



Agenda Item #: 07/0206.21

Staff Report

City of Manhattan Beach

TO: Honorable Mayor Tell and Members of the City Council

THROUGH: Geoff Dolan, City Manager

FROM: Neil C. Miller, Director of Public Works *ncm*
Dana Greenwood, City Engineer *DAG*
Michael A. Guerrero, Senior Civil Engineer *m.a.g.*

DATE: February 6, 2007

SUBJECT: Discussion of Construction Issues for the 2002-05 Street Improvement Project and Approve Appropriation of \$54,000 for Change Order No. 1 to Griffith Company

RECOMMENDATION:

It is recommended that the City Council pass a motion to:

- a) Receive and file the staff presentation regarding the 2002-05 Street Improvement Project
- b) Provide direction regarding potential modifications to the design issues for the completion of this project and design of future street improvement projects
- c) Approve Change Order No. 1 to Griffith Company in the net amount of \$54,000 for the change in method of rolled curb construction and approve a supplemental appropriation from the Gas Tax Fund

BUDGET IMPLICATION:

Design Contract	\$ 107,080.00
Construction Management/Inspection Contract	\$ 95,000.00
Construction Contract	\$1,397,575.00
Change Order No. 1	\$ 54,000.00
TOTAL	\$1,653,655.00

DISCUSSION:

Background

The 2002-05 Street Improvement Project includes the following street segments (see attached map):

- 14th Street from Poinsettia Avenue to Sepulveda Boulevard
- 17th Street from Poinsettia Avenue to Sepulveda Boulevard
- 19th Street from Poinsettia Avenue to Elm Avenue
- Walnut Avenue from 19th Street to Marine Avenue
- Pine Avenue from 19th Street to Marine Avenue
- Elm Avenue from 19th Street to Marine Avenue
- Oak Avenue from Manhattan Beach Boulevard to Marine Avenue

The streets in this area of the City typically do not have surface drainage improvements such as concrete curb and gutter and therefore require substantial street maintenance. In addition the area adjacent to the street surface contains various improvements by area residents. The project includes the construction of a colored concrete rolled curb that will provide better surface drainage and a uniform appearance of the street. The existing street surface will be completely removed and replaced. The project will coordinate with a previously completed street improvement project for the streets in the Tree Section area south of Marine Avenue.

Design Considerations

Street improvement projects typically include the following design criteria:

- Provide satisfactory structural capacity of the street cross section
- Provide satisfactory capacity and grading to ensure proper surface drainage
- Provide a smooth riding roadway surface
- Provide a smooth transition between the new grades of the street improvements and the grades of any existing improvements

Structural capacity of the street is typically determined by existing condition of the street, anticipated life span of the street improvement, traffic volumes, and budget constraints. These factors are used to determine the appropriate street improvement strategy such as complete reconstruction or grind and overlay.

While structural issues are typically straightforward, grade issues are often more critical and difficult to balance. Using the 2002-05 Street Project as an example, although the City public street right of way is 40 feet in width the typical roadway width is only 24 feet wide on project streets. This leaves 8 feet of public right of way on either side of the street. According to the City Municipal Code Section 9.72.015 "Development of Street Right of Way for Public Uses" Subsection C1 "Duty to Repair" that states:

It shall be the duty of every person owning real property within the City to keep in repair street right of way area abutting their real property (not including public street driving surface). If the failure of an abutting owner to maintain the street right of way area results in damage or injury to a member of the public, said abutting owner shall be liable to such member of the public.

In many circumstances this means that each property owner develops this area individually over time. In many cases the improvement material (asphalt, concrete, brick, etc.) does not match

from neighbor to neighbor. In more extreme cases the grades of the developed areas do not match between neighbor to neighbor. While these circumstances may be satisfactory within the encroachment area of the right of way these are not acceptable as a part of the street improvements. Hence the challenge of the design grades is to balance the roadway grades with existing improvements.

In order to provide a transition between the street improvements and existing improvements both the previously completed 1999-2001 Street Improvement Project and the 2002-05 Street Improvement Project used a similar design by removal and replacement of a 2-foot "pave back" section behind the newly constructed rolled curb in order to allow for the transition. The Contractor is required to reconstruct the 2-foot area with the same material that was removed. Although the new construction material is the same there are typically some variations in color and texture due to the new construction abutting old material. In time typically this variation lessens. In some circumstances with extreme grade issues additional public right of way beyond the 2-foot area is required to be replaced (such as to ensure proper driveway slopes or surface drainage).

