



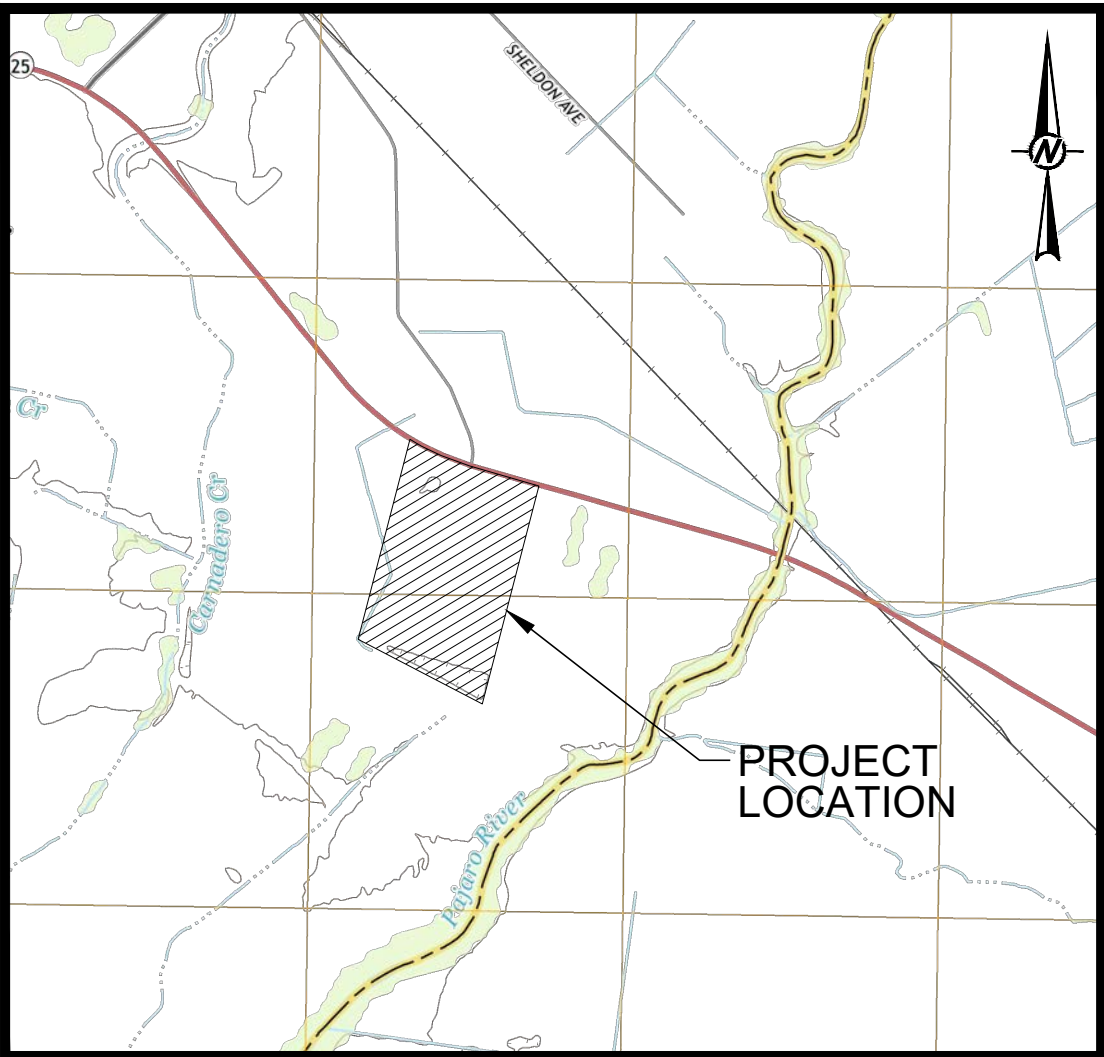
REGIONAL MAP

# AERATED STATIC PILE COMPOSTING PRELIMINARY GRADING PLAN

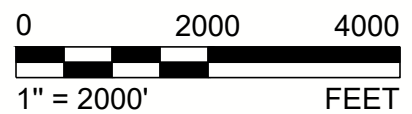
Z-BEST PRODUCTS  
SANTA CLARA COUNTY  
GILROY, CALIFORNIA

APRIL 2019

PREPARED BY:  
GOLDER ASSOCIATES INC.  
425 LAKESIDE DRIVE  
SUNNYVALE, CA 94085  
(408) 220-9223



LOCATION MAP



## PROJECT PURPOSE

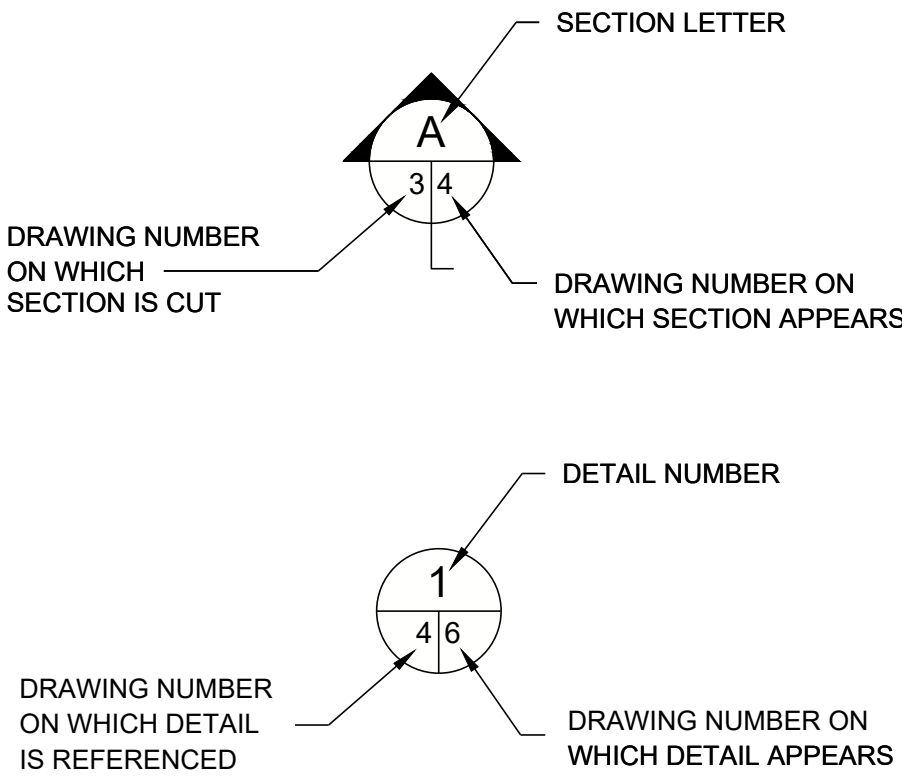
- THE OVERALL PROJECT PURPOSE IS TO CONVERT THE CURRENT COMPOSTING TECHNOLOGY TO AN AERATED STATIC PILE TECHNOLOGY, WHICH IS A MORE EFFICIENT COMPOSTING TECHNOLOGY.
- TO PROVIDE A WORKING SURFACE THAT IS ABOVE THE 100-YEAR BASE FLOOD ELEVATION, APPROXIMATELY 60,000 CY OF FILL IS REQUIRED.
- RECONFIGURE DETENTION BASIN 1 TO INCREASE CAPACITY.
- TO PROTECT THE DETENTION BASIN 1 FROM INUNDATION BY THE 100-YEAR FLOOD, APPROXIMATELY 24,000 CY OF FILL IS REQUIRED FOR A PERIMETER BERM.
- TO OFFSET THE LOSS OF FLOOD STORAGE VOLUME RELATED TO THE FILL, THE EXISTING FLOOD STORAGE BASIN IN AREA 1 WILL BE EXPANDED, GENERATING APPROXIMATELY 49,450 CY OF SOIL.
- APPROXIMATELY 32,000 CY OF ADDITIONAL FILL IS REQUIRED TO COMPLETE CONSTRUCTION.

| PROJECT AREA |           |
|--------------|-----------|
| PARCEL       | AREA (AC) |
| 841-37-028   | 20.03     |
| 841-37-029   | 136.99    |
| TOTAL        | 157.02    |

## ABBREVIATIONS

|      |                                        |
|------|----------------------------------------|
| BGS  | BELOW GROUND SURFACE                   |
| CLSM | CONTROLLED LOW-STRENGTH MATERIAL       |
| CPE  | CORRUGATED POLYETHYLENE PIPE           |
| CMP  | CORRUGATED METAL PIPE                  |
| CMU  | CONCRETE MASONRY UNIT                  |
| Ø    | DIAMETER                               |
| DST  | DOUBLE SIDED TEXTURED                  |
| E    | EASTING                                |
| EL   | ELEVATION                              |
| FL   | FLOWLINE                               |
| F.S. | FINISH SURFACE                         |
| HDPE | HIGH DENSITY POLYETHYLENE              |
| LCRS | LEACHATE COLLECTION AND REMOVAL SYSTEM |
| LFG  | LANDFILL GAS                           |
| MIN  | MINIMUM                                |
| MON  | MONUMENT                               |
| NIC  | NOT IN CONTRACT                        |
| SDR  | STANDARD DIMENSION RATIO               |

## SYMBOLS



| REV. | YYYY-MM-DD | DESCRIPTION       | DESIGNED | PREPARED | REVIEWED | APPROVED |
|------|------------|-------------------|----------|----------|----------|----------|
| 4    | 2018-04-01 | ISSUED FOR PERMIT | RDH      | MAG      | RDH      |          |
| 3    | 2018-08-28 | ISSUED FOR PERMIT | RDH      | JMH      | RDH      |          |
| 2    | 2018-07-17 | ISSUED FOR PERMIT | RDH      | JDR      | RDH      |          |
| 1    | 2018-06-29 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |
| 0    | 2018-04-20 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT



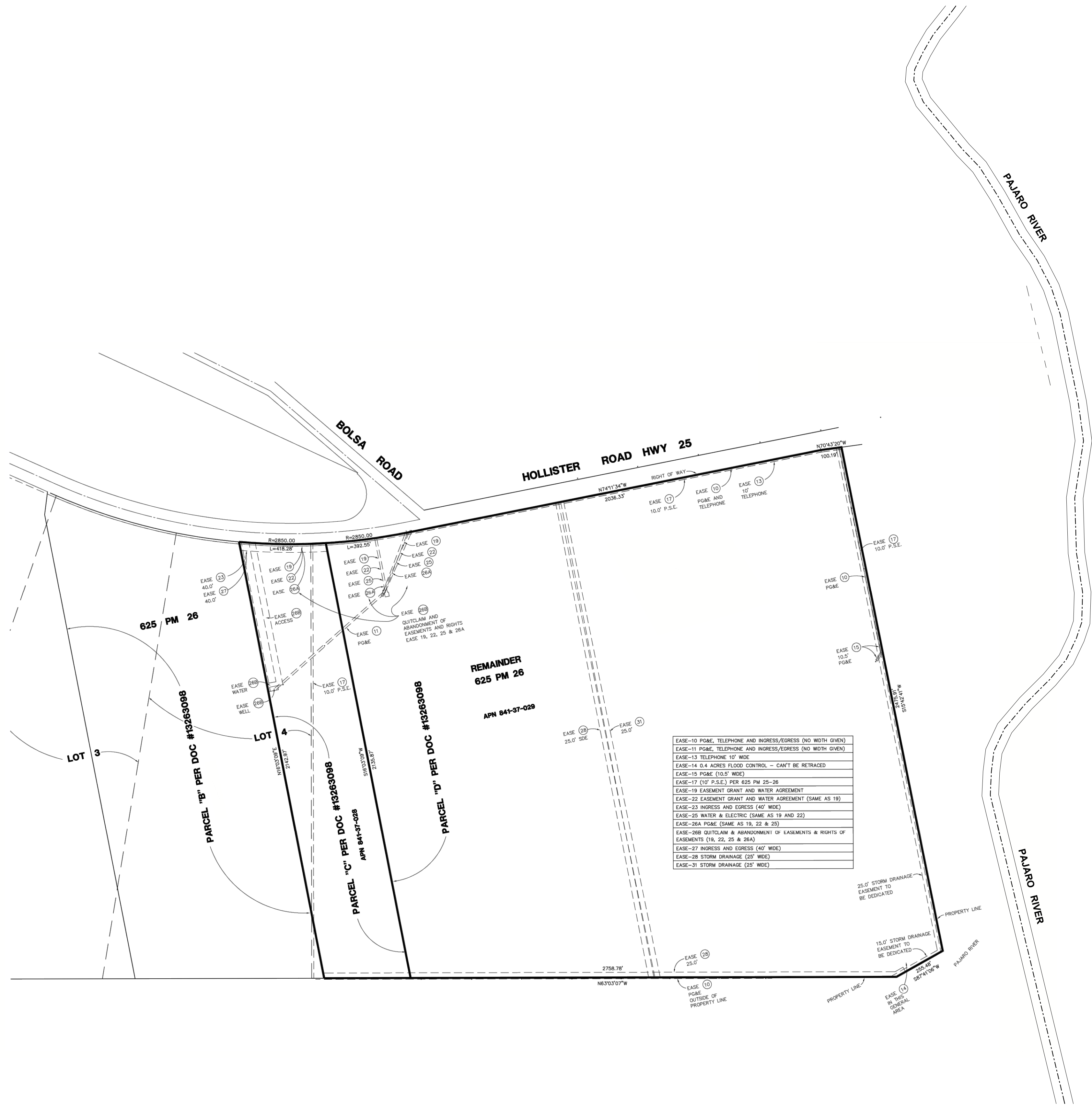
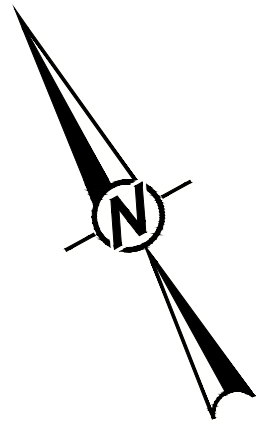
SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
TITLE SHEET

| PROJECT NO. | COUNTY FILE NO.             | REV. | 1 of 16 | DRAWING |
|-------------|-----------------------------|------|---------|---------|
| 133-97640   | 6498-81-11-09G 08P 08A 08EA | 4    |         | 1       |





NOTE(S)  
1. EASEMENTS SHOWN ARE FROM MH ENGINEERING BASED ON THE PRELIMINARY TITLE REPORT DATED JUNE 24, 2013

| REV. | YYYY-MM-DD | DESCRIPTION       | DESIGNED | PREPARED | REVIEWED | APPROVED |
|------|------------|-------------------|----------|----------|----------|----------|
| 4    | 2018-04-01 | ISSUED FOR PERMIT | RDH      | MAG      | RDH      |          |
| 3    | 2018-08-28 | ISSUED FOR PERMIT | RDH      | JMH      | RDH      |          |
| 2    | 2018-07-17 | ISSUED FOR PERMIT | RDH      | JDR      | RDH      |          |
| 1    | 2018-06-29 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |
| 0    | 2018-04-20 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT



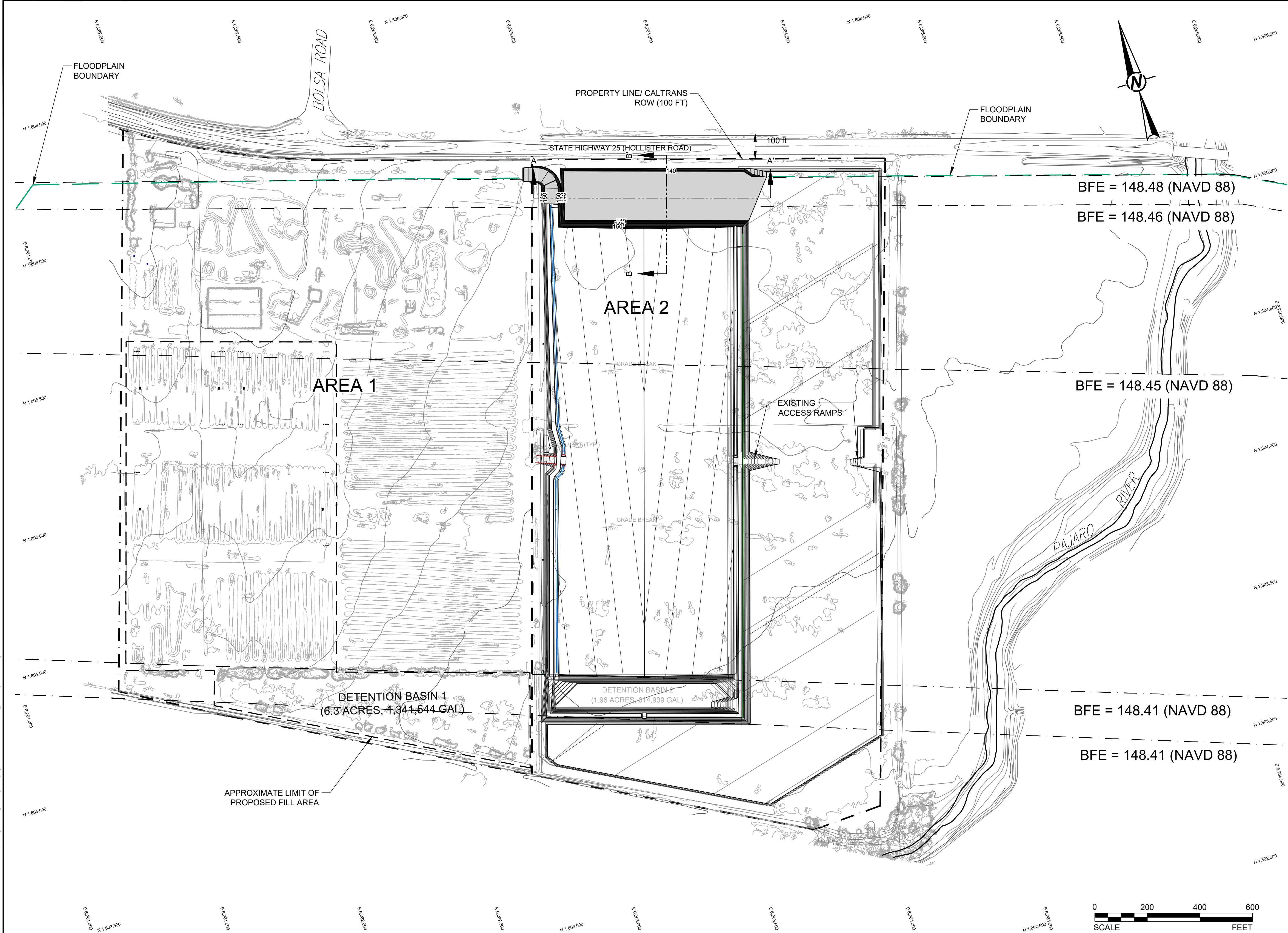
SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
EASEMENT MAP

| PROJECT NO. | COUNTY FILE NO.             | REV. | 2 of 16 | DRAWING |
|-------------|-----------------------------|------|---------|---------|
| 133-97640   | 6498-81-11-09G 08P 08A 08EA | 4    |         | 2       |





**LEGEND**

— FLOODPLAIN BOUNDARY

— BASE FLOOD ELEVATIONS

**NOTE(S)**

- ENTIRE SITE LOCATED WITHIN FLOOD ZONE AE WITH A 100-YEAR BASE FLOOD ELEVATION OF 148.5 FEET (NAVD88).
- BASE FLOOD ELEVATIONS FROM SCHAAF & WHEELER BASED ON CONDITIONAL LETTER OF MAP REVISION BASED ON FILL, DATED 2/2/2018.
- NO FLOODWAY AREAS ARE PRESENT ON SITE.
- ENTIRE SITE IS WITHIN A LIQUEFACTION HAZARD ZONE BASED ON SANTA CLARA COUNTY GEOLOGIC HAZARD ZONES MAP.

|      |            |                   |          |          |                   |
|------|------------|-------------------|----------|----------|-------------------|
| 4    | 2018-04-01 | ISSUED FOR PERMIT | RDH      | MAG      | RDH               |
| 3    | 2018-08-28 | ISSUED FOR PERMIT | RDH      | JMH      | RDH               |
| 2    | 2018-07-17 | ISSUED FOR PERMIT | RDH      | JDR      | RDH               |
| 1    | 2018-06-29 | ISSUED FOR PERMIT | RDH      | MAL      | RDH               |
| 0    | 2018-04-20 | ISSUED FOR PERMIT | RDH      | MAL      | RDH               |
| REV. | YYYY-MM-DD | DESCRIPTION       | DESIGNED | PREPARED | REVIEWED APPROVED |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT

SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

1 in

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
EXISTING TOPOGRAPHY

PROJECT NO.  
133-97640

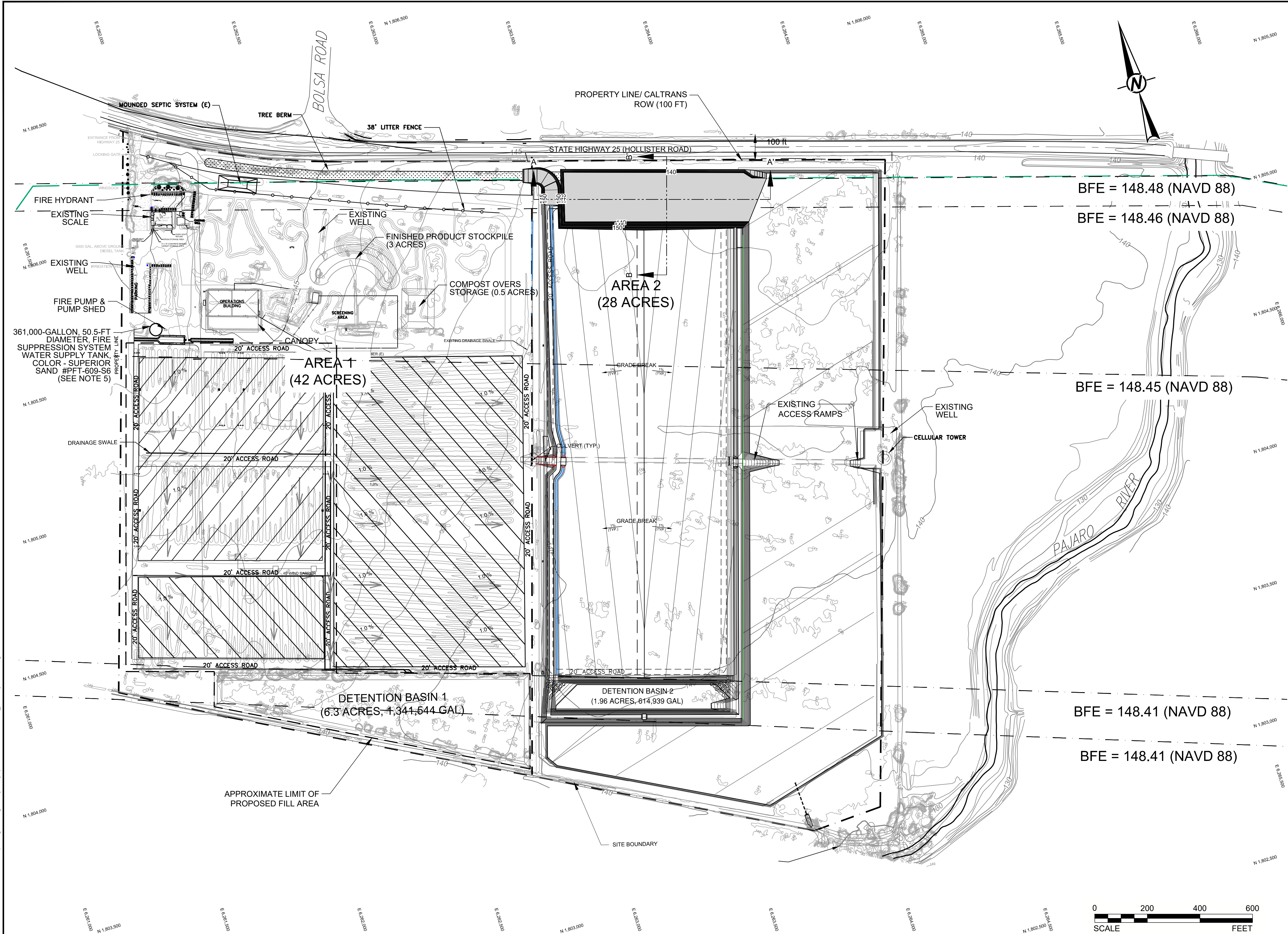
COUNTY FILE NO.  
6498-81-11-09G 08P 08A 08EA

REV.  
4

3 of 16

DRAWING  
3





- NOTE(S)**
- ON-SITE ACCESS ROADS SHALL BE CAPABLE OF SUPPORTING 75,000 LB FIRE APPARATUS. ALL ON-SITE ACCESS ROADS ARE PRIVATE.
  - VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
  - NO FLOODWAY AREAS ARE PRESENT ON SITE.
  - ENTIRE SITE IS WITHIN A LIQUEFACTION HAZARD ZONE BASED ON SANTA CLARA COUNTY HAZARDS ZONE MAP.
  - AREA 2 GRADES WERE PREVIOUSLY APPROVED PER GRADING PERMIT #62162046.
  - AREA1 MAY BE USED FOR MSW/FOOD WASTE COMPOSTING, CLEAN GREEN MATERIAL COMPOSTING, AND MULCH PROCESSING AND STOCKPILING. MULCH FEEDSTOCKS INCLUDE CLEAN GREEN MATERIALS AND COMPOST OVERS. MULCH PROCESSING INCLUDES COLORIZATION OF MULCH.
  - AREA 2 MAY BE USED FOR FINISHED COMPOST BLENDING AND STORAGE, AND PROCESSING AND STORAGE OF COMPOST OVERS FOR MULCH. MULCH PROCESSING INCLUDES COLORIZATION OF MULCH.
  - OPERATIONS BUILDING CANOPY, FIRE SUPPRESSION SYSTEM WATER SUPPLY TANK, FIRE PUMP, AND FIRE PUMP SHED ARE PART OF FILE 11206-81-10 (ASA) PROJECT.

| REV. | YYYY-MM-DD | DESCRIPTION       | DESIGNED | PREPARED | REVIEWED | APPROVED |
|------|------------|-------------------|----------|----------|----------|----------|
| 4    | 2018-04-01 | ISSUED FOR PERMIT | RDH      | MAG      | RDH      |          |
| 3    | 2018-08-28 | ISSUED FOR PERMIT | RDH      | JMH      | RDH      |          |
| 2    | 2018-07-17 | ISSUED FOR PERMIT | RDH      | JDR      | RDH      |          |
| 1    | 2018-06-29 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |
| 0    | 2018-04-20 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA



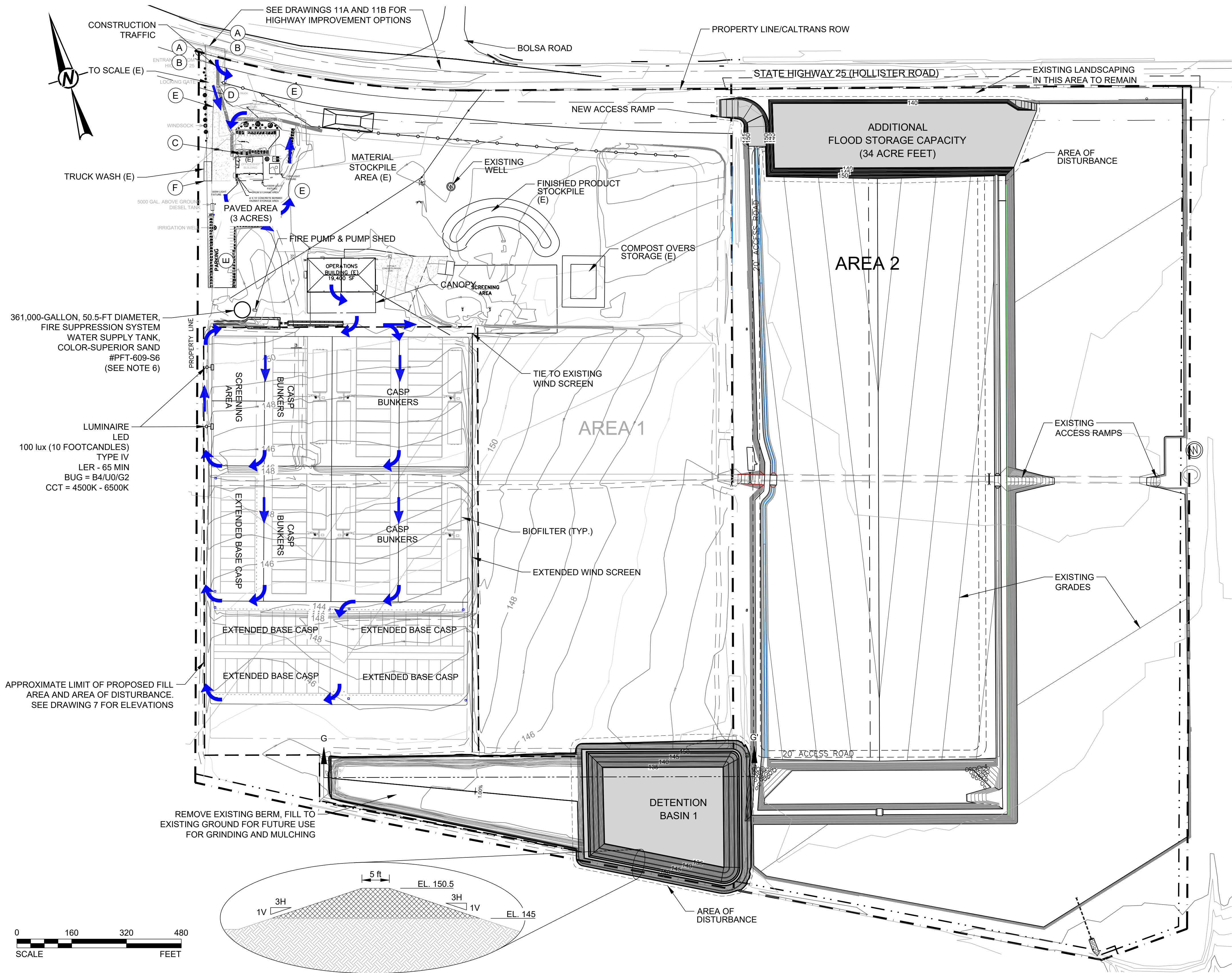
CONSULTANT  


SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

| PROJECT                                       | COUNTY FILE NO.             | REV. | 4 of 16 | DRAWING |
|-----------------------------------------------|-----------------------------|------|---------|---------|
| AERATED STATIC PILE COMPOSTING PERMIT PACKAGE | 6498-81-11-09G 08P 08A 08EA | 4    |         | 4       |
| TITLE<br>EXISTING SITE PLAN                   | PROJECT NO.<br>133-97640    |      |         |         |



Path: \\vacament\local\zbest\Compost Facility\Civil\3D\2019 Aterated Static-Pile Composting Grading Plan [Rev]1 | File Name: 13397640\_Site Layout [Rev]1.dwg | Last Edited By: mtrapi | Printed By: MTrapi | Date: 2019-10-01 | Time: 11:25:52 AM



| Total Site (acres)                                | 301.9                       | Total Area of Site Disturbed (acres) | 301.9   |                                       |
|---------------------------------------------------|-----------------------------|--------------------------------------|---------|---------------------------------------|
|                                                   |                             |                                      |         |                                       |
| Impervious Surfaces                               | Existing Area (square feet) | Proposed Area (square feet)          |         | Total Post-Project Area (square feet) |
|                                                   |                             | Replaced                             | New     |                                       |
| Roof Area(s)                                      | 35,060                      | 0                                    | 0       | 35,060                                |
| Parking                                           | 34,848                      | 0                                    | 0       | 34,848                                |
| Sidewalks, Equipment Pads, etc.                   | 3,141,430                   | 810,000                              | 0       | 3,141,430                             |
| Streets (public)                                  | 0                           | 0                                    | 0       | 0                                     |
| Streets (private)                                 | 135,050                     | 0                                    | 0       | 135,050                               |
| Total Impervious Surfaces:                        | 3,346,388                   | 810,000                              | 0       | 3,346,388                             |
|                                                   |                             |                                      |         | 0                                     |
| Pervious Areas                                    |                             |                                      |         | 0                                     |
| Landscaped Areas                                  | 97,530                      | 0                                    | 0       | 97,530                                |
| Pervious Parking                                  | 0                           | 0                                    | 0       | 0                                     |
| Other Pervious Surfaces (green roof, etc.)        | 9,706,846                   | 0                                    | 0       | 9,706,846                             |
| Total Pervious Surfaces:                          | 9,804,376                   | 0                                    | 0       | 9,804,376                             |
|                                                   |                             |                                      |         |                                       |
| Total Proposed Replaced + New Impervious Surfaces |                             |                                      | 810,000 |                                       |
| Total Proposed Replaced + New Pervious Surfaces   |                             |                                      | 0       |                                       |

SIGNAGE

- (A) EXISTING SIGN
- (B) 3'x4' SIGN
- SITE RULES
  - NO SMOKING ON SITE
  - HARD HAT AND SAFETY VEST REQUIRED AT ALL TIMES
  - SITE SPEED LIMIT 5 MPH
  - ALL VISITORS MUST CHECK-IN AT SCALE HOUSE
  - OBEY ALL POSTED SIGNS
  - ALL TRUCKS MUST STOP AT SCALE
  - VOUCHER CUSTOMERS MUST STOP AT SCALE
  - USE OF TRUCK WASH REQUIRED BEFORE EXITING SITE
  - TRUCK TRAFFIC MUST FOLLOW PAVEMENT ARROWS TO SCALE
- (C) 2'x2' SIGN
- EMPLOYEE AND VISITOR PARKING
- (D) 3'x3' SIGN
- FOLLOW PAVEMENT ARROWS TO SCALE
- (E) 2'x2' SIGN
- 5 MPH
- (F) 2'x2' SIGN
- USE OF TRUCK WASH REQUIRED BEFORE EXITING SITE 2
  - ENTER TRUCK WASH AFTER WATER ACTIVATION



NOTE(S)

- AERATED STATIC PILE LAYOUT PROVIDED BY ENGINEERED COMPOST SYSTEMS.
- ON-SITE ACCESS ROADS SHALL BE CAPABLE OF SUPPORTING 75,000 LB FIRE APPARATUS. ALL ON-SITE ACCESS ROADS ARE PRIVATE.
- CASP - COVERED AERATED STATIC PILE.
- SEE DRAWING 5B FOR NORTH STORAGE FLOOD STORAGE AREA.
- VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
- OPERATIONS BUILDING CANOPY, FIRE SUPPRESSION SYSTEM WATER STORAGE TANK, FIRE PUMP, AND FIRE PUMP SHED ARE PART OF FILE 11206-81-10 (ASA) PROJECT.
- AREA 2 GRADES WERE PREVIOUSLY APPROVED PER GRADING PERMIT #62162046.
- AREA 1 WILL BE USED FOR MSW/FOOD WASTE COMPOSTING, CLEAN GREEN MATERIAL, YARD TRIMMINGS, FOOD WASTE, AND AGRICULTURAL MATERIAL COMPOSTING, AND MULCH PROCESSING AND STOCKPILING. MULCH FEEDSTOCKS INCLUDE CLEAN GREEN MATERIAL, COMPOST OVERS, AND OTHER MATERIALS DESCRIBED IN THE REPORT OF COMPOST SITE INFORMATION. MULCH PROCESSING INCLUDES COLORIZATION OF MULCH.
- AREA 2 WILL BE USED FOR FINISHED COMPOST BLENDING AND STORAGE, AND MULCH PROCESSING AND STOCKPILING. MULCH FEEDSTOCKS INCLUDE CLEAN GREEN MATERIAL, COMPOST OVERS, AND OTHER MATERIALS DESCRIBED IN THE REPORT OF COMPOST SITE INFORMATION. MULCH PROCESSING INCLUDES COLORIZATION OF MULCH.

|   |            |                   |
|---|------------|-------------------|
| 4 | 2018-04-01 | ISSUED FOR PERMIT |
| 3 | 2018-08-28 | ISSUED FOR PERMIT |
| 2 | 2018-07-17 | ISSUED FOR PERMIT |
| 1 | 2018-06-29 | ISSUED FOR PERMIT |
| 0 | 2018-04-20 | ISSUED FOR PERMIT |

REV. YYYY-MM-DD DESCRIPTION

|     |     |     |
|-----|-----|-----|
| RDH | MAG | RDH |
| RDH | JMH | RDH |
| RDH | JDR | RDH |
| RDH | MAL | RDH |
| RDH | MAL | RDH |

DESIGNED PREPARED REVIEWED APPROVED

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT



SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
PROPOSED SITE PLAN

PROJECT NO.  
133-97640

COUNTY FILE NO.  
6498-81-11-09G 08P 08A 08EA

REV.  
4

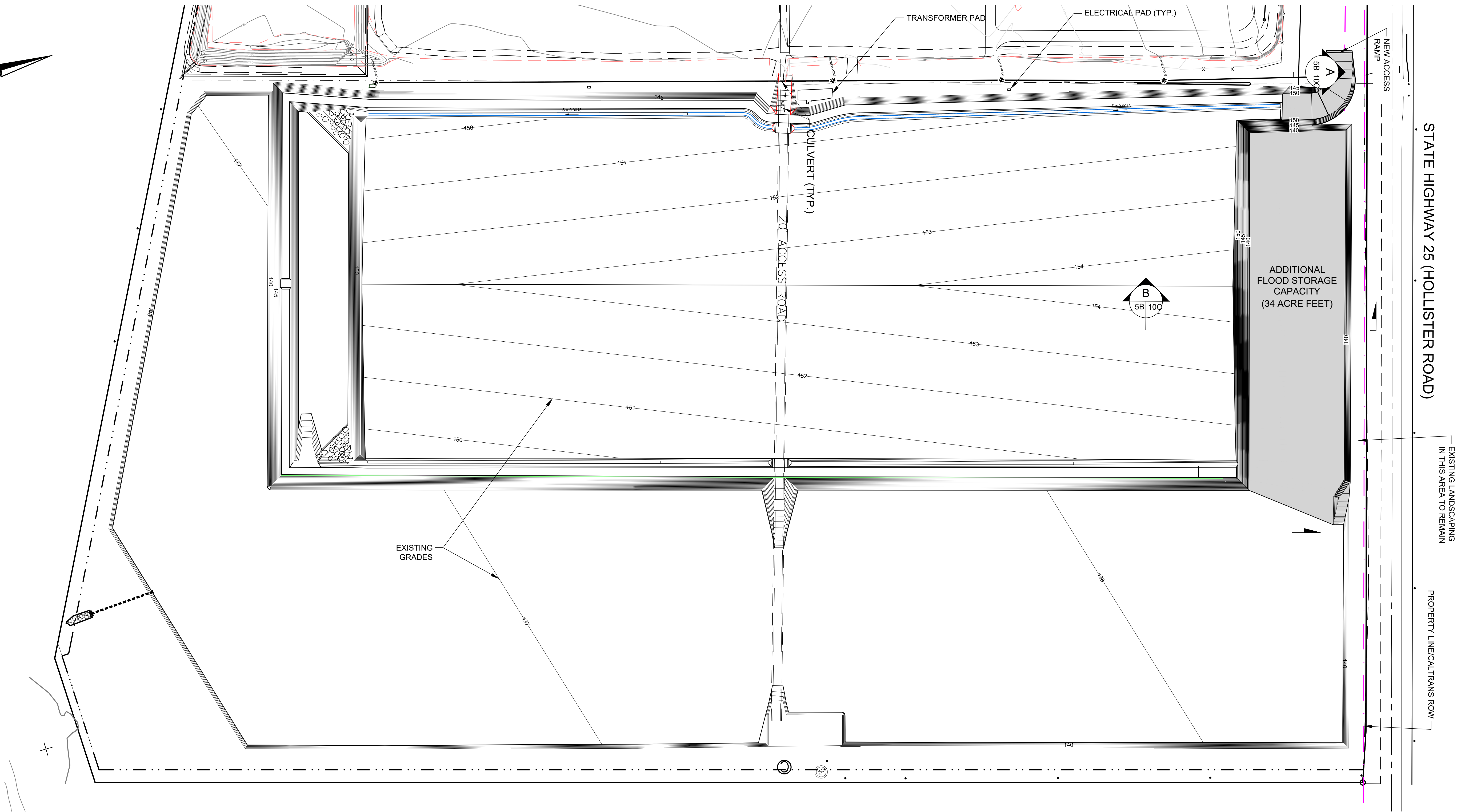
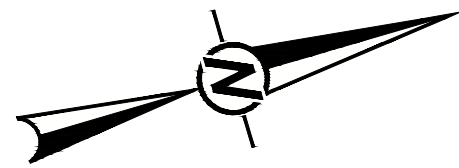
5 of 16

DRAWING  
5A

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3/D



Path: \\vacament\local\Sheet\Z-Best Compost Facility\Civil 3D\2019 Area 2 Expansion\1 File Name: 18022010\_Area 2 Expansion REV2.dwg | Last Edited By: jhannigan Date: 2019-09-30 Time: 4:37:07 PM | Printed By: MTrapi Date: 2019-10-01 Time: 11:33:55 AM



NOTE(S)

1. AREA 2 GRADES WERE PREVIOUSLY APPROVED PER GRADING PERMIT #62162046.

| REV. | YYYY-MM-DD | DESCRIPTION       | DESIGNED | PREPARED | REVIEWED | APPROVED |
|------|------------|-------------------|----------|----------|----------|----------|
| 4    | 2018-04-01 | ISSUED FOR PERMIT | RDH      | MAG      | RDH      |          |
| 3    | 2018-08-28 | ISSUED FOR PERMIT | RDH      | JMH      | RDH      |          |
| 2    | 2018-07-17 | ISSUED FOR PERMIT | RDH      | JDR      | RDH      |          |
| 1    | 2018-06-29 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |
| 0    | 2018-04-20 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT



SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
AREA 2 FLOOD STORAGE BASIN

PROJECT NO.  
133-97640

COUNTY FILE NO.  
6498-81-11-09G 08P 08A 08EA

REV.  
4

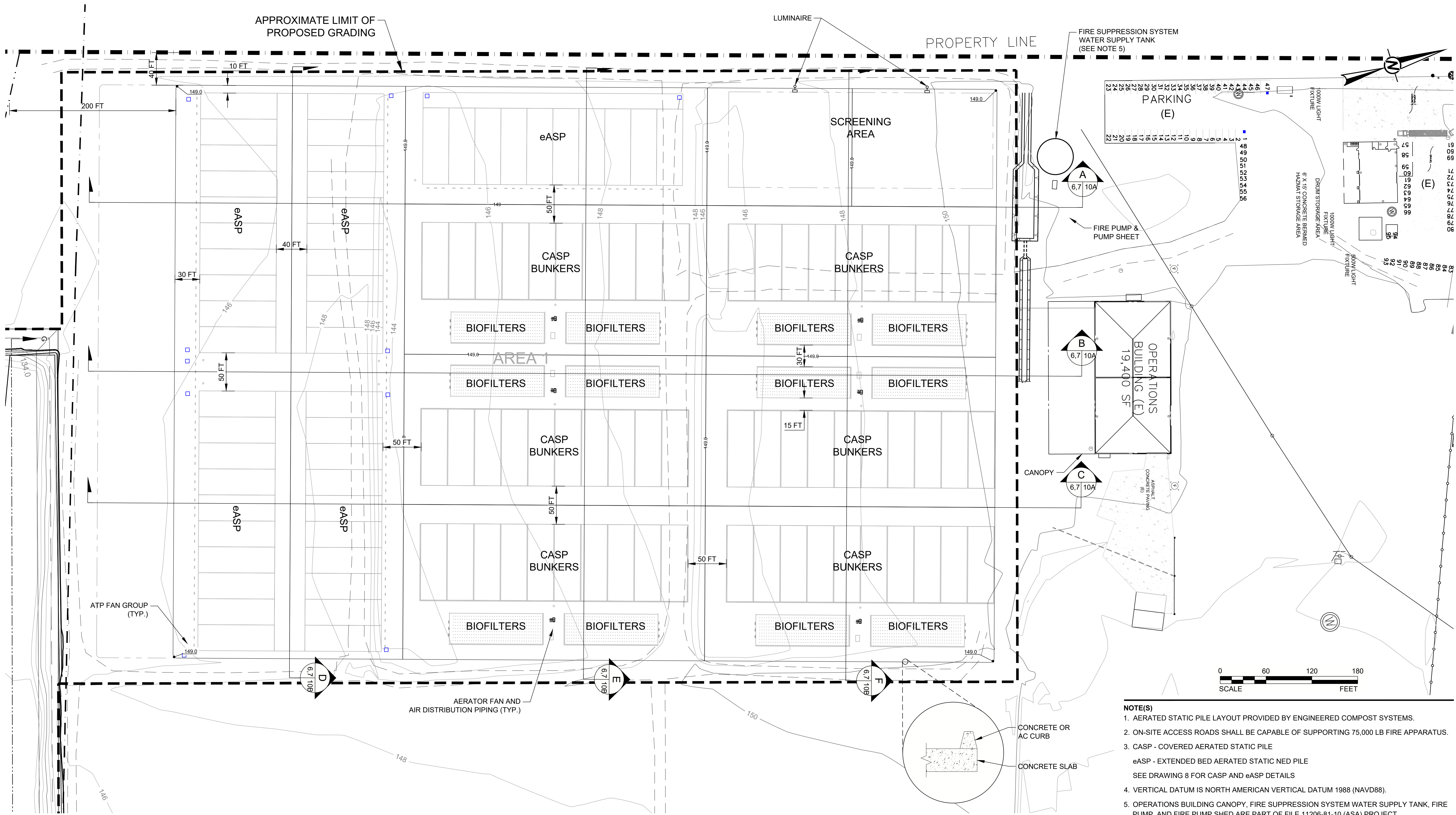
6 of 16

DRAWING  
5B

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D



Path: \\vacament\local\Sheet\Z-Best Compost Facility\Civil\3D\2019 Aerated Static Pile Composting Grading Plan [Rev1] - File Name: 13397640\_Site Layout [Rev7].dwg | Last Edited By: mtrap | Date: 2019-10-01 | Time: 11:08:12 AM | Printed By: MTrap | Date: 2019-10-01 | Time: 11:35:59 AM



- NOTE(S)**
1. AERATED STATIC PILE LAYOUT PROVIDED BY ENGINEERED COMPOST SYSTEMS.
  2. ON-SITE ACCESS ROADS SHALL BE CAPABLE OF SUPPORTING 75,000 LB FIRE APPARATUS.
  3. CASP - COVERED AERATED STATIC PILE  
eASP - EXTENDED BED AERATED STATIC NED PILE  
SEE DRAWING 8 FOR CASP AND eASP DETAILS
  4. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
  5. OPERATIONS BUILDING CANOPY, FIRE SUPPRESSION SYSTEM WATER SUPPLY TANK, FIRE PUMP, AND FIRE PUMP SHED ARE PART OF FILE 11206-81-10 (ASA) PROJECT.

|      |            |                   |          |          |                   |
|------|------------|-------------------|----------|----------|-------------------|
| 4    | 2018-04-01 | ISSUED FOR PERMIT | RDH      | MAG      | RDH               |
| 3    | 2018-08-28 | ISSUED FOR PERMIT | RDH      | JMH      | RDH               |
| 2    | 2018-07-17 | ISSUED FOR PERMIT | RDH      | JDR      | RDH               |
| 1    | 2018-06-29 | ISSUED FOR PERMIT | RDH      | MAL      | RDH               |
| 0    | 2018-04-20 | ISSUED FOR PERMIT | RDH      | MAL      | RDH               |
| REV. | YYYY-MM-DD | DESCRIPTION       | DESIGNED | PREPARED | REVIEWED APPROVED |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA  
CONSULTANT



