

## **Appendix I**

### **Stormwater Management Memo for Cole Administration Building**

Siegfried Engineers, February 9, 2022



## MEMORANDUM

**To:** Scott Gregory  
Lamphier-Gregory

**From:** Paul Schneider, P.E.  
Principal, Civil Engineer  
Siegfried Engineering, Inc.  
3428 Brookside Rd.,  
Stockton, CA 95219

**Date:** February 9, 2022

**Re:** **Cole Administration Building**  
**1011 Union Street**  
**Oakland, CA 94607**



### EXECUTIVE SUMMARY

The Cole Administration Building, located at 1011 Union Street Oakland, CA 94607 is a 2.57-acre lot that was previously paved over and served as an elementary school. The Cole Administration Building project reduces the stormwater impact and has been designed in accordance with the State Water Resource Control Board and local NPDES Provision C.3 Technical Guidelines regarding post-construction stormwater management.

Stormwater runoff is directed into five bioretention planters which will serve both as stormwater detention and treatment prior to discharge to the City of Oakland's storm drain system. Bioretention sizing calculations may be found in Attachment A and B. The location of drainage features including bioretention basins may be found in Attachment C.

The project complies with regional SFRWQCB and has completed the Department of State Architect's (DSA) plan check process. As DSA is the authority of the project the district need not enter into a maintenance agreement with the City of Oakland.

### Attachments:

Attachment A: Required Capture Volume Calculations

Attachment B: Provided Capture Volume Calculations

Attachment C: Relevant Improvement Plan Sheets

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#### Stockton

3428 Brookside Rd.,  
Stockton, CA 95219  
t: 209.943.2021 f: 209.942.0214

#### San Jose

111 N. Market St., Ste. 300  
San Jose, CA 95113  
t: 408.754.2021

#### Sacramento

900 Howe Ave, #200  
Sacramento, CA 95825  
t: 916.520.277

#### Modesto

100 Sycamore Ave, #200  
Modesto, CA 95354  
t: 209.762.3580



## Attachment A

### Required Capture Volume Calculations

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<b>Stockton</b> 3428 Brookside Rd., Stockton, CA 95219 t: 209.943.2021 f: 209.942.0214	<b>San Jose</b> 111 N. Market St., Ste. 300 San Jose, CA 95113 t: 408.754.2021	<b>Sacramento</b> 900 Howe Ave, #200 Sacramento, CA 95825 t: 916.520.277	<b>Modesto</b> 100 Sycamore Ave, #200 Modesto, CA 95354 t: 209.762.3580
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## Worksheet for Calculating the Water Quality Design Volume (80 percent capture method)

Instructions: After completing Section 1, make a copy of this Excel file for each Drainage Management Area within the project. Enter information specific to the project and DMA in the cells shaded in yellow. Cells shaded in light blue contain formulas and values that will be automatically calculated.

### 1.0 Project Information

- 1-1 Project Name:
- 1-2 City application ID:
- 1-3 Site Address or APN:
- 1-4 Tract or Parcel Map No:
- 1-5 Site Mean Annual Precip. (MAP)<sup>1</sup>  Inches
- 1-6 Applicable Rain Gauge<sup>2</sup>

The calculations presented here are based on the 80% capture method of sizing **volume-based treatment measures** provided in the Clean Water Program Alameda County C.3 Technical Guidance, v. 4.0. The steps presented below are explained in Chapter 5, Section 5.1 of the guidance manual, applicable portions of which are included in this file, in the tab called "Guidance from Chapter 5".

Refer to the Mean Annual Precipitation Map in Appendix D of the C.3 Technical Guidance to determine the MAP, in inches, for the site. [Click here for map](#)

Enter "Oakland Airport" if the site MAP is 16.4 inches or greater. Enter "San Jose" if the site MAP is less than 16.4 inches.

MAP adjustment factor is automatically calculated as:

(The "Site Mean Annual Precipitation (MAP)" is divided by the MAP for the applicable rain gauge, shown in Table 5.2, below.)

### 2.0 Calculate Percentage of Impervious Surface for Drainage Management Area (DMA)

- 2-1 Name of DMA:

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area
2-2 Impervious surface	<input type="text" value="583"/>	<input type="text" value="1.0"/>	<input type="text" value="583"/>
2-3 Pervious service	<input type="text" value="1,431"/>	<input type="text" value="0.1"/>	<input type="text" value="143"/>
Total DMA Area (square feet) =			<input type="text" value="2,014"/>

**Note:**  
DMA 1 exceeds 2:1 pervious to impervious ratio and therefore is self-treating. No Bioretention needed.

- 2-4 Total Effective Impervious Area (EIA)  Square feet

### 3.0 Calculate Unit Basin Storage Volume in Inches

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients
		Coefficient of 1.00
Oakland Airport	18.35	0.67
San Jose	14.4	0.56

- 3-1 Unit basin storage volume from Table 5.2:  Inches  
(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)

- 3-2 Adjusted unit basin storage volume:  Inches  
(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)

- 3-3 Required Capture Volume (in cubic feet):  Cubic feet  
(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)

- 3-4 To size an infiltration trench, enter the surface area available:  Square feet

- 3-5 Required depth of infiltration trench, given the surface area available (in 3-4):  Feet  
(Assumes 35% void space in rectangular trench with vertical sides.)  
(Note: Infiltration trench depths are typically between 3 and 8 feet.)

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- 1-6 Applicable Rain Gauge<sup>2</sup>

Enter "Oakland Airport" if the site MAP is 16.4 inches or greater. Enter "San Jose" if the site MAP is less than 16.4 inches.

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- 2-1 Name of DMA:

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area
2-2 Impervious surface	<input type="text" value="23,650"/>	<input type="text" value="1.0"/>	<input type="text" value="23,650"/>
2-3 Pervious service	<input type="text" value="5,820"/>	<input type="text" value="0.1"/>	<input type="text" value="582"/>
Total DMA Area (square feet) =		<input type="text" value="29,470"/>	

- 2-4 Total Effective Impervious Area (EIA)  Square feet

### 3.0 Calculate Unit Basin Storage Volume in Inches

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients
		Coefficient of 1.00
Oakland Airport	18.35	0.67
San Jose	14.4	0.56

- 3-1 Unit basin storage volume from Table 5.2:  Inches

(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)

- 3-2 Adjusted unit basin storage volume:  Inches

(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)

- 3-3 Required Capture Volume (in cubic feet):  Cubic feet

(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)

- 3-4 To size an infiltration trench, enter the surface area available:  Square feet

- 3-5 Required depth of infiltration trench, given the surface area available (in 3-4):  Feet

(Assumes 35% void space in rectangular trench with vertical sides.)  
(Note: Infiltration trench depths are typically between 3 and 8 feet.)

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Instructions: After completing Section 1, make a copy of this Excel file for each Drainage Management Area within the project. Enter information specific to the project and DMA in the cells shaded in yellow. Cells shaded in light blue contain formulas and values that will be automatically calculated.

