degrades the level of service at Livermore Avenue and Railroad Avenue to a 60 second average delay (LOS E) during peak periods while Maple St at First Street shows a slight degradation to a 49 second delay, but still retains LOS D. Mitigations for the Livermore Avenue Railroad intersection are being considered. The critical movement is the eastbound left turn. Addition of a second eastbound left turn lane should improve the intersection delay to less than 45 seconds (LOS D), which is the City's acceptable minimum standard. However, right-of-way constraints limit the options and some possible mitigations increase pedestrian crossing times. Recalibrating the signal timing may also be helpful reducing delay.

The eastbound left turn for the garage(s) would need to be lengthened, by widening Railroad Avenue along the Speedee frontage, to extend from the garage entrances all the way to Livermore Avenue. That combined with providing entry stacking results in adequate operations at the garage entry points.

The Consultant Team is also evaluating modifications that may help improve traffic circulation and garage operations. While additional analysis is required to complete evaluation of options several preliminary concepts are outlined below.

The first idea was to add a westbound right turn lane along the Railroad Avenue frontage east of Livermore Avenue. Land would be required from the adjacent property owners. This would reduce the right turn queue from 360 feet to 140 feet reducing delays for exiting garage traffic; however, it does not substantially improve the overall operations of the intersection. This proposal would increase the pedestrian crosswalk length.

The second idea was to eliminate the right turn exit from the existing garage and redirect all right turners to the I Street exit. This would eliminate many of the pedestrian conflicts at the existing garage crosswalk. The proposal would require significant wayfinding signage within the LVC garage and design modifications at the existing exit to prohibit right turn movements. The analysis showed that the new exit would function well; however, during large events queued vehicles within the garage waiting to exit could impact Option 3 and 4 garage operations.

Another idea was to realign the existing crosswalk easterly 12' to be closer to the exit. This would provide better visibility between exiting cars and pedestrians. The crosswalk would no longer align with the Shea Plaza pathway; however, it would land at the 10' wide sidewalk directly in front of the ice cream store.

An additional option to consider would be to consider re-balancing the auto and pedestrian needs along Livermore Avenue. For example, signal timing between Railroad Avenue and Fourth Street could be coordinated during peak hours to platoon auto traffic through this segment. This would require signaling the mid-block crosswalks and timing them to coordinate with the progression of the platoons.

Other ideas are still being developed for consideration. Staff will return with specific recommendations once all available options have been evaluated.

Summary

As outlined above, impacts to intersection levels of service during peak hours show that eastbound left turn capacity from Railroad Avenue into the garage, garage entrance capacity, and the volume of traffic at Livermore/Railroad intersection are limiting factors. The maximum capacity of a new I Street garage is in the range of 375 spaces, even with the implementation of improvements to Railroad Avenue and the existing garage. Staff has provided a range of design options for parking structure designs, with cost estimates for each design identified in Attachment 4. For those options with parking

counts in excess of 375 spaces, minor modifications to the parking structure design would be required to bring the total parking space count down to 375 or fewer spaces to reflect the capacity of the surrounding street system. Each of the parking garage design options differ in terms of their efficiency, cost, height, and private property impacts. At this time staff is requesting the City Council review the traffic findings and parking structure options and provide direction to staff to conduct additional analysis to further refine one or more preferred options for future Council consideration. Staff will then conduct final traffic analysis for these options, prepare traffic mitigation recommendations, and return to the Council for final direction on development of a preferred parking garage design. Staff is planning to present this information to the Downtown Steering Committee on May 11. We expect to return to Council in early summer with a final analysis and recommendation.

FISCAL AND ADMINISTRATIVE IMPACTS

The costs to perform the study has been included in the City's Capital Improvement Program under CIP 586003.

The cost estimates for the various garage options range from \$14.6 million to \$17.6 million. The annual operating and maintenance costs are estimated at \$65,000 to \$70,000 per year (excluding mechanical lifts). Funding for design and construction is included in the CIP 2017-15. Once constructed, additional funds would need to be programmed in the Public Works operating budget for on-going maintenance and repairs.