**zanker** | rethink. reinvent. renew.  
SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

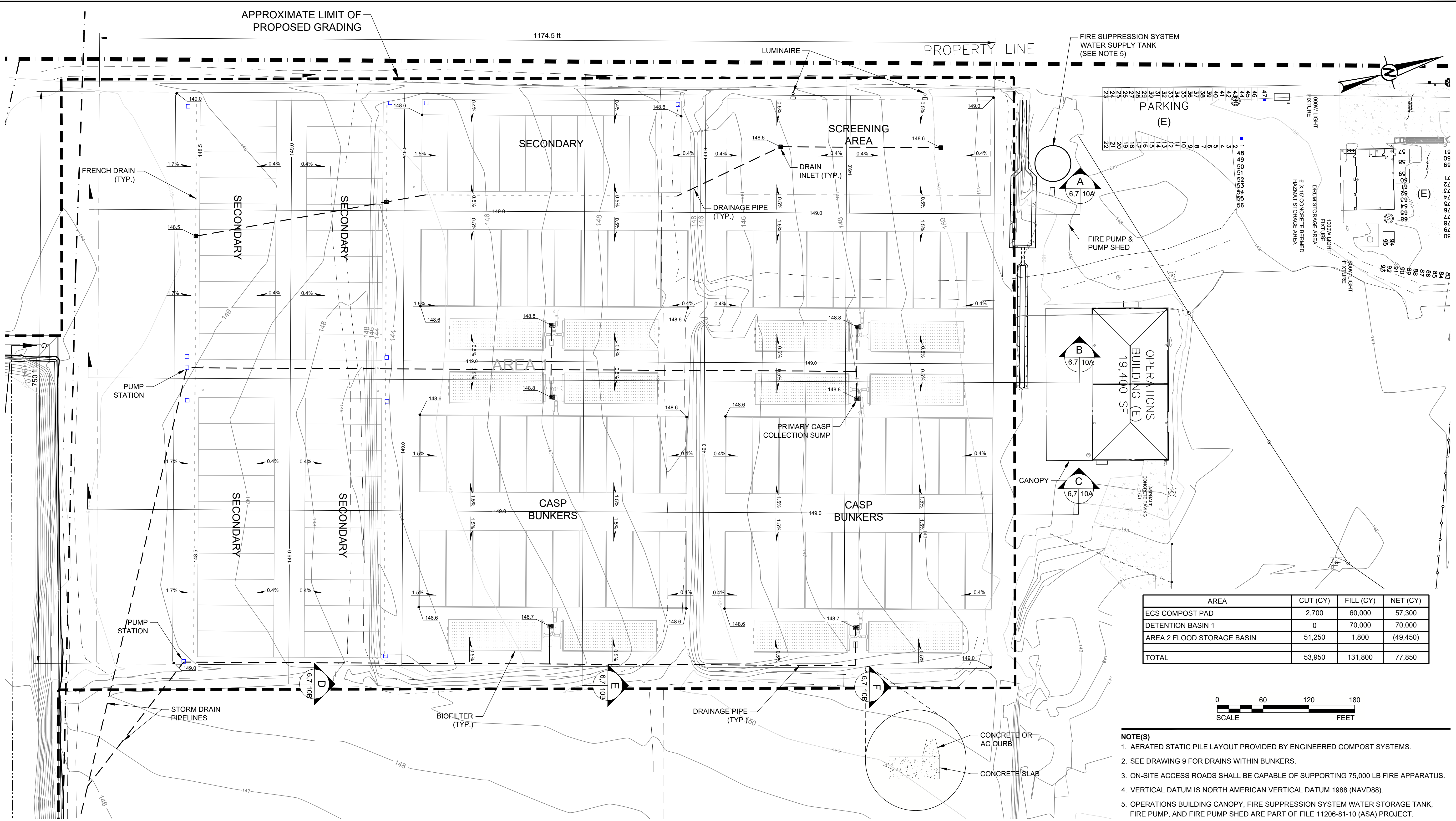
TITLE  
AERATED STATIC PILE PLAN

|                          |                                                |           |         |              |
|--------------------------|------------------------------------------------|-----------|---------|--------------|
| PROJECT NO.<br>133-97640 | COUNTY FILE NO.<br>6498-81-11-09G 08P 08A 08EA | REV.<br>4 | 7 of 16 | DRAWING<br>6 |
|--------------------------|------------------------------------------------|-----------|---------|--------------|

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D



Path: \\sacramento\lead\Sheet\Z-Best Compost Facility\Civil\3D\2019 Aerated Static Pile Composting Grading Plan [Rev1] - File Name: 13397640\_Site Layout [Rev7].dwg | Last Edited By: mtrapi | Printed By: MTrapi | Date: 2019-10-01 | Time: 11:45:57 AM



CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT



SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
GRADING AND DRAINAGE PLAN

PROJECT NO.  
133-97640

COUNTY FILE NO.  
6498-81-11-09G 08P 08A 08EA

REV.  
4

8 of 16

DRAWING  
7

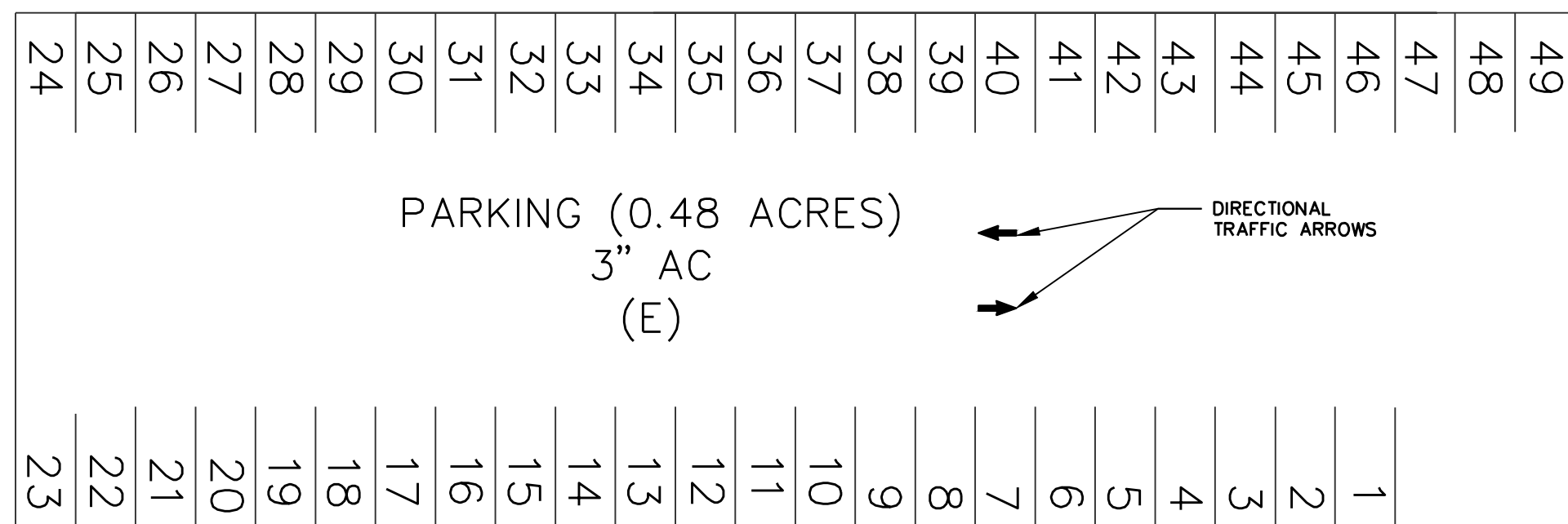
1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D



Path: \\nasramen\local\as\Site\Z-Best Compost Facility\Civil\3D\2019 Aerial\State File\Composting Grading Plan [Rev]1 | File Name: SHEET 7 - 1307640 - Z-Best-Parking 051113\_NA.DWG, P2.dwg

## WEST PARKING LOT

SCALE: 1"=25'



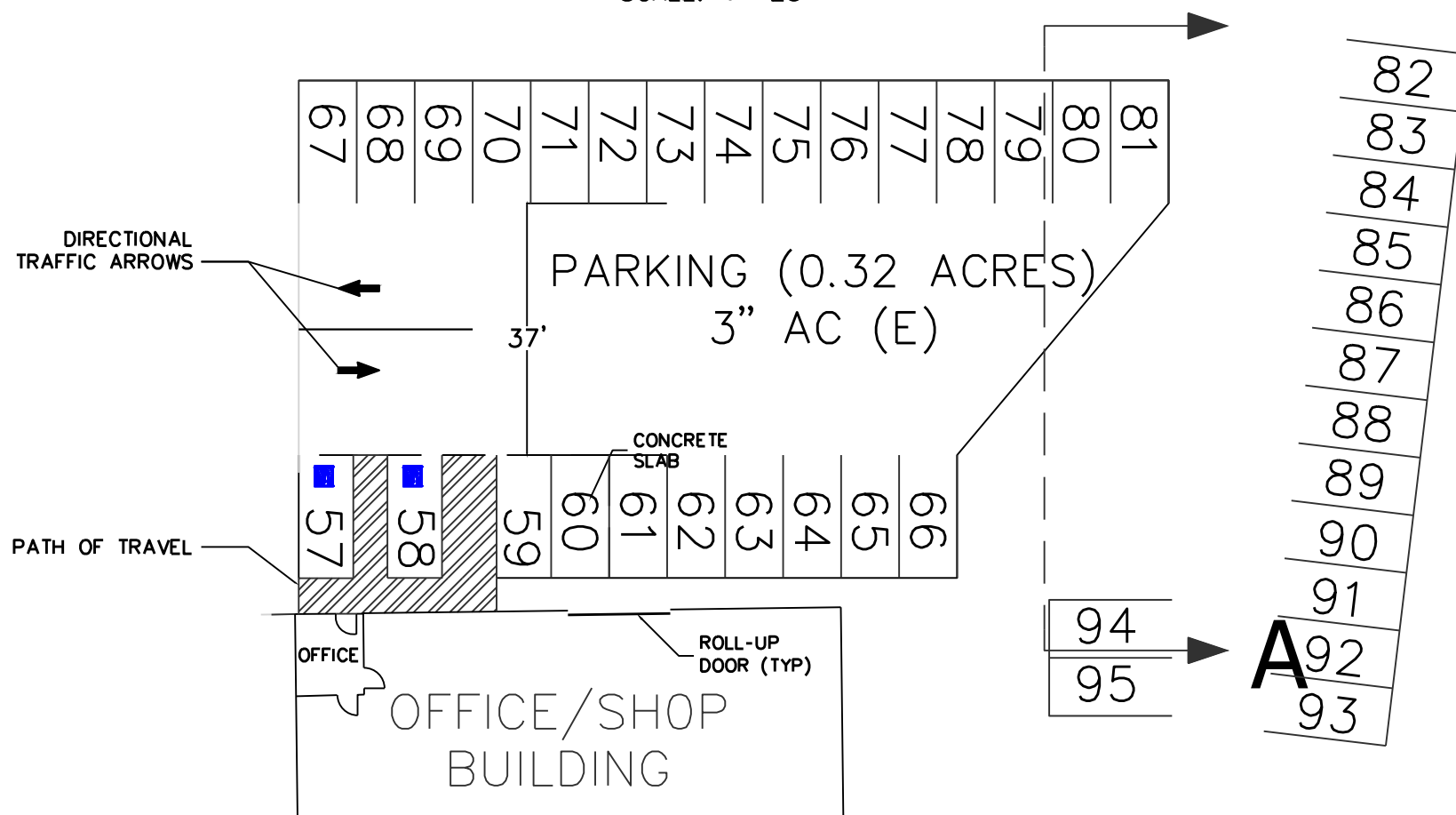
PARKING (0.48 ACRES)  
3" AC  
(E)

DIRECTIONAL  
TRAFFIC ARROWS

PATH OF TRAVEL

## NORTH PARKING LOT

SCALE: 1"=25'



PARKING (0.32 ACRES)  
3" AC (E)

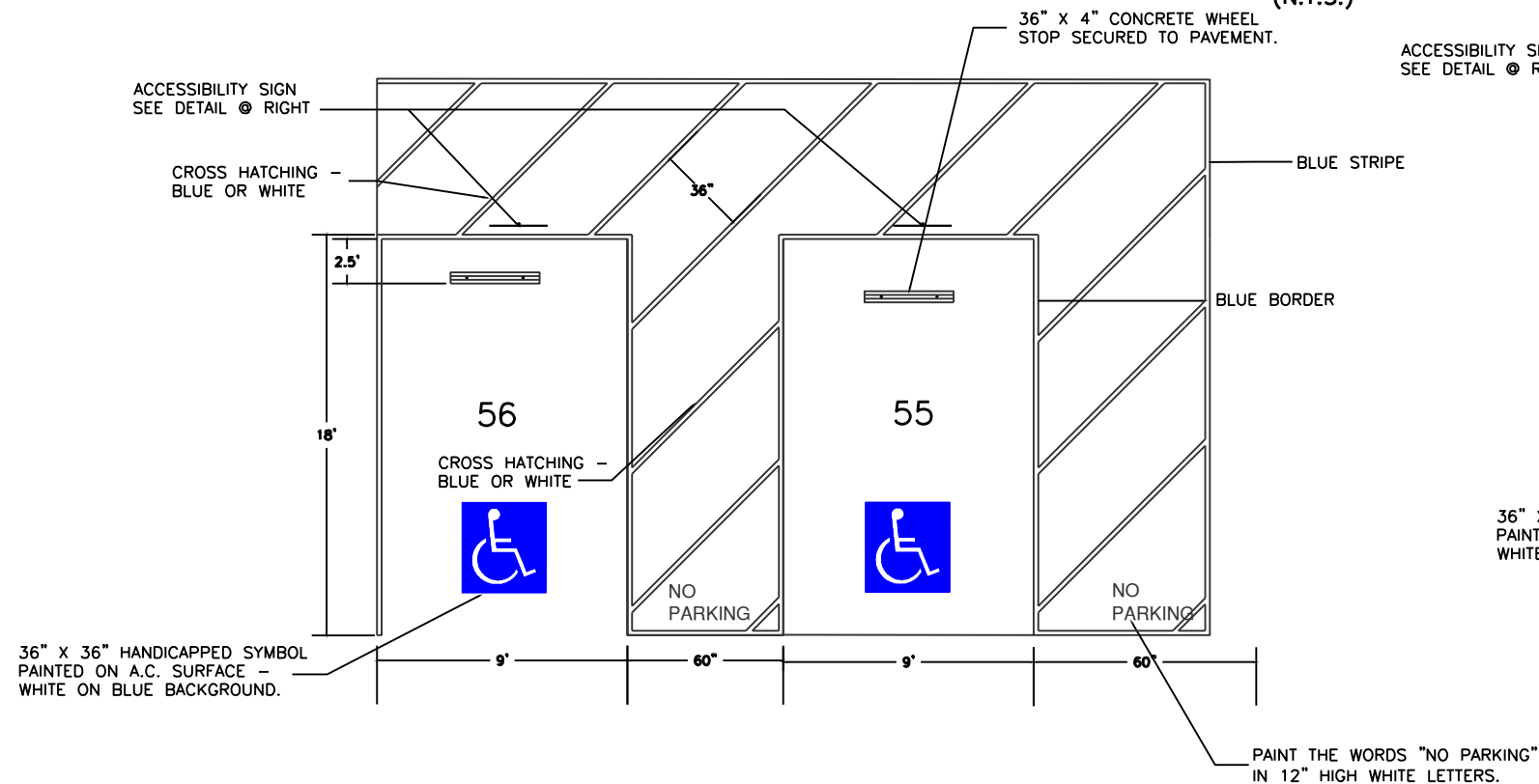
DIRECTIONAL  
TRAFFIC ARROWS

PATH OF TRAVEL

OFFICE/SHOP  
BUILDING

## HANDICAPPED PARKING LAYOUT

ALL PARKING TO BE DOUBLE STRIPED MINIMUM STALL SIZE = 8'-0" X 18'-0"  
MAXIMUM SLOPE = 2% IN ALL DIRECTIONS  
(N.T.S.)



ACCESSIBILITY SIGN  
SEE DETAIL @ RIGHT

36" X 4" CONCRETE WHEEL  
STOP SECURED TO PAVEMENT.

36" X 4" CONCRETE WHEEL  
STOP SECURED TO PAVEMENT.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

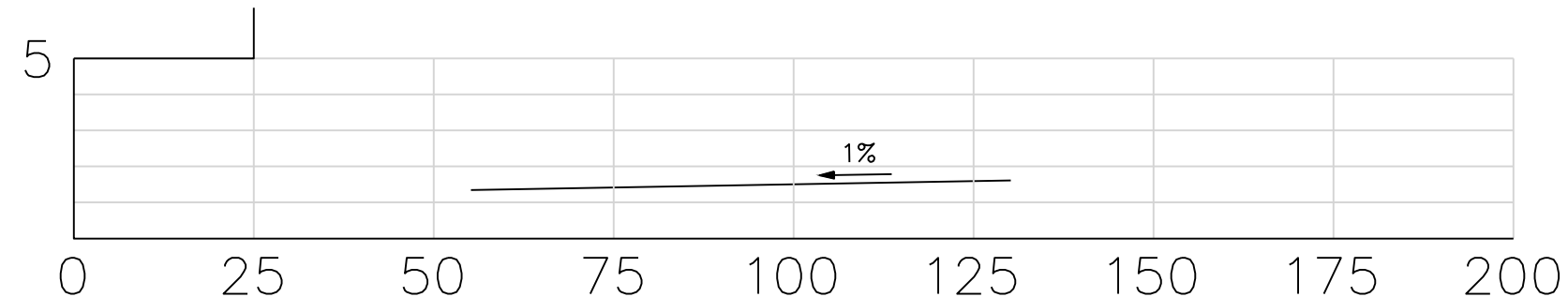
36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.

36" X 36" HANDICAPPED SYMBOL  
PAINTED ON A.C. SURFACE  
WHITE ON BLUE BACKGROUND.



## SECTION A

SCALE: 1"=25'

## PARKING SPACES

- 91 STANDARD SPACES
- 3 HANDICAP ACCESSIBLE
- 1 VAN
- 95 TOTAL (BICYCLE PARKING AVAILABLE IN OFFICE/SHOP BUILDING)

## HANDICAPPED PARKING DETAILS

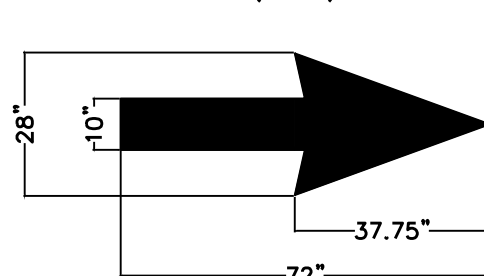
- 1- 8'-0" X 18'-0" SPACE WITH 60" WIDE LOADING & UNLOADING AREA ON THE PASSENGER SIDE
- 2- 2% MAXIMUM SLOPE IN ANY DIRECTION
- 3- ALL SPACES SHALL BE IDENTIFIED WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY ON A REFLECTORIZED SIGN (70 SQ. IN.) POSTED @ 80" ABOVE FINISHED GRADE.
- 4- AT EACH ENTRANCE TO THE PARKING AREA OR AT EACH DISABLED ACCESS SPACE POST A SIGN (17" X 22") STATING THAT UNAUTHORIZED VEHICLES PARKING IN DESIGNATED DISABLED ACCESS SPACES MAY BE TOWED AWAY.
- 5- SURFACE OF SPACE SHALL HAVE OUTLINE OF WHEELCHAIR WITH OCCUPANT (36" X 36").

## PATH OF TRAVEL

THE DISABLED PATH OF TRAVEL SHALL BE A MINIMUM 4'-0" WIDE & SLOPE A MAXIMUM OF 5% IN THE DIRECTION OF TRAVEL.

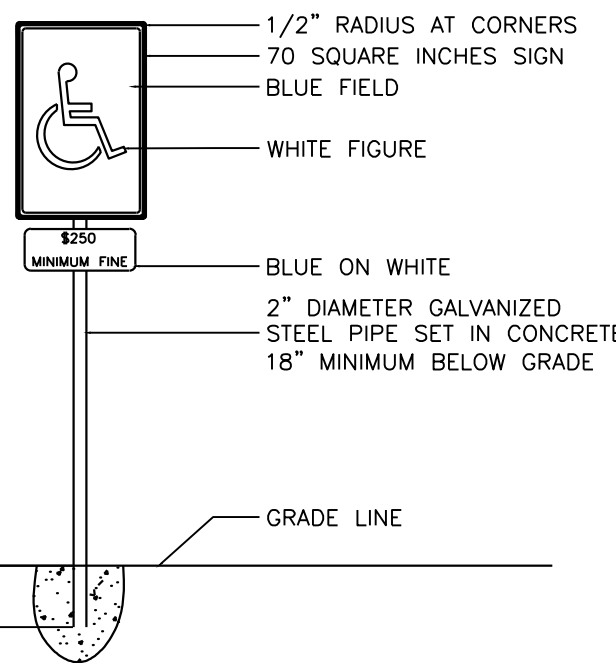
## DIRECTIONAL ARROWS

EACH LOT ENTRANCE WILL HAVE DIRECTIONAL ARROWS INSTALLED SUBSTANTIALLY SIMILAR TO BELOW.  
(N.T.S.)



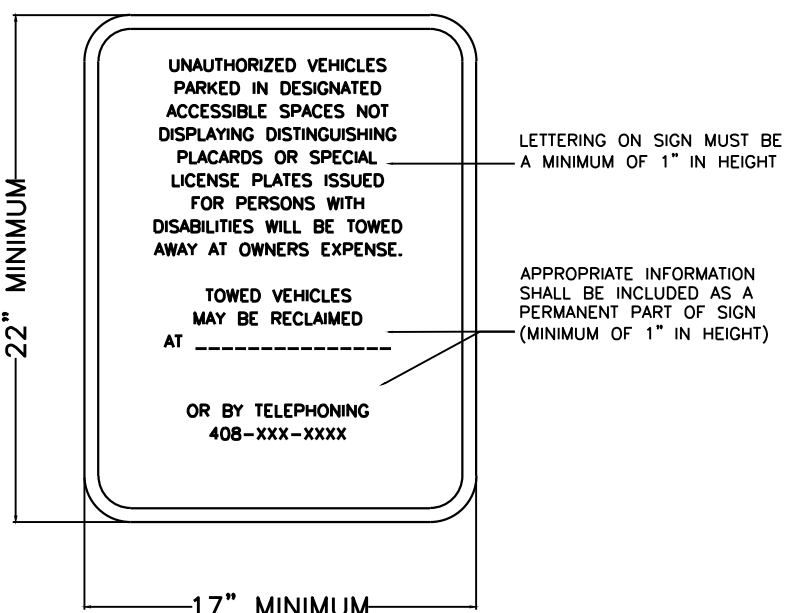
## ACCESSIBILITY SIGN

EACH HANDICAPPED SPACE SHALL DISPLAY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY ON A POLE @ THE END OF THE STALL - REFLECTORIZED SIGN CONSTRUCTED OF PORCELAIN STEEL WITH BEADED TEXT OR EQUAL.  
(SIGN MAY BE MOUNTED ON STRUCTURE @ 36" HEIGHT)  
(N.T.S.)



## ENTRANCE SIGN

EACH LOT ENTRANCE SHALL DISPLAY THE HANDICAPPED ENTRANCE SIGN WITH MINIMUM 1" HIGH LETTERING.  
(N.T.S.)



|   |            |                   |
|---|------------|-------------------|
| 4 | 2018-04-01 | ISSUED FOR PERMIT |
| 3 | 2018-08-28 | ISSUED FOR PERMIT |
| 2 | 2018-07-17 | ISSUED FOR PERMIT |
| 1 | 2018-06-29 | ISSUED FOR PERMIT |
| 0 | 2018-04-20 | ISSUED FOR PERMIT |

REV. YYYY-MM-DD DESCRIPTION

|     |     |     |
|-----|-----|-----|
| RDH | MAG | RDH |
| RDH | JMH | RDH |
| RDH | JDR | RDH |
| RDH | MAL | RDH |
| RDH | MAL | RDH |

DESIGNED PREPARED REVIEWED APPROVED

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT



SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

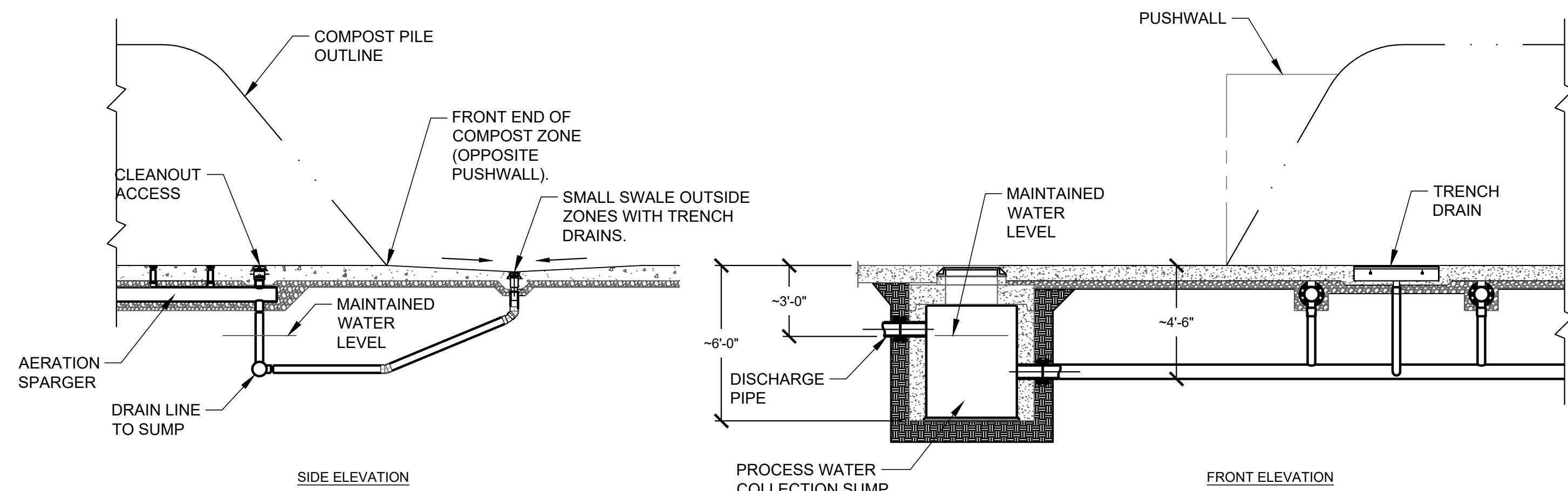
PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
PARKING AND LIGHTING PLAN

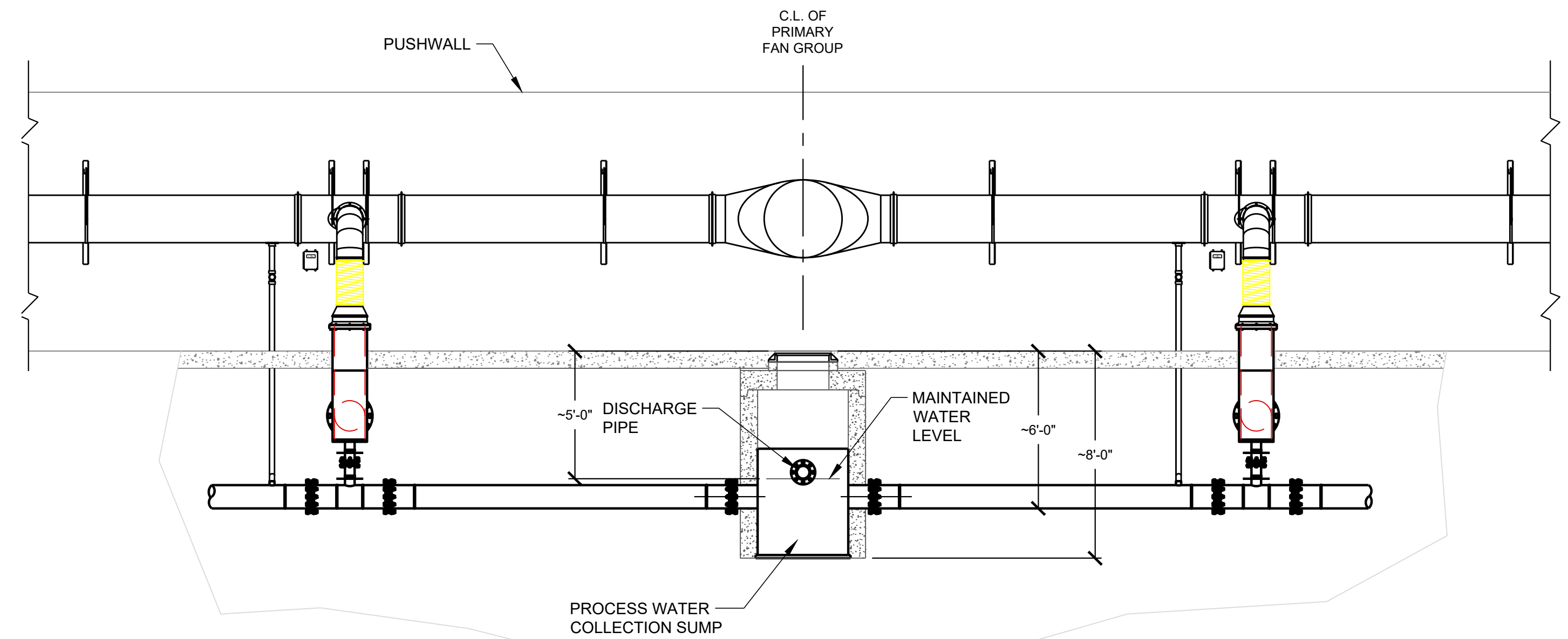
PROJECT NO. 133-97640 COUNTY FILE NO. 6498-81-11-09G 08P 08A 08EA REV. 4 9 of 16 DRAWING 8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D

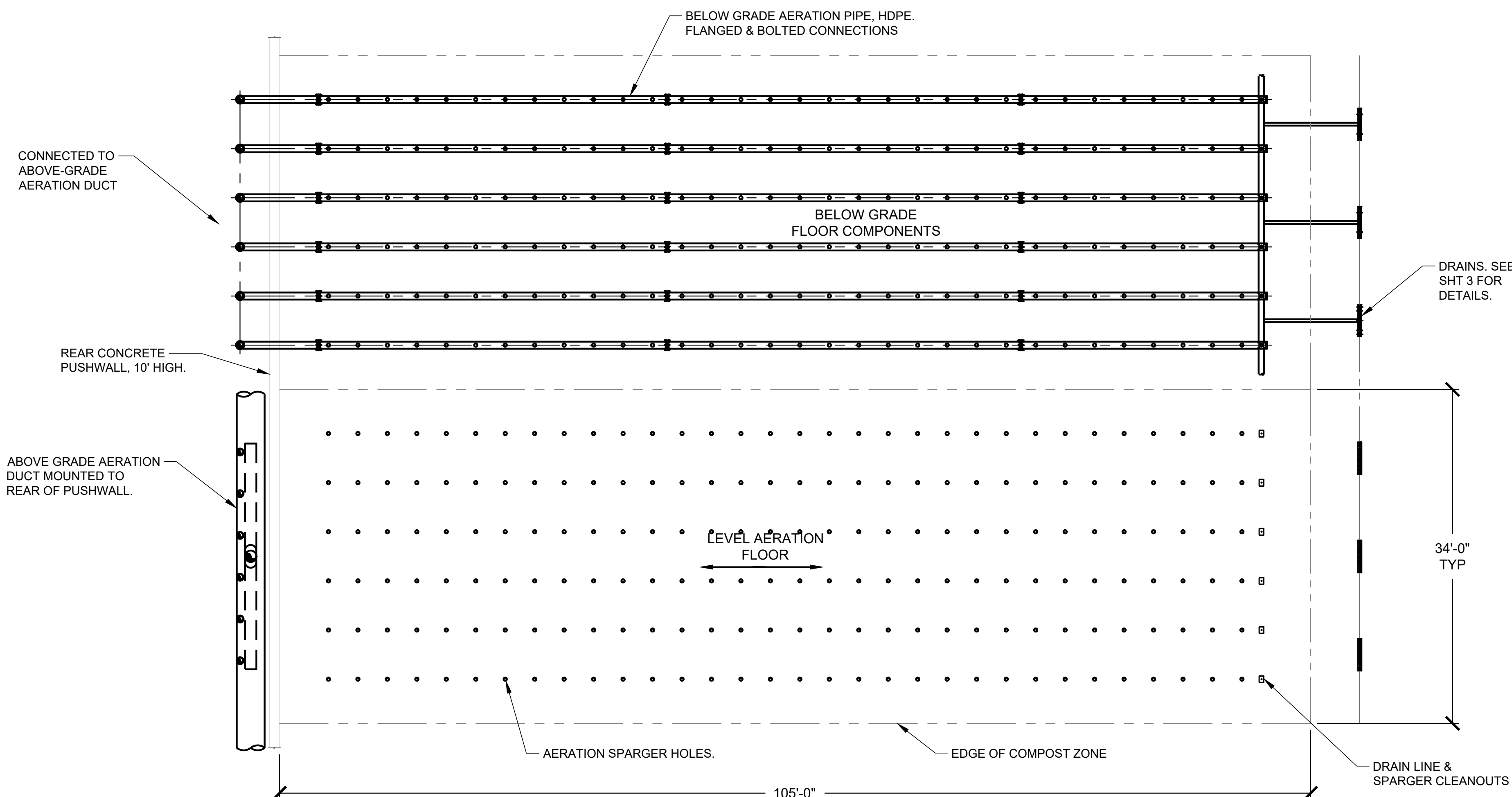




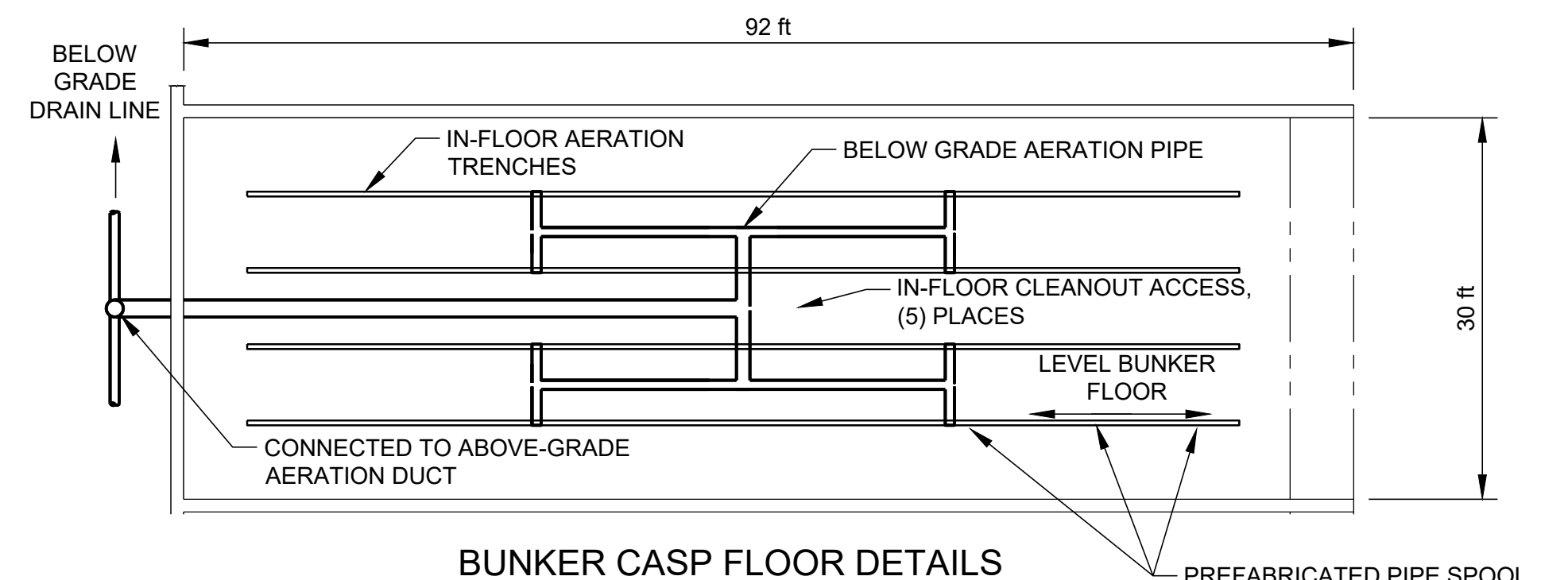
TYPICAL SUMP DETAILS - SECONDARY  
eASPs  
NTS



TYPICAL SUMP DETAILS - PRIMARY CASP BUNKERS  
REAR ELEVATION - BEHIND PUSHWALL  
NTS



TYPICAL AERATION FLOOR - SECONDARY  
eASPs  
NTS



BUNKER CASP FLOOR DETAILS  
TYPICAL  
NTS

**NOTE(S)**  
AERATED STATIC PILE LAYOUT AND FACILITY INFORMATION PROVIDED BY  
ENGINEERED COMPOST SYSTEMS

|   |            |                   |
|---|------------|-------------------|
| 4 | 2018-04-01 | ISSUED FOR PERMIT |
| 3 | 2018-08-28 | ISSUED FOR PERMIT |
| 2 | 2018-07-17 | ISSUED FOR PERMIT |
| 1 | 2018-06-29 | ISSUED FOR PERMIT |
| 0 | 2018-04-20 | ISSUED FOR PERMIT |

REV. YYYY-MM-DD DESCRIPTION

|          |          |          |
|----------|----------|----------|
| RDH      | MAG      | RDH      |
| RDH      | JMH      | RDH      |
| RDH      | JDR      | RDH      |
| RDH      | MAL      | RDH      |
| RDH      | MAL      | RDH      |
| DESIGNED | PREPARED | REVIEWED |
| APPROVED |          |          |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA  
CONSULTANT



**zanker** | rethink. reinvent. renew.  
SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
**DETAILS**

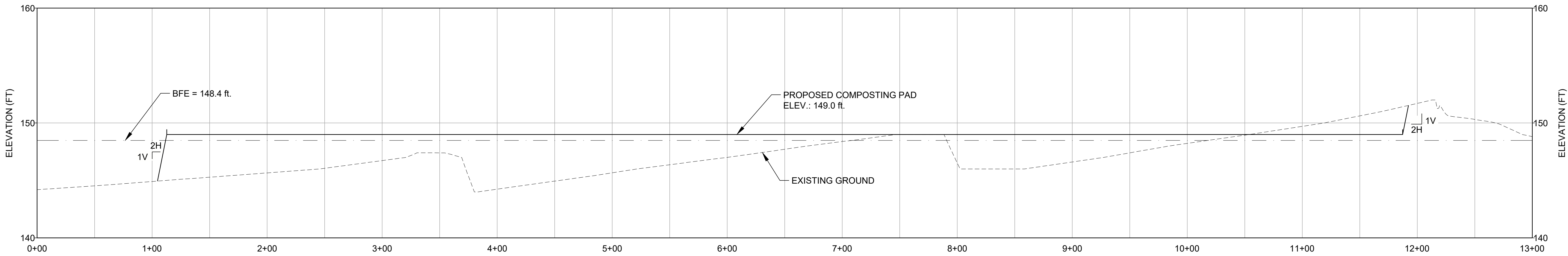
|                          |                                                |           |          |              |
|--------------------------|------------------------------------------------|-----------|----------|--------------|
| PROJECT NO.<br>133-97640 | COUNTY FILE NO.<br>6498-81-11-09G 08P 08A 08EA | REV.<br>4 | 10 of 16 | DRAWING<br>9 |
|--------------------------|------------------------------------------------|-----------|----------|--------------|

Path: \\nasarament\local\Shes\Z-Best Compost Facility\CIVIL 3D\2019 Aerated Static Pile Composting Grading Plan [Rev1] | File Name: 13397640\_ECS Design\_P2.dwg

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3/D

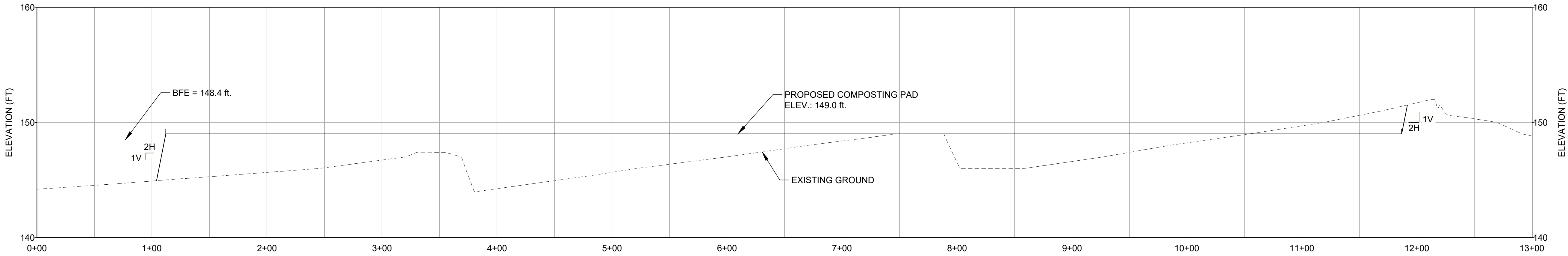


Path: \\vacament\local\Shed\Z-best Compost Facility\Civil\3D\2019 Aerated Static Pile Composting Grading Plan [Rev]1 | File Name: 13397640\_Site Layout [Rev]1.dwg | Last Edited By: mtrapi | Date: 2019-10-01 | Time: 11:08:12 AM | Printed By: MTrapi | Date: 2019-10-01 | Time: 11:08:45 AM



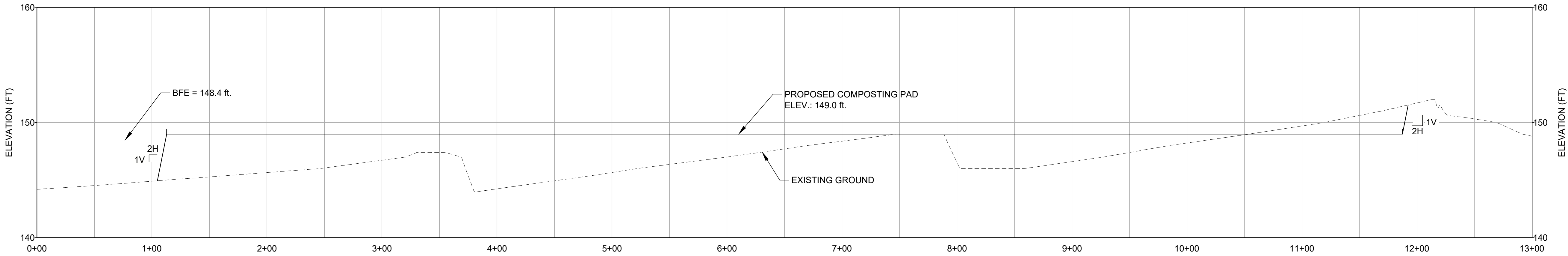
HORZ. SCALE: 1"=50'  
VERT. SCALE: 1"=5'

**A** AERATED STATIC PILE PAD SECTION A



HORZ. SCALE: 1"=50'  
VERT. SCALE: 1"=5'

**B** AERATED STATIC PILE PAD SECTION B



HORZ. SCALE: 1"=50'  
VERT. SCALE: 1"=5'

**C** AERATED STATIC PILE PAD SECTION C

**NOTE(S)**  
1. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

| REV. | YYYY-MM-DD | DESCRIPTION       | DESIGNED | PREPARED | REVIEWED | APPROVED |
|------|------------|-------------------|----------|----------|----------|----------|
| 4    | 2018-04-01 | ISSUED FOR PERMIT | RDH      | MAG      | RDH      |          |
| 3    | 2018-08-28 | ISSUED FOR PERMIT | RDH      | JMH      | RDH      |          |
| 2    | 2018-07-17 | ISSUED FOR PERMIT | RDH      | JDR      | RDH      |          |
| 1    | 2018-06-29 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |
| 0    | 2018-04-20 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT



SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

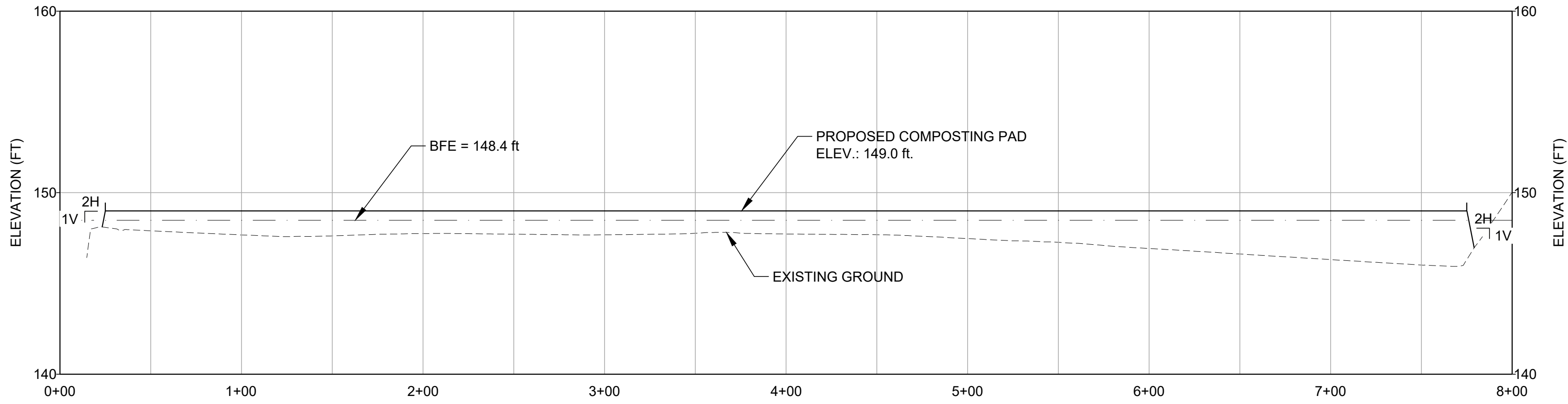
TITLE  
AERATED STATIC PILE SECTIONS

PROJECT NO. 133-97640  
COUNTY FILE NO. 6498-81-11-09G 08P 08A 08EA  
REV. 4  
11 of 16  
DRAWING 10A

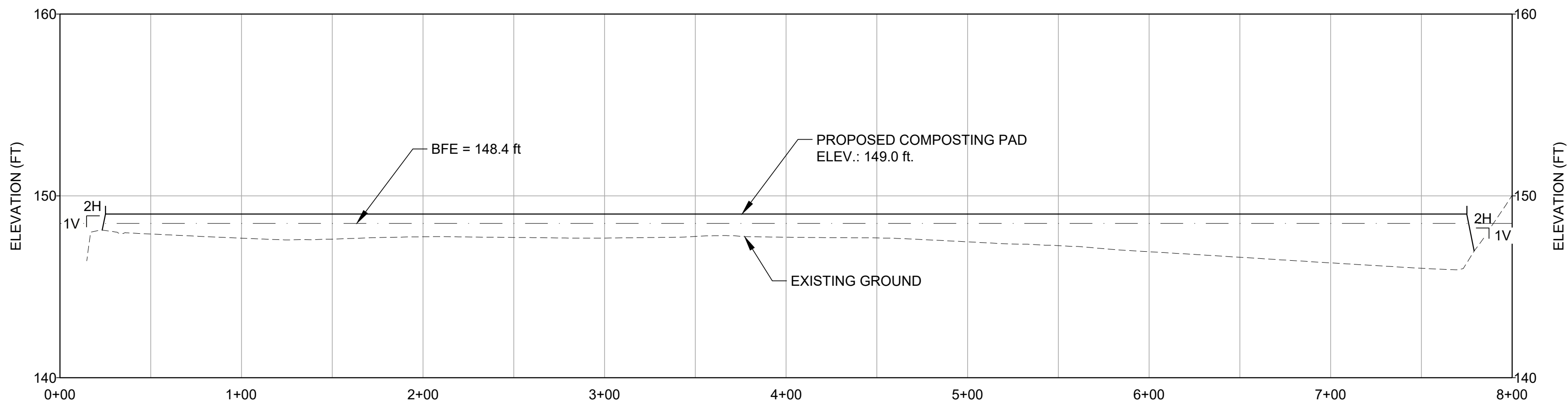
1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D



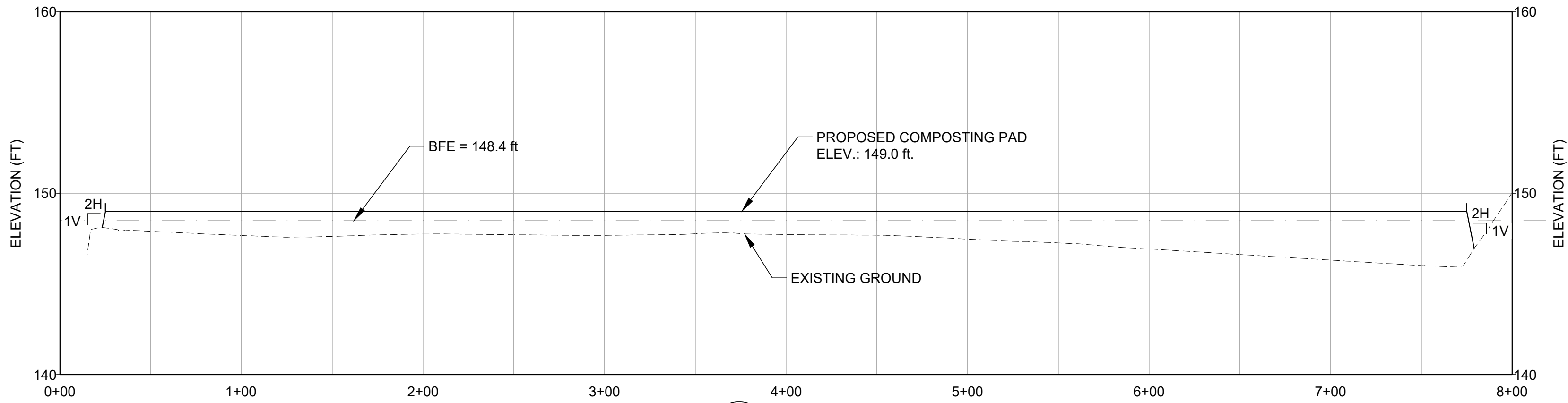
Path: \\vacament\local\asdas\Sheet\Z-Best Compost Facility\Civil 3D\2019 Aerated Static Pile Composting Grading Plan [Rev1] | File Name: 13397640\_Site Layout [Rev7].dwg | Last Edited By: mtrap | Date: 2019-10-01 | Time: 11:08:12 AM | Printed By: MTrap | Date: 2019-10-01 | Time: 11:08:59 AM