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- 1-4 Tract or Parcel Map No:
- 1-5 Site Mean Annual Precip. (MAP)<sup>1</sup>  Inches

The calculations presented here are based on the 80% capture method of sizing **volume-based treatment measures** provided in the Clean Water Program Alameda County C.3 Technical Guidance, v. 4.0. The steps presented below are explained in Chapter 5, Section 5.1 of the guidance manual, applicable portions of which are included in this file, in the tab called "Guidance from Chapter 5".

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- 1-6 Applicable Rain Gauge<sup>2</sup>

Enter "Oakland Airport" if the site MAP is 16.4 inches or greater. Enter "San Jose" if the site MAP is less than 16.4 inches.

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### 2.0 Calculate Percentage of Impervious Surface for Drainage Management Area (DMA)

- 2-1 Name of DMA:

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area
2-2 Impervious surface	<input type="text" value="17,773"/>	<input type="text" value="1.0"/>	<input type="text" value="17,773"/>
2-3 Pervious service	<input type="text" value="3,590"/>	<input type="text" value="0.1"/>	<input type="text" value="359"/>
Total DMA Area (square feet) =		<input type="text" value="21,363"/>	

- 2-4 Total Effective Impervious Area (EIA)  Square feet

### 3.0 Calculate Unit Basin Storage Volume in Inches

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients
		Coefficient of 1.00
Oakland Airport	18.35	0.67
San Jose	14.4	0.56

- 3-1 Unit basin storage volume from Table 5.2:  Inches  
(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)

- 3-2 Adjusted unit basin storage volume:  Inches  
(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)

- 3-3 Required Capture Volume (in cubic feet):  Cubic feet  
(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)

- 3-4 To size an infiltration trench, enter the surface area available:  Square feet

- 3-5 Required depth of infiltration trench, given the surface area available (in 3-4):  Feet  
(Assumes 35% void space in rectangular trench with vertical sides.)  
(Note: Infiltration trench depths are typically between 3 and 8 feet.)

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- 1-3 Site Address or APN:
- 1-4 Tract or Parcel Map No:
- 1-5 Site Mean Annual Precip. (MAP)<sup>1</sup>  Inches
- 1-6 Applicable Rain Gauge<sup>2</sup>

The calculations presented here are based on the 80% capture method of sizing **volume-based treatment measures** provided in the Clean Water Program Alameda County C.3 Technical Guidance, v. 4.0. The steps presented below are explained in Chapter 5, Section 5.1 of the guidance manual, applicable portions of which are included in this file, in the tab called "Guidance from Chapter 5".

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- 2-1 Name of DMA:

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Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area
2-2 Impervious surface	<input type="text" value="14,847"/>	<input type="text" value="1.0"/>	<input type="text" value="14,847"/>
2-3 Pervious service	<input type="text" value="3,457"/>	<input type="text" value="0.1"/>	<input type="text" value="346"/>
Total DMA Area (square feet) =		<input type="text" value="18,304"/>	

- 2-4 Total Effective Impervious Area (EIA)  Square feet

### 3.0 Calculate Unit Basin Storage Volume in Inches

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients
		Coefficient of 1.00
Oakland Airport	18.35	0.67
San Jose	14.4	0.56

- 3-1 Unit basin storage volume from Table 5.2:  Inches  
(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)

- 3-2 Adjusted unit basin storage volume:  Inches  
(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)

- 3-3 Required Capture Volume (in cubic feet):  Cubic feet  
(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)

- 3-4 To size an infiltration trench, enter the surface area available:  Square feet

- 3-5 Required depth of infiltration trench, given the surface area available (in 3-4):  Feet  
(Assumes 35% void space in rectangular trench with vertical sides.)  
(Note: Infiltration trench depths are typically between 3 and 8 feet.)

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- 1-5 Site Mean Annual Precip. (MAP)<sup>1</sup>  Inches

The calculations presented here are based on the 80% capture method of sizing **volume-based treatment measures** provided in the Clean Water Program Alameda County C.3 Technical Guidance, v. 4.0. The steps presented below are explained in Chapter 5, Section 5.1 of the guidance manual, applicable portions of which are included in this file, in the tab called "Guidance from Chapter 5".

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- 2-1 Name of DMA:

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area
2-2 Impervious surface	<input type="text" value="30,793"/>	<input type="text" value="1.0"/>	<input type="text" value="30,793"/>
2-3 Pervious service	<input type="text" value="9,075"/>	<input type="text" value="0.1"/>	<input type="text" value="908"/>
Total DMA Area (square feet) =		<input type="text" value="39,868"/>	

- 2-4 Total Effective Impervious Area (EIA)  Square feet

### 3.0 Calculate Unit Basin Storage Volume in Inches

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients
		Coefficient of 1.00
Oakland Airport	18.35	0.67
San Jose	14.4	0.56

- 3-1 Unit basin storage volume from Table 5.2:  Inches

(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)

- 3-2 Adjusted unit basin storage volume:  Inches

(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)

- 3-3 Required Capture Volume (in cubic feet):  Cubic feet

(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)

- 3-4 To size an infiltration trench, enter the surface area available:  Square feet

- 3-5 Required depth of infiltration trench, given the surface area available (in 3-4):  Feet

(Assumes 35% void space in rectangular trench with vertical sides.)  
(Note: Infiltration trench depths are typically between 3 and 8 feet.)



## Attachment B

Provided Capture Volume Calculations

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<b>Stockton</b> 3428 Brookside Rd., Stockton, CA 95219 t: 209.943.2021 f: 209.942.0214	<b>San Jose</b> 111 N. Market St., Ste. 300 San Jose, CA 95113 t: 408.754.2021	<b>Sacramento</b> 900 Howe Ave, #200 Sacramento, CA 95825 t: 916.520.277	<b>Modesto</b> 100 Sycamore Ave, #200 Modesto, CA 95354 t: 209.762.3580
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3428 Brookside Road  
 Stockton, CA 95219  
 209.943.2021 Fax: 209.942.0214

**Job Number:** 19150  
**Project Name:** Cole Administration Center  
**Workbook Name:** Bioretention Volume Calculations  
**Sheet Name:**

**Drainage Management Area 1(Self-Treating)**

Description	Porosity	Depth(ft)	Area(sf)	Volume Provided(cf)	Volume Required(cf)
Ponding		0.5	0	0	
Planter Media	0.25	1.5	0	0	
Rock	0.35	1	0	0	
				0	

**Drainage Management Area 2**

Description	Porosity	Depth(ft)	Area(sf)	Volume Provided(cf)	Volume Required(cf)
Ponding		1	834	834	
Planter Media	0.25	1.5	834	313	
Rock	0.35	1	834	292	
				1439	1401

**Drainage Management Area 3**

Description	Porosity	Depth(ft)	Area(sf)	Volume Provided(cf)	Volume Required(cf)
Ponding		0.5	860	430	
Planter Media	0.25	1.5	860	323	
Rock	0.35	1	860	301	
				1054	1048

**Drainage Management Area 4**

Description	Porosity	Depth(ft)	Area(sf)	Volume Provided(cf)	Volume Required(cf)
Ponding		1	510	510	
Planter Media	0.25	1.5	510	191	
Rock	0.35	1	510	179	
				880	878

**Drainage Management Area 5**

Description	Porosity	Depth(ft)	Area(sf)	Volume Provided(cf)	Volume Required(cf)
Ponding		1	1070	1070	
Planter Media	0.25	1.5	1070	401	
Rock	0.35	1	1070	375	
				1846	1833

Total Bioretention Area =	3274
Total Required Capture Volume =	5160
Total Provided Capture Volume=	5218

**Notes:**

1. Required capture volume per Alameda County C.3 Technical Guidance V4.0 worksheet for Calculation the Water Quality Design Volume.

