

**Appendix H:
Transportation Data**

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H.1 - Materials Recovery Facility Waste Renovation Report

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October 12, 2017

Ms. Janna Waligorski
FIRST CARBON SOLUTIONS
2000 O Street, Suite 200
Sacramento, CA 95811

**RE: MATERIALS RECOVERY FACILITY THROWITA WAY SITE
MODIFICATION, EL DORADO COUNTY, CA**

Dear Ms. Waligorski:

KD Anderson & Associates, Inc. has prepared this analysis for the proposed new site master plan for the existing Material Recovery Facility and Transfer Station (MRF) located on the south end of Throwita Way in El Dorado County. Access to the site is via Bradley Road and Truck Street which connect to Diamond Drive (State Route 49). The facility serves most of the west slope of El Dorado County including residents and businesses. In addition to solid waste management the site undertakes recycling activities. The activities are as follows:

- Receive and Transfer Solid Waste – waste is collected from residences and businesses and is then reloaded onto tractor-trailers for transfer to out of county landfills;
- Material Processing and Recovery – recyclable materials are sorted from certain waste streams;
- Commingled / Single Stream Recyclables – commingled materials are brought to the facility and temporarily stored under a fabric covered structure until reloaded and shipped to a material recovery facility outside the County;
- Recycle Drop-Off Center – customers can bring separated recyclable materials, such as papers, plastics, aluminum and glass to the facility where they are baled and sent to recover markets;
- Household Hazardous Waste (HHW) Drop-Off – Household hazardous wastes can be received from County residents and Conditionally Exempt Small Quantity Generators are temporarily stored until they are shipped outside the County;
- Green / Yard Waste – Green waste is collected by franchised collection vehicles and unloaded at the site. The material is temporarily stored until reloaded and taken to a processing facility outside the County. Residents and landscape contractors can also self-haul green waste to the site;
- Construction and Demolition – Waste is received by collection trucks, contractors and the public and stored in a separate outdoor area. The material is processed and separated to recover recyclable materials. Residual waste is loaded onto tractor-trailers and shipped to out of county landfills;
- Appliance Recycling – Customers can drop off reusable items such as refrigerators and stoves which are then removed of all contaminants such as Freon. The remaining metal is then shipped to recyclers.

Project Description

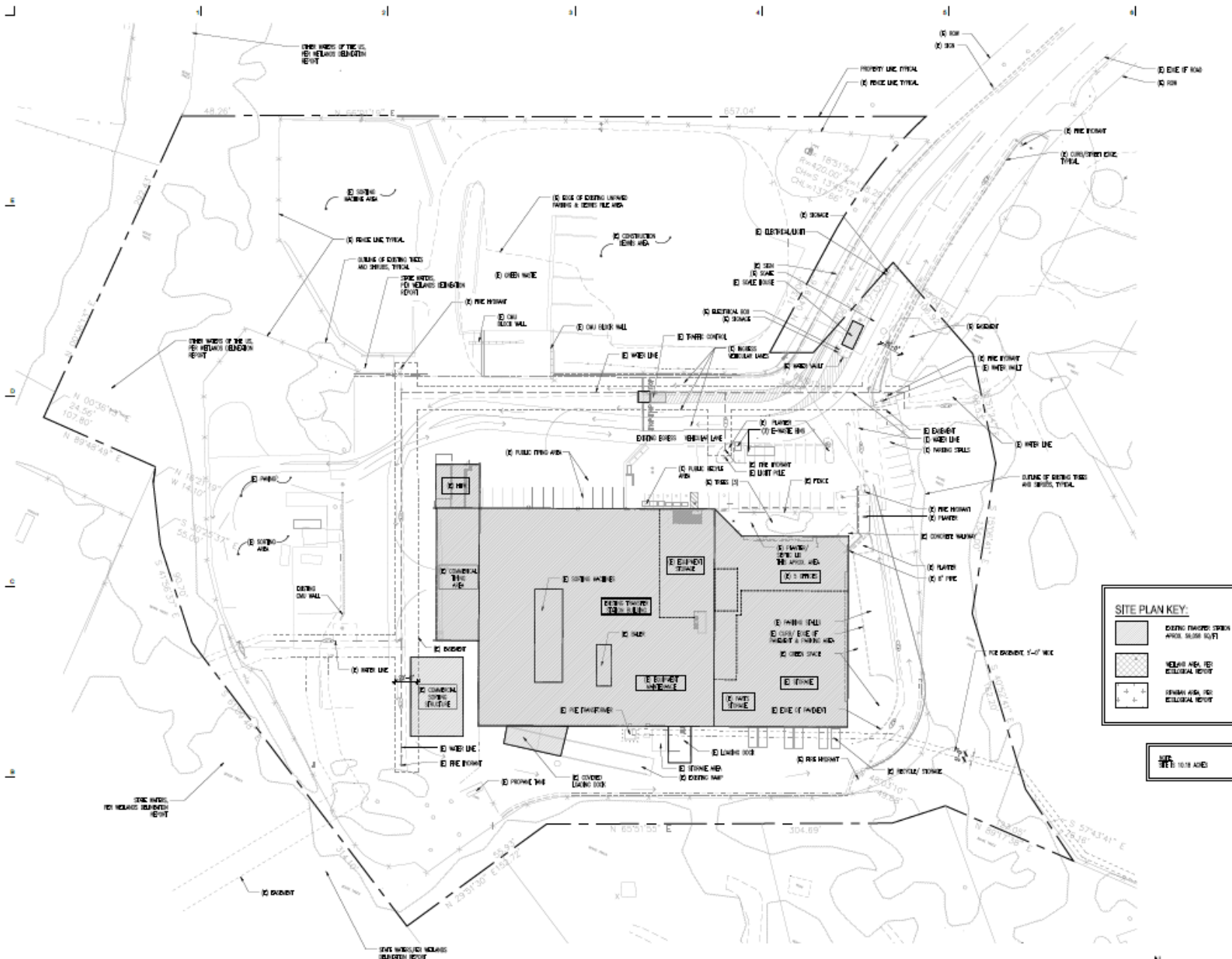
The MRF site is 10.3 acres and currently consists of 75,760 square feet (sf) of facilities. This includes a 40,800 sf warehouse which is used as the main transfer station and a 20,600 sf office building. The remaining square footage includes out-building and extended canopies that have been added to existing structures to allow vehicles to back into stalls and unload materials during inclement weather. The facility is currently permitted to process 400 tons per day (tpd) of solid waste material and 300 tpd of green waste for a total of 700 tpd.

The proposed project will include a site master plan that will enhance operational conditions and offer improved services. Figure 1 displays the proposed site plan. The new site plan will have 88,927 sf of buildings and covered areas, an increase of 13,167 sf. All materials received will be unloaded and processed under covered areas.

The project will include the following new facilities:

- New Gatehouse, Entrance and Scale System – The entrance will be redesigned to allow collection trucks to enter a dedicated entrance with a separate scale on the north side of the site.
- New Transfer Station – a new building will be constructed on the north side of the site allowing the building to receive all waste material. Franchise collectors will unload on the west side of the building while self-haul customers will unload on the east side.
- Recycle Processing Canopy – a new canopy building will be constructed to allow processing of recyclable waste streams.
- Recycle Drop Off area – The updated facility will include a covered canopy building to allow drop-off of HHW waste and source separated recyclable materials.
- Maintenance Center – the last bay of the existing transfer station will be re-purposed to provide an area for routine maintenance for rolling stock used for on-site operations.
- Office and Education Center – The existing office space will be upgraded with an education center added within the existing square footage. The education center will provide space to conduct events for site tours for schools and other groups.

The site will be updated to provide better efficiencies for each of the waste and recyclable streams; however, the project will not increase the permitted amount of waste that can be handled daily and will remain at 700 tpd. Based on our discussions with El Dorado County Long Range Planning staff the project will create minimal new traffic to the site (i.e. site tours) and thus will not require a traffic impact study. However, consistent with County guidelines an On-Site Transportation Review is being prepared.



SITE PLAN KEY:

[Hatched Box]	EXISTING DRIVEWAY, OPEN AREA, SIDEWALK
[Dotted Box]	NEWLY ADDED ECOLOGICAL RESTORE
[Box with + +]	REPAIR AREA FOR ECOLOGICAL RESTORE

NOT TO SCALE



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WASTE CONNECTIONS
MATERIAL RECOVERY FACILITY
 4100 THROWITA WAY
 PLACERVILLE, CA 95867

Date Revision

NEXUS PROJECT #: 18161
 CHECKED BY: [Signature]
 DATE: [Date] Project Issue Date
EXISTING SITE PLAN



AS101

KD Anderson & Associates, Inc.
 Transportation Engineers

SITE PLAN

Technical Approach

This assessment focused on the tasks described below:

- Identify Project Characteristics: This task assembled peak hour traffic counts at two intersections, Diamond Road (SR 49) at Bradley Drive and the Project Entrance at Throwita Way. A field study was also conducted to observe queuing patterns at the project entrance.
- Review local area for current traffic problems such as high-accident locations, non-standard intersections / driveways or intersections in need of a traffic signal.
- Review site entrance and proximity to existing and future adjacent driveways.
- Review adequacy of site parking relative to anticipated demand and zoning code.
- Review vehicle circulation: This task included an AutoTurn assessment to confirm the adequacy of site circulation. Key concerns focused on projected circulation of tractor-trailer traffic and self-haul vehicles with trailers.
- Identify if adequate temporary queuing locations for tractor-trailers are available while waiting to load waste material for off-haul.