ATTACHMENTS

1. Location Map
2. Garage Options – Layouts and Sections
3. Garage Options – Parcel Required
4. Garage Options Statistics
5. Garage Eastbound Left Turn Lane Extension

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Approved by:



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Fiscal Review by:



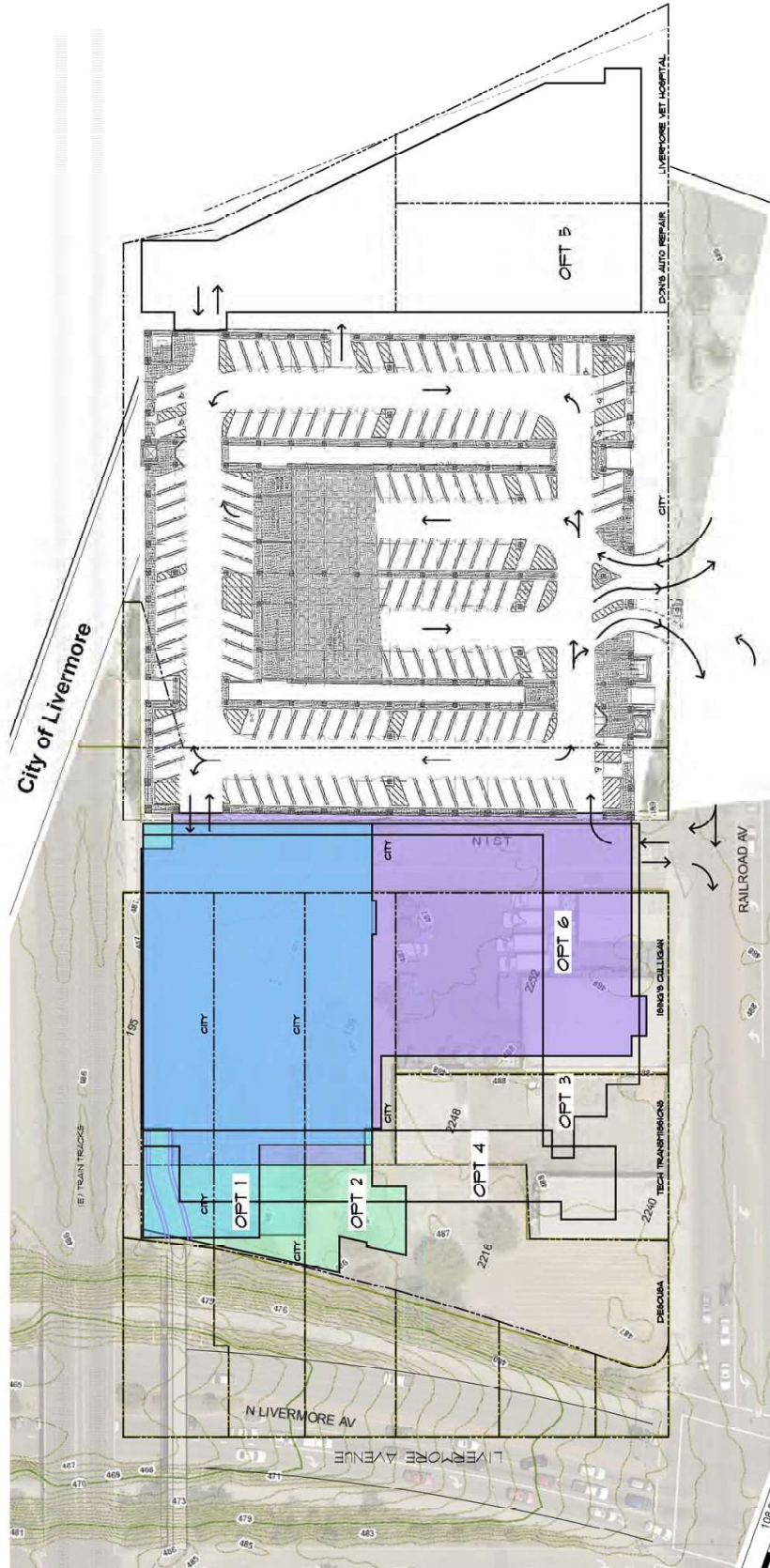
Douglas Alessio
Administrative Services Director



DATE: 04-06-2017
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JOB NO.: 1618