D AERATED STATIC PILE PAD SECTION D  
HORZ. SCALE: 1"=50'  
VERT. SCALE: 1"=5'



E AERATED STATIC PILE PAD SECTION E  
HORZ. SCALE: 1"=50'  
VERT. SCALE: 1"=5'



F AERATED STATIC PILE PAD SECTION F  
HORZ. SCALE: 1"=50'  
VERT. SCALE: 1"=5'

NOTE(S)  
1. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

|   |            |                   |
|---|------------|-------------------|
| 4 | 2018-04-01 | ISSUED FOR PERMIT |
| 3 | 2018-08-28 | ISSUED FOR PERMIT |
| 2 | 2018-07-17 | ISSUED FOR PERMIT |
| 1 | 2018-06-29 | ISSUED FOR PERMIT |
| 0 | 2018-04-20 | ISSUED FOR PERMIT |

REV. YYYY-MM-DD DESCRIPTION

|     |     |     |
|-----|-----|-----|
| RDH | MAG | RDH |
| RDH | JMH | RDH |
| RDH | JDR | RDH |
| RDH | MAL | RDH |
| RDH | MAL | RDH |

DESIGNED PREPARED REVIEWED APPROVED

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT



SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

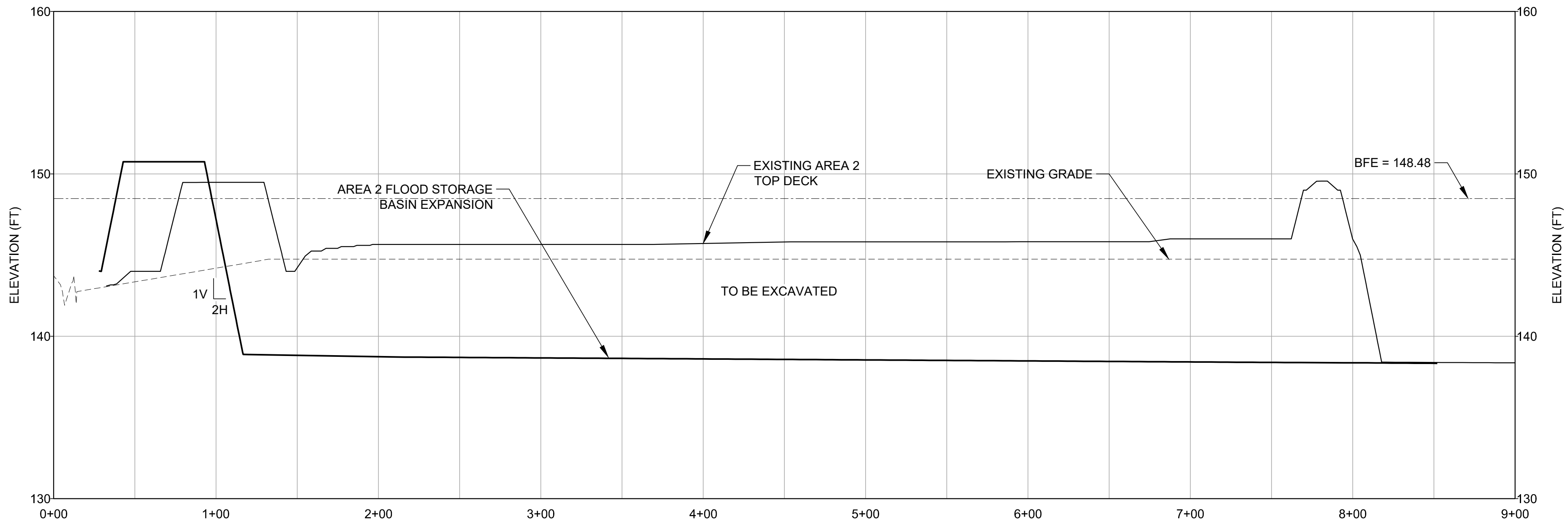
TITLE  
AERATED STATIC PILE SECTIONS

PROJECT NO. 133-97640 COUNTY FILE NO. 6498-81-11-09G 08P 08A 08EA REV. 4 12 of 16 DRAWING 10B

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D



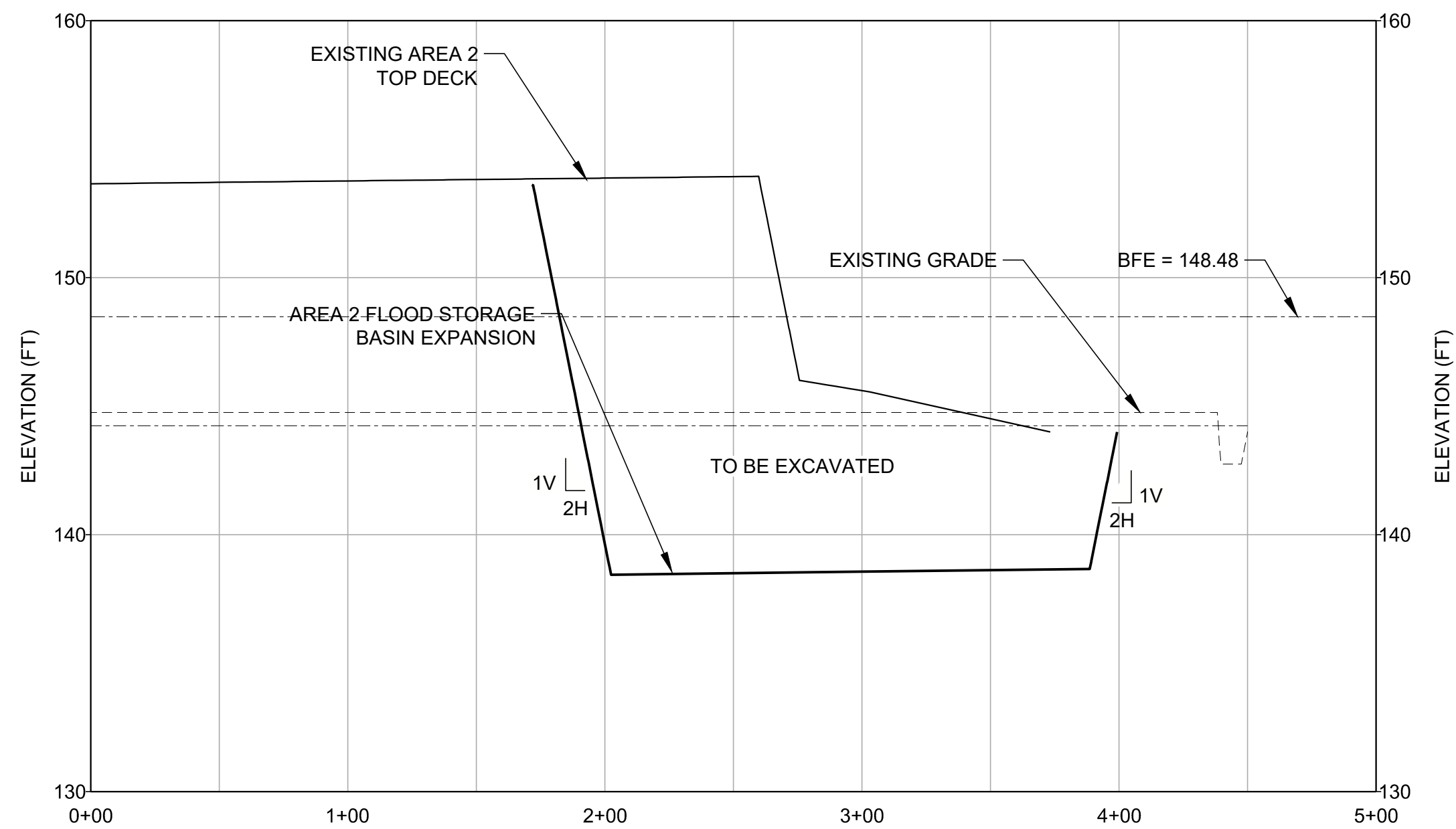
Path: \\sacramento\local\Sheet\Z-Best Compost Facility\Civil\3D\2019 Area 2 Expansion\1 File Name: 082920\_Area 2 Expansion REV2.dwg | Last Edited By: jhamilton Date: 2019-09-30 Time: 4:37:07 PM | Printed By: MTrapi Date: 2019-10-01 Time: 11:17:24 AM



HORZ. SCALE: 1"=50'  
VERT. SCALE: 1"=5'

**A** AREA 2 FLOOD STORAGE BASIN SECTION A

5B 10C



HORZ. SCALE: 1"=50'  
VERT. SCALE: 1"=5'

**B** AREA 2 FLOOD STORAGE BASIN SECTION B

5B 10C

| REV. | YYYY-MM-DD | DESCRIPTION       | DESIGNED | PREPARED | REVIEWED | APPROVED |
|------|------------|-------------------|----------|----------|----------|----------|
| 4    | 2018-04-01 | ISSUED FOR PERMIT | RDH      | MAG      | RDH      |          |
| 3    | 2018-08-28 | ISSUED FOR PERMIT | RDH      | JMH      | RDH      |          |
| 2    | 2018-07-17 | ISSUED FOR PERMIT | RDH      | JDR      | RDH      |          |
| 1    | 2018-06-29 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |
| 0    | 2018-04-20 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT



SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
**AREA 2 FLOOD STORAGE BASIN SECTIONS**

|                          |                                                |           |          |                |
|--------------------------|------------------------------------------------|-----------|----------|----------------|
| PROJECT NO.<br>133-97640 | COUNTY FILE NO.<br>6498-81-11-09G 08P 08A 08EA | REV.<br>4 | 13 of 16 | DRAWING<br>10C |
|--------------------------|------------------------------------------------|-----------|----------|----------------|

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3/D



Path: \\nasarament\local\Site\Z-Best Compost Facility\Civil\_3D\2019 Aerial Static Pile Composting Grading Plan [Rev1] | File Name: 13397640\_Conceptual Intersection R1.dwg

| REV. | YYYY-MM-DD | DESCRIPTION       | DESIGNED | PREPARED | REVIEWED | APPROVED |
|------|------------|-------------------|----------|----------|----------|----------|
| 4    | 2018-04-01 | ISSUED FOR PERMIT | RDH      | MAG      | RDH      |          |
| 3    | 2018-08-28 | ISSUED FOR PERMIT | RDH      | JMH      | RDH      |          |
| 2    | 2018-07-17 | ISSUED FOR PERMIT | RDH      | JDR      | RDH      |          |
| 1    | 2018-06-29 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |
| 0    | 2018-04-20 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT

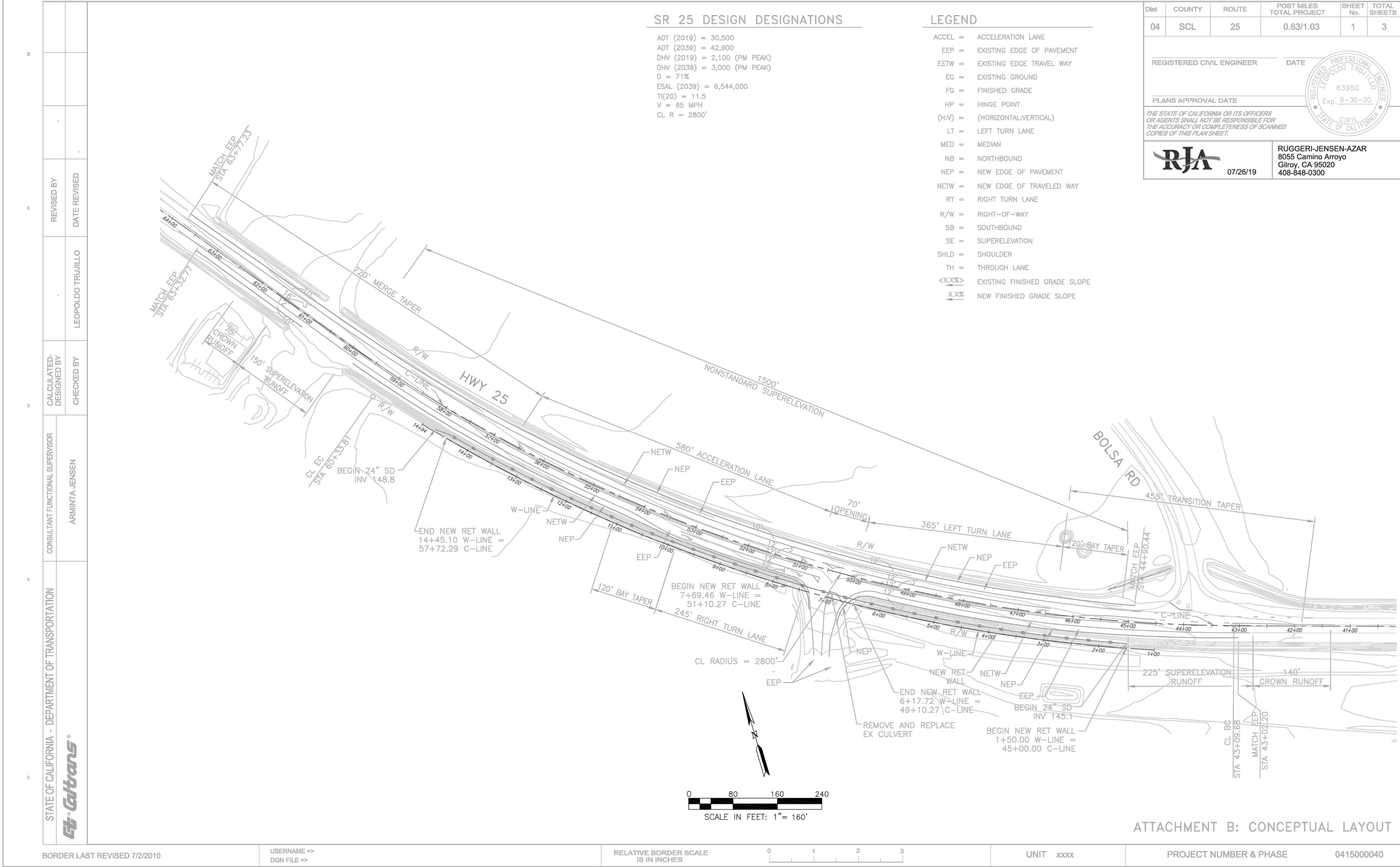


SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
HIGHWAY IMPROVEMENTS - OPTION 1

PROJECT NO. 133-97640 COUNTY FILE NO. 6498-81-11-09G 08P 08A 08EA REV. 4 14 of 16 DRAWING 11A



Drawing: M:\Site\A-Z-Best Compost Facility\REFERENCES\REF\2019-09-25 Highway Conceptual Option\182022 Concept Layout Sent to Richard Haughey 2019-09-25.dwg  
Sep 30, 2019, 4:24pm

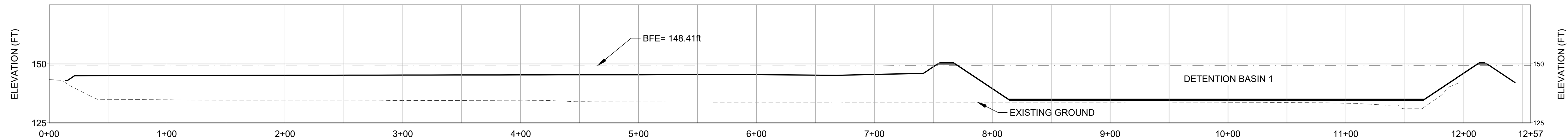
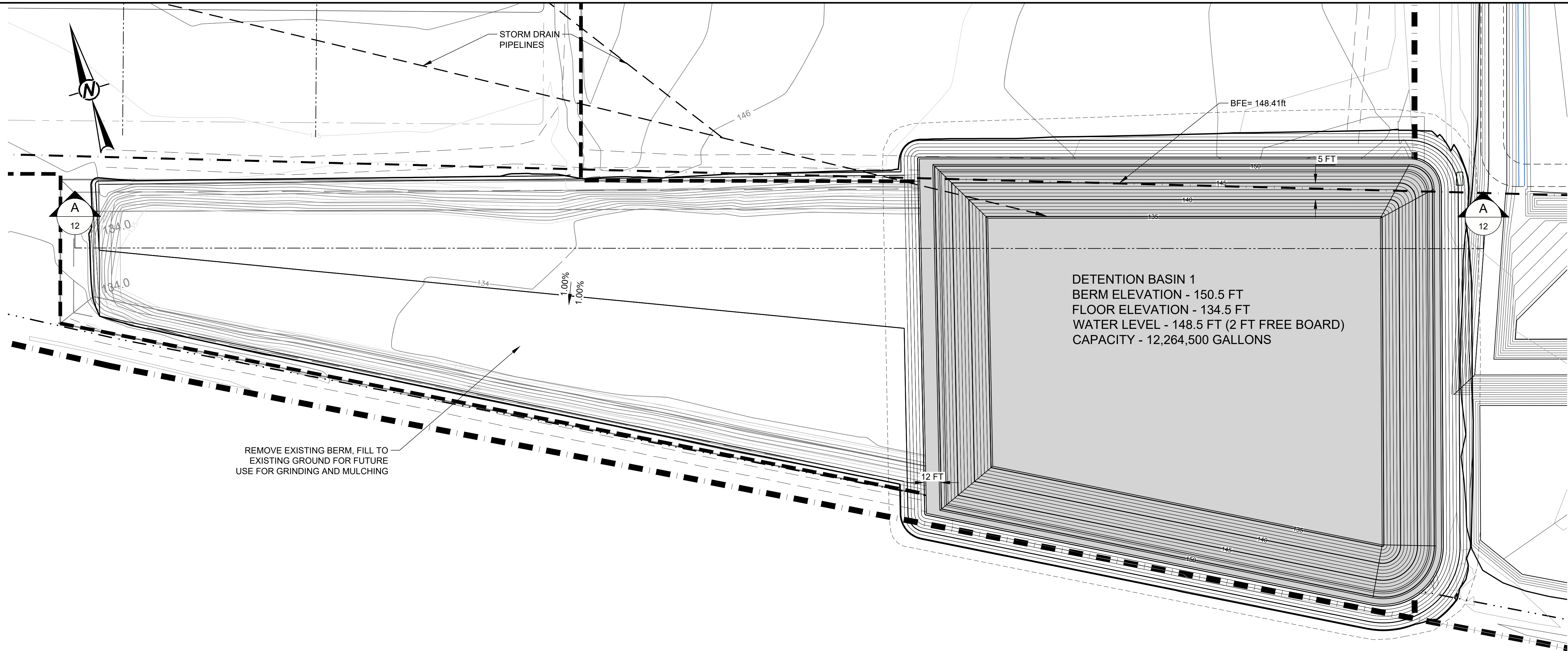
1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3/D







Path: \\vacament\local\Sheet\Z-Best Compost Facility\Civil 3D\2019 Aerated Static Pile Composting Grading Plan [Rev1] | File Name: 13397640\_Site Layout [Rev7].dwg | Last Edited By: mtrap | Date: 2019-10-01 | Time: 11:08:12 AM | Printed By: MTrap | Date: 2019-10-01 | Time: 11:18:59 AM



SCALE 1"=50'

A

12

PROPOSED BASIN SECTION A



| REV. | YYYY-MM-DD | DESCRIPTION       | DESIGNED | PREPARED | REVIEWED | APPROVED |
|------|------------|-------------------|----------|----------|----------|----------|
| 4    | 2018-04-01 | ISSUED FOR PERMIT | RDH      | MAG      | RDH      |          |
| 3    | 2018-08-28 | ISSUED FOR PERMIT | RDH      | JMH      | RDH      |          |
| 2    | 2018-07-17 | ISSUED FOR PERMIT | RDH      | JDR      | RDH      |          |
| 1    | 2018-06-29 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |
| 0    | 2018-04-20 | ISSUED FOR PERMIT | RDH      | MAL      | RDH      |          |

CLIENT  
Z-BEST COMPOST PRODUCTS  
COMPOSTING FACILITY  
GILROY, CALIFORNIA

CONSULTANT



SUNNYVALE  
425 LAKESIDE DRIVE  
SUNNYVALE, CALIFORNIA 94085  
USA  
[+1] (408) 220-9223  
www.golder.com

PROJECT  
AERATED STATIC PILE COMPOSTING PERMIT PACKAGE

TITLE  
PROPOSED DETENTION BASIN 1 - PLAN AND SECTION

PROJECT NO.  
133-97640

COUNTY FILE NO.  
6498-81-11-09G 08P 08A 08EA

REV.  
4

16 of 16

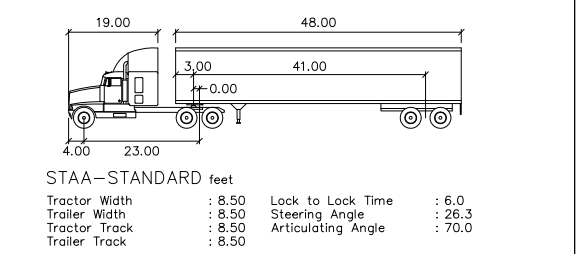
DRAWING  
12

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D



ADT (2019) = 30,500  
ADT (2039) = 42,900  
DHV (2019) = 2,100 (PM PEAK)  
DHV (2039) = 3,000 (PM PEAK)  
D = 71%  
ESAL (2039) = 6,544,000  
TI(20) = 11.5  
V = 65 MPH  
CL R = 2800'

|             |   |                               |
|-------------|---|-------------------------------|
| ACCEL       | = | ACCELERATION LANE             |
| EEP         | = | EXISTING EDGE OF PAVEMENT     |
| EETW        | = | EXISTING EDGE TRAVEL WAY      |
| EG          | = | EXISTING GROUND               |
| FG          | = | FINISHED GRADE                |
| HP          | = | HINGE POINT                   |
| (H:V)       | = | (HORIZONTAL:VERTICAL)         |
| LT          | = | LEFT TURN LANE                |
| MED         | = | MEDIAN                        |
| NB          | = | NORTHBOUND                    |
| NEP         | = | NEW EDGE OF PAVEMENT          |
| NETW        | = | NEW EDGE OF TRAVELED WAY      |
| RT          | = | RIGHT TURN LANE               |
| R/W         | = | RIGHT-OF-WAY                  |
| SB          | = | SOUTHBOUND                    |
| SE          | = | SUPERELEVATION                |
| SHLD        | = | SHOULDER                      |
| TH          | = | THROUGH LANE                  |
| <X.X%>      | = | EXISTING FINISHED GRADE SLOPE |
| <u>X.X%</u> | = | NEW FINISHED GRADE SLOPE      |



PROJECT NUMBER & PHASE 0415000040

Drawing: W:\Jobs 18\182022 Z-Best Products Offsite\Drawings\Prelim\Conceptual Layouts\182022 Concept Layout.dwg  
Jul 24, 2019, 9:43am



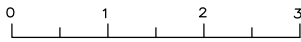
|                                                                                    |                                  |  |                            |                   |              |  |
|------------------------------------------------------------------------------------|----------------------------------|--|----------------------------|-------------------|--------------|--|
| STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION                                 | CONSULTANT FUNCTIONAL SUPERVISOR |  | CALCULATED—<br>DESIGNED BY | REVISED BY        |              |  |
|                                                                                    |                                  |  |                            |                   |              |  |
|                                                                                    |                                  |  |                            |                   |              |  |
| ARMINTA JENSEN                                                                     |                                  |  | CHECKED BY                 | LEOPOLDO TRUJILLO | DATE REVISED |  |
|  |                                  |  |                            |                   |              |  |



BORDER LAST REVISED 7/2/2010

USERNAME =>  
DGN FILE =>

RELATIVE BORDER SCALE  
IS IN INCHES



UNIT xxxx

PROJECT NUMBER & PHASE 0415000040

| DIST | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT | SHEET<br>No. | TOTAL<br>SHEETS |
|------|--------|-------|-----------------------------|--------------|-----------------|
| 04   | SCL    | 25    | 0.63/1.03                   | 2            | 3               |

REGISTERED CIVIL ENGINEER DATE

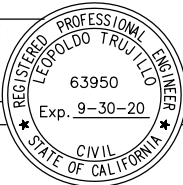
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS  
OR AGENTS SHALL NOT BE RESPONSIBLE FOR  
THE ACCURACY OR COMPLETENESS OF SCANNED  
COPIES OF THIS PLAN SHEET.



07/26/19

RUGGERI-JENSEN-AZAR  
8055 Camino Arroyo  
Gilroy, CA 95020  
408-848-0300

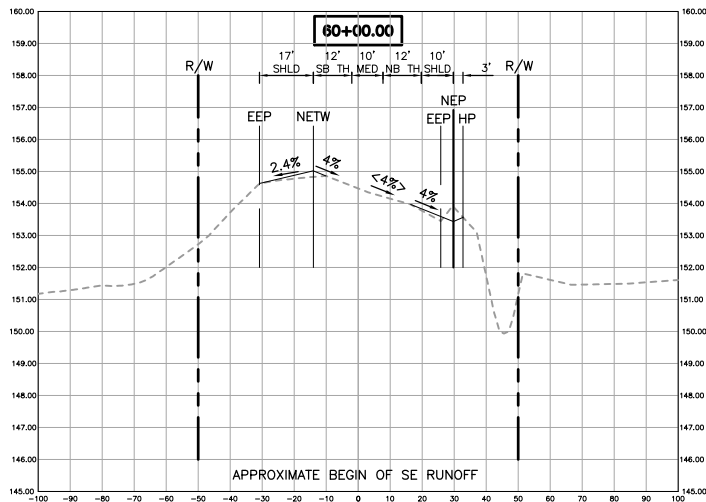
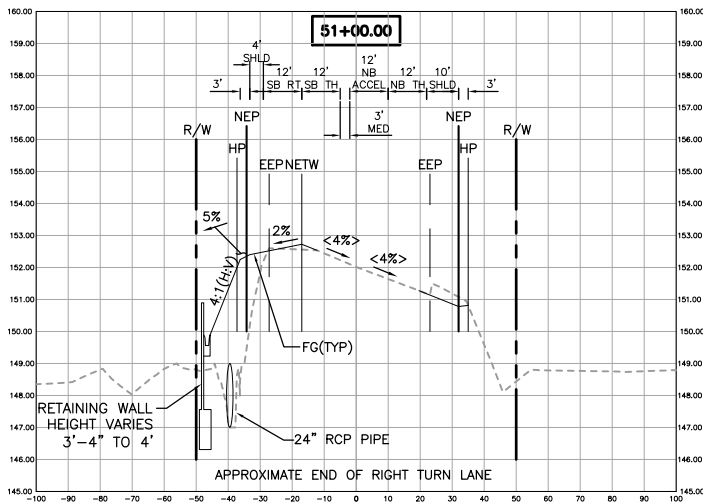
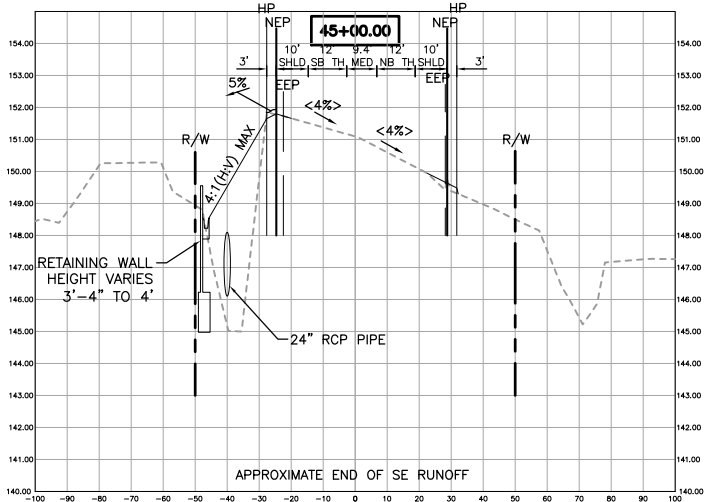
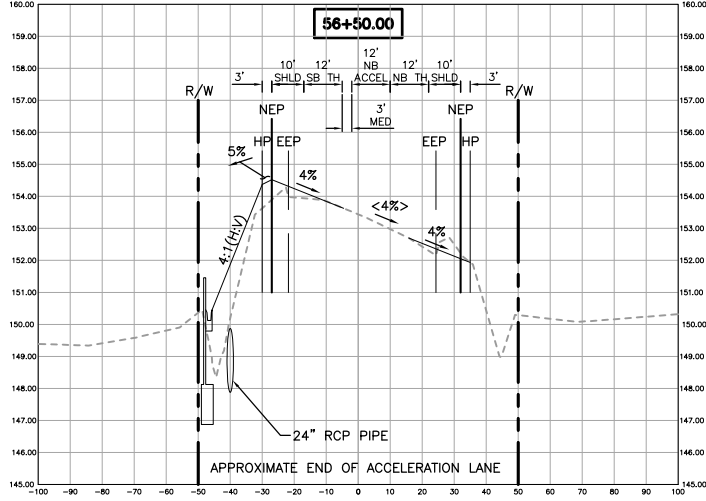
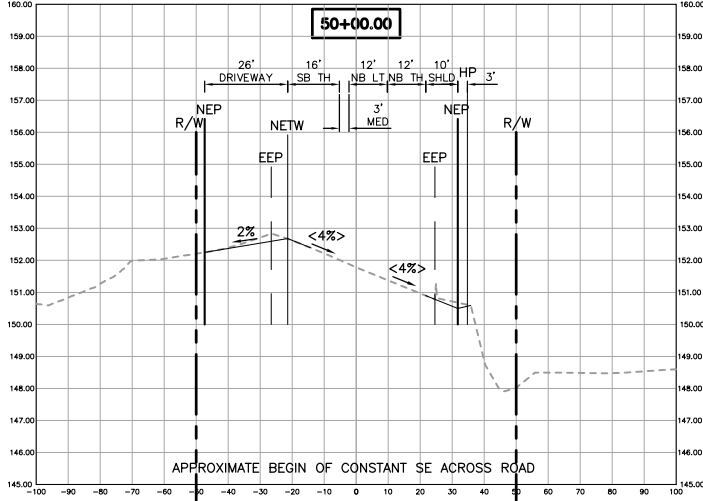
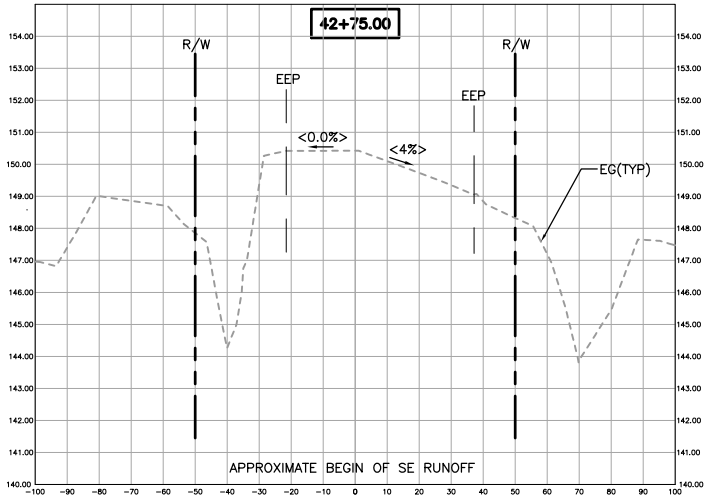
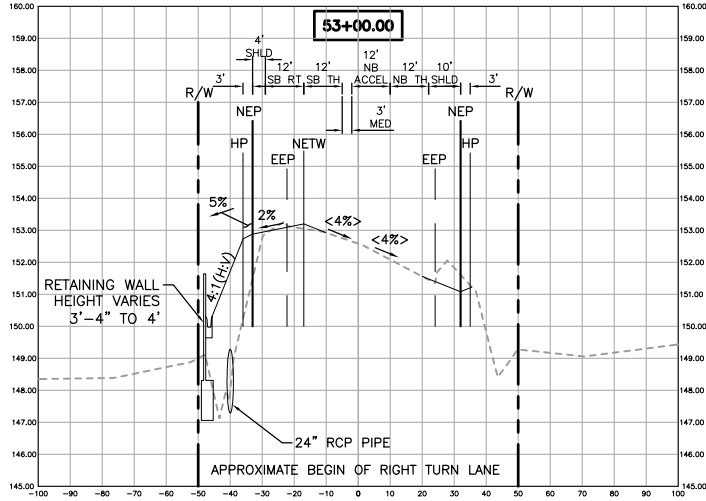
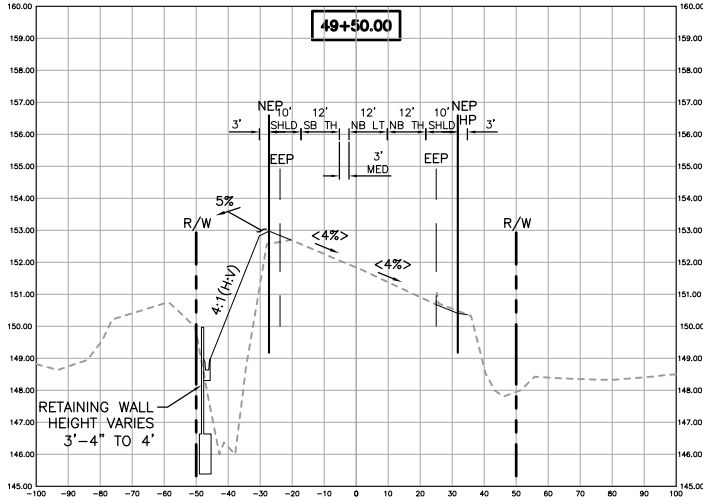
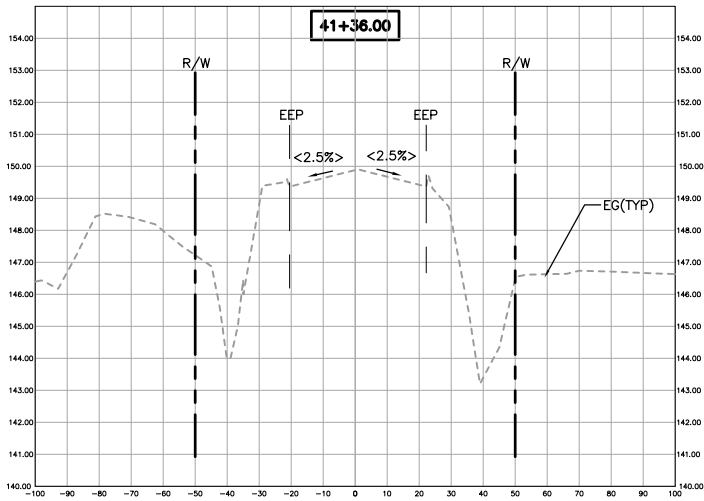


### LEGEND

- ACCEL = ACCELERATION LANE  
EEP = EXISTING EDGE OF PAVEMENT  
EETW = EXISTING EDGE OF TRAVEL WAY  
EG = EXISTING GROUND  
FG = FINISHED GRADE  
HP = HINGE POINT  
(H:V) = (HORIZONTAL:VERTICAL)  
LT = LEFT TURN LANE  
MED = MEDIAN  
NB = NORTHBOUND  
NEP = NEW EDGE OF PAVEMENT  
NETW = NEW EDGE OF TRAVELED WAY  
RT = RIGHT TURN LANE  
R/W = RIGHT-OF-WAY  
SB = SOUTHBOUND  
SE = SUPERELEVATION  
SHLD = SHOULDER  
TH = THROUGH LANE  
<X.X%> EXISTING FINISHED GRADE SLOPE  
X.X% NEW FINISHED GRADE SLOPE



SCALE IN FEET: 1" = 60'  
VERTICAL SCALE: 1" = 6'



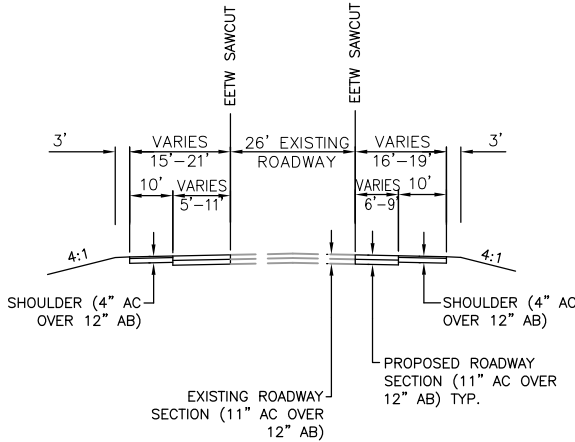
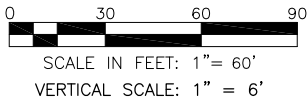
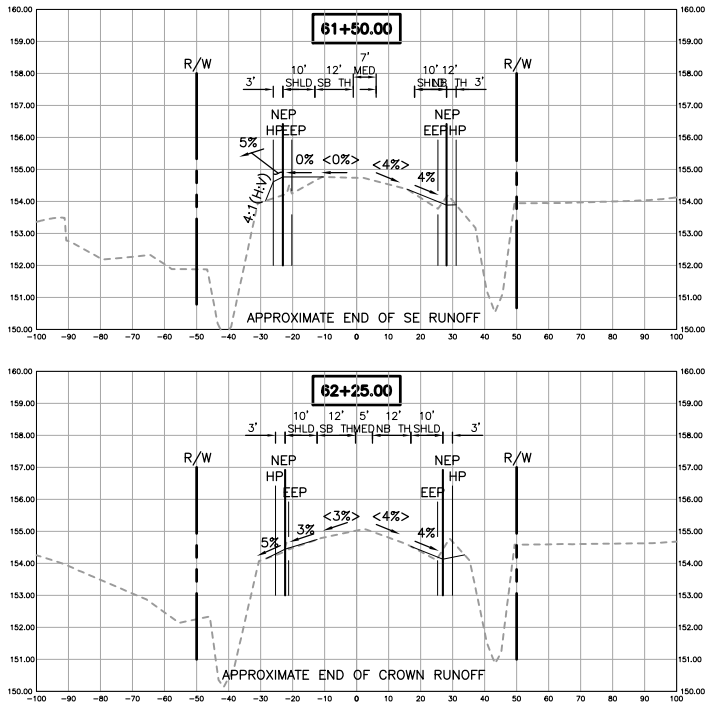
DATE PLOTTED => \$DATE  
TIME PLOTTED => \$TIME

LAST REVISION  
05-01-19

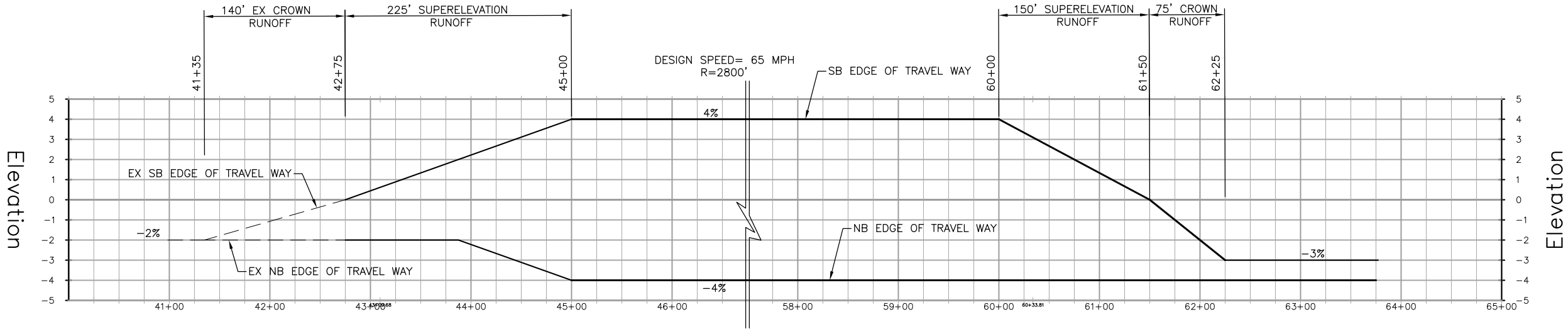
Drawing: W:\Jobs 18\182022 Z-Best Products Offsite\Drawings\Prelim\Conceptual Layouts\182022 Concept Layout.dwg  
Jul 24, 2019, 9:45am



|                                                    |                                  |                |                        |            |                   |            |              |  |  |
|----------------------------------------------------|----------------------------------|----------------|------------------------|------------|-------------------|------------|--------------|--|--|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | CONSULTANT FUNCTIONAL SUPERVISOR | ARMINTA JENSEN | CALCULATED-DESIGNED BY | CHECKED BY | LEOPOLDO TRUJILLO | REVISED BY | DATE REVISED |  |  |
|                                                    |                                  |                |                        |            |                   |            |              |  |  |
|                                                    |                                  |                |                        |            |                   |            |              |  |  |
|                                                    |                                  |                |                        |            |                   |            |              |  |  |



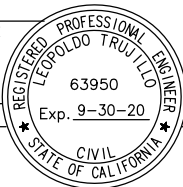
TYPICAL ROADWAY SECTION



SUPERELEVATION DIAGRAM

HORIZONTAL SCALE: 1" = 120'  
VERTICAL SCALE: 1" = 6'

| DIST                                                                                                                                                                 | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT                                                         | SHEET<br>No. | TOTAL<br>SHEETS |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|-------------------------------------------------------------------------------------|--------------|-----------------|
| 04                                                                                                                                                                   | SCL    | 25    | 0.63/1.03                                                                           | 3            | 3               |
| REGISTERED CIVIL ENGINEER _____                                                                                                                                      |        |       | DATE _____                                                                          |              |                 |
| PLANS APPROVAL DATE _____                                                                                                                                            |        |       |  |              |                 |
| <i>THE STATE OF CALIFORNIA OR ITS OFFICERS<br/>OR AGENTS SHALL NOT BE RESPONSIBLE FOR<br/>THE ACCURACY OR COMPLETENESS OF SCANNED<br/>COPIES OF THIS PLAN SHEET.</i> |        |       |                                                                                     |              |                 |
| <br>07/26/19                                                                      |        |       | RUGGERI-JENSEN-AZAR<br>8055 Camino Arroyo<br>Gilroy, CA 95020<br>408-848-0300       |              |                 |



LEGEND

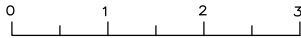
- ACCEL = ACCELERATION LANE
- EETW = EXISTING EDGE OF TRAVEL WAY
- EG = EXISTING GROUND
- FG = FINISHED GRADE
- HP = HINGE POINT
- (H:V) = (HORIZONTAL:VERTICAL)
- LT = LEFT TURN LANE
- MED = MEDIAN
- NB = NORTHBOUND
- NEP = NEW EDGE OF PAVEMENT
- NETW = NEW EDGE OF TRAVELED WAY
- RT = RIGHT TURN LANE
- R/W = RIGHT-OF-WAY
- SB = SOUTHBOUND
- SE = SUPERELEVATION
- SHLD = SHOULDER
- TH = THROUGH LANE
- <X.X%> EXISTING FINISHED GRADE SLOPE
- X.X% NEW FINISHED GRADE SLOPE

ATTACHMENT D: SECTIONS & DETAILS

BORDER LAST REVISED 7/2/2010

USERNAME =>  
DGN FILE =>

RELATIVE BORDER SCALE  
IS IN INCHES



UNIT xxxx

PROJECT NUMBER & PHASE 0415000040

DATE PLOTTED => \$DATE  
TIME PLOTTED => \$TIME

LAST REVISION  
05-01-19



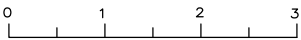
|                                                    |                                  |  |                            |         |      |
|----------------------------------------------------|----------------------------------|--|----------------------------|---------|------|
| STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION | CONSULTANT FUNCTIONAL SUPERVISOR |  | CALCULATED–<br>DESIGNED BY | REVISOR | DATE |
|                                                    | ARMINTA JENSEN                   |  |                            |         |      |
|                                                    |                                  |  |                            |         |      |
|                                                    |                                  |  |                            |         |      |



BORDER LAST REVISED 7/2/2010

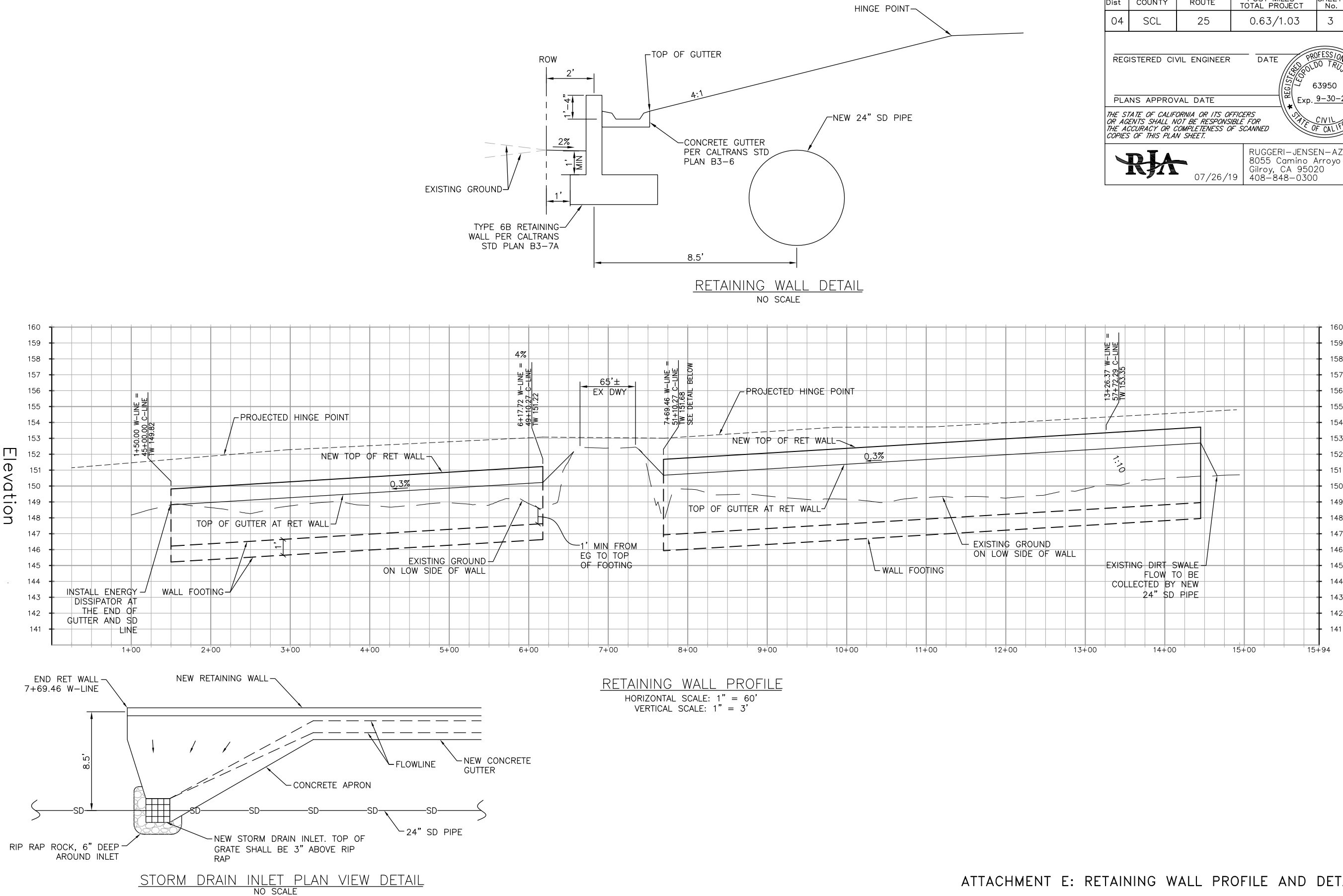
USERNAME =>  
DGN FILE =>

RELATIVE BORDER SCALE  
IS IN INCHES



UNIT xxxx

PROJECT NUMBER & PHASE 0415000040



|      |        |       |                             |              |                 |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT | SHEET<br>No. | TOTAL<br>SHEETS |
| 04   | SCL    | 25    | 0.63/1.03                   | 3            | 3               |

REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

07/26/19

REGISTERED PROFESSIONAL ENGINEER  
LEOPOLDO TRUJILLO  
63950  
Exp. 9-30-20  
CIVIL  
STATE OF CALIFORNIA

RUGGERI-JENSEN-AZAR  
8055 Camino Arroyo  
Gilroy, CA 95020  
408-848-0300



|                     |                              |                                  |                |                            |                   |              |  |
|---------------------|------------------------------|----------------------------------|----------------|----------------------------|-------------------|--------------|--|
| STATE OF CALIFORNIA | DEPARTMENT OF TRANSPORTATION | CONSULTANT FUNCTIONAL SUPERVISOR | ARMINTA JENSEN | CALCULATED-<br>DESIGNED BY | LEOPOLDO TRUJILLO | REVISED BY   |  |
|                     |                              |                                  |                |                            |                   |              |  |
|                     |                              |                                  |                |                            |                   |              |  |
|                     |                              |                                  |                |                            |                   |              |  |
| Caltrans            |                              |                                  |                | CHECKED BY                 |                   | DATE REVISED |  |
|                     |                              |                                  |                |                            |                   |              |  |
|                     |                              |                                  |                |                            |                   |              |  |
|                     |                              |                                  |                |                            |                   |              |  |

SR 25 DESIGN DESIGNATIONS

ADT (2019) = 30,500  
ADT (2039) = 42,900  
DHV (2019) = 2,100 (PM PEAK)  
DHV (2039) = 3,000 (PM PEAK)  
D = 71%  
ESAL (2039) = 6,544,000  
Ti(20) = 11.5  
V = 65 MPH  
CL R = 2800'

LEGEND

- ACCEL = ACCELERATION LANE

EEP = EXISTING EDGE OF PAVEMENT

EETW = EXISTING EDGE TRAVEL WAY

EG = EXISTING GROUND

FG = FINISHED GRADE

HP = HINGE POINT

(H:V) = (HORIZONTAL:VERTICAL)

LT = LEFT TURN LANE

MED = MEDIAN

NB = NORTHBOUND
- NEP = NEW EDGE OF PAVEMENT

NETW = NEW EDGE OF TRAVELED WAY

RT = RIGHT TURN LANE

R/W = RIGHT-OF-WAY

SB = SOUTHBOUND

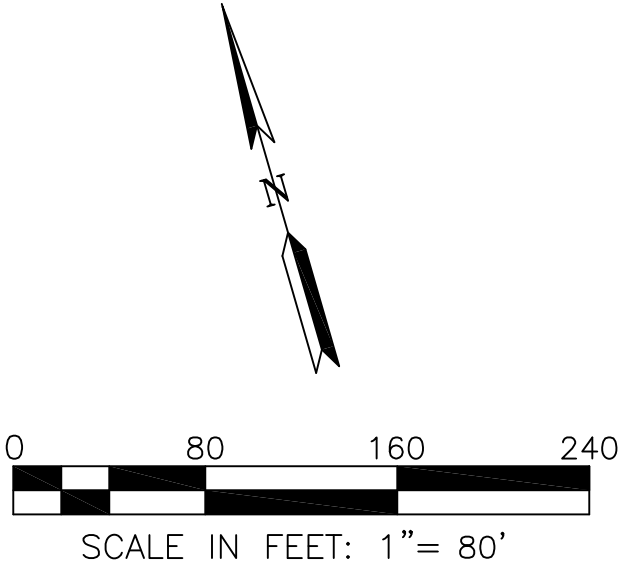
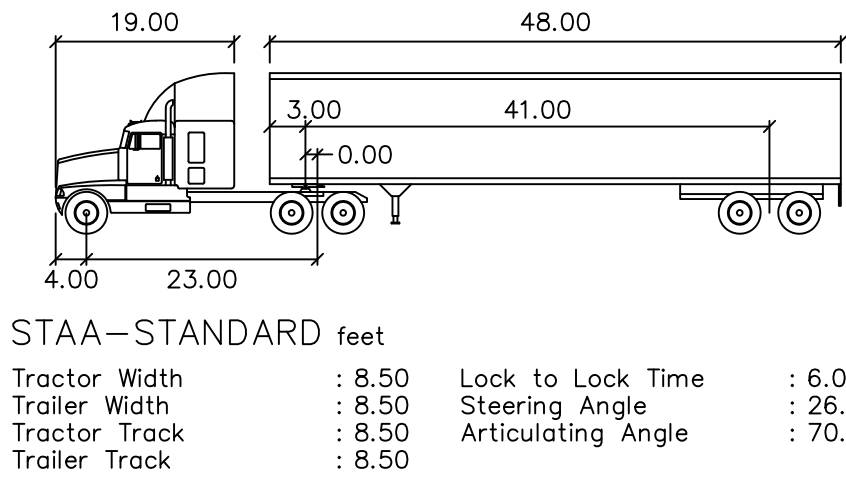
SE = SUPERELEVATION

SHLD = SHOULDER

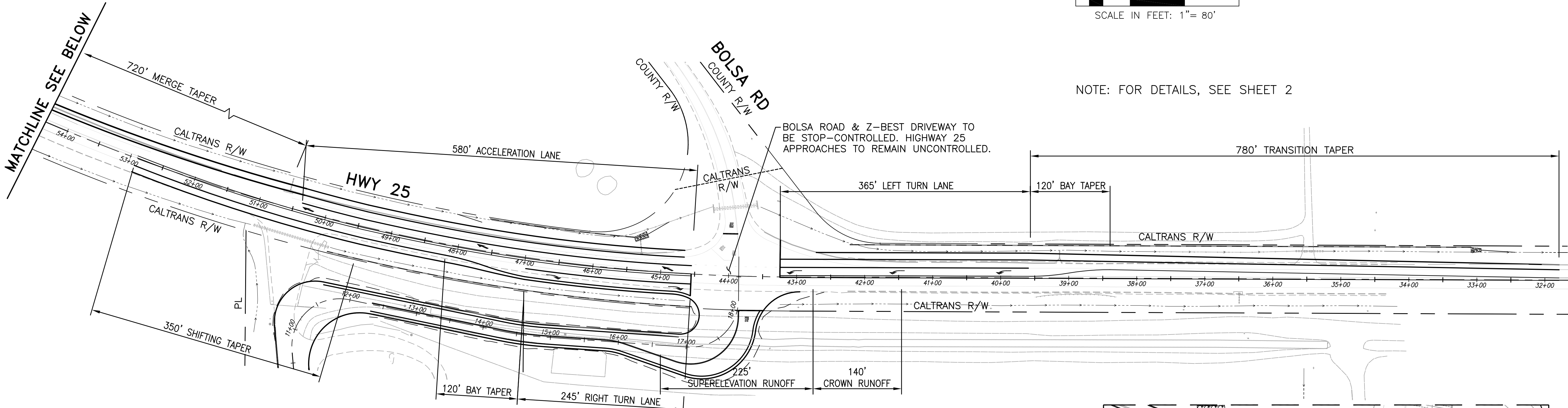
TH = THROUGH LANE

<X.X%> = EXISTING FINISHED GRADE SLOPE

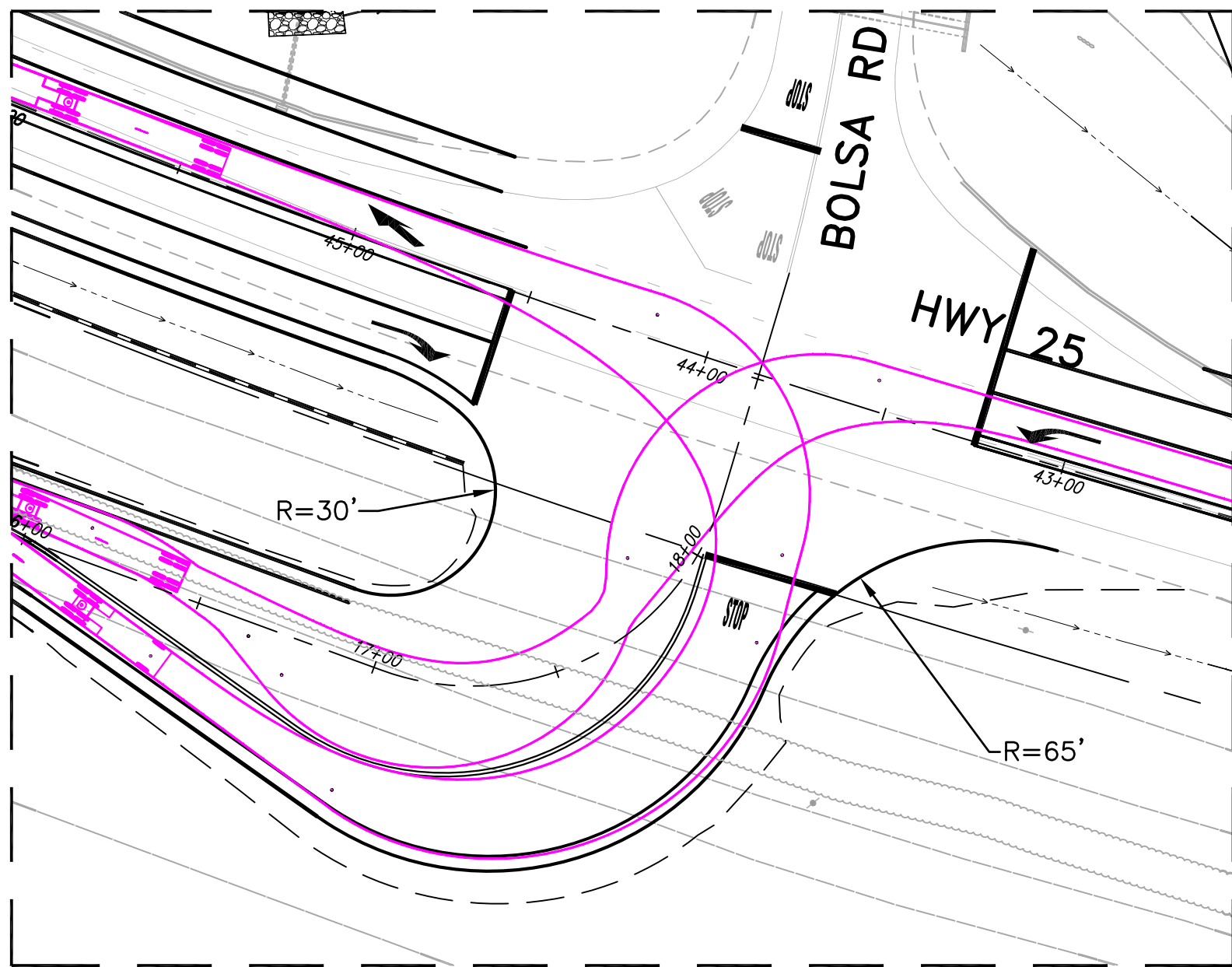
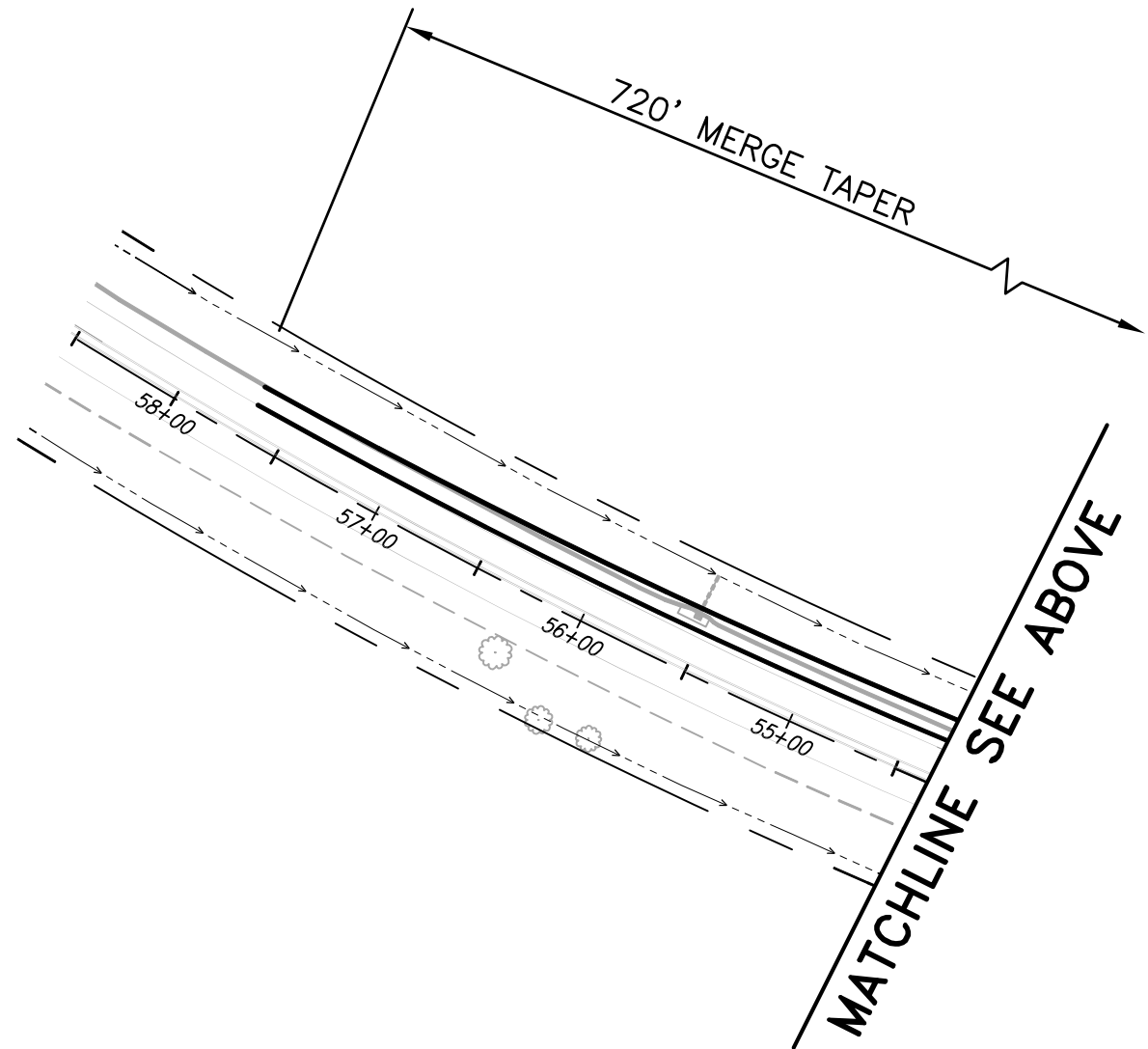
X.X% = NEW FINISHED GRADE SLOPE



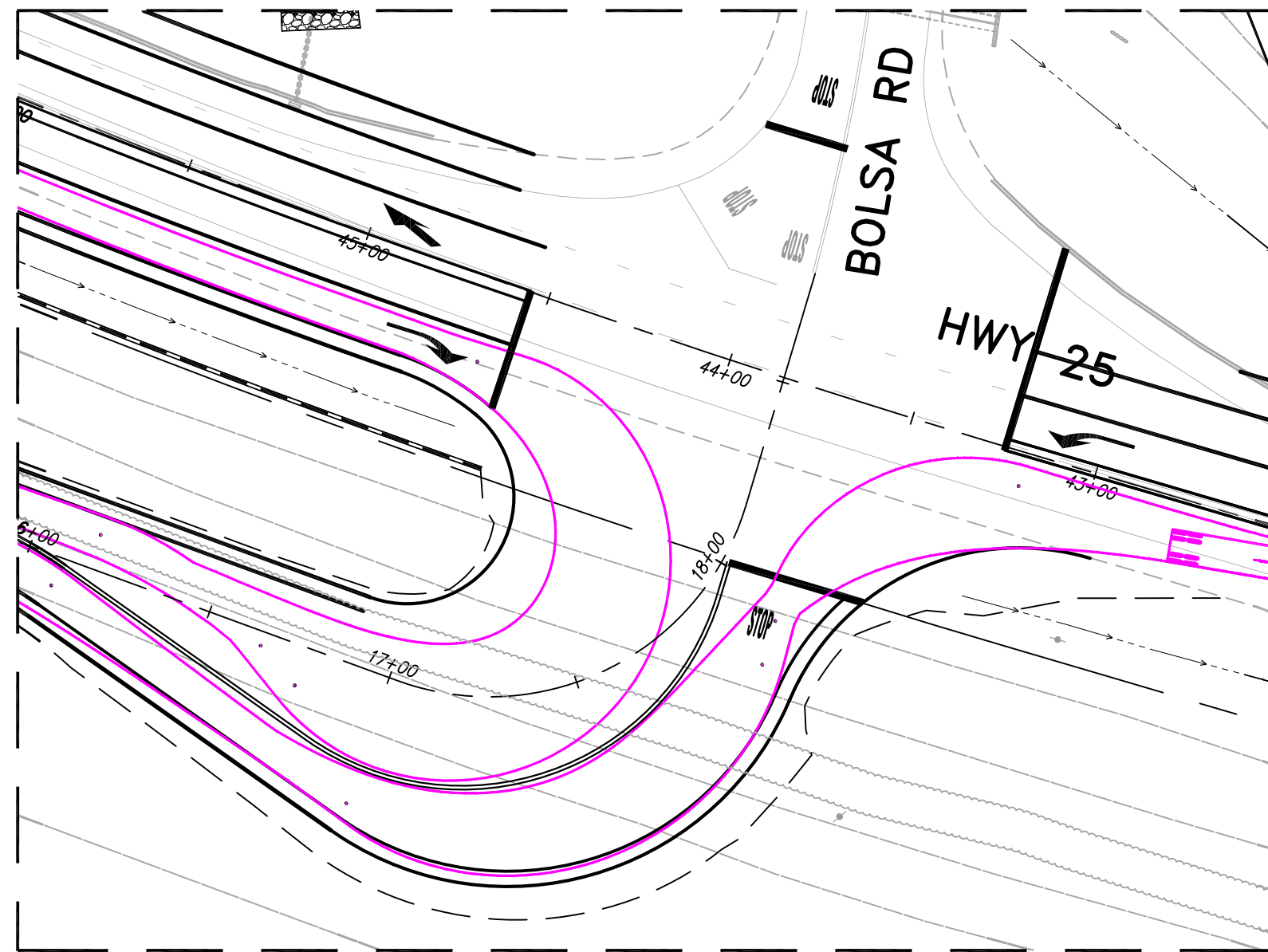
| Dist                                                                                                                                                                 | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT                                                                                                               | SHEET<br>No. | TOTAL<br>SHEETS |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|
| 04                                                                                                                                                                   | SCL    | 25    | 0.63/1.03                                                                                                                                 | 1            | 4               |
| REGISTERED CIVIL ENGINEER                                                                                                                                            |        |       | DATE                                                                                                                                      |              |                 |
| PLANS APPROVAL DATE                                                                                                                                                  |        |       | <div><div>REGISTERED PROFESSIONAL ENGINEER<br/>LEOPOLDO TRUJILLO<br/>63950<br/>Exp. 9-30-20<br/>CIVIL<br/>STATE OF CALIFORNIA</div></div> |              |                 |
| <i>THE STATE OF CALIFORNIA OR ITS OFFICERS<br/>OR AGENTS SHALL NOT BE RESPONSIBLE FOR<br/>THE ACCURACY OR COMPLETENESS OF SCANNED<br/>COPIES OF THIS PLAN SHEET.</i> |        |       |                                                                                                                                           |              |                 |
| <div><div>RJA</div><div>01/14/20</div></div>                                                                                                                         |        |       | <div>RUGGERI-JENSEN-AZAR<br/>8055 Camino Arroyo<br/>Gilroy, CA 95020<br/>408-848-0300</div>                                               |              |                 |



NOTE: FOR DETAILS, SEE SHEET 2



TRUCK TURNING TEMPLATE DETAIL 1  
SCALE: 1"=40'



TRUCK TURNING TEMPLATE DETAIL 2  
SCALE: 1"=40'

ATTACHMENT A: CONCEPTUAL GEOMETRIC LAYOUT

BORDER LAST REVISED 7/2/2010

USERNAME ==>  
DGN FILE ==>

RELATIVE BORDER SCALE  
IS IN INCHES



UNIT xxxx

PROJECT NUMBER & PHASE

0415000040

DATE PLOTTED ==> \$DATE  
TIME PLOTTED ==> \$TIME

06-18-19



|                                                    |                                  |  |              |
|----------------------------------------------------|----------------------------------|--|--------------|
| STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION | CONSULTANT FUNCTIONAL SUPERVISOR |  |              |
|                                                    | CALCULATED—DESIGNED BY           |  |              |
|                                                    | CHECKED BY                       |  |              |
|                                                    | LEOPOLDO TRUJILLO                |  |              |
| REVISOR                                            | REVISED BY                       |  | DATE REVISED |
|                                                    |                                  |  |              |
|                                                    |                                  |  |              |
|                                                    |                                  |  |              |

SR 25 DESIGN DESIGNATIONS

ADT (2019) = 30,500  
ADT (2039) = 42,900  
DHV (2019) = 2,100 (PM PEAK)  
DHV (2039) = 3,000 (PM PEAK)  
D = 71%  
ESAL (2039) = 6,544,000  
Ti(20) = 11.5  
V = 65 MPH  
CL R = 2800'

LEGEND

- ACCEL = ACCELERATION LANE

EEP = EXISTING EDGE OF PAVEMENT

EETW = EXISTING EDGE TRAVEL WAY

EG = EXISTING GROUND

FG = FINISHED GRADE

HP = HINGE POINT

(H:V) = (HORIZONTAL:VERTICAL)

LT = LEFT TURN LANE

MED = MEDIAN

NACD = NEW AC DIKE

NB = NORTHBOUND
- NEP = NEW EDGE OF PAVEMENT

NETW = NEW EDGE OF TRAVELED WAY

RT = RIGHT TURN LANE

R/W = RIGHT-OF-WAY

SB = SOUTHBOUND

SE = SUPERELEVATION

SHLD = SHOULDER

TH = THROUGH LANE

<X.X%> = EXISTING FINISHED GRADE SLOPE

X.X% = NEW FINISHED GRADE SLOPE

|      |        |       |                             |              |                 |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT | SHEET<br>No. | TOTAL<br>SHEETS |
| 04   | SCL    | 25    | 0.63/1.03                   | 2            | 4               |

REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

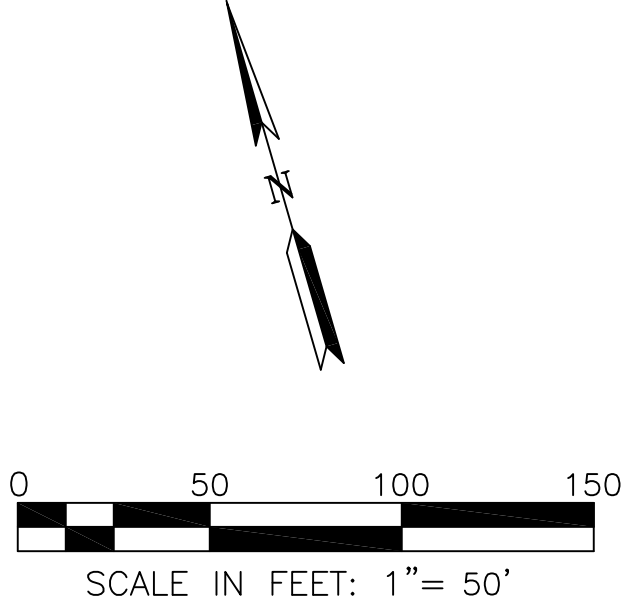
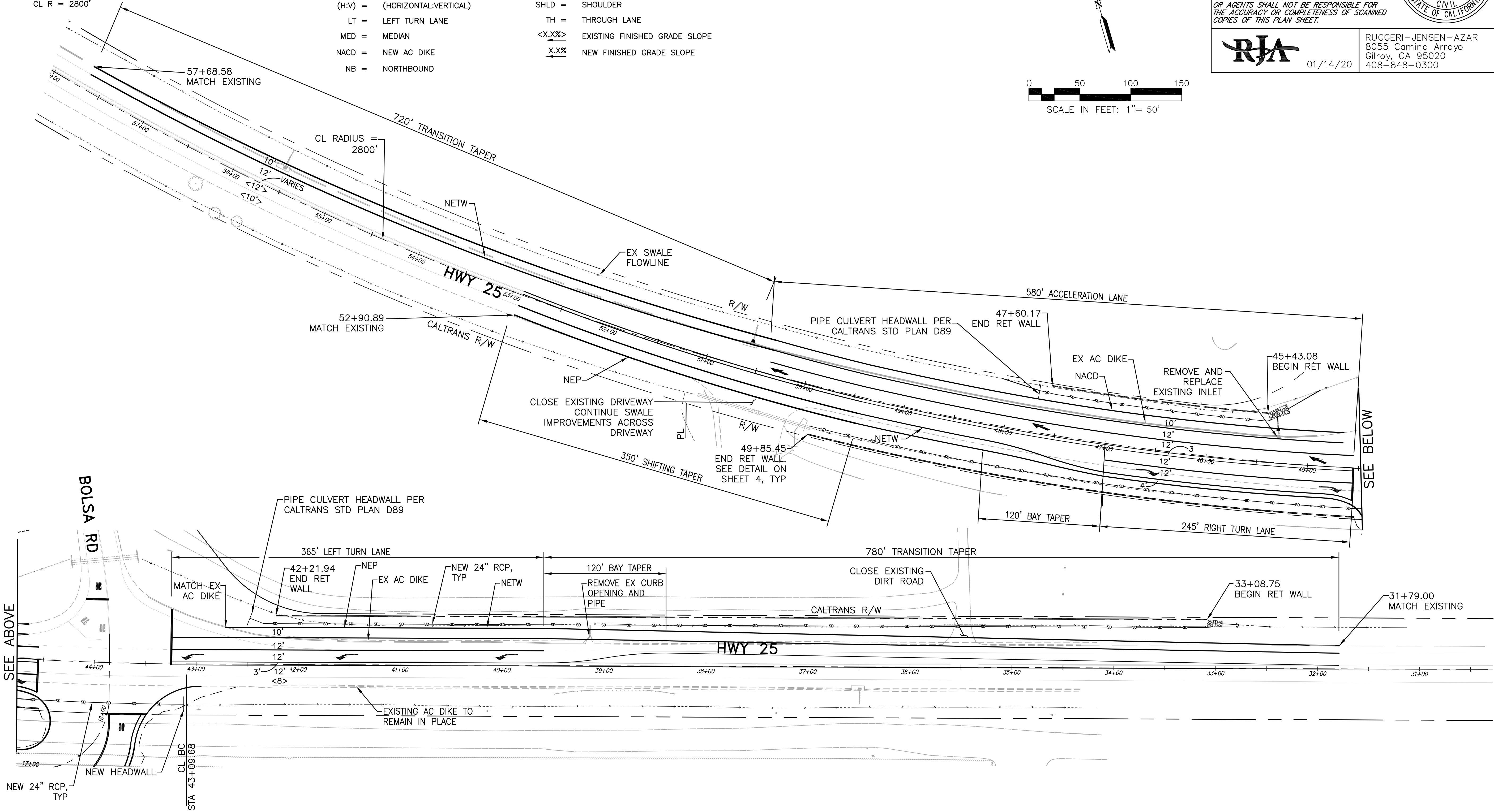
THE STATE OF CALIFORNIA OR ITS OFFICERS  
OR AGENTS SHALL NOT BE RESPONSIBLE FOR  
THE ACCURACY OR COMPLETENESS OF SCANNED  
COPIES OF THIS PLAN SHEET.

RJA

01/14/20

REGISTERED PROFESSIONAL ENGINEER  
LEOPOLDO TRUJILLO  
63950  
Exp. 9-30-20  
CIVIL  
STATE OF CALIFORNIA

RUGGERI-JENSEN-AZAR  
8055 Camino Arroyo  
Gilroy, CA 95020  
408-848-0300



ATTACHMENT B: ROADWAY & DRAINAGE IMPROVEMENTS

BORDER LAST REVISED 7/2/2010

USERNAME ==>  
DGN FILE ==>

RELATIVE BORDER SCALE  
IS IN INCHES



UNIT xxxx

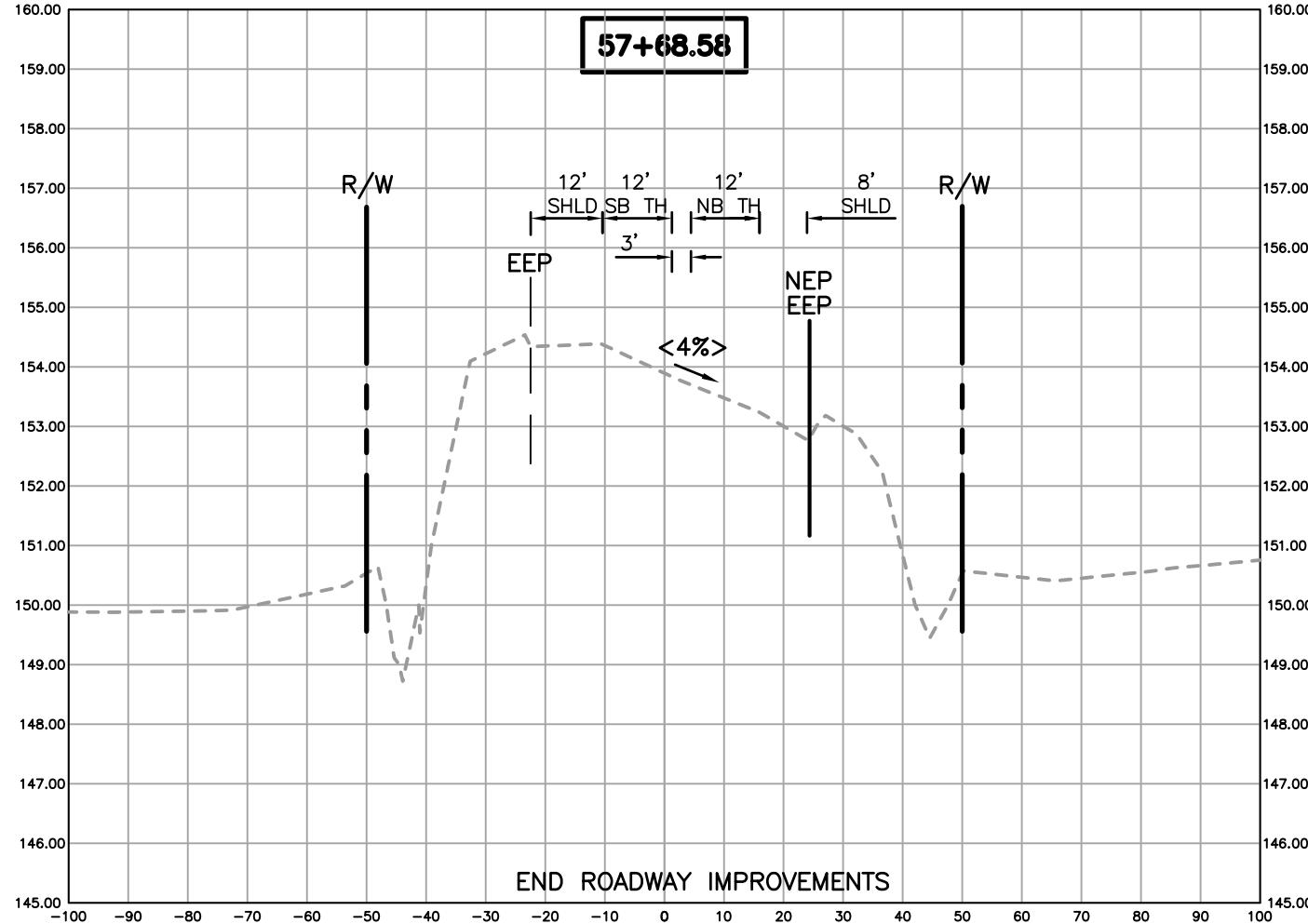
PROJECT NUMBER & PHASE 0415000040

LAST REVISION  
06-18-19  
DATE PLOTTED ==> \$DATE  
TIME PLOTTED ==> \$TIME



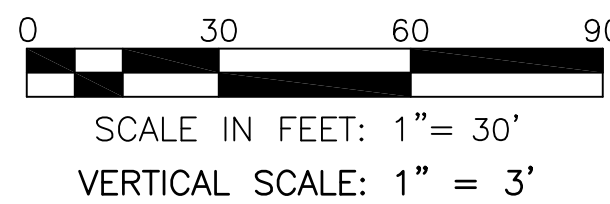
**X**

PROJECT NUMBER & PHASE 0415000040



RUGGERI-JENSEN-AZAR  
8055 Camino Arroyo  
Gilroy, CA 95020  
408-848-0300

|        |   |                               |
|--------|---|-------------------------------|
| ACCEL  | = | ACCELERATION LANE             |
| EETP   | = | EXISTING EDGE OF PAVEMENT     |
| EETW   | = | EXISTING EDGE OF TRAVEL WAY   |
| EG     | = | EXISTING GROUND               |
| FG     | = | FINISHED GRADE                |
| HP     | = | HINGE POINT                   |
| (H:V)  | = | (HORIZONTAL:VERTICAL)         |
| LT     | = | LEFT TURN LANE                |
| MED    | = | MEDIAN                        |
| NB     | = | NORTHBOUND                    |
| NEP    | = | NEW EDGE OF PAVEMENT          |
| NETW   | = | NEW EDGE OF TRAVELED WAY      |
| RT     | = | RIGHT TURN LANE               |
| R/W    | = | RIGHT-OF-WAY                  |
| SB     | = | SOUTHBOUND                    |
| SE     | = | SUPERELEVATION                |
| SHLD   | = | SHOULDER                      |
| TH     | = | THROUGH LANE                  |
| <X.X%> |   | EXISTING FINISHED GRADE SLOPE |
| X.X%   |   | NEW FINISHED GRADE SLOPE      |



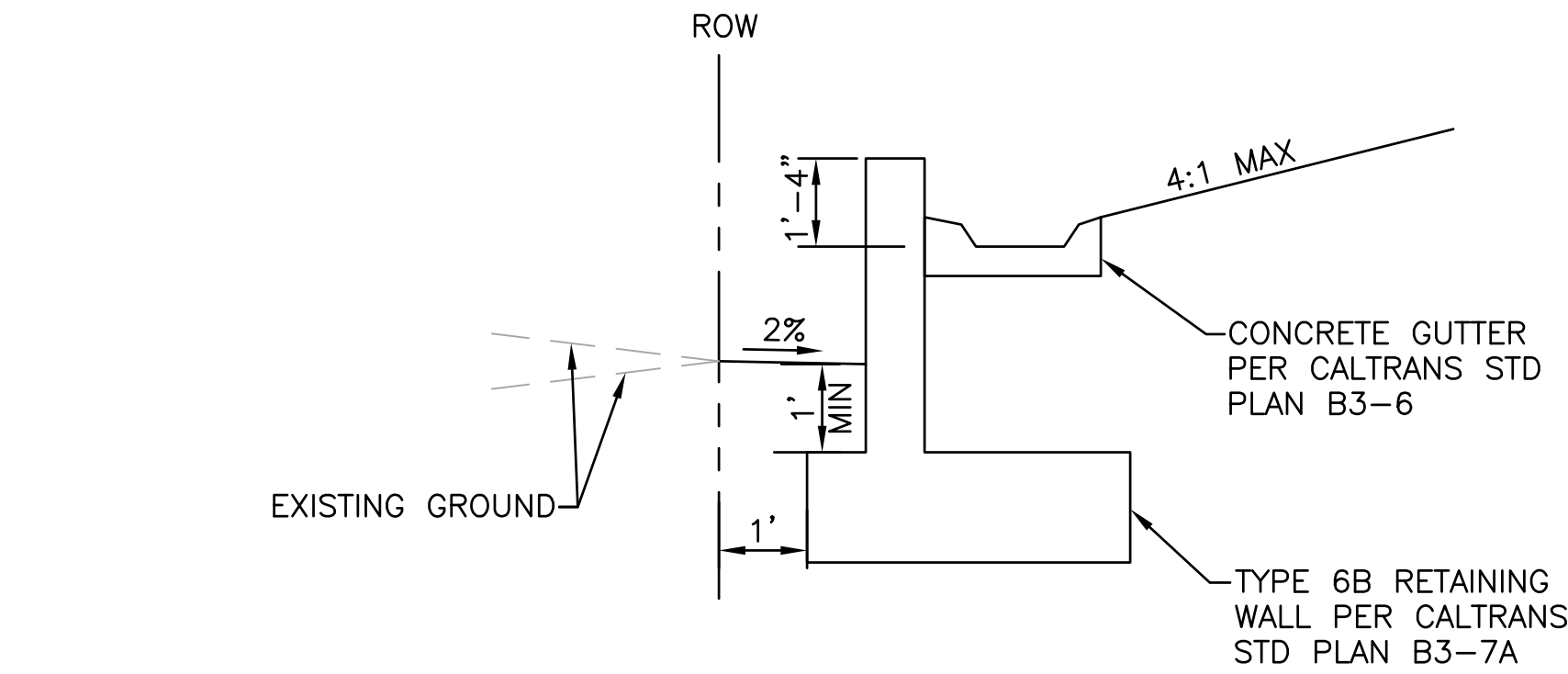
## ATTACHMENT C: CROSS SECTIONS

|               |                        |
|---------------|------------------------|
| LAST REVISION | DATE PLOTTED => \$DATE |
| 05-01-19      | TIME PLOTTED => \$TIME |

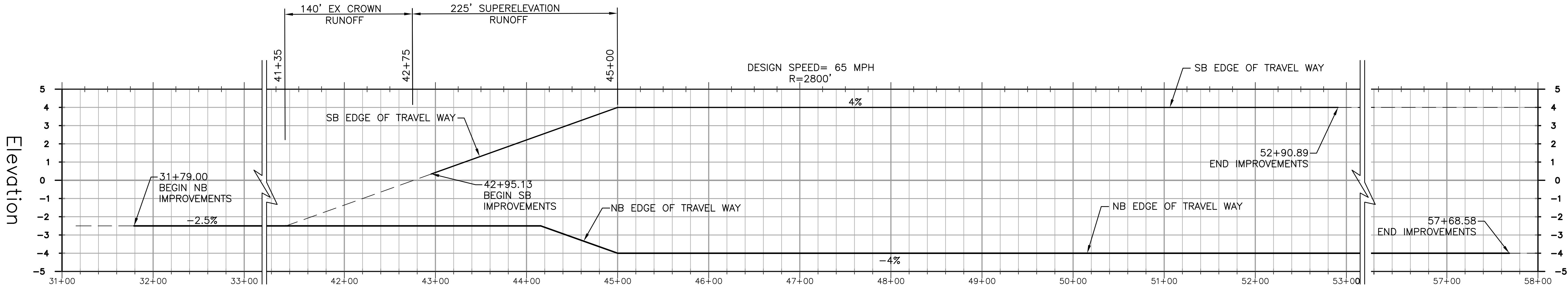
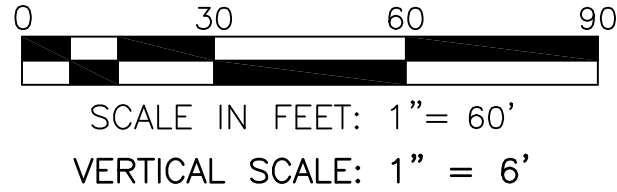
Drawing: W:\Jobs 18\182022 Z-Best Products Offsite\Drawings\Prelim\Conceptual Layouts\182022 Concept Layout-Option 2 with new Points.dwg  
Jan 14, 2020, 11:31am



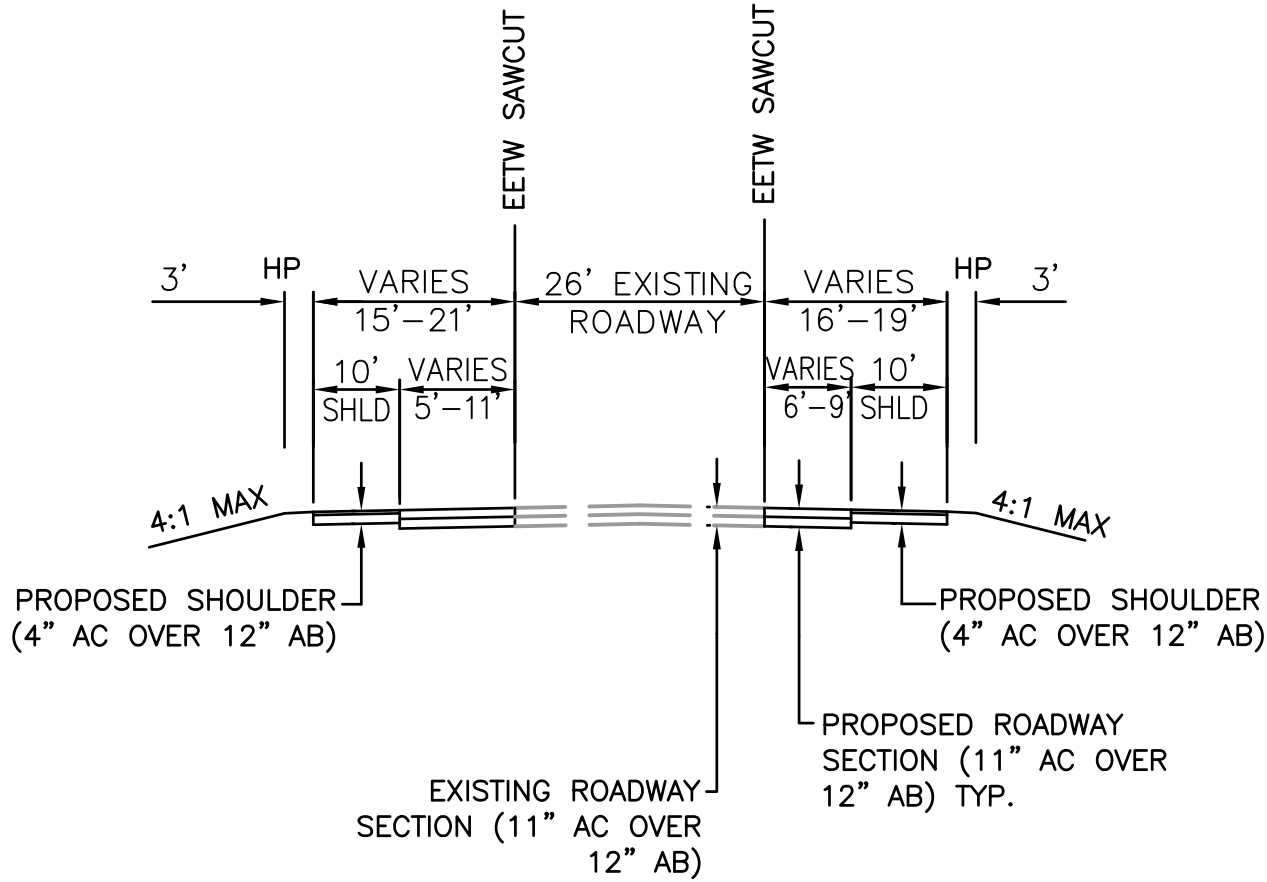
|                                                    |                                  |  |                             |                   |              |
|----------------------------------------------------|----------------------------------|--|-----------------------------|-------------------|--------------|
| STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION | CONSULTANT FUNCTIONAL SUPERVISOR |  | CALCULATED –<br>DESIGNED BY | REVISOR BY        |              |
|                                                    | ARMINTA JENSEN                   |  |                             |                   |              |
|                                                    |                                  |  |                             |                   |              |
|                                                    |                                  |  |                             |                   |              |
| Caltrans®                                          |                                  |  | CHECKED BY                  | LEOPOLDO TRUJILLO | DATE REVISED |
|                                                    |                                  |  |                             |                   |              |
|                                                    |                                  |  |                             |                   |              |
|                                                    |                                  |  |                             |                   |              |



RETAINING WALL DETAIL



SUPERELEVATION DIAGRAM  
HORIZONTAL SCALE: 1" = 60'  
VERTICAL SCALE: 1" = 3'



TYPICAL ROADWAY SECTION

| Dist                                                                                                                                                       | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT                                                   | SHEET<br>No. | TOTAL<br>SHEETS |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|-------------------------------------------------------------------------------|--------------|-----------------|
| 04                                                                                                                                                         | SCL    | 25    | 0.63/1.03                                                                     | 4            | 4               |
| REGISTERED CIVIL ENGINEER                                                                                                                                  |        |       | DATE                                                                          |              |                 |
| PLANS APPROVAL DATE                                                                                                                                        |        |       | DATE                                                                          |              |                 |
| THE STATE OF CALIFORNIA OR ITS OFFICERS<br>OR AGENTS SHALL NOT BE RESPONSIBLE FOR<br>THE ACCURACY OR COMPLETENESS OF SCANNED<br>COPIES OF THIS PLAN SHEET. |        |       | DATE                                                                          |              |                 |
| RJA                                                                                                                                                        |        |       | RUGGERI-JENSEN-AZAR<br>8055 Camino Arroyo<br>Gilroy, CA 95020<br>408-848-0300 |              |                 |
| 01/14/20                                                                                                                                                   |        |       | 63950<br>Exp. 9-30-20                                                         |              |                 |

LEGEND

- ACCEL = ACCELERATION LANE
- EETW = EXISTING EDGE OF TRAVEL WAY
- EG = EXISTING GROUND
- FG = FINISHED GRADE
- HP = HINGE POINT
- (H:V) = (HORIZONTAL:VERTICAL)
- LT = LEFT TURN LANE
- MED = MEDIAN
- NB = NORTHBOUND
- NEP = NEW EDGE OF PAVEMENT
- NETW = NEW EDGE OF TRAVELED WAY
- RT = RIGHT TURN LANE
- R/W = RIGHT-OF-WAY
- SB = SOUTHBOUND
- SE = SUPERELEVATION
- SHLD = SHOULDER
- TH = THROUGH LANE
- <X.X%> EXISTING FINISHED GRADE SLOPE
- X.X% NEW FINISHED GRADE SLOPE

ATTACHMENT D: SECTIONS & DETAILS

BORDER LAST REVISED 7/2/2010

USERNAME ==>  
DGN FILE ==>

RELATIVE BORDER SCALE  
IS IN INCHES



UNIT xxxx

PROJECT NUMBER & PHASE

0415000040

LAST REVISION  
05-01-19  
DATE PLOTTED ==> \$DATE  
TIME PLOTTED ==> \$TIME





980 State Hwy 25, Gilroy, CA 95020

Phone (408) 846-1577 Fax (408) 846-1573

---

1-27-20

## Updated Project Description

### Z-Best Composting Facility Proposed Expansion and Upgrade

#### Project Purpose

The purpose of the proposed project is to modify Z-Best's existing municipal solid waste (MSW) composting operations to enable faster and more efficient composting. This would be achieved by replacing the existing Compost Technologies, Inc. (CTI) composting process with a more advanced and more efficient composting technology, Engineered Compost System (ECS). The current CTI system, in place since early 2003, utilizes 14'x300' composting bags with fan aeration through HDPE pipes and ventilation holes along the sides of the bags. The ECS system utilizes the latest in Aerated Static Pile Technology with a primary stage and secondary stage of composting with both negative and positive aeration through an engineered mechanical system. Additional modifications to existing operations would be made to accommodate the new processing technology. Modifications to existing site conditions would also be made for this purpose. The proposed technology and operations modifications would enable Z-Best to increase its current permitted MSW composting capacity from 1,500 tons per day (tpd) with up to 15 days per year at 2500 tpd, to 2,750 tons per day with up to 20 days per year at 3500 tpd. The additional capacity is consistent with State of California CalRecycle goals to increase waste diversion from landfills and a partial remedy for addressing regulations imposing restrictions on placing organic materials in landfills. Z-Best is not proposing to modify its existing green waste composting operations or green waste intake volume as part of the proposed project.

#### Project Objectives

Z-Best Products proposes to upgrade the existing Municipal Solid Waste (MSW) composting method from the current CTI System, which has been in place for approximately 15 years, to a more efficient system utilizing the latest research and technology called ECS. The Project Objective is as follows.

- Increase composting efficiency by completing the composting process in 34-38 days (4-5 weeks) with the ECS system compared to the current 14 weeks with the CTI system.
- Process and compost over two times the feedstock in the same geographical footprint on site in the same amount of time.
- Reduce odors associated with MSW composting in using the ECS system while avoiding an increase in operational noise.
- Reduce site emissions utilizing the best available technology for aeration, biofiltration, and liquid capture.



- Increase Z-Best's current Solid Waste Facilities Permit (SWFP) daily tonnage limits from the current 1,500 tons per day with up to 15 days at 2500 tpd to 2,750 tons per day with up to 20 days at 3500 tpd providing additional composting capacity toward achieving State of CA CalRecycle diversion goals and a partial remedy for regulations imposing restrictions on organics in landfills as directed in state laws and regulations including Assembly Bill 1383, Senate Bill 1383, Assembly Bill 1826, Assembly Bill 1594, Assembly Bill 605, and Senate Bill 876.
- Ensure operational consistency with the State Water Quality Control Board's 2015 General Waste Discharge Requirements regarding waste discharges from composting operations.
- Avoid additional peak hour traffic by restricting additional truck traffic associated with the proposed increase in feedstock, to delivering loads between the hours of 8PM and 4AM.
- Improve traffic safety at the Highway 25 Z-Best facility entrance/exit by proposing significant safety improvements to Highway 25 at the entrance/exit. Proposed improvements consist of a realignment of the entrance/exit with Bolsa Road, (approximately 600 feet south of the existing entrance) along with the addition of acceleration and deceleration lanes, a right turn lane and a left turn lane on the highway to provide for significantly improved safety with vehicles entering and exiting the facility. These Highway 25 improvements would also result in improved traffic safety for Bolsa Road/Highway 25 traffic.
- Provide additional mulch and compost products that are beneficial to the environment as soil amendments, water conserving mulch ground cover, erosion control and bio-soil products.
- Provide up to 30 additional local jobs to the community.