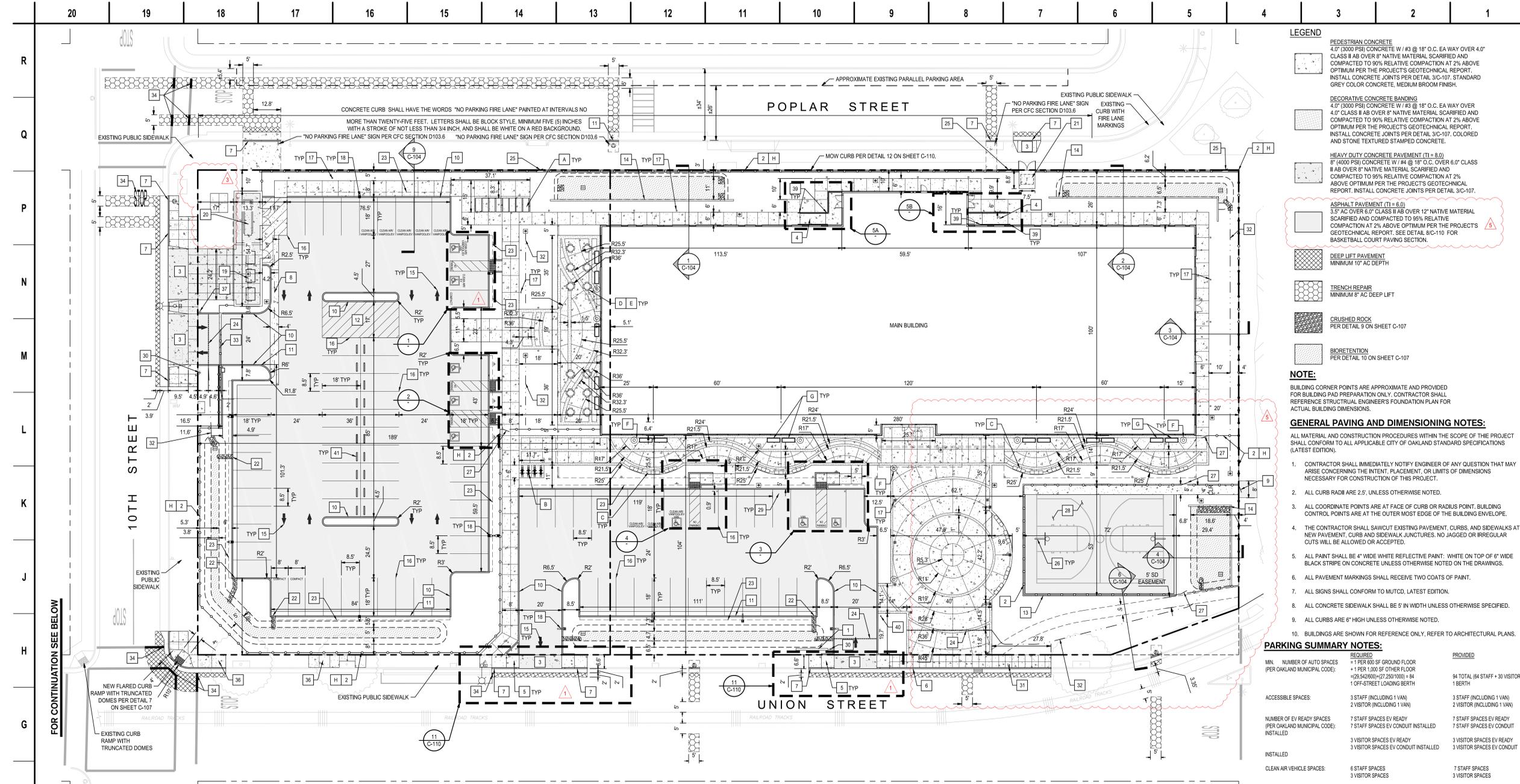


## Attachment C

Relevant Improvement Plan Sheets

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<b>Stockton</b> 3428 Brookside Rd., Stockton, CA 95219 t: 209.943.2021 f: 209.942.0214	<b>San Jose</b> 111 N. Market St., Ste. 300 San Jose, CA 95113 t: 408.754.2021	<b>Sacramento</b> 900 Howe Ave, #200 Sacramento, CA 95825 t: 916.520.277	<b>Modesto</b> 100 Sycamore Ave, #200 Modesto, CA 95354 t: 209.762.3580
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- LEGEND**
- PEDESTRIAN CONCRETE  
4.0' (1000 PSI) CONCRETE W/ #3 @ 18" O.C. EA WAY OVER 4.0' CLASS II AS OVER 8" NATIVE MATERIAL SCARIFIED AND COMPACTED TO 90% RELATIVE COMPACTION AT 2% ABOVE OPTIMUM PER THE PROJECT'S GEOTECHNICAL REPORT. INSTALL CONCRETE JOINTS PER DETAIL 3-C-107. STANDARD GREY COLOR CONCRETE, MEDIUM BROOM FINISH.
  - DECORATIVE CONCRETE BANDING  
4.0' (1000 PSI) CONCRETE W/ #3 @ 18" O.C. EA WAY OVER 4.0' CLASS II AS OVER 8" NATIVE MATERIAL SCARIFIED AND COMPACTED TO 90% RELATIVE COMPACTION AT 2% ABOVE OPTIMUM PER THE PROJECT'S GEOTECHNICAL REPORT. INSTALL CONCRETE JOINTS PER DETAIL 3-C-107. COLORED AND STONE TEXTURED STAMPED CONCRETE.
  - HEAVY DUTY CONCRETE PAVEMENT (TI=8.0)  
8" (4000 PSI) CONCRETE W/ #4 @ 18" O.C. OVER 6.0' CLASS II AS OVER 8" NATIVE MATERIAL SCARIFIED AND COMPACTED TO 95% RELATIVE COMPACTION AT 2% ABOVE OPTIMUM PER THE PROJECT'S GEOTECHNICAL REPORT. INSTALL CONCRETE JOINTS PER DETAIL 3-C-107.
  - ASPHALT PAVEMENT (TI=6.0)  
3.5" AC OVER 6" CLASS II AS OVER 12" NATIVE MATERIAL SCARIFIED AND COMPACTED TO 95% RELATIVE COMPACTION AT 2% ABOVE OPTIMUM PER THE PROJECT'S GEOTECHNICAL REPORT. SEE DETAIL 8-C-110 FOR BASKETBALL COURT PAVING SECTION.
  - DEEP LIFT PAVEMENT  
MINIMUM 10" AC DEPTH
  - TRENCH REPAIR  
MINIMUM 8" AC DEEP LIFT
  - CRUSHED ROCK  
PER DETAIL 9 ON SHEET C-107
  - BIORETENTION  
PER DETAIL 10 ON SHEET C-107
- NOTE:**  
BUILDING CORNER POINTS ARE APPROXIMATE AND PROVIDED FOR BUILDING PAD PREPARATION ONLY. CONTRACTOR SHALL REFERENCE STRUCTURAL ENGINEER'S FOUNDATION PLAN FOR ACTUAL BUILDING DIMENSIONS.
- GENERAL PAVING AND DIMENSIONING NOTES:**  
ALL MATERIAL AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL CONFORM TO ALL APPLICABLE CITY OF OAKLAND STANDARD SPECIFICATIONS (LATEST EDITION).
- CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY QUESTION THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
  - ALL CURB RADI ARE 2.5', UNLESS OTHERWISE NOTED.
  - ALL COORDINATE POINTS ARE AT FACE OF CURB OR RADIUS POINT. BUILDING CONTROL POINTS ARE AT THE OUTER MOST EDGE OF THE BUILDING ENVELOPE.
  - THE CONTRACTOR SHALL SLOW CUT EXISTING PAVEMENT, CURBS, AND SIDEWALKS AT NEW PAVEMENT, CURB AND SIDEWALK JUNCTURES. NO JAGGED OR IRREGULAR CUTS WILL BE ALLOWED OR ACCEPTED.
  - ALL PAINT SHALL BE 4" WIDE WHITE REFLECTIVE PAINT. WHITE ON TOP OF 6" WIDE BLACK STRIPE ON CONCRETE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
  - ALL PAVEMENT MARKINGS SHALL RECEIVE TWO COATS OF PAINT.
  - ALL SIGNS SHALL CONFORM TO MUTCD, LATEST EDITION.
  - ALL CONCRETE SIDEWALK SHALL BE 5' IN WIDTH UNLESS OTHERWISE SPECIFIED.
  - ALL CURBS ARE 6" HIGH UNLESS OTHERWISE NOTED.
  - BUILDINGS ARE SHOWN FOR REFERENCE ONLY. REFER TO ARCHITECTURAL PLANS.