Project Characteristics

For the near term access to the site will remain in its current approach. This includes access from Diamond Drive (SR 49) via Bradley Drive to Throwita Way. Signage exists along Diamond Drive in advance of the Bradley Drive intersection directing customers to the MRF; Truck Street provides a secondary access onto Throwita Way. Traffic counts were conducted at the Diamond Drive / Bradley Drive intersection and the entrance to the MRF during the mid-week a.m. peak hour and during the mid-week mid-day peak hour when most traffic is franchised haulers and the Saturday peak hour when most traffic is self-haul vehicles. Information provided by Waste Connections, the County's contracted waste manager, indicated that the peak hours occur between 11:00 a.m. and 3:00 p.m. during the mid-week with the peak days being Monday through Wednesday, and Saturdays.

With the completion of the Diamond Springs Parkway, access to the MRF will change from the current route. The Diamond Dorado Retail Center project consists of about 280,000 square feet of retail uses to be built on the south side of the proposed Diamond Springs Parkway. This arterial roadway will connect Missouri Flat Road to Diamond Road. The new roadway will include a signalized intersection at Throwita Way. Dedicated turn lanes along Diamond Springs Parkway will provide direct inbound access past the retail center to the project site. Outbound traffic will comingle with retail traffic upon leaving the site. A four-way intersection providing access to both sides of the retail center is proposed about 300 feet north of the entrance to the MRF site.

Existing Traffic Conditions

Traffic volumes were collected and queues observed during the peak hours of the site. Figure 2 presents the turning movements at the SR 49 / Bradley Drive intersection and the inbound / outbound volumes at the site entrance. The site entrance volumes are also split by vehicle type, including Light Density Vehicles (passenger cars and trucks), Medium Density Vehicles (collection / franchise haul trucks, debris boxes, etc.) and Heavy Duty Vehicles (tractor-trailer trucks).

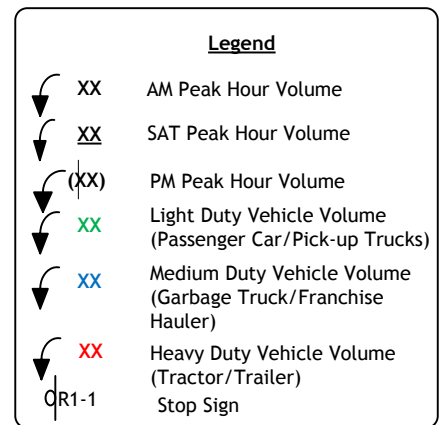
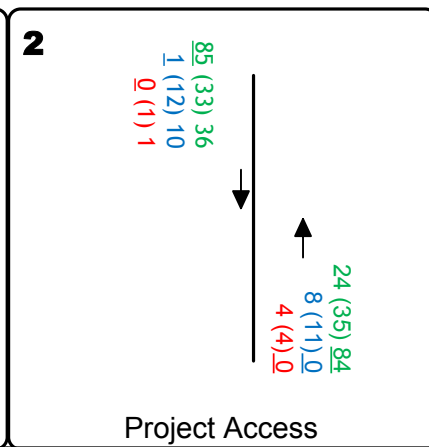
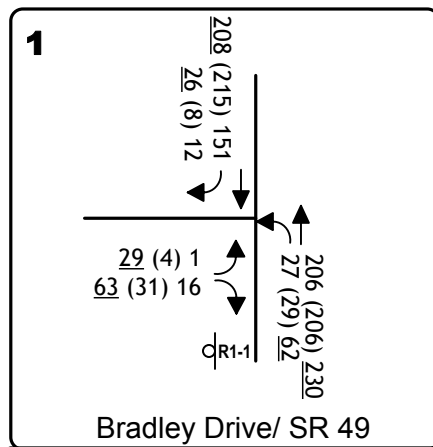
The highest volume of vehicles occurs on Saturday. On the Saturday when traffic was observed 170 vehicles entered or exited the site, with 99% being LDV. During the midweek the highest volumes occur in the mid-day period. 96 vehicles were observed on a Wednesday entering or exiting the site. According to MRF staff, Monday through Wednesday are the highest volume mid-week days (e-mail A. Magallanez). Of these vehicles 71% are LDV, 24% are MDV and 5% are HDV.

Access to the MRF is along low volume roads once vehicles turn off of Diamond Drive (SR 49). A review of the route indicated that sight distance appears adequate at the intersections for vehicles turning at the Diamond Drive / Bradley Drive and Bradley Drive / Throwita Way intersections. County staff and Caltrans were contacted to obtain the accident history for these intersections and along the Bradley Drive and Throwita Way roadways.

One accident was identified at the Diamond Drive / Bradley Drive intersection in the previous three year period ending December 2014. The accident occurred in the northbound direction 30 feet south of the Bradley Drive intersection and involved a vehicle making an improper turn rear-ending the leading vehicle. No other accidents were identified, and the existing conditions review did not identify any traffic concerns.

A site visit was conducted to identify typical queuing conditions at the current entrance to the site. The queuing observations indicated that vehicles currently choose one of three lanes based upon the type of vehicle (e.g. collection truck / franchise hauler, self-hauler, etc.) and the type of material being unloaded (e.g. recyclables, tires, etc.). Current signage at the entry gate appeared to confuse customers as during a site visit nine vehicles were observed in a single lane; MRF staff left the entry gate area and directed customers to the various lanes. With this observed queue the vehicles queued a distance of about 230 feet.

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EXISTING VOLUMES AND LANE CONFIGURATIONS

Proposed Site Entrance

The project access is at the southerly end of Throwita Way. The entrance to the site will include two inbound lanes and one outbound lane. The project will modify the public scale location by moving it further south. Under the proposed layout inbound tractor-trailers will be directed to the outside lane prior to the public scale; collection trucks may also use this lane upon entering the site. Three lanes will be provided for trucks once they enter at the far north side of the site. Two lanes will be used for tractor-trailers to queue while they wait to be loaded for outbound material hauling. The outside lane will have a scale available for franchise haulers (Figure 1).

The inside lane approaching the site will be used for self-haul customers. This lane will widen to three lanes once the truck entrance is passed with the outer lane available for recyclable and hazardous waste drop off. This area of the site is located north of the gated entrance and allows these customers to avoid the public scale. After unloading, these vehicles will exit the site via a stop controlled lane that separates the inbound lanes at the truck entrance (Figure 1). The middle lane will provide the main access into the site, allowing access into the site across the public scale for the waste material drop-off area. Upon exiting, these same vehicles will travel across an outbound scale at this location. The inside inbound lane will provide access to the facility's parking lots and office / education center.

As noted in **Existing Traffic Conditions** queues of up to nine vehicles were observed. The proposed layout will allow various users to use alternative routes to enter the site. Vehicles other than collection trucks that will be weighed will enter through the public scale entrance. A bypass lane is available at the public scale for those vehicles not required to be weighed. The observed nine-vehicle queue should be reduced with the various entrance locations for different customers.

Franchise haul trucks (MDV) and tractor-trailer trucks (HDV) will enter the site at the north side of the site while self-haulers (LDV) will enter the site further south. A scale will be available specifically for franchise haul vehicles to expedite travel into the facility. The closest roadway to this entrance is an unpaved roadway identified as Lime Plant Road. This roadway is about 130 feet from the commercial entrance and does not appear to be an active road. The closest paved roadway is expected to be the intersection providing access to the proposed Diamond Dorado shopping center, about 300 feet north of the property. Based on observed queues project traffic is not expected to impact this intersection.

Parking

Parking requirements were reviewed to determine needed parking due to the zoning code and requirements relative to existing parking demand. For this study parking requirements relate to vehicles parked for extended periods of time for employees and visitors, and does not account for customers dropping off waste materials. The site is zoned for Industrial use. Title 130, Article 3 of the County's zoning code identifies parking space requirements for four use types. The site includes 11,500 sf of indoor active use area (AUA), 8,500 sf of storage, 62,550 sf of outdoor

storage area and a service bay for motor vehicle repair. Table 1 displays the parking space requirements for each. Based on the zoning code 48 stalls are required for the MRF.

**TABLE 1
 PARKING REQUIREMENTS PER ZONING CODE**

Use Type	Parking Space Requirement	Size	Parking Required
Industrial - General and specialized	1 per 500 sf AUA	11,500 sf	23
	1 per 1,000 sf indoor storage area	8,500 sf	9
	1 per 5,000 sf outdoor storage area	62,550 sf	13
Automobile repair and service	3 per service bay	1 bay	3
Total Stalls Required			48

The proposed facility will provide 44 marked stalls in front of the office / education center along the north side of the building and 12 spaces on the east side of the building. An additional 7 parking spaces are provided along the east side of the interior roadway opposite the main parking lot. The total spaces to be provided will be 63 spaces which is greater than required by the County's zoning code.