ATTACHMENT

1



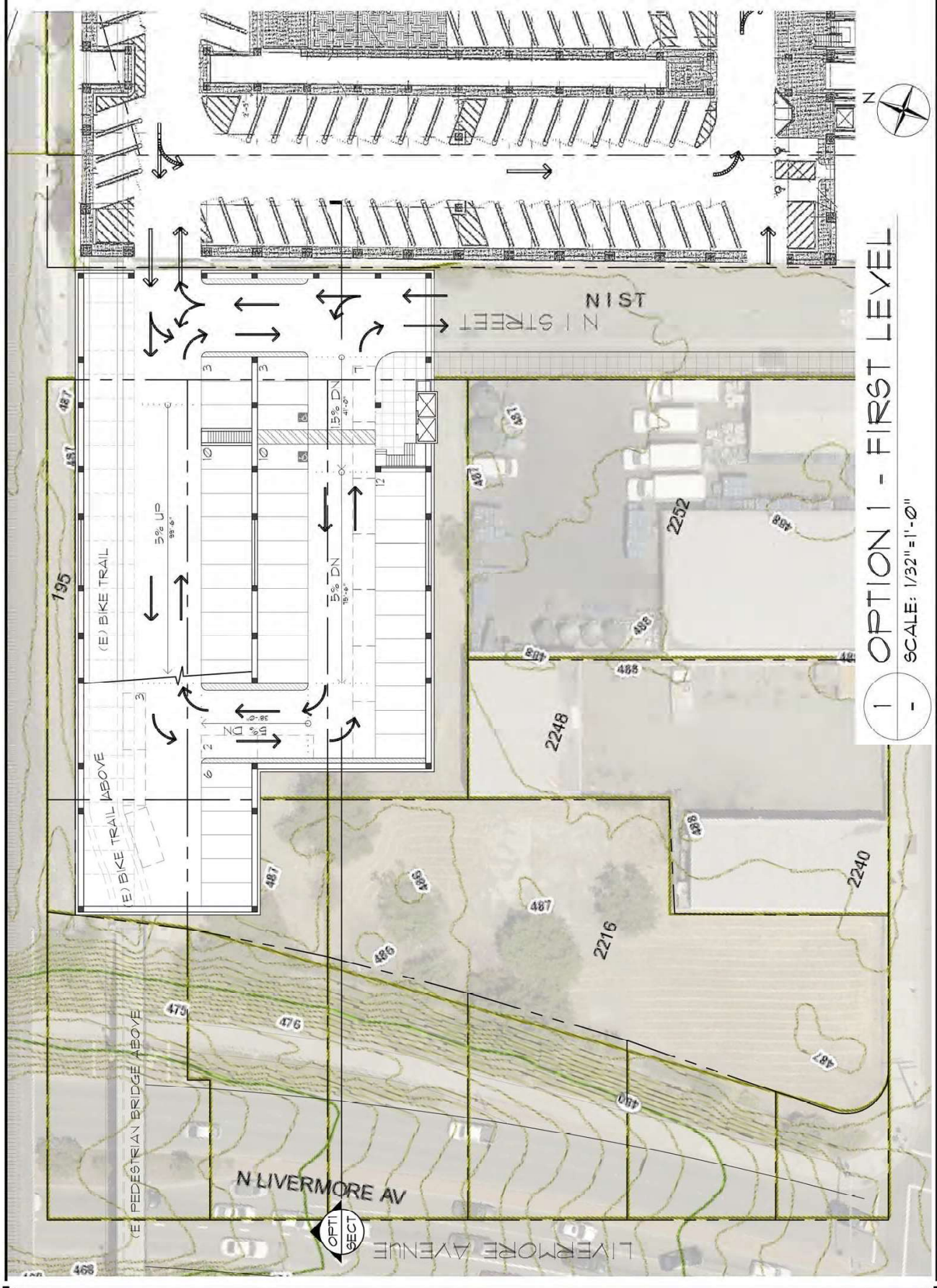
○ I STREET GARAGE, LOCATION MAP @ GROUND LEVEL

NTS



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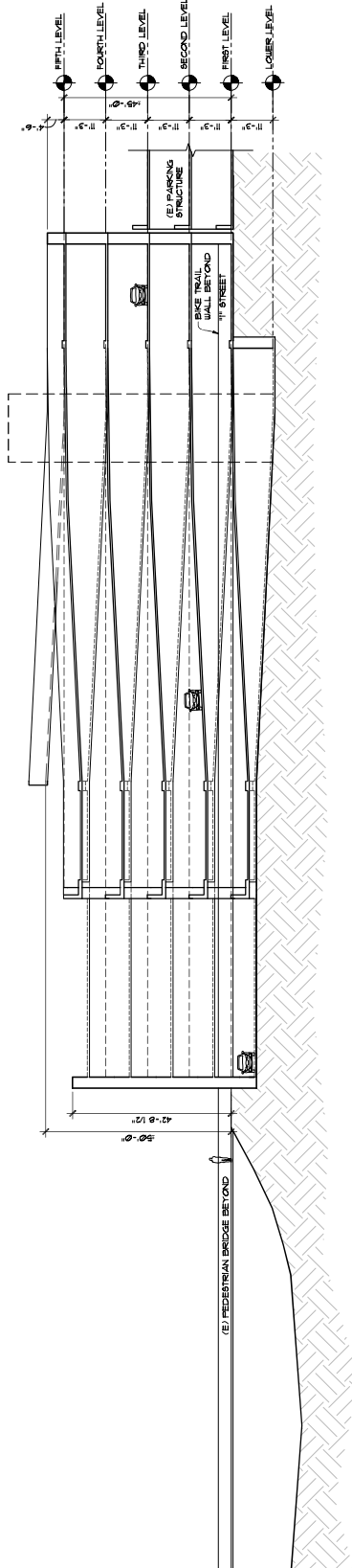
OPTION 1
LEVEL 1