Construction Issues

Construction started on the project on November 20, 2006. The project was broken up into two phases so that not all of the affected streets would be impacted at the same time. Phase I includes Oak Avenue, Walnut Avenue, 14th Street, and 19th Street. Projects are typically constructed so that consecutive streets are not under construction at the same time to reduce impacts to traffic and parking. City staff has received comments from several affected residents regarding various elements of the project that will be summarized and addressed in this report.

Some residents have been concerned regarding access to their driveways. Limited access to driveways is inevitable due to demolition of the street right of way, construction of the concrete rolled curb, and reconstruction of the 2-foot "pave back" area. The Contractor has attempted to minimize the amount of time that residents are affected by scheduling the work tasks accordingly and working as quickly as possible. The Contractor also constructed temporary ramps to each property in between the tasks in order provide driveway access while working on other portions of the project. The Contractor has delivered a written notice to the affected residents at each instance when their driveway access would be impacted. To date the Contractor has delivered 4 construction notices to affected residents at the following project milestones:

- Demolition of street right of way at rolled curb and 2-foot "pave back" area
- Concrete rolled curb construction
- 2-foot pave back reconstruction
- Roadway demolition, base installation, and asphalt installation

The Contractor posted parking restrictions 72 hours in advance in the affected project areas per the City's capital improvement project requirements. In addition both the City and the Contractor delivered a general notice regarding the scope of the project to affected residents prior to construction commencing on the project.

During construction of the first Phase of the project two survey issues were encountered. After construction of the concrete rolled curb on the west side of Oak Avenue between 17th Street and 19th Street it was determined that the new elevation of the rolled curb would negatively impact the surface drainage of several properties if left as constructed. While the grade would have worked

satisfactorily for the street grade the impact to the drainage to these properties was unacceptable. The Design Consultant was contacted and revised plans were submitted. The Contractor was directed to remove and reconstruct the subject portion of rolled curb.

The Design Consultant was also responsible for construction staking for the project. Construction grades and offsets were placed on the existing pavement in Phase I of the project including the area on Pine Avenue between 19th Street and Marine Avenue. The City's Inspection Consultant and residents along Pine Avenue noted that the construction staking on this segment of the project showed that the construction staking did not coincide with the existing street roadway improvements. The Design Consultant was again contacted and it was determined that the alignment was affected by horizontal survey control assumptions that were not correct (most likely due to unavailable historical survey information). In order to resolve the issue without impacting the project schedule, work on Pine Avenue was delayed to Phase II of the project. After additional review, the street reconstruction was adjusted 12" horizontally and the issue was resolved. In both circumstances City staff worked with the Design Consultant, Inspection Consultant, Contractor, and affected residents in order to quickly resolve the issues. Resolution of both issues is not expected to affect the overall completion schedule of the project. The Design Consultant is currently reviewing and resubmitting the plans for the streets in the remainder of the project to ensure that the street work does not adversely affect the surface drainage and driveway access of properties on these streets.

Some residents have concerns regarding the method of construction using the 2-foot "pave back" area within the encroachment area to reconstruct driveways and parking pads. Although this area is within the public right of way some residents feel that the reconstructed area does not coordinate with the pre-existing character of the improved area. A related concern by residents is the Contractor's use of slip-form equipment to construct the concrete rolled curb by extrusion. Although it is an approved construction method within the Standard Specifications for Public Works Construction some residents prefer the method used in the previous street project with traditional wood forms and concrete placement.

Both methods of construction have their own advantages and disadvantages. Some residents claim that they prefer the form and place method because this allows for some degree of flexibility in the rolled curb profile thus allowing some modification being made to adjust to existing improvements so that the 2-foot "pave back" area may be eliminated in some areas. However, adjustments to the top of curb may also have disadvantages since increasing the height of the curb may cause negative impacts to driveway slope access and reducing the height of the curb reduces the surface drainage capacity of the street. The form and place method is also more labor intensive, costs more, and takes more time than the slip-form method. This additional time means that affected residents will not have driveway access for a longer period of time with the form and place method as opposed to the slip-form method. An advantage of the slip-form method is that the rolled curb has the same cross section throughout the project, while a disadvantage is that this method relies more on the "pave back" area in order to transition between the rolled curb and the existing improvements. The slip-form method also requires a minimum of 6" behind the top of the curb in order to place an offset control line for the automatic sensor controls that assist in the operation of the equipment. The Contractor estimates that the form and place method of construction will add an additional \$54,000 to the project cost (\$21,400 for Pine Avenue, \$20,900 for Elm Avenue, \$11,700 for 17th Street). Staff is not concerned about changing the construction method to the form and

place method since either method is approved within the specification. While there may be an additional cost and added driveway access issues during construction the form and place method may allow greater flexibility in taking care of public property adjacent to private improvements.