Site Circulation

The Material Resource Facility project will result in an updated layout of the facility to provide efficient access into the facility and an expedited method to accept material into the site and transfer the same material out of the site. The on-site traffic conditions accompanying the planned modernization were reviewed to confirm that truck circulation can be provided throughout the site. Illustrations of site circulation are attached.

Design Vehicle. Based on discussion with staff the maximum sized vehicle on the site are tractor-trailer transfer vehicles traveling to and from the project site. These vehicles are California Legal Design Vehicles (as defined in the Caltrans *Highway Design Manual*), but do not include Surface Transportation Assistance Act (STAA) Design Vehicles. The design vehicle expected at the project site is a California Legal-65 tractor-trailer.

The paths and turning requirements for the site have been identified through application of AASHTO standards using *AutoTurn* software. Four additional design vehicles were reviewed. These included franchise operator trucks (i.e. garbage trucks), passenger car/pick-up trucks and passenger car/pick-up trucks with trailers. Two alternative vehicle types were considered for the passenger car with trailer vehicle. The first is similar to a passenger car with boat trailer

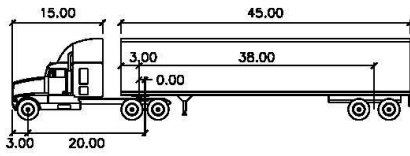
attachment while the second one is a passenger car with commercial trailer. The commercial trailer is longer than many trailers that self-haul customers may use; therefore, the car with boat trailer was used based on the shorter length of the trailer. These vehicle types were also studied as the internal tractor-trailer routes differ than these other vehicles. The tractor-trailers operate along the periphery of the site while the franchise haulers can operate along the periphery and through the main entry gate; all self-haul vehicles will use the main entry gate and the bypass lane into the recyclables/household waste drop-off area just north of the public scale.

AutoTurn Site Evaluation. The site plan was reviewed to identify those key locations where truck traffic and new circulation could create operational issues. Trucks arriving at the site entrance will be directed to the scale at the north side of the site as shown in Figure 1. This entrance will be specifically for tractor-trailers that will be off-hauling materials and franchise operators delivering waste.

Tractor-trailers will queue in an area adjacent to the north scale while waiting to be uploaded at the transfer station. Five tractor-trailers can queue prior to being loaded as shown in Figure 3. The tractor-trailers will descend a ramp that will allow transferable material to be pushed into the trailers. Once loaded the trucks will proceed up a ramp and then head south along the perimeter of the site. These vehicles will proceed along the south perimeter and then enter the roadway along the east side of the site. This roadway provides a direct exit from the site and onto Throwita Way. As illustrated in Figure 3, trucks will use the entire roadway as they complete this turn in the southeastern corner of the site. A curve is present along the entry roadway near the public scale. The *AutoTurn* assessment indicates that tractor-trailers cannot stay within the proposed lane; therefore, the east edge of the roadway should be widened to provide for overtracking of the vehicles occurring in this curve.

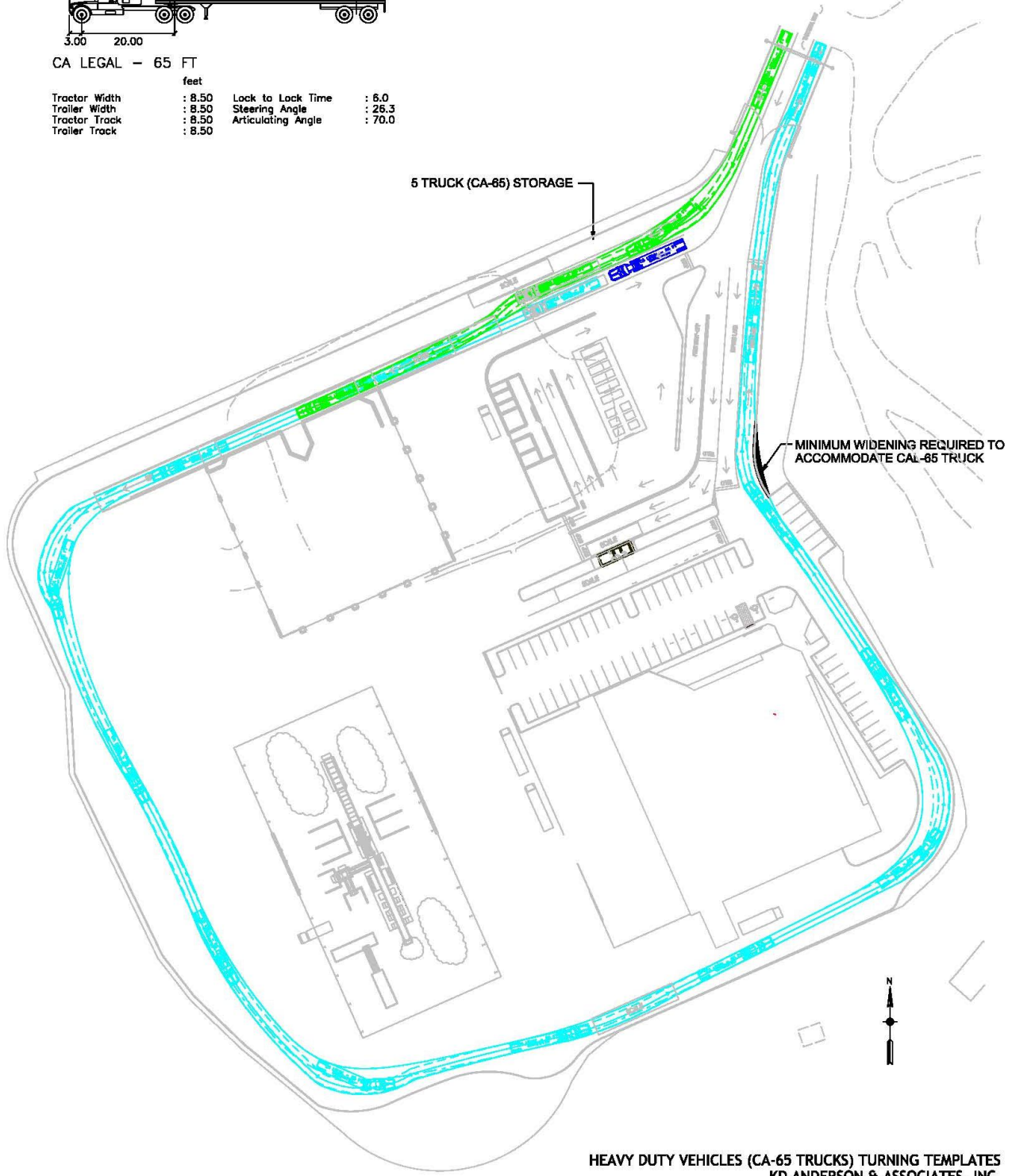
Figure 4 shows the turning paths for franchise haulers throughout the site. This category of vehicle (MDV) may also include debris box trucks and other large construction dump style trucks. The franchise haulers are expected to use the same entrance as the tractor-trailers, utilizing the scale at the north side of the site for inbound weighing. It is assumed that other trucks associated with the franchisees, (i.e. debris box trucks) may also use this entrance and scale. All other trucks are expected to use the public scale in the middle of the site. After being weighed the franchise operators will continue to the west side of the transfer station where they will back up to unload waste material. They will then proceed to the main entrance where they will be weighed unladen and then head north out of the site onto Throwita Way. As shown in Figure 4 there are two locations that will be impacted by these trucks. The franchise haulers will need to back up to offload at the Transfer Station facility and at the Recycle Canopy facility. Adequate space is available at the Transfer Station to allow the franchise trucks to back up. At the Recycle Canopy trucks at the south end of the site have limited space to back up. Figure 4 illustrates that the southernmost dock has accessibility issues with outbound vehicles having to make a three-point turn to depart. Similar to the Cal-Legal trucks franchise trucks departing past the main scale will make a left turn onto the outbound roadway. The *AutoTurn* assessment shows that the roadway will need to be widened to keep trucks on the pavement, similar to the Cal-Legal tracking.