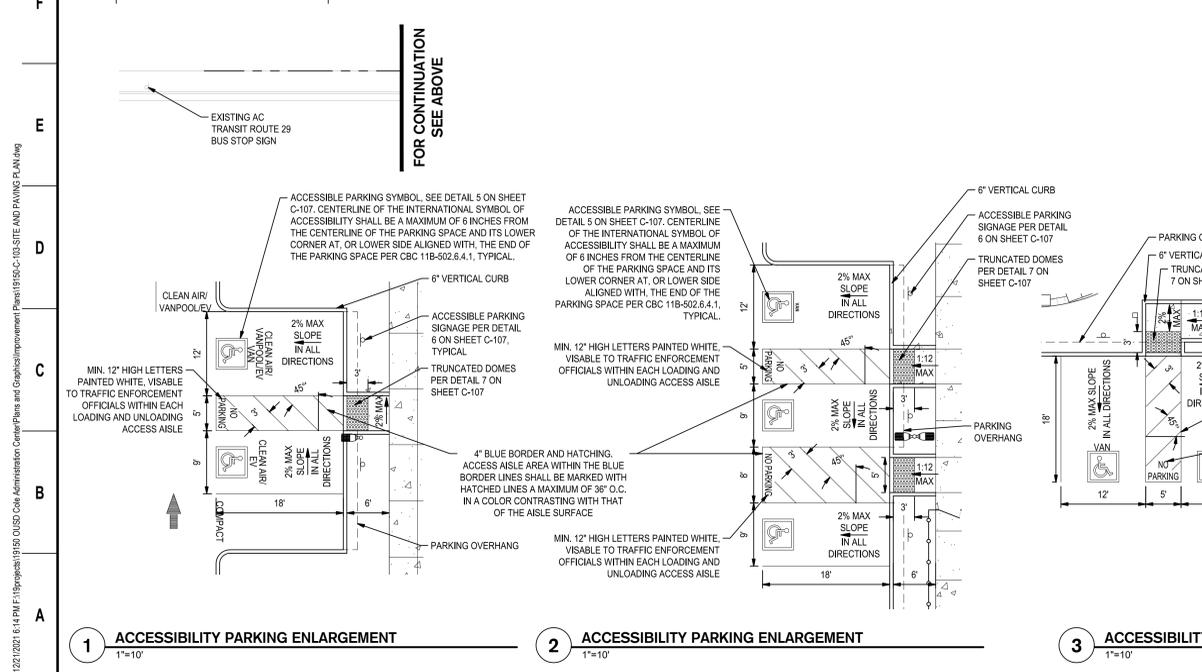
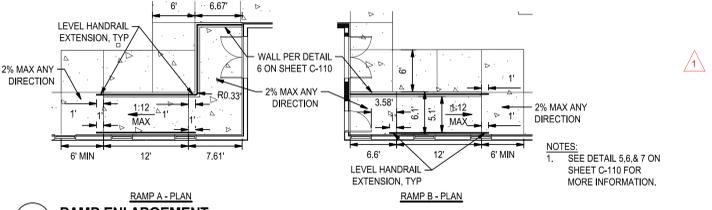
- KEY NOTES**
- BUILDING ADDRESS SIGN, SEE ARCHITECTURAL PLANS
  - NEW 6" HIGH ORNAMENTAL IRON SECURITY FENCING SEE DETAIL 1 ON SHEET C-108
  - NEW DRIVEWAY PER CITY OF OAKLAND STD. DWG. S-2
  - ACCESSIBLE RAMP WITH HANDRAILS, SEE DETAIL 5 ON SHEET C-110
  - CURB RAMP PER DETAIL 11 ON SHEET C-110
  - TYPE A CONCRETE CURB, GUTTER, & SIDEWALK PER C.O.O. TD. DWG. S1. MODIFY CURB HEIGHT TO MATCH EXISTING PER SHEET C-104.
  - TYPE A CONCRETE CURB, GUTTER, & SIDEWALK PER C.O.O. STD. DWG. S1. MODIFY GUTTER TO MATCH EXISTING WHERE OCCURS.
  - 4" VALLEY GUTTER PER DETAIL 11 ON SHEET C-107
  - 3' WIDE ACCESS GATE
  - INSTALL 6" VERTICAL CURB PER DETAIL 1 ON SHEET C-107
  - INSTALL 6" VERTICAL CURB AND GUTTER PER DETAIL 2 ON SHEET C-107
  - COMMERCIAL DELIVERY PARKING ZONE
  - 12" MOW CURB PER DETAIL 9 ON SHEET C-110
  - RETAINING WALL PER DETAIL 8 ON SHEET C-104
  - INSTALL WHITE ARROW MARKING PER DETAIL 2 ON SHEET C-108
  - 4" WIDE WHITE STRIPE
  - PROPOSED BOLLARD, SHOWN FOR REFERENCE ONLY. SEE ARCHITECTURAL AND ELECTRICAL PLANS
  - PROPOSED SITE LIGHT, SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL PLANS. LIGHT POLE FOOTING PER DETAIL 4 ON SHEET C-110.
  - TRASH ENCLOSURE, SEE ARCHITECTURAL PLANS FOR REFERENCE ONLY. SEE ARCHITECTURAL AND ELECTRICAL PLANS
  - PROPOSED TRANSFORMER LOCATION, SEE ELECTRICAL PLANS
  - CURB CUT PER DETAIL 9 ON SHEET C-107
  - PARKING OVERHANG
  - INSTALL TRENCH DRAIN PER DETAIL 12 ON SHEET C-107
  - INSTALL 3' WIDE FIRE ACCESS MAN GATE W/ KNOX BOX SEE DETAIL 11B ON SHEET C-110 BASKETBALL HOOP ASSEMBLY SYSTEM
  - INSTALL 3' WIDE SECURITY ACCESS GATE W/ KNOX BOX. SEE ARCHITECTURAL PLAN SHEET A-101.
  - SEE DETAIL 10A ON SHEET C-110 FOR BASKETBALL COURT LAYOUT
  - INSTALL CONCRETE TIRE CURB STOP PER DETAIL 4 ON SHEET C-107
  - INSTALL TOW AWAY SIGN PER DETAIL 8 ON SHEET C-107
  - PROPOSED RELOCATION OF EXISTING NO PARKING SIGN, LOWEST EDGE OF SIGN SHALL BE MIN. OF 80' FROM EXISTING GRADE.
  - VEGETATED SWALE PER DETAIL 3 ON SHEET C-108
  - NEW 6" HIGH ORNAMENTAL SECURITY FENCE AUTOMATIC ROLLING GATE SEE DETAIL 1 AND 9 ON SHEET C-109
  - REPLACE DAMAGED STRIPING TO MATCH EXISTING PRIOR TO REMOVAL. 2 COATS OF PAINT.
  - DIRECT BORE WATER LINE UNDER EXISTING RAILROAD
  - SIDEWALK ONLY PER C.O.O. STD. DWG. S1.
  - ACCESS KEYPAD LOCATION, VERIFY LOCATION WITH OWNER
  - INTENTIONALLY LEFT BLANK
  - 4" LEVEL HANDRAIL- EXTENSION AFTER GRADE BREAK AT BOTH TOP AND BOTTOM LANDINGS OF RAMP, TYP.
  - FLAG POLE, SEE ARCHITECTURAL/STRUCTURAL PLANS
  - WHEEL STOP, SEE DETAIL 4 ON SHEET C-107