Some residents have requested that the profile of the rolled curb be modified so that it is not as high as is currently being constructed. The current rolled curb profile is 4" high from the flow line to the top of the curb and 1" high from the flow line to the edge of the street. Thus the top of the rolled curb is 3" higher than the edge of the street grade. As mentioned previously, reducing the height of the rolled curb reduces the surface drainage capacity of the street. This may be especially critical for properties that are below the grade of the street. For this reason although the rolled curb profile may be reduced the Public Works Department does not recommend reducing the curb height to less than 3" due to concerns regarding surface drainage.

Some residents have been trying to compare the quality of the encroachment improvements between the 1999-2001 Street Improvement Project and the current project. However, it is difficult to compare since the previous project was completed over 4 years ago. Since that time many new homes have been constructed in the area and property owners have completed improvements within the encroachment area at their own expense. In addition other property owners have modified or reconstructed their encroachment area again at their own expense. While some properties had their encroachment area reconstructed as a part of the capital improvement project for similar reasons as the current project (surface drainage and driveway access) it is more likely that many of the encroachment improvements were reconstructed at the expense of the property owners.

One reassuring aspect is that while some residents have concerns regarding the quality of work within the encroachment area based upon the assumption that the project is nearly complete, there is actually a substantial amount of work left to do before the project is completed. Many of the concerns noted by residents have already been discussed with the Contractor by City staff. The current list of corrective actions (attached) planned within the public right of way encroachment area for Phase I of the project includes 46 locations. These corrective actions include grinding and overlaying inadequately compacted asphalt and additional construction of driveways to ensure satisfactory transition to existing driveway slopes. This list does not include work in the public right of way encroachment area that the Contractor has not yet started. The Contractor will schedule and complete all work in the encroachment area within the allowed contract time.

For the current capital improvement project, since there is not any technical reason for reconstruction of the public right of way beyond the 2-foot "pave back" area the main issue is whether to do additional reconstruction for aesthetic reasons only. This may have implications beyond the current project as property owners adjacent to future capital improvement projects may have an expectation that the City will be financially responsible for aesthetic improvements within the public right of way encroachment area adjacent to their property as a result of work done within the public right of way street area. However it is City staff's commitment to do everything we reasonably can to accommodate each of the individual specific situations including elevation changes between the encroachment area and the new street improvements and matching existing improvements within the encroachment area. But as the list of corrective actions shows we must remember that the project is not finished yet and that City staff and the Contractor have a commitment that the project when completed will be one that everyone is proud of and we will work individually to do the best we can to ensure this result.

SUMMARY:

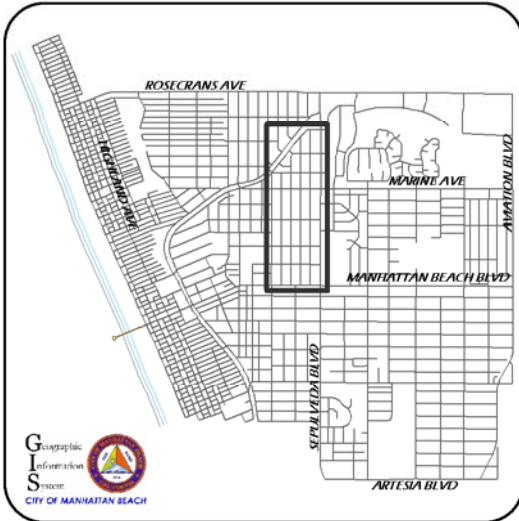
To reiterate, staff will make every reasonable effort to satisfy individual grade issues and encroachment area reconstruction. Staff concurs that the use of the form and place method of rolled curb construction may add additional flexibility in meeting individual property owner right of way improvements and finds the additional cost reasonable. Staff also feels that, in certain areas, the depth of the gutter may be reduced from 4” to 3” to improve driveway access transitions. An additional resident request to have a greater than 2-foot transition from the back of the rolled curb within the encroachment improvement would add significant cost to the project for primarily aesthetic reasons. Staff however supports such requests if they improve driveway accessibility or surface drainage.