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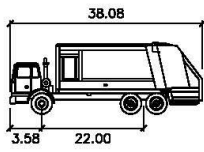
CA LEGAL - 65 FT
feet

Tractor Width	: 8.50	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 26.3
Tractor Track	: 8.50	Articulating Angle	: 70.0
Trailer Track	: 8.50		



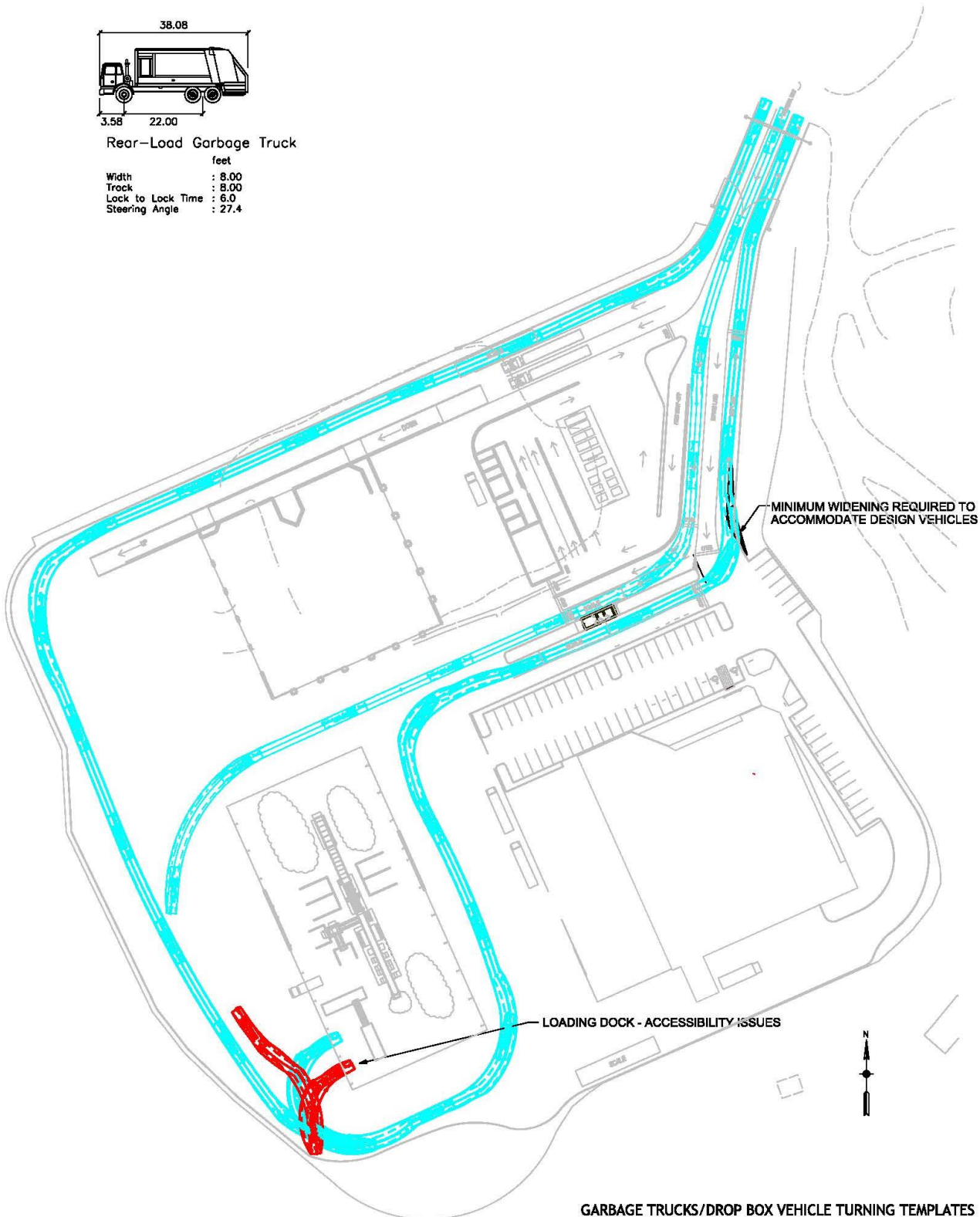
HEAVY DUTY VEHICLES (CA-65 TRUCKS) TURNING TEMPLATES
 KD ANDERSON & ASSOCIATES, INC.
 10/17/17 1"=100'
 FIGURE 3
 3260-04

HEAVY DUTY VEHICLE TURNING TEMPLATE



Rear-Load Garbage Truck

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 27.4



GARBAGE TRUCKS/DROP BOX VEHICLE TURNING TEMPLATES
 KD ANDERSON & ASSOCIATES, INC.
 10/17/17 1"=100'
 FIGURE 4
 3260-04

MEDIUM DUTY VEHICLE TURNING TEMPLATE

Two *AutoTurn* analyses were conducted for self-haul vehicles, without trailers (Figure 5) and with trailers (Figures 6 and 7). The self-haul vehicles (LDV) will use the public scale entrance for inbound and outbound access for all but the recyclables/household waste drop-off area just north of the public scale. These vehicles will enter the recyclables/household waste drop-off area just after passing the truck entrance at the north side of the site. The *AutoTurn* analysis shows that 10 self-haul vehicles will be able to queue for the public scale. Outbound vehicles will be able to exit via past the public scale or past the recyclable/household waste drop-off area. Self-haul vehicles that have entered the recyclable/household waste drop off area can enter two of the three drop-off lanes; however, as shown in Figure 5, the storage area may interfere with those vehicles making a sharp right turn to the inside lane. The storage area may need to be reconfigured to accommodate this turn depending on the location of the structure posts. All vehicles exiting the recyclable / household waste area will use the exit between the truck entrance and the main roadway. Vehicles using this exit will be turning into the exit at an acute angle with other outbound vehicles. A clear zone should be maintained to allow unrestricted visibility to eastbound to northbound vehicles.

The second *AutoTurn* analysis for self-haul vehicles included 20' trailers the 20' (boat trailers). Inbound vehicles approaching the public scale entrance will be able to complete turns without overtopping the medians. These vehicles will be able to complete turns entering the recyclable/household waste area using the outside and middle aisles (Figure 6). The inside aisle may be accessible, depending on the location of the structure posts. These vehicles will be able to exit the site at both the recycle/household waste and main entry areas. Adequate visibility needs to be maintained at the intersection of the outbound recycle/household waste lane and the main road intersection so that vehicles with trailers can enter the outbound lane to exit the site.

A third *AutoTurn* analysis for self-haul vehicles was analyzed. This included a passenger vehicle with commercial trailer attached based on NCHRP Report 659, "Guide for the Geometric Design of Driveways". This trailer is approximately 40' in length. Inbound vehicles approaching the public scale entrance will be able to complete turns without overtopping the medians; however, the turn will require the use of both inbound lanes. Vehicles entering the recyclable/household waste area will be able to use the outside and middle aisles as shown in Figure 7 although the proposed medians in the entry and between the first and second aisles would need to be shortened to allow the trailers to not overtop the curbs. These trailers cannot enter the inside aisle. These vehicles will be able to exit the site at both the recycle/household waste and main entry areas. As noted earlier adequate visibility needs to be maintained for exiting.

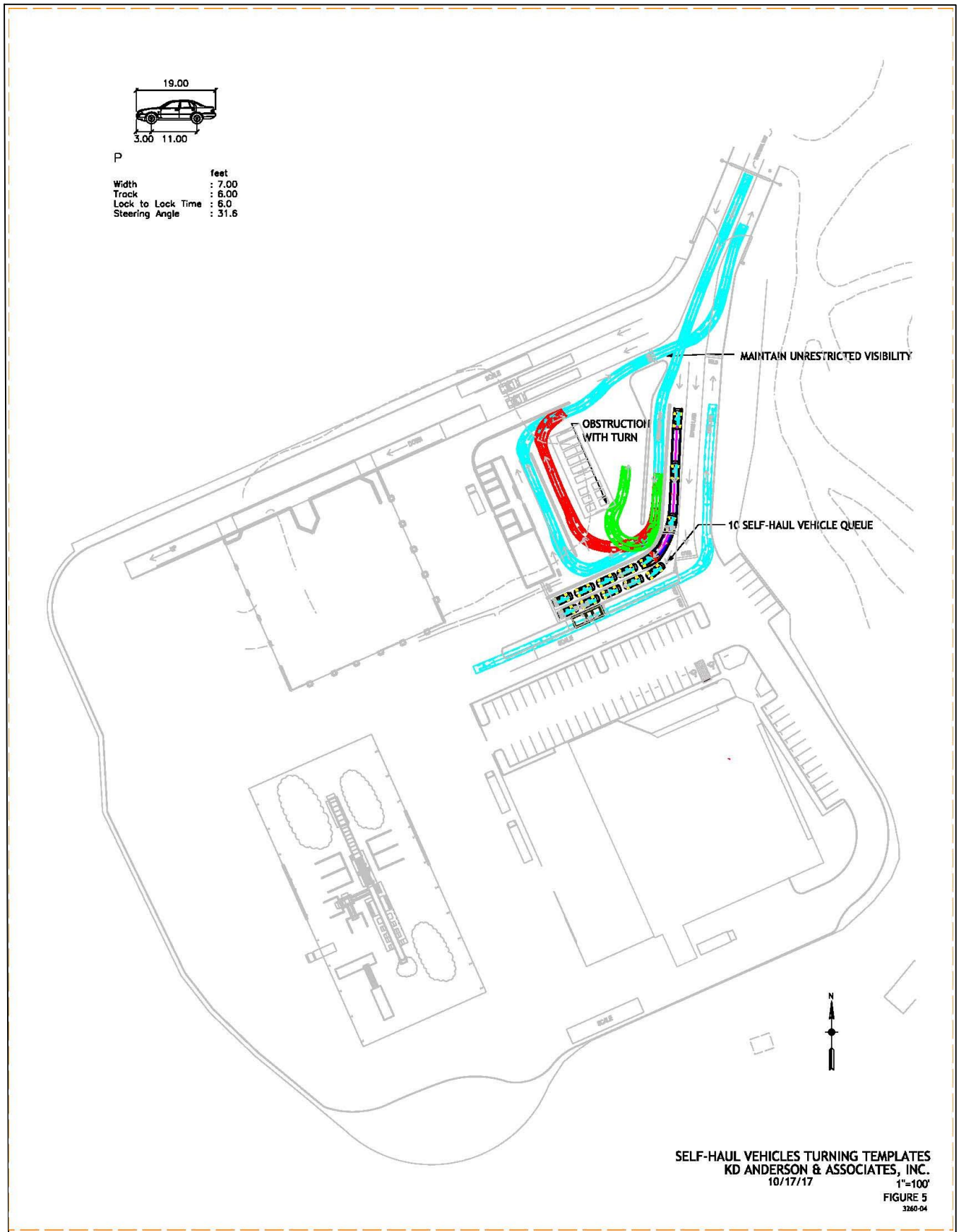
Signing, Striping and Lane Configurations. Signage directing the various site uses will be important to providing good flow through the site with minimal queues. There are several locations where traffic will be crossing, and it will be important for site users to know where they are going without blocking site intersections. For example, upon entering the facility at the north end of the site adequate wayfinding signage should be provided to identify which lanes should be used for each on-site activity. This will allow motorists to move into the appropriate lane prior