**PARKING SUMMARY NOTES:**

MIN. NUMBER OF AUTO SPACES (PER OAKLAND MUNICIPAL CODE):	REQUIRED	PROVIDED
	+1 PER 300 SF GROUND FLOOR	94 TOTAL (84 STAFF + 30 VISITOR)
	+1 PER 1,000 SF OTHER FLOOR	1 BERTH
	+ (28,542,600 / (27,250,000)) + 84	
	1 OFF-STREET LOADING BERTH	
ACCESSIBLE SPACES:	3 STAFF (INCLUDING 1 VAN)	3 STAFF (INCLUDING 1 VAN)
	2 VISITOR (INCLUDING 1 VAN)	2 VISITOR (INCLUDING 1 VAN)
NUMBER OF EV READY SPACES (PER OAKLAND MUNICIPAL CODE):	7 STAFF SPACES EV READY	7 STAFF SPACES EV READY
	7 STAFF SPACES EV CONDUIT INSTALLED	7 STAFF SPACES EV CONDUIT INSTALLED
	3 VISITOR SPACES EV READY	3 VISITOR SPACES EV READY
	3 VISITOR SPACES EV CONDUIT INSTALLED	3 VISITOR SPACES EV CONDUIT INSTALLED
CLEAN AIR VEHICLE SPACES:	6 STAFF SPACES	7 STAFF SPACES
	3 VISITOR SPACES	3 VISITOR SPACES
ACCESSIBLE EV READY SPACES:	2 STAFF (INCLUDING 1 VAN)	2 STAFF (INCLUDING 1 VAN)
	1 VISITOR VAN	1 VISITOR VAN
	*ACCESSIBLE CLEAN AIR VEHICLE SPACES PROVIDED ARE IN ADDITION TO MIN. REQUIRED STANDARD (NON CLEAN AIR/VEHICLE READY) ACCESSIBLE SPACES	
MIN. NUMBER OF BIKE SPACES:	= 1 LONG TERM PER 20 EMPLOYEES	
	= 300(20+15) LONG TERM	16 LONG TERM
	= 1 SHORT TERM PER 20,000 SF	
	= (60,228(20,000)) + 4 SHORT TERM	8 SHORT TERM

**SITE FURNISHINGS & AMENITIES SCHEDULE**

REFERENCE	SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NUMBER	COLOR / FINISH
A	[Symbol]	BIKE LOCKERS SINGLE TIER, 2 DOOR, SWING HANDLE DOOR LOCK.	CYCLESAFE	PP-SM-M16	TELEGREY 4, RAL 7047
B	[Symbol]	BIKE RACK SQUARE TUBE U RACK, SURFACE MOUNTED.	THE PARK CATALOG	509-2040	POWDER-COATED, IRON GRAY #7011
C	[Symbol]	BENCH STRAIGHT 3-JOINT, BACKLESS, INTERMEDIATE ARMS ONLY, SURFACE MOUNTED.	LANDSCAPEFORMS	PLEXUS-II	POWDER-COATED STORMCLOUD
D	[Symbol]	TABLE 38" ROUND (28 1/4" HIGH) TO TABLE TOP, PERFORATED, NO CENTER HOLE, CATENA BASE, MOVABLE.	LANDSCAPEFORMS	CATENA TABLE	POWDER-COATED STORMCLOUD
E	[Symbol]	CHAIR (4 PER TABLE) MOVABLE (17" HIGH TO SEAT)	LANDSCAPEFORMS	CATENA CHAIR	POWDER-COATED STORMCLOUD
F	[Symbol]	LITTER RECEPTACLES TOP OPENING, FREE STANDING, SURFACE MOUNTED.	LANDSCAPEFORMS	PLEXUS	POWDER-COATED STORMCLOUD
G	[Symbol]	PLANTER POTS (SRC) STANDARD STEEL REINFORCED CONCRETE, 38"x24"x27".	OCP	QS-CAL247236P	STRATA SRC-FRENCH GRAY
H	[Symbol]	FENCE 6" HIGH ORNAMENTAL TUBE STEEL SECURITY FENCE	AMERISTAR	MONTAGE II GENESIS STYLE	POWDER-COATED, FOR COLOR SEE ARCHITECTURAL FINISH SCHEDULE ON SHEET A-201