Staff therefore is requesting for direction regarding the following issues:

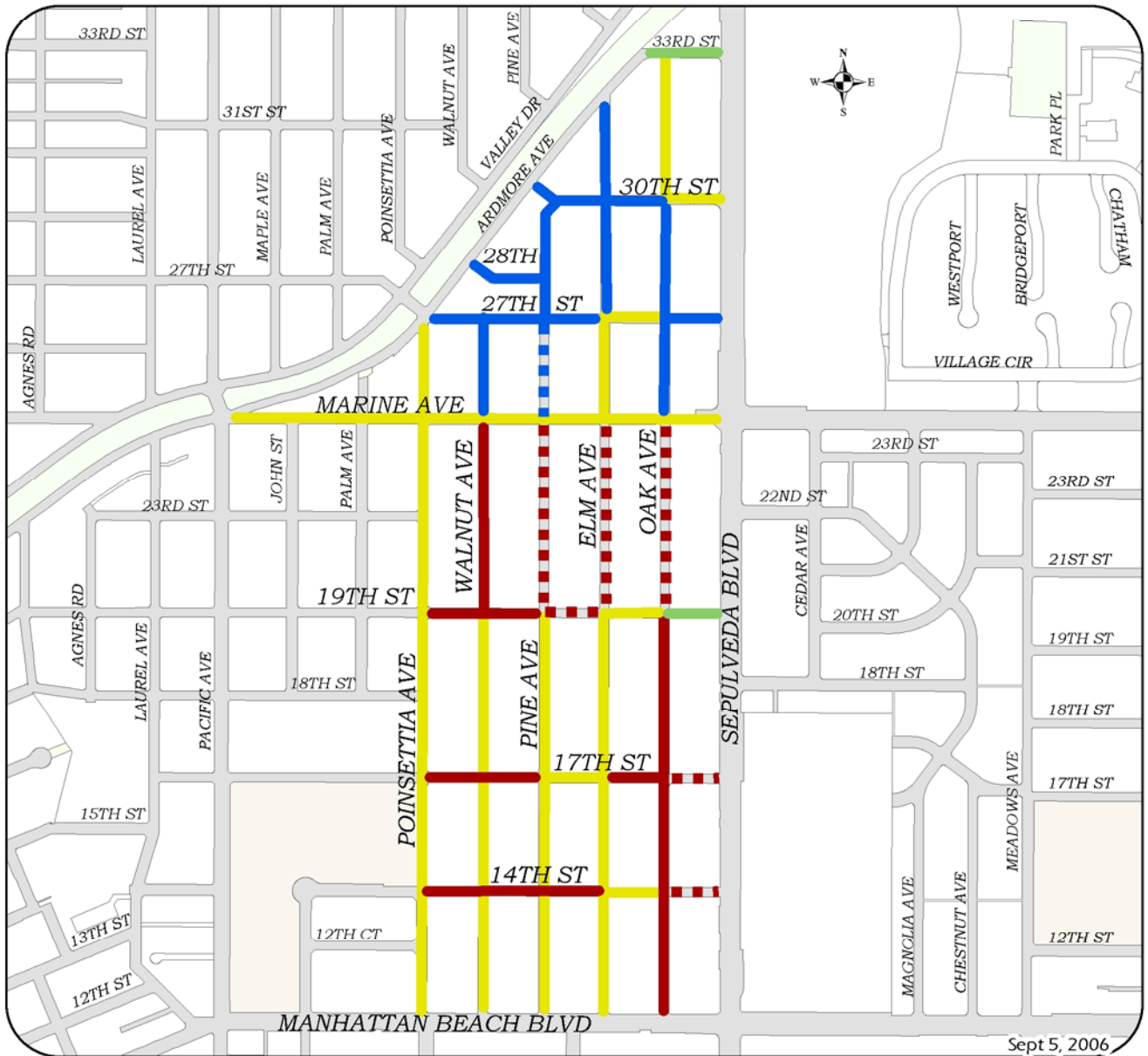
- Whether to increase the 2-foot “pave back” area for reconstruction of the encroachment area
- Whether the Contractor can continue to use the slip-form equipment on the current project or require the Contractor to use the form and place method; the form and place method will add approximately \$54,000 to the project cost
- Whether the rolled curb cross section should be reduced from a 4” height (measured from flow line to top of rolled curb)

