**TECHNICAL MEMO**

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Date: June 16, 2015

Subject: Ballona Landfill Disposal Site Review

Purpose – We have reviewed various options for transporting soil from the Project to appropriate disposal locations. Movement of soils in conjunction with the project grading operations is considered separately elsewhere. The assumption of this analysis is that toward the end of the grading operations, there may be up to 110,000 cubic yards (c.y.) of excess soil that might be exported outside the project boundary for disposal for Alternative 1, 10,000 cubic yards for Alternative 2, and 1,230,000 c.y. for Alternative 3.

We have assumed the Project export will be transported by tandem truck to an active and permitted landfill facility at the time of export operation. For larger dirt hauling operations, a tandem truck can haul up to 18 c.y. of soil. For planning purposes, we assume an average of 15 c.y. to address saturated conditions that may be encountered. Assuming an average of 2 minute headway between trucks leaving the site to account for operations and traffic flow impacts, 240 truck trips would be generated during an eight hour day. This would result in a daily average total of 3,600 c.y. exported from the site. The total truck trips and duration for the three alternatives is as follows:

Alternate 1 - Disposal of 110,000 c.y. would require 7,330 truck trips and a duration of 31 days.

Alternate 2 - Disposal of 10,000 c.y. would require 670 truck trips and a duration of 3 days.

Alternate 3 - Disposal of 1,230,000 c.y. would require 81,730 truck trips and a duration of approximately 16 months.

There are a number of permitted landfill facilities which may be used. Five of the permitted landfill facilities that should be active during the time of the export operation are listed below in the likely priority they will be used based on capacity, required freeway route, and proximity to the project. However, variations may occur based on a number of factors including capacity at the time the project starts exporting, maintenance at the facilities, traffic conditions, etc:

1. Calabasas Sanitary Landfill, 5300 Lost Hills, Agoura, CA. The landfill site has an estimated capacity available of 69.3 million c.y. and closure date of 09/30/2025. It can receive a maximum intake of materials of 3,500 ton per day (approximately 2,060 c.y. per day). A Haul Route from the site would require traveling from Project Area “A” into Project Area “C-North” via the Lincoln Blvd. temporary construction bridge and merging onto Lincoln Blvd. This outgoing route is chosen to eliminate left turns onto Lincoln Blvd. Then Northwest (NW) 0.3 miles on Lincoln Blvd. - right turn onto Mindanao Way N, 0.4 miles on Mindanao Way N, right turn onto CA-90 E, 1.5 miles on CA-90 E, 13.2 miles on I-405 N, 15.3 miles on US-101 N, and 1 miles on local road, for a total travel distance of 30.0 miles. A round trip from the site to the landfill will take approximately two and a half hours. For the return trips, the empty trucks would enter Project Area “A” from Lincoln Bld. South, again to avoid left turns and provide a “one-way” operation on-site for efficiency. A truck could make three round trip to the landfill during an eight hour period.
2. Simi Valley Landfill, 2801 Madera Road, Simi Valley, CA. The landfill site has an estimated capacity available of 120 million c.y. and closure date of 01/31/2052. It can receive a maximum intake of materials of 9,250 ton per day (approximately 5,440 c.y. per day). A Haul Route from the site would require traveling from Project Area “A” into Project Area “C-North” via the Lincoln Blvd. temporary construction bridge and merging onto Lincoln Blvd. This outgoing route is chosen to eliminate left turns onto Lincoln Blvd. Then Northwest (NW) 0.3 miles on Lincoln Blvd. NW, right turn onto Mindanao Way N, 0.4 miles on Mindanao Way N, right turn onto CA-90 E,1.5 miles on CA-90 E, 20.8 miles on I-405 N, 19.6 miles on CA-118 W, and 0.5 miles on local road, for a total travel distance of 43.4 miles. For the return trips, the empty trucks would enter Project Area “A’ from Lincoln Blvd. South, again to avoid left turns and provide a “one-way” operation on-site for efficiency. A round trip from the site to the landfill will take approximately three hours. A truck could make three round trips to the landfill during an eight hour period.
3. Scholl Canyon Landfill, 3001 Scholl Canyon Road, Glendale, CA. This landfill site has an estimated capacity available of 59.9 million c.y. and closure date of 04/01/2030. It can receive a maximum intake of materials of 3,400 ton per day (approximately 2,000 c.y. per day). A Haul Route from the site would require traveling from Project Area “A” into Area “C-North” via the Lincoln Blvd temporary construction bridge and merging onto Lincoln Blvd. North. This outgoing route is likely as it eliminates left turns onto Lincoln Blvd. Then Northwest (NW), 0.3 miles on Lincoln Blvd. - right turn onto Mindanao Way N, 0.4 miles on Mindanao Way N, right turn onto CA-90 E, 1.5 miles on CA-90 E, 3.5 miles on I-405 N, 13.5 miles on I-10 E, 5.2 miles on I-5 N, 3.4 miles on CA-2 N, 2.6 miles on CA-13 E and 2.4 miles on local road, for a total travel distance of 33.0 miles. For the return trips, the empty trucks would enter Project Area “A” from Lincoln Blvd. South, again to avoid left turns and provide a “one-way” operation on-site for efficiency. A round trip from the site to the landfill will take approximately two and a half hours. A truck can make three round trips to the landfill during an eight hour period.
4. Toland Road Landfill, 3500 Toland Road, Santa Paula, CA. The landfill site has an estimated capacity available of 30 million c.y. and closure date of 05/31/2027. It can receive a maximum intake of materials of 1,500 ton per day (approximately 880 c.y. per day). A Haul Route from the site would require traveling from Project Area “A” into Project Area “C-North” via the Lincoln Blvd. temporary construction bridge and merging onto Lincoln Blvd. This outgoing route is chosen to eliminate left turns onto Lincoln Blvd. Then Northwest (NW) 0.3 miles on Lincoln Blvd. NW, right turn onto Mindanao Way N, 0.4 miles on Mindanao Way N, right turn onto CA-90 E, 1.5 miles on CA-90 E, 23.6 miles on I-405 N, 12.8 on I-5 N, 24.7 miles on CA-126 W, and 1.9 miles on local road, for a total travel distance of 66.2 miles. For the return trips, the empty trucks would enter Project Area “A’ from Lincoln Blvd. South, again to avoid left turns and provide a “one-way” operation on-site for efficiency. A round trip from the site to the landfill will take approximately three hours. A truck could make two round trips to the landfill during an eight hour period.
5. Lancaster Landfill & Recycling Center, 600 East Avenue F, Lancaster, CA. The landfill site has an estimated capacity available of 27.7 million c.y. and closure date of 03/01/2044. It can receive a maximum intake of materials of 5,100 ton per day (approximately 3,000 c.y. per day). A Haul Route from the site would require traveling from Project Area “A” into Project Area “C-North” via the Lincoln Blvd. temporary construction bridge and merging onto Lincoln Blvd. This outgoing route is chosen to eliminate left turns onto Lincoln Blvd. Then Northwest (NW) 0.3 miles on Lincoln Blvd. NW, right turn onto Mindanao Way N, 0.4 miles on Mindanao Way N, right turn onto CA-90 E, 1.5 miles on CA-90 E, 23.6 miles on I-405 N, 3.1 miles on I-5 N, 46.0 miles on CA-14 N and 4.1 miles on local road, for a total travel distance of 79.3 miles. For the return trips, the empty trucks would enter Project Area “A’ from Lincoln Blvd. South, again to avoid left turns and provide a “one-way” operation on-site for efficiency. A round trip from the site to the landfill will take approximately three and a half hours. A truck could make two round trips to the landfill during an eight hour period.

The anticipated off-haul from the project at approximately 3,600 c.y. per day exceeds the maximum intake capacity of all but one of these landfills, and is roughly 27 percent of their combined capacity of approximately 13,380 c.y. Therefore hauling to multiple landfills each day will be required.

The off-haul operations, as with all grading efforts will be conducted using Best Management Practices (BMP’s) to limit the amount of soil loss from the site. These would include BMP’s such as tire wash, shaker plates, covered trucks, etc.