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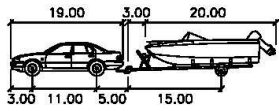
to arriving at a decision point. Striping should be used at various locations to provide direction, but as noted earlier, should also not be used if vehicles would continually cross over striping.

The site plan notes several locations with 'yield' markings. These markings should be eliminated as 'yield' signs and markings can confuse motorists. In the locations shown, the yield markings would provide priority to side street traffic which are shown to be stop controlled.

The plan identifies two outbound lanes at the main scale exit. However, only a single departure lane is provided northbound to exit the site. The purpose of having two lanes is that exiting vehicles not having to be weighed can bypass the scale. However, two vehicles queued at the intersection simultaneously will create confusion for these motorists. If possible, it is recommended that the scale be moved to the west edge of the island. This will provide about 100 feet between the scale house and the stop bar. A W9-1 (Right Lane Ends) sign should be installed just past the scale. The final 50 feet of striping should be removed and a W4-2 (merge sign) at the end of the striping. This will identify that vehicles should merge. It is also recommended that a taper be installed to reduce the width from two 12-foot lanes to a single 18-foot lane. Figure 8 presents proposed changes to the striping to facilitate movements throughout the project site.

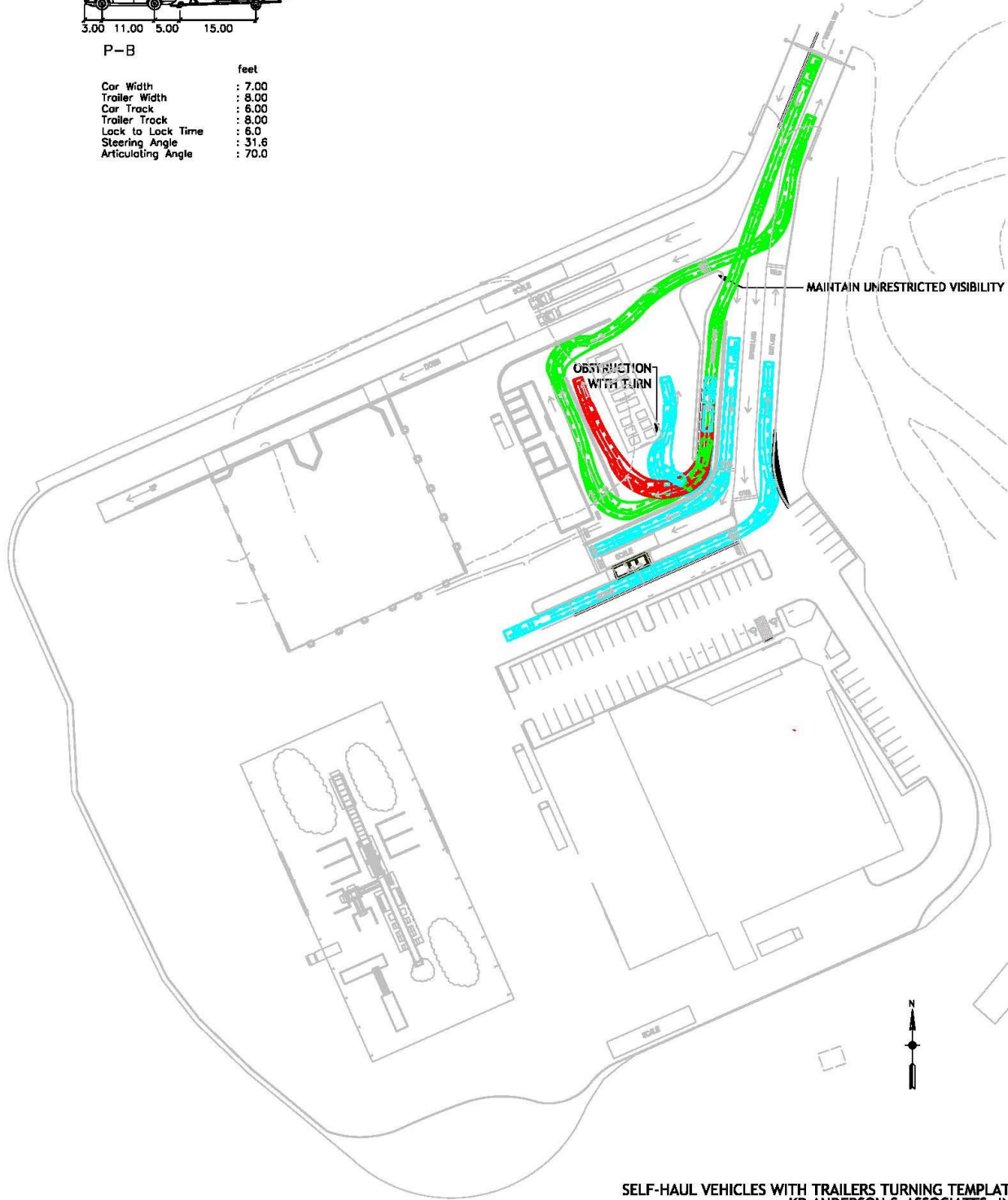


LIGHT DUTY VEHICLE TURNING TEMPLATE



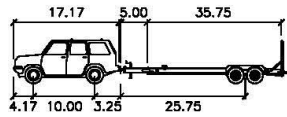
P-B

	feet
Car Width	: 7.00
Trailer Width	: 8.00
Car Track	: 6.00
Trailer Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6
Articulating Angle	: 70.0