## ECS System

The ECS system would enable greater compost volume throughput because the composting process duration is reduced to 4-5 weeks versus approximately 14 weeks with the existing CTI process. Consequently, as part of the proposed project, Z-Best is requesting the Santa Clara County Department of Environmental Health amend its current SWFP to increase the daily volume of MSW it is allowed to process. The request is in response to increased MSW composting capacity that would be enabled by employing the ECS process and technology. The increase in daily MSW tonnage intake would also trigger other changes to Z-Best's operations. These, as well as physical site changes to accommodate the ECS process and improvements, are the fundamental sources of physical changes associated with the proposed project. Additional components of the proposed project include expanding flood water storage capacity, modifying an existing storm water detention pond, new signage, new lighting and safety improvement options to State Route 25 as described above.

ECS process infrastructure would be installed within Area 1 of the Z-Best site within the same physical footprint (pad) as the existing CTI composting area. No change to the adjacent footprint of the existing green waste composting area is proposed. All existing above-ground CTI improvements and infrastructure would first be removed. No modification of the existing boundary of Z-Best operations within Area 1 would be required to install the ECS improvements. The ECS composting process has two steps – primary and secondary. The ECS process is termed “aerated” because in each step, air is drawn or forced through the composting materials. The purpose is to maintain optimal conditions for rapid decomposition while reducing odors and dust. In the primary composting step, the ECS process and technology is designed to maximize control of odor and volatile organic compounds (VOC) emissions from the decomposing MSW, and to maximize reducing pathogens, drying materials, and stabilizing materials. The second step is designed to promote uniform stabilization of primary composted materials. In both steps, the processes adhere to the U.S. Composting Council's Best Management Practices (BMPs). BMPs cover the characteristics of the initial compost mix, the control of the process conditions in the pile and in biofilters, and overall housekeeping.

Primary composting would take place in individual concrete bunkers where static piles of MSW would be placed. A total of 60 bunkers would be constructed for primary composting. Each bunker is approximately 30

feet wide by 100 feet long by ten feet high. The pre-processed MSW feedstock would be stacked in the bunkers with a front-end loader to a level height of nine feet. Once the pile is built, it would be top-covered by six inches of material that has already been composted. This material acts as a biofilter covering. The bio-layer cover provides insulation to insure that high enough temperatures are reached within the material to kill pathogens that may occur within it and as a biofilter layer which reduces VOCs and odors commonly released during the composting process. Each bunker would contain a discrete batch of compost. The bunker design eliminates the potential of cross-contamination from adjacent composting zones. Each pile within each bunker would be negatively aerated. That is, through a mechanical system of fans, air from the atmosphere would be pulled down through each pile. The entire system is termed a “covered aerated static pile” system or “CASP”. A typical CASP system is comprised of groups or “zones” of bunkers connected to a single fan (this ensemble is called a “fan group”). Each zone within a fan group is monitored with temperature probes and the aeration to that zone is independently controlled to maintain BMP conditions. The fan provides suction for negatively aerating the piles.

Automated dampers regulate the airflow drawn from atmosphere down through the pile. The air is then exhausted to and scrubbed in a temperature-controlled biofilter. Each biofilter is a bed of ground wood material of about four to six inches in depth. The biofilters do not need cleaning but are replaced periodically to maintain their design depth and density and their design airflow rate and backpressure. Biofilters conditions are monitored (like the temperature/moisture conditions of the piles) by an ECS control system. The ECS control system also monitors the piles themselves to optimize air and temperature conditions consistent with Best Management Practices (BMPs). Monitoring the biofilters assures that they are identified for replacement in a timely manner.

An irrigation system mounted on the bunker walls provides automatic top watering of the CASP to add moisture before the pile is removed and/or to increase the moisture in the biolayer for additional absorption of emissions. There are diminishing returns in leaving the compost in the bunkers for a longer period because the piles begin to densify and dry out, which can lead to non-BMP conditions.

Secondary composting would take place in an extended bed aerated static pile (eASP) with positive aeration. After completing the primary composting process, the material, which by this point should already be substantially deodorized and stabilized, would be moved by a front-end loader to a secondary composting zone. Similar to the primary composting step, the compost would be placed in concrete bunkers and undergo secondary composting using the eASP technology. A total of 40 secondary eASP concrete bunkers are proposed, each with dimensions similar to those for the primary CASP bunkers described above. The secondary eASP bunkers are grouped and are connected to a single fan (fan groups). Each zone within a fan group is independently monitored and controlled to maintain BMP conditions, just like in the primary composting step. Air is forced up through the piles from the floor of the piles, with automated dampers regulating the airflow.

The secondary compost would be piled to a maximum depth of 9.5 feet within the bunkers. The material would not be covered with an insulating bio-layer, since it would have already met all pathogen reduction requirements during the primary process. As with the primary step, the secondary pile materials are monitored. The proposed ECS design provides enough capacity to allow for 17 days of aeration in the secondary composting system.

Leachate is a solution created when a liquid (in this case water) moves downward through a pile of MSW containing soluble (dissolvable) materials. Leachate commonly includes soluble materials with the potential to degrade surface and groundwater quality. Leachate is currently created during MSW composting operations at the Z-Best facility when water is added to the CTI bags containing MSW and during secondary composting. Storm water that is collected from impermeable surfaces within the composting area is also considered to be leachate and must be managed to avoid discharge. Compost process and storm water leachate would continue to be generated with the proposed project. However, it would be managed consistent with water quality standards



for composting operations that were promulgated by the State Water Resources Control Board in 2016. These standards are more stringent than previously applied to composting operations, including ZBest's operations.

Water must be added to the MSW piles throughout the composting process to maintain BMP conditions. Depending on the MSW content and climate, the average compost processed with aerated static pile technology can consume water (as measured by water weight) at a rate of 0.25 to 0.75 times the weight of feedstock. Water added to the compost that is not absorbed, as well as storm water collected from the composting area represents a valuable resource that has historically been captured and reused to maintain desired moisture levels during the composting process.

Composting can generate small volumes of leachate when excess applied water circulates through the MSW being composted and accumulates at the bottom of a compost pile. This leachate tends to be high in biological oxygen demand level. In the ECS primary composting process, composting leachate would be contained within the CASP bunkers by the bunker walls and a sloped floor, collected in the negatively aerated floors and pumped via sump pumps through collection lines and pumped into existing detention basin #1.

The leachate would be reused as noted above. As part of the proposed project, detention basin #1 would be reconfigured and lined to prevent percolation of leachate into groundwater, as described below and in Section 10.0, Hydrology and Water Quality. Secondary composting would take place on a positively aerated aeration floor. Very limited quantities of leachate would be produced during this process; most would be reabsorbed into the lower moisture level compost. When there is significant precipitation and/or a chance overwatering of a pile, the leachate would be relatively low biological oxygen demand compared to what is collected from the primary composting bunkers. Leachate from the secondary process would be collected in a similar fashion as identified for the primary process.

The proposed project includes an improved storm water collection system. Storm water from the ECS composting pad would be collected in French drains and conveyed toward the existing/modified detention basin. The storm water would then be pumped into the basin. Like the leachate described above, storm water in the basin, when available, would be reused in composting process to maintain BMP conditions within the composted materials.

## Odor Management

There are commonly several sources of odor associated with composting operations. The same is true for existing Z-Best operations. These sources include, but are not limited to, MSW and green waste feedstock sorting and processing, MSW and green waste composting, and wastewater detention/storage. The ECS technology includes mechanisms designed to address odor generation and capture. The CASP technology is designed to operate in negative aeration so that nearly all of odor generated inside the piles of MSW that is placed inside the concrete bunkers is pulled into the floor of the bunker and scrubbed in the biofilter. And as noted previously, as part of the composting process, MSW being composted in the CASP bunker would be covered with a biofilter material. This material serves as a filter for the nominal odors that are not captured and scrubbed through the negative aeration process.

## SWFP

As previously noted, Z-Best is currently permitted to accept up to 1,500 TPD of MSW and green waste feedstock, and up to 2,500 TPD of feedstock on up to 15 days per year. These limits are established in Z-Best's current Solid Waste Facilities Permit issued by the Santa Clara County Environmental Health Department, which acts as CalRecycle's Local Enforcement Agency (LEA). Z-Best is requesting that its permit be amended

to allow up to 2,750 TPD of MSW and green waste and up to 20 days per year a maximum of 3500 TPD of MSW and green waste feedstock.

## Equipment

With an increase in daily MSW intake, activities for initial feedstock processing would intensify. An additional loader and a new (replacement) screening plant would be required for this purpose. The current CTI process bagging machines, bags and blower fans for each bag would be eliminated from use as would other ancillary CTI composting systems and equipment.

## Employees, Visitors, and Vendors

Z-Best currently employs up to 60 people. To accommodate the increase in MSW processing intensity and increased composting throughput enabled by the ECS process, Z-Best proposes to add up to 30 new employees, for a total of 90. Not all 90 employees would be working simultaneously. Z-Best proposes to conduct operations over five possible shifts. One shift would consist of approximately 47 employees (5 AM to 3 PM). Shift 2, from 7AM to 5PM would have approximately 18 employees, shift 3 from 5PM to 5AM would have approximately 10 employees, shift 4, from 8PM to 5AM would have approximately 13 employees, shift 5, from 6AM to 6PM would have approximately 2 employees.

On average, a total of 3-5 visitors and/or vendors per day, Monday through Friday, would come and go from the facility typically between the hours of 9:30AM to 3 PM.

## Traffic

Z-Best's current SWFP allows up to 356 incoming vehicles per day on days when feedstock intake is limited to 1,500 TPD and up to 448 incoming vehicles per day on the 15 days when maximum intake of 2,500 TPD is permitted. With the requested increase in daily permitted feedstock intake of 2,750 tons, up to 100 new daily haul truck trips and up to 64 new employee vehicle trips are anticipated. On peak days (up to 20 days per year), an additional 157 truck trips would be added. However, Z-Best has committed to limiting all new inbound truck trips to the hours of 8 pm to 4 am to avoid existing morning and evening periods of peak traffic on the existing road network. Truck trips associated with outbound materials would be limited to the hours of 4 AM to 7 AM and 9 AM to 3 PM.

## Site Access Change

Highway 25 improvements are being proposed that include a new entrance/exit to the Z-Best facility, realigned with Bolsa Rd, approximately 600' south of the existing entrance/exit. The proposed improvements present significant highway safety improvements at the entrance/exit of the facility as well as at the Bolsa Rd. Highway 25 intersection. The proposed new entrance/exit of the facility would include installation of 580' of acceleration and deceleration lanes on highway 25 for traffic entering the facility from the highway or entering the highway from the facility. A 365' left turn lane is also included in the proposed highway improvements for northbound highway 25 traffic entering the facility. A 245' right turn lane would be installed for south bound highway 25 traffic entering the facility. To accommodate highway 25' necessary widening for these additional lanes, approximately 1000' of retaining wall at the edge of the Caltrans ROW will be required on the west side and east side of the highway with a 24" storm drain-pipe under-ground for storm water flow that currently flows in an open storm water ditch. This retaining wall and storm water pipe is necessary to allow for necessary widening of the highway to the edge of the existing Caltrans ROW. Proposed highway improvements will not



involve improvements to the highway outside of the existing Caltrans ROW nor would there be any proposed improvements to the County Bolsa Road existing ROW.

Once the highway improvements are completed and the new entrance/exit to the facility are operational, the existing entrance/exit would be closed off with a K-rail temporarily installed along the full width of the current entrance to prevent traffic from entering or exiting the facility at the current location. The temporary K-rail would remain at this location while the existing culvert is removed, and a drainage ditch is installed adjoining the existing stormwater ditch on either side of the existing entrance. Once the drainage ditch across the full width of the existing driveway is completed, the K-rail would be removed. The proposed new entrance/exit of the facility would be the west leg of a new 4-way intersection at Bolsa Rd and Highway 25. The east leg of the intersection would be the existing Bolsa Rd, unchanged. The new entrance/exit to the Z-Best facility would involve new pavement and culvert connecting the highway with a new driveway. This new driveway would continue on Z-Best property curving back north and connect with the existing driveway west of the blocked/closed entrance.

On site improvements associated with the proposed new facility entrance/exit would include paving of a 600' section of the existing gravel roadway adjacent to the highway on Z-Best property. No imported fill material would be necessary, approximately 450 cubic yards of cut soil and gravel would be re graded to create the necessary turn radius connecting the highway with the new driveway. Approximately 10 poplar trees would need to be removed and new replacement poplar trees would be planted around the radius of the turn section of the new driveway. The installation of the new entrance/exit to the facility would be timed to be constructed simultaneously with on-site ECS system improvements. The duration of highway improvements and new driveway is estimated to be 3 to 4 months from start to finish. The existing entrance/exit to the facility would continue to be operational until the new entrance is complete and operational.

The drawings detailing proposed highway improvements also include, for reference, a possible back up plan that would involve nearly identical improvements to the highway in terms of acceleration, deceleration lanes, left turn and right turn lanes added to the highway but at the existing entrance rather than at the proposed realigned entrance to the facility. This is for information purposes only.

### On-Site Improvements

The Z-Best site is within a 100-year flood hazard zone. As part of the project, the footprint of Area 1 within which ECS improvements would be installed, would be raised by about one foot to raise it above the 10-year flood elevation. The raised pad would be paved prior to ECS improvements being installed. Paving would not result in an increase in impervious area. Modification of Detention Basin #1 Per the State Water Quality Control Boards 2015 General Waste Discharge Requirements for composting operations under which Z-Best now operates, the surface runoff from a composting facility must be managed to prevent discharge to surface water body and groundwater. Consequently, Z-Best would modify detention basin #1 to include a liner and other improvements. This would prevent the discharge of water delivered to the pond, which is comprised of storm water and leachate conveyed from the CTI process, to groundwater. The configuration of detention basin #1 is also being modified to reduce its area, while also ensuring, through excavation and construction of perimeter berms, that its storage volume meets the design standards contained in the 2015 General Waste Discharge Requirements for containing storm water with no discharge to surface or groundwater. Currently basin 1 is a pie shaped basin approximately 1200 feet long on the long side and approximately 375 feet wide on the widest side. This footprint will change to a more rectangle shaped basin with higher berm perimeter to create more depth and capacity to meet the above described 2015 General Waste Discharge Requirements. The revised basin configuration is proposed to be approximately 375 feet wide by 480 feet long.

Z-Best's proposal to raise the elevation of Area 1 by one foot would result in the loss of flood storage capacity given that the Z-Best site is within a 100-year flood hazard zone. To compensate for the loss of flood water storage, Z-Best is proposing to construct expand the existing flood storage basin along the south side of State

Route (SR) 25 at the north end of Area 2 within the Z-Best site. The facility would have capacity to retain about 34 acre-feet of flood water.

### Mulch Processing Change

As part of its current green waste operations, Z-Best receives green waste in the form of yard waste and wood waste. Green waste is composted within a portion of Area 1. The woody waste fraction of green waste does not break down in the active green waste composting process. Z-Best screens out this woody waste (termed “compost overs”) from the composted green waste, grinds it, and produces mulch products from the ground material. This activity is currently permitted to take place in either area 1 or area 2. A second mulch product is currently produced only in area 1. This second type of mulch is made from wood waste that has not been composted because of the larger size of the material. Larger pieces of wood do not break down during the composting process so they are pulled from the waste stream and separated from material to be composted. This larger wood waste material is currently ground and screened into mulch only in area 1. As part of the proposed project, this second type of mulch processing of larger woody non composted material would be permitted to take place in either area 1 or area 2. The request would not result in a change in the storage/mulching process or throughput, just its location.



December 20, 2019  
File No. 01219043.00

Mr. John Doyle  
Operations Manager  
Z-Best Products  
980 State Highway 25  
Gilroy, California

Subject: Emissions from Proposed Changes to Z-Best Facility in Gilroy, California

Dear Mr. Doyle:

Z-Best Composting (Z-Best) has prepared a Notice of Preparation (NOP) for proposed changes (Project) at the Z-Best facility at 980 State Highway 25, Gilroy (Site). The Bay Area Air Quality Management District (BAAQMD) provided comments on the California Environmental Quality Act (CEQA) Notice of Preparation (NOP) for the Project in a November 15, 2018 letter to the County of Santa Clara Department of Planning and Development. At the request of Z-Best, SCS Engineers (SCS) has prepared this response to BAAQMD questions.

The project includes the removal of the existing municipal solid waste (MSW) and foodwaste in-vessel composting system (CTI bag system) and the construction of a primary covered aerated static pile (CASP) and a secondary (curing) aerated static pile composting for MSW and foodwaste composting. The CASP system would have negative aeration with emissions controlled by biofilters for primary (active) composting and positively aerated static piles for secondary (curing) composting. The Project also includes site improvements, such as modifications to the detention basin. The Project will result in the capacity to compost an additional 875 tons per day (tpd) of MSW and/or foodwaste.

This additional 875 tpd of composting capacity would be permitted as an increase in the monthly capacity for the site. Composting reactive organic gas (ROG) emissions occur over the composting cycle, so it is appropriate to evaluate the daily change in ROG emissions based on this daily average composting rate. The project would also increase the peak daily composting rate, but this peak daily rate is independent of the monthly throughput rate.

## Construction-Related Emissions

The BAAQMD requested that the emissions from the construction of the Project be quantified.

To calculate the construction emissions from the Project, SCS evaluated the project the California Emission Estimator Model (CalEEMod). The emissions calculated include mobile sources and on-road emissions related to construction, including emissions from worker commutes and the importation of soil. The emissions were calculated using construction information including the area of surface disturbed, equipment counts, and the duration of construction activities provided by Z-Best and Golder Engineering, who prepared project drawings. The pollutants analyzed include ROG, oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and greenhouse gas (GHG).

A summary of basic project information is shown in **Table 1**.

**Table 1. Basic Project Information**

| Parameter     | Value                  |
|---------------|------------------------|
| Location      | Santa Clara County     |
| Climate Zone  | 4                      |
| Land Use Type | General Light Industry |
| Lot Acreage   | 157.32                 |

John Doyle provided an expected construction schedule and equipment counts. Construction would occur in three phases: grading, trenching, and paving. The duration and equipment count for each phase are shown in **Table 2**.

**Table 2. Construction Phases and Equipment**

| Parameter                                        | Grading | Trenching | Paving |
|--------------------------------------------------|---------|-----------|--------|
| Duration (months)                                | 3       | 2         | 3      |
| Graders                                          | 1       |           |        |
| Off-highway trucks (water truck)                 | 1       |           |        |
| Other construction equipment (compactor)         | 1       |           |        |
| Rubber tired dozer                               | 1       |           |        |
| Scraper                                          | 5       |           |        |
| Tractors/Loaders (includes excavator)            |         | 2         |        |
| Off-highway trucks (concrete pump truck)         |         |           | 1      |
| Other construction equipment (concrete finisher) |         |           | 1      |
| Paver                                            |         |           | 1      |
| Paving Equipment                                 |         |           | 1      |

The project includes the use of a water truck, which would mitigate dust emissions from soil operations and off-road vehicle travel. These mitigation measures were included in CalEEMod emission calculations. Emissions for the Project construction phase and off-site construction emissions are shown in **Table 3** on an annual and a per day basis for summer and winter emissions. CalEEMod outputs, including all input parameters, are included in **Attachment A**.

## On-Road Emissions

The BAAQMD also requested the quantification of emissions from on-road vehicles. On-road vehicle emissions were calculated using the vehicle miles traveled (VMT) provided by Hexagon Engineering and emission factors Emission Factor (EMFAC) model. Employee trips are assumed to be light duty auto (LDA). Haul vehicles are assumed to be tractor trailers. A summary of the VMT by and emission factor by trip type is shown in **Table 4**. The emissions are shown in **Table 5**. The EMFAC output is included in **Attachment B**.



**Table 3. Construction Emissions**

| Period             | ROG   | NO <sub>x</sub> | CO   | SO <sub>2</sub> | Fugitive PM <sub>10</sub> (dust) | Exhaust PM <sub>10</sub> | Total PM <sub>10</sub> | Fugitive PM <sub>2.5</sub> (dust) | Exhaust PM <sub>2.5</sub> | Total PM <sub>2.5</sub> | Total GHG <sup>1</sup> |
|--------------------|-------|-----------------|------|-----------------|----------------------------------|--------------------------|------------------------|-----------------------------------|---------------------------|-------------------------|------------------------|
| Annual (tons/year) | 0.393 | 2.01            | 2.73 | 0.008           | 0.261                            | 0.168                    | 0.429                  | 0.082                             | 0.154                     | 0.236                   | 747                    |
| Summer (lb/day)    | 8.44  | 111             | 56.7 | 0.176           | 6.28                             | 3.63                     | 9.92                   | 1.99                              | 3.34                      | 5.33                    | 17,773                 |
| Winter (lb/day)    | 8.47  | 111             | 56.9 | 0.175           | 6.28                             | 3.63                     | 9.92                   | 1.99                              | 3.35                      | 5.33                    | 17,638                 |
| Off-Site (lb-day)  | 0.768 | 22.67           | 5.48 | 0.066           | 1.66                             | 0.076                    | 1.74                   | 0.453                             | 0.073                     | 0.525                   | 7,004                  |

<sup>1</sup>Annual GHG Emissions shown in Metric tons of CO2 equivalent (MTCO2e) per year, daily emissions in pounds of CO2 equivalent per day

**Table 4. On-Road VMT and Emission Factors**

| Trip Type    | VMT/day | Emission Factors (g/VMT) |                 |       |                 |                          |                           |           |
|--------------|---------|--------------------------|-----------------|-------|-----------------|--------------------------|---------------------------|-----------|
|              |         | ROG                      | NO <sub>x</sub> | CO    | SO <sub>2</sub> | Exhaust PM <sub>10</sub> | Exhaust PM <sub>2.5</sub> | Total GHG |
| Existing     |         |                          |                 |       |                 |                          |                           |           |
| Employees    | 3090    | 0.0133                   | 0.0536          | 0.761 | 0.00273         | 0.00161                  | 0.00148                   | 276       |
| Trucks       | 7348    | 0.161                    | 4.58            | 0.597 | 0.0133          | 0.0952                   | 0.0911                    | 1410      |
| Post Project |         |                          |                 |       |                 |                          |                           |           |
| Employees    | 4076    | 0.0133                   | 0.0536          | 0.761 | 0.00273         | 0.00161                  | 0.00148                   | 276       |
| Trucks       | 15060   | 0.161                    | 4.58            | 0.597 | 0.0133          | 0.0952                   | 0.0911                    | 1410      |

**Table 5. On-Road Emissions**

| Trip Type           | Emissions (lb/day) |                 |       |                 |                          |                           |           |
|---------------------|--------------------|-----------------|-------|-----------------|--------------------------|---------------------------|-----------|
|                     | ROG                | NO <sub>x</sub> | CO    | SO <sub>2</sub> | Exhaust PM <sub>10</sub> | Exhaust PM <sub>2.5</sub> | Total GHG |
| <b>Existing</b>     |                    |                 |       |                 |                          |                           |           |
| Employees           | 0.091              | 0.36            | 5.18  | 0.019           | 0.011                    | 0.010                     | 1,879     |
| Trucks              | 2.61               | 74.13           | 9.66  | 0.22            | 1.54                     | 1.47                      | 22,821    |
| <b>Post Project</b> |                    |                 |       |                 |                          |                           |           |
| Employees           | 0.12               | 0.48            | 6.83  | 0.025           | 0.014                    | 0.013                     | 2,478     |
| Trucks              | 5.34               | 151.93          | 19.80 | 0.44            | 3.16                     | 3.02                      | 46,772    |
| Trucks (peak days)  | 6.93               | 197.20          | 25.71 | 0.57            | 4.10                     | 3.92                      | 60,711    |

## Listing of Emission Sources

The BAAQMD has requested a listing of emission sources at the existing facility by source name and permitted source number. Emission sources for both the existing facility and the post-Project facility are listed in Table 6.

The Project includes the removal of S-28, the enclosed vessel for composting, the construction of the CASP and biofilter system, upgrading the overs screen, and the addition of a new electric trommel screen. The Site is also in the process of adding a new grinder and diesel engine to power the grinder, which is unrelated to the Project but has been included in **Table 6** for completeness.

**Table 6. Existing and Proposed Emission Sources**

| Emission Source                                                   | Permit Number | Existing | Post-Project |
|-------------------------------------------------------------------|---------------|----------|--------------|
| Green Waste Trommel Screen w/Water Spray                          | S-3           | x        | x            |
| Green Waste Compost Windrows (15 acres) w/Water Spray             | S-4           | x        | x            |
| Finished Compost and Mulch Stockpiles (5 Acres) w/Water Spray     | S-5           | x        | x            |
| MSW Building Sort Line Disc Screen                                | S-8           | x        | x            |
| Conveyors, MSW (2x), Green Waste/Compost (13x), MSW/Compost (13x) | S-10          | x        | x            |
| Composted Green Waste 1" Overs Rotary Screen w/Water Spray        | S-13          | x        | x            |
| Composted MSW Fines Denzimetric Table #1 w/Baghouse               | S-15          | x        | x            |
| Green Waste Trommel Screen (60') w/Water Spray                    | S-18          | x        | x            |
| Composted MSW BHS 1" Disc Screen                                  | S-19          | x        | x            |
| Mobile Diesel Engine, Peterson 6701B                              | S-20          | x        | x            |
| Mobile Grinding Operation                                         | S-22          | x        | x            |
| Composted MSW Trommel Screen w/Water Spray                        | S-23          | x        | x            |
| Composted MSW Fines Densimetric Table #2 w/Baghouse               | S-24          | x        | x            |
| Composted Green Waste Wind Shifter w/Baghouse                     | S-25          | x        | x            |
| Finished Green Waste Compost Trommel Screen w/Water Spray         | S-26          | x        | x            |
| Composted MSW Trommel Screen w/Water Spray                        | S-27          | x        | x            |
| Enclosed Vessel Composting Operating (CTI Bag)                    | S-28          | x        |              |
| Unprocessed MSW Stockpiles                                        | S-29          | x        | x            |
| Composted MSW Stockpiles                                          | S-30          | x        | x            |
| Unprocessed Green Waste Stockpiles                                | S-31          | x        | x            |
| Processed Green Waste Stockpiles                                  | S-32          | x        | x            |
| MSW Bag Breaker                                                   | S-33          | x        | x            |
| Composted MSW BHS 1 inch Overs Screen w/Water Spray               | S-34          | x        | modified     |
| Covered Negative Aerated Static Pile Composting (Active Phase)    | new           |          | new          |
| Aerated Static Pile Composting (Curing Phase)                     | new           |          | new          |
| Composted MSW Trommel Screen w/Water Spray (same as S-23)         | new           |          | new          |



## Evaluation of Compost Process

The CASP composting process with a biofilter and abatement through a biofilter is the level of emissions control currently required by BAAQMD. The BAAQMD has determined that the best available control technology (BACT) for composting process is a CASP with a positive pressure system with a biofilter cover (typically finished compost), or CASP with a negative pressure system and an engineered biofilter to control emissions.

SCS was provided a source test report by Horizon Air Measurement Services, Inc. for a facility in Southern California that Z-Best believes is comparable to the proposed facility. Emission factors for ROG, called precursor organic compounds (POCs) in the BAAQMD, determined from that source test are used to calculate emissions from the CASP (active) and positive pressure ASP (curing) phases of the composting process as shown in **Table 7**. The emission factor for tipping piles prescribed by the California Air Resources Board (CARB), and required for use by the BAAQMD, is used for the emission factors from piles tipped in the tipping building. The factor is typically based pounds per ton per day emissions, but since Z-Best plans to process all incoming waste within 24 hours, we show the emission factor as simply lb/ton. Waste will also be tipped directly onto the CASP piles, which will result in no emissions from tipped waste before it is added to the active curing phase.

Please note that the emission factors derived from the aforementioned source test are abnormally low compared to data SCS has seen for similar operations. These factors are also significantly lower than the CARB-prescribed factors for POCs, which the BAAQMD has required for permitting for other compost facilities in the BAAQMD. ECS believes that the tested composting facility and the Site are significantly better designed and that the engineered systems result in much lower emissions than systems with only “rudimentary” engineering and process control. If the BAAQMD accepts these factors, they will become permit limits, and Z-Best will be required to do testing annually to prove they can meet these levels on a continuous basis. Because of the potential challenge of passing a source test with such a low emission factor, the emission factor was increased by a factor of 50 percent.

The active composting process is mitigated by a CASP system mitigates 80 percent of VOC emissions per CARB and BAAQMD evaluations. The curing composting process will be mitigated by a positive pressure ASP with a moist compost cover layer, which provides mitigation of 50 percent of VOC emissions. The source test being used in this analysis did not provide independent testing of the curing piles, so the emission factor for the curing pile is assumed to be the same as for active composting. Curing piles have lower emission rates than the active, so the use of the emission factor for the active composting phase is a conservative assumption and is expected to overestimate VOC emissions.

BAAQMD has not published a BACT determination for composting. Several other facilities have been permitted in the BAAQMD with BACT defined as a CASP as BACT for the active composting phase. BAAQMD has not proposed BACT for the curing phase, and the use of a positive ASP with moist compost layer exceeds the mitigation required by BAAQMD.

POC emissions from the composting process, both before and after mitigation, are shown in **Table 7**.

**Table 7. POC Emissions from Composting Process**

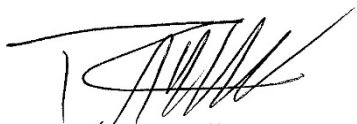
| Phase                        | Emission Factor<br>(lb/wet ton of<br>material) | Daily<br>Throughput<br>(tpd) | Uncontrolled<br>Daily Emission<br>(lb/day) | Control<br>Efficiency | Controlled Daily<br>Emission<br>(lb/day) | Controlled<br>Annual<br>Emissions<br>(tons/year) |
|------------------------------|------------------------------------------------|------------------------------|--------------------------------------------|-----------------------|------------------------------------------|--------------------------------------------------|
| In-building tipping          | 0.2                                            | 219                          | 43.8                                       | 0                     | 43.75                                    | 7.98                                             |
| Negative CASP (Active Phase) | 0.0151                                         | 875                          | 13.2                                       | 80%                   | 2.64                                     | 0.48                                             |
| Positive ASP (Curing Phase)  | 0.0151                                         | 875                          | 13.2                                       | 50%                   | 6.61                                     | 1.21                                             |
| Total                        |                                                |                              | 70.2                                       |                       | 53.00                                    | 9.67                                             |

## CLOSING

This additional information was provided to address emissions-related questions from the BAAQMD about the proposed modification of the Z-Best composting facility in Gilroy, California. The emissions information for construction and on-road emissions, and the information about permitted sources can be incorporated into or referenced in an appropriate CEQA document for the proposed modification of the facility.

If you have any questions or concerns about this evaluation, please contact the undersigned at 562-637-4561.

Sincerely,



Raymond H. Huff, R.E.P.A.  
Vice President  
**SCS Engineers**  
Sincerely,



Patrick S. Sullivan, R.E.P.A., C.P.P., B.C.E.S.  
Senior Vice President  
**SCS Engineers**

attachments



**Attachment A**  
**CalEEMod Output**

## Z-Best Gilroy - Santa Clara County, Annual

**Z-Best Gilroy**  
**Santa Clara County, Annual****1.0 Project Characteristics**

---

**1.1 Land Usage**

| Land Uses              | Size | Metric   | Lot Acreage | Floor Surface Area | Population |
|------------------------|------|----------|-------------|--------------------|------------|
| General Light Industry | 0.00 | 1000sqft | 157.32      | 0.00               | 0          |

**1.2 Other Project Characteristics**

|                             |                                |                             |       |                             |       |
|-----------------------------|--------------------------------|-----------------------------|-------|-----------------------------|-------|
| Urbanization                | Rural                          | Wind Speed (m/s)            | 2.2   | Precipitation Freq (Days)   | 58    |
| Climate Zone                | 4                              |                             |       | Operational Year            | 2022  |
| Utility Company             | Pacific Gas & Electric Company |                             |       |                             |       |
| CO2 Intensity<br>(lb/MW hr) | 641.35                         | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.006 |

**1.3 User Entered Comments & Non-Default Data**



## Z-Best Gilroy - Santa Clara County, Annual

## Project Characteristics -

Land Use - Acreage from Golder Drawing 5A - AERATED STATIC PILE COPOSTING PERMIT PACKAGE

Construction Phase - grading expected to take 3 months

trenching expected to take 2 months

construction expected to take 59 working days

Off-road Equipment - Equipment counts based on highest number of equipment planned for each phase

Grading "other construction equipment" is compactor

Off-road Equipment - Off Highway Truck is concrete pumping trucks (estimated 250 hp)

Other construction equipment is ride on concrete finishers (37 hp)

Off-road Equipment - equipment use from description of construction activities provided by email on 2/25/18

Trips and VMT - trip counts provided by site

Grading -

| Table Name             | Column Name                     | Default Value | New Value        |
|------------------------|---------------------------------|---------------|------------------|
| tblConstDustMitigation | WaterUnpavedRoadMoistureContent | 0             | 5                |
| tblConstructionPhase   | NumDays                         | 620.00        | 78.00            |
| tblConstructionPhase   | NumDays                         | 440.00        | 69.00            |
| tblConstructionPhase   | NumDaysWeek                     | 5.00          | 6.00             |
| tblConstructionPhase   | NumDaysWeek                     | 5.00          | 6.00             |
| tblConstructionPhase   | NumDaysWeek                     | 5.00          | 6.00             |
| tblLandUse             | LotAcreage                      | 0.00          | 157.32           |
| tblOffRoadEquipment    | HorsePower                      | 402.00        | 250.00           |
| tblOffRoadEquipment    | HorsePower                      | 172.00        | 37.00            |
| tblOffRoadEquipment    | LoadFactor                      | 0.38          | 0.42             |
| tblOffRoadEquipment    | LoadFactor                      | 0.42          | 0.36             |
| tblOffRoadEquipment    | OffRoadEquipmentType            |               | Pavers           |
| tblOffRoadEquipment    | OffRoadEquipmentType            |               | Paving Equipment |
| tblOffRoadEquipment    | OffRoadEquipmentUnitAmount      | 0.00          | 1.00             |
| tblOffRoadEquipment    | OffRoadEquipmentUnitAmount      | 0.00          | 1.00             |

## Z-Best Gilroy - Santa Clara County, Annual

|                           |                            |       |           |
|---------------------------|----------------------------|-------|-----------|
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00  | 5.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 0.00  | 2.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 0.00  | 1.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 0.00  | 1.00      |
| tblOffRoadEquipment       | PhaseName                  |       | Grading   |
| tblOffRoadEquipment       | PhaseName                  |       | Grading   |
| tblOffRoadEquipment       | PhaseName                  |       | Trenching |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblProjectCharacteristics | UrbanizationLevel          | Urban | Rural     |
| tblTripsAndVMT            | HaulingTripNumber          | 0.00  | 6,200.00  |
| tblTripsAndVMT            | VendorTripNumber           | 0.00  | 50.00     |
| tblTripsAndVMT            | WorkerTripNumber           | 23.00 | 33.00     |
| tblTripsAndVMT            | WorkerTripNumber           | 5.00  | 25.00     |

## 2.0 Emissions Summary

---



## Z-Best Gilroy - Santa Clara County, Annual

**2.1 Overall Construction****Unmitigated Construction**

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2020    | 0.3926  | 5.0050 | 2.7257 | 8.1700e-003 | 0.5433        | 0.1675       | 0.7107     | 0.1759         | 0.1542        | 0.3301      | 0.0000   | 743.4052  | 743.4052  | 0.1587 | 0.0000 | 747.3718 |
| Maximum | 0.3926  | 5.0050 | 2.7257 | 8.1700e-003 | 0.5433        | 0.1675       | 0.7107     | 0.1759         | 0.1542        | 0.3301      | 0.0000   | 743.4052  | 743.4052  | 0.1587 | 0.0000 | 747.3718 |

**Mitigated Construction**

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2020    | 0.3926  | 4.8362 | 2.7257 | 8.1700e-003 | 0.2612        | 0.1675       | 0.4287     | 0.0822         | 0.1542        | 0.2364      | 0.0000   | 743.4046  | 743.4046  | 0.1587 | 0.0000 | 747.3712 |
| Maximum | 0.3926  | 4.8362 | 2.7257 | 8.1700e-003 | 0.2612        | 0.1675       | 0.4287     | 0.0822         | 0.1542        | 0.2364      | 0.0000   | 743.4046  | 743.4046  | 0.1587 | 0.0000 | 747.3712 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 3.37 | 0.00 | 0.00 | 51.92         | 0.00         | 39.68      | 53.29          | 0.00          | 28.39       | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |

## Z-Best Gilroy - Santa Clara County, Annual

| Quarter | Start Date | End Date  | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|-----------|----------------------------------------------|--------------------------------------------|
| 1       | 4-1-2020   | 6-30-2020 | 4.6448                                       | 4.6448                                     |
| 2       | 7-1-2020   | 9-30-2020 | 0.3505                                       | 0.2876                                     |
|         |            | Highest   | 4.6448                                       | 4.6448                                     |

## 2.2 Overall Operational

### Unmitigated Operational

[illegible]

## Z-Best Gilroy - Santa Clara County, Annual

**2.2 Overall Operational****Mitigated Operational**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Area         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|------------|------------|------------|------------|---------------|----------|-------------------|
| 1            | Grading    | Grading    | 4/1/2020   | 6/30/2020  | 6             | 78       |                   |
| 2            | Trenching  | Trenching  | 7/1/2020   | 8/31/2020  | 6             | 53       |                   |
| 3            | Paving     | Paving     | 9/1/2020   | 11/19/2020 | 6             | 69       |                   |



## Z-Best Gilroy - Santa Clara County, Annual

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 429****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name | Offroad Equipment Type       | Amount | Usage Hours | Horse Power | Load Factor |
|------------|------------------------------|--------|-------------|-------------|-------------|
| Grading    | Graders                      | 1      | 8.00        | 187         | 0.41        |
| Grading    | Off-Highway Trucks           | 1      | 8.00        | 402         | 0.38        |
| Grading    | Other Construction Equipment | 1      | 8.00        | 172         | 0.42        |
| Grading    | Rubber Tired Dozers          | 1      | 8.00        | 247         | 0.40        |
| Grading    | Scrapers                     | 5      | 8.00        | 367         | 0.48        |
| Trenching  | Tractors/Loaders/Backhoes    | 2      | 8.00        | 97          | 0.37        |
| Paving     | Off-Highway Trucks           | 1      | 8.00        | 250         | 0.42        |
| Paving     | Other Construction Equipment | 1      | 8.00        | 37          | 0.36        |
| Paving     | Pavers                       | 1      | 8.00        | 130         | 0.42        |
| Paving     | Paving Equipment             | 1      | 8.00        | 132         | 0.36        |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Grading    | 9                       | 33.00              | 0.00               | 6,200.00            | 10.80              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching  | 2                       | 5.00               | 0.00               | 0.00                | 10.80              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving     | 2                       | 25.00              | 50.00              | 0.00                | 10.80              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

## Z-Best Gilroy - Santa Clara County, Annual

Water Exposed Area

Water Unpaved Roads

**3.2 Grading - 2020****Unmitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category      | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Fugitive Dust |               |               |               |                    | 0.4623        | 0.0000        | 0.4623        | 0.1537         | 0.0000        | 0.1537        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Off-Road      | 0.2994        | 3.4312        | 1.9957        | 4.3000e-003        |               | 0.1387        | 0.1387        |                | 0.1276        | 0.1276        | 0.0000        | 377.9513        | 377.9513        | 0.1222        | 0.0000        | 381.0072        |
| <b>Total</b>  | <b>0.2994</b> | <b>3.4312</b> | <b>1.9957</b> | <b>4.3000e-003</b> | <b>0.4623</b> | <b>0.1387</b> | <b>0.6010</b> | <b>0.1537</b>  | <b>0.1276</b> | <b>0.2812</b> | <b>0.0000</b> | <b>377.9513</b> | <b>377.9513</b> | <b>0.1222</b> | <b>0.0000</b> | <b>381.0072</b> |

## Z-Best Gilroy - Santa Clara County, Annual

**3.2 Grading - 2020****Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                 |                 |               |               |                 |
| Hauling      | 0.0258        | 0.8996        | 0.1842        | 2.4400e-003        | 0.0526        | 2.9200e-003        | 0.0555        | 0.0145         | 2.8000e-003        | 0.0172        | 0.0000        | 236.4395        | 236.4395        | 0.0108        | 0.0000        | 236.7099        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 4.2700e-003   | 3.0700e-003   | 0.0322        | 1.0000e-004        | 0.0102        | 7.0000e-005        | 0.0103        | 2.7100e-003    | 6.0000e-005        | 2.7800e-003   | 0.0000        | 8.7535          | 8.7535          | 2.1000e-004   | 0.0000        | 8.7589          |
| <b>Total</b> | <b>0.0300</b> | <b>0.9026</b> | <b>0.2164</b> | <b>2.5400e-003</b> | <b>0.0628</b> | <b>2.9900e-003</b> | <b>0.0657</b> | <b>0.0172</b>  | <b>2.8600e-003</b> | <b>0.0200</b> | <b>0.0000</b> | <b>245.1930</b> | <b>245.1930</b> | <b>0.0110</b> | <b>0.0000</b> | <b>245.4688</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category      | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Fugitive Dust |               |               |               |                    | 0.1803        | 0.0000        | 0.1803        | 0.0599         | 0.0000        | 0.0599        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Off-Road      | 0.2994        | 3.4312        | 1.9957        | 4.3000e-003        |               | 0.1387        | 0.1387        |                | 0.1276        | 0.1276        | 0.0000        | 377.9508        | 377.9508        | 0.1222        | 0.0000        | 381.0067        |
| <b>Total</b>  | <b>0.2994</b> | <b>3.4312</b> | <b>1.9957</b> | <b>4.3000e-003</b> | <b>0.1803</b> | <b>0.1387</b> | <b>0.3190</b> | <b>0.0599</b>  | <b>0.1276</b> | <b>0.1875</b> | <b>0.0000</b> | <b>377.9508</b> | <b>377.9508</b> | <b>0.1222</b> | <b>0.0000</b> | <b>381.0067</b> |



## Z-Best Gilroy - Santa Clara County, Annual

**3.2 Grading - 2020****Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                 |                 |               |               |                 |
| Hauling      | 0.0258        | 0.8996        | 0.1842        | 2.4400e-003        | 0.0526        | 2.9200e-003        | 0.0555        | 0.0145         | 2.8000e-003        | 0.0172        | 0.0000        | 236.4395        | 236.4395        | 0.0108        | 0.0000        | 236.7099        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 4.2700e-003   | 3.0700e-003   | 0.0322        | 1.0000e-004        | 0.0102        | 7.0000e-005        | 0.0103        | 2.7100e-003    | 6.0000e-005        | 2.7800e-003   | 0.0000        | 8.7535          | 8.7535          | 2.1000e-004   | 0.0000        | 8.7589          |
| <b>Total</b> | <b>0.0300</b> | <b>0.9026</b> | <b>0.2164</b> | <b>2.5400e-003</b> | <b>0.0628</b> | <b>2.9900e-003</b> | <b>0.0657</b> | <b>0.0172</b>  | <b>2.8600e-003</b> | <b>0.0200</b> | <b>0.0000</b> | <b>245.1930</b> | <b>245.1930</b> | <b>0.0110</b> | <b>0.0000</b> | <b>245.4688</b> |

**3.3 Trenching - 2020****Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 0.0111        | 0.1116        | 0.1208        | 1.6000e-004        |               | 7.0600e-003        | 7.0600e-003        |                | 6.4900e-003        | 6.4900e-003        | 0.0000        | 14.4612        | 14.4612        | 4.6800e-003        | 0.0000        | 14.5781        |
| <b>Total</b> | <b>0.0111</b> | <b>0.1116</b> | <b>0.1208</b> | <b>1.6000e-004</b> |               | <b>7.0600e-003</b> | <b>7.0600e-003</b> |                | <b>6.4900e-003</b> | <b>6.4900e-003</b> | <b>0.0000</b> | <b>14.4612</b> | <b>14.4612</b> | <b>4.6800e-003</b> | <b>0.0000</b> | <b>14.5781</b> |

## Z-Best Gilroy - Santa Clara County, Annual

**3.3 Trenching - 2020****Unmitigated Construction Off-Site**

|              | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 4.4000e-004        | 3.2000e-004        | 3.3200e-003        | 1.0000e-005        | 1.0500e-003        | 1.0000e-005        | 1.0600e-003        | 2.8000e-004        | 1.0000e-005        | 2.9000e-004        | 0.0000        | 0.9012        | 0.9012        | 2.0000e-005        | 0.0000        | 0.9018        |
| <b>Total</b> | <b>4.4000e-004</b> | <b>3.2000e-004</b> | <b>3.3200e-003</b> | <b>1.0000e-005</b> | <b>1.0500e-003</b> | <b>1.0000e-005</b> | <b>1.0600e-003</b> | <b>2.8000e-004</b> | <b>1.0000e-005</b> | <b>2.9000e-004</b> | <b>0.0000</b> | <b>0.9012</b> | <b>0.9012</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.9018</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 0.0111        | 0.1116        | 0.1208        | 1.6000e-004        |               | 7.0600e-003        | 7.0600e-003        |                | 6.4900e-003        | 6.4900e-003        | 0.0000        | 14.4612        | 14.4612        | 4.6800e-003        | 0.0000        | 14.5781        |
| <b>Total</b> | <b>0.0111</b> | <b>0.1116</b> | <b>0.1208</b> | <b>1.6000e-004</b> |               | <b>7.0600e-003</b> | <b>7.0600e-003</b> |                | <b>6.4900e-003</b> | <b>6.4900e-003</b> | <b>0.0000</b> | <b>14.4612</b> | <b>14.4612</b> | <b>4.6800e-003</b> | <b>0.0000</b> | <b>14.5781</b> |

## Z-Best Gilroy - Santa Clara County, Annual

**3.3 Trenching - 2020****Mitigated Construction Off-Site**

|              | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Worker       | 4.4000e-004        | 3.2000e-004        | 3.3200e-003        | 1.0000e-005        | 1.0500e-003        | 1.0000e-005        | 1.0600e-003        | 2.8000e-004        | 1.0000e-005        | 2.9000e-004        | 0.0000        | 0.9012        | 0.9012        | 2.0000e-005        | 0.0000        | 0.9018        |
| <b>Total</b> | <b>4.4000e-004</b> | <b>3.2000e-004</b> | <b>3.3200e-003</b> | <b>1.0000e-005</b> | <b>1.0500e-003</b> | <b>1.0000e-005</b> | <b>1.0600e-003</b> | <b>2.8000e-004</b> | <b>1.0000e-005</b> | <b>2.9000e-004</b> | <b>0.0000</b> | <b>0.9012</b> | <b>0.9012</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.9018</b> |

**3.4 Paving - 2020****Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                |                |               |               |                |
| Off-Road     | 0.0423        | 0.3698        | 0.3178        | 6.5000e-004        |               | 0.0178        | 0.0178        |                | 0.0164        | 0.0164        | 0.0000        | 57.4057        | 57.4057        | 0.0186        | 0.0000        | 57.8698        |
| Paving       | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0423</b> | <b>0.3698</b> | <b>0.3178</b> | <b>6.5000e-004</b> |               | <b>0.0178</b> | <b>0.0178</b> |                | <b>0.0164</b> | <b>0.0164</b> | <b>0.0000</b> | <b>57.4057</b> | <b>57.4057</b> | <b>0.0186</b> | <b>0.0000</b> | <b>57.8698</b> |



