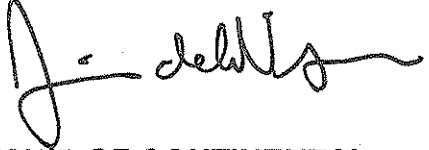


CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

Date: August 23, 2013

To: The Honorable City Council
c/o City Clerk, Room 395
Attention: Honorable Mike Bonin, Chair, Transportation Committee

From: Jaime de la Vega, General Manager
Department of Transportation 

Subject: **SECOND REPORT ON WORKMANSHIP OF CONTINENTAL
CROSSWALKS AND BICYCLE LANE INSTALLATIONS (C.F. 13-0866)**

SUMMARY

Subsequent to Council Motion 13-0866 (Englander-Cedillo) dated July 3, 2013 noting the "inferior workmanship" at the intersection of Corbin Avenue and Devonshire Street and other locations related to striping removal, LADOT prepared a report dated July 19, 2013 and presented it to the Transportation Committee on July 24, 2013.

This is a second report outlining additional research requested by the Committee and additional solutions to address the issues.

RECOMMENDATION

That the Council RECEIVE AND FILE this report.

DISCUSSION

Overview

LADOT stated in the first report that: All removal methods will result in some degree of alteration to the texture and/or color of the street.... While this is true, the results in some cases are not acceptable both from an engineering perspective and for the residents of the city.

It was also stated in Committee on July 24th that we are researching the use of fog sealing to minimize pavement scars. Committee members accepted that scarring will occur but directed the department to survey other jurisdictions' (in particular the City of Santa Monica) best practices regarding pavement marking removals and the use of fog seal.

Sterndahl Inc.

LADOT uses Sterndahl, Inc. to remove pavement markings and striping as necessary. Sterndahl is one of the leading striping and striping removal contractors in the country. They have completed work for Caltrans and many cities in Southern California. We interviewed Mr. Troy Hill and Mr. Dennis Sterndahl regarding the use of fog seal and industry practice.

LADOT also asked Sterndahl to conduct a test on the subject street, Corbin Avenue by fog sealing some of the noted pavement scars.

Mr. Troy Hill indicated that fog seal is intended to prevent water damage to a street. It can be useful when lanes are removed to seal the pavement surface and put the oils back into the roadway pavement. The color is similar to a newly slurried/resurfaced street, and color cannot be changed to match existing color.

Mr. Dennis Sterndahl stated that Caltrans has used fog seal for years on the freeway shoulders. It is generally sprayed on the entire asphalt surface to provide a moisture barrier. It is useful on newer asphalt to extend the life of the pavement. Caltrans always removes thermoplastic striping first. It does not appear any other local jurisdictions use fog seal to cover pavement scars due to removals.

The fog seal test conducted on Corbin Avenue did not yield sufficient results. The color of the seal did not match the existing pavement, and the scars in the pavement were slightly diminished but still visible. We believe there are better solutions.

Both gentlemen also stated that the City of Los Angeles is the only jurisdiction that does not remove striping before slurry seal projects. They stated that slurry will not stick to thermoplastic, and will quickly diminish causing striping to show through. They also discussed the problems related to taping of striping prior to slurry and tape removal after slurry. Due to the remaining stripes being "inset" slightly into the pavement grade after the tape is removed, any future striping removal will result in even deeper gouging of the pavement. The conclusion is that striping must be removed prior to slurry seal projects.

Other Local Jurisdictions

Staff had communications with various local jurisdictions including Santa Monica, Burbank, and Glendale. We also received information on the practices in Pasadena.

The key points from these discussions are:

- Striping is always removed prior to slurry seal
- Many use a combination of grinding and waterblasting to remove the entire stripe, possibly with less gouging to the pavement
- Fog sealing is not used in any of the jurisdictions
- Most do not slurry their major streets, only locals and collectors

The lessons here are twofold:

1. Fog seal is not a widely used application in Southern California, if used at all. Research shows that fog seal is typically sprayed across the entire roadway and not just on lane line removals.
2. A combination of grinding and waterblasting may result in a better surface appearance than grinding alone, but will still not completely eliminate scarring.