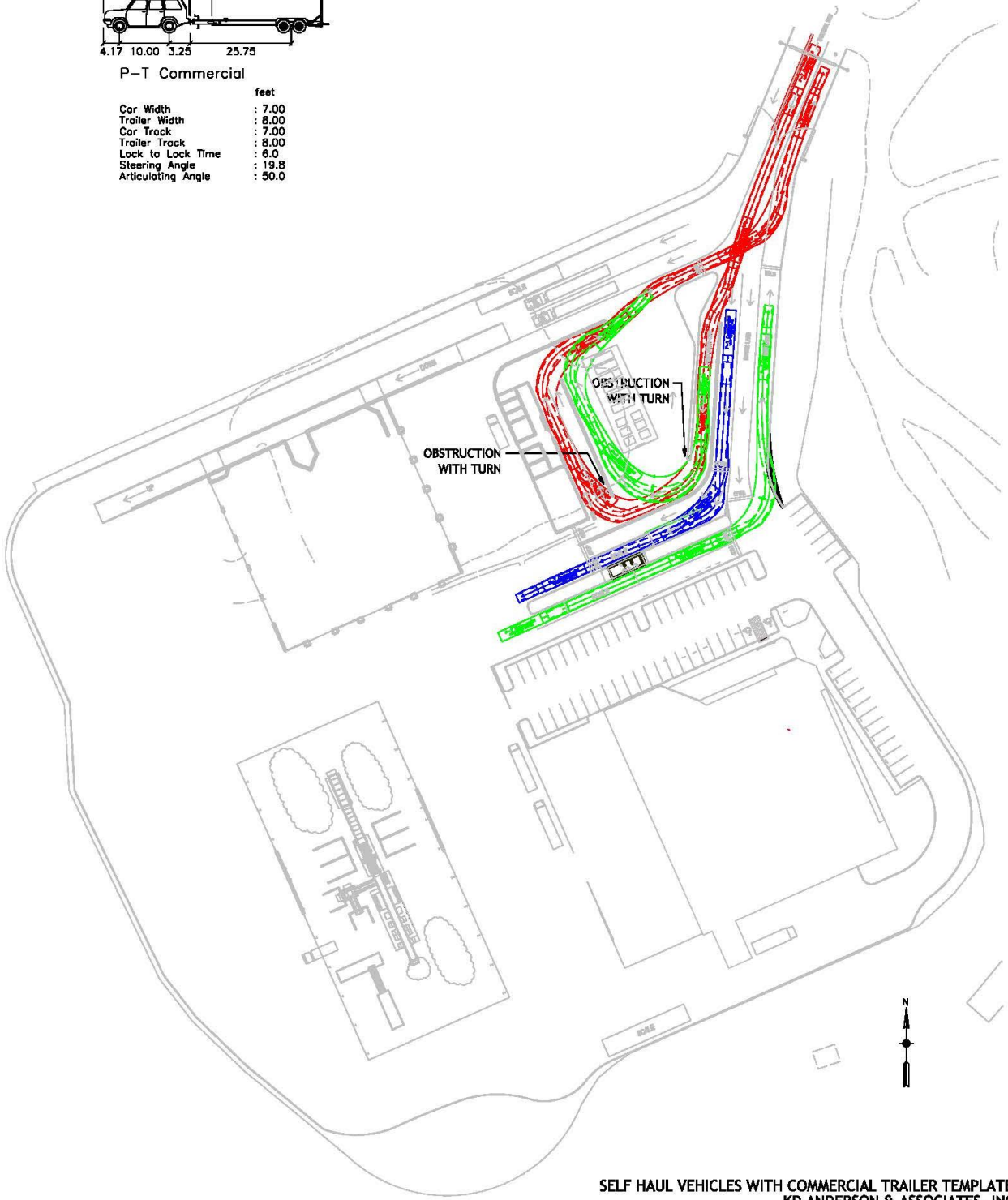
SELF-HAUL VEHICLES WITH TRAILERS TURNING TEMPLATES
 KD ANDERSON & ASSOCIATES, INC.
 10/17/17 1"=100'
 FIGURE 6
 32260-04

LIGHT DUTY VEHICLE WITH TRAILER TURNING TEMPLATE



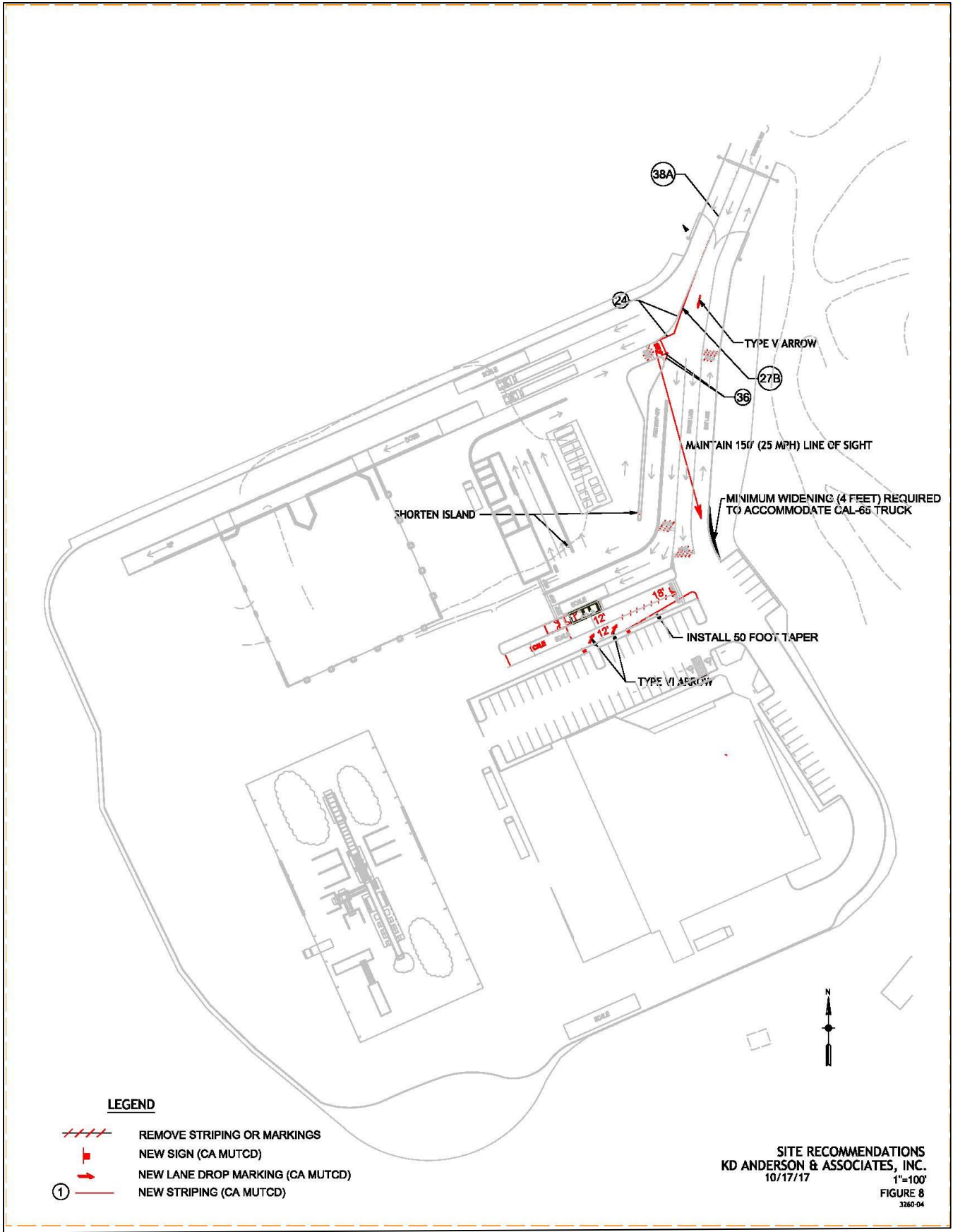
P-T Commercial

	feet
Car Width	: 7.00
Trailer Width	: 8.00
Car Track	: 7.00
Trailer Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 19.8
Articulating Angle	: 50.0



SELF HAUL VEHICLES WITH COMMERCIAL TRAILER TEMPLATES
 KD ANDERSON & ASSOCIATES, INC.
 10/17/17 1"=100'
 FIGURE 7
 32260-04

LIGHT DUTY VEHICLE WITH COMMERICAL TRAILER TURNING TEMPLATE



SITE RECOMMENDATIONS

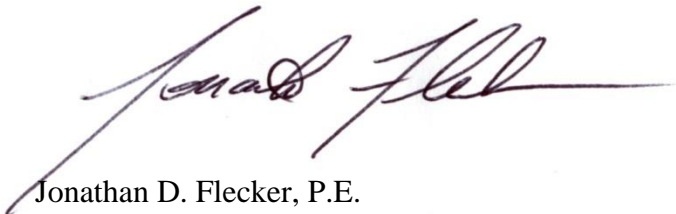
Conclusions

The proposed update of the MRF facility in Diamond Springs is expected to improve efficiency of both vehicles and waste transiting the site. The project will construct a new office / administration facility including the addition of educational center within the administration building. The project will result in 88,927 square feet of buildings and covered areas, an increase of about 13,167 square feet. The project will not increase the processing of the permitted amount of 700 tons per day of solid waste material. It is expected that few new trips will be generated by the facility update. The new trips would likely be related to the education program that the waste facility plans to institute for local schools and groups; however, the few additional trips would not affect roadway travel conditions.

Should you have any questions please free to contact me directly at (916) 501-7513. You may also reach me via e-mail at jflecker@kdanderson.com.

Sincerely,

KD Anderson & Associates, Inc.