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OPTION 1:
SECTION

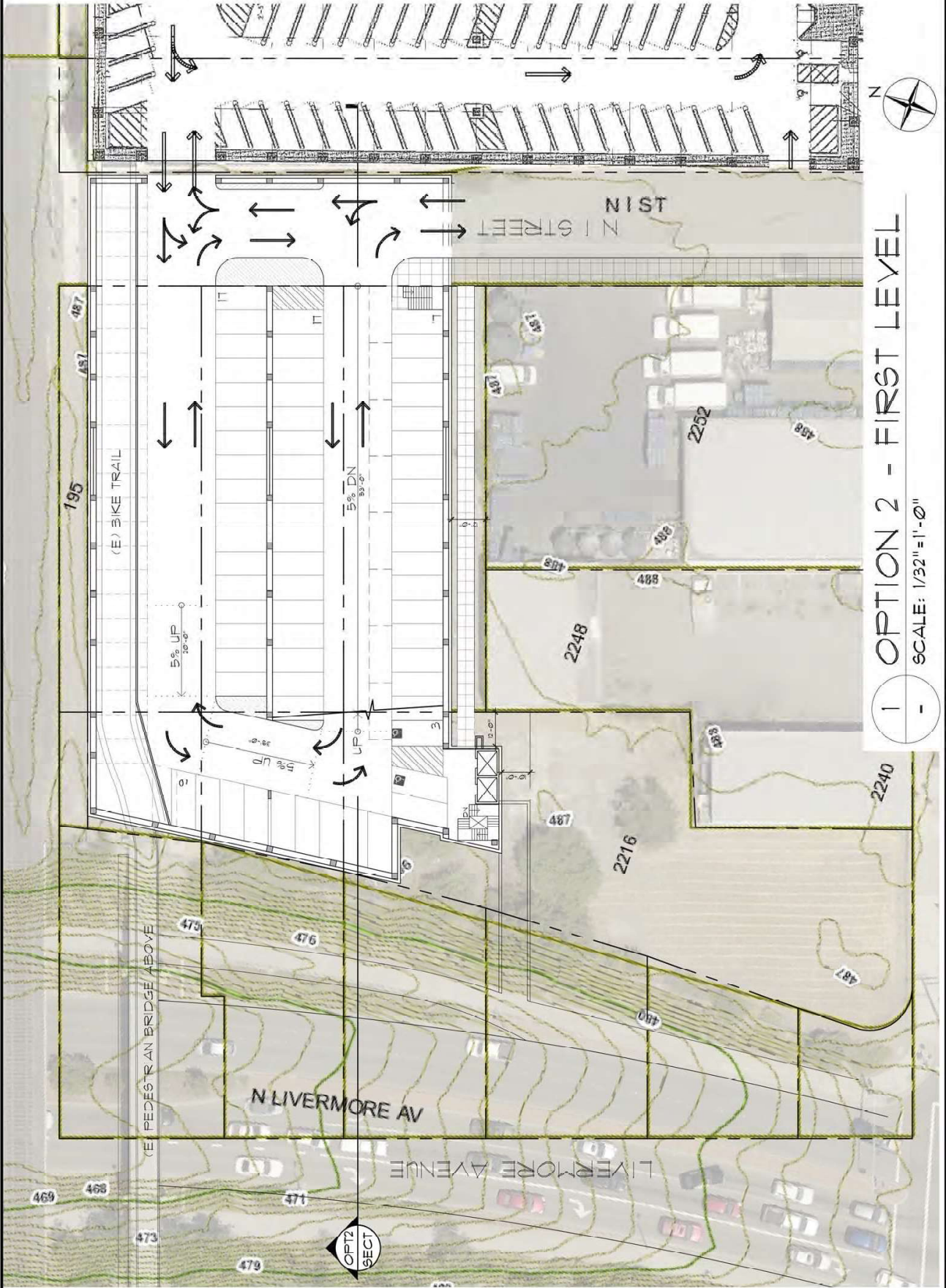


2 - OPTION 1 - SECTION
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OPTION 2:
LEVEL 1