- Attachment:
- A. Project Location Map
 - B. Street Profile/Rolled Curb Profile
 - C. List of Corrective Actions

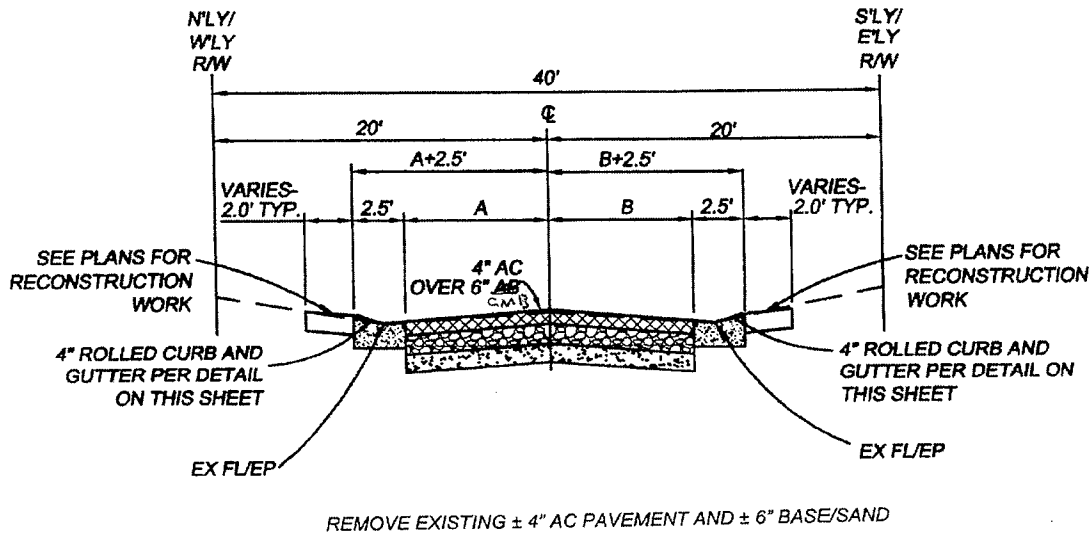
Street Resurfacing Projects



-  Previously Completed Street Improvements
-  Phase 1a: 2002-2005 Street Resurfacing Project
-  Phase 1b: 2002-2005 Street Resurfacing Project
-  Phase 2a: 2005-2007 Street Resurfacing Project
-  Phase 2b: 2005-2007 Street Resurfacing Project
-  Existing Concrete Curb & Gutter

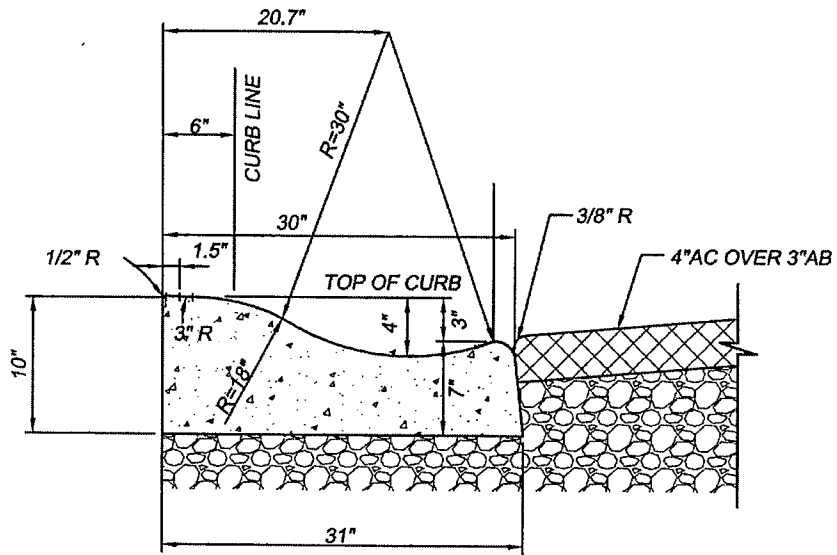


2002-2005 Street Improvement Project



TYPICAL SECTION A

N.T.S.



4" PCC ROLLED CURB AND GUTTER

N.T.S.