Jonathan D. Flecker, P.E.
Transportation Engineer

Attachments

**SR 49 / BRADLEY DRIVE
FEB 18, 2016**

NB Left

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
7:00 -7:15	1	0	1	1
7:15 -7:30	6	2	8	7
7:30 -7:45	11	3	14	6
7:45 -8:00	17	3	20	6
8:00 -8:15	20	8	28	8
8:15 -8:30	23	10	33	5
8:30 -8:45	30	11	41	8
8:45 -9:00	34	14	48	7

NB Thru

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
7:00 -7:15	28	2	30	30
7:15 -7:30	73	3	76	46
7:30 -7:45	130	4	134	58
7:45 -8:00	188	5	193	59
8:00 -8:15	234	5	239	46
8:15 -8:30	285	6	291	52
8:30 -8:45	334	6	340	49
8:45 -9:00	379	8	387	47

	Σ	
7:00 -7:15	55	
7:15 -7:30	86	
7:30 -7:45	95	
7:45 -8:00	115	351
8:00 -8:15	101	397
8:15 -8:30	100	411
8:30 -8:45	97	413
8:45 -9:00	111	409

SB Thru

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
7:00 -7:15	24	0	24	24
7:15 -7:30	55	0	55	31
7:30 -7:45	83	0	83	28
7:45 -8:00	126	0	126	43
8:00 -8:15	162	2	164	38
8:15 -8:30	200	2	202	38
8:30 -8:45	231	3	234	32
8:45 -9:00	271	5	276	42

SB Right

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
7:00 -7:15	0	0	0	0
7:15 -7:30	0	0	0	0
7:30 -7:45	2	0	2	2
7:45 -8:00	9	0	9	7
8:00 -8:15	10	0	10	1
8:15 -8:30	12	0	12	2
8:30 -8:45	14	0	14	2
8:45 -9:00	15	0	15	1

EB Left

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
7:00 -7:15	0	0	0	0
7:15 -7:30	0	0	0	0
7:30 -7:45	0	0	0	0
7:45 -8:00	0	0	0	0
8:00 -8:15	0	0	0	0
8:15 -8:30	0	0	0	0
8:30 -8:45	1	0	1	1
8:45 -9:00	6	0	6	5

EB Right

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
7:00 -7:15	0	0	0	0
7:15 -7:30	0	2	2	2
7:30 -7:45	0	3	3	1
7:45 -8:00	0	3	3	0
8:00 -8:15	3	8	11	8
8:15 -8:30	4	10	14	3
8:30 -8:45	8	11	19	5
8:45 -9:00	14	14	28	9

**SR 49 / BRADLEY DRIVE
FEB 18, 2016**

NB Left					NB Thru					SB Thru					SB Right					EB Left					EB Right									
	Raw Data Cars	Raw Data Trucks	Σ	Net Vol		Raw Data Cars	Raw Data Trucks	Σ	Net Vol		Raw Data Cars	Raw Data Trucks	Σ	Net Vol		Raw Data Cars	Raw Data Trucks	Σ	Net Vol		Raw Data Cars	Raw Data Trucks	Σ	Net Vol		Raw Data Cars	Raw Data Trucks	Σ	Net Vol					
11:30 -11:45	3	1	4	4	11:30 -11:45	55	7	62	62	11:30 -11:45	64	2	66	66	11:30 -11:45	1	1	2	2	11:30 -11:45	4	1	5	5	11:30 -11:45	1	0	1	1	11:30 -11:45	4	1	5	5
11:45 -12:00	15	3	18	14	11:45 -12:00	103	12	115	53	11:45 -12:00	112	4	116	50	11:45 -12:00	2	1	3	1	11:45 -12:00	11	3	14	9	11:45 -12:00	1	0	1	0	11:45 -12:00	11	3	14	9
12:00 -12:15	20	4	24	6	12:00 -12:15	141	16	157	42	12:00 -12:15	167	4	171	55	12:00 -12:15	5	1	6	3	12:00 -12:15	20	4	24	10	12:00 -12:15	1	0	1	0	12:00 -12:15	20	4	24	10
12:15 -12:30	23	6	29	5	12:15 -12:30	186	20	206	49	12:15 -12:30	209	6	215	44	12:15 -12:30	7	1	8	2	12:15 -12:30	4	0	4	3	12:15 -12:30	25	6	31	7					
12:30 -12:45	27	8	35	6	12:30 -12:45	228	23	251	45	12:30 -12:45	252	6	258	43	12:30 -12:45	10	1	11	3	12:30 -12:45	5	0	5	1	12:30 -12:45	26	8	34	3					
12:45 -1:00	31	8	39	4	12:45 -1:00	280	25	305	54	12:45 -1:00	293	6	299	41	12:45 -1:00	12	2	14	3	12:45 -1:00	8	0	8	3	12:45 -1:00	30	8	38	4					
1:00 -1:15	37	11	48	9	1:00 -1:15	327	25	352	47	1:00 -1:15	348	7	355	56	1:00 -1:15	13	2	15	1	1:00 -1:15	13	1	14	6	1:00 -1:15	33	11	44	6					
1:15 -1:30	41	13	54	6	1:15 -1:30	375	31	406	54	1:15 -1:30	396	7	403	48	1:15 -1:30	17	2	19	4	1:15 -1:30	16	1	17	3	1:15 -1:30	34	13	47	3					

493

454

436

445

453

**SR 49 / BRADLEY DRIVE
FEB 20, 2016**

NB Left

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
11:30 -11:45	12	2	14	14
11:45 -12:00	33	2	35	21
12:00 -12:15	47	2	49	14
12:15 -12:30	67	2	69	20
12:30 -12:45	80	3	83	14
12:45 -1:00	93	4	97	14
1:00 -1:15	106	4	110	13
1:15 -1:30	116	4	120	10

NB Thru

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
11:30 -11:45	45	1	46	46
11:45 -12:00	100	1	101	55
12:00 -12:15	162	1	163	62
12:15 -12:30	222	1	223	60
12:30 -12:45	279	1	280	57
12:45 -1:00	329	2	331	51
1:00 -1:15	387	3	390	59
1:15 -1:30	447	3	450	60

	Σ
11:30 -11:45	136
11:45 -12:00	149
12:00 -12:15	160
12:15 -12:30	163
12:30 -12:45	136
12:45 -1:00	159
1:00 -1:15	150
1:15 -1:30	148

608
608
618
608
593

SB Thru

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
11:30 -11:45	52	0	52	52
11:45 -12:00	104	1	105	53
12:00 -12:15	159	1	160	55
12:15 -12:30	211	1	212	52
12:30 -12:45	251	1	252	40
12:45 -1:00	312	1	313	61
1:00 -1:15	369	1	370	57
1:15 -1:30	417	1	418	48

SB Right

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
11:30 -11:45	7	0	7	7
11:45 -12:00	14	0	14	7
12:00 -12:15	19	0	19	5
12:15 -12:30	24	0	24	5
12:30 -12:45	33	0	33	9
12:45 -1:00	40	0	40	7
1:00 -1:15	47	0	47	7
1:15 -1:30	53	0	53	6

EB Left

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
11:30 -11:45	1	0	1	1
11:45 -12:00	5	0	5	4
12:00 -12:15	12	0	12	7
12:15 -12:30	24	0	24	12
12:30 -12:45	26	0	26	2
12:45 -1:00	34	0	34	8
1:00 -1:15	37	0	37	3
1:15 -1:30	42	0	42	5

EB Right

	Raw Data Cars	Raw Data Trucks	Σ	Net Vol
11:30 -11:45	15	1	16	16
11:45 -12:00	24	1	25	9
12:00 -12:15	41	1	42	17
12:15 -12:30	55	1	56	14
12:30 -12:45	69	1	70	14
12:45 -1:00	87	1	88	18
1:00 -1:15	98	1	99	11
1:15 -1:30	117	1	118	19

**SITE ENTRANCE
FEBRUARY 17, 2016**

INBOUND

OUTBOUND

	Raw Data Cars		Raw Data Trucks		Σ	Net Vol		Raw Data Cars		Raw Data Trucks		Σ	Net Vol		Σ	
	LDV	MDV	HDV					LDV	MDV	HDV						
7:00 -7:15	2	0	0	2	2		7:00 -7:15	0	0	0	0	0		7:00 -7:15	2	
7:15 -7:30	2	0	1	3	1		7:15 -7:30	0	0	0	0	0		7:15 -7:30	1	
7:30 -7:45	7	0	4	11	8		7:30 -7:45	0	0	1	1	1		7:30 -7:45	9	
7:45 -8:00	10	2	5	17	6		7:45 -8:00	1	1	1	3	2		7:45 -8:00	8	20
8:00 -8:15	18	5	5	28	11		8:00 -8:15	5	4	2	11	8		8:00 -8:15	19	37
8:15 -8:30	25	8	5	38	10		8:15 -8:30	11	6	3	20	9		8:15 -8:30	19	55
8:30 -8:45	36	8	5	49	11		8:30 -8:45	20	8	3	31	11		8:30 -8:45	22	68
8:45 -9:00	46	12	6	64	15		8:45 -9:00	25	9	5	39	8		8:45 -9:00	23	83
	36	10	1	47	9	0	0	24	8	4	36	6	0	0	15	

**SITE ENTRANCE
FEBRUARY 17, 2016**

INBOUND

	Raw Data Cars		Raw Data Trucks			Net Vol
	LDV	MDV	HDV	Σ		
11:30 -11:45	14	3	0	17	17	
11:45 -12:00	20	6	0	26	9	
12:00 -12:15	29	10	1	40	14	
12:15 -12:30	33	12	1	46	6	
12:30 -12:45	39	13	2	54	8	
12:45 -1:00	45	15	3	63	9	
1:00 -1:15	61	17	3	81	18	
1:15 -1:30	68	22	3	93	12	
	33	12	1	46	6	

OUTBOUND

	Raw Data Cars		Raw Data Trucks			Net Vol	Σ
	LDV	MDV	HDV	Σ			
11:30 -11:45	9	1	1	11	11	28	
11:45 -12:00	21	5	2	28	17	26	
12:00 -12:15	29	7	3	39	11	25	
12:15 -12:30	35	11	4	50	11	17	
12:30 -12:45	42	13	4	59	9	17	
12:45 -1:00	47	13	4	64	5	14	
1:00 -1:15	60	17	5	82	18	36	
1:15 -1:30	69	19	5	93	11	23	
	35	11	4	50	11	90	