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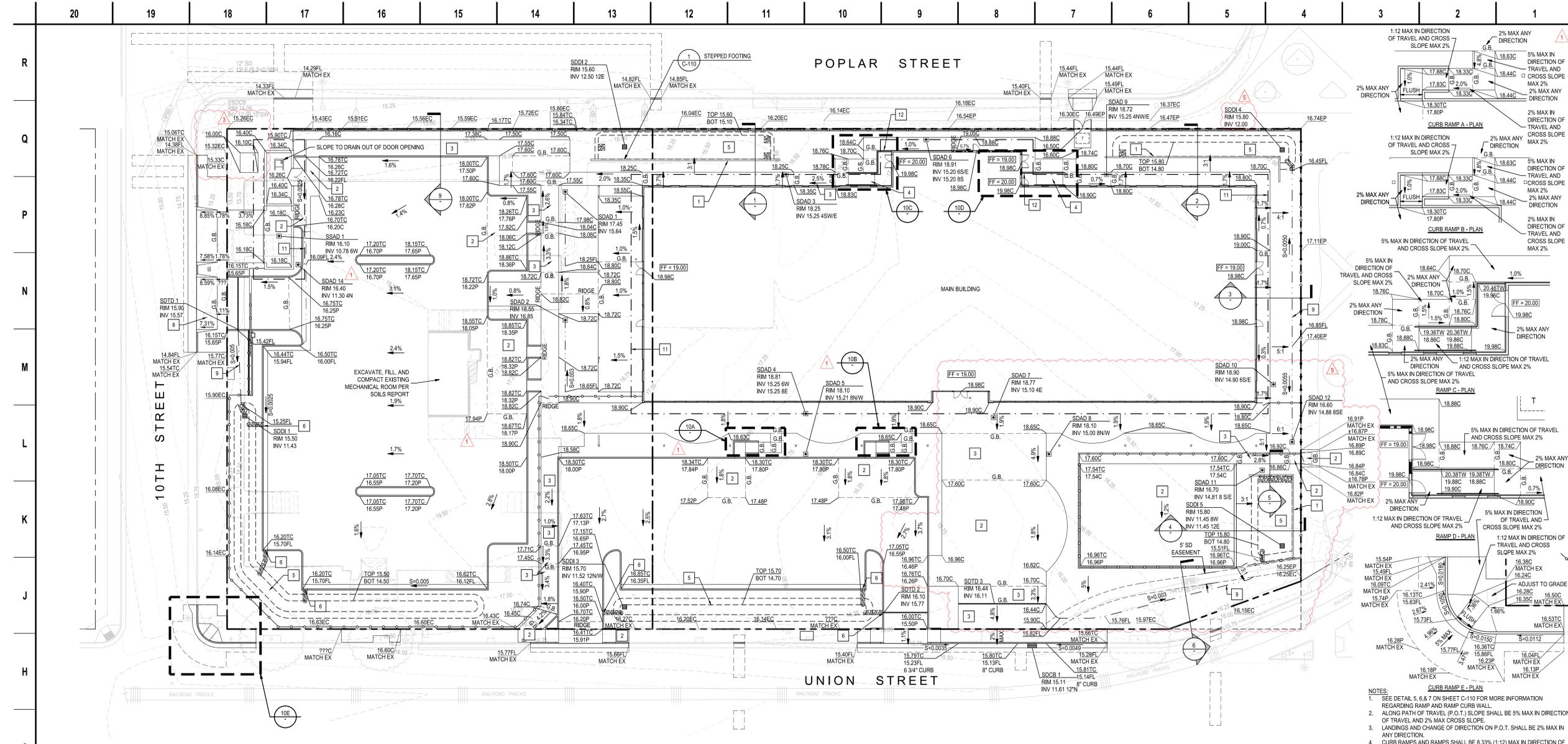
**SITE AND PAVING PLAN**

DATE SIGNED: 12/21/21  
SCALE: 1"=20'

SKA Project Number: 19178  
SEI Project Number: 19150

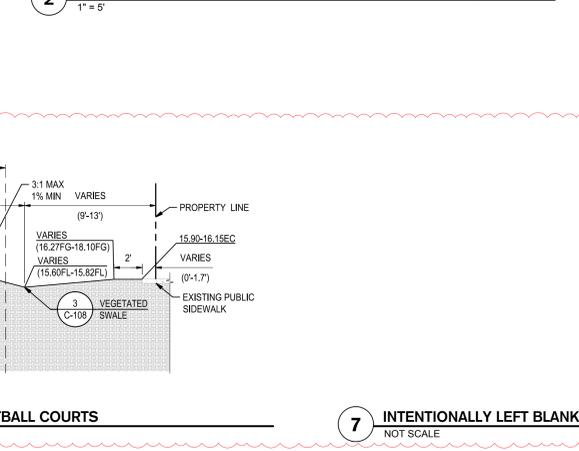
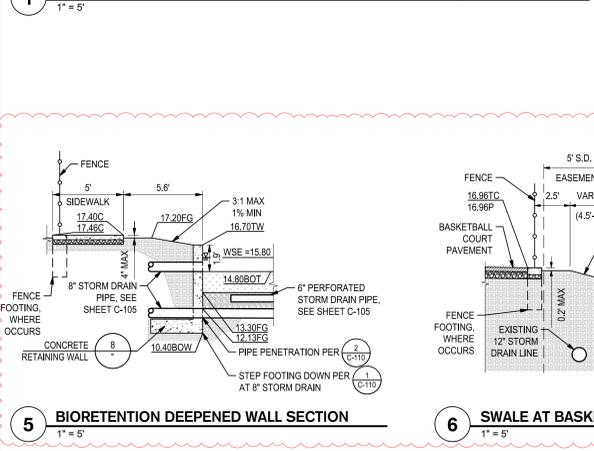
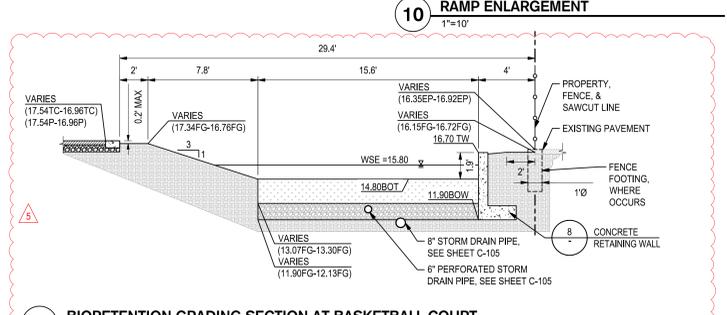
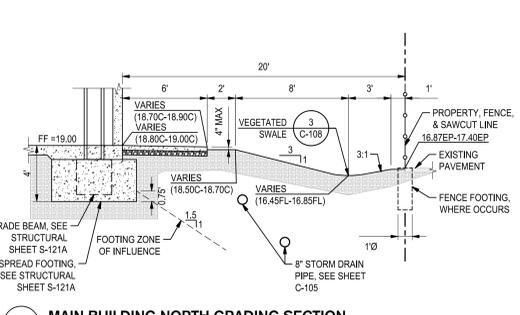
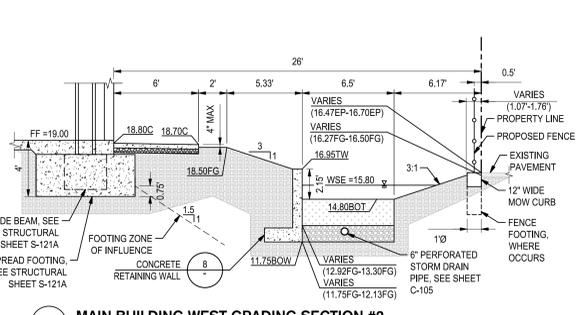
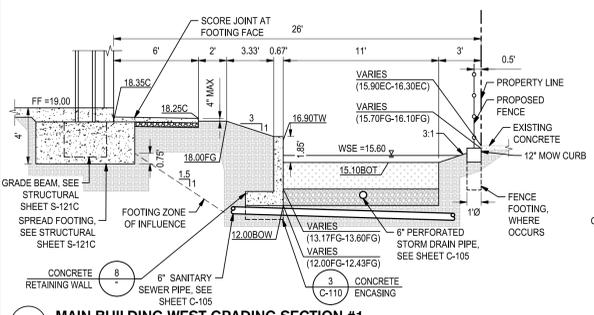
OUSD Project Number: 19119