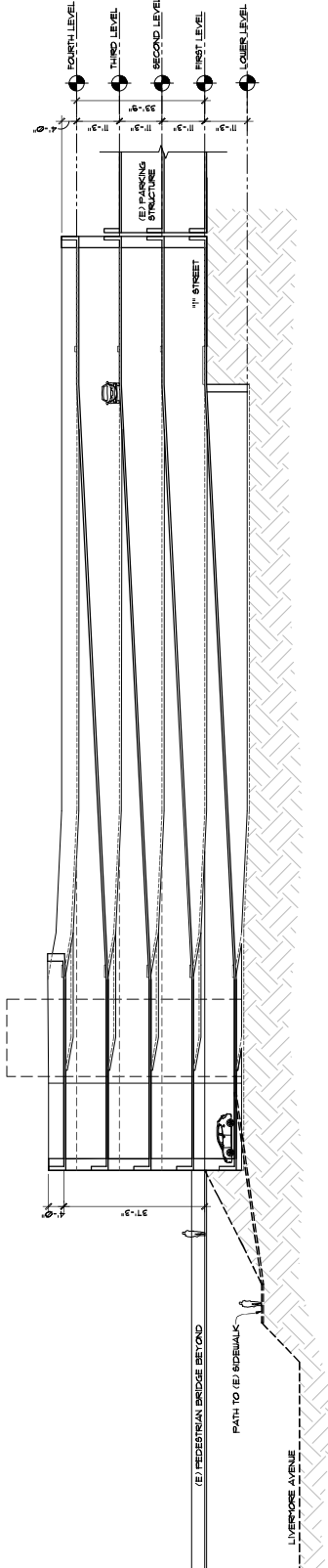


1 - OPTION 2 - FIRST LEVEL
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OPTION 2:
SECTION

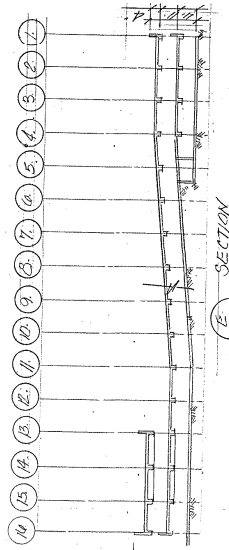
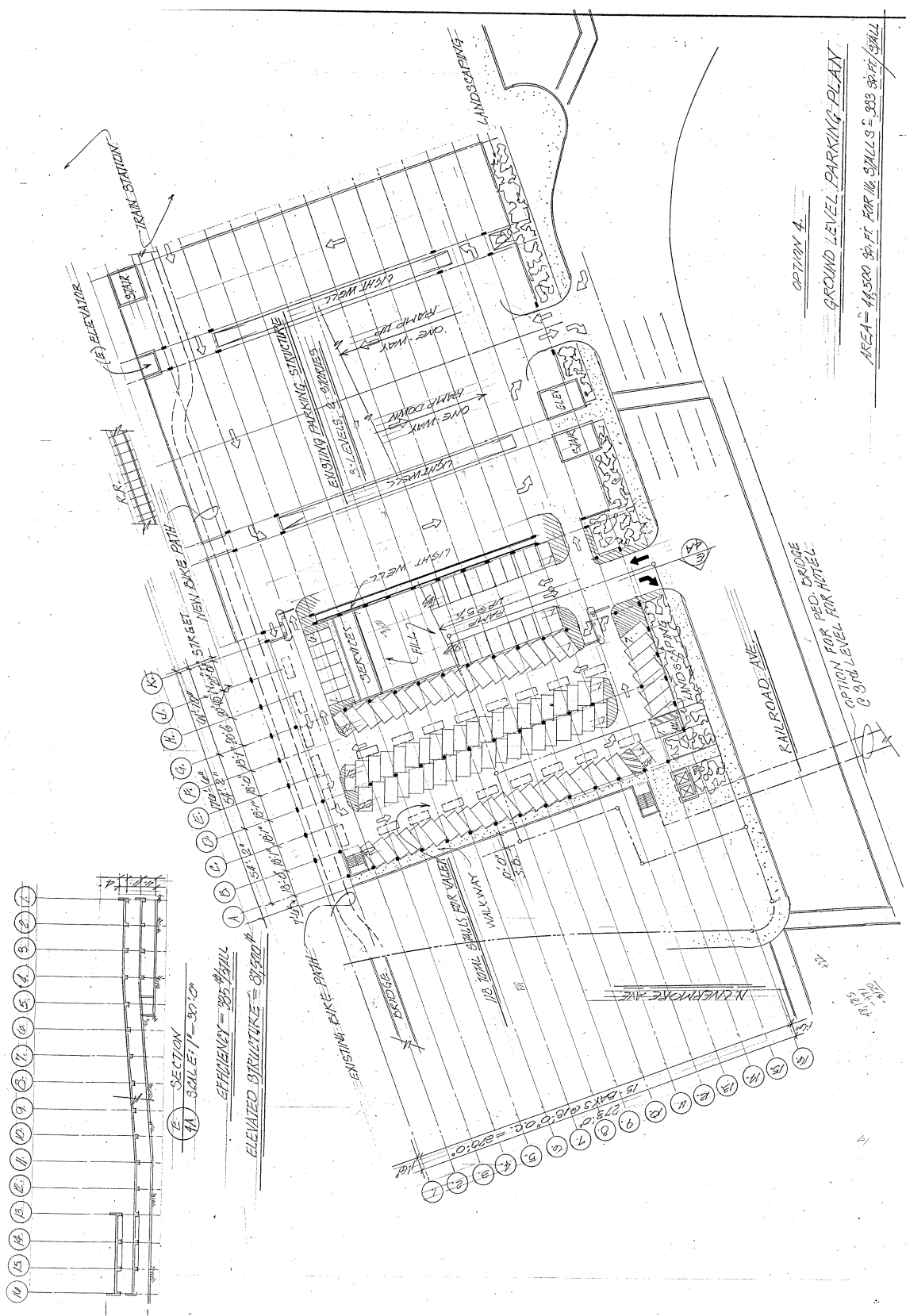