Unit Cost: Slurry Seal vs Fog Seal

Slurry seal provides more to the street surface than fog seal, as it includes fine aggregates. This explains the following cost differences, as researched by staff:

- Slurry Seal Approximately \$0.22/sq ft
- Fog Seal Approximately \$0.10/sq ft

However, doing small portions of fog seal only at pavement marking removal locations would increase this cost substantially.

Discussions with Bureau of Street Services

Staff from LADOT met with BSS to discuss some better strategies.

LADOT proposed the following:

- All streets with striping that are slated for slurry need to have their striping removed prior to the slurry work being done. Taping is not a viable option and will no longer be used.
- Major projects that involve striping removal (i.e. bike lane projects) should in some instances follow a three-step process: remove existing striping, slurry if necessary, install new striping.
- Resurfacing projects should include the “wings” at major intersections to allow for a clean installation of continental crosswalks without pavement scars
- Intersections where continental crosswalks are yet to be installed (if any) should be resurfaced first.

BSS has agreed to partner with LADOT, especially on the first two points above.

The issue with point one is that our only striping removal contractor would need to be ready to remove striping without delay as necessary to keep up with BSS slurry schedule. Also, additional money might need to be identified to pay for the unanticipated additional striping removal.

Regarding point two, any streets with new bike lane installations will need a higher level of coordination with BSS. If BSS can slurry streets that are slated for restriping after striping removal and before reinstallation of new striping, additional miles can be added to their program in support of LADOT. The issues here are two-fold: funding and schedules. BSS may need additional funding to do this at night or on weekends so it does not impact their regular schedule.

BSS has stated that they may be able to resurface the “wings” of the cross streets (bullet point 3) in their resurfacing projects. This will have to be evaluated as the fiscal year progresses based on schedules.

They also stated that they have resurfaced intersections (bullet point 4) for DOT and will continue to do so.

Corbin Avenue

Research revealed that the appearance of the striping removal on Corbin Avenue was primarily due to a combination of factors. That portion of Corbin was slurried in March 2012. Striping was removed for installation of a bike lane in June 2013. The grinding of the pavement to realign the lane lines resulted in removal of the top layer of street, namely the slurry, revealing the older street surface underneath. The result was a rather sharp contrast in the color of the newer slurry and the older street underneath.

The best solution was to put a new layer of slurry and restripe after. LADOT and BSS agreed to partner together to improve the appearance of Corbin Avenue south of Devonshire Street. It was decided to follow the procedure outlined in point two above.

The striping on the entire stretch was first removed, BSS has completed the slurry work, and striping reinstallation has been recently completed.

ACTIONS AND RECOMMENDED BEST PRACTICES

Here is a summary of the actions and best practices identified in this report:

1. Corbin Avenue was repaired in response to the Council Motion, with cooperation between LADOT and BSS.
2. Striping should be removed before any future slurry seal job. It should not be covered with slurry and it should not be taped.
3. Fog seal should not be used to cover pavement scars.
4. A new coordination procedure must take place with BSS for slurry after striping removals on large projects where the scarring is severe. Better coordination is needed for bike lane installations with slurry and resurfacing schedules.
5. LADOT should test the combination of grinding and waterblasting to see if it improves scarring in general, and if it is a cost effective solution.

FISCAL IMPACT

No fiscal impacts will result from this report, however, new methods of striping removal and the increase in quantity of striping removal may result in additional costs. It is not possible to assess the costs at this point. Additionally, BSS may need additional funds to slurry additional streets not in their annual program in support of LADOT.

JTV:NA:na

- c: Honorable Mitchell Englander, Council District 12
Honorable Gilbert Cedillo, Council District 1
Nazario Saucedo, Bureau of Street Services