## Z-Best Gilroy - Santa Clara County, Annual

**3.4 Paving - 2020****Unmitigated Construction Off-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |               |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Hauling      | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       | 6.4400e-003        | 0.1874        | 0.0501        | 4.3000e-004        | 0.0103        | 8.9000e-004        | 0.0112        | 2.9700e-003        | 8.5000e-004        | 3.8100e-003        | 0.0000        | 41.6266        | 41.6266        | 1.9900e-003        | 0.0000        | 41.6763        |
| Worker       | 2.8600e-003        | 2.0600e-003   | 0.0216        | 6.0000e-005        | 6.8400e-003   | 4.0000e-005        | 6.8800e-003   | 1.8200e-003        | 4.0000e-005        | 1.8600e-003        | 0.0000        | 5.8663         | 5.8663         | 1.4000e-004        | 0.0000        | 5.8699         |
| <b>Total</b> | <b>9.3000e-003</b> | <b>0.1895</b> | <b>0.0717</b> | <b>4.9000e-004</b> | <b>0.0171</b> | <b>9.3000e-004</b> | <b>0.0180</b> | <b>4.7900e-003</b> | <b>8.9000e-004</b> | <b>5.6700e-003</b> | <b>0.0000</b> | <b>47.4928</b> | <b>47.4928</b> | <b>2.1300e-003</b> | <b>0.0000</b> | <b>47.5462</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                |                |               |               |                |
| Off-Road     | 0.0423        | 0.2010        | 0.3178        | 6.5000e-004        |               | 0.0178        | 0.0178        |                | 0.0164        | 0.0164        | 0.0000        | 57.4056        | 57.4056        | 0.0186        | 0.0000        | 57.8698        |
| Paving       | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0423</b> | <b>0.2010</b> | <b>0.3178</b> | <b>6.5000e-004</b> |               | <b>0.0178</b> | <b>0.0178</b> |                | <b>0.0164</b> | <b>0.0164</b> | <b>0.0000</b> | <b>57.4056</b> | <b>57.4056</b> | <b>0.0186</b> | <b>0.0000</b> | <b>57.8698</b> |

## Z-Best Gilroy - Santa Clara County, Annual

**3.4 Paving - 2020****Mitigated Construction Off-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |               |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Hauling      | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Vendor       | 6.4400e-003        | 0.1874        | 0.0501        | 4.3000e-004        | 0.0103        | 8.9000e-004        | 0.0112        | 2.9700e-003        | 8.5000e-004        | 3.8100e-003        | 0.0000        | 41.6266        | 41.6266        | 1.9900e-003        | 0.0000        | 41.6763        |
| Worker       | 2.8600e-003        | 2.0600e-003   | 0.0216        | 6.0000e-005        | 6.8400e-003   | 4.0000e-005        | 6.8800e-003   | 1.8200e-003        | 4.0000e-005        | 1.8600e-003        | 0.0000        | 5.8663         | 5.8663         | 1.4000e-004        | 0.0000        | 5.8699         |
| <b>Total</b> | <b>9.3000e-003</b> | <b>0.1895</b> | <b>0.0717</b> | <b>4.9000e-004</b> | <b>0.0171</b> | <b>9.3000e-004</b> | <b>0.0180</b> | <b>4.7900e-003</b> | <b>8.9000e-004</b> | <b>5.6700e-003</b> | <b>0.0000</b> | <b>47.4928</b> | <b>47.4928</b> | <b>2.1300e-003</b> | <b>0.0000</b> | <b>47.5462</b> |

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## Z-Best Gilroy - Santa Clara County, Annual

|             | ROG     | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category    | tons/yr |        |        |        |               |              |            |                |               |             | MT/yr    |           |           |        |        |        |
| Mitigated   | 0.0000  | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000  | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

## 4.2 Trip Summary Information

| Land Use               | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| General Light Industry | 0.00                    | 0.00     | 0.00   |             |            |
| Total                  | 0.00                    | 0.00     | 0.00   |             |            |

## 4.3 Trip Type Information

| Land Use               | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                        | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| General Light Industry | 14.70      | 6.60       | 6.60        | 59.00      | 28.00      | 13.00       | 92             | 5        | 3       |

## 4.4 Fleet Mix

| Land Use               | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| General Light Industry | 0.610498 | 0.036775 | 0.183084 | 0.106123 | 0.014413 | 0.005007 | 0.012610 | 0.021118 | 0.002144 | 0.001548 | 0.005312 | 0.000627 | 0.000740 |

## 5.0 Energy Detail

---

Historical Energy Use: N



## Z-Best Gilroy - Santa Clara County, Annual

## 5.1 Mitigation Measures Energy

[illegible]

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

[illegible]

## Z-Best Gilroy - Santa Clara County, Annual

**5.2 Energy by Land Use - NaturalGas****Mitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| General Light Industry | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**5.3 Energy by Land Use - Electricity****Unmitigated**

|                        | Electricity Use | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|-----------------|---------------|---------------|---------------|---------------|
| Land Use               | kWh/yr          | MT/yr         |               |               |               |
| General Light Industry | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

## Z-Best Gilroy - Santa Clara County, Annual

### 5.3 Energy by Land Use - Electricity

**Mitigated**

|                        | Electricity Use | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|-----------------|---------------|---------------|---------------|---------------|
| Land Use               | kWh/yr          | MT/yr         |               |               |               |
| General Light Industry | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

## 6.0 Area Detail

## 6.1 Mitigation Measures Area

[illegible]



## Z-Best Gilroy - Santa Clara County, Annual

**6.2 Area by SubCategory****Unmitigated**

|                       | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| SubCategory           | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Architectural Coating | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                       | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| SubCategory           | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Architectural Coating | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**7.0 Water Detail**

## Z-Best Gilroy - Santa Clara County, Annual

**7.1 Mitigation Measures Water**

|             | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|-----------|--------|--------|--------|
| Category    | MT/yr     |        |        |        |
| Mitigated   | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**7.2 Water by Land Use****Unmitigated**

|                        | Indoor/Outdoor Use | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|--------------------|---------------|---------------|---------------|---------------|
| Land Use               | Mgal               | MT/yr         |               |               |               |
| General Light Industry | 0 / 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                    | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

## Z-Best Gilroy - Santa Clara County, Annual

**7.2 Water by Land Use****Mitigated**

|                        | Indoor/Outdoor Use | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|--------------------|---------------|---------------|---------------|---------------|
| Land Use               | Mgal               | MT/yr         |               |               |               |
| General Light Industry | 0 / 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                    | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**8.0 Waste Detail**

---

**8.1 Mitigation Measures Waste****Category/Year**

|             | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|-----------|--------|--------|--------|
|             | MT/yr     |        |        |        |
| Mitigated   | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

## Z-Best Gilroy - Santa Clara County, Annual

**8.2 Waste by Land Use****Unmitigated**

|                        | Waste Disposed | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|
| Land Use               | tons           | MT/yr         |               |               |               |
| General Light Industry | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                        | Waste Disposed | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|
| Land Use               | tons           | MT/yr         |               |               |               |
| General Light Industry | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|



## Z-Best Gilroy - Santa Clara County, Annual

**10.0 Stationary Equipment**

---

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

**11.0 Vegetation**

---

## Z-Best Gilroy - Santa Clara County, Summer

**Z-Best Gilroy**  
**Santa Clara County, Summer****1.0 Project Characteristics**

---

**1.1 Land Usage**

| Land Uses              | Size | Metric   | Lot Acreage | Floor Surface Area | Population |
|------------------------|------|----------|-------------|--------------------|------------|
| General Light Industry | 0.00 | 1000sqft | 157.32      | 0.00               | 0          |

**1.2 Other Project Characteristics**

|                             |                                |                             |       |                             |       |
|-----------------------------|--------------------------------|-----------------------------|-------|-----------------------------|-------|
| Urbanization                | Rural                          | Wind Speed (m/s)            | 2.2   | Precipitation Freq (Days)   | 58    |
| Climate Zone                | 4                              |                             |       | Operational Year            | 2022  |
| Utility Company             | Pacific Gas & Electric Company |                             |       |                             |       |
| CO2 Intensity<br>(lb/MW hr) | 641.35                         | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.006 |

**1.3 User Entered Comments & Non-Default Data**

## Z-Best Gilroy - Santa Clara County, Summer

## Project Characteristics -

Land Use - Acreage from Golder Drawing 5A - AERATED STATIC PILE COPOSTING PERMIT PACKAGE

Construction Phase - grading expected to take 3 months

trenching expected to take 2 months

construction expected to take 59 working days

Off-road Equipment - Equipment counts based on highest number of equipment planned for each phase

Grading "other construction equipment" is compactor

Off-road Equipment - Off Highway Truck is concrete pumping trucks (estimated 250 hp)

Other construction equipment is ride on concrete finishers (37 hp)

Off-road Equipment - equipment use from description of construction activities provided by email on 2/25/18

Trips and VMT - trip counts provided by site

## Grading -

| Table Name             | Column Name                     | Default Value | New Value        |
|------------------------|---------------------------------|---------------|------------------|
| tblConstDustMitigation | WaterUnpavedRoadMoistureContent | 0             | 5                |
| tblConstructionPhase   | NumDays                         | 620.00        | 78.00            |
| tblConstructionPhase   | NumDays                         | 440.00        | 69.00            |
| tblConstructionPhase   | NumDaysWeek                     | 5.00          | 6.00             |
| tblConstructionPhase   | NumDaysWeek                     | 5.00          | 6.00             |
| tblConstructionPhase   | NumDaysWeek                     | 5.00          | 6.00             |
| tblLandUse             | LotAcreage                      | 0.00          | 157.32           |
| tblOffRoadEquipment    | HorsePower                      | 402.00        | 250.00           |
| tblOffRoadEquipment    | HorsePower                      | 172.00        | 37.00            |
| tblOffRoadEquipment    | LoadFactor                      | 0.38          | 0.42             |
| tblOffRoadEquipment    | LoadFactor                      | 0.42          | 0.36             |
| tblOffRoadEquipment    | OffRoadEquipmentType            |               | Pavers           |
| tblOffRoadEquipment    | OffRoadEquipmentType            |               | Paving Equipment |
| tblOffRoadEquipment    | OffRoadEquipmentUnitAmount      | 0.00          | 1.00             |
| tblOffRoadEquipment    | OffRoadEquipmentUnitAmount      | 0.00          | 1.00             |

## Z-Best Gilroy - Santa Clara County, Summer

|                           |                            |       |           |
|---------------------------|----------------------------|-------|-----------|
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00  | 5.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 0.00  | 2.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 0.00  | 1.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 0.00  | 1.00      |
| tblOffRoadEquipment       | PhaseName                  |       | Grading   |
| tblOffRoadEquipment       | PhaseName                  |       | Grading   |
| tblOffRoadEquipment       | PhaseName                  |       | Trenching |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblProjectCharacteristics | UrbanizationLevel          | Urban | Rural     |
| tblTripsAndVMT            | HaulingTripNumber          | 0.00  | 6,200.00  |
| tblTripsAndVMT            | VendorTripNumber           | 0.00  | 50.00     |
| tblTripsAndVMT            | WorkerTripNumber           | 23.00 | 33.00     |
| tblTripsAndVMT            | WorkerTripNumber           | 5.00  | 25.00     |

## 2.0 Emissions Summary

---



## Z-Best Gilroy - Santa Clara County, Summer

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

|         | ROG    | NOx      | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|---------|--------|----------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Year    | lb/day |          |         |        |               |              |            |                |               |             | lb/day   |             |             |        |        |             |
| 2020    | 8.4447 | 110.6535 | 56.6554 | 0.1760 | 13.5151       | 3.6320       | 17.1470    | 4.3927         | 3.3441        | 7.7368      | 0.0000   | 17,679.2801 | 17,679.2801 | 3.7610 | 0.0000 | 17,773.3058 |
| Maximum | 8.4447 | 110.6535 | 56.6554 | 0.1760 | 13.5151       | 3.6320       | 17.1470    | 4.3927         | 3.3441        | 7.7368      | 0.0000   | 17,679.2801 | 17,679.2801 | 3.7610 | 0.0000 | 17,773.3058 |

**Mitigated Construction**

|         | ROG    | NOx      | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|---------|--------|----------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Year    | lb/day |          |         |        |               |              |            |                |               |             | lb/day   |             |             |        |        |             |
| 2020    | 8.4447 | 110.6535 | 56.6554 | 0.1760 | 6.2836        | 3.6320       | 9.9156     | 1.9892         | 3.3441        | 5.3334      | 0.0000   | 17,679.2801 | 17,679.2801 | 3.7610 | 0.0000 | 17,773.3058 |
| Maximum | 8.4447 | 110.6535 | 56.6554 | 0.1760 | 6.2836        | 3.6320       | 9.9156     | 1.9892         | 3.3441        | 5.3334      | 0.0000   | 17,679.2801 | 17,679.2801 | 3.7610 | 0.0000 | 17,773.3058 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 53.51         | 0.00         | 42.17      | 54.71          | 0.00          | 31.06       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

## Z-Best Gilroy - Santa Clara County, Summer

**2.2 Overall Operational****Unmitigated Operational**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Area         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated Operational**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Area         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

## Z-Best Gilroy - Santa Clara County, Summer

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

### 3.0 Construction Detail

---

#### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|------------|------------|------------|------------|---------------|----------|-------------------|
| 1            | Grading    | Grading    | 4/1/2020   | 6/30/2020  | 6             | 78       |                   |
| 2            | Trenching  | Trenching  | 7/1/2020   | 8/31/2020  | 6             | 53       |                   |
| 3            | Paving     | Paving     | 9/1/2020   | 11/19/2020 | 6             | 69       |                   |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 429

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

## Z-Best Gilroy - Santa Clara County, Summer

| Phase Name | Offroad Equipment Type       | Amount | Usage Hours | Horse Power | Load Factor |
|------------|------------------------------|--------|-------------|-------------|-------------|
| Grading    | Graders                      | 1      | 8.00        | 187         | 0.41        |
| Grading    | Off-Highway Trucks           | 1      | 8.00        | 402         | 0.38        |
| Grading    | Other Construction Equipment | 1      | 8.00        | 172         | 0.42        |
| Grading    | Rubber Tired Dozers          | 1      | 8.00        | 247         | 0.40        |
| Grading    | Scrapers                     | 5      | 8.00        | 367         | 0.48        |
| Trenching  | Tractors/Loaders/Backhoes    | 2      | 8.00        | 97          | 0.37        |
| Paving     | Off-Highway Trucks           | 1      | 8.00        | 250         | 0.42        |
| Paving     | Other Construction Equipment | 1      | 8.00        | 37          | 0.36        |
| Paving     | Pavers                       | 1      | 8.00        | 130         | 0.42        |
| Paving     | Paving Equipment             | 1      | 8.00        | 132         | 0.36        |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Grading    | 9                       | 33.00              | 0.00               | 6,200.00            | 10.80              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching  | 2                       | 5.00               | 0.00               | 0.00                | 10.80              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving     | 2                       | 25.00              | 50.00              | 0.00                | 10.80              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

Water Unpaved Roads



## Z-Best Gilroy - Santa Clara County, Summer

**3.2 Grading - 2020****Unmitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2               | Total CO2               | CH4           | N2O | CO2e                    |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------------|-------------------------|---------------|-----|-------------------------|
| Category      | lb/day        |                |                |               |                |               |                |                |               |               | lb/day   |                         |                         |               |     |                         |
| Fugitive Dust |               |                |                |               | 11.8548        | 0.0000        | 11.8548        | 3.9400         | 0.0000        | 3.9400        |          |                         | 0.0000                  |               |     | 0.0000                  |
| Off-Road      | 7.6770        | 87.9800        | 51.1712        | 0.1103        |                | 3.5558        | 3.5558         |                | 3.2714        | 3.2714        |          | 10,682.56<br>28         | 10,682.56<br>28         | 3.4550        |     | 10,768.93<br>68         |
| <b>Total</b>  | <b>7.6770</b> | <b>87.9800</b> | <b>51.1712</b> | <b>0.1103</b> | <b>11.8548</b> | <b>3.5558</b> | <b>15.4107</b> | <b>3.9400</b>  | <b>3.2714</b> | <b>7.2114</b> |          | <b>10,682.56<br/>28</b> | <b>10,682.56<br/>28</b> | <b>3.4550</b> |     | <b>10,768.93<br/>68</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx            | CO            | SO2             | Fugitive PM10 | Exhaust PM10    | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5   | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4             | N2O | CO2e                   |
|--------------|---------------|----------------|---------------|-----------------|---------------|-----------------|---------------|----------------|-----------------|---------------|----------|------------------------|------------------------|-----------------|-----|------------------------|
| Category     | lb/day        |                |               |                 |               |                 |               |                |                 |               | lb/day   |                        |                        |                 |     |                        |
| Hauling      | 0.6530        | 22.6030        | 4.5765        | 0.0631          | 1.3892        | 0.0744          | 1.4636        | 0.3807         | 0.0712          | 0.4519        |          | 6,730.735<br>1         | 6,730.735<br>1         | 0.2996          |     | 6,738.224<br>1         |
| Vendor       | 0.0000        | 0.0000         | 0.0000        | 0.0000          | 0.0000        | 0.0000          | 0.0000        | 0.0000         | 0.0000          | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000          |     | 0.0000                 |
| Worker       | 0.1147        | 0.0704         | 0.9076        | 2.6700e-<br>003 | 0.2711        | 1.6900e-<br>003 | 0.2728        | 0.0719         | 1.5600e-<br>003 | 0.0735        |          | 265.9821               | 265.9821               | 6.5100e-<br>003 |     | 266.1448               |
| <b>Total</b> | <b>0.7677</b> | <b>22.6734</b> | <b>5.4841</b> | <b>0.0658</b>   | <b>1.6603</b> | <b>0.0761</b>   | <b>1.7364</b> | <b>0.4526</b>  | <b>0.0728</b>   | <b>0.5254</b> |          | <b>6,996.717<br/>2</b> | <b>6,996.717<br/>2</b> | <b>0.3061</b>   |     | <b>7,004.369<br/>0</b> |

## Z-Best Gilroy - Santa Clara County, Summer

**3.2 Grading - 2020****Mitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2               | Total CO2               | CH4           | N2O | CO2e                    |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------------|-------------------------|---------------|-----|-------------------------|
| Category      | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                         |                         |               |     |                         |
| Fugitive Dust |               |                |                |               | 4.6234        | 0.0000        | 4.6234        | 1.5366         | 0.0000        | 1.5366        |               |                         | 0.0000                  |               |     | 0.0000                  |
| Off-Road      | 7.6770        | 87.9800        | 51.1712        | 0.1103        |               | 3.5558        | 3.5558        |                | 3.2714        | 3.2714        | 0.0000        | 10,682.56<br>28         | 10,682.56<br>28         | 3.4550        |     | 10,768.93<br>68         |
| <b>Total</b>  | <b>7.6770</b> | <b>87.9800</b> | <b>51.1712</b> | <b>0.1103</b> | <b>4.6234</b> | <b>3.5558</b> | <b>8.1792</b> | <b>1.5366</b>  | <b>3.2714</b> | <b>4.8080</b> | <b>0.0000</b> | <b>10,682.56<br/>28</b> | <b>10,682.56<br/>28</b> | <b>3.4550</b> |     | <b>10,768.93<br/>68</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx            | CO            | SO2             | Fugitive PM10 | Exhaust PM10    | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5   | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4             | N2O | CO2e                   |
|--------------|---------------|----------------|---------------|-----------------|---------------|-----------------|---------------|----------------|-----------------|---------------|----------|------------------------|------------------------|-----------------|-----|------------------------|
| Category     | lb/day        |                |               |                 |               |                 |               |                |                 |               | lb/day   |                        |                        |                 |     |                        |
| Hauling      | 0.6530        | 22.6030        | 4.5765        | 0.0631          | 1.3892        | 0.0744          | 1.4636        | 0.3807         | 0.0712          | 0.4519        |          | 6,730.735<br>1         | 6,730.735<br>1         | 0.2996          |     | 6,738.224<br>1         |
| Vendor       | 0.0000        | 0.0000         | 0.0000        | 0.0000          | 0.0000        | 0.0000          | 0.0000        | 0.0000         | 0.0000          | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000          |     | 0.0000                 |
| Worker       | 0.1147        | 0.0704         | 0.9076        | 2.6700e-<br>003 | 0.2711        | 1.6900e-<br>003 | 0.2728        | 0.0719         | 1.5600e-<br>003 | 0.0735        |          | 265.9821               | 265.9821               | 6.5100e-<br>003 |     | 266.1448               |
| <b>Total</b> | <b>0.7677</b> | <b>22.6734</b> | <b>5.4841</b> | <b>0.0658</b>   | <b>1.6603</b> | <b>0.0761</b>   | <b>1.7364</b> | <b>0.4526</b>  | <b>0.0728</b>   | <b>0.5254</b> |          | <b>6,996.717<br/>2</b> | <b>6,996.717<br/>2</b> | <b>0.3061</b>   |     | <b>7,004.369<br/>0</b> |

## Z-Best Gilroy - Santa Clara County, Summer

**3.3 Trenching - 2020****Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Off-Road     | 0.4190        | 4.2103        | 4.5594        | 6.2100e-003        |               | 0.2662        | 0.2662        |                | 0.2449        | 0.2449        |          | 601.5370        | 601.5370        | 0.1946        |     | 606.4008        |
| <b>Total</b> | <b>0.4190</b> | <b>4.2103</b> | <b>4.5594</b> | <b>6.2100e-003</b> |               | <b>0.2662</b> | <b>0.2662</b> |                | <b>0.2449</b> | <b>0.2449</b> |          | <b>601.5370</b> | <b>601.5370</b> | <b>0.1946</b> |     | <b>606.4008</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|-----|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |     |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             |     | 0.0000         |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             |     | 0.0000         |
| Worker       | 0.0174        | 0.0107        | 0.1375        | 4.0000e-004        | 0.0411        | 2.6000e-004        | 0.0413        | 0.0109         | 2.4000e-004        | 0.0111        |          | 40.3003        | 40.3003        | 9.9000e-004        |     | 40.3250        |
| <b>Total</b> | <b>0.0174</b> | <b>0.0107</b> | <b>0.1375</b> | <b>4.0000e-004</b> | <b>0.0411</b> | <b>2.6000e-004</b> | <b>0.0413</b> | <b>0.0109</b>  | <b>2.4000e-004</b> | <b>0.0111</b> |          | <b>40.3003</b> | <b>40.3003</b> | <b>9.9000e-004</b> |     | <b>40.3250</b> |

## Z-Best Gilroy - Santa Clara County, Summer

**3.3 Trenching - 2020****Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Off-Road     | 0.4190        | 4.2103        | 4.5594        | 6.2100e-003        |               | 0.2662        | 0.2662        |                | 0.2449        | 0.2449        | 0.0000        | 601.5370        | 601.5370        | 0.1946        |     | 606.4008        |
| <b>Total</b> | <b>0.4190</b> | <b>4.2103</b> | <b>4.5594</b> | <b>6.2100e-003</b> |               | <b>0.2662</b> | <b>0.2662</b> |                | <b>0.2449</b> | <b>0.2449</b> | <b>0.0000</b> | <b>601.5370</b> | <b>601.5370</b> | <b>0.1946</b> |     | <b>606.4008</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|-----|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |     |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             |     | 0.0000         |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             |     | 0.0000         |
| Worker       | 0.0174        | 0.0107        | 0.1375        | 4.0000e-004        | 0.0411        | 2.6000e-004        | 0.0413        | 0.0109         | 2.4000e-004        | 0.0111        |          | 40.3003        | 40.3003        | 9.9000e-004        |     | 40.3250        |
| <b>Total</b> | <b>0.0174</b> | <b>0.0107</b> | <b>0.1375</b> | <b>4.0000e-004</b> | <b>0.0411</b> | <b>2.6000e-004</b> | <b>0.0413</b> | <b>0.0109</b>  | <b>2.4000e-004</b> | <b>0.0111</b> |          | <b>40.3003</b> | <b>40.3003</b> | <b>9.9000e-004</b> |     | <b>40.3250</b> |



## Z-Best Gilroy - Santa Clara County, Summer

**3.4 Paving - 2020****Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |                |               |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Off-Road     | 1.2252        | 10.7180        | 9.2121        | 0.0189        |               | 0.5169        | 0.5169        |                | 0.4755        | 0.4755        |          | 1,834.171<br>4         | 1,834.171<br>4         | 0.5932        |     | 1,849.001<br>6         |
| Paving       | 0.0000        |                |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                        | 0.0000                 |               |     | 0.0000                 |
| <b>Total</b> | <b>1.2252</b> | <b>10.7180</b> | <b>9.2121</b> | <b>0.0189</b> |               | <b>0.5169</b> | <b>0.5169</b> |                | <b>0.4755</b> | <b>0.4755</b> |          | <b>1,834.171<br/>4</b> | <b>1,834.171<br/>4</b> | <b>0.5932</b> |     | <b>1,849.001<br/>6</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.1827        | 5.3718        | 1.3579        | 0.0127        | 0.3062        | 0.0255        | 0.3317        | 0.0882         | 0.0244        | 0.1125        |          | 1,345.549<br>8         | 1,345.549<br>8         | 0.0613        |     | 1,347.083<br>3         |
| Worker       | 0.0869        | 0.0534        | 0.6876        | 2.0200e-003   | 0.2054        | 1.2800e-003   | 0.2067        | 0.0545         | 1.1800e-003   | 0.0557        |          | 201.5016               | 201.5016               | 4.9300e-003   |     | 201.6249               |
| <b>Total</b> | <b>0.2696</b> | <b>5.4251</b> | <b>2.0455</b> | <b>0.0148</b> | <b>0.5115</b> | <b>0.0268</b> | <b>0.5383</b> | <b>0.1426</b>  | <b>0.0256</b> | <b>0.1682</b> |          | <b>1,547.051<br/>4</b> | <b>1,547.051<br/>4</b> | <b>0.0663</b> |     | <b>1,548.708<br/>2</b> |

## Z-Best Gilroy - Santa Clara County, Summer

**3.4 Paving - 2020****Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day        |                        |                        |               |     |                        |
| Off-Road     | 1.2252        | 5.8263        | 9.2121        | 0.0189        |               | 0.5169        | 0.5169        |                | 0.4755        | 0.4755        | 0.0000        | 1,834.171<br>4         | 1,834.171<br>4         | 0.5932        |     | 1,849.001<br>6         |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                        | 0.0000                 |               |     | 0.0000                 |
| <b>Total</b> | <b>1.2252</b> | <b>5.8263</b> | <b>9.2121</b> | <b>0.0189</b> |               | <b>0.5169</b> | <b>0.5169</b> |                | <b>0.4755</b> | <b>0.4755</b> | <b>0.0000</b> | <b>1,834.171<br/>4</b> | <b>1,834.171<br/>4</b> | <b>0.5932</b> |     | <b>1,849.001<br/>6</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.1827        | 5.3718        | 1.3579        | 0.0127        | 0.3062        | 0.0255        | 0.3317        | 0.0882         | 0.0244        | 0.1125        |          | 1,345.549<br>8         | 1,345.549<br>8         | 0.0613        |     | 1,347.083<br>3         |
| Worker       | 0.0869        | 0.0534        | 0.6876        | 2.0200e-003   | 0.2054        | 1.2800e-003   | 0.2067        | 0.0545         | 1.1800e-003   | 0.0557        |          | 201.5016               | 201.5016               | 4.9300e-003   |     | 201.6249               |
| <b>Total</b> | <b>0.2696</b> | <b>5.4251</b> | <b>2.0455</b> | <b>0.0148</b> | <b>0.5115</b> | <b>0.0268</b> | <b>0.5383</b> | <b>0.1426</b>  | <b>0.0256</b> | <b>0.1682</b> |          | <b>1,547.051<br/>4</b> | <b>1,547.051<br/>4</b> | <b>0.0663</b> |     | <b>1,548.708<br/>2</b> |

**4.0 Operational Detail - Mobile**

## Z-Best Gilroy - Santa Clara County, Summer

## 4.1 Mitigation Measures Mobile

|             | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O | CO2e   |
|-------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-----|--------|
| Category    | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |     |        |
| Mitigated   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |

## 4.2 Trip Summary Information

|                        | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
| Land Use               | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| General Light Industry | 0.00                    | 0.00     | 0.00   |             |            |
| Total                  | 0.00                    | 0.00     | 0.00   |             |            |

## 4.3 Trip Type Information

|                        | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| Land Use               | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| General Light Industry | 14.70      | 6.60       | 6.60        | 59.00      | 28.00      | 13.00       | 92             | 5        | 3       |

## 4.4 Fleet Mix

| Land Use               | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| General Light Industry | 0.610498 | 0.036775 | 0.183084 | 0.106123 | 0.014413 | 0.005007 | 0.012610 | 0.021118 | 0.002144 | 0.001548 | 0.005312 | 0.000627 | 0.000740 |

## Z-Best Gilroy - Santa Clara County, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

|                        | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|------------------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category               | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |        |        |
| NaturalGas Mitigated   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

## Z-Best Gilroy - Santa Clara County, Summer

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| General Light Industry | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| General Light Industry | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail****6.1 Mitigation Measures Area**



## Z-Best Gilroy - Santa Clara County, Summer

|             | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O | CO2e   |
|-------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-----|--------|
| Category    | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |     |        |
| Mitigated   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |

## 6.2 Area by SubCategory

Unmitigated

|                       | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| SubCategory           | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Architectural Coating | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |               | 0.0000        |               |     | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |               | 0.0000        |               |     | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

## Z-Best Gilroy - Santa Clara County, Summer

**6.2 Area by SubCategory****Mitigated**

|                       | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| SubCategory           | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Architectural Coating | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |               | 0.0000        |               |     | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |               | 0.0000        |               |     | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## Z-Best Gilroy - Santa Clara County, Summer

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

**11.0 Vegetation**

---

## Z-Best Gilroy - Santa Clara County, Winter

**Z-Best Gilroy**  
**Santa Clara County, Winter****1.0 Project Characteristics**

---

**1.1 Land Usage**

| Land Uses              | Size | Metric   | Lot Acreage | Floor Surface Area | Population |
|------------------------|------|----------|-------------|--------------------|------------|
| General Light Industry | 0.00 | 1000sqft | 157.32      | 0.00               | 0          |

**1.2 Other Project Characteristics**

|                             |                                |                             |       |                             |       |
|-----------------------------|--------------------------------|-----------------------------|-------|-----------------------------|-------|
| Urbanization                | Rural                          | Wind Speed (m/s)            | 2.2   | Precipitation Freq (Days)   | 58    |
| Climate Zone                | 4                              |                             |       | Operational Year            | 2022  |
| Utility Company             | Pacific Gas & Electric Company |                             |       |                             |       |
| CO2 Intensity<br>(lb/MW hr) | 641.35                         | CH4 Intensity<br>(lb/MW hr) | 0.029 | N2O Intensity<br>(lb/MW hr) | 0.006 |

**1.3 User Entered Comments & Non-Default Data**

## Z-Best Gilroy - Santa Clara County, Winter

## Project Characteristics -

Land Use - Acreage from Golder Drawing 5A - AERATED STATIC PILE COPOSTING PERMIT PACKAGE

Construction Phase - grading expected to take 3 months

trenching expected to take 2 months

construction expected to take 59 working days

Off-road Equipment - Equipment counts based on highest number of equipment planned for each phase

Grading "other construction equipment" is compactor

Off-road Equipment - Off Highway Truck is concrete pumping trucks (estimated 250 hp)

Other construction equipment is ride on concrete finishers (37 hp)

Off-road Equipment - equipment use from description of construction activities provided by email on 2/25/18

Trips and VMT - trip counts provided by site

## Grading -

| Table Name             | Column Name                     | Default Value | New Value        |
|------------------------|---------------------------------|---------------|------------------|
| tblConstDustMitigation | WaterUnpavedRoadMoistureContent | 0             | 5                |
| tblConstructionPhase   | NumDays                         | 620.00        | 78.00            |
| tblConstructionPhase   | NumDays                         | 440.00        | 69.00            |
| tblConstructionPhase   | NumDaysWeek                     | 5.00          | 6.00             |
| tblConstructionPhase   | NumDaysWeek                     | 5.00          | 6.00             |
| tblConstructionPhase   | NumDaysWeek                     | 5.00          | 6.00             |
| tblLandUse             | LotAcreage                      | 0.00          | 157.32           |
| tblOffRoadEquipment    | HorsePower                      | 402.00        | 250.00           |
| tblOffRoadEquipment    | HorsePower                      | 172.00        | 37.00            |
| tblOffRoadEquipment    | LoadFactor                      | 0.38          | 0.42             |
| tblOffRoadEquipment    | LoadFactor                      | 0.42          | 0.36             |
| tblOffRoadEquipment    | OffRoadEquipmentType            |               | Pavers           |
| tblOffRoadEquipment    | OffRoadEquipmentType            |               | Paving Equipment |
| tblOffRoadEquipment    | OffRoadEquipmentUnitAmount      | 0.00          | 1.00             |
| tblOffRoadEquipment    | OffRoadEquipmentUnitAmount      | 0.00          | 1.00             |



## Z-Best Gilroy - Santa Clara County, Winter

|                           |                            |       |           |
|---------------------------|----------------------------|-------|-----------|
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 2.00  | 5.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 0.00  | 2.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 0.00  | 1.00      |
| tblOffRoadEquipment       | OffRoadEquipmentUnitAmount | 0.00  | 1.00      |
| tblOffRoadEquipment       | PhaseName                  |       | Grading   |
| tblOffRoadEquipment       | PhaseName                  |       | Grading   |
| tblOffRoadEquipment       | PhaseName                  |       | Trenching |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblOffRoadEquipment       | PhaseName                  |       | Paving    |
| tblProjectCharacteristics | UrbanizationLevel          | Urban | Rural     |
| tblTripsAndVMT            | HaulingTripNumber          | 0.00  | 6,200.00  |
| tblTripsAndVMT            | VendorTripNumber           | 0.00  | 50.00     |
| tblTripsAndVMT            | WorkerTripNumber           | 23.00 | 33.00     |
| tblTripsAndVMT            | WorkerTripNumber           | 5.00  | 25.00     |

## 2.0 Emissions Summary

---

## Z-Best Gilroy - Santa Clara County, Winter

**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

|         | ROG    | NOx      | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O    | CO2e            |
|---------|--------|----------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|--------|-----------------|
| Year    | lb/day |          |         |        |               |              |            |                |               |             | lb/day   |                 |                 |        |        |                 |
| 2020    | 8.4700 | 111.2206 | 56.9371 | 0.1748 | 13.5151       | 3.6332       | 17.1483    | 4.3927         | 3.3453        | 7.7380      | 0.0000   | 17,543.56<br>36 | 17,543.56<br>36 | 3.7747 | 0.0000 | 17,637.93<br>08 |
| Maximum | 8.4700 | 111.2206 | 56.9371 | 0.1748 | 13.5151       | 3.6332       | 17.1483    | 4.3927         | 3.3453        | 7.7380      | 0.0000   | 17,543.56<br>36 | 17,543.56<br>36 | 3.7747 | 0.0000 | 17,637.93<br>08 |

**Mitigated Construction**

|         | ROG    | NOx      | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O    | CO2e            |
|---------|--------|----------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|--------|-----------------|
| Year    | lb/day |          |         |        |               |              |            |                |               |             | lb/day   |                 |                 |        |        |                 |
| 2020    | 8.4700 | 111.2206 | 56.9371 | 0.1748 | 6.2836        | 3.6332       | 9.9168     | 1.9892         | 3.3453        | 5.3345      | 0.0000   | 17,543.56<br>36 | 17,543.56<br>36 | 3.7747 | 0.0000 | 17,637.93<br>08 |
| Maximum | 8.4700 | 111.2206 | 56.9371 | 0.1748 | 6.2836        | 3.6332       | 9.9168     | 1.9892         | 3.3453        | 5.3345      | 0.0000   | 17,543.56<br>36 | 17,543.56<br>36 | 3.7747 | 0.0000 | 17,637.93<br>08 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 53.51         | 0.00         | 42.17      | 54.71          | 0.00          | 31.06       | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |

## Z-Best Gilroy - Santa Clara County, Winter

**2.2 Overall Operational****Unmitigated Operational**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Area         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated Operational**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Area         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

## Z-Best Gilroy - Santa Clara County, Winter

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

### 3.0 Construction Detail

---

#### Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|------------|------------|------------|------------|---------------|----------|-------------------|
| 1            | Grading    | Grading    | 4/1/2020   | 6/30/2020  | 6             | 78       |                   |
| 2            | Trenching  | Trenching  | 7/1/2020   | 8/31/2020  | 6             | 53       |                   |
| 3            | Paving     | Paving     | 9/1/2020   | 11/19/2020 | 6             | 69       |                   |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 429

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

## Z-Best Gilroy - Santa Clara County, Winter

| Phase Name | Offroad Equipment Type       | Amount | Usage Hours | Horse Power | Load Factor |
|------------|------------------------------|--------|-------------|-------------|-------------|
| Grading    | Graders                      | 1      | 8.00        | 187         | 0.41        |
| Grading    | Off-Highway Trucks           | 1      | 8.00        | 402         | 0.38        |
| Grading    | Other Construction Equipment | 1      | 8.00        | 172         | 0.42        |
| Grading    | Rubber Tired Dozers          | 1      | 8.00        | 247         | 0.40        |
| Grading    | Scrapers                     | 5      | 8.00        | 367         | 0.48        |
| Trenching  | Tractors/Loaders/Backhoes    | 2      | 8.00        | 97          | 0.37        |
| Paving     | Off-Highway Trucks           | 1      | 8.00        | 250         | 0.42        |
| Paving     | Other Construction Equipment | 1      | 8.00        | 37          | 0.36        |
| Paving     | Pavers                       | 1      | 8.00        | 130         | 0.42        |
| Paving     | Paving Equipment             | 1      | 8.00        | 132         | 0.36        |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Grading    | 9                       | 33.00              | 0.00               | 6,200.00            | 10.80              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Trenching  | 2                       | 5.00               | 0.00               | 0.00                | 10.80              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving     | 2                       | 25.00              | 50.00              | 0.00                | 10.80              | 6.60               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

Water Unpaved Roads



## Z-Best Gilroy - Santa Clara County, Winter

**3.2 Grading - 2020****Unmitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2               | Total CO2               | CH4           | N2O | CO2e                    |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------------|-------------------------|---------------|-----|-------------------------|
| Category      | lb/day        |                |                |               |                |               |                |                |               |               | lb/day   |                         |                         |               |     |                         |
| Fugitive Dust |               |                |                |               | 11.8548        | 0.0000        | 11.8548        | 3.9400         | 0.0000        | 3.9400        |          |                         | 0.0000                  |               |     | 0.0000                  |
| Off-Road      | 7.6770        | 87.9800        | 51.1712        | 0.1103        |                | 3.5558        | 3.5558         |                | 3.2714        | 3.2714        |          | 10,682.56<br>28         | 10,682.56<br>28         | 3.4550        |     | 10,768.93<br>68         |
| <b>Total</b>  | <b>7.6770</b> | <b>87.9800</b> | <b>51.1712</b> | <b>0.1103</b> | <b>11.8548</b> | <b>3.5558</b> | <b>15.4107</b> | <b>3.9400</b>  | <b>3.2714</b> | <b>7.2114</b> |          | <b>10,682.56<br/>28</b> | <b>10,682.56<br/>28</b> | <b>3.4550</b> |     | <b>10,768.93<br/>68</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx            | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |                |               |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.6710        | 23.1545        | 4.9249        | 0.0620        | 1.3892        | 0.0756        | 1.4648        | 0.3807         | 0.0724        | 0.4531        |          | 6,616.646<br>9         | 6,616.646<br>9         | 0.3137        |     | 6,624.488<br>7         |
| Vendor       | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Worker       | 0.1220        | 0.0860         | 0.8410        | 2.4500e-003   | 0.2711        | 1.6900e-003   | 0.2728        | 0.0719         | 1.5600e-003   | 0.0735        |          | 244.3538               | 244.3538               | 6.0600e-003   |     | 244.5053               |
| <b>Total</b> | <b>0.7930</b> | <b>23.2405</b> | <b>5.7659</b> | <b>0.0645</b> | <b>1.6603</b> | <b>0.0773</b> | <b>1.7376</b> | <b>0.4526</b>  | <b>0.0739</b> | <b>0.5266</b> |          | <b>6,861.000<br/>7</b> | <b>6,861.000<br/>7</b> | <b>0.3197</b> |     | <b>6,868.994<br/>0</b> |

## Z-Best Gilroy - Santa Clara County, Winter

**3.2 Grading - 2020****Mitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2               | Total CO2               | CH4           | N2O | CO2e                    |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------------|-------------------------|---------------|-----|-------------------------|
| Category      | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                         |                         |               |     |                         |
| Fugitive Dust |               |                |                |               | 4.6234        | 0.0000        | 4.6234        | 1.5366         | 0.0000        | 1.5366        |               |                         | 0.0000                  |               |     | 0.0000                  |
| Off-Road      | 7.6770        | 87.9800        | 51.1712        | 0.1103        |               | 3.5558        | 3.5558        |                | 3.2714        | 3.2714        | 0.0000        | 10,682.56<br>28         | 10,682.56<br>28         | 3.4550        |     | 10,768.93<br>68         |
| <b>Total</b>  | <b>7.6770</b> | <b>87.9800</b> | <b>51.1712</b> | <b>0.1103</b> | <b>4.6234</b> | <b>3.5558</b> | <b>8.1792</b> | <b>1.5366</b>  | <b>3.2714</b> | <b>4.8080</b> | <b>0.0000</b> | <b>10,682.56<br/>28</b> | <b>10,682.56<br/>28</b> | <b>3.4550</b> |     | <b>10,768.93<br/>68</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx            | CO            | SO2             | Fugitive PM10 | Exhaust PM10    | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5   | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4             | N2O | CO2e                   |
|--------------|---------------|----------------|---------------|-----------------|---------------|-----------------|---------------|----------------|-----------------|---------------|----------|------------------------|------------------------|-----------------|-----|------------------------|
| Category     | lb/day        |                |               |                 |               |                 |               |                |                 |               | lb/day   |                        |                        |                 |     |                        |
| Hauling      | 0.6710        | 23.1545        | 4.9249        | 0.0620          | 1.3892        | 0.0756          | 1.4648        | 0.3807         | 0.0724          | 0.4531        |          | 6,616.646<br>9         | 6,616.646<br>9         | 0.3137          |     | 6,624.488<br>7         |
| Vendor       | 0.0000        | 0.0000         | 0.0000        | 0.0000          | 0.0000        | 0.0000          | 0.0000        | 0.0000         | 0.0000          | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000          |     | 0.0000                 |
| Worker       | 0.1220        | 0.0860         | 0.8410        | 2.4500e-<br>003 | 0.2711        | 1.6900e-<br>003 | 0.2728        | 0.0719         | 1.5600e-<br>003 | 0.0735        |          | 244.3538               | 244.3538               | 6.0600e-<br>003 |     | 244.5053               |
| <b>Total</b> | <b>0.7930</b> | <b>23.2405</b> | <b>5.7659</b> | <b>0.0645</b>   | <b>1.6603</b> | <b>0.0773</b>   | <b>1.7376</b> | <b>0.4526</b>  | <b>0.0739</b>   | <b>0.5266</b> |          | <b>6,861.000<br/>7</b> | <b>6,861.000<br/>7</b> | <b>0.3197</b>   |     | <b>6,868.994<br/>0</b> |

## Z-Best Gilroy - Santa Clara County, Winter

**3.3 Trenching - 2020****Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Off-Road     | 0.4190        | 4.2103        | 4.5594        | 6.2100e-003        |               | 0.2662        | 0.2662        |                | 0.2449        | 0.2449        |          | 601.5370        | 601.5370        | 0.1946        |     | 606.4008        |
| <b>Total</b> | <b>0.4190</b> | <b>4.2103</b> | <b>4.5594</b> | <b>6.2100e-003</b> |               | <b>0.2662</b> | <b>0.2662</b> |                | <b>0.2449</b> | <b>0.2449</b> |          | <b>601.5370</b> | <b>601.5370</b> | <b>0.1946</b> |     | <b>606.4008</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|-----|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |     |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             |     | 0.0000         |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             |     | 0.0000         |
| Worker       | 0.0185        | 0.0130        | 0.1274        | 3.7000e-004        | 0.0411        | 2.6000e-004        | 0.0413        | 0.0109         | 2.4000e-004        | 0.0111        |          | 37.0233        | 37.0233        | 9.2000e-004        |     | 37.0463        |
| <b>Total</b> | <b>0.0185</b> | <b>0.0130</b> | <b>0.1274</b> | <b>3.7000e-004</b> | <b>0.0411</b> | <b>2.6000e-004</b> | <b>0.0413</b> | <b>0.0109</b>  | <b>2.4000e-004</b> | <b>0.0111</b> |          | <b>37.0233</b> | <b>37.0233</b> | <b>9.2000e-004</b> |     | <b>37.0463</b> |

## Z-Best Gilroy - Santa Clara County, Winter

**3.3 Trenching - 2020****Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Off-Road     | 0.4190        | 4.2103        | 4.5594        | 6.2100e-003        |               | 0.2662        | 0.2662        |                | 0.2449        | 0.2449        | 0.0000        | 601.5370        | 601.5370        | 0.1946        |     | 606.4008        |
| <b>Total</b> | <b>0.4190</b> | <b>4.2103</b> | <b>4.5594</b> | <b>6.2100e-003</b> |               | <b>0.2662</b> | <b>0.2662</b> |                | <b>0.2449</b> | <b>0.2449</b> | <b>0.0000</b> | <b>601.5370</b> | <b>601.5370</b> | <b>0.1946</b> |     | <b>606.4008</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|-----|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |     |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             |     | 0.0000         |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             |     | 0.0000         |
| Worker       | 0.0185        | 0.0130        | 0.1274        | 3.7000e-004        | 0.0411        | 2.6000e-004        | 0.0413        | 0.0109         | 2.4000e-004        | 0.0111        |          | 37.0233        | 37.0233        | 9.2000e-004        |     | 37.0463        |
| <b>Total</b> | <b>0.0185</b> | <b>0.0130</b> | <b>0.1274</b> | <b>3.7000e-004</b> | <b>0.0411</b> | <b>2.6000e-004</b> | <b>0.0413</b> | <b>0.0109</b>  | <b>2.4000e-004</b> | <b>0.0111</b> |          | <b>37.0233</b> | <b>37.0233</b> | <b>9.2000e-004</b> |     | <b>37.0463</b> |

## Z-Best Gilroy - Santa Clara County, Winter

**3.4 Paving - 2020****Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |                |               |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Off-Road     | 1.2252        | 10.7180        | 9.2121        | 0.0189        |               | 0.5169        | 0.5169        |                | 0.4755        | 0.4755        |          | 1,834.171<br>4         | 1,834.171<br>4         | 0.5932        |     | 1,849.001<br>6         |
| Paving       | 0.0000        |                |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                        | 0.0000                 |               |     | 0.0000                 |
| <b>Total</b> | <b>1.2252</b> | <b>10.7180</b> | <b>9.2121</b> | <b>0.0189</b> |               | <b>0.5169</b> | <b>0.5169</b> |                | <b>0.4755</b> | <b>0.4755</b> |          | <b>1,834.171<br/>4</b> | <b>1,834.171<br/>4</b> | <b>0.5932</b> |     | <b>1,849.001<br/>6</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.1928        | 5.4223        | 1.5577        | 0.0124        | 0.3062        | 0.0259        | 0.3321        | 0.0882         | 0.0248        | 0.1130        |          | 1,308.575<br>9         | 1,308.575<br>9         | 0.0663        |     | 1,310.232<br>8         |
| Worker       | 0.0924        | 0.0652        | 0.6371        | 1.8600e-003   | 0.2054        | 1.2800e-003   | 0.2067        | 0.0545         | 1.1800e-003   | 0.0557        |          | 185.1165               | 185.1165               | 4.5900e-003   |     | 185.2313               |
| <b>Total</b> | <b>0.2852</b> | <b>5.4875</b> | <b>2.1948</b> | <b>0.0142</b> | <b>0.5115</b> | <b>0.0272</b> | <b>0.5387</b> | <b>0.1426</b>  | <b>0.0260</b> | <b>0.1686</b> |          | <b>1,493.692<br/>4</b> | <b>1,493.692<br/>4</b> | <b>0.0709</b> |     | <b>1,495.464<br/>1</b> |

## Z-Best Gilroy - Santa Clara County, Winter

**3.4 Paving - 2020****Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day        |                        |                        |               |     |                        |
| Off-Road     | 1.2252        | 5.8263        | 9.2121        | 0.0189        |               | 0.5169        | 0.5169        |                | 0.4755        | 0.4755        | 0.0000        | 1,834.171<br>4         | 1,834.171<br>4         | 0.5932        |     | 1,849.001<br>6         |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                        | 0.0000                 |               |     | 0.0000                 |
| <b>Total</b> | <b>1.2252</b> | <b>5.8263</b> | <b>9.2121</b> | <b>0.0189</b> |               | <b>0.5169</b> | <b>0.5169</b> |                | <b>0.4755</b> | <b>0.4755</b> | <b>0.0000</b> | <b>1,834.171<br/>4</b> | <b>1,834.171<br/>4</b> | <b>0.5932</b> |     | <b>1,849.001<br/>6</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.1928        | 5.4223        | 1.5577        | 0.0124        | 0.3062        | 0.0259        | 0.3321        | 0.0882         | 0.0248        | 0.1130        |          | 1,308.575<br>9         | 1,308.575<br>9         | 0.0663        |     | 1,310.232<br>8         |
| Worker       | 0.0924        | 0.0652        | 0.6371        | 1.8600e-003   | 0.2054        | 1.2800e-003   | 0.2067        | 0.0545         | 1.1800e-003   | 0.0557        |          | 185.1165               | 185.1165               | 4.5900e-003   |     | 185.2313               |
| <b>Total</b> | <b>0.2852</b> | <b>5.4875</b> | <b>2.1948</b> | <b>0.0142</b> | <b>0.5115</b> | <b>0.0272</b> | <b>0.5387</b> | <b>0.1426</b>  | <b>0.0260</b> | <b>0.1686</b> |          | <b>1,493.692<br/>4</b> | <b>1,493.692<br/>4</b> | <b>0.0709</b> |     | <b>1,495.464<br/>1</b> |

**4.0 Operational Detail - Mobile**



## Z-Best Gilroy - Santa Clara County, Winter

## 4.1 Mitigation Measures Mobile

|             | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O | CO2e   |
|-------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-----|--------|
| Category    | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |     |        |
| Mitigated   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |

## 4.2 Trip Summary Information

|                        | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
| Land Use               | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| General Light Industry | 0.00                    | 0.00     | 0.00   |             |            |
| Total                  | 0.00                    | 0.00     | 0.00   |             |            |

## 4.3 Trip Type Information

|                        | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| Land Use               | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| General Light Industry | 14.70      | 6.60       | 6.60        | 59.00      | 28.00      | 13.00       | 92             | 5        | 3       |

## 4.4 Fleet Mix

| Land Use               | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| General Light Industry | 0.610498 | 0.036775 | 0.183084 | 0.106123 | 0.014413 | 0.005007 | 0.012610 | 0.021118 | 0.002144 | 0.001548 | 0.005312 | 0.000627 | 0.000740 |

## Z-Best Gilroy - Santa Clara County, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

|                        | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|------------------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category               | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |        |        |
| NaturalGas Mitigated   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

## Z-Best Gilroy - Santa Clara County, Winter

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| General Light Industry | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| General Light Industry | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail****6.1 Mitigation Measures Area**

## Z-Best Gilroy - Santa Clara County, Winter

|             | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O | CO2e   |
|-------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-----|--------|
| Category    | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |     |        |
| Mitigated   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |

## 6.2 Area by SubCategory

Unmitigated

|                       | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| SubCategory           | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Architectural Coating | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |               | 0.0000        |               |     | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |               | 0.0000        |               |     | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

## Z-Best Gilroy - Santa Clara County, Winter

**6.2 Area by SubCategory****Mitigated**

|                       | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| SubCategory           | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Architectural Coating | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |               | 0.0000        |               |     | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |               | 0.0000        |               |     | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## Z-Best Gilroy - Santa Clara County, Winter

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

**11.0 Vegetation**

---



**Attachment B**  
**EMFAC Output**

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air District

Region: BAY AREA AQMD

Calendar Year: 2020

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

| Region     | Calendar Yr | Vehicle Cat | Model Year | Speed     | Fuel | ROG_RUNEX   | CO_RUNEX    | NOx_RUNEX   | CO2_RUNEX   | CH4_RUNEX   | PM10_RUNEX  | PM2_5_RUNEX | SOx_RUNEX   | SOx_STREX   | N2O_RUNEX   |
|------------|-------------|-------------|------------|-----------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| BAY AREA / | 2020        | LDA         | Aggregate  | Aggregate | GAS  | 0.013321179 | 0.760834107 | 0.053576977 | 276.358803  | 0.003284054 | 0.001605795 | 0.001476507 | 0.002734794 | 0.000581507 | 0.005456194 |
| BAY AREA / | 2020        | T7 tractor  | Aggregate  | Aggregate | DSL  | 0.161086208 | 0.597015221 | 4.579019292 | 1409.592818 | 0.007482037 | 0.095204504 | 0.091086    | 0.013317134 | 0           | 0.221568361 |



# HEXAGON TRANSPORTATION CONSULTANTS, INC.

## Memorandum

**Date:** January 30, 2020  
**To:** John Doyle, Z-Best Products  
**From:** Robert Del Rio, T.E.  
**Subject:** Z-Best Traffic Operations and Site Access Analysis

## Introduction

Hexagon Transportation Consultants, Inc. has completed a traffic operations and site access analysis for the proposed facility expansion and site operations at the existing Z-Best Compost Facility located along State Route (SR) 25, south of the City of Gilroy in southern Santa Clara County, California. The proposed project consists of material processing operation improvements on the existing site to more efficiently process a larger volume of material. Access to the project site is currently provided via one stop-controlled full access entrance along the south side of SR 25 (for ease of reference, SR 25 will be referred to as an east/west roadway within this report) located approximately 600 feet west of the Bolsa Road intersection with SR 25. As part of the proposed facility expansion, the project also is proposing to replace the existing access point along SR 25 with a new access point that will align with Bolsa Road via a new fourth leg at the existing SR 25 and Bolsa Road intersection. The project site location is presented in Figure 1.

