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June 16, 2021

The Honorable Bob Blumenfield, Chair
Public Works Committee
Los Angeles City Council

c/o Michael Espinosa
Office of the City Clerk
City Hall, Room 395

**COUNCIL FILE 18-1114 REPAIR OF HILLSIDE STREETS / REQUIRING DESIGN AND
ENGINEERING INTERVENTION / DETAILED ANALYSIS / WORK PLAN;
AND COUNCIL FILE 17-1143 COMPREHENSIVE ASSESSMENT / STREETS
WITHDRAWN FROM PUBLIC USE / REINSTATEMENT PROCEDURE**

Dear Councilmember Blumenfield:

RECOMMENDATIONS

1. Receive and file this report in CF 17-1143 noting that future report backs and actions on this topic should take place under CF 18-1114 for efficiency of processing since they have identical recommendations at this point and the streets discussed under CF 18-1114 include all hillside streets and are inclusive of those included under CF 17-1143.
2. Concur with the Bureau of Engineering (BOE) intent to proceed with the implementation a phased comprehensive study to assess hillside streets with a local University.
3. Revise the pending instructions under CF 18-1114 as follows:
 - a. INSTRUCT the Bureau of Engineering (BOE) to work with the Bureau of Street Services (BSS), the Los Angeles Fire Department (LAFD), the Los Angeles Department of Transportation (LADOT), the Department of City Planning (DCP), the Emergency Management Department (EMD) the Bureau of Sanitation (LASan), the Department of Water and Power (LADWP) and other



departments as appropriate to proceed with a phased comprehensive study to assess hillside streets in partnership with a local university

b. DIRECT the BOE to phase the hillside study such that progress can be reported back approximately every 12 months and to report progress back to City Council as these phases are completed.

c. INSTRUCT the BOE, in coordination with the other departments guiding the hillside study scope, to include in such study scope information that will enable the following Council request and instructions.

d. REQUEST the City Attorney and INSTRUCT the BOE and BSS to report on streets that had been previously removed from public use have been fully incorporated into the City's street network and the steps necessary to incorporate the remaining streets.

e. INSTRUCT the LADOT, in consultation with BOE, to report on the feasibility of making streets one-way streets to minimize the right of way acquisition of private properties.

BACKGROUND AND DISCUSSION

On May 12, 2021, the City Council adopted the following recommendations under both subject Council Files:

1. INSTRUCT the Bureau of Engineering (BOE) to work with the Bureau of Street Services (BSS), the Los Angeles Fire Department, and the Los Angeles Department of Transportation (LADOT) to develop a recommended scope for a comprehensive study to assess hillside streets, and prepare a cost estimate.

2. DIRECT the BOE to report within 120 days with details of the recommended study scope of work and associated funding request.

3. REQUEST the City Attorney and INSTRUCT the BOE and BSS to report on streets that had been previously removed from public use have been fully incorporated into the City's street network and the steps necessary to incorporate the remaining streets

4. INSTRUCT the BOE, in consultation with LADOT, to report on the feasibility of making streets one-way streets to minimize the right of way acquisition of private properties.

In response to recommendations 1 and 2 from the May 12 Council Action, the BOE has formed a working group to discuss the scope of a hillside study. This group has met multiple times and includes BSS, LAFD, LADOT, DCP, EMD, LASan, LADWP and UCLA.

As reported in our previous report to Council, generally streets are initially developed by property owners to the standard specified by the City under a B Permit from the Bureau of Engineering at which time the City becomes responsible for pavement maintenance under the State Highway Code. However, many hillside streets were created many

decades ago without yet being built out to City standards by property owners. This results in having numerous streets where the City may not yet have responsibility for regular pavement maintenance. The City may have other responsibilities under other state code requirements such as to keep the streets in a passable condition.

The City may, at its option, elect to maintain or improve streets even when not legally required. However, some streets are in such poor condition that it is not possible for the City to maintain the pavement surface electively without prior capital improvements.