**SITE ENTRANCE
FEBRUARY 20, 2016**

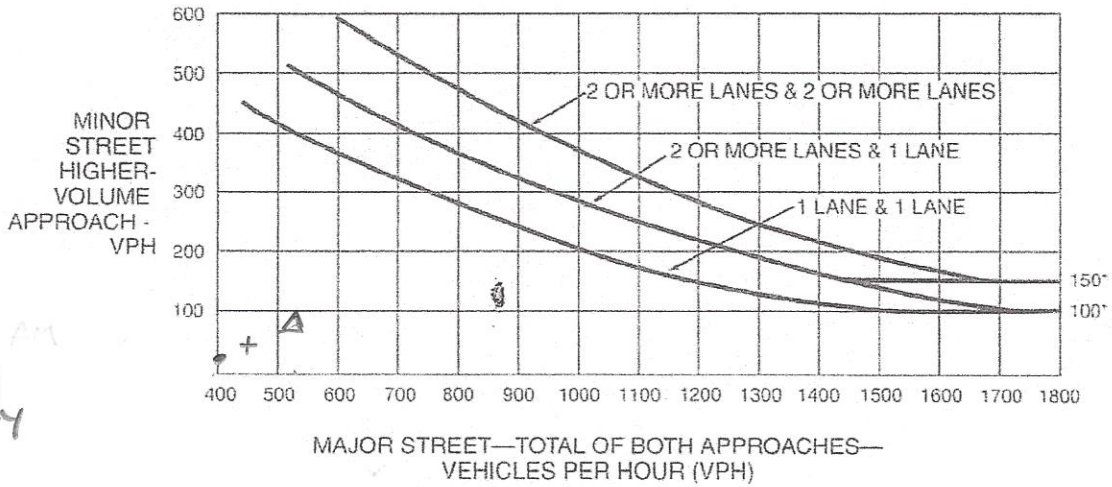
INBOUND

	Raw Data			Σ	Net Vol
	Raw Data Cars LDV	Raw Data Trucks MDV	Trucks HDV		
11:00 -11:15	20	1	1	22	22
11:15 -11:30	36	2	1	39	17
11:30 -11:45	56	2	1	59	20
11:45 -12:00	80	2	1	83	24
12:00 -12:15	98	3	1	102	19
12:15 -12:30	121	3	1	125	23
12:30 -12:45	138	4	1	143	18
12:45 -1:00	157	4	1	162	19
	85	1	0		

OUTBOUND

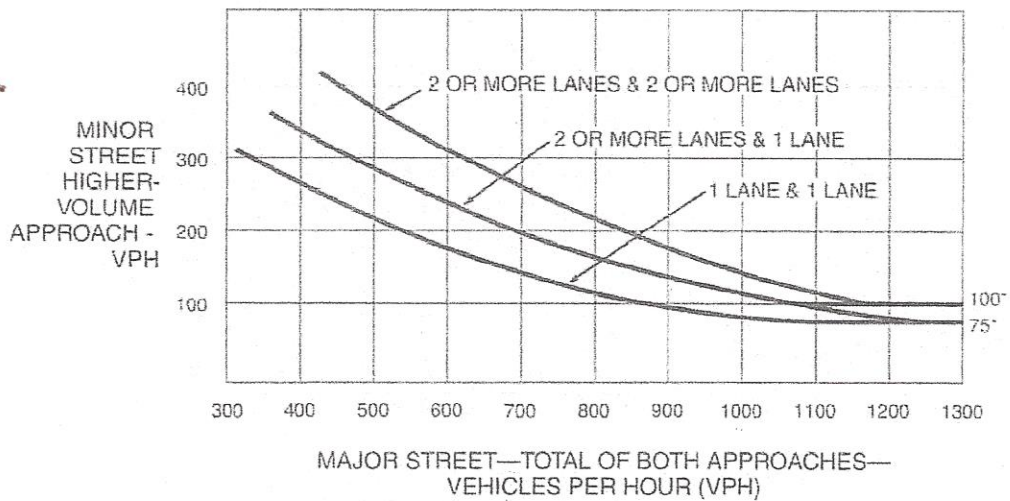
	Raw Data			Σ	Net Vol		Σ	
	Raw Data Cars LDV	Trucks MDV	Trucks HDV					
11:00 -11:15	18	1	0	19	19	11:00 -11:15	41	
11:15 -11:30	32	1	0	33	14	11:15 -11:30	31	
11:30 -11:45	51	1	0	52	19	11:30 -11:45	39	
11:45 -12:00	78	1	0	79	27	11:45 -12:00	51	162
12:00 -12:15	92	1	0	93	14	12:00 -12:15	33	154
12:15 -12:30	116	1	0	117	24	12:15 -12:30	47	170
12:30 -12:45	132	1	0	133	16	12:30 -12:45	34	165
12:45 -1:00	151	1	0	152	19	12:45 -1:00	38	152
	84	0	0					

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

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H.2 - Transportation Impact Study Initial Determination

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COMMUNITY DEVELOPMENT AGENCY LONG RANGE PLANNING

2850 Fairlane Court, Placerville, CA 95667
Phone (530) 621-4650, Fax (530) 642-0508

Transportation Impact Study (TIS) – Initial Determination

Applicant Information:

Name: Waste Connections, Inc. (Tom Riley) Phone #: 916/549-0443
Address: 4100 Throwita Way, Placerville Email: tomr@wasteconnections.com

Project Information:

Name of Project: Materials Recovery Facility Reno Planning Number: not yet assigned
Project Location: 4100 Throwita way, Placerville, CA Bldg Size: appx. 90,000
APN(s): 051-25-047 Project Planner: Rob Peters
Number of units: 0

Description of Project:

Renovation of existing facility including partial demolition of existing building and construction of two new separate buildings of apprx. 25,000 sq ft (transfer station) and 30,000 sq ft (recycle canopy). Renovations would redesign the facility to efficiently handle waste streams and recyclables. All existing operations would remain. New operations would be limited to new grinding equipment and an education center. No new or increased amounts of materials would be accepted. Greenwaste and C&D material would be temporarily processed at an offsite location. Net new sq ft is approx 20,000.

Step 1:

The following project uses are typically exempt from preparation of a Transportation Impact Study (TIS). Check applicable box. **An On-Site Transportation Review may be required for every project (see next page).**

- 4 or less single family homes 28,000 square feet or less for warehouse
 14 or less multi-family units 38,000 square feet or less for mini-storage
 2,300 square feet or less for shopping center 10,000 square feet or less for churches
 6,400 square feet or less for general office 20 or less sites for campgrounds
 10,000 square feet or less for industrial 7 or less rooms for rent for bed & breakfast

None apply – a TIS is required with applicable fee.

Step 2:

Submit this form along with a detailed project description, and any other applicable items, such as location maps, to CDA Long Range Planning Division by mail, fax or e-mail.

Mail: Community Development Agency, Long Range Planning Division
2850 Fairlane Ct, Placerville, CA 95667
Attn: Natalie Porter
Fax: 530-642-0508
e-mail: natalie.porter@edcgov.us



COMMUNITY DEVELOPMENT AGENCY LONG RANGE PLANNING

2850 Fairlane Court, Placerville, CA 95667
Phone (530) 621-4650, Fax (530) 642-0508

An On-Site Transportation Review is typically required for all projects. The Community Development Agency Director or his designee may waive the requirement if no additional vehicle trips will be generated by the proposed change, no up-zoning is requested, or no intensification of use is requested.

On-Site Transportation Review

May be required

If an On-Site Transportation Review is required, the following information shall be evaluated and the findings signed and stamped by a registered Traffic Engineer or Civil Engineer, and shall be included with the project submittal:

1. Existence of any current traffic problems in the local area such as a high-accident location, non-standard intersection or roadway, or an intersection in need of a traffic signal
2. Proximity of proposed site driveway(s) to other driveways or intersections
3. Adequacy of vehicle parking relative to both the anticipated demand and zoning code requirements
4. Adequacy of the project site design to fully satisfy truck circulation and loading demand on-site, when the anticipated number of deliveries and service calls may exceed 10 per day
5. Adequacy of the project site design to provide at least a 25 foot minimum required throat depth (MRTD) at project driveways, include calculation of the MRTD
6. Adequacy of the project site design to convey all vehicle types
7. Adequacy of sight distance on-site
8. Queuing analysis of "drive-through" facilities

To be completed by El Dorado County, CDA Long Range Planning Division Staff:

ON-SITE TRANSPORTATION REVIEW IS REQUIRED. (TIS is not required)

TIS IS REQUIRED; initial deposit for TIS scoping and review is required by CDA Long Range Planning Division Staff. See Attached TIS Initial Fund Request Letter.

Kate John
CDA Long Range Planning Signature

2/4/16
Date

ADH TS

On-Site Transportation Review and TIS is waived based on: _____

Waiver approved by:

CDA Director

Date