The purpose of the traffic operations analysis is to determine the magnitude of project traffic currently on the adjacent roadway system and estimate the amount of additional traffic that would be added to the roadway system as a result of the proposed facility and operations expansion (hereafter referred to as the proposed project). Existing operational and/or safety constraints at the existing site access point and the proposed new access point at Bolsa Road and on the surrounding roadways and intersections also was evaluated. The analysis of the transportation system is based on applicable local and regional standards.

## Scope of Study

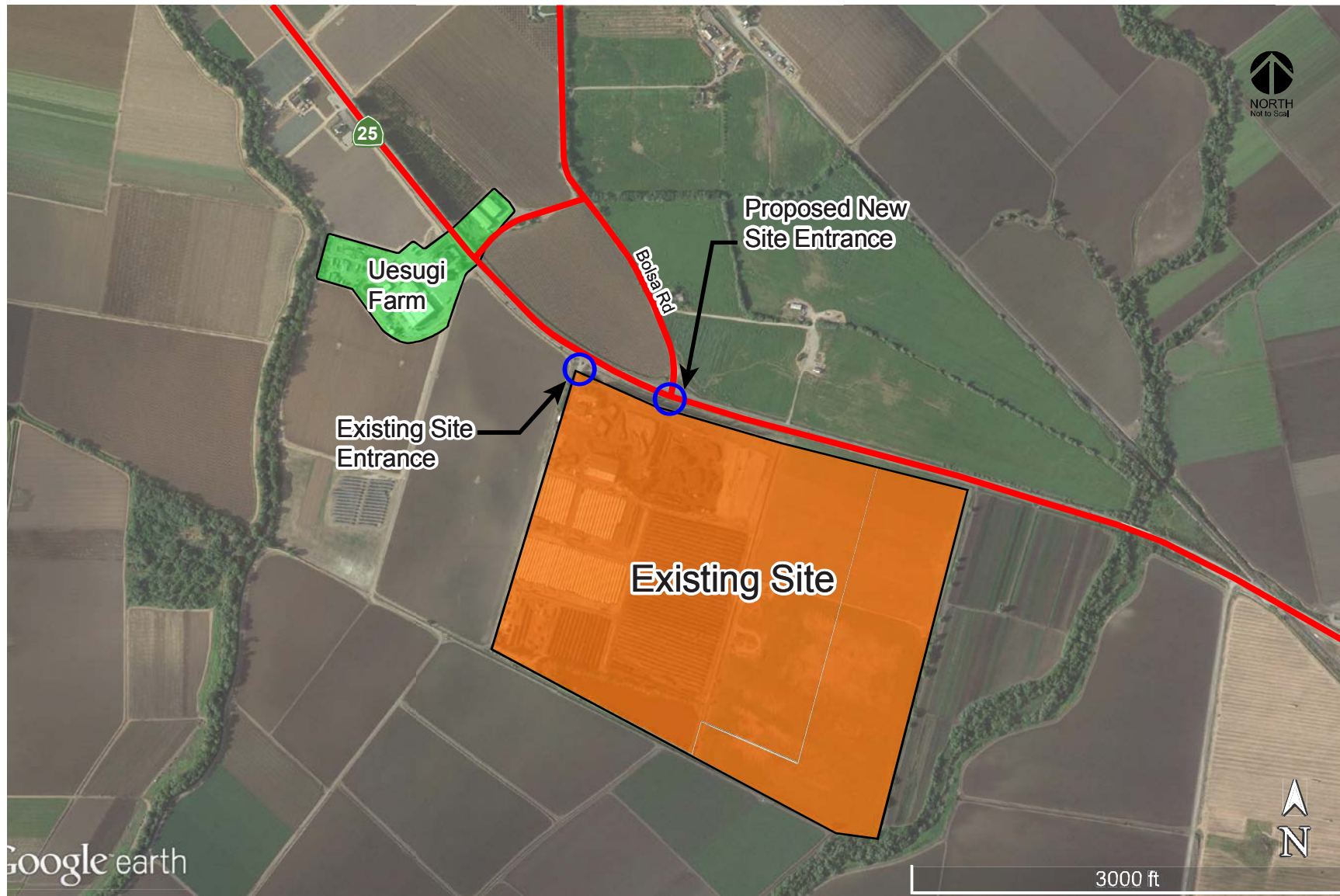
The traffic operations analyses at the site access points consist of peak hour level of service analysis, signal warrant checks, and queuing analysis. The analysis includes an evaluation of traffic conditions during the AM (7:00AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak commute periods at the following two intersections:

SR 25 and Existing Project Entrance

SR 25 and Bolsa Road/Proposed Bolsa Road Project Entrance

Additionally, highway segments along SR 25, east and west of the project site, also were evaluated to identify any existing deficiencies and to quantify the amount of additional traffic that is projected to be added by the proposed project.

**Figure 1**  
**Z-Best Site Location**



## Study Scenarios

The following study scenarios study were evaluated:

**Existing Conditions:** Existing conditions represent existing peak-hour traffic volumes obtained from intersection turn movement counts completed in 2015.

**Existing Plus Project Conditions:** Existing plus project conditions represent existing peak-hour traffic volumes with the addition of the traffic estimated to be generated by the proposed facility expansion. This scenario assumes no changes to the existing roadway network or the existing project access.

**Existing Plus Project with a Proposed Access Point at Bolsa Road Conditions:** Existing plus project conditions with the adjustment of traffic volumes to reflect a new project access point at Bolsa Road.

## Trip Generation, Distribution, and Assignment

### Existing Facility Operations

Currently, the Z-Best facility is permitted to receive up to 1500 tons per day of feedstock material, inert material for facility maintenance, and additives used in finished products. Feedstock includes both green waste and municipal solid waste (MSW). Up to 2,500 tons per day of material may be received a maximum of 15 days per year and subset peak tonnages are set at 1,300 tons per day for green waste, 700 tons per day of MSW, and 500 tons per day of other material. The current hours of operation for the Z-Best facility are Monday through Friday 6 AM to 5 PM and Saturday 6 AM to 12 PM. The existing use permit allows the processing building to operate from 6 AM to 10 PM, the overall facility from 6 AM to 6 PM, and the windrow materials receiving, screening and turning (on-site) to be 24 hours a day. The facility is currently operated by 58 full-time employees (allowable maximum number of employees by current use permit is 60 employees) in five shift times (5 AM to 5 PM, 7 AM to 5 PM, 5 PM to 5 AM, 5 PM to 1:30 AM, and 6 AM to 5 PM), with the majority of the employees (30 employees) working between 5 AM and 5 PM. The existing work shift times and number of employees per shift are summarized in Table 1.

### Existing Trip Generation Estimates

Project trips currently utilizing the project entrance and on the surrounding roadway system were determined based upon truck scale data provided by Z-Best and count data collected at the project entrance.

The truck scale data provided by Z-Best includes the daily number of inbound and outbound trucks by hour that passed over the on-site scales during the period of October 2013 through September 2014, which, according to Z-Best staff, represent peak operations of the facility over the past two years. The existing count data was collected in August 2015 and consists of (1) peak-hour intersection turn-movement counts collected at the site's entrance during the AM peak period (7:00 AM to 9:00 AM) and the PM peak period (4:00 PM to 6:00 PM) and (2) 24-hour vehicle composition video counts also collected at the site's entrance. The new 24-hour vehicle composition data were compared with the truck data provided by Z-Best to validate the truck scale data. The number of daily and peak hour trips to the site associated with all other non-truck traffic also were obtained from the new traffic counts.

Other non-truck vehicular trips associated with the site include cars or smaller trucks driven by employees or vendors and parts and supply deliveries. Both the truck scale data provided by Z-Best and new count data are contained in the Appendix. The existing site trip generation data is summarized in Table 2.

**Table 1**  
**Existing and Proposed Employee Work Shift Times**

| Hours of Operation   | Existing Conditions <sup>1</sup> |         |         |         | Proposed Daily Conditions <sup>2</sup> |         |         |         | Peak Season Conditions <sup>2</sup> |      |         |         |
|----------------------|----------------------------------|---------|---------|---------|----------------------------------------|---------|---------|---------|-------------------------------------|------|---------|---------|
| 12:00 AM to 1:00 AM  |                                  |         | SHIFT 3 | SHIFT 4 |                                        |         | SHIFT 3 | SHIFT 4 |                                     |      |         | SHIFT 3 |
| 1:00 AM to 2:00 AM   |                                  |         |         | 4       |                                        |         |         |         |                                     |      |         |         |
| 2:00 AM to 3:00 AM   |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |
| 3:00 AM to 4:00 AM   |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |
| 4:00 AM to 5:00 AM   | 30 *                             |         |         |         | 47 *                                   |         |         |         | 45 *                                |      |         |         |
| 5:00 AM to 6:00 AM   |                                  |         | 5       |         |                                        |         | 10      | 13      |                                     |      |         | 15      |
| 6:00 AM to 7:00 AM   | SHIFT 1                          |         |         | 2 *     | SHIFT 1                                |         |         | 2 *     | SHIFT 1                             |      |         |         |
| 7:00 AM to 8:00 AM   |                                  | SHIFT 2 |         | 5       |                                        | SHIFT 2 |         | 5       |                                     | 30 * |         |         |
| 8:00 AM to 9:00 AM   |                                  |         |         |         |                                        |         |         |         |                                     |      | SHIFT 2 |         |
| 9:00 AM to 10:00 AM  |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |
| 10:00 AM to 11:00 AM |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |
| 11:00 AM to 12:00 PM |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |
| 12:00 PM to 1:00 PM  |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |
| 1:00 PM to 2:00 PM   |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |
| 2:00 PM to 3:00 PM   |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |
| 3:00 PM to 4:00 PM   |                                  |         |         |         | 47                                     |         |         |         |                                     |      |         |         |
| 4:00 PM to 5:00 PM   |                                  |         | 5 *     | 4 *     |                                        |         | 10 *    |         | 45                                  |      |         |         |
| 5:00 PM to 6:00 PM   | 30                               | 17      |         | 2       |                                        | 18      | SHIFT   | 2       |                                     |      |         | 15 *    |
| 6:00 PM to 7:00 PM   |                                  |         | 3       | 4       |                                        |         | 3       |         |                                     | 30   |         | SHIFT 3 |
| 7:00 PM to 8:00 PM   |                                  |         |         |         |                                        |         |         | 13 *    |                                     |      |         |         |
| 8:00 PM to 9:00 PM   |                                  |         |         |         |                                        |         |         | SHIFT 4 |                                     |      |         |         |
| 9:00 PM to 10:00 PM  |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |
| 10:00 PM to 11:00 PM |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |
| 11:00 PM to 12:00 AM |                                  |         |         |         |                                        |         |         |         |                                     |      |         |         |

Notes:

<sup>1</sup> Existing facility shift times and number of employees per shift (assumes employees will arrive at the site 15 minutes prior to the beginning of their work shifts and leave the site 15 minutes after completion of their work shift).

<sup>2</sup> Proposed facility shift times and assumed number of employees per shift (assumes employees will arrive at the site 15 minutes prior to the beginning of their work shifts and leave the site 15 minutes after completion of their work shift).

\* Number of employees per work shift.



**Table 2**  
**Existing Site-Generated Trips**

| Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Daily |     |       | Peak Hours |     |       |    |     |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-------|------------|-----|-------|----|-----|-------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |     |       | AM         |     |       | PM |     |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | In    | Out | Total | In         | Out | Total | In | Out | Total |
| <b>Total Vehicle Trips</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |     |       |            |     |       |    |     |       |
| Driveway Counts <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 192   | 198 | 390   | 10         | 9   | 19    | 9  | 27  | 36    |
| <b>Heavy Truck Trips</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     |       |            |     |       |    |     |       |
| Truck Trips (Counts) <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 104   | 105 | 209   | 6          | 8   | 14    | 5  | 5   | 10    |
| Truck Trips (Scale Data) <sup>3</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 132   | 132 | 264   | 13         | 13  | 26    | 10 | 10  | 20    |
| Notes:<br>AM = one peak-hour between 7:00 - 9:00 am<br>PM = one peak-hour between 4:00 - 6:00 pm<br>Daily = 24-hour total<br><sup>1</sup> Based on peak hour intersection turn-movement and 24-hour daily counts completed at the project site entrance in August 2015.<br><sup>2</sup> Based on vehicle composition obtained from 24-hour daily counts completed at project site entrance in August 2015.<br><sup>3</sup> Based on truck scale data provided by Z-Best (October 1st, 2013 to December 31st, 2013). |       |     |       |            |     |       |    |     |       |

The count data collected at the site entrance indicates that the facility currently generates 390 daily vehicle trips with 19 trips occurring during the AM peak hour and 36 trips occurring during the PM peak hour.

Based on the vehicle composition data collected at the site entrance, approximately 209 daily truck trips are currently generated by the facility. The truck scale data indicated a peak of 264 daily truck trips. The number of truck trips obtained from the traffic counts is approximately 20% less than that indicated by the truck scale data. However, the truck scale data is reflective of a period of peak operations for the facility over the past two years.

Hourly site-generated trips, both truck and non-truck trips, were estimated by correlating the 24-hour count information collected at the site entrance with the current number of employees and their shift-times. Based on this information, all components of traffic currently accessing and leaving the project site throughout the day were estimated (see Table 3). It is estimated that approximately 208 truck trips and 182 non-truck trips (116 employee trips and 66 “other” trips), for a total of 390 total trips, are currently generated by the Z-Best Facility on an average weekday.

### Proposed Facility Expansion Operations – Typical Day

The proposed facility and operations expansion (the project), involves replacing the current method of composting MSW with a more advanced, far more efficient method of composting. The current CTI composting system is proposed to be replaced with a “State of the Art” ECS composting method. With these proposed improvements, Z-Best will be able to compost more than double the amount of MSW feedstock within the same time period and within the same footprint on the site. Subsequently, Z-Best is proposing an increase in the daily feedstock tonnage limit from 1,500 tons per day to 2,750 tons per day. The additional feedstock tonnage is proposed to be received only during non-peak traffic hours (9:00 am to 3:00 pm and 8:00 pm to 4:00 am).

The number of employees also is proposed to increase from the current 58 employees (60 allowed by the use permit) to 80-85 employees (with a maximum of 90 employees allowed by the use permit). The

**Table 3**  
**Typical Daily Site-Generated Trips**

| Hours of Operation   |            | Existing Conditions <sup>1</sup>           |                                        |       |                  | Proposed Conditions <sup>2</sup> |                           |                                         |                       |                              |                        |                                                 |     |                          |       |     |       | Total Site Trips |     |       | Net Additional Trips |    |  |
|----------------------|------------|--------------------------------------------|----------------------------------------|-------|------------------|----------------------------------|---------------------------|-----------------------------------------|-----------------------|------------------------------|------------------------|-------------------------------------------------|-----|--------------------------|-------|-----|-------|------------------|-----|-------|----------------------|----|--|
|                      |            | Non-Truck Trips (Based on Driveway Counts) | Truck Trips (Based on Driveway Counts) | Total | Non-Truck Trips  |                                  |                           |                                         | Truck Trips           |                              |                        |                                                 |     |                          |       |     |       |                  |     |       |                      |    |  |
|                      |            |                                            |                                        |       | Total Site Trips |                                  | Additional Employee Trips | Existing Employee Trips/New Shift Times | Other Non-Truck Trips | Total Future Non-Truck Trips | Additional Truck Trips | Existing Truck Trips/Off-Peak Hours Restriction |     | Total Future Truck Trips | Total |     |       |                  |     |       |                      |    |  |
|                      |            |                                            |                                        |       | In               | Out                              |                           |                                         |                       |                              |                        | Total                                           | In  |                          |       | Out | Total | In               | Out | Total |                      |    |  |
| 12:00 AM to 1:00 AM  | Arrivals   | 0                                          | 1                                      | 1     | 1                | 0                                | 1                         | 1                                       |                       |                              | 0                      | 0                                               | 7   | 7                        | 14    | 14  | 14    | 14               | 28  | 13    | 14                   | 27 |  |
|                      | Departures | 0                                          | 0                                      | 0     |                  |                                  |                           | 0                                       | 0                     |                              |                        | 0                                               | 0   | 7                        | 7     | 14  | 14    | 14               |     |       |                      |    |  |
| 1:00 AM to 2:00 AM   | Arrivals   | 0                                          | 0                                      | 0     | 0                | 0                                | 1                         | 1                                       |                       |                              | 0                      | 0                                               | 7   | 7                        | 14    | 14  | 14    | 14               | 14  | 14    | 27                   |    |  |
|                      | Departures | 0                                          | 1                                      | 1     |                  |                                  |                           | 0                                       | 0                     |                              |                        | 0                                               | 0   | 7                        | 7     | 14  | 14    | 14               |     |       |                      |    |  |
| 2:00 AM to 3:00 AM   | Arrivals   | 0                                          | 0                                      | 0     | 0                | 0                                | 0                         | 0                                       |                       |                              | 0                      | 0                                               | 7   | 7                        | 14    | 14  | 14    | 14               | 14  | 14    | 28                   |    |  |
|                      | Departures | 0                                          | 0                                      | 0     |                  |                                  |                           | 0                                       | 0                     |                              |                        | 0                                               | 0   | 7                        | 7     | 14  | 14    | 14               |     |       |                      |    |  |
| 3:00 AM to 4:00 AM   | Arrivals   | 0                                          | 3                                      | 3     | 3                | 3                                | 5                         | 8                                       |                       |                              | 0                      | 0                                               | 7   | 7                        | 14    | 14  | 14    | 14               | 14  | 28    | 20                   |    |  |
|                      | Departures | 4                                          | 1                                      | 5     |                  |                                  |                           | 0                                       | 0                     |                              |                        | 0                                               | 0   | 7                        | 7     | 14  | 14    | 14               |     |       |                      |    |  |
| 4:00 AM to 5:00 AM   | Arrivals   | 5                                          | 5                                      | 10    | 10               | 5                                | 15                        |                                         | 17                    | 30                           | 0                      | 47                                              |     | 5                        | 5     | 52  | 52    | 52               | 42  | 13    | 55                   |    |  |
|                      | Departures | 0                                          | 5                                      | 5     |                  |                                  |                           | 9                                       | 4                     | 0                            | 13                     |                                                 |     | 5                        | 5     | 18  | 18    | 18               |     |       |                      |    |  |
| 5:00 AM to 6:00 AM   | Arrivals   | 2                                          | 5                                      | 7     | 7                | 3                                | 10                        |                                         |                       | 2                            | 2                      |                                                 |     | 5                        | 5     | 7   | 7     | 7                | 0   | 12    | 12                   |    |  |
|                      | Departures | 0                                          | 3                                      | 3     |                  |                                  |                           | 5                                       | 5                     | 0                            | 10                     |                                                 |     | 5                        | 5     | 15  | 15    | 15               |     |       |                      |    |  |
| 6:00 AM to 7:00 AM   | Arrivals   | 33                                         | 7                                      | 40    | 40               | 7                                | 47                        |                                         | 1                     | 17                           | 0                      | 18                                              |     | 5                        | 5     | 23  | 23    | 23               | -17 | -2    | -19                  |    |  |
|                      | Departures | 0                                          | 7                                      | 7     |                  |                                  |                           | 0                                       | 0                     |                              |                        | 0                                               |     | 5                        | 5     | 5   | 5     | 5                |     |       |                      |    |  |
| 7:00 AM to 8:00 AM   | Arrivals   | 4                                          | 6                                      | 10    | 10               | 11                               | 21                        |                                         |                       | 0                            | 0                      |                                                 |     | 0                        | 0     | 0   | 0     | 0                | -10 | -11   | -21                  |    |  |
|                      | Departures | 3                                          | 8                                      | 11    |                  |                                  |                           | 0                                       | 0                     |                              |                        | 0                                               |     | 0                        | 0     | 0   | 0     | 0                |     |       |                      |    |  |
| 8:00 AM to 9:00 AM   | Arrivals   | 6                                          | 6                                      | 12    | 12               | 5                                | 17                        |                                         |                       | 1                            | 1                      |                                                 |     | 0                        | 1     | 1   | 1     | 1                | -11 | -4    | -15                  |    |  |
|                      | Departures | 3                                          | 2                                      | 5     |                  |                                  |                           | 1                                       | 1                     |                              |                        | 1                                               |     | 0                        | 1     | 1   | 1     | 1                |     |       |                      |    |  |
| 9:00 AM to 10:00 AM  | Arrivals   | 6                                          | 13                                     | 19    | 19               | 20                               | 39                        |                                         |                       | 6                            | 6                      |                                                 | 8   | 5                        | 13    | 19  | 19    | 19               | 0   | 0     | 0                    |    |  |
|                      | Departures | 7                                          | 13                                     | 20    |                  |                                  |                           | 7                                       | 7                     |                              |                        | 8                                               | 5   | 13                       | 20    | 20  | 20    | 20               |     |       |                      |    |  |
| 10:00 AM to 11:00 AM | Arrivals   | 9                                          | 7                                      | 16    | 16               | 23                               | 39                        |                                         |                       | 9                            | 9                      |                                                 | 7   | 5                        | 12    | 21  | 21    | 21               | 5   | 0     | 5                    |    |  |
|                      | Departures | 11                                         | 12                                     | 23    |                  |                                  |                           | 11                                      | 11                    |                              |                        | 7                                               | 5   | 12                       | 23    | 23  | 23    | 23               |     |       |                      |    |  |
| 11:00 AM to 12:00 PM | Arrivals   | 4                                          | 8                                      | 12    | 12               | 16                               | 28                        |                                         |                       | 4                            | 4                      |                                                 | 7   | 5                        | 12    | 16  | 16    | 16               | 4   | 2     | 6                    |    |  |
|                      | Departures | 6                                          | 10                                     | 16    |                  |                                  |                           | 6                                       | 6                     |                              |                        | 7                                               | 5   | 12                       | 18    | 18  | 18    | 18               |     |       |                      |    |  |
| 12:00 PM to 1:00 PM  | Arrivals   | 4                                          | 10                                     | 14    | 14               | 15                               | 29                        |                                         |                       | 4                            | 4                      |                                                 | 7   | 5                        | 12    | 16  | 16    | 16               |     |       |                      |    |  |
|                      | Departures | 5                                          | 10                                     | 15    |                  |                                  |                           | 5                                       | 5                     |                              |                        | 7                                               | 5   | 12                       | 17    | 17  | 17    | 17               | 2   | 2     | 4                    |    |  |
| 1:00 PM to 2:00 PM   | Arrivals   | 3                                          | 12                                     | 15    | 15               | 13                               | 28                        |                                         |                       | 3                            | 3                      |                                                 | 7   | 6                        | 13    | 16  | 16    | 16               | 1   | 4     | 5                    |    |  |
|                      | Departures | 4                                          | 9                                      | 13    |                  |                                  |                           | 4                                       | 4                     |                              |                        | 7                                               | 6   | 13                       | 17    | 17  | 17    | 17               |     |       |                      |    |  |
| 2:00 PM to 3:00 PM   | Arrivals   | 3                                          | 8                                      | 11    | 11               | 10                               | 21                        |                                         |                       | 2                            | 2                      |                                                 | 7   | 6                        | 13    | 15  | 15    | 15               | 4   | 4     | 8                    |    |  |
|                      | Departures | 3                                          | 7                                      | 10    |                  |                                  |                           | 1                                       | 1                     |                              |                        | 7                                               | 6   | 13                       | 14    | 14  | 14    | 14               |     |       |                      |    |  |
| 3:00 PM to 4:00 PM   | Arrivals   | 3                                          | 5                                      | 8     | 8                | 13                               | 21                        |                                         |                       | 0                            | 0                      |                                                 |     |                          | 0     | 0   | 0     | 0                |     |       |                      |    |  |
|                      | Departures | 6                                          | 7                                      | 13    |                  |                                  |                           | 17                                      | 30                    | 0                            | 47                     |                                                 |     |                          | 0     | 47  | 47    | 47               | -8  | 34    | 26                   |    |  |
| 4:00 PM to 5:00 PM   | Arrivals   | 5                                          | 5                                      | 10    | 10               | 27                               | 37                        |                                         |                       | 5                            | 5                      |                                                 |     |                          | 0     | 10  | 10    | 10               | 0   | -27   | -27                  |    |  |
|                      | Departures | 22                                         | 5                                      | 27    |                  |                                  |                           | 0                                       | 0                     |                              |                        | 0                                               |     |                          | 0     | 0   | 0     | 0                |     |       |                      |    |  |
| 5:00 PM to 6:00 PM   | Arrivals   | 0                                          | 1                                      | 1     | 1                | 20                               | 21                        |                                         |                       | 0                            | 0                      |                                                 |     |                          | 0     | 0   | 0     | 0                |     |       |                      |    |  |
|                      | Departures | 18                                         | 2                                      | 20    |                  |                                  |                           | 1                                       | 19                    | 0                            | 20                     |                                                 |     |                          | 0     | 20  | 20    | 20               | -1  | 0     | -1                   |    |  |
| 6:00 PM to 7:00 PM   | Arrivals   | 1                                          | 0                                      | 1     | 1                | 2                                | 3                         |                                         |                       | 1                            | 1                      |                                                 |     |                          | 0     | 1   | 1     | 1                | 0   | -2    | -2                   |    |  |
|                      | Departures | 1                                          | 1                                      | 2     |                  |                                  |                           |                                         | 0                     |                              | 0                      |                                                 |     |                          | 0     | 0   | 0     | 0                |     |       |                      |    |  |
| 7:00 PM to 8:00 PM   | Arrivals   | 0                                          | 0                                      | 0     | 0                | 0                                | 0                         |                                         |                       | 9                            | 4                      |                                                 |     |                          | 0     | 13  | 13    | 13               | 13  | 0     | 13                   |    |  |
|                      | Departures | 0                                          | 0                                      | 0     |                  |                                  |                           |                                         | 0                     |                              |                        |                                                 |     |                          | 0     | 0   | 0     | 0                |     |       |                      |    |  |
| 8:00 PM to 9:00 PM   | Arrivals   | 0                                          | 1                                      | 1     | 1                | 1                                | 2                         |                                         |                       | 0                            | 0                      |                                                 | 8   | 8                        | 16    | 16  | 16    | 16               | 15  | 15    | 30                   |    |  |
|                      | Departures | 0                                          | 1                                      | 1     |                  |                                  |                           | 0                                       | 0                     |                              |                        | 8                                               | 8   | 16                       | 16    | 16  | 16    | 16               |     |       |                      |    |  |
| 9:00 PM to 10:00 PM  | Arrivals   | 0                                          | 0                                      | 0     | 0                | 0                                | 0                         |                                         |                       | 0                            | 0                      |                                                 | 7   | 7                        | 14    | 14  | 14    | 14               | 14  | 14    | 28                   |    |  |
|                      | Departures | 0                                          | 0                                      | 0     |                  |                                  |                           | 0                                       | 0                     |                              |                        | 7                                               | 7   | 14                       | 14    | 14  | 14    | 14               |     |       |                      |    |  |
| 10:00 PM to 11:00 PM | Arrivals   | 0                                          | 1                                      | 1     | 1                | 1                                | 2                         |                                         |                       | 0                            | 0                      |                                                 | 7   | 7                        | 14    | 14  | 14    | 14               | 13  | 14    | 27                   |    |  |
|                      | Departures | 1                                          | 0                                      | 1     |                  |                                  |                           | 1                                       | 1                     |                              |                        | 7                                               | 7   | 14                       | 15    | 15  | 15    | 15               |     |       |                      |    |  |
| 11:00 PM to 12:00 AM | Arrivals   | 0                                          | 0                                      | 0     | 0                | 0                                | 0                         |                                         |                       | 0                            | 0                      |                                                 | 7   | 7                        | 14    | 14  | 14    | 14               | 14  | 14    | 28                   |    |  |
|                      | Departures | 0                                          | 0                                      | 0     |                  |                                  |                           | 0                                       | 0                     |                              |                        | 7                                               | 7   | 14                       | 14    | 14  | 14    | 14               |     |       |                      |    |  |
| TOTAL DAILY TRIPS:   |            | 182                                        | 208                                    | 390   | 192              | 198                              | 390                       | 64                                      | 116                   | 66                           | 246                    | 200                                             | 208 | 408                      | 654   | 324 | 330   | 654              | 132 | 132   | 264                  |    |  |

## Notes:

<sup>1</sup> Existing hourly project site traffic activity was estimated based on the existing 24-hour vehicle composition traffic counts conducted at the project site entrance in August 2015, in combination with information provided by Z-Best on their current number of employees, employee shift times, and hours of operation.

<sup>2</sup> Hourly site traffic projections associated with the proposed Z-Best facility operations expansion. These projections are based on the anticipated increase in the number of employees and number of trucks accessing the site daily, the proposed new employee shift times, and the restriction of all inbound truck traffic to the site during the off-peak hours only (8:00PM - 4:00AM) and outbound truck traffic to the hours of (4:00AM - 7:00AM and 9:00 AM to 3:00 PM).

proposed new work shift times would be the following: 5 AM to 3 PM, 7 AM to 5 PM, 5 PM to 5 AM, 8 PM to 4:30 AM and 6 AM to 5 PM. The work shift times are used to estimate the peak hour traffic that may be generated by the proposed facility expansion. The proposed work shift times and assumed number of employees per shift are summarized in Table 1.

### **Proposed Facility Expansion Trip Generation Estimates – Typical Day**

The additional traffic associated with the expansion of the facility operations were estimated and assigned to the roadway network based on anticipated increase in the number of employees, employee work shift times, additional truck traffic, and assuming all new additional truck traffic would be generated outside of the commute hours between 9:00 am to 3:00 pm and 8:00 pm to 4:00 am.

It is anticipated that with the expanded operations, the facility would generate an additional 100 trucks per day including 57 trucks associated with Green Waste and 43 trucks associated with the delivery of finished product and landfill material (trash/ADC). The existing and additional truck trips would access the site throughout the entire day, with the exception of the commute periods between 7-9 AM and 3-8PM. However, there are currently truck trips that occur between the hours of 4-7 AM that would continue to occur with the proposed facility expansion. Based on this assumption, the time restrictions truck trips represent no more than an additional 16 truck trips per hour.

The proposed expansion would also increase the number of employees from the existing 58 employees to a maximum of 90 employees (although the applicant anticipates the plant to operate with no more than 85 employees). This represents an increase of 32 additional employees. The additional employees would result in the addition of 64 daily trips (32 inbound and 32 outbound trips) to the project site. Employee trips were estimated based on the proposed work shift times (5 AM to 3 PM, 7 AM to 5 PM, 5 PM to 5 AM, 8 PM to 4:30 AM and 6 AM to 5 PM) and assuming employees would arrive at the site within 15 minutes before the beginning of their shift time and leave the site within 15 minutes of the end of their shift time. The proposed new shift times were assumed to also apply to all current employees.

With the proposed expansion, the Z-Best Facility is projected to generate a total of two trips during the morning peak hour (7:00 AM to 9:00 AM) and 20 trips during the evening peak hour (4:00 PM to 6:00 PM). This represents a decrease of approximately 19 trips during the AM peak hour and 17 trips during the PM peak hour when compared to existing conditions. The projected decrease in peak hour trips is due to the change in work shift times associated with the proposed expansion. The hourly trip generation estimates with the proposed facility expansion are summarized in Table 3.

It should be noted that a maximum of 47 trips are currently generated in the morning hours between 4:00-9:00 AM and 37 trips during the early evening hours between 3:00-8:00 PM. With the proposed facility expansion and operations, the maximum number of trips during the morning hours would increase to 70 trips while the maximum number of trips during the early evening hours would increase to 47 trips. However, these increases in trips would occur outside of the standard morning and evening commute periods.

### **Proposed Facility Operations and Trip Generation Estimates – Peak Season Day**

Work shift times could be adjusted up to 20 days per year to handle peak leaf season in the fall and heavy volume in the spring. The daily work shift times may be adjusted during the peak season to occur between 5:00 AM and 4:00 PM, 8:00 AM and 6:00 PM, and 6:00 PM and 5:00 AM. The adjusted peak season shift times along with anticipated employees for each shift are also shown in Table 1.

In addition, the project proposes to increase the daily feedstock tonnage limit from the 2,750 tons per day during typical daily operations to 3,500 tons per day for up to 20 days per year to handle peak leaf season in the fall and heavy volume in the spring. The increased tonnage during these 20 days would

result in an additional 57 truck trips. However, the increase in tonnage and associated additional truck trips during peak season would have no effect on peak hour traffic conditions since the proposed expansion includes the restriction of all existing as well as the additional truck trips due to the proposed expansion to the hours outside the morning commute period between 7:00-9:00 AM and evening commute period between 3:00-8:00 PM.

The peak season operations of the proposed expansion would result in 9 and 8 additional trips during the morning peak hour (7:00 AM – 9:00 AM) and the evening peak hour (4:00 PM – 6:00 PM), respectively, when compared to the currently generated 21 and 37 trips during the same periods. However, the addition of the additional trips that would be added to the roadway network during the peak hours would occur infrequently, up to a maximum of 20 days per year during peak season operations. The small number of additional trips due to the peak season operations would not have a significant effect on roadway operations.

The hourly trip generation estimates with the proposed facility expansion during the peak season are summarized in Table 4.

### **Trip Distribution and Assignment**

The distribution of employee, non-truck traffic, is currently distributed equally to SR 25 north and south of the project site. The majority of trucks originating from and bound for the project site currently use SR 25 to and from US 101. A smaller number of trucks use SR 25 to SR 156. The proposed expansion is not proposing significant changes to the existing travel routes used by employees or trucks. The existing directional distribution was applied to the future volume projections, with implementation of the proposed expansion, to assign new project traffic at the project entrance and to the roadway network. The distribution of all project traffic during the peak season would be the same as the traffic distribution during the non-peak season. The existing and anticipated trip distribution patterns are presented in Figures 2 and 3, respectively.

### **Project Access Improvement Operations Evaluation**

A traffic operations analyses at the site access points consisting of peak hour level of service analysis, signal warrant checks, and queuing analysis was completed. Each of the components of the site access operations analyses are described in the following sections.

#### **Proposed SR 25 Site Access Improvements**

As part of the proposed facility expansion, the project also is proposing to replace its existing access point along SR 25 with a new access point that will align with Bolsa Road via a new fourth leg at the existing SR 25 and Bolsa Road intersection. The new access point has been discussed with Caltrans and they have preliminarily agreed that the proposed alignment of a new the project access point with Bolsa Road would improve operations along SR 25 in the vicinity of Bolsa Road and the existing project access point by providing a controlled access point to the project site. The proposed new intersection also would include exclusive left-turn lanes along SR 25 that would not only increase intersection capacity but also would minimize the disruption of through traffic along SR 25. Providing access to the project site that aligns with Bolsa Road via a four-legged intersection would improve operations and safety for project traffic, in particular since the majority of vehicular trips generated by the project site are large trucks. The existing project site access point will be closed with the implementation of the new project access point at the Bolsa Road intersection. A conceptual plan for the proposed project access point at the SR 25 and Bolsa Road intersection is shown in Figure 4.

Z-Best also has developed plans for safety/operational improvements at the existing project site entrance on SR 25 in coordination with Caltrans should the proposed new access point at Bolsa Road

**Table 4**  
**Peak Season Site-Generated Trips**

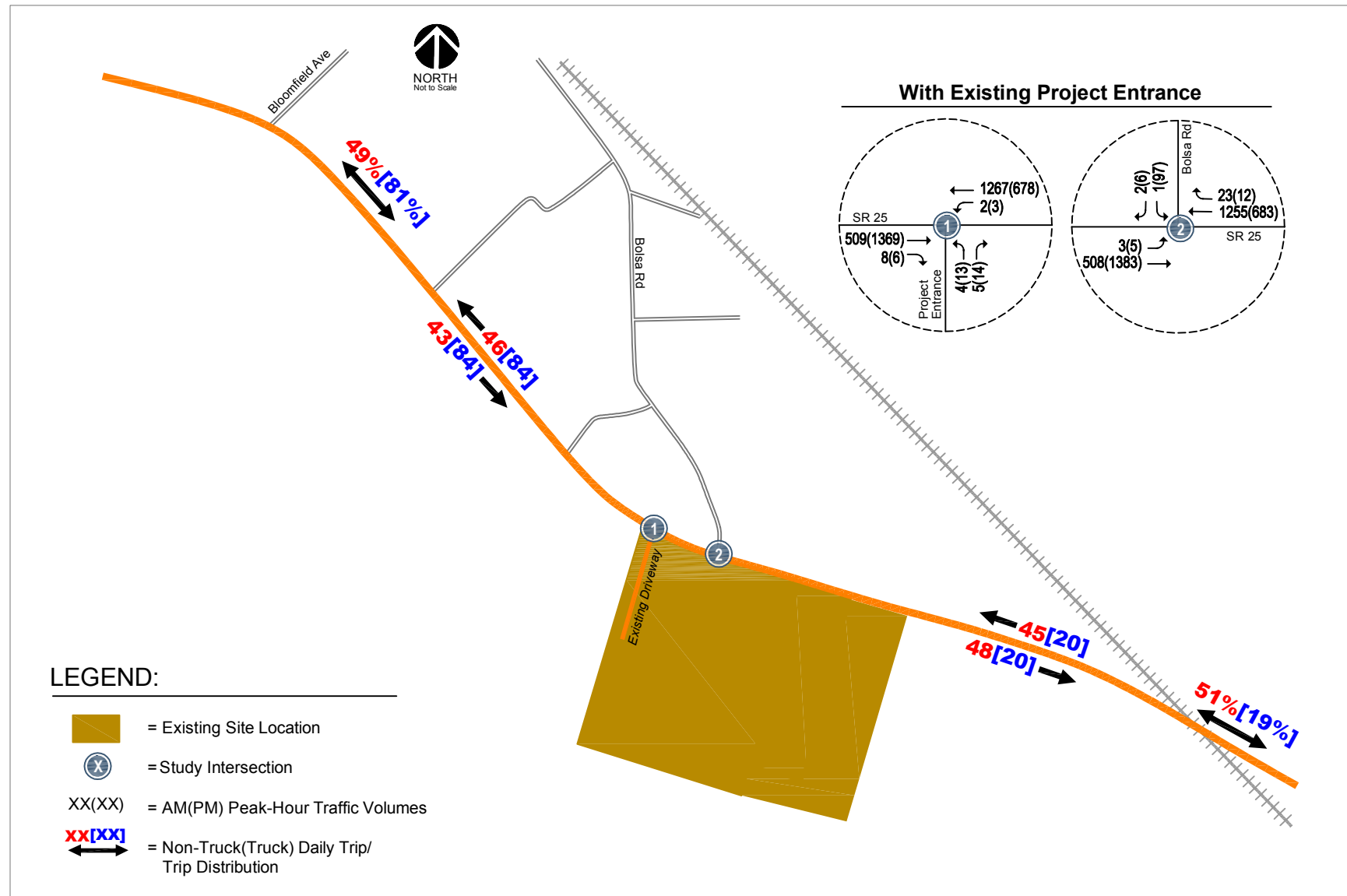
| Hours of Operation |            | Existing Conditions <sup>1</sup>           |                                        |       | Peak Season Conditions <sup>2</sup> |                                         |                       |                              |                        |                                                 |                          |       |     |     | Total Site Trips |     |     | Net Additional Trips |     |     |       |
|--------------------|------------|--------------------------------------------|----------------------------------------|-------|-------------------------------------|-----------------------------------------|-----------------------|------------------------------|------------------------|-------------------------------------------------|--------------------------|-------|-----|-----|------------------|-----|-----|----------------------|-----|-----|-------|
|                    |            | Non-Truck Trips (Based on Driveway Counts) | Truck Trips (Based on Driveway Counts) | Total | Non-Truck Trips                     |                                         |                       |                              | Truck Trips            |                                                 |                          |       |     |     |                  |     |     |                      |     |     |       |
|                    |            |                                            |                                        |       | Additional Employee Trips           | Existing Employee Trips/New Shift Times | Other Non-Truck Trips | Total Future Non-Truck Trips | Additional Truck Trips | Existing Truck Trips/Off-Peak Hours Restriction | Total Future Truck Trips | Total |     |     |                  |     |     |                      |     |     |       |
|                    |            |                                            |                                        |       |                                     |                                         |                       |                              |                        |                                                 |                          |       | In  | Out | Total            | In  | Out | Total                | In  | Out | Total |
| 12:00 AM           | Arrivals   | 0                                          | 1                                      | 1     | 1                                   | 0                                       | 1                     |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  | 18               | 18  | 36  | 17                   | 18  | 35  |       |
| to 1:00 AM         | Departures | 0                                          | 0                                      | 0     |                                     |                                         |                       |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  |                  |     |     |                      |     |     |       |
| 1:00 AM            | Arrivals   | 0                                          | 0                                      | 0     | 0                                   | 1                                       | 1                     |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  | 18               | 18  | 36  | 18                   | 17  | 35  |       |
| to 2:00 AM         | Departures | 0                                          | 1                                      | 1     |                                     |                                         |                       |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  |                  |     |     |                      |     |     |       |
| 2:00 AM            | Arrivals   | 0                                          | 0                                      | 0     | 0                                   | 0                                       | 0                     |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  | 18               | 18  | 36  | 18                   | 18  | 36  |       |
| to 3:00 AM         | Departures | 0                                          | 0                                      | 0     |                                     |                                         |                       |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  |                  |     |     |                      |     |     |       |
| 3:00 AM            | Arrivals   | 0                                          | 3                                      | 3     | 3                                   | 5                                       | 8                     |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  | 18               | 18  | 36  | 15                   | 13  | 28  |       |
| to 4:00 AM         | Departures | 4                                          | 1                                      | 5     |                                     |                                         |                       |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  |                  |     |     |                      |     |     |       |
| 4:00 AM            | Arrivals   | 5                                          | 5                                      | 10    | 10                                  | 5                                       | 15                    | 17                           | 28                     | 0                                               | 45                       | 5     | 5   | 50  | 50               | 5   | 55  | 40                   | 0   | 40  |       |
| to 5:00 AM         | Departures | 0                                          | 5                                      | 5     |                                     |                                         |                       |                              | 0                      | 0                                               |                          | 5     | 5   | 5   |                  |     |     | 5                    |     |     |       |
| 5:00 AM            | Arrivals   | 2                                          | 5                                      | 7     | 7                                   | 3                                       | 10                    |                              | 0                      | 0                                               |                          | 5     | 5   | 5   | 5                | 20  | 25  | -2                   | 17  | 15  |       |
| to 6:00 AM         | Departures | 0                                          | 3                                      | 3     |                                     |                                         |                       |                              | 5                      | 10                                              | 0                        | 15    | 5   | 5   |                  |     |     | 5                    | 20  |     |       |
| 6:00 AM            | Arrivals   | 33                                         | 7                                      | 40    | 40                                  | 7                                       | 47                    |                              | 0                      | 0                                               |                          | 5     | 5   | 5   | 5                | 5   | 10  | -35                  | -2  | -37 |       |
| to 7:00 AM         | Departures | 0                                          | 7                                      | 7     |                                     |                                         |                       |                              | 0                      | 0                                               |                          | 5     | 5   | 5   |                  |     |     | 5                    |     |     |       |
| 7:00 AM            | Arrivals   | 4                                          | 6                                      | 10    | 10                                  | 11                                      | 21                    | 10                           | 20                     | 0                                               | 30                       |       |     | 0   | 30               | 30  | 0   | 30                   | 20  | -11 | 9     |
| to 8:00 AM         | Departures | 3                                          | 8                                      | 11    |                                     |                                         |                       |                              | 0                      | 0                                               |                          | 0     | 0   | 0   | 0                |     |     |                      |     |     |       |
| 8:00 AM            | Arrivals   | 6                                          | 6                                      | 12    | 12                                  | 5                                       | 17                    |                              | 1                      | 1                                               |                          |       | 0   | 1   | 1                | 1   | 2   | -11                  | -4  | -15 |       |
| to 9:00 AM         | Departures | 3                                          | 2                                      | 5     |                                     |                                         |                       |                              | 1                      | 1                                               |                          | 0     | 1   |     |                  |     |     | 0                    | 1   |     |       |
| 9:00 AM            | Arrivals   | 6                                          | 13                                     | 19    | 19                                  | 20                                      | 39                    |                              | 6                      | 6                                               | 13                       | 5     | 18  | 24  | 24               | 25  | 49  | 5                    | 5   | 10  |       |
| to 10:00 AM        | Departures | 7                                          | 13                                     | 20    |                                     |                                         |                       |                              | 7                      | 7                                               | 13                       | 5     | 18  | 25  |                  |     |     |                      |     |     |       |
| 10:00 AM           | Arrivals   | 9                                          | 7                                      | 16    | 16                                  | 23                                      | 39                    |                              | 9                      | 9                                               | 11                       | 5     | 16  | 25  | 25               | 27  | 52  | 9                    | 4   | 13  |       |
| to 11:00 AM        | Departures | 11                                         | 12                                     | 23    |                                     |                                         |                       |                              | 11                     | 11                                              | 11                       | 5     | 16  | 27  |                  |     |     |                      |     |     |       |
| 11:00 AM           | Arrivals   | 4                                          | 8                                      | 12    | 12                                  | 16                                      | 28                    |                              | 4                      | 4                                               | 11                       | 5     | 16  | 20  | 20               | 22  | 42  | 8                    | 6   | 14  |       |
| to 12:00 PM        | Departures | 6                                          | 10                                     | 16    |                                     |                                         |                       |                              | 6                      | 6                                               | 11                       | 5     | 16  | 22  |                  |     |     |                      |     |     |       |
| 12:00 PM           | Arrivals   | 4                                          | 10                                     | 14    | 14                                  | 15                                      | 29                    |                              | 4                      | 4                                               | 11                       | 5     | 16  | 20  | 20               | 21  | 41  | 6                    | 6   | 12  |       |
| to 1:00 PM         | Departures | 5                                          | 10                                     | 15    |                                     |                                         |                       |                              | 5                      | 5                                               | 11                       | 5     | 16  | 21  |                  |     |     |                      |     |     |       |
| 1:00 PM            | Arrivals   | 3                                          | 12                                     | 15    | 15                                  | 13                                      | 28                    |                              | 3                      | 3                                               | 11                       | 6     | 17  | 20  | 20               | 21  | 41  | 5                    | 8   | 13  |       |
| to 2:00 PM         | Departures | 4                                          | 9                                      | 13    |                                     |                                         |                       |                              | 4                      | 4                                               | 11                       | 6     | 17  | 21  |                  |     |     |                      |     |     |       |
| 2:00 PM            | Arrivals   | 3                                          | 8                                      | 11    | 11                                  | 10                                      | 21                    |                              | 2                      | 2                                               | 11                       | 6     | 17  | 19  | 19               | 18  | 37  | 8                    | 8   | 16  |       |
| to 3:00 PM         | Departures | 3                                          | 7                                      | 10    |                                     |                                         |                       |                              | 1                      | 1                                               | 11                       | 6     | 17  | 18  |                  |     |     |                      |     |     |       |
| 3:00 PM            | Arrivals   | 3                                          | 5                                      | 8     | 8                                   | 13                                      | 21                    |                              | 0                      | 0                                               |                          |       | 0   | 0   | 0                | 0   | 0   | -8                   | -13 | -21 |       |
| to 4:00 PM         | Departures | 6                                          | 7                                      | 13    |                                     |                                         |                       |                              | 0                      | 0                                               |                          | 0     | 0   | 0   |                  |     |     |                      |     |     |       |
| 4:00 PM            | Arrivals   | 5                                          | 5                                      | 10    | 10                                  | 27                                      | 37                    |                              | 0                      | 0                                               |                          |       | 0   | 0   | 0                | 45  | 45  | -10                  | 18  | 8   |       |
| to 5:00 PM         | Departures | 22                                         | 5                                      | 27    |                                     |                                         |                       |                              | 17                     | 28                                              | 0                        | 45    | 0   | 0   |                  |     |     | 45                   |     |     |       |
| 5:00 PM            | Arrivals   | 0                                          | 1                                      | 1     | 1                                   | 20                                      | 21                    | 5                            | 10                     | 0                                               | 15                       |       | 0   | 15  | 15               | 0   | 15  | 14                   | -20 | -6  |       |
| to 6:00 PM         | Departures | 18                                         | 2                                      | 20    |                                     |                                         |                       |                              | 0                      | 0                                               |                          | 0     | 0   | 0   |                  |     |     |                      |     |     |       |
| 6:00 PM            | Arrivals   | 1                                          | 0                                      | 1     | 1                                   | 2                                       | 3                     |                              | 1                      | 1                                               |                          |       | 0   | 1   | 1                | 30  | 31  | 0                    | 28  | 28  |       |
| to 7:00 PM         | Departures | 1                                          | 1                                      | 2     |                                     |                                         |                       |                              | 10                     | 20                                              | 0                        | 30    | 0   | 0   |                  |     |     | 30                   |     |     |       |
| 7:00 PM            | Arrivals   | 0                                          | 0                                      | 0     | 0                                   | 0                                       | 0                     |                              | 0                      | 0                                               |                          |       | 0   | 0   | 0                | 0   | 0   | 0                    | 0   | 0   |       |
| to 8:00 PM         | Departures | 0                                          | 0                                      | 0     |                                     |                                         |                       |                              | 0                      | 0                                               |                          | 0     | 0   | 0   |                  |     |     |                      |     |     |       |
| 8:00 PM            | Arrivals   | 0                                          | 1                                      | 1     | 1                                   | 1                                       | 2                     |                              | 0                      | 0                                               | 12                       | 8     | 20  | 20  | 20               | 20  | 40  | 19                   | 19  | 38  |       |
| to 9:00 PM         | Departures | 0                                          | 1                                      | 1     |                                     |                                         |                       |                              | 0                      | 0                                               | 12                       | 8     | 20  | 20  |                  |     |     |                      |     |     |       |
| 9:00 PM            | Arrivals   | 0                                          | 0                                      | 0     | 0                                   | 0                                       | 0                     |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  | 18               | 18  | 36  | 18                   | 18  | 36  |       |
| to 10:00 PM        | Departures | 0                                          | 0                                      | 0     |                                     |                                         |                       |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  |                  |     |     |                      |     |     |       |
| 10:00 PM           | Arrivals   | 0                                          | 1                                      | 1     | 1                                   | 1                                       | 2                     |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  | 18               | 19  | 37  | 17                   | 18  | 35  |       |
| to 11:00 PM        | Departures | 1                                          | 0                                      | 1     |                                     |                                         |                       |                              | 1                      | 1                                               | 11                       | 7     | 18  | 19  |                  |     |     |                      |     |     |       |
| 11:00 PM           | Arrivals   | 0                                          | 0                                      | 0     | 0                                   | 0                                       | 0                     |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  | 18               | 18  | 36  | 18                   | 18  | 36  |       |
| to 12:00 AM        | Departures | 0                                          | 0                                      | 0     |                                     |                                         |                       |                              | 0                      | 0                                               | 11                       | 7     | 18  | 18  |                  |     |     |                      |     |     |       |
| TOTAL DAILY TRIPS: |            | 182                                        | 208                                    | 390   | 192                                 | 198                                     | 390                   | 64                           | 116                    | 66                                              | 246                      | 314   | 208 | 522 | 768              | 381 | 387 | 768                  | 189 | 189 | 378   |

## Notes:

<sup>1</sup> Existing hourly project site traffic activity was estimated based on the existing 24-hour vehicle composition traffic counts conducted at the project site entrance in August 2015, in combination with information provided by Z-Best on their current number of employees, employee shift times, and hours of operation.