The primary goal of this study at a high level is to assess the condition of hillside streets to better determine information such as the following:

- Identification of streets that meet the City's standards well enough that they can be determined to be part of the City's network of obligated pavement maintenance even if records do not exist of a B Permit being accepted
- Identification of streets that are substandard and yet are in a condition such that the City could electively maintain the pavement if so desired.
- Identification of streets that cannot be maintained without further capital improvements
- Identification and rough estimated costs of the scope of work necessary to bring substandard streets to a condition that they could be maintained, and also for the scope of work that would be required to bring them to City standards for hillside streets.
- Prioritization of streets for potential recommended improvements based on a variety of scoring factors.

In the initial discussions with our City working group, other objectives have been identified that would be useful to the City and would have a strong synergy with the study objectives and would provide great efficiency to be included in the study. These include things such as identifying critical facilities, emergency access routes and other information that may assist in the creation of a local hazard mitigation plan. The proposed study scope as outlined in the remainder of this report incorporates the working group suggestions.

The following key items were identified by the working group as data/features to gather related to the public right-of-way and its adjacent terrain with regard to the primary study purpose:

- 1) Street Pavement Width, flowline to flowline
- 2) Identify the presence of flow control (curb and gutter/AC Berm)
- 3) Slope measurements adjacent to the roadway
- 4) Existing roadway conditions with photos
- 5) Both longitudinal and cross slopes of the street segment
- 6) Elevations to provide standard sections

Prioritization of the street segments may also include the following factors:

- 1) Street Classification
- 2) Standard Roadway Width
- 3) Right-of-Way Width
- 4) Emergency access routes
- 5) Number of homes taking sole access from a segment
- 6) Demand to width ratio
- 7) Approximate rough cost of improvements
- 8) Risk reduction/assessment
- 9) Potential drainage concerns
- 10) City's current ability to maintain pavement
- 11) Critical facilities, including Schools and Government facilities
- 12) Hillside Traffic Assessment Guidelines
- 13) Access to and from properties
- 14) Presence of trailheads and/or associated parking
- 15) EMG Risk Factors – Local hazard mitigation plan
- 16) Properties with sole egress routes
- 17) Population density
- 18) Equity – risk and vulnerability factors

Due to the magnitude of the scope, and the length of time that the full study would likely take, it is recommended that it be completed in annual phases. This also aligns well with the fact that the study would be performed by a local university since they often arrange projects by school year. A phased study will potentially also be more efficient because some streets that are in good condition would not need the more detailed and time-consuming portion of the work carried out in later phases of the study. At the current time we envision that the study will require at least three annual phases as described in the following, although these are subject to adaptation as more is learned moving forward:

- Phase I would include data collection from various sources and stakeholders, the development of a classification scheme to rapidly identify the highest priority street segments to the extent possible from street level imagery and existing datasets, and identifying street segments for detailed analysis in Phase II.
- Phase II would provide 3D Mapping of some of the highest priority streets segments from Phase I using LIDAR (Light Detection and Ranging) surveying. This will include the automated detection and segmentation of streets, sidewalks, fire hydrants, slopes, and encroachments to be used for street-level prioritization (S-L P – framework by combining sensor data with contextual data). The purpose of this phase is essentially to test and fine tune automated analysis methods on a pilot scale.
- Phase III would focus on software development and scaling tools, data, and processes from the first two phases to the remaining hillside street inventory. This phase intends to include a Prioritization plan for the entire inventory.

The phases are estimated to cost approximately \$300,000 per year. The BOE is proposing to utilize the BOE Equipment and Training Trust Fund which is funded by a permit surcharge to fund at least this initial stage and possibly the later stages. This fund is proposed for use because the results of this study will assist our development services program greatly by providing additional information related to street widths. Use of this fund does not require formal Council approval.

Recommendations 3 and 4 from the May 12 action will require significant levels of investigation. BOE is recommending that a new instruction be added to incorporate those objectives into this study to the extent feasible to assist with those report backs. Further, LADOT is the department in charge of establishing one-way streets, so the BOE has proposed making LADOT the lead on the report back regarding one-way street feasibility.

If you have any questions concerning this matter, please contact BOE Deputy City Engineer, Ted Allen, at ted.allen@lacity.org.

Sincerely,



Electronically signed by 21866

Gary Lee Moore, PE, ENV SP
City Engineer

GLM/TA:jgr

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cc: Jennifer McDowell, Office of the Mayor
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