**C-103**

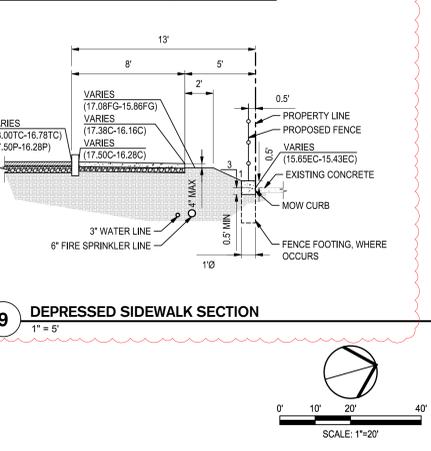
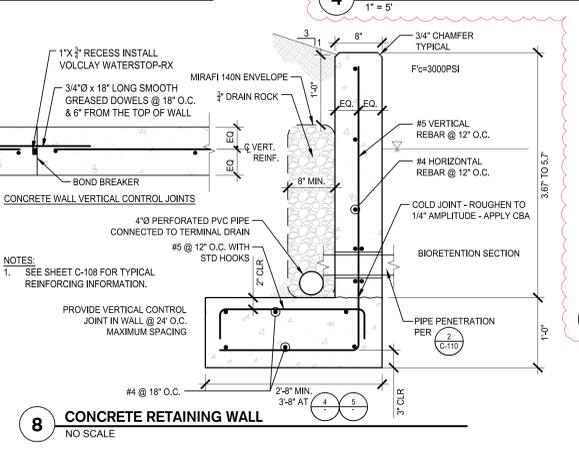


- ### KEY NOTES
- RETAINING WALL SEE DETAIL 8 THIS SHEET
  - 2% MAXIMUM IN ANY DIRECTION
  - 5% MAXIMUM IN DIRECTION OF TRAVEL
  - 1:12 ACCESSIBLE RAMP WITH HANDRAILS PER DETAIL 5 ON SHEET C-110
  - BIORETENTION BASIN PER DETAIL 10 ON SHEET C-107
  - CURB CUT PER DETAIL 9 ON SHEET C-107
  - ADJUST TO GRADE
  - ADJUST TO GRADE EXISTING UTILITY VAULT LID BY CHIPPING AND RESETTING FRAME TO MATCH DRIVEWAY SLOPE, COORDINATE WITH UTILITY PROVIDER
  - VEGETATED SWALE PER DETAIL 3 ON SHEET C-108
  - INTENTIONALLY LEFT BLANK
  - APPROXIMATE OVER EXCAVATION LINE
  - EXTEND RAMP CURB FOR RAISED CONCRETE AREA PER DETAIL 6 ON SHEET C-110, HANDGUARD RAIL REINFORCING PER DETAIL 7 ON C-110.

- ### NOTES
- 0.02' DIFFERENCE BETWEEN INTERIOR FF AND EXTERIOR CONCRETE AT DOOR LANDINGS, TYPICAL AT ALL DOORS, SEE ARCHITECTURAL PLAN SHEET A-016 FOR MORE INFORMATION.
  - SITE GRADING AND SITE PREPARATION SHALL BE IN ACCORDANCE WITH SECTION 6.3 OF THE GEOTECHNICAL REPORT.
  - SECTION 6.3.3 BUILDING PAD GRADING APPLY THE MAIN BUILDING, MPR, AND TRASHGENERATOR ENCLOSURE, SEE GEOTECH REPORT FOR MORE INFORMATION, THE OVER EXCAVATION OUTLINE IS SHOWN FOR REFERENCE ONLY, REFER TO GEOTECHNICAL REPORT FOR MORE INFORMATION.
  - FOOTINGS IN DETAILS ARE SHOWN FOR REFERENCE ONLY, REFER TO STRUCTURAL PLANS, THE LARGEST FOOTING SIZES ARE DISPLAYED TO CAPTURE THE WORST CASE.
  - SEE DETAILS 6, 7, & 8 ON SHEET C-108 FOR TYPICAL BENDS, HOOKS, AND LAP SPICE LENGTHS.



**7 INTENTIONALLY LEFT BLANK**  
NOT SCALE



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NOTE: If this drawing is not 30"x42" it has been revised from its original size and the scales noted on drawing details are no longer applicable.

NO.	DATE	ISSUE DESCRIPTION
1	03/09/2021	DSA BACK CHECK #2
2	11/10/2021	RFI 004 ELECTRICAL TRENCH
3	12/14/2021	RFI 016 WATER RELOCATION
5	12/21/2021	DSA REVISION #1

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**GRADING PLAN**

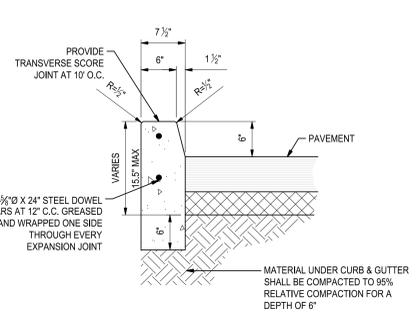
DATE SIGNED: 12/21/21  
SKA Project Number: 19118  
SEI Project Number: 19150

OSUD Project Number: 19119

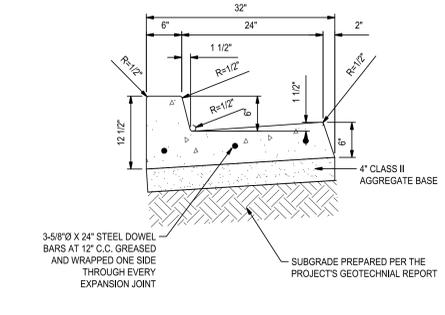
**C-104**

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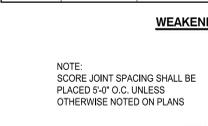
**1 6" CONCRETE CURB**  
NO SCALE



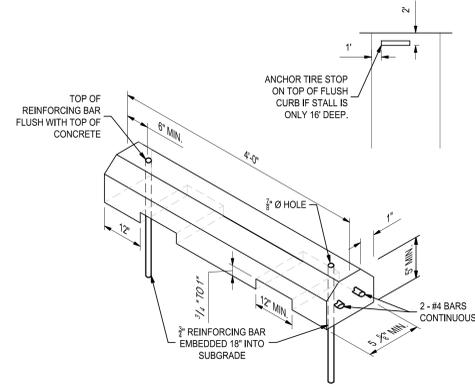
**2 6" VERTICAL CURB AND GUTTER**  
NO SCALE

DOWEL SIZE & SPACING			
SLAB DEPTH	DIAMETER	LENGTH	SPACING
4"	5/8"	12"	24" O.C.
6"	3/4"	18"	18" O.C.
8"	1"	24"	18" O.C.
10"	1"	24"	12" O.C.