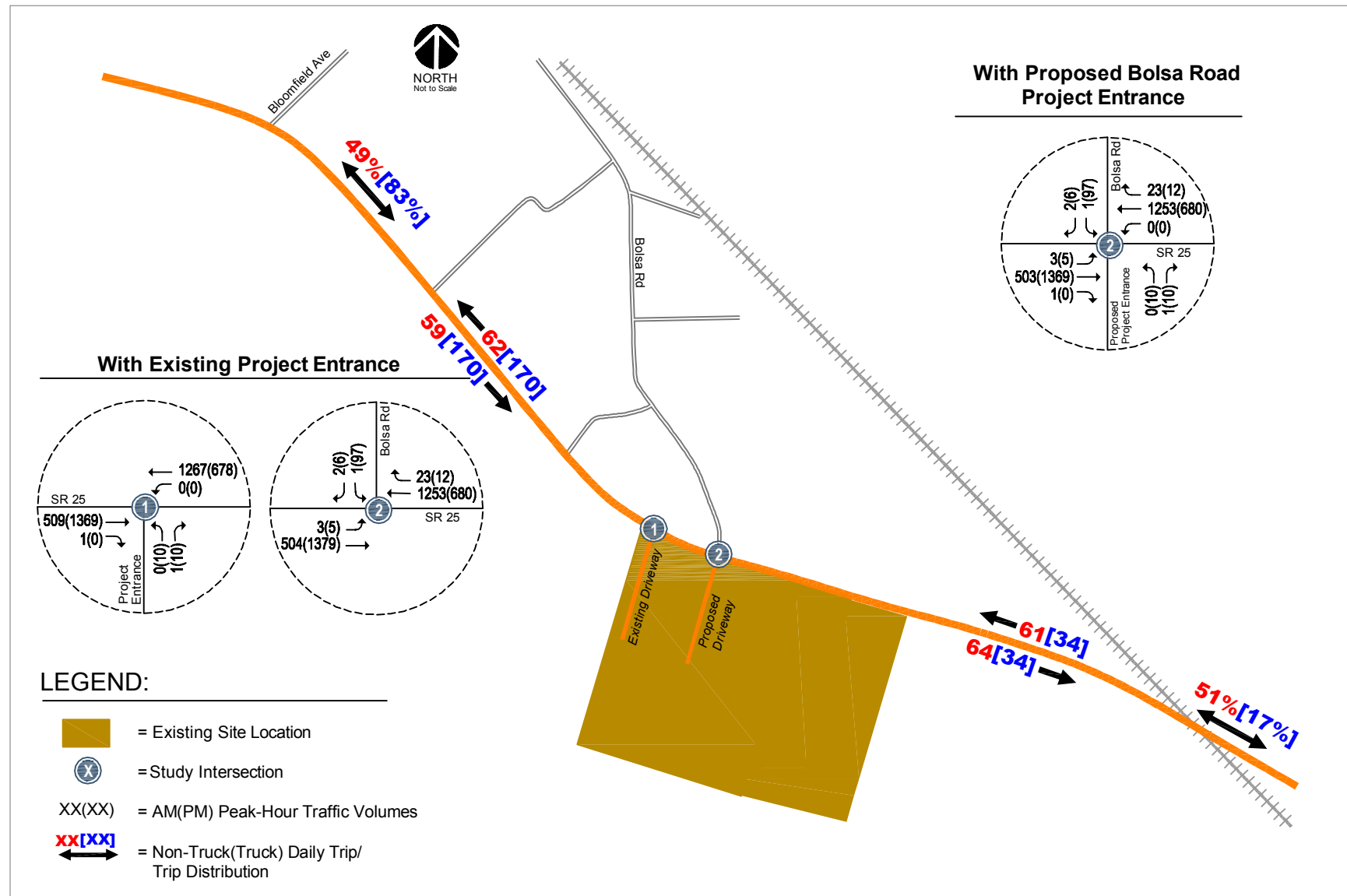
<sup>2</sup> Hourly site traffic projections associated with the proposed Z-Best facility operations expansion during peak season. These projections are based on the anticipated increase in the number of employees and number of trucks accessing the site daily during peak season up to 20 days per year, the anticipated employee shift times during peak season, and the restriction of all inbound truck traffic to the site during the off-peak hours only (8:00PM - 4:00AM) and outbound truck traffic to the hours of (4:00AM - 7:00AM and 9:00 AM to 3:00 PM).

**Figure 2**  
**Trip Distribution and Traffic Volumes Under Existing Conditions**

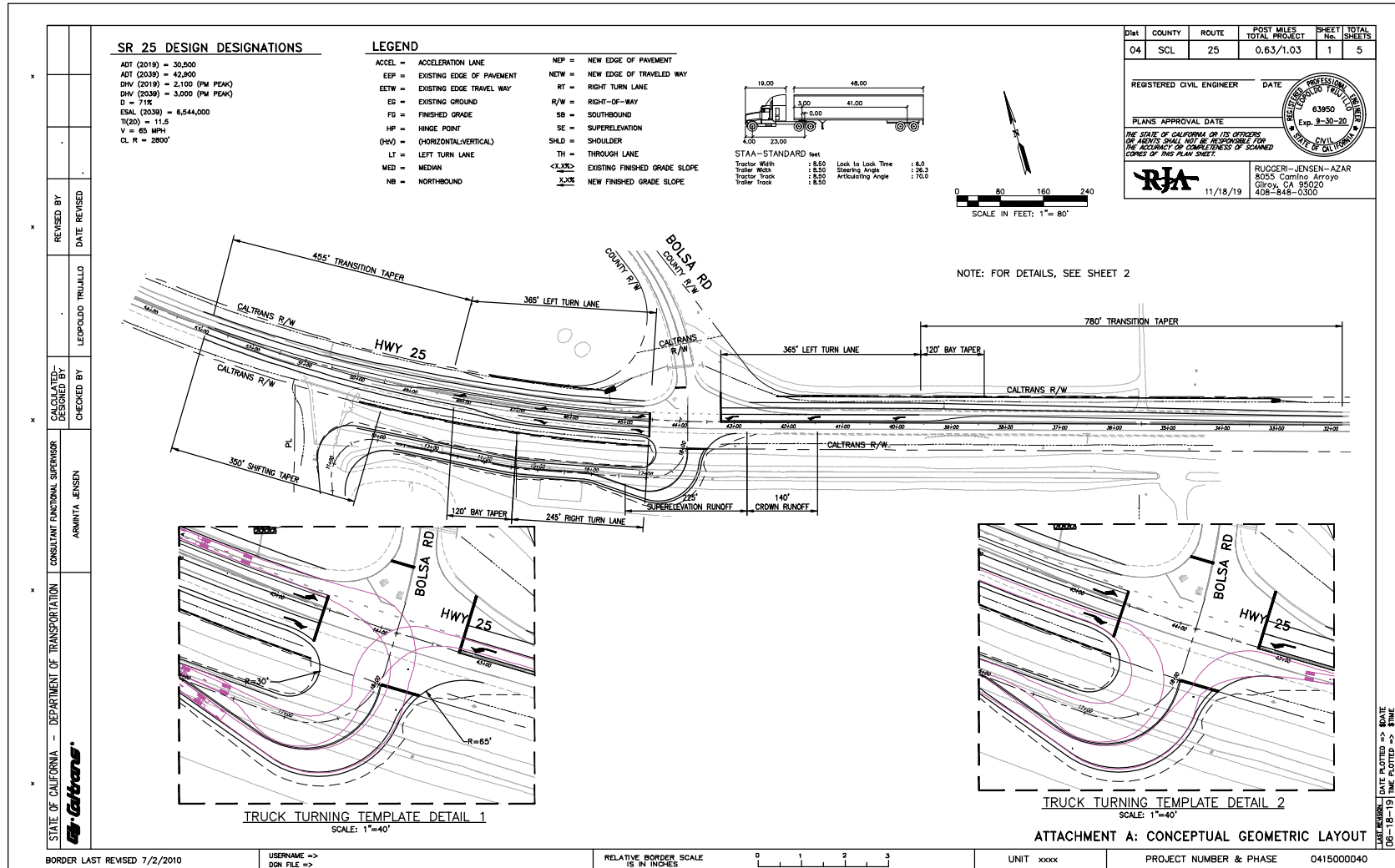




**Figure 3**  
**Trip Distribution and Traffic Volumes Under Project Conditions**



**Figure 4**  
**Conceptual Bolsa Road/Relocated Project Driveway Improvements**



not be implemented. The proposed improvements include the addition of an eastbound deceleration lane into the project site, westbound left-turn lane into the project site, and acceleration lane to serve traffic exiting the project site. The proposed entrance improvements would not only improve truck access into the project site but would also result in improved highway segment operations by minimizing the disruption of through traffic along SR 25. A conceptual plan for the existing site entrance improvements is shown in Figure 5.

The site access improvements will be coordinated with Caltrans and they will determine whether the proposed site access improvements are adequate and meet Caltrans design standards.

### **Existing and Project Conditions Traffic Volumes**

Existing plus project traffic volumes are comprised of the existing peak-hour traffic volumes and the net addition of the traffic estimated to be generated by the proposed facility expansion project.

The existing and projected peak-hour traffic volumes with the proposed facility expansion (project conditions) for each site access point alternative are shown on Figures 2 and 3, respectively.

### **Passenger Car Equivalent Trips**

Because a significant portion of the traffic associated with the project would be truck traffic, a more conservative analysis was conducted for this study in which the truck trips were converted to passenger car equivalent (PCE) trips. This is founded on the observation that trucks impact traffic operations at intersections more significantly than passenger cars do. For this analysis, it is assumed that each truck trip is equivalent to 1.5 passenger car trips.

### **Intersection Level of Service Analysis**

Level of Service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The study intersections were analyzed using TRAFFIX software, which is based on the *Highway Capacity Manual* (HCM) 2000 method for computing level of service at intersections. Two-way-stop controlled intersection levels of service are evaluated based on worst approach stop control delay time for all vehicles at the intersection.

Traffic conditions were analyzed for the weekday AM and PM peak hours. The weekday AM peak hour of traffic is generally between 7:00 AM and 9:00 AM, and the weekday PM peak hour is typically between 4:00 PM and 6:00 PM. It is during these periods that the most congested traffic conditions occur on a typical weekday. The level of service results are discussed below and summarized in Table 5. The level of service calculations are included in the Appendix.

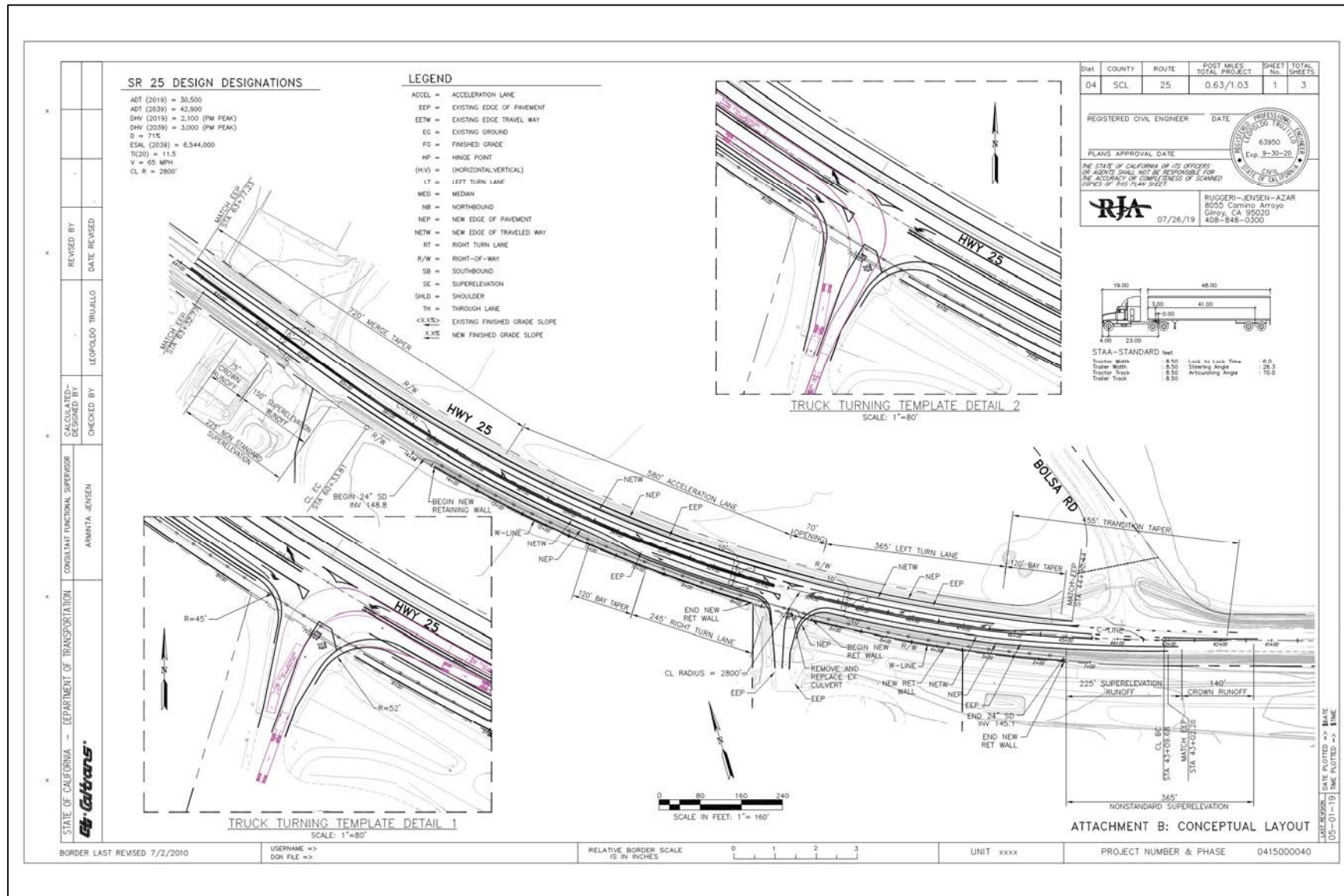
### **Significant Impact Criteria**

Each of the study facilities are located along SR 25. The California Department of Transportation (Caltrans) has jurisdiction of all State maintained facilities, including SR 25. Therefore, the study intersections were evaluated based on Caltrans significance criteria. The criteria described below apply to the weekday AM and PM peak hours.

### **Caltrans Definition of Significant Impacts**

All roadway facilities studied are under the jurisdiction of Caltrans, and therefore, are required to meet the Caltrans Level of Service (LOS) standard. Caltrans level of service standard is LOS C or better. The Caltrans Guide for the Preparation of Traffic Impact Studies (Caltrans 2002) defines a significant impact to occur when:

**Figure 5**  
**Conceptual Existing Project Driveway Improvements**



**Table 5**  
**Operations Analysis Result Summary**

| Intersection                                                                                                                                                                                                                                                                                                                                    | LOS<br>Standard | Peak<br>Hour | Existing        |                    |     |                    |          | Existing + Project |                    |          |        |                    |          |        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|-----------------|--------------------|-----|--------------------|----------|--------------------|--------------------|----------|--------|--------------------|----------|--------|
|                                                                                                                                                                                                                                                                                                                                                 |                 |              | Warrant<br>Met? | Average            |     | Worst              |          | Warrant<br>Met?    | Average            |          |        | Worst              |          |        |
|                                                                                                                                                                                                                                                                                                                                                 |                 |              |                 | Delay <sup>1</sup> | LOS | Delay <sup>2</sup> | LOS      |                    | Delay <sup>1</sup> | LOS      | Change | Delay <sup>2</sup> | LOS      | Change |
| <b>Existing Project Entrance Alternative</b>                                                                                                                                                                                                                                                                                                    |                 |              |                 |                    |     |                    |          |                    |                    |          |        |                    |          |        |
| SR 25 and Existing Project Entrance                                                                                                                                                                                                                                                                                                             | C               | AM           | No              | 0.2                | A   | <b>28.7</b>        | <b>D</b> | No                 | 0.0                | A        | -0.2   | 11.4               | B        | -17.3  |
|                                                                                                                                                                                                                                                                                                                                                 |                 | PM           | No              | 0.9                | A   | <b>62.9</b>        | <b>F</b> | No                 | 0.5                | A        | -0.4   | <b>54.2</b>        | <b>F</b> | -8.7   |
| SR 25 and Bolsa Road                                                                                                                                                                                                                                                                                                                            | C               | AM           | No              | 0.1                | A   | <b>30.3</b>        | <b>D</b> | No                 | 0.1                | A        | 0.0    | <b>30.1</b>        | <b>D</b> | -0.2   |
|                                                                                                                                                                                                                                                                                                                                                 |                 | PM           | <b>Yes</b>      | 22.1               | C   | <b>468.6</b>       | <b>F</b> | <b>Yes</b>         | 21.7               | C        | -0.4   | <b>458.0</b>       | <b>F</b> | -10.6  |
| <b>Relocated Project Entrance to Bolsa Road Alternative</b>                                                                                                                                                                                                                                                                                     |                 |              |                 |                    |     |                    |          |                    |                    |          |        |                    |          |        |
| SR 25 and Bolsa Road/Proposed Project Entrance<br>(Stop-Controlled)                                                                                                                                                                                                                                                                             | C               | AM           | --              | --                 | --  | --                 | --       | No                 | 0.1                | A        | --     | <b>35.2</b>        | <b>E</b> | --     |
|                                                                                                                                                                                                                                                                                                                                                 |                 | PM           | --              | --                 | --  | --                 | --       | <b>Yes</b>         | <b>43.8</b>        | <b>E</b> | --     | <b>914.3</b>       | <b>F</b> | --     |
| <b>Notes:</b><br><sup>1</sup> Whole intersection weighted average control delay.<br><sup>2</sup> The worst case delay is normally the time it would take a vehicle on the minor street of an unsignalized intersection to make a left-turn onto the major street.<br><b>Bold</b> indicates unacceptable level of service or signal warrant met. |                 |              |                 |                    |     |                    |          |                    |                    |          |        |                    |          |        |



1. The addition of project traffic causes roadway (or intersection) operations to degrade from an acceptable level (LOS C or better) to an unacceptable level (LOS D or worse) or,
2. Project traffic is added to a roadway (or intersection) operating at an unacceptable level (LOS D or worse).

### **Existing Conditions**

The results of the level of service analysis show that, measured against the Caltrans level of service standards, both the existing project entrance and Bolsa Road intersections with SR 25 currently operate at an unacceptable LOS F during the PM peak hour based on the worst approach delay. The worst-case approach is typically the minor street approach that is stop-controlled.

### **Project Conditions**

#### **Existing Project Entrance Alternative**

The results of the level of service analysis show that when measured against the Caltrans level of service standards, the existing project entrance intersection with SR 25 would improve to LOS B during the AM peak hour and remain at LOS F under project conditions. The SR 25 and Bolsa Road intersection is projected to continue to operate at LOS D and LOS F conditions during the AM and PM peak hours, respectively, under project conditions. Each intersection would experience a slight reduction in delay on the worst approach during the peak hours with the project. The improvement in delay at each location is a result of the net reduction in trips due to the proposed expansion during the peak hours.

The proposed project would not result in the addition of traffic to the existing site access or SR 25 and Bolsa Road intersections during the peak hours, therefore, based on Caltrans impact criteria, the proposed project would not result in a significant project impact at the study intersections.

#### **Relocated Project Access**

The results of the level of service analysis show that the SR 25 and Bolsa Road intersection with stop-control on Bolsa Road and the relocated project entrance is projected to have worst-case approach operations of LOS E and F during the AM and PM peak hours, respectively, under project conditions.

### **Signal Warrant Analysis**

The level of service analysis at the study intersections were supplemented with an assessment of the need for signalization of the intersections. The need for signalization of unsignalized intersections is assessed based on the Peak-Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways (CA MUTCD)*, Part 4, Highway Traffic Signals, 2014. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak hour traffic volumes are, or would be, sufficient to justify installation of a traffic signal. Intersections that meet the peak hour warrant are subject to further analysis before determining that a traffic signal is necessary. Additional analysis may include unsignalized level of service analysis and/or operational analysis such as evaluating vehicle queuing and delay. Other options such as traffic control devices, signage, or geometric changes may be preferable based on existing field conditions. The results of the signal warrant analysis are summarized in Table 5. The signal warrant sheets are included within the Appendix.

The results of the peak-hour volume warrants indicate that the peak-hour volumes at the existing project entrance intersection with SR 25 currently and are projected to fall below the threshold that warrant signalization with the proposed facility expansion. The peak hour volumes at the SR 25 and



Bolsa Road intersection currently meet and are projected to continue to meet the threshold for signalization during the PM peak hour with the relocation of the site access to Bolsa Road. However, a traffic signal at the new project access point at Bolsa Road is not recommended, or supported by Caltrans, since a traffic signal would adversely affect traffic operations along SR 25.

## Intersection Operations (Queuing) Analysis

The operations analysis is based on vehicle queuing for left-turn movements at intersections. Vehicle queues obtained from TRAFFIX were utilized for this analysis. The basis of the analysis is as follows: (1) TRAFFIX is used to estimate the 95<sup>th</sup> percentile maximum number of queued vehicles during the peak hour for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. This analysis thus provides a basis for estimating future storage requirements at the selected locations.

Under project conditions, the queuing analysis results show that, the eastbound and westbound left-turn lanes at the relocated SR 25/Bolsa Road project access intersection would experience queue lengths of no more than one vehicle during the peak hours. The southbound (Project Entrance) approach would experience queue lengths of two vehicles, or 50 feet assuming an average vehicle length of 25 feet per vehicle. The northbound (Bolsa Road) approach currently experiences lengthy queues due to the large number of left-turns from Bolsa Road to SR 25 during the PM peak hour.

During the off-peak hours, as many as 52 trips (47 non-truck and 5 truck trips) are projected to access the project site from 4:00 AM to 5:00 AM. Approximately half of the 52 trips or 26 trips would access the site from the east. Assuming an even distribution of traffic arriving throughout the hour, this would equate to approximately one trip every two to three minutes or a queue of no more than one vehicle in the westbound left-turn lane.

## Collision History

The collision history along SR 25 in the vicinity of the project entrance and Bolsa Road intersections with SR 25 was reviewed. A review of collision data received from Caltrans indicates a total of 29 collisions over a 3-year span along SR 25 between Bloomfield Road and the beginning of the highway divider (located approximately 1.5 miles east of the project site entrance). The number of collisions along this highway segment exceeds the statewide average for similar facilities. However, only two collisions occurred in the vicinity of the project entrance and Bolsa Road intersections with SR 25 over that same 3-year period.

## Highway Segment Operations

The highway segments located immediately east and west of the project entrance were evaluated based on the *Highway Capacity Manual* (HCM) 2010 methodology and using the Highway Capacity Software (HCS). The results of the highway segment peak hour level of service analysis show that the segments along SR 25 currently operate at an unacceptable LOS E during the AM and PM peak hours.

According to the Caltrans definition of impact on highway segments, the addition of any traffic to a facility currently operating unacceptably would be considered an impact. The proposed project would result in a reduction of traffic volumes to and from the project site during the peak hours.

Therefore, the proposed project would not result in a significant project impact on highway segments of SR 25.

## **Proposed SR 25 Site Access Improvements**

The operations and site access analysis shows that although the proposed project would not result in traffic impacts at the site access points and Bolsa Road intersections with SR 25, both the intersections and the study highway segments currently operate at unacceptable levels. The improvements at the existing site access point would improve traffic operations along SR 25 and the project site entrance.

The proposed relocation of the project access point to the SR 25/Bolsa Road intersection would provide a controlled access point to the project site from SR 25. Providing access to the project site from SR 25 via a controlled intersection would improve operations and safety for both project traffic and through traffic along SR 25, in particular since the majority of vehicular trips generated by the project site are large trucks. Along with the proposed relocated project access point, exclusive left-turn lanes along SR 25 which would not only increase intersection capacity but also minimize the disruption of through traffic along SR 25. Overall, the proposed site access improvements on SR 25 would improve traffic conditions at the project site access and along SR 25.

Each of the design requirements that would be applicable to the relocated project access point at the SR 25/Bolsa Road intersection are discussed below.

### **Highway Design Manual Standards**

The Caltrans Highway Design Manual (HDM) makes the following recommendations regarding intersection design standards.

#### **Sight Distance**

A clear line of sight should be provided between the driver on the minor street (crossroad) and the approaching traffic (major street). At a minimum, adequate stopping sight distance should be provided at all unsignalized intersections. Corner sight distance and decision sight distance also should be provided when possible and/or applicable. In some cases, the cost of providing the required corner sight distance may be excessive. When restrictive conditions exist, the minimum value for corner sight distance shall be equal to the stopping sight distance. Decision sight distance is required at intersections where the State route turns or crosses another State route.

Based on the design speed along SR 25 (posted speed limit of 55 mph), the required stopping sight distance must be no less than 500 ft. (Table 201.1 of the HDM) and the minimum corner sight distance should be 605 ft.

The available sight distances on SR 25 at Bolsa Road would exceed both the minimum stopping and corner sight distances because SR 25 is relatively straight and has no driver view obstruction in the vicinity of the intersection.

#### **Acceleration Lanes**

According to the HDM, at rural intersections with stop control on the local cross street, acceleration lanes for left and right turn onto the State facility should be considered.

#### **Left-Turn Channelization**

The HDM recommends left-turn lanes be provided at intersections to expedite the movement of

through traffic, control the movement of turning traffic, increase intersection capacity, and improve safety. At a minimum, the left-turn lane should meet the following requirements:

**Lane Width** – The lane width for both single and double left-turn lanes on State highways shall be 12 ft. However, under certain circumstances, left-turn lane widths of 11 ft. or as narrow as 10 ft. may be used. Based on Caltrans design criteria, the left-turn lanes at the new intersection should be a minimum of 10 ft. wide.

**Approach Taper** – The approach taper provides space for a left-turn lane by moving traffic laterally to the right. In all situations where space is available (usually in rural and semi-rural areas or in urban areas with high traffic speeds and/or volumes), the standard left-turn channelization design in which all widening is to the right of approaching traffic and the deceleration lane begins at the end of the approach taper should be used. However, alternate designs with the deceleration lane beginning at the 2/3 point of the approach taper (so that part of the deceleration takes place in the through traffic lane) may be used in urban areas where constraints exist, speeds are moderate, and traffic volumes are relatively low. The required approach taper (Figure 405.2A) for the left-turn lanes on SR 25, based on a design speed of 55 mph and assuming the proposed left-turn lane would be 12 ft. wide, is 660 ft.

**Deceleration Lane Length** – Deceleration lane length are based on the roadway's design speed. It is desirable that deceleration take place entirely off the through traffic lanes. Based on Table 405.2B of the HDM, the required deceleration lane length for a 55-mph roadway is approximately 485 ft. (including bay taper). Bay tapers of 120 ft. are normally used on rural high-speed highways. As described above, alternate left-turn channelization designs allow the deceleration lane beginning at the 2/3 point of the approach taper, so part of the deceleration takes place in the through traffic lane. In cases where partial deceleration is permitted on the through lanes, design speeds may be reduced 10 to 20 mph for a lower entry speed.

**Storage Length** – As a minimum, storage space for two passenger cars should be provided at 25 ft. per car within turn-pockets. However, if 10 percent (%) or more of the peak hour traffic is composed of large trucks, space for one passenger car and one truck should be provided.

Vehicular queue estimates for left-turns at the SR 25/Bolsa Road intersection show 95<sup>th</sup> percentile queue lengths of no more than one vehicle for left-turn movements along SR 25 during the peak hours. However, traffic volumes along SR 25 are composed of a significant amount of heavy trucks since it serves as the primary route to US 101 from a primarily agricultural area. Therefore, based on the estimated queue length calculations and Caltrans standards, a minimum of 75 ft. (one vehicle and one truck length) of queue storage capacity should be provided in the left-turn pockets along SR 25 at the intersection with Bolsa Road. Ultimately, Caltrans will decide whether the proposed intersection layouts are adequate and meets Caltrans design standards.

## Supplemental Evaluation of Vehicle-Miles-Traveled (VMT)

Historically, transportation analysis has utilized delay and congestion on the roadway system as the primary metric for the identification of traffic impacts and potential roadway improvements to relieve traffic congestion that may result due to proposed/planned growth. However, the State of California has recognized the limitations of measuring and mitigating only vehicle delay at intersections and in 2013 passed Senate Bill (SB) 743, which requires jurisdictions to stop using congestion and delay metrics, such as Level of Service (LOS), as the measurement for CEQA transportation analysis. With the adoption of SB 743 legislation, public agencies will soon be required to base the determination of transportation impacts on VMT rather than level of service. The intent of this change is to shift the focus of transportation analysis under CEQA from vehicle delay and roadway

auto capacity to a reduction in vehicle emissions, and the creation of robust multimodal networks that support integrated land uses.

An estimate of Vehicle-Miles-Traveled (VMT) was completed for the proposed facility expansion. VMT is typically calculated for common land uses such as residential, office, and industrial developments. However, the proposed project consists of an uncommon land use, a composting facility, that will primarily generate truck traffic for which evaluation tools such as a Transportation Demand Forecasting (TDF) model are not applicable for the estimation of VMT. Therefore, the estimates of VMT for the project were derived based on the anticipated number of employees and truck loads as well as origin/destination information provided by the applicant.

A comparison of VMT currently generated by the existing site operations versus the VMT that could be generated by the proposed expansion of site operations was completed. VMT is calculated as the number of vehicle trips multiplied by the length of the trips in miles. VMT per employee is a measure of the daily vehicle miles traveled divided by the number of employees of the project site.

As shown in Table 6, the proposed expansion and adjustment of site operations will result in a decrease in VMT per employee and VMT per truck load, when compared to the VMT currently generated by the existing site operations.

## Potential SR 25 Widening and Realignment

Caltrans has identified operational problems during the peak commute hours along the SR 25 corridor and at the US 101/SR 25 interchange, which are due primarily to the capacity constraints of the highway and interchange. Thus, Caltrans has initiated the study for the widening and realignment of SR 25 that will include the segment along the project's frontage and realignment of Bolsa Road. In the vicinity of the project site, SR 25 consists of an undivided two-lane State highway with a posted speed limit of 55 miles per hour (mph) in both directions of travel.

In June 2016, Caltrans approved the Hollister to Gilroy State Route 25 Route Adoption project. In the Route Adoption study, Caltrans identifies two alternatives (plus a No Build alternative) to eventually replace 11.2 miles of the existing SR 25 two-lane highway with a four-lane expressway in San Benito and Santa Clara Counties. A route adoption would require San Benito and Santa Clara Counties to adopt a specific corridor for the future expressway into their General Plans, for the purpose of acquiring most or all parcels within the defined corridor area. The route adoption study extends from San Felipe Road (in Hollister) to the end of SR 25 at US 101 in Santa Clara County.

Both route adoption alternatives are 11.2 miles long and share the same alignment from US 101 to approximately ½ mile east of Shore Road. The project site entrance is located within this area. The proposed improvements would include the realignment of both SR 25 and Bolsa Road, which would result in a new intersection of Bolsa Road with the new realigned SR 25.

Although the actual SR 25 widening and realignment project has yet to be designed, approved, and funded, if constructed, it will affect project site access. The exact SR 25 realignment and location of the potential new intersection with Bolsa Road is not known at this time. However, the Route Adoption Alternatives 1 and 2 plans (prepared by Caltrans and shown on Figure 6) indicate the following:

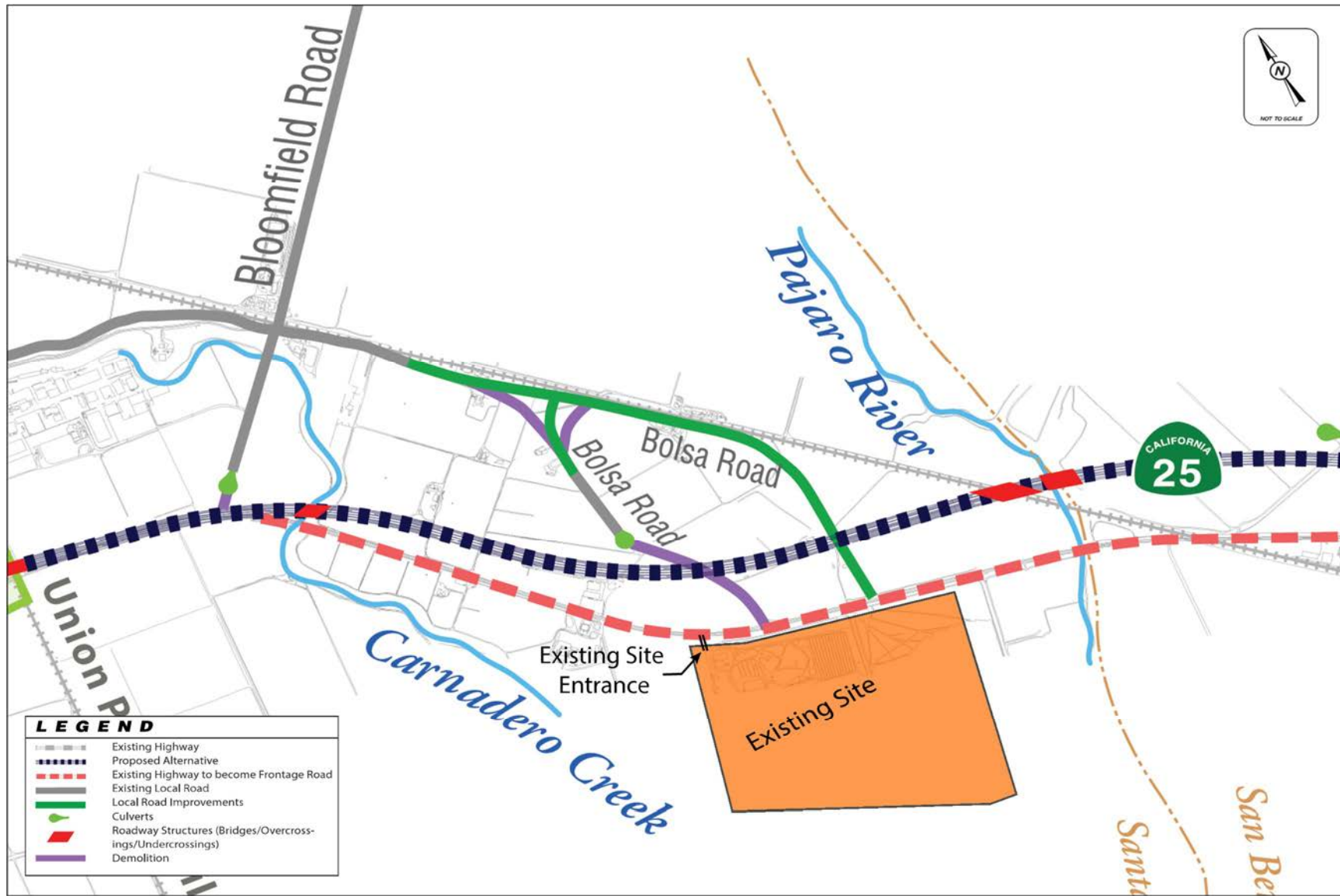
- The realignment of SR 25 would begin east of Bloomfield Road and run north of and parallel to the existing SR 25 alignment from this point past Shore Road.
- The existing SR 25 would become a frontage road and would continue to provide direct access to the adjacent parcels/land uses, including the project site.

**Table 6**  
**VMT per Truck Load Estimates**

| Origin-Destination                                                                                                                                                 | Distance (mi) | Existing                 |             |           |                    | Existing + Project |             |           |               |                    | Existing + Project (Peak 20-Day Season) <sup>2</sup> |             |           |               |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------|-------------|-----------|--------------------|--------------------|-------------|-----------|---------------|--------------------|------------------------------------------------------|-------------|-----------|---------------|--------------------|
|                                                                                                                                                                    |               | Daily Loads <sup>1</sup> | Daily Trips | Daily VMT | Daily VMT per load | Daily Loads        | Daily Trips | Daily VMT | Distribut ion | Daily VMT per load | Daily Loads                                          | Daily Trips | Daily VMT | Distribut ion | Daily VMT per load |
| Green Waste                                                                                                                                                        |               |                          |             |           |                    |                    |             |           |               |                    |                                                      |             |           |               |                    |
| GreenWaste Recovery - San Jose                                                                                                                                     | 38            | 32.73                    | 65.46       | 2487.4    |                    | 89.73              | 179.46      | 6819.4    |               |                    | 122.73                                               | 245.46      | 9327.4    |               |                    |
| ZeroWaste Energy - San Jose                                                                                                                                        | 45            | 9.04                     | 18.08       | 813.7     |                    | 9.04               | 18.08       | 813.7     |               |                    | 9.04                                                 | 18.08       | 813.7     |               |                    |
| Blue Line Transfer - South San Francisco                                                                                                                           | 75            | 1.64                     | 3.28        | 245.8     |                    | 1.64               | 3.28        | 245.8     |               |                    | 1.64                                                 | 3.28        | 245.8     |               |                    |
| Bay Counties SMART - Sunnyvale                                                                                                                                     | 48            | 3.99                     | 7.97        | 382.7     |                    | 3.99               | 7.97        | 382.7     |               |                    | 3.99                                                 | 7.97        | 382.7     |               |                    |
| Sub-Total                                                                                                                                                          |               | 47.39                    | 94.79       | 3929.5    | 82.9               | 104.39             | 208.79      | 8261.5    |               | 79.1               | 137.39                                               | 274.79      | 10769.5   |               | 78.4               |
| Finished Product (Mulch/Compost)                                                                                                                                   |               |                          |             |           |                    |                    |             |           |               |                    |                                                      |             |           |               |                    |
| 100-mile Radius                                                                                                                                                    | 50            | 20.75                    | 41.50       | 2074.8    | 100.0              | 28.75              | 57.50       | 2874.8    |               | 100.0              | 33.75                                                | 67.50       | 3374.8    |               | 100.0              |
| Landfill (Trash/ADC)                                                                                                                                               |               |                          |             |           |                    |                    |             |           |               |                    |                                                      |             |           |               |                    |
| Billy Wright Landfill - Los Banos                                                                                                                                  | 43            | 5.47                     | 10.93       | 470.1     |                    | 15.96              | 31.92       | 1372.5    | 30%           |                    | 21.98                                                | 43.95       | 1890.0    | 30%           |                    |
| Marina Landfill - Marina                                                                                                                                           | 29            | 8.06                     | 16.13       | 467.7     |                    | 23.54              | 47.09       | 1365.5    | 44%           |                    | 32.42                                                | 64.84       | 1880.4    | 44%           |                    |
| Newby Island Landfill - Milpitas                                                                                                                                   | 45            | 4.44                     | 8.87        | 399.2     |                    | 12.95              | 25.90       | 1165.7    | 24%           |                    | 17.83                                                | 35.67       | 1605.1    | 24%           |                    |
| John Smith Landfill - Hollister                                                                                                                                    | 17            | 0.20                     | 0.41        | 6.9       |                    | 0.59               | 1.18        | 20.1      | 1%            |                    | 0.82                                                 | 1.63        | 27.7      | 1%            |                    |
|                                                                                                                                                                    |               | 18.17                    | 36.33       | 1343.8    | 74.0               | 53.05              | 106.09      | 3923.9    |               | 74.0               | 73.05                                                | 146.09      | 5403.2    |               | 74.0               |
| Total                                                                                                                                                              |               | 86.31                    | 172.62      | 7348.1    | 85.1               | 186.19             | 372.38      | 15060.2   |               | 80.9               | 244.19                                               | 488.38      | 19547.6   |               | 80.1               |
|                                                                                                                                                                    |               |                          |             |           |                    |                    |             |           |               |                    |                                                      |             |           |               |                    |
| <sup>1</sup> Source: Z-Best Products. Average daily load estimated using total number of loads recorded in 2018.                                                   |               |                          |             |           |                    |                    |             |           |               |                    |                                                      |             |           |               |                    |
| <sup>2</sup> Peak leaf season in the fall and heavy volume in the spring. The increased tonnage during these 20 days would result in an additional 58 truck trips. |               |                          |             |           |                    |                    |             |           |               |                    |                                                      |             |           |               |                    |



**Figure 6**  
**Potential SR 25 Widening and Realignment**





- The existing segment of Bolsa Road, between the existing SR 25 and north of the realigned SR 25 would be abandoned, eliminating the existing Bolsa Road/SR 25 intersection. The new Bolsa Road realignment would extend eastward adjacent to the existing Union Pacific Railroad tracks and intersect with both the realigned SR 25 and the existing SR 25 just east of the project site.

With the potential realignment of SR 25 and Bolsa Road, all project traffic bound for and originating from the Z-Best facility would utilize the new Bolsa Road intersection with the realigned SR 25.

## Conclusions

The proposed expansion of the existing facility operations on the site will include an increase in the number of employees from the current 58 employees (60 allowed by the use permit) to 80-85 employees (with a maximum of 90 employees allowed by the use permit). It is also anticipated that with the expanded operations, the facility would be able to serve an additional 100 trucks per day. However, based on the proposed new work shift times and all new truck trips being proposed to access the project site outside of the standard peak commute hours, the proposed expansion of the existing Z-Best facility operations would result in a decrease in the number of peak-hour trips generated by the project site when compared to existing conditions. Therefore, the proposed project would not result on impacts to any of the study facilities on SR 25.

The operations and site access analysis shows that although the proposed project would not result in traffic impacts at the study intersections and highway segments along SR 25, the existing project access point and SR 25/Bolsa Road intersection and the study highway segments currently operate at unacceptable levels. The proposed relocation of the project access point to the SR 25/Bolsa Road intersection would provide a controlled access point to the project site from SR 25. Providing access to the project site from SR 25 via a controlled intersection would improve operations and safety for both project traffic and through traffic along SR 25, in particular since the majority of vehicular trips generated by the project site are large trucks. Along with the proposed relocated project access point, exclusive left-turn lanes along SR 25 which would not only increase intersection capacity but also minimize the disruption of through traffic along SR 25. Overall, the proposed site access improvements on SR 25 would improve traffic conditions at the project site access and along SR 25.