**City of Manhattan Beach
2002-2005 Street Improvement Project
Phase I – Hot List**

- **1400 Pine Avenue** (driveway on 14th Street)
concrete driveway; too steep at 2-foot pave back and creates excessive angle point
- **1401 Elm Avenue** (driveway on 14th Street)
concrete driveway; too steep at 2-foot pave back and creates excessive angle point
- **1401 Pine Avenue** (steps on 14th Street)
repair brick stairs

- **1304 Oak Avenue**
concrete driveway; appears to have been damaged at saw cut line during demolition
- **1404 Oak Avenue**
replace damaged water meter pull box
- **1405 Oak Avenue**
asphalt driveway; too steep at 2-foot pave back and creates excessive angle point; (Griffith stated they would fix at their cost)
- **1509 Oak Avenue**
asphalt driveway/parking pad; too steep at 2-foot pave back and creates excessive angle point
- **1601 Oak Avenue**
asphalt driveway/parking pad; too steep at 2-foot pave back and creates excessive angle point
- **1721 Oak Avenue**
concrete driveway/asphalt parking pad; not reconstructed at consistent 2-foot width at pave back area
- **1725 Oak Avenue**
concrete driveway/parking pad; not reconstructed at consistent 2-foot width at pave back area; also looks like wrong color
- **1801 Oak Avenue**
wrong color brick pavers (6 each) used in NE corner of parking pad (red versus gray)
- **1829 Oak Avenue**
grade loose bricks behind rolled curb at south side of property
- **2405 Oak Avenue**
grade loose backfill behind rolled curb
- **2413/2417 Oak Avenue**
dog prints and graffiti at rolled curb

- **1901 Pine Avenue** (driveway on 19th Street)
concrete driveway with brick accent; slot pave less than 6" instead of 2-foot pave back; most likely will need additional (est. 5') for better transition
- **1829 Walnut Avenue**
asphalt behind curb on north side of property (19th Street)
- **1901 Walnut Avenue**
asphalt at parking pad on west side (Walnut Avenue) and asphalt behind curb on south side (19th Street)
- **1905 Walnut Avenue**
concrete driveway; too steep at 2-foot pave back and creates excessive angle point on north side of driveway
- **2005 Walnut Avenue**
concrete driveway; too steep at 2-foot pave back and creates excessive angle point; also need to finish asphalt at parking pad
- **2009 Walnut Avenue**
concrete driveway; unnecessary angle point at 2-foot pave back
- **2100 Walnut Avenue**
stamped colored concrete driveway; potential cracks in driveway during demolition (?) not addressed properly; especially at pull box

Additional Issues

- **1312 Pine Avenue & 1313 Elm Avenue** (14th Street on south side between Pine Avenue and Elm Avenue)
concrete turf blocks are all over the place; clean up!!!
- **1900 Pine Avenue** (at 19th Street)
brick area has low spots; make sure it drains!!!
(Bill Little)
- **1808 Oak Avenue/1812 Oak Avenue/1816 Oak Avenue/1820 Oak Avenue/Temple Menorah**
looks like asphalt was not compacted well and is unraveling; also not reconstructed to a score mark; also looks like asphalt was reconstructed at a hump
- **1205 Oak Avenue**
asphalt was not reconstructed according to direction provided by property owner (Lilly/William Lee)
- **1208 Oak Avenue**
according to property owner new concrete driveway is too steep and car bottoms out
(Robert Kaprow)

- **1151 Sepulveda Boulevard** (driveway on Oak Avenue)
according to business tenant new asphalt driveway is too steep and cars bottom out
(Cookie at Manhattan Beach Dental Center)
- **1808 Oak Avenue**
according to resident, allegedly bricks were removed from property and used for repair on other property; according to inspector and contractor this was done specifically at the request of resident as a favor to her and asphalt installed;
resolve!!!
- **1904/2000/2100 Walnut Avenue**
colored stamped concrete issues/matching existing
- **1315 (Ortho Mattress)/1401 (Animal Hospital) Sepulveda Blvd**
(side of property on 14th Street); add asphalt to eliminate dip in side area behind rolled curb
- **1804/1809/1813/1821 Oak Avenue**
re-evaluate loose brick areas to make sure they are level
- **1729 Oak Avenue**
complete brick work at driveway/parking pad
(Kohn)
- **1733 Oak Avenue**
complete brick work adjacent to driveway
(McCormick)
- **1821 Oak Avenue**
complete brick work adjacent to driveway