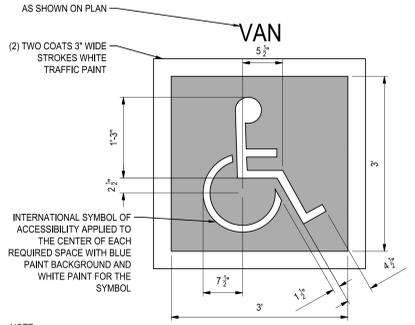
EXPANSION JOINT & CONTROL JOINT		
SLAB THICKNESS	WPJ SPACING (EACH WAY)	CONTROL JOINT SPACING
4"	8' O.C. MAX.	32' O.C. MAX.
6"	12' O.C. MAX.	36' O.C. MAX.
8"	16' O.C. MAX.	40' O.C. MAX.
10"	N/A	40' O.C. MAX.



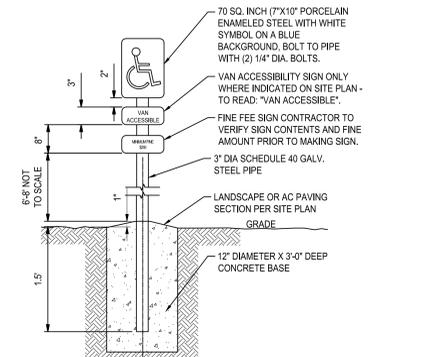
**3 TYPICAL CONCRETE JOINT DETAILS**  
NO SCALE



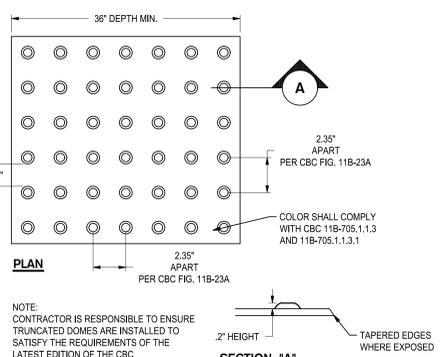
**4 4" WHEEL STOP**  
NOT TO SCALE



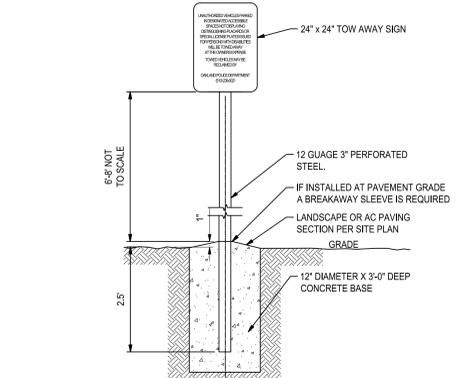
**5 ACCESSIBLE STALL INDICATOR**  
NO SCALE



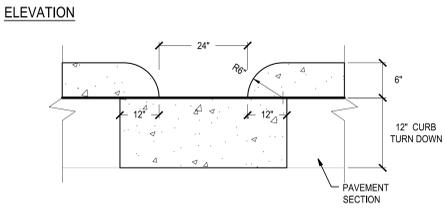
**6 ACCESSIBLE PARKING SIGN**  
NO SCALE



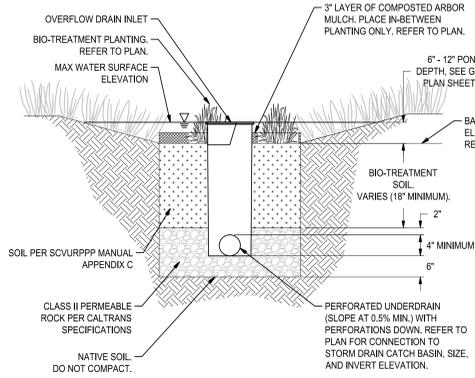
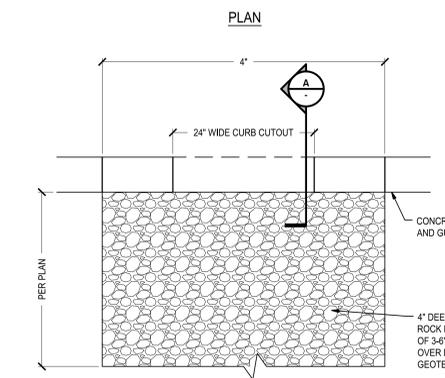
**7 TRUNCATED DOMES**  
NO SCALE



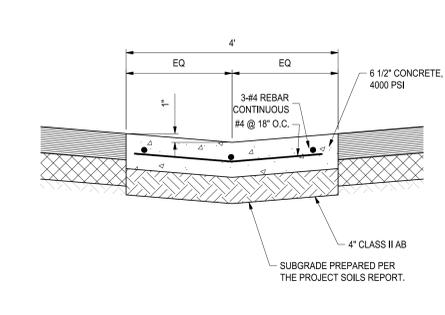
**8 TOW AWAY SIGN**  
NO SCALE



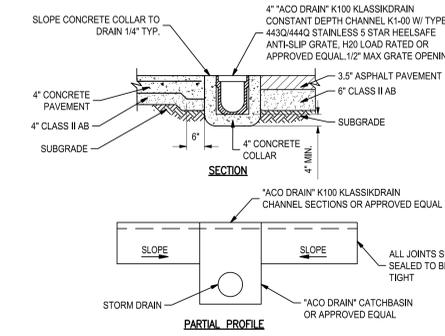
**9 CONCRETE CURB OPENING**  
NO SCALE



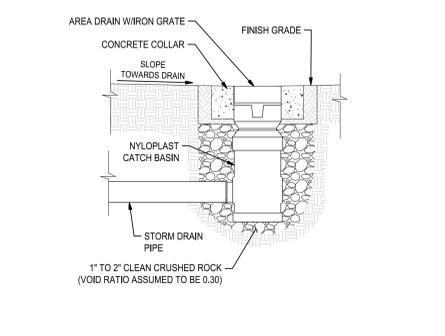
**10 BIORETENTION AREA**  
NO SCALE



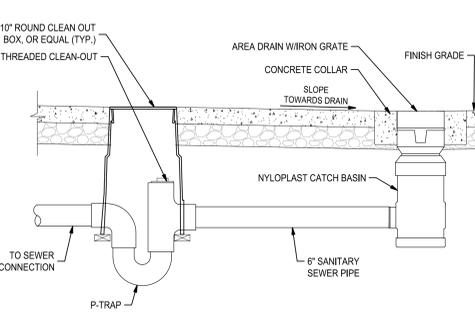
**11 CONCRETE VALLEY GUTTER**  
NO SCALE



**12 4" TRENCH DRAIN**  
NO SCALE



**13 AREA DRAIN**  
NO SCALE



**14 SS DRAIN WITH P-TRAP IN A BOX**  
NO SCALE

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1011 UNION STREET,  
OAKLAND, CA 94607

Drawing Title  
**CONSTRUCTION DETAILS I**

Drawing No.  
**C-107**

DATE SIGNED: 12/21/21

SKA Project Number: 19718  
SEI Project Number: 19150

CUSSD Project Number: 19119

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