2 - OPTION 2 - SECTION
 SCALE: 1/32" = 1'-0"



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OPTION 3:
LEVEL 1

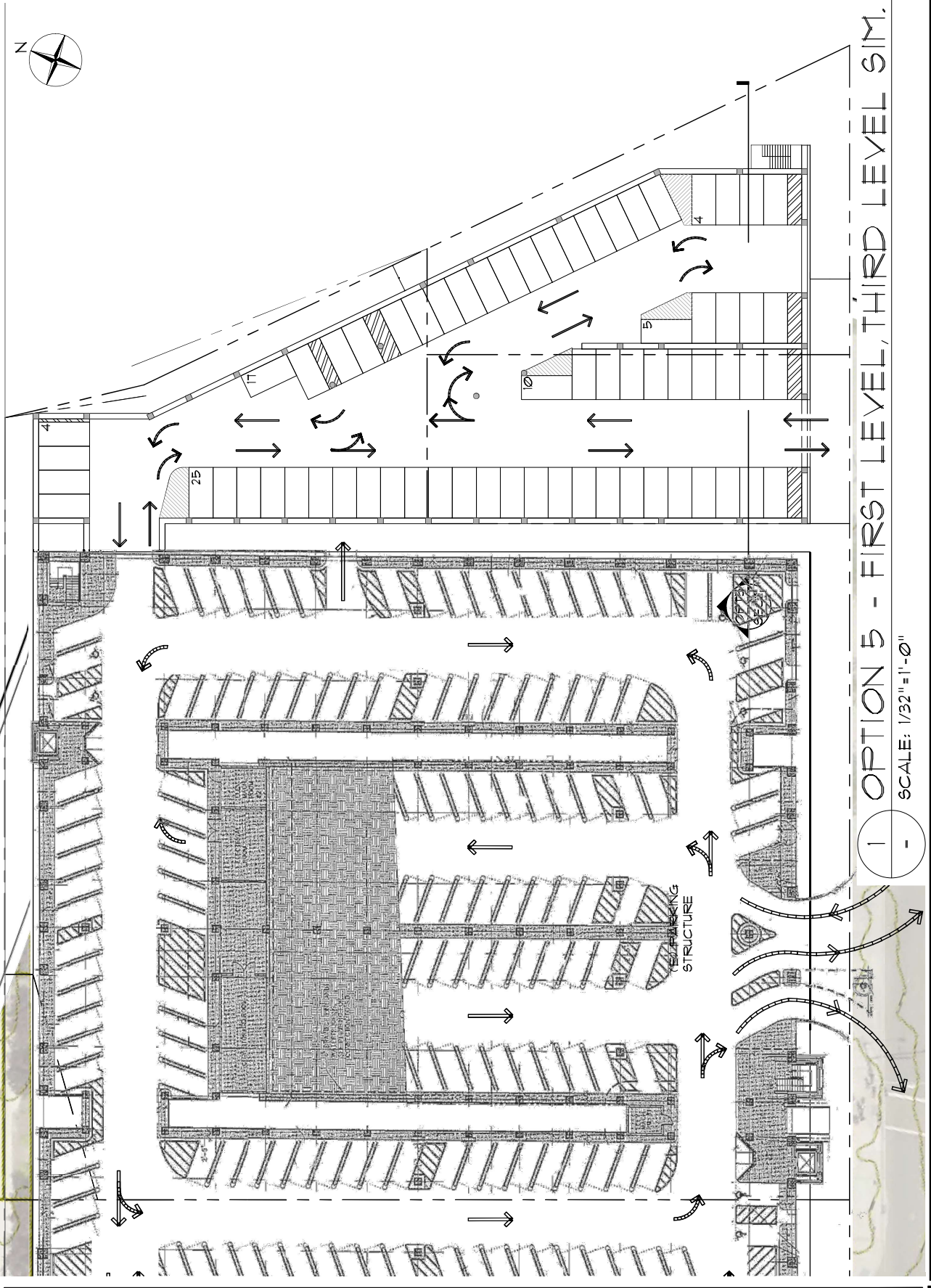


OPTION 4
 GROUND LEVEL PARKING PLAN
 AREA = 44,500 sq ft FOR 116 STALLS @ 383 sq ft/STALL
 OPTION FOR PED. BRIDGE
 GROUND LEVEL FOR HOTEL



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OPTION 5:
 LEVEL 1

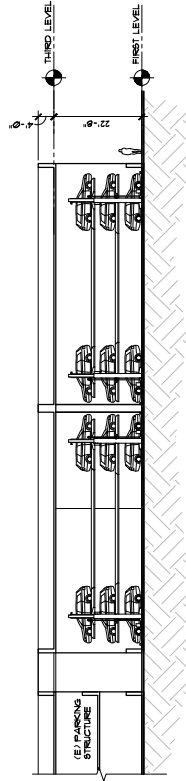


1 - OPTION 5 - FIRST LEVEL, THIRD LEVEL SIM.
 SCALE: 1/32" = 1'-0"



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OPTION 5:
SECTION

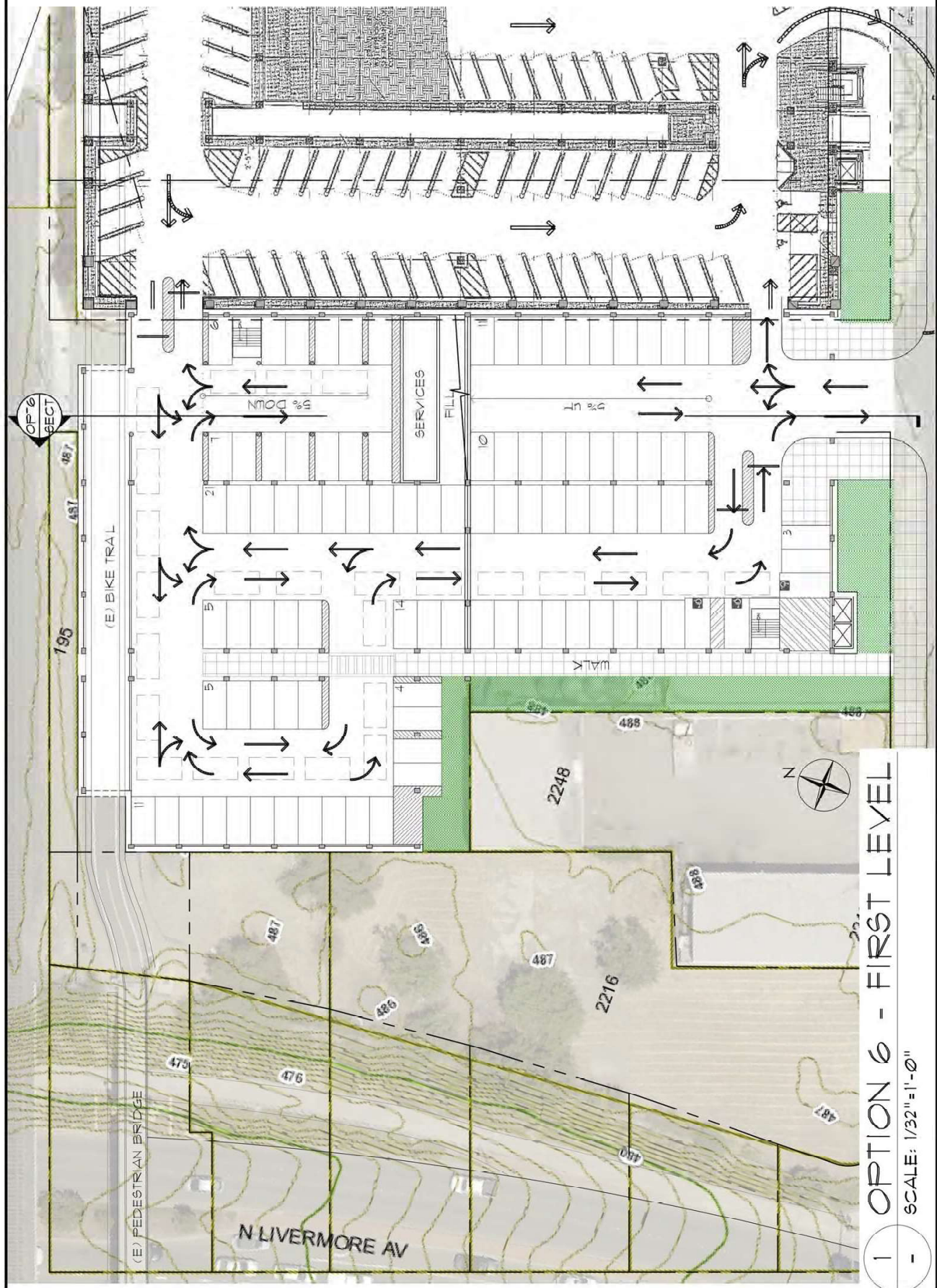


2 - OPTION 5 - SECTION
 SCALE: 1/32" = 1'-0"



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**OPTION 6:
 LEVEL 1**

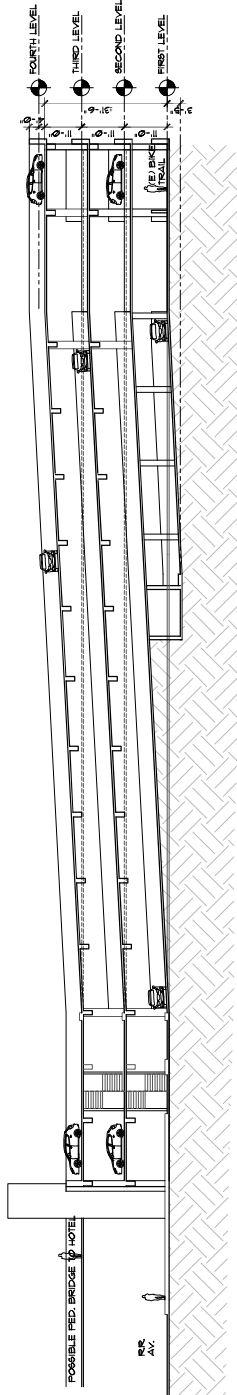


1 - OPTION 6 - FIRST LEVEL
 SCALE: 1/32" = 1'-0"



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OPTION 6:
SECTION



2 - SECTION LONG
 SCALE: 1/32" = 1'-0"

Table 1: Parcels Required for Parking Structure Options

	APN	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
City Owned Parcels	26001702					x	
	28000102	x	x	x	x		x
	28000201	x	x	x	x		x
	28000202	x	x	x	x		x
	28000803	x	x	x	x		x
	28000808	x	x	x	x		x
Private Parcels	26001601 (Don's Auto Repair)					x	
	26001602 (Livermore Vet Hospital)					x	
	28000301 (Ising's Culligan)			x	x		x
	28000401 (Tech Transmissions)			x	x		
	28000707 (DeSousa)		x				

Table 2: Parking Structure Option Statistics

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Levels	6	5	3	4	2	3
Structure Height	45 ft	37 ft	22 ft	33 ft	22 ft	33 ft
Structure Square Footage (SqFt)	136,839	136,903	135,100	137,720	47,220	140,500
Stall Quantity (Self Only)	362	396	403	391	260	380
Stall Efficiency (SqFt / Stall)	378	346	335	352	182	370
Commercial Option	Yes	Yes	No	Yes	No	No
Total Project Costs (Land + Const. + Design)	\$16.9 M	\$17.6 M	\$16.2 M	\$17.1 M	\$14.6 M	\$16.9 M
Cost Per Stall	\$46,920	\$44,410	\$40,070	\$43,770	\$55,983